Commodity Section M-4

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DEPARTMENT OF THE ARMY TECHNICAL MANUAL TM 11-487A
DEPARTMENT OF THE NAVY PUBLICATION NAVEXOS P-2058
DEPARTMENT OF THE AIR FORCE TECHNICAL ORDER TO 31-3-73

MILITARY HANDBOOK

ELECTRONIC COMMUNICATION EQUIPMENT



DEPARTMENTS OF THE ARMY, THE NAVY, AND THE AIR FORCE
WASHINGTON 25, D. C., *11 June 1959*

TM 11-487A/NAVEXOS P-2058/TO 31-3-73 is issued for the use of all concerned.

[AG 413.44 (23 Apr 59)]

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USAIS (6)
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USAARMS (6)
Sig Sec, GENDEP (2)
Sig Dep (2)
USATTC (2)
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USA Sig Eqt Spt Agcy (120)
USA Sig Pub Agcy (10)
USA Sig Msl Spt Agcy (2)
TASSA (100)
Armed Svc Electro-Std Agcy (25)
Army Avn Tng Cen (4)
USA Elct PG (6)
Frankford Arsenal (2)
Redstone Arsenal (2)
Detroit Arsenal (2)
Sig Fld Maint Shops (2)
Yuma Test Sta (2)
Boston Army Base (2)
Brooklyn Army Base (2)
Units organized under following TOE's:
11-5 (1)
11-15 (1)
11-22 (1)
11-55 (1)
11-95 (1)
11-155 (1)
11-555 (1)
11-558 (1)
11-587 (1)
11-592 (1)
11-597 (1)

NG: None.
USAR: None.
For explanation of abbreviations used, see AR 320-50.

*** This publication supersedes JANAP 161, 6 March 1953, including C 1, 1 October 1956, TM 11-487A, 28 August 1950, and TM 11-487B, 5 March 1951.**

MILITARY HANDBOOK

ELECTRONIC COMMUNICATION EQUIPMENT

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
(SUPPLY AND LOGISTICS)
WASHINGTON 25, D. C.

DEPARTMENT OF DEFENSE
OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
(SUPPLY AND LOGISTICS)
Washington, D. C.

Electronic Communication Equipment
Supply and Logistics
Standardization Military Handbook 161

1. This handbook was prepared by the United States Army under the direction of the Assistant Secretary of Defense (Supply and Logistics).

2. This handbook was approved for printing and inclusion in the Supply and Logistics series of handbooks.

3. This handbook is designed to supplement department manuals and directives and is intended for use in the standardization to the greatest extent possible, of the design, development, procurement, and application of military electronic communication equipment.

4. Every effort has been made to reflect the latest data and information on electronic communication equipment of current interest to each of the Departments of the Department of Defense. This handbook is to be reviewed and supplemented, periodically, to insure its completeness and currency. Those making use of this document are encouraged to report any errors and/or omissions discovered and any recommendations for changes or inclusions to the custodians.

Copies may be obtained by requisitioning through normal publications supply channel.

Custodian:

Army—Signal Corps
Navy—Bureau of Ships
Air Force—Air Materiel Command

ELECTRONIC COMMUNICATION EQUIPMENT

INTRODUCTION

	Paragraph	Page
Purpose	1	1
Scope	2	1
Arrangement of content	3	1
Glossary of abbreviations	4	2
Details of content	5	2
Type classification definitions	6	3
Currency of information	7	4
Stock numbers	8	4
Data not available	9	4

TYPE*

		Page
AN/AIC	------	5
AN/ARA	------	19
AN/ARC	------	25
AN/ARR	------	89
AN/ART	------	117
AN/ARW	------	133
AN/AXR	------	139
AN/AXT	------	143
AN/BRA	------	147
AN/BRT	------	151
AN/CRT	------	155
AN/FCA	------	163
AN/FCC	------	167
AN/FCT	------	211
AN/FGA	------	213
AN/FGC	------	223
AN/FGQ	------	291
AN/FGR	------	295
AN/FGT	------	305
AN/FIA	------	311
AN/FIC	------	313
AN/FNH	------	335
AN/FRA	------	337
AN/FRC	------	373
AN/FRH	------	423
AN/FRQ	------	427
AN/FRR	------	429
AN/FRT	------	525
AN/FRW	------	711
AN/FSH	------	715
AN/FSW	------	717
AN/FTC	------	719
AN/GCA	------	751
AN/GGA	------	753
AN/GGC	------	755
AN/GIA	------	759
AN/GRA	------	763
AN/GRC	------	785
AN/GRD	------	845
AN/GRQ	------	847
AN/GRR	------	851
AN/GRT	------	871
AN/GSC	------	883

TYPE—Continued

	Paragraph	Page
AN/GTA	------	885
AN/GTC	------	887
AN/GTT	------	889
AN/GXR	------	891
AN/MGC	------	893
AN/MRC	------	895
AN/MRR	------	949
AN/MRT	------	955
AN/MSA	------	965
AN/MTC	------	967
AN/MTQ	------	969
AN/PGC	------	971
AN/PIP	------	975
AN/PIQ	------	977
AN/PNH	------	981
AN/PNS	------	989
AN/PRC	------	991
AN/PRR	------	1077
AN/PRW	------	1089
AN/PTA	------	1093
AN/PTC	------	1095
AN/PVC	------	1101
AN/SGA	------	1107
AN/SGC	------	1113
AN/SIA	------	1117
AN/SIH	------	1131
AN/SIQ	------	1135
AN/SNH	------	1137
AN/SRA	------	1147
AN/SRC	------	1179
AN/SRR	------	1215
AN/SRT	------	1243
AN/TCA	------	1333
AN/TCC	------	1345
AN/TGC	------	1403
AN/TIP	------	1435
AN/TIQ	------	1439
AN/TNP	------	1449
AN/TRA	------	1451
AN/TRC	------	1469
AN/TRQ	------	1531
AN/TRR	------	1541
AN/TRT	------	1553
AN/TTC	------	1579
AN/TTQ	------	1597
AN/TXA	------	1601
AN/TXC	------	1607
AN/TXR	------	1627
AN/UFA	------	1631
AN/UGA	------	1633
AN/UGC	------	1637
AN/UGR	------	1653
AN/UGT	------	1657
AN/UIA	------	1661
AN/UIC	------	1667

* For complete lists of specific items covered in this handbook, refer to appendixes II and III.

TYPE—Continued

	Paragraph	Page
AN/UIQ		1669
AN/UNH		1675
AN/UNQ		1685
AN/URA		1691
AN/URC		1753
AN/URN		1773
AN/URR		1779
AN/URT		1905
AN/URW		1965
AN/USA		1969
AN/USM		1975
AN/USP		1977
AN/USQ		1981

TYPE—Continued

	Paragraph	Page
AN/UXA		1983
AN/UXC		1989
AN/UXH		1991
AN/VIA		1993
AN/VIC		1995
AN/VRC		2001
AN/VRQ		2077
AN/VRR		2083
AN/VRT		2097
APPENDIX I. GLOSSARY OF ABBREVIATIONS		2099
APPENDIX II. INDEX OF ITEMS BY NAME		2101
APPENDIX III. INDEX OF ITEMS BY TYPE NUMBER		2121

INTRODUCTION

1. Purpose

This publication presents data and information on the technical, physical, operational, and logistical characteristics of the electronic communication equipment used in the Department of Defense. It is intended primarily for use by the standardization, design, development, and procurement activities of the Department of Defense, and in the technical planning and coordinating of logistical operations involving the use and maintenance of military equipment in a theater of operations.

2. Scope

This publication contains information on electronic communication equipment that is used by the Army, the Navy, and the Air Force to establish communication systems for military purposes. It covers equipments used in both wire and radio communication systems, and includes equipment for use at all echelons of command.

3. Arrangement of Content

a. Items of equipment are arranged and identified in accordance with type nomenclature designations of the Joint Electronics Type Designation System, or "AN" System, as described in MIL-STD-196. This system is an alphabetical arrangement of basic indicators, followed by a numerical arrangement of types of equipment for each set or series of basic indicators.

b. Items of equipment with service, commercial, or other types of nomenclature are arranged under the most appropriate TYPE of AN System/indicator nomenclature. Within each set or series of basic AN/TYPE designation, equipments are arranged numerically and alphabetically. All such AN/TYPE designations follow items of equipment arranged as outlined in *a* above.

Examples:

AN/ARC-33	AN/FRR-3	AN/GRR-3
AN/ARC-34	AN/FRR-4	AN/GRR-5
AN/ARC-36	AN/FRR-7	AN/GRR-7
AN/ARC-type	AN/FRR-type	AN/GRR-type
SCR-274	RAO	BC-312
SCR-522	RBF	R-247/URR
SCR-542	RBP	RCF

c. Items not bearing set designations of the AN series can be readily located by reference to Appendix II or III. Appendix II is arranged in alphabetical sequence by official nomenclature. This appendix includes all items of equipment described in this publication, and the listing is maintained in narrative style, rather than in normal catalog style. For example, Frequency-Shift Converter CV-115( )/URR is listed under F, instead of under C for Converter, Frequency-Shift. Appendix III also contains a complete listing of all items covered in this publication, arranged in alpha-numerical order by assigned type number, regardless of whether the type number was assigned by a specific department or under the Joint Electronics Type Designation System. Commercial equipments are listed by their manufacturer's number within this appendix. All items listed in Appendix II also show the arbitrarily assigned type designation used in this publication.

Note. Assignment of an item to a particular type designation within this publication is arbitrary, and should not be construed as a limitation or indication that this equipment is suitable for use only as implied by its classification herein.

d. For convenience, Table I is a listing of the meanings assigned to the first, second, and third letters of the three-letter group following the AN/ of the Joint Electronic Type Designation System.

Table I. Set or Equipment Indicator Letters

1st Letter Installation	2nd Letter Type of equipment	3rd Letter Purpose
A—Airborne (installed and operated in aircraft). B—Underwarter mobile, submarine.	A—Invisible light, heat radiation. B—Pigeon. C—Carrier (wire).	A—Auxiliary assemblies (not complete operating sets). B—Bombing.

Table I. Set or Equipment Indicator Letters—Continued

1st Letter Installation	2nd Letter Type of equipment	3rd Letter Purpose
C—Air transportable (inactivated, do not use). D—Pilotless carrier. F—Fixed. G—Ground, general ground use (includes two or more ground installations). K—Amphibious. M—Ground, mobile (installed as operating unit in a vehicle which has no function other than transporting the equipment). P—Pack or portable (animal or man). S—Water surface craft. T—Ground, transportable. U—General utility (includes two or more general installation classes, airborne, shipboard and ground). V—Ground, vehicular (installed in vehicle designed for functions other than carrying electronic equipment, etc., such as tanks). W—Ship, submarine	D—Radiac. F—Photographic. G—Telegraph or teletype (wire). I—Interphone and public address. K—Telemetering. L—Countermeasures (inactivated, do not use). M—Meteorological. N—Sound in air. P—Radar. Q—Sonar and underwater sound. R—Radio. S—Special types, magnetic, etc. or combinations of types. T—Telephone (wire). V—Visual and visible light. X—Facsimile or television.	C—Communications (receiving and transmitting). D—Direction finder. G—Gun or searchlight directing. H—Recording (photographic, meteorological and sound). L—Searchlight control (inactivated, use "G"). M—Maintenance and test assemblies (including tools). N—Navigational aids (including altimeters, beacons, compasses, racons, depth sounding, approach and landing). P—Reproducing (photographic and sound). Q—Special, or combination of types. R—Receiving. S—Detecting and/or range and bearing. T—Transmitting. W—Remote control. X—Identification and recognition.

4. Glossary of Abbreviations

Appendix I contains a glossary of the standard abbreviations used in this publication. The abbreviations are listed in alphabetical order, together with the exact terminology of the word or phrase for which the abbreviation is used.

5. Details of Content

Descriptions of individual items of equipment in this publication are all organized in a standard format. The first page of each item usually contains all information necessary for general and rapid identification of the equipment, including a photograph, if available. Information more often required after selection and identification of an item generally appears on the second page of an item description.

a. Normally the latest model or models of equipment are used as a basis of the descriptive matter. The nomenclature type-designation printed at the top of each page indicates the specific item or model of an item covered by material on that page. The use of parentheses ( ) in the type-designation at the top of each page is intended to indicate coverage of more than one model of the item; if only specific items are covered by an entry, each item so covered is listed at the top of each page of that entry.

b. The *Cognizant Service* is defined as that service responsible for procuring the item of equipment and/or applying for its official nomenclature.

c. FSN is the Federal Stock Number assigned to the item for supply cataloguing. The FSN is a combination of the Federal Supply Classification number and the Federal Item Identification Number.

d. The meaning of the various terms used to describe the status—or *type classification*—of items of equipment covered in this publication are defined in paragraph 6. Also included in the publication are items which have not been assigned formal or official type classification, but which have been issued and are available for, or are in, current use (par. 6*d*).

e. Where available, a *photograph* of each item of equipment has been included. Some larger, complex items have been illustrated with stylized drawings. The photograph often does not show the entire equipment—most minor accessories have been deleted from the photographs, and some of the illustrations may not show all the major operating components. However, if major operating components are not shown in the accompanying illustration, this fact generally is stated in the accompanying functional description.

f. Data pertaining to the *major components* usually includes only the major *operating* components. To conserve space, power equipment often is not included in this listing. Such accessory items as headsets, handsets, and antennas generally are not included in the listings. Interconnecting cables and wire is not listed, even though it may be furnished with the item of equipment. In general, where a complete detailed listing of components is needed, refer to the appropriate supply documents that pertain to the specific item of equipment concerned.

g. Shipping Data, which is given in tabular form, includes the number of packages, total volume, and total weight of the equipment when packaged for shipment. Unless otherwise specified, the data refers to export shipment packaging.

h. That service having *Procurement Cognizance* for an item of equipment is defined as the Procuring Service.

i. The following breakdown of *Design Cognizance* is used throughout this publication:

USA, Sig C	United States Army, Signal Corps
USN, BuAer	United States Navy, Bureau of Aeronautics.
USN, BuOrd	United States Navy, Bureau of Ordnance.
USN, BuShips	United States Navy, Bureau of Ships.
USAF, RADC	United States Air Force, Rome Air Development Center.
USAF, WADC	United States Air Force, Wright Air Development Center.

6. Type Classification Definitions

Each Department of the Department of Defense uses its own system of status of equipment classification.

a. U.S. Army Definitions. The following terms are used by the U.S. Army to describe the status of its equipment:

(1) *Standard* type is used to designate the most advanced and satisfactory item or assemblage that has been adopted and is preferred for procurement. Normally, there will be only one standard type of each requirement.

(2) *Substitute standard* type is used to designate an item or assemblage which is not so satisfactory as the standard type, but is a usable stubstitute therefor, and may be procured only to supplement the supply of the standard type.

(3) *Limited standard* type is used to designate an item or assemblage that is less satisfactory than the standard or substitute standard type but which is acceptable and used as a substitute therefor until the supply is exhausted unless specific exception is made by the General Staff. A limited standard type item or assemblage is considered as an asset in the Army supply system to the extent to which it is determined acceptable for meeting supply demands for the standard or substitute standard items. Care must be exercised to insure that limited standard types acceptable solely for certain specific purposes such as training are not considered as assets for meeting operational requirements. Additional complete units of limited standard types will not be procured, but component parts and accessories may be procured by purchase, manufacture, or cannibalization as necessary to maintain the complete items in serviceable condition throughout an economical and reasonable life expectancy.

(4) *Obsolete* type is a type of item or assemblage which has been declared unsuitable for military (Army) use. Obsolete items will not be issued and will be disposed of at the earliest practicable date by the chief of the responsible agency in accordance with existing instructions, except in those special cases where they are to be retained for special requirements outside of the established Army supply program. Where the development and procurement status of new types make such action desirable, the chief of the responsible development agency will recommend reclassification of former types through the technical committee.

b. U. S. Navy Definitions. The following terms are used by the U.S. Navy to describe the status of its equipment:

(1) *Standard.* The most advanced and satisfactory articles adopted, and those which are preferred for procurement.

(2) *Limited standard.* Articles which do not have satisfactory military characteristics as standard articles, but are usable substitutes for standard articles. Complete

major units will not be procured, but component parts and accessories and complementary articles, even though they may be limited standard articles, may be procured if necessary and economical, to maintain the complete major units in serviceable condition throughout a reasonable life expectancy.

(3) *Substitute standard.* Articles which do not have as satisfactory military characteristics as standard articles and, when necessary, may be procured to supplement the supply of standard articles.

(4) *Planned standard.* Those articles under evaluation which have been indicated by the Ship Characteristics Board for installation through the Ship Improvement Guide on new construction and conversion projects. Approval for service use prior to installation is required for articles in this category.

(5) *Obsolescent.* Those articles which do not have satisfactory military characteristics. Complete units, component parts, accessories, and complementary articles will normally not be procured for the specific purpose of maintaining this equipment; however, spare parts common to other equipment in the supply established may be used for their maintenance.

(6) *Obsolete.* Those articles that have been declared unsuitable for their original military purpose. Disposal of stocks of obsolete articles will, in all cases, be expedited.

c. U.S. Air Force Definitions. The following terms are used in this publication to describe the status of equipment used by the U.S. Air Force:

(1) *Standard.* An item that meets an established need and is considered suitable for Air Force use.

(2) *Alternate standard.* An item that may not be so satisfactory as a standard item, but which is a usable alternate for procurement in quantity in place of the standard item when the standard item cannot be procured in quantities to satisfy Air Force needs.

(3) *Limited standard.* An item in stock that is not so satisfactory as either standard or alternate standard items but which is usable in place thereof. Limited standard items may be used until stocks are exhausted. Limited standard end items will not be procured. Additional parts and components may be procured when necessary to maintain the item in serviceable condition.

(4) *Tentative standard.* An item that appears promising enough operationally to warrant the risk of initiating production of limited quantities prior to the completion of development or prior to completion of testing.

(5) *Obsolete.* An item that no longer meets Air Force needs.

d. Status Designation "Used By," Definition. Certain items of equipment are not listed by a particular service as carrying any of the specific status designations in *a* through *c* above. However, in some instances, it is known that certain quantities of the equipment are in use at installations under the control of that particular service. These items are designated as "Used by" under the type classification of the service involved.

7. Currency of Information

Information and data in this publication is current as of the date printed on the first page of coverage for each item of equipment.

8. Stock Numbers

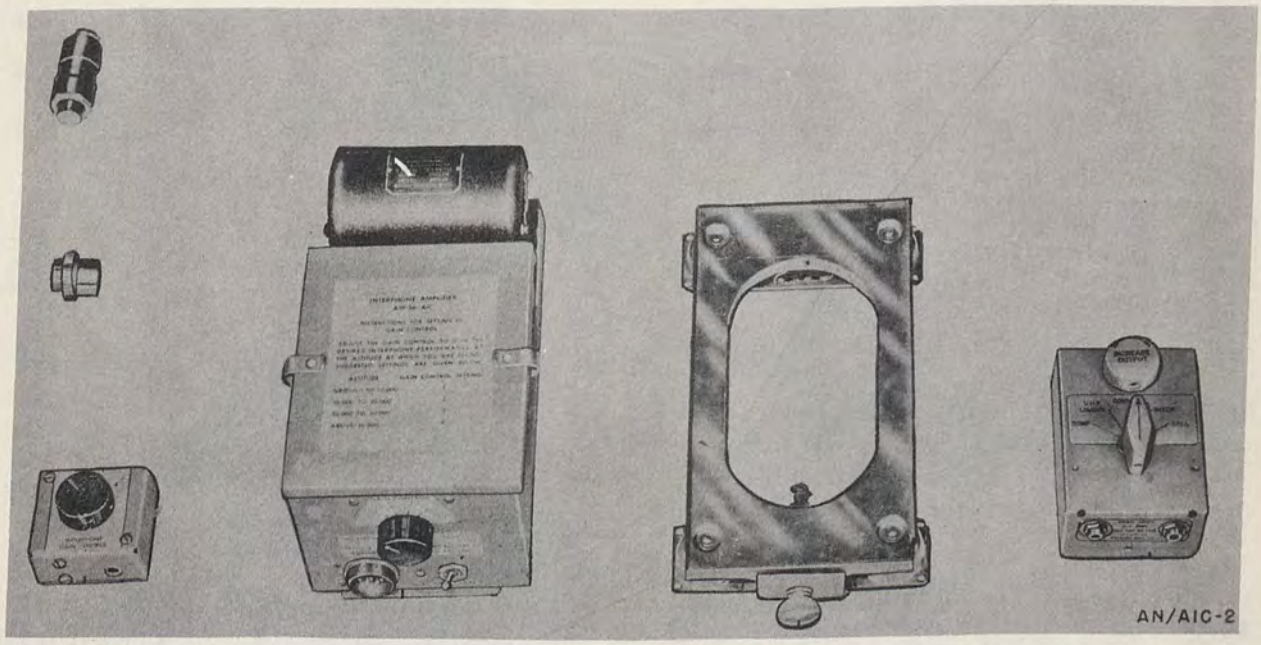
Throughout this publication, Federal Stock Numbers are given when available. In addition, the stock number formerly assigned by each department of the Department of Defense is given, if it can be determined.

9. Data Not Available

Blank spaces have been left under appropriate headings, to permit the user of this publication to enter any data that could not be determined during preparation.

12 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	L/Std
STOCK NO:	--	--	1600-266487340



FUNCTIONAL DESCRIPTION:

Interphone Equipments AN/AIC–2 and AN/AIC–2A are lightweight, high altitude (40,000 feet) multiplane aircraft communication units used by interceptor fighters and light medium bombers to provide interphone communication between the various interphone stations. They are operated by a push-to-talk button on the microphone.

The AN/AIC–2 is a high impedance unit used with radio equipment connected for high impedance output; the AN/AIC–2A is a low impedance unit used with radio equipment connected for low impedance output.

TECHNICAL CHARACTERISTICS:

Facilities: Affords operation of 15 stations (maximum), each capable of selecting compass, VHF liaison, command, interphone, and call circuits

Type Controls: Each station has a manual volume control and a 5-position rotary switch for selection of any circuit from the following: compass, VHF liaison, command, interphone, and call. Interphone Amplifier AM–26/AIC can be controlled either by its local gain control or by means of Remote Gain Control C–97/AIC–2. Interphone Amplifier AM–26A/AIC is controlled by Automatic Gain Control C–158/AIC which is included in the amplifier case.

Power Output: 4 w into a 250-ohm load

Distortion: 6%

Power Requirements: 1.7 amp at 24- to 28-v dc

AN/AIC-2, -2A INTERPHONE EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USAF)		
1	Interphone Amplifier AM–26/AIC	1600–211304960	9-3/4 x 5-1/4 x 5-1/8	6.8
1	Interphone Amplifier AM–26A/AIC	1600–211304964	9-3/4 x 5-1/4 x 5-1/8	6.8
1	Jack Box BC–1266	1600–212996500	4-11/16 x 3-1/2 x 3-1/16	1.0
	or			
1	Jack Box BC–1366M	1600–212996700	4-11/16 x 3-1/2 x 3-1/16	1.0
1	Mounting MT–28/ARN–5	1600–293345050	11-3/4 x 6 x 1-1/4	1.2
As required	Remote Gain Control C–97/AIC–2	1600–211687270	2-3/4 x 2-1/2 x 2-1/16	.3

REFERENCE DATA AND LITERATURE:

TO 12R2–2AIC2–2, –14

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	0.67	15.25

PROCUREMENT DATA

PROCURING SERVICE: USAF DESIGN COG: USAF, ARDC

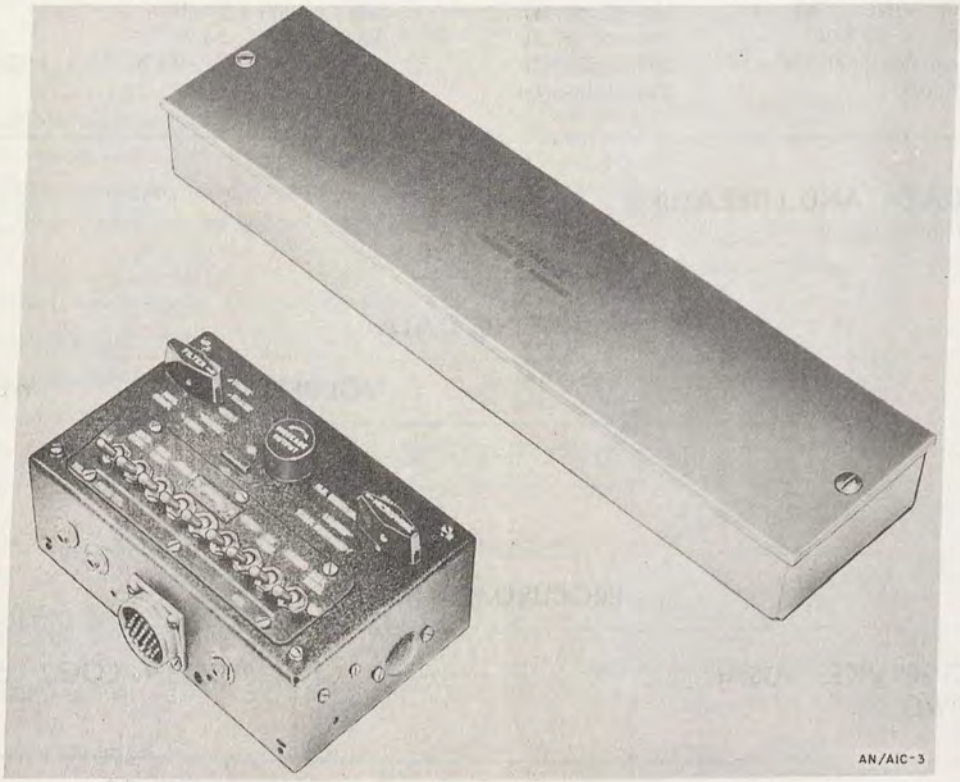
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERPHONE EQUIPMENT AN/AIC-3

12 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	L/Std
STOCK NO:	--	--	1600-266487350



FUNCTIONAL DESCRIPTION:

Interphone Equipment AN/AIC–3 is an airborne interplane, intraplane, and air-to-ground intercommunication system having not less than two nor more than five interphone stations. It is designed for aircraft requiring not more than five master stations with all control facilities available at each station. The system is normally supplied for light bombers and cargo aircraft.

This equipment has five functions: voice communications between any or all interphone stations; individual selections at each station of the audio output of eight receivers; means of switching the microphone to any one of three transmitters or to interphone; a call facility whereby all positions may be called by voice regardless of the microphone or facility switch setting at any of the call stations; and a filter facility whereby the output signal of the automatic radio compass receiver may be fed through a radio range filter—at each interphone station—to the operator.

TECHNICAL CHARACTERISTICS:

Facilities: Affords intraplane and interplane communication and control of radio equipment

Type Controls: Manual; 3-position switch for voice, range, or both; 5-position switch for VHF command, liaison, HF command transmitters, and interphone call

Power Output: 60 mv at 600 ohms impedance (per unit)

Power Requirements: 0.445 amp (per station) at 24- to 28-v dc

AN/AIC-3 INTERPHONE EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USAF)		
2 to 5	Control C-166( )/AIC-3	1600-211687477	8-3/4 x 5-3/4 x 3-9/16	4.0 ea
2 to 5	Filter F-21/ARA-9	1600-387447470	3-3/4 x 2-3/4 x 2-1/2	1.62 ea
1	Junction Box J-90/AIC-3	1600-298349415	20-3/32 x 4-57/64 x 2-1/16	3.3
2 to 5	Plug U-6/U	3300-294385500	----------	0.22

REFERENCE DATA AND LITERATURE:

TO 12R2-2AIC3-14, -1, -2

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	0.57	8.95

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

DESIGN COG: USAF, ARDC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERPHONE-RADIO CONTROL SET AN/AIC-4

12 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Interphone-Radio Control Set AN/AIC-4 provides the pilot and radio operator of an aircraft with control over the microphone, radio transmitter, radio receiver audio output, and the interphone circuits of the aircraft communication facilities.

This equipment also provides all crew members with interphone communication, access to the audio output from he vhf receiver, and control of the vhf transmitter.

t

TECHNICAL CHARACTERISTICS:

Frequency Range: 0 to 4,000 cps
Power Output:
Low: 1.5 w
High: 4 w
Input Impedance:
Microphone: 200 ohms
Radio Channel: 0 to 3,000 ohms
Output Impedance:
Low: 120 ohms
High: 30 ohms
Power Requirements: 63 w, 28-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Interphone Amplifier AM-40/AIC	----------	9-1/8 x 13-13/32 x 5-3/4	10.7
1	Operator's Control Unit C-174/AIC-4	----------	4-1/8 x 4-5/32 x 3-5/16	1.38
	or			
	Control Unit C-387/AIC-4	----------	6 x 3-3/8 x 4-15/16	.9
	or			
	Control Unit C-387A/AIC-4	----------	6 x 3-3/8 x 4-15/16	.9
1	Pilot's Control Unit C-242/AIC-4	----------	6 x 3-3/8 x 4-23/32	1.7
	or			
	Pilot's Control Unit C-172/AIC-4	----------	5-7/8 x 5-15/32 x 3-1/2	2.8
	or			
	Pilot's Control Unit C-150/AIC-4	----------	6 x 3-3/8 x 4-13/16	1.7
1 to 3	Station Control Unit C-173/AIC-4	----------	4-1/8 x 4-5/32 x 3-7/16	1.31

AN/AIC-4 INTERPHONE-RADIO CONTROL SET

REFERENCE DATA AND LITERATURE:
AN16-30AIC4-2

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

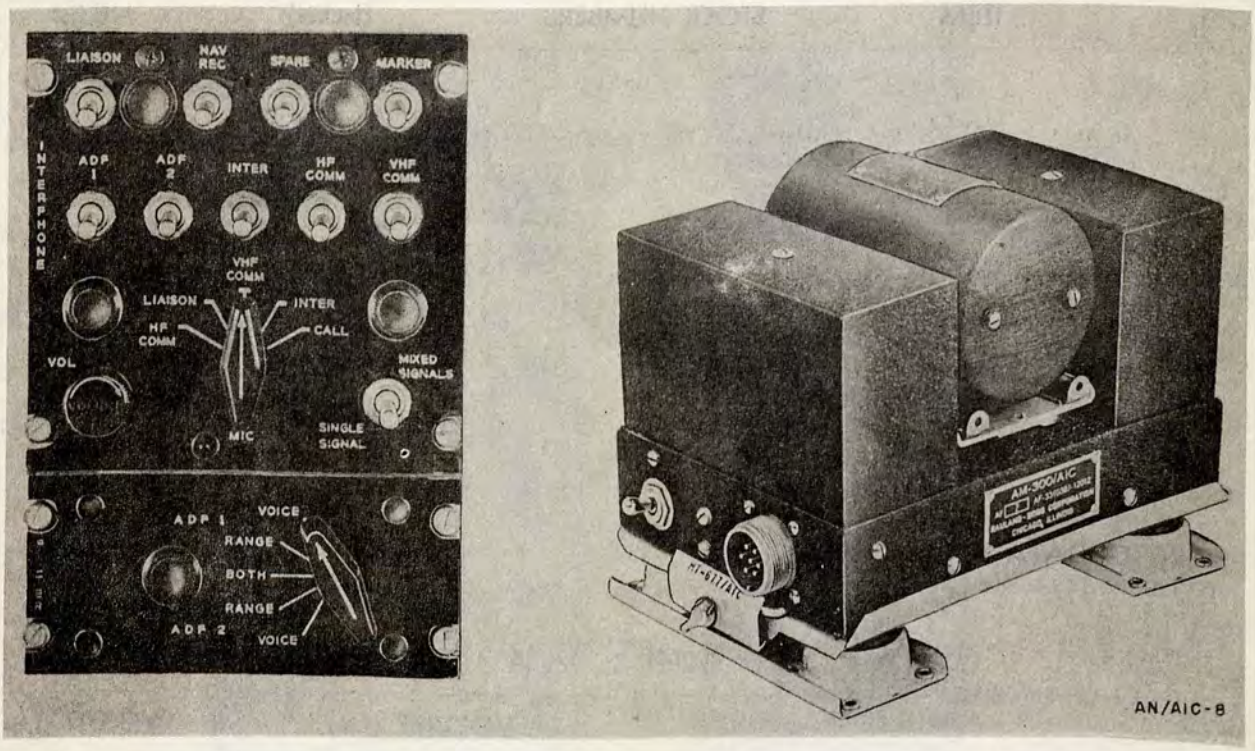
DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Magnavox Co.	Ft. Wayne, Ind.	NOas-6885	

INTERCOMMUNICATION SET AN/AIC-8

12 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	L/Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Intercommunication Set AN/AIC–8 is an aircraft intercommunication and intraplane system having not less than two nor more than five interphone stations, as well as a number of auxiliary stations. The maximum combined total of the interphone and auxiliary stations is 20. The system is normally installed on fighter bombers and cargo, as well as on transport aircraft.

Basically the equipment consists of an audio amplifier (including dynamotor), an interphone control, and filter assembly components.

The filter assembly permits reception of either one or both ADF receivers.

TECHNICAL CHARACTERISTICS:

Facilities: Affords voice communication between any or all interphone stations, individual selection at each interphone station of the audio output of eight receivers and of the intercommunication system; also provides a means of switching a microphone to any of three transmitters or the intercommunication system; all stations may be called by voice regardless of the setting of the microphone or the receiver switches at any of the stations.

Type Controls:
Operation: Manual
Toggle Switches:
Number: 9
Designations: LIAISON, NAV REC, SPARE, MARKER, ADF 1, ADF 2, INTER, HF COMM, VHF COMM
Rotary Switch:
Number of Positions: 5
Designations: HF COMM, LIAISON, VHF COMM, INTER, CALL
Rotary Switch:
Number of Positions: 5
Designations:
ADF 1: VOICE, RANGE, BOTH
ADF 2: VOICE, RANGE, BOTH

AN/AIC-8 INTERCOMMUNICATION SET

Power Requirements:
AF Amplifier AM–300/AIC: 1.6 amp at 24- to 28-v dc
Mixer Amplifier AM–142/AIC: 0.6 amp at 24- to 28-v dc
Interphone Control C–633/AIC–8: 0.2 amp at 24- to 28-v dc
Filter Assembly F–90/AIC: 0.04 amp at 24- to 28-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USAF)		
1	AF Amplifier AM–300/AIC	1600–211307300	7-1/2 x 4-5/16 x 5-3/16	6.3
As required	Filter Assembly F–90/AIC	1600–387477740	5-3/4 x 2-5/8 x 3-3/4	
As required	Interphone Control C–633/AIC–8	1600–211944745	5-3/4 x 5-5/8 x 3-3/4	2.3
As required	Jack Box J–139A/AIC	1600–212919391	3-3/8 x 2 x 2	.3
As required	Mixer Amplifier AM–142/AIC	1600–211305824	5-1/4 x 6 x 1-3/4	1.9
As required	Mounting Plate MT–556/AIC	1600–298359990	5-1/4 x 5 x 1-1/4	.35
	Mounting Plate MT–677/AIC	1600–293348744	8-1/2 x 5-7/16 x 1-1/2	.47

REFERENCE DATA AND LITERATURE:

TO 12R2–2AIC8–2, –14

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	0.49	8.1

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:
DESIGN COG: USAF, ARDC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERCOMMUNICATION SET AN/AIC-10, -10A

12 November 1958
Cognizant Serv: USAF FSN:

USA	USN	USAF
TYPE CLASS:		Std
STOCK NO:		



FUNCTIONAL DESCRIPTION:

Intercommunication Set AN/AIC–10 and AN/AIC–10A are communication equipments designed for maximum exclusion of ambient acoustic distortion and for improved stability at high altitudes. Further, they provide electronic automatic gain control, give good signal-to-noise ratio under extreme noise conditions, and improved intelligibility at high altitudes, with excellent reliability.

These equipments consist of a line of dynamic microphones, connectors, cables, interphone controls and accessories, an amplifier and headsets. An interphone system for any specific aircraft is made up by selecting items from this line of equipment that will provide the particular interphone facilities desired at each crew position in the aircraft. Application is in all types of military aircraft.

The AN/AIC–10A is identical to the AN/AIC–10 in all respects except as follows: a transistorized amplifier is used in place of the vacuum tube amplifier in Interphone Contro C–823/AIC–10, Control Panels C–824/AIC–10 and C–825/AIC–10, Relay Assembly RE–94/AIC–10, and Dynamic Loudspeaker LS–184/AIC–10. Dynamotor high voltage power supplies are eliminated since the transistor amplifiers operate directly from the 28-volt direct current aircraft power supply.

TECHNICAL CHARACTERISTICS:

Facilities: Affords partial control and intermixing of a maximum of 10 receiver outputs, talking on 6 positions; loudspeaker monitoring and automatic volume compression; automatic gain control; and communication beyond the aircraft through means of radio equipment.

Type Controls: 5 to 10 toggle switches for audio output of 5 to 10 receivers; 6-position rotary switch to permit talking

AN/AIC-10, -10A INTERCOMMUNICATION SET

over private interphone, command, liaison, intercommunication, interphone and call circuits; mixing or single-receiver; monitoring; loudspeaker when desired.

Power Output: 200 mw (nominal) per interphone station

Power Requirements:
AN/AIC–10: 450 ma at 27.5-v dc (nominal) per interphone station
AN/AIC–10A: 330 ma at 27.5-v dc (nominal) per interphone station

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USAF)		
As required	Amplifier, Audio Frequency AM–843/AIC–10	1600–010022035	5-21/32 x 4-21/32 x 2-3/4	2.95
As required	Control Panel C–824/AIC–10	1600–211945170	5-3/4 x 3-3/4 x 6-21/32	3.3
As required	Control Panel C–824A/AIC–10	1600–011245310	5-3/4 x 3-3/4 x 6-21/32	3.3
As required	Control Panel C–825/AIC–10	1600–211945175	5-3/4 x 3-3/4 x 6-21/32	3.1
As required	Control Panel C–825A/AIC–10	1600–011245315	5-3/4 x 3-3/4 x 6-21/32	3.1
As required	Control Panel C–826/AIC–10	1600–211945180	5–3/4 x 2-5/8 x 3-9/16	0.9
As required	Dynamic Loudspeaker LS–184/AIC–10	1790–052735500	7-1/4 x 8-5/32 x 4-1/8	3.1
As required	Dynamotor DY–76/AIC–10	1600–337838756	6-7/8 x 7-7/8 x 5-7/16	9.2
As required	Dynamotor DY–77/AIC–10	1600–337838766	5-5/8 x 5 x 4-9/16	4.2
As required	Interphone Control C–823/AIC–10	1600–211945165	5-7/16 x 3-5/8 x 4-3/8	2.1
As required	Interphone Control C–823A/AIC–10	1600–011245305	5-7/16 x 3-5/8 x 4-3/8	2.1
As required	Mounting MT–1059/U	1600–012830010	7-11/16 x 5-1/2 x 1-7/16	.5
As required	Mounting MT–1060/U	1600–012830020	5-11/16 x 4-13/16 x 1-1/14	.3
As required	Mounting MT–1424	1600–012827910		

REFERENCE DATA AND LITERATURE:

TO 12R2–2AIC10–1, –2, 4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
9	1.09	23.7

INTERCOMMUNICATION SET AN/AIC-10, -10A

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: MIL-I-26122 (USAF)
MIL-I-6699 (USAF)
MIL-I-6699A (USAF)

DESIGN COG: USAF, ARDC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Andrea Radio Corp.	Long Island, N. Y.	AF33(600)30102	
Andrea Radio Corp.	Long Island, N. Y.	AF33(600)31688	
Radio Corp. of America	Camden, N. J.	AF33(038)18977	
Radio Corp. of America	Camden, N. J.	AF33(600)22924	

PUBLIC ADDRESS SET AN/AIC-13

12 November 1958
Cognizant Serv: USAF FSN: 5831–

	USA	USN	USAF
TYPE CLASS:	--	--	Std
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Public Address Set AN/AID–13 is an announcing system that provides communications in areas where the ambient noise level is high. It may be effectively employed in directing loading operations or in giving instructions to maintenance crews. Further, it may be used in providing entertainment and radio reception for passengers or in announcing instructions and messages to flying personnel.

This equipment is designed to be operated with Intercommunication Sets AN/AIC–10, AN/AIC–10A, and AN/AIC–18.

The system can be installed for use in cargo and bomber type aircraft. It provides loudspeaker communication from aircraft to ground or within the aircraft.

TECHNICAL CHARACTERISTICS:

Facilities: Audio Frequency Amplifier AM–944/AIC–13 is capable of operating up to four loudspeakers simultaneously. When area and ambient requirements demand more power and more coverage, up to three amplifiers may be operated from Public Address Set Control C–1614/AIC–13. When operating conditions do not require the use of this panel, amplifiers may be connected in parallel, each driving four Magnetic Loudspeakers LS–211/AIC–13. In installations requiring high power external announcing, Audio Frequency Amplifier AM–944/AIC–13 is equipped with relays so that one or another Magnetic Loudspeaker LS–211/AIC–13 may be operated individually or in unison.

Type Controls: Public Address Set Control C–1614/AIC–13 has a volume control circuit arranged so that loudspeaker volume may be directly adjusted or remotely controlled from any loudspeaker position. The control also has a four-position rotary switch for selection of individual or a combination of loudspeakers. Five monitoring facility switches are available to provide radio reception.

Power Output: 20 w (nominal) per amplifier

Power Requirements:

Audio Frequency Amplifier AM–944/AIC–13:
- *Standby:* 0.04 amp at 27-v dc
- One Loudspeaker: 1.1 or 1.22 at 27-v dc
- Two Loudspeakers: 1.22 amp at 27-v dc
- Four Loudspeakers: 1.34 amp at 27-v dc

Public Address Set Control C–1614/AIC–13:
- *Standby:* 0.12 amp at 27-v dc
- *Monitor Reaction:* 0.16 amp at 27-v dc
- *P. A. Announce:* 0.24 amp at 27-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USAF)		
1	Amplifier, Audio Frequency AM–944/AIC–13	----------	5-3/4 x 5-1/2 x 3-3/4	5
1	Control, Public Address Set C–1614/AIC–13	----------	5-3/4 x 3-3/4 x 4	2
As required	Loudspeaker, Magnetic LS–211/AIC–13	----------	7-1/2 x 3-3/4 x 4	3.15
1	Mounting MT–1412	1600–012827910	7 x 5 x 2-1/2	.6

AN/AIC-13 PUBLIC ADDRESS SET

REFERENCE DATA AND LITERATURE:

TO 12R2-2AIC13-2, -3, -4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USAF DESIGN COG: USAF, ARDC

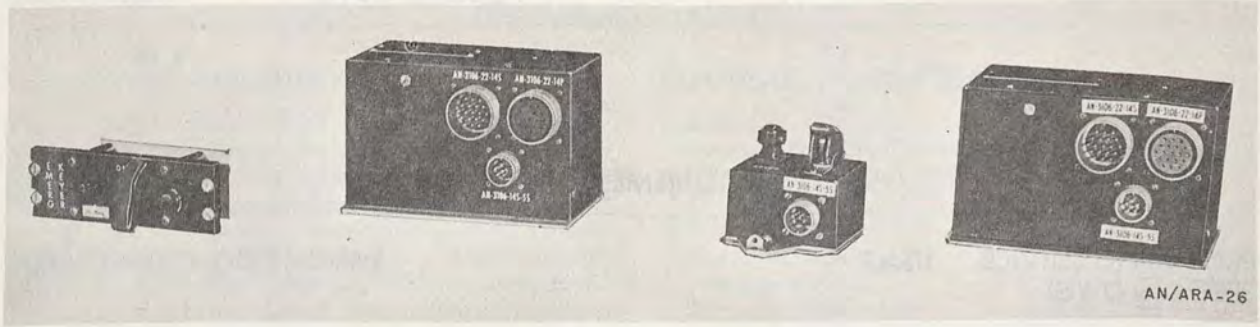
SPEC &/or DWG: MIL-A-25546; MIL-L-25547; MIL-G-25548

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Corp. of America	Camden, N. J.	AF33(600)-34351	

CONTROL-KEYER GROUP AN/ARA-26

12 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Control-Keyer Group AN/ARA-26 is designed to automatically operate an airborne command or liaison transmitter in the event of an emergency.

The keyer automatically turns on a transmitter and channels it to the distress frequency and simultaneously sets controls on the transmitter for modulated continuous wave emission. Following the completion of channeling, it modulates continuous wave distress signals in international morse code.

A time delay, which can be preset for any interval from 5 to 30 seconds, allows time for transmitter warmup and channeling.

This equipment is used in bomber, reconnaissance, air support, trainer, cargo, and fighter aircraft. It is applicable for emergency operation of Radio Sets AN/ARC–3, –8, –21 –21X, –27, –34, –36, –49, –66, and Collins 618S–1.

TECHNICAL CHARACTERISTICS:

Type Controls: Control Panel C–790/ARA–26 is rack mounted in the cockpit of the aircraft and provides the following functions: ON-OFF starting switch and switch guard; edge lighting panel light; and indicator light with push-to-test ferrule. Keyer Control C–789/ARA–26 is mounted at a remote location in the aircraft so as to be readily accessible for operation by the radio or radar operator. It has the same function as the C–790/ARA–26.

Frequency Range in Mc: Operates on distress frequency

Power Requirements: 0.7 amp at 27.5 v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USAF)		
1	Control Panel C–790/ARA–26	1600–211688980		
1	Keyer KY–65/ARA–26	1600–211613353		
	or			
	Keyer KY–65A/ARA–26	1600–012514100		
1	Keyer Control C–789/ARA–26	1600–211945099		
1	Mounting FT–292–A	1600–293160000		
1	Mounting MT–796/U	1600–293348969		

AN/ARA-26 CONTROL-KEYER GROUP

REFERENCE DATA AND LITERATURE:

TO 12R5-2ARA26-1, -2, -3

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	0.21	7.19

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

DESIGN COG: USAF, ARDC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Courter Products Division	----	AF33-(600)-32093	
Suffolk Products Corp.	Northport, N. Y.	AF33(600)-32-64	
Webster-Chicago Corp.	Chicago, Ill.	AF33(038)-16702	$151.00

TWO CHANNEL REKEYER AN/ARA-type

4 December 1958
Cognizant Serv: USN FSN: AFSAV 39C

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Two Channel Rekeyer AFSAV 39C is designed for use in fixed radio receiving stations although the equipment is rugged enough for mobile operation. It converts keyed tone signals received from any communication receiver, such as ASAN5 and the DEN 35, into 30- or 60-milliampere direct current pulses and provides for operation of two teleprinters. It contains no noise rejecting circuits; however, under ideal conditions, it may be used directly from a receiver. The signal is printed on either a standard model 14 Typing Reperforator or model 15 Page Printer.

The equipment consists of a single unit 5-1/4 inches high which will mount in a standard 19-inch rack.

Electrically similar to Two Channel Rekeyer AFSAV 39A.

The following equipment is used with, but is not supplied as a part of, the Two Channel Rekeyer AFSAV 39C: any communications receiver, such as the ASAN5 and the DEN 35, or; model 14 Typing Reperforator; model 15 Page Printer; oscilloscope with dc input; vacuum-tube voltmeter; and a standard electronic equipment repair kit.

TECHNICAL CHARACTERISTICS:

Input Data:
Impedance: 600 ohm (balanced or unbalanced)
Type Tone Data: 300 to 10,000 cps; tone frequency, ON-OFF keyed
Band Length: 5 ms
Signal Input Level:
Nominal: 0 dbm
Maximum: +20 dbm
Minimum (Threshold Level): −12 dbm
Signal Input Lines: 2
Signal to Noise Ratio: 4 to 1 (maximum)

Output Data:
Recording Method: 2 model 14 typing reperforators or 2 model 15 page printers or any combination of both
Current: 30 ma per channel for holding-type printers, 60 ma per channel for pulling-type printers
Band Distortion: 0.5 ms

Power Requirements: 1 amp current drain at full load, 95- to 125-v 48- to 62-cycle 1-phase ac (Power input of Two Channel Rekeyer AFSAV 39C is 115 w, 115-v ac.)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cable, power	----------	72 lg	1
1	Cable, signal	----------	72 lg	1.5
2	Plug, phone	----------	1/2 dia x 20-25/32 long	
1	Two Channel Rekeyer AFSAV 39C	----------	5-1/4 x 16 x 19	43

REFERENCE DATA AND LITERATURE:

AN/ARA-type TWO-CHANNEL REKEYER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.98	100

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiation Inc.	Melbourne, Fla.	DA49-170-sc-1702, 29 June 58 MIPR-R-55-881-57023	$362.00 with equipment spares

RADIO FREQUENCY TUNER AN/ARA-type

20 October 1958
Cognizant Serv: USN FSN: 5820-519-5074

TN-273/URT

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Frequency Tuner TN-273/URT is designed for automatic tuning of open, fixed wire antennas from 45 to 100 feet long and the coupling of the 52-ohm output circuit of an aircraft transmitter having 50 to 100 watts power output to such antennas over a frequency range of 2 to 25 mc. Most grounded-end antennas of similar length also are fully tunable, but in some cases may require a different fixed shunt capacitance.

The tuner includes an antenna transfer relay circuit. This circuit transfers the aircraft antenna directly to a separate receiver when the transmitter is not being used; thus, separate components may be operated in the same manner as a transmitter-receiver.

Ac Power Supply PP-1477(XN-1)/URT is required for the operation of the tuner.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 25
Input Impedance: 52 ohms
Antenna Tuning Data:
Type: Fixed open wire
Length: 45 to 100 feet
Power Requirements:
Primary Power Supply: 27.5-v dc
Transmitter Plate Supply: 400- or 250-v dc
Aircraft or Transmitter
Power Source: 15 w, 115-v 400-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Mounting	----------	1-1/2 x 10-3/8 x 10-5/8	1.25
1	Radio Frequency Tuner TN-273/URT	----------	7-11/16 x 10-3/8 x 13-7/8	17.3

(Equipment consists of only one major operating component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92844

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/ARA-type RADIO FREQUENCY TUNER

PROCUREMENT DATA

PROCURING SERVICE: USN BuShips
SPEC &/OR DWG: Collins Radio Model 180L–3

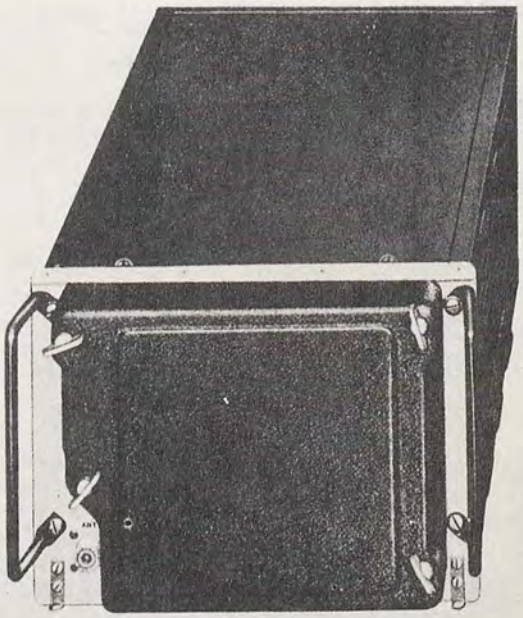
DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NObsr–71044	$1,800

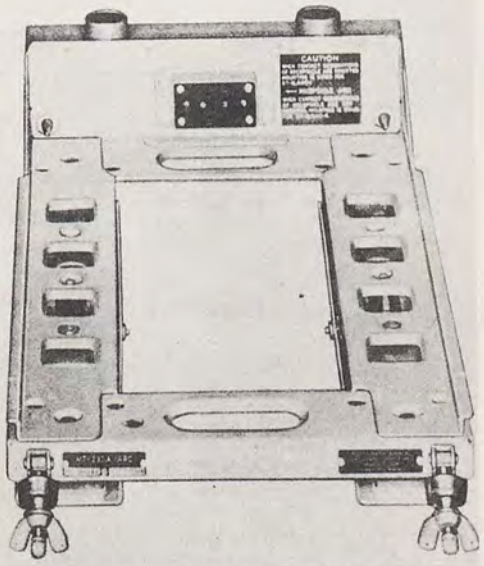
RADIO SET AN/ARC-1, -1X, -1A, -1AX

12 November 1958
Cognizant Serv: USN FSN: 5820-665-1477 (AN/ARC-1)

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-106721-200 (AN/ARC-1)	--



RADIO TRANSMITTER-RECEIVER RT-18A/ARC-1



MOUNTING BASE MT-230A/ARC AND CABLING CX-181B/ARC-1

AN/ARC-1A

FUNCTIONAL DESCRIPTION:

Radio Sets AN/ARC-1, AN/ARC-1X, AN/ARC-1A, and AN/ARC-1AX are aircraft amplitude modulated (A3) transmitter-receivers designed to operate within the vhf band on any of nine preset crystal-controlled frequencies. The channel selector is operated by the aircraft pilot. An additional restricted guard channel frequency permits monitoring or simultaneous sending and receiving operation under restricted conditions.

These equipments, intended for air-to-air and air-to-ground communication, are suitable for flying control, tactical control, or formation flying.

Radio Sets AN/ARC-1 and AN/ARC-1X are similar to Radio Set AN/ARC-12 except for the frequency range.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 100 to 156
Preset Channels: 10 (including guard channel)
Guard Channel: 121.5 mc
Frequency Stability: 0.025%
Maximum Range (normal Conditions): Line of sight distance (about 280 miles) at 5,000 ft
Receiver:

Intermediate Frequency: 9.72 mc

Audio Frequency Output: Dual output arranged for either 300- or 400-ohm load

Noise Suppression: Squelch circuit and peak-noise limiter

Sensitivity: 2.8 uv (approx)

AN/ARC-1, -1X, -1A, -1AX RADIO SET

Transmitter:
Output Impedance: 50 ohms
Power Output (Rf Carrier): 8 w(approximately)
Modulation Type: Amplitude
Selectivity: 25 db down at 100 kc from resonance
Peak Power Output: 4 times carrier output

Power Requirements:
Dynamotors DY–9/ARC–1, DY–9A/ARC–1, DY–9B/ARC–1:
Rated Input:
Continuous: 4 amp at 26-v dc
Intermittent: 7.5 amp at 26-v dc
Rated Output:
Continuous: 0.135 amp at 360-v dc
Intermittent: 0.355 amp at 310-v dc
Power Supply PP–1092/U:
Input: 450 w 115- or 230-v, 60-cycle, 1-phase ac
Output: 360 ma at +360-v dc; 30 ma at −150-v dc; 4 amp at either 13-v or 26-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For AN/ARC–1:			
1	Cabling CX–181B/ARC–1			1.75
1	Control Unit C–45/ARC–1			
	or			
	Control Unit C–115/ARC–1			
	or			
	Radio Set Control C–865/ARC–1			1.0
	Dynamotor DY–9/ARC–1			
	or			
	Dynamotor DY–9A/ARC–1			
	or			
	Dynamotor DY–9B/ARC–1		3-1/2 x 5-1/4 x 9	7.0
6	Grip terminal (diamond)			
1	Mounting Plate MT–4/ARR–2 (for C–45/ARC–1)			
1	Plug AN–3106–20–1P with Cable Clamp AN–3057–12		1-7/8 dia	
1	Plug AN–3106–20–1S with Cable Clamp AN–3057–12		1-7/8 dia	
1	Plug AN–3106–20–16P with Cable Clamp AN–3057–12		1-7/8 dia	
1	Radio Transmitter-Receiver RT–18/ARC–1, including:		9-1/32 x 10-7/8 x 24-3/8	40.0
1	Mounting Base MT–100/ARC–1, MT–230/ARC, or MT–239A/ARC			4.4
2	Terminal lug (25 amp)			

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For AN/ARC-1X:			
1	Cabling CX-181B/ARC-1			
1	Control Unit C-45/ARC-1			
	or			
	Control Unit C-115/ARC-1	----------	----------	1.0
	or			
	Radio Set Control C-865/ARC-1	----------	----------	1.0
6	Grip terminal (diamond)			
1	Mounting Plate MT-4/ARR-2 (for C-25/ARC-1)			
1	Plug AN-3106-20-1P with Cable Clamp AN-3057-12	----------	1-7/8 dia	
1	Plug AN-3106-20-1S with Cable Clamp AN-3057-12	----------	1-7/8 dia	
1	Plug AN-3106-20-16P with Cable Clamp AN-3057-12	----------	1-7/8 dia	
1	Power Supply PP-1092/U	----------	15 x 16 x 20	85
1	Radio Transmitter-Receiver RT-18/ARC-1, including:	----------	9-1/32 x 10-7/8 x 24-3/8	40
	Mounting Base MT-100/ARC-1, MT-230/ARC, or MT-239A/ARC	----------	----------	4.4
2	Terminal lug (25 amp)			
	For AN/ARC-1A:			
1	Cabling CX-181B/ARC-1	----------	----------	1.75
1	Dynamotor DY-9B/ARC-1	----------	3-1/2 x 5-1/4 x 9	5.7
1	Plug AN-3106-20-1P with Cable Clamp AN-3057-12	----------	1-7/8 dia	
1	Plug AN-3106-20-16P with Cable Clamp AN-3057-12	----------	1-7/8 dia	
1	Radio Transmitter-Receiver RT-18A/ARC-1 including:	----------	9-1/32 x 10-7/8 x 24-3/4	40
1	Mounting Base MT-230A/ARC	----------	----------	4.4
1 set	Tools			
	For AN/ARC-1AX:			
1	Cabling CX-181B/ARC-1	----------	----------	1.75
1	Plug AN-3106-20-1P with Cable Clamp AN-3057-12	----------	1-7/8 dia	

AN/ARC-1, -1X, -1A, -1AX RADIO SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Plug AN–3106–20–16P with Cable Clamp AN–3057–12	----------	1-7/8 dia	
1	Power Supply PP–1092/U	----------	15 x 16 x 20	85
1	Radio Transmitter-Receiver RT–18A/ARC–1, including:	----------	9-1/32 x 10-7/8 x 24-3/4	40
1	Mounting Base MT–230A/ARC–1	----------	----------	4.4
1 set	Tools			

REFERENCE DATA AND LITERATURE:

For *AN/ARC–1*: AN 16–30ARC1–3; NAVSHIPS 98543
For *AN/ARC–1A:* AN 16–30ARC1–7; NAVSHIPS 98543

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For *AN/ARC–1:*			
Western Electric Co.	New York, N. Y.	NXsa–31225, 1943	$1,100.00
For *AN/ARC–1A:*			
Western Electric Co.	New York, N. Y.	NXsa–96346, 16 November 1945	$1,100.00

RADIO SET AN/ARC-2

12 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	2S921-2	N16-R-27135-2281	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC-2 is a general purpose, medium power, amplitude modulated transceiver designed for installation in all types of naval aircraft. It provides manual selection by pilot or radio operator of eight preset master-oscillator controlled channels or remote control of the autotune system of channel selection.

This equipment is similar to Radio Set AN/ARC-2A except for its receiver-transmitter component.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 9,050 kc
Transmitter Rf Output: 17 to 30 w (minimum)
Receiver Audio Output: Consistent at 500 mw (maximum) with automatic volume control and noise limiter action
Audio Response: ±3 db relative to the response at 1,000 cps for modulated frequencies of 300 to 3,500 cps
Type Emission and Reception: A1, A2, A3
Operating Limits:
Temperature: −58° to +150° F.
Altitude: 40,000 feet (maximum) above sea level
Type of Control: Autotune system, manual or electrical selection
Power Requirements: 20 amp at 26.5-v dc continuous duty (must withstand surge of 60 amp for 0.5 second)

AN/ARC-2 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 or more	Control Box C-243/ARC-2	.....	5-15/16 x 3-1/2 x 3-1/4	2.0
1 or more	Control Box C-244A/ARC-2	.....	8-2/16 x 3-5/8 x 3-1/4	1.3
1 or more	Control Panel C-245A/ARC-2	.....	7-23/32 x 6 x 2-1/4	1.3
1	Dynamotor DY-31/ARC-2	.....	9-3/32 x 4-1/16 x 4-1/16	9.5
1	Mounting Base MT-421/AR	.....	5-3/16 x 16-1/2 x 23-15/32	6.0
1 or more	Mounting Plate MT-163/ART-13	.....	5-1/4 x 3-5/8 x 3/16	.25
1	Transmitter-Receiver RT-91/ARC-2	.....	7-23/32 x 15-9/16 x 21-13/32	63.9

REFERENCE DATA AND LITERATURE:

AN 16-30ARC2-3

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuAer

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NXsa 90807, 1 July 1945 NOas 11025, 15 December 1946	

RADIO SET AN/ARC-2A

12 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC–2A is a general purpose, medium power, amplitude modulated equipment designed for installation in all types of naval aircraft. It provides two-way radio communication by voice, cw, or mcw on any one of eight preset channels that may be selected from the transmitter-receiver panel or from a remote control panel.

This equipment is similar to Radio Set AN/ARC–2 except for its receiver-transmitter component.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 9,050 kc
Power Output: 15 to 30 w
Type Emission and Reception: A1, A2, A3
Type Receiver: Superheterodyne
Operating Limits:
Temperature: 58°F. to +140°F. (−50°C. to +60°C.)
Altitude: 40,000 feet (maximum)
Power Requirements: 20 amp at 26.5 v-dc ±10%

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 or more	Control Box C–244A/ARC–2	.....	3-1/4 x 3-5/8 x 8-1/8	1.3
1 or more	Control Panel C–245A/ARC–2	.....	2-1/4 x 6 x 7-23/32	1.3
1	Dynamotor DY–31/ARC–2	.....	4-1/16 x 4-1/16 x 9-3/32	9.5
1	Mounting Base MT–421/AR or Mounting Base MT–421A/AR	.....	5-3/16 x 16-1/2 x 23-15/32	6.0
1 or more	Mounting Plate MT–163/ART–13	.....	3/16 x 3-5/8 x 5-1/4	.25
1 or more	Radio Set Control C–732/ARC–2	.....	2-1/4 x 5-1/4 x 6-5/8	1.9
1 or more	Radio Set Control C–732A/ARC–2	.....	2-1/4 x 5-1/4 x 5-3/4	1.7
1	Transmitter Receiver RT–298/ARC– A	.....	7-23/32 x 15-9/16 x 21-13/32	63.5

REFERENCE DATA AND LITERATURE:

AN 16–3ARC2–21

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

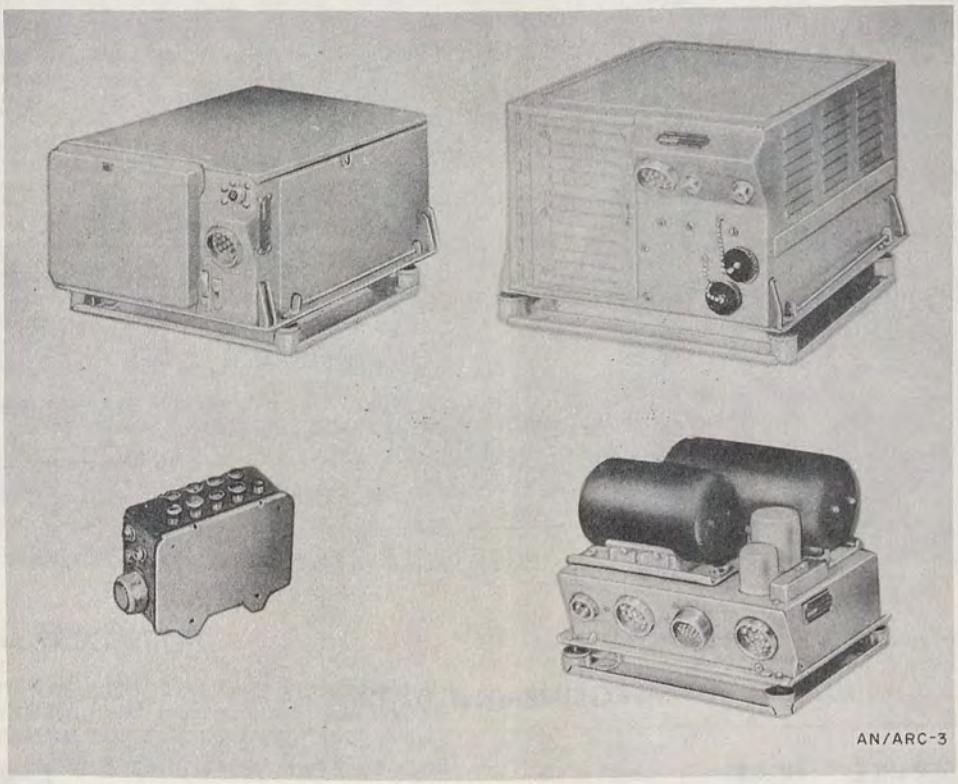
DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NOas 52-918, 16 May 1952	$2,690.00

RADIO SET AN/ARC-3( )

1 July 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	Used by	Used by	L/Std
STOCK NO:	2S918-3	--	AN/ARC-3: 1600-266487170 AN/ARC-3A: 1600-013388050 AN/ARC-3B: 1600-013388060



FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC-3( ) is an airborne command vhf communication system for air-to-air and air-to-ground communication. It operates on any eight preset crystal-controlled channels in the 100- to 156-mc range, by pushbuttons located on Control Box C-118/ARC-3.

The crystals are capable of operating under conditions of high humidity and temperature.

The transmitter has an output impedance of 52 ohms matching low impedance transmission lines, such as RG-8/U.

It is normally operated with Antenna Mast AN-104-B.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 100 to 156 on any 8 preset crystal-controlled channels

Type Modulation: AM

Type of Signal: Voice, tone

Power Output: 8 w

Power Requirements:

Starting: 3,324 w, 28-32-v dc

Continuous operation: 385 w, 28-32-v dc

AN/ARC-3( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Mast AN–104–B	(USA)2A286–104B		
1	Control Box C–118A/ARC–3	(USA)2C666–118A	6-1/2 x 2-1/2 x 6	2.1
1	Control Panel C–404A	(USA)2C667–404A	5 x 2-5/8 x 2	
1	Control Unit C–197/ARC–3	(USA)2C684–197 (FSN)5821–503–1020	2-1/2 x 1-5/8 x 2-1/16	
1	Dynamotor Unit DY–21/ARC–3	(FSN)6125–635–4095	7-1/2 x 3-3/4 x 3-1/2	8.4
1	Dynamotor Unit DY–22/ARC–3	(USA)3H1535–22	7-1/4 x 3-3/4 x 3-1/2	4.8
1	Power Junction Box	(USA)3H2676–68	5-3/16 x 8-3/8 x 10-11/32	6.7
1	Radio Receiver R–77/ARC–3	(USA)2C4180–77 (FSN)5821–194–7090	15-1/2 x 11 x 6	20.5
1	Radio Set Control C–753A	(USA)2C684–753 (FSN)5820–697–9678	5-3/4 x 3-3/8 x 6-1/2	
1	Transmitter T–67/ARC–3	(USA)2C6900–67 (FSN)5821–503–3431	7-1/2 x 15 x 12-1/4	21

REFERENCE DATA AND LITERATURE:

TO 12R2–2ARC–3–2

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5	96

PROCUREMENT DATA

PROCURING SERVICE: USAF

DESIGN COG:

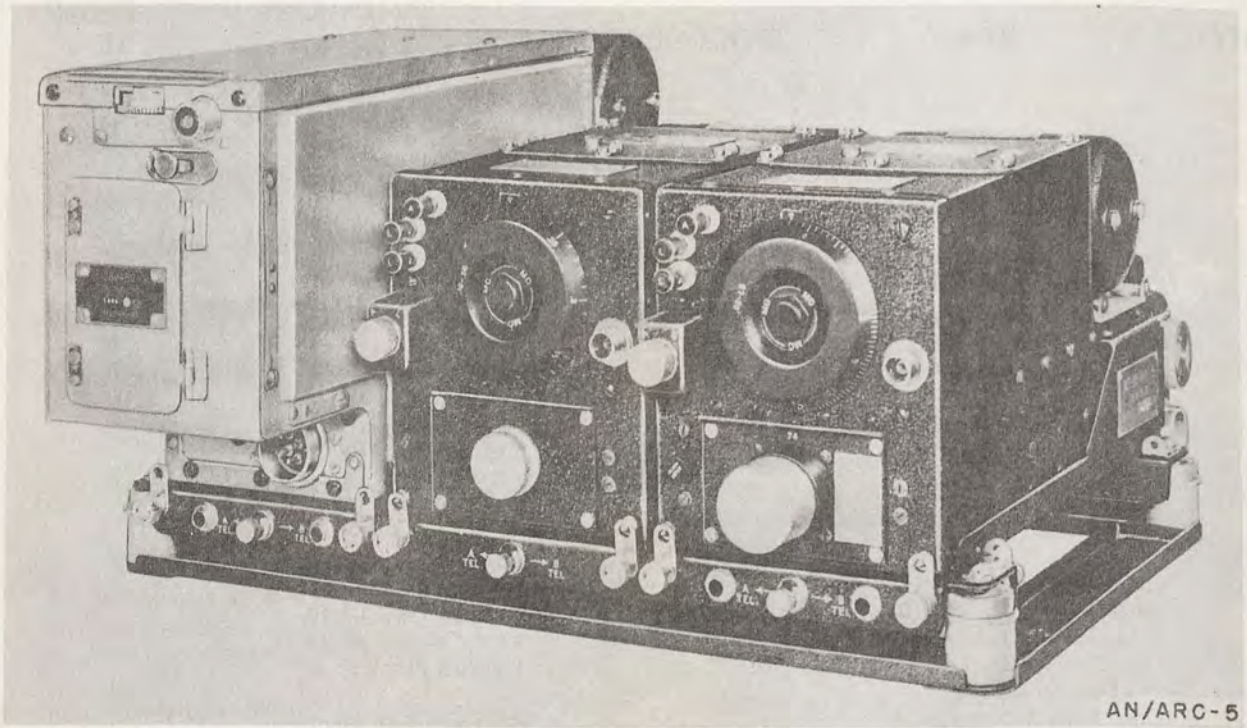
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
		R–52–1866–SC–21	$2,415.43

RADIO EQUIPMENT AN/ARC-5

14 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-106810-200	--



FUNCTIONAL DESCRIPTION:

Radio Equipment AN/ARC-5 is a multichannel amplitude modulation transmitting and receiving group designed for installation in aircraft. It is used for general air-to-ground communications, and for reception of instrument landing and navigational signals.

This multiple-unit equipment may employ a maximum of five receivers and eight transmitters, depending upon the type of installation.

TECHNICAL CHARACTERISTICS:

Transmitting:

Frequency Range in Mc:

Radio Transmitter T-15/ARC-5: 0.5 to 0.8
Radio Transmitter T-16/ARC-5: 0.8 to 1.3
Radio Transmitter T-17/ARC-5: 1.3 to 2.1
Radio Transmitter T-18/ARC-5: 2.1 to 3.0
Radio Transmitter T-19/ARC-5: 3.0 to 4.0
Radio Transmitter T-20/ARC-5: 4.0 to 5.3
Radio Transmitter T-21/ARC-5: 5.3 to 7.0
Radio Transmitter T-22/ARC-5: 7.0 to 9.1
Radio Transmitter T-23/ARC-5: 100 to 156

Type Emission: A1, A2, A3

Power Output:

2.1 to 3.0 mc: 16 w on A1; 7 w on A2; 5 w on A3
3.0 to 4.0 mc: 24 w on A1; 11 w on A2; 6 w on A3
4.0 to 9.1 mc: 39 w on A1, 20 w on A2; 13 w on A3
100 to 156 mc: 6 w on A3

Features: Ganged master oscillator and power amplifier circuits; plate and screen grid modulation permits tuning for maximum A3 output; frequency check by magic eye; check of *lock tune* by crystal resonator

Receiving:

Frequency range in mc:

Radio Receiver R-23/ARC-5: 0.19 to 0.55
Radio Receiver R-24/ARC-5: 0.52 to 1.5
Radio Receiver R-25/ARC-5: 1.3 to 3.0
Radio Receiver R-26/ARC-5: 3.0 to 6.0

AN/ARC-5 RADIO EQUIPMENT

Radio Receiver R–27/ARC–5: 6.0 to 9.1
Radio Receiver R–28/ARC–5: 100 to 156
Type: Superheterodyne
Type Reception: A1, A2, A3
Sensitivity: 5.0 to 7.0 mv at 30% for 10 mw output
Features: Automatic or manual sensitivity control, automatic volume control, automatic gain control, remote controlled tuning or *lock tune* A3 operation
Antenna: Long *fore and aft* inverted L or T
Power Requirements: 24- to 28-v dc aircraft supply

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
(*)		*LF–Mf–Hf Components*		
(*)	Adapter, Audio MX–19/ARC–5		1-5/8 x 3-1/16 x 2	0.2
(*)	Adapter, Power MX–20/ARC–5		1-5/8 x 3-1/16 x 2	.15
(*)	Adapter, Remote Control MX–21/ARC–5		1-5/8 x 3-1/16 x 2	.15
(*)	Antenna Loading Coil TN–6/ARC–5		8-3/16 x 5-9/16 x 4-1/8	2.0
(*)	Antenna Relay Unit RE–2/ARC–5		5 x 5-5/8 x 1-3/16	1.9
(*)	Control Unit C–25/ARC–5		1-3/8 x 2 x 2-1/2	.1
(*)	Control Unit C–26/ARC–5		5-15/32 x 3-1/4 x 3	.7
(*)	Control Unit C–27/ARC–5		1–3/4 x 1–3/16 x 4–3/8	.25
(*)	Crystal Frequency Generator 0–4/ARC5			
(*)	Dynamotor DY–2A/ARR–2		2-3/4 x 4-3/4 x 3-1/4	3.0
(*)	Dynamotor DY–8/ARC–5		3-3/8 x 7-5/8 x 4	8.2
(*)	Junction Box J–34/ARC–5		2-1/2 x 4-1/8 x 4-3/16	.5
(*)	Junction Box J–28/ARC–5		2-1/2 x 4-1/8 x 4-3/16	.4
(*)	Local Control Unit C–24/ARC–5		1-5/8 x 3-1/16 x 2	.15
(*)	Modulator MD–7/ARC–5		8-1/4 x 10-1/16 x 6-5/8	9.1
(*)	Mounting Base MT–5/ARR–2		10-23/32 x 6-11/16 x 1-9/16	.6
(*)	Mounting Base MT–62/ARC–5		10-23/32 x 11-5/8 x 1-19/16	.8
(*)	Mounting Base MT–64/ARC–5		10-23/32 x 16-9/16 x 1-9/16	1.0
(*)	Mounting Base MT–66/ARC–5		10-23/32 x 21-1/2 x 1-9/16	1.1
(*)	Mounting Base MT–68/ARC–5		11-13/16 x 7-1/4 x 1-11/16	.7
(*)	Mounting Base MT–70/ARC–5		11-13/16 x 12-13/16 x 1-3/4	.8
(*)	Mounting Base MT–72/ARC–5		11-13/16 x 18-1/4 x 1-13/16	.9
(*)	Mounting Base MT–74/ARC–5		11-13/16 x 23-13/16 x 1-7/8	1.1
(*)	Mounting Base MT–76/ARC–5		10-3/16 x 8-7/8 x 1-1/8	.7
(*)	Mounting Base MT–77/ARC–5		5 x 5-3/8 x 1	.3

(*) Selection and quantities of units depend on type of installation desired and corresponding coverage of units.

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		LF–Mf–Hf Components—Continued		
(*)	Mounting Base MT–159/ARC–5		8-3/4 x 5-5/8 x 1-3/8	.5
(*)	Mounting Plate MT–4/ARR–2			
(*)	Mounting Plate MT–78/ARC–5		1/4 x 1-3/16 x 4-3/8	.04
(*)	Mounting Plate MT–80/ARC–5		1/4 x 4-1/8 x 4-3/16	.09
(*)	Rack MT–7A/ARR–2		13-1/8 x 6 x 4-3/8	1.4
(*)	Rack MT–63/ARC–5		13-1/8 x 11 x 4-3/8	2.7
(*)	Rack MT–65/ARC–5		13-1/8 x 16 x 4-3/8	4.0
(*)	Rack MT–67/ARC–5		13-1/8 x 20-7/8 x 4-3/8	5.0
(*)	Rack MT–69/ARC–5		14-5/8 x 6-5/8 x 3-7/8	1.4
(*)	Rack MT–71/ARC–5		14-5/8 x 12-1/8 x 3-7/8	2.5
(*)	Rack MT–73/ARC–5		14–5/8 x 17–5/8 x 3–7/8	3.3
(*)	Rack MT–75/ARC–5		14-5/8 x 23-1/8 x 3-7/8	4.4
(*)	Radio Receiver R–23/ARC–5		11-1/2 x 4-13/16 x 5-5/8	6.0
(*)	Radio Receiver R–24/ARC–5		11-1/2 x 4-13/16 x 5-5/8	6.0
(*)	Radio Receiver R–25/ARC–5		11-1/2 x 4-13/16 x 5-5/8	6.0
(*)	Radio Receiver R–26/ARC–5		11-1/2 x 4-13/16 x 5-5/8	6.0
(*)	Radio Receiver R–27/ARC–5		11-1/2 x 4-13/16 x 5-5/8	6.0
(*)	Radio Transmitter T–15/ARC–5		12-3/4 x 5-1/4 x 7-1/16	9.0
(*)	Radio Transmitter T–16/ARC–5		12-3/4 x 5-1/4 x 7-1/16	9.0
(*)	Radio Transmitter T–17/ARC–5		12-3/4 x 5-1/4 x 7-1/16	9.0
(*)	Radio Transmitter T–18/ARC–5		12-3/4 x 5-1/4 x 7-1/16	9.0
(*)	Radio Transmitter T–19/ARC–5		12-3/4 x 5-1/4 x 7-1/16	9.0
(*)	Radio Transmitter		12-3/4 x 5-1/4 x 7-1/16	9.0
(*)	Radio Transmitter T–21/ARC–5		12-3/4 x 5-1/4 x 7-1/16	9.0
(*)	Radio Transmitter T–22/ARC–5		12-3/4 x 5-1/4 x 7-1/16	9.0
* sets	Spare parts			
(*)	Transmitter Control Unit C–29/ARC–5		2-11/16 x 4-1/8 x 4-3/16	.5
(*)	Transmitter Control Unit C–30/ARC–5		2-11/16 x 4-3/16 x 4-1/2	.7
		Vhf Components		
(*)	Adapter 49192			.07
(*)	Auxiliary Control Unit C–39/ARC–5			.9
(*)	Auxiliary Control Unit C–48/ARC–5			.9

AN/ARC-5 RADIO EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	Vhf Components—Continued			
(*)	Control Unit C-42/ARC-5		5-15/32 x 3-1/4 x 3	1.0
(*)	Control Unit C-43/ARC-5		2-3/4 x 9-1/2 x 5-1/2	2.6
(*)	Control Unit, Transmitter C-30/ARC-5		3-3/4 x 4-1/2 x 4-1/8	1.4
(*)	Crystal DC-30			.06
(*)	Crystal DC-31			.06
(*)	Jack Box J-16/ARC-5			.46
(*)	Jack Box J-22/ARC-5			.46
(*)	Jack Box J-22A/ARC-5			.5
(*)	Junction Box J-17/ARC-5			3.5
(*)	Main Control Unit C-38/ARC-5			1.8
(*)	Mounting Plate MT-4/ARR-2		1/4 x 3-3/4 x 5-15/32	.12
(*)	Mounting Plate MT-78/ARC-5			.04
(*)	Mounting Plate MT-80/ARC-5			.09
(*)	Mounting Plate MT-85-ARC-5			.56
(*)	Mounting Plate MT-98/ARC-5			.31
(*)	Radio Receiver R-28/ARC-5		14 x 4-7/8 x 7-5/32	17.5
(*)	Radio Transmitter T-23/ARC-5		15-3/16 x 5-29/64 x 8-9/16	12.3
(*)	Test Equipment AN/GRM-1			
(*)	Test Equipment IE-35-A			

REFERENCE DATA AND LITERATURE:

AN-08-10-195, NAVAER 08-5Q-95

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

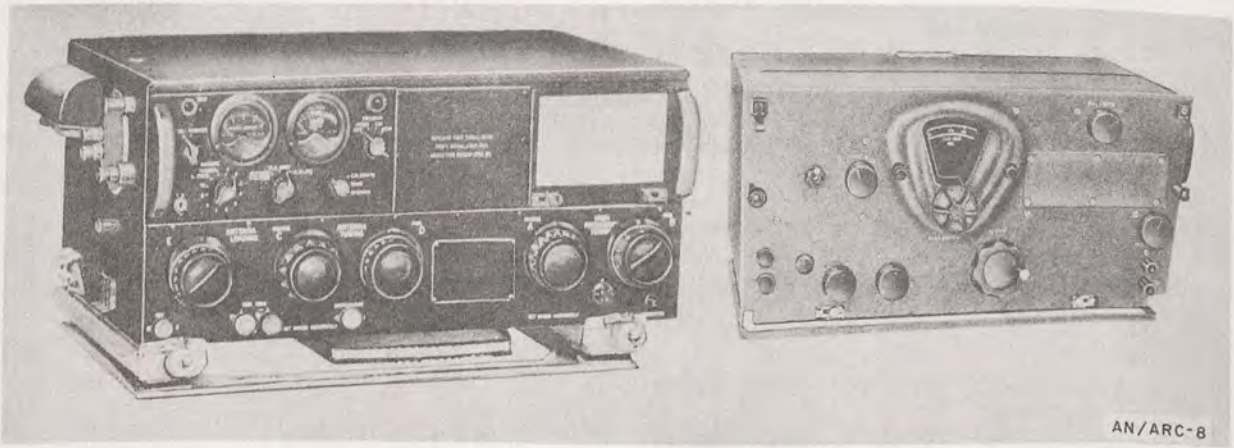
DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Aircraft Radio Corp.	Boonton, N. J.	NXsr-32848, 17 June 1943	

RADIO SET AN/ARC-8

14 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	L/Std
STOCK NO:	--	--	1600-266487307



AN/ARC-8

FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC-8 is an airborne, low- and high-frequency communication system for air-to-air and air-to-ground communication. Application of the set is in bomber, air-sea rescue, trainer and cargo aircraft.

This equipment includes Radio Receiving Set AN/ARR-11 and Radio Transmitting Set AN/ART-13( ). The AN/ARR-11 contains Radio Receiver BC-348( ), which is designed for local continuous tuning. The AN/ART-13( ) uses an autotune system that permits rapid selection of any one of 11 preset channels.

Antenna requirements vary with the operating frequency of the equipment. Normally, for high frequency operation a fore-and-aft inverted L or T type antenna is used; and for low frequency operation a trailing wire and Antenna Loading Unit CU-32/ART-13A are used.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitter: 0.2 to 0.5; 2 to 18
Receiver: 0.2 to 0.5; 1.5 to 18

Type Controls: Control Unit C-87/ART-13 provides an OFF-VOICE-CW-MCW switch, an 11-position CHANNEL switch, a pilot lamp, a voice jack, and a key used for keying the transmitter on cw or mcw. A modified version of the key contains a toggle switch that permits selection of two frequencies for each of the 10 high frequency channels of the autotune system—provided Radio Transmitting Set AN/ART-13B is using crystal-controlled operation. For installations having standarized control panels, Control Panel C-405( )/A replaces and performs all functions (except key) of Control Unit C-87/ART-13.

Type of Modulation: AM

Type Emission and Reception: Voice, tone, mcw

Power Output:

Transmitter:
200 Kc: 4.0 w
300 Kc: 7.5 w
400 Kc: 11 w
500 Kc: 14 w
600 Kc: 18 w
2.0 Mc: 30 w
3.0 Mc: 60 w
4.0 Mc: 80 w
5.5 Mc to 13.5 Mc: 90 w
15.5 Mc: 75 w
18.1 Mc: 65 w

Note: Power output is automatically reduced to one-half its nominal value at altitudes from 20,000 to 25,000 feet.

Receiver: 3 w maximum into 300- or 4,000-ohm resistive load

Power Requirements:
Transmitter: 33 amp at 28-v dc
Receiver: 1.5 amp at 28-v dc

AN/ARC-8 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USAF)		
1	Antenna Loading Unit CU-32/ART-13A	1600-203621020	23-1/2 x 13 x 12	24.75
1	Control Unit C-87/ART-13	1600-211939950	3-1/2 x 6-5/32 x 3-1/4	1.44
	or			
	Control Panel C-405/A	1600-211687989	2-1/2 x 5 x 2-5/8	1.5
	or			
	Control Panel C-405A/A	1600-337491906		
1	Crystal Control Unit CDA-T	1600-013066001	5-3/8 x 9-1/2 x 6-1/2	3.
1	Dynamotor Unit DY-17/ ART-13A	1600-337837400	7-1/8 x 11-7/8 x 8-7/8	28
	or			
	Dynamotor Unit DY-17A/ ART-13A	1600-011728057		
1	Mounting Base MT-198/ ART-13A	1600-293346301	22-1/2 x 10-11/16 x 2	
1	Mounting Base MT-284A/ ART-13	1600-012830800	20-1/2 x 14-3/4 x 2-1/2	2.94
1	Mounting Plate MT-163/ ART-13	1600-293346058	3-5/8 x 5-1/4 x 1/4	.11
1	Mounting Plate MT-164/ ART-13	1600-349197150	7-1/8 x 11-5/32 x 1-1/4	1.13
1	Oscillator O-17/ART-13A	1600-213573820		
1	Radio Receiver BC-348-Q	1600-216460000	18 x 10-1/2 x 9-1/2	38
	or			
	Radio Receiver BC-348-R	1600-216466000		
	or			
	Radio Receiver BC-348-S	1600-216468500		

REFERENCE DATA AND LITERATURE:

12R2-2ART13-1, -2
12R2-3BC-112
12R2-3BC348-2

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
10	15.22	222.62

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: 71-872-A(BC-348-( ))

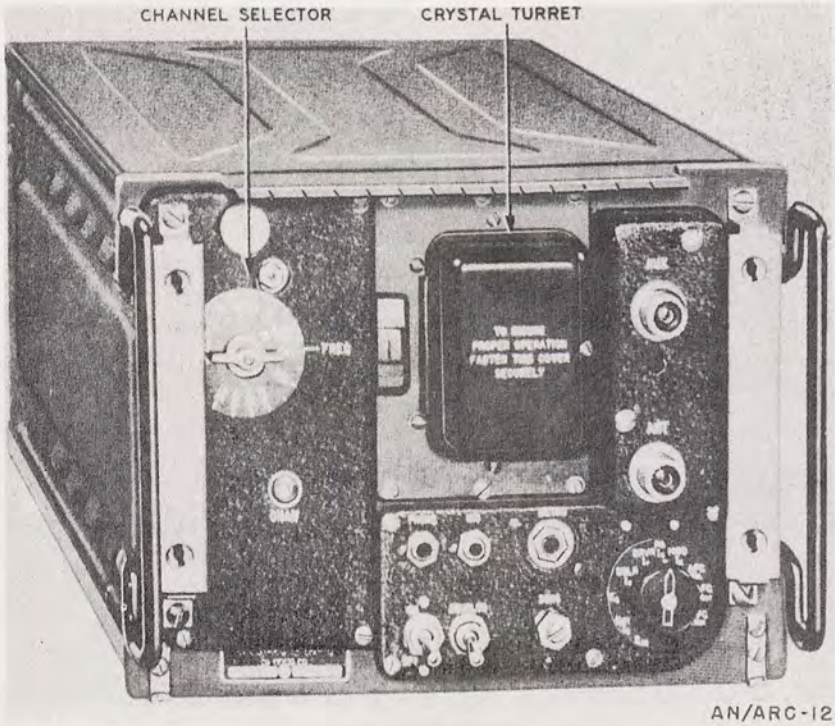
DESIGN COG: USAF, ARDC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicraft Co.	Chicago Ill.	AF33(600)-24620 (BC-348-R only)	$397.00

RADIO SET AN/ARC-12

14 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



AN/ARC-12

FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC–12 is designed to provide radio telephone communication between aircraft or between aircraft and ground stations.

Provision is made for the remote selection of any one of nine predetermined main channel frequencies or a fixed guard channel frequency.

The receiver circuit includes a separate radio frequency unit that permits monitoring on the guard channel while operating on one of the main channels.

This equipment may be used separately or as a component of Radio Set AN/ARC–30, an airborne communications relay system. The AN/ARC–30 consists essentially of two AN/ARC–12's receiving on one frequency and transmitting on a different frequency.

Radio Set AN/ARC–12 is functionally similar to Radio Sets AN/ARC–1 and AN/ARC–1X except for the frequency range covered.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 350; nine preset main frequencies and one guard frequency
Type Modulation: AM
Type Emission and Reception: Voice
Approximate Range: Line of sight
Receiver Output: 100 mw into at 300-ohm resistive load with an RF input of 10 uv, 30% modulated at 1,000 cps; 500 mw (−10% +20%) with an RF input of 1,000 uv, 30% modulated at 1,000 cps
Transmitter Output: 6w (RF output)
Power Requirements:
Reception: 9 amp continuous at 26.5-v dc
Transmission: 11.5 amp (maximum) continuous at 26.5-v dc
Channel Switching Interval Reception: 11 amp intermittent at 26.5-v dc
Channel Switching Interval Transmission: 13.5 amp (maximum) intermittent at 26.5-v dc

AN/ARC-12 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabling CX-181B/ARC-1			1.75
1	Control Unit C-115/ARC-1		2-1/4 x 6 x 6-1/2	0.8
	or			
	Control Unit C-45/ARC-1			
1	Dynamotor DY-9B/ARC-1		3-1/2 x 5-1/4 x 9-3/16	5.7
1	Mounting Base MT-230A/ARC			4.13
1	Mounting Plate MT-4/ARR-2			0.1
1	Transmitter-Receiver RT-58/ARC-12		9-1/32 x 10-7/8 x 24-1/2	45.3

REFERENCE DATA AND LITERATURE:
AN-16-30ARC12-3

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

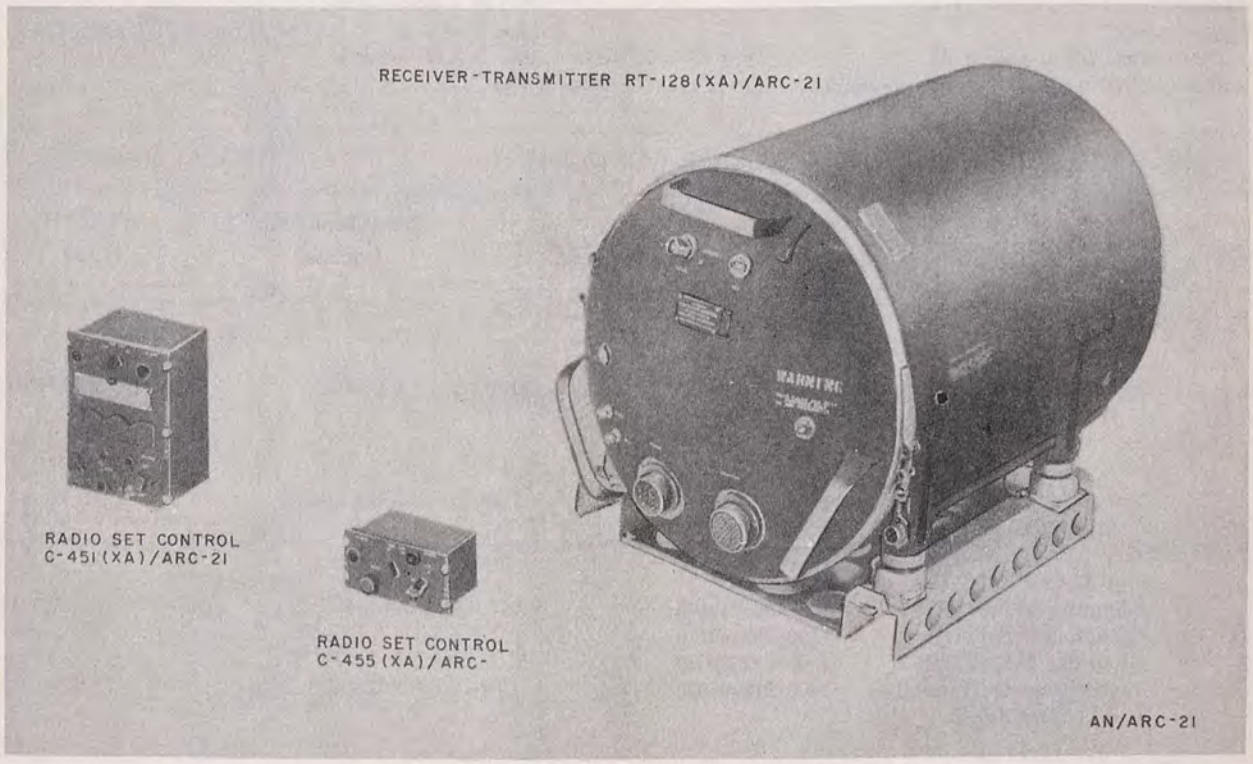
PROCURING SERVICE: USN
SPEC &/or DWG:
DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA, Victor Division, Radio Corp. of America	New York, N. Y.	NObsa 30232	$4,000.00
Western Electric Co.	New York, N. Y.	NObsa 30181	$4,000.00

RADIO SET AN/ARC-21( )

14 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Alt-Std
STOCK NO:	--	--	1600–266490141



FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC–21( ) is an airborne liaison type long distance communication system for air-to-air and air-to-ground communication. It is used in bombers, reconnaissance, and air support aircraft. The receiver-transmitter is in a pressurized container to provide full power output at altitudes up to 50,000 feet.

The system provides a total of 44,000 possible frequencies, spaced in increments of 500 cycles, within the tuning range of the set. Any 20 of these channels can be preset in the Radio Set Control C–451( )/ARC–21 in any order. As many as five supplementary controls (Radio Set Control C–455/ARC) may also be used for selection of any one of the 20 preset frequencies.

Intercommunication Set AN/AIC–10 is required for input and output circuits. Frequency shift keying for teletype operation requires Frequency Shift Converter CV–357/A and a teletypewriter. The system can operate with Control Keyer Group AN/ARA–26 and auxiliary Radio Set AN/ARR–36.

A fixed wire or flush-mounted aircraft can be used with this equipment. An automatic antenna coupler (type 3000 or 3100) is required to match the impedance of the aircraft antenna to the 52-ohm coaxial transmission line used by the system.

Radio Set AN/ARC–21 and AN/ARC–21X are identical except for power requirements. The AN/ARC–21 operates from direct current only; the AN/ARC–21X, from both alternating and direct current.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 24

Type Controls: Radio Set Control C–451( )/ARC–21 provides access to preset frequency control drums, VOLUME control, CONTROL off-on switch, CW TUNE fine tuning control, CW SHARP-CW Broad-VOICE-FSK type of

AN/ARC-21( ) RADIO SET

operation selector switch, NOISE control, POWER-HI-LOW switch, and a CHANNEL selector switch. Radio Set Control C-455/ARC is a supplementary control unit enabling operations from points other than the Radio Set Control C-451( )/ARC-21. Only controls for VOICE operation and channel selection are provided in this unit.

Type Modulation: AM

Type Emission and Reception: Cw, voice, frequency shift keying

Power Output:

Transmitter: 100 w (nominal)

Receiver: 900 mw into 200-ohm impedance

Power Requirements:

Dynamotor Assembly DY-50/ARC-21:

Transmit Operation: 59 amp at 27.5-v dc

Receive Operation: 25 amp at 27.5-v dc

Tuning Operation: 45 amp at 27.5-v dc

Power Supply PP-298/ARC-21X:

Transmit Operation: 21 amp at 27.5-v dc; 8 amp, 115-v 380- to 1,000-cycle ac

Receive Operation: 17 amp at 27.5-v dc; 2.5 amp, 115-v 380- to 1,000-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USAF)		
1	Dynamotor Assembly DY-50/ARC-21	1600-011728020	7-1/4 x 8-7/8 x 12-3/4	30.5
	or			
	Power Supply PP-298/ARC-21X	1600-013323015	7-23/32 x 8-7/8 x 12-3/4	25.5
1	Keyer Group Adapter MX-1394/ARC-21	1600-010012000	3-3/4 x 2-3/4 x 5	1.6
1	Mounting MT-971/U	1600-293349175	2-1/8 x 18-5/8 x 18-3/8	4
1	Mounting MT-972/U	1600-293349176	2-7/8 x 8-3/4 x 13-7/32	1.38
1	Mounting MT-1555/U	1600-012829040	2-25/32 x 3-3/4 x 7-7/8	1
1	Radio Receiver-Transmitter RT-128/ARC-21	1600-218996925	19 x 18-1/8 x 26-1/8	132
	or			
	Radio Receiver-Transmitter RT-128A/ARC-21	1600-013570075		
1	Radio Set Control C-451/ARC-21	1600-211944406	7-1/8 x 5-3/4 x 5-1/8	5.34
	or			
	Radio Set Control C-451A/ARC-21	1600-011270120		
1 to 5	Radio Set Control C-455/ARC	1600-011270030	2-5/8 x 5-3/4 x 4-13/32	1.5
1	Solenoid Relay RE-132/ARC	3380-701525-4415	8 x 3-1/4 x 3-1/4	2.5

REFERENCE DATA AND LITERATURE:

TO 12R2-2ARC21-1, -2, -3, -4, -505

RADIO SET **AN/ARC-21( )**

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
8	13.59	279.90

PROCUREMENT DATA

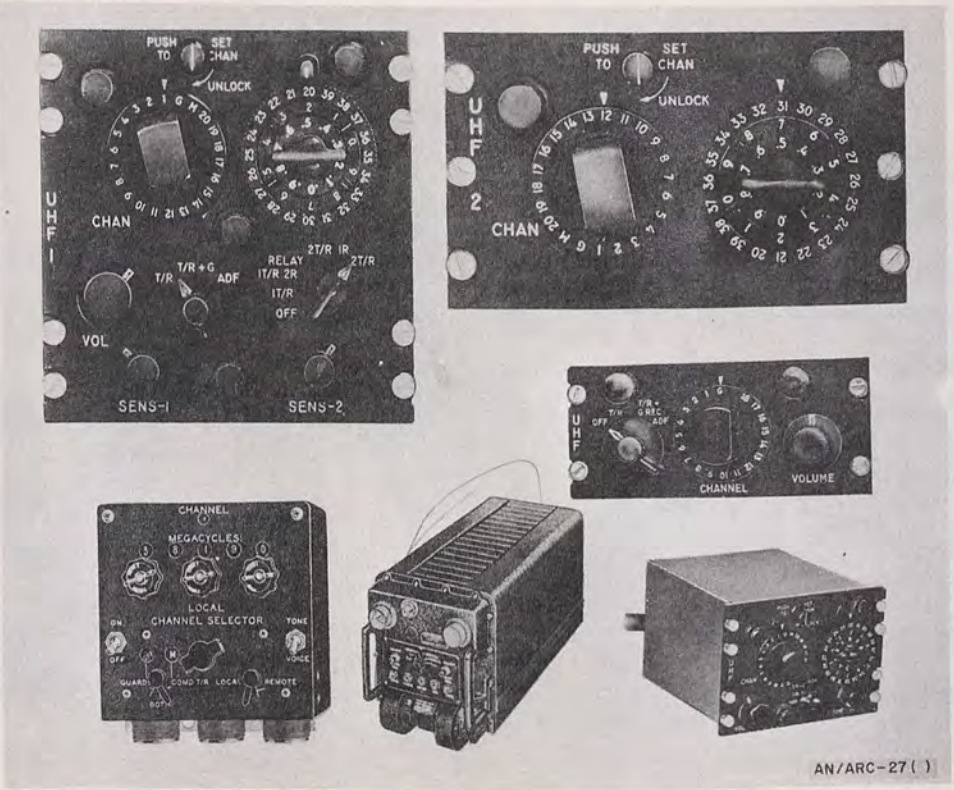
Procuring Service: USAF **DESIGN COG:** USAF, ARDC
SPEC &/or DWG: MIL-R-6471A(USAF)-AN/ARC-21; MIL-R-6472(USAF)-AN/ARC-21X

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Corp. of America	Camden, N. J.	AF33(600)-32231	$18,171.00

RADIO SET AN/ARC-27

14 November 1958
Cognizant Serv: USN FSN: 5821-503-1114, 5821-644-4926(USN)

	USA	USN	USAF
TYPE CLASS:	--	Used by	Alt-Std
STOCK NO:	--	F16-Q-106856-200	R-51-5688-AMG



FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC-27 is an airborne, two-way, ultra high frequency command radio equipment for voice or tone signals. It is used for air-to-air, air-to-ship, and ground-to-air communication in all types of fighter, bomber, and cargo aircraft.

The receiving equipment consists of a triple-conversion, superheterodyne unit using three crystal oscillators, and a double-conversion superheterodyne auxiliary guard channel receiver. Both receivers work into a common audio output circuit. The triple-conversion receiver operates with Direction Finder Group AN/ARA-25 for navigational purposes, as well as for voice communication.

Provision is made for the remote selection of any one of 18 preset frequencies or for operation on a guard channel frequency, and for constant monitoring of the guard frequency.

Any aircraft antenna using a 52-ohm coaxial transmission line, such as Radio Frequency Cable RG-8/U or RG-58/U, may be used.

This equipment is similar to Radio Set AN/ARC-19, except for differences in channel spacing.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Frequency Channels: 1750; spaced 100 kc apart
Preset Frequencies: 18
Approximate Range: Line of sight
Type Modulation: AM
Type Emission and Reception: Voice or tone
Transmitter:
Modulation: 90% to 95%
Power Output: 9 w
Receiver:
Type: Superheterodyne
Input: 5 uv 30% modulated at 1,000 cps

AN/ARC-27 RADIO SET

Minimum Output: 50 mw
Maximum Output: 2 w
Antenna:
Type: Borad-band
Impedance: 50 ohms

Power Requirements:
Transmitting: 19.1 amp at 27.5-v dc
Receiving: 16.5 amp at 27.5-v dc
Channel Switching: 25.5 amp at 27.5-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Mounting MT–821/ARC–27	----------	6-11/16 x 6-37/64 x 3/8	0.6
1	Mounting MT–822/ARC–27	----------	2-3/8 x 11-1/8 x 19-3/4	3.7
1	Radio Receiver-Transmitter RT–178/ARC–27	----------	12-3/8 x 11-1/4 x 27-7/8	72.2
1	Radio Set Control C–626/ ARC–27	----------	9-9/16 x 6-3/8 x 5-1/2	9.75
1	Radio Set Control C–628/ ARC–27	----------	2-5/8 x 3-5/8 x 5-3/4	1.5
1 set	Spare parts			

REFERENCE DATA AND LITERATURE:

AN 16–30ARC27–3

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

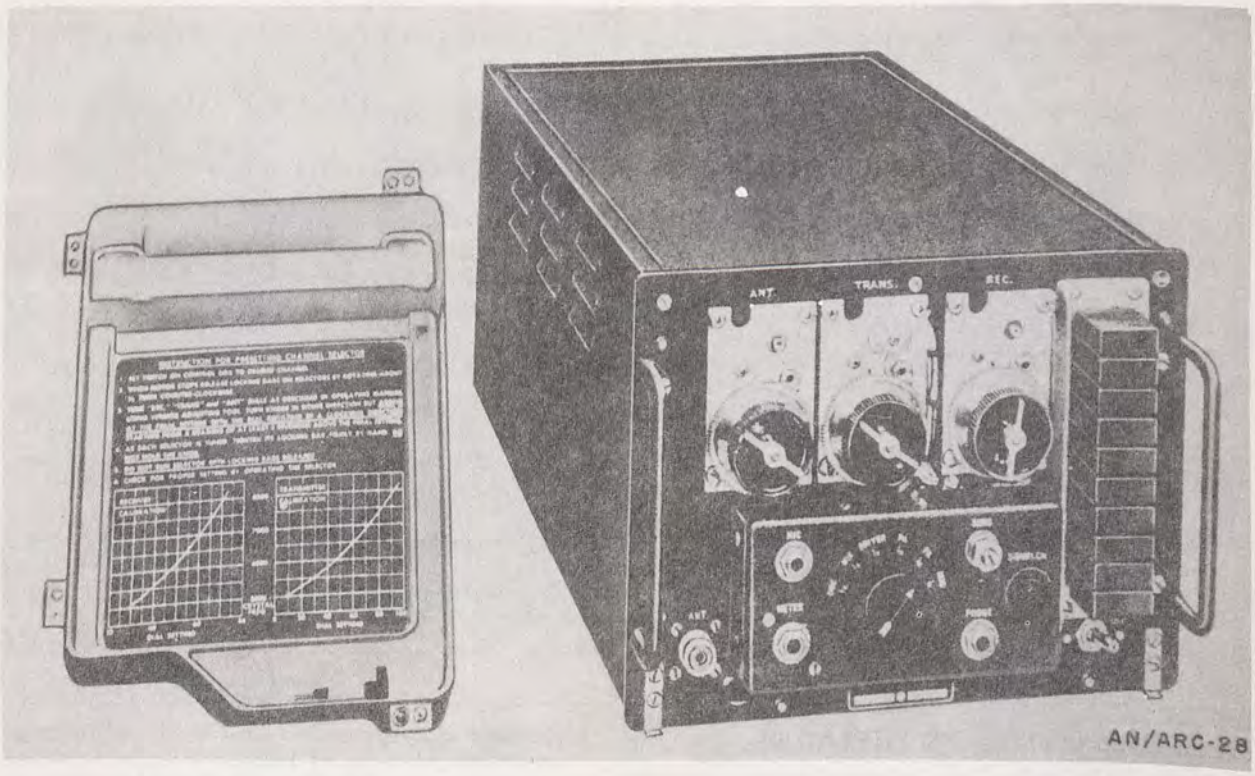
PROCURING SERVICE: USN
SPEC &/or DWG: MIL–R–5068
DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NObsr–30199, 4 October 1946	

RADIO SET AN/ARC-28

14 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC–28 is an airborne very-high frequency automatic relay station equipment designed to extend the range of voice radio communication between either a shore station or a ship and other aircraft.

A signal transmitted from a shore station or a ship is received by one transceiver and applied through a relay unit to the second transceiver for relaying to the aircraft with which contact is desired.

Two radio Sets AN/ARC–1, interconnected by a relay unit, are required but not supplied. Each transceiver provides 10 preset crystal-controlled channels, one of which is used as a guard channel. Provision is made for either individual or simultaneous use of the two transmitter-receivers.

Remote controls are available for individual transceiver operation, as well as for the control of the automatic relay system.

Remote controls are available for individual transceiver operation, as well as for the control of the automatic relay system.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 100 to 156; nine main channels, one guard channel
Type Modulation: AM
Type Signal: Voice
Transmitter Output: 8w
Receiver Output: 400 mw into 300-ohm resistive load for each output circuit
Frequency Stability: 0.25% at −40° to +50°C.
Power Requirements: 28-v aircraft battery

AN/ARC-28 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
4	Adapter, Right Angle 49192			
1	Control Unit C-333/ARC-28		2-15/16 x 4-1/4 x 4-1/4	0.7
	or			
	Control Unit C-390/ARC-28		2-1/4 x 5-1/8 x 6	0.9
	or			
	Radio Set Control C-864/ ARC-28		2-1/4 x 4-1/2 x 5-3/4	0.9
	Mounting Plate MT-80/ ARC-5		11/32 x 4-1/4 x 4-1/4	0.1
	Mounting Plate MT-335/ ARC-18		11/32 x 6-1/4 x 10-3/8	0.5
	Plug 49195			
	Plug AN-3106-20-1P with Cable Clamp AN-3057-12		1-7/8 dia	0.2
	Plug AN-3106-20-16P with Cable Clamp AN-3057-12		1-7/8 dia	0.2
	Plug AN-3106-20-16S with Cable Clamp AN-3057-12		1-7/8 dia	0.2
	Plug AN-3106-20-16S Pos 4 with Cable Clamp AN-3057-12		1-7/8 dia	0.2
	Plug AN-3106-30-1S with Cable Clamp AN-3057-12		1-7/8 dia	0.2
	Relay Unit RE-51/ARC-28		6-5/16 x 7-1/8 x 10-1/2	5.5
	Terminal			
	Wiring Harness CX-925/ARC-28			1.74

FERENCE DATA AND LITERATURE:

N 16-30ARC28-3

SHIPPING DATA

GS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

CURING SERVICE: USN DESIGN COG: USN, BuAer

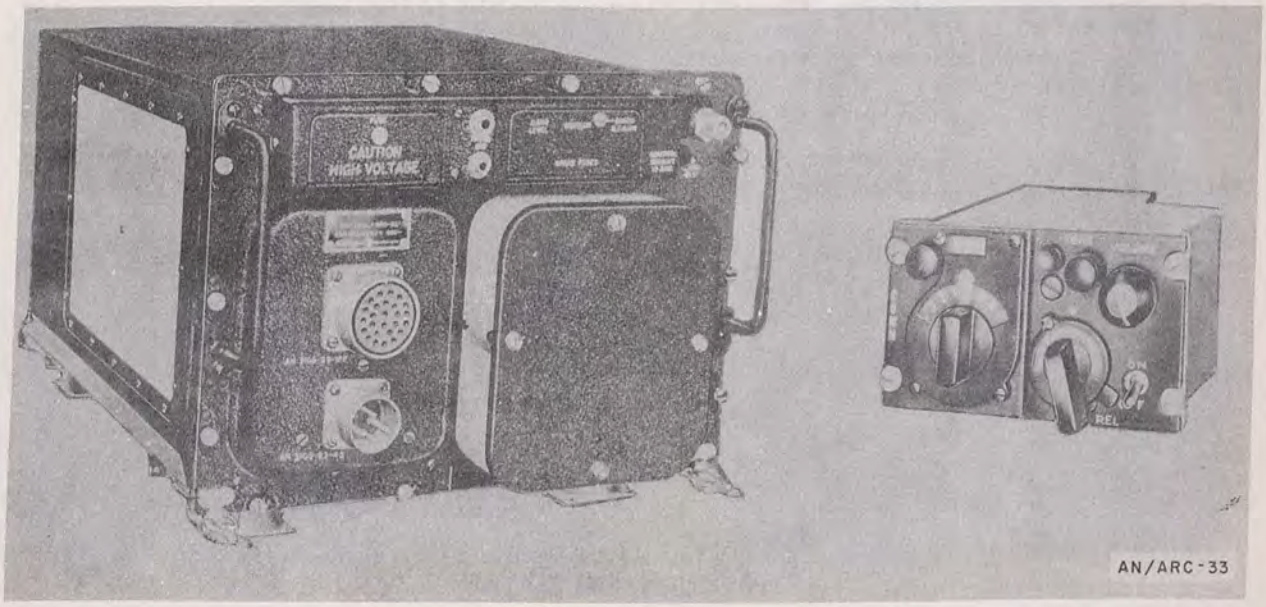
&/or DWG:

TRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/ARC-33

14 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Alt-Std
STOCK NO:	--	--	1600-266490165



FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC-33 is an airborne command, receiving-transmitting equipment designed for air-to-air and air-to-ground voice communication in the ultra high frequency range. Primary application of the equipment is for voice communication in fighter aircraft at altitudes up to 50,000 feet.

This equipment is normally operated with remote Control Panel C-784/ARC-33, which automatically increases the gain of the modulator speech amplifier with an increase in altitude. The control also permits presetting of any 20 channels of the total range of frequencies. One guard channel in the 238- to 248-megacycles range can be monitored simultaneously with normal operation of the equipment.

Flush-tail cap-type arrays, Antenna AT-256A/ARC, or any other ultra high frequency antenna having a 52-ohm coaxial transmission line, such as Radio Frequency Cable RG-8/U, can be used.

The receiver-transmitter component has been modified for use with Direction Finder Group AN/ARA-25. Remote Channel Indicator ID-572/ARC and associated Control Box C-2006/ARC-33 are designed for use with the AN/ARC-33 installed in fighter aircraft to enable the pilot to select a channel without having to look away from the flight instruments. Additional aircraft wiring is required for this function.

This equipment is interchangeable with, as well as operationally and physically similar to Radio Set AN/ARC-27.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225.0 to 399.9
Number of Frequencies: 1,750; spaced in increments of 100 kc
Approximate Operational Range: 75 miles at 3,000 feet altitude
Type Controls: Control Panel C-784/ARC-33 provides a guard indicator, a tone pushbutton, a volume control, an on-off switch, a Main-Both-G function switch, a memory cylinder assembly panel, a channel selector switch, and a preset channel indicator. This control is being replaced in USAF aircraft by Control C-2006/ARC-33, functionally and physically similar to Control C-1057A/ARC-34.
Type Modulation: AM
Type Emission and Reception: Voice, tone
Transmitter Power Output: 8 w (minimum)
Power Requirements:
Transmitting: 15.5 amp at 27.5-v dc
Receiving: 12.5 amp at 27.5-v dc
Peak: 20.25 amp at 27.5-v dc

AN/ARC-33 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USAF)		
1	Control Panel C-784/ARC-33	1600-373061550	5-3/4 x 3-3/4 x 7-5/8	3.43
1	Mounting MT-611/ARC-33	1600-293348500	2-3/8 x 14-3/4 x 21	2.75
1	Radio Receiver-Transmitter RT-173A/ARC-33	1600-013569950	15-3/16 x 10-3/8 x 21-1/2	83.56

REFERENCE DATA AND LITERATURE:

TO 12R2-2ARC33-1, -2, -4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	8.93	139.35

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: MIL-R-25061

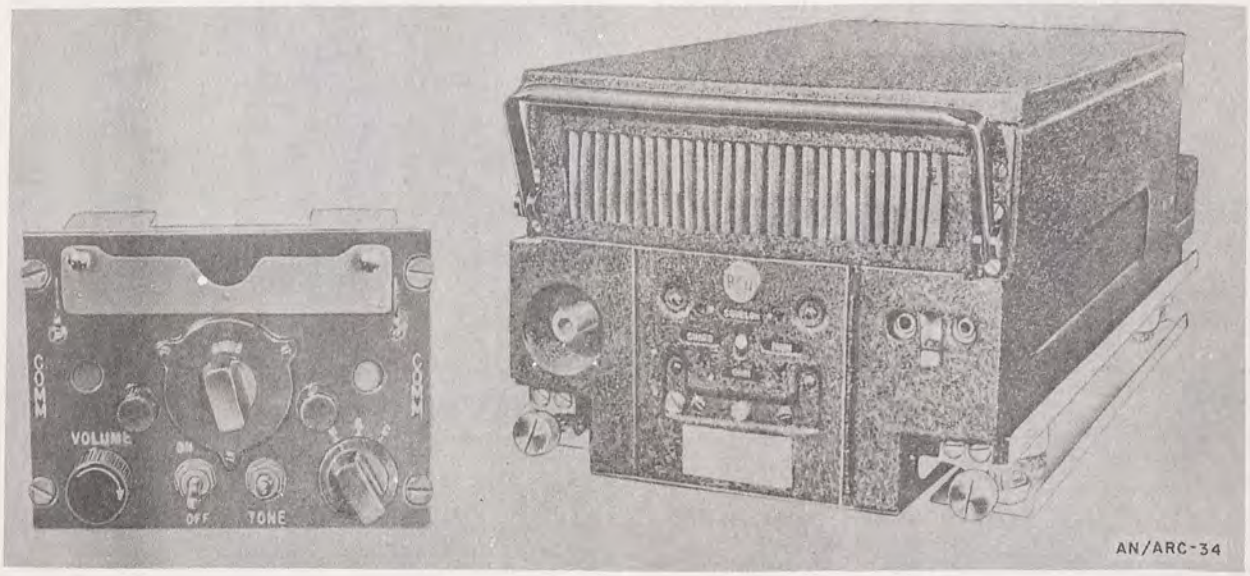
DESIGN COG: USAF, ARDC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Bendix Radio Corp.	Towson, Md.	AF33(038)-20409	$4,100.00

RADIO SET AN/ARC-34

14 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Std
STOCK NO:	--	--	1600-013388000



FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC–34 is a minaturized version of Radio Set AN/ARC–33. It is an airborne command, receiving-transmitting equipment designed for air-to-air and air-to-ground voice communication in the ultra high frequency range. Its primary application is for voice communication in fighter, bomber, reconnaissance and air support aircraft. It will operate at altitudes up to 50,000 feet.

Radio Set Control C–1057/ARC–34 permits presetting, in any order desired, of any 20 channels. One guard channel in the 238- to 248-megacycle range can also be monitored simultaneously with normal operation of the equipment.

The set has 150-ohm impedance, nominal, input and output circuits for use with either Intercommunication Set AN/AIC-10 or Microphone T–17 and Headset HS–33. Other intercommunications systems can be used if the input and output impedances and interwiring can be matched.

Flush-tail cap-type arrays, Antenna AT–256A/ARC, or any other ultra high frequency antenna having a 52-ohm coaxial transmission line, such as Radio Frequency Cable RG–8/U, can be used.

This equipment can operate with Direction Finder Group AN/ARA–25 and Control Keyer Group AN/ARA–26. Remote Channel Indicator ID–572/ARC and associated Radio Set Control C–1057A/ARC–34 are designed for use with the AN/ARC–34 installed in fighter aircraft to enable the pilot to select a channel without having to look away from the flight instruments. Additional aircraft wiring is required for this function.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225.0 to 399.9
Number of Frequencies: 1,750; spaced in increments of 100 kc
Approximate Operational Range: 75 miles at 3,000 feet altitude
Type Controls: Radio Set Control C–1057/ARC–34 provides an OFF-MAIN-BOTH-ADF switch and a MANUAL-PRESET-GUARD switch.
Type Modulation: AM
Type Emission and Reception: Voice, tone
Transmitter Power Output: 8 w (minimum)
Power Requirements:
Maximum: 21 amp at 22 to 29-v dc
Transmitting: 18 amp 27.5-v dc (nominal)
Receiving: 13.5 amp at 27.5-v dc (nominal)
Tuning: 17 amp 27.5-v dc (nominal)

AN/ARC-34 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USAF)		
1	Control, Radio Set C–1057/ ARC–34	1600–011270020	4-7/8 x 5-3/4 x 7-1/10	2.7
1	Mounting MT–1099/U	1600–012830090	2 x 10-3/4 x 21-5/16	3.6
1	Radio Receiver-Transmitter RT–263/ARC–34	1600–013570000	7-9/16 x 10-1/8 x 20-11/16	46.9

REFERENCE DATA AND LITERATURE:

TO 12R2–2ARC34–1, –2, –3, –4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	7.42	105.1

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: MIL–R–7646C (USAF)

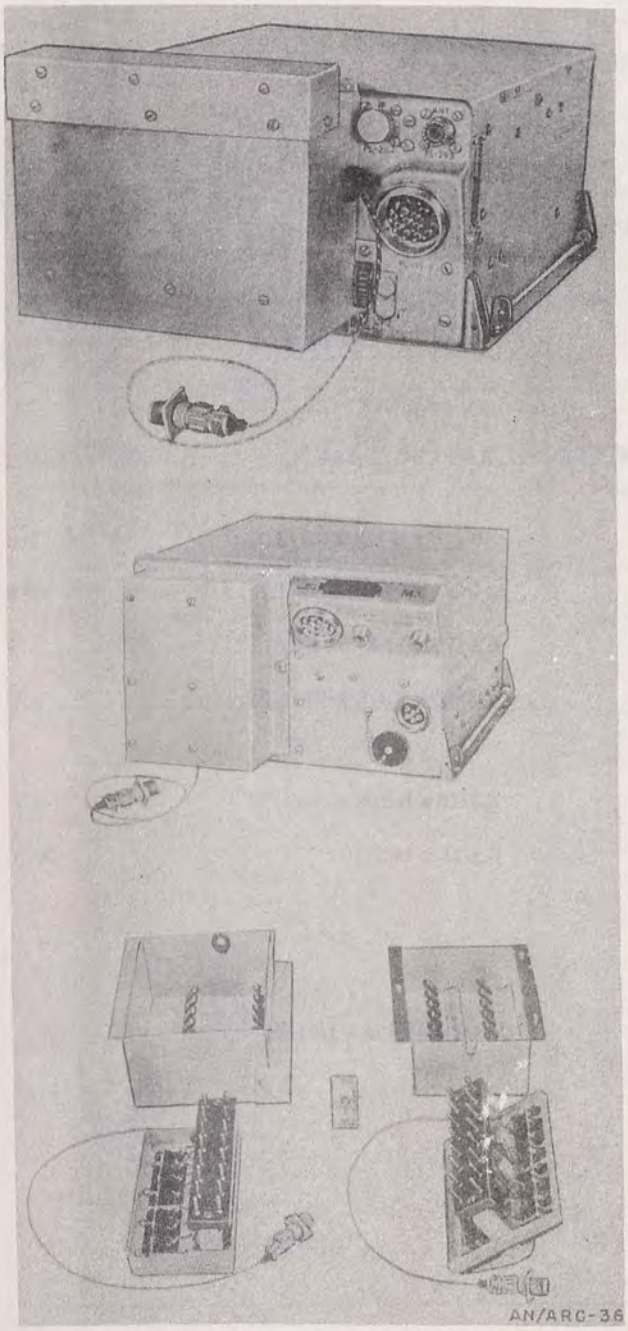
DESIGN COG: USAF, ARDC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Magnavox Co.	Fort Wayne, Ind.	AF33(600)31283	$4,300.00
Radio Corp. of America	Camden, N. J.	AF33(600)29041 AF33(600)30587	$4,300.00

RADIO SET AN/ARC-36( )

14 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	L/Std
STOCK NO:			AN/ARC-36: 1600-266490175 AN/ARC-36A: 1600-013388030 AN/ARC-36B: 1600-013388040



FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC-36( ) is an airborne communication system for air-to-ground and air-to-air communications in the very high frequency range. Sixteen preset crystal-controlled channels are remotely controlled by Control Box C-118( )/ARC-3 or Control Panel C-404( )/A.

The transmitter has an output impedance of 52 ohms matching low impedance lines, such as Radio Frequency Cable RG-8/U. It normally operates with Antenna Mast AN-104-B.

This equipment is similar to Radio Sets AN/ARC-3 and AN/ARC-49 except for the number of frequency channels. The AN/ARC-3 has eight, the AN/ARC-36( ) has 16, and the AN/ARC-49 has 48 channels.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 100 to 156
Number of Crystals Required: 32
Type Controls: Control Box C-118( )/ARC-3 provides eight channel selector pushbuttons, an OFF pushbutton, a MIC receptacle, a TEL jack and a Tone button. Control Panel C-404( )/A provides a channel selector switch, a tone switch, a volume control, and an ON-OFF switch.
Approximate Operational Range: Line of sight
Type Modulation: AM
Type Emission and Reception: Voice, tone
Power Output:
Transmitter: 8 w into a 50-ohm resistive load
Receiver: 600 mw into 50- or 600-ohm load impedance
Power Requirements:
Starting: 3,324 w, 118 amp at 28-v dc
Transmitting: 12.4 amp 28-v dc
Receiving: 5.9 amp at 28-v dc

AN/ARC-36( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USAF)		
1	Control Box C-118/ARC-3	1600-211939981	6 x 2-5/8 x 6-7/8	2.1
	or			
	Control Box C-118A/ARC-3	1600-211687425		
	or			
	Control Panel C-404/A	1600-211687988	5 x 2-5/8 x 2-5/8	0.9
	or			
	Control Panel C-404A/A	1600-211688471		
1	Dynamotor Unit DY-21/ ARC-3	1600-337837500	4 x 3-7/16 x 7-1/2	8.4
1	Dynamotor Unit DY-22/ ARC-3	1600-337837590	4 x 3-7/16 x 6-1/2	4.8
1	Modification Kit MX-1131( )/ ARC	1600-012674500		
1	Mounting FT-240-A (u/w Control Box C-118( )/ ARC-3)	1600-293030000	5/16 x 5-1/2 x 6-3/8	0.3
1	Mounting Base MT-236B/ ARC-3	1600-293346524	10-1/8 x 8-1/2 x 2-1/8	1.2
1	Mounting Base MT-237C/ ARC-3	1600-293346534	11-5/16 x 10-5/8 x 2-1/8	1.6
1	Mounting Base MT-238C/ ARC-3	1600-293346544	12-1/2 x 11-7/8 x 2-1/8	1.8
1	Power Junction Box J-68/ ARC-3	1600-347541000	3-3/16 x 8-3/8 x 10-11/32	6.7
	or			
	Power Junction Box J-68A/ ARC-3	1600-012490200	3-3/16 x 8-3/8 x 10-11/32	6.7
1	Radio Receiver R-77/ARC-3	1600-215157921	6 x 11 x 14-5/16	20.5
	or			
	Radio Receiver R-77A/ARC-3	1600-224564921		
	or			
	Radio Receiver R-77B/ARC-3	1600-013424030		
1	Radio Transmitter T-67/ ARC-3	1600-224643270	7-1/2 x 12-1/8 x 15-1/4	21
	or			
	Radio Transmitter T-67A/ ARC-3	1600-014480300		
	or			
	Radio Transmitter T-67B/ ARC-3	1600-014480300		

REFERENCE DATA AND LITERATURE:

TO 12R2-2ARC-2, -34, -503

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
11	5.26	99.38

PROCUREMENT DATA

PROCUREMENT SERVICE: USAF
DESIGN COG: USAF, ARDC
SPEC &/or DWG: MIL-M-5818 (USAF)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For AN/ARC-36( ):			
Sylvania Electric Products, Inc.	Buffalo, N. Y.	AF33(600)23386	$1,040.0
For Modification Kit MX-1131A/ARC	----	AF33(600)32814	93.(

RADIO SET AN/ARC-38

14 November 1958
Cognizant Serv: USN FSN:

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC-38 provides cw and phone, two-way communication between aircraft in flight, aircraft and ship, and aircraft and shore. It provides both transmitting and receiving facilities for high-frequency communication.

Radio Set Controls C-1398/ARC-38 and C-1399/ARC-38 permit the selection of 20 preset channels. The set may also be operated at the receiver-transmitter location if the type of emission and channel have been previously selected.

Operated at the pilot's control position, only phone emission is available on the 20 preset channels. Full frequency choice and cw emission are made available at the radio operator's control position.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 25

Transmitter:

Power Output: 2.0 to 14.2495 MC: 100 w minimum; 14.250 to 25 Mc: 90 w minimum

Type Emission: A1, A3

Modulation Level: 95 to 100% when 1,000 cps input voltage is 1.0 v

Receiver:

Output: 100 mw minimum with 5-uv input modulated 30% at 1,000 cps

Distortion: 12% maximum of a 30%, 1,000 cps modulated wave with input of 50 to 100,000 uv

Audio Response: ±3.5 db relative to 1,000 cps output for frequency between 300 to 3,500 cps

Power Requirements: 174 va, 115-v, 400-cycle ac; 26 amp at 27.5-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Dynamotor-Power Supply DY-118/ARC-38	----------	4-7/8 x 6-3/4 x 18-5/16	22.0
1	Mounting MT-1414/ARC-38	----------	3-7/8 x 5-7/8 x 15-7/8	4.0
1	Mounting MT-1415/ARC-38	----------	7-1/8 x 16-3/8 x 21-7/16	9.4
1	Radio Receiver-Transmitter RT-311/ARC-38	----------	7-13/16 x 51-5/16 x 23-7/16	63.6
1	Radio Set Control C-1398/ ARC-38	----------	5-3/4 x 6 x 7-3/16	7.0
1	Radio Set Control C-1399/ ARC-38	----------	1-7/8 x 3-7/8 x 5-3/4	1.25

REFERENCE DATA AND LITERATURE:

NAVAER 16-30ARC83-501

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	3.5	96

AN/ARC-38 RADIO SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-R-18173 (Aer)

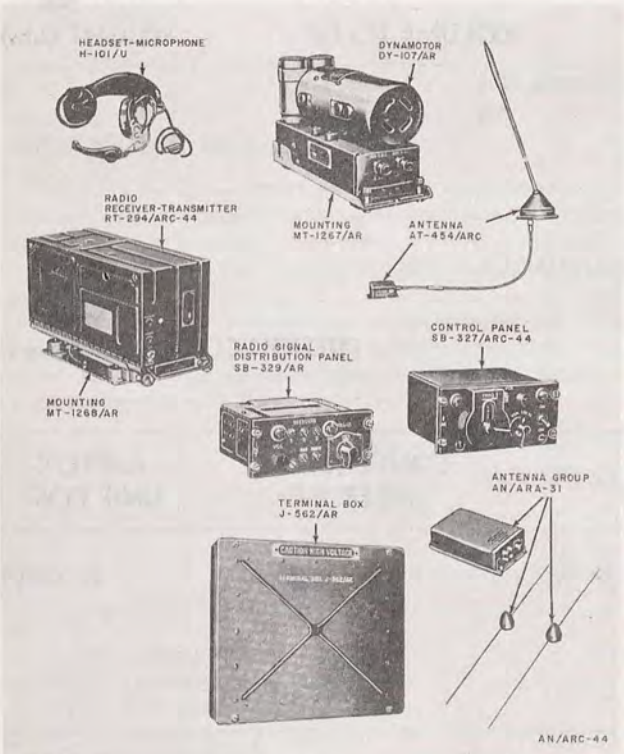
DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NOas 55-821, 29 August 1956	$6,240.00
		NOas 52-670, 22 December 1951	$6,240.00

RADIO SET AN/ARC-44

1 July 1958
Cognizant Serv: USA FSN: 5821-503-2586

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S921-44	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC-44 is a compact FM radio equipment that operates in the vhf range and can be used for communication, retransmission, and homing in Army aircraft.

It consists essentially of a receiver-transmitter that is operated from remote-control panel equipment and a radio distribution panel that enables the selection and operation of as many as six receivers (singly or in combination), three transmitters, or the aircraft interphone channel.

This equipment is capable of functioning as an airborne radio relay station between two stations that cannot communicate with each other because of distance. In such applications, an additional transmitter is required and different receive and transmit channels are used.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 24 to 51.9 (280 channels, 100 kc apart)
Type Modulation: FM
Type of Signal: Voice; keyed FM; keyed cw for homing
Power Output: 50 mw (rcvr); 8 w (xmtr)
Power Requirements: Dynamotor DY-107/AR: 475 amp, 27-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna Group AN/ARA-31	2A289A-31		3.38
(*)	Control Panel SB-327/ARC-44	2Z6955-327	3 x 6 x 5-3/4	2.19
1	Radio Receiver-Transmitter RT-294/ARC-44	2C5130-294	7-1/4 x 13-7/8 x 5-1/8	4
(*)	Radio Signal Distribution Panel SB-329/AR	2Z6955-329	2-5/8 x 5-5/16 x 5-3/4	1.63
1	Radio Test Set AN/ARM-8	3F4318-6.3	6 x 9 x 9-5/32	8.69
1	Terminal Box J-562/AR	3Z12501-5.4	2 x 11 x 12	4.25

* Quantity depends on aircraft in which installed.

AN/ARC-44 RADIO SET

REFERENCE DATA AND LITERATURE:

TM 11/517

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
9	5.2	92.75

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: MIL-R-12483A

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Admiral Corp.	Chicago, Ill.	50727-P-57-55	$1,400.00

RADIO SET AN/ARC-48

17 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC–48 is a small, light-weight communication equipment designed for use in all types of rotary wing and reconnaissance type fixed wing aircraft. It provides two-way communication with properly equipped surface stations and other aircraft.

This equipment meets essential communication requirements for the aircraft in which it is installed and in addition functions as a common control point for other communications equipments installed in the aircraft.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Three Channel Settings: 233.8 mc, 234.6 mc, 236.2 mc
Guard Channel: Preset at 243.0 mc
Spare Crystal: For 237.8 mc (provided)
Transmitter Power Output: 2 w at 90% modulation
Receiver Power Output: 100 mw
Sensitivity: 6 uv
Selectivity: 6 db signal-plus-noise-to-noise ratio
Power Requirements: 1.6 amp at 27.5-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna AT–481/ARC–48			
1	Dynamotor DY–128/ARC–48			
1	Mounting MT–1381/ARC–48			
1	Mounting MT–1382/ARC–48			
1	Radio Set Control C–1363/ARC–48			
1	Receiver-Transmitter, Radio RT–307/ARC–48			

REFERENCE DATA AND LITERATURE:

NAVER 16–30ARC48–501

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/ARC-48 RADIO SET

PROCUREMENT DATA

PROCURING SERVICE: USN, BuAer
SPEC &/or DWG:

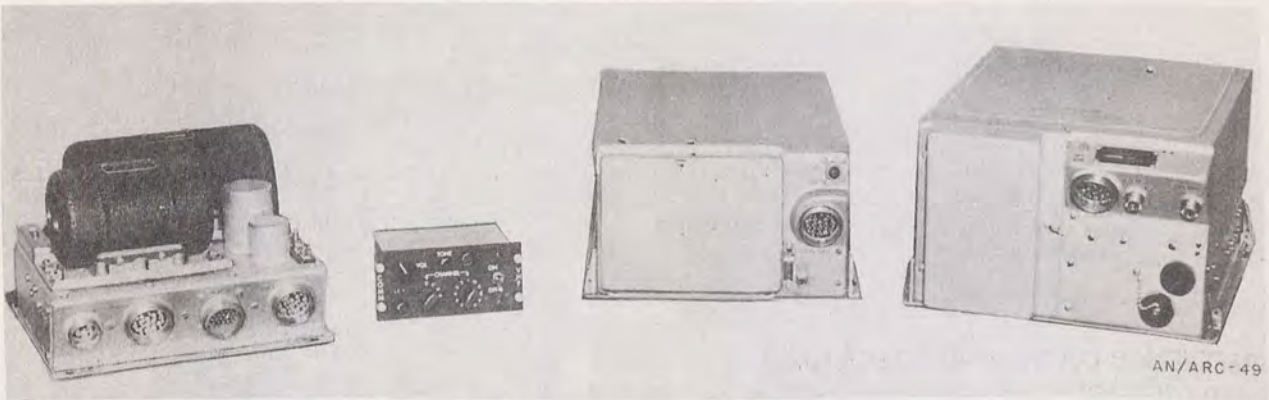
DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/ARC-49

17 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Std
STOCK NO:	--	--	1600-013388025



FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC–49 is an airborne communication system for air-to-air and air-to-ground communication in the very high frequency range. Forty-eight preset crystal-controlled channels are remotely controlled by Control Radio Set C–1400/ARC–49.

This equipment is similar to Radio Sets AN/ARC–3 and AN/ARC–36( ) except for the number of frequency channels. The AN/ARC–3 has eight, the AN/ARC–36( ) has 16, and the AN/ARC–49 has 48 channels.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 100 to 150

Type Controls: Radio Set Control C–1400/ARC–49 provides a VOLUME control, a TONE button, a crystal selector switch, a channel selector, and an ON-OFF switch.

Type Modulation: AM

Type Emission and Reception: Voice, tone

Power Output:

Transmitter: 8 w into a 50-ohm resistive load
Receiver: 600 mw into 50- or 600-ohm load impedance

Power Requirements:

Continuous Operation: 385 w, 13.75 amp at 28-v dc,
Starting: 3,324 w, 118 amp at 28-v dc
Transmitting: 12 amp at 28-v dc
Receiving: 5.5 amp at 28-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USAF)		
1	Dynamotor Unit DY-21/ARC-3	1600-337837500	4 x 3-7/16 x 7-1/2	8.4
1	Dynamotor Unit DY-22/ARC-3	1600-337837590	4 x 3-7/16 x 6-1/2	4.8
1	Mounting Base MT-236B/ARC-3	1600-293346524	10-1/8 x 8-1/2 x 2-1/8	1.2
1	Mounting Base MT-237C/ARC-3	1600-293346534	11-5/16 x 10-5/8 x 2-1/8	1.6
1	Mounting Base MT-238C/ARC-3	1600-293346544	12-1/2 x 11-7/8 x 2-1/8	1.8

AN/ARC-49 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Junction Box J-68/ARC-3	1600-347541000	3-3/16 x 8-3/8 x 10-11/32	6.7
	or			
	Power Junction Box J-68A/ARC-3	1600-012490200		
1	Radio Receiver R-608/ARC-49	1600-013424200	6 x 11 x 15-9/16	21.5
1	Radio Set Control C-1400/ARC-49	1600-011270110	5-3/4 x 2-5/8 x 4-5/8	1.5
1	Radio Transmitter T-452/ARC-49	1600-014480143	7-1/2 x 12-1/8 x 15-1/4	22.4

REFERENCE DATA AND LITERATURE:

TO 12R2-2ARC3-2, -34

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
9	4.25	86.83

PROCUREMENT DATA

PROCURING SERVICE: USAF
DESIGN COG: USAF, ARDC
SPEC &/or DWG: MIL-R-8389 (USAF)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Sylvania Electric Products Inc.	Buffao, N. Y.	AF33(600)-25777	$1,812.00

RADIO SET AN/ARC-55

1 July 1958
Cognizant Serv: USN FSN: 5821-510-4545

	USA	USN	USAF
TYPE CLASS:	Used by	Std	--
STOCK NO:	2S921-55		



FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC-55 is an airborne, two-way, point-to-point equipment used for air-to-air, air-to-ship, and ground-to-air communication in all types of fighters, bombers, helicopters, and cargo aircraft.

This equipment operates on any one of 18 preset, crystal-controlled frequencies of 1,750 available channels. It consists of a triple-conversion superhetrrodyne receiver with three crystal oscillators and a double-conversion superheterodyne auxiliary guard channel, both working into a common audio output circuit.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 399.9
Type Modulation: AM
Type of Signal: Voice or tone
Power Output: 9 w
Power Requirements: 25 amp at 24–28-v dc

AN/ARC-55 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver-Transmitter RT-349/ARC-55	5821-697-9902	11 x 9-5/8 x 25-1/16	57.5
1	Radio Set Control C-626/ARC-27	----------	6-3/8 x 9-9/16 x 5-1/2	9
1	Radio Set Control C-628/ARC-27	----------	3-5/8 x 2-5/8 x 5-3/4	1
1	Radio Set Control C-1827/ARC-55	5355-534-2787	5-3/4 x 3 x 2-1/4	1.7

REFERENCE DATA AND LITERATURE:

AN 16-30ARC27-2, -502

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	1.6	61

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-R-5068C

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Admiral Corp.	Chicago, Ill.	R-02-890006-SC-01-23	$1,507.00

RADIO SET AN/ARC-60

1 July 1958
Cognizant Serv: USA FSN: 5821-543-0643

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	--	--	--


AN/ARC-60

FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC-60 is an assemblage of radio and accessory equipment for installation in observation and reconnaissance fixed and rotary wing aircraft of low weight-carrying capability. It provides these aircraft with air-to-ground and air-to-air voice communication in the uhf range.

It consists primarily of a crystal-controlled AM transmitter and a continuously tunable superheterodyne receiver. Separate control boxes permit selection of 16 preset operating frequencies.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 228 to 258
Type Modulation: AM
Type of Signal: Voice
Power Output: 0.5 w
Power Requirements: 6.8 amp at 28-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT-701/AR	5985-321-0690	7-5/8 x 1-31/32 x 1-31/32	0.4
3	Electrical Equipment Rack MT-1140/ARC	5820-503-3449	1 x 11-21/32 x 4-15/16	.5
2	Frequency-Converter Transmitter CV-431/AR	5321-320-8639	4-3/4 x 11-1/2 x 4-3/4	5.9
1	Oscillator-Relay O-423/AR	5821-321-0242	5 x 2-3/4 x 5-1/16	1.1
1	Radio Receiver R-508/ARC	5821-503-1517	6-7/16 x 11-3/8 x 4-5/16	8.8
1	Radio Set Control C-1917/AR	5821-321-0683	3-3/4 x 3-3/4 x 5-3/4	1.4
1	Relay Switch RE-275/AR	5945-325-6587	1-3/4 x 3-1/4 x 2-1/2	.41

AN/ARC-60 RADIO SET

REFERENCE DATA AND LITERATURE:

TM 11-522-10
TM 11-522-25

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	8	150

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Aircraft Radio Corp.	Boonton, N. J.	32430-P-56-55	$814.00

RADIO SET AN/ARC-66

17 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Tent.-Std
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/ARC–66 is an airborne command, receiving-transmitting equipment for air-to-air and air-to-ground voice communication in the ultra high frequency range. This equipment, primarily designed for use in fighter aircraft, is a functional part of Communication-Identification-Navigation Sub-Systems AN/ASQ–30 and AN/ASQ–31.

This set provides a total of 1,750 crystal controlled frequencies. Any 20 of these channels can be preset in Radio Set Control C–1057/ARC–34. One guard channel in the 238- to 248-mc range can also be monitored simultaneously with normal operation of the set.

Audio input and output circuits are designed for use with Microphone Headset H–78A/AIC. Although this system is not physically similar to Radio Set AN/ARC–34, it uses the same subassemblies, with the exception of a 115-volt three-phase, 400-cycle Power Supply PP–1730/ARC–66. Two additional Audio Frequency Amplifier Subassemblies AM–1657/ARC–66 and AM–1658/ARC–66 are incorporated in this equipment.

Flush-tail cap-type arrays, Antenna AT–256A/ARC, or any other ultra high frequency aircraft antenna with a 52-ohm coaxial transmission line, such as Radio Frequency Cable RG–8/U, can be used.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225.0 to 399.9
Number of Frequencies: 1,750; spaced in increments of 100 kc
Approximate Operational Range: 75 miles at 3,000 feet altitude
Type Controls: Radio Set Control C–1057/ARC–34 provides an OFF-MAIN-BOTH-ADF switch, a MANUAL-PRESET-GUARD switch, a TONE push button, a preset channel selection knob, four manual frequency knobs, and a volume control.
Type Modulation: AM
Type Emission and Reception: Voice, tone
Transmitter Power Output: 8 w (minute)
Power Requirements:
Transmitting: 165 va, 115-v ±10 v 400-cycle 3-phase ac 8 amp at 26.5-v ±2.5 v dc
Receiving: 75 va, 115-v ±10 v 400-cycle 3-phase ac 8 amp at 26.5-v ±2.5-v dc
Tuning: 75 va, 115-v ±10 v 400-cycle 3-phase ac 9.5 amp 26.5-v ±2.5-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USAF)		
1	Control, Radio Set C–1057/ARC–34	1600–011270020	4-7/8 x 5-3/4 x 7-1/10	2.7
1	Radio Receiver-Transmitter RT–423/ARC–66	1600–013570105	7-19/32 x 24-5/16 x 11-1/2	56

REFERENCE DATA AND LITERATURE:

TO 12R2–4–19–2, –3, –4

AN/ARC-66 RADIO SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

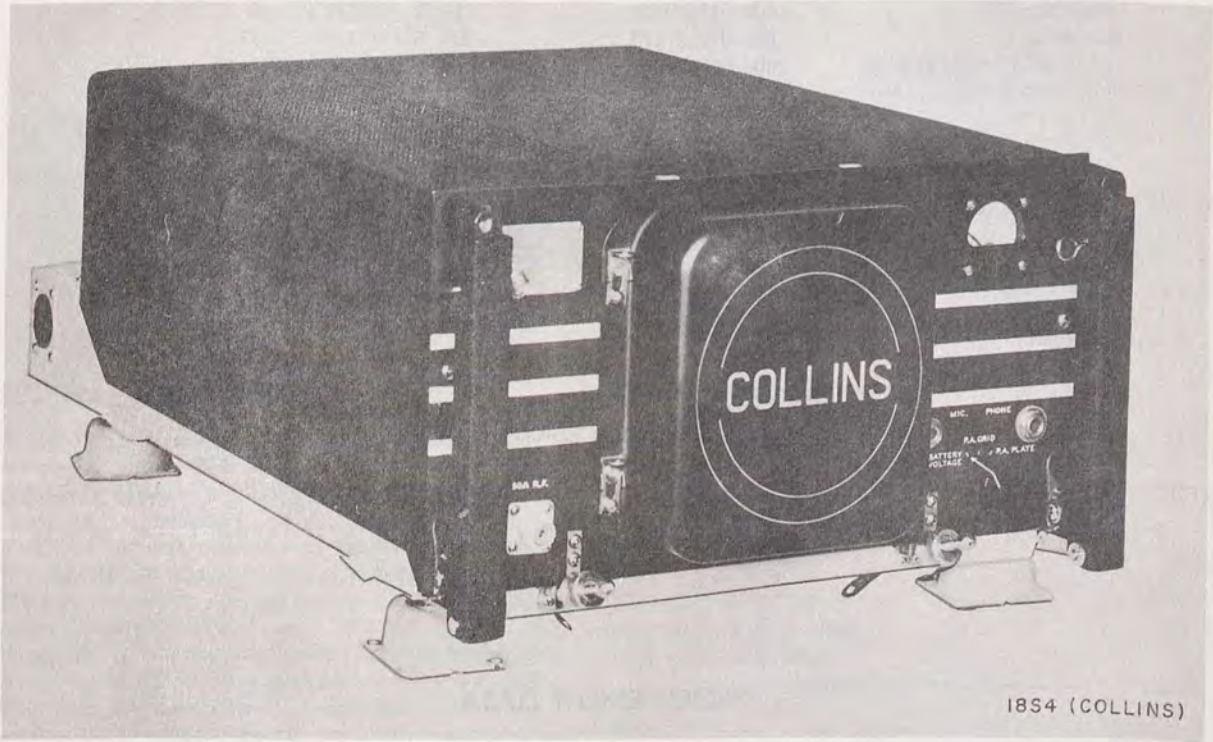
DESIGN COG: USAF, ARDC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Corp. of America	Camden, N. J.	AF 04(606)5946	$6,177.00

RADIO SET AN/ARC-type

14 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	L/Std
STOCK NO:	--	--	1600–013380500



18S4 (COLLINS)

FUNCTIONAL DESCRIPTION:

Radio Set 18S–4 is a high-frequency airborne communications system for air-to-air and air-to-ground communication. Normally, it is used in aircraft operating at altitudes under 31,000 feet. The equipment consists of a transmitter-receiver with a self-contained dynamotor unit, and antenna-matching network or automatic antenna tuner, and a remote control unit.

The transmitter-receiver operates on up to 20 crystal-controlled frequencies on 10 tuned channels. Each channel can be used for two frequencies that differ in basic frequency by not more than 1 percent. Frequency selection, as well as audio input and output, may be remotely controlled by an autotune system consisting of a remote control unit and interconnecting cable.

Antenna Matching Network 180K–3 and Automatic Antenna Tuner 180L–2 are designed to match the 52-ohm output circuit of the transmitter to various aircraft antennas at selected frequencies. Radio Frequency Cable RG–8/U is used to connect the transmitter-receiver to antennas of 45 feet or more in length.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 18.5
Frequency Control: Crystal
Type Signal: AM
Type Transmission and Reception: Cw, voice
Number of Channels: 10
Number of Preset Frequencies: 20 (maximum)
Power Output:
Transmitter: 100 w (nominal)
Receiver: 50 mw (minimum) into 600-ohm load
Power Consumption:
Standby: 192 w, 8 amp
Transmitting: 912 w (nominal), 38 amp at 24-v dc
Power Requirements:
Receiving: 8 amp at 28-v dc
Transmitting: 38 amp at 28-v dc

AN/ARC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Network 108K–3	1600–012980000	10-7/8 x 10-1/8 x 7-3/4	12.8
1	Antenna Tuner 180L–2	1600–012980020	11-5/8 x 10-5/16 x 9	18
1	Mounting 350C–5	1600–012830100	24-1/2 x 16-3/8 x 4-1/8	7.5
1	Mounting 350D–3	1600–012827540	10-5/8 x 10-3/16 x 1-1/2	1
1	Radio Set Control 314S–6	1600–011270040	3-1/8 x 5-3/4 x 2-5/8	2.5
1	Transmitter-receiver 18S–4	1600–013570070	12-1/2 x 15-1/2 x 7-3/4	60

REFERENCE DATA AND LITERATURE:

TO 12R2–4–5–1
TO 12R2–4–5–2
TO 12R2–4–5–3
TO 12R2–4–5–4
TO 12R2–4–5–501

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	9.34	137.53

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

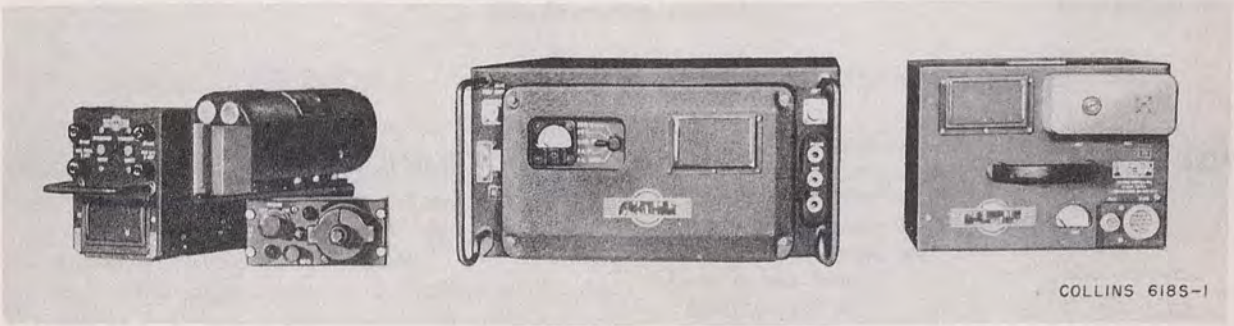
DESIGN COG: COMMERCIAL

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Ia.	AF33(600)–16670	$2,676.00

RADIO SET AN/ARC-type

17 November 1958
Cognizant Serv: USAF FSN: 618S–1

	USA	USN	USAF
TYPE CLASS:	--	--	A/Std
STOCK NO:	--	--	1600–013380550



FUNCTIONAL DESCRIPTION:

Radio Set 618S–1 is an airborne liaison type high-frequency communications system for air-to-air and air-to-ground communication. It is used primarily for long-range communication on cargo and transport aircraft. The equipment consists of a transmitter-receiver with a self-contained dynamotor unit, an automatic antenna tuner, and a radio set control.

The transmitter-receiver operates on any one of 144 crystal-controlled frequencies that are selected by the operator. A common crystal controls transmitting and receiving frequency on selected channels. The automatic antenna tuner normally is used to match the impedance of the aircraft antenna to the 52-ohm output of the transmitter.

The radio set is designed to operate with any high-frequency amplitude-modulated system having the same frequency range.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 25
Frequency Control: Crystal
Type Signal: AM
Type Transmission and Reception: Cw, voice
Number of Channels: 4
Band 1: 2 to 3.75 mc
Band 2: 3.75 to 7.25 mc
Band 3: 7.25 to 14.25 mc
Band 4: 14.25 to 25 mc
Number of Preset Frequencies: 144 (maximum)
Power Output:
Transmitter: 100 w (nominal)
Receiver: 300 mw into 300-ohm load
Power Requirements: 30 amp at 27.5-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Automatic Antenna Tuner 180L–3	1600–012980030	13-3/8 x 10-5/16 x 2-19/32	18.3
1	Mounting 350D–3	1600–012827540	10-5/8 x 10-3/16 x 1-1/2	1
1	Mounting 350S–1	1600–012842000	25-3/16 x 16-3/8 x 6-3/16	9
1	Mounting 350T–3	1600–012830415	17-9/16 x 5-7/8 x 3-15/16	4
1	Power Supply 418W–1	1600–011775000	18-1/16 x 4-7/8 x 6-3/4	22
1	Radio Set Control 614C–2	1600–011270100	4-9/16 x 5-3/4 x 2-19/32	1.75
1	Radio Transmitter-Receiver	1600–013570055	23-7/16 x 15-7/16 x 7-25/32	55

AN/ARC-type RADIO SET

REFERENCE DATA AND LITERATURE:

TO 12R2-4-6-1
TO 12R2-4-6-2
TO 12R2-4-6-3
TO 12R2-4-6-4
TO 12R2-4-8-2
TO 12R2-4-8-3
TO 12R2-4-8-14

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	6.34	50.28

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

DESIGN COG: COMMERCIAL

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	AF33(600)-31045	$4,694.00

RADIO TRANSMITTING AND RECEIVING SET AN/ARC-type

26 November 1958
Cognizant Serv: USN FSN: GF–11/RU–16

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting and Receiving Set GF–11/RU–16 is made up of Aircraft Radio Transmitting Equipment GF–11 and Aircraft Radio Receiving Equipment RU–16. It is used in aircraft with a 12-volt direct-current power supply. This equipment is designed to transmit or receive voice, tone-modulated, or continuous-wave signals.

Some of the components of the GF–11/RU–16 are interchangeable with those of the GF–8/RU–13 (serial No. 121 and above). Components of the GF–8/RU–13 (serial No. 1 to 120 inclusive) are interchangeable with those of the GF–3/RU–4A, GF–4/RU–5A, and GF–5/RU–7 and differ from the GF–11/RU–16 only in certain modifications in Receiver Switch Box 23096 and Dynamotor Filter Unit 21109. Subject to slightly modified performance, these switch boxes and dynamotor filter units are interchangeable.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Receiver: 195 to 13,575 kc
Transmitter: 2,000 to 9,050 kc
Type Emission: Voice, cw, mcw
Modulation: Am, voice 95%, mcw 100%
Tone Frequency: 1,000 cps
Power Output Data:
2,000 to 3,200 kc:
Voice: 2 to 7 w peak
Cw: 2 to 7 w
Mcw: 2 to 7 w peak
3,000 to 9,050 kc:
Voice: 12 to 15 w peak
Cw: 12 to 15 w
Mcw: 12 to 15 w peak
Dynamotor Output: 425-v at 163 ma
Power Requirements: 12- to 15-v dc at 8 amp

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Relay Unit 23049			0.8
1	Antenna-Loop Remote Control 23051			.06
1	Aircraft Radio Receiver 46051A			12.9
1	Aircraft Radio Transmitter 52063A			10.8
8	Container 47092 (for GF–11 coil sets)			.3
5	Container 47029 (for RU–16 coil sets).			9.6
8	Coil set for GF–11:			
1	Coil Set 47135			.9
1	Coil Set 47136			.9
1	Coil Set 47137			.9
1	Coil Set 47138			.9
1	Coil Set 47139			.9
1	Coil Set 47140			.9
1	Coil Set 47141			.9
1	Coil Set 47142			.9

AN/ARC-type RADIO TRANSMITTING AND RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
5	Coil set for RU–16:			
1	Coil Set 47068			1.7
1	Coil Set 47069			1.7
1	Coil Set 47070			1.7
1	Coil Set 47072			1.7
1	Coil Set 47075			1.7
5	Dual Coil Set Local Control 23053 (for RU–16 dual coil sets)			.02
5	Dual coil set for RU–16:			
1	Dual Coil Set 47105			2.6
1	Dual Coil Set 47107			2.6
1	Dual Coil Set 47108			2.6
1	Dual Coil Set 47112			2.6
1	Dual Coil Set 47204			2.6
1	Dual Coil Set Remote Control 23054			.006
1*	Dynamotor-Filter Unit 21109A			13.5
1	Extension Control Box 23099			.8
1	Junction Box 62008A			2.2
1	Receiver Switch Box 23096A			.9
2	Remote Switching Mechanical Linkage 23052			.14
1	Remote Tuning Control 23012			.9
1*	Remote Tuning Control Mechanical Linkage 23021			.12
1*	Test Meter 22266			
1	Transmitter Control Box 23097			.7
	Accessories:			
1 set	Cables and plugs			
1*	Receiver slip cover			
1	Receiver tuning chart			
1*	Transmitter slip cover			

* Optional, not furnished with all lots of equipment.

REFERENCE DATA AND LITERATURE:

NA 08 5G–400

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	Chicago Ill.	NOs–84530, 21 April 1941	

EMERGENCY MOBILE COMMUNICATION EQUIPMENT AN/ARC-type

3 December 1958
Cognizant Serv: USN FSN: 5820-347-9172 MAM

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	--	--	--

(No Illustration Available)

TECHNICAL CHARACTERISTICS:

Emergency Mobile Communication Equipment MAM is a very-high-frequency communication unit designed for use in aircraft. The unit is intended for two-way communication by radio telephone between airplanes and between ground stations and airplanes. The equipment may be pretuned for operation on four crystal-controlled frequencies in the 140- to 144-megacycle band.

FUNCTIONAL DESCRIPTION:

Frequency Range in Mc: 140 to 144
Type of Signal: Voice
Frequency Control: Crystal and master oscillator
Power Requirements: 115-v 60-cycle 1-phase ac, or 12-v dc (battery)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Aircraft Radio Receiving Equipment RAX–1, consisting of:		7-1/2 x 7-1/2 x 17	22
1	Unit 1, Radio Receiver 46115 (GFE)			
1	Unit 2, Radio Receiver 46116 (GFE)		7-1/2 x 7-1/2 x 17	22
1	Gasoline Engine Generator 73003 (GFE)		16 x 19 x 21-1/2	195
1	Radio Transmitter 52357 (GFE)		9-1/2 x 11-13/16 x 13-3/4	41
1	Radio Transmitter-Receiver RT–19/ARC–4 (GFE)		7-11/16 x 10-7/16 x 19-1/2	35
1	Rectifier and Audio Amplifier 20339		8-1/4 x 9 x 10-15/16	35
1	Rectifier Power Unit 20338 (GFE)		7-1/2 x 8-13/16 x 9-15/32	29
1	Rotary Converter 21485		8-1/4 x 11-1/8 x 16-3/4	76

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900588

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/ARC-type EMERGENCY MOBILE COMMUNICATION EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

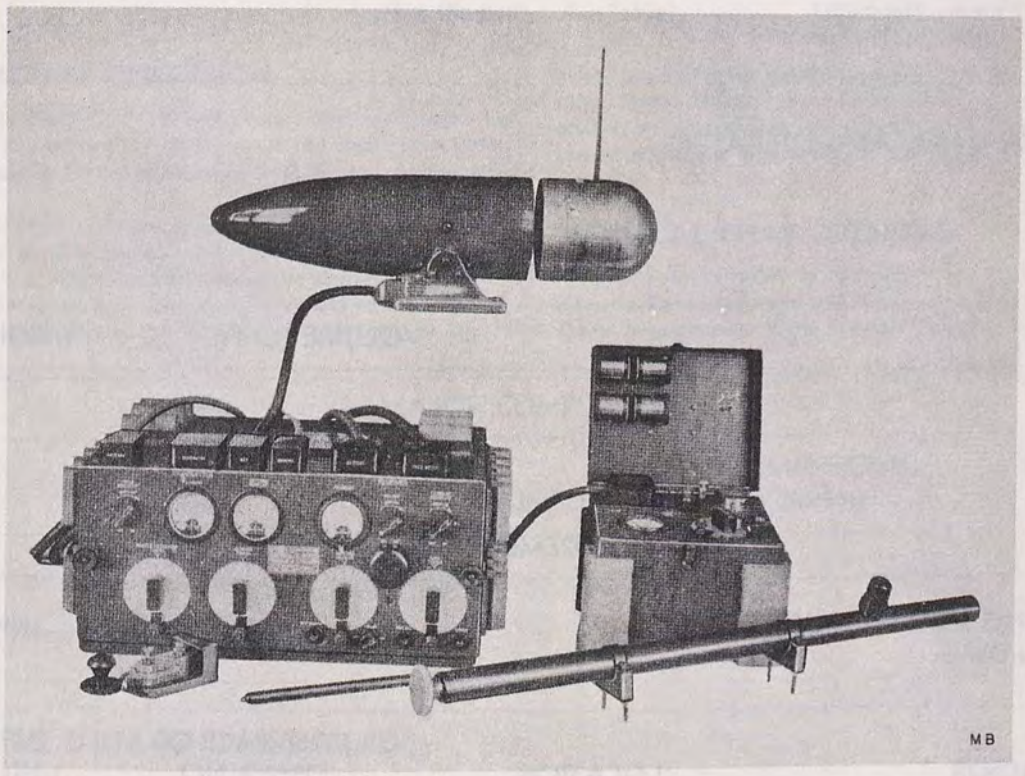
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Air-Track Mfg. Corp.	College Park, Md.	NXsr 90766	

AIRCRAFT RADIO TRANSMITTER-RECEIVER AN/ARC-type

4 December 1958
Cognizant Serv: USN FSN: MB

	USA	USN	USAF
TYPE CLASS:	—	Used by	—
STOCK NO:	—	—	—



FUNCTIONAL DESCRIPTION:

Aircraft Radio Transmitter-Receiver MB is designed for use on aircraft and is intended for fire control spotting work. The transmitter and receiver are inclosed in one case, which is connected by detachable cables to the frequency meter, wind driven generator, battery, key, antenna, and counterpoise.

Breakin operation is obtained by means of a relay that connects the antenna to the transmitter when the key is closed but leaves the antenna connected to the receiver at all other times. Transmission is continuous wave with complete keying. The receiver is one of the nonradiating type and arranged for damped and undamped wave operation.

TECHNICAL CHARACTERISTICS:

Frequency Range: 550 to 1,000 kc
Number of Bands: 19
Bandwidth: 25 kc each
Power Requirements: Wind-Driven Generator 2501

AN/ARC-type AIRCRAFT RADIO TRANSMITTER-RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transmitter, Receiver, and Case 2500			
1	Frequency Meter 2502			
1	Wind-Driven Generator 2501			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: USN, BuAer
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

AIRCRAFT RADIO TRANSMITTER-RECEIVER AN/ARC-type

4 December 1958
Cognizant Serv: USN FSN: ME

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Aircraft Radio Transmitter-Receiver ME is designed for use with aircraft of the reconnaissance and observation types. Its purpose is for communication with ships and other aircraft.

The transmitter and receiver are inclosed in one case and connected by detachable cables to the wind driven generator, battery, key, antenna, and frame of the aircraft.

Breakin operation is obtained by means of a relay that connects the antenna to the transmitter when the key is closed but leaves the antenna connected to the receiver at all other times. Transmission is continuous wave, crystal-controlled, at a predetermined frequency. The receiver is of the nonradiating type arranged for damped or undamped reception.

TECHNICAL CHARACTERISTICS:

Frequency Range: 3,000 to 4,000 kc
Antenna Type: 1/4-wave reel type
Power Requirements: Wind Driven Generator 3063

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transmitter 3061, Receiver 3062, Case 3060			
1	Wind Driven Generator 3063			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/ARC-type AIRCRAFT RADIO TRANSMITTER-RECEIVER

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVING EQUIPMENT AN/ARR-1

17 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment AN/ARR-1 is an adapter designed for aircraft homing. It is not a complete self-contained radio equipment but applicable solely for operation in conjunction with standard aircraft radio receivers.

This unit delivers the keyed modulation component of the signal to the receiver input where it is further amplified and converted to an audio frequency signal. The resulting audio frequency signal is keyed to conform to the keying on the modulation frequency of the received signal.

All units of this equipment are similar to and functionally identical with corresponding units of Homing Adapter Equipments ZB, ZB-1, and ZB-3.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 234 to 258
Reception: Radio signals amplitude modulated with frequencies from 540 to 830 kc
Output Impedance: 50 ohms
Output Frequency: 540 to 830 kc
Antenna:
Type: AT-5/ARR-1, a quarter wave length, or three-quarter wave length
Input Impedance: 50 ohms
Power Requirements: 0.28 amp at 12-v dc or 0.14 amp at 24-v dc, 10 ma at 220-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Box C-1/ARR-1	----------	2-9/16 x 3 x 3	0.56
1	Eight conductor cable	----------	1/2 dia x 120	
1	Flexible transmission line	----------	0.410 dia x 240	
2	Plug 49062	----------	1-1/4 dia x 2-3/8	.15
1	Plug 49132	----------	1-1/8 dia x 2-3/8	.1
2	Plug 49133	----------	1-1/4 dia x 2-3/8	.1
1	Plug 49134	----------	1-1/4 dia x 2-3/8	.12
4	Plug 49195	----------	11/16 dia x 1-9/16	.06
1	Portable Test Oscillator TS-1/ARR-1	----------	6-3/4 x 7-1/8 x 11-1/8	14.5
1	Radio Receiver R-1/ARR-1	----------	3-3/4 x 3-7/8 x 12-1/4	4.0
1	Switching Relay RE-1/ARR-1	----------	2-5/16 x 4 x 4-15/16	1.4
1	Three conductor cable	----------	3/8 dia x 120	

REFERENCE DATA AND LITERATURE:

NAVAER O8-5Q-1

AN/ARR-1 RADIO RECEIVING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Corp.	New York, N. Y.	Nos 84433	
Zenith Radio Corp.	Chicago, Ill.	NXs 2959	

RADIO RECEIVING EQUIPMENT AN/ARR-2, -2A, -2X, -2AX

17 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments AN/ARR–2, AN/ARR–2A, AN/ARR–2X, and AN/ARR–2AX are designed for aircraft reception of signals transmitted by Homing Beacon Equipment. The signal must be amplitude modulated at a lower radio frequency, which usually is keyed telegraphically but may be amplitude modulated in turn by a voice signal.

The modulation may be set at any one of six frequencies. These equipments are for remote control operation only.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 234 to 258
Reception: Receiver will respond to a superimposed modulation frequency at any one of six preset frequencies within the range of 540 to 830 kc.
Power Output:
Continuous Wave: 500 mw
Modulated Continuous Wave: 900 mw
Output Impedance: 300 ohms; 4,000 ohms
Sensitivity:
Continuous Wave Reception: 10-uv input for 1.7 v across a 300-ohm load or 6.3 v across a 4,000-ohm load
Voice Reception: 450-uv input for 1.7 v across a 300-ohm load or 6.3 v across a 4,000-ohm load
Antenna:
Type: Quarter wave
Input Impedance: 50 ohms
Power Requirements:
AN/ARR–2: 1.6 amp (total) at 28-v dc
Heaters: 0.5 amp
Dynamotor: 1.1 amp
AN/ARR–2A: 2.2 amp (total) at 28-v dc
Heaters: 0.5 amp
Adapter Motor Field: 0.25 amp
Armature: 9.35 amp
AN/ARR–2X: 3.2 amp (total) at 14-v dc
Heaters: 1.0 amp
Dynamotor: 2.2 amp
AN/ARR–2AX: 4.4 amp (total) at 14-v dc
Heaters: 1.0 amp
Dynamotor: 2.2 amp
Adapter Motor Field: 0.5 amp
Armature: 0.7 amp

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For AN/ARR-2:			
1	Adapter MX–2/ARR–2		1-7/32 dia	0.12
1	Cable WF–1/U (4-conductor)		1/2 dia x 60	
1	Cable WM–1/U (8-conductor)		1/2 dia x 120	
1	Coaxial Plug 49195 or PL–259		13/16 dia	.06
1	Control Unit C–2/ARR–2		3 x 3-3/8 x 5-15/32	1.3
1	Control Unit Mounting Plate MT–4/ARR–2		1/16 x 3-9/16 x 5-9/16	.2
3	Decode card			
1	Dynamotor DY–2/ARR–2		2-23/32 x 3-9/32 x 4-13/16	3.0
1	Dynamotor DY–2B/ARR–2		2-3/4 x 3-19/32 x 4-1/2	2.2
1	Mechanical Linkage #6151 or Tuning Shaft MC–215		5/8 dia	
1	Plug PL–147, PL–147A, or 9127		1-7/32 dia	.12
	Plug PL–152, PL–152A, 6577, or 9125		1-7/32 dia	.12

AN/ARR-2, -2A, -2X, -2AX RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Frequency Cable RG-8/U		13/32 dia x 180	
1	Right angle adaptor for Mechanical Linkage MX-22/ARR-2		5/8 x 1-11/32 x 1-19/32	.2
1	Right Angle Coaxial Adapter 49192 or M-359		13/16 dia	.1
	For AN/ARR-2A:			
1	Adapter MX-2/ARR-2		1-7/32 dia	.12
1	Cable WF-1/U (4-conductor)		1/2 dia x 60	
1	Cable WM-1/U (8-conductor)		1/2 dia x 120	
1	Clamp for Plug AN-3057-12			
1	Coaxial Plug 49195 or PL259		13/16 dia	.06
1	Control Unit C-35/ARR-2A		2-15/32 x 3-3/8 x 5-15/32	.9
1	Control Unit C-116/ARR-2A		2-1/8 x 6 x 6-5/16	.75
1	Control Unit Mounting Plate MT-4/ARR-2		1/16 x 3-9/16 x 5-9/16	.2
3	Decode card			
1	Dynamotor DY-2/ARR-2		2-23/32 x 3-9/32 x 4-13/16	3.0
1	Dynamotor DY-2B/ARR-2		2-3/4 x 3-19/32 x 4-1/2	2.2
1	Electric Tuning Control Adapter C-37/ARR-2A		1-19/32 x 3-13/64 x 4-3/16	.94
1	Mechanical Linkage #6151 or Tuning Shaft MC-215		5/8 dia	
1	Plug AN-3106-20-27S-Position 8		1-1/2 dia	.18
2	Plug G-33069 or B-33069-2		1-7/32 dia	.12
1	Plug PL-147, PL-147A or 9127		1-7/32 dia	.12
2	Plug PL-152, PL-152A, 6577 or 9125		1-7/32 dia	.12
1	Radio Frequency Cable 9G-8/U		13/32 dia x 180	
1	Right Angle Coaxial Adapter 4192 or M-359		13/16 dia	.1
	For AN/ARR-2X:			
1	Adapter MX-2/ARR-2		1-7/32 dia	.12
1	Cable WF-1/U (4-conductor)		1/2 dia x 60	
1	Cable WM-1/U (8-conductor)		1/2 dia x 120	
1	Coaxial Plug 49195 or PL-259		13/16 dia	.06
1	Control Unit C-2/ARR-2		3 x 3-3/8 x 5-15/32	1.3
1	Control Unit Mounting Plate MT-4/ARR-2		1/16 x 3-9/16 x 5-9/16	.2
3	Decode card			
1	Dynamotor DY-1/ARR-2X		2-23/32 x 3-9/32 x 4-13/16	3.0
1	Mechanical Linkage #6151 or Tuning Shaft MC-215		5/8 dia	
1	Plug PL-147, PL-147A, or 9127		1-7/32 dia	.12

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Plug PL–152, PL–152A, 6577, or 9125		1-7/32 dia	.12
1	Radio Frequency Cable RG–8/U		13/32 dia x 180	
1	Right angle adapter for Mechanical Linkage MX–22/ARR–2		5/8 x 1-11/32 x 1-19/32	.2
1	Right Angle Coaxial Adapter 49192 or M–359		13/16 dia	.1
	For AN/ARR–2AX:			
1	Adapter MX–2/ARR–2		1-7/32 dia	.12
1	Cable WF–1/U (4-conductor)		1/2 dia x 60	
1	Cable WM–1/U (8-conductor)		1/2 dia x 120	
1	Clamp for Plug AN–3057–12			
1	Coaxial Plug 49195 or PL–259		13/16 dia	.06
1	Control Unit C–35/ARR–2A		2-15/32 x 3-3/8 x 5-15/32	.9
1	Control Unit C–116/ARR–2A		2-18/ x 6 x 6-5/16	.75
1	Control Unit Mounting Plate MT–4/ARR–2		1/16 x 3-9/16 x 5-9/16	.2
3	Decode card			
1	Dynamotor DY–1/ARR–2X		2-23/32 x 3-9/32 x 4-13/16	3.0
1	Electric Tuning Control Adapter C–36/ARR–2AX		3-13/64 dia x 4-3/16	
1	Mechanical Linkage #6151 or Tuning Shaft MC–215		5/8 dia	
1	Plug AN/3106–20–27S–Position 8		1-1/2 dia	.18
2	Plug G–33069 or B–33069–2		1-7/32 dia	.12
1	Plug PL–147, PL–147A, or 9127		1-7/32 dia	.12
2	Plug PL–152, PL–152A, 6577, or 9125		1-7/32 dia	.12
1	Radio Frequency Cable RG–8/U		13/32 dia x 180	
1	Right Angle Coaxial Adapter 49192 or M–359		13/16 dia	.1

REFERENCE DATA AND LITERATURE:

AN 16–30ARR2–2

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/ARR-2, -2A, -2X, -2AX RADIO RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

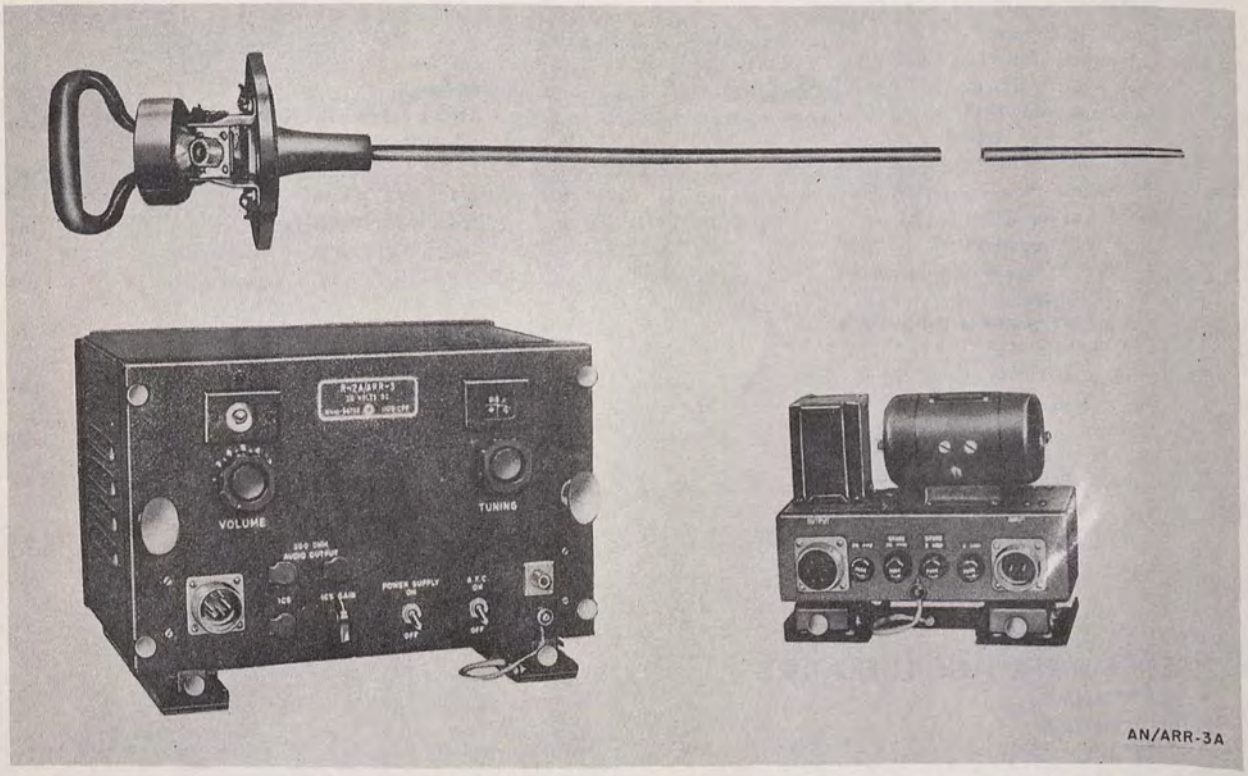
DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	X–NXS–4967 NXsr–38075, 5 May 1944	
Zenith Radio Corp.	Chicago, Ill.	NXsr–59128, 5 May 1944	

RADIO RECEIVING EQUIPMENT AN/ARR-3A, -3B

17 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



AN/ARR-3A

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments AN/ARR–3A and AN/ARR–3B are frequency-modulated, airborne units designed to be used with Radio Transmitting Equipments AN/CRT–1A and AN/CRT–1B having hydrophones for submarine detection.

Sounds emitted by submarines are transmitted on frequency bands to which these radio receiving equipments are tuned. The receivers, in conjunction with their associated transmitters, enable an aircraft in flight to determine the approximate location of a submerged submarine.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 62 to 72

Number of Channels:
Radio Receiver R–2/ARR–3: 6
Radio Receiver R–2A/ARR–3: 12

Audio Output Jack: 300 ohms impedance

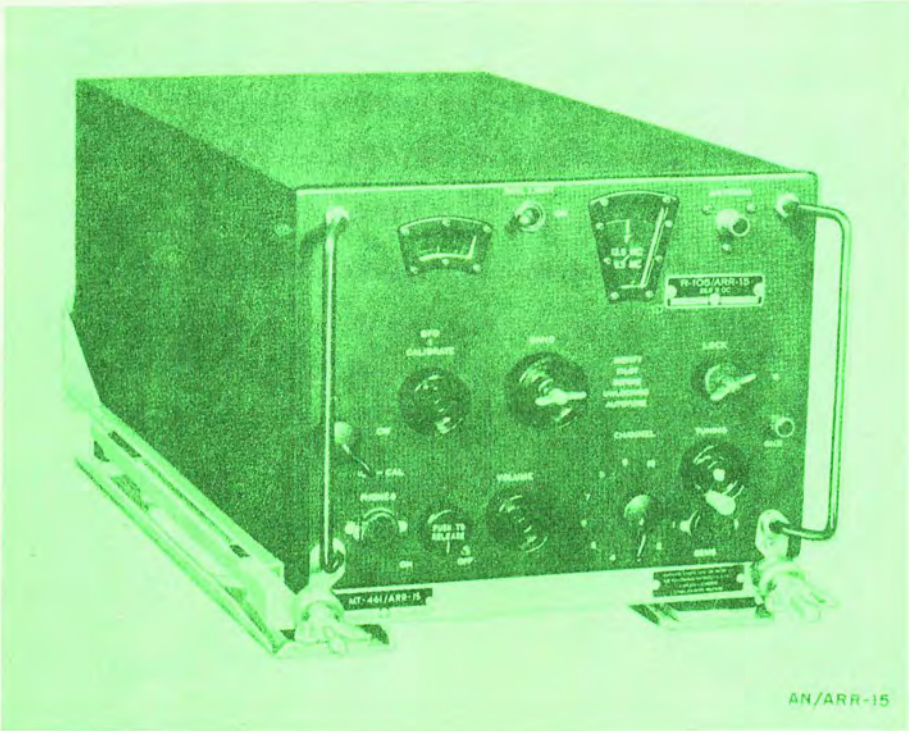
Antenna:
Type: Whip
Impedance: 70 ohms

Power Requirements: 72.5 w, 24-v to 28-v dc

RADIO SET AN/ARR-15

17 November 1958
Cognizant Serv: USN FSN: 5820-665-2538

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-108338-200 (USN)	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/ARR-15 is a general purpose receiver designed for medium high frequency communication. It may be controlled locally or from a remote position.

An autotune system permits automatic mechanical selection of any one of 10 preset crystal-controlled channels within the provided frequency range.

This equipment is similar to Radio Set AN/ARR-15A except that the A model has an electron tube substituted for a crystal.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.5 to 18.5
Frequency Control: Crystal (10 preset channels)
Type Modulation: AM
Type Reception: Cw, mcw, voice
Antenna: Fixed aircraft; 17 to 34 feet long
Design: Contained in single compact case
Mounting Data: Detachable aircraft mounting base
Audio Output: 500 w
Power Equipment: Self-contained dynamotor
Power Requirements: 47.7 w, 1.8 amp at 26.5-v dc

AN/ARR-15 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Connector plug			
1	Control box			1.37
1	Control console unit			1.37
1	Dynamotor			
1	Power connector			.43
1	Radio Receiver R-105/ARR-15		23-1/4 x 10-3/8 x 9-9/16	40
1	Receiver mounting base			3.18

REFERENCE DATA AND LITERATURE:

AN 16-30ARR15-3

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: CS-395

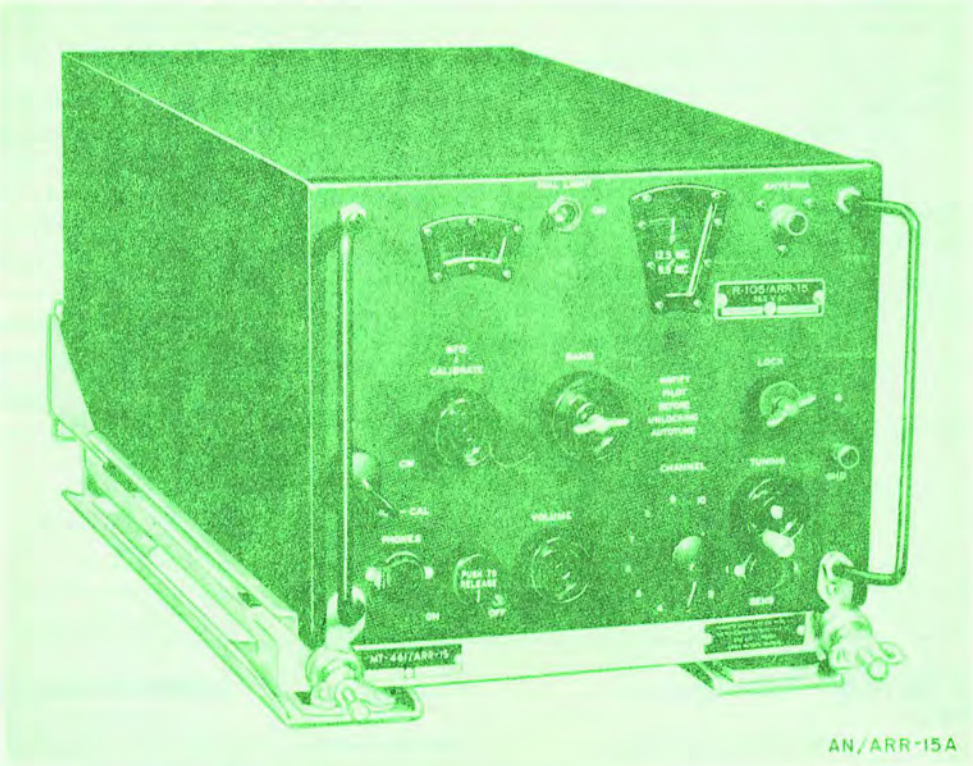
DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa		$1,500.00

RADIO SET AN/ARR-15A

17 November 1958
Cognizant Serv: USN FSN: 5820-642-6829

	USA	USN	USAF
TYPE CLASS:		Used by	
STOCK NO:			



AN/ARR-15A

FUNCTIONAL DESCRIPTION:

Radio Set AN/ARR-15A is a general purpose receiver designed to provide preset, multichannel, voice, continuous wave, or modulated continuous wave, pilot or radio operated reception. It is suitable for installation in all types of naval aircraft.

This equipment may be controlled from the receiver panel or from a remote position.

An autotune system permits the selection of any one of 10 channels and may be adjusted to select any 10 frequencies within the range of the set.

Radio Sets AN/ARR-15 and AN/ARR-15A are functionally similar. However, the AN/ARR-15A incorporates an improved autotune unit and minor component changes; an electron tube has been substituted for a crystal.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.5 to 18.5 in six bands
- Band A: 1.5 to 2.5 mc
- Band B: 2.5 to 3.5 mc
- Band C: 3.5 to 5.5 mc
- Band D: 5.5 to 8.5 mc
- Band E: 8.5 to 12.5 mc
- Band F: 12.5 to 18.5 mc

Type Modulation: AM

Type Reception: Voice, mcw, cw

Operating Temperature Range: −40°C. to +60°C.

Altitude: 40,000 feet above sea level (maximum)

Audio Output: 500 mw (maximum)

Power Requirements: 26.5-v dc

AN/ARR-15 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Connector plug			
1	Control box	----------	----------	1.37
1	Control console unit	----------	----------	1.37
1	Dynamotor			
1	Power connector	----------	----------	.43
1	Radio Receiver R-105/ARR-15	----------	23-1/4 x 10-3/8 x 9-9/16	40
1	Receiver mounting base	----------	----------	3.18

REFERENCE DATA AND LITERATURE:

AN 16-30ARR15-3

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: CS-395

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	----	$1,500.00

RADIO SET AN/ARR-15A

17 November 1958
Cognizant Serv: USN FSN: 5820-642-6829

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



AN/ARR-15A

FUNCTIONAL DESCRIPTION:

Radio Set AN/ARR-15A is a general purpose receiver designed to provide preset, multichannel, voice, continuous wave, or modulated continuous wave, pilot or radio operated reception. It is suitable for installation in all types of naval aircraft.

This equipment may be controlled from the receiver panel or from a remote position.

An autotune system permits the selection of any one of 10 channels and may be adjusted to select any 10 frequencies within the range of the set.

Radio Sets AN/ARR-15 and AN/ARR-15A are functionally similar. However, the AN/ARR-15A incorporates an improved autotune unit and minor component changes; an electron tube has been substituted for a crystal.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.5 to 18.5 in six bands
- Band A: 1.5 to 2.5 mc
- Band B: 2.5 to 3.5 mc
- Band C: 3.5 to 5.5 mc
- Band D: 5.5 to 8.5 mc
- Band E: 8.5 to 12.5 mc
- Band F: 12.5 to 18.5 mc

Type Modulation: AM

Type Reception: Voice, mcw, cw

Operating Temperature Range: −40°C. to +60°C.

Altitude: 40,000 feet above sea level (maximum)

Audio Output: 500 mw (maximum)

Power Requirements: 26.5-v dc

AN/ARR-15A RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Mounting Base MT-461/ARR-15		3-15/16 x 10-7/8 x 23-27/32	3.31
1	Power connector		1-5/16 x 2-15/32 x 4-15/16	.69
1	Radio Receiver R-105A/ARR-15		7-7/8 x 10-3/8 x 21-9/16	39.5
1	Radio Set Control C-733/ARR-15A		2-1/4 x 5-11/32 x 5-3/4	1.7

REFERENCE DATA AND LITERATURE:

AN 16-30ARR15-3

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NOas-51-259-i, 25 October 1950	

RADIO SET AN/ARR-36

17 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Tent-Std
STOCK NO:	--	--	1600-013424120 (Ref)

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/ARR-36 is an airborne receiving set that can be operated independently of any other communication equipment. It is normally used in conjunction with Radio Set AN/ARC-21 or AN/ARC-21X to provide auxiliary receiving facilities and cross band operation.

The equipment will receive continuous wave and voice transmission, as well as frequency-shift keying transmission when a suitable converter is used.

Remote, automatic tuning is provided in the high frequency range covered by the set. Radio Set Controls C-451/ARC-21 and C-455/ARC-21 may be used with this equipment to provide 20 preset frequencies.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 24
Number of Frequencies: 44,000
Type Modulation: AM
Type Reception: Voice, cw
Operational Altitude: 50,000 feet (maximum)
Power Output: 900 mw into 200 ohms impedance
Power Requirements:
Receiving: 9 amp at 27.5-v dc
Tuning: 12 amp at 27.5-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USAF)		
1	Dynamotor Power Supply DY-108/ARR-36	1600-011728160	3-1/4 x 8-1/8 x 3	4.5
1	Mounting MT-1276/ARR-36	1600-012830430	3-15/16 x 12-3/4 x 23-1/2	5
1	Radio Receiver R-224/ARR-36	1600-013424180	10-1/4 x 12 x 25	53.4

REFERENCE DATA AND LITERATURE:

TO 12R2-2ARC21-1, -2, -3, -4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/ARR-36 RADIO SET

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: MIL-R-9453

DESIGN COG: USAF, ARDC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Corporation of America	Camden, N. J.	AF33(600)-32231	$9,000.00

RADIO EQUIPMENT AN/ARR-type

5 December 1958
Cognizant Serv: USN FSN: ABD

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Equipment ABD is designed for aircraft use.

This equipment consists essentially of two major operating components—a radio receiver and a control unit.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Band 1: 38 to 52
Band 2: 195 to 220
Power Requirements:
Control Unit: 5 amp at 12- to 14-v dc
Radio Receiver: 5 amp at 12-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna insulator bushing			
2	Antenna plug			
2	Antenna shock cord assembly			
1	Control Unit 23ABE	----------	3-7/8 x 6-1/8 x 7-1/2	3.5
1	"D" plug			
1	"D" plug shield assembly			
1	Detonator			
1	Detonator indicator			
1	Equipment spare parts group			
1	Five-prong female plug	----------	----------	.14
2	Five-prong male plug	----------	----------	.14
2	Five-prong plug shield assembly			
1	Fuse assembly	----------	----------	.25
1	Junction Box			
1	Pilot control switch	----------	----------	.6
1	Power socket assembly	----------	----------	.4
1	Radio Receiver Unit 43AAH	----------	9-1/2 x 13 x 13-1/2	24
1	Receiver shock mounting	----------	----------	.9
1	Seven-prong female plug	----------	----------	.15
1	Seven-prong male plug	----------	----------	.15
1	Seven-prong plug shield assembly			
1	Shielded cable (3 conductor)	----------	----------	.09
1	Shielded cable (6 conductor)	----------	----------	.18
1	Shielded cable (8 conductor)	----------	----------	.19
1	Terminal block (bakelite)			
1	Terminal block (ceramic)			

REFERENCE DATA AND LITERATURE:

NAVER 08-55-30

AN/ARR-type RADIO EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Philco Corp.	Philadelphia, Pa.	NOs–99911, 25 February 1942	

AIRCRAFT RADIO RECEIVING EQUIPMENT AN/ARR-type

4 December 1958
Cognizant Serv: USN FSN:

ABK, ABK-1, -2, -3, -4, -5, -6, and -7

	USA	USN	USAF
TYPE CLASS:	Used by	--	--
STOCK NO:	--	ABK: F16–Q–124401–200 (12-v dc) ABK–1: F16–Q–124421–200 (24-v dc) ABK–2: F16–Q–124402–200 (12-v dc) ABK–3: F16–Q–124422–200 (24-v dc) ABK–4: F16–Q–124403–200 (12-v dc) ABK–5: F16–Q–124423–200 (24-v dc) ABK–6: F16–Q–124404–200 (12-v dc) ABK–7: F16–Q–124424–200 (24-v dc)	--

(No Illustration Available.)

FUNCTIONAL DESCRIPTION:

Aircraft Radio Receiving Equipments ABK, ABK–1, –2, –3, –4, –5, –6, and –7 are part of the Mark III IFF System, and are primarily intended for use in aircraft as a means of establishing identity.

They are combination receivers and transmitter-coders which respond with the appropriate coded signal when excited by the signal from an interrogator.

All models of the ABK-series are similar except for power supply voltage.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 158 to 186, continuous sweep
Power Requirements:
ABK, ABK–2, –4, –6: 12-v dc
ABK–1, –3, –5, –7: 24-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For ABK, ABK–2, –4, –6:			
1	Aircraft Radio Receiver (Transponder) 43AAX	----------	13 x 9 x 12-5/16	30
1	Antenna Assembly 66AAV	----------	----------	.8
	or			
1	Antenna Assembly 66AAW	----------	----------	1.5
1	Control Unit 23ABG	----------	3-1/2 x 8 x 6-1/4	1
1 set	Equipment spares	----------	21 x 9-1/4 x 6-5/8	28
1	Selector Unit 23ABH	----------	3-1/2 x 8 x 6-1/4	.5

AN/ARR-type AIRCRAFT RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For ABK–1, –3, –5, –7:			
1	Aircraft Radio Receiver (Transponder) 43AAY		13 x 9 x 12-5/8	30
1	Antenna Assembly 66AAV			.8
	or			
1	Antenna Assembly 66AAW			1.5
1	Control Unit 23ABG		3-1/2 x 8 x 6-1/4	1
1	Equipment spares		21 x 9-1/4 x 6-5/8	28
1	Selector Unit 23ABH		3-1/2 x 8 x 6-1/4	.5

REFERENCE DATA AND LITERATURE:

CSP 1375

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuAer

SPEC &/or DWG: ABK–RE–9079–A
ABK–1–RE–9079–A

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For ABK, ABK–1:			
Hazeltine Electronics Corp.	New York, N. Y.	NOs–95492	
For ABK–2, –3:			
Stromberg-Carlson Co.	Rochester, N. Y.	NXs–8127	
For ABK–4, –5:			
Zenith Radio Corp.	Chicago, Ill.	NXs–8128	
For ABK–6, –7:			
Stewart Warner Corp.	Chicago, Ill.	NXs–8129	

AIRCRAFT RADIO RECEIVING EQUIPMENT AN/ARR-type

4 December 1958
Cognizant Serv: USN FSN: ARA

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available.)

FUNCTIONAL DESCRIPTION:

Aircraft Radio Receiving Equipment ARA is used with Aircraft Radio Transmitting Equipment ATA to make up a complete multichannel radio transmitting and receiving set for use on aircraft equipped with a 24-volt dc power supply. When the ARA and ATA are used together, the system is designed to transmit and receive voice, tone-modulated, or continuous-wave signals.

The receivers cover the frequency range of 190 to 9,100 kc in five independent units, any two or three of which may be installed and operated one at a time or simultaneously, depending on the requirements. The frequency ranges are 190 to 550 kc, 520 to 1,500 kc, 1.5 to 3 mc, 3 to 6 mc, 6 to 9.1 mc.

ARA receivers are interchangeable with RAV receivers in corresponding frequency ranges except those in 190- to 550-kc and 520- to 1,500-kc ranges. The receiver units of the RAT–1 equipment may be operated in the ARA receiver racks, or vice versa.

The following equipment is used with, but not supplied with, Aircraft Radio Receiving Equipment ARA: antennas as required, receiver test set.

TECHNICAL CHARACTERISTICS:

Frequency Range: 190 to 9,100 kc in 5 units
Reception: Voice, cw, mcw
Frequency Accuracy: 0.3%
Type: Superheterodyne
Power Requirements: 22- to 30-v dc, 1.6 amp at 28-v dc for each receiver

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	Auxiliary Outlet Adapter NT–62036 (for NT–46145 receiver only)			
	Dials, Receiver Control Box, 190–550 kc, 520–1, 500 kc, 1.5–3 mc, 3–6 mc, 6–9 mc			
	Radio Receiver NT–46104 (1.5 to 3 mc)		4-3/4 x 5-3/4 x 10-7/16	5.7
	Radio Receiver NT–46105 (3 to 6 mc)		4-3/4 x 5-3/4 x 10-7/16	5.7
	Radio Receiver NT–46106 (6 to 9.1 mc)		4-3/4 x 5-3/4 x 10-7/16	5.7
	Radio Receiver NT–46129 (190 to 550 kc)		4-3/4 x 5-3/4 x 10-7/16	5.7
	Radio Receiver NT–46145 (520 to 1,500 kc)		4-3/4 x 5-3/4 x 10-7/16	5.7
	Receiver Control Box NT–23155 (2-unit) with dials for receiver frequency		3 x 4-1/8 x 6-3/8	1.8
	Receiver Control Box NT–23251 (3-unit) with dials for receiver frequency		3 x 6-3/8 x 9-1/2	2.7
	Receiver Control Box Mounting 6831 (2-unit)		1/4 x 5-15/32 x 6-3/8	

AN/ARR-type AIRCRAFT RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	Receiver Control Box Mounting 7054		1/4 x 5-15/32 x 9-1/2	
	Receiver Dynamotor Unit 21531			3.0
	Receiver Mounting NT–46085 (2-unit)		1-7/16 x 10-23/32 x 11-5/8	.8
	Receiver Mounting NT–46150 (3-unit)		1-7/16 x 10-23/32 x 16-9/16	1.0
	Receiver Rack NT–46110 (2-unit)			2.7
	Receiver Rack NT–46149 (3-unit)			4.0
1 set	Cable assemblies			
1 set	Mechanical linkage			
1 set	Spare parts			
1 set	Tools			
	Switch Panel Adapter NT–49107 (for NT–46129, NT–46104, NT–46105, NT–46106 receivers)			.15

REFERENCE DATA AND LITERATURE:

NA–08–5Q–4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuAer

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Aircraft Radio Corp.	Boonton, N. J.	NOs–74912, 29 June 1940	

AIRCRAFT RADIO RECEIVER AN/ARR-type

4 December 1958
Cognizant Serv: USN FSN: ARB

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available.)

FUNCTIONAL DESCRIPTION:

Aircraft Radio Receiver ARB consists of a superheterodyne receiver designed for the reception of voice, cw, or mcw signals. A group of controls and accessories supplied permit control of the receiver from either one or two remote locations.

The frequency range is divided into four bands. On the two lower bands (A and B), either a loop or an extended antenna may be used; on the upper frequency bands (C and D), only an extended antenna may be used. The receiver selectivity may be broadened on the two high frequency bands to facilitate the locating of signals.

An accessories plug is provided on the receiver unit to power auxiliary equipment through the receiver.

TECHNICAL CHARACTERISTICS:

Frequency Range: 195 to 9,050 kc in four bands
Band A: 195 to 560 kc
Band B: 560 to 1,600 kc
Band C: 1.6 to 4.5 mc
Band D: 4.5 to 9.05 mc
Antenna: Loop or extended type on Bands A and B; extended type only on Bands C and D
Reception: Voice, mcw or cw
Intermediate Frequency: 134 kc on Bands A and B; 915 kc on Bands C and D
Frequency Control: Manual at either local or remote positions
Output Impedance: 300 and 4,200 ohms
Power Requirements: 28-v dc

MAJOR COMPONENTS

QTY *For One Remote Location*	QTY *For Two Remote Locations*	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	1	Aircraft Radio Receiver NT–56151	----------	7-11/16 x 8-5/16 x 17	26.8
1 set	0	Bulk cable and fittings (p/o RCA MI–8689)			
0	1 set	Bulk cable and fittings (p/o RCA MI–8689–A)			
1 set	0	Combined operating spare parts (and box) for ARB receiver and ATB Transmitter (RCA MI–8695)			
0	1 set	Combined operating spare parts (and box) for ARB Receiver and ATB Transmitter (RCA MI–8695–A)			
1	2	Flexible tuning shaft			
1	1	Local tuning unit			
0	1	Mechanical linkage			
0	1	Operators Control Box 23256	----------	3 x 4-15/16 x 5-3/4	2
1	1	Pilots Control Box 23254	----------	2-1/4 x 3 x 5-3/4	1.2

AN/ARR-type AIRCRAFT RADIO RECEIVER

MAJOR COMPONENTS—Continued

QTY		ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	1	Receiver Mounting Base 10081			
1	1	Receiver slip cover			
1	2	Receiving Tuning Head 23253			
1	1	Right angle tuning drive			
0	1	"T" tuning drive			

REFERENCE DATA AND LITERATURE:

NAVAER 08-5Q-3

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAe

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Corp. of America	----	NOs-98559	

AIRCRAFT RADIO RECEIVING EQUIPMENT AN/ARR-type

5 December 1958
Cognizant Serv: USN FSN: 5820-316-8686 RAX-1

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available.)

FUNCTIONAL DESCRIPTION:

Battery-powered Aircraft Radio Receiving Equipment RAX-1 is designed for use in the 200- to 27,000-kc frequency range. The equipment is arranged in three receiver units; unit one covers from 200 to 1,500 kc in 4 bands; unit two covers from 1,500 to 9,000 kc in 4 bands; unit three covers from 7,000 to 27,000 kc in 5 bands.

TECHNICAL CHARACTERISTICS:

Type of Reception: A1, A2, and A3
Frequency Range: 200 to 27,000 kc
Power Source Required: 24-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Accessories			
1 set	Cables			
1	Junction Box	CG68028	2 x 4 x 5-7/16	1.0
1	Radio Receiver Unit 1	CG46115	7-1/2 x 7-1/2 x 17	21.6
1	Radio Receiver Unit 2	CG46116	7-1/2 x 7-1/2 x 17	22.2
1	Radio Receiver Unit 3	CG46117	7-1/2 x 7-1/2 x 17	22.5
3	Receiver Racks	CG46128	3-3/8 x 7-1/2 x 16-5/8	2.8
3	Slip covers			

REFERENCE DATA AND LITERATURE:

NAVAER 08-5Q-245

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/ARR-type AIRCRAFT RADIO RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
			$220.00

AIRCRAFT RADIO EQUIPMENT AN/ARR-type

20 November 1958
Cognizant Serv: USN FSN:

RU-18, -19

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available.)

FUNCTIONAL DESCRIPTION:

Aircraft Radio Equipments RU–18 and RU–19 are complete aircraft receiving sets. These sets are capable of receiving mcw of cw signals in the frequency range of 195 to 13,575 kc, with proper selection of interchangeable coil units.

The RU–18 is designed for installation in aircraft with a 12- to 15-volt source of dc supply; the RU–19 is designed for installation in aircraft with a 24- to 30-volt supply. Junction boxes and dynamotor-filter units of the two equipments are the only corresponding items that are not interchangeable.

TECHNICAL CHARACTERISTICS:

Frequency Range: 195 to 13,575 kc, in various bands:

Range O: 195 to 290 kc
Range P: 290 to 435 kc
Range L: 400 to 600 kc
Range C: 545 to 850 kc
Range D: 850 to 1330 kc
Range E: 1,330 to 2,040 kc
Range F: 2,040 to 3,000 kc
Range G: 3,000 to 4,525 kc
Range H: 4,000 to 6,000 kc
Range N: 6,000 to 9,050 kc
Range K: 9,050 to 13,575

Other available sets of coils cover:

Range M: 5,200 to 7,700 kc
Range Q: 540 to 830 kc

Power Requirements: RU–18: 12–15-v dc; RU–19: 24–30-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Aircraft Radio Receiver NT–46048/D w/Mounting Base NT–46011		7-3/16 x 8-1/8 x 15-3/4	13.9
1	Dynamotor Filter Unit NT–21215A (u/w RU–18)		4-3/8 x 5-3/4 x 7-3/8	9
	or			
1	Dynamotor Filter Unit NT–21441 (u/w RU–19)		4-3/8 x 5-3/4 x 7-3/8	9
(*)	Dual Coil Set Local Control NT–23053			
1	Dual Coil Set Remote Control NT–23087			
1	Junction Box NT–62007A		2-15/16 x 5-1/2 x 7-3/8	1.9
1	Junction Box NT–62017		4-1/16 x 5-1/2 x 7-3/8	2.4
1	Receiver Remote Tuning Control NT–23012		2-1/2 x 3 x	0.9
1	Receiver Switch Box NT–23087		2-3/8 x 3-11/16 x 5-1/16	0.9
	Selected Receiver Coil Sets and containers			

* Furnished on basis of one per Dual Coil Set supplied with particular equipment.

AN/ARR-type AIRCRAFT RADIO EQUIPMENT

REFERENCE DATA AND LITERATURE:

Technical Manual for Navy Model RU–18 and Navy Model RU–19 Aircraft Radio Telegraph and Telephone Receiving Equipments

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

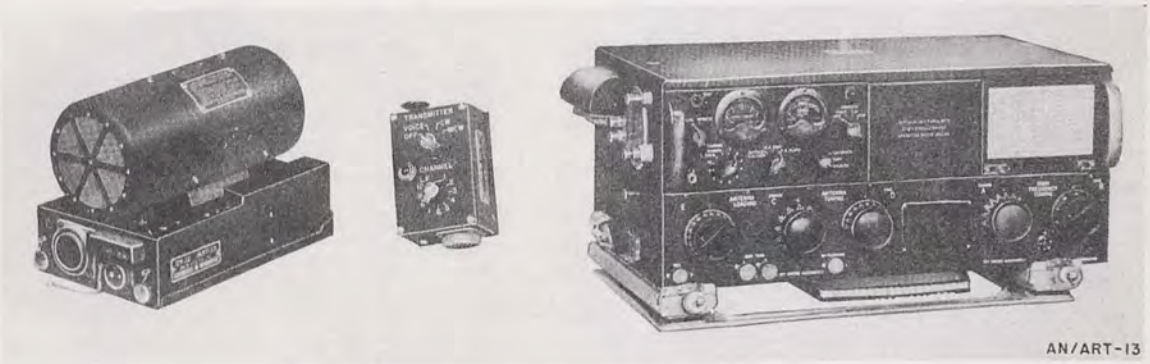
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co., Inc.	Chicago, Ill.	NOs–84530	

RADIO TRANSMITTING SET AN/ART-13

17 November 1958
Cognizant Serv: USN FSN: 5820-665-2307

	USA	USN	USAF
TYPE CLASS:	Obsolete	Used by	--
STOCK NO:	--	F16-Q-109310-200	--



AN/ART-13

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/ART-13 is a compact, lightweight, radio transmitter for air-ground communication in aircraft. An autotune system permits rapid selection of 10 preset channels within the high frequency range. Selection of operating method is accomplished through a local remote switch by the radio operator or the pilot.

The danger of permitting antenna radiated power to cover a longer range than is necessary has been eliminated by the use of a pressure operated relay.

This equipment includes a set of connectors and adapters but not the necessary interconnecting wires and cables. Microphones, a table-type key, a throttle switch, headphones, and an antenna system are required but not supplied.

Either a trailing long wire antenna or a fixed antenna with a shunt capacitor can be used. A transmitter-to-receiver antenna transfer relay switch is included.

This equipment is identical with aircraft Radio Transmitting Equipment ATC and similar to Radio Transmitting Set AN/ART-13A and Radio Transmitting Equipment TCZ.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 18.1; 0.2 to 1.5 with additional equipment
Number of Channels: 10 hf channels only; use of a lf oscillator provides an additional channel in the frequency band 0.2 mc to 1.5 mc.
Frequency Control: Crystal
Type Emission: Voice, cw, mcw
Keying: Relay keying; 30 wpm (maximum speed)
Mounting: Shock-mounting base
Power Output:
High Frequency Range: 31 to 90 w
Optional Low Frequency Range: 5 to 80 w
Power Supply Equipment: Dynamotor
Power Requirements: 770 to 896 w, 28-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Shunt Capacitor CU-24/ART-13	----------	3-7/8 x 4-1/8 x 5	1.68
1	Antenna Switching Unit SA-22/ART-13			
1	Control Unit C-87/ART-13	----------	3-1/4 x 3-1/2 x 6-3/16	1.4

AN/ART-13 RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSION (Inches)	WEIGHT (Lbs)
1	Dynamotor Unit DY-12/ ART-13	----------	8-1/2 x 7-1/8 x 12-3/16	30
1	Mounting Base MT-284/ ART-13	----------	2-1/2 x 15-15/32 x 20-33/64	1.88
1	Radio Transmitter T-47/ ART-13	----------	11-11/32 x 15-15/32 x 23-9/16	67

REFERENCE DATA AND LITERATURE:

AN 08-30ART13-5

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: USN, BuAer

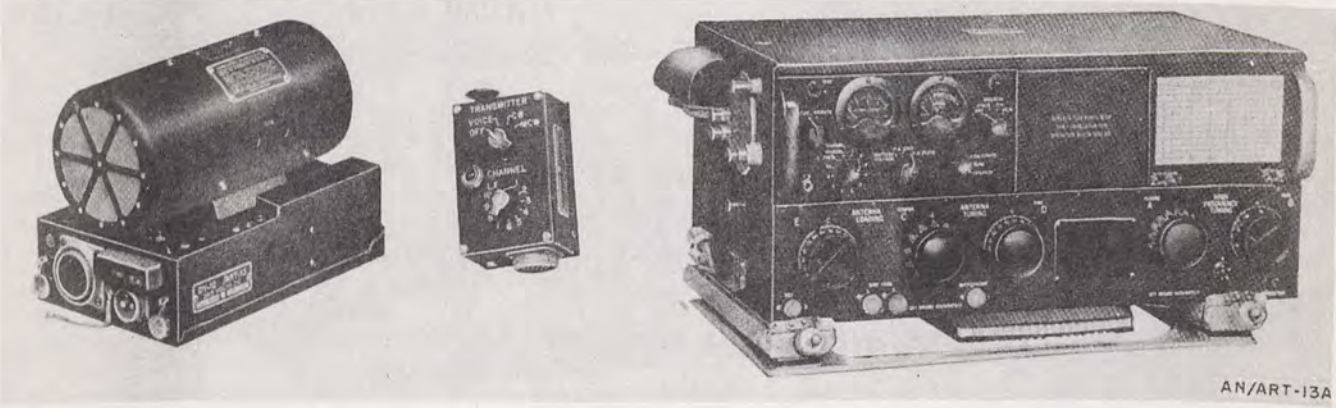
SPEC &/or DWG: RE13A583B; EN28/2280-43; RE13A1040

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co., Inc.	Cedar Rapids, Iowa	NOs-73238	$14,000.00
		NXsa-44558	14,000.00
		NXsa-95145	14,000.00
		N5sa-4687	14,000.00
		NXsa-66789	14,000.00
		N5sa-7232	14,000.00
		NObsr-43061	14,000.00
Zenith Radio Corp.	Chicago, Ill.	NXss-18932	14,000.00
		NXsa-45461	14,000.00
		NXsa-67955	14,000.00

RADIO TRANSMITTING SET AN/ART-13A

18 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	Obsolete	Used by	--
STOCK NO:			



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/ART–13A is designed for air-ground communication in aircraft. It uses an autotune system that permits rapid selection of any one of 11 channels, as well as choice of type of emission. The autotune system can be controlled either by the radio operator or by the pilot.

A pressure operated relay automatically reduces the power output by 50 percent whenever the aircraft reaches an altitude of 25,000 feet.

This equipment is similar to Radio Transmitting Set AN/ART–13 and Aircraft Radio Transmitting Equipment ATC.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Low: 0.2 to 1.5
High: 2 to 18
Frequency Control: Crystal
Number of Channels:
Low Frequency: 1
High Frequency: 10
Type Modulation: AM
Type Emission: Voice, cw, mcw
Keying: Relay keying; max speed 30 wpm
Mounting: Shock-mounting base
Power Output:
Low Frequency: 5 to 80 w
High Frequency: 31 to 90 w
Power Requirements: 770 to 896 w, 28-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Loading Unit CU–32/ART–13A			
1	Antenna Shunt Capacitor CU–24/ART–13		3-7/8 x 4-1/8 x 5	1.68
1	Control Unit C–87/ART–13		3-1/4 x 3-1/2 x 6-3/16	1.4
1	Dynamotor Unit DY–17/ART–13A		8-13/16 x 7-3/16 x 11-15/16	28
1	Oscillator 0–17/ART–13A			
1	Radio Transmitter T–47A/ART–03		11-11/32 x 15-15/32 x 23-9/16	67

AN/ART-13A RADIO TRANSMITTING SET

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: RE13A583B; EN28/2280-43; RE13A1040

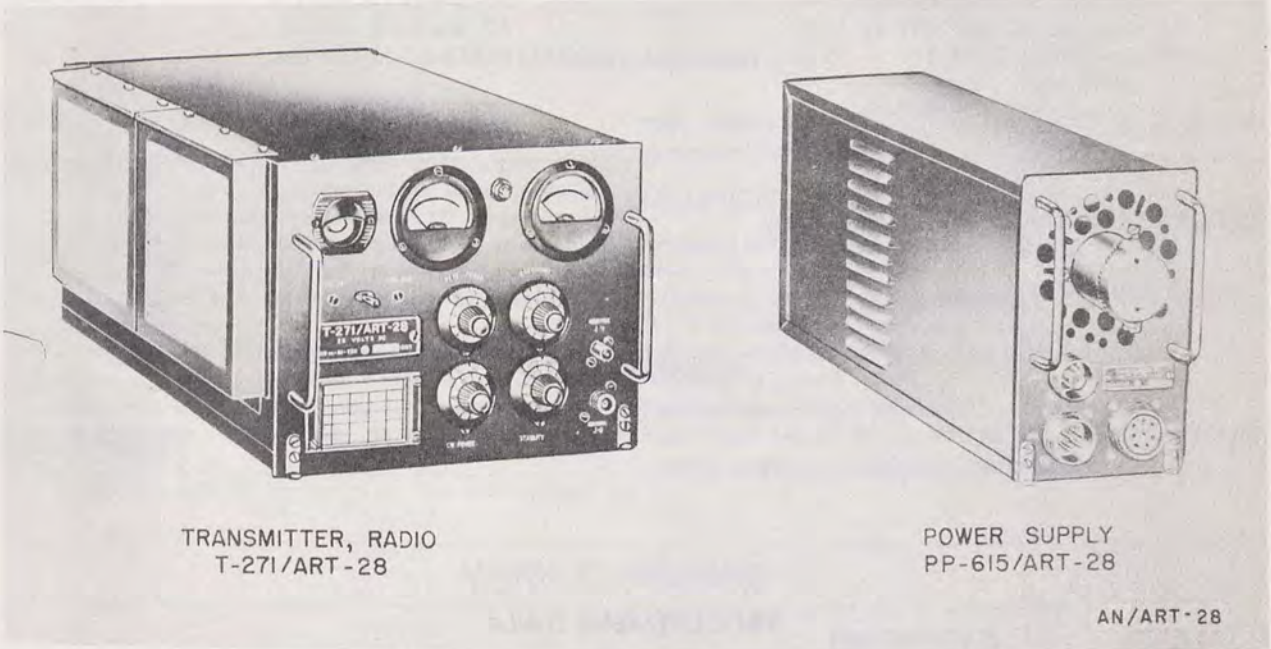
DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co., Inc.	Cedar Rapids, Iowa	NOs-73238	$14,000.00
		NXsa-44558	14,000.00
		NXsa-95145	14,000.00
		N5sa-4687	14,000.00
		NXsa-66789	14,000.00
		N5sa-7232	14,000.00
		NObsr-43061	14,000.00
Zenith Radio Corp.	Chicago, Ill.	NXss-18932	14,000.00
		NXsa-45461	14,000.00
		NXsa-67955	14,000.00

RADIO TRANSMITTING SET AN/ART-28

18 November 1958
Cognizant Serv: USN FSN:

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO:		



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/ART–28 is primarily designed to relay radar information from an aircraft early warning radar set to the receiving and indicating equipment in a surface control station. The application of this equipment permits the plan position indicator presentation, obtained by radar scanning from the aircraft at a high altitude, to be reproduced in the surface control station.

The relay transmitter is installed in the aircraft to operate directly from the output signals of the aircraft early warning synchronizer. However, the transmitter also may be installed in an intermediate aircraft to re-relay the radar signals picked up by a relay receiver from another aircraft early warning relay transmitter.

This equipment is used with Airborne early warning units, such as Radar Set AN/APS–20 and Radio Receiving Set AN/ARR–27.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 460 to 510
Channel Frequencies: 464.87 mc, 477.43 mc, 490 mc, 502.56 mc
Output Characteristics:
Emission: Coded pulse-modulated carrier
Pulse Repetition Frequency: 300 pps
Basic, Sine, Cosine, Main Bang Pulses: Composed of three 1 μsec pulses whose leading edges are separated by +3 or −0.5 μsec and +5 or −0.5 μsec respectively at 40% of peak amplitude
Power Output:
Peak Video: 100 w or more at antenna receptacle
Peak Synchronized: 400 w or more at antenna receptacle
Unmodulated: Adjusted to 20 w as measured at antenna receptacle
Synchronized Power-video Power Ratio: 4 to 1 or greater; approximately 2 to 1 or greater in voltage
Power Requirements:
Ac Voltage:
Line to Neutral (Optimum): 115 v
Line to Neutral (Operating Range): 102 to 124 v
Line to Neutral Peak and Best Operating Range: 110 to 120 v
Phase to Phase (Optimum): 200 v
Frequency: 320 to 1,000 cps
Phase: 3 (4-wire system)
Volt-amperes: 1,000
Current Drain: 1.7 amp (2 phase); 2.5 amp (3 phase)
Dc Voltage:
Range: 24 to 29 v
Optimum: 26.5 v
Operating Current: 5.6 amp
Starting Current: 8.5 amp

AN/ART-28 RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Mounting MT-828/ART-28	----------	4-1/32 x 11-1/8 x 22-1/4	4.5
1	Mounting MT-829/ART-28	----------	2-7/16 x 5-7/8 x 21-5/8	2.5
1	Power Supply PP-615/ ART-28	----------	4-15/16 x 7-13/16 x 21-1/2	24
1	Transmitter T-271/ART-28	----------	7-7/8 x 11-3/64 x 20-1/4	42.5

REFERENCE DATA AND LITERATURE:

AN 16-30ART28-1

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric Corp.	Washington, D. C.	NOas-51-730f, 12 February 1951	$2,340.00

AIRCRAFT RADIO TRANSMITTING EQUIPMENT AN/ART-type

4 December 1958
Cognizant Serv: USN FSN: ATA

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Aircraft Radio Transmitting Equipment ATA is used with Aircraft Radio Receiving Equipment ARA to make up a complete multichannel radio transmitting and receiving set for use on aircraft equipped with a 24-volt, dc power supply. When the ATA and ARA are used together, the system is designed to transmit and receive voice, tone-modulated, or continuous-wave signals.

The transmitters cover the frequency range of 2.1 to 9.1 mc in five independent units, any two of which may be installed and operated one at a time, depending on the requirements. The frequency ranges are 2.1 to 3 mc, 3 to 4 mc, 4 to 5.3 mc, 5.3 to 7 mc, 7 to 9.1 mc.

The following equipment is used with, but not supplied with, Aircraft Radio Transmitting Equipment ATA: antennas as required, transmitter test set.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2.1 to 9.1 mc in 5 units
Power Output:
Optimum antenna loading conditions: 40 w for cw and 15 w for voice at 28-v dc input
Normal conditions: 25 w cw, 12 w mcw, 8 w voice
Frequency Accuracy: 0.04%
Type Emission: Voice, cw, mcw
Power Requirements: 22- to 30-v dc, 8.8 amp at maximum power output on cw, 2.5-amp heater current

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	Antenna Relay Unit NT–29125	----------	4-5/8 x 4-7/8 x 6-9/16	1.9
	Antenna Relay Unit Mounting NT–29126	----------	29/32 x 5 x 5-5/8	.3
1 Set	Cable assemblies			
1 Set	Mechanical linkage			
1 Set	Spare parts			
1 Set	Tools			
	Modulator Unit NT–50083	----------	6-11/16 x 7-1/8 x 10-1/8	9.0
	Modulator Unit Mounting NT–50084	----------	1 x 8-7/8 x 10-3/16	.7
	Radio Transmitter NT–52208 (3 to 4 mc)	----------	5-1/2 x 7-1/4 x 11-3/16	8.3
	Radio Transmitter NT–52209 (4 to 5.3 mc)	----------	5-1/2 x 7-1/4 x 11-3/16	8.3
	Radio Transmitter NT–52210 (5.3 to 7 mc)	----------	5-1/2 x 7-1/4 x 11-3/16	8.3
	Radio Transmitter NT–52211 (7 to 9.1 mc)	----------	5-1/2 x 7-1/4 x 11-3/16	8.3
	Radio Transmitter NT–52232 (2.1 to 3 mc)	----------	5-1/2 x 7-1/4 x 11-3/16	8.3
	Transmitter Control Box NT–23243	----------	2-11/16 x 4-1/8 x 4-3/8	.9

AN/ART-type AIRCRAFT RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	Transmitter Control Box Mounting 7083	----------	3/16 x 4-1/8 x 4-3/16	
	Transmitter Dynamotor Unit NT-21626	----------	----------	8.0
	Transmitter Mounting NT-52213 (2-unit)	----------	1-3/8 x 11-3/16 x 12-3/4	.8
	Transmitter Rack NT-52212 (2-unit)	----------	----------	2.0

REFERENCE DATA AND LITERATURE:

NA-08-5Q-4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Aircraft Radio Corp.	Boonton, N. J.	NOs-74912, 29 June 1940	

AIRCRAFT RADIO EQUIPMENT AN/ART-type

4 December 1958
Cognizant Serv: USN FSN: ATB

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Aircraft Radio Equipment ATB is supplied in two forms, for single place and for dual place operation. It is of compact design and is intended for either continuous-wave, modulated continuous-wave, or voice transmission.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2.3 to 9.05

Type Emission: cw, mcw, voice
Power Output:
Cw: 3.5 w
Mcw: 2.8 w (carrier)
Voice: 2.8 w (carrier)
Dynamotor:
Input: 27.5-v dc
Output: 0.320 amp at 425-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Aircraft Radio Transmitter 52233 consists of:	----------	7-3/16 x 10-3/8 x 15-1/2	35.0
2	Tuning Unit 47192			
1	Mounting Base, Right 10082			
1	Mounting Base, Left 10083			
1	Dynamotor Assembly 21724 consists of:	----------	5-1/2 x 7-5/8 x 7-15/16	14.3
1	Mounting Base 10084			
1	Metering Kit 60025	----------	2-27/32 x 5-7/8 x 7-25/32	1.9
1**	Operators Control Box 23313	----------	3-23/32 x 4-9/32 x 5-15/16	4.2
1*	Pilots Control Box 23258	----------	2-1/4 x 3 x 5-15/16	.7
1**	Pilots Control Box 23314	----------	3-23/32 x 4-9/32 x 6-1/16	1.8
1	Set bulk cables and fittings			
1	Slip cover for dynamotor			
1	Slip cover for transmitter			
1	Tuning Unit 47191 consists of:	----------	6 x 7-13/16 x 12-3/16	10.3
1	Tuning Unit Carrying Case 10085			

* Supplied only with single place equipment
** Supplied only with dual place equipment

REFERENCE DATA AND LITERATURE:
NA 08-5Q-51

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division of RCA	Camden, N. J.	NOs-98559, 23 February 1942	

AIRCRAFT RADIO TRANSMITTING EQUIPMENT AN/ART-type

4 December 1958
Cognizant Serv: USN FSN: ATD

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Aircraft Radio Transmitting Equipment ATD is a low power transmitter designed for use in single- or double-cockpit aircraft; it is also sufficiently flexible for use on larger aircraft. The transmitter is designed for local or remote control operation. All power for the equipment is supplied by the primary battery supply of the plane.

The following equipment is used, but is not supplied with Aircraft Radio Transmitting Equipment ATD: power supply (1); receiver (1); carbon microphone (2), or mask-type carbon microphone (2).

TECHNICAL CHARACTERISTICS:

Frequency Range in Kc: 540 to 9,050
Emission: A1, A2, A3
Power Output: 50 w (A1), 40 w (A2, A3)
Operating Condition:
CW Tune-Operate Switch in Tune Position: 11.0 amp
CW Key Up: 9.3 amp
CW Key Down: 17.6 amp
Phone Carrier: 18.5 amp
Phone Normal Modulation: 19.0 amp
Phone Standby (dynamotor stopped): 5.0 amp
Power Requirements: 19 amp at 28-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Accessories and operating spare parts			
1	Aircraft Transmitter Unit 52253	----------	10-15/16 x 13-25/32 x 23-3/8	70
1	Dynamotor assembly Unit 21748	----------	6-7/8 x 8-13/32 x 11-7/16	24.1
1	Remote Control Unit 23280	----------	2-3/4 x 3-1/16 x 5-27/32	1.06
1	Remote Indicator Unit 55079	----------	2-3/16 x 2-5/16 x 3-5/16	.75

REFERENCE DATA AND LITERATURE:

NAVAER 08-5Q-39

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/ART-type AIRCRAFT RADIO TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

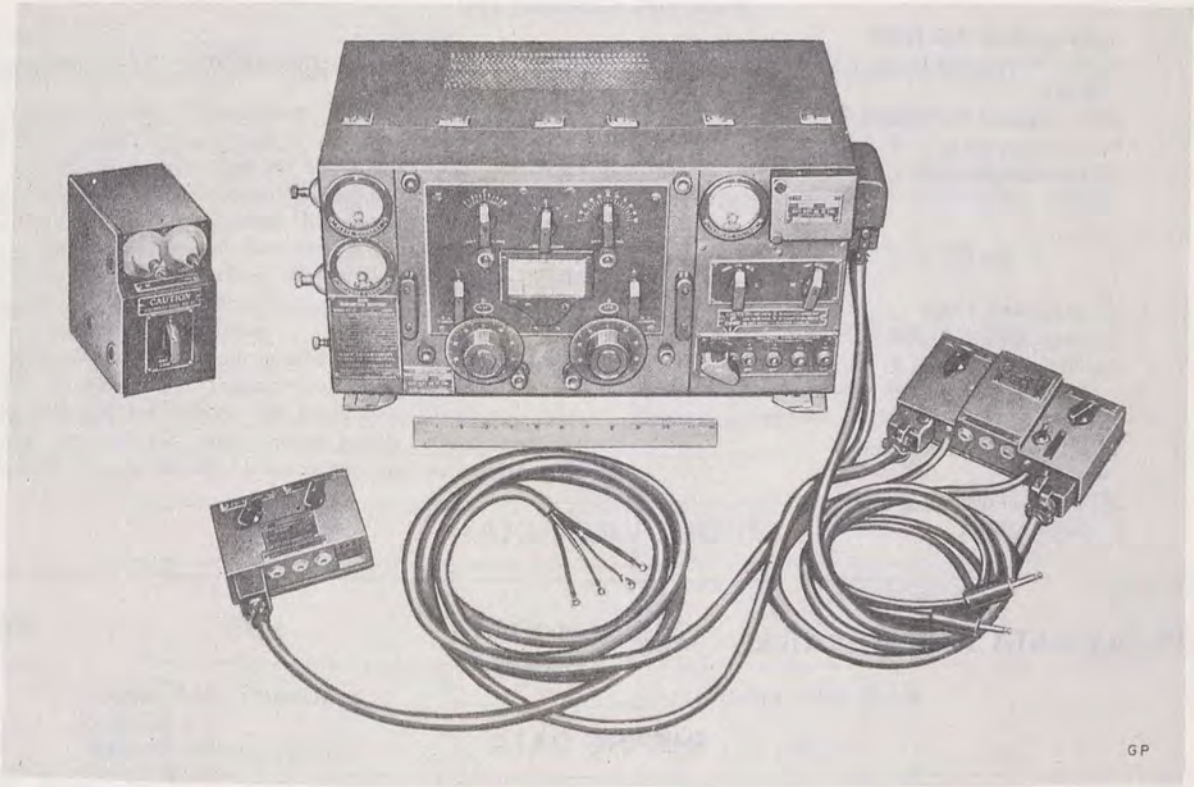
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Bendix Aviation Corp. Radio Division	Baltimore, Md.	NOs-73237	

AIRCRAFT RADIO TRANSMITTING EQUIPMENT AN/ART-type

25 November 1958
Cognizant Serv: USN FSN: GP, GP-2

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Aircraft Radio Transmitting Equipments GP and GP–2 are high-power radio-transmitting equipments for aircraft service, featuring compactness, light weight, and unusual flexibility of installation and usage. They are intended primarily for use in observation and scouting airplanes but can be employed in any aircraft equipped with proper power supplies and radiating systems.

Both models are fundamentally identical, differing only in that certain accessories required for an operative installation and furnished with the GP are omitted in the GP–2.

The following equipment is used with, but is not supplied with, Aircraft Radio Transmitting Equipments GP and GP–2: one Alternator NEA–1, NEA–1A, or NEA–2 complete with regulator, one 12-volt storage battery, two 600-ohm headsets, one antenna installation, one low-pass switch, and one Aircraft Radio Receiving Equipment RU–2 or RU–3.

TECHNICAL CHARACTERISTICS:

Frequency Range: 350 to 9,050 kc in six bands
Band A: 350 to 800 kc
Band B: 800 to 1,500 kc
Band C: 1,500 to 3,000 kc
Band D: 3,000 to 4,525 kc
Band E: 4,525 to 6,500 kc
Band F: 6,500 to 9,050 kc
Type Emission: Cw, mcw, voice
Power Output:
350 to 500 Kc:
Cw and Mcw: 85 w
Voice: 60 w
500 to 800 Kc:
Cw and Mcw: 100 w
Voice: 75 w
800 to 1,500 Kc:
Cw and Mcw: 125 w
Voice: 85 w
3,000 to 9,050 Kc:
Cw and Mcw: 125 w
Voice: 85 w
Power Requirements: 850 ma, 120-v 600- to 800-cycle ac; 0.5 amp at 12-v dc

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For GP:			
1	Antenna Load Coil 47079			52
1	Operator's Control Unit 23057			3.1
1	Pilot's Control Unit 23058			1.2
1	Power input cable			1.2
1	Transmitter-Rectifier Unit 52051			52
	For GP–2:			
1	Antenna Reel 71006			3.4
1	Antenna Weight 71003			4.2
1	Antenna Wire Model J (500 ft)			4.2
1	Fairlead 61083			1.1
2	Microphone with plug and cable			.9
2	Microphone with plug and Cable 26003A			.9

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Manufacturing Co.		*For GP:* NOs–35625, 14 April 1934 *For GP–2:* NOs–42717, 17 June 1935	

AIRCRAFT RADIO TRANSMITTING EQUIPMENT AN/ART-type

25 November 1958
Cognizant Serv: USN FSN: GP-7

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Aircraft Radio Transmitting Equipment GP–7 is an airborne, high frequency radio transmitter designed to transmit continuous wave, modified continuous wave, and voice signals for long range communication. The transmitter may be started or stopped from either the operator's or pilot's position. The circuit is such that neither the operator nor the pilot can lock out the other; that is, the equipment can be started at the radio operator's position and stopped at the pilot's position or vice versa.

The following equipment is used with, but is not supplied with, Aircraft Radio Transmitting Equipment GP–7: aircraft microphones, helmet with headphones, flameproof telegraph keys, fairlead with antenna length counter, antenna reel with 350-foot Model J antenna wire, and antenna weight.

TECHNICAL CHARACTERISTICS:

Frequency Range: 350 to 9,050 kc
Type Emission: A1, A2, A3
Power Output:
350 to 800 Kc: 85 w (cw and mcw)
800 to 3,000 Kc:
Cw and Mcw: 100 w
Voice: 35 w
3,000 to 9,050 Kc:
Cw and Mcw: 125 w
Voice: 40 w
Dynamotor Output: 120-v 600- to 800-cycle ac
Power Requirements: 12- to 14-v dc or 14- to 28-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Aircraft Radio Transmitter 52173–A	----------	10-3/4 x 13 x 23-3/8	49.5
1	External Antenna Loading Coil 47125	----------	4 x 6-7/8 x 7	4
	Interconnection cables (bulk)			
1	Operator's Control Box 23220	----------	2-5/16 x 4-1/2 x 8	3
1	Pilot's Control Box 23219	----------	2-9/32 x 4-1/2 x 5-1/2	1
1	Plug-in Tuning Unit Container 47124 (Aluminum)	----------	9-1/16 x 10-7/8 x 12	5
1	Plug-in Tuning Unit Container 47226 (Steel)	----------	9-1/16 x 10-7/8 x 12	6.25
1	Range A Plug-in Tuning Unit 47150–A	----------	8-1/4 x 9-1/2 x 10-13/16	15
1	Range B Plug-in Tuning Unit 47151–A	----------	8-1/2 x 9-1/2 x 10-13/16	14
1	Range C Plug-in Tuning Unit 47155	----------	8-1/2 x 9-1/2 x 10-13/16	14
1	Range D Plug-in Tuning Unit 47152–A	----------	8-1/2 x 9-1/2 x 10-13/16	14
1	Range E Plug-in Tuning Unit 47153–A	----------	8-1/2 x 9-1/2 x 10-13/16	13
1	Range F Plug-in Tuning Unit 47154–A	----------	8-1/2 x 9-1/2 x 10-13/16	15
1 set	Spare parts	----------	15 x 16 x 21	45
1	Waterproof slip cover	----------	----------	0.5

AN/ART-type AIRCRAFT RADIO TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

Instruction Book 7243, Serial No. 862

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	26.97	400

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Manufacturing Co.	Baltimore, Md.	NOs–74844, 27 June 1940	

RADIO SET AN/ARW-2

18 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–Q–109860–200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/ARW–2 is an airborne unit forming the receiving end of a remote control link. It provides remote radio control of ten separate electrical circuits and receives frequency modulated signals transmitted by Radio Set AN/ARW–3.

The receiver is capable of actuating any of ten separate control functions by means of self-contained relays. Properly adjusted, the ten control channels may be used in any combination, provided that no more than three are actuated at any one time.

This equipment is identical with Radio Set AN/ARW–2X except for input power requirements.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 42
Tone Channel Frequencies: 300 cps; 420 cps; 590 cps; 830 cps; 1,155 cps; 1,620 cps; 2,270 cps; 3,180 cps; 4,450 cps; 6,230 cps
Type Modulation: FM, 15 kc maximum deviation (with suppressor disconnected)
Type Receiver: Superheterodyne
Sensitivity: Adjustable, 1 to 5 uv (with suppressor operating)
Input Impedance (RF): 50 ohms, adjustable from 4 to 30 uv
Output Circuits: 10 circuits switched individually by action of tone operated relays, each rated 1 amp dc
Power Requirements: 87.7 w, 27-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna cable and plug			
1	Control cable and plug			
1	Mounting Base MT–52/UR		22 x 10-7/16 x 2-3/16	3.9
1	Power cable and plug			
1	Radio Receiver R–32/ARW–2		8 x 10-7/16 x 22-3/8	44.7

REFERENCE DATA AND LITERATURE:

AN 16–30ARW2–3

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/ARW-2 RADIO SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Fred M. Link	New York, N. Y.	NXsa-33081 NXsa-95103	

RADIO TRANSMITTER AN/ARW-3

18 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitter AN/ARW-3 is a crystal controlled frequency modulated unit equipped with ten tone oscillators used for modulation. It is designed for application in aircraft.

This equipment plus Radio Set AN/ARW-2 as receiver form a remote radio control system capable of actuating any of ten remote control channels. These may be actuated in any combination provided no more than three are used at one time.

The transmitter may be operated with the radio frequency carrier on continuously or normally off and keyed on only by energizing one or more of the control channels. It may utilize an amplifier unit to increase the operating range.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 42

Transmitter Tone Channel Frequencies: 300 cps; 420 cps; 590 cps; 830 cps; 1,155 cps; 1,620 cps; 2,270 cps; 3,180 cps; 4,450 cps; 6,230 cps

Type Modulation: Fm ±15 kc maximum deviation

Output Impedance (RF): 50 to 250 ohms

Amplifier Input Impedance: 50 ohms (approximately)

Amplifier Power Input (RF): 15 w (approximately)

Transmitter Power Supply: 8 amp at 27-v dc

Power Output:

Transmitter: 25 w

Amplifier: 250 w (nominal), 400 w (maximum)

Power Requirements: 310 w (standby), 675 w (transmitting at 250-w output), 750 w (transmitting at 350-w output), 115-v, 800- to 2,400-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier Unit AM-10/ARW-3	.....	12-1/4 x 15-7/16 x 22-3/8	61.4
1	Mounting Base MT-52/UR	.....	2-3/16 x 10-7/16 x 22	3.9
1	Mounting Base MT-53/UR	.....	2-3/16 x 15-7/16 x 22	4.1
1 set	Plugs and accessories			
1 set	Power and antenna cables			
1	Radio Transmitter T-24/ARW-3	.....	9-3/16 x 10-7/16 x 22-3/8	30.7

REFERENCE DATA AND LITERATURE:

AN 16-30ARW2-3

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/ARW-3 RADIO TRANSMITTER

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Link Radio Corp.	New York, N. Y.	NXsa–33081	$2,800.00
		NXsa–68000	2,800.00
		NXsa–95103	2,800.00

AIRCRAFT RADIO EQUIPMENT AN/ARW-34

18 November 1958
Cognizant Serv: USN FSN:

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Aircraft Radio Equipment AN/ARW-34 is an airborne frequency modulated, remote transmitting unit. It provides remote radio control of ten separate electrical circuits. Control is accomplished by selectively modulating the transmitter with audio tones that, at the receiver, selectively operate relays controlling external electrical circuits.

This equipment is similar to Radio Transmitting Set AN/ARW-3 except for the frequency range.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 52 to 65
Frequency Control: Crystal
Type Modulation: FM ±15 kc maximum deviation
Type Emission: F2
Output Impedance: 50 to 250 ohms
Power Output: 10 w; 175 w (with amplifier)
Power Requirements: 8 amp at 28-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier AM-82/ARW-34		12-1/4 x 15-7/16 x 22-3/8	65.5
1	Cable, Power DCOP-09			
2	Cable, Power PAR-12			
1	Mounting Base MT-52/UR		2-3/16 x 10-7/16 x 22	3.9
1	Mounting Base MT-53/UR		2-3/16 x 15-7/16 x 22-3/8	65.5
1	Plug AN3108-20-4S with Clamp AN-3057-12			.35
1	Plug AN3108-24-12S with Clamp AN-3057-12			.35
1	Plug AN3108-28-2P with Clamp AN-3057-16			.35
3	Plug 49190			.06
2	Radio Frequency Cable RG-8/U			
1	Radio Transmitter T-125A/ ARW-34		9-3/16 x 10-7/16 x 22-3/8	34.6

REFERENCE DATA AND LITERATURE:

AN/ARW-34 AIRCRAFT RADIO EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Fred M. Link	New York, N. Y.	NXsa 95103	$2,000.00
		N5sr 4628	2,000.00
		N5sr 4629	2,000.00

AIRCRAFT RADIO RECEIVING EQUIPMENT AN/AXR-type

4 December 1958
Cognizant Serv: USN FSN: ARJ

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Aircraft Radio Receiving Equipment ARJ is an aircraft radio television receiver designed for use with Aircraft Radio Transmitting Equipment ATJ. It may be adjusted to operate on any one of five different frequency channels, permitting simultaneous operation of up to five separate sets of equipments within the same general area. Under favorable operating conditions, scenes clearly visible at the transmitting aircraft may be reproduced in the receiving aircraft at a distance of at least 10 miles.

Test equipment is used with, but is not supplied with, Aircraft Radio Receiving Equipment ARJ.

TECHNICAL CHARACTERISTICS:

Intermediate Frequency: 23.5 mc
Presentation: 7-inch cathode ray tube in receiver and monitor units
Resolution: 230 scanning lines vertical and horizontal
Type Receiver: Superheterodyne
IF Bandwidth: 8 mc
Input Impedance: 50 ohms
Power Requirements:
Receiver: 27- to 31-v dc; 10 amp at 28.6 v dc
Monitor: 27- to 31-v dc; 4 amp at 28.6-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly 66ADT	----------	4-1/4 x 8 x 20-1/2	2.5
1	Antenna Assembly 66AFW	----------	4-5/32 x 7-29/32 x 20-1/2	1.8
1 set	Interconnecting cables			
1	Monitor Unit 60ABK	----------	8-21/32 x 10-17/32 x 19-5/8	30
1	Radio Receiver 46ACC	----------	10-13/32 x 17-7/8 x 22-3/8	53.75

REFERENCE DATA AND LITERATURE:

NAVAER 08-5S-45
NAVAER 08-5S-79

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/AXR-type AIRCRAFT RADIO RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

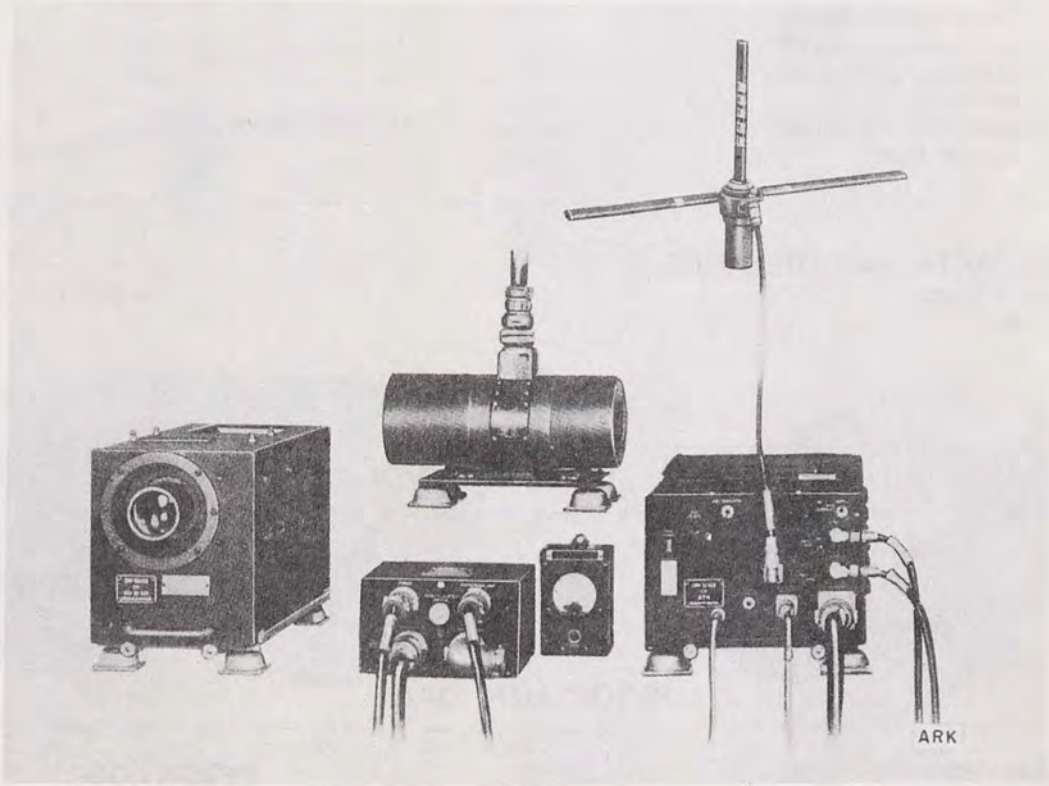
DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

AIRCRAFT RADIO RECEIVING EQUIPMENT AN/AXR-type

4 December 1958
Cognizant Serv: USN FSN: ARK

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--		--



FUNCTIONAL DESCRIPTION:

Aircraft Radio Receiving Equipment ARK is an ultra-high frequency receiver for use in and by aircraft in conjunction with Aircraft Radio Transmitting Equipment ATK to comprise a complete system for plane-to-plane radio television reception. Scenes visible from an aircraft using Radio Transmitting Equipment ATK may be reproduced in another aircraft using Aircraft Radio Receiving Equipment ARK, at a distance of about 10 miles.

The equipment can operate on any one of 10 frequency channels, and up to 10 separate sets of equipments may be operated simultaneously within the same general area. The equipment will operate under severe conditions of vibration temperature, humidity, and altitude.

Either the cylindrical or elliptical type antenna is supplied for frequency channels 1 to 5; elliptical type only for channels 6 to 10.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 264 to 372 in 10 channels (preset)
Presentation: Television scan on 7-inch cathode ray tubes in receiver and monitor units
Vertical Resolution: 350 scanning lines
Horizontal Resolution: Equivalent to vertical resolution
Aspect Ratio: 4:3
Frames Per Second: 40
Synchronizing Signals: Pulses
Type of Receiver: Superheterodyne
Intermediate Frequency: 50 mc
IF Bandwidth: 8 mc
Input Impedance: 50 ohms
Range: 10 miles or more under favorable conditions
Power Requirements:
Radio Receiver: Dynamotor requires 286 w, 27- to 31-v dc from a regulated power source
Monitor Unit: Dynamotor requires 115 w, 27- to 31-v dc

AN/AXR-type AIRCRAFT RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Aircraft Radio Receiver 46ACD with Mounting Base 10164	----------	10-13/32 x 17-7/8 x 22-3/8	55.0
1	Antenna Assembly 66ADU			
1	Antenna Assembly 66AFW	----------	----------	1.8
1 set	Interconnecting cables and accessories	----------	----------	1.6
1	Monitor ABK with Mounting Base 10169	----------	10-17/32 x 8-21/32 x 18-5/8	31.25

REFERENCE DATA AND LITERATURE:

NAVAER 08–5S–79
AN 16–45–69

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

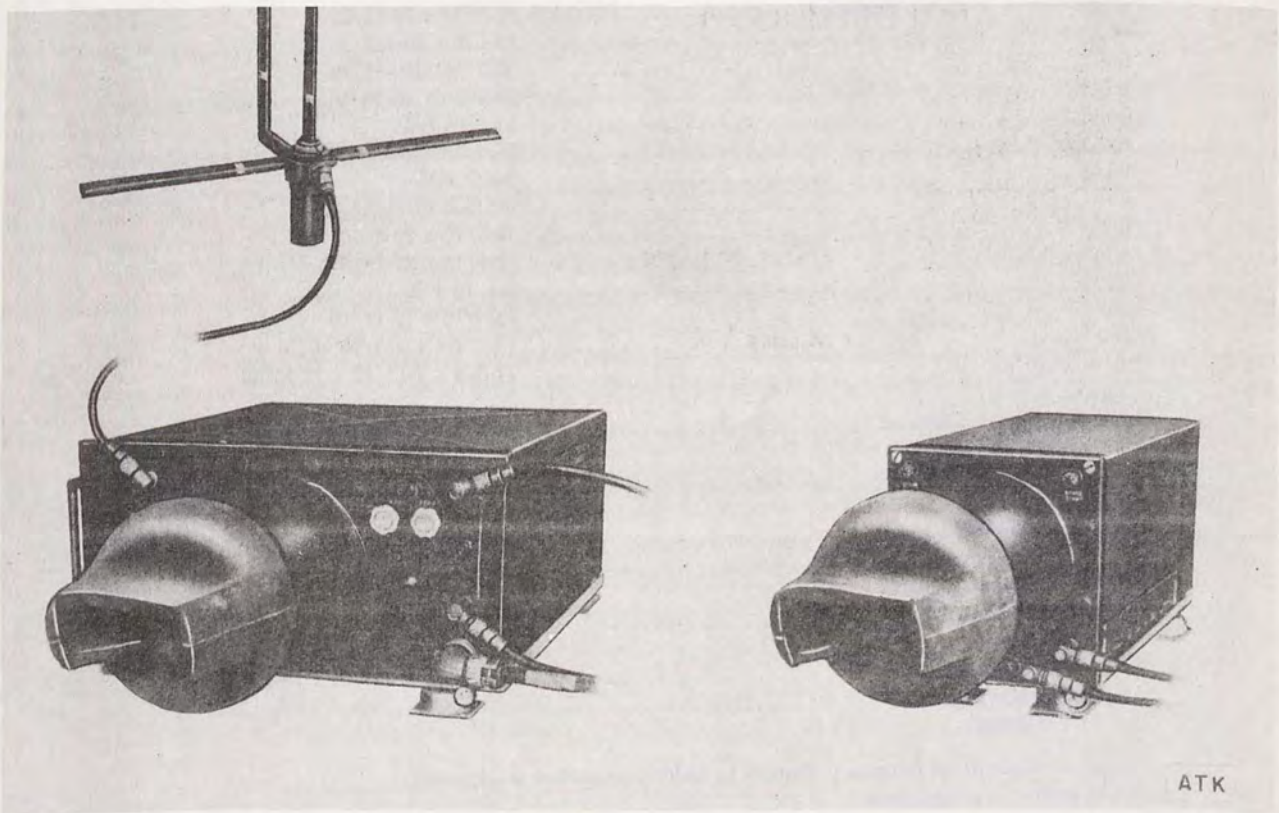
DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division of RCA	Camden, N. J.	NXs–6722	$500.00

AIRCRAFT RADIO TRANSMITTING EQUIPMENT AN/AXT-type

4 December 1958
Cognizant Serv: USN FSN: ATK

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



ATK

FUNCTIONAL DESCRIPTION:

Aircraft Radio Transmitting Equipment ATK is an ultra-high frequency transmitter for use in and by aircraft, in conjunction with Aircraft Radio Receiving Equipment ARK, to comprise a complete system used for plane-to-plane television transmission. Scenes visible from an aircraft using the ATK may be reproduced in another aircraft using the ARK, at a distance of about 10 miles.

The equipment can operate on any one of 10 frequency channels, and up to 10 separate sets of equipments may be operated simultaneously within the same general area. The equipment will operate under severe conditions of vibration, temperature, humidity, and altitude.

Either cylindrical or elliptical type antenna is supplied for channels 1 through 5; elliptical type only for channels 6 through 10.

TECHNICAL CHARACTERISTICS:

Transmitter:
- Frequency Range in Mc: 264 to 372 in 10 bands
- Operating Range: 10 miles
- Type of Emission: Pulse
- Power Output: 30 w
- Output Impedance: 70 ohms

Antenna:
- Type: Ground plane
- Feed: 50-ohm concentric transmission line
- Input Impedance: 50 ohms

Power Requirements: 27- to 31-v dc, regulated

AN/AXT-type AIRCRAFT RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly*			
	66AED	----------	13-1/8 x 22-3/8	1.7
	66AEE	----------	12-9/16 x 21-13/32	1.7
	66AEF	----------	12-5/8 x 20-1/2	1.7
	66AEG	----------	12-7/16 x 19-11/16	1.7
	66AEH	----------	12-7/16 x 18-15/16	1.7
	66AEJ	----------	11 x 18-1/4	1.9
	66AEK	----------	10-1/2 x 17-9/16	1.8
	66AEL	----------	9-3/4 x 17	1.8
	66AEM	----------	9-5/8 x 16-13/32	1.8
	66AFX	----------	13-1/16 x 22-3/8	2.2
	66AFY	----------	12-9/16 x 21-7/16	2.1
	66AFZ	----------	8-1/16 x 20-1/2	2.1
	66AGA	----------	11-9/16 x 19-11/16	2
	66AGB	----------	11-1/4 x 18-15/16	2
1	Conversion Unit CRV–59AAE	----------	11-3/4 x 9-13/32 x 23-15/32	36
1	Dynamotor CEK–21981 or CC–21981	----------	9-9/32 x 13-13/32 x 6-1/2	26.25
1	Dynamotor Mounting Base 10166	----------	----------	2.25
1	Filter Junction Box 53AAB	----------	5-9/64 x 8-33/64 x 7-27/32	8
1	Mounting base for Aircraft Radio Transmitter 10167	----------	----------	2
1	Mounting plate for Junction Box 10174	----------	----------	0.5
1	Radio Transmitter 52ACB	----------	9-31/32 x 12-13/64 x 18-1/32	26
1	Set, cables and plugs	----------	----------	14
1**	Test Meter 60058			

* Antenna supplied depends on frequency channel to which transmitter is adjusted.
** Not supplied with every equipment.

REFERENCE DATA AND LITERATURE:

AN–08–45–69

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division of RCA	Camden, N. J.	NXs–6722	

5 December 1958
Cognizant Serv: USN FSN: AT-317/BRR

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Loop Antenna System AT-317/BRR is a very-low-frequency, streamlined loop antenna designed for submarine service. Its primary use is to operate with Radio Receiving Equipments RAK or RBA, and Radio Receiving Set AN/SRR-11.

Antenna Coupler CU-352/BRR is an integral part of the system. It functions as an adapter to provide various modes of radio reception including omnidirectional coverage of radio signals with the submarine surfaced or submerged.

TECHNICAL CHARACTERISTICS:

Frequency Range: 14.6 to 38 kc
Type: Crossed-loop
Hydrostatic Pressure: Ability to withstand 600 pounds per square inch
Presentation: 3 modes of reception: (1) single-plane fore-aft, (2) single-plane athwartships, (3) omnidirectional

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Cable RG-160/U	----------	1-1/8 dia x 75 ft lg	
1	Antenna Coupler CU-352/BRR	----------	7-3/16 x 8-3/4 x 10-5/8	11.5
1	Interconnecting Cable RG-11/U	----------	13/32 dia x 36 lg	
1	Loop Antenna AT-317/BRR	----------	----------	126

REFERENCE DATA AND LITERATURE:

NAVSHIPS 93182

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	10.3	310

LOOP ANTENNA SYSTEM AN/BRA-type

5 December 1958
Cognizant Serv: USN FSN: AT-317/BRR

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Loop Antenna System AT–317/BRR is a very-low-frequency, streamlined loop antenna designed for submarine service. Its primary use is to operate with Radio Receiving Equipments RAK or RBA, and Radio Receiving Set AN/SRR–11.

Antenna Coupler CU–352/BRR is an integral part of the system. It functions as an adapter to provide various modes of radio reception including omnidirectional coverage of radio signals with the submarine surfaced or submerged.

TECHNICAL CHARACTERISTICS:

Frequency Range: 14.6 to 38 kc
Type: Crossed-loop
Hydrostatic Pressure: Ability to withstand 600 pounds per square inch
Presentation: 3 modes of reception: (1) single-plane fore-aft, (2) single-plane athwartships, (3) omnidirectional

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Cable RG–160/U	----------	1-1/8 dia x 75 ft lg	
1	Antenna Coupler CU–352/BRR	----------	7-3/16 x 8-3/4 x 10-5/8	11.5
1	Interconnecting Cable RG–11/U	----------	13/32 dia x 36 lg	
1	Loop Antenna AT–317/BRR	----------	----------	126

REFERENCE DATA AND LITERATURE:

NAVSHIPS 93182

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	10.3	310

AN/BRA-type LOOP ANTENNA SYSTEM

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
American Phenolic Corp.	Chicago, Ill.	NObsr–52691, 5 May 1952	$2,100.00 with spares

ANTENNA AN/BRA-type

5 December 1958
Cognizant Serv: USN FSN:

AT-317(XN-1)/BRR

	USA	USN	USAF
TYPE CLASS:	- -	Used by	- -
STOCK NO:	- -	- -	- -

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Antenna AT-317(XN-1)/BRR is a very-low-frequency underwater loop antenna designed for submarine service in conjunction with Radio Receiving Equipment RAK or RBA. The outline of the antenna resembles a streamlined teardrop, and it is mounted in line with the submarine for the purpose of reducing sea water drag.

This cross-loop antenna may be used for bi-directional reception in a plane for fore-aft or in a plane athwart ships by means of a switching arrangement contained in the antenna coupler. The antenna coupler also contains matching transformers, tuning capacitors and a phasing network, so that both loop inductors can be phased electrically to produce omnidirectional reception.

TECHNICAL CHARACTERISTICS:

Antenna Coupler Frequency: 14 to 38 kc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT-317(XN-1)/BRR includes:	----------	----------	126
1	Antenna Coupler CU-352(XN-1)/BRR	----------	----------	11.5
1	Coupler cable	----------	36 lg	
1	Transmission line	----------	900 lg	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92084

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/BRA-type ANTENNA

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
American Phenolic Corp.	Chicago, Ill.	NObsr–52333	$2,100.00 with spares

RADIO TRANSMITTING BUOY AN/BRT-type

1 December 1958
Cognizant Serv: USN FSN: T-616/SRT

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Buoy T-616/SRT is a self-contained, low-power transmitter powered by a magnesium silver chloride battery, which is an integral part of the equipment.

This equipment is designed for ejection from a sunken or submerged submarine. It rises to the surface and automatically transmits radio signals to aid in the location of a distressed vessel.

TECHNICAL CHARACTERISTICS:

Preset Frequency: 243 mc
Frequency Control: Master oscillator
Type of Signal: Mcw; modulating frequency 1,000 cps, ±10%
Power Output: 0.75 w
Power Requirements: 7.5-v dc from self-contained magnesium silver chloride battery

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitting Buoy T-616/SRT	----------	3-1/4 dia. x 39-3/4	

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/BRT-type RADIO TRANSMITTING BUOY

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TELEGRAPH TRANSMITTING EQUIPMENT AN/BRT-type

1 December 1958
Cognizant Serv: USN FSN: TAR-2

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Telegraph Transmitting Equipment TAR–2 is designed for installation on certain classes of submarines. It is a complete equipment capable of operating in the medium and high frequency bands.

This equipment, designed for a minimum of weight, gives maximum output in the small space allowed.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 to 600 kc; 4,000 to 4,525 kc; 8,000 to 9,050 kc; 12,000 to 13,575 kc; and 16,000 to 18,100 kc

Power Output: 200 w

Type of Signal:
300 to 600 Kc: Cw, mcw
All Hf Bands: Cw only

Frequency Control:
300 to 600 Kc: Master oscillator
All Hf Bands: Crystal or master oscillator

Modulation Frequency: 800 cps

Keying Speed: 40 wpm (maximum)

Antenna Requirements: Flat top or single loop

Power Requirements: 120/230-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Filter Unit 4222		13-1/2 x 13-7/8 x 15-13/16	42
1	Motor-Generator 3865 (120-v dc)		15 x 17-7/8 x 36-3/8	500
	or			
1	Motor-Generator 4490 (230-v dc)		15 x 17-7/8 x 36-3/8	500
1	Radio Transmitter 4218		14-3/16 x 32 x 60	470
1	Starter 4491 (230-v dc)		11-1/6 x 14-1/8 x 19-7/16	75
1	Starter 4492 (120-v dc)		11-1/16 x 14-1/8 x 19-7/16	75

REFERENCE DATA AND LITERATURE:

Technical Manual (Navy) for Navy Model TAR–2 Intermediate and High Frequency Radio Telegraph Transmitting Equipment

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/BRT-type RADIO TELEGRAPH TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING AGENCY: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Manufacturing Co.	Chicopee Falls, Mass.	NOs–18078	

RADIO TRANSMITTING EQUIPMENT AN/CRT-1A, -1B

18 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	AN/CRT-1A: F16-Q-111624-100 AN/CRT-1B: F16-Q-111625-200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments AN/CRT-1A and AN/CRT-1B are self-contained miniature radio units constructed in the form of a buoy. These units detect and transmit underwater sounds made by a submarine. They are used with Radio Receiving Equipment AN/ARR-3 or Radio Set AN/ARR-16.

Radio Transmitting Equipment AN/CRT-1A is preset to operate on one of six frequencies; the AN/CRT-1B is preset to operate on one of 12 frequencies. Each unit is color coded to indicate its respective frequency.

The buoys are launched from aircraft and dropped by parachute to the water. The open parachute checks the fall of the buoy and the tightening of the shroud lines releases the power switch turning on the transmitter. The impact of the buoy striking the water operates the hydrophone release, which drops the hydrophone 24 feet below the surface.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
AN/CRT-1A: 67.6 to 71.7 preset on one of six frequencies
AN/CRT-1B: 62 to 72 preset on one of 12 frequencies
Type Emission: F3
Operating Range:
Aircraft Receiver: 5 to 10 miles at an altitude of 300 feet; 30 to 40 miles at an altitude of 5,000 feet
Vessel Receiver: 1 to 6 miles (approximately)
Underwater sound Pick-up: Variable, depending on sea conditions; speed, depth, and type of submarine; and radio transmission conditions
Antenna: Quarter wave (approximately), telescopic nondirectional, 39 inches extended (approximately)
Power Output: 0.08 w
Power Requirements: Four 1.5-v Batteries BA-30(19031); two 67.5-v Batteries BA-51(19032)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitting Equipment AN/CRT-1A	----------	40-1/2 high x 5-1/4 wide	16
	or			
	Radio Transmitting Equipment AN/CRT-1B	----------	41 high x 5-1/2 wide	16

REFERENCE DATA AND LITERATURE:

AN/CRT-1A: AN 16-30CRT1-7
AN/CRT-1B: AN 16-30CRT1-3

AN/CRT-1A, -1B RADIO TRANSMITTING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For AN/CRT-1A:		
1	3.66	63.5
For AN/CRT-1B:		
1	3.40	61

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: RE13A820

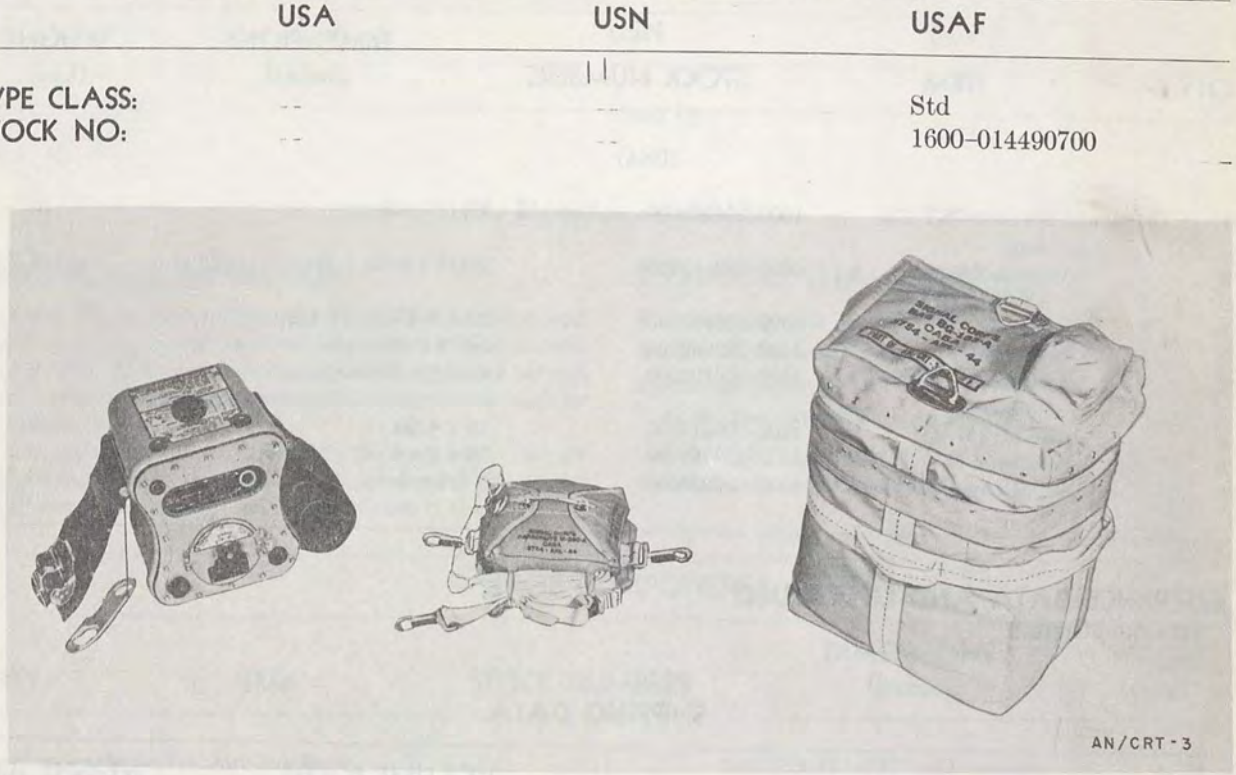
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For AN/CRT-1A:			
Emerson Radio Co.	New York, N. Y.	NXsa 36246	$320.00
Freed Radio Co.	New York, N. Y.	NXsa 36247	320.00
For AN/CRT-1B:			
Emerson Radio Co.	New York, N. Y.	NXsa 65283	320.00
Freed Radio Co.	New York, N. Y.	NXsa 65296	320.00

RADIO SET AN/CRT-3A

18 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Std
STOCK NO:	--	--	1600-014490700



FUNCTIONAL DESCRIPTION:

Radio Set AN/CRT-3A is a hand-powered emergency transmitter designed for sea rescue work for use from raft or life boat by survivors. It is air transportable and dropped by parachute and permits ground-to-air and point-to-point communication.

This equipment is capable of three types of signaling; hand keyed signal light; automatic transmission of SOS on 0.5 megacycle tone-modulated, and SOS on 8.364 megacycles unmodulated, automatically shifting from one frequency to the other every 40 to 50 seconds; and hand keyed, tone-modulated transmissions on .05 megacycle.

One kite and two balloons are supplied to support a single long wire antenna.

All power for operation of the equipment is supplied by a hand cranked generator.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 mc; 8.364 mc

Type Controls: Operating controls are located in an elongated oval depression in the front panel of the transmitter. Controls consist of a three-position selector switch and a push-button telegraph key.

Type Modulation: AM

Type Signal: Mcw on 0.5 mc with 1,000-cycle tone; cw only on 8.364 mc

Power Output: 2-1/2 w (approximately) on 0.5 mc; 2 w (approximately) on 0.5 mc

Power Requirements: Furnished by hand-powered generator in the transmitter cabinet

AN/CRT-3A RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Radio Set AC/CRT-3A including:	1600-014490700	10-1/2 x 10 x 9	16
2	Antenna Assembly AS-207/CRT-3	1600-202-152538	2-1/2 x 3 dia	0.7 ea
1	Bag BG-155-A	1600-286162130	20-1/4 x 17 x 14-1/2	8.1
2	Balloon M-278-A	1600-203062995	5-1/8 x 4-1/4 dia	1.3 ea
2	Hydrogen Generator M-315-B	1600-696792900	11-5/8 x 4-1/4 dia	6 ea
1	Kite M-357-A	1600-203611500	19 x 4 dia	0.8
1	Parachute M-390-B	1600-293487490	16 x 9 x 4	3.7
1	Signal Lamp M-308-B	1600-606905000	3-1/8 x 3 dia	0.7

REFERENCE DATA AND LITERATURE:

TO 12R5-2CRT3-2

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.1	40

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: MIL-R-8153

DESIGN COG: USAF, ARDC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

18 November 1958

RADIO TRANSMITTING EQUIPMENT AN/CRT-4

Cognizant Serv: USN FSN: 5845-665-1416

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment AN/CRT-4 is a directional radio-sono buoy consisting of a self-contained miniature radio transmitter. It is launched from specially equipped aircraft and is used to detect and transmit underwater sounds made by a submarine.

The radio signal transmitted from the buoy to the aircraft or to a surface ship, indicates both the presence of underwater craft and the direction of the craft in relation to the buoy.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 62.9 to 71.7
Number of Frequency Settings: 12
Operational Range:
At 300 Feet: 5 to 10 nautical miles
At 5,000 Feet: 30 to 40 nautical miles
Power Requirements: 1.5-v dc; 67.5-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitting Equipment	----------	6-5/32 x 52-11/32 (with antenna folded, less battery)	28.13
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

AN 16-30CRT4-3

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1		200

AN/CRT-4 RADIO TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/CRT-5

18 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--		Std
STOCK NO:	--		--



FUNCTIONAL DESCRIPTION:

Radio Set AN/CRT–5 is a portable, short-range transmitter used in airfield traffic control operations or as a standby or supplementary transmitter for ground-to-air and point-to-point communication.

The low frequency operations of this equipment necessitates the application of a long antenna, such as Antenna Assembly AS–326/CRT–5 (350 to 450 feet), at least 20 feet above the ground.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.2 to 0.4
Type Modulation: AM
Type Emission: Voice
Operational Range: 10 to 15 miles
Power Output: 10 w
Power Requirements: 350 w, 110- to 125-v, 50- to 60-cycle, 1-phase ac or 144 w (full load), 12 amp at 12-v dc supplied by Vibrator Power Unit PP–203/CRT–5.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly AS–326/CRT–5			7
1	Microphone T–17–D		69 x 2-3/4 x 2-1/4	1
1	Power Cable Assembly CX–1172/U		1-3/4 dia x 72	
1	Power Cable Assembly CX–1173/U		1-3/4 dia x 24	0.5
1	Radio Transmitter T–151/CRT–5		12–7/16 x 18-3/8 x 23-5/32	140
1	Vibrator Power Unit PP–203/CRT–5		24-1/4 x 7-3/8 x 15-9/16	54

AN/CRT-5 RADIO SET

REFERENCE DATA AND LITERATURE:

TO 16-30CRT5-4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	17.51	340

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

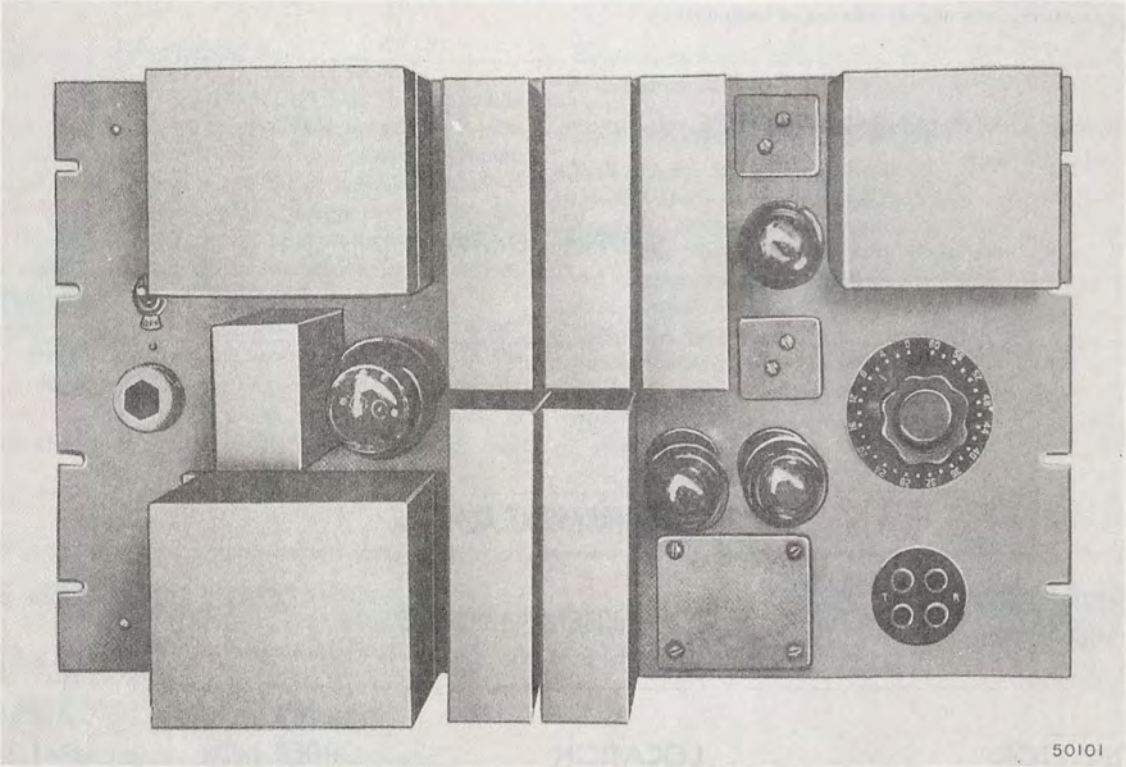
DESIGN COG: USAF, ARDC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

AUDIO FREQUENCY AMPLIFIER AN/FCA-type

7 November 1958
Cognizant Serv: USN FSN: 50101

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--



FUNCTIONAL DESCRIPTION:

Audio Frequency Amplifier 50101 is a two-stage vacuum tube amplifier with a self-contained power rectifier circuit. It is used to raise the energy level in telephone and telegraph communication circuits operating in the frequency range of 300 to 10,000 cycles per second. The amplifier is a part of Carrier Control System UN.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 to 10,000 cps
Amplifier Gain: Adjustable from −10 to +50 db
Output Power Level: +30 dbm maximum permissible single frequency power output.
Power Consumption: 125 w
Power Source Requirements: 105- to 125-v 50- to 60-cycle ac

AN/FCA-type AUDIO FREQUENCY AMPLIFIER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Audio Frequency Amplifier 50101	----------	10 x 10-1/2 x 19	65

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900591

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5.8	130

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	NXsr-83392	

REPEATER TELEGRAPH AN/FCA-type

20 October 1958
Cognizant Serv: USN FSN: TH-29/UG(TR-2)

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Repeater Telegraph TH-29/UG (TR-2) is an in-line repeater designed for one-way reversible operation. It also may be connected for four-wire or two- to four-wire operation.

The unit is fully electronic and has complete isolation between input and output circuits. It is adaptable to either 20- or 60-ma neutral telegraph loops. The repeater uses tone couplers for isolation on the input sides and low-resistance vacuum-tube keying on the output sides.

For in-line, two-wire service, two one-way repeaters are operated with the input of one connected in series with the output of the other. The two repeaters are electronically coupled, so that the output keying tube of one repeater, in series with the input circuits of the other repeater, is continuously on mark during transmission. An open circuit at the receiving end will put the sending end on space.

TECHNICAL CHARACTERISTICS:

Type of Loop: 20 or 60 ma neutral
Effective Mark Input or Output Impedance: 425 ohms ±5%
Four-wire Service (Each Loop):
Input: 270 ohms, 20 ma loop; 90 ohms, 60 ma loop
Output: 330 ohms (mark)
Keying Speed: Up to 150 cps (dot cycles or reversals).
Distortion: Less than 2%
Battery Voltage: 150 v (In series with repeater, this provides a loop supply of 120 v for a 60-ma loop.)
Power Requirements: 50 w, 105- to 125-v 50- to 60-cycle 1-phase ac.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Repeater Telegraph TH-29/UG (Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92873

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/FCA-type REPEATER TELEGRAPH

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG: Stelma Model TR-2

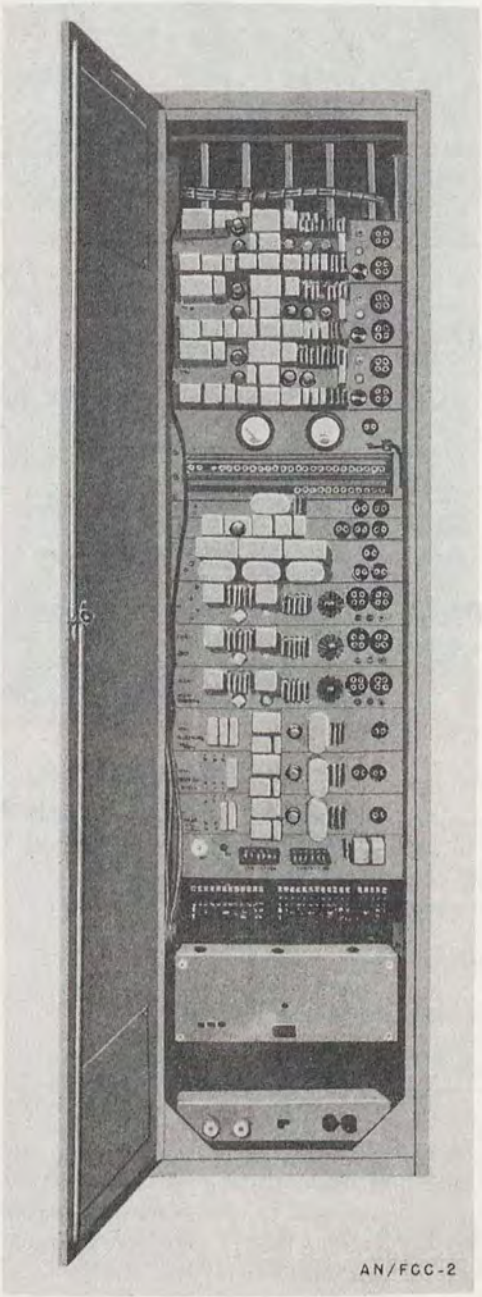
DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Stelma, Inc.	Stamford, Conn.	NObsr-71279, 20 April 1956	$1,760 with equipment spares.

CARRIER TERMINAL SET AN/FCC-2

1 July 1958
Cognizant Serv: USA FSN: 5805-222-1925

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4A2795.1PF	--	--



FUNCTIONAL DESCRIPTION:

Carrier Terminal Set AN/FCC-2 is a six-channel, voice-frequency dc telegraph and teletypewriter terminal equipment used in long-distance communication over fixed plant landlines or radio channels.

This equipment consists essentially of a commercial (Western Electric Co 42B1) carrier telegraph equipment and includes four cabinets of panel-mounted apparatus. Each cabinet accommodates apparatus for three channels; two sending cabinets (one of which is shown here) and two receiving cabinets comprising a complete six-channel terminal. It operates on an equivalent four-wire basis and can be used in conjunction with teletypewriter equipment, a remotely keyed radio transmitter, Boehme detector and recorder units, and IBM receiver apparatus.

TECHNICAL CHARACTERISTICS:

Facilities Required: Open wire, cable pairs, radio channels
Facilities Provided: Six-channel, two-way operation
Frequency: Channel spacing; 340 cps
Midchannel Frequency: 425, 765, 1,105, 1,445, 1,785, 2,125 cps
Tone Frequency (for Boehme and Similar Equipment): 1,785 cps
Type Modulation: AM
Power Requirements: 180 to 200 w, 103-126/203-253-v 50/60-cycle ac

AN/FCC-2 CARRIER TERMINAL SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Receiving Terminal WECO NO. X–61848C	----------	84 x 17 x 22-1/4	
1	Receiving Terminal WECO NO. X–61848D	----------	84 x 17 x 22-1/4	
1	Sending Terminal WECO NO. X–61848A	----------	84 x 17 x 22-1/4	
1	Sending Terminal WECO NO. X–61848B	----------	84 x 17 x 22-1/4	

REFERENCE DATA AND LITERATURE:

Instruction Book for WECO Carrier Terminal Model 42B1

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	76	

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: WECO NO. 42B1

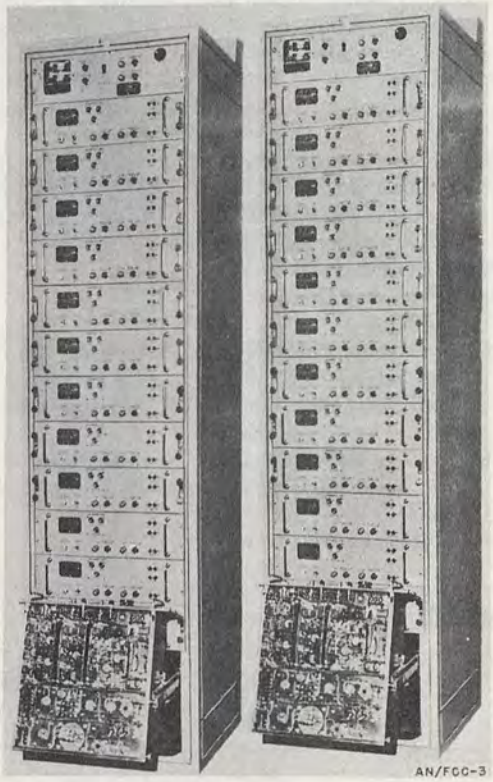
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.		

TELEGRAPH CARRIER TERMINAL AN/FCC-3

18 November 1958
Cognizant Serv: USN FSN: 5805-692-6775

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Carrier Terminal AN/FCC-3 is a shore-based system providing one-way multichannel telegraph or teletypewriter communications over wire lines or a radio link. It combines eight low-speed channels and four high-speed channels into one voice-frequency carrier signal.

This equipment accepts neutral, polar, or tone input signals and furnishes neutral or polar signal outputs.

It consists of two cabinets, one containing the transmitting equipment and the other containing the receiving equipment. Any two receivers may be operated in frequency diversity to improve the quality of the transmission.

The system can be used for remote controlled keying of continuous wave or voice radio transmitting equipment. Line current for the polar or neutral loops can be supplied either externally or by the equipment.

This equipment is similar to Carrier Telegraph Terminals AN/FCC-7 and AN/FCC-8 except for the number of wideband receivers and transmitters. In addition, the AN/FCC-3 uses two frequency converters, which the AN/FCC-8 does not include.

TECHNICAL CHARACTERISTICS:

System:

Frequency:

Range: 300 to 3,400 cps

Carrier Signal Frequencies (cps):

Channel	Midband Center	Mark	Space	Modulated Channels		
				Midband Center	Mark	Space
85-cycle frequency shift						
1	425	467.5	382.5	2,975	2,932.5	3,017.5
2	595	637.5	552.5	2,805	2,762.5	2,847.5
3	765	807.5	722.5	2,635	2,592.5	2,677.5
4	935	977.5	892.5	2,465	2,422.5	2,507.5
5	1,105	1,147.5	1,063.5	2,295	2,252.5	2,337.5
6	1,275	1,317.5	1,232.5	2,125	2,082.5	2,167.5
7	1,445	1,487.5	1,402.5	1,955	1,912.5	1,997.5
8	1,615	1,657.5	1,572.5	1,785	1,742.5	1,827.5
170-cycle frequency shift						
9	1,955	2,040	1,870			
10	2,380	2,465	2,295			
11	2,800	2,890	2,720			
12	3,280	3,315	3,145			

Channels: 12 audio telegraph carrier

Type Modulation: Frequency shift

Facilities: Eight to 40 dot-cycle and four 100 dot-cycle channels suitable for polar or neutral telegraph or teletypewriter operation.

Power Output (Transmitter Group): 6 dbm (maximum) into 600 ohms

Sensitivity (Receiver Group): −40 to +6 dbm on a single channel

Power Requirements:

Receiver Group: 1,645 w, 115- or 230-v 50- to 60-cycle ac.

Transmitter Group: 1,125 w, 115- or 230-v 50- to 60-cycle ac.

AN/FCC-3 TELEGRAPH CARRIER TERMINAL

Telegraph Carrier Transmitter:

Input: 20- or 60-ma neutral telegraph loop with battery supplied by the loop; 30-ma polar telegraph loop with battery supplied from the loop; 20- or 60-ma neutral telegraph loop with battery supplied from the transmitter.

Output: 600-ohm line; audio level is continuously variable over range of −24 dbm to +6 dbm; transmitter operates in parallel with one or more transmitters.

Keying Rate: With narrow-band filters, the maximum keying rate is 40 dot-cycles; with wide-band filters, 100 dot-cycles.

Frequency: MARK and SPACE signals with ±3 cps of normal values.

Power Consumption: 73 w

Telegraph Carrier Receiver:

Input: 600-ohm line; steady or slow varying audio signal between −40 dbm and +10 dbm at frequency of the receiver filter set used; receiver operates in parallel with one or more receivers.

Output: Dc pulses of 20- or 60-ma neutral telegraph loop with battery supplied from either the loop or receiver; 30-ma polar telegraph loop with battery supplied from the receiver

Keying Rate: With narrow-band filters, the maximum keying rate is 40 dot-cycles; with wide-band filters, 100 dot-cycles.

Frequency: MARK and SPACE frequencies

Power Consumption: 110 w

Electronic Frequency Converter CV-243/FCC-3:

Input: Two 600-ohm inputs—one for signal to be frequency converted, the other for signal to be combined with the frequency converted signal; normal input level for eight channels into each input is −0.5 dbm. Maximum combined peak signal is 4.3 v at each input. For eight channels into the converted input alone, maximum peak signal input is 5.9 v. For 12 channels with normal input alone, maximum peak signal is 7.3 v.

Output: 600-ohm line ungrounded; equipment gain of 1 for signals from converted and normal input circuits to output; line ATTENUATOR provides from 0- to 40-db Attenuation in 2-db steps.

Power Consumption: 50 w

Electronic Frequency Converter CV-244/FCC-3:

Input: 600-ohm line, ungrounded; includes line transformer and ATTENUATOR ranging from 0- to 40-db in 2-db steps; normal input level is 0.5 dbm; maximum combined input peak signal is 8.6 v.

Output: Two 600-ohm outputs; equipment gain of 1 for signals from input to converted and normal output circuits

Power Consumption: 50 w

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
13	Cable Assembly, Power Electrical CX-3125/U		52 long	
13	Cable Assembly, Special Purpose Electrical CX-3224/FCC-3		52 long	
1	Electronic Frequency Converter CV-243/FCC-3		5-1/4 x 16 x 19	
1	Electronic Frequency Converter CV-244/FCC-3		5-1/4 x 16 x 19	
1	Maintenance parts kit			
1	Telegraph Carrier Receiver R-525/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Receiver R-526/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Receiver R-527/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Receiver R-528/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Receiver R-529/FCC-3		5-1/4 x 16 x 19	

TELEGRAPH CARRIER TERMINAL AN/FCC-3

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph Carrier Receiver R-530/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Receiver R-531/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Receiver R-532/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Receiver R-533/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Receiver R-534/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Receiver R-535/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Receiver R-536/FCC-3		5-1/4 x 16 x 19	
2	Telegraph Carrier Terminal Cabinet CY-1196/FCC-3		24 x 24 x 93	
1	Telegraph Carrier Transmitter T-371/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-372/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-373/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-374/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-375/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-376/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-377/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-378/FCC -3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-379/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-380/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-381/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-382/FCC-3		5-1/4 x 16 x 19	
1	Wiring Harness CX-2448/FCC-3		67 long	
1	Wiring Harness CX-2449/FCC-3		67 long	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91901

AN/FCC-3 TELEGRAPH CARRIER TERMINAL

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	101.3	3,705

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-T-15294A

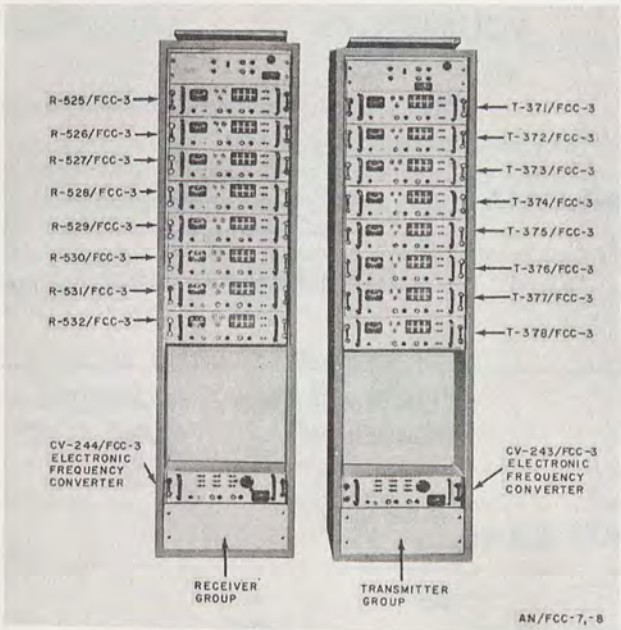
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Frequency Laboratories Inc.	Boonton, N. J.	NObsr 52374, 5 April 1956	$11,900.00

TELEGRAPH CARRIER TERMINAL AN/FCC-8

20 November 1958
Cognizant Serv: USN FSN: 5805-665-1966

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Carrier Terminal AN/FCC-8 consists of both transmitting and receiving groups of terminals for a voice-frequency telegraph carrier communication system. It provides eight channels and may be used on radio circuits and wire units.

This equipment is identical with Telegraph Carrier Terminals AN/FCC-3 and AN/FCC-7 except for the number of wide-band units and the exclusion of the electronic frequency converters in the AN/FCC-8.

TECHNICAL CHARACTERISTICS:

Frequency Range: 425 to 1,615 cps; spaced 170 cps between channels
Number of Channels: 8 per group
Power Requirements: 115- or 230-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph Carrier Receiver R-525/FCC-3	----------	5-1/4 x 16 x 19	
2	Telegraph Carrier Terminal Cabinet CY-1195/FCC-3	----------	24 x 24 x 93	
1	Telegraph Carrier Transmitter T-371/FCC-3	----------	5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-372/FCC-3	----------	5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-373/FCC-3	----------	5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-374/FCC-3	----------	5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-375/FCC-3	----------	5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-376/FCC-3	----------	5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-377/FCC-3	----------	5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-378/FCC-3	----------	5-1/4 x 16 x 19	

AN/FCC-8 TELEGRAPH CARRIER TERMINAL

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91901

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	148	

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Frequency Laboratories, Inc.	Boonton, N. J.	NObsr 52374	

TERMINAL, TELEPHONE AN/FCC-9

20 November 1958
Cognizant Serv: USN FSN: 5805-501-3758

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

. Telephone Terminal AN/FCC-9 is a four-channel voice-frequency carrier equipment. It consists of four carrier channels and one order wire channel for use over any suitable four-wire line or equivalent four-wire facility.

This equipment is used in military communications at fixed plant installations. It is similar to Telephone Terminal AN/TCC-3 except for ringing facilities.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 to 20,000 cps
Channel Frequencies:
Order Wire: 300 to 3,500 cps
Channel 1: 4,500 to 7,700 cps
Channel 2: 2,500 to 11,700 cps
Channel 3: 12,500 to 15,700 cps
Channel 4: 16,500 to 19,700 cps
Channel Width: 3,200 cps
Attentuation: 30 db (maximum)
Transmission Variation: 1 db (maximum)
Speech Band: 300 to 3,500 cps
Cross Talk Attenuation: −50 db
Sending Level: 0 dbm
Receiving Level Range: −30 to 0 dbm
Power Requirements: 103- to 127-v or 206- to 254-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Hand telephone			
1	Meter			
1 Set	Patch cord and spares			
1	Terminal, Telephone TA-292/FCC-9			
1	Test oscillator			
1	Voice-frequency ringer			
1	Volume limiter			
4	Wire terminating set and adjustable attenuator			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92338

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/FCC-9 TERMINAL, TELEPHONE

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Engineering Products, Ltd.	Montreal, Canada	63200, 23 June 1953	$10,400.00

TELEGRAPH CARRIER TERMINAL AN/FCC-type

5 December 1958
Cognizant Serv: USN FSN: C–2T

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Telegraph Carrier Terminal C–2T transmits mark and space frequency-shift-modulated telegraph communication signals on a single-sideband carrier and receives telegraph signals under *space diversity* operation.

The equipment provides 12 single carrier transmitter channels and 12 pairs of receiving channels having the same midband frequencies for diversity reception. It is designed for fixed station installation to operate telegraph printers and other telegraph end equipment.

Telegraph Carrier Terminal C–2T is a modified version of Carrier Telegraph Terminal AN/FCC–3 which permits space diversity operation.

TECHNICAL CHARACTERISTICS:

Frequency Range in Cycles: 300 to 3,400; 12 audio telegraph carrier channels
Sensitivity: −40 dbm to +6 dbm on a single channel
Power Output: 6-dbm maximum output into 600 ohms
Power Consumption:
Receiver Group: 1,645 w
Transmitter Group: 1,125 w
Power Requirements: 115/230 v, 50- to 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Electronic Frequency Converter CV–243/FCC–3	----------	5-1/4 x 16 x 19	
1	Electronic Frequency Converter CV–244/FCC–3	----------	5-1/4 x 16 x 19	
2	Telegraph Carrier Receiver R–525/FCC–3	----------	5-1/4 x 16 x 19	
2	Telegraph Carrier Receiver R–526/FCC–3	----------	5-1/4 x 16 x 19	
2	Telegraph Carrier Receiver R–527/FCC–3	----------	5-1/4 x 16 x 19	
2	Telegraph Carrier Receiver R–528/FCC–3	----------	5-1/4 x 16 x 19	
2	Telegraph Carrier Receiver R–529/FCC–3	----------	5-1/4 x 16 x 19	
2	Telegraph Carrier Receiver R–530/FCC–3	----------	5-1/4 x 16 x 19	
2	Telegraph Carrier Receiver R–531/FCC–3	----------	5-1/4 x 16 x 19	
2	Telegraph Carrier Receiver R–532/FCC–3	----------	5-1/4 x 16 x 19	
2	Telegraph Carrier Receiver R–533/FCC–3	----------	5-1/4 x 16 x 19	
2	Telegraph Carrier Receiver R–534/FCC–3	----------	5-1/4 x 16 x 19	
2	Telegraph Carrier Receiver R–353/FCC–3	----------	5-1/4 x 16 x 19	

AN/FCC-type TELEGRAPH CARRIER TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Telegraph Carrier Receiver R-536/FCC-3		5-1/4 x 16 x 19	
3	Telegraph Carrier Terminal Cabinet CY-1195/FCC-3		24 x 24 x 93	
1	Telegraph Carrier Transmitter T-371/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-372/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-373/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-374/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-375/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-376/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-377/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-378/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-379/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-380/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-381/FCC-3		5-1/4 x 16 x 19	
1	Telegraph Carrier Transmitter T-382/FCC-3.		5-1/4 x 16 x 19	
	Accessories:			
39	Cable Assembly, Special Purpose Electrical CX-2124/FCC-3		56	
39	Cable Assembly, Power, Electrical CX-2125/U		52	
1	Maintenance parts kits		12 x 15 x 24	
1	Wiring Harness (Receiver Group Cabinet Unit #1) 1H		67	
1	Wiring Harness (Receiver Group Cabinet Unit #2) 2H		67	
1	Wiring Harness (Transmitter Group Cabinet) CX-2448/FCC-3		67	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92370(A)
NAVSHIPS 91901

TELEGRAPH CARRIER TERMINAL AN/FCC-type

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

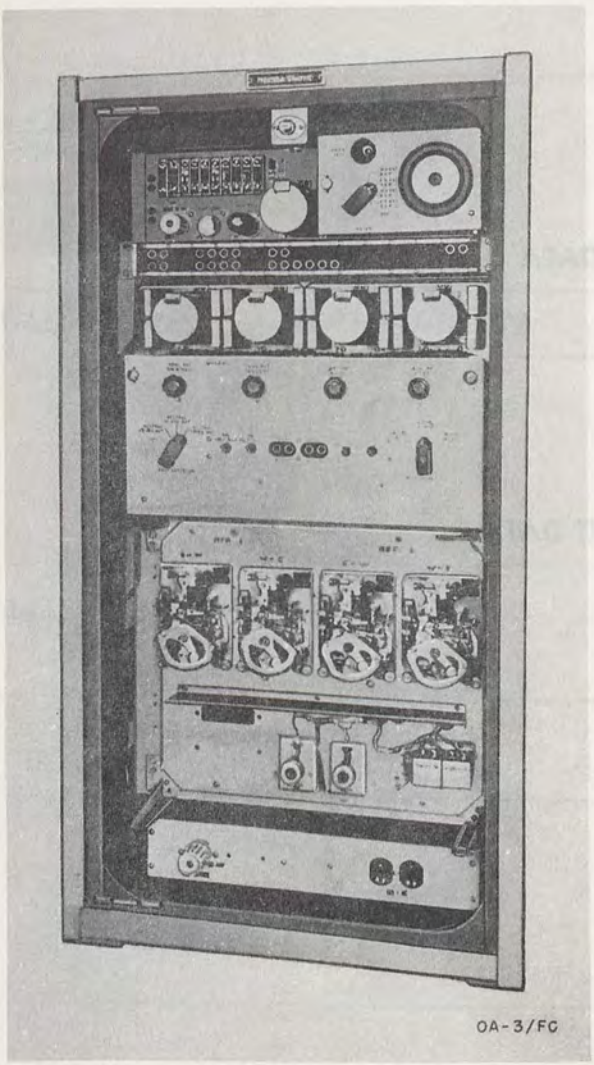
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Frequency Laboratories, Inc.	Boonton, N. J.	No–HC–6279 NObsr–64168	$3750.00 with spares

REGENERATIVE REPEATER AN/FCC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-164-7128

OA-3/FC

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4A2117	--	--



OA-3/FC

FUNCTIONAL DESCRIPTION:

Regenerative Repeater OA-3/FC is an intermediate dc, neutral only, repeater equipment used at points between two Telegraph Repeaters OA-6/FC in fixed-plant facilities.

This equipment consists of two panel-mounted dc telegraph regenerative repeaters housed in a single floor-type cabinet. It re-forms, re-times, and re-transmits teletypewriter signals and enables oprration in tandem of several line sections, thus effectively increasing the overall length (or operating distance) of a telegraph line circuit.

When operated in conjunction with carrier equipment, it is used only with the dc portion of the circuit.

TECHNICAL CHARACTERISTICS:

Number and Type of Facilities: Neutral half-duplex, neutral full-duplex, and neutral three-way duplex.

Power Requirements: 150 w, 115-v 50/60-cycle ac.

AN/FCC-type REGENERATIVE REPEATER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Regenerative Repeater OA-3/FC	5805-164-7128	22-1/4 x 17 x 42	315

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-2032

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	23.8	510

PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, SigC

SPEC &/or DWG: WECO X-66031A

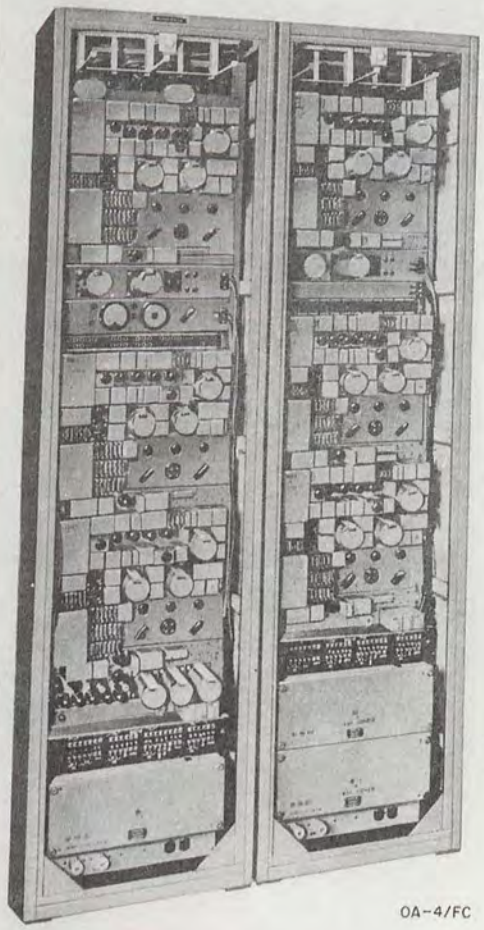
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.		

CARRIER TERMINAL AN/FCC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-223-7449

OA-4( )/FC

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4A2794	--	--



OA-4/FC

FUNCTIONAL DESCRIPTION:

Carrier Terminal OA-4( )/FC is a six-channel carrier terminal equipment used as part of the equipment necessary to provide a maximum of 12 two-way telegraph circuits on a four-wire basis, over type C or type H carrier facilities. It is used in long distance teletypewriter communication applications at fixed-plant installations.

This equipment consists of two cabinet inclosed units or bays. Each bay provides three channel terminations (numbered 1 through 6).

It is designed to be used with Carrier Terminal OA-5( )/FC to provide 12 channels of telegraph communication over a single normal telephone channel.

It may be used separately or with Carrier Terminal OA-5( )/FC. It can be operated over channel two of a three-channel carrier telephone system derived through Carrier Terminal OA-11/FC or OA-12/FC, or on either the voice-frequency or the carrier channel of Carrier Terminal OA-13/FC.

TECHNICAL CHARACTERISTICS:

Facilities Required for Transmission: Wire or cable having maximum loss of 30 dbm.

Facilities Provided: Six-channel, two-way operation on a four-wire basis; separate sending and receiving paths using the same frequency for each direction of transmission; monitoring of local side of all channels provided.

Frequency: 425 to 1,275 cps; 6 channels spaced 170 cps apart

Type of Modulation: AM

Type Ringing: Vf

Power Requirements: 700 w, 115/230-v 50/60-cycle ac

AN/FCC-type CARRIER TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet No. 1, channels 1, 2, and 3	----------	84 x 22-1/2 x 17	600
1	Cabinet No. 2, channels 4, 5, and 6	----------	84 x 22-1/4 x 17	600

REFERENCE DATA AND LITERATURE:

TM 11-2024
TM 11-2029

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	66	1,520

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: WECO X61822A

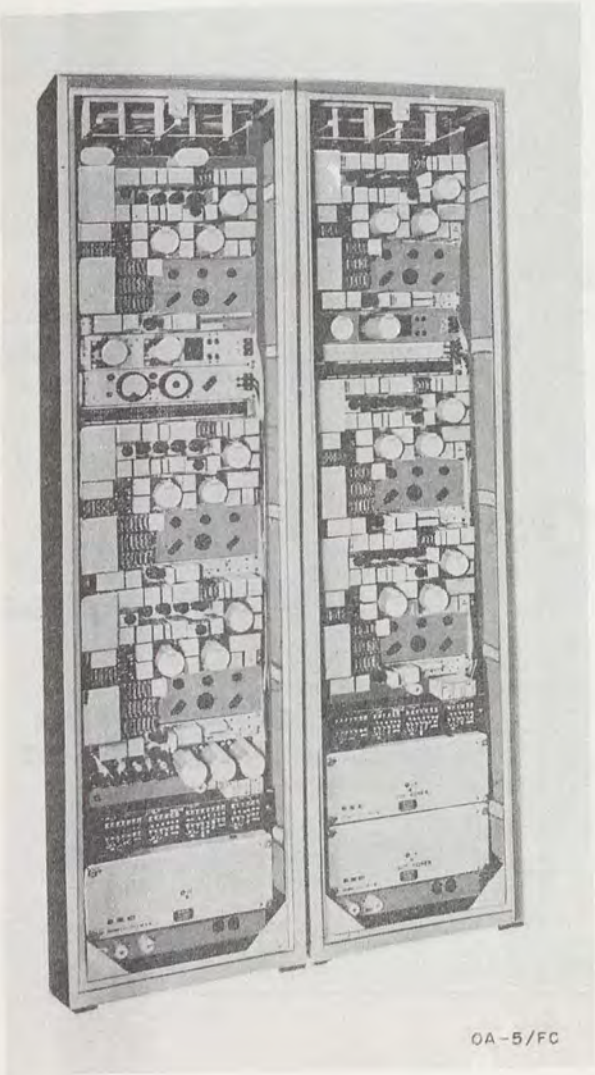
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.		

CARRIER TERMINAL AN/FCC-type OA-5( )/FC

1 July 1958
Cognizant Serv: USA FSN: 5805-222-1934

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4A2794.1	--	--



FUNCTIONAL DESCRIPTION:

Carrier Terminal OA-5( )/FC is a six-channel carrier terminal equipment used as part of the equipment necessary to provide a maximum of 12 two-way telegraph circuits, on a four-wire basis, over type C or type H carrier facilities. It is used in long distance teletypewriter communication applications at fixed-plant installations.

This equipment consists of two bays of apparatus contained in individual steel floor-type cabinets. Each bay provides three channel terminations.

This terminal equipment is designed to be used in conjunction with Carrier Terminal OA-4( )/FC to provide 12 carrier channels over a single telephone channel.

It may be used separately or with Carrier Terminal OA-4( )/FC. It can be operated over channel two of a three-channel carrier telephone system derived through Carrier Terminal OA-11/FC or OA-12/FC, or on either the vf or the carrier channel of Carrier Terminal OA-13/FC.

TECHNICAL CHARACTERISTICS:

Facilities Required for Transmission: Wire or cable having maximum loss of 30 dbm

Facilities Provided: Six-channel, two-way operation on a four-wire basis; separate sending and receiving paths using the same frequency for each direction of transmission; monitoring of local side of all channels provided

Frequency: 1,445 to 2,295 cps; 6 channels spaced 170 cps apart

Type of Modulation: AM

Type Ringing: Vf

Power Requirements: 700 w, 115/230-v 50/60-cycles ac

AN/FCC-type CARRIER TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet No. 3, channels, 7, 8, and 9	----------	84 x 22-1/4 x 17	600
1	Cabinet No. 4, channels 10, 11, and 12	----------	84 x 22-1/4 x 17	600

REFERENCE DATA AND LITERATURE:

TM 11-2024
TM 11-2029

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	66	1,520

PROCUREMENT DATA

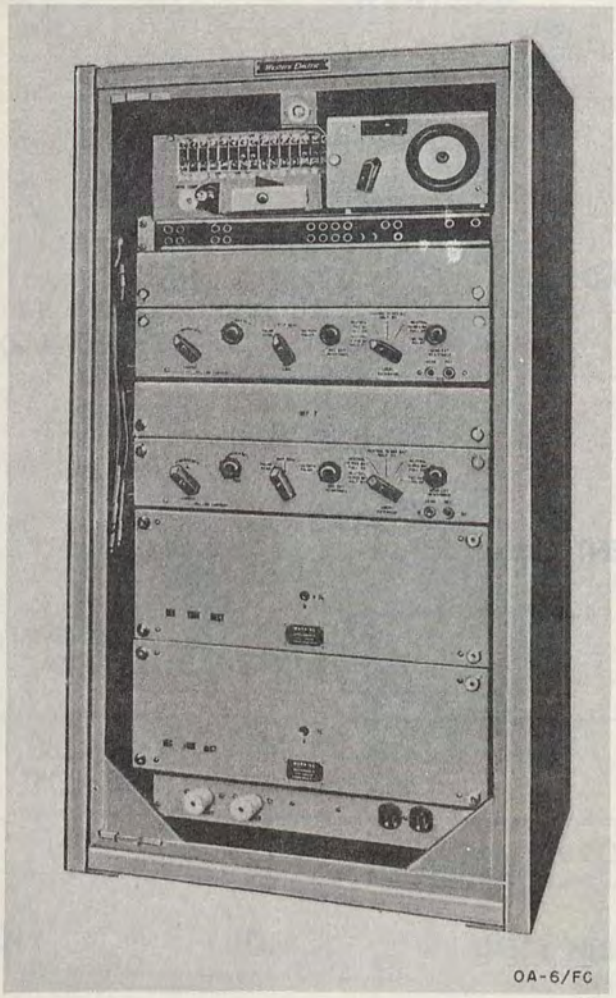
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: WECO X-61822B

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.		

TELEGRAPH REPEATER AN/FCC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-224-4963 OA-6/FC

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4A2798	--	--



OA-6/FC

FUNCTIONAL DESCRIPTION:

Telegraph Repeater OA-6/FC is a packaged, dc repeater equipment that extends the operating range of telegraph systems used for teletypewriter communication over composited or simplexed open wire or cable facilities.

This equipment consists of two complete commercial (Western Electric X-61824) dc telegraph repeaters and associated rectifiers. It may be adapted to various modes of transmission on both line and local sides, and has provision for connection of a monitoring printer.

It may be used as an intermediate or a terminal repeater, and is used in conjunction with Regenerative Repeater OA-3/FC, Carrier Terminal OA-4( )/FC, and Carrier Terminal OA-5( )/FC in long distance telegraph systems.

TECHNICAL CHARACTERISTICS:

Number and Type of Facilities:

Line Side: Polarential or two-path polar operation

Local Extension (Loop or Drop) Side: Neutral half- or full-duplex, plus two-path polar operation; jack provided for monitoring pointer

Power Requirements: 420w, 105/125-v 50/60-cycle ac

AN/FCC-type TELEGRAPH REPEATER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph Repeater OA-6/FC (Equipment consists of only one major operating component.)	5805-224-4963	22-1/4 x 17 x 42	400

REFERENCE DATA AND LITERATURE:

TM 11-2034

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	23	550

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: WECO Dwg. No. X61824B-1

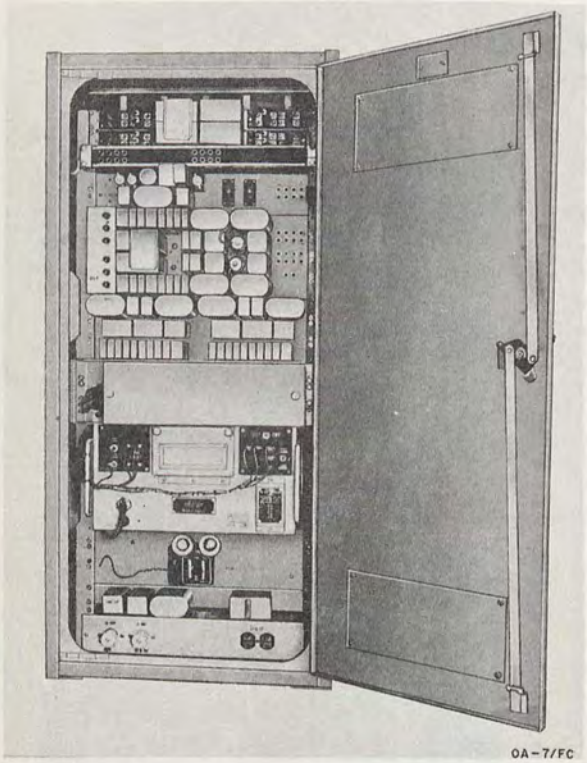
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	36311-P-43	

TELEPHONE REPEATER AN/FCC-type

5 December 1958
Cognizant Serv: USA FSN: 5805-164-7075

OA-7/FC

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4B3198.1	--	--



OA-7/FC

FUNCTIONAL DESCRIPTION:

Telephone Repeater OA-7/FC is a vf telephone equipment used to extend the operating range of two- or four-wire telephone systems operating over open wire or cable

This equipment is contained in a floor-type steel cabinet and includes two composite sets, monitoring apparatus, a balancing netowkr, vf ringing equipment, and a power supply circuit.

The OA-7/FC can be used as a terminal repeater or an intermediate repeater.

TECHNICAL CHARACTERISTICS:

Frequency Range: 200 to 2500 cps
Facilities Required for Transmission: Two- or four-wire lines
Facilities Afforded: Two- or four-wire phantom circuit; two- or four-wire physical circuit
Power Requirements: 60 w, 105/125-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telephone Repeater OA-7/FC	5805-164-7079	49 x 22-1/4 x 17	420

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-2028

AN/FCC-type TELEPHONE REPEATER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	30.9	610

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG.

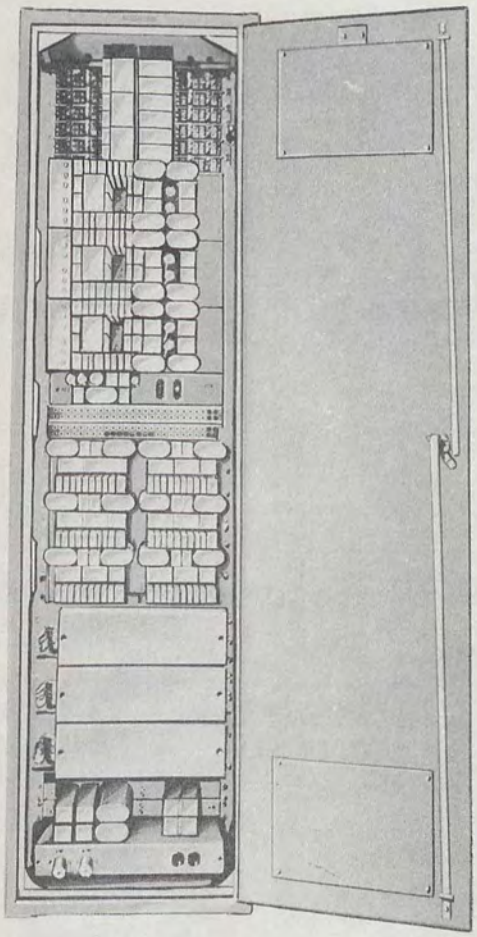
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	Kearny, N. J.		

TELEPHONE REPEATER AN/FCC-type

5 December 1958
Cognizant Serv: USA FSN: 5805-164-7076 OA-8/FC

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4B3199.1	--	--



OA-8/FC

FUNCTIONAL DESCRIPTION:

Telephone Repeater OA-8/FC is a vf telephone equipment used to extend the operating range of three separate two-wire or four-wire telephone systems operating over open wire or cable.

This equipment consists of three separate vf telephone amplifiers mounted in a single floor-type steel cabinet and includes composite sets, equalizers, and balancing networks for each of the three systems handled.

The OA-8 can be used as a terminal repeater or intermediate repeater.

TECHNICAL CHARACTERISTICS:

Facilities Required for Transmission: two- or four-wire lines
Facilities Afforded: two- or four-wire phantom circuit; two- or four-wire physical circuits
Frequency Range: 200 to 2500 cps
Power Requirements: 60 w, 105/125-v 50/60-cycle ac

AN/FCC-type TELEPHONE REPEATER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Telephone Repeater OA–8/FC	5805–164–7069	84 x 22-1/4 x 17	540

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–2028

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	37.9	916

PROCUREMENT DATA

PROCURING SERVICE: USA **DESIGN COG:** USA, Sig C
SPEC &/or DWG:

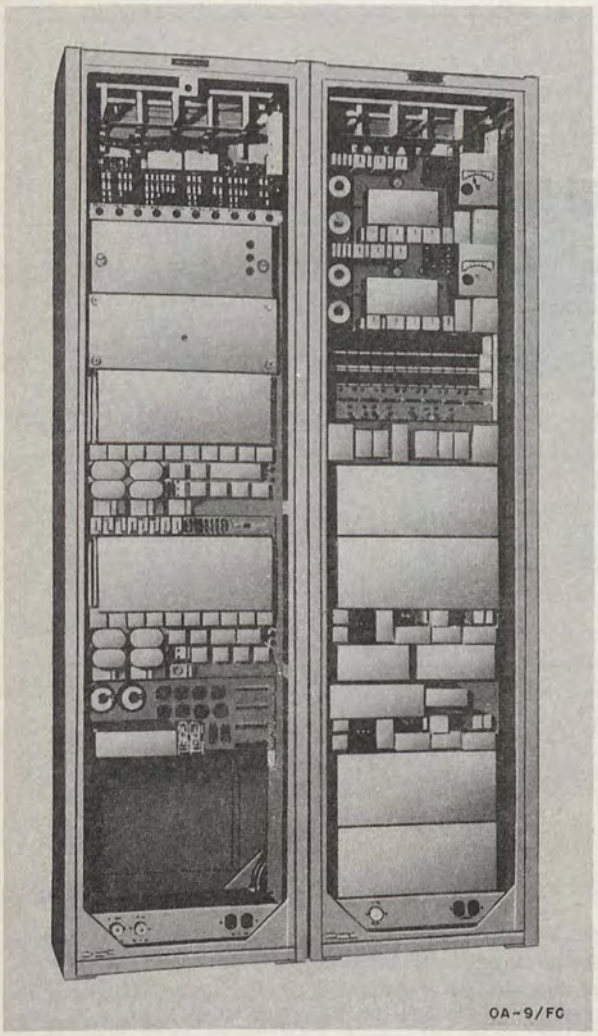
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	Kearny, N. J.		

CARRIER REPEATER AN/FCC-type

5 December 1958
Cognizant Serv: USA FSN: 5805-164-7078

OA-9/FC

	USA	USN	USAF
TYPE CLASS:	S/Std	--	--
STOCK NO:	4B3202C.1	--	--



FUNCTIONAL DESCRIPTION:

Carrier Repeater OA-9/FC is used to extend the range of a carrier system using Carrier Terminals OA-11/FC and OA-12/FC. The equipment is used in fixed plant installations.

The OA-9/FC consists of apparatus mounted on standard rack panels in two floor-type steel cabinets installed side by side.

TECHNICAL CHARACTERISTICS:

Frequency Range: 6 to 29 kc
Facilities Required for Transmission: two- or four-wire open wire circuit, transposed.
Facilities Afforded: 3 vf channels
Type of Modulation: AM
Power Requirements: 200 w, 105-120-v 50-60-cycle ac; or 6 Batteries BA-34, 2 Batteries BA-8, and 10 Batteries BA-27

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Carrier repeater bay	----------	22-1/4 x 17 x 84	540
1	Repeater line and power bay	----------	22-1/4 x 17 x 84	540

AN/FCC-type CARRIER REPEATER

REFERENCE DATA AND LITERATURE:

TM 11–2023

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	75	1,570

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: WECO X–61819C or S

DESIGN COG: USA, Sig C

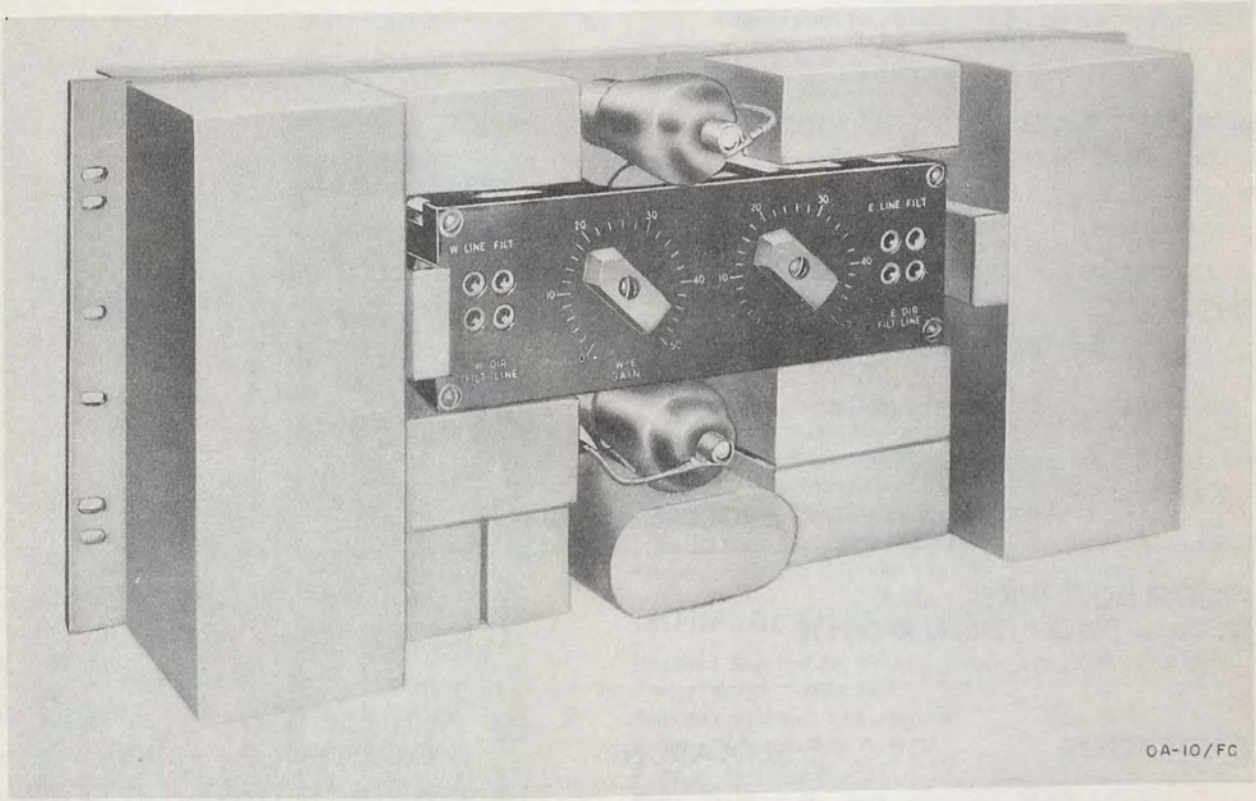
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	Kearny, N. J.		

CARRIER REPEATER AN/FCC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-164-7067

OA-10( )/FC

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4B3202H	--	--



FUNCTIONAL DESCRIPTION:

Carrier Repeater OA-10( )/FC is a single-channel, type H telephone and telegraph carrier-repeater equipment used to extend the range, in both directions, of transmission in a system using Carrier Terminal OA-13/FC, or equivalent terminal apparatus. It is used at fixed station installations.

This equipment consists of two amplifiers, two sets of line and filter jacks, and associated telephone apparatus on a single rack panel that can be mounted in Cabinet CY-413/FC or CY-414/FC. It can be used in conjunction with radio relay and related terminal equipment in a system and can be installed at intermediate points of a section of facility.

TECHNICAL CHARACTERISTICS:

Facilities Required: Two-wire
Facilities Provided: Composited or simplexed circuits
Frequency: 4.15 to 10.15 kc
Power Requirements: 15w, 105/125-v 50/60-cycle ac

AN/FCC-type CARRIER REPEATER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Carrier Repeater OA–10/FC (Equipment consists of only one major component.)	5805–164–7067	----------	35

REFERENCE DATA AND LITERATURE:

TM 11–2022, TM 11–2025

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.5	70

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: WECO X–66217B

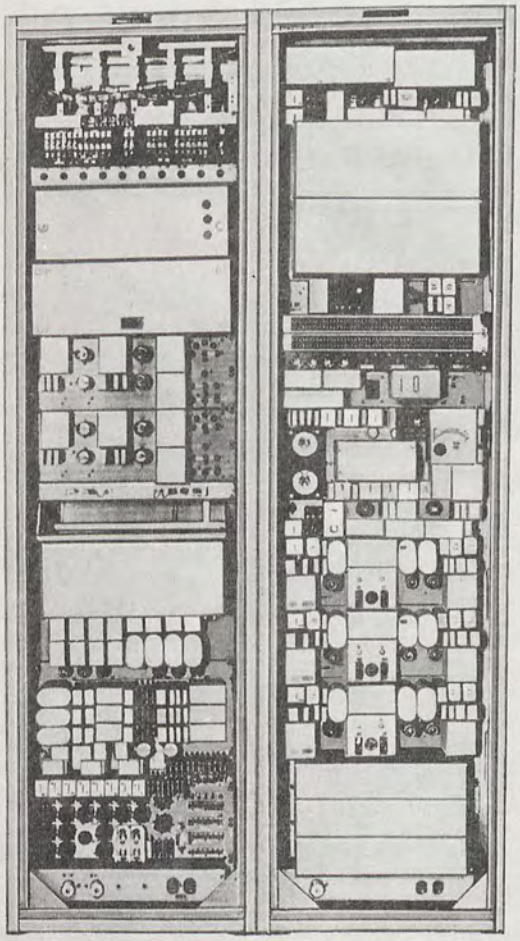
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.		

CARRIER TERMINAL AN/FCC-type

5 December 1958
Cognizant Serv: USA FSN: 5805-170-4771, 5805-128-6262

	USA	USN	USAF
TYPE CLASS:	S/Std	--	--
STOCK NO:	4B8363C-2.1	--	--



OA-11/FC

FUNCTIONAL DESCRIPTION:

Carrier Terminal OA-11( )/FC is a fixed-plant wire communication terminal equipment used in conjunction with OA-12/FC to provide a means of superimposing three additional two-way telephone circuits on an existing open wire facility.

This equipment consists of panel-mounted apparatus, inclosed in two floor-type steel cabinets, comprising a self-contained operating unit, including power supply equipment. This terminal is arbitrarily designated EAST; the companion OA-12/FC is arbitrarily designated WEST.

To increase the operating range of a system using this equipment Carrier Repeater OA-9/FC must be used.

TECHNICAL CHARACTERISTICS:

Facilities Required for Transmission: Two- or four-wire open wire circuit, transposed
Facilities Afforded: 3 vf channels
Frequency Range: 6 to 29 kc
Type of Modulation: AM
Power Requirements: 250 w, 105-125-v 50-60-cycle ac

AN/FCC-type CARRIER TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Line and power bay	----------	22-1/4 x 17 x 84	600
1	Terminal bay	----------	22-1/4 x 17 x 84	600

REFERENCE DATA AND LITERATURE:

TM 11–2023, TM 11–2026

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	75	1,680

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: WECO X–61819P

DESIGN COG: USA, Sig C

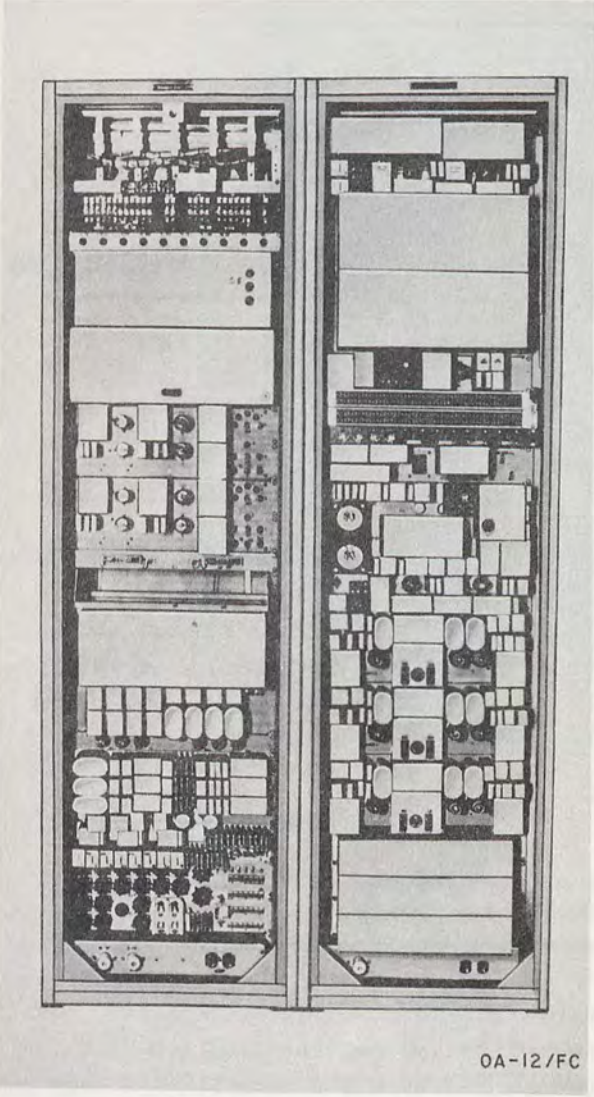
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	Kearny, N. J.	4633–P–45	

CARRIER TERMINAL AN/FCC-type

5 December 1958
Cognizant Serv: USA FSN: 5805-170-7855

OA-12/FC

	USA	USN	USAF
TYPE CLASS:	S/Std	--	--
STOCK NO:	4B8363C-2.1	--	--



OA-12/FC

FUNCTIONAL DESCRIPTION:

Carrier Terminal OA-12/FC is fixed-plant wire communication terminal equipment used in conjunction with Carrier Terminal OA-11( )/FC to provide a means of superimposing three additional two-way telephone circuits on an existing open wire facility.

This equipment consists of panel-mounted apparatus, inclosed in two floor-type steel cabinets, comprising a self-contained operating unit, including power supply equipment. This terminal is arbitrarily designated WEST; the companion OA-12/FC is arbitarily designated EAST.

To increase the operating range of a system using this equipment Carrier Repeater OA-9/FC must be used.

TECHNICAL CHARACTERISTICS:

Facilities Required for Transmission: two- or four-wire open wire circuit, transposed
Facilities Afforded: 3 vf channels
Frequency Range: 6 to 29 kc
Type of Modulation: AM
Power Requirements: 250 w, 105-125-v 50-60-cycle ac

AN/FCC-type CARRIER TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Line and power bay	----------	22-1/4 x 17 x 84	600
1	Terminal bay	----------	22-1/4 x 17 x 84	600

REFERENCE DATA AND LITERATURE:

TM 11-2023, TM 11-2026

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	75	1,680

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: WECO X-61819R

DESIGN COG: USA, Sig C

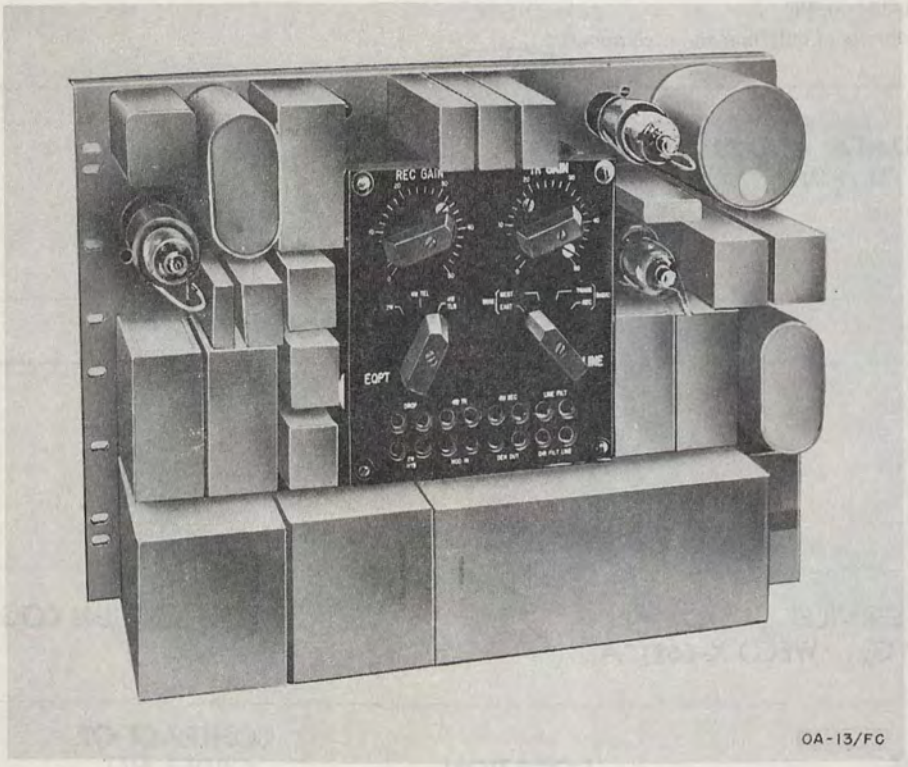
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	Kearny, N. J.	4633-P-45	

CARRIER TERMINAL AN/FCC-type

5 December 1958
Cognizant Serv: USA FSN: 5805-170-5288

OA-13( )/FC

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4B8375	--	--



FUNCTIONAL DESCRIPTION:

Carrier Terminal OA-13/FC is fixed-plant wire communication terminal equipment used to provide a means of superimposing one additional telephone channel on an existing open wire facility.

This equipment consists of panel-mounted apparatus which can be installed on a standard 19-inch relay rack. It converts vf signals to carrier frequencies for transmission, and carrier frequencies to vf for reception, with amplification in both directions.

TECHNICAL CHARACTERISTICS:

Facilities Required for Transmission: Two- or four-wire open-wire circuit
Facilities Afforded: 1 vf channel
Frequency Range: 4 to 11 kc
Type of Modulation: AM
Power Requirements: 20 w, 105-125-v 50-60-cycle ac

AN/FCC-type CARRIER TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Carrier Terminal OA–13( )/FC (Equipment consists of only one major component.)	5805–170–5288	----------	50

REFERENCE DATA AND LITERATURE:

TM 11–2025, TM 11–2038

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	6	125

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: WECO X–66217A

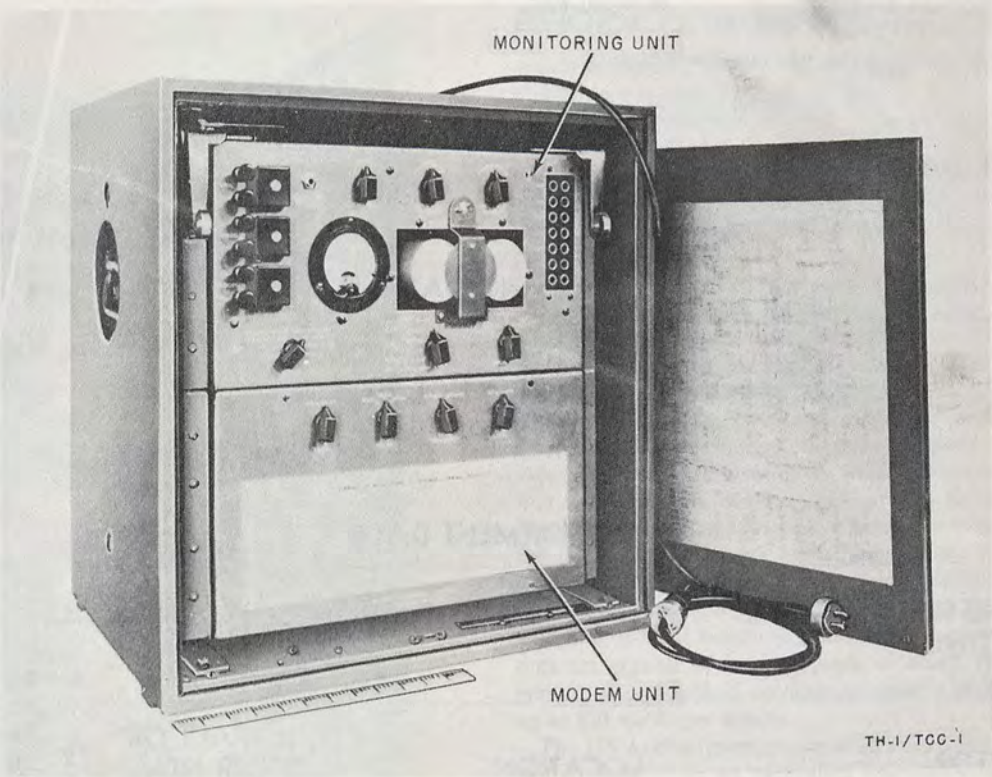
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	Kearny, N. J.	4633–P–45	

TELEGRAPH TERMINAL AN/FCC-type

23 October 1958
Cognizant Serv: USA FSN: 5805-240-6225

TH-1/TCC-1

	USA	USN	USAF
TYPE CLASS:	Obs	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Terminal TH-1/TCC-1 is a carrier telegraph terminal equipment that provides two-way voice-frequency telegraph or teletypewriter communication over a portion of the frequency range of a voice-frequency circuit. It is used principally at fixed plant installations.

The telegraph terminal can be used to provide speech-plus-duplex operation in connection with open wire lines, cable, field wire or repeatered lines, or carrier facilities. Filter F-1/GG is required at intermediate points in the telephone circuit to separate telephone and telegraph circuit frequencies.

The terminal equipment consists essentially of three panels of operating apparatus. One is a modem unit, one a monitoring unit, and one a voice-frequency ringer panel. The monitoring unit panel is mounted above the modem unit panel in a wooden cabinet. The ringer panel is mounted at the top rear of the cabinet.

TECHNICAL CHARACTERISTICS:

Frequency:
Telephone Circuit: 200 to 3,000 cps
Telegraph Circuit: 1,500 to 2,000 cps
Type Signal: AM
Type Ringing: 20-cycle vf (1,000- or 500-cycle signals interrupted at 19 cycles)
Facilities Afforded: Speech plus duplex
Power Requirements: 160 w (maximum), 100-130/200-250-v 50- to 60-cycle ac; 12.5 amp at 12-v dc

AN/FCC-type TELEGRAPH TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Telegraph Terminal TH-1/TCC-1	5805-240-6225		

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-2206

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

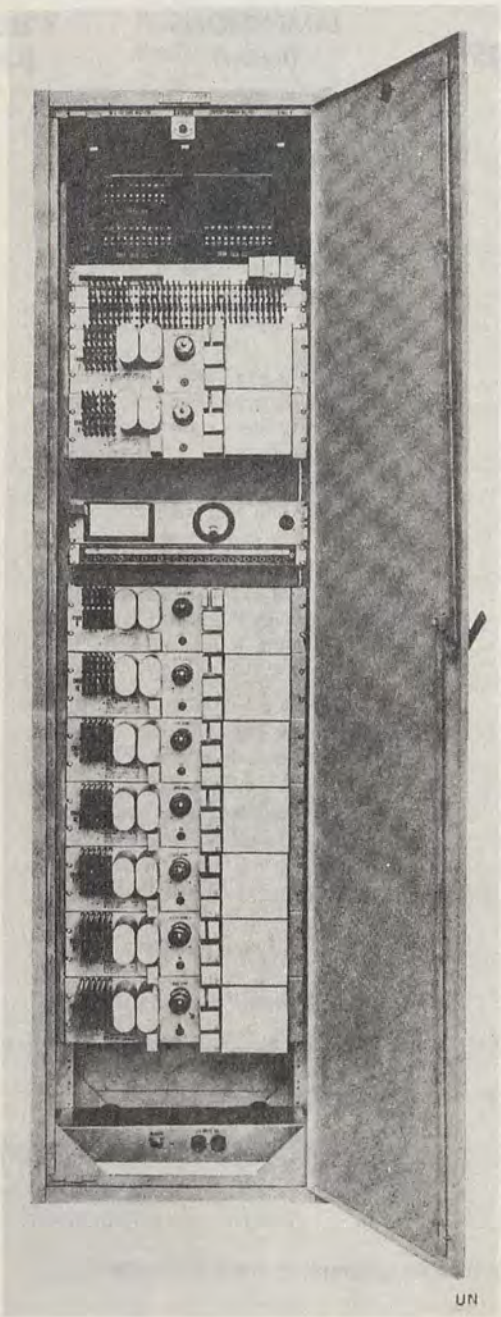
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

CARRIER CONTROL SYSTEM AN/FCC-type

14 November 1958
Cognizant Serv: USN FSN: 5805–665–0556, 5805–644–3445 (with equipment spares) UN

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–Q–341515–200	--



UN

FUNCTIONAL DESCRIPTION:

Carrier Control System UN is a multichannel carrier communications system for shore station use. It is capable of the simultaneous operation of voice channels and a variety of narrow- and wide-band audio-frequency telegraph channels over one radio carrier or a two- or four-wire line. The system consists of a number of panel units, available as required, which provide different combinations of telegraph and telephone terminal facilities.

When the voice-frequency telegraph equipment and telephone carrier equipment are used conjunctively, operation is possible on three voice telephone channels, which together approximately cover the frequency range of the system. One of these channels is a voice telephone circuit that may be used with or without the telephone carrier equipment, and the other two are voice carrier telephone channels that are provided only through the use of the telephone carrier equipment. Any one or all three of these channels may be used for either 3 wide-band or 12 narrow-band vf telegraph carriers. Without the use of the telephone carrier equipment, the maximum service obtainable on the normal voice telephone circuit are 3 or 12 narrow-band vf telegraph channels in combination with 3 wide-band telegraph channels. The narrow-band carriers are capable of keying speeds of about 100 words per minute; the wide-band carriers are capable of keying speeds up to 300 words per minute.

The UN system permits operation over a nonmetallic link and is operated on an equivalent four-wire basis with each channel a one-way circuit. To provide two-way communication between two points, two channels–one sending and one receiving–are necessary, thus involving two radio circuits. The system also may be operated over a two- or four-wire metallic circuit capable of transmitting frequencies from 200 to 10,300 cycles per second.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 to 10,150 cps
Type Signal: AM
Type Transmission and Reception: Cw, voice
Type Ringing: 1,000/20 cps
Number of Channels:
With Telephone Terminal Equipment: 3 voice channels
Without Telephone Terminal Equipment: 12 narrow-band or 3 wide-band telegraph channels or single voice channel

AN/FCC-type CARRIER CONTROL SYSTEM

Channel Frequencies:
Narrow Band: 170 cps
Medium Band: 340 cps
Wide Band: 850 cps

Oscillator Frequency: 85 cps
Power Requirements: 1 kw (approximately), 105- to 125-v 50- to 60-cycle 1-phase ac—ringing satisfactory only with a 60-cycle power source

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Attenuator 631193		6-25/32 x 4-5/32 x 4-15/32	4.5
1	Audio-Frequency Panel 50101 (1 required at sending terminal, 1 at receiving terminal)		10-1/2 x 19	65
1	Base-Frequency Amplifier 50100[a,b]		5-1/4 x 19	16
1	Base-Frequency Oscillator 35023[a,b]		10-1/2 x 19 x 3-1/2	44.5
1	Channel Oscillator:			
	Narrow-band channels[b] 1 through 12, 35010 through 35021		5-1/4 x 19 x 3-1/2	21.5
1	Wide-band channels[b] 22, 35024; 23, 35025; 24, 35026		5-1/4 x 19 x 3-1/2	21.5
1	Demodulator[b,c]:			
	50103 (used only with ungrounded load)		10-1/2 x 19 x 10	63
	50124 (used with grounded ungrounded load)		10-1/2 x 19 x 10	60
1	Harmonic Generator Alarm Panel 10094[a]		3-1/2 x 19	7.5
1	Harmonic Generator Panel 35002[a]		5-1/4 x 19 x 3-1/2	16
1	HI Carrier Telephone Terminal Panel 23295 (includes sending and receiving circuits for upper sideband)		15-3/4 x 19	80
1	HI Carrier Telephone Terminal Panel 23296 (includes sending and receiving circuits for lower sideband)		15-3/4 x 19	80
1	Modulator[b,d]:			
	50102 (contact keying only)		5-1/4 x 19 x 8	58
	50217 (permits contact keying)		5-1/2 x 19 x 10-1/2	17
1	Receiving Channel Terminal:			
	Medium-band channels[b] 1, 3, 5, 7, 9, and 12, (type number unassigned)		3-1/2 x 19	17

[a] Used in a system to prevent interchannel interference when more than six telegraph channels are provided.
[b] Supplied as required for each specific installation.
[c] One required at receiving terminal for each telegraph channel.
[d] One required at sending terminal for each telegraph channel.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	Narrow-band channels[b] 1 through 3, 53102; 4 through 6, 53103; 7 through 8, 53104; 10 through 12, 53105; 1, 3, and 5, 53106; 1 and 3, 53114; 1 and 5, 53115; 3 and 5, 53116		7 x 19	28.5
	Wide-band channels[b] 22 through 24, 53107		7 x 19	28.5
1	Receiving Line Terminal Panel 23297 (without line filter) or 23298 (with line filter)[e]		1-3/4 x 19	6.5
1	Receiving Voice Channel Terminal Panel 23303		1-3/4 x 19	4
1	Rectifier Power Unit 20140		15-3/4 x 23 x 11	140
1	Rectifier Power Unit 20141		2-21/32 x 9-1/2 x 2-21/32	
1	Rectifier Power Unit 20142		9-1/4 x 7-1/2 x 6-1/2	20
1	Sending Channel Terminal:			
	Medium-band channels[b] 1, 3, 5, 7, 9, and 11, (type number unassigned)		3-1/2 x 19 x 8	17
	Narrow-band channels[b] 1 through 3, 53096; 4 through 6, 53097; 7 through 9, 53098; 10 through 12, 53099; 1, 3, and 5, 53100		3-1/2 x 19 x 8	18.5
	Wide-band channels[b] 22 through 24, 53100		3-1/2 x 19 x 8	16
	Sending Line Terminal Panel 23297 (without line filter) or 23298 (with line filter)[e]		1-3 4 x 19	6.5
1	Sending Voice Channel Terminal Panel 50112		3-1/2 x 19	12.5
1	Transmission Measuring Set 60036		11 x 8-1/2 x 6-1/2	14
1	Voltmeter Test Panel 60035		3-1/2 x 19	5.5

[e] Type used at both sending and receiving terminals depends on combination of services used.

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900, 116

AN/FCC-type CARRIER CONTROL SYSTEM

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

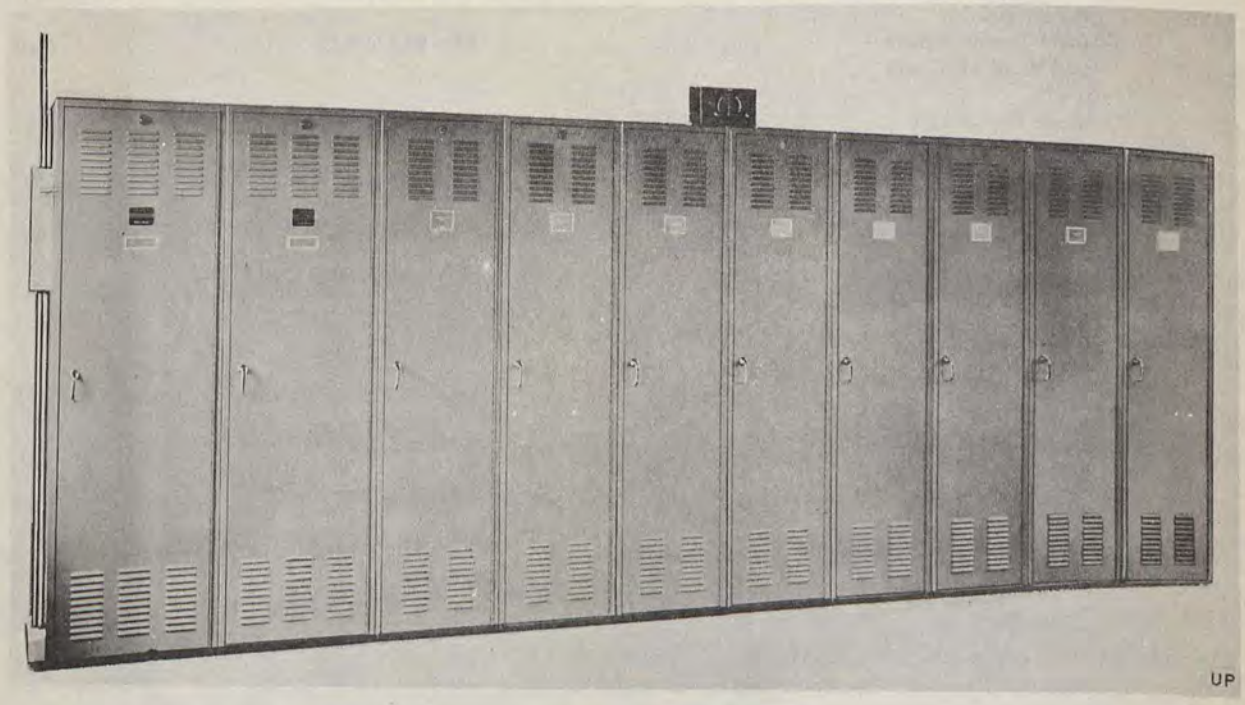
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TWO-TONE CARRIER CONTROL SYSTEM AN/FCC-type

14 November 1958
Cognizant Serv: USN FSN: UP

	USA	USN	USAF
TYPE CLASS:	Used by	Used by	--
STOCK NO:	--	--	--



UP

FUNCTIONAL DESCRIPTION:

Two-tone Carrier Control System UP is a multichannel voice-frequency carrier telegraph system that provides six two-way telegraph circuits over one radiotelephone circuit. Four one-way regenerative repeaters are provided to improve the quality of transmission by restoring distorted teletypewriter signals to almost perfect form and timing. The equipment is designed primarily for use with single-sideband, shortwave radio transmission. It is used at fixed shore stations.

To obtain better transmission in teletypewriter operation where there is selective fading of the radio signals, two tones usually are transmitted for each mark and two for each space, thus forming a frequency-diversity circuit. Visual and aural indications of signal deterioration are provided by a monitoring bay.

The carrier control can communicate with terminal, repeater, and related equipment operating in the connecting facility or comprising the system. Required for operation of the control are radio communication circuits and wire lines or radio link circuits between radio equipment and terminal equipment. A telegraph adapter unit provides proper coupling and equalization of a wire line connecting a radio receiver to the terminal equipment. All circuits must be capable of operation up to 4,900 cycles per second.

The UP is similar to Carrier Terminal OA–64/FRC–10, described under Radio Set AN/FRC–10( ).

TECHNICAL CHARACTERISTICS:

Frequency Range:
Without Frequency Diversity: 425 to 2,465 cps
With Frequency Diversity: 425 to 4,930 cps

Maximum System Length (Between Carrier Equipment and Radio Receiver or Transmitter):
128-mil Copper Open Wire: 200 miles
19-gage Loaded Cable: 20 miles
19-gage Nonloaded Cable:

Type Signal: AM (two-tone and two-tone frequency diversity)

Type Transmission and Reception: CW

Channel Frequencies:
Channel 1: 425 cps mark, 595 cps space
Channel 2: 765 cps mark, 935 cps space
Channel 3: 1,105 cps mark, 1,275 cps space
Channel 4: 1,445 cps mark, 1,615 cps space
Channel 5: 1,785 cps mark, 1,955 cps space
Channel 6: 2,125 cps mark, 2,295 cps space

Power Requirements: 3 kw, 105- to 125-v 50- to 60-cycle 1-phase ac

AN/FCC-type TWO-TONE CARRIER CONTROL SYSTEM

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Carrier Supply Bays 35ABW and 35ABX		84 x 22-1/4 x 17	490
3	Channel Terminal Bays 50AFW, 50AFX, and 50AFY		84 x 22-1/4 x 17	460
1	Common Bay 50AFV		84 x 22-1/4 x 17	515
1	Oscillator 19C		9-1/4 x 9-1/2 x 13	27
2	Power Supply Bays 20ADS and 20ADT		84 x 22-1/4 x 17	700
1	Power Supply Unit 15123–L02WA		8-3/4 x 10-1/8	65
1	Regulated rectifier		12-7/32 x 12-7/32 x 23	140
1	Telegraph Adapter Unit 49AAA		84 x 22-1/4 x 17	
1	Test Set I–181		5-1/8 x 5-1/8 x 8-3/4	9
1	Test Set 67B		5-1/8 x 5-1/8 x 8-3/4	9
1	Test Set 67B (SPL)			
1	Transmission Measuring Set 13A		6-1/2 x 8-1/2 x 11	14
1	Tube Tester, MOD 560 (SPL) (in case)		6-3/4 x 14-1/2 x 16	23
1	Volt-Ohm-Milliameter 166852 (in case)		3 x 4-1/2 x 7-1/2	3.25

REFERENCE DATA AND LITERATURE:

Technical manual for Two-Tone Carrier Control System UP
TM 11–2132

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

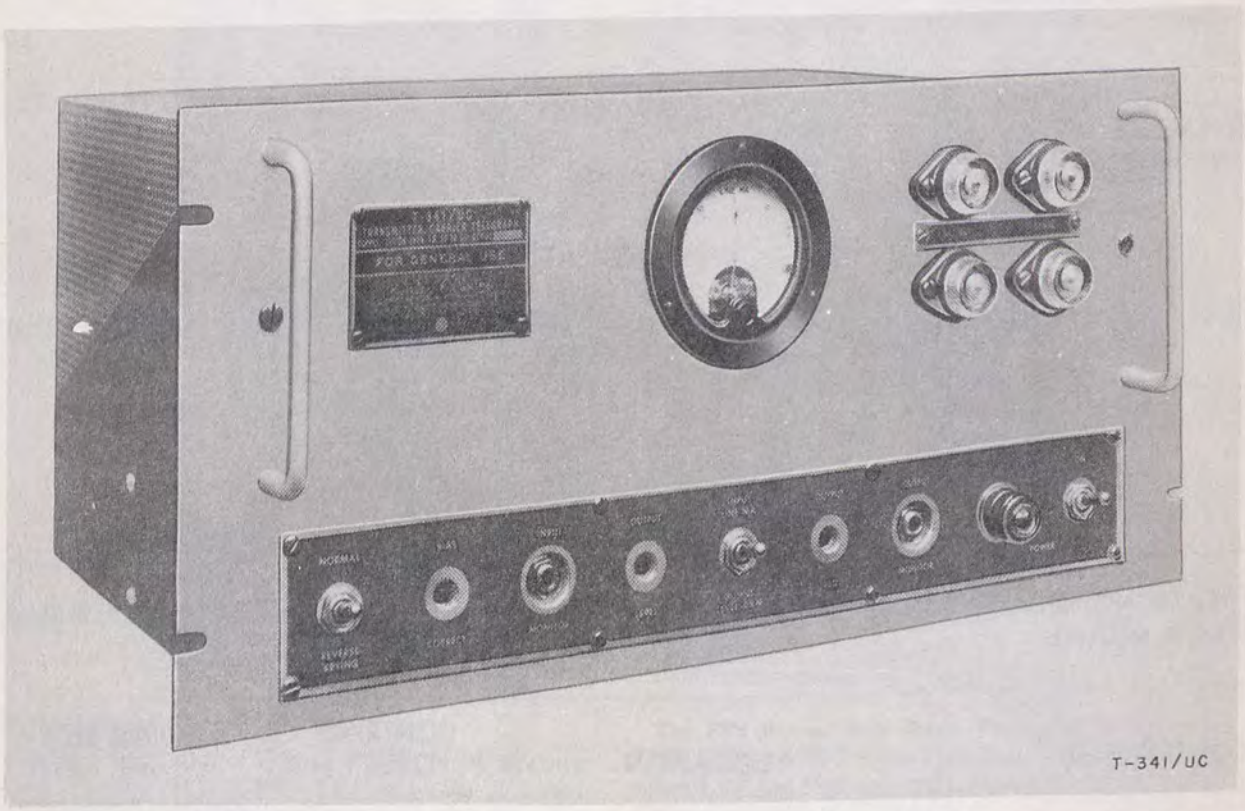
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	NXsr–60059	

CARRIER TELEGRAPH TRANSMITTER AN/FCT-type

T-341/UC

20 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Carrier Telegraph Transmitter T-341/UC is capable of accepting a direct current telegraph signal (polar or neutral) and translating this signal into a corresponding on-off tone signal.

This equipment can be used, in conjunction with Carrier Telegraph Receiver R-466/UC, to provide tone keying facilities to Carrier Telegraph Terminal AN/FCC-3. It also can be used in various system applications to provide hand-keyed or teletypewriter order-wire service.

It is designed for rack mounting and is equipped with provisions for manual adjustment of both the audio tone frequency and the bias in the transmitted signals.

TECHNICAL CHARACTERISTICS:

Input Keying: 20- to 60-ma neutral remote battery; 20- to 60-ma neutral local battery; 30- ma polar remote battery.
Keying Speed: 20 to 200 dot-cycles (equivalent to 60 to 600 wpm telegraph); higher keying speeds can be handled if input level variations are not over ±5 dbm.
Output: 600-ohm balanced or unbalanced line; on-off tone, selected frequency between 400 and 8,000 cps.
Output Distortion: Less than 5%
Output Level: Within ±2 db of level at 1,000 cps over the range.
Visual Operation Indicator: Light on front panel (keying); meter for dbm level and output current
Power Requirements: 70 w, 115/230-v 50-60-cycle ac

AN/FCT-type CARRIER TELEGRAPH TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Carrier Telegraph Transmitter T–341/UC	----------	8-23/32 x 14-3/8 x 19	34.5

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91663

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	9.25	92.5

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

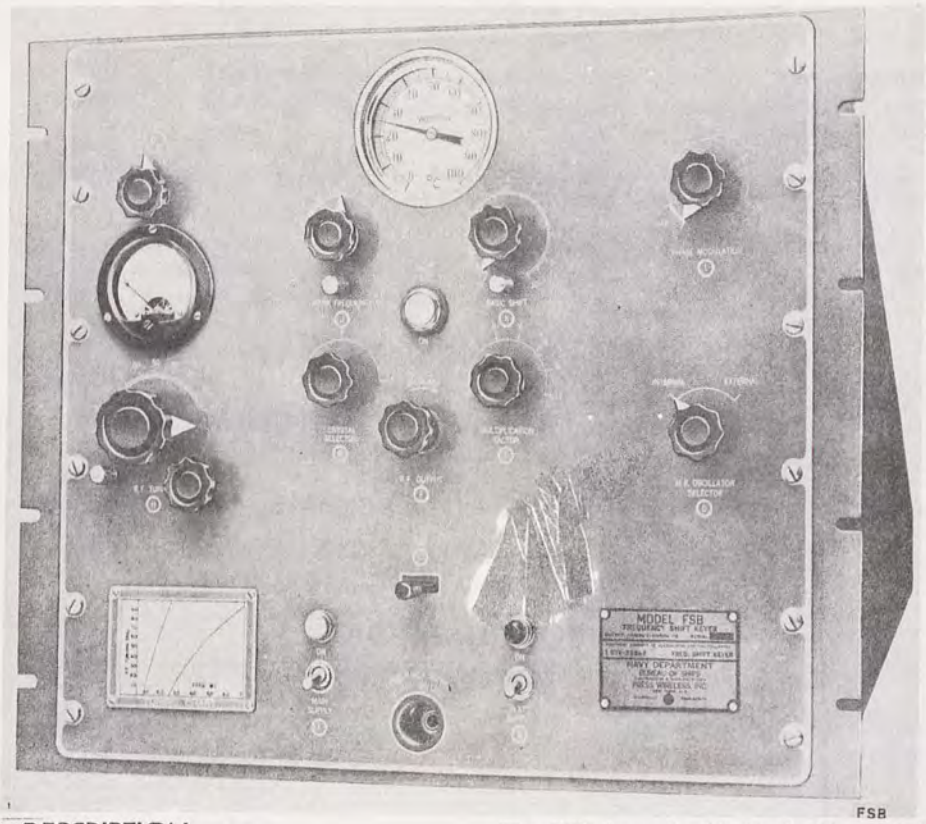
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
C. G. S. Laboratories, Inc.	Stanford, Conn.	NObsr–52381	$600.00

FREQUENCY SHIFT KEYER EQUIPMENT AN/FGA-type

5 December 1958
Cognizant Serv: USN FSN: FSB

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FSB

FUNCTIONAL DESCRIPTION:

Frequency Shift Keyer Equipment FSB is an auxiliary keying equipment for radiotelegraph transmitters. It is used at shore stations to impress intelligence on a radio frequency carrier by the frequency-shift method to minimize the effects of fading, noise interference, and static disturbances at the receiving equipment. It produces a radio frequency signal capable of being shifted back and forth between two distinct preset frequencies, with the output used to excite the associated transmitter. In addition to frequency-shift keying, facilities for phase modulation of the carrier and for use of the equipment in radiophoto frequency-shift transmission are provided.

The keyed input for this equipment may be any type of signal, including Morse code, teletypewriter, radiophoto, or facsimile.

A crystal oscillator with three preset channels is used and provision is made for the alternate use of an external oscillator, such as the transmitter oscillator.

The equipment may be permanently installed in the associated transmitter cabinet or mounted in a separate mobile cabinet. A coupler unit must be connected between the transmitter and frequency-shift keyer for impedance matching.

The FSB is used with Radio Transmitting Equipments TDN, TEB, and TEC without coupling networks, and may be adapted for use with any radio transmitter with an intermediate frequency of 1.0 to 6.7 mc.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.0 to 6.7
Frequency Shift: 0 to 1,000 cps
Type Modulation: FM
Type of Signal: Frequency-shift keying
External Rf Input: 0.8 to 6.5 mc
Internal Crystal Rf: 0.8 to 6.5 mc
200-kc Oscillator Accuracy: ±6 cps in any 6-hour period
Phase Modulation: Up to 1 radian at 200-cycle rate
Keying Voltage:
Polar: ±50 to ±150 v, one side grounded.
Neutral: −50 to −150 v, positive side grounded
Input Impedance: 75 ohms
Output Impedance: 75 ohms
Mounting Data: Standard relay rack
Power Output: 2 w
Power Requirements: 175 w, 115- to 230-v, 50- to 60-cps, 1-phase ac

AN/FGA-type FREQUENCY SHIFT KEYER EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Cables			
1 set	Equipment spares	----------	13 x 32 x 17	53
1	Frequency Shift Keyer Equipment CYV–35062	----------	16 x 19 x 15	88

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900, 928

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	15	315

PROCUREMENT DATA

PROCURING SERVICE: USN C
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Press Wireless Manufacturing Corp.	New York, N. Y.	NXsr–67976, 29 June 1944 N5sr–10565, 23 July 1945	$700.00

TELEGRAPH TERMINAL AN/FGA-type G-1T

26 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Telegraph Terminal G-1T is a high speed communication unit designed for transmission and reception of teletypewriter messages at the rate of 60, 120, 480, or 960 words per minute.

To accomplish this, teletypewriter signals from standard teletypewriter transmitters are recorded on magnetic tape at 60 words per minute, and played back through the output channel at any one of the five speeds.

This unit has dual input channels and recorders to permit simultaneous recording of two separate signals. It also has dual output channels.

The following equipment is required, but is not supplied, with Telegraph Terminal G-1T: At least 8 reels of cellulose telemetering tape, one tape splicer, and electrical splicing tape.

TECHNICAL CHARACTERISTICS:

Keying Input: 2,184 cps tone
Speed: 60, 120, 240, 480, or 960 wpm
Output Data:
Output Impedance: 500-ohm, unbalanced
Output Level: 0 dbm (±6 dbm)
Input Data:
Input Impedance: 500-ohm, balanced or unbalanced
Input Level: 0 dbm (±6 dbm)
Power Requirements: 1.5 kw, 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Playback Amplifier and Tone-to-DC Converter, Unit 1800-1900			
1	Record-Playback Chassis, Unit 2000			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92312

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/FGA-type TELEGRAPH TERMINAL

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

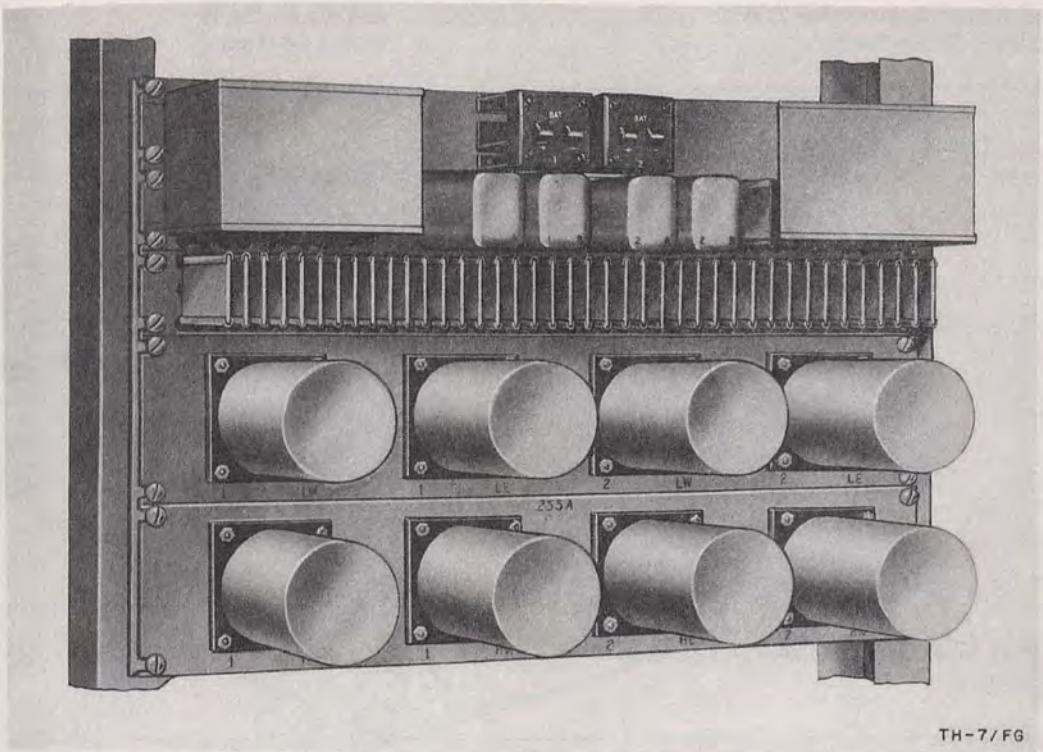
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Transmitter Equipment Manufacturing Co., Inc.	Brooklyn, N. Y.	NObsr–63197, 2 February 1953	$17,500.00 with spares

TELEGRAPH REPEATER **AN/FGA-type**

1 December 1958
Cognizant Serv: USA FSN: TH-7/FG

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Repeater TH–7/FG is a dc telegraph repeater used to extend the operating range between two dc teletypewriter stations. It includes the equipment for two single-line repeaters, one of which is designated repeater 1, the other repeater 2. With repeater 1 used in a system, repeater 2 may be used in another system or used as standby equipment. The equipment may be operated on a one-way reversible, neutral, or polar basis. It is designed to be mounted on a standard 19-inch relay rack.

A repeater of the TG–7/FG may be used in three types of dc telegraph systems. When one loop of the repeater is operated on either a polar or neutral basis, the other loop must be operated on a neutral basis. When the TG–7/FG is used as an intermediate repeater between two teletypewriter stations or to extend the loop circuit of a carrier telegraph terminal, one loop of the repeater must be operated on a neutral basis and the other loop may be operated on either a neutral or polar basis. When the TH–7/FG is used to extend a tandem (back-to-back) loop between two carrier telegraph terminals, one loop must be operated on a neutral basis and the other normally is operated on a polar basis. No monitoring facilitie are available.

No power supply is furnished as a part of the telegraph repeater. However, positive and negative 130-volt dc sources are required.

TECHNICAL CHARACTERISTICS:

Type Transmission: Neutral and polar

Distance Ranges:

Teletypewriter Equipment: 12 miles to each station if station is equipped with wave-shaping equipment. 3 miles to each station if station is not equipped with wave-shaping equipment.

Cw Operation: Inductance of each loop must not exceed the equivalent of six 3C sounders; when more than two sounders are used, each must be equipped with a 1,000-ohm shunt.

Power Requirements:

Neutral Operation: Two each ±130-v dc sources, two each −130-v dc sources

Polar Operation: Three each ±130-v dc sources, two each −130-v dc sources

AN/FGA-type TELEGRAPH REPEATER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph Repeater TH–7/FG	----------	12-3/4 x 8-1/2 x 19	
8	Relay (WECo 225A)	----------	2-3/4 x 2-3/4 x 5	

REFERENCE DATA AND LITERATURE:

None

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.1	

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

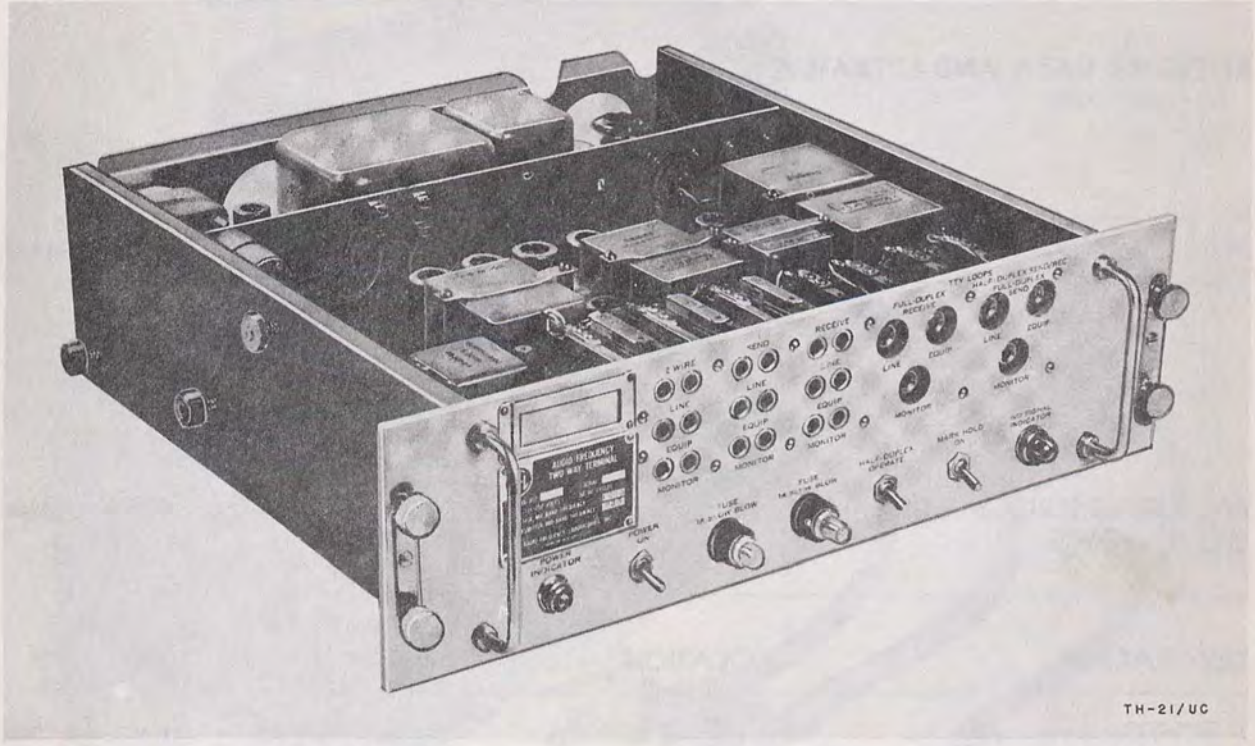
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEGRAPH TERMINAL AN/FGA-type

20 October 1958
Cognizant Serv: USN FSN: 5805-506-4523 (with equipment spares) TH-21/UC

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Terminal TH-21/UC is a teletypewriter communications terminal that makes possible the transmission and reception of teletypewriter messages by radio communication equipment. It may be used for either half- or full-duplex operation.

In the SEND position, the terminal converts current pulses from a teletypewriter into two-tone audio frequencies of similar time duration for transmission over open-wire lines or cable or by radio. In the RECEIVE position, teletypewriter signals from distant teletypewriter transmitting equipment are demodulated and amplified for operation of an associated teletypewriter.

TECHNICAL CHARACTERISTICS:

Frequency Range: 382 to 3,315 cps
Operating Speed:
85 Cps Frequency-shift: 100 wpm
170 Cps Frequency-shift: 250 wpm
Mode of Operation: Half- or full-duplex
Power Requirements: 115- or 230-v 60-cycle 1-phase 2-wire ac

AN/FGA-type TELEGRAPH TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph Terminal TH–21/UC (Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:
NAVSHIPS 92737

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:
DESIGN COG: USN, BuShips

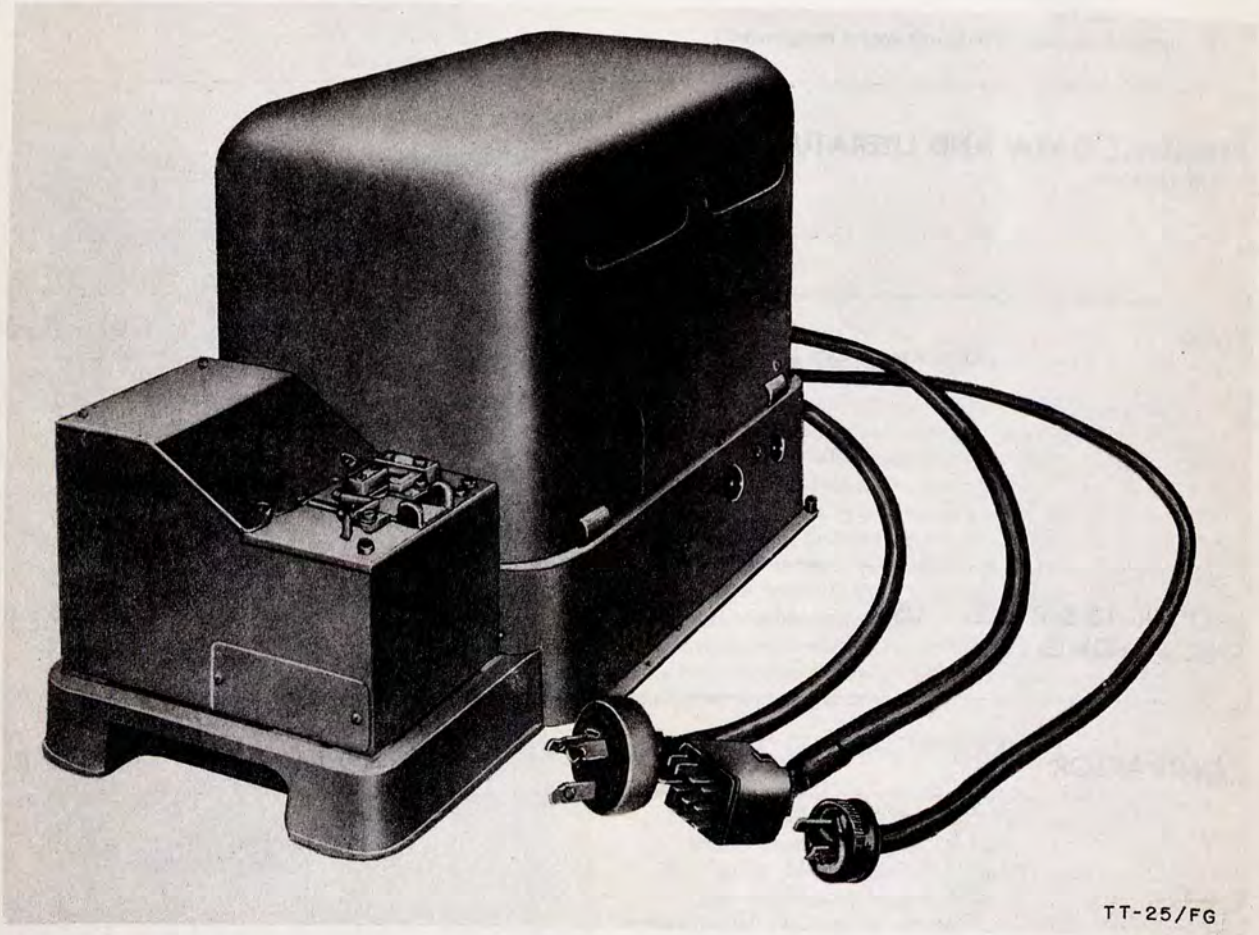
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Frequency Laboratories, Inc.	Boonton, N. J.	NObsr–71039, 9 September 1955	$1,500 with equipment spares

TRANSMITTER DISTRIBUTOR AN/FGA-type

21 October 1958
Cognizant Serv: USA FSN: 5815-222-4297

TT-25/FG

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4TXD95GW	--	--



TT-25/FG

FUNCTIONAL DESCRIPTION:

Transmitter Distributor TT-25/FG is an automatic transmitter distributor, called a receiving transmitter distributor, designed for use as part of a code room communication system. The unit translates code combinations from fully perforated or chadless tape into electrical impulses that are set up locally and then are combined with impulses from an external source. The combined signals are used in teletypewriter transmitting and receiving circuits.

The TT-25/FG is a single-channel equipment consisting principally of tape sensing and tape feeding mechanisms, a special distributor commutator, and a motor, all of which are inclosed in a metal housing.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368 or 404 opm
Type Signaling Code: 5-unit, start-stop
Type Signals: Neutral
Type Motor: Synchronous or series-governed
Motor Speed:
Synchronous: 1,800 rpm
Series-governed: 2,102 or 2,308 rpm
Power Requirements:
Synchronous Motor: 105- to 125-v 50- to 60-cycle ac
Series-governed Motor: 105- to 125-v 25- to 60-cycle ac

AN/FGA-type TRANSMITTER DISTRIBUTOR

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transmitter Distributor TT–25/FG	----------	----------	28

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–2222

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5	70

PROCUREMENT DATA

PROCURING SERVICE: USA DESIGN COG: USA, Sig C

SPEC &/or DWG:

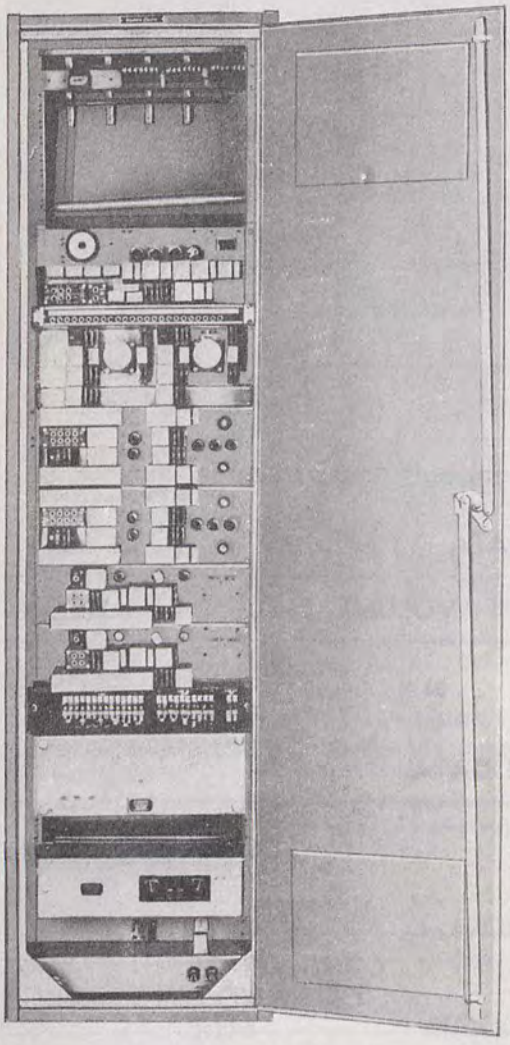
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIOTELETYPE TERMINAL EQUIPMENT AN/FGC-1( )

1 July 1958
Cognizant Serv: USA FSN: AN/FGC-1: 5815-228-3103 AN/FGC-1X: 5805-503-2757

	USA	USN	USAF

TYPE CLASS: Std
STOCK NO: AN/FGC-1:
4TW61789-2
AN/FGC-1X:
4TW61789-3



AN/FGC-1

FUNCTIONAL DESCRIPTION:

Radioteletype Terminal Equipment AN/FGC-1( ) is an assemblage of control and filtering apparatus designed to translate frequency-shift-keyed teletypewriter signals into dc pulses that will operate a teletypewriter.

This equipment is contained in a steel floor-type cabinet.

The equipment is designed for fixed-plant operation, and contains facilities for disabling the radio receiver during periods of transmission, thus providing either full duplex or one-way reversible operations.

This equipment can be operated in systems using Diversity Receiving Equipment AN/FRR-3 or other suitable fixed-plant receiving equipment.

TECHNICAL CHARACTERISTICS:

Input Signal:
Hf Radio: Mark, 2,125-cycle tone; space, 2,975-cycle tone; transmission speed, 60 wpm.
Lf Radio: Mark, 2,465-cycle tone; space, 2,635-cycle tone; transmission speed, 60 wpm.

Output Signal: Dc, neutral, or polar

Power Requirements:
AN/FGC-1: 103-127/207-253-w 50/60-cycle ac
AN/FGC-1X: 103-127/207-253-v 25/60-cycle ac

AN/FGC-1( ) RADIOTELETYPE TERMINAL EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Current Regulator CN–164/FGC–1			
1	Electrical Equipment Cabinet CY–1071/FGC–1	----------	84 x 17 x 19-5/8	
1	Power Supply PP–763/FGC–1			
	or			
1	Power Supply PP–737/FGC–1			
1	Receiver Control C–948/FGC–1			
1	Telegraph Repeater TH–11/FGC–1			
1	Terminal Box J–447/FGC–1			
1	Trigger Amplifier AM–591/FGC–1			
1	Signal Data Converter CV–205/FGC–1			
1	Under Voltage Alarm BZ–27/FGC–1			

* Components not stocked separately.

REFERENCE DATA AND LITERATURE:

TM 11–356

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	35	680

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: SC–DL–55029

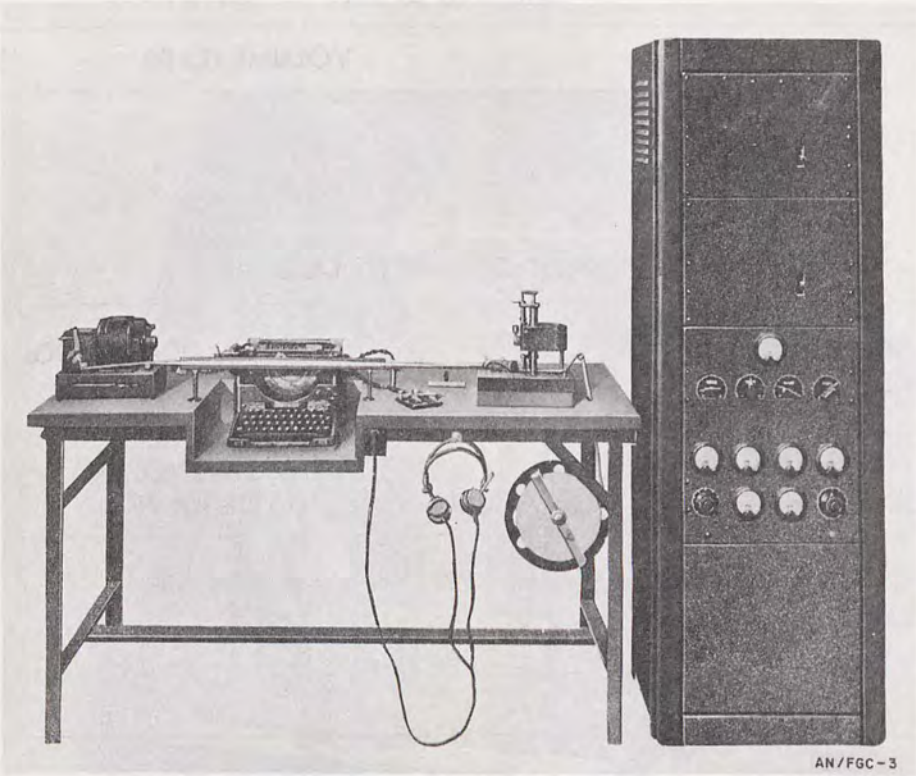
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Adler Electronics, Inc.	New Rochelle, N. Y.	29381–P–56–51	$4,272.51
Continental Electronics, Ltd.	Brooklyn, N. Y.	4861–P–52–09	4,597.04
Peer, Inc.	Benton Harbor, Mich.	28191–P–55–51	4,006.97
The Gamewell Co.	Newton Upper Falls, Mass.	4680–P–52–09	5,173.33

OCEAN CABLE TERMINAL SET AN/FGC-3

1 July 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Ocean Cable Terminal Set AN/FGC-3 is a complete, fixed, shore ground terminal for transmitting and receiving signals over a submarine cable.

This equipment consists of a signal-shaping amplifier, operating table, direct writer (inked-tape), and associated keying and recording equipment.

It is used for manually keyed code signals and, with auxiliary equipment, for teletypewriter communication.

TECHNICAL CHARACTERISTICS:

Type of Signal: Morse code, teletypewriter, direct writer, or similar

Type of Communication Circuit: Dc telegraph, simplex operation

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier Unit 560-A	----------	27 x 24 x 72	
1	Direct Writer 4-A			
1	Operating Table 175-A	----------	60 x 32 x 30	
1	Tape Puller 4-A			
1	Tape Reel 2-B			

AN/FGC-3 OCEAN CABLE TERMINAL SET

REFERENCE DATA AND LITERATURE:
TM 11-2213

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-T-15294

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Northern Radio Co. Inc.	New York, N. Y.	NObrs-64283 R54-0352-SC-43	$7,980.00

TELETYPEWRITER SET AN/FGC-4

1 July 1958
Cognizant Serv: USA FSN: 5815-164-7101

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4TW14B.1		



FUNCTIONAL DESCRIPTION:

Teletypewriter Set AN/FGC-4 is a sending and receiving teletypewriter station equipment. It produces a typed tape that is not perforated, and that is used for communication and monitoring purposes.

This equipment consists of a commercal teletypewriter (Teletype Corp. Model 14) with a standard communications keyboard and type pallets. It can be operated on a half- or full-duplex basis.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368.1 opm (60 wpm)

Motor Characteristics: Series governed; resistor assembly provided for operation on dc

Power Requirements: 110 w; 110-v 60-cycle ac; 110-v dc when arranged with special resistor assembly

AN/FGC-4 TELETYPEWRITER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Teletype Base FK61MG1			
1	Teletype Copy Holder 74833	4T115700AA		
1	Teletype Cover C55	4TFPC201AA		
1	Teletype Table XRT82	4TXRT200AA		
1	Teletype Typing Unit FT–23D275			

REFERENCE DATA AND LITERATURE:

Commercial Instruction Book

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

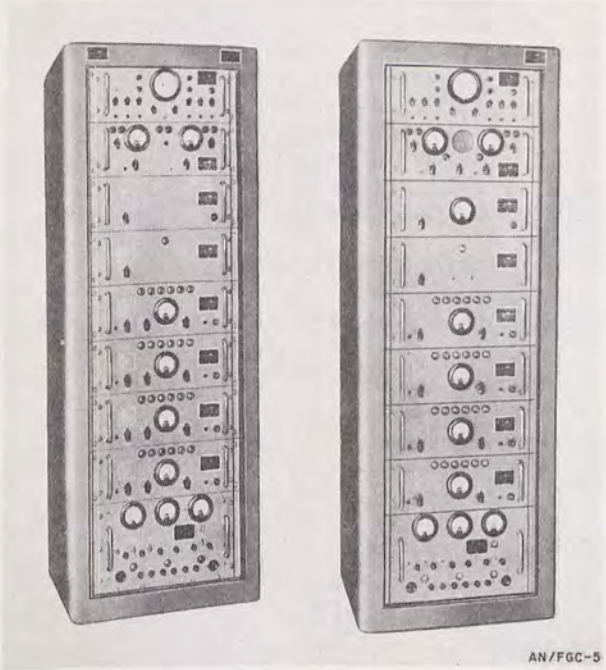
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	3429–P–52–09	$719.00

TELEGRAPH TERMINAL SET AN/FGC-5

20 November 1958
Cognizant Serv: USAF FSN: 5805-247-9307 (USAF) 5805-665-3510 (USN)

USA	USN	USAF
TYPE CLASS: --	Used by --	
STOCK NO: --	F16-T-989403 --	



AN/FGC-5

FUNCTIONAL DESCRIPTION:

Telegraph Terminal Set AN/FGC-5 is a complete send-receive electronic time-division multiplex unit. It consists of Telegraph Receiving Group OA-150/FGC-5 and Telegraph Transmitting Group OA-151/FGC-5.

This equipment provides two-, three-, or four-channel multiplex teletypewriter operation on a single voice channel on the basis of a time-division system.

All components except the power supply are of a tilt-up drawer type; the power supply slides out horizontally on rails.

The set, as supplied, is for 60 word-per-minute operation but may be modified by a wiring change to 75 word-per-minute operations.

The number of channels in which the set can be operated depends upon the circuit characteristics. Narrow bands or circuits with excessive distortion may limit operation to three, or even two, multiplex channels.

TECHNICAL CHARACTERISTICS:

Frequency: 101.25 kc
Frequency Control: Quartz crystal
Channel Speed: 60 wpm
Characters Per Line: 72
Channels: 2, multiplex
Code: 5 unit
Oscillator Characteristics:
Frequency Control: Temperature regulated quartz crystal in a modified Colpitts oscillator circuit.
Operating Frequency: 101.25 kc
Keying Frequency:
60 wpm: 150 cps; 112.5 cps
75 wpm: 187.5 cps; 140.62 cps
Frequency Stability: +0.0001% per degree C., with crystal heater at 55° C. ±1° (131° F.) ±1°.
Transmitting Group Signals:
Output Multiplex Signal: 120-v internal source, variable up to 0.06 amp, + polarity to station ground; 120-v or less external source, variable up to 0.03 amp, + polarity to station ground.
Input Start-stop Signals: On-off dc + or − polarity, 0.06 amp from external battery source.
Receiving Group Signals:
Input Multiplex Signal: On-off dc, 0.06 amp from external source of + or − polarity or from a 115-v internal positive battery source.
Output Start-stop Signals: On-off dc, + or − polarity, 0.06 amp, external battery source.
Heat Dissipation:
Transmitting Group: 690 w
Receiving Group: 690 w
Power Requirements: 690 w, 6.9 amp, 0.86 pf, 115- or 230-v ±10% 50- or 60-cycle 1-phase ac.

AN/FGC-5 TELEGRAPH TERMINAL SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet CY–700/FGC–5		72-7/8 x 27 x 24-3/16	405
1	Cabinet CY–743/FGC–5		72-7/8 x 27 x 24-3/16	405
4	Code Converter CV–81/FGC–5		6-31/32 x 17-1/8 x 19	64
4	Code Converter CV–94/FGC–5		6-31/32 x 17-1/8 x 19	64
1	Control Monitor C–620/FGC–5		6-31/32 x 17-1/8 x 19	14
1	Control Monitor C–621/FGC–5		6-31/32 x 17-1/8 x 19	14
1	Distributor Drive 0–101/FGC–5		6-31/32 x 17-1/8 x 19	15
1	Distributor Drive 0–100/FGC–5		6-31/32 x 17-1/8 x 19	15
2	Oscilloscope OS–11/FGC–5		6-31/32 x 17-1/8 x 19	22 ea
2	Power Supply PP–484/FGC–5		10-1/2 x 19 x 22	187 ea
1	Signal Distributor TT–58/FGC–5		6-31/32 x 17-1/8 x 19	13
1	Signal Distributor TT–64/FGC–5		6-31/32 x 17-1/8 x 19	13
1 set	Spares		12-1/4 x 16 x 31	595

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91265(a)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
11	187.4	3,104

PROCUREMENT DATA

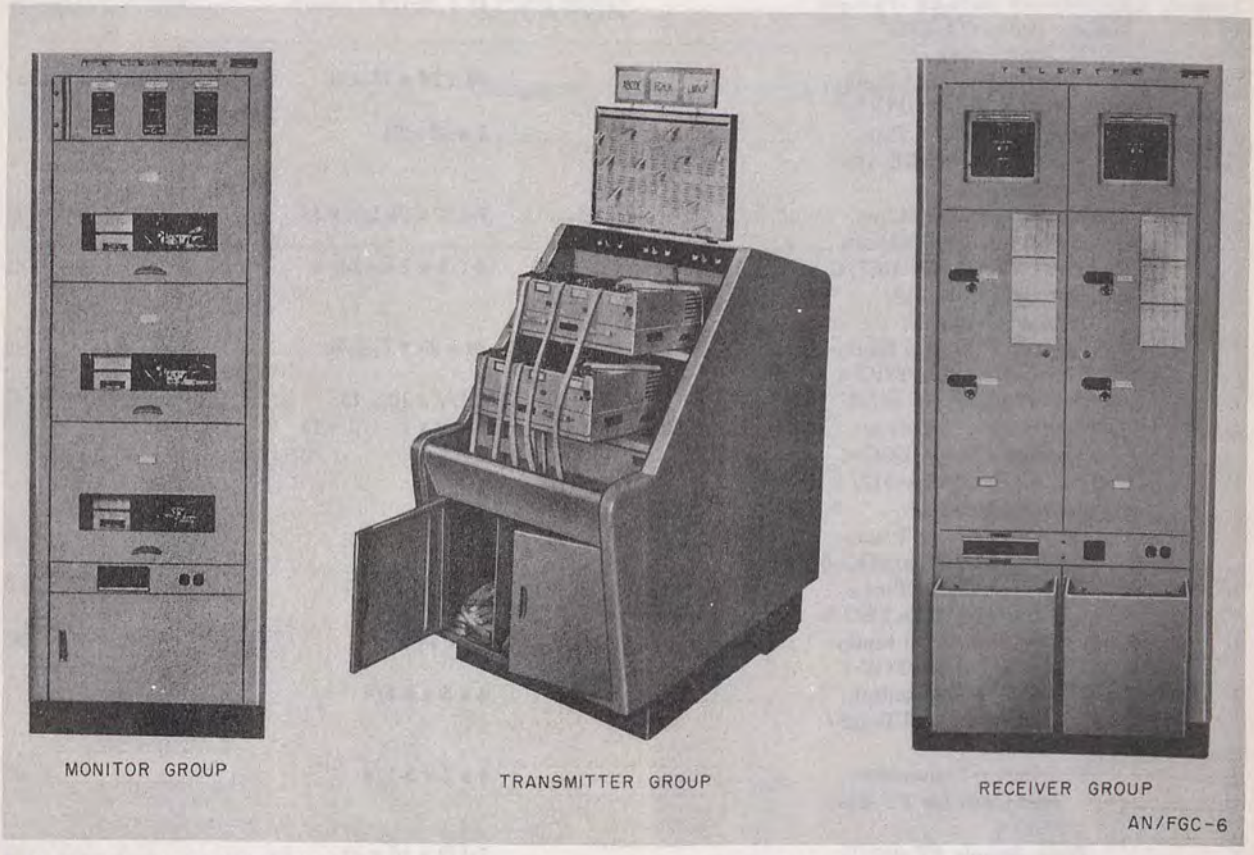
PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG: MIL–T–15259 (Ships)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr–39309, 23 June 1947	$19,000.00

TELETYPEWRITER SET AN/FGC-6

20 November 1958
Cognizant Serv: USN: FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



MONITOR GROUP

TRANSMITTER GROUP

RECEIVER GROUP

AN/FGC-6

FUNCTIONAL DESCRIPTION:

Teletypewriter Set AN/FGC-6 is used at a relay station to receive, transmit, and monitor telegraph messages. It consists essentially of a receiver group, a transmitter group, and a monitor group. A typical station installation may consist of several sets.

The receiver group receives automatic telegraph signals at 60, 75, or 100 (experimental) words per minute from three incoming signal lines and converts the signals to perforated tape. Characters are also typed on the tape.

The transmitter group transmits from perforated tape to three outgoing signal lines at 60, 75, or 100 (experimental) words per minute. Circuits in series with the distributor-transmitters provide monitoring. Each transmitted message is numbered consecutively.

The monitor group receives messages from the transmitter group and records each transmitted message on tape in the same manner as the receiver group. Time and date are stamped every minute on the message tape, which is taken up on a reel for storage.

TECHNICAL CHARACTERISTICS:

Signal Frequency (Maximum Dot-Cycles):
60 Wpm: 22.8 cps
75 Wpm: 28.5 cps
100 Wpm: 37.1 cps

Frequency Control: Depends on use of synchronous motor and regulated 60-cycle power supply.

Telegraph Signals (Transmitted or Received):
Neutral: 0.06 amp (nominal)
Polar: 0.03 amp (nominal)

Power Factors: 0.3 (approx) for each group

Power Requirements: 10 amp (monitor group), 12 amp (transmitter group), 14 amp (receiver group), 115-v ±10% 60-cycle ±0.5 cycle 1-phase ac

AN/FGC-6 TELETYPEWRITER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Maintenance parts kit		11 x 16-1/4 x 18-3/4	30
1	Monitor Group OA-519/FGC-6 consisting of:			
1	Cabinet, Electrical Equipment CY-1423/FGC-6		24 x 27 x 77-3/8	411
3	Reeling Machine, Tape, Motor Driven RL-173/FGC-6		5 x 12 x 21	47
3	Reperforator, Teletypewriter TT-140/FGC-6		7-1/2 x 11-1/2 x 12	111
3	Stamp, Time MX-1527/U		4-1/4 x 7 x 13-3/4	50
1	Receiver Group OA-518/FGC-6 consisting of:			
1	Cabinet, Electrical Equipment CY-1422/FGC-6		24 x 33 x 77-3/8	544
1	Power Supply PP-987/U		7-1/2 x 10 x 12	49
4	Reperforator, Teletypewriter TT-141/FGC-6		7-1/2 x 11-1/2 x 12	156
1	Transmitter Group OA-517/FGC-6 consisting of:			
1	Base, Distributor-Transmitter MT-1258/FGC-6		11 x 16 x 17	36
2	Base, Distributor-Transmitter MT-1259/FGC-6		6-1/2 x 16 x 17	56
1	Cabinet, Electrical Equipment CY-1421/FGC-6		27 x 43 x 67	346
3	Distributor-Transmitter, Teletypewriter TT-138/FGC-6		4 x 5 x 5-1/4	14
6	Distributor-Transmitter, Teletypewriter TT-139/FGC-6		4 x 5 x 5-1/4	27
1	Power Supply PP-987/U		7-1/2 x 10 x 12	49

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91899(a)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
12	210.6	2,955

TELETYPEWRITTER SET AN/FGC-6

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-T-16280A (Ships)

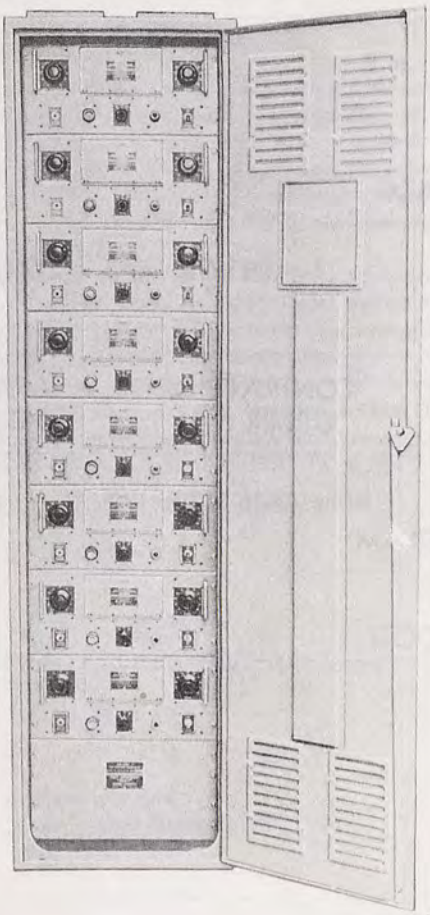
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr 52445, 3 April 1953	$17,790.00

TELETYPEWRITER REPEATER SET AN/FGC-7

20 November 1958
Cognizant Serv: USN FSN: 5805-501-1411

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-T-995466	--



AN/FGC-7

FUNCTIONAL DESCRIPTION:

Teletypewriter Repeater Set AN/TGC-7 is a shore-based electronic regenerative type equipment for use on 60, 75, or 100 word-per-minute long-line teletypewriter wire circuits. It consists of eight teletypewriter repeaters housed in a single cabinet.

This equipment is capable of receiving audio or polar and neutral teletypewriter signals having a maximum bias distortion of 45% and of regenerating the signal with less than 5% bias distortion at the output.

This equipment is functionally similar to Teletypewriter Repeater Set AN/FGC-7A; both are similar mechanically but not electrically.

TECHNICAL CHARACTERISTICS:

Operating Facilities: Can handle eight simplexed or four diplexed channels simultaneously
Operating Speed: 60, 75, or 100 wpm
Keying Input:
Tone: 500 to 3,600 cps
Direct Current: 30 ma polar; 60 ma neutral
Tone Input Level: 20 to 0 db
Input Distortion: 45% maximum mark or space bias
Output: Relay contacts in series with a 310-ohm resistor; contacts closed on mark during operation or during any steady input state.
Output Distortion: 5% (maximum)
Power Requirements: 85-w (per repeater), 115-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet CY-614/G	----------	87-1/2 x 22-3/8 x 24	
1 set	Equipment spares			
8	Teletypewriter Repeater TT-63/FGC			

AN/FGC-7 TELETYPEWRITER REPEATER SET

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91247

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	46.7	670

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-T-16264 (Ships)

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Meridian Inc.	Stamford, Conn.	NObsr-42501, 25 June 1948	$3,500.00

TELETYPEWRITER REPEATER SET AN/FGC-7A

20 November 1958
Cognizant Serv: USN FSN: 5805-382-1898 5815-392-7742 (USN)

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16-T-993417	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Teletypewriter Repeater Set AN/FGC-7A is a shore-based electronic regenerative type equipment consisting of eight regenerative teletypewriter repeaters in a standard relay cabinet. These repeaters receive on-off tone or polar and neutral teletypewriter signals having a maximum bias distortion of 45% and regenerate the signal with less than 5% bias distortion at the output.

Two repeaters may be used to receive a diplex teletypewriter signal, one producing a leading diplex signal regenerated to standard simplex timing, the other producing a lagging diplex signal regenerated to standard simplex timing.

This equipment is used in long-line wire teletypewriter circuits at teletypewriter relay and receiving stations. Provision is made for connection of a monitor teletypewriter.

Teletypewriter Repeater Set AN/FGC-7A is functionally similar to Teletypewriter Repeater Set AN/FGC-7; both are similar mechanically but not electrically.

TECHNICAL CHARACTERISTICS:

Operating Facilities: Can handle eight simplexed or four diplexed channels simultaneously
Operating Speed: 60, 75, or 100 wpm
Keying Input:
Tone: 500 to 3,600 cps
Direct Current: 30 ma polar, 60 ma neutral
Tone Input Level: 20 to 0 dbm
Input Distortion: 45% maximum mark or space bias
Output: Relay contacts in series with a 310-ohm resistor; contacts closed on mark during operation or during any steady input state.
Output Distortion: 5% (maximum)
Power Requirements: 85 w, 115-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet CY-614/G	----------	87-1/2 x 22-3/8 x 24	575 (including eight repeaters)
1 set	Equipment spares			
8	Teletypewriter Repeater TT-63A/FGC			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91689; TM 11-2247

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	83.92	1,075

AN/FGC-7A TELETYPEWRITER REPEATER SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Stelma Inc.	Stamford, Conn.	NObrs–52696, 27 June 1951	

TELETYPEWRITER SET AN/FGC-8

20 November 1958
Cognizant Serv: USN: FSN: 5815-669-7909

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Teletypewriter Set AN/FGC-8 is a general purpose equipment used for the transmission of messages from keyboard or tape and the reception of incoming messages in printed page form. The typing unit and keyboard have standard English characters.

This equipment provides for direct interchange of typewritten telegraph messages, perforation of tape for subsequent transmission, and automatic transmission of printing-telegraph messages under control of perforated tape.

The perforator transmitter keyboard, used in direct sending, may also be operated independently (whether or not receiving an incoming message) as a high-speed perforator in the preparation of tape for subsequent transmission.

TECHNICAL CHARACTERISTICS:

Keyboard: Standard commercial
Characters: English
Characters per Line: 72
Feed: Friction
Operating Speed: 368 opm
Code: 5 unit
Circuits: Wire and radio
Installation: Fixed station
Power Requirements: 115-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Base, Teletype Corp. No. BB50			
1	Cover, Teletype Corp. No. C-156			
1 set	Gears, Teletype Corp. No. 80374			
1	Motor Unit, Teletype Corp. No. MU27			
1	Perforator Transmitter, Teletype Corp. No. PEX25JX			
1	Power Supply PP-315/GGA-1	----------	15 x 9-3/4 x 25-1/2	
1	Table, Teletype Corp. No. XRT116			

AN/FGC-8 TELETYPEWRITER SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transmitter-Distributor TT–52/FG			
1	Typing Unit, Teletype Corp. No. BP119/210			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

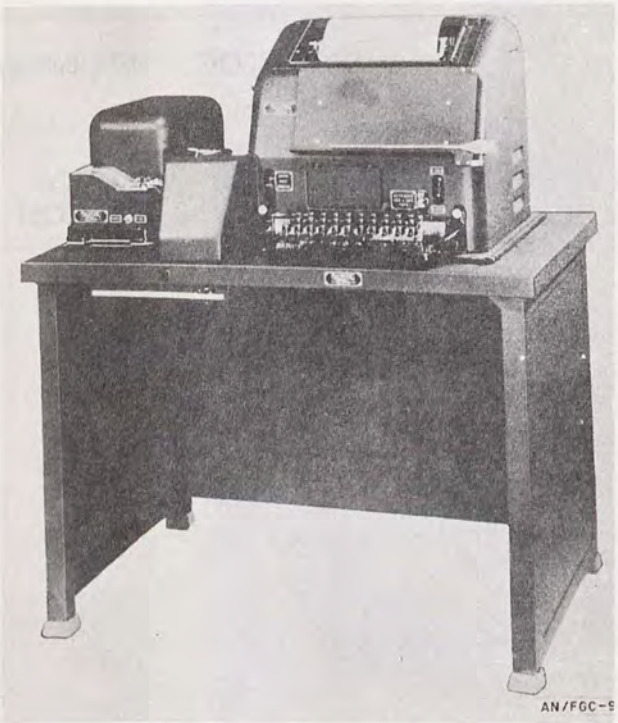
PROCURING SERVICE: USN DESIGN COG: USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr–42466	$2,220.00

TELETYPEWRITER SET AN/FGC-9

20 November 1958
Cognizant Serv: USN FSN: 5815-665-1515

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-T-995468	--



FUNCTIONAL DESCRIPTION:

Teletypewriter Set AN/FGC-9 is used for ship-to-ship and ship-to-shore radioteletype communication. It provides either direct keyboard or tape transmission.

This equipment has resilient shock mounts between the mounting table and the printer and also on the transmitter-distributor to reduce vibration. The table is bolted to the deck of the ship on which the unit is used.

The set can communicate with any five-unit code teletypewriter equipment geared for 368 operations per minute.

TECHNICAL CHARACTERISTICS:

Operating Functions: Page printing of incoming messages; keyboard or perforated tape transmission of outgoing messages.

Operating Speed: 368 opm; 60 wpm (approximately)

Motor Characteristics: Synchronous, capacitor start motor

Power Requirements: 110- to 115-v, 60-cycle ±0.5 cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Motor Unit, Teletype Corp. No. MU-4			
1	Perforator Transmitter, Teletype Corp. No. PEX25JX			
1	Power Supply PP-315/GGA-1	----------	15 x 9-3/4 x 15-1/2	
1	Transmitter-Distributor TT-57/FG			
1	Typing Unit, Teletype Corp. No. BP119/210			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91239

AN/FGC-9 TELETYPEWRITER SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

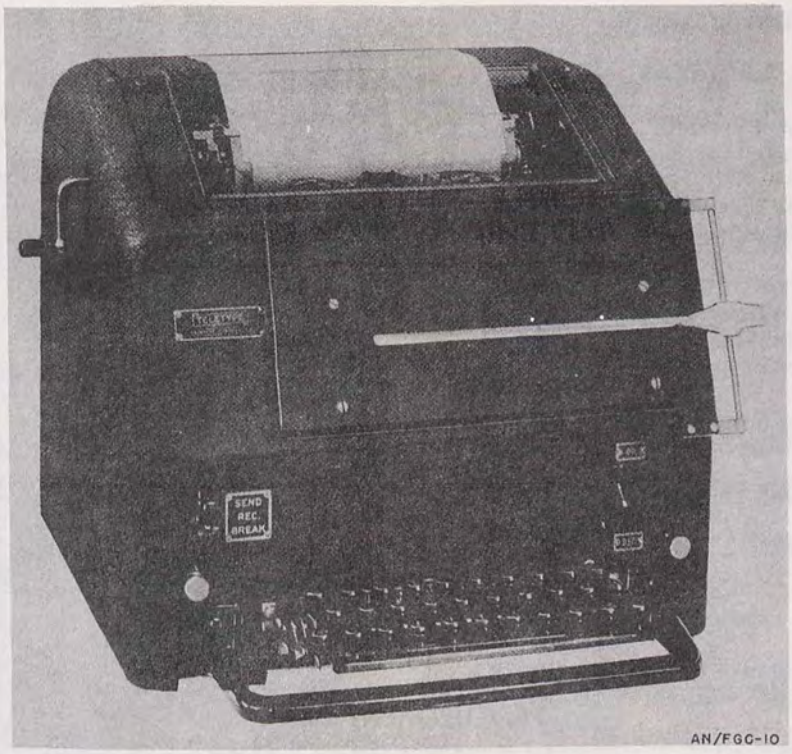
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.		

TELETYPEWRITER SET AN/FGC-10

20 November 1958
Cognizant Serv: USN FSN: 5815-665-3733

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-T-992423	--



FUNCTIONAL DESCRIPTION:

Teletypewriter Set AN/FGC-10 is designed for the transmission and reception of teletypewriter messages over wire or radio communication circuits.

This equipment is installed at shore stations and communicates with any five-unit code teletypewriter equipment geared for 368 operations per minute.

The set is identical with Teletypewriter TT-5FG, except that the latter uses a series motor with unregulated power sources.

TECHNICAL CHARACTERISTICS:

Operating Functions: Page printing of incoming messages; keyboard transmission of outgoing messages

Operating Speed: 368 opm; 60 wpm (approximately)

Power Requirements: 115-v 60-cycle 1-phase ac (a regulated power supply is required for satisfactory operation)

AN/FGC-10 TELETYPEWRITER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Base, Teletype Corp. No. BB–44			
1	Keyboard, Teletype Corp. No. BK22LD			
1	Motor Unit, Teletype Corp. No. MU4			
1	Power Supply PP–424/U			
1	Table, Teletype Corp. No. XRT200AA			
1	Typing Unit, Teletype Corp. No. BP128/247			

REFERENCE DATA AND LITERATURE:
NAVSHIPS 91240

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

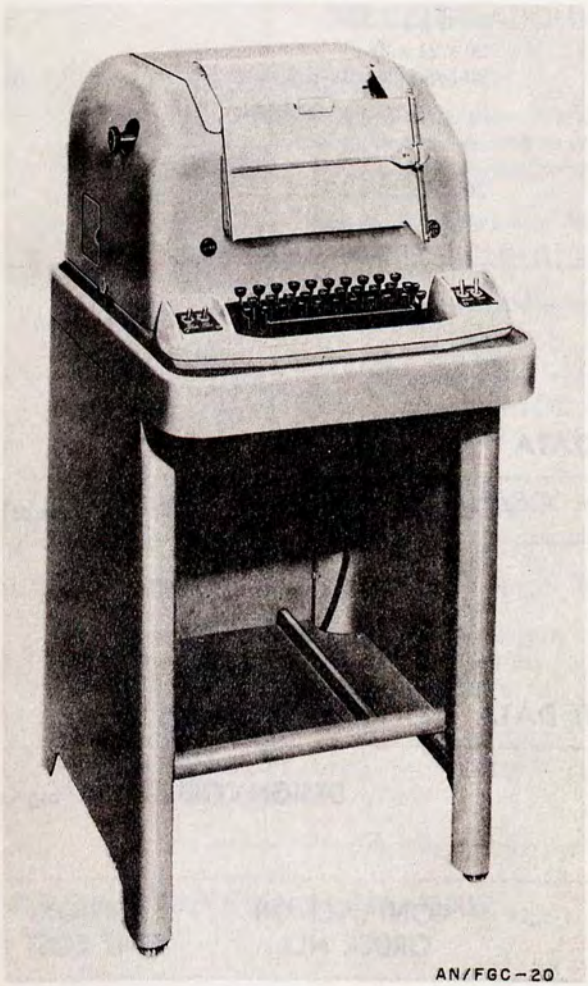
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr–42421 NObsr–52210	

TELETYPEWRITER SET AN/FGC-20( )

1 July 1958
Cognizant Serv: USA FSN: 5815-503-2652

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4T900-20	--	--



AN/FGC-20

FUNCTIONAL DESCRIPTION:

Teletypewriter Set AN/FGC-20( ) is a page-printing equipment used for the transmission, monitoring, and reception of messages in fixed communication centers.

This set consists essentially of a teletypewriter, table, and power supply.

This set is similar to Teletypewriter Set AN/FGC-21, except for the keyboard and type pallets.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368.1, 404, or 600 opm (60, 66, or 100 wpm)
Motor Characteristics:
AN/FGC-20: Synchronous
AN/FGC-20X: Series governed
Power Requirements:
AN/FGC-20: 105-125-v 60-cycle 1-phase ac
AN/FGC-20X: 105-125-v 60-cycle 1-phase ac; or 105-125-v dc

AN/FGC-20( ) TELETYPEWRITER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Power Supply PP–978/G	3H4497–978	9 x 4 x 4	7
1	Teletypewriter table	4T901–59	20 x 21 x 27	
1	Teletypewriter TT–98/FG (AN/FGC–20)	4TTT98	20-5/8 x 24 x 13-1/2	54
	or			
1	Teletypewriter TT–100/FG (AN/FGC–20X)	4TTT100	20-5/8 x 24 x 13-1/2	54

REFERENCE DATA AND LITERATURE:

TM 11–2230

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	18	125

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–T–11749

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Kleinschmidt, Inc.	Deerfield, Ill.	55196–P–57–51	

TELETYPEWRITER SET AN/FGC-21( )

1 July 1958
Cognizant Serv: USA FSN: 5815-503-2653

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4T900-21	--	--

(SEE ILLUSTRATION OF AN/FGC-20( ) p. 245)

FUNCTIONAL DESCRIPTION:

Teletypewriter Set AN/FGC-21( ) is a page-printing equipment used for the transmission, monitoring, and reception of weather information in fixed weather communication stations.

This equipment is the same as Teletypewriter Set AN/FGC-20, except that it is equipped with a weather keyboard and type pallets.

It consists essentially of a teletypewriter, table, and power supply.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368.1, 404, or 600 opm (60, 66, or 100 wpm)
Motor Characteristics:
AN/FGC-21: Synchronous
AN/FGC-21X: Series governed
Power Requirements:
AN/FGC-21: 105-125-v 60-cycle 1-phase ac
AN/FGC-21X: 105-125-v 60-cycle 1-phase ac; or 105-125-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Power Supply PP-978	3H4497-978	9 x 4 x 4	7
1	Teletypewriter table	4T901-59	20 x 21 x 27	
1	Teletypewriter TT-97/FG (AN/FGC-21)	4TTT97	20-5/8 x 24 x 13-1/2	54
	or			
1	Teletypewriter TT-99/FG (AN/FGC-21X)	4TTT99	20-5/8 x 24 x 13-1/2	54

REFERENCE DATA AND LITERATURE:

TM 11-2230

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	18	125

AN/FGC-21( ) TELETYPEWRITER SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-T-11749B

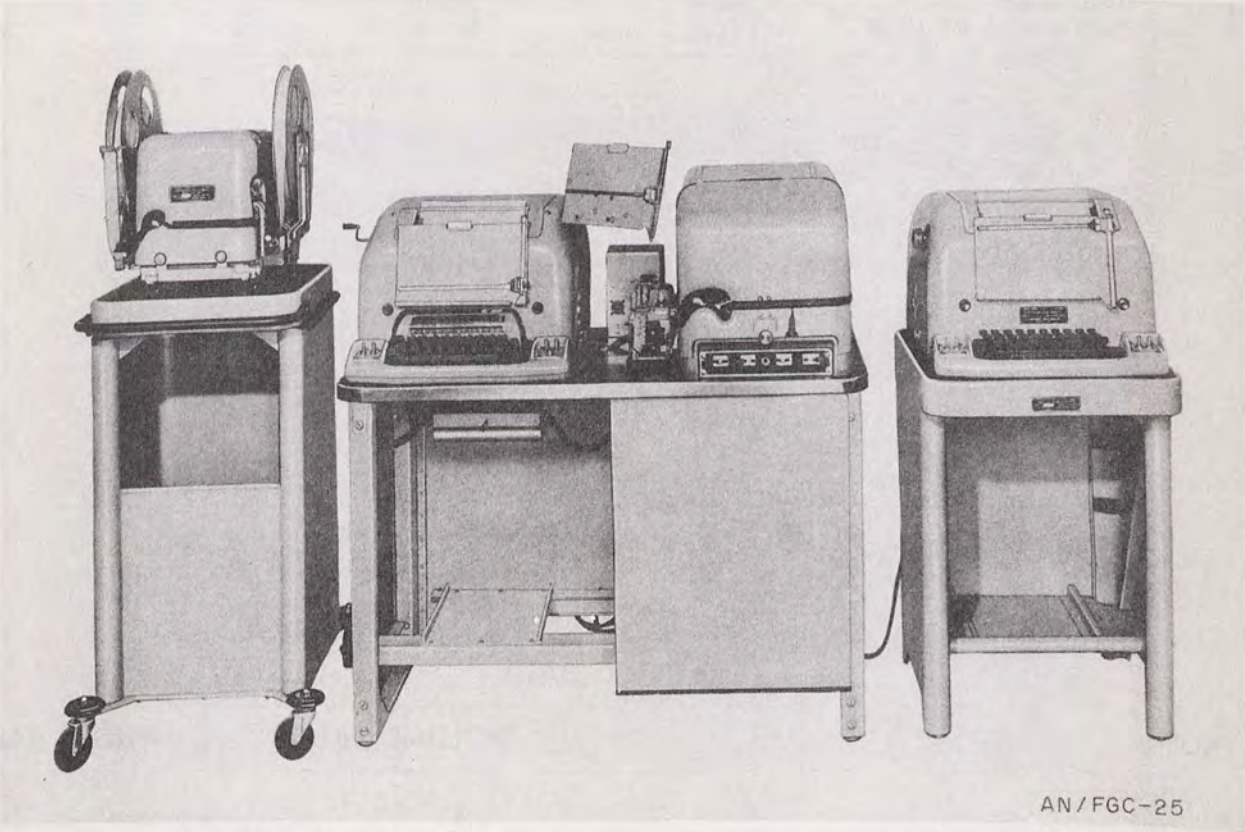
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Kleinschmidt, Inc.	Deerfield, Ill.		

TELETYPEWRITER SET AN/FGC-25( )

1 July 1958
Cognizant Serv: USA FSN: 5815-503-3316

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4T900-25	--	1730-044500198



FUNCTIONAL DESCRIPTION:

Teletypewriter Set AN/FGC-25( ), a typical installation of which is shown above, is a fixed-station equipment used for transmitting, receiving, or monitoring.

This equipment includes a teleprinter, a perforator having a transmitter distributor, and power and accessory components. A patch panel provides for the selection of a variety of operating circuit arrangements.

This equipment may be operated on a half- or full-duplex basis. It can produce printed page copy and/or perforated-and-printed tape of messages transmitted or received, or it can transmit from such tape.

The AN/FGC-25 has a synchronous motor; the AN/FGC-25X, a series-governed motor.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368.1, 404, 460, or 600 opm (60, 66, 75, or 100 wpm)

Motor Characteristics:

AN/FGC-25: Synchronous

AN/FGC-25X: Series-governed

Power Requirements:

AN/FGC-25: 105-125-v 50/60-cycle 1-phase ac

AN/FGC-25X: 105-125-v 50/60-cycle (regulated or unregulated) 1-phase ac

AN/FGC-25( ) TELETYPEWRITER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Copy holder	4TK56550	10 x 6	
1	Teletypewriter TT–117/FG (AN/FGC–25)	4TTT117	11-1/4 x 17-1/8 x 20-9/16	58
	or			
1	Teletypewriter TT–119/FG (AN/FGC–25X)	4TTT119	11-1/4 x 17-1/8 x 20-9/16	58
1	Teletypewriter Reperforator-Transmitter TT–178/FG (AN/FGC–25X)	4TTT178	13-3/32 x 17-1/8 x 22-3/16	79
	or			
1	Teletypewriter Reperforator-Transmitter TT–179/FG (AN/FGC–25X)	4TTT179	13-3/32 x 17-1/8 x 22-3/16	79
1	Teletypewriter Table FN–65/FG	4TFN65	27 x 23-1/2 x 40	52

REFERENCE DATA AND LITERATURE:

TM 11–2246

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	37.8	320

PROCUREMENT DATA

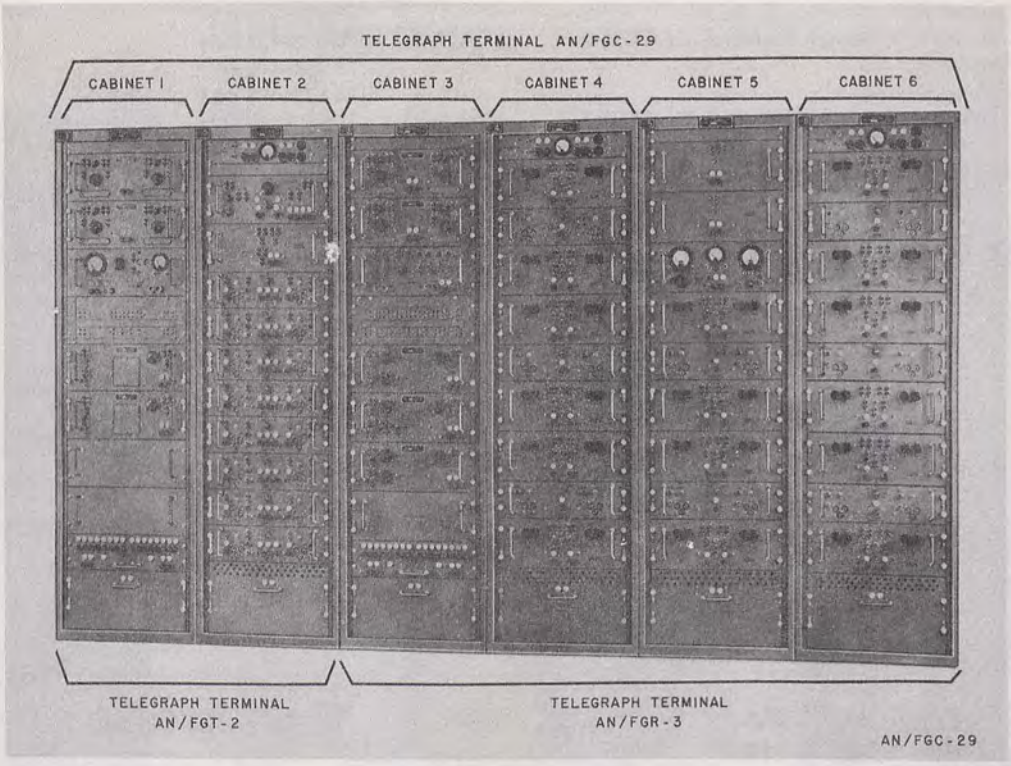
PROCURING SERVICE: USA
SPEC &/or DWG: MIL–T–11979A
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Kleinschmidt, Inc.	Deerfield, Ill.	47581–P–57–51	$3,575.08

TELEGRAPH TERMINAL AN/FGC-29

1 July 1958
Cognizant Serv: USA FSN: 5805-338-4450

	USA	USN	USAF
TYPE CLASS:	Std	--	T/Std
STOCK NO:	4A2816-29	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Terminal AN/FGC-29 is the fixed-plant terminal equipment for a 16-channel carrier telegraph system that provides communication over long-range, twin-channel single-sideband radio circuits operating in the hf band.

Facilities are provided for both two-channel and four-channel diversity combining to overcome the effects of radio fading.

The available radio bandwidth of 200 to 6,000 cps is divided by this equipment into two circuits, each with a nominal bandwidth of 375 to 3.025 cps. Thus, various combinations of teletypewriter, voice, and/or facsimile facilities are availabl through this terminal equipment.

Equalizer and amplifier equipment are also provided to permit operation of the terminal over wire line facilities to remote radio stations.

TECHNICAL CHARACTERISTICS:

Operating Speed of Teletypewriter Channels (Maximum): 100 wpm

Power Requirements: 4,000 w, 107-122/210-250-v 50/60-cycle ac

AN/FGC-29 TELEGRAPH TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Cabinet 3	Telegraph Terminal AN/FGR-3 4A2817-3	75 x 22-1/2 x 24	749
1	Cabinet 4		75 x 22-1/2 x 24	869
1	Cabinet 5		75 x 22-1/2 x 24	900
1	Cabinet 6	Telegraph Terminal AN/FGT-2 4A2818-2	75 x 22-1/2 x 24	874
1	Cabinet 1		75 x 22-1/2 x 24	662
1	Cabinet 2		75 x 22-1/2 x 24	809

REFERENCE DATA AND LITERATURE:

TM 11-2245

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7	665	8,344

PROCUREMENT DATA

PROCURING SERVICES: USA
SPEC &/or DWG: MIL-T-11958

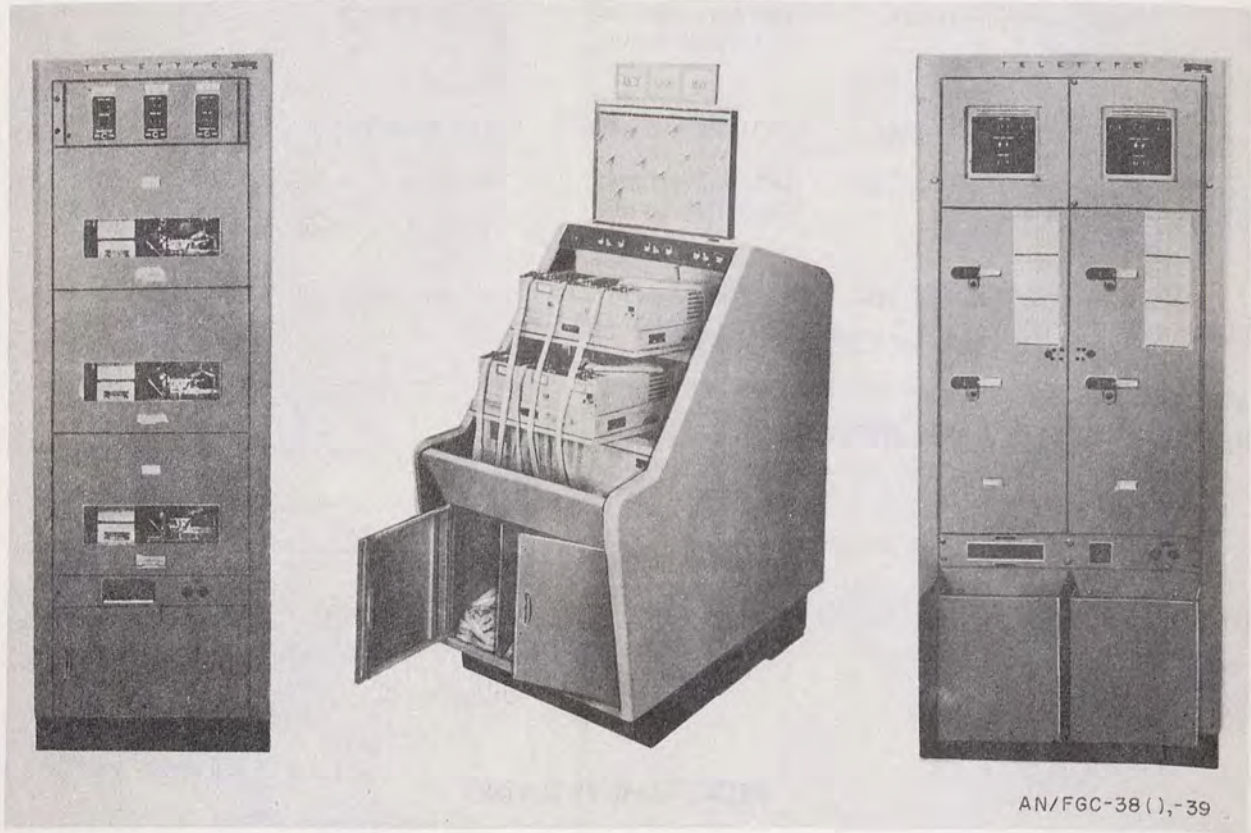
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Union Telegraph Co.	New York, N. Y.	374-P-54-93	$68,180.95

TELETYPEWRITER SET AN/FGC-38( ), -39

1 July 1958
Cognizant Serv: USN FSN: AN/FGC-38: 5815-523-8639
AN/FGC-38X: 5815-523-8640

	USA	USN	USAF
TYPE CLASS:	Used by	Std	AN/FGC-38, -38X: Std AN/FGC-39: L/Std
STOCK NO:	AN/FGC-38: 4T900-38 AN/FGC-38X: 4T900-38X	--	--



AN/FGC-38( ),-39

FUNCTIONAL DESCRIPTION:

Teletypewriter Set AN/FGC-38( ) or AN/FGC-39 is used at relay stations ashore to receive, transmit, and monitor telegraph messages.

This equipment consists of three groups: transmitter, receiver, and monitor.

The AN/FGC-38 uses the 7.42 unit code and synchronous motors for all units; the AN/FGC-38X, the 7.42 unit code and series-governed motors; and the AN/FGC-39, the 7.00 unit code and synchronous motors.

Operating Functions: Transmits automatic teletypewriter signals from punched tape; receives automatic teletypewriter signals, producing typed and punched tape.

TECHNICAL CHARACTERISTICS:

Operating Speed:

AN/FGC-38, -38X: 60, 75, or 100 wpm

AN/FGC-39: 60 wpm

Motor Types:

AN/FGC-38, -39: Synchronous

AN/FGC-38X: Series-governed

Power Requirements:

AN/FGC-38, -39: 115-v (±10%) 60-cycle (±0.5 cycle) 1-phase ac

AN/FGC-38X: 115-v (±10%) 50-70-cycle 1-phase ac

AN/FGC-38( ), -39 TELETYPEWRITER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Monitoring Group OA-617/ FGC-38	(FSN)5815-092-1396 (USA)4T900-38-617	77-3/8 x 27 x 24	420
	or			
1	Monitoring Group OA-620/ FGC-38X	(USA)4T900-38X-620	77-3/8 x 27 x 24	420
1	Receiving Group OA-616/ FGC-38	(FSN)5815-096-7414 (USA)4T900-38-616	77-3/8 x 33 x 24	505
	or			
1	Receiving Group OA-619/ FGC-38X	(USA)4T900-38X-619	77-3/8 x 33 x 24	505
1	Transmitter Group OA-615/ FGC-38	(FSN)5815-309-3783 (USA)4T900-38-615	67 x 27 x 43	484
	or			
1	Transmitter Group OA-618/ FGC-38X	(FSN)5815-099-0651 (USA)4T900-38X-618	67 x 27 x 43	284

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92378, TM 11-2248

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
12	212.2	3,020

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-T-16280

DESIGN COG: USN, BuShips

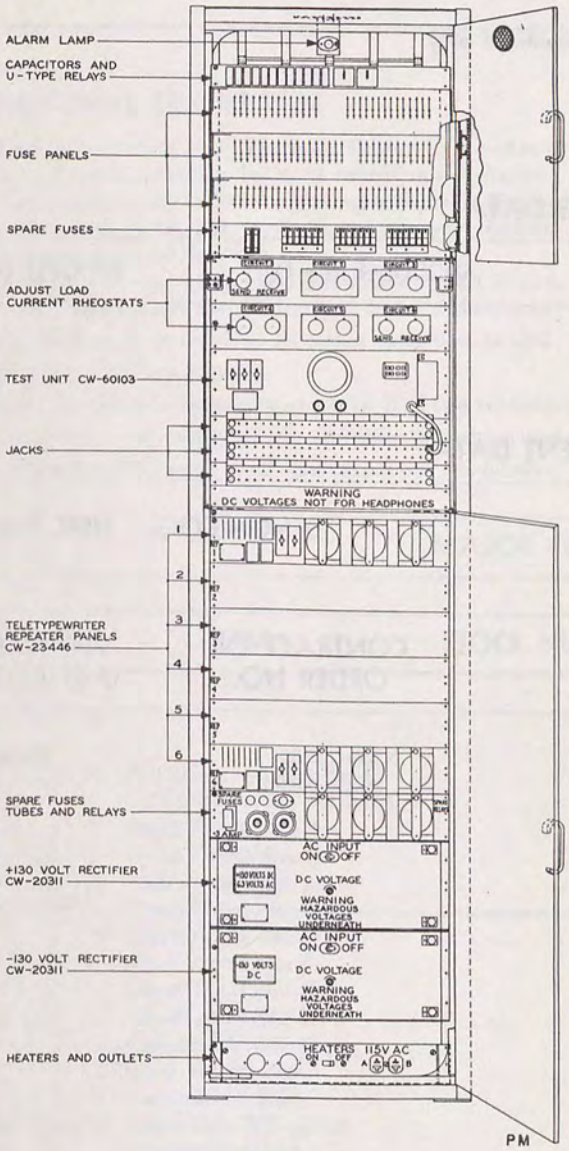
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	RO 3-69196-SC-01-23	$17,960.00

TELETYPEWRITER REPEATER AN/FGC-type

5 December 1958
Cognizant Serv: USN FSN:

PM

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Teletypewriter Repeater PM is designed for use in the telegraph circuits of Carrier Control System UN. The general purpose of this repeater is to provide the necessary equipment and interconnections, so that teletypewriters may be used for sending and receiving on the telegraphs of the UN.

TECHNICAL CHARACTERISTICS:

Telegraph Signal Speed: 60 or 75 wpm
Power Requirements: 103–126/207–253-v 50–60-cycle ac

AN/FGC-type TELETYPEWRITER REPEATER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Teletypewriter Repeater PM	----------	17 x 22-1/4 x 84	

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900315

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	NXsr-55602; NXsr-83392	$3600.00

RF AND AF SIGNAL DISTRIBUTION UNIT AN/FGC-type

20 November 1958
Cognizant Serv: USN FSN:

RF, AF, TYPE A, B, C

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Signal Distribution Unit Types A, B, and C are standardized, rf and af, manually operated, switching and monitoring equipments for use in Naval Shore communication centers. Using standard component parts, these equipments provide maximum operational flexibility.

All components are designed to mount in standard 19-inch relay rack cabinets and may be arranged in any desired order. Blank panel space is provided to permit expansion as additional components are required.

Type A consists of three cabinets, type B of two cabinets, and type C of one cabinet. Basic operating procedures and components are the same in all three types but the number, arrangement, and mounting of components are altered to fit the space available.

TECHNICAL CHARACTERISTICS:

Impedance of Rj Components: 70 ohms (nominal)
Impedance of Rj Loads: 600 ohms (nominal)
Connecting Capabilities:

Type A: 32 antenna and 32 receivers
Type B: 22 antenna and 22 receivers
Type C: 11 antenna and 11 receivers

Power Requirements:

115-v (10%) 58–60-cycle 1-phase ac
or
230-v (±10%) 58–60-cycle may be substituted if al components served are capable of operation on 230 volts

MAJOR COMPONENTS

QTY A	QTY B	QTY C	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
22	22	11	Af Patchcords, installed in MX–814/G NT–491397A		36 in. long	0.5
5	6	3	Blank Panels Size A		3/16 x 1-23/32 x 19	.6
5	3	2	Blank Panels Size B		3/16 x 3-15/32 x 19	1.3
2	2	1	Blank Panels Size C		3/16 x 5-7/32 x 19	1.9
2	3	1	Blank Panels Size D		3/16 x 6-31/32 x 19	2.5
1	1	1	Blank Panel Size E		3/16 x 8-23/32 x 19	3.1
1	1	--	Blank Panel Size F		3/16 x 10-15/32 x 19	3.7
1	--	1	Blank Panel Size G		3/16 x 12-7/32 x 19	4.4
1	--	--	Blank Panel Size H		3/16 x 13-31/32 x 19	5
3	2	1	Cabinet CY–597/G		22-3/8 x 26 x 87-1/2	276
2	2	2	Code Marker Sets			
1	1	2	Conduit end cover			
263	186	77	Connectors NT–49190			
16	11	--	Control C–443/G		5-7/32 x 7 x 7 3/4	5
--	--	1	Frequency Meter IM–15a with Mounting Adapter Kit NT–K1–10625		8-23/32 x 15-1/2 x 19	123
1	1	--	Frequency Meter LR–1		17-1/2 x 22-3/4 x 19	155
2	1	1	Jack Panel J–237/G		1-23/32 x 2-1/8 x 19	2.3
3	2	1	Jack Panel J–238/G		3 x 5-7/32 x 19	10.2
3	2	1	Jack Panel J–239/G		1-23/32 x 4-1/4 x 19	4.9

AN/FGC-type RF AND AF SIGNAL DISTRIBUTION UNIT

MAJOR COMPONENTS—Continued

QTY			ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
3	2	1	Jack Panel J–243/G		7 x 8-23/32 x 19	70.3
1	1	..	Jack Panel J–265/G		1-23/32 x 2-1/8 x 19	14
6	5	2	Jack Mounting Strip NT–491394		1-23/32 x 3-3/8 x 19	5.8
1	1	..	Mounting MT–571/G		1-23/32 x 16-7/8 x 19	12.1
1	1	1	Multimeter OBQ–4		5-7/32 x 7-1/2 x 19	12
1	1	1	Ohmmeter ZM–1/U		3-15/32 x 11 x 19	11.9
1	1	1	Oscilloscope OBL–3a with Mounting Adapter Kit NT–RL–1062		6-31/32 x 15-1/2 x 19	26.7
20	15	10	Panel Screws #10/32 x 1/2 BH			
2	2	1	Patchcord Storage Panel MX–814/G		1-1/4 x 1-23/32 x 19	2
1	..	..	Power Supply NT–20130 with Rectifier Mounting Shelf NT–10348		10 x 14 x 19	52
1	..	..	Radio Receiver RBC Series with Rack Mounting Cabinet 10350		14-3/4 x 20-1/8 x 19	82
2	2	1	Retainer-Pulley Assembly MX–813/G		2-3/4 x 3-3/4 x 20-1/4	8.5
1	1	1	Speaker Assembly Panel LS–139/G		6-1/4 x 8-23/32 x 19	8.9
1	1	1	Switchboard Shelf FN–28/G		8-23/32 x 16-3/4 x 22-1/2	45.5
1	1	1	Switch Panel SA–134/G		2-7/8 x 6-31/32 x 20-5/8	10
1	1	..	Switch Panel SA–135/G		5-7/32 x 11-3/4 x 19	10.3
1	1	..	Switch Panel SA–137/G		12 x 12-7/32 x 19	25
6	5	2	Terminal Board Assembly J–242/G		3-15/32 x 4 x 19	2.9
1	1	1	Volume Level Indicator TS–629/U		3-15/32 x .. x 19	20

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91047

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
Type A: 5	149.3	1,980
Type B: 4	101.3	1,403
Type C: 3	55.86	555

FR AND AF SIGNAL DISTRIBUTION SIGNAL **AN/FGC-type**

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Airplane and Marine Instruments, Inc.	Clearfield, Pa.	NObsr 30000	Type A: $3,300.00
		NObsr 52521	Type B: $2,600.00
			Type C: $1,500.00

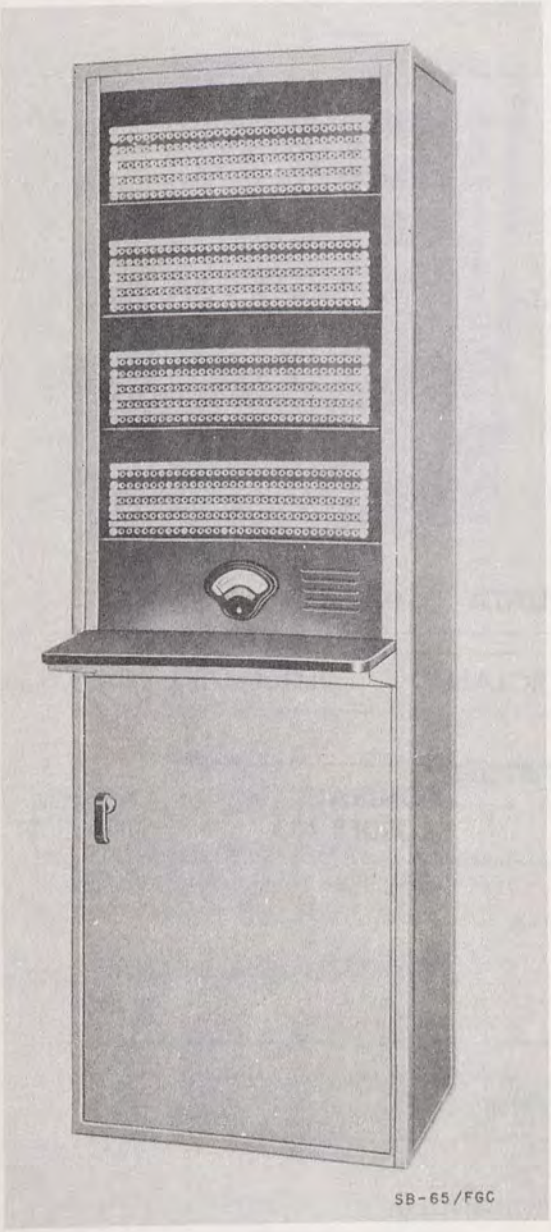
TELEGRAPH SWITCHBOARD AN/FGC-type

20 November 1958
Cognizant Serv: USA FSN: 5805-242-5974

SB-65( )/FGC

USA	USN	USAF

TYPE CLASS: Std
STOCK NO: 4C9905-65



FUNCTIONAL DESCRIPTION:

Telegraph Switchboard SB-65( )/FGC is a cord and jack patching switchboard for interconnecting loops, extensions, and teletypewriter sets.

Provision is made in the switchboard for connection of a telephone set for control purposes, and also for connection of a telegraph key and a telegraph sounder for transmitting and receiving tests and for emergency operation. It is equipped with a milliammeter which furnishes a means of making simple tests of line facilities.

The switchboard is mounted on top of a special storage cabinet and writing desk combination. A rack is included in this storage cabinet to hold the patchcords not in use.

On the face of the switchboard, each group of five jacks (vertical grouping) provides for permanent (normal-through) connection of two teletypewriter sets to two separate lines; one miscellaneous jack is also included. There are 30 such groups in each of four identical jack panel sections.

TECHNICAL CHARACTERISTICS:

Number of Switchboard Positions: 1
Number and Type of Circuits: 120 full-duplex loops, plus 120 miscellaneous jacks (two of which are required for testing purposes)
Power Requirements: None

AN/FGC-type TELEGRAPH SWITCHBOARD

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet	----------	26-1/4 x 17-1/2 x 84	*510
4	Jack panel sections			
1	Milliameter w/panel			
30	Patch cord (3 feet)			
30	Patch cord (4 feet)			

* Weight shown is total weight of switchboard installed.

REFERENCE DATA AND LITERATURE:

TM 11–2227

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	31.2	625

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

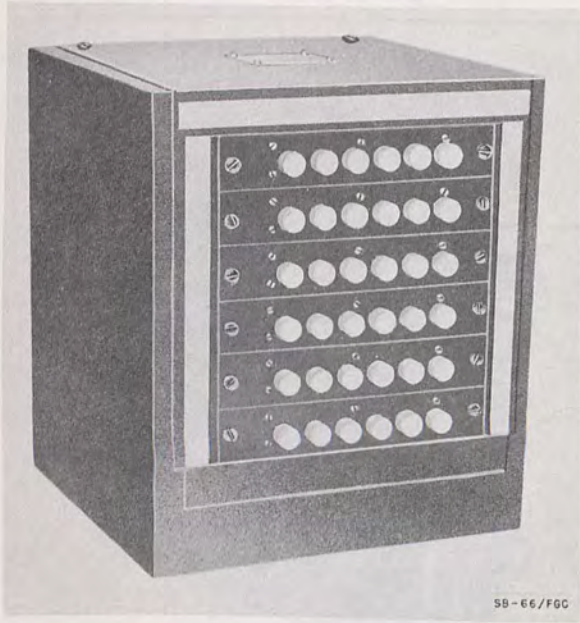
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

SWITCHBOARD AN/FGC-type

20 November 1958
Cognizant Serv: USA FSN: 5305-498-7740

SB-66( )/FGC

	USA	USN	USAF
TYPE CLASS:	Std	--	L/Std
STOCK NO:	4C9905-66	--	1730-429298270



FUNCTIONAL DESCRIPTION:

Switchboard S6-66( )/FGC is a PBX-type switchboard for interconnecting up to six teletypewriters in a small network, with provision for grouping or conference circuits. It is designed for small fixed station applications.

This equipment consists of a single, cordless, manual switchboard unit. Switching is performed by push-key operation.

Two of these switchboards may be connected together to serve 12 teletypewriters; however, only 6 lines may be used at any one time.

No provision is made on the switchboard for signaling the operator and the equipment usually is used in circuits requiring switching on a prescheduled basis.

TECHNICAL CHARACTERISTICS:

Number of Switchboard Positions: 1

Number and Type of Circuits: 6 line circuits; 6 teletypewriter circuits

Power Requirements: None; all power furnished by remote equipment

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Switchboard SB-66( )/FGC	----------	7-3/4 x 9 x 7	

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-2083

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.4	40

AN/FGC-type SWITCHBOARD

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C.

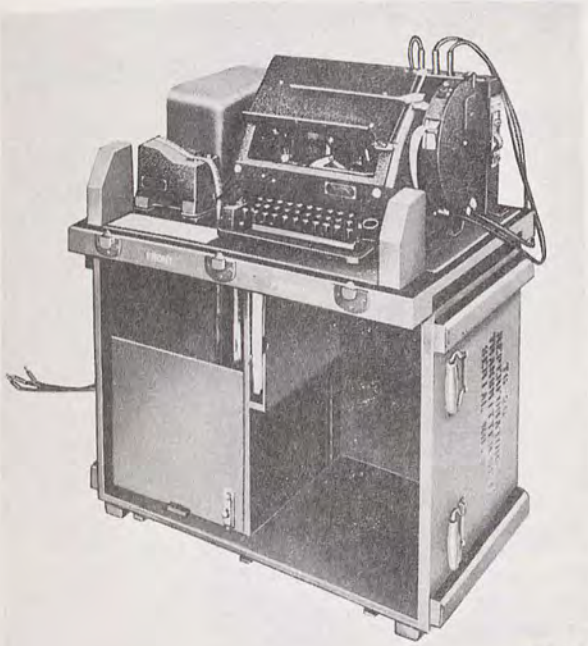
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Power Equipment Co.	Detroit, Mich.	5294–P–57–51	$407.00

REPERFORATOR TRANSMITTER AN/FGC-type

23 October 1958
Cognizant Serv: USA FSN: 5815-503-2768

TG-26

	USA	USN	USAF
TYPE CLASS:	L/Std	--	L/Std
STOCK NO:	4T12.1A-1	--	1730-480082300



TG-26

FUNCTIONAL DESCRIPTION:

Reperforator Transmitter TG-26 is portable field teletypewriter tape relay station equipment designed for the automatic or manual transmission and the reception of messages in the form of perforated and typed paper tape. It is used in field wire, cable, or open wire systems.

The equipment consists of a typing reperforator having a perforater transmitter and a transmitter distributor. The perforator transmitter has a standard communications keyboard. The carrying cases may be set up to form an operating table.

Messages are received by the reperforator automatically in the form of typed and perforated tape. Sending may be performed either by operation of the keyboard, with or without simultaneous production of perforated and typed tape, or by feeding perforated tape to the transmitter distributor for automatic transmission to the line. The unit can be used for simultaneous transmission and reception, automatic monitoring, automatic transmission, automatic and manual transmission simultaneously, or for other modes of operation as required.

The TG-26 is the major operating component of Reperforator Teletypewriter Set TC-16. Other components of this set include Rectifier RA-87 and Line Unit BE-77-A.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368.1 opm, 60 wpm 404 opm, 66 wpm
Type Motor: Ac series-governed
Power Requirements: 225 w, 115-v 50- to 60-cycle ac 115-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Reperforator-Transmitter TG-26 (in carrying case)	5815-503-2768	19 x 33 x 38	225

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-2201
TM 11-2222
TM 11-2223

AN/FGC-type REPERFORATOR TRANSMITTER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	21	290

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

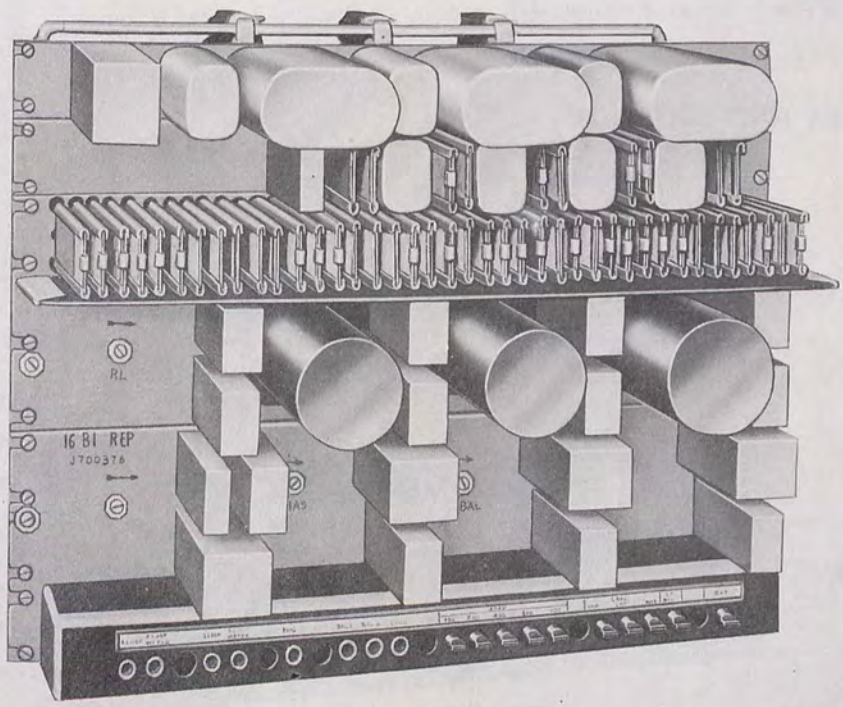
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEGRAPH REPEATER AN/FGC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-164-7076 TH-8/FG

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	4B3199.1	--	--



TH-8/FG

FUNCTIONAL DESCRIPTION:

Telegraph Repeater TH-8/FG is a repeater equipment designed to be used in single-wire ground-return facilities in fixed-plant applications.

This equipment consists essentially of a commercial (Bell Telephone 16B1) terminal repeater mounted on a standard 19-inch panel.

It operates as the polar-sending or polar-receiving terminal of a polarential system or as the terminal of a differential duplex system (with line normal or reversed, and battery normal or reversed).

TECHNICAL CHARACTERISTICS:

Number and Type of Facilities: Single-wire, ground-return; polar sending or polar receiving, or differential duplex.
Power Requirements: 130-v dc

AN/FGC-type TELEGRAPH REPEATER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph Repeater TH–8/FG (Equipment consists of only one major component.)	5845–164–7076	14 x 9 x 8	

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

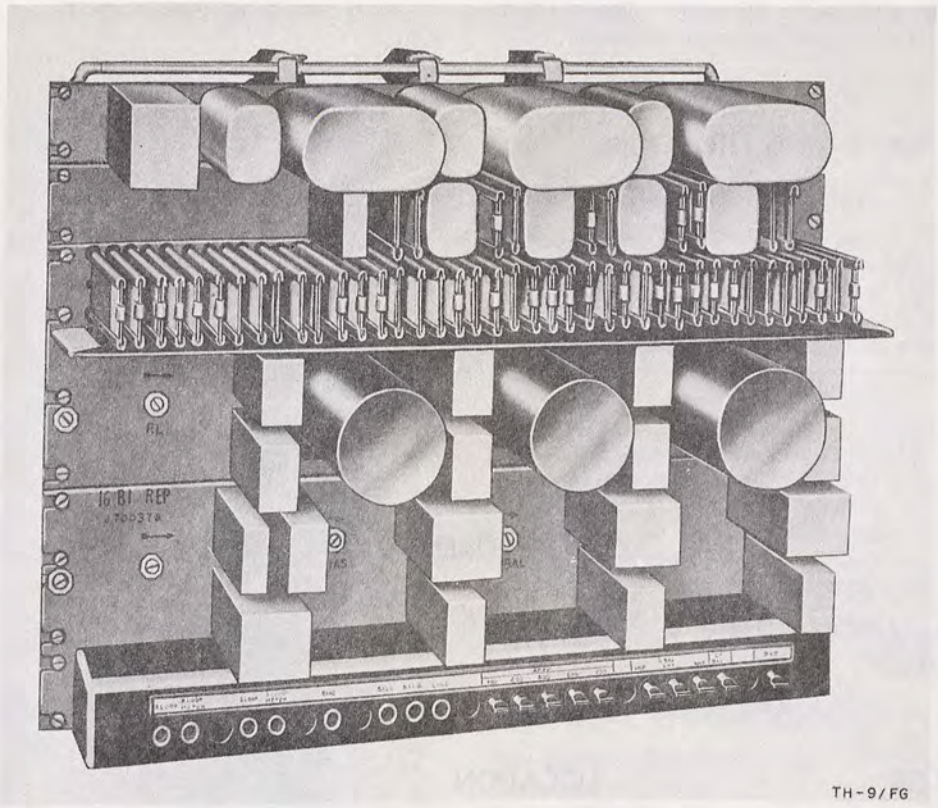
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEGRAPH REPEATER AN/FGC-type

1 July 1958
Cognizant Serv: USA FSN: 5845-164-7078 TH-9/FG

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Repeater TH-9/FG is a repeater equipment designed to be used in full-metallic facilities in fixed-plant applications.

This equipment, mounted on a standard 19-inch panel, consists essentially of a commercial (Bell Telephone 16B1) terminal repeater modified for full metallic operation.

It operates as the polar-sending or polar-receiving terminal of a polarential system or as the terminal of a differential duplex system (with line normal or reversed, and battery normal or reversed).

TECHNICAL CHARACTERISTICS:

Number and Type of Facilities: two-wire; polarential sending or receiving, or differential duplex
Power Requirements: 130-v dc

AN/FGC-type TELEGRAPH REPEATER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph Repeater TH–9/FG (Equipment consists of only one major component.)	5845–164–7078	14 x 9 x 8	

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

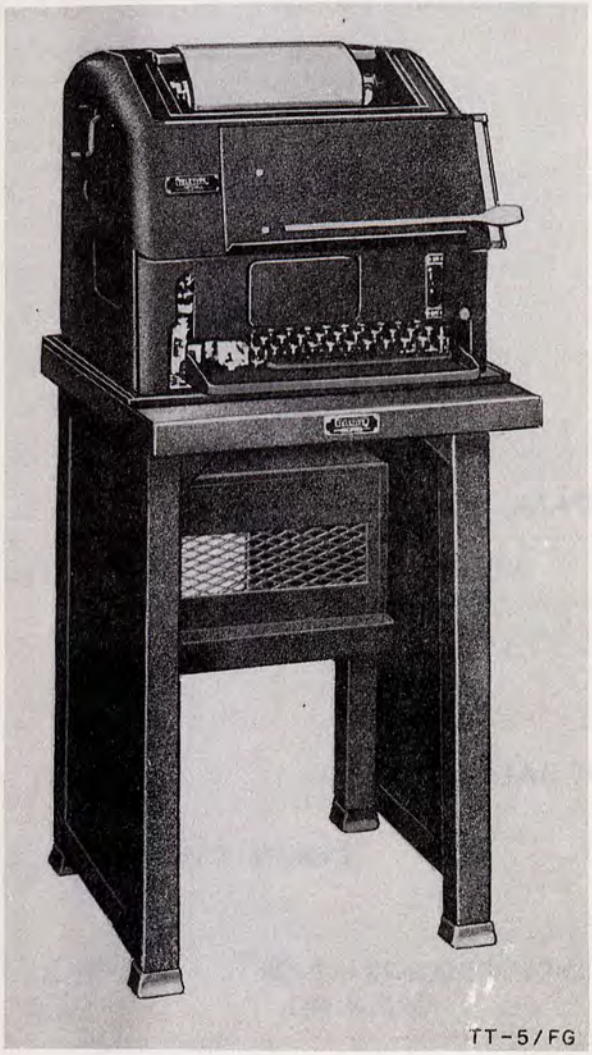
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELETYPEWRITER AN/FGC-type

20 October 1958
Cognizant Serv: USN FSN: 5815-164-7116
5815-199-0197
5815-698-8837

TT-5/FG

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	L/Std
STOCK NO:	4T2-18A-1	F16-T-995493	--



TT-5/FG

FUNCTIONAL DESCRIPTION:

Teletypewriter TT-5/FG is standard communication page-printing sending and receiving teletypewriter station equipment designed for interchanging typewritten messages between two or more points connected by telegraph communication channels. It is used in permanent and semipermanent installations.

The equipment consists essentially of a commercial teletypewriter (Teletype Model 15), an operating table, and a rectifier for use at ac stations for local teletypewriter circuits and for adjusting motor voltages to the correct values.

The unit can be operated on a half-duplex or receive-only basis and adapted to receive either neutral or polar signals. It sends and receives on a single loop, but can be used with additional equipment for double-loop operation and for transmitting polar or polarential signals.

The TT-5/G has a standard keyboard for use in ordinary message communication.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Standard communications
Characters Per Line: 72
Operating Speed:
368 opm, 60 wpm
404 opm, 66 wpm
Code: 5-unit, start-stop
Type Motor: Ac series-governed
Motor Speed: 2,100 rpm
Power Requirements: 110-v 50- to 60-cycle 1-phase ac unregulated. (Alternate motors may be used for ac and dc regulated and unregulated power supplies.)

AN/FGC-type TELETYPEWRITER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Rectifier REC–29		12-9/16 x 9-1/4 x 8-3/16	46
1	Table XRT–115		21-5/16 x 18 x 26-1/2	39
1	Teletypewriter printer (Teletype Model 15), consisting of:		18 x 21 x 15-1/2	112
1	Base BB–44		9 x 15-3/4 x 16	21
1	Copyholder 91752			
1	Cover C–105			
1 set	Equipment spares and accessories			
1	Gear 80374			
1	Keyboard BK–22–KQ			
1	Motor Unit MU–27		5-3/4 x 8-1/2 x 5-3/4	16
1	Relay RY–30			
1	Speed Indicator 103628			
1	Typing Unit BP–22/210		12 x 14-1/2 x 15-1/4	37

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	64.7	746

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: Teletype Model 15

DESIGN COG: USA, Sig C

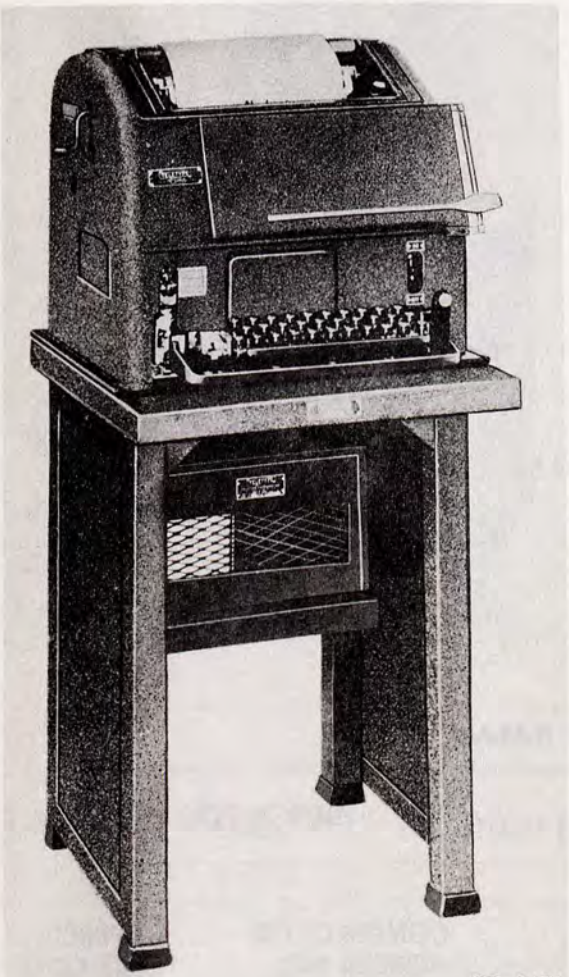
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	35431–Phila–43	$1,200.00

TELETYPEWRITER AN/FGC-type

20 October 1958
Cognizant Serv: USA FSN: 5815-164-7103
5815-336-1631

TT-6/FG

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	L/Std
STOCK NO:	4T2-16A-2	F16-T-995497	- -



TT-6/FG

FUNCTIONAL DESCRIPTION:

Teletypewriter TT-6/FG is standard communication page-printing sending and receiving teletypewriter station equipment designed for interchanging typewritten messages between two or more points connected by telegraph communication channels. It is used in permanent and semipermanent installations.

The equipment consists essentially of a commercial teletypewriter (Teletype Model 15), an operating table, and a rectifier for use at alternating current stations for local teletypewriter circuits and for adjusting motor voltages to the correct values.

The unit can be operated on a half-duplex or receive-only basis and adapted to receive either neutral or polar signals. It sends and receives on a single loop, but can be used with additional equipment for double-loop operation and for transmitting polar or polarential signals.

The TT-6/G keyboard incorporates weather symbols for use in weather report service.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Weather communications
Characters Per Line: 76
Operating Speed:
368 opm, 60 wpm
404 opm, 66 wpm
Code: 5-unit, start-stop
Type Motor: Ac series-governed
Motor Speed: 2,100 rpm
Power Requirements: 110-v 50- to 60-cycle 1-phase ac unregulated. (Alternate motors may be used for ac and dc regulated and unregulated power supplies.)

AN/FGC-type TELETYPEWRITER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Rectifier REC–29		12-9/16 x 9-1/4 x 8-3/16	46
1	Table XRT–115		21-5/16 x 18 x 26-1/2	39
1	Teletypewriter printer (Teletype Model 15), consisting of:		18 x 21 x 15-1/2	112
1	Base BB–44		9 x 15-3/4 x 16	21
1	Copyholder 91752			
1	Cover C–105			
1	Cover Plate 91750			
1 set	Equipment spares and accessories			
1	Gear 80374			
1	Keyboard BK–22–JK			
1	Motor Unit MU–27		5-3/4 x 8-1/2 x 5-3/4	16
1	Relay RY–30			
1	Speed Indicator 103628			
1	Typing Unit BP–22/210		12 x 14-1/2 x 15-1/4	37

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	64.7	746

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

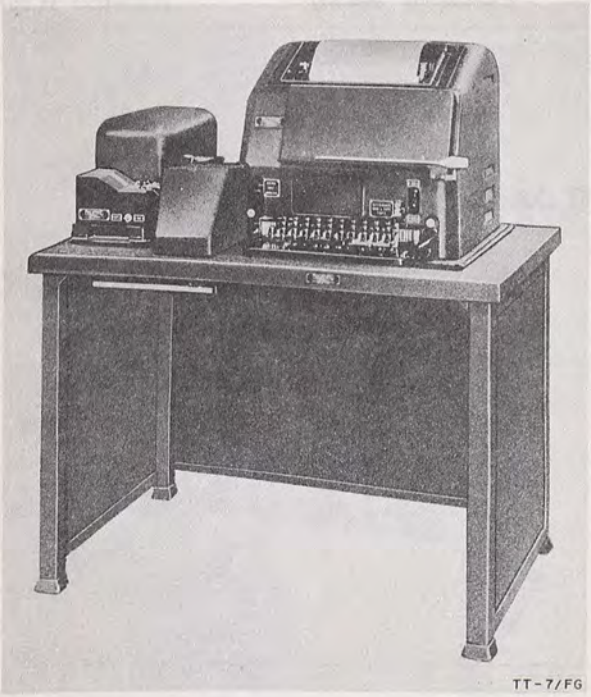
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	35431–Phila–43	$1,125.00

TELETYPEWRITER AN/FGC-type

1 July 1958
Cognizant Serv: USA FSN: 5815-164-7115

TT-7( )/FG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	L/Std
STOCK NO:	4T4.15A-1	--	--



TT-7/FG

FUNCTIONAL DESCRIPTION:

Teletypewriter TT-7( )/FG is a standard communication, page-printing, tape-perforating and transmitting, fixed station sending and receiving teletypewriter equipment.

This equipment consists essentially of a commercial (Teletype Corp Model 19) teletypewriter and includes an operating table and base, a transmitter-distributor, rectifier, and associated components.

It can be used for neutral half-duplex or full-duplex operation with or without simultaneous production of (or automatic transmission from) perforated paper tape. It can be arranged, by the addition of supplementary components, to operate in polar or polarential facilities, and can be used in a tape-relay station.

TECHNICAL CHARACTERISTICS:

Operating Functions: Standard communication key board operation; tape perforation; tape transmission; remote motor stop control

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cover	5815-125-8169	16-9/16 x 16-13/16 x 15-3/8	38
1	Motor Unit PU-109/GG	6105-189-1913	----------	14
1	Perforator-transmitter	5815-199-0204	18 x 12 x 6-1/4	24
1	Power supply	6130-233-3539		
1	Teletypewriter Distributor-Transmitter TT-52/FG	5815-222-4292	----------	30
1	Teletypewriter subassembly	5815-162-8216	15-1/2 x 14 x 12	
1	Teletypewriter subassembly	5815-162-8249	16 x 16 x 9	
1	Teletypewriter Table FN-89/FG	4TXRT116	36 x 23 x 27	112
1	Typing unit	5815-162-8249	----------	49

AN/FGC-type TELETYPEWRITER

REFERENCE DATA AND LITERATURE:

TM 11-2216

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7	97.4	1,352

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	10673-P-54-33	$2,127.06

TELETYPEWRITER AN/FGC-type

1 July 1958
Cognizant Serv: USA FSN: 5815-164-7111

TT-8/FG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Std
STOCK NO:	4T4.13A-1	--	--



TT-8/FG

FUNCTIONAL DESCRIPTION:

Teletypewriter TT-8/FG (the weather communication version of Teletypewriter TT-7/FG) is a page-printing, tape-perforating and tape-transmitting, sending and receiving teletypewriter station equipment used for weather data communication at fixed plant installations.

This equipment consists essentially of a teletypewriter equipped with a perforator-transmitter and weather keyboard and type pallets, plus a transmitter-distributor, a rectifier, and operating table, and accessories.

It operates on a half-duplex or full-duplex basis. A line selector switch is provided and the equipment can function as a teletypewriter relay station. Wiring includes an integral testing circuit and connection terminals for a reperforator.

TECHNICAL CHARACTERISTICS:

Operating Functions: Keyboard operation or tape transmission; page printing and/or tape perforation (weather keyboard)

Operating Speed: 368.1 opm (60 wpm) or 404 opm (66 wpm)

Motor Characteristics: Ac series governed motor; 110-v 50/60-cycle ac

Power Requirements: 92-125/190-250-v 25/50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Cover	5815-125-8169	16-9/16 x 16-13/16 x 15-3/8	38
1	Distributor-Transmitter Teletypewriter TT-52/FG	(USA) 4TXD86FR	----------	30
1	Motor Unit PU-109/GG	(FSN) 6105-189-1913	----------	14
1	Perforator-transmitter	(FSN) 5815-199-0202	18 x 12 x 6-1/4	24
1	Power Supply PP-315/GGA-1	(FSN) 6130-233-3539	25 x 8 x 11	
1	Table	(FSN) 5815-356-3196	21-5/16 x 18 x 26-1/2	112
1	Teletypewriter	(FSN) 5815-162-8247	15-1/2 x 14 x 12	29

AN/FGC-type TELETYPEWRITER

REFERENCE DATA AND LITERATURE:

TM 11-2216

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7	97.4	1,353

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

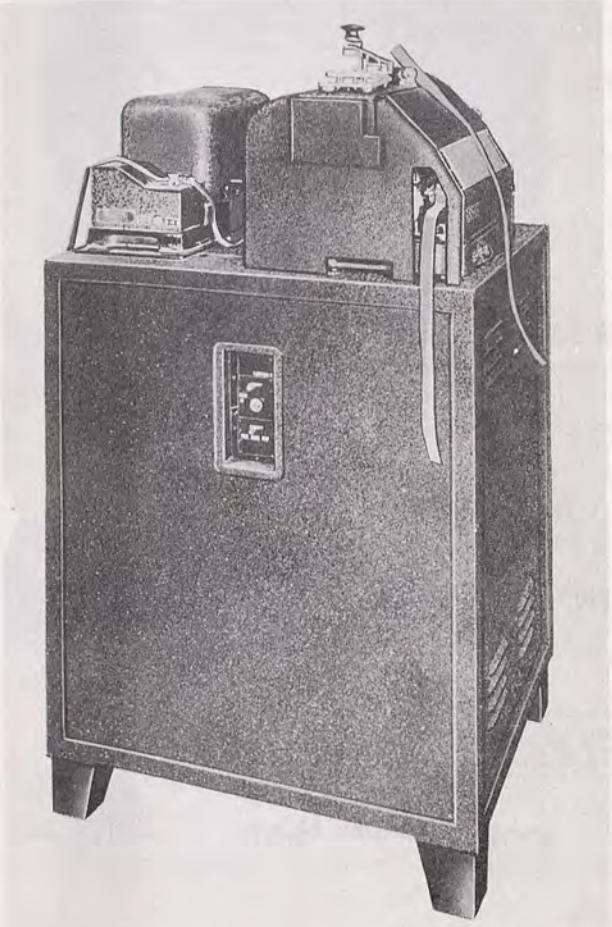
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	3281-P-52-09	$2,128.98

TELETYPEWRITER AN/FGC-type

21 October 1958
Cognizant Serv: USA FSN: 5815-198-9031

TT-10/FG

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	4TW132A2	--	--



TT-10/FG

FUNCTIONAL DESCRIPTION:

Teletypewriter TT-10/FG is automatic sending and receiving station equipment used to receive, record, and retransmit teletypewriter messages. It is used primarily in conjunction with wire or radio carrier equipment.

Messages received are recorded on perforated tape by the typing reperforator. The perforated tape then may be fed directly to the transmitter distributor or it may be cut to permit splicing in tape-recorded messages that have been received or perforated by other equipments.

The TT-10/FG consists essentially of a reperforator teletypewriter, a transmitter distributor, an operating table, and a power supply. It is equipped with a synchronizing circuit that provides the receiving equipment with artificial start and stop impulses that keep the typing reperforator in perfect synchronization with the sending equipment.

TECHNICAL CHARACTERISTICS:

Reperforator TT-53/FG:
- Motor Rating: 1/25 hp
- Input Voltage (Motor): 110-v 60-cycle 1-phase ac
- Selector Magnet Input: 60 or 20 ma at 120-v dc
- Motor Speed: 2,102 rpm
- Tape Speed: 368 opm

Transmitter-Distributor TT-52/FG:
- Motor Rating: 1/25 hp
- Input Voltage (Motor): 110-v 60-cycle 1-phase ac
- Outgoing Signals: 0.03 amp or 0.06 amp at 120-v dc
- Motor Speed: 2,102 rpm
- Transmission Speed: 368 opm

Power Supply PP-748/U:
- Power Input:
  - 95- to 250-v 25- to 60-cycle 1-phase ac
  - 105- to 125-v dc
- Power Output: 8 amp at 120-v dc

AN/FGC-type TELETYPEWRITER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Supply PP–748/U	(FSN) 5815–643–0262	7-5/8 x 19-3/4 x 9-3/16	78
1	Reperforator TT–53/FG	(FSN) 5815–199–0188	16-3/4 x 13-1/2 x 11-1/2	63
1	Splicer TT–14/FG	----------	4 x 4 x 7	5
1	Teletypewriter Table FN–49/FG	(USA) 4TW132A2–13	26 x 22 x 34	215
1	Transmitter Distributor TT–52/FG	(FSN) 5815–222–4292	8-3/8 x 15-1/2 x 9	33

REFERENCE DATA AND LITERATURE:

TM 11–2210

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	33.75	652

PROCUREMENT DATA

PROCURING SERVICE: USA DESIGN COG: USA, Sig C

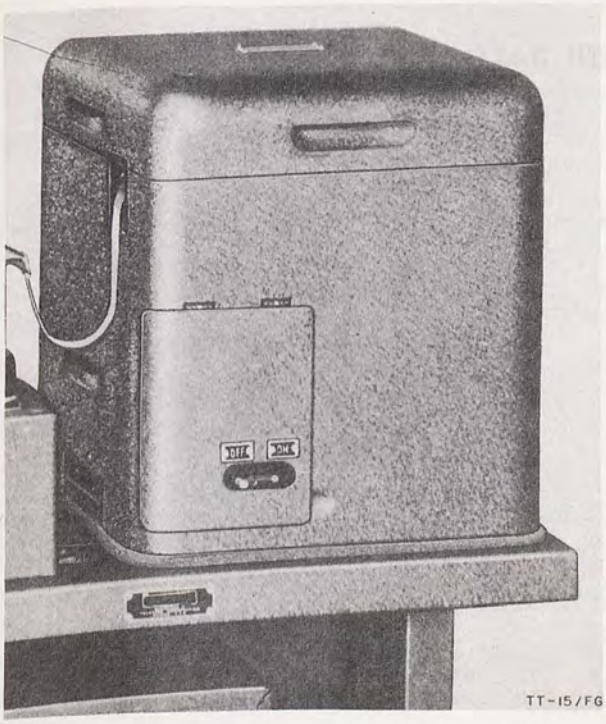
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

REPERFORATOR AN/FGC-type TT-15/FG

1 July 1958
Cognizant Serv: USA FSN: 5815-199-0197

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	4T9.2-1	--	--



FUNCTIONAL DESCRIPTION:

Reperforator TT-15/FG is an automatic teletypewriter receiving equipment that delivers received messages in the form of perforated tape.

This equipment consists of the reperforating receiver and a low auxiliary table.

It can be used in conjunction with Teletypewriter TT-7/FG or similar equipment to provide an automatic tape-relay receiving facility. The perforated tape produced by this equipment can be used in a standard transmitter-distributor equipment.

TECHNICAL CHARACTERISTICS:

Operating Functions: Automatic reception from line circuits on perforated tape without typing
Operating Speed: 368.1 or 404 opm (60 or 66 wpm)
Motor Characteristics: Series-governed
Power Requirements: 110-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Reperforator TT-15/FG	5815-199-0197	12-5/8 x 12-5/8 x 20-1/16	134
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11-2223

SHIPPING DATA

VOLUME (Cu Ft)	WEIGHT (Lbs)
7	180

PROCUREMENT DATA

CURING SERVICE: USA
& / or DWG:

DESIGN COG: USA, Sig C

NTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
type Corp.	Chicago, Ill.	3237–P–52–09	$515.86

REPERFORATOR AN/FGC-type

1 July 1958
Cognizant Serv: USA FSN: 5815-163-1860 TT-16/FG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	4T10.4A-3	--	--



FUNCTIONAL DESCRIPTION:

Reperforator TT-16/FG is an automatic teletypewriter receiving equipment designed to operate in standard communication facilities and produce a perforated tape from teletypewriter signals received. The message is also typed on the perforated tape.

This equipment consists essentially of a single operating unit installed on a low operating table.

It can be used for automatic receiving or for monitoring. The message can be read from the printed portion of the tape, or the tape can be used to retransmit the message over another facility.

TECHNICAL CHARACTERISTICS:

Operating Functions: Automatic reception from line circuits, producing perforated tape with typed characters
Operating Speed: 368.1 or 404 opm (60 or 66 wpm)
Motor Characteristics: Series-governed
Power Requirements: 110-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Reperforator TT-16/FG	5815-163-1860	21 x 13-3/4 x 13-7/8	62
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11-2223

AN/FGC-type REPERFORATOR

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	9.8	150

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–P–10437

DESIGN COG: USA, Sig C

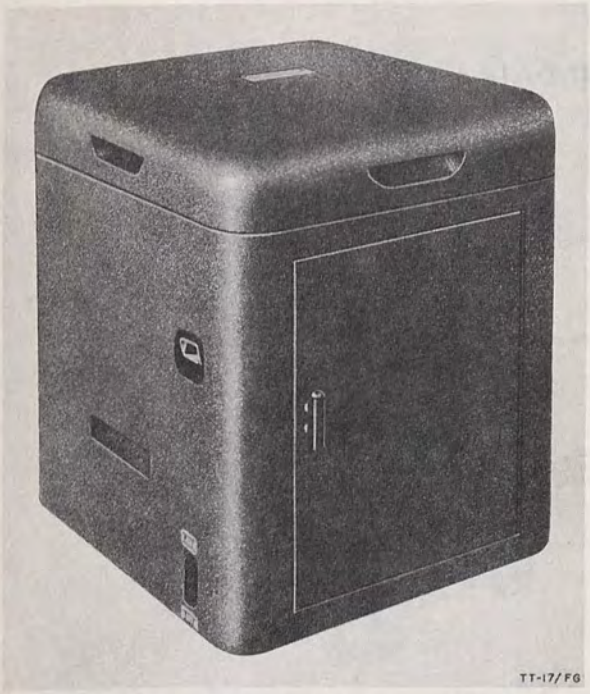
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Parapak Corp.	Milwaukee, Wis.	21863–P–57–51	
Teletype Corp.	Chicago, Ill.	47423–P–57–51	$823.72

REPERFORATOR AN/FGC-type

1 July 1958
Cognizant Serv: USA FSN: 5815-199-0182

TT-17/FG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	L/Std
STOCK NO:	4T10.5A-3	--	--



FUNCTIONAL DESCRIPTION:

Reperforator TT-17/FG is an automatic teletypewriter receiving equipment designed to operate in weather data systems.

This equipment consists essentially of a single unit, with weather data type pallets.

It can be used for automatic receiving or for monitoring; it produces a typed and perforated tape of messages received. The message can be read directly from the typed portion of the tape, and the tape can be used to retransmit the message over another facility.

The equipment is inclosed in a steel housing and is installed on a low operating table.

TECHNICAL CHARACTERISTICS:

Operating Functions: Automatic reception from line circuits on perforated tape with typewritten characters
Operating Speed: 368.1 or 404 opm (60 or 66 wpm)
Motor Characteristics: Series-governed
Power Requirements: 110-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Reperforator TT-17/FG	5815-199-0182	21 x 13-3/4 x 13-7/8	62.5
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11-2223

AN/FGC-type REPERFORATOR

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	9.8	150

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

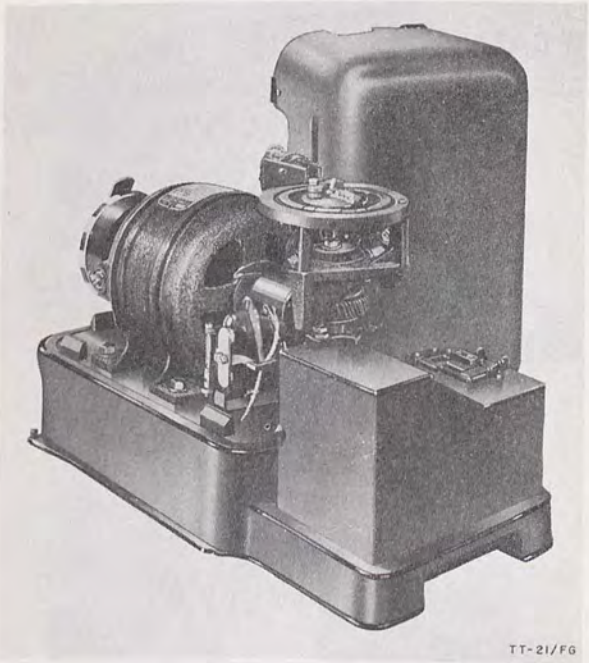
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	38801-P-53-33	$697.25

TRANSMITTER-DISTRIBUTOR AN/FGC-type

1 July 1958
Cognizant Serv: USA FSN: 5815-222-4294 TT-21/FG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	4TXD100GW	--	--



FUNCTIONAL DESCRIPTION:

Transmitter-Distributor TT-21/FG is an automatic teletypewriter transmitting equipment. It is used to transmit or retransmit teletypewriter messages from previously prepared or received perforated tape in large communication centers.

This equipment is a single-channel, motor-driven unit, consisting of tape-sensing, tape-feeding, and transmitting mechanisms and a motor inclosed in a metal housing. It includes a special start magnet, power and line cords, and end-of-line stop mechanism.

TECHNICAL CHARACTERISTICS:

Operating Functions: Transmits five-unit, start-stop teletypewriter code impulses from a perforated tape
Operating Speed: 368.1 opm (60 wpm)
Motor Characteristics: Series governed; 87.6 vps tuning fork adjustment; 2,100 rpm speed
Power Requirements: 115-v 25/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Transmitter-Distributor TT-21/FG	5815-222-4294	15-1/2 x 8-3/4 x 9	35

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-2222

AN/FGC-type TRANSMITTER-DISTRIBUTOR

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5.2	170

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) XD228CA/GW

DESIGN COG: USA, Sig C

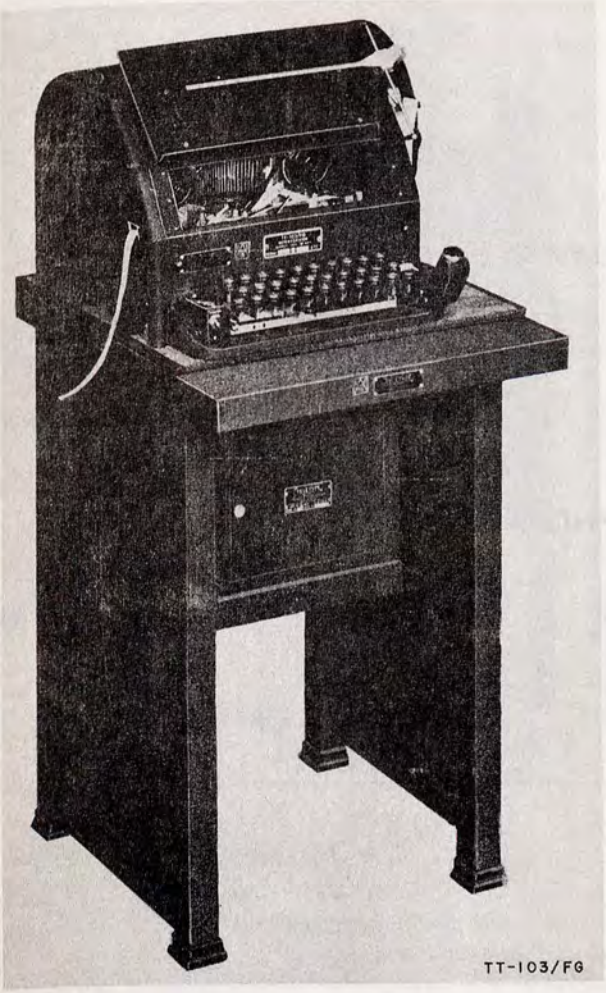
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELETYPEWRITER REPERFORATOR-TRANSMITTER AN/FGC-type

17 November 1958
Cognizant Serv: USN FSN:

TT-102/FG, TT-103/FG

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



TT-103/FG

FUNCTIONAL DESCRIPTION:

Teletypewriter Reperforator-Transmitters TT-102/FG and TT-103/FG are general purpose typing reperforator sets used to transmit and receive messages both in code perforations and in typewritten characters on the same paper tape. Messages may be transmitted directly from the keyboard of the reperforator-transmitter or by using the code-perforated tape in a transmitter distributor. The equipment normally is used in a ground station, such as an originating and relay signal center.

The TT-102/FG and TT-103/FG are identical except for the motors. The TT-103/FG has a synchronous motor; the TT-102/FG is equipped with a series-governed motor.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368 opm
Type Tape: Chadless
Code: 5-unit, start-stop
Type Motor:
TT-102/FG: Series-governed
TT-103/FG: Synchronous
Motor Speed (Synchronous Motor): 1,800 rm
Power Requirements: 160 w, 115-v 60-cycles 1-phase ac

AN/FGC-type TELETYPEWRITER REPERFORATOR-TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Keyboard unit		9 x 15 x 16	17
1	Teletypewriter table			
1	Typing reperforator		7-1/2 x 11-1/2 x 12	33

REFERENCE DATA AND LITERATURE:

Teletype manual 96MA

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	29.1	400

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.		

TELETYPEWRITER REPEATER-MIXER AN/FGQ-1( )

1 July 1958
Cognizant Serv: USA FSN: 5815-256-4067

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4TW131-B2	--	--



FUNCTIONAL DESCRIPTION:

Teletypewriter Repeater-Mixer AN/FGQ-1( ) is used with other teletypewriter equipment (shown above) to provide a secrecy system in which plain text messages may be automatically enciphered before transmission to a distant station. Incoming messages received in cipher are automatically deciphered and appear on the recording teletypewriter in plain text.

These teletypewriter station arrangements are adaptable for on-line and off-line operations.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368.1 opm (60 wpm)
Motor Characteristics:
Ac Series or Universal: 95/105/115/125/190/210/230/250 v, 25/40/50/60 cycle
Ac Synchronous: 95–125 v, 60 cycle
Dc Universal: 105–125 v

AN/FGQ-1( ) TELETYPEWRITER REPEATER-MIXER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Teletypewriter Repeater-Mixer AN/FGQ-1 (Equipment consists of only one major component.)	5815-256-4067	30-1/2 x 26 x 22	160

REFERENCE DATA AND LITERATURE:

TM 11-2209

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	20.9	408

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-M-13231

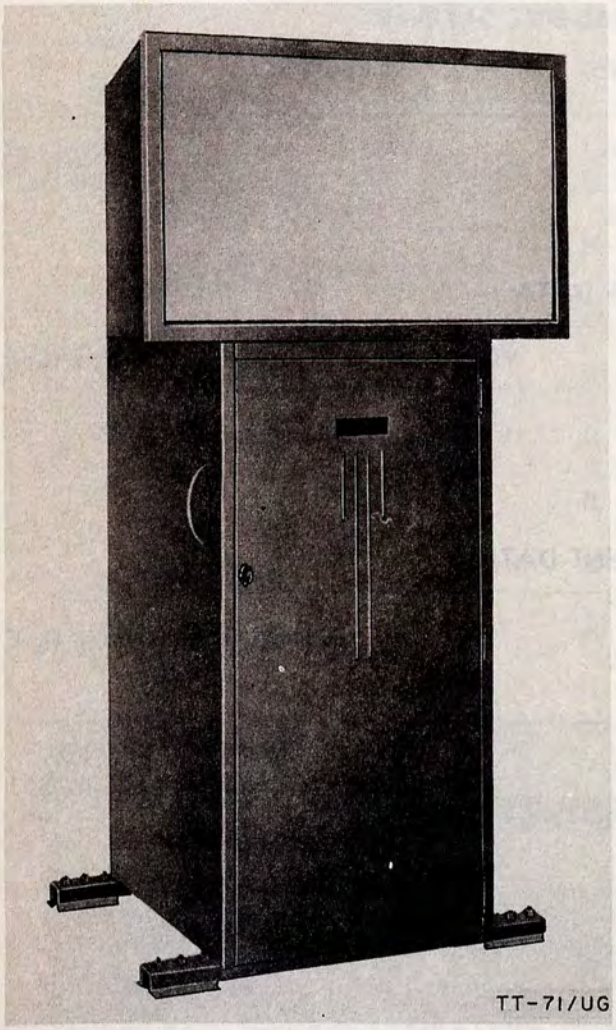
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	42273-P-56	$1,201.00

TELETYPEWRITER PRINTER-PROJECTOR AN/FGQ-type

1 July 1958
Cognizant Serv: USA FSN: 5815-356-3163 TT-71/UG

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4TTT71	--	1730-486121855


TT-71/UG

FUNCTIONAL DESCRIPTION:

Teletypewriter Printer-Projector TT-71/UG is fixed station receiving-only equipment. It projects its received messages on a translucent screen and is used for teletypewriter conference communications, group orientation and instruction, and similar applications.

This equipment consists of a single cabinet containing two receiving units and the projection and illumination systems. One of the receiving units (essentially a commercial Teletype Corp. Model 14) is a page-printing teletypewriter. This unit prints the message in page form on a transparent web from which the message is projected on the 3- by 2-foot screen. The other receiving unit (commercial Teletype Corp. Model 14, modified, or equivalent) is a type-bar tape printer. This unit prints the message on a continuous strip of paper tape, which may be used for reference purposes.

TECHNICAL CHARACTERISTICS:

Operating Functions: Standard communications type pallet arrangements; five-unit start-stop code
Lighting System: 500-w lamp
Operating Speed: 368.1 opm (60 wpm)
Motor Characteristics: Synchronous; 10-amp start, 2-amp running load
Power Requirements: 1 kw, 110-v 60-cycle ac

AN/FGQ-type TELETYPEWRITER PRINTER-PROJECTOR

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Teletypewriter Printer-Projector TT-71/UG	5815-356-3163	81 x 33 x 37	
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11-2228

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	8.6	

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

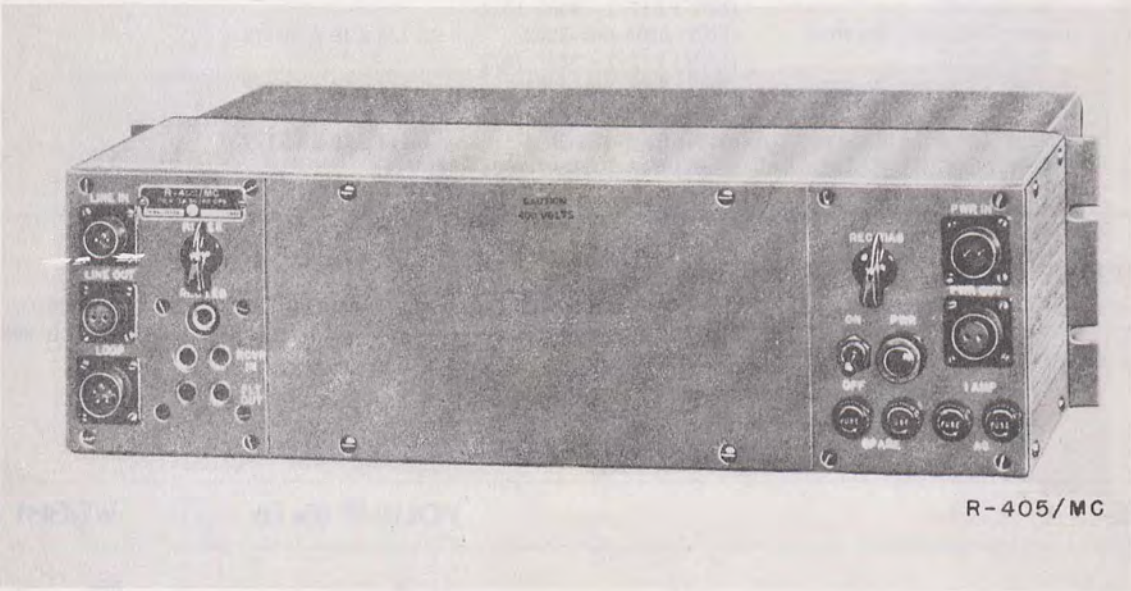
CARRIER TELEGRAPH RECEIVER **AN/FGR-type**

5 December 1958

Cognizant Serv: USN FSN: R-405/MC: 5805-325-8818
R-406/MC: 5805-313-4152
R-407/MC: 5805-313-4153
R-408/MC: 5805-313-4154
R-409/MC: 5805-665-3261
R-410/MC: 5805-665-3262
R-411/MC: 5805-665-3264
R-412/MC: 5805-568-2898

R-405/MC thru R-412/MC

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	R-405/MC: F17-T-28591-1017 R-406/MC: F17-T-28591-1018 R-407/MC: F17-T-28591-1019 R-408/MC: F17-T-28591-1020 R-409/MC: F17-T-28591-1021 R-410/MC: F17-T-28591-1022 R-411/MC: F17-T-28591-1023 R-412/MC: F17-T-28591-1024	--



R-405/MC

AN/FGR-type CARRIER TELEGRAPH RECEIVER

FUNCTIONAL DESCRIPTION:

Carrier Telegraph Receivers R–405/MC through R–412/MC are used to form an eight-channel carrier terminal-whereby a received frequency-modulated audio signal is translated by each of the eight carrier receivers into direct-current on-off telegraph signals that can operate up to eight teleprinters or other printing devices.

The R–405/MC through R–412/MC receive signals respectively from Carrier Telegraph Transmitters T–290/MC through T–297/MC.

The eight receivers are identical except for the characteristic center audio frequency to which each individual unit is adapted.

TECHNICAL CHARACTERISTICS:

Operating Frequency:
R–405/MC: 935 cps
R–406/MC: 1,105 cps
R–407/MC: 1,275 cps
R–408/MC: 1,445 cps
R–409/MC: 1,615 cps
R–410/MC: 1,785 cps
R–411/MC: 1,955 cps
R–412/MC: 2,125 cps
Number of Channels: 8 (one per receiver)
Bandwidth: 850 to 2210 cps
Sensitivity: −40 dbm to +10 dbm
Type of Signal: F3
Power Requirements: 280 w (per unit), 105/115/125-v 50–60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Carrier Telegraph Receiver R–405/MC	(FSN) 5805–325–8818 (USN) 17–T–28591–1017	5-1/4 x 19 x 14-1/2	27
1	Carrier TelegraphReceiver R–406/MC	(FSN) 5805–313–4152 (USN) F17–T–28591–1018	5-1/4 x 19 x 14-1/2	27
1	Carrier Telegraph Receiver R–407/MC	(FSN) 5805–313–4153 (USN) F17–T–28591–1019	5-1/4 x 19 x 14-1/2	27
1	Carrier Telegraph Receiver R–408/MC	(FSN) 5805–313–4154 (USN) F17–T–28591–1020	5-1/4 x 19 x 14-1/2	27
1	Carrier Telegraph Receiver R–409/MC	(FSN) 5805–665–3261 (USN) F17–T–28591–1021	5-1/4 x 19 x 14-1/2	27
1	Carrier Telegraph Receiver R–410/MC	(FSN) 5805–665–3262 (USN) F17–T–28591–1022	5-1/4 x 19 x 14-1/2	27
1	Carrier Telegraph Receiver R–411/MC	(FSN) 5805–665–3264 (USN) F17–T–28591–1023	5-1/4 x 19 x 14-1/2	27
1	Carrier Telegraph Receiver R–412/MC	(FSN) 5805–568–2898 (USN) F17–T–28591–1024	5-1/4 x 19 x 14-1/2	27

REFERENCE DATA AND LITERATURE:

Instruction Book for Carrier Telegraph Transmitters T–290/MC, T–291/MC, T–292/MC, T–293/MC, T–294/MC, T–295/MC, T–296/MC, and T–297/MC; and Carrier Telegraph Receivers R–405/MC, R–406/MC, R–407/MC, R–408/MC, R–409/MC, R–410/MC, R–411/MC and R–412/MC

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
8	14.48	252

CARRIER TELEGRAPH RECEIVER **AN/FGR-type**

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

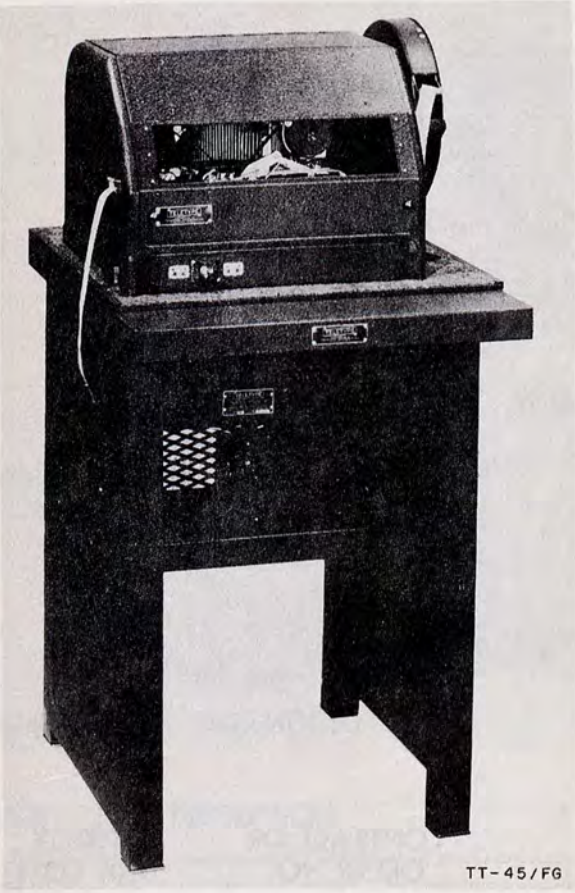
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Lenkurt Electric Co. Inc.	San Carlos, Calif.	N189s–76108, 2 October 1951	

REPERFORATOR AN/FGR-type

22 October 1958
Cognizant Serv: FSN: 5815-370-0055

TT-45/FG, TT-46/FG

	USA	USN	USAF
TYPE CLASS:	--	Used by	Std
STOCK NO:	--	TT-45/FG: F17-T-350013-304	--
		TT-46/FG:	



TT-45/FG

FUNCTIONAL DESCRIPTION:

Reperforators TT-45/FG and TT-46/FG are receiving only typing reperforator units used to receive messages transmitted over wire or radio circuits and to record the messages in both code perforations and typed characters on the same tape. They are used in teletypewriter receiving and distributing stations, messages received by a typing reperforator may be transmitted to one or more stations by a transmitter distributor.

The reperforators consist essentially of a commercial typing reperforator (Teletype Model 14), an operating table, and a rectifier power supply. They may be used with five-unit code teletypewriter transmitting equipment geared for 368 operations per minute such as Teletypewriters TT-47/UG, TT-48/UG, TT-69/UG, TT-70/UG, TT-52/FG, and AN/FGC-11. The equipment also may be used with Teletype Panel TT-23/SG or TT-23B/SG and associated radio converters.

The TT-45/FG and TT-46/FG are identical with the exception of the motor units. The TT-45/FG has a synchronous motor; the TT-46/FG has a series-governed motor.

TECHNICAL CHARACTERISTICS:

Type Signaling Code: 5-unit, start-stop
Transmission Speed: 368 opm, 60 wpm
Type Motor:
TT-45/FG: Synchronous
TT-46/FG: Series-governed
Power Requirements: 115-v 60-cycle 1-phase ac

AN/FGR-type REPERFORATOR

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Reperforator TT–45/FG, consisting of:			
1	Base FB46/15			
1	Cover FPRC200AA			
1	Electrical Assembly 105014			
1	Rectifier REC29			
1	Relay RY30			
1	Table XRT200AA	----------	26-1/8 x 18 x 21-5/16	
1	Tape Container 115702			
1	Typing Reperforator FPR23H246	----------	11-1/2 x 15-3/4 x 13	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91241

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: Spec. No. S–5514

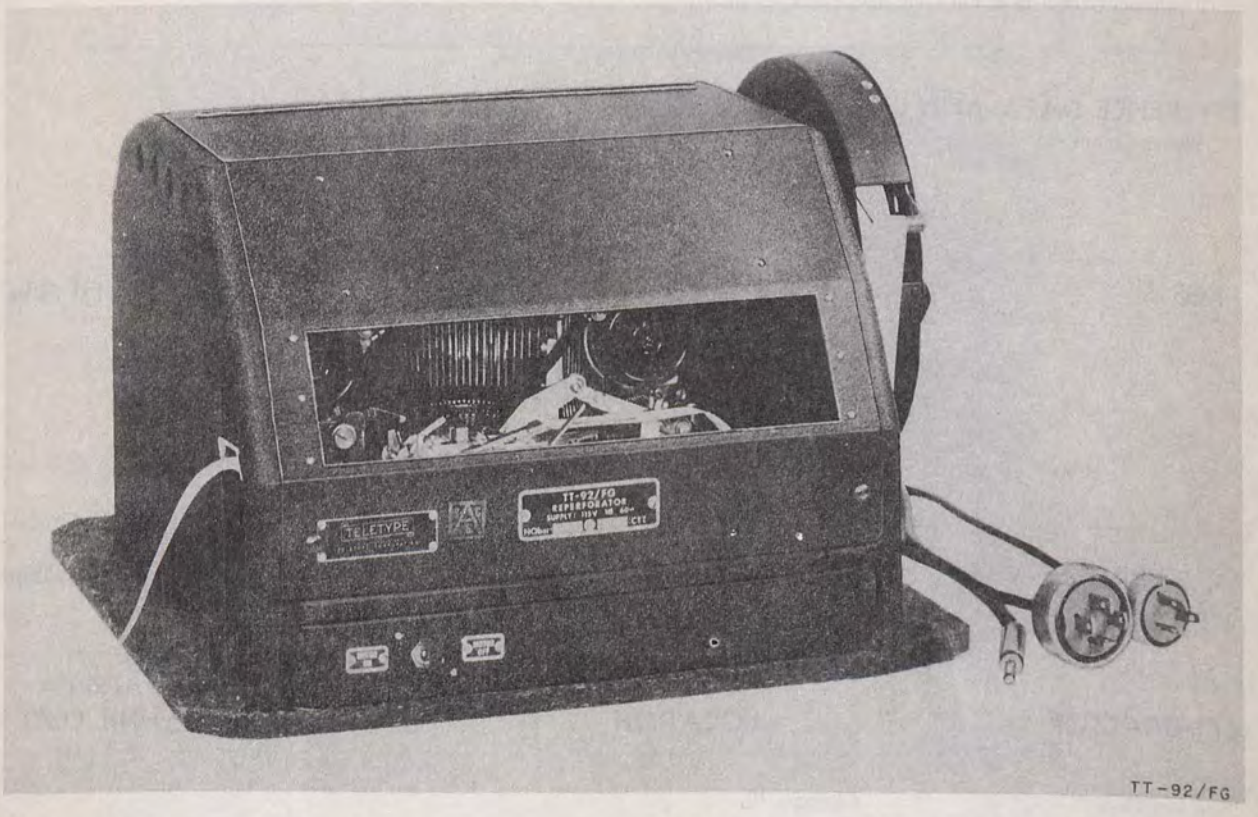
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr–41979	$1,000.00
		NObsr–52179	1,000.00
		NObsr–42421	

TELETYPEWRITER REPERFORATOR AN/FGR-type

17 November 1958
Cognizant Serv: USN FSN: TT–92/FG

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



TT-92/FG

FUNCTIONAL DESCRIPTION:

Teletypewriter Reperforator TT–92/FG is a receiving only typing reperforator unit used to receive messages transmitted over wire or radio circuits and to record the messages in both code perforations and typed characters on the same tape. It is used in message and signal centers at ground stations. Messages received by a typing reperforator may be transmitted to one or more stations by a transmitter distributor.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368 opm
Type Signaling Code: 5-unit, start-stop
Type Motor: Synchronous
Motor Speed: 1,800 rpm
Power Requirements: 160 w, 115-v 60-cycles 1-phase ac

AN/FGR-type TELETYPEWRITER REPERFORATOR

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Teletypewriter Reperforator TT-92/FG	----------	7-1/2 x 11-1/2 x 12	67.5

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

Teletype manual 96MA

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	13	180

PROCUREMENT DATA

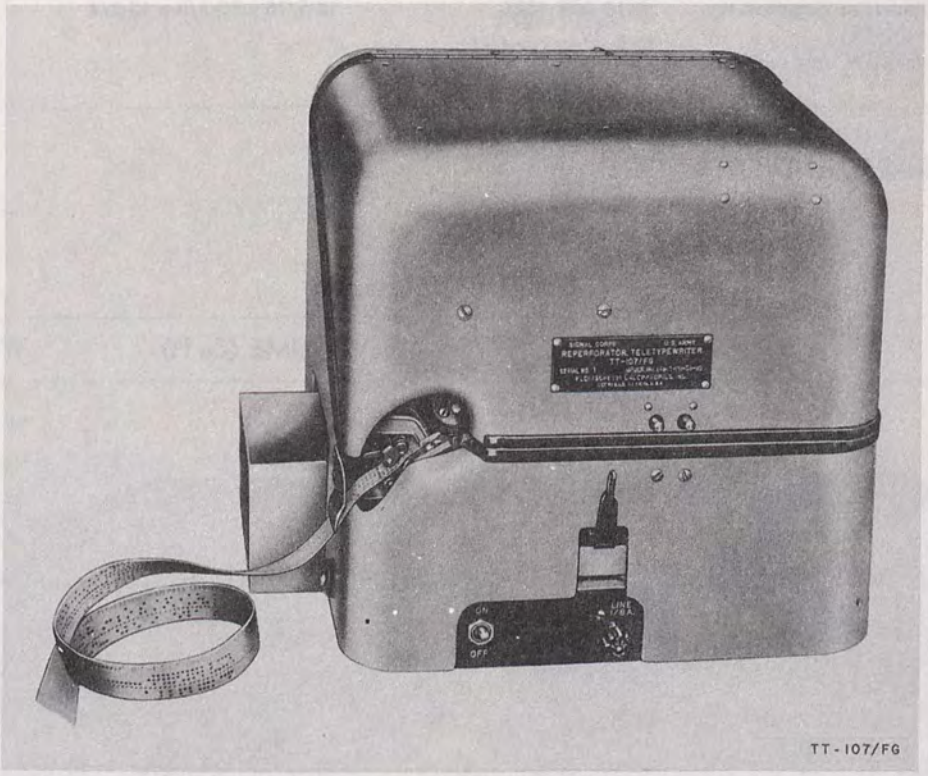
PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.		

TELETYPEWRITER REPERFORATOR AN/FGR-type

1 July 1958
Cognizant Serv: USA FSN: 5815-503-1168 TT-107/FG

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4TTT107	--	--



FUNCTIONAL DESCRIPTION:

Teletypewriter Reperforator TT-107/FG is a fixed station, receiving only, lightweight typing reperforator used to receive messages directly from the line, or to monitor copy produced by other teletypewriters. It may be operated by either polar or neutral signals.

It prints English characters and perforates standard start-stop five-unit code characters. Accessory drive gears are available to convert the normal 60-wpm speed to 100-wpm operation.

TECHNICAL CHARACTERISTICS:

Operating Functions: Prints standard communication symbols and characters; perforates start-stop five-unit code groups
Operating Speed: 386.1 or 600 opm (60 or 100 wpm)
Motor Characteristics: Synchronous; 3,600 rpm
Power Requirements: 120 w, 115-v 60-cycle 1-phase ac

AN/FGR-type TELETYPEWRITER REPERFORATOR

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Teletypewriter-Reperforator TT-107/FG	5815-503-1168	12-5/16 x 12-5/8 x 12-1/4	37

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-2226

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5.4	75

PROCUREMENT DATA

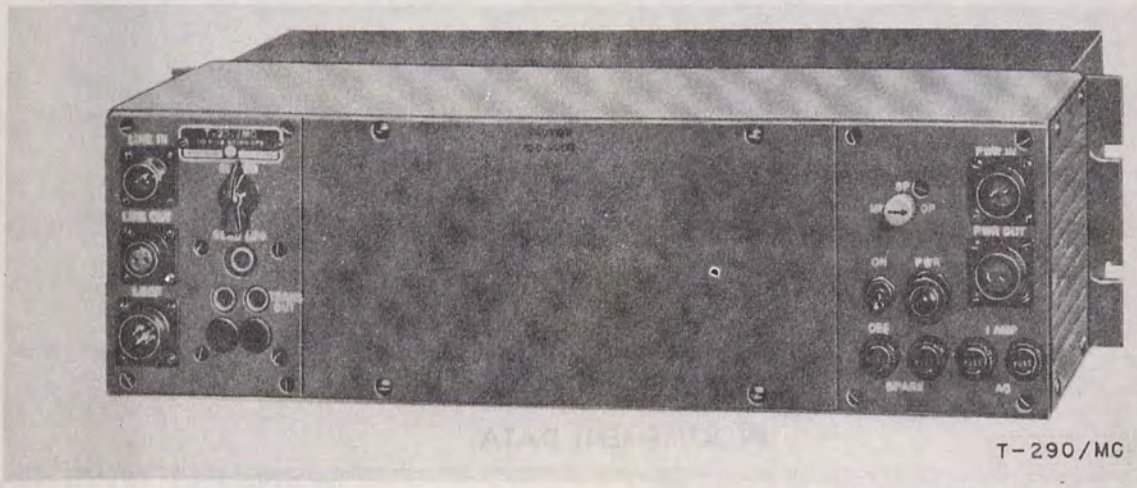
PROCURING SERVICE:
SPEC &/or DWG: MIL-T-11985

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

CARRIER TELEGRAPH TRANSMITTER AN/FGT-type

20 November 1958
Cognizant Serv: USN FSN: T–290/MC thru T–297/MC

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	T–290/MC: F17–T–28591–1025 T–291/MC: F17–T–28591–1026 T–292/MC: F17–T–28591–1027 T–293/MC: F17–T–28591–1028 T–294/MC: F17–T–28591–1029 T–295/MC: F17–T–28591–1030 T–296/MC: F17–T–28591–1031 T–297/MC: F17–T–28591–1032	--



T–290/MC

FUNCTIONAL DESCRIPTION:

Carrier Telegraph Transmitters T–290/MC through T–297/MC are used to form an eight-channel carrier terminal, whereby mark and space signals from up to eight teletypewriters are translated into frequency-modulated audio signals which can be combined and sent to companion Carrier Telegraph Receivers R–405/MC through R–412/MC over a single wire, cable, or radio circuit.

These eight equipments are identical except for the center frequency of the audio fm signal. All are designed for rack mounting.

TECHNICAL CHARACTERISTICS:

Channels: 8 (one per transmitter)
Bandwidth: 850 to 2,210 cps
Transmitter Output: −20 dbm to +6 dbm
Operating Channel Center Frequencies:
T–290/MC: 935 cps
T–291/MC: 1,105 cps
T–292/MC: 1,275 cps
T–293/MC: 1,445 cps
T–294/MC: 1,615 cps
T–295/MC: 1,785 cps
T–296/MC: 1,955 cps
T–297/MC: 2,125 cps
Power Requirements: 232 w per unit, 105/115/125-v 50–60-cycle 1-phase ac

AN/FGT-type CARRIER TELEGRAPH TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USN)		
1	Carrier Telegraph Transmitter T-290/MC	F17-T-28591-1025	5-1/4 x 19 x 14-1/2	24.5
1	Carrier Telegraph Transmitter T-291/MC	F17-T-28591-1026	5-1/4 x 19 x 14-1/2	24.5
1	Carrier Telegraph Transmitter T-292/MC	F17-T-28591-1027	5-1/4 x 19 x 14-1/2	24.5
1	Carrier Telegraph Transmitter T-293/MC	F17-T-28591-1028	5-1/4 x 19 x 14-1/2	24.5
1	Carrier Telegraph Transmitter T-294/MC	F17-T-28591-1029	5-1/4 x 19 x 14-1/2	24.5
1	Carrier Telegraph Transmitter T-295/MC	F17-T-28591-1030	5-1/4 x 19 x 14-1/2	24.5
1	Carrier Telegraph Transmitter T-296/MC	F17-T-28591-1031	5-1/4 x 19 x 14-1/2	24.5
1	Carrier Telegraph Transmitter T-297/MC	F17-T-28591-1032	5-1/4 x 19 x 14-1/2	24.5

(Each equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91541

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
*9	1.81 ea	29 ea

* Packaging consists of separate package for each of the eight equipments required to make up one complete transmitting unit for eight channels of teletypewriter, plus one package of accessories.

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

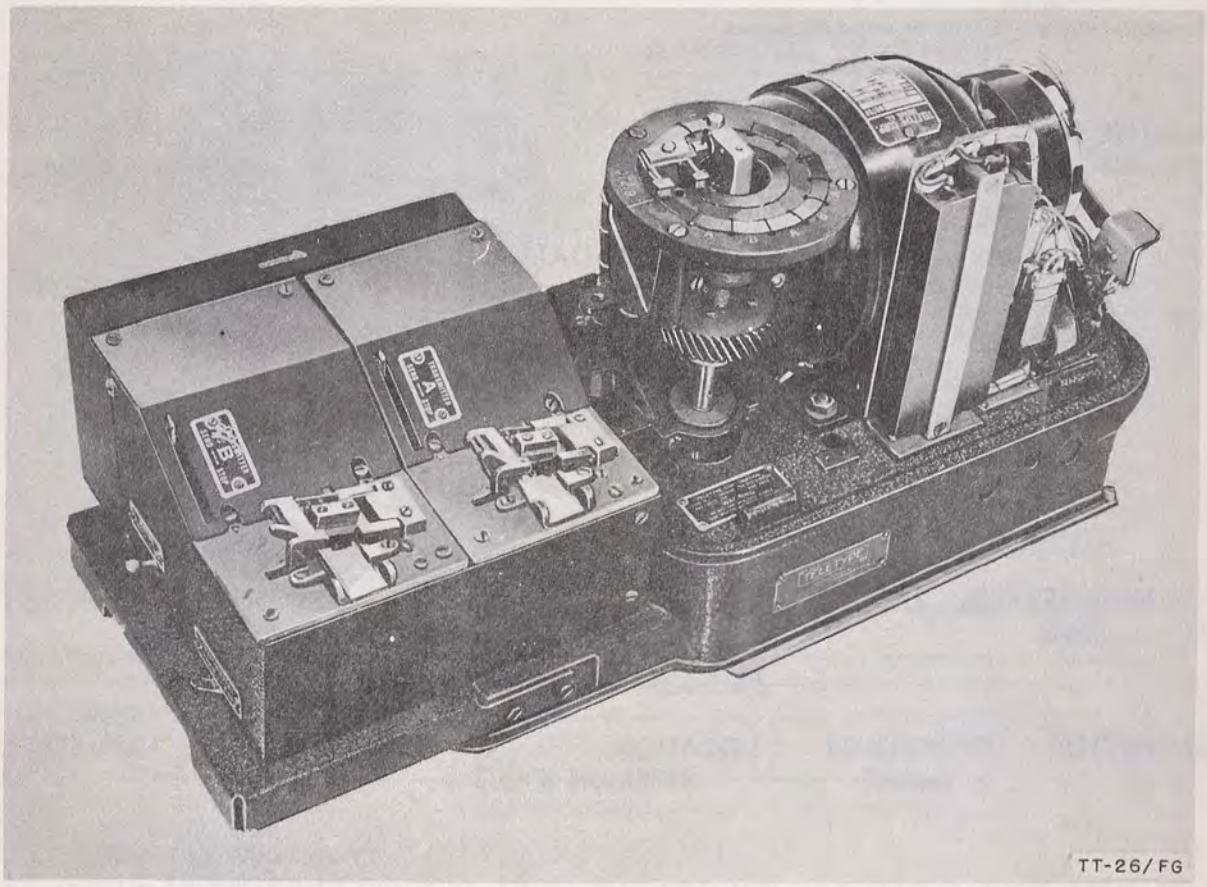
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Lenkurt Electric Co.	San Carlos, Calif.	N189s-76108	

TRANSMITTER DISTRIBUTOR AN/FGT-type

22 October 1958
Cognizant Serv: USA FSN: 5815-222-4288 TT-26/FG

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4TXD91GL	--	--



FUNCTIONAL DESCRIPTION:

Transmitter Distributor TT-26/FG is a two-channel transmitter distributor that translates code perforations recorded on paper tape into electrical impulses and then transmits them as five-unit, start-stop teletypewriter code to receiving stations over dc wire lines, carrier systems, or radio channels. These impulses are identical with the code impulses transmitted from the keyboard of a teletypewriter operating at the same speed.

The TT-26/FG includes two tape sensing and two transmitting mechanisms, a special distributor commutator, and a motor unit. The commutator has 13 segments—5 pairs for the transmission of intelligence impulses, a start segment, a stop segment, and an X segment located between the start and stop segments.

This unit has no distributor clutch. Therefore, it requires fully attended service in which the operator inserts the message tape and starts and stops the transmitter manually.

TECHNICAL CHARACTERISTICS:

Type Signaling Code: 5-unit, start-stop
Type Signals: Neutral
Transmission Speed: 368 or 404 opm
Type Motor: Synchronous or series-governed
Motor Speed:
Synchronous: 1,800 rpm
Series-governed: 2,102 or 2,308 rpm
Power Requirements:
Synchronous Motor: 105- to 125-v 50- to 60-cycle ac
Series-governed Motor: 105- to 125-v 25- to 60-cycle ac

AN/FGT-type TRANSMITTER DISTRIBUTOR

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transmitter Distributor TT–26/FG (Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11–2222

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5	70

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TRANSMITTER-DISTRIBUTOR AN/FGT-type

13 November 1958
Cognizant Serv: USN FSN: 5815-644-4752

TT-57/FG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	--	--	--



TT-57/FG

FUNCTIONAL DESCRIPTION:

Transmitter-Distributor TT-57/FG is a single-channel distributor that translates code perforations recorded on paper tape into electrical impulses and then transmits them as five-unit, start-stop teletypewriter code to one or more receiving stations over dc wire lines, carrier systems, or radio channels. It can communicate with any 7.42-unit code teletypewriter receiving equipment geared for 368 operations per minute. Th e unit is designed for use at shore stations.

The TT-57/FG is fully automatic. It includes a tape sensing mechanism, a transmitting mechanism, a distributor motor, and a radio filter mounted on a teletypewriter table. It uses either fully perforated or chadless tape.

TECHNICAL CHARACTERISTICS:

Transmission Speed: 368 opm
Type Signaling Code: 5-unit, start-stop
Transmission Pattern: 7.42-unit
Type Motor: Synchronous
Motor Speed: 1,800 rpm
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transmitter-Distributor TT-57/FG, consisting of:			
1	Distributor motor and base			
1	Feeding and transmitting mechanism			
1	Radio filter and cover			
1	Tape sensing mechanism			
1	Teletypewriter Table FN-31/FG	----------	----------	40

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,116

AN/FGT-type TRANSMITTER-DISTRIBUTOR

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

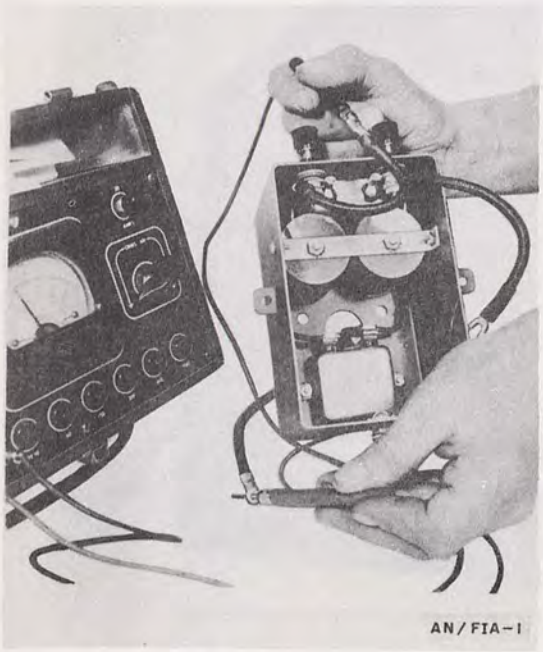
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NOsr–42421	

AUDIO DISTRIBUTING CENTRAL AN/FIA-1

21 November 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	6C190–1	--	--



AN/FIA-1

FUNCTIONAL DESCRIPTION:

Audio Distributing Central AN/FIA–1 and its associated audio input equipment amplify and distribute program material to pillow, program, and paging speakers in hospitals and similar institutions.

This equipment can originate programs from recordings or transciptions, and can pick up and amplify two frequency modulated, amplitude modulated, or short-wave broadcast programs simultaneously. Programs piped in from telephone lines or originated by speech input equipment, such as Amplifier AM–129/U, also can be distributed by this system.

Four program channels and one paging channel are available. Provisions have been made for the addition of a fifth program channel and two additional radio receiver program sources.

TECHNICAL CHARACTERISTICS:

Type Controls: Input and output channel selection, radio tuner, turntable, and amplifier cabinet control

Power Output:

Driver Amplifier: 0.5 w
Power Amplifier: 50 w

Power Requirements:

Driver Amplifier: 60 w (maximum), 115-v 60-cycle 1-phase ac
Receiver: 120 w, 115-v 60-cycle 1-phase ac
Power Amplifier: 206 w (maximum), 115-v 60-cycle 1-phase ac
Console: 3,072 w (maximum), 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 ea	Amplifier AM–124/U through AM–128/U	----------	73-1/4 x 16-1/2 x 22-1/2	171 to 293
1	Console OA–23/FIA–1, desk section	----------	4 x 15 x 32	30
1	Console OA–23/FIA–1, main section	----------	57-3/8 x 30 x 74-1/8	439
2	Console OA–23/FIA–1, phonograph section	----------	33-1/2 x 24 x 27	121
3	Microphone M–10/FIA–1	----------	10-1/4 h x 7-1/2 d	9.3

AN/FIA-1 AUDIO DISTRIBUTING CENTRAL

REFERENCE DATA AND LITERATURE:

TM 11-2590

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
16	----	4,969.5

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

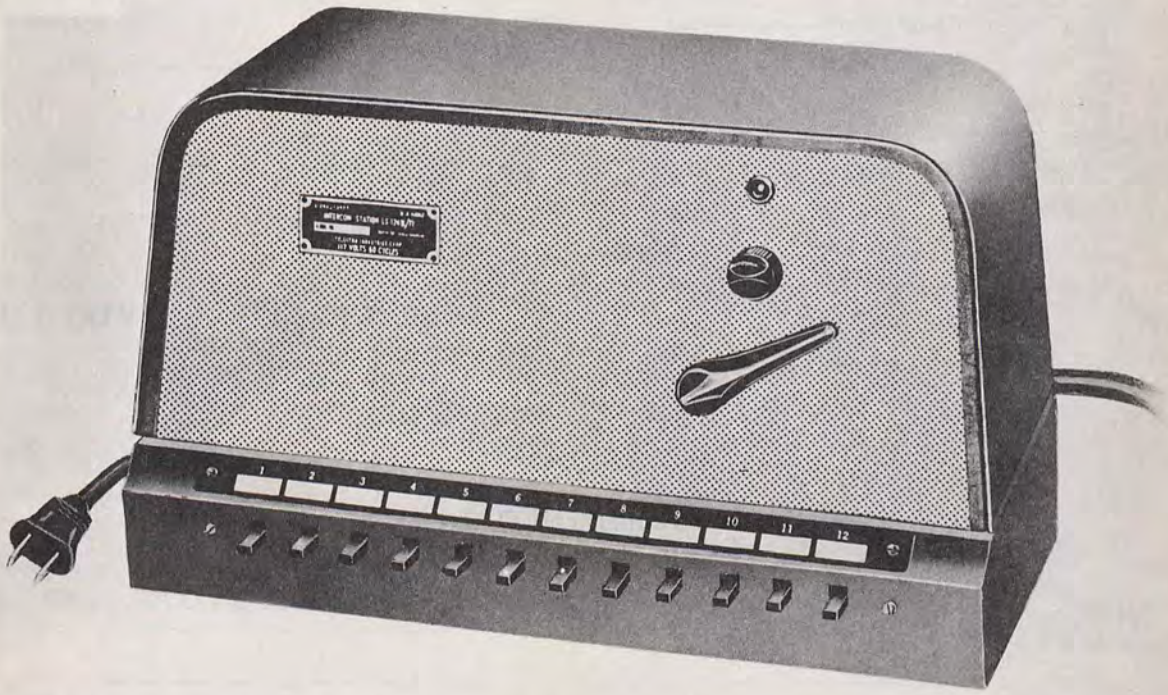
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERCOMMUNICATING STATION AN/FIC-type

3 December 1958
Cognizant Serv: USA FSN: 5830-170-9934

LS-124( )/FI

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4B1485	--	--



LS-124/FI

FUNCTIONAL DESCRIPTION:

Intercommunicating Station LS-124( )/FI is a master control station unit of an intercommunication system serving large headquarters buildings, depots, and communications centers at air stations or similar locations.

This equipment consists of a speaker microphone and an audio amplifier assembled as a single unit and is used in conjunction with as many as 12 other local station units on a one-way, talk-back, selected station, or all-talk basis.

The LS-124( )/FI usually is operated in conjunction with remote speaker microphone station units that cannot signal this master station.

The LS-124( )/FI can operate over a trunk line to another master station; the resulting combination can provide intercommunication and paging facilities.

TECHNICAL CHARACTERISTICS:

Input and Output Impedances: 50 or 500 ohms
Speaker Voice Coil Impedance: 45 ohms
Power Output: 2 w to line; 1 w to speaker
Power Requirements: 25 w (in use), 12 w (idle), 110- 125-v 50/60-cycle ac

AN/FIC-type INTERCOMMUNICATING STATION

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Intercommunicating Station LS-124( )/FI (Equipment consists of only one major component.)	4B1485	7-3/8 x 6-7/8 x 13-3/8	20.5

REFERENCE DATA AND LITERATURE:

TM 11-2572 and TM 11-2572A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.8	35

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

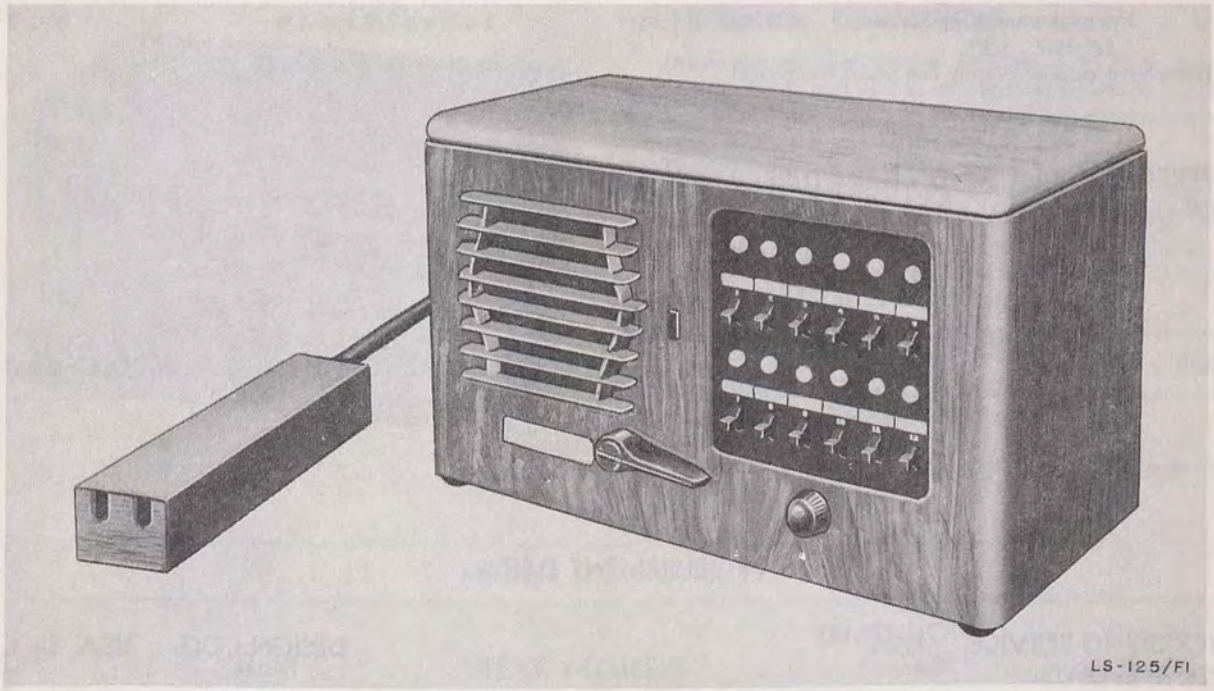
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERCOMMUNICATING STATION AN/FIC-type

3 December 1958
Cognizant Serv: USA FSN: 5830-162-8168 LS-125( )/FI

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4B1482AM	--	--



FUNCTIONAL DESCRIPTION:

Intercommunicating Station LS-125( )/FI is a master or control station unit used in an intercommunication system. It is used in headquarters buildings, depots, communications centers, or similar installations.

This equipment consists of a speaker microphone and an audio amplifier assembled as a single unit and is used in conjunction with as many as 12 other station units on a one-way, talk-back, selected station, or all-talk basis.

The LS-125( )/FI is designed specifically for use with Intercommunicating Station LS-129/FI or LS-130( )/FI.

TECHNICAL CHARACTERISTICS:

Input and Output Impedances: 50 or 500 ohms
Speaker Voice Coil Impedance: 45 ohms
Power Output: 2-1/2 w
Power Requirements: 30 w (in use), 15 w (idle), 110- 125-v 50/60-cycle ac

AN/FIC-type INTERCOMMUNICATING STATION

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Intercommunicating Station LS–125( )/FI (Equipment consists of only one major component.)	4B1482AM	7-3/8 x 6-7/8 x 13-3/8	20-1/2

REFERENCE DATA AND LITERATURE:

TM 11–2572 and TM 11–2572A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.3	70

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

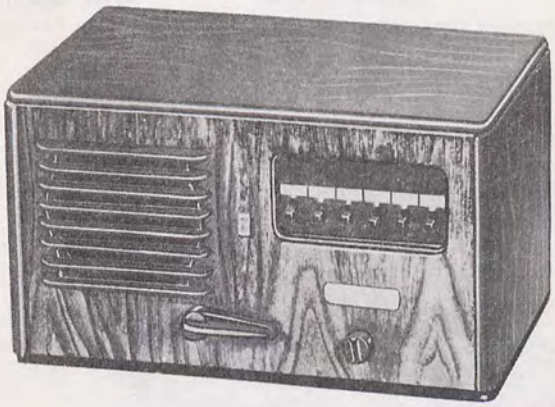
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERCOMMUNICATING STATION AN/FIC-type

3 December 1958
Cognizant Serv: USA FSN: 5830-164-8056

LS-126( )/FI

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4B1486M	--	--



LS-126/FI

FUNCTIONAL DESCRIPTION:

Intercommunicating Station LS-126( )/FI is a master or control station unit used in an intercommunication system. It is used in headquarters buildings, depots, communications centers, or similar locations.

This equipment consists of a speaker microphone and an audio amplifier assembled as a single unit and is used in conjunction with as many as six other local station units on a one-way, talk-back, selected station basis, or all-talk basis.

This unit is designed specifically for use with Intercommunicating Station LS-129/FI or LS-130( )/FI.

TECHNICAL CHARACTERISTICS:

Input and Output Impedances: 50 or 500 ohms
Speaker Voice Coil Impedance: 45 ohms
Power Output: 2-1/2 w
Power Requirements: 30 w (in use), 15 w (idle), 115-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Intercommunicating Station LS-126( )/FI	4B1586M	7-3/8 x 6-7/8 x 13-3/8	20-1/2

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-2572 and TM 11-2572A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.3	70

AN/FIC-type INTERCOMMUNICATING STATION

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERCOMMUNICATING STATION AN/FIC-type

3 December 1958
Cognizant Serv: USA FSN: LS–127/FI, LS–127A/FI: 5830–162–8169
LS–127B/FI: 5830–503–2690

LS–127( )/FI

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	LS–127/FI, LS–127A/FI: 4B1484AM LS–127B/FI: 4B1479B–127	--	--



LS–127/FI

FUNCTIONAL DESCRIPTION:

Intercommunicating Station LS–127( )/FI is the master or control station unit of an intercommunication system and is used in systems serving large headquarters buildings, depots, communications centers, or similar fixed plant installations.

This equipment consists of a self-contained speaker microphone and amplifier and can be used with as many as 24 other station units on a one-way, talk-back, selected station, or all-talk basis.

The LS–127( )/FI is designed specifically for use with Intercommunicating Station LS–129/FI or LS–130( )/FI.

TECHNICAL CHARACTERISTICS:

Input and Output Impedances: 50 or 050 ohms
Speaker Voice Coil Impedance: 45 ohms
Power Output: 2-1/2 w
Power Requirements: 30 w (in use), 15 w (idle), 115-v 50/60-cycle ac

AN/FIC-type INTERCOMMUNICATING STATION

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Intercommunicating Station LS–127( )/FI (Equipment consists of only one major component.)	4B1486M	7-3/8 x 6-7/8 x 19-3/4	30

REFERENCE DATA AND LITERATURE:

TM 11–2572 and TM 11–2572A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.75	79.5

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

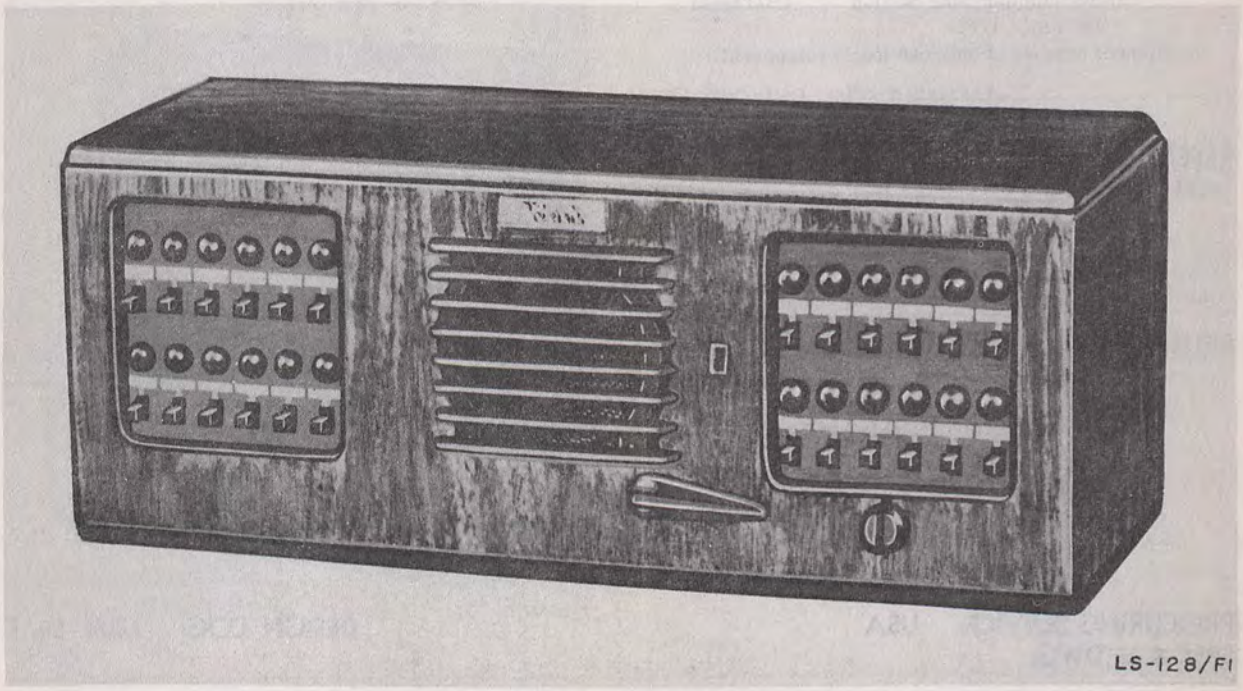
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERCOMMUNICATING STATION AN/FIC-type

3 December 1958
Cognizant Serv: USA FSN: 5830-162-8170

LS-128( )/FI

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4B1484M	--	--



FUNCTIONAL DESCRIPTION:

Intercommunicating Station LS-128( )/FI is the master or control station unit of an intercommunication system and is used in systems serving large headquarters buildings, depots, communications centers, or similar fixed-plant installations.

This equipment consists essentially of a speaker microphone and amplifier and can be used in conjunction with as many as 24 other station units on a one-way, talk-back, selected station, or all-talk basis.

The LS-128( )/FI is designed specifically for use with Intercommunicating Station LS-129/FI or LS-130( )/FI.

TECHNICAL CHARACTERISTICS:

Input and Output Impedances: 50 or 500 ohms
Speaker Voice Coil Impedance: 45 ohms
Power Output: 2-1/2 w
Power Requirements: 30 w (in use), 15 w (idle), 115-v 50/60 cycle ac

AN/FIC-type INTERCOMMUNICATING STATION

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Intercommunicating Station LS–128( )/FI (Equipment consists of only one major component.)	4B11484M	7-3/8 x 6-7/8 x 19-3/4	30

REFERENCE DATA AND LITERATURE:

TM 11–2572 and TM 11–2572A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.9	79.5

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

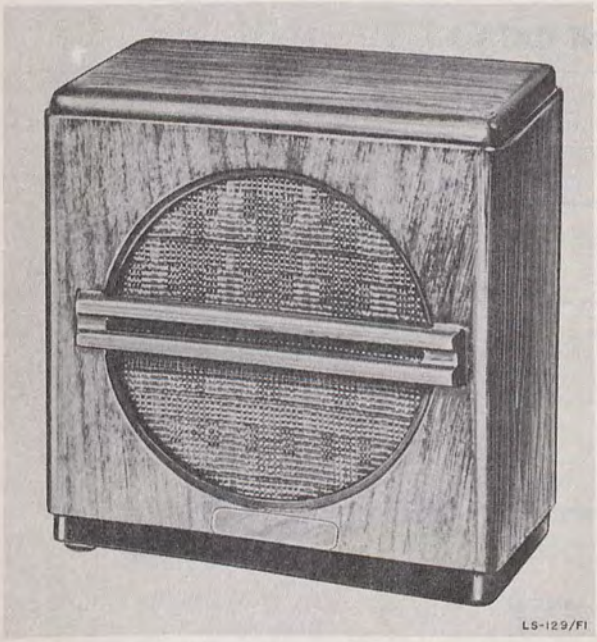
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERCOMMUNICATING STATION AN/FIC-type

3 December 1958
Cognizant Serv: USA FSN: 5830–222–1664 LS–129/FI

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	6C294A–129A	--	--



FUNCTIONAL DESCRIPTION:

Intercommunicating Station LS–129/FI is a speaker microphone equipment used in an intercommunication system. It is used in headquarters building, depots, communications centers, and similar installations.

This equipment consists of a speaker microphone contained in a wooden cabinet. It cannot initiate calls to other speaker microphone units or to the master station unit of a system in which it is used.

The LS–129/FI receives power from the master control station unit of the system in which it is used.

TECHNICAL CHARACTERISTICS:

Output Impedance: 50 ohms

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Intercommunicating Station LS–129/FI	6C294A–129A	7-3/8 x 3-3/4 x 7-1/8	4.25

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–2572

AN/FIC-type INTERCOMMUNICATING STATION

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1 (10 units)	4	

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

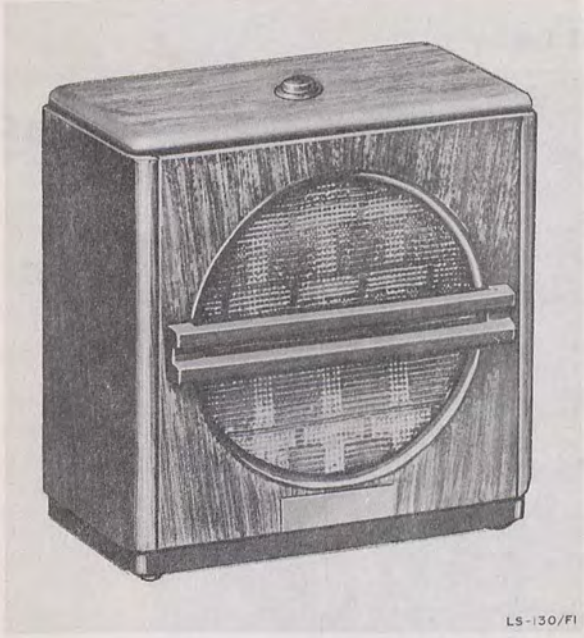
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERCOMMUNICATING STATION AN/FIC-type

3 December 1958
Cognizant Serv: USA FSN: 5830-222-1663

LS-130( )/FI

	USA	USN	USAF
TYPE CLASS:	Std	--	L/Std
STOCK NO:	6C294A-130	--	--



LS-130/FI

FUNCTIONAL DESCRIPTION:

Intercommunicating Station LS-130( )/FI is a speaker microphone equipment designed for use as a local station unit in an intercommunication system. It is used in systems serving large headquarters buildings, depots, communications centers, or similar installations.

This equipment consists of a 5-inch speaker microphone contained in a wooden cabinet and is equipped with a push-button for signaling annunciator-equipped master station units.

The LS-130( )/FI cannot initiate calls to the other speaker microphone units or to master station units not equipped with annunciators.

The LS-130( )/FI receives power from the master control station unit of the system in which it is used.

TECHNICAL CHARACTERISTICS:

Output Impedance: 50 ohms

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Intercommunicating Station LS-130( )/FI	6C294A-130	7-3/8 x 3-3/4 x 7-1/8	4.25
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11-2572

AN/FIC-type INTERCOMMUNICATING STATION

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1 (10 units)	4	

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

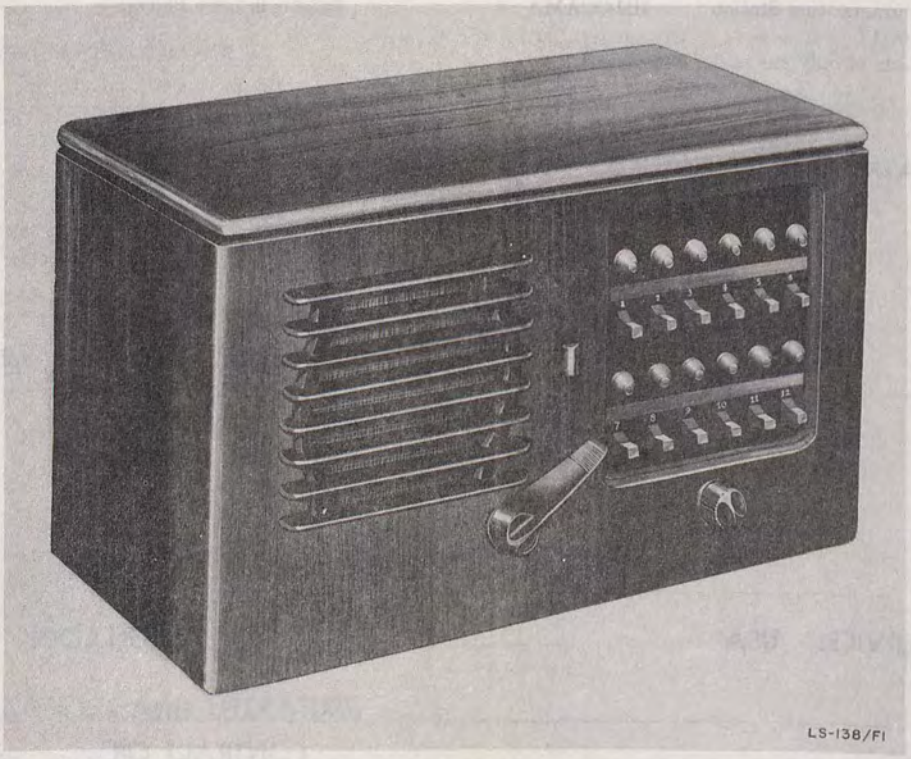
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERCOMMUNICATING STATION AN/FIC-type

3 December 1958
Cognizant Serv: USA FSN: 5830–170–9935

LS–138/FI

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4B1482AMA	--	--



FUNCTIONAL DESCRIPTION:

Intercommunicating Station LS–138/FI is a master or control station unit of an intercommunication unit. It is used in systems serving large headquarters buildings, depots, communications centers, or similar installations.

This equipment consists of a self-contained speaker microphone and amplifier unit and is used in conjunction with 12 other local station units on a one-way, talk-back, selected station, or all-talk basis.

The LS–138/FI can communicate with other master stations and through them with their remote stations.

TECHNICAL CHARACTERISTICS:

Input and Output Impedances: 50 or 500 ohms
Speaker Voice Coil Impedance: 45 ohms
Power Output: 2-1/2 w
Power Requirements: 30 w (in use), 15 w (idle), 110/220-v 50/60-cycle ac

AN/FIC-type INTERCOMMUNICATING STATION

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Intercommunicating Station LS-138/FI	4B1482AMA	7-3/8 x 6-7/8 x 13-3/8	20.5
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.3	70

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERCOMMUNICATION STATION AN/FIC-type

3 December 1958
Cognizant Serv: USA FSN: 5830-503-2691 LS-200/FI

	USA	USN	USAF
TYPE CLASS:	Std	--	Used by
STOCK NO:	6C42-200	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Intercommunication Station LS-200/FI is used for voice communication over wire lines between offices of a large headquarters. The equipment is arranged to provide privacy of communication (by means of speaker-microphone or handset) between stations when all master stations in the system are equipped with this feature. Annunciators are used as a means of signaling between points in the system.

The LS-200/FI is used with as many as six other local station units.

TECHNICAL CHARACTERISTICS:

Input and Output Impedances: 50 or 500 ohms
Speaker Voice Coil Impedance: 45 ohms
Power Output: 2 w
Power Requirements: 30 w (in use), 15 w (idle), 105- to 125-v 60 cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Intercommunication Station LS-200/FI	6C42-200	13-3/4 x 7-1/8 x 7-1/2	
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11-5089

SHIPPING DATA

PKGS	VOLUM (Cu Ft)	WEIGHT (Lbs)
1	2.0	27

AN/FIC-type INTERCOMMUNICATION STATION

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERCOMMUNICATION STATION AN/FIC-type

3 December 1958
Cognizant Serv: USA FSN: 5830-521-0542

LS-201/FI

	USA	USN	USAF
TYPE CLASS:	Std	--	Used by
STOCK NO:	6C42-201	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Intercommunication Station LS-201/FI is used for voice communication over wire lines between officers of a large headquarters. The equipment is arranged to provide privacy of communication (by means of speaker-microphone or handset) between stations when all master stations in the system are equipped with this feature. Annunciators are used as a means of signaling between points in the system.

The LS-201/FI is used with as many as 12 other local station units.

TECHNICAL CHARACTERISTICS:

Input and Output Impedances: 50 or 500 ohms
Speaker Voice Coil Impedance: 45 ohms
Power Output: 2 w
Power Requirements: 30 w (in use), 15 w (idle), 105- to 125-v 60 cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Intercommunication Station LS-201/FI	6C41-201	13-3/4 x 7-1/8 x 7-1/2	

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-5089

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2.0	29

AN/FIC-type INTERCOMMUNICATION STATION

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

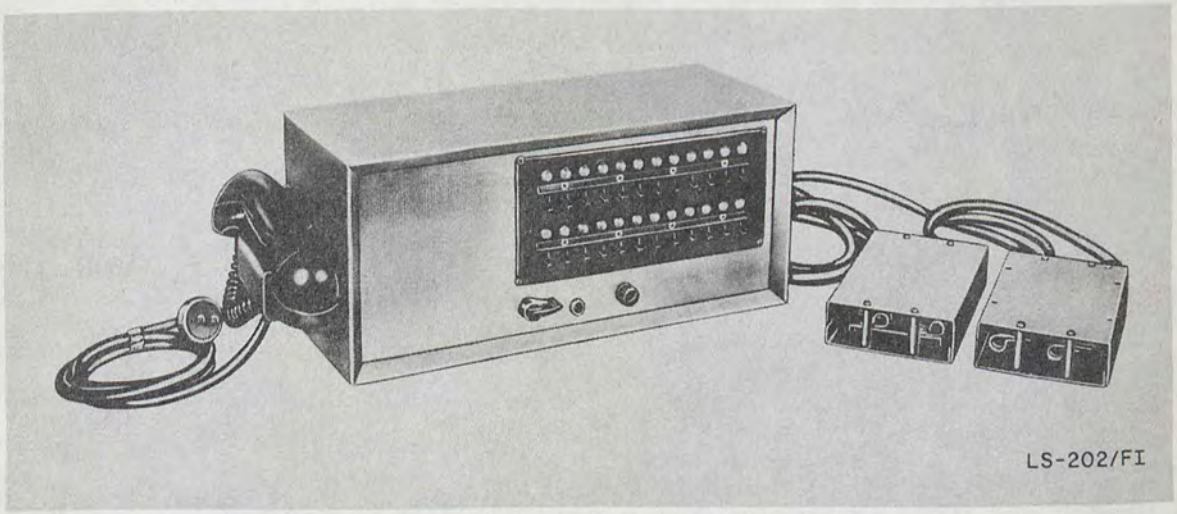
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERCOMMUNICATION STATION AN/FIC-type

3 December 1958
Cognizant Serv: USA FSN: 5830-503-2692

LS-202/FI

	USA	USN	USAF
TYPE CLASS:	Std	--	Used by
STOCK NO:	6C42-202	--	--



FUNCTIONAL DESCRIPTION:

Intercommunication Station LS-202/FI is used for voice communication over wire lines between offices of a large headquarters. The equipment is arranged to provide privacy of communication (by means of speaker-microphone or handset) between stations when all master stations in the system are equipped with this feature. Annunciators are used as a means of signaling between points in the system.

The LS-202/FI is used with as many as 24 other local station units.

TECHNICAL CHARACTERISTICS:

Input and Output Impedances: 50 or 500 ohms
Speaker Voice Coil Impedance: 45 ohms
Power Output: 2 w
Power Requirements: 30 w (in use), 15 w (idle), 105- to 125-v 60 cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Intercommunication Station LS-202/FI	6C42-202	21-3/4 x 7-1/2 x 8-1/2	

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-5089

AN/FIC-type INTERCOMMUNICATION STATION

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2.3	33

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RECORDER-REPRODUCER ASSEMBLY AN/FNH-type

20 November 1958
Cognizant Serv: USN FSN: RD-153/SNH

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Recorder-Reproducer Assembly is a completely self-contained unit designed to provide continuous recording without loss of time for reloading. It consists of four rack-mounted Sound Recorder-Reproducers Type VRF–7 and incorporates an overlap relay circuit. Adjacent units in the rack are intended to operate in pairs and the change-over from one unit to the other in a pair is automatic.

This equipment is designed for fixed installation and can be used to record and play back orders, conferences, or conversations.

The recording medium is an endless 35-mm cellulose acetate film which can record audible sound for a period of 2 hours continuously or, by substituting a motor pulley and belt, it can record 3 hours continuously for each VRF-7 unit.

Note. Each VRF–7 unit is similar to Sound Recorder-Reproducer type VRF–1, except for mechanical modifications to provide for rack mounting, and for minor electronic modifications to provide for overlap operation.

Facilities are provided for switching the input to each of the four units from any one of 16 telephone, radio, or microphone lines.

TECHNICAL CHARACTERISTICS:

Number of Inputs: 16
Overlap Operation: Automatic; unit starts 2 minutes before first unit reaches end of recording time
Reload Indication: Red signal lamps
Recording Medium: 35 mm cellulose acetate film
Recording Time (each unit): 2 hours continuous, 3 hours with motor pulley and belt changes
Film Speed: 40 feet per minute
Audio Power Output: 5 w
Recording Needle: Sapphire tip
Frequency Response: ±3 db from 300 to 4,500 cps, 1,000 cps reference
Noise Level: 200 uw maximum
Distortion: 2.5% at 400 and 1,000 cps
Gain: 108 db ±2
Operating Power Requirements (Each Unit): 130 w, 115-v 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier			
1	Control Panel			
1	Main Frame Assembly			
1	Mounting Rack			
4	Recorder-Reproducer VRF–7			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 365–1825

AN/FNH-type RECORDER-REPRODUCER ASSEMBLY

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: Dwg. No. 58–60

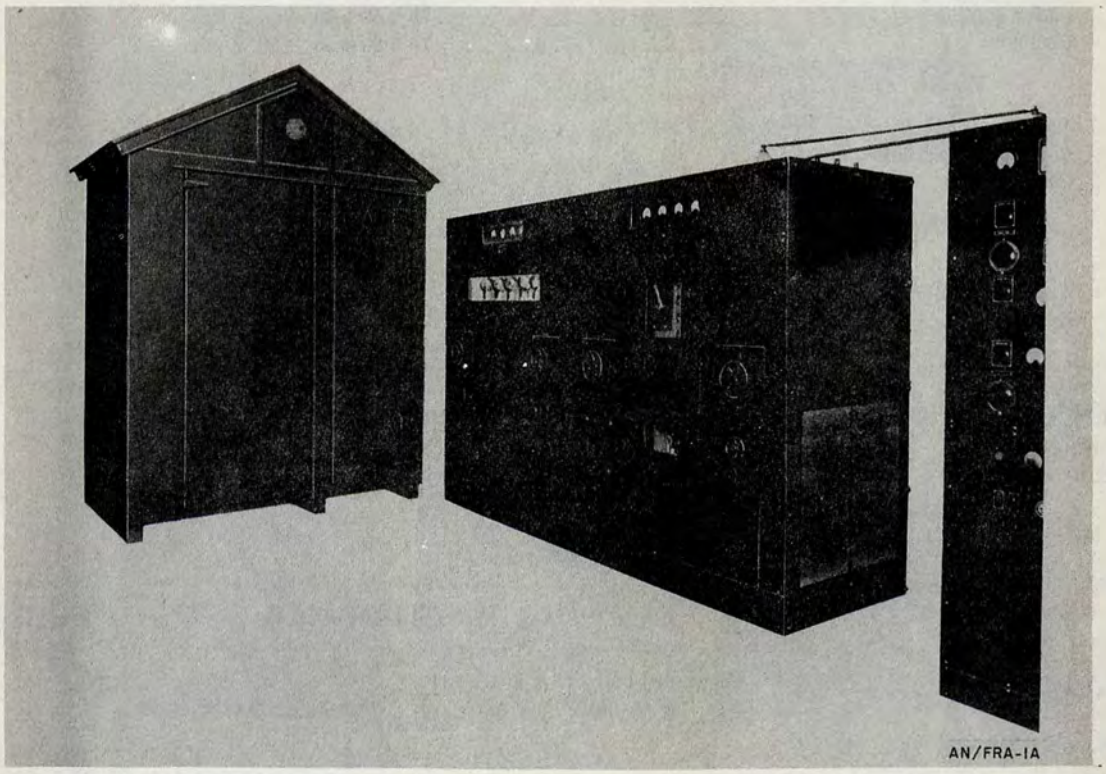
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Frederick Hart and Co., Inc.	Poughkeepsie, N. Y.	NObsr 46447	

AMPLIFIER ASSEMBLY AN/FRA-1( )

1 July 1958
Cognizant Serv: USA FSN: 5820-194-4977

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	2C466	--	--



AN/FRA-1A

FUNCTIONAL DESCRIPTION:

Amplifier Assembly AN/FRA-1( ) is a low- to medium-frequency, medium-power (class C), rf power-amplifier equipment intended for military fixed-station radiotelegraph service. It is operated with such exciters as Radio Transmitter BC-365-( ).

This equipment consists essentially of the power amplifier, its related rectifier, an antenna tuning unit, and associated items.

Models A and B include a prefabricated wooden house that contains the antenna tuning networks. All models are functionally interchangeable but differ in arrangement of controls, control circuitry, and similar design details.

TECHNICAL CHARACTERISTICS:

Freequency Range in Mc: 0.15 to 0.55
Antenna Characteristics: 750 to 3,000 uuf; 6 to 12 ohms
Type of Signal: Cw (on-off), or fsk (125-cycle shift)
Power Output: 6 to 10 kw
Power Requirements: 22 kva, 200/240-v 50/60-cycle 3-phase ac

AN/FRA-1( ) AMPLIFIER ASSEMBLY

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For AN/FRA-1:			
1	Antenna tuning unit	----------	120 x 97 x 68	2,540
1	Power amplifier	----------	78 x 60 x 36	1,400
1	Rectifier	----------	78 x 60 x 36	1,600
	For AN/FRA-1A:			
1	Amplifier	----------	76 x 60 x 36	900
1	Antenna tuning unit	----------	98 x 84 x 58	1,400
1	Rectifier unit	----------	76 x 60 x 36	2,000
	For AN/FRA-1B:			
1	Amplifier	----------	76 x 60 x 36	1,650
1	Antenna tuning unit	----------	110 x 84 x 62	2,600
1	Rectifier unit	----------	76 x 60 x 36	1,700

REFERENCE DATA AND LITERATURE:

TM 11-1055
TM 11-5028

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
Type No.: AN/FRA-1		
17	646.82	9,915
Type No.: AN/FRA-1A		
13	----	9,488
Type No.: AN/FRA-1B		
10	----	8,846

PROCUREMENT DATA

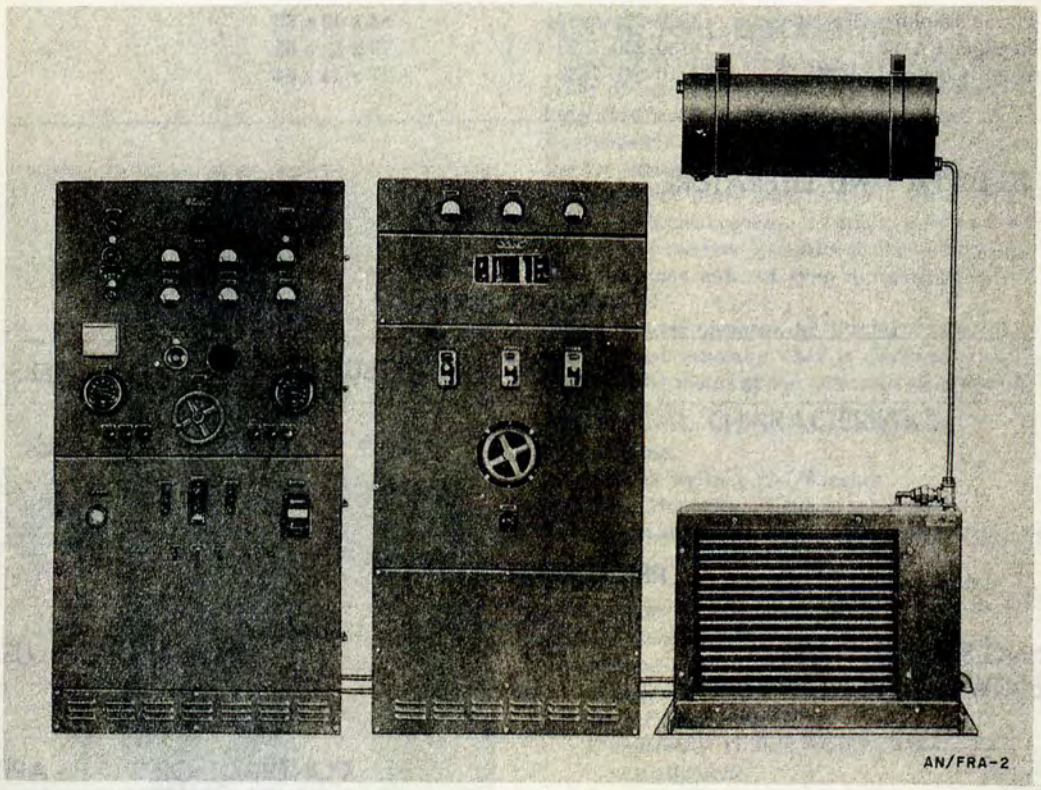
PROCURING SERVICE: USA
SPEC &/or DWG: MIL-A-10209
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Receptor Co., Inc.	Brooklyn, N. Y.	2151-P-50-02	$16,462.00
Collins Radio Co.	Cedar Rapids, Iowa	43026-P-56-55	16,465.00

AMPLIFIER GROUP AN/FRA-2

1 July 1958
Cognizant Serv: USA FSN: 5895-194-9394

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C466-2	--	--



FUNCTIONAL DESCRIPTION:

Amplifier Group AN/FRA-2 is a low- to medium-power, cw or frequency-shift keying, Rf power-amplifying equipment used for fixed-station radioteletypewriter communication.

This equipment consists essentially of the power-amplifier unit (a push-pull, class C amplifier), its associated rectifier, and a water-cooling unit.

This power amplifier is operated with Radio Transmitter BC-339-( ) or equal and is available in several models, all of which are functionally interchangeable but different in design details.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 26.5
Exciter Requirements: 400 to 1,000 w
Type Modulation: AM
Type of Signal: Cw or mcw (300 wpm International Morse Code maximum); or fsk (850-cycle frequency shift)
Power Output: 10 kw
Power Requirements: 220-v 50/60-cycle 3-phase ac

AN/FRA-2 AMPLIFIER GROUP

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Amplifier BC–340	5820–224–5997	83 x 42 x 60	2,370
1	Rectifier RA–22	6130–230–7293	79 x 39 x 95	3,105
1	Water Cooling Unit RU–2	4110–545–7836	47 x 54 x 54	850

REFERENCE DATA AND LITERATURE:

TM 11–801

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
21	653.7	9,258

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–3309

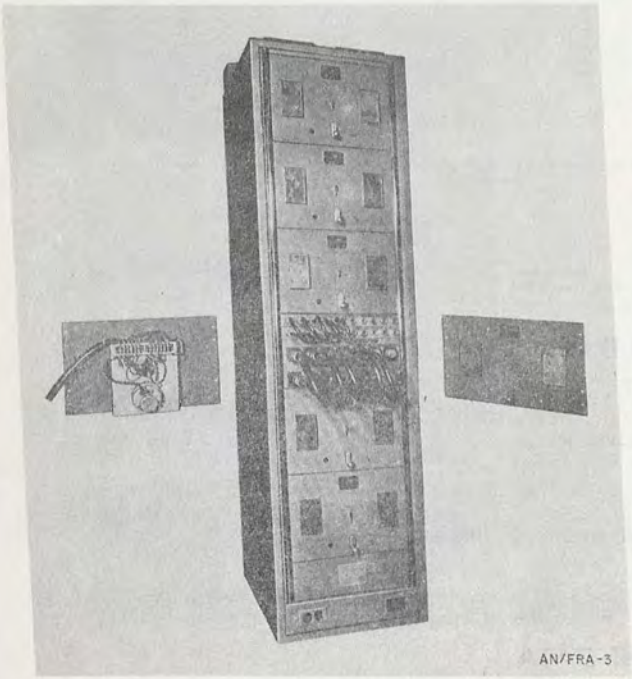
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Lewyt Manufacturing Corp.	Long Island City, N. Y.	21541–P–50–06	$12,488.00

RADIO FREQUENCY SWITCHING GROUP AN/FRA-3

21 November 1958
Cognizant Serv: USN FSN: 5820-303-5722

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Frequency Switching Group AN/FRA-3 is specifically designed to permit radio operators to select any one of forty antennae from the operating position at the receiver. By means of a patching arrangement at the switching location, the five remote-control panels may be patched to control any one of the five (forty point) antenna selector switches.

This equipment consists essentially of five complete systems. Each of five receiver operators at five different locations may select any one antenna from a remotely located group of forty.

The receiver operator, by turning a hand crank, turns a synchronized generator that is electrically connected to a synchronized motor at the antenna switch location.

TECHNICAL CHARACTERISTICS:

Control Panel:
- Size: 19 inches x 12-7/8 inches
- Type Mounting: Standard relay rack
- Mounted Behind Panel: 5G synchronized generator and if. synchronized motor
- Hand Crank: On shaft of sunchronized generator; protrudes through lower center of panel.

Antenna Selector:
- Number: 5
- Location: Mounted in same relay rack cabinet

RF Patch Panels J-239/G:
- Components: 11 Jack Switches 491388, five of which are partially used
- Location: Two are mounted in relay rack cabinets with antenna selectors

Electrical Connector Assemblies J-435/G and J-436/G:
- Location: Mounted in relay rack cabinet with antenna selectors
- Function: To patch synchronized control cables from the control panels to the antenna selector

AN/FRA-3 RADIO FREQUENCY SWITCHING GROUP

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
5	Antenna Selector SA–256/FRA–3		12-7/32 x 15 x 19	47.5
1	Blank panel		3/16 x 5-7/32 x 19	.625
5	Control Panel C–923/FRA–3		8-1/4 x 12-7/32 x 19	16
1	Electrical Connector Assembly J–435/FRA–3		2-1/4 x 3-15/32 x 19	2.25
1	Electrical Connector Assembly J–436/FRA–3		2-1/4 x 3-15/32 x 19	1.875
1 Box	Equipment spares			
2 Sets	Installation drawings			
5	Synchronized control patch cords			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91500

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	23	425

(An additional box holds equipment spares, synchronized control patch cords, manuals, and drawings.)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Transcontinental Electronic Corp.	New York, N. Y.	NObsr–49003, 19 July 1949	$4,500.00

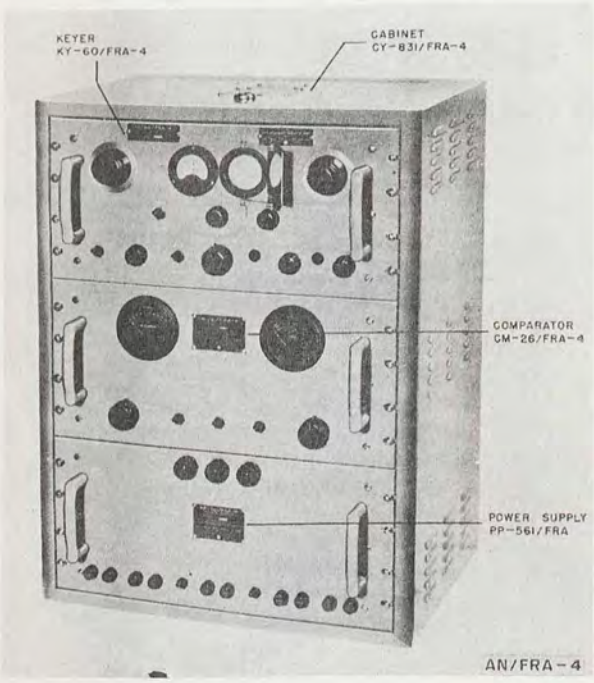
FREQUENCY SHIFT CONVERTER GROUP AN/FRA-4

21 November 1958
Cognizant Serv: USN FSN:

USA	USN	USAF

TYPE CLASS:
STOCK NO:

Used by
F16–Q–112605–200



FUNCTIONAL DESCRIPTION:

Frequency Shift Converter Group AN/FRA–4 is used in the shore-based portion of a radiotelegraph system. It selects the strongest of three frequency shift signals from associated receiving equipments and converts mark-space type frequency into polar relay operation, keyed tone output, and keyed direct current output; or converts multiple shift facsimile-type signals into amplitude modulated tone output.

The outputs are used to operate teletypewriter printers, tape recorders, remotely located telegraph or teletypewriter terminal equipment, facsimile recorders, or similar equipment.

The equipment uses the three intermediate frequency signals from Diversity Radio Receiving Equipment RBP or RCP. A one- or two-receiver system is also applicable.

The comparator, keyer, and power supply may be removed from the main table-mounted type cabinet and mounted in any 19-inch relay rack.

TECHNICAL CHARACTERISTICS:

Frequency Range: 50 kc, 10 kc band
Tone Frequency: 850 to 3,750 cps
Reception:
Type Signal: Frequency shift
Type Modulation: Fm
Power Output:
Tone: 10 v across 600 ohms
Dc Signal 90 v across 3,000 ohms
Polar Relay: 270-v dc
Keying Speeds Obtainable: 100 wpm
Power Requirements: 227 w, 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency Shift Converter Group AN/FRA–4, consisting of:			
1	Cabinet CY–831/FRA–4		28 x 28-3/8 x 17-1/16	159
1	Comparator CM–26/FRA–4		8-3/4 x 19 x 15-3/16	
1	Keyer KY–60/FRA–4		8-3/4 x 19 x 15-3/16	
1	Power Supply PP–561/FRA–4		8-3/4 x 19 x 15-3/16	
1	Maintenance parts kit		12-3/4 x 25 x 16-1/2	86

AN/FRA-4 FREQUENCY SHIFT CONVERTER GROUP

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91496

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	26.7	372

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

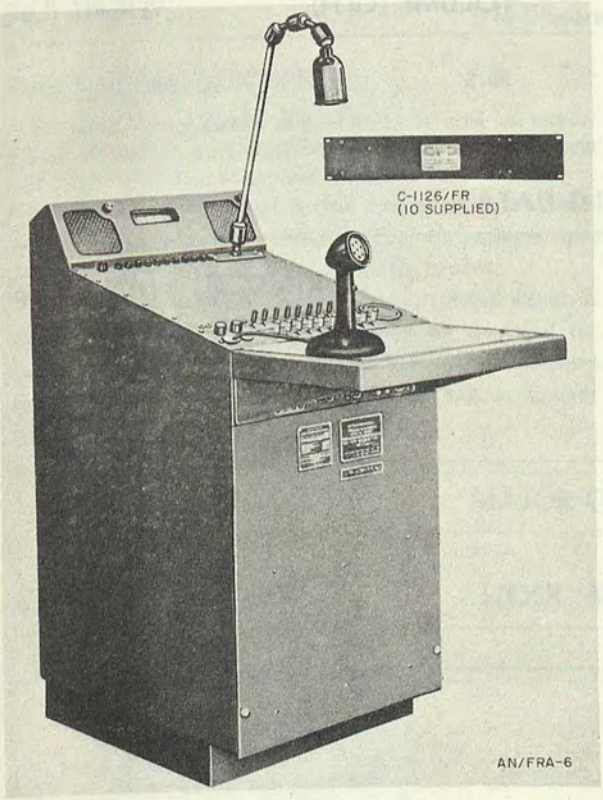
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hoffman Radio Corp.	Los Angeles, Calif.	NObsr–43389, 15 June 1949	

CONTROL-MONITOR GROUP AN/FRA-6

21 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Control-Monitor Group AN/FRA–6 is an airport remote-control console used for the operation of one to ten transmitters remotely located from the airport control tower. It is also used for selecting and controlling the output of one to ten remotely located receivers.

When required, two of these groups can be connected in multiple to share any or all the remote equipment available.

TECHNICAL CHARACTERISTICS:

Number of Controlled Channels: 10 receivers (maximum); 10 transmitters (maximum)

Power Requirements: 25 w, 105- to 125-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier Assembly AM–744/FRA–6	----------	8 x 5-3/4 x 17-7/16	
1	Amplifier, Audio Frequency AM–728/FRA–6	----------	8 x 2-7/8 x 17-7/16	
1	Console, Communication Control OA–408/FRA–6	----------	40 x 19-1/2 x 36	
1	Power Supply PP–851/FRA–6	----------	7-1/4 x 8-5/8 x 10-7/8	

AN/FRA-6 CONTROL-MONITOR GROUP

REFERENCE DATA AND LITERATURE:
NAVSHIPS 91816(a)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	39.2	705

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

CONTROL-MONITOR GROUP AN/FRA-11

21 November 1958
Cognizant Serv: USN FSN:

USA USN USAF

TYPE CLASS:
STOCK NO: Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Control-Monitor Group AN/FRA–11 is used at airport control towers as an aircraft communication control system to provide unified air-to-ground voice communication.

This equipment provides flexible control of 16 transmit-receive communication channels. The transmitters and receivers may be either locally or remotely located.

Provisions are made for recording any received signal. A limited number of voice recorders may be employed for recording specific channels. Any desired shift in channel recording may be made on the jack panel of cabinet number one.

TECHNICAL CHARACTERISTICS:

Number of Controlled Channels: 16 receiver; 16 transmitter
Impedance:
Preamplifier: 200 ohms input; 200 ohms output
Audio Frequency Amplifier AM–1042/FRA–11: 5,000 ohms input; 600 ohms output
Audio Frequency Amplifier AM–1043/FRA–11: 200 ohms input; 600 ohms output
Amplifier Assembly AM–1044/FRA–11: 600 ohms input; 1,200 ohms output
Signal Distributing Panel SB–390/FRA–11: 100,000 ohms input; 600 ohms output
Power Requirements: 1,600 w, 115-v 60-cycle 2-wire 1-phase ac (the dc power is supplied as part of the equipment)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Amplifier Assembly AM–1044/FRA–11		8-3/4 x 13-1/2 x 19	
4	Audio Frequency Amplifier AM–1042/FRA–11		8-3/4 x 14 x 19	
3	Audio Frequency Amplifier AM–1043/FRA–11		5-1/4 x 10-1/2 x 19	
3	Control Indicator C–1443/FRA–11		20-1/16 x 34-3/8 x 35	
3	Dynamic Microphone Electro-voice Model 602D			
1	Power Distribution Panel SB–389/FRA–11		5-1/4 x 5-1/2 x 19	
2	Power Supply PP–1142/FRA–11		8-3/4 x 11-1/2 x 19	
3	Power Supply PP–1143/FRA–11		7-7/8 x 8-3/4 x 19	
1	Radio Signal Distribution Panel SB–390/FRA–11		7 x 13-1/2 x 19	
16	Relay Assembly RE–166/FRA–11		3-1/2 x 9-1/4 x 19	
3	Speaker, Pull Down, Jenson Type AP–10		4-1/2 x 5 dia	

AN/FRA-11 CONTROL-MONITOR GROUP

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92273

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
18	70.7	1,037.2

PROCUREMENT DATA

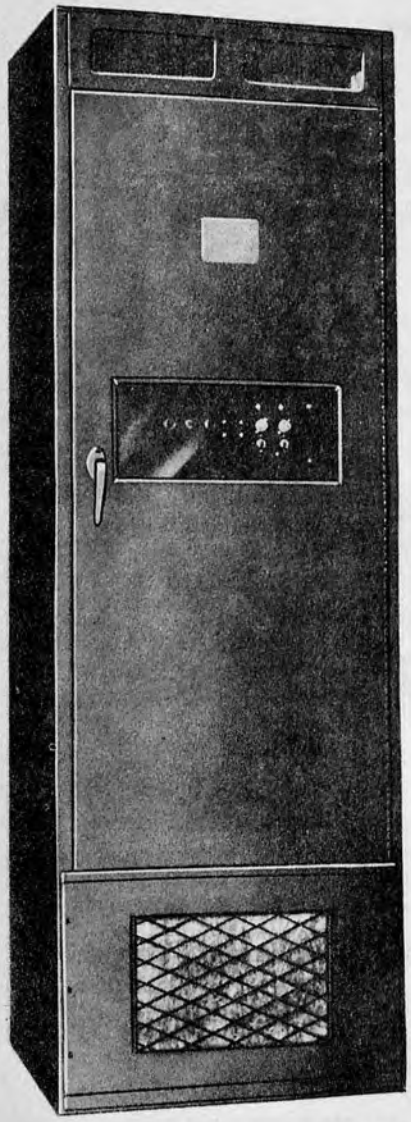
PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Charleston Naval Shipyard	Naval Base, S. C.	BuAer P.O. 40738, 40700	

MODULATOR-POWER SUPPLY AN/FRA-16

21 November 1958
Cognizant Serv: USN FSN: 5825-642-8025

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



AN/FRA-16

FUNCTIONAL DESCRIPTION:

Modulator-Power Supply AN/FRA-16 is designed to provide a high voltage, low voltage, and bias voltage to Dual Ultra-High Frequency Fan Marker Transmitter TZU with which it is used. It also furnishes a 3,000-cycle amplified signal for modulating the transmitter carrier.

Two modulator-power supplies are required for each dual transmitter; one of the power supplies and one of the transmitters being used as standby for emergency purposes.

TECHNICAL CHARACTERISTICS:

Power Output:
- High-voltage Power Supply: 400 ma at 1,000-v dc
- Low-voltage Power Supply: 400 ma at 500-v dc
- Bias Power Supply: 100 ma at −150-v dc
- Tone Oscillator and Modulator: 3,000-cycle modulation tone

Power Requirements: 11- to 16-amp, 93- to 127-v 60-cycle ac

AN/FRA-16 MODULATOR-POWER SUPPLY

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Modulator-power supply	----------	18 x 24 x 72	645

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Lewyt Manufacturing Corp.	Brooklyn, N. Y.	NObsr-64240	$6,000.00

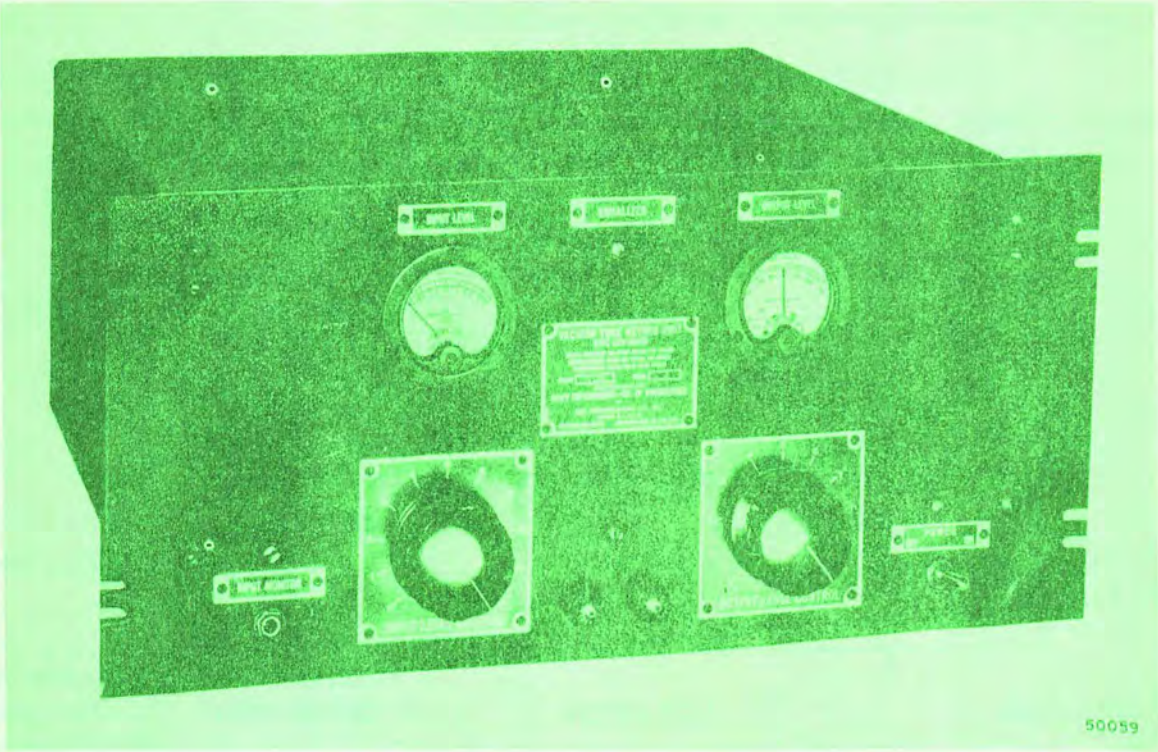
VACUUM TUBE KEYER UNIT AN/FRA-type

7 November 1958
Cognizant Serv: USN FSN: 5820-665-3425 50059

USA USN USAF

TYPE CLASS:
STOCK NO:

Used by



FUNCTIONAL DESCRIPTION:

Vacuum Tube Keyer Unit 50059 consists of an amplifier and rectifier designed for line operation of high-speed telegraphic ink recorders. It is used to link automatically the high-speed telegraphic incoming signals to the recorders.

Incoming low-level sinusoidal signals, keyed at high speed, are amplified and converted to dc pulses of substantially flat-top characteristics suitable for actuating the recorder. It is primarily designed for the differential operation of high-speed recorders. However, unidirectional operation required for operating certain other types of recorders and for vacuum-tube keying of radiotelegraph transmitters also may be used.

TECHNICAL CHARACTERISTICS:

Keying Speed: 500 wpm (maximum), equivalent to 200 keying cps

Signal Input:

Frequency: 300 to 10,000 cps

Sensitivity: −10 db (with provisions for changing sensitivity)

Line Impedance: 600 ohms

Out, Differential or Unidirectional (Ungrounded or Either Side Grounded):

1,600-ohm Load: 40 v

100,000-ohm Load: 125 v

Output Voltage Limits:

Differential Operation: Voltages of opposite polarity equal within 1 db

Unidirectional Operation: Minimum voltage change 40 db

Output Wave Shape: Essentially flat-topped

Ac Attention (Maximum Tone Signal or Harmonic in Output):

Less than 60 uv

Power Requirements: 150 w, 105- to 125-v 50- to 60-cycle 1-phase ac

AN/FRA-type VACUUM TUBE KEYER UNIT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	Vacuum-Tube Keyer Unit 50059	----------	8-3/4 x 16 x 19	72

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 954U5

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division of Radio Corp. of America	Camden, N. J.	NOs-91075, 26 August 1941	

ANTENNA COUPLER AN/FRA-type

5 December 1958
Cognizant Serv: USN FSN: CU-168/FRR

	USA	USN	USAF
TYPE CLASS:	Used by	Used by	Alt-Std
STOCK NO:	--	F16-C-91719-2001	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Antenna Coupler CU-168/FRR is a ground station equipment which provides means for operating up to five communications receivers from a single receiving antenna. Additional couplers may be connected in tandem in order to provide antenna inputs for additional receivers. The coupler is used with an unbalanced line having a nominal impedance of 70 ohms.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 32
Number of Outputs: 5 to receivers; 1 to tandem coupler
Impedance: 70 ohms
Mounting Data: Relay rack (19 in.), or in Cabinet CY-597A/G
Power Requirements: 125 w, 105 to 125 v, 50- to 400-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Coupler CU-168/FRR consists of:		8-23/32 x 19 x 11-13/16	
1	Main chassis			
1	Power supply			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91697A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1		

AN/FRA-type ANTENNA COUPLER

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-C-0015744C

DESIGN COG: USN, BuShips

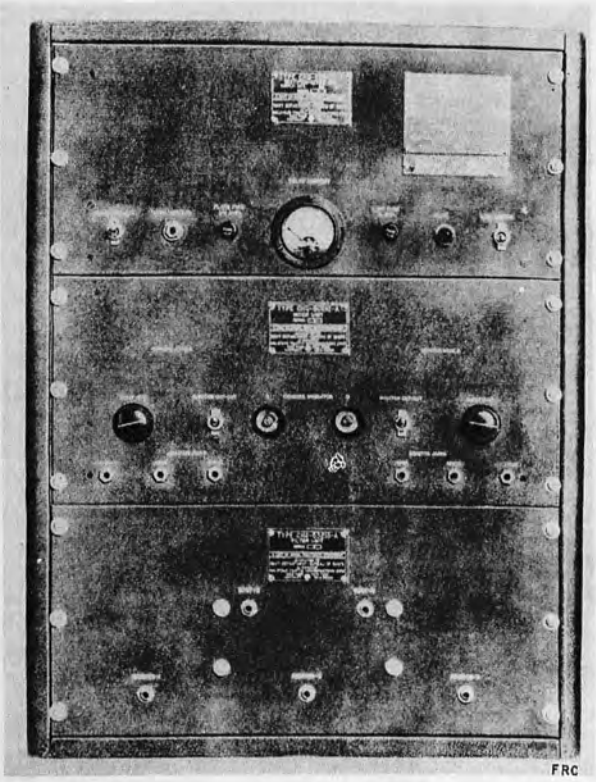
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NObsr-49175, 2 June 1950 NObsr-52727	

FREQUENCY SHIFT RECEIVER CONVERTER AN/FRA-type

5 December 1958
Cognizant Serv: USN FSN:

FRC

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-15108-100	--



FRC

FUNCTIONAL DESCRIPTION:

Frequency Shift Receiver Converter FRC is used to demodulate frequency-shift-keyed radioteletype signals. It functions at audio frequencies and is used with any two stable communication receivers equipped with a beat-frequency-oscillator. "Polar keying" is used. The unit provides dual-channel diversity reception, and is used at shore stations.

The FRC is identical with Frequency Shift Receiver Equipment FRC-1 except that the FRC uses Navy components. The FRC replaces nomenclature for the identical Navy Model FSC.

The following equipment is used with, but is not supplied with, Frequency Shift Receiver Converter FRC: spaced diversity (2) antennas, and communication receivers (2).

TECHNICAL CHARACTERISTICS:

Frequency:
Mark: 2,975 cps
Space: 2,125 cps
Keying Speed: 70 dot cps on relay output. Several hundred wpm on tone output
Input Impedance: 500 ohms
Input Level: 6 mw (minimum)
Limited Range: 0.5- to 30-v rms input
Limited Output: 4-v rms
Limited Output Impedance: 500 ohms
Attenuator Loss: 12 db
Mark and Space Filter Input and Output Impedances: 500 ohms
Space Filter Bandpass: 1,600 to 2,600 cps
Mark Filter Bandpass: 2,400 to 3,600 cps
Rejection Ratio (Space Channel): 26 db down
Output Mixer Unit: 15 ma at 10-v polar dc (4-v minimum)
Output Tone Keyer: 1,000 cps af tone
Mounting: Table or standard relay rack
Power Requirements: 115-v, 50- to 60-cycle 1-phase ac

AN/FRA-type FREQUENCY SHIFT RECEIVER CONVERTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency Shift Converter Model FRC consists of:	----------	15 x 21 x 28	150
1	Cabinet RW–10420 includes:	----------	15 x 21 x 28	150
1	Filter Unit RVV–53215			
1	Mixer Unit RW–50212			
1	Power and Keyer Unit BVV–20345			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,078

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

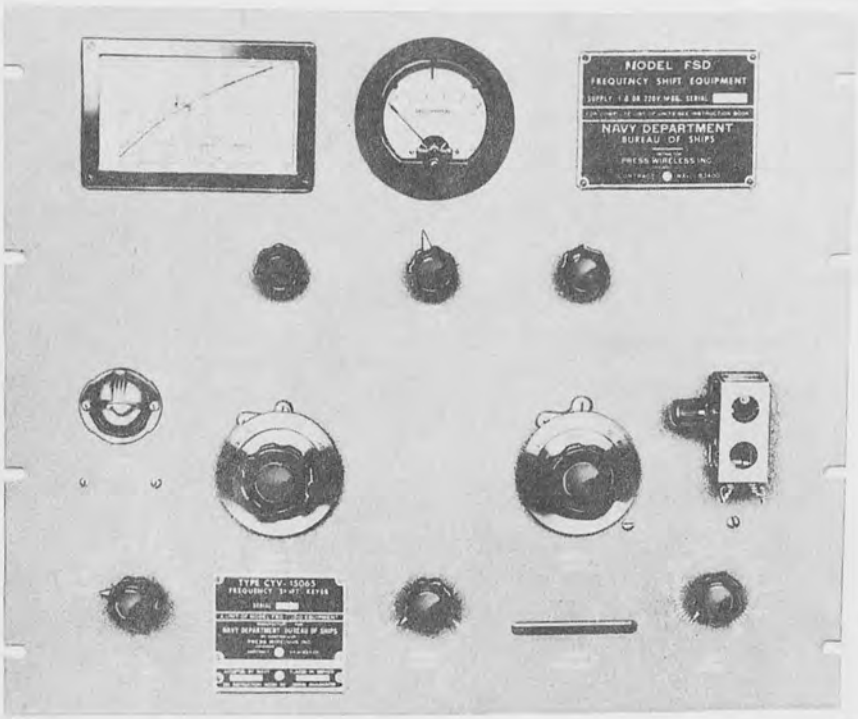
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Washington Navy Yard	Washington, D.C.	----	$2,500.00 with spares

FREQUENCY SHIFT KEYER EQUIPMENT AN/FRA-type

26 November 1958
Cognizant Serv: USN FSN: FSD

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FSD

FUNCTIONAL DESCRIPTION:

Frequency Shift Keyer Equipment FSD is used to replace the exciter of a continuous-wave transmitter with a source of radio-frequency excitation that can be frequency-shift keyed to produce telegraph or facsimile signals corresponding to the signals at the keyer input. This method of keying minimizes selective fading, interference, and static disturbances, thereby assuring a higher fidelity of transmission. It is primarily intended for installation in shore stations.

Four preset crystal-controlled oscillator frequencies a provided.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2 to 5 mc
Type Modulation: Fm
Type of Signals: Frequenc hift keying
Input Level: 0 to −20 db
Power Output: 1-1/2 w (variable)
Power Requirements: 100- 260-v 60-cycle 1-phase ac

AN/FRA-type FREQUENCY SHIFT KEYER EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency Shift Keyer CYV–35065 consists of:	----------	12-1/2 x 15-3/4 x 19	65
1	Audio-frequency chassis			
1	Oscillator oven chassis			
1	Radio-frequency chassis			
1	Rectifier Power Unit CYV–20349	----------	8-3/4 x 12 x 19	30

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

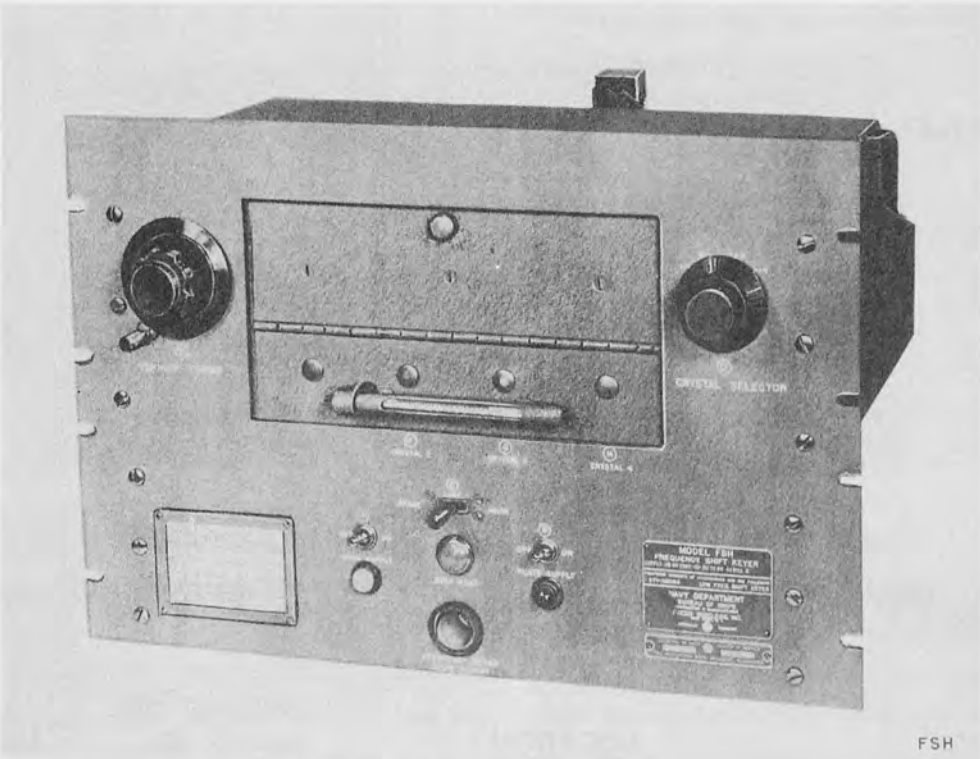
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Press Wireless, Inc.	Chicago, Ill.	NXsr–83400, 27 November 1944	

FREQUENCY SHIFT KEYER EQUIPMENT AN/FRA-type

26 November 1958
Cognizant Serv: USN FSN: 5815-328-9335 FSH

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FSH

FUNCTIONAL DESCRIPTION:

Frequency Shift Keyer Equipment FSH provides a means of conveying intelligence on a radio circuit using the principle of carrier frequency shift. Mark and space impulses received by the unit produce two fixed frequency conditions which differ by 170 cycles per second.

This unit replaces the oscillator of the transmitter with which it is associated. Although designed primarily for radioteletype, the basic system of frequency-shift keying can be used on any radiotelegraph system having similar keyed signal requirements.

The FSH is intended to operate as an exciter with Radio Transmitter BC-365 or similar transmitters and may be keyed either by teletypewriters, Demodulator 50124, or Vacuum Tube Keyer Unit 50059. It is designed for standard 19-inch rack mounting, but may be table mounted.

TECHNICAL CHARACTERISTICS:

Frequency Range: 100 to 500 kc
Frequency Control: Crystal
Frequency-shift Data:
Mark: +85 cps above assigned frequency
Space: −85 cps below assigned frequency
RF Output: 2 w
Keying Data:
Signal: 30- to 100-v dc polar or neutral signal
Speed: 60 wpm or teletypewriter impulses
Power Requirements: 125 w, 115/230-v 50- 60-cycle ac

AN/FRA-type FREQUENCY SHIFT KEYER EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency Shift Keyer Model FSH	----------	12-1/4 x 14 x 19	75

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

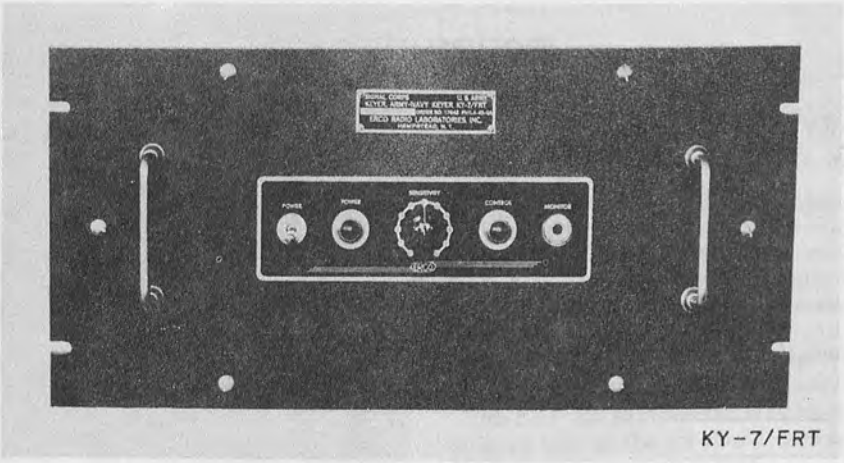
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Press Wireless, Inc.	New York, N. Y.	NXsr-91981	$2,000.00 with spares

TONE KEYING UNIT AN/FRA-type

1 July 1958
Cognizant Serv: USA FSN: 5820-263-1171

KY-7/FRT

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C2262-7A	--	--



KY-7/FRT

FUNCTIONAL DESCRIPTION:

Tone Keying Unit KY-7/FRT provides a keyed negative output voltage and adapts any type of keyed radio transmitting equipment to tone-keying operations.

A 1,000-cycle keying tone is fed over a 500-ohm line into the input transformer, which has a center tap for simplex control.

This equipment contains a polarized keying relay, controlled by the keyed tone input, that can be used to key an associated radio transmitter.

TECHNICAL CHARACTERISTICS:

Type of Signal: Tone keyed negative output voltage
Input Impedance: 500 ohms
Keyed Output Voltage: 0 to 115 v
Power Requirements: 115/230-v 50-60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Tone Keying Unit KY-7/FRT (Equipment consists of only one major component.)	(FSN) 5820-263-1171	8-3/4 x 9-13/16 x 19	28.3

REFERENCE DATA AND LITERATURE:

TM 11-2669

AN/FRA-type TONE KEYING UNIT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2.7	67

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-T-10247

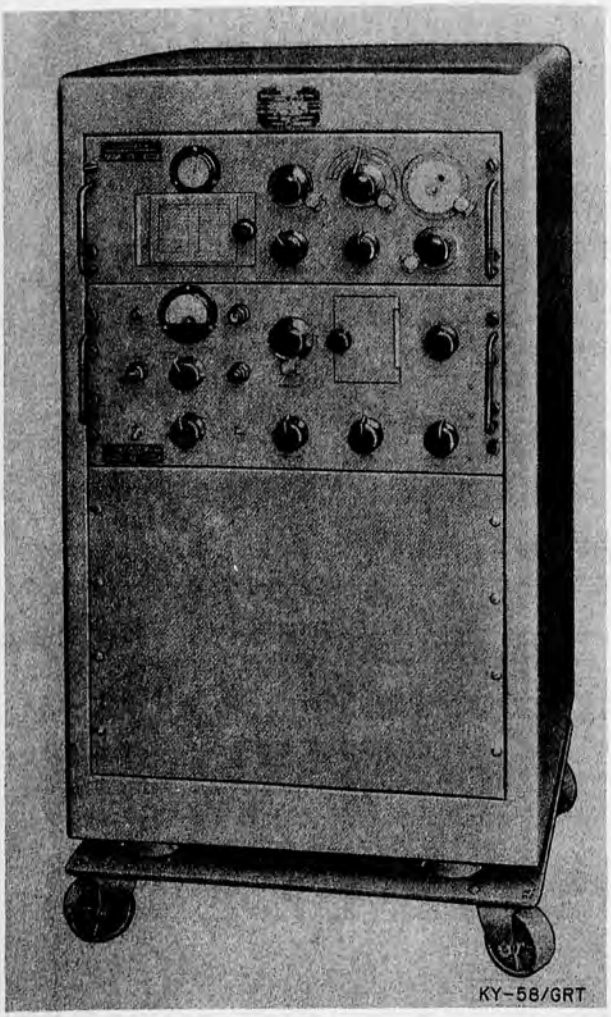
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Erco Radio Laboratory, Inc.	Garden City, N. Y.	17643-P-45-04	$160.08
Lucian Labs	----	23459-P-50-10	266.50

KEYER AN/FRA-type KY-58/GRT

3 December 1958
Cognizant Serv: USN FSN: 5820-503-3402

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Used by
STOCK NO:	2C640-58	F16-K-47681-1001	- - -



FUNCTIONAL DESCRIPTION:

Keyer KY-58/GRT is a frequency-shift keyer used in long distance radio telegraph systems to improve transmission. It replaces the exciter of a continuous wave transmitter with a source of excitation that can be shifted in frequency (a smaller value higher and lower) to produce telegraph or facsimile signals corresponding to those delivered to the transmitter input. This frequency-shift method is used to minimize selective fading, interference, and static disturbances.

This keyer can be connected to an external master oscillator (such as that of the associated transmitter) and provides three crystal-controlled channels.

Keyer KY-58/GRT is electrically and mechanically identical with Keyer KY-75/SRT except that the KY-58/GRT is mounted on casters for mobility whereas the KY-75/SRT is not.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.0 to 6.7
Type Modulation: Fm
Type of Signal: Frequency-shift keying, facsimile
Power Output: 6 w into 75-ohm load
Power Requirements: 470 w, 115/230-v 50/60-cycle 1-phase ac

AN/FRA-type KEYER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Keyer KY-58/GRT	5820-503-3402		
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91543

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	20.9	469

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.	Malden Mass.	NObsr-42513, 30 June 1948 NObsr-52052, 30 October 1950	$1160.00

EXCITER UNIT AN/FRA-type

5 December 1958
Cognizant Serv: USA FSN: 0–5/FR, 0–5A/FR: 5820–194–9657
0–5B/FR, 0–5C/FR: 5820–240–3899

0–5( )/FR

	USA	USN	USAF
TYPE CLASS:	Std	--	L/Std
STOCK NO:	0–5/FR, 0–5A/FR: 2C2710–5, 0–5B/FR, 0–5C/FR: 2C2710–5B	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Exciter Unit 0–5( )/FR is a frequency-shift keying device. It generates a mark signal 425 cps above an assigned frequency upon closing a standard telegraph key and a space signal 425 cps below the assigned frequency upon opening the key.

Although designed primarily for radioteletype, the basic system of frequency-shift keying can be used on any radiotelegraph system having similarly keyed signal requirements.

The equipment is designed for mounting on a table or in a standard 19-inch relay rack.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 6
Frequency Shift: 0 to 1000 cps positive
Rf Output: 2 w (variable)
Rf Termination: Coaxial fitting
Power Requirements: 125 w, 110/220-v 50–60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Exciter Unit 0–5( )/FR	----------	12-1/4 x 12-1/2 x 19	81

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–2205

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	8	108

AN/FRA-type EXCITER UNIT

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

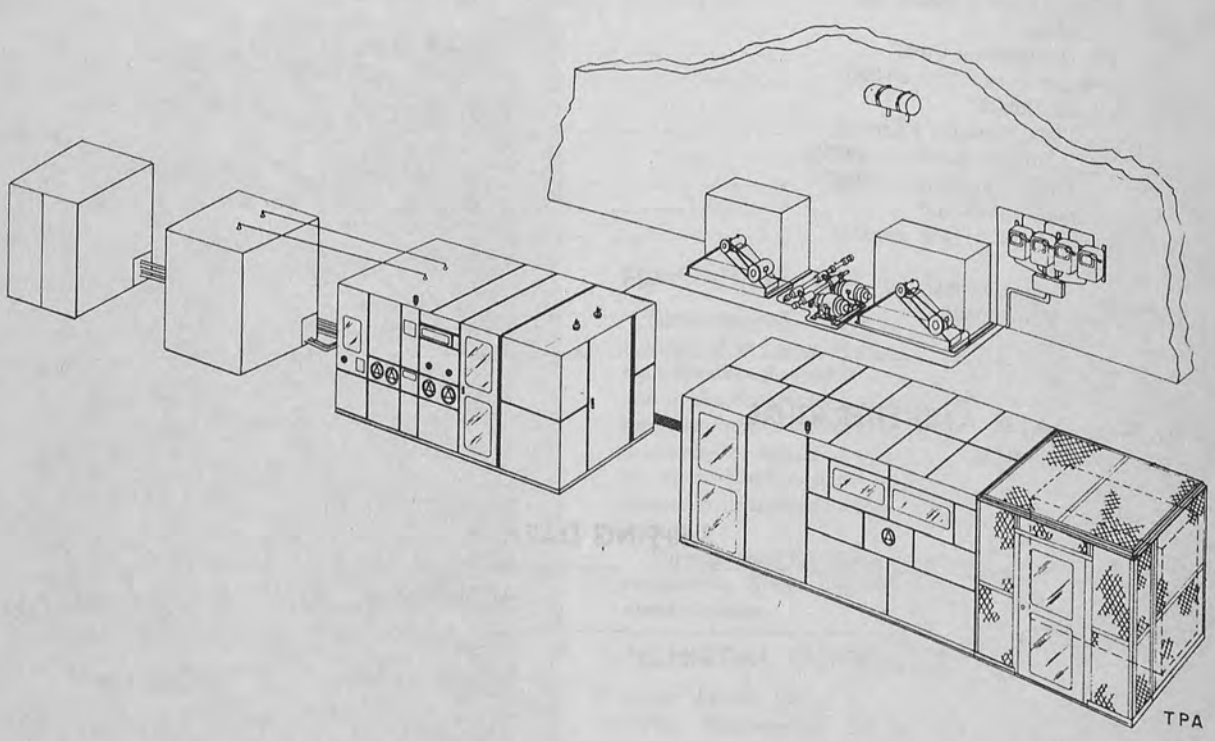
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Press Wireless, Inc.	Hicksville, N. Y.	31402 Phila 43–02; 31402–43 PP 2008	

HIGH FREQUENCY POWER AMPLIFIER EQUIPMENT AN/FRA-type

20 October 1958
Cognizant Serv: USN FSN: TPA

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

High Frequency Power Amplifier Equipment TPA is an hf power amplifier intended primarily for shore radio installations. It is used for the amplification and transmission of radio communications from one shore station to another, or from a shore station to ships at sea.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 22
Frequency Control: External exciter unit
Type Signal: Cw, mcw, voice
Power Output: 50 kw
Input Impedance: 200 and 600 ohms
Output Impedance: 600 ohms
Power Requirements: 220-v 50- to 60-cycle 3-phase ac

AN/FRA-type HIGH FREQUENCY POWER AMPLIFIER EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Cooling unit 10565		51 x 60 x 62	1,378
1	Dual Pump Unit 10565		35 x 36 x 50	618
1	Power Amplifier 50278, including:		60 x 78 x 168	6,816
1	Oscillograph 61067		8-3/4 x 14-1/4 x 19-1/2	54
1	Rectifier Power Unit 20458, consisting of:		60 x 78 x 168	5,991
1	Plate Contact or Circuit Breaker Assembly 29905		21 x 36-1/2 x 69	971
1	Plate Transformer 302867		32 x 66 x 73	6,675
1	Screen inclosure		60 x 78 x 80	404
1	Starter Rack 211656, consisting of:		7 x 11 x 15	235
1	Magnetic controller			
1	Surge Tank 10566		14 x 16 x 34	75

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,962(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
40	2,512	39,114

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

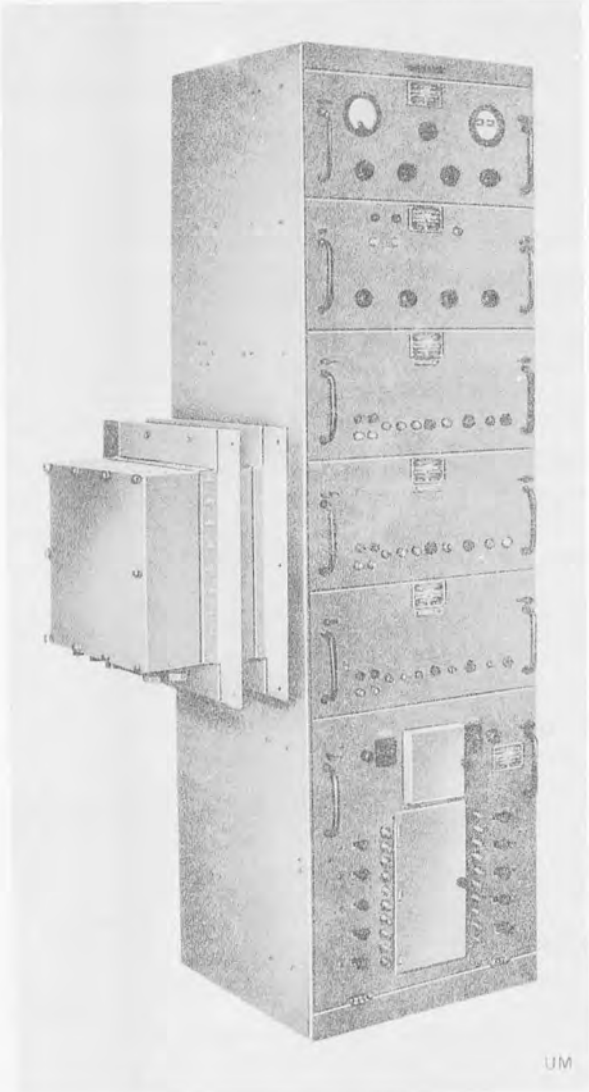
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Corp.	Clifton, N. J.	NXsr-84985	

LORAN SWITCHING EQUIPMENT AN/FRA-type

12 November 1958
Cognizant Serv: USN FSN: UM

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--



UM

FUNCTIONAL DESCRIPTION:

Loran Switching Equipment UM is used in transmitting stations of a Loran system to correlate the major station equipments and to perform the auxiliary functions of shielding and of discriminating between local and remote pulses. The loran equipment consists of an excitation switching unit, a discriminator switching unit, three discriminator units, and a power distribution panel mounted in a cabinet. The unit is located with transmitting and timing equipment in a shielded room.

Three distinct functions are performed by Loran switching equipment. These are selective switching, isolation, and discrimination.

TECHNICAL CHARACTERISTICS:

Power Factor: 95%

Power Requirements: 600 w (approximately) with space heaters on, 115-v (±5 v) 55- to 65-cycle 1-phase ac

AN/FRA-type LORAN SWITCHING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
5 sets	Equipment spares	----------	15 x 15 x 24	130
1	Loran Switching Equipment UM, consisting of:	----------	20 x 36-13/16 x 77-5/16	630
1	Cabinet 10473	----------	20 x 36-13/16 x 77-5/16	305
1	Discriminator Switching Unit 23483	----------	9-39/64 x 20-5/16 x 22	35
3	Discriminator Unit 50247	----------	9-39/64 x 20-5/16 x 22	75
1	Excitation Switching Unit 24471	----------	9-34/64 x 19-1/2 x 22	30
1	Power Distribution Panel 23482	----------	5 x 22 x 22	35

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,745

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	221.82	2,615

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Bridgeport, Conn.	NXsr-81395, 30 December 1944 NXsr-88826, 11 January 1945 NXsr-8826, 11 January 1945	

AUTOMATIC TRANSMITTER FOR PERFORATED TAPE AN/FRA-type

26 November 1958
Cognizant Serv: FSN:

XTR-442-C

USA USN USAF

TYPE CLASS:
STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Automatic Transmitter for Perforated Tape XTR-442-C is an electromechanical device used to produce International Morse Code characters from perforated Wheatstone tape at speeds variable from 10 to 100 words per minute. It is used with radiotelegraph transmitting equipment and carrier telegraph equipment at ground stations.

The equipment consists of an auto head and drive unit and an electronic unit, each contained in a separate case. The auto head and drive unit keys electrical impulses in response to the perforations on the Wheatstone tape. The electronic unit operates with the auto head and drive unit to produce modulated signals or to operate a keying relay, either of which may be used to key a radiotelegraph transmitter.

Two types of output are available. The terminal output of an electronically operated relay (bias or similar voltage) is used for the control of a radiotelegraph transmitter. Keyed audio-frequency tone from several automatic tape transmitters may be used with appropriate carrier equipment for the control of radiotelegraph transmitters at a remote location. In addition, the auto head, through which the perforated tape passes, can be used to operate any standard polar relay for local control of a transmitter without using the electronic unit.

TECHNICAL CHARACTERISTICS:

Keying Speed: Variable from 10 to 100 wpm
Power Requirements: 115-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Auto head and drive unit	----------	8-1/2 x 12 x 13-3/4	30
1	Electronic unit	----------	9-1/4 x 10 x 15	14

REFERENCE DATA AND LITERATURE:

TM 11-2545

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5.7	141

AN/FRA-type AUTOMATIC TRANSMITTER FOR PERFORATED TAPE

PROCUREMENT DATA

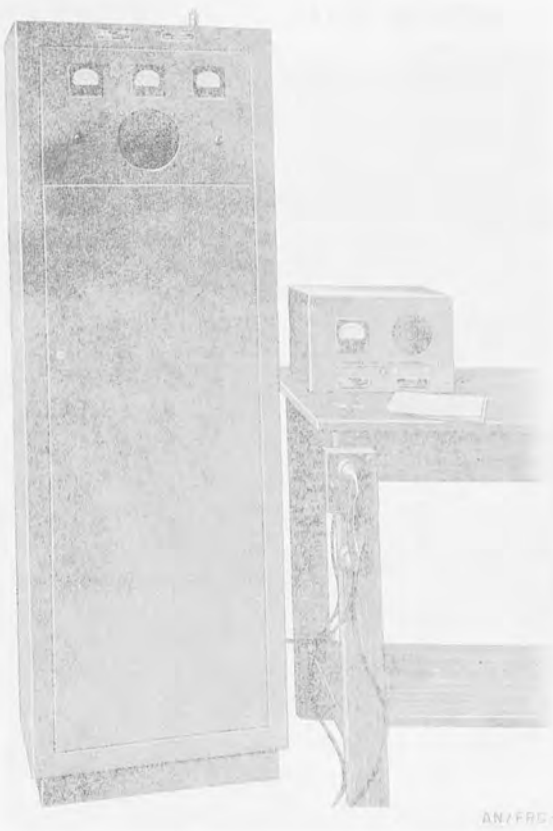
PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:
DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
McElroy & Goode, Inc.	Boston, Mass.		

RADIO SET AN/FRC-6

1 July 1958
Cognizant Serv: USA FSN: 5820-192-7142

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	
STOCK NO:	2S2002-6A		



FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC-6 is a two-way, crystal-controlled, FM (voice) transmitting and receiving equipment used for communication in the vhf band by military police, security troops, and similar units.

The equipment consists of cabinet-inclosed, rack and panel-mounted equipment and includes a control console, handset, and associated accessories.

This set can be operated by remote control over a field telephone pair from a distance up to 10 miles and can communicate with fixed or vehicular stations, in open country up to 20 miles away.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 40
Type Modulation: Fm
Type of Signal: Voice
Power Output: 50 w
Power Requirements: 325 w, 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AS-412/FRC-6	(FSN) 5985-243-0428		
1	Console C-559A/FRC-6	(FSN) 5820-194-2969	12 x 18 x 10	33
1	Rack MT-658A/FRC-6 consists of:	(USA) 2Z7383-658A	68-7/8 x 22-1/2 x 15	173
	Radio Receiver R-276A/FRC-6	(FSN) 5820-164-7229	9 x 9 x 18-1/2	21
	Radio Set Control C-560A/FRC-6	(FSN) 5820-170-4778	5-1/4 x 6 x 18-1/2	9
	Radio Transmitter T-215A/FRC-6	(FSN) 5820-194-0974	9 x 9 x 18-1/2	38

AN/FRC-6 RADIO SET

REFERENCE DATA AND LITERATURE:

TM 11-5506

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	40.101	496

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-3291

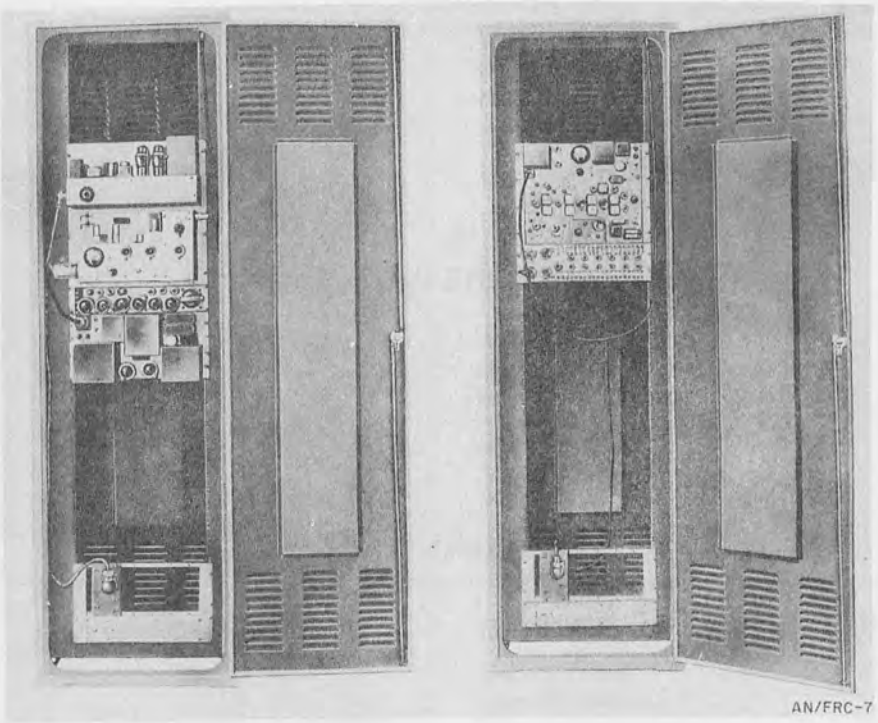
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Farnsworth Electronics Division, International Telegraph & Telephone Corp.	Palo Alto, Calif.	37214-P-53-51	$1,223.46

RADIO SET AN/FRC-7( )

1 July 1958
Cognizant Serv: USA FSN: 5820-249-6593

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S2002-7	--	--



AN/FRC-7

FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC-7( ) is a medium-power, Am (voice and tone) receiving and transmitting equipment used for fixed-plant relay, point-to-point, ground-to-air, and similar applications in the vhf band.

This equipment consists of rack-mounted operating components (installed in a steel, floor-type cabinet), an antenna, a power supply, and associated items.

This set can provide four-channel communication with such equipment as Carrier Terminal Set AN/FCC-2.

When the operating components of this equipment are installed in special weatherproof cabinets, the set is designated Radio Set AN/FRC-17.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 132 to 156
Type Modulation: Am
Type of Signal: Voice or tone
Power output: 12 w
Power Requirements:
Transmitter: 400 w, 105-125-v 60-cycle 1-phase ac
Receiver: 90 w, 105-125-v 60-cycle 1-phase ac

AN/FRC-7( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna AS-576/FRC	(USA) 2A264-576	54 x 50 x 12	40
2	Cabinet	----------	84 x 17 x 26-1/4	265
1	Power Supply PP-749/FRC	(FSN) 6130-245-9677	8-3/4 x 8-3/4 x 19	68
1	Radio Receiver R-448/FRC	(FSN) 5820-244-8534	14 x 2-1/2 x 19	20
1	Radio Transmitter T-326/FRC	(FSN) 5820-252-4626	19-7/32 x 8-11/16 x 19	14

REFERENCE DATA AND LITERATURE:
TM 11-292

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7	134.8	1,149

PROCUREMENT DATA

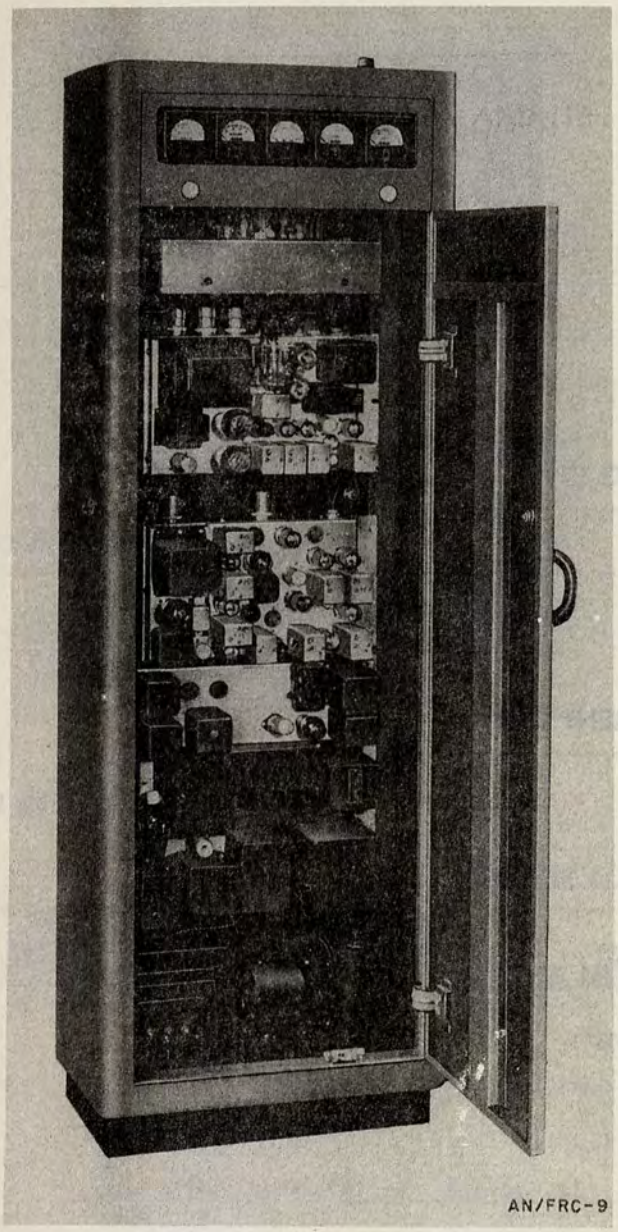
PROCURING SERVICE: USA
SPEC &/or DWG:
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Receptor Co. Inc.	Brooklyn, N. Y.	14598-P-50-06	$3,182.00

RADIO SET AN/FRC-9

1 July 1958
Cognizant Serv: USA FSN: 5820-230-0442

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C5608	--	--



AN/FRC-9

FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC-9 is a medium-power, crystal-controlled, Fm (voice), radio transmitting and receiving equipment operating in the vhf band. It is used for fixed-station, point-to-point communication for traffic control by guard and security troops, military police units and similar organizations.

This equipment consists of a single-channel transmitter with associated receiver and power supply components inclosed in a floor-type metal cabinet. It has an automatic power overload reset, and includes a blower motor.

A whip-type or equivalent antenna is used.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 40
Type Modulation: FM
Type of Signal: Voice
Power Output: 250 w
Power Requirements: 1,160 w, 115-v 60-cycle ac

AN/FRC-9 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna	2A292–8250		
1	Control panel	2C2801–1		
1	Rack	2Z7381.20		
1	Radio Receiving Set AN/FRR–5	2C4508		
1	Radio transmitter	2C6702		
1	Remote Control Unit C–408/FR	2C731		
1	Rf amplifier	2C305		
1	Transmitter control	2C729–4		

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

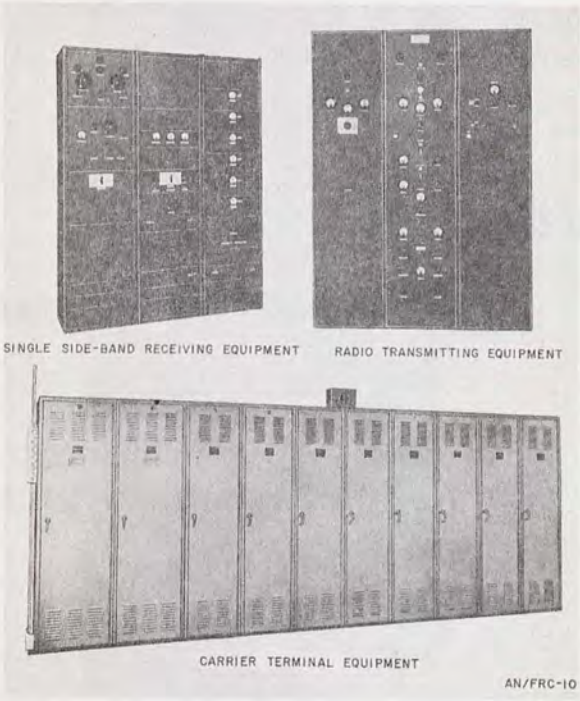
PROCURING SERVICE: USA DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/FRC-10

1 July 1958
Cognizant Serv: USA FSN: 5820-188-6177

	USA	USN	USAF
TYPE CLASS:	Std	Std	Std
STOCK NO:	2C5110	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC-10 is a high-power, hf, long range, AM (voice, and tone) radioteletype communication equipment used in long-distance, fixed-plant applications.

This equipment consists of a single-sideband radio transmitter, radio receiver, and carrier terminal facilities. It provides six full duplex radioteletype channels (plus a vf order-wire facility) when operated in a system terminated by identical or equivalent equipment. It can be arranged for double modulation diversity operation when required to overcome fading or interference with long-distance communication.

This set requires elaborate antenna arrays, and power is provided by 5-kw field power units located at each of the sites of the operating components, which usually are displaced a considerable distance from each other.

The U. S. Navy radio transmitting equipment TEF is essentially the same as Radio Transmitter WECO D156000, which is part of this set; Radio Receiver REA (USN) is essentially the same equipment as Radio Receiver WECO D-99945.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4.5 to 22
Type Modulation: Am (single-sideband)
Type of Signal: Voice and tone
Power Output: 2 kw (peak envelope)
Power Requirements:
Transmitter: 5 kw, 220-v 50/60-cycle 3-phase ac
Receiver: 500 w, 115-v 50/60-cycle 1-phase ac
Carrier Terminals: 3 kw, 115-v 50/60-cycle 1-phase ac
Distortion Measuring Bay: 250 w, 115-v 50/60 cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Carrier Terminal OA-63/FRC-10	5805-240-6224-		
	AND		220-1/4 x 84 x 17	5,260
1	Carrier Terminal OA-64/FRC-10	5805-241-3305-		
1	Distortion measuring bay	6625-669-0093	22 x 84 x 17	350
1	Radio Receiver D-99945	6636-194-7068	65-1/8 x 84 x 18-1/4	1,440
1	Transmitter WECO D-156000	5820-189-7041	60-3/4 x 88 x 30	2,400

AN/FRC-10 RADIO SET

REFERENCE DATA AND LITERATURE:

TM 11-2132, TM 11-832, TM 11-884

SHIPPING DATA

PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs)
OA-63/FRC-10 and OA-64/FRC-10 D-99945 D-156000	25	213.5	5,478

PROCUREMENT DATA

PROCURING SERVICE: USA DESIGN COG: USA, Sig C

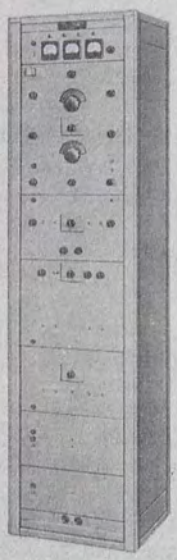
SPEC &/or DWG: (USA) 89067-89080

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.		

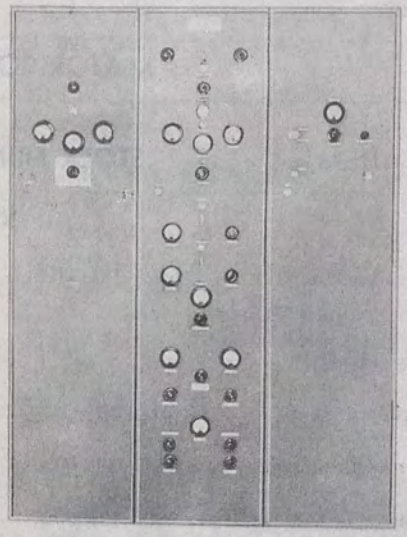
RADIO SET AN/FRC-10A

1 July 1958
Cognizant Serv: USA FSN: 5820-193-7099

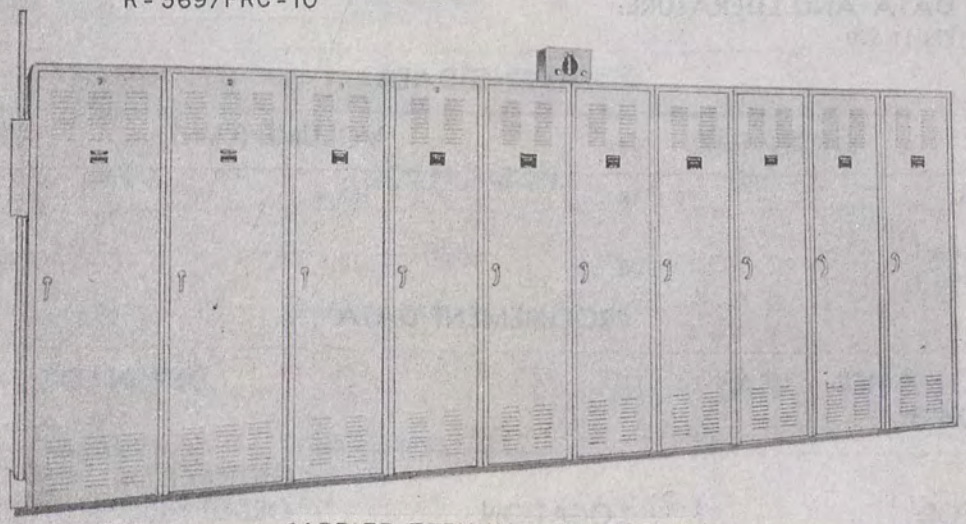
	USA	USN	USAF
TYPE CLASS:	Std	Std	Std
STOCK NO:	2C5110A	--	--



RADIO RECEIVER
R-369/FRC-10



RADIO TRANSMITTING EQUIPMENT



CARRIER TERMINAL EQUIPMENT

AN/FRC-10A

AN/FRC-10A RADIO SET

FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC–10A is an improved version of Radio Set AN/FRC–10; the commercial receiver unit has been replaced by Radio Receiver R–369/FRC–10. The same multiplexing equipment (Carrier Terminal OA–63/FRC–10 and Carrier Terminal OA–64/FRC–10) and transmitter (commercial WECO D–156000) are used in this set as were used in the earlier model, AN/FRC–10.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitter: 4.5 to 22
Receiver: 4 to 28
Type Modulation: Am
Type of Signal: Composite transmissions consisting of tone-radioteletype, voice, fascimile, or other audio frequencies in the range from 100 to 6,000 cpsp also, standard double-sideband am
Power Output: 2 kw (peak envelope)
Power Requirements:
Transmitter: 5 kw, 220-v 50/60-cycle 3-phase ac
Receiver: 500 w, 115-v 50–60-cycle 1-phase ac
Carrier terminals: 3 kw, 115-v 50/60-cycle 1-phase ac
Distortion Measuring Bay: 250 w, 115-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Carrier Terminal OA–63/FRC–10	5805–241–3305		
	AND		220-1/4 x 84 x 17	5,260
1	Carrier Terminal OA–64/FRC–10	5805–240–6224		
1	Distortion measuring equipment	6625–669–0093	22 x 84 x 17	
1	Radio Receiver R–369/FRC–10	5820–497–9043	22-1/2 x 84 x 17	550
1	Transmitter WECO D–156000	5820–189–7041	60-3/4 x 88 x 30	2,400

REFERENCE DATA AND LITERATURE:

TM 11–832, TM 11–870

SHIPPING DATA

PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs)
R–369/FRC–10 D–156000	18	156.4	2,111
OA–63/FRC–10 & OA–64/FRC–10	25	213.5	5,478

PROCUREMENT DATA

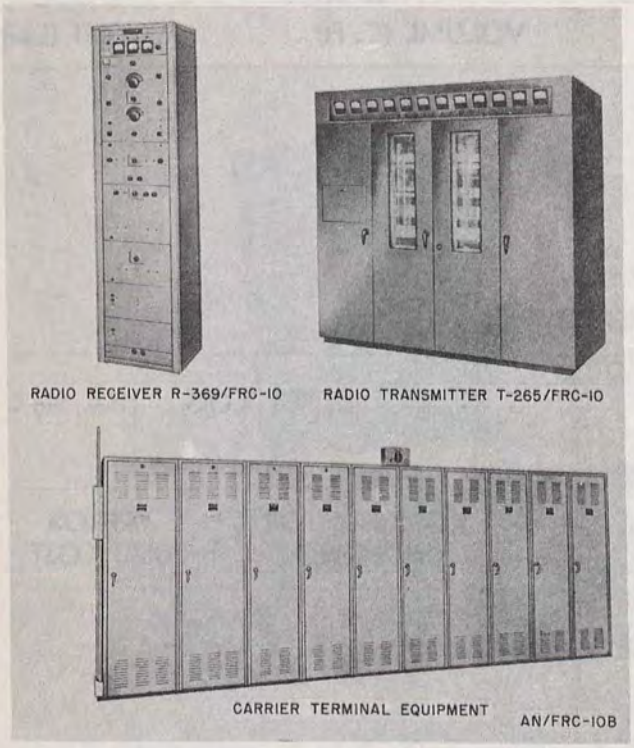
PROCURING SERVICE: USA DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/FRC-10B

1 July 1958
Cognizant Serv: USA FSN: 5820-186-9264

	USA	USN	USAF
TYPE CLASS:	Std	Std	Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC-10B is an improved verion of Radio Set AN/FRC-10; the commercial transmitter and receiver units have been replaced by Radio Transmitter T-265/FRC-10 and Radio Receiver R-369/FRC-10. The same multiplexing equipment (Carrier Terminal OA-63/FRC-10 and Carrier Terminal OA-64/FRC-10) is used in all models of the AN/FRC-10( ).

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitter: 4 to 23
Receiver: 4 to 28

Type Modulation: Am

Type of Signals: Composite transmissions consisting of tone-radioteletype, voice, facsimile, or other audio frequencies in the range from 100 to 6,000 cps; also, standard double-sideband am

Power Output: 4 kw (ssb peak envelope power), 1 kw (dsb carrier)

Power Requirements:
Transmitter: 10kw, 230-v 50/60-cycle 3-phase ac
Receiver: 500 w, 50-60-cycle 1-phase ac
Carrier terminals: 3 kw, 115-v 50/60-cycle 1-phase ac
Distortion measuring bay: 250 w, 115-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USN)		
1	Carrier Terminal OA-63/FRC-10	5805-241-3305		
	AND		220-1/4 x 84 x 17	5,260
1	Carrier Terminal OA-64/FRC-10	5805-240-6224		
1	Distortion measuring equipment	6625-669-0093	22 x 84 x 17	
1	Radio Receiver R-369/FRC-10	5820-497-9043	22-1/2 x 84 x 17	550
1	Radio Transmitter T-265/FRC-10	5820-249-6609	84 x 84 x 42-1/2	5,800

AN/FRC-10B RADIO SET

REFERENCE DATA AND LITERATURE:

TM 11-814, TM 11-870

SHIPPING DATA

UNIT	PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
T-265/FRC-10	31	595.3	10,009
R-369/FRC-10	18	156.4	2,111
OA-63/FRC-10 & OA-64/FRC-10	25	213.5	5,478

PROCUREMENT DATA

PROCURING SERVICE: USA DESIGN COG: USA, Sig C

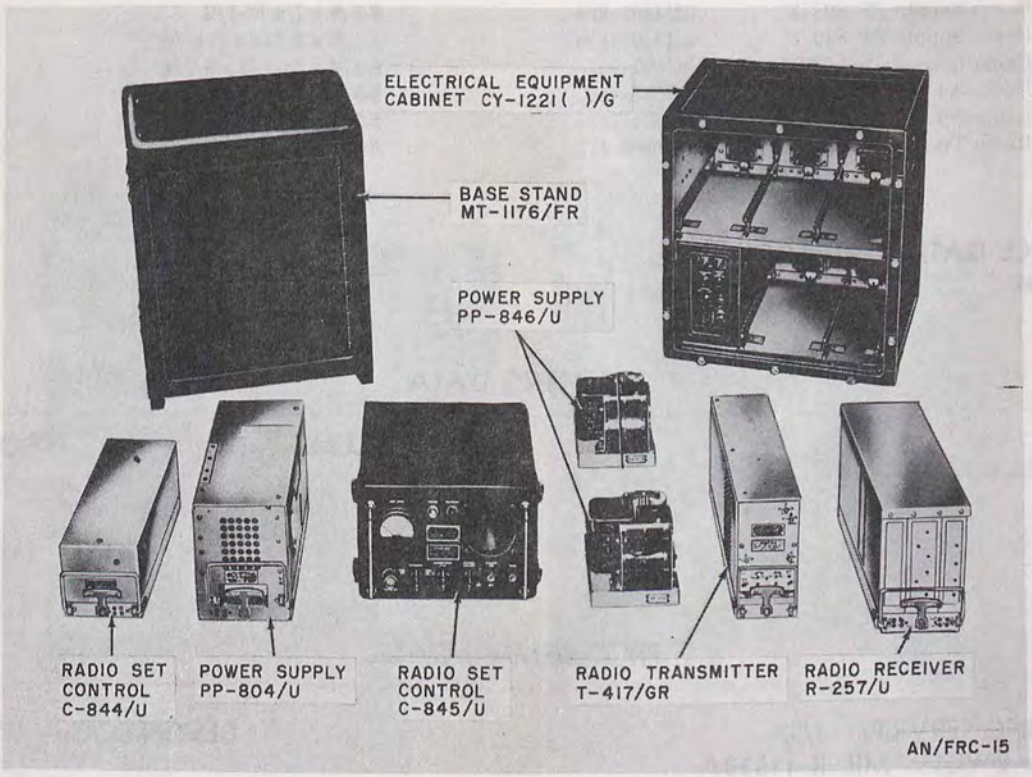
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/FRC-15

1 July 1958
Cognizant Serv: USA FSN: 5820-537-3997

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S2002-15	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC-15 is a vhf, FM, low-powered radio receiving and transmitting equipment used in tactical and nontactical communication applications.

This equipment consists of receiver and transmitter components, local and remote-control units, equipment cabinet and base, related power supplies, and accessories.

It can be operated in simplex, duplex, and retransmission applications. Push-to-talk operation over either of two preset frequencies is provided either locally or at a maximum distance of 10 miles from the transmitter site. Duplex operation requires an additional antenna and can be conducted from the local operating site only. The remote-control unit can be used to transmit tone signals for transmitter adjustment and signaling, to monitor reception, and to intercommunicate between the set and the remote point.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 25 to 50
Type Modulation: Fm
Type of Signal: Voice
Power Output: 0.5 w (rcvr); 45 w (xmtr)
Power Requirements:
PP-804/U: 230 va, 115/230-v 50-65-cycle ac
PP-846/U: 46 va, 115/230-v 50-65-cycle ac

AN/FRC-15 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Power Supply PP-804/U	3H4497-804	8-5/8 x 7 x 14-1/2	40
2	Power Supply PP-846/U	3H4497-846	5-1/8 x 6-1/4 x 7-1/16	10.5
1	Radio Receiver R-257/U	2C180-257	8-1/2 x 14-1/2 x 5-3/4	19
1	Radio Set Control C-844/U	2C684-844	8-3/4 x 14-3/4 x 5-7/8	6.5
1	Radio Set Control C-845/U	2C684-845	8-7/16 x 13-3/4 x 13-1/2	17.5
1	Radio Transmitter T-417/GR	2C6900-417	8-1/2 x 14-1/2 x 4-1/2	9

REFERENCE DATA AND LITERATURE:

TM 11-282

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	28.1	477

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-11539A

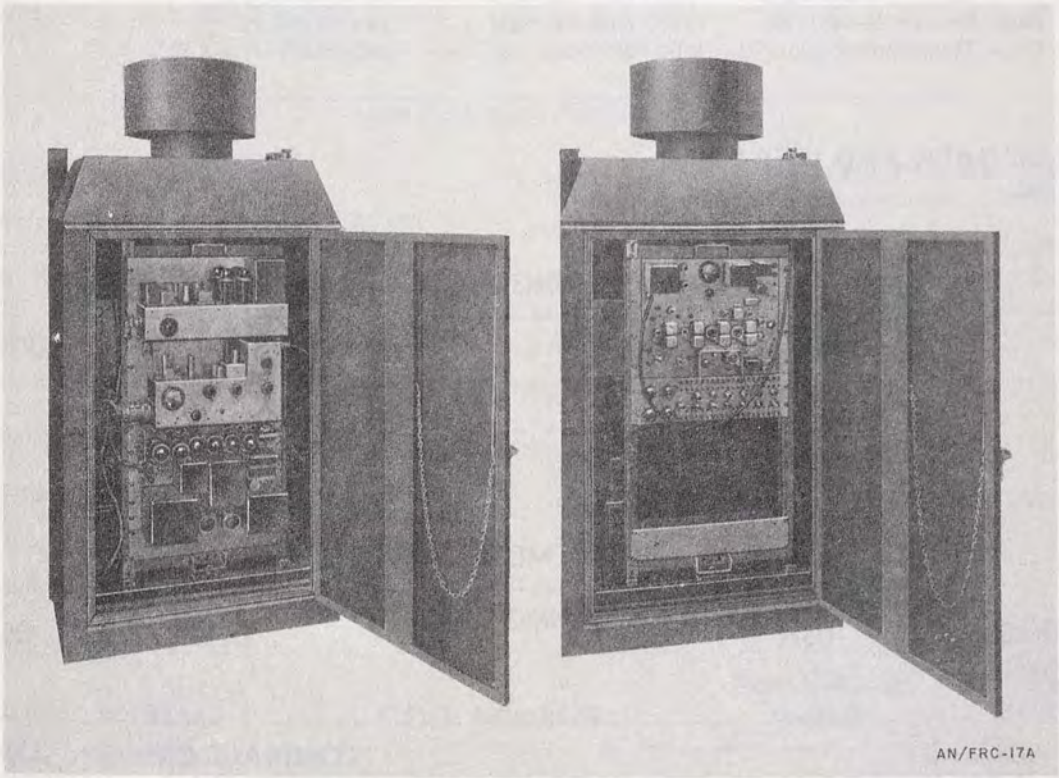
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	50967-P-57-55	$1,894.00

RADIO SET AN/FRC-17( )

1 July 1958
Cognizant Serv: USA FSN: 5820-249-6592

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S2002-17	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC-17( ) is a medium-power vhf, Am (voice and tone) receiving and transmitting equipment used for fixed-plant, radio-relay applications. It is housed in special weatherproof cabinets for outdoor installation.

It consists essentially of a receiver and transmitter with accessory items, and operates from a commercial power source or equivalent power unit.

The major operating components of this equipment, when installed in floor-type cabinets, is designated Radio Set AN/FRC-7( ).

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 132 to 156
Type Modulation: Am
Type of Signal: Voice or tone
Power Output: 12 w
Power Requirements:
Transmitter: 400 w, 105–125-v 60-cycle 1-phase ac
Receiver: 90 w, 105–125-v 60-cycle 1-phase ac

AN/FRC-17( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna AS–576/FRC	(USA) 2A264–576	54 x 50 x 12	40
2	Cabinet (outdoor)	----------	64-1/2 x 18 x 32	290
1	Power Supply PP–749/FRC	(FSN) 6130–245–9677	8-3/4 x 8-3/4 x 19	68
1	Radio Receiver R–448/FRC	(FSN) 5820–244–8534	14 x 2-1/2 x 19	20
1	Radio Transmitter T–326/FRC	(FSN) 5820–252–4626	19-7/32 x 8-11/16 x 19	14

REFERENCE DATA AND LITERATURE:
TM 11–292

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7	140.57	1,269

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Receptor Co., Inc.	New York, N. Y.	14598–P–50–06	$3,233.00

RADIO REPEATER SET

RADIO-TELEPHONE TERMINAL SET AN/FRC-23( )
RADIO REPEATER SET AN/FRC-26( )

1 July 1958
Cognizant Serv: USA **FSN:** AN/FRC-23: 5820-399-7166
AN/FRC-26: 5820-399-7168

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	AN/FRC-23: 2C5347 AN/FRC-26: 2C5347A	--	--

(No Photograph Available)

FUNCTIONAL DESCRIPTION:

Radio-Telephone Terminal Set AN/FRC-23 and Radio Repeater Set AN/FRC-26 are fixed plant, pm microwave radio transmitting and receiving sets that are the system terminal and repeater elements, respectively, of a 24-channel, simultaneous two-way, point-to-point communications system.

Radio-Telephone Terminal Set AN/FRC-23 consists essentially of the normal transmitter and receiver components plus a standby or spare transmitter and a diversity receiver that can be used as a spare, and antenna, multiplexing, testing, and associated items.

Radio Repeater Set AN/FRC-26 is composed essentially of the same primary operating components arranged for operation at intermediate points of a system to extend its effective range. Additional components are provided to insure 24-hour-per-day operation.

These sets can be adjusted to operate in conjunction with Radio Repeater Set AN/FRC-34 and Radio Set AN/FRC-35, after rearrangement of components and interconnections.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1,700 to 1,850
Type Modulation: Pulse
Type Signal: 24-channel voice
Power Output: 10 w
Power Requirements: 2,400 w, 117-v (±5%) 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)

(This set is normally procured as a complete unit for specific application; components may vary in accordance with system requirements.)

REFERENCE DATA AND LITERATURE:

TM 11-222, TM 11-222A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/FRC-23( ) RADIO-TELEPHONE TERMINAL SET

AN/FRC-26( ) RADIO REPEATER SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

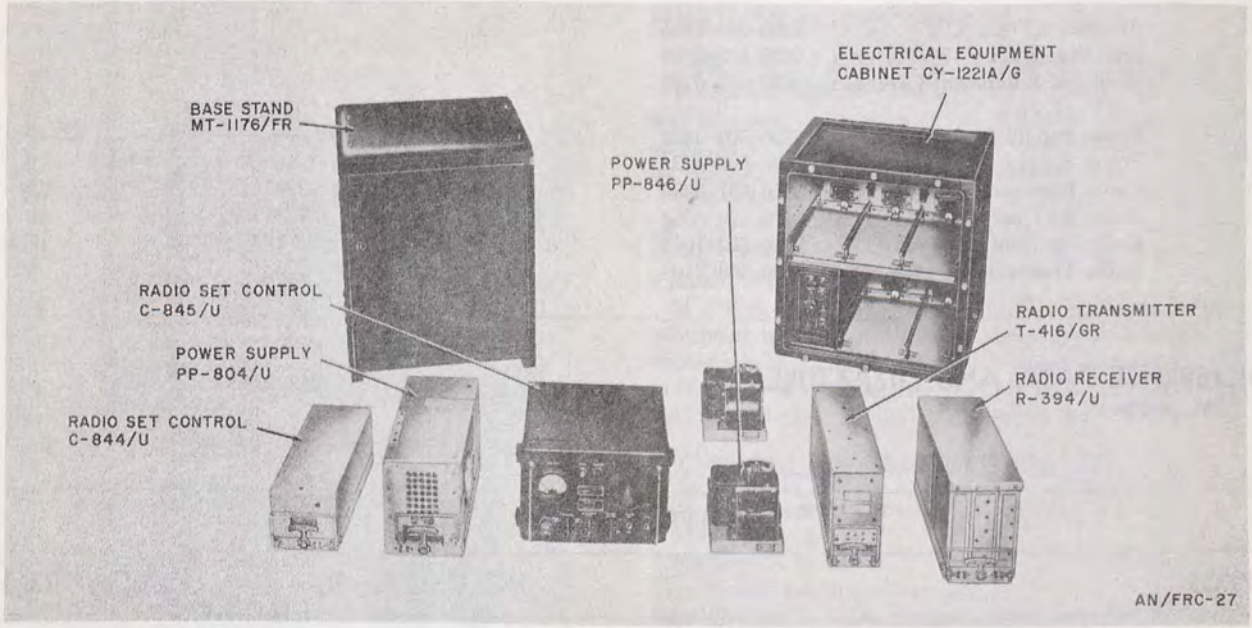
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Syracuse, N. Y.	18830–P–51 32140–P–51 168–30–P–51	

RADIO SET AN/FRC-27( )

1 July 1958
Cognizant Serv: USA FSN: 5820-503-1127

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S2002-27	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC-27( ) is a vhf, FM, low-powered radio receiving and transmitting equipment used in fixed communication applications.

This equipment consists of receiver and transmitter components, local and remote-control units, equipment cabinet and base, related power supplies, and accessories.

It can be operated in simplex, duplex, and retransmission applications. Push-to-talk operation over either of two preset frequency channels is provided either locally or at a maximum distance of 10 miles from the transmitter site. Duplex operation requires an additional antenna and can be conducted from the local operating site only. The remote-control unit can be used to transmit tone signals for signaling and for transmitter adjustment, to monitor reception, and to intercommunicate between the remote point and the set.

Radio Sets AN/FRC-27( ) and AN/TRC-34 are identical, except that Base Stand MT-1176/FR is supplied only with the former.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 152 to 174

Type Modulation: Fm

Type of Signal: Voice

Transmitter Power Output: 50 w

Power Requirements:

Power Supply PP-804/U: 230 va, 115/230-v 50/60-cycle ac

Power Supply PP-846/U: 46 va, 115/230-v 50/60-cycle ac

AN/FRC-27( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT-438/GR	5985-264-7498		
1	Base Stand MT-1176/FR	5820-503-2569		
1	Electrical Equipment Cabinet CY-1221/G	5820-503-0792		
1	Power Supply PP-804/U	5820-500-4421	8-5/8 x 7 x 14-1/2	40
2	Power Supply PP-846/U	5820-500-4426	5-1/8 x 6-1/4 x 7-1/16	10
1	Radio Receiver R-394/U	5820-537-3950	8-1/2 x 14-1/2 x 5-3/4	19
1	Radio Set Control C-844/U	5820-503-0997	8-3/4 x 17-3/4 x 5-7/8	10
1	Radio Set Control C-845/U	5820-503-1004	8-7/16 x 13-3/4 x 13-1/2	17.5
1	Radio Transmitter T-416/GR	5820-503-3304	8-1/2 x 14-1/2 x 4-1/2	9

REFERENCE DATA AND LITERATURE:

TM 11-226

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	27.6	473

PROCUREMENT DATA

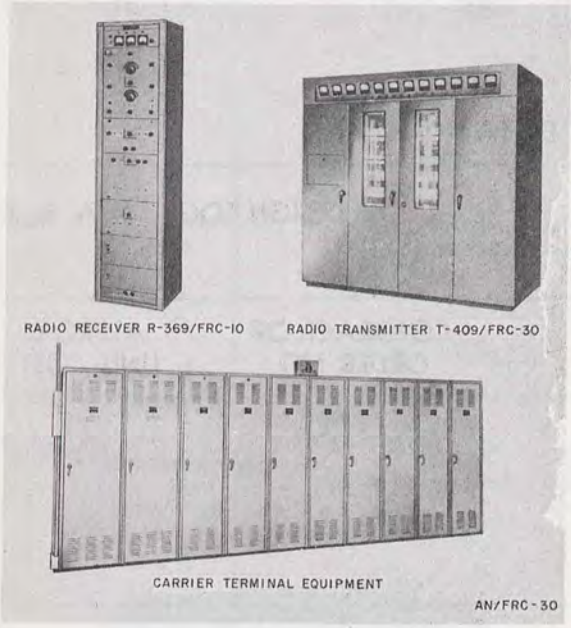
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: MIL-N-11539A

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Great American Electric, Inc.		43072-P-56-55	$1,352.00
Motorola, Inc.	Chicago, Ill.	50967-P-57-55	1,993.00

RADIO SET AN/FRC-30

1 July 1958
Cognizant Serv: USA FSN: 5820-511-4266

	USA	USN	USAF
TYPE CLASS:		--	--
STOCK NO:	2S2002-30	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC-30 is an AM, hf, single-sideband, twin-channel radiotelephone equipment used to handle two-way telephone or six two-way radiotelegraph or radioteletype traffic in long-range, point-to-point communication. It can be operated in transoceanic radio communication circuits.

This equipment includes radio transmitting equipment (shown above) that provides operation over 10 push-button-selected preset frequency channels, and receiving, carrier terminal, and auxiliary components.

It is similar to Radio Set AN/FRC-10B, the only difference being in the transmitters of the two sets. The external appearance of Radio Transmitter T-409/FRC-30 is identical to that of Radio Transmitter T-265/FRC-10; the differences are all in internal circuitry and technical characteristics.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitter: 4.5 to 28
Receiver: 4 to 28
Type Modulation: Am (ssb or dsb)
Type of Signal: Voice, facsimile, teletypewriter (composite transmission)
Power Output:
Ssb: 4 kw
Dsb: 1 kw
Power Requirements:
Transmitter: 9 kw, 230-v 50/60-cycle 3-phase ac
Receiver: 500 w, 115-v 50/60-cycle 1-phase ac
Carrier Terminals: 3 kw, 115-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Carrier Terminal OA-63/FRC-10	5805-241-3305	91 x 36 x 180	6,780
1	Carrier Terminal OA-64/FRC-10	5805-240-6224	84 x 28 x 44	1,440
1	Radio Receiver R-369/FRC-10	5820-497-9043	84 x 22-1/2 x 17	550
1	Radio Transmitter T-409/FRC-30	5820-545-7272	84 x 42-1/2 x 48	5,800

AN/FRC-30 RADIO SET

REFERENCE DATA AND LITERATURE:

TM 11-814, C1
TM 11-870
TM 11-2132

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	668.8	13,877

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	16803-P-51-06	$74,296.41

RADIO SET AN/FRC-31( )

1 July 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C5396.2	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC-31( ) is a general-purpose, vhf, fm (voice or tone) radio receiving and transmitting equipment used for nontactical, fixed-plant communication applications in the field by military police, Transportation Corps, and similar operations. It is operated from a console, which can be set up at a maximum distance of 10 miles from the rest of the equipment.

AN/FRC-31( ) RADIO SET

This equipment consists essentially of an antenna used for both transmission and reception, the operating console, and an equipment cabinet that houses the transmitter, receiver, power supply, control unit, and ac panel. The equipment cabinet is weatherproof, and may be installed outdoors.

This set has facilities for transmitting and receiving on either of two pairs of crystal-controlled frequencies to enable communication with groups of vehicles, in a typical application, over one pair of frequencies while communication is maintained over the other pair of frequencies with other fixed stations.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Transmitter: 2 channels within 240 kc of each other, 152 to 174 mc
Receiver: 2 channels within 180 kc of each other, 152 to 174 mc
Antenna: 162 to 174 mc
Type Modulation: FM
Type of Signal: Voice or tone
Power Output: 50 w (167 to 174 mc); 60 w (152 to 167 mc)
Power Requirements: 50 w (console), 115 w standby or 480 w transmitting (power supply); 117-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AT–427/FRC–31	2A288A–160	164 lg x 3-3/16 dia.	73
1	Console C–559/FRC–6	2C684–559C	9 x 12-3/4 x 13	30
1	Electrical equipment cainet	----------	54-5/16 x 18 x 20	128.5
1	Power Supply PP–966/FRC–31	3H4496.59	7-1/4 x 6-1/4 x 19	42
1	Radio Receiver R–565/FRC–31	2C4575–12	5-1/4 x 4-7/8 x 16-1/2	9
1	Radio Transmitter T–413/FRC–31	2C6703–11	5-1/4 x 4-7/8 x 16-1/2	6.5

REFERENCE DATA AND LITERATURE:

TM 11–234

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	33.2	583

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	3500–P–52	

RADIO REPEATER SET AN/FRC-34

1 July 1958
Cognizant Serv: USA FSN: 5820-503-1229

	USA	USN	USAF
TYPE CLASS:	S/Std	--	--
STOCK NO:	2S2002-34	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Repeater Set AN/FRC-34 is the relay station equipment in an unattended fixed plant type of microwave radio-relay system operating in the 1,700- to 1,850-mc range. The system provides two-way communication for up to 24 voice channels. This equipment, along with Radio Telephone Terminal Sets AN/FRC-35, is specially procured in complete system groups.

This equipment receives the signals transmitted by Radio Set AN/FRC-35, amplifies them, reshapes the pulses, and retransmits the composite signal. It consists primarily of three transmitters and three receivers (two in operation, one standby spare) and associated equipments. In addition to standard voice communication circuits, the system provides for the transmission of teletypewriter, telemetering, supervisory control, and similar functions.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1,700 to 1,850
Type Modulation: Ppm
Type of Signal: Voice, teletypewriter, telemeter, video, etc
Number of Channels: 24 voice (maximum)
Power Output: 10 w (peak)
Power Requirements: 1,700 w, 117-v (±5%) 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)

(Quantities and items of specific components vary in accordance with channeling requirements of system.)

REFERENCE DATA AND LITERATURE:

TM 11-222B

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/FRC-34 RADIO REPEATER SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MFR. No. MIL-766-8503G1

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Corp.	Schenectady, N. Y.	16830-PH-51 3214-PH-51	

RADIO TELEPHONE TERMINAL SET AN/FRC-35

1 July 1958
Cognizant Serv: USA FSN: 5820-503-1134

	USA	USN	USAF
TYPE CLASS:	S/Std	--	--
STOCK NO:	2S2002-35	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Telephone Terminal Set AN/FRC-35 is the terminal radio and multiplexing equipment used in a fixed-plant microwave multichannel radiotelephone system. The system provides two-way communication over a maximum of 24 voice channels. This equipment, along with Radio Repeater Set AN/FRC-34, is procured in complete system groupings for specific applications.

This equipment consists primarily of two microwave radio transmitters and two receivers (one of each in use and the others as standby spares) and 24-channel telephone pulse-position multiplexing equipment.

In addition to the 24 voice channels, this equipment provides for the transmission of teletypewriter, telemetering, supervisory control, and other similar functions. Special fault-indicating devices at the unattended repeater stations are received by, translated in, and displayed or recorded at this terminal equipment, thus providing constant operational control over the distant repeater stations.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1,700 to 1,850
Type Modulation: Ppm
Type of Signal: Voice, teletypewriter, telemeter, video, etc
Number of Channels: 24 voice (maximum)
Power Output: 10 w
Power Requirements: 3,000 w, 117-v (±5%) 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)

(Quantities and items of specific components vary in accordance with channeling requirements of system.)

REFERENCE DATA AND LITERATURE:

TM 11-222B

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/FRC-35 RADIO TELEPHONE TERMINAL SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MFR. NO. MIL-766-8503G1

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Corp.	Schenectady, N. Y.		

RADIO SET AN/FRC-36

21 November 1958
Cognizant Serv: USN FSN: 5820-642-8428

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC-36 is a medium-power frequency modulated (voice), fixed radio receiving and transmitting station used for two-way communication by guards and security police in internal security and industrial control operations.

This equipment consists essentially of a transmitter, receiver, power supply, and control chassis assembled in an upright metal cabinet. The set is suitable for either outdoor or indoor installations. Remote-control facilities are furnished by a separate unit, Radio Set Control C-1624/FRC-36.

With associated accessories, this unit provides two-way communications with mobile and/or other base stations operating within range on the same specific frequency.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 42
Type Modulation: FM (F3)
Type Emission and Reception: Voice
Modulation Acceptance: ±15 kc at −6 db
Ambient Temperature Range: −30° C. to 460° C.

Receiver:
Sensitivity: Less than 0.45 uv for 20 db quieting
Input Impedance: 50 to 72 ohms
Spurious Response Attenuation: 100 db
Frequency Stability: ±750 cps
Squelch Threshold Sensitivity: 0.2 uv
Audio Output: 1 w
Power Consumption:
Operate: 40 w
Muted: 30 w

Transmitter:
Crystal Frequency Multiplication: 16 times
Power Output: 50 w
Output Impedance: 50 to 72 ohms
Spurious Emission Attenuation: −60 db
Frequency Stability: ±750 cps
Modulation: ±15 kc for 100% at 1,000 cps
Input Impedance: 500 ohms
Audio Input Level: −20 db
Power Consumption:
Standby: 70 w
Transmit: 400 w

Power Requirements: 117-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac power supply chassis			
1	Cabinet kit			
1	Cable kit			
1	Receiver chassis			
1	Receiver if. crystal (3,185 kc)			
1	Remote-control chassis			
1	Spare fuse and ac panel			
1	Transmitter chassis			
1	Tuning toolkit			

REFERENCE DATA AND LITERATURE:

Commercial literature (Motorola 68P836250-0)

AN/FRC-36 RADIO SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	NObsr-64259, 30 June 1954	

RADIO SET AN/FRC-37 (XN-1)

21 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC-37 (XN-1) is a transmitting and receiving equipment used in shore-based radio relay link systems. It is a microwave system consisting of one bay of units, an antenna, and a voltage regulator.

This equipment transmits and receives pulsed amplitude modulated signals and has been designed to operate with Multiplex Set C-1X or Modulator Group OA-502/FRC, Demodulator Group OA-504/FRC, and Demodulator-Modulator Group OA-505/FRC.

The set is capable of operating as a repeater in a radio relay system consisting of as many as five hops and is designed to net, on a video basis, with Radio Terminal Group OA-501/FRC, Radio Repeater Group OA-503/FRC, and Radio Repeater Group OA-510/FRC.

Communication between stations is limited to line of sight operation. Highly directional parabolic antennas are used to effectively increase the power output of the transmitter. Two transmitters and two receivers are normally operated in a parallel path arrangement on the same frequency but separated on a polarization basis. Relatively unattended operation is possible by the elimination of switch-over equipment.

TECHNICAL CHARACTERISTICS:

Transmitter:
- Frequency Range in Mc: 1,700 to 1,970; 1,970 to 2,400
- Type Modulation: Pulse
- Frequency Stability: 0.005% (maximum)
- Carrier Bandwidth: 6 mc
- Video Input Impedance: 70 ohms nominal
- Input Pulse Voltage: 2 to 15 v peak
- Input Pulse Characteristic: 0.3 usec maximum rise time; 0.2 usec wide
- Power Output: 25 w peak
- Duty Cycle: 20% maximum (0.8 to 10%)
- Output Impedance: 50 ohms

Receiver:
- Frequency Range in Mc: 1,700 to 2,400
- Frequency Stability: ±0.02%
- Input Impedance: 50 ohms
- Noise Figure: 12 db
- Image Rejection: 65 db
- Intermediate Frequency: 30 mc
- Bandwidth: 7.0 ±1 mc between 3 db points
- Over-all Gain: 109 db
- Video Output: 7 to 10 v peak
- Output Impedance: 70 ohms
- Wavemeter Accuracy: 0.02%
- Input Sensitivity: 35 uv

Power Requirements: 115-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna assembly, Unit 11	----------	120	
1	Dummy load and attenuator panel, Unit 13	----------	1 x 12-1/4 x 19	
1	Equipment Cabinet CY-614/G	----------	22 x 1/2 x 24 x 88	787
1 set	Equipment maintenance parts	----------	----------	163
1	Line voltage regulator, Unit 14	----------	11 x 12-1/2 x 20-1/2	79
1	Power distribution panel, Unit 12	----------	7 x 13-1/2 x 19	
1	Receiver, Unit 1	----------	10-1/2 x 12 x 19	
1	Receiver, Unit 6	----------	10-1/2 x 12 x 19	
1	Receiver power supply, Unit 7	----------	7 x 14-1/2 x 19	
1	Receiver power supply, Unit 10	----------	7 x 14-1/2 x 19	

AN/FRC-37 (XN-1) RADIO SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transmitter, high band, Unit 4		12-1/4 x 14-1/2 x 19	
1	Transmitter, high band, Unit 5		12-1/4 x 14-1/2 x 19	
1	Transmitter, low band, Unit 2		12-1/4 x 14-1/2 x 19	
1	Transmitter, low band, Unit 3		12-1/4 x 14-1/2 x 19	
1	Transmitter power supply, Unit 8		7 x 14-1/2 x 19	
1	Transmitter power supply, Unit 9		7 x 14-1/2 x 19	

REFERENCE DATA AND LITERATURE:

NAVSHIPS-92834

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
17	2,78.7	2,721

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: USN, BuShips

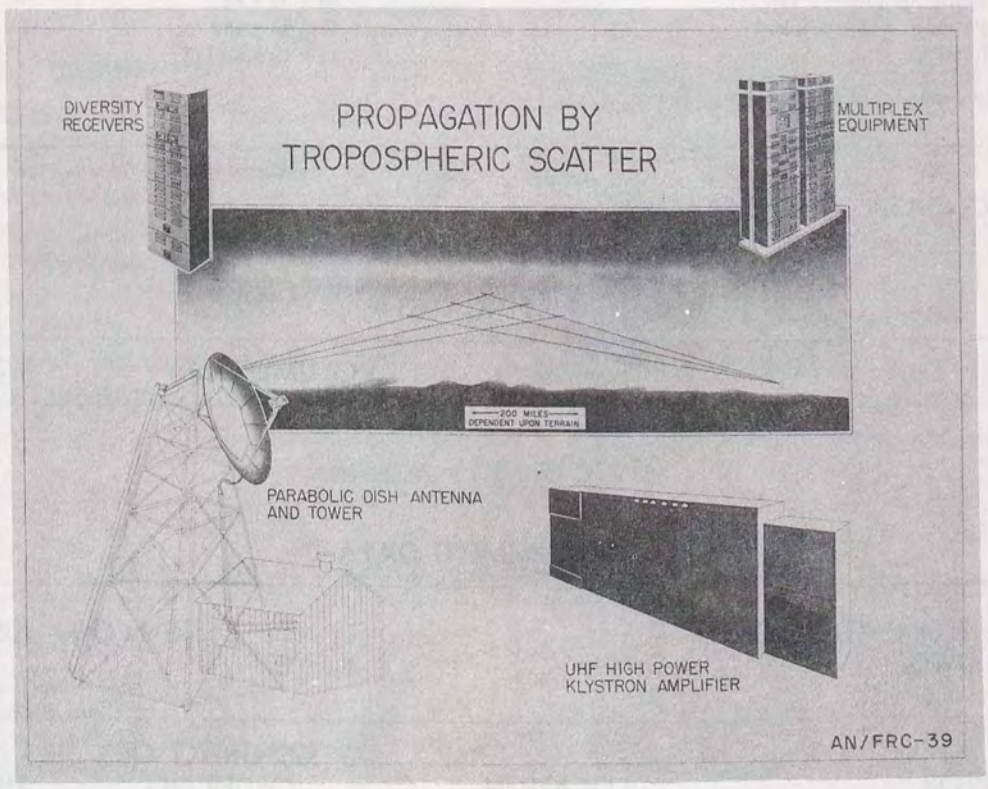
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telecommunication Laboratories	Nutley, N. J.	NObsr-64145, 30 March 1954	

RADIO SET AN/FRC-39

21 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Tent-Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC–39 is a multichannel equipment for voice and data signal transmission in point-to-point communication facilities serving filter centers of the Air Defense Command.

The number of operating components required depends on whether it will be used as a terminal station or in pairs as a repeater station of a radio relay facility.

This equipment is normally operated with other units, such as Telephone Terminals AN/TCC–3 and AN/TCC–7 or Telegraph Terminal AN/TCC–20.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Band A: 755 to 985
Band B: 1,700 to 2,400
Operational Range: 200 miles (approximate)
Type Modulation: Fm (F3, F9)
Type Signal: Voice; composite transmission
Power Output: 1 or 10 kw (depending on power amplifier used)

AN/FRC-39 RADIO SET

MAJOR COMPONENTS

*QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	Antenna w/power diplexer		96 dia x 336 dia	1,800
	Exciter, frequency modulated		17 x 19 x 31-1/2	225
	Power amplifier (1 kw)		54 x 30 x 84	1,600
	Power amplifier (10 kw)		46 x 84 x 180	8,600
	Receiver		17 x 19 x 33-1/3	200

* Quantity depends on installation.

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

DESIGN COG: USAF, ARDC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/FRC-39 (V)

21 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Tent-Std
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC-39(V) is designed to function as a terminal station and provides transmission and reception of multichannel voice as well as data signals. It consists of variable components both as to type and quantity, the selection of which depends upon the installation.

Application in pairs provides facilities for a repeater station. When additional sets are added to a repeater station, these provide branching facilities.

This equipment will operate with multiplex equipment to provide up to 72 simultaneous transmission channels.

It is used mainly for transmission of Air Defense Command tactical and administrative communications traffic.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 400 to 2,400
Operational Range: Over-the-horizon transmission
Type Emission: F9 (fm); response ±2 db from 0.25 to 340 kc
Power Output: 1 kw or 10 kw
Power Requirements:
For 1-kw Operation: 4 kw, 208-v ±10% 50- to 63-cycle 4-wire 3-phase ac
For 10-kw Operation: 34 kw, 208-v ±10% 50- to 63-cycle 4-wire 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For 1-Kw Dual Diversity:			
1	Auto transfer switch			
2	Diplexer assembly			
2	Exciter, Rel Type #863			
2	Parabolic reflector	----------	28 ft or 60 ft dia	
2	Power assembly (1 kw), Rel Type #865			
3	Receiver, Rel Type #864			
1	Receiver patch			
2	Vertical or horizontal polarized feed horn			
	For 10-Kw Fourfold Diversity:			
2	Branching filter			
2	Diplexer assembly			
2	Exciter, Rel Type #863			
1	Exciter patch			
2	PA patch			
2	Parabolic reflector	----------	28 ft or 60 ft dia	
2	Power amplifier (10 kw), Rel Type #866			
5	Receiver, Rel Type #864			
1	Receiver patch			
2	Vertical or horizontal polarized feed horn			

AN/FRC-39 (V) RADIO SET

REFERENCE DATA AND LITERATURE:

TO 31R5-2FRC39-(series)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

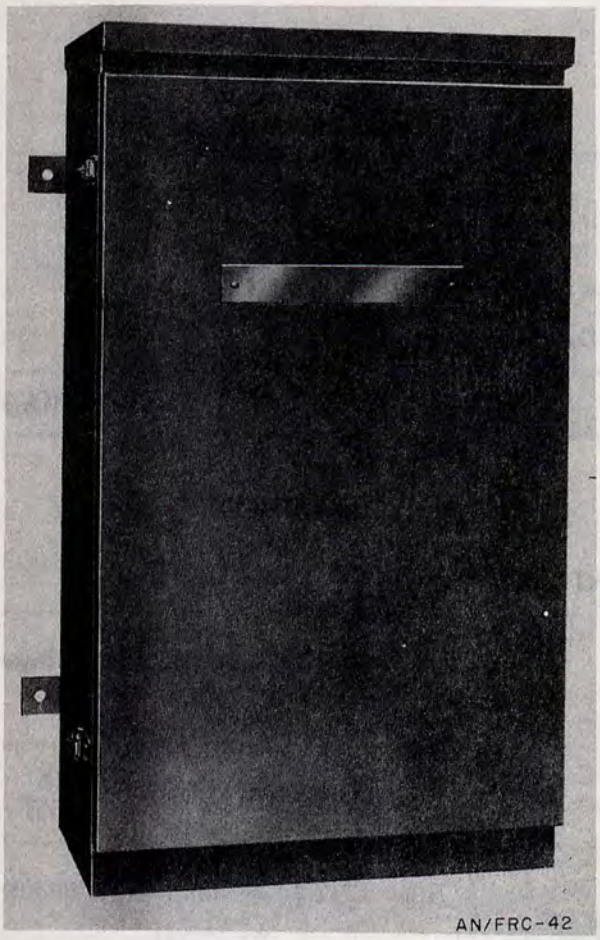
DESIGN COG: USAF, ARDC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA	Camden, N. J.	AR30(635)6242	

RADIO SET AN/FRC-42

24 November 1958
Cognizant Serv: USN FSN: 5820-665-1715

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC-42 is a general purpose, fixed station two-way communication equipment. It may be used in conjunction with Radio Sets AN/VRC-32 and AN/PRC-33.

The pole-mounted cabinet is provided with straps for mounting it on cross arms between two telephone poles. This cabinet must be installed close to the antenna transmission line and a source of line voltage.

This equipment is a militarized version of a commercial (General Electric Company Model PO-16W) pole-mounted radio set.

TECHNICAL CHARACTERISTICS:

Receiver:
- Type: Wide band, double-conversion superheterodyne
- Frequency Range in Mc: 30 to 54
- Audio Output: 1.5 w; less than 10% distortion
- Sensitivity: .4 uv, 20-db quieting method
- Squelch: Adjustable, will open at less than .15 uv at critical setting
- Selectivity: 100 db ±30 kc; 20-db quieting method
- Bandwidth: ±15 kc at the 6-db points
- Spurious Response: At least 100 db down
- Ambient Temperature: −30° C to 160° C. (outside of cabinet that houses chassis)
- Frequency Stability:
  - Unheated crystal: ±0.002%
  - Heated crystal: ±0.0005%

Audio Frequency: Within +2 to −8 of a 6 db/octave de-emphasis curve from 300 to 3,000 cps (1,000-cps reference)

Channel Separation (Maximum): .4% of operating frequency (approximately 160 kc) in 2-, 3-, or 4-channel operation

Control: Crystal

Intermediate Frequencies: 3.2 mc and 290 kc

Output: F3 phase modulation

Type Signal: Voice

Radio Set Control:
- Preamplifier:
  - Input impedance: 100,000 ohms (dynamic microphone); 270 ohms (carbon microphone)
  - Output impedance:
    - Frequency response: ±2 db, 400 to 3,500 cps
    - Distortion: Less than 5% at 1,000 cps
- Line Amplifier:
  - Input impedance: 600 ohms nominal
  - Output impedance: 3.5 ohms
  - Frequency response: ±3 db, 400 to 3,500 cps with 1-w output
- Tone Oscillator Frequency: 800 cps (approximately)
- Control Circuits:
  - One channel control: 105 v with line terminated
  - Remote squelch: 105-v dc with control pair open (maximum); 12-v dc with control pair terminated (for simplexing with the telephone line)
- Voltage Line to Line or Line to Ground: 105-v dc with control pair open or terminated (maximum)

Antenna: Folded unipod

Power Requirements: 117-v 50- to 60-cycle 1-phase ac

AN/FRC-42 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AS–759/FRC–36			
1	Cabinet, Electrical Equipment CY–1907/FRC–42			
1	Control Unit C–1846/FRC–42			
1	Loudspeaker LS–256/U			
1	Radio Receiver-Transmitter RT–368/FRC–42			

REFERENCE DATA AND LITERATURE:
NAVSHIPS 92653

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

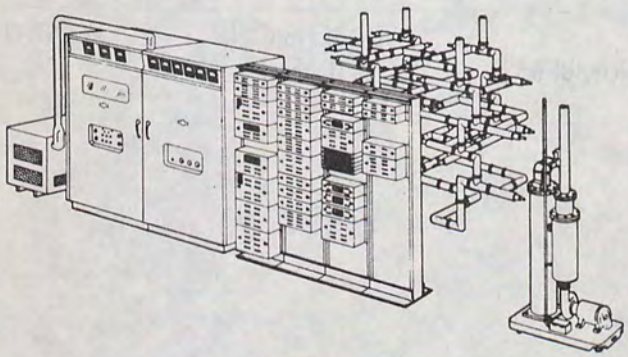
PROCURING SERVICE: USN
SPEC &/or DWG:
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Electronics Division	Syracuse, N. Y.	NObsr 64749, 6 June 1955	$628.00

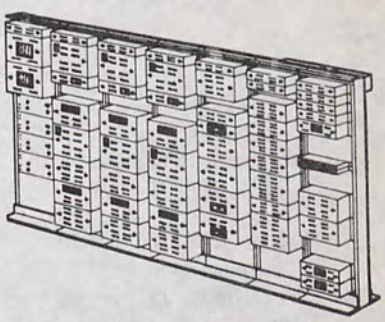
RADIO SET AN/FRC-44

24 November 1958
Cognizant Serv: USAF FSN:

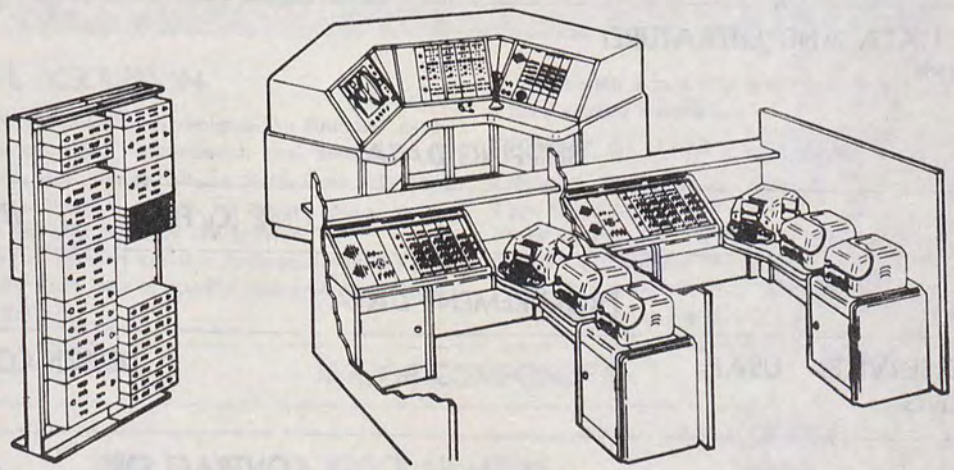
	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	--	--	--



TRANSMITTER SITE



RECEIVER SITE



CONTROL SITE

AN/FRC-44

AN/FRC-44 RADIO SET

FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC–44 is a complete multifrequency, ground-to-air, single sideband (ssb) receiving, transmitting, and control facility for world-wide communication. It can transmit intelligence of up to 3 kilocycles or transform to a 2- to 3-kilocycle bandwidth, including voice, frequency-shift keying, selective calling, and data transmission.

Selection of omnidirectional or steerable antennas for both receiver and transmitter and azimuth control of the steerable beams are controllable from the control site.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2.8 to 30
Operational Range: Beyond 30 miles
Transmitting Power: 12 kw to 300 kw
Power Requirements: 15 amp minimum, 115-v 50- to 60-cycle, 1-phase ac; 200 amp minimum, 195- to 225-v 50- to 60-cycle, 3-phase ac; or 100 amp minimum, 350- to 410-v 50- to 60-cycle, 3-phase ac; or 30 amp minimum, 195- to 225-v 50- to 60-cycle, 3-phase ac; or 20 amp minimum, 350- to 410-v 50- to 60-cycle, 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	Antenna Multicoupler AN/FRC–44			
*	Converter, Frequency Shift CV–350/URC w/power supply			
	Keyer KY–217( )/URC w/power supply			
	Receiver group			
	Regenerative repeater			
	Signal Generator Group OA–1373( )/FRC–44			
	Transmitter Group OA–1446 ( )/GRT			
	Transmitter Group OA–1448 ( )/GRT			

* The quantity of individual items is determined by actual requirements.

REFERENCE DATA AND LITERATURE:

AF–30(635)4504

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

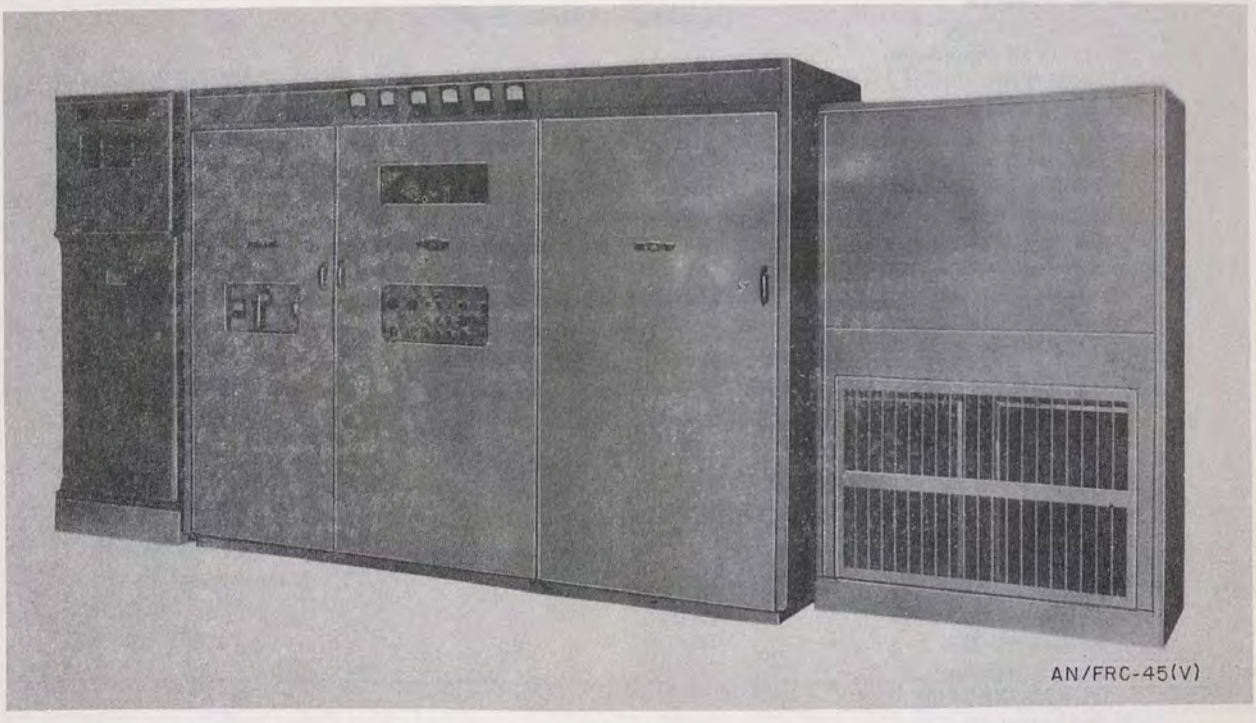
PROCURING SERVICE: USAF **DESIGN COG:** USAF
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa		
Westinghouse Electric	Baltimore, Md.		
Wilcox Electric Co.	Kansas City, Mo.		

RADIO SET AN/FRC-45(V)

24 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Ltd-Std
STOCK NO:	--	--	1700–016092180



AN/FRC-45(V)

FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC–45(V) is designed to function as a terminal station providing transmission and reception of multichannel voice and data signals. In pairs, these sets provide facilities for a repeater station. By adding sets to a repeater station, branching facilities are provided.

This equipment consists of variable components both as to type and quantity; selection of specific items depends upon the installation desired.

Application is in a tropospheric forward scatter system and a fixed ground installation.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 755 mc to 985; 1 band
Type Emission: Fm, F9
Power Output: 1 kw or 10 kw (nominal)
Number of Channels: 24-teletypewriter
Power Requirements: For more than 2 kw, 208-v 60-cycle 3-phase ac; for less than 2 kw, 120-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
(*)	Amplifier, Radio Frequency AM–1563/FRC–45( )			
	Antenna, dish type	----------	30 ft or 60 ft	
	Carrier telegraph terminal system			

AN/FRC-45(V) RADIO SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	Dummy load, electrical			
	Fan, Centrifugal HD–267/FRC–45( )			
	Filter, Bandpass F–331/FRC–45( )			
	Filter, Band Suppression F–329/FRC–45( )			
	Filter, Low Pass F–330/FRC–45( )			
	Jack Assembly, Telephone TA–324/FRC–45( )			
	Modulator Group OA–1285/FRC–45( )			
	Panel, Power Distribution SB–644/FRC–45( )			
	Panel, Power Distribution SB–645/FRC–45( )			
	Power Supply PP–1610/FRC–45( )			
	Rack, Electrical Equipment MT–1752/FRC–45( )			
	Receiver Group OA–1284/FRC–45(V)			
	Receiver-Transmitter RT–392/FRC–45( )			
(*)	Telephone system, carrier			
	Terminal Box J–785/FRC–45( )			
	Transmitter Group OA–1285/FRC–45( )			
	Voltage regulator			

* The quantity of individual items as well as the applicability of specific items is determined by actual requirements.

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: GS–18074

DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co., Inc.	New York, N. Y.	AF18(600)–572	

RADIO SET AN/FRC-47

24 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC–47 is a communication equipment employing the tropospheric forward scatter technique. It provides 12 multiplexed voice channels.

Used in pairs, this radio set provides facilities for a repeater station.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 300 to 400; 1 band; 12 channels
Type Emission: A3a
Transmitter Power Output: 50 kw
Power Requirements: 280-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna system			
1	Audio termination facility			
1	Monitor and cable assembly			
2	Multiplexer			
1	Radio frequency test stand			
4	Receiver			
2	Transmitter			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

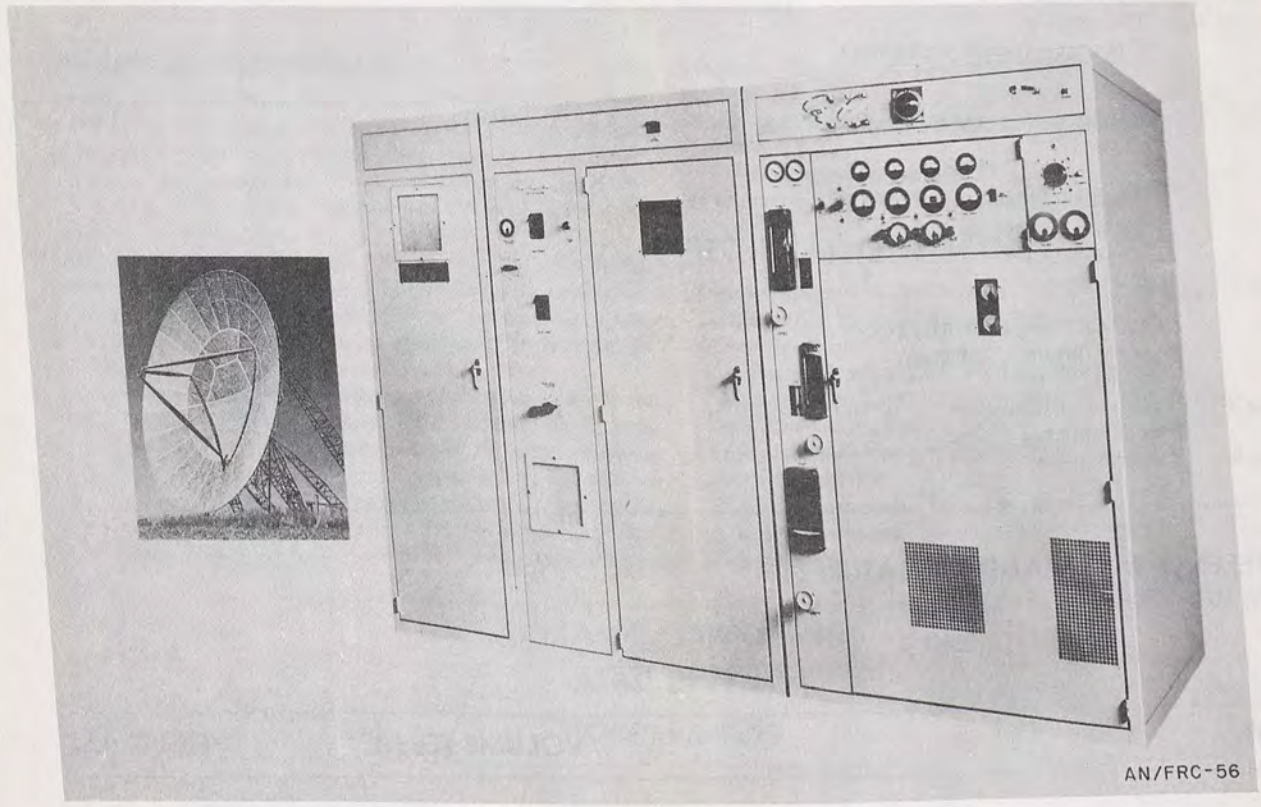
PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

	USA	USN	USAF
TYPE CLASS:	--	--	Tent-Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/FRC-56(V) is designed to function as a terminal station that provides transmission and reception of multichannel voice and data signals. It is used mainly for transmission of Air Defense Command tactical and administrative communications traffic.

This equipment consists of variable components both as to type and quantity. The selection of specific number and type of items depends on the installation requirements.

Employed in pairs, these sets provide facilities for a repeater station. When additional sets are added to a repeater station they provide branching facilities.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1,700 to 2,400; single band
Type Emission: Fm (F9)
Frequency-division Multiplexer: Up to 72 voice channels
Power Output: 1 kw or 10 kw (maximum)
Power Requirements: For more than 2 kw, 208-v 60-cycle 3-phase ac or for less than 2 kw, 115-v 60-cycle 1-phase ac

AN/FRC-56 (V) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2 or 3	Antenna			
2 or 3	Coaxial feed or horn assembly			
36 or 48	Compandor			
2	FM exciter			
3 or 4	FM receiver			
1	Frequency-division multiplexer			
	or			
	Multiplexer Set AN/TCC–32			
	or			
	Terminal, Telephone AN/TCC–3 with Terminal, Telegraph AN/TCC–20			
	or			
	Terminal, Telephone AN/TCC–7 with Terminal, Telegraph AN/TCC–20			
2 or 3	Mast, antenna support			
2	Power amplifier (10 kw)			
2 or 3	Power duplexer			

REFERENCE DATA AND LITERATURE:

TO 31R5–2FRC39 & 56( ) (pending)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USAF, RCUE
DESIGN COG: USAF, RCUE
SPEC &/or DWG: RADC–2425A

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Corporation of America	Long Island, N. Y.		

MICROWAVE RADIO RELAY SET AN/FRC type

5 December 1958
Cognizant Serv: USAF FSN: CLR–6, Philco

	USA	USN	USAF
TYPE CLASS:	--	Used by	Alt-Std
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Microwave Radio Relay Set CLR–6, Philco (Radio Set AN/TRC–30) is a frequency modulated radio set used in two-way, (duplex) point-to-point radio relay systems, for ground or fixed station installation. Communications are provided by identical, or equivalent, repeater and terminal equipment operating in the same system.

Microwave Radio Relay Set CLR–6, consists of a radio transmitter, a receiver, a 4-foot parabola antenna, a reflector, and wave guide kit. A complete relay system consists of two terminal sets, each with 20 to 40 miles apart in tandem, to span the distance between the terminals.

When used with its associated multiplexing equipment (such as Philco Time Division Multiplexing Equipment CMT–4) the system may be expanded to 24 telephone channels. Each channel may be further expanded to as many as 12 additonal channels for telegraph, teletype, telemetering, signaling, and supervisory control circuits. High-speed facsimile transmission is also possible by using two adjacent telephone channels as one. With the use of smaller multiplexing units, one, four, or eight voice channels may be inserted, or dropped off, at any repeater station as may be required.

Voice termination equipment is used with, but is not part of the set.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 7,125 to 7,425 (with channel division determined by multiplexing equipment)
Operating Range:
Repeater Spacing: Line of sight (20 to 40 miles)
Total Range: 1,000 miles (average) terminal spacing
Type Modulation: Fm
Type of Signal: Voice, cw, radioteletype
Power Output: 1 w
Power Requirements (Per terminal or repeater station): 1,200 w with heaters, 700 w without heaters, 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Philco CLR–6 Repeater/ Terminal (in rack)	----------	28 x 90 x 90	500
1	Philco Multiplexing Equipment (CMT–4)			

REFERENCE DATA AND LITERATURE:

Philco Training Manual CLR–6

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	135	810

AN/FRC type MICROWAVE RADIO RELAY SET

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

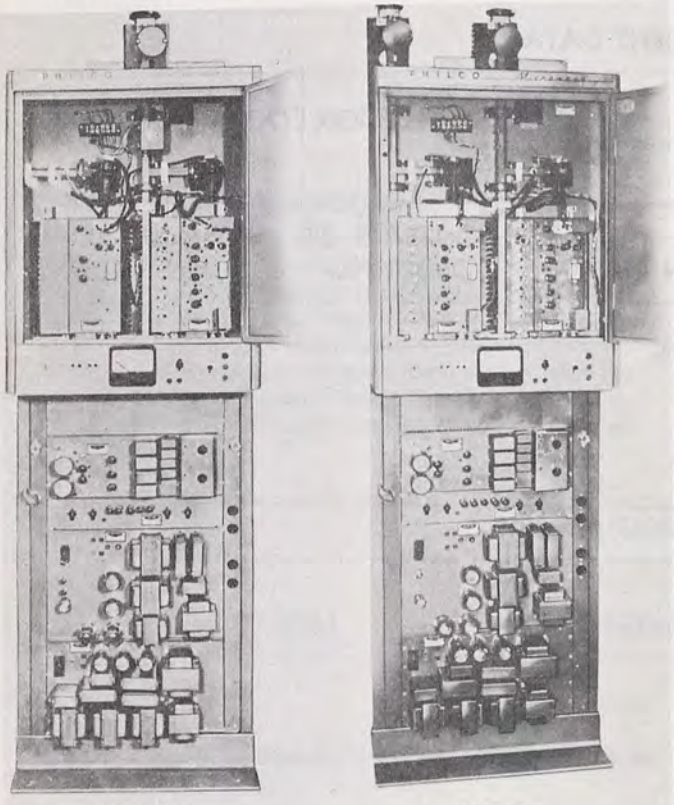
DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

MICROAVE RADIO RELAY SET AN/FRC-type

5 December 1958
Cognizant Serv: USAF FSN: CLR–7, Philco

	USA	USN	USAF
TYPE CLASS:	--	Used by	Alt-Std
STOCK NO:	--	--	1,760–NSL



CLR-7 TERMINAL CLR-7 REPEATER

CLR-7

FUNCTIONAL DESCRIPTION:

Microwave Radio Relay Set CLR–7, Philco, is the transmitting and receiving portion of a microwave communication station. Two or more such stations make up a radio relay link to provide two-way (duplex) communication between two points, when the CLR–7 is used in conjunction with suitable multiplexing equipment such as Philco Time Division Multiplexing Equipment CMT–4.

Microwave Radio Relay Set CLR–7, Philco, is used in ground, fixed stations, as radio relay links wherever use of land communication lines is not feasable. It can communicate with Microwave Radio Relay Sets CLR–6 or other CLR–7 equipments.

This equipment is designed to accommodate frequency-division and pulse-amplitude time division multiplex equipments which provide up to 60 voice channels, each of which may be further multiplexed to provide up to 16 telegraph or teletype channels, per voice channel. The radio relay link is usually made up of a number of stations located at intervals of 20 to 40 miles.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 6,125 to 8,100 in 5 bands
Transmitter Power Output: 1 w
Receiver Bandwidth: 10 mc
Power Requirements: 600 w (nominal), 117-v, regulated, 50- to 60-cycle ac; 150 w (approx), 117-v, unregulated, 50- to 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
3	Klystron	FSN 5960–296–4473		
1	Microwave Repeater CLR–7RGL	FSN 5820–505–1580		
1	Microwave Terminal CLR–7TGL	FSN 5820–505–1482		

REFERENCE DATA AND LITERATURE:

TO 31R5–4–5–11
TO 31–1–11

AN/FRC-type MICROWAVE RADIO RELAY SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Philco Corporation	Philadelphia, Pa.		

CODE TAPE RECORDER AN/FRH-type

20 November 1958
Cognizant Serv: USN FSN:

RD-110/U, RD-110A/U

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	RD-110/U: F16-Q-239818-200 RD-110A/U: F16-Q-239817-200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Code Tape Recorders RD-110/U and RD-110A/U are used to record signal codes from several types of radio receiver outputs, or from the output of an automatic (transmitting) typewriter. The recorder inscribes an ink trace of International Morse or similarly coded signals on paper tape suitable for manual transcription. Automatic transcription from the tape is possible with automatic typewriters and suitable tape-scanning devices. An automatic tape feed unit is incorporated in the RD-110A/U.

TECHNICAL CHARACTERISTICS:

Input Voltage: 0.07 through 7.0 volts at 600 ohms impedance
Output Amplitude: Constant at voltages between above input limits
Operating Frequency:
Without Filter: 1,000 to 3,000 cps
With Filter: 1,875 cps (all other frequencies and noise are rejected.)
Power Requirements: 200 w, 115/230-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USN)		
1	Code Tape Recorder RD-110/U	F16-Q-239818-200	10-15/32 x 19 x 15-1/2	80
	or			
1	Code Tape Recorder RD-110A/U	F16-Q-239817-200	10-15/32 x 19 x 15-1/2	80

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91682

AN/FRH-type CODE TAPE RECORDER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.13	90

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Whiteford Laboratory	Lynn, Mass.	NObsr–49122 NObsr 57254	

CODE TAPE RECORDER AN/FRH-type

20 November 1958
Cognizant Serv: USN FSN: RD-112/U

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-239820-200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Code Tape Recorder RD-112/U is a self-contained, undulating type, ink-slip recorder capable of converting radiotelegraph code information from the audio output of a communications-type radio receiver into its visual equivalent in permanently written form. The signals are recorded in ink on standard paper recording tape.

This equipment is capable of recording telegraphic code signals at speeds up to 350 wpm.

The recorder is contained in a steel case with a hinged lid on top. The ink reservoir assembly, recording pen assembly, and all controls, switches,and indicators necessary for normal, operation of the equipment are located on the front panel. The front panel also contains an electronic tuning eye for correct frequency adjustment of the audio signal output from the radio receiver.

TECHNICAL CHARACTERISTICS:

Operating Frequency:
Without Filter: 500 to 5,000 cps
With Filter: 1,875 cps (all other frequencies and noise rejected)
Input Impedance: 300-ohm single line; 600-ohm single line; or 600-ohm balanced line
Input Sensitivity: 0.075 volt
Tape Speed: 5 to 35 feet per minute
Recording Speed: Up to 350 wpm.
Tape Type: Standard 3/8-inch wide recording tape
Pen Stroke: Adjustable 1/32 to 3/16 inch
Power Requirements: 115/230-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USN)		
1	Code Tape Recorder RD-112/U	F16-Q-239820-200	14 x 19 x 16-1/2	78.0

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91781

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	6.6	138

AN/FRH-type CODE TAPE RECORDER

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
McElroy Manufacturing Corp.	Littleton, Mass.	NObsr–52163	

TRANSMITTER CONTROL-MONITOR GROUP AN/FRQ-3

24 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Transmitter Control-Monitor Group AN/FRQ-3 is a radio frequency and audio frequency manually operated switching and monitoring equipment employed in shore transmitter stations.

This equipment permits standardization of components; the methods of installation and wiring give maximum operational flexibility.

TECHNICAL CHARACTERISTICS:

Receiving Equipment:
Frequency Range: 80 kc to 560 kc 1.9 mc to 24 mc
Reception: Phone, cw, or mcw
Jack Positions: 78
Switching Panel Line and Equipment Circuits: 20
Oscilloscope Pulse Repetition Rate: 7 to 30,000 cps
Audio Oscillator:
Output Impedance: 600 ohms
Voltage: 24.5 v
Frequency Range: 20 to 40,000 cps
Monitoring Rf Jack Switches: 80
Af Jack Positions, Monitoring: 156
Miscellaneous Rf Switches: 60 ea
Antenna Coupler:
Impedance: 70 ohms
Frequency Range in Mc: 2 to 32
Frequency Meter Range: 160 to 30,000 kc
Power Requirements: 110-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Monitoring Group OA-489/FRQ-3 including:			
2	Antenna Coupler CU-168/FRR			
2	Audio Oscillator EL-Tronics Model TE-200k			
1	Desk FN-28/G			
1	Frequency Meter LR-1 or FR/36U			
2	Frequency Shift Converter CV-60/URR			
2	Oscilloscope OBL-3a			
2	Radio Receiver RCH			
2	RF/AF Jack position			
1	RF/AF Switching position			
2	Speaker Panel LS-139/G			
1	Transmitter Control Console OA-490/FRQ-3 including:			
1	Audio Oscillator Hewlett-Packard Type 200 AB			
2	Jack panel			
2	Loudspeaker			
1	Oscilloscope OBL-3a			

AN/FRQ-3 TRANSMITTER CONTROL-MONITOR GROUP

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Receiver RCH			
2	Switching panel			
1	Volt–Ohm–Milliammeter OBQ–4			
1	Volume Level Indicator TS–629/U			

REFERENCE DATA AND LITERATURE:
NAVSHIPS 92228

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

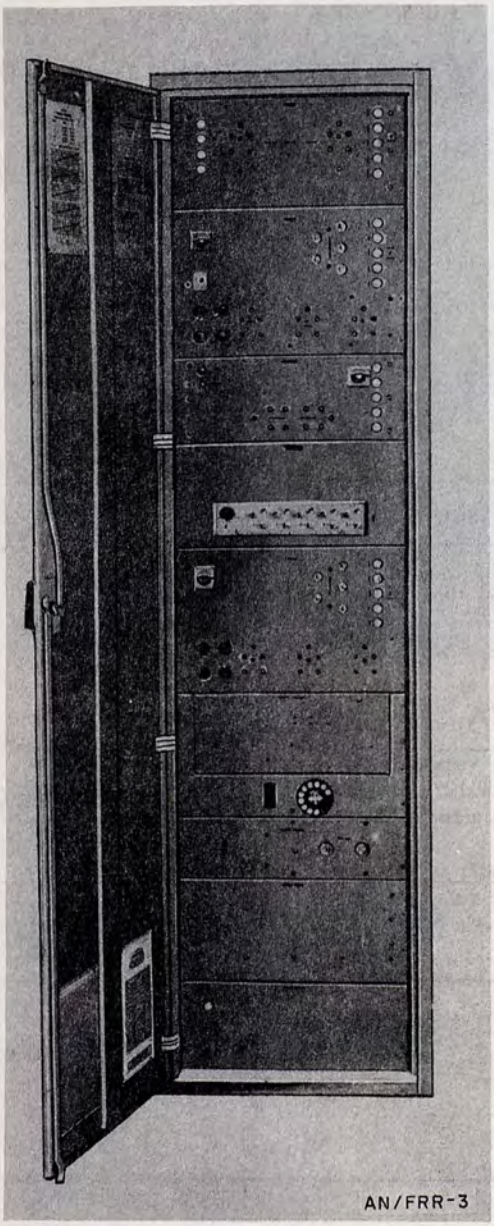
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Electronics Division, U.S. Naval Gun Factory			

DIVERSITY RECEIVING EQUIPMENT AN/FRR-3( )

1 July 1958
Cognizant Serv: USA FSN: 5820-187-3154

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S2001-3	--	1760-265497715



AN/FRR-3

FUNCTIONAL DESCRIPTION:

Diversity Receiving Equipment AN/FRR-3( ) is an hf, am (voice and frequency-shift-keying) radio receiving equipment used in long-range, point-to-point communication to overcome the effects of radio fading. It is fixed-plant equipment.

This equipment consists essentially of two identical superheterodyne radio receivers, which operate from separate antennas, and an hf oscillator common to both receivers. Its output can be fed to Radioteletype Terminal Equipment AN/FGC-1.

It is equipped with a telephone dial that may be used to turn the equipment on or off and to select any of five preset frequency channels or any combination of four antennas.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2.4 to 23 in 5 bands
Type Modulation: AM
Type of Signal: Voice and fsk radioteletype
Power Requirements: 400 w, 100–130/200–260-v 50–60-cycle ac

AN/FRR-3( ) DIVERSITY RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS*	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna unit	----------	8-3/4 x 13-5/8 x 18-3/4	35
1	Cabinet	----------	85 x 17 x 22-1/2	
1	Multiplier unit	----------	7 x 13-3/4 x 18-3/4	29.5
1	Oscillator unit	----------	8-3/4 x 10-5/8 x 18-3/4	35
1	Power control unit	----------	5-1/4 x 7-1/2 x 18-3/4	15.25
1	Power filter unit	----------	8-3/4 x 11-1/4 x 18-3/4	62.5
1	Power supply unit	----------	7-1/2 x 13-5/8 x 18-3/4	61.75
2	Receiver unit	----------	12-1/4 x 13-3/4 x 18-3/4	46
1	Remote control unit	----------	10-1/2 x 8 x 18-3/4	24.25

* Components not separately stocked.

REFERENCE DATA AND LITERATURE:

TM 11-872

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	53.16	1,146

PROCUREMENT DATA

PROCURING SERVICE: USA **DESIGN COG:** USA, Sig C

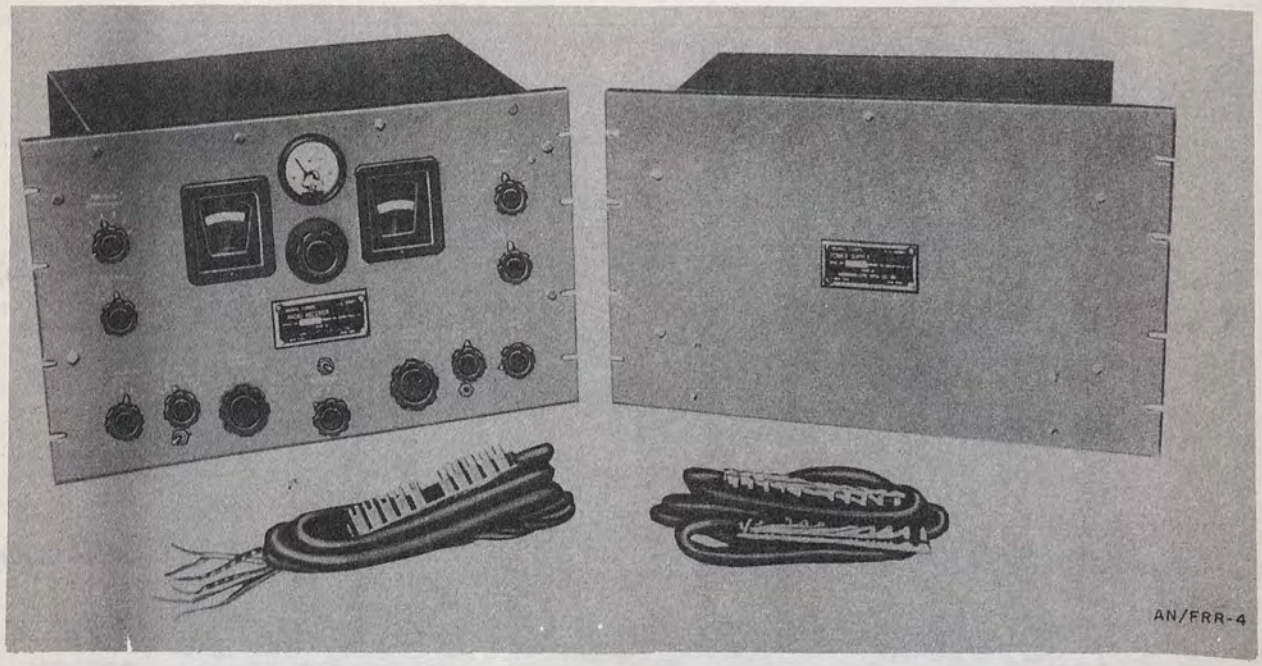
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	3217-P-51-06	
Press Wireless Manufacturing Co. Inc.	New York, N. Y.	38861-P-53-47	$2,700.00

RADIO SET AN/FRR-4

24 November 1958
Cognizant Serv: USA FSN: 5820-164-7207

	USA	USN	USAF
TYPE CLASS:	Std	--	Obs
STOCK NO:	2S2001-4FP	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/FRR-4 is a medium-frequency, amplitude-modulated, long-range receiving equipment. It is designed for fixed station or mobile and vehicular installation and for intercept team application.

This equipment consists of a commercial (Hammarlund Super-Pro) communications receiver, which may be cabinet-inclosed or rack and panel mounted; included also is a power supply unit.

In emergencies, the equipment can be operated by battery supply.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Band 1: .54 to 1.16
Band 2: 1.16 to 2.5
Band 3: 2.5 to 5
Band 4: 5 to 10
Band 5: 10 to 20
Type Modulation: AM
Operational Range: 100 miles
Type Signal: Cw, tone, voice
Power Requirements: 180 w, 105- to 125-v 50- to 60-cycle ac

AN/FRR-4 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Supply Unit RA–84	----------	10-1/2 x 10 x 19	60
1	Radio Receiver BC–1004	----------	10-1/2 x 15-3/8 x 19	55

REFERENCE DATA AND LITERATURE:
TM 11–866

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	7.4	175

PROCUREMENT DATA

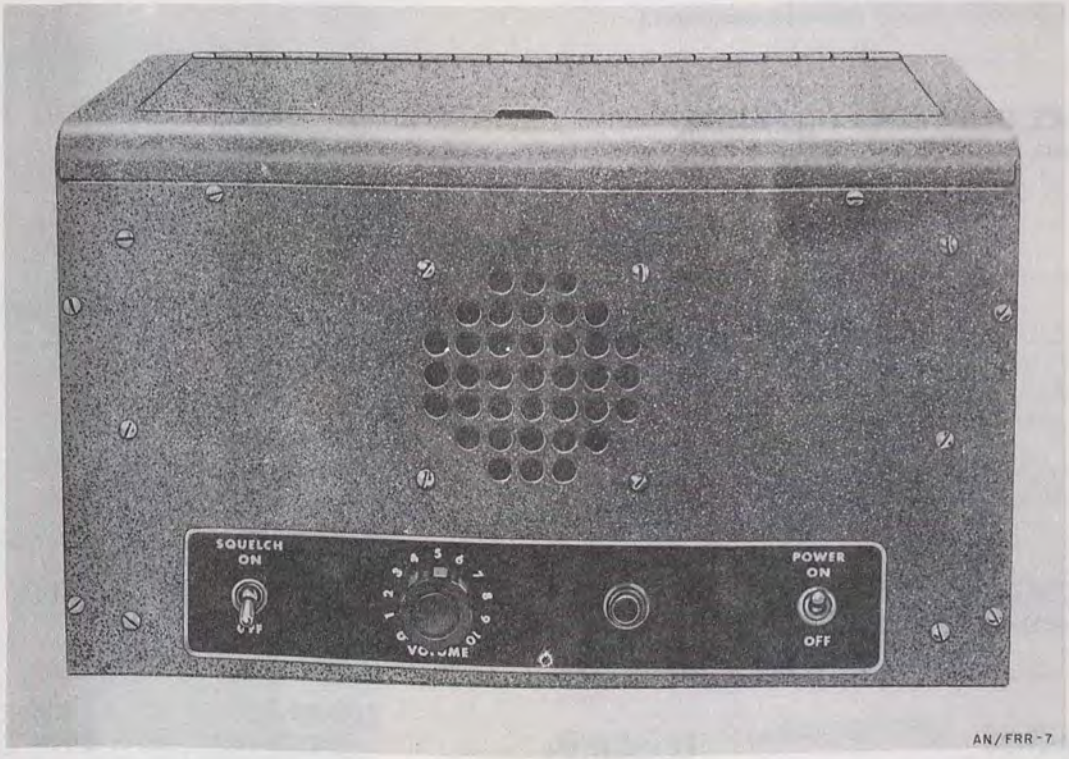
PROCURING SERVICE: **DESIGN COG:**
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVING SET AN/FRR-7( )

1 July 1958
Cognizant Serv: USA FSN: 5820-164-7174

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	2C6731	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/FRR-7( ) is a crystal-controlled, fixed-frequency, am (voice and tone) receiving equipment operating in the medium-frequency band.

This equipment consists of a lightweight radio receiver with built-in power supply and loudspeaker. It provides for break-in operation when operated in conjunction with a transmitter using the same or an adjacent frequency.

This set has squelch control for reducing background noise volume control, and provision for operation of an external loudspeaker. It uses a conventional type antenna system.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.6 to 2.9
Type Modulation: AM
Type of Signal: Tone, voice
Power Requirements: 40 w, 115-v 50/60-cycle ac

AN/FRR-7( ) RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Radio Receiver AN/FRR-7	5820-164-7174	9 x 12 x 15-9/16	30
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11-883

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.4	47

PROCUREMENT DATA

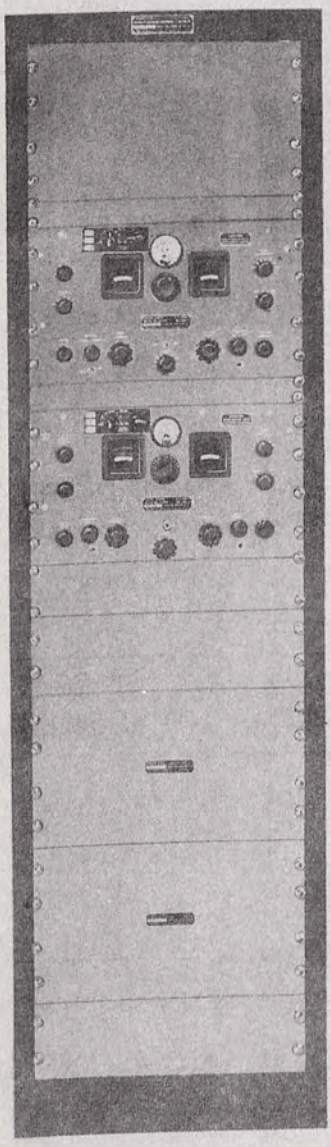
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Kaar Engineering Co.			

RADIO RECEIVING SET AN/FRR-12

1 July 1958
Cognizant Serv: USA FSN: 5820-164-7219

	USA	USN	USAF
TYPE CLASS:	L/Std	--	L/Std
STOCK NO:	2S2001-12	--	--



AN/FRR-12

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/FRR-12 is a fixed-station, dual-diversity receiving set for use in point-to-point radioteletype systems. This set may also be used for cw, mcw, or am voice reception.

This equipment consists primarily of two Radio Receivers R-270/FRR (modified) mounted, with their power supplies, in a standard steel floor-type cabinet. Sufficient space is available in the equipment rack to install separately procured radioteletype converters such as Converter CV-31/TRA-7.

The receivers have noise-limiter, bandspread, phasing, volume, and beat-frequency-oscillator controls. The received frequency can be either crystal-controlled or manually selected.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.25 to 40 in 5 bands
Type Modulation: AM
Type of Signal: Cw, mcw, voice, fsk radioteletype
Power Requirements: 400 w, 95-130/190-260-v 25-60-cycle ac

AN/FRR-12 RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Power Supply Unit RA-74-D	6130-398-4500	10-1/2 x 10-1/4 x 19	60.5
1	Rack MT-660( )/FRR-12	5820-223-9843	76 x 18 x 22	230
2	Radio Receiver R-27/FRR	5820-164-7179	10-1/2 x 16-3/4 x 19	60.50

REFERENCE DATA AND LITERATURE:
TM 11-896

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	34.7	934

PROCUREMENT DATA

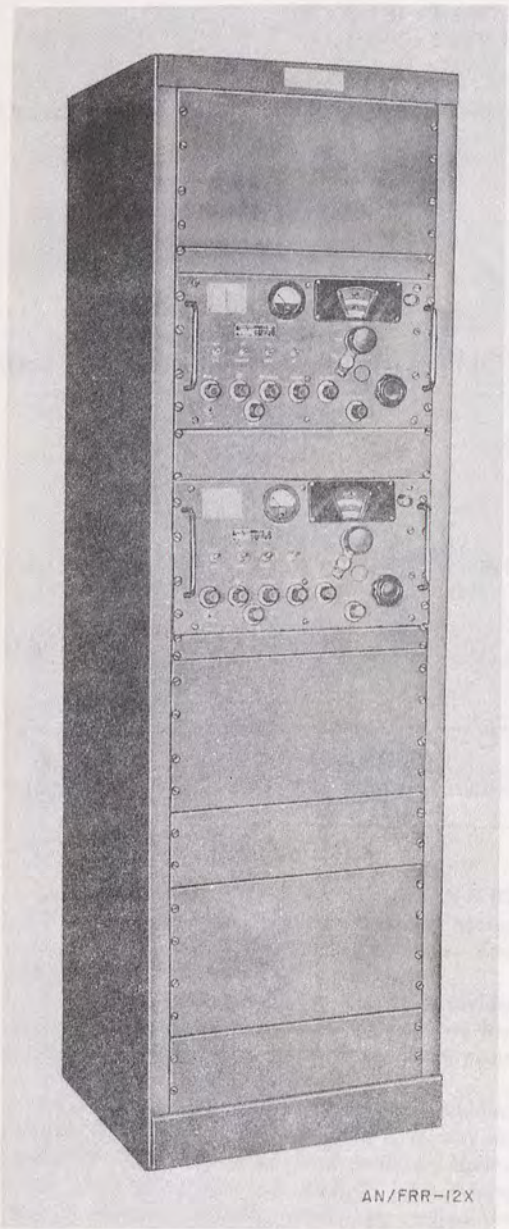
PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 69-19; 3280
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVING SET AN/FRR-12X

1 July 1958
Cognizant Serv: USA FSN: 5820-187-3141

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S2001-12X	--	--


AN/FRR-12X

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/FRR-12X provides the same services in the same applications as Radio Receiving Set AN/FRR-12. The AN/FRR-12X uses later model receivers that have self-contained power supplies.

This equipment consists of two Radio Receivers R-274/FRR and a terminal box installed in a standard steel floor-type cabinet. Space is available for installation of additional equipment in the rack.

The receivers have rf and audio gain, phasing, and beat-frequency-oscillator controls. The receivers can be either crystal or manually controlled.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.54 to 54.0
Type Modulation: AM
Type of Signal: Cw, tone, voice, fsk
Power Requirements: 240 w, 95/105/117/130/190/210/234/360-v 50-60-cycle ac

AN/FRR-12X RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Rack MT–693/FRR–12X	5820–223–9844	76-3/4 x 18-1/8 x 22	
2	Radio Receiver R–274/FRR	5820–187–3143	10-1/2 x 16-3/4 x 19	58
1	Terminal Box J–346/FRR–12X	5976–240–4450	7-3/4 x 3 x 4-1/4	2.2

REFERENCE DATA AND LITERATURE:

TM 11–896A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1		

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–3395

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafter Co.	Chicago, Ill.	25557–P–49	

RADIO RECEIVING SET AN/FRR-21, -22, -23

24 November 1958
Cognizant Serv: USN FSN: 5820-649-4772

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Sets AN/FRR–21, AN/FRR–22, and AN/FRR–23 are designed for fixed station operation in the low-, medium-, and high-frequency bands. Each set has provisions for rack mounting.

The frequency range of each receiver is divided into five bands with continuous tuning throughout each band.

These equipments are intended for shore communication and for ground based installations.

The basic receiver of all three sets is a double superheterodyne type having two stages of radio frequency amplification ahead of the first mixer and local oscillator. Radio Receiving Sets AN/FRR–22 and AN/FRR–23 have accommodations for an external oscillator, which can replace the local oscillator.

These three receiving sets are basically similar to Radio Receiving Sets AN/SRR–11, AN/SRR–12, and AN/SRR–13, respectively.

TECHNICAL CHARACTERISTICS:

Frequency Range:

AN/FRR–21:
- Band 1: 14 to 30 kc
- Band 2: 30 to 63 kc
- Band 3: 63 to 133 kc
- Band 4: 133 to 283 kc
- Band 5: 283 to 600 kc

AN/FRR–22:
- Band 1: 250 to 500 kc
- Band 2: 500 to 1,000 kc
- Band 3: 1,000 to 2,000 kc
- Band 4: 2,000 to 4,000 kc
- Band 5: 4,000 to 8,000 kc

AN/FRR–23:
- Band 1: 2 to 4 mc
- Band 2: 4 to 8 mc
- Band 3: 8 to 16 mc

AN/FRR-21, -22, -23 RADIO RECEIVING SET

Band 4: 16 to 24 mc
Band 5: 24 to 32 mc
Type Modulation: Am A1, A2 (−21, −22, −23); A3 (−22, −23); fm (F1)
Type Signal: Cw, voice, fsk
Frequency Control: Continuous lc oscillator tuning
Receiver Type: Superheterodyne, employing double conversion
Receiver Output: 6 mw into 600 ohms (0 db); output through headphones and indicated on output meter
Input Impedance to Antenna Preamplifier: 73 ohms low impedance; 200 ohms high impedance
First Intermediate Frequency:
AN/FRR-21: 60 kc on bands 1 and 4; 200 kc on bands 2, 3, and 5
AN/FRR-22: 200 kc on bands 1, 2, and 3; 1,600 kc on bands 4 and 5
AN/FRR-23: 1,600 kc on all 5 bands
Second Intermediate Frequency: 200 kc for all three receivers
Receiver Sensitivity (Cw with High Impedance Antenna):
14 to 18 Kc: 8 uv minimum
18 to 100 Kc: 5 uv minimum
100 to 600 Kc: 3.5 uv minimum
600 Kc to 8 Mc: 3 uv minimum
8 to 24 Mc: 4 uv
24 to 34 Mc: 5 uv or better
Power Requirements: 0.85 amp, 90% pf; 105, 115, or 125 v 50- to 60- or 400-cycle 1 phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Connectors, clamps, and cable			
1	Radio receiving set	----------	8-3/4 x 17-1/2 x 18-1/2	75

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92211

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5.5	1

PROCUREMENT DATA

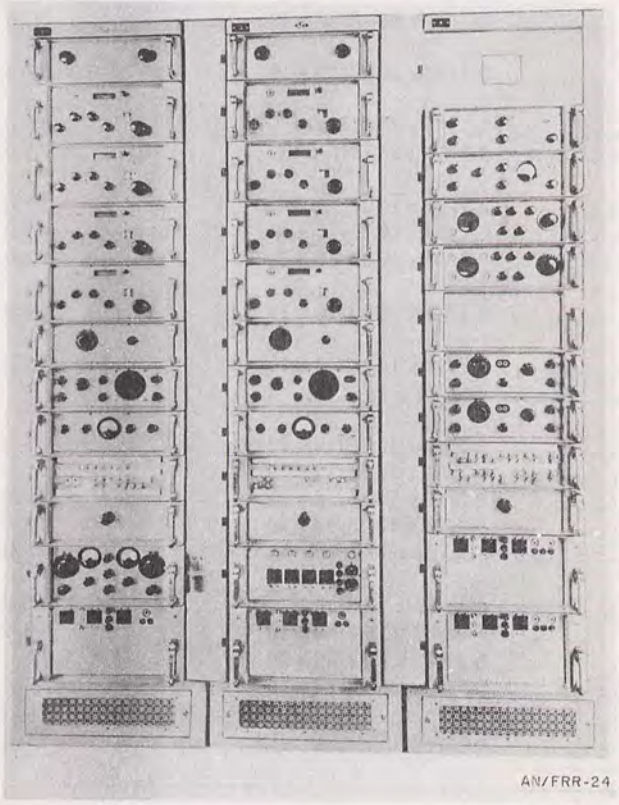
PROCURING SERVICE: USN
SPEC &/or DWG:
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Corporation of America, RCA Victor Division	Camden, N. J.	NObsr-52623, 29 June 1951 NObsr-57135, 19 December 1951	

RADIO RECEIVING SET AN/FRR-24

24 November 1958
Cognizant Serv: USN FSN: 5820-665-3514

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--


AN/FRR-24

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/FRR-24 is a double-conversion superheterodyne type diversity receiver for use at shore stations in point-to-point communication. It can receive signals in single-channel, space- or frequency-dual-, or triple-diversity operations, such as double-sideband radiotelephone, on-off keyed radiotelegraph, and frequency-shift-keyed telegraph to operate single-channel teletypewriters at 24.5 dot cycles and/or up to four-channel multiplex at 98 dot cycles.

The functions and performance of this equipment are similar to those of Radio Receiving Sets AN/FRR-10 and AN/FRR-37, except that the AN/FRR-24 uses both dual- or triple-diversity operation and cannot receive single-sideband suppressed signals.

The complete equipment is contained in four rack cabinets permanently connected together.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Band 1: 2 to 4
Band 2: 4 to 8
Band 3: 8 to 16
Band 4: 16 to 32
Type Modulation: AM (A1, A2, A3); FM (F1, F4)
Type Signal: Cw, mcw, voice, fsk, facsimile
Type of Frequency Control: Manual tuned with tuneable oscillator or crystal-controlled oscillator
Antenna Input Impedance: 70 ohms, unbalanced
Frequency Stability: 0.002% per degree C. frequency variation, 6-db gain variation
Intermediate Frequency Rejection: 100 db
Sensitivity: A2, A3, 2 uv; A1, A4, F1, 3 uv
Gain Variation: 6 db
Keying Speed: 500 wpm
Power Requirements: 1.5 kw; 10- 115-, and 125-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
3	Amplifier-Converter AM-450/FRR-24	----------	6-31/32 x 16-15/16 x 19	58.0
3	Amplifier-Converter AM-451/FRR-24	----------	6-31/32 x 16-15/16 x 19	58.0

AN/FRR-24 RADIO RECEIVING SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
3	Amplifier-Converter AM-452/FRR-24		6-31/32 x 16-15/16 x 19	58.0
3	Amplifier-Converter AM-453/FRR-24		6-31/32 x 16-15/16 x 19	58.0
1	Amplifier-Detector AM-438/FRR-24		5-7/32 x 16-15/16 x 19	36.0
3	Amplifier-Detector AM-439/FRR-24		5-7/32 x 16-15/16 x 19	36.0
2	Amplifier-Detector AM-440/FRR-24		5-7/32 x 16-15/16 x 19	31.0
4	Cabinet CY-860/FRR-24		14-3/4 x 20-7/8 x 84	215.0
1	Comparator-Keyer CM-32/FRR-24		5-7/32 x 15-7/16 x 19	33.0
3	Control Panel SB-142/FRR-24		5-7/32 x 15-7/16 x 19	33.0
3	Filter Assembly F-99/FRR-24		5-7/32 x 16-15/16 x 19	45.0
3	Frequency Converter CV-126/FRR-24		5-7/32 x 16-15/16 x 19	33.0
3	Frequency Shift Converter CV-127/FRR-24		5-7/32 x 16-15/16 x 19	35.0
3	Keyer KY-62/FRR-24		5-7/32 x 16-15/16 x 19	35.0
1	Oscillator Assembly O-131/FRR-24		6-31/32 x 19	
1	Patch Panel SB-138/FRR-24		5-7/32 x 16-15/16 x 19	21.0
1	Patch Panel SB-140/FRR-24		5-7/32 x 16-15/16 x 19	21.0
1	Patch Panel SB-143/FRR-24		5-7/32 x 16-15/16 x 19	21.0
1	Patch Panel SB-169/FRR-24		5-7/32 x 16-15/16 x 19	21.0
1	Power Distribution Panel SB-141/FRR-24		6-31/32 x 15-5/16 x 19	28.0
3	Power Supply PP-590/FRR-24		8-23/32 x 15-5/16 x 19	96.0
1	Power Supply PP-648/FRR-24		8-23/32 x 15-5/16 x 19	96.0
1	Power Supply PP-649/FRR-24		8-23/32 x 15-5/16 x 19	96
3	R. F. Amplifier AM-454/FRR-24		5-7/32 x 16-15/16 x 19	32.0
1	Toolbox		6-31/32 x 16-15/16 x 19	41.0

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91580

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
55	173.35	4,368

RADIO RECEIVING SET AN/FRR-24

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.	Malden, Mass.	NObsr–39402, 30 June 1947	$60,260.00

RADIO RECEIVING SET AN/FRR-27

24 November 1958
Cognizant Serv: USN FSN: 5820-665-2380

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio receiving Set AN/FRR-27 is a very-high-frequency, double-conversion superheterodyne equipment designed for single-channel, crystal-controlled operation. It provides means for reception of amplitude-modulated voice and tone transmission.

This equipment is designed for use in air traffic control towers at naval air stations and can be used at naval shore stations or advanced bases on point-to-point communications circuits.

Radio Receiving Set AN/FRR-27 is part of a series of fixed-tuned crystal-controlled radio receivers similar in design and construction but differing in frequency ranges. The series of radio receiving sets includes AN/FRR-26 with a range from 2 to 8 megacycles; AN/FRR-30, with a range from 200 to 500 kilocycles; AN/FRR-31, with a range from 8 to 32 megacycles.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Rated: 100 to 156 in 1 band
Maximum: 98 to 159

Reception: A2 and A3
Frequency Control: Crystal-controlled oscillator
Receiver Type: Double-conversion superheterodyne
Intermediate Frequencies: 23 mc and 3 mc
Power Output:
Audio Channel: 1.5 w minimum into 200- to 600-ohm load, with less than 7% distortion
Phone Jack: 15 mw minimum into 600-ohm load
Frequency Stability of Receiver: Variation in line voltage of ±10% of normal does not vary resonant frequency by more than 0.002%. Variation in ambient temperature between −20° C. to +50° C. does not vary resonant frequency by more than 0.01% from 25° C.
Squelch Circuit:
Effective Silencing Range: 1 to 100 uv
Time Constant: 0.2 sec maximum
Audio Output Reduction: Over 40 db
Antenna Input: 50 ohms, unbalanced
Power Requirements: 54 w nominal; 105-, 115-, or 125-v 50- to 60-cycle 1-phase ac; 0.50 amp

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Plugs (3) for external cords	----------	1 x 3-1/2 x 3-1/2	0.2
1	Radio Receiver R-518/FRR-27 including mounting legs	----------	6 x 17 x 18-3/4	35.5
2	Relay rack mounting bracket	----------	1 x 5-1/4 x 6	.6
1	Test Cable W601	----------	3-1/2 x 3-1/2 x 12	1.33

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92021

AN/FRR-27 RADIO RECEIVING SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-R-156458 (Ships)

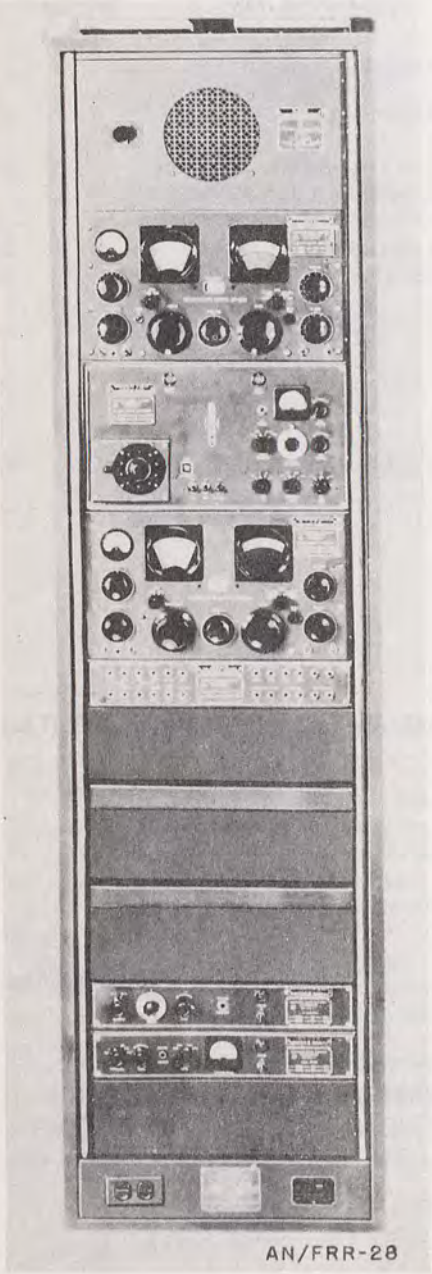
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Communication Co., Inc.	Coral Gables, Fla.	NObsr-52715, 29 June 1951	$390.60

RADIO RECEIVING SET AN/FRR-28

24 November 1958
Cognizant Serv: USN FSN: 5820-665-2362

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-112117-200	--



AN/FRR-28

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/FRR-28 is an amplitude-modulated equipment designed for diversity radio reception with a frequency-shift converter-comparator group to provide two-channel space or frequency-diversity reception of radio signals. It is used for single- or dual-diversity reception of radiotelephone or telegraph signals in the high-frequency spectrum.

This equipment employs two commercial standard (Hammarlund Model SP-600-MX) receivers modified for diversity operation. A radio frequency-beat frequency oscillator unit is included which may be used to confer a high degree of stability to the ensemble. Optional crystal control is also provided. An amplifier-detector unit may be used for local monitoring purposes. A keyer unit is used to convert the received signal to a keyed audio tone of a selected frequency; this can then be used in a circuit external to the receiving set either to key a radio transmitter or to operate a teletypewriter.

The set is installed in a relay-rack cabinet with patching panel and loudspeaker unit.

Frequency-shift signal reception is also possible with the use of an additional converter-comparator, space and wiring being provided for Frequency Shift Converter-Comparator Group AN/URA-6. The set features beat-frequency oscillator and noise-limiter circuits, and has provisions for visual indication of the output.

TECHNICAL CHARACTERISTICS:

Receiver:

Frequency Range: 540 kc to 54 mc in 6 bands (self-controlled 1.545-mc to 20.045-mc master oscillator)

Type of Reception: A1, A2, A3, FSK (with the use of a converter)

Intermediate Frequencies: 455 kc and 3.955 mc (100 ohms output impedance)

Input Impedance: 72 ohms, unbalanced

Output Impedance: 600 ohms to loudspeaker or external lines; 8,000 ohms to front panel jacks

Audio Output Power: 2.5 w into 600 ohms; 15 mw into 8,000 ohms

Rf Oscillator:

Frequency Range Mc: 2 to 32 in 4 bands (temperature-controlled variable oscillator)

Preset Frequencies: 3-hf crytals and 2-bfo crystals

Amplifier-Detector:

Input Impedance: 1,000 ohms

Output Impedance: 4,000 ohms

AN/FRR-28 RADIO RECEIVING SET

Loudspeaker Input Impedance: 500 ohms
Keyer:
Input: Positive polar keying, negative polar keying, keyed tone, polar relay keying
Output Tone: 425, 765, 1,105, 1,445, 1,785, or 2,125 cps into 600 ohms
Power Requirements: 570 w, 115- or 230-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier-Detector AM-615/UR, including cable		3-1/2 x 19 x 14	15
1	Cabinet CY-597A/G		87-1/2 x 24 x 22-3/8	275
12	Cable			
2	Fuse			
1	Keyer KY-79/UR, with cable		3-1/2 x 19 x 13-1/2	22
1	Loudspeaker, Magnetic LS-187/UR		10-1/2 x 19 x 3-13/16	12
1	Oscillator, Radio Frequency O-165/UR, including cable		10-1/2 x 19 x 14	54
1	Panel, Patching, Communication S-224/UR, including six patch cords		3-1/2 x 19 x 6	7
2	Receiver, Radio R-450/FRR-28		10-1/2 x 19 x 16-1/2	66

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91582

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	73.4	1,040

PROCUREMENT DATA

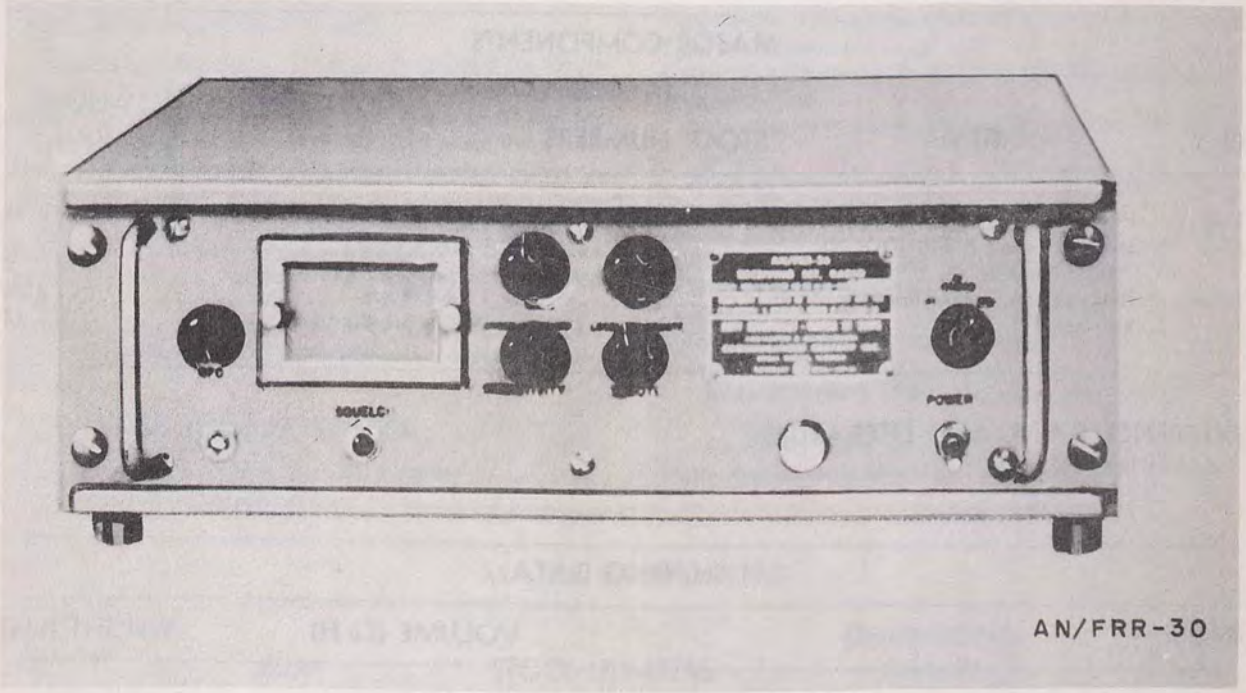
PROCURING SERVICE: USN
SPEC &/or DWG:
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Northern Radio Co., Inc.	New York, N. Y.	NObsr-52132, 19 December 1950	

RADIO RECEIVING SET AN/FRR-30

24 November 1958
Cognizant Serv: USN FSN: 5820-665-2360

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/FRR-30 is designed for reception of telegraphy without the use of modulation audio frequencies in the A1 and A1 broad positions. It also provides telegraphy by keying of modulating audio frequencies and telephony in the A2, A3 position of operation over the designated frequency range.

This equipment is for use in air traffic control towers at naval air stations. The receiver can also be used at naval shore stations or advanced bases on point-to-point communication circuits.

It can be employed for both local and limited remote operation and is suitable for continuous operation over long periods of time.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Band 1: 200 kc to 380 kc
Band 2: 380 kc to 560 kc

Number of Preset Frequencies: One as determined by the crystal of the channel determining oscillator

Frequency Control: Crystal-controlled oscillator

Type Modulation: AM, A2, A3

Receiver Type: Single conversion

Intermediate Frequency: 75 kc

Receiver Output:
Audio Channel: 1.5 w minimum into a 200- to 600-ohm load, with less than 7% distortion
Phone Jack: 15 mw minimum into a 600-ohm load with less than 7% distortion

Type Reception: A1, A2, A3

Frequency Stability Data: +10% of normal does not vary the resonant frequency by more than 100 cps (approximately)
Variation in Power Line Frequency: 50 to 60 cps does not vary the resonant frequency by more than 100 cps (approximately)

AN/FRR-30 RADIO RECEIVING SET

Variation in Ambient Temperature: −15° C. to +50° C. does not vary the resonant frequency by more than 200 cps (approximately)

Squelch Circuit Effective Silencing Range: 1 to 100 uv (approximately)

Time Constant: Under 0.2 second

Time Constant Impedances:

Antenna Input: 72 ohms unbalanced

Audio Channel Outputs:

Audio Receptacle: Load can be within a range of 200 to 600 ohms with less than 2-db variation of audio output

Headphone Jack: Can be used with a 600-ohm headphone

Antenna Data: An antenna having a 72-ohm terminal impedance is required

Power Requirements: 105- 115-, or 125-v 50- to 60-cycle ac; 0.57 amp at 115-v; 62 w at 115-v rms

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Plugs (4)	----------	1 x 3-1/2 x 3-1/2	0.31
1	Radio Receiver R-519/FRR-30, including legs	----------	6 x 17 x 18-3/4	40
1 pair	Relay-rack mounting brackets	----------	1 x 5-1/4 x 6	0.56
1	Test cable	----------	3-1/2 x 3-1/2 x 12	1.13

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92679

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.25	88.5

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-R-15645A
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Communications Co., Inc.	Coral Gables, Fla.	NObsr-52715, 29 June 1951	$630.00

RADIO RECEIVING SET AN/FRR-31

24 November 1958
Cognizant Serv: USN FSN: 5820-665-2369

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/FRR-31 is designed for the reception of telegraphy without the use of modulating audio frequencies in the A1 and A1 BROAD positions. It also provides telegraphy by keying of modulating audio frequencies, and telephony in the A2, A3 position of operation over the designated frequency range.

This equipment is for use in air traffic control towers at naval air stations. The receiver can also be used at naval shore stations or advanced bases on point-to-point communication circuits.

It can be employed for both local and limited remote operation and is suitable for continuous operation over long periods of time.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 8 mc to 32; 3 bands
Number of Preset Frequencies: 1
Type Control: Crystal-controlled oscillator
Type Modulation: AM on A2, A3
Intermediate Frequency: 2,020-kc first IF; 120-kc second IF
Receiver Output:
Audio Channel: 1.5 w (minimum) into 200- to 600-ohm load
Phone Jack: 15 mw (minimum) into 600-ohm load
Type Reception: A1, A2, A3
Squelch Circuit:
Effective Silencing Range: 1 to over 100 uv
Time Constant: Under 0.2 sec
Impedance:
Antenna Input: 72 ohms unbalanced
Audio Channel Output:
Audio Receptacle: 200 to 600 ohms with less than 2-db variation
Headphone: 600 ohms
Power Requirements: 62 w 105- 115-, or 125-v 50- to 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 pair	Relay-rack mounting brackets	----------	1 x 5-1/4 x 6	
1	Radio Receiver R-777/FRR-31	----------	6 x 17 x 18-3/4	40
1	Set of plugs	----------	1 x 3-1/2 x 3-1/2	
1	Test cable	----------	3-1/2 x 3-1/2 x 12	1

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92835

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.3	88.5

AN/FRR-31 RADIO RECEIVING SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Communications Co., Inc.	Coral Gables, Fla.	NObsr–52715, 29 June 1951	$3,850.00

RADIO RECEIVING SET AN/FRR-32

24 November 1958
Cognizant Serv: USN FSN: 5820-644-4783

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/FRR-32 is an amplitude-modulated communications equipment designed for fixed station operation. It is used with a frequency-shift converter-comparator group to provide two-channel space- or frequency-diversity reception of radio signals.

A built-in monitoring unit permits local monitoring and tuning of the two component receivers. Both are controlled by a separate master oscillator to improve stability.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Band 1: 2 to 4
Band 2: 4 to 8
Band 3: 8 to 16
Band 4: 16 to 24
Band 5: 24 to 32

Frequency Control: Crystal controlled when using the RF oscillator; continuous lc oscillator tuning when operating the receivers without the master oscillator

Receiver Type: Dual-conversion superheterodyne
Intermediate Frequencies: First IF, 1,600 kc; second IF, 200 kc
Type Reception: A1, A2, A3, F1
Receiver Output: 6 mw into 600 ohms
Input Impedance (to Antenna Preamplifier):
Low: 73 ohms
High: 200 ohms
Receiver Sensitivity (CW):
2 to 8 Mc: 5 uv minimum
8 to 24 Mc: 6 uv minimum
24 to 32 Mc: 8 uv minimum
Silencer Diodes: Operate on A3 signals
Threshold Control Range: 40 db
Power Data (at 115 v):
Receivers 1 and 2: 62.5 w
Comparator.Keyer: 80 w
Rf Oscillator: 295 w
Power Requirements: 490 w; 105; 115-, or 125-v, 50- to 60-cycle 1-phase ac; 90% pf

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiving Set AN/FRR-32 including:	----------	22-3/8 x 24 x 87-9/16	
2	Radio Receiver R-618/FRR-32	----------	8-3/4 x 18-1/2 x 19	75
1	Cabinet CY-597A/G	----------	22-3/8 x 24 x 87-9/16	
1	Comparator Keyer CM-70/FRR-32	----------	8-23/32 x 18-3/16 x 19	
1	Dynamic Loudspeaker LS-169/G	----------	4-3/8 x 8-23/32 x 19	
1	Patching Communication Switchboard SB-431/FRR-32	----------	1-1/16 x 10-1/2 x 19	
1	Radio Frequency Oscillator O-330/FRR-32	----------	10-15/32 x 18-5/8 x 19	

REFERENCE DATA AND LITERATURE:

AN/FRR-32 RADIO RECEIVING SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

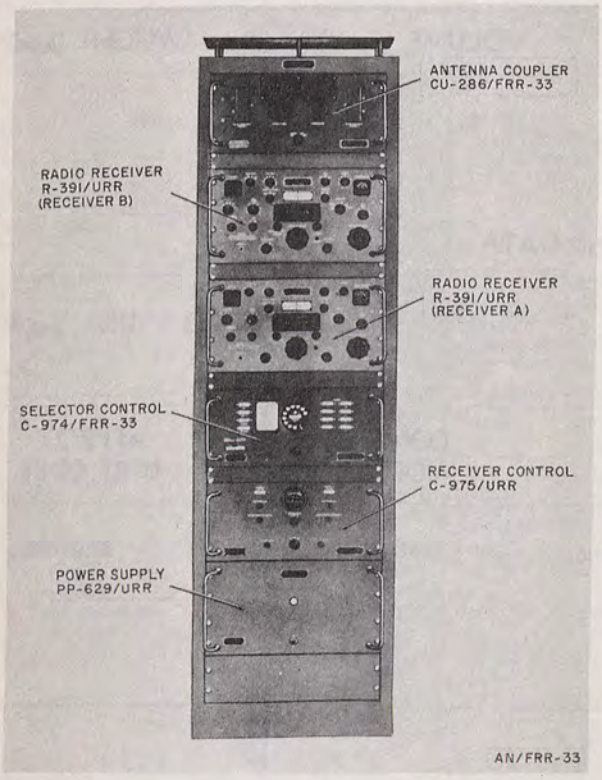
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Corporation of America, RCA Victor Division	Camden, N. J.	NObsr-57571	

RADIO RECEIVING SET AN/FRR-33

1 July 1958
Cognizant Serv: USA: FSN: 5815-503-1501

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S2001-33	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/FRR-33 is a dual-diversity equipment used for minimizing the effects of fading in radioteletype signals. It is operated in conjunction with Radioteletype Terminal Equipment AN/FGC-1 in fixed plant military communication applications at higher headquarters.

This equipment includes two identical radio receivers, an antenna coupler, a selector control, a receiver control, a remote switching control, and a power supply, all of which are rack-mounted in a steel cabinet. A complete diversity antenna system, providing two rhombic antennas for each set, is required but not supplied with this equipment.

As many as three AN/FRR-33 systems can be controlled by the remote switching control.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 32
Type Modulation: AM
Type of Signal: Cw, voice, fsk radio tty (850-cycle shift)
Power Requirements: 1,475 w, 115/230-v 48-62-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna Coupler CU-286/FRR-33	2A745-286	19 x 18-1/4 x 8-3/4	
1	Electrical Equipment Cabinet CY-1119/U	6F300-1119	20-13/16 x 21-27/32 x 76	
1	Power Supply PP-629/URR	3H4497-629	19 x 15-15/64 x 10-1/2	
2	Radio Receiver R-391/URR	2C4180-391	19 x 14-1/2 x 10-1/2	
1	Receiver Control C-975/URR	2C684-975	19 x 17-9/16 x 8-3/4	
1	Remote Switching Control C-973/FRR-33	2C684-973	9-21/64 x 12-51/64 x 8-7/32	
1	Selector Control C-974/FRR-33	2C684-974	19 x 15-5/16 x 8-3/4	

AN/FRR-33 RADIO RECEIVING SET

REFERENCE DATA AND LITERATURE:

TM 11-871

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
9	65.6	1,099

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-D-10251

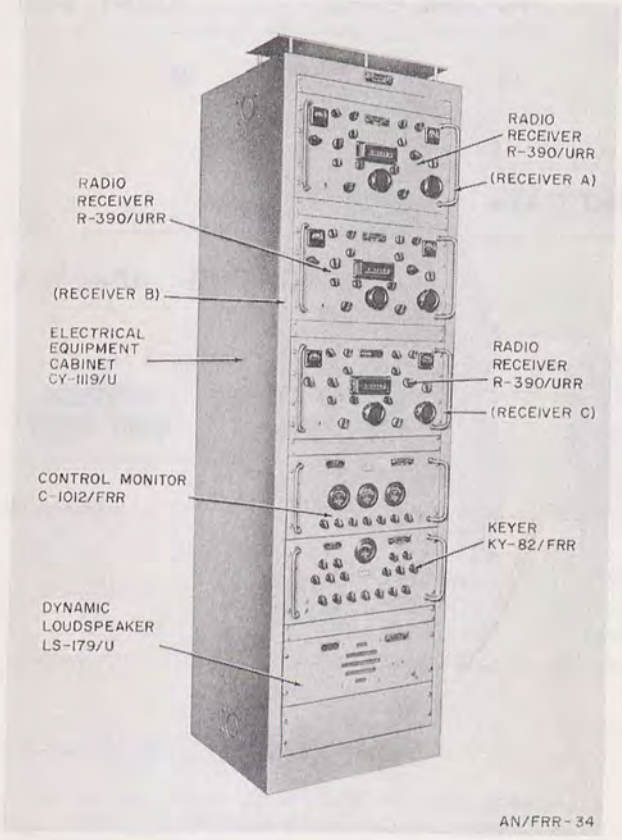
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CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	26575-P-52-51	$9,087.23

RADIO RECEIVING SET AN/FRR-34

1 July 1958
Cognizant Serv: USA FSN: 5820-503-1496

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S2001-34	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/FRR-34 is a triple-diversity equipment used for the reception of radiotelephone, radiotelegraph, and radioteletype signals.

This equipment consists essentially of three receivers, a control monitor, a keyer, and a loudspeaker, all mounted in an equipment cabinet.

By means of switching circuits in the keyer, the following modes of operation can be selected: each receiver separately; two in dual diversity or three in triple diversity, to minimize fading; or two in dual diversity while the third is operated as a search receiver on other frequencies.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 32
Type Modulation: AM
Type of Signal: Cw, mcw, voice
Power Output: 5 mw (phones); 10 mw (600-ohm balanced line); 500 mw (600-ohm unbalanced line)
Power Requirements: 980 w, 115/230-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Monitor C-1012/FRR	(USA) 2C684-1012	19 x 8-23/32 x 13-5/16	
1	Dynamic Loudspeaker LS-179/U	(FSN) 5965-284-6709	19 x 2-7/8 x 6-31/32	
1	Electrical Equipment Cabinet CY-1119/FRR	(USA) 6F-300-1119	21-7/8 x 20-13/16 x 76	
1	Keyer KY-82/FRR	(USA) 2C640-82	19 x 18-11/16 x 8-23/32	
3	Radio Receiver R-390/URR	(USA) 2C4180-390	19 x 14-1/2 x 10-1/2	

AN/FRR-34 RADIO RECEIVING SET

REFERENCE DATA AND LITERATURE:

TM 11-864

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	122	922

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10909A

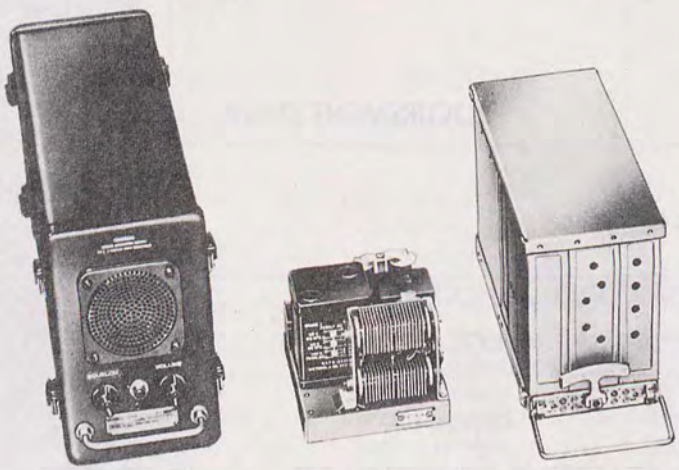
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	20302-P-57-51	$4,482.00

RADIO RECEIVING SET AN/FRR-36

1 July 1958
Cognizant Serv: USA FSN: 5820-503-1503

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S2001-36	--	--



ELECTRICAL EQUIPMENT CABINET CY-1150/U

POWER SUPPLY PP-846/U

RADIO RECEIVER R-394/U

AN/FRR-36

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/FRR-36 is a vhf fm (voice) equipment used in monitoring and communication applications.

This set consists essentially of a radio receiver with its power supply, housed in a metal equipment cabinet, and includes an appropriate vertical antenna.

It is a fixed-station equipment; the same receiver component with different power-supply and antenna component, for vehicular installation, is Radio Receiving Set AN/VRR-7.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 152 to 174
Type Modulation: FM
Type of Signal: Voice
Power Requirements: 46 va, 115/230-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT-438/GR	(FSN) 5985-264-7498	21 x 57-1/4 x 57-1/4	7.5
1	Electrical Equipment Cabinet CY-1150/U	(USA) 6F290-1150	10-5/8 x 21-1/4 x 7-1/2	14.5
1	Power Supply PP-846/U	(USA) 3H4497-846	5 x 6-1/4 x 7-1/16	9.5
1	Radio Receiver R-394/U	(USA) 2C180-394	8-1/2 x 14-1/2 x 5-3/4	17

AN/FRR-36 RADIO RECEIVING SET

REFERENCE DATA AND LITERATURE:

TM 11-229

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	7.25	176

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-N-11539

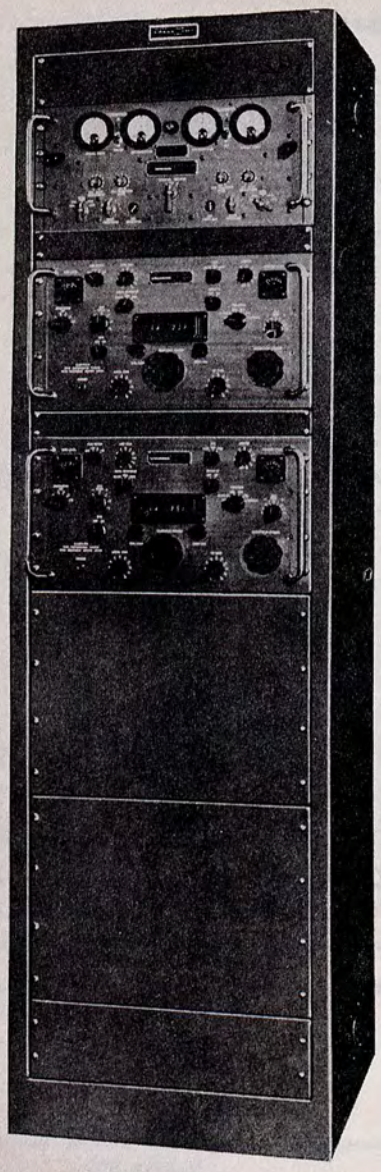
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	11661-P-52-51	$615.24

RADIO RECEIVING SET AN/FRR-38( )

1 July 1958
Cognizant Serv: USA FSN: 5820-503-1497

TYPE CLASS:	Std	--	Std
STOCK NO:	2S2001-38	--	--



AN/FRR-38

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/FRR-38( ) is a dual-diversity equipment that receives frequency-shift-keyed, single-channel, or time-division multiplex radioteletype signals. It is used as a radio receiver in a space-diversity radioteletype communications system.

This equipment consists of two receivers and a frequency-shift converter mounted in an equipment cabinet and includes an installation kit.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 32
Type Modulation: AM
Type of Signal: Cw, mcw, voice, fsk
Power Requirements: 270 w, 115/230-v 50/60-cycle 1-phase ac

AN/FRR-38( ) RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Cabinet, Electrical Equipment CY–1119/U	6F300–1119	76 x 20-1/2 x 21-27/32	225
1	Frequency Shift Converter CV–116/URR	2C716–3	8-3/4 x 17 x 19	65
1	Installation Kit for Radio Receiving Set AN/FRR–38			
2	Radio Receiver R–390/URR	2C4180–390	10-1/2 x 17-1/4 x 19	80

REFERENCE DATA AND LITERATURE:

TM 11–674

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	64.3	875

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

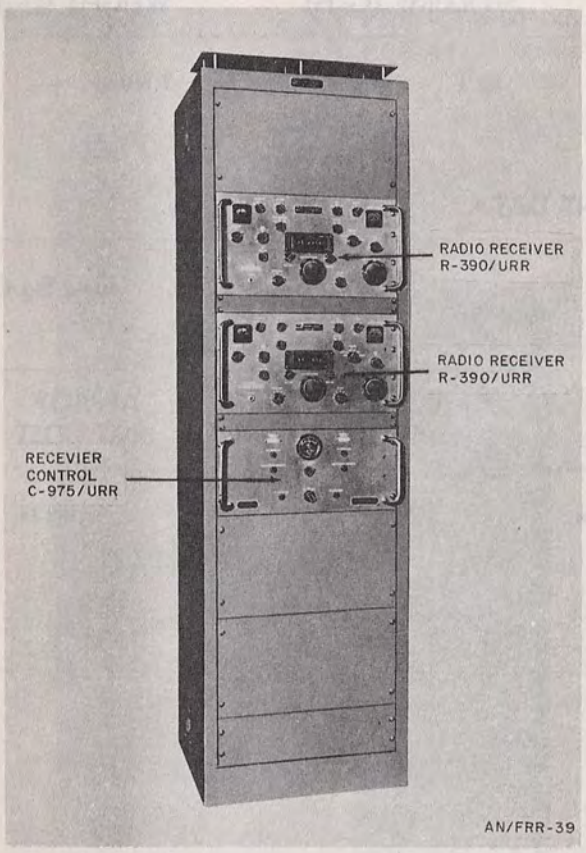
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CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hoffman Labs, Inc.	Los Angeles, Calif.	26565–P–52–93	$3,643.0

RADIO RECEIVING SET AN/FRR-39

1 July 1958
Cognizant Serv: USA FSN: 5820-503-1515

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S2001-39	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/FRR-39 is a diversity equipment used at a terminal of a system to receive frequency-shift-keyed, single-channel or time-division multiplex, teletype-writer signals; it also can be used to receive voice, cw, or tone signals.

It consists of two receivers and a receiver control unit mounted in an equipment cabinet.

This equipment is operated in conjunction with Radioteletype Terminal Equipment AN/FGC-11( )/ or other similar radioteletype converter equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 32
Type Modulation: AM (single- or double-sideband)
Type of Signal: Cw, mcw, voice, fsk
Power Output: 5 mw (phones); 10 mw (60-ohm bal line); 500 mw (600-ohm unbal line)
Power Requirements: 270 w, 115/230-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Electrical Equipment Cabinet CY-1119/U	5820-503-0801	78-1/2 x 20-13/16 x 21-7/8	165
2	Radio Receiver R-390/URR	5820-503-1242	10-1/2 x 17-1/4 x 19	80
1	Receiver Control C-975/URR	5815-503-0891	8-3/4 x 16-1/2 x 19	48

AN/FRR-39 RADIO RECEIVING SET

REFERENCE DATA AND LITERATURE:

TM 11-648

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	53.4	2,501.6

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

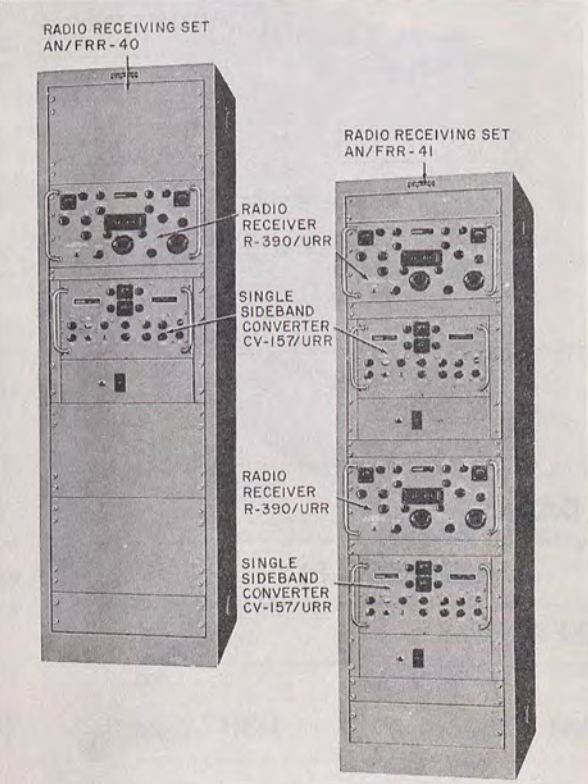
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	26566-P-52-93	$9,492.11

RADIO RECEIVING SET AN/FRR-40, -41

1 July 1958
Cognizant Serv: USA FSN: AN/FRR-40: 5820-545-7325
AN/FRR-41: 5820-503-1513

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	AN/FRR-40: 2S001-40 AN/FRR-41: 2S2001-41	--	--



AN/FRR-40,-41

FUNCTIONAL DESCRIPTION:

Radio Receiving Sets AN/FRR-40 and AN/FRR-41 are used for the reception of single-sideband or twin single-sideband radio signals that carry multiplex teletypewriter, facsimile, and/or voice intelligence.

The AN/FRR-40 consists of one receiver and a single-sideband converter housed in a metal equipment cabinet. The AN/FRR-41, composed of two receivers and two converters housed in a metal equipment cabinet, is used for dual-diversity reception.

Both equipments are used in long-range applications between installations that have a heavy flow of message traffic. The audio output of each of these sets is capable of operating voice-reproducing equipment directly, or of feeding carrier terminal equipment that provides several teletypewriter or facsimile channels.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 32
Type Modulation: AM (single- or double-sideband)
Type of Signal: Voice, cw, tone (radioteletype)
Power Requirements: 520 w (AN/FRC-40), 1,040 w (AN/FRC-41), 105-125-210/250-v 50/60-cycle 1 phase ac

AN/FRR-40, -41 RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
	For AN/FRR-40:			
1	Electrical Equipment Cabinet CY-1119/U	6F300-1119	76 x 20-1/2 x 21-27/32	225
1	Radio Receiver R-390/URR	2C4180-390	10-1/2 x 17-1/4 x 19	80
1	Single Side Band Converter CV-157/URR	2C722-157	15-3/4 x 15 x 19	104
	For AN/FRR-41:			
1	Electrical Equipment Cabinet CY-1119/U	6F300-1119	76 x 20-1/2 x 21-27/32	225
2	Radio Receiver R-390/URR	2C4180-390	10-1/2 x 17-1/4 x 19	80
2	Single Side Band Converter CV-157/URR	2C772-157	15-3/4 x 15 x 19	104

REFERENCE DATA AND LITERATURE:
TM 11-649

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
AN/FRR-40		
4	55.3	642
AN/FRR-41		
6	75.3	909

PROCUREMENT DATA

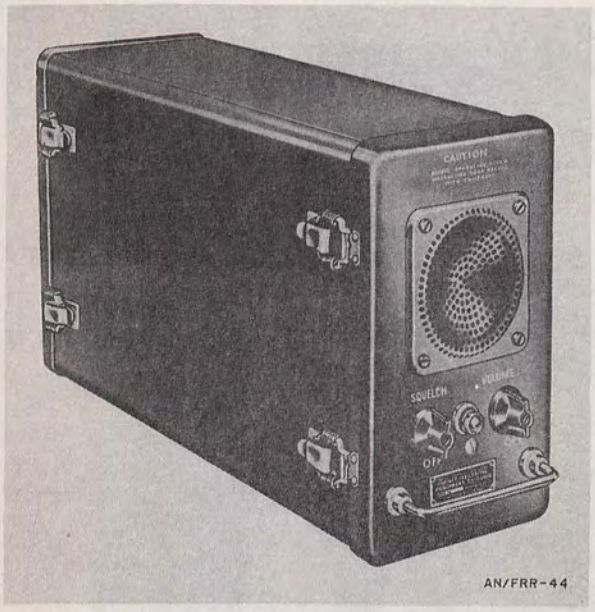
PROCURING SERVICE: USA
SPEC &/or DWG:
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hoffman Labs. Inc.	Los Angeles, Calif.	26565-P-52-93	$6,402.30 (AN/FRR-40) $11,423.89 (AN/FRR-41)

RADIO RECEIVING SET AN/FRR-44

1 July 1958
Cognizant Serv: USA FSN: 5820-503-1504

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S2001-44	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/FRR-44 is a vhf (FM-voice) fixed station equipment used primarily for monitoring and radio communication applications.

This equipment consists essentially of a radio receiver and its power supply, housed in an equipment cabinet, and includes antenna and accessory components.

The primary operating component, Radio Receiver R-257/U, is also used as the receiving component of such radio equipments as Radio Sets AN/FRC-15, AN/TRC-22, and AN/VRC-6( ).

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 25 to 50
Type Modulation: FM
Type of Signal: Voice, tone
Power Requirements: 0.4 amp, 115-v 50/60-cycle ac; or 0.2 amp, 230-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AS-612/U	2A249-612	11-1/2 x 5-1/4 x 41	30.0
1	Electrical Equipment Cabinet CY-1150/U	6F290-1150	10-5/8 x 21-1/4 x 7-1/2	14.5
1	Power Supply PP-846/U	3H4497-846	5 x 6-1/4 x 7-1/16	9.5
1	Radio Receiver R-257/U	2C4180-257	8-1/2 x 14-1/2 x 5-3/4	17.0

REFERENCE DATA AND LITERATURE:

TM 11-225

AN/FRR-44 RADIO RECEIVING SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	5.60	140

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-N-11539

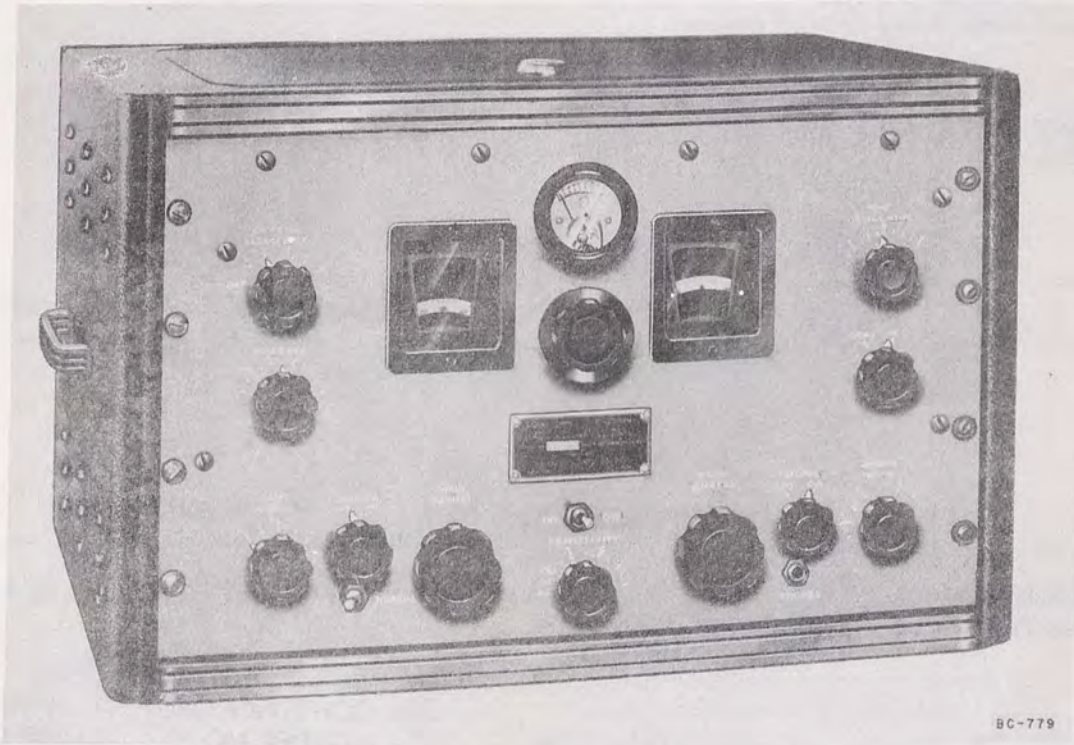
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	11661-P-52-51	$729.71

RADIO RECEIVER **AN/FRR-type**

1 July 1958
Cognizant Serv: USA FSN: 5820–164–7215 BC–779

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	2C4779	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver BC–779 is a long-range lf and hf, AM (voice, tone, and cw) equipment operating in five frequency bands. It is used for fixed station, monitoring, and similar communication applications.

This equipment consists of a table model commercial type (Hammarlund Super-Pro) communication receiver that can be operated in its metal cabinet or mounted on a standard relay rack. It can be provided with shock mounts for use in a vehicle.

This receiver operates on a single long-wire or doublet antenna system and uses an external power supply unit. It can also be operated from storage and dry batteries.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.1 to 0.4 and 2.5 to 20.0 in 5 bands
Type Modulation: AM
Type of Signal: Cw, tone, voice
Power Requirements: 180 w from one of the following power units:

Power Supply Unit RA–74: 95–260-v 25/60-cycle ac
Power Supply Unit RA–84: 105–125-v 50/60-cycle ac
Power Supply Unit RA–94: 115/230-v 50/60-cycle ac

OR

One 6-v storage battery, five 45-v B batteries, and one 45-v C battery

AN/FRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Radio Receiver BC–779	5820–164–7215	10-1/2 x 13-3/8 x 19	55
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11–866

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.3	90

PROCUREMENT DATA

PROCURING SERVICE: USA DESIGN COG: USA, Sig C
SPEC &/or DWG:

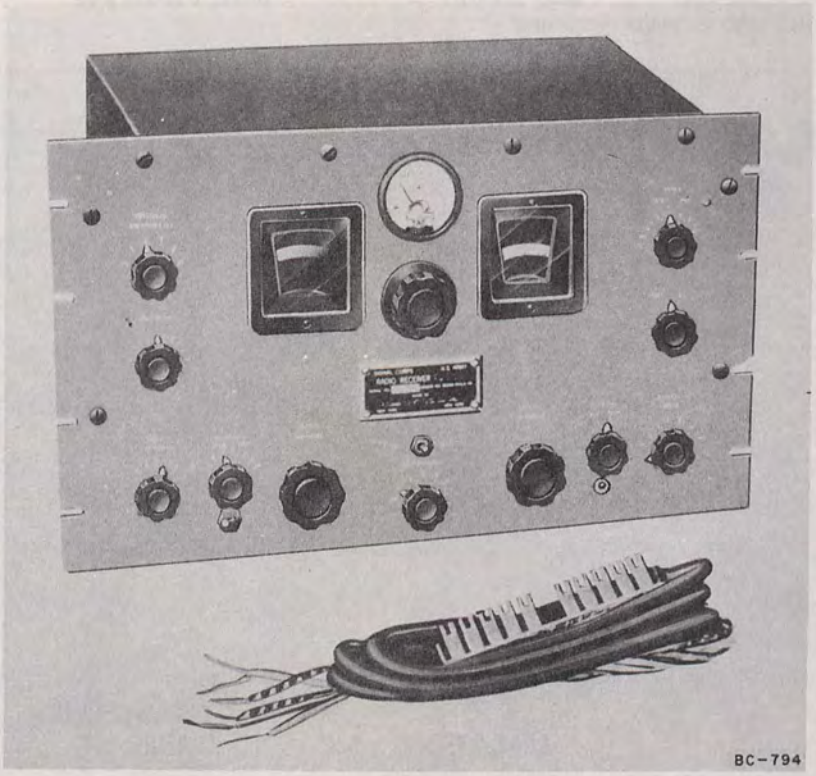
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVER AN/FRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-164-6377

BC-794

	USA	USN	USAF
TYPE CLASS:	Std	--	A/Std
STOCK NO:	2C4794	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver BC-794 is a general purpose, am (voice, tone and cw), receiving equipment operating in the medium- and high-frequency bands. It is used as fixed station equipment for communication, monitoring, or similar applications.

This equipment consists essentially of a commercial (Hammarlund Super-Pro) communications-type radio receiver and includes accessories. It may be installed in a vehicle by means of appropriate shock mounts.

A doublet antenna with a balanced transmission line, a straight wire and ground, or equivalent antenna systems may be used.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.25 to 40.0 in 5 bands
Type Modulation: AM
Type of Signal: Voice, tone, cw
Power Requirements: 180 w from one of the following power units:

Power Supply Unit RA-74: 95-260-v 25/60-cycle ac
Power Supply Unit RA-84: 105-125-v 50/60-cycle ac
Power Supply Unit RA-94: 115/230-v 50/60-cycle ac
OR
One 6-v storage battery, five 45-v B batteries, and one 45-v C battery

AN/FRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver BC–794 (Equipment consists of only one major component.)	5820–164–6377	10-1/2 x 13-3/8 x 19	55

REFERENCE DATA AND LITERATURE:

TM 11–866

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.3	90

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: (USA) 71–1523; 71–3280

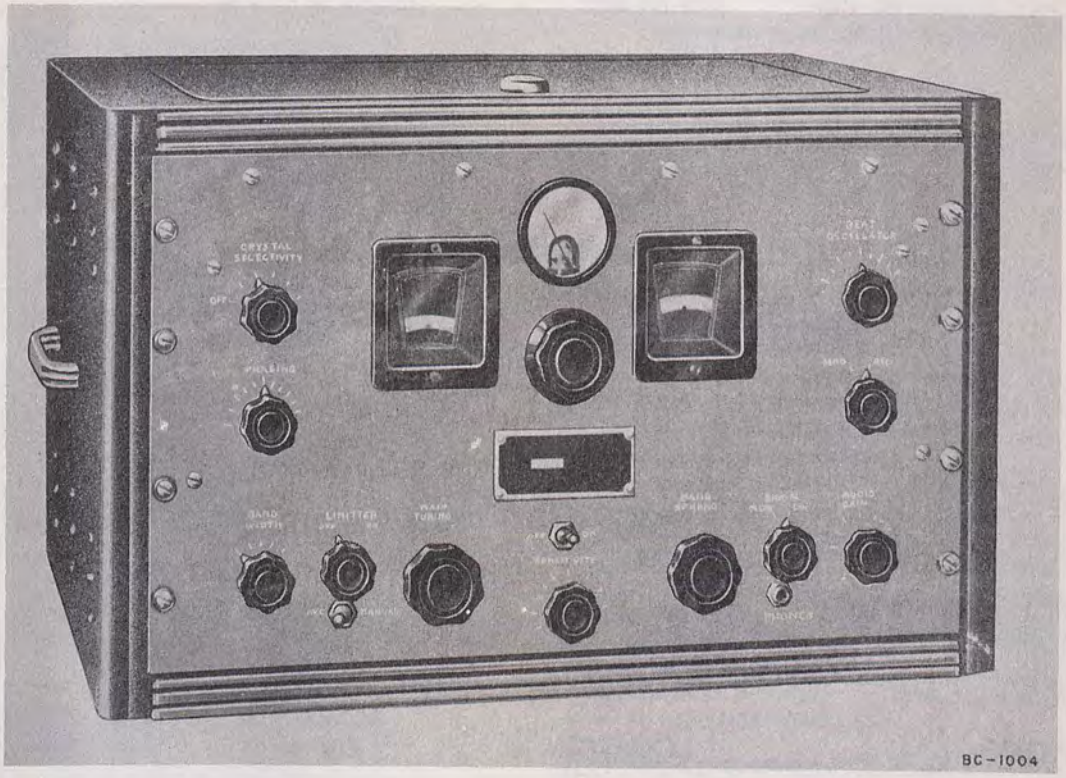
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hammarlund Manufacturing Co.	----	12613–P–47	

RADIO RECEIVER AN/FRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-164-6375

BC-1004

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C5004	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver BC-1004 is a crystal-controlled, general purpose, AM (voice, tone, and cw) receiving equipment used in fixed-plant or vehicular applications for monitoring, intercept, or communication in the lf and mf ranges.

This equipment consists essentially of a commercial (Hammarlund Super Pro) communications type receiver that can be removed from its cabinet and mounted on a standard rack panel. For vehicular use, a shock mount is available.

It operates with a conventional straight wire antenna and ground or a doublet-type antenna system.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.54 to 2.5, 5.0 to 20.0
Type Modulation: AM
Type of Signal: Voice, tone, cw
Power Requirements: 180 w from one of the following power units:

Power Supply Unit RA-74: 95-260-v 25/60-cycle ac
Power Supply Unit RA-84: 105-125-v 50/60-cycle ac
Power Supply Unit RA-94: 115/230-v 50/60-cycle ac

OR

One 6-v storage battery, five 45-v B batteries, and one 45-v C battery

AN/FRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Radio Receiver BC–1004	5820–164–6375	10-1/2 x 13-1/2 x 19	55

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–866

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.3	90

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–1523

DESIGN COG: USA, Sig C

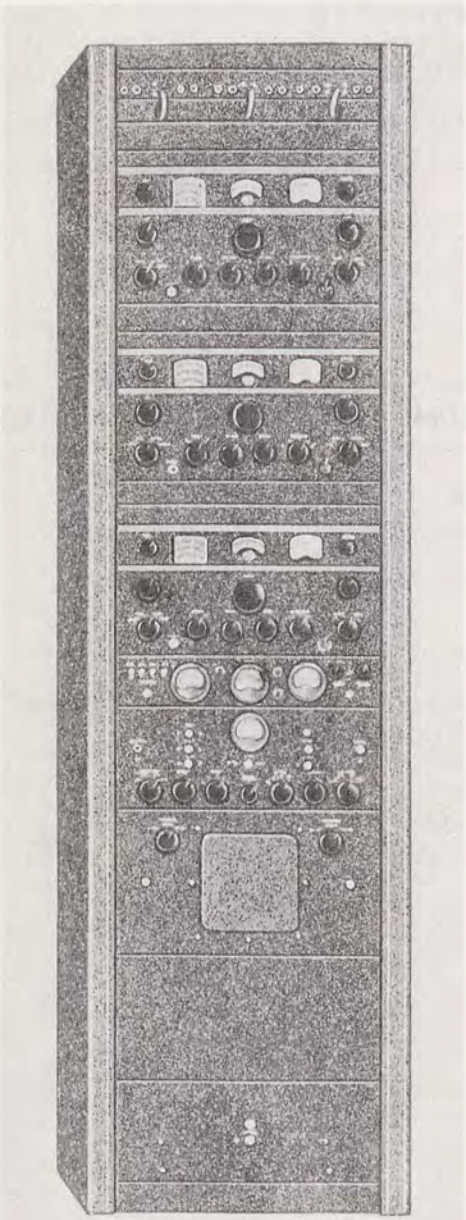
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hammarlund Co.	----	9092–P–44	

RADIO RECEIVER ASSEMBLY AN/FRR-type

1 July 1958
Cognizant Serv: USA FSN:

OA-58/FRC

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C5137-58	--	--



OA-58/FRC

FUNCTIONAL DESCRIPTION:

Radio Receiver Assembly OA-58/FRC is a long-range, medium- and high-frequency, triple-diversity, AM (voice, cw, and mcw) fixed-station radio receiving equipment, designed to minimize the effects of fading.

This equipment consists of three superheterodyne radio receivers, each with an individual power supply; a tone keyer; a monitoring unit; loudspeaker; and accessories, assembled on a standard relay rack, and inclosed in a steel floor-type cabinet.

Each of the receivers can be operated separately from its own doublet or rhombic antenna. The monitoring unit is common to all receivers and operates on its own power-supply unit. The loudspeaker can be switched to any one, or all, of the radio receiver outputs.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.54 to 32.0 in 6 overlapping bands
Type Modulation: AM
Type of Signal: Cw, voice, mcw
Power Requirements: 450 w, 110–160/190–260-v 50–60 cycle ac

AN/FRR-type RADIO RECEIVER ASSEMBLY

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet	----------	84 x 21 x 22	275.0
1	Loudspeaker assembly	----------	10-1/2 x 4-1/2 x 19	26.5
1	Monitoring unit	----------	3-1/2 x 7-1/2 x 19	10.5
1	Monitoring unit power supply	----------	7 x 7 x 19	17.5
3	Radio Receiver (RCA Model AR-88F)	----------	10-1/2 x 19 x 19	78.5
1	Tone keyer unit	----------	7 x 11 x 19	26.5

REFERENCE DATA AND LITERATURE:

TM 11-889

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7	78.74	1,122

PROCUREMENT DATA

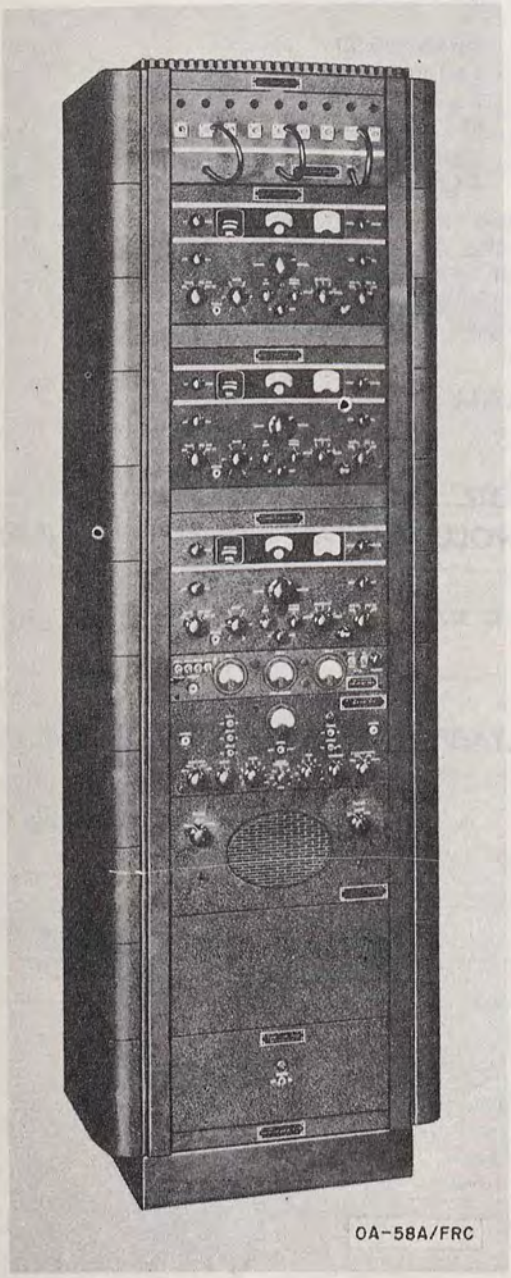
PROCURING SERVICE: USA
SPEC &/or DWG: MIL-17815C (RCA)
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA-RCA Victor	New York, N. Y.	21366-P-50-7	$5,274.79

RADIO RECEIVER ASSEMBLY AN/FRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-194-2983 OA-58A/FRC

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C5137-58A	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver Assembly OA-58A/FRC is a long-range, mf and hf, triple-diversity, am, fixed-station radio receiving equipment. It is a military version of commercial (RCA) equipment OA-58/FRC.

This equipment consists of three superheterodyne radio receivers, a tone keyer, a monitoring unit, loudspeaker, and accessories, assembled in a standard relay rack and inclosed in a steel floor-type cabinet.

Each receiver can be operated independently, or two or three receivers can be operated in diversity by feeding their outputs through the tone keyer, which combines (voice signals) these outputs, or selects (cw) the strongest signals to key the tone output of the keyer.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.535 to 32 in 6 overlapping bands
Type Modulation: AM
Type of Signal: Cw, mcw, voice; single receiver, double- or triple-diversity
Power Requirements: 450 w, 110/125/150/210/240-v 50-60-cycle ac

AN/FRR-type RADIO RECEIVER ASSEMBLY

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Dynamic Loudspeaker LS-156/FRC	6C42-156	8-3/4 x 4-3/4 x 19	10
1	Keyer KT-50/FRC	2C640-50	7 x 12-1/2 x 19	10
1	Patching Panel SB-99/FRC	2Z6955-99	7 x 1-9/16 x 19	5
1	Power Supply PP-479/FRC	3H4497-479	7 x 7-1/8 x 19	20
1	Rack MT-687/FRC	2Z7383-687	84-7/8 x 23 x 23	250
3	Radio Receiver R-320/FRC	2C4180-320	10-1/2	80
1	Receiver Monitor MX-968/FRC	2C2562-986Z	7 x 7-3/4 x 19	26

REFERENCE DATA AND LITERATURE:

TM 11-889A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	67.372	995

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVER ASSEMBLY AN/FRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-164-7220 OA-59/FRC

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C5404	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiver Assembly OA-59/FRC is a crystal-controlled, dual-diversity, fixed-frequency, AM (cw) receiving equipment used for radioteletype and radiotelegraph long-range communication in fixed-plant installations.

This equipment consists, essentially, of two commercial type (Wilcox Model CW 3-D) receivers, each with its own power supply, rack-and-panel-mounted in a steel floor-type cabinet. It operates in six bands, which are selected by means of appropriate plug-in coils furnished with the equipment. It is provided with hf and beat-frequency oscillators common to both receiver components.

This set uses two rhombic or two other matched-type antenna systems.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.9 to 24.0 in six bands
Type Modulation: AM
Type of Signal: Cw, radioteletype
Power Requirements: 1.3 amp, 110-115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Metal cabinet	----------	72 x 24 x 17	
2	Wilcox Model CW3-D Receiver	----------	10-1/2 x 19 x 11-1/2	

REFERENCE DATA AND LITERATURE:

TM 11-2204

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	37	528

AN/FRR-type RADIO RECEIVER ASSEMBLY

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: 115AD–4CW–3–D

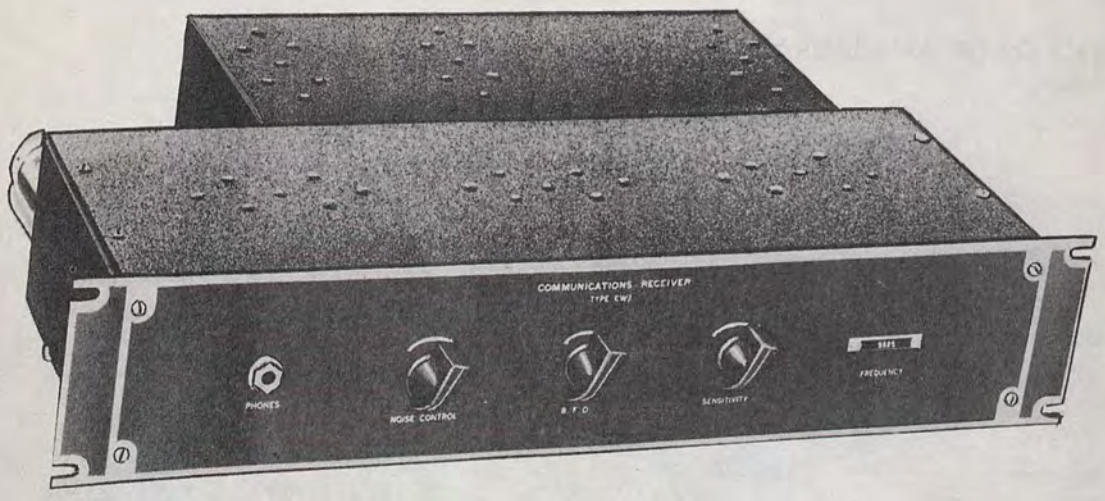
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Wilcox-Gay Corp.	Charlotte, Mich.		

RADIO RECEIVER AN/FRR-type

5 December 1958
Cognizant Serv: USA FSN: R-208/FR

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C4547-2	--	--



R-208/FR

FUNCTIONAL DESCRIPTION:

Radio Receiver R–208/FR is a crystal-controlled amplitude-modulated (continuous wave only) receiving equipment used for long distance point-to-point or ground-to-air applications at fixed-plant installations.

This equipment consists of a single rack-mounted component which may be installed with any combination of eight receivers (one or more of which may be Radio Receiver R–209/FR) on a standard relay rack. It can be preset by selection of appropriate interchangeable coils to operate in frequency channels covered by four sets of plug-in coils for each band.

When installed in combinations of several receivers, each receiver can be controlled independently, either locally or from a remote operating point, through the use of Remote Control Console CY–161/FRC.

Sensitivity, frequency selection, beat-frequency oscillator, and noise controls are included. The equipment uses a doublet, rhombic, or other suitable type of antenna system.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.95 to 16.5 by use of four sets of rf coils:
- Set 1: 1.95 to 3.6
- Set 2: 3.5 to 6.1
- Set 3: 5.6 to 10.0
- Set 4: 9.4 to 16.5

Type of Modulation: AM
Type of Signal: Cw
Power Requirements: 70 w, 110-v 60-cycle ac

AN/FRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-208/FR	----------	3-15/32 x 12-1/2 x 19	20.6

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-853

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2.5	40

PROCUREMENT DATA

PROCURING SERVICE: USA DESIGN COG: USA, Sig C
SPEC &/or DWG:

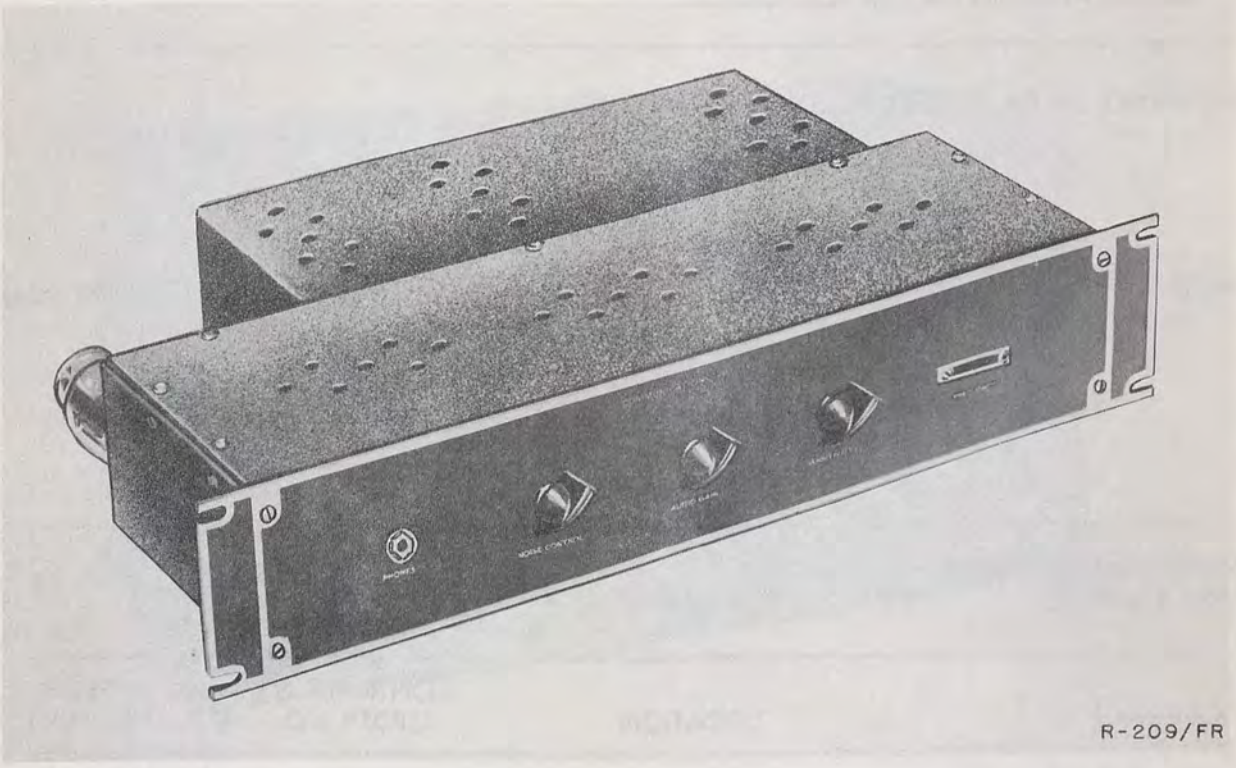
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVER AN/FRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-164-7203

R-209( )/FR

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C4547.1-1	--	--



R-209/FR

FUNCTIONAL DESCRIPTION:

Radio Receiver R-209( )/FR is a crystal-controlled, superheterodyne am (voice), mf and hf receiving equipment designed for use in point-to-point or ground-to-air communication and similar applications at fixed-plant installations.

This equipment consists of a single, panel-mounted radio receiver having three panel controls and designed for installation in a standard relay rack, which can accommodate a total of eight such receivers. The frequency band is selected by means of four sets of interchangeable RF coils.

It can be mounted with seven other identical receivers, or in any combination of Radio Receivers R-208/FR and R-209/FR, and installed in a single floor-type cabinet to form a single operating bay of equipment.

Each receiver as assembled can be individually controlled locally or, by means of Remote Control Console CY-161/FRC, from a remote operation point.

Antenna systems generally used with this equipment are of the long wire, doublet, rhombic, or other suitable types.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.95 to 16.5 in four overlapping bands, by use of sets of RF coils
Type Modulation: AM
Type of Signal: Voice
Power Requirements: 70 w, 110-v 60-cycle ac

AN/FRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-209/FR	(FSN) 5820-164-7203 (USA) 2C4547.1-1	3-15/32 x 12-1/4 x 19	20

(Equipment consists only of a single major component.)

REFERENCE DATA AND LITERATURE:

TM 11-853

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2.39	50

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC & or DWG:

DESIGN COG: USA, Sig C

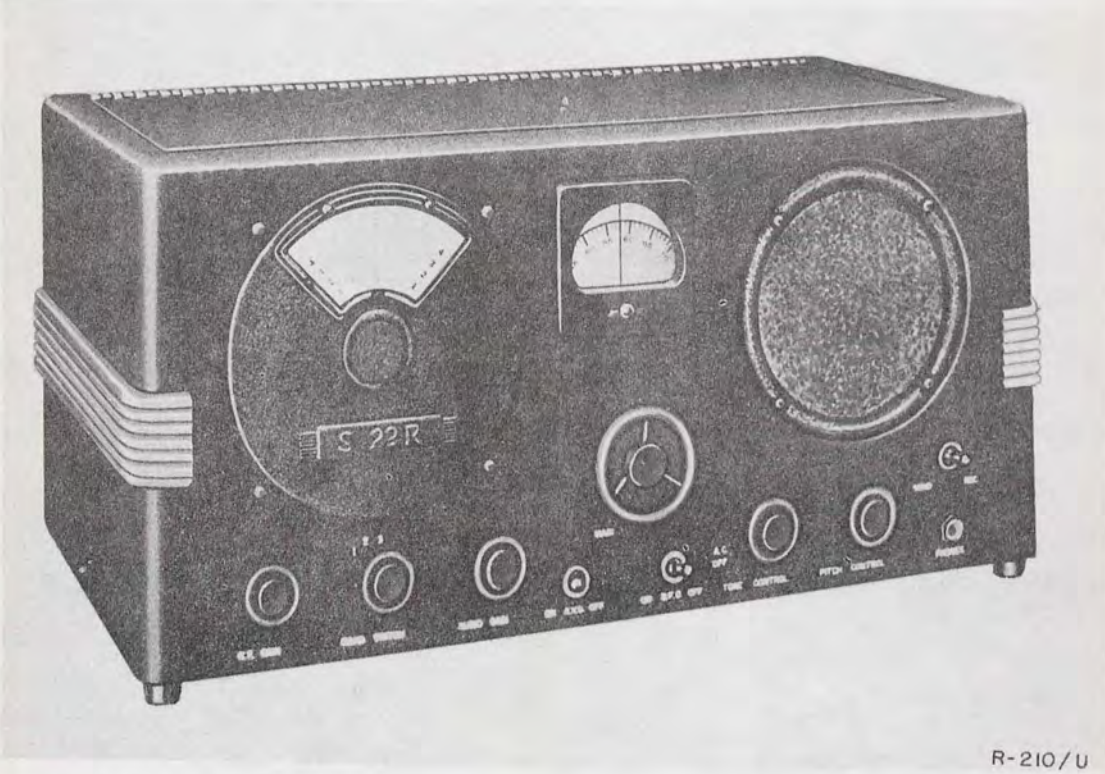
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVER AN/FRR-type

5 December 1958
Cognizant Serv: USA FSN: 5820–503–1261

R–210/U

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	2C4534	--	--



R-210/U

FUNCTIONAL DESCRIPTION:

Radio Receiver R–210/U is a transportable, amplitude-modulated (voice and continuous wave) equipment used for point-to-point communication in the low-frequency, medium-frequency, and high-frequency ranges at fixed-plant installations.

The equipment consists essentially of a commercial (Hallicrafters S22R) table model radio receiver of the conventional communications type and consists of a single unit in a steel cabinet. It has a built-in loudspeaker and provisions for headset operation. Its controls include RF and AF gain, pitch, band selection, avc, beat-frequency oscillator, and on-off switches. It uses a long-wire type antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.1 to 18.0 in four bands
Type of Modulation: AM
Type of Signal: Voice or cw
Power Requirements: 50 w, 110–125-v 50/60-cycle ac; or 110–125-v dc

AN/FRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R–210/U (Equipment consists of only one major component.)	(FSN) 5820–503–1261	18 x 8-1/2 x 9-1/4	

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2	55

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVER AN/FRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820–187–3143

R–274/FRR

	USA	USN	USAF
TYPE CLASS:	Std	Std	--
STOCK NO:	2C4180–274	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R–274/FRR is a medium-, high-, and very-high-frequency am (voice, tone and cw) receiving equipment used for communication and special applications in fixed plant and similar installations.

This equipment consists of a single radio receiver component having a built-in power supply that is mounted on a panel for rack mounting. It requires additional equipment for reproduction of audio signals.

Carrier shift signals can be fed to appropriate teletypewriter terminal equipment or to Dual Diversity Converter CV–31/TRA–7 and similar units. Provision is made for use of the audio end of this radio receiver alone, and for standby operation when used in conjunction with radio transmitting equipment.

It operates with a single-wire antenna or any of the more complex fixed radio station antennas.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.54 to 54
Type Modulation: AM
Type of Signal: Cw, tone, voice, frequency shift keyed radio-teletype (with additional equipment)
Power Requirements: 120 w, 95/260-v (in 8 different steps) 50–60-cycle ac

AN/FRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Radio Receiver R–274/FRR (Equipment consists of only one major component.)	2C4180–274	10-15/32 x 18-1/8 x 19	58

REFERENCE DATA AND LITERATURE:

TM 11–897

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.64	105

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–3340

DESIGN COG: USA, Sig C

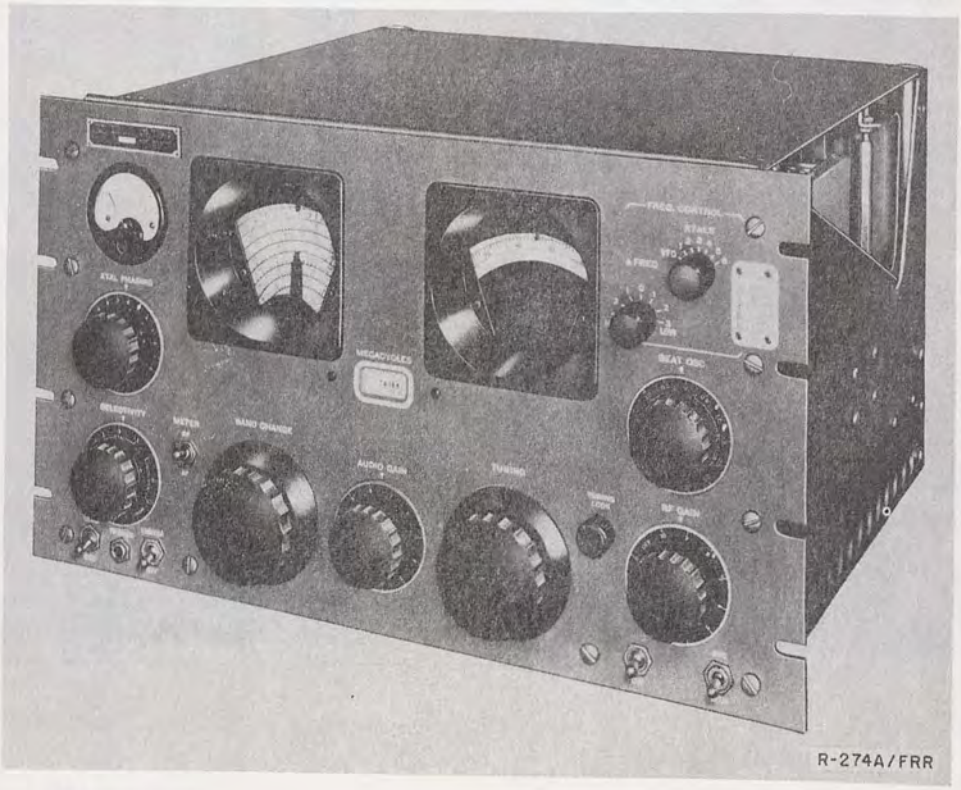
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVER AN/FRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-187-3143

R-274A/FRR; R-274C/FRR

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	R-274A/FRR: 2C4180-274A R-274C/FRR: 2C4180-274C	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R-274A/FRR and R-274C/FRR are operationally the same as Radio Receiver R-274/FRR, but differ greatly in appearance and slightly in technical characteristics.

These equipments consist of a single radio receiver component with a built-in power supply. They are designed for rack-mounting in standard fixed-station 19-inch equipment bays. Frequency-shift keyed signals can be fed to radioteletype converters either at audio frequency or through coaxial cable at intermediate RF frequency.

These receivers operate on either single-wire antennas or doublets, as well as the usually more complex arrays in fixed-plant applications.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.54 to 54
Type Modulation: AM
Type of Signal: Cw, tone, voice, frequency-shift keyed radioteletype (with additional equipment)
Power Requirements: 130 w, 90–270-v, 50–60-cycle ac

AN/FRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-274A/FRR (Equipment consists of only one major component.)		21-3/8 x 12-3/4 x 17-1/8	66

REFERENCE DATA AND LITERATURE:

TM 11-851

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	8.15	220

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC & / or DWG:

DESIGN COG: USA, Sig C

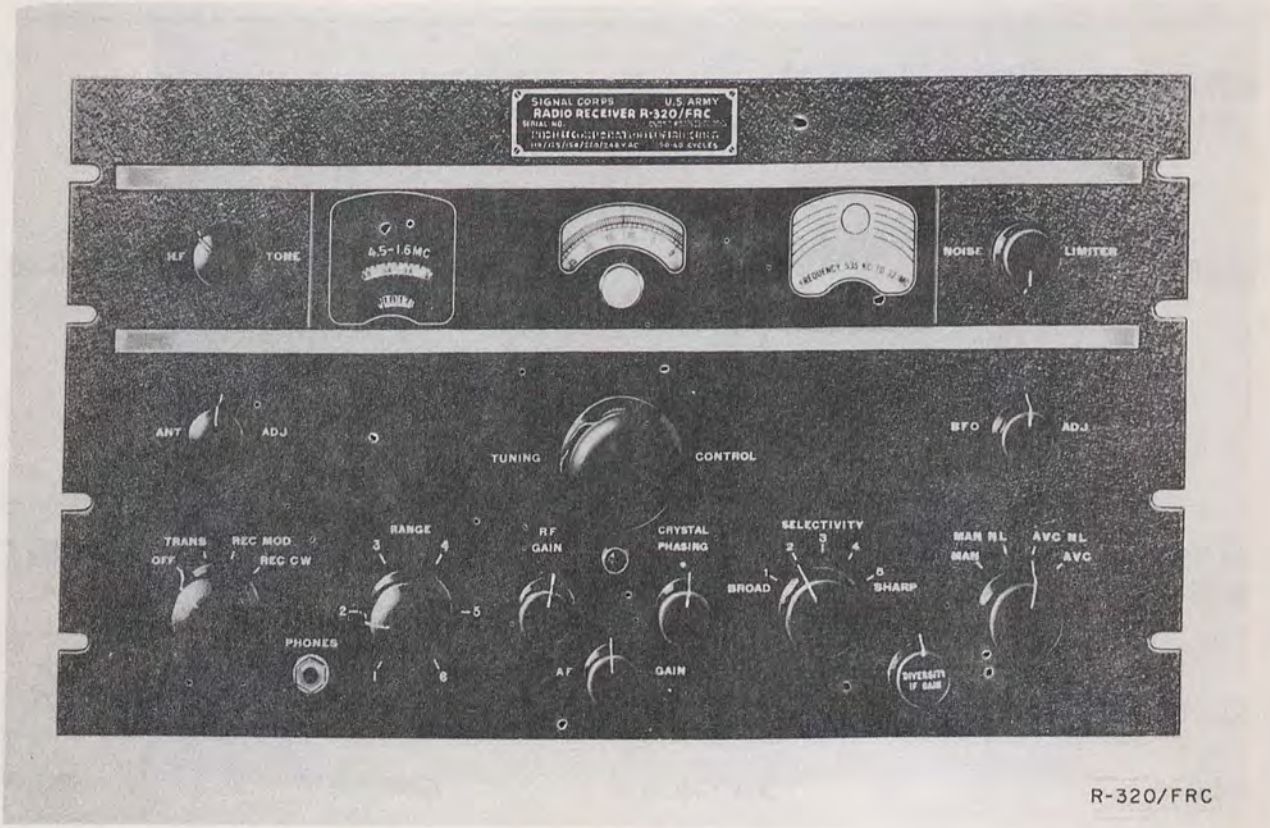
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVER AN/FRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-223-2502

R-320/FRC

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C4180-320	--	--



R-320/FRC

FUNCTIONAL DESCRIPTION:

Radio Receiver R-320/FRC is an am (voice, cw, and mcw) receiving equipment used for general communications such as point-to-point, ground-to-air, and ship-to-shore applications or for diversity reception.

The R-320/FRC is a commercial (RCA Model AR-88-F) receiver having avc, IF gain, and a diode output circuit. It operates in the frequency range 0.535 to 0.32 mc (in 6 bands) and requires 115-230 v ac. It is used in Radio Receiver Assembly OA-58A/FRC, which uses three such receivers for triple diversity reception.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.535 to 32.0 in 6 overlapping bands
Type of Signal: Cw, mcw, voice
Power Output: 2.5 w, maximum undistorted
Power Requirements: 115/230-v 50/60-cycle ac

AN/FRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-320/FRC (Equipment consists of only one major component.)	----------	----------	98

REFERENCE DATA AND LITERATURE:

TM 11-880, TM 11-899

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	8.93	200

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-E-10004

DESIGN COG: USA, Sig C

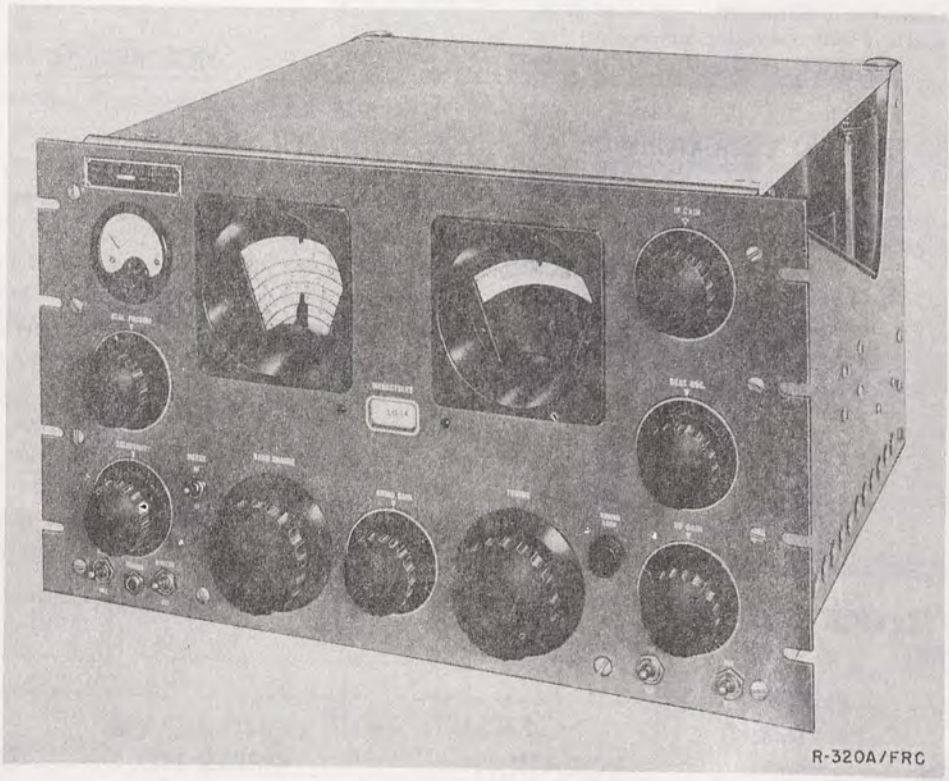
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA	New York, N. Y.	13533-P-48-77	$810.07

RADIO RECEIVER AN/FRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-503-1243

R-320A/FRC

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C4180-320A	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R-320A/FRC is a commercial (Hammarlund SP-600-J-4) receiver having avc, IF gain, a diode output circuit, a crystal filter, and a beat-frequency oscillator.

Its application and capabilities are similar to those of Radio Receiver R-320/FRC and R-274A/FRR.

This receiver covers a wider range of frequencies than the R-320/FRC, and has other operational advantages over the earlier model.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.54 to 54
Type Modulation: AM
Type of Signal: Cw, tone, voice
Power Requirements: 130 w, 90-270-v (in seven selective stages) 50-60-cycle ac

AN/FRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Radio Receiver R–320A/FRC	2C4180–320A	----------	67.5
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11–851

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	8.15	170

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hammarlund Mfg Co.	New York, N. Y.	19474–P–50–06	$590.00

DIVERSITY RECEIVING EQUIPMENT AN/FRR-type

5 December 1958
Cognizant Serv: USN FSN: 5820-665-2249 RBE

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Diversity Receiving Equipment RBE is a complete diversity radio receiving equipment suitable for use at Naval radio stations. It is used for diversity reception of continuous wave or interrupted continuous wave radio telegraph signals by either loudspeaker or headphones, or by telegraph recorder. The equipment also permits the reception of modulated continuous wave radio telephone signals, by headphone or loudspeaker methods, over separate channels without diversity combination of these separate channels. The components of the equipment are mounted on a cabinet type rack.

Each major unit is provided with a self-contained power component to provide the power for both plate and heater circuits.

Three antennas are used with, but not supplied with, Diversity Receiving Equipment RBE.

TECHNICAL CHARACTERISTICS:

Frequency Range:
System: 550 to 30,000 kc
Single and Dual Preselector: 550 to 32,000 kc
Intermediate Frequency: 456 kc
Input Connections: Single wire type antenna, balanced feed line or a low impedance concentric transmission line
Input Impedance:
System: 600 ohms
Loudspeaker: 600 ohms
Single and Dual Preselector: 80 to 125 ohms
Output Impedance (Single and Dual Preselector): 80 to 100 ohms
Diversity Combining Unit:
Type of Reception: Cw or icw
Maximum Speed: 500 words per minute
Power Output (Loudspeaker): 1.75 v
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Blank panel			
1	Diversity Combining Unit NT-50079	----------	12-7/32 x 13-9/16 x 19	60
1	Dual Preselector NT-50091	----------	10-15/32 x 10-9/16 x 19	34
1	Loudspeaker NT-49140	----------	8-23/32 x 8-11/16 x 19	32
1	Mounting rack (cabinet type)			
	Patch cords			
3	Radio Receiver NT-46142	----------	10-15/32 x 13-9/16 x 19	60
1	Single Preselector NT-50090	----------	10-15/32 x 10-9/16 x 19	20

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,261

AN/FRR-type DIVERSITY RECEIVING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

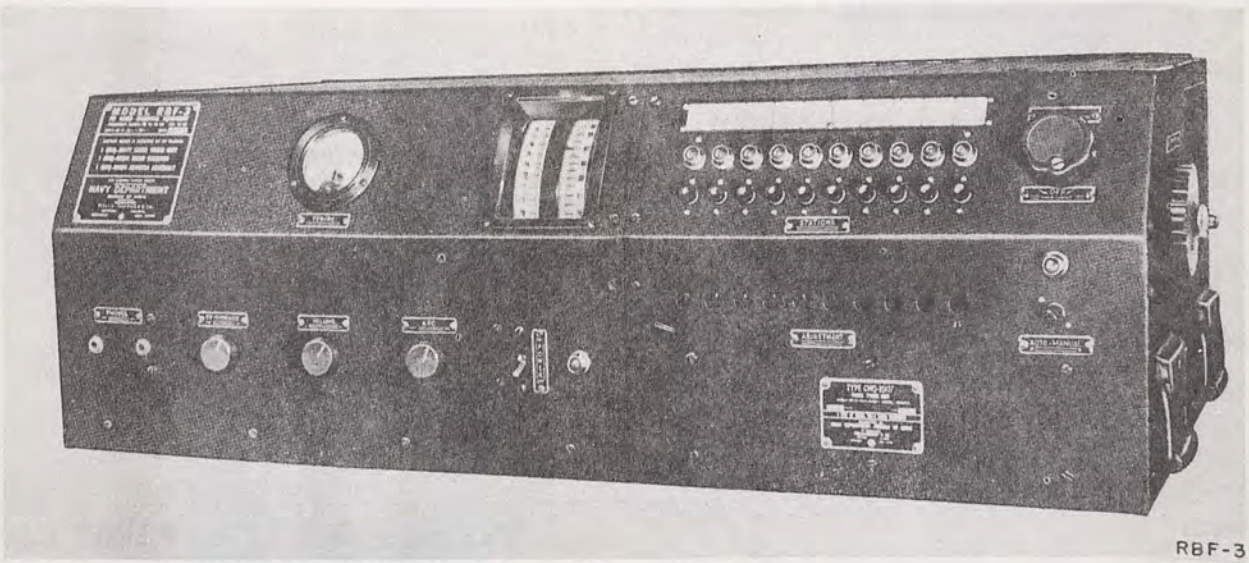
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Supply Corp.	Washington, D. C.	NOs–70248, 11 December 1939 N171S–59715, 25 July 1940	

RADIO RECEIVING EQUIPMENT **AN/FRR-type**

5 December 1958
Cognizant Serv: USN FSN: 5820-642-7814 RBF-3

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-248420-200	--



RBF-3

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RBF-3 is a shore-based equipment designed for monitoring signals from sono-radio buoy transmitting equipments. This equipment may automatically monitor up to ten signals at as many different frequencies in the 70 to 90 megacycle band.

The receiver has a special tuning unit which provides manual tuning, push-button tuning, or (by means of a motor driven tuning and muting device) continuous automatic tuning of one station after another for 5-second periods. In an emergency, the receiver can be operated from batteries, using manual tuning only.

The RBF-3 is used with Radio Transmitting Equipment JM series.

The RBF-3 is complete and ready for installation except for a headset that is required but not supplied.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 70 to 90
Type Receiver: Superheterodyne
Type Modulation: AM
Impedance:
Output: 50 and 5,000 ohms
Input: 50 to 75 ohm concentric line connectors
Antenna:
Type: Spike with ground plane
Feed: 69-ohm coaxial line
Mounting: 10-ft pipe for connection to 100-ft tower
Power Requirements: 215 w; 95- to 125-v, 50- to 60-cycle, 1-phase ac; or 8-v and 300-v batteries for dc

AN/FRR-type RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly CWQ–66084		152 x 72 dia	34
1	Antenna Cable RG–8/U or RG–11/U		200 ft lg	17
1	Constant Voltage Transformer 30B722			55
1 set	Equipment spares and acces sories			350
1	Ground Plane A–1202			10
1	Receiver-Tuner consists of:		12-7/16 x 39-1/8 x 18-3/16	235
1	Radio Receiver CWQ–46024		12-5/16 x 39-5/8 x 19-1/4	
1	Radio Tuner Unit CWQ–10177		7-1/2 x 17-1/2 x 14-3/4	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,225–IB

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	43.49	880

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

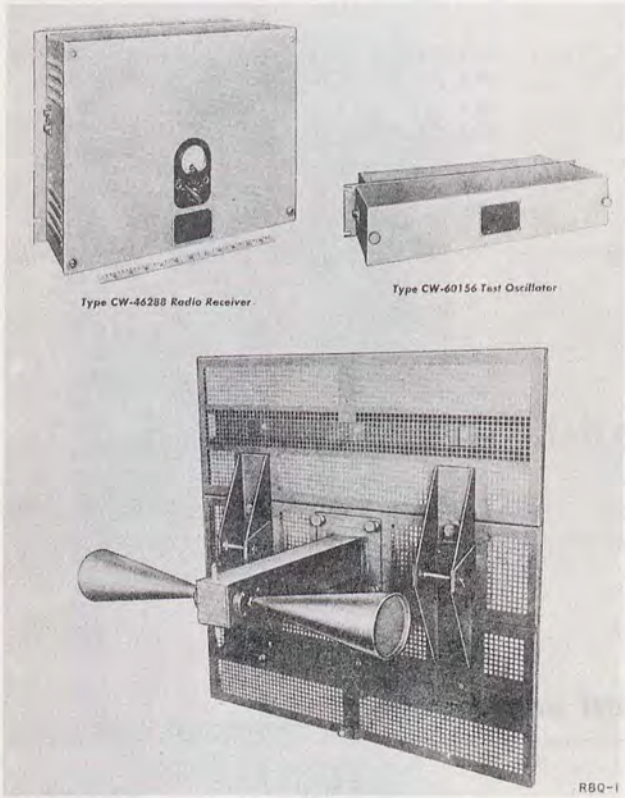
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Wells-Gardner and Co.	Chicago, Ill.	NXss–19175, 5 December 1942	$3,500.00 with spares

HIGH FREQUENCY RADIO RECEIVING EQUIPMENT AN/FRR-type

5 December 1958
Cognizant Serv: USN FSN 5820-642-7792 RBQ-1

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-253920-200	--



FUNCTIONAL DESCRIPTION:

High Frequency Radio Receiving Equipment RBQ-1 makes up the receiving terminal of a continuously operated point-to-point, ultra-high-frequency radio link. The major units are rack mounted for either indoor or outdoor installations. The equipment is suitable for reception of single channel voice, multichannel voice carrier telegraph, or multichannel voice carrier telegraph and two channel voice carrier telephone signals. Output facilities at voice frequencies are arranged for connecting to conventional wire line circuits for either local or remote operation.

The RBQ-1 is designed primarily for use with High Frequency Radio Telephone Transmitting Equipment TDG-1. The RBQ-1 is electrically and mechanically interchangeable with High Frequency Radio Receiving Equipment RBQ, and is identical except for minor modifications.

The following equipment is used with, but is not supplied with, High Frequency Radio Receiving Equipment RBQ-1: Coaxial cable and fittings to connect receiver and antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 132 to 156
Frequency Control: Crystal
Type of Reception: A2, A3
Sensitivity: 2mv
Audio Response: Flat within 3 db from 150 to 10,000 cps
Input Impedance: To match a 70 ohm transmission line
Mounting: Rack mounted in either indoor or outdoor cabinet
Power Output: 30 mw at an output impedance of 600 ohms
Power Requirements: 100 w; 110- or 120-v, 60-cycle, 1-phase ac. Outdoor cabinet heater requires an additional 325 w, but is not normally operated at the same time as the receiver.

AN/FRR-type HIGH FREQUENCY RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1*	Antenna (3-db) 150427			
1*	Antenna (9-db) 150428			
1*	Antenna Outfit 150429			
1	Cabinet 10604		84 x 26-1/4 x 17	
1	Cable Outfit 150418			
1	Outdoor Cabinet 10589		67-7/8 x 32-1/2 x 18-3/4	
1	Portable Antenna (6-db) 66157		40 x 40 x 25	
1	Radio Receiver 46288		14 x 19 x 9-5/8	
1	Spare Part Panel 10569		3-15/32 x 19	
1	Test Oscillator Unit 60156		3-1/2 x 19 x 9-3/4	

* May be substituted for Portable Antenna 66157.

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900.621

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4		

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips

SPEC &/or DWG:

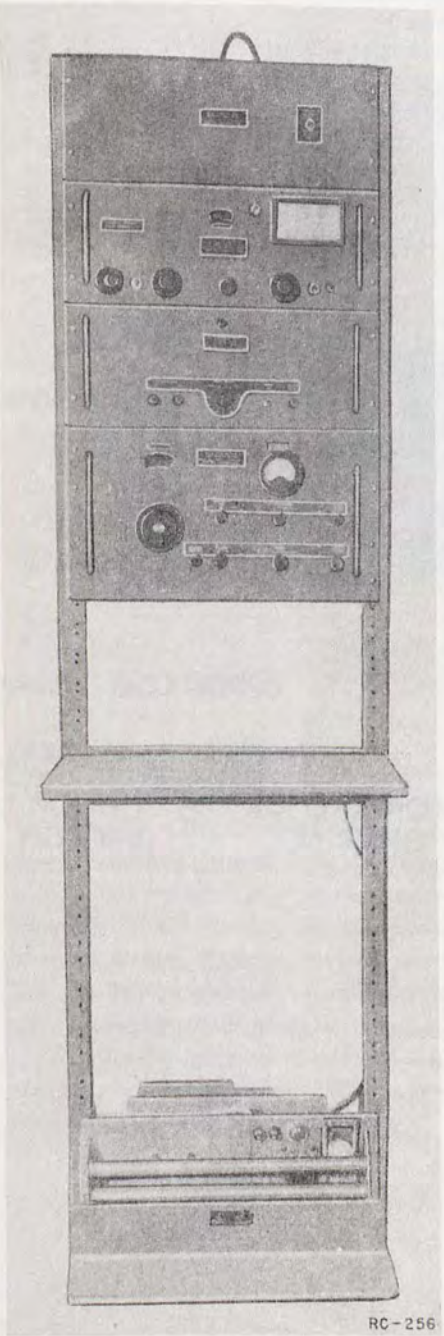
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co., Inc.	New York, N. Y.	NXsr-83392, 15 February 1945	$2284.00 with spares

RADIO RECEIVING EQUIPMENT AN/FRR-type

5 December 1958
Cognizant Serv: USAF FSN:

RC–256

	USA	USN	USAF
TYPE CLASS:	--	--	A/Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RC–256 is an amplitude-modulated radio equipment and is used with, but not part of, Radio Transmitter RC–257 to form a single-channel radio terminal station for point-to-point and air-to-ground communication.

The input impedance matches Radio Frequency Cable RG–11/U for operation with Antenna Equipment RC–81 or RC–81–C.

This receiver provides continuous tuning over its entire frequency range, and for precise calibration, a Frequency Meter BD–1420 is supplied.

A series-type noise limiter is built in for reduction of pulse-type interference.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 100 to 156
Type Modulation: AM
Type of Signal: Voice, cw, icw, and tone
Power Output: 1.2 w into 600-ohm impedance (maximum)
Power Requirements: 100 w, 110–125/220–250-v 60-cycle 1-phase ac

AN/FRR-type RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Equipment RC–81–C			6.7
1	Frame FM–39		72 x 20 x 3	12100
1	Frequency Meter BC–1420		7 x 19 x 11-1/2	35.0
1	Fuse Panel PN–15–B		5 x 19 x 5	24.0
1	Radio Receiver BC–1421		10-15/32 x 19 x 13-9/16	38.0
1	Rectifier RA–147		8-23/32 x 19 x 6-31/32	26.0
1	Switching Panel PN–56		6-31/32 x 19-1/8	7.5

REFERENCE DATA AND LITERATURE:

TO 16–40 RC–256–6–3–4–6

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	66.53	948

PROCUREMENT DATA

PROCURING SERVICE: USAF DESIGN COG: USAF
SPEC &/or DWG:

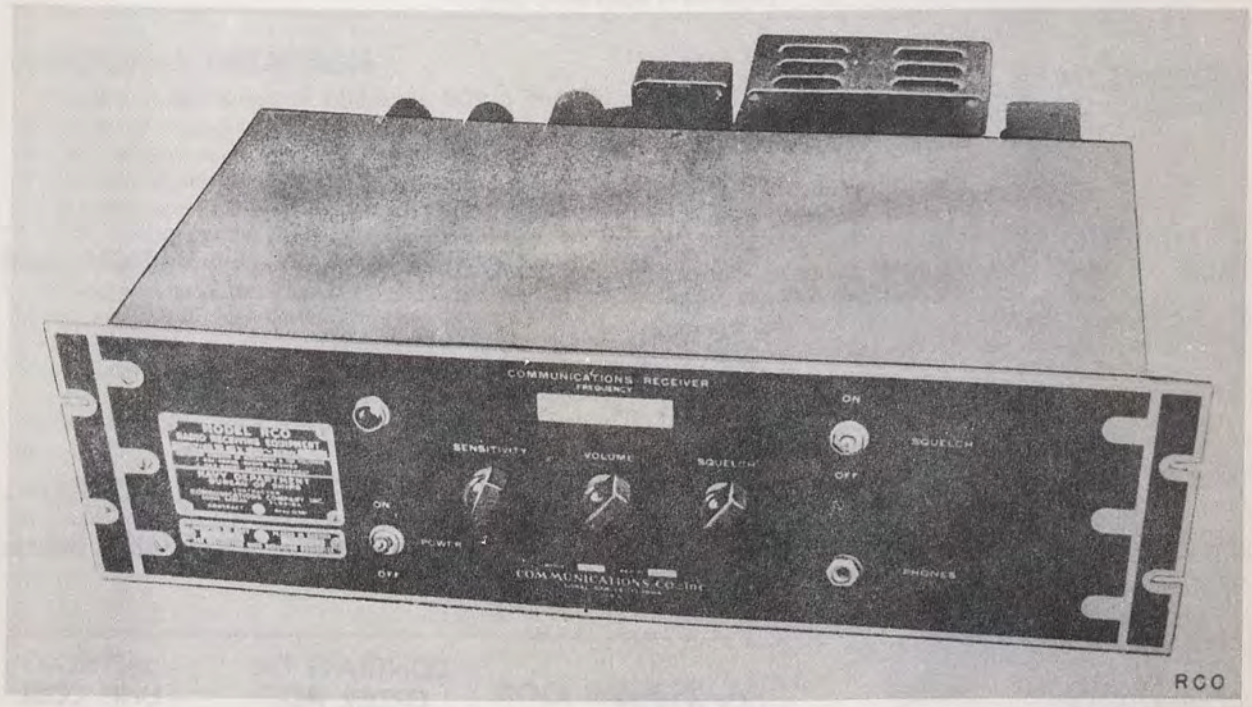
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVING EQUIPMENT AN/FRR-type

5 December 1958
Cognizant Serv: USN FSN: 5820-644-4778

RCO

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-261730-200	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RCO is a crystal-controlled, fixed frequency, superheterodyne receiver designed for single channel reception. It is designed to withstand constant duty such as that required for aeronautical ground-station, airport traffic control, or for point-to-point service requiring a reliable, crystal-controlled, fixed-frequency receiver. Individual RCO receivers may be mounted in a relay rack, with each receiver used to monitor a given station or frequency.

The following equipment is used, but is not supplied, with Radio Receiving Equipment RCO: one pair of 600-ohm headphones or one 600-ohm loudspeaker.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 100 to 156, at one preset crystal controlled frequency
Intermediate Frequency: 6,480 kc
Type of Reception: A2, A3
Impedance:
Output: 600 ohms balanced to ground
Input: 50 ohms for coaxial cables
Sensitivity: 7.5 uv for 6-mw output
Antenna Description: Quarter wavelength, adjustable over frequency range of the RCO
Power Output: 0.5 w into 600-ohm load
Power Requirements: 75 w, 110- to 120-v 50- to 60-cycle 1-phase ac

AN/FRR-type RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly 66091			
1	Radio Receiver 66090	----------	5-1/4 x 19 x 14	28

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,255

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	6.54	150

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: EN 28/4750–43 SHIPS

DESIGN COG: USN, BuSihps

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Communications Co., Inc.	Coral Gables, Fla.	NXss–31381, 8 June 1943	$500.00 with spares

DIVERSITY RADIO RECEIVING EQUIPMENT AN/FRR-type

5 December 1958
Cognizant Serv: USN FSN: 5820-665-2365 RCP

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Diversity Radio Receiving Equipment RCP is designed to receive one triple-diversity signal, one dual-diversity signal and one straight signal, or three straight-set signals. Each of the three identical superheterodyne receivers consists of a radio-frequency tuning unit covering a frequency range of 3 to 24 megacycles, and an intermediate-frequency unit employing amplification at 450 kilocycles and 50 kilocycles.

The signal control panel is employed for switching, combining, and monitoring signals. The tone keyer is used for telegraph service, and the audio-frequency amplifier is used for telephone service.

A complete diversity antenna system is required for use, but is not supplied, with Diversity Radio Receiving Equipment RCP.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 3 to 24 in three bands
Band 1: 3 to 6 mc
Band 2: 6 to 12 mc
Band 3: 12 to 24 mc

Type of Reception: A1, A2, A3 with provision for special keying or line equipment

Impedance:
Output: 600 ohms
Antenna Matching: 125 ohms

Sensitivity: Overall rf gain (midband minimum), 3,000 voltage gain, 1–2 conversion gain; over-all IF. average gain, 25,000 voltage gain

Antenna: Fishbone, rhombic or open "V" with open 4-wire transmission line of 200-ohm impedance; three antennas are required.

Keying Speed: Up to 500 dot-cycles per second

Power Putput:
Telephone: 60 mw into a 600-ohm load
Telegraph: 6 db above 1.5 to 12 milliwatts with attenuator pad out

Power Requirements:

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Adjustment Tools 8410–A			
1	A. F. Frequency Amplifier Unit 50098		10-1/4 x 10-15/32 x 19	32
4	Antenna Panel 23276		5-3/4 x 19	3.2
3	Battery (45 volts) 870747–1			
2	Blank Panel 16015A			
5	Blank Panel 16016A			
3	Cabinet Rack 16013A		19-15/16 x 20-5/16 x 88-5/8	
3	I. F. Amplifier Unit 50097		9-1/4 x 19 x 27-31/32	85
1	Power Control Panel 23275		4-7/8 x 10-15/32 x 19	9.5
2	Rack Handle 16009A			
2	Rack Step 16008			
3	Radio-Frequency Amplifier Unit 50096		8-1/4 x 19 x 27-31/32	83
1	Rectifier Power Unit 20136		9-5/8 x 19 x 21	123
3	Shielded Lead 16010A			
1	Signal Control Panel 50157		5-7/8 x 10-15/32 x 19	57
2	Tone Keyer Unit 35007		10-15/32 x 10-3/4 x 19	37
1	Transformer-Voltage Regulating 30815		5-5/8 x 6-15/16 x 15-9/16	52
1 set	Trim Strips 16014–B			
1 set	Vacuum Tubes 16018–A			

AN/FRR-type DIVERSITY RADIO RECEIVING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,478

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

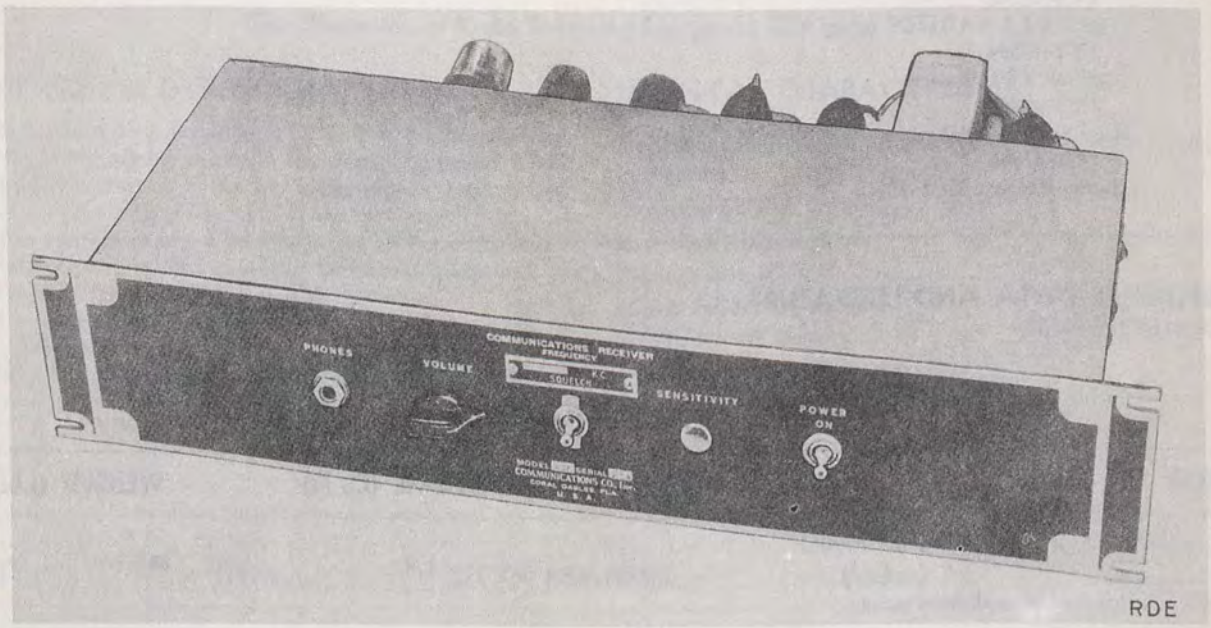
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT ORDER NO.	APPROX UNIT COST
RCA, Victor Division of Radio Corporation of America	Camden, N. J.	NXss-27145, 12 April 1943	$12,800.00 with spares

RADIO RECEIVING EQUIPMENT AN/FRR-type

20 November 1958
Cognizant Serv: USN FSN: RDE

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–Q–266290–200	--



RDE

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RDE is a fixed-tuned crystal-controlled radio telephone receiver, designed for operation on any one frequency within its available frequency band. Three plug-in RF transformers are used in the circuits, and four sets of transformers are required to cover the total frequency range.

This equipment can be used for either local or unattended remote operation. It is a superheterodyne receiver, designed primarily for airport control operation and for aeronautical ground stations. The equipment does not include audio reproduction devices; therefore, loudspeaker or earphones must be separately procured.

Both this equipment and later models (See Radio Receiving Equipment RDE–1) are being replaced by Radio Receiving Set AN/FRR–26( ).

TECHNICAL CHARACTERISTICS

Frequency Range in Mc: 2.0 to 8.10 in four bands, using plug-in coils and crystals in the oscillator circuit
Reception: Radiotelephone
Power Output: 0.5 w into a 600-ohm load
Output Impedance: 600 ohms
Antenna Requirements:
High Impedance: 50 $\mu\mu$f or more capacity
Low Impedance: 100- or 400-ohm line
Power Requirements: 115-v 60-cycle 1-phase ac

AN/FRR-type RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Coil Set 2.0 to 2.8 mc CCI–47363			
1	Coil Set 2.8 to 4.0 mc CCI–47364			
1	Coil Set 4.0 to 5.5 mc CCI–47365			
1	Coil Set 5.5 to 8.0 mc CCI–47366			
1	Radio Receiver CCI–46219	----------	3-1/2 x 19 x 13	31

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95257

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	1.4	35*

* Weight packed in cardboard carton.

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: EN28/4477–44/SHIPS

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Communications Co., Inc.	Coral Gables, Fla.	NXsr–38501 NXsr–41033	$575.00

RADIO RECEIVING EQUIPMENT AN/FRR-type

20 November 1958
Cognizant Serv: USN FSN:

RDE–1

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–Q–266300–200	--

(See Illustration of Radio Receiving Equipment RDE page 507)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RDE–1 is functionally and mechanically similar to Radio Receiving Equipment RDE. The major difference in the two equipments is the improved electronic circuitry of the RDE–1, the later model.

This equipment is a fixed-tuned, crystal-controlled, radiotelephone receiver used primarily for shore installations. It can be used for either local or remote operation.

A squelch circuit is provided to block the receiver when no signal is being received.

Both the RDE and the RDE–1 are being replaced by Radio Receiving Set AN/FRR–26( ).

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2.8 to 8.0 in four bands (single frequency)

Frequency Control: Crystal

Reception: Radiotelephone

Power Output: 0.5 w

Output Impedance: 600 ohms

Sensitivity: 600 ohms

Input Impedance: 100 and 400 ohms

Power Requirements: 110–115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver RDE–1	----------	3-1/2 x 19 x 13	31

(This equipment consists of only one major operating component.)

REFERENCE DATA AND LITERATURE:

Instruction Book for Navy Model RDE–1 Receiver

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.4	35

AN/FRR-type RADIO RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

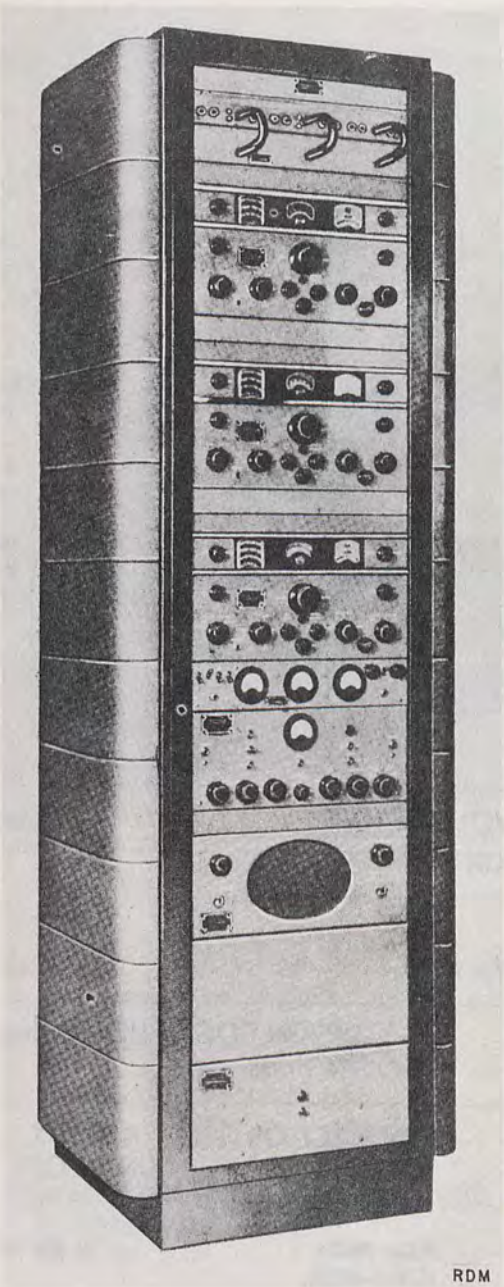
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Communications Co., Inc.	Coral Gables, Fla.	N5sr–4606	

DIVERSITY RADIO RECEIVING EQUIPMENT AN/FRR-type

20 November 1958
Cognizant Serv: USN FSN: RDM, RDM-1

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	RDM: F16-Q-269940-200	--
		RDM-1: F16-Q-269941-200	



RDM

FUNCTIONAL DESCRIPTION:

Diversity Radio Receiving Equipments RDM and RDM-1 are long-range, mf and hf, triple-diversity, AM., fixed-station radio receiving sets. They are military versions of commercial (RCA DR-89) diversity receiving equipments. These equipments are very similar to the OA-58/FRC and the OA-58A/FRC.

This equipment consists of three superheterodyne radio receivers, a tone keyer, a monitoring unit, loudspeaker, and accessories. These components are assembled in a standard relay rack and inclosed in a steel floor-type cabinet.

Each receiver can be operated independently or two or three receivers can be operated in diversity by feeding their outputs through the tone keyer, which either combines voice signal outputs, or selects the strongest cw or mcw signal to key the tone output of the keyer.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.535 to 32.0 in six overlapping bands
Type of Reception: Cw, mcw, voice
Power Output:
Tone Keyer and Combining Unit: 12 mw
Receiver Amplifier: 2.5 w
Output Impedance:
Tone Keyer: 600 ohms
Receiver Amplifier: 600 ohms
Input Impedance: Antenna coupling system designed to provide optimum coupling from 200-ohm transmission line, except in the broadcast band (535 to 1,600 kc)
Power Requirements: 100-165/190-260-4 50-60-cycle 1-phase ac

AN/FRR-type DIVERSITY RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	RDM:			
1	Antenna Panel CRV–23425			
1	Cabinet Rack and Panels Assembly		84 x 22 x 21	280
1	Loudspeaker Assembly CALO–49526		8-3/4 x 19 x 4-3/4	12
1	Monitoring Unit CALO–23424			11
1	Monitoring Unit Power Supply CALO–20289		7 x 19 x 6-1/2	18
3	Radio Receiver CRV–46246–A		11 x 19-1/4 x 19-1/4	98
1	Tone Keyer Unit CALO–35049		7 x 19 x 10-1/2	26
	RDM–1:			
1	Antenna Panel CRV–23425–A			
1	Cabinet CRV–10692		84 x 22 x 21	280
1	Loudspeaker Assembly CRV–49526–A		8-3/4 x 19 x 4-3/4	12
1	Monitoring Unit CRV–23424–A			11
1	Monitoring Unit Power Supply CRV–20289–A		7 x 19 x 6-1/2	18
3	Radio Receiver CRV–46246–B		10-1/2 x 19 x 17-3/4	98
1	Tone Keyer Unit CRV–35049–A		7 x 9 x 10-1/2	26

REFERENCE DATA AND LITERATURE:

RDM: NAVSHIPS 95261
RDM–1: NAVSHIPS 91061

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG:

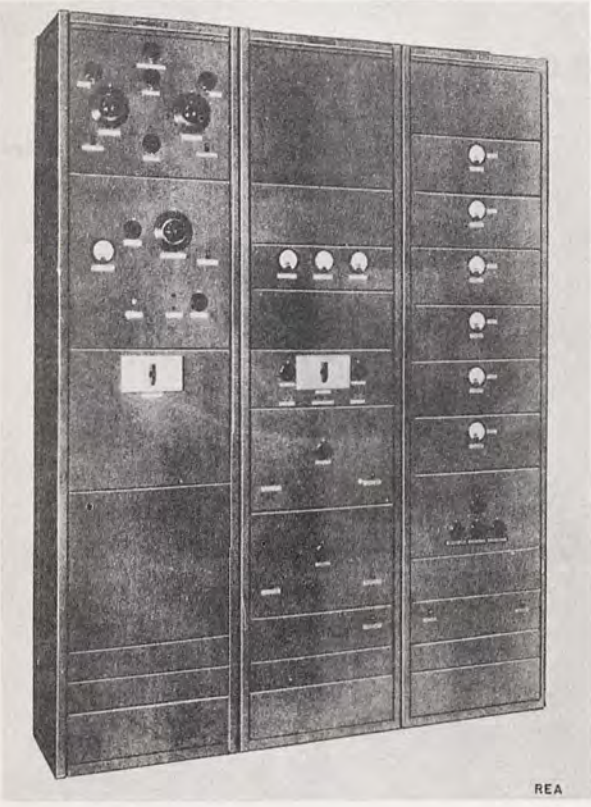
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Div., Radio Corp. of America	Camden, N. J.	NXsr–38074 NObsr–39228	$4,500.00

SINGLE SIDE BAND RADIO RECEIVING EQUIPMENT AN/FRR-type

1 July 1958
Cognizant Serv: USN FSN: 6636-194-7068

REA, REA-1

	USA	USN	USAF
TYPE CLASS:	L/Std	L/Std	--
STOCK NO:	2C4522	--	--



REA

FUNCTIONAL DESCRIPTION:

Single Side Band Radio Receiving Equipments REA and REA-1 are the Navy counterparts of Radio Receiver WECO D-99945 used in Radio Set AN/FRC-10. They are complete single-sideband, reduced-carrier, radio receivers of the triple detection type, for either one, or both of two telephone channels arranged as a twin-channel system. They can be used in conjunction with multichannel carrier telegraph receiving equipment.

The REA is identical to the REA-1, except that the REA-1 has an improved first beat oscillator frequency control unit and an improved tuning control unit.

The equipment is inclosed in three rack-type bays, and is complete, except for a receiving antenna system, a power cable, headsets, and terminal equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 22 in two bands
Type Modulation: AM (single or double sideband)
Type of Signal: Composite transmissions consisting of tone-radioteletype, voice, facsimile, or other audio frequencies in the range from 100 to 6,000 cps; also can receive standard double-sideband amplitude modulated voice
Power Output: +15 vw each channel into individual 600-ohm lines
Power Requirements: 500 w, 115-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Single Sideband Radio Receiving Equipment (WECO-CW-D-99945)	----------	65-1/8 x 84 x 18-1/4	1,440

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95354
TM 11-884

AN/FRR-type SINGLE SIDE BAND RADIO RECEIVING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

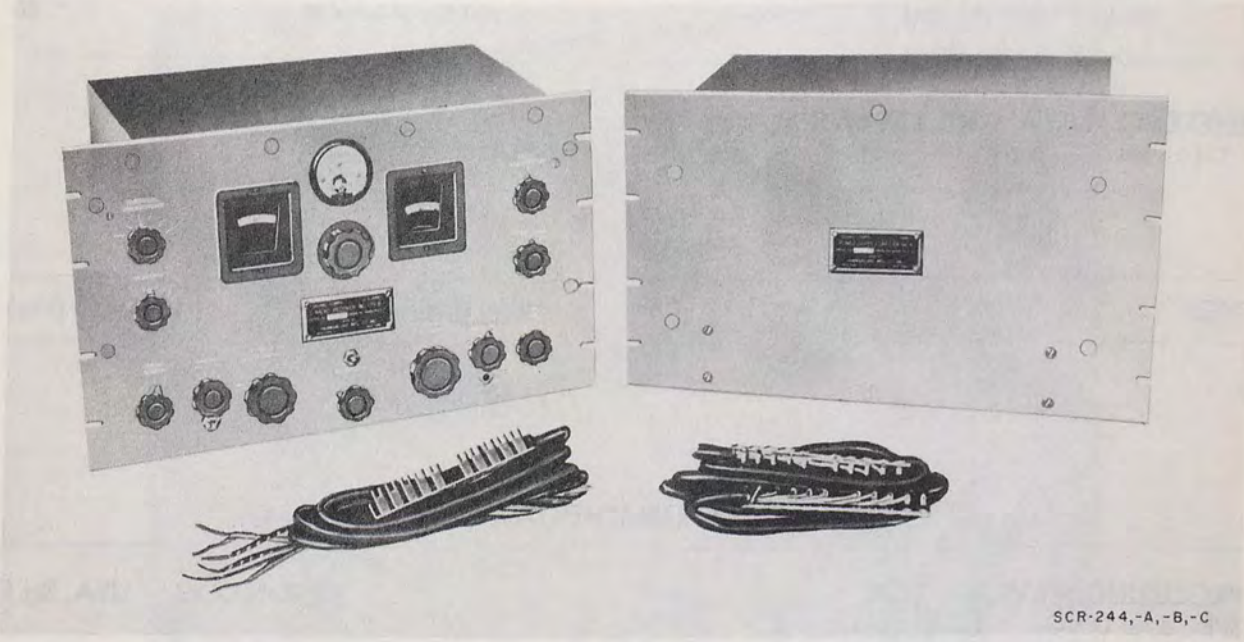
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/FRR-type

1 July 1958
Cognizant Serv: USA FSN:

SCR–244, -A, -B, -C

	USA	USN	USAF
TYPE CLASS:	L/Std	--	Std
STOCK NO:	2S244A 2S244B 2S244C	--	--



SCR-244,-A,-B,-C

FUNCTIONAL DESCRIPTION:

Radio Sets SCR–244, –A, –B, and –C are general purpose, AM (voice and cw) receiving equipments used for communication, monitoring, or intercept purposes in the mf and hf bands in fixed station applications.

This equipment consists essentially of a commercial (Hammarlund Super-Pro) communications type receiver, plus a power supply. It may be operated as table top equipment or installed in a standard relay rack. When cabinet inclosed it may be mounted on appropriate shock mounts and operated in vehicles, if a proper power source is available.

Automatic and manual volume control are provided.

Antenna and accessory items are included with this set.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.54 to 20.0 in 5 bands
Type Modulation: AM
Type of Signal: Voice, tone, cw
Power Requirements: 105–120-v 50/60-cycle ac

AN/FRR-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Cabinet CH–104	2Z1577–104	12-1/4 x 16-1/2 x 23	18
1	Power Supply Unit RA–94	3H4496–94	10-1/2 x 10 x 19	60
1	Radio Receiver BC–1004	2C5004	10-1/2 x 15-3/8 x 19	55

REFERENCE DATA AND LITERATURE:

TM 11–866

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	7.4	175

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–1525–A

DESIGN COG: USA, Sig C

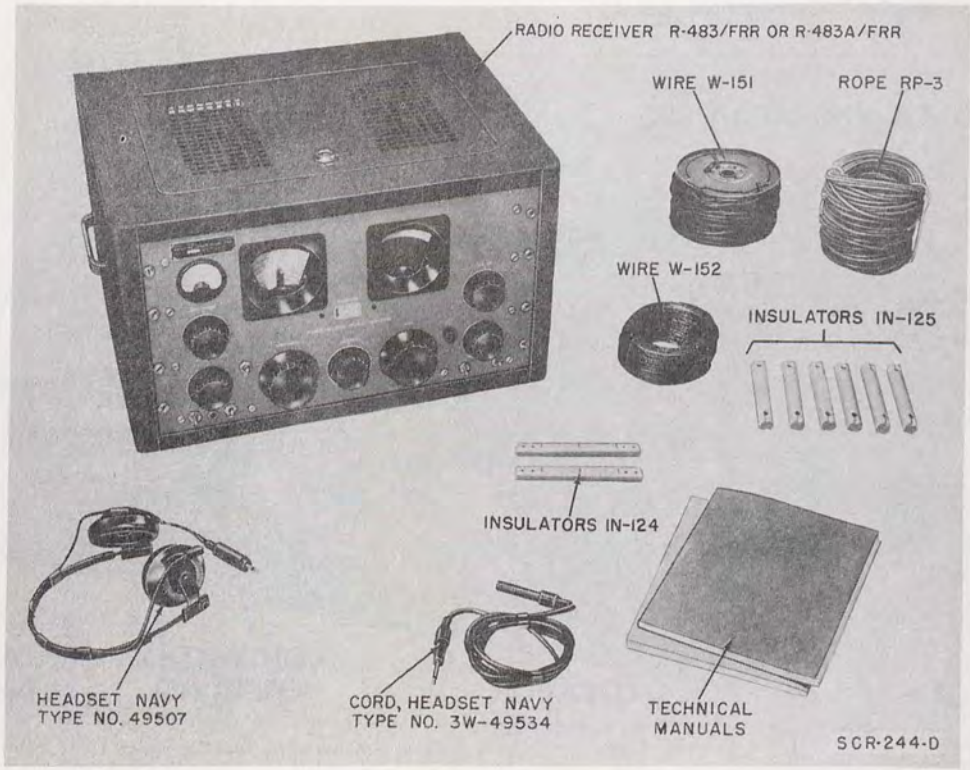
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hammarlund Manufacturing Co., Inc.	New York, N. Y.	3479–P–52–06	$828.22

RADIO SET AN/FRR-type

1 July 1958
Cognizant Serv: USA FSN:

SCR-244-D

	USA	USN	USAF
TYPE CLASS:	L/Std	--	Std
STOCK NO:	2S244D	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-244-D is similar to the earlier models (SCR-244, -A, -B, and -C), except that the power supply has been built into the receiver chassis.

This set is used for communication, monitoring, or intercept purposes in the mf and hf bands in fixed station applications.

It is installed as table top equipment. (For rack-mounted version of this equipment see Radio Receiver R-274A/FRR and R-320A/FRC.)

Antenna and accessory items are included with this set.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.54 to 54 in 6 bands
Type Modulation: AM
Type of Signal: Voice, tone, cw
Power Requirements: 130w, 90–270-v 25–60-cycle ac

AN/FRR-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Radio Receiver R–483/FRR	2C4180–483	12-3/4 x 17-1/2 x 21-3/8	102.5

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–851

SHIPPING DATA

PKGS	DIMENSIONS (Inches)	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	18¼ x 35 x 25¼	9.33	175

PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, Sig C

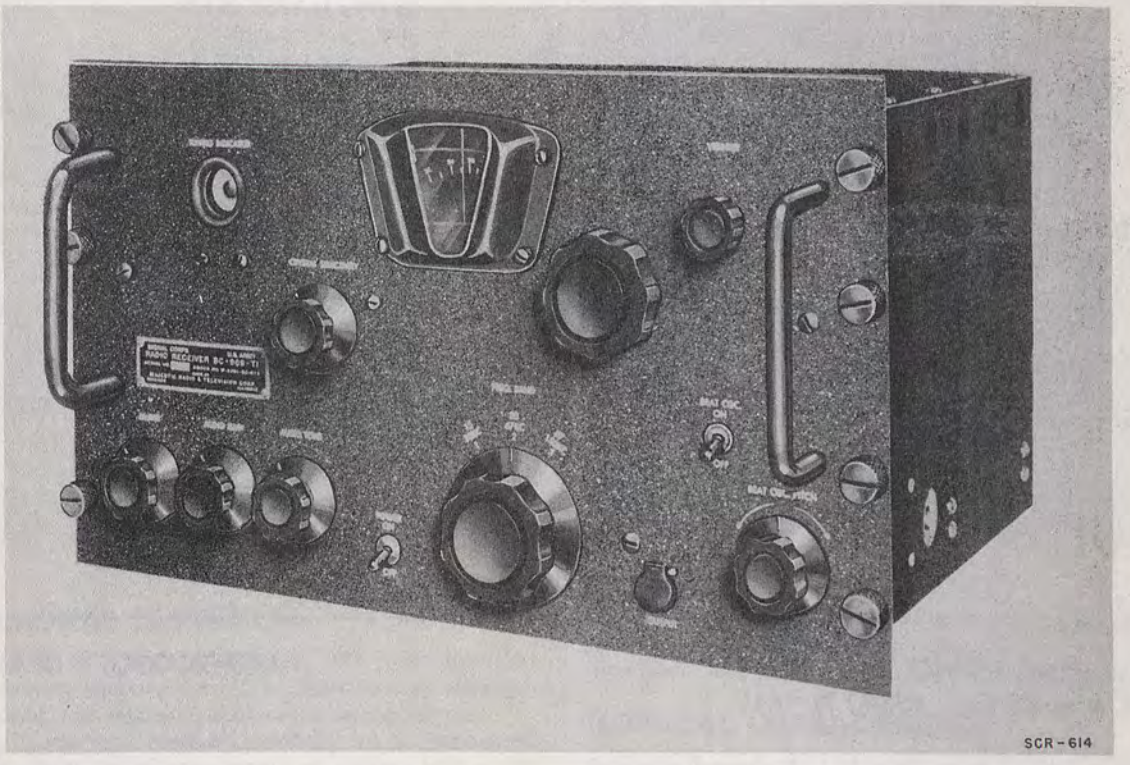
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/FRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-164-8148 SCR-614-( )

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S614A	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-614-( ) is an IF, multiband AM, (voice, cw, and tone), long-range radio receiving equipment. It is intended for radio direction finding, monitoring, or intercept applications.

This equipment consists of a radio receiver, which can be rack-mounted or installed on a vehicular shock mount, a power supply unit, and assocaited accessories.

It uses a whip-type antenna in vehicular use and a balanced 100-ohm line antenna in fixed plant installations.

It operates from 115- or 230-v ac power.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.015 to 0.15 in 3 bands
Type Modulation: AM
Type of Signal: Cw, voice, or tone
Power Output: 2 w
Power Requirements: 95-130/190-260-v 25-70-cycle ac

AN/FRR-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Case CS–109A	2Z1890–109	20-1/8 x 10-1/2 x 13-1/2	18.5
1	Mounting FT–411	2Z6721–411	21-1/4 x 3-1/2 x 13-1/2	10.2
1	Mounting FT–414	2Z6721–414	18-1/4 x 3-1/2 x 11-3/4	9.5
1	Power Supply Unit RA–61	3H4496–61	19 x 4 x 13-7/8	52.1
1	Radio Receiver BC–969	2C4969	19 x 10-1/2 x 15-7/8	49.3

REFERENCE DATA AND LITERATURE:

TM 11–873

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–1641

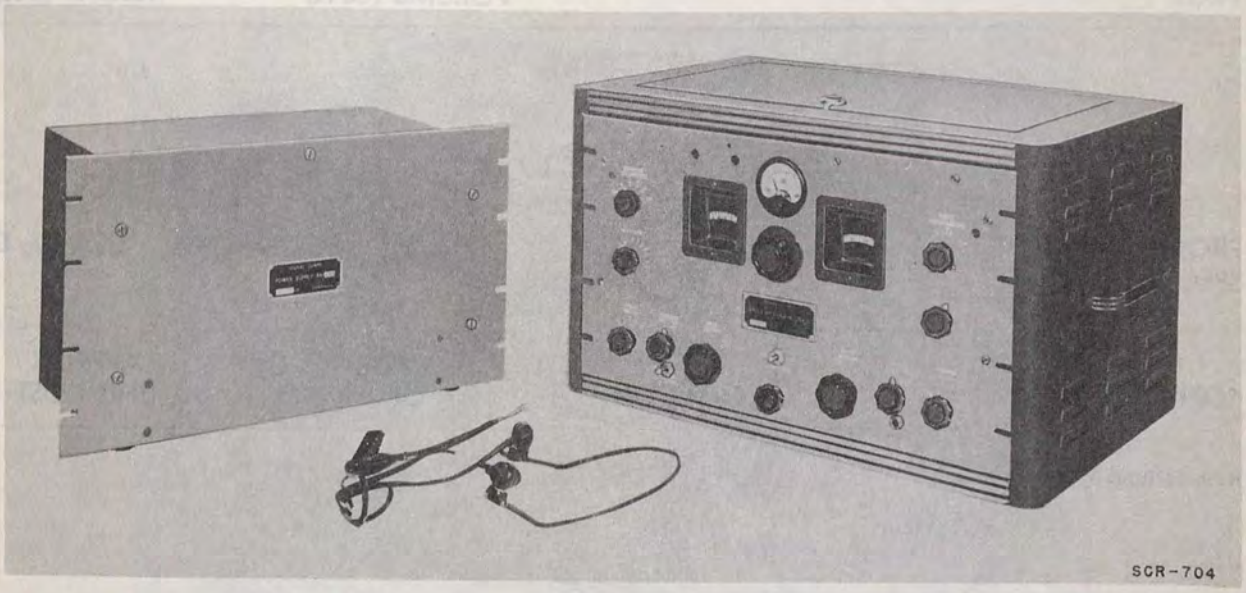
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET **AN/FRR-type**

1 July 1958
Cognizant Serv: USA FSN: 5820-164-7239 SCR-704

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S704	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR–704 is a long-range, AM (voice, tone, and cw) receiving equipment used for high-frequency intercept, monitoring, and similar applications for fixed plant use.

This equipment consists essentially of a commercial (Hammarlund Super-Pro) communications-type table model receiver and a panel-mounted power supply. The equipment may be installed in a standard relay rack and operates in five frequency bands.

This set can be installed and battery operated in a vehicle. It can be used for communication purposes or as an audio amplifier if required. The antenna generally is a single-wire and ground or a doublet antenna system having a balanced transmission line may be used.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.25 to 40.0 mc in 5 bands
Type Modulation: AM
Type of Signal: Cw, tone, and voice
Power Requirements: 115–230-v 50/60-cycle ac; or one 6-v storage battery, five 45-v B batteries, and one 45-v C battery

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Cabinet CH–104	2Z1577–104	10-1/2 x 23 x 16-1/2	18
1	Power Supply Unit RA–94	3H4496–94	10-1/2 x 19 x 10	60
1	Radio Receiver BC–794	2C4794	10-1/2 x 19 x 15-3/8	55

AN/FRR-type RADIO SET

REFERENCE DATA AND LITERATURE:

TM 11-866

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	7.5	179

PROCUREMENT DATA

PROCURING SERVICE:
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hammarlund Manufacturing Co.	----	9092-P-44	

RADIO COMMUNICATIONS RECEIVER AN/FRR-type

20 November 1958
Cognizant Serv: FSN:

SP–600–JX

	*USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Communications Receiver SP–600–JX is the commercial prototype of Radio Receiver R–483/FRR, Radio Receiver R–274A/FRR, and Radio Set SCR–244–D.

This equipment is a general purpose radio communications receiving set and is primarily intended for fixed station use. It provides continuous tuning from 0.54 to 54.0 mc and can be used to receive voice, cw, tone, or frequency-shift-keyed signals. This radio receiver may be used in space diversity applications in conjunction with diversity keyers or combiners requiring IF. output from the receiver.

It is identical with or similar to Radio Receiver R–274A/FRR, Radio Receiver R–274C/FRR, Radio Receiver R–320A/FRC, Radio Receiver R–483/FRR, and Radio Receiver R–483A/FRR and Radio Set SCR–244–D.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.54 to 54.0 in 6 bands
Output Power: 2.5 w
Output Impedance: 600-ohm balanced split winding
Sensitivity: 2.3 μv
Power Requirements: 130 w, 90–270-v 50–60-cycle 1-phase ac

AN/FRR-type RADIO COMMUNICATIONS RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Communication Receiver SP–600–JX	----------	12-3/4 x 17-1/2 x 21-3/8	102.5

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91405, TM 11–851

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	8.15	220

PROCUREMENT DATA

PROCURING SERVICE:

DESIGN COG:

SPEC &/or DWG: COMMERCIAL

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hammarlund Manufacturing Co., Inc.	New York 1, N. Y.		

RADIO TRANSMITTING EQUIPMENT AN/FRT-1

20 November 1958
Cognizant Serv: USN FSN: 5820-302-5957

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment AN/FRT-1 is a multichannel communication unit capable of continuous wave, modulated continuous wave, and voice emission. It permits simultaneous operation of four channels; one or two of them modulated with voice or tone, and the others on straight continuous wave telegraph.

This equipment is designed to be operated from the remote assembly; however, in case of emergency the transmitter can be operated on continuous wave telegraph or radiotelephone through the use of connections and controls on the transmitter.

TECHNICAL CHARACTERISTICS:

Frequency Range: 150 kc to 500 kc; 2 mc to 18 mc
Power Output: 500 to 600 w
Output Impedance: 500 to 600 ohms
Modulator Response: 1-db variation
Harmonic Distortion: 8% maximum
Noise Level: -60 db
Power Requirements: 230-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Amplifier AM-2/FRC	----------	3-1/2 x 9-1/2 x 19	
1	Dual Modulator Cabinet MD-1/FRC	----------	12-1/8 x 24 x 60-3/4	475
3 or 4	High RF Cabinet T-4/FRC	----------	12-1/8 x 24 x 60-3/4	325
0 or 1	Low RF Cabinet T-5/FRC	----------	18-1/8 x 24 x 60-3/4	325
6	Oscillator O-2/FRC	----------	3-1/2 x 9-1/2 x 19	
1	Power Cabinet PP-1/FRC	----------	24 x 27-9/16 x 60-3/4	660
4	Switch Panel SA-2/FRC	----------	3-1/2 x 9-1/2 x 19	

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/FRT-1 RADIO TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

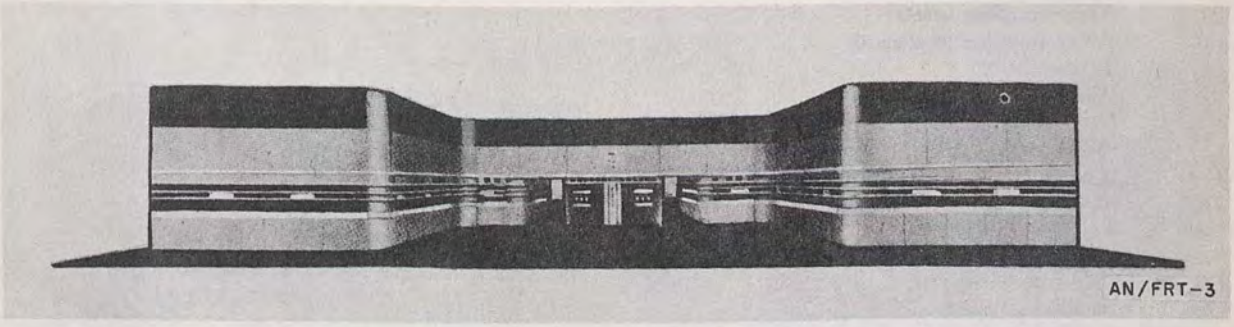
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Aircraft Accessories Corp.	Kansas City, Kans.		

RADIO TRANSMITTING SET AN/FRT-3

26 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/FRT-3 is a complete super-power shore unit designed for world-wide radiotelegraph and radioteletype communication in the very low-frequency band.

This equipment includes a basic transmitter combined with auxilliary power and cooling items, antenna tuning apparatus, and a suitable antenna-ground system.

Either ON-OFF or frequency-shift keying may be used for signaling.

TECHNICAL CHARACTERISTICS:

Frequency Range: 14.5 to 35 kc
Type Emission: Cw telegraph or frequency-shift keying
Nominal Output: 1,140 kw
Frequency Stability: 0.001%
Power Requirements:
4,160-v 60-cycle 3-wire 3-phase ac
460-v 60-cycle 3-wire 3-phase ac
115-v 60-cycle 2-wire 1-phase ac
125-v dc (240 amp-hour battery)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
4	Air/water heat exchanger	----------	92 x 95 x 111	
2	Antenna-ground system material			
2	Automatic tracking unit			
4	Blower			
1	Cooling system control unit			
2	Dc emergency pump			
1	Dc switch			
4	Distilled water pump			
1	Enclosure			
2	Exciter equipment			
2	Exciter plate transformer			
2	Frequency Generator-Monitor O-146/FRT-3	----------	18 x 49 x 72	36.8
1	Installation material			
2	Main filter reactor and dumping resistor			

AN/FRT-3 RADIO TRANSMITTING SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Main plate transformer			
2	Main rectifier			
1	Piping, water			
1	Power amplifier (port)			
1	Power amplifier (starboard)			
1	Test oscillator			
2	Water/heat exchanger	----------	17 x 19 x 50	
2	Pure water tank	----------	72 dia x 84	
4	Raw water pump			
2	Series current-limiting resistor			
1 set	Antenna Loading coils			
1 set	Antenna variometers			
1 set	Equipment spare parts			
1 set	Helix house material			
1 set	Installation cable			
1 set	Installation drawings			
1	Shielding compartment			
1	Supervisory console			
1	Switchgear and control equipment			
1	Test load, pa (port)	----------	24 x 60 x 90	
1	Test load, pa (starboard)	----------	24 x 60 x 90	
1	Test load pump			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91652

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

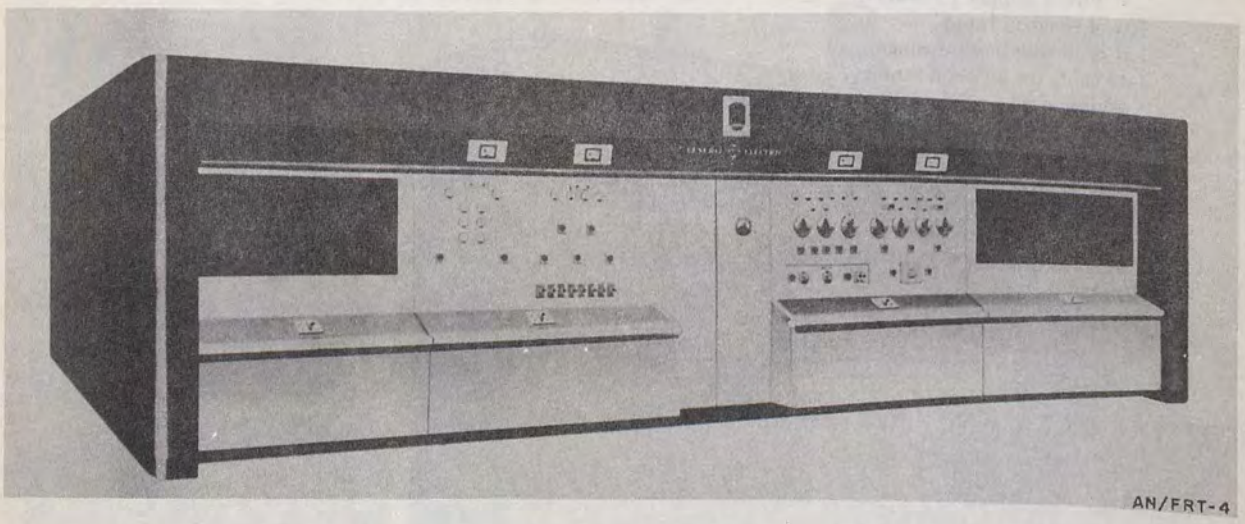
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Corporation of America	New York, N. Y.	NObsr–39291, 23 June 1947	$30,000.00

RADIO TRANSMITTING SET AN/FRT-4

26 November 1958
Cognizant Serv: USN FSN: 5820-665-2277

	USA	USN	USAF
TYPE CLASS:	--	Used by	Used by
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/FRT–4 is a shore-based low-frequency, high-power, radiotelegraph transmitter used primarily in shore-to-ship communications. The set provides for continuous wave, modulated continuous wave, voice, and tone transmission signals.

This equipment permits three types of keying: Direct-current line keying at any speed up to 500 words per minute; facsimile keying at any speed up to 500 words per minute; and frequency-shift keying up to a maximum of 200-cycle-per-second shift.

The set has master oscillator frequency control and provides continuous tuning throughout its frequency range.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Band 1: 50 to 60 kc
Band 2: 60 to 70 kc
Band 3: 70 to 85 kc
Band 4: 85 to 105 kc
Band 5: 105 to 125 kc
Band 6: 125 to 150 kc
Type Modulation: AM (FM with Adaptor NFM–83–50)
Power Output: 55 w
Frequency Stability: 0.005%
Output Impedance: 600 ohms
Power Requirements: 230-v 50– to 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna tuning equipment	----------	----------	16,000
1	Antenna Series Capacitor CB–1/U	----------	54-1/2 x 35 x 53	800

AN/FRT-4 RADIO TRANSMITTING SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	F.F. signal generator consisting of:			
1	Oscillator Unit SG–22/U	----------	18 x 21-1/2 x 27-1/2	55
1	Power Supply PP–427/U	----------	18 x 19-1/2 x 27-1/2	95
1	Kit of electron tubes			
1	Kit of installation drawings			
1	Litz cable for antenna tuning equipment			
1	Modification Kit MX–928/FRT–4			
1	Radio Test Set TS–674/FRT–4	----------	17 x 18-1/2 x 21	20
2	Technical Manual NAVSHIPS–91169			
2	Technical Manual NAVSHIPS–91170			
1	Transmitter AN/FRT–4	----------	9 ft x 17 ft x 36 ft	34,000

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91169

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
71 Antenna tuning equipment		
84 Transmitter		
97 Spare parts		

PROCUREMENT DATA

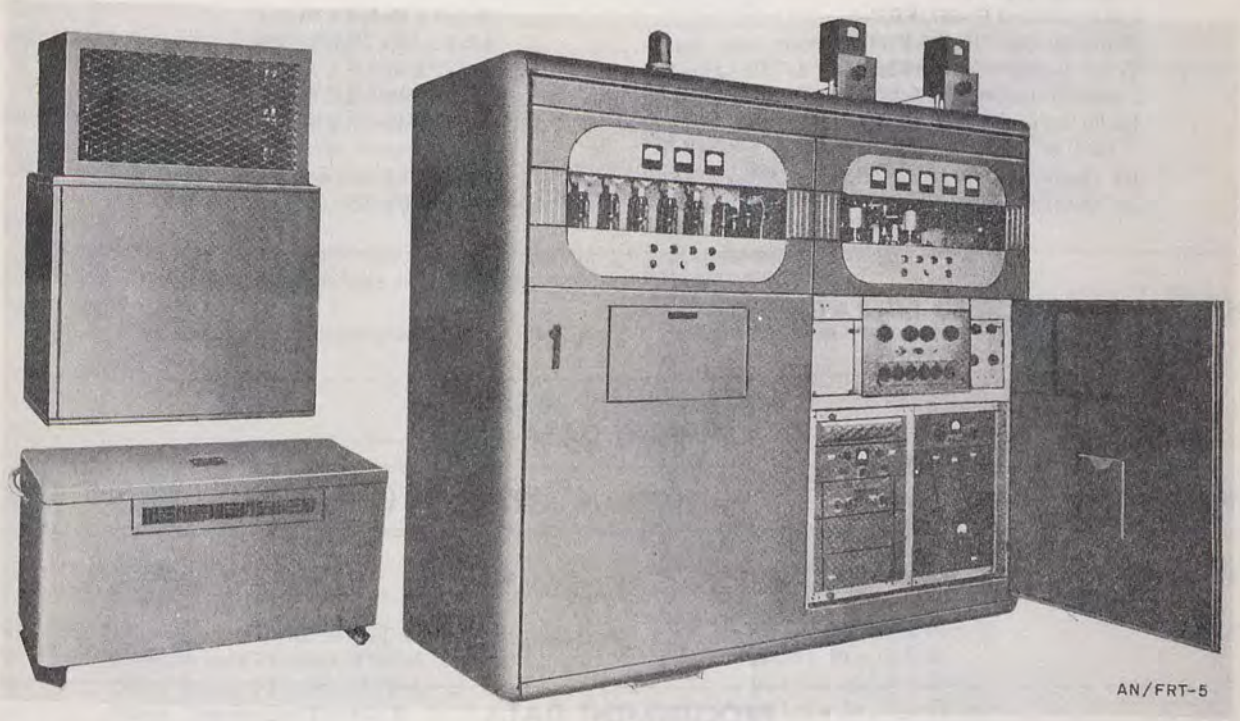
PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Syracuse, N. Y.	NObsr–39343, 30 June 1947	$2,566.30

RADIO TRANSMITTING SET AN/FRT-5

26 November 1958
Cognizant Serv: USN FSN: 5820-669-7137

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-122695-100	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/FRT-5 is a medium power, high-frequency equipment, designed for shore base use and to provide shore-to-ship or point-to-point communication. It permits ON-OFF radiotelegraph, frequency-shift telegraph or teletypewriter, and facsimile transmission.

This equipment provides 10 preset crystal-controlled channels and has a stabilized variable frequency oscillator. It is intended for optimum operation into an antenna with an impedance of 600 ohms.

The set is identical with the commercial Collins type 205D-1 equipment and is similar to Radio Transmitting Equipment TEB except for redesign.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 26
Power Output: 15 kw
Type Modulation: AM, FM
Type Signal: Cw, rtt, fax
Output Impedance: 600 ohms
Frequency Control: Crystal and stabilized oscillator using afc, and provision for connecting an external master oscillator
Ambient Temperature: 32° to 122°F, in a relative humidity up to 95%
Type of Keying:
Vacuum Tube: Electronic keyer arranged to accept keying impulses that are negative, positive; polar negative and polar positive for mark
Frequency Shift: Grounded or ungrounded polar or neutral keying
Keying Speed: To 400 wpm
Operating Control: Local automatic sequence stop and start control, with provision for automatic shutdown from a remote position if not keyed for selected period from 2 to 30 min. Transmitter has automatic overload reset with up to nine 30 sec lockout periods
Power Requirements: 27.5 key locked, 4.25 kw standby, 207-235-v 57-63-cycle 3 phase ac; and 115-v 60-cycle 1-phase ac for crystal oven

AN/FRT-5 RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency Shift Keyer KY-45/FRT-5		10-1/2 x 19 x 15-1/8	29
1	Power Control C-587/FRT-5		38-1/4 x 30-1/4 x 14-1/4	298
1	Power Supply PP-454/FRT-5		8-3/4 x 19 x 15-1/8	88
1	Power Supply PP-490/FRT-5		91-1/2 x 46-5/8 x 37-1/2	1,742
1	Power Transformer TF-122/U		18-1/2 x 36-1/2 x 14-3/4	
1	Radio Transmitter T-225/FRT-5		91-1/2 x 46-5/8 x 37-1/2	2,108
1	RF Oscillator O-91/FRT-5		10-1/4 x 19 x 15-1/8	35
1	RF Oscillator O-92/FRT-5		5-1/4 x 19 x 12	15

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91183

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
16	434.76	7,687

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** USA, BuShip

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Corp.	Cedar Rapids, Iowa	NObsr-39399, 30 June 1947	$38,500.00
		NObsr-42505, 28 June 1945	38,500.00

RADIO TRANSMITTING SET AN/FRT-5A

26 November 1958
Cognizant Serv: USN FSN: 5820-665-2470

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-122693-200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/FRT-5A is a medium power, shore-based equipment providing A1 radiotelegraph, frequency-shift telegraph, or facsimile transmission.

The principal function of this equipment is to provide reliable communications over long and difficult circuits, either shore-to-shore or point-to-point.

The transmitter may be remotely operated. It is equipped equipped with an automatic shutdown when not keyed for an adjustable time.

This set is the same as Radio Transmitting Set AN/FRT-5 except that provision is made in Frequency Shift Keyer KY-45A/FRT-5 for facsimile transmission. It is a replacement for Radio Transmitting Equipment TEB.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 26
Frequency Control: Crystal or stabilized oscillator
Type of Signal: Cw, rtt, fax
Keying Speed: 400 wpm maximum
Power Output: 15 kw
Power Requirements: 28 kw maximum 207-253-v 60-cycle 3-phase ac; and 115-v 60-cycle 1-phase ac for crystal oven

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency Shift Keyer KY-45A/FRT-5	----------	10-1/2 x 19 x 15-1/8	29
1	Power Control C-587A/FRT-5	----------	38-1/4 x 30-1/4 x 14-1/4	273
1	Power Supply PP-454A/FRT-5	----------	8-3/4 x 19 x 15-1/8	85
1	Power Supply PP-490A/FRT-5	----------	91-1/2 x 46-5/8 x 37-1/2	1,780
1	Power Transformer TF-122/U	----------	18-1/2 x 36-1/2 x 14 3/4	560
1	Radio Transmitter T-225A/FRT-5	----------	91-1/2 x 46-5/8 x 37-1/2	1,942
1	RF Oscilloscope O-91A/FRT-5	----------	10-1/2 x 19 x 15-1/8	35
1	RF Oscilloscope O-92A/FRT-5	----------	5-1/4 x 19 x 12	15

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91457(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
13	597.9	9,360

AN/FRT-5A RADIO TRANSMITTING SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Clifton, N. J.	NObsr–49171, 12 June 1951	

RADIO TRANSMITTING SET AN/FRT-5B

26 November 1958
Cognizant Serv: USN FSN: 5820-644-4923

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-122692-200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/FRT-5B is a 15-kilowatt equipment designed for precision shore-to-ship or point-to-point communications. It is equipped for off-on keying, frequency-shift keying, or teleprinter operation, and features rapid and accurate channel switching.

This equipment is the same as Radio Transmitting Set AN/FRT-5 except that provision is made in the Frequency Shift Keyer KY-45A/FRT-5 for facsimile transmission. It is also similar to Radio Transmitting Set AN/FRT-5A except for minor differences in circuit design and components.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 26
Number of Preset Channels: 10
Frequency Control: Crystal or master oscillator
Type Emission: Cw, rtt, fax
Type Modulation: AM, FM
Power Output: 15 kw into 600-ohm fixed load
Keying Speed: To 400 wpm
Power Requirements:
Transmitting Equipment: 28 kw, 230-v (±10%) 60-cycle (±5%) 3-phase ac; and
Crystal Ovens: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Control C-587B/FRT-5	----------	38-1/4 x 30-1/4 x 14-1/4	273
1	Power Supply PP-4908/FRT-5	----------	91-1/2 x 46-5/8 x 37-1/2	1,780
1	Power Transformer TF-122/U	----------	18-1/2 x 36-1/2 x 14-3/4	560
1	Radio Transmitter T-225B/FRT-5 including:	----------	91-1/2 x 46-5/8 x 37-1/2	1,942
1	Frequency Shift Keyer KY-45B/FRT-5	----------	10-1/2 x 19 x 15-1/8	29
1	Power Supply PP-454A/FRT-5	----------	8-3/4 x 19 x 15-1/8	85
1	RF Oscillator O-91B/FRT-5	----------	10-1/2 x 19 x 15-1/8	35
1	RF Oscillator O-92B/FRT-5	----------	5-1/4 x 19 x 12	15

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91740

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
13	597.9	9,360

AN/FRT-5B RADIO TRANSMITTING SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

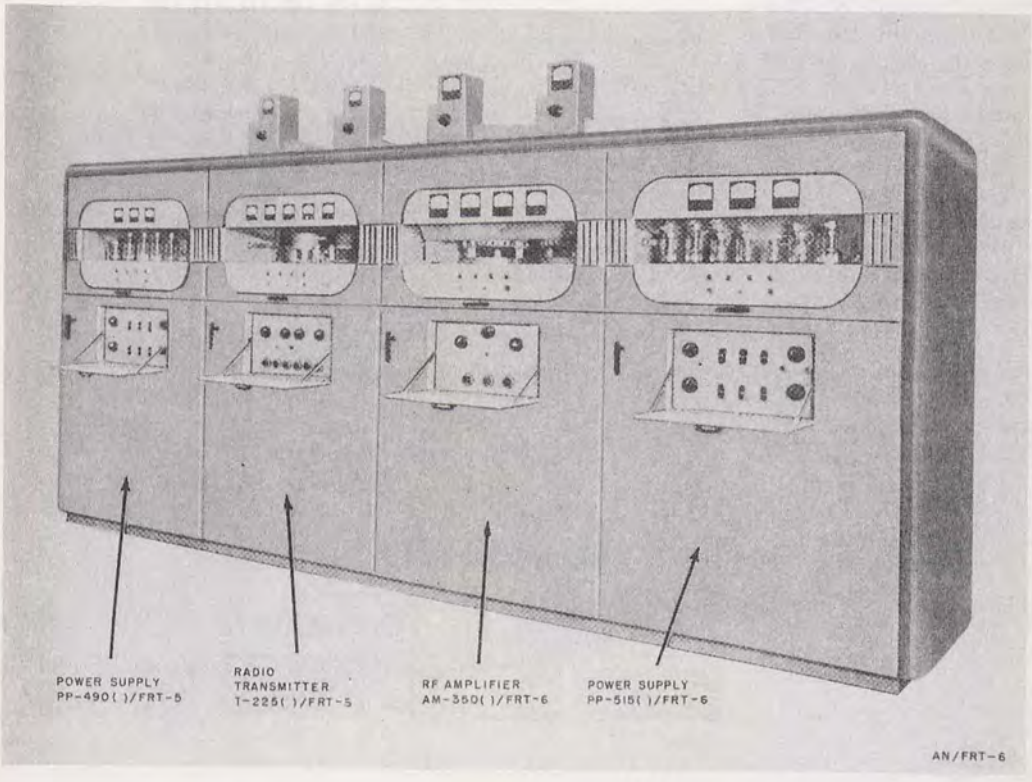
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Corp.	Clifton, N. J.	NObsr–52662, 27 June 1951	

RADIO TRANSMITTING SET AN/FRT-6

26 November 1958
Cognizant Serv: USN FSN: 5820-642-7784

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-122696-200	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/FRT-6 is a long-range, high-frequency facility designed for shore-based communications service. It provides an output power of 40 kilowatt for ON-OFF radiotelegraph, frequency-shift telegraph or teletypewriter, and facsimile transmission.

This equipment is principally employed for shore-to-ship and point-to-point communication. The high radio frequency power output makes it suitable for transmission over long and difficult circuits.

The set provides 10 preset, crystal-controlled channels and has a stabilized variable frequency oscillator. It is intended for optimum operation into an antenna with an impedance of 600 ohms.

The transmitter may be operated without using the main radio frequency amplifier section to provide a 15-kilowatt output, instead of the normal 40-kilowatt output, for operation to medium distances or for emergency use.

Radio Transmitting Set AN/FRT-6 is similar functionally to Radio Transmitting Equipment TEC.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 26

Frequency Control: Crystal or stabilized oscillator

Type of Signal: Cw, rtt, fax

Type Modulation: AM, FM

Keying: Maximum keying speed 400 wpm, A1, F1

Nominal Power Output: 40 kw

Power Requirements: 86 kw (normal), 27.5 kw (low power); 207-253-v 60-cycle 3-phase ac; and 115-v 60-cycle 1-phase ac for crystal oven

AN/FRT-6 RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency Shift Keyer KY–45/FRT–5		10-1/2 x 19 x 15-1/8	49
1	Power Control C–587/FRT–5		38-1/2 x 30-1/4 x 14-1/4	298
1	Power Control C–598/FRT–6		24-1/2 x 38-1/2 x 14-3/4	137
1	Power Supply PP–454/FRT–5		8-3/4 x 19 x 15-1/8	88
1	Power Supply PP–490/FRT–5		91-1/2 x 46-5/8 x 37-1/2	1,742
1	Power Supply PP–515/FRT–6		91-1/2 x 46-5/8 x 37-1/2	2,030
1	Power Transformer TF–122/U		18-1/2 x 36-1/2 x 14-3/4	527
1	Power Transformer Assembly TF–124/FRT–6		55-3/4 x 58-1/2 x 30-1/2	3,010
1	Radio Transmitter T–255/FRT–5		91-1/2 x 46-5/8 x 37-1/2	2,108
1	RF Amplifier AM–350/FRT–6		91-1/2 x 46-5/8 x 54-1/2	2,550
1	RF Oscillator O–92/FRT–5		10-1/2 x 19 x 1[illegible]8	35
1	RF Oscillator O–92/FRT–5		5-1/4 x 19 x 12	15

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91263

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
29	958.8	17,892

PROCUREMENT DATA

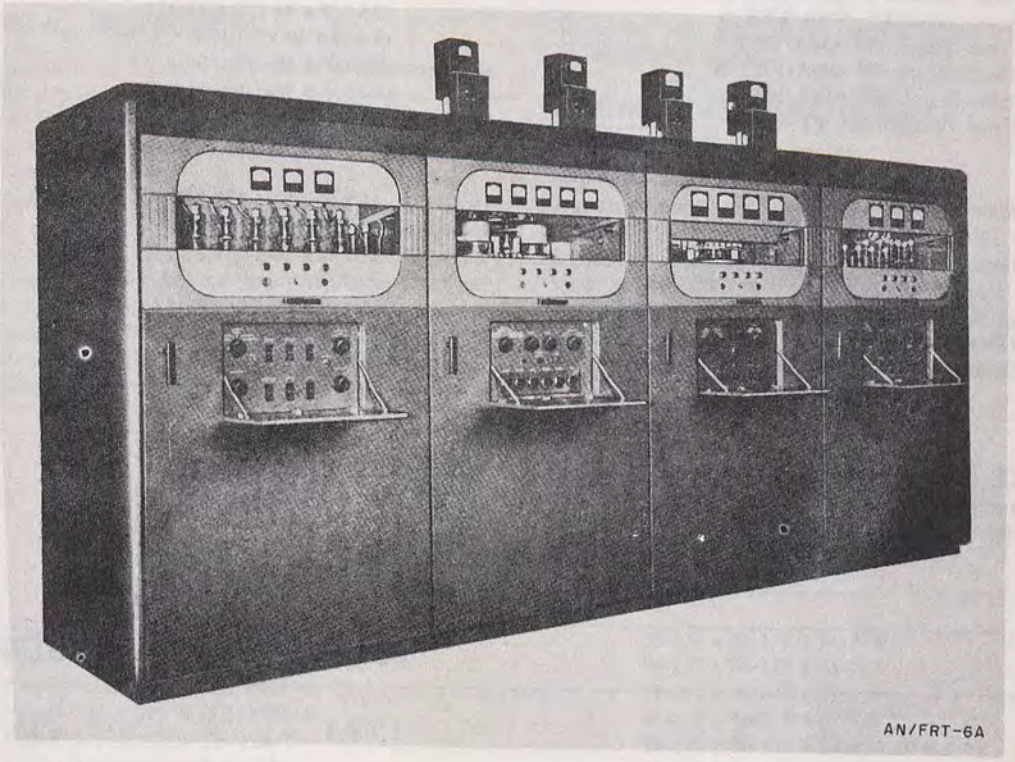
PROCURING SERVICE: USN
SPEC &/or DWG: RE–13A900B
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NObsr–39400, 30 June 1947	$58,816.00
		NObsr–42465, 30 June 1948	$58,816.00

RADIO TRANSMITTING SET AN/FRT-6A

26 November 1958
Cognizant Serv: USN FSN: 5820-642-8579

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-122697-200	



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/FRT-6A is a long-range, high-frequency facility designed for shore-based communications service. It provides an output power of 40 kilowatt for ON-OFF radiotelegraph, frequency-shift telegraph or teletypewriter, and facsimile transmission.

This equipment is principally employed for shore-to-ship and point-to-point communication.

The set provides 10 preset, crystal-controlled channels and has a stabilized variable frequency oscillator. It is intended for optimum operation into an antenna with an impedance of 600 ohms.

The transmitter may be operated less the high-power amplifier and rectifier at which time service similar to that obtained from Radio Transmitting Set AN/FRT-5A is available.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 26
Frequency Control: Crystal or stabilized master oscillator
Type of Signal: Cw, rtt, fax
Power Output:
Normal Operation: 40 kw
Without Main RF Amplifier: 15 kw
Keying Speed: 400 wpm maximum
Type Modulation: AM, FM
Power Requirements: 86 kw (normal), 27.5 kw (low power); 207-253-v 60-cycle 3-phase ac; and 115-v 60-cycle 1-phase ac for crystal oven

AN/FRT-6A RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency Shift Keyer KY–45A/FRT–5		10-1/2 x 19 x 15-1/8	29
1	Power Control C–587A/FRT–5		38-1/4 x 30-1/4 x 14-1/4	273
1	Power Control C–598A/FRT–6		24-1/2 x 38-1/2 x 14-3/4	146
1	Power Supply PP–454A/FRT–5		8-3/4 x 19 x 15-1/8	85
1	Power Supply PP–490A/FRT–5		91-1/2 x 46-5/8 x 37-1/2	1,780
1	Power Supply PP–515A/FRT–6		91-1/2 x 46-5/8 x 37-0/2	1,954
1	Power Transformer TT–122/U		18-1/2 x 36-1/2 x 14-3/4	560
	or			
	Power Transformer Assembly TF–124/FRT–6		55-3/4 x 58-1/2 x 30-1/2	3,010
1	Radio Transmitter T–225A/FRT–5		91-1/2 x 46-5/8 x 37-1/2	1,942
1	RF Amplifier AM–350A/FRT–6		91-1/2 x 46-5/8 x 37-1/2	2,372
1	RF Oscillator O–91A/FRT–5		10-1/2 x 19 x 15-1/8	35
1	RF Oscillator O–92A/FRT–5		5-1/4 x 19 12	15

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91404(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
18	1,196.1	19,836

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Clifton, N. J.	NObsr–49171, 24 May 1950	

RADIO TRANSMITTING SET AN/FRT-6B

26 November 1958
Cognizant Serv: USN FSN: 5820-642-8381

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-122698-200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/FRT-6B is a 40-kilowatt set designed for precision shore-to-ship or point-to-point communications. It is equipped for ON-OFF keying, frequency-shift keying, or teleprinter operation, and features rapid and accurate channel switching.

This equipment may be operated as a 15 kilowatt unit by deactivating the main amplifier and its power supply. By means of an isolated switch, the output circuit is disconnected from the power amplifier input and connected to the transmission line of the antenna.

Radio Transmitting Set AN/FRT-6B consists essentially of Radio Transmitting Set AN/FRT-5B, with an additional power amplifier and rectifier. It is similar to Radio Transmitting Set AN/FRT-6A except for minor circuit changes and component parts.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 26
Preset Channels: 10
Frequency Control: Crystal or master oscillator
Type Emission: Cw, rtt, fax
Keying Speed: To 400 wpm
Power Output: 40 kw into 600 ohms
Type Modulation: AM or FM
Power Requirements: 86 kw (normal), 27.5 kw (low power); 230-v (±10%) 60-cycle (±5%) 3-phase ac; and 115-v 60-cycle 1-phase ac for crystal oven

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1				
1	Power Control C-587C/FRT-5		38-1/4 x 30-1/4 x 14-1/4	273
1	Power Control C-5985/FRT-6		24-1/2 x 38-1/2 x 14-3/4	146
1	Power Supply PP-490B/FRT-5		91-1/2 x 46-5/8 x 37-1/2	1,780
1	Power Supply PP-515B/FRT-6		91-1/2 x 46-5/8 x 37-1/2	1,954
1	Power Transformer TF-122/U		18-1/2 x 36-1/2 x 14-3/4	560
	Power Transformer Assembly TF-124/FRT-6		55-3/4 x 58-1/2 x 30-1/2	3,010
1	Radio Transmitter T-225B/FRT-5, including:		91-1/2 x 46-5/8 x 47-1/2	1,942
1	Frequency Shift Keyer KY-45B/FRT-5		10-1/2 x 19 x 15-1/8	29
1	Power Supply PP-454A/FRT-5		8-3/4 x 19 x 15-1/8	85
1	RF Oscillator O-91B/FRT-5		10-1/2 x 19 x 15-1/8	35
1	RF Oscillator O-92B/FRT-5		5-1/4 x 19 x 12	15
1	RF Amplifier AM-350B/FRT-6		91-1/2 x 46-5/8 x 37-1/2	2,372

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91739

AN/FRT-6B RADIO TRANSMITTING SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
18	1,196.1	19,836

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Corp.	Clifton, N. J.	NObsr-52662, 27 June 1951	

RADIO TRANSMITTING SET AN/FRT-6C

26 November 1958
Cognizant Serv: USN FSN: 5820-347-9145

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitter Set AN/FRT-6C is a 40 kilowatt shore-based communication service designed to provide continuous-wave radiotelegraph, frequency-shift-telegraph, or facsimile transmission. It is primarily intended for reliable and precise shore-to-ship and point-to-point-communication. The high radio-frequency power output permits the transmission of intelligence over long and difficult circuits.

This equipment may be operated as a 15 kilowatt unit functioning independently of the 40 kilowatt main amplifier and its power supply.

Radio Transmitting Sets AN/FRT-6, AN/FRT-6A, and AN/FRT-6B are similar except for minor circuit changes and component parts. Radio Transmitting Set AN/FRT-6C is similar to the previous models except that the components have been changed to permit operation from 50 or 60 cycles instead of from 60 cycles only.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 26
Type of Signal: Cw, rtt, fax
Type Control: Crystal or stabilized oscillator
Poser Output: 40 kw nominal
Keying Speed: 400 wpm maximum
Equipment Power Factor:
Starting (Hi-voltage Off): 82.5%
Standby (Key Operation): 80.5%
Operation (Normal): 96%
Power Requirements: 86 kw (normal) 27.5 (low power); 207-253-v 50/60-cycle 3-phase ac; and 115-v 50/60 cycle 1-phase ac for crystal oven

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency Shift Keyer KY-45B/FRT-5	----------	10-1/2 x 15-1/8 x 19	29
1	Power Control C-587C/FRT-5	----------	14-1/4 x 30-1/4 x 38-1/4	298
1	Power Control C-598B/FRT-6	----------	14-3/4 x 24-1/2 x 38-1/2	146
1	Power Supply PP-454C-FRT-5	----------	8-3/4 x 15-1/8 x 19	88
1	Power Supply PP-490C/FRT-5	----------	37-1/2 x 43-1/2 x 79-3/8	1,742
1	Power Supply PP-515C/FRT-6	----------	37-1/2 x 43-1/2 x 79-3/8	2,030
1	Power Transformer TF-214/U	----------	19-1/8 x 31-3/4 x 40-1/2	675
1	Power Transformer TF-215/U	----------	30 x 57 x 60	2,350
1	Radio Transmitter T-225/FRT-5	----------	37-1/2 x 46-5/8 x 91-1/2	2,108
1	RF Amplifier AM-350C/FRT-6	----------	43-1/2 x 54-1/2 x 91-1/2	2,550
1	RF Oscillator O-91B/FRT-5	----------	10-1/2 x 15-1/8 x 19	35
1	RF Oscillator O-92B/FRT-5	----------	5-1/4 x 12 x 19	15

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92596(A)

AN/FRT-6C RADIO TRANSMITTING SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
19	1,130	19,309

PROCUREMENT DATA

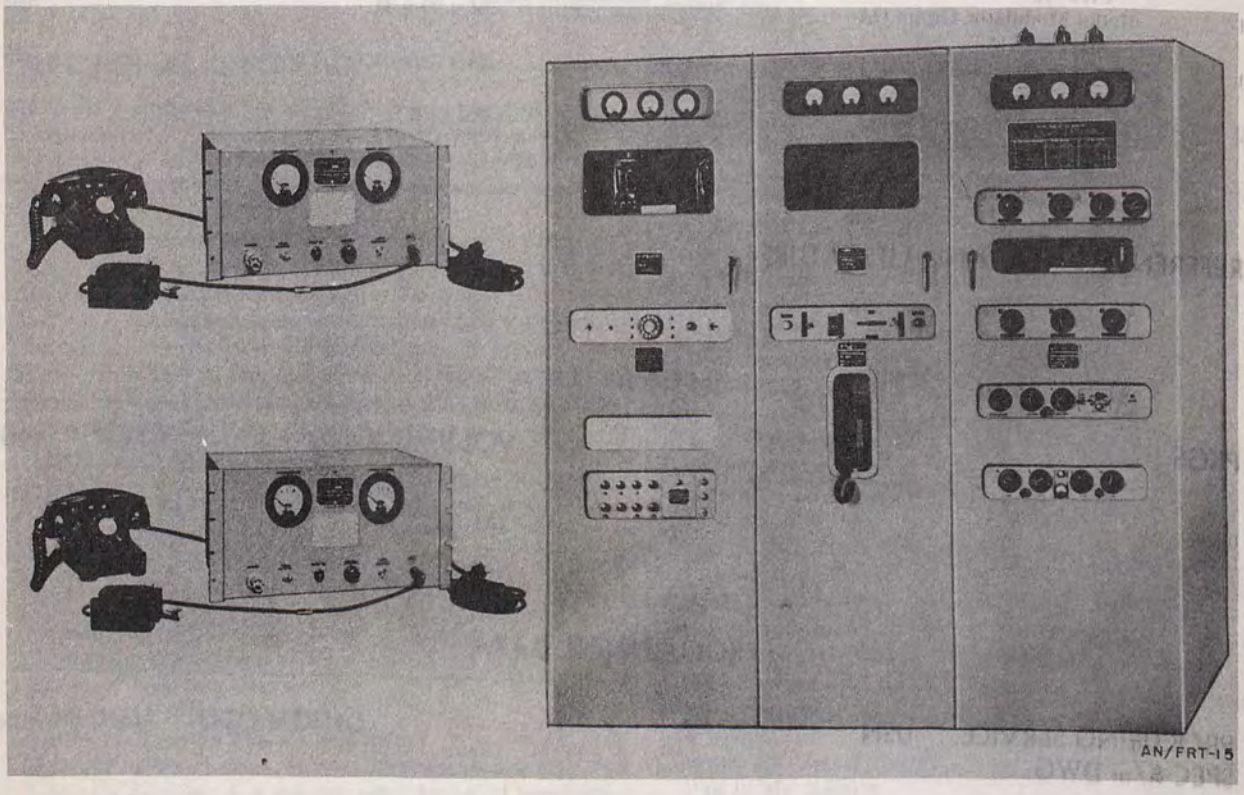
PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG: MIL-T-16268(SHIPS)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Clifton, N. J.	NObsr-64118, 8 February 1945	$62,000.00

RADIO TRANSMITTING SET AN/FRT-15

26 November 1958
Cognizant Serv: USN FSN: 5820-665-2284

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-122708-200	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/FRT-15 is a general service, medium-power, communication set used at shore stations. It is suitable for point-to-point and aeronautical ground station operations.

This equipment provides telephone-type dial automatic tuning for ten preset channels. It permits complete remote control over a two-pair telephone line.

The transmitter has a fuilt-in frequency-shift keying unit.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 30
Frequency Control: Crystal or master oscillator
Number of Preset Frequencies: 10
Type of Signal: Voice, cw, mcw, rtt, fax
Type Modulation: AM
Modulating Tone Frequency: 1,000 cps
RF Power Output:
2 to 12 mc: 3,000 w
12 to 26 mc: 2,500 w
26 to 30 mc: 2,000 w
Frequency Drift: ±0.003% maximum
Keying Speed:
A1: 500 wpm
A2: 50 wpm
Power Requirements: 9,920 w; 220-v 50-60-cycle 3-phase ac, and 110-v 50-60-cycle 1-phase ac for remote-control unit

AN/FRT-15 RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Supply Group OA–206/FRT–15	----------	84 x 26 x 31	1,350
1	Radio Modulator Group OA–204/FRT–15	----------	84 x 29 x 31	880
1	Radio Transmitter Group OA–205/FRT–15	----------	84 x 29 x 31	775
2	Transmitter Control C–475/FRT	----------	9 x 19 x 11	105

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	521.33	7,413

PROCUREMENT DATA

PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corporation of America	New York, N. Y.	NObsr–43454, 30 June 1949	

RADIO TRANSMITTING SET AN/FRT-15A

26 November 1958
Cognizant Serv: USN FSN: 5820-548-3809

	USA	USN	USAF
TYPE CLASS:	--	Used by	Ltd-Std
STOCK NO:	--	--	1760-049587010

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/FRT-15A is a general service unit intended for use in naval shore or air force ground installations. It is suitable for point-to-point and aeronautical ground station operation on a number of selected frequency channels.

The set has been designed for operation of ambient temperatures between 0° and 50° centigrade (32° and 122° Fahrenheit) and in a relative humidity up to 95 percent.

This equipment is capable of continuous operation on continuous-wave, modulated continuous wave, telephone, frequency-shift keying (with phase modulation, if desired), or facsimile. The appropriate frequency may be selected automatically either locally or remotely.

Radio Transmitting Set AN/FRT-15 is identical in appearance, rating, operation, and application with Radio Transmitting Set AN/FRT-15 but differs in certain minor details of construction.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 30
Tuning: Continuous over entire range
Number of Frequency Channels: 12
Number of Preset Frequencies: 11
Number of Manually Tuned Frequencies: 1
Type of Frequency Control: Crystal or master oscillator
Frequency Selection: Any one frequency by use of telephone-type dial, either locally or remotely
Time to Change Preset Frequency and/or Mode of Operation: Less than 15 seconds
Type Emission: Cw, mcw, voice modulated, fsk, fax
Type Modulation: AM
Input: −25 to 0 db into 500 ohm impedance
Audio Response: −Flat with ±3 db from 15 cps to 3,500 cps
Compression: Above 70% modulation; 10 db increase in input results in less than 3 db change in modulation level
Modulation Capability: 100%
Type of Frequency-shift Circuit: Reactance modulated oscillator
Nominal Oscillator Frequency: 200 kc
Deviation: Adjustable from 0 to ±1,000 cps
Deviation Response: Linear with respect to dc input voltage, within 5%
Stability: Within 5% above 200 cps, within 10 cps below 200 cps frequency shift
Frequency of Phase Modulation: 200 cps per second ±5%
Placement of Antenna: 1 radian ±0.1 radian
Phototransmission:
Input Signal: Peak magnitude of +1 to +20 v
Input Impedance: 600 ohms ±10%
Maximum Deviation: Zero signal, 1,000 cps; peak signal, +1,000 cps
Response:
Static: Linear within 5% with respect to an input signal, over a 30 db range below any value between +1- and +20-v dc
Dynamic: Peak of any ac signal voltage of 0 to 2,000 cps is with 2 db of dc voltage to cause some deviation
Keying:
Type: Polar or neutral
Range: 30- to 135-v dc
Control: Local or remote
Circuit: Electronic
Speed: Cw ON-OFF or frequency shift up to 500 wpm; mcw, up to 50 wpm
Control: Local or remote
Local Control: Start and stop by manual switches; emission and channel selection by telephone-type dial
Remote Control: Initial start at transmitter only; restart, standby, stop, emission, and channel selection by telephone-type dial
Nominal RF Output Power:
2 to 12 Mc: 3,000 w
12 to 26 Mc: 2,500 w
26 to 30 Mc: 2,000 w
Output Transmission Line. Balanced; impedance 70 to 800 ohms; maximum standing wave ratio with load connected, two to one
Crystals, Channel Frequency:
Type: CR-27/U
Number Required: 1 to 10
Frequency Range: 1,800 to 3,800 kc
Operating Temperature: 75° C. ±1°C.
Master Oscillator:
Type: Rf oscillator 0-140A/FRT-15
Frequency Range: 1,800 kc to 4,000 kc
Power Requirements:
Power Supply Group OA-206A/FRT-15: 220-v 50-60-cycle 3-phase ac
Transmitter Control C-745A/FRT-15: 110-v 50-60-cycle 1-phase ac

AN/FRT-15A RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Supply Group OA-206A/FRT-15 including:		25-15/16 x 31 x 83-15/16	1,175
1	Cabinet-Power Supply CY-933A/FRT-15		25-5/16 x 31	1,040
2	Desk set		5-1/2 x 7 x 9	8
1	Power Supply PP-632A/FRT-15		11-5/8 x 16 x 25-1/2	92
1	Power Supply PP-633A/FRT-15		8 x 9-1/8 x 25-7/16	43
2	Telegraph key		2-3/8 x 3-5/16 x 6	4
2	Transmitter Control C-745A/FRT-15		8-23/32 x 11-5/8 x 19	96
1	Radio Modulator Group OA-204A/FRT-15, including:		28-15/16 x 31 x 83-15/16	975
1	Cabinet CY-931A/FRT-15		28-15/16 x 31 x 83-15/16	659
1	Keyer KY-70A/FRT-15		10-15/32 x 16-1/4 x 19	46
1	Power Supply PP-631A/FRT-15		8-23/32 x 16 x 19	78
1	Radio Modulator MD-137A/FRT-15		27 x 28-1/4 x 29-5/8	70
1	Relay Assembly RE-95A/FRT-15		8 x 11-3/4 x 27	19
1	Signal Data Converter CV-165A/FRT-15		4-11/16 x 8-15/16 x 19	8
1	Voltage Regulator CN-143A/FRT-15		8-23/32 x 8-7/8 x 19	95
1	Radio Transmitter Group OA-2050A/FRT-15 including:		28-15/16 x 31 x 83-15/16	925
1	Amplifier-Oscillator AM-483A/FRT-15		11-3/8 x 25-3/16 x 30-1/8	87
1	Cabinet-Radio Frequency Amplifier CY-932A/FRT-15		28-15/16 x 31 x 82-15/16	761
1	RF Oscillator O-140A/FRT-15 including:		10-15/32 x 19 x 20-7/8	77
1	Band Pass Filter F-105A/FRT-15		3-1/2 x 3-3/4 x 14	7
1	Filter-Mixer F-104A/FRT-15		3 x 3-1/2 x 10-3/16	2
1	Frequency Selector-Mixer CV-275/FRT-15A		3-13/16 x 6-9/16 x 16-5/16	8
1	Frequency Selector-Mixer CV-276/FRT-15A		4-3/8 x 6 x 14	8
1	Frequency Selector C-1245/FRT-15A		3-13/16 x 6-3/4 x 16-15/16	9
1	Harmonic Generator O-206/FRT-15A		3-7/8 x 6 x 13-1/2	4
1	Oscillator Assembly O-141A/FRT-15		5 x 7 x 13-3/16	12
1 Set	Interconnecting and Accessory items			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91848(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
15	457.9	7,144

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: TS-2176

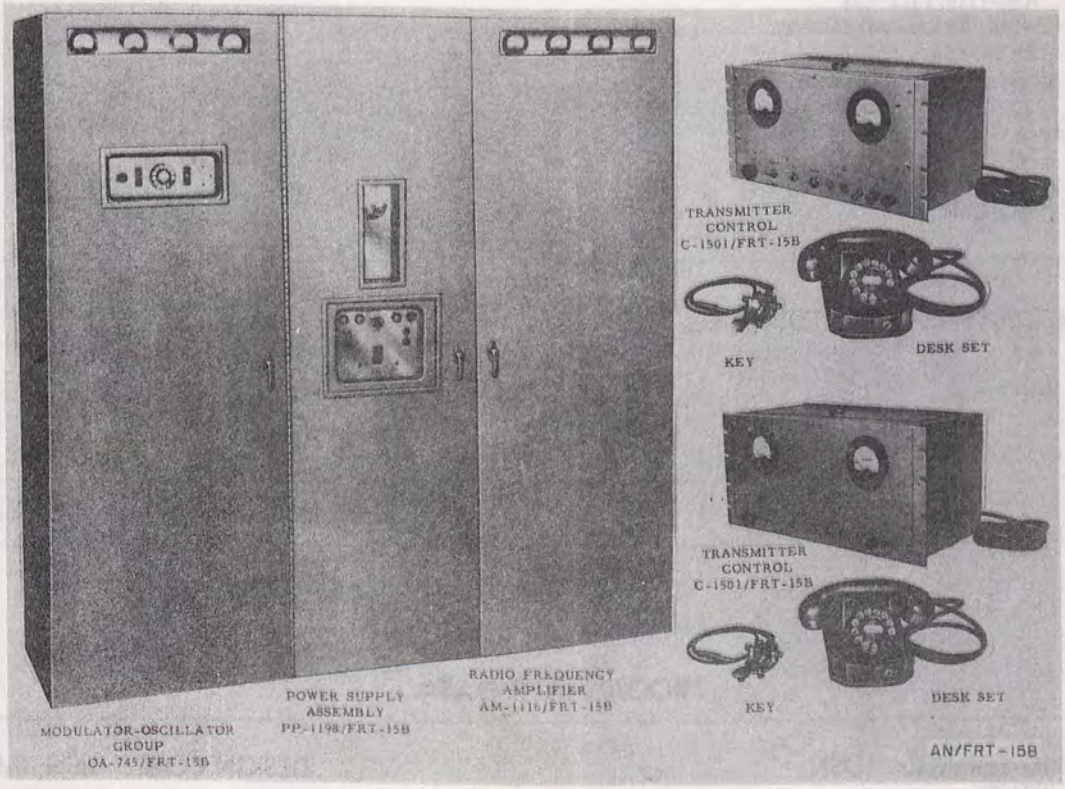
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corporation of America	New York, N. Y.	NObsr-52677, 28 June 1951	$17,500.00
		NObsr-63158, 31 December 1952	17,500.00

RADIO TRANSMITTING SET AN/FRT-15B

26 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/FRT–15B is used at shore stations to provide medium-power communications. It is suitable for point-to-point and aeronautical ground station operation on a number of selected frequency channels.

This equipment is capable of continuous operation on continuous-wave, modulated continuous wave, telephone, frequency-shift keying, or facsimile.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 30
Number of Bands: 10
Number of Channels: 10
Type of Signal: Cw, mcw, voice, rtt, fax
Frequency Control: Crystal and master oscillator
Power Output: 3,000 w
Power Requirements: 220–v 50–60-cycle 3-phase ac

AN/FRT-15B RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier, Radio Frequency AM–1116/FRT–158			
2	Control, Transmitter C–1501/FRT–15B			
1	Modulator Oscillator Group OA–745/FRT–15B			
1	Power Supply Assembly PP–1198/FRT–15B			
1	Transmitter Group OA–746/FRT–15B			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

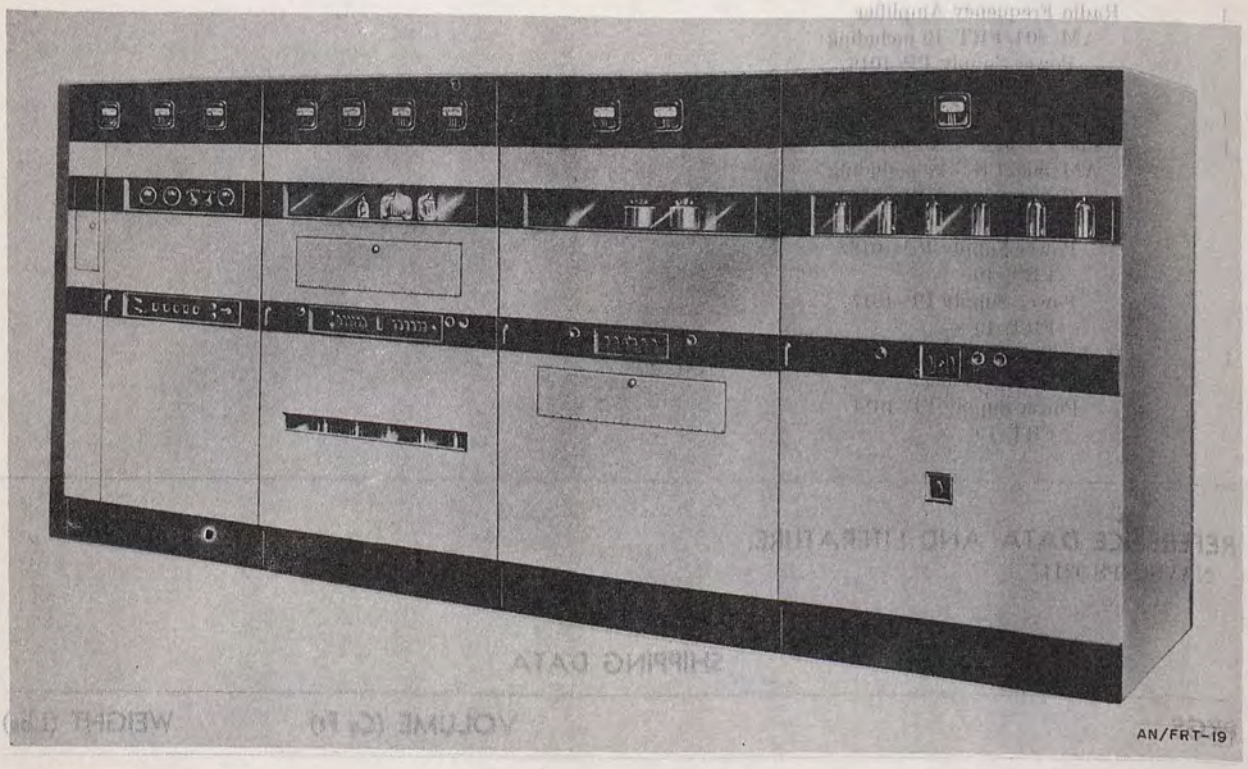
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Broadway Electronics	Red Bank, N. J.	NObsr–49252, 11 October 1954	

RADIO TRANSMITTING SET AN/FRT-19

26 November 1958
Cognizant Serv: USN FSN: 5820-665-2297

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/FRT-19 is a shore-based, low-frequency communication set. It provides continuous-wave transmission and is used primarily for shore-to-ship communications under widely varying climatic conditions.

This equipment consists essentially of an exciter bay, amplifier bay, and antenna tuner. Frequency control for the one channel provided is by means of a master or crystal oscillator.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Band 1: 30 kc to 48 kc
Band 2: 48 kc to 78 kc
Band 3: 78 kc to 130 kc
Band 4: 130 kc to 215 kc
Band 5: 215 kc to 355 kc
Band 6: 355 kc to 600 kc

Frequency Accuracy and Stability: ±3 cps, at 30.0 kc; ±20 cps, at 600.0 kc

Frequency Control: Crystal

Type Modulation: AM

Type of Signal: Cw, mcw, fsk, fax

Output Impedance: 600 ohms

Power Output:
0.03 to 0.3 mc: 15 kw
0.3 to 0.6 mc: 3 kw

Power Requirements: 230-v 50/60-cycle 3-phase ac

AN/FRT-19 RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Coupler MK–156/FRT–19			
1	Radio Frequency Amplifier AM–804/FRT–19 including: Power Supply PP–1016/FRT–19			
1	Power Supply PP–901/FRT–19			
1	Radio Frequency Amplifier AM–805/FRT–29 including: Power Supply PP–1015/FRT–19 Power Supply PP–1018/FRT–19 Power Supply PP–1017/FRT–19			
1	Radio Transmitter T–396/FRT–19 including: Power Supply PP–1014/FRT–19			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92117

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

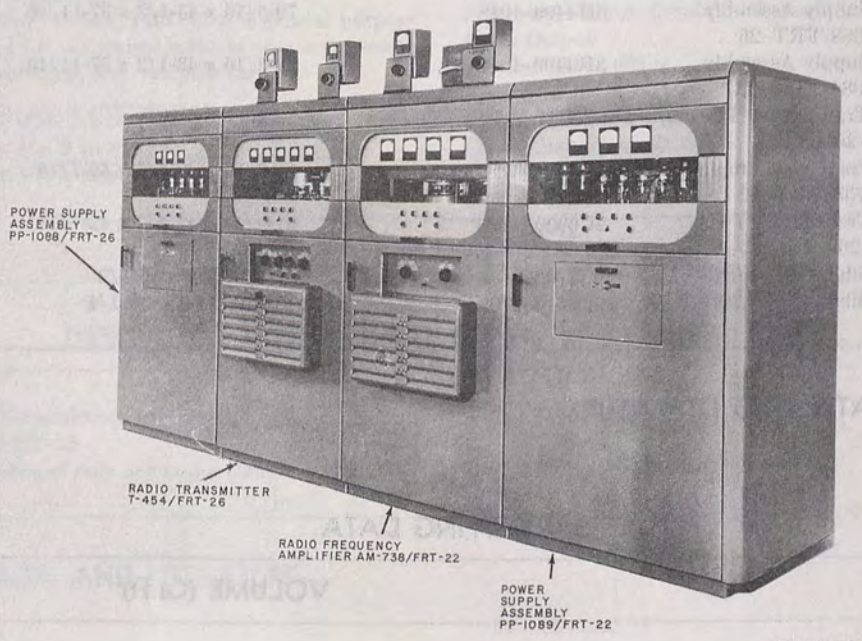
PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Sierra Electronic Corp. and Manufacturing Co.	San Carlos, Calif.	NObsr–52585, 20 June 1951	$66,000.00

RADIO TRANSMITTING SET AN/FRT-22

1 July 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S2003–22	--	1760–266489168



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/FRT–22 is a high-power, hf, fixed station radio equipment used for handling cw radiotelegraph, frequency-shift teletypewriter, or facsimile traffic over long distances.

It consists essentially of a transmitter (having two RF oscillators, a frequency-shift keyer, and a power supply), an amplifier, and two power assemblies. Each of these components is housed in a metal cabinet; these four cabinets are bolted together to form a single unit.

This equipment is the primary operating component of Coded Facility –344 (TB SIG 322–334).

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 26.5
Type Modulation: AM, FM
Type of Signal: Cw, fsk, ssb
Power Output:
Ssb: 30 kw
Cw, fsk: 40 kw
Power Requirements: 84.5 kw, 230–v (±10%) 50/60-cycle 3-phase ac

AN/FRT-22 RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Frequency Shift Keyer KY-45/FRT-5	2C640-45	19 x 15-1/8 x 10-1/2	
1	Power Supply PP-454/FRT-5	3H4497-454	19 x 15-1/8 x 8-3/4	
1	Power Supply Assembly PP-1088/FRT-26	3H4499-1088	79-5/16 x 43-1/2 x 37-11/16	1,800
1	Power Supply Assembly PP-1089/FRT-22	3H4499-1089	79-5/16 x 43-1/2 x 37-11/16	2,000
1	Power Transformer TF-196/FRT-26	2Z9964-196	32 x 42 x 19-1/8	605
1	Radio Frequency Amplifier AM-738/FRT-22	2C448A-738	91-9/16 x 43-1/2 x 59-7/16	2,650
1	Radio Transmitter T-454/FRT-26	2C6900A-454	91-9/16 x 43-1/2 x 42-7/16	2,200
1	RF Oscillator O-91/FRT-5	2C2709-91	19 x 15-1/8 x 10-1/2	
1	RF Oscillator O-270/FRT-26	2C2710-270	19 x 10-13/16 x 5-1/4	

REFERENCE DATA AND LITERATURE:

TM 11-847

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	481.423	12,595

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: MIL-R-11181

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	25866-P-55-55	$67,613.30

RADIO TRANSMITTING SET AN/FRT-23

26 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/FRT-23 is a general purpose equipment designed for the transmission of continuous-wave voice and tone modulation, and facsimile carriers.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 30
Type of Signal: Cw, mcw, voice
Type of Modulation: AM
Frequency Control: Crystal and master oscillator
Power Output:
2 to 12 MC: 600 w
12 to 26 MC: 500 w
26 to 30 MC: 400 w
Power Requirements: 3,600 va, 115/230-v 50-60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitting Set AN/FRT-23	----------	24 x 32 x 72	

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/FRT-23 RADIO TRANSMITTING SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: USCG SPEC RTTS 345

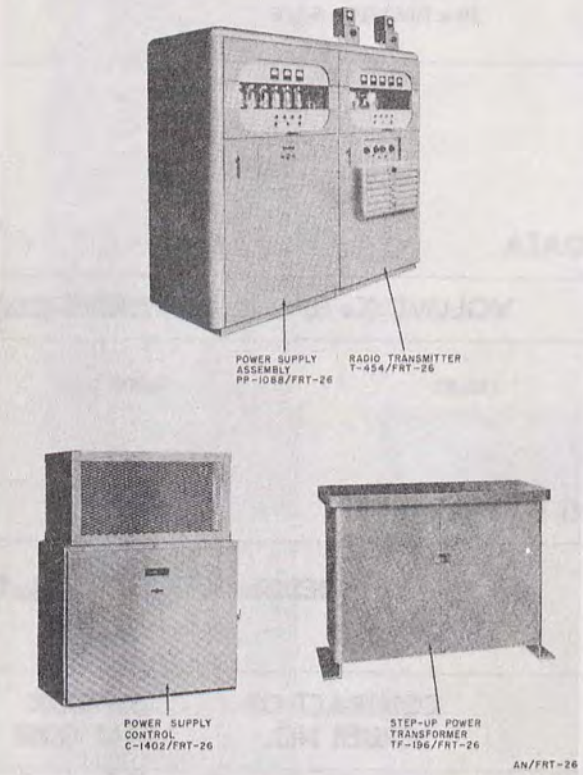
DESIGN COG: USN, USCG

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Clifton, N. J.	Teq-38329, 20 November 1940 Teq-38850, 19 February 1952 Teq-39205, 30 December 1952	

RADIO TRANSMITTING SET AN/FRT-26

1 July 1958
Cognizant Serv: USN FSN: 5820-503-3306

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S2003-26	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/FRT-26 is a medium-power, hf fixed station radio equipment used for handling cw radiotelegraph, radioteletype, or facsimile traffic over long distances.

It consists essentially of a transmitter and its power supply (housed in two metal cabinets bolted together to form a single unit), a high-voltage power transformer, and a power control. The transmitter cabinet contains two RF oscillators, a frequency-shift keyer, and a power supply.

This equipment is the primary operating component of Coded Facility-333 (TB SIG 322-333).

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 26.5
Type Modulation: AM, FM
Type of Signal: Cw, fsk
Power Output: 15 kw
Power Requirements: 27.5 kw, 230-v (±10%) 50/60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Frequency Shift Keyer KY-45/FRT-5	2C640-45	19 x 15-1/8 x 10-1/2	
1	Power Supply PP-454/FRT-5	3H4497-454	19 x 15-1/8 x 8-3/4	
1	Power Supply Assembly PP-1088/FRT-26	3H4499-1088	9-5/16 x 43-1/2 x 37-11/16	1,800
1	Power Supply Control C-1402/FRT-26	2C684-1402	38-1/4 x 30-1/4 x 14-3/4	298

AN/FRT-26 RADIO TRANSMITTING SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Transformer TF–196/ FRT–26	2Z9964–196	32 x 42 x 19-1/8	605
1	Radio Transmitter T–454/ FRT–26	2C6900A–454	91-9/16 x 43-1/2 x 42-7/16	2,200
1	RF Oscillator O–91/FRT–5	2C2709–91	19 x 15-1/8 x 10-1/2	
1	RF Oscillator O–270/FRT–26	2C2710–270	19 x 10-13/16 x 5-1/4	

REFERENCE DATA AND LITERATURE:

TM 11–846

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	196.97	5,070

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–11181

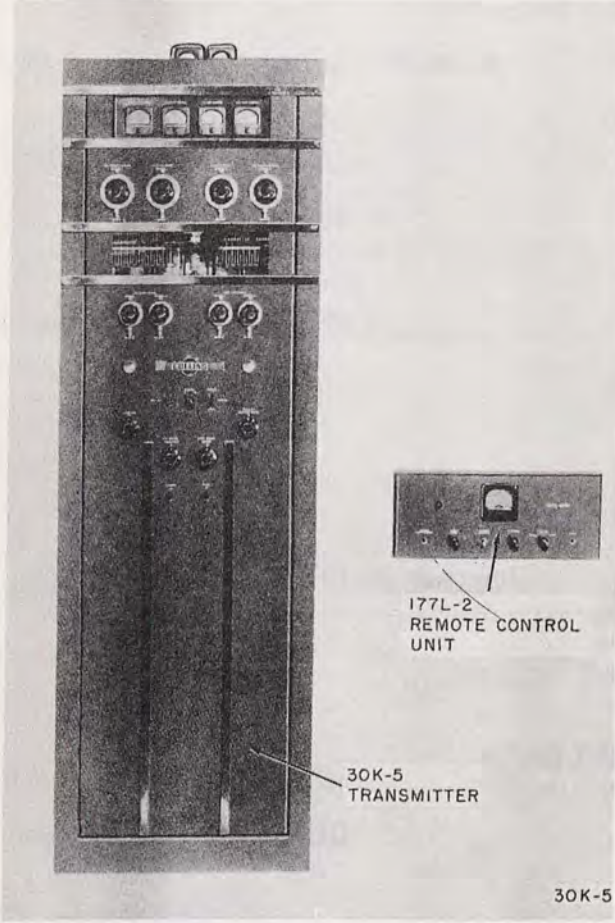
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	21770–P–56–55	$38,380.00

GROUND STATION TRANSMITTER AN/FRT-type

4 November 1958
Cognizant Serv: USN FSN: 30K–5

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Ground Station Transmitter 30K–5 is a self-contained dual-channel radio transmitter designed for general applications where service is intermittent, such as aeronautical ground stations, police stations, or general point-to-point communication. The unit contains a flexible pi network output circuit arrangement that permits the use of a variety of antenna types.

Remote operation may be provided by Remote Control Unit 177L–2; this unit provides filament and plate power controls as well as keying, microphone pre-amplifier, and channel switching functions. The transmitter can be converted for use with a 50-cycle power source or converted from 230- to 115-volt operation.

Equipment required for the operation of the transmitter are a telegraph key and standard phone plug, connecting cables (No. 10 AWG or larger), and an antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 30 in 2 channels
Frequency Stability: Within 0.004%
Type Signal: AM
Type Transmission: Cw, voice
Modulation Capability: 100% with cw or voice
Harmonic and Spurious Radiation: At least 30 db below carrier level at output terminals
Keying Data:
Speed: 32 dot-cycles per second (80 wpm) maximum
Pulse Width Distortion: 20% (maximum)
Transient Dip: 25% (maximum)
Audio Input Level: 0.005 v sufficient for 100% modulation at 1,000 cps without clipper
Audio Frequency Response: Within 3 db from 150 to 3,000 cps without clipper, 25 db or more down at 4,000 cps; reference is 90% modulation at 1,000 cps
Audio Frequency Distortion: Less than 10% at 1,000 cps with 100% modulation without clipper
Audio Peak Clipper: Cuts off sharply at 4,000 cps; both positive and negative clipped
Carrier Shift: 5% (maximum)
Power Output (Nominal):
2 to 15 Mc: 300 w cw, 250 w voice
15 to 24 Mc: 250 w cw, 200 w voice
24 to 30 Mc: 225 w cw, 150 w voice
Output Impedance: Adjustable in 1-turn steps for matching any unbalanced load with a resistive component of 70 to 2,000 ohms, providing the total load impedance does not require a higher voltage than does the 2,000 ohms pure resistance; above 4 mc the lower resistance limit may be reduced to 50 ohms; a series load coil will permit matching 50 ohms from 2 to 4 mc.
Operating Conditions:
Ambient Temperature Range: 0° to 50°C.
Ambient Humidity Range: 0 to 95% relative
Altitude: Sea level to 6,000 feet (higher with 75% of nominal power output)
Power Requirements: 1,350 w (maximum), 230-v 60-cycle 1-phase ac

AN/FRT-type GROUND STATION TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Coils			
1 set	Crystals			
1 set	Equipment maintenance parts			
2	Microphone			
1	Ground Station Transmitter 30K-5,		20 x 22 x 70	385
	including:			
1	Microphone connector			
	or			
1 set	Tools			
1 set	Vacuum tubes			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92867

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN

SPEC &/or DWG:

DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Ia.	NObsr-71045, 26 Sept 1955	$3,460 with equipment

COMMUNICATIONS TRANSMITTER AN/FRT-type

6 November 1958
Cognizant Serv: USN FSN: 431D–1

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Communications Transmitter 431D–1 is a shore-based radio transmitter used for high-frequency radiotelegraph and radiotelephone operation in shore-to-ship, ground station-to-aircraft, and similar applications of point-to-point communication. Ten preset channels are available.

Frequency-shift operation may be used if Frequency-Shift Oscillator Unit 709E–1 (Collins Radio) is installed.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 30
Frequency Stability: Better than 0.002%
Type Transmission: Cw, voice, fsk
Number of Autotune Channels: 10
Autotune Cycle Time: Less than 8 seconds (approximately 8 seconds with 50-cps supply)
Keying Data:
Cw: 200 wpm
Fsk: 240 dot-cycles per second
Impedance:
Output: 50 to 70 ohms with a maximum swr of 2 to 1
RF Input: 50 to 70 ohms
Audio Characteristics:
Input Impedance: 600 ohms
Input Level: −20 to +10 dbm
Frequency Response: Within 3 db at 350 to 27,000 cps
Distortion (Total Harmonic): Less than 5% at 1,000 cps and 90% modulation when clipping is not used
Noise: At least 40 db below 100% modulation
Power Output: 1 kw
RF Input Power Required: 0.5 w approximately (2 w maximum) from external source
Operating Conditions:
Ambient Temperature Range: 0 to 50°C
Relative Humidity: 95% (maximum)
Elevation: 10,000 feet (maximum) above sea level for satisfactory operation
Power Requirements: 4,150 w (maximum) 208- to 230-v 60-cycle 1-phase ac, ±5% line voltage and line frequency variation

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Coils			
1 set	Crystals			
1 set	Equipment parts			
2	Microphone			
1	Radio Transmitter 431D–1	----------	33 x 48 x 84	1,250
1	RF connector, make plug			
1	Tube kit			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92869

AN/FRT-type COMMUNICATIONS TRANSMITTER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Ia.	NObsr–71045, 25 September 1955	$12,821.00 with equipment spares

RADIO TRANSMITTER AN/FRT-type

4 December 1958
Cognizant Serv: USAF FSN: BC–329–( )

	USA	USN	USAF
TYPE CLASS:	Models –A through –H, and –J, –L, and –M are Ltd-Std; –N is S/Std.	Used by	L/Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter BC–329 is a fixed, ground radio transmitter for short-range airport control by voice communication. Tactical use is for emergency airport traffic control at advanced air bases.

It is crystal controlled, but has a master oscillator for emergency operation at a frequency range from 0.19 to 0.41 mc. The 500-ohm impedance audio input circuit is designed for a low impedance microphone or telephone line.

The antenna output is designed for operation into a long-wire antenna such as the antenna kit used with, but not part of, Tower AB–127/FR.

TECHNICAL CHARACTERISTICS:

Frequency Range: 0.2 to 0.41 mc, preset, single channel
Operating Range: Short (nominal)
Type Modulation: AM
Type of Signal: Voice
Power Output: 25 w
Power Requirements: 560 w, 105- to 125-v, 50 to 60 cps, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter BC–329	----------	30-1/2 x 24-1/2 x 20	240

(Equipment consists only of a single major operating component.)

REFERENCE DATA AND LITERATURE:

TO 16–30GRT–2–3

AN/FRT-type RADIO TRANSMITTER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	7.4	264

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

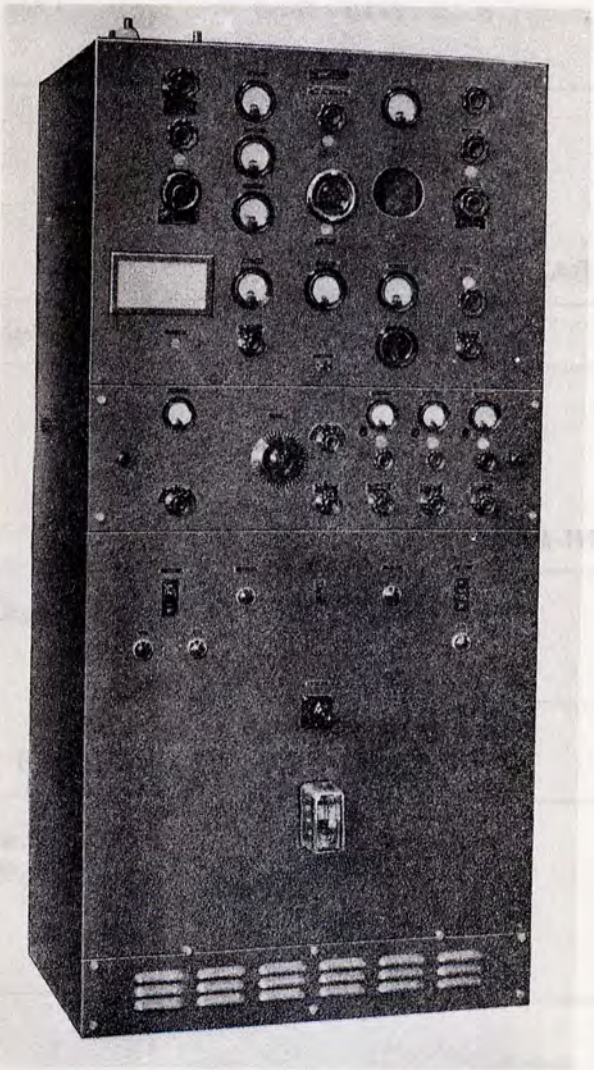
DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TRANSMITTER AN/FRT-type

1 July 1958
Cognizant Serv: USA FSN: 5820-194-0970 BC-339-( )

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C6339	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter BC-339-( ) is a high-frequency, medium power, radiotelegraph transmitting equipment used for fixed-plant, long-range, high-speed communication.

This equipment consists of a floor-type steel cabinet containing the operating components and related apparatus.

It can be operated independently, or as a driver for Power Amplifier BC-340 with Rectifier RA-22 and Water Cooling Unit RU-2 to form a 10-kw radiotelegraph or radioteletype facility.

It has provision for remote starting, stopping, and keying the transmitter over a telephone pair from distances up to 6 miles away, and can be operated under such conditions at speeds of 300 wpm.

It is usually operated with a rhombic, doublet, or similar array, and operates on 220-volt ac.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4.0 to 26.5
Type Modulation: AM
Type of Signal: Cw; or, with additional equipment, fsk
Power Output: 1 kw
Power Requirements:
BC-339-A, -B, -C, -F: 220-v 60-cycle 3-phase ac
BC-339-E, -G, -H, -J, -K, -L, -M: 220-v 50/60-cycle 3-phase ac
Key Up: 1,610 w
Key Down: 4,300 w

AN/FRT-type RADIO TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Radio Transmitter BC–339–( ) (Equipment consists of only one major component.)	5820–194–0970	81-5/8 x 33-3/8 x 37-1/8	1,560

REFERENCE DATA AND LITERATURE:

TM 11–836

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	115	2,350

PROCUREMENT DATA

PROCURING SERVICE: USA **DESIGN COG:** USA, Sig C
SPEC &/or DWG: (USA) 71–3309

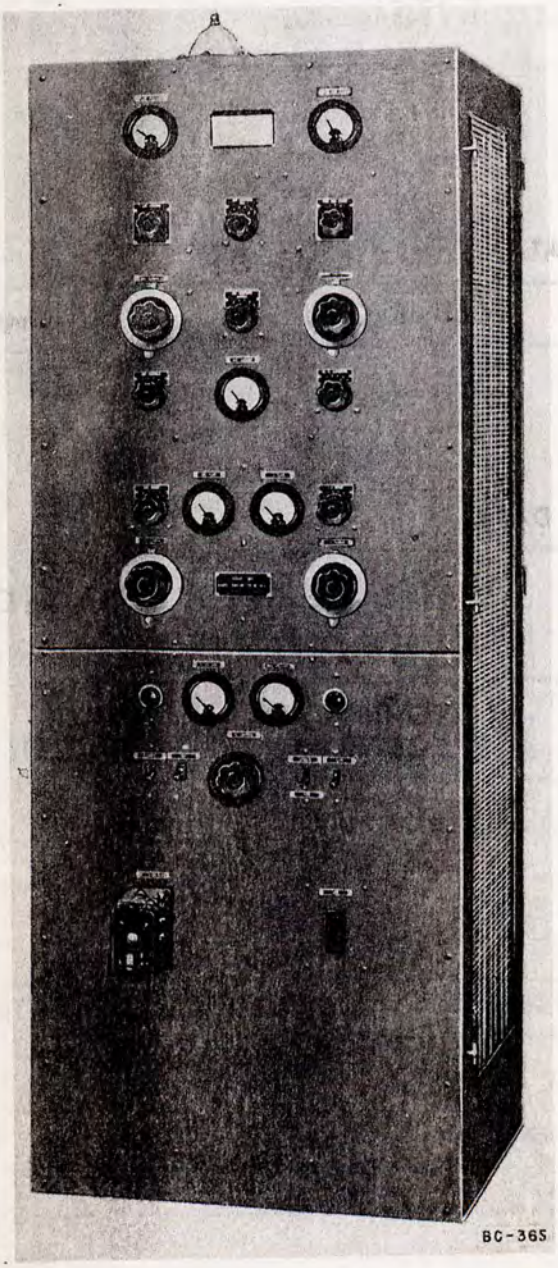
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Barker & Williamson, Inc.	Bristol, Pa.	4650–P–52–31	$6,090.64
A. F. Smuckler & Co., Inc.	Brooklyn, N. Y.	3361–P–52–06	5,766.31

RADIO TRANSMITTER AN/FRT-type

1 July 1958
Cognizant Serv: USA FSN: 5820-189-7053

BC-365-( )

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	2C6355F	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter BC-365-( ) is a medium-power, lf and mf, radiotelegraph transmitting equipment used at fixed-plant installations for long-range communication.

This equipment consists of a single floor-type cabinet containing the operating components and control units. The keyer control is mounted on the front panel, and two separate keyer tubes provide for both am and frequency-shift keying.

Its remote control component permits operation of the transmitter over a telephone pair from a point up to 6 miles away.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.15 to 0.55
Type Modulation: AM
Type Signal: Cw, fsk
Power Output: 350 w
Power Requirements: 1,800 w, 110/220-v 50/60-cycle ac

AN/FRT-type RADIO TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Radio Transmitter BC–365	2C6355	28 x 26 x 76	810
1	Remote Control Unit RM–10	----------	19 x 1-15/16 x 1-3/4	2.25

REFERENCE DATA AND LITERATURE:

TM 11–828

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	46	925

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 171–190

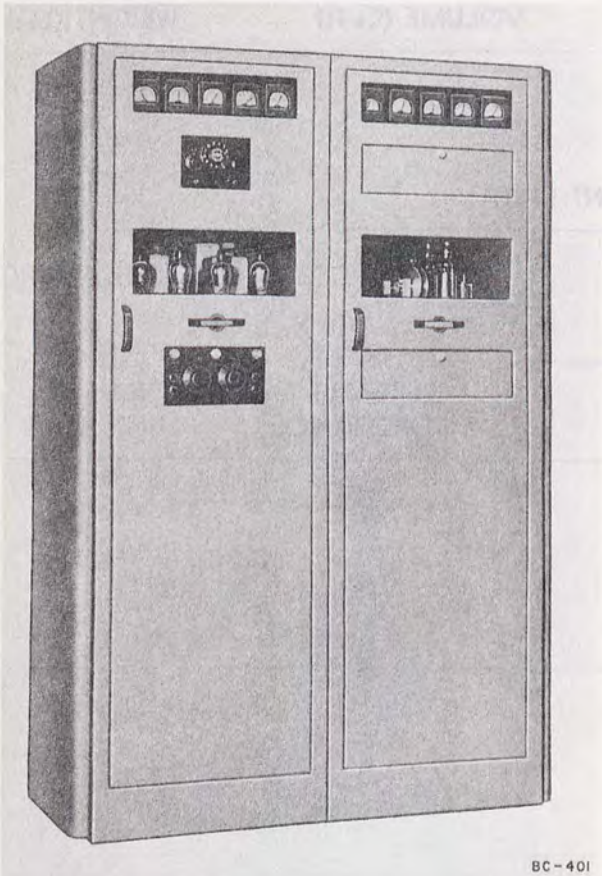
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Telemarine Communications Co.	----	8577–P–48–77	

RADIO TRANSMITTER AN/FRT-type

1 July 1958
Cognizant Serv: USA FSN: 5820-126-8847 BC-401

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C6381	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter BC-401 is a crystal-controlled, AM (voice and cw), mf and hf radio transmitting equipment used for medium- and long-range communication at permanent installations.

This equipment consists of a steel floor-type cabinet inclosing operating units and components. It operates in 10 preset crystal-controlled channels, has provision for full remote control operation, and uses a double-cage type of antenna or other suitable fixed-plant antenna array.

A receifier and modulation unit and a remote control unit are used with, but are not issued as part of, this equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 18.1
Type Modulation: AM
Type of Signal: Cw, voice
Power Output: 400 w
Power Requirements: 220-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Radio Transmitter BC-401	5820-126-8847	78 x 48 x 24	1,640
	(Equipment consists of only one major component.)			

AN/FRT-type RADIO TRANSMITTER

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 171-97-B

DESIGN COG: USA, Sig C

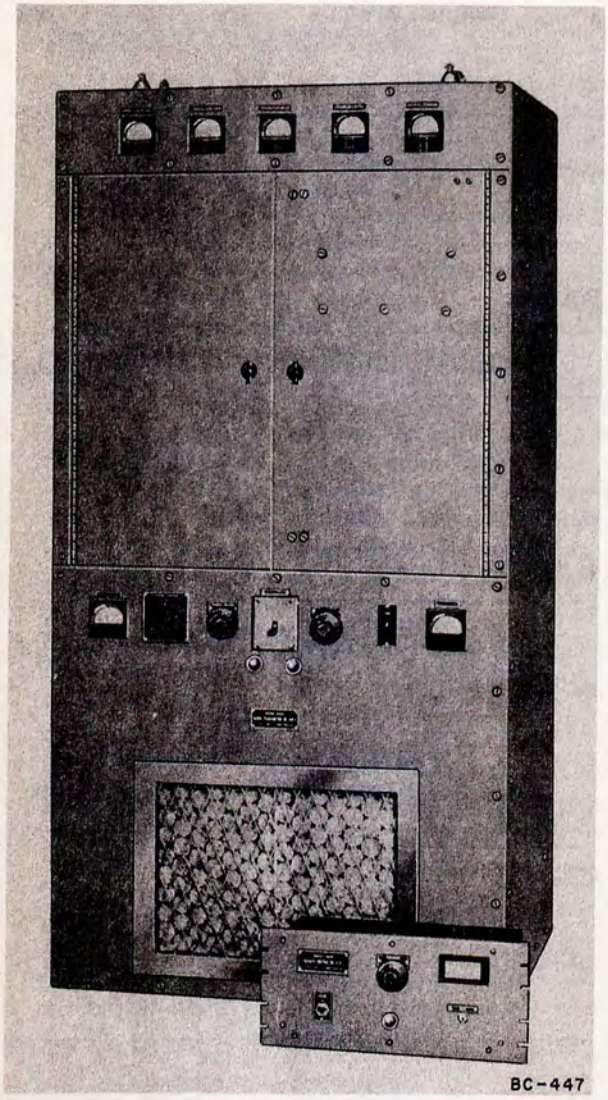
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TRANSMITTER AN/FRT-type

1 July 1958
Cognizant Serv: USA FSN: 5820-189-7046

BC-447-( )

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C6387-1	--	--


BC-447

FUNCTIONAL DESCRIPTION:

Radio Transmitter BC-447-( ) is a medium-power, long-range, radiotelegraph transmitting equipment operating in the medium- and high-frequency bands at fixed-plant installations.

This equipment consists of a cabinet-inclosed radio transmitter and associated remote control unit, and provides two crystal-controlled channels.

It can be operated from a remote point over a telephone pair, and uses any suitable antenna with a balanced 600-ohm transmission line.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Channel 1: 4.0 to 18.0
Channel 2: 2.0 to 8.0
Type Modulation: No provisions
Type of Signal: Cw
Power Output: 300 w
Power Requirements: 1,200 w, 115/230-v 50/60-cycle ac

AN/FRT-type RADIO TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Radio Transmitter BC–447–( )	5820–189–7046 (USA) 2C6387–1	28-7/16 x 35 x 74	871
1	Remote Control Unit RM–17	(USA) 2C7617		

REFERENCE DATA AND LITERATURE:

TM 11–827

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	92	1,247

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 171–191

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TRANSMITTER AN/FRT-type

25 November 1958
Cognizant Serv: USN FSN:

KWS-1, KWS-1(MOD)

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Transmitters KWS-1 and KWS-1(MOD) (Collins Radio) are compact amateur transmitters, designed for single sideband, continuous-wave and amplitude-modulated operation. They feature filter-type single sideband generation and use a mechanical filter for this purpose.

The power supply cabinet is deck mounted but can be rack mounted, if desired. The exciter and power amplifier may be mounted on a table or on top of the power supply cabinet alongside the operator's table.

The KWS-1 and KWS-1(MOD) are similar except for frequency range and minor design changes.

The following equipment is used with, but is not supplied with, both Transmitters KWS-1 and KWS-1(MOD): one antenna, one speaker control, one Micromatch, Jones Model 263, one telegraph key, and test equipment as required.

In addition, the following equipment is used with, but not supplied with Transmitter KWS-1 only: one microphone assembly with push-to-talk stand and one microphone assembly with plain stand.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
KWS-1:
Band 1: 3.0 to 4.0
Band 2: 7.0 to 7.3
Band 3: 14.0 to 15.0
Band 4: 21.0 to 22.0
Band 5: 26.4 to 27.4
Band 6: 28.0 to 29.0
Band 7: 29.0 to 30.0
KWS-1(MOD): 3.0 to 6.0, 7.0 to 8.0, and 13.0 to 15.0 in six bands
Type Emission: Cw
Type Modulation: AM, FM
PA Plate Power Input: 1,000 w nominal peak envelope power
Distortion: Third order distortion down more than 35 db with tone frequencies of 900 and 2,500 cps
Calibration: Direct reading in kc on linear scale
Dial Accuracy: Within 200 cps
AF Response: Within ±3 db from 200 to 2,900 cps
Frequency Stability Data:
Warm-up:
5 Minutes: 1,000 cps (maximum)
10 Minutes: 500 cps (maximum)
Normal Operation:
20 Minutes: Within 300 cps of starting frequency
30 Minutes: Within 100 cps over 10-minute period
Carrier Suppression: Not less than 50 db
Undesired Sideband Suppression: Not less than 50 db
Spurious Radiation: At least 35 kb down
Impedance Data:
Microphone Input: High impedance
Antenna Connection: 52 ohms
Microphone Patch Connection: 600 ohms
Microphone Patch Signal Level: 0.1 v
Power Requirements: 1,500 w (maximum), 115- or 230-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For KWS-1:			
1	Antenna change-over relay			
1 set	Connectors			
1 set	Equipment spare parts			
1	Exciter and power amplifier	----------	10-15/32 x 15-1/2 x 17-3/8	50
1	Microphone assembly, plain stand			
1	Microphone assembly, push-to-talk stand			
1	Power supply	----------	15-1/2 x 17-3/8 x 30	173

AN/FRT-type TRANSMITTER

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For KWS–1(MOD):			
1	Antenna change-over-relay			
1 set	Equipment spare parts			
1	Exciter and power amplifier		10-15/32 x 15-1/2 x 17-3/8	50
1	Low-pass filter			
1	Plug UG–260/U			
1	Power supply		15-1/2 x 17-3/8 x 30	173
1	Vibration isolator, with adapter plates			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92787

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

DESIGN COG: Commercial

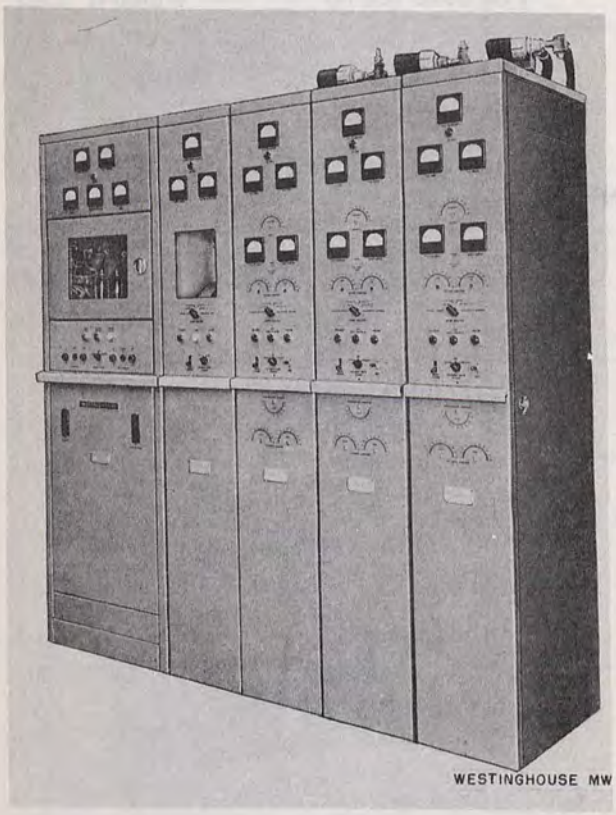
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	*For KWS–1:* NObsr–71045, 26 September 1955 NObsr–71287, 27 April 1956 *For KWS–1(MOD):* NObsr–71289, 27 April 1956	$2,823.00 with spares

RADIO TRANSMITTER AN/FRT-type

10 December 1958
Cognizant Serv: USAF FSN:

MW

	USA	USN	USAF
TYPE CLASS:	--	--	Used by
STOCK NO:	--	--	--



WESTINGHOUSE MW

FUNCTIONAL DESCRIPTION:

Radio Transmitter MW is a commercial (Westinghouse) fixed-station AM (voice, cw, or mcw) tone, OFF-ON, or frequency-shift-keying, teletypewriter equipment. A normal installation consists of one rectifier unit, one modulator unit, plus various radio-frequency units to provide for the requirements of the installation.

All RF units require external excitation of 2 w in the range of 2 to 4.5 megacycles from a 70-ohm-impedance coaxial cable. The equipment provides for the connection of up to six RF and/or modulator units to a single rectifier unit at a time; only four such units can be operated simultaneously from one rectifier unit.

The modulator unit provides effective voice transmission with 20–db adjustable volume compression, bypassed when required, and a peak limiter which prevents overmodulation on either the positive or the negative peaks of the modulation envelope.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 30 in six bands: band 1, from 2 to 3.46; band 2, from 3.46 to 6.0; band 3, from 6.0 to 10.4; band 4, from 10.4 to 18; band 5, from 18 to 24; and band 6, from 24 to 30

Type of Modulation: AM

Type of Signal: Cw, mcw, tone, OFF-ON, and frequency-shift-keying teletype

Power Output:

AM: 2.5 kw, at all frequencies up to 24 mc; slightly less from 24 to 30 mc

Cw: 3 kw

Power Requirements: 24 kw, 210- to 250-v 50/60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Rectifier Unit Style 1474264 Cabinet	----------	24-1/4 x 76 x 24	650
1	RF Unit Style 1474265 Cabinet	----------	12-1/4 x 76 x 24	350
1	Modulator Unit Style 1474266 Cabinet	----------	12-1/4 x 76 x 24	340
1	Power Supply Style 1353091	----------	19 x 14 x 9-1/4	57
1	Crystal Oscillator Style 1353089	----------	8-1/4 x 5 x 6-5/16	3
1	Plate Transformer T–112	----------	31 x 22 x 47-1/2	1,100

AN/FRT-type RADIO TRANSMITTER

REFERENCE DATA AND LITERATURE:

Instruction Book CF–1624

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	70	3,000

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

DESIGN COG: USAF

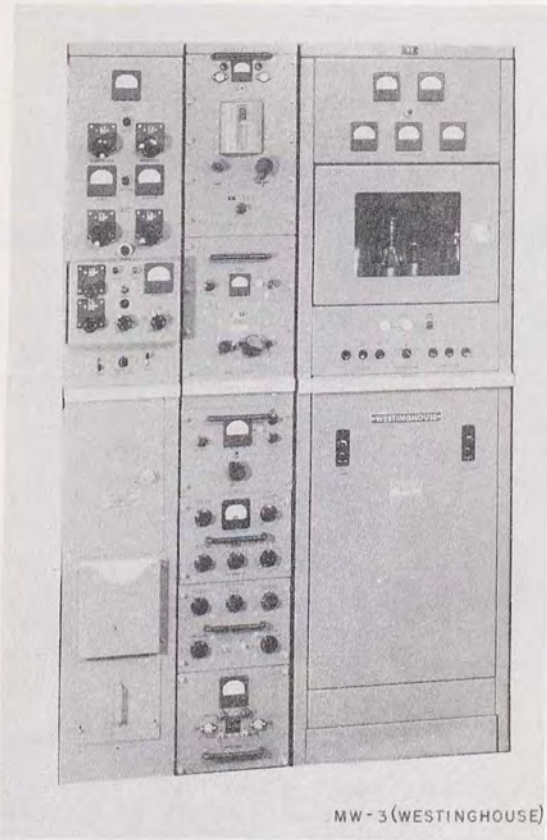
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET **AN/FRT-type**

5 December 1958
Cognizant Serv: FSN:

MW–3

	USA	USN	USAF
TYPE CLASS:	Std	--	Used by
STOCK NO:	--	--	--



MW-3 (WESTINGHOUSE)

FUNCTIONAL DESCRIPTION:

Radio Set MW–3 is a low-distortion, single-sideband transmitter operating over the frequency range of 2 to 30 mc. It will accommodate two audio channels, each in the frequency range of 300 to 6000 cps. This permits each channel to handle audio tones above 3000 cps for telegraph functions.

This equipment also provides for operation as an AM transmitter to operate with appropriate AM receivers.

This equipment is a commercial equipment (Westinghouse Electric Co., model MW–3) procured for military use.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 30
Type of Modulation: AM
Type of Signal: Voice of tone
Power Output: 2.5 kw (peak)
Power Requirements: 208/230/250-v 50/60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	SSB Exciter	(USAF) 472–D–006		
1	Linear Amplifier	(USAF) 307P715G01		
1	Rectifier	FSN) 5820–504–2665		

AN/FRT-type RADIO SET

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE:
SPEC &/or DWG:

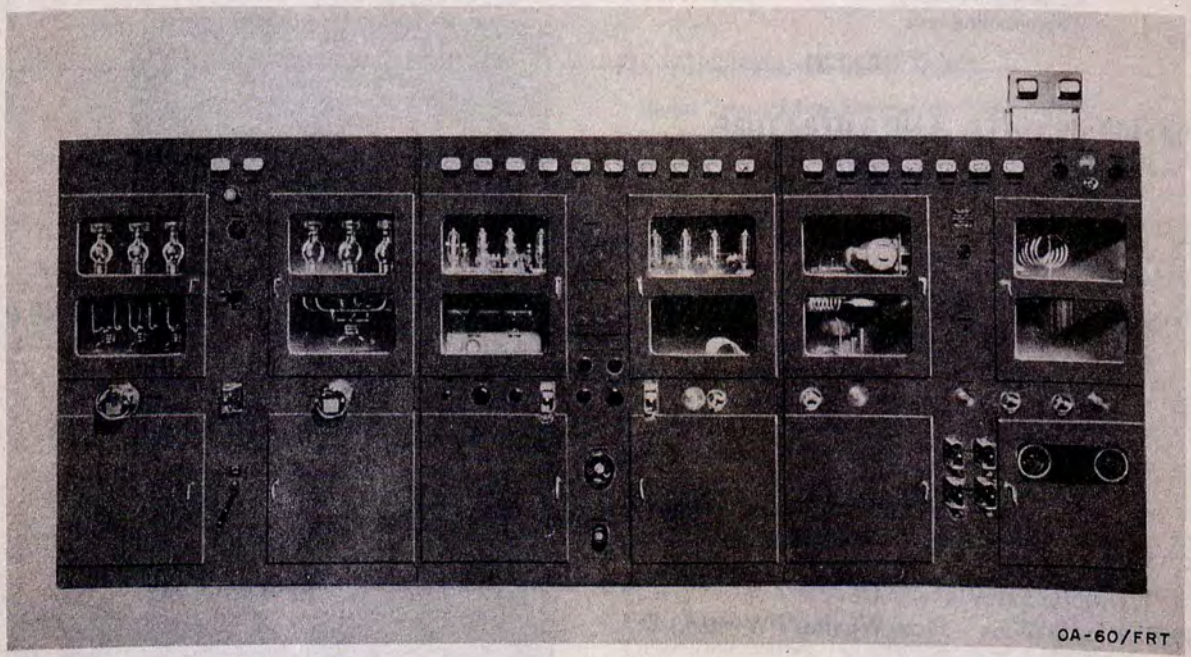
DESIGN COG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electronics Corp.	Baltimore, Md.		

RADIO TRANSMITTER ASSEMBLY AN/FRT-type

1 July 1958
Cognizant Serv: USA FSN: 5820-189-7031 OA-60( )/FRT

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C6893	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter Assembly OA-60( )/FRT is a high-power, AM high-frequency, radio transmitting equipment used for point-to-point long-range communication applications at large fixed stations.

This equipment essentially consists of Press Wireless PW-40 transmitter, and is an assembly of operating units and components, rack- and panel-mounted in floor-type cabinets. It includes a high-voltage rectifier, RF exciter, RF power amplifier sections, and water cooling, crystal-control, and related accessory and auxiliary items.

It can be used with a single-sideband transmitter as a linear amplifier, and provides a single preset operating channel.

It is used for high-speed cw, and for radioteletype communication, and can be controlled locally, or from a remote operating site, by appropriate remote control equipment.

It uses a 600-ohm transmission line operating into a rhombic or other high-power antenna system, has a power output of about 40 kw and operates from a 100-kw source of 230-volt 3-phase ac.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
OA-60A/FRT: 5.3 to 21
OA-60B/FRT: 4 to 21
Type Modulation: AM
Type of Signal: Cw, fsk, or single-sideband
Power Output: 40 kw
Power Requirements: 100 kw, 240-v 3-phase ac

AN/FRT-type RADIO TRANSMITTER ASSEMBLY

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	High-voltage rectifier	----------	82 x 56 x 72	4,860
1	RF exciter	----------	82 x 56 x 72	3,090
1	RF power amplifier	----------	82 x 56 x 72	3,290
1	Water-cooling unit	----------	66 x 66 x 60	1,093

REFERENCE DATA AND LITERATURE:

TM 11-835

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
27	1,665.5	25,588

PROCUREMENT DATA

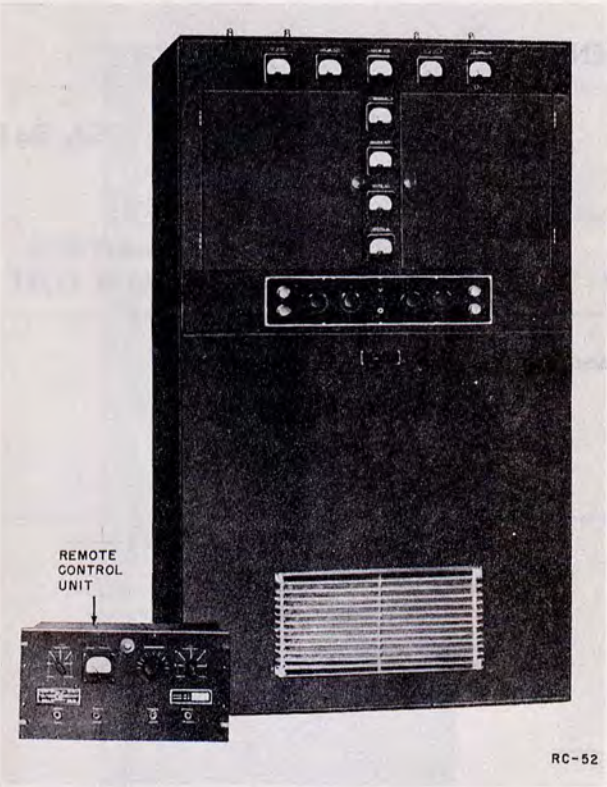
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: Press Wireless PW-40A, B

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Press Wireless	West Newton, Mass.		

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

1 July 1958
Cognizant Serv: USA FSN: 5805-164-7086 RC-52-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C6903-52	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment RC-52-( ) is a medium range, medium- and high-frequency fixed plant radio transmitting station equipment used for point-to-point communication, air-warning and similar applications by means of AM (voice, cw, or mcw) signals.

This equipment consists of a single cabinet-inclosed unit and a remote control equipment plus microphone and accessory items. It covers its frequency range (1.5 to 7 mc) in four bands and operates in two preselected channels.

Provision is made for selection of specific types of emission from the remote operating or control point, and for automatic starting and stopping of the equipment by remote control.

A rhombic or doublet antenna is used, and power is derived from a source of 115-v or 230-v ac.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.5 to 7.0 in 4 bands
Type Modulation: AM
Type of Signal: Voice, cw and mcw
Power Output: 300 w
Power Requirements: 115/230-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Microphone M-48/U	2B1657	8 high x 5 diameter	
1	Radio Transmitter BC-452	2C6392	29 x 24 x 72	
1	Remote Control Unit RM-22	2C7622	17-3/8 x 14-1/8 x 10-1/2	

REFERENCE DATA AND LITERATURE:

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	50	1,750

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 171–208

DESIGN COG: USA, Sig C

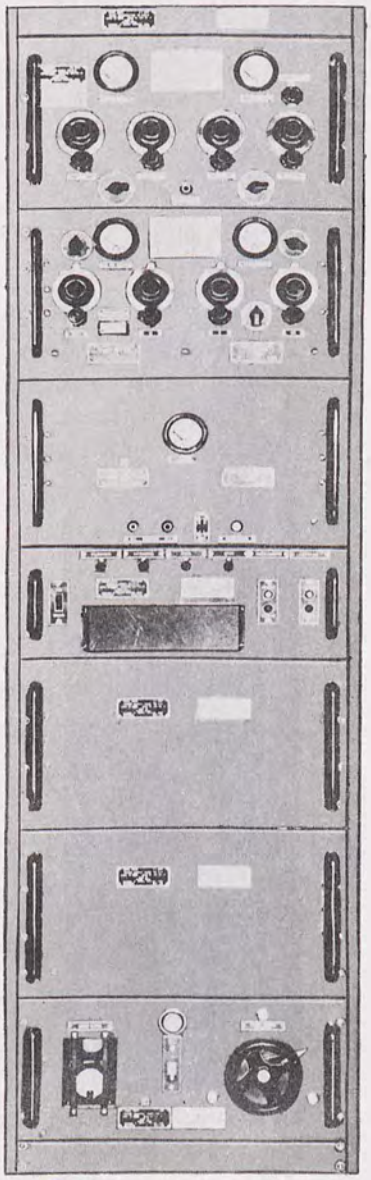
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Aireon Manufacturing Co.	Kansas City, Kans.		

RADIO SET AN/FRT-type

SCR-643

20 November 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Std
STOCK NO:	--	--	--



SCR-643

FUNCTIONAL DESCRIPTION:

Radio Set SCR-643 is a complete fixed station, ground installed, radio transmitting equipment for short-distance point-to-point and ground-to-air communication. It normally is used to provide two transmitting channels for vhf aircraft control net systems.

This equipment consists of two transmitters, each providing one preset, crystal-controlled voice or tone-modulated channel in the vhf range. (Only one of the two transmitters is shown on the accompanying illustration.)

This equipment can be controlled locally or with additional equipment (such as Control Unit RM–27), it can be remotely controlled at distances of up to two miles. The transmitter output matches the 72-ohm coaxial cable normally supplied as part of Antenna Equipment RC–81.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 100 to 156
Type of Modulation: AM
Type of Signal: Voice or mcw
Number of Channels: Simultaneous operation on two preset channels (one preset channel per transmitter)
Power Output: 50 w
Power Requirements: 5.5 kva (with heaters) or 2.5 kva (without heaters), 110-120-v 50/60-cycle 1-phase ac

AN/FRT-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AM–56–B		43-1/2 x 188 x 2-3/4	4,078
	or			
1	Antenna Mast MA–6		43-1/2 x 188 x 25-3/4	4,078
2	Antenna Equipment RC–81–A		28 x 12 x 38	4
1	Monitoring Equipment RC–80–A		20–1/2 x 72 x 3	134
2	Power Unit PE–89–A		28 x 41 x 60	1,140
1	Shelter HO–3		48 x 66 x 60	2,000
2	Transmitter BC–640–Z		21-1/4 x 72-3/8 x 20	

REFERENCE DATA AND LITERATURE:
TO 40SCR–643–2

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
16	500	10,000

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

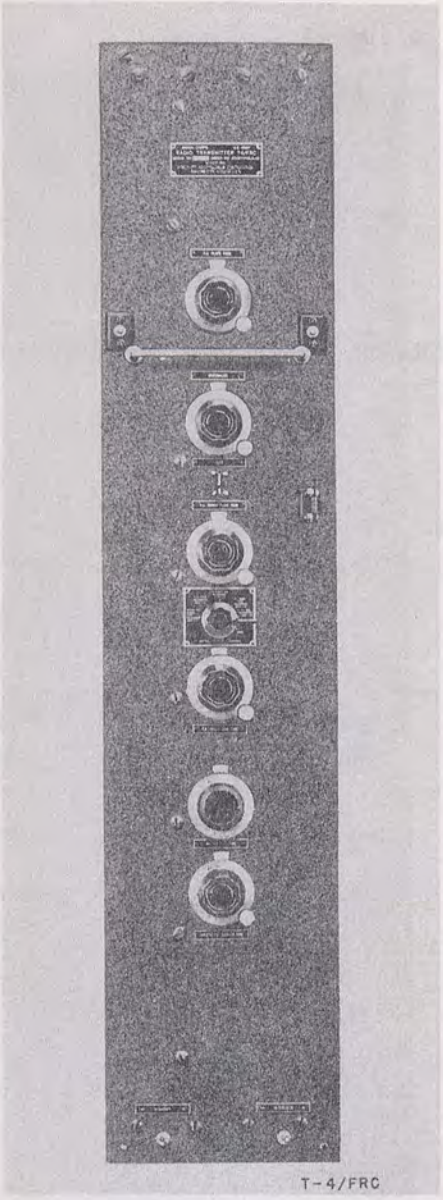
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TRANSMITTER AN/FRT-type

1 July 1958
Cognizant Serv: USA FSN: 5820-194-0966

T-4( )/FRC

	USA	USN	USAF
TYPE CLASS:	Std	--	L/Std
STOCK NO:	2C6900-4	--	--



T-4/FRC

FUNCTIONAL DESCRIPTION:

Radio Transmitter T-4( )/FRC is a crystal-controlled, medium frequency, AM (voice, cw, mcw, and frequency-shift keying) transmitting equipment, for point-to-point or ground-to-air communication in the hf band, at fixed plant applications.

This equipment consists of a radio transmitting inclosed in a steel floor-type cabinet also containing the low-voltage power supply unit. It can be operated from a distant location by means of appropriate remote-control equipment, and is provided with a selector switch for selection of crystal or master oscillator control, or for radioteletype communication.

For cw transmission a power supply unit alone must be added; for voice communication a power supply unit and a modulator are required. It may be used with three other transmitters, a modulator, and suitable power supply equipment to constitute a multichannel station equipment.

It operates into a delta-matched doublet, a rhombic, or an equivalent antenna system, and requires a 400- or 600-ohm transmission line.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 18
Type Modulation: AM (with Modulator Unit MD-1/FRC)
Type Signal: Cw, mcw, frequency shift keying, and voice with additional equipment
Power Output: 400 w
PowerRequirements: 220-v 50/60-cycle ac

AN/FRT-type RADIO TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Radio Transmitter T–4/FRC (Equipment consists of only one major component.)	2C6900–4	21 x 24 x 12	330

REFERENCE DATA AND LITERATURE:

TM 11–820

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–3333

DESIGN COG: USA, Sig C

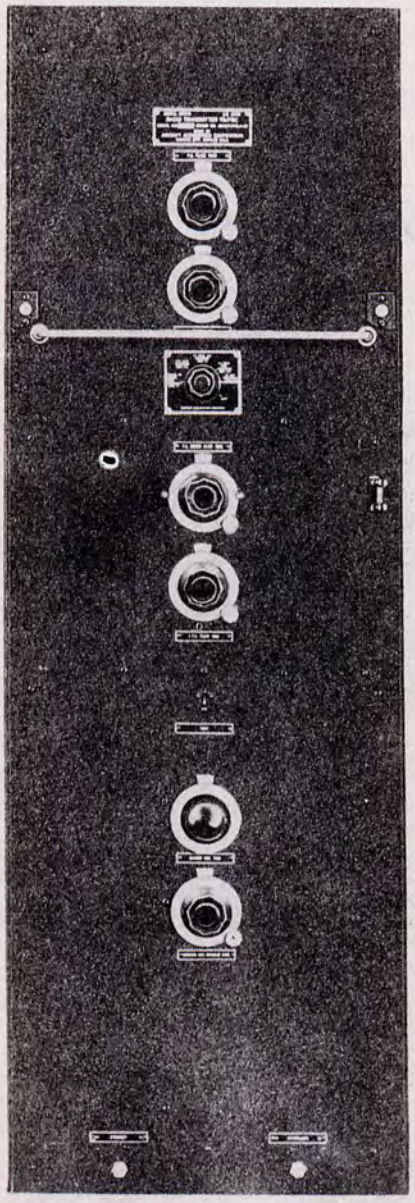
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Espey Manufacturing Co., Inc.	New York, N. Y.	21414–P–50–06	$1,250.00

RADIO TRANSMITTER AN/FRT-type

1 July 1958
Cognizant Serv: USA FSN: 5820-240-0545

T-5( )FRC

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2C6900-5A	--	--



T-5/FRC

FUNCTIONAL DESCRIPTION:

Radio Transmitter T-5( )/FRC is a long-range, high-power, medium- and low-frequency, crystal-controlled transmitting station equipment. It can be used for communication by AM (voice using additional equipment, cw, mcw, or frequency-shift keying) signals at fixed plant installations.

This equipment consists of a single transmitting unit and a tuning house, and it is used principally as the low-frequency RF unit of a multichannel radio system.

It operates into a 600-ohm transmission line that feeds a vertical radiator, or a Bevridge-type antenna.

A separate antenna tuning unit is provided to load the antenna. This unit is installed at the antenna end of the RF transmission line.

A low-voltage power supply unit is contained within the equipment cabinet and the high-voltage is furnished by a separate power supply, not furnished as part of this equipment. It requires 220-volt ac power.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.15 to 0.55
Type Modulation: AM
Type of Signal: Cw, mcw, fsk, and voice with additional equipment
Power Output: 600 w
Power Requirements: 220-v 50/60-cycle ac

AN/FRT-type RADIO TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna tuning unit	2C80101–77	49-1/4 x 38-1/4 x 39-1/8	193
1	Radio Transmitter T–5/FRC	----------	61 x 24 x 18	450

REFERENCE DATA AND LITERATURE:

TM 11–820

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	57	643

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: (USA) 71–3333; 171–225

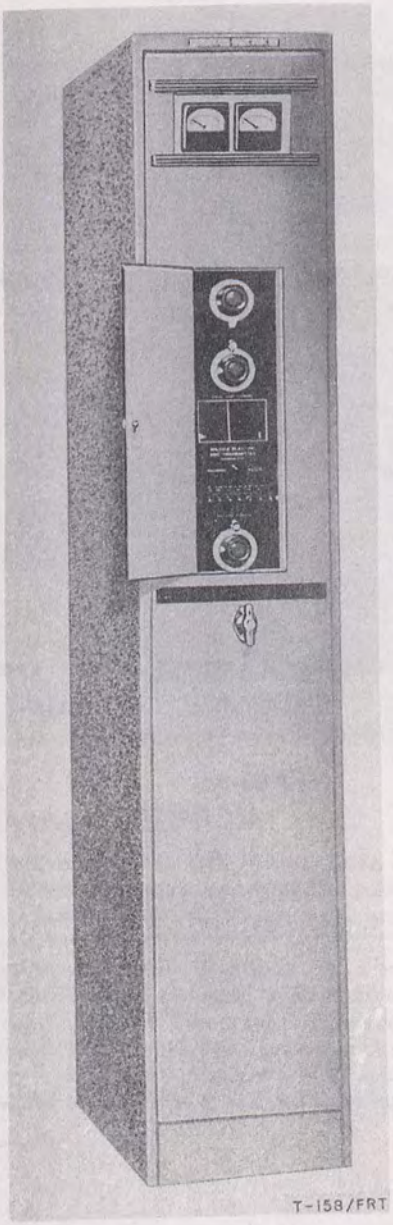
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Espey Manufacturing Co. Inc.	Brooklyn, N Y.	21414–P–50–06	$1,440.00

RADIO TRANSMITTER AN/FRT-type

1 July 1958
Cognizant Serv: USA FSN: 5820-194-0969

T-158( )/FRT

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2C6840	--	--



T-158/FRT

FUNCTIONAL DESCRIPTION:

Radio Transmitter T-158( )/FRT is crystal-controlled, AM (voice, cw, mcw, and frequency-shift keying) medium-power, transmitting equipment. It is used for fixed-plant ground-to-air, and point-to-point long-range communication in the medium- and high-frequency range.

This equipment consists of a radio transmitter, exciter unit, and coil set inclosed in a floor-type cabinet and includes a radioteletype modification kit. The rectifier and modulator are not supplied as part of this equipment.

It is usually operated at a distant site by means of remote control equipment, and can use any 600-ohm antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
T-158, -158A, -158B/FRT: 2 to 18
T-158C/FRT: 2 to 20
T-158D/FRT: 2 to 26
Type Modulation: AM
Type of Signal: Cw, voice, composite transmission, fsk
Power Output: 2.5 kw
Power Requirements: 15 kva, 220-v 50/60-cycle 3-phase ac

AN/FRT-type RADIO TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Coil set	----------	----------	6.7
1	Exciter unit	----------	8-3/4 x 8-1/2 x 17-1/4	27
1	Radio Transmitter T–158/FRT	(FSN) 5820–194–0969 (USA) 2C6840	73-3/4 x 26-1/4 x 12-1/4	365

REFERENCE DATA AND LITERATURE:

TM 11–2671

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	51.6	732

PROCUREMENT DATA

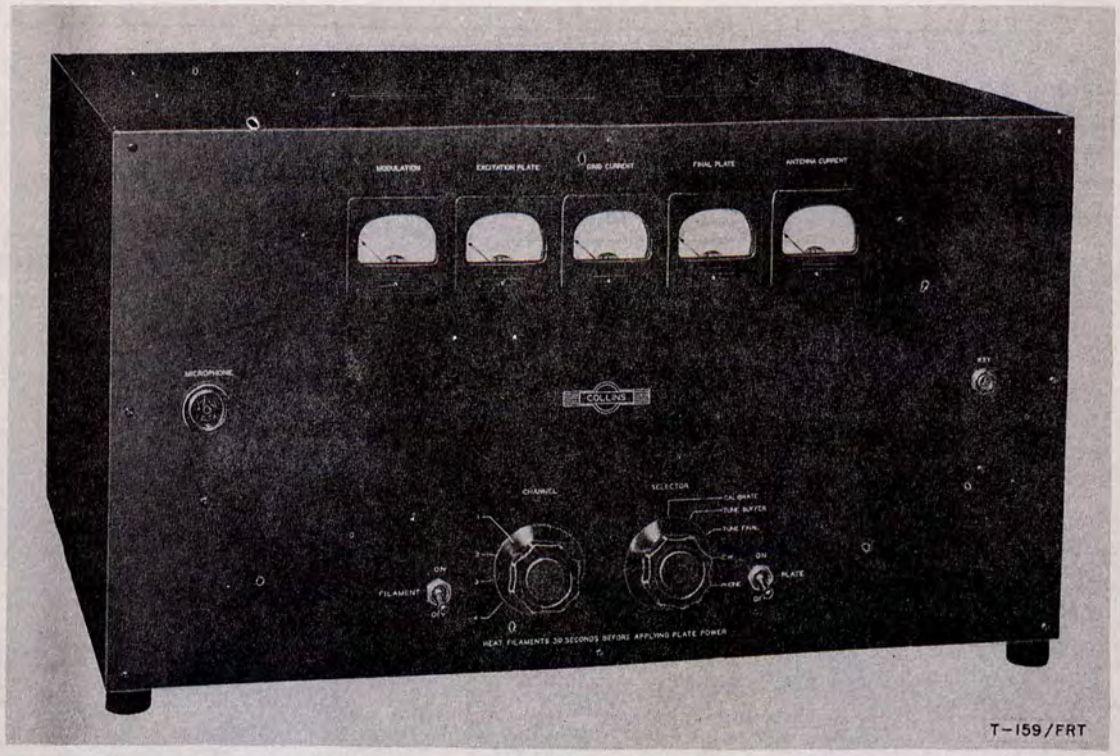
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: (USA) 71–3286

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Wilcox Elec. Co., Inc.	Kansas City, Mo.	2546–P–53–36	$2,219.09

RADIO TRANSMITTER AN/FRT-type

1 July 1958
Cognizant Serv: USA FSN: 5820-126-8834 T-159/FRT

	USA	USN	USAF
TYPE CLASS:	L/Std	--	Std
STOCK NO:	2C6632RA-8	--	1760-222-650-000



FUNCTIONAL DESCRIPTION:

Radio Transmitter T-159/FRT is a low-power, AM (voice and cw) radio transmitting equipment used for point-to-point, homing, and fixed or mobile station use in the medium- and high-frequency bands.

This equipment consists essentially of a commercial (Collins Model 32 RA-7, -7, or -9) table-model transmitter contained in a steel cabinet. The complete installation includes a microphone and a telegraph key. It operates in four preset channels and may be keyed up to speeds of 60 wpm.

It is designed to work into unbalanced antennas or transmission lines, having a resistive impedance of 30 to 1,200 ohms and a reactive impedance of up to 300 ohms.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.5 to 15.0
Type Modulation: AM
Type of Signal: Voice and cw
Power Output:
Voice: 50 w
Cw: 75 w
Power Requirements: 400 w, 115-v 50/60-cycle 1-phase ac

AN/FRT-type RADIO TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter T-159/FRT	(FSN) 5820-126-8834 (USA) 2CC6632RA-8	12 x 22 x 18	120

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-808
TO 16-10-116

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	7.2	220

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: Collins Type 32RA7

DESIGN COG: USA, Sig C

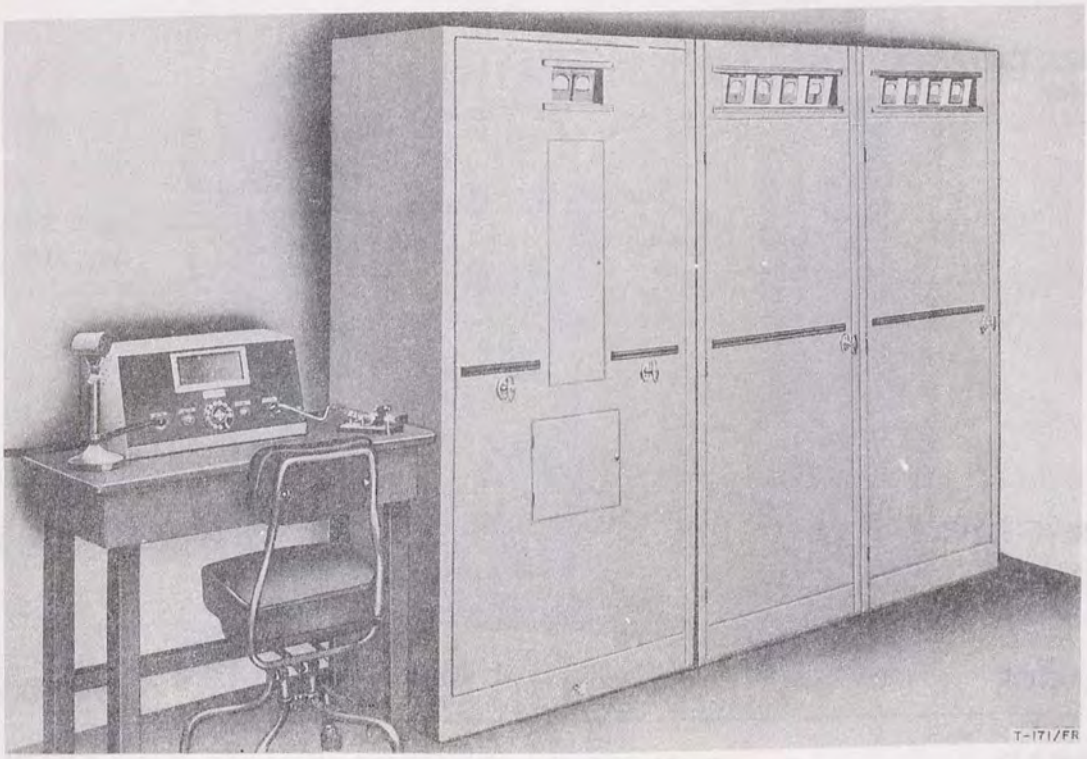
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	2959-P-52-06	

RADIO TRANSMITTER AN/FRT-type

1 July 1958
Cognizant Serv: USA FSN: T-171/FR: 5820-126-8852
T-171A&B/FR: 5820-126-8851

T-171( )/FR

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2C6900-171	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter T-171( )/FR is an IF, long-range, AM (voice and cw) radio transmitting equipment used primarily for handling large traffic loads in fixed station application. It may also be used for homing.

This equipment consists essentially of a large floor type unit transmitter that is used with control and power components to form a complete radio transmitting station.

It may be operated from a distant point by means of remote control equipment and has provision for automatic keying.

The T-171/FR provides voice and cw; the T-171A/FR, cw, remote keying, and voice; and the T-171B/FR, frequency-shift keying and voice.

Power is derived from special power rectifier and supply units.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.125 to 0.525
Type Modulation: AM
Type of Signal: Cw, voice
Power Output: 2,400 w
Power Requirements:
1.0 amp at 4,000-v dc
0.125 amp at 2,000-v dc
0.1 amp at 500-v dc
0.05 amp at 500-v dc
1.0 amp at 12-v dc

AN/FRT-type RADIO TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter T–171( )/FR	----------	72 x 36-1/2 x 24-3/4	720

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–802

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
9	152.6	1,342

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–3398

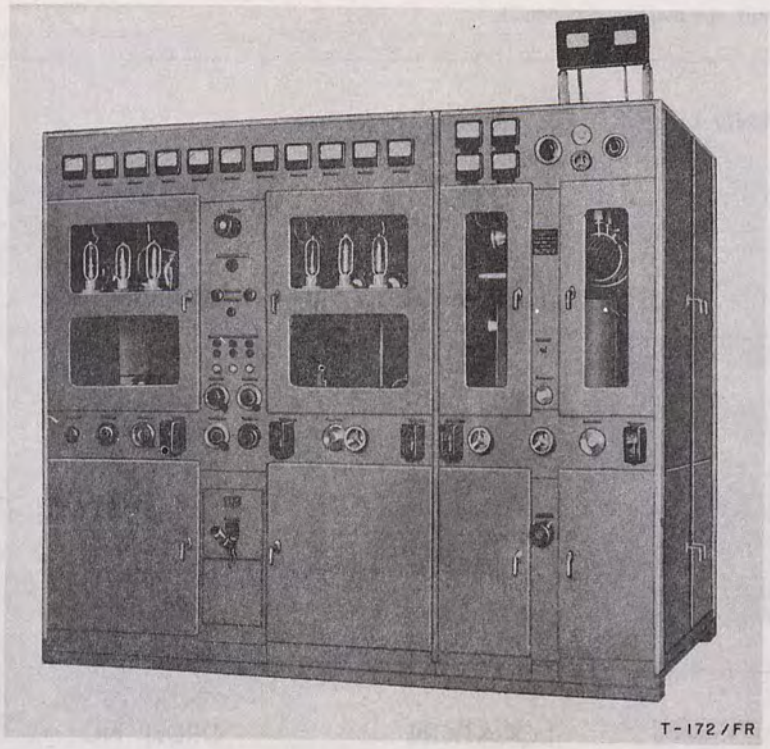
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
J. H. Bunnell & Co.	Brooklyn 1, N. Y.	25448–P–49–06	$5,483.91

RADIO TRANSMITTER AN/FRT-type T-172/FR

1 July 1958
Cognizant Serv: USA FSN: 5815-351-3323

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C6890	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter T-172/FR is a crystal-controlled, long-range, high-frequency, transmitting equipment used for cw and frequency-shift keyed communications in fixed-plant applications.

This equipment consists of a rectifier, exciter, power amplifier, and related units inclosed in a large floor-type steel cabinet as a single unit. It is capable of cw transmission at the rate of about 350 wpm; and by means of supplementary equipment, it can be used in radioteletype communication.

This transmitter generally uses a rhombic antenna system having a 500- to 600-ohm, two-wire transmission line, and can be operated from a distant operating point by means of appropriate remote control components. It is the military version of Press Wireless PW-15A.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 21
Type of Signal: Cw and frequency shift keying
Power Output: 15 kw
Power Requirements: 35 kw, 220-v 60-cycle 3-phase ac

AN/FRT-type RADIO TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter T–172/FR	(FSN) 5815–351–3323 (USA) 2C6890	108 x 84-1/2 x 56-1/4	6,948

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–821

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
12	885.4	11,227

PROCUREMENT DATA

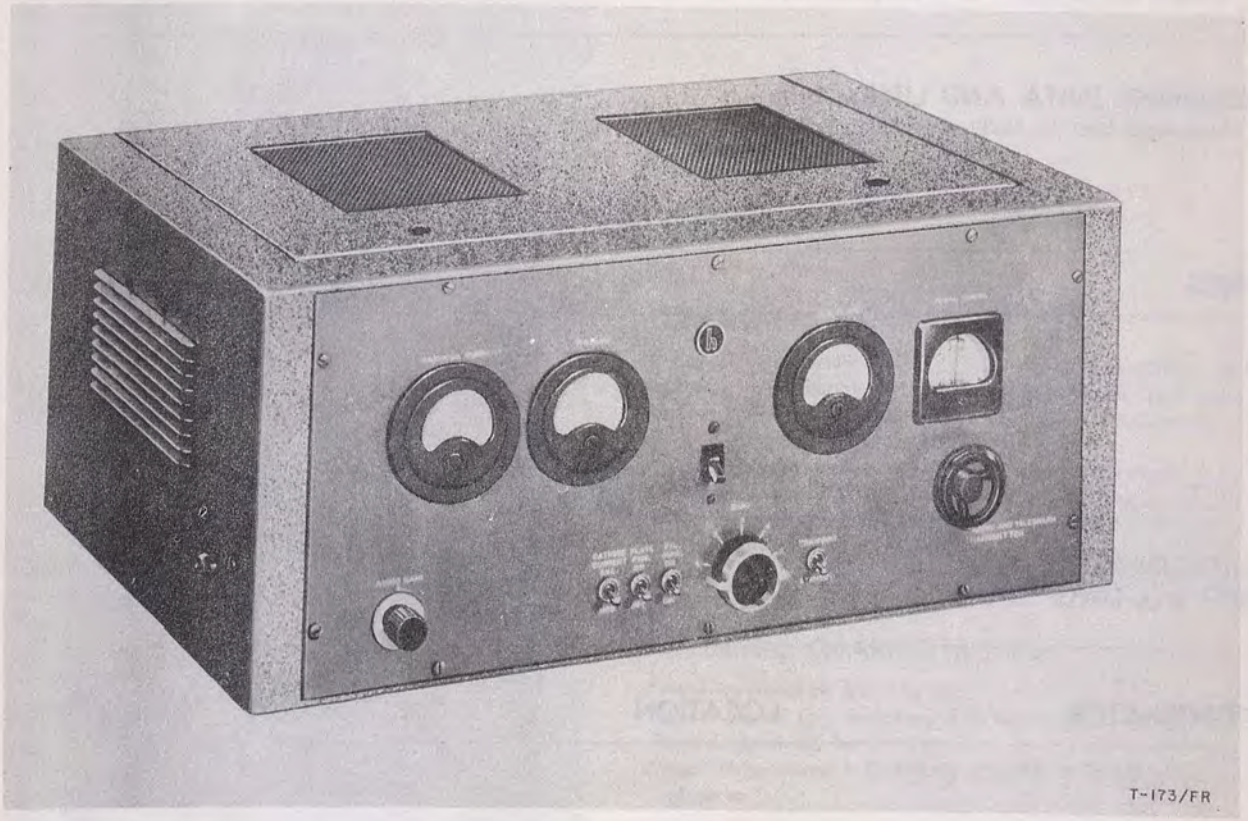
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TRANSMITTER AN/FRT-type T-173/FR

1 July 1958
Cognizant Serv: USA FSN: 5840-228-3116

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C714	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter T-173/FR is a low-power, high-frequency, AM (voice and cw), transmitting equipment used in point-to-point communication in fixed-plant applications.

This equipment consists essentially of a commercial (Hallicrafter HT-9) table-model transmitter, a microphone, telegraph hand key, and antenna components. It includes a set of crystals by means of which five channels can be preset; there is an individual crystal for each channel. Band switching is accomplished by means of interchangeable plug-in coils and the band switch on the front panel.

This transmitter can be operated with conventional antenna systems.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.7 to 30.0
Type Modulation: AM
Type of Signal: Voice, cw
Power Output:
Voice: 75 w
Cw: 100 w
Power Requirements: 500 va, 105-125-v 50/60-cycle ac

AN/FRT-type RADIO TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter T–173/FR	(FSN) 5840–228–3116 (USA) 2C714	29-1/8 x 12-1/2 x 20-1/2	120

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

Instruction Book for Hallicrafter Radio Transmitter, Type HT–9.

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.17	125

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

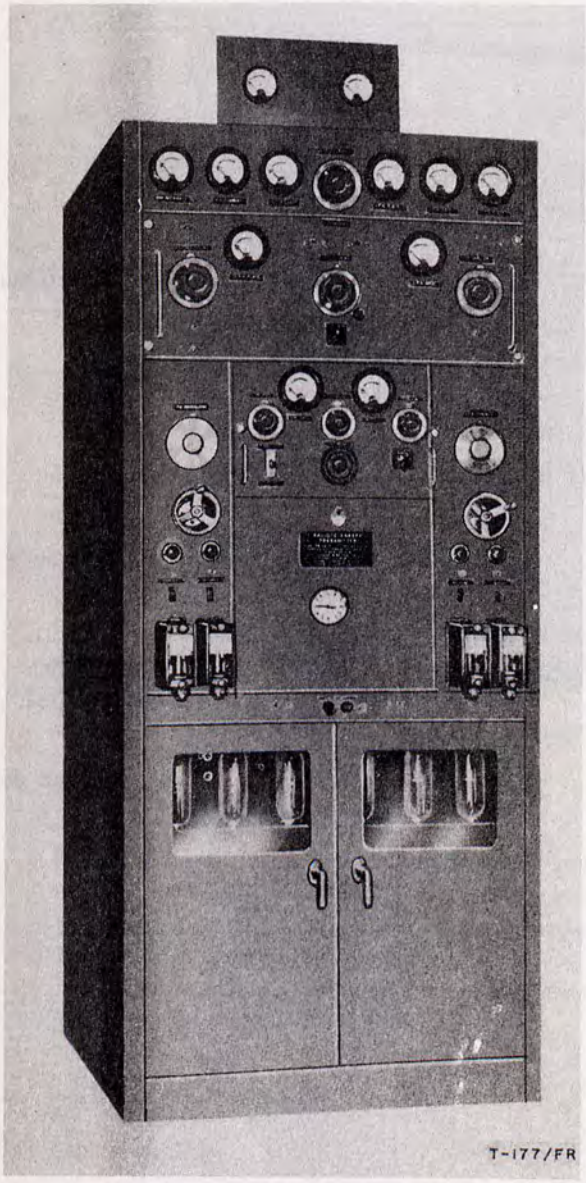
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TRANSMITTER AN/FRT-type

1 July 1958
Cognizant Serv: USA FSN: 5820-126-8848

T-177/FR

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C6892	--	--



T-177/FR

FUNCTIONAL DESCRIPTION:

Radio Transmitter T-177/FR is a medium-power, hf, long-range radio transmitting station equipment. It is used for cw or frequency-shift radioteletype communication at fixed plant installations.

This equipment consists essentially of a commercial (Press Wireless Model PW918A) radio transmitter and is crystal or master-oscillator controlled. It has provision for electronic keying and for connection of Carrier Terminal OS-5/FC. Internal frequency-shift and remote control provisions are included.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 23
Type of Signal: Cw, frequency shift keyed radioteletype
Power Output: 2.5 kw
Power Requirements: 11.8 kva, 220-230-v 50/60 cycle 3-phase ac

AN/FRT-type RADIO TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter T–177/FR	----------	77 x 33 x 36	1,717

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–834

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
8	196.8	3,326

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–10207

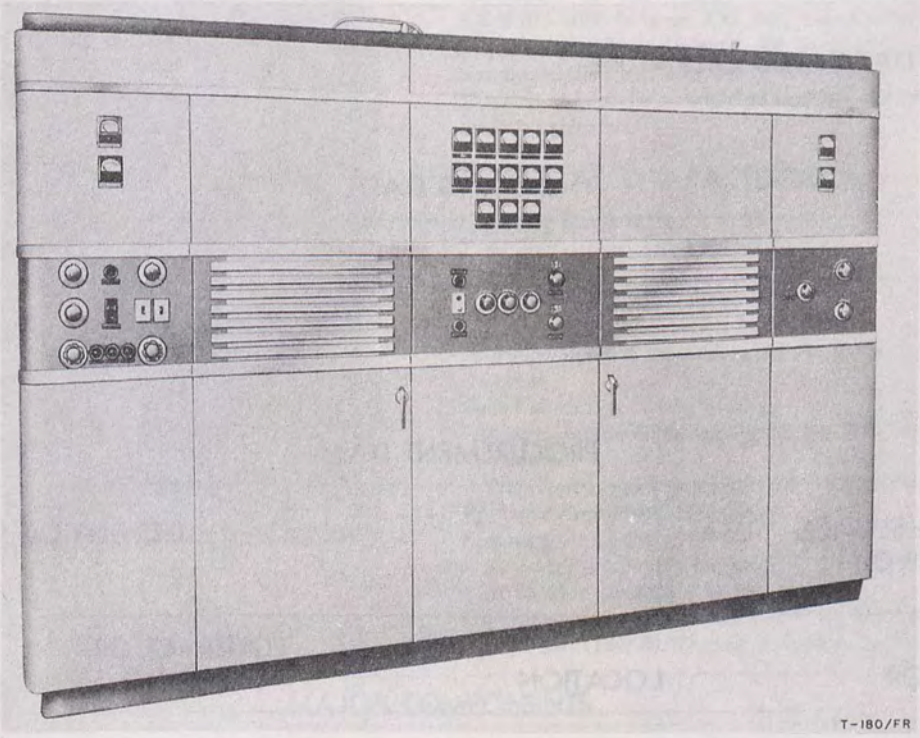
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Wickes Engineering & Construction Co.	Camden, N. J.	21479–P–50–7	$14,432.95

RADIO TRANSMITTER AN/FRT-type

1 July 1958
Cognizant Serv: USA FSN: T-180/FR

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter T–180/FR is a long-range high-power, AM (voice) transmitting equipment used for communication in the mf and hf bands in fixed-station applications for point-to-point, ground-to-air, and broadcast purposes.

This equipment is a crystal-controlled transmitter providing high-level, class B modulation and class C final.

It consists essentially of an assemblage of control and operating components inclosed in floor-type steel cabinets.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 22
Type Modulation: AM
Type of Signal: Voice
Power Output: 7.5 kw
Power Requirements: 220-v 50/60-cycle 3-phase ac

AN/FRT-type RADIO TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter T–180/FR	----------	122 x 90 x 49	
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

(RCA) Instruction Book

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	338.25	

PROCUREMENT DATA

PROCURING SERVICE: USA DESIGN COG: USA, Sig C
SPEC &/or DWG:

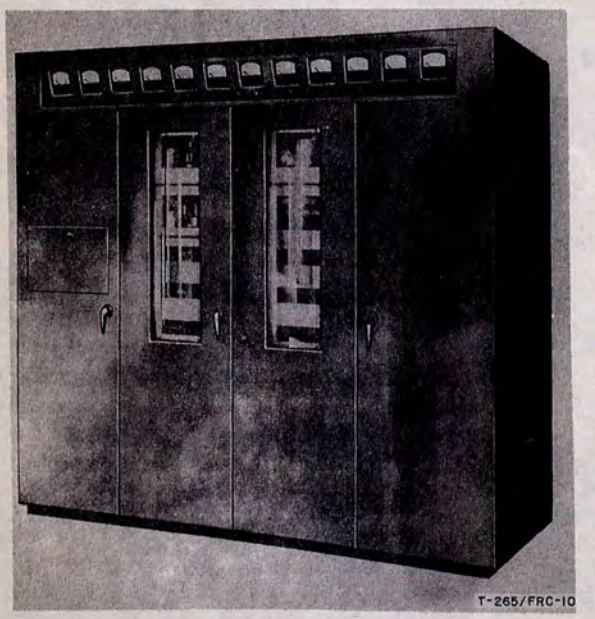
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TRANSMITTER AN/FRT-type

1 December 1958
Cognizant Serv: USA FSN: 5820-249-6609

T-265/FRC-10

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter T-265/FRC-10 is the transmitting component of the complete single-sideband Radio Set AN/FRC-10B. It is an AM, ssb, twin-channel, suppressed-carrier transmitter designed for long-range point-to-point communication, and operates in the frequency range of 4 to 23 mc. It also can be arranged to transmit conventional double sideband signals.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 23
Type Modulation: Amplitude, ssb or dsb
Power Output:
Single Sideband Envelope: 4 kw
Double Sideband Carrier: 1 kw
Spurious Signal Suppression: 43 db below envelope power output
Tone Volume:
Speech Input Terminals: −13 to +20 dbm (+3 dbm normal)
Test-Tone Input Terminals: 0 to +20 dbm (0 dbm normal)
Vf Input Impedance: 600 ohms
Frequency Accuracy:
At 4 Mc: ±0.0011% or less
At 23 Mc: ±0.0026% or less
Power Requirements: 10 kw, 230-v 50/60-cycle 3-phase ac; and 1 kw, 115-v 50/60-cycle 1-phase ac auxiliary power

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Ammeter, Weston Model 425	----------	2 x 2-3/4 x 3-1/4	
1	Distortion measuring equipment	----------	17 x 22 x 84	
1	Generator KS-5472-01	----------	3-15/16 x 3-15/16 x 8	
1	Multimeter TS-352/U	----------	6-1/4 x 8-3/4 x 11-1/4	
1	Radio Transmitter T-265/FRC-10	----------	42-1/2 x 84 x 84	5,800
1	Test Set 81AW	----------	1-3/4 x 3-1/8 x 4-5/8	
1	Tube Tester I-177-B	----------	5-1/4 x 8-1/2 x 15-1/2	
1	Variac, General Radio Co. V5HMT	----------	4-15/16 x 5 x 6-7/8	
1	Voltage Regulator, Superior Electric Co. EM621OY or S344	----------	18-5/8 x 23-1/4 x 39-3/8	
1	Voltmeter, Weston Model 433	----------	3-1/2 x 5-1/16 x 6-1/32	

AN/FRT-type RADIO TRANSMITTER

REFERENCE DATA AND LITERATURE:

TM 11-814, NAVSHIPS 92152

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
31	595.3	10,009

PROCUREMENT DATA

PROCURING SERVICE: USA **DESIGN COG:** USA, Sig C

SPEC &/or DWG:

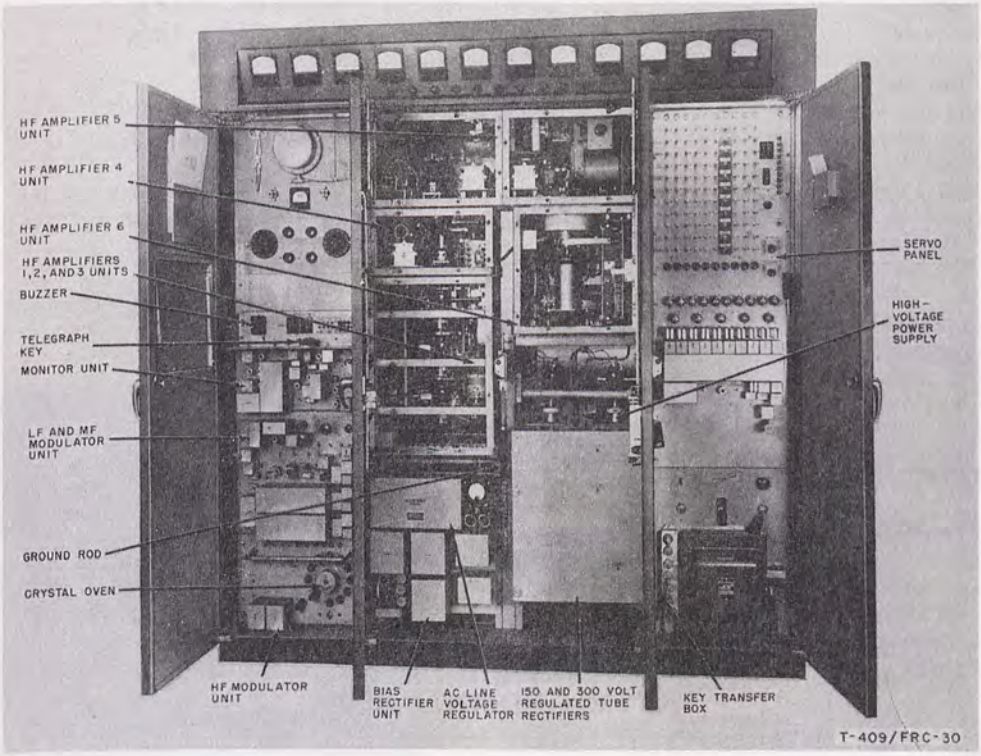
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	TASSA Order 1-0279 Philadelphia, 49 Contract MIPR-R-51-880-19390, 19816	

RADIO TRANSMITTER AN/FRT-type

1 December 1958
Cognizant Serv: USA FSN: 5820-545-7272

T-409/FRC-30

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter T-409/FRC-30 is the transmitting component of the complete single-sideband Radio Set AN/FRC-30. It is an AM., ssb, twin-channel, suppressed-carrier transmitter designed for long-range point-to-point communication, and operates in the frequency range of 4.5 to 28 mc. It also can be arranged to transmit conventional double sideband signals.

This equipment is an improved version of Radio Transmitter T-265/FRC-10, and is similar in appearance to that equipment. The major operational difference between the two transmitters is the frequency range covered.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4.5 to 28.0
Type Modulation: Amplitude, ssb or dsb
Power Output:
Single Sideband Envelope: 4 kw
Double Sideband Carrier: 1 kw
Spurious Signal Suppression: 43 db below envelope power output
Tone Volume:
Speech Input Terminals: −13 to +20 dbm (+3 dbm normal)
Test-Tone Input Terminals: 0 to +20 dbm (0 dbm normal)
Vf Input Impedance: 600 ohms
Frequency Accuracy:
At 4 Mc: ±0.0011% or less
At 23 Mc: ±0.0026% or less
Power Requirements: 10kw, 230-v 50/60-cycle 3-phase ac; and 1 kw, 115-v 50–60-cycle 1-phase ac auxiliary power

AN/FRT-type RADIO TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ammeter		2 x 2-3/4 x 3-1/4	
1	Distortion measuring equipment		17 x 22 x 84	
1	Generator		3-15/16 x 3-15/16 x 8	
1	Multimeter		6-1/4 x 8-3/4 x 11-1/4	
1	Radio Transmitter T–409/FRC–30		42-1/2 x 84 x 84	5,800
1	Test set		1-3/4 x 3-1/8 x 4-5/8	
1	Tube tester		5-1/4 x 8-1/2 x 15-1/2	
1	Variac		4-15/16 x 5 x 6-7/8	
1	Voltage Regulator		18-5/8 x 23-1/4 x 39-3/8	
1	Voltmeter		3-1/2 x 5-1/16 x 6-1/32	

REFERENCE DATA AND LITERATURE:

TM 11–814, Ch. 1 TM 11–814; NAVSHIPS 92152

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
31	595.3	10,009

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: J41611AA–90

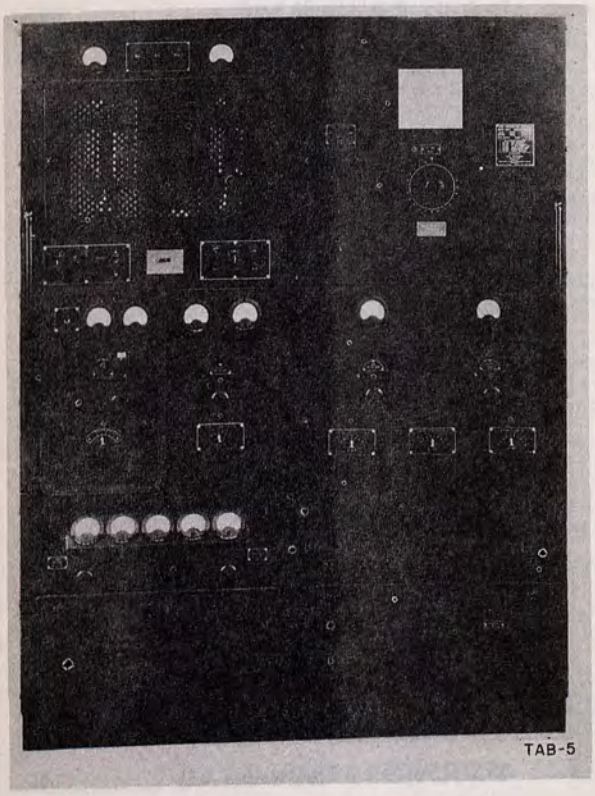
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.		

TRANSMITTING EQUIPMENT, 2 KW AN/FRT-type

1 December 1958
Cognizant Serv: USN FSN: TAB, TAB–3, TAB–4, TAB–5

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	TAB: F16–Q–305955–200	--
		TAB–3: F16–Q–306015–200	
		TAB–4: F16–Q–306035–200	
		TAB–5: F16–Q–306055–200	



TAB-5

FUNCTIONAL DESCRIPTION:

2 KW Radio Transmitting Equipments TAB, TAB–3 TAB–4, and TAB–5 are medium-power radiotelegraph transmitters designed for shore station installation to provide cw and icw or mcw transmission at low and medium frequencies. These transmitters may be operated locally or remotely controlled by means of a single pair control line. The equipment is started by pressing the telegraph key, and it will automatically shut down 30 seconds after keying has stopped. An antenna selector switch makes possible a quick change from one transmitting antenna to another when two antennas are used to cover the frequency range.

The TAB series transmitters are all similar. The TAB–2 differs somewhat in appearance from the others and is capable of being operated from a wider range of power sources. The TAB–6 and TAB–7 differ from the others in the series in that they include dry-disk rectifiers in the equipment, and they do not require the motor-generator power supplies that are used with the other sets.

TECHNICAL CHARACTERISTICS:

Frequency Range: 100 to 555 kc
Type of Signal: Cw and icw or mcw
Power Output:
Cw: 2 kw (maximum)
Icw or Mcw: 1 kw (maximum)
Frequency Control: Master oscillator
Keying:
Relay: 100 wpm on cw; 50 wpm on icw or mcw
Vacuum Tube: 500 wpm on cw
Antenna Requirements: T-type, 1 each for 100- to 300-kc range and for 300- to 555-kc range
Power Requirements:
TAB: 6.3 kw, 220-v 60-cycle 2- or 3-phase ac
TAB–3: 6.3 kw, 220-v 60-cycle 3-phase ac
TAB–4: 120-v dc; or 220-v 60-cycle 3-phase ac; or 440-v 25-cycle 3-phase ac
TAB–5: 7.2 kw 220-v 60-cycle 3-phase ac; or 7.2 kw, 220/440-v 25-cycle 3-phase ac

AN/FRT-type TRANSMITTING EQUIPMENT, 2 KW

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For TAB:			
1	Antenna Selector Switch CG–4319		16-1/2 x 8 x 3	13
1	Generator Transfer Switch CG–4316		28-1/2 x 30 x 15	125
1	Generator Transfer Switch CG–4317		28-1/2 x 30 x 15	125
1	Land Line Control Unit 23216		20-11/16 x 20-7/16 x 10-3/8	81
	or			
1	Land Line Control Unit 23217		20-11/16 x 20-7/16 x 10-3/8	81
1	Modification Kit MX–1271/FRT			
1	Motor-Generator Set CG–4313		80-11/16 x 25-3/4 x 18-1/2	1,580
1	Radio Frequency Tuner TN–199/FRT			
1	Radio Transmitter CG–4320		76-1/16 x 48-5/32 x 33-3/16	895
	For TAB–3:			
1	Antenna Selector Switch CAY–3439		16-1/2 x 8 x 3	13
1	Generator Transfer Switch CAY–3452–A		28-1/2 x 30 x 15	125
1	Land Line Control Unit 23216		20-11/16 x 20-7/16 x 10-3/8	81
	or			
1	Land Line Control Unit 23217		20-11/16 x 20-7/16 x 10-3/8	81
1	Modification Kit MX–1271/FRT			
1	Motor-Generator Set CG–3414		80-11/16 x 25-3/4 x 18-1/2	1,580
1	Radio Frequency Tuner TN–199/FRT			
1	Radio Transmitter CAY–3438		76 x 24 x 30	895
	For TAB–4:			
1	Antenna Selector Switch CG–4227		16-1/2 x 8 x 3	13
1	Automatic Starter CG–4228			
	or			
1	Automatic Starter CG–4228–A			
	or			
1	Automatic Starter CG–4228–B			
1	Land Line Control Unit 23216		20-11/16 x 20-7/16 x 10-3/8	81
	or			
1	Land Line Control Unit 23217		20-11/16 x 20-7/16 x 10-3/8	81
1	Modification Kit MX–1271			
1	Motor-Generator Set CG–4063			2,216

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Motor-Generator CG–4066			2,216
	or			
1	Motor-Generator Set CG–4068			2,216
1	Radio Frequency Tuner TN–199/FRT			
1	Radio Transmitter CG–4225			1,105
	or			
1	Radio Transmitter CG–4225–A			1,098
	or			
1	Radio Transmitter CG–4225–B			1,039
	For TAB–5:			
1	AC Power Transfer Panel 24084		39-13/16 x 20-1/4 x 11	77
	or			
1	AC Power Transfer Panel 24084–A		39-13/16 x 20-1/4 x 11	108
1	Land Line Control Unit 23216		20-11/16 x 20-7/16 x 10-3/8	81
	or			
1	Land Line Control Unit 23217		20-11/16 x 20-7/16 x 10-3/8	81
1	Modification Kit MX–1271/FRT			
2	Motor-Generator Set 21503		25-5/16 x 72-1/2 x 22	2,450
	or			
2	Motor-Generator Set 21507		25-5/16 x 72-1/2 x 22	2,450
1	Radio Frequency Tuner TN–199/FRT			
1	Radio Transmitter 52164		76 x 57-1/2 x 37	1,065
	or			
1	Radio Transmitter 52165		76 x 57-1/2 x 37	1,065

REFERENCE DATA AND LITERATURE:

TAB: GEI–1776
TAB–3: NAVSHIPS 95285
TAB–4: GEI–6092
TAB–5: NAVSHIPS 95287

AN/FRT-type TRANSMITTING EQUIPMENT, 2 KW

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
13	220.54	

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For TAB:			
General Electric Co.	Schenectady, N. Y.	---	$17,828.00
For TAB-3:			
Westinghouse Electric & Manufacturing Co.	Baltimore, Md.	NO-12981	
For TAB-4:			
General Electric Co.	Schenectady, N. Y.	NOs-19885	
For TAB-5:			
Westinghouse Electric & Manufacturing Co.	Baltimore, Md.	NOs-74868	

TRANSMITTING EQUIPMENT, 2 KW AN/FRT-type

1 December 1958
Cognizant Serv: USN FSN: TAB–2

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

2 KW Transmitting Equipment TAB–2 is a medium-power, low-frequency transmitter intended for use primarily at coastal radio stations, radio compass stations, or aircraft stations. It may be controlled either locally or from some remote point over a single wire telegraph line.

It will radiate from 1 to 2 kw, depending upon the frequency and antenna characteristics. Continuous wave or interrupted continuous wave is available, and the output can be reduced from full power down to one-quarter power. This transmitter may be keyed at any speed up to 100 words per minute in International Morse Code.

This equipment is functionally similar to other models in the TAB–series.

TECHNICAL CHARACTERISTICS:

Frequency Range: 100 to 555 kc
Power Output: 2 kw (maximum)
Type of Signal: Cw, icw
Frequency Accuracy: Within 350 cps
Interrupter Frequency: 800 cps
Antenna Requirements:
100- to 300-kc Range: 1,500 to 2,500 $\mu\mu$f, 2 to 8 ohms
300- to 555-kc Range: 1,000 to 1,500 $\mu\mu$f, 2 to 8 ohms
(Separate antennas must be provided for each of these two ranges.)
Power Requirements: 115–120/220–230-v dc, 220-v 60-cycle 3-phase ac, or 440-v 25-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna transfer switch	----------	3 x 7-5/8 x 16-1/2	
1	Generator Transfer Switch 3452	----------	12-11/16 x 28-13/16 x 30-5/8	125
2	Motor-generator set (115–120–v dc)	----------	20-1/4 x 30-5/8 x 73-1/2	2,320
	or			
2	Motor-generator set (220–230–v dc)	----------	20-1/4 x 30-5/8 x 73-1/2	2,220
	or			
2	Motor-generator set (220–v 60-cycle 3-phase)	----------	20-1/4 x 29-7/8 x 80-11/16	1,580
	or			
2	Motor-generator set (440–v 25-cycle 3-phase ac)	----------	20-1/4 x 29-7/8 x 90-5/16	2,040
1	Motor Starter 3443 (120–v dc)	----------	18 x 22 x 30-7/8	170
	or			
1	Motor Starter 3446 (230–v dc)	----------	18 x 22 x 30-7/8	170
	or			
1	Motor Starter 3448 (220–v 60-cycle 3-phase)	----------	----------	60

AN/FRT-type TRANSMITTING EQUIPMENT, 2 KW

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Motor Starter 3451 (440-v 25-cycle 3-phase)	----------	----------	60
1	Radio Transmitter 3438	----------	33-3/16 x 49-5/32 x 76-1/16	895

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Manufacturing Co.	Chicopee Falls, Mass.	NOs-8777 NOs-9900	$15,450.00

TRANSMITTING EQUIPMENT, 2 KW AN/FRT-type

1 December 1958
Cognizant Serv: USN FSN: TAB–6, TAB–7

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	TAB–6, F16–Q–306076–200	--
	TAB–7, F16–Q–306077–200	

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

2 KW Radio Transmitting Equipments TAB–6 and TAB–7 are functionally and operationally identical with Transmitting Equipment TAB, except that these equipments use disk-type dry rectifiers as their power supply, instead of the motor-generator units supplied with the other sets in the TAB series.

The only difference in the TAB–6 and the TAB–7 is that two identical rectifiers are supplied with the TAB–6, and only one is provided with the TAB–7. Since the TAB–6 has two rectifier units, it also is provided with an ac power transfer panel for quick change-over of power supplies.

TECHNICAL CHARACTERISTICS:

Frequency Range: 100 to 555 kc
Type of Signal: Cw and icw or mcw
Power Output:
Cw: 2 kw (maximum)
Icw or Mcw: 1 kw (maximum)
Frequency Control: Master oscillator
Keying:
Relay: 100 wpm on cw; 50 wpm on icw or mcw
Vacuum tube, 500 wpm on cw
Antenna Requirements: T-type, 1 each for 100- to 300-kc range and for 300- to 555-kc range
Power Requirements: 7.5 kw, 220-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For TAB–6:			
1	AC Power Transfer Panel 24084–A		30-13/16 x 20-1/4 x 11	108
1	Land Line Control Unit 23216		20-11/16 x 20-7/16 x 10-3/8	81
	or			
1	Land Line Control Unit 23217		20-11/16 x 20-7/16 x 10-3/8	81
1	Modification Kit MX–127/FRT			
1	Radio Frequency Tuner TN–199/FRT			
1	Radio Transmitter 52273		76 x 57-1/2 x 37	1,133
2	Rectifier Power Unit 20167		72 x 34 x 24	1,170
	For TAB–7:			
1	Land Line Control Unit 23216		20-11/16 x 20-7/16 x 10-3/8	81
	or			
1	Land Line Control Unit 23217		20-11/16 x 20-7/16 x 10-3/8	81
1	Modification Kit MX–1271/FRT			

AN/FRT-type TRANSMITTING EQUIPMENT, 2 KW

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSION (Inches)	WEIGHT (Lbs)
1	Radio Frequency Tuner TN-199/FRT			
1	Radio Transmitter 52237		76 x 57-1/2 x 37	1,133
1	Rectifier Power Unit 20167		72 x 34 x 24	1,170

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,379

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For TAB-6:		
10	305.71	5,346
For TAB-7:		
8	221.25	3,677

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Manufacturing Co.	Baltimore, Md.	NXss-5647 NXss-16821	

1 December 1958
Cognizant Serv: USN FSN:

TBA–8, TBA–10, TBA–11

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	TBA–8: F16–Q–309575–200 TBA–10: F16–Q–309615–200 TBA–11: F16–Q–309635–200	--

(See Illustration TBA–6 Under AN/SRT-type: TBA–3, TBA–5, TBA–6, TBA–9 p. 1291)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TBA–8, TBA–10, and TBA–11 are high frequency radio telegraph transmitters designed for use at shore installations. These sets are similar in appearance and performance, but differ in the power supply equipment furnished.

These equipments are similar to the shipboard versions, the TBA–3, TBA–5, TBA–6, and TBA–9. (*See* Radio Transmitting Equipment TBA–3, TBA–5, TBA–6, and TBA–9, classified as AN/SRT-type.)

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4.0 to 26.0
Frequency Control: Master oscillator
Nominal Power Output: 1 kw
Type of Signal: Cw
Keying Speed: 500 wpm (maximum), vacuum tube keying
Power Requirements:
TBA–8, TBA–11: 4.6 kw (115 amp starting), 220-v 60-cycle 3-phase ac; 4.6 kw (57.5-amp starting), 440-v 60-cycle 3-phase ac
TBA–10: 4.6 kw (30 kw starting), 220-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For TBA–8:			
1	Land Line Control Unit 23269	----------	42-1/8 x 24 x 15-3/4	165
2	Magnetic Controller 21897	----------	23-7/8 x 21-7/16 x 9-1/16	70
2	Motor-Generator Set 21899	----------	19-15/16 x 71-5/16 x 16-5/8	815
1	Power Transfer Switch 24092	----------	12-1/4 x 16 x 9-1/4	26
1	Radio Transmitter 52280	----------	72 x 49 x 31-1/8	975
	For TBA–10:			
1	Land Line Control Unit 23269	----------	42-1/8 x 24 x 15-3/4	165
2	Magnetic Controller 21373	----------	22-1/8 x 20-1/4 x 10-1/4	65
2	Motor-Generator Set 21375–A	----------	17-9/16 x 70-7/16 x 16	815
1	Power Transfer Switch 24092	----------	12-1/4 x 16 x 9-1/4	26
1	Radio Transmitter 52282	----------	72 x 49 x 31-1/8	953
	For TBA–11:			
1	Land Line Control Unit 23269	----------	42-1/8 x 24 x 15-3/4	165
2	Magnetic Controller 21897	----------	23-7/8 x 21-7/16 x 9-1/16	70
2	Motor-Generator Set 21899	----------	19-15/16 x 71-5/16 x 16-5/8	815
1	Power Transfer Switch 24092	----------	12-1/4 x 16 x 9-1/4	26
1	Radio Transmitter 52280–A	----------	72 x 49-1/4 x 34-1/8	1,128
1	Transmission Line Coupling Unit 50118	----------	9-1/4 x 49 x 31-1/8	116

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

TBA–8: NAVSHIPS 900,290
TBA–10: NAVSHIPS 900,406
TBA–11: NAVSHIPS 900,454

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
10	282.6	4,139

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: USN, BuShips
SPEC &/or DWG: TBA–8: EN28/1725–42/SHIPS; S–500–4372; RE13A420G
TBA–10: RE13A420F; RE13A420G
TBA–11: EN28/1755–43 SHIPS

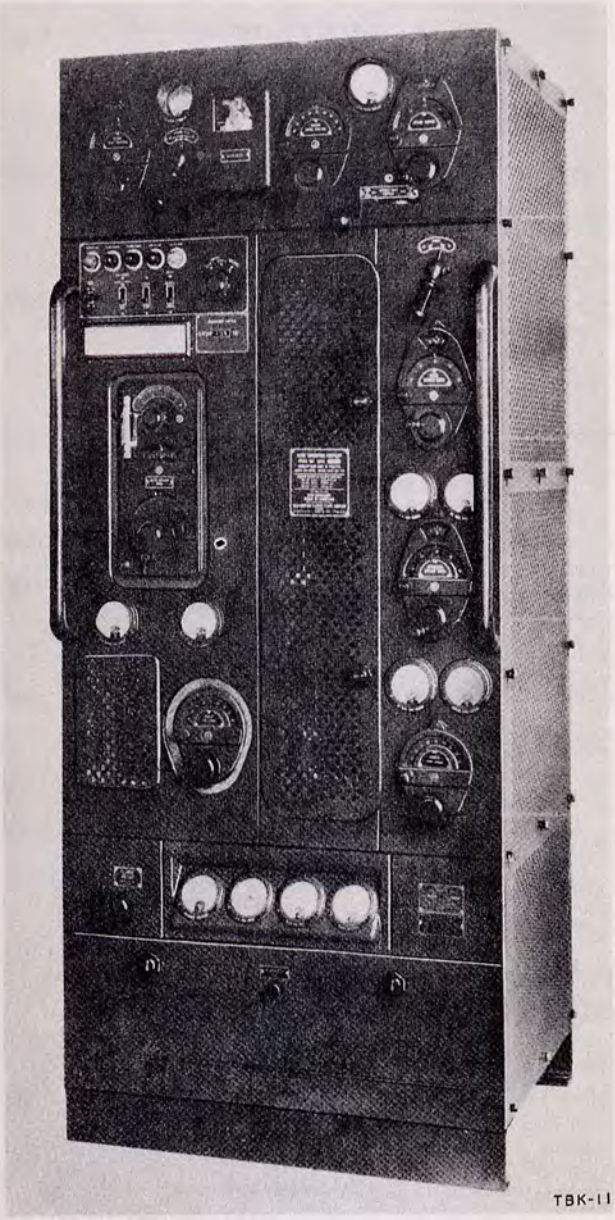
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For TAB–8:			
General Electric Co.	Schenectady, N. Y.	NXs–4843	$22,000.00
For TAB–10:			
General Electric Co.	Schenectady, N. Y.	NOs–64824	
For TBA–11:			
General Electric Co.	Schenectady, N. Y.	NXss–17380	

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

1 December 1958
Cognizant Serv: USN FSN:

TBK-6, TBK-11, TBK-15, TBK-16

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



TBK-11

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TBK–6, TBK–11, TBK–15, and TBK–16 are medium power, high frequency transmitters capable of relay keying speeds up to 100 words per minute or (except for the TBK–6) vacuum tube keying speeds up to 500 words per minute. The transmitter power may be reduced from full power to a minimum of 75 watts by disconnecting the power amplifier. These sets are primarily designed for shore station installation.

Remote operation of these transmitters is possible over landline telegraph circuits.

These transmitting equipments are essentially the same as the TBM series of transmitters, except that the TBK series does not have provisions for modulated continuous wave signaling.

Shipboard models of this equipment (classified and described under AN/SRT–type) are the TBK–3, TBK–5, TBK–7 through TBK–10, TBK–12 through TBK–14, and TBK–17 through TBK–20. The TBK–4 is suitable for either shipboard or shore installation, and is classified and described under AN/URT–type equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2.0 to 18.1
Frequency Control: Master oscillator
Type of Signal: Cw
Power Output: 75 or 500 w
Keying Speed:
TBK–6: 100 wpm (maximum)
TBK–11, TBK–15, TBK–16: 500 wpm (maximum)
Antenna: 80 feet (maximum Length)
Power Requirements:
TBK–6: 220/440-v 25-cycle 3-phase ac; 220-v 60-cycle 2/3-phase ac; 230-v dc
TBK–11: 220/440-v 25-cycle 3-phase ac; 220-v 60-cycle 1/3-phase ac
TBK–15: 220-v 60-cycle 3-phase ac
TBK–16: 220/440-v 50/60-cycle 3-phase ac

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For TBK–6			
2	Motor generator unit (220-v 25-cps 3-ϕ)		18-1/2 x 22-1/16 x 72-1/8	1,250
	or			
2	Motor generator unit (220-v 25-cps 2-ϕ)		19-9/16 x 18-3/4 x 70-1/8	885
	or			
2	Motor generator unit (220-v 60-cps 3-ϕ)		18-9/16 x 18-3/4 x 70-1/8	885
	or			
2	Motor generator unit (230-v dc)		18-9/16 x 18-3/4 x 75	900
	or			
2	Motor generator unit (440-v 25-cps 3-ϕ)		18-1/2 x 22-1/16 x 72-1/8	1,250
2	Motor Starter 21251 (230-v dc)		14-1/2 x 15-1/4 x 28-1/2	90
	or			
2	Motor Starter 21252 (220-v 60-cps 3-ϕ)		9 x 10-5/8 x 18-3/4	30
	or			
2	Motor Starter 21253 (220-v 60-cps 2-ϕ)		9 x 10-5/8 x 18-3/4	30
	or			
2	Motor Starter 21254 (440-v 25-cps 3-ϕ)		9 x 10-5/8 x 18-3/4	30
	or			
2	Motor Starter 21259 (220-v 25-cps 3-ϕ)		9 x 10-5/8 x 18-3/4	30
1	Power Transfer Unit 23101 (ac)		11 x 20-1/4 x 39-13/16	75
	or			
1	Power Transfer Unit 23102 (dc)			
1	Radio Transmitter 52064 (220-v 60-cps 2/3-ϕ)		24 x 32 x 72	711

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Radio Transmitter 52065 (220/440-v 25-cps 3-ϕ)		24 x 32 x 72	711
	or			
1	Radio Transmitter 52066 (230-v dc)		24 x 32 x 72	662
1	Remote Control Unit 23099 (ac)		12-15/16 x 19 x 20	91
	or			
1	Remote Control Unit 23100 (dc)		12-15/16 x 19 x 20	53
	For TBK–11			
1	Land Line Control Unit 23216 (220-v 60-cps 1/3-ϕ)		10-3/8 x 20-7/16	81
	or			
1	Land Line Control Unit 23217 (220/440-v 25-cps 3-ϕ)		10-3/8 x 20-7/16 x 20-11/16	81
2	Magnetic Controller 21512 (440-v 25-cps 3-ϕ)		11-5/8 x 17 x 23-1/4	80
	or			
2	Magnetic Controller 21609 (220-v 25-cps 3-ϕ)		11-5/8 x 17 x 23-1/4	80
	or			
2	Magnetic Controller 21610 (220-v 60-cps 3-ϕ)		11-5/8 x 17 x 23-1/4	80
	or			
2	Magnetic Controller 21644 (220-v 60-cps 1-ϕ)		11-5/8 x 17 x 24-1/4	80
2	Motor Generator Unit 21521 (220/440-v 25-cps 3-ϕ)		20-1/2 x 21-3/4 x 78-1/2	1,250
	or			
2	Motor Generator Unit 21522 (220-v 60-cps 3-ϕ)		20-3/8 x 20-1/2 x 74-21/32	1,100
	or			
2	Motor Generator Unit 21671 (220-v 60-cps 1-ϕ)		20-3/8 x 20-1/2 x 74-21/32	1,100

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Transfer Panel 24084–A		11 x 20-1/4 x 39-13/16	108
1	Radio Transmitter 52169 (220/440-v 25-cps 3-ϕ)		24 x 32 x 72	810
	or			
1	Radio Transmitter 52170 (220-v 60-cps 1/3-ϕ)		24 x 32 x 72	797
	For TBK–15			
1	Land Line Control Unit 23216		11-1/16 x 20-5/16 x 20-3/4	81
2	Magnetic Controller 21668		9-3/16 x 16-5/8 x 18-3/4	50
2	Motor Generator Unit 21677		20-3/8 x 20-1/2 x 74-21/32	1,105
1	Power Transfer Panel 24084–A		11 x 20-1/4 x 39-13/16	108
1	Radio Transmitter 52170		24 x 32 x 72	797
	For TBK–16			
1	Land Line Control Unit 23216		11 x 20-3/4 x 21-5/16	81
1	Radio Transmitter 52170		24 x 32 x 72	789
1	Rectifier Power Unit 20228		24 x 32 x 72	1000

REFERENCE DATA AND LITERATURE:

TBK–6: Technical Manuals for Navy Model TBK–3, 4, 5, 6, 7, 8, 10 and 17, Radio Transmitting Equipment
TBK–11: NAVSHIPS 900386
TBK–15: NAVSHIPS 900386
TBK–16: NAVSHIPS 900387

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG:

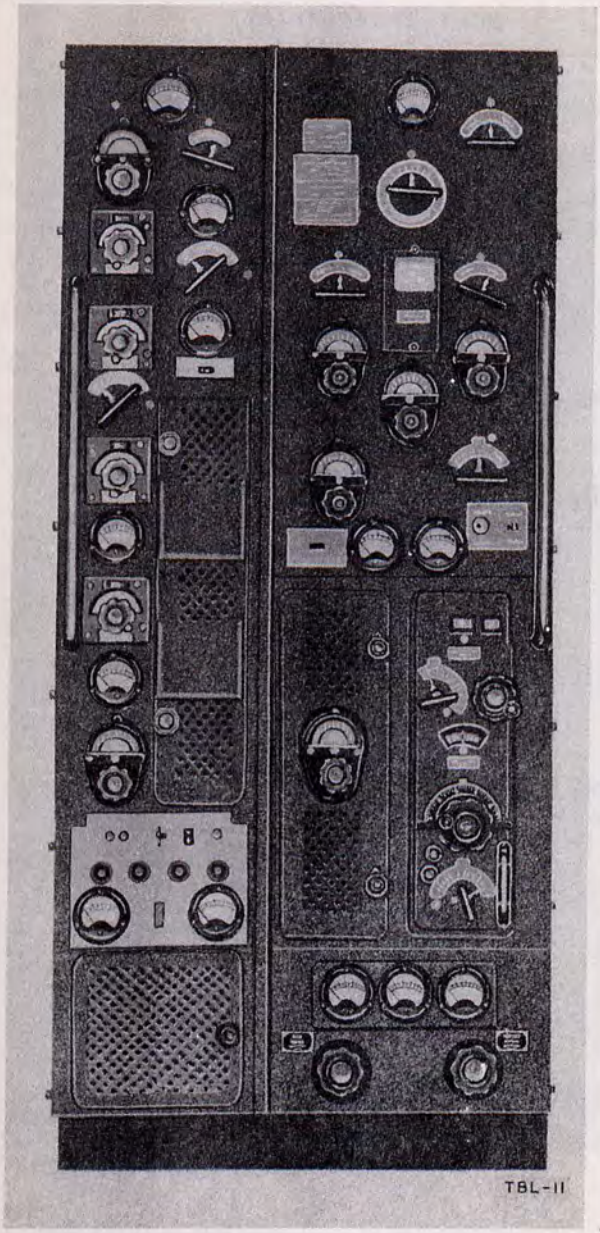
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For TBK–6:			
Westinghouse Electric & Manufacturing Co.	Baltimore, Md.	NOs 47498	
For TBK–11:			
Westinghouse Electric & Manufacturing Co.	Baltimore, Md.	NOs 67051 NOs 72975 NOs 80646	
For TBK–15:			
Westinghouse Electric & Manufacturing Co.	Baltimore, Md.	NOs 67051 NOs 72975 NOs 80646	
For TBK–16:			
Westinghouse Electric & Manufacturing Co.	Baltimore, Md.	NXsr 38688 NXsr 18237	

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

1 December 1958
Cognizant Serv: USN FSN:

TBL–10, TBL–11

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	TBL–10: F16–Q–312555–200 TBL–11: F16–Q–312575–200	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TBL–10 and TBL–11 are designed for shore station installation where space is at a premium.

These equipments can be keyed at speeds up to 100 words per minute, and can be controlled either locally or remotely. Remote control is accomplished by means of a landline control unit, which may be located up to 50 miles from the transmitter, with landline connecting circuits.

The TBL–10 and TBL-11 are identical with the exception of a power transfer panel and an extra rectifier power unit furnished with the TBL–10.

TECHNICAL CHARACTERISTICS:

Frequency Range: 175 to 600 kc; 2,000 to 18,000 kc
Frequency Control: Master oscillator
Type of Signal: Cw, mcw; voice signals may be transmitted with additional speech input equipment not furnished as part of this equipment
Power Output:
Cw: 200 w
Mcw: 100 w
Voice: 50 w
Keying Speed: 100 wpm (maximum)
Power Requirements: 3.5 kw, 220/440-v 50–60 cycle 3-phase ac

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For TBL–10			
1	Land Line Control Unit 23216		20-3/4 x 21-3/16 x 11-1/16	81
1	Power Transfer Panel 24084–A		39-7/8 x 20-1/4 x 10-3/8	108
1	Radio Transmitter 52249		72 x 32 x 24-3/8	829
2	Rectifier Power Unit 20195		71-5/8 x 27-1/8 x 23-9/16	819
	For TBL–11			
1	Land Line Control Unit 23216		20-3/4 x 21-3/16 x 11-1/16	81
1	Radio Transmitter 52249		72 x 32 x 24-3/8	829
1	Rectifier Power Unit 20195		71-5/8 x 27-1/8 x 23-9/16	819

REFERENCE DATA AND LITERATURE:

Instruction Book for Navy Model TBL–10 and TBL–11 Radio Telegraph Transmitting Equipment.

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7 for TBL–10	196.31	3,921
6 For TBL–11	146.31	2,806

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

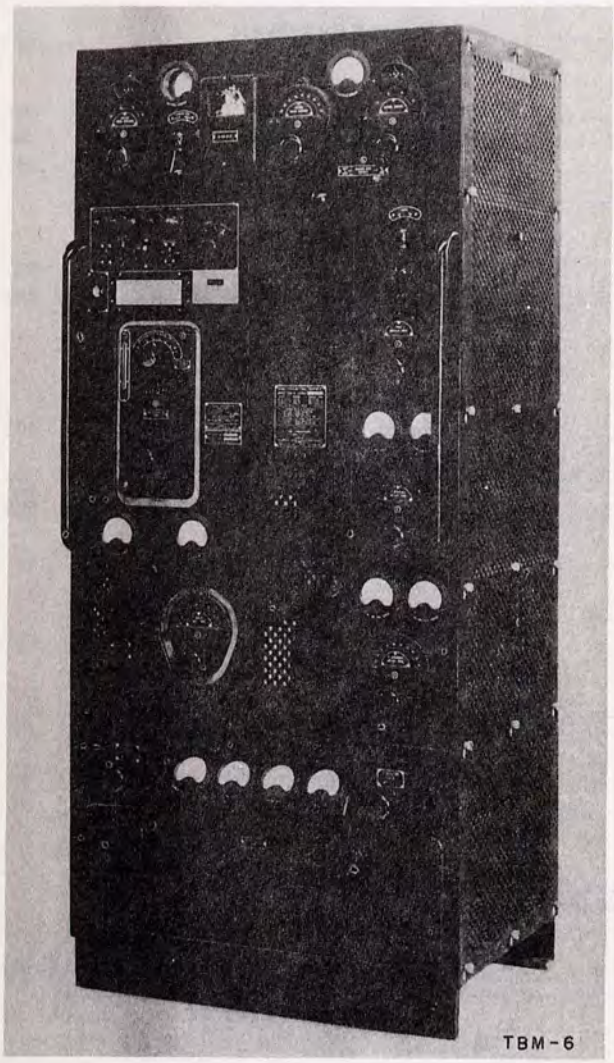
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs–97922 (Sup) NXss–17132	

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

18 November 1958
Cognizant Serv: USN FSN: 5820-644-0915 TBM-6

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --		--


TBM-6

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TBM-6 is designed for use as shore-based equipment.

This equipment is a medium power, high frequency transmitter capable of vacuum tube keying speeds up to 500 words-per-minute. The modulator unit provides 50 words-per-minute modulated continuous wave telegraph transmission; vacuum tube keying cannot be used on this type of transmission. The transmitter power output may be reduced from full power to a minimum of 75 watts for telegraphic signaling by disconnecting the power amplifier.

Either local or remote operation is possible. Remote operation is possible by use of a land line when telegraphing.

A remote control unit and a radiophone unit are required for use, but are not supplied, with this equipment.

The TMB series is basically similar to the TBK series except that the TBK series are A1 radio telegraph transmitters and are not equipped with modulators. In addition, there is some flexibility in the type power equipment used with the various transmitters.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc
Power Output:
A1: 75 or 500 w
A2, A3: 350 w
Frequency Control: Master oscillator
Type Emission: A1, A2, A3
Keying Speed:
A1: 500 wpm (maximum)
A2: 50 wpm (maximum)
Modulator Data:
Speech Input: 6 mw level from 600-ohm source
Modulation: 100%
Af Distortion: 10% (maximum)
Gain: 60 db
Output: 400 w
Antenna Data: 80 feet (maximum length outside trunk)
Power Requirements:
Motor Generator 21521: 220-v 25-cycle 3-phase ac
Motor Generator 21522: 220-v 60-cycle 3-phase ac

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Land Line Control 23217 (25 cps)		10-3/8 x 20-7/16 x 20-11/16	81
	or			
	Land Line Control 23216 (60 cps)		11-1/16 x 20-5/16 x 20-3/4	81
2	Magnetic Controller			
	21511 (25 cps)		11-5/8 x 17 x 24-1/4	80
	21411 (60 cps)		11-5/8 x 17 x 24-1/2	80
1	Modulator 50066 (25 cps)		18 x 24 x 72	380
	or			
	Modulator 50065 (60 cps)		18 x 24 x 72	380
2	Motor Generator Set 21521 (25 cps)		20-1/2 x 21-3/4 x 78-1/2	1,250
	or			
	Motor Generator Set 21522 (60 cps)		20-3/8 x 20-1/2 x 74-21/32	1,100
1	Power Transfer Panel 24084		11 x 20-1/4 x 39-13/16	77
1	Radio Transmitter 52169 (25 cps)		24 x 32 x 72	825
	or			
	Radio Transmitter 52170 (60 cps)		24 x 32 x 72	797

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900386

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
12	185.37	4,274

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs–67051, 12 June 1939 NOs–72975, 8 May 1940 NOs–80646, 8 January 1941 NOs–80646, 21 September 1942	

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

18 November 1958
Cognizant Serv: USN FSN: 5820-644-0916 TBM-8

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TBM-8 is designed for use as shore-based equipment.

This equipment is a medium power, high frequency transmitter capable of vacuum tube keying speeds up to 500 words per-minute. The modulator unit provides 50 words per minute modulated continuous wave telegraph transmission; vacuum tube keying cannot be used on this type of transmission. The transmitter power output may be reduced from full power to a minimum of 75 watts for telegraphic signaling by disconnecting the power amplifier.

Either local or remote operation is possible. Remote operation is possible by use of a land line when telegraphing.

A remote control unit and a radiophone unit are required for use, but are not supplied, with this equipment.

The TBM series is basically similar to the TBK series except that the TBK series are A1 radio telegraph transmitters and are not equipped with modulators. In addition, there is some flexibility in the type power equipment used with the various transmitters.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc
Power Output:
A1: 75 or 500 w
A2, A3: 350 w
Frequency Control: Master oscillator
Type Emission: A1, A2, A3
Keying Speed:
A1: 500 wpm (maximum)
A2: 50 wpm (maximum)
Modulator Data:
Speech Input: 6 mw level from 600-ohm source
Modulation: 100%
Af Distortion: 10% (maximum)
Gain: 60 db
Output: 400 w
Antenna Data: 80 feet (maximum length outside trunk)
Power Requirements: 220-v 60-cycle 3-phase ac (Motor Generator 21677)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Land Line Control 23216	----------	10-3/8 x 20-7/16 x 20-11/16	81
2	Magnetic Controller 21668	----------	9-3/16 x 16-5/8 x 18-3/4	50
1	Modulator 50065-A	----------	18 x 24 x 72	380
2	Motor Generator Set 21677	----------	20-3/8 x 20-1/2 x 74-21/32	1,105
1	Power Transfer Panel 24084-A	----------	11 x 20-1/4 x 39-13/16	108
1	Radio Transmitter 52170	----------	24 x 32 x 72	797

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900386

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
11	187.76	4,089

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs-67051, 12 June 1939 NOs-72975, 8 May 1940 NOs-80646, 8 January 1941 NOs-80646, 21 September 1942	

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

18 November 1958
Cognizant Serv: FSN:

TBM-10

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TBM–10 is designed for use as shore-based equipment.

This equipment is a medium power, high frequency transmitter capable of vacuum tube keying speeds up to 500 words-per-minute. The modulator unit provides 50 words-per-minute modulated continuous wave telegraph transmission; vacuum tube keying cannot be used on this type of transmission. The transmitter power output may be reduced from full power to a minimum of 75 watts for telegraphic signaling by disconnecting the power amplifier.

Either local or remote operation is possible. Remote operation is possible by use of a land line when telegraphing.

A remote control unit and a radiophone unit are required for use, but are not supplied, with this equipment.

The TBM series is basically similar to the TBK series except that the TBK series are A1 radio telegraph transmitters and are not equipped with modulators. In addition, there is some flexibility in the type power equipment used with the various transmitters.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc
Power Output:
A1: 75 or 500 w
A2, A3: 350 w
Frequency Control: Master oscillator
Type Emission: A1, A2, A3
Keying Speed:
A1: 500 wpm (maximum)
A2: 50 wpm (maximum)
Modulator Data:
Speech Input: 6 mw level from 600-ohm source
Modulation: 100%
Af Distortion: 10% (maximum)
Gain: 60 db
Output: 400 w
Antenna Data: 80 feet (maximum length outside trunk)
Power Requirements: 220- or 440-v 50- or 60-cycle 3-phase ac (Rectifier Power Unit 20228)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Land Line Control 23216	----------	11 x 20-3/4 x 21-5/16	81
1	Modulator 50065–A	----------	18 x 24 x 72	385
1	Radio Transmitter 52170	----------	24 x 32 x 72	789
1	Rectifier Power Unit 20228	----------	24 x 32 x 72	1,000

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900387

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
9	206.43	3,838

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

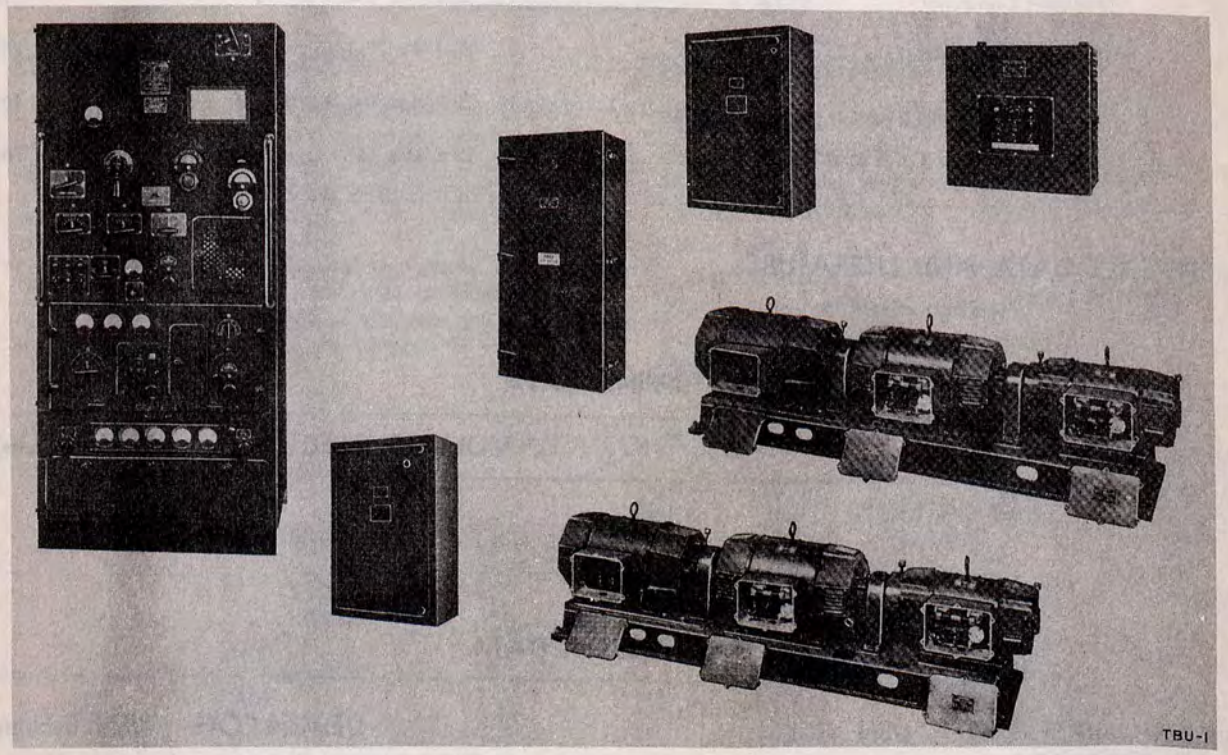
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NXsr-18237, 1 July 1943 NXsr-38688, 28 September 1943	

RADIO TELEGRAPH TRANSMITTING EQUIPMENT AN/FRT-type

4 December 1958
Cognizant Serv: USN FSN: TBU–1

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–Q–315395	--



FUNCTIONAL DESCRIPTION:

Radio Telegraph Transmitting Equipment TBU–1 is primarily designed for use at shore installations where a medium power transmitter is desired. Frequency is continuously variable throughout the specified range. The transmitter may be operated from the front panel or from a remote location by use of the land line control unit.

Radio Telegraph Transmitting Equipments TBU–1 and TBU–3 have been adapted for shore installations by the addition of duplicate motor-generator sets and a land line control unit, otherwise they are identical to the TBU and TBU–2 models.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 to 2,000 kc
Type of Signal: Cw, mcw
Keying Data: Relay keying, 100 wpm max speed
Nominal Power Output:
Cw: 1,000 w
Mcw: 500 w
Frequency Control: Master oscillator
Power Supply Equipment: Motor-generator
Power Requirements: 220/440-v 60-cycle 3-phase ac; 230-v dc

AN/FRT-type RADIO TELEGRAPH TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Land Line Control Unit CAY–23216	----------	20-3/4 x 21-3/16 x 11-1/16	81
2	Magnetic Controller CAY–21710	----------	22-21/32 x 16 x 13-1/4	70
2	Motor Generator Unit CAY–21447	----------	20-1/4 x 77-1/15 x 20-3/8	1,205
1	Power Transfer Panel CAY–24083	----------	39-7/8 x 20-1/4 x 10-3/8	108
1	Radio Transmitter CAY–52227	----------	72 x 34 x 24	769

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,384

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
16	190.36	5,532

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric Mfg. Co.	Baltimore, Md.	NOs–66593 9 May 1939 NOs–82338, 24 Feb 1941	$12,500.00 including spares

RADIO TELEGRAPH TRANSMITTING EQUIPMENT AN/FRT-type

4 December 1958
Cognizant Serv: USN FSN: TBU-3

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16-Q-315470-200	--

(See Illustration: TBU-1, p. 633)

FUNCTIONAL DESCRIPTION:

Radio Telegraph Transmitting Equipment TBU-3 is primarily designed for use at shore stations where a medium power transmitter is desired. Frequency is continuously variable throughout the specified range. The transmitter may be operated from the front panel or from a remote location by use of the land line control unit.

Radio Telegraph Transmitting Equipment TBU-3 and TBU-1 have been adapted for shore installations by the addition of duplicate motor-generator sets and a land line control unit, otherwise they are identical to the TBU and TBU-2 models.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 to 2,000 ac
Type of Signal: Cw, mcw
Keying Data: Relay keying, 100 wmp max speed
Nominal Power Output:
Cw: 1,000 w
Mcw: 500 w
Frequency Control: Master oscillator
Power Supply Equipment: Motor-generator
Power Requirements: 220/440-v 60-cycle 3-phase ac; 230-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Land Line Control Unit CAY-23216		20-3/4 x 21-3/16 x 11-1/16	81
2	Magnetic Controller CAY-21694		18-29/32 x 16-5/8 x 9-3/16	50
	or			
2	Magnetic Controller CAY-21696		18-29/32 x 16-5/8 x 9-3/16	50
2	Motor Generator Unit CAY-21448		22-1/8 x 74-21/32 x 30-3/4	1,185
	or			
2	Motor Generator Unit CAY-21447		20-1/4 x 77-1/15 x 20-3/8	1,205
1	Radio Transmitter CAY-52224		72 x 34 x 24	769
	or			
1	Radio Transmitter CAY-52225		72 x 34 x 24	769

AN/FRT-type RADIO TELEGRAPH TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,384

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7	146.27	4,257

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

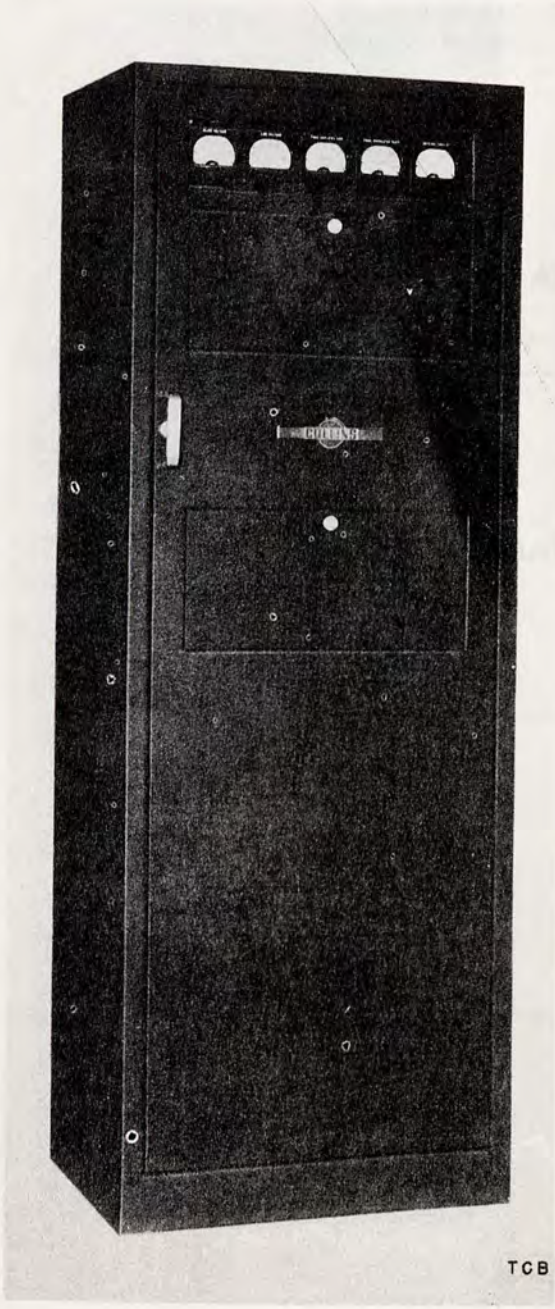
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Manufacturing Co.	Baltimore, Md.	NOs-66593, 9 May 1939 NOs-82338, 24 Feb 1941	$12,500.00 including spares

RADIO TELEPHONE AND TELEGRAPH TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN:

TCB

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–Q–318652–100	--



TCB

FUNCTIONAL DESCRIPTION:

Radio Telephone and Telegraph Transmitting Equipment TCB is used primarily for general communication in shore installations. This equipment offers rapid automatic frequency selection from ten pretuned channels. It can be operated from either the front panel or from a remote control unit.

The TCB, TCB–1, and TCB–2 are similar in operation but the models differ slightly in frequency range, output power, and power requirements.

TECHNICAL CHARACTERISTICS:

Frequency Range: 1,500 to 15,000 kc, 10 +reset channels
Power Output: 150 w
Type of Signal: Cw, mcw, voice
Keying Data:
Type: Vacuum tube
Cw: High speed keying
Mcw: 60 wpm
Frequency Control: Crystal
Power Requirements: 110-v 60-cycle 1-phase ac

AN/FRT-type RADIO TELEPHONE AND TELEGRAPH TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Operator's Control Unit 177E–2	----------	8-3/4 x 19 x 10	38
1	Operator's Desk Set 223F–4	----------	6 x 9 x 7-1/2	5.75
1	Station Control Unit 176L–2	----------	7-3/4 x 9 x 5-1/2	11
1	Transmitter 16E–1	----------	61-3/4 x 21-1/2 x 16-1/2	502

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95302

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
14		2,209

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

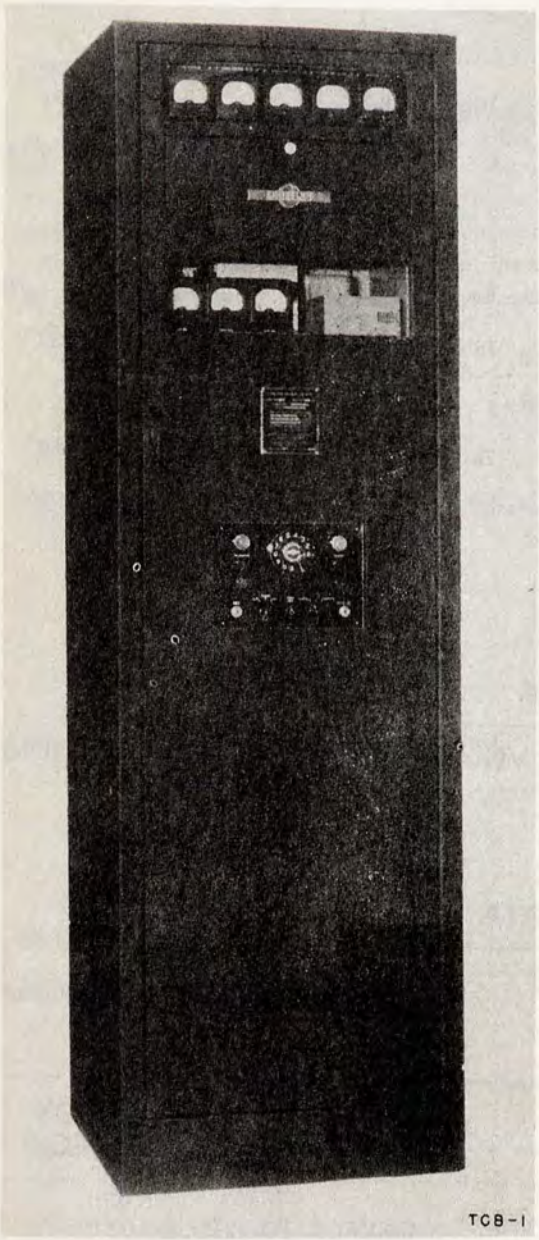
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NOs–66284, 22 Apr 1939 NXss–7663, 23 Nov 1942	$3,000.00 with equipment spares

RADIO TELEPHONE AND TELEGRAPH TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TCB–1

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–Q–318655–200	--



TCB-1

FUNCTIONAL DESCRIPTION:

Radio Telephone and Telegraph Transmitting Equipment TCB–1 is primarily used for general communication in shore installations. This equipment offers rapid automatic frequency selection from ten pretuned channels. It can be operated from either the front panel or from a remote control unit.

The TCB, TCB–1, and TCB–2 are similar in operation but the models differ in frequency range, output power, and power requirements.

TECHNICAL CHARACTERISTICS:

Frequency Range: 1,500 to 12,000 kc, 10 preset channels
Frequency Control: Crystal
Power Output: 75 w
Type of Signal: Cw, mcw, voice
Keying Data:
Type: Vacuum tube keying
Cw: High speed keying
Mcw: 60 wpm
Power Requirements: 110-v 25/60-cycle 1-phase ac

AN/FRT-type RADIO TELEPHONE AND TELEGRAPH TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Operator's Control Unit 177G–4 (60 cps)		10 x 19 x 10-1/2	53
	or			
1	Operator's Control Unit 177G–5 (25 cps)		10 x 19 x 10-1/2	53
1	Operator's Desk Set 223G–3 (60 cps)		6 x 9 x 7-1/2	5.75
	or			
1	Operator's Desk Set 223G–6 (25 cps)		6 x 9 x 7-1/2	5.75
1	Transmitter 16E–5 (60 cps)		78 x 24 x 24	952
	or			
1	Transmitter 16E–6 (25 cps)		78 x 24 x 24	950

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95303

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
14		2,209

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: S–500–2366

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NOs–81551, 10 Feb 1941	$3,000.00 with equipment spares

RADIO TELEPHONE AND TELEGRAPH TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TCB–2

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–Q–318675–200	--

(See Illustration of TCB–1, p. 639)

FUNCTIONAL DESCRIPTION:

Radio Telephone and Telegraph Transmitting Equipment TCB–2 is used primarily for general communication in shore installations. This equipment offers rapid automatic frequency selection from ten pretuned channels. It can be operated from either the front panel or from a remote control unit.

The TCB, TCB–1, and TCB–2 are similar in operation but the models differ slightly in frequency range, output power, and power requirements.

TECHNICAL CHARACTERISTICS:

Frequency Range: 1,500 to 12,000 kc, 10 preset channels
Frequency Control: Crystal
Power Output: 75 w
Type of Signal: Cw, mcw, voice
Keying Data:
Type: Vacuum tube keying
Cw: High speed keying
Mcw: 60 wpm
Power Requirements: 110-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Operator's Control Unit 177G–4	----------	10 x 19 x 10-1/2	53
1	Operator's Desk Set 223G–3	----------	6 x 9 x 7-1/2	5-3/4
1	Transmitter 16E–5	----------	78 x 24 x 24	952

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95304

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
14		2,209

AN/FRT-type RADIO TELEPHONE AND TELEGRAPH TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: EN28/4448-42/SHIPS

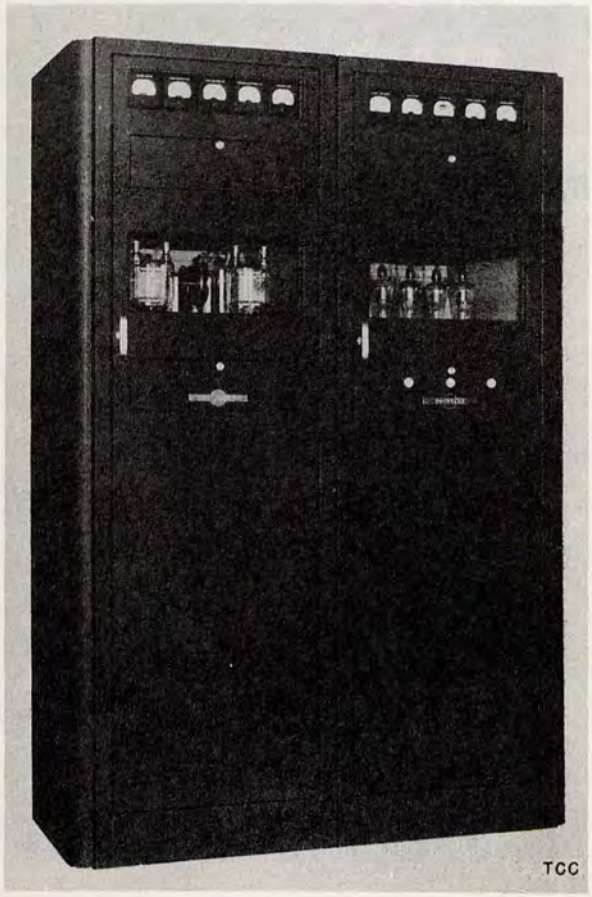
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TELEPHONE AND TELEGRAPH TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TCC

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-318678-200	--


TCC

FUNCTIONAL DESCRIPTION:

Radio Telephone and Telegraph Transmitting Equipment is designed for shore use where medium and high frequency cw, mcw, and voice operation on any one of 10 preset frequencies is required with rapid changeover. By means of an autotune and telephone dial system, frequency change, choice of emission, and starting and shutting down the equipment may be accomplished either at the transmitter or at a remote point.

Equipments comprising the TCC series are all similar in operation and differ mainly in power source requirements. The TCC and TCC-2 differ from the other models of the series in that the frequency range extends from 2.0 to 20.0 megacycles, instead of 2.0 to 18.1 megacycles.

Although TCC series equipments are still in use, they have been superseded by Radio Transmitting Equipment TDH.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 20
Frequency Control: Crystal, 10 preset channels
Type of Signal: Cw, mcw, voice
Keying Speeds:
Cw: Vacuum tube keying speeds up to several hundred wpm
Mcw: Up to 60 wpm
Power Output:
Cw: 1,000 w
Mcw, Voice: 600 w
Power Requirements: 4.5 kw, 20-v 50/60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Bay, consisting of:	----------	78 x 24 x 24	990
1	RF Bay, consisting of:	----------	78 x 24 x 24	580

AN/FRT-type RADIO TELEPHONE AND TELEGRAPH TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95305

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

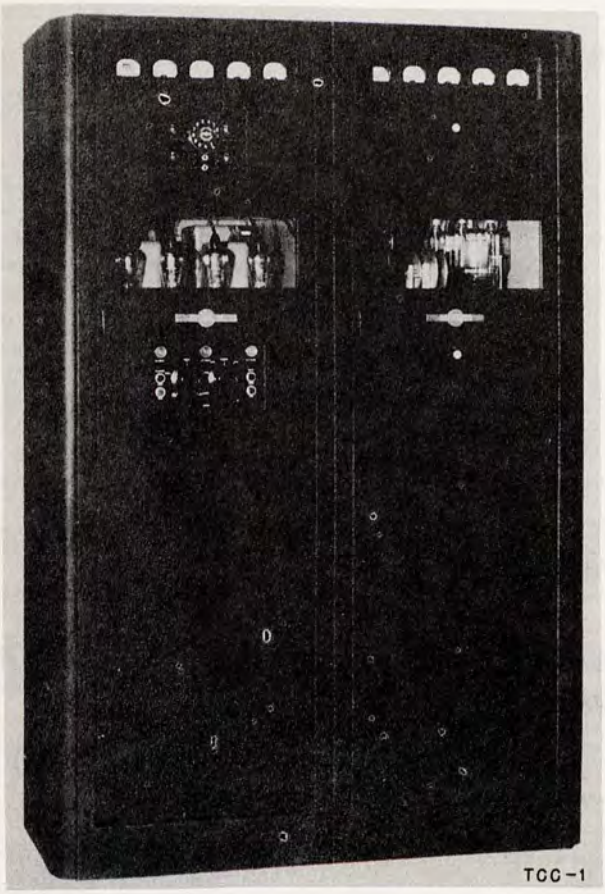
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NOs-66284, 22 Apr 1939	$11,500.00 including equipment spares

RADIO TELEPHONE AND TELEGRAPH TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TCC–1

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Telephone and Telegraph Transmitting Equipment TCC–1 is designed for shore use where medium- and high- frequency cw, mcw, and voice operation on any one of 10 preset frequencies is required with rapid changeover. By means of an autotune and telephone dial system, frequency change, choice of emission, and starting and shutting down the equipment may be accomplished either at the transmitter or at a remote point.

Equipments comprising the TCC series are all similar in operation and differ chiefly in power source requirements.

Although TCC series equipments are still in use, they have been superseded by Radio Transmitting Equipment TDH.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2.0 to 18.1 mc
Frequency Control: Crystal, 10 preset channels
Type of Signal: Cw, mcw, voice
Keying Speeds:
Cw: Vacuum tube keying speeds up to several hundred words per minute
Mcw: Up to 60 wpm
Power Output:
Cw: 1,000 w
Mcw, voice: 600 w
Power Requirements: 4.5 kw, 220-v 25/60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Autotune RF Unit 1014–1 (60 cps)	----------	78 x 24 x 24	600
	or			
1	Autotune RF Unit 1014–2	----------	78 x 24 x 24	600
1	Frequency Converter 231N500	----------	66 x 26-1/2 x 16	2,360
1	L. H. Dust Cover 38M–2	----------	78 x 24 x 2	20
1	Operator's Control Unit 177G–1 (60 cps)	----------	10-1/2 x 19 x 16	53

AN/FRT-type RADIO TELEPHONE AND TELEGRAPH TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Operator's Control Unit 177G–3 (25 cps)		10-1/2 x 19 x 10	53
1	Operator's Desk Set 223G–1 (60 cps)		5-1/2 x 1/8 x 7-1/2	5.75
	or			
1	Operator's Desk Set 223G–5 (25 cps)		5-1/2 x 5-1/8 x 7-1/2	5.75
1	Power Modulator Unit 1021–1 (60 cps)		78 x 24 x 24	1,000
	or			
1	Power and Modulator Unit 1021–2 (25 cps)		78 x 24 x 24	1,000
1	R. H. Dust Cover 38M–1		78 x 24 x 2	20

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95306

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
26	233.0	4,446

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NOs–74981, 29 Jun 1940	$11,500.00 including equipment spares

RADIO TELEPHONE AND TELEGRAPH TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TCC-2

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-318679-100 (Navy)	--

(See Illustration of TCC, p. 643)

FUNCTIONAL DESCRIPTION:

Radio Telephone and Telegraph Transmitting Equipment TCC-2 is designed for shore use where medium and high frequency cw, mcw, and voice operation on any one of 10 preset frequencies is required with rapid changeover. By means of an autotune and telephone dial system, frequency change, choice of emission, and starting and shutting down the equipment may be accomplished either at the transmitter or at a remote point.

Equipments comprising the TCC series are all similar in operation and differ chiefly in power source requirements. The TCC and TCC-2 differ from the other models of the series in that the frequency range extends from 2.0 to 20.0 megacycles, instead of 2.0 to 18.1 megacycles.

Although TCC series equipments are still in use, they have been superseded by Radio Transmitting Equipment TDH.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 20
Frequency Control: Crystal, 10 preset channels
Type of Signal: Cw, mcw, voice
Keying Speeds:
Cw: Up to several hundred words per minute
Mcw: Up to 60 wpm
Power Output:
Cw: 1,000 w
Mcw, voice: 600 w
Power Requirements: 4.5 kw, 220-v 50/60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Autotune RF Bay 1007-6	----------	78 x 24 x 24	600
1	Operator's Control Unit 177E-2	----------	10-1/2 x 19 x 10	53
1	Operator's Desk Set 223G-4	----------	6 x 9 x 7-1/2	5.75
1	Power Unit 1006-6	----------	78 x 24 x 24	990
1	Station Control Unit 176L-2	----------	11-1/2 x 12-1/4 x 6-3/8	12

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95307

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/FRT-type RADIO TELEPHONE AND TELEGRAPH TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NOs–74981, 29 Jun 1940	$11,500.00 including equipment spares

RADIO TELEPHONE AND TELEGRAPH TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958 TCC-3

Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-318680-200	--

(See Illustration of TCC-1, p. 645)

FUNCTIONAL DESCRIPTION:

Radio Telephone and Telegraph Transmitting Equipment TCC-3 is designed for shore use where medium and high frequency cw, mcw, and voice operation on any one of 10 preset frequencies is required with rapid changeover. By means of an autotune and telephone dial system, frequency change, choice of emission, and starting and shutting down the equipment may be accomplished either at the transmitter or at a remote point.

Equipments comprising the TCC series are all similar in operation and differ chiefly in power source requirements.

Although TCC series equipments are still in use, they have been superseded by Radio Transmitting Equipment TDH.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2.0 to 18.1

Frequency Control: Crystal, 10 preset channels

Type of Signal: Cw, mcw, voice

Keying Speeds:

Cw: Up to several hundred words per minute

Mcw: Up to 60 wpm

Power Output:

Cw: 1,000 w

Mcw, Voice: 600 w

Power Requirements: 4.5 kw, 220-v 25/60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Autotune RF Unit 1014-5	----------	78 x 24 x 24	600
1	Frequency Converter 231N500	----------	66 x 26-1/2 x 16	2,360
1	L. H. Dust Cover 38M-2	----------	78 x 24 x 2	20
1	Operator's Control Unit 177G-5	----------	10-1/2 x 19 x 10	53
1	Operator's Desk Set 223G-3	----------	5-1/2 x 5-1/8 x 7-1/2	5.75
1	Power and Modulator Unit 1021-5	----------	78 x 24 x 24	1,000
1	R. H. Dust Cover 38M-1	----------	78 x 24 x 2	20

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95308

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
22	271.89	3,893

AN/FRT-type RADIO TELEPHONE AND TELEGRAPH TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NOs–81551, 10 Feb 1941	$11,500.00 including equipment spares

RADIO TELEPHONE AND TELEGRAPH TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TCC–4

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16–Q–318682–200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Telephone and Telegraph Transmitting Equipment TCC–4 is designed for shore use where medium and high frequency, cw, mcw, and voice operation on any one of 10 preset frequencies is required with rapid changeover. By means of an autotune and telephone dial system, frequency change, choice of emission, and starting and shutting down the equipment may be accomplished either at the transmitter or at a remote point.

Equipments comprising the TCC series are all similar in operation and differ chiefly in power source requirements.

Although TCC series equipments are still in use, they have been superseded by Radio Transmitting Equipment TDH.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2.0 to 18.1
Frequency Control: Crystal, 10 preset channels
Type of Signal: Cw, mcw, voice
Keying Speeds:
Cw: Up to several hundred words per minute
Mcw: Up to 60 wpm
Power Output:
Cw: 1,000 w
Mcw, voice: 600 w
Power Requirements: 4.5 kw, 220-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	L. H. Dust Cover 38M–2	----------	78 x 24 x 2	20
1	Operator's Control Unit NT–23360	----------	10-1/2 x 19 x 10	53
1	Operator's Desk Set 223G–3	----------	5-1/2 x 5-1/8 x 7-1/2	5.75
1	Radio Transmitter NT–52297, consisting of:			
	RF Power Unit	----------	78 x 24 x 24	600
	Modulator unit	----------	78 x 24 x 24	1,000
1	R. H. Dust Cover 38M–1	----------	78 x 24 x 2	20

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,214

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
22	271.89	3,893

AN/FRT-type RADIO TELEPHONE AND TELEGRAPH TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

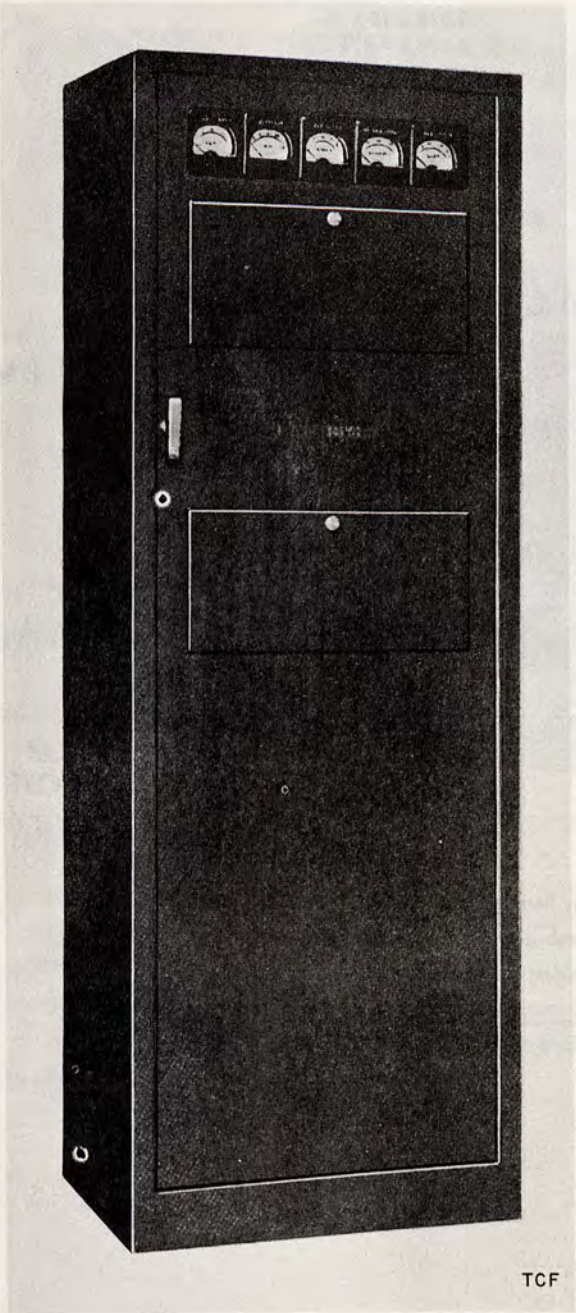
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NXss-7662, 23 Feb 1942	$11,500.00 including equipment spares

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TCF

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



TCF

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCF features rapid automatic selection of any 1 of 10 predetermined crystal frequencies. Through the use of an autotune motor and telephone dial system, frequency change, choice of emission, and starting and shutting down the equipment are accomplished either locally through a station control unit or remotely by means of an operator's control unit and desk set.

The TCF is designed for shore base operations.

Radio Transmitting Equipment TCF is similar in construction to the model TCB but differs in frequency range.

Equipment required but not supplied: Two telegraph keys and two volume indication meters.

TECHNICAL CHARACTERISTICS:

Frequency Range: 10,000 to 30,140 kc
Frequency Control: Crystal
Power Output: 50 to 75 w
Type of Signal: Cw, mcw, voice
Operating Control: Local or remote
Keying Rate: 60 wpm maximum
Antenna: Conventional single wire
Power Requirements: 1 kw, 110-v 60-cycle cps 1-phase ac

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Desk Set 223F–4		6 x 7-1/2 x 9	5.75
1	Hand Set 997N19			
1	Operator's Control Unit 177E–1		8-3/4 x 10 x 19	38
1	Station Control Unit 176L–1		5-1/2 x 7-3/4 x 9	11
1	Transmitter 16E–2		16-1/2 x 21-1/2 x 61-3/4	502

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,116

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

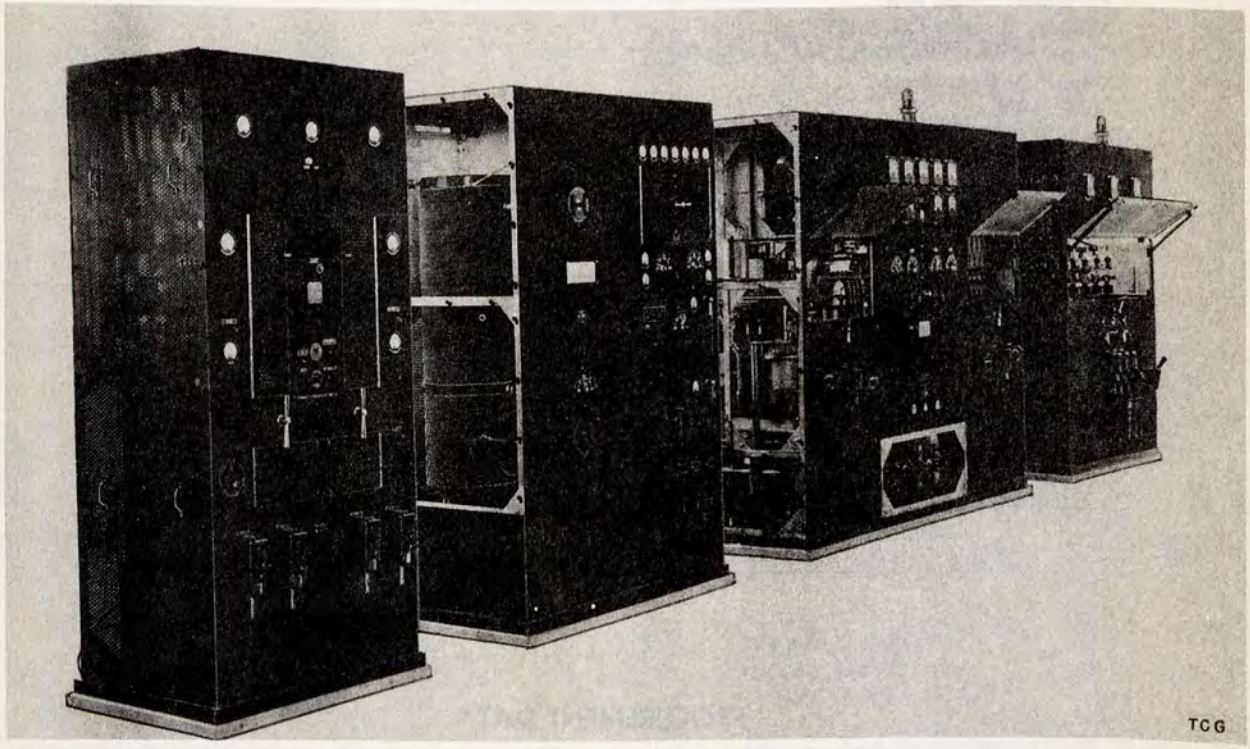
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Manufacturing Co.			

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TCG

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCG is designed primarily as high-power, low-frequency, radiotelegraph transmitters for shore to ship service. This transmitter is capable of continuously variable adjustment to any frequency in the 50- to 150-kilocycle range. The TCG and TCG–1 are similar in operation, but differ in power requirements.

TECHNICAL CHARACTERISTICS:

Frequency Range: 50 to 150 kc in 6 bands
Frequency Control: Master oscillator
Type of Signal: Cw
Nominal Power Output: 50 kw
Keying Data:
Relay Keying: Max. speed 200 wp
Dc Line Keying: Max. speed 500 wpm
Power Requirements: 100 kw, 230-v 60-cycle cps 3-phase ac

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	2 kw Exciter CG–52194			
2	50 kw Power Amplifier CG–50081			
1	Air Water Cooling unit			
2	Auxiliary Rectifier CG–20121			
1	Contractor Unit CG–29092			
1	Main Plate Transformer CG–30458A			
1	Main Rectifier CG–20111			
3	Step-down Transformer CG–35595	----------	12-3/8 x 31-3/4 x 14-3/8	640
1	Water Cooling Unit CWH–10273			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95311

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: RE13A596A

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	NOs–77907, 21 Oct 1940	$256,275.00 including spares

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TCG–1

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(See Illustration of TCG, p. 655)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCG–1 is designed primarily as high-power, low-frequency radio telegraph transmitters for shore to ship service. This transmitter is capable of continuously variable adjustment to any frequency in the 50 to 150 kilocycle range. The TCG and TCG–1 are similar in operation, but differ in power requirements.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 50 to 150 kc in 6 bands
Frequency Control: Master oscillator
Type of Signal: Cw
Nominal Power Output: 50 kw
Keying Data:
Relay Keying: Maximum speed 200 wpm
Dc Line Keying: Maximum speed 500 wpm
Power Requirements: 100 kw, 400-v 25-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	2 kw Exciter CG–52229	----------	92 x 66-1/8 x 50-17/32	1,350
1	50 kw Power Amplifier CG–50089	----------	100-5/16 x 120-7/8 x 143-7/16	6,275
1	Air Water Cooling Unit			
1	Auxiliary Rectifier CG–20127	----------	92 x 44-7/8 x 88-5/8	1,397
1	Contractor Unit CG–29089	----------	65-3/8 x 46 x 44	1,954
1	Main Plate Transformer CV–30597	----------	44-1/2 x 65-5/8 x 100-3/8	7,000
1	Main Rectifier CG–20115	----------	100-5/8 x 74-7/8 x 49-1/4	3,343
3	Step-Down Transformer CG–35595	----------	12–3/8 x 31–3/4 x 14–3/8	640
1	Water Cooling Unit CWH–10273			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95311

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG: RE13A596A

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	NOs–77907, 21 Oct 1940	$256,275.00 including spares

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TCG-2

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCG-2 is designed primarily as a high-power, intermediate frequency transmitter for shore to ship service and is to be used at shore stations.

TECHNICAL CHARACTERISTICS:

Frequency Range: 50 to 150 kc
Frequency Control: Master oscillator
Type of Signal: Cw
Nominal Power Output: 50 kw
Keying Data:
Relay Keying: Maximum speed 200 wpm
Facsimile Keying: Maximum speed 500 wpm
DC Line Keying: Maximum speed 500 wpm
Power Requirements: 100 kw, 230-v 50/60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna tuning equipment			
1	Auxiliary Rectifier 20121-A	----------	38-5/8 x 45-7/8 x 92	1,382
1	Contactor Unit 29174	----------	44 x 46 x 65-3/8	1,790
1	Exciter 52194-A (2 kw)	----------	50-7/32 x 66-1/8 x 102	2,000
1	Main Plate Transformer 30846	----------	40-3/4 x 58-1/2 x 94-1/2	5,000
1	Main Rectifier 20152	----------	49-1/4 x 79-7/8 x 100-5/16	2,635
1	Power Amplifier 50125 (50 kw)	----------	100-5/16 x 120-7/8 x 143-7/16	5,000
1	Tank and Circulating Unit 10171	----------	38 x 51-1/2 x 67-3/8	1,500
1	Water Cooling Unit 10107			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

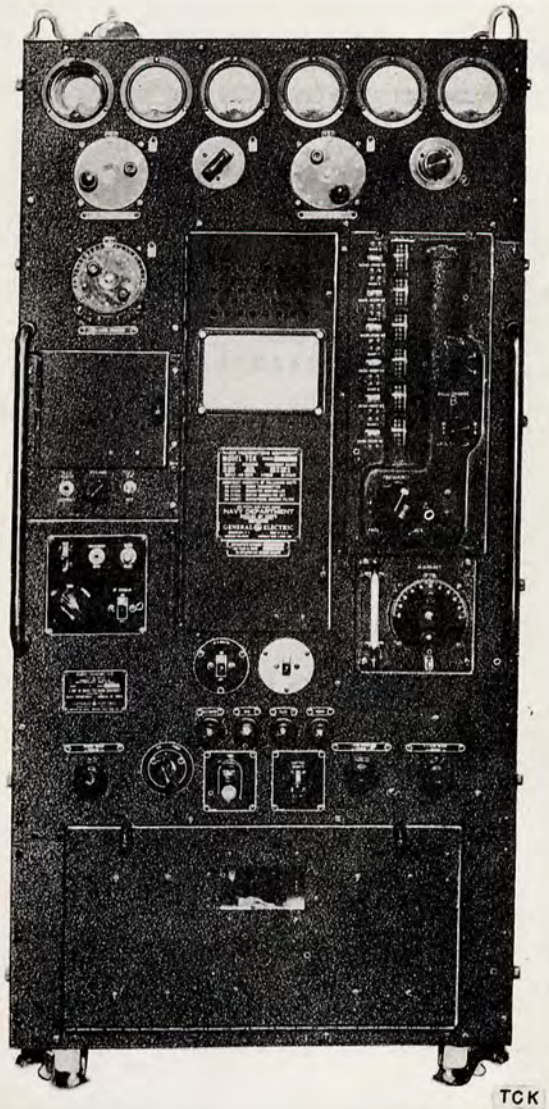
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	NOs–77907, 30 Jun 1942	$163,600.00 including equipment spares

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

Cognizant Serv: USN FSN: TCK

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	115-v dc: F16–Q–320915–200 220/440-v ac: F–16–Q–320920–200	



TCK

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCK is used for mf and hf telegraph and telephone transmission at shore installations, particularly at advanced bases. The equipments are not limited solely to this application since installation of proper shock mountings adapts them for use on shipboard. The equipment is small in size with a relatively high output, and is for use where space is at a premium. The transmitter may be operated from the front panel or from a remote location by use of a standard four- or six-wire remote control unit.

All models of the TCK series are similar electrically and mechanically, except that the TCK–4 and TCK–6 use a rectifier and a transmission line coupling unit. Models of the TCK series are not interchangeable due to minor circuit modifications and differences in power requirements.

Equipment required but not supplied: Navy standard four- or six-wire remote control unit.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc in 6 bands
Frequency Control: Master oscillator
Type of Signal: Cw, voice
Keying Data: Relay keying, maximum speed 100 wpm
Nominal Power Output:
Cw: 400 w
Voice: 100 w
Input Impedance:
To Microphone: 70 ohms
To Line: 500 ohms
Power Requirements: 2.3 kw, 115/230-v dc; or 2.4 kw 220/440-v 60-cycle 3-phase ac

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Magnetic Controller CG–21627 (115-v dc operation)		29-3/16 x 19-7/16 x 13-11/16	130
	or			
1	Magnetic Controller CG–21628 (230-v dc operation)		29-3/16 x 19-7/16 x 13-11/16	130
	or			
1	Magnetic Controller CG–21629 (220/440-v, 3 phase, 60 cps operation)		19-15/16 x 20-7/16 x 8-13/16	40
1	Microphone CAU–51006A		3-3/8 x 3-1/4 x 3-3/4	1
1	Microphone CAU–51016A		9-3/4 x 5-1/4 x 2-1/2	2
1	Microphone Circuit Filter CG–53087		9-3/32 x 7-7/16 x 5-3/16	9
1	Motor-Generator Unit CG–21631 (115-v dc operation)		14-1/8 x 41-15/16 x 11-1/4	370
	or			
1	Motor-Generator Unit CG–21632 (230-v dc operation)		14-1/8 x 41-5/16 x 11-1/4	370
	or			
1	Motor Generator Unit CG–21633 (220/440-v, 3 phase, 60 cps operation)		14-1/8 x 38-1/4 x 11-1/4	320
1	Transmitter Unit CG–52214 (115-v dc operation)		52-5/16 x 25 x 18-1/4	275
	or			
1	Transmitter Unit CG–52215 (230-v dc operation)		52-5/16 x 25 x 18-1/4	280
	or			
1	Transmitter Unit CG–52216 (220/440-v, 3 phase, 60 cps operation)		52-5/16 x 25 x 18-1/4	285

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,210

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	80.1	1,595

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: EN-28/1263-41

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	NOs-83834, 2 April 1941	$9,578.00 including equipment spares

5 December 1958
Cognizant Serv: USN FSN: TCK–1

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	115-v Dc: F16–Q–320945–200 220/440-v Ac: F16–Q–320956–200	--

(See Illustration of TCK, p. 661)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCK–1 is used for mf and hf telegraph and telephone transmission at shore installations, particularly at advanced bases. The equipments are not limited solely to this application since installation of proper shock mountings adapts them for use on shipboard. The equipment is small in size with a relatively high output, and is for use where space is at a premium. The transmitter may be operated from the front panel or from a remote location by use of a standard four- or six-wire remote control unit.

All models in the TCK are similar electrically and mechanically, except that the TCK–4 and TCK–6 use a rectifier and a transmission line coupling unit. Models of the TCK series are not interchangeable due to minor circuit modifications and differences in power requirements

Equipment required but not supplied: Navy standard four- or six-wire remote control unit.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc in 6 bands
Frequency Control: Master Oscillator
Type of Signal: Cw, voice
Keying Data: Relay keying, maximum speed 100 wpm
Nominal Power Output:
Cw: 400 w
Voice: 100 w
Input Impedance:
To Microphone: 70 ohms
To Line: 500 ohms
Power Requirements: 2.4 kw, 220/440-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Magnetic Controller CG–21629	----------	19-15/16 x 20-7/16 x 8-13/16	40
1	Microphone CAU–51016A	----------	9-3/4 x 5-1/4 x 2-1/2	2
1	Microphone Circuit Filter CG–53087	----------	9-3/32 x 7-7/16 x 5-3/16	9
1	Motor-Generator Unit CG–21633	----------	14-1/8 x 38-1/4 x 11-1/4	320
1	Transmitter Unit CG–52216	----------	52-5/16 x 25 x 18-1/4	285

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,210

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	76.8	1,344

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: S–500–2982

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	NOs–87454, 18 June 1941	$9,578.00 including equipment spares

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TCK–2

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16–Q–320985–200	--

(See Illustration of TCK, p. 661)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCK–2 is used for mf and hf telegraph and telephone transmission at shore installations, particularly at advanced bases. The equipments are not limited solely to this application since installation of proper shock mountings adapts them for use on shipboard. The equipment is small in size with a relatively high output, and is for use where space is at a premium. The transmitter may be operated from the front panel or from a remote location by use of a standard four- or six-wire remote control unit.

All models of the TCK series are similar electrically and mechanically, except that the TCK–4 and TCK–6 use a rectifier and a transmission line coupling unit. Models of the TCK series are not interchangeable due to minor circuit modifications and differences in power requirements.

Equipment required but not supplied: Navy standard four- or six- wire remote control unit. Model TCK–2 is not supplied with a microphone.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc in 6 bands
Frequency Control: Master oscillator
Type of Signal: Cw, voice
Keying Data: Relay keying, maximum speed 100 wpm
Nominal Power Output:
Cw: 400 w
Voice: 100 w
Input Impedance: 500 ohms to line
Power Requirements: 2.4 kw, 220/440-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Magnetic Controller CG–21629	----------	19-15/16 x 20-7/16 x 8-13/16	40
	or			
1	Magnetic Controller CG–21630	----------	19-15/16 x 20-7/16 x 8-13/16	40
1	Motor-Generator Unit CG–21633	----------	14-1/8 x 38-1/4 x 11-1/4	320
1	Transmitter Unit CG–52216A	----------	52-5/16 x 25 x 18-1/4	285

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,210

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	68.1	1,334

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

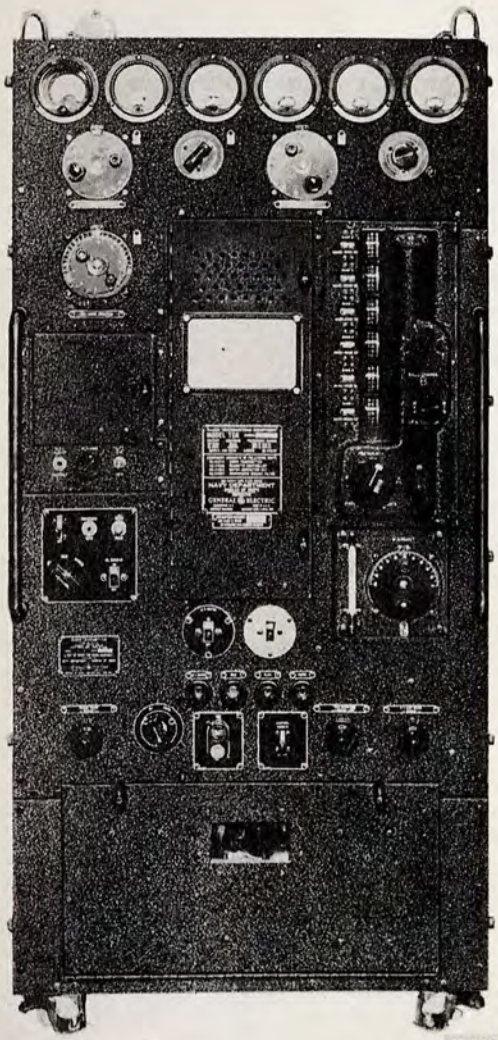
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	TCG–34112, 26 December 1941	$9,578.00 including equipment spares

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TCK–3

USA	USN	USAF
TYPE CLASS: --	Used by --	--
STOCK NO: --	220 Ac: F16–Q–320995–200 (Navy)	--
	440 Ac: F16–Q–321005–200 (Navy)	



TCK-3

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCK–3 is used for mf and hf telegraph and telephone transmission at shore installations, particularly at advanced bases. The equipment is not limited solely to this application since installation of proper shock mounting adapts it for use on shipboard. The equipment is small in size with a relatively high output, and is for use where space is at a premium. The transmitter may be operated from the front panel or from a remote location by use of standard four- or six-wire remote control unit.

All models of the TCK series are similar electrically and mechanically, except that the TCK–4 and TCK–6 use a rectifier and a transmission line coupling unit. Models of the TCK series are not interchangeable due to minor circuit modifications and differences in power requirements.

Equipment required but not supplied: Navy standard four- or six-wire remote control unit.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc in 6 bands
Frequency Control: Master oscillator
Type of Signal: Cw, voice
Keying Data: Relay keying, maximum speed of 100 wpm
Nominal Power Output:
Cw: 400 w
Voice: 100 w
Input Impedance:
To Microphone: 70 ohms
To Line: 500 ohms
Power Requirements: 2.3 kw, 115/230-v dc; or 2.4 kw 220/440-v 60-cycle 3-phase ac

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Magnetic Controller CG–21627 (115-v dc operation)		29-3/16 x 19-7/16 x 3-11/16	130
	or			
1	Magnetic Controller CG–21628 (230-v dc operation)		29-3/16 x 19-7/16 x 13-11/16	130
	or			
1	Magnetic Controller CG–21629 (220/440-v ac operation)		19-15/16 x 20-7/16 x 8-13/16	40
1	Microphone CAU–51044A		9-3/4 x 5-1/4 x 2-1/2	2
1	Motor-Generator Unit CG–21631A (115-v dc operation)		14-1/8 x 41-15/16 x 11-1/4	370
	or			
1	Motor-Generator Unit CG–21632A (230-v dc operation)		14-1/8 x 41-15/16 x 11-1/4	370
	or			
1	Motor-Generator Unit CG–21633A (220/440-v ac operation)		14-1/8 x 38-1/4 x 11-1/4	320
1	Transmitter Unit CG–52214A (115-v dc operation)		52-5/16 x 25 x 18-1/4	275
	or			
1	Transmitter Unit CG–52215A (230-v dc operation)		52-5/16 x 25 x 18-1/4	280
	or			
1	Transmitter Unit CG–52216A (220/440-v ac operation)		52-5/16 x 25 x 18-1/4	285

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,210

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	61.0	1,180

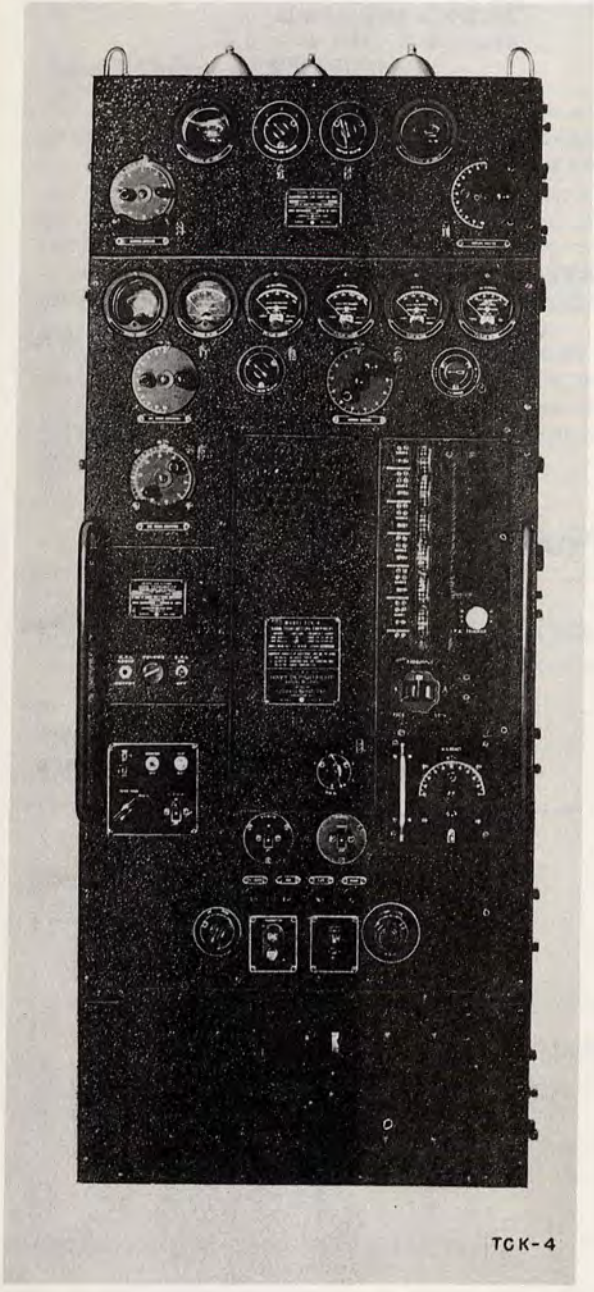
PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips DESIGN COG: USN, BuShips
SPEC &/or DWG: EN28/1362–43 SHIPS; EN28/1258–43 SHIPS; EN28/5820–43

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	NXss–18783, 11 February 1943	$9,578.00 including equipment spares

5 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	110/220 ac: F16–Q–321025–200	--



TCK-4

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCK–4 is used for mf and hf telegraph and telephone transmission at shore installations, particularly at advanced bases. The equipment is not limited solely to this application since installation of proper shock mountings adapts them for use on shipboard. It is small in size with a relatively high output, and is used where space is at a premium. The transmitter may be operated from the front panel or from a remote location by use of a standard four- or six-wire remote control unit.

All models of the TCK series are similar electrically and mechanically, except that the TCK–4 and TCK–6 use a rectifier and a transmission line coupling unit. Models of the TCK series are not interchangeable due to minor circuit modifications and differences in power requirements.

Equipment required but not supplied: Navy standard four- or six-wire remote control unit.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc in 6 bands
Frequency Control: Master oscillator
Type of Signal: Cw, voice
Keying Data: Relay keying, maximum speed 100 wpm
Nominal Power Output:
Cw: 400 w
Voice: 100 w
Input Impedance:
To Microphone: 70 ohms
To Line: 500 ohms
Power Requirements: 1.8 kw, 110/220-v 60-cycle 1-phase ac

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Line Coupling Unit CG–50139	----------	11-15/32 x 25 x 16-3/32	65
1	Microphone CAU–51044A	----------	9-3/4 x 5-1/4 x 2-1/2	2
1	Rectifier CG–20219	----------	51-25/32 x 24-13/16 x 16	375
1	Transmitter Unit CG–52299	----------	52-5/16 x 25 x 18-1/4	290

REFERENCE DATA AND LITERATURE:
NAVSHIPS 900,210

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	102.7	1,275

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL–R–15526
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	NXss–18783, 22 February 1943	$9,578.00 including equipment spares

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TCK–5

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(See Illustration of TCK, p. 661)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCK–5 is used for mf and hf telegraph and telephone transmission at shore installations, particularly at advanced bases. This equipment is not limited solely to this application since installation of proper shock mountings adapts it for use on shipboard. It is small in size with a relatively high output, and is used where space is at a premium. The transmitter may be operated from the front panel or from a remote location by use of a standard four- or six-wire remote control unit.

All models of the TCK series are similar electrically and mechanically, except that the TCK–4 and TCK–6 use a rectifier and a transmission line coupling unit. Models of the TCK series are not interchangeable due to minor circuit modifications and differences in power requirements.

Equipment required but not supplied: Navy standard four- or six-wire remote control unit.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc in 6 bands
Frequency Control: Master oscillator
Type of Signals: Cw, voice
Keying Data: Relay keying, maximum speed 100 wpm
Nominal Power Output:
Cw: 400 w
Voice: 100 w
Input Impedance:
To Microphone: 70 ohms
To Line: 500 ohms
Power Requirements: 2.3 kw, 115-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Magnetic Controller CG–21627	----------	29-3/16 x 19-7/16 x 13-11/16	130
1	Microphone CAU–51044A	----------	9-3/4 x 5-1/4 x 2-1/2	2
1	Motor-Generator Unit CG–21631A	----------	14-1/8 x 41-15/16 x 11-1/4	370
1	Transmitting Unit CG–52214A	----------	52-5/16 x 25 x 18-1/4	275

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,210

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	64.5	1,335

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	TCG–36083, 16 June 1943	$9,578.00 including equipment spares

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TCK–6

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(See Illustration of TCK–4, p. 673)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCK–6 is used for mf and hf telegraph and telephone transmission at shore installations, particularly at advanced bases. This equipment is not limited solely to this application since installation of proper shock mountings adapts it for use on shipboard. It is small in size with a relatively high output, and is used where space is at a premium. The transmitter may be operated from the front panel or from a remote location by use of a standard four- or six-wire remote control unit.

All models of the TCK series are similar electrically and mechanically except that the TCK–4 and TCK–6 use a rectifier and a transmission line coupling unit. Models of the TCK series are not interchangeable due to minor circuit modifications and differences in power requirements.

Equipment required but not supplied: Navy standard four- or six-wire remote control unit.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc in 6 bands
Frequency Control: Master oscillator
Type of Signal: Cw, voice
Keying Data: Relay keying, maximum speed 100 wpm
Nominal Power Output:
Cw: 400 w
Voice: 100 w
Input Impedance:
To Microphone: 70 ohms
To Line: 500 ohms
Power Requirements: 1.8 kw, 110/220-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Line Coupling Unit CG–50139	----------	11-15/32 x 25 x 16-3/32	65
1	Microphone CAU–51044A	----------	9-3/4 x 5-1/4 x 2-1/2	2
1	Rectifier CG–20219	----------	51-25/32 x 24-13/16 x 16	375
1	Transmitter Unit CG–52299	----------	52-5/16 x 25 x 18-1/4	290

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,210

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	102.7	1,275

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	TCG–36083, 30 Jun 1943	$9,578.00 including equipment spares

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TCK–7

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(See Illustration of TCK, p. 661)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCK–7 is used for mf and hf telegraph and telephone transmission at shore installations, particularly at advanced bases. This equipment is not limited solely to this application since installation of proper shock mountings adapts it for use on shipboard. The equipment is small in size with a relatively high output, and is used where space is at a premium. It may be operated from the front panel or from a remote location by use of a standard four- or six-wire remote control unit.

All models of the TCK series are similar electrically and mechanically except that the TCK–4 and TCK–6 use a rectifier and a transmission line coupling unit. Models of the TCK series are not interchangeable due to minor circuit modifications and differences in power requirements.

Equipment required but not supplied: Navy standard four- or six-wire remote control unit.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc in 6 bands
Frequency Control: Master oscillator
Type of Signal: Cw, voice
Keying Data: Relay keying, maximum speed 100 wpm
Nominal Power Output:
Cw: 400 w
Voice: 100 w
Input Impedance:
To Microphone: 70 ohms
To Line: 500 ohms
Power Requirements: 2.3 kw, 230-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Magnetic Controller CG–211197	----------	17-5/16 x 11-9/16 x 10-5/8	46
1	Microphone CAU–51078	----------	10-3/8 x 5-1/4 x 2-5/8	2-1/4
1	Motor-Generator Unit CGU–21632A	----------	14-1/8 x 41-15/16 x 11-1/4	345
1	Transmitter Unit CG–52345	----------	52-5/16 x 25 x 18-1/4	285

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,210

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
8	72.4	1,221

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co	Schenectady, N. Y	NXsr–53304, 16 Mar 1944	$9,578.00 including equipment spares

RADIO TELEPHONE TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TCR

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16–Q–324675–200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Telephone Transmitting Equipment TCR is a medium-power mf radiotelephone transmitter used at shore stations for communication with ships or other shore stations.

This equipment is specifically designed for remote control operation, and since only 58 feet of cable are supplied to connect the control units to the transmitter, location of the units must be carefully calculated.

Although it is still in use, the TCR has been superseded by Radio Transmitting Equipment TDF.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 3,000 kc (6 pretuned channels)
Frequency Control: Crystal
Type of Signal: Mcw, voice
Power Output (Average): 125 w
Keying:
Type: Relay
Speed: 40 wpm
Antenna: Single-wire, quarter-wave with suitable ground, 50 to 65 feet
Power Requirements: 1.01 kw 105–125/210–250-v 50/60-cycle 1-phase ac (Conversion kits are available for operation on 220-v 25-cycle 3-phase ac; 44-v dc; 115-v dc; and 230-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cable equipment	----------	50 ft lg	
2	Control Unit 23242	----------	8-1/4 x 14 x 9-1/4	16 ea
1	Fused Line Switch 31322	----------	7-1/2 x 6-1/2 x 4	4.25
2	Hand Telephone Assembly 51027	----------	5-1/2 x 9 x 7-1/2	5 ea
1	Radio Transmitter 52207	----------	61-1/4 x 34 x 20	690
2	Telegraph Key type CQ	----------	1-3/8 x 2-7/8 x 5-1/2	0.33 ea

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	74	1,660

AN/FRT-type RADIO TELEPHONE TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

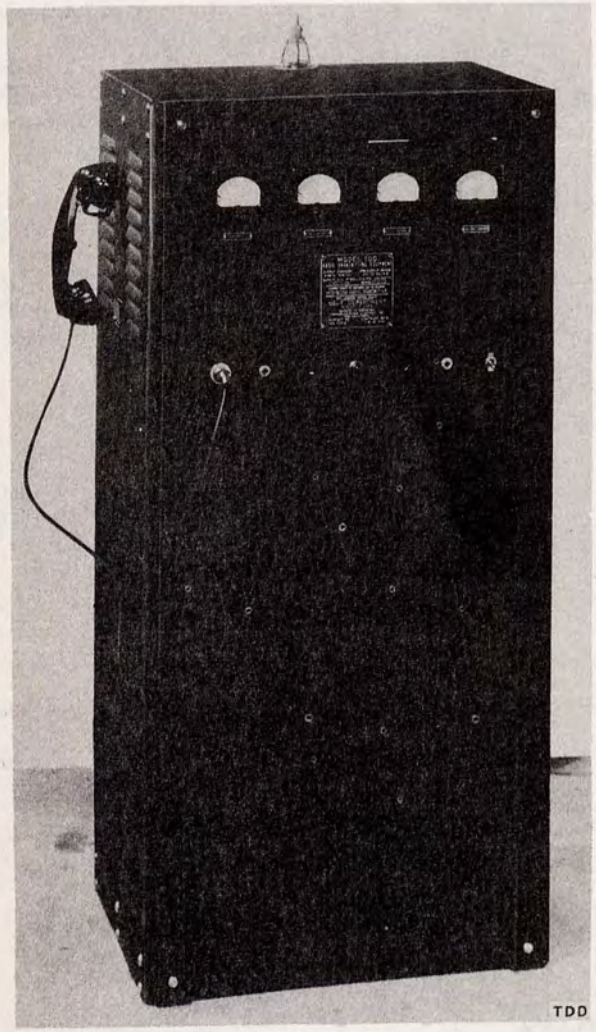
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.	NOs–87455, 18 June 1941	

RADIO TELEPHONE TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN:

TDD, TDD–1, –2, –3, –4

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



TDD

FUNCTIONAL DESCRIPTION:

Radio Telephone Transmitting Equipment TDD, TDD–1, –2, –3, and –4 are low-power transmitters for use in airport traffic control towers. They are crystal controlled and operate in the frequency range of 200 to 550 kilocycles. Provisions are made for connection of a remote telephone or microphone and a muting relay. The muting relay prevents feed-back or objectionable interference when a receiver is used in conjunction with the transmitter equipment. Models of the TDD series are electrically and mechanically interchangeable. Antenna (Crystals NT–40,000) is required, but not supplied with the basic equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range: 200 to 550 kc in 3 bands
Frequency Control: Crystal
Type Emission: A3
Amplitude Modulation: 100%
Power Output: 15 w average
Power Requirements: 330 w; 115-v ±10%, 60-cycle, 1-phase ac
Antenna Type: Single-wire, 100 to 500 feet

AN/FRT-type RADIO TELEPHONE TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	TDD or TDD–1			
1	Radio Telephone Transmitting Equipment, consisting of:			
	Cabinet		18 x 25-1/2 x 52	120
	Radio Transmitter NT–52258		14 x 14 x 19	70
	TDD–2			
1	Radio Telephone Transmitting Equipment, consisting of:			
	Cabinet		18 x 25-1/2 x 52	120
	Radio Transmitter NT–52258–A		14 x 14 x 19	70
	TDD–3			
1	Radio Telephone Transmitting Equipment, consisting of:			
	Cabinet		18 x 25-1/2 x 52	120
	Radio Transmitter NT–52258–B		14 x 14 x 19	70
	TDD–4			
1	Radio Telephone Transmitting Equipment, consisting of:			
	Radio Transmitter NT–52258–C		17-5/8 x 22 x 51-3/4	190
	Set of equipment spares and accessories		9 x 12-3/4 x 18-1/2	62

REFERENCE DATA AND LITERATURE:

TDD–2: NAVSHIPS 900,271–1B
TDD–3: NAVSHIPS 900,271–1B
TDD–4: NAVSHIPS 91499

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	39.72	452

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG: MIL-R-15588

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
TDD-2:			
Communications Co., Inc.	Coral Gables, Fla.	NXsr-38851, 11 October 1943	$1,100.00 including equipment spares
TDD-3:			
Communications Co., Inc.	Coral Gables, Fla.	NXsr-90765, 23 January 1945	$1,100.00 including equipment spares
TDD-4:			
Starrett Television Corp.	New York, N. Y.	NObsr-52247, 2 Feb-1951	$1,100.00 including equipment spares

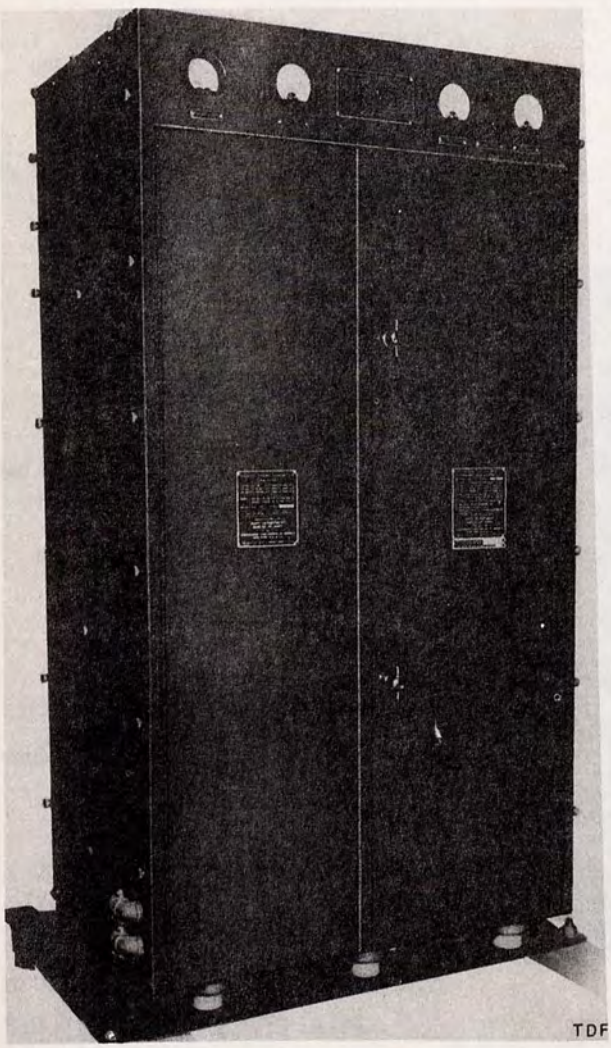
RADIO TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN: TDF

USA USN USAF

TYPE CLASS:
STOCK NO:

Used by
115KC: 16–Q–332895–200
220KC: 16–Q–332905–200


TDF

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TDF is designed for installation at shore stations for communication with ship or other shore stations. This equipment is similar to Radio Telephone Transmitting Equipment TCR, but has a greater frequency range.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2.0 to 9.4 mc
Type of Signal: Cw, mcw, voice
Keying Data: Relay keying, 40 wpm
Nominal Power Output: 125 w
Antenna Data: Quarter-wave antenna with suitable ground system
Power Requirements: 1,000 w, 105–125/210–250-v 50–60-cycle 1-phase ac; conversion kits are available for other power sources

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Control Unit 23288		8-1/4 x 14 x 9-1/4	16
2	Hand Telephone Assembly 51027		5-1/2 x 9 x 7-1/2	5
1	Main Line Safety Switch 24969		7-1/2 x 6-1/2 x 4	4.25
1	Radiotelephone Transmitter 52261		61-1/4 x 34 x 20	690
1	Set of Frequency Conversion Parts			
2	Telegraph Key		1-3/8 x 2-7/8 x 5-1/2	0.33

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95329

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	74	1,660

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips

SPEC &/or DWG:

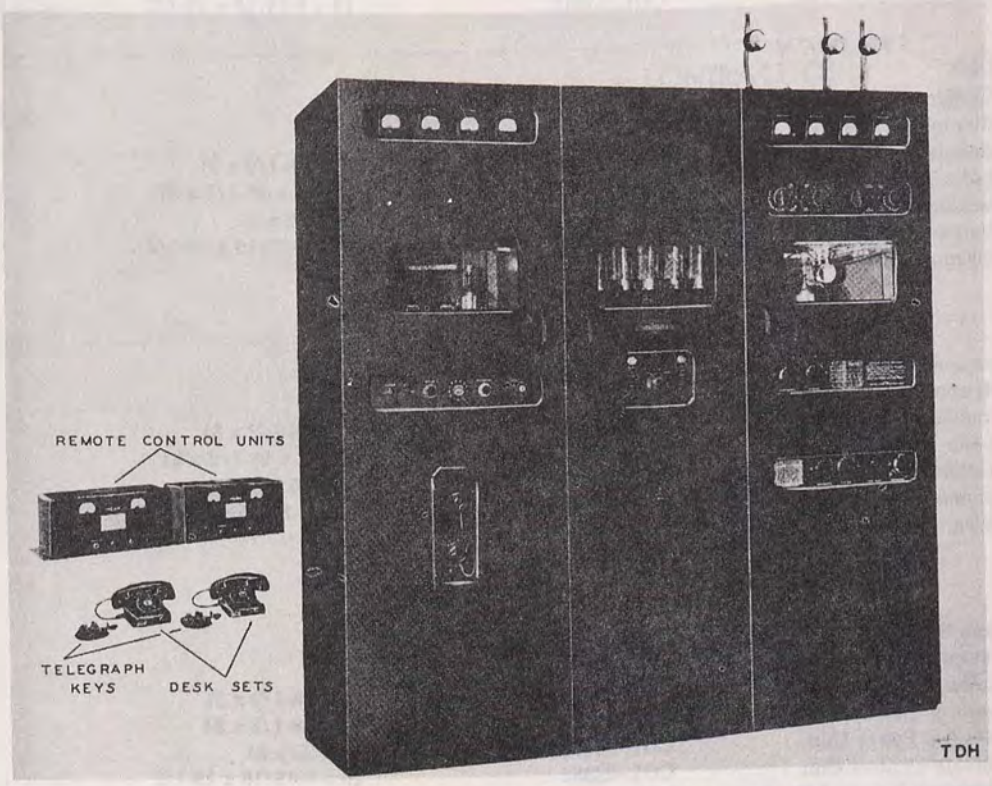
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.	NXs-9542	$3,000.00

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

5 December 1958
Cognizant Serv: USN FSN:

TDH, TDH–2, –3, –4

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	--	TDH–2: 16–Q–333606–200 TDH–3: 16–Q–333608–200 TDH–4: 16–Q–333645–200	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TDH and TDH–2, –3 and –4 are primarily intended for land applications involving point to point communication, aeronautical ground stations, and other services requiring operation on a number of readily selected frequency channels. The units are equipped with an automatic telephone dial system which permits the selection of any one of eleven pretuned frequency channels, and may be operated at the transmitter, or from a remote location. The TDH, TDH–2, –3 and –4 are similar electrically and mechanically, and differ only in minor modifications.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 18.1
Type of Emission: A1, A2, A3
Keying: A1—200 wpm maximum; A2—60 wpm max
Power Output: At 2 to 12 mc, 3 kw; at 12 to 18.1 mc, 2.5 kw
Power Source Required:
Transmitter—9.92 kw, 230-v, 50 to 60-cycle, 3-phase ac (.84 pf).
Remote Control Unit—52 w, 115-v, 50- to 60-cycle, 1-phase ac (0.86 pf)

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For TDH			
2	Desk Set Collins	20N406		
1 set	Equipment Spares			
3	Microphone	CTE–51004		
1	Modulator	COL–50129	84 x 28-1/2 x 31	830
1	Radio Transmitter	COL–52291	95-5/8 x 28-1/2 x 31	775
1	Rectifier Power Unit	COL–20196	84 x 25 x 31	1,350
2	Remote Control Unit	COL–23351	19 x 8-15/16 x 10-1/2	80
	For TDH–2			
1 set	Equipment Spares			
3	Microphone Collins	20N406		
1	Modulator	COL–50129	84 x 28-1/2 x 31	800
1	Radio Transmitter	COL–52291	95-5/8 x 28-1/2 x 31	775
1	Rectifier Power Unit	COL–20196	84 x 25 x 31	1,350
2	Remote Control Unit	COL–23351	19 x 8-15/16 x 10-1/2	80
2	Telegraph Key and Cord	COL–26019		
	For TDH–3			
1 set	Equipment Spares			
3	Microphone Collins	20N406		
1	Modulator	COL–50129	84 x 28-1/2 x 31	830
1	Radio Transmitter	COL–52291	95-5/8 x 29-1/2 x 31	775
1	Rectifier Power Unit	COL–20196	84 x 25 x 31	830
2	Remote Control Unit	COL–23384	19 x 8-15/16 x 19-1/2	105
2	Telegraph Key and Cord	COL–26019		
	For TDH–4			
2	Desk Set Collins	223G–B		
1 set	Equipment Spares			
1	Modulator	COL–50129	84 x 28-1/2 x 31	830
1	Radio Transmitter	COL–52343	86 x 28-1/2 x 31	749
1	Rectifier Power Unit	COL–20196	84 x 25 x 31	1,350
2	Remote Control Unit	COL–23384	19 x 8-15/16 x 19-1/2	105
2	Telegraph Key and Cord	COL–26019		

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95531, 95332, 900,904, 900,798

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
22	475	6,000

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

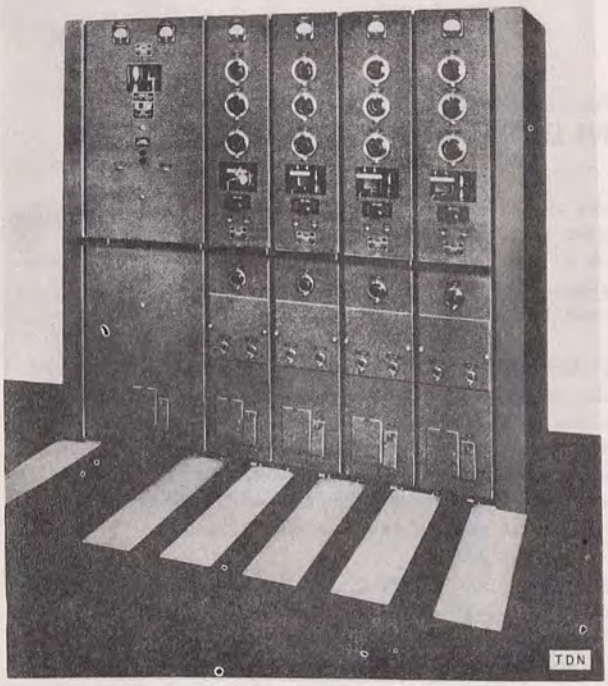
DESIGN COG: BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NXss-5515 NXss-25888 NXss-21717 NXsr-55667	$11,000.00

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

6 October 1958
Cognizant Serv: USN FSN: TDN

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–Q–334400–100	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TDN is a multichannel radio telegraph transmitter made up of separate radio-frequency units for different channels. The use of these separate units makes possible simultaneous operation on several frequencies and rapid frequency change without using completed RF switching.

Each RF unit is a complete telegraph transmitter, lacking only a power supply to operate independently. It is designed for operation on its own RF line and antenna system. The audio amplifier unit is a complete audio-frequency equipment that provides voice transmission throughout the frequency range of the equipment.

The transmitter is used at aircraft ground stations and for general communications. Remote control is possible at distances up to 1/2 mile.

TECHNICAL CHARACTERISTICS:

RF Unit:
- Frequency Range in Mc: 2 to 20 in three bands
- Frequency Control: Crystal
- Type Signal: AM
- Type Transmission: Cw, voice
- Modulation: 100% with maximum input of 4 kw from power amplifier
- Impedance, RF Line: 400 to 700 ohms

AF Unit:
- Type: Balanced speech and power audio amplifier for modulation of single RF unit
- Power Output: 3 kw
- Distortion:
  - *95% Modulation:* Less than 10%
  - *70% Modulation:* Less than 50%
- Overall Frequency Response: 300 to 4,000 cps within 3 db
- Power Requirements (Four RF Units in Use): 20 kw, 220-v 50- to 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Lock Control Unit 23357	----------	7 x 19 x 4-1/2	10
1 set	Miscellaneous hardware			
1	Plate Transformer 301046	----------	26-1/2 x 15-1/2 x 26	
4	Radio Transmitter:			
(1)	52349	----------	72 x 11-1/4 x 34	
(2)	52350	----------	72 x 11-1/4 x 34	
(1)	52351	----------	72 x 11-1/4 x 34	
1	Rectifier Power Unit 301046	----------	71-3/4 x 22-1/2 x 34-1/4	

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

Instruction book for Navy Model TDN Radio Transmitting Equipment

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Corp.	Newark, N. J.	NXss–18118, 24 November 1942 (Cw transmission only)	

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

7 October 1958
Cognizant Serv: USN FSN: TDN-2, 5820-644-4879 (with equipment spares) TDN-2, TDN-3, TDN-4
TDN-3, 5820-642-6403
5820-665-1784 (with equipment spares)
TDN-4, 5820-462-6368
5820-665-2312 (with equipment spares)

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TDN-2, TDN-3, and TDN-4 are multichannel radio telegraph transmitters using separate radio-frequency units for different channels. The use of these separate units makes possible not only simultaneous operation on several frequencies but also rapid frequency change without using complicated RF switching.

Each RF unit is a complete telegraph transmitter, lacking only the power supply to operate independently. Each unit operates with a separate antenna. The audio amplifier unit is a complete audio-frequency equipment that provides voice transmission throughout the frequency range of the transmitting equipment. The stations can be controlled at the transmitter location or from a remote location at distances up to 1/2 mile.

The TDN-2 and TDN-3 have crystal oscillator control on five and six preset channels, respectively. The TDN-4 has master oscillator control and has been modified to facilitate connection of external frequency-shift keying apparatus.

The radio transmitting equipment is designed for use at aircraft ground stations or for general shore station communications.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 20 in three bands
Number of Preset Frequencies:
TDN-2, TDN-4: 5
TDN-3: 6
Frequency Control: Quartz crystal or Colpitts master oscillator
Type Signal: AM
Type Transmission:
TDN-2, TDN-3: Cw
TDN-4: Cw, voice
Nominal Power Output: 3 kw for keyed cw or intermittent PHONE per transmitter
Audio Input Level: 25 db below 6 mw
Frequency Response: Flat within 3 db between 300 and 4,000 cps
Input Impedance: 500 ohms
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spare parts (less tubes)	----------	----------	940 (TDN-2) 970 (TDN-3) 1,017 (TDN-4)
1	Local control and keyer cabinet, including:	----------	20-3/4 x 22 x 76-3/16	320
3	Keying unit			
1	Operator's control unit			
1	Selector control unit			
1	Local control and keyer cabinet (TDN-2), including:	----------	20-3/4 x 22 x 76-3/16	325
1	Keyer Power Supply 20322	----------	6-25/32 x 6-31/32 x 19	20
2	Keying Unit 23466	----------	6-19/32 x 6-31/32 x 19	15

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Operator's Control Unit 23465		5-7/32 x 9-11/16 x 19	16
1	Selector Control Unit 23464		15-5/16 x 19 x 24-15/32	115
1	Local control and keyer cabinet (TDN–3), including:		20-3/4 x 22 x 76-3/16	335
1	Keyer power supply			
3	Keyer unit			
1	Operator's unit			
1	Selector control unit			
1	Local control and keyer cabinet (TDN–4), including:		20-3/4 x 22 x 76-3/16	325
1	Keyer power supply			
2	Keying unit			
1	Local Control Switch Panel 23470		6 x 6-31/32 x 19	6
1	Operator's control unit			
1	Selector control unit			
2	Master oscillator cabinet, including:		19-5/8 x 22 x 76-3/16	395
1	Oscillator Power Supply 20323			
1	Patchboard Panel 23472		4-1/4 x 7 x 19	5
1	Patchboard Panel 23511		4-1/4 x 7 x 19	5
4	RF Oscillator 35059		8-3/4 x 15-1/4 x 19	40
3	Transmitter connector panel RE–23–F–2268		2-7/8 x 3-3/4 x 8-5/8	1
2	Modulator 50204 (TDN–4)		11-1/4 x 34 x 72	496
1 set	Operating tubes			93 (TDN–2) 108 (TDN–3) 123 (TDN–4)
2	Plate Transformer 301046–A		18-1/2 x 25-11/16 x 26-1/4	750
2	Radio Transmitter 52349		11-1/4 x 34 x 72	296
2	Radio Transmitter 52350		11-1/4 x 34 x 72	296
1 (TDN–2, –4) 2 (TDN–3)	Radio Transmitter 52351		11-1/4 x 34 x 72	296
1 set	Spare tubes			93 (TDN–2) 108 (TDN–3) 123 (TDN–4)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,709

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
25 for TDN–2	816.5	11,104
18 for TDN–3	801.75	9,162
23 For TDN–4	938	10,688

PROCUREMENT DATA

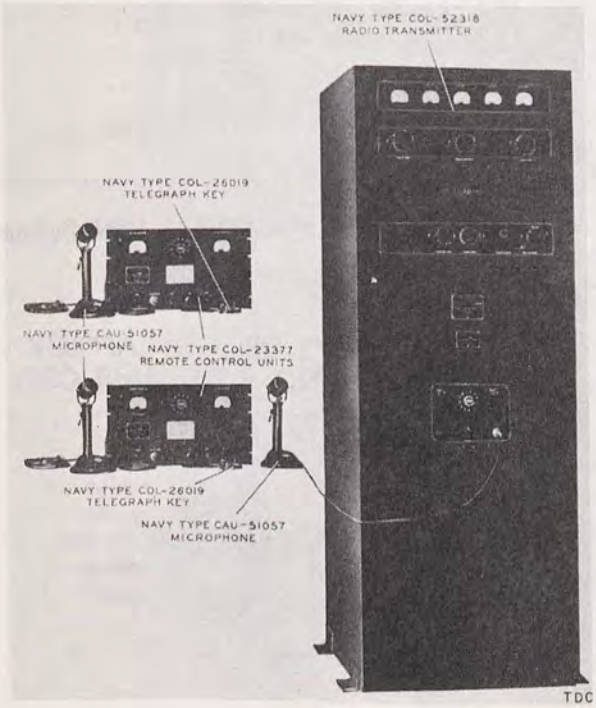
PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Corp.	Clifton, N. J.	NXsr–51522, 3 March 1944	$26,100, (TDN–2) with equipment spares $28,000 (TDN–3) with equipment spares $29,700 (TDN–4) with equipment spares

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

9 October 1953
Cognizant Serv: USN FSN: 5820-265-8325 TDO
5820-665-2283 (with equipment spares)

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-335815-200	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TDO is a medium-powered, high-frequency radio transmitter used at shore stations for point-to-point communication. It uses an autotune system for instantaneous selection of any one of 11 preset channels. Channel selection is made by a telephone dial on the transmitter panel or at the remote control unit.

The remote control units may be used for complete control of the equipment at any distance where the total line loss does not exceed 25 decibels. An electronic carrier control permits keying speeds up to several hundred words per minute for continuous-wave operation and 60 words per minute for modulated continuous-wave operation. A master oscillator is used for frequency control.

The radio transmitter is designed to operate into an unbalanced 70- to 600-ohm antenna or line.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 18.1
Frequency Control: Master oscillator, 10 preset channels
Type Signal: AM
Type Transmission: Cw, mcw, voice
Nominal Power Output:
Cw: 400 w
Mcw and Voice: 250 w
Keying Data:
Cw: 200 wpm
Mcw: 60 wpm
Input Impedance: 500 ohms
Power Requirements:
Transmitter: 1,570 w; 115/230-v 50- to 60-cycle 1-phase ac
Remote Control Unit: 25 w, 115-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Accessories			
1 set	Equipment spares	----------	----------	100
3	Microphone 26019			
1	Radio Transmitter 52318	----------	80-5/8 x 28 x 28-1/8	1,140
2	Remote Control Unit 23377	----------	8 x 19 x 10-1/2	60
2	Telegraph Key 26019			
2 sets	Vacuum tubes	----------	----------	10

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95336

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
12	164.9	2,372

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

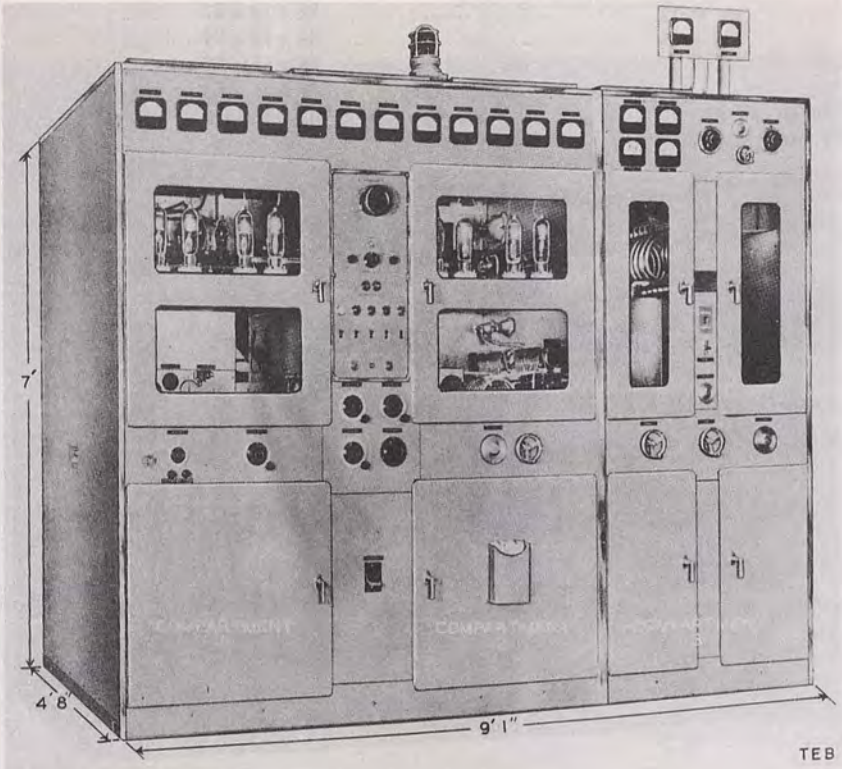
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NXss–20834, 5 January 1943	$9,578 with equipment spares
		NXss–24869, 27 February 1943	$9,578 with equipment spares

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

17 October 1958
Cognizant Serv: USN FSN: 5820-642-6165 TEB
5820-665-2281 (with equipment spares)

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-338850-200	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TEB is a high-powered, high-frequency shore-based equipment used for radiotelegraph or frequency-shift operation in shore-to-ship and point-to-point communication within line-of-sight distances. Six preset crystal-controlled channels are available, and provision is made for connecting an external master oscillator.

Vacuum-tube keying speeds up to 400 words per minute are possible. An external frequency-shift keyer unit may be connected for teletypewriter operation. An automatic control circuit will shut down the entire unit, except for the blowers and oscillator oven, if the transmitter is not keyed for a predetermined period, adjustable from 2 to 30 minutes.

The TEB is designed to work into a balanced two-wire transmission line of 550 to 600 ohms impedance and zero reactance.

This equipment is essentially the Press Wireless Co. Model PW-15 and is identical with Radio Transmitter T-172/FR.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 21
Frequency Control: Crystal
Frequency Stability: Better than 1 cps/mc/°C in ambient temperature of 140° F
Ambient Temperature Limits: 0° to 50°C
Type Signal: AM., FM
Type Transmission: Cw, fsk
Type Keying: Vacuum tube
Keying Speed: 400 wpm or better
Carrier Output:
Cw into 600-ohm Load: 15 kw
Frequency-shift into 600-ohm Load: 15 kw
Power Output: 15 kw
Output Impedance: Balanced two-wire line of 550 to 650 ohms
Power Consumption:
Key Down: 35 kw for 15-kw RF output
Key Up: 6.9 kw for zero RF output
Power Requirements: 0.945 pf, 207- to 253-v 57- to 63-cycle 3-phase ac

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares:			
	Box 1		38 x 19 x 27	201
	Box 2		38 x 15 x 27	208
	Box 3		38 x 15 x 27	200
	Box 4		38 x 21 x 28	622
1	Radio Transmitter 52353		84 x 109 x 56	6,365
1 set	Vacuum tubes (operating and spare):			
	Box 1		34 x 17 x 30	40
	Box 2		38 x 19 x 27	94
	Box 3		53 x 23 x 27	186
	Box 4		41 x 21 x 28	94
	Box 5		41 x 21 x 28	94

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,352(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
20	834	15,628

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

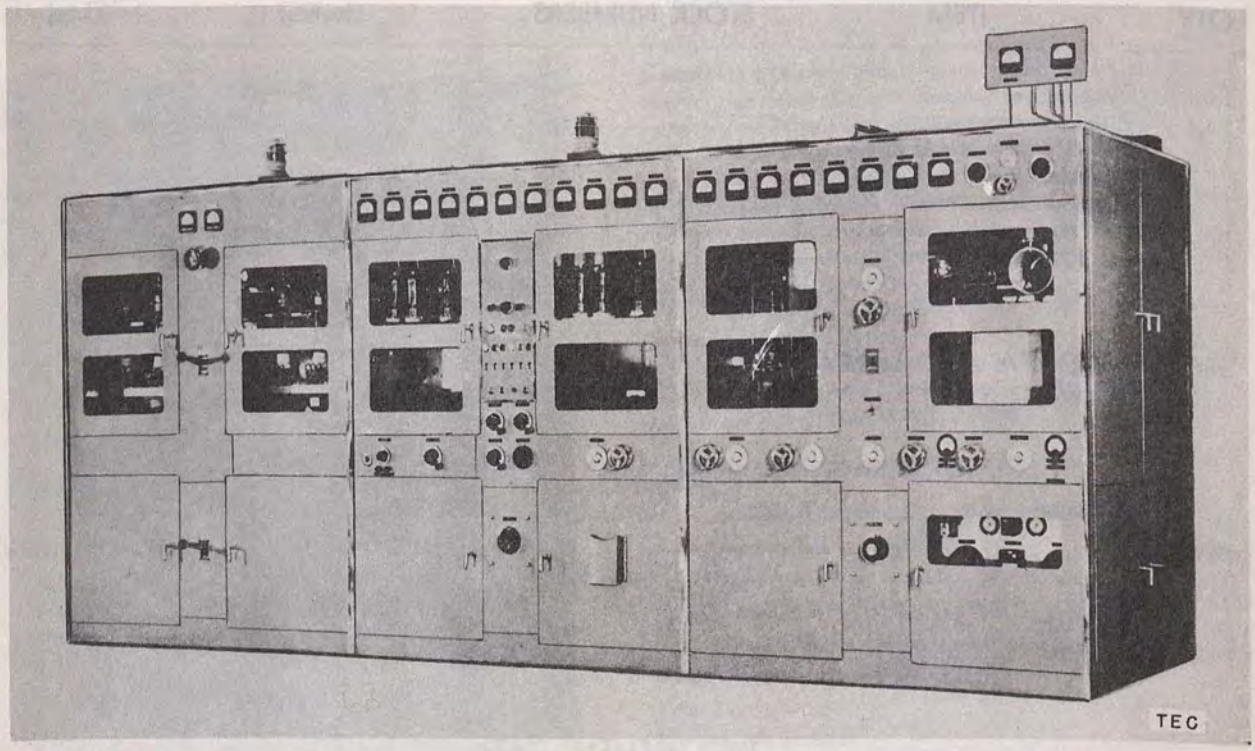
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Press Wireless Manufacturing Corp.	Long Island City, N. Y.	NXsr-55605	$38,500.00
		NXsr-83381	38,500.00
		N5sr-10537	38,500.00
		N5sr-17791	38,500.00

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

17 October 1958
Cognizant Serv: USN FSN: 5820-642-6149 TEC
5820-665-2048 (with equipment spares)

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-339595-200	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TEC is a shore-based unit used for high-powered, high-frequency radiotelegraph or frequency-shift operation in shore-to-ship and point-to-point communication. Six preset crystal-controlled channels available, and provision is made for connecting a master oscillator.

Vacuum-tube type keying speeds up to 400 words per minute are possible. An external frequency-shift keyer may be connected for teletypewriter operation. An automatic control feature will shut down the equipment if it is not keyed for any predetermined period, adjustable from 2 to 30 minutes. The control section provides overload protection for both driver and power amplifier stages.

The TEC may be used in conjunction with a single-sideband transmitter, the output of which is fed into the power amplifier stage of the TEC. The TEC is designed to work into a balanced two-wire transmission line of 550 to 650 ohms impedance with zero reactance.

This equipment is essentially The Press Wireless Model PW-40.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 21
Frequency Control: Crystal or external oscillator
Frequency Stability: Drift less than 2 cps/mc at 20°C (68°F.) ambient temperature
Type Signal: AM, FM
Type Transmission: Cw, voice, fsk
Type Keying: Vacuum tube
Keying Speed: 400 wpm or better
Carrier Output:
Cw into 550- to 650-ohm Load: 40 kw
Voice into 550- to 650-ohm Load: 30 kw
Frequency-shift into 550-to 650-ohm Load: 40 kw
Power Output:
Normal Operation: 40 kw
Without Power Amplifier: 2 kw

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

Heat Dissipation:
Power Amplifier: 22 kw
Exciter: 2 kw
Main Rectifier: 2 kw

Power Consumption:
Key Down: 95 kw
Key Up: 38 kw at zero frequency output
Power Requirements: 0.95 pf, 207- to 253-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Accessories			234
1 set	Equipment spares			4,393
1	Radio Transmitter Unit 52354, consisting of:			
1	Exciter section		84-1/2 x 82 x 56	3,650
1	Power amplifier section		84-1/2 x 82 x 56	3,105
1	Power rectifier section		84-1/2 x 82 x 56	2,780

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,212–X

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
52	2,343	35,136

PROCUREMENT DATA

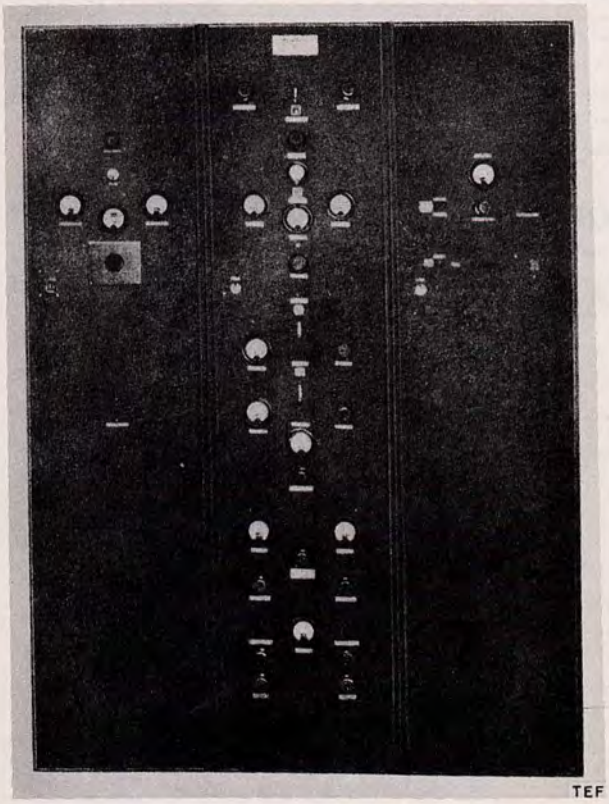
PROCURING SERVICE: USN
SPEC &/or DWG:
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Press Wireless Manufacturing Corp.	Long Island City, N. Y.	NXsr–55605, 2 January 1955	$38,816 with equipment spares
		N5sr–807 23 April 1945	$38,816 with equipment spares

RADIO TRANSMITTING EQUIPMENT AN/FRT-type

17 October 1958
Cognizant Serv: USN FSN: 5820-642-6215 TEF
5820-665-3847 (with equipment spares)

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-339600-200	--



TEF

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TEF is a medium-powered, high-frequency short wave radiotelephone transmitter for use in transoceanic communication. It provides two telephone channels in a twin-channel, single-sideband system or, alternatively, one conventional double-sideband channel. The equipment is designed for installation at shore stations.

The transmitting equipment is exceptionally flexible in its disposition of communication channels to reduce interference or interchannel crosstalk. The change from single- to double-sideband operation is made by a relay operated at the transmitter or from a remote control panel and may be adjusted for any one of six preset frequencies.

The TEF has a monitor circuit that is used to measure the degree of distortion at the output.

This equipment is essentially the Western Electric Co. Model D-156000 and is the transmitting component of Radio Sets AN/FRC-10 and AN/FRC-10A.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4.5 to 22 (by modification, 4 to 20)
Frequency Control: Crystal oscillator
Type Signal: AM
Type Transmission: Cw, mcw, voice
AF Input: Two independent channels from 100 to 6,000 cps
Speech Input Level: ±5 db
Tone Input: 1 mw
Signal-to-Noise Ratio:
Single Side Band: 50 db plus
Double Side Band: 40 db plus
Peak Power Output: 2 kw
Average Power Output: 500 w
Antenna: 400- to 800-ohm open-wire line or 200-ohm balanced concentric line
Power Requirements: 5 kw, 220- to 235-v 50- to 60-cycle 3-phase ac

AN/FRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter, WECo Model D–156000, consisting of:		90 x 69 x 27	2,400
4	Amplifier:			
(1)	50221		7 x 20-1/4 x 27	
(1)	50222		7 x 20-1/4 x 27	
(1)	50223		7 x 20-1/4 x 27	
(1)	50224		19-1/4 x 20-1/4 x 27	
1	Antenna Matching Transformer 47626		7-7/8 x 19 x 19-1/4	
1	Attenuator Panel 632781			
1	Crystal Filter A and B 53220			
1	Double Sideband Input Panel 50219		8-3/4 x 27 x 20-1/4	
1	Grounding Panel 10452			
1	High-Frequency Distribution Panel 10454			
1	Jack Panel 49737		9/16 x 13/16 x 3-15/32	
1	Key Panel 26023			
1	Low-Frequency Distribution Panel 10453			
1	Low-Power High-Frequency Unit 35067		10 x 19 x 27	
2	Modulator:			
(1)	50218 (1A)		5-1/4 x 8-3/4 x 19	
(1)	50246 (1B)		5-1/4 x 8-3/4 x 19	
1	Monitor Panel 60126			
1	Multi-Circuit Low-Frequency Panel 50220		12-1/4 x 27 x 20-1/4	
8	Rectifier Unit:			
(1)	20356			
(1)	20357			
(1)	20358			
(1)	301640			
(1)	301641			
(1)	20359		14 x 19 x 26	
(1)	20360		12 x 20-1/4 x 12-5/8	
(1)	20361		12 x 20-1/4 x 12-5/8	
1	Screen Supply Regulator Panel 20362		6 x 27 x 19	
1	Voltage Regulator 301642		8 x 7 x 19-5/16	
1	Voltmeter Switching Panel 49737			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95356
TM 11–832

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co., Inc.	New York, N. Y.	NXs-60059	$55,000.00

RADIO COMMUNICATION TRANSMITTING EQUIPMENT AN/FRT-type

20 October 1958
Cognizant Serv: USN FSN: 5820-642-6153 TEG-1
5820-665-2269 (with equipment spares)

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Communication Transmitting Equipment TEG-1 is a highly flexible radio transmitter designed for shore installations. Interference with other units of a duplex communication system are minimized, and instant contact with receiving units on preselected frequency channels are assured by temperature-controlled crystal and oscillator circuits and calibration circuits that simplify checking the accuracy of the self-excited oscillator against crystal-controlled frequencies.

At the transmitter, the control panel permits the choice of 10 preset frequencies and 1 manually controlled frequency and 5 types of carrier emission with 3 power levels. A motor-driven frequency selector and relay switching system permits a complete transfer from one operation to another in less than 25 seconds.

The transmitting equipment may be used for local operation or remote operation from up to 10 remote stations. Both amplitude and frequency-shift modulation are available at either position.

TECHNICAL CHARACTERISTICS:

Frequency Range: 200 to 2,000 kc, 1 preset channel 2,000 to 18,100 kc, 9 preset channels and 1 manual
Frequency Control: Crystal
Type Signal: AM, FM
Type Transmission: Cw, mcw, voice, fsk
Type Keying: Vacuum tube
Keying Speeds:
Cw: Up to 500 wpm
Mcw: Up to 100 wpm
Carrier Output:
Cw: 100 w
Mcw, voice: 80 w
Heat Dissipation: 1,475 w
Power Requirements: 1.6 kw (maximum), key down, 0.95 pf (minimum), 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Tuner, High-Frequency 472067	----------	19-3/8 x 24-1/4 x 30-7/8	220
1	Antenna Tuner, Low-Frequency 472067	----------	19-3/8 x 30-7/8 x 32	232
1	Cable for remote control			
1	Line Terminal 62385	----------	17 x 24-3/8 x 37-1/2	265
1	Power Transformer 304354 (used when power supply is 220-v ac)	----------	7-3/8 x 10-1/8 x 17-3/8	110
1	Power Transformer 304355 (used when power supply is 440-v ac)	----------	8-3/4 x 10-1/4 x 10-3/4	35
1	Radio Transmitter 53272	----------	24 x 30 x 57-3/8	1,190
1	Transmitter Control 23545	----------	11-1/4 x 12 x 23	53
1	Transmitter Control 63546	----------	17 x 24-3/8 x 30	195

AN/FRT-type RADIO COMMUNICATION TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91167.1

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
13	226	4,335

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: USN, BuShips

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division of Radio Corp. of America	Camden, N. J.	NObsr-39339	$44,500.00

REMOTE CONTROL CONSOLE AN/FRW-type

5 December 1958
Cognizant Serv: USN FSN: 5825-665-3571

C-1624/FRW-36

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Remote Control Console C-1624/FRC-36 provides all the control functions necessary to operate a remotely installed one- or two-frequency transmitter, and one or two receivers. The control is used with a frequency-modulated, 2-way radio communications system base station over a two-wire 500- to 600-ohm line.

TECHNICAL CHARACTERISTICS:

Power Requirements: 50 w, 118-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Magnamike Microphone Motorola Model P-7245-B			
1	Remote control console	----------	9 x 12-3/4 x 13	30

REFERENCE DATA AND LITERATURE:

68P836225-0 Motorola Instruction Manual

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/FRW-type REMOTE CONTROL CONSOLE

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola Communications & Electronics, Inc.	Chicago, Ill.	NObsr–64259	$151.00 with spares

RADIO SET CONTROL AN/FRW-type

5 December 1958
Cognizant Serv: USN FSN: C-1846/FRC-42

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set Control C-1846/FRC-46 is a compact unit designed for remote control of base station applications. The units consists of a preamplifier, a tone oscillator, line amplifier, and control circuits enclosed in a steel cabinet for desktop mounting.

TECHNICAL CHARACTERISTICS:

Line Amplifier:
Frequency Response: ±3 db, 400 to 3,500 cps with 1 w output
Input Impedance: 600 ohms (nominal)
Output Impedance: 3.5 ohms
Preamplifier:
Frequency Response: +3 db, 400 to 3,500 cps
Input Impedance: 100,000 ohms (dynamic microphone); 270 ohms (carbon microphone)
Output Impedance: 600 ohms (nominal)
Distortion: Less than 5% at 1,000 cps
Tone Oscillator Frequency:
Control Circuits:
One Channel Control: 105-v with line terminated
Remote Squelch (Maximum): 105-v dc with control pair open; 12-v dc with control pair terminated (for simplexing with telephone line)
Maximum Voltage Line to Line or Line to Ground: 105-v dc with control pair open or terminated
Maximum Short Circuit Line Current: 50 ma
Power Requirements: 65 w, 117-v ±10%, 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Set Control C-1846/FRC-42	----------	8 x 9 x 15	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92658

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/FRW-type RADIO SET CONTROL

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

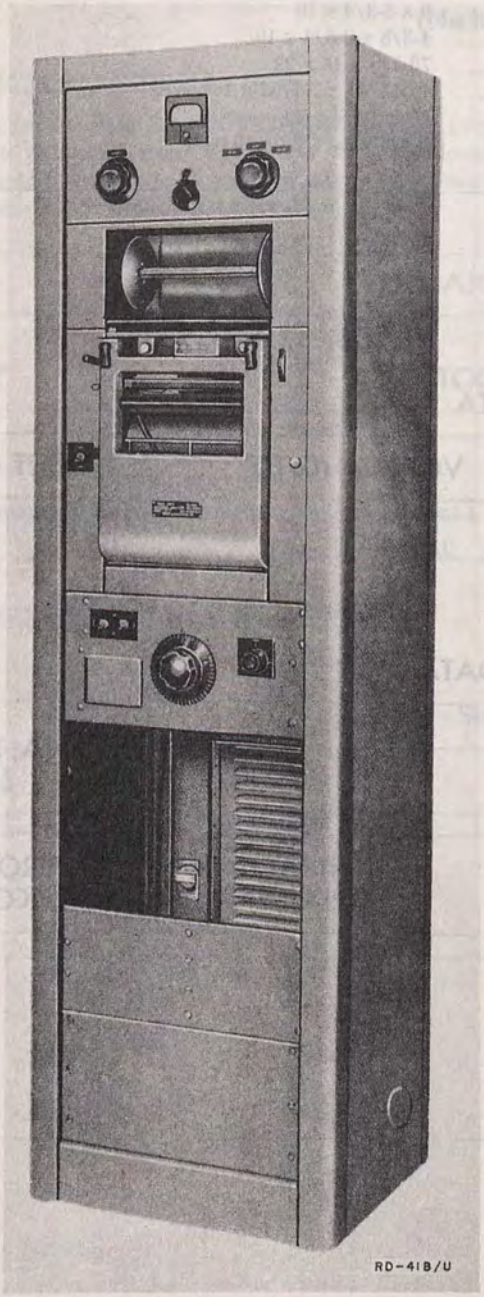
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Syracuse, N. Y.	NObsr–64749	$151.00

RECORDER AN/FSH-type

20 November 1958
Cognizant Serv: USA FSN: 5895-241-3507

RD-41B/U

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	6C262-41B	--	--



FUNCTIONAL DESCRIPTION:

Recorder RD-41B/U graphically records electrical signals or groups of signals of a definite cyclic or repetitive nature. An immediately visible,permanent record is made on a continuous strip which may be observed at the instant of recording or accumulated for subsequent visual analysis. The recorder is used to record at audio frequencies such signals as hand-keyed code, machine-keyed code, teletypewriter, facsimile signals, and oscillator outputs. Reception of signals may be from line or radio receiver. The scanning speed may be adjusted to synchronize with the signal recorded by varying the rpm of the drum. In special applications, recurring mechanical action may be converted to electrical values for recording. Recording is performed by electrically controlled desposits of metal upon a chemically treated paper.

TECHNICAL CHARACTERISTICS:

Frequency Range: 30 to 15,000 cps
Recorded Line Length: 8.2 inches
Paper Feed Rate: 4.2, 8, 16, 70, 90, or 105 lines per inch
Drum Speed: 45 to 400 rpm
Width of Recording Paper: 9-1/2 inches
Power Requirements: 715 w, 110/120-v 60-cycle 1-phase ac

AN/FSH-type RECORDER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Motor drive amplifier	----------	8 x 14 x 19	67
1	Mounting panel	----------	19-9/32 x 3 x 19	8
1	Oscillator	----------	6 x 8-3/4 x 19	25
1	Power panel	----------	4-3/8 x 8-3/4 x 19	23
1	Rack MT–453/F	----------	76-1/8 x 18 x 22	210
1	Recorder	----------	14-13/32 x 7-7/32 x 14-27/32	29
1	Recorder amplifier	----------	10 x 8-3/4 x 19	34
1	Takeup reel	----------	5-1/2 x 6-31/32 x 19	6

REFERENCE DATA AND LITERATURE:

TM 11–5526
TO 16–35RD41–5

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	31.83	450

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hogan Laboratories, Inc.	New York, N. Y.		

CONTROL-MONITOR SET AN/FSW-2

26 November 1958
Cognizant Serv: USN FSN:

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Control-Monitor Set AN/FSW-2 is designed to permit remote control of certain functions of various equipments at a remote point, and to obtain from this point continuous indications of the status of certain equipment.

The control and status information obtained through the use of this equipment is transmitted over telephone lines.

TECHNICAL CHARACTERISTICS:

Power Requirements: 120-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control-Monitor Set AN/FSW-2 (Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/FSW-2 CONTROL-MONITOR SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEPHONE CENTRAL OFFICE SET AN/FTC-9

26 November 1958
Cognizant Serv: USA FSN: 5805-407-4887

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4C20850	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Telephone Central Office Set AN/FTC-9 is fixed plant, unattended, single-party, bridged ringing, private automatic (dial) equipment. It provides the necessary switching facilities required for a 50-line dial telephone system.

The set is used in larger structures and limited areas and offers connections for local intercommunication only. It permits expansion to accommodate as many as 100 lines.

This equipment consists essentially of commercial (Automatic Electric Company Type 50 PAX) dial switching equipment and includes installation materials, batteries, and battery-charging accessories.

It is mounted in a double-sided frame, inclosed in a steel cabinet with hinged collapsible doors.

TECHNICAL CHARACTERISTICS:

Number of Switchboard Positions: None (unattended)
Automatic Equipment: 48 v, Type 50 PAX
Number of Line Circuits:
Normal: 50
Maximum: 100 (ultimate expansion)
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Steel cabinet with equipment	----------	72 x 24 x 84-1/8	Floor loading requirements: 125 psf

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-2100; TM 11-2105; TB SIG 322-102

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/FTC-9 TELEPHONE CENTRAL OFFICE SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEPHONE CENTRAL OFFICE SET AN/FTC-25

1 July 1958
Cognizant Serv: USA FSN: 5805-537-7461

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4C27200-2	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Telephone Central Office Set AN/FTC-25 is fixed-plant, unattended, single-party, bridged ringing, 48-volt, common-battery, private automatic (dial) equipment that provides the necessary switching facilities required for a 50-line dial telephone system. It is used in larger structures and limited areas to provide connections for local intercommunication only. It is capable of expansion to accommodate up to 100 lines.

This equipment consists essentially of commercial (Automatic Electric Company Type 50 PAX) dial switching equipment and includes installation materials, batteries, and battery-charging accessories.

It is mounted in a double-sided frame and is inclosed in a steel cabinet with hinged collapsible doors.

TECHNICAL CHARACTERISTICS:

Number of Positions: Unattended
Number and Type of Circuits: 50 lines, expandable to 100 lines
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telephone Central Office Set AN/FTC-25	5805-537-7461	72 x 24 x 84-1/8	

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-2100, TM 11-2105, TB SIG 322-102

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/FTC-25 TELEPHONE CENTRAL OFFICE SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

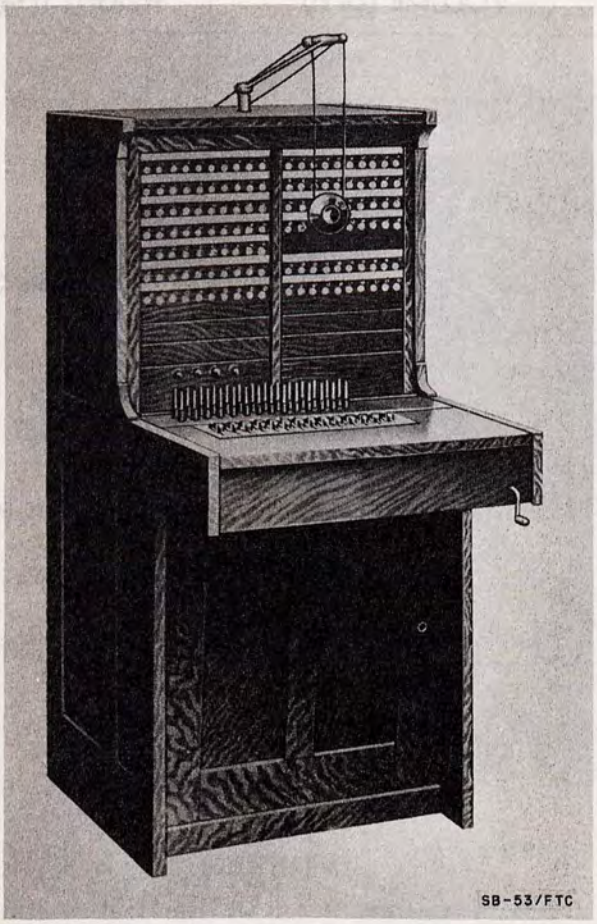
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Stromberg Carlson Div., General Dynamics Corp.	Rochester, N. Y.	4717–P–52–03	$4,296.00

TELEPHONE SWITCHBOARD AN/FTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-164-7072

SB-53( )/FTC

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4C12100-5.2	--	S2-431375200



FUNCTIONAL DESCRIPTION:

Telephone Switchboard SB-53( )/FTC is a single-position, manual, cord-type, universal switchboard used to switch local common-battery and magneto lines, and for connecting other lines to trunk circuits. It is used in fixed-plant applications.

This equipment consists of a desk-type switchboard and uses a separate ringing generator, which is not furnished with the equipment. It is provided with a built-in magneto ringing generator for emergency use.

Fifteen simultaneous talking connections can be made through this equipment.

TECHNICAL CHARACTERISTICS:

Number of Switchboard Positions: 1
Number and Type of Circuits: 15 cord; 100 line; 10 trunk
Power Requirements: 24-v dc; separate ringing equipment supplies ringing current

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSION (Inches)	WEIGHT (Lbs)
		(FSN)		
1	**Telephone Switchboard SB-53( )/FTC**	5805-164-7072	59 x 24 x 38-3/8	550

(Equipment consists of only one major component.)

AN/FTC-type TELEPHONE SWITCHBOARD

REFERENCE DATA AND LITERATURE:

TM 11–2087

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	66	

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (Mfr. No.) E–55486–FR
DESIGN COG: USA, Sig C

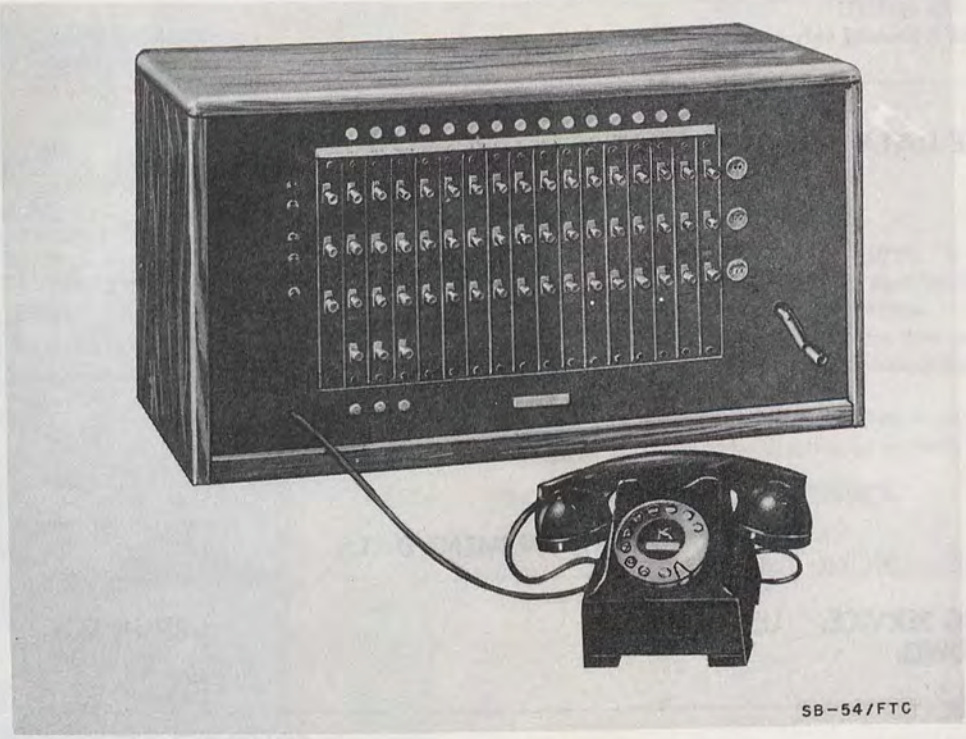
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Stromberg-Carlson Co. Division, General Dynamics Corp.	Rochester, N. Y.	21213–P–54–53	$2,346.00

TELEPHONE SWITCHBOARD AN/FTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-164-7071

SB-54/FTC

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4C11007	--	--



FUNCTIONAL DESCRIPTION:

Switchboard SB-54/FTC is a cordless, manual, single-position, common-battery telephone switchboard used for establishing connections between a small number of local stations or between such stations and a dial or manual central office. It is used in fixed-station applications.

This equipment consists essentially of a commercial (Kellogg 1007-cc, special, or equal) telephone switchboard of the desk-mounted or turret type, in which interconnections are made by means of a key in each line or circuit. The maximum interconnection capacity is five telephone circuits or trunks.

It is designed for 48-v dc ringing from the central office, and has additional keys for night service. It includes provision for magneto ringing; and requires an operator's desk set, which is not furnished.

TECHNICAL CHARACTERISTICS:

Number of Positions: 1

Number and Type of Circuits: 5 connecting; 12 line; 5 trunk

Power Requirements: Battery supplied by common-battery central office

AN/FTC-type TELEPHONE SWITCHBOARD

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Telephone Switchboard SB–54/FTC	5805–164–7071	23 x 12 x 12	110

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	40	200

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

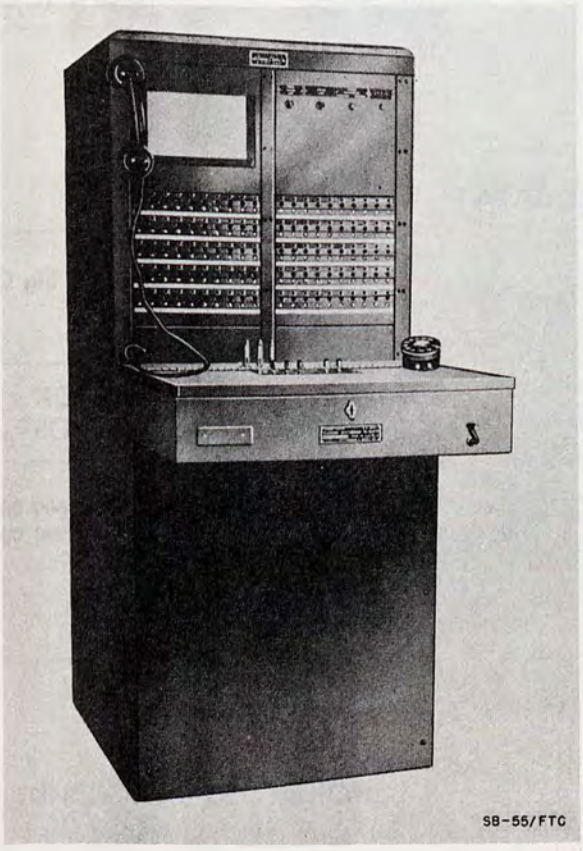
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Kellogg Switchboard & Supply Co.	Chicago, Ill.		

TELEPHONE SWITCHBOARD AN/FTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-164-7086

SB-55( )/FTC

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4C18100-6	-	--



FUNCTIONAL DESCRIPTION:

Telephone Switchboard SB-55( )/FTC is a manual, single-position, two-panel switchboard used for fire-reporting and similar applications at fixed installations.

This equipment consists of a floor-type desk unit. The two trunks may be connected to either a dial or manual telephone facility.

It includes the operator's handset and other accessory items.

Ringing current must be supplied by separate equipment.

TECHNICAL CHARACTERISTICS:

Number of Switchboard Positions: 1
Number and Type of Circuits: 3 cord; 100 line; 2 trunk
Power Requirements: 48-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Telephone Switchboard SB-55/FTC	5805-164-7086	38-1/4 x 24 x 57-1/4	400

(Equipment consists of only one major component.)

AN/FTC-type TELEPHONE SWITCHBOARD

REFERENCE DATA AND LITERATURE:

TM 11–2084

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	40	600

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–S–13171

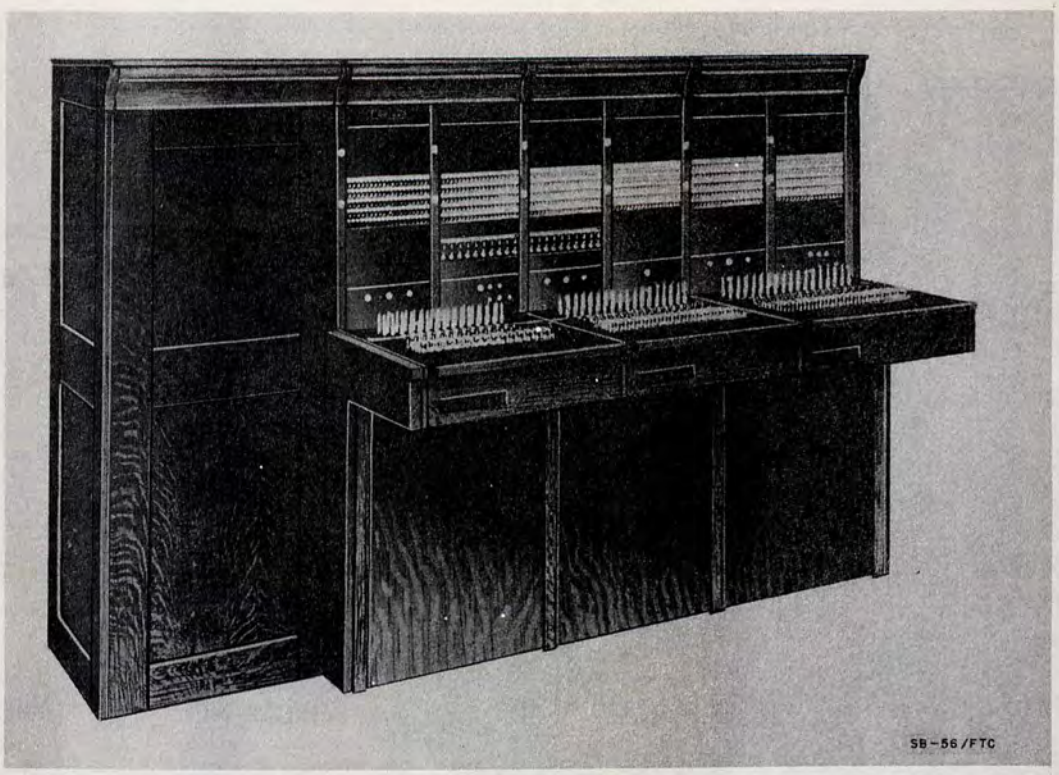
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Crossbar Tel. & Sig. Co.		55994–P–57–56	$3.500.00
Kellogg Switchboard & Supply Co.	Chicago, Ill.	21748–P–56–56	3,296.00

SWITCHBOARD AN/FTC-type

1 July 1958
Cognizant Serv: USA FSN: SB–56/FTC

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	NSN	--	--



FUNCTIONAL DESCRIPTION:

Switchboard SB–56/FTC is a three-position, multiple, common-battery, manual telephone switchboard with a maximum capacity of 800 lines.

This equipment consists of a commercial (Kellogg #6–800) central office type switchboard, each position of which has two jack panel sections. Each position has 15 universal cord circuits, a dial circuit, and an operator's circuit. The switchboard is wired and equipped for 20 magneto trunks, and 20 two-way trunks to automatic exchanges, lamp supervision, and miscellaneous circuits.

A relay rack is mounted at the rear of the switchboard. The main distributing frame and operator's telephone equipment are not supplied as part of this equipment; 24-volt battery supply and ringing current source must be separately procured.

TECHNICAL CHARACTERISTICS:

Number of Positions: 3 or more

Number and Type of Circuits: 45 cord (3 dial); 800 line; 40 trunk

Power Requirements: 24-v dc

AN/FTC-type SWITCHBOARD

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Switchboard SB–56/FTC (Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11–2227

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	480	7,500

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

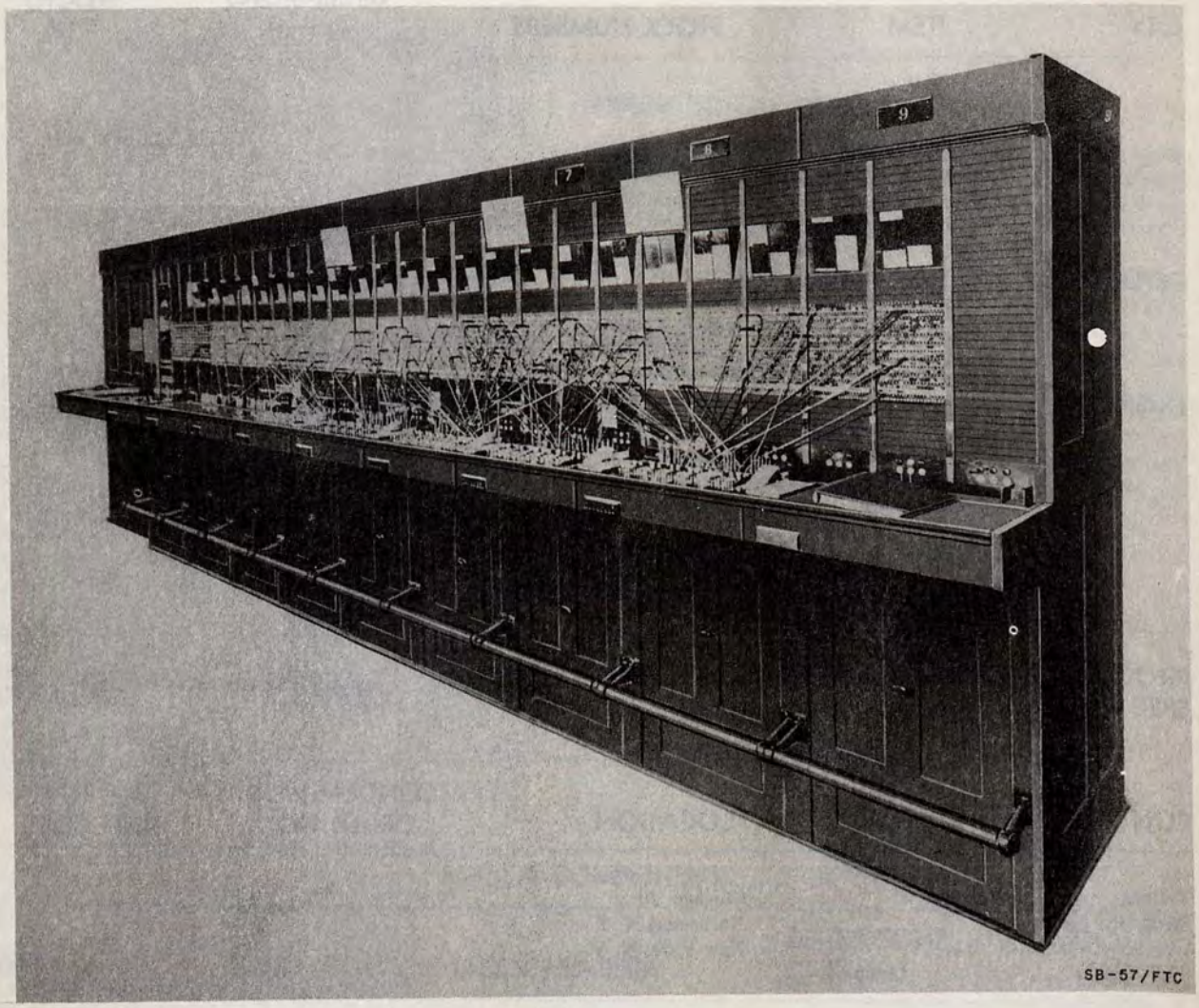
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Kellogg Switchboard & Supply Co.	Chicago, Ill.		

SWITCHBOARD **AN/FTC-type**

20 November 1958
Cognizant Serv: USA **FSN:** 5805-223-5488 SB-57/FTC

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4C22800-1	--	--



FUNCTIONAL DESCRIPTION:

Switchboard SB-57/FTC is a large, manual, multiple, common-battery switchboard used for local service with trunking facilities to other offices in permanent installations.

This equipment consists of commercial (Kellogg #2800; Stromberg-Carlson #18, or Western Electric Co. #11) telephone central office switchboard equipment. It has apparatus for common-battery line, common-battery and dial trunks, night alarm, and related circuits, and has provision for re-ring signals.

TECHNICAL CHARACTERISTICS:

Number of Switchboard Positions: 5 minimum to 20 maximum
Number and Type of Circuits:
Cord: 17 per position

AN/FTC-type SWITCHBOARD

Line: Maximum capacity 2,800 lines, multipled on a 7-panel basis
Outgoing Trunks: 40
Manual or Dial Trunks: 20
Magneto Trunks: 20
Information Trunks: 10
Interposition Trunks: 10
Power Requirements: 24-v battery and 20-cycle ringing power

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Switchboard SB–57/FTC (Equipment consists of only one major component.)	5805–223–5488		

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	430	7,800

PROCUREMENT DATA

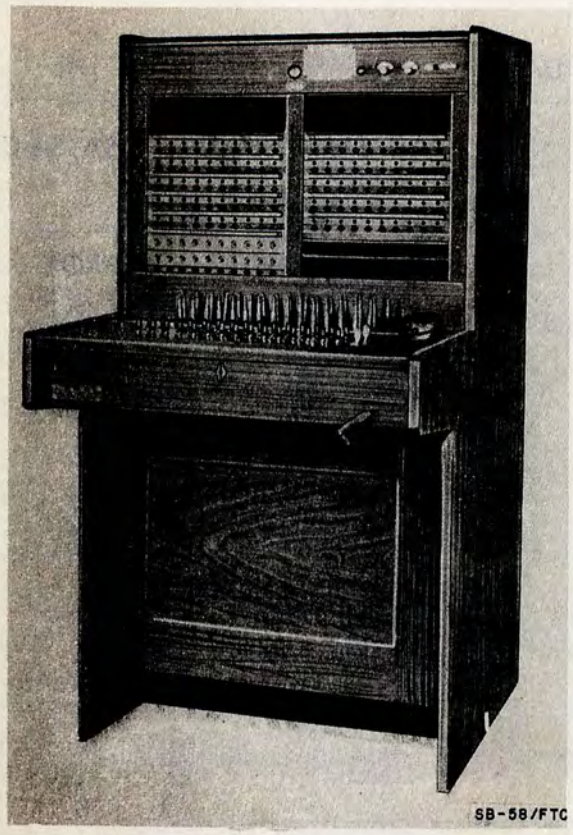
PROCURING SERVICE: USA
SPEC &/or DWG:
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Kellogg	Chicago, Ill.		
Stromberg-Carlson	Rochester, N. Y.		
Western Electric Co., Inc.	New York, N. Y.		

SWITCHBOARD AN/FTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-170-5286 SB-58/FTC

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4C12100-7	--	--


SB-58/FTC

FUNCTIONAL DESCRIPTION:

Switchboard SB-58/FTC is a single-position, nonmultiple, telephone switching equipment for interconnection of and communication between common-battery and magneto lines. It also provides for operation of trunk circuits to either manual or dial central offices.

This equipment consists essentially of a commercial (Western Electric Co. No. G1) floor-type unit having two jack panels, and is equipped for 80 common-battery and 20 local-battery magneto station lines. It also has 15 universal cord circuits, 10 trunks, a dial and cord for operation with automatic central offices, and line and supervisory lamps for local lines. It has provision for one-lamp signaling on trunks.

This switchboard includes an operator's telephone set and has a hand generator for emergency ringing. It does not include battery supply or 20-cycle ringing equipment.

TECHNICAL CHARACTERISTICS:

Number of Positions: 1
Number and Type of Circuits: 15 cord (1 dial); 100 line; 10 trunk
Power Requirements: 24-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Switchboard SB-58/FTC	5805-170-5286	26-7/8 x 3 4-1/2 x 51-3/16	487
	(Equipment consists of only one equipment.)			

REFERENCE DATA AND LITERATURE:

AN/FTC-type SWITCHBOARD

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	40	700

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

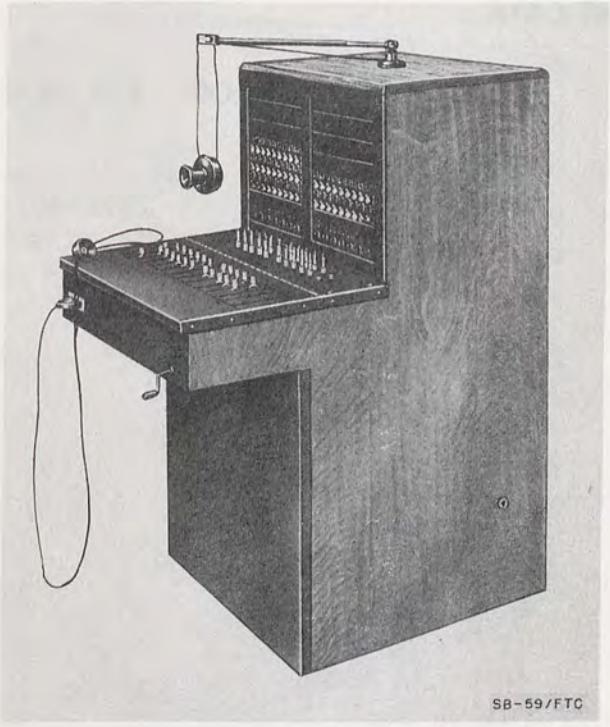
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.		

SWITCHBOARD AN/FTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-170-4763

SB-59/FTC

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4C18100-2	--	--



FUNCTIONAL DESCRIPTION:

Switchboard SB-59/FTC is a manual, single position, common-battery, telephone switchboard used for trunking to other common-battery, manual or dial central offices and is not intended for through switching applications.

This equipment consists essentially of a commercial (Kellogg K-100) telephone switchboard. It is a floor-mounted desk-type unit wired for a dial circuit, but does not include a dial. It is equipped with 100 line circuits, 15 cord circuits, and 10 trunks, and includes an operator's telephone set and a hand generator for emergency ringing.

TECHNICAL CHARACTERISTICS:

Number of Positions: 1
Number and Type of Circuits: 15 cord 100 line; 10 trunk
Power Requirements: 24-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Switchboard SB-59/FTC	5805-170-4763	26-7/16 x 34-1/2 x 51-3/16	390

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

AN/FTC-type SWITCHBOARD

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	35	581

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Kellogg Switchboard & Supply Co.	Chicago, Ill.		
Stromberg-Carlson Corp.	Rochester, N. Y.		
Western Electric Co.	New York, N. Y.		

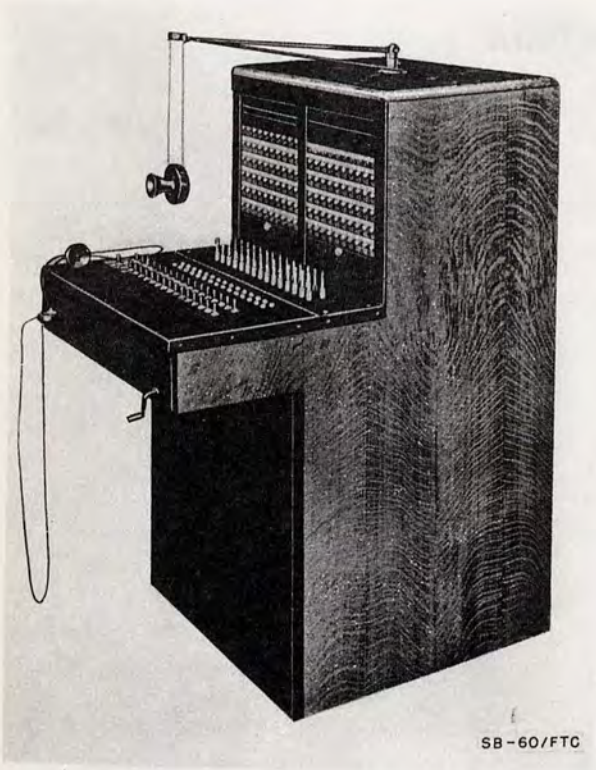
SWITCHBOARD AN/FTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805–162–8186

SB–60/FTC

USA USN USAF

TYPE CLASS: L/Std
STOCK NO: 4C18099



SB-60/FTC

FUNCTIONAL DESCRIPTION:

Switchboard SB–60/FTC is a single-position, nonmultiple, manual, magneto telephone switchboard used in situations where line resistance, leakage, or other unfavorable plant conditions prohibit satisfactory common battery operation.

This equipment is a floor-mounted, desk-type unit having combination drops (not shown in the illustration) and jacks arranged on two jack panels, and providing for 100 magneto lines, and 15 cords furnished and equipped for double drop supervision. There is also a five-bar hand generator wired to a key for switching to the power generator. An operator's telephone is included.

Local battery supply must be separately procured.

TECHNICAL CHARACTERISTICS:

Number of Positions: 1
Number and Type of Circuits: 15 cord; 100 line; 0 trunk
Power Requirements: 3-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Switchboard SB–60/FTC	5805–162–8186		
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

AN/FTC-type SWITCHBOARD

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	40	575

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

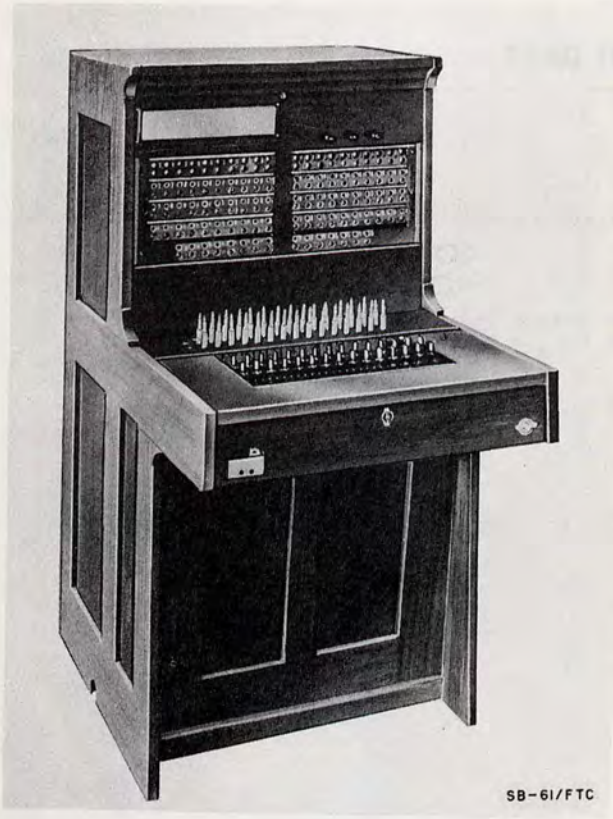
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Kellogg Switchboard & Supply Co.	Chicago, Ill.		
Stromberg-Carlson Corp.	Rochester, N. Y.		

SWITCHBOARD AN/FTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805–164–7082

SB–61/FTC

	USA	USN	USAF
TYPE CLASS:	L/Std	—	—
STOCK NO:	4C19080–4	—	—



FUNCTIONAL DESCRIPTION:

Switchboard SB–61/FTC is a single-position, nonmultiple, common-battery telephone switchboard having switchboard circuits for manual or dial operation to connecting central offices in fixed-plant applications.

This equipment consists of a floor-type commercial (Western Electric Co. No. 550 SC) switchboard having two jack-panels and is wired for 80 common-battery lines, 15 cord circuits, and 15 trunks. It has lamp signaling and supervision. A hand generator is furnished for emergency ringing. It is equipped with a dial, not shown in the illustration, and includes an operator's telephone set.

Battery supply and ringing current must be furnished separately.

TECHNICAL CHARACTERISTICS:

Number of Positions: 1
Number and Type of Circuits: 15 cord; 80 line; 15 trunk
Power Requirements: 24-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Switchboard SB–61/FTC	5805–164–7082	25-1/4 x 35 x 51-1/16	500

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

AN/FTC-type SWITCHBOARD

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	40	700

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

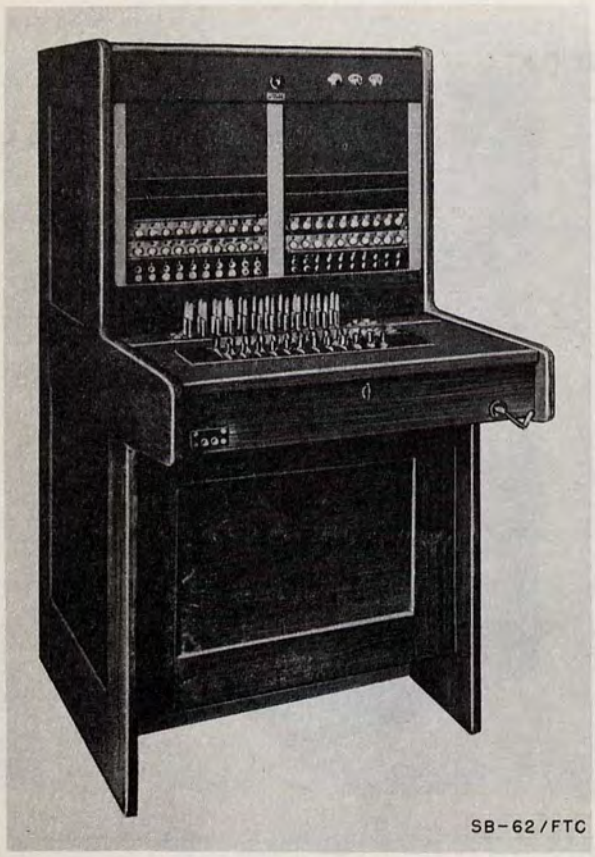
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	Chicago, Ill.		

SWITCHBOARD AN/FTC-type

1 July 1958
Cognizant Serv: USA FSN:

SB-62/FTC

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4C17063-1A.1	--	--



FUNCTIONAL DESCRIPTION:

Switchboard SB-62/FTC is a common-battery, nonmultiple, manual, telephone switchboard having circuits for dial (not shown in this illustration) or manual operation to connecting central offices. It is used in fixed plant applications.

This equipment consists essentially of a commercial (Western Electric Co. No. 551A) telephone switchboard and is a floor-mounted desk-type unit. It is a single-position equipment with two panels and is wired for 40 common-battery lines, 10 cord circuits, and 10 trunks. It has lamp signaling and supervision, a hand generator for emergency signaling, an operator's telephone set, and includes 20 line-circuits equipped with relays for use on circuits of high line-resistance.

It does not include battery supply or ringing equipment.

TECHNICAL CHARACTERISTICS:

Number of Positions: 1
Number and Type of Circuits: 10 cord, 40 line, 10 trunk
Power Requirements: 24-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Switchboard SB-62/FTC	4C17063-1A	25-1/2 x 30-1/2 x 46	500

(**Equipment** consists of only one major component.)

REFERENCE DATA AND LITERATURE:

AN/FTC-type SWITCHBOARD

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	40	700

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

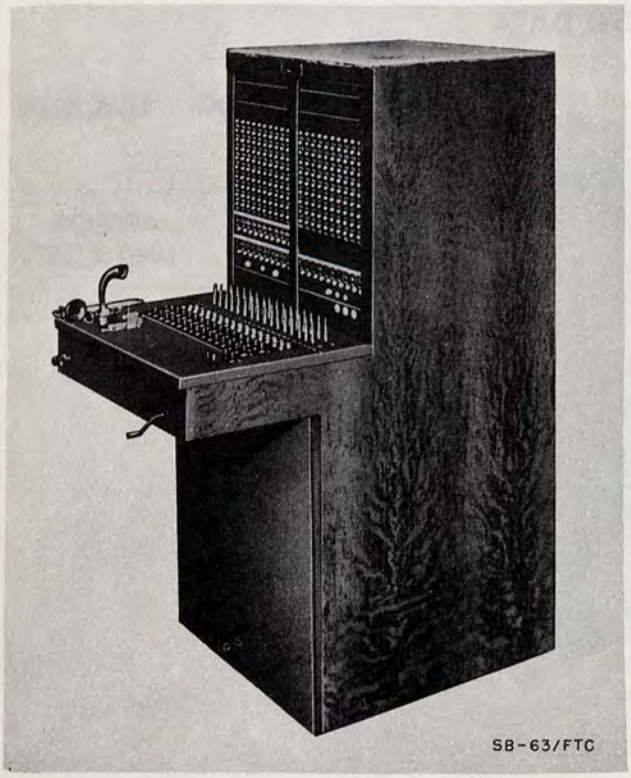
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.		

SWITCHBOARD AN/FTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-162-8187

SB-63/FTC

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4C18100-3	--	--



FUNCTIONAL DESCRIPTION:

Switchboard SB-63/FTC is a single-position, manual, common-battery telephone switchboard used in fixed-plant applications.

This equipment consists essentially of a commercial (Kellogg Jr. Masterbuilt) telephone switchboard of the floor-mounted desk type. It has two jack panels and is equipped for 40 common-battery, 40 universal and 20 magneto (with lamp signaling) lines, and is wired for 20 (equipped for 10) dial trunks. It has 15 universal cord circuits, a hand generator for emergency ringing, and an operator's telephone set.

Ringing current and battery must be furnished separately.

TECHNICAL CHARACTERISTICS:

Number of Positions: 1
Number and Type of Circuits: 15 cord; 40 common-battery line; 40 univeral line; 20 magneto line; 10 trunk
Power Requirements: 24-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Switchboard SB-63/FTC	5805-162-8187	38-1/4 x 23-15/16 x 58-5/16	500
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

AN/FTC-type SWITCHBOARD

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	40	700

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

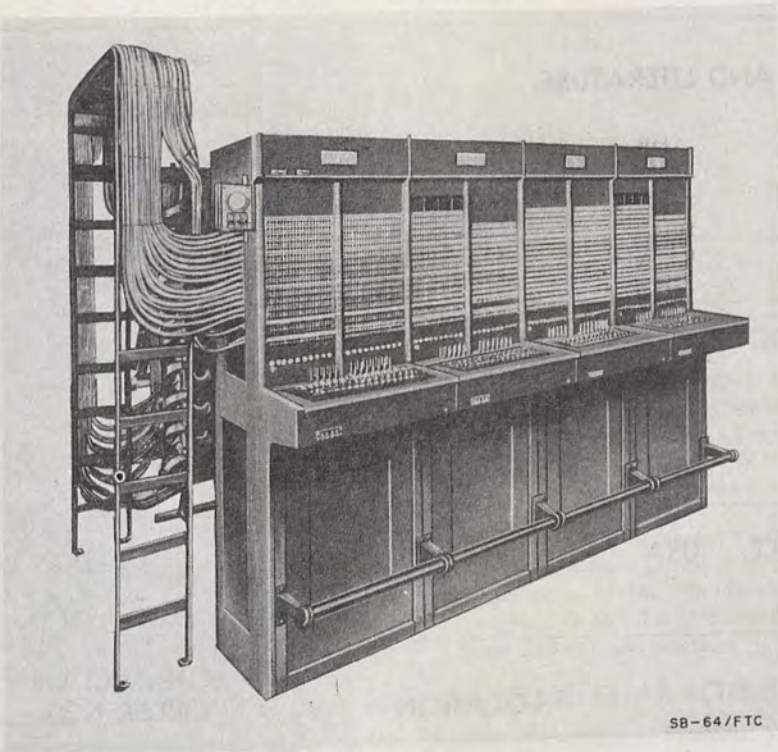
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Kellogg Switchboard & Supply Co.	Chicago, Ill.		

SWITCHBOARD AN/FTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-164-7074

SB-64/FTC

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4C17063-12	--	--



FUNCTIONAL DESCRIPTION:

Switchboard SB-64/FTC is a medium-size central-office type, multiposition, manual, 640-line (maximum capacity) switchboard equipment used in fixed plant applications.

This equipment consists essentially of a commercial (Western Electric Co. No. 12, 640-line) exchange switchboard, which is a four-position equipment constructed sectionally and having two jack panels per position, each position constituting a self-contained unit. It may be equipped with a total of 640 common battery and/or magneto lines with lamp signaling multipled on a 2-panel basis, and 120 2-way ring-down trunks. Fifteen universal cord circuits are wired per position (the normal equipment for each position is 13 cords) with lamp supervisory equipment on cord circuits.

It also is equipped with dial and dial cord. Ringing current is supplied by a separate power unit. It uses a main distributing frame supplied separately, which is connected to this switchboard by cabling.

TECHNICAL CHARACTERISTICS:

Number of Positions:
Maximum: As required
Minimum: 3

Number and Types of Circuits Per Position: 15 cord; 640 line; 120 trunk

Power Requirements: 48-v dc

AN/FTC-type SWITCHBOARD

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Switchboard SB–64/FTC	5805–164–7074	----------	3,360
(Equipment consists of only one major component.)				

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	480	7,500

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

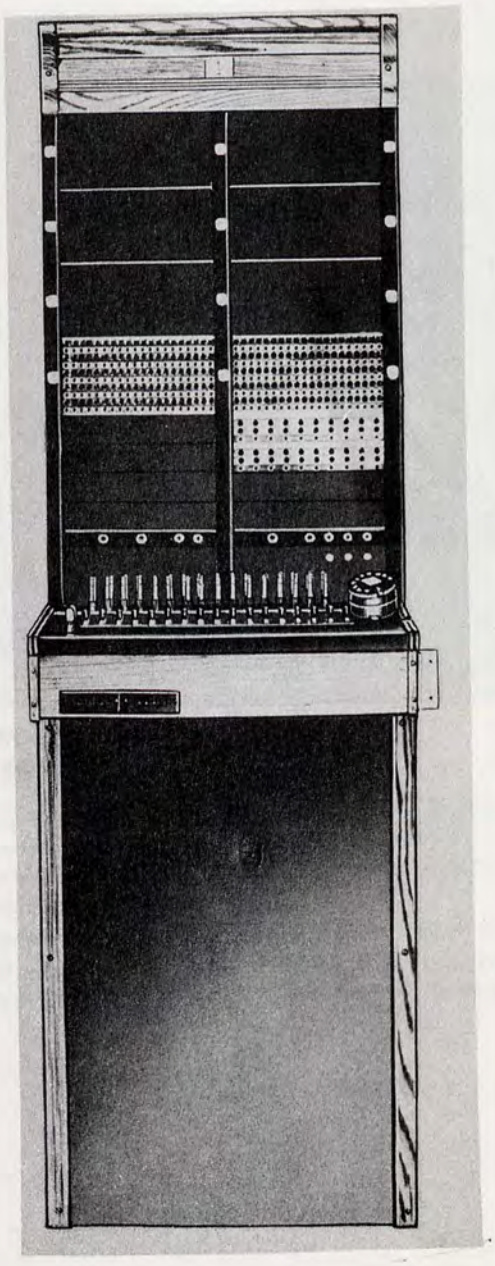
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.		

MANUAL TELEPHONE SWITCHBOARD SECTION AN/FTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-498-7752

SB-171/FTC

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	4C21600.1	--	--



FUNCTIONAL DESCRIPTION:

Manual Telephone Switchboard Section SB-171/FTC is the basic unit of local manual central office switching facilities that are capable of handling 1,200 to 1,600 lines.

This equipment consists essentially of one commercial (Kellogg No. 1600) switchboard section equipped with 15 universal cord circuits.

The 1,200-line office (Coded Facility 152, TB SIG 322-152) includes 16 operating positions or sections and two end positions composed of the SB-171/FTC. The 1,600-line office (Coded Facility 156, TB SIG 322-156) has 22 such operating positions and two end positions.

TECHNICAL CHARACTERISTICS:

Number of Switchboard Positions: Depends on size of central office in which installed

Number and Type of Circuits: 15 cord; trunk and line, as required

AN/FTC-type MANUAL TELEPHONE SWITCHBOARD SECTION

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Manual Telephone Switchboard Section SB-171/FTC	5805-498-7752	22-5/8 x 37-1/16 x 72-7/8	

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-2061

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
11	145.8	2,797

PROCUREMENT DATA

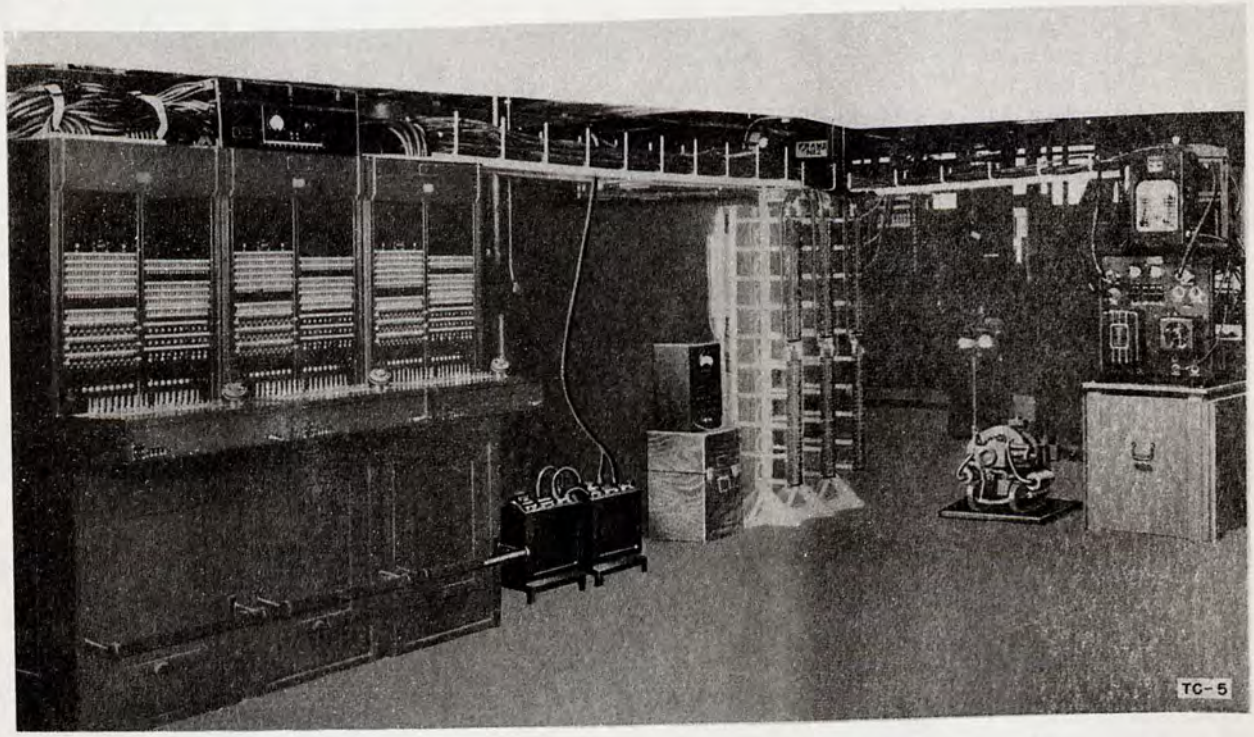
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Kellogg Switchboard & Supply Co.	Chicago, Ill.		

AUXILIARY TELEPHONE CENTRAL EQUIPMENT AN/FTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-407-4903 TC-5

	USA	USN	USAF
TYPE CLASS:	S/Std	--	--
STOCK NO:	4C27005	--	--



FUNCTIONAL DESCRIPTION:

Auxiliary Telephone Central Equipment TC-5 is a group of installation components used to enable movement of Telephone Central Office Set TC-2 or TC-10 with a minimum of service interruption.

This equipment consists essentially of a power unit, cable racks, and related items installed at the new location preliminary to movement of the telephone exchange, as in a *leapfrogging* operation. Switchboards, main frame, and wire chief's test cabinet are then obtained separately and added to these installed components to complete the move.

TECHNICAL CHARACTERISTICS:

Power Requirements:
Power Unit PE-75: 2.5 kva, 115-v 60-cycle ac
Rectifier RA-36: 0.0- to 65-v dc
Storage Batteries: 40- to 56-v dc

AN/FTC-type AUXILIARY TELEPHONE CENTRAL EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
4	Battery BB–46	6140–126–1544		
1	Cabinet BE–72	6625–241–7869	26-1/2 x 6-7/16 x 7	
1	Cabinet BE–75	5930–228–7957	13-1/2 x 9-3/4 x 5-1/4	
1	Panel BD–90	5805–240–4847	26-1/4 x 35-1/2 x 25	
1	Power Unit PE–75	6115–228–5815		
1	Rectifier RA–36	6130–222–6216		

REFERENCE DATA AND LITERATURE:

TM 11–340
TM 11–471

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	149	2,531

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

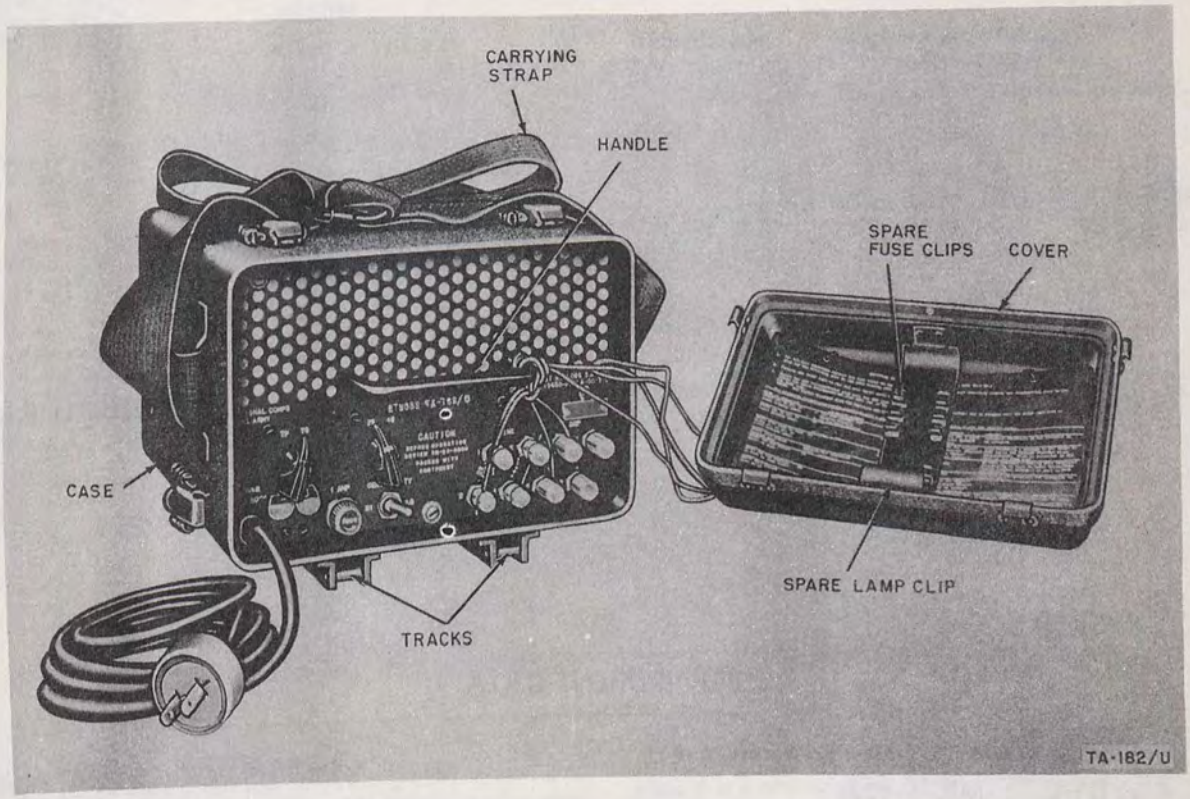
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEGRAPH-TELEPHONE SIGNAL CONVERTER AN/GCA-type TA-182/U

1 July 1958
Cognizant Serv: USA FSN: 5805-356-2897

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4F350-182	--	



FUNCTIONAL DESCRIPTION:

Telegraph-Telephone Signal Converter TA-182/U provides a means of signaling in circuits that will not pass 20-cycle ringing signals because of line or equipment characteristics.

In telegraph circuits, it converts 20-cycle ringing signals to 1,225 cps for transmission, and reverses this operation upon reception. In telephone circuits, it converts 20-cycle ringing signals to 1,600 cps for transmission, and reverses this operation upon reception.

TECHNICAL CHARACTERISTICS:

Type of Signal: Ringing
Frequency: Converts 20 cps to 1,225 cps or 1,600 cps
Type Communication Circuits: Telegraph and telephone ringing
Controls: 2-wire/4-wire selector switch; telephone-telegraph selector switch; high-low sensitivity selector switch
Power Requirements: 40 w, 115-v (±10%) 50/60-cycle 1-phase ac

AN/GCA-type TELEGRAPH-TELEPHONE SIGNAL CONVERTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph-Telephone Signal Converter TA-182/U (Equipment consists of only one major component.)	5805-356-2897	11 x 7-1/2 x 10-1/2	15

REFERENCE DATA AND LITERATURE:

TM 11-2137

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.02	24

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-T-10267

DESIGN COG: USA, Sig C

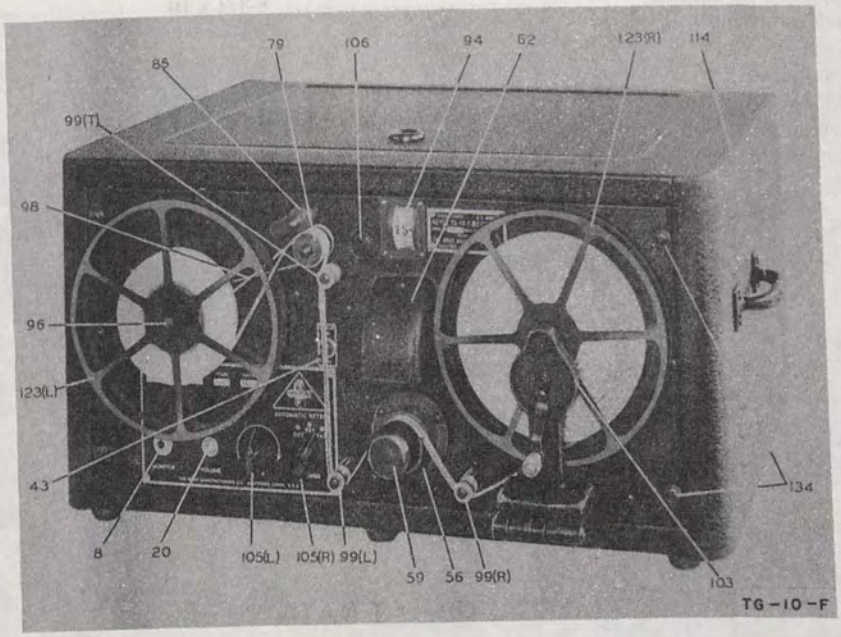
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Kellogg Switchboard & Supply Co.	Chicago, Ill.	6506-P-51-31	$379.60
The Rudolph Wurlitzer Co.	----	4697-P-52-31	177.80

KEYER AN/GGA-type

23 October 1958
Cognizant Serv: USA FSN: TG–10, 6940–407–3277
TG–10–F, 5805–303–7753

TG–10, TG–10–F

	USA	USN	USAF
TYPE CLASS:	--	Used by	L/Std
STOCK NO:	4A1200	--	--



FUNCTIONAL DESCRIPTION:

Keyers TG–10 and TG–10–F are automatic keying units designed to provide audible code practice signals from an inked tape recording. The audio-frequency output of the keyer has sufficient power to supply as many as 500 to 1,000 headsets, if necessary. Keyer tone may be supplied directly to headsets or to headsets through practice tables.

The keying unit may be operated with an external telegraph key. It also may be used as a tape puller for any one of several types of ink recorders where the recorder is not provided with its own tape-pulling mechanism.

The keyer is a self-contained unit. It is ready for operation when it is connected to an adequate power source and to the headsets or practice tables. The unit may be operated in its own case or removed and mounted on a standard 19-inch relay rack.

TECHNICAL CHARACTERISTICS:

Speed: 0 to 1,000 wpm
Tone Frequency: 800 cps
Power Source Requirements: 115-v 50-cycle 1-phase ac

AN/GGA-type KEYER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Keyer TG–10 or TG–10–F			
	In case	----------	11 x 18-1/2 x 24	63
	Removed from case for rack mounting	----------	8-3/4 x 19	40
3	Take-up reel			
2	Tape, inked paper			
1 set	Vacuum Tubes (8)			

(Equipment consists of only one major operating component.)

REFERENCE DATA AND LITERATURE:

TM 11–447

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

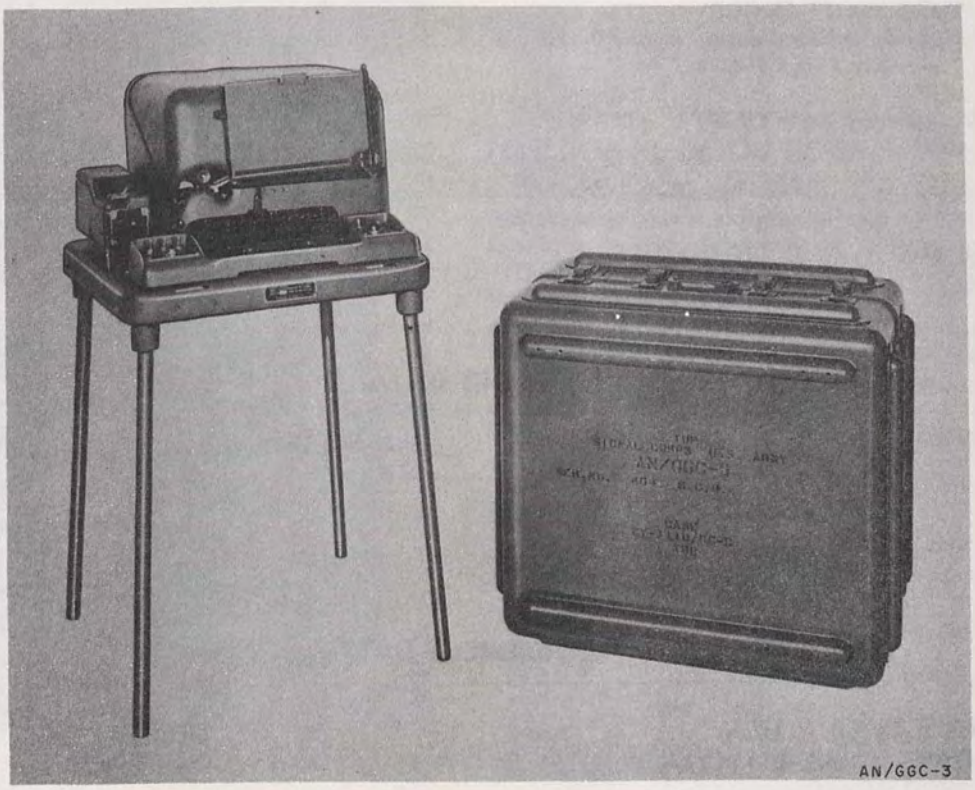
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Gray Manufacturing Co.	Hartford, Conn.		

TELETYPEWRITER SET AN/GGC-3

1 July 1958
Cognizant Serv: USA FSN: 5815-503-3309

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4T902-3	--	--



FUNCTIONAL DESCRIPTION:

Teletypewriter Set AN/GGC-3 is a lightweight, portable, sending and receiving equipment.

This equipment consists essentially of a typing reperforator unit with a keyboard transmitter, a tape transmitter and a teletypewriter table. It derives line-operating current from an associated teletypewriter switchboard, Telegraph Terminal TH-5/TG, or other external source, and can be arranged to operate on either neutral or polar signals on a half- or full-duplex basis.

This set provides facilities for sending from either a keyboard or a tape transmitter; received signals are printed and perforated on tape. It operates over dc wire lines, carrier, or radio channels through suitable line terminating equipment, and is equipped with a universal series-governed motor, enabling operation from either ac or dc sources.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368.1 or 600 opm
Motor Characteristics: Universal ac or dc, series type
Power Requirements: 150 w, 115/230-v 50/60-cycle 1-phase ac; or 115-v dc

AN/GGC-3 TELETYPEWRITER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Teletypewriter Reperforator-Transmitter TT-76/GGC	4TTT76	21 x 18 x 12	45
1	Teletypewriter Reperforator-Transmitter Case CY-1110/GGC	6F300-1110	25 x 22 x 16	30
1	Teletypewriter Table FN-52/GGC	4TFN52	21 x 18 x 28	15

REFERENCE DATA AND LITERATURE:

TM 11-2225

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	18.36	208

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-11177A

DESIGN COG: USA, Sig C

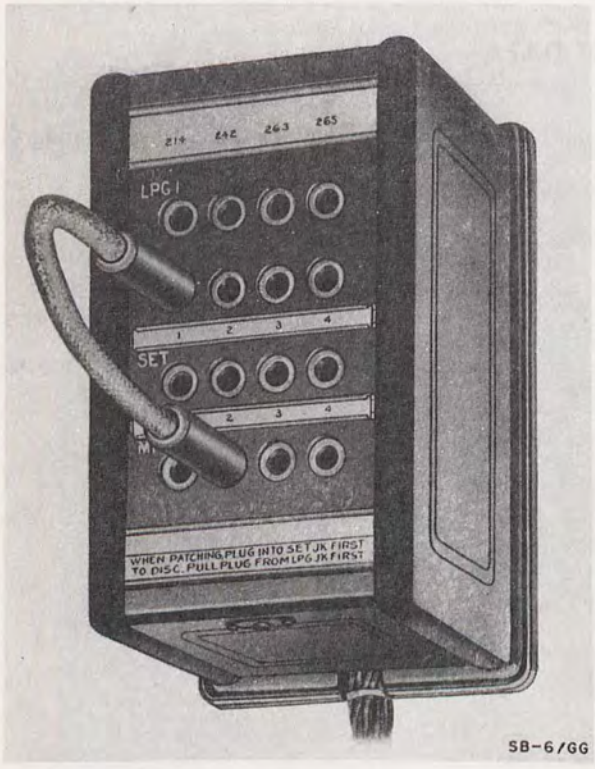
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Kleinschmidt Laboratories, Inc.	Deerfield, Ill.	47579-P-57-51	$1,646.70

TELEGRAPH SWITCHBOARD AN/GGC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-498-7459

SB-6( )/GG

	USA	USN	USAF
TYPE CLASS:	Std		Std
STOCK NO:	4A2593-6		1730-407092400



SB-6/GG

FUNCTIONAL DESCRIPTION:

Telegraph Switchboard SB-6( )/GG is a transportable, jack-patching manual switchboard used for interconnecting local lines, dc loops, extensions, and teletypewriter sets.

The equipment consists of 16 panel mounted jacks in a steel cabinet, and serves four line circuits. For each line circuit, there are two loop jacks, a set jack for connection of a teletypewriter or other equipment, and a miscellaneous jack for connection of auxiliary equipment or spare teletypewriter sets.

The equipment is used to switch circuits and to make tests of associated line facilities.

TECHNICAL CHARACTERISTICS:

Number of Positions: 1
Number and Type of Circuits: 4 line

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph Switchboard SB-6/GG	5805-498-7459	7-5/16 x 4-3/4 x 4-5/8	4

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-2035

AN/GGC-type TELEGRAPH SWITCHBOARD

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.092	4

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–S–3723

DESIGN COG: USA, Sig C

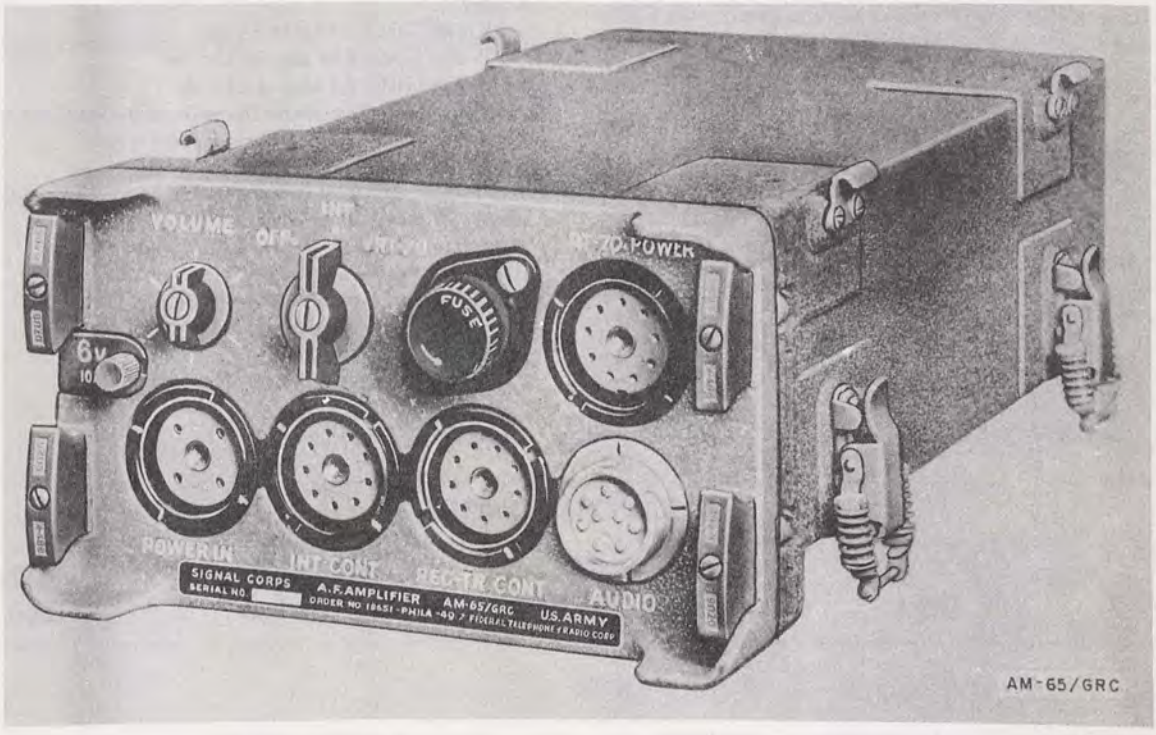
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Artisan Electronics Corp.	New York, N. Y.	4724–P–52–03	$35.85

AF AMPLIFIER AN/GIA-type

AM-65/GRC

4 December 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	2C449-65	--	--



FUNCTIONAL DESCRIPTION:

AF Amplifier AM-65/GRC is a lightweight, compact, three-channel audio frequency amplifier and electronic mixer. It is designed to provide interphone operation and radio monitoring in vehicular installations which use one or two receiver-transmitters and one or more interphone control boxes.

The unit contains the audio amplifier and electronic mixer circuits necessary for amplifying and mixing signals from the receiver portions of one Receiver-Transmitter RT-70/GRC and one Receiver-Transmitter RT-66/GRC, RT-67/GRC, or RT-68/GRC, with the high level output of the self-contained interphone amplifier. Separate channels are provided in the amplifier for monitoring the output of the receivers of each type of receiver-transmitter while simultaneously monitoring the low-level output of the interphone amplifier.

Since the unit is intended primarily for vehicular operation, it contains all the power supply circuits required for operation from a 6-, 12-, or 24-volt vehicular battery system, in conjunction with a plug-in type vibrator unit—Power Supply PP-448/GR, PP-281/GRC, or PP-282/GRC respectively. The amplifier contains the power supply circuits required to operate Receiver-Transmitter RT-70/GRC. In addition, the unit acts as a junction box for all system connections of that receiver-transmitter.

AF Amplifier AM-65/GRC, combined with other installation components, may be used in the radio installations known as Radio Sets AN/GRC-3 through AN/GRC-8 and AN/VRC-7, -13, -14, or -15.

The following equipment is used with, but is not supplied with, AF Amplifier AM-65/GRC: Power Supply PP-448/GR and a 6-volt storage battery, PP-281/GRC and a 12-volt storage battery, or PP-282/GRC and a 24-volt storage battery. A separate 135-volt 8 supply and a 6-volt dc filament power source may be substituted for the vibrator power supply to operate the amplifier. In addition, Chest Set Group AN/GSA-6, Headset-Microphone H-63/U, Headset NT-49507, or Loudspeaker LS-166/U (for listening only) Micro-

AN/GIA-type AF AMPLIFIER

phone M–29/U (for talking only), are used as oscillating items.

TECHNICAL CHARACTERISTICS:

Signal Input Levels:
Set 1 + INPH CHAN: 5 v (maximum)
Set 2 + INPH CHAN: 5 v (maximum)
Set 1 + Set 2 + INPH CHAN: 0.25 v (maximum)
Signal Output Levels:
Set 1 + INPH CHAN: 350 mw (minimum) with a 5 v Set 1 input signal
Set 1 + Set 2 + INPH CHAN: 800 mw (minimum) with 5 v Set 1 input signal
Set 2 + INPH CHAN: 350 mw (minimum) with a 5 v Set 2 input signal
Set 1 + Set 2 + INPH CHAN: 800 mw (minimum) with a 5 v Set 2 input signal
Set 1 + INPH CHAN: 350 mw (minimum) with a 0.25-v interphone input signal
Set 2 + INPH CHAN: 350 mw (minimum) with a 0.25-v interphone input signal
Set 1 + Set 2 + INPH CHAN: 1,800 mw (minimum) with a 0.25-v interphone input signal
Input Impedances:
Set 1 + INPH CHAN: 1,500 ohms
Set 2 + INPH CHAN: 1,500 ohms
Set 1 + Set 2 INPH CHAN: 150 ohms
Output Impedance: 600 ohms all channels, tap for 150 ohms
Audio Frequency Response: Flat to within 4 db for frequencies between 400 and 2,500 cps, sharp cutoff beyond these limits
Distortion: 10% (maximum) per channel
Cross Talk: 50 db down (minimum) between Set 1 + INPH CHAN and Set 2 + INPH CHAN
Input Voltage Requirements for Operation with Vibrator Power Supply:
PP–448/GR: 6.1 amp at 6-v dc
PP–281/GRC: 3.85 amp at 12-v dc
PP–282/GRC: 2.4 amp at 24-v dc
Input Voltage Requirements for Operation with External Supply:
Filaments, Relay, and Microphone: 6.3 v dc
Plates: 135-v dc
Voltages Made Available to Receiver-Transmitter RT–70/GRC:
Plates: 78 ma at 90- to 95-v dc
Filaments: 360 ma at 6.3-v
Relay: 161 ma at 6.3 v
Operating Temperature Range: −40° to +131° F.
Power Requirements (Standby):
Plates: 35 ma at 135-v dc
Filaments: 1.2 amp at 6.3 v; 0.6 amp at 12.6 v
Relay: 161 ma at 6.3 v
Microphone: 30 ma at 6.3 v

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	AF Amplifier AM–65/GRC	2C449–65	4-1/4 x 7-7/8 x 12-7/8	15.5
(Equipment consists of only one major component.)				

REFERENCE DATA AND LITERATURE:

TM 11–5039

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AF AMPLIFIER **AN/GIA-type**

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

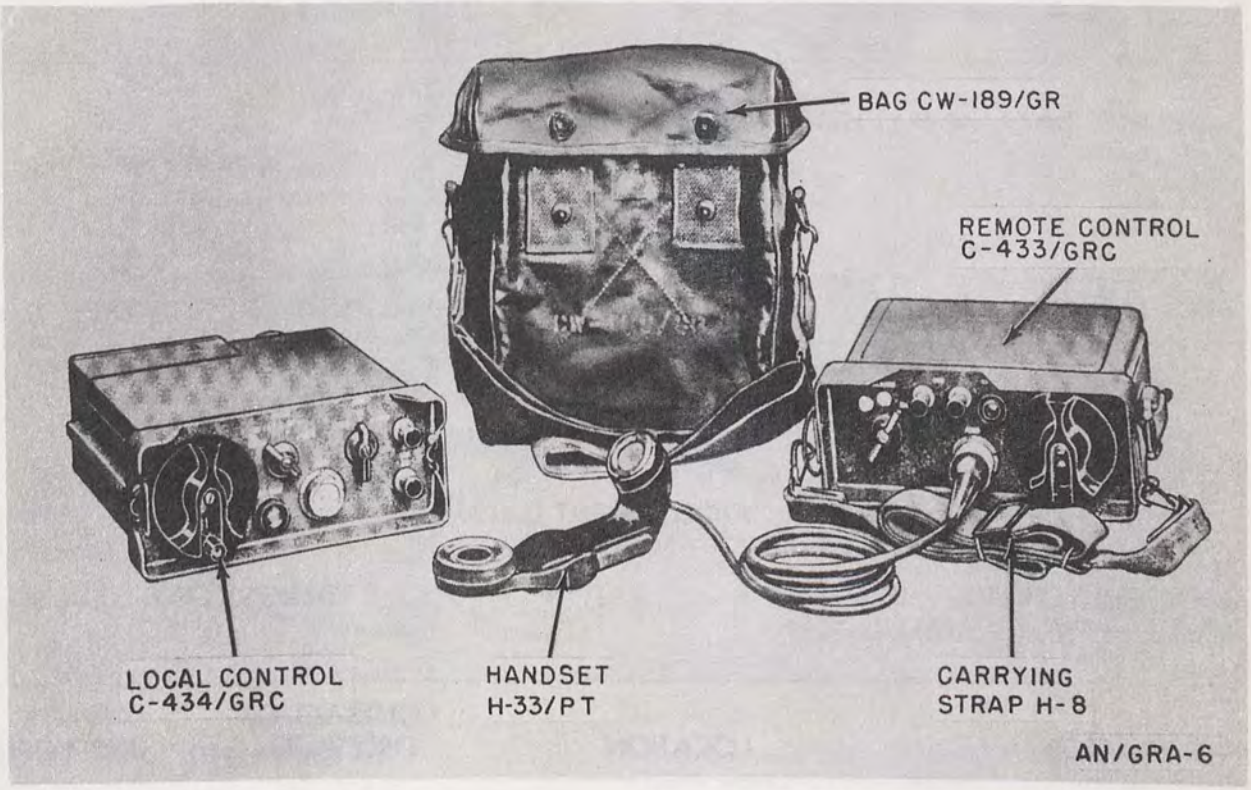
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Raytheon Manufacturing Co.	Waltham 54, Mass.	D–36–039–SC–3779 2921–Phila–52–07	$130.00 with spares

CONTROL GROUP AN/GRA-6

1 July 1958
Cognizant Serv: USA FSN: 5820-537-3848

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C684A-6	--	--



FUNCTIONAL DESCRIPTION:

Control Group AN/GRA-6 is a remote-control equipment used to operate one or two radio sets, either locally or from remote locations, and is used with radio communication equipment at battalion and regimental command levels.

This equipment consists of a remote-control unit, a local-control unit, and accessory components.

It enables push-to-talk control of radio equipment selected from either the local or remote point, and provides telephone facilities, including ringing or call lamp signaling, between operators up to distances of 2 miles over a conventional telephone pair.

TECHNICAL CHARACTERISTICS:

Type of Signal: Voice

Type Communication Circuits: Duplex telephone communication; push-to-talk; power control

Controls:

On local control: LOCAL selector switch; REMOTE selector switch; and RINGER

On remote control: SELECTOR switch and RINGER

AN/GRA-6 CONTROL GROUP

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Local Control C–434/GRC	2C684–434	3-1/2 x 10-1/8 x 8-9/16	10.5
1	Remote Control C–433/GRC	2C684–433	3-1/2 x 7-3/32 x 8-1/4	7.0

REFERENCE DATA AND LITERATURE:

TM 11–5038

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.32	61

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–3329

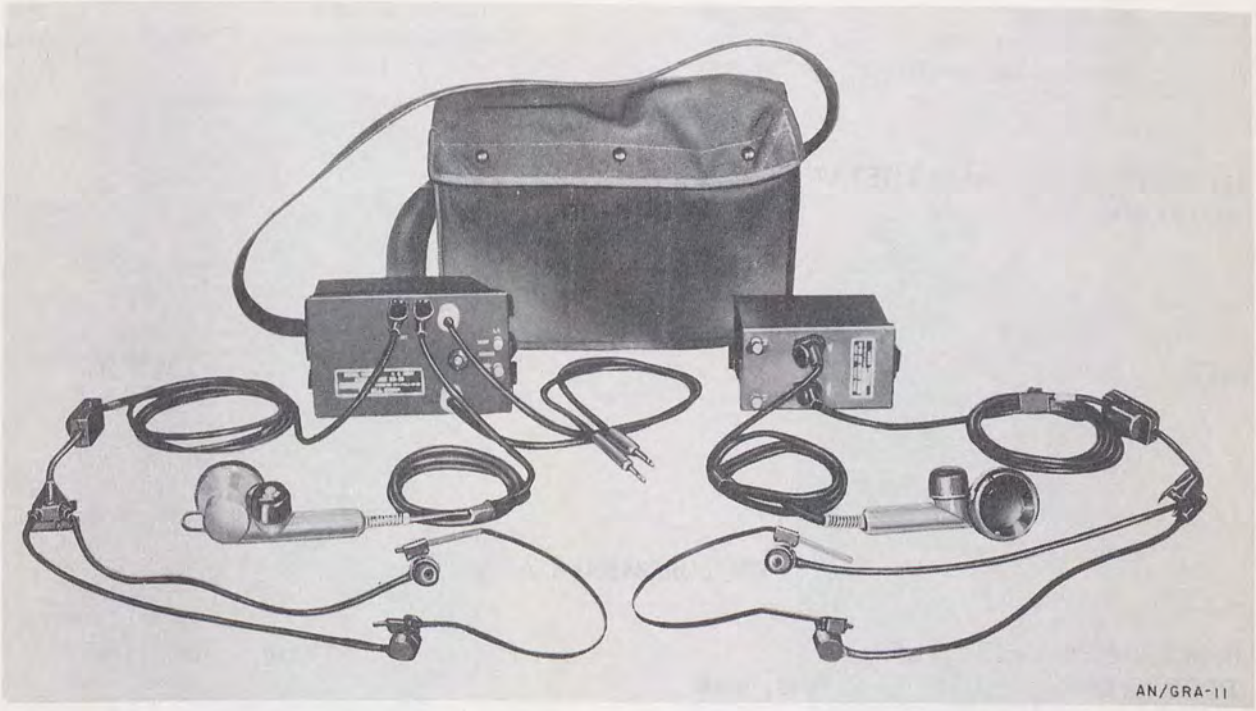
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone Radio Co.	Clifton, N. J.	16818–P–51–55	$279.41

RADIO SET CONTROL GROUP AN/GRA-11

1 July 1958
Cognizant Serv: USA FSN: 5820-228-6108

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C7600-261	--	--



FUNCTIONAL DESCRIPTION:

Radio Set Control Group AN/GRA-11 is the joint nomenclature assigned to that equipment formerly known as Remote Control Equipment RC-261.

Radio Set Control Group AN/GRA-11 is an assemblage of items enabling the erection of a local battery telephone facility between a remote operating position and the actual site of a radio equipment. It is used in conjunction with radio equipment used at company and battery level in units organic to infantry, armored, and airborne divisions.

This equipment consists essentially of a control station designed to be operated at the remote point, a control box used at the radio set, and accessories. The remote control unit is connected to the control box at the radio set by a field wire pair.

By means of this equipment the radio set can be operated from the remote point. Transmission from the remote poin can be monitored at the radio set, or operation at the radio set can be monitored at the remote point. In addition, the two terminal units of the system can be used as an intercommunication facility between the two locations.

The equipment is powered by dry batteries and by the hand generator unit that is integral in the remote control unit.

TECHNICAL CHARACTERISTICS:

Type of Signal: Cw and voice
Type Communication Circuits: Local battery telephone
Controls: One three-position switch marked RADIO, REMOTE, INTERPHONE; two-position impedance switch marked HIGH, LOW; and press-to-talk switch
Power Requirements: 3-v dc (two Batteries BA-30); 6-v dc (four Batteries BA-30)

AN/GRA-11 RADIO SET CONTROL GROUP

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Bag BG–186	2Z551–186	15-1/2 x 5 x 9-5/8	2.0
1	Control Unit RM–53	2C680–53	8-1/2 x 4-3/8 x 4-3/8	4.94
1	Remote Control Unt RM–52	2C680–52	7-1/16 x 3-1/4 x 5 3/16	3.5

REFERENCE DATA AND LITERATURE:

TM 11–2632

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	4	71-3/16

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) SC–D–7841, 7849

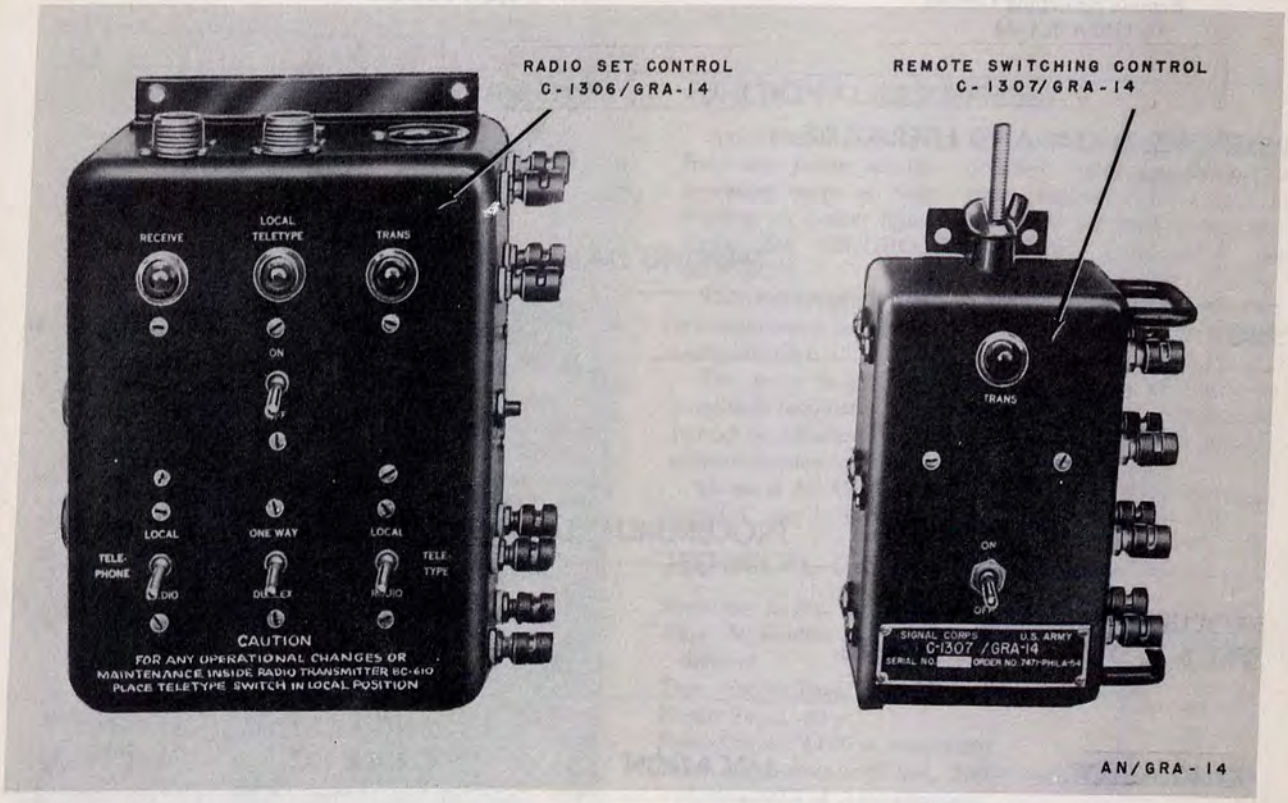
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Air Communications, Inc.	Winthrop, Mass.	1011–P–45–06	$54.03
		2206–P–45–03	54.36
		2208–P–45–03	53.97

RADIO SET CONTROL GROUP AN/GRA-14

1 July 1958
Cognizant Serv: USA FSN: 820-503-1090

	USA	USN	USAF
TYPE CLASS:	Std		Std
STOCK NO:	2C684A-14		



FUNCTIONAL DESCRIPTION:

Radio Set Control Group AN/GRA-14 is used with Radio Set AN/GRA-26A, AN/GRC-26B, or AN/GRC-26C to provide remote control of the radio set over distances up to 1 mile. It enables control of the following functions of the radio set: switching from send to receive; radiotelephone or radioteletype communication on a one-way or full-duplex basis.

This radio set control group consists of a local-control unit, a remote-control unit, and six cables for connecting the local-control unit to the radio set. The local-control unit is mounted in the radio-set shelter and connected to the radio set and the local telephone. The remote-control unit is located at the remote site and is connected to the remote teletypewriter or telephone, and to a 115-volt ac power source.

The teletypewriters and the perforator transmitter may be moved from the radio-set shelter and located at the remote site. However, for full use of the radio set with the control group, two additional teletypewriters, a perforator transmitter or reperforator-transmitter teletypewriter, and a 115-volt ac power source are required.

TECHNICAL CHARACTERISTICS:

Types of Operation: Switching from send to receive; radiotelephone and/or radio-teletype communication on a one-way reversible or full-duplex basis; telephone communication to the radio-set shelter simultaneously with radioteletype communication to a distant station; teletypewriter communication to the radio-set shelter simultaneously with radiotelephone communication to a distant station

Controls:

Local-control Unit: ON-OFF, TELEPHONE LOCAL-RADIO; ONE-WAY DUPLEX; LOCAL-RADIO TELETYPE

Remote-control Unit: ON-OFF

Power Requirements: 115-v ac (remote-control unit); 115-v dc (local control unit)

AN/GRA-14 RADIO SET CONTROL GROUP

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Set Control C–1306/GRA–14	----------	12 x 4-3/4 x 8-1/2	7.25
1	Remote Switching Control C–1307/GRA–14	----------	9-1/2 x 4 x 5-3/8	3

REFERENCE DATA AND LITERATURE:

TM 11–264A, C 4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.4	12.75

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–12665

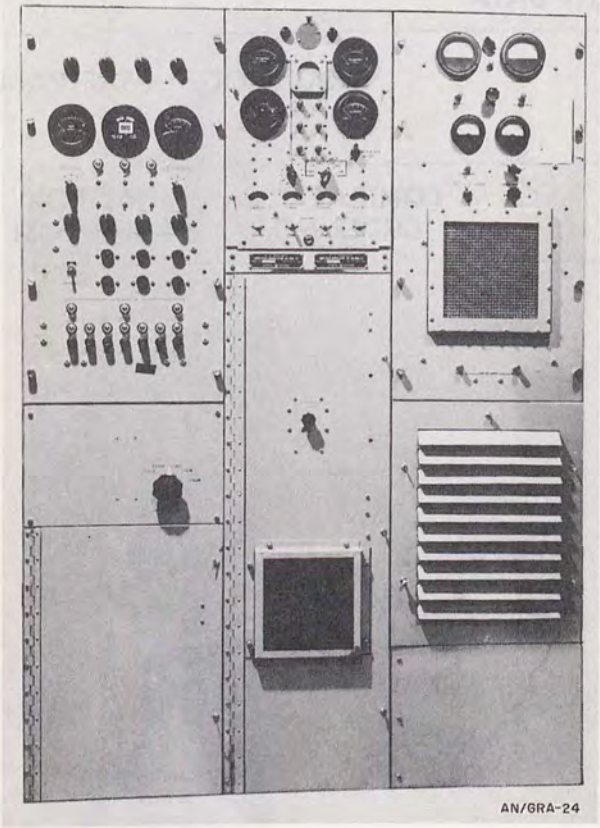
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
New London Instrument Co., Inc.	New London, Conn.	7471–P–54–55	$78.50
George Vorow & Co.	Philadelphia, Pa.	55442–P–56–55	102.00

AMPLIFIER-MODULATOR GROUP AN/GRA-24

26 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Tent-Std
STOCK NO:	--	--	--


AN/GRA-24

FUNCTIONAL DESCRIPTION:

Amplifier-Modulator Group AN/GRA–24 is an ultra-high-frequency power amplifier designed to increase the useful operating range of radio communication with aircraft. It requires an exciter input of 80 watts obtained from either Radio Set AN/GRC–27 or Radio Transmitting Set AN/GRT–3.

This equipment is used where high power ground-to-air communication is required to provide more effective line-of-sight coverage.

The group is intended for single-channel, ground-to-air amplitude-modulated transmission of voice or digital data. It may be switched to either a directional or omnidirectional antenna by means of a switch on the control unit.

Antennas AS–450/GR, AS–505/GR, and AT–197/GR, not supplied, may be used with this equipment.

TECHNICAL CHARACTERISTICS:

Frequency in Mc: 225 to 400
Type Modulation: AM, FM (F1, F9; by modification of drivers)
Type Signal: Tone, voice, composite transmission
Exciter Input: 80 w
Power Output: 1,000 w (minimum)
Power Requirements: 9 kva, 208-v (±10-v) 50–60-cycle 3-phase ac; 0.9 pf, 4-wire system

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier-modulator group	----------	48 x 36 x 60	1,825
1	Control unit	----------	19 x 20 x 8-3/4	50

REFERENCE DATA AND LITERATURE:

AN/GRA-24 AMPLIFIER-MODULATOR GROUP

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: MIL-A-9529

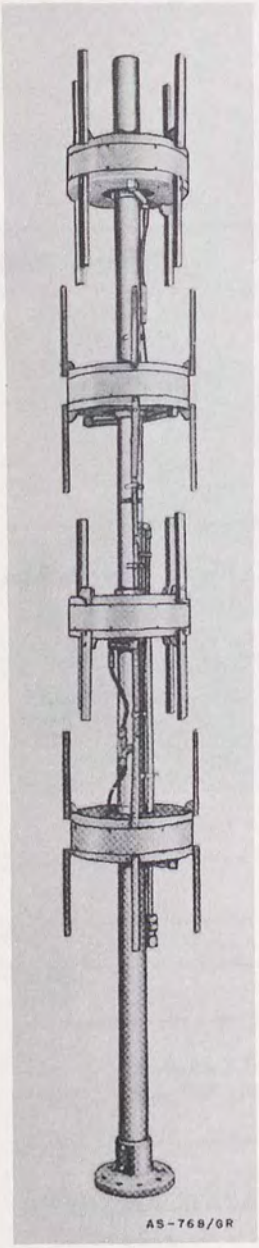
DESIGN COG: USAF, RADC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

ANTENNA AN/GRA-type

5 December 1958
Cognizant Serv: USN FSN: AS–768/GR

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--



FUNCTIONAL DESCRIPTION:

Antenna AS–768/GR is a vertically stacked antenna array designed for radio transmission and reception in the frequency range of 225 to 400 mc. It is used for communication with aircraft at naval air stations.

This vertically stacked antenna array gives a 360° radiation pattern in the horizontal plane with the point of maximum radiation 4° above the optical line of sight.

TECHNICAL CHARACTERISTICS:

Frequency Range: 225 to 400 mc
Input Impedance: 50 ohms at 300 mc
Radiation Pattern:
Horizontal: Circular 0° to 360°
Vertical:
15° at 300 mc, point of maximum radiation
4° above optical line of sight
Standing Wave Ratio: 2-to-1 maximum

AN/GRA-type ANTENNA

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AS–768/GR	----------	14-7/8 x 126-5/8	120

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92489

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	33.7	275

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

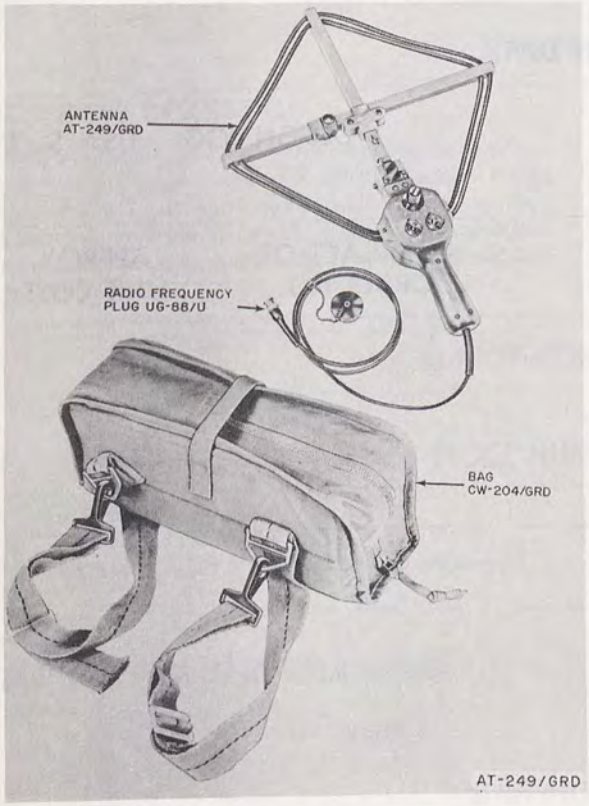
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Product Development Co., Inc.	Kearny, N. J.	NObsr–64096	

ANTENNA AN/GRA-type

5 December 1958
Cognizant Serv: USA FSN: AT-249/GRD

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Antenna AT–249/GRD, when connected to Radio Set AN/PRC–6, comprises an effective homing device that permits the radio operator to find the direction of a radio transmitter tuned to the frequency of the Radio Set AN/PRC–6 and to proceed toward it.

Highly accurate bearings generally are not required for homing; therefore, an azimuth scale is not provided. When desired, azimuth readings can be obtained by sighting a pocket compass in the direction of the indicated bearings.

Homing Antenna AT–339/PRC can be used in place of Antenna AT–249/GRD. The AT–249/GRD can be used, in the 47- to 55.4-mc range, with Radio Set AN/PRC–10, and with all radio sets containing Receiver-Transmitter RT–68/GRC or Radio Receiver R–110/GRC.

TECHNICAL CHARACTERISTICS:

Frequency Range: 47 to 55.4 mc, continuously variable
Type: Unshielded loop
Provision for Sensing: Built-in SENSE or NORMAL switch
Output Control: Four-position step attenuator

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT–249/GRD	----------	3-1/2 x 14-5/8 x 20-1/4	2
1	Bag CW–204/GRD	----------	5-1/2 x 8-1/8 x 16-1/2	2.6

REFERENCE DATA AND LITERATURE:

TM 11–5058

AN/GRA-type ANTENNA

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1		6.75

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

CONTROL INDICATOR AN/GRA-type C-806/GR

5 December 1958
Cognizant Serv: USAF FSN:

USA	USN	USAF
TYPE CLASS:	Used by	Used by
STOCK NO:		

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Control Indicator C-806/GR selects any one of 10 preset channels from one Radio Receiver R-278/GR and one Radio Transmitter T-217/GR, and indicates when any of a number of transmitters are being modulated. Emergency modulation of a single receiver and reception from a single transmitter are available from jacks.

These functions are available over 5 miles of field wire or commercial telephone lines.

TECHNICAL CHARACTERISTICS:

Quantity of Controlled Channels: 10
Power Requirements: 115 or 230 v, 50- to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Indicator C-806/GR		3-15/32 x 8 x 19	12

(This equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TO 16-35C806-4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/GRA-type CONTROL INDICATOR

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: WLENG-234-A

DESIGN COG: USAF

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	AF-33(038)-6135	$230.00 with spares

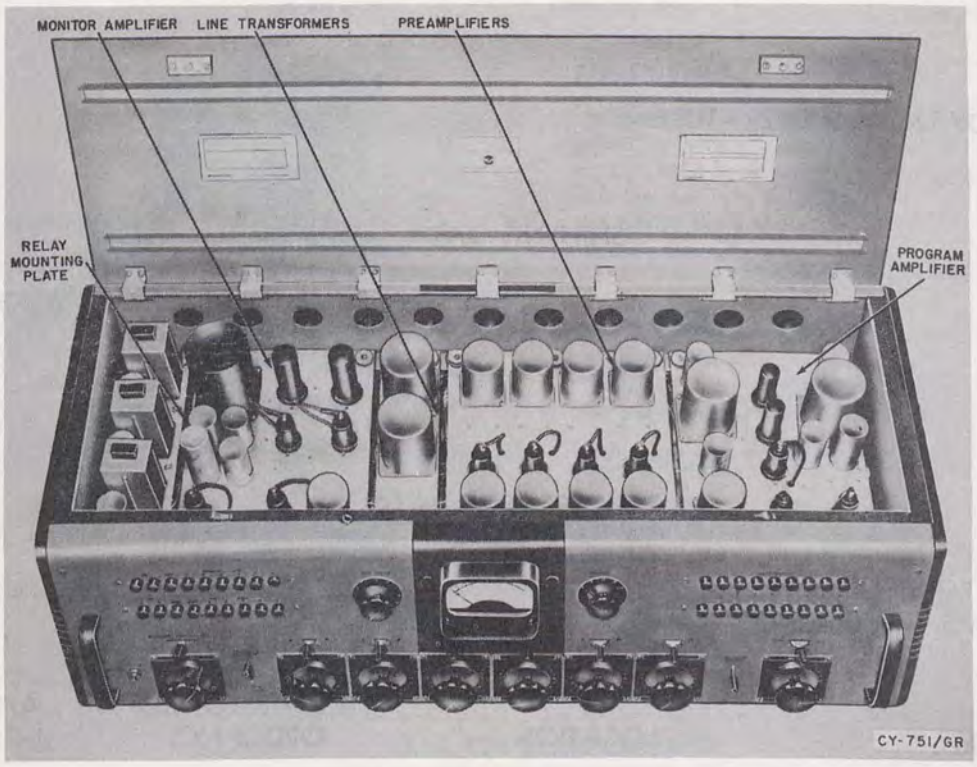
CONSOLE AN/GRA-type

1 July 1958
Cognizant Serv: USA FSN: 5320-355-7818

CY-751/GR

USA	USN	USAF

TYPE CLASS: Std
STOCK NO: 2C1562B-751



FUNCTIONAL DESCRIPTION:

Console CY-751/GR is a high-fidelity audio amplifier and control system used in broadcasting am and fm radio programs.

This equipment consists of a power supply (not illustrated) and a console. It provides facilities for mixing and amplifying the outputs of four microphones in one or two studies, a control-room microphone, an announcer-booth microphone, two transcription turntables, or two of six remote lines.

The amplified output signals of the console are transmitted to a radio transmitter to modulate the broadcast carrier.

This console may also be used for auditioning, monitoring, talk-back from the control room to the studios or remote points, studio cuing, and remote cuing. In conjunction with an external recorder and a recording amplifier, it can be used for recording broadcast programs or auditions.

TECHNICAL CHARACTERISTICS:

Type of Signal: Audio (30 to 15,000 cycles)
Controls: A–P (6 Audition-program selector switches); REMOTE-LOCAL ANNOUNCE; REG.-EMG. LINE OUT; OVERRIDE-OFF-RECORD; PROGRAM-REMOTE PH MON; MIXER 5 INPUT (9 push-button selectors for connecting turn tables and any one of six remote lines to console); MIXER 6 INPUT (same as MIXER 5 INPUT); REMOTE CUE (8 push-button selectors for remote line and remote talk-back); MONITOR INPUT (9 push-button selectors for monitoring signals); TUBE CHECK (selects console tube stages to be checked on front panel volume meter); MONITOR (volume control for monitor amplifier); MASTER (volume control for program amplifier); VU CONTROL (zero adjust for volume-unit meter)
Power Requirements: 225 w, 100– 130-v 50/60-cycles ac

AN/GRA-type CONSOLE

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Console amplifier	5895–224–6188	10-1/2 x 17 x 39	135
1	Power supply	5820–265–0704	15 x 8 x 15	60

REFERENCE DATA AND LITERATURE:

TM 11–2647
TO 16–35CY751–5

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	22.6	385

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–M–13231

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Continental Electronics, Ltd.	Dallas, Tex.	21328–P–50–01	$1,850.00
Radio Corp. of America	New York, N. Y.	50728–P–57–55	2,304.24

GENERATOR AN/GRA-type

25 November 1958
Cognizant Serv: USA FSN: GN-58-A

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	Used by
STOCK NO:	3H2358		



FUNCTIONAL DESCRIPTION:

Generator GN–58–A is a hand operated generator unit designed to supply power to Receiver-Transmitter RT–77/GRC–9 when a vehicular battery is not available, as in portable field use. The equipment requires a single operator who sits astride the leg seat and rotates the generator cranks in the direction indicated on the generator housing.

The generator incorporates a plug-in voltage regulator that operates to keep the output voltage constant, regardless of the speed of rotation or the amount of load on the generator, within 50 to 70 rpm limits.

The GN–58–A is similar to Generator GN–58 except for changes in component parts of voltage regulators and filters.

TECHNICAL CHARACTERISTICS:

Speed of Rotation: 50 to 70 rpm
Operation: Manual, by hand crank
Regulation: By varying field currents dependent upon speeds of rotation above 50 rpm
Power Output: 115 ma at 425-v dc; 2.5 amp at 6.3-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Cord CD–1086	----------	7 feet long	
1	Generator GN–58–A	3H2358	7-1/2 x 8 x 10-1/2	22.75
1	Leg LG–2–A			
2	Leg LG–3			

REFERENCE DATA AND LITERATURE:

TM 11–263 or TO 31R2–2GRC9–1

AN/GRA-type GENERATOR

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

POWER SUPPLY AN/GRA-type

5 December 1958
Cognizant Serv: USN FSN: PP–1098/GRC–9

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Power Supply PP–1098/GRC–9 is designed to convert 115-v 60-cycle single-phase ac into the proper dc voltages to operate Radio Set AN/GRC–9.

The equipment is suitable for use either on shipboard or at shore stations where the normal supply voltage is 115-v 60-cycle single-phase ac.

TECHNICAL CHARACTERISTICS:

Power Output: 65 w (max), 95 ma at 470–v dc, 42 ma at 105-v dc, 17 ma at 105-v dc, 2.5 amp at 6.1-v dc, 450 ma at 1.5-v dc

Power Input: 215 w (max), 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Supply PP–1098/GRC–9	----------	9 x 16-1/2 x 10-1/4	59

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92310

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1		

AN/GRA-type POWER SUPPLY

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Charleston Naval Shipyard	Charleston, S. C.	10704/53	

RADIO TRANSMITTER EQUIPMENT AN/GRA-type

5 December 1958
Cognizant Serv: USN FSN: TCA–1

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitter Equipment TCA–1 is a low power, general purpose, radio telephone transmitter designed primarily for table mounting in air station control towers.

The TCA–1 features rapid selection of four pretuned channels in the frequency range of 3,000 to 9.050 kilocycles. It is designed to work into an unbalanced antenna or transmission line of 70- to 600-ohm resistive impedance, and up to 1,000-ohm reactive impedance.

This equipment is designed to operate from a 50- to 60-cycle power source or a 50- to 60-cycle and 25-cycle power source.

TECHNICAL CHARACTERISTICS:

Frequency Range: 3,000 to 9.050 kc
Number of Channels: 4 preset
Frequency Control: Crystal
Type of Signal: Voice
Power Output: 15 w
Response (Af): Uniform within 3 db, from 500 to 2,500 cps; down 30 db or more at 60 and 5,000 cps
Amplitude Distortion (Af): 6% rms maximum at any modulation level
Residual Noise Level: 40 db or more below 100% modulation
Power Requirements: 200 w, 110- 115-v 50–60/25-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transmitter Model TCA–1 c/o: Radio Frequency Unit 33R–1 Modulator and Power Supply 421A–1 (50 to 60 cps) or 421A–2 (50 to 60 and 25 cps)	----------	12-3/4 x 20-1/4 x 28-1/4	170
1	Operators Desk Set 223F–5			
1	Power Line Connector Cord 65J–1			
1	Receiver Connector 365N808			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95301

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/GRA-type RADIO TRANSMITTER EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

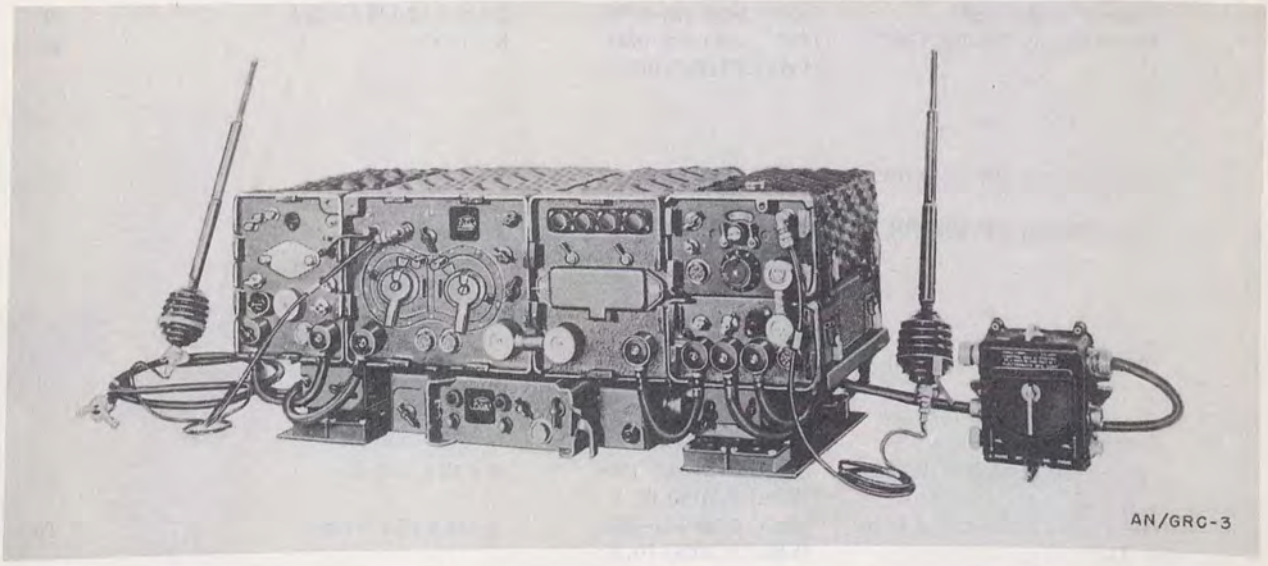
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NOs–81551, 10 Feb 1941	$750.00

RADIO SET AN/GRC-3

1 July 1958
Cognizant Serv: USA FSN: 5820–230–0453

	USA	USN	USAF
TYPE CLASS:	Std	Std	--
STOCK NO:	2S12–3124	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC–3 is a short-range, fm (voice), two-way communication equipment having provision for retransmission, duplex, and remote control operation. It is one of the integrated series of radio equipment and is used by units organic to an armored division.

It consists of a medium-power radio receiver-transmitter component, designated as set 1, and an auxiliary radio receiver, both of which operate in the frequency range assigned to armored units. In addition, it includes a separate low-power, short-range receiver-transmitter, designated as set 2, which operates in a frequency band common to armored, artillery, and infantry units. Vehicular interphone amplifier and control units for selecting desired modes of operation and service are included.

It operates in a vehicle from the 12- or 24-v vehicular storage battery.A hand generator and associated components (Modification Kit MX–898/GR) provide for operation in semipermanent locations.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Receiver-Transmitter RT–66/GRC (set 1): 20.0 to 27.9
Receiver-Transmitter RT–70/GRC (set 2): 47.0 to 58.4
Radio Receiver R–108/GRC (auxiliary receiver): 20.0 to 27.9

Type Modulation: FM

Type of Signal: Voice and 1,600-cycle fm signals

Power Output:

	Transmitting	
	Low	*High*
Set 1:	1 to 2 w	9 to 16 w
Set 2:	0.5 w	

	Receiving		
	Phone	*Speaker*	*Retransmission*
Set 1:	50 mw	1 w	30 mw
Set 2:		75 mw	
Auxiliary receiver	50 mw	1 w	30 mw

Power Requirements: 110 to 280 w (depending upon mode of operation) from 12/24-v vehicular storage battery

AN/GRC-3 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM–65/GRC	(FSN) 5820–194–8303 (USA) 2C449–65.1	4-1/4 x 13 x 7-7/8	15.5
1	Control C–435/GRC	(FSN) 5820–170–4780	3-1/2 x 10-1/2 x 8-3/4	12
1	Power Supply PP–109/GRC	(FSN) 6130–284–0231 (USA) 3H4497–109.1	8 x 13 x 9	33
	or			
1	Power Supply PP–112/GRC	(FSN) 6130–284–0230 (USA) 3H4497–112.1	8 x 13 x 9	33
2	Power Supply PP–281/GR	(FSN) 5820–500–4375 (USA) 3H4497–281.1	4-1/2 x 6 x 3	6
	or			
2	Power Supply PP–282/GR	(FSN) 5820–500–1648 (USA) 3H4497–282.1	4-1/2 x 6 x 3	6
1	Radio Receiver R–108/GRC	(FSN) 5820–503–1258 (USA) 2C4180–108.1	9 x 13 x 7-1/4	35
1	Receiver-Transmitter RT–66/GRC	(FSN) 5820–503–1508 (USA) 2C5130–66.1	9 x 13 x 11-1/4	35
1	Receiver-Transmitter RT–70/GRC	(FSN) 5820–537–3913 (USA) 2C5130–70.2	4-3/4 x 13 x 7-1/8	25

REFERENCE DATA AND LITERATURE:
TM 11–284

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	10.48	441

PROCUREMENT DATA

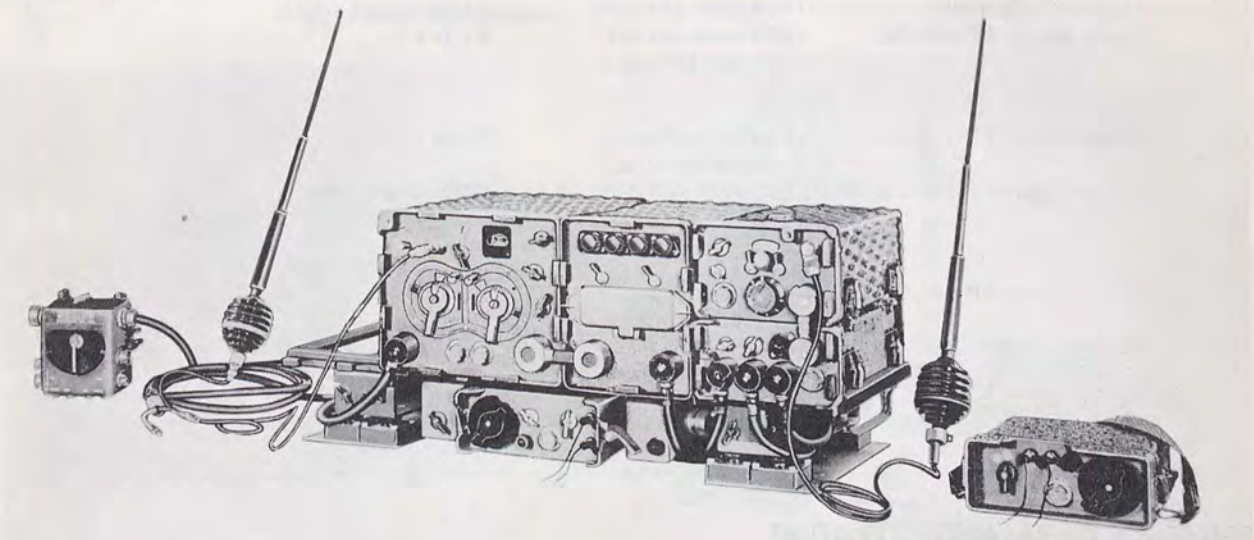
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/GRC-4( )

1 July 1958
Cognizant Serv: USA FSN: 5820-243-6418

	USA	USN	USAF
TYPE CLASS:	Std	Std	--
STOCK NO:	2S12-4124		--



AN/GRC-4

FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC-4( ) is a short-range, FM (voice), two-way communication equipment having provision for retransmission, duplex, and remote control operation. It is one of the integrated series of radio equipment and is used by units organic to an armored division.

It consists of a medium-power radio receiver-transmitter component, designated as set 1, that operates in the frequency range assigned to armored units, and a low-power receiver-transmitter, designated as set 2, that operates in a frequency band common to armored, artillery, and infantry units. Vehicular interphone amplifier and control units for selecting desired modes of operation and service are included.

This equipment generally operates in a vehicle from the 12- or 24-v vehicular storage battery; hand generator and associated components (Modification Kit MX-898/GR) may be used for operation in semipermanent ground applications.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Receiver-Transmitter RT-66/GRC (set 1): 20.0 to 27.9
Receiver-Transmitter RT-70/GRC (set 2): 47.0 to 58.4
Type Modulation: Fm
Type of Signal: Voice and 1,600-cycle fm signals
Power Output:

	Transmitting	
	Low	*High*
Set 1:	1 to 2 w	9 to 16 w
Set 2:	0.5 w	

	Receiving		
	Phone	*Speaker*	*Retransmission*
Set 1:	50 mw	1 w	30 mw
Set 2:		75 w	

Power Requirements: 110 to 280 w (depending upon mode of operation), 12/24-v dc from vehicular storage battery

AN/GRC-4( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM–65/GRC	(FSN)5820–194–8303 (USA)2C449–65.1	4-1/4 x 13 x 7-7/8	15.5
1	Control C–435/GRC	(FSN)5820–170–4780	3-1/2 x 10-1/2 x 8-3/4	12
1	Power Supply PP–109/GR	(FSN)6130–284–0231 (USA)3H4497–109.1	8 x 13 x 9	33
	or			
1	Power Supply PP–112/GR	(FSN)6130–284–0230 (USA)3H4497–112.1	8 x 13 x 9	33
1	Power Supply PP–281/GR	(FSN)5820–500–4375 (USA)3H4497–281.1	4-1/2 x 6 x 3	6
	or			
1	Power Supply PP–282/GR	(FSN)5820–500–1648 (USA)3H4497–281.1	4-1/2 x 6 x 3	6
1	Receiver-Transmitter RT–66/GRC	(FSN)5820–503–1508 (USA)2C5130–66.1	9 x 13 x 11-1/4	35
1	Receiver-Transmitter RT–70/GRC	(FSN)5820–537–3913 (USA)2C5130–70.2	4-3/4 x 13 x 7-1/8	25

REFERENCE DATA AND LITERATURE:

TM 11–284

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	10.48	441

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

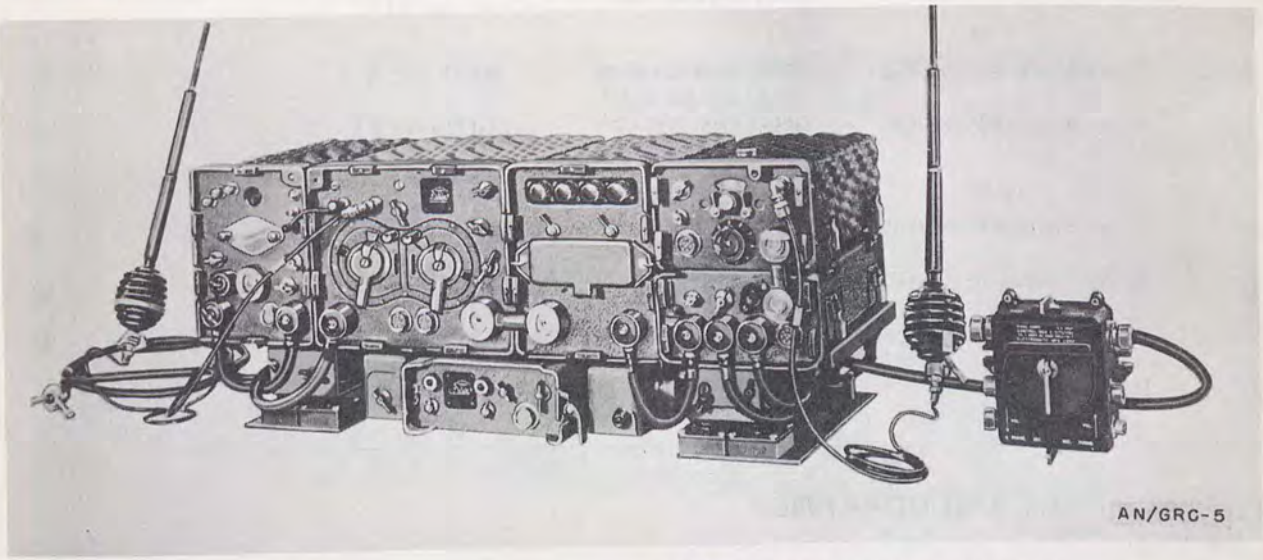
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/GRC-5

1 July 1958
Cognizant Serv: USA FSN: AN/GRC-5: 5820-230-0449
AN/GRC-5X: 5820-230-0460

	USA	USN	USAF
TYPE CLASS:	Std	Std	--
STOCK NO:	AN/GRC-5: 2S12-5/24 AN/GRC-5X: 2S12-5/12	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC-5 is a short-range, FM (voice), two-way communication equipment having provision for retransmission, duplex, and remote control operation. It is one of the integrated series of radio equipment used by artillery units.

This equipment consists of a medium-power radio receiver-transmitter, designated as set 1, operating on frequencies assigned to field artillery and a low-power receiver-transmitter designated as set 2, operating on frequencies common to artillery, armored, and infantry units for communication and liaison among all three types of organizations. It includes an auxiliary receiver, a vehicular interphone amplifying equipment, and control units for selecting desired modes of operation and service.

It generally operates in a vehicle from the 12- or 24-v vehicular storage battery; a hand generator and associated components (Modification Kit MX-898/GR) may be used for semipermanent field operation of set 1 or set 2 removed from the vehicle.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Receiver-Transmitter RT-67/GRC (set 1): 27.0 to 38.9
Receiver-Transmitter RT-70/GRC (set 2): 47.0 to 58.4
Radio Receiver R-109/GRC (auxiliary receiver): 27.0 to 38.9

Type Modulation: FM

Type of Signal: Voice and 1,600-cycle FM tone signals

Power Output:

	Transmitting	
	Low	*High*
Set 1:	1 to 2 w	9 to 16 w
Set 2:	0.5 w	

	Receiving		
	Phone	*Speaker*	*Retransmission*
Set 1:	50 mw	1 w	30 mw
Set 2:		75 mw	
Auxiliary receiver	50 mw	1 w	30 mw

Power Requirements: 110 to 280 w (depending upon mode of operation) from 12/24-v vehicular storage battery

AN/GRC-5 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM–65/GRC	(FSN)5820–194–8303 (USA) 2C449–65.1	4-1/4 x 13 x 7-7/8	15.5
1	Control C–435/GRC	(FSN) 5830–170–7868	3-1/2 x 10-1/2 x 8-3/4	12
1	Power Supply PP–109/GR	(FSN) 6130–284–0231 (USA) 3H4497–109.1	8 x 13 x 9	33
	or			
1	Power Supply PP–112/GR	(FSN) 6130–284–0230 (USA) 3H4497–112.1	8 x 13 x 9	33
2	Power Supply PP–281/GR	(FSN) 5820–500–4375 (USA) 3H4497–281.1	4-1/2 x 6 x 3	6
	or			
2	Power Supply PP–282/GR	(FSN) 5820–500–1648 (USA) 3H4497–282.1	4-1/2 x 6 x 3	6
1	Radio Receiver R–109/GRC	(FSN) 5820–503–1413 (USA) 2C4180–109	9 x 13 x 7-1/4	35
1	Receiver-Transmitter RT–67/GRC	(FSN) 5820–503–1507 (USA) 2C5130–67.1	9 x 13 x 11-1/4	35
1	Receiver-Transmitter RT–70/GRC	(FSN) 5820–537–3913 (USA) 2C5130–70.2	4-3/4 x 13 x 7-1/8	25

REFERENCE DATA AND LITERATURE:

TM 11–284

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	10.48	441

PROCUREMENT DATA

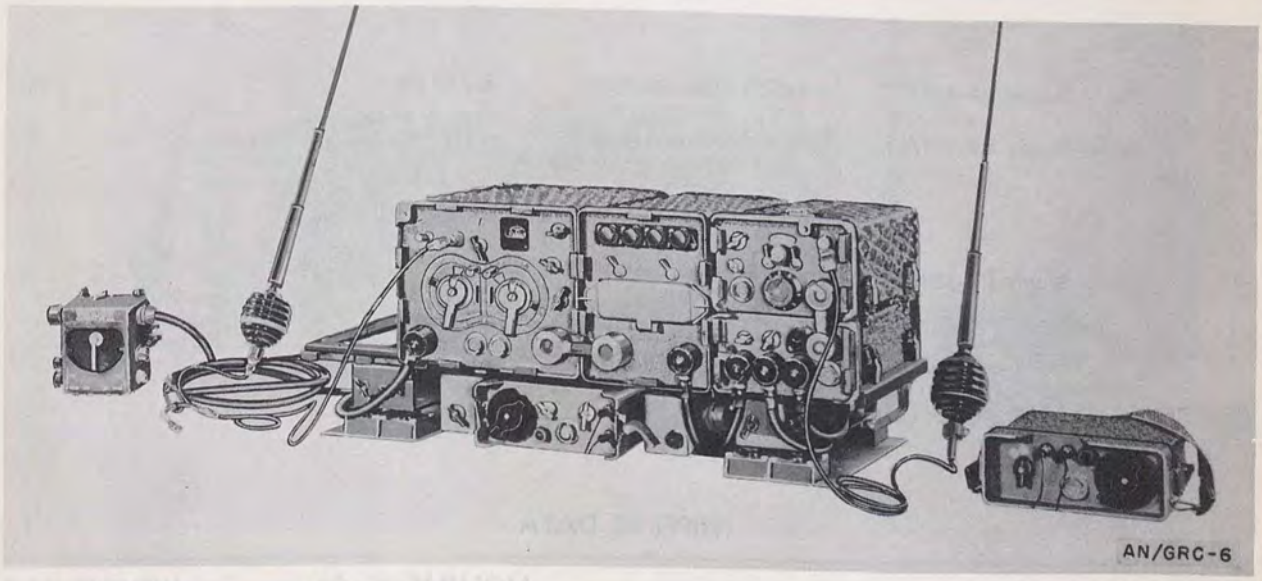
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/GRC-6

1 July 1958
Cognizant Serv: USA FSN: AN/GRC-6: 5820-222-6417
AN/GRC-6X: 5820-230-0448

	USA	USN	USAF
TYPE CLASS:	Std	Std	--
STOCK NO:	AN/GRC-6: 2S12-6/24 AN/GRC-6X: 2S12-6/12	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC-6 is a vehicular, short-range, FM (voice), two-way radio communication equipment having provision for retransmission, duplex, and remote control operation. It is one of the integrated series of radio equipment and is used by artillery units.

This equipment consists of a medium-power receiver-transmitter, designated as set 1, that operates in the frequency range assigned to an artillery unit. In addition, it includes a separate, low-power, short-range receiver-transmitter, designated as set 2, that operates in the frequency band common to armored, artillery, and infantry units. Vehicular interphone amplifier and control units for selecting desired modes of operation and service are included.

It generally operates in a vehicle from the 12- or 24-v vehicular storage battery; a hand generator and associated components (Modification Kit MX-898/GR) may be used for operation in semipermenant locations.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
RT-67/GRC (set 1): 27.0 to 38.9
RT-70/GRC (set 2): 47.0 to 58.4
Type Modulation: FM
Type of Signal: Voice and 1,600-cycle FM tone signals
Power Output:

	Transmitting	
	Low	*High*
Set 1:	1 to 2 w	9 to 16 w
Set 2:	0.5 w	

	Receiving		
	Phone	*Speaker*	*Retransmission*
Set 1:	50 mw	1 w	30 mw
Set 2:		75 mw	

Power Requirements: 110 to 280 w (depending upon mode of operation) at 12- or 24-v dc from vehicular storage battery

AN/GRC-6 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM–65/GRC	(FSN) 5820–194–8303 (USA) 2C449–65.1	4-1/4 x 13 x 7-7/8	15.5
1	Control C–435/GRC	(FSN) 5830–170–7868	3-1/2 x 10-1/2 x 8-3/4	12
1	Power Supply PP–109/GR	(FSN) 6130–284–0231 (USA) 3H4497–109.1	8 x 13 x 9	33
	or			
1	Power Supply PP–112/GR	(FSN) 6130–284–0230 (USA) 3H4497–112.1	8 x 13 x 9	33
1	Power Supply PP–281/GR	(FSN) 5820–500–4375 (USA) 3H4497–281.1	4-1/2 x 6 x 3	6
	or			
1	Power Supply PP–282/GR	(FSN) 5820–500–1648 (USA) 3H4497–282.1	4-1/2 x 6 x 3	6

REFERENCE DATA AND LITERATURE:
TM 11–284

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	10.48	441

PROCUREMENT DATA

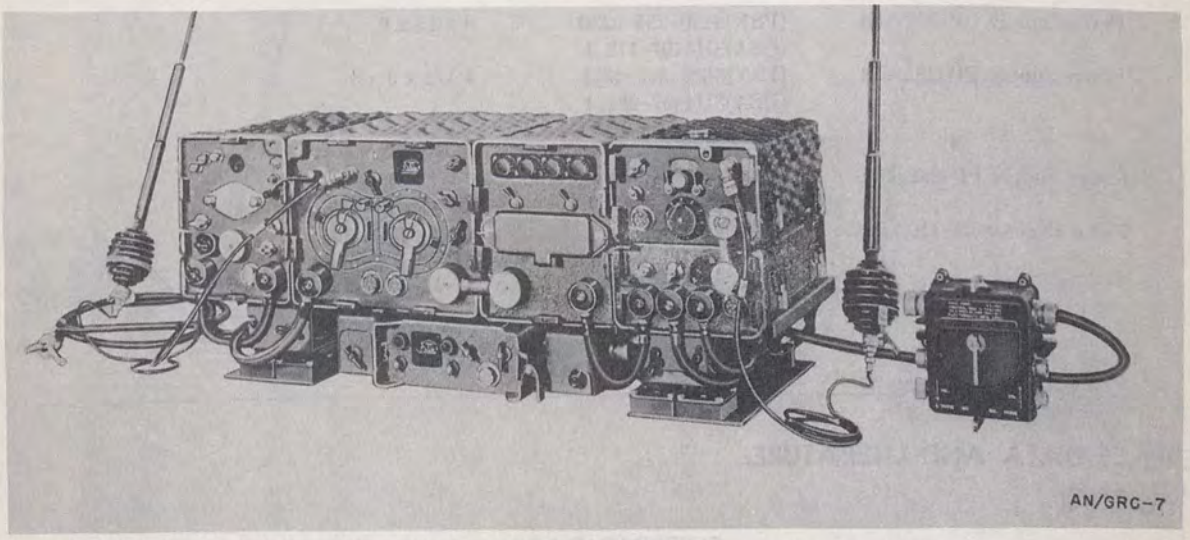
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/GRC-7

1 July 1958
Cognizant Serv: USA FSN: AN/GRC-7: 5820-230-0446
AN/GRC-7X: 5820-222-6416

	USA	USN	USAF
TYPE CLASS:	Std	Std	--
STOCK NO:	AN/GRC-7: 2S12-7/24 AN/GRC-7X: 2S12-7/12	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC-7 is a short-range, FM (voice), two-way communication equipment having provision for retransmission, duplex, and remote control operation. It is one of the integrated series of radio equipment used by units organic to an infantry division.

It consists of a medium-power radio receiver-transmitter component, designated as set 1, and an auxiliary radio receiver, both of which operate in the frequency range assigned to infantry units. In addition, it includes a separate low-power, short-range receiver-transmitter, designated as set 2, that operates in a frequency band common to armored, artillery, and infantry units. Vehicular interphone amplifier and control units for selecting desired modes of operation and service are included.

It generally operates in a vehicle from the 12- or 24-v vehicular storage battery; a hand generator and associated components (Modification Kit MX-898/GR) may be used for operation in semipermanent locations.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
RT-68/GRC (set 1): 38.0 to 54.9
RT-70/GRC (set 2): 47.0 to 58.4
RC-110/GRC (auxiliary receiver): 38.0 to 54.9

Type Modulation: FM

Type of Signal: Voice and 1,600-cycle FM tone signals

Power Output:

	Transmitting	
	Low	*High*
Set 1:	1 to 2 w	9 to 16 w
Set 2:	0.5 w	

	Receiving		
	Phone	*Speaker*	*Retransmission*
Set 1:	50 mw	1 w	30 mw
Set 2:		75 mw	
Aux Rec:	50 mw	1 w	30 mw

Power Requirements: 110 to 280 w (depending upon mode of operation), 12/24-v dc from vehicular storage battery

AN/GRC-7 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM-65/GRC	(FSN)5820-194-8303 (USA)2C449-65.1	4-1/4 x 13 x 7-7/8	15.5
1	Control C-435/GRC	(FSN)5830-170-7868	3-1/2 x 10-1/2 x 8-3/4	12
1	Power Supply PP-109/GR	(FSN)6130-284-0231 (USA)3H4497-109.1	8 x 13 x 9	33
	or			
1	Power Supply PP-112/GR	(FSN)6130-284-0230 (USA)3H4497-112.1	8 x 13 x 9	33
2	Power Supply PP-281/GR	(FSN)5820-500-4375 (USA)3H4497-281.1	4-1/2 x 6 x 3	6
	or			
2	Power Supply PP-282/GR	(FSN)5820-500-1648 (USA)3H4497-282.1	4-1/2 x 6 x 3	6
1	Radio Receiver R-110/GRC	(FSN)5820-503-1254 (USA)2C4180-110.1	9 x 13 x 7-1/4	35
1	Receiver-Transmitter RT-68/GRC	(FSN)5820-503-1505 (USA)2C5130-68.1	9 x 13 x 11-1/4	35
1	Receiver-Transmitter RT-70/GRC	(FSN)5820-537-3913 (USA)2C5130-70.2	4-3/4 x 13 x 7-1/8	25

REFERENCE DATA AND LITERATURE:

TM 11-284

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	10.48	441

PROCUREMENT DATA

PROCURING SERVICE: USA **DESIGN COG:** USA, Sig C

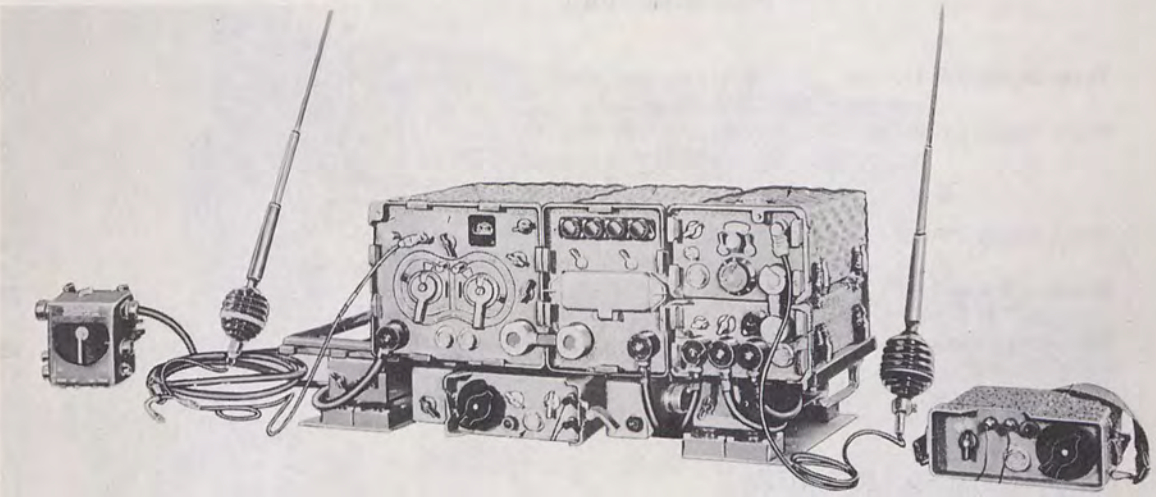
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/GRC-8

1 July 1958
Cognizant Serv: USA FSN: AN/GRC-5820-230-0454
AN/GRC-8X: 5820-230-0445

	USA	USN	USAF
TYPE CLASS:	Std	Std	--
STOCK NO:			



AN/GRC-8

FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC-8 is a short-range, FM (voice), two-way communication equipment for retransmission, duplex, and remote control operation. It is one of the integrated series of radio equipment used by units organic to an infantry division.

This equipment consists of a medium-power radio receiver-transmitter component, designated as set 1, operating in the frequency range assigned to infantry units, and a low-power receiver-transmitter, designated as set 2, which operates in a frequency band common to armored, artillery, and infantry units. It includes vehicular interphone amplifying equipment and control units for selecting desired modes of operation

It generally operates in a vehicle from the 12- or 24-v vehicular storage battery; a hand generator and associated components (Modification Kit MX-898/GR) may be used for operation in semipermanent ground applications.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Receiver-Transmitter RT-68/GRC (set 1): 38.0 to 54.9
Receiver-Transmitter RT-70/GRC (set 2): 47.0 to 58.4

Type Modulation: FM

Type of Signal: Voice and 1,600-cycle FM tone signals

Power Output:

	Transmitting	
	Low	*High*
Set 1:	1 to 2 w	9 to 16 w
Set 2:	0.5 w	

	Receiving		
	Phone	*Speaker*	*Retransmission*
Set 1:	50 mw	1 w	30 mw
Set 2:		75 w	

Power Requirements: 110 to 280 w (depending upon mode of operation) from 12/24-v vehicular storage battery

AN/GRC-8 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM–65/GRC	(FSN) 5820–194–8303 (USA) 2C449–65.1	4-1/4 x 13 x 7-7/8	15.5
1	Control C–435/GRC	(FSN) 5830–170–7868	3-1/2 x 10-1/2 x 8-3/4	12
1	Power Supply PP–109/GR	(FSN) 6130–284–0231 (USA) 3H4497–109.1	8 x 13 x 9	33
	or			
1	Power Supply PP–112/GR	(FSN) 6130–284–0230 (USA) 3H4497–112.1	8 x 13 x 9	33
1	Power Supply PP–281/GR	(FSN) 5820–500–4375 (USA) 3H4497–281.1	4-1/2 x 6 x 3	6
	or			
1	Power Supply PP–282/GR	(FSN) 5820–500–1648 (USA) 3H4497–282.1	4-1/2 x 6 x 3	6
1	Receiver-Transmitter RT–68/GRC	(FSN) 5820–503–1505 (USA) 2C5130–68.1	9 x 13 x 11-1/4	35
1	Receiver-Transmitter RT–70/GRC	(FSN) 5820–537–3913 (USA) 2C5130–70.2	4-3/4 x 13 x 7-1/8	25

REFERENCE DATA AND LITERATURE:

TM 11–284

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	10.48	441

PROCUREMENT DATA

PROCURING SERVICE: USA DESIGN COG: USA, Sig C

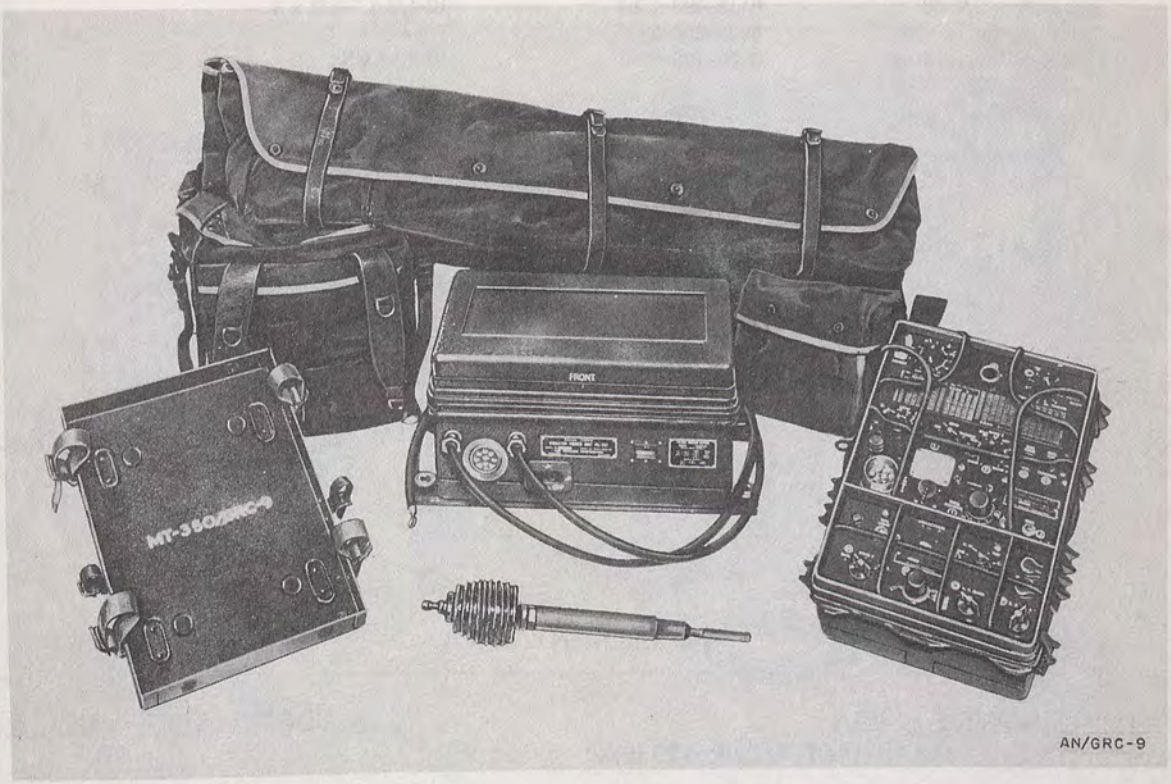
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/GRC-9( )

1 July 1958
Cognizant Serv: USA FSN: 5820-193-8845

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Std
STOCK NO:	2S2501-9	--	266-498345



FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC-9( ) is a light-weight portable or vehicular, 3-band, AM (voice, tone, cw, and mcw) equipment used by infantry and armored units for communication in the hf band.

This equipment consists of a receiver-transmitter (which can be either crystal- or master-oscillator controlled), a power supply, and related accessories. It uses a vehicular whip-type or long-wire antenna, one or two sets of headphones, or a loudspeaker connected at either of the headphone jacks.

Power is derived from a storage battery through the vibrator power unit or from a hand generator such as the GN-58.

During standby, the receiver uses Battery BA-48, which can be used in conjunction with the hand generator when the transmitter is being operated.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 12 in 3 bands
Type Modulation: AM
Type of Signal: Voice, cw, or mcw
Power Output:
With PE-237: High, 7 w; low, 1 w (voice)
With GN-58: High 3.6 w;low, 1.2 w (voice)
Power Requirements: Vibrator Power Supply PE-237 and 6-, 12-, or 24-v vehicular storage battery; Generator GN-58; or Power Unit PE-162. Battery BA-48 used for standby operation of receiver.

AN/GRC-9( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Generator GN–58	6115–498–4267	10-1/2 x 7-1/2 x 8	22.75
1	Loudspeaker LS–203/U	5965–280–3800	7 x 4-3/4 x 3	3
1	Receiver-Transmitter RT–77/GRC–9	5820–196–9041	16 x 13 x 8	32
1	Vibrator Power Supply PE–237	5820–252–5503	20 x 10-1/2 x 10-3/4	74

REFERENCE DATA AND LITERATURE:

TM 11–263

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	15.9	359

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–P–1167; MIL–R–12532A

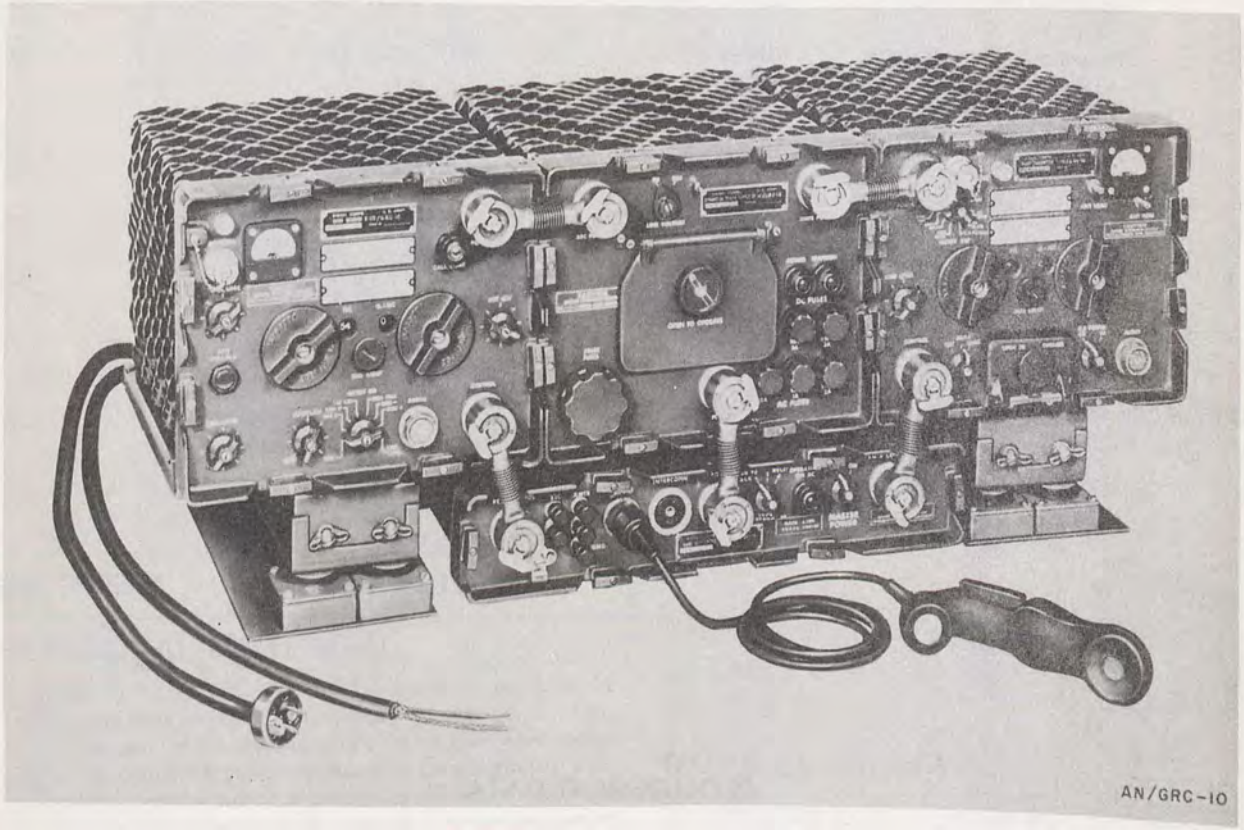
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Avco Mfg. Corp., Crosley Division	Cincinnati, Ohio	15170–P–52–55	$1,387.54
Hoffman Labs., Inc.	Los Angeles, Calif.	341–P–51–55	1,713.21
Lewyt Manufacturing Corp.	Brooklyn, N. Y.	21581–P–56–55	489.00
Tele-King Corp.	----	15174–P–52–01	
The Rowland-Borg Corp.	Chicago, Ill.	53096–P–45–04	1,222.53

RADIO SET AN/GRC-10

1 July 1958
Cognizant Serv: USA FSN: 5820-570-5482

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S2501-10	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC-10 is a vhf, FM receiving and transmitting equipment that may be used in single-channel push-to-talk communication applications, as a terminal station of a single-channel, line of sight, radio relay system, as a major component of a multichannel radio terminal set, or as part of a radio relay (repeater) set of a multichannel system. (See AN/GRC-39 and AN/GRC-40.)

It consists essentially of an antenna system, a receiver, a transmitter, a power supply, a radio-set control, and an equipment rack.

It can be used in fixed-plant, ground, or vehicular applications.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 54 to 70.9 (170 channels spaced 0.1 mc apart).
Type Modulation: FM
Type of Signal: Voice; multichannel telephone, telegraph; facsimile; or various combinations of these.
Transmitter Power Output: 10 w, 40 w.
Power Requirements, Each: DY-94/GRC-10: 292 w, 115/230-v, 50/65-cycle ac; 326 w, 26-v dc.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Group OA-249/GRC-10	5985-174-0514	----------	90.5
1	Dynamotor-Power Supply DY-94/GRC-10	6125-392-7183	9-1/4 x 13 x 11-1/4	59.5
1	Electrical Equipment Rack MT-700/GRC-10	5820-503-3465	5 x 12-1/2 x 33-5/8	
1	Radio Receiver R-125/GRC-10	5820-503-1244	9-1/4 x 13 x 11-1/4	31
1	Radio Set Control C-632/GRC-10	5820-503-1010	4 x 13 x 18	18
1	Radio Transmitter T-235/GRC-10	5820-503-3420	9-1/4 x 13 x 11-1/4	34.5

REFERENCE DATA AND LITERATURE:

TM 11-614

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	33	609.3

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10511

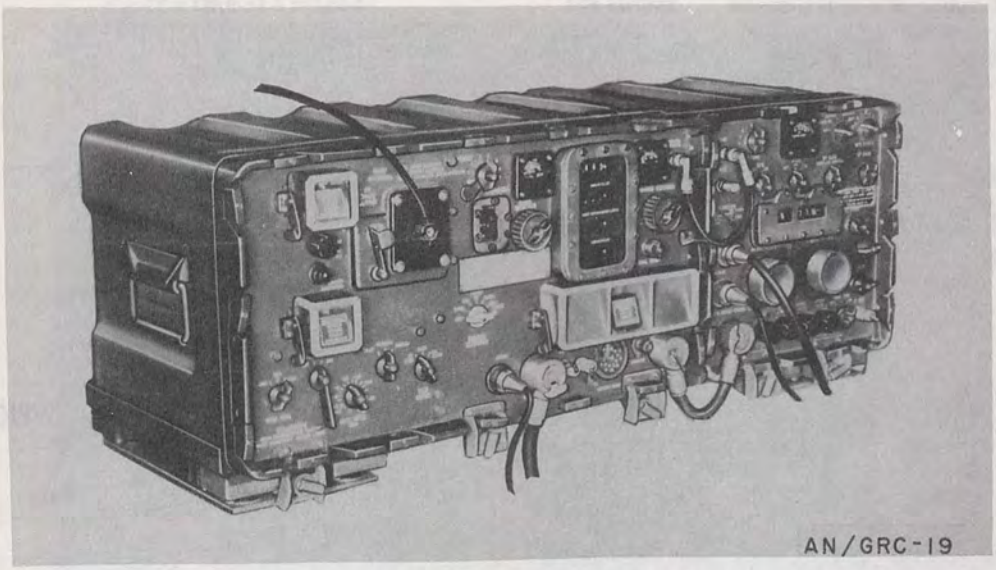
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
A.R.F. Products Co.	River Forest, Ill.	1998-P-51-93	$3,700.80
Motorola, Inc.	Chicago, Ill.	92-P-52-51	

RADIO SET AN/GRC-19( )

1 July 1958
Cognizant Serv: USA FSN: 5820-030-0155

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S2501-19/24	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC-19( ) is a mobile or portable, hf equipment used for transmitting and receiving voice, radiotelegraph, and, in conjunction with suitable associated equipment, for radioteletype communication. Its transmitter may be remotely controlled at a maximum distance of 75 feet from the operating site by means of an appropriate control unit.

This equipment consists essentially of a transmitter, receiver, and whip antenna but requires an installation kit suited to the vehicle in which it is used for mobile operation. Both a 28-volt power source and a half-wave, center-fed Hertz array (Antenna Group AN/GRA-12) are required for fixed-station operation.

This radio set has a provision for simultaneous voice and radioteletype service, and it can operated on a simplex or duplex basis or in radio-relay applications.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitter: 1.5 to 20 in 10 bands
Receiver: 0.5 to 32 in 32 bands
Type Modulation: AM
Type of Signal: Cw, fsk, voice, or fsk and voice composite
Power Output: 100 w
Power Requirements: 28.5-v dc

AN/GRC-19( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Mounting MT–851/GRC–19	2Z6763–851	1-11/16 x 14-9/32 x 33-8/8	45
1	Radio Receiver R–392/URR	2C480–392	11-1/2 x 14-3/16 x 11-1/4	52.3
1	Radio Transmitter T–195/ GRC–19	2C6900–195	11-1/2 x 14-1/8 x 22	125

REFERENCE DATA AND LITERATURE:

TM 11–274

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	37.1	351

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–10473

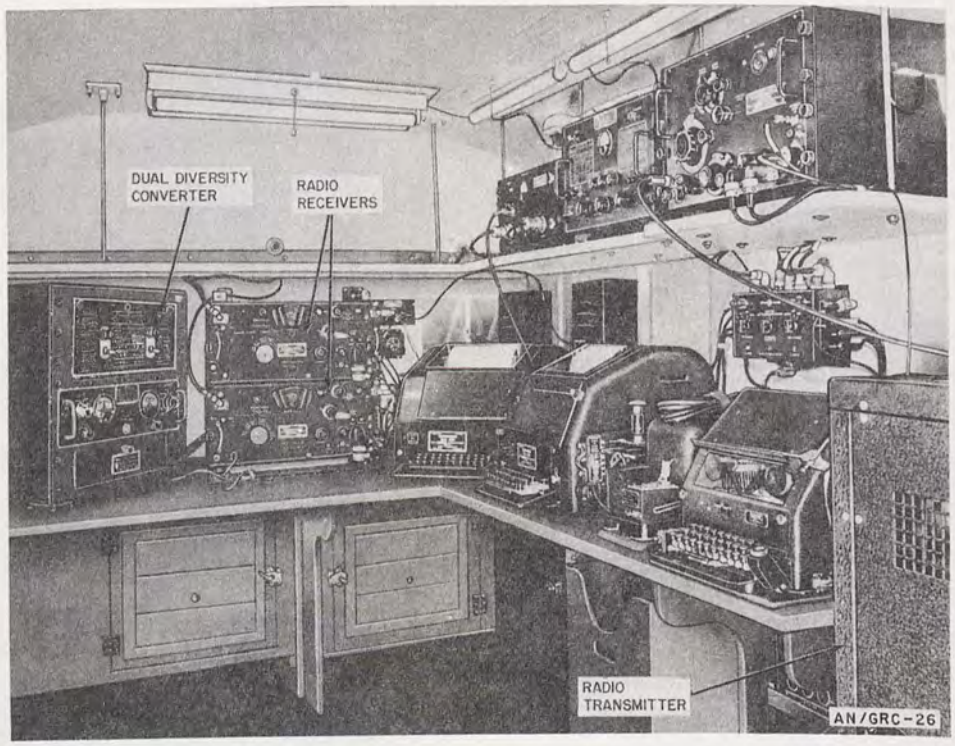
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	3150–P–51–93	

RADIO SET AN/GRC-26( )

1 July 1958
Cognizant Serv: USA FSN: 5820-186-9250

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S2501-26	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC-26( ) is a mobile, long-range, AM (voice, tone, cw, or frequency-shift-keying teletypewriter) transmitting and receiving equipment used for point-to-point and ground-to-air communication.

This equipment consists of radio, teletypewriter, and associated items installed in a field-type shelter mounted on a 2-1/2-ton, 6 x 6, cargo truck, with a 1-ton trailer on which a field power unit is installed. Whip-type and doublet antenna components are included.

This set is used primarily for radioteletype operation on a full-duplex basis and uses dual-diversity reception. It can be operated on a half-duplex basis and includes a voice channel serving as an *order wire*. The equipment normally is operated at the halt but can provide voice or cw communication while in motion. The voice channel can be used as a voice-patching facility, simultaneously with radioteletype operation in emergencies or when otherwise required.

The entire equipment can be transported by a C-82 type aircraft.

Later models of this set are composed of later and improved types of transmitting, receiving, and reproducing equipment. Functionally, the various models generally are interchangeable.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: Receiver: 1.5 to 18.0
Type Modulation: AM
Type of Signal: Voice, tone, cw, fsk, or voice and fsk composite
Power Output:
Voice: 300 w
Cw or Fsk: 400 w
Power Requirements: Approximately 3,000 w, 115-v 60-cycle ac

AN/GRC-26( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Tuning Unit BC-939-( )	5820-223-4641	14-1/2 x 23-1/2 x 11-1/4	48
1	Control Box C-345A/MRC-2	----------	3-1/2 x 2 x 6	4
1	Control Unit C-292B/TRA-7	5815-162-8257	11-27/32 x 12-5/16 x 19-1/8	185
1	Dual Diversity Converter CV-31B/TRA-7	5815-194-9388	20-7/8 x 17-5/16 x 19-1/4	200
1	Frequency Shift Exciter O-39B/TRA-7	5815-240-3295	12-5/8 x 16-3/8 x 19	110
1	Oscillator O-41/TRA-7			
1	Perforator-Transmitter TT-56/MGC	5815-198-9033	13-1/2 x 21 x 25	85
1	Power Unit PE-95-G	----------	38-1/2 x 28-1/4 x 67-1/2	1,556
2	Radio Receiver R-336/GRC-26	5820-194-2992	9-1/4 x 10-3/4 x 18	65
1	Radioteletypewriter Control C-535/GRC-26	5820-221-0188	12 x 7 x 3-3/4	4.5
1	Radio Transmitter T-213/GRC-26	5820-194-0965	45 x 30 x 31	400
1	Shelter S-55/GRC	5410-498-7314	79-1/2 x 81-1/2 x 145	3,100
1	Speech Amplifier BC-614-( )	5820-164-7288	16-1/2 x 9-3/4 x 9-1/2	30
2	Teletypewriter TT-55/MGC	5815-198-4442	15-1/2 x 18 x 18	60
1	Trailer, 1-ton, 2-wheel	2330-407-7887	67-1/2 x 73 x 145-1/2	1,300

REFERENCE DATA AND LITERATURE:

TM 11-264

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	1,150	15,400

PROCUREMENT DATA

PROCURING SERVICE USA **DESIGN COG:** USA, Sig C

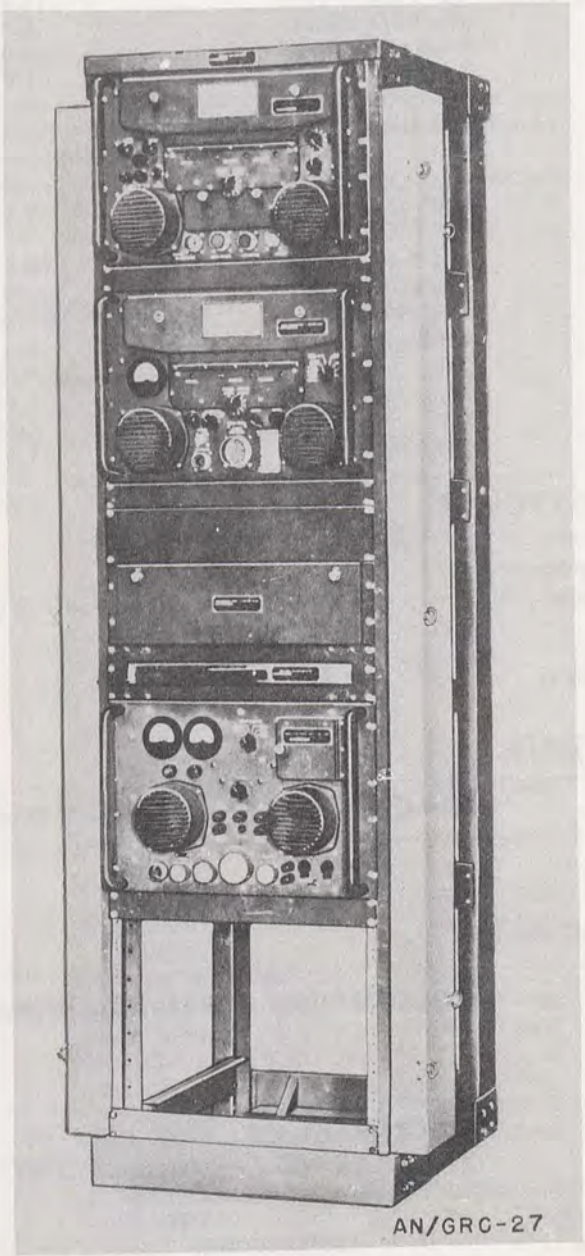
SPEC &/or DWG: (USA)71-3334; MIL-R-11812

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
American Machine & Foundry Co., Electronics Div.	New York, N. Y.	25209-P-54-55	$9,181.75
Avco Mfg. Co., Crosely Div.	New York, N. Y.	21316-P-56-55	7,168.81
Barker & Williamson, Inc.	Upper Darby, Pa.	43056-P-56-55	8,081.42
The Hallicrafters Co.	Chicago, Ill.	3357-P-52-36	10,793.66

RADIO SET AN/GRC-27

26 November 1958
Cognizant Serv: USAF FSN: 5820-511-4267(USAF)
5820-665-3120(USN)

	USA	USN	USAF
TYPE CLASS:	--	Used by	Alt-Std
STOCK NO:	--	F16-Q-112792-100	1700-266-498-657


AN/GRC-27

FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC-27 is an ultra-high-frequency transmitting and receiving unit intended primarily for ground-to-air communications. It is also applicable for use on naval vessels for ship-to-air and ship-to-ship communication through an adaptor which makes the control circuits compatible with standard shipboard remote control system.

The set is comprised of an indefinite quantity of radio transmitters, modulator-power supplies, radio receivers, distortion panel components, relay racks, antennas, and the necessary interconnecting tables. A typical ground-to-air communication set up for control-tower operation may consist of four complete transmitter-receiver equipments. Three of these are used for control of aircraft; the fourth as a spare. Requirements for naval operations vary as far as number of component parts are concerned.

This equipment is designed to operate in any one of 10 preset channels.

Radio Receiver R-278/GR monitors either one of two crystal-controlled, preset, standby, guard channels. Modulator-Power Supply MD-129/GR supplies power for Radio Transmitter T-217/GR in cycles of 1 minute ON and 5 minutes OFF.

Equipment can be requisitioned as required on an individual project, or installation basis.

TECHNICAL CHARACTERISTICS:

Transmitter:
- Frequency Range in Mc: 225 to 399.9
- Frequency Control: Crystal synthesizer
- Number of Channels: 1,750; spaced at 100 kc
- Preset Channels: 10
- Type Emission: Voice, mcw
- Type Modulation: AM
- Power Output: 100 w(nominal)

Receiver:
- Frequency Range in Mc: 225 to 399.9
- Type Reception: Voice, mcw
- AF Response:
  - Narrow: 400 to 3,000 cps
  - Broad: 200 to 20,000 cps
- Features: Avc and squelch circuit
- Power Output: 3 w into 600 ohm load

Power Requirements: Minimum installation 2,310 w (approximate), 115/230-v 50-60-cycle 1-phase ac

AN/GRC-27 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
(*)	Antenna AS-505/GR	5985-217-1601	12-1/2 ft lg	50.5
	Antenna AT-197/GR	5985-219-7454	26 x 18-3/4 dia	7.0
	Desk Shelf MX-1058/U	1700-295-560-744	19 x 3-1/2 x 20-3/8	11.3
	Distribution Panel J-390/GR	5820-546-4985	19 x 5-1/4 x 3-1/4	5.5
	Electrical Conduit MX-1174/U	1700-016091-900	5-3/8 x 66-1/4 x 2-3/8	10.0
	Electrical Special Purpose Cable Assembly CX-1539/U	5995-249-7959	6 ft	2.7
	Modulator Power Supply MD-129B/GR	5820-642-7827	19 x 12-1/4 x 20	140.0
	Plug Connector UG-495/U	5935-258-7884	----------	0.625
	Power Cable Assembly CX-1541/U	5995-296-8879	5 ft	1.0
	Rack MT-686/GR	5975-538-0410	22-5/8 x 72-1/2 x 21-3/8	96.0
	Radio Receiver R-278B/GR	5825-503-1555	19 x 12-1/4 x 20	115.0
	Radio Transmitter T-217A/GR	5820-257-3579	19 x 12-1/4 x 20	130.0
	RF Cable Assembly CG-693/U	5995-263-1268	5 ft 6 in.	1.4
(*)	RF Cable Assembly CG-707/U	5995-280-4001	2 ft	0.6
	RF Cable RG-17A/U	6145-299-7755	----------	0.5 per ft
	Special Purpose Cable Assembly CX-1540/U	5995-249-7959	5 ft 6 in.	2.6
	Special Purpose Cable Assembly CX-1564/U	5995-295-8430	6 ft	2.9

* *Note.* The quantity of all items listed depends upon local requirements.

REFERENCE DATA AND LITERATURE:

TO 31R2-2GRC27-64;
TO 31R-1-1

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7	24	600

PROCUREMENT DATA

PROCURING SERVICE: USAF; USN
DESIGN COG: USAF; USN, BuShips
SPEC &/or DWG: BuShips Dwg RE 46D 2022B; BuShips Dwg RE 46F 2023B

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	USAF: AF33(038)-19516 USN: MIPR 800-19230	

RADIO SET AN/GRC-27A

26 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC-27A is primarily intended for ultra-high-frequency communication between ships, ship-to-shore, and ship-to-aircraft.

This equipment will net with other radio sets operating in the ultra-high-frequency band, such as TED, TDZ, AN/URR-13, AN/URR-35, RDZ, AN/ARC-27, and AN/ARC-33.

TECHNICAL CHARACTERISTICS:

Transmitter:
Frequency Range in Mc: 225 to 399.9
Frequency Control: Crystal
Frequency Stability: ±10 kc
Preset Channels: 10
Type of Signal: Voice, mcw
Type Modulation: AM
Audio Band Width:
Broad Band: 200 to 20,000 cps
Narrow Band: 400 to 3,000 cps
Receiver:
Frequency Range in Mc: 225 to 399.9
Type of Signal: Voice, mcw
Sensitivity: 30% modulation at 1,000 cps
Output: 3 w into 600 ohms
Carrier Noise Level: 40 db below 95% modulated carrier level
Audio Input Level for 95% Modulation: 45 dbm
Antenna Input Impedance, Receiver and Transmitter: 52 ohms
Power Requirements: 115/230-v 50-60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Distribution Panel J-390/GR	----------	3-1/4 x 5-1/5 x 19	5.5
2	Electrical Conduit MX-1174/U	1700-016091-900	2-2/8 x 5-3/8 x 66-1/4	10.0
1	Electrical Special Purpose Cable CX-1539/U	5995-249-7959	72 lg	2.7
1	Modulator-Power Supply MD-129A/GR	5820-642-7827	19 x 21-1/4 x 20	140.0
2	Plug Connector UG-495/U	5935-258-7884	----------	0.625
2	Power Cable Assembly CX-1541/U	5995-296-8879	60 lg	1.0
1	Rack MT-1589/GRC-27A	----------	21 x 25-3/4 x 63	113.0
1	Radio Receiver R-278B/GR	5825-503-1555	12-1/4 x 19 x 20	115.0
1	Radio Transmitter T-217A/GR	5820-257-3579	12-1/4 x 19 x 20	130.0
1	RF Cable Assembly CG-690/U	----------	72 lg	0.6
2	RF Cable Assembly CG-707/U	5995-280-4001	24 lg	1.4
1	RF Cable Assembly CG-693/U	5995-263-0268	66 lg	4.6
1	Special Purpose Cable Assembly CX-1540/U	5995-249-7959	66 lg	2.9
1	Special Purpose Cable Assembly CX-1564/U	5995-295-8430	72 lg	

AN/GRC-27A RADIO SET

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
9	62.2	1,089

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

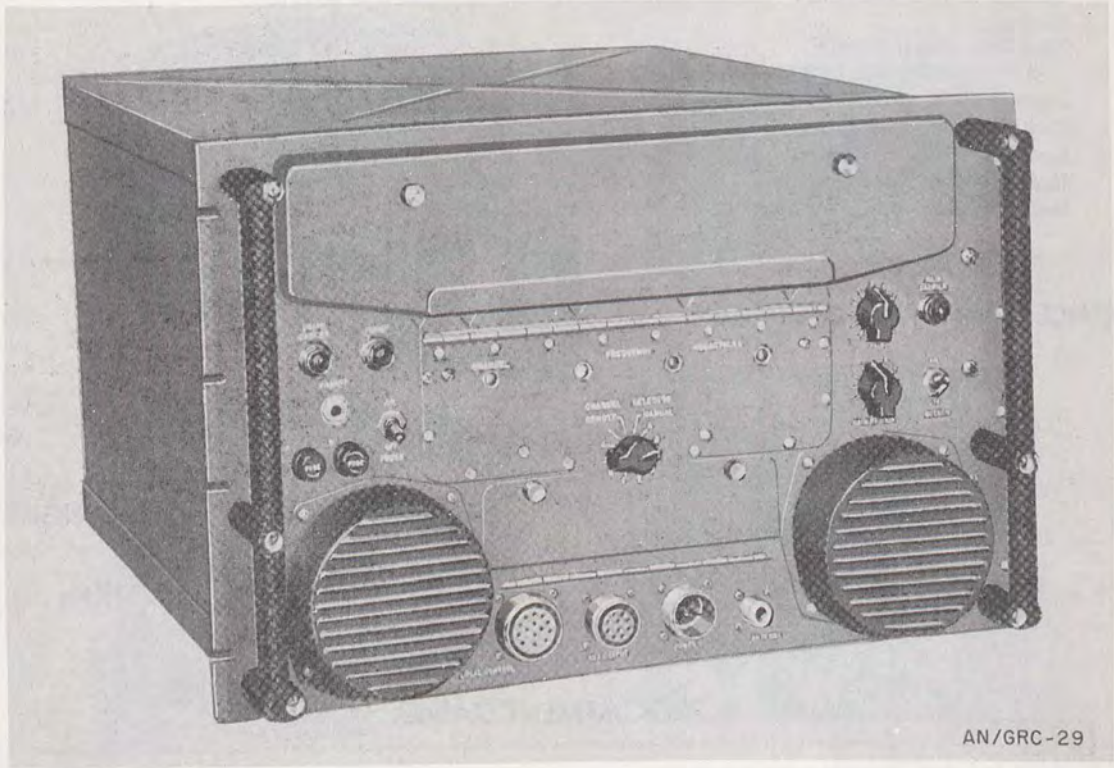
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Company	Cedar Rapids, Iowa	NObsr–64829	$6,800.00

RADIO SET AN/GRC-29

26 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	Ltd-Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC–29 is a two-way, ultra-high-frequency communication equipment primarily used for advanced air base traffic control ground-to-air or point-to-point communication. It is an adaption of Radio Set AN/GRC–27. For amphibious use, it has a watertight container, and an adaptable mobile power unit.

Modulator Power Supply MD–129/GR supplies power for Radio Transmitter T–217/GR in cycles of 1 minute ON and 5 minutes OFF.

This equipment can be operated over two telephone pairs from distances of up to 10 miles by means of Radio Set Control C–566/GR.

The antenna system uses low impedance 52-ohm transmission lines and has switching facilities for selecting directional or omnidirectional, broadband operation.

Power requirements are supplied by Power Unit 5JB or an equivalent power source.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 399.9
Frequency Control: Crystal
Guard Channels Frequency: 238 mc to 248 mc
Number of Channels: 1,750; spaced 100 kc apart
Number of Preset Channels: 10
Type Modulation: AM
Type Signal: Voice
Power Output:
Transmitter: 100 w
Receiver: 3 w into 600-ohm resistive load
Power Requirements: 2.5 kw, 115/230-v 50–60-cycle 1-phase ac

AN/GRC-29 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AS–450/GR		23 x 17 x 29	65.0
1	Antenna AT–197/GR		19 x 26 x 19	7.5
1	Antenna Mast AB–158/GR		50 ft to 90 ft lg	650.0
8	Cases			
1	Modulator-Power Supply MD–129/GR		19 x 12-1/4 x 22-5/8	180.0
1	Power Unit Type 5JB		73 x 39 x 27	1,400.0
1	Radio Receiver R–278/GR		19 x 12-1/4 x 22-5/8	145.0
1	Radio Set Control C–565/GR		19 x 12-1/4 x 11-1/2	85.0
1	Radio Set Control C–566/GR		19 x 8-3/4 x 11-1/2	45.0
1	Radio Transmitter T–217/GR		19 x 12-1/4 x 22-5/8	150.0

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
21	87.9	3,954

PROCUREMENT DATA

PROCURING SERVICE: USAF; USN
SPEC &/or DWG: WLENG–210A

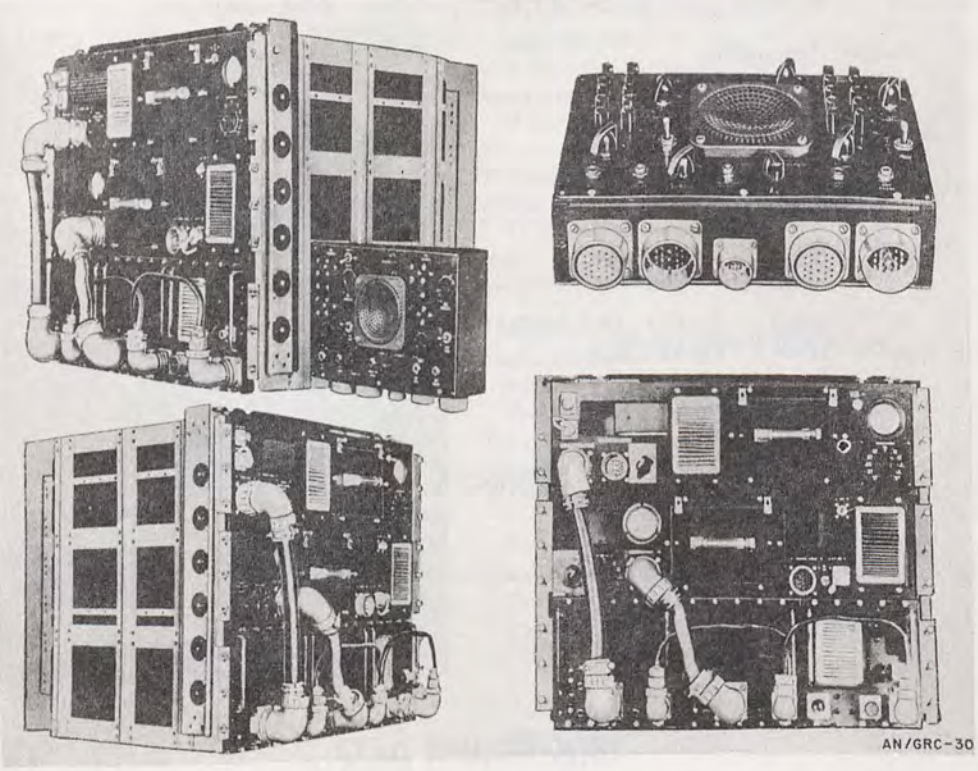
DESIGN COG: USAF, RADC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/GRC-30

26 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Alt-Std
STOCK NO:	--	--	--


AN/GRC-30

FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC-30 is a ground-operated, two-way, dual-channel, very-high-frequency and ultra-high-frequency receiver-transmitter. It is normally used to provide communication between ground controlled approach equipment and aircraft.

This equipment provides 20 crystal-controlled, preset channels—10 channels in each receiver-transmitter unit.

Radio Receiver RT-420/GRC-30 monitors one channel in both the very-high-frequency and ultra-high-frequency bands, and has provision for a 1,600-ohm balanced output for direction finding and navigation applications.

Discone Antenna Group OA-291/GRC-30 is normally used with this equipment; it can be remotely controlled over distances up to 5 miles over standard telephone lines.

The set is normally used with Radar Sets AN/FPN-16, AN/CPN-4, AN/CPN-18, and Radio Set AN/MPN-1, and other ground controlled approach radar equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Radio Receiver-Transmitter RT-226/GRC-30: 100 mc to 180 mc; 10 channels
Radio Receiver-Transmitter RT-227/GRC-30: 225 mc to 399.9 mc; 10 channels
Radio Receiver R-420/GRC-30: 100 mc to 160 mc and 225 mc to 399.9 mc; 2 channels in each range
Frequency Control: Crystal
Type Modulation: AM
Type Signal: Voice, tone
Power Output:
Transmitter: 12 w (each)
Receiver: 1.2 w (each)
Power Requirements: 3,100 w 115/230-v 50-60-cycle 1-phase ac

AN/GRC-30 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Group OA–291/ GRC–30	----------	30 x 38-1/2 x 7-1/2	22
1	Radio Receiver R–420/ GRC–30	----------	7-7/8 x 7-3/4 x 21	45
1	Radio Receiver-Transmitter RT–226/GRC–30	----------	24-1/2 x 6-3/4 x 21	125
1	Radio Receiver-Transmitter RT–227/GRC–30	----------	24-1/2 x 6-3/4 x 21	145
1	Radio Set Control C–896/ GRC–30	----------	12 x 7-3/4 x 21	45
1	Radio Set Control C–897/ GRC–30	----------	12 x 7-3/4 x 21	45

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	10	650

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

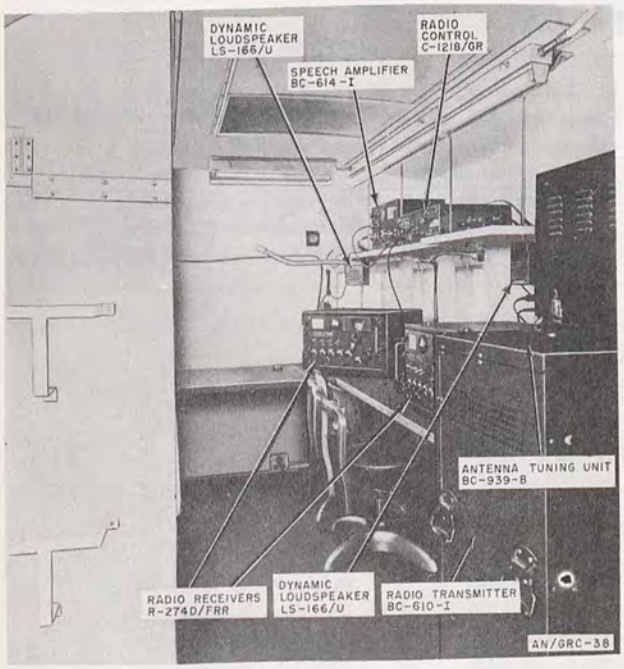
DESIGN COG: USAF, RADC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/GRC-38( )

Cognizant Serv: USA **FSN:** 5820-546-6516

	USA	USN	USAF
TYPE CLASS:	Std	--	L/Std
STOCK NO:	2S2501-38	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC-38( ) is a mobile or fixed transmitting and receiving station used for ground-to-ground and ground-to-air communication applications.

It consists of a transmitter, two receivers, a speech amplifier, an antenna tuning unit, and a radio set control. All operating components are housed in a shelter, which is transportable in a 2-1/2-ton, 6 by 6 cargo truck.

This equipment requires a 115-volt ac commercial power source for fixed station operation, but includes a trailer-mounted generator for mobile use.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Receiver: 0.54 to 54 in six bands
Transmitter: 2 to 18
Type Modulation: AM
Type of Signal: Voice, cw
Transmitter Power Output:
Cw: 400 w
Voice: 300 w
Power Requirements:
Commercial Power: 5.4 kw, 115-v 60-cycle 1-phase ac
Power Unit PE-95-G Rated Output: 10 kw, 120/240-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Tuning Unit BC-939-B	5820-186-3549	24-1/4 x 9-3/32 x 13-5/16	
2	Radio Receiver R-274D/FRR	5820-503-1241	----------	58
1	Radio Set Control C-1218/GR	5820-503-1012	19 x 12 x 5-1/2	
1	Radio Transmitter BC-610-I	5820-189-7042	----------	401
1	Shelter S-69/GRC	5410-356-2486	142 x 83-1/2 x 79-1/2	7,400
1	Speech Amplifier BC-614-I	5820-164-7288	----------	31

REFERENCE DATA AND LITERATURE:

TM 11-281B

AN/GRC-38( ) RADIO SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	1,130.75	12,365

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-1683A

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	3464-P-52-06	

RADIO TERMINAL SET AN/GRC-39

1 July 1958
Cognizant Serv: USA FSN: 5820-309-3213

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S12-39	--	--

(See Illustration of Radio Set AN/GRC-10. p. 799)

FUNCTIONAL DESCRIPTION:

Radio Terminal Set AN/GRC-39 consists essentially of two Radio Sets AN/GRC-10 (one in use and one spare) and two power units. When it is operated in conjunction with Telephone Terminal AN/TCC-3 and associated equipment, it can provide duplex facilities for four voice channels or various combinations of voice, facsimile, and telegraph channels.

It can be utilized in fixed-plant, ground-based, or vehicular applications.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 54 to 70.9 (170 channels spaced 0.1 mc apart)
Type Modulation: FM
Type of Signal: Voice; multichannel telephone, telegraph; facsimile; or various combinations of these
Transmitter Power Output: 10 w, 40 w
Power Requirements: Each DY-94/GRC-10: 292 w, 115/230-v 50/65-cycle ac; 326 w, 26-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Dynamic Loudspeaker LS-166/U	5965-243-6420	5 x 3-1/8 x 5	4
1	Junction Box J-85/G	5820-244-0706	4 x 5-1/2 x 5	9
1	Junction Box JB-110	6150-498-9130	2 x 4-1/2 x 12-1/2	6
2	Power Unit PE-75-( )	6115-228-5315	24-1/2 x 19 x 36	298
2	Radio Set AN/GRC-10	5820-570-5482	See AN/GRC-10	

REFERENCE DATA AND LITERATURE:

TM 11-614

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
11	100.4	1,910

AN/GRC-39 RADIO TERMINAL SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO REPEATER SET AN/GRC-40

1 July 1958
Cognizant Serv: USA FSN: 5820-309-3215

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S12-40	--	--

(See Illustration of Radio Set AN/GRC-10. p. 799)

FUNCTIONAL DESCRIPTION:

Radio Repeater Set AN/GRC-40 consists primarily of three Radio Sets AN/GRC-10 (two in use and one spare) and two power units. It operates as a complete radio-relay station between two Radio Terminal Sets AN/GRC-39.

This set can operate in series between terminal stations to extend the range of the system. Normally, the maximum number of relay stations is limited to five by the accumulated background noise in each system.

Operation of each repeater station is limited to line-of-sight in each of two directions.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 54 to 70.9 (170 channels spaced 0.1 mc apart)
Type Modulation: FM
Type of Signal: Voice, multichannel telephone, telegraph; facsimile; or various combinations of these

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Dynamic Loudspeaker LS-166/U	5965-243-6420	5 x 3-1/8 x 5	4
1	Junction Box J-85/G	5820-244-0706	4 x 5-1/2 x 5	9
1	Junction Box JB-110	6150-498-9130	2 x 4-1/2 x 12-1/2	6
2	Power Unit PE-75-( )	6115-228-5315	24-1/2 x 19 x 36	298
3	Radio Set AN/GRC-10	5820-570-5482	See AN/GRC-10	

REFERENCE DATA AND LITERATURE:

TM 11-614

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
15	133.4	2519.3

AN/GRC-40 RADIO REPEATER SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

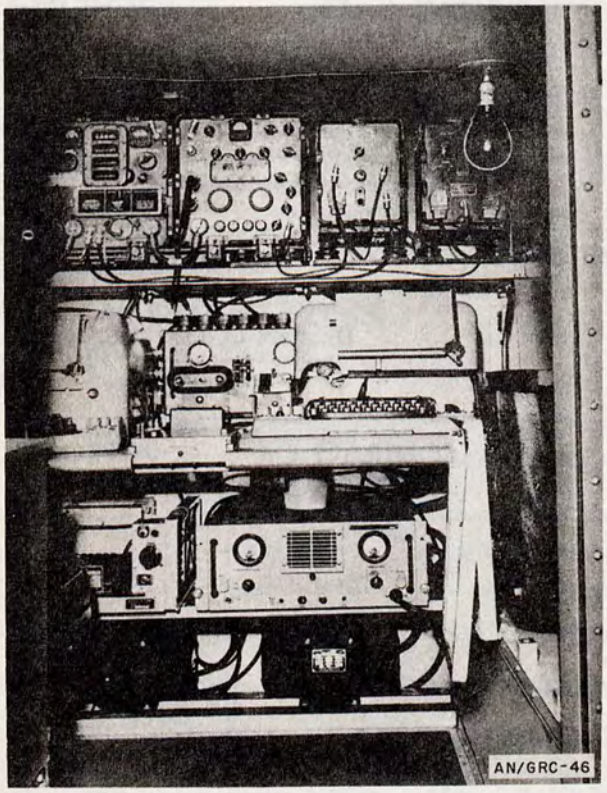
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TELETYPEWRITER SET AN/GRC-46

1 July 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S2501–46	--	--



FUNCTIONAL DESCRIPTION:

Radio Teletypewriter Set AN/GRC–46 is an assembly of transmitting, receiving, and teletypewriter equipment arranged in a shelter and mounted on a vehicle. It is a complete mobile radioteletype station.

This set can provide either separate or simultaneous transmission and reception of voice and radioteletype signals. It may be operated while the vehicle is in motion.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitter: 1.5 to 20.0
Receiver: 1.5 to 32.0
Type Modulation: AM
Type of Signal: Cw, voice, fsk radioteletype
Power Output: 100 w
Power Requirements: 1,500 w, 28-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	(USA)			
1	Frequency Shift Converter CV–278/GR	2C722–278	13 x 7-1/4 x 9	
1	Interconnecting Box J–668			
1	Radio Modulator MD–203/GR	2C2537–203	13 x 7-1/4 x 9	
1	Radio Receiver R–392/URR	2C4180–392	11-1/2 x 14-1/8 x 11	
1	Radio Transmitter T–195/GRC–19			52
1	Shelter S–89/G			
1	Teletypewriter T–98/FG	4TTT98.1		

AN/GRC-46 RADIO TELETYPEWRITER SET

REFERENCE DATA AND LITERATURE:

TB SIG 302
TM 11–656–10
TM 11–656–25

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

(Set is assembled from individual components at Army Signal Depot, and is shipped in its Shelter S–89. No shipment packaging is required.)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: Depot assembled

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/GRC-48

26 November 1958
Cognizant Serv: USN FSN: 5820-566-5539

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC-48 is a general purpose two-way communication set designed for fixed ground installation. It provides ground-to-ground and ground-to-air communications, utilizing ultra-high-frequency equipment.

This equipment is intended for communication with other field units and aircraft having similar radio sets operating in the identical band.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 399.9
Frequency Control: Crystal
Type Modulation: AM, voice or mcw
Number of Preset Channels: 10
Number of Channels Available: 1,750; spaced at 100 kc intervals
Type Receiver: Triple-conversion superheterodyne with automatic tuning
Receiver Sensitivity: 1.0 w output at not less than 10 db signal-to-noise ratio
Receiver Input Impedance: 52 ohms
Power Output: 100 w
Power Requirements: 115/230-v 50-60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control, Radio Set C-1335/TRC-32	(USA) 2C684A-1335		
1	Control, Radio Set C-1336/TRC-32	(USA) 2C684-1336		
3	Headsets MHS-11	(FSN) 5965-281-0316		
1	Mast AB-155A/U	(FSN) 5985-251-2366		
3	Microphones, Carbon 51004C	(FSN) 5965-669-8804		
1	Modulator-Power Supply MD-129A/GR	(USA) 3H4497-129	12-7/32 x 19 x 22-11/16	
1	Radio Receiver R-278B/GR	(FSN) 5820-665-1971	21 x 19 x 12-1/4	
1	Radio Transmitter T-217A/GR	(FSN) 5820-642-7772	22 x 19 x 12-1/4	

REFERENCE DATA AND LITERATURE:

NAVMC ELEC-2003,
NAVSHIPS 91338,
TO 16-35C1335-1, -4,
TO 16-350A104-3, -4,
TO 16-350A192-3, -4

AN/GRC-48 RADIO SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/GRC-75

26 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC–75 is a transportable very-high-frequency transmitting and receiving equipment. It is designed primarily for use with multichannel carrier telephone terminal apparatus.

TECHNICAL CHARACTERISTICS:

Frequency Range: 50 mc to 100 mc
Number of Bands: 1
Number of Channels: 200
Type Emission: FM
Power Output: 120 w
Power Requirements: 115-v 50-cycle 1-phase ac or 230-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Set AN/GRC–75 (Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/GRC-75 RADIO SET

PROCUREMENT DATA

PROCURING SERVICE: USN
DESIGN COG: USN
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TERMINAL SET AN/GRC-76

26 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Terminal Set AN/GRC–76 receives and transmits multichannel voice (12 voice plus 1 order wire), telegraph, teletypewriter and/or facsimile in conjunction with appropriate multichannel subcarrier telephone carrier equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 50 to 100
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Terminal Set AN/GRC–76 (Equipment consists of only one major equipment.)			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/GRC-76 RADIO TERMINAL SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO REPEATER SET AN/GRC-77

26 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Repeater Set AN/GRC–77 receives and retransmits multichannel voice (12 voice plus 1 order wire), telegraph, teletypewriter and/or facsimile and provides a simultaneous two-way radio relay circuit.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 50 to 100
Number of Bands: 1
Number of Channels: 200
Method Operation: Continuous multiplexing
Type Emission: FM
Power Requirements: 115-v 50-cycle 1-phase ac or 230-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Repeater Set AN/GRC–77			

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/GRC-77 RADIO REPEATER SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/GRC-78

26 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC–78 is a transportable very-high-frequency and ultra-high-frequency transmitting and receiving equipment. It is used with appropriate multichannel carrier telephone terminal apparatus.

TECHNICAL CHARACTERISTICS:

Transmitter:
Frequency Range in Mc: 100 to 225 and 400 to 600
Number of Bands: 2
Channels: 383
Type Modulation: FM
Power Output: 120 w

Receiver:
Frequency Range in Mc: 100 to 225 and 400 to 600
Number of Bands: 2
Channels: 383

Power Requirements: 115-v 50-cycle 1-phase ac or 230-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)

REFERENCE DATA AND LITERATURE:

AN/GRC-78 RADIO SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO REPEATER SET AN/GRC-80

26 November 1958
Cognizant Serv: USN FSN:

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Repeater Set AN/GRC–80 receives and retransmits multichannel voice (12 voice plus 1 order wire), telegraph, teletypewriter and/or facsimile, and provides a simultaneous two-way radio relay circuit.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 100 to 225 and 400 to 600
Number of Bands: 2
Number of Channels: 383
Type Modulation: FM
Power Requirements: 115-v 50-cycle 1-phase ac or 230-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/GRC-80 RADIO REPEATER SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/GRC-81

26 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC–81 is a transportable very-high-frequency and ultra-high-frequency transmitting and receiving equipment. It is used with appropriate multichannel carrier telephone terminal apparatus.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Number of Bands: 1
Number of Channels: 175
Power Output: 120 w
Type Modulation: FM
Power Requirements: 115-v 50-cycle 1-phase ac or 230-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)

REFERENCE DATA AND LITERATURE:

AN/GRC-81 RADIO SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TERMINAL SET AN/GRC-82

26 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Terminal Set AN/GRC–82 receives and transmits multichannel voice (12 voice plus 1 order wire), telegraph, teletypewriter and/or facsimile in conjunction with appropriate multichannel subcarrier telephone carrier equipment such as Telephone Terminal AN/TCC–7.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Power Requirements: 115-v 50-cycle 1-phase ac or 230-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/GRC-82 RADIO TERMINAL SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/GRC-85

26 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC–85 is a single sideband communication equipment operating in the frequency range of 2 to 30 megacycles. It is designed to operate in any one of 10 preset channels.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 30
Number of Channels: 10; preset
Type of Modulation: Composite
Power Output: 1 kw
Power Requirements: 115/230-v 60-cycle

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Balance modulator—RF tuner			
2	Control panel			
2	Crystal oscillator			
1	Power amplifier unit			
6	Power supply			
2	Rack, electrical equipment			
2	Receiver audio-RF tuner			
2	Remote control panel			
2	Terminal and junction panel			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/GRC-85 RADIO SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/GRC-86

26 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/GRC–86 is a single sideband communication equipment designed to operate in the frequency range of 2 to 30 megacycles.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 30
Type Modulation: Composite
Power Output: 1 kw
Power Requirements: 115/230-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Balance modulator—RF tuner			
2	Control panel			
2	Frequency divider unit			
2	Oscillator, RF			
1	Power amplifier unit			
2	Power supply			
2	Rack, electrical equipment			
2	Remote control panel			
2	Stabilized master oscillator			
1	Terminal and junction box			
1	Tuner			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/GRC-86 RADIO SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

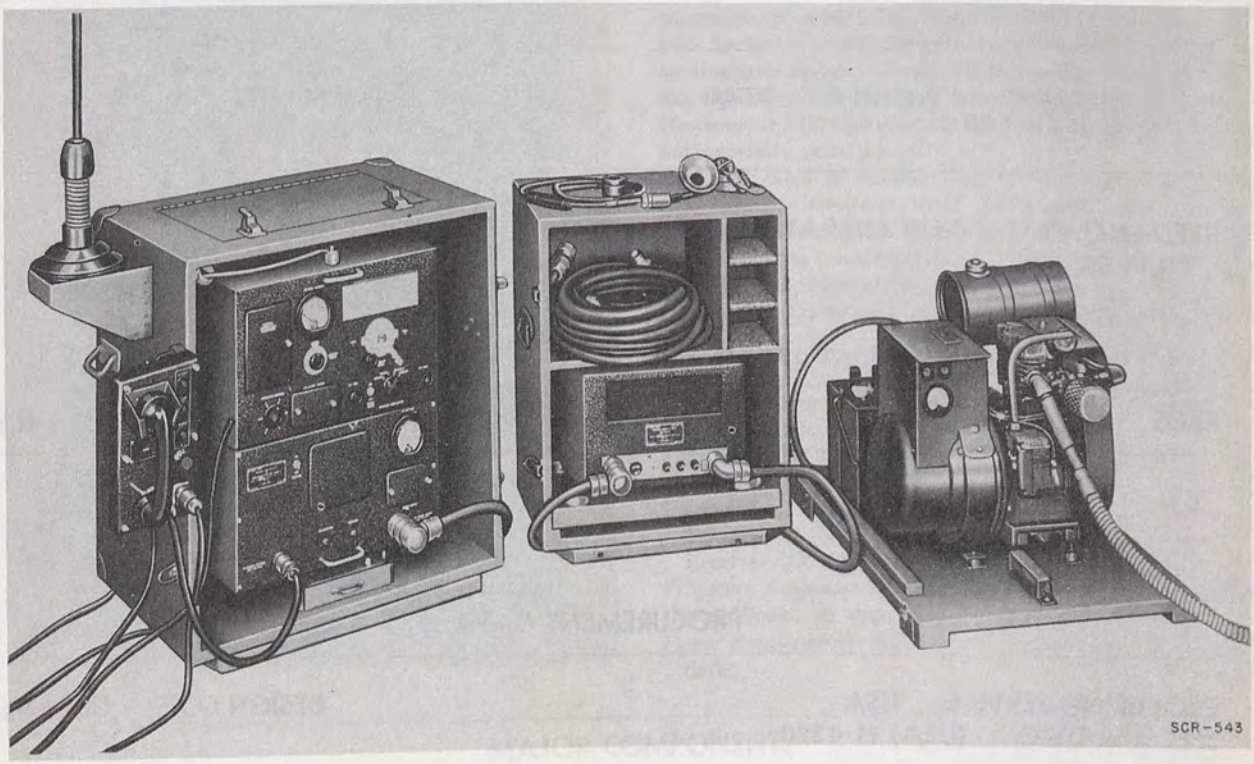
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/GRC-type

1 July 1958
Cognizant Serv: USA FSN: 5820-192-7140

SCR-543-( )

	USA	USN	USAF
TYPE CLASS:	SCR-543-( ): Std SCR-543-A, -B, -C: L/Std	--	--
STOCK NO:	2S543	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-543-( ) is a medium range, medium- and high-frequency, AM, radiotelephone equipment for mobile or fixed station use by antiaircraft artillery units.

This equipment consists of a radio receiver and transmitter component, power supply, and associated accessories, and may be installed and operated in a light truck or from a permanent location as a field radiotelephone station. It can be operated with a whip-type or straight-wire antenna.

This equipment may be operated from a remote point by use of Remote Control Unit RM-21.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.68 to 4.45
Type Modulation: AM
Type of Signal: Voice and cw
Power Output: 45 w
Power Requirements: Power Unit PE-108, or storage battery

AN/GRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Power Unit PE–108 in Chest CH–131	3H600–108	24 x 23-3/4 x 28	265
1	Radio Receiver and Transmitter BC–669 in Chest CH–133	----------	22-1/2 x 28-3/4 x 27-1/2	216
1	Radio Transmitter BC–699 in Chest CH–33	----------	20-3/8 x 29-3/4 x 28-1/2	182
1	Remote Control Unit RM–21 in Chest CH–73	2C7621	4-1/2 x 10-1/2 x 16-1/2	5

REFERENCE DATA AND LITERATURE:

TM 11–625

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	54	1,253

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–1320

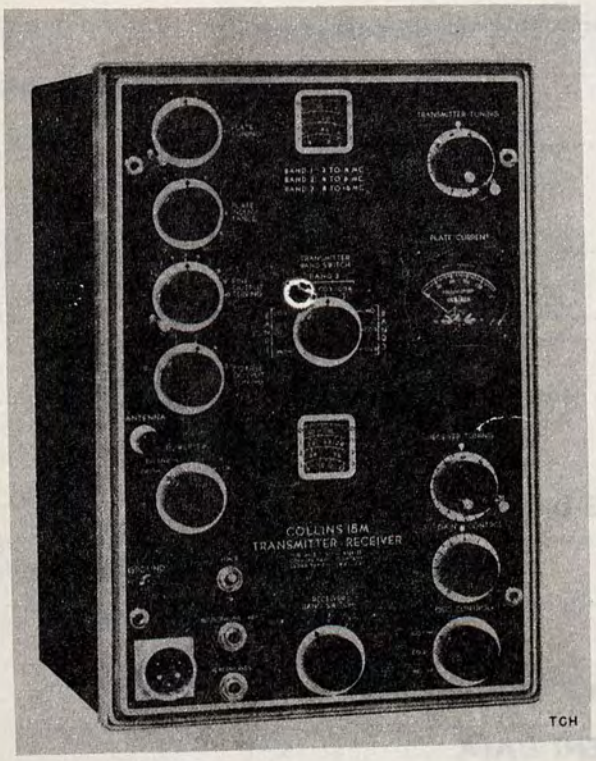
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TRANSMITTER AND RECEIVER EQUIPMENT AN/GRC-type

5 December 1958
Cognizant Serv: USN FSN: TCH

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



TCH

FUNCTIONAL DESCRIPTION:

Transmitter and Receiver Equipment TCH is an hf radio transmitter-receiver for use in the field or on vehicles to provide flexible communication. It uses a master oscillator for continuously variable operation over the frequency range, and has crystal control provisions for any two preset frequencies. However, crystal operation in the 8 to 16 megacycle band is not generally satisfactory.

A wide range of antenna lengths may be used with this equipment. In temporary field installations various counterpoise arrangements are employed, and an 8- to 10-foot rod with suitable loading coil is recommended for vehicular installation.

Equipment required but not supplied: Field Antenna Assembly 37B–2; Engine Driven Battery Charger 231N102.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 16
Frequency Control: Master oscillator or crystal
Type of Signal: Cw, voice
Type Receiver: Superheterodyne
Power Output:
Transmitter: 15 w on cw; 5 w voice
Receiver: 200 mw maximum into 500-ohm load
Frequency Response: Within 5 db between 400 and 5,000 cps
Keying Speed: 30 wpm
Power Requirements: 102/160/150 w 12/24/32-v dc or 115-v dc/ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna kit			
1	Antenna Loading Coil 190U–1			
4	Battery Cable 65F–5			
1	Canvas Carrying Case 11N13			
3	Control Cable 65F–6			
2	Dual Quartz Crystal Plate Assembly 1E			
1	Headphone 273N3			
1	Microphone, Cord and Plug Assembly 20N404			
4	Power Cable 65F–4			

AN/GRC-type TRANSMITTER AND RECEIVER EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
4	Power Unit			
	Collins Type 413B–1 (12 v, dc operation)	----------	9-1/2 x 22-1/4 x 12	95.0
	Collins Type 415E–3 (24 v, dc operation)	----------	6-3/8 x 6-5/8 x 3-1/2	8.5
	Collins Type 416T–1 (32 v, dc operation)	----------	6-1/4 x 6-1/2 x 7-1/2	18.0
	Collins Type 416T–2 (115 v, ac/dc)	----------	6-1/4 x 6-1/2 x 7-1/2	18.0
1	Telegraph Key, Cord and Plug Assembly 67A–1			
1	Transmitter-Receiver Unit Collins Type 18M–5	----------	14-1/4 x 9-5/8 x 9-3/4	25.5

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE:
SPEC &/or DWG:

DESIGN COG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NOs–75324, 20 Jul 1940	

DIRECTION FINDER SET AN/GRD-5

26 November 1958
Cognizant Serv: USN FSN: 5825-642-8184

	USA	USN	USAF
TYPE CLASS:	--	Used by	Ltd-Std
STOCK NO:	--	F16-Q-112796-200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Direction Finder Set AN/GRD-5 is a receiver and azimuth indicator used in conjunction with ground control approach equipment in locating and homing aircraft. It is installed in a truck or at a control tower installation.

This equipment provides instantaneous azimuth indications of aircraft in flight, on the basis of radio frequency transmissions from the aircraft. It features automatic sensing means so that a single bearing is presented at all times while a signal is being received. Presence of a signal is indicated visually by means of a neon tube.

Direction Finder Set AN/GRD-5 is the production model of Experimental Direction Finder Adaptor for Radar Equipment CXGH-2.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Manual Tuning: 100 mc to 160 mc
Actual Frequency: 120 mc to 156 mc
Frequency Control: Crystal or continuously variable
Operational Range: Maximum of 135 miles when using a 25-foot antenna and receiving from a standard aircraft transmitter at an altitude of 10,000 ft
Type Receiver: Superheterodyne
Type Reception: A1, A2, A3
Intermediate Frequency: 15.09 mc
Output: Greater than 500 mw into a 600-ohm load; less than 10% distortion
Impedance:
Input: 50 ohms
Output: 600 ohms
Features: Squelch and noise limiter circuits to eliminate audio output other than from signal
Antenna: Eight element H-type Adcock with broad band dipoles
Mounting:
Receiver: Table or rack
Azimuth Indicator: Table
Power Requirements: 276 w 115-v (±5.75 v) 60-cycle (±6 cycles) 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AS-575/GRD-5	----------	57-3/16 x 25-3/8 x 25-3/8	50.0
1	Antenna Mast with Guys AB-307/GRD-5	----------	300 x 192 x 192	
1	Azimuth Indicator ID-317/GRD-5	----------	13 x 6-3/16 x 6-5/8	8.0
5	Cable CX-2174/U	----------	96 lg	2.0
5	Cord CG-92C/U	----------	120 lg	15.0
5	Indicator Cable CX-2175/U	----------	180 lg	2.0
5	Power Cable CX-2176/U	----------	120 lg	35.0
5	Power Input Cable CX-2177/U	----------	96 lg	0.5
1	Radio Receiver R-499/GRD-5	----------	8-25/32 x 17-17/32 x 19-7/32	92.0
1	Set of equipment spares			

REFERENCE DATA AND LITERATURE:

AN/GRD-5 DIRECTION FINDER SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	40.4	270

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: D-52

DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telecommunications Laboratory, Inc.	Nutley, N. J.	NObsr-49106, 16 May 1950	

TRAINER AN/GRQ-T1

26 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Trainer AN/GRQ–T1 is used for instruction of trainees in basic principles of electronics. It has necessary provisions to permit students to build electrical circuits by plugging in patch cords, without the use of tools.

The various components can be used repeatedly without destroying or damaging them. Through the use of additional electronic equipment, application of this trainer can be greatly expanded. The following equipments may be employed: audio frequency generator, oscilloscope, Voltmeter OE, frequency meter, alternating current and direct current voltmeter, radio frequency signal generator, vacuum tube voltmeter and volt-ohm-milliammeter.

TECHNICAL CHARACTERISTICS:

Oscillator Frequency: 1,600 kc to 3,000 kc
Type Control: Continuously tuned or crystal
Maximum Operating Current: 2 amp
Power Requirements: 105- 125-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet CY–796/GRQ–T1	----------	12-5/16 x 27-3/4 x 31-1/2	27
1	Cabinet CY–797/GRQ–T1	----------	29-1/2 x 32-5/8 x 53-3/4	240
1	Circuit Demonstration Panel MX–1041/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	11
1	Circuit Demonstration Panel MX–1042/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	8.5
1	Circuit Demonstration Panel MX–1043/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	20
1	Circuit Demonstration Panel MX–1044/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	10.5
1	Circuit Demonstration Panel MX–1045/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	26
1	Circuit Demonstration Panel MX–1046/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	8
1	Circuit Demonstration Panel MX–1047/GRQ–T1	----------	5-1/4 x 17 x 20-7/8	11
1	Circuit Demonstration Panel MX–1048/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	11.5
1	Circuit Demonstration Panel MX–1049/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	9.5
1	Circuit Demonstration Panel MX–1050/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	10.5
1	Circuit Demonstration Panel MX–1051/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	11.5
1	Circuit Demonstration Panel MX–1052/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	16
1	Power Supply PP–535/GRQ–T1	----------	8 x 13-7/16 x 29-7/8	58

AN/GRQ-T1 TRAINER

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91336

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7	77.68	850

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
A. F. Smuckler and Co. Inc.	Brooklyn, N. Y.	NObsr–43406, 17 June 1949	

TRAINER AN/GRQ-T1A

26 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Trainer AN/GRQ-T1A is used in instructing trainees in the basic principles of electronics. It incorporates provisions that permit students to build electrical circuits by plugging in patch cords, without the use of tools.

The various components can be re-used a number of times without destroying or damaging them. Through the use of additional electronic equipment, application of this trainer can be greatly expanded. The following equipments may be employed, but are not part of the trainer: audio frequency signal generator, radio frequency signal generator, oscilloscope alternating current and direct current voltmeter, vacuum tube voltmeter, and volt-ohm-milliammeter.

TECHNICAL CHARACTERISTICS:

Maximum Operating Current: 2 amp
Power Requirements: 105- 125-v 50–60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet CY–796/GRQ–T1	----------	12-5/16 x 27-3/4 x 31-1/2	27
1	Cabinet CY–797/GRQ–T1	----------	29-1/2 x 32-5/8 x 53-3/4	240
1	Circuit Demonstration Panel MX–1041A/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	11
1	Circuit Demonstration Panel MX–1042A/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	9.5
1	Circuit Demonstration Panel MX–1043A/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	22
1	Circuit Demonstration Panel MX–1044A/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	10.5
1	Circuit Demonstration Panel MX–1045A/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	30
1	Circuit Demonstration Panel MX–1046A/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	8
1	Circuit Demonstration Panel MX–1047A/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	11
1	Circuit Demonstration Panel MX–1048A/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	12.5
1	Circuit Demonstration Panel MX–1049A/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	10
1	Circuit Demonstration Panel MX–1050A/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	12
1	Circuit Demonstration Panel MX–1051A/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	12
1	Circuit Demonstration Panel MX–1052A/GRQ–T1	----------	5-1/4 x 17 x 29-7/8	16
1	Power Supply PP–535A/ GRQ–T1	----------	8 x 13-7/16 x 29-7/8	63

AN/GRQ-T1A TRAINER

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91705

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	79.8	869

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

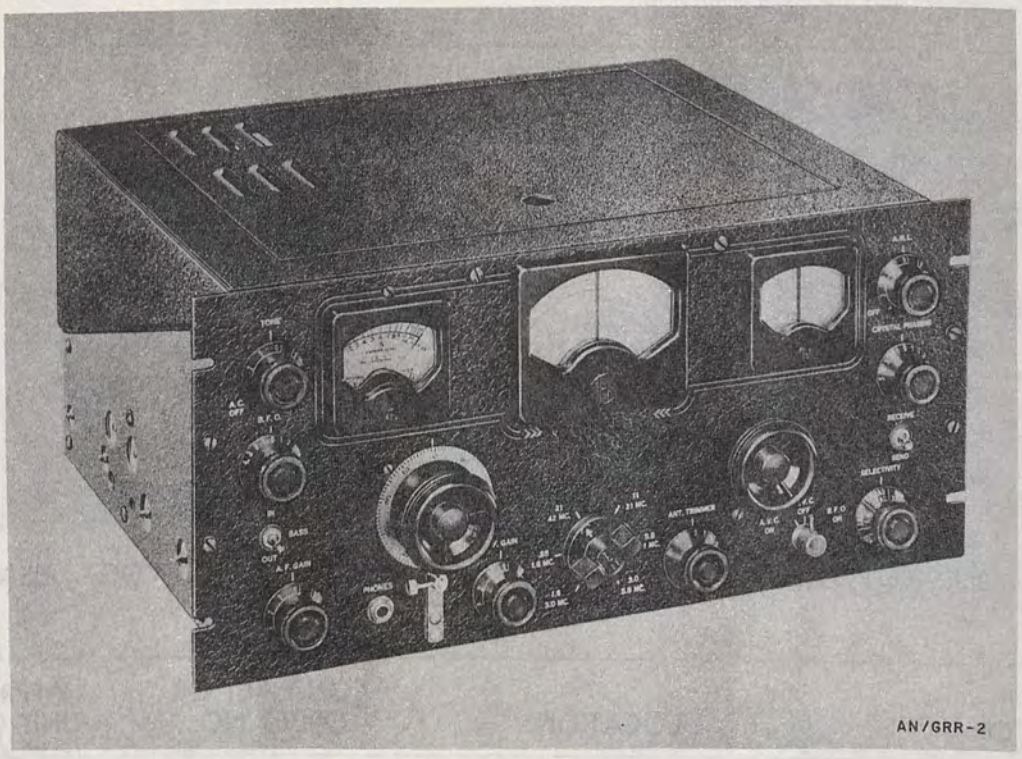
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Willor Manufacturing Corp.	New York, N. Y.	NObsr–52680, 28 August 1951	$1,149.21

RADIO SET AN/GRR-2

1 July 1958
Cognizant Serv: USA FSN: 5820-164-7190

	USA	USN	USAF
TYPE CLASS:	Obs	Used by	--
STOCK NO:	2C4535.6	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/GRR-2 is a crystal-controlled, medium-weight radio receiver for the reception of AM (voice) and cw signals in the mf, hf, and vhf bands. It can be used in permanent or semipermanent stations.

This equipment is essentially a commercial (Hallicrafters SX-28) table-model receiver that may be either cabinet or rack and panel mounted. It has a phonograph jack and three output impedances for headphones and an external 500-ohm or 5,000-ohm permanent magnet speaker. The set can be operated with a conventional inverted L or doublet antenna system.

It has a built-in power supply, and it operates from ac with provision for emergency use of either battery or power pack.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.55 to 42 in 6 consecutive bands
Type Modulation: AM
Type of Signal: Voice, tone, keyed cw
Power Output: 8 w undistorted
Power Requirements:
Ac: 138 w, 117-v 60-cycle
or
Dc: Heater supply: 4.8 amp at 6 v
High-voltage supply: 150 ma at 270 v
Power consumption: 108 w

AN/GRR-2 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Set AN/GRR–2	(FSC) 5820–164–7190 (USA) 2C4535.6	16-1/2 x 20-3/4 x 10-3/4	78

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–874

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5.5	135

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

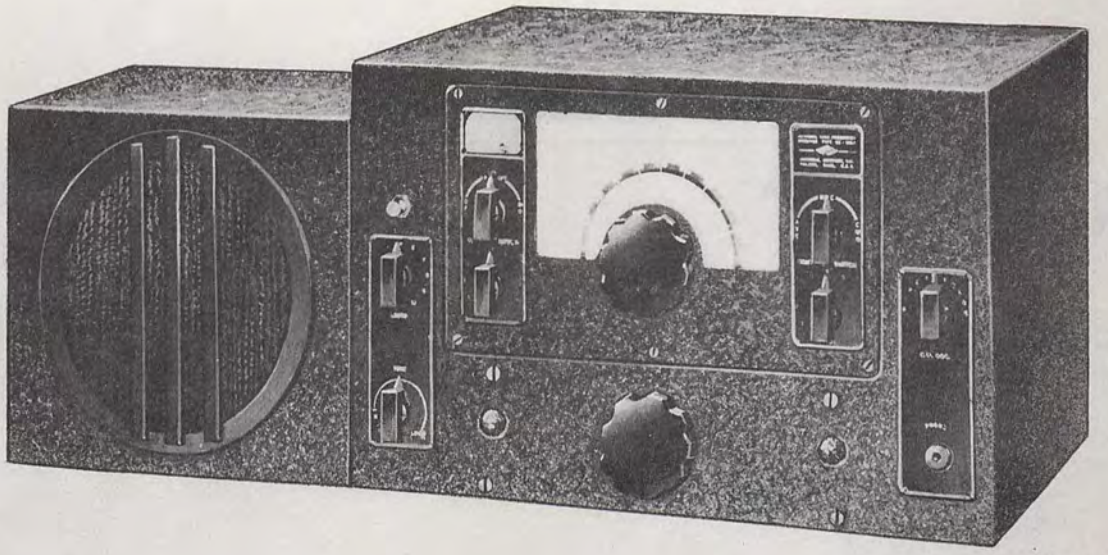
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafter Co.	Chicago, Ill.		

RADIO SET AN/GRR-3

1 July 1958
Cognizant Serv: USA FSN: 5820-223-2495

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C4529	--	--



AN/GRR-3

FUNCTIONAL DESCRIPTION:

Radio Set AN/GRR-3 is a transportable, AM (voice, cw, and mcw) receiving equipment operating in the lf and mf bands for air-ground, ground, and weather data communication.

This equipment consists essentially of a commercial (National NC-100 ASC) communications type receiver and associated 8-inch inclosed loudspeaker. It has a built-in power supply.

This set can be used with conventional inverted L or T type antennas or with a doublet antenna system.

This set has been replaced by Radio Receiver BC-779.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.2 to 0.4 and 1.3 to 30
Type Modulation: AM
Type of Signal: Voice, cw, mcw
Power Requirements: 110-v 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	National Receiver NC-100ASC	----------	12 x 19 x 15	65
1	Loudspeaker in cabinet (8" PM)			

AN/GRR-3 RADIO SET

REFERENCE DATA AND LITERATURE:

SIG 10-312

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

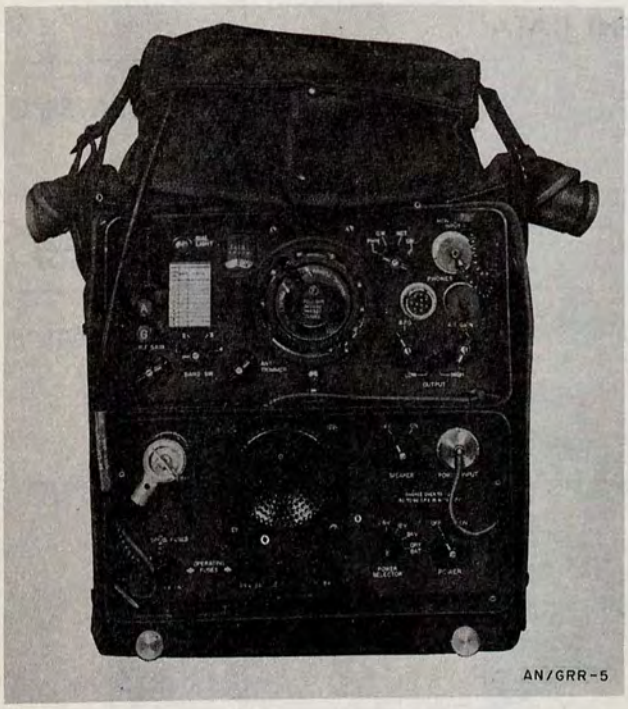
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/GRR-5( )

1 July 1958
Cognizant Serv: USA FSN: 5820-248-3508

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S2505-5	--	--


AN/GRR-5

FUNCTIONAL DESCRIPTION:

Radio Set AN/GRR-5( ) is a low-power, AM (voice, cw, and mcw) radio receiving equipment that operates in the mf and hf ranges. It is a general purpose set used in infantry divisions and is intended to replace Radio Set SCR-593.

This equipment consists essentially of a superheterodyne radio receiver having an integral loudspeaker and a shock mount. It is provided with a protective canvas carrying case.

Three types of antennas (whip-type, doublet, and straight wire) and an integral power supply are included. It operates from 110-v ac power or from 6-, 12-, or 24-v storage batteries. It can be operated for about 48 hours on Battery BA-48, which can be mounted on top of the equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.5 to 18.0 in 4 bands
Type Modulation: AM
Type of Signal: Cw, mcw, voice
Power Output: 20 to 90 mw
Power Requirements:
Dry Batteries: 350 to 450 ma at 1.4-v dc, and 20 to 27 ma at 90-v dc

or

Power Supply PP-308/URR: 5.0 amp at 6-v dc; 2.5 amp at 12-v dc; 1.75 amp at 24-v dc; or 0.5 amp at 110-v ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Case CY-615/URR	6F300-615	13-7/32 x 12-1/8 x 8-1/16	8.6
1	Power Supply PP-308/URR	3H4497-308	9-3/4 x 13 x 6-1/2	26
1	Rack MT-768/URR	----------	5-1/2 x 9-5/16 x 13-1/16	7
1	Radio Receiver R-174/URR	2C4180-174	9-3/4 x 13-1/4 x 6-1/2	18.9

REFERENCE DATA AND LITERATURE:

TM 11-295

AN/GRR-5( ) RADIO SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	17	162

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–10138

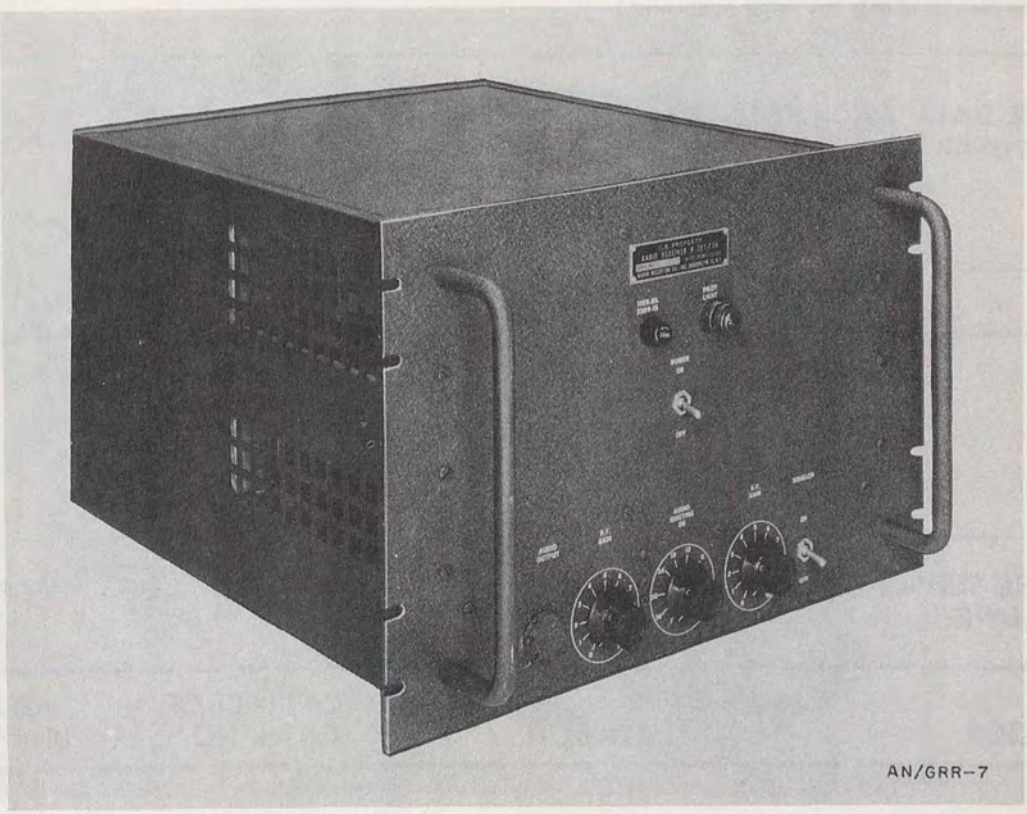
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Emerson Radio & Phono. Corp.	Jersey City, N. J.	3154–P–51–01	$835.78
Motorola, Inc.	Chicago, Ill.	15166–P–52–01	
Zenith Radio Corp.	Chicago, Ill.	15165–P–52–13	

RADIO RECEIVING SET AN/GRR-7

26 November 1958
Cognizant Serv: USAF FSN:

USA	USN	USAF
TYPE CLASS:		Alt-Std
STOCK NO:		



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/GRR–7 is a general communication equipment used for ground operation, for air-to-ground, and point-to-point communication. Primary application is for control tower and airway station operation. It has sufficient output to operate a loudspeaker.

This equipment is a double conversion superheterodyne with a second IF of 6 megacycles. It is thus subject to interference from high frequency transmitters operating on or near this frequency.

The radio frequency input circuit is intended to operate from the following antennas: AT–197/GR, AS–505/GR, and AS–450/GR. It is normally used with, but not part of, Radio Transmitter Set AN/GRT–3.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 399.9
Spacing Between Individual Channels: 100 kc
Type Control: Crystal
Type Modulation: AM
Type Signal: Voice or tone
Power Output: 1 w into 600-ohm load
Power Requirements: 200 w, 115/230-v 60-cycle 1-phase ac

AN/GRR-7 RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R–361/GR (Equipment consists of only one major component.)		19 x 12-1/4 x 19	50

REFERENCE DATA AND LITERATURE:

TO AN 16–30GRR–7–1

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2.5	62

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

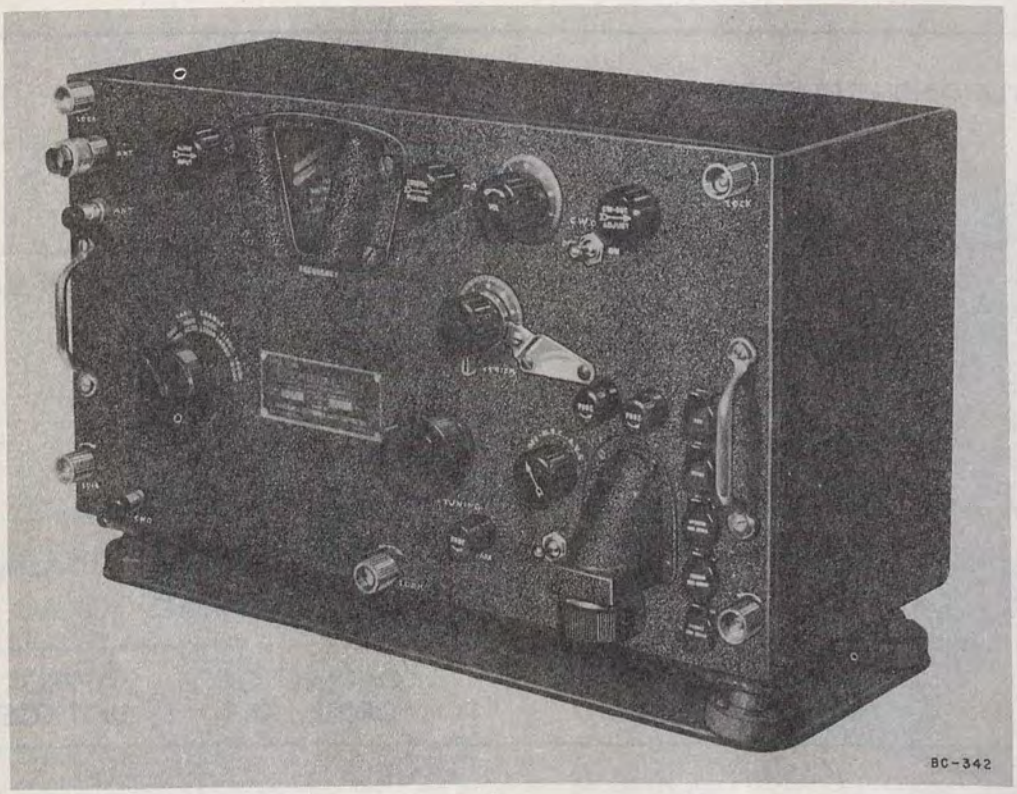
DESIGN COG: USAF, RADC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVER AN/GRR-type

4 December 1958
Cognizant Serv: USA FSN: 5820–164–6373 BC–342

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	2C4342	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver BC–342 is a lightweight receiving equipment which operates in the medium-frequency and high-frequency bands and is the operational equivalent of Radio Receiver BC–312. It is designed for general purpose ground, mobile, or fixed station use at division or higher headquarters.

This equipment is a highly sensitive and selective self-contained radio receiver inclosed in a metal cabinet. It is used as a component of Radio Set SCR–399 and similar equipment.

Radio Receiver BC–342 uses a whip-type or straight wire antenna and operates from a 115-volt alternating-current power source.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.5 to 18.0 (overall)
Band A: 1.5 to 3.0 mc
Band B: 3.0 to 5.0 mc
Band C: 5.0 to 8.0 mc
Band D: 8.0 to 11.0 mc
Band E: 11.0 to 14.0 mc
Band F: 14.0 to 18.0 mc
Intermediate Frequency: 470Kc
Receiver Type: Superheterodyne
Type Modulation: AM
Type of Signal: Cw, tone, voice
Power Requirements: 75 w, 115-v, 50- to 60-cps ac

AN/GRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver BC–342 (Equipment consists of only one major component.)	2C4342	10 x 9-1/16 x 18-1/16	61.5

REFERENCE DATA AND LITERATURE:

TM 11–850

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.7	120

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVER AN/GRR-type

25 November 1958
Cognizant Serv: USA FSN: 5820-164-6370

BC-344-( )

	USA	USN	USAF
TYPE CLASS:	Obs	Used by	--
STOCK NO:	2C4344	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver BC-344-( ) is a lightweight, portable, amplitude-modulated radio receiving equipment used for voice, continuous-wave, and tone signal communication in the low- and medium-frequency bands. It is the alternating-current version of battery-operated Radio Receiver BC-314.

This equipment, consisting of a single, cabinet-inclosed radio receiver, can be operated with straight wire or rhombic-type antennas, doublet antenna systems, and antennas of special design as required.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.15 to 1.50 (overall) in four bands
Band A: 0.15 to 0.26
Band B: 0.26 to 0.45
Band C: 0.45 to 0.82
Band D: 0.82 to 1.50
Intermediate Frequency: 92.5 kc
Type Modulation: AM
Type Receiver: Superheterodyne
Type Reception: Cw, tone, voice
Power Requirements: 75 w, 110- to 120-v 50- to 60-cycle ac

AN/GRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Mounting FT–162	2Z6702	1-1/4 x 6-7/8 x 18	3.75
1	Radio Receiver BC–344–( )	2C4344	10 x 9-1/16 x 18-1/16	61.5
1 set	Spare parts			

REFERENCE DATA AND LITERATURE:

TM 11–850

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.7	120

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

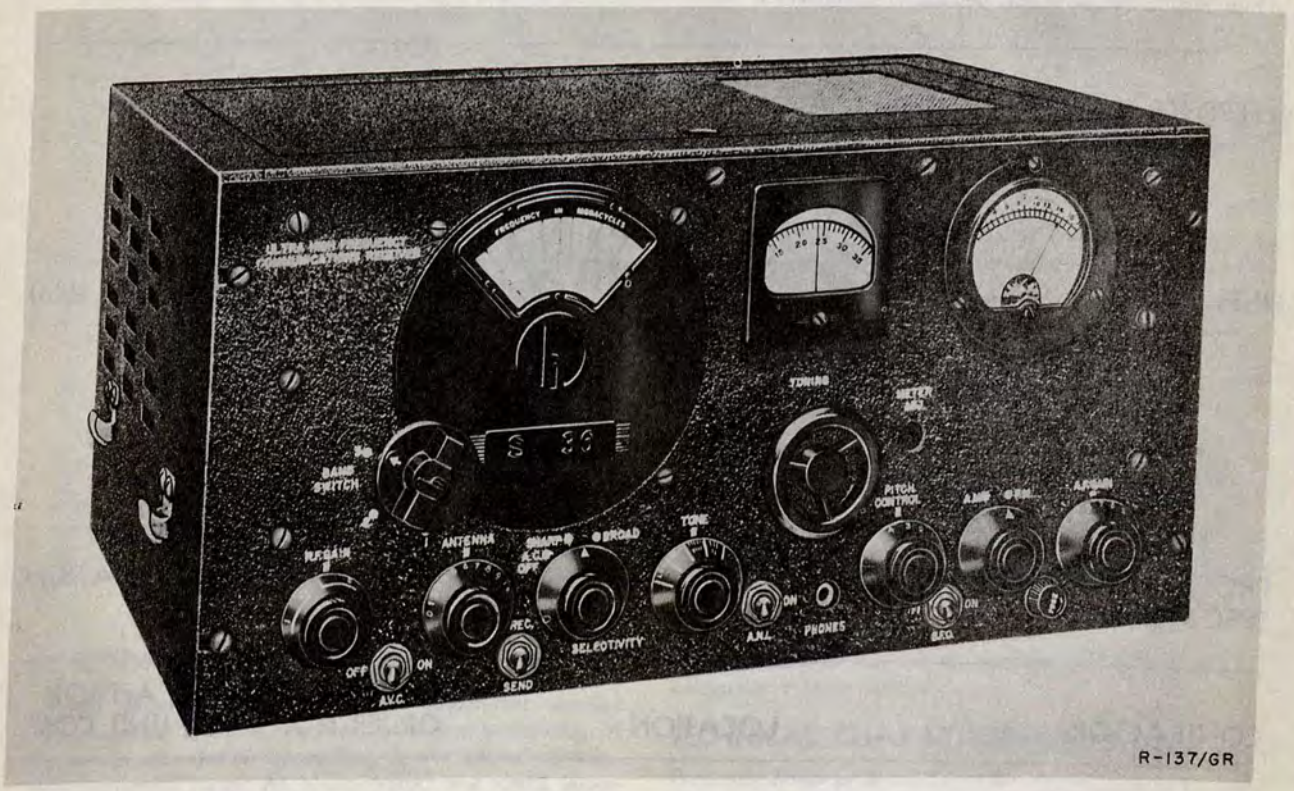
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVER AN/GRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820–503–1398

R–137/GR

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C4537–36	--	--



R–137/GR

FUNCTIONAL DESCRIPTION:

Radio Receiver R–137/GR is a transportable, AM (voice, cw) and FM (voice) receiving equipment used for intercept, monitoring, ground to air, and air warning applications in the hf and vhf bands.

This equipment consists essentially of a commercial (Hallicrafter S–36) communications type receiver inclosed in a table model cabinet and requires an external loudspeaker. It is provided with a jack for a headset and an output terminal for loudspeaker operation. It also has manual and automatic volume control and a beat-frequency oscillator.

This set can be operated on 115/230-v ac or from a 6-v battery plus 270 v (at 145 ma) of B battery.

It may be used as a component of Radio Control Central AN/TRQ–1.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.8 to 143.0 in 3 bands
Type Modulation: Am, FM
Type of Signal: Voice, cw
Power Requirements: 115/230-v 50/60-cycle ac; or A battery, 4.5 amp at 6-v dc and B battery, 145 ma at 270-v dc

AN/GRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R–137/GR	(FSN) 5820–503–1398 (USA) 2C4537–36	19 x 9 x 14	66

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

Instruction Book 7610–239–4538

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	1.66	

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

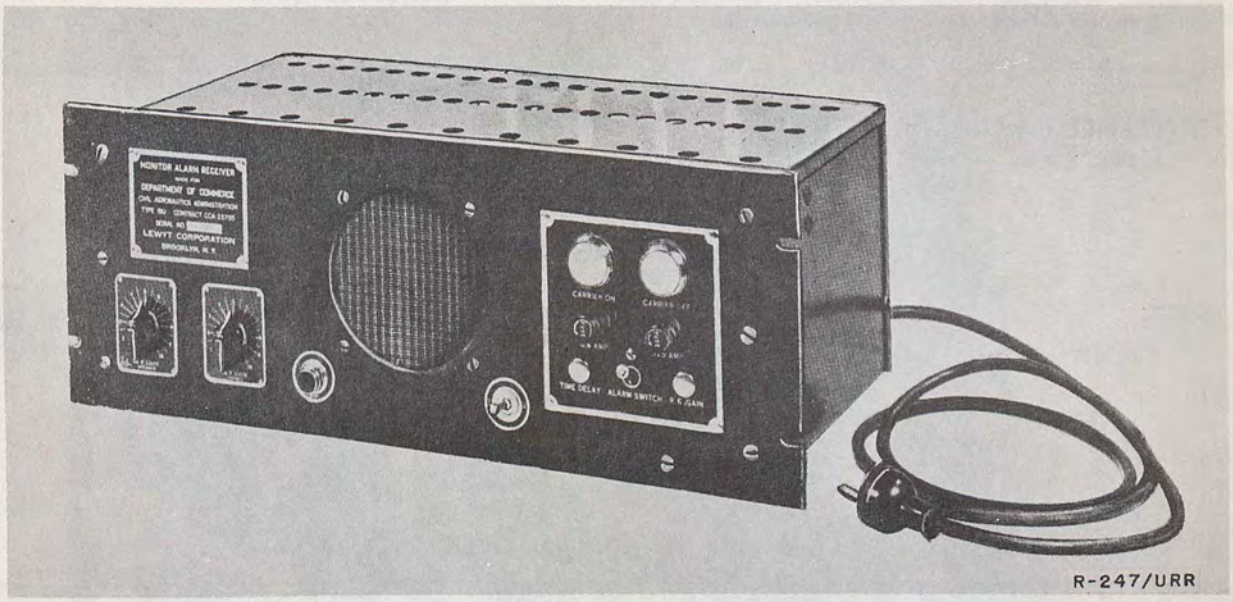
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.		

RADIO RECEIVER AN/GRR-type

5 December 1958
Cognizant Serv: USN FSN: 5820-234-0528

R-247/URR

	USA	USN	USAF
TYPE CLASS:	...	L/Std	...
STOCK NO:	...	F16-R-31543-1687	



FUNCTIONAL DESCRIPTION:

Radio Receiver R-247/URR is a fixed-tuned monitor alarm receiver intended specifically for the monitoring of compass locator station transmitters in the 200 to 550 kilocycle frequency range. An alarm buzzer and signal lamps operate whenever the received signal drops below a predetermined level.

This equipment provides instantaneous or time delay alarm operation. The time delay circuit delays operation of the alarm system for 10 to 15 seconds to prevent undesired operation of the alarm, caused by the absence of a signal during normal short-time transmission interruptions.

The R-247/URR has three RF stages individually adjustable from the back of the receiver but does not provide automatic volume control.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.2 to 0.55
Type of Modulation: AM
Type of Signal: Voice or cw
Output Impedance:
Headphones: 600 ohms
Speaker: 20,000 ohms
Power Output:
Headphones: 0.2 w
Speaker: 0.5 w
Power Requirements: 48 w, 115-v 60-cycle 1-phase ac

AN/GRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R–247/URR (Equipment consists of only one major component.)	5820–234–0528	6-31/32 x 19 x 9-1/8	35

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91084

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	----	40

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

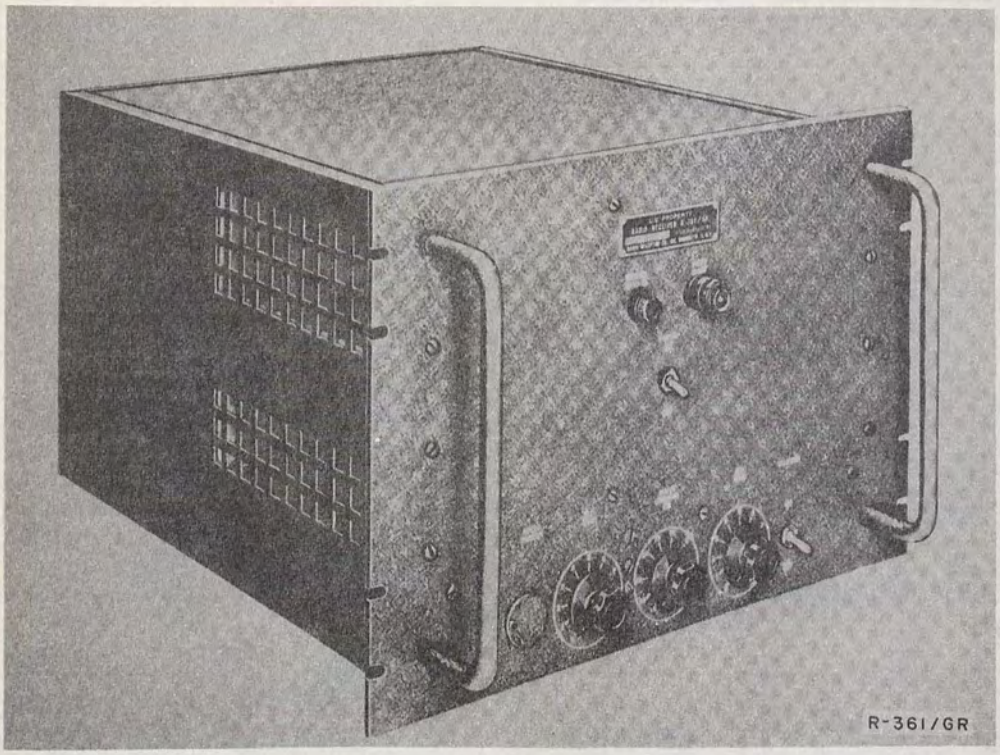
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Lewyt Corp.	Brooklyn, N. Y.	CAA–25755	$110.00

RADIO RECEIVER **AN/GRR-type**

5 December 1958
Cognizant Serv: USAF **FSN:** 5825-505-0470

R-361C/GR

	USA	USN	USAF
TYPE CLASS:	--	--	Used by
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R-361C/GR is used to receive signals from equipment in aircraft beyond line-of-sight paths. The equipment operates in the frequency range of 225 to 399.9 megacycles and has an output level adequate for operating a loudspeaker of the type used in control towers.

The R-361/GR is similar to Radio Receiver R-361A/GR but has different subassemblies.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 399.9

Type of Signal: Voice or cw

Channel Spacing: 100 kc

Output Impedance: 600 ohms

Power Requirements: 115–230-v 60-cycle 1-phase ac

AN/GRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Radio Receiver R–361C/GR	5825–505–0470		
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

DESIGN COG: USAF

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Television Corp.	Long Island City, N. Y.		

RADIO SET AN/GRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-164-7241 SCR-607-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S607	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-607-( ) is a 3-band, voice and cw, AM and FM, medium- and high-frequency, general purpose radio receiving equipment for fixed station or mobile use in intercept, monitoring, or communication application.

It consists of a commercial type (Hallicrafter S-36) table model communication receiver that can also be mounted on a standard relay rack. It is designed to operate with a special dipole array (Antenna Equipment RC-154) and can be controlled at *standby* from a remote location by means of auxiliary equipment.

This equipment is operated from 115-230-volt ac or from a 6-volt vehicular storage battery plus 270 volts of B battery supply. A shock mount is provided for use when this set is installed and operated in a vehicle.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.8 to 143 in 3 band

Type Modulation: AM, FM

Type of Signal: Voice, cw

Power Requirements: 110 w, 115/230-v 50/60-cycle ac; or 4.5 amp at 6-v dc from storage battery, and 145 ma at 270-v dc from B battery

AN/GRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-361C/GR (Equipment consists of only one major component.)	5825-505-0470		

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

DESIGN COG: USAF

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Television Corp.	Long Island City, N. Y.		

RADIO SET AN/GRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-164-7241

SCR-607-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S607	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-607-( ) is a 3-band, voice and cw, AM and FM, medium- and high-frequency, general purpose radio receiving equipment for fixed station or mobile use in intercept, monitoring, or communication application.

It consists of a commercial type (Hallicrafter S-36) table model communication receiver that can also be mounted on a standard relay rack. It is designed to operate with a special dipole array (Antenna Equipment RC-154) and can be controlled at *standby* from a remote location by means of auxiliary equipment.

This equipment is operated from 115-230-volt ac or from a 6-volt vehicular storage battery plus 270 volts of B battery supply. A shock mount is provided for use when this set is installed and operated in a vehicle.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.8 to 143 in 3 band

Type Modulation: AM, FM

Type of Signal: Voice, cw

Power Requirements: 110 w, 115/230-v 50/60-cycle ac; or 4.5 amp at 6-v dc from storage battery, and 145 ma at 270-v dc from B battery

AN/GRR-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Equipment RC–154	(FSN) 5985–243–0107	----------	200
1	Mounting FT–377	(USA) 2Z6721–377	4-7/8 x 21-1/4 x 14-1/2	12
1	Radio Receiver BC–787	(USA) 2C4787	9-5/16 x 21-1/4 x 14-1/2	78

REFERENCE DATA AND LITERATURE:

TM 11–867, TM 11–2631

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–10235

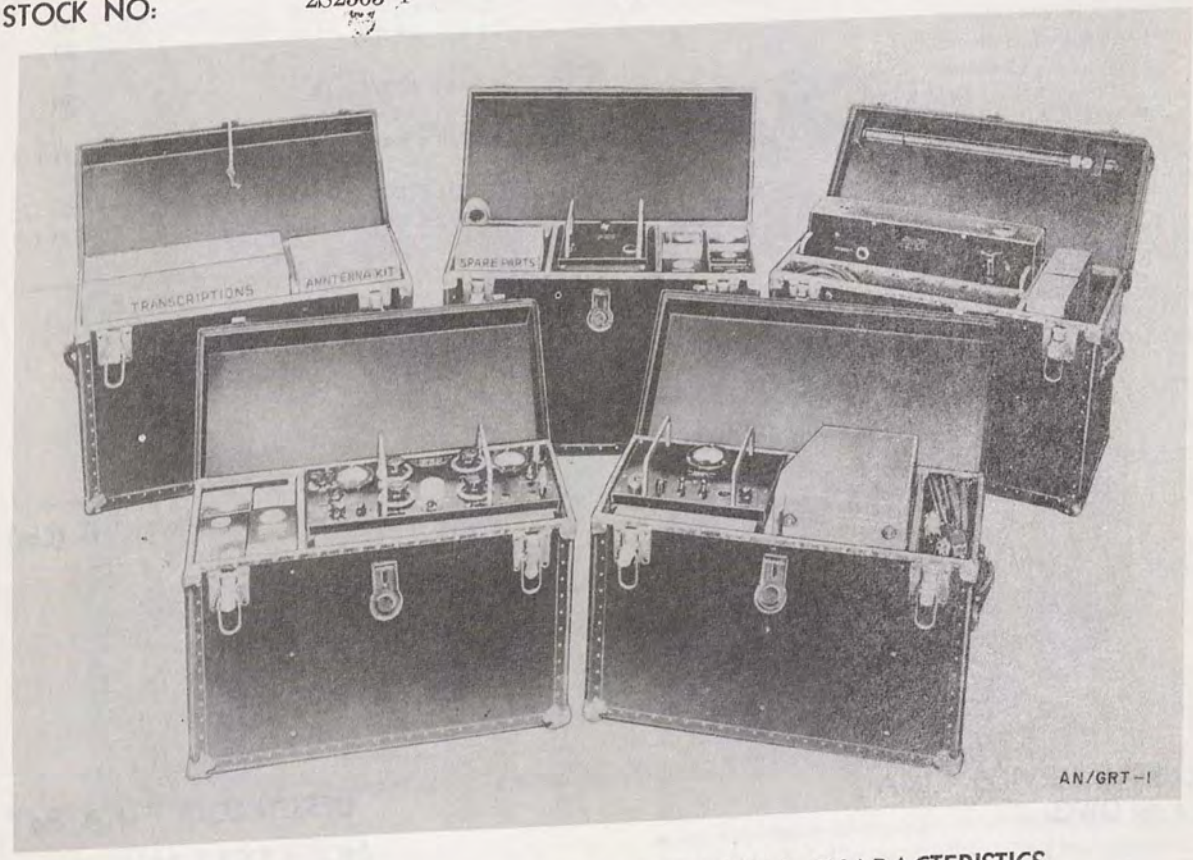
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Electronic Devices, Inc.	Brooklyn, N. Y.	4036–P–46–59	$ 240.62
The Hallicrafters Co.	Chicago, Ill.	21686–P–50–51	1,074.50
Technical Appliance Corp.	Sherbourne, N. Y.	53321–P–45–59	289.00

RADIO SET AN/GRT-1

1 July 1958
Cognizant Serv: USA FSN: 5890-186-3538

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	2S2503-1	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/GRT-1 is a portable broadcasting station consisting of a broadcast transmitter, power supply, pressure cooling unit, control console mixer, and a phonograph turntable. It is packed in five armored trunks that serve as carrying cases.

Antenna supports, and suitable control room and studio facilities are required.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.1 to 1.5
Type Modulation: AM
Type of Signal: Voice
Power Output: 50 w
Power Requirements: 1,190 w, 90–240-v 50–60-cycle ac

AN/GRT-1 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Auxiliary antenna kit	----------	12 x 12 x 3	20
1	Control console mixer	----------	11 x 18 x 9-3/8	35
2	Dynamic microphone			
1	Photograph turntable (two-speed)	----------	6-3/4 x 20-1/4 x 18	20
1	Pressure cooling and voltage selector unit	----------	11-7/8 x 9 x 17-7/8	54-1/4
1	Radio broadcast transmitter	----------	11-1/4 x 18-3/4 x 17-7/8	49-1/2
1	Transmitter Power Supply	----------	10-1/2 x 12-1/2 x 16	89-1/4

REFERENCE DATA AND LITERATURE:

TM-11-825

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	----	766

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

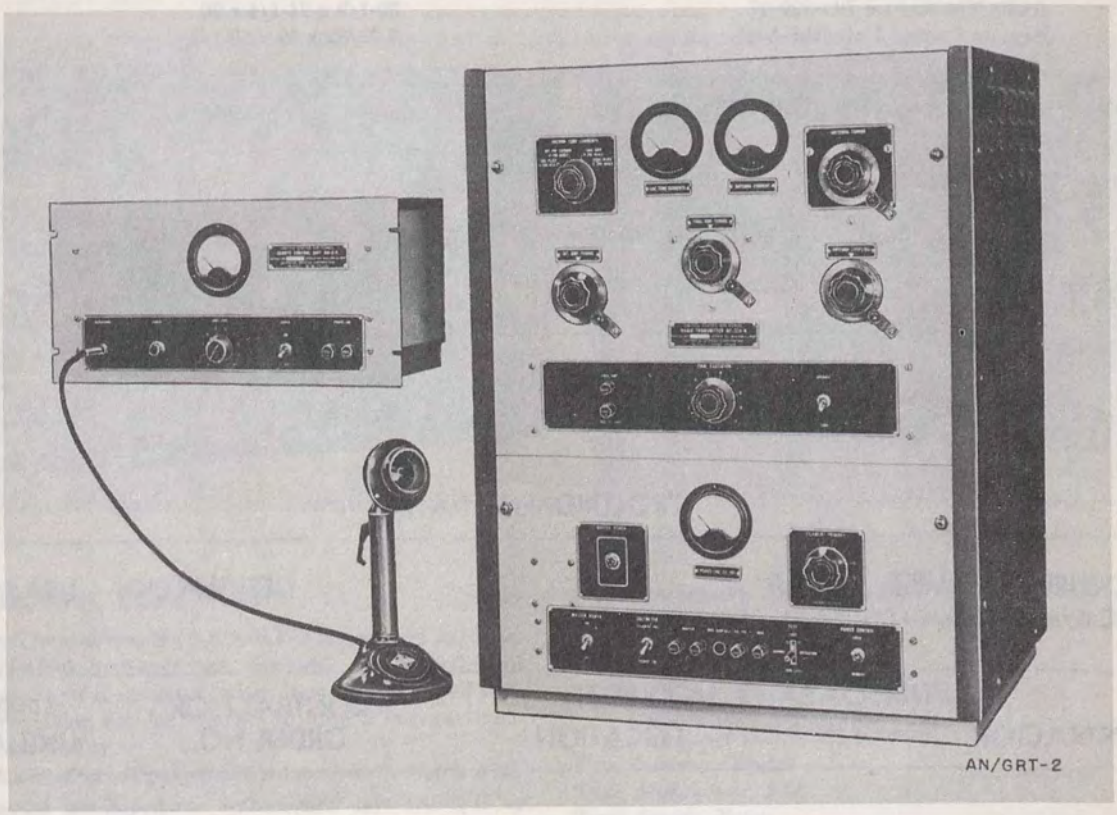
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

14961-P-44

RADIO TRANSMITTING SET AN/GRT-2

26 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Alt-Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/GRT–2 is a fixed, ground communication equipment designed for short-range airport traffic control. It can be operated from a distance of 5 miles by Remote Control Unit RM–6.

The frequency is crystal controlled, with a master oscillator for emergency operation.

The 500-ohm impedance audio input circuit is designed for a low-impedance microphone or telephone line. The antenna output is intended to operate into a long wire antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.2 to 0.41
Type Modulation: AM
Type Signal: Voice
Power Output: 25 w
Power Requirements: 560 w 105–125-v 50–60-cycle 1-phase ac; an additional 28 w is required for remote control

AN/GRT-2 RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Microphone T–27–P		11 x 5-1/4 dia	2.75
1	Radio Transmitter BC–329–N		30-1/2 x 24-1/4 x 20	240
1	Remote Control Unit RM–6–K		8-23/32 x 19 x 10-1/4	36

REFERENCE DATA AND LITERATURE:
TO 16–30FRT2–2, –3

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	25.6	512

PROCUREMENT DATA

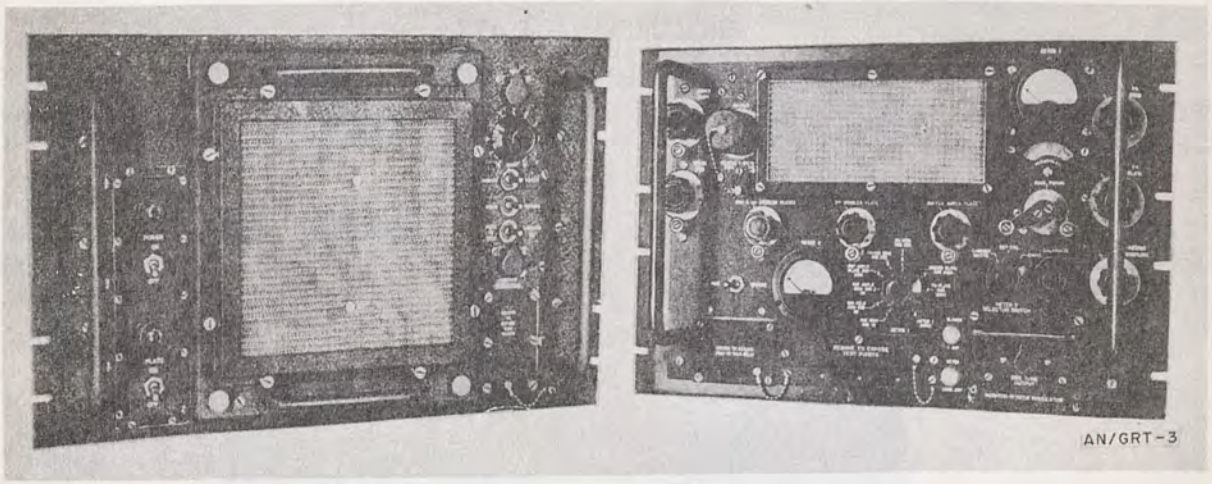
PROCURING SERVICE: USAF
SPEC &/or DWG:
DESIGN COG: USAF, RADC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TRANSMITTING SET AN/GRT-3

26 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Alt-Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/GRT-3 is a ground fixed station ultra-high-frequency set designed for ground-to-air and point-to-point communication. It is normally used with Radio Receiving Set AN/GRR-7 to form a two-way communication facility.

The transmitter output circuit is intended to match a 52-ohm coaxial low-impedance transmission line RG-8/U or equivalent.

Recommended antennas are: Antenna AT-197/GR, Antenna AS-505/GR, and Antenna AS-450/GR. On control tower frequencies, Antenna AT-197/GR is used. On airway frequencies, Antenna AS-505/GR is recommended. No remote control facilities are provided.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Type Control: Crystal
Type Modulation: AM
Type Signal: Voice
Power Output: 100 w (nominal)
Power Requirements: 750 w, 105-125/210-250-v 60-cycle 1-phase ac

MAJOR COMPONENTS

*QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Modulator-Power Supply MD-141/GR	----------	10 x 12-1/4 x 21	200.0
1	Radio Transmitter T-282/GR	----------	19 x 12-1/4 x 21	175.0

REFERENCE DATA AND LITERATURE:

AN/GRT-3 RADIO TRANSMITTING SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	22.44	600

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: Eng-246

DESIGN COG: USAF, RADC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TRANSMITTER AN/GRT-type

4 December 1958
Cognizant Serv: USA FSN:

BC-191-( )

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	2C6191	--	--



BC-191

FUNCTIONAL DESCRIPTION:

Radio Transmitter BC–191–( ) is a general utility, medium-range, low-frequency radio transmitting equipment which is widely used as part as part of Radio Sets SCR–117, SCR–188, SCR–193, and AN/VRC–1 and similar equipment. The sets can be used on the ground, in vehicles, and in aircraft, for ground-to-ground or ground-to-air communication.

This equipment consists of a radio transmitter and appropriate tuning units for the frequency channels in which radio transmitter operation is desired, a dynamotor, and related accessories. Normally, when issued as part of a complete radio set, this equipment is provided with tuning units for the frequencies in which the radio set is to be operated.

Radio Transmitters BC–191–A through –F and BC–191–N are identical for all operating functions, but vary slightly in mechanical detail.

The tramsmitter may be operated from a storage battery, through the dynamotor component, or from a portable field power unit such as Power Units PE–75 and PE–49 and similar equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.2 to 0.8 and 1.5 to 12.5
Operating Range: Approx 100 miles
Type of Modulation: AM
Type of Signal: Voice, tone, and cw
Power Output: 40 to 75 w
Power Requirements: 12-v storage battery, gasoline engine generator for supplying 12-v and high voltage, or 110- or 220-v 60 cycle ac.

AN/GRT-type RADIO TRANSMITTER

MAJOR COMPONENT

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Tuning Unit BC–306		17-3/4 x 9-1/2 x 9-1/8	9.75
1	Dynamotor Unit BD–77		10-29/32 x 11-1/16 x 7-1/2	38.7
1	Radio Control Box BC–309		3–9/16 x 3–1/2 x 2-7/32	0.418
1	Radio Transmitter BC–191–( )		22 x 21-21/32 x 9-5/16	52
8	Transmitter tuning units		7-5/8 x 16-3/4 x 8-3/4	11.437

REFERENCE DATA AND LITERATURE:
TM 11–4017

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:
DESIGN COG: USA, Sig C

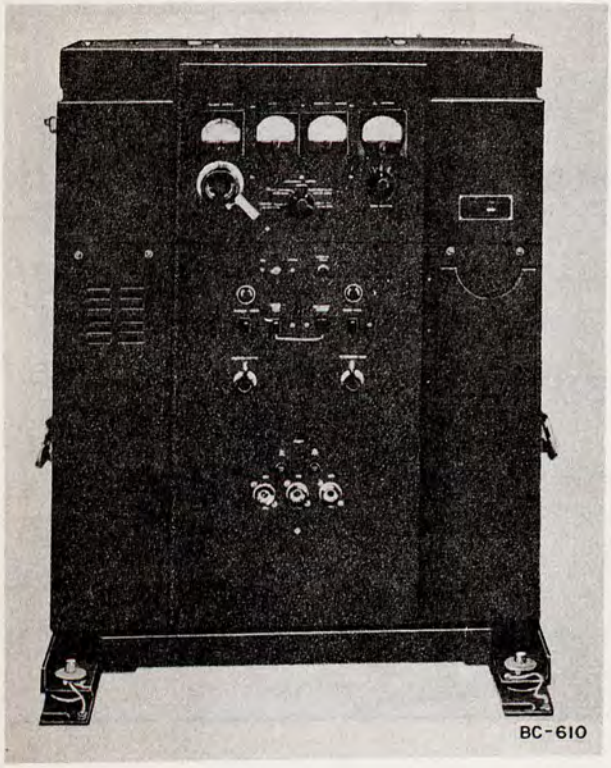
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TRANSMITTER AN/GRT-type

1 July 1958
Cognizant Serv: USA FSN: 5820–189–7042

BC–610–( )

	USA	USN	USAF
TYPE CLASS:	Std	--	L/Std
STOCK NO:	2C6500	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter BC–610–( ) is the widely used radio transmitting component of such equipments as Radio Sets SCR–399, SCR–499, and similar units. It is a crystal-controlled or master oscillator medium- and high-frequency, radiotelegraph equipment used in intermediate and long-distance communication.

With additional equipment (such as Speech Amplifier BC–614–( )), this transmitter can furnish am radiotelephone service.

This equipment consists essentially of a single, cabinet-inclosed, compact unit fitted with shock mountings. It is designed for mobile applications, using whip-type antenna systems. With rhombic, doublet, tower-supported or other elaborate antenna arrays, it can be used as a fixed station transmitter.

As mobile equipment it is powered by a trailer-drawn power unit; as fixed station equipment it is operated on conventional power sources.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 18
Type Modulation: AM
Type of Signal: Cw or voice (with additional equipment)
Power Output:
Cw: 400 w
Voice: 300 w
(Above 8 mc, the output is somewhat less.)
Power Requirements: 1,700 to 2,000 w, 115-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Radio Transmitter BC–610–( ) (includes complete set of rf tuning units and coils)	5820–189–7042	32-5/8 x 21-3/8 x 39-7/8 (includes three rf tuning units and coils from set supplied)	497

(Equipment consists of only one major component.)

AN/GRT-type RADIO TRANSMITTER

REFERENCE DATA AND LITERATURE:

TM 11-281, TM 11-826

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	35.1	755

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-3334-(BC-610-I)
(USA) 71-1683-( )

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
David Bogen Co., Inc.	Paramus, N. J.	(BC-610-F) 10970-P-48-77	
George Voron & Co.	Philadelphia, Pa.	(BC-610-H) 25210-P-54-55	$1,627.22
The Hallicrafter Co.	Chicago, Ill.	(BC-610-I) 3467-P-52-06	1,606.11

RADIO TRANSMITTER AN/GRT-type

1 July 1958
Cognizant Serv: USA FSN: 5820-503-3305

T-417/GR

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C6900-417	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter T-417/GR is an FM radio transmitter designed for fixed station use. It is intended for use in system applications to provide point-to-point communication, or radio relay service by retransmission.

This transmitter is not self-sufficient; it relies on other components of the system to provide power and control facilities.

Provision is made for operation on either of two preset crystal-controlled frequencies.

It is used as part of Radio Sets AN/FRC-15 and AN/TRC-22.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 25 to 50
Type Modulation: FM
Type of Signal: Voice
Power Output: 45 w
Power Requirements: Power Supply PP-804/U or equivalent (not supplied as part of this equipment)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Radio Transmitter T-417/GR	5820-503-3305	8-1/2 x 4-1/2 x 14-1/2	

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-804

AN/GRT-type RADIO TRANSMITTER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	varies	varies

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-N-11539

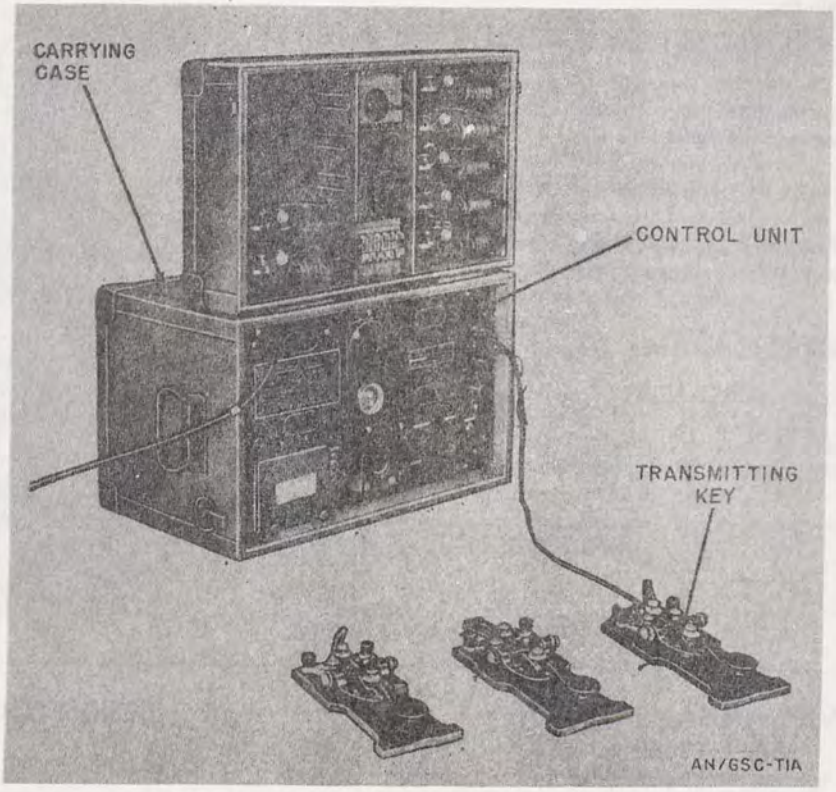
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	11661-P-52-93	

CODE TRAINING SET AN/GSC-T1( )

26 November 1958
Cognizant Serv: USA FSN: 6940-243-1972

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Ltd-Std
STOCK NO:	4A401-T1	--	--



FUNCTIONAL DESCRIPTION:

Code Training Set AN/GSC-T1( ) is a device intended to facilitate student practice of transmission and reception of International Morse Code signals by both visual and audio methods.

This equipment is used at camps, aboard transports, in hospitals, and in rehabilitation centers. It may be operated out of doors.

Practice groups may be placed as far as 40 feet from the equipment, provided the surrounding noise levels do not exceed 60 decibels. It includes 10 telegraph keys which may all be connected to the main unit at one time.

During operation, hand keying produces either an audio tone adjustable in ptich and volume, or a blinker flash visible to a practice group. The tone is delivered by a loudspeaker and the blinker flash by a 1-watt neon gas lamp.

There are two models of this equipment, Code Training Sets AN/GSC-T1 and AN/GSC-T1A. Both of these items are functionally similar, and differ only in minor electrical details.

TECHNICAL CHARACTERISTICS:

Medium of Communication:
Audible: 2-1/2 in. permanent magnet loudspeaker
Visual: 1 w neon gas lamp
Frequency of Tone: 600 to 1,000 cps ±20%
Sound Range: Approximately 40 ft; with local noise below 60 db noise level
Power Requirements: 6/12/24/115-v dc; or 115/230-v 60-cycle ac

AN/GSC-T1( ) CODE TRAINING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Code Training Set AN/GSC–T1( ) including:			
1	Control unit		13-1/4 x 18 x 11	52.0
1	Power cord and auxiliary cord		96 lg	1.8
10	Transmitting keys		1-1/2 x 3 x 6	1.9
10	Transmitting key cords		120 lg	0.5

REFERENCE DATA AND LITERATURE:

TM 11–437; TM 11–437A; TO 28–30GSCT1–6

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5.1	76

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–T–13660

DESIGN COG: USA, Sig C

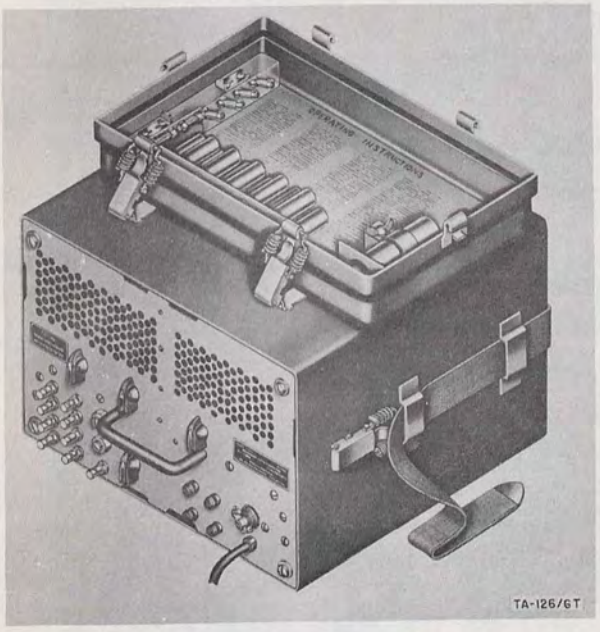
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEPHONE REPEATER AN/GTA-type

1 July 1958
Cognizant Serv: USA FSN: 5805-221-4817

TA-126/GT

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B3186-126	--	--



FUNCTIONAL DESCRIPTION:

Telephone Repeater TA-126/GT is a portable, single-channel, terminal-type equipment that provides stable, low-loss, short-haul telephone circuits in point-to-point, loop, and local trunk circuits. It is used in field wire systems to improve transmission under all weather conditions.

The equipment passes 20 cycle or vf signaling. It may be used with field telephones, field switchboards, telephone and telegraph apparatus, multichannel telegraph terminals, and data transmission equipment.

TECHNICAL CHARACTERISTICS:

Facilities Required: Two-wire or four-wire field telephone lines

Facilities Provided: Two-wire or four-wire operation; low-loss telephone circuits over poor quality lines

Frequency: 200 to 6,500 cps

Power Requirements: 1 amp 115-v (±10%) 50/60-cycle ac; 4 amp 22-30-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Telephone Repeater TA-126/GT	5805-221-4817	11-5/8 x 15-7/8 x 16-1/2	65

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-2135

AN/GTA-type TELEPHONE REPEATER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.13	75

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-T-11004

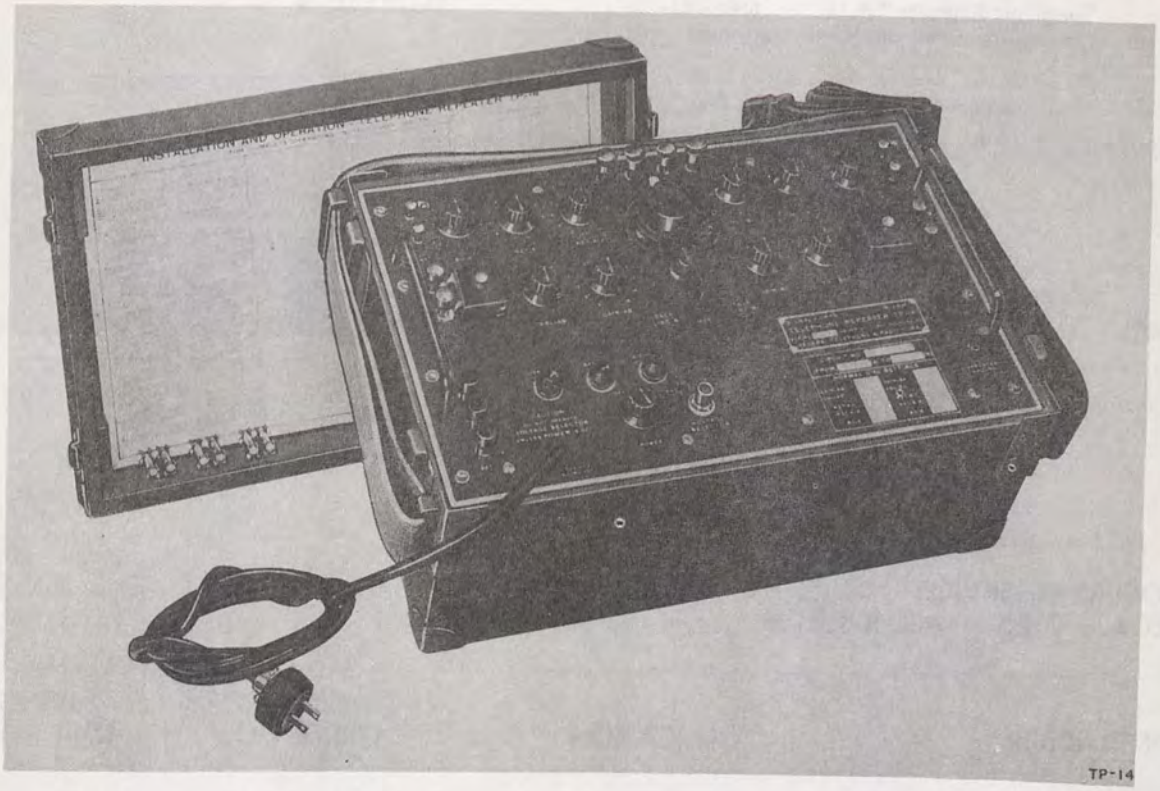
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Lenkurt Electric Co., Inc.	San Carlos, Calif.	14203-P-51-03	$1,326.00

TELEPHONE REPEATER AN/GTC-type TP-14

1 July 1958
Cognizant Serv: USA FSN: 5805-164-7065

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4B3250-14	--	--



FUNCTIONAL DESCRIPTION:

Telephone Repeater TP-14 is a portable, field, 22-type repeater equipment used to extend the range of two-wire (open-wire or field cable) facilities.

This equipment consists of a completely self-contained unit including the amplifier, filters, equalizers, line-balancing networks, and related items. It is a panel-mounted apparatus contained in a protective box or case, and can be removed from its housing for rack-and-panel mounting in fixed-station applications.

Two of these repeaters may be used in tandem to extend circuits where mixed facilities, such as open-wire and field cable, are used, and can be installed at terminal or intermediate points of a system.

TECHNICAL CHARACTERISTICS:

Number and Type of Facilities: Four-wire to four-wire amplification or two-wire to four-wire amplification or four-wire to two-wire amplification

Power Requirements: 11 w 110–130/220–250-v 50/60-cycle ac; or 800 ma at 12-v dc from storage battery; or 20 ma at 135-v dc from dry cells and 150 ma at 12-v dc from storage battery

AN/GTC-type TELEPHONE REPEATER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telephone Repeater TP–14	5805–164–7065	17-1/2 x 11 x 8	

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–2007

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–13215B

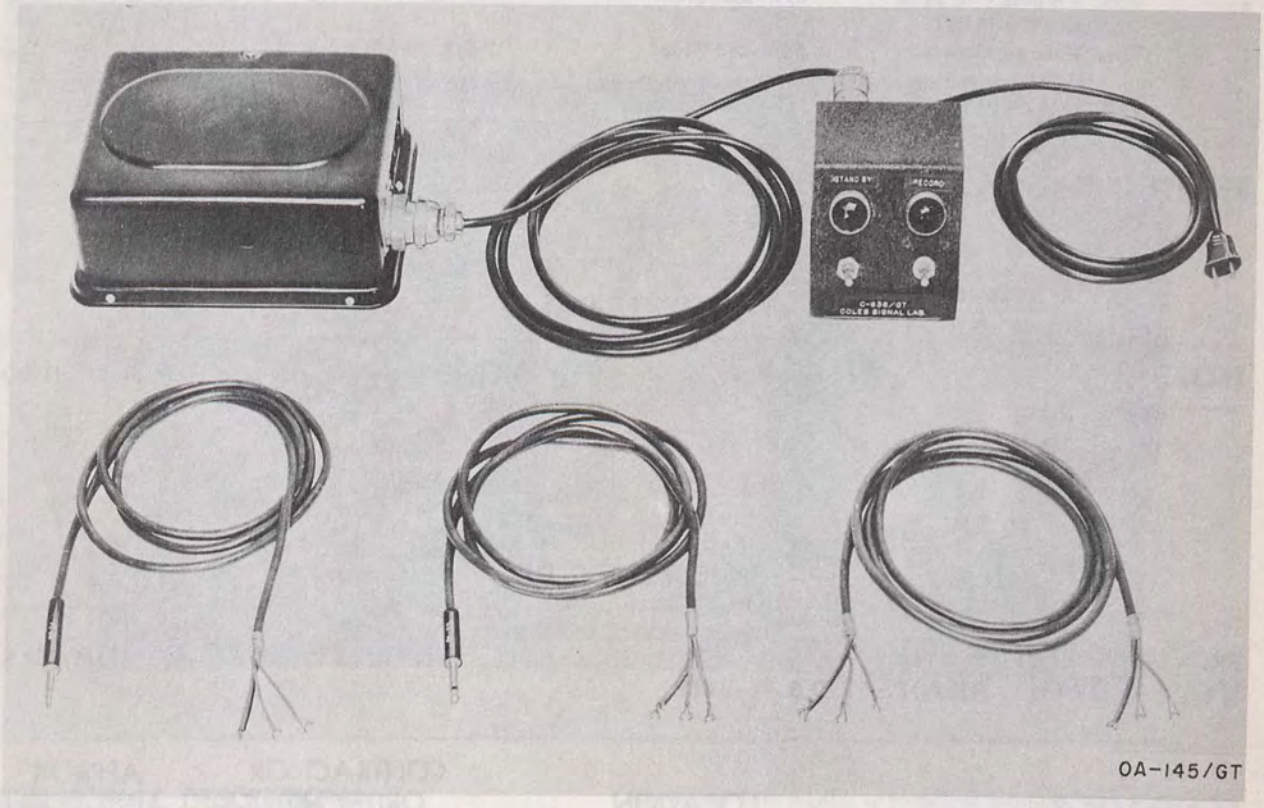
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Development Corp.	Trenton, N. J.	3567–P–52–03	$590.00

TONE WARNING GENERATOR GROUP AN/GTT-type OA-145/GT

1 July 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Tone Warning Generator Group OA-145/GT is used on telephone lines to give audible indication that the telephone conversation is being recorded.

This equipment consists essentially of a tone-warning generator, controls, and accessories.

Three special purpose cable assemblies are supplied with this equipment for flexibility in connection to most standard recorders.

The warning signal is applied to the line at intervals of 15 seconds, which complies with the requirements of the Federal Communication Commission for use on commercial telephone lines.

TECHNICAL CHARACTERISTICS:

Type of Signal: 1,400-cps tone of 0.2 second duration, 15 second interval

Power Requirements: 115-v 50/60-cycle ac

AN/GTT-type TONE WARNING GENERATOR GROUP

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Tone Warning Generator Control C–638/GT	6110–228–3132	3-15/16 x 4 x 4-1/2	0.5
1	Tone Warning Generator O–93/GT	5895–242–3145	9-3/4 x 6-5/8 x 4-1/32	1.5

REFERENCE DATA AND LITERATURE:

TM 11–2088

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2	35

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA)71–3370 & 71–3412

DESIGN COG: USA, Sig C

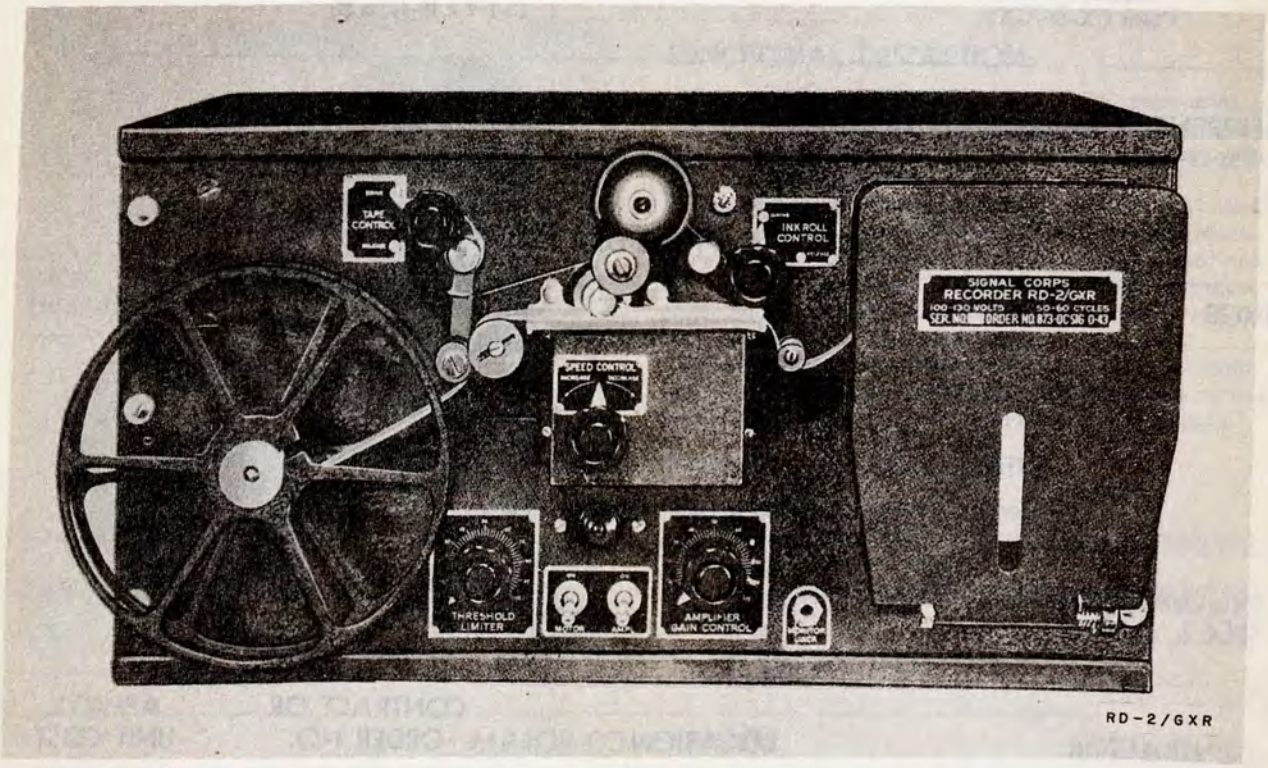
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RECORDER AN/GXR-type

RD-2/GXR

20 November 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	6C262-2	--	--



RD-2/GXR

FUNCTIONAL DESCRIPTION:

Recorder RD-2/GXR is a cabinet or rack mounted facsimile recorder. It records printed or typed messages on 3/4-inch paper tape from facsimile signals received on an ordinary radio receiver or from a wire line. These signals consist of seven mark or space impulses per line, and seven lines per character. The recorder is a self-contained unit only requiring connection to a power line and a source of signal to its input terminals. It is capable of recording printed messages at varying speeds up to 84 words per minute.

TECHNICAL CHARACTERISTICS:

Signal Input: Special facsimile signal (7X7) −3 db to +27 db
Input Impedance: 600 ohms at 1,000 cps
Recording Speed: 25 to 85 wpm
Tape Speed: Variable, with maximum of 54, 60, or 72 inches per minute, depending upon selection of interchangeable speed-control rollers
Power Requirements: 150 w 100–130-v 50–60-cycle ac

AN/GXR-type RECORDER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Recorder RD–2/GXR (cabinet mount)	----------	10-1/8 x 14-5/8 x 19-1/4	75
1	Chest CX–65/GXR	----------	13-1/2 x 19-1/2 x 29	40

REFERENCE DATA AND LITERATURE:

TM 11–382

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.7	125

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

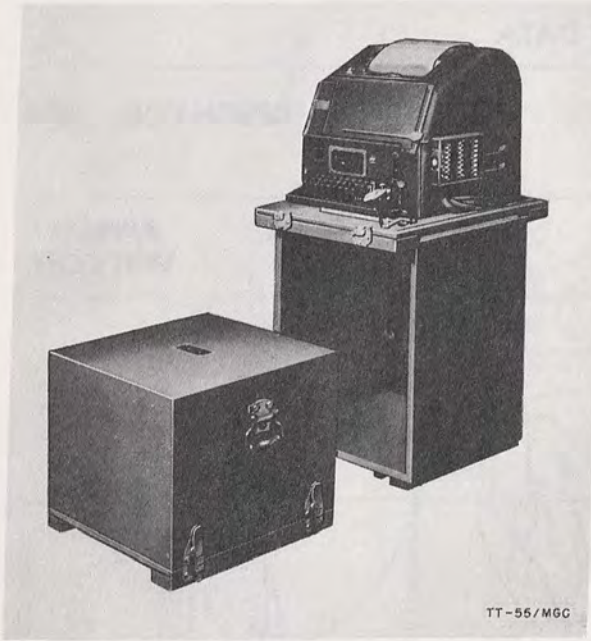
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELETYPEWRITER AN/MGC-type

1 July 1958
Cognizant Serv: USA FSN: 5815-198-4442

TT-55/MGC

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4TTT55	--	--


TT-55/MGC

FUNCTIONAL DESCRIPTION:

Teletypewriter TT-55/MGC is a field, page-printing, teletypewriter equipment designed for installation in field-type shelters or vans for mobile station use in standard communication applications.

This equipment consists essentially of a modified commercial (Teletype Corp. Model 15) teletypewriter station equipment. It has a standard communication keyboard and type pallets and includes a base, motor unit, keyboard transmitter and typing unit, and related accessories. It can be operated in half-duplex operation only.

The cases illustrated above are used to transport the equipment alone. They generally are not included when this equipment is installed in a van or shelter for mobile applications.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368.1 opm (60 wpm)
Motor Characteristics: Series governed; 87.6 vps tuning-fork adjustable; 1,800 rpm speed
Power Requirements: 110 w 115-v dc; 140-va, 115-v 25/50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Teletypewriter TT-55/MGC	5815-198-4442	----------	225
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11-352

AN/MGC-type TELETYPEWRITER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	42	557

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-3334

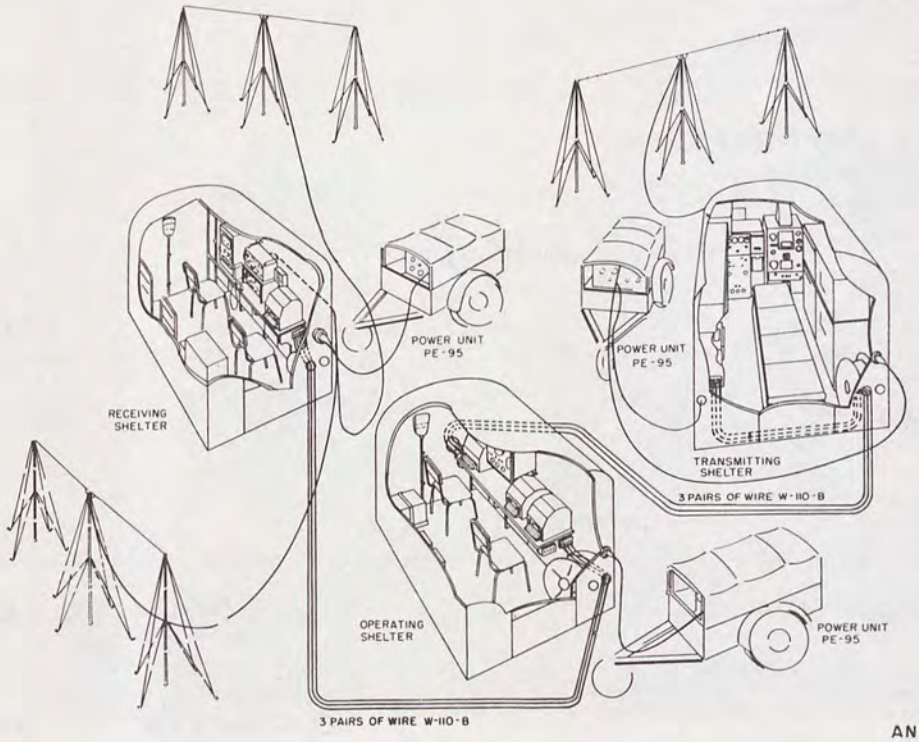
DESIGN COG: USA

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.		

RADIO SET AN/MRC-2( )

1 July 1958
Cognizant Serv: USA FSN: 5820-193-7118

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S3007-2	--	--



AN/MRC-2

FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC-2( ) is a 2-kw mobile radioteletype station designed to provide either net or long-distance operation, with provision for fsk radioteletype communication. It is used at field headquarters of large units for long-range communication and for handling a heavy volume of traffic.

This equipment is installed and operated in three Shelters HO-17, each carried on a 2-1/2 ton, 6 x 6 cargo truck. Each truck has a 6-kw trailer-drawn power unit. One shelter houses the transmitting equipment, another carries the receiving equipment, and the third carries the teletypewriter equipment. An additional truck may be provided to transport the antenna masts and accessories.

The transmitter operates into one coaxially-fed doublet antenna. The receiver operated with two coaxially-fed doublet antennas spaced three wavelengths apart for diversity reception.

In addition to fsk radioteletype, it is possible to transmit cw at 2 kw, and voice or cw at 300 w or 400 w, respectively.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitter: 2 to 18
Receiver: 1.5 to 18 in 6 bands
Type Modulation: AM
Type of Signal: Fsk radioteletype, cw, voice
Power Output:
Voice: 300 w
Fsk or cw: 2 kw 400 w
Power Requirements:
Transmitter: 6.5 kw 115-v 60-cycle ac
Receiver: 2.5 kw 115-v 60-cycle ac
Operating: 2 kw 115-v 60-cycle ac

AN/MRC-2( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Unit PE–75	----------	56 x 44 x 39	491
3	Power Unit PE–95	----------	76-1/2 x 108 x 76-1/2	4,965
1	Shelter HO–17, Operating	----------	158 x 90-1/2 x 77	7,200
1	Shelter HO–17, Receiving	----------	158 x 90:1/2 x 77	7,200
1	Shelter HO–17, Transmitting	----------	158 x 90-1/2 x 77	8,800

REFERENCE DATA AND LITERATURE:

TM 11–624, TO 16–30MRC2–7

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
9	3,057	39,416

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

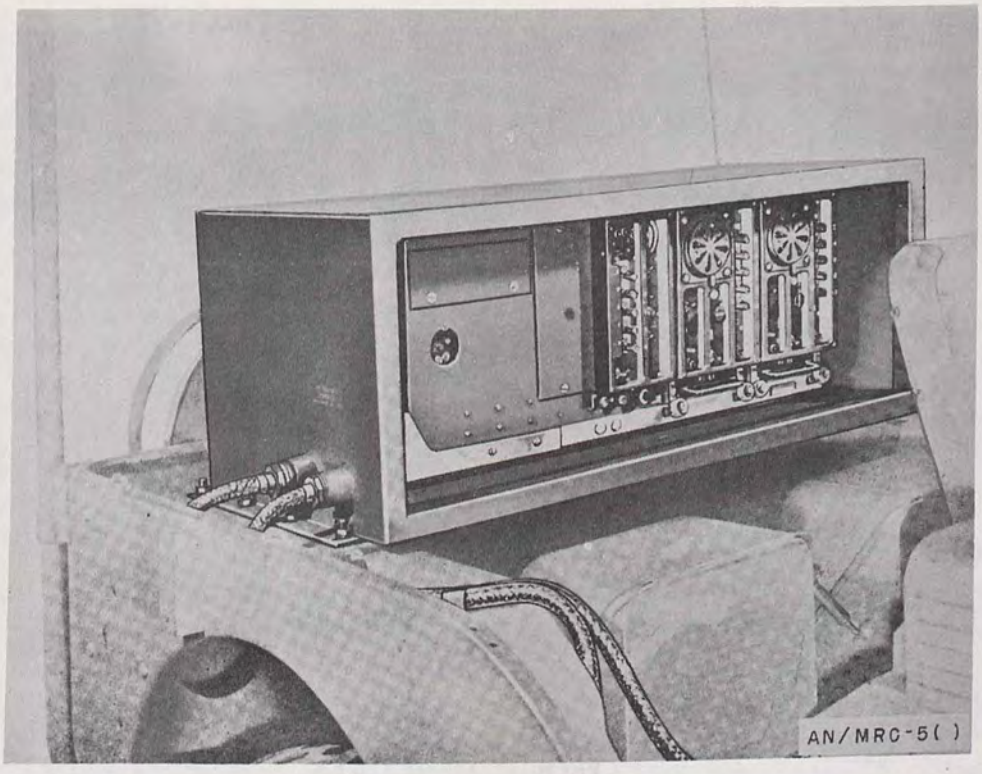
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Baker & Williamson, Inc.	Upper Darby, Pa.	3135–P–51–31	$27,782.85
The Hallicrafters Co.	Chicago, Ill.	3135–P–51–06	27,006.47

RADIO SET AN/MRC-5C

26 November 1958
Cognizant Serv: USN FSN: 5820-665-3873

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-114345-200	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC-5C is a complete mobile radio station designed for short-range ground communication in field and internal security operations. It consists essentially of Radio Set SCR-608 installed in a type M-38, 1/4-tone vehicle.

Headset reception and push-to-talk transmission are possible at the local radio set control. The remote radio set control may be located as far as 1 mile from the vehicle. The local radio set control also provides loudspeaker reception and on-off power control of the set.

The set is submersion proof.

Radio Set AN/MRC-5C is similar to Radio Set AN/MRC-6C, except that the AN/MRC-6C consists of a Truck M-38 and a Radio Transmitting and Receiving Equipment TCS.

TECHNICAL CHARACTERISTICS:

Transmitter:

Frequency Range in Mc: 27 to 38.9
Number of Preset Channels: 10
Frequency Control: Crystal
Type of Signal: Voice
Type Modulation: FM
Operational Range: 5 to 15 miles
Power Output: 20 w

Receiver:

Type: Superheterodyne
Frequency Control: 10 preset channels or continuous manual tuning
Type Reception: FM
Intermediate Frequency: 2.65 mc
Bandwidth: 80 kc
Sensitivity: 1 uv
Output: 2 w to speaker; 0.2 w to headset

Antenna: 10 ft whip

Power Requirements: 24-v dc vehicular battery

AN/MRC-5C RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Mast Base Bracket 16–B–750001–368		5-3/4 x 5-1/2 x 12-1/2	6.6
1	Local Radio Set Control C–1217/MRC		7-1/4 x 10-5/8 x 8-3/4	
1	Maintenance Parts Cabinet CY–732/MRC		8-7/8 x 30 x 15-1/2	41
1	Radio Cabinet CY–731A/MRC		17 x 44-5/8 x 18-11/16	
1	Radio Set SCR–608			181
1	Remote Radio Set Control C–1226/MRC		1-9/16 x 3-3/16 x 4-7/8	
1	Set of cables, brackets, plates and hardware			
1	Truck M–38		67-1/4 x 62 x 132-15/16	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91811

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

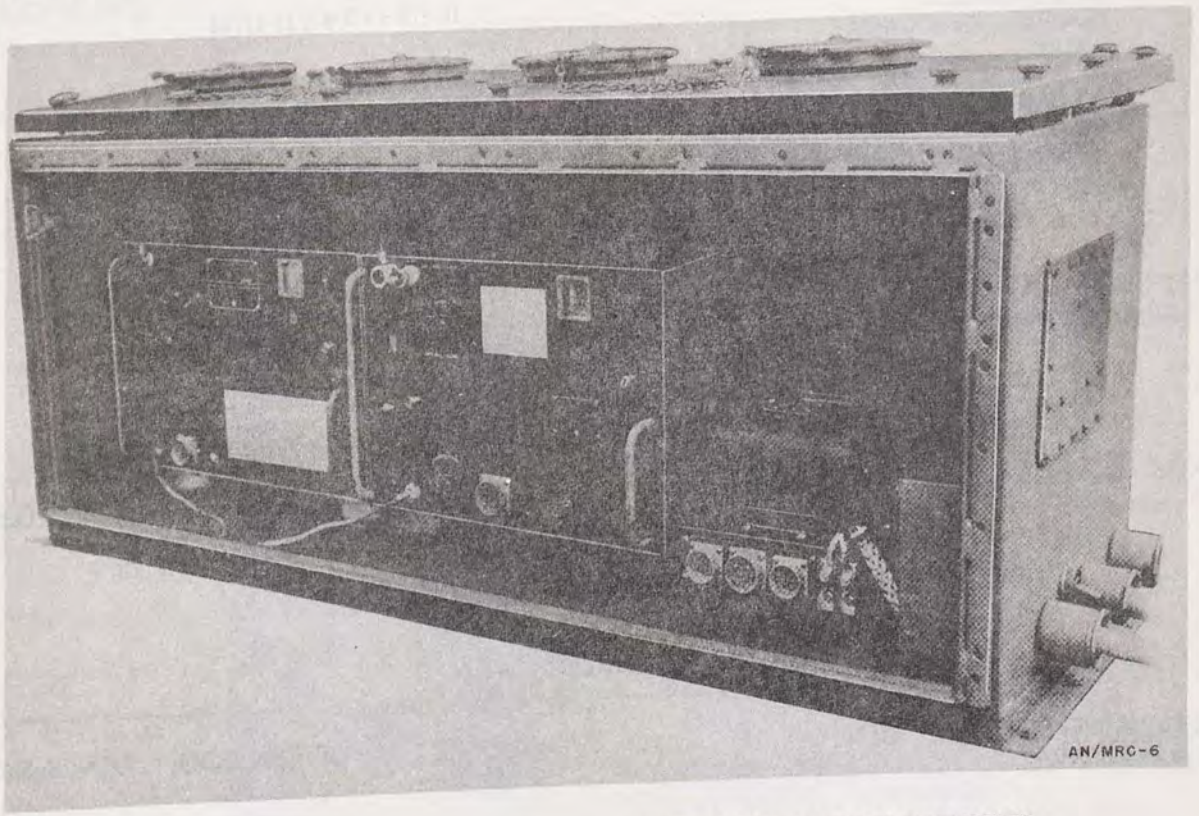
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Waterproof Electric Co.	Burbank, California	NObsr–52593, 12 June 1951	

RADIO SET AN/MRC-6, -6A, -6B

26 November 1958
Cognizant Serv: USN FSN: 5820-665-1348 (AN/MRC-6B)

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Sets AN/MRC-6, AN/MRC-6A, and AN/MRC-6B are mobile communications equipments for internal security and field use. They consist primarily of a 1/4-ton truck, Radio Transmitting and Receiving equipment TCS (or similar), submersible cabinet, a remote control unit, and accessories.

Radio Sets AN/MRC-6, AN/MRC-6A, and AN/MRC-6B are functionally similar although components and type number vary. The AN/MRC-6A and AN/MRC-6B use Radio Transmitter-Receiver Assembly OA-26A/MRC in place of the TCS. The AN/MRC-6B includes an additional power generator operating off the vehicle engine and 2 additional storage batteries.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Band 1: 1.5 mc to 3 mc
Band 2: 3 mc to 6 mc
Band 3: 6 mc to 12 mc
Type Modulation: AM
Type Signal: Cw, voice
Power Output:
Transmitter: 25 w cw;10 w voice
Receiver: 2.5 w audio
Power Requirements: 24-v dc from vehicular storage battery

AN/MRC-6, -6A, -6B RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For AN/MRC-6B:			
2	Battery BB-221/U	----------	10-5/8 x 7-7/8 x 12-11/16	30
1	Installation Kit MX-566A/MRC			
1	Power Supply Kit MX-736A/MR	----------	----------	137
1	Radio Transmitter-Receiver Assembly OA-26A/MRC-6			
1	Truck V-35/U			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91308, 95319

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

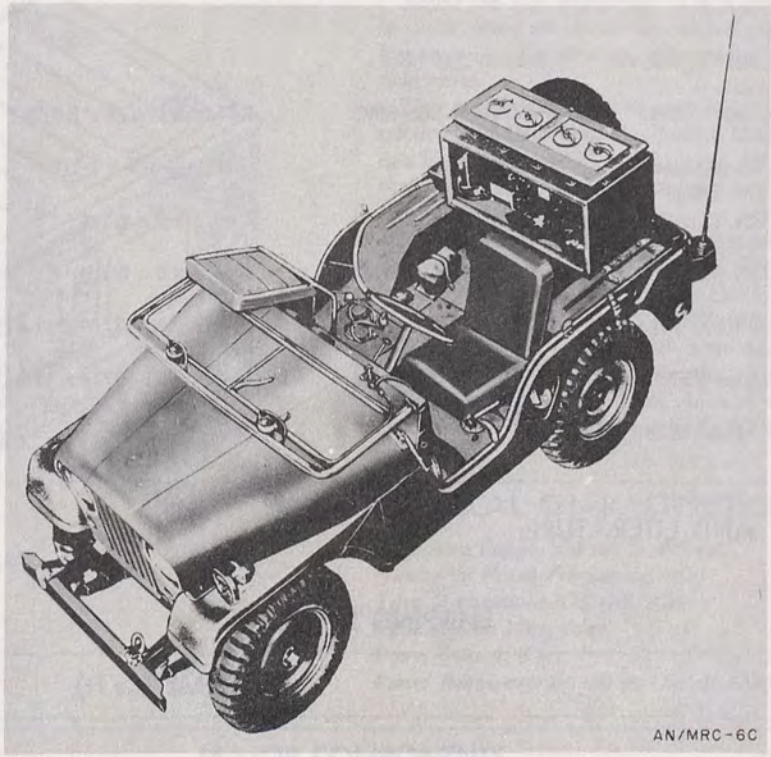
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/MRC-6C

26 November 1958
Cognizant Serv: USN FSN: 5820-644-0934
5820-665-1348(USN)

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC-6C is a mobile transmitting and receiving equipment installed in a 1/4-tone Ordnance Truck, model M38A1. It is designed for either continuous wave or voice modulated transmission and reception within the frequency range of the set.

The type of emission may be selected by means of a switch located on the front panel of the transmitter unit. The receiver and transmitter units are rigidly constructed to give a high degree of frequency stability.

The vehicle is equipped with an extended exhaust and intake and other waterproofing features to provide for deep water fording.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Band 1: 1.5 mc to 3 mc
Band 2: 3 mc to 6 mc
Band 3: 6 mc to 12 mc
Type of Signal: Voice or cw
Type Modulation: AM
Operational Range:
Voice: 15 miles
Cw: 30 miles
Transmitter Power Output:
Voice: 10 w
Cw: 25 w
Type Tuning: Master oscillator or crystal
Antenna: Whip type
Power Requirements: 24-v dc from vehicular storage batteries

AN/MRC-6C RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
3	Battery BA–30	(FSN) 6135–120–1020		
1	Cabinet, Electrical Equipment CY–731A/MRC	(FSN) 5975–575–6286	42-7/8 x 20-1/2 x 17-1/8	
	or			
1	Cabinet, Electrical Equipment CY–1425/MRC	(USA) 6F290–1425		
1	Control, Radio Set C–614/MRC	(FSN) 5820–265–8093	12-1/4 x 10-7/8 x 8-3/8	
1	Control Unit, Transmitter USN Type No. 23398	(USA) 2C718	5-1/4 x 3-3/4 x 2-1/2	
1	Dynamotor USN Type No. 21330A	(FSN) 6125–635–5442	13-1/4 x 9 x 9-1/4	
1	Dynamotor USN Type No. 21330B	(FSN) 6125–635–5441	13-1/4 x 9 x 9-1/4	
1	Radio Receiver USN Type No. 46159	(FSN) 5820–163–1695	13-3/4 x 11-13/16 x 11-11/16	
1	Radio Transmitter USN Type No. 52245	(FSN) 5820–164–8115	14-3/8 x 11-13/16 x 11-11/16	
1	Utility Truck Model M38A1			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900.705

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: USN

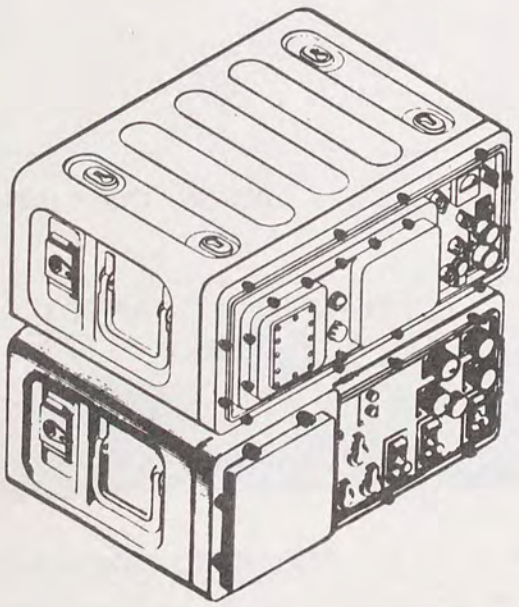
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/MRC-13( )

26 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



AN/MRC-13( )

FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC–13( ) is a general service, mobile, medium-range, amplitude-modulated unit used for ultra-high-frequency communication with aircraft, ships, and mobile field units.

This equipment consists essentially of VHF Radio Transmitting and Receiving Equipment MAR, which is mounted in a truck. It is similar to Radio Set AN/MRC–12( ) except that the latter includes a standby receiver (Portable Radio Receiving Equipment RDR).

The models of this equipment differ primarily in the type of vehicle in which they are installed. The AN/MRC–13 is installed in Truck NT–10182–D; AN/MRC–13A is installed in Truck V–35/U; and AN/MRC–13B is installed in Truck M38A1. The AN/MRC–13B also differs from the other models, in that it operates from the 24-v dc vehicular storage battery, while the AN/MRC–13 and AN/MRC–13A both operate from 13-v dc storage batteries which are part of the radio set.

TECHNICAL CHARACTERISTICS:

Frequency Range: 225 mc to 390 mc
Number of Preset Frequencies: 10
Type Modulation: AM (A2, A3)
Type Signal: Mcs, voice
Power Output: 8 w
Power Requirements: 430 w, 13-v dc 430 w, 24-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Truck M38A1 (–13B), V–35/U (–13A),			
	or			
	Reconnaissance Car 10182–D (–13) containing:			
1	Transmitter-Receiver 43067	----------	9-1/2 x 21-1/4 x 16-1/4	45
1	Modulator-Dynamotor Unit 50248	----------	9-1/2 x 21-1/4 x 16-1/4	45
1	Installation kit			

AN/MRC-13( ) RADIO SET

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

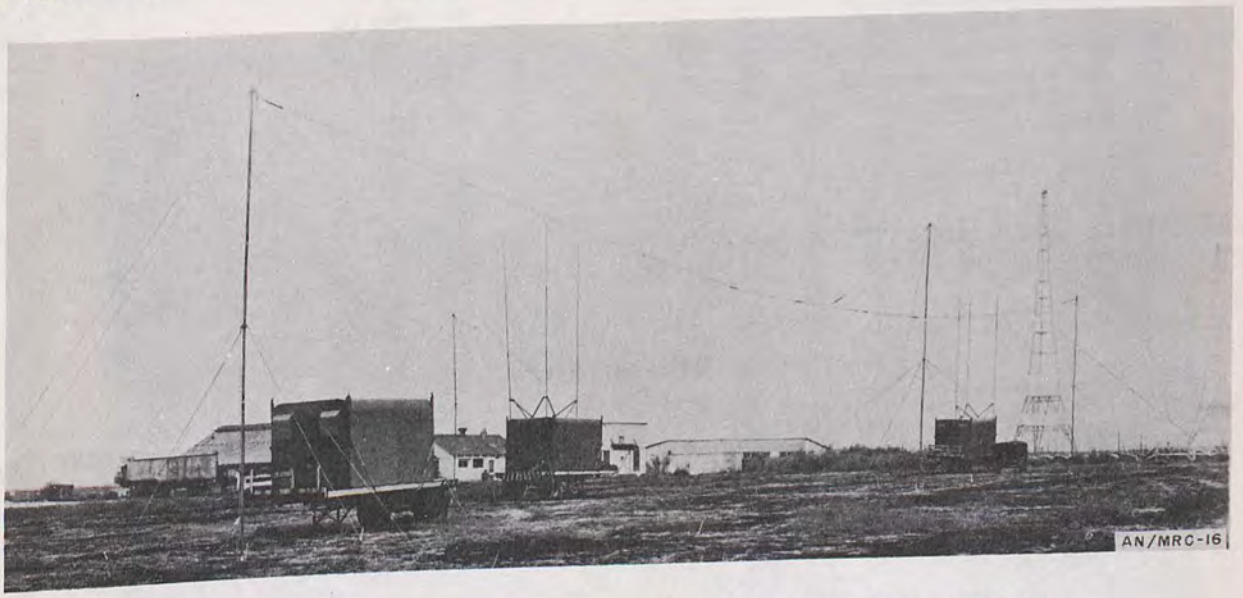
DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/MRC-16

26 November 1958
Cognizant Serv: USN FSN: 5895-665-1336

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC-16 is a mobile receiving and transmitting equipment used as a ground radio command center. It provides communication between aircraft in flight or with other ground radio stations. Application is in general air warning, fighter air defense, and in general air-to-ground and short-range ground-to-ground communication. A frequency modulated radio set is included for communication with tactical ground elements.

This equipment consists of a receiver shelter, a transmitter shelter, a power shelter, 2 power trailers and 10 remote control stations. The transmitter shelter contains the following Radio Transmitting Equipments: two TCK's, one TBM, two TCS's, and three TDQ's. The receiver shelter contains five Radio Receiving Equipments RAO and RCK and one Radio Set SCR-608. Power Unit PE-85-M, located in the power shelter, supplies power to the transmitting shelter. A motor generator, also in the power shelter, suplies power to Radio Transmitting Equipment TBM, which alone draws 5,000 watt. The receiver shelter is powered by one of the trailer-drawn Power Units PE-95, and the other serves as an auxiliary power supply for the transmitter shelter.

The remote control stations, which are not designed to be operated more than 1/2 mile distant from the main station equipment, consist essentially of a telephone set and a hand telegraph key, which are connected to any of the radio transmitting or receiving components by means of an adapter.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Transmitters: 2 mc to 18 mc, 115 mc to 156 mc, 1.5 mc to 12 mc
Receivers: 54 to 30 mc, 115 mc to 156 mc, 27 mc to 38.9 mc
Type Emission and Reception: Cw, mcw, voice
Type Modulation: AM, FM
Power Output:
Transmitter:
TCK: 400 w on cw, 100 w on voice
TBM: 500 w on cw, 350 w on mcw and voice
TDQ: 45 w on cw, 25 w on mcw and voice
TCS: 40 w on cw, 20 w on voice
SCR-608: 20 w
Receivers:
RAO: 0.3 w into 600 ohms
RCK: 15 mw into 600 ohms
TCS: 6 mw
SCR-608: 2 w to loudspeaker; 200 mw to headset
Antennas: Long wire, half-wave dipole, 25 ft whip
Power Requirements:
Transmitting: 13.6 kw, 220-v 50-60-cycle 3-phase ac (including TBM, which draws 5 kw)
Receiving: 5 kw, 220-v 50-60-cycle 1-phase ac

AN/MRC-16 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Power Unit PE–95		75 x 74 x 95	4,200
1	Power Shelter S–2/MRC–16		98 x 100 x 173	9,950
1	Receiver antenna system			
1	Receiver Shelter S–3/MRC–16		89 x 100 x 173	8,150
1	Transmitter antenna system			
1	Transmitter Shelter S–1/ MRC–16		98 x 100 x 173	9,700

REFERENCE DATA AND LITERATURE:
NAVSHIPS 91607

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	3,550	36,200

PROCUREMENT DATA

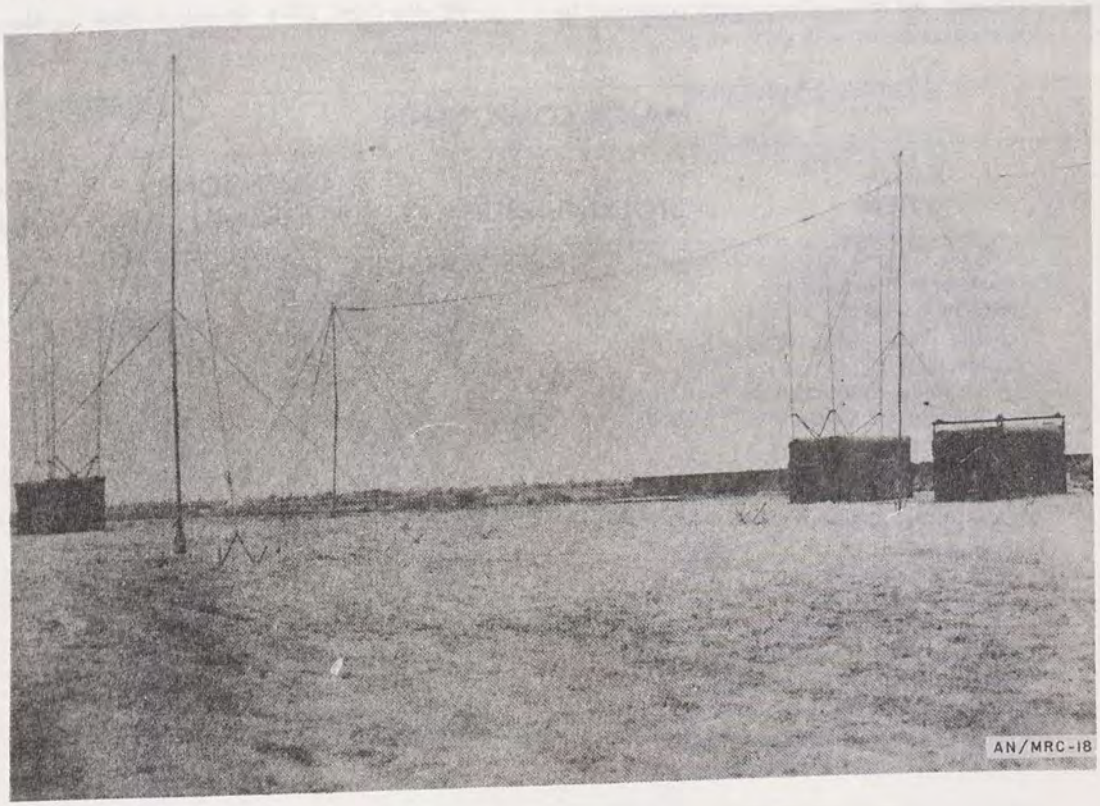
PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/MRC-18

24 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC–18 is a mobile medium-frequency, high-frequency, and very-high frequency equipment operating as a ground command center in two-way communication with aircraft, or with other ground installations. Provision is made for general air warning and fighter air defense operation, general air-to-ground communications, and short range communications.

This equipment consists essentially of a receiver shelter, a transmitter shelter, a power shelter, 3 power trailers, and 10 remote control stations. The transmitter shelter contains two Radio Transmitting Equipments TCK, two Radio Transmitting and Receiving Equipments TCS, and two VHF Radio Transmitting Equipments TDQ. The receiver shelter contains two Radio Receiving Equipments RAO and RCK and one Radio Set SCR–608. The power shelter contains Power Unit PE–85M for supplying the transmitter shelter. The three power trailers are one-ton two-wheel cargo trailers, each containing one Power Unit PE–95 for supplying the receiver trailer and as auxiliary supply for the transmitter shelter.

A remote station consists of a telephone set and a hand telegraph key connected to any of the transmitters or receivers. No remote station can be operated more than 1/2 mile from the equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitting: 1.5 to 18, 27 to 38.9, 115 to 156
Receiving: 0.54 to 30, 27 to 38.9, 115 to 156
Type Modulation: AM of FM
Type Signal: A1, A2, A3 (cw, mcw, voice)
Transmitter Power Output:
TCK: 400 w on A1; 100 w on A3
TDQ: 45 w on A1; 25 w on A2 or A3
TCS: 40 w on A1; 20 w on A3
SCR–608: 20 w

AN/MRC-18 RADIO SET

Receiver Output:

RAO: 0.3 w into 600 ohms
RCK: 15 mw into 600 ohms
TCS: 6 mw
SCR–608: 2 w to loudspeaker; 200 mw to headset

Antenna Receiving System: Five field arrangements of turnstile atop mast with guide wires; four whip antennas installed atop shelter; one single wire antenna connected to shelter and to mast assembly with guide wires

Antenna Transmitting System: Three field arrangements of dipole atop mast with guide wires; one single wire antenna interconnecting the three guide wire setups; and four whip antennas atop shelter

Power Requirements:

PE–85M: 10 kw, 220-v 60-cycle 3-phase ac (for transmitter shelter)
PE–95: 5-kw, 220-v 60-cycle 1-phase ac (for receiver shelter)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transmitter Shelter S–1/MRC–18 including:	----------	98 x 100 x 173	9,700
3	Radio Transmitting Equipments TCK			
2	VHF Radio Transmitting Equipments TDQ			
2	Radio Transmitting and Receiving Equipments TCS			
1	Receiver Shelter S–2/MRC–18 including:	----------	98 x 100 x 173	8,150
5	Radio Receiving Equipments RAO			
5	Radio Receiving Equipments RCK			
1	Radio Set SCR–608			
1	Power Shelter S–2/MRC–16	----------	98 x 100 x 173	9,950
3	Power trailers containing Power Unit PE–95	----------	75 x 74 x 95	4,200

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91487

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	3,245	32,000

RADIO SET **AN/MRC-18**

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

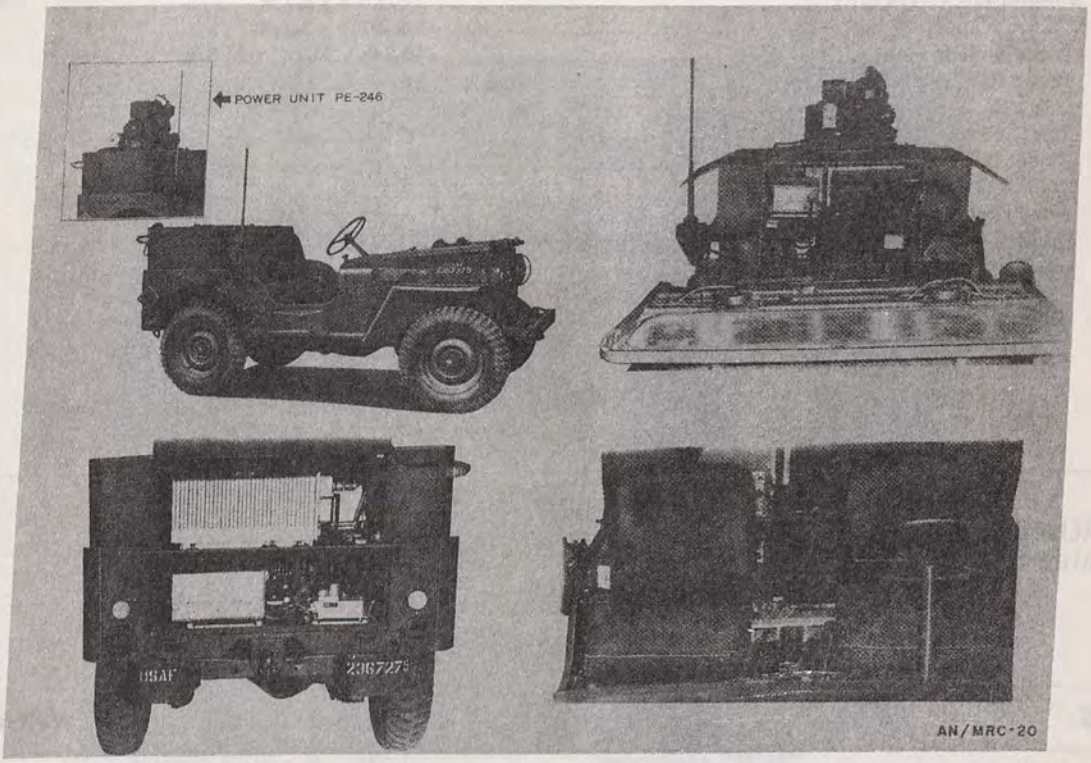
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Mare Island Naval Shipyard	Vallejo, Calif.	58703/49, 18 March 1949	

RADIO SET AN/MRC-20

24 November 1958
Cognizant Serv: USAF FSN: 5820-505-1942

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S3007-20	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC-20 is an assembly of high-frequency, very-high-frequency, and ultra-high-frequency transmitting and receiving equipment arranged for vehicular installation and operation.

This equipment is designed to provide a mobile communication system capable of operating on three different ranges, either separately, simultaneously, or automatically by voice control. As designed and used, this equipment increases the flexibility of ground and/or ground-to-air communications and enlarges the range of fixed stations.

Power is supplied by Power Unit PE-246; power required is 1,700 watts of 28.5-volt dc. For emergency use, a 28-volt, 35-ampere-hour storage battery will operate the equipment for approximately 30 minutes under normal conditions.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmission: 0.2 to 1.5, 2 to 18.1, 100 to 156, 225 to 399.9
Reception: 0.2 to 0.5, 2 to 18, 100 to 156, 225 to 399.9
Number of Preset Channels:
Auto-tuned: 11; 200- to 500-kc, and 2-mc to 18-mc range
Crystal-controlled: 8; 100-mc to 156-mc range
Crystal-controlled: 18; 225-mc to 399.9-mc range
Total Number of Available Channels: 1,750, spaced 100 kc apart
Type Modulation: AM
Type Emission: A3 (voice, tone; cw may be used in hf and lf ranges)
Power Output:
Transmitters: 10 w (nominal)
Receivers: 0.5 w to 3 w (nominal)
Power Requirements:
Power Unit: 1.7 kw at 28-v dc (60 amp)
Battery: 28.5 v dc (35 amp-hour) will operate set for 1/2 hour in emergency

AN/MRC-20 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
3	Antenna groups (hf, vhf, uhf)	----------	30 x 19 (approximately)	25.0
1	Control Box C–118/ARC–3	----------	2-5/8 x 6 x 6-7/8	2.1
1	Control Unit C–87/ART–13	----------	8 x 3-1/2 x 3-3/8	2.1
1	Power Unit PE–246	----------	16-7/8 x 20-1/2 x 24-3/8	113.0
1	Radio Receiver BC–348–Q, or –R	----------	18 x 9-1/2 x 10-1/2	41.0
1	Radio Receiver R–77/ARC–3	----------	11 x 6 x 15-1/2	17.0
1	Radio Receiver-Transmitter RT–178/ARC–27	----------	12-3/8 x 11-1/4 x 27-7/8	71.0
1	Radio Set Control C–626/ ARC–27	----------	6-3/8 x 9-9/16 x 5-1/4	11.2
1	Radio Set Control C–628/ ARC–27	----------	3-1/4 x 8-1/2 x 3	1.3
1	Radio Transmitter T–47A/ ART–13	----------	23-1/2 x 11-1/2 x 14-1/2	103.6
1	Radio Transmitter T–67/ ARC–3	----------	12-1/4 x 7-1/2 x 15	17.5
2	Remote Control RC–261	----------	4–1/4 x 4–1/4 x 8–1/2	21.0

REFERENCE DATA AND LITERATURE:
TO 31R2–2MRC20–14

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

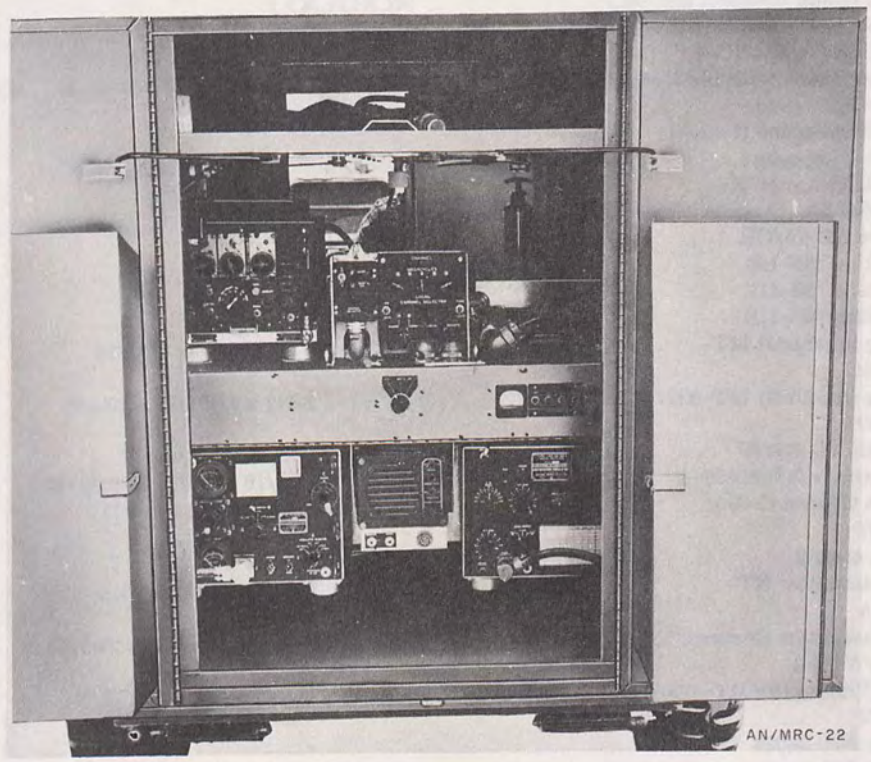
PROCURING SERVICE: USAF
DESIGN COG: USAF, RCUE
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Northeastern Engineering, Inc.	Manchester, N. H.		

RADIO SET AN/MRC-22

24 November 1958
Cognizant Serv: USN FSN: 5820-665-3871

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC-22 is a mobile multichannel high-frequency, very-high-frequency, and ultra-high-frequency two-way communication equipment. It is primarily designed to be used as a command station for ground-to-aircraft and point-to-point communication.

This equipment consists essentially of three transceivers, a motor generator assembly, and a gasoline-driven motor generator installed in a two-wheel trailer. The equipment ensemble makes up a complete, self-powered, radio communication station that can be quickly moved to any ground location.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
TCS: 1.5 to 12
AN/ARC-1: 100 to 156
AN/ARC-27: 225 to 400
Type Modulation: AM
Type Signal: Cw, mcw, voice
Number of Preset Channels:
1.5-mc to 12-mc Range: 10
100-mc to 156-mc Range: 18
Frequency Control: Crystal
Total Number of Channels: 1.751
Remote Channel: Up to 25 ft
Power Output:
Cw: 25 w
Mcw, Voice: 10 w
Power Requirements: Incorporates its own gasoline engine generator and motor-generator assembly

AN/MRC-22 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AS–390/SRC			
1	Antenna NT–66150A			
2	Chest Set Group AN/GSA–6			
1	Control panel			
1	Control Unit C–45/ARC–1		2-5/8 x 3-3/8 x 6-1/8	1.00
1	Dynamotor Power Unit NT–211330–B		8-25/32 x 9-5/8 x 12-15/16	35.00
2	Headset-Microphone H–63/U			
	Interconnecting cables			
1	Leg Band, Telegraph Key NT–10531			
1	Mast Base AB–15/GR			
3	Mast Section MS–116			
1	Mast Section MS–117			
1	Mast Section MS–118			
1	Mounting (modified) MT–230/ARC		5 x 10-15/16 x 24-3/16	4.25
1	Mounting (modified) MT–822/ARC–27		2-1/2 x 11-11/16 x 19-3/4	3.50
1	Power Unit PU–250/U		18-1/4 x 21-1/4 x 27	126.00
1	Radio Receiver NT–46159–A		11-1/16 x 11-7/8 x 13-13/16	38.13
1	Radio Set Control C–626/ARC–27		5-1/2 x 6-3/8 x 9-9/16	9.75
1	Radio set control		2-15/16 x 6-15/16 x 7	3.25
1	Radio Transmitter NT–52245–A		11 x 11-13/16 x 13-3/4	48.00
1	Radio Transmitter-Receiver RT–18/ARC–1		9-1/32 x 10-19/32 x 24-3/16	47.00
1	Receiver-Transmitter RT–178/ARC–27		11-1/4 x 12-3/8 x 27-7/8	72.20
1	Telegraph Key 26026			
2	Telephone EE–8		3-1/2 x 7-11/16 x 9-9/16	19.50
1	Trailer body		47 x 58-1/4 x 76-1/4	250.00
1	Trailer Chassis M–115		30-1/2 x 38-1/4 x 106	280.00

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91876

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	295	1,630

RADIO SET **AN/MRC-22**

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-R-16037B(Ships)

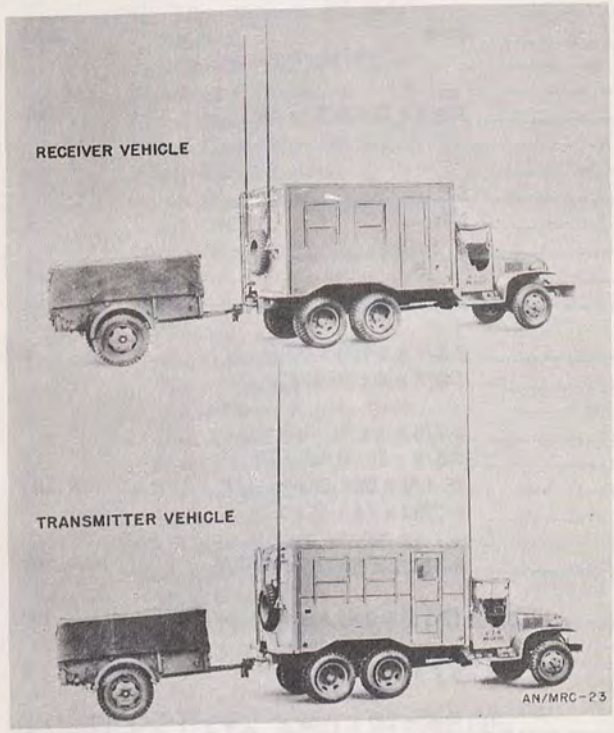
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Waterproof Electric Co.	Burbank, Calif.	NObsr-52518, 8 June 1951	$8,300.00

RADIO SET AN/MRC-23

24 November 1958
Cognizant Serv: USN FSN: 5895-665-1337

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC–23 is a self-contained mobile radio communications center suitable for operations in ground-to-air tactical radio nets.

This equipment includes a transmitter truck and receiver truck. Each truck obtains its primary power from an associated trailer-mounted gasoline engine generator. The receiver truck has two antenna masts; the transmitter truck one. Antennas, cables, ground rack, and mast and guy assemblies are stored in the truck during transit.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.5 to 400, not continuously
Transmitter TDE–1:
Frequency Range in Mc: 1.5 to 18
Type Emission: A1, A2, A3
Power Output: A1, 125 w; A2, 35 w; A3, 30 w
Transmitter AN/URT–7:
Frequency Range in Mc: 115 to 156; four crystal-controlled preset channels
Type Emission: A2, A3
Power Output: 45 w
Transmitter TED–1:
Frequency Range in Mc: 225 to 400; four preset crystal-controlled channels
Type Emission: A2
Transmitter-Receiver TCS–1:
Frequency Range in Mc: 1.5 to 12; continuous coverage in 3 bands
Type Emission: A1, A3
Power Output: A1, 40 w; A3, 20 w
Audio Power Output: 1.5 w
Receiver RCH:
Frequency Range: 80 kc to 560 kc; 1.9 mc to 24 mc in 5 bands
Audio Power Output: 2 w
Receiver AN/FRR–27:
Frequency Range in Mc: 115 to 156
Audio Power Output: 1.5 w
Receiver AN/URR–13A:
Frequency Range in Mc: 225 to 400
Audio Power Output: 0.06 w
Power Requirements:
PE–95–G: 12.5 w (output), 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	With Receiver Truck 6 x 6, K–53:			
2	AF Amplifier AM–215A/U	----------	7 x 8-3/8 x 12	23.5
3	Antenna Assembly AT–150/SCR	----------	4-3/4 ft	4.5

AN/MRC-23 RADIO SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
3	Antenna Assembly NT–66095		4 ft	17
2	Antenna Duplexer CU–359/ MRC–23		2-1/16 x 4-5/16 x 6-1/8	2.5
2	Antenna Mast AB–334/G		49 ft	100
3	Chair			
1	Clock, 24-hour			
1	Control Panel SB–293/MRC–23		7-5/8 x 15-23/32 x 19	36
3	Desk lamp			
1	Exhaust fan			
1	Ground cable		5 ft	
1	Ground stake		5 ft	4
3	Headset-Microphone H–63/U			
1	Heater Type P			15
2	HF Whip Antenna AT–441/ MRC–23		35 ft	19
1	Jack Box J–545/MRC–23		2-3/4 x 4-1/2 x 9-1/4	5.5
2	Loudspeaker CUL–49546		7-3/4 x 8 x 10-15/16	
2	Operator desk			
1	Power distribution box		4-7/8 x 7 x 31	
1	Power Supply PP–952/MRC–23		7-5/8 x 15-23/32 x 19	19
1	Power Unit PE–95–G		28-1/4 x 38-1/2 x 67-1/2	1,556
3	Radio Receiving Set AN/ FRR–27		5-7/32 x 14-1/2 x 19	
3	Radio Receiving Set AN/ URR–13		6-31/32 x 17-1/2 x 19-1/3	57
2	Radio Receiving Set Model RCH		12-1/8 x 20-7/16 x 20-13/16	106
2	Radio Set Control C–1235/ MRC		3 x 4 x 4	2
6	Rf cable assembly		100 ft	
1	Supervisor's desk			
2	Telegraph key			
1	Telephone EE–8–( )			11.5
2	Typewriter			
	With Transmitter Truck 6 x 6, K–53:			
2	Antenna Assembly AS–390/ SRC		16	3.625
2	Antenna Assembly NT–66095		4 ft	
1	Antenna Mast AB–334/G		49 ft	100
1	Chair			
1	Clock			
1	Control Panel SB–294/MRC–23		7-1/4 x 10-1/8 x 14-1/2	15
1	Control position desk			
1	Crystal Calibrated Frequency Indicating Equipment LM–18			25.5
1	Desk lamp			
1	Emergency electronic repair kit			
1	Exhaust fan			
1	Field Telephone EE–8–( )			11.5
1	Ground cable		5 ft	

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ground rod		5 ft	4
1	Heater Type P			15
2	HF Whip Antenna AT-441/MRC-23		35 ft	
2	Jack Box J-546/MRC-23		1-15/16 x 4-1/4 x 5-3/4	2.5
1	Multimeter TS-352/U			15
1	Power distribution box		4-7/8 x 7 x 31	
1	Power Supply PP-338/U		10 x 12-1/2 x 26	120
1	Power Unit PE-95-G		28-1/4 x 38-1/2 x 67-1/2	1,556
2	Radio Transmitting Equipment AN/URT-7		13-23/32 x 16-1/2 x 19	146
1	Radio Transmitting Equipment TDE-( )		20-1/2 x 28-1/4	334
2	Radio Transmitting Equipment (TED-( )		13-23/32 x 15 x 19	146
1	Radio Transmitting and Receiving Equipment TCS-( )			180
1	Rectifier Power Supply Unit Unit Type-CBEQ20219-A		10-1/8 x 11-11/16 x 17-1/4	94
4	RF cable assembly		100 ft	
1	RF Signal Generator Set AN/URM-25B		10-1/4 x 10-1/4 x 13	35
1	RF Wattmeter AN/URM-43		4-3/4 x 6-1/2 x 9-1/2	15
3	Reel and Wire Reel DR-4 Wire WD-1/TT			87
1	Terminal Box J-544/MRC-23			2.5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91962

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2 Power Unit PE-95-G	----	1,650
1 Receiver truck	----	14,500
1 Transmitter Truck	----	15,000

AN/MRC-23 RADIO SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Adlers Communications Laboratories	New Rochelle, N. Y.	NObsr–52703, 26 June 1951	$48,400.00

RADIO SET AN/MRC-24

24 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC–24 is a mobile communication equipment providing point-to-point high-frequency and line-of-sight very-high-frequency communication. Point-to-point communication is possible when the vehicle is moving.

Auxiliary equipment, such as mobile power supply, test equipment, antenna materials, maintenance parts and tools, are included with each radio set. The major components are permanently installed in a 2-1/2 ton, 6 x 6 truck provided with a built-in heater and exhaust ventilation fan.

TECHNICAL CHARACTERISTICS:

Transmitter TCK–4:
Frequency Range: 2,000 kc to 18,100 kc
Type Emission: Cw or AM
Power Output: 400 w on cw;100 w on AM
Transmitter-Receiver TCS–12:
Frequency Range: 1,500 kc to 12,000 kc
Type Emission: Cw or AM
Power Output: 40 w on cw; 20 w on AM
Tuning: Manual; 4 crystal channels available
Transmitter TDQ:
Frequency Range in Mc: 115 to 156
Type Emission: Mcw or voice
Power Output: 45 w nominal
Control: Crystal control on 4 channels
Receiver RCK:
Frequency Range in Mc: 115 to 156
Control: Crystal control on 4 channels
Transmitter-Receiver MAR:
Frequency Range in Mc: 225 to 390
Type Emission: Mcw or voice
Power Output: 8 w nominal
Control: Crystal control on 10 channels
Receiver RCH:
Frequency Range: 80 kc to 560 kc and 1.9 mc to 24 mc
Type Reception: Radiotelephone or telegraph signals
Number of Bands: 5
Power Requirements: 7-1/2 kw 115-v 60 cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Accessories			
1	Adapter Kit NT–49992			
1	Antenna NT–66095			
1	Antenna NT–66147			
1 set	Antenna accessories			
1	Frequency Meter ML–15			
4	Mast Section NT–66103			
4	Mast Section NT–66104			
4	Mast Section NT–66105			
4	Mast Section NT–66106			
4	Mast Section NT–66107			
1	Mobile Engine Generator EAT			
1	Multimeter ME–25/U			
1	Multimeter TS–352/U			
3	Receiver RCH			
1	Receiver RCK			
1	RF Signal Generator AN/URM–25			
1	Tool Set TE–113			

AN/MRC-24 RADIO SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transmitter TCK–4			
1	Transmitter TDQ			
1	Transmitter-Receiver MAR			
1	Transmitter-Receiver TCS–02 with remote adapter			
1	Truck 2-1/2 ton, 6 x 6 (GMC)			
1	Tube Tester TV–3/U			
1 set	Vehicle accessories			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91603

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO CENTRAL AN/MRC-25

24 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Central AN/MRC–25 is a truck operating as part of Communication Central AN/MSC–3. It is principally designed to provide spare part storage space and facilities for maintenace of Communication Central AN/MSC–3.

This equipment also provides radio transmitting and receiving sets intended to operate in conjunction with associated communication vehicles.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
RCK: 115 to 156
RDZ: 200 to 400
TDO: 115 to 156
TDZ: 225 to 4,000
Type Emission and Reception: A2, A3
Power Requirements: 115-v 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Truck K–56 includes:	----------	93 x 121-1/2 x 259	
2	Antenna NT–66095			
2	Antenna NT–66147			
4	Case CY–29/TRC			
2	Coaxial Cable RG–10/U			
2	Coaxial Cable RG–18/U			
1	Field Telephone EE–8			
1	Gas Engine Generator NT–73029			
1	Ground rod			
1	Interconnecting Cable NT–TTRS–16			
1	Mast for AN/TRC–1			
1	Multimeter ME–25/U			
2	Oscilloscope OLB–1			
1	Power Cable NT–TCOP–9			
1	Power Distribution Panel 24–S			
1	Radio Receiving Equipment RCK			
1	Radio Receiving Equipment RDZ			
2	Radio Teletype Terminal AN/SGC–1			
1	Ra Radio Transmitting Equipment TDQ			
1	Radio Transmitting Equipment TDZ			
1	Receiver Analyzer OE–12			
1	Signal Generator LAJ–2			

AN/MRC-25 RADIO CENTRAL

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Signal Generator LF series			
32	Spare parts cabinet, 4 drawer, with spare parts			
16	Spare parts cabinet, 8 drawer, with spare parts			
2	Teletype Tool Kit TE–50A			
4	Tool Kit NT–10223			
1	Transformer W.E. 85U390			
1	TTY Test Equipment I–208			
1	TTY Test Set TS–659			
1	TTY Test Set TS–660			
3	Tube Tester TV–3/U			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92158

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/MRC-32

24 November 1958
Cognizant Serv: USN FSN: 5820-642-7592

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC-32 is a high power vehicular radio station providing facilities for transmission and reception of radioteletypewriter signals by means of frequency-shift modulation. In addition, continuous wave, telegraphy, and voice facilities are provided. Voice signals can be sent alone or together with the frequency-shift modulated radioteletype signals.

This equipment consists essentially of Radio Set AN/GRC-26A mounted on a 2-1/2-ton cargo Truck M-35 and a trailer-mounted Power Unit PU-290/MR. All components except the power unit are contained in Shelter S-69/GRC.

The radio set is capable of operating in motion or in a stationary position. The teletypewriter equipment operates most satisfactorily when stationary. It is possible to operate the teletypewriter equipment from a remote position.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitter BC-610-H: 2 to 18; 3 channels
Receiver R-388/URR: 0.5 to 30.5
Operational Range:
Cw or Fs: 250 miles
Voice: 100 miles
Type Modulation: FM and AM simultaneously or separately
Type Tuning: Master oscillator or crystal
Antenna: Whip or doublet and long wire
Transmitter Power Output:
Cw of Fs Operation: 400 w
Voice Operation: 300 w
Fs and Voice Simultaneously: 300 w
Power Requirements:
Transmitter BC-610-H: 115-v 50- to 50- cycle ac
Receiver R-388/URR: 115-v or 230-v, 45- or 70-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency Meter Set SCR-211	2C1411.5		
1	Multimeter TS-352B/U	3F3324-9.352B		
1	Oscillator, Radio Frequency O-39C/TRA-7	5815-224-5287		
1	Perforator-Transmitter TT-56/MGC	5815-198-9033		
1	Power Supply RA-87-A	5815-230-7257	18 x 19 x 10-1/2	
1	Radio Set AN/GRC-26A	2S2501-26A		
1	Radio Set Control Group AN/GRA-14	5820-503-1090		
2	Receiver, Radio R-388/URR	5820-644-0990		
2	Teletypewriter TT-55/MGC	4TTT55		
1	Transmitter, Radio BC-610-H	5820-189-7042	32-5/8 x 21-3/8 x 39-7/8	

REFERENCE DATA AND LITERATURE:

TM 11-257/TO16-35039-15
TM 11-264A/TO16-30GRC26-15
TM 11-300; TM 11-333; TM 11-352
TM 11-359; TM 11-826/TO16-40BC610-6

AN/MRC-32 RADIO SET

REFERENCE DATA AND LITERATURE:—Continued

TM 11-854/TO16-35R-388-5
TM 11-904; TM 11-957A; TM 11-2201
TM 11-2222; TM 11-2223; TM 11-5054/TO16-40BC614-6
TM 11-5062/TO16-35PP712-5
TM 11-5527A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET CENTRAL AN/MRC-35A

25 November 1958
Cognizant Serv: USN FSN: 5895-543-0582

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC-35A is a mobile radio station for control of tactical aircraft operating in close support of ground forces. The mobile radio equipment will provide forward aircraft control by ground-to-air and ground-to-ground communications.

This equipment is capable of net operation with standard amplitude-modulated low-, medium-, and high-frequency ground radio sets and ultra-high-frequency airborne radio sets.

The unit will provide homing facilities for aircraft; communications with aircraft during convoy movement; and temporary airstrip control, and control of rescue operations. The low-frequency radio equipment cannot be used while the vehicle is in motion.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Receiver BC-348-Q: 200 kc to 500 kc; 1.5 mc to 18 mc
Receiver-Transmitter RT-178/ARC-27: 225 mc to 399.9 mc
Transmitter T-47/ART-13: 200 kc to 600 kc; 2 mc to 18.1 mc

Type Emission and Reception:
Receiver BC-348-Q: Cw, AM voice
Receiver-Transmitter RT-178/ARC-27: Mcw, AM voice
Transmitter T-47/ART-13: Cw, mcw, AM voice

Transmitter Output:
Transmitter T-47/ART-13:
200 Kc: 5.5 w
4 Mc: 40 w
9 Mc: 90 w
18.1 Mc: 65 w
Receiver-Transmitter RT-178/ARC-27: 9 w

Antenna: Whip, long wire, coaxial stub

Power Requirements: 28 v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Group AN/GRA-6	5820-537-3848		
1	Dynamotor DY-12/ART-13	6125-093-7068	10-1/4 lg	
2	Headset-Microphone Assembly AN/URA-2	5965-296-2796		
1	Radio Receiver BC-348-Q	----------	18 x 10-1/2 x 9-1/2	
1	Radio Set Control C-626/ ARC-27	2C684-626	9-9/16 x 6-3/8 x 5-1/2	
1	Radio Set Control C-2198/ MRC-35A	5820-543-0104	16-1/2 x 10-3/4 x 4-7/8	
1	Radio Transmitter T-47/ ART-13	5821-505-0011	23-9/16 x 12-3/8 x 10-3/4	
1	Receiver-Transmitter, Radio RT-178/ARC-27	5820-642-7845		
1	Truck, Utility Model M38A1			

AN/MRC-35A RADIO SET CENTRAL

REFERENCE DATA AND LITERATURE:

AN 08-30ART13-5
NAVSHIPS 91338
TM 11-692B-1/AN16-30ART13-4
TM 11-692-2/AN16-30ART13-3
TM 11-692C-1/AN16-30ARC27-3
TM 11-692C-2/AN16-30ARC27-2
TM 11-692D/TO12R2-3BC-348-2
TM 11-5038/TO16-30GRA6-5

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/MRC-36

25 November 1958
Cognizant Serv: USN FSN: 5820-665-1224

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC-36 is a short-range radiotelephone communication unit primarily applicable within and between armored, artillery, and infantry units.

This equipment with associated accessories consists essentially of Radio Set AN/GRC-3 installed in Truck M38A1.

TECHNICAL CHARACTERISTICS:

AF Amplifier AM-65/GRC:
- Input Impedance:
  - RT-66/GRC: 1,500 ohms (interphone channel)
  - RT-70/GRC or RT-70A/GRC: 1,500 ohms (interphone channel)
  - RT-66/GRC and RT-70/GRC RT-70A/GRC: 150 ohms (interphone channel)
- Output Impedance: 150 ohms and 600 ohms (adjustable)
- Af Response: Flat to within 4 db for frequencies between 400 and 2,500 cps with sharp cutoff beyond these limits

Radio Receiver R-108/GRC:
- Frequency Range Mc: 20 to 28
- Type Receiver: Single conversion superheterodyne
- Type Modulation: FM
- Sensitivity: Over 25-db signal plus noise-to-noise ratio at 1/2 μv, deviation $\pm$15 kc, 1,000 cps
- Type of Tuning: Continuously variable and detent selection of three preset frequencies
- Channel Spacing: 100 kc
- Audio Output:
  - Loudspeaker: 500 mw
  - Earphones: 40 mw
  - Fixed level: 20 mw $\pm$3 mw
- Audio Output Impedance: 600 ohms unbalanced

Receiver-Transmitter RT-66/GRC:
- Frequency Range in Mc: 20 to 27.9
- Type Transmission and Reception: Voice and 1,600 cps ringing tone
- Type Modulation: FM
- Operational Range: Approximately 10 miles (vehicle in motion); 15 miles, stationary
- Type Tuning: Choice of detent or preset channels or continuous tuning
- Detent Channels Available: 80
- Preset Detent Channels: 2
- Channel Spacing: 100 kc
- Type Receiver: Double conversion superheterodyne
- Power Output, Transmitter:
  - Low Power: 2 w
  - High Power: 16 w
- Audio Input Impedance: 150 ohms
- Power Output, Receiver:
  - Loudspeaker: 800 mw
  - Handset: 50 mw
  - Fixed Level: 20 mw

Receiver-Transmitter RT-70/GRC or RT-70A/GRC:
- Frequency Range in Mc: 47 to 58.4
- Type Transmission and Reception: Voice
- Type Modulation: FM
- Operational Range: Approximately 1 mile
- Type Tuning: Continuous
- Preset Detent Channels: 2
- Channel Spacing: 100 kc
- Transmitter Power Output: 500 mw
- Transmitter Audio Input Impedance: 150 ohms at 1,000 cps
- Type Receiver: Double conversion superheterodyne
- Receiver Audio Output Power: 75 mw for $\pm$15 kc deviation at 1,000 cps
- Receiver Audio Output Impedance: 600 ohms

Power Requirements:
- Power Supply PP-282/GRC:
  - Input Power: 20 to 32 v dc at 1.23 amp max
  - Output Power: 135 v dc at 0.118 amp
- Power Supply PP-112/GR: 25.2 v dc at 7.0 amp (input power)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Adapter UG-273/U	5935-149-3534	1-7/32 lg	
1	Adapter UG-306/U	5935-171-3016	1 x 7/8 x 1/2	
1	Cabinet CY-731B/MRC	6F300-731B	42-7/8 x 18-11/16 x 17-1/8	

AN/MRC-36 RADIO SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet CY–732/MRC	2Z1891–732	30 x 16-1/2 x 9-7/8	
1	Cable Assembly CG–568/U	5995–255–1334	51-15/16 lg	
1	Case, Standardized Components, Electrical CY–1460/MRC	6F207–78	15 x 12 x 13	
1	Chest Set AN/GSA–6	5965–355–7649		
1	Dynamic Loudspeaker LS–166/U	5965–243–6420	5-31/32 x 3-3/16 x 7-1/32	
3	Headset-Microphone H–63E/U	5965–237–8049		
1	Mast Base MP–65–B	5820–503–2953	18 lg x 3-1/8 dia	
1	Mast Section MS–116 or MS–116A	5985–199–8831	39-1/2 lg x 0.393 dia	
1	Mast Section MS–117 or MS–117A	5985–199–8843	39–1/2 lg x 0.373 dia	
1	Mast Section MS–118 or MS–118A	5985–199–8841	39-1/2 lg x 0.246 dia	
1	Radio Set AN/GRC–3	2S12–3/24		
1	Truck, utility, 1/4 ton	2320–204–3323		

REFERENCE DATA AND LITERATURE:

TM 11–284/TO16–30GRC–36
TM 11–289/TO16–35RT66–5
TM 11–290; TM 11–898
TM 11–5036/TO31R2–2GRC3–31
TM 11–5038/TO16–30GRA6–5
TM 11–5039; TM 11–5040

SHIPPING DATA

PKGS	DIMENSIONS (Inches)	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SEPC &/or DWG:

DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/MRC-37

25 November 1958
Cognizant Serv: USN FSN: 5820-644-0930

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC-37 is primarily designed for short-range operation within and between armored, artillery, and infantry units.

This equipment with associated accessories consists essentially of Radio Set AN/GRC-5 installed in a Truck M38A1.

TECHNICAL CHARACTERISTICS:

AF Amplifier AM-65/GRC:
- Input Impedance:
  - RT-67/GRC: 1,500 ohms (interphone channel)
  - RT-70/GRC or RT-70A/GRC: 1,500 ohms (interphone channel)
  - RT-67/GRC and RT-70/GRC or RT-70A/GRC: 150 ohms (interphone channel)
- Output Impedance: 150 ohms and 600 ohms (adjustable)
- AF Response: Flat to within 4 db for frequencies between 400 and 2,500 cps with sharp cutoff beyond these limits

Radio Receiver R-109/GRC:
- Frequency Range in Mc: 27 to 39
- Type Receiver: Single conversion superheterodyne
- Type Modulation: FM
- Sensitivity: Over 25 db signal plus noise-to-noise ratio at 1/2 μv, deviation $\pm$15 kc, 1,000 cps
- Type of Tuning: Continuously variable and detent selection of 3 preset frequencies
- Channel Spacing: 100 kc
- Audio Output:
  - Loudspeaker: 500 mw
  - Earphones: 40 mw
  - Fixed level: 20 mw
- Audio Output Impedance: 600 ohms unbalanced

Receiver-Transmitter RT-67/GRC:
- Frequency Range in Mc: 27 to 38.9 and 47 to 58.4
- Type Transmission and Reception: Voice and 1,600 cps ringing tone
- Type Modulation: FM
- Operational Range:
  - Vehicle in Motion: 10 miles
  - Stationary: 15 miles
- Type Tuning: Detent or preset channels or continuous tuning
- Detent Channels: 120
- Channel Spacing: 100 kc
- Transmitter Output:
  - Low Power: 2 w
  - High Power: 16 w
- Transmitter Audio Input Impedance: 150 ohms
- Type Receiver: Double conversion superheterodyne
- Receiver Audio Power Output:
  - Loudspeaker: 800 mw
  - Handset: 50 mw
  - Fixed Level: 20 mw
- Receiver Audio Output Impedance: 600 ohms
- Receiver Sensitivity: 25 μv

Receiver-Transmitter RT-70/GRC or RT-70A/GRC:
- Frequency Range in Mc: 47 to 58.4
- Type Transmission and Reception: Voice
- Type Modulation: FM
- Operational Range: Approximately 1 mile
- Type Tuning: Continuous
- Preset Detent Channels: 2
- Channel Spacing: 100 kc
- Transmitter Power Output: 500 mw
- Transmitter Audio Input Impedance: 150 ohms at 1,000 cps
- Type Receiver: Double conversion superheterodyne
- Receiver Audio Output Power: 75 mw for $\pm$15 kc deviation at 1,000 cps
- Receiver Audio Output Impedance: 600 ohms
- Receiver Sensitivity: 25 db signal-to-noise ratio at 1.0 μv $\pm$15 kc deviation at 1,000 cps

Power Requirements:
- Power Supply PP-282/GRC:
  - Input Power: 20 v to 32 vdc at 1.23 amp max
  - Output Power: 135 v dc at 0.118 amp
- Power Supply PP-112/GR: 25.2 vdc at 7.0 amp

AN/MRC-37 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Adapter UG–273/U	5935–149–3534	1-7/32 lg	
1	Adapter UG–306/U	5935–171–3016	1 x 7/8 x 1/2	
1	Cabinet CY–731B/MRC	6F300–731B	42-7/8 x 18-11/16 x 17-1/8	
1	Cabinet CY–732/MRC	2Z1891–732	30 x 16-1/2 x 9-7/8	
1	Cable Assembly CG–568/U	5995–255–1334	51-15/16 lg	
1	Chest Set AN/GSA–6	5965–355–7649		
1	Dynamic Loudspeaker LS–166/U	5965–243–6420	5-21/32 x 3-3/16 x 7-1/32	
3	Headset-Microphones H–63E/U	5965–237–8049		
1	Mast Base MP–65–B	5820–503–2953	18 lg x 3-1/8 dia	
1	Mast Section MS–116 or MS–116A	5985–199–8831	39-1/2 lg x 0.393 dia	
1	Mast Section MS–117 or MS–117A	5985–199–8843	39-1/2 lg x 0.373 dia	
1	Mast Section MS–118 or MS–118A	5985–199–8841	39-1/2 lg x 0.246 dia	
1	Radio Set AN/GRC–5	5820–230–0449		
1	Truck, utility, 1/4 ton	2320–204–3323		

REFERENCE DATA AND LITERATURE:

TM 11–284/TO16–30GRC3–6
TM 11–289/TO16–35RT66–5
TM 11–290; TM 11–898
TM 11–5036/TO31R2–2GRC3–31
TM 11–5038/TO16–30GRA6–5
TM 11–5039; TM 11–5040

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/MRC-38

25 November 1958
Cognizant Serv: USN FSN: 5820-644-0931

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC-38 is primarily designed for short-range operation within and between armored, artillery, and infantry units.

This equipment consists essentially of Radio Set AN/GRC-7 installed in a Truck M38A1. The radio set provides frequency modulated radio-telephone communications within an established frequency range.

TECHNICAL CHARACTERISTICS:

AF Amplifier AM-65/GRC:
- Input Impedance:
  - RT-68/GRC: 1,500 (interphone channel)
  - RT-70/GRC or RT-70A/GRC: 1,500 ohms (interphone channel)
  - RT-68/GRC and RT-70/GRC or RT-70A/GRC: 150 ohms (interphone channel)
- Output Impedance: 150 ohms and 600 ohms (adjustable)
- AF Response: Flat to within 4 db for frequencies between 400 and 2,500 cps with sharp cutoff beyond these limits

Radio Receiver R-110/GRC:
- Frequency Range in Mc: 38 to 55
- Type Receiver: Single conversion superheterodyne
- Type Modulation: FM
- Sensitivity: Over 25 db signal plus noise-to-noise ratio at 1/2 μv, deviation $\pm$15 kc, 1,000 cps
- Type of Tuning: Continuously variable and detent selection of 3 preset frequencies
- Channel Spacing: 100 kc
- Audio Output:
  - Loudspeaker: 500 mw
  - Earphones: 40 mw
  - Fixed Level: 20 mw
- Audio Output Impedance: 600 ohms unbalanced

Receiver-Transmitter RT-68/GRC:
- Frequency Range in Mc: 38 to 54.9
- Type Transmission and Reception: Voice and 1,600 cps ringing tone
- Type Modulation: FM
- Operational Range:
  - Vehicle in Motion: 10 miles
  - Stationary: 15 miles
- Type Tuning: Detent or preset channels or continuous tuning
- Detent Channels: 170
- Preset Detent Channels: 2
- Channel Spacing: 100 kc
- Transmitter Output:
  - Low Power: 2 w
  - High Power: 16 w
- Transmitter Audio Input Impedance: 150 ohms
- Type Receiver: Double conversion superheterodyne
- Receiver Audio Power Output:
  - Loudspeaker: 800 mw
  - Handset: 50 mw
  - Fixed Level: 20 mw
- Receiver Audio Output Impedance: 600 ohms
- Receiver Sensitivity: 25 μv

Receiver-Transmitter RT-70/GRC or RT-70A/GRC:
- Frequency Range in Mc: 47 to 58.4
- Type Transmission and Reception: Voice
- Type Modulation: FM
- Operational Range: Approximately 1 mile
- Type Tuning: Continuous
- Preset Detent Channels: 2
- Channel Spacing: 100 kc
- Transmitter Power Output: 500 mw
- Transmitter Audio Input Impedance: 150 ohms at 1,000 cps
- Type Receiver: Double conversion superheterodyne
- Receiver Audio Output Power: 75 mw for $\pm$15 kc deviation at 1,000 cps
- Receiver Audio Output Impedance: 600 ohms
- Receiver Sensitivity: 25 db signal-to-noise ratio at 1.0 μv $\pm$15 kc deviation at 1,000 cps
- Power Supply PP-282/GRC:
  - Input Power: 20 v to 32 vdc at 1.23 amp max
  - Output Power: 135 vdc at 0.118 amp
- Power Supply PP-112/GR: 25.2 vdc at 7.0 amp

AN/MRC-38 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Adapter UG–273/U	593–149–3534	1-7/32 lg	
1	Adapter UG–306/U	5935–171–3016	1 x 7/8 x 1/2	
1	Cabinet CY–731B/MRC	6F300–731B	42-7/8 x 18-11/16 x 17-1/8	
1	Cabinet CY–732/MRC	2Z1891–732	30 x 16-1/2 x 9-7/8	
1	Cable Assembly CG–568/U	5995–255–1334	51-15/16 lg	
1	Chest Set AN/GSA–6	5965–355–7649		
1	Dynamic Loudspeaker LS–166/U	5965–243–6420	5-21/32 x 3-3/16 x 7-1/32	
3	Headset-Microphone H–63E/U	5965–237–8049		
1	Mast Base MP–65–B	5820–503–2953	18 lg x 3-1/8 dia	
1	Mast Section AB–24/GR	5985–240–3720	23-1/2 lg	
1	Mast Section MS–117 or MS–117A	5985–199–8843	39-1/2 lg x 0.373 dia	
1	Radio Set AN/GRC–7	5820–230–0446		
1	Truck, utility, 1/4 ton	2320–204–3323		

REFERENCE DATA AND LITERATURE:

TM 11–284/TO16–30GRC3–6
TM 11–289/TO16–35RT66–5
TM 11–290; TM 11–898
TM 11–5036/TO31R2–2GRC3–31
TM 11–5038/TO16–30GRA6–5
TM 11–5039; TM 11–5040

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

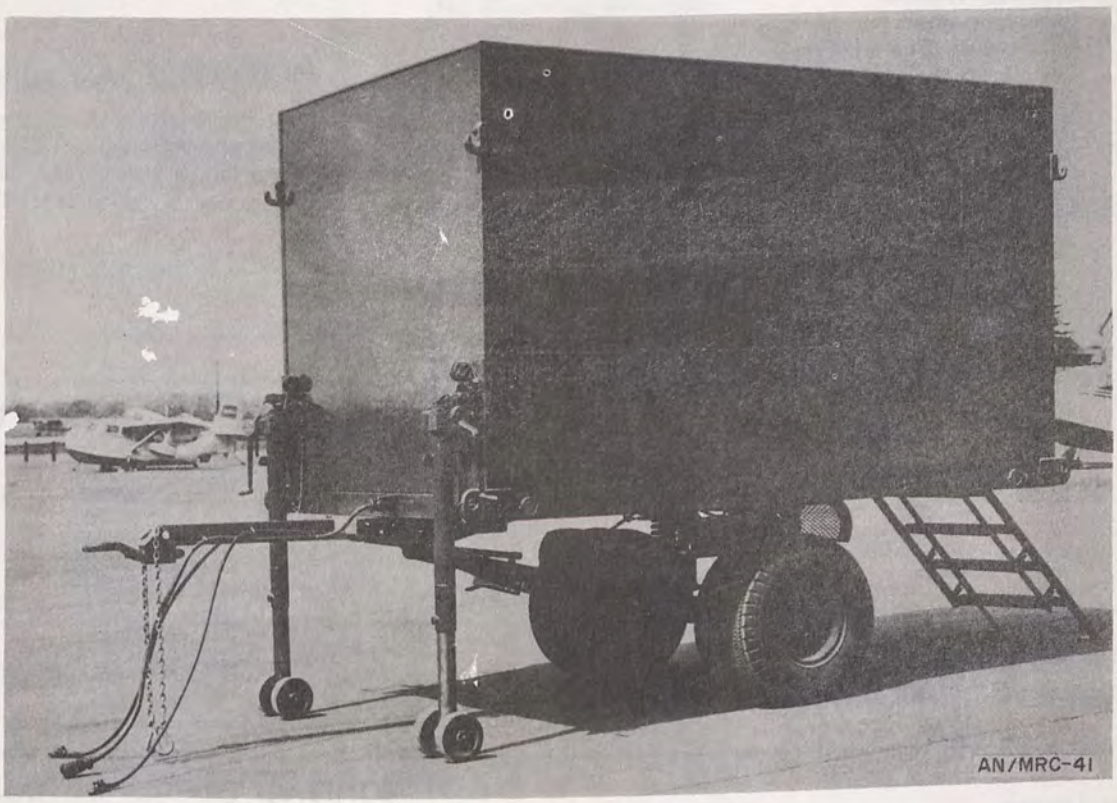
DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/MRC-41

25 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC–41 is a highly mobile, air-transportable, radio relay unit capable of independent operation. It may also be employed with other mobile or permanent com-center facilities to provide ground-to-ground or point-to-point communication.

This equipment is used either as a relay or terminal station in continuous wave, voice, and diversity radioteletype communication. It is normally operated with Teletypewriter Central Office AN/MGC–2, Radio Receiving Set AN/MRR–5, and Radio Transmitting Set AN/MRT–6.

All operating components are installed and operated from Van Trailer V–83/M.

Power is supplied by trailer mounted Diesel Engine Generator Set Type MB–5; however, this item is not supplied as part of the radio set.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 230 to 250
Type Modulation: FM (F3, F9)
Type Signal: Cw, voice, fsk
Power Output:
Receiver: .5 w
Transmitter: 5 w
Power Requirements: 20 to 30 kw; 120- or 240-v, 50- to 60-cycle 1-phase ac

AN/MRC-41 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
8	Converter Signal TA–182/U			
4	Converter, vf carrier			
4	Keyer, vf carrier			
4	Set, Network (2 ea ±120 cps)			
1	Radio Relay Set AN/TRC–12B			
1	Terminal, Telephone AN/TCC–3			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1,150	8,000

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: MIL–R–9523

DESIGN COG: USAF, RCSG

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/MRC-59

25 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC–59 is a transportable communication equipment designed for mounting in a 1/4 ton vehicle.

This equipment is not intended to be operated while the vehicle is in motion.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4,400 to 5,000
Type of Emission and Reception: P9F
Bandwidth: 3kc
Power Output: 3 w peak
Power Requirements: 110-v 400-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AS–682/TRC–27			
1	Converter			
1	Engine generator			
1	Motor generator			
2	Multiplexer TD–101/TRC–27			
1	Radio Set AN/MRC–59			
1	Receiver-Transmitter RT–252/ TRC–27			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/MRC-59 RADIO SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/MRC-60

25 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC-60 is a transportable communication equipment designed to be mounted in a shelter; the shelter itself is mounted on a 3/4-ton truck.

This equipment is not intended to be operated while the vehicle is in motion.

The essential power equipment is carried on a 3/4-ton trailer.

TECHNICAL CHARACTERISTICS:

Frequency Range in mc: 4,400 to 5,000
Type of Emission and Reception: P9F
Number of Channels: 32
Bandwidth of Each Channel: 3kc
Power Output: 3 w peak
Power Requirements: 115-v 400-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
4	Antenna AS-682/TRC-27			
2	Engine generator			
4	Mast AB-357/TRC-27			
4	Motor generator			
8	Multiplexer TD-101/TRC-27			
4	Receiver-Transmitter RT-252/TRC-27			
1	Shelter S-110/U			
1	Trailer M-101, 3/4 ton			
1	Truck M-37, 3/4 ton			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/MRC-60 RADIO SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/MRC-62

25 November 1958
Cognizant Serv: USN FSN: 5820-519-5524

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC-62 is a communication system combining transmitter, receiver, and power unit. It provides a terminal facility for receiving and transmitting multichannel voice, telegraph, and/or facsimile when used with appropriate terminal apparatus.

This equipment is contained in Shelter S-110/U which is mounted on a 1/4-ton Truck M-37. Facilities are provided to permit detaching of the shelter for lift by rotary wing aircraft over water during amphibious operations or over mountainous terrain.

Power Unit PE-75 is mounted in Trailer M-101 and provides the necessary power source.

TECHNICAL CHARACTERISTICS:

Radio Transmitter T-235/GRC-10:
- Frequency Range in mc: 54 to 70.9
- Type Signal: Voice, multichannel telephone, telegraph or facsimile; singly or in combination
- Type Modulation: FM
- Operational Range:
  - *High Power:* 20 to 50 miles
  - *Low Power:* 5 to 15 miles
- Maximum Frequency Deviation: ±40 kc
- Power Output:
  - *High Power:* 40 w
  - *Low Power:* 10 w
- Output Impedance: 50 ohms (at antenna receptacle)

Radio Receiver R-125/GRC-10:
- Frequency Range in mc: 54 to 70.9
- Type Receiver: Double conversion superheterodyne
- Type Signals: FM, ±40 kc maximum deviation
- Frequency Control: Crystal and automatic frequency control
- Sensitivity: 0.5 μv signal input for 10 db signal-plus-noise ratio

Antenna Group OA-249/GRC-10:
- Frequency Range in mc: 54 to 71 inclusive
- Characteristic Impedance: 52 ohms
- Antenna Type: Yagi

Power Requirements: 292 w 115- or 230-v 60- to 65-cycle or 326 w 26 v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
8	Adapter Connectors UG-567A/U	5935-636-6236		
1	Antenna Group OA-249/GRC-10	5985-503-0650		
4	Base, Telegraph-Telephone Signal Converter MT-791/U	5805-186-9464		
2	Control, Radio Set C-632/GRC-10	5820-505-0724		
4	Converter, Telegraph-Telephone Signal TA-182/U	5805-263-3326		
1	Dummy Load, Electrical DA-73/U	5985-264-7480		
2	Dynamotor Power Supply Type DY-94/GRC-10	6125-392-7183		
1	Generator Set, Gasoline Engine, Trailer Mounted PU-357/MRC	6115-553-0554		

AN/MRC-62 RADIO SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Handset H–33E/PT	5965–163–9947		
2	Loudspeaker, Dynamic LS–166/U	5965–243–6420		
1	Multimeter TS–352B/U	6625–553–0142		
2	Rack, Electrical Equipment MT–700/GRC–10	5820–503–3465		
2	Radio Receiver R–125/GRC–10	5820–503–1244		
1	Shelter, Electrical Equipment S–110/U	5410–641–3237		
1	Terminal, Telephone AN/TTC–3	5805–503–2648		
2	Transmitter, Radio T–235/GRC–10	5820–503–3420		
1	Truck, Cargo 3/4 ton, 4 x 4 Type M–37	2320–835–8323		

REFERENCE DATA AND LITERATURE:

TM 11–614
TM 11–900
TM 11–2137
TM 11–2142
TM 11–5527A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShip

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/MRC-63

25 November 1958
Cognizant Serv: USN FSN: 5820-519-5525

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/MRC-63 is a communication system combining transmitter, receiver, and power units. It provides a terminal facility for receiving and transmitting multichannel voice, telegraph, and/or facsimile when used with appropriate terminal apparatus.

This equipment is contained in Shelter S-110/U mounted on a 1/4-ton Truck M-37. Facilities are provided to permit detaching of the shelter for rotary wing aircraft lift over water during amphibious operations or over mountainous terrain.

Power Unit PE-75 is mounted in Trailer M-101 and provides the necessary power source.

The set is similar to Radio Set AN/MRC-62 except for the number of major components.

TECHNICAL CHARACTERISTICS:

Radio Transmitter T-235/GRC-10:
- Frequency Range in mc: 54 to 70.9
- Type Signal: Voice, multichannel telephone, telegraph or facsimile; or a combination of these.
- Type Modulation: FM
- Operational Range:
  - *High Power:* 20 to 50 miles
  - *Low Power:* 5 to 15 miles
- Maximum Frequency Deviation: ±40 kc
- Power Output:
  - *High Power:* 40 w
  - *Low Power:* 10 w
- Output Impedance: 50 ohms (at antenna receptacle)

Radio Receiver R-125/GRC-10:
- Frequency Range in mc: 54 to 70.9
- Type Receiver: Double conversion superheterodyne
- Type Signal: FM; ±40 kc maximum deviation
- Frequency Control: Crystal and automatic frequency control
- Sensitivity: 0.5 μv signal input for 10 db signal-plus-noise ratio

Antenna Group OA-249/GRC-10:
- Frequency Range in mc: 54 to 71 inclusive
- Characteristic Impedance: 52 ohms
- *Antenna Type:* Yagi

Power Requirements: 292 w; 115- or 230-v, 60- to 65-cycle ac; or 326 w, 26 v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
10	Adapter Connector UG-567A/U	5935-636-6236		
2	Antenna Group OA-249/GRC-10	5985-503-0650		
3	Control, Radio Set C-632/GRC-10	5820-505-0724		
1	Dummy Load, Electrical DA-73/U	5985-264-7480		
3	Dynamotor, Power Supply DY-94/GRC-10	6125-392-7183		
1	Generator Set, Gasoline Engine, Trailer Mounted PU-357/MRC	3H2444-3		
3	Handset H-33E/PT	5965-163-9947		
2	Loudspeaker, Dynamic LS-166/U	5965-243-6420		

AN/MRC-63 RADIO SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Multimeter	3F3324-9.352B		
3	Rack, Electrical Equipment MT-700/GRC-10	5820-503-3465		
3	Radio Receiver R-125/GRC-10	5820-503-1244		
1	Shelter, Electrical Equipment S-110/U	5410-641-3237		
3	Transmitter, Radio T-235/ GRC-10	5820-503-3420		
1	Truck, Cargo 3/4 ton, 4 x 4 Type M-37	2320-835-8323		

REFERENCE DATA AND LITERATURE:

TM 11-614
TM 11-900
TM 11-5527A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

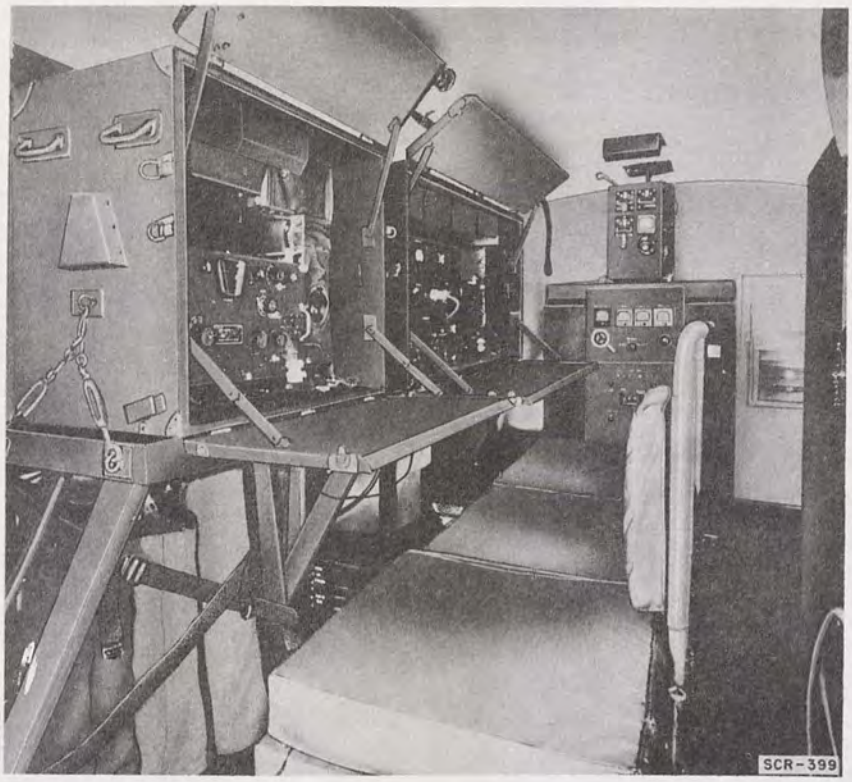
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/MRC-type

1 July 1958
Cognizant Serv: USA FSN: 5820-355-8124

SCR-399

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Std
STOCK NO:	2S399	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR–399 is a field, mobile, transmitting and receiving station used for AM voice, tone, or cw communication, over medium or long distances, in the medium- and high-frequency ranges.

This equipment consists of transmitting, receiving, control, and related components installed within Shelter HO–17, which is carried on a 2-1/2-ton, 6 x 6 cargo truck, and can operate on the move or at the halt.

It includes remote-control components by means of which the equipment can be operated from locations up to 2 miles away, over a telephone pair, in conjunction with Telephone EE–8.

It can be used in the 1-mc range by means of Frequency Conversion Kit MC–509.

It uses vehicular whip-type antenna systems. At the halt, when the operating range must be extended, it can be used with more elaborate arrays, such as doublet systems.

A trailer-drawn, 5-kw power unit is included to provide power for this set.

Radio Set SCR–499 is the air-transportable version of this equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in mc:

Transmitting: 2 to 18

Receiving: 1.5 to 18

Type Modulation: AM

Type of Signal: Voice, tone, or cw

Power Output:

Voice: 300 w

Cw: 400 w

Power Requirements: 2,500 w 115-v 60-cycle ac (supplied by PE–95 or equivalent); and 12-v storage battery

AN/MRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna Tuning Unit BC–939	2C527–939		
1	Power Unit PE–95–G	3H4595G	75-1/2 x 28-1/2 x 38-1/2	1,545
1	Radio Receiver BC–312	2C4312	10 x 9-1/16 x 18-1/16	58.0
1	Radio Receiver BC–342	2C4342	10 x 9-1/16 x 18-1/16	61.5
1	Radio Transmitter BC–610–( )	2C6500	32-5/8 x 21-3/8 x 39-7/8	452
1	Shelter HO–17	3Z7700–17	159 x 92 x 80	7,255
1	Speech Amplifier BC–614–E	2C214E	16 x 9-1/4 x 11	

REFERENCE DATA AND LITERATURE:

TM 11–281

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	895	10,025

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA)71–1683A

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Detrola Corp.	Chicago, Ill.	30203–P–43–02	
The Hallicrafters Co.	Chicago, Ill.	3464–P–52–06	$6,935.29

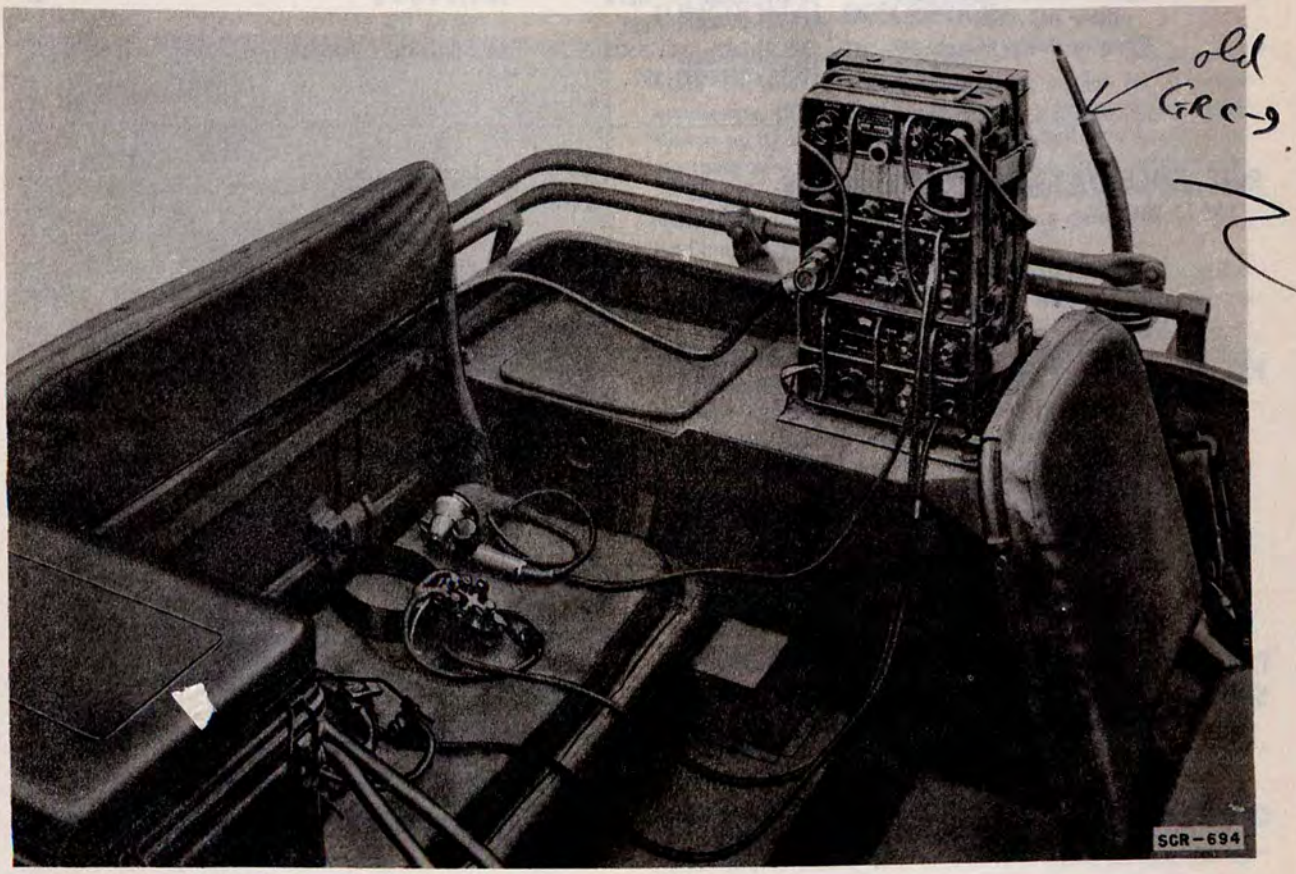
RADIO SET AN/MRC-type

1 July 1958
Cognizant Serv: USA FSN: 5820-193-8836

SCR-694-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	2S694/6-12-24	--	--

No AN/GRC type



FUNCTIONAL DESCRIPTION:

Radio Set SCR-694-( ) is a lightweight, portable, crystal-controlled, AM (voice, tone, and cw) equipment used for front-line communication, and as a command set that can be installed on the ground or in vehicles.

This equipment consists of a radio transmitter-receiver, a power supply, a hand-operated generator, and related accessories. The watertight case and waterproof metal cover permit floating this set ashore as in amphibious operations.

It uses a whip-type or half-wave horizontal antenna and has a 3-position frequency-band switch.

This set has been replaced by Radio Set AN/GRC-9.

TECHNICAL CHARACTERISTICS:

Frequency Range in mc: 4.8 to 6.5
Type Modulation: AM
Type of Signal: Cw and voice
Power Output: 8.5, 14, and 17 w
Power Requirements: 6/12/24-v dc from storage battery; or hand Generator GN-58.

AN/MRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Generator GN–58	(USA) 3H2358	8 x 6 x 6	
1	Radio Receiver and Transmitter BC–1306	(FSN) 5820–197–3274 (USA) 2C5395–1306	14-1/2 x 9 x 5	27
1	Vibrator Power Supply PE–237	(FSN) 5820–252–5503 (USA) 3H6800–237	11 x 20-3/16 x 9-15/16	

REFERENCE DATA AND LITERATURE:

TM 11–230C

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	7.5	250

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 271–1606

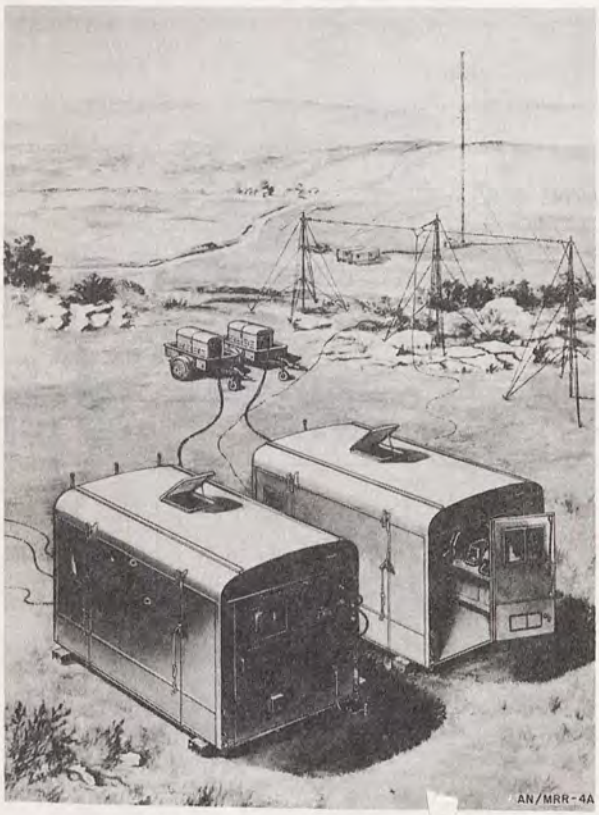
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVING SET AN/MRR-4( )

1 July 1958
Cognizant Serv: USA FSN: 5820-546-6505

	USA	USN	USAF
TYPE CLASS:	S/Std	--	--
STOCK NO:	2C4028-4	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/MRR-4( ) is a transportable voice, cw, and radioteletype receiving station for (a) aural monitoring, (2) magnetic tape recording of broadcasts, either picked up by radio receivers or transmitted over landline, (3) receiving programs of remote origin for direct rebroadcast, (4) receiving programs, or other information by radioteletype circuits, and (5) sending and receiving information by a landline teletypewriter system.

This equipment, consisting of a radio receiving and a radioteletype shelter, normally functions as the receiving terminus for Radio Transmitting Set AN/MRT-5. It includes push-button and patch-board facilities that enable rapid connection of system components to the AN/MRT-5 or similar radio stations. The shelters, which house all of the operating components except the power units, include panoramic indicators, a teletypewriter, a perforator transmitter, radio receivers, magnetic tape recorders, telephones, and accessories.

The two shelters are powered by trailer-drawn, 10-kw power units and are readily transported by standard 6 x 6 trucks.

The AN/MRR-4 and AN/MRR-4A are functionally identical and all components are interchangeable.

TECHNICAL CHARACTERISTICS:

Frequency Range in mc: 0.1 to 0.4, 1.35 to 29.4 in 6 bands (Hammarlund rcvr Mod SP-600-JLX); 0.54 to 54 in 6 bands (R-274A/FRR)
Type Modulation: AM
Type of Signal: Cw, tone, voice, radioteletype
Power Requirements: 130 w, 115-v 60-cycle ac (except for battery-operated telephone system)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Power Unit PE-[illegible]			
1	[illegible]adio Receiving Shelter [illegible]O-4027	----------	[illegible] x 78 x 145	4,215
1	[illegible]adio Teletypewriter Shelter MO-4026	----------	81 x 78 x 145	4,863

AN/MRR-4( ) RADIO RECEIVING SET

REFERENCE DATA AND LITERATURE:

TM 11-646

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	530.1	8,898

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-11601

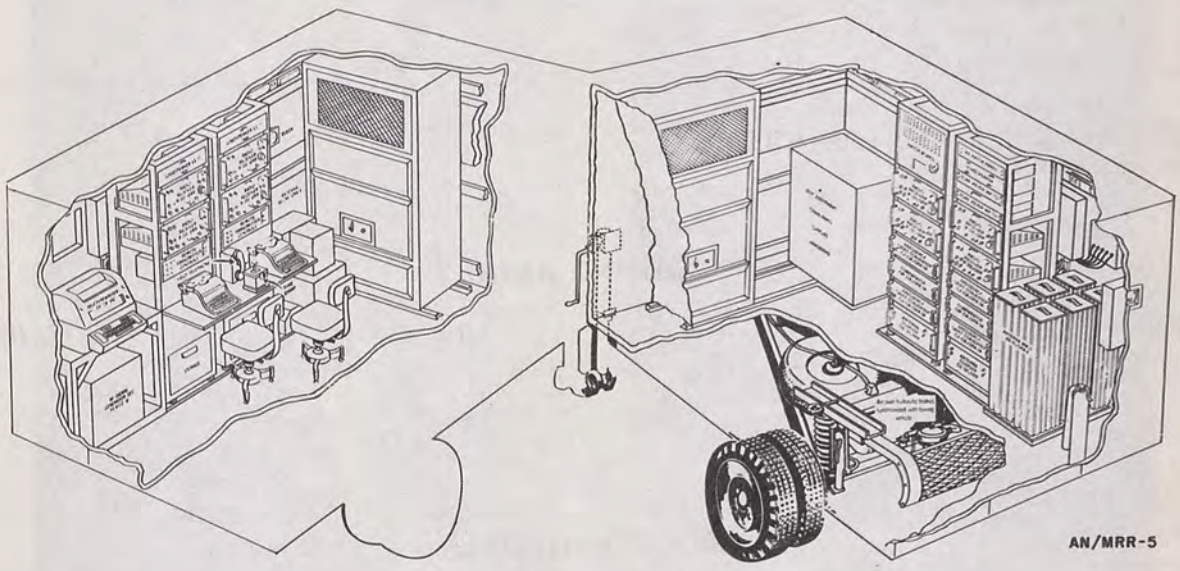
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Gates Radio Co.	Quincy, Ill.	11655-P-52-93	$26,112.66

RADIO RECEIVING SET AN/MRR-5

25 November 1958
Cognizant Serv: USAF FSN: 5895-505-1041B

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	--	--	1760-048640030



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/MRR-5 is a highly mobile, air-transportable equipment designed to operate with other mobile or permanent communication centers, as a part of a ground-to-air or point-to-point communications system.

This equipment has remote controls for operating Radio Transmitting Set AN/MRT-6 and is suitable for operation with Radio Beacon AN/URN-5, Radio Transmitting Set AN/URT-7, and Radio Transmitting Equipment TED-2. It is normally used with Teletypewriter Central Office AN/MGC-2, Radio Set AN/MRC-41, and Radio Transmitting Set AN/MRT-6.

All operating components are installed in and are operated from Van Trailer V-83/M.

Power is supplied by Trailer-Mounted Diesel Engine Generator Set Type MB-5, which is not supplied as part of the set or of commercial facilities.

TECHNICAL CHARACTERISTICS:

Frequency Range in mc: 0.5 to 30.5
Coverage: Continuous
Tuning Steps: 30
Type Modulation: AM (A1, A2, A3); FM (F1)
Type Emission: Cw, tone, voice, fsk
Power Output: 1.5 w; 4 or 600 ohms
Power Requirements: 20 kw to 30 kw; 120- or 240-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna Coupler CU-168/FRR	5985-539-7961		
3	Antenna Group AN/GRA-4			

AN/MRR-5 RADIO RECEIVING SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Frequency Shift Converter-Comparator NR-174	5815-505-3338		
8	Radio Receiver R-388/URR	5820-537-3985	10-1/2 x 19 x 13-11/16	35
2	Remote Transmitter Controls			
1	Teletypewriter TT-70A/UG	1730-NL-7693		

REFERENCE DATA AND LITERATURE:

TO 31R2-2MRR5-1, -2, -4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1,150	8,000

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: MIL-R-9518

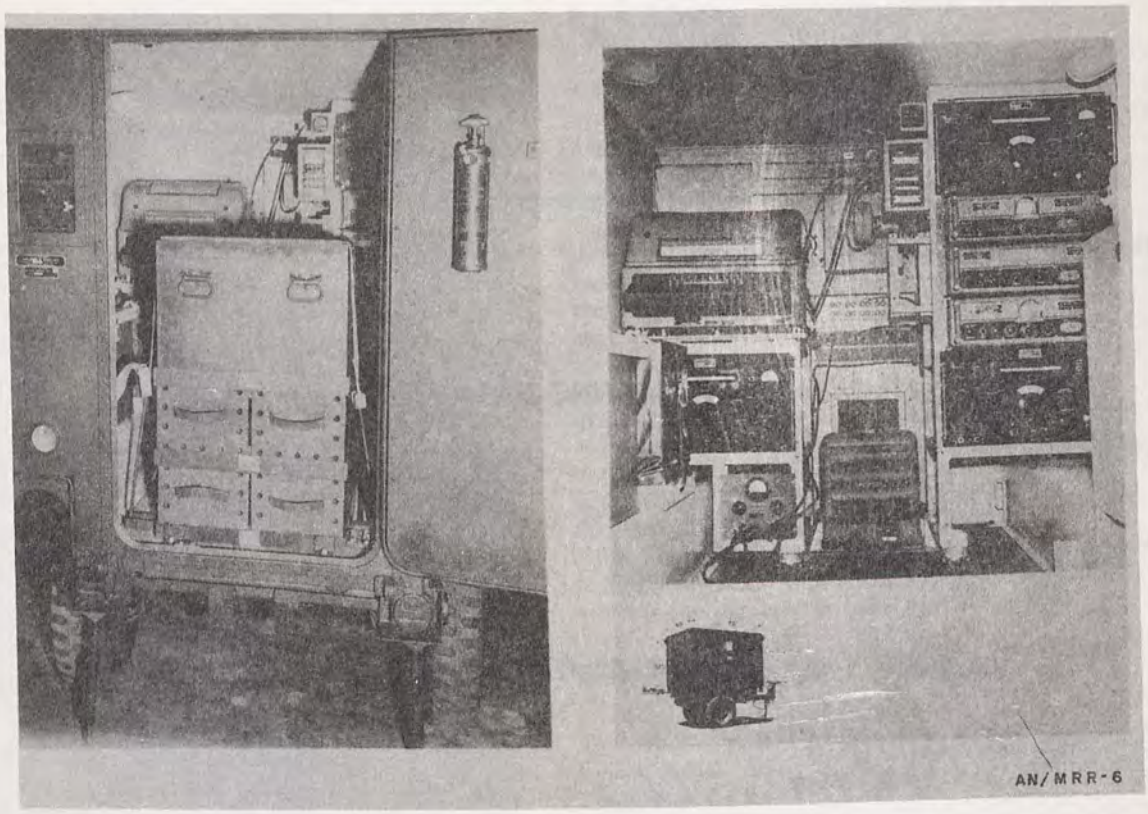
DESIGN COG: USAF, RCSG

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Craig Systems, Inc.	90 Holton St., Danvers, Mass.		

RADIO RECEIVING SET AN/MRR-6

25 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Tent-Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/MRR–6 is a highly mobile and air-transportable equipment designed for reception and printing of radioteletype signals transmitted by the frequency-shift method or by voice and continuous wave signals. It is employed in short duration (up to three months) for emergency support of Airways and Air Communications Service air operations.

This equipment includes remote controls for operation of Radio Transmitting Set AN/MRT–7 and can receive radio teletype signals through Frequency Shift Converter-Comparator, Northern Radio Type 174, operating with Teletypewriter TT–70/UG.

Radio Receiving Set AN/MRR–6 is usually operated with Air Traffic Control Set AN/MRN–15, Radio Transmitting Set AN/MRT–7, and Facsimile Set AN/MXR–1.

All operating components are installed in and operated from a trailer van.

Power is supplied by Trailer Mounted Diesel Engine Generator Set MB–6; however, this item is not supplied as part of the set.

TECHNICAL CHARACTERISTICS:

Frequency Range in mc: 0.5 to 30.5
Coverage: Continuous
Tuning Steps: 30
Type Modulation: AM (A1, A2, A3); FM (F1)
Type Emission: Cw, tone, voice, fsk
Power Output: 1.5 w; 600 ohms
Power Requirements: 5 kw; 240-v 50- to 63-cycle 3-wire 1-phase ac

AN/MRR-6 RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency Shift Converter-Comparator NR–174	5815–505–3338		
4	Mast AB–86/GRA–4			
3	Radio Receiver R–388/URR	5820–537–3985	10-1/2 x 19 x 13-11/16	35
1	Rectifier Power Unit RA–133			
1	Shelter w/trailer mounting chassis			
1	Teletypewriter TT–70/UG	1730–NL–7693		

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	341.6	3,200 (approx)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: RADC–2448

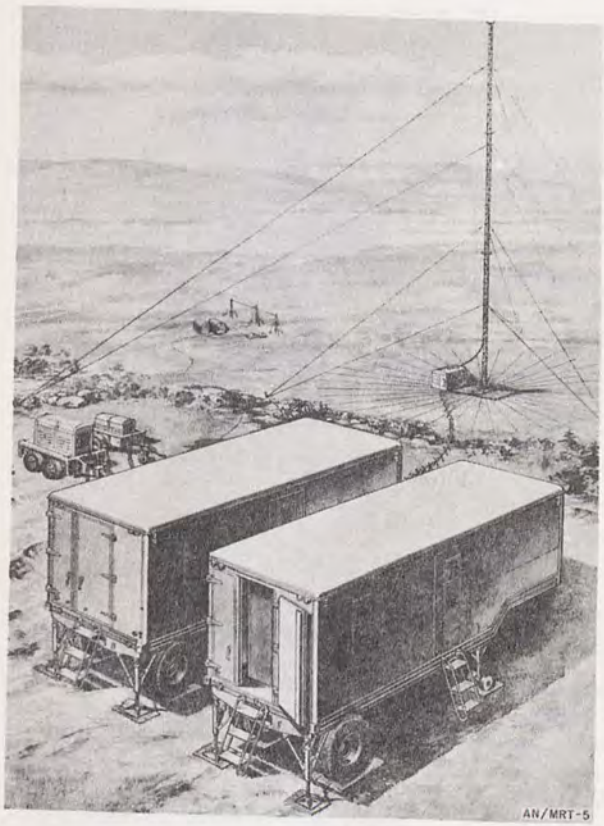
DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TRANSMITTING SET AN/MRT-5( )

1 July 1958
Cognizant Serv: USA FSN: 5820-503-2635

	USA	USN	USAF
TYPE CLASS:	S/Std	--	--
STOCK NO:	2C6912-5	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/MRT-5( ) is a transportable radio station that provides complete radio transmission facilities in the standard AM broadcast band. This equipment, when used with Radio Receiving Set AN/MRR-4( ), is a complete radio station for dissemination of information for entertainment and psychological warfare services.

All operating components, with the exception of the two power units and the antennas, are housed in the transmitting trailer, the studio trailer, and the antenna tuning shelter. The transmitting trailer supplies facilities for generating, amplifying, and transmitting the rf carrier; and the studio trailer, for all local programming. The antenna tuning shelter provides for tuning the antenna and feeding the modulated rf to the mast antenna or the balloon-carried antenna. Provisions are made for transmitting programs originated at a remote point.

Main power for the transmitting trailer and the antenna tuning shelter is furnished by Power Unit PE-85/M; and for the studio trailer, by Power Unit PE-95-G.

The AN/MRT and AN/MRT-5A differ somewhat; a variable-frequency oscillator and Radio Receiver R-388/URR are added to the transmitting trailer of the A model.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.54 to 1.6
Type Modulation: AM
Type of Signal: Voice
Power Output: 5 kw
Power Requirements:
Transmitter: 15.5 kw, 230-v 60-cycle 3-phase ac
Studio Shelter: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Antenna Tower AB-127( )/FR	5450-223-6202	180 ft high	
1	Antenna tuning shelter	----------	82 x 78 x 145	
1	Studio trailer	----------	95-1/2 x 131-3/4 x 318	
1	Transmitting trailer	----------	95-1/2 x 131-3/4 x 318	

AN/MRT-5( ) RADIO TRANSMITTING SET

REFERENCE DATA AND LITERATURE:

TM 11-643

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-11601

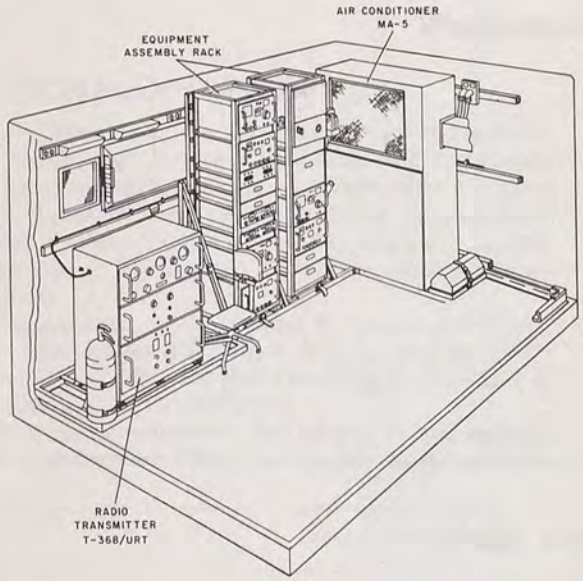
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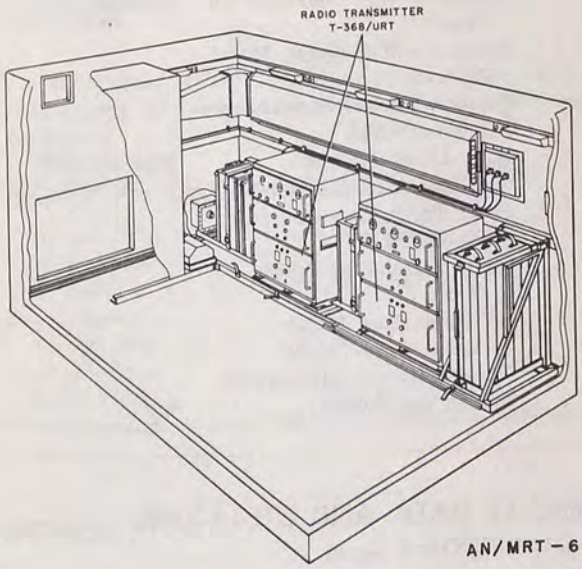
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Gates Radio Co.	Quincy, Ill.	101-P-52-93	$85,514.7

RADIO TRANSMITTING SET AN/MRT-6

25 November 1958
Cognizant Serv: USAF FSN:

USA	USN	USAF
TYPE CLASS:		Std
STOCK NO:		1760-049587233





FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/MRT-6 is a mobile, air-transportable, high frequency transmitting station that is used for ground-to-air and point-to-point radio transmission. The facility is entirely self-contained, except for primary power, and may be operated independently or in conjunction with other airport communication equipment.

Various components of this set may be remotely controlled by Radio Receiving Set AN/MRR-5.

This equipment is normally operated with Teletypewriter Central Office AN/MGC-2, Radio Set AN/MRC-41, and Radio Receiving Set AN/MRR-5, and is installed in and operated from Van Trailer V-83/M.

Power is supplied by Trailer Mounted Diesel Engine Generator Set Type MB-5; however, this item is not supplied as part of the set. Where available, commercial power may be used.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.5 to 20
Number of Bands: 5
Type Modulation: AM, FM
Type Emission: Cw, tone, voice, fsk (A1, A2, A3, F1)
Power Output: 375 w (voice; 475 w (cw)
Power Requirements: 20 kw to 30 kw; 120- or 240-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
3	Antenna Coupler Type TAC-1	1760-049-685-100		
3	Antenna Tuning Unit Model TAC			
1	Carbon Microphone M-15/UR			
1	Equipment Frame 76R31			

AN/MRT-6 RADIO TRANSMITTING SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Equipment Rack 76d12			
1	Equipment Rack 76d13			
2	Frequency Shift Converter NR Type 152	5820–508–2175		
3	Frequency Shift Keyer, Model XFK			
2 sets	Frequency determining network			
1	Headset HS–33A			
3	Mast AB–86/GRA–4	5985–244–5147		
3	Oscillator, variable-frequency			
1	Panel, Patch, Communication SB–502/M			
3	Radio Transmitter T–368/URT			
1	RF Patch Panel 76G37			
1	Terminal Box J–741/M			
3	Transmitter control assembly			
1	Trailer, van V–83M	83R145		

REFERENCE DATA AND LITERATURE:

TO 31R2–2MRT6–1, –2, –4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1,150	8,000 (approx)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: MIL–T–9519

DESIGN COG: USAF, RCSG

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Craig Systems, Inc.	Danvers, Mass.		

RADIO TRANSMITTING SET AN/MRT-7

25 November 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Tent-Std
STOCK NO:	--	--	1760-049587237

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/MRT-7 is an air-transportable, mobile, high frequency equipment used to transmit voice, frequency-shift telegraph, and intermediate frequency beacon signals. It is suitable for worldwide communication use and in short-duration (3 months) emergency support applications of Airways and Air Communications Service operations.

This equipment can be operated by remote control from Radio Receiving Set AN/MRR-6. It is used with Air Traffic Control Set AN/MRN-15, Radio Receiving Set AN/MRR-6, and Facsimile Set AN/MXR-1.

All operating components are installed in and operated from a trailer van. Power for operation is derived from Trailer-Mounted Diesel Engine Generator Type MB-6; however, this item is not supplied as part of the radio transmitting set.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.2 to .4; 1.5 to 15
Type Modulation: AM, FM
Type Emission: A1, A2, A3, F1 (Cw, tone, voice, fsk)
Power Output:
A2, A3: 15 w
A2, A3: 50 w
A1, F1: 75 w
Power Requirements: 5 kw; 240-v 50- to 63-cycle 3-wire 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency Shift Keyer, Model XFK			
3	Mast AB-86/GRA-4	5985-244-5147		
2	Oscillator, Model PMO			
1	Radio Telephone Transmitting Equipment TDD-4			
2	Radio Transmitter, CR Model 32-BA-9			
1	Shelter with trailer mounting chassis			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	341.6	3,200 (approx.)

AN/MRT-7 RADIO TRANSMITTING SET

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: RADC-2449

DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/MRT-type

1 July 1958
Cognizant Serv: USA FSN: SCR-573-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	L/Std
STOCK NO:	2S573	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-573-( ) is AM or tone-modulated, VHF, transmitting equipment for ground-to-air, and point-to-point communication. It is normally operated as mobile equipment from Truck K-53 and Trailer K-63, both of which are supplied. Radio Set SCR-573-A (transmitting station), when used with Radio Set SCR-574-A (receiving station), comprises a two-way, VHF Fighter Control Net System.

Two Radio Transmitters BC-640, each operating on one preset, crystal-controlled frequency, provide dual channel transmission.

This equipment can be controlled locally, or remotely over standard telephone lines from a distance of 60 to 120 miles. The distance between transmitters and receivers should be at least 1/4 mile because the transmitters may block out receivers operating in adjacent channels. Separation between transmitting and receiving stations at the same terminal installation should not exceed 2 miles.

Recommended antenna system consists of Antenna AN-86 (76 feet), two Antenna Equipments RC-81, and associated coaxial cable.

Power is normally furnished by Power Unit PE-99 (part of Radio Set SCR-573), or an equivalent source.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 100 to 156
Type Modulation: AM
Type of Signal: Voice or tone
Power Output: 50 w per transmitter
Power Requirement: 2.5 kva 110v 50/60 cycle 1 phase ac (without heater); or 7.5 kvs 120v 50/60 cycle 3 phase ac (with heater)

AN/MRT-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
2	Antenna Equipment RC–81–A	----------	12 x 28 x 38	4
1	Control Unit RM–27	----------	11-3/8 x 19 x 10-1/2	29
2	Radio Transmitter BC–640	2C530–640	72 x 21 x 20	515
1	Trailer K–63 (with Power Unit PE–99)	----------	72 x 72 x 144	2,860
1	Truck K–53	----------	130 x 96 x 256	13,385

REFERENCE DATA AND LITERATURE:

TM 11–866
TO AN–40SCR573–2

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	2,275	17,760

PROCUREMENT DATA

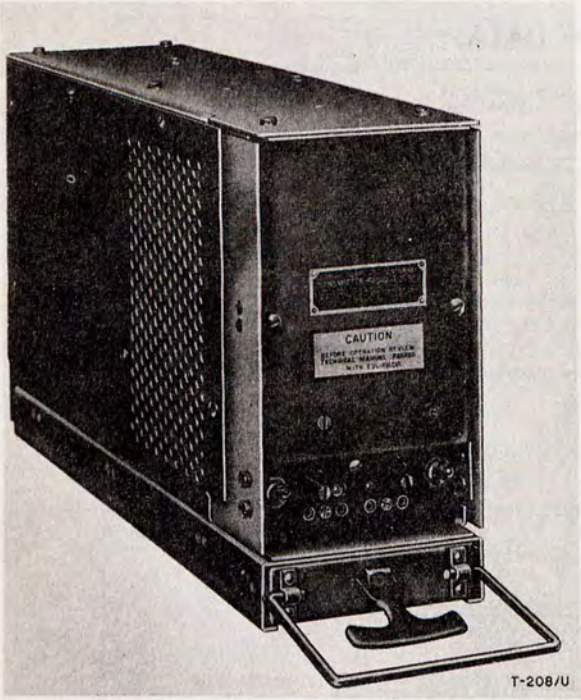
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SPEC &/or DWG: USA 271–1336
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Bendix Radio Corp.	Sparks, Withington		

RADIO TRANSMITTER AN/MRT-type T-208/U

1 July 1958
Cognizant Serv: USA FSN: 5820-545-7268

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C6900-208	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter T-208/U is an FM radio transmitter designed for mobile use. It is intended for use in system applications to provide point-to-point communication, or radio relay service by retransmission.

This transmitter is used as a component of Radio Set AN/VRC-6( ).

Provision is made for operation on either of two preset crystal-controlled frequencies.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 25 to 50
Type Modulation: FM
Type of Signal: Voice
Power Output: 25 w
Power Requirements: Dynamotor DY-93/G (20 amp at 12-v dc), Dynamotor DY-98/G (10 amp at 24-v dc); or Dynamotor DY-100/U (40 amp at 6-v dc); none of these dynamotors are supplied with this equipment

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Radio Transmitter T-208/U	5820-545-7268	8-1/2 x 4-1/2 x 14-1/2	

(Equipment consists of only one major component; it relies on other system components for power and control functions.)

REFERENCE DATA AND LITERATURE:

TM 11-804

AN/MRT-type RADIO TRANSMITTER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	varies	varies

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-N-11539

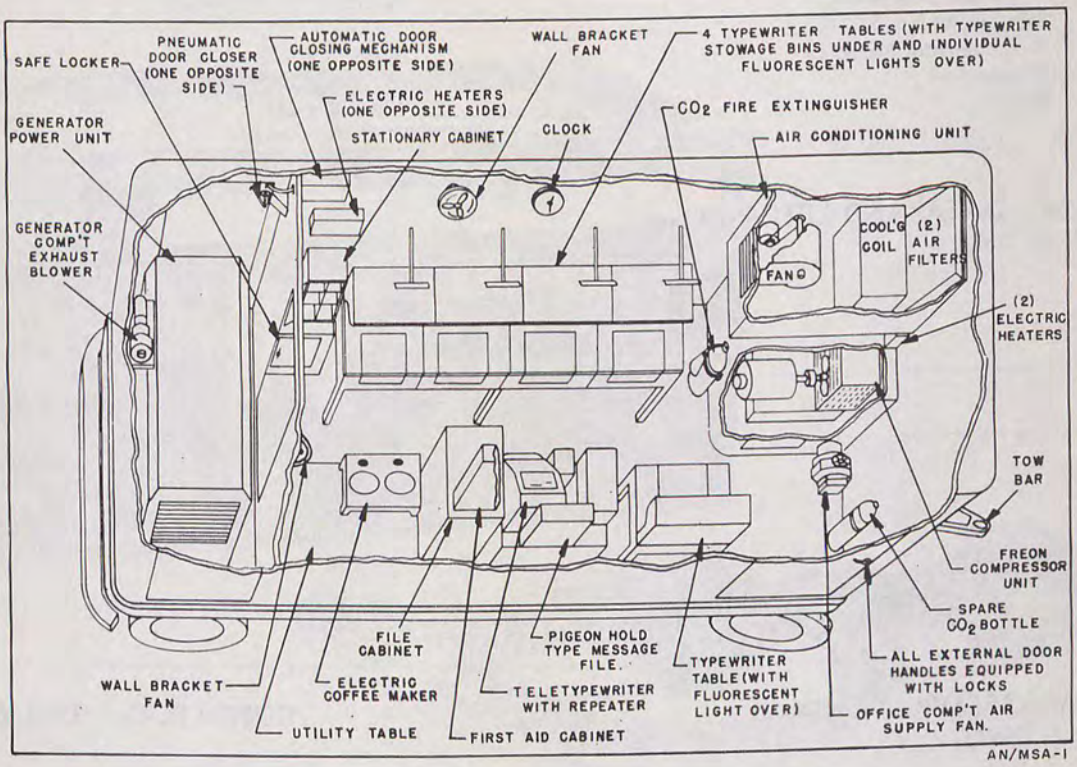
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	11661-P-52-93	

COMMUNICATIONS CENTRAL OFFICE GROUP AN/MSA-1

25 November 1958
Cognizant Serv: USN FSN:

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--



FUNCTIONAL DESCRIPTION:

Communications Central Office Group AN/MSA–1 is a fully equipped trailer type van that provides facilities for performing cryptographic functions in a mobile communications center, such as Communications Central AN/MSC–3.

This equipment includes built-in furniture, lighting, heating, air conditioning, and power generating units. Terminals are installed for two teletypewriter and six telephone circuits.

It is equipped with a carbon dioxide fire protection system.

The power system is designed to furnish an independent source of power for air conditioning, lighting, and miscellaneous office use. Provision is also made for receiving power from an external source and for furnishing power to an external load.

TECHNICAL CHARACTERISTICS:

Teletypewriter: Automatic reception from line circuits of associated units of a communications central

Power Supply Equipment: Power Unit PE–95–G; used when external power source is not available

Power Requirements: 10 kw 120-v 60-cycle 1- or 3-phase ac

AN/MSA-1 COMMUNICATIONS CENTRAL OFFICE GROUP

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Communication handset			
2	File cabinet			
1	Power Unit PE–95–G	---------- ----------	67-1/2 x 38-1/2 x 28-1/4	1,556
1	Safe Locker No. 6			
1	Teletypewriter Model 19	---------- ----------	34-3/8 x 41-5/8 x 23-1/2	
5	Typewriter			
1	Van	----------	129 x 95 x 245	17,000

REFERENCE DATA AND LITERATURE:
NAVSHIPS 91498

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1,500	17,000

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:
DESIGN COG: USN, BuShips

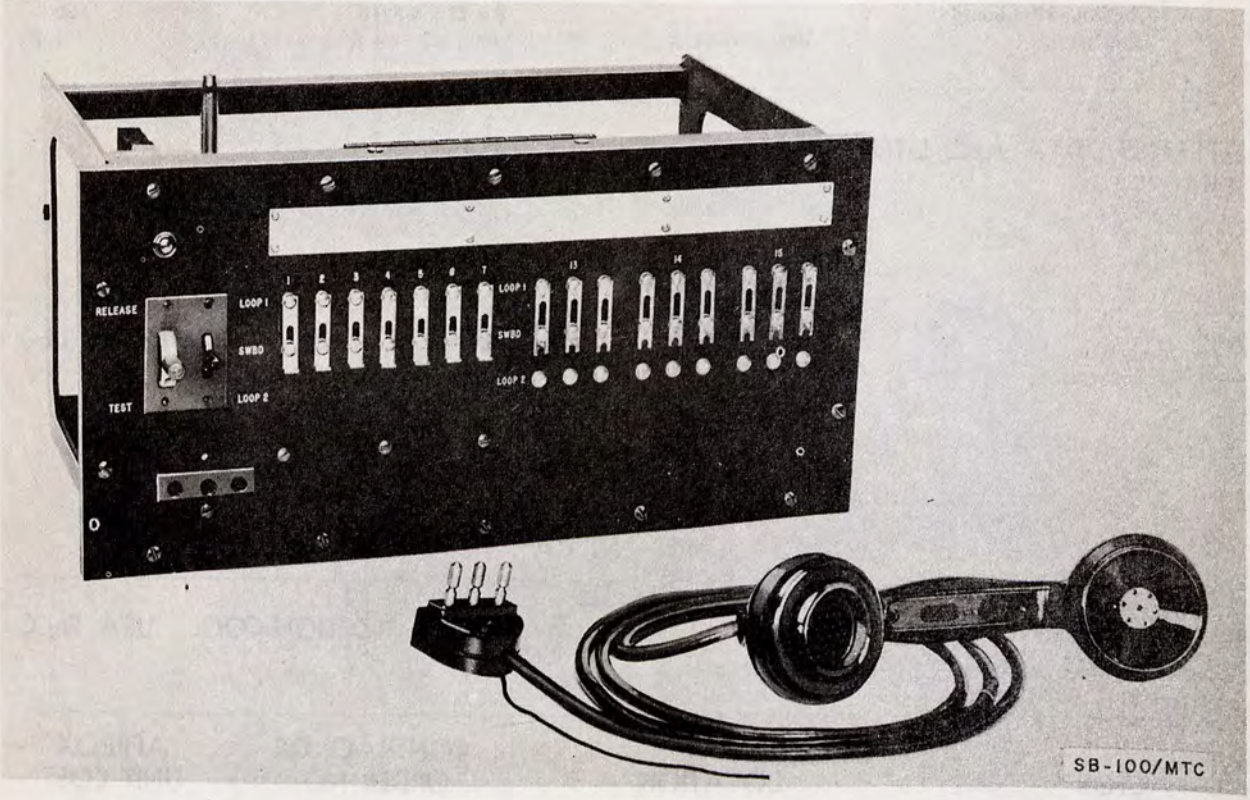
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Boston Naval Shipyard	Boston, Mass.	44704, 45707, 80701	

CONTROL SWITCHBOARD AN/MTC-type

1 July 1958
Cognizant Serv: USA FSN: 6110-164-8067

SB-100/MTC

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4C9905-100	--	--



FUNCTIONAL DESCRIPTION:

Control Switchboard SB-100/MTC is semiautomatic equipment used for quickly grouping field telephones of a network for alerts, conferences, and instructions. It is usually mounted atop the administrative switchboard.

This equipment, consisting of the switchboard component and a handset has no means for ringing and signaling.

TECHNICAL CHARACTERISTICS:

Number of Positions: 1
Number and Type of Circuits: 14 manually operated lines
Power Requirements: 3-v dc; 0.5 amp at 24-v dc

AN/MTC-type CONTROL SWITCHBOARD

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Control switchboard	----------	8 x 17 x 9-3/16	20
1	Handset TS-9	5965-170-6473	9 x 3 x 3	1.75

REFERENCE DATA AND LITERATURE:

TM 11-2133

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.20	57

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-S-12662

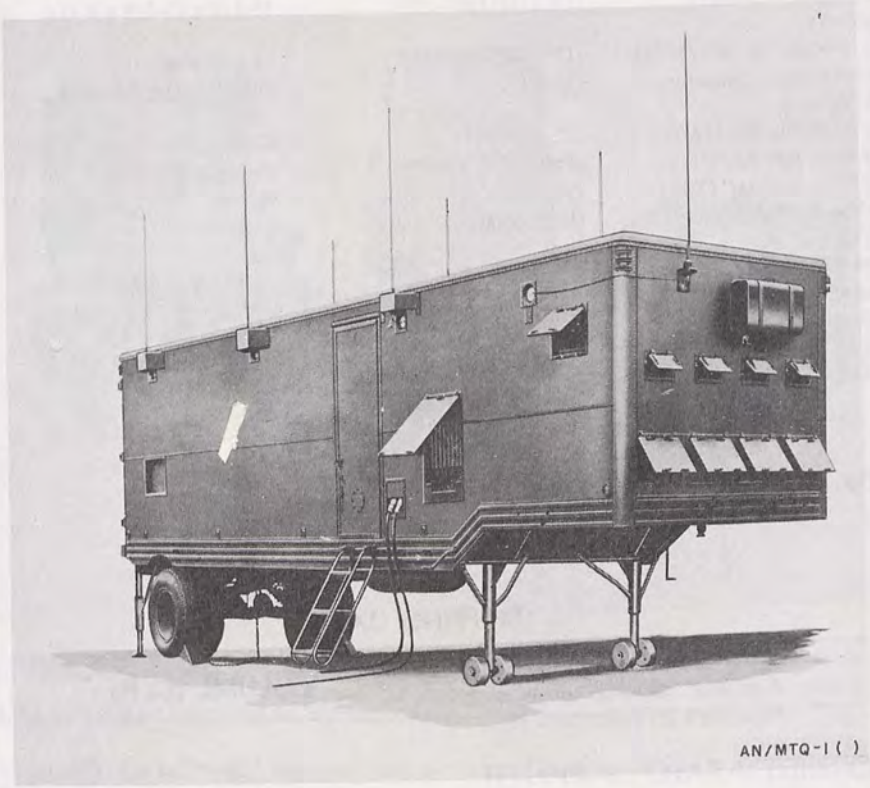
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Development Corp.	Trenton, N. J.	15920-P-55-53	$354.00
Great American Electric Co.	Meridan, Conn.	31164-P-55-53	198.00

OPERATIONS CENTER AN/MTQ-1( )

1 July 1958
Cognizant Serv: USA FSN: 5895-537-7440

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4C5970-1	--	--



AN/MTQ-1 ( )

FUNCTIONAL DESCRIPTION:

Operations Center AN/MTQ-1( ) is a mobile operations center used as the tactical or battle headquarters of an anti-aircraft defense command to collect, evaluate, and disseminate intelligence, and to direct firing when necessary.

This equipment, consisting of three trailers (an equipment trailer and two power trailers), is not designed to operate on the move.

The equipment van contains telephone, teletypewriter, radar repeater, and radio equipment, display boards, air conditioning equipment, and accessory items. Communication equipment is not supplied but facilities for mounting such equipment are provided.

The AN/MTQ-1, AN/MTQ-1A, and AN/MTQ-1B are functionally identical. Each operations center normally requires 220-volt, 3-wire, 1-phase ac power, but can be operated on 110 volts if the air conditioning equipment is not connected. Power is normally supplied by a trailer-mounted Power Unit PE-95-( ) but commercial power may be substituted, if available.

TECHNICAL CHARACTERISTICS:

Power Requirements: 10 kw 220-v 60-cycle 3-wire 1-phase ac; or 4 kw 110-v 60-cycle 2-wire 1-phase ac without air conditioning equipment

AN/MTQ-1( ) OPERATIONS CENTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Azimuth Indicator VK–4	(USA)2C1582–35	----------	378
3	Control Unit C–199/TTQ	(FSN)5820–170–4782	6-7/16 x 4-7/16 x 5-1/4	5.5
1	Power Supply PP–327/ GRC–9Y	(USA)3H4497–327	15-1/4 x 20-5/8 x 8-1/2	85
1	Power Supply PP–989/MTQ–1	(USA)3H4497–989	24 x 12 x 48	270
1	Range-Azimuth Indicator AN/SPA–4	(USA)2C1559A–4	18 x 21-3/4 x 37-13/16	315
1	Relay Test Set TS–772/GT	(USA)3F4325–772	6-1/2 x 11/16 x 1	1
1	Relay Unit RE–8A/TTQ	(FSN)5830–170–3616	19-3/4 x 8-1/2 x 5-1/2	24
1	Relay Unit RE–24C/TTQ	(FSN)5805–194–8137	48 x 24 x 12	210
1	Switchboard Table FN–61/ MTQ–1	(FSN)5805–392–8664	24-1/4 x 15-1/4 x 29-1/2	23.5
2	Trailer-Mounted Gasoline Engine	(FSN)6115–356–0995	97 x 83 x 165-1/2	4,500
1	Van Semitrailer V–79/G	(USA)6J1101–79	135 x 95-1/2 x 363	10,500
1	Video Amplifier AM–549/ MTQ–1	(USA)2C333–6	8-1/4 x 7-1/2 x 5-1/2	12

REFERENCE DATA AND LITERATURE:

TM 11–5550

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–O–10605

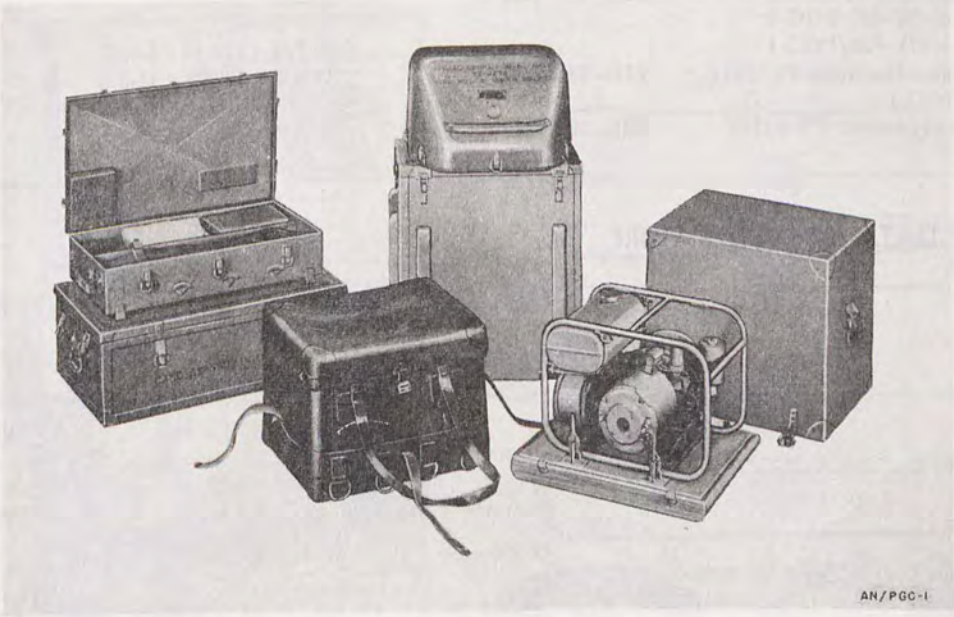
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Wickes Engr. & Construction Co.	Camden, N. J.	6433–P–51–31	$65,877.00

TELETYPEWRITER SET AN/PGC-1

1 July 1958
Cognizant Serv: USA FSN: 5815–198–5963

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4T2–19	--	1730–480008098



FUNCTIONAL DESCRIPTION:

Teletypewriter Set AN/PGC–1 is a portable, field teletypewriter station.

This equipment consists of a lightweight teletypewriter, a gasoline-engine-driven electrical generator, carrying cases, and accessories. The cases are used to mount the equipment during operation in the field. The entire equipment can be transported on packboards.

This set is designed to operate in neutral circuits but can be adapted to receive and transmit polar signals. It is usually connected to the remote teletypewriter through a dc telegraph line, tactical carrier facilities, or a radio channel. It can be arranged for half-duplex, full-duplex, or sending- or receiving-only operation. Two or more of these sets can be interconnected for operation with each other without using intermediate line modifying equipment.

TECHNICAL CHARACTERISTICS:

Operating Functions: Keyboard operation; remote motor stop and break-in facilities; no weather keyboard available

Operating Speed: 368.1 opm (60 wpm); gears furnished for 600 opm (100 wpm); 72 characters per line

Motor Characteristics: Universal (ac or dc) series type, tuning fork speed adjusting frequency 3,600 rpm

Power Requirements: 150 w 105/125-v dc or 105/125-v 50/60-cycle ac

AN/PGC-1 TELETYPEWRITER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Bag CW–160/PGC–1	5851–498–9111	20 x 10 x 3	
1	Case CY–552/PGC–1	----------	27 x 16 x 6	24
1	Case CY–553/PGC–1	----------	30-1/2 x 19-1/2 x 9-1/2	30
1	Engine-Generator PU–181/PGC–1	6115–242–2297	17-1/2 x 12-3/4 x 14-3/4	95
1	Teletypewriter TT–4/TG	5815–198–4438	24-3/8 x 20-7/8 x 16-3/8	94.5

REFERENCE DATA AND LITERATURE:

TM 11–2235

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	19.5	285

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–3364

DESIGN COG: USA, Sig C

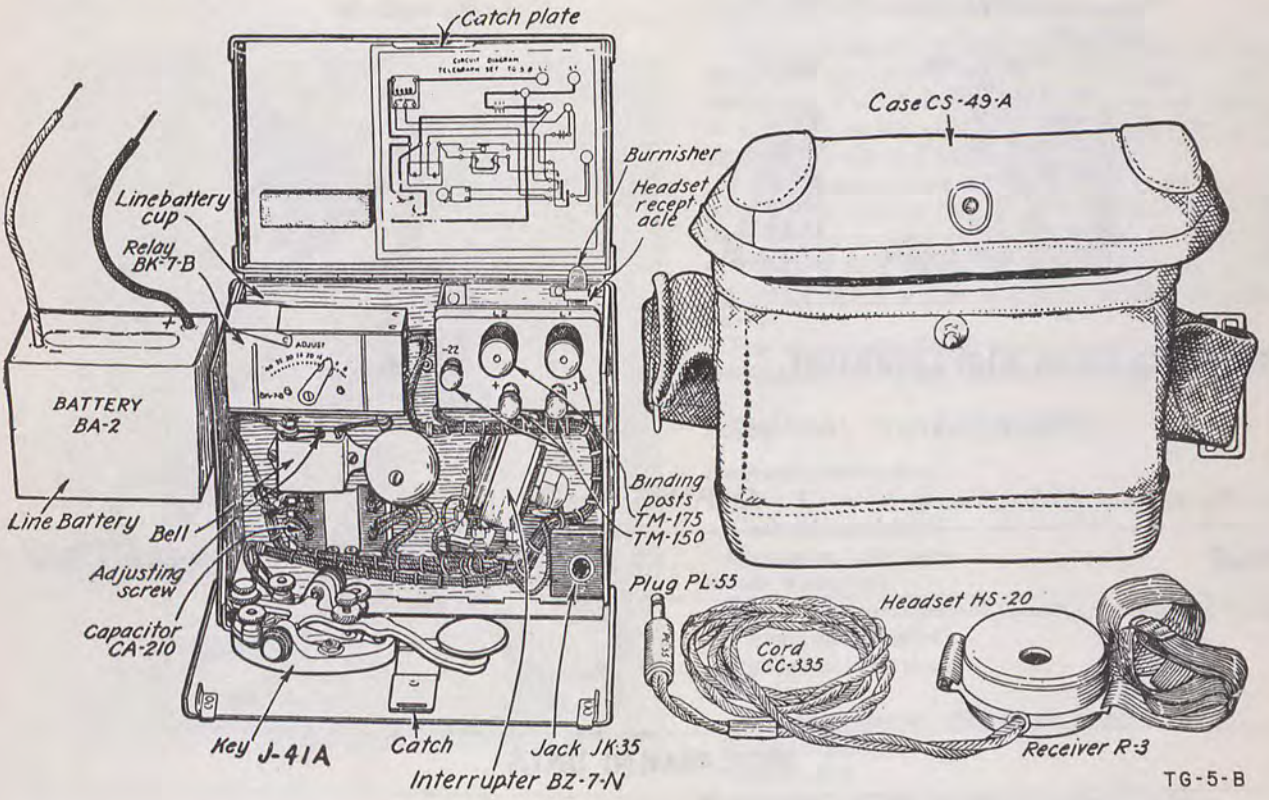
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Cash Register Co.	Dayton, Ohio	6611–P–51–09	

TELEGRAPH SET AN/PGC-type

26 November 1958
Cognizant Serv: USA FSN: 5805-407-3616

TG-5-B

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Set TG-5-B is a portable, open-circuit field telegraph set designed for telegraph communication over short lines. Telegraph sets may be connected directly to each other by metallic ground or ground-return circuits, or they may be used in conjunction with existing wire systems to provide additional communication channels. The unit also can be used as a tone keyer for voice-modulated radio sets. The range of the equipment varies with the type of line used, the condition of the wire, whether the wire is wet or dry, and whether the wire is on the ground or in the air.

When used on metallic or ground-return lines, two telegraph sets may be connected in series as terminal stations, and one or more telegraph sets connected in series with them as intermediate stations. No more than three or four telegraph sets, however, can be so connected and still operate with each other.

When used in conjunction with existing wire systems, two telegraph sets may be connected in series as terminal stations, or one or more connected in series with them as intermediate stations. Operation may be simplexed, phantom, or simplexed-phantom circuits, with connections made through repeating coils in the equipment with which they are operated.

The equipment will operate satisfactorily as a tone keyer with any radio set using a carbon button microphone. An adapter cord is necessary to permit use of the telegraph set as a tone keyer.

All circuit elements of the TG-5-B are contained in a sheet-metal box. The set is provided with a canvas carrying case.

TECHNICAL CHARACTERISTICS:

Operating Speed-,Two Sets Working Together:
50 Miles Wet Wire W-110-B: 20 wpm
Dry Wire W-110-B: Will operate satisfactorily when total resistance of line does not exceed 23,600 ohms
Power Requirements: 12-v dc 3-v dc or 22-1/2-v dc

AN/PGC-type TELEGRAPH SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Telegraph Set TG–5–B, consisting of:	----------	5-1/2 x 5-1/2 x 10	
1	Case CS–49–A with shoulder strap	4A349A		
1	Headset HS–20	2B832		
1	Interrupter BZ–7–N	4Z5007		
1	Jack JK–35	2Z5535		
1	Key J–41–A	3Z441A		
1	Relay BK–7–B	4A2007B		
1	Terminal block assembly	2Z9405.22		

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

PUBLIC ADDRESS SET AN/PIP-1A

25 November 1958
Cognizant Serv: USN FSN: 5830-644-4413

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Public Address Set AN/PIP-1A is a compact and portable instrument which may be used in the same way as an ordinary megaphone. The set is designed for intermittent operation. It amplifies and transmits intelligible speech over extended distances through high ambient noise levels.

A total operating cycle of 2 hours at 50 percent on and 50 percent off is available from the fully charged battery. However, continuous operation for more than 10 minutes may overheat and thus damage the vibrator power supply. Each operating period should be followed by an equal deenergizing period.

This equipment is directly interchangeable, electrically and mechanically, with Public Address Set AN/PIP-1.

TECHNICAL CHARACTERISTICS:

Loudspeaker-microphone:
Type: A pressure-operated magnetic controlled reluctance microphone element
Impedance: 1,600 ohms
Remote Microphone:
Type: A pressure-operated magnetic controlled reluctance microphone element
Impedance: 1,600 ohms
Audio Amplifier:
Frequency Response: 400 cps to 5,500 cps
Stages: 3, push-pull
Output: 10 w
Loudspeaker: A driver mechanism coupled to a horn
Power Requirements: 6 v (Battery BB-207/U)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Audio-Frequency Amplifier AM-568A/PIP-1	----------	6-1/2 x 10-1/2 x 12	20
1	Loudspeaker-Microphone LS-183A/PIP-1	----------	6 x 13-1/2 x 13-3/4	5.25
1	Maintenance Parts Kit MK-132/PIP-1A	----------	6 x 12 x 18	32
1	Remote Microphone TH-4	----------	1-11/16 x 2-5/8 x 4-15/16	2

AN/PIP-1A PUBLIC ADDRESS SET

REFERENCE DATA AND LITERATURE:

NAVSHIPS 365-2035

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

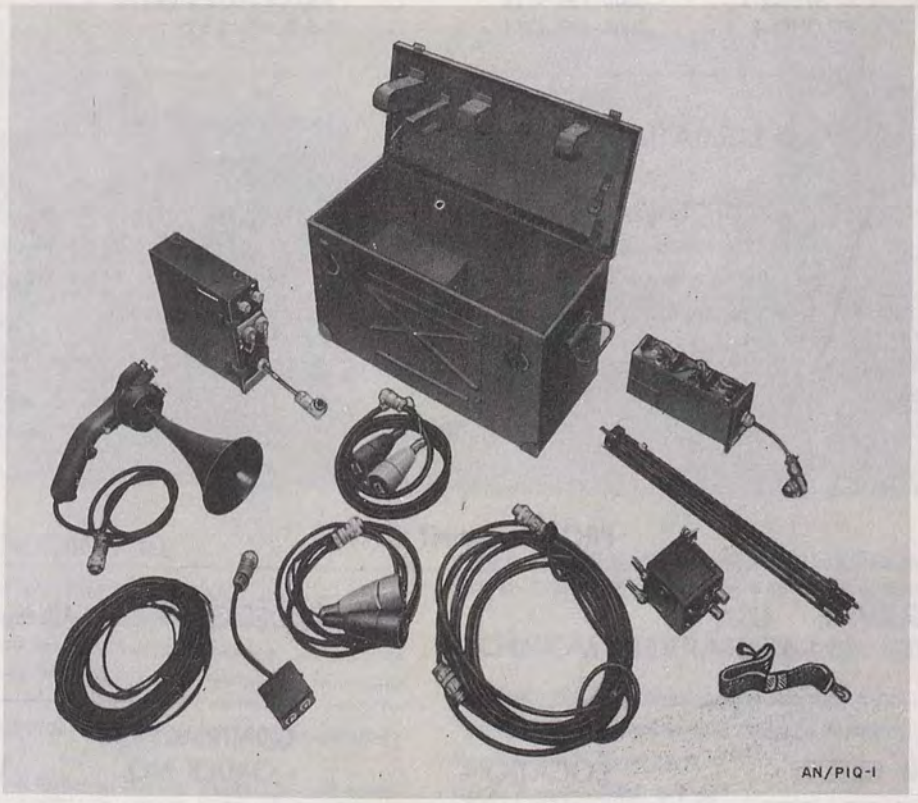
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Audio Equipment Co., Inc.	Great Neck, N. Y.	NObsr-59427	

PUBLIC ADDRESS SET AN/PIQ-1

25 November 1958
Cognizant Serv: USA FSN: 5830-164-6620

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	6C198-1	--	--



FUNCTIONAL DESCRIPTION:

Public Address Set AN/PIQ-1 is a portable (man-carried), low-power, short-range, voice amplifying and projecting equipment used by tactical or training units to control or brief groups of personnel within 200 yards of the set.

This equipment can be arranged for operation with the loudspeaker mounted on a handle supporting a lip microphone or it may be mounted on a tripod for stationary use. By means of auxiliary equipment, this set can be modified to allow the operator's hand to remain free while using the equipment.

The set can be installed and operated in a vehicle and connected to a larger loudspeaker; also it can be operated by a direct current power supply.

Earlier models are designed to hold three rechargeable wet cells in the battery tray; later models can accommodate either wet or dry cell batteries.

TECHNICAL CHARACTERISTICS:

Facilities: Single-channel public address; voice
Type Controls: Volume; push-to-talk switch
Power Output: 1-1/2 w
Power Requirements: 3 Batteries BB-206/U (storage) or 3 Batteries BA-56 and 4 Batteries BA-41 (in emergency, Battery BA-30 may be substituted for Battery BA-41)

AN/PIQ-1 PUBLIC ADDRESS SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier AM–74/PIQ–1	5830–164–7289	2-1/4 x 8-1/4 x 4	3.4
1	Loudspeaker LS–110/PIQ–1	5965–160–2463	5 x 10-3/4	1.75
1	Microphone M–8/PIQ–1	5965–194–9774	3-1/8 x 3-1/2 x 10-1/4	.90
1	Tripod MT–353/PIQ–1	5965–160–4744	1-5/8 x 18 x 58	2.25

REFERENCE DATA AND LITERATURE:

TM 11–2566

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2.58	70

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: 17–3163

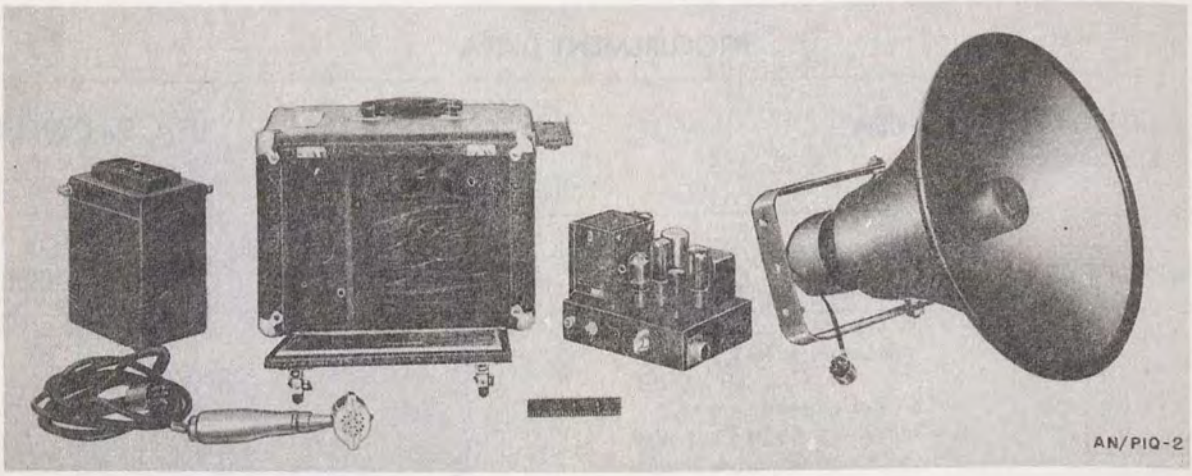
DESIGN COG: USA, Sig C (RCUE)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

PUBLIC ADDRESS SET AN/PIQ-2

25 November 1958
Cognizant Serv: USA FSN: 5830–164–7332

	USA	USN	USAF
TYPE CLASS:	L/Std	--	Std
STOCK NO:	6C260–146S	--	1790–612859950



FUNCTIONAL DESCRIPTION:

Public Address Set AN/PIQ–2 is a portable, medium-power, general-purpose sound amplification and projection equipment used for beach control purposes during amphibious operations. It also may be used to control personnel in similar tactical operations.

The operating range of this equipment is approximately 300 to 400 yards.

Primarily, this set is designed for use where 110-volt alternating current power is not available. For power, a 6-volt storage battery is included in a specially designed container.

TECHNICAL CHARACTERISTICS:

Facilities: Single-channel public address; voice
Type Controls: On-off switch; volume control
Power Output: 10 to 14 w
Power Requirements: 6-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Audio amplifier			
1	Hand microphone			
1	Loudspeaker			

REFERENCE DATA AND LITERATURE:

AN/PIQ-2 PUBLIC ADDRESS SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	----	87

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C (RCUE)

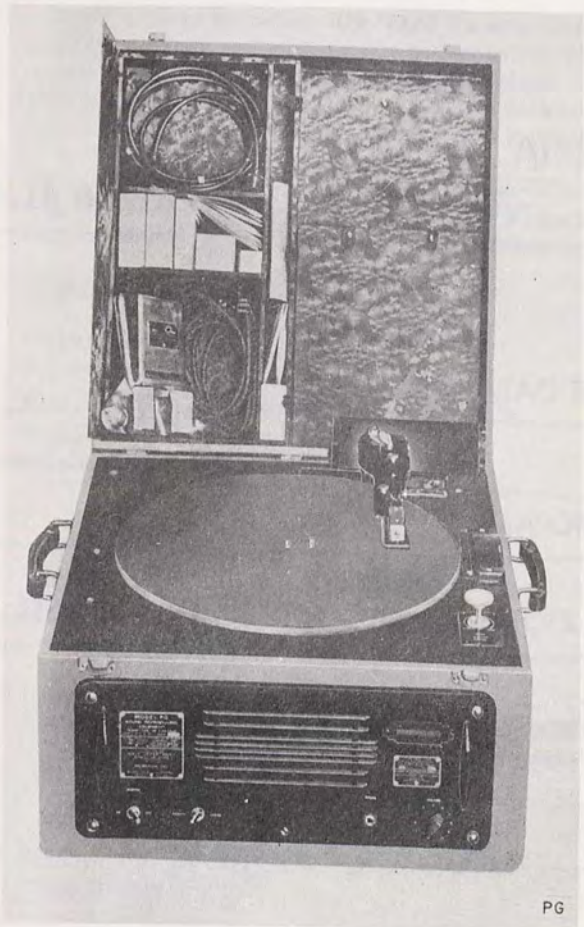
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

SOUND REPRODUCING EQUIPMENT AN/PNH-type

5 December 1958
Cognizant Serv: USN FSN:

PG

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



PG

FUNCTIONAL DESCRIPTION:

Sound Reproducing Equipment PG is a portable sound reproducing equipment designed to reproduce the audio signals embossed on Memodiscs by Voice Recording Equipments PE and PE–1.

The equipment contains a foot-operated control that permits the operator to start and stop reproduction as desired, and to cause the repetetion of as much of the material just reproduced as may be desired.

TECHNICAL CHARACTERISTICS:

Frequency Range: 200 to 3000 cps
Output Impedance: 600 ohms
Turn Table Size: 16-1/4 in. dia.
Rotation: Clockwise or counterclockwise
Power Requirements: 110 w, 110/120-v 58/62-cycle 1-phase ac

AN/PNH-type SOUND REPRODUCING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Sound Reproducing Equipment PG	----------	13-3/4 x 22 x 24-1/2	100

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95207

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Memovox, Inc.	Beverly Hills, Calif.	NXss–15073	

SOUND RECORDER-REPRODUCER AN/PNH-type

20 November 1958
Cognizant Serv: USA FSN: 5835-170-4850

RD-31A/U

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Std
STOCK NO:	6C272-7	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Sound Recorder-Reproducer RD-31A/U is a self-contained, portable, magnetic steel wire recorder and reproducer which records speech or music from a microphone, telephone, or program line source. Recordings may be played back immediately through this equipment's self-contained loudspeaker or through an external loudspeaker or headset. The equipment can be used as a public address set to cover a limited area with the self-contained speaker or to cover a large area with an external speaker (not supplied with equipment).

TECHNICAL CHARACTERISTICS:

Frequency Response: 150 to 5,000 cps at ±3 db
Power Output: 5 watts
Recording-Reproducing Medium: Stainless steel wire
Recording Time: 60 minutes maximum
Wire Speed: 2-1/2 feet per second
Wire Size: 0.004 inch diameter
Recorder-Reproducer Head:
Type: Magnetic
Impedance: 800 ohms at 1 kc; 890 ohms erase-coil impedance at 40 kc
Loudspeaker:
Type: Permanent magnet
Cone Dia.: 5 inch
Output Transformer Impedance: Primary, 5,000 ohms; secondary, 3.5 ohms
Microphone:
Type: Dynamic
Impedance: 30,000 ohms
Motor:
Horsepower: 1/100
Rotation: 1,600 rpm
Power Requirements: 100 w 105/120-v 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Microphone			
1	Sound Recorder-Reproducer, RD-31A/U	(USA) 6C272-7 (FSN) 5835-170-4850	10-3/8 x 12-13/16 x 13-3/4	32

REFERENCE DATA AND LITERATURE:

TM 11-2548

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.9	78

AN/PNH-type SOUND RECORDER-REPRODUCER

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-33477

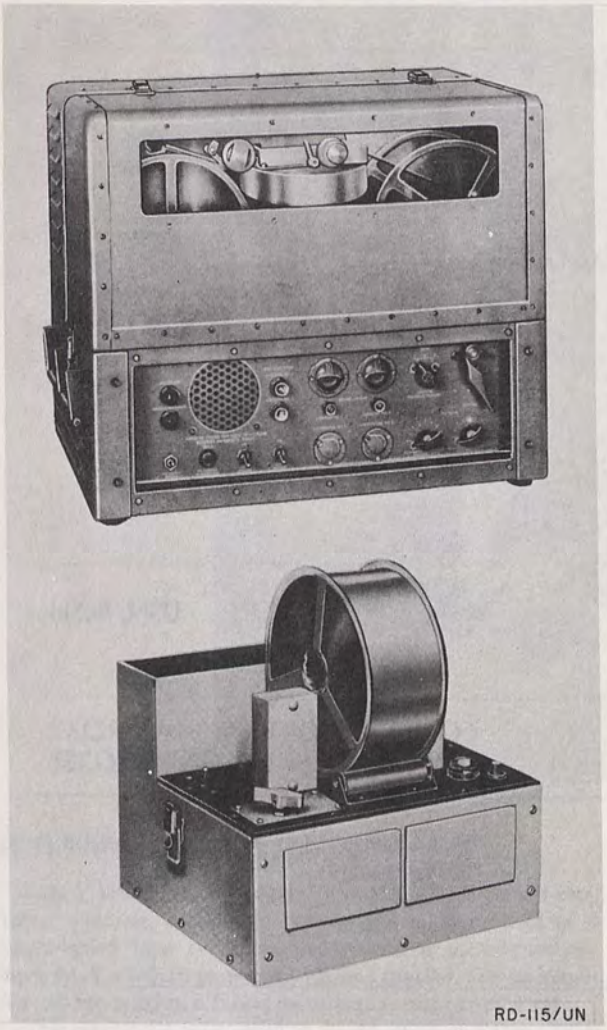
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.			

SOUND RECORDER-REPRODUCER AN/PNH-type

20 November 1958
Cognizant Serv: USN FSN: RD–115/UN, –115A/UN, –115C/UN

	USA	USN	USAF
TYPE CLASS:	--	Used by	Obs
STOCK NO:	--	--	--


RD-115/UN

FUNCTIONAL DESCRIPTION:

Sound Recorder-Reproducers RD–115/UN, RD–115A/UN, and RD–115C/UN are portable 24-hour dual channel magnetic tape recorder-reproducers designed to record and play back audio signals. They are designed primarily for continuous recording applications, such as recording ship-to-shore and plane-to-control-tower conversations.

These equipments are interchangeable. The only difference between models is in minor component parts.

The units are designed for either rack or case mounting and contain warning lamp and buzzer signals which give warning when the tape needs replenishing.

TECHNICAL CHARACTERISTICS:

Type Recorder-Reproducer: Electromagnetic
Frequency Response: ±1-1/2 db from 400 to 3,800 cps
Recording Medium: Red oxide coated paper tape, 3 inches wide by 1,136 feet long
Recording Time: 24-1/4 hours maximum continuous
Speed: 9.28 in. per minute
Amplifier Output: 2 w
Power Requirements: 125 w 115-v 60-cycle 1-phase ac

AN/PNH-type SOUND RECORDER-REPRODUCER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Demagnetizer MX–1373/UN	----------	9 x 10-7/16 x 13	34
1	Recorder-Reproducer RD–115/UN	----------	12-1/2 x 17-3/16 x 21	67-1/2

REFERENCE DATA AND LITERATURE:

NAVSHIPS 365–1978 (RD–115/UN)
NAVSHIPS 365–3063 (RD–115A/UN, –115C/UN)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	12.3	208-3/8

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL–R–17054

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
American Measuring Instruments Corp.	New York, N. Y.	NObsr–66527	$865.00
Soundscriber Corp.	New Haven, Conn.	NObsr–54469 and NObsr–59493	

SOUND RECORDER-REPRODUCER AN/PNH-type

20 November 1958
Cognizant Serv: USN FSN: RD–133/UN

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Sound Recorder-Reproducer RD–133/UN is a self-contained portable sound recorder-reproducer. It consists of a single-speed tape transport mechanism, a record-produce-erase head, a 6-inch permanent magnet speaker, and an amplifier, all mounted in a fabric covered plywood carrying case.

This equipment is designed to record sound on a thin plastic material coated with iron oxide. Provision is made for monitoring the signal. The recording can be reproduced immediately with no further processing.

Sound recordings can be made from microphone, telephone lines, phonograph, or radio with either intermittent or continuous operation.

The equipment erases old recordings automatically as a new recording is made or it can erase without impressing any new signal on the tape. It can reproduce the recorded sound repeatedly in part or in its entirety.

TECHNICAL CHARACTERISTICS:

Type: Electromagnetic
Frequency Response: 8 db from 100 to 5,000 cps
Recording Medium: Plastic tape 1/4 in. wide coated with iron oxide.
Tape Speed: 3.75 in. per second
Amplifier Output: 2.5 w
Input Impedance:
Radio or Phonograph: 20,000 ohms
Microphone: 500,000 ohms
Output Impedance:
Monitor: 3.2 ohms
External Speaker: 3.2 ohms
Input Voltage Limits:
Radio or Phonograph: 2-v maximum
Microphone: 2-v maximum
Output Level: 2.5 w
Power Requirements: 106 w 115-v 60-cycle 1-phase ac

AN/PNH-type SOUND RECORDER-REPRODUCER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Microphone	----------	2 x 2-3/4 x 3-1/4	
1	Recorder RD–133/UN	----------	12 x 16-3/8 x 18-1/8	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 365–2306

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:
Spec: MIL–R–17734
Dwg: No–242–19898

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Webster Electric Co.	Racine, Wis.	NObsr–59781	$192.00

SPEAK-O-PHONE SOUND DETECTOR AN/PNS-type

20 November 1958
Cognizant Serv: FSN: SDB

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Speak-O-Phone Sound Detector Model SDB is a portable, battery-operated, three-stage, audio amplifier. It enables the operator to listen to conversations without the knowledge of those speaking when it is possible to "plant" a microphone in the room, when a wall or panel of an adjoining room is available, by direct connection to a telephone line, or by use of induction coil tapping of a telephone line. Output signals are delivered to two separate phone jacks and to a special output jack for use with the crystal cutter of an accessory recorder. The recorder is not part of this equipment.

TECHNICAL CHARACTERISTICS:

Power Requirements: 1.5-v dc, 4.5-v dc, and 90-v dc from dry batteries

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier unit w/control panel	----------	5-1/2 x 6 x 10-1/2	4.75
2	Carbon microphone	----------	3/4 high x 2-1/4 dia	0.365
1	Carrying case	----------	8-1/4 x 11-1/2 x 14-1/2	5.75
1	Contact microphone w/cable and connector	----------	5/8 x 2 x 144	0.375
2	Headphone w/headband	----------	1/4 x 2 x 10	1.00
1	Telephone induction coil w/ cable and connector	----------	7/8 x 3-1/8 x 144	0.438
2 reels	Telephone wire	----------	600 long	1.25

REFERENCE DATA AND LITERATURE:

TM 11-2541

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/PNS-type SPEAK-O-PHONE SOUND DETECTOR

PROCUREMENT DATA

PROCURING SERVICE:
SPEC &/or DWG:

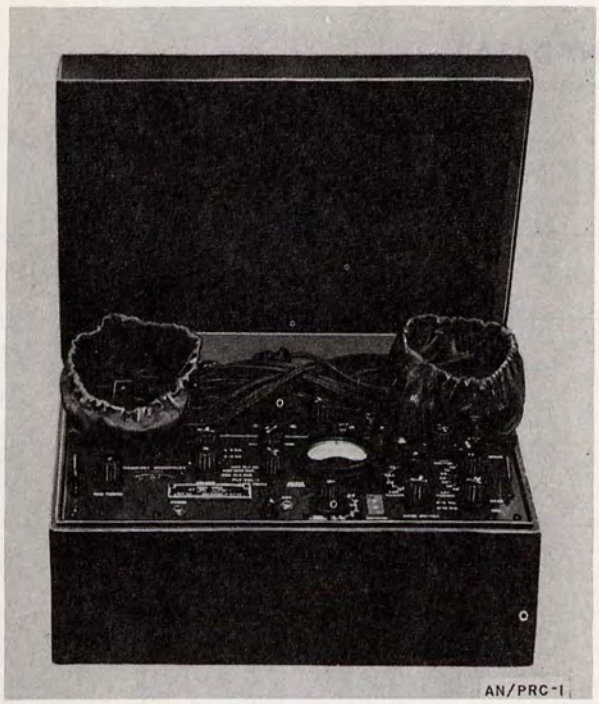
DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Speak-O-Phone	New York, N. Y.		

RADIO SET AN/PRC-1( )

1 July 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S3503–1	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/PRC–1( ) is a complete portable radio receiving and transmitting equipment, used by special forces.

It consists essentially of a receiver-transmitter and a rectifier power unit, both contained in one housing.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 12 in two bands
Type Modulation: AM
Type of Signal: Receivers voice, tone, cw; transmits only cw
Power Output: 30 w
Power Requirements: 115/150/200/220/250-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Receiver-Transmitter RT–30/PRC–1	2C5130–30.3	18 x 5-1/2 x 12	
1	Rectifier Power Unit PP–36/PRC–1	3H4698–36		

REFERENCE DATA AND LITERATURE:

TM 11–638

AN/PRC-1( ) RADIO SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2.57	76

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 271–3035

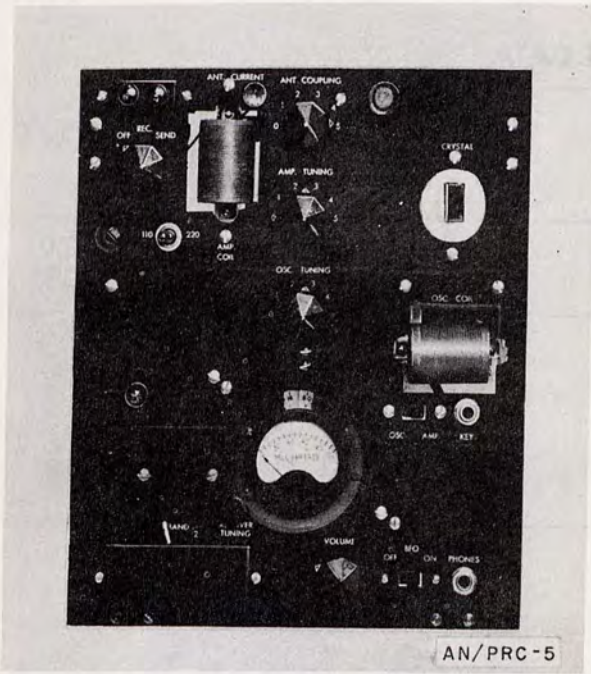
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
		2260–P–44–08	

RADIO SET AN/PRC-5

1 July 1958
Cognizant Serv: USA FSN: 5820-404-5995

	USA	USN	USAF
TYPE CLASS:	S/Std	--	--
STOCK NO:	2S3503-5	--	--



AN/PRC-5

FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-5 is a portable cw receiving and transmitting equipment, mounted in a luggage-type carrying case, used for shortwave communication over medium distances by special forces.

It consists of a transceiver composed of a radiotelegraph receiver and transmitter unit with power supply and includes a telegraph key, headset, and auxiliary items.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitter: 4 to 16 in four bands
Receiver: 4.5 to 16 in two bands
Type Modulation: None
Type of Signal: Cw
Transmitter Power Output: 10 to 16 w
Power Requirements: 110/220-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Portable case, luggage type	2Z1800.4	12-1/4 x 10-3/4 x 8-1/2	
1	Radio receiver and transmitter	----------	11 x 10 x 4-1/8	15

REFERENCE DATA AND LITERATURE:

TM 11-265

AN/PRC-5 RADIO SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1		

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/PRC-6( )

1 July 1958
Cognizant Serv: USA FSN: 5820-194-9928

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S3503-6	--	--


AN/PRC-6

FUNCTIONAL DESCRIPTION:

Radio Set AN/PRC-6( ) is the FM version of the "handie-talkie" Radio Set SCR-536 and operates in a single fixed-frequency channel selected by use of the appropriate crystal. This is low-power, short-range equipment that operates in the VHF range for line-of-sight communication by forward elements of armored, infantry, and artillery units.

This equipment consists of a light, self-contained receiver-transmitter having a built-in microphone and earphone, and provision for a loop antenna that is used for homing applications. It includes provision for connecting a conventional handset. The entire set, with battery installed, weighs 6.5 pounds.

The normal antenna is a built-in spring-steel ribbon extending from or retracting into the housing.

It operates from Battery BA-270/U (which is not supplied as part of this set) and includes the necessary crystal unit for the frequency on which the equipment is to operate.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 47.0 to 55.4
Type Modulation: FM
Type of Signal: Voice
Power Output: 0.25 w
Power Requirements: Battery BA-270/U
Transmitter: 1 amp at 1.5-v dc (1.5 w); 14 ma at 45-v dc (0.63 w); 28 ma at 90-v dc (2.52 w)
Receiver: 440 ma at 1.5-v dc (0.66 w); 13 ma at 45-v dc (0.585 w)

AN/PRC-6( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Crystal Unit CR-23/U	----------	11/32 x 23/32 x 1-1/32	0.031
1	Handset H-33C/PT	5805-163-9947	1-1/2 x 8-3/8 x 3-1/4	.875
1	Radio Receiver-Transmitter RT-196/PRC-6	5820-194-9929	14-3/4 x 4-3/4 x 4-1/4	3.5

REFERENCE DATA AND LITERATURE:

TM 11-296, TM 11-4069

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.7	7 (without battery)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10250
DESIGN COG: USA, Sig C

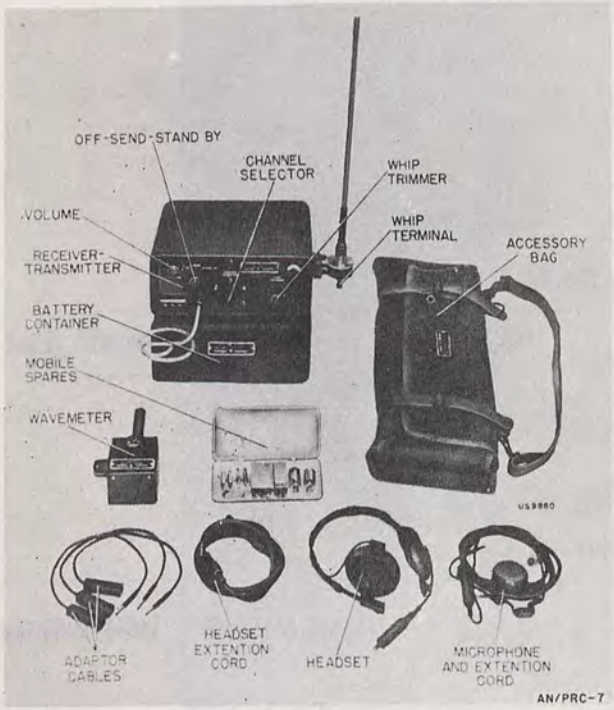
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
CBS-Columbia Manufacturing Co.	Brooklyn, N. Y.	15741-P-55-55	$104.50
Emerson Radio & Phonograph Corp.	Jersey City, N. J.	2931-P-52-55	
Ratheon Manufacturing Co.	Waltham, Mass.	3319-P-52-55	185.93
Sentinal Radio Corp.	Evansville, Ill.	2873-P-52-37	

RADIO SET AN/PRC-7(XN-1)

25 November 1958
Cognizant Serv: USN FSN:

USA	USN	USAF

TYPE CLASS: -- Used by --
STOCK NO: -- -- --



FUNCTIONAL DESCRIPTION:

Radio Set AN/PRC-7(XN-1) is a portable equipment designed for ground or vehicular use. It provides two-way radiophone communication over a 1-mile range. The set is lightweight and weatherproofed and employs subminiature components and interchangeable plug-in intermediate frequency stages.

This equipment permits rapid selection of five preset channels for both reception and transmission. Instantaneous transfer from both reception and transmission is accomplished by microphone button-controlled relays.

TECHNICAL CHARACTERISTICS:

Transmitter:
Frequency Range in mc: 2 to 12
Number of Channels: 5
Frequency Control: Crystal
Frequency Stability: 0.017% at 2 mc, 0.00567% at 12 mc
Type Emission: A3
Power Output: 0.8 w (RF average power)
Input Impedance: 100 ohms
Duty Cycle: 1 to 3 hr

Receiver:
Frequency range in mc: 2 to 15
Number of Channels: 5
Frequency Control: Crystal
Type Receiver: Superheterodyne
Intermediate Frequency: 1.6 mc
Power Output: 75 mw maximum, 25 mw average, to headphones
Output Impedance: 300 ohms
Duty Cycle: 2 to 3 hr
Features: Interchangeable plug-in IF stages

Antenna Type: 10 ft 10 in; whip
Operational Range: 1 mile
Power Requirements: One Battery B–34 connected for 6 v
Two Batteries B–35, 1-1/2 v, connected in parallel, and
Six Batteries BA–53, 45 v, connected for 135-v output

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Accessory bag, containing:	----------	6 x 16 x 5	
3	Adaptor cable			
1	Battery cable			
1	Battery container	----------	4-3/8 x 10-1/8 x 9-27/32	
1	Extension Cord 49576			
1	Headset Assembly 49507			

AN/PRC-7(XN-1) RADIO SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Microphone Assembly 51071			
1	Receiver-transmitter	----------	4-3/8 x 10-1/8 x 9-27/32	12
1	Set of spare tubes			
1	Shipping chest			
1	Wavemeter FR–20/U			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91389

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5.7	

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

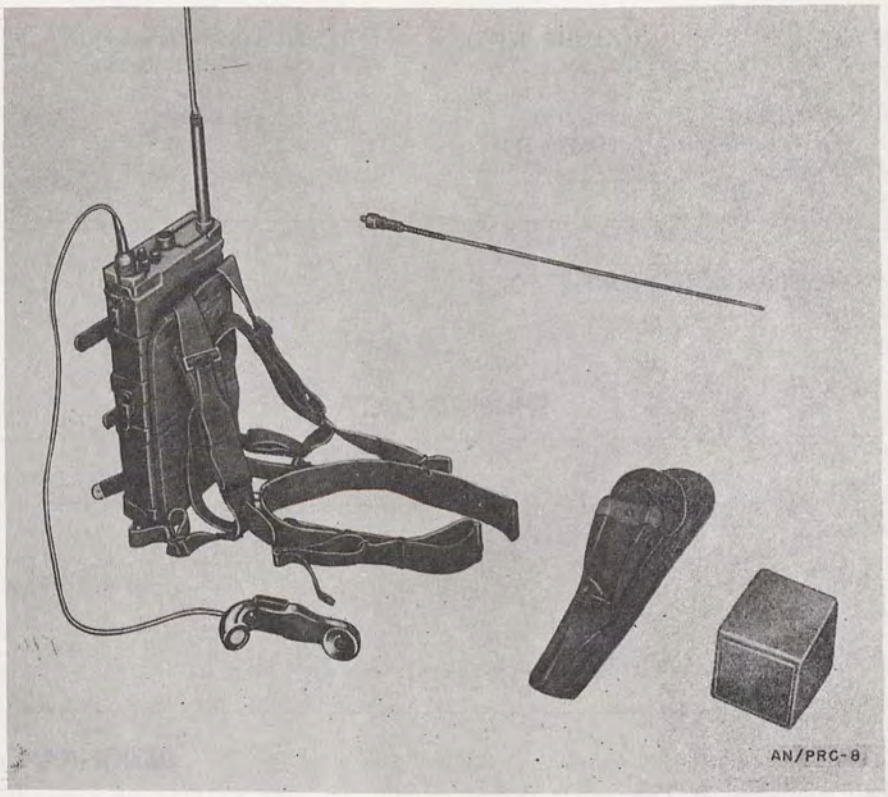
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Corp. of America, RCA Victor Division	Camden, N. J.		$392.00

RADIO SET AN/PRC-8

1 July 1958
Cognizant Serv: USA FSN: 5820-253-6129

	USA	USN	USAF
TYPE CLASS:	Std	Std	--
STOCK NO:	2S3503-8	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/PRC-8 is a portable (man-carried), low-power, FM (voice), radio transmitting and receiving equipment used for short-range, point-to-point, or radio relay communication in the frequency range assigned to armored divisions. It can also be installed in aircraft.

This equipment consists essentially of a radio transmitter-receiver equipped with a carrying harness, antenna components, and related accessories.

It can be operated by remote control and adapted for homing use by the addition of appropriate auxiliary components. The set can also be operated in a vehicle.

Two of these sets can be operated back-to-back as an unattended radio-relay station.

TECHNICAL CHARACTERISTICS:

Frequency Range in mc: 20.0 to 27.9
Type Modulation: FM
Type of Signal: Voice
Power Output: 1.2 w
Power Requirements: Battery BA-279/U (not supplied with set)

AN/PRC-8 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AT–271/PRC	2A204A–271	113 x 0.75 (diameter)	0.33
1	Antenna AT–272/PRC	2A204A–272	36.5 x 0.875 (diameter)	.5
1	Case CY–744/PRC	3B375–744	9.5 x 3 x 9.5	1.5
1	Handset H–33B/PT	2B620–33	3.5 x 3.5 x 8	.875
1	Radio Receiver-Transmitter RT–174/PRC–8	2C5130–174	9.5 x 3 x 10.5	9

REFERENCE DATA AND LITERATURE:

TM 11–612, TM 11–4065

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.85	40

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–10273B

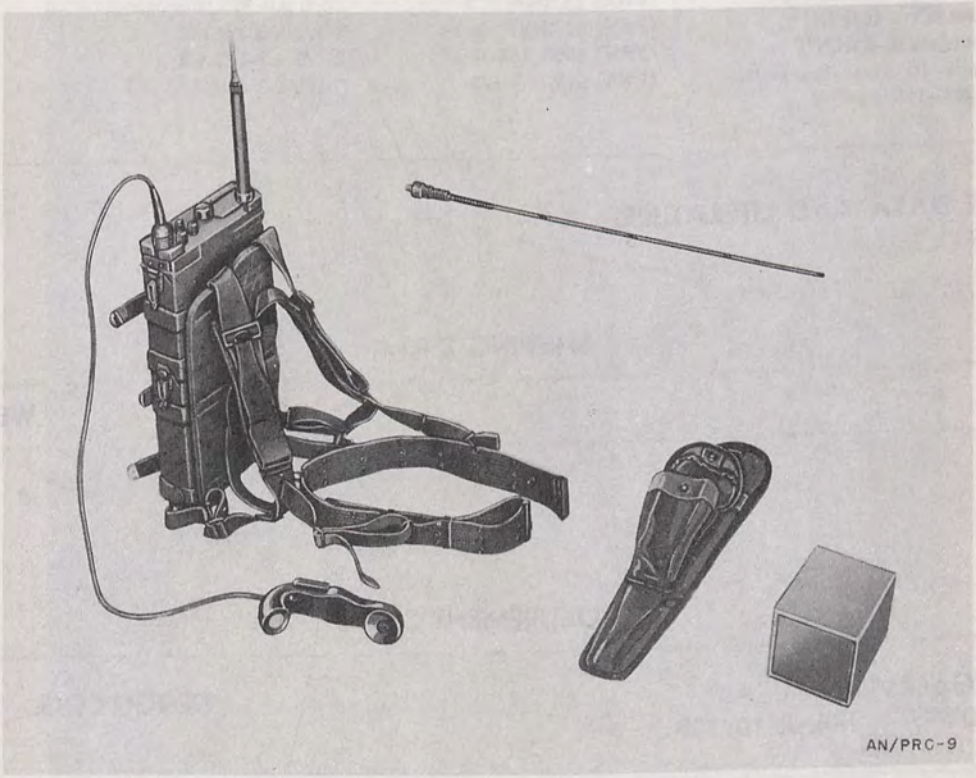
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Admiral Corp.	Chicago, Ill.	3432–P–52–55	$371.94
RCA, RCA Victor Division	New York, N. Y.	1758–P–51–37	326.37
Utility Electronics Corp.	----	23468–P–50–55	307.49
Western Electric Co. Inc.	New York, N. Y.	10575–P–55–55	218.25

RADIO SET AN/PRC-9( )

1 July 1958
Cognizant Serv: USA FSN: 5820-254-9394

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/PRC-9( ) is a portable (man-carried), low-power, FM (voice), radio transmitting and receiving equipment used for VHF, short-range, point-to-point, or radio-relay communication in the frequency range assigned to artillery units. It can also be installed and operated in aircraft or motor vehicle.

This equipment consists essentially of a radio receiver-transmitter equipped with a carrying harness, antenna components, and related accessories.

It can be operated by remote control and adapted for homing use by the addition of appropriate auxiliary components.

Two of these sets can be operated back-to-back as an unattended radio-relay station.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0–38.9
Type Modulation: FM
Type of Signal: Voice
Power Output: 1 w
Power Requirements: Battery BA-279/U not supplied with equipment)

AN/PRC-9( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT-271/PRC	(FSN) 5820-242-4967	113 x 0.75 (diameter)	0.33
1	Antenna AT-272/PRC	(USA) 2A204A-272	36.5 x 0.875 (diameter)	.5
1	Case CY-744/PRC	(FSN) 6140-243-6318	9-1/2 x 3 x 9-1/2	1.5
1	Handset H-33B/PT	(FSN) 5965-163-9947	3-1/2 x 3-1/2 x 8	0.875
1	Radio Receiver-Transmitter RT-175/PRC-9	(USA) 2C5130-175	9-1/2 x 3 x 10-1/2	9

REFERENCE DATA AND LITERATURE:

TM 11-612

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.85	40

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10273B

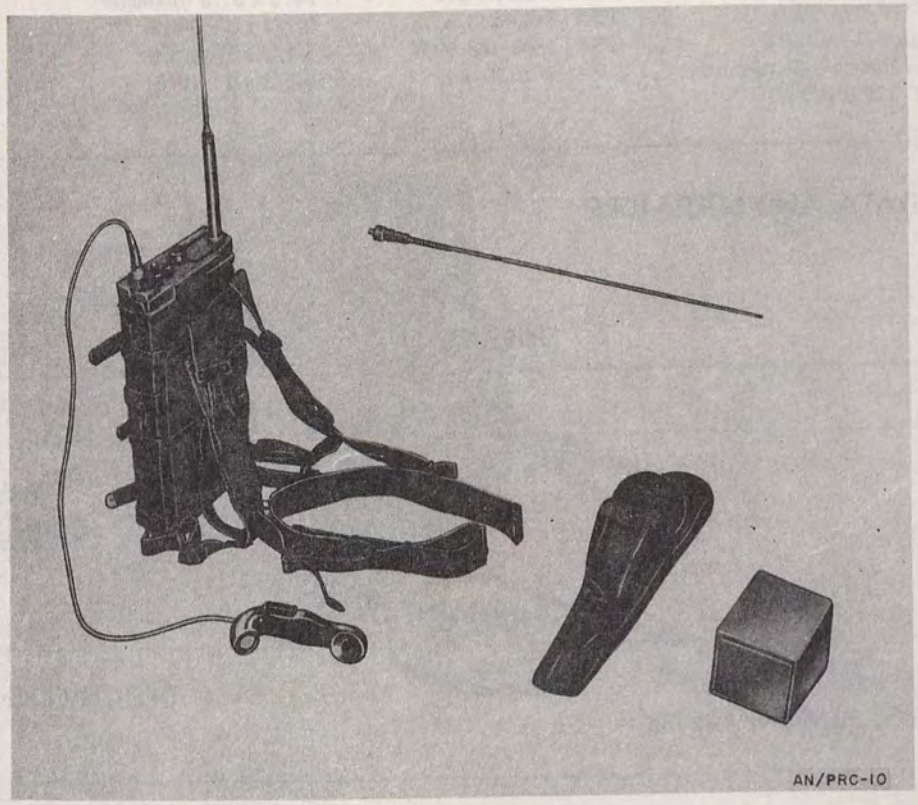
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Admiral Corp.	Chicago, Ill.	3432-P-52-55	$371.94
Motorola, Inc.	Chicago, Ill.	21582-P-56-55	292.30
RCA, RCA-Victor Division	New York, N. Y.	15178-P-52-55	513.96
Utilities Electronics Corp.	----	23469-P-50-55	307.49
Western Electric Co. Inc.	New York, N. Y.	10575-P-55-55	292.25

RADIO SET AN/PRC-10( )

1 July 1958
Cognizant Serv: USA FSN: 5820-223-5122

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Std
STOCK NO:	2S3503-10	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/PRC-10( ) is a portable (man-carried), low-power, FM (voice), radio transmitting and receiving equipment used for VHF, short-range, point-to-point, or radio-relay communication in the frequency range assigned to infantry divisions. It can also be installed and operated in aircraft or motor vehicles.

This equipment consists essentially of a radio receiver-transmitter equipped with a carrying harness, antenna components, and related accessories.

It can be operated by remote control and adapted for homing use by the addition of appropriate auxiliary components.

Two of these sets can be operated back-to-back as an unattended radio-relay station.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 38.0 to 54.9
Type Modulation: FM
Type of Signal: Voice
Power Output: 0.9 w
Power Requirements: Battery BA-279/U (not supplied with equipment)

AN/PRC-10( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT–271/PRC	(FSN) 5985–242–4967	113 x 0.75 (diameter)	0.33
1	Antenna AT–272/PRC	(USA) 2A204A–272	36.5 x 0.75 (diameter)	.5
1	Case CY–744/PRC	(FSN) 6140–243–6318	9-1/2 x 3 x 9-1/2	1.5
1	Handset H–33B/PT	(FSN) 5805–163–9947	3-1/2 x 3-1/2 x 8	.875
1	Radio Receiver-Transmitter RT–176/PRC–10	(USA) 2C5130–176	9-1/2 x 3 x 10.5	9

REFERENCE DATA AND LITERATURE:

TM 11–612

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.85	40

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–10273B

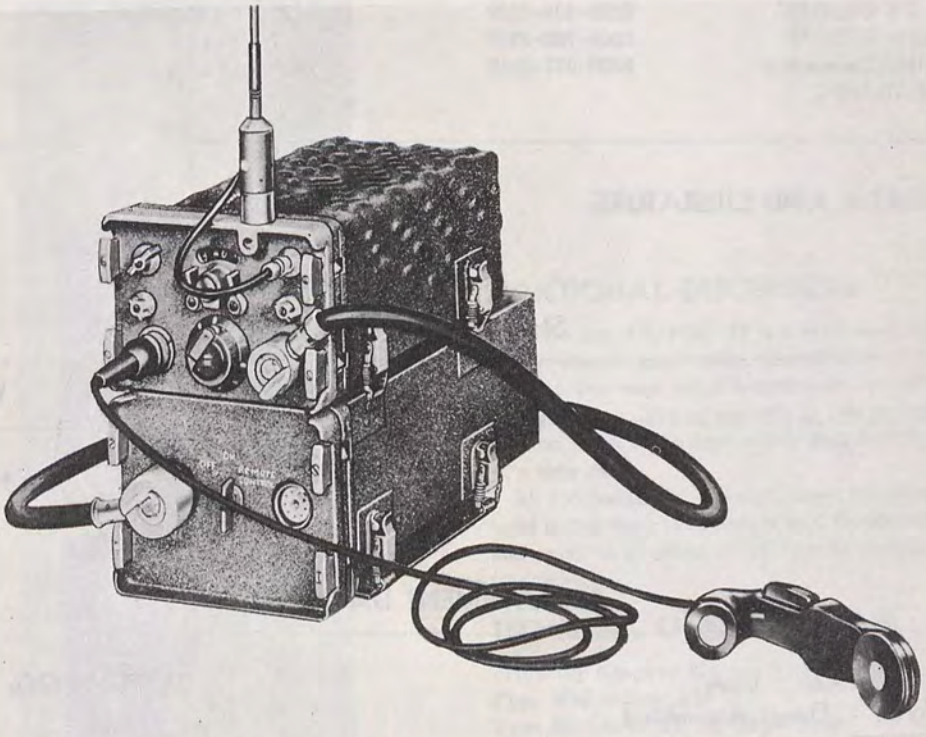
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Admiral Corp.	Chicago, Ill.	3432–P–52–55	$533.67
RCA-RCA Victor Division	New York, N. Y.	15178–P–52–55	592.78
Utility Electronics Corp.	----	23468–P–50–55	307.49

RADIO SET AN/PRC-16

1 July 1958
Cognizant Serv: USA FSN: 5820-249-6594

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S3503-16	--	--



AN/PRC-16

FUNCTIONAL DESCRIPTION:

Radio Set AN/PRC-16 is a portable, lightweight, low-power, short-range, battery operated, FM (voice) equipment for two-way ground-to-ground or ground-to-air communication in the VHF range.

This set consists of the separate, short-range, low-power receiver-transmitter component designated as set 2 when used as part of radio sets of the integrated series such as Radio Sets AN/GRC-3 through AN/GRC-8. Antenna system, battery box, handset, and accessories are included.

This equipment can be operated from a remote point over a telephone pair up to a distance of about 2 miles by means of Control Group AN/GRA-6.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 47 to 58.4
Type Modulation: FM
Type of Signal: Voice
Power Output: 0.5 w
Power Requirements: Five 1.5-v Batteries BA-403/U, one 90-v Battery BA-419/U

AN/PRC-16 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Case CY–590/GRC	5820–404–7320	5-1/2 x 8 x 15-3/4	7
1	Handset H–33/PT	5965–163–9947	3 x 2-1/16 x 3	2
1	Receiver-Transmitter RT–70/GRC	5820–537–3913	4-3/4 x 13 x 7-7/8	25

REFERENCE DATA AND LITERATURE:

TM 11–288

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	----	45

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: Depot Assembled

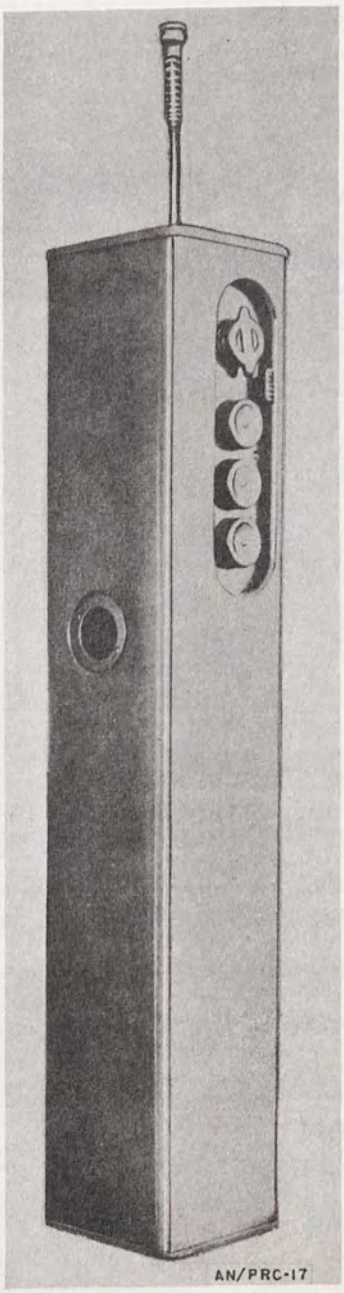
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/PRC-17

25 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/PRC–17 is a hand-held, lightweight, emergency search and rescue transmitter-receiver designed to provide two-way voice communication between a life raft and searching ships or aircraft. It also provides for the transmission of an audio tone which may be continuous or keyed at a slow rate.

All components of this equipment are contained in a watertight metal case. The receiver is of the superregenerative type and operates at either of the two frequencies selected for the transmitter.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 121.5 to 243
Type Modulation: AM
Type Emission: A2, A3 (mcw, voice)
Frequency Control: Crystal
Type Antenna: Whip
Power Output: 50 mw
Power Requirements: 1.57 w, 5.4- to 105-v, dc (from self-contained batteries) B voltage; 135 v, dc (A voltage) 1.1- to 1.34-v dc
Battery Life:
Transmitting: 20 hr
Receiving: 15 hr

AN/PRC-17 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Set AN/PRC–17	----------	14-3/4 x 2-5/8 x 2-7/8	

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL–R–7121 (Aer)

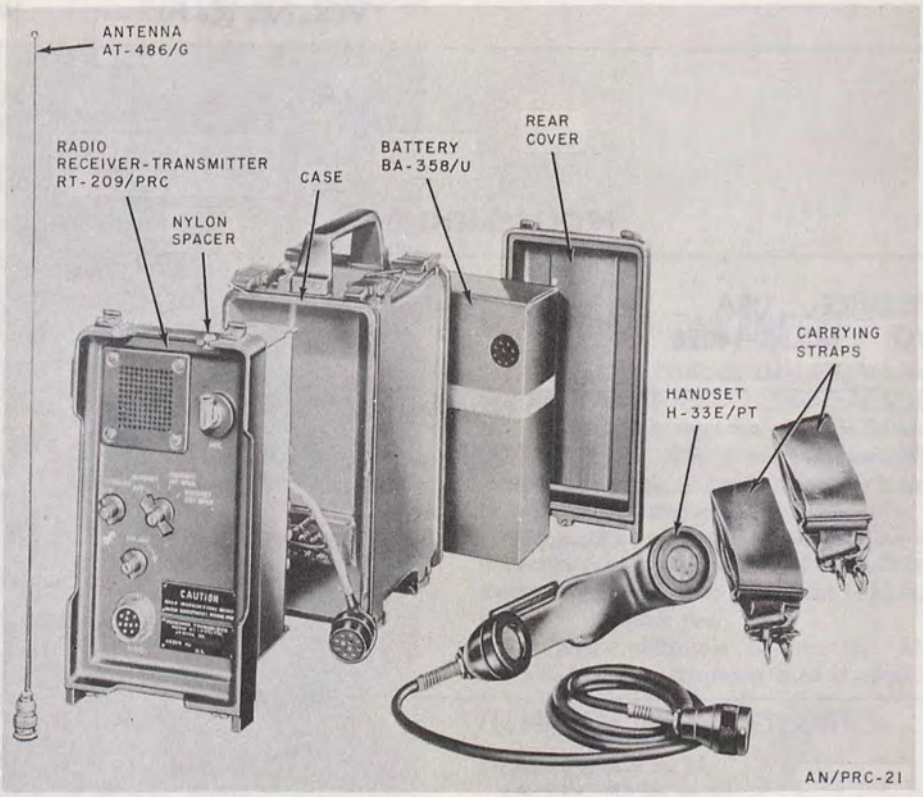
DESIGN COG: USn, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Telephonics Corp.	Huntington, N. Y.	NOas–51–216	$210.00
		NOas–52–798	210.00
		NOas–53–555, 29 April 1953	210.00
		NOas–53–1019, 13 July 1953	210.00
		NOas–10361	210.00

RADIO SET AN/PRC-21( )

1 July 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/PRC–21( ) is a low-power, portable, FM transmitter-receiver used by military police, guards, and security forces.

This equipment consists essentially of a radio transmitter-receiver, handset, antenna, and carrying straps. It is powered by a dry battery that is not supplied with the equipment.

This set is intended for nontactical purposes.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 152 to 174
Type Modulation: FM
Type of Signal: Voice
Power Output: 150 mw
Power Requirements: Battery BA–358/U

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Set AN/PRC–21( ) (Equipment consists of a single major operating assembly.)			

AN/PRC-21( ) RADIO SET

REFERENCE DATA AND LITERATURE:

TM 11-610
TO 31R2-2PRC21-11

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.69	30

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-14028

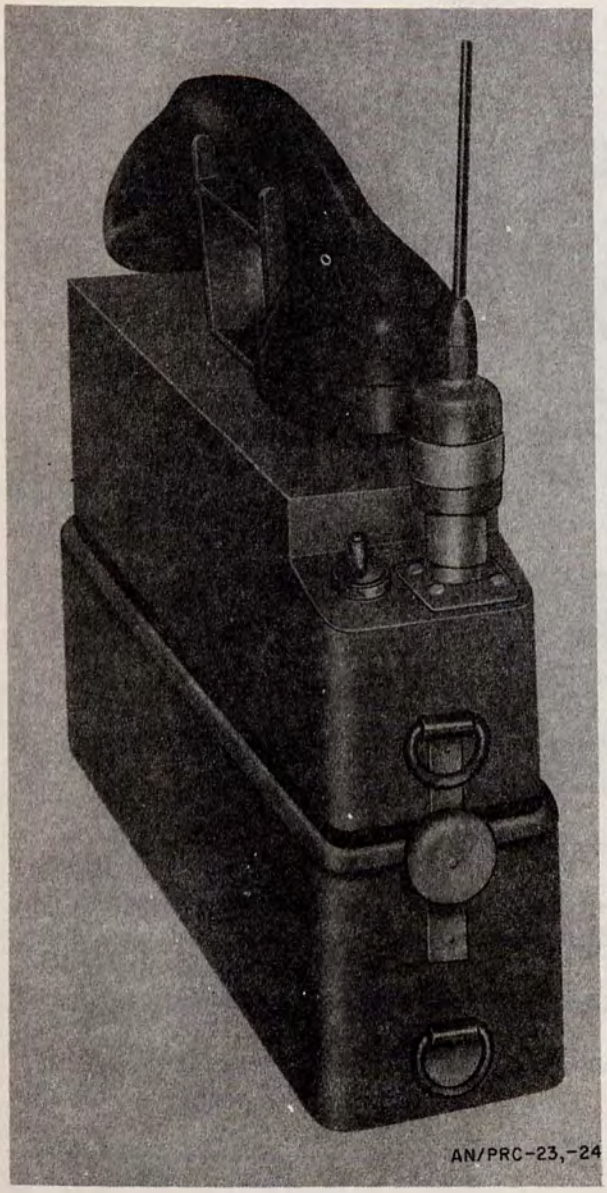
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	08709-P-55-93	$484.00

RADIO SET AN/PRC-23, 24

1 July 1958
Cognizant Serv: USA FSN: AN/PRC-23: 5820-194-9926
AN/PRC-24: 5820-194-9927

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	AN/PRC-23: 2S3503-23 AN/PRC-24: 2S3503-24	--	--



AN/PRC-23,-24

FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-23 (Motorola Model FHTR-1BLL) and Radio Set AN/PRC-24 (Motorola Model FHTR-1BH) are self-contained, short-range, single frequency, low-power, battery-operated, FM (voice) transmitting and receiving equipment capable of providing two-way communication up to 1.5 miles over average terrain.

Both sets are pretuned to the selected frequency within their respective ranges. Realinement of the individual stages of the transmitter and receiver is required to change the operating frequency of either one.

The major difference between the AN/PRC-23 and AN/PRC-24 is the frequency band in which they operate.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
AN/PRC-23: 25 to 30
AN/PRC-24: 40 to 50
Type Modulation: FM
Type of Signal: Voice, mcw
Power Output: 500 mw
Power Requirements: Six 1.5-v Batteries BA-30 and three 67.5-v Batteries BA-51; provides 6 to 8 hours continuous operation

AN/PRC-23, 24 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT–348/PRC	(FSN) 5985–221–9042		
1	Handset	(FSN) 5805–237–8047		
1	Housing			
1	Power supply chassis			
1	Transmitter-Receiver RT–235/ PRC (AN/PRC–24)	(USA) 2C 5612	12-5/8 x 3-1/8 x 12-1/2	14.9
	or			
	Transmitter Receiver RT–236/ PRC (AN/PRC–23)	(USA) 2 C 5611	12-5/8 x 3-1/8 x 12-1/2	14.9

REFERENCE DATA AND LITERATURE:

Commercial Instruction Book

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA DESIGN COG: USA, Sig C

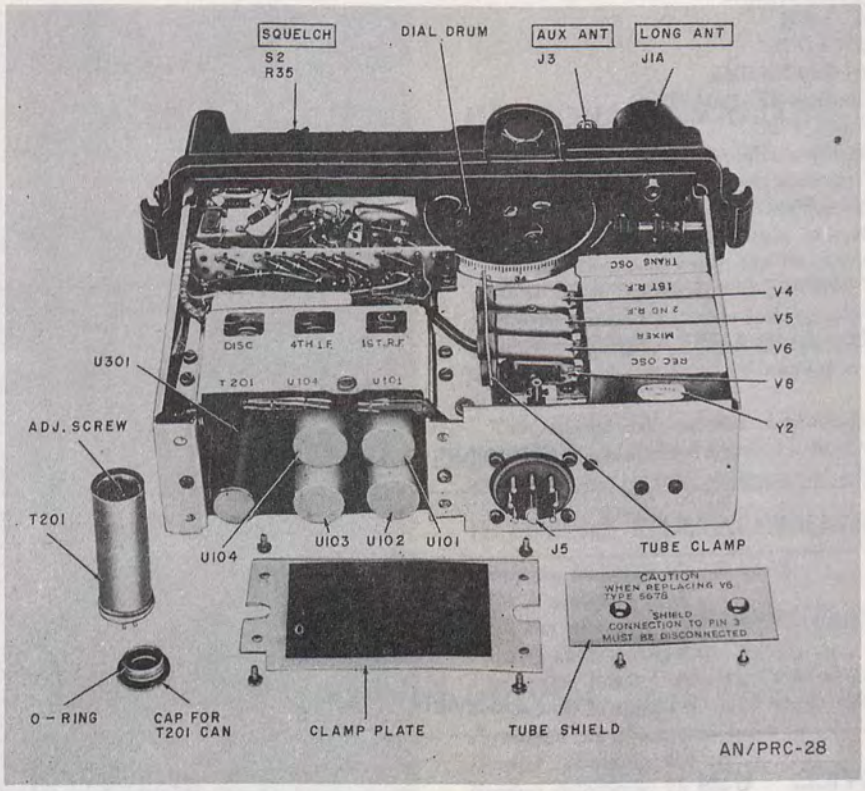
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/PRC-28

25 November 1958
Cognizant Serv: USN FSN: 5820-503-2585
5820-644-4823 (USN)

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	2S3503-28	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/PRC-28 is a portable, pack mounted, frequency modulated, transmitter and receiver designed for single channel voice operation.

This equipment obtains its operational power from Battery BA-279( )/U.

The radio set is similar to, but not interchangeable with, Radio Set AN/PRC-10( ).

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 42
Number of Channels: 1
Frequency Control: Crystal
Type Emission and Reception: Voice
Type Modulation: FM
Type of Receiver: Superheterodyne
Power Output: 0.9 w
Power Requirements: Battery BA-279( )/U

AN/PRC-28 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT–271A/PRC			
1	Antenna AT–272A/PRC			
1	Antenna Spring Section AB–129( )/PR			
1	Bag CW–216A/PR			
1	Belt, Suspenders M–1945			
1	Carrying Harness ST–120A/PRC			
1	Case CY–744A/PRC			
1	Handset H–33( )/PT			
1	Receiver-Transmitter RT–339( )/PRC–28			
1 set	Spare parts			

REFERENCE DATA AND LITERATURE:

TM 11–612
TM 11–4065A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

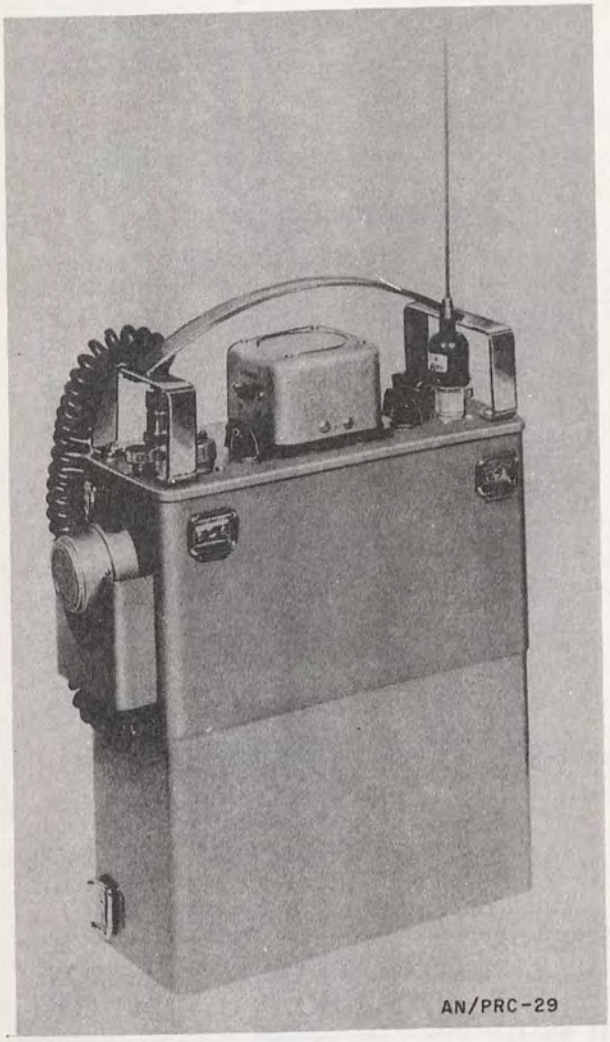
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Corp. of America, Victor Division	Camden, N. J.	MIPR–53–39364, 29 January 1953	$810.00
		MIPR–54–47060, 1954	810.00

RADIO SET AN/PRC-29

25 November 1958
Cognizant Serv: USN FSN: 5820-665-1219

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/PRC-29 is a portable, man-carried, two-way, low-power transmitting and receiving equipment. It is contained in a single housing and provides dependable communications over average terrain for a nominal distance of 1 to 2 miles. Increased range can be obtained by elevating the antenna above the surrounding terrain.

The set is used by guards and security police for communication during internal security and industrial control operations. However, it may be employed in various tactical situations.

This equipment consists essentially of a commercial Motorola Model X-11-1A radio receiver-transmitter equipped with a carrying harness, antenna, and related accessories.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 42
Type Modulation: FM
Type Emission and Reception: F3 (voice)
Type of Control: Crystal
Transmitter Radio Frequency Power Output: 750 mw
Transmitter Modulation: ±15 kc for 100%
Transmitter Audio Input: 0.3 v
Receiver Sensitivity: 0.5 mv
Receiver Selectivity: 75 db
Receiver Audio Output: 100 mw
Power Requirements: Three 45-v (Burgess-type M-30) B batteries or equivalent (p); two 1.5-v std 4F-size batteries (fil)

AN/PRC-29 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Set AN/PRC–29 consists of:	----------	5 x 12-1/8 x 15-1/8	23.7
1	Antenna P–8653–A	----------	43	
1	Battery Power Supply P–9096			
1	Carrying Case K–9099			
1	Carrying Strap Kit K–9098			
1	Channel Receiver Assembly TA–124			
1	Channel Transmitter Assembly TA120			
1	Control Panel TU135–N			
1	Microphone P–9094–A			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92759

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.5	23.7

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola Communications and Electronics Division	Chicago, Ill.	NObsr–64259, 20 September 1954	

RADIO SET AN/PRC-33

25 November 1958
Cognizant Serv: USN FSN: 5820-642-7724

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



AN/PRC-33

FUNCTIONAL DESCRIPTION:

Radio Set AN/PRC–33 is a lightweight, short-range, receiving and transmitting unit designed for two-way communication. It is supplied as a complete item to fulfill the requirements for a portable station.

The set may be hand-or back-carried. It may also be used as a semifixed unit by setting it up on the ground if so required.

This equipment consists essentially of a militarized version of Industrial Radio Corporation, Type PS–40, Model HC radio set. It is normally resistant to dust and rain. A weatherproof canvas case is used to protect the item under extreme weather conditions.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 42
Type Modulation: FM
Type Emission and Reception: F3 (voice)
Spurious Responses: 75 db
Operational Range:
Normal: 2 miles
Maximum: 10 miles
Transmitter:
Frequency Deviation: ±15 kc
Frequency Stability: ±0.005%
Spurious Radiation: 40 db
Power Output: 3/4 w
Receiver:
Sensitivity: 0.5 mv
Selectivity: 75 db ±8 kc
Audio Output: 0.1 w
Power Requirements: 1.5-v dc (fil); 45-v dc; 135-v dc (battery operated)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT–673/PRC–33			
3	Battery, Burgess B, No. M39			
1	Battery, Burgess A, No. 8F			
1	Case, Receiver-Transmitter CY–1916/PRC–33	----------	4-1/2 x 10 x 11-1/2	15
1	Microphone			
1	Radio Receiver-Transmitter RT–359/PRC–33			

AN/PRC-33 RADIO SET

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92651

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Industrial Radio Corp.	Chicago, Ill.	NObsr-64749, 14 September 1955	

RADIO SET AN/PRC-37

25 November 1958
Cognizant Serv: USAF FSN: 5820–

	USA	USN	USAF
TYPE CLASS:	--	--	Tent-Std
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/PRC–37 is a portable, lightweight communication unit generally used by air-police and air-rescue teams. It is a single band, transistorized set with an operational range of 70 to 80 miles at an 8,000-foot altitude in air-rescue operations.

This equipment essentially replaces Radio Set AN/PRC–21.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 144 to 174
Number of Bands: 1
Type Modulation: FM
Type Emission: F3 (voice)
Power Output: 1 w (maximum)
Power Requirements: 6- or 12-v battery (rechargeable)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna			
1	Battery (rechargeable)			
1	Carry strap			
1	Case			
1	Loudspeaker			
1	Microphone			
1	Power supply			
1	Radio receiver			
1	Radio transmitter			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/PRC-37 RADIO SET

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TRANSMITTING AND RECEIVING EQUIPMENT AN/PRC-type

3 December 1958
Cognizant Serv: USN FSN: MAB

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–Q–176014–200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting and Receiving Equipment MAB is an ultraportable voice communication equipment designed as a single-frequency, crystal-controlled, amplitude-modulated link between paratroop forces. The equipment is also suitable for reconnaissance of outpost communications. The transmitter has no manual tuning knob but is pretuned by means of a screwdriver control.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2.3 to 4.5 (preset to one frequency)
Power Output: 0.2 w
Effective Range: 1 mile over average terrain
Power Requirements: Battery Pack 19027–A; or Lead-Acid Storage Battery 19046 with Vibrator Power Unit 20221

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly 66081	----------	15-1/8 high (collapsed); 85 high (extended)	1
1	Battery Pack 19027–A	----------	6-1/2 x 3-5/8 x 1-13/16	2
1	Case 10162	----------	9 x 3 x 3	
1	Headset Assembly 49214	----------	----------	.25
1	Microphone and Cover Assembly 51048	----------	----------	1
1	Power Supply Vibrator 20211	----------	6-9/16 x 3-11/16 x 1-7/8	
1	Storage Battery 19046	----------	2-3/8 x 1-25/32 x 3-9/16	
1	Transmitter-Receiver 43045, including battery, power unit, and case	----------	6-1/4 x 3-9/16 x 1-13/16	1.25

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95121

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.2	9.7

AN/PRC-type RADIO TRANSMITTING AND RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuSI

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COS
Communications Co., Inc.	Coral Gables, Fla.	NXss-14439	$10(

PORTABLE VHF RADIO TRANSMITTING AND RECEIVING EQUIPMENT AN/PRC-type

8 December 1958
Cognizant Serv: USN FSN: MAW, MAW–1

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



MAW

FUNCTIONAL DESCRIPTION:

Portable VHF Radio Transmitting and Receiving Equipment MAW or MAW–1 is a low-power, very-high-frequency pack-type communication set used in ground-to-air liaison, ship, or shore based emergency communication. The entire equipment, including accessories, is contained in a portable submersion-proof case. It is capable of modulated continuous wave and voice transmission and reception on any of 10 preset crystal-controlled channels.

This equipment is powered by two 2-volt storage batteries and a vibrator-type power pack. The batteries are of the dry-charged type, and 24 ounces of 1.265 specific gravity sulfuric acid is required. Battery charging can be accomplished by connection to a 6-volt storage battery or other source of low voltage dc power.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 115 to 156
Type of Modulation: AM
Type of Signal: Voice, mcw
Power Output:
Transmitter: 0.7 w
Receiver: 0.025 w into 600-ohm load
Power Requirements:
Transmitter: 135-v dc
Receiver: 100-v dc
Filament: 1.5- and 3-v dc

AN/PRC-type PORTABLE VHF RADIO TRANSMITTING AND RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For MAW:			
1	Radio Transmitter-Receiver NT–43069 including battery assembly		5-3/8 x 14-1/2 x 17-15/16	42
2	Antenna Assembly NT–66150		1-1/2 x 1-1/2 x 19	.75
1	Shipping Chest NT–10543		12-3/4 x 16-1/2 x 25	35.6
	For MAW–1:			
1	Radio Transmitter-Receiver NT–43069A including battery assembly		5-3/8 x 14-1/2 x 18	42
2	Antenna Assembly NT–66150		1-1/2 x 1-1/2 x 19	.75
1	Shipping Chest NT–10543		12-3/4 x 16-1/2 x 25	35.6

REFERENCE DATA AND LITERATURE:

MAW: NAVSHIPS 900734
MAW–1: NAVSHIPS 91529(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For MAW:		
1	6.54	137
For MAW–1:		
1	7.07	178

PROCUREMENT DATA

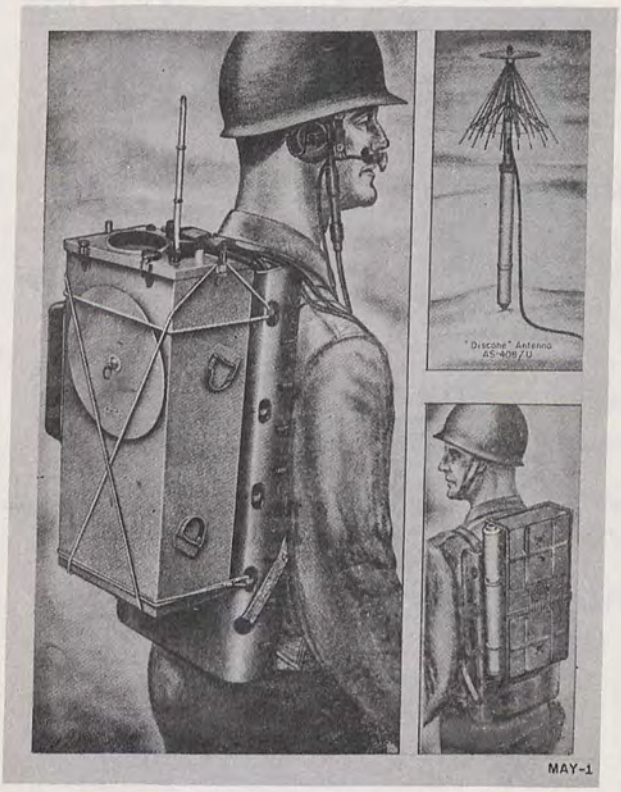
PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Howard Radio Co.	Chicago, Ill.	NXsr–77870	$1/600 (MAW)
Hoffman Radio Corp.	Los Angeles, Calif.	NObsr–52170, 15 December 1950)	1,750 (MAW–1)

PORTABLE RADIO TRANSMITTING AND RECEIVING EQUIPMENT AN/PRC-type

8 December 1958
Cognizant Serv: USN FSN: MAY, MAY–1

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



MAY–1

FUNCTIONAL DESCRIPTION:

Portable Radio Transmitting and Receiving Equipment MAY and MAY–1 are general service, am, low-power VHF/UHF transmitter-receiver equipments designed for pack-board operation in the field.

Four preset crystal-controlled channels are provided for the transmitter receiver. It is designed for use with a collapsible broad-band antenna of the ground-plane type, but will operate with a collapsible whip-type array.

TECHNICAL CHARACTERISTICS:

Frequency Range: 225–390 mc
Type of Modulation: AM
Type of Signal: Mcw, voice
Power Output:
Transmitter: 1 w into 50 ohm load
Receiver: 25 mw into 300 ohm load
Power Requirements: Self-contained 6-v dc lead-acid storage battery capable of 4 hours continuous operation at a duty cycle of 3 to 1

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transmitter-Receiver NT–43071 (MAY), or NT–43071–A (MAY–1)	----------	10 x 13-1/8 x 23-13/16	44
2	Discone Antenna AS–408/U	----------	2-5/16 dia x 20-9/16 (folded) 17-1/2 x 46 (fully extended)	2.75
1	Auxiliary Battery Pack NT–19062	----------	5-1/2 x 11-7/8 x 20-5/8	42

AN/PRC-type PORTABLE RADIO TRANSMITTING AND RECEIVING EQUIPMENT

REFERENCE DATA AND LITERATURE:

MAY: NAVSHIPS 91392
MAY–1: NAVSHIPS 91792

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	12.45	252

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

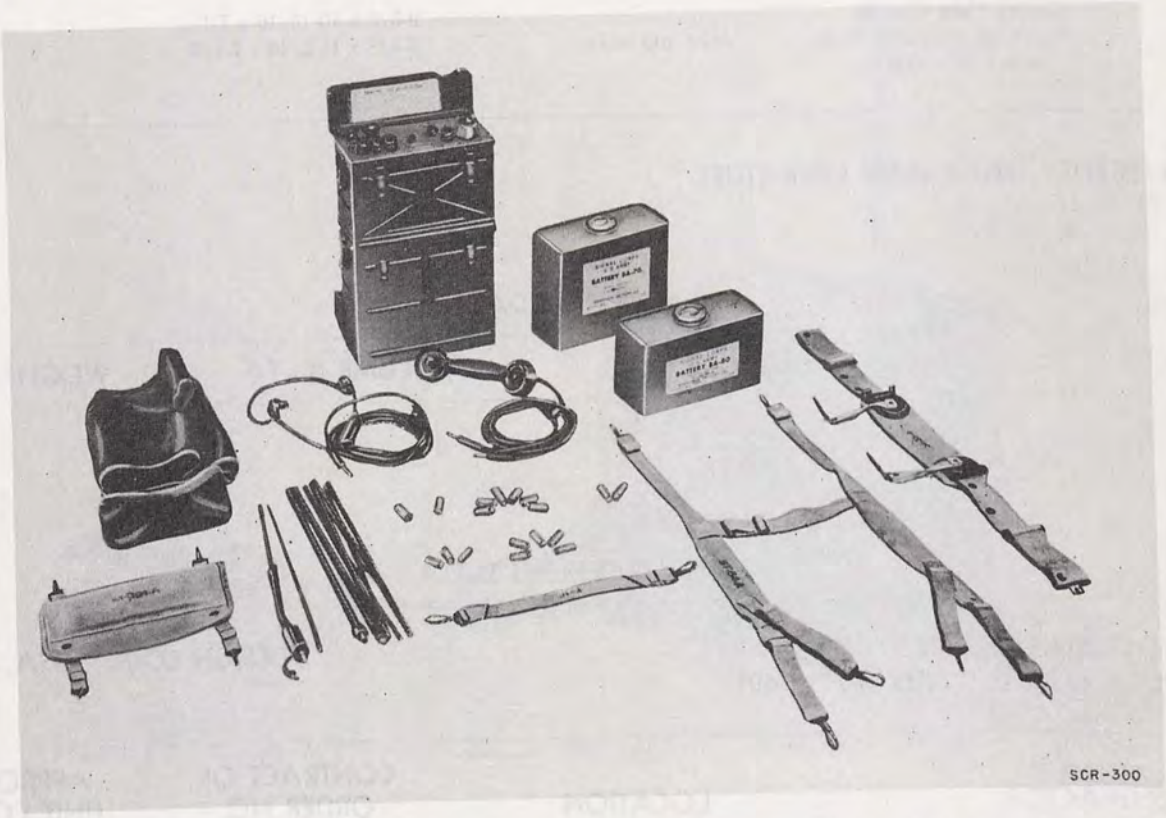
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Raytheon Manufacturing Co.	Waltham, Mass.	NObsr–43097 (MAY and MAY–1); NObsr–63480 (MAY–1); NXsr–77830 (MAY–1)	$2,850.00

RADIO SET AN/PRC-type

1 July 1958
Cognizant Serv: USA FSN: 5820-186-9200

SCR-300

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	2S300	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-300 is a portable, short-range, low-power, FM (voice) transmitting and receiving equipment used for communication by foot troops.

This equipment consists of a transmitter-receiver contained in a metal housing, the lower portion of which is the battery compartment, and includes a flexible, whip-type antenna. It may be operated on the ground or while being carried by the operator or a "bearer" and may be installed in aircraft or vehicles. A handset with a press-to-talk switch is included but the equipment can be operated by means of headphones and microphone.

The vehicular version of this equipment is Radio Set AN/VRC-3.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 40 to 48
Type Modulation: FM
Type of Signal: Voice
Power Output: 0.3 w
Power Requirements: Battery BA-80

AN/PRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Battery Case CS–139	----------	9-3/8 x 10-15/16 x 7-1/4	3.66
1	Radio Receiver and Transmitter BC–1000	5820–196–9042	5-5/8 x 11-5/16 x 7-1/8	13

REFERENCE DATA AND LITERATURE:

TM 11–242

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3	44.5

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 271–1601

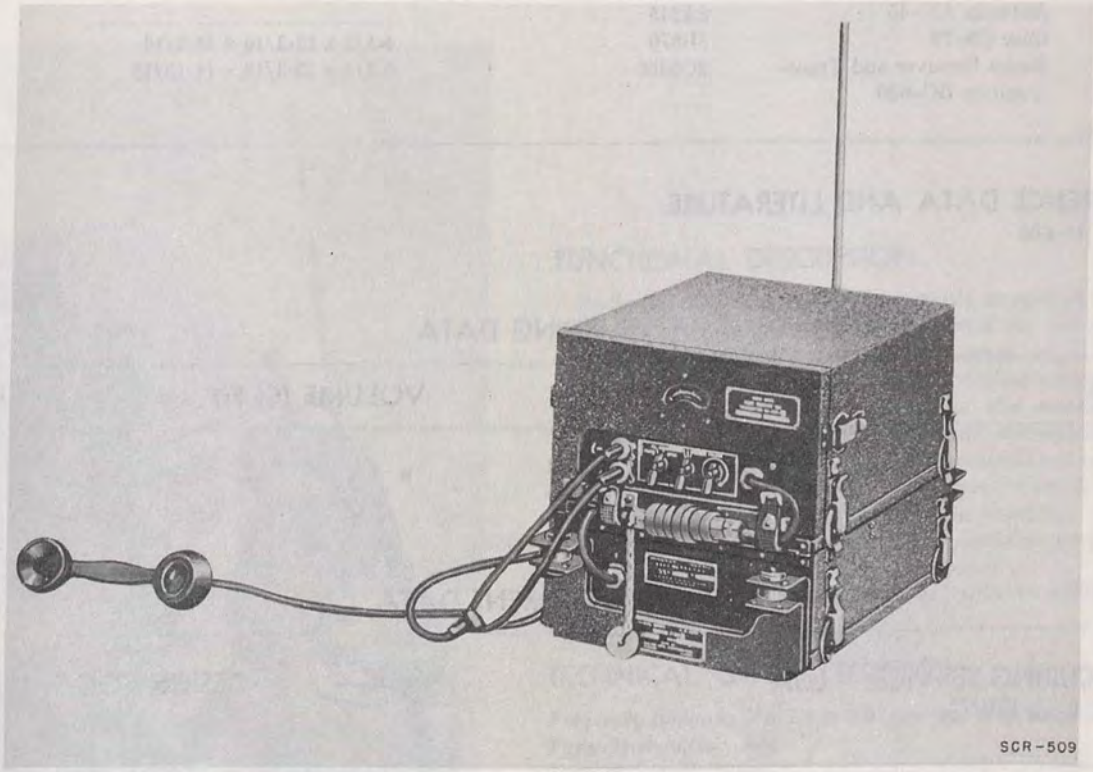
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Philco Corp. (U.S. Marine Corps) (Bureau of Ships)	Philadelphia, Pa. ----	29316–P–44–01 R–54–0363–SC–43	$186.37

RADIO SET AN/PRC-type

1 July 1958
Cognizant Serv: USA FSN: 5820-193-7119 SCR-509-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	2S509	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-509-( ) is a portable, short-range, low-power, FM (voice only), radio receiving and transmitting equipment used by armored units. The set is designed for operation on the ground but can be installed in a vehicle.

This equipment consists of a receiver-transmitter, a metal case containing the batteries, an antenna, and related accessories. The receiver-transmitter is mounted on the battery case by means of trunk-type clasps. It provides 80 crystal-controlled channels spaced 100 kc apart, two of which can be preset.

It can be operated from a remote point over a telephone pair by means of standard remote control apparatus.

This set, when installed in a vehicle (with appropriate antenna and power supply) is designated as Radio Set SCR-510.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9
Type Modulation: FM
Type of Signal: Voice
Power Output: 1.8 w
Power Requirements: Battery BA-39, Battery BA-40, and Battery BA-41

AN/PRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AN–45	2A245	----------	0.63
1	Case CS–79	3B879	4-1/2 x 13-3/16 x 15-9/16	10
1	Radio Receiver and Transmitter BC–620	2C5360	6-3/4 x 13-3/16 x 14-15/16	27.20

REFERENCE DATA AND LITERATURE:

TM 11–605

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	9	210

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/PRC-type SCR-536

1 July 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	2S536	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR–536 is a highly portable, hand-held, short-range, transmitting and receiving equipment for AM (voice) communication by foot-troops in forward areas.

This equipment consists of a crystal-controlled transmitter-receiver contained in a metal housing that also contains the batteries and in which the earphone and microphone are assembled. The set is turned on or off by extending or retracting the telescoping antenna that is built into the set. A press-to-talk switch is mounted on the side of the housing.

This set can operate on one of 50 available frequency channels, any one of which can be preselected.

This equipment has been replaced by Radio Set AN/PRC–6.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 3.5 to 6.0 (any one of 50 channels)
Type Modulation: AM
Type of Signal: Voice
Power Output: 0.02 w
Power Requirements: 1.5 v dc from Battery BA–37; 103.5 v from Battery BA–38

AN/PRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Radio Set SCR–536	2S536		
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11–235

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.6	17

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: (USA) 71–1053

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Electrical Research Laboratories, Inc.	Birmingham, Mich.	8259–P–45–01	$67.98
Galvin Manufacturing Corp.	Philadelphia, Pa.	10531–P–45–01	64.48

RADIO SET AN/PRC-type

1 July 1958
Cognizant Serv: USA FSN: 5820-223-2493 SCR-593-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S593.1-V12	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-593-( ) is a portable, light weight, AM (voice), radio receiving equipment used for air-warning, patrols, and similar applications.

This equipment consists of a push-button controlled receiver that operates on four-preselected channels and has a rechargeable 2-volt battery. In portable applications, the telescoping antenna and associated lead-in, form a harness by which the set can be carried slung from the shoulder.

In vehicular applications, a shock mounting is provided.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 6
Type Modulation: AM
Type of Signal: Voice
Power Requirements: 2-v dc from Storage Battery BB-54-A.

AN/PRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AN–75–A	2A275–75	(Extended) 84 (Collapsed) 12	4 4
1	Battery BB–54–A	3B54	5-7/32 x 3-27/32 x 3	4.77
1	Mounting FT–338–A	----------	----------	5.77
1	Radio Receiver BC–728–A	2C41728	11-9/16 x 8-3/8 x 5-5/8	15

REFERENCE DATA AND LITERATURE:

TM 11–859

SHIPPING DATA (DOMESTIC PACK)

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3	63

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–1527

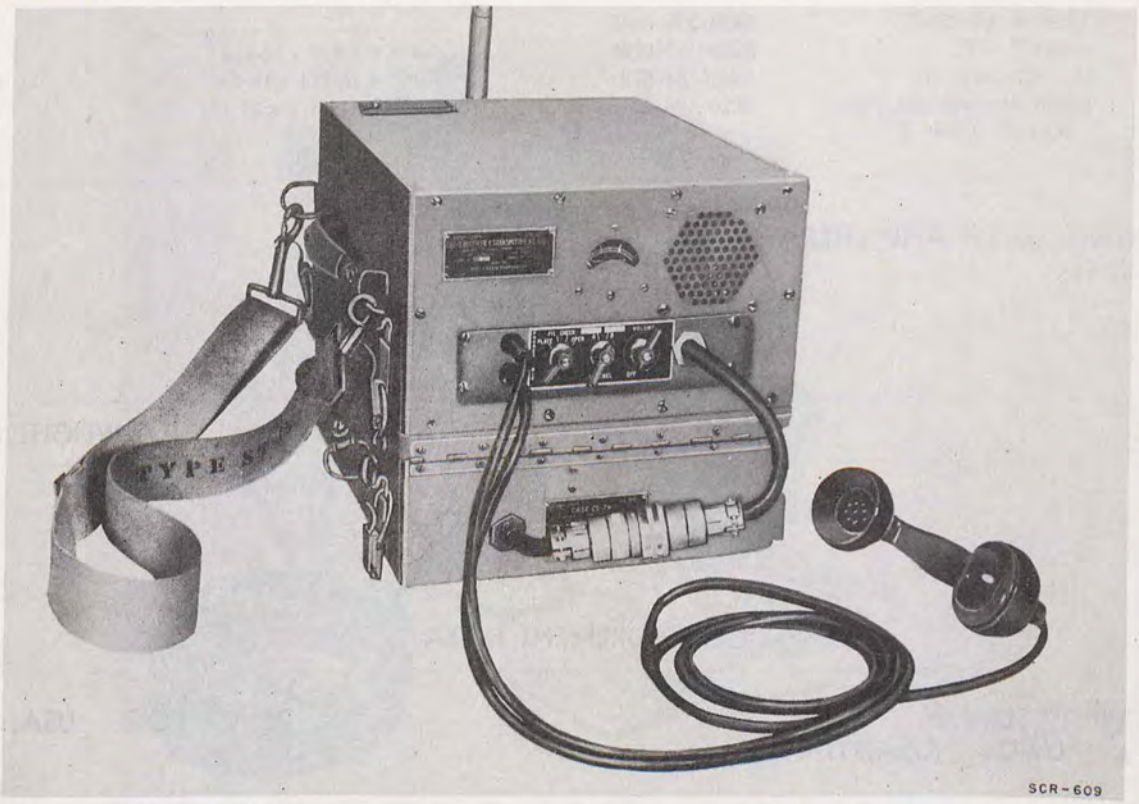
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/PRC-type

1 July 1958
Cognizant Serv: USA FSN: 5820-164-5831 SCR-609-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S609	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-609-( ) is a transportable, low-power, short-range, FM (voice), transmitting and receiving equipment used by artillery units.

This equipment consists essentially of a receiver-transmitter component that derives its power from a set of dry batteries contained within a case to which it is attached by means of trunk-type clasps. Antenna, handset, and related accessories are included.

It provides 120 FM channels spaced 100 kc apart, two of which can be preset in the field. This set can be operated by means of standard remote control equipment.

Radio Set SCR-609 can be operated in a vehicle by means of a power-supply unit that derives its power from the storage battery of the vehicle in which the equipment is installed When so arranged the equipment is identical with Radio Set SCR-610 (AN/VRC-type).

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9
Type Modulation: FM
Type of Signal: Voice
Power Output: 1.3 w
Power Requirements:
Transmitting: Battery BA-39 and Battery BA-40
Receiving: Battery BA-40
Internal Bias: Battery BA-41

AN/PRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AN–29–C	5820–230–5445	----------	2
1	Case CS–137	5955–497–9739	4-3/8 x 4-5/8 x 12-1/2	6.45
1	Case CS–79–( )	5820–164–8784	6-1/2 x 15-1/4 x 18-1/4	14.94
1	Radio Receiver and Transmitter BC–659–J	5820–196–1715	11-7/8 x 16-3/8 x 21-1/2	35.13

REFERENCE DATA AND LITERATURE:

TM 11–615

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	7.4	137.5

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA)271–1318

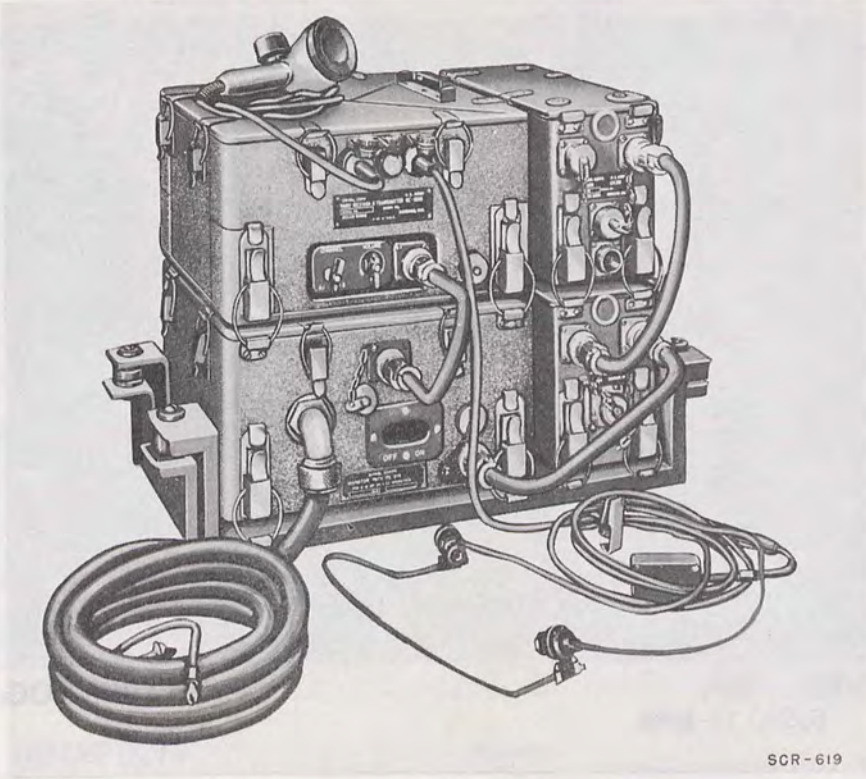
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/PRC-type

1 July 1958
Cognizant Serv: USA FSN: 5820-192-7114 SCR-619

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S619/6-12-24	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-619 is a pack and vehicular, short-range, FM radiotelephone equipment used for communication in the VHF band by field artillery units in battery fire control applications.

This equipment consists of a crystal-controlled receiver-transmitter operating in 120 frequency channels spaced 100 kc apart, two of which are preset. A battery box, dynamotor, and battery charger are included.

This set uses a whip-type antenna and can be removed from the vehicle in which it is installed for operation from the ground.

It is powered by the vehicular storage battery or by dry batteries contained in the battery box.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9
Type Modulation: FM
Type of Signal: Voice
Power Output: 1.5 w
Power Requirements: 6 amp at 6-v dc; 3.5 amp at 12-v dc; or 24-v dc

AN/PRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Battery Box CY–740/PRC	6140–164–8787	5-3/4 x 10-1/4 x 11	9
1	Battery Charger PE–219	6130–222–6198	6-11/32 x 12-1/8 x 12-5/16	25
1	Mast Base MP–74	5985–221–5560	1–3/8 W x 14-1/8 L	.53
1	Mounting FT–506	5820–221–5511	10-3/16 x 4-11/16 x 21-3/16	12.25
1	Receiver-Transmitter BC–1335	5820–196–1708	6-21/32 x 12-1/2 x 13-9/32	22.75

REFERENCE DATA AND LITERATURE:

TM 11–619

SHIPPING DATA (DOMESTIC PACK)

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	16.1	366

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–3096

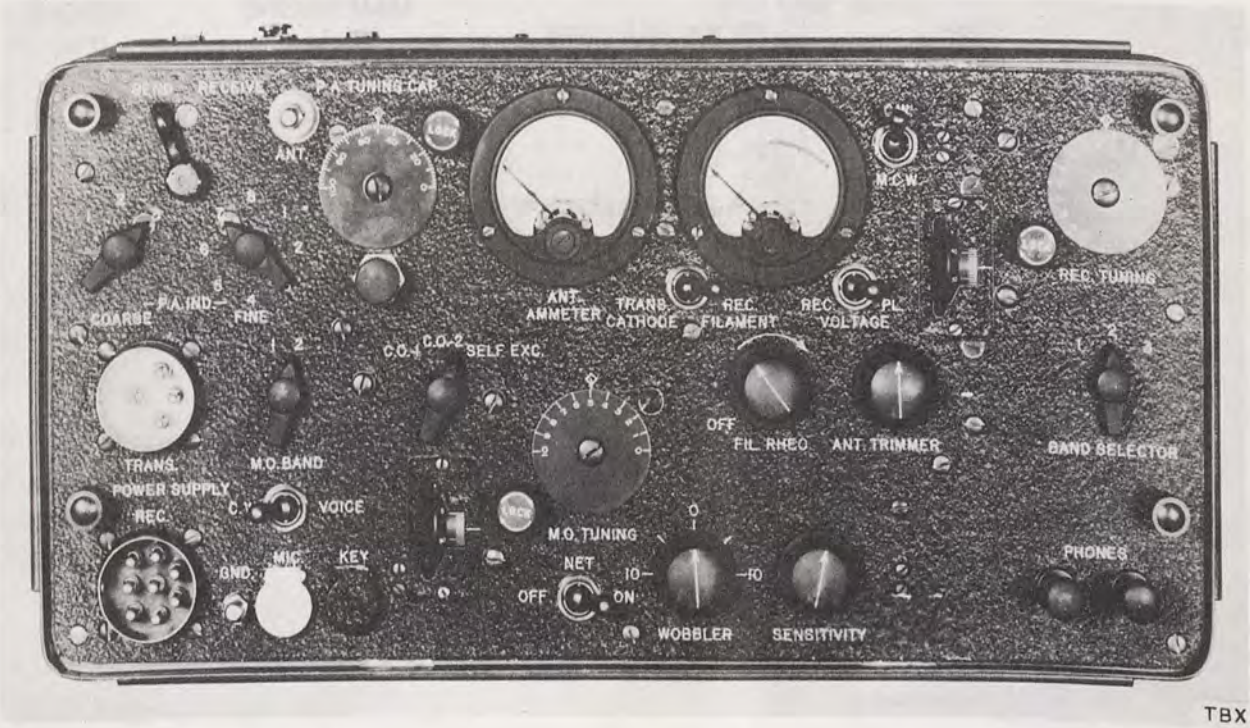
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Rauland Corp.	Chicago, Ill.	2217–P–48	$1,223.63

PORTABLE RADIO AND RECEIVING EQUIPMENT AN/PRC-type

4 December 1958
Cognizant Serv: USN FSN: TBX

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–Q–316995–200	--



TBX

FUNCTIONAL DESCRIPTION:

Portable Radio and Receiving Equipment TBX may be used for ship or shore communication with similar equipment and other units of the Navy communication system at ranges of approximately 30 miles for continuous-wave transmission and 15 miles for voice transmission.

The TBX series equipments are similar electrically and mechanically except that the TBX–5 through –8, and all the "a" equipments such as TBX–a, TBX–2a, etc., can operate at slightly higher frequencies.

The TBX series replaces the Radio Transmitting and Receiving Equipments TBO series.

TECHNICAL CHARACTERISTICS:

Transmitter:
Frequency: 2,000 to 4,525 kc
Frequency Control: Master oscillator and crystal
Type of Signal: Cw, voice
Power Output:
Cw: 9 w
Voice: 3 w

Receiver:
Frequency: 2,000 to 8,000 kc
Frequency Control: Master oscillator and crystal
Type: Superheterodyne
Type of Signal: Cw, mcw, voice
Output Impedance: 600 ohms

Antenna Type: 7 section, 25-foot vertical whip; or 30-foot single-wire L-type

Power Requirements:
Standard:
Transmitter: Hand-driven generator
Receiver: Battery pack
Optional:
Transmitter:
EF Series Gasoline Engine-Driven Generator Equipment
EG Series AC Motor Generator Equipment, 115-v 60-cycle 1-phase ac
EH Series DC Motor Generator Equipment, 115-v dc
EJ Series Dynamotor Equipment, 12-v dc

AN/PRC-type PORTABLE RADIO AND RECEIVING EQUIPMENT

Receiver:
EL Series Auxiliary Rectifier Power Equipment, 115-v 60-cycle 1-phase ac
EM Series Auxiliary Dynamotor Equipment, 6-v dc
EN Series Auxiliary Dynamotor Equipment, 12-v dc
EO Series Auxiliary Dynamotor Equipment, 24-v dc
EP Series Auxiliary Dynamotor Equipment, 32-v dc
EQ Series Auxiliary Dynamotor Equipment, 110-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AC Motor Generator Equipment EG Series (Supplied by request)		7-19/32 x 8-7/16 x 23-5/16	134.2
1	Antenna Assembly			7.5
1	Auxiliary Dynamotor Equipment EM Series 6-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EM Series 12-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EO Series 24-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EP Series 32-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EQ Series 110-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Rectifier Power Equipment EL Series 115-v ac (May be supplied instead of dry battery)		9-3/4 x 9-1/4 x 8-7/8	19
7	Batteries			
	(2) Type 19010		4-5/16 x 2-5/8 x 2-5/8	
	(3) Type 19005		6-5/8 x 2-11/16 x 4-1/4	
	(2) Type 19011		2-13/16 x 7/8 x 4-1/16	
1	DC Motor Generator Equipment EH Series (Supplied by request)		7-19/32 x 8-7/16 x 23-5/16	134.2
1	Dynamotor Equipment EJ Series (Supplied by request)		6-13/16 x 9-1/4 x 7-21/32	20
1	Gasoline Engine-Driven Generator Equipment EF Series (Supplied by request)			60.5
1	Generator, Hand- or Engine-Driven 21263A		14-1/8 x 19-1/2 x 6-11/32	22.3
1	Shipping Chest for Complete Basic TBX 10017A		17-3/4 x 49-3/4 x 18-3/8	82
1	Transmitter-Receiver Unit 43005		8-1/2 x 15-53/64 x 10	29

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	17.7	355

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	TCG–34067, 25 Nov 1941 TCG–34107, 24 Nov 1941	$1,100.00

PORTABLE RADIO AND RECEIVING EQUIPMENT AN/PRC-type

4 December 1958
Cognizant Serv: USN FSN: TBX–1

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–Q–316996–200 (Navy)	--

(See Illustration TBX p. 1039)

FUNCTIONAL DESCRIPTION:

Portable Radio and Receiving Equipment TBX–1 may be used for ship or shore communication with similar equipment and other units of the Navy Communication system at ranges of approximately 30 miles for continuous-wave transmission and 15 miles for voice transmission.

The TBX series equipments are similar electrically and mechanically except that the TBX–5 through –8, and all the "a" equipments such as TBX–a, TBX–2a, etc, can operate at slightly higher frequencies.

The TBX series replaces the Radio Transmitting and Receiving Equipments TBO series.

TECHNICAL CHARACTERISTICS:

Transmitter:
Frequency Range: 2,000 to 4,525 kc
Frequency Control: Master oscillator and crystal
Type of Signal: Cw, voice
Power Output:
Cw: 9 w
Voice: 3 w

Receiver:
Frequency Range: 2,000 to 8,000 kc
Frequency Control: Master oscillator and crystal
Type: Superheterodyne
Type of Signal: Cw, mcw, voice
Output Impedance: 600 ohms

Antenna Type: 7 section 24-foot vertical whip; or 30-foot single-wire L-type

Power Requirements:
Standard:
Transmitter: Hand-driven generator
Receiver: Battery pack
Optional:
Transmitter:
EF Series Gasoline Engine-Driven Generator Equipment
EG Series AC Motor Generator Equipment, 115-v 60-cycle 1-phase ac
EH Series DC Motor Generator Equipment, 115-v dc
EJ Series Dynamotor Equipment, 12-v dc
Receiver:
EL Series Auxiliary Rectifier Power Equipment, 115-v 60-cycle 1-phase ac
EM Series Auxiliary Dynamotor Equipment, 6-v dc
EN Series Auxiliary Dynamotor Equipment, 12-v dc
EO Series Auxiliary Dynamotor Equipment, 24-v dc
EP Series Auxiliary Dynamotor Equipment, 32-v dc
EQ Series Auxiliary Dynamotor Equipment, 110-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AC Motor Generator Equipment EG Series (Supplied by request)	----------	7-19/32 x 8-7/16 x 23-5/16	134.2
1	Antenna assembly	----------	----------	7.5
1	Auxiliary Dynomotor Equipment EM Series 6-v dc (May be supplied instead of dry battery)	----------	7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynomotor Equipment EM Series 12-v dc (May be supplied instead of dry battery)	----------	7-13/16 x 8-5/8 x 5-1/8	11.5

AN/PRC-type PORTABLE RADIO AND RECEIVING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSION (Inches)	WEIGHT (Lbs)
1	Auxiliary Dynamotor Equipment EO Series 24-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EP Series 32-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EQ Series 110-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Rectifier Power Equipment EL Series 115-v ac (May be supplied instead of dry battery)		9-3/4 x 9-1/4 x 8-7/8	19
7	Batteries			
	(2) Type 19010		4-5/16 x 2-5/8 x 2-5/8	
	(3) Type 19005		6-5/8 x 2-11/16 x 4-1/4	
	(2) Type 19011		2-13/16 x 7/8 x 4-1/16	
1	DC Motor Generator Equipment EH Series (Supplied by request)		7-19/32 x 8-7/16 x 23-5/16	134.2
1	Dynamotor Equipment EJ Series (Supplied by request)		6-13/16 x 9-1/4 x 7-21/32	20
1	Gasoline Engine-Driven Generator EF Series (Supplied by request)			60.5
1	Generator, Hand- or Engine-Driven 21263A		14-1/8 x 19-1/2 x 6-11/32	22.3
1	Shipping Chest for Complete Basic TBX 10017A		17-3/4 x 49-3/4 x 18-3/8	82
1	Transmitter-Receiver Unit 43005		8-1/2 x 15-53/64 x 10	29

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	17.7	355

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	TCG–34067, 25 Nov 1941 TCG–34107, 24 Nov 1941 NOs–81118, 1 June 1942	$1,100.00

PORTABLE RADIO AND RECEIVING EQUIPMENT AN/PRC-type

4 December 1958
Cognizant Serv: USN FSN: TBX-2

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-317005-200	--

(See Illustration TBX p. 1039)

FUNCTIONAL DESCRIPTION:

Portable Radio and Receiving Equipment TBX-2 may be used for ship or shore communication with similar equipment and other units of the Navy communication system at ranges of approximately 30 miles for continuous-wave transmission and 15 miles for voice transmission.

The TBX series equipments are similar electrically and mechanically except that the TBX-5 through -8, and all the "a" equipments such as TBX-a, TBX-2a, etc., can operate at slightly higher frequencies.

The TBX series replaces the Radio Transmitting and Receiving Equipments TBO series.

TECHNICAL CHARACTERISTICS:

Transmitter:
- Frequency Range: 2,000 to 4,525 kc
- Frequency Control: Master oscillator and crystal
- Type of Signal: Cw, voice
- Power Output:
  - Cw: 9 w
  - Voice: 3 w

Receiver:
- Frequency Range: 2,000 to 8,000 kc
- Frequency Control: Master oscillator and crystal
- Type: Superheterodyne
- Type of Signal: Cw, mcw, voice
- Output Impedance: 600 ohms

Antenna Type: 7 section 24-foot vertical whip; or 30-foot single-wire L-type

Power Requirements:
- Standard:
  - Transmitter: Hand-driven generator
  - Receiver: Battery pack
- Optional:
  - Transmitter:
    - EF Series Gasoline Engine-Driven Generator Equipment
    - EG Series AC Motor Generator Equipment, 115-v 60-cycle 1-phase ac
    - EH Series DC Motor Generator Equipment, 115-v dc
    - EJ Series Dynamotor Equipment, 12-v dc
  - Receiver:
    - EL Series Auxiliary Rectifier Power Equipment, 115-v 60-cycle 1-phase ac
    - EM Series Auxiliary Dynamotor Equipment, 6-v dc
    - EN Series Auxiliary Dynamotor Equipment, 12-v dc
    - EO Series Auxiliary Dynamotor Equipment, 24-v dc
    - EP Series Auxiliary Dynamotor Equipment, 32-v dc
    - EQ Series Auxiliary Dynamotor Equipment, 110-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AC Motor Generator Equipment EG Series (Supplied by request)	----------	7-19/32 x 8-7/16 x 23-5/16	134.2
1	Antenna Assembly	----------	----------	7.5
1	Auxiliary Dynamotor Equipment EM Series 6-v dc (May be supplied instead of dry battery)	----------	7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EM Series 12-v dc (May be supplied instead of dry battery)	----------	7-13/16 x 8-5/8 x 5-1/8	11.5

AN/PRC-type PORTABLE RADIO AND RECEIVING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Auxiliary Dynamotor Equipment EO Series 24-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EP Series 32-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EQ Series 110-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Rectifier Power Equipment EL Series 115-v ac (May be supplied instead of dry battery)		9-3/4 x 9-1/4 x 8-7/8	19
7	Batteries			
	(2) Type 19010		4-5/16 x 2-5/8 x 2-5/8	
	(3) Type 19005		6-5/8 x 2-11/16 x 4-1/4	
	(2) Type 19011		2-13/16 x 7/8 x 4-1/16	
1	DC Motor Generator Equipment EH Series (Supplied by request)		7-19/32 x 8-7/16 x 23-5/16	134.2
1	Dynamotor Equipment EJ Series (Supplied by request)		6-13/16 x 9-1/4 x 7-21/32	20
1	Gasoline Engine-Driven Generator Equipment EF Series (Supplied by request)			60.5
1	Generator, Hand- or Engine-Driven 21263A		14-1/8 x 19-1/2 x 6-11/32	22.3
1	Shipping Chest for Complete Basic TBX 10017A		17-3/4 x 49-3/4 x 18-3/8	82
1	Transmitter-Receiver Unit 43005		8-1/2 x 15-53/64 x 10	69

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	17.7	355

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	TCG–34067, 25 Nov 1941 TCG–34107 24 Nov 1941 NOs–81118, 1 June 1942	$1,100.00

PORTABLE RADIO AND RECEIVING EQUIPMENT AN/PRC-type

4 December 1958
Cognizant Serv: USN FSN: TBX–3

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(See Illustration: TBX p. 1039)

FUNCTIONAL DESCRIPTION:

Portable Radio and Receiving Equipment TBX–3 may be used for ship or shore communication with similar equipment and other units of the Navy Communication system at ranges of approximately 30 miles for cw transmission and 15 miles for voice transmission.

The TBX series equipments are similar electrically and mechanically except that the TBX–5 through –8, and all the "a" equipments such as TBX–a, TBX–2a, etc., can operate at slightly higher frequencies.

The TBX series replaces the Radio Transmitting and Receiving Equipments TBO series.

TECHNICAL CHARACTERISTICS:

Transmitter:
- Frequency Range: 2,000 to 4,525 kc
- Frequency Control: Master oscillator and crystal
- Type of Signal: Cw, voice
- Power Output:
  - Cw: 9 w
  - Voice: 3 w

Receiver:
- Frequency Range: 2,000 to 8,000 kc
- Type: Superheterodyne
- Type of Signal: Cw, mcw, voice
- Control: Master oscillator and crystal
- Output Impedance: 600 ohms

Antenna Type: 7 section 24-foot vertical whip;

Power Requirements:
- Standard:
  - Transmitter: Hand-driven generator
  - Receiver: Battery pack
- Optional:
  - Transmitter:
    - EF Series Gasoline Engine-Driven Generator Equipment
    - EG Series AC Motor Generator Equipment, 115-v 60-cycle 1-phase ac
    - EH Series DC Motor Generator Equipment, 115-v dc
    - EJ Series Dynamotor Equipment, 12-v dc
  - Receiver:
    - EL Series Auxiliary Rectifier Power Equipment, 115-v 60-cycle 1-phase
    - EM Series Auxiliary Dynamotor Equipment, 6-v dc
    - EN Series Auxiliary Dynamotor Equipment, 12-v dc
    - EO Series Auxiliary Dynamotor Equipment, 24-v dc
    - EP Series Auxiliary Dynamotor Equipment, 32-v dc
    - EQ Series Auxiliary Dynamotor Equipment, 110-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMS (In)	WEIGHT (Lbs)
1	AC Motor Generator Equipment EG Series (Supplied by request)	----------	7-19/32 x 8-7/16 x 23-5/16	134.2
1	Antenna Assembly	----------	----------	7.5
1	Auxiliary Dynamotor Equipment EM Series 6-v dc (May be supplied instead of dry battery)	----------	7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EM Series 12-v dc (May be supplied instead of dry battery)	----------	7-13/16 x 8-5/8 x 5-1/8	11.5

AN/PRC-type PORTABLE RADIO AND RECEIVING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Auxiliary Dynamotor Equipment EO Series 24-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EP Series 32-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Rectifier Power Equipment EL Series 115-v ac (May be supplied instead of dry battery)		9-3/4 x 9-1/4 x 8-7/8	19
7	Batteries:			
	(2) Type 19010		4-5/16 x 2-5/8 x 2-5/8	
	(3) Type 19005		6-5/8 x 2-11/16 x 4-1/4	
	(2) Type 19011		2-13/16 x 7/8 x 4-1/16	
1	DC Motor Generator Equipment EH Series (Supplied by request)		7-19/32 x 8-7/16 x 23-5/16	134.2
1	Dynamotor Equipment EJ Series (Supplied by request)		6-13/16 x 9-1/4 x 7-21/32	20
1	Gasoline Engine-Driven Generator Equipment EF Series (Supplied by request)			60.5
1	Generator, Hand- or Engine-Driven 21263A		14-1/8 x 19-1/2 x 6-11/32	22.3
1	Shipping Chest for Complete Basic TBX 10017A		17-3/4 x 49-3/4 x 18-3/8	82
1	Transmitter-Receiver Unit 43005		8-1/2 x 15-53/64 x 10	29

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	17.7	355

AN/PRC-type PORTABLE RADIO AND RECEIVING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Auxiliary Dynamotor Equipment EO Series 24-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EP Series 32-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Rectifier Power Equipment EL Series 115-v ac (May be supplied instead of dry battery)		9-3/4 x 9-1/4 x 8-7/8	19
7	Batteries:			
	(2) Type 19010		4-5/16 x 2-5/8 x 2-5/8	
	(3) Type 19005		6-5/8 x 2-11/16 x 4-1/4	
	(2) Type 19011		2-13/16 x 7/8 x 4-1/16	
1	DC Motor Generator Equipment EH Series (Supplied by request)		7-19/32 x 8-7/16 x 23-5/16	134.2
1	Dynamotor Equipment EJ Series (Supplied by request)		6-13/16 x 9-1/4 x 7-21/32	20
1	Gasoline Engine-Driven Generator Equipment EF Series (Supplied by request)			60.5
1	Generator, Hand- or Engine-Driven 21263A		14-1/8 x 19-1/2 x 6-11/32	22.3
1	Shipping Chest for Complete Basic TBX 10017A		17-3/4 x 49-3/4 x 18-3/8	82
1	Transmitter-Receiver Unit 43005		8-1/2 x 15-53/64 x 10	29

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	17.7	355

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	TCG–34067, 25 Nov 1941 TCG–34107, 24 Nov 1941 NOs–81118, 1 Jun 1942	$1,100.00

PORTABLE RADIO AND RECEIVING EQUIPMENT AN/PRC-type

4 December 1958
Cognizant Serv: USN FSN: TBX-4

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	(6-v dc) F16-Q-317045-200	--

(See Illustration: TBX p. 1039)

FUNCTIONAL DESCRIPTION:

Portable Radio and Receiving Equipment TBX-4 may be used for ship or shore communication with similar equipment and other units of the Navy Communication system at ranges of approximately 30 miles for cw transmission and 15 miles for voice transmission.

The TBX xeries equipments are similar electrically and mechanically except that the TBX-5 through -8, and all the "a" equipments such as TBX-a, TBX-2a, etc., can operate at slightly higher frequencies.

The TBX series replaces the Radio Transmitting and Receiving Equipments TBO series.

TECHNICAL CHARACTERISTICS:

Transmitter:
Frequency Range: 2,000 to 4,525 kc
Frequency Control: Master oscillator and crystal
Type of Signal: Cw, voice
Power Output:
Cw: 9 w
Voice: 3 w

Receiver:
Frequency Range: 2,000 to 8,000 kc
Frequency Control: Master oscillator and crystal
Type: Superheterodyne
Type of Signal: Cw, mcw, voice
Output Impedance: 600 ohms

Antenna Type. 7 section 24-foot vertical whip; or 30-foot single-wire L-type

Power Requirements:
Standard:
Transmitter: Hand-driven generator
Receiver: Battery pack
Optional:
Transmitter:
EF Series Gasoline Engine-Driven Generator Equipment
EG Series AC Motor Generator Equipment, 115-v 60-cycle 1-phase ac
EH Series DC Motor Generator Equipment, 115-v dc
EJ Series Dynamotor Equipment, 12-v dc
Receiver:
EL Series Auxiliary Rectifier Power Equipment, 115-v 60-cycle 1-phase ac
EM Series Auxiliary Dynamotor Equipment, 6-v dc
EN Series Auxiliary Dynamotor Equipment, 12-v dc
EO Series Auxiliary Dynamotor Equipment, 24-v dc
EP Series Auxiliary Dynamotor Equipment, 32-v dc
EQ Series Auxiliary Dynamotor Equipment, 110-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Ihnces)	WEIGHT (Lbs)
1	AC Motor Generator Equipment EG Series (Supplied by request)	----------	7-19/32 x 8-7/16 x 23-5/16	134.2
1	Antenna Assembly	----------	----------	7.5
1	Auxiliary Dynamotor Equipment EM Series 6-v dc	----------	7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EM Series 12-v dc	----------	7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EO Series 24-v dc	----------	7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EP Series 32-v dc	----------	7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EQ Series 110-v dc	----------	7-13/16 x 8-5/8 x 5-1/8	11.5

AN/PRC-type PORTABLE RADIO AND RECEIVING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Auxiliary Rectifier Power Equipment EL Series 115-v ac		9-3/4 x 9-1/4 x 8-7/8	19.
7	Batteries			
	(2) Type 19010		6-5/16 x 2-5/8 x 2-5/8	
	(3) Type 19005		6-5/8 x 2-11/16 x 4-1/4	
	(2) Type 19011		2-13/16 x 7/8 x 4-1/16	
1	DC Motor Generator Equipment EH Series (Supplied by request)		7-19/32 x 8-7/16 x 23-5/16	134.2
1	Dynamotor Equipment EJ Series (Supplied by request)		6-13/16 x 9-1/4 x 7-21/32	20
1	Gasoline Engine-Driven Generator Equipment EF Series (Supplied by request)			60.5
1	Generator, Hand- or Engine-Driven 21263A		14-1/8 x 19-1/2 x 6-11/32	22.3
1	Shipping Chest for Complete Basic TBX 10017A		17-3/4 x 49-3/4 x 18-3/8	82
1	Transmitter-Receiver Unit 43005A		8-1/2 x 15-53/64 x 10	29

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95618

SHIPPING DATA

PGKS	VOLUME (Cu Ft)	WEIGHT (Lb)
1	17.7	355

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hazeltine Electronics Corp.	New York, N. Y.	NXss-18179, 19 Nov 1942	$1,100.00

PORTABLE RADIO AND RECEIVING EQUIPMENT AN/PRC-type

4 December 1958
Cognizant Serv: USN FSN: TBX–4A

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16–Q–317065–200	--

(See Illustration: TBX p. 1039)

FUNCTIONAL DESCRIPTION:

Portable Radio and Receiving Equipment TBX–4a may be used for ship or shore communication with similar equipment and other units of the Navy Communication system at ranges of approximately 30 miles for cw transmission and 15 miles for voice transmission.

The TBX series equipments are similar electrically and mechanically except that the TBX–5 through –8, and all the "a" equipments such as this equipment, can operate at slightly higher frequencies.

The TBX series replaces the Radio Transmitting and Receiving Equipments TBO series.

TECHNICAL CHARACTERISTICS:

Transmitter:
- Frequency Range: 2,000 to 5,800 kc
- Frequency Control: Master oscillator and crystal
- Type of Signal: Cw, voice
- Power Output:
  - Cw: 9 w
  - Voice: 3 w

Receiver:
- Frequency Range: 2,000 to 8,000 kc
- Frequency Control: Master oscillator and crystal
- Type: Superheterodyne
- Type of Signal: Cw, mcw, voice
- Output Impedance: 600 ohms

Type Antenna: 7 section 24-foot vertical whip; or 30-foot single-wire L-type

Power Requirements:
- Standard:
  - Transmitter: Hand-driven generator
  - Receiver: Battery pack
- Optional:
  - Transmitter:
    - EF Series Gasoline Engine-Driven Generator Equipment
    - EG Series AC Motor Generator Equipment, 115-v 60-cycle 1-phase ac
    - EH Series DC Motor Generator Equipment, 115-v dc
    - EJ Series Dynamotor Equipment, 12-v dc
  - Receiver:
    - EL Series Auxiliary Rectifier Power Equipment, 115-v 60-cycle 1-phase ac
    - EM Series Auxiliary Dynamotor Equipment, 6-v dc
    - EN Series Auxiliary Dynamotor Equipment, 12-v dc
    - EO Series Auxiliary Dynamotor Equipment, 24-v dc
    - EP Series Auxiliary Dynamotor Equipment, 32-v dc
    - EQ Series Auxiliary Dynamotor Equipment, 110-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSION (Inches)	WEIGHT (Lbs)
1	AC Motor Generator Equipment EG Series (Supplied by request)	----------	7-19/32 x 8-7/16 x 23-5/16	134.2
1	Antenna Assembly	----------	----------	7.5
1	Auxiliary Dynamotor Equipment EM Series 6-v dc (May be supplied instead of dry battery)	----------	7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EM Series 12-v dc (May be supplied instead of dry battery)	----------	7-13/16 x 8-5/8 x 5-1/8	11.5

AN/PRC-type PORTABLE RADIO AND RECEIVING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Auxiliary Dynamotor Equipment EO Series 24-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EO Series 110-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EP Series 32-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Rectifier Power Equipment EL Series 115-v ac (May be supplied instead of dry battery)		9-3/4 x 9-1/4 x 8-7/8	19
7	Batteries:			
	(2) Type 19010		4-5/16 x 2-5/8 x 2-5/8	
	(3) Type 19005		6-5/8 x 2-11/16 x 4-1/4	
	(2) Type 19011		2-13/16 x 7/8 x 4-1/16	
1	DC Motor Generator Equipment EH Series (Supplied by request)		7-19/32 x 8-7/16 x 23-5/16	134.2
1	Dynamotor Equipment EJ Series (Supplied by request)		6-13/16 x 9-1/4 x 7-21/32	20
1	Gasoline Engine-Driven Generator Equipment EF Series (Supplied by request)			60.5
1	Generator, Hand- or Engine-Driven 21263A		14-1/8 x 19-1/2 x 6-11/32	22.3
1	Shipping Chest for Complete Basic TBX 10017A		17-3/4 x 49-3/4 x 18-3/8	82
1	Transmitter-Receiver Unit 43005D		8-1/2 x 15-53/64 x 10	29

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	17.7	355

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hazeltine Electronics Corp.	New York, N. Y.	NXss-18179, 19 Nov 1942	$1,100.00

PORTABLE RADIO AND RECEIVING EQUIPMENT AN/PRC-type

4 December 1958
Cognizant Serv: USN FSN:

TBX–5

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16–Q–317070–200	--

(See Illustration: TBX p. 1039)

FUNCTIONAL DESCRIPTION:

Portable Radio and Receiving Equipment TBX–5 may be used for ship or shore communication with similar equipment and other units of the Navy Communication system at ranges of approximately 30 miles for cw transmission and 15 miles for voice transmission.

The TBX series equipments are similar electrically and mechanically except that the TBX–7 through –8, and all the "a" equipments such as TBX–a, TBX–2a, etc., can operate at slightly higher frequencies.

The TBX series replaces the Radio Transmitting and Receiving Equipments TBO series.

TECHNICAL CHARACTERISTICS:

Transmitter:
Frequency Range: 2,000 to 5,800 kc
Control: Master oscillator and crystal
Type of Signal: Cw, voice
Power Output:
Cw: 9 w
Voice: 3 w

Receiver:
Frequency Range: 2,000 to 8,000 kc
Frequency Control: Master oscillator and crystal
Type: Superheterodyne
Type of Signal: Cw, mcw, voice
Output Impedance: 600 ohms

Type Antenna: 7 section 24-foot vertical whip; or 30-foot single-wire L-type

Power Requirements:
Standard:
Transmitter: Hand-driven generator
Receiver: Battery pack
Optional:
Transmitter:
EF Series Gasoline Engine-Driven Generator Equipment
EG Series AC Motor Generator Equipment, 115-v 60-cycle 1-phase ac
EH Series DC Motor Generator Equipment, 115-v dc
EJ Series Dynamotor Equipment, 12-v dc
Receiver:
EL Series Auxiliary Rectifier Power Equipment, 115-v 60-cycle 1-phase ac
EM Series Auxiliary Dynamotor Equipment, 6-v dc
EN Series Auxiliary Dynamotor Equipment, 12-v dc
EO Series Auxiliary Dynamotor Equipment, 24-v dc
EP Series Auxiliary Dynamotor Equipment, 32-v dc
EQ Series Auxiliary Dynamotor Equipment, 110-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AC Motor Generator Equipment EG Series (Supplied by request)	----------	7-19/32 x 8-7/16 x 23-5/16	134.2
1	Antenna Assembly	----------	----------	7.5
1	Auxiliary Dynamotor Equipment EM Series 6-v dc (May be supplied instead of dry battery)	----------	7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EM Series 12-v dc (May be supplied instead of dry battery	----------	7-13/16 x 8-5/8 x 5-1/8	11.5

AN/PRC-type PORTABLE RADIO AND RECEIVING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Auxiliary Dynamotor Equipment EO Series 24-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EP Series 32-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EO Series 110-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Rectifier Power Equipment EL Series 115-v ac (May be supplied instead of dry battery)		9-3/5 x 9-1/4 x 8-7/8	19
7	Batteries			
	(2) Type 19010		4-5/16 x 2-5/8 x 2-5/8	
	(3) Type 19005		6-5/8 x 2-11/16 x 4-1/4	
	(2) Type 19011		2-13/16 x 7/8 x 4-1/16	
1	DC Motor Generator Equipment EH Series (Supplied by request)		7-19/32 x 8-7/16 x 23-5/16	134.2
1	Dynamotor Equipment EJ Series (Supplied by request)		6-13/16 x 9-1/4 x 7-21/32	20
1	Gasoline Engine-Driven Generator Equipment EF Series (Supplied by request)			60.5
1	Generator, Hand- or Engine-Driven 21263A		14-1/8 x 19-1/2 x 6-11/32	22.3
1	Shipping Chest for Complete Basic TBX 10017A		17-3/4 x 49-3/4 x 18-3/8	82
1	Transmitter-Receiver Unit 43005D		8-1/2 x 15-53/64 x 10	29

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95297

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	17.7	355

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Garad Radio Corp.	Brooklyn, N. Y.	NXss-31870, 28 Jun 1943	$1,100.00

4 December 1958
Cognizant Serv: USN FSN: TBX–6

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	12-v dc: F16–Q–317105–200 32-v dc: F16–Q–317165–200	--

(See Illustration: TBX p. 1039)

FUNCTIONAL DESCRIPTION:

Portable Radio and Receiving Equipment TBX–6 may be used for ship or shore communication with similar equipment and other units of the Navy Communication system at ranges of approximately 30 miles for cw transmission and 15 miles for voice transmission.

The TBX series equipments are similar electrically and mechanically except that the TBX–5 through –8, and all the "a" equipments such as TBX–a, TBX–2a, etc., can operate at slightly higher frequencies.

The TBX series replaces the Radio Transmitting and Receiving Equipments TBO series.

TECHNICAL CHARACTERISTICS:

Transmitter:
- Frequency Range: 2,000 to 5,800 kc
- Frequency Control: Master oscillator and crystal
- Type of Signal: Cw, voice
- Power Output:
  - *Cw:* 9 w
  - *Voice:* 3 w

Receiver:
- Frequency Range: 2,000 to 8,000 kc
- Frequency Control: Master oscillator and crystal
- *Type:* Superheterodyne
- Type of Signal: Cw, mcw, voice
- Output Impedance: 600 ohms

Antenna Type: 7 section 24-foot vertical whip; or 30-foot single-wire L-type

Power Requirements:
- Standard:
  - *Transmitter:* Hand-driven generator
  - *Receiver:* Battery pack
- Optional:
  - *Transmitter:*
    - EF Series Gasoline Engine-Driven Generator Equipment
    - EG Series AC Motor Generator Equipment, 115-60-cycle 1-phase ac
    - EH Series DC Motor Generator Equipment, 115-v dc
    - EJ Series Dynamotor Equipment, 12-v dc
  - *Receiver:*
    - EL Series Auxiliary Rectifier Power Equipment, 115-v 60-cycle 1-phase ac
    - EM Series Auxiliary Dynamotor Equipment, 6-v dc
    - EN Series Auxiliary Dynamotor Equipment, 12-v dc
    - EO Series Auxiliary Dynamotor Equipment, 24-v dc
    - EP Series Auxiliary Dynamotor Equipment, 32-v dc
    - EQ Series Auxiliary Dynamotor Equipment, 110-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AC Motor Generator Equipment EG Series (Supplied by request)	----------	7-19/32 x 8-7/16 x 23-5/16	134.2
1	Antenna Assembly	----------	----------	7.5
1	Auxiliary Dynamotor Equipment EM Series 6-v dc (May be supplied instead of dry battery)	----------	7-13/16 x 8-5/8 x 5-1/8	11.5

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	Auxiliary Dynamotor Equipment EM Series 12-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
	Auxiliary Dynamotor Equipment EO Series 24-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
	Auxiliary Dynamotor Equipment EP Series 32-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
	Auxiliary Dynamotor Equipment EQ Series 110-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
	Auxiliary Rectifier Power Equipment EL Series 115-v ac (May be supplied instead of dry battery)		9-3/4 x 9-1/4 x 8-7/8	19
	Batteries			
	(2) Type 19010		4-5/16 x 2-5/8 x 2-5/8	
	(3) Type 19005		6-5/8 x 2-11/16 x 4-1/4	
	(2) Type 19011		2-13/16 x 7/8 x 4-1/16	
1	DC Motor Generator Equipment EH Series (Supplied by request)		7-19/32 x 8-7/16 x 23-5/16	134.2
1	Dynamotor Equipment EJ Series (Supplied by request)		6-13/16 x 9-1/4 x 7-21/32	20
1	Gasoline Engine-Driven Generator Equipment EF Series (Supplied by request)			60.5
1	Generator, Hand- or Engine-Driven 21263A		14-1/8 x 19-1/2 x 6-11/32	22.3
1	Shipping Chest for Complete Basic TBX 10017A		17-3/4 x 49-3/4 x 18-3/8	82
1	Transmitter-Receiver Unit 43005C		8-1/2 x 15-53/64 x 10	29

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95298

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	17.7	355

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	NXsr-35352, 30 Jul 1943	$1,100.00

PORTABLE RADIO AND RECEIVING EQUIPMENT AN/PRC-type

4 December 1958
Cognizant Serv: USN FSN: TBX–7

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(See Illustration: TBX p. 1039)

FUNCTIONAL DESCRIPTION:

Portable Radio and Receiving Equipment TBX–7 may be used for ship or shore communication with similar equipment and other units of the Navy Communication system at ranges of approximately 30 miles for cw transmission and 15 miles for voice transmission.

The TBX series equipments are similar electrically and mechanically except that the TBX–5 through –8, and all the "a" equipments such TBX–a, TBX–2a, etc., can operate at slightly higher frequencies.

The TBX series replaces the Radio Transmitting and Receiving Equipments TBO series.

TECHNICAL CHARACTERISTICS:

Transmitter:
Frequency Range: 2,000 to 5,800 kc
Frequency Control: Master oscillator and crystal
Type of Signal: Cw, voice
Power Output:
Cw: 9 w
Voice: 3 w

Receiver:
Frequency Range: 2,000 to 8,000 kc
Frequency Control: Master oscillator and crystal
Type: Superheterodyne
Type of Signal: Cw, mcw, voice
Output Impedance: 600 ohms

Antenna Type: 7 section 24-foot vertical whip, or 30-foot single-wire L-type

Power Requirements:
Standard:
Transmitter: Hand-driven generator
Receiver: Battery pack
Optional:
Transmitter:
EF Series Gasoline Engine-Driven Generator Equipment
EG Series AC Motor Generator Equipment, 115-v 60-cycle 1-phase ac
EH Series DC Motor Generator Equipment, 115-v dc
EJ Series Dynamotor Equipment, 12-v dc

Receiver:
EL Series Auxiliary Rectifier Power Equipment, 115-v 60-cycle 1-phase ac
EM Series Auxiliary Dynamotor Equipment, 6-v dc
EN Series Auxiliary Dynamotor Equipment, 12-v dc
EO Series Auxiliary Dynamotor Equipment, 24-v dc
EP Series Auxiliary Dynamotor Equipment, 32-v dc
EQ Series Auxiliary Dynamotor Equipment, 110–v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AC Motor Generator Equipment EG Series (Supplied by request)	----------	7-19/32 x 8-7/16 x 23-5/16	134.2
1	Antenna Assembly	----------	----------	7.5
1	Auxiliary Dynamotor Equipment EM Series 6-v dc (May be supplied instead of dry battery)	----------	7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EM Series 12-v dc (May be supplied instead of dry battery)	----------	7-13/16 x 8-5/8 x 5-1/8	11.5

AN/PRC-type PORTABLE RADIO AND RECEIVING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Auxiliary Dynamotor Equipment EO Series 24-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EP Series 32-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Dynamotor Equipment EQ Series 110-v dc (May be supplied instead of dry battery)		7-13/16 x 8-5/8 x 5-1/8	11.5
1	Auxiliary Rectifier Power Equipment EL Series 115-v ac (May be supplied instead of dry battery)		9-3/4 x 9-1/4 x 8-7/8	19
7	Batteries			
	(2) Type 19010		4-5/16 x 2-5/8 x 2-5/8	
	(3) Type 19005		6-5/8 x 2-11/16 x 4-1/4	
	(2) Type 19011		2-13/16 x 7/8 x 4-1/16	
1	DC Motor Generator Equipment EH Series (Supplied by request)		7-19/32 x 8-7/16 x 23-5/16	134.2
1	Dynamotor Equipment EJ Series (Supplied by request)		6-13/16 x 9-1/4 x 7-21/32	20
1	Gasoline Engine-Driven Generator Equipment EF Series (Supplied by request)			60.5
1	Generator, Hand- or Engine-Driven 21263A		14-1/8 x 19 1/2 x 6-11/32	22.3
1	Shipping Chest for Complete Basic TBX 10017A		17-3/4 x 49-3/4 x 18-3/8	82
1	Transmitter-Receiver Unit 43005C		8-1/2 x 15-53/64 x 10	29

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	17.7	355

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

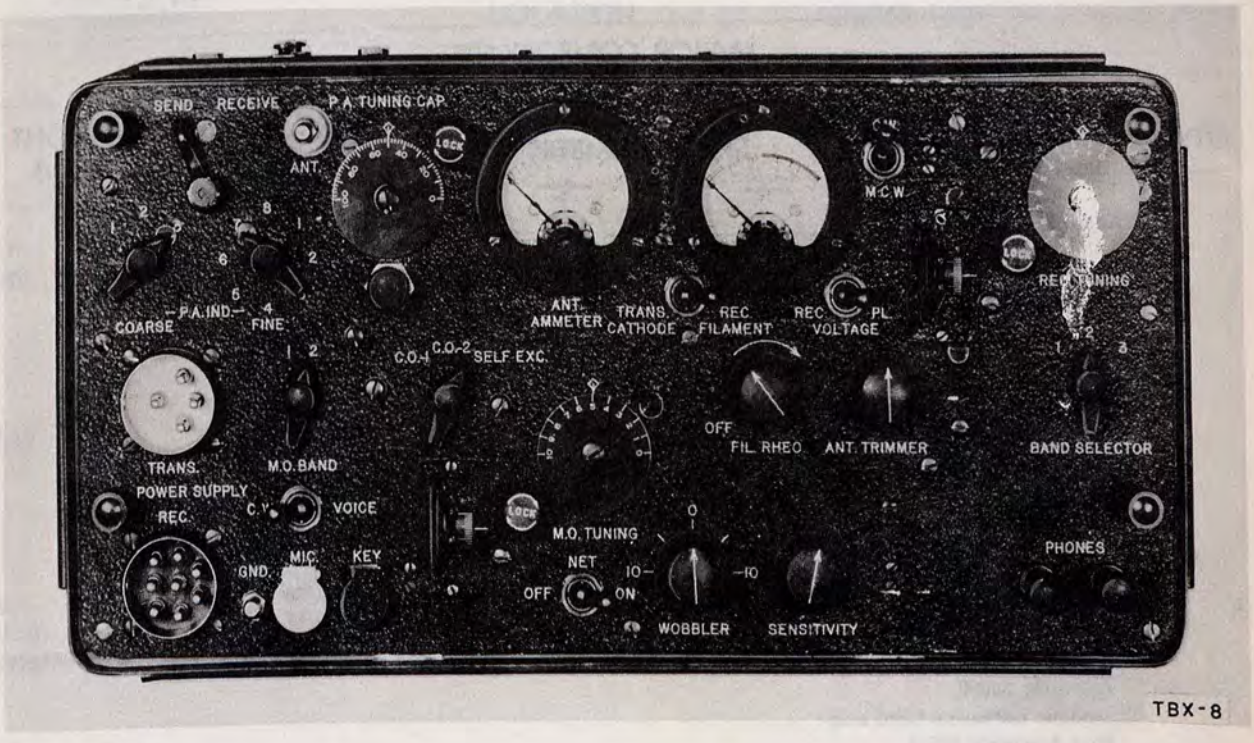
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	NXsr-35352, 30 Jul 1943	$1,100.00

PORTABLE RADIO TRANSMITTING AND RECEIVING EQUIPMENT AN/PRC-type

4 December 1958
Cognizant Serv: USN FSN: TBX-8

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	12-550 dc: F16-Q-317170-200 12 dc: F16-Q-317145-200 115 ac: F16-Q-317155-200 550 dc: F16-Q-317165-200	--



TBX-8

FUNCTIONAL DESCRIPTION:

Portable Radio Transmitting and Receiving Equipment TBX-8 is a three-man carry, transmitter-receiver for general field use.

The basic set uses a hand generator as the transmitter power source and batteries for the receiver. However, for installations at shore stations and on surface craft, certain auxiliary power supplies are available.

The TBX-8 differs in many respects from the earlier Portable Radio Transmitting and Receiving Equipments TBX series.

Equipment required but not supplied: (10) Crystals CR-5B/U in holder, Telephone Headset 49057-A, Telephone Extension Cord and Plug Assembly 49534, Lip Microphone Assembly 51071, Microphone Extension Cord and Switch Assembly 49561, Telegraph Key and Leg Band Assembly 26022.

TECHNICAL CHARACTERISTICS:

Maximum Range: 30 miles
Transmitter:
Frequency Range: 2,000 to 5,800 kc

AN/PRC-type PORTABLE RADIO TRANSMITTING AND RECEIVING EQUIPMENT

Frequency Channels: 2 preset at any frequency, 2,000 to 4,200 kc
Frequency Control: Master oscillator and crystal
Type of Signal: Cw, voice
Modulation Capability: 90%
Power Output:
Cw: 8.5 w
Voice: 2.5 w with long wire antenna
Stability:
Crystal: 0.03%
Master oscillator: 0.25%

Receiver:
Type: Superheterodyne
Frequency Range: 2,000 to 8,000 kc
Sensitivity:
Cw: 20 uv with 14 db signal-plus-noise-to-noise ratio
Voice: 10 uv with 14 db signal-plus-noise-to-noise ratio
IF: 1.515 mc
Type of Signal: Cw, mcw, voice
Antenna Type: Whip or single-wire, end fed

Power Requirements:
Transmitter: 550/12–6 v, dc hand generator
Receiver: Two 45 v-19005 dry battery, two 1.5 v–19010 dry battery, and one 7.5 v–19011 dry battery

Auxiliary Power Units Available:
For Transmitter: Gasoline Engine Driven Generator Equipment EF–8 AC Motor Generator Equipment EG–7, DC Motor Generator Equipment EH Dynamotor Equipment EJ–7 Vibrator Power Supply Type 20337
For Receiver: Auxiliary Rectifier Power Equipment EL, EAD Auxiliary Dynamotor Equipment EM, EN, EO, EP, EQ, EAP; Vibrator Power supply Type 20337

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Adaptor Unit 632246	----------	2-3/4 x 2-9/16 x 4-5/32	0.5
	Antenna system	----------	----------	10.5
	Battery Cable 49574	----------	36 long	
1	Carrying Case–10375			
1	Crystal Calibrator and Monitor 60133	----------	6-3/4 x 5-1/4 x 2-11/16	
	Generator Cable 49044–A	----------	240 long	
	Generator, Hand or Engine Driven CG–21263–B	----------	9 x 9-1/2 x 6-11/32	24.3
	Lip Microphone Assembly 51071			
	Microphone Extension Cord and Switch Assembly 49588			
	Remote Control Unit 23453	----------	7-3/16 x 9 x 2-15/16	5.7
1	Shipping Chest 10017–B	----------	17-3/4 x 49-3/4 x 17-3/4	80.0 (empty)
	Telegraph Key and Leg Band Assembly 26022			
	Telephone Extension Cord and Plug Assembly 49534			
	Telephone Headset Assembly 49507–A			
	Transmitter-Receiver Unit 4360 and Rain Shield 10480–A	----------	8-1/2 x 16-1/2 x 10-13/16	32.9

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,706

PORTABLE RADIO TRANSMITTING AND RECEIVING EQUIPMENT AN/PRC-type

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	17.5	320

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

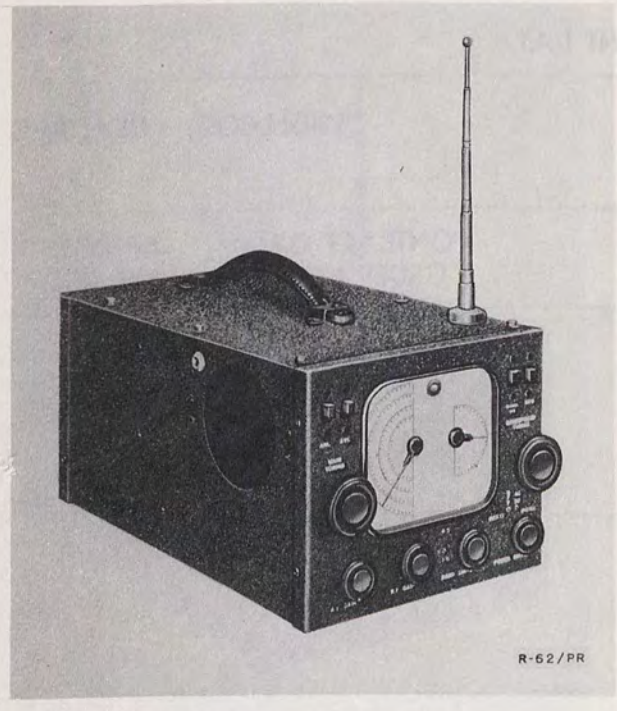
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Garod Radio Corp.	Brooklyn, N. Y.	NXsr–38500, 22 Apr 1944 NXsr–69224, 2 Mar 1945 NXsr–71254, 28 Jul 1944	

RADIO RECEIVER AN/PRR-type

1 July 1958
Cognizant Serv: USA FSN: R-62/PR

	USA	USN	USAF
TYPE CLASS:	S/Std	--	--
STOCK NO:	2C4180-62	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R-62/PR is a hand-carried, AM (voice, tone, and cw) radio receiving equipment used for intercept, monitoring, and similar applications in the mf and hf bands.

This equipment consists of a radio receiver in a steel cabinet having a carrying handle, a telescoping antenna, and a built-in loudspeaker. Provision is made for use of headphones and connection to a straight wire antenna and ground. This set has automatic or manual volume controls, automatic noise level adjustment, standby and beat-frequency oscillator switches, AF and RF gain controls, and band-spread tuning.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 30.5 in 4 bands
Type Modulation: AM
Type of Signal: Cw, tone, voice
Power Requirements: 40 w, 115-v ac or dc; or one 6-v A battery and two 45-v B batteries

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Radio Receiver R-62/PR	2C4180-62	7 x 8-1/2 x 13-1/4	18
	(Equipment consists of a single major component.)			

REFERENCE DATA AND LITERATURE:

TM 11-876

AN/PRR-type RADIO RECEIVER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2.2	58

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	17018–P–44–03	

RADIO RECEIVER AN/PRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-164-7170

R-80( )/PR

	USA	USN	USAF
TYPE CLASS:	S/Std	--	--
STOCK NO:	2C4180-80	--	--



R-80/PR

FUNCTIONAL DESCRIPTION:

Radio Receiver R-80( )/PR is a general purpose, hand-carried radio receiving equipment that receives AM (voice, tone, and cw) signals in the mf and hf bands. It is used for communication, intercept, monitoring, and similar applications at tactical or fixed stations.

This equipment consists of a radio receiver in a steel cabinet having a carrying handle, a telescoping antenna, and a built-in loudspeaker. It has automatic and manual volume controls, automatic noise level adjustment, AF and RF gain controls, standby and beat-frequency oscillator switches, and band-spread tuning. Provision is made for use of headphones and connection to a long-wire antenna and ground

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.55 to 30.5 in 4 bands
Type Modulation: AM
Type of Signal: Cw, voice, tone
Power Requirements: 50 w, 110/117-v ac or dc or one 6-v A battery and two 45-v B batteries

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Radio Receiver R-80/PR	5820-164-7170	9 x 9 x 15	28

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-876

AN/PRR-type RADIO RECEIVER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2.2	58

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

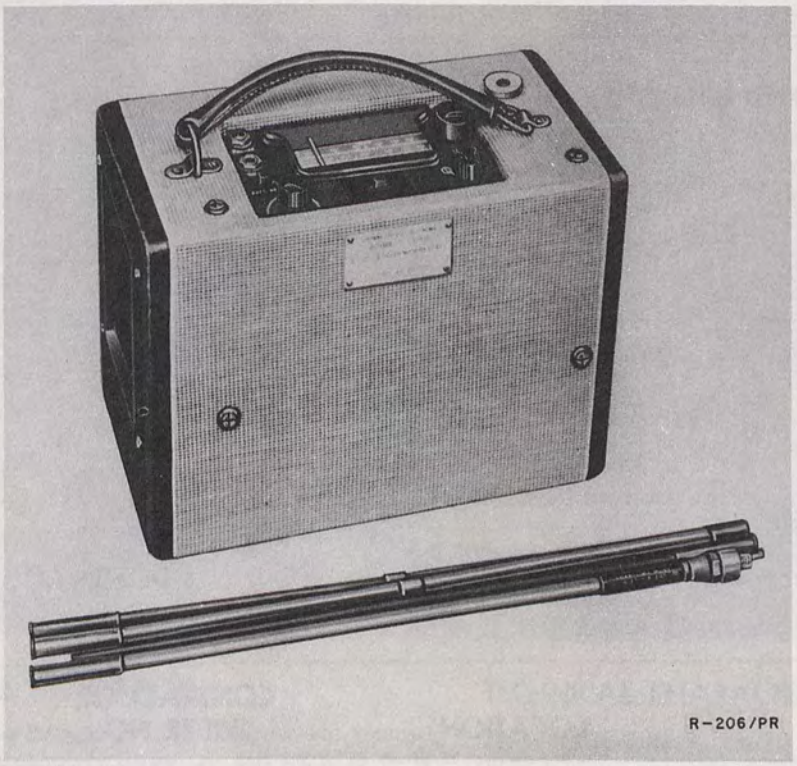
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafter Co.	Chicago, Ill.	19643-P-50-6	$198.00

RADIO RECEIVER AN/PRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-242-5210

R-206( )/PR

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C4573	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R-206( )/PR is a highly portable, three-band, special purpose, AM (voice and tone) receiving equipment used in the low-, medium-, and high-frequency bands for checking range courses and for similar applications.

This equipment consists of a small compact radio receiver contained in a suitcase-type housing. It has a built-in speaker and an output jack for connection of a headset. A loop antenna is used on frequency bands 1 and 2 (0.195 to 0.41 and 0.54 to 1.56 mc); a whip-type antenna is used on all three bands.

This set has been replaced by Radio Receiver AN/SRC-7( ).

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Band 1: 0.195 to 0.41
Band 2: 0.54 to 1.56
Band 3: 2.20 to 6.20
Type Modulation: AM
Type of Signal: Voice, tone
Power Output:
Battery Operation: 50 mcw
Ac or dc Operation: 0.5 w
Power Requirements: 115-v 50/60-cycle ac; or 40 w, 115-v dc; or 7.5 v dc from one A battery and 45-v dc from two B batteries

AN/PRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R–206( )/PR	(FSN) 5820–242–5210 (USA) 2C4573	8-1/2 x 6-1/2 x 12	10.5

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–5011

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2.25	21.5

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

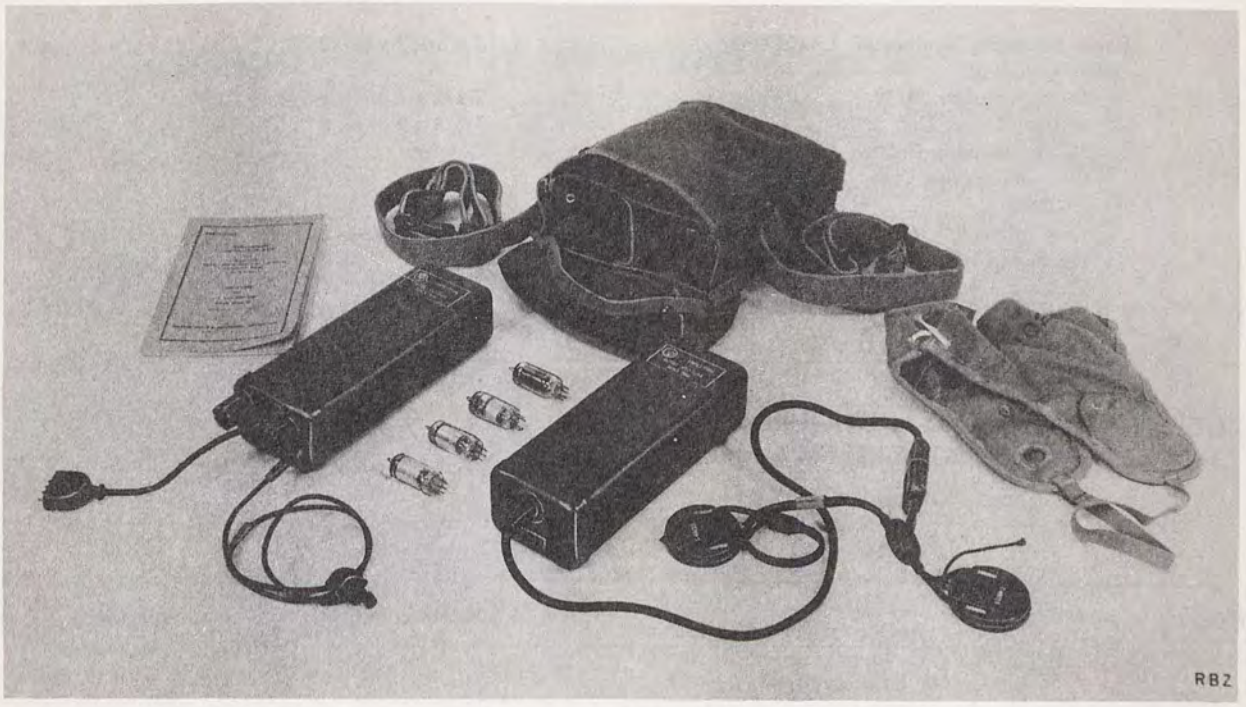
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Midwest Engineering Development Co., Inc. (R–206A/PR)	Kansas City, Mo.	11919–P–47	

RADIO RECEIVING EQUIPMENT AN/PRR-type

5 December 1958
Cognizant Serv: USN FSN: 5820-665-1227

RBZ

	USA	USN	USAF
TYPE CLASS:	Used by	Used by	--
STOCK NO:	2C4010	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RBZ is a lightweight, compact radio receiver designed for shore use and intended to be carried on the chest in a canvas case secured by shoulder straps. The circuit used is that of a five-tube permeability-tuned superheterodyne receiver with automatic volume control.

The equipment consists principally of a radio receiver, a battery power unit, an antenna lead, and headphones. The antenna lead consists of a flexible rubber-covered cable. A clamp on one end fastens to a standard metal helmet which acts as the antenna. A length of wire may be used as an antenna in pace of the helmet. Headphones, mounted in a canvas skull cap, are designed for use under the helmet.

The receiver derives its operating power from dry batteries—two Batteries BA–30 and one Battery BA–51—which are carried in the watertight plastic battery case.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 5.8
Type Reception: Mcw, voice
Sensitivity: 1 to 4 uv for output of 1 mw
Power Output: Suitable for headphone operation
Output Impedance: 600 ohms
Intermediate Frequency: 455 kc
Image Rejection Ratio: 100 to 1
Low-voltage Battery Life Expectancy: 8 to 10 hours continuous operation
High-voltage Battery Life Expectancy: 40 to 50 hours, depending on sensitivity that can be tolerated
Power Requirements: Two 1.5-v Batteries BA–30, one 67.5-v Battery BA–51

AN/PRR-type RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Radio Receiving Equipment RBZ, including:	2C4010	7 x 3-1/2 x 5-1/2	5.5
1	Battery Holder 19140	2Z5042-31	2-1/2 x 1-3/4 x 7-1/2	
1	Battery Power Unit 19040	----------	1-7/8 x 2-7/8 x 8	1.812
1	Cable Assembly 49238	3E6572-4	27 long	.94
1	Canvas Carrying Case 10203	----------	----------	1
2	Case (phenolic) 10172	2Z1800.53	3 x 2 x 8-3/4	
1	Headband 10204	2B740-1	17 x 9	
1	Headset Assembly 49214	2B971-8	----------	.5
1	Radio Receiver Unit 46203	2C4011	1-7/8 x 2-7/8 x 8	1.875

REFERENCE DATA AND LITERATURE:

Technical manual for Radio Receiving Equipment RBZ

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.8	19

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: USN, BuShips

SPEC &/or DWG:

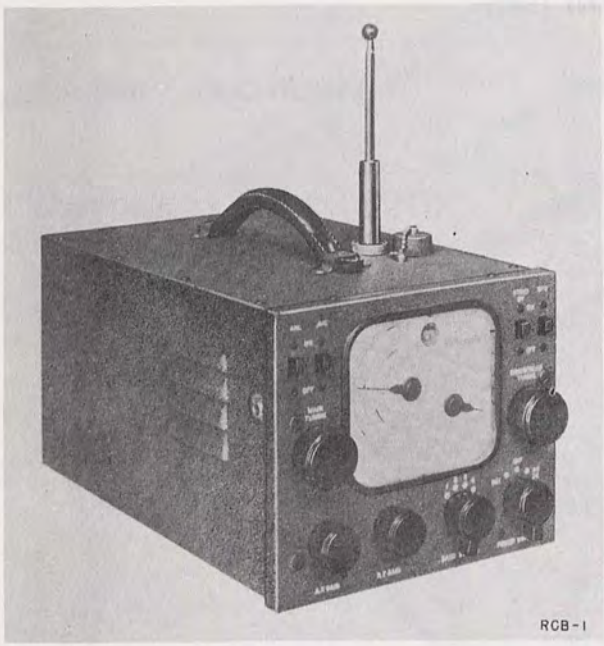
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Emerson Radio & Phonograph Corp.	New York, N. Y.	NXss-15891	$70 with equipment spares.

PORTABLE RADIO RECEIVING EQUIPMENT AN/PRR-type

5 December 1958
Cognizant Serv: USN FSN: RCB–1

USA	USN	USAF

TYPE CLASS: -- Used by --
STOCK NO: -- -- --



FUNCTIONAL DESCRIPTION:

Portable Radio Receiving Equipment RCB–1 consists of a completely self-contained nine-tube superheterodyne communications receiver mounted in a steel cabinet suitable for table operation or portable use. A self-contained telescoping antenna, speaker and batteries are provided.

This equipment provides continuous coverage of the broadcast and shortwave bands accepting either continuous-wave telegraph or amplitude-modulated telephone signals.

The receiver may be operated from either alternating-current or direct-current commercial power sources. An external antenna may be used to increase the overall performance.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.55 to 30 in four bands
Intermediate Frequency: 455 kc
Tone Frequency: 1,000 cycles
Antenna Type: Built-in telescoping ships external long wire (50 to 100 feet), or external half-wave doublet resonate at particular frequency desired
Power Requirements: 6- and 90-v dc, 110- to 117-v 60-cycle 1-phase ac or 110- to 117-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Portable Radio Receiving Equipment Model RCB–1 (Equipment consists of only one major component.)	----------	9 x 9 x 15	28

REFERENCE DATA AND LITERATURE:

AN/PRR-type PORTABLE RADIO RECEIVING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE:
SPEC &/or DWG:

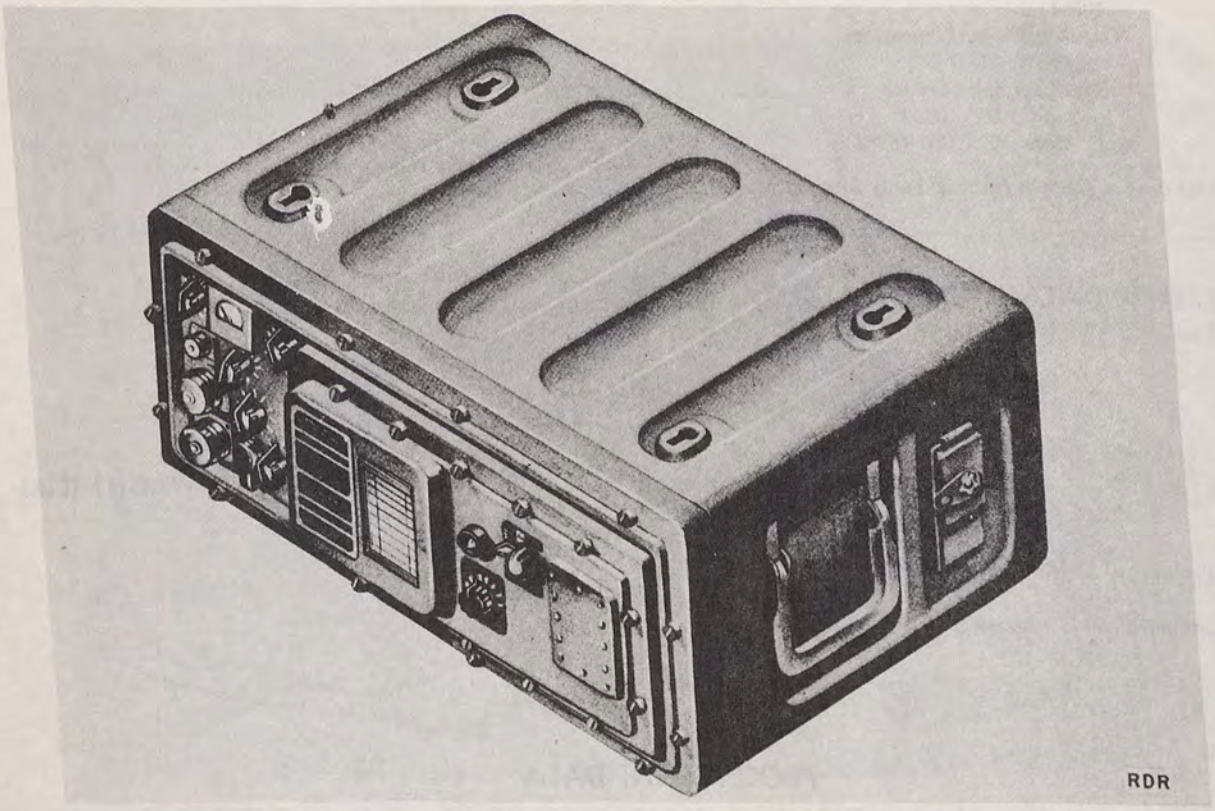
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	NXsr-39204	

PORTABLE RADIO RECEIVING EQUIPMENT AN/PRR-type

20 November 1958
Cognizant Serv: USN FSN: RDR

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16–Q–272190–200	--



FUNCTIONAL DESCRIPTION:

Portable Radio Receiving Equipment RDR is designed for ship, shore, field, and vehicular use over line-of-sight distances. It contains 10 crystal-controlled heterodyning frequencies and any one of the 10 preset channels may be selected by a motor-driven selector mechanism that may be either locally or remotely actuated.

This equipment was designed as a companion receiver to Radio Transmitting and Receiving Equipment MAR and is housed in the same type case to permit grouping and mounting with other MAR units.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 125 to 390 mc in 10 preset channels
Frequency Control: Crystal
Reception: Mcw, voice
Power Output: 1 w into 600-ohm load
Output Impedance: 600 ohms
Sensitivity: 8 uv input for signal-to-noise ratio of 10_1
Antenna: Half-wave, center-fed dipole
Input Impedance: 50 ohms
IF.: 30.2 mc
Power Requirements: 145 w, 13-v dc or 13-v ac and 375-v dc (Selector motor load not included)

AN/PRR-type PORTABLE RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly, CRV–66147	----------	22 (high) x 25 (deep)	3.5
1	*Antenna Carrying Case, NT–10591			
1	*Gasoline Engine Generator Set CCW–73037			
1	*Metal Carrying Case for Engine CBDV–10620	----------	14-3/4 x 12 x 17-9/16	
1	Radio Receiver, CRV–46283	----------	9-1/2 x 21-1/4 x 16-1/4	54

* Optional equipment furnished only for field operation.

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,841(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
Without Optional Field Equipment:		
4	20.4	347
With Optional Field Equipment:		
6	47.6	867

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

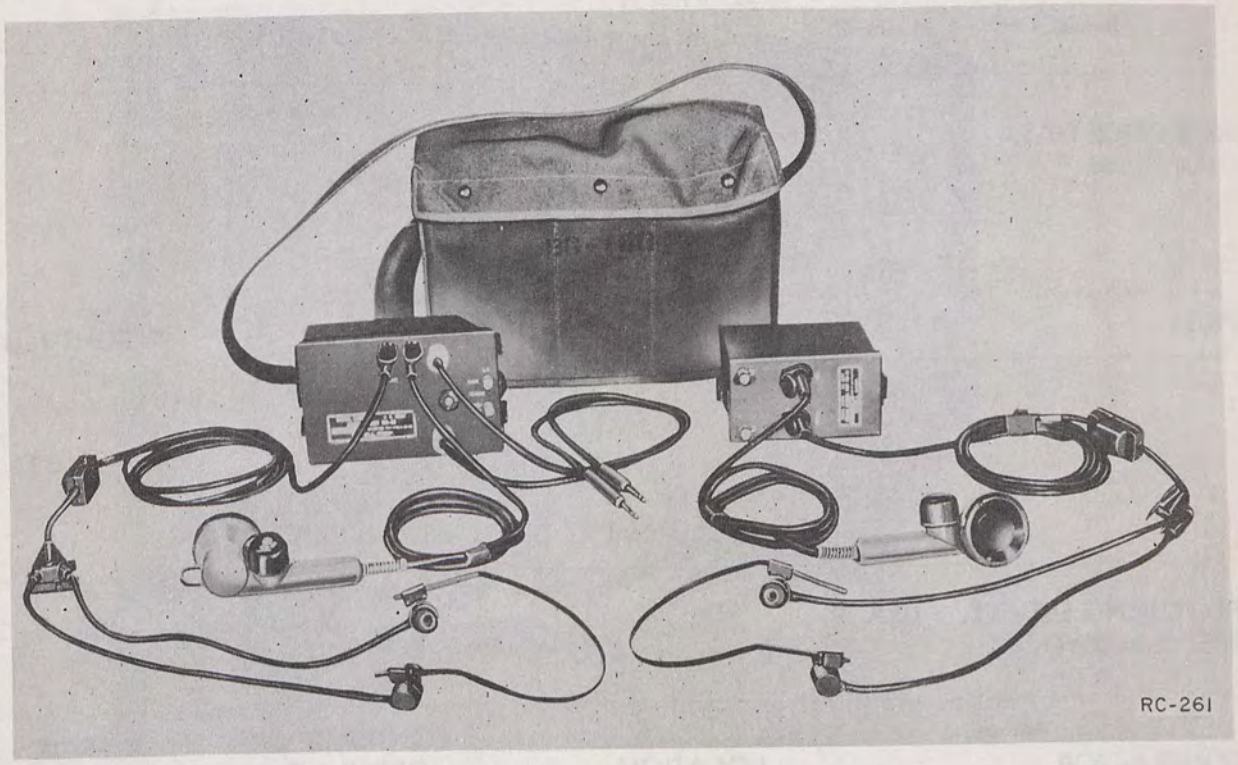
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division, Radio Corp. of America	Camden, N. J.	NXsr–60008	$3,000.00

REMOTE CONTROL EQUIPMENT **AN/PRW-type**

5 December 1958
Cognizant Serv: USA FSN: 5820-228-6108 RC-261

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C7600-261	--	--



FUNCTIONAL DESCRIPTION:

Remote Control Equipment RC-261 is an assemblage of items enabling the erection of a local-battery telephone facility between a remote operating position and the actual site of a radio equipment.

This equipment consists essentially of a control station designed to be operated at the remote point, a control box used at the radio set, and accessories. The remote control unit may be connected to the control box at the radio set by field wire.

The equipment is powered by dry batteries and by the hand magneto unit, which is integral in the remote control unit.

TECHNICAL CHARACTERISTICS:

Type of Signal: Cw, voice
Type Communication Circuits: Local battery telephone
Controls: A switch marked RADIO, REMOTE, INTERPHONE; impedance switch marked HIGH-LOW; and press-to-talk switch
Power Requirements: 3-v dc (two Batteries BA-30); 6-v dc (four Batteries BA-30)

AN/PRW-type REMOTE CONTROL EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Bag BG–186	----------	15-1/2 x 5 x 9-5/8	2
1	Control Unit RM–53	(FSN) 5820–221–0204 (USA) 2C680–53	8-1/2 x 4-3/8 x 4-3/8	4.94
1	Remote Control Unit RM–52	----------	7-1/16 x 3-1/4 x 5-3/16	3.5

REFERENCE DATA AND LITERATURE:

TM 11–2632

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.9	71.19

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

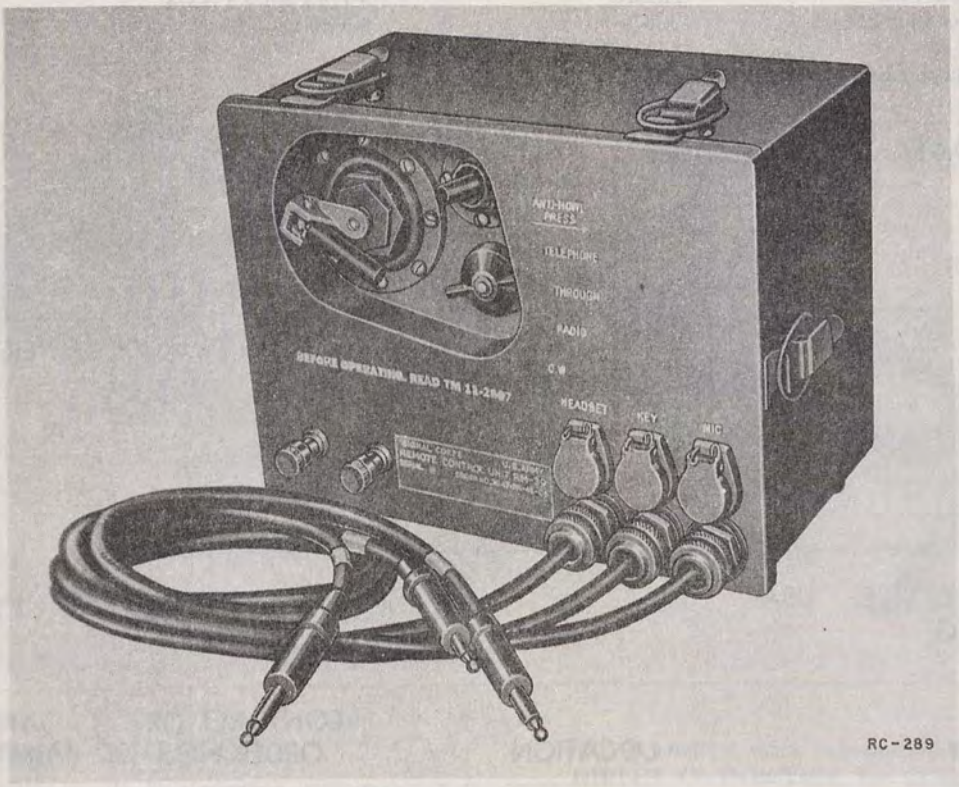
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
			$83.00

REMOTE CONTROL EQUIPMENT **AN/PRW-type**

1 July 1958
Cognizant Serv: USA FSN: 5820-170-4789 RC-289

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C7600-289	--	--



FUNCTIONAL DESCRIPTION:

Remote Control Equipment RC-289 is an assemblage of items enabling the erection of a local-battery telephone facility between a remote operating position and the actual site of the radio equipment.

This equipment consists essentially of a modified steel-cased Telephone EE-8, a telegraph key, and a standard field Telephone EE-8. The connecting facility is usually a conventional field telephone pair. Telephone EE-8 is located at the remote station; the remote control unit is installed at the radio set.

The modes of operation available are local-battery telephone communication between remote point and radio operator, control of radio equipment from the remote Telephone EE-8, voice circuit monitoring by the radio operator at the radio equipment, and operation of the radio set (voice or cw) with monitoring at either the remote station or the radio set.

It is powered by dry batteries and uses the hand generator integral in the remote control unit or in a Telephone EE-8 for ringing.

TECHNICAL CHARACTERISTICS:

Type of Signal: Cw and voice

Type Communication Circuits: Local battery telephone

Controls: Four-position switch marked TELEPHONE, THROUGH, RADIO, CW; Crank GC-9; and toggle switch marked ANTI-HOWL

Power Requirements: 4-1/2-v dc (Battery BA-27); 15-v dc (two Batteries BA-34); 1.5 v dc (Battery BA-30)

AN/PRW-type REMOTE CONTROL EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Case CS–76–J	2Z1876	9-7/8 x 8-5/8 x 6-3/4	2
1	Control Unit RM–39	2C679–39	9-5/16 x 6-5/8 x 5	12.9
1	Key J–47	3Z23447	----------	.3
1	Telephone EE–8	4B5008	----------	12.9

REFERENCE DATA AND LITERATURE:

TM 11–2667

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2.2	70

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

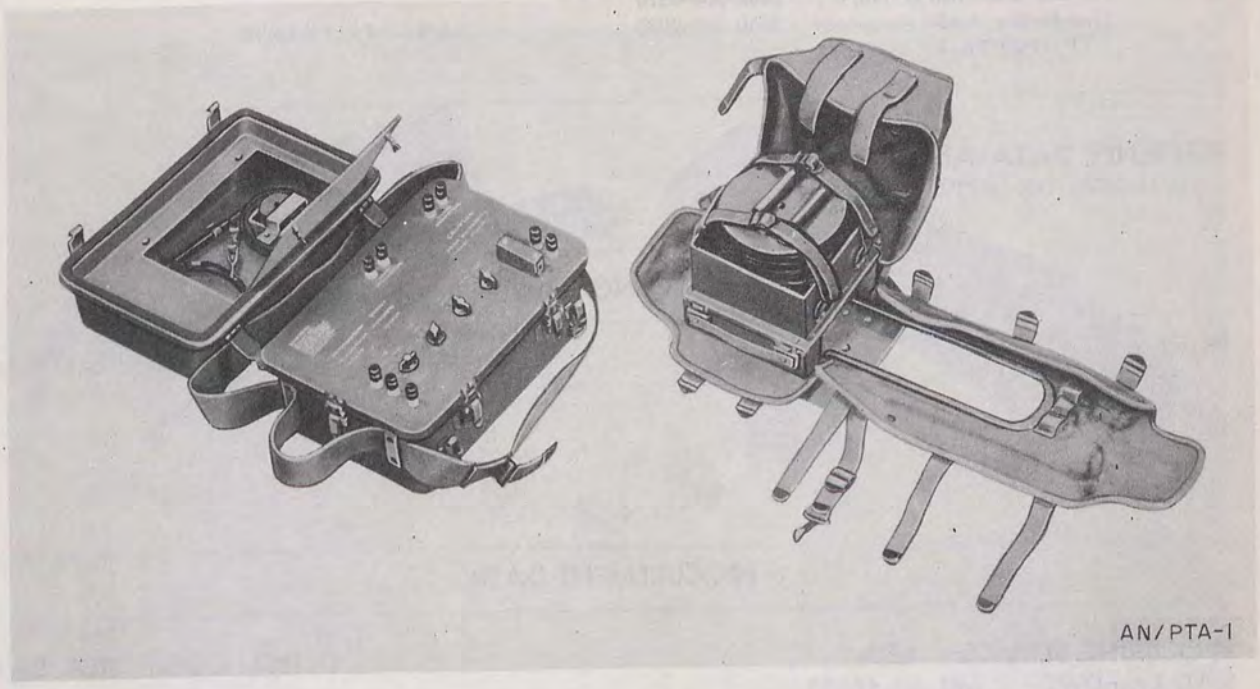
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletone Radio Co.	Elizabeth, N. J.	3205–P–51–01	$69.00

AUDIO FREQUENCY MONITOR AN/PTA-1

25 November 1958
Cognizant Serv: USA FSN: 6625-668-9525

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4C5633-1	--	--



FUNCTIONAL DESCRIPTION:

Audio Frequency Monitor AN/PTA-1 is a battery-operated wire tapping device used in the interception of communication signals transmitted over telephone wire circuits.

The intercepted signal can be recorded, but recording equipment is not supplied as part of this assemblage.

For convenience, this equipment is packed in two units for transportation and can be easily carried by one man.

TECHNICAL CHARACTERISTICS:

Frequency Range: 200 to 8,000 cps
Number of Bands: 1
Audio Frequency Amplifier AM-558/PTA-1:
Input Impedance: 20; 150; 500; 1,000; 2,000; 3,500; 5,000; 500,000 ohms; a ninth impedance position labeled FOR DIRECT CONNECTION TO LINES is for wire line bridging use
Output Impedance: 600 ohms
Input Impedance Accuracy: ±10%, FILTER switch B at 200 to 8,000 cps
±20%, FILTER swtich B at 200 to 3,000 cps
±20%, FILTER switch B at 300 to 8,000 cps
±25%, FILTER switch B at 300 to 3,000 cps
Output Impedance Accuracy: ±10% at 1,000 cps
Amplifier Gain: 90 db at 1,000 cps, minimum; 85 db between 200 and 8,000 cps
Power Output: Plus 10 dbm
Distortion: 7% (maximum) at maximum power
Power Requirements: 6 v, 50-ma dc (fil); 90 v, 5-ma dc (p)

AN/PTA-1 AUDIO FREQUENCY MONITOR

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier, Audio Frequency AM-558/PTA-1	2C448-558	8-3/4 x 10-5/8 x 15-3/8	20
1	Headset, Electrical H-113/U	5965-504-6370		
1	Transformer, Audio Frequency TF-148/PTA-1	5950-030-2985	1-5/8 x 1-7/8 x 2-15/16	.5

REFERENCE DATA AND LITERATURE:

TM 11-2099/TO16-30PTA1-6

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	6.1	82

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-M-10670

DESIGN COG: USA, Sig C

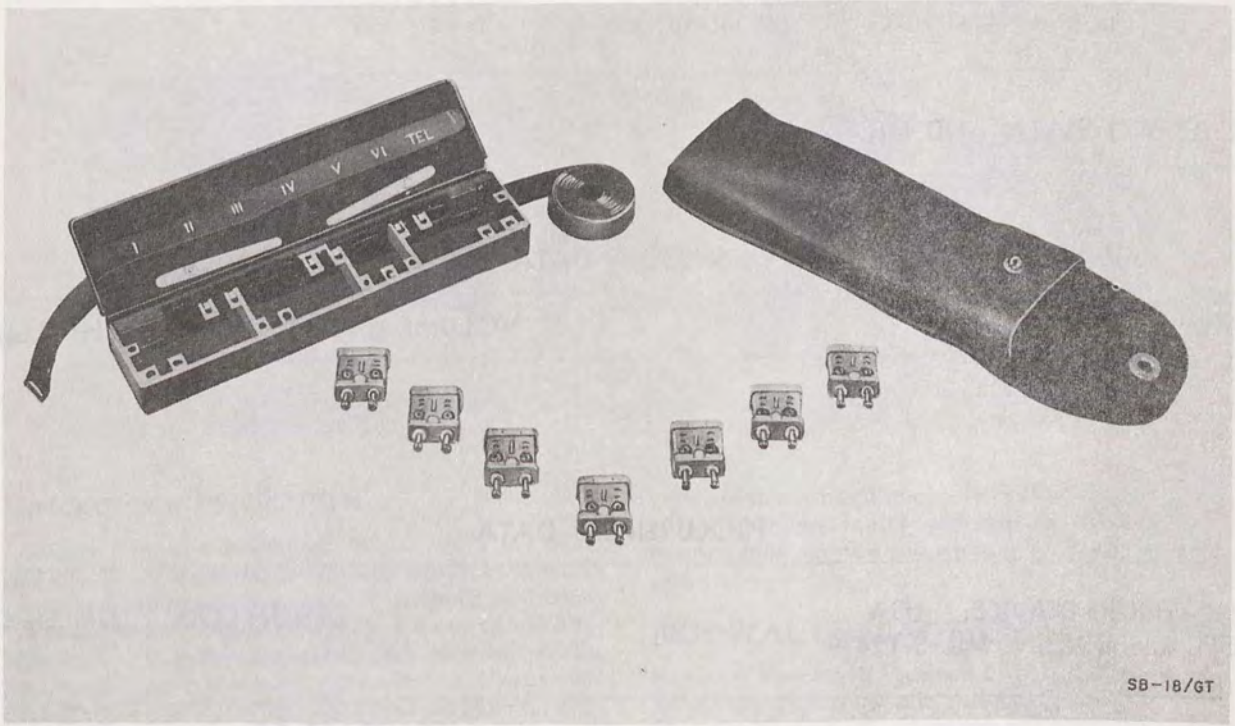
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

EMERGENCY SWITCHBOARD AN/PTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805–162–8191

SB–18–GT

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4C9905–18	--	1700–429298000



FUNCTIONAL DESCRIPTION:

Emergency Switchboard SB–18/GT is a small, compact, lightweight, manual switching equipment used with field wire facilities.

This equipment can be used as an emergency substitute for a six-line magneto telephone switchboard. Switching is performed by interconnecting the adapter plugs in the switchboard. Each adapter plug contains a small neon bulb that serves as a signal lamp when energized by ringing current.

A field telephone, such as the EE–8, is required to operate this switchboard. The operator's telephone supplies switchboard and ringing current.

TECHNICAL CHARACTERISTICS:

Number of Switchboard Positions: 1
Number and Type of Circuits: 6 line
Power Requirements: None

AN/PTC-type EMERGENCY SWITCHBOARD

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
7	Adapter Plug U–4/GT	5935–161–6649	2 x 1-1/2 x 5/8	0.1
1	Case CY–229/GT	5805–407–3892	12 x 4 x 1-1/2	
1	Plug Holder MT–313/GT	5805–161–6617	12 x 3 x 1-1/4	

REFERENCE DATA AND LITERATURE:

TB 11–333–1

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.02	5

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–S–12479

DESIGN COG: USA, Sig C

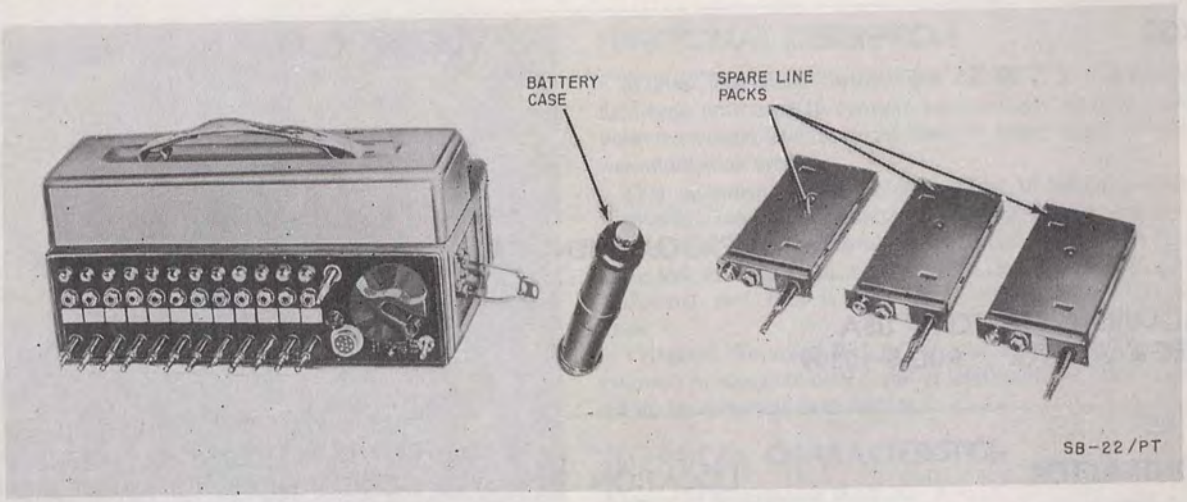
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Insuline Corp. of America	Manchester, N. H.	4454–P–53–33	$13.85
S. H. Couch Co., Inc.	North Quincy, Mass.	3545–P–52–03	20.50

MANUAL TELEPHONE SWITCHBOARD AN/PTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-257-3602

SB-22( )/PT

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4C9905-22	--	--



FUNCTIONAL DESCRIPTION:

Manual Telephone Switchboard SB-22( )/PT is a small, portable, 12-line monocord switchboard used to interconnect local-battery telephone lines and/or vf telegraph equipment.

This equipment consists essentially of a case in which individual line packs and an operator's pack are mounted. This method of design allows rapid replacement of defective circuits. The operator's pack includes a hand-generator for ringing.

Two of these equipments can be stacked and used together to handle 29 lines; in this application the operator's pack is removed from one case and replaced by five additional line packs.

TECHNICAL CHARACTERISTICS:

Number of Switchboard Positions: 1
Number and Type of Circuits: 1 cord; 12 line
Power Requirements: Four Batteries BA-30

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Battery case	6135-635-5223	----------	1.5
1	Handset-Headset H-81/U	6240-196-4501	----------	1.2
1	Switchboard Accessory Kit MX-230/PT	5805-356-2693	5 x 15 x 11-1/2	3.8
1	Switchboard SB-22/PT (bare unit)	----------	12 x 12 x 16-5/16	25

AN/PTC-type MANUAL TELEPHONE SWITCHBOARD

REFERENCE DATA AND LITERATURE:

TM 11–2202

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.29	58

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–S–10399

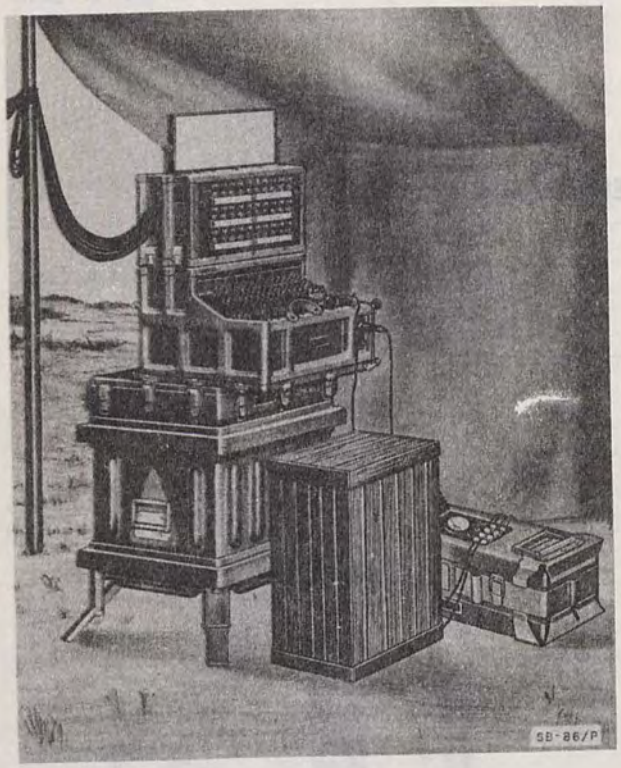
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Radio & Telephone Division, International Telephone & Telegraph Corp.	Clifton, N. J.	1672–P–51–31	$745.04
North Electric Co.	Galion, Ohio	4740–P–52–31	743.54
Stromberg-Carlson Co., Division, General Dynamics Corp.	Rochester, N. Y.	4739–P–52–51	696.30

MANUAL TELEPHONE SWITCHBOARD AN/PTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-503-2660 SB-86/P

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4C9905-86	--	--



FUNCTIONAL DESCRIPTION:

Manual Telephone Switchboard SB-86/P is a portable, field-type unit used to connect local-battery telephone and voice-frequency teletypewriter lines in many types of wire communication systems.

This equipment is capable of handling 15 calls at a time. Provision is made for automatic and manual ringing, common-battery and magneto signaling, and conference calls. It is mounted for operation on its outer cover assembly. An additional jack field is required to handle more than 30 lines.

Telegraph Terminal TH-5/TG and a teletypewriter are required to complete calls if the vf teletypewriter circuits are set up for telegraph only service.

TECHNICAL CHARACTERISTICS:

Number of Switchboard Positions: 1
Number and Type of Circuits: 16 cord, 30 line (expandable to 60 line with additional equipment), 2 trunk
Ringing: 20 cps from vibrator or hand magneto
Power Requirements:
Common Battery signaling: 20-26.5-v dc from five Batteries BA-200/U
Magneto signaling: 15-26.5-v dc
Night alarm and panel lamps: 3-v dc from two Batteries BA-30
Operator's set: 3-v dc from two Batteries BA-30

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	**Manual Telephone Switchboard Section SB-248/P**	4C9905-248	21 x 23-1/2 x 18-1/2	65
1	**Power Supply PP-990/G**	3H4497-990	10 x 21 x 7-1/8	29
1	**Switchboard Signal Assembly TA-207/P**	4C9635-2	10 x 4 x 14-1/2	6

AN/PTC-type MANUAL TELEPHONE SWITCHBOARD

REFERENCE DATA AND LITERATURE:

TM 11-2134

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	19.95	300

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-S-10446

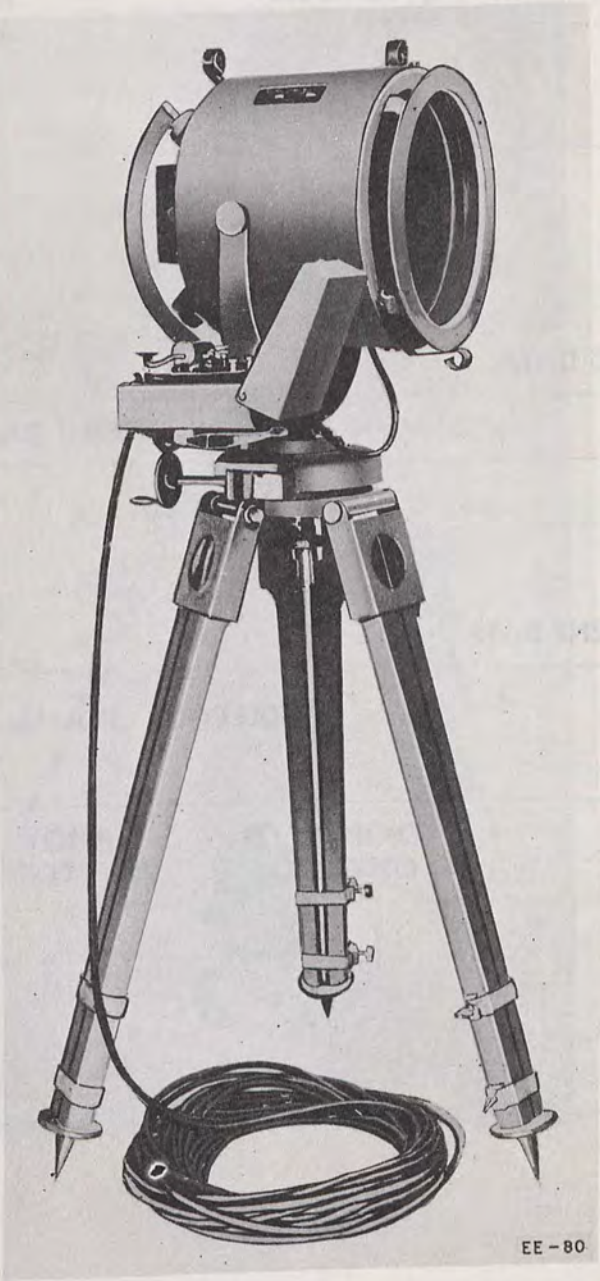
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Kellogg Switchboard & Supply Co.	Chicago, Ill.	1669-P-51-93	$1,784.00
North Electric Manufacturing Co.	Galion, Ohio	96-P-52-93	3,215.00

SIGNAL LAMP EQUIPMENT AN/PVC-type

26 November 1958
Cognizant Serv: USA FSN: EE-80-( )

	USA	USN	USAF
TYPE CLASS:	Obs	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Signal Lamp Equipment EE-80-( ) is a portable, alternating-current or direct-current operated, tripod-mounted signaling lamp in a metal housing, with telegraph key. It provides for signaling with white or colored light in Morse code. Approximate range is 7 miles by day, and 45 miles by night.

It is used in field or harbor defense, coastal signal stations, and similar applications.

This equipment consists of lamp housing with signaling and control fittings; telescoping tripod; white, red, or green light filters; and accessories.

Signal Lamp Equipment EE-80 includes Signal Lamp M-124; Signal Lamp Equipment EE-80-A uses Signal Lamp M-283—these lamps are interchangeable.

Signal Lamp Equipment EE-80 has been superseded by Signal Lamp Equipment EE-80-A.

TECHNICAL CHARACTERISTICS:

Number and Type of Channels: 1 (white, red, or green colored light)
Communication Speed: 5 wpm
Type Light Source: Incandescent lamps
Special Features: Lamp focusing adjustment, peep-sight-type rear sight; crossed-hair-type front sight; gear adjustment mechanism for elevation and azimuth alinment; telegraphic-type signaling key; masking louvres; colored light filters
Power Requirements: 450 w 110-120-v ac or dc

AN/PVC-type SIGNAL LAMP EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Chest CH–24	----------	44-3/4 x 26-1/2 x 26	128
1	Signal Lamp M–124 or M–283, filters, lamps, etc., including:	----------	30 x 18 x 26	74
1	Key J–47	3Z3447		
1	Tripod LG–9	6B1109	38-1/2 x 11	35

REFERENCE DATA AND LITERATURE:

TM 11–390

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	4.0	324

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

SIGNAL LAMP EQUIPMENT AN/PVC-type

26 November 1958
Cognizant Serv: USA FSN: 5850-356-3720

EE-84

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Signal Lamp Equipment EE-84 is a portable, visual signaling device which provides communication by flashes of white or red light keyed in accordance with the dots and dashes of telegraphic codes. It is used for line-of-sight communication in airport traffic control, by military police and security troops, and similar units. Approximate range is 2.5 miles in bright sunlight (maximum); many times this range at night.

This equipment consists essentially of a prefocussed lamp in a cylindrical housing, a tripod, and associated battery box. It has a sighting telescope that has illuminated crossed-hairs used in setting up and aiming the device, and a compass and azimuthal scale for orientation.

TECHNICAL CHARACTERISTICS:

Number and Type of Channels: 1 (keyed or interrupted light flashes)

Communication Speed: 8 wpm

Type Light Source: Incandescent lamp, prefocussed, paraboloidal reflector

Special Features: May use filters to modify light to red or other color; includes red filter goggles for reading red light signals

Power Requirements: 8 Batteries BA-30

AN/PVC-type SIGNAL LAMP EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Bag BG–72	6B32	13 x 11 x 8	8
1	Bag BG–73	6B33	36 x 5 dia with a side bag 8 x 6-1/2 x 3	3.4
1	Cord CD–332	3E1332	144 lg	.6
1	Key J–46	6B451	4 x 2 x 1	.2
1	Mount assembly (Ordnance Dept for aiming circle type M1916 and M1916M1)	6B583	5.3 x 1-1/2 dia	1
1	Signal Lamp M–132	6B692	10 x 5-1/2 dia	5.5
1	Tripod (Ordnance Dept type G for aiming circle type M1916)	6B1110	34 x 4 dia when folded	7.4

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	6	70

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

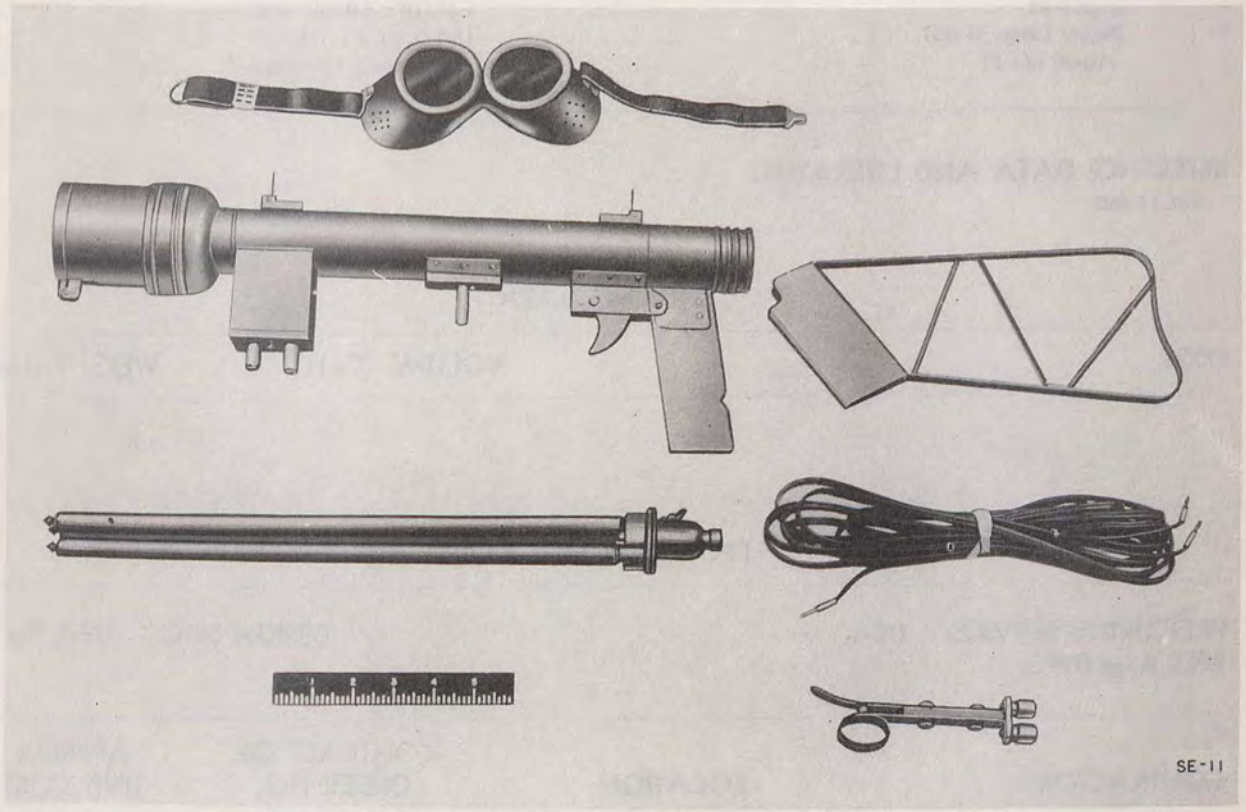
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

SIGNAL LAMP EQUIPMENT AN/PVC-type

20 November 1958
Cognizant Serv: USA FSN: 5850–407–6671 SE–11

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	6B841	--	--



FUNCTIONAL DESCRIPTION:

Signal Lamp Equipment SE–11 is a light-signaling device used for visual communication. It is used in traffic control and in forward area line-of-sight communication applications.

This equipment consists essentially of a signal lamp with a pistol grip and trigger-type on-off switch. A gunstock type of mounting is provided for operating the equipment from the shoulder. A tripod is included for use when the signal lamp is installed on the ground in relatively permanent applications. The tripod has a swivel head assembly and the equipment can be operated by remote control. Provision also is made for operation by a standard hand key when using International Morse Code. The lamp is equipped with sights similar to those of a rifle and can be quickly trained on a given target. Goggles and filters are provided for reception of signals from similar equipment.

Signals of either white or red light can be selected by the operator.

TECHNICAL CHARACTERISTICS:

Type of Signal: Red or white light flashes
Approximate Range:
Day: 1-1/2 miles
Night: 5 miles
Controls: Self contained trigger or hand key
Power Requirements: 7.5-v dc from 5 Batteries BA–30 in series

AN/PVC-type SIGNAL LAMP EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 (pr)	Filter MC–430			
1 (pr)	Goggles M–172		8 x 2-3/4	0.3
1	Key J–51		1-11/16 x 5-9/16 x 1/2	.1
1	Signal Lamp M–227		18-1/2 x 6 x 1-3/4	2.1
1	Tripod LG–21		42 extended; 18 collapsed	1.4

REFERENCE DATA AND LITERATURE:

TM 11–392

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.1	8.5

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TRANSMITTER-TELETYPEWRITER CONTROL AN/SGA-type

5 December 1958
Cognizant Serv: USN FSN: 5815-665-0929 C-492/SG

USA	USN	USAF
TYPE CLASS: --	Used by --	--
STOCK NO: --	F16-C-90148-2651	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Transmitter-Teletypewriter Control C-492/SG is intended for general shipboard installation. The unit controls associated radio transmitter power ON-OFF, controls associated radio transmitter carrier ON-OFF, and enables transfer of associated teletypewriter to send or receive.

Visual indications are provided by indicator lights on controls panels. The control is designed to be mounted on the side of, or adjacent to, a send-receive teletypewriter; it may, however, be mounted on a bulkhead by means of a bracket.

TECHNICAL CHARACTERISTICS:

Power Requirements: Lamps powered through cabling of associated teletypewriter equipment

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transmitter-Teletypewriter Control C-492/SG	----------	8-3/4 x 5-1/2 x 4-1/2	3.25

(This equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91108

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.14	3.88

AN/SGA-type TRANSMITTER-TELETYPEWRITER CONTROL

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: RE-23F257B

DESIGN COG: USN, BuSI

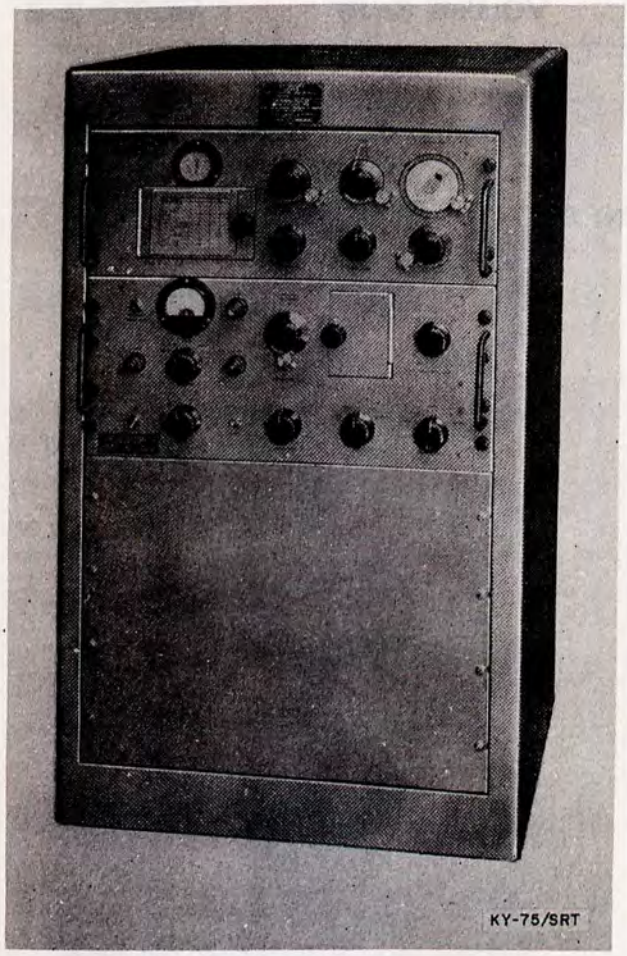
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COS
Northeastern Engineering Inc.	Manchester, N. H.	NObsr-44205	$3E

KEYER AN/SGA-type

3 December 1958
Cognizant Serv: USN FSN: 5820-501-1954

KY-75/SRT

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Used by
STOCK NO:	--	F16-K-47672-9201	--



FUNCTIONAL DESCRIPTION:

Keyer KY-75/SRT is a frequency-shift keyer used in long distance radio telegraph systems to improve transmission. It replaces the exciter of a continuous wave transmitter with a source of excitation that can be shifted in frequency (a small value higher and lower) to produce telegraph or facsimile signals corresponding to those delivered to the transmitter input. This frequency-shift method is used to minimize selective fading, interference, and static disturbances.

This keyer can be connected to an external master oscillator (such as that of the associated transmitter) and provides three crystal-controlled channels.

Keyer KY-75/SRT is electrically and mechanically identical with Keyer KY-58/GRT that the KY-58/GRT is mounted on casters for mobility whereas the KY-75/SRT is not.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.0 to 6.7
Type Modulation: FM
Type of Signal: Frequency-shift keying, facsimile
Power Output: 6 w into 75-ohm load
Power Requirements: 470 w, 115/230-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Keyer KY-75/SRT	----------	24-1/2 x 22-1/8 x 26-9/16	220

(Equipment consists of only one major component.)

AN/SGA-type KEYER

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91543

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	15.4	401

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

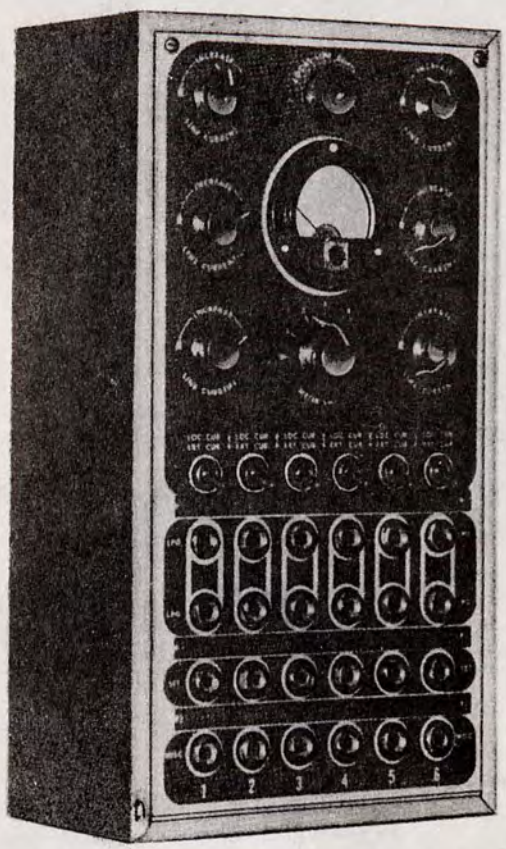
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co. Inc.	Malden, Mass.	NObsr–42513, 30 June 1948 NObsr–52052, 30 October 1950	$1,160.00

TELETYPE PANEL AN/SGA-type

21 October 1958
Cognizant Serv: USN FSN: TT-23/SG, 5815-302-5553
TT-23B/SG, 5815-372-5935

TT-23/SG, TT-23B/SG

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	TT-23/SG, F16-P-1353-2 TT-23B/SG, F17-P-23164-8867	--



TT-23B/SG

FUNCTIONAL DESCRIPTION:

Teletype Panels TT-23/SG and TT-23B/SG are small teletypewriter patch panels designed for general shipboard use to facilitate the interconnection and transfer of teletypewriter equipment with radio adapters, such as frequency-shift keyers and converters, and tone modulation terminal equipment.

Each panel has six channels. Each channel consists of a loop circuit of two loop jacks, one set jack, one miscellaneous jack, a rheostat for adjusting line current, and a toggle switch for selecting either a local or external source of line current. A meter measures line current on any channel. The miscellaneous jacks permit connection of any teletypewriter equipment not regularly assigned to a channel.

The TT-23/SG and TT-23B/SG are electrically and mechanically interchangeable. Minor differences between the models do not affect their application.

TECHNICAL CHARACTERISTICS:

Number of Circuits: 6 teletypewriter loop circuits
Current Range: 0 to 100 ma
Meter Range: 1 ma for full-scale deflection
Power Requirements: 100 ma (maximum) at 115-v dc

AN/SGA-type TELETYPE PANEL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
6	Dummy plug	----------	----------	0.02
6	Patch cord	----------	18 long	1.12
1	Teletype Panel TT–23/SG or TT–23B/SG	----------	14-5/8 x 8-1/4 x 5	12.5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91103

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.568	15

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

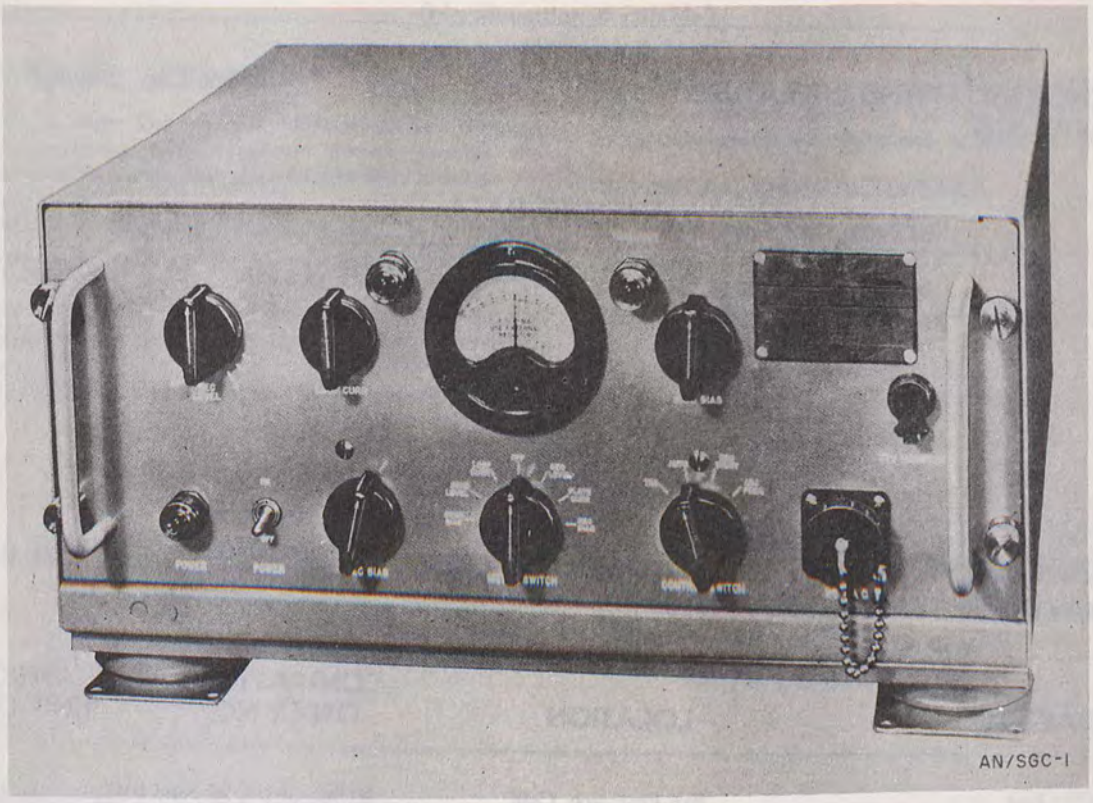
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Northeastern Engineering, Inc.	Manchester, N. H.	NObar–39378	$142 (TT–23/SG)

RADIO TELETYPE TERMINAL SET AN/SGC-1

25 November 1958
Cognizant Serv: USN FSN: 5815-665-1330

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-115092-200 (USN)	--



FUNCTIONAL DESCRIPTION:

Radio Teletype Terminal Set AN/SGC-1 is used to transmit and receive teletypewriter messages over radio channels between stations similarly equipped.

The terminal set, when transmitting, converts the current pulses from the teletypewriter to audio tones which modulate the radio transmitter. When receiving, the set converts the tones to make-and-break signals for operating the associated teletypewriter.

TECHNICAL CHARACTERISTICS:

Frequency Range: .5 kc and .7 kc
Type Emission and Reception: A3 (cw)
Minimum Input Signal Level: −40 dbm
Maximum Output Power: +10 dbm
Output Impedance: 600 ohms or 50 ohms
Input Impedance: 600 ohms
Heat Dissipation: 117 w
Power Requirements: 86 w, 115-v 50- to 60-cycle 1-phase ac

AN/SGC-1 RADIO TELETYPE TERMINAL SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares	----------	6-1/8 x 19-1/8 x 16	49
1	Teletypewriter Terminal TT-40/SGC-1	----------	9-11/16 x 19-1/4 x 17-9/16	50

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91152

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	6.1	148

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: CS-703; MIL-R-1510

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Remler Co., Ltd.	San Francisco, Calif.	NObsr-39323, 26 June 1947	$650.00

RADIO TELETYPE TERMINAL SET AN/SGC-1A

25 November 1958
Cognizant Serv: USN FSN: 5815-665-1329

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-115096-200 (USN)	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Teletype Terminal Set AN/SGC-1A is a terminal for teletypewriter communications, making possible the transmission and reception of teletypewriter messages by radio equipment.

When transmitting, the terminal set converts the current pulses from the teletypewriter to audio tones for modulating the transmitter.

When the set is receiving, teletypewriter transmissions are demodulated so as to facilitate operation of the associated teletypewriter.

This equipment is the same as Radio Teletype Terminal Set AN-SGC-1 in size, weight, operation, installation, and external connection. However, the AN/SGC-1A chassis is not interchangeable with the chassis of the AN/SGC-1.

TECHNICAL CHARACTERISTICS:

Frequency Range: 0.5 kc and 0.7 kc
Type Emission and Reception: A1
Minimum Signal Input: −40 dbm
Maximum Signal Output: +10 dbm
Input Impedance: 600 ohms
Output Impedance: 600 ohms or 50 ohms
Power Requirements: 86 w, 115-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Set of equipment spares	----------	6-1/8 x 12-13/16 x 10-1/2	27
1	Teletypewriter Terminal TT-40A/SGC-1	----------	9-11/16 x 19-1/4 x 17-9/16	50

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91503

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	6.1	130

AN/SGC-1A RADIO TELETYPE TERMINAL SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

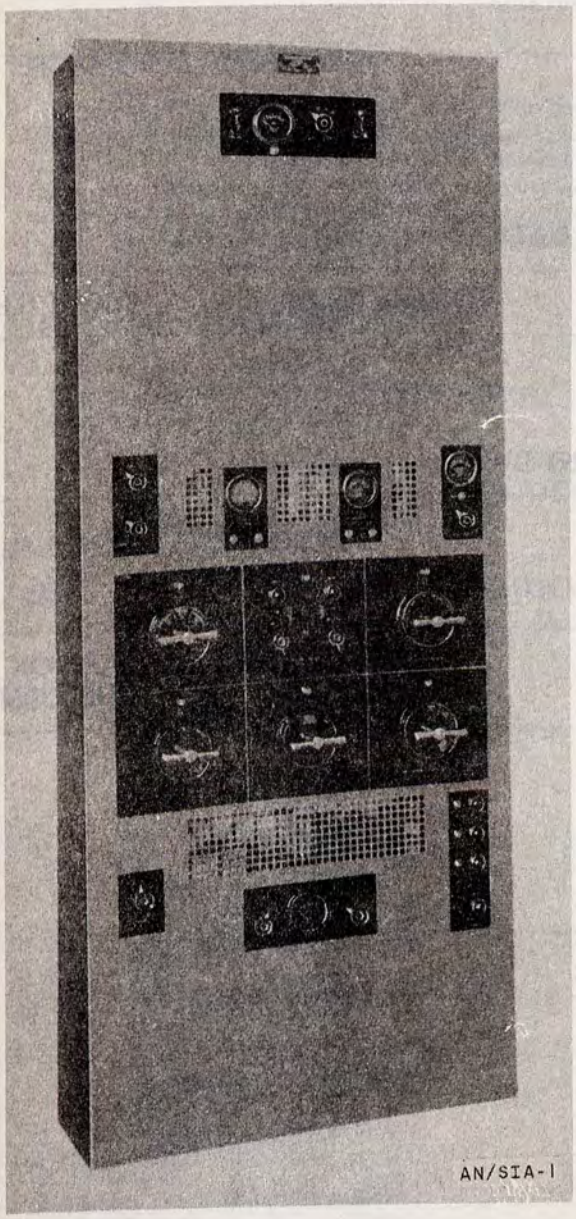
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Remler Co., Ltd.	San Francisco, Calif.	NObsr–52077, 17 November 1950	

AMPLIFIER-OSCILLATOR GROUP AN/SIA-1

25 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Amplifier-Oscillator Group AN/SIA–1 is designed to control general alarm as well as chemical attack alarm signals and to amplify audio signals. It is part of Navy Battle Announcing Equipment Type MCG.

This equipment consists of a preliminary amplifier and two oscillators mounted in a cabinet. The front panel of the cabinet provides various control and indicating devices.

The group requires transmitter control stations and reproducers in quantities determined by a given situation. However, these items are not furnished as part of the equipment.

TECHNICAL CHARACTERISTICS:

Power Requirements: 115-v 60-cycle 1-phase ac

AN/SIA-1 AMPLIFIER-OSCILLATOR GROUP

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier D–150159			
1	Cabinet D–150162			
1	Oscillator D–150139			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 365–0286

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: ESXX–677147–G1

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co., Inc.	New York, N. Y.	Nod–1098	

AMPLIFIER-OSCILLATOR GROUP AN/SIA-3

25 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Amplifier-Oscillator Group AN/SIA–3 provides general announcing facilities for a 1-mc circuit and submarine control announcing for a 7-mc circuit. It is used for disseminating orders and information from the various control stations, strategically located throughout the submarine, to all other parts of the vessel where the 1-mc or 7-mc loudspeakers are employed.

TECHNICAL CHARACTERISTICS:

Audio Frequency Amplifier:
Frequency Response: ±1 db at 300 cps to 3,000 cps
Amplifier Gain: 119 db maximum
Input Impedance: 75 ohms at 150 ohms at 1,000 cps
Output Impedance: 39 ohms at 1,000 cps
Power Output: 125 w at 5% distortion

Alarm Signal Generator:
Collision Alarm: 750-cps to 1,750-cps siren; 3-sec full sweep
Dining Alarm: Simulated motor-operated horn
General Alarm: Simulated bell; 90 strokes per minute
Voltage Output: 10 v rms
Output Impedance: 500 ohms

Power Requirements:
Standby: 230 w, 115-v 60-cycle 1-phase ac, 2.0 amp
Ready: 1,250 w, 115-v 60-cycle 1-phase ac, 11.0 amp

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
(*)	Amplifier and Control Rack 1C/SAA	----------	15 x 20 x 16-3/4	750
	Handset 1C/MPH	----------	2-3/4 x 3-1/2 x 9-1/2	4.5
	Loudspeaker L–S	----------	5 x 8 x 12	23
	Loudspeaker Fixed Volume Control 1C/SXV	----------	3-1/4 x 4-7/16 x 4-7/16	4.5
	Low Power Loudspeaker 1C/SAA	----------	8-1/2 x 11 x 11	15
	Microphone Control Box 1C/MBA	----------	4-1/2 x 5-5/8 x 5-5/8	5
	Microphone Jack Box 1C/MJB	----------	4 x 4-1/2 x 4-1/2	4.5
	Microphone with Flexible Mounting 1C/MFM	----------	3-1/2 x 4-1/2 x 39	5.5
	Portable Microphone 1C/MPM	----------	2-3/4 x 5-1/4 x 11	5
	Pressure Proof Loudspeaker 1C/SHA	----------	5 x 6 x 6	13
	Pressure Proof Talk Switch 1MC/7MC			

* Quantity as required per installation.

AN/SIA-3 AMPLIFIER-OSCILLATOR GROUP

REFERENCE DATA AND LITERATURE:

NAVSHIPS 365–1864

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: USN, BuShips

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Remler Co., Ltd.	San Francisco, Calif.	NObsr–47705	

AMPLIFIER-OSCILLATOR GROUP AN/SIA-10

25 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Amplifier-Oscillator Group AN/SIA-10 provides amplified voice and alarm signals which are heard from reproducers located in various parts of the ship. Further, it amplifies voice and command signals originating from selected gun station reproducers located in the gun mounts.

This equipment consists essentially of a general announcing system and an aircraft announcing system.

TECHNICAL CHARACTERISTICS:

Voltage Amplifier N–201–3: Contains compressor and limiter circuits and its own power supply

Power Amplifier N–202–3: Consists of a single-stage, high-power class B audio amplifier using 4 type 811 tubes in push-pull parallel

Control Panel Assembly N–262–3: Consists of relays, switches, volume indicator, load resistors, fuses, terminals, relay power transformers associated with the system

Alarm Signal Generator N–214–2: Consists of an oscillator-amplifier, a power transformer with rectifier and filter circuit, 4 control relays, and a motor driven cam-operated switch, all mounted on a common chassis

Transmitter Control Station N–251: Encased in metal housing which is mounted on the ship's bulkhead. On the unit control panel are mounted the busy lights, the reproducer-group selector switches, the press-to-talk switch, a shock-mounted volume-indicating meter, and a microphone

Portable Microphone N–253–3: Consists of the microphone motor, the press-to-talk switch, a resistor-condenser equalizing pad, and the microphone housing. An antifeed-back mouthpiece is secured to the housing with a clamping ring which also retains the motor assembly in the housing

Amplifier Cabinet Assembly N–254–3: Consists of (1) Voltage Amplifier N–201–3, (1) salvo and cease firing Signal Generator N–217, (1) Control and Test Panel N–287–1

Command Signal Generator N–217–1: Consists of a vacuum-tube oscillator-amplifier with power supply, relays, and motor-driven variable condenser

Control Box, Class "E" N–290–6: Consists of a shock-mounted volume indicator, a portable microphone receptacle with protecting cap and locking-type press-to-talk switch

Reproducers N–256 and N–257: Differ only in that they employ different transformers to obtain different levels of output

Reproducer N–259: Permanent-magnet type and of direct radiator construction

Power Requirements: 115-v ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier and Control Panel Assembly N–254–3	----------	16-7/8 x 26 x 29	265
1	Amplifier and Control Panel Assembly N–289–4	----------	20 x 30 x 72	1,175
1	Circuit Analyzer N–209–1	----------	----------	13.5
1	Control Box, Class "E" N–290–6	----------	6-1/2 x 9-1/4 x 11-3/4	22
2	Portable Microphone Transmitter N–253–3	----------	----------	5
7	Reproducer, Class H, Grade I and II, N–256	----------	10-1/2 x 12-5/8 x 15-1/2	49
50	Reproducer, Class L, Grade I, N–259	----------	5-3/4 x 8-5/8 x 12	23
10	Reproducer, Class M, Grade I and II, N–257	----------	10-1/2 x 12-5/8 x 15-1/2	49

AN/SIA-10 AMPLIFIER-OSCILLATOR GROUP

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Set of Spare Parts N–208–6	----------	----------	943
2	Transmitter Control Station, Class A, N–251–16	----------	8-1/2 x 12-1/2 x 15-7/8	48
2	Transmitter Control Station, Class A, N–251–17	----------	8-1/2 x 12-1/2 x 15-7/8	48

REFERENCE DATA AND LITERATURE:

Commercial literature IC–30W

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Remler Co., Ltd.	San Francisco, Calif.	NObsr–11185 NObsr–11761–Lot II	

AMPLIFIER-CONTROL GROUP AN/SIA-35

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Amplifier Control-Group AN/SIA–35 is a shipborne battle announcing system that provides voice communication among microphones located at various positions on the vessel, and among groups of reproducers located throughout the ship.

This equipment also provides for the reproduction of electronically generated alarm signals that simulate klaxon siren and gong signals. The transmitter stations of the system permit the use of fixed, portable, or throat microphones except in torpedo rooms where only throat microphones can be used.

Pressure-proof boxes are provided for protection against submersion.

TECHNICAL CHARACTERISTICS:

Signal Generator:
Power Consumption:
Standby: 82 w
Operating: 92 w
Heat Dissipation: 92 w
Power Output: 10 w
Voltage Amplifier:
Power Input:
Standby: 80 w
Ready: 271 w
Heat Dissipation:
Standby: 80 w
Ready: 191 w
Distortion: 10% at full load
Power Consumption:
Standby: 232 w
Operating: 634 w
Power Output: 160 w
Heat Dissipation: 474 w
Power Requirements: 115 v 60-cycle

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control panel			
2	Power amplifier			
2	Signal generator			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 365–0222

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SIA-35 AMPLIFIER-CONTROL GROUP

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Guided Radio Corp.	New York, N. Y.	NOs–88797	

AMPLIFIER-CONTROL GROUP AN/SIA-61

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Amplifier-Control Group AN/SIA-6 is designed to transmit, amplify, and reproduce speech and tone signals on shipboard.

The number of transmitter control stations, signal generators, amplifiers, and reproducers employed on any particular system is determined by the requirements and extent of the installation.

TECHNICAL CHARACTERISTICS:

Amplifier Rack (Circuit IMC): Provides 2-channel amplifier rack with facilities for housing 4 voltage amplifiers, 2 signal generators, 1 control panel. Each of the 2 amplifier channels comprises 2 voltage amplifiers connected in parallel.

Amplifier Rack (Lifeboat Talk-Back Circuit): Comprises a cabinet in which is mounted 1 control panel, 1 voltage amplifier with compressor

Portable Transmitter: Comprises a magnetic microphone with a talk switch supported by neck band; includes 20-ft. cable

Reproducers (High and Medium Power): High and low power reproducers are alike in all construction details with exception of volume control switch and resistor; diaphragm has 15-ohm voice coil.

Reproducers (Low and Standard Power): Contained within 2-section circular brass mounting; permanent-magnet-field dynamic type

Signal Generator (Type B): Produce bell tone signal for general alarm and various audio frequencies for alarm or command signals. Signals also used for test purposes

Transmitter Control Station (Class A): Comprises magnetic type microphone, volume indicating meter, switch, and indicating lamps

Voltage Amplifier: Consists of 3 stages of amplification together with rectifier tubes that supply dc plate power for voltage amplifier and compressor

Compressor: Consists of one-stage amplification and 2 separate signal rectifier stages

Heat Dissipation (Maximum):

Standby: 285 w with talk-back amp off; 527 w with talk-back amp on

Ready: 1,057 w with talk-back amp off; 1,360 w with talk-back amp on

Power Requirements:

Standby: 285 w, 93 pf, lagging with talk-back amp off; 527 w, 93 pf, lagging with talk-back amp on

Ready: 1,137 w, 87.5 pf, lagging with talk-back amp off; 1,430 w, 87.5 pf, lagging with talk-back amp on

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier Rack MI–2783	----------	14 x 24 x 29-5/8	200
1	Amplifier Rack MI–2784	----------	14 x 21-3/8 x 72	555
1	Circuit Tester MI–2657	----------	5-1/2 x 12-3/4 x 13	13.5
10	Portable Transmitter MI–2162–A	----------	4-3/8 x 5-1/2 x 12	5.5
2	Reproducer, Class H MI–2916–A	----------	13-3/4 x 17-1/8 x 18	36
62	Reproducer, Class L MI–2917–J	----------	5 x 10 x 10-3/4	19
16	Reproducer, Class M M–2915–A	----------	13-3/4 x 17-1/8 x 18	36
1	Set of Spare Parts and Tools W–130307			
2	Set of Tubes MI–2646			

AN/SIA-61 AMPLIFIER-CONTROL GROUP

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Set of Tubes MI–2647			
8	Talk Back Switch MI–2859–B		5-1/2 x 7 x 7-1/2	
1	Transmitter Control Station, Class A, MI–2192–1		10-1/4 x 12-1/8 x 16-1/2	3
2	Transmitter Control Station, Class A, MI–2192–5		10-1/4 x 12-1/8 x 16-1/2	3

REFERENCE DATA AND LITERATURE:

Commercial literature, Instruction Book No. 27H3

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lb

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: USN, BuShi
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Corp. of America Manufacturing Co., Inc.	Camden, N. J.	NOs–94132	

AMPLIFIER-CONTROL GROUP AN/SIA-62

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Amplifier-Control Group AN/SIA–62 is a voice and tone transmitting, generating, amplifying, and reproducing equipment. It is designed for shipboard installation.

This equipment consists essentially of a rack containing a two-channel amplifier, a control panel, and two signal generators. Each of the two amplifier channels is composed of two voltage amplifiers connected in parallel.

The system is used to amplify and control voice communications to and from reproducers and transmitters located at various stations aboard ship. It is also used to generate general and chemical alarm signals.

In conjunction with a portable transmitter, two transmitter control stations, and reproducers as required, this equipment forms general announcing system (circuit 1 MC) of the Navy Battle Announcing Equipment Type MCG.

The amplifier is identical with the commercial Radio Corporation of America Model No. MI–2722–A.

TECHNICAL CHARACTERISTICS:

Information not available

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier Rack 1–MC			
1	Control panel			
2	Signal Generator MI–2871			
1	Voltage Amplifier MI–2877A			

REFERENCE DATA AND LITERATURE:

Commercial literature, Instruction Book No. 27W; IB–38673

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SIA-62 AMPLIFIER-CONTROL GROUP

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Corp. of America	Camden, N. J.	78790 81910	

CONTROL-OSCILLATOR GROUP AN/SIA-66

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Control-Oscillator Group AN/SIA–66 is a battle announcing equipment designed for transmitting, amplifying, and reproducing speech and alram signals on shipboard.

The number of transmitters, control boxes, signal generators, amplifier units, and reproducers employed as part of any particular system is determined by the requirements and the extent of the installation.

TECHNICAL CHARACTERISTICS:

Amplifier:
Output: 140 w
Input: 64 ohms
Input of Reproducer, Class H: 95 v
Input of Reproducer, Class M: 95 v
Input of Reproducer, Class L: 95 v
Dc Resistance of Reproducer, Class BM: 14.5 ohms
Headset:
Type: Permanent magnet
Dc Resistance: 2,200 ohms
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier MCG–MCA	----------	18 x 30 x 72	1,000
1	Control Box, Class D	----------	5-1/2 x 8-1/2 x 11-1/8	16
1	Headset	----------	4 x 6 x 6	3
1	Jack box	----------	3-1/8 x 4-11/16 x 6-3/16	2
1	Portable transmitter	----------	4-1/2 x 5-1/2 x 12	4
1	Reproducer, Class BM	----------	24 x 26 x 37	283
(*)	Reproducer, Class H	----------	8-3/4 x 12-3/4 x 12-3/4	25
(*)	Reproducer, Class L	----------	7-1/2 x 9-1/16 x 9-1/16	12
(*)	Reproducer, Class M	----------	8-3/4 x 12-3/4 x 12-3/4	25
(*)	Reproducer, Class S	----------	7-1/2 x 9-1/16 x 9-1/16	12
1	Set of spare parts and tool and test equipment			
1	Transmitter, Class A	----------	9 x 14-7/8 x 19-1/8	35
(*)	Quantities as required per vessel			

* Determined by the requirements and the extent of the installation.

REFERENCE DATA AND LITERATURE:

NAVSHIPS 365–0063

AN/SIA-66 CONTROL-OSCILLATOR GROUP

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

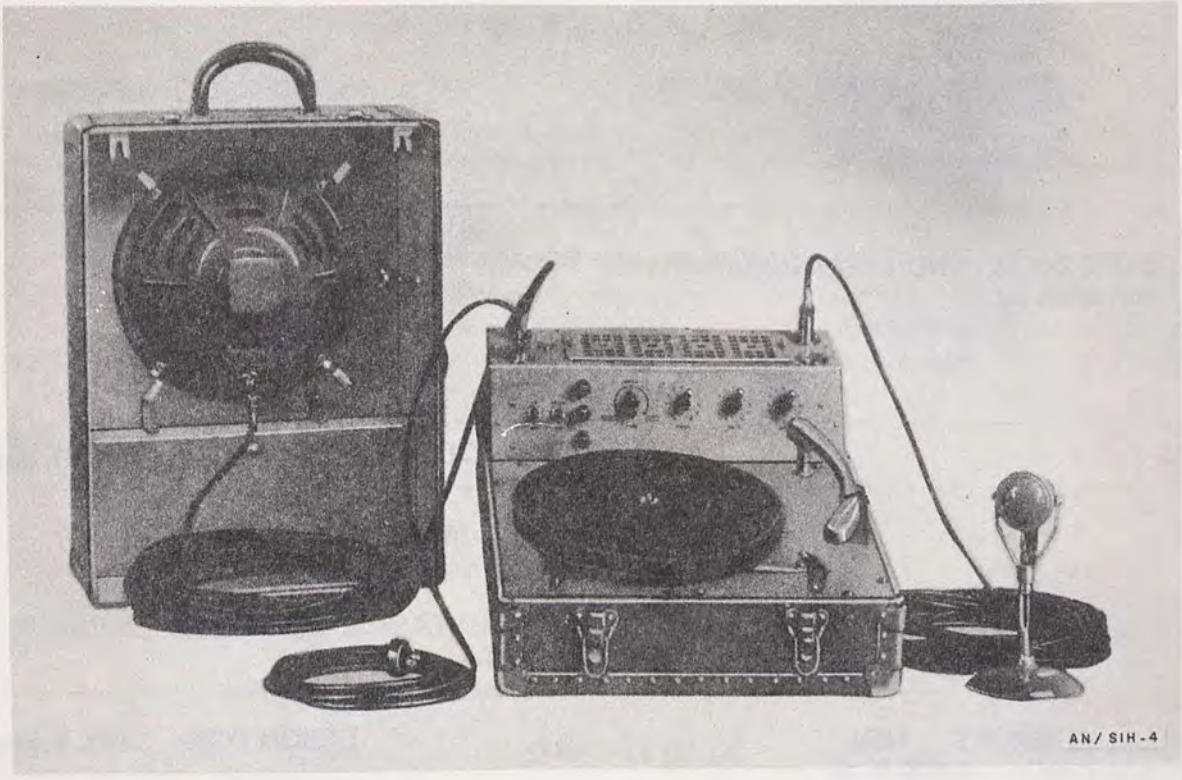
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Stromberg-Carlson Co.	Rochester, N. Y.	NObsr–11477	

PUBLIC ADDRESS SET AN/SIH-4

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Public Address Set AN/SIH–4 is a portable, self-contained transcription reproducer and public address system.

This equipment is used to reproduce standard recording disks up to and including 16 inches in diameter that have been recorded at speeds of 33-1/3 or 78 revolutions per minute.

Reproducing speeds adjustable to accommodate variations in line frequency or voltage, or both.

The set will also produce long playing or microgroove records if the proper needle is substituted in the reproducer head.

TECHNICAL CHARACTERISTICS:

Input Facilities: Microphone 1, microphone 2, low level, and photograph (variable reluctance pick-up)

Input Impedance:
Microphone 1: 150 ohms
Microphone 2: 150 ohms
Low Level: 35,000 ohms
Phonograph Pick-up: 150,000 ohms

Input Voltage Limits:
Microphone 1: 800 uv to 45,000 uv rms
Microphone 2: 800 uv to 45,000 uv rms
Low Level: 2.5 v to 4 v rms
Photograph: 30 mv to 360 mv rms

Output Facilities: Speaker and low level

Output Impedance:
Speaker: 8 ohms
Low Level: 35,000 ohms

Power Output:
Speaker: 10 w
Low Level: 4 v rms

Reproducing Speed: 78 rpm and 33-1/3 rpm

Type of Recordings: Will reproduce all laterally cut records and transcriptions, cut either outside-in or inside-out; and with the proper needlI will reproduce microgroove recordings

Power Consumption: 100 w

Power Requirements: 108- to 122-v, 55- to 65-cycle, 1-phase ac

AN/SIH-4 PUBLIC ADDRESS SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Carrying case consisting of: Amplifier and turntable assembly Loudspeaker Microphone Microphone cable Power cable Speaker cable	----------	12-1/4 x 17-1/2 x 23-1/2	51

REFERENCE DATA AND LITERATURE:

NAVSHIPS 365–1947

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5.15	86

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: SHIPS–R–29

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Mark Simpson Manufacturing Co., Inc.	Long Island City, New York, N. Y.	NObsr–50563, March 1951	

PUBLIC ADDRESS SET AN/SIH-6

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Public Address Set AN/SIH–6 is an electrical amplification system designed to serve audiences by amplifying record player data.

TECHNICAL CHARACTERISTICS:

Power Output: 55 w
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier, audio frequency			
1	Loudspeaker, permanent magnet			
1	Record player			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SIH-6 PUBLIC ADDRESS SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-P-16790

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Bowen and Co., Incorporated	Bethesda 14, Md.	NObsr-67052, 20 June 1955	

PUBLIC ADDRESS SET AN/SIQ-1

6 December 1958
Cognizant Serv: USA FSN: 5830-163-1796

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	6C197-1	--	--



FUNCTIONAL DESCRIPTION:

Public Address Set AN/SIQ-1 is a medium-power, sound amplifying and projecting equipment used for briefing, training, or morale purposes. It is designed primarily for shipboard use but can also be used in outdoor or indoor auditoriums.

This equipment consists essentially of a combined two-speed phonograph turntable and audio amplifier, microphones, speakers, and related accessories. It is so arranged that the entire equipment can be packed into seven carrying cases, each of which can be carried by two men.

Sound signals, whether speech or music, are picked up by means of the microphones or by means of the sound reproducer. There is no provision for input from wire communication or radio receiving equipment.

TECHNICAL CHARACTERISTICS:

Sound Reproducer:
Amplifier Output: 50 w
Type Reproduction: Magnetic
Recording Sizes Accepted: 10 inch, 12 inch, 16 inch
Revolutions per Minute: 33-1/3 or 78
Dynamic Microphone:
Type: Unidirectional
Impedance: 30 to 50 ohms
Dynamic Speaker:
Type: Diaphragm
Input: 20 w
Impedance: 150 ohms
Amplifier:
1 Channel Input Impedance: 30 ohms
Output Impedance: 4, 8, 30, 60, 125, 150, 500 ohms
Microphone Stand:
Type: Adjustable
Dimensions: From 35 inches to 5 feet 8 inches
Motor Generator Input: 4.4 amp, 115-v 60-cycle 1-phase ac; 550 w, 5 amp at 100-v dc
Power Requirements: 250 w, 115-v 60-cycle 1-phase ac, or 250 w, 115-v dc through converter

AN/SIQ-1 PUBLIC ADDRESS SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
8	Cable assembly, special purpose, electrical	5995–162–9891	100 feet 2-1/2 inches	
2	Cable assembly, special purpose, electrical	5995–284–4164	100 feet	
2	Microphone, dynamic	5965–164–7294	4-13/16 x 2-5/8 x 2	
1	Motor generator	6125–240–0781	13-1/2 x 7-13/16 x 7-13/16	
1	Reproducer, sound	5835–164–7247		
4	Speaker, dynamic	5965–164–7263	24-1/2 dia x 31 long	
2	Stand, microphone	5965–162–1315	35 inches to 5 feet 8 inches	

REFERENCE DATA AND LITERATURE:

TM 11–2577

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7	59.3	536

PROCUREMENT DATA

PROCURING SERVICE: USA DESIGN COG: USA, Sig C

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

SOUND RECORDER-REPRODUCER SET AN/SNH-1

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Sound Recorder-Reproducer Set AN/SNH–1 is a electromagnetic type equipment designed for a frequency response of 50 to 8,000 cycles per second at a speed of 7-1/2 inches per second, and a frequency response of 50 to 5,000 cycles per second at a speed of 3-3/4 inches per second.

This equipment uses a magnetic tape recording medium consisting of a magnetically coated paper and plastic base. The recording and reproducing heads are replaceable. Turnover of the tape is required for the use of dual track operation. Recording time depends on the recording speed and the use of dual or single track operation.

Features of the set include such details as remote electrical stop-start, automatic shut-off, high speed shuttle and synchronous motor drive.

TECHNICAL CHARACTERISTICS:

Type: Electromagnet

Frequency Response:
Slow Speed: 50 to 5,000 cps
High Speed: 50 to 8,000 cps
Recording Medium: Magnetic tape
Tape Size: 1/4 inch wide by 1,250 foot long (maximum)
Number of Tracks: 1 or 2 (turnover required for dual track)
Recording Speed:
Slow: 3.75 inch per second
High: 7.5 inch per second
Continuous Recording Time:
Dual Track:
Slow Speed: 120 minutes
High Speed: 60 minutes
Single Track:
Slow Speed: 70 minutes
High Speed: 30 minutes
Amplifier Output: 5 w
Power Requirements: 108- to 122-v, 55- to 65-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Recorder-Reproducer Set, Sound AN/SNH–1			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SNH-1 SOUND RECORDER-REPRODUCER SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-R-918 (SHIPS)

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Mark Simpson Manufacturing Co.	Long Island City, New York, N. Y.	NObs-50472	

SOUND RECORDER-REPRODUCER SET AN/SNH-2

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Sound Recorder-Reproducer Set AN/SNH–2 is a portable, electromagnetic equipment designed for a frequency response of 100 to 7,000 cycles per second.

This equipment uses a recording medium of 0.0046-inch diameter silicon wire.

The recording and erasing heads are replaceable.

The set provides a maximum of 3 hours of recording time at a speed of 2 feet per second.

TECHNICAL CHARACTERISTICS:

Type: Electromagnetic
Frequency Response: 100 cps to 7,000 cps
Recording Medium: Silicon wire
Wire Size: 0.0046 in. dia
Recording Time: 3 hr maximum, continuous
Speed: 2 feet per second
Amplifier Output: 2 w
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Recorder-Reproducer Set, Sound AN/SNH–2			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SNH-2 SOUND RECORDER-REPRODUCER SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Brush Development Co.	Cleveland, Ohio	NObs–46104	

SOUND RECORDER-REPRODUCER SET AN/SNH-3

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Sound Recorder-Reproducer Set AN/SNH–3 is a portable, electromagnetic equipment designed for a frequency response of 100 to 7,000 cycles per second at +2 decibels to −6 decibels using a 1,000-cycle-per-second reference level.

The recording medium of this equipment is wire of a magnetic material plated on a copper silicon base.

The set permits 3 hours of continuous recording time at a speed of 2 feet per second.

TECHNICAL CHARACTERISTICS:

Type: Electromagnetic
Frequency Response: 100 cps to 7,000 cps, +2 db to −6 db, 1,000-cps reference
Recording Medium: Wire
Wire Diameter: 0.00475 inch by 7,400 foot long
Recording Time: 3 hr continuous
Speed: 2 feet per second
Amplifier Output: 57.5 w
Power Requirements: 105- to 120-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Recorder-Reproducer Set, Sound AN/SNH–3			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SNH-3 SOUND RECORDER-REPRODUCER SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShip

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Brush Development Co.	Cleveland, Ohio	NObs-47359	

SOUND RECORDER-REPRODUCER SET AN/SNH-6

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Sound Recorder-Reproducer Set AN/SNH–6 is an electromagnetic equipment that uses a cellulose acetate 35-millimeter film. It is designed to provide normal frequency response of 250 to 4,500 cycles per second at a speed of 40 feet per minute.

Special features of the equipment permit 2 hours of recording at a speed of 60 feet per minute; it incorporates a public address system and a monitor indicator.

TECHNICAL CHARACTERISTICS:

Type: Electromagnetic
Frequency Response: 25 cps to 4,500 cps
Recording Medium: Cellulose acetate film
Film Size: Standard 35-mm film width, 7,200 feet long (120 tracks)
Recording Time: 3 hour maximum, continuous
Speed: 40 feet per minute
Amplifier Output: 3 w
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Recorder-Reproducer Set, Sound AN/SNH–6			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SNH-6 SOUND RECORDER-REPRODUCER SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Frederick Hart and Co.	Poughkeepsie, N. Y.		

SOUND RECORDER-REPRODUCER SET AN/SNH-7

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Sound Recorder-Reproducer Set AN/SNH–7 is an electromagnetic equipment that uses a steel wire recording medium. It is designed to provide a frequency response of 300 to 3,700 cycles per second, a 60 minute maximum recording time, and a recording and reproducing speed of 4 feet per second.

This is a portable equipment.

TECHNICAL CHARACTERISTICS:

Type: Electromagnetic
Frequency Response: 300 cps to 3,700 cps
Recording Medium: Steel wire
Recording Time: 60 minutes maximum, continuous
Speed: 4 ft per sec (both recording and reproducing)
Power Requirements: 115 v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Recorder-Reproducer Set, Sound AN/SNH–7			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SNH-7 SOUND RECORDER-REPRODUCER SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Brush Development Co.	Cleveland, Ohio		

ANTENNA GROUP AN/SRA-

1 December 1958
Cognizant Serv: USN FSN: 5895-254-7185

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	--	F16-A-54463-5300	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Antenna Group AN/SRA-3 is a whip type unit designed to be used with Radio Sets SCR-508, SCR-510, SCR-528, SCR-608, SCR-610, SCR-628, SCR-300 and any other radio equipment requiring a 50-ohm antenna in the frequency range of this antenna group.

The antenna coupler of this equipment matches the applicable radio set to the antenna.

The antenna group can be used with the standardized seri of Army equipment such as Radio Sets AN/GRC-3 throug AN/GRC-8, AN/GRC-9, AN/GRC-10, AN/GRC-16, AN GRC-17, and AN/GRC-18.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20 to 50
Power Requirements: None

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT-252/SR	----------	131 x 9-1/2	25
1	Antenna Coupler CU-226/SR	----------	1-3/4 x 2-3/8 x 4-3/8	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91292

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs
2	2	45

AN/SRA-3 ANTENNA GROUP

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Engineering and Research Corp.	Riverdale, Md.	NObsr–43445, 29 June 1949 NObsr–52485, 27 June 1951	

ELECTRICAL FILTER ASSEMBLY AN/SRA-9

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Electrical Filter Assembly AN/SRA-9 is a unit consisting of nine filter subassemblies designed to provide seven frequency channels for radio receivers. Channels are obtained by combining the provided plug-in filter subassemblies. As many as six of the nine subassemblies may be used simultaneously.

Each filter subassembly is comprised of a low-pass and a high-pass filter. The common crossover frequency between the two filters marks the division between channels.

The application of a single antenna at the filter input and seven receivers directly coupled to the filter output, results in practically the same efficiency as if each receiver had its own antenna. An additional 21 receivers connected to the filter output, in a decoupled arrangement, would not materially affect the directly coupled receivers, and the performance of the 21 additional receivers would be superior to that of three or four receivers connected to a given antenna through a conventional patch panel.

This equipment employs a test set for checking the calibration of the filter assemblies. The antenna and receivers are connected to the filter assembly by means of coaxial patch cords.

The unit is similar to Electrical Filter Assembly AN/SRA-9A except for improved components in the later model.

TECHNICAL CHARACTERISTICS:

Frequency Range: 14 kc to 32 mc
Number of Channels: 7
Cutoff Frequencies:
Number: 9
Designations; 50; 150; 300; 530; 1,600; 2,000; 3,500; 7,000; 14,000 kc
Characteristic Impedance of Each Filter: 180 ohms
Power Requirements: None

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Filter Assembly, Electrical F-145/SRA-9 consisting of:			
1	Filter Panel J-482/SRA-9	----------	2-1/8 x 8-2/3 x 19	10.25
9	Filter subassemblies	----------	2 x 3 x 4	18
1	Filter Case CY-1129/SRA-9	----------	10-3/4 x 11 x 25-3/4	24
1	Filter Test Set TS-734/SRA-9	----------	2 x 3 x 6-1/4	1
3	Shorting plug	----------	1-1/4 dia x 1-7/8	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91777

AN/SRA-9 ELECTRICAL FILTER ASSEMBLY

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Brubaker Manufacturing Co., Inc.	Los Angeles, Calif.	N123S-86863, 13 June 1952	

ELECTRICAL FILTER ASSEMBLY AN/SRA-9A

1 December 1958
Cognizant Serv: USN FSN: 5915-313-8465

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Electrical Filter Assembly AN/SRA-9A provides a maximum of seven radio frequency channels by means of filter subassemblies which plug into the main chassis. Connections from the main chassis to an antenna and up to 28 receivers are made by coaxial patch cords. Any or all of the seven channels may be used simultaneously and independently.

This equipment consists essentially of a chassis and panel assembly with an antenna input jack, 28 output jacks, and nine filter subassemblies. Any one of the filter subassemblies can be used at one time. A filter test set is supplied for calibration checking of the filter subassemblies.

The unit is generally similar to Electrical Filter Assembly AN/SRA-9 except that the AN/SRA-9A has improved components.

TECHNICAL CHARACTERISTICS:

Frequency Range: 14 kc to 32 mc
Number of Channels: 7
Subassembly Crossover Frequencies:
Number: 9
Designations: 50; 150; 300; 530; 1,600; 2,000; 3,500; 7,000; 14,000 kc
Input and Output Impedance: 180 ohms
Reflection Loss: Approximately 1db when input impedance is 70 ohms
Subassembly Type: Both low- and high-pass filter network
Attenuation: Between 3 and 6 db
Antenna Input: 1
Output Jacks: 28
Mounting Data: Standard 19 in. relay rack
Power Requirements: None

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Case, Filter CY-1129A/SRA-9	----------	9-1/2 x 25-1/4 x 12-3/4	24.6
	or			
	CY-1325/SRA-9A	----------	6-1/4 x 12-3/8 x 9-3/8	12.12
3	Dummy connector plug	----------	1-7/8 x 1-1/4 dia	
9	Filter Subassembly	----------	4 x 2 x 3	18 (total)
1	Panel, Filter J-482/SRA-9	----------	8-2/3 x 19 x 2-1/8	10.25
1	Test Set, Filter TS-734A/SRA-9A	----------	2 x 6-1/4 x 3-1/2	1

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91777

AN/SRA-9A ELECTRICAL FILTER ASSEMBLY

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	5.13	102.35

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

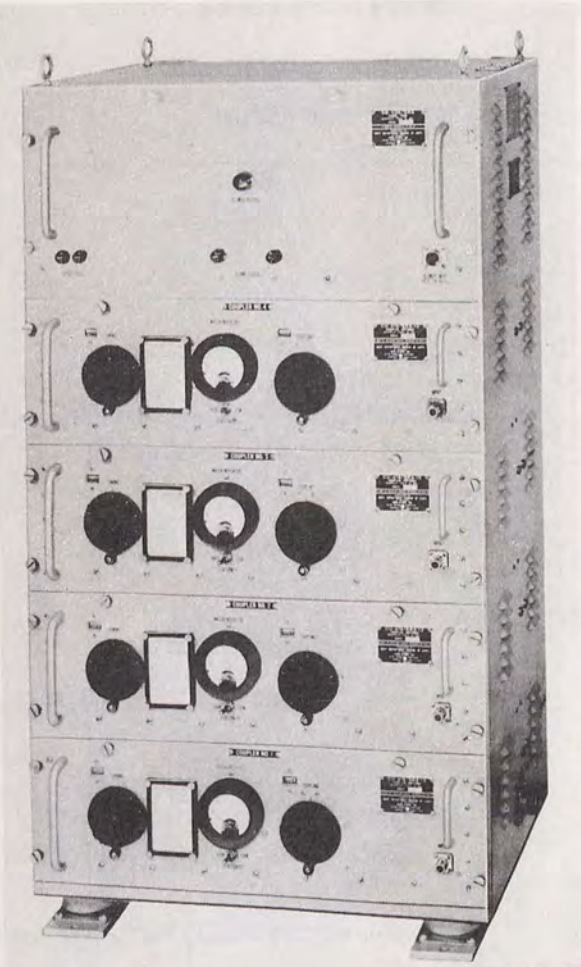
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Brubaker Manufacturing Co., Inc.	Los Angeles, Calif.	N123s-86863, 13 June 1952	

ANTENNA COUPLER GROUP AN/SRA-13

1 December 1958
Cognizant Serv: USN FSN: 5985-347-9752

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



AN/SRA-13

FUNCTIONAL DESCRIPTION:

Antenna Coupler Group AN/SRA-13 is designed for shipboard operation for the purpose of coupling the output of four radio transmitters to a single broadband antenna.

This equipment may be used separately or in combination with other items of the series such as Antenna Coupler Groups AN/SRA-14 and AN/SRA-15 as well as AN/SRA-1b. In combination, these units provide an antenna-multicoupler system capable of simultaneously operating 12 transmitters, each with a power output of 500 watts. Generally, these antenna coupler groups are used with approved high frequency transmitters such as Radio Transmitting Equipment TBM.

Antenna Coupler Group AN/SRA-13 replaces Antenna Multi-Coupler CU-301/UR. The AN/SRA-13, AN/SRA-14, and AN/SRA-15 are similar except that they operate in different frequency ranges.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 6
Tuning Band: 1 band, continuously variable
Type of Frequency Control: Manual
Input Impedance: 50 ohms
Output Impedance: 50 ohms
Efficiency: Not less than 70%
Voltage Isolation Ratio Between Adjacent Bands: 15 to 1
Power Handling Capability: Simultaneous coupling of 4 (500 w, 100% AM hf) transmitters
Antenna Data: Broadband
Power Requirements: 115-v 60-cycle 1-phase ac

AN/SRA-13 ANTENNA COUPLER GROUP

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet, Electrical Equipment CY–1670/SRA	----------	20-1/2 x 26-1/4 x 46-3/4	122.5
4	Coupler, Antenna CU–419/SRA–13	----------	7-23/32 x 18-3/16 x 24-3/4	43
2	Instruction Book NAVSHIPS 92746			
1	Panel, Fuse SB–406/SRA	----------	10-3/8 x 11-7/32 x 24-3/4	11.5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92746

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	18.8	416

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

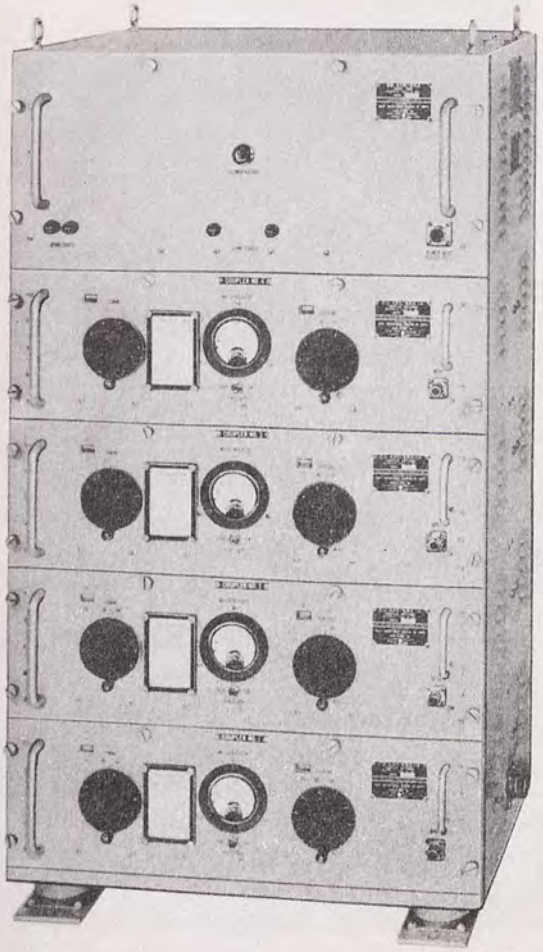
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Electric Machine Shops-Clarke, Inc.	Silver Springs, Md.	NObsr–64322, 6 January 1953	$3,500.00

ANTENNA COUPLER GROUP AN/SRA-14

1 December 1958
Cognizant Serv: USN FSN: 5985-347-9754

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



AN/SRA-14

FUNCTIONAL DESCRIPTION:

Antenna Coupler Group AN/SRA-14 is designed for shipboard operation for the purpose of coupling the output of four radio transmitters to a single broadband antenna.

This equipment may be used separately or in combination with other items of the series such as Antenna Coupler Groups AN/SRA-13, AN/SRA-14, and AN/SRA-1b. In combination, these units provide an antenna-multicoupler system capable of simultaneously operating 12 transmitters, each with a power output of 500 watts. Generally, these antenna coupler groups are used with approved high frequency transmitters such as Radio Transmitting Equipment TBM.

Antenna Coupler Group AN/SRA-14 replaces Antenna Multi-Coupler CU-302/UR. The AN/SRA-13, AN/SRA-14, and AN/SRA-15 are similar except that they operate in different frequency ranges.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 12
Tuning Band: 1 band, continuously variable
Type of Frequency Control: Manual
Input Impedance: 50 ohms
Output Impedance: 50 ohms
Efficiency: Not less than 68%
Voltage Isolation Ratio Between Adjacent Bands: 15 to 1:
Power Handling Capability: Simultaneous coupling of 4 (500 w, 100% AM hf) transmitters
Antenna Data: Broadband
Power Requirements: 115-v 60-cycle 1-phase ac

AN/SRA-14 ANTENNA COUPLER GROUP

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet, Electrical Equipment CY–1670/SRA		20-1/2 x 26-1/4 x 46-3/4	122.5
4	Coupler, Antenna CU–420/SRA–14		7-23/32 x 18-3/16 x 24-3/4	36.5
2	Instruction Book NAVSHIPS 92746			
1	Panel, Fuse SB–406/SRA		10-3/8 x 11-7/32 x 24-3/4	11.5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92746

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	18.8	390

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

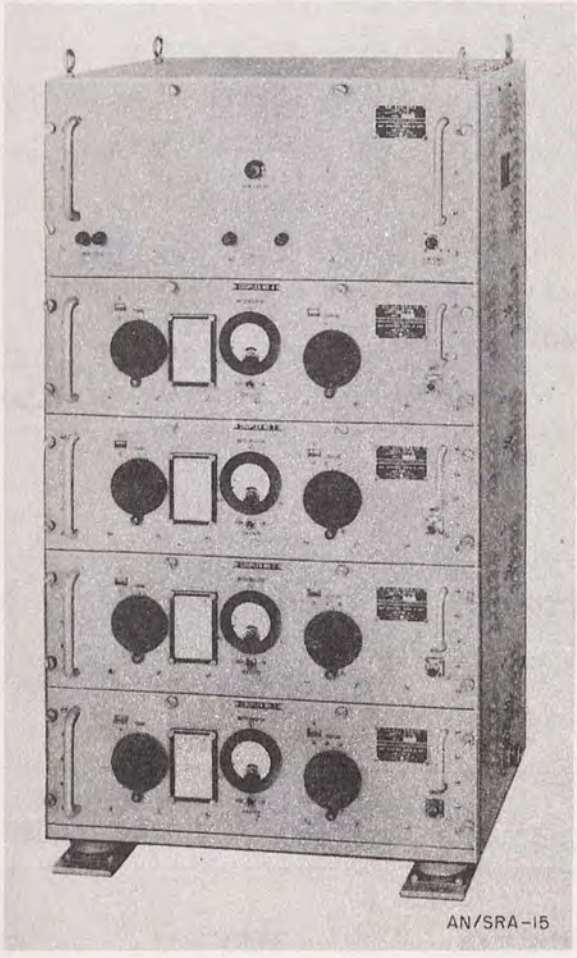
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Electrical Machine Shops-Clarke, Inc.	Silver Springs, Md.		

ANTENNA COUPLER GROUP AN/SRA-15

Cognizant Serv: USN FSN: 5985-347-9756

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



AN/SRA-15

FUNCTIONAL DESCRIPTION:

Antenna Coupler Group AN/SRA-15 is designed for shipboard operation for the purpose of coupling the output of four radio transmitters to a single broadband antenna.

This equipment may be used separately or in combination with other items of the series such as Antenna Coupler Groups AN/SRA-13, AN/SRA-14, and AN/SRA-1b. In combination, these units provide an antenna-multicoupler system capable of simultaneously operating 12 transmitters, each with a power output of 500 watts. Generally, these antenna coupler groups are used with approved high frequency transmitters such as Radio Transmitting Equipment TBM.

Antenna Coupler Group AN/SRA-15 replaces Antenna Multi-Coupler CU-303/UR. The AN/SRA-13, AN/SRA-14, and AN/SRA-15 are similar except that they operate in different frequency ranges.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 6 to 18
Tuning Band: 1 band, continuously variable
Type of Frequency Control: Manual
Input Impedance: 50 ohms
Output Impedance: 50 ohms
Efficiency: Not less than 60%
Voltage Isolation Ratio Between Adjacent Bands: 15 to 1
Power Handling Capability: Simultaneous coupling of 4 (500 w, 100% AM hf) transmitters
Antenna Data: Broadband
Power Requirements: 115-v 60-cycle 1-phase ac

AN/SRA-15 ANTENNA COUPLER GROUP

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet, Electrical Equipment CY–1670/SRA		20-1/2 x 26-1/4 x 46-3/4	122.5
4	Coupler, Antenna CU–421/SRA–15		7-23/32 x 18-3/16 x 24-3/4	35.5
2	Instruction Book NAVSHIPS 92746			
1	Panel, Fuse SB–406/SRA		10-3/8 x 11-7/32 x 24-3/4	11.5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92746

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	18.8	386

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

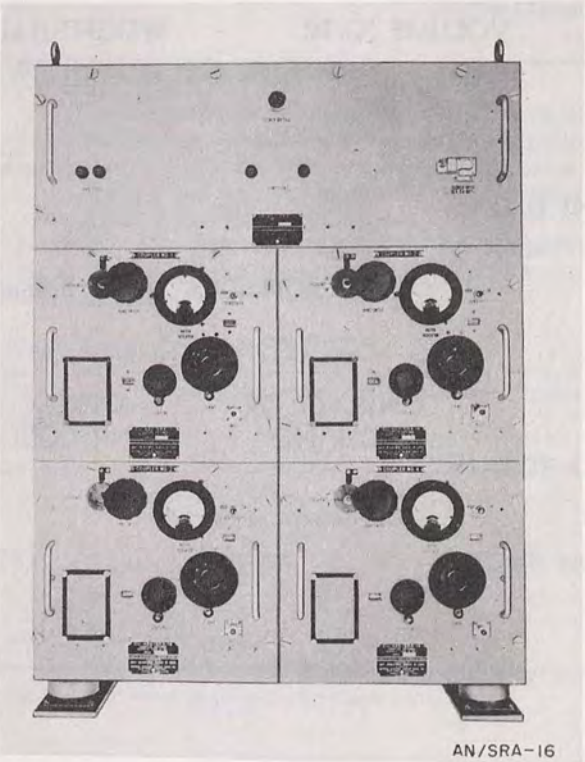
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Electrical Machine Shops-Clarke, Inc.	Silver Springs, Md.		

ANTENNA COUPLER GROUP AN/SRA-16

Cognizant Serv: USN FSN: 5985-347-9758

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



AN/SRA-16

FUNCTIONAL DESCRIPTION:

Antenna Coupler Group AN/SRA-16 is designed to couple into one broadband antenna four transmitters operating simultaneously at frequencies approximately 10 percent from each other.

The antenna couplers of this equipment are of the plug-in-type; however, they are not interchangeable since the output plugs are at different locations on each rotron blower motor.

TECHNICAL CHARACTERISTICS:

Frequency Range: 9 mc to 26 mc
Input Impedance: 50 ohms
Output Impedance: 50 ohms
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Coupler CU-422/SRA-16	----------	12-3/8 x 13-3/4 x 24-3/4	
1	Antenna Coupler CU-423/SRA-16	----------	12-3/8 x 13-3/4 x 24-3/4	
1	Antenna Coupler CU-424/SRA-16	----------	12-3/8 x 13-3/4 x 24-3/4	
1	Antenna Coupler CU-425/SRA-16	----------	12-3/8 x 13-3/4 x 24-3/4	
1	Cabinet, Electrical Equipment CY-1671/SRA-16	----------	25-1/8 x 29-1/4 x 39-3/4	
1	Panel, Fuse SB-407/SRA-16	----------	9-7/8 x 10-7/8 x 27-3/4	

AN/SRA-16 ANTENNA COUPLER GROUP

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Electrical Machine Shops, Clarke, Inc.	Silver Springs, Md.	NObsr-63422, 4 August 1954	

MODULATOR UNIT AN/SRA-type

7 November 1958
Cognizant Serv: USN FSN: 50065–A

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Modulator Unit 50065–A is designed for use on all types of vessels except some submarines. It contains the apparatus necessary for taking power from a suitable power source, rectifier, or motor generator and modulating the transmitter with which it is used by either tone or voice.

The 50065–A is a part of Radio Transmitting Equipment TBM and can be used with Radio Transmitters 52170, 52171, 52217, and 52218.

TECHNICAL CHARACTERISTICS:

Speech Input: At a 6-mw level from a 600-ohm source, capable of effecting 100% plate modulation of the transmitter with an AF distortion of less than 10%

Audio Frequency Range: 100 to 5,000 cps from final amplifier

Modulation Gain: 60 db

Modulation Frequency: For mcw, 700 cps obtained from audio oscillator in modulator unit

Power Output: 400 w

Power Requirements:
115-v dc ±10%
230–v dc ±10%
220-v 60-cycle 1-phase ac
220-v 60-cycle 3-phase ac
440-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares			
1	Modulator Unit 50065–A	----------	18 x 24 x 72	385

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

Technical manual for Modulator Unit 50065–A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	36.32	623

AN/SRA-type MODULATOR UNIT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric Corp.	Baltimore, Md.	NXsr–51573, 14 March 1944	$1,500 with equipment spares

ANTENNA ASSEMBLY AN/SRA-type

5 December 1958
Cognizant Serv: USN FSN: 5985-030-0095 AS-390/SRC

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-A-53590-1001	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Antenna Assembly AS-390/SRC is a broadband, coaxial stub antenna, used for transmitting or receiving vertically polarized waves at frequencies from 220 to 440 mc

The antenna is unbalanced to ground and its characteristics are similar to Antenna AT-150/SRC.

TECHNICAL CHARACTERISTICS:

Frequency Range: 220 to 440 mc
Nominal Input Impedance: 52 ohms
Standing Wave Ratio: 1.9:1
Ambient Temperature Limit: 177°C. (350°F.)
Installation: Mounted on top of a mast or pig stick with main axis vertical

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly AS-390/SRC	----------	16 x 23 x 23	3.625
1	Maintenance Kit	----------	4 x 4 x 3	2
1	Wrench	----------	5 x 5 x 11/16	.3

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91338

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2.25	8.5

AN/SRA-type ANTENNA ASSEMBLY

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Bird Electronic Corp.	Cleveland, Ohio	NObsr–43272, 21 April 1949	$48.00

ANTENNA **AN/SRA-type**

5 December 1958
Cognizant Serv: USN FSN: AT–150/SRC

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–A–51900–1201	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Antenna AT–150/SRC is a broad band, coaxial dipole antenna, used for transmitting or receiving vertically polarized waves at frequencies from 220 to 440 mc.

The antenna is balanced to ground and its radiation pattern is similar to that of a conventional dipole.

TECHNICAL CHARACTERISTICS:

Frequency Range: 220 to 440 mc
Input Impedance: 52 ohms
Standing Wave Ratio: 2.1:1
Ambient Temperature Limit: 177°C. (350°F.)
Installation: Mounted at the end of a yardarm or bracket with the radiating element in a vertical position

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT–150/SRC	----------	17-3/8 x 22-7/16 x 3-1/4	4.5
1	Maintenance kit (includes box)	----------	4 x 4 x 3	2.25

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91338

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.33	10.5

AN/SRA-type ANTENNA

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Bird Electronic Corp.	Cleveland, Ohio	NObsr–43272, 23 April 1949	$70.00

RADIO SET CONTROL AN/SRA-type

5 December 1958
Cognizant Serv: USN FSN: C–682/SR

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set Control C–682/SR is a panel designed for centralized control of Radio Sets AN/ARC–1, MAR, RDR, and TCS, and loudspeakers and handsets. The audio output circuits of four Radio Sets, AN/ARC–1, MAR, RDR, and TCS, are permanently connected to the radio set control. Selector switches are provided on the front panel so that the output of any one of the four radio sets may be connected to either one or both of the two loudspeakers.

Individual volume controls are provided for each loudspeaker. To provide for two-way communication, where applicable, the audio circuits of the four radio sets may be connected to handsts. The handsets are not permanently connected to the panel but may be plugged into any one of the five connectors mounted on the housing of the panel. Four of these connectors are permanently connected to each of the four radio sets, and the fifth connector is common to any one of the four radio sets by means of a switch.

TECHNICAL CHARACTERISTICS:

(*None.*)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Set Control C–682/SR	----------	5-7/8 x 13-5/8 x 17	40

(This equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91307

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SRA-type RADIO SET CONTROL

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

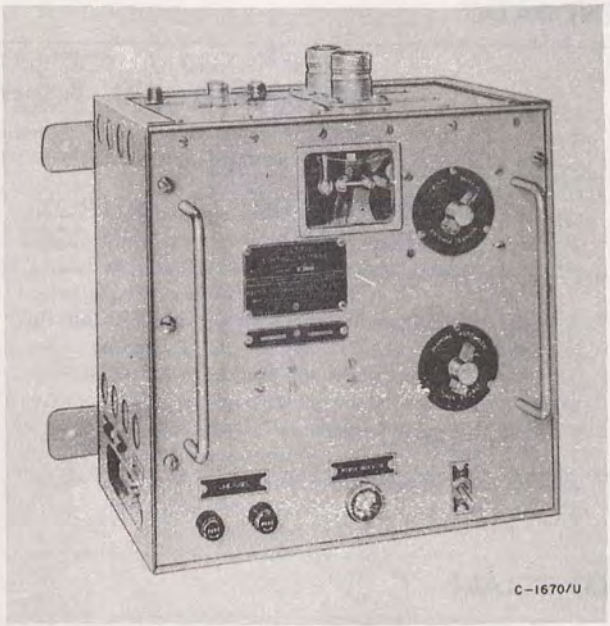
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Bendix Aviation Corp., Friez Instrument Division	Baltimore, Md.	NObs–47842	

ANTENNA CONTROL AN/SRA-type C-1670/U

5 December 1958
Cognizant Serv: USN FSN: 5985-665-1905

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Antenna Control C-1670/U provides facilities for controlling transmitter keying and antenna switching from the receive to transmit position. This equipment provides an automatic antenna transfer system for break-in operation. The unit is interconnected with the keying circuit of the associated transmitter so that the antenna transfer contacts are never required to break the antenna current.

Provision is made for bulkhead mounting of the unit. It is used with Radio Transmitting Sets AN/SRT-14, AN/SRT-15, AN/SRT-16 and Radio Transmitting Equipments of the TBL-series.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 20
Keying Speed: 60 words per minute
Circuit Closing Delay: Adjustable; 0 to 1 second
Power Requirements: 115-v, 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Control C-1670/U	----------	9-1/2 x 13 1/2 x 15-1/4	39
1	Spare parts box	----------	6 x 9 x 12	12
1 set	Accessories	----------	2 x 4-1/2 x 4-3/4	3-5/16

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92566

AN/SRA-type ANTENNA CONTROL

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-A-16318A

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Mercury Manufacturing Corp.	Buffalo, N. Y.	NObsr-57139	$1,500.00 with spares

ANTENNA COUPLER AN/SRA-type

5 December 1958
Cognizant Serv: USN FSN: CU-284/UR

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-C-91723-5001	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Antenna Coupler CU-284/UR is an ultra-high frequency power coupling and impedance-matching device used aboard ship to make possible the simultaneous operation of two radio transmitters and/or receivers from a single antenna. The purpose of this equipment is to improve the over-all efficiency of ultra-high frequency radio communications by installing the smaller number of ultra-high frequency antennas in the few satisfactory locations aboard ship.

The unit consists essentially of two parallel connected, capacity-tuned, resonant cavities forming two identical channels which may be used for transmitting or receiving. Separate manually operated tuning controls permit independent tuning of each cavity. Each channel is capable of transferring 100 watts of radio frequency power.

Antenna Coupler CU-284/UR is intended for use primarily with Radio Receiving Sets AN/URR-13 and AN/URR-35, and with Radio Transmitting Equipment TED. It can be used with other ultra-high frequency transmitting and receiving equipment where automatic quick-shift operation is not required. It is used with ultra-high frequency Antennas AT-150/SRT, AS-390/SRC, AS-486/B, AS-505/GR, and the ultra-high frequency section of Antenna Assembly AS-493/U.

The following equipment is required, but is not supplied, with Antenna Coupler CU-284/UR: Cable RG-8/U, RG-9/U or RG-10/U.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Output Impedance: 50 ohms
Mounting Data: Shelf or bulkhead mounting, with adequate grounding of the chassis
Power Requirements: None

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Coupler CU-284/UR	----------	8-5/16 x 13 x 6-3/8	16
3	Cable Conn ctor UG-941A/U or equivalent			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91790

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.1	31

AN/SRA-type ANTENNA COUPLER

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

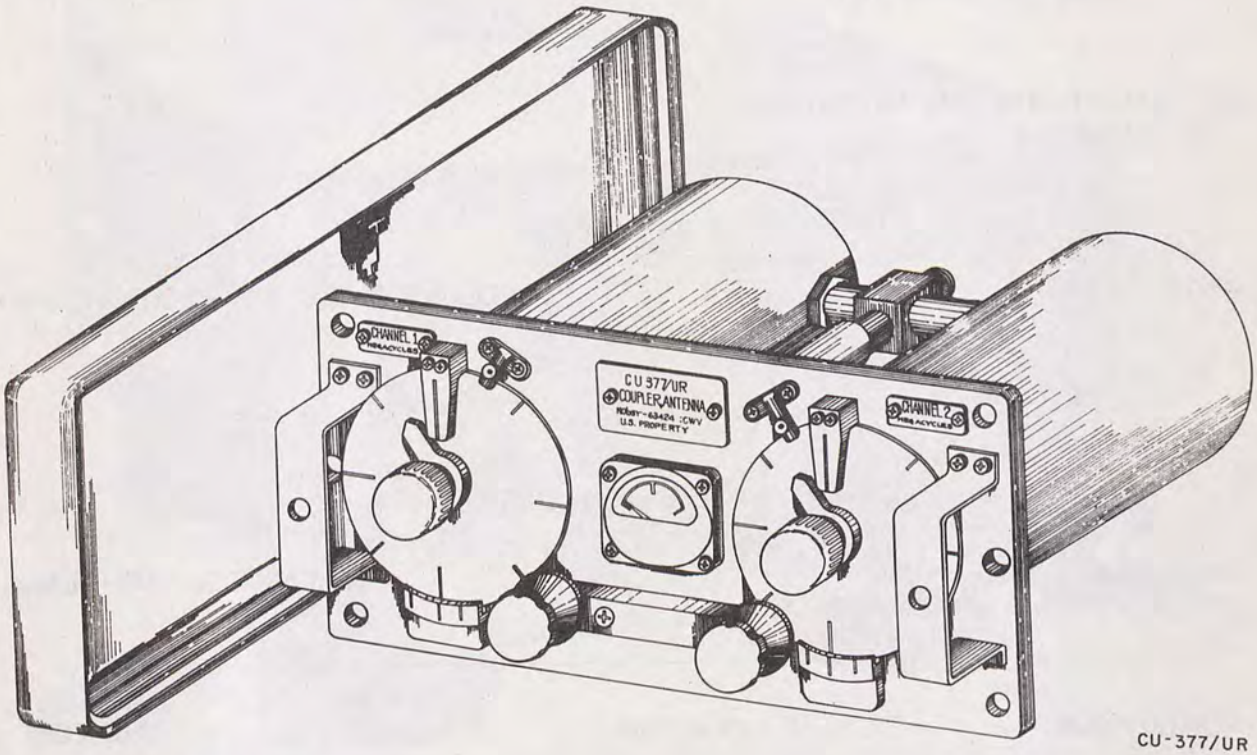
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Harvey-Wells Electronics, Inc.	Southbridge, Mass.	NObsr–52597	

ANTENNA COUPLER AN/SRA-type CU-377/UR

5 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



CU-377/UR

FUNCTIONAL DESCRIPTION:

Antenna Coupler CU-377/UR is intended for use aboard naval vessels with radio communication equipment consisting of several transmitters and/or receivers. The coupler permits the simultaneous operation of two ultra-high frequency transmitters or receivers into a single antenna in the frequency range of 225 to 400 megacycles. It is primarily intended for use with Radio Transmitting Equipment TED and Radio Receiving Equipment AN/URR-13.

The CU-377/UR is similar to Antenna Coupler CU-284/UR except for better resettability, lower insertion loss, and greater adjacent channel separations.

Interconnecting cables as required are used with, but are not supplied with, Antenna Coupler CU-377/UR.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Output Impedances:
Antenna: 50 ohms
Channel 1: 50 ohms
Channel 2: 50 ohms
Type of Tuning: Manual tuning of capacity tuned cavities
Power Requirements: None

AN/SRA-type ANTENNA COUPLER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Coupler CU–377/UR	----------	5-1/4 x 7-5/32 x 11	9.5
3	Mating Connector UG–21B/U			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92187

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.1	24.5

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: SHIPS–C–1120

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Harvey-Wells Electronics, Inc.	Southbridge, Mass.	NObsr–63424, 4 May 1953	$1,100.00 with spares.

3 December 1958
Cognizant Service: USNFSN: 5820-318-4449

KEYER **AN/SRA-type**
KY-83( )/S

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	KY-83/S: F-16-K-476871151	--



FUNCTIONAL DESCRIPTION:

Keyer KY-83( )/S adapts communication radio transmitters and receivers to remote-control operation of magnetic minesweeping equipment. This keyer makes it possible to transmit and receive the timing pulses used in minesweeping, by utilizing available radio communication equipment without interrupting the normal function of such units.

The KY-83/S and KY-83A/S are functionally identical; their dimensions differ slightly according to the manufacturer. They are operated with Auxiliary Controllers Mark VI and VII and combinations of radio receivers and transmitters for detonating magnetic mines.

TECHNICAL CHARACTERISTICS:

TRANSMITTING SECTION:
Input Impedance: 600, 300, or 50 ohms
Output Impedance: 600, 300, or 50 ohms
Type of Signal: 500 cps, stability ±10 cps (under ±10% variation in 115 v dc)
Output Level: 0 to 2 v (adjustable)
RECEIVING SECTION:
Input Impedance: 600, 300, or 50 ohms
Output Impedance: 600, 300, or 50 ohms for speech channel; 600 or 40 for tone channel
Audio Output: 300 mw
Tone Output: 0 to 0.1 v rms (adjustable) into impedance of 4 ohms ±J40 ohms
Power Requirements: 65 w, 115-v (±10%) dc

AN/SRA-type KEYER

MAJOR COMPONENT

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USN)		
1	Keyer KY–83/S	F–16–K–476871151	7-23/32 x 11-3/4 x 16	42
	or			
1	Keyer KY–83A/S	----------	6-11/16 x 11-7/8 x 16-3/16	42

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

KY–83/S: NAVSHIPS 91764
KY–83A/S: NAVSHIPS 91822(B)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For KY–83/S:		
1	6	120
For KY–83A/S:		
1	1.7	50

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For KY–83/S:			
Hopkins Engineering Co.	Altadena, Calif.	NObsr–57221	
For 83A/S:			
Stavid Engineering Inc.	Plainfield, N. J.	NObsr–57543	

TRANSMISSION LINE TUNER AN/SRA-type

20 October 1958
Cognizant Serv: USN FSN: 5820-284-5980
5985-284-5980

TN-233/SRC

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Transmission Line Tuner TN-233/SRC is a substitute for and performs the functions of Loading Coil 47205 for Radio Transmitting and Receiving Equipment TCS. In addition, it embodies the following features: an internal dummy load and provisions for an external dummy load for testing the output of the transmitter, a built-in pick-up loop with a connector for a frequency meter, and a means for grounding the antenna when the radio equipment is not in use. Also, 3-inch coaxial lines may be used, thus reducing the radio-frequency field in the operating circuits and improving the over-all efficiency of the TCS equipment.

The tuner provides the necessary inductance and capacitance to artificially increase or decrease the antenna length. This permits the transmitter to be coupled more efficiently, particularly in the frequency range of 1,500 to 3,000 kc. Switches provide the necessary connections for testing the transmitter output and for grounding the antenna, for selection of the amount of inductance used, and for inserting capacitance in series with the antenna. A 12.5-ohm dummy load may be connected through either a 100- or 300-$\mu\mu$f capacitor to provide proper loading.

The TN-233/SRC has been designed primarily for use with the TCS. However, it may be used with any low-, medium-, or high-frequency radio transmitter having a radio-frequency output up to and including 125 watts.

TECHNICAL CHARACTERISTICS:

Frequency Range: 1,500 to 12,000 kc
Input Impedance: 50 ohms (nominal) for direct connection to the TCS
Output Impedance: Varies to match antenna in use
Internal Dummy Load Rating: 20 w (maximum)
External Dummy Load Rating: 125 w (maximum)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transmission Line Tuner TN-233/SRC	----------	8 x 8-1/4 x 9	11

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92794
92343

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.81	13-1/2

AN/SRA-type TRANSMISSION LINE TUNER

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: Spec MIL-E-17362A (Ships)

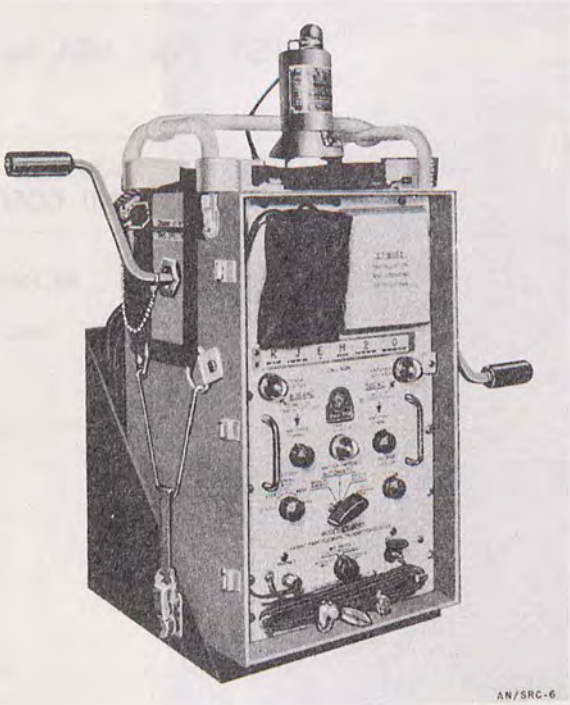
DESIGN COG: USN, BuShips

Clearfield Broadcasters, Inc., Manufacturing Division	Clearfield, Pa.	NObsr-71146	$90.00

RADIO SET AN/SRC-6( )

1 July 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4003-6	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/SRC-6 (Radiomarine Model ET-8053) (shown above) and Radio Set AN/SRC-6A (Mackay Type 401-A) are portable radiotelegraph transmitters and receivers, powered by a built-in hand-driven generator, for emergency use in lifeboats or other survival craft.

This equipment consists of a transmitter and receiver with a built-in hand generator and an antenna system.

Automatic or manual keying is provided to transmit twleve 4-second dashes with 1-second pauses followed by three distress signals on 500 kc, and three distress signals followed by a 30-second dash for direction finding on 8,364 kc.

Two-way communication can be accomplished by manual keying only.

The AN/SRC-6 and AN/SRC-6A are generally interchangeable as to purpose and use.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitter: 0.5 to 8.364
Receiver: 0.5 (fixed); 8.25 to 8.75 (AN/SRC-6); 8.266 to 8.745 (AN/SRC-6A)
Type Modulation: AM
Type of Signal: Modulated keyed telegraphy (rcvr, xmtr); cw (rcvr)
Power Output:
AN/SRC-6: 2 w on 0.5 mc, 5 w on 8.64 mc
AN/SRC-6A: 1.7 w (min) on 0.5 mc; 4 w (min) on 8.364 mc
Power Requirements: Built-in hand generator

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Watertight case containing transmitter, receiver, and hand generator	----------	20-1/2 x 12-1/2 x 14-7/16	58.5

REFERENCE DATA AND LITERATURE:

Commercial Instruction Book NAVSHIPS 92207

AN/SRC-6( ) RADIO SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

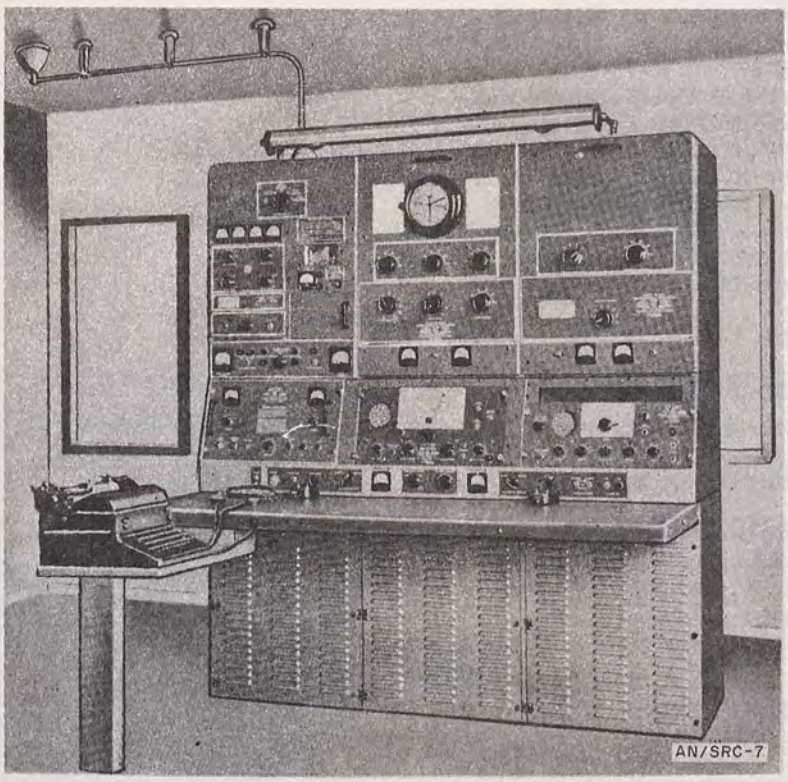
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Mackay Radio & Telegraph Co., Inc., Marine Division	Clark, N. J.	25692-P-53-36	$1,150.12
RCA-RCA Victor Division	New York, N. Y.	33759-P-53-36	966.21

RADIO SET AN/SRC-7

1 July 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4003–7	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/SRC–7 (Radiomarine Model 5U) is a self-contained radiotelegraph communication set providing medium- and high-frequency emergency communication facilities.

This equipment consists of two medium-frequency transmitters (one main and one emergency), an hf transmitter, an hf receiver, one receiver that can receive in both the low- and medium-frequency bands, an auto alarm, an auto alram keyer, control panels, power components, antennas, and accessories.

The main medium-frequency transmitter and the hf transmitter are crystal-controlled. The emergency transmitter is master-oscillator controlled. The emergency transmitter is operated from a 12-volt storage battery (through a battery charger from the ship's line under normal conditions). The low- and medium-frequency receiver operates from a 12-volt storage battery and a 90-volt B battery, under emergency conditions; normally it operates from the ship's line as does the rest of the equipment.

This equipment can be operated on ships that have either ac or dc power or a combination of the two.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.015 to 0.65 (low- and medium-freq rcvr); 0.085 to 0.55, 1.9 to 25 (hf rcvr); 0.35 to 0.515 (main and emer xmtr); 2 to 24 (hf xmtr)

Type Modulation: AM

Type of Signal: Cw, mcw

Power Output: 40 w (mcw, emer xmtr); 200 w (cw), 250 w (mcw) (main medium-freq xmtr); 300 w (cw, hf xmtr).

Power Requirements: 17.4 amp 115-v 60-cycle 1-phase ac (Code A); 11.3 amp, 115–v dc (Code A); 22 amp, 115-v 60-cycle 1-phase ac (Code B); 32 amp, 115-v dc (Code C); 22 amp, 230-v dc (Code D). For operation from 220 or 440-v ac, a step-down transformer is used; dc is supplied by a rotary converter

AN/SRC-7 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Dynamotor power supply	3H1512-23		
1	Modulator-Power Supply MD-220/SRC-7	2C2510-220		
1	Power Supply PP-1068/SRC-7	3H4497-1068		
1	Power Supply PP-1069/SRC-7	3H4497-1069		
1	Power Supply PP-1070/SRC-7	3H4497-1070		
1	Power Supply PP-1071/SRC-7	3H4497-1071		
1	Radio Receiver R-597/SRC-7	2C4180-597		
1	Radio Receiver R-598/SRC-7	2C4180-598		
1	Radio Receiver R-599/SRC-7	2C4180-599		
1	Radio Transmitter T446/ SRC-7	2C6900A-446		
1	Radio Transmitter T-447/ SRC-7	2C6900A-447		
1	Radio Transmitter T-448/ SRC-7	2C6900A-448		

REFERENCE DATA AND LITERATURE:

Commercial instruction book

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

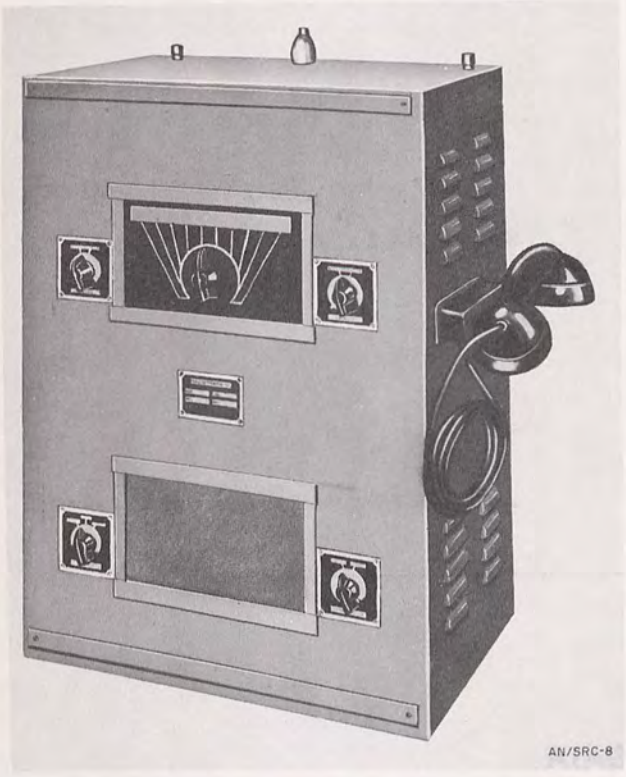
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA—RCA Victor Division	New York, N. Y.	33761-P-53-36	$5,445.00

RADIO SET AN/SRC-8( )

1 July 1958
Cognizant Serv: USA FSN: AN/SRC-8: 5820-567-2387
AN/SRC-8X: 5820-567-2388
AN/SRC-8XX: 5820-567-2361
AN/SRC-8Y: 5820-503-2580

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	AN/SRC-8: 2C5109-8 AN/SRC-8X: 2C5109-8X AN/SRC-8XX: 2C5109-8XX AN/SRC-8Y: 2C5109-8Y	--	--



AN/SRC-8

FUNCTIONAL DESCRIPTION:

Radio Set AN/SRC-8( ) (Ray Jefferson, Inc. Model 914 Radio Telephone) provides medium-frequency, two-way, ship-to-shore and ship-to-ship radiotelephone service for ships in coastwise waters.

This equipment consists of a transmitter, a receiver, an antenna, accessories, and power components.

The AN/SRC-8 and the AN/SRC-8X operate from a 115-volt dc and ac power source, respectively; the AN/SRC-8XX and AN/SRC-8Y operate respectively from 12-volt and 32-volt batteries.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 3
Type Modulation: AM
Type of Signal: Voice
Power Output: 50 w
Power Requirements:
AN/SRC-8: 115-v dc
AN/SRC-8X: 115-v 60-cycle ac
AN/SRC-8XX: 12-v dc
AN/SRC-8Y: 32-v dc

AN/SRC-8( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For AN/SRC-8:	(FSN)		
1	Antenna AT-609/SRC-8	5280-697-7745		
1	Converter-Dynamotor PU-283/SRC-8	6125-392-7172		
1	Receiver-Transmitter RT-306/SRC	5280-569-0018	25-1/4 x 19-7/8 x 13	72
	For AN/SRC-8X:			
1	Antenna AT-609/SRC-8	5280-697-7745		
1	Power Supply PP-1055/SRC-8X	5280-643-0260		
1	Receiver-Transmitter RT-306/SRC	5280-569-0018	25-1/4 x 91-7/8 x 13	72
	For AN/SRC-8XX:			
1	Antenna AT-609/SRC-8	5280-697-7745		
1	Dynamotor DY-126/SRC-8XX	6125-521-0400		
	or			
1	Dynamotor DY-127/SRC-8XX	6125-521-0401		
1	Receiver-Transmitter RT-327/SRC	5280-510-1599	25-1/4 x 19-7/8 x 13	72
	For AN/SRC-8Y:			
1	Antenna AT-609/SRC-8	5280-697-7745		
1	Dynamotor DY-122/SRC-8Y	6125-521-0397		
	or			
1	Dynamotor DY-123/SRC-8Y	6125-521-7998		
1	Receiver-Transmitter RT-327/SRC	5280-510-1599	25-1/4 x 19-7/8 x 13	72

REFERENCE DATA AND LITERATURE:

TM 11-253

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	10.9	140

RADIO SET **AN/SRC-8( )**

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Munston Mfg. & Service, Inc.	Islip, L. I., N. Y.	28589–P–55–55 (AN/SRC–8A)	$332.75

RADIO SET AN/SRC-9

1 July 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	Used by	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/SRC–9 (Mackay Type 402–A) is a nonportable, rugged, compact, lifeboat radiotelegraph transmitter-receiver designed for communication between survival craft and rescue vessels in the international distress frequency band and on the long-range frequency of 8,346 kc. The transmitter design assures effective use by personnel not trained in radio communication.

Manual keying for sending distress signals and for communication purposes is available. Also provided is automatic keying that transmits sequences of the International Auto Alarm Signal and SOS signals on 500 kc, followed on 8,364 kc by more SOS signals and by a long dash for direction-determining receivers.

All power required for operation of the equipment can be provided by a 12-volt storage battery.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Fixed Tuned: 0.492 to 0.508
Tunable: 8.1 to 8.9
Type Modulation: AM
Type of Signal: Cw, mcw
Power Output: 30 w into 10-ohm, 100-$\mu\mu$f antenna on 500 kc; 40 w into 40-ohm antenna on 8,364 kc
Power Requirements: 32 amp, 12-v dc from storage battery

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Set AN/SRC–9	----------	22 x 21 x 15	92

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92364

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SRC-9 RADIO SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: BuShips R-1472

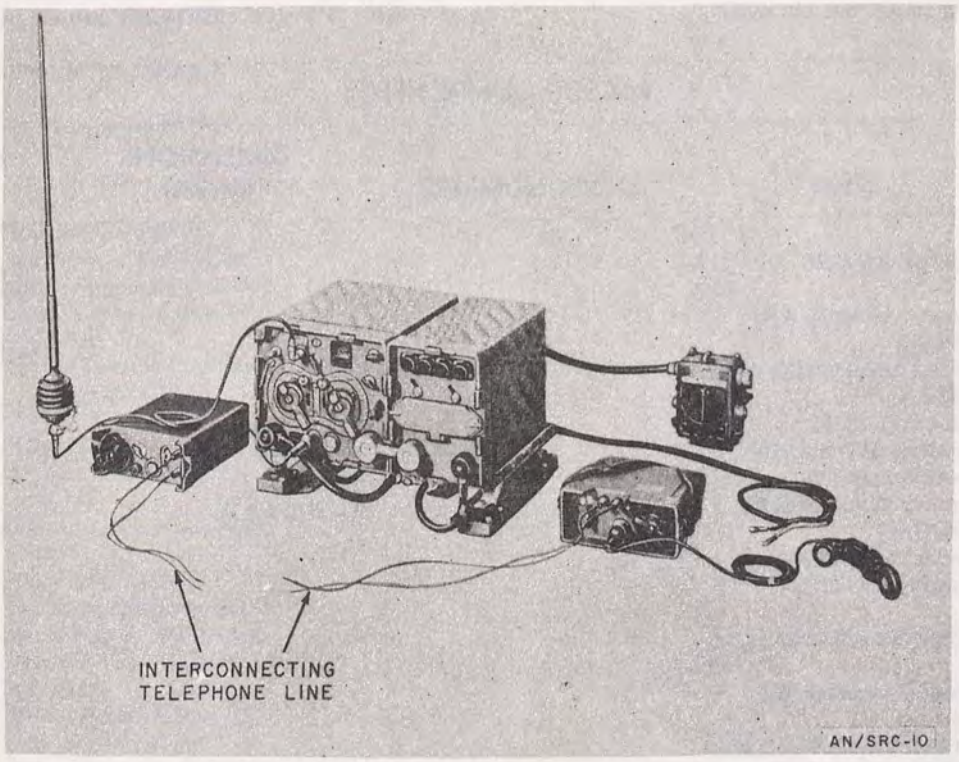
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Mackay Radio & Telegraph Co., Inc.	New York, N. Y.	NObsr-64203	

RADIO SET AN/SRC-10, -10X, -10Y, -11, -11X, -11Y, -12, -12X, -12Y

Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:		--	--



FUNCTIONAL DESCRIPTION:

Radio Sets AN/SRC–10, AN/SRC–10X, AN/SRC–10Y, AN/SRC–11, AN/SRC–11X, AN/SRC–11Y, AN/SRC–12, AN/SRC–12X, and AN/SRC–12Y are designed to provide frequency modulated radiotelephone facilities within the frequency range of 20 to 54.9 megacycles. Each receiver-transmitter covers a specific portion of the over-all frequency range.

These equipments can be installed and operated in trucks, personnel carriers, armored utility vehicles, weapon carriers, and other authorized vehicles.

The radio sets are primarily intended for short range operation and are shipboard installed for amphibious communications.

Radio Sets AN/SRC–10, AN/SRC–10X, AN/SRC–10Y, AN/SRC–11, AN/SRC–11X, AN/SRC–11Y, AN/SRC–12, AN/SRC–12X, and AN/SRC–12Y are nomenclatures that have been assigned to identify the United States Navy equivalent to United States Army Radio Sets AN/VRC–8, AN/VRC–9, and AN/VRC–10.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
AN/SRC–10, –10X, –10Y: 20 to 27.9
AN/SRC–11, –11X, –11Y: 27 to 38.9
AN/SRC–12, –12X, –12Y: 38 to 54.9

Type of Emission and Reception: Voice and 1,600 cps FM signals

Type of Tuning: Continuous or channel selection

Number of Frequency Channels:
AN/SRC–10, –10X, –10Y: 80
AN/SRC–11, –11X, –11Y: 120
AN/SRC–12, 12X, –12Y: 170

Channel Spacing: 100 kc

AN/SRC-10, -10X, -10Y, -11, -11X, -11Y, -12, -12X, -12Y RADIO SET

Presetting: Any 2 channels
Operational Range: 10 to 15 miles
Receiver Type: Double conversion superheterodyne
Receiver Sensitivity: 30 db signal plus noise-to-noise ratio with 1/2 uv input signal
Audio Output Impedance: 600 ohms at all audio output terminals
Microphone Input Impedance: 150 ohms

Power Output:
Transmitter: High 16 w, low 2 w (approximately)
Receiver: 1 w into 600 ohm phones (a third output of approximately 30 mw at fixed level output is not used)
Power Requirements:
AN/SRC–10, –11, –12: 24 v dc
AN/SRC–10X, –11X, –12X: 12 v dc
AN/SRC–10Y, –11Y, –12Y: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Set AN/SRC–10:			
1	Antenna Assembly AN/SRA–3			
1	Control Adapter MX–1583/SRC			
1*	Handset H–33/PT		2-1/16 x 3 x 3	2
1	Mounting MT–299/GR		4 x 13 x 20	24
1	Power Supply PP–112/GR		8 x 9 x 13	33
1	Receiver-Transmitter RT–66/GRC		9 x 11-1/4 x 13	35
1	Special Purpose Cable Assembly CX–1211/U			.4
	For Radio Set AN/SRC–10X:			
1	Antenna Assembly AN/SRA–3			
1	Control Adapter MX–1583/SRC			
1*	Handset H–33/PT		2-1/16 x 3 x 3	2
1	Mounting MT–299/GR		4 x 13 x 20	24
1	Power Supply PP–109/GR		8 x 9 x 13	33
1	Receiver-Transmitter RT–66/GRC		9 x 11-1/4 x 13	35
1	Special Purpose Cable Assembly CX–1211/U			.4
	For Radio Set AN/SRC–10Y:			
1	Antenna Assembly AN/SRA–3			
1	Control Adapter MX–1986/SRC			
1*	Handset H–33/PT		2-1/16 x 3 x 3	2
1	Mounting MT–299/GR		4 x 13 x 20	24
1	Power Supply PP–1175/SR		7-5/16 x 9-1/4 x 12-7/8	
1	Receiver-Transmitter R–66/GRC		9 x 11-1/4 x 13	35

RADIO SET AN/SRC-10, -10X, -10Y, -11, -11X, -11Y, -12, -12X, -12Y

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Special Purpose Cable Assembly CX–1211/U	----------	----------	4
	For Radio Set AN/SRC–11:			
1	Antenna Assembly AN/SRA–3			
1	Control Adapter MX–1583/SRC			
1*	Handset H–33/PT	----------	2-1/16 x 3 x 3	2
1	Mounting MT–299/GR	----------	4 x 13 x 20	24
1	Power Supply PP–112/GR	----------	8 x 9 x 13	33
1	Receiver-Transmitter RT–67/GR	----------	9 x 11-1/4 x 13	35
1	Special Purpose Cable Assembly CX–1211/U	----------	----------	.4
	For Radio Set AN/SRC–11X:			
1	Antenna Assembly AN/SRA–3			
1	Control Adapter MX–1583/SRC			
1*	Handset H–33/PT	----------	2-1/16 x 3 x 3	2
1	Mounting MT–299/GR	----------	4 x 13 x 20	24
1	Power Supply PP–109/GR	----------	8 x 9 x 13	33
1	Receiver-Transmitter R–67/GRC	----------	9 x 11-1/4 x 13	35
1	Special Purpose Cable Assembly CX–1211/U	----------	----------	.4
	For Radio Set AN/SRC–11Y:			
1	Antenna Assembly AN/SRA–3			
1	Control Adapter MX–1986/SRC			
1*	Handset H–33/PT	----------	2-1/16 x 3 x 3	2
1	Mounting MT–299/GR	----------	4 x 13 x 20	24
1	Power Supply PP–1175/SR	----------	7-5/16 x 9-1/4 x 12-7/8	
1	Receiver-Transmitter RT–67/GRC	----------	9 x 11-1/4 x 13	35
1	Special Purpose Cable Assembly CX–1211/U	----------	----------	.4
	For Radio Set AN/SRC–12:			
1	Antenna Assembly AN/SRA–3			

AN/SRC-10, -10X, -10Y, -11, -11X, -11Y, -12, -12X, -12Y RADIO SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Adapter MX–1583/SRC			
1*	Handset H–33/PT		2-1/16 x 3 x 3	2
1	Mounting MT–299/GR		4 x 13 x 20	24
1	Power Supply PP–112/GR		8 x 9 x 13	33
1	Receiver-Transmitter RT–68/GRC		9 x 11-1/4 x 13	35
1	Special Purpose Cable Assembly CX–1211/U			.4
	For Radio Set AN/SRC–12X:			
1	Antenna Assembly AN/SRA–3			
1	Control Adapter MX–1583/SRC			
1*	Handset H–33/PT		2-1/16 x 3 x 3	2
1	Mounting MT–299/GR		4 x 13 x 20	24
1	Power Supply PP–109/GR		8 x 9 x 13	33
1	Receiver-Transmitter RT–68/GRC		9 x 11-1/4 x 13	35
1	Special Purpose Cable Assembly CX–1211/U			.4
	For Radio Set AN/SRC–12Y:			
1	Antenna Assembly AN/SRA–3			
1	Control Adapter MX–1986/SRC			
1*	Handset H–33/PT		2-1/16 x 3 x 3	2
1	Mounting MT–299/GR		4 x 13 x 20	24
1	Power Supply PP–1175/SR		7-5/16 x 9-1/4 x 12-7/8	
1	Receiver-Transmitter RT–68/GRC		9 x 11-1/4 x 13	35
1	Special Purpose Cable Assembly CX–1211/U			.4

* One additional Handset H–33/PT should be supplied for each control box installed.

REFERENCE DATA AND LITERATURE:

TM 11–286; BuShips Ltr S67/1–7 Ser 881E–1–3528, 1 September 1956

RADIO SET AN/SRC-10, -10X, -10Y, -11, -11X, -11Y, -12, -12X, -12Y

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
DeJur-Amsco Corp.	Long Island City, New York, N. Y.	DA-36-039-SC-47969	
Signal Corps Supply Agency	Philadelphia, Pa.	MIPR 800-29092-52, 23 June 1952	

RADIO SET AN/SRC-13, -13X, -13Y, -14, -14X, -14Y, -15, -15X, -15Y

Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Sets AN/SRC–13, AN/SRC–13X, AN/SRC–13Y, AN/SRC–14, AN/SRC–14X, AN/SRC–14Y, AN/SRC–15, AN/SRC–15X, and AN/SRC–15Y are designed to provide frequency modulated radiotelephone facilities within the frequency range of 20 to 55 megacycles. Each receiver-transmitter covers a specific portion of the over-all frequency range.

These equipments can be installed and operated in trucks, personnel carriers, armored utility vehicles, weapon carriers, and other authorized vehicles.

The radio sets are primarily intended for short range operation and are shipboard installed for amphibious communications.

Radio Sets AN/SRC–13, AN/SRC–13X, AN/SRC–13Y, AN/SRC–14, AN/SRC–14X, AN/SRC–14Y, AN/SRC–15, AN/SRC–15X, and AN/SRC–15Y is nomenclature that has been assigned to identify the Uhited States Navy equivalent to United States Army Radio Sets AN/VRC–16, AN/VRC–17, and AN/VRC–18.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
AN/SRC–13, –13X, –13Y:
RT–66/GRC: 20 to 27.9
R–108/GRC: 20 to 28
AN/SRC–14, –14X, –14Y:
RT–67/GRC: 27 to 38.9
R–109/GRC: 27 to 39
AN/SRC–15, –15X, –15Y:
RT–68/GRC: 38 to 54.9
R–110/GRC: 38 to 55

Type of Emission and Reception: Voice and 1,600 cps fn signals

Type of Tuning:
RT–66/GRC: Continuous or choice of 80 detented channel with provisions for presetting any 2 channels.
RT–67/GRC: Continuous or choice of 120 detented chan nels with provisions for presetting any 2 channels
RT–68/GRC: Continuous or choice of 170 detented chan nels with provisions for presetting any 2 channels
R–108/GRC, R–109/GRC, R–110/GRC: Continuous tun ing with detent provisions for preselection of any frequencies

Operational Range: 10 to 15 miles

Type of Receivers: Double conversion superheterodyne

Sensitivity of Receivers: 30 db signal plus noise-to-noise rati with 1/2 uv input signal

AN/SRC-13, -13X, -13Y, -14, RADIO SET -14X, -14Y, -15, -15X, -15Y

Microphone Input Impedance: 150 ohms
Audio Output Impedance: 600 ohms at all audio output terminals
Power Output:
Transmitter:
High: 16 w
Low: 2 w (approximate)
Receivers (Each): 1 w into 600 ohm speakers, 50 mw into 600 ohm phones. (A third output of approximately 30 mw at fixed-level output is not used.)
Power Requirements:
AN/SRC–13, –14, –15: 24 v dc
AN/SRC–13X, –14X, –15X: 12 v dc
AN/SRC–13Y, –14Y, –15Y: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Set AN/SRC–13:			
2	Antenna Assembly AN/SRA–3			
1	Control Adapter MX–1583/SRC			
1*	Handset H–33/PT			
1	Mounting MT–327/GRC		2-1/16 x 3 x 3	2
1	Power Supply PP–112/GR		4 x 13 x 20	28
1	Power Supply PP–282/GRC		8 x 9 x 13	33
1	Radio Receiver R–108/GRC		3 x 4-1/2 x 6	6
1	Receiver-Transmitter RT–66/GRC		7-1/4 x 9 x 13	35
1	Special Purpose Cable Assembly CX–1211/U		9 x 11-1/4 x 13	35
	For Radio Set AN/SRC–13X:			
2	Antenna Assembly AN/SRA–3			
1	Control Adapter MX–1583/SRC			
1*	Handset H–33/PT			
1	Mounting MT–327/GRC		2-1/16 x 3 x 3	2
1	Power Supply PP–109/GR		4 x 13 x 20	28
1	Power Supply PP–281/GRC		8 x 9 x 13	33
1	Radio Receiver R–108/GRC		3 x 4-1/2 x 6	6
1	Receiver-Transmitter RT–66/GRC		7-1/4 x 9 x 13	35
1	Special Purpose Cable Assembly CX–1211/U		9 x 11-1/4 x 13	35
	For Radio Set AN/SRC–13Y:			.4
2	Antenna Assembly AN/SRA–3			
1	Control Adapter MX–1986/SRC			
1*	Handset H–33/PT			
1	Mounting MT–327/GRC		2-1/16 x 3 x 3	2
1	Power Supply PP–1175/SR		4 x 13 x 20	28
1	Radio Receiver R–108/GRC		7-5/16 x 9-1/4 x 12-7/8	
1	Receiver-Transmitter RT–66/GRC		7-1/4 x 9 x 13	35
			9 x 11-1/4 x 13	35

RADIO SET AN/SRC-13, -13X, -13Y, -14, -14X, -14Y, -15, -15X, -15Y

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Special Purpose Cable Assembly CX–1211/U			.4
	For Radio Set AN/SRC–14:			
2	Antenna Assembly AN/SRA–3			
1	Control Adapter MX–1583/SRC			
1*	Handset H–33/PT		2-1/16 x 3 x 3	2
1	Mounting MT–327/GRC		4 x 13 x 20	28
1	Power Supply PP–112/GR		8 x 9 x 13	33
1	Power Supply PP–282/GRC		3 x 4-1/2 x 6	6
1	Radio Receiver R–109/GRC		7-1/4 x 9 x 13	35
1	Receiver-Transmitter RT–67/GRC		9 x 11-1/4 x 13	35
1	Special Purpose Cable Assembly CX–1211/U			.4
	For Radio Set AN/SRC–14X:			
2	Antenna Assembly AN/SRA–3			
1	Control Adapter MX–1583/SRC			
1*	Handset H–33/PT		2-1/16 x 3 x 3	2
1	Mounting MT–327/GRC		4 x 13 x 20	28
1	Power Supply PP–109/GR		8 x 9 x 13	33
1	Power Supply PP–281/GRC		3 x 4-1/2 x 6	6
1	Radio Receiver R–109/GRC		7-1/4 x 9 x 13	35
1	Receiver-Transmitter RT–67/GRC		9 x 11-1/4 x 13	35
1	Special Purpose Cable Assembly CX–1211/U			.4
	For Radio Set AN/SRC–14Y:			
2	Antenna Assembly AN/SRA–3			
1	Control Adapter MX–1986/SRC			
1*	Handset H–33/PT		2-1/16 x 3 x 3	2
1	Mounting MT–327/GRC		4 x 13 x 20	28
1	Power Supply PP–1175/SR		7-5/16 x 9-1/4 x 12-7/8	
1	Radio Receiver R–109/GRC		7-1/4 x 9 x 13	35
1	Receiver-Transmitter RT–67/GRC		9 x 11-1/4 x 13	35
1	Special Purpose Cable Assembly CX–1211/U			.4
	For Radio Set AN/SRC–15:			
2	Antenna Assembly AN/SRA–3			

AN/SRC-13, -13X, -13Y, -14, -14X, -14Y, -15, -15X, -15Y RADIO SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Adapter MX–1583/SRC			
1*	Handset H–33( )/PT		2-1/16 x 3 x 3	2
1	Mounting MT–327/GR		4 x 13 x 20	28
1	Power Supply PP–112/GR		8 x 9 x 13	33
1	Power Supply PP–282/GRC		3 x 4-1/2 x 6	6
1	Radio Receiver R–110/GRC		7-1/4 x 9 x 12-13/16	20.25
1	Receiver-Transmitter RT–68/GRC		9 x 11-1/4 x 13	35
1	Special Purpose Cable Assembly CX–1211/U			.4
	For Radio Set AN/SRC–15X:			
2	Antenna Assembly AN/SRA–3			
1	Control Adapter MX–1583/SRC			
1*	Handset H–33( )/PT		2-1/16 x 3 x 3	2
1	Mounting MT–327/GR		4 x 13 x 20	28
1	Power Supply PP–109/GR		8 x 9 x 13	33
1	Power Supply PP–281/GRC		3 x 4-1/2 x 6	6
1	Radio Receiver R–110/GRC		7-1/4 x 9 x 12-13/16	20.25
1	Receiver-Transmitter RT–68/GRC		9 x 11-1/4 x 13	35
1	Special Purpose Cable Assembly CX–1211/U			.4
	For Radio Set AN/SRC–15Y:			
2	Antenna Assembly AN/SRA–3			
1	Control Adapter MX–1986/SRC			
1*	Handset H–33( )/PT		2-1/16 x 3 x 3	2
1	Mounting MT–327/GR		4 x 13 x 20	28
1	Power Supply PP–1175/SR		7-5/16 x 9-1/4 x 12-7/8	
1	Radio Receiver R–110/GRC		7-1/4 x 9 x 12-13/16	20.25
1	Receiver-Transmitter R–68/GRC		9 x 11-1/4 x 13	35
1	Special Purpose Cable Assembly CX–1211/U			.4

* One additional Handset H–33( )/PT should be supplied for each control box installed.

RADIO SET AN/SRC-13, -13X, -13Y, -14, -14X, -14Y, -15, -15X, -15Y

REFERENCE DATA AND LITERATURE:

TM 11-611; BuShips Ltr S67/1-7 Ser 881E-1-3528, 1 September 1955

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
JFD Manufacturing Co.	Brooklyn, N. Y.	DA-36-039-SC-12166, 31 October 1951	
Signal Corps Supply Agency	Philadelphia, Pa.	MIPR-800-39141, 29 September 1952	

RADIO TRANSMITTING AND RECEIVING EQUIPMENT AN/SRC-type

3 December 1958
Cognizant Serv: USN FSN: 5820-665-3823 MAC

USA	USN	USAF
TYPE CLASS:	--	--
STOCK NO:	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting and Receiving Equipment MAC is designed for operation on board naval vessels, such as minesweepers, to provide coordinated control of minesweeping equipment on cooperating boats. It has been designed for remote control and unattended operation.

A frequency-modulated short-range radio circuit is provided on which two tone signals may be impressed alternately to operate separate control relays at the receiving points. Means is provided to limit the effective range to as low as 1,000 yards for security reasons.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 42
Type Modulation: FM
Type of Signal: Tone
Transmitter Power Output: 0.01 to 2 w (adjustable)
Transmitter Output Impedance: 30 to 100 ohms into concentric transmission line
Power Requirements: 80 w, 115-v 60- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly 66044	----------	4 x 4 x 78	3
1	Coaxial antenna cable	----------	100 feet long	11
1	Control cable with Plugs	----------	75 feet long	18
1	Power cable with Plugs	----------	10 feet long	1.5
1	Radio Transmitter-Receiver Unit 43052	----------	9 x 11-11/16 x 16	38
1	Remote Control Unit 23397	----------	3-1/8 x 4-1/2 x 5	4.5
1	Test Meter, Link Type 1410	----------	----------	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95122

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SRC-type RADIO TRANSMITTING AND RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

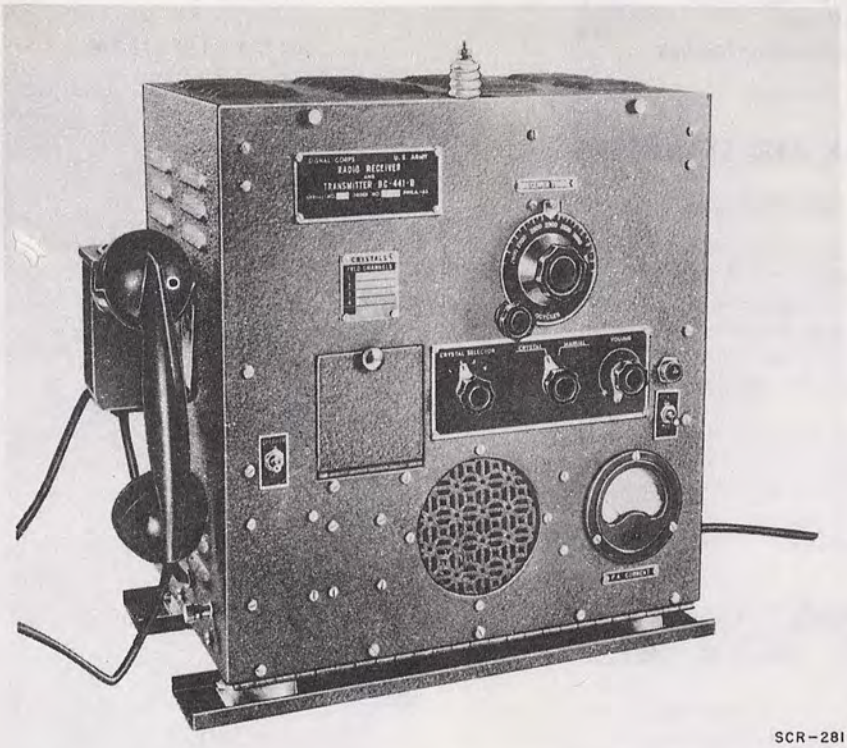
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Fred M. Link	New York, N. Y.	NXss 32846	$140.00

RADIO SET AN/SRC-type

1 July 1958
Cognizant Serv: USA FSN: 5820-186-9257

SCR-28-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	L/Std
STOCK NO:	2S281	--	--



SCR-281

FUNCTIONAL DESCRIPTION:

Radio Set SCR-281-( ) is a medium-power, crystal-controlled AM (voice) transmitting and receiving equipment used for ship-to-ship, ship-to-shore, and shore station communication in coastwise and harbor-control applications.

This equipment consists of a radio transmitter and a radio receiver assembled within a single metal cabinet that may be floor-, deck-, shelf-, or platform-mounted. It has a shock mounting and a handset, and the receiver section includes a loudspeaker.

It can be operated on one of four channels, preselected by means of appropriate plug-in crystals, and includes provision for control of transmitter-receiver change-over by means of the press-to-talk switch of the handset.

It can use a conventional long-wire antenna or equivalent system but it can be operated with a whip-type array 35 feet in length.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.7 to 2.75
Type Modulation: AM
Type of Signal: Voice only
Power Output: 25 w
Power Requirements:
Transmitter: 230 w, 115-v 60-cycle 1-phase ac
Receiver: 107 w, 115-v 60-cycle 1-phase ac

AN/SRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Radio Receiver and Transmitter BC–441	2C5341	16 x 10 x 16	102
2	Shockproof mounting bracket	----------	1-1/2 x 2-1/2 x 17-7/8	4

REFERENCE DATA AND LITERATURE:

TM 11–244.

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	6	143

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC & / or DWG: (USA) 71–3402

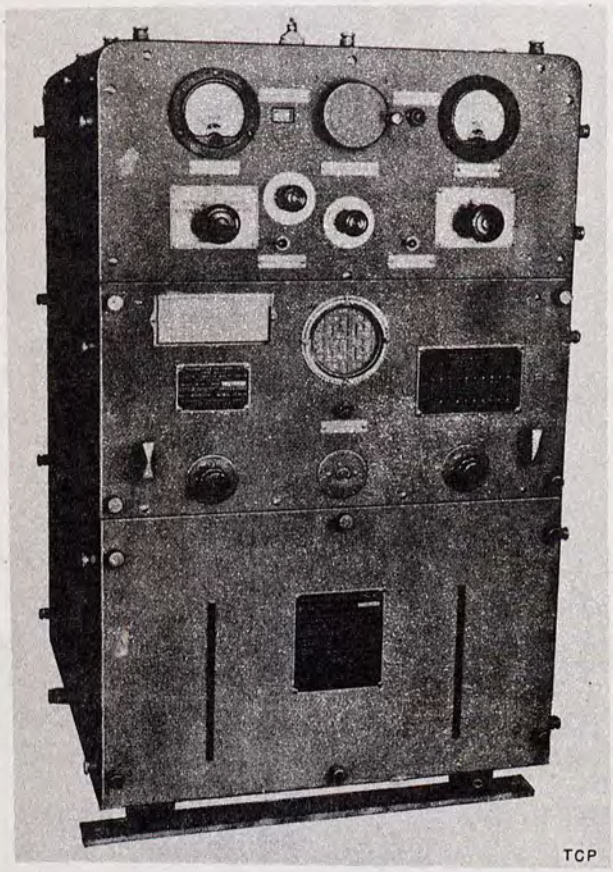
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT AN/SRC-type

5 December 1958
Cognizant Serv: USN FSN: TCP

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	(32-v dc): F16–Q–323895–200 (115-v dc): F16–Q–323905–200	--



TCP

FUNCTIONAL DESCRIPTION:

Radio Telephone Transmitting and Receiving Equipment TCP, TCP–1, –2, and –3 are designed for two-way radio telephone communication at medium frequency between ships, and between ships and associated shore activities. Each transmitter-receiver is capable of operation from several types of power supplies, depending upon the type of installation desired.

All models of the TCP series are similar except for minor modifications on the later models and the alternating current power supply equipment available with the TCP–3.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Transmitter: 2,000 to 3,000 kc, 10 preset channels maximum
Receiver: 2,000 to 3,000 kc, 10 preset channels maximum
Frequency Control: Crystal
Type Signal: Voice
Nominal Power Output: 75 w
Type Receiver: Superheterodyne
Receiver Output Impedance: 4 ohms, 200 ohms
Receiver Sensitivity: 50 mw audio output for 2 to 5 uv input
Power Requirements: 32/115-v dc

AN/SRC-type RADIO TELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Hand Telephone Assembly CRM–51026		9 x 3-1/2 x 6-1/4	4
1	Line Filter Unit CRM–53076 (32–v dc)		10 x 6-1/2 x 6	6
	or			
1	Line Filter Unit CRM–53077 (115–v dc)		10 x 6-1/2 x 6	6
2	Remote control cable			
1	Remote Control Unit CRM–23230		10-1/4 x 13-5/8 x 5-3/8	11
1	Transmitter-Receiver Unit CRM–43009 (32-v dc)		37 x 20-1/8 x 22	310
	or			
1	Transmitter-Receiver Unit CRM–43010 (115–v dc)		37 x 20-1/8 x 22	310

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95316

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	40.0	578

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC & /or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.	NOs–81903, 12 February 1941	$2,200.00 including equipment spares

AN/SRC-type RADIO TELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Hand Telephone Assembly CRM–51026		9 x 3-1/2 x 6-1/4	4
1	Line Filter Unit CRM–53076 (32–v dc)		10 x 6-1/2 x 6	6
	or			
1	Line Filter Unit CRM–53077 (115–v dc)		10 x 6-1/2 x 6	6
2	Remote control cable			
1	Remote Control Unit CRM–23230		10-1/4 x 13-5/8 x 5-3/8	11
1	Transmitter-Receiver Unit CRM–43009 (32-v dc)		37 x 20-1/8 x 22	310
	or			
1	Transmitter-Receiver Unit CRM–43010 (115–v dc)		37 x 20-1/8 x 22	310

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95316

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	40.0	578

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips

SPEC & /or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.	NOs–81903, 12 February 1941	$2,200.00 including equipment spares

RADIO TELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT AN/SRC-type

5 December 1958
Cognizant Serv: USN FSN: TCP–1

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	(32-v dc): F16–Q–323925–200 (115-v dc): F16–Q–323935–200	

(See Illustration of TCP, p. 1205)

FUNCTIONAL DESCRIPTION:

Radio Telephone Transmitting and Receiving Equipment TCP–1 and TCP, –2, and –3 are designed for two-way radio telephone communication at medium frequency between ships, and between ships and associated shore activities. Each transmitter-receiver is capable of operation from several types of power supplies, depending upon the type of installation desired.

All models of the TCP series are similar except for minor modifications on the later models and the alternating current power supply equipment available with the TCP–3.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Transmitter: 2,000 to 3,000 kc, 10 preset channels maximum
Receiver: 2,000 to 3,000 kc, 10 preset channels maximum
Frequency Control: Crystal
Type Signal: Voice
Nominal Power Output: 75 w
Type Receiver: Superheterodyne
Receiver Output Impedance: 4 ohms, 200 ohms
Receiver Sensitivity: 50 mw audio output for 2 to 5 uv input
Power Requirements: 32/115-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Hand Telephone Assembly CRM–51026	----------	9 x 3-1/2 x 6-1/4	4
1	Line Filter Unit CRM–53085 (32–v dc)	----------	10-9/16 x 9-3/8 x 3-5/8	9
	or			
1	Line Filter Unit CRM–53086 (115–v dc)	----------	10-9/16 x 9-3/8 x 3-5/8	9
2	Remote control cable			
1	Remote Control Unit CRM–23230	----------	10-1/4 x 13-5/8 x 5-3/8	11
1	Transmitter-Receiver Unit CRM–43009 (32–v dc)	----------	37 x 20-1/8 x 22	310
	or			
1	Transmitter-Receiver Unit CRM–43010 (115–v dc)	----------	37 x 20-1/8 x 22	310

AN/SRC-type RADIO TELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95316

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	40.0	578

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.	NOs-87455, 18 June 1941	$2,200.00 including equipment spares

RADIO TELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT AN/SRC-type

5 December 1958
Cognizant Serv: USN FSN: TCP-2

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	(32-v dc): F16-Q-323955-200 (Navy) (115-v dc): F16-Q-323965-200 (Navy)	--

(See Illustration of TCP, p. 1205)

FUNCTIONAL DESCRIPTION:

Radio Telephone Transmitting and Receiving Equipment TCP-2 and TCP, -1 and -3 are designed for two-way radio telephone communiction at medium frequency between ships, and between ships and associated shore activities. Each transmitter-receiver is capable of operation from several types of power supplies, depending upon the type of installation desired.

All models of the TCP series are similar except for minor modifications on the later models and the alternating current power supply equipment available with the TCP-3.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Transmitter: 2,000 to 3,000 kc, 10 preset channels maximum
Receiver: 2,000 to 3,000 kc, 10 preset channels maximum
Frequency Control: Crystal
Type Signal: Voice
Nominal Power Output: 75 w
Type Receiver: Superheterodyne
Receiver Output Impedance: 4 ohms, 200 ohms
Receiver Sensitivity: 50 mw audio output for 2 to 5 uv input
Power Requirements: 32/115-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Hand Telephone Assembly CRM-51026		9 x 3-1/2 x 6-1/4	4
1	Line Filter Unit CRM-53085 (32-v dc)		10-9/16 x 9-3/8 x 3-5/8	9
	or			
1	Line Filter Unit CRM-53086 (115-v dc)		10-9/16 x 9-3/8 x 3-5/8	9
1	Remote control cable			
1	Remote Control Unit CRM-23230		10-1/4 x 13-5/8 x 5-3/8	11
1	Transmitter-Receiver Unit CRM-43009-A (32-v dc)		37 x 20-1/8 x 22	310
	or			
1	Transmitter-Receiver Unit CRM-43010-A (115-v dc)		37 x 20-1/8 x 22	310

AN/SRC-type RADIO TELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95317

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	40.0	578

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.	NXsr-36947, 6 September 1943	$2,200.00 including equipment spares

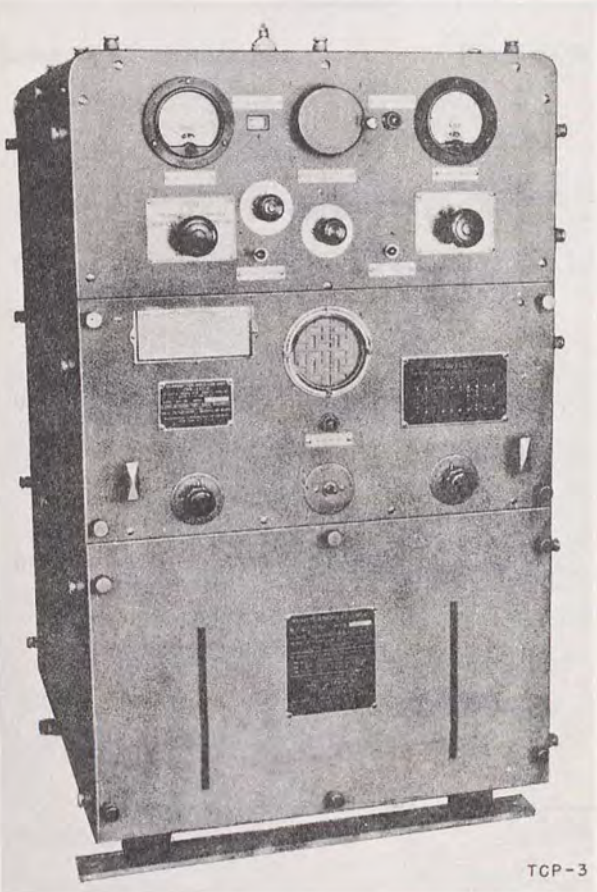
RADIO TELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT AN/SRC-type

5 December 1958
Cognizant Serv: USN FSN: TCP–3

USA	USN	USAF

TYPE CLASS: --
STOCK NO: --

Used by
(115-v dc): F16–Q–323975–200 (Navy)
(230-v dc): F16–Q–323976–200 (Navy)


TCP-3

FUNCTIONAL DESCRIPTION:

Radio Telephone Transmitting and Receiving Equipment TCP–3 and TCP, –1, and –2 are designed for two-way radio telephone communication at medium frequency between ships, and between ships and associated shore activities. Each transmitter-receiver is capable of operation from several types of power supplies, depending upon the type of installation desired.

All models of the TCP series are similar except for minor modifications on the later models and on this, the TCP–3, the alternating current power supply equipment that is available.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Transmitter: 2,000 to 3,000 kc, 10 preset channels maximum
Receiver: 2,000 to 3,000 kc, 10 preset channels maximum
Frequency Control: Crystal
Type Signal: Voice
Nominal Power Output: 75 w
Type Receiver: Superheterodyne
Receiver Output Impedance: 4 ohms, 200 ohms
Receiver Sensitivity: 50 mw audio output for 2 to 5 uv input
Power Requirements: 32/115/230-v dc ;or 115-v 50–60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Hand Telephone Assembly CRM–51026	----------	9 x 3-1/2 x 6-1/4	4
1	Line Filter Unit CRM–53085 (32–v dc)	----------	10-9/16 x 9-3/8 x 3-5/8	9

AN/SRC-type RADIO TELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Line Filter Unit CRM–53086 (115–v dc)		10-9/16 x 9-3/8 x 3-5/8	9
	or			
1	Line Filter Unit CRM–53192 (230–v dc)			
1	Remote control cable			
1	Remote Control Unit CRM–23230		10-1/4 x 13-5/8 x 5-3/8	11
1	Transmitter-Receiver Unit CRM–43009–A (32–v dc)		37 x 20-1/8 x 22	310
	or			
1	Transmitter-Receiver Unit CRM–43010–A (115–v dc)		37 x 20-1/8 x 22	310
	or			
1	Transmitter-Receiver Unit CRM–43061 (230–v dc)		37 x 20-1/8 x 22	310
	or			
1	Transmitter-Receiver Unit CRM–43062 (115–v 50-60-cycle 1-phase ac)		37 x 20-1/8 x 22	310

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95318

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	40.0	578

RADIO TELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT AN/SRC-type

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.	NXsr–55686, 19 April 1944	$2,200.00 including equipment spares

RADIO RECEIVING SET AN/SRR-3

1 December 1958
Cognizant Serv: USA FSN: 5820-164-7214

	USA	USN	USAF
TYPE CLASS:	Obsolete	Used by	--
STOCK NO:	2C4589	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/SRR-3 is a superheterodyne unit suitable for shipboard, or shore installation. It is adapted for the reception of radiotelephone or radiotelegraph signals by either headphones or loudspeaker.

This equipment is essentially a commercial Scott Model SLR-F set. It is designed for alternating current operation and is equipped with a rectifier type power supply. The headphones used with the set must have an impedance of either 600 or 20,000 ohms. These headphones may be used separately or in conjunction with a local loudspeaker of the permanent magnet type.

The set is contained in a steel cabinet suitable for installation on top of a table or bench with cradle type shock mounting. The chassis is constructed to permit mounting in a standard type relay rac.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Band 1: 80 kc to 220 kc
Band 2: 210 kc to 560 kc
Band 3: 1.9 mc to 5.1 mc
Band 4: 4.5 mc to 12 mc
Band 5: 8.8 mc to 24 mc
Antenna: Balance feed line or single wire
Type modulation: AM
Type Emission: Cw, mcw, voice
Operational Range: Medium and long
Power Requirements: 85 w; 110- to 120-v 60-cycle, 0.75 amp

AN/SRR-3 RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Inverter Model 262	----------	8 x 8-11/16 x 10-7/16	28
1	Radio Receiver Model SLR–F	----------	13-7/8 x 20-13/16 x 21	106
1	Speaker Model SPM–8	----------	5 x 9-3/16 x 10-1/2	6.5

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

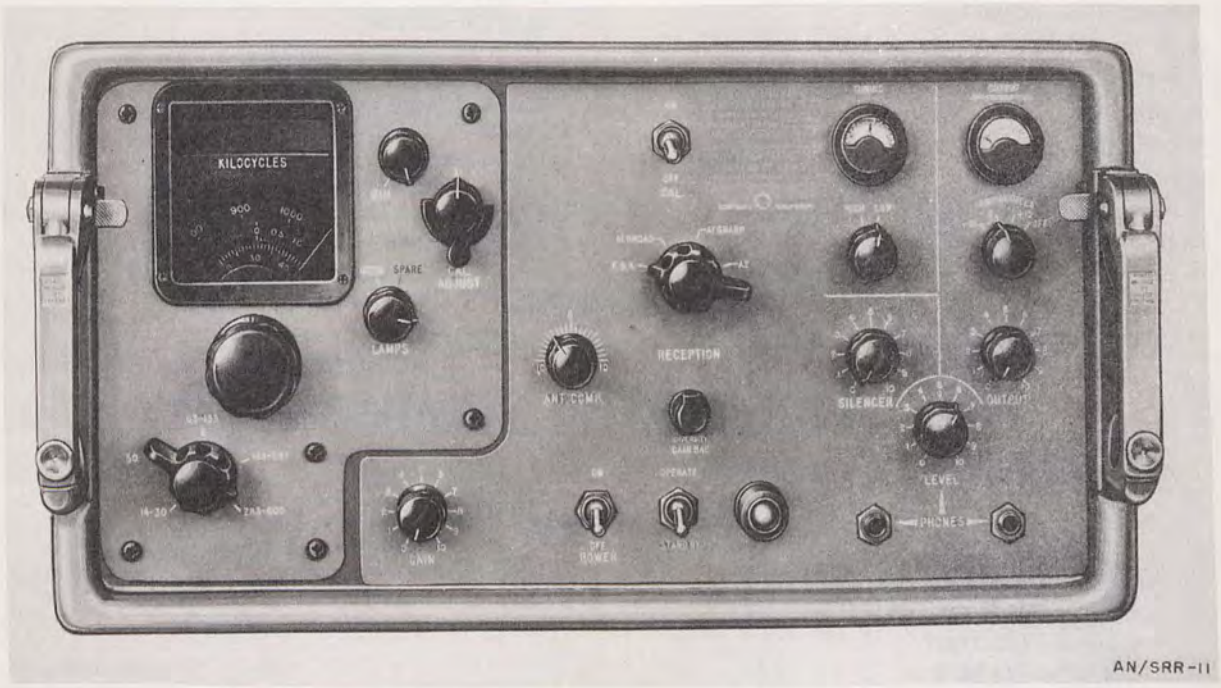
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
E. H. Scott Radio Laboratory	Chicago, Ill.		

RADIO RECEIVING SET AN/SRR-11, -12, -13, -13A

1 December 1958
Cognizant Serv: USN FSN: AN/SRR-11: 5820-642-8254
AN/SRR-12: 5820-642-8251
AN/SRR-13: 5820-665-2373
AN/SRR-13A: 5820-503-6763

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Sets AN/SRR-11, AN/SRR-12, AN/SRR-13 and AN/SRR-13A are low, medium and high frequency equipments designed for all types of vessels.

The frequency range in each receiver is divided into five bands; continuous tuning is available throughout. All of the units are compartmentalized for ease of maintenance and application. Each major assembly is physically independent and thus affords quick replacement.

These equipments operate in conjunction with panoramic adapters, frequency-shift receiver converters, facsimile, and similar facilities.

TECHNICAL CHARACTERISTICS:

Frequency Range:
AN/SRR-11:
Band 1: 14 kc to 30 kc
Band 2: 30 kc to 63 kc
Band 3: 63 kc to 133 kc
Band 4: 133 kc to 233 kc
Band 5: 283 kc to 600 kc
AN/SRR-12:
Band 1: 0.25 mc to 0.5 mc
Band 2: 0.5 mc to 1 mc
Band 3: 1 mc to 2 mc
Band 4: 2 mc to 4 mc
Band 5: 4 mc to 8 mc
AN/SRR-13, AN/SRR-13A:
Band 1: 2 mc to 4 mc
Band 2: 4 mc to 8 mc
Band 3: 8 mc to 16 mc
Band 4: 16 mc to 24 mc
Band 5: 24 mc to 32 mc
Type Modulation: AM, FM

AN/SRR-11, -12, -13, -13A RADIO RECEIVING SET

Input Impedance:
Lot: 70 ohms
High: Antenna with capacity of 30 to 5,000 $\mu\mu$f (200 nominal); antenna consisting of 20 uh in shunt with series combination of 400 $\mu\mu$f capacitor and 400 ohm resistor, the entire combination being in series with a 200 $\mu\mu$f capacitor

Intermediate Frequency:
AN/SRR–11:
Band 1: 60 kc and 200 kc
Band 2: 200 kc
Band 3: 200 kc
Band 4: 60 kc and 200 kc
Band 5: 200 kc

AN/SRR–12:
Band 1: 200 kc
Band 2: 200 kc
Band 3: 200 kc
Band 4: 1,600 kc and 200 kc
Band 5: 1,600 kc and 200 kc

AN/SRR–13, AN/SRR–13A:
Band 1: 1,600 kc and 200 kc
Band 2: 1,600 kc and 200 kc
Band 3: 1,600 kc and 200 kc
Band 4: 1,600 kc and 200 kc
Band 5: 1,600 kc and 200 kc

Type Reception:
AN/SRR–11: A1, A2, F1
AN/SRR–12, AN/SRR–13, AN/SRR–13A: A1, A2, A3, F1 (cs, mcw, icw, tone, voice)

Sensitivity:
AN/SRR–11:
14 to 18 Kc: 8 uv
18 to 100 Kc: 5 uv
100 to 600 Kc: 3.5 uv

AN/SRR–12:
0.250 to 8 Mc: 5 uv

AN/SRR–13, AN/SRR–13A:
2 to 16 Mc: 6 uv
16 to 32 Mc: 10 uv

Power Requirements: 75 w; 105- 115- or 125-v, 50- to 60- or 400-cycle 1-phase ac; 0.85 amp at 90% pf

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Receiving Set AN/SRR–11:			
2	Clamp, Cable AN3057–4			
1	Clamp, Cable AN3057–8			
2	Connector AN3106A–10SL–4S			
1	Connector AN3106A–16S–5S			
1	Connector UG–21B/U			
1	Connector UG–88/B			
1	Radio Receiver R–439/SRR–11	----------	8-23/32 x 17-1/4 x 18-11/32	65
1	Test Cable Assembly CG–1101/SRR			
	For Radio Receiving Set AN/SRR–12:			
3	Clamp, Cable AN3057–4			
1	Clamp, Cable AN3057–8			
3	Connector AN3106A–10SL–4S			
1	Connector AN3106A–16S–5S			
1	Connector UG–21B/U			
2	Connector UG–88/U			
1	Radio Receiver R–440/SRR–12	----------	8-23/32 x 17-1/4 x 18-11/32	65
1	Test Cable Assembly CG–1101/SRR			
	For Radio Receiving Set AN/SRR–13:			
3	Clamp, Cable AN3057–4			
1	Clamp, Cable AN3057–8			

RADIO RECEIVING SET AN/SRR-11, -12, -13, -13A

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
3	Connector AN3106A–10SL–4S			
1	Connector AN3106A–16S–5S			
1	Connector UG–21B/U			
2	Connector UG–88/U			
1	Radio Receiver R–441/SRR–13	----------	8-23/32 x 17-1/4 x 18-11/32	65
	For Radio Receiving Set AN/SRR–13A			
3	Clamp, Cable AN3057–4			
1	Clamp, Cable AN3057–8			
3	Connector AN3106A–10SL–4S			
1	Connector AN3106A–16S–5S			
1	Connector UG–21B/U			
2	Connector UG–88/U			
1	Radio Receiver R–441A/ SRR–13	----------	8-23/32 x 17-1/4 x 18-11/32	65
1	Test Cable Assembly CG–1101/SRR			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91875(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2 (AN/SRR–11)	4.9	122
2 (AN/SRR–12)	8.2	152
2 (AN/SRR–13)	5	136

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Corp. of America	Camden, N. J.	NObsr–52014, 31 August 1950 NObsr–57134, 31 August 1950	

RADIO RECEIVING SET AN/SRR-15

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/SRR–15 is a general purpose communication equipment for shipboard use. It has an extremely accurate tuning dial and frequency control.

Late models of this equipment have, in addition, circuits and facilities for reception of signal sideband suppressed carrier signals.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2.0 to 32
Number of Bands: 4
Type Emission: A1, A2, A3, A4, A3b
Power Output: 60 mw
Power Requirements: 105-, 115-, or 125-v, 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiving Set AN/SRR–15			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SRR-15 RADIO RECEIVING SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

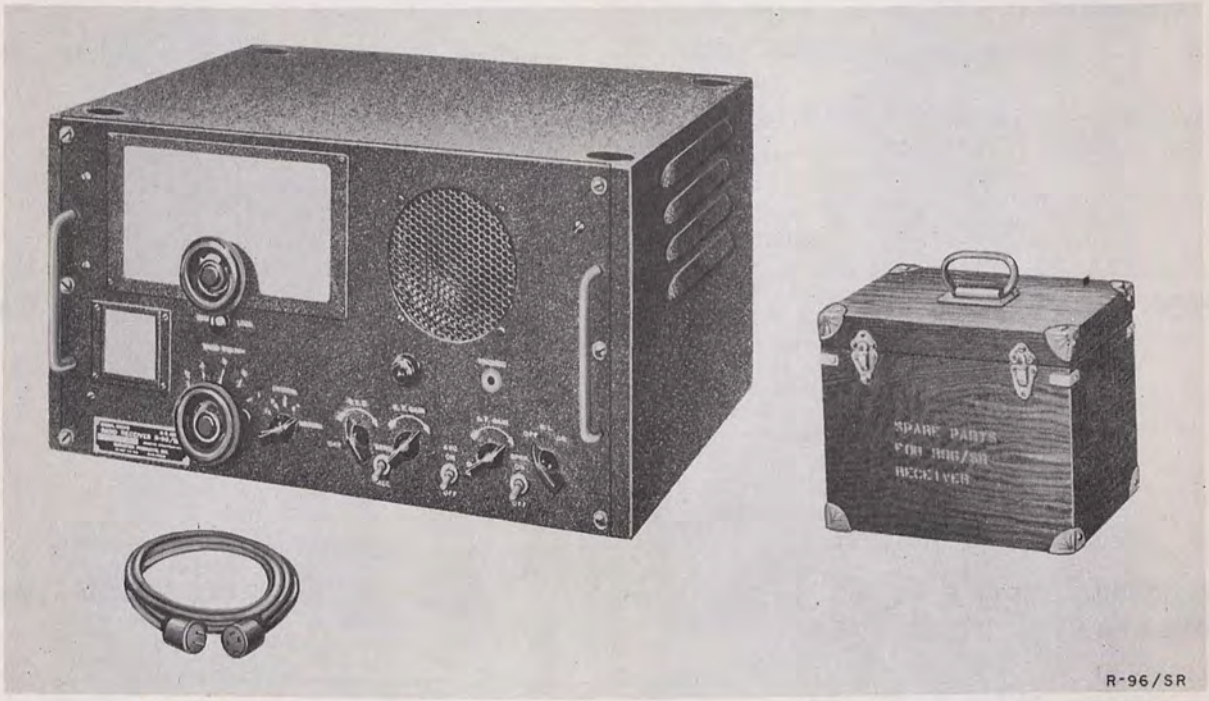
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.	Malden, Mass.	NObsr–63391	

RADIO RECEIVER AN/SRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-221-0177

R-96( )/SR

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C4180-96	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R-96( )/SR is a five-channel, AM (voice, cw, icw, and mcw) receiving equipment used in the low-, medium-, and high-frequency bands in radio operation aboard ship. It may be installed on harbor patrol or seagoing craft.

This equipment consists of a crystal-controlled receiver designed to operate in conjunction with Radio Transmitter T-83/SR, to which it may be connected by cables. Change-over relays in the transmitter control sending and receiving and are operated by means of the press-to-talk switch in the handset.

This receiver requires a conventional ship's antenna or other suitable array.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.135 to 12.12 in 5 overlapping bands

Type Modulation: AM

Type of Signal: Voice, cw, icw, mcw

Power Requirements: 0.4 amp, 115-v dc or 115-v 50/60-cycle ac

AN/SRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R–96( )/SR	(FSN) 5820–221–0177 (USA) 2C4180–96	10 x 20-7/8 x 17-1/2	87.5

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–878A

SHIPPING DATA (DOMESTIC PACK)

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	7.69	160.5

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 69–3

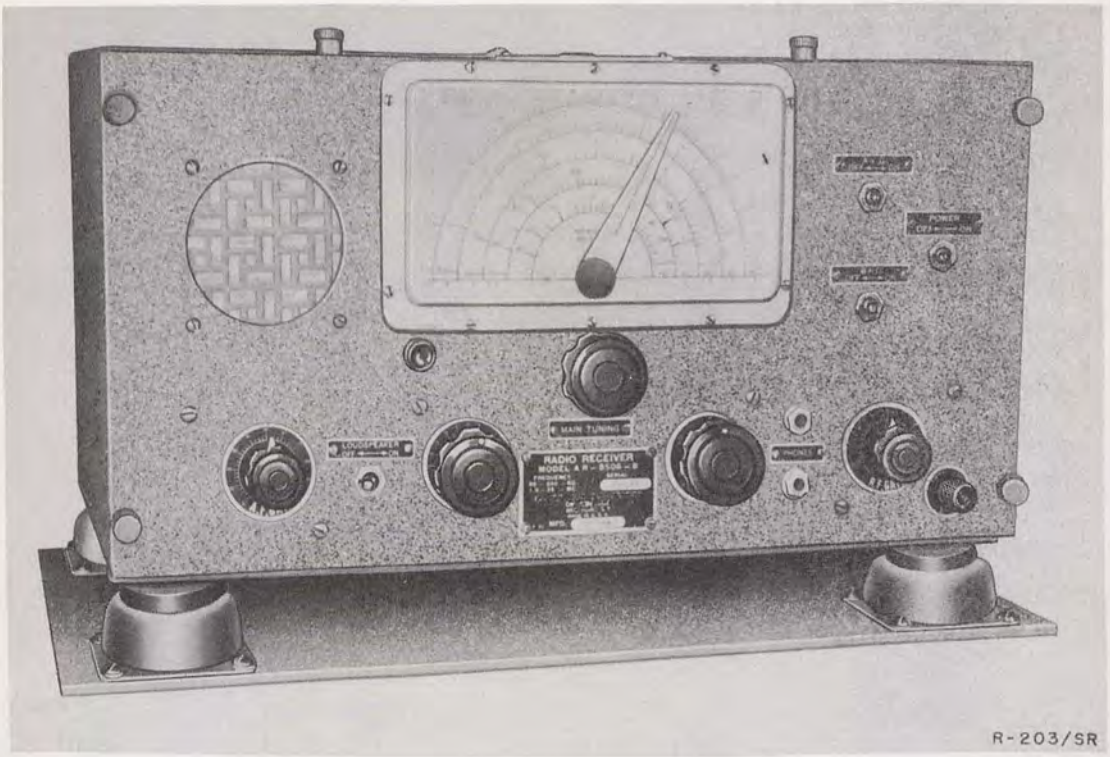
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	14048–P–48–77	$406.46

RADIO RECEIVER AN/SRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-194-2982 R-203( )/SR

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C4180-203A	--	--



R-203/SR

FUNCTIONAL DESCRIPTION:

Radio Receiver R-203( )/SR is a table model receiving equipment for AM (voice and cw) signals in the low-, medium-, and high-frequency bands used in shipborne and similar applications.

This equipment consists essentially of a commercial (RMCA model AR8506-A) marine receiver that is contained in a metal cabinet but can be removed from the case and installed on a standard relay rack. It has a built-in loudspeaker and includes a headset and accessories.

It can be operated on a ship's antenna or other suitable array.

It operates from 115-v ac or dc sources, from 230-v ac sources, or, by means of fixed Resistor MX-1024/U, from 230-v dc.

If required by local conditions, Electrical Noise Suppressor F-91/U is used to reduce background noise and local electrical interference.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Band 1: 0.085 to 0.22
Band 2: 0.21 to 0.55
Band 3: 1.9 to 5.4
Band 4: 5.2 to 12.0
Band 5: 11.5 to 25.0
Type Modulation: AM
Type of Signal: Voice, tone, cw
Power Requirements: 45 w, 115-v 50/60-cycle ac; 90 w, 230-v 50/60-cycle ac; 115-v dc; or (using Fixed Resistor MX-1024/U) 230-v dc

AN/SRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R–203( )/SR	(FSN) 5820–194–2982 (USA) 2C1480–203A	11-3/4 x 13-1/16 x 21	65

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–875

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	12	145

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

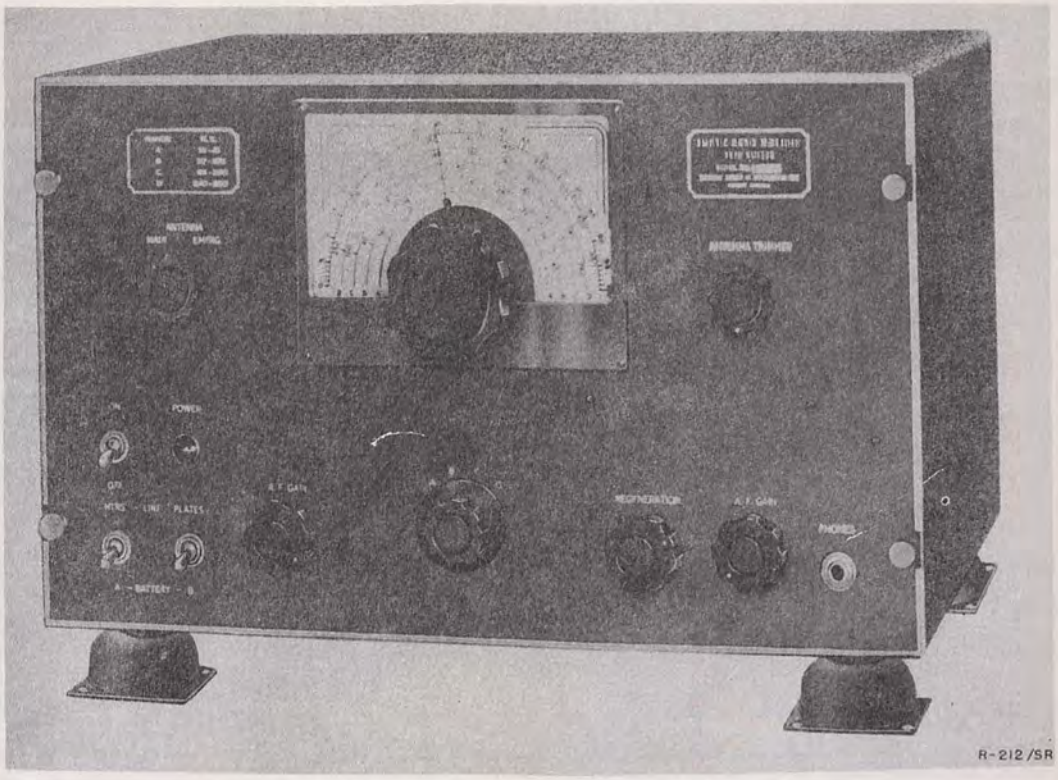
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.	24675–P–49–7	$431.80

RADIO RECEIVER AN/SRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-164-7185

R-212/SR

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C4498	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R-212/SR is a tuned-radio-frequency, AM (cw, icw, and mcw) radiotelegraph receiver equipment used in shipborne and fixed station applications.

This equipment consists of a commercial (Federal 128 AY) receiver having a regenerative detector. It can be operated with a single wire antenna system.

It operates on ac or dc or from storage or dry batteries and has a power-selection switch by means of which the power source can be selected.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.015 to 0.650 in 4 overlapping bands
Type Modulation: AM
Type of Signal: Cw and mcw
Power Requirements:
Ac: 36 w; 115 v, 60 cycles;
Dc Line Plus A Battery: 0.17 amp at 115 v from line, 1.9 amp at 6.3 v from battery; or
Batteries: 1.9 amp at 6.3 v from A battery and 7 to 12 ma at 90 v from B battery

AN/SRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R–212/SR (Equipment consists of only one major component.)			43

REFERENCE DATA AND LITERATURE:

TM 11–868

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.2	43

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

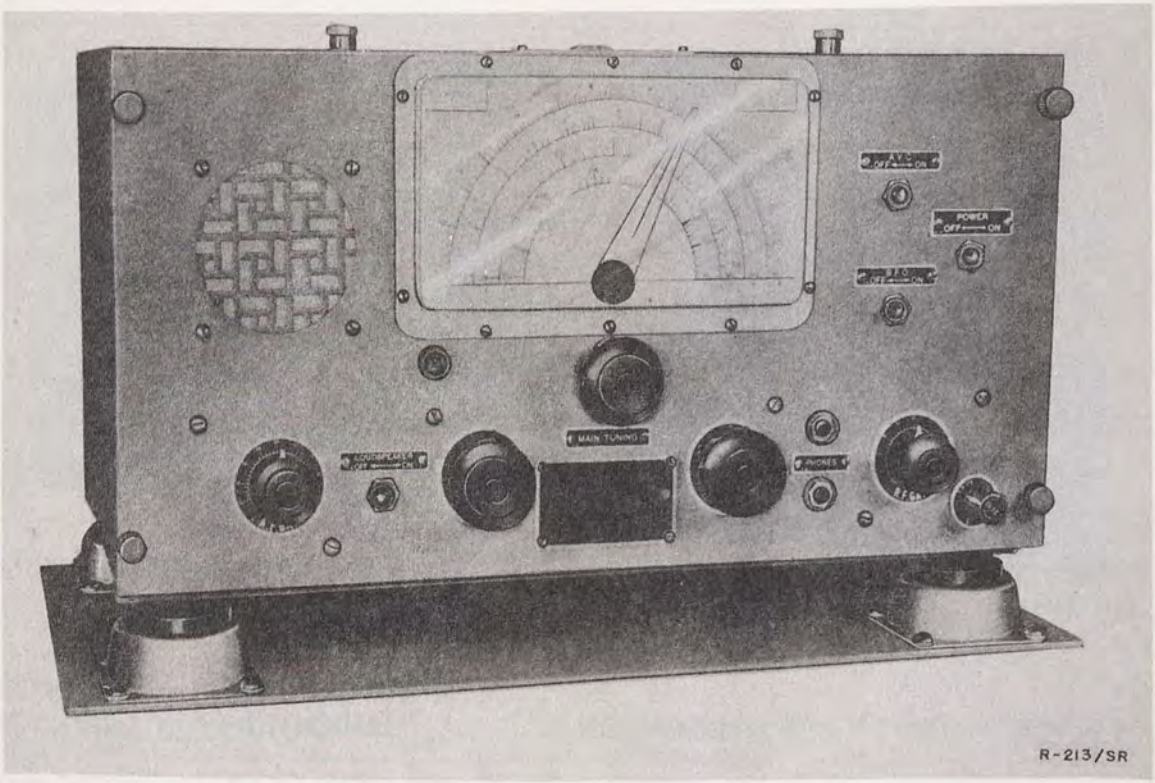
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVER AN/SRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-164-7191

R-213/SR

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C4519-8506BC	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R-213/SR is a transportable, am (voice, tone, and cw) receiving equipment used for communication in the low-, medium-, and high-frequency bands on shipboard, in similar marine applications, or in fixed land stations.

This equipment is a self-contained, table model radio receiver inclosed in a metal cabinet and provided with a shock mount. It has a built-in loudspeaker and jacks for high- or low-impedance headphones and is provided with a beat-frequency oscillator, automatic or manual volume control, and electrical band-spread tuning.

It operates in four frequency bands with a doublet or other suitable antenna array.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: Band 1: 0.21 to 0.55; Band 3: 5.2 to 12.0; Band 2: 1.90 to 5.40; Band 4: 11.5 to 25.0

Type Modulation: AM

Type of Signal: Cw, tone, and voice

Power Requirements: 45 w, 115-v ac or dc; or 90 w, 250-v ac or dc with 325-ohm, 75-w external resistor

AN/SRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Line filter unit	----------	7-1/4 x 6-7/8 x 3-5/8	5
1	Radio Receiver R-213/SR	----------	11-3/4 x 21 x 13-1/16	63

REFERENCE DATA AND LITERATURE:

SHIPPING DATA (DOMESTIC PACK)

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	4.5	100

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

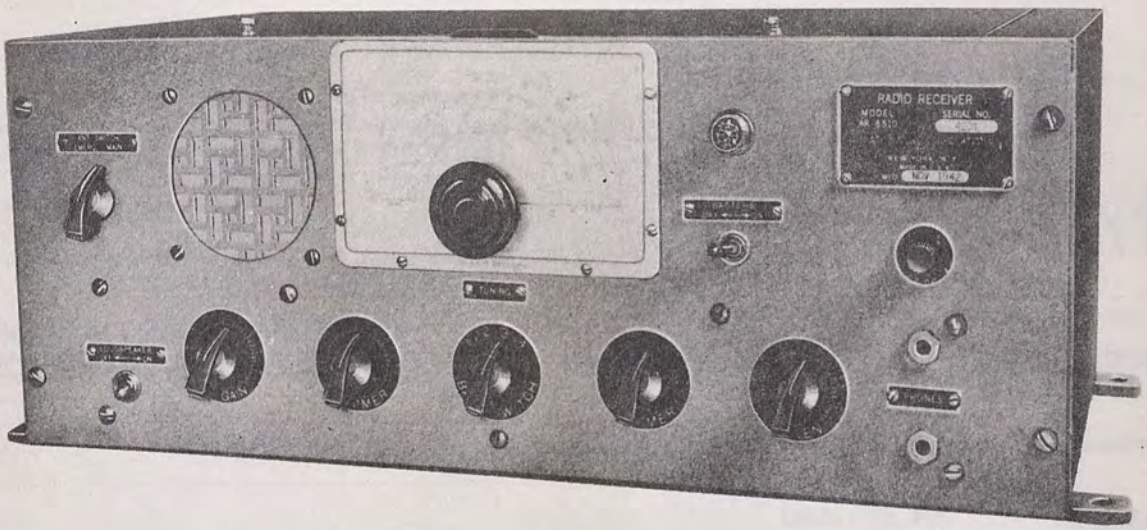
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACTOR ORDER NO.	APPROX UNIT COST

RADIO RECEIVER AN/SRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-164-7192 R-215/SR

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C4519-8510	--	--



R-215/SR

FUNCTIONAL DESCRIPTION:

Radio Receiver R-215/SR is a medium-range, AM (cw and mcw) receiving equipment, operating in the very-low-, low-, and medium-frequency ranges on shipboard, or in equivalent communication applications.

This equipment consists essentially of a commercial (RMCA AR-8510) table model radio receiver.

It operates by means of a conventional long wire or ship's antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.15 to 0.65 in 4 bands
Type Modulation: AM
Type of Signal: Mcw and cw
Power Requirements: 6-v battery and 90-v battery; 110-v dc; or 35 w, 115-v 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-215/SR	----------	8-1/4 x 22 x 13	39

(Equipment consists of only one major component.)

AN/SRR-type RADIO RECEIVER

REFERENCE DATA AND LITERATURE:

Instruction Book, Radio Receiver R–215/SR (FSN 7610–233–2314)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.		

RADIO RECEIVER AN/SRR-type RAZ

5 December 1958
Cognizant Serv: USN FSN: 5820-316-8686

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiver RAZ is a shipboard radio receiving equipment designed for medium and low frequency reception, covering a continuous frequency range of 15 to 600 kc, divided into four bands, with selector switches for a convenient, rapid selection of desired frequency.

The receiver may be operated from batteries.

A separate rectifier power supply unit is used when the receiver is operated from a 110-volt, 60-cycle ac source.

TECHNICAL CHARACTERISTICS:

Antenna Type: Ground straight wire, 75 to 250 ft.

Frequency Range in Kc: 15 to 600 in four bands: A, 15 to 40 kc; B, 40 to 100 kc; C, 100 to 250 kc; D, 250 to 600 kc

Receiver Type: Tuned RF with one stage of preselection

Type of Reception: Cw, mcw and voice

Input Impedance: 20,000 to 100,000 ohms

Output: For high impedance telephone receivers of approximately 2,000 to 3,000 ohms; on low impedance, a matching transformer is used with headphones

Sensitivity: 30 to 500 uv for 6 mw in headphones

Power Requirements: 40 w at 115 v, 60-cycle 1-phase ac; or a 6-v "A" battery and a 90-v "B" battery with a current drain of 2 amp and 8.6 milliamperes respectively

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver RAZ	----------	8 x 12 x 20-1/8	29
1	Rectifier Power Supply Unit	----------	8 x 8 x 10-5/8	16

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95936

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5.1	55

AN/SRR-type RADIO RECEIVER

PROCUREMENT DATA

PROCURING SERVICE: U. S. NAVY
SPEC &/or DWG:

DESIGN COG: BuShips

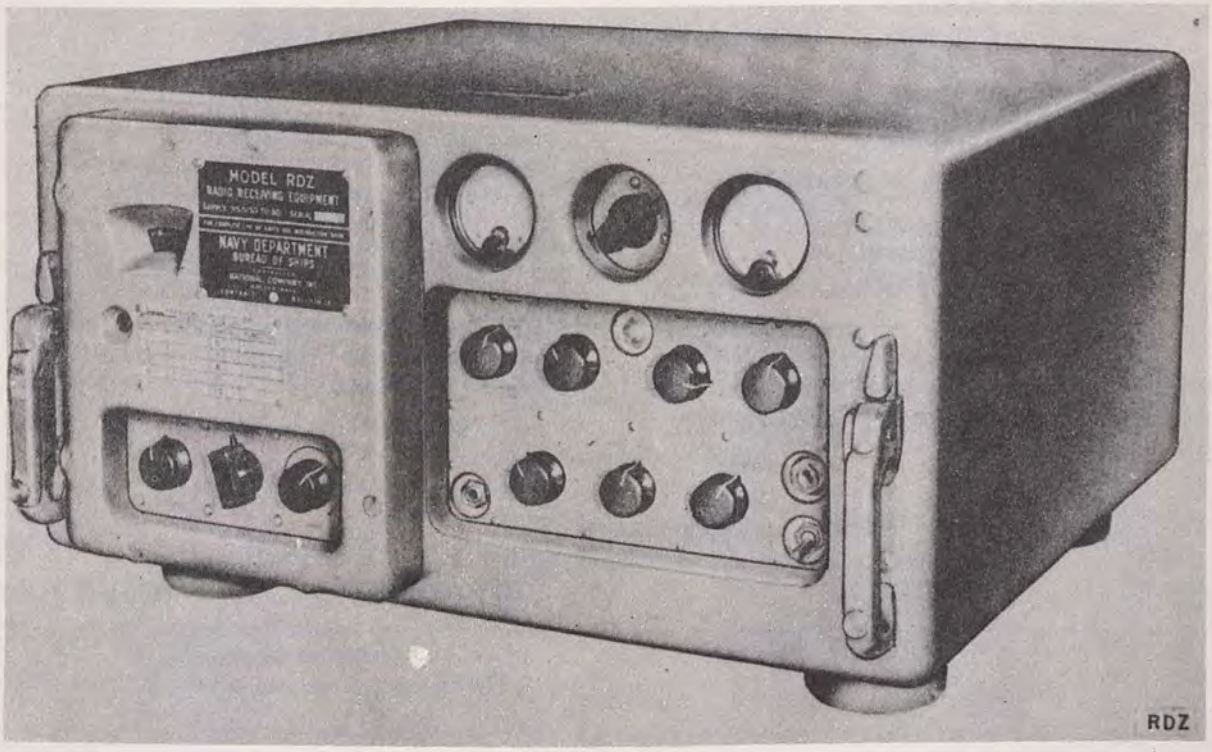
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corporation of America, Engineering Department	New York, N. Y.	----	$300.00

RADIO RECEIVING EQUIPMENT AN/SRR-type

20 November 1958
Cognizant Serv: USN FSN:

RDZ, RDZ–1, RDZ–A

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	RDZ: F16–Q–274390–200	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RDZ, RDZ–1, and RDZ–a are designed for shipboard or shore use. The superheterodyne receiver incorporates a crystal-controlled oscillator and provides reception of radiotelephone transmissions on any 10 channels in the frequency band of 200 to 400 mc; however, the frequencies between 222 and 232 mc are rendered inoperative by interaction within the set of the intermediate-frequency amplifier and harmonics of the crystal multiplier circuits.

An automatic 10-channel tuning unit is associated with the receiver to permit local or remote operation. Connections to and from the receiver are filtered to limit possible interference from nearby electronic apparatus.

Three types of output are available: frequency scan, video scan, and audio. This equipment is mounted in a case, which s provided with shock mounts, and the entire assemblage is designed for installation on a table or bench. A clearance of at least 19-7/16 inches is required in front of the equipment.

These three equipments are functionally interchangeable—the only differences being minor electrical or mechanical modifications.

TECHNICAL CHARACTERISTICS:

Frequency Range: 200 to 400 mc; any 10 preset frequencies except between 222 and 232 mc

Frequency Control: Crystal

Type Reception: Mcw or voice

Power Output:

Phone Jack: 1.5 v or 4 mw into 600-ohm load

Audio Channel: 6 v or 60 mw into 600-ohm load, or 600 mw into 30-ohm load at rear audio receptacle

Scanning Terminals: 10,000 uv into 50-ohm load

Output Impedance:

Headphones: 600 ohms

Output Terminals: 30 to 600 ohms

Sensitivity: 5 to 15 uv

Input Impedance: 50 ohms

Power Requirements:

Receiver and Crystal Oven: 175 w, 110/115-120-v 50–60-cycle 1-phase ac

Automatic Tuning: 175 w, 110/115/120-v 50–60-cycle 1-phase ac

AN/SRR-type RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna NT–66147 or AT–150/SRC or AS–390/SRC			
2	Remote Oven CFT–40148		2-1/4 x 3-21/32 x 2-19/32	0.75
1	Radio Receiver CNA–46275		13-1/8 x 22 x 22-5/32	150
1	Remote Channel Selector NT–23492 (Supplied only with initial 1,000 Model RDZ equipments.)		3-5/16 x 4-9/16 x 5-1/4	2
1	Set of 100 Crystals CFT–40161 or CFT–40162 (Supplied by Navy only with sets serial No. 1 through No. 3500.)		1-1/2 x 9-1/4 x 5-1/2	2

REFERENCE DATA AND LITERATURE:

RDZ, RDZ–1: NAVSHIPS 900,617; NAVSHIPS 91331
RDZ–a: NAVSHIPS 91229.

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	16.78	428

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: USN, BuShips
SPEC & or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RDZ:			
National Co., Inc.	Malden, Mass.	NXsr–55624	$9,195.00
RDA–1:			
Admiral Corp.	Chicago, Ill.	NXsr–7194	3,900.00
RDA–a:			
National Co., Inc.	Malden, Mass.	NObsr–43174	5,500.00

RADIO RECEIVER TRANSFER SWITCHBOARD AN/SRR-type

20 November 1958
Cognizant Serv: USN FSN: SB-82/SRR

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F17-P-23308-5364	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiver Transfer Switchboard SB-82/SRR is a multiple selection switchbox capable of transferring the outputs of up to five radio receivers to various remote locations. Any one receiver output may be supplied to any number of remote locations from 1 to 10; or, up to 5 receiver outputs may be supplied to any combination of remote stations simultaneously.

This equipment is designed primarily for use aboard ship and is part of the shipboard radio remote control system. Essentially, it consists of a terminal strip and 10 rotary switches on a hinged front. It is usually used collectively in a bank arrangement and, by interconnection of switchboards, an increased number of remote stations can be supplied.

Removable panels at top, bottom and three sides make connections accessible.

This equipment is designed for bulkhead mounting.

TECHNICAL CHARACTERISTICS:

Operation: Manual
Number of Lines: 5 receivers; 10 remote lines
Power Requirements: None

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver Transfer Switchboard SB-82/SRR	----------	9-1/2 x 5-1/8 x 7-1/4	10

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
*1	---	67

* Six equipments shipped together in one box.

AN/SRR-type RADIO RECEIVER TRANSFER SWITCHBOARD

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
American Radio Hardware Co., Inc.	New York, N. Y.	NObsr–52025	
National Electrical Machine Shop, Inc.	Silver Spring, Md.	NObsr–52438	
Transcontinental Electric Corp.	New York, N. Y.	NObsr–42425	

RADIO RECEIVING EQUIPMENT AN/SRR-type

20 November 1958
Cognizant Serv:

SLR–12B

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment SLR–12B (Scott Radio Laboratories) is suitable for and is primarily intended for use aboard ship, but is equally suitable for use at shore stations.

The equipment provides optimum performance and high quality reception of voice or tone-modulated radio frequency signals, and supplies audio signals to either headphones or loudspeaker.

It is designed for table top or bench mounting.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.53 to 1.60 and 5.55 to 15.6
Reception: Voice or tone modulated
Power Output: 30 mw at phone jack
Intermediate Frequency: 455 kc ±1 kc
IF. Rejection: 75.0 db minimum
HF Oscillator Radiation: 400 uw at any frequency
Undistorted Output (Max): Approximately 10 w with 3% distortion measured at 400 cps across 600-ohm load impedance
Loudspeaker: Permanent magnet type with 600-ohm matching transformer
Antenna: 50- to 200-ft single-wire or balanced feed line
Power Requirements: 95 w, 110–125-v 58–62-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiving Equipment SLR–12B	----------	13-3/4 x 18-1/2 x 20-1/2	104
1	Loudspeaker SPM–12	----------	9-3/4 x 14-3/8 x 14-3/8	28

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95274

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SRR-type RADIO RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE:
SPEC &/or DWG:

DESIGN COG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
E. H. Scott Radio Laboratories, Inc.	Chicago, Ill.		

RADIO RECEIVING EQUIPMENT AN/SRR-type

20 November 1958
Cognizant Serv: USN FSN: SLR–H

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment SLR–H (Scott Radio Laboratories) is designed primarily for installation aboard ship, but can also be used at shore installations. It is similar to Radio Receiving Equipment SLR–12B in appearance and technical characteristics, but the SLR–H has a beat-frequency oscillator circuit, which provides for reception of cw telegraph signals.

It is designed for table-top or bench mounting.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.53 to 1.60; 5.55 to 15.6
Reception: Voice, tone modulated, or cw signals
Type Receiver: Superheterodyne
Power Output: 30 mw at phone jack
Intermediate Frequency: 455 ±1 kc
IF. Rejection: 75.0 db minimum
HF Oscillator Radiation: 400 uw at any frequency
Undistorted Output (Maximum): 19 w (approximately) with 3% distortion measured at 400 cps across 600-ohm load impedance
Loudspeaker: Permanent magnet type with 600-ohm matching transformer
Antenna: 50- to 200-feet single-wire or balanced feed line
Power Requirements: 95 w, 100–125-v 58–62-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver SLR–H	----------	13-1/4 x 18-1/2 x 20-1/2	104

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

E. H. Scott Radio Laboratories, Inc., Technical Manual for Radio Receiving Equipment Model SLR–H.

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SRR-type RADIO RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

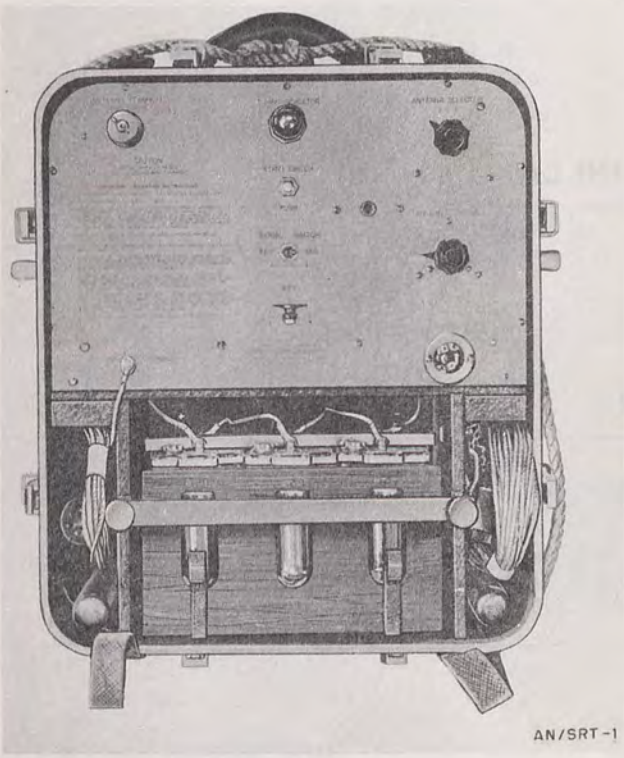
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
E. H. Scott Radio Laboratories, Inc.	Chicago, Ill.		

RADIO TRANSMITTING SET AN/SRT-1

1 December 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Obsolete	Used by	--
STOCK NO:	2C6657	F16-Q-150972-100	--



AN/SRT-1

FUNCTIONAL DESCRIPTION:

Radio Transmitter Set AN/SRT-1 is a compact, portable, fixed-frequency, single-channel, battery-operated lifeboat transmitter. It transmits automatically for a period of 2 minutes each time the button is pressed and then automatically stops to conserve the battery.

This equipment is housed in a watertight case. During each 2-minute period, the SOS distress signal is sent 18 times, and long dashes are sent 6 times to facilitate the taking of bearings by rescue ships.

To send the specified signals does not require a trained operator; however, a hand telegraph key is provided for use by a radio operator to permit the transmission of messages.

The battery has a life of 96 minutes, or will last for 48 of the 2-minute message cycles. This will be sufficient for 48 hours if the unit is used only on the hour.

A battery charging panel, consisting of an ammeter and current limiting resistors, is used to charge the transmitter storage battery from the 115 volt direct current ship mains.

TECHNICAL CHARACTERISTICS:

Frequency in Mc: 0.5
Frequency Control: Designed for single frequency only
Type Modulation: AM
Type Emission: A1 (automatic keying); A2 (hand keying)
Power Output: 5 w
Operational Range: 50 to 100 miles
Antenna: Equipment has wire antenna attached for lifeboat use
Power Requirements: 6 v, 16 amp dc (storage battery)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitting Set AN/SRT-1, consisting of:	2C6657	21-11/16 x 15-13/16 x 13-1/2	60
2	Antenna wire	----------	600	1.875
1	Battery BB-54-A	----------	3-31/32 x 5-1/2 x 3	4.50
1	Battery charging panel	----------	20-1/4 x 8-1/4 x 14-1/2	16
1	Rope	----------	480	1.75

AN/SRT-1 RADIO TRANSMITTING SET

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	11.46	190

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

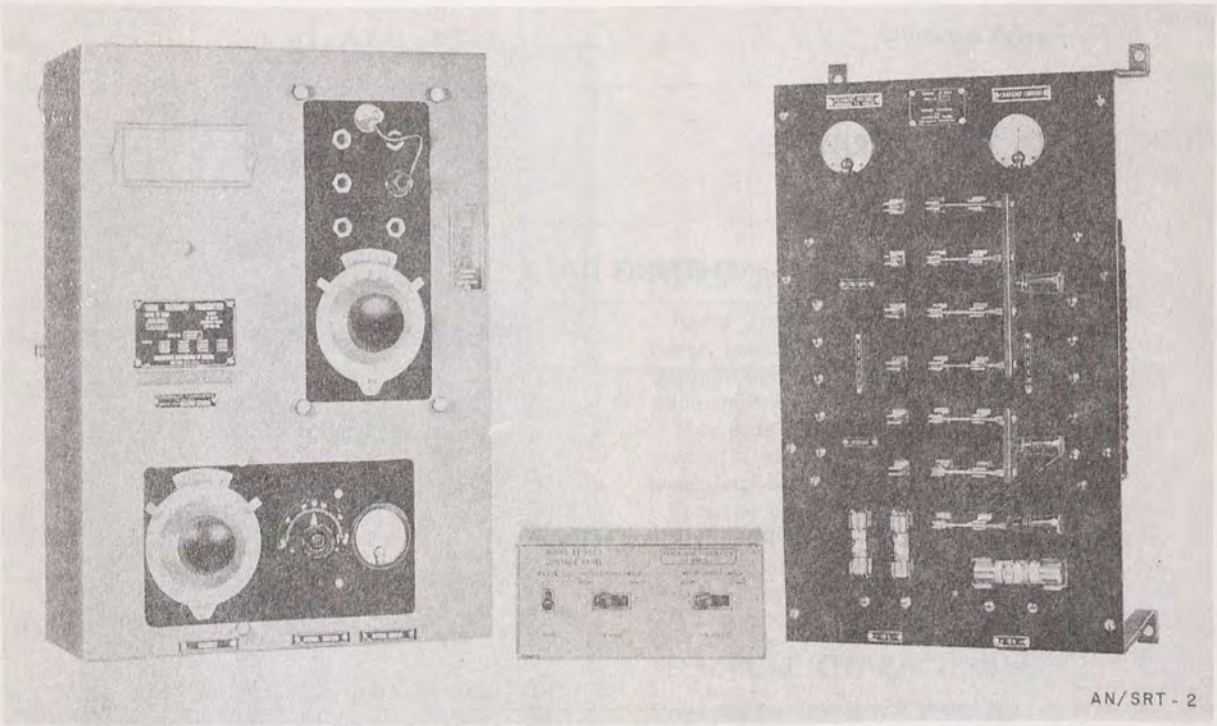
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.		

RADIO TRANSMITTING SET AN/SRT-2

1 December 1958
Cognizant Serv: USA FSN: 5820-189-7027

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C6773	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/SET-2 is used on small boats as the main or emergency transmitter. It is operated in the standard international medium frequency band for ship-to-ship and ship-to-shore communication.

This equipment consists essentially of a commercial Radiomarine Model ET 8003 radiotelegraph transmitter. It can be operated from a 110 volt direct current power source or from a 12 volt storage battery capable of supplying 45 amperes for a 6 hour period.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.355 to 0.5
Type Modulation: AM
Type Emission: A2 (700 cps tone)
Operating Range: 100 miles
Power Output: 30 w
Power Requirements: 45 amp at 12-vdc or 4 amp at 110- to 115-vdc

AN/SRT-2 RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Motor generator	----------	9-1/3 x 30 x 9-1/4	128
1	Power control and charging panel	----------	21 x 12 x 9-1/2	24
1	Radiotelegraph transmitter	----------	20-7/8 x 15-7/8 x 11-1/6	26

REFERENCE DATA AND LITERATURE:

TM 11-831

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	----	330

PROCUREMENT DATA

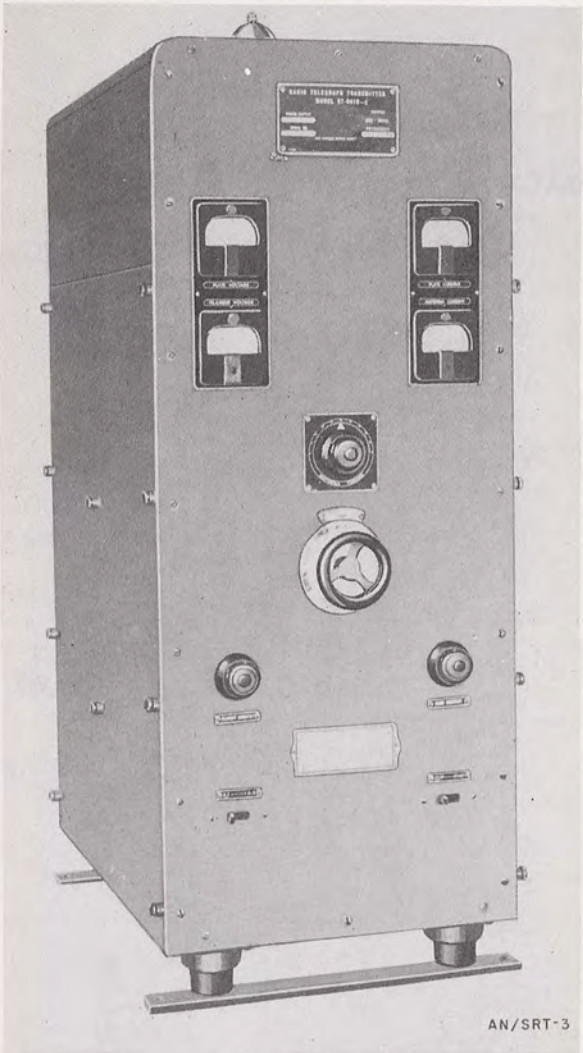
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.		

RADIO TRANSMITTING SET AN/SRT-3( )

1 July 1958
Cognizant Serv: USA FSN: 5820-189-7040

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C6655C	--	--



AN/SRT-3

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/SRT-3( ) is a medium-power, medium-range, crystal-controlled am (cw and mcw) transmitting equipment for ship-to-ship and ship-to-shore communication in the mf band.

This equipment consists of a floor-type transmitting assembly fitted with shock-mountings and includes a motor generator, plus associated components.

It can be used in emergencies by adding an emergency panel and a small dynamotor.

The set operates in eight preset frequency channels and uses the normal ship's antenna system.

This equipment has been replaced by Radio Set AN/SRC-7.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.35 to 0.515
Type Modulation: AM
Type of Signal: Cw and mcw
Power Output: 300 w, mcw; 200 w, cw
Power Requirements: 1,300 w, 150/230-v dc; or 4.5 am, 220/440-v 60-cycle 3-phase ac

AN/SRT-3( ) RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Motor generator	----------	14-1/8 x 27-3/4 x 9-3/4	225
1	Transmitter	----------	44-3/4 x 17-3/8 x 28-3/4	200

REFERENCE DATA AND LITERATURE:

TM 11-860

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	17	562

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: Wilcox 25-2220

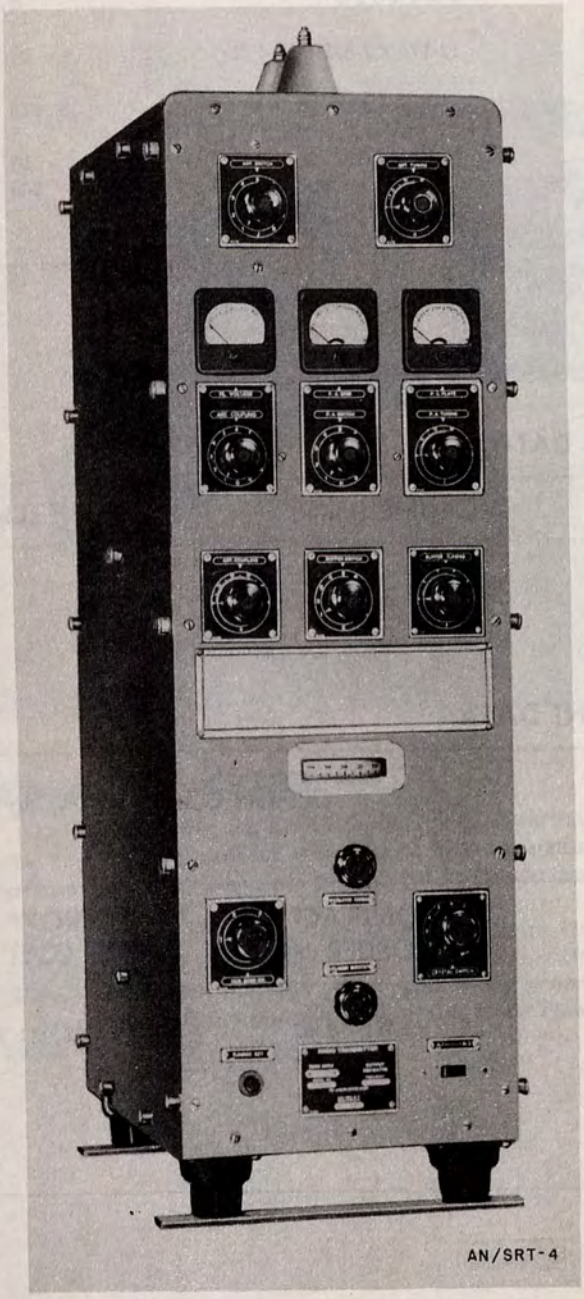
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
(AN/SRT-3A): Radiomarine Corp. of America	New York, N. Y.	3367-P-52-02	$1,984.25

RADIO TRANSMITTING SET AN/SRT-4( )

1 July 1958
Cognizant Serv: USA FSN: 5820-189-7032

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C6656A.2	--	--



AN/SRT-4

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/SRT-4( ) is a low-power, medium-range, AM (cw and mcw) transmitting equipment designed for use aboard ship in ship-to-ship or ship-to-shore communication in the MF and HF bands.

This equipment consists of a single, shock-mounted, floor-type cabinet containing the operating components and control apparatus. It includes a motor generator and motor starter, control panel, crystal units, and related items. It operates on two preset frequencies and uses the ship's antenna array.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2.00 to 22.14
Type Modulation: AM
Type of Signal: Cw, mcw
Power Output: 200 w below 17 mc, 150 w above 17 mc
Power Requirements: 1,300 w, 115-v dc

AN/SRT-4( ) RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Electrical Noise Suppressor F–198/SRT–3A	5915–501–4119	9-3/4 x 3 x 6	6.75
1	Generator Control C–1192/ SRT–4A	6110–635–5554	12-1/4 x 7-3/8 x 10-1/2	14.5
1	Motor Generator PU–255/ SRT–3A	6125–231–2874	14-1/8 x 27-3/4 x 9-3/4	225
1	Motor Starter SA–306/SRT–3A	2920–378–3396	9-1/2 x 7-1/2 x 6-1/2	15
1	Radio Transmitter T–397/ SRT–4A	5820–503–3297	45-3/16 x 13-1/4 x 19-1/2	360

REFERENCE DATA AND LITERATURE:

TM 11–852

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	40.1	735

PROCUREMENT DATA

PROCURING SERVICE: USA **DESIGN COG:** USA, Sig C

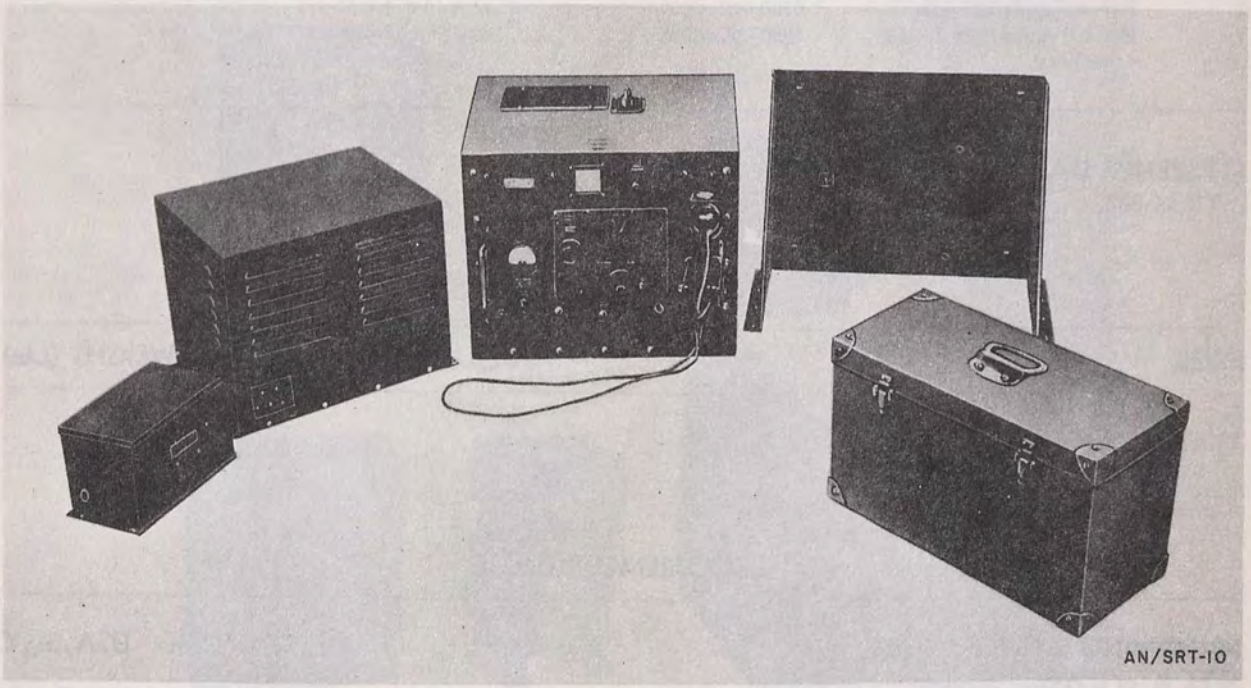
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.	3367–P–52–02	$2,033.70

RADIO TRANSMITTING SET AN/SRT-10( )

1 July 1958
Cognizant Serv: USA FSN: 5820-222-0059

	USA	USN	USAF
TYPE CLASS:	L/Std	--	L/Std
STOCK NO:	2C6657-10	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/SRT-10( ) is a 50-watt am (cw, voice) marine telephone and telegraph radio transmitter used on small ships. Provisions are included for its operation by remote control.

This set operates from a 115-volt ac or a 24-, 32-, or 110-volt dc source. When operating from the dc source, a motor starter and a suitable converter (not supplied) must be used.

This equipment is functionally identical with Radio Transmitter T-83/SR.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.7 to 8.7
Type Modulation: AM
Type of Signal: Cw, voice
Power Output: 50 w
Power Requirements: 450 w, 115-v 50/60-cycle ac; or 500 w, 24/32/110-v dc

AN/SRT-10( ) RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Motor Starter RE–79/SRT–10	6110–406–1963	10-1/2 x 6-1/8 x 6-1/16	
1	Power Supply PP–462/U	6130–231–0666	18 x 15-3/4 x 13-1/2	
1	Radio Transmitter T–240/ SRT–10	5820–222–0063	20-3/4 x 17-3/4 x 17-7/8	

REFERENCE DATA AND LITERATURE:

TM 11–837

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	20	

PROCUREMENT DATA

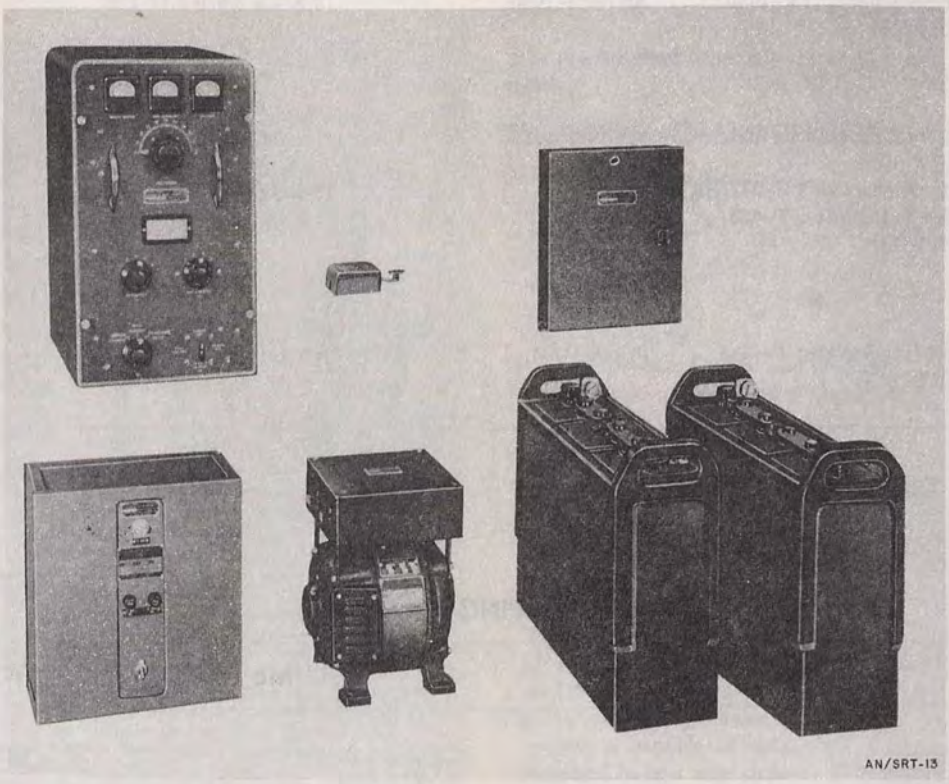
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
J. H. Bunnell & Co.	New York, N. Y.	25671–P–49–01	$1,969.83
A. F. Smuckler & Co., Inc.	Brooklyn, N. Y.	21866–P–50–06	

RADIO TRANSMITTING SET AN/SRT-13( )

1 July 1958
Cognizant Serv: USA FSN: 5820-503-2633

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C6657-13	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/SRT-13( ) is a marine emergency radio telegraph transmitting set. It consists of a radio transmitter, a motor generator, a terminal box, a battery charger, two storage batteries, and accessories.

Radio Transmitting Sets AN/SRT-13 and AN/SRT-13X are identical, except for the battery charging circuit and the battery charger. Radio Transmitters T-433/SRT-13 and T-434/SRT-13X are not interchangeable, unless circuit changes are made to permit battery charging with the particular battery charger used.

This equipment is operated from two 6-volt batteries that may be charged by Battery Charger PP-1030/SRT-13 from a 115-volt ac source, or by Battery Charger PP-1031/SRT-13X from a 115-volt dc source.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.35 to 0.505
Type Modulation: AM
Type of Signal: Tone
Power Output: 40 w
Power Requirements: 12-v dc from batteries supplied with equipment; 115-v 50/60 cycle 1-phase ac to operate battery charger, PP-1030/SRT-13; 115-v dc to operate battery charger PP-1031/SRT-13X

AN/SRT-13( ) RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Battery Charger PP–1030/ SRT–13	3H791.1–1030	12-3/4 x 8-5/8 x 12-1/4	29
	or			
1	Battery Charger PP–1031/ SRT–13X	3H791.1–1031	11 x 7-1/8 x 10-3/4	10
1	Motor Generator PU–277/SRT	----------	12-1/8 x 8-1/4 x 9-5/16	52
1	Radio Transmitter T–433/ SRT–13	2C6900–433	21 x 13 x 18-1/2	75
	or			
1	Radio Transmitter T–434/ SRT–13X	2C6900–434	21 x 13 x 18-1/2	75

REFERENCE DATA AND LITERATURE:
TM 11–844

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	15.6	635

PROCUREMENT DATA

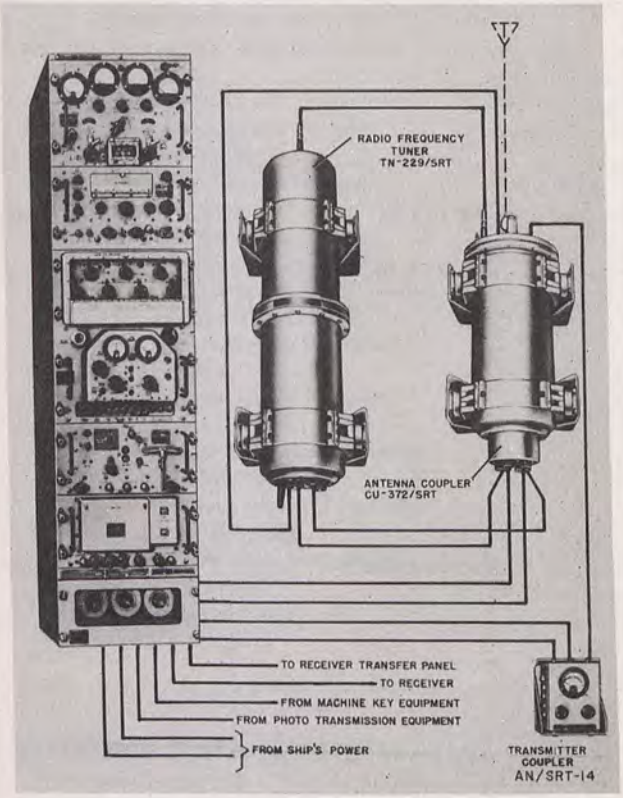
PROCURING SERVICE: USA **DESIGN COG:** USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Mackay Radio & Telegraph Co., Inc., Marine Division	Clark, N. J.	25645–P–53–36	$1,170.66

RADIO TRANSMITTING SET AN/SRT-14, -14A

1 December 1958
Cognizant Serv: USN FSN: AN/SRT-14: 5820-501-3056
AN/SRT-14A: 5820-665-2125

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Sets AN/SRT-14 and AN/SRT-14A are designed to transmit continuous wave, voice, facsimile or frequency shift signals with a nominal 100 watt output over a 9.3 to 26 megacycle range. These sets are limited to transmission on one frequency at a time. Output power may vary from 80 per cent to 160 per cent of the nominal output level.

Transmission of continuous wave signals may be from either hand or machine keying facilities; frequency shift signals are generated by machine keying. Tuning is manual and, when used with appropriate United States Navy furnished equipment, these units may be energized and have key or voice signals supplied from a remote position.

Radio Transmitting Set AN/SRT-14A is a nonmagnetic version of the AN/SRT-14. The nonmagnetic version differs from the standard type only in the material used for cabinet panels.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Band 1: 0.3 to 0.8
Band 2: 0.8 to 2
Band 3: 2 to 5
Band 4: 5 to 11
Band 5: 11 to 19
Band 6: 19 to 26

Frequency Control: Crystal and frequency shift oscillator

Type Emission and Modulation Capability:
A1: 100%
A3: 100%
F1: ±1,000 cps shift about carrier
F4: 0 to 2,000 cps shift

Squelch Circuit Characteristics: A conventional circuit that cuts off the audio amplifier when the microphone is not receiving voice signals

Harmonic Attenuation in Amplifier:
40 DB Below Carrier Level: 0.3 mc to 2 mc
50 DB Below Carrier Level: 2 mc to 5 mc
60 DB Below Carrier Level: Above 5 mc

Characteristics of Recommended Antennas: The antenna tuning system is capable of tuning an antenna consisting of a standard 35-foot ship antenna (NT-66047) or a single-wire antenna between 60- and 130-feet long with a 40-foot height.

Nominal Carrier Output:
A1, F1: 100 w
A3: 67 w

Heat Dissipation of 100 W Transmitter Group and Mounting:
1,600 w maximum

Power Requirements:
Primary Power:
Voltage: 110 v ±10%, 60-cycle ±5%, 1-phase ac
Current and Power Factor:
Start: 15 amp, 0.92 pf
Standby: 7.9 amp
Operate (A1): 13.4 amp, 0.90 pf
Operate (A3): 13.6 amp, 0.92 pf
Oven Heater Power:
Voltage: 110 v ±10%, 60-cycle ±5%, 1-phase ac
Current and Power Factor: 0.8 amp, 1.0 pf

AN/SRT-14, -14A RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Transmitting Set AN/SRT-14:			
1	Antenna Coupler CU-372 SRT	----------	13-3/8 x 16-1/2 x 34-5/8	500
1	Electrical Equipment Cabinet CY-1572/SRT			
1	Electrical Equipment Cabinet CY-1573/SRT			
1	Installation Kit MK-230/ SRT-14	----------	----------	53
1	Mounting MT-1423/SRT	----------	7 x 16 x 24	100
1	Power Supply PP-1096/SRT			
1	Radio Frequency Tuner TN-229/SRT	----------	13-3/8 x 16-1/2 x 50	135
1	Radio Modulator MD-230/ SRT			
1 set	Equipment spares for antenna coupler			
1 set	Equipment spares for mounting			
1 set	Equipment spares for radio frequency tuner			
1 set	Equipment spares for transmitter group			
1	Transmitter Group OA-684/ SRT including:	----------	16 x 26 x 55-3/8	765
1	Electrical Equipment Cabinet CY-1571/SRT			
1	Power Supply PP-1094/ SRT			
1	Power Supply PP-1095/ SRT			
1	Radio Frequency Amplifier AM-1008/SRT			
1	Radio Frequency Oscillator O-275/SRT			
1	Radio Modulator MD-229/ SRT			
1	Transmitter Coupler CU-402/SRT	----------	7-11/16 x 9-1/4 x 9-7/16	11
	For Radio Transmitting Set AN/SRT-14A:			
1	Antenna Coupler CU-372/SRT	----------	13-3/8 x 16-1/2 x 34-5/8	100
1	Electrical Equipment Cabinet CY-1572A/SRT			
1	Electrical Equipment Cabinet CY-1573A/SRT			
1	Installation Kit MK-231/ SRT-14A	----------	----------	53

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Mounting MT–1423/SRT	----------	7 x 16 x 24	100
1	Power Supply PP–1096/SRT			
1	Radio Frequency Tuner TN–229/SRT	----------	13-3/8 x 16-1/2 x 50	135
1	Radio Modulator MD–230/SRT			
1 set	Equipment spares for antenna coupler	----------	----------	2
1 set	Equipment spares for mounting	----------	----------	7
1 set	Equipment spares for radio frequency tuner	----------	----------	20
1 set	Equipment spares for transmitter group			
1	Transmitter Group OA–684/SRT including:	----------	16 x 26 x 55-3/8	765
1	Electrical Equipment Cabinet CY–1571A/SRT			
1	Power Supply PP–1094/SRT			
1	Power Supply PP–1095/SRT			
1	Radio Frequency Amplifier AM–1008/SRT			
1	Radio Frequency Oscillator O–275/SRT			
1	Radio Modulator MD–229/SRT			
1	Transmitter Coupler CU–402/SRT	----------	7-11/16 x 9-1/4 x 9-7/16	11

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92121(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
11 (AN/SRT–14) and (AN/SRT–14(A))	76.5	1,841.5

AN/SRT-14, -14A RADIO TRANSMITTING SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

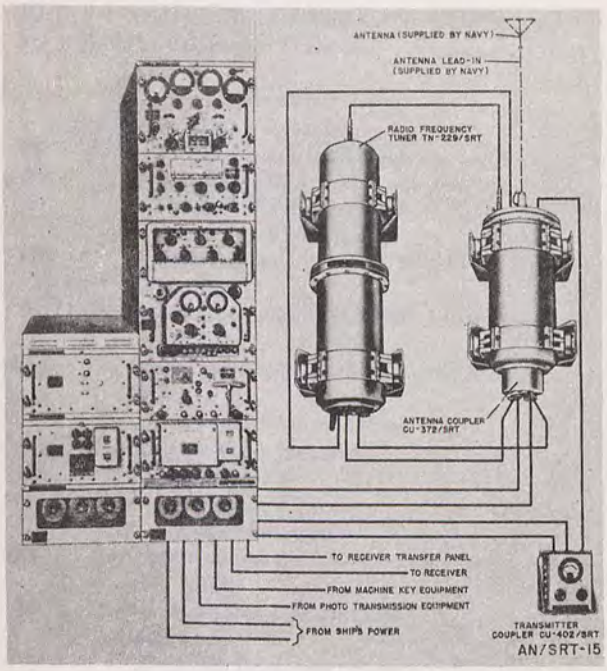
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Co.	Clifton, N. J.	NObsr-52021, 1 September 1950	$22,700.00

RADIO TRANSMITTING SET AN/SRT-15, -15A

1 December 1958
Cognizant Serv: USN FSN: AN/SRT-15: 5820-669-7829

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Sets AN/SRT-15 and AN/SET-15A are designed to transmit continuous wave, voice, facsimile or frequency shift signals with a 100 watt or 500 watt output. These sets are limited to transmission on one frequency at a time. Output power may vary from 80 per cent to 160 per cent of the nominal output level.

Transmission of continuous wave signals may be from either hand or machine key facilities; frequency shift signals are generated by machine keying. Tuning is manual and, when used with appropriate United States Navy furnished equipment, these units may be energized and have key or voice signals supplied from a remote position.

Radio Transmitting Set AN/SRT-15A is a nonmagnetic version of the AN/SRT-15. The nonmagnetic version differs from the standard type only in the material used for cabinet panels.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Band 1: 0.3 to 0.8
Band 2: 0.8 to 2
Band 3: 2 to 5
Band 4: 5 to 11
Band 5: 11 to 19
Band 6: 19 to 26

Frequency Control: Crystal and frequency shift oscillator

Type Emission and Modulation Capability:
A1: 100%
A3: 100%
F1: ±1,000 cps shift about carrier
F4: 0 to 2,000 cps shift

Squelch Circuit Characteristics: A conventional circuit that cuts off the audio amplifier when the microphone is not receiving voice signals.
40 DB Below Carrier Level: 0.3 mc to 2 mc
50 DB Below Carrier Level: 2 mc to 5 mc
60 DB Below Carrier Level: Above 5 mc

Characteristics of Recommended Antennas: The antenna tuning system is capable of tuning an antenna consisting of a standard 35-foot ship antenna (NT-66047) or a single-wire antenna between 60 to 130 feet long with 40-foot height

Nominal Carrier Output:
A1, F1: 100 w, 500 w
A3: 67 w, 333 w

Heat Dissipation:
100 W Transmitter Group and Mounting: 1,600 w maximum
Radio Modulator-Power Supply (Booster): 1,900 w maximum

Power Requirements:
Primary Power:
Voltage: 110-v ±10%, 60-cycle ±5%, 1-phase ac
Current and Power Factor:
Start: 15 amp, 0.92 pf
Standby: 7.9 amp
Operate (A1): 13.4 amp, 0.90 pf
Operate (A3): 13.6 amp, 0.92 pf
Oven Heater Power:
Voltage: 110 v ±10%, 60-cycle ±5%, 1-phase ac
Current and Power Factor: 0.8 amp, 1.0 pf

AN/SRT-15, -15A RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Transmitting Set AN/SRT-15:			
1	Antenna Coupler CU-372/SRT		13-3/8 x 16-1/2 x 34-5/8	100
1	Electrical Equipment Cabinet CY-1572/SRT			
1	Electrical Equipment Cabinet CY-1573/SRT			
1	Equipment spare transformer			80
1	Installation Kit MK-232/SRT-15 including Cover CW-341/SRT			100
2	Mounting MT-1423/SRT		7 x 16 x 24	100
1	Power Supply PP-1096/SRT			
1	Radio Frequency Tuner TN-629/SRT		13-3/8 x 16-1/2 x 50	135
1	Radio Modulator MD-230/SRT		16 x 18-1/4 x 26	350
1	Radio Modulator Power Supply OA-685/SRT			
1 set	Equipment spares for antenna coupler			2
2 set	Equipment spares for mounting			7
1 set	Equipment spares for radio frequency tuner			20
1 set	Equipment spares for radio modulator power supply			90
1 set	Equipment spares for transmitter group			
1	Transmitter Group OA-684/SRT including:		16 x 26 x 55-5/8	765
1	Electrical Equipment Cabinet CY-1571/SRT			
1	Power Supply PP-1094/SRT			
1	Power Supply PP-1095/SRT			
1	Radio Frequency Amplifier AM-1008/SRT			
1	Radio Frequency Oscillator O-275/SRT			
1	Radio Modulator MD-229/SRT			
1	Transmitter Coupler CU-402/SRT		7-11/16 x 9-1/4 x 9-7/16	11
	For Radio Transmitting Set AN/SRT-15A:			
1	Antenna Coupler CU-372/SRT		13-3/8 x 16-1/2 x 34-5/8	100
1	Equipment spare transformer			80

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Installation Kit MK–233/SRT–15A including cover			105
1	CW–341A/SRT			
2	Mounting MT–1423/SRT		7 x 16 x 24	100
1	Radio Frequency Tuner TN–229/SRT		13-3/8 x 16-1/2 x 50	135
1	Radio Modulator-Power Supply OA–685/SRT including:		16 x 18-1/4 x 26	350
1	Electrical Equipment Cabinet CY–1572A/SRT			
1	Electrical Equipment Cabinet CY–1573A/SRT			
1	Power Supply PP–1096/SRT			
1	Radio Modulator MD–230/SRT			
2 sets	Equipment spares for antenna coupler			2
2 sets	Equipment spares for mounting			7
1 set	Equipment spares for radio frequency tuner			20
1 set	Equipment spares for radio modulator power supply			
1 set	Equipment spares for transmitter group			
1	Transmitter Group OA–684/SRT including:		16 x 26 x 55-3/8	765
1	Electrical Equipment Cabinet CY–1571A/SRT			
1	Power Supply PP–1094/SRT			
1	Power Supply PP–1095/SRT			
1	Radio Frequency Amplifier AM–1008/SRT			
1	Radio Frequency Oscillator O–275/SRT			
1	Radio Modulator MD-229/SRT			
1	Transmitter Coupler CY–402/SRT		7-11/16 x 9-1/4 x 9-7/16	11

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92121(A)

AN/SRT-15, -15A RADIO TRANSMITTING SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
16 (AN/SRT–15)	99.7	2,345.5
17 (AN/SRT–15A)	99.1	2,490.5

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

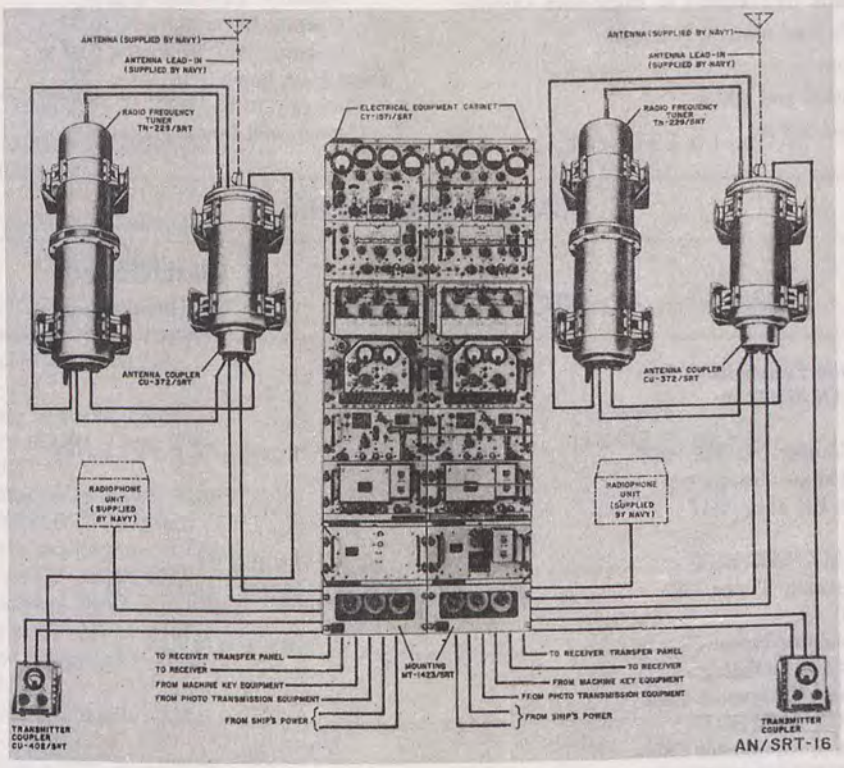
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Co.	Clifton, N. J.	NObsr–52021, 1 September 1950	$26,500.00

RADIO TRANSMITTING SET AN/SRT-16, -16A

1 December 1958 ,
Cognizant Serv: USN FSN: AN/SRT-16: 5820-665-2278
AN/SRT-16A: 5820-665-2306

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Sets AN/SRT-16 and AN/SRT-16A are designed to transmit continuous wave, voice, facsimile or freequency shift signals, with a 100 watt or 500 watt output. These sets may transmit two signals simultaneously from two transmitter bays; both signals may be at the 100 watt level, or one transmitter may be at the 100-watt output and the other transmitter at 500-watt output. Output power may vary from 80% to 160% of the nominal output level.

Transmission of continuous wave signals may be from either hand or machine key facilities; frequency shift signals are generated by machine keying. Tuning is manual and, when used with appropriate United States Navy furnished equipment, these units may be energized and have key or voice signals supplied from a remote position.

Radio Transmitting Set AN/SRT-16A is a nonmagnetic version of the AN/SRT-16. The nonmagnetic version differs from the standard type only in the material used for cabinet panels.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Band 1: 0.3 to 0.8
Band 2: 0.8 to 2
Band 3: 2 to 5
Band 4: 5 to 11
Band 5: 11 to 19
Band 6: 19 to 26
Frequency Control: Crystal and frequency shift oscillator
Type Emission and Modulation Capability:
A1: 100%
A3: 100%
F1: ±1,000 cps shift about carrier
F4: 0 to 2,000 cps shift

AN/SRT-16, -16A RADIO TRANSMITTING SET

Squelch Circuit Characteristics: A conventional circuit that cuts off the audio amplifier when the microphone is not receiving voice signals

Harmonic Attenuation in Amplifier:
40 DB Below Carrier Level: 0.3 mc to 2 mc
50 DB Below Carrier Level: 2 mc to 5 mc
60 DB Below Carrier Level: Above 5 mc

Characteristics of Recommended Antennas: The antenna tuning system is capable of tuning an antenna consisting of standard 35 ft ship antenna (NT–66047) or single-wire antenna between 60 to 130 ft long with 40 ft height.

Nominal Carrier Output:
A1, F1: 100 w or 100 w and 500 w
A3: 67 w or 67 w and 333 w

Heat Dissipation:
100 W Transmitter Group and Mounting: 1,600 w maximum
Radio Modulator-Power Supply (Booster): 1,900 w maximum

Power Requirements:
Primary Power:
Voltage: 110 v ±10%, 60-cycle ±5%, 1-phase ac
Current and Power Factor:
Start: 30 amp, 0.92 pf
Standby: 18.8 amp, 0.92 pf
Operate (A1): 26.8 amp, 0.90 pf
Operate (A2): 27.2 amp, 0.92 pf
Oven Heat Power:
Voltage: 110 v ±10%, 60-cycle ±5%, 1-phase ac
Current and Power Factor: 16 amp, 1.0 pf

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Transmitting Set AN/SRT–16:			
2	Antenna Coupler CU–372/SRT		13-3/8 x 16-1/2 x 34-5/8	100
1	Equipment spare transformer			80
1	Installation Kit MK–234/SRT–16			90
2	Mounting MT–1423/SRT		7 x 16 x 24	100
2	Radio Frequency Tuner TN–229/SRT		13-3/8 x 16-1/2 x 50	135
1	Radio Modulator-Power Supply OS–685/SRT including:		16 x 18-1/4 x 26	350
1	Electrical Equipment Cabinet CY–1572/SRT			
1	Electrical Equipment Cabinet CY–1573/SRT			
1	Power Supply PP–1096/SRT			
1	Radio Modulator MD–230/SRT			
2 sets	Equipment spares for antenna coupler			2
2 sets	Equipment spares for mounting			7
2 sets	Equipment spares for radio frequency tuner			20
1	Equipment spares for radio modulator power supply			90
2 sets	Equipment spares for transmitter group			
2	Transmitter Group OA–684/SRT including:		16 x 26 x 55-3/8	765
2	Electrical Equipment Cabinet CY–1571/SRT			
2	Power Supply PP–1094/SRT			

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Power Supply PP–1095/SRT			
2	Radio Frequency Amplifier AM–1008/SRT			
2	Radio Frequency Oscillator P–275/SRT			
2	Radio Modulator MD–29/SRT			
2	Transmitter Coupler CU–402/SRT		7-11/16 x 9-1/4 x 9-7/16	11
	For Radio Transmitting Set AN/SRT–16A:			
2	Antenna Coupler CU–372/SRT		13-3/8 x 16-1/2 x 34-5/8	100
1	Equipment spare transformer			80
1	Installation Kit MK–235/SRT–16A			105
2	Mounting MT–1423/SRT		7 x 16 x 24	100
2	Radio Frequency Tuner TN–229/SRT		13-3/8 x 16-1/2 x 50	135
1	Radio Modulator-Power Supply OA–685/SRT including:		26 x 18-1/4 x 26	350
1	Electrical Equipment Cabinet CY–1572A/SRT			
1	Electrical Equipment Cabinet CY–1573A/SRT			
1	Power Supply PP–1096/SRT			
1	Radio Modulator MD–230/SRT			
2 sets	Equipment spares for antenna coupler			2
2 sets	Equipment spares for mounting			7
2 sets	Equipment spares for radio frequency tuner			20
1 set	Equipment spares for radio modulator power supply			90
2 sets	Equipment spares for transmitter group			
2	Transmitter Group OA–684/SRT including:		16 x 26 x 55-3/8	765
2	Electrical Equipment Cabinet CY–1571A/SRT			
2	Power Supply PP–1094/SRT			
2	Power Supply PP–1095/SRT			
2	Radio Frequency Amplifier AM–1008/SRT			

AN/SRT-16, -16A RADIO TRANSMITTING SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Radio Frequency Oscillator O–275/SRT			
2	Radio Modulator MD–229/SRT			
2	Transmitter Coupler CU–402/SRT	----------	7-11/16 x 9-1/4 x 9-7/16	11

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92121(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
24 (AN/SRT–16)	97.5	2,492.5
22 (AN/SRT–16A)	98.1	2,335.5

PROCUREMENT DATA

PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Co.	Clifton, N. J.	NObsr–52021, 1 September 1950	$47,200.00

RADIO TRANSMITTING SET AN/SRT-18(XN-2)

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/SRT-18(XN-2) is a communication equipment designed to be operated by itself or in conjunction with a 1,000 watt amplifier or with an external power source.

This equipment consists essentially of five rack mounted units. These units are a radio frequency amplifier, an oscillator-multiplier, a modulator, a control indicator, and a power supply.

The set is similar to Radio Transmitting Set AN/SRT-18(XN-1) except for minor electrical and mechanical changes.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Type Emission: A3
Type Control: Crystal
Power Output: 100 w modulated
Power Requirements: 440-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitting Set AN/SRT-18(XN-2) includes:		19-5/8 x 27-5/8 x 50-7/16	
1	Amplifier, radio frequency unit 1			
1	Control-indicator unit 4			
1	Modulator unit 3			
1	Oscillator-multiplier unit 2			
1	Power supply unit 5			
1	Rack unit 6			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92741

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SRT-18(XN-2) RADIO TRANSMITTING SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: SHIPS–T–1904

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Air Associates, Inc.	Orange, N. J.	NObsr–64774, 31 May 1955	$30,221.00

RADIO TRANSMITTER AN/SRT-type 149–A

12 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--		--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitter 149–A is an emergency radio telegraph transmitter designed for use on shipboard. This battery-operated unit, such as is required by International Law for every ship at sea, is capable of being operated on two 6-volt batteries for a period of at least 1 hour.

The transmitter provides telegraph communication on all frequencies within the range of the equipment. Five frequencies may be preset by the operator for quick selection by adjustment of detent stops on the frequency dial. The frequencies in general use for ships on the high seas are 375, 400, 425, 468, and 500 kilocycles.

TECHNICAL CHARACTERISTICS:

Frequency Range: 350 to 500 kc
Distance Range: 100 to 50 miles
Type Transmission: Mcw
Power Output: 25 w
Output Impedance: 4 ohms
Power Requirements: 12-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Battery (single unit consisting of two 6-v batteries)	.....	9-1/2 x 17-1/2 x 20-1/2	174
1	Battery Charger 104–B	.....	7-5/32 x 10-3/4 x 11-1/16	9.75
1	Motor Generator 114–A	.....	8-1/4 x 9-1/8 x 11-1/8	49
1	Motor Generator 132–A	.....	8-7/16 x 8-15/16 x 11-1/8	48
1	Transmitter 149–A	.....	12-1/8 x 15-3/4 x 28-7/8	76

REFERENCE DATA AND LITERATURE:

TM 11-822

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SRT-type RADIO TRANSMITTER

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

PORTABLE LIFEBOAT RADIO TRANSMITTER AN/SRT-type

13 November 1958
Cognizant Serv: USN FSN: 265

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Portable Lifeboat Radio Transmitter 265 is a battery-operated set designed to transmit distress signals efficiently under adverse conditions in an open lifeboat at sea. The transmitter automatically sends SOS signals for approximately 2-1/2 minutes, and then shuts off to conserve the battery. An operator's telegraph key is included as a part of the equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Type Signal:
Type Transmission:
Power Requirements: 6-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF oscillator			
1	Antenna			
1	Antenna coil			
1	Automatic SOS			
1	Battery (6-v)			
1	Battery-charging panel			
1	Dynamotor			
1	Manual telegraph key			
1	Modulator			
1	RF oscillator			
1	RF power oscillator			
1	Self-releasing switch			
1	Test antenna			

REFERENCE DATA AND LITERATURE:

Technical manual for Portable Lifeboat Radio Transmitter 265

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SRT-type PORTABLE LIFEBOAT RADIO TRANSMITTER

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

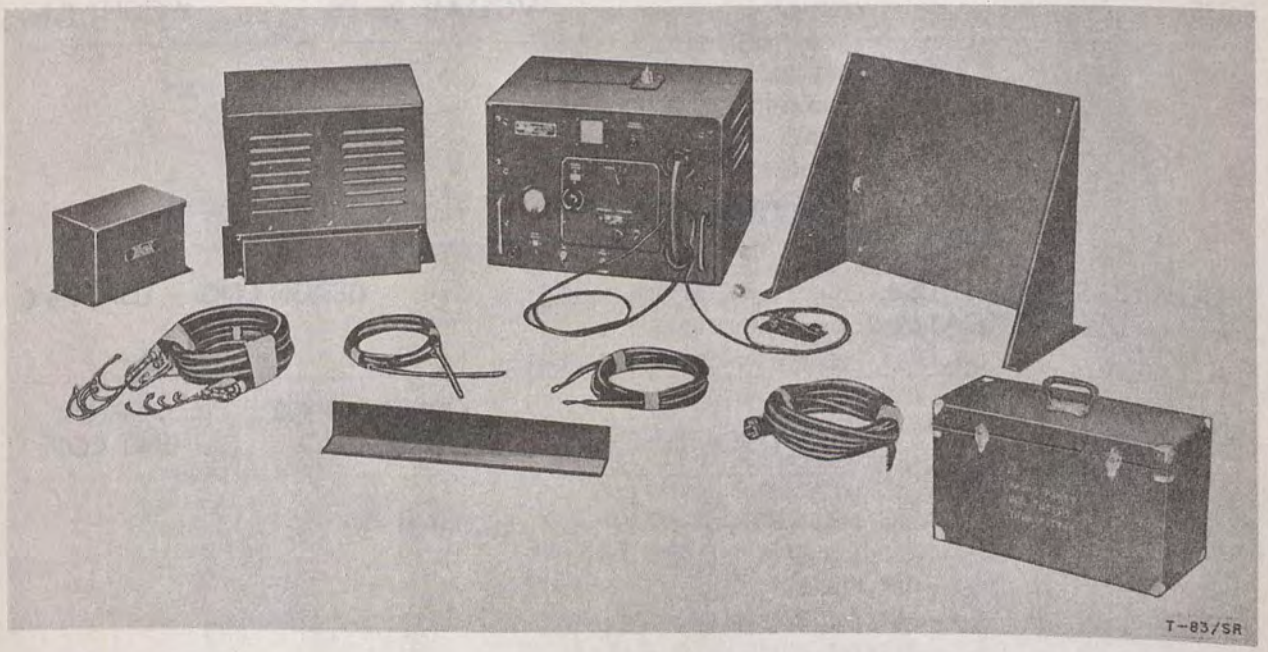
DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Brelco Corp.	New York, N. Y.		

RADIO TRANSMITTER AN/SRT-type

1 July 1958
Cognizant Serv: USA FSN: 5820–164–7149 T–83/SR

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	2C6900–83	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter T–83/SR is a crystal-controlled short-range, AM (voice and cw) transmitting equipment used in two-way, ship-to-shore communication in the medium- and high-frequency range.

This equipment consists of the radio transmitter component and associated power supply and includes a converter starter box and accessories. It operates on five preset frequency channels selected by a five-position switch and can be controlled from a remote operating location.

It uses a long-wire or whip-type antenna and may be table or shelf-mounted.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.7 to 8.7
Type Modulation: AM
Type of Signal: Cw and voice
Power Output: 50 w
Power Requirements: 460 w, 115-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Converter Starter Box RE–79/SRT–10	6110–406–1963	6 x 6-1/8 x 10-1/2	8.5
1	Power supply	6130–231–0666	13-3/8 x 15-1/4 x 18-1/8	127.0
1	Radio Transmitter T–83/SR	5820–164–7149	13-1/2 x 16 x 21	118.0

AN/SRT-type RADIO TRANSMITTER

REFERENCE DATA AND LITERATURE:

TM 11-837

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	17.22	325

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 69-2

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
		PR-44-3531	

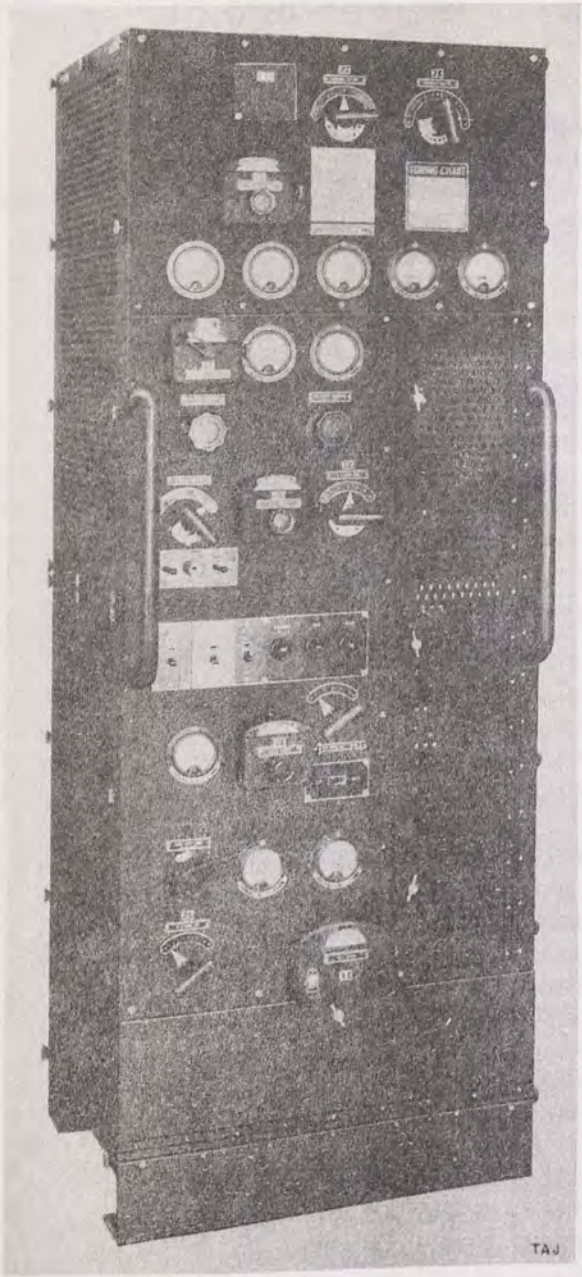
500 WATT TRANSMITTING EQUIPMENT **AN/SRT-type**

1 December 1958
Cognizant Serv: FSN:

TAJ, TAJ–1 thru TAJ–19

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	TAJ: F16–Q–307416–200	--
		TAJ–1: F16–Q–307435–200	
		TAJ–2: F16–Q–307455–200	
		TAJ–3: F16–Q–307475–200	
		TAJ–4: F16–Q–307495–200	
		TAJ–5: F16–Q–307515–200	
		TAJ–6: F16–Q–307535–200	
		TAJ–7: F16–Q–307555–200	
		TAJ–8: F16–Q–307558–200 (230-v ac)	
		TAJ–8: F16–Q–307559–200 (220-v ac)	
		TAJ–8: F16–Q–307560–200 (115-v ac)	
		TAJ–8: F16–Q–306561–200 (440-v ac)	
		TAJ–9: F16–Q–307596–200 (440-v ac)	
		TAJ–10: F16–Q–307615–200 (115-v dc)	
		TAJ–10: F16–Q–307625–200 (230-v dc)	
		TAJ–10: F16–Q–307635–200 (440-v ac)	
		TAJ–11: F16–Q–307655–200 (115-v dc)	
		TAJ–11: F16–Q–307665–200 (230-v dc)	
		TAJ–11: F16–Q–307675–200 (440-v ac)	
		TAJ–12: F16–Q–307685–200 (115-v dc)	
		TAJ–12: F16–Q–307695–200 (230-v dc)	
		TAJ–12: F16–Q–307715–200 (440-v ac)	
		TAJ–13: F16–Q–307725–200 (115-v dc)	
		TAJ–13: F16–Q–307728–200 (230-v dc)	
		TAJ–13: F16–Q–307735–200 (115/230-v dc)	
		TAJ–14: F16–Q–307755–200 (155-v dc)	
		TAJ–14: F16–Q–307776–200 (230-v dc)	
		TAJ–14: F16–Q–307765–200 (440-v ac)	
		TAJ–15: F16–Q–307785–200 (115-v dc)	
		TAJ–15: F16–Q–307777–200 (230-v dc)	
		TAJ–16: F16–Q–307788–200 (115-v dc)	
		TAJ–16: F16–Q–307787–200 (230-v dc)	
		TAJ–16: F16–Q–307790–200 (440-v ac)	
		TAJ–17: F16–Q–307791–200 (220-v ac)	
		TAJ–18: F16–Q–307795–200 (115-v dc)	
		TAJ–18: F16–Q–307815–200 (230-v dc)	
		TAJ–18: F16–Q–307835–200 (440-v ac)	
		TAJ–19: F16–Q–307855–200 (115-v dc)	
		TAJ–19: F16–Q–307875–200 (220-v ac)	
		TAJ–19: F16–Q–307885–200 (230-v dc)	
		TAJ–19: F16–Q–307895–200 (440-v ac)	

AN/SRT-type 500 WATT TRANSMITTING EQUIPMENT



FUNCTIONAL DESCRIPTION:

500 Watt Transmitting Equipments TAJ and TAJ–1 through TAJ–19 are primarily intended for shipboard installation, except for TAJ–13 and TAJ–17, which are designed for use at shore insallations. All of these transmitters operate with medium power output at low frequencies. Relay keying speeds up to 100 words per minute on cw may be used. The transmitters can be operated locally, or from a remote location by use of a Navy standard four- or six-wire remote control unit (Remote Control Unit 23005 or 23146).

The TAJ–3 through TAJ–19 are electrically and mechanically similar with the exception of power supply units. All models prior to the TAJ–3 have a separate filter unit. A crystal-controlled oscillator unit is furnished with all models prior to the TAJ–4. The TAJ–4 and TAJ–5 only are supplied with a rectifier unit; other models use a motor-generator set.

TECHNICAL CHARACTERISTICS:

Frequency Range:
TAJ and TAJ–1 thru TAJ–3: 195 to 600 kc
TAJ–4 thru TAJ–19: 175 to 600 kc

Type of Signal: Cw, mcw

Keying: 100 wpm (maximum) on cw; 50 wpm (maximum) with 800 cps modulated tone

Power Output:
TAJ: 300 w
TAJ–1 thru TAJ–19: 500 w on cw; 250 w on mcw

Frequency Control:
TAJ–4 through TAJ–19: Master oscillator
TAJ–1 through TAJ–3: Crystal control

Power Requirements:
TAJ, TAJ–1 through TAJ–3: 3 kw, 115-v dc; or 3 kw, 230-v dc
TAJ–4: 2.82 kw, 230-v 60-cycle 3-phase ac
TAJ–5: 2.65 kw, 440-v 60-cycle 3-phase ac
TAJ–6, TAJ–7, TAJ–9: 4.5 amp (43 amp starting), 440-v 60-cycle 3-phase ac
TAJ–8, TAJ–11, TAJ–12, TAJ–14, TAJ–16, TAJ–18, TAJ–19: 4.1 amp (45 amp starting), 440-v 60-cycle 3-phase ac; 8.2 amp (90 amp starting), 220-v 60-cycle ac; 15 amp (45 amp starting, 230-v dc; or 28 amp (90 amp starting), 115-v dc
TAJ–10: 4.1 amp, 400-v 60-cycle 3-phase ac; 15 amp, 230-v dc; or 28 amp 115-v dc
TAJ–13: 8.7 amp (90 amp starting), 220-v 60-cycle 3-phase ac
TAJ–15: 15 amp (45 amp starting), 230-v dc
TAJ–17: 8.2 amp (90 amp starting), 220-v 60-cycle 3-phase ac; or 7.9 amp (90 amp starting), 220-v 50-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For TAJ:			
1	Magnetic Controller CAY–3415 (115-v dc)		25-3/8 x 21-1/8 x 13-11/16	135
	or			
1	Magnetic Controller CAY–3416 (230-v dc)		25-3/8 x 21-1/8 x 13-11/16	135
1	Motor-Generator Set CAY–3689 (115-v dc)		20-5/16 x 36 x 18	1,200
	or			
1	Motor-Generator Set CAY–3690 (230-v dc)		20-5/16 x 36 x 18	1,200
1	Radio Transmitter CAY–3334–A		46 x 26-1/8 x 17	425
	For TAJ–1:			
1	Crystal Frequency Indicator CAY–3336		11-1/2 x 8-7/8 x 10	24
1	Filter Unit CAY–3335		27-7/8 x 14 x 12-1/8	91
	or			
1	Filter Unit CAY–3335–A		27-7/8 x 14 x 12-1/8	100
1	Magnetic Controller CAY–3415 (115-v dc)		25-3/8 x 21-1/8 x 13-11/16	135
	or			
1	Magnetic Controller CAY–3416 (230-v dc)		25-3/8 x 21-1/8 x 13-11/16	135
1	Motor-Generator Set CAY–3422 (115-v dc)		20 x 35 x 16-1/2	590
	or			
1	Motor-Generator Set CAY–3423 (230-v dc)		20 x 35 x 16-1/2	590
1	Radio Transmitter CAY–3334		47-3/4 x 27-1/8 x 17-1/4	426
	For TAJ–2:			
1	Crystal Frequency Indicator CG–4441		14-3/4 x 19 x 16-3/8	45
1	Filter Unit CG–4442		25-1/2 x 18-1/2 x 7-9/16	90
1	Magnetic Controller CG–4443 (115-v dc)		22-3/4 x 16-1/2 x 14-1/2	75

AN/SRT-type 500 WATT TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSION (Inches)	WEIGHT (Lbs)
	or			
1	Magnetic Controller CG–4445 (230-v dc)		22-3/4 x 16-1/2 x 14-1/2	75
1	Motor-Generator Set CG–4083 (230-v dc)		15-3/8 x 36 x 14	485
	or			
1	Motor-Generator Set CG–4084 (115-v dc)		14-3/8 x 36 x 14	485
1	Radio Transmitter CG–4440 (115-v dc)		70 x 26-7/8 x 19	450
	or			
1	Radio Transmitter CG–4444 (230-v dc)		50 x 26-7/8 x 19	450
	For TAJ–3:			
1	Crystal Frequency Indicator 74007		10-5/16 x 16 x 9-29/32	27
1	Magnetic Controller 21042 (115-v dc)		24-7/8 x 15 x 13-7/8	85
	or			
1	Magnetic Controller 21043 (230-v dc)		24-7/8 x 15 x 13-7/8	87
1	Motor-Generator Set 21044 (115-v dc)		18 x 33-3/8 x 18	527
	or			
1	Motor-Generator Set 21045 (230-v dc)		18 x 33-3/8 x 18	527
1	Radio Transmitter 52009		70 x 26-3/4 x 20	370
	For TAJ–4:			
1	Radio Transmitter 52022		72 x 27 x 20	375
1	Rectifier Unit 20007		72 x 21 x 23-1/2	650
	For TAJ–5:			
1	Radio Transmitter 52029		71-7/8 x 27 x 20	375
1	Rectifier Unit 20018		71-7/8 x 23-15/16 x 22-7/8	975
	For TAJ–6:			
1	Magnetic Controller 21258		17-15/16 x 10-1/8 x 7-3/4	22

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Motor Generator Set consisting of 21255, 21256, and 21257		22-1/2 x 72 x 17-1/4	850
1	Radio Transmitter 52069		72 x 27 x 24	645
	For TAJ–7:			
1	Magnetic Controller 21258		17-15/16 x 10-1/8 x 7-3/4	22
1	Motor Generator Set consisting of 21296, 21297, and 21298		19 x 29/32 x 71-3/4 x 17	860
1	Radio Transmitter 52078		72-1/4 x 27 x 24-3/16	605
	For TAJ–8:			
1	Magnetic Controller 21457 (115-v dc)		24 x 16-11/16 x 26	105
1	Magnetic Controller 21458 (230-v dc)		24 x 16-11/16 x 26	105
	or			
1	Magnetic Controller 21459 (220-v ac)		28 x 15-13/16 x 20-11/16	111
	or			
1	Magnetic Controller 21460 (440-v ac)		28 x 15-13/16 x 20-11/16	111
1	Motor-Generator Set 21466 (115-v dc)		19-5/16 x 75 x 16-5/8	775
	or			
1	Motor-Generator Set 21467 (230-v dc)		19-5/16 x 75 x 16-5/8	775
	or			
1	Motor-Generator Set 21468 (220/440-v ac)		19-13/32 x 70-7/16 x 16-5/8	775
1	Radio Transmitter 52142 (115/230 v dc)		72-1/4 x 27 x 24	610
	or			
1	Radio Transmitter 52143 (220/440-v ac)		72-1/4 x 27 x 24	610
	For TAJ–9:			
1	Magnetic Controller 21455		22-1/8 x 20-1/4 x 10-1/4	65
1	Motor-Generator Set 21456		19-7/8 x 71-3/4 x 18-5/8	860
1	Radio Transmitter 52140		72-1/4 x 27 x 24-3/16	605

AN/SRT-type 500 WATT TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For TAJ–10:			
1	Magnetic Controller 21455 (440-v ac)		22-1/8 x 20-1/4 x 10-1/4	65
1	Magnet8c Controller 21567 (115-v dc)		25 x 14-1/4 x 13-1/4	75
1	Magnetic Controller 21568 (230-v dc)		22 x 14-1/4 x 11	75
1	Motor-Generator Set 21456–A (220/440-v ac)		18 x 71-5/8 x 18-1/2	800
	or			
1	Motor-Generator Set 21571 (115-v dc)		18 x 64-3/4 x 12-3/4	950
	or			
1	Motor-Generator Set 21572 (230-v dc)		18 x 64-3/4 x 12-3/4	960
1	Radio Transmitter 52167 (115/230-v dc)		72 x 27 x 24-1/8	550
	or			
1	Radio Transmitter 52189 (220/440-v ac)		72 x 27 x 24-1/8	550
1	Magnetic Controller 21752 (115-v dc)		25 x 14-1/4 x 13-1/4	70
	or			
1	Magnetic Controller 21753 (230-v dc)		22-3/4 x 14-1/4 x 13-1/4	70
	or			
1	Magnetic Controller 21754 (220-v ac)		21-7/8 x 20 x 9	70
	or			
1	Magnetic Controller 21755 (440-v ac)		21-7/8 x 20 x 9	70
1	Motor-Generator Set 21756 (115-v dc)		20 x 76-1/2 x 18-3/4	960
	or			
1	Motor-Generator Set 21757 (230-v dc)		20 x 76-1/2 x 18-3/4	960

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Motor-Generator Set 21758 (220/440-v ac)		20 x 72 x 18-3/4	850
1	Radio Transmitter 52240 (115/230-v dc)		74 x 27 x 25	540
1	Radio Transmitter 52241		74 x 27 x 25	540
	For TAJ–12:			
1	Magnetic Controller 21874 (115-v dc)		24-3/8 x 14-1/2 x 14	
	or			
1	Magnetic Controller 21875 (220/440-v ac)		22 x 18-1/4 x 12-1/4	101
	or			
1	Magnetic Controller 21880 (230-v dc)		24-3/8 x 14-1/2 x 14-1/4	
	or			
1	Magnetic Controller 21891 (220/440-v ac)		22 x 18-1/4 x 12-1/4	
1	Motor-Generator Set 21783 (220/440-v ac)		18 x 57-7/8 x 18-3/4	
	or			
1	Motor-Generator Set 21784 (115-v dc)		18 x 62-1/8 x 18-3/4	
1	Motor-Generator Set 21785		18 x 52-1/8 x 18-3/4	
1	Radio Transmitter 52259		72-1/4 x 27 x 24	
	or			
1	Radio Transmitter 52260		72-1/4 x 27 x 24	
	For TAJ–13:			
1	Land-Line Control Unit 23269		42-1/8 x 24 x 14-1/4	165
2	Magnetic Controller 21754 (220-v ac)		21-7/8 x 20 x 9	70
2	Motor-Generator Set 21758		20 x 72 x 18-3/4	850
1	Power Transfer Switch 24092		12-1/4 x 16 x 9-1/4	26
1	Radio Transmitter 52241		74 x 27 x 25	540

AN/SRT-type 500 WATT TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	TAJ–14:			
1	Magnetic Controller 21752 (115-v dc)		25 x 14-1/4 x 13-1/4	70
	or			
1	Magnetic Controller 21753 (230-v dc)		22-3/4 x 14-1/4 x 13-1/4	70
	or			
1	Magnetic Controller 21754 (220-v ac)		21-7/8 x 20 x 9	70
	or			
1	Magnetic Controller 21755 (440-v ac)		21-7/8 x 20 x 9	70
1	Motor-Generator Set 21756–A (115-v dc)		20 x 76-1/2 x 18-3/4	1,040
	or			
1	Motor-Generator Set 21757A (230-v dc)		20 x 76-1/2 x 18-3/4	1,040
	or			
1	Motor-Generator Set 21956 (220/440-v dc)		20 x 72 x 18	850
1	Radio Transmitter 52240 (115/230-v dc)		74 x 27 x 25	540
	or			
1	Radio Transmitter 52241 (220/440-v ac)		74 x 27 x 25	540
	For TAJ–15:			
1	Magnetic Controller 21753		22-3/4 x 14-1/4 x 13-1/4	70
1	Motor-Generator Set 21757–A		20 x 76-1/2 x 18-3/4	1,040
1	Radio Transmitter 52240		74 x 27 x 25	540
	For TAJ–16:			
1	Magnetic Controller 21753 (230-v dc)		22-3/4 x 14-1/4 x 13-1/4	70

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Magnetic Controller 21754 (220-v ac)		21-7/8 x 20 x 9	70
	or			
1	Magnetic Controller 21755 (440-v ac)		21-7/8 x 20 x 9	70
1	Motor-Generator Set 21756 (115-v dc)		20 x 76-1/2 x 18-3/4	960
	or			
1	Motor-Generator Set 21757 (230-v dc)		20 x 76-1/2 x 18-3/4	960
1	Motor-Generator Set 21758 (220/440-v ac)		20 x 72 x 18-3/4	850
1	Radio Transmitter 52240		74 x 27 x 25	540
	or			
1	Radio Transmitter 52241		74 x 27 x 25	540
	For TAJ–17:			
2	Magnetic Controller 211005		21-7/8 x 20 x 9	70
	or			
2	Magnetic Controller 211006		21-7/8 x 20 x 9	70
2	Motor-Generator Set 21956		20 x 72 x 18	850
1	Power Transfer Switch 24092		12-1/4 x 16 x 9-1/4	26
1	Radio Transmitter 52241		74 x 27 x 25	540
	or			
1	Radio Transmitter 52293		73-3/4 x 27 x 24-1/8	540
	For TAJ–18:			
1	Magnetic Controller 21752 (115-v dc)		25 x 14-1/4 x 13-1/4	70
	or			
1	Magnetic Controller 21753 (230-v dc)		22-3/4 x 14-1/4 x 13-1/4	70
	or			
1	Magnetic Controller 21754 (220-v ac)		21-7/8 x 20 x 9	70

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Magnetic Controller 21755 (440-v ac)		21-7/8 x 20 x 9	70
1	Motor-Generator Set 21756–A (115-v dc)		20 x 76-1/2 x 18-3/4	1,040
	or			
1	Motor-Generator Set 21757-A (230-v dc)		20 x 76-1/2 x 18-3/4	1,040
	or			
1	Motor-Generator Set 21956 (220/440-v ac)		20 x 72 x 18	850
1	Radio Transmitter 52240 (115/230 v dc)		74 x 27 x 25	540
	or			
1	Radio Transmitter 52241 (220/440-v ac)		74 x 27 x 25	540
	For TAJ–19:			
1	Magnetic Controller 211086 (115-v dc)		17-5/16 x 11-9/16 x 10-5/8	55
	or			
1	Magnetic Controller 211087 (230-v dc)		17-5/16 x 11-1/8 x 10-5/8	55
	or			
1	Magnetic Controller 211088 (220-v ac)		9-3/4 x 7-1/2 x 7-1/2	45
1	Magnetic Controller 211089 (440-v ac)		9-3/4 x 7-1/2 x 7-1/2	45
1	Motor-Generator Set 21757–A		20 x 76-1/2 x 18-3/4	1,040
1	Radio Transmitter 52240–A (115/230-v dc)		73-3/4 x 27 x 24	560
	or			
1	Radio Transmitter 52241–A (220/440-v ac)		73-3/4 x 27 x 24-1/8	560

REFERENCE DATA AND LITERATURE:

TAJ: NAVSHIPS IB–5536A
TAJ–1: NAVSHIPS IB–5542
TAJ–2: NAVSHIPS GEI–5747A
TAJ–3: NAVSHIPS IB–5727
TAJ–4: NAVSHIPS IB–23231
TAJ–5: NAVSHIPS IB–23271
TAJ–6: NAVSHIPS GEI–8689A
TAJ–7: NAVSHIPS GEI–11023A
TAJ–8: NAVSHIPS 900,295
TAJ–9: NAVSHIPS 95288
TAJ–10: NAVSHIPS 900,428
TAJ–11, TAJ–13, TAJ–16, TAJ–17; NAVSHIPS 900,863
TAJ–12: NAVSHIPS 900,554
TAJ–14: TAJ–15, TAJ–18: NAVSHIPS 900,833
TAJ–19: NAVSHIPS 900,492

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For TAJ, TAJ–1 thru TAJ–12, TAJ–14 thru TAJ–16, TAJ–18, and TAJ–19: 4	159	3,120
For TAJ–13: 7	221	4,643
For TAJ–17: 6	194	4,323

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For TAJ:			
Westinghouse Electric & Mfg. Co.	Chicopee Falls, Mass.	NOs–6616	$9,200.00
For TAJ–1:			
Westinghouse Electric & Mfg. Co.	Chicopee Falls, Mass.	NOs–12856	
For TAJ–2:			
General Electric Co.	Schenectady, N. Y.	NOs–20727	
For TAJ–3:			
RCA Victor Division, RCA	Camden, N. J.	NOs–27519	
For TAJ–4:			
RCA Victor Division, RCA	Camden, N. J.	NOs–31197	
For TAJ–5:			
Westinghouse Electric & Mfg. Co.	Chicopee Falls, Mass.	NOs–36091	

AN/SRT-type 500 WATT TRANSMITTING EQUIPMENT

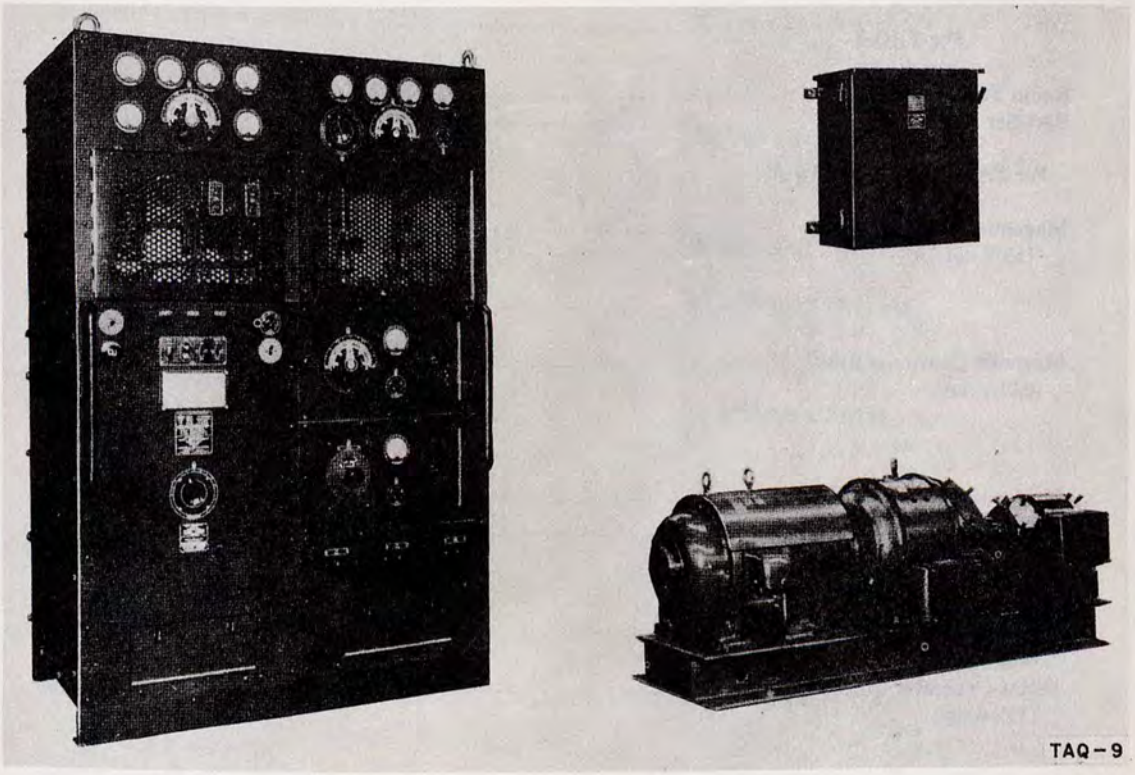
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For TAJ–6:			
General Electric Co.	Schenectady, N. Y.	NOs–43790	
For TAJ–7:			
General Electric Co.	Schenectady, N. Y.	NOs–58412	
For TAJ–8:			
Bendix Radio Corp.	Baltimore, Md.	NOs–66778	
For TAJ–9:			
General Electric Co.	Schenectady, N. Y.	NOs–67756	
For TAJ–10:			
General Electric Co.	Schenectady, N. Y.	NOs–80656	
For TAJ–11:			
General Electric Co.	Schenectady, N. Y.	NOs–97255	
For TAJ–12:			
For TAJ–13:			
General Electric Co.	Schenectady, N. Y.	NOs–97255	
For TAJ–14:			
General Electric Co.	Schenectady, N. Y.	NXs–4843	
For TAJ–15:			
General Electric Co.	Schenectady, N. Y.	NXss–18530	
For TAJ–16:			
General Electric Co.	Schenectady, N. Y.	Tcg–34571	
For TAJ–17:			
General Electric Co.	Schenectady, N. Y.	NXss–18530	
For TAJ–18:			
General Electric Co.	Schenectady, N. Y.	NXss–33082	
For TAJ–19:			
General Electric Co.	Schenectady, N. Y.	NXsr–36960	

TRANSMITTING EQUIPMENT, 2 KW AN/SRT-type

1 December 1958
Cognizant Serv: USN FSN:

TAQ–4 thru TAQ–6b, TAQ–9, TAQ–10

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	TAQ–4:	--
		TAQ–5: F16–Q–308646–200 (115-v dc)	
		TAQ–5: F16–Q–308666–200 (230-v dc)	
		TAQ–5: F16–Q–308656–200 (220-v ac)	
		TAQ–5: F16–Q–308676–200 (440-v ac)	
		TAQ–6: F16–Q–308647–200 (115-v dc)	
		TAQ–6: F16–Q–308667–200 (230-v dc)	
		TAQ–6: F16–Q–308657–200 (220-v ac)	
		TAQ–6: F16–Q–308677–200 (440-v ac)	
		TAQ–9: F16–Q–308725–200 (115-v dc)	
		TAQ–9: F16–Q–308735–200 (440-v ac)	
		TAQ–10: F16–Q–308745–200	



TAQ–9

FUNCTIONAL DESCRIPTION:

2 KW Transmitting Equipments TAQ–4, TAQ–5, TAQ–6, TAQ–6b, TAQ–9, and TAQ–10 are all similar in appearance and application. The TAQ–4 uses a rectifier unit instead of the motor-generator units provided with the other models of this equipment. The TAQ–10 is designed for shore installation, and all the other models are designed primarily for shipboard installations.

AN/SRT-type TRANSMITTING EQUIPMENT, 2 KW

This equipment provides cw or mcw radiotelegraph transmission at keying speeds up to 100 words per minute (500-wpm speed in the TAQ–10) at any frequency in the band from 175 to 600 kc. The units may be controlled locally, or from a remote location with a 4- or 6-wire remote control unit or the landline control unit supplied with the TAQ–10.

TECHNICAL CHARACTERISTICS:

Frequency Range: 175 to 600 kc
Frequency Control: Master oscillator
Type of Signal: Cw, mcw
Power Output:
Cw: 2 kw
Mcw: 1 kw
Keying Method and Speed:
TAQ–4 thru TAQ–6b, TAQ–9: Relay keying, 100 wpm (maximum)
TAQ–10: Vacuum tube keying, 500 wpm (maximum), cw; relay keying, 100 wpm (maximum) on cw, 50 wpm (maximum) on mcw
Power Requirements:
TAQ–4: 7.5 kw, 440-v 60-cycle 3-phase ac
TAQ–5, TAQ–6, TAQ–6b, TAQ–9: 8.6 kw, 115/230-v dc; 8.0 kw, 220/440-v 60-cycle 3-phase ac
TAQ–10: 8.0 kw, 220/440-v ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For TAQ–4-			
1	Radio Transmitter 52036		35-3/8 x 49 x 72	940
1	Rectifier Unit 20009		23-5/8 x 35-3/4 x 72	965
	For TAQ–5, TAQ–6, TAQ–6b:			
1	Magnetic Controller 21366 (115-v dc)		22-1/2 x 16-1/2 x 14-1/2	109
	or			
1	Magnetic Controller 21367 (230-v dc)		22-1/2 x 13-1/2 x 14-1/2	74
	or			
1	Magnetic Controller 21368 (220-v ac)		26-7/16 x 27 x 12-19/32	140
	or			
1	Magnetic Controller 21369 (440-v ac)		26-7/16 x 27 x 12-19/32	140
1	Motor-Generator 21358 (115-v dc)		27 x 78-3/8 x 22-1/4	1,325
	or			
1	Motor-Generator 21359 (230 v dc)		27 x 78-3/8 x 22-1/4	1,325
	or			
1	Motor-Generator 21360 (220/440-v ac)		27 x 78-3/8 x 22-1/4	1,325

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter 52113 (115-v dc)		72 x 49-1/4 x 34-1/8	985
	or			
1	Radio Transmitter 52114 (230-v dc)		72 x 49-1/4 x 34-1/8	970
	or			
1	Radio Transmitter 52115 (220/440-v ac)		72 x 49-1/4 x 34-1/8	1,050
	For TAQ–9:			
1	Magnetic Controller 21366 (115-v dc)		22-1/2 x 16-1/2 x 14-1/2	109
	or			
1	Magnetic Controller 21367 (230-v dc)		22-1/2 x 13-1/2 x 14-1/2	74
	or			
1	Magnetic Controller 21368 (220-v ac)		26-7/16 x 27 x 12-19/32	140
	or			
1	Magnetic Controller 21369 (440-v ac)		26-7/16 x 27 x 12-19/32	14
1	Motor-Generator 21358–A (115-v dc)		27 x 78-3/8 x 22-1/4	1,32
	or			
1	Motor-Generator 21359–A (230-v dc)		27 x 78-3/8 x 22-1/4	1,32
	or			
1	Motor-Generator 21360–A (220/440-v ac)		27 x 78-3/8 x 22-1/4	1,18
1	Radio Transmitter 52182 (115/230-v dc)		72 x 49-1/4 x 34-1/8	98
	or			
1	Radio Transmitter 52183		72 x 49-1/4 x 34-1/8	1,05
	For TAQ–10:			
1	Land-Line Control Unit 23269		14-1/2 x 42-1/8 x 24	16
1	Magnetic Controller 21896		27 x 25 x 10-7/8	10
1	Motor-Generator 21892		26-11/16 x 71-5/8	1,20
1	Power Transfer Switch 24092		16 x 12-1/2 x 9-1/4	2
1	Radio Transmitter 52279		72 x 49-1/4 x 34-1/8	90

AN/SRT-type TRANSMITTING EQUIPMENT, 2 KW

REFERENCE DATA AND LITERATURE:

TAQ–4: Technical Manual (Navy) for 2 KW Radio Telegraph Transmitting Equipment Model TAQ–4
TAQ–5, TAQ–6, TAQ–6b: NAVSHIPS 900,248
TAQ–9: NAVSHIPS 900,273
TAQ–10: NAVSHIPS 900,549

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For TQ–4:		
For TAQ–5, TAQ–6, TAQ–6b, TAQ–9: 5	----	4,590
For TAQ–10: 7	----	4,930

PROCUREMENT DATA

PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG: TAQ–4:
TAQ–5: RE 13A351J
TAQ–6: S–500–1257
TAQ–6b:
TAQ–9: Spec No. RE 13A351J
TAQ–10: Spec EN 28 (1725–42)
SHIPS; S–500–4372

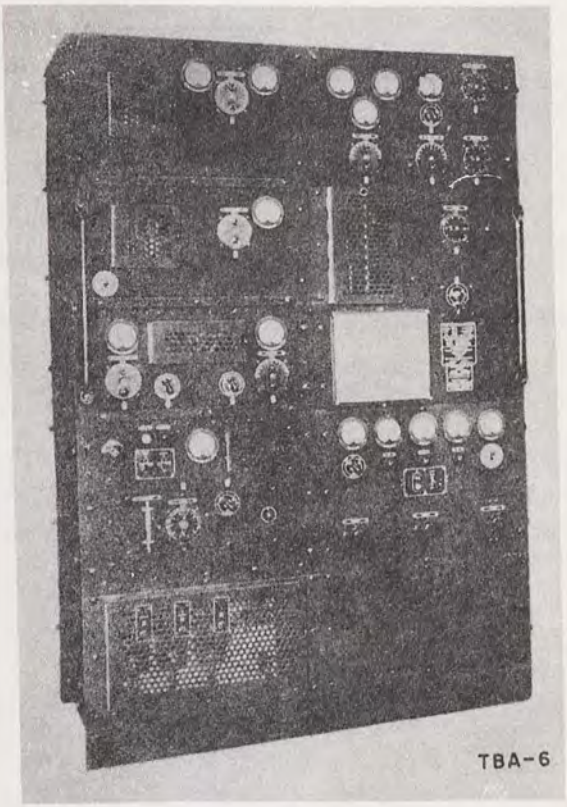
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For TAQ–4:			
General Electric Co.	Schenectady, N. Y.	NOs–37323	
For TAQ–5, TAQ–6, TAQ–6b:			
General Electric Co.	Schenectady, N. Y.	NO–62958 NO–70094	$12,000.00
For TAQ–9:			
General Electric Co.	Schenectady, N. Y.	NOs–70094	
For TAQ–10:			
General Electric Co.	Schenectady, N. Y.	NXs–4843	

RADIO TRANSMITTING EQUIPMENT AN/SRT-type

1 December 1958
Cognizant Serv: USN FSN:

TBA–3, TBA–5, TBA–6, TBA–9

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	TBA–3: F16–Q–309495–200	--
		TBA–5:	
		TBA–6: F16–Q–309545–200 (115-v dc)	
		TBA–9: F16–Q–309577–200	



TBA–6

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TBA–3, TBA–5, TBA–6, and TBA–9 are high frequency radiotelegraph transmitters designed for use aboard large naval vessels. They are similar in appearance and performance, but differ in the power supply equipment furnished. The TBA–5 is equipped with a rectifier power supply, while the other shipboard models are equipped with motor-generator units.

The TBA–5 and the TBA–9, in addition to the master oscillator frequency control provided with the other models of this equipment, also have provisions respectively for 16 and 10 crystal-controlled frequency channels.

The TBA–3, TBA–5, TBA–6, and TBA–9 are similar to the TBA–8, TBA–10, and TBA–11, which are versions of this equipment designed for shore station use. (*See* Radio Transmitting Equipment TBA–8, TBA–10, TBA–11, classified as AN/FRT-type.)

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4.0 to 26.0
Frequency Control:
TBA–5: 16 channels crystal-controlled; master oscillator
TBA–9: 10 channels crystal-controlled; master oscillator
TBA–3, TBA–6: Master oscillator.
Nominal Power Output: 1 kw
Type of Signal: Cw
Keying Speed: 100 wpm (keying relay)
Power Requirements:
TBA–3: 4.98 kw (30.2 kw starting), 220/440-v 60-cycle 3-phase ac
TBA–5: 5.76 kw, 440-v 60-cycle 3-phase ac
TBA–6: 5.3 kw (12 kw starting), 115/230-v dc; 4.6 kw (30 kw starting), 440-v 60-cycle 3-phase ac
TBA–9: 4.6 kw (30 kw starting), 440-v 60-cycle 3-phase ac

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For TBA–3:			
2	Magnetic Controller 21373 (220-v ac)		22-1/8 x 20-1/4 x 10-1/4	65
	or			
1	Magnetic Controller 21374 (220/440-v ac)		22-1/8 x 20-1/4 x 10-1/4	65
1	Motor-Generator Set 21375 (220/440-v ac)		17-9/16 x 70-7/16 x 16	815
	or			
1	Motor-Generator Set 21375–A (220/440-v ac)		17-9/16 x 70-7/16 x 16	815
1	Radio Transmitter 52116		72 x 48-3/4 x 31-1/8	975
	For TBA–5:			
1	Radio Transmitter 52040		72 x 49 x 33-5/8	1,090
1	Rectifier 20027		72 x 33-3/4 x 23	1,000
	For TBA–6:			
1	Control switch assembly			
1	Magnetic Controller 21374 (220/440-v ac)		22-1/8 x 20-1/4 x 10-1/4	65
	or			
1	Magnetic Controller 21591 (115-v dc)		22 x 17-9/32 x 15-1/4	65
	or			
1	Magnetic Controller 21592 (230-v dc)		22 x 17-9/32 x 15-1/4	65
1	Motor-Generator Set 21375–A (220/440-v ac)		17-9/16 x 70-7/16 x 16	815
	or			
1	Motor-Generator Set 21595 (115-v dc)		17-9/16 x 70-7/16 x 18	815
	or			
1	Motor-Generator Set 21596 (230-v dc)		17-9/16 x 70-7/16 x 18	815

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter 52195 (115-v dc)		72 x 49 x 31-1/8	953
	or			
1	Radio Transmitter 52196 (230-v dc)		72 x 49 x 31-1/8	953
	or			
1	Radio Transmitter 52197 (440-v ac)		72 x 49 x 31-1/8	953
	For TBA–9:			
1	Magnetic Controller 21898		23-7/8 x 21-7/16 x 9-1/16	74
1	Motor-Generator Set 21899		19-15/16 x 71-5/16 x 16-5/8	815
1	Radio Transmitter 52281		72 x 49 x 31-1/8	1,044

REFERENCE DATA AND LITERATURE:

TBA–3: NAVSHIPS 900,398
TBA–5: Technical Manual (Navy) for Radio Telegraph Transmitting Equipment Model TBA–5
TBA–6: NAVSHIPS 900,406
TBA–9: NAVSHIPS 900,454

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
8	250.0	3,809

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips

SPEC &/or DWG: TBA–3: RE13A420F; C–S–500–617
TBA–5:
TBA–6: RE13A420F
TBA–9: EN28/1447–42(SHIPS CG); S–500–4372; RE13A420G

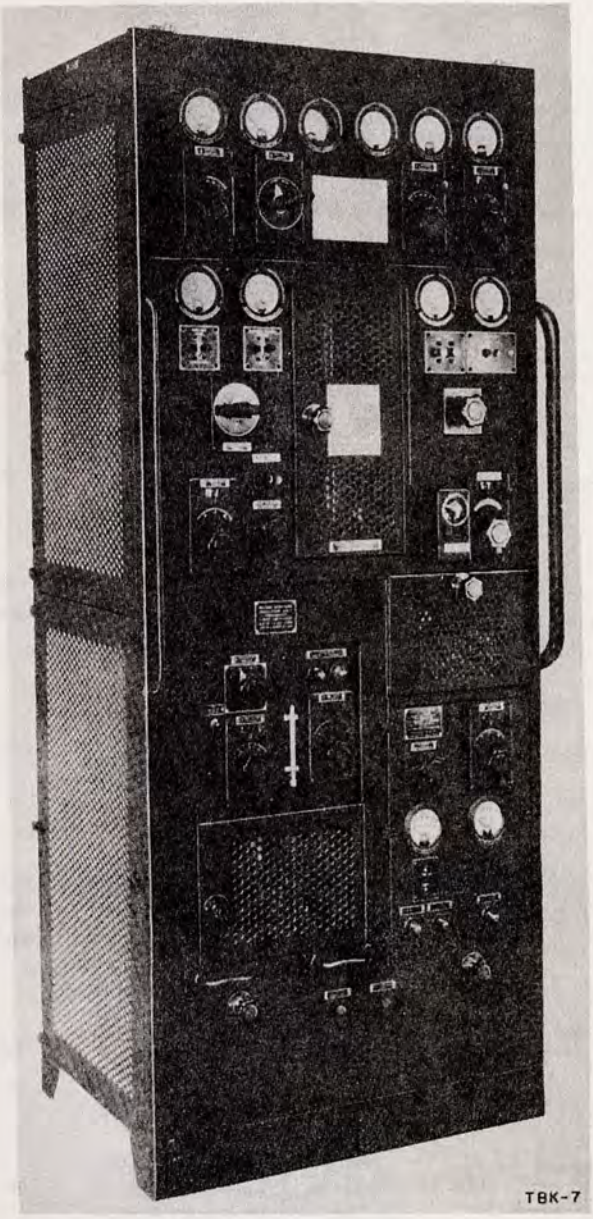
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For TBA–3:			
General Electric Co.	Schenectady, N. Y.	NOs–64824	
For TBA–5:			
General Electric Co.	Schenectady, N. Y.	NOs–74717	$9,580.00
For TBA–6:			
General Electric Co.	Schenectady, N. Y.	NOs–64824	
For TBA–9:			
General Electric Co.	Schenectady, N. Y.	NXs–4843	

RADIO TRANSMITTING EQUIPMENT AN/SRT-type

1 December 1958
Cognizant Serv: USN FSN:

TBK–3, TBK–5, TBK–7 thru TBK–10, TBK–12 thru TBK–14, TBK–17 thru TBK–20

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--


TBK-7

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TBK–3, TBK–5, TBK–7, TBK–8, TBK–9, TBK–10, TBK–12, TBK–13, TBK–14, TBK–17, TBK–18, TBK–19 and TBK–20 are medium power, high frequency transmitters capable of relay keying speeds up to 100 words per minute, and designed primarily for shipboard installation. The transmitter power may be reduced from full power to 75 watts by disconnecting the power amplifier.

Remote operation of these transmitters is possible by use of a standard 4- or 6-wire control system.

These transmitters are essentially the same as the TBM series of transmitters, except that the TBK series does not include provisions for modulated continuous wave signaling.

Shore-based models in the TBK series (classified and described under AN/FRT-type) are the TBK–6, TBK–11, TBK–15, and TBK–16. The TBK–4 is suitable for either shipboard or shore installation, and is classified and described under AN/URT-type equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2.0 to 18.1
Frequency Control: Master oscillator
Type of Signal: Cw
Power Output: 75 or 500 w
Keying Speed: 100 wpm (maximum)
Antenna: 80 feet (maximum length)
Power Requirements:
TBK–3: 115/230-v dc
TBK–5: 115/230-v dc; 440-v 60-cycle 3-phase ac
TBK–7: 440-v 60-cycle 3-phase ac
TBK–8: 115/230-v dc; 220/440-v 60-cycle 3-phase ac
TBK–9: 115/230-v dc; 220/440-v 60-cycle 3-phase ac
TBK–10: 115/230-v dc; 220/440-v 60-cycle 3-phase ac
TBK–12: 115/230-v dc; 220/440-v 60-cycle 3-phase ac
TBK–13: 115/230-v dc; 220/440-v 60-cycle 3-phase ac
TBK–14: 115–230-v dc; 220/440-v 60-cycle 3-phase ac
TBK–17: 115/230-v dc; 220/440-v 60-cycle 3-phase ac
TBK–18: 440-v 60-cycle 3-phase ac
TBK–19: 230-v dc; 220/440-v 60-cycle 3-phase ac
TBK–20: 115/230-v dc

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For TBK–3:			
1	Motor generator unit		15-15/32 x 18-7/16 x 74-1/16	700
1	Motor Starter 21158 (115-v dc)		12-9/16 x 14 x 25-1/8	80
	or			
1	Motor Starter 21159 (230-v dc)		12-9/16 x 14 x 25-1/8	80
1	Radio Transmitter 52031		24 x 32 x 72	760
	For TBK–5:			
1	Motor generator unit (115/230-v dc)		18-9/16 x 18-3/4 x 75	900
	or			
1	Motor generator unit (440-v ac)		18-9/16 x 18-3/4 x 70-1/8	885
1	Motor Starter 21249 (440-v ac)		9 x 10-5/8 x 18-3/4	30
	or			
1	Motor Starter 21250 (115-v dc)		14-1/2 x 15-1/4 x 28-1/2	90
	or			
1	Motor Starter 21251 (230 v dc)		14-1/2 x 15-1/4 x 28-1/2	90
1	Radio Transmitter 52064 (440-v ac)		24 x 32 x 72	695
	or			
1	Radio Transmitter 52066 (115/230-v dc)		24 x 32 x 72	662
	For TBK–7:			
1	Motor generator unit		18-9/16 x 18-3/4 x 70-1/8	885
1	Motor Starter 21304		8-1/2 x 11 x 17	30
1	Radio Transmitter 52079		24 x 32 x 72	695
	For TBK–8, TBK–10, TBK–12:			
1	Magnetic Controller 21333 (115-v dc)		13 x 17 x 20-21/32	80
	or			
1	Magnetic Controller 21334 (230-v dc)		13 x 17 x 20-21/32	80

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Magnetic Controller 21335 (220-v ac)		9 x 16 x 19-21/32	48
	or			
1	Magnetic Controller 21336 (440-v ac)		9 x 16 x 19-21/32	48
1	Motor Generator Unit 21330 (115-v dc)		19 x 23 x 74-1/4	1,170
	or			
1	Motor Generator Unit 21331 (230-v dc)		19 x 23 x 74-1/4	1,170
	or			
1	Motor Generator Unit 21332 (220/440-v ac)		19 x 23 x 71-1/16	1,150
1	Radio Transmitter 52103 (115-v dc)		24-9/16 x 31-5/8 x 72	629
	or			
1	Radio Transmitter 52104 (230-v dc)		24-9/16 x 31-5/8 x 72	629
	or			
1	Radio Transmitter 52105 (220/440-v ac)		24-9/16 x 31-5/8 x 72	664
	For TBK–9:			
1	Motor Generator Unit 21401 (115-v dc)		20-1/4 x 20-1/2 x 78-7/8	1,067
	or			
1	Motor Generator Unit 21402 (230-v dc)		20-1/4 x 20-1/2 x 78-7/8	1,067
	or			
1	Motor Generator Unit 21403 (220/440-v ac)		20-3/8 x 20-1/2 x 78-7/8	1,033
1	Motor Starter 21409 (115-v dc)		16-7/8 x 17-1/2 x 26-1/4	110

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Motor Starter 21410 (230-v dc)		15-7/8 x 17-1/2 x 26-1/4	95
	or			
1	Motor Starter 21411 (220-v ac)		11-5/8 x 17 x 24-1/4	80
	or			
1	Motor Starter 21412 (440-v ac)		11-5/8 x 15 x 21-1/4	50
1	Radio Transmitter 52126 (115-v dc)		24 x 32 x 72	720
	or			
1	Radio Transmitter 52127 (230-v dc)		24 x 32 x 72	720
	or			
1	Radio Transmitter 52128 (220/440-v ac)		24 x 32 x 72	720
	For TBK–13:			
1	Magnetic Controller 21668 (220-v ac)		9-3/16 x 16-5/8 x 18-3/4	50
	or			
1	Magnetic Controller 21669 (440-v ac)		9-3/16 x 16-5/8 x 18-3/4	50
1	Motor Generator Unit 21677		20-3/4 x 22-1/8 x 74-21/32	1,255
1	Radio Transmitter 52171		24 x 32 x 72	780
	For TBK–14:			
1	Magnetic Controller 21333 (115-v dc)		13 x 17 x 20-21/32	80
1	Magnetic Controller 21334 (230-v dc)		13 x 17 x 20-21/32	80
	or			
1	Magnetic Controller 21336 (220/440-v ac)		9 x 16 x 19-21/32	48
1	Motor Generator Unit 21330–A, –B, –C (115-v dc)		19 x 23 x 74-1/4	1,170

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Motor Generator Unit 21331–A, –B, –C (230-v dc)		19 x 23 x 74-1/4	1,170
	or			
1	Motor Generator Unit 21332–A, –B, –C (220/440-v ac)		19 x 23 x 71-1/16	1,150
1	Radio Transmitter 52103 (115-v dc)		24-9/16 x 31-5/8 x 72	629
	or			
1	Radio Transmitter 52104 (230-v dc)		24-9/16 x 31-5/8 x 72	629
	or			
1	Radio Transmitter 52105 (220/440-v ac)		24-9/16 x 31-5/8 x 72	664
	For TBK–17:			
1	Magnetic Controller 211104 (115-v dc)		10-1/2 x 20-1/2 x 23	95
	or			
1	Magnetic Controller 211105 (230-v dc)		10-1/2 x 15-1/2 x 23	85
	or			
1	Magnetic Controller 211106 (220-v ac)		8-5/16 x 9-3/4 x 14	40
	or			
1	Magnetic Controller 211107 (440-v ac)		8-5/16 x 9-3/4 x 14	40
1	Motor Generator Unit 21330–A (115-v dc)		19 x 23 x 73-3/8	1,170
	or			
1	Motor Generator Unit 21331–A (230-v dc)		19 x 23 x 73-3/8	1,170
	or			
1	Motor Generator Unit 21332–A (220/440-v ac)		18-7/8 x 22-9/16 x 70-1/8	1,150

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter 42105 (220/440-v ac)		24-9/16 x 31-5/8 x 72	664
	or			
1	Radio Transmitter 52103 (115-v dc)		24-9/16 x 31-5/8 x 72	629
	or			
1	Radio Transmitter 52104 (230-v dc)		24-9/16 x 31-5/8 x 72	629
	For TBK–18:			
1	Magnetic Controller 21669		9-3/16 x 16-5/8 x 18-3/4	50
1	Motor Generator Unit 21677		20-3/4 x 22-1/8 x 74-21/32	1,255
1	Radio Transmitter 52171		24 x 32 x 72	780
	For TBK–19:			
1	Magnetic Controller 211105 (230-v dc)		10-1/2 x 15-1/2 x 23	63
	or			
1	Magnetic Controller 211106 (220-v ac)		8-5/16 x 10-3/8 x 14	30
	or			
1	Magnetic Controller 211107 (440-v ac)		8-5/16 x 10-3/8 x 14	30
1	Motor Generator Unit 211286 (220/440-v ac)		17-13/16 x 18-/18 x 58	727
	or			
1	Motor Generator Unit 211340 (230-v dc)		18-1/16 x 18-1/8 x 62-3/8	769
1	Radio Transmitter 52104 (230-v dc)		24-9/16 x 31-5/8 x 72	629
	or			
1	Radio Transmitter 52105 (220/440-v ac)		24-9/16 x 31-5/8 x 72	664
	For TBK–20:			
1	Magnetic Controller 211231 (115-v dc)		10-3/16 x 15 x 20-1/4	68

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Magnetic Controller 211232 (230-v dc)		10-3/16 x 15 x 20-1/4	76
1	Motor Generator Unit 21675 (115-v dc)		20-5/16 x 20-3/8 x 78-13/16	1,275
	or			
1	Motor Generator Unit 21676 (230-v dc)		20-5/16 x 20-3/8 x 78-13/16	1,275
1	Radio Transmitter 52217 (115-v dc)		24 x 32 x 72	740
	or			
1	Radio Transmitter 52218 (230-v dc)		24 x 32 x 72	740

REFERENCE DATA AND LITERATURE:

TBK–3, TBK–5, TBK–7, TBK–8, TBK–10, TBK–17: Technical Manuals for Navy Model TBK–3, 4, 5, 6, 7, 8, 10 and 17, Radio Transmitting Equipment
TBK–9: NAVSHIPS 900380
TBK–12: NAVSHIPS 95293
TBK–13, TBK–18, TBK–20: NAVSHIPS 900388
TBK–14: NAVSHIPS 95294
TBK–19: NAVSHIPS 900482

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For TBK–3:			
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs–36091	
For TBK–5:			
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs–47498	

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For TBK–7:			
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs–58126	
For TBK–8:			
Radio Corp. of America	Camden, N. J.	NOs–16006	
For TBK–9:			
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs–67051	
For TBK–10:			
Radio Corp. of America	Camden, N. J.	NOs–70875	
For TBK–12:			
Radio Corp. of America	Camden, N. J.	NOs–80750	
For TBK–13:			
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs–72975 NOs–80646 NXsr 18237 NXsr 38688 NXsr 36550 NXsr 51573	
For TBK–14:			
Radio Corp. of America	Camden, N. J.	NXs–655	
For TBK–17:			
Radio Corp. of America	Camden, N. J.	NXss 28616	
For TBK–18:			
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs 72975 NOs 80646 NXsr–38688 NXsr–18237 NXsr 36550 NXsr 51573	
For TBK–19:			
Radio Corp. of America	Camden, N. J.	NXsr 38496	
For TBK–20:			
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs 72975 NOs 80646 NXsr 18237 NXsr 38688 NXsr 36550 NXsr–51573	

RADIO TRANSMITTING EQUIPMENT AN/SRT-type

18 November 1958
Cognizant Serv: FSN: 5820-665-2292

TBM-4

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TBM-4 is designed for use on all types of Naval vessels except certain types of submarines.

This equipment is a medium power, high frequency transmitter capable of relay keying speeds up to 100 words-per-minute. The modulator unit provides 50 words-per-minute modulated continuous wave telegraph transmission. The transmitter power output may be reduced from full power to a minimum of 75 watts for telegraphic signaling by disconnecting the power amplifier.

Either local or remote operation is possible. Remote operation of this equipment is possible by use of a standard 4- or 6-wire control system.

A remote control unit and a radio-phone unit are required for use, but are not supplied, with this equipment.

The TBM series is basically similar to the TBK series except that the TBK series are A1 radio telegraph transmitters and are not equipped with modulators. In addition, there is some flexibility in the type power equipment used with the various transmitters.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc
Power Output:
A1: 75 or 500 w
A2, A3: 250 w
Frequency Control: Master oscillator
Type Emission: A1, A2, A3
Keying Speed:
A1: 100 wpm (maximum) on A1
A2: 50 wpm (maximum)
Modulator Data:
Speech Input: 6 mw level from 600-ohm source
Modulation: 100%
AF Distortion: 10% (maximum)
Gain: 60 db
Output: 400 w
Antenna Data: 80 feet (maximum length outside trunk)
Power Requirements:
Motor Generator 21401: 115-v dc
Motor Generator 21402: 230-v dc
Motor Generator 21403: 220- or 440-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Dc Operation:			
1	Modulator 50065		18 x 24 x 72	380
1	Motor Generator Set 21401 (115-v)		20-1/4 x 20-1/2 x 78-7/8	1,062
	or			
	Motor Generator Set 21402 (230-v)		20-1/4 x 20-1/2 x 78-7/8	1,067
1	Motor Starter 21409 (115-v)		16-7/8 x 17-1/2 x 26-1/4	110
	or			
	Motor Starter 21410 (230-v)		15-7/8 x 17-1/2 x 26-1/4	95
1	Radio Transmitter 52126 (115-v)		24 x 32 x 72	720

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
	Radio Transmitter 52127 (230-v)		24 x 32 x 72	720
	For Ac Operation:			
1	Modulator 50065		18 x 24 x 72	380
1	Motor Generator Set 214403		20-3/8 x 20-1/2 x 78-7/8	1,033
1	Motor Starter 21411 (220-v)		11-5/8 x 17 x 24-1/4	80
	or			
	Motor Starter 21412 (440-v)		11-5/8 x 15 x 21-1/4	50
1	Radio Transmitter 52128		24 x 32 x 72	720

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900380

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs–67051, 12 June 1939	
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs–72975, 8 May 1940	

RADIO TRANSMITTING EQUIPMENT AN/SRT-type

18 November 1958
Cognizant Serv: FSN: 5820-642-6184

TBM-5

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TBM-5 is designed for use on all types of Naval vessels except certain types of submarines.

This equipment is a medium power, high frequency transmitter capable of relay keying speeds up to 100 words-per-minute. The modulator unit provides 50 words-per-minute modulated continuous wave telegraph transmission. The transmitter power output may be reduced from full power to a minimum of 75 watts for telegraphic signaling by disconnecting the power amplifier.

Either local or remote operation is possible. Remote operation of this equipment is possible by use of a standard 4- or 6-wire control system.

A remote control unit and a radio-phone unit are required for use, but are not supplied, with this equipment.

The TBM series is basically similar to the TBK series except that the TBK series are A1 radio telegraph transmitters and are not equipped with modulators. In addition, there is some flexibility in the type power equipment used with the various transmitters.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc
Power Output:
A1: 75 or 500 w
A2, A3: 350 w
Frequency Control: Master oscillato
Type Emission: A1, A2, A3
Keying Speed:
A1: 100 wpm (maximum)
A2: 50 wpm (maximum)
Modulator Data:
Speech Input: 6 mw level from 600-ohm source
Modulation: 100%
AF Distortion: 10% (maximum)
Gain: 60 db
Output: 400 w
Antenna Data: 80 feet (maximum length outside trunk)
Power Requirements: 440-v 60-cycle 3-phase (Motor Generator 21522)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Magnetic Controller 21412	----------	11-5/8 x 15 x 21-1/4	50
1	Modulator 50065	----------	18 x 24 x 72	385
1	Motor Generator Set 21522	----------	20-3/8 x 20-1/2 x 74-21/32	1,100
1	Radio Transmitter 52171	----------	24 x 32 x 72	780

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900388

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
14	160.62	3,684

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs–72975, 8 May 1940 NOs–80646, 8 January 1941 NOs–80646 Sup, 21 September 1942 NXsr–18237, 1 July 1943 NXsr–38688, 28 September 1943 NXsr–36550, 23 August 1943 NXsr–51573, 14 July 1944	

RADIO TRANSMITTING EQUIPMENT AN/SRT-type

18 November 1958
Cognizant Serv: FSN: 5820-644-0880

TBM-7

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment is designed for use on all types of Naval vessels except certain types of submarines.

This equipment is a medium power, high frequency transmitter capable of relay keying speeds up to 100 words-per-minute. The modulator unit provides 50 words-per-minute modulated continuous wave telegraph transmission. The transmitter power output may be reduced from full power to a minimum of 75 watts for telegraphic signaling by disconnecting the power amplifier.

Either local or remote operation is possible. Remote operation of this equipment is possible by use of a standard 4- or 6-wire control system.

A remote control unit and a radiophone unit are required for use, but are not supplied, with this equipment.

The TBM series is basically similar to the TBK series except that the TBK series are A1 radio telegraph transmitters and are not equipped with modulators. In addition, there is some flexibility in the type power equipment used with the various transmitters.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc
Power Output:
A1: 75 or 500 w
A2, A3: 250 w
Frequency Control: Master oscillator
Type Emission: A1, A2, A3
Keying Speed:
A1: 100 wpm (maximum)
A2: 50 wpm (maximum)
Modulator Data:
Speech Input: 6 mw level from 600-ohm source
Modulation: 100%
AF Distortion: 10% (maximum)
Gain: 60 db
Output: 400 w
Antenna Data: 80 feet (maximum length outside trunk)
Power Requirements:
Motor Generator 21675: 115-v dc
Motor Generator 21676: 230-v dc
Motor Generator 21677: 440-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Dc Operation:			
1	Magnetic Controller 21666 (115-v)		13-3/8 x 16 x 22-1/2	70
	or			
	Magnetic Controller 21667 (230-v)		13-3/8 x 16 x 22-1/2	70
1	Modulator 50065-A		18 x 24 x 72	385
1	Motor Generator Set 21675 (115-v)		20-5/16 x 20-3/8 x 78-13/16	1,275
	or			
	Motor Generator Set 21676 (230-v)		20-5/16 x 20-3/8 x 78-13/16	1,275

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter 52217 (115-v)		24 x 32 x 72	740
	or			
	Radio Transmitter 52218 (230-v)		24 x 32 x 72	780
	For Ac Operation:			
1	Magnetic Controller 21669		9-3/16 x 16-5/8 x 18-3/4	50
1	Modulator 50065–A		18 x 24 x 72	385
1	Motor Generator Set 21677		20-3/4 x 22-1/8 x 74-21/32	1,255
1	Radio Transmitter 52171		24 x 32 x 72	780

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900388

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For dc operation: 12	169.03	4,076
For ac operation: 11	161.20	3,758

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs–72975, 8 May 1940 NOs–80646, 8 January 1941 NOs–80646, 21 September 1942 NXsr–18237, 1 July 1943 NXsr–38688, 28 September 1943 NXsr–36550, 23 August 1943 NXsr–51573, 14 July 1944	

RADIO TRANSMITTING EQUIPMENT AN/SRT-type

18 November 1958
Cognizant Serv: FSN: 5820-644-0906

TBM-9

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TBM-9 is designed for use on all types of Naval vessels except certain types of submarines.

This equipment is a medium power high frequency transmitter capable of relay keying speeds up to 100 words-per-minute. The modulator unit provides 50 words-per-minute modulated continuous weave transmission. The transmitter power output may be reduced from full power to a minimum of 75 watts for telegraphic signaling by disconnecting the power amplifier.

Either local or remote operation is possible. Remote operation of this equipment is possible by use of a standard 4- or 6-wire control system.

A remote control unit and a radiophone unit are required for use, but are not supplied, with this equipment.

The TBM series is basically similar to the TBK series except that the TBK series are A1 radio telegraph transmitters and are not equipped with modulators. In addition, there is some flexibility in the type power equipment used with the various transmitters.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc
Power Output:
A1: 75 or 500 w
A2, A3: 350 w
Frequency Control: Master oscillator
Emission: A1, A2, A3
Keying Speed:
A1: 100 wpm (maximum)
A2: 50 wpm (maximum)
Modulator Data:
Speech Input: 6 mw level from 600-ohm source
Modulation: 100%
AF Distortion: 10% (maximum)
Gain: 60 db
Output: 400 w
Antenna Data: 80 feet (maximum length outside trunk)
Power Requirements:
Motor Generator 21676: 230-v dc
Motor Generator 21677: 440-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For dc operation:			
1	Magnetic Controller 21667	----------	13-3/8 x 16 x 22-1/2	70
1	Modulator 50065-A	----------	18 x 24 x 72	385
1	Motor Generator Set 21676	----------	20-5/16 x 20-3/8 x 78-13/16	1,275
1	Radio Transmitter 52218	----------	24 x 32 x 72	780
	For ac operation:			
1	Magnetic Controller 21669	----------	9-3/16 x 16-5/8 x 18-3/4	50
1	Modulator 50065-A	----------	18 x 24 x 72	385
1	Motor Generator Set 21677	----------	20-3/4 x 22-1/8 x 74-21/32	1,255
1	Radio Transmitter 52171	----------	24 x 32 x 72	780

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900388

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs
For dc operation: 1	20?.94	4,302
For ac operation: 0	190.54	3,969

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs-72975, 8 May 1940 NOs-80646, 8 January 1941 NOs-80646, 21 September 1942 NXsr-18237, 1 July 1943 NXse-38688, 28 September 1943 NXsr-36550, 23 August 1943 NXsr-51573, 14 July 1944	

RADIO TRANSMITTING EQUIPMENT AN/SRT-type

18 November 1958
Cognizant Serv: FSN:

TBM-11

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TBM–11 is designed for use on all types of Naval vessels except certain types of submarines.

This equipment is a medium power, high frequency transmitter capable of relay keying speeds up to 100 words-per-minute. The modulator unit provides 50 words-per-minute modulated continuous wave telegraph transmission. The transmitter power output may be reduced from full power to a minimum of 75 watts for telegraphic signaling by disconnecting the power amplifier.

Either local or remote operation is possible. Remote operation of this equipment is possible by use of a standard 4- or 6-wire control system.

A remote control unit and a radiophone unit are required for use, but are not supplied, with this equipment.

The TBM series is basically similar to the TBK series except that the TBK series are A1 radio telegraph transmitters and are not equipped with modulators. In addition, there is some flexibility in the type power equipment used with the various transmitters.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc
Power Output:
A1: 75 or 500 w
A2, A3: 350 w
Frequency Control: Master oscillator
Type Emission: A1, A2, A3
Keying Speed:
A1: 100 wpm (maximum)
A2: 50 wpm (maximum)
Modulator Data:
Speech Input: 6 mw level from 600-ohm source
Modulation: 100%
AF Distortion: 10% (maximum)
Gain: 60 db
Output: 400 w
Antenna Data: 80 feet (maximum length outside trunk)
Power Requirements:
Motor Generator 21675: 115-v dc
Motor Generator 21676: 230-v dc
Motor Generator 21677: 440-v 60-cycle 3-phase

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For dc operation			
1	Magnetic Controller 211231 (115-v)		10-3/16 x 15 x 20-1/4	68
	or			
	Magnetic Controller 211232 (230-v)		10-3/16 x 15 x 20-1/4	76
1	Modulator 50065–A		18 x 24 x 72	385
1	Motor Generator Set 21675 (115-v)		20-5/16 x 20-3/8 x 78-3/16	1,275
	or			
	Motor Generator Set 21676 (230-v)			
1	Radio Transmitter 52217 (115-v)		24 x 32 x 72	740

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
	Radio Transmitter 52218 (230-v)		24 x 32 x 72	780
	For ac operation:			
1	Magnetic Controller 211233		6-3/4 x 8-7/32 x 11-9/32	18
1	Modulator 50065–A		18 x 24 x 72	385
1	Motor Generator Set 21677		20-3/4 x 22-1/8 x 74-21/32	1,255
1	Radio Transmitter 52171		24 x 32 x 72	780

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900388

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
11 *for dc operation*	204.1	4,321
11 *for ac operation*	189.6	3,944

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs–72975, 8 May 1940 NOs–80646, 8 January 1941 NOs–80646, 21 September 1942 NXsr–18237, 1 July 1943 NXsr–38688, 28 September 1943 NXsr–36550, 23 August 1943 NXsr–51573, 14 July 1944	

RADIO TRANSMITTING EQUIPMENT AN/SRT-type

18 November 1958
Cognizant Serv: FSN:

TBM-12

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TBM–12 is designed for use on all types of Naval vessels except certain types of submarines.

This equipment is a medium power, high frequency transmitter capable of relay keying speeds up to 100 words-per-minute. The modulator unit provides 50 words-per-minute modulated continuous wave transmission. The transmitter power output may be reduced from full power to a minimum of 75 watts for telegraphic signaling by disconnecting the power amplifier.

Either local or remote operation is possible. Remote operation of this equipment is possible by use of a standard 4- or 6-wire control system.

A remote control unit and a radiophone unit are required for use, but are not supplied with this equipment.

The TBM series is basically similar to the TBK series except that the TBK series are A1 radio telegraph transmitters and are not equipped with modulators. In addition, there is some flexibility in the type power equipment used with the various transmitters.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc
Power Output:
A1: 75 or 500 w
A2, A3: 350 w
Frequency Control: Master oscillator
Type Emission: A1, A2, A3
Keying Speed:
A1: 100 wpm (maximum)
A2: 50 wpm (maximum)
Modulator Data:
Speech Input: 6 mw level from 600-ohm source
Modulation: 100%
AF Distortion: 10% (maximum)
Gain: 60 db
Output: 400 w
Antenna Data: 80 feet (maximum) length outside trunk)
Power Requirements: 230-v dc (Motor Generator 21676)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Magnetic Controller 211232	----------	10-13/32 x 15 x 20-1/4	68
1	Modulator 50065–B	----------	18 x 24 x 72	385
1	Motor Generator Set 21676	----------	20-1/4 x 20-1/4 x 78-13/16	5,225
1	Radio Transmitter 52218	----------	24 x 32 x 72	780

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900763

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
10	138.55	3,962

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NXsr-65327, 20 June 1944	

18 November 1958
Cognizant Serv: USN FSN:

TBN-3

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Transmitting Equipment TBN-3 is a combined intermediate and high frequency equipment designed for shipboard installation. It consists of a 500-watt high frequency unit for continuous wave and modulated continuous wave telegraph and telephone transmission plus a 1,000-watt intermediate frequency transmitter for continuous wave and modulated continuous wave telegraph transmission. Suitable switching facilities are provided to permit alternate operation of either transmitter unit from a common rectifier unit.

The TBN-3 is supplied with single channel speech input equipment making it possible to connect the component units together to form a remote telephone operation of one high frequency transmitter. The transmitter units may be controlled and keyed using the Navy standard 4-wire remote control system using Remote Control Unit 23005 when provided. Provisions are made in the high frequency transmitter unit for low power operation with a nominal output of 75 watts in the frequency range of 2,000 to 9,050 kilocycles for continuous wave and modulated continuous wave telegraphic signalling.

Transmitting Equipment TBN-3 is similar to other models of the TBN series. Some models are used aboard ship, while others are used at shore stations. The major difference is that some models use rectifier units while the others operate from motor generators.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Intermediate: 300 to 2,000 kc
High: 2,000 to 18,100 kc

Power Output:
Intermediate Frequency: 1,000 w
High Frequency: 500 w

Type Emission:
Intermediate Frequency: A1, A2
High Frequency: A1, A2, A3

Frequency Control: Master oscillator

Keying Speed (High Frequency Transmitter): 100 wpm

Power Requirements: 440-v (±5%) 60-cycle (±2%) 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Rectifier-Modulator Unit 20033	----------	24 x 38 x 72	1,460
1	High Frequency Transmitter Unit 52048	----------	24 x 32 x 72	748
1	Intermediate Transmitter Unit 52046	----------	24 x 32 x 72	626
1	Single Channel speech input equipment consisting of:			
1	Master Monitor Unit 23072	----------	11-3/4 x 12-1/4 x 13-7/8	45
1	Telegraph Power Unit 20039	----------	12-3/8 x 13-3/8 x 15-5/8	85
1	Station Control Unit 23070	----------	8-1/2 x 10 x 20-5/16	38

AN/SRT-type TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Chicopee Falls, Mass.	NOs-38614, 9 October 1934	

RADIO TELEGRAPH TRANSMITTING EQUIPMENT AN/SRT-type

4 December 1958
Cognizant Serv: USN FSN: TBU

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16-Q-315376-200	--

(See Illustration: TBU-1, p. 633)

FUNCTIONAL DESCRIPTION:

Radio Telegraph Transmitting Equipment TBU is primarily designed for use on all larger types of surface vessels where a medium frequency, medium power transmitter is desired. Frequency is continuously variable throughout the specified range. The transmitter may be operated from the front panel or from a remote location by use of Navy standard four- or six-wire remote control unit.

The TBU is identical with the TBU-1 and TBU-3 models except that the latter two have been adapted for shore installations by the addition of duplicate motor-generator sets and a land line control unit.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 to 2,000 kc
Type of Signal: Cw, mcw
Keying Data: Relay keying, 100 wpm max speed
Nominal Power Output:
Cw: 1,000 w
Mcw: 500 w
Frequency Control: Master oscillator
Power Supply Equipment: Motor generator
Power Requirements: 220/440-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Magnetic Controller CAY-21695	----------	18-29/32 x 16-5/8 x 9-3/16	50
1	Motor Generator Unit CAY-21448	----------	22-1/8 x 74-21/32 x 20-3/4	1,185
1	Radio Transmitter CAY-52223	----------	72 x 34 x 24	769

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,384

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
15	158.10	4,087

AN/SRT-type RADIO TELEGRAPH TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric Mfg. Co.	Baltimore, Md.	NOs-66593, 9 May 1939 NOs-82338 24 Feb 1941	$12,500.00 including spares

AN/SRT-type RADIO TELEGRAPH TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric Mfg. Co.	Baltimore, Md.	NOs-66593, 9 May 1939 NOs-82338 24 Feb 1941	$12,500.00 including spares

RADIO TELEGRAPH TRANSMITTING EQUIPMENT AN/SRT-type

4 December 1958
Cognizant Serv: USN FSN: TBU–2

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	115-v dc: F16–Q–315415–200 230-v dc: F16–Q–315425–200	--

(See Illustration: TBU–1, p. 633)

FUNCTIONAL DESCRIPTION:

Radio Telegraph Transmitting Equipment TBU–2 is primarily designed for use on all larger types of surface vessels where a medium frequency, medium power transmitter is desired. Frequency is continuously variable throughout the specified range. The transmitter may be operated from the front panel or from a remote location by use of a Navy standard four or six wire remote control unit.

Radio Telegraph Transmitting Equipment TBU–2 is identical to TBU–1 and TBU–3 models except that the latter two have been adapted for shore installations by the addition of duplicate motor-generator sets and a land line control unit.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 to 2,000 kc
Type of Signal: Cw, mcw
Keying Data: Relay keying, 100 wpm max speed
Nominal Power Output:
Cw: 1,000 w
Mcw: 500 w
Frequency Control: Master oscillator
Power Supply Equipment: Motor-generator
Power Requirements: 220/440-v 60-cycle 3-phase; 115/230-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Magnetic Controller CAY–21695	----------	18-29/32 x 16-5/8 x 9-3/16	50
1	Motor Generator Unit CAY–21448	----------	22-1/8 x 74-21/32 x 20-3/4	1,185
1	Radio Transmitter CAY–52223	----------	72 x 34 x 24	769

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,384

AN/SRT-type RADIO TELEGRAPH TRANSMITTING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	105.32	2,672

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric Mfg. Co.	Baltimore, Md.	NOs-66593, 9 May 1939 NOs-82338, 24 Feb 1941	$12,500.00 including spares

RADIO TRANSMITTING EQUIPMENT AN/SRT-type

5 December 1958
Cognizant Serv: USN FSN: TCJ, TCJ-1

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TCJ and TCJ-1 are designed for use in certain types of submarines, destroyers, cruisers, or in other applications requiring similar radio equipments. Model TCJ-1 may also be used for shore station service. These equipments are designed to effect communication with precision, speed, and reliability without the necessity of preliminary calling and without causing interference with other units in the same frequency band.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 to 600 kc
Type of Signal: Cw and mcw
Power Requirements: 115/230-v dc; or 220-v ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	*TCJ-1:*			
	Ship Operation:			
1	Magnetic Controller Unit 21629		8-13/16 x 19-15/16 x 20-7/8	40
1	Motor-generator Set 21765		11-1/4 x 14 1/8 x 34-15/16	267
1	Radio Transmitter Unit 52243		18-1/4 x 25 x 52-3/8	285
	Shore operation:			
1	Land Line Control Unit 23269		15-3/4 x 24 x 42-1/8	160
1	Magnetic Controller Unit 21627 (115-v dc)		13-11/16 x 19-7/16 x 29-3/16	130
1	Magnetic Controller Unit 21628 (230-v dc)			
	or			
1	Radio Transmitter Unit 52243 (220-v ac)		18-1/4 x 25 x 52-3/8	285
2	Magnetic Controller Unit 21629		8-14/16 x 19-15/16 x 20-7/8	40
2	Motor-generator Set 21765		11-1/4 x 14-1/8 x 34-15/16	320
1	Motor-generator Set 21764 (115-v dc)		11-1/4 x 14-1/8 x 38-5/8	328
	or			
1	Motor-generator Set 21798 (230-v dc)			
1	Power Transfer Switch 24092		9-1/4 x 12-1/4 x 16	14

AN/SRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter Unit 52242 (115-v dc)	----------	18-1/4 x 25 x 52-3/8	275
	or			
1	Radio Transmitter Unit 52257 (230-v dc)			

REFERENCE DATA AND LITERATURE:

NAVSHIPS-900,402–1B

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	NOs–97255, 9 Oct 1944	$8,200.00 including equipment spares

PORTABLE EMERGENCY RADIO TRANSMITTING EQUIPMENT AN/SRT-type

5 December 1958
Cognizant Serv: USN FSN: TCY, TCY–1

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	--	TCY: 16–Q–327825–200 TCY–1: 16–Q–327845–200	--



FUNCTIONAL DESCRIPTION:

Radio Transmitters TCY and TCY–1 are portable emergency sets designed for operation in lifeboats, life rafts, and on shipboard. The equipment is capable of transmitting SOS interspersed with 10-second dashes (automatically) to furnish radio bearings, or it may be keyed manually for transmission.

TECHNICAL CHARACTERISTICS:

Frequency Range: 500 kc ±5%

Type of Reception: A2, modulated in excess of 70% at 1,000 cps

Frequency Control: Master oscillator

Nominal Power Output: 5 w

Duration of Operation: 48 periodic operations (approx 2 minutes ea), or 1-1/2 hour continuous keying

Power Source Required: 90 w at 6 v dc

Power Supply Equipment: Storage battery and vibrator packs

AN/SRT-type PORTABLE EMERGENCY RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For TCY:			
1	Antenna Materials Kit			
1 set	Equipment Spares			
1	Radio Transmitter 52236	----------	16-1/4 x 21-1/4 x 9-3/8	60
	For TCY–1:			
1	Antenna Materials Kit			
1 set	Equipment Spares			
1	Radio Transmitter 52236–A	----------	16-1/4 x 21-1/4 x 9-3/8	60

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95324

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	18.35	145

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: BuShips

SPEC &/or DWG: EN 28/3210–43/Ships
EN 28/2658–43/NSA
EN 28/2944–43/Ships

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Corp.	Newark, N. J.	NXsr–46043	$462.00

RADIO TELEGRAPH TRANSMITTING EQUIPMENT AN/SRT-type

5 December 1958
Cognizant Serv: USN FSN: TDA

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16–Q–329265–200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Telegraph Transmitting Equipment TDA is a compact, medium power transmitter designed for shipboard use in effecting ship-to-shore and ship-to-ship transmission. It employs a master oscillator frequency control but is arranged so that crystal units may be easily installed.

TECHNICAL CHARACTERISTICS:

Frequency Range: 355 to 550 kc

Frequency Control: Master oscillator
Type Emission: A1, A2
Power Output: 200 w
Keying Speed:
A1: 100 wpm
A2: 50 wpm
Power Requirements: 1,210 w, 115-v dc
Antenna Type: Any antenna with capacitance between 500 and 1,500 micromicrofarads and resistance of 4 to 10 ohms

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Motor-Generator Set CRM–ET–8010	----------	15 x 28 x 11	210
1	Radio Transmitter CRM–ET–8010–C	----------	45-3/16 x 17-3/4 x 29	175

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/SRT-type RADIO TELEGRAPH TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

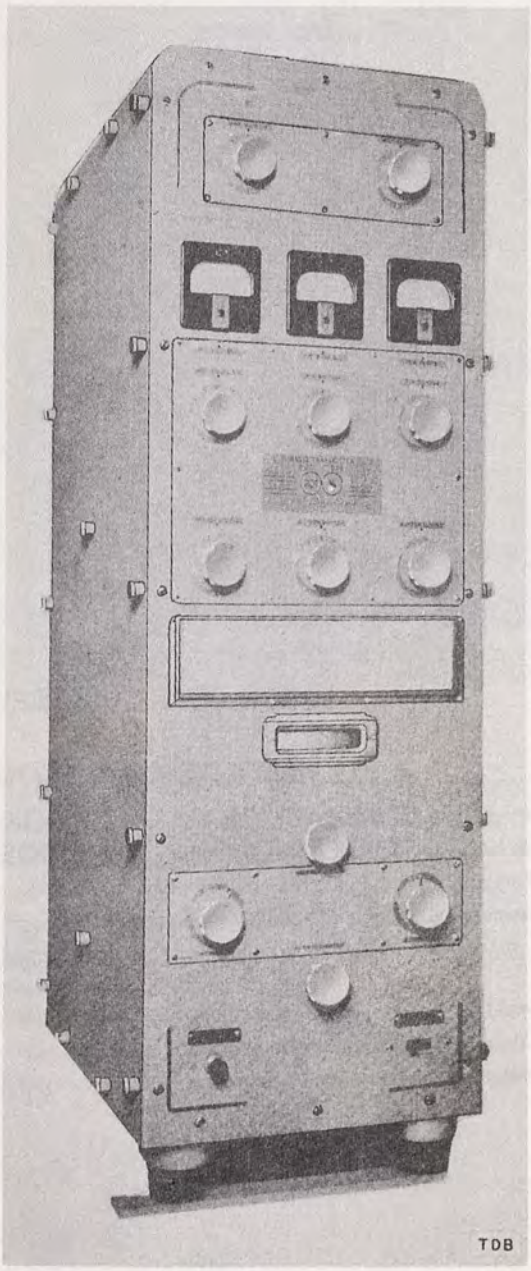
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.		

RADIO TELEGRAPH TRANSMITTING EQUIPMENT AN/SRT-type

5 December 1958
Cognizant Serv: USN FSN: TDB

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



TDB

FUNCTIONAL DESCRIPTION:

Radio Telegraph Transmitting Equipment TDB is a high-frequency radiotelegraph transmitter designed primarily for marine applications to provide A1 and A2 emission in the frequency range of 2,000 to 22,140 kilocycles. It can be crystal controlled with a maximum of ten quartz crystals that may be installed. This equipment also has provision, by means of front panel adjustments, to cover continuously the frequency range for which it is designed.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 22,140 kc in 4 bands
Type Emission: A1, A2
Power Output (A2): 200 w between 2,000 and 17,000 kc, 150 w above 17,000 kc
Frequency Control: Crystal or dial
Modulation Data (A2):
Frequency: 500-cycle
Percentage: 70%
Frequency Tolerance:
Master Oscillator Operation: ±.05%
Crystal-Control Operation: ±.02%
Power Requirements: 1,300 w, 110/230-v dc
Antenna Type: 30 to 40 feet vertical wire for low frequencies; ships main antenna for higher frequencies

AN/SRT-type RADIO TELEGRAPH TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Unit ET–8019			
1	Filter Type 20			
1	Motor Generator ET–8010			
1	Motor Starter CR–4052–Y1			
1	Radio Telegraph Transmitter TDB	----------	12-1/4 x 19-1/4 x 45-3/16	150
1	Switch, Antenna Transfer ATS–7			
1	Telegraph Key CQ			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

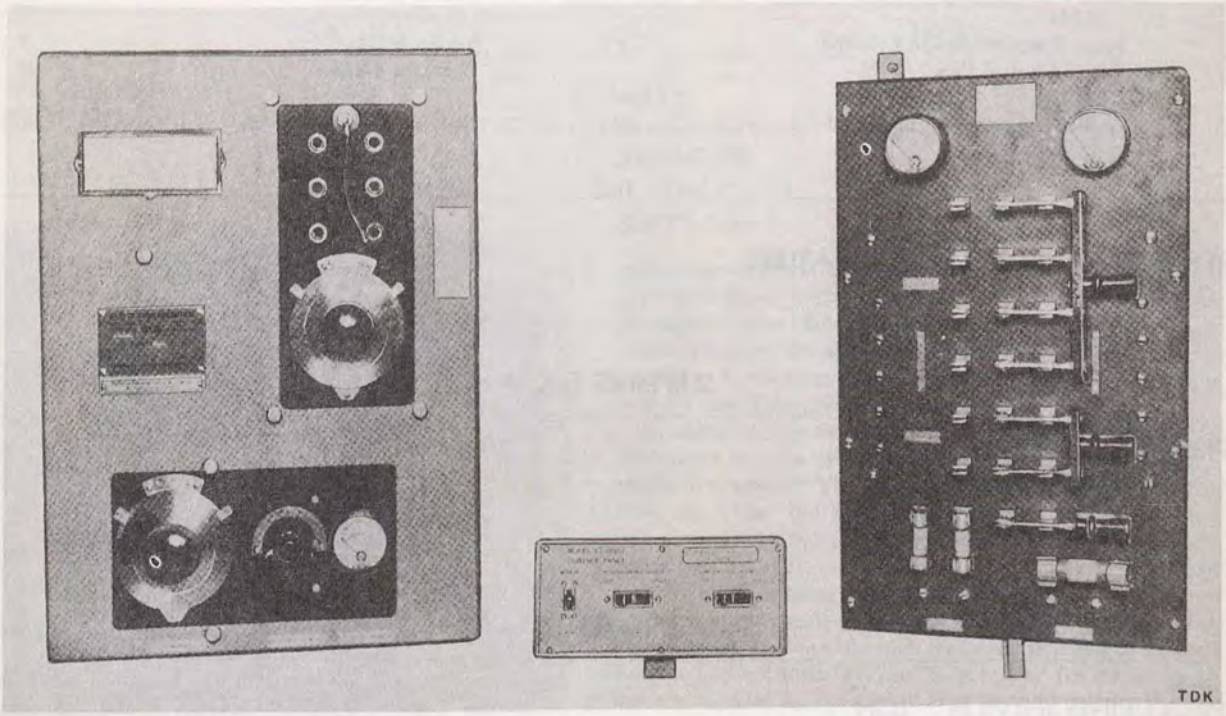
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.	----	$3,000.00 including equipment spares

EMERGENCY RADIO TELEGRAPH EQUIPMENT AN/SRT-type

1 July 1958
Cognizant Serv: USN FSN: 5820–189–7027 TDK

	USA	USN	USAF
TYPE CLASS:	Used by	L/Std	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Emergency Radio Telegraph Transmitter TDK is AM (mcw) equipment for emergency mf transmission aboard ship. It provides a high degree of reliability, together with simplified operation and minimum drain from the power-supply circuits.

This transmitter uses a simple self-excited oscillator for frequency control.

It will operate from 115-volt dc or 12-volt storage battery power sources. When it is used only for emergency service from a 12-volt battery, no connections are needed to the 115-volt motor; but 115-volt dc must be connected to the power control panel for battery charging.

This transmitter is essentially the same as Radio Transmitter AN/SRT–2.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.355 to 0.50
Type Modulation: AM
Type Signal: Mcw
Power Output: 30w into a 750-$\mu\mu$f, 4-ohm antenna
Power Requirements: 45 amp at 12-v dc; or 4 amp at 110–115-v dc

AN/SRT-type EMERGENCY RADIO TELEGRAPH EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Unit CRM–23309	----------	4 x 9-1/8 x 5	4.(
1	Motor Generator Set CBP–21864	----------	9-1/8 x 30 x 7-3/4	130
1	Plate Transformer CAY–30882	----------	5 x 5 x 5-3/4	8.(
1	Power Control Panel CRM–23310	----------	19 x 12 x 8-3/8	25
1	Radio Transmitter Unit CRM–52269	----------	20-1/8 x 15-1/8 x 7-1/2	26

REFERENCE DATA AND LITERATURE:
TM 11–831

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:
DESIGN COG: USN, BuShips

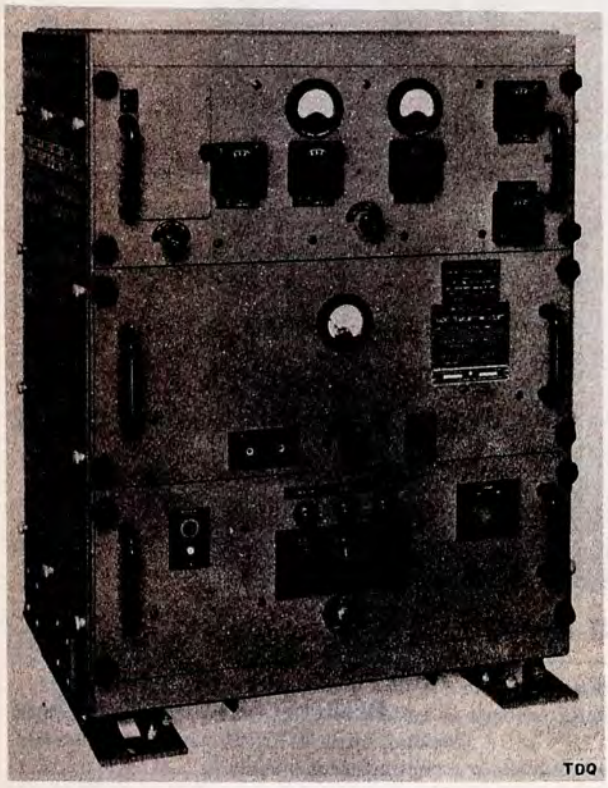
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.		

VHF RADIO TRANSMITTING EQUIPMENT AN/SRT-type

9 October 1958

Cognizant Serv: USN FSN: 115-v Ac, 5820-644-0864 TDQ
5820-665-3715 (with equipment spares)
230-v Ac, 5820-665-3530
5820-644-4875 (with equipment spares)
440-v Ac, 5820-644-0870
5820-665-3707 (with equipment spares)
115-/230-v Dc, 5820-644-0877
5820-665-1098 (with equipment spares)

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	115-v Dc: F16-Q-336585-200 230-v Dc: F16-Q-336575-200	--



FUNCTIONAL DESCRIPTION:

VHF Radio Transmitting Equipment TDQ is a low-powered, general purpose radio transmitter operating in the VHF band from a fixed, vertically polarized, half-wave antenna. It can be operated locally or from a remote location by a four- or six-wire remote control unit. Keying speeds up to 40 words per minute are possible.

The transmitter is designed primarily for shipboard installation and can be operated from any of the usual ship's power sources. It is used for ship-to-shore, ground-to-air, or point-to-point communication. Signals can be received by any amplitude-modulated receiver with the same frequency coverage. In addition, Navy field change No. 4 has converted the equipment to extend the audio-frequency response and to permit operation in conjunction with Portable Carrier Control System UF and Telephone Terminal CF-1-A.

Crystals for any four frequencies within the range of the equipment may be used and selected as desired by a switch on the transmitter. The transmitter must be returned, however, each time the frequency is changed. In installations where rapid variation of transmission from one frequency to another or simultaneous transmission on different frequencies is desired, two or more equipments must be used.

The radio transmitter consists of a radio-frequency unit, a modulator, and a power unit contained in a single cabinet. Remote Control Unit 23172 or 23211 and an RF transmission line are required for the operation of the equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 115 to 156
Frequency Control: Crystal
Type Signal: AM
Type Transmission: Mcw, voice
Type Keying: Relay
Keying Speed: 40 wpm
RF Transmission Line:
RG-10/U: For distances of less than 100 ft
RG-18/U: For distances over 100
Power Output: 45 w
Power Requirements:
Ac Operation:
2.6 amp (starting), 6.8 amp (operating), 115-v 60-cycle 1-phase ac
1.23 amp (starting), 3.5 amp (operating), 230-v, 60-cycle 1-phase ac
.75 amp (starting), 1.8 amp (operating) at 440-v, 60-cycle 3-phase ac
Dc Operation:
50 amp (starting), 13 amp (operating) at 115-v dc 25 amp (starting), 6.5 amp (operating) at 230-v dc

AN/SRT-type VHF RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly 66095		24-1/2 x 46-1/2 x 4-3/4	17
1	Line Transformer 30984 (for 440-v ac operation)		13-3/4 x 11 x 9	57
1	Microphone 51004C		2-7/16 x 2-1/8 x 1-5/16	0.5
1	Motor Generator:			
	211092 (for 115-v dc operation)		11-3/4 x 27-3/8 x 13-3/8	210
	211093 (for 230-v dc operation)		11-3/4 x 27-3/8 x 13-3/8	210
1	Motor Starter:			
	211090 (for 115-v dc operation)		21 x 17-3/8 x 13	16
	211091 (for 230-v dc operation)		21 x 17-3/8 x 13	16
1	Radio Transmitter 52328		32-1/4 x 25-1/4 x 18-3/8	283

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,474

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	42.5	908

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips

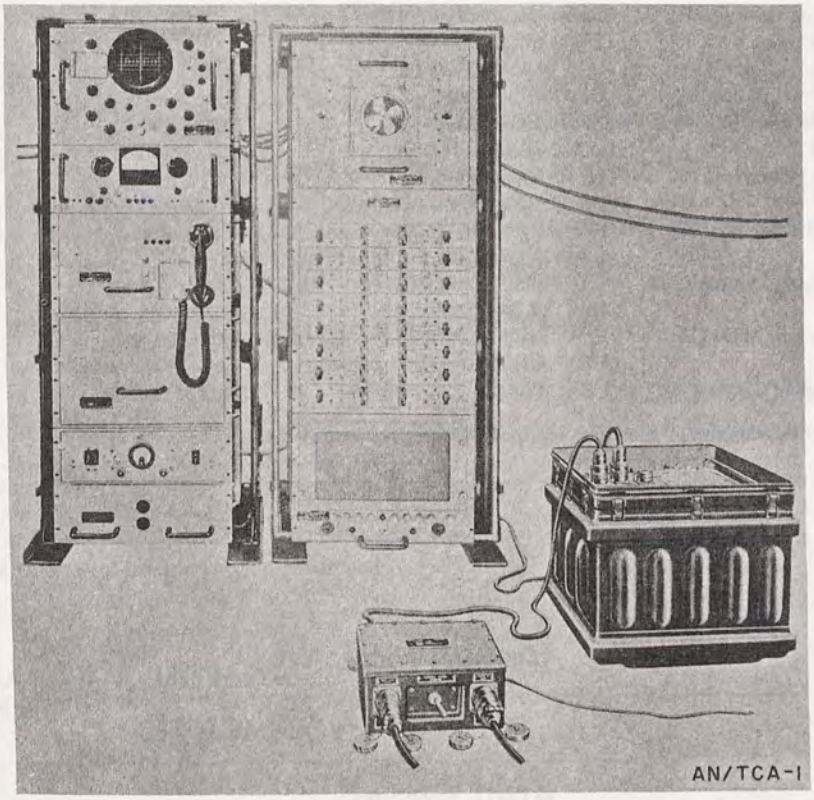
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division of Radio Corp. of America	Camden, N. J.	NXss-29644, 17 May 1943	$3,500 with equipment spares

MULTIPLEXER GROUP AN/TCA-1

1 July 1958
Cognizant Serv: USA FSN: 5805-309-3342

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2Z6823-2	--	--



FUNCTIONAL DESCRIPTION:

Multiplexer Group AN/TCA-1 is used as a drop and insert terminal at a microwave repeater station in systems using Multiplexer Sets AN/TCC-13 at its terminals.

The AN/TCA-1 provides eight independent vf channels for use in the area of the repeater station at which it is installed. Each of the eight channels can be dropped for local use or passed through the system without change. It also restores the 23- or 45-channel video pulse train from the microwave radio receiver into a standard wave shape before it is fed into the microwave radio transmitter.

This equipment is part of Radio Repeater Set AN/TRC-41.

TECHNICAL CHARACTERISTICS:

Facilities Required: Radio Set AN/TRC-29 or equivalent

Facilities Provided: Restores pulse train of 23- or 45-channel voice system, and allows up to 8 drop-and-insert voice channels

Type of Signal: Pulse position, time-division multiplex

Frequency (Each vf channel):

Modulating Bandwidth: 300 to 3,500 cps

Signaling: 20 cps

Video Signal Characteristics:

Pulse Rate: 192 kc

Pulse Width: 0.6 microsecond

Bandwidth: 1 mc

Power Requirements: 1.1 kw, 115/230-v (±10%) 47.3-63-cycle ac

AN/TCA-1 MULTIPLEXER GROUP

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Monitor C–1151/TC	(FSN) 5805–503–3288 (USA) 2C684–1151	19 x 19 x 10-1/2	
1	Electrical Equipment Rack MT–1433/TCA–1	(FSN) 5805–503–3459 (USA) 2Z7383–1433		
2	Electrical Standardized Components Case CY–1280/U	(FSN) 5805–333–9806 (USA) 6F300–1280	26-1/2 x 27 x 60	*515 *534
1	Multiplexer Subassembly MX–1442/TC	(FSN) 5805–395–9412 (USA) 4B2137–1442	19 x 17-1/4 x 8-1/2	
1	Power Supply PP–691/G	(FSN) 5805–548–1669 (USA) 3H4497–691	19 x 19 x 12	123
1	Pulse Form Restorer TD–68/G	(FSN) 5820–510–1600 (USA) 2C5620–68	22-3/4 x 19 x 15-5/8	
2	Remote Switching Control C–1509/TC	(FSN) 5805–503–1103 (USA) 2C684–1509	4-1/2 x 2-3/4 x 5-1/2	
16	Telephone Modem MD–179/TC	(FSN) 5805–503–1065 (USA) 4B1925B–179	16 x 2-1/2 x 8-1/2	5.5
1	Voltage Regulator CN–236/G	(USA) 3H4498–236	23 x 17-1/2 x 19-1/2	215

* Weights of cases are total weights of case plus equipment normally installed therein.

REFERENCE DATA AND LITERATURE:

TM 11–2141
TM 11–2682

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	159.5	2,576

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: MIL–R–14267

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
International Telephone & Telegraph Corp., Federal Radio & Telephone Division	Clifton, N. J	43018–P–56–55	$17,539.00

AUDIO FREQUENCY AMPLIFIER AN/TCA-type

5 December 1958
Cognizant Serv: USN FSN: CW-50101

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16-A-28090-6957	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Audio Frequency Amplifier CW-50101 is a two-stage vacuum tube amplifier used to raise the signal level in telephone and telegraph communication circuits. It is used as a part of Carrier Control System UN.

TECHNICAL CHARACTERISTICS:

Frequency Range in Cycles: 300 to 10,000
Amplifier Gain: −10 db to +50 db
Output Power Level: 1 w
Input and Output Impedances: 600 ohms
Power Requirements: 125 w, 105- to 125-v, 50 to 60 cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Audio Frequency Amplifier CW-50101	----------	10-1/2 x 19 x 10	65

(This equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,591

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5.8	130

AN/TCA-type AUDIO FREQUENCY AMPLIFIER

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShip

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co., Inc.	New York, N. Y.	NXsr-83392, 13 February 1945 NObsr-39293, 23 June 1947	$215.00 with spares

DEMODULATOR AN/TCA-type

5 December 1958
Cognizant Serv: USN FSN: CW–50124

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16–A–4691	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Demodulator CW–50124 is used to convert the modulated carrier current, obtained at the receiving end of a carrier telegraph channel, into pulses of direct current or voltage suitable for operating telegraph recording equipment.

The direct current signals obtained from the demodulator are suitable for operating a telegraph recorder, teletypewriter arranged for 20 milliampere polar operation, a relay-operated keying circuit for a radio transmitter, the direct keying of a radio transmitter, or for the receiving relay of Teletypewriter Repeater Equipment PM. The CW–50124 is also part of Carrier Control System UN.

TECHNICAL CHARACTERISTICS:

Frequency Range in Cycles: 425 to 4,675 with optimum operation above 1,000

Reception: A1

Signal Input: Sine wave carrier, 100% modulated with unbiased telegraph signals

Signal Input Level: From −10 dbm to 0 dbm with optimum level of −6 dbm (reference level of 0 dbm is equivalent to 1 mw input)

Keying Speed:

Carrier Frequencies Above 1,000 cps: Up to 180 dot-cycles per second

Carrier Frequencies Below 1,000 cps: Up to 140 dot-cycles per second

Input Impedance: 500 ohms

Output Impedance: 1,800 ohms

Mounting Data: The demodulator is designed for mounting in a standard 19-inch relay rack

Power Requirements: 100 w, 105- to 125-v, 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Demodulator CW–50124	----------	10-1/2 x 19 x 10	60
1 set	Equipment spares			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,816

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.6	125

AN/TCA-type DEMODULATOR

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co., Inc.	New York, N. Y.	NXsr–83392, 13 February 1945	$600.00 without spares

MULTIPLEXER AN/TCA-type

5 December 1958
Cognizant Serv: USN FSN: TD–159/U

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Multiplexer TD–159/U is designed to multiplex the maximum of four audio channels and a synchronization channel into one video channel. To accomplish this, pulse position modulation (ppm) is used for the video channel. This ppm-video channel is intended to amplitude modulate a radio transmitter, and to demultiplex and to demodulate similar ppm and am. video information into four outgoing audio channels.

TECHNICAL CHARACTERISTICS:

Input Channel:
Audio Channel:
Band Width: 3,200 cycles
Impedance: 600 ohms
Frequency Range: 300 to 3,500 cycles
Video Channel:
Band Width: 3-1/2 x 4-1/2 mc
Impedance: 91 ohms
Frequency Range: 0 to 4-1/2 mc
Output:
Audio:
Band Width: 3,200 cycles
Impedance: 600 ohms
Frequency Range: 300 to 3,500 cycles
Video:
Band Width: 3-1/2 to 4-1/2 mc
Impedance: 91 ohms
Frequency Range: 0 to 4-1/2 mc
Power Requirements: 115-v 400-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Multiplexer TD–159/U	----------	10 x 13 x 22	

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/TCA-type MULTIPLEXER

PROCUREMENT DATA

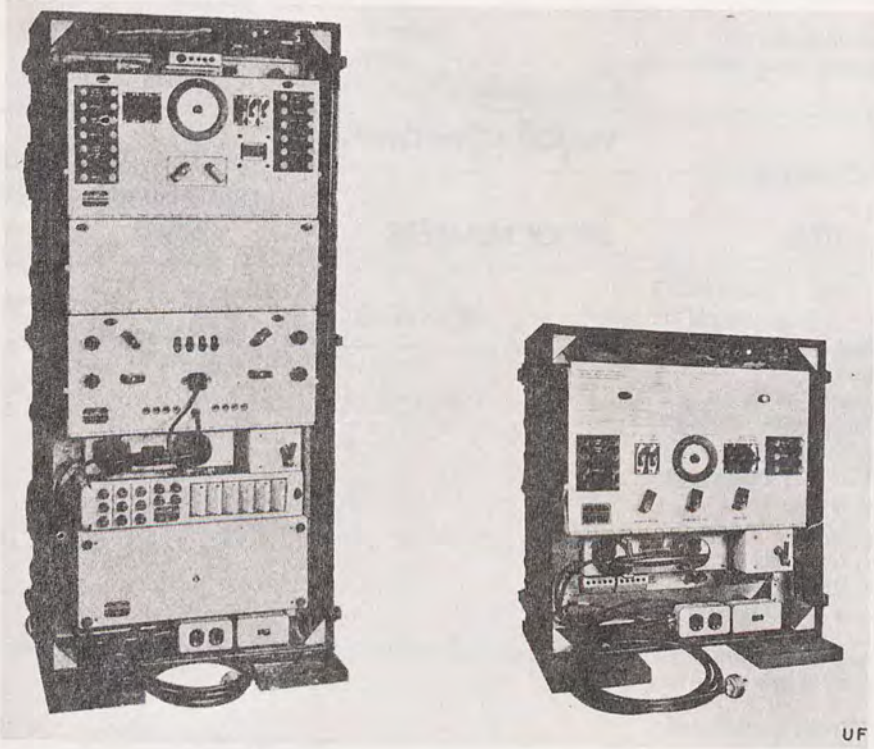
PROCURING SERVICE: USN, BuShips
DESIGN COG: USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Raytheon Manufacturing Co.	Waltham, Mass.	NObsr–63079	

PORTABLE CARRIER CONTROL SYSTEM AN/TCA-type

28 October 1958
Cognizant Serv: USN FSN: 5820-665-1928 (with equipment spares) UF

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-341095-200	--



FUNCTIONAL DESCRIPTION:

Portable Carrier Control System UF is used in multichannel carrier telegraph operation over land lines or radio links. It converts dc telegraph or teletypewriter signals into voice frequencies for transmission over the wire line or radio link, and reconverts the ac signals to dc signals.

The system consists of four Line Terminal Equipments UG and two Radio-Line Terminal Equipments UH. The UG is the carrier telegraph terminal equipment for the system, and the UH is the radio and line amplifier equipment for the radio link. For operation over a radio link, these six units and the necessary radio transmitting and receiving equipment for two radio channels (one for each direction of transmission) provide four two-way telegraph circuits.

Either duplex or half-duplex operation may be used; either is capable of handling manual telegraph or teletypewriter and automatic tape-recorded transmission. Operation may be on either a neutral or polar basis, depending upon the type of communication equipment used with the UF.

For use when a land line is practicable, the line terminal equipment at opposite ends of a system may be directly connected by either a two- or four-wire line having an equivalent loss of not more than 25 decibles. When operation over radio links is desired, two radio terminal units are required, one at either end of the system. Typical radio communication equipment with which the UF will operate are Radio Set AN/TRC-1, Radio Transmitter BC-640-B and Radio Receiver BC-639-A, Radio Transmitter TDQ and Radio Receiver RCK, and High-Frequency Radiotelephone Transmitting Equipment TGD and High-Frequency Radio Receiving Equipment RBQ.

TECHNICAL CHARACTERISTICS:

Operating Frequencies:
Low: 595, 765, 935, 1,105 cps
High: 1,445, 1,614, 1,785, 1,955 cps
Type Modulation: AM
Type Ringing: 20-cycle

AN/TCA-type PORTABLE CARRIER CONTROL SYSTEM

Transmission Speed:
Teletypewriter: 60 wpm
Automatic Tape Keyer and Recorder: 100 wpm
Radio Link Range: 15 to 40 miles
Load Circuit Range: 1/4 mile (max) length of field wire
Line Circuit Ranges:
Between Two UG Line Terminals: 6 to 16 miles
Between UG and UH Line Terminals: 5 miles
Between UH Line Terminal and Transmitter or Receiver: 500 feet
Radio Frequency Range: 30 to 300 mc
Telegraph Carrier Frequency Band: 500 to 2,050 cps
Output Level, UG Line Terminal: 0 dbm per telegraph circuit
Input Level to Transmitter: −25 dbm and +10 dbm for single telegraph carrier frequency
Output Level From Radio Receiver: −10 dbm and +10 dbm for single telegraph carrier frequency
Terminating Impedances:
UG and UH: 600 ohms
Radio Transmitter: 50, 200, or 600 ohms
Radio Receiver: 600 ohms
Power Requirements: 15 w (UH), 135 w (UG), 103- to 126/207- to 253-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Accessories			
4	Line Terminal Equipment UG, consisting of:	----------	49-1/2 x 24-1/4 x 17-1/8	373
1	Fuse Panel Unit 28016			
1	Line Control Unit 23426			
1	Load Control Unit 50177			
1	Rectifier Power Unit 20290			
1	Telephone Unit 51068			
2	Radio-Line Terminal Equipment UH, consisting of:	----------	24-1/4 x 23-7/8 x 17-1/8	163
1	Control Unit 23427			
1	Telephone Unit 51068			

Note: One set of equipment spares (seven boxes) furnished for 10 UF systems. Spare tubes, relays, fuses, and fuseholders are attached to equipment panels in the cabinets.

Equipment spares, consisting of:			
Box 1	----------	36-3/16 x 25-3/4 x 17-3/4	276
Box 2	----------	36-1/16 x 25-3/4 x 17-3/4	228
Box 3	----------	36-1/16 x 25-3/4 x 17-3/4	239
Box 4	----------	36-1/16 x 25-3/4 x 17-3/4	199
Box 5	----------	36-1/16 x 25-3/4 x 17-3/4	208
Box 6	----------	36-1/16 x 25-3/4 x 17-3/4	236
Box 7	----------	36-1/16 x 25-3/4 x 17-3/4	252

Note. Eight boxes of ground rods furnished for 10 UF systems.

8 Rods (2 per UG)	----------	20-1/4 x 1/2 dia
8 Rods (2 per UG)	----------	20-1/2 x 1/2 dia
8 Rods (4 per UH)	----------	46-1/2 x 1/2 dia
8 Rods (4 per UH)	----------	46-0/2 x 1/2 dia

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,223

PORTABLE CARRIER CONTROL SYSTEM AN/TCA-type

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For one UF system		
2	36	1,083
For ten UF systems		
35	1,851	14,017

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

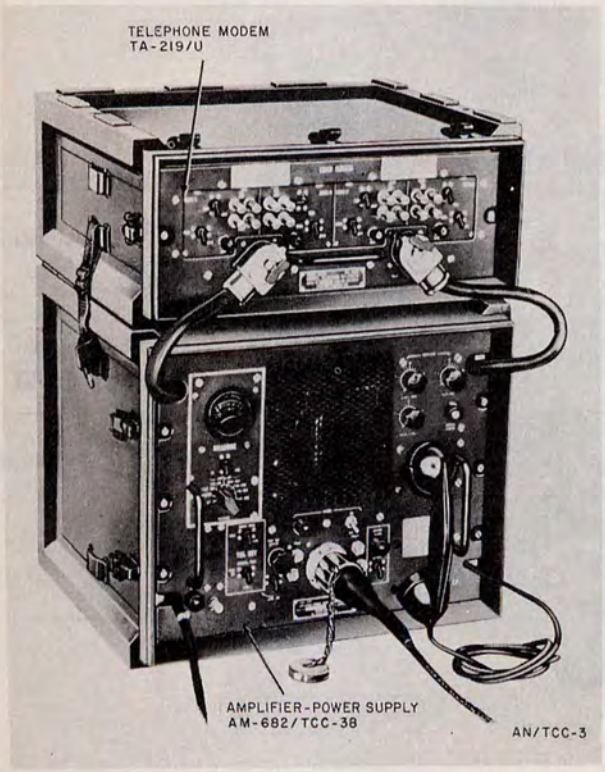
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	NXsr–41001 25 October 1945 NXsr–85031 N5sr–5495	$13,000 with equipment spares

TELEPHONE TERMINAL AN/TCC-3

1 July 1958
Cognizant Serv: USA FSN: 5805-503-2648

	USA	USN	USAF
TYPE CLASS:	Std		Std
STOCK NO:	4B8364-2		



FUNCTIONAL DESCRIPTION:

Telephone Terminal AN/TCC-3 is a four-channel carrier telephone terminal set used to provide four traffic channels and one order-wire channel over loaded spiral-four cable. It can also be used to carry a single wide-band special-service channel.

This equipment consists essentially of a telephone modem unit and an amplifier power supply.

This set is the major component of Telephone Terminal AN/TCC-23. It also is used in multiple combinations in Telephone Terminal AN/TCC-7.

TECHNICAL CHARACTERISTICS:

Facilities Required: Loaded spiral-four cable or equivalent four-wire facilities

Facilities Provided: Four vf traffic channels plus one order-wire channel; or one wide-band channel plus one order-wire channel

Channel Carrier Frequency:
Channel 1: 8 kc
Channel 2: 12 kc
Channel 3: 16 kc
Channel 4: 20 kc

Frequency Band:
Order wire: 300 to 3,100 cps
Channel 1: 4,500 to 7,700 cps
Channel 2: 8,500 to 11,700 cps
Channel 3: 12,500 to 15,700 cps
Channel 4: 16,500 to 19,700 cps

Type Modulation: AM; lower sideband of each channel

Type Ringing: 1,600 cps

Power Requirements: 125 w, 115/230-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Amplifier Power Supply AM-682/TCC-3	4B107	9-1/8 x 18-1/16 x 20-5/8	73
1	Telephone Modem TA-219/U	4B1925A	17-1/16 x 18-1/16 x 20-5/8	103

AN/TCC-3 TELEPHONE TERMINAL

REFERENCE DATA AND LITERATURE:

TM 11-2142

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	13.8	296

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-T-10485

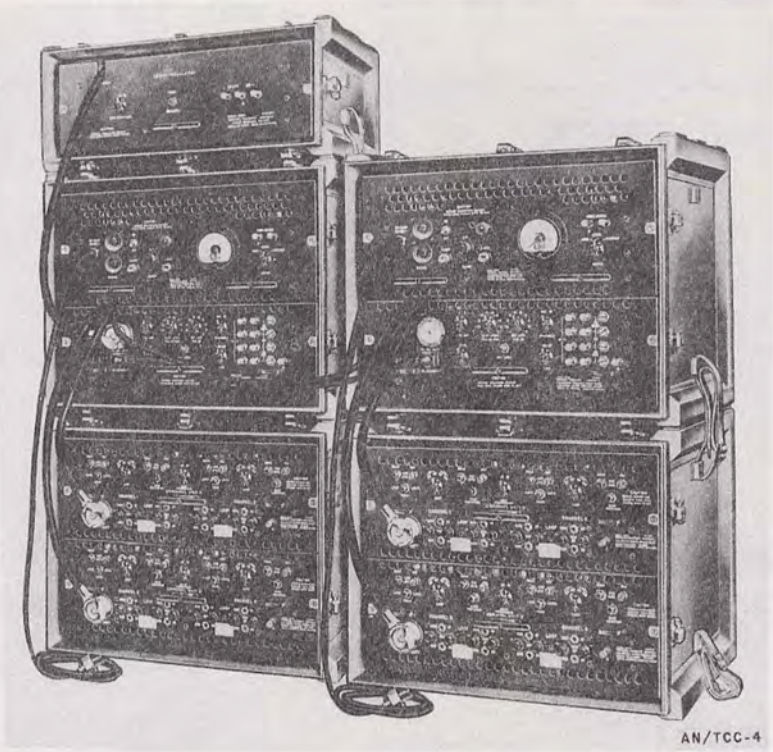
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	1667-P-51-61	$4,069.00

TELEGRAPH TERMINAL AN/TCC-4

1 July 1958
Cognizant Serv: USA FSN: 5805-537-7387

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4A2811-4	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Terminal AN/TCC-4 is used for high-speed, frequency-shift, voice-frequency, carrier telegraph communication. It provides terminal equipment for eight teletypewriter channels over a standard two- or four-wire telephone facility, or 16 channels over a four-wire facility.

Different arrangements of this equipment can be made to provide for more or less telegraph channels. Two of these sets can be combined to provide for 16 telegraph channels; or one set can be split to provide two separate four-channel terminals.

This equipment consists essentially of two Telegraph Terminals AN/TCC-20 plus one Telegraph Modem TH-14/T.

TECHNICAL CHARACTERISTICS:

Facilities Required:
Loops: VF frequency shift teletypewriter signal, 1,325- and 1,225-cps; or dc neutral signal
Lines: Two- or four-wire telephone channel (wire or radio), flat characteristics between 300 and 3,000 cps
Facilities Provided;
Two-wire line circuits: 8 channels
Four-wire line circuits: 8 channels or 16 channels
Frequency of Line Signals: 425 to 2,975 cps
Type Modulation: Fsk
Type Ringing: 20 cycle
Power Requirements: 480 w, 115/230-v 50/60-cycle 1-phase ac

AN/TCC-4 TELEGRAPH TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph Modem TH–14/T	(USA) 4A1472	9 x 18-1/8 x 20-5/8	49
2	Telegraph Modem Assembly TH–15/T	(USA) 4A1473	16-7/8 x 18-1/8 x 20-5/8	82
2	Telegraph Terminal Group TH–13/T	(FSN) 5805–356–2633	16-7/8 x 18-1/8 x 20-5/8	104

REFERENCE DATA AND LITERATURE:

TM 11–2242
TO 31W4–2TCC–1

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	22.7	495

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–T–10568

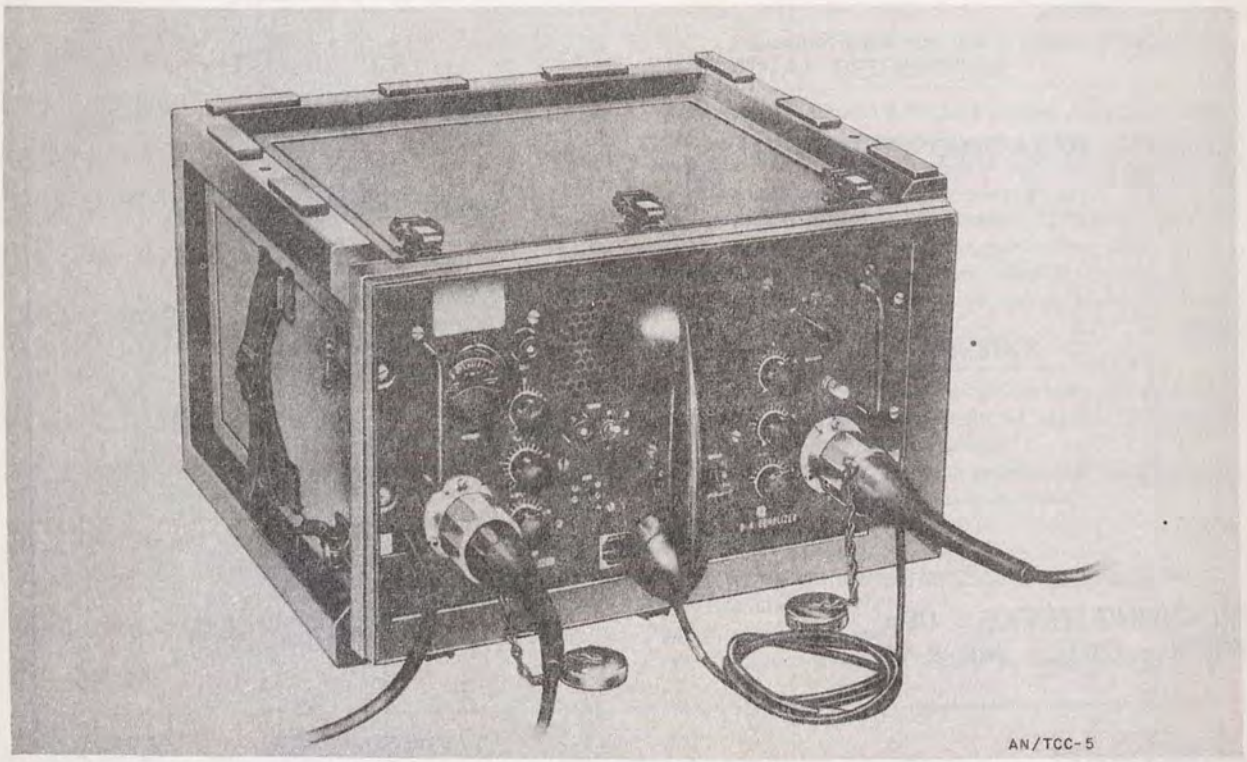
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Farnsworth Electronics Co. Division, International Telephone & Telegraph Corp.	Fort Wayne, Ind.	10676–P–54–53	$7,690.17

TELEPHONE REPEATER AN/TCC-5

1 July 1958
Cognizant Serv: USA FSN: 5805–256–4055

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B3185–5	--	--



FUNCTIONAL DESCRIPTION:

Telephone Repeater AN/TCC–5 is a four-wire carrier telephone repeating equipment specifically designed for use at intermediate points of a system terminated by Telephone Terminal AN/TCC–3 to permit the addition of spiral-four cable sections within a system. It may also be operated with suitable radio terminal equipment in a radio link in such a system.

This equipment consists of a single major operating component that includes provisions for ringing, monitoring, and connection facilities to the order-wire channel of the system.

TECHNICAL CHARACTERISTICS:

Facilities Required: Spiral-four cable with Telephone Terminal AN/TCC–3 carrier equipment

Facilities Provided: Four-channel telephone carrier plus one VF order-wire channel; amplified in both directions

Frequency:

Carrier Channel: 4,500 to 19,700 cps

Order Wire: 300 to 3,100 cps

Order-wire Signaling: 1,600 cps

Power Requirements: 115/230-v 50/60-cycle ac

AN/TCC-5 TELEPHONE REPEATER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Telephone Repeater AN/TCC-5	5805-256-4055	12-3/16 x 18-1/16 x 20-5/8	86

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-2136

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	6.8	150

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10486

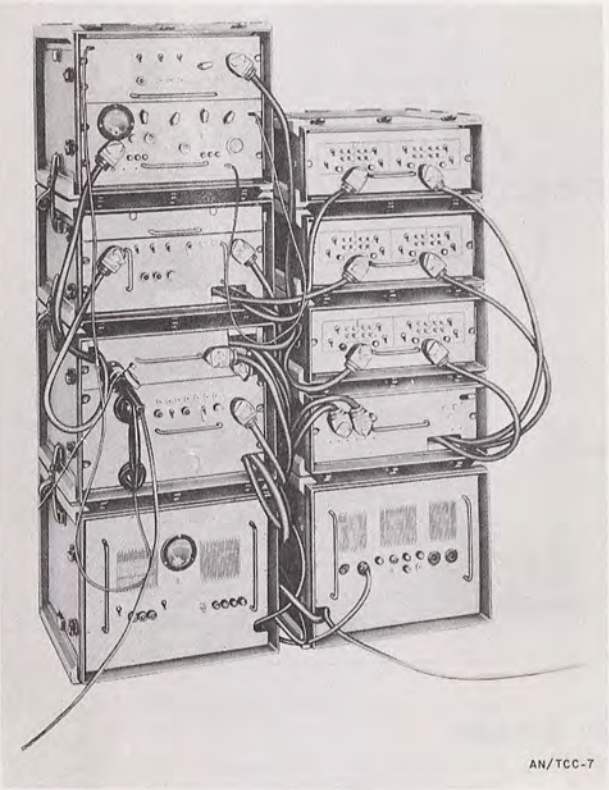
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	1667-P-51-61	$1,396.00

TELEPHONE TERMINAL AN/TCC-7

1 July 1958
Cognizant Serv: USA FSN: 5805-503-1228

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B8364-5	--	--



AN/TCC-7

FUNCTIONAL DESCRIPTION:

Telephone Terminal AN/TCC-7 is the terminal equipment used in a 12-channel telephone carrier system over a single nonloaded spiral-four cable and/or radio-relay links. This system includes attended Telephone Repeater AN/TCC-8 and unattended Telephone Repeater AN/TCC-11, and can provide two-way telephone communication over 12 VF channels and one order-wire circuit over distances up to 200 miles.

TECHNICAL CHARACTERISTICS:

Facilities Required: Nonloaded spiral-four cable or equivalent; appropriate repeater equipment and another AN/TCC-7 terminal at distant end of system
Facilities Provided: 12 VF telephone channel; one order-wire channel; monitoring and ringing facilities
Frequency:
Over Spiral-four Cable Alone: 0.3 to 99 kc
Over Spiral-four Cable and/or Radio Links: 12 to 60 kc
Type Modulation: AM
Type Ringing: 1,600 cps
Power Requirements: 710 w, 115/230-v 49-65-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Amplifier-Pilot Regulator AM-707/TCC-7	4B107-707	17-1/16 x 18-1/16 x 20-5/8	108
1	Power Supply PP-826/U	3H4497-826	17-1/16 x 18-1/16 x 20-5/8	103
1	Power Supply PP-827/U	3H4497-827	17-1/16 x 18-1/16 x 20-5/8	100
1	Receiver-Transmitter-Test Set Group OA-443/TCC-7	3F3937-443	17-1/16 x 18-1/16 x 20-5/8	83

AN/TCC-7 TELEPHONE TERMINAL

REFERENCE DATA AND LITERATURE:

TM 11–2139

SHIPPING DATA

PKGS	DIMENSIONS (Inches)	VOLUME (Cu Ft)	WEIGHT (Lbs)
9		51.2	

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

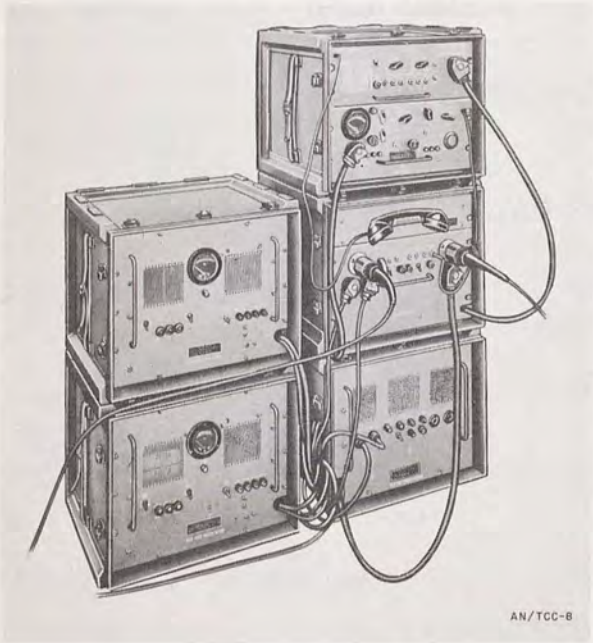
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	21729–P–56–56	$11,100.00

TELEPHONE REPEATER AN/TCC-8

1 July 1958
Cognizant Serv: USA FSN: 5805-333-9796

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B3185-8	--	--



FUNCTIONAL DESCRIPTION:

Telephone Repeater AN/TCC-8 is the attended repeater element of a 12-channel carrier telephone system that includes Telephone Terminal AN/TCC-7 and unattended Telephone Repeater AN/TCC-11. Such a system can be operated over nonloaded spiral-four cable and/or radio links for distanees up to 200 miles.

This equipment consists of an amplifier, a receiver-transmitter test set group, and two power supplies that also furnish power to one, two, or three unattended repeaters located in the system. A voice-frequency channels and a ringing signal are provided for communication between attended point of the system.

TECHNICAL CHARACTERISTICS:

Facilities Required: Single nonloaded spiral-four cable with Telephone Terminal AN/TCC-7 and/or radio links

Facilities Provided: 12-channel telephone carrier plus one VF order-wire channel, amplified in both directions

Frequency:

Carrier Channel: 12 to 60 kc (pilot frequency, 68 kc; test frequency, 83, 91, 99 kc)

Order-Wire Channel: 300 to 1,700 cps

Order-Wire Ringing: 1,600 cps

Power Requirements: 900 w, 115/230-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Amplifier-Pilot Regulator AM-708/TCC-8	4B107-708	17-1/16 x 18-1/16 x 20-5/8	118
2	Power Supply PP-826/U	3H4497-826	17-1/16 x 18-1/16 x 20-5/8	103
1	Power Supply PP-827/U	3H4497-827	17-1/16 x 18-1/16 x 20-5/8	100
1	Receiver-Transmitter Test Set Group OA-446/TCC-8	3F3937-446	17-1/16 x 18-1/16 x 50-5/8	87

AN/TCC-8 TELEPHONE REPEATER

REFERENCE DATA AND LITERATURE:

TM 11–2140
TM 11–2150

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	41.8	831

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–10624

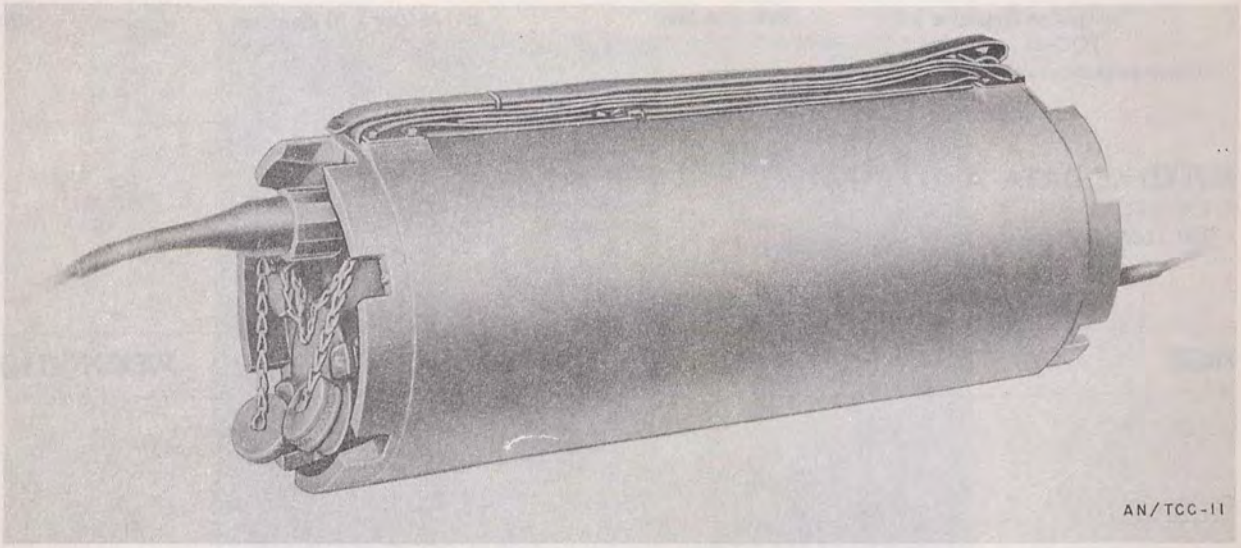
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	14181–P–51–61	

TELEPHONE REPEATER AN/TCC-11( )

1 July 1958
Cognizant Serv: USA FSN: 5805-356-2661

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B3185-11	--	--



FUNCTIONAL DESCRIPTION:

Telephone Repeater AN/TCC-11( ) is a four-wire, unattended, carrier-telephone repeater. It is use to extend the length of a 12-channel spiral-four carrier-telephone system that uses Telephone Terminals AN/TCC-7 and attended Telephone Repeaters AN/TCC-8. The extension obtained for each AN/TCC-11( ) added to the sytem is 5-3/4 miles.

This equipment contains facilities for amplifying, equalizing, and regulating the two-way transmission of a band of frequencies from 12 to 99 kc. This band contains 12 carrier-frequency message channels, a 68-kc pilot frequency, and three fault-finding frequencies of 83 kc, 91 kc, and 99 kc. Amplification is supplied to overcome cable loss at the various frequencies transmitted; regulation is applied to correct for changes in cable loss that occur with changes in temperature.

In addition, a means of ringing, talking, and listening at attended points is provided over an unamplified voice-frequency order-wire circuit.

TECHNICAL CHARACTERISTICS:

Facilities Required: Spiral-four cable; 12-channel carrier telephone system using Telephone Terminals AN/TCC-7 and Telephone Repeaters AN/TCC-8

Facilities Provided: Amplification of signal in both directions

Power Requirements: 0.1 amp at 150-v regulated dc supplied over spiral-four cable by Telephone Terminal AN/TCC-7 or Telephone Repeater AN/TCC-8.

AN/TCC-11( ) TELEPHONE REPEATER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Telephone Repeater AN/TCC–11	5805–356–2661	28-1/4 long x 10 diameter	70

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–2148
TM 11–2150

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.4	130

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–10622

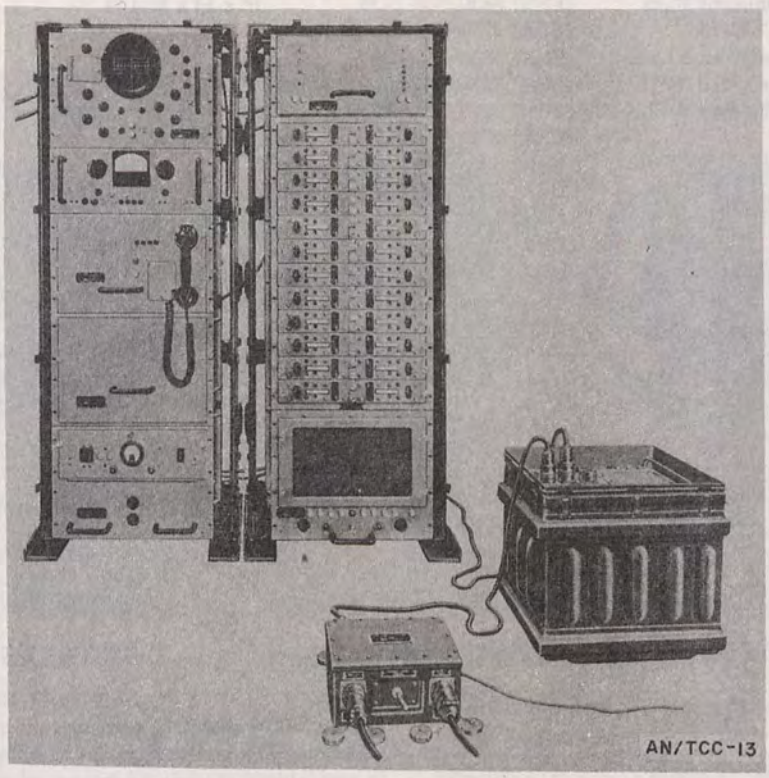
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	21729–P–56–56	$1,199.00

MULTIPLEXER SET AN/TCC-13

1 July 1958
Cognizant Serv: USA FSN: 5805-503-1040

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B2135-13	--	--



FUNCTIONAL DESCRIPTION:

Multiplexer Set AN/TCC–13 is used as a terminal in a multichannel microwave radio-relay communication network.

It combines 23 independent vf channels into one composite video signal for transmission over a single RF carrier; conversely, it separates a video signal into 23 individual vf channels.

Two of these sets at each end of the microwave system can provide 45 individual vf channels.

This set can be used only with manual telephone switching centrals; it can operate with either two-wire or four-wire lines for each of the 23 or 45 channels.

This equipment is a component part of Radio Telephone Terminal AN/TRC–38.

TECHNICAL CHARACTERISTICS:

Facilities Required: Radio Set AN/TRC–29 or equivalent
Facilities Provided: Combines 23 vf channels into 1 video channel
Type of Signal: Pulse-position, time-division multiplex
Frequency (Each vf channel):
Modulating Bandwidth: 300 to 3,500 cps
Signaling: 20 cps
Video Signal Characteristics:
Pulse Rate: 192 kc
Pulse Width: 0.6 microsecond
Bandwidth: 1mc
Power Requirements: 1.1 kw, 115/230-v (±10%) 47.5–63-cycle ac

AN/TCC-13 MULTIPLEXER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Monitor C–1151/TC	(FSN) 5805–503–3288 (USA) 2C684–1151	19 x 19 x 10-1/2	
1	Electrical Equipment Rack MT–1165/TCC–13	(FSN) 5820–503–3425 (USA) 2Z7383–1163	19 x 19 x 31-1/2	
2	Electrical Standardized Components Case CY–1280/U	(FSN) 5805–333–9806 (USA) 6F300–1280	26-1/2 x 27 x 60	*535 *534
1	Multiplexer Subassembly MX–1442/TC	(FSN) 5805–395–9412 (USA) 4B2137–1442	19 x 17-1/4 x 8-1/2	
1	Multiplexer TD–60/TCC–13	(FSN) 5805–503–1039 (USA) 4B2136–60	19 x 19 x 8-3/4	
1	Power Supply PP–691/G	(FSN) 5805–548–1669 (USA) 3H4497–691	19 x 19 x 12	123
2	Remote Switching Control C–1509/TC	(FSN) 5805–503–1103 (USA) 2C684–1509	4-1/2 x 2 3/4 x 5-1/2	
24	Telephone Modem MD–179/TC	(FSN) 5805–503–1065 (USA) 4B1925B–179	16 x 2-1/2 x 8-1/2	5.5
1	Voltage Regulator CN–236/G	(USA) 3H4498–236	23 x 17-1/2 x 19-1/2	215

* Weights of cases are total weights of case plus equipment normally installed therein.

REFERENCE DATA AND LITERATURE:

TM 11–2147
TM 11–2682

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	159.5	2,596

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–14182

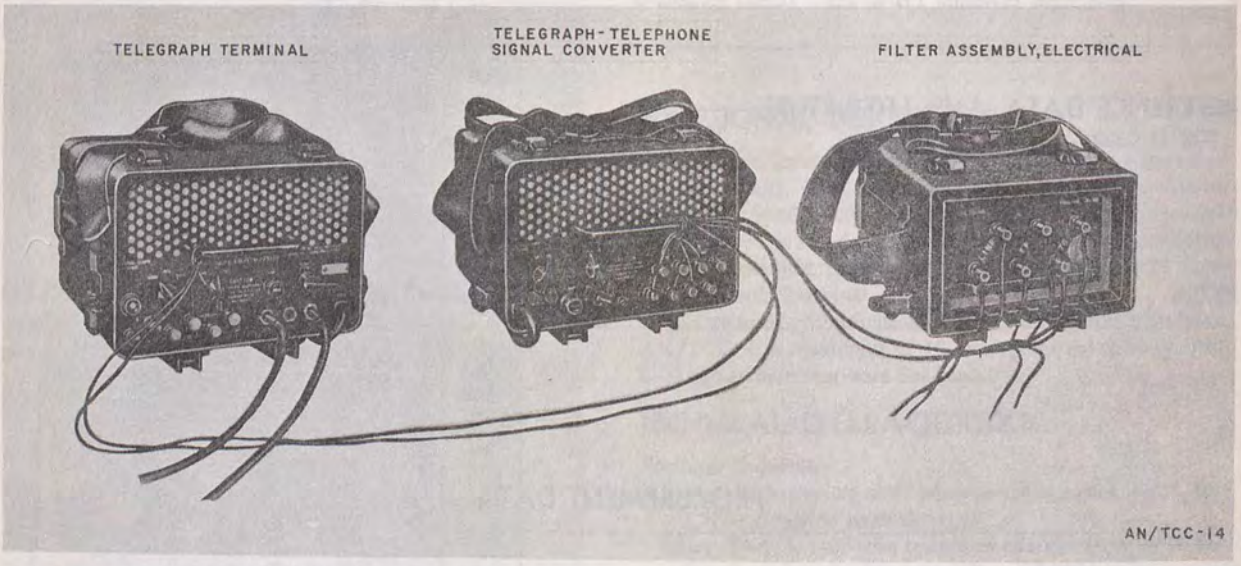
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
International Telephone & Telegraph Corp., Federal Radio & Telephone Co. Division	Clifton, N. J.	38721–P–56–55	$9,767.00

TELEGRAPH-TELEPHONE TERMINAL AN/TCC-14

1 July 1958
Cognizant Serv: USA FSN: 5805-238-9873

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4A2895-3	--	1730-407-778-030



FUNCTIONAL DESCRIPTION:

Telegraph-Telephone Terminal AN/TCC-14 is an assemblage of three separate operating components that permits simultaneous transmission of telegraph pulses and speech.

This equipment can be operated in four different types of systems: point-to-point, networds connecting three or more teletypewriter stations, switched systems serving several teletypewriter stations, and push-to-talk remote control radio applications.

It is used in systems composed of two-wire, four-wire, carrier or voice-frequency telegraph facilities, and includes components enabling normal telephone ringing and supervision required for both local battery and common battery switchboards.

TECHNICAL CHARACTERISTICS:

Facilities Required: Two-wire or four-wire vf carrier and/or radio remote control circuits

Facilities Provided: Alternate telegraph and telephone; simultaneous telegraph and telephone; speech plus half-duplex; push-to-talk radio control; and/or telegraph only

Frequency:

Telegraph terminal: Mark, 1,325 cps; space, 1,225 cps

Electrical filter assembly: 1,275 cps (midfrequency)

Type Ringing: 20 cps

Power Requirements: 115-v (±10%) 50/60-cycle ac

AN/TCC-14 TELEGRAPH-TELEPHONE TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Electrical Filter Assembly F–98/U	(FSN) 5915–356–2134	10 x 8-3/4 x 6-1/2	25.5
1	Telegraph-Telephone Signal Converter TA–182/U	(USA) 4F350–182	11 x 10-1/2 x 7-1/2	15
1	Telegraph Terminal TH–5/TG	(USA) 4A2895–5	11 x 10-1/2 x 7-1/2	18.5

REFERENCE DATA AND LITERATURE:

TM 11–2239

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.1	88.5

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–T–10267

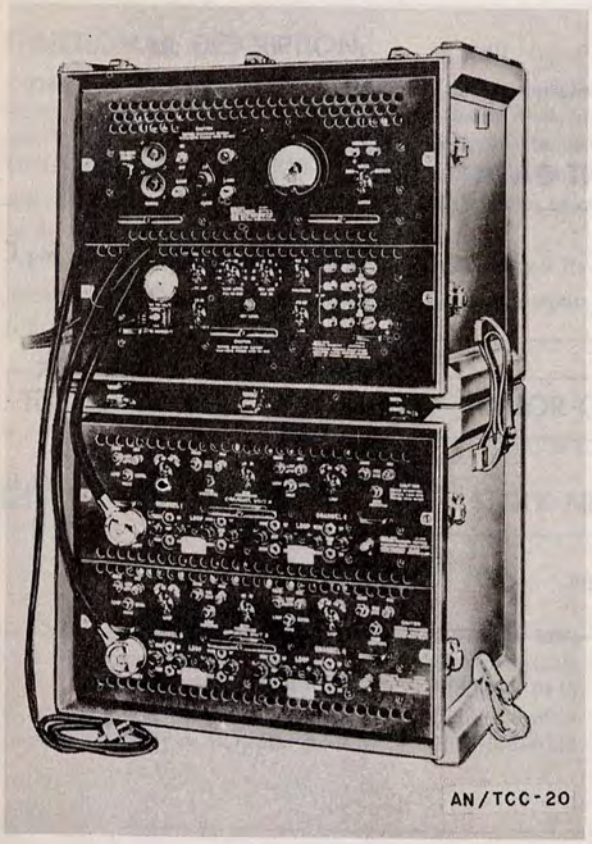
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Dynamics Corp., Stromberg-Carlson Division	Rochester, N. Y.	3291–P–52–31	$ 996.00
Great American Industries, Inc.	Meriden, Conn.	30005–P–51–31	787.00
Kellogg Switchboard & Supply Co.	Chicago, Ill.	6438–P–51–31	1,048.00

TELEGRAPH TERMINAL AN/TCC-20

1 July 1958
Cognizant Serv: USA FSN: 5805-338-4451

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4A2894	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Terminal AN/TCC-20 is used for high-speed, frequency-shift, voice-frequency, carrier telegraph communication. It provides terminal equipment for four teletyepwriter channels over a standard two- or four-wire telephone facility. Two of these sets, plus a Telegraph Modem TH-14/T make up Telegraph Terminal AN/TCC-4.

In various combinations with Telegraph Terminal AN/TCC-4, a maximum of 16 teletypewriter channels may be obtained on a four-wire line basis.

TECHNICAL CHARACTERISTICS:

Facilities Required:
Loops: Vf frequency shift teletypewriter signal, 1,325- and 1,225-cps; or dc neutral signal
Lines: Two- or four-wire telephone channel (wire or radio), flat characteristics between 300 and 3,000 cps
Facilities Provided: Four-channel, two- or four-wire line operation
Frequency of Line Signals: 425 to 1,615 cps
Type Ringing: 20 cycle
Power Requirements: 240 w, 115/230-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph Modem Assembly TH-15/T	(USA) 4A1472	16-7/8 x 18-1/8 x 20-5/8	82
1	Telegraph Terminal Group TH-13/T	(FSN) 5805-356-2633	16-7/8 x 18-1/8 x 20-5/8	104

AN/TCC-20 TELEGRAPH TERMINAL

REFERENCE DATA AND LITERATURE:

TM 11-2242

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	10.2	215

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-T-10568

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Dynamics Corp., Stromberg-Carlson Division	Rochester, N. Y.	55987-P-57-56	$2,629.10

TELEPHONE REPEATER AN/TCC-21

1 July 1958
Cognizant Serv: USA FSN: 5805-692-6777

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B3185-21	--	--

(See Illustration of AN/TCC-8)

FUNCTIONAL DESCRIPTION:

Telephone Repeater AN/TCC-21 is the attended repeater element of a 12-channel carrier telephone system that includes Telephone Terminal AN/TCC-7 and unattended Telephone Repeater AN/TCC-11. Such a system can be operated over nonloaded spiral-four cable and/or radio links for distances up to 200 miles.

This equipment consists essentially of one Telephone Repeater AN/TCC-8 plus power units and accessory equipment.

TECHNICAL CHARACTERISTICS:

Facilities Required: Single nonloaded spiral-four cable with Telephone Terminal AN/TCC-7 and/or radio links
Facilities Provided: 12-channel telephone carrier plus one vf order-wire channel, amplified in both directions
Frequency:
Carrier Channel: 12 to 60 kc (pilot frequency, 68 kc; test frequency, 83, 91, 99 kc)
Order-Wire Channel: 300 to 1,700 cps
Order-Wire Ringing: 1,600 cps
Power Requirements: 900 w, 115/230-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Ground Rod MX-148/G	5975-224-5260	72 long x 3/4 diameter	4
1	Junction Box J-85/G	5820-244-0706	4-1/16 x 5 x 5-0/2	8
1	Junction Box JB-110	6150-498-9130	2-1/4 x 4-1/2 x 12-1/4	8.5
2	Power Unit PE-75	6115-228-5815	26-1/2 x 19 x 36	330
1	Telephone Repeater AN/TCC-8	5805-333-9796		

REFERENCE DATA AND LITERATURE:

TM 11-2140
TM 11-2150

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	41.35	664

AN/TCC-21 TELEPHONE REPEATER

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10624

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEPHONE REPEATER AN/TCC-22

1 July 1958
Cognizant Serv: USA FSN: 5805-503-1234

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B3185-22	--	--

(See Illustration of AN/TCC-5)

FUNCTIONAL DESCRIPTION:

Telephone Repeater AN/TCC-22 is a four-wire carrier telephone repeating equipment specifically designed for use at intermediate points of a system terminated by Telephone Terminal AN/TCC-3 to permit the addition of spiral-four cable sections within a system. It may also be operated with suitable radio terminal equipment in a radio link in such a system.

This equipment includes provisions for ringing, monitoring, and connection facilities to the order-wire channel of the system.

It is composed essentially of Telephone Repeater AN/TCC-5 plus a power unit and accessory items.

TECHNICAL CHARACTERISTICS:

Facilities Required: Spiral-four cable with Telephone Terminal AN/TCC-3 carrier equipment

Facilities Provided: Four-channel telephone carrier plus one vf order-wire channel, amplified in both directions

Frequency:
Carrier Channel: 4,500 to 19,700 cps
Order Wire: 300 to 3,100 cps
Order-Wire Signaling: 1,600 cps

Power Requirements: 115/230-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ground Rod MX-148/G	5975-224-5260	72 long x 3/4 diameter	4
1	Junction Box J-85/G	5820-244-0706	4-1/16 x 5 x 5-1/2	8
1	Junction Box JB-110	6150-498-9130	2-1/4 x 4-1/2 x 12-1/4	8.5
2	Power Unit PE-214-B	6115-230-40-02	14 x 18-1/2 x 10	40
1	Telephone Repeater AN/TCC-5	5805-256-4055	12-3/16 x 18-1/16 x 20-5/8	86

REFERENCE DATA AND LITERATURE:

TM 11-2136

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.29	200

AN/TCC-22 TELEPHONE REPEATER

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10486

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEPHONE TERMINAL AN/TCC-23

1 July 1958
Cognizant Serv: USA FSN: 5805-338-4452

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B3185-23	--	--

(See Illustration of Telephone Terminal AN/TCC-3)

FUNCTIONAL DESCRIPTION:

Telephone Terminal AN/TCC-23 is a four-channel carrier telephone terminal set used to provide four traffic channels and one order-wire channel over loaded spiral-four cable. It can also be used to carry a single wide-band special service channel.

This equipment consists of one Telephone Terminal AN/TCC-3 plus two power units (one in use, one spare) and accessory items.

TECHNICAL CHARACTERISTICS:

Facilities Required: Loaded spiral-four cable or equivalent four-wire facilities

Facilities Provided: 4 vf traffic channels plus 1 order-wire channel; or 1 wide-band channel plus 1 order-wire channel

Channel Carrier Frequency:
Channel 1: 8 kc
Channel 2: 12 kc
Channel 3: 16 kc
Channel 4: 20 kc

Frequency Band:
Order Wire: 300 to 3,100 cps
Channel 1: 4,500 to 7,700 cps
Channel 2: 8,500 to 11,700 cps
Channel 3: 12,500 to 15,700 cps
Channel 4: 16,500 to 19,700 cps

Type Modulation: AM, lower sideband of each channel

Type Ringing: 1,600 cps

Power Requirements: 125 w, 115/230-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
2	Power Unit PE-75	3H4575	24-1/2 x 19 x 36	330
1	Telephone Terminal AN/TCC-3	4B8364-2	26-3/16 x 18-1/16 x 30-5/8	176

REFERENCE DATA AND LITERATURE:

TM 11-2142

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	16.2	530

AN/TCC-23 TELEPHONE TERMINAL

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-T-10485

DESIGN COG: USA, Sig C

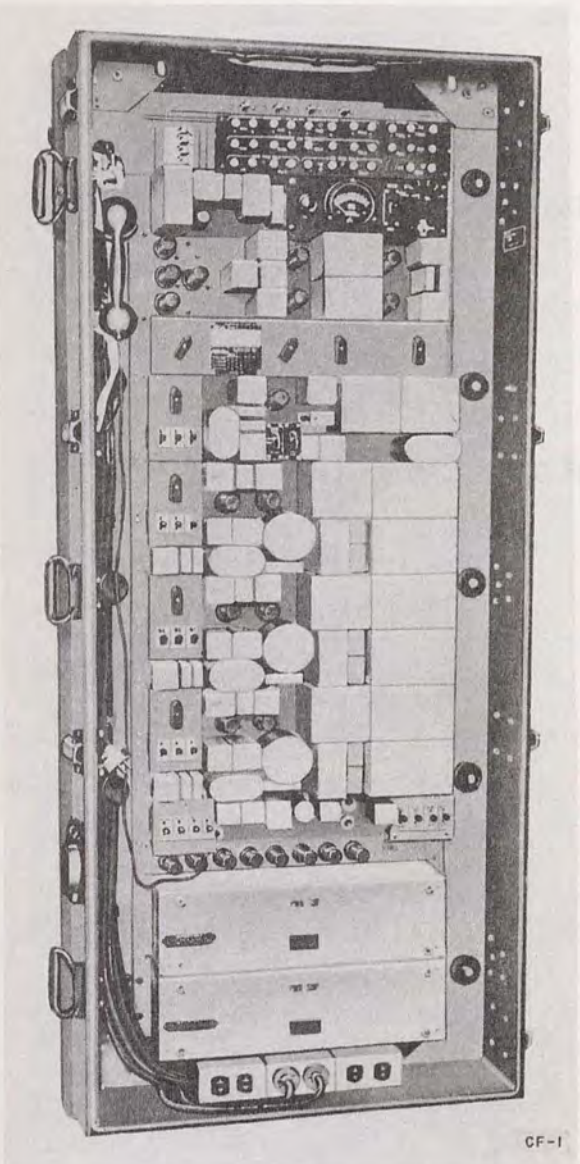
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEPHONE TERMINAL AN/TCC-type

1 July 1958
Cognizant Serv: USA FSN: CF-1-A: 5805-170-4770
CF-1-B: 5805-170-4772

CF-1-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	CF-1-A: 4B8361A	--	--
	CF-1-B: 4B8361B	--	--



FUNCTIONAL DESCRIPTION:

Telephone Terminal CF-1-( ) is a transportable, four-channel, carrier telephone terminal equipment used in systems composed of spiral-four cable or equivalent facilities.

This equipment consists of a single bay of apparatus that provides one voice-frequency, plus three-carrier-frequency channels.

It requires additional equipment for ringing. It may be used with other carrier terminal equipment to provide telephone and telegraph traffic handling and transmission facilities. Distances up to about 100 miles are possible with repeaters at 25-mile intervals, over cable on the ground or in the air, and up to 400 miles over buried cable. Operation over nonrepeated circuits is possible up to 45 miles.

This terminal is the principal operating component of Telephone Terminal Set TC-21.

TECHNICAL CHARACTERISTICS:

Facilities Required: Spiral-four cable or facility of equivalent quality

Facilities Provided: One vf plus three carrier-frequency voice channels
CF-1-A: two-wire termination
CF-1-B: two- or four-wire termination

Line Frequency: 200 to 12,000 cps; approximate band spacing of 2,600 cps

Type Modulation: AM

Type Ringing: Vf, with additional equipment

Power Requirements:
Normal: 115/230-v 50/60-cycle ac
Emergency: One 12-v, two 6-v storage batteries

AN/TCC-type TELEPHONE TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Telephone Terminal CF–1–A (Equipment consists of only one major component.)	5805–170–4770	66 x 28 x 19	475

REFERENCE DATA AND LITERATURE:

TM 11–801

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	32	562

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–1552

DESIGN COG: USA, Sig C

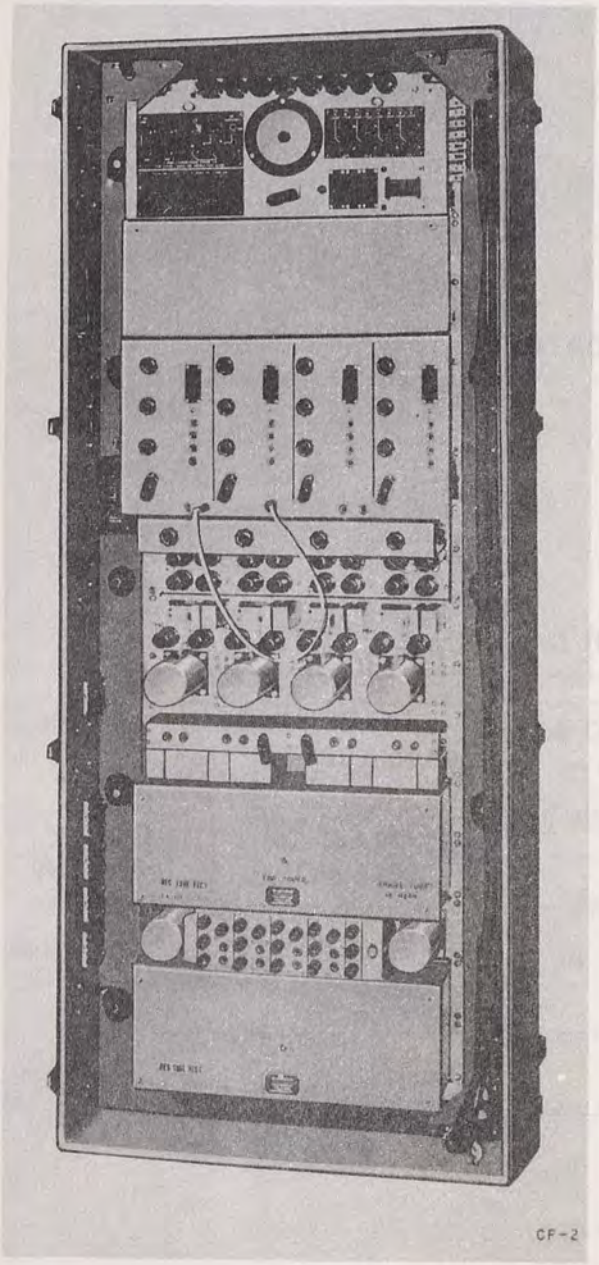
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	14870–P–43–23	$2,455.08

TELEGRAPH TERMINAL AN/TCC-type

5 December 1958
Cognizant Serv: USA FSN: For CF-2-A: 5805-239-8260
For CF-2-B: 5805-239-8264

CF-2-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	--	--	--
For CF-2-A:	4A2892A		
For CF-2-B:	4A2892B		



FUNCTIONAL DESCRIPTION:

Telegraph Terminal CF-2-( ) is a transportable, four-channel, voice-frequency carrier terminal equipment used for two-way transmission of teletypewriter signals in each channel, and which operates over a channel of a carrier-telephone system derived by means of Telephone Terminal CF-1, Repeater CF-3, and associated equipment. It is used in spiral-four cable, or equivalent systems, serving division and higher headquarters.

This equipment consists of panel-mounted apparatus covering four channels, inclosed in a single cabinet. (CF-2-A, not illustrated here, consists of equivalent apparatus arranged in two cabinets but performing the identical service.)

It can be installed adjacent to the carrier telephone terminal, but may be operated from a distant point over a two-wire circuit (between carrier telephone and telegraph bays) that has a net loss not exceeding 8 db; or over any telephone circuit terminating on a two-wire basis (of the required stability and freedom from interference) that has a net loss not exceeding 25 db (at 500-2,050 cps).

TECHNICAL CHARACTERISTICS:

Frequency Range in cps: 500 to 2,050, 8 channels spaced 170 cps apart

Type of Modulation: AM

Power Requirements: 200 to 250 w, 100- to 125-v, or 200- to 250-v, 50- to 60-cycle, ac

AN/TCC-type TELEGRAPH TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For CF–2–A:			
1	Telegraph Terminal CF–2–A (1 or 2 bays of equipment)	----------	66 x 27-1/2 x 19	530 (each bay)
	For CF–1–B-			
1	Telegraph Terminal CF–2–B (1 bay of equipment)	----------	66 x 27-1/2 x 19	575

REFERENCE DATA AND LITERATURE:

For CF–2–A: TM 11–355
For CF–2–B: TM 11–355B

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For CF–A–A: 2	74.44	1,580
For CF–2–B: 1	70.63	1,297

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: 71–1554

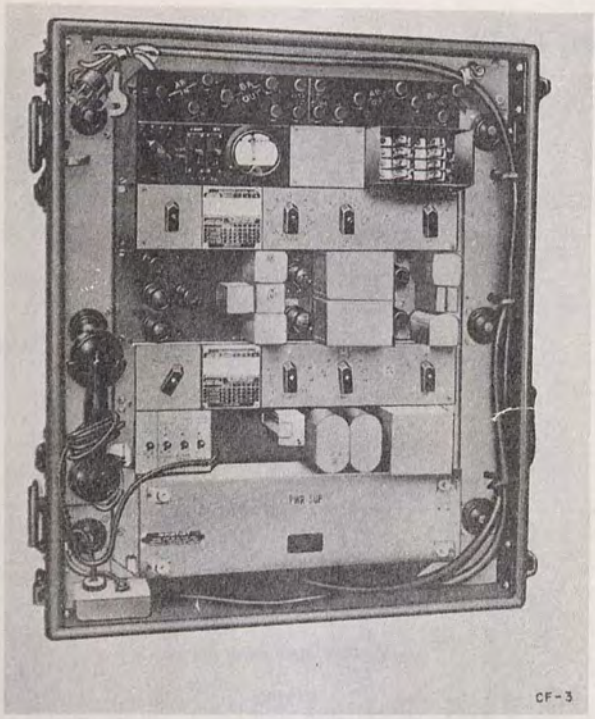
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	1685–P–51–10	$3,902.00

REPEATER **AN/TCC-type**

1 July 1958
Cognizant Serv: USA FSN: 5805-164-7064 CF-3

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4B3203	--	--



FUNCTIONAL DESCRIPTION:

Repeater CF-3 is a carrier repeater equipment used to extend the range of telephone and telegraph carrier facilities using spiral-four or equivalent wire or cable facilities.

This equipment consists essentially of two one-way amplifiers. It provides for two dc ground-return simplex circuits from the two associated cable pairs. One of these ground-return circuits is used for signaling; the other may be used for dc telegraph.

This equipment is the primary operating component of Repeater Set TC-23.

TECHNICAL CHARACTERISTICS:

Facilities Required: Spiral-four cable or equivalent
Facilities Provided: Four-wire telephone and telegraph amplification in both directions
Frequency: 200 to 12,000 cps
Type of Modulation: AM
Power Requirements: 30 w, 115-230-v 50/60-cycle ac; or 3.75 amp at 12-v dc from storage battery in emergency

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Repeater CF-3	5805-164-7064	28 x 14 x 34	225

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-341

AN/TCC-type REPEATER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	17.9	340

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-1553

DESIGN COG: USA, Sig C

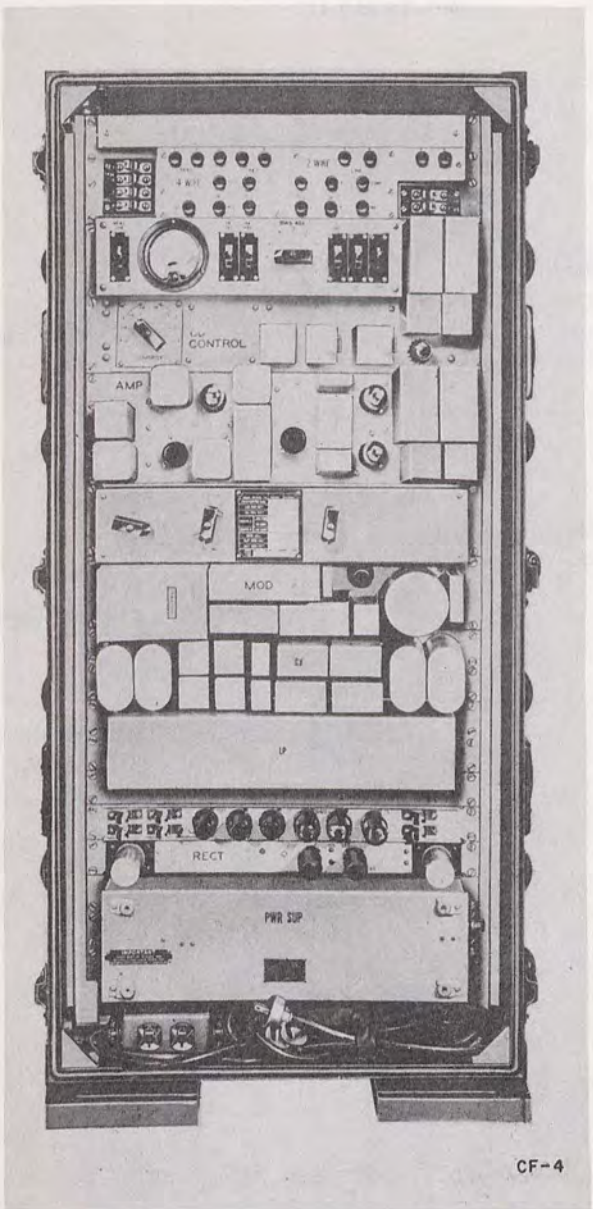
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	1928-P-42-23	$1,445.00

CONVERTER AN/TCC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-228-6104

CF-4

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B448-4	--	1790-412552640



CF-4

FUNCTIONAL DESCRIPTION:

Converter CF-4 is carrier-converter equipment, designed to be used at junctions of open wire and Telephone Terminal CF-1 or spiral-four cable. It changes four-wire operation from the terminal (or the cable) to effective two-wire operation over the open-wire pair.

This equipment consists of a single bay or cabinet of apparatus. It provides equivalent four-wire operation in direction BA by maintaining the frequency of that channel in the 0.2 to 11.6 kc band, and by raising transmission in the AB direction to the 20.85 to 32.25 kc band.

It is the primary operating component of Converter Set TC-33 and can be used at either terminal A or B, in systems using Repeater CF-5 at intermediate points. It can also be used in conjunction with Repeater CF-3 at junctions between four-wire and two-wire facilities.

TECHNICAL CHARACTERISTICS:

Facilities Required: Open wire or equivalent
Facilities Provided: Equivalent four-wire
Frequency:
Converter A: 20.85 to 32.25 kc
Converter B: 0.2 to 11.6 kc
Type Modulation: AM
Power Requirements: 30 w, 115/230-v 50/60-cycle ac; or 3.5 amp at 12-v dc

AN/TCC-type CONVERTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Converter CF–4	5805–228–6104	49-1/2 x 24 x 17	280
(Equipment consists of only one major component.)				

REFERENCE DATA AND LITERATURE:

TM 11–2008

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	11.67	280

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

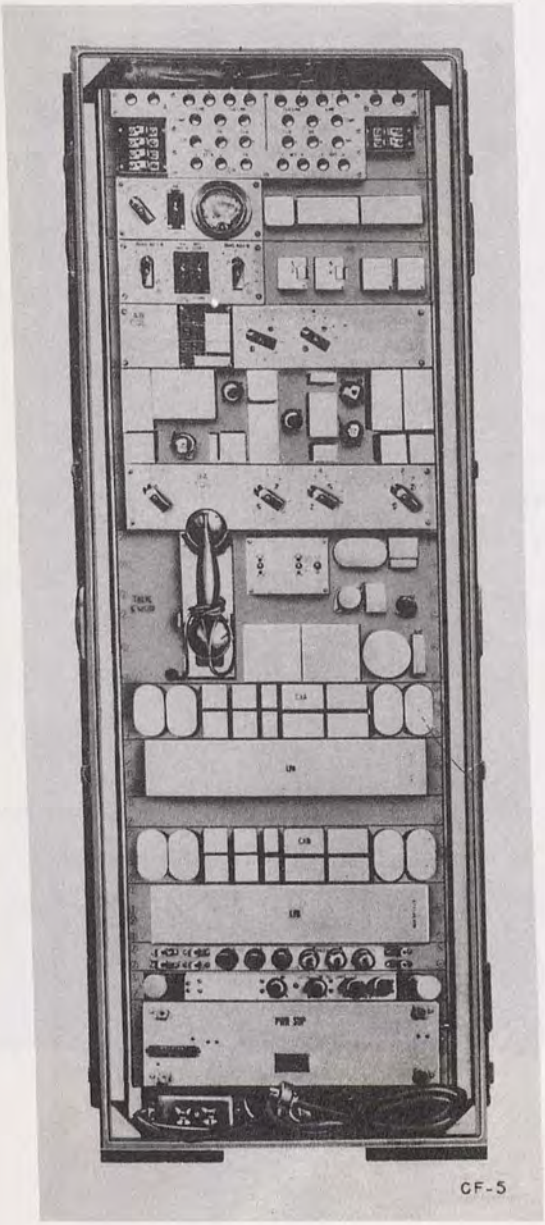
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

REPEATER AN/TCC-type

1 July 1958
Cognizant Serv: USA FSN: 5805–164–7066

CF–5

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B3205	--	1790–416801000



FUNCTIONAL DESCRIPTION:

Repeater CF–5 is a carrier repeater equipment used to extend the transmission range of open-wire carrier systems in which Telephone Terminal CF–1, Converter CF–4, and related equipment are operated.

This equipment consists essentially of two independent amplifiers and related alarm and signaling circuits arranged on relay rack panels and housed in a vertical cabinet as a single bay of equipment.

TECHNICAL CHARACTERISTICS:

Facilities Required: Open-wire or equivalent facilities; terminal carrier equipment

Facilities Provided: Two-wire, intermediate repeater range amplification

Frequency:
AB Direction: 20,850 to 32,250 cps
BA Direction: 200 to 11,600 cps

Type of Modulation: AM

Type Ringing: Vf

Power Requirements: 45 w, 105–125/210–250-v 50/60-cycle ac; or 12-v dc from storage battery in emergency

AN/TCC-type REPEATER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Repeater CF–5	5805–164–7066	73 x 28 x 27	380

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–2008
TM 11–4405

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	40	690

PROCUREMENT DATA

PROCURING SERVICE:
SPEC &/or DWG: (USA) 71–3052

DESIGN COG: USA, Sig C

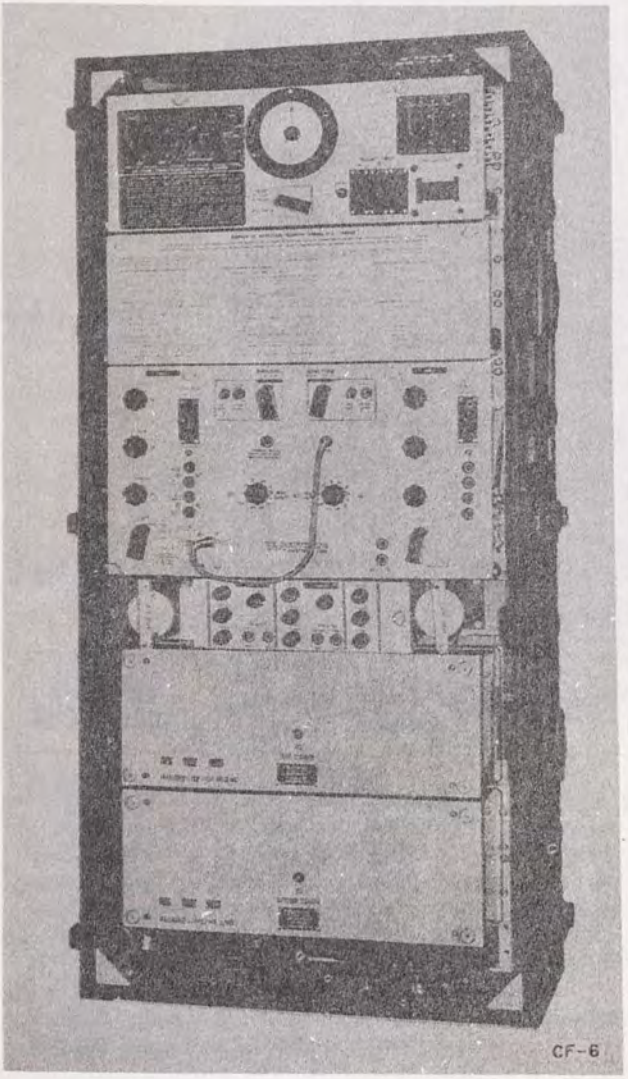
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	20443–P–45–23	$2,632.00

TELEGRAPH TERMINAL AN/TCC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-247-9306

CF-6

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4A2892-6	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Terminal CF-6 is a portable unit providing two channels of voice-frequency carrier telegraph. It may be used spearately or in combination with Telegraph Terminal CF-2-( ).

A system using Telegraph Terminals CF-2-( ) and CF-6 is designed to operate over one channel of a four-channel telephone facility using Telephone Terminal CF-1-A. Such a system provides six two-way telegraph circuits.

In four-wire operation, transmission in each direction is over a separate line pair and each of the 12 channel frequencies can be transmitted in both directions. Eight of these 12 frequencies are provided by Telegraph Terminal CF-2-( ) and four by Telegraph Terminal CF-6. Two each of the CF-2-( ) and the CF-6 are required at each end of the carrier line.

TECHNICAL CHARACTERISTICS:

Facilities Required: Normally used with Telegraph Terminal CF-2-( ) and Telephone Terminal CF-1-( )
Facilities Provided: 2 channels vf telegraph
Frequency: 425, 1,275, 2,125, and 2,295 cps
Power Requirements: 150 w, 115/230-v (±10%) 50/60-cycle ac

AN/TCC-type TELEGRAPH TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph Terminal CF–6 (Equipment consists of only one major component.)	5805–247–9306	49-3/8 x 24 x 17	400

REFERENCE DATA AND LITERATURE:

TM 11–2009

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–3078

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	25690–P–45–43	

CARRIER HYBRID AN/TCC-type

1 July 1958
Cognizant Serv: USA FSN: 5915-190-5214

CF-7

	USA	USN	USAF
TYPE CLASS:	L/Std	--	L/Std
STOCK NO:	4B1467	--	--



FUNCTIONAL DESCRIPTION:

Carrier Hybrid CF-7 is a unit used to connect Telephone Terminal CF-1-A (carrier) or Repeater CF-3-A (carrier), both of which are designed for four-wire operation, to a two-wire line. With this equipment, four two-way telephone circuits can be obtained over a single pair of wires. In addition, two dc ground-return telegraph circuits or one dc signaling circuit and one dc telegraph circuit can be obtained.

This equipment is used primarily with open-wire lines but may also be used on field wire or spiral-four cable.

Four voice-frequency telegraph channels can be made available in place of one of the telephone circuits by applying Telegraph Terminal CF-2-A or CF-2-B (carrier) at the telephone terminals.

This unit is similar to and interchangeable with Hybrid Circuit Network TA-225/TT.

TECHNICAL CHARACTERISTICS:

Type of Signal: Voice, dc telegraph
Type Circuit: Field wire or spiral-four cable

AN/TCC-type CARRIER HYBRID

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Carrier Hybrid CF–7	5915–190–5214	18-3/8 x 9-1/2 x 7-3/8	48
(Equipment consists of only one major component.)				

REFERENCE DATA AND LITERATURE:

TM 11–2003

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.74	48

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: WECO No. X–66107

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	35791–P–43	

HYBRID CIRCUIT NETWORK AN/TCC-type

1 July 1958
Cognizant Serv: USA FSN: 5915-392-7669

TA-31( )/U

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4C59990A-31	--	--



FUNCTIONAL DESCRIPTION:

Hybrid Circuit Network TA-31( )/U is a portable unit that electrically couples two- and four-wire circuits and permits full-duplex operation in two-wire systems.

This equipment can be used in either wire or radio systems. Provision is made for establishing simplex facilities, signaling, and remote control of radio transmitters, with the use of additional equipment.

TECHNICAL CHARACTERISTICS:

Facilities Required: Two-wire line facilities, with four-wire equipment
Facilities Provided: Full duplex operation on two-wire lines
Frequency: 250 to 3,200 cps
Impedance: 600 to 4,000 ohms
Power Requirements: 115/230-v 50/60-cycle ac; 24-v dc; or Battery BA-419/U

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Hybrid Circuit Network TA-31( )/U	5915-392-7669 -02 5915-552-9657	9 x 11 x 16	

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-2144

AN/TCC-type HYBRID CIRCUIT NETWORK

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.25	70

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-V-10759

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Daven Co.	Livingston, N. J.	6513-P-51-03	$818.00

HYBRID CIRCUIT NETWORK AN/TCC-type

1 July 1958
Cognizant Serv: USA FSN: 5915-190-5214

TA-255/TT

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B1467	--	--



FUNCTIONAL DESCRIPTION:

Hybrid Circuit Network TA-225/TT is a portable unit used to connect four-wire line equipment (such as Telephone Terminal CF-1( ) or Repeater CF-3-A) to a two-wire line. It can also be used to connect Radio Terminal Set AN/TRC-3 to a two-wire line.

This equipment will permit operation of a phantom circuit, two ground-return dc telegraph circuits, or one ground-return dc signaling and one ground-return dc telegraph circuit on the two-wire line.

One network is used at each junction of the two-wire and four-wire lines. This equipment is designed for operation over open-wire lines, but in an emergency it may be used on field wire or on one pair of a spiral-four cable system.

This unit is similar to and interchangeable with Carrier Hybrid CF-7.

TECHNICAL CHARACTERISTICS:

Type of Signal: Dc telegraph and carrier telephone
Type of Communication Circuits: Four channel two-way carrier telephone system; two dc telegraph circuits

AN/TCC-type REPEATER SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	13.23	186

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

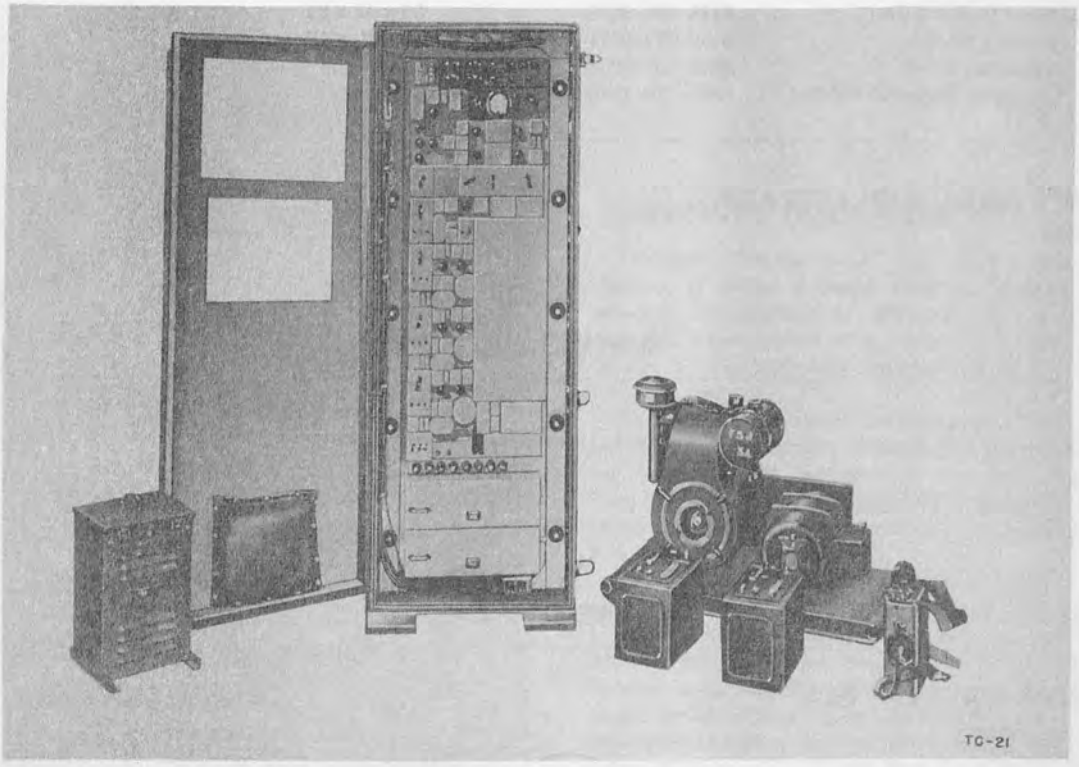
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEPHONE TERMINAL SET AN/TCC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-222-2105 TC-21-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4B8360-21	--	--



FUNCTIONAL DESCRIPTION:

Telephone Terminal Set TC-21-( ) is a carrier telephone terminal equipment providing four vf channels over a spiral-four system up to 100 miles in length, an open wire pair, or a combination of these facilities, for telephone (and teletypewriter) communication in long-range tactical carrier communications applications.

This equipment consists essentially of Telephone Terminal CF-1 (carrier), plus rectifier and power unit components and related accessories.

It is usually installed at the terminal of a system in which Repeater Set TC-23 is used at intermediate points to extend the operating range; or it is operated in conjunction with Repeater Sets TC-33 and TC-37 in open-wire systems. It can also be used in a system that is transmitted over a radio link.

TECHNICAL CHARACTERISTICS:

Facilities Required: Open wire or spiral-four cable
Facilities Provided: Four 2,600-cps channels, either two-wire or four-wire
Frequency: 200 to 12,000 cps
Type Modulation: AM
Type Ringing: Vf from Ringing Equipment EE-101-A or equivalent
Power Requirements: 115/230-v 50/60-cycle ac; or emergency operation from 12-v storage battery

AN/TCC-type TELEPHONE TERMINAL SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Battery BB–55	6140–126–1540	26 x 14 x 19	110
2	Power Unit PE–75	6115–228–5815	36 x 19 x 26	660
1	Rectifier RA–83	6130–222–6214	14 x 10 x 16	57
1	Telephone EE–8	5805–162–6251	7 x 16 x 7	10
1	Telephone Terminal CF–1–( )	5805–170–4770	66 x 28 x 19	475

REFERENCE DATA AND LITERATURE:

TM 11–341
TM 11–369
TM 11–2001

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	53.4	1,340

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

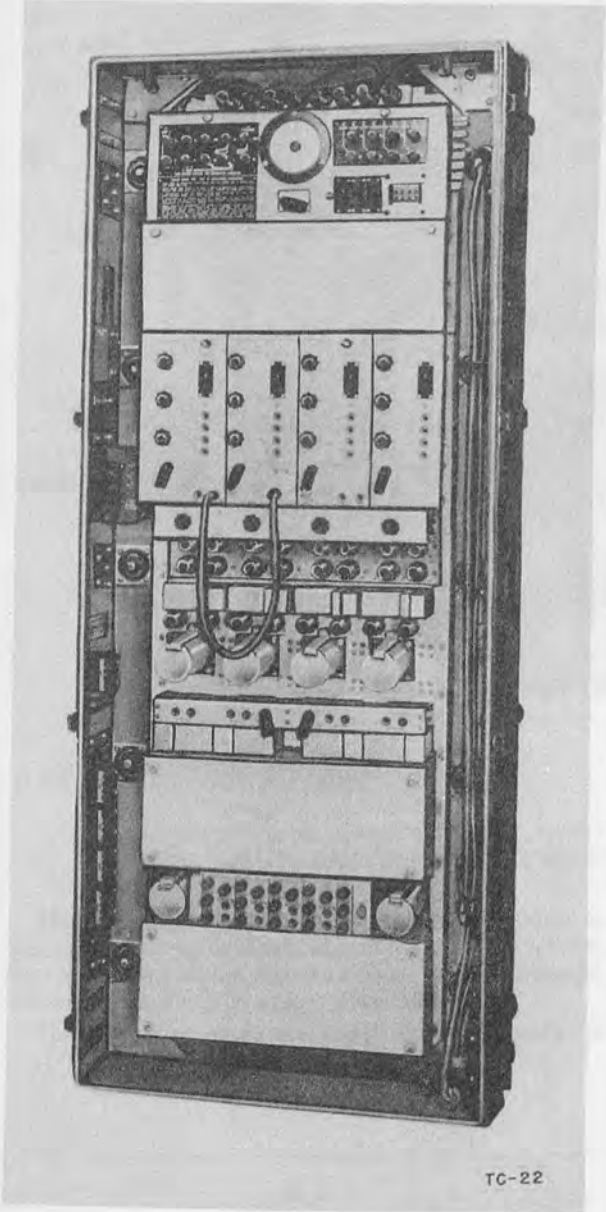
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	2457–P–45	

TELEGRAPH TERMINAL SET AN/TCC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-223-7448 TC-22-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	L/Std
STOCK NO:	4A2822	--	--



TC-22

FUNCTIONAL DESCRIPTION:

Telegraph Terminal Set TC-22( ) is a transportable four-channel, vf carrier telegraph terminal equipment providing two-way transmission of teletypewriter signals in each channel. It can operate in one channel of a carrier-telephone facility in which Telephone Terminal Set CF-1 and Repeaters CF-3 are used.

There are two models of this equipment: Telegraph Terminal Set TC-22-A consists of panel-mounted apparatus covering four channels, contained in two floor-type cabinets; Terminal Set TC-22B (illustrated) consists of equivalent panel-mounted apparatus covering four-channels, contained in a single floor-type cabinet.

This terminal set may be installed adjacent to a carrier-telephone terminal, or it may be operated over a two-wire or four-wire circuit (which has a net loss not exceeding 8 db) between telephone and telegraph terminals located at a distance from each other. It can also be operated over a telephone circuit terminating on a two-wire or four-wire basis of the required stability and freedom from interference, and having a net loss not exceeding 25 db at 500 to 2,050 cps.

TECHNICAL CHARACTERISTICS:

Facilities Required: One channel of Telephone Terminal Set TC-21, or equivalent telephone facility
Facilities Provided: Four two-wire teletypewriter channels
Frequency: 500 to 2,050 cps; 8 channels spaced 170 cps apart
Type Modulation: AM
Power Requirements: 200 to 250 w, 100-125/200-250-v 50/60-cycle ac

AN/TCC-type TELEGRAPH TERMINAL SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS* (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Maintenance Equipment ME–75			
1	Telegraph Terminal CF–2–A	5805–239–8260	19 x 27-1/2 x 66 (each bay)	530 (each bay)
	or			
1	Telegraph Terminal CF–2–B	5805–190–6814	19 x 27-1/2 x 66	530

* CF–2–A contained in two bays; CF–2–B in one bay.

REFERENCE DATA AND LITERATURE:

TM 11–355

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	85	1,540

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

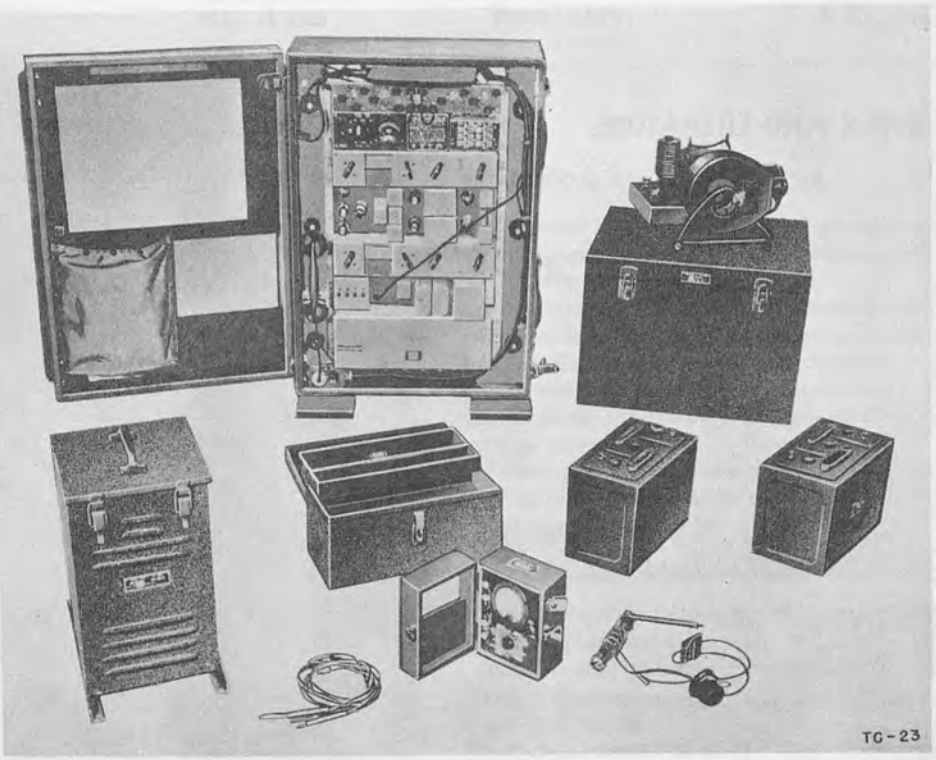
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	148–P–43	

REPEATER SET AN/TCC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-164-8047

TC-23

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4B3223	--	--



FUNCTIONAL DESCRIPTION:

Repeater Set TC–23 is a transportable, four-wire, carrier repeater equipment used at intermediate points in a spiral-four cable carrier facility.

This equipment consists of the repeater component, a power unit, rectifier, and related accessories. It has facilities for transmitting, testing, and monitoring a vf channel and for automatic transfer to emergency power supply.

The primary operating component of this equipment is part of Telephone Central Office Set AN/TCC–2; and consists of repeater apparatus mounted on panels and contained in a wooden case. It is used with Telephone Terminal CF–1.

TECHNICAL CHARACTERISTICS:

Facilities Required: Spiral-four cable
Facilities Provided: Two simplexed circuits of the spiral-four line
Power Requirements: 115/230-v 50/60-cycle ac; emergency power provided by 12-v storage battery

AN/TCC-type REPEATER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Battery BB–55	(FSN) 6140–126–1540	13 x 7 x 9-3/8	110
1	Power Unit PE–214	(USA) 3H4600–214	14-1/8 x 17-3/4 x 12-3/16	57
1	Rectifier RA–83	(FSN) 6130–222–6214	14 x 10 x 16	51
1	Repeater CF–3	(USA) 4B3203	28 x 14 x 34	225

REFERENCE DATA AND LITERATURE:

TM 11–341
TM 11–369
TM 11–2001

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	35	1,036

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

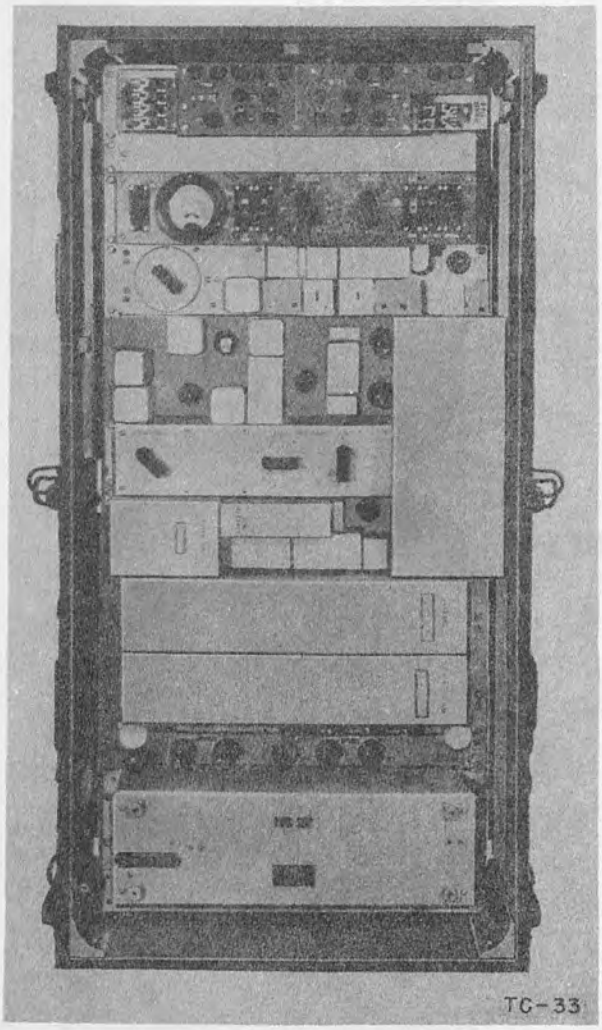
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
		6596–P–51–03	

CONVERTER SET AN/TCC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-228-6102

TC-33-( )

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4B449-33	--	--



TC-33

FUNCTIONAL DESCRIPTION:

Converter Set TC-33-( ) is a transportable, vf, group-modulator equipment used for adapting four-wire transmission to two-wire facilities.

This equipment consists of panel-mounted apparatus contained in a steel cabinet and is normally installed adjacent to a telephone carrier terminal or a repeater.

It is designed for use with a four-channel vf carrier telephone system and can provide equivalent four-wire operation over an open-wire pair.

It may be used to monitor at adjacent telephone terminals, and one of its composite circuits may be used as a signal and alarm circuit.

TECHNICAL CHARACTERISTICS:

Facilities Required: Spiral-four cable or open-wire line
Facilities Provided: Conversion of four-wire carrier system to equivalent two-wire operation
Type of Modulation: AM
Type Ringing: Vf
Power Requirements: 30 w, 115/230-v 50/60-cycle ac; or 12-v dc from storage battery in emergency

AN/TCC-type CONVERTER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Battery BB–55	6140–126–1540	13 x 7 x 9-3/8	110
1	Case CS–111	6140–160–4995	18-5/8 x 16-3/4 x 13-1/8	
1	Chest BC–5	1290–356–3902	28-7/8 x 18-1/8 x 12	
1	Converter CF–4–( )	5845–228–6104	24 x 17 x 49	300
2	Ground Rod MX–148/G	5975–224–5260	72 long x 3/4 diameter	4

REFERENCE DATA AND LITERATURE:
TM 11–2008

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	44	830

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–3051
DESIGN COG: USA, Sig C

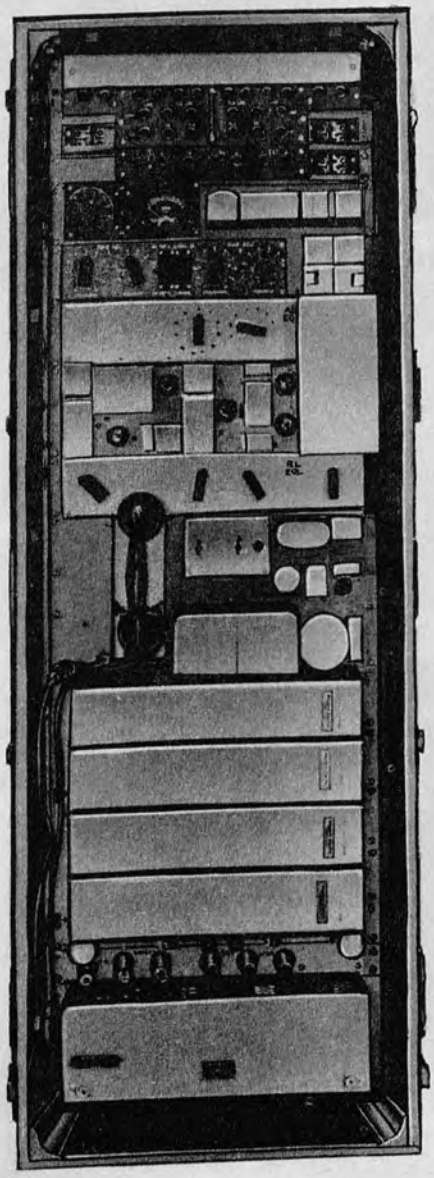
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	4436–P–53–33	$2,050.06

REPEATER SET AN/TCC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-164-7068

TC-37

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4B3237	--	--



TC-37

FUNCTIONAL DESCRIPTION:

Repeater Set TC-37 is a two-wire, four-channel carrier repeater for extending the transmission range of four-channel telephone carrier terminal equipment over open-wire lines.

This equipment consists essentially of Repeater CF-5 with power unit and accessory equipment. It usually is operated in conjunction with Converter Set TC-33 and Telephone Terminal Set TC-21.

This system provides four telephone channels, one of which is usable for vf telegraph communication.

TECHNICAL CHARACTERISTICS:

Facilities Required: Spiral-four cable or open-wire line
Facilities Provided: Two-wire four-channel telephone carrier repeater
Frequency:
AB direction of transmission: 200–11,600 cps
BA direction of transmission: 20,850–32,250 cps
Channel spacing: 2,600 cps
Power Requirements: 46 w, 110/220-v 50/60-cycle ac

AN/TCC-type REPEATER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Battery BB–55	(FSN) 6140–126–1540	26 x 14 x 19	110
1	Power Unit PE–214	(USA) 3H4600–214	12-3/16 x 14-1/8 x 17-1/8	56
1	Rectifier RA–83	(FSN) 6130–222–6214	14 x 10 x 16	57
1	Repeater CF–5	(FSN) 5805–164–7066	24 x 19 x 65	380

REFERENCE DATA AND LITERATURE:

TM 11–2008

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	48.1	942

PROCUREMENT DATA

PROCURING SERVICE: USA DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Maspeth Tel. & Radio Corp.	Brooklyn, N. Y.	3590–P–52–31	$4,090.00

LINE TERMINAL EQUIPMENT AN/TCC-type

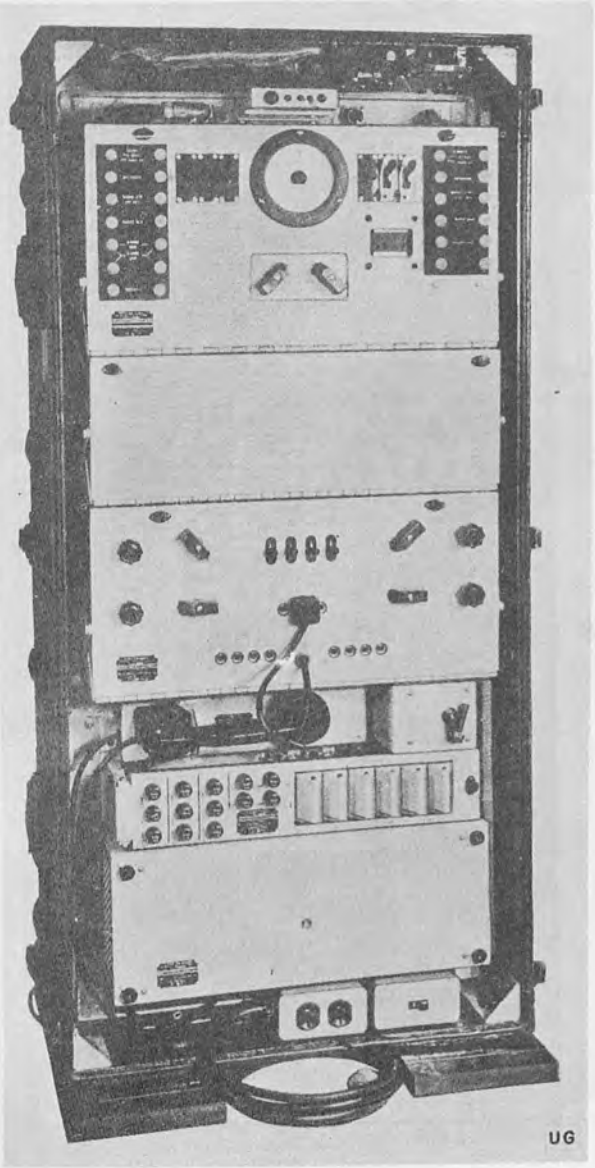
30 October 1958
Cognizant Serv: USN FSN: 5805-644-4571

UG

USA	USN	USAF

TYPE CLASS: --
STOCK NO: --

Used by
F16-Q-341100-100



UG

FUNCTIONAL DESCRIPTION:

Line Terminal Equipment UG is used for carrier telegraph transmission over a land line or radio link. It converts dc telegraph signals to audio-frequency tone for transmission over the line or radio link, and reconverts the AF tone signals to direct current.

The system consists of two two-way telegraph circuits. By the use of two switches, one that selects the operating frequencies for two oscillators and another that selects the two corresponding filters for each circuit, the two circuits of a terminal unit may be set to operate on any one of four combinations of frequencies.

Either duplex or half-duplex operation may be used. Either is capable of handling manual telegraph or teletypewriter and automatic tape-recorded transmissions. Operation may be on either a neutral or polar basis. Either a two or four-wire system may be used provided its loss is not greater than 25 decibels.

The UG is used with Radio-Line Terminal Equipment UH as part of Portable Carrier Control System UF.

TECHNICAL CHARACTERISTICS:

Operating Frequencies:
Low: 595, 765, 935, 1,105 cps
High: 1,445, 1,615, 1,785, 1,955 cps
Number of Channels: 2
Type Signal: AM
Transmission Speed:
Teletypewriter: 60 wpm
Automatic Tape Keyer and Recorder: 100 wpm
Line Circuit Ranges:
W-110-B: 6 miles
W-143: 16 miles
19-gage Quadruple Unloaded Line: 16 miles
Output Level: 0 dbm
Power Requirements: 135 w, 103- to 126/207- to 253-v 50- to 60-cycle 1-phase ac

AN/TCC-type LINE TERMINAL EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Line Terminal Equipment UG, consisting of:	----------	49-1/2 x 24-1/2 x 17-1/8	373
1	Cabinet 10331			
1	Fuse Panel 28016			
1	Control Unit 23426			
1	Load Control Unit 50177			
1	Rectifier Power Unit 20290			
1	Telephone Set Unit 51068			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,223

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	22.5	710

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

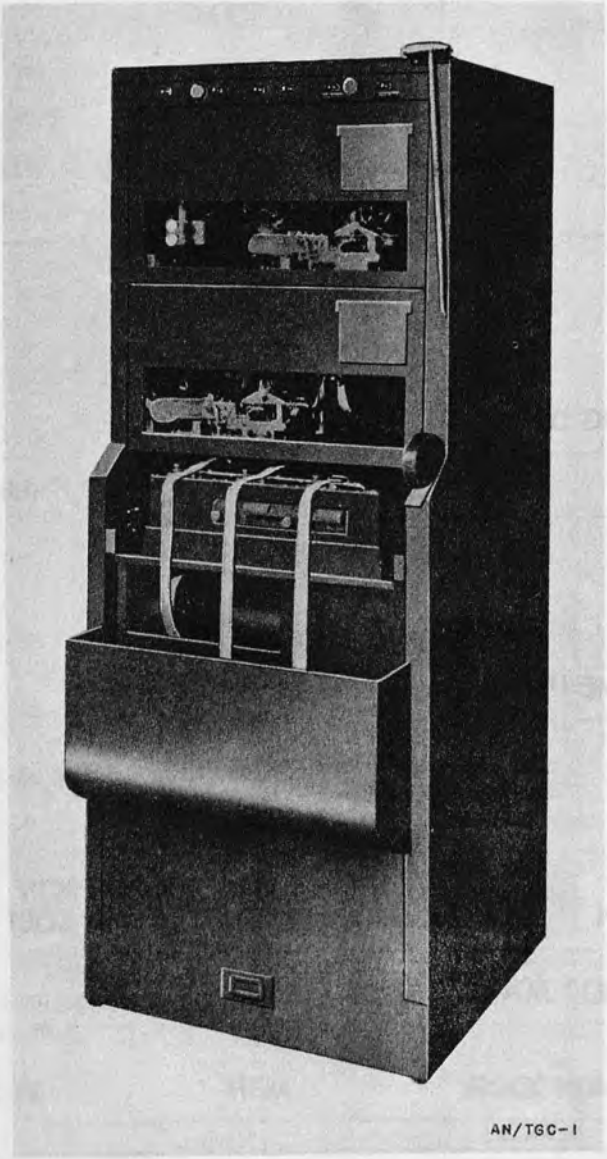
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	NXsr-41001, 25 October 1954 NXsr-85031 N5sr-5945	

TELETYPEWRITER SET AN/TGC-1( )

1 July 1958
Cognizant Serv: USA FSN: 5815-198-5952

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Std
STOCK NO:	4T1000-1		--



FUNCTIONAL DESCRIPTION:

Teletypewriter Set AN/TGC-1( ) is an automatic, high-speed, multichannel, teletypewriter station equipment used for sending, receiving, or monitoring, by means of typed and perforated paper tape.

This equipment consists of a single operating assemblage composed of a multiple transmitter-distributor (which provides one number transmitter and two message transmitters) and two typing reperforators. It can be used for conventional duplex make-and-break, duplex polar, single, split duplex make-and-break, split duplex polar, or split single operation.

Several of these equipments may be installed side by side for handling large traffic loads. It can be used for tape-relay operation, and is designed for continuous operation.

It operates on 115-volt ac or dc; the tapewinder motor operates on ac only.

TECHNICAL CHARACTERISTICS:

Operating Functions: No keyboard; number release key; message release key; tape feed key; break key; alarm switch

Operating Speed: 368.1 or 600.0 opm

Motor Characteristics: Series-governed motor, tuning fork adjustable to 2,102 rpm, or a synchronous motor requiring no adjustment

Power Requirements: 115-v dc; or 115-v 50/60-cycle ac

AN/TGC-1( ) TELETYPEWRITER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Electrical equipment cabinet	5815–243–9684	24 x 24 x 65	250
1	Rectifier 54A	5815–242–7797	5 x 15-3/4 x 6-3/4	35
1	Signal indicator panel	6350–162–6298	5 x 21 x 1-3/4	20
1	Tape winder	5815–129–1877	12 x 6 x 11	10
1	Teletypewriter distributor-transmitter (multiple)	5815–222–4290	15-1/4 x 16-3/4 x 5-3/4	90
2	Teletypewriter reperforators	5815–199–0186	13 x 12 x 8	34.25
1	Tuning fork	6625–243–2927		

REFERENCE DATA AND LITERATURE:

TM 11–2203

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	42.5	1,267

PROCUREMENT DATA

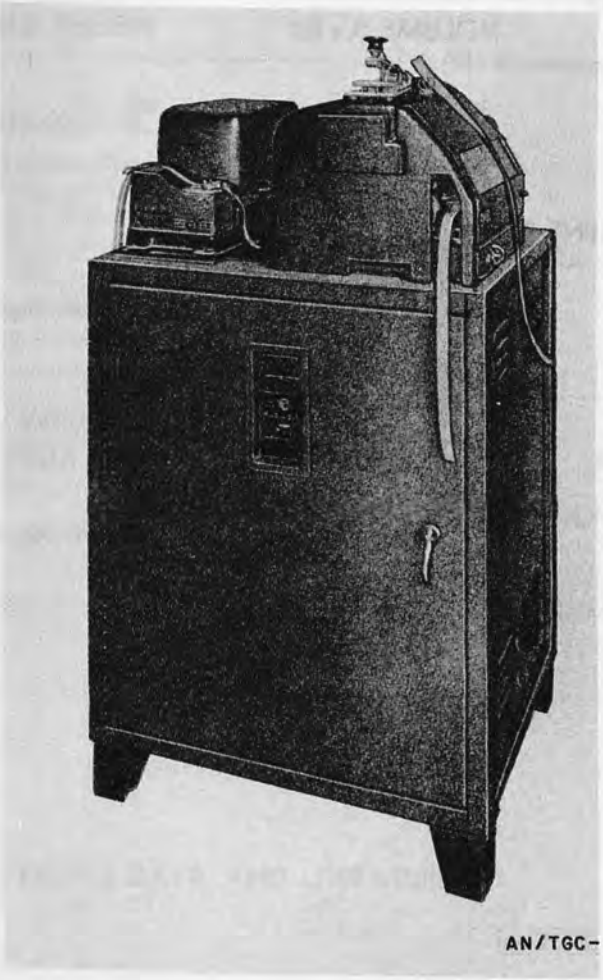
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: (USA) SC–D–31245

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Molded Insulation Co.	Philadelphia, Pa.	14524–P–48–77	$1,162.61
Thomas A. Edison, Inc.	Orange, N. J.	18042–P–50–09	1,014.82

TELETYPEWRITER SET AN/TGC-3

Cognizant Serv: USA **FSN:** 5815-198-9035

	USA	USN	USAF
TYPE CLASS:	S/Std	Used by	Std
STOCK NO:	4TW133A2	--	--



FUNCTIONAL DESCRIPTION:

Teletypewriter Set AN/TGC-3 is an automatic transmitting and receiving unit used for torn-shape switching or teletypewriter relay applications by means of typed and perforated paper tape.

This equipment consists essentially of a transmitter-distributor and a receiving-only typing reperforator. It includes an operating table and related accessories. Tape received by means of the reperforator unit can be used to transmit through the transmitter-distributor.

The set operates in neutral or polar channels and can be used with telegraph terminal equipment and with Teletypewriter Repeater-Mixer AN/FGQ-1.

TECHNICAL CHARACTERISTICS:

Transmission and Reception: Polar or neutral
Tape:
Width: 11/16 in.
Type: Perforated, chad, or chadless
Operating Speed: 368 opm
Motor Characteristics:
Type: Series-governed
Cycles per Second: 87.6
Revolutions per Minute: 2,100
Power Requirements:
With Power Unit: 300 w; 95-, 125-, 190-, or 250-, 25- or 60-cycle, ac
Without Power Unit:
DC Supply: 120 v (3), 0.8 amp drain
AC Supply: 115-v 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Distributor-Transmitter, Teletypewriter TT-52/FG	5815-199-0188	9 x 9-3/8 x 15-1/2	33
1	Power Supply PP-748/U	3H4497-748	13-5/16 x 11-7/8 x 20-3/4	89
1	Reperforator TT-53/FG	5815-199-0188	11-3/4 x 13-1/2 x 16-3/4	62.25
1	Teletypewriter table	----------	34 x 22 x 26	205

AN/TGC-3 TELETYPEWRITER SET

REFERENCE DATA AND LITERATURE:

TM 11-2214

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	33.8	663

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	25802-P-54-53	$1,695.59

TELETYPEWRITER SET AN/TGC-6

1 December 1958
Cognizant Serv: USN FSN:

USA	USN	USAF
TYPE CLASS:	Used by	..
STOCK NO:	4T1001–6	..

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Teletypewriter Set AN/TGC–6 is a lightweight, portable, sending and receiving teletypewriter station primarily intended for field use.

This equipment is designed for operation in a nominal 60 milliampere, direct current, network or in a 20 milliampere wire line or radio carrier system.

The covers of the components are immersion-proof and thus afford complete protection from the effects of weather and permit self-floatation in amphibious activities.

Power is supplied by a gasoline-driven generator, Engine-Generator PU–181/PGC–1, which furnishes 120- or 240-volt, 60-cycle, single-phase ac power.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Standard communications
Characters per Line: 72
Speed: 368.1 and 404 operations per minute
Words per Minute: Approximately 60 and 66
Operational Range: 25 miles
Power Requirements:
Motor: 150 w; 105- to 125-v, 50 to 60-cycle, 1-phase ac
Line: Dc line, 60 ma; voice frequency line, 20-ma dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Case CY–553/PGC–1	6F300–553	30 x 19 x 6	
1	Engine-Generator PAU–181/PGC–1	3H1927–181		121
1	Teletypewriter Set AN/PGC–1	4T2.19	25-5/16 x 20-1/4 x 14-1/8	147

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	18.2	351

AN/TGC-6 TELETYPEWRITER SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

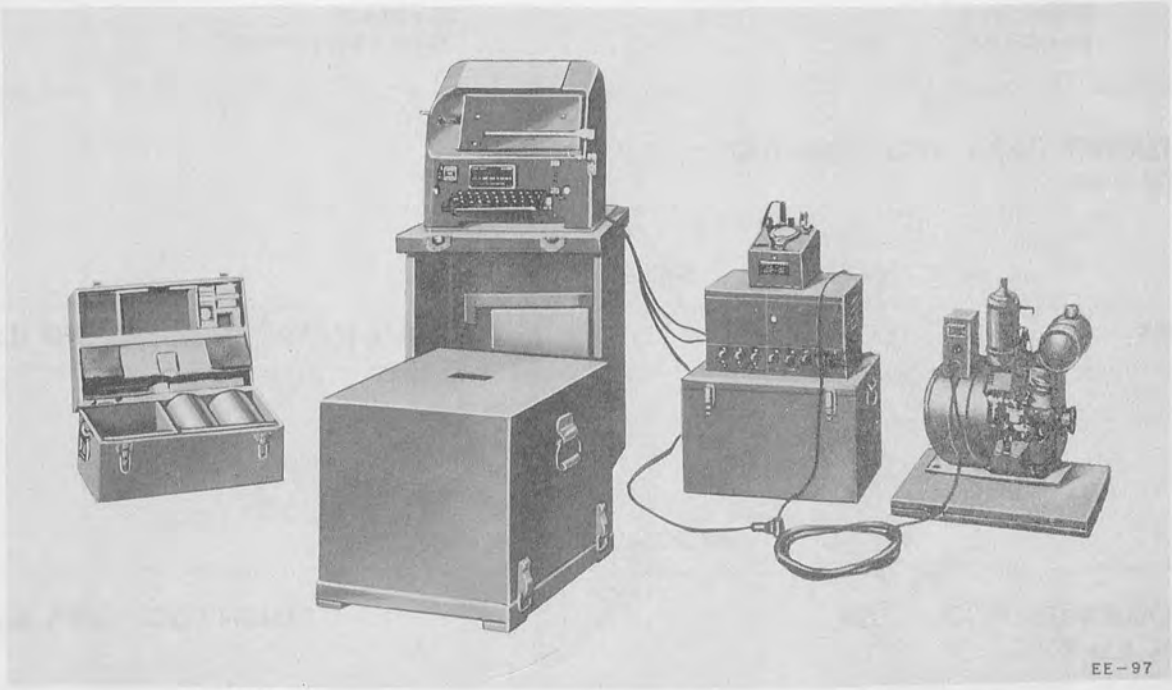
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEGRAPH PRINTER SET AN/TGC-type

1 July 1958
Cognizant Serv: USA FSN: 5815-164-7102 EE-97-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4TEE97	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Printer EE-97-( ) is a complete, transportable, field teletypewriter station used for transmitting and receiving telegraph communications at battalion and higher headquarters.

This equipment consists primarily of a conventional page-printing, sending and receiving teletypewriter (printer), line control unit, and power generating equipment contained n carrying cases.

The set is designed for quick installation in the open or under shelter. It requires only connection to wire facilities for operation.

TECHNICAL CHARACTERISTICS:

Operating Functions: Standard communications keyboard
Operating Speed: 60 wpm (368 opm), adjustable to 66 wpm (404 opm)
Motor Characteristics: Series governed; 0.4 amp at 115-v dc
Power Supplied: 250 w, 115-v dc from Power Unit PE-77

AN/TGC-type TELEGRAPH PRINTER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Line Unit BE–77	4T103554	7-3/4 x 6 x 6	6
1	Power Unit PE–77	3H4577	22 x 12 x 22	127
1	Printer TG–7	4T2.28	19 x 20 x 42	225
1	Rectifier RA–37	----------	12-1/2 x 8-1/4 x 6-1/2	24

REFERENCE DATA AND LITERATURE:

TM 11–354

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	40	700

PROCUREMENT DATA

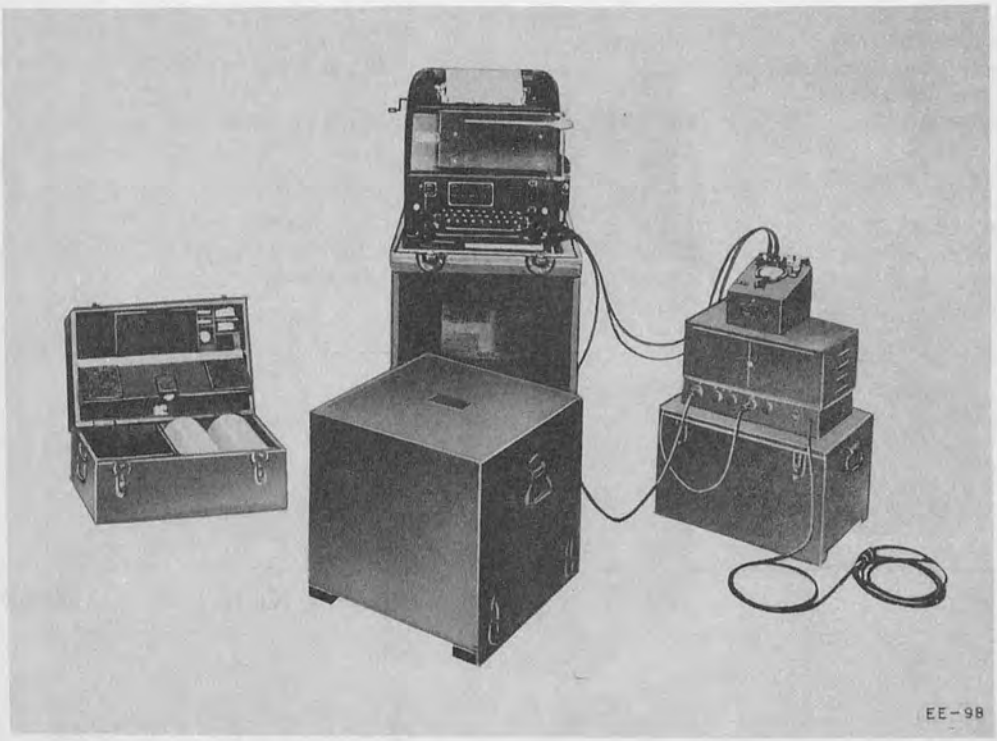
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELETYPEWRITER SET AN/TGC-type

26 November 1958
Cognizant Serv: USA FSN: EE-98-A: 5815-164-7113 EE-98-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	*EE-98:* 4TEE98 *EE-98-A:* 4TEE98A	--	--



FUNCTIONAL DESCRIPTION:

Teletypewriter Sets EE-98 and EE-98-A are complete, transportable, field teletypewriter stations which require only connection to power and communication lines in order to operate.

This equipment consists of a conventional page-printing teletypewriter, line control unit, rectifier, and related accessories contained in carrying cases. It can be used in conjunction with carrier terminal facilities and at teletypewriter centrals and radio terminals.

The equipment is designed for quick installation in the open or under shelter. It is connected for operation by means of cords and plug connectors.

TECHNICAL CHARACTERISTICS:

Keyboard: Standard communication

Operating Speed: 60 wpm (368 opm) adjustable to 66 wpm (404 opn)

Motor Characteristics: Series-governed, 115-v dc or 250-v, 50 to 60 cps, 87.6 vps tuning fork speed adjusting frequency 1,800 rpm

Power Requirements: 200 w; 115-v dc; 95-125/190-250-v 50-60-cycle ac

AN/TGC-type TELETYPEWRITER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
	For EE–98:			
1	Line Unit BE–77	4T103554	7-3/4 x 6 x 6	6
1	Printer TG–7–A (mounted on Chest CH–50–A)	4T2.13	19 x 20 x 42	225
1	Rectifier RA–37	3H4677	12-1/2 x 8-1/2 x 6-1/2	24
	For EE–98–A:			
1	Line Unit BE–77–A	4TBE77A	7-3/4 x 6 x 6	6
1	Rectifier RA–87	3H4698–87	8-3/8 x 14-9/16 x 7-1/2	40
1	Teletypewriter TG–7–B (mounted on Chest CH–50–A)	4T2.28	19 x 20 x 42	225

REFERENCE DATA AND LITERATURE:

TM 11–354

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For EE–98:		
5	32	547
For EE–98–A:	32	562
5		

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

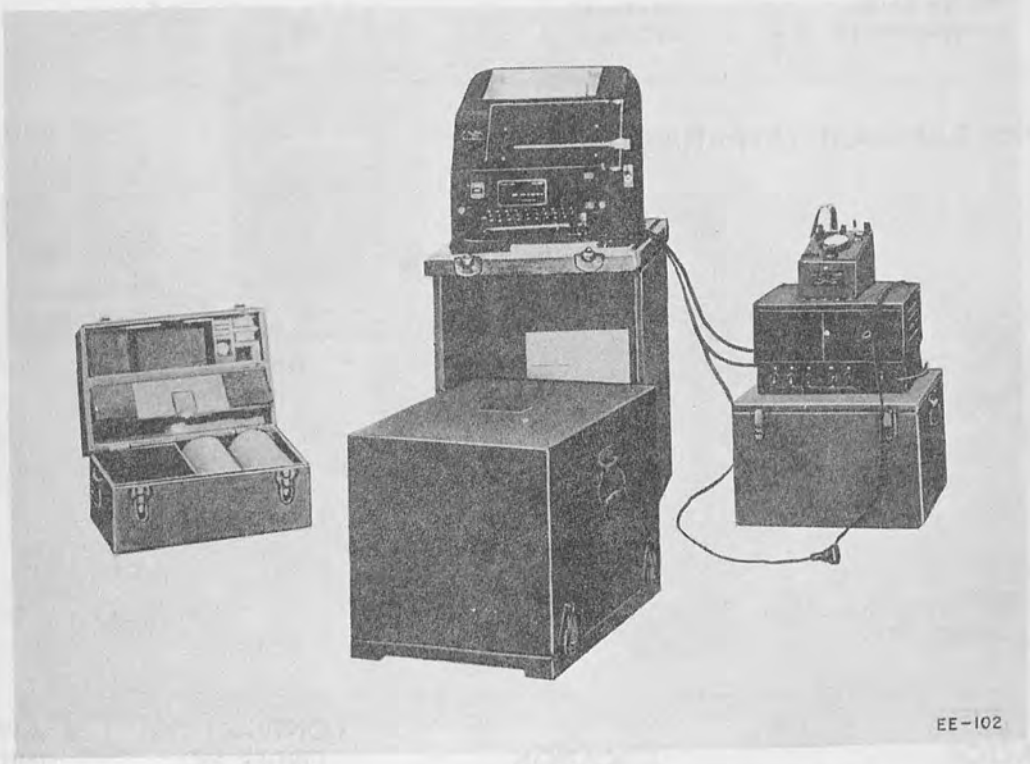
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELETYPEWRITER SET AN/TGC-type

26 November 1958
Cognizant Serv: USA FSN: 5815-198-9036

EE-102

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Teletypewriter Set EE-102 is a transportable field teletypewriter equipment used in weather reporting stations.

This equipment consists primarily of a page-printing field teletypewriter having a weather symbol keyboard, a line unit, power supply, rectifier, and associated accessories contained in carrying cases.

The equipment is designed for quick installation in the open or under shelter. It is connected for operation by means of cords and plug connectors.

TECHNICAL CHARACTERISTICS:

Keyboard: Weather symbols
Operating Speed: 60 wpm (368 opm) adjustable to 66 wpm (404 opm)
Motor Characteristics: Series-governed; 87.6 vps tuning fork speed adjusting frequency; 1,800 rpm
Power Requirements: 200 w; 115-v dc; or 85- to 95-125/190-250-v 50-60-cycle ac

AN/TGC-type TELETYPEWRITER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Line Unit BE–77–A	4TBE77A	7-3/4 x 6 x 6	6
1	Rectifier RA–87	3H4699–87	8-3/8 x 14-9/16 x 7-1/2	40
1	Teletypewriter TG–37–B	4T2.23A–1	19 x 20 x 42	225

REFERENCE DATA AND LITERATURE:

TM 11–354

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
8	32	562

PROCUREMENT DATA

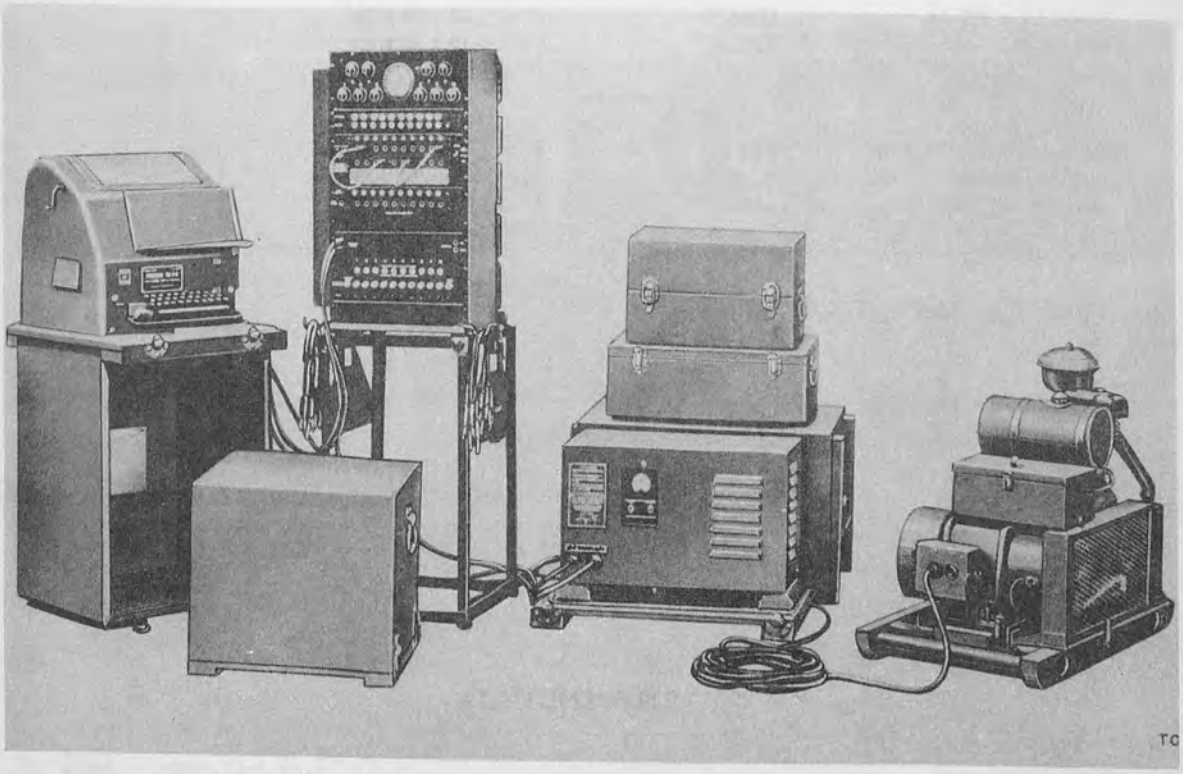
PROCURING SERVICE: USA DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEGRAPH CENTRAL OFFICE SET AN/TGC-type

1 July 1958
Cognizant Serv: USA FSN: 5815-198-9035 TC-3

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4TW133A2	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Central Office Set TC-3 is a complete transportable central office for receiving, transmitting, and switching tactical teletypewriter traffic in a field wire or cable system.

This equipment consists essentially of a switchboard, teletypewriter, and associated accessories. It has provision for supplying line current alone, in conjunction with the remote station, or by the distant station alone. The switchboard provides switching and full repeating facilities for 10 lines (maximum), which may be ground return or metallic.

When it becomes necessary to expand the capacity of this telegraph central office, a maximum of two switchboards may be added and operated in multiple with the switchboard of this equipment.

It operates on about 500 w of ac power through appropriate rectifying equipment.

TECHNICAL CHARACTERISTICS:

Number of Positions: 1 to 3
Number and Type of Circuits Per Position: 1 cord, 10 line
Power Requirements: 500 w, 115/230-v 50/60-cycle 1-phase ac
Rectifier Power Output: 4.5 amp at 115-v dc

AN/TGC-type TELEGRAPH CENTRAL OFFICE SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Power Unit PE–75	3H4575	36 x 19 x 26	325
1	Printer TG–7–A	4T2.28	19 x 20 x 42	225
	or			
1	Teletypewriter TG–7–B	4T2.28	19 x 20 x 42	225
1	Rectifier RA–43	3H4683	30 x 16 x 19	190
1	Switchboard BD–100	4A2560	16 x 16 x 26	180

REFERENCE DATA AND LITERATURE:

TM 11–358

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
8	93.3	1,683

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

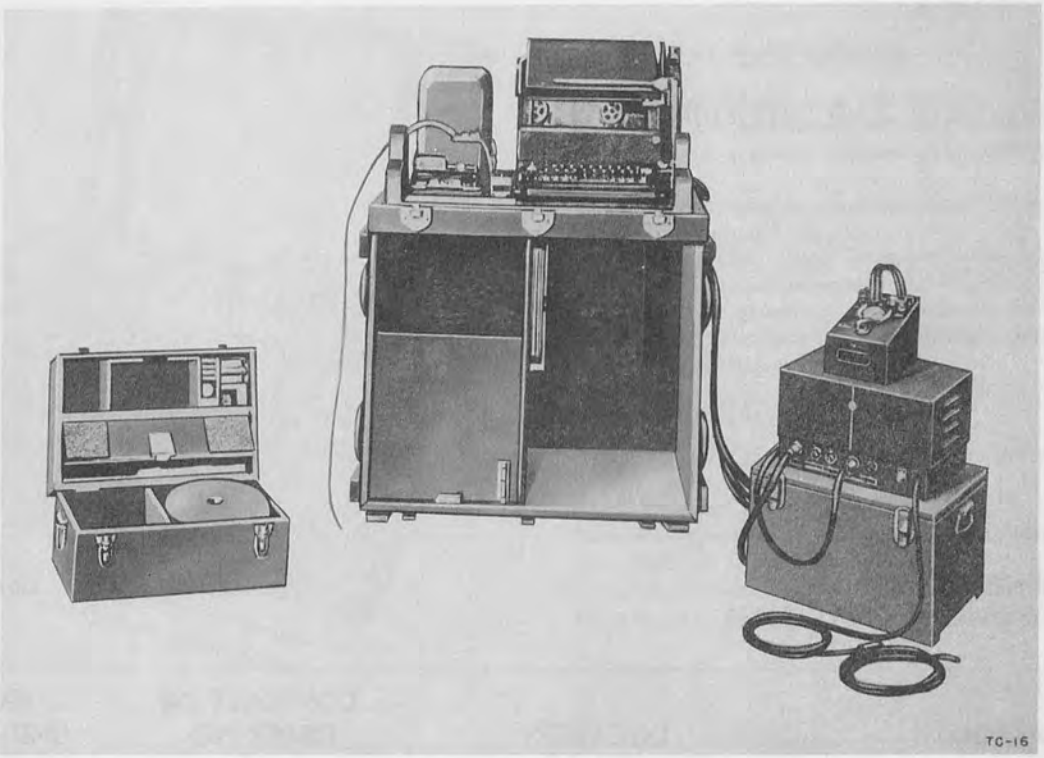
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

REPERFORATOR-TELETYPEWRITER SET AN/TGC-type

1 July 1958
Cognizant Serv: USA FSN: 5815-198-5964
5815-356-3158

TC-16-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4TTC16, 4TTC16-1	--	--



FUNCTIONAL DESCRIPTION:

Reperforator-Teletypewriter Set TC-16-( ) is a field, transportable, standard communication, tape sending and receiving teletypewriter station equipment.

This equipment consists essentially of a reperforator transmitter having standard communication keyboard and type pallets, plus a transmitter-distributor, a line unit, rectifier, and accessory items. The line unit provides a means for measuring and adjusting for bias and distortion of line signals.

It can be connected to other teletypewriters in field wire or cable, open wire, carrier, or radio systems.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368.1 opm and 404 opm
Motor Characteristics: Series ac governed
Power Requirements: 300 w, 85-135/170-270-v 50/60-cycle ac

AN/TGC-type REPERFORATOR-TELETYPEWRITER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Ground Rod MX–148/G	(FSN) 5975–224–5260	72 x 3/4 (dia)	9.5
1	Line Unit BE–77A	(FSN) 5805–162–6302	6 x 8-1/4 x 6-3/8	31
1	Rectifier RA–87	(FSN) 6130–230–7257	12-1/2 x 18-1/2 x 10-1/2	57
1	Reperforator-Transmitter TG–26–A	(USA) 4T12.1A–1	19 x 33 x 38	225

REFERENCE DATA AND LITERATURE:

TM 11–2201

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	33	587

PROCUREMENT DATA

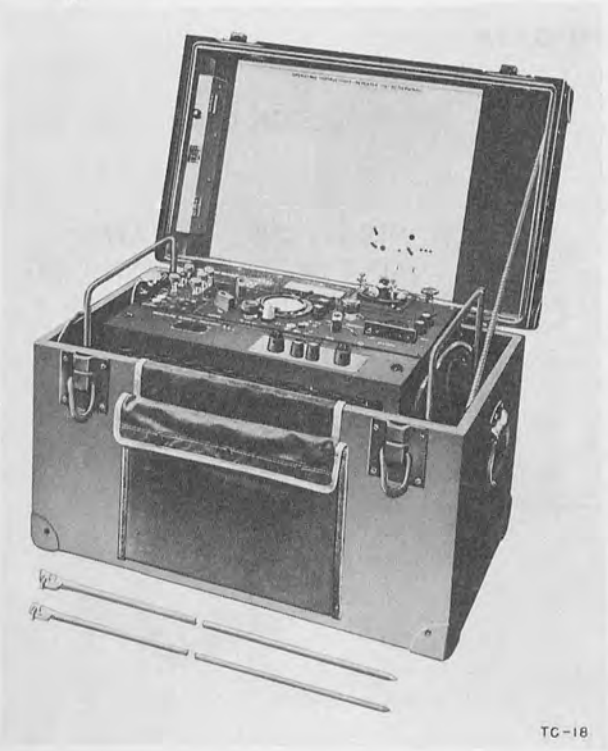
PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 123848
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
J. H. Bunnel & Co.	New York, N. Y.	25578–P–49	

REPEATER SET AN/TGC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-224-4962 TC-18

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4A2118	--	--



TC-18

FUNCTIONAL DESCRIPTION:

Repeater Set TC-18 is a transportable, dc telegraph terminal repeater equipment used in simplexed field-wire line circuits or in open-wire, composited, ground-return facilities.

This equipment consists of a single primary operating component and two ground rods.

It is equipped with a hand telegraph key for use of supervisory and maintenance personnel and is usually operated on a half-duplex basis, providing one channel of teletypewriter communication. It is designed to extend the operating range of teletypewriter station equipment.

TECHNICAL CHARACTERISTICS:

Facilities Required: Simplexed field wire or open-wire (composited, ground return)

Facilities Provided:

Line Side: Polarential send, differential send; two-path

Local Side: 30- to 60-ma neutral

Power Requirements: 95–125/190–250-v 50/60-cycle ac; or 115-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
2	Ground Rod MX-148/G	5975-224-5260	72 x 34 (dia)	9.5
1	Telegraph Terminal Repeater TG-30	5805-224-4957	25 x 16 x 14-1/2	130

REFERENCE DATA AND LITERATURE:

TM 11-2004

AN/TGC-type REPEATER SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	6.5	195

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

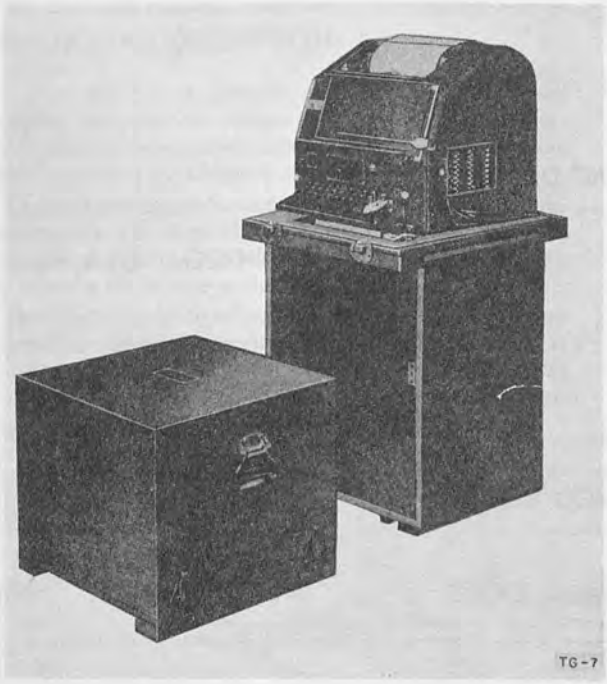
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

PRINTER AN/TGC-type

31 October 1958
Cognizant Serv: USA FSN: 5815-503-2651

TG-7

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	4T2.13-1		--


TG-7

FUNCTIONAL DESCRIPTION:

Printer TG-7 is a portable, page-printing sending and teletypewriter station equipment designed for the interchange of typewritten messages between two or more points connected by telegraph communication channels.

The equipment consists essentially of a modified commercial teletypewriter (Teletype Model 15) and two chests. One chest serves as a seat for the operator; the other is used as an operating table for the teletypewriter.

The TG-7 is functionally similar to the TG-7A and TG-7B. However, in addition to the normal operating speed, the A and B models may be adjusted to operate at 404 operations per minute (67 words per minute) for interoperation with British equipment by increasing the speed of the motor. This is accomplished by changing the adjustment of the motor governor. The B model also can operate on 115-volt, 40-cycle ac.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Standard communications
Characters Per Line: 72
Operating Speed: 368 ohm, 60 wpm
Code: 5-unit, start-stop
Transmission Pattern: 7.5-unit
Number of Channels: 1
Type Motor: Series-governed
Motor Speed: 1,800 rpm
Tuning Fork Frequency: 87.6 vps
Power Requirements: 140 va, 115-v 25-/50- to 60-cycle 1-phase ac; 110 w, 115-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Chest CH-50			
1	Chest CH-62			
1	Teletypewriter (Teletype Model 15)			

(Equipment consists of only one major operating component.)

AN/TGC-type PRINTER

REFERENCE DATA AND LITERATURE:

TM 11-352

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	42	557

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	13465-P-48-77	$901.56

PRINTER **AN/TGC-type**

31 October 1958
Cognizant Serv: USA FSN: 5815-315-2873

TG-7-A

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	4T2.28	F16-T-995413	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Printer TG-7-A is portable, page-printing sending and receiving teletypewriter station equipment designed for the interchange of typewritten messages between two or more points connected by telegraph communication channels.

The equipment consists essentially of a modified commercial teletypewriter (Teletype Model 15) and two chests. One chest serves as a seat for the operator; the other is used as an operating table for the teletypewriter.

The TG-7-A may be adjusted to operate at 404 operations per minute (67 words per minute) for interoperation with British equipment by increasing the speed of the motor. This is accomplished by changing the adjustment of the motor governor.

The TG-7-A is similar in appearance to the TG-7-B. The A model, however, will operate only on 115-volt, 25-cycle ac or 115-volt, 50- to 60-cycle ac; the B model also will operate on 115-volt, 40-cycle ac.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Standard communications
Characters Per Line: 72
Operating Speed: 368 opm, 60 wpm
Code: 5-unit, start-stop
Transmission Patterns: 7.5-unit
Number of Channels: 1
Type Motor: Series-governed
Power Requirements: 95 w, 115-v 25-50 to 60-cycle, 1-phase ac; 115-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Chest CH-50-A	4T103370		
1	Chest CH-62-A	4T103368		
1	Teletypewriter (Teletype Model 15)			

(Equipment consists of only one major operating component.)

REFERENCE DATA AND LITERATURE:

TM 11-352

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	42	557

AN/TGC-type PRINTER

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	S&A–20869	$1,200 with equipment spares
		S&A–22558	$1,200 with equipment spares

TELETYPEWRITER AN/TGC-type

31 October 1958
Cognizant Serv: USA FSN: TG–7–B

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	L/Std
STOCK NO:	4T2.28A–4	F16–P–7052–5	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Teletypewriter TG–7–B is portable, page-printing sending and receiving teletypewriter station equipment designed for the interchange of typewritten messages between two or more points connected by telegraph communication channels.

The equipment consists essentially of a modified commercial teletypewriter (Teletype Corp. Model 15) and two chests. One chest serves as a seat for the operator; the other is used as an operating table for the teletypewriter.

The TG–7–B may be adjusted to operate at 404 operations per minute (67 words per minute) for interoperation with British equipment by increasing the speed of the motor. This is done by changing the adjustment of the motor governor.

The TG–7–B is similar in appearance to the TG–7–A. The B model, however, will operate on 115-volt, 40-cycle ac in addition to 115-volt, 25-cycle ac or 115-volt, 50- to 60-cycle ac.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Standard communications
Characters Per Line: 72
Operating Speed: 368 opm, 60 wpm
Code: 5-unit, start-stop
Transmission Pattern: 7.5-unit
Number of Channels: 1
Type Motor: Series-governed
Power Requirements: 95 w, 115-v 25/50- to 60-cycle 1-phase ac; 115-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	(USA)			
1	Chest CH–50–B	4T105299		
1	Chest CH–62–B	4T105367		
1	Teletypewriter (Teletype Model 15)			

(Equipment consists of only one major operating component.)

REFERENCE DATA AND LITERATURE:

TM 11–352

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	42	557

AN/TGC-type TELETYPEWRITER

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

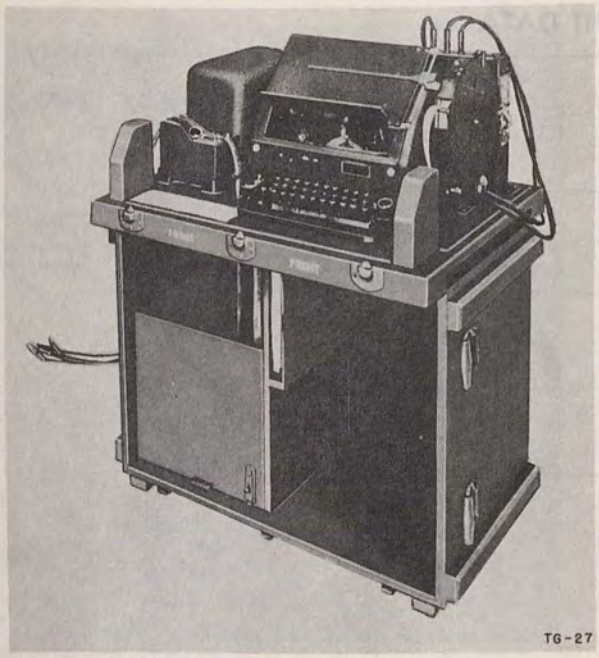
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	S&A–20869	$1,200 with equipment spares
		S&A–22558	$1,200 with equipment spares

REPERFORATOR-TRANSMITTER AN/TGC-type

1 July 1958
Cognizant Serv: USAF FSN: 5815-164-7098 TG-27

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4T12.2A-1	--	--



FUNCTIONAL DESCRIPTION:

Reperforator-Transmitter TG-27 is a transportable standard weather communication teletypewriter station equipment used for sending and receiving weather data by means of perforated paper tape.

This equipment consists essentially of a transmitter-distributor and a typing reperforator having a weather communication keyboard and type pallets. It is transported in a carrying case, which is used as the operating table.

This equipment is the major component of Reperforator-Teletypewriter Set TC-17.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368.1 or 404 opm (60 or 66 wpm)
Motor Characteristics: Series-governed
Power Requirements: 225 w, 115-v 50/60-cycle ac; or 225 w, 115-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Reperforator-Transmitter TG-27	5815-164-7098	19 x 33 x 38	225

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-2201

AN/TGC-type REPERFORATOR-TRANSMITTER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

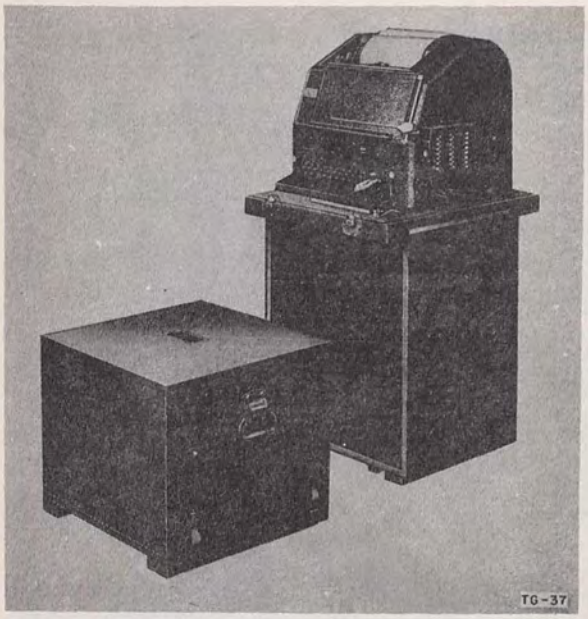
DESIGN COG: USAF, RCSSE-2

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELETYPEWRITER AN/TGC-type

1 July 1958
Cognizant Serv: USA FSN: 5815-164-7172 TG-37-( )

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4T2.23A-1	--	--



FUNCTIONAL DESCRIPTION:

Teletypewriter TG-37-( ) is a portable, field, page-printing teletypewriter station equipment having weather communication keyboard and type-pallets.

This equipment consists essentially of a commercial (Teletype Corp. Model 15) teletypewriter that has been modified for tactical use. It is carried in field-type cases that are used to form the operating table and operator's seat.

It can receive and transmit messages, but is not used for full-duplex operation. It is the weather communication version of Teletypewriter TG-7.

TECHNICAL CHARACTERISTICS:

Operating Speed: 368.1 or 404 opm (60 or 66 wpm)
Motor Characteristics: Series-governed; 87.6 vps tuning-fork frequency; 1,800 rpm
Power Requirements: 110 w, 115-v dc; 140 va, 115-v 25/50-60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Teletypewriter TG-37	5815-164-7172	20 x 19 x 42	225

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-352

AN/TGC-type TELETYPEWRITER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	42.0	557

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

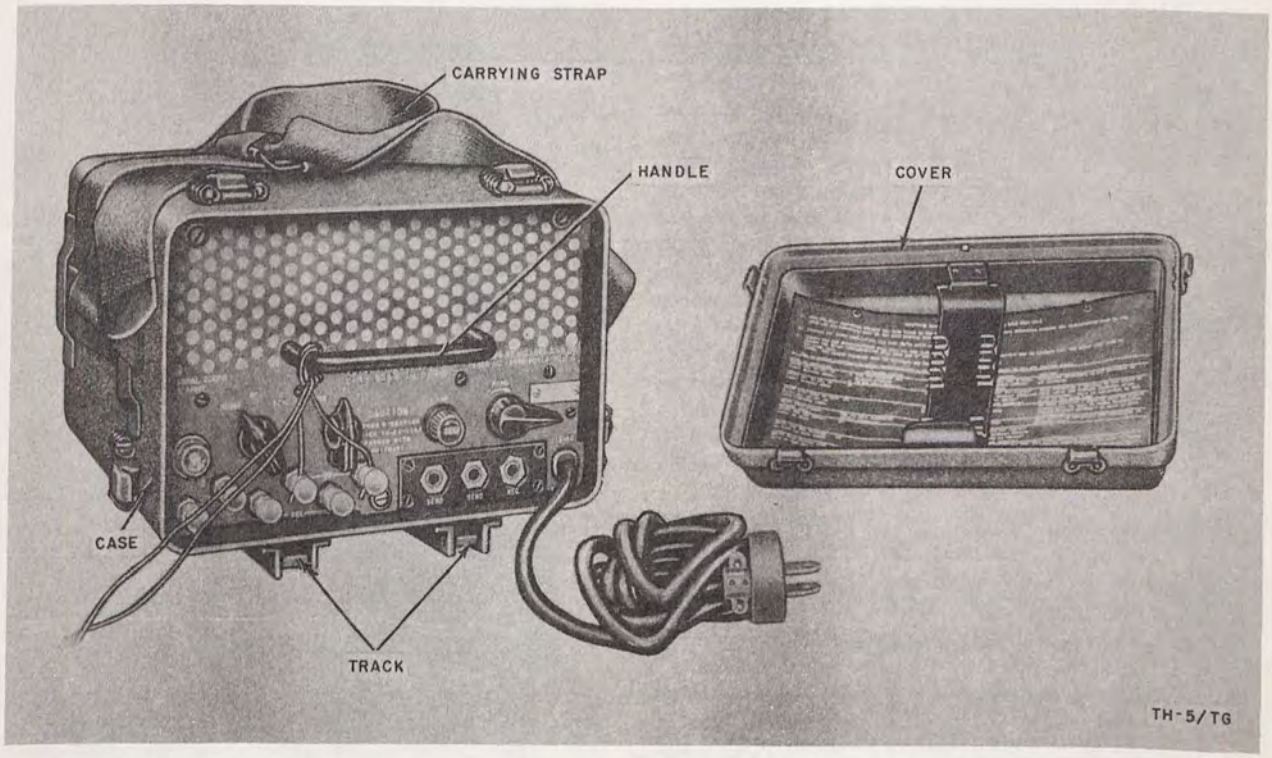
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEGRAPH TERMINAL AN/TGC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-240-6225

TH-5/TG

	USA	USN	USAF
TYPE CLASS:	--	--	Std
STOCK NO:	4A2895-5	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Terminal TH-5/TG is a small, transportable, frequency-shift modulator and demodulator equipment used in one-way reversible operation of teletypewriter circuits over two-wire, four-wire, or radioteletype facilities.

This equipment can be operated in conjunction with associated equipment in circuits controlled by either local-battery or common-battery switchboards. It can also transmit and receive 20-cycle signaling current.

TECHNICAL CHARACTERISTICS:

Facilities Required: Teletypewriter equipment; two-wire, four-wire, or radioteletype circuits

Facilities Provided: Translates dc teletypewriter signals into vf, frequency-shift, 1,225- and 1,325-cps signals; or demodulates 1,225- and 1,325-cps signals and translates them into dc impulses; also provides 20-cps ringing

Power Requirements: 60 w, 115-v 50/60-cycle ac

AN/TGC-type TELEGRAPH TERMINAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Telegraph Terminal TH–5/TG	5805–240–6225	11 x 10-1/2 x 7-1/2	18.5

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–2239

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.78	22.5

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–T–10267

DESIGN COG: USA, Sig C

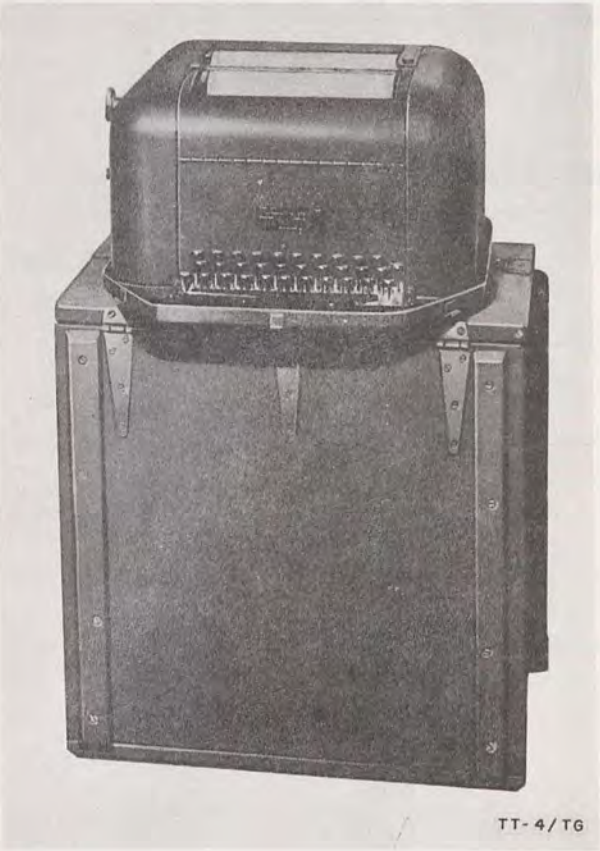
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELETYPEWRITER AN/TGC-type

1 July 1958
Cognizant Serv: USA FSN: 5815–198–4433

TT–4( )/TG

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	4TTT4	--	1730–486121–750



TT-4/TG

FUNCTIONAL DESCRIPTION:

Teletypewriter TT–4( )/TG is a portable, lightweight, page-printing teletypewriter for the transmission, monitoring, and reception of messages at battalion headquarters and communications centers of higher headquarters. It is immersionproof and may be floated during amphibious operations and can be carried on a standard packboard.

Normally used in neutral circuits only, this equipment may be adapted to receive and transmit polar signals. It can be connected to distant teletypewriters in field wire or cable, open wire, carrier or radio systems. It can be arranged for half-duplex, full-duplex, receiving only, or sending-only operation.

When suitable power for the motor and line is available, two or more Teletypewriters TT–4( )/TG may be connected directly and operated without associated line equipment.

This teletypewriter is the major operating component of tactical Teletypewriter Set AN/PGC–1 and fixed station Teletypewriter TT–61/FG.

TECHNICAL CHARACTERISTICS:

Operating Functions: Keyboard operation; remote motor stop; break-in facilities
Operating Speed: 368.1 opm (60 wpm); gears furnished for 600 opm (100 wpm)
Motor Characteristics: Universal (ac or dc) series type
Motor Speed: Tuning fork adjusted to 180 vps; 3,600 rpm
Power Requirements: 105–125-vdc; or 150 w, 105–125-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Teletypewriter TT–4/TG	5815–198–4433	22-1/2 x 18-7/8 x 11-1/4	43

(Equipment consists of only one major component.)

AN/TGC-type TELETYPEWRITER

REFERENCE DATA AND LITERATURE:

TM 11–2234

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	12.15	95

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–T–14579

DESIGN COG: USA, Sig C

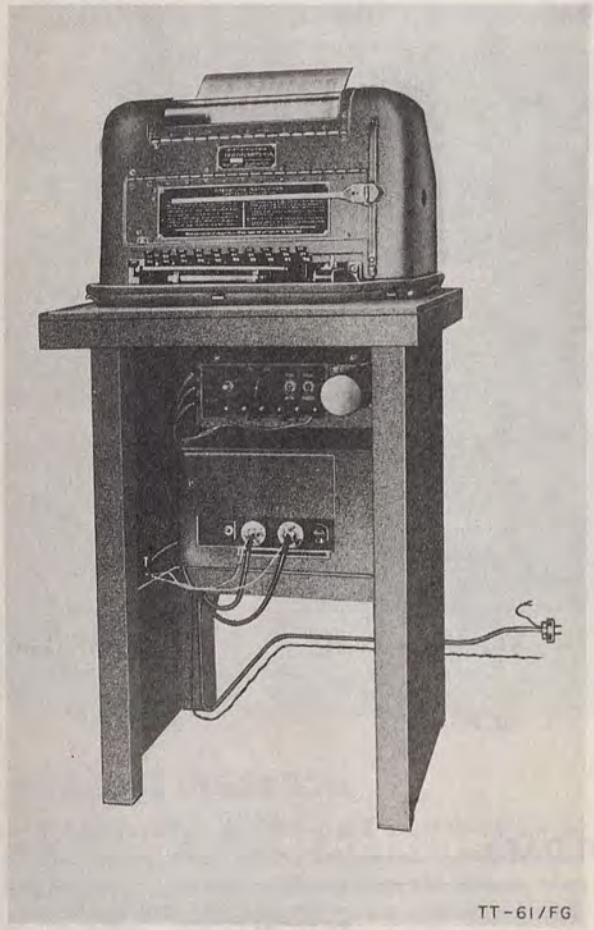
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Kleinschmidt, Inc.	Deerfield, Ill.	6610–P–51–09	$1,954.02
National Cash Register Co.	Dayton, Ohio	6611–P–51–09	1,799.31

TELETYPEWRITER AN/TGC-type

26 November 1958
Cognizant Serv: USA FSN: 5815-198-9028

TT-61/FG

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4TTT61	--	--



TT-61/FG

FUNCTIONAL DESCRIPTION:

Teletypewriter TT-61/FG is a complete sending and receiving teletypewriter station comprised of compact, transportable units suitable for use at fixed or semifixed station installations in which space is limited. The set is designed for use in a nominal 60-milliampere dc neutral or polar network or in a 20-milliampere wire line or radio carrier system. Interoperation is possible with most types of United States and British standard communications teletypewriters in military or commercial use.

The typing unit is a page-printing teletypewriter with a standard communications keyboard. It is capable of sending and receiving messages in standard start-stop, five-unit code. The printing mechanism is capable of operating on neutral signals only, but can be adapted to incoming polar signals through the use of a line unit. Normally this equipment is not used for polar transmission. However, provision is made in the transmitting mechanism for polar as well as neutral sending operation providing additional equipment is used and wiring charges are made.

The TT-61/FG consists of Teletypewriter TT-4/TG, Teletypewriter Adapter TT-73/FG (line unit), rectifier type Power Supply PP-604/FG, and Teletypewriter Table FN-45/FG. The table is used as a mounting and operating table for all other components.

TECHNICAL CHARACTERISTICS:

RF Suppression: Teletypewriter does not interfere with radio reception at frequencies between 0.35 and 150 mc when located 1 foot or more from radio antenna.

Ambient Temperature Limits:
Equipment in Use: 32°F. to 132°F.
Equipment in Storage: −80°F. to 160°F.

Teletypewriter TT-4/TG:
Type Keyboard: Standard communications
Characters Per Line: 72 (maximum)
Operating Speed: 368, 404, or 600 opm
Service Range:
368 or 404 Opm: 25 miles
600 Opm: 15 miles
Signaling Code: 5-unit, start-stop; stop-impulse length equals start-impulse length multiplied by 1.42.
Type Signals: Neutral
Bias:
Output Signals: ±5% (maximum) at 368 opm on DC LINE
Input Signals (Tolerance):
368 or 404 Opm: ±40%
600 Opm: ±35%
End Distortion Tolerance, Input Signals:
368 or 404 Opm: 35% marking or spacing
600 Opm: 30%
Type Motor: Governed series, universal (ac or dc)
Motor Speed: 3,600 rpm ±5% at all operating speeds
Power Requirements: 150 w, 115-v 50- to 60-cycle 1-phase ac

Teletypewriter Adapter TT-73/FG:
Type Relay: Polar
Relay Operating Current: 60 or 20 ma
Relay Bias Circuit Input: 115-v dc

AN/TGC-type TELETYPEWRITER

Power Supply PP–604/FG:
Dc Output:
Voltage and Current: 2 amp (maximum) at 115-v dc
Regulation: 12-v variation over load-current range of 0.01 to 0.2 amp
Ac Ripple: 0.5-v (maximum) at all rated loads
Ac Output: 2.6 amp (maximum) at 115-v ac for any rated input
Input: 45 w (with no ac load), 95- to 125-/190- to 250-v 25- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Power Supply PP–604/FG	6130–250–5500	12 x 8-7/8 x 7-1/8	29.25
1	Teletypewriter TT–4/TG (includes Case CY–694/PGC and contents)	5815–198–4438	24-3/8 x 20-7/8 x 16-3/8	94.5
	Teletypewriter Table FN–45/FG (includes Teletypewriter Adapter TT–73/FG with relay)	3815–256–8333	18-5/8 x 21-1/4 x 27	24.75

REFERENCE DATA AND LITERATURE:

TM 11–2236

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	23.7	260

PROCUREMENT DATA

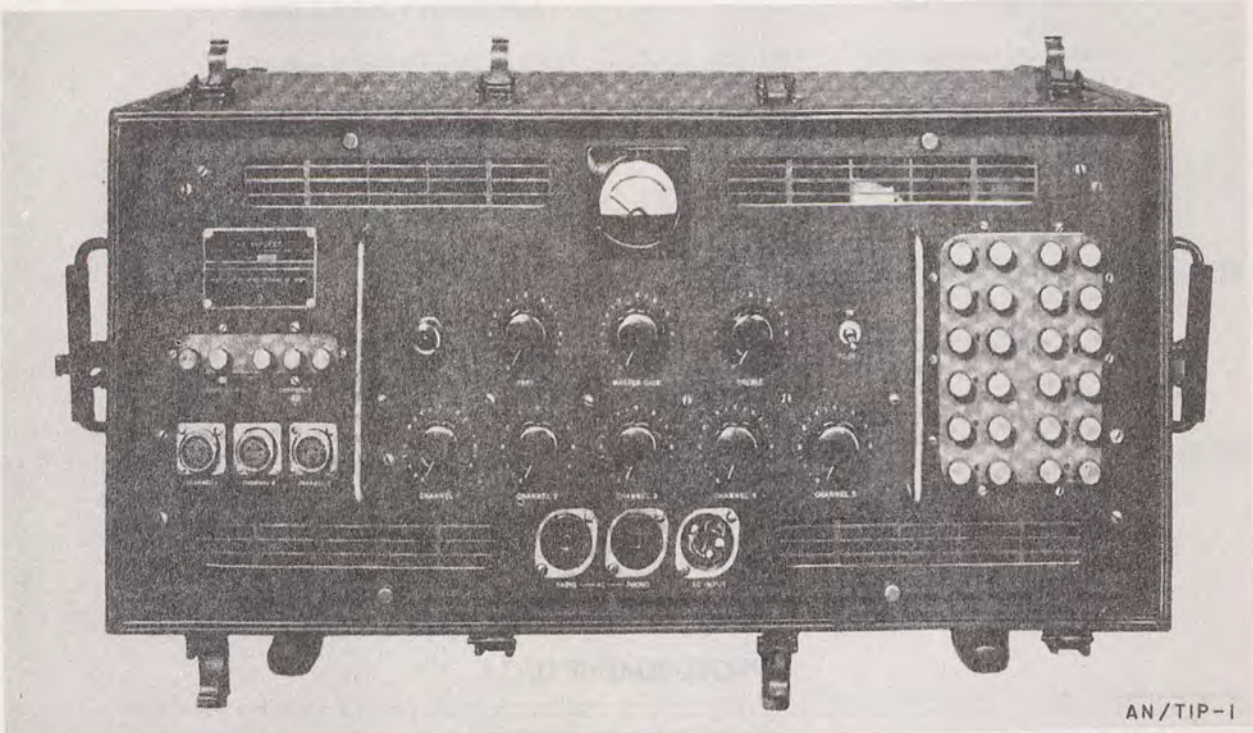
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

PUBLIC ADDRESS SET AN/TIP-1, -1A

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Public Address Sets AN/TIP–1 and AN/TIP–1A are designed to provide a high quality loudspeaker system for projecting voice, music, or other signals from microphones, electrical transcriptions, and radio receivers in auditoriums, stadiums, or buildings.

The amplifier part of the set provides five separate input channels; three for microphone and/or reproducer, one for radio input, plus one miscellaneous channel. Each channel has an individual volume control, but all channels are controlled at a master volume control which regulates the over-all gain. As many as 12 loudspeakers may be connected to the audio frequency amplifier.

Radio Receiving Equipment RBO is usually used in conjunction with this equipment.

TECHNICAL CHARACTERISTICS:

Facilities:
Input: 5 channel; microphone, phonograph, radio
Output: 12 speakers

Type Controls: One volume control for each channel, master volume control for all channels, and separate bass and treble controls

Power Output: 60 w into 30 ohms

Power Requirements: 300 w, 115-v 50- to 60-cycle 1-phase ac

AN/TIP-1, -1A PUBLIC ADDRESS SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM–282A/TIP–1		14-7/8 x 28-7/8 x 18-3/8	141
2	Dynamic Speaker CUL–491888A		18-1/4 x 28-7/8 x 23-3/4	60
5	Loudspeaker, Radial CUL–491887		18-1/2 x 54-3/8 x 19-1/2	22
2	Microphone CAFI–51096		8-1/4 x 37-5/8 x 15-5/8	42
1	Sound Reproducer RD–56A/TIP–1		80-3/8 x 25-5/8 x 20-1/4	75

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91168, 91419

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	78.2	910

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

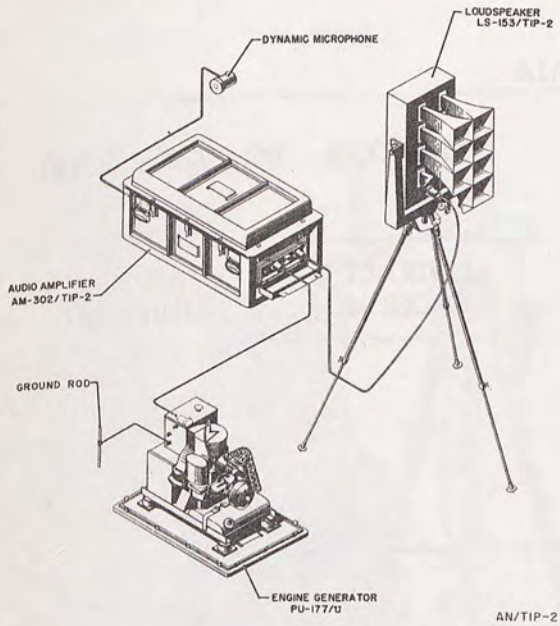
DESIGN COG: USN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

PUBLIC ADDRESS SET AN/TIP-2

1 December 1958
Cognizant Serv: USN FSN: 5830-511-4448

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Std
STOCK NO:	6C211-2	--	--



AN/TIP-2

FUNCTIONAL DESCRIPTION:

Public Address Set AN/TIP-2 is a transportable, high-level, high-gain system used for the distant projection of a signal during landing operatings.

This equipment can be operated from a microphone or telephone-line signal input over a wide temperature range and under adverse weather conditions.

TECHNICAL CHARACTERISTICS:

Sound Projection:
Optimum conditions: 10,000 ft
Battle conditions: 2,500 ft
Type Controls: Gain control with volume indicator
Power Output: 500 w (350 to 5,000 cps)
Power Requirements: 1,100 w, 115-v 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM-302/TIP-2	S17-A-53896-4086 (BuShips No.)	14-1/4 x 34 x 19-3/4	220
1	Case CY-719/TIP-2	2Z1891-719	16-1/4 x 43-3/4 x 15-3/4	169
1	Case CY-760/TIP-2	6C12-760	20-5/8 x 30-1/8 x 19-3/4	190
1	Engine Generator PU-177/U	3H1927-177	24-1/4 x 28-1/4 x 20-5/8	615
1	Loudspeaker Assembly LS-153/TIP-2	----------	24 x 17-1/4 x 13	106.5

REFERENCE DATA AND LITERATURE:

TM 11-5554

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	45	1,477

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: CS-276

DESIGN COG: USN, BuShips (RCUE)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

PUBLIC ADDRESS SET AN/TIQ-2( )

1 December 1958
Cognizant Serv: USA FSN: 5830-164-6618

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Ltd-Std (AN/TIQ-2, AN/TIQ-2A), Std (AN/TIQ-2B)
STOCK NO:	6C200-2	--	--



FUNCTIONAL DESCRIPTION:

Public Address Set AN/TIQ-2( ) is a portable, electrical sound amplification system designed to project speech, music, or signals from radio, communication circuits, or records. It is intended to serve large audiences and is used in a variety of applications.

This equipment consists essentially of a medium-power audio amplifier, a phonograph turntable, loudspeakers, and related accessories. It is contained in field-type carrying cases.

Provision is made in the amplifier output for connection to a booster amplifier to obtain added coverage. A suitable booster amplifier is Amplifier AN-20/TIQ-2.

There are three models of this equipment AN/TIQ-2, AN/TIQ-2A, and AN/TIQ-2B; all of these items are basically similar with the exception of minor changes in components.

The set can be operated from sources of 115- or 230-volts of alternating-current power, or from either a 6- or 12-volt storage battery using Vibrator Power Supply PP-31/TIQ-2.

TECHNICAL CHARACTERISTICS:

Amplifier:
- Frequency Range: 50 cps to 10,000 cps; maximum variation 3 db
- Input Channels: 5 microphone inputs, 1 radio input, 1 line input, 1 phone input
- Power Output: 20 w at less than 5% distortion

Turntable:
- Heat Control: 75 w heating unit controlled by thermostatic switch
- Speed: 33-1/3 and 78 rpm
- Speed Control: Governor operated by accessible lever

Microphone:
- Type: Dynamic, moving coil, unidirectional
- Frequency Range: 60 cps to 7,500 cps
- Output: −56 db
- Swivel: Permits full 180° travel

Speaker:
- Type: Permanent magnet
- Impedance: 250, 500, 1,000 or 2,500 ohms

Power Requirements: 275 w; 115- or 230-v, 60-cycle 1-phase ac; or 6- or 12-v storage battery dc through Vibrator Power supply PP-31/TIQ-2

AN/TIQ-2( ) PUBLIC ADDRESS SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Public Address Set AN/TIQ-2:			
1	Amplifier AM-20/TIQ-2	2C449-20	14 x 8-3/4 x 19	
1	Case CY-37/TIQ-2	5965-280-3432	33-1/4 x 22-7/8 x 23-1/4	151
3	Case CY-38/TIQ-2	2Z1891-38	22 x 16-3/16 x 10-1/8	
1	Headset HS-30-( )	5965-164-7259	----------	0.8
2	Loudspeaker LS-103/TIQ-2	6C42-103	48 lg (collapsed)	18.5
1	Turntable MX-39/TIQ-2	5835-128-8762	19 x 15 x 6	
	For Public Address Set AN/TIQ-2A:			
1	Amplifier AM-20A/TIQ-2	2C449-20A	19 x 14 x 8-3/4	
1	Case CY-37A/TIQ-2	5830-404-7266	33-3/4 x 22-7/8 x 23-1/4	
2	Case CY-38/TIQ-2	2Z1891-38	22 x 16-3/16 x 10-1/8	
1	Headset HS-30-( )	5965-164-7259	----------	0.8
2	Loudspeaker LS-103A/TIQ-2	6C42-103	48 lg (collapsed)	18.5
1	Turntable MX-39A/TIQ-2	5835-128-8762	19 x 15 x 6	
	For Public Address Set AN/TIQ-2B:			
1	Amplifier AM-20B/TIQ-2	2C449-20B	19 x 14 x 8-3/4	
1	Case CY-37A/TIQ-2	5830-404-7266	33-3/4 x 22-7/8 x 23-1/4	
2	Case CY-38/TIQ-2	2Z1891-38	22 x 16-3/16 x 10-1/8	
1	Headset HS-30-( )	5965-164-7259	----------	0.8
2	Loudspeaker LS-103B/TIQ-2	6C42-103	48 lg (collapsed)	18.5
1	Turntable MX-39A/TIQ-2	5835-128-8762	19 x 15 x 16	

REFERENCE DATA AND LITERATURE:

TM 11-2586

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	31.04	576

PUBLIC ADDRESS SET **AN/TIQ-2( )**

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: 7-3023

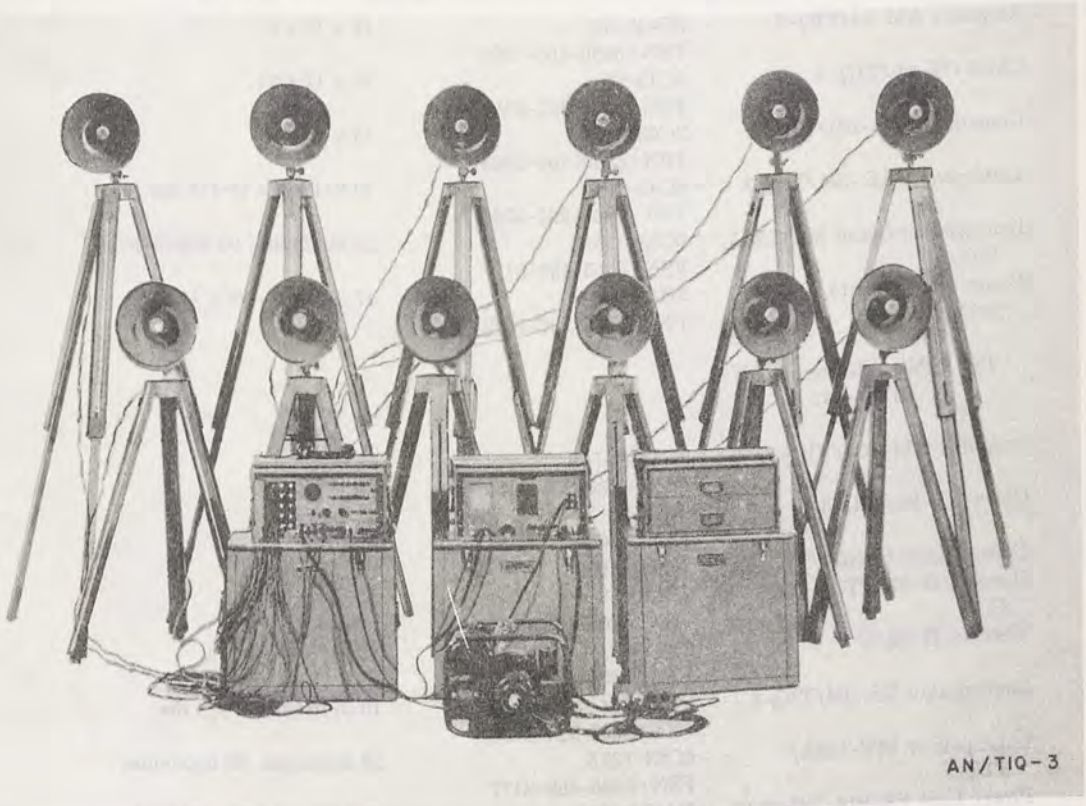
DESIGN COG: USA, Sig C (RCUE)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

PUBLIC ADDRESS SET AN/TIQ-3( )

1 December 1958
Cognizant Serv: USA FSN: 5830-164-6619

	USA	USN	USAF
TYPE CLASS:	Std	--	Ltd-Std (AN/TIQ-3) Std (AN/TIQ-3A)
STOCK NO:	6C200-3	--	--



FUNCTIONAL DESCRIPTION:

Public Address Set AN/TIQ-3( ) is a portable, sound amplifying, and projecting equipment used in delivering commands or briefing instructions, or in the control of groups of personnel at airfields and at division and higher headquarters.

This equipment consists essentially of an amplifier, a control unit, loudspeakers, and power unit, and accessories.

The set can be modulated by a handset or microphone and by its loudspeaker components, such as the phonograph or similar pick-up devices. It has a tone generator for signaling over the system.

Power is supplied by its power unit or an equivalent source of 115 or 230 volts alternating current.

There are two models of this equipment Public Address Set AN/TIQ-3 and AN/TIQ-3A. Both of these are basically similar, differing only in details of the components.

TECHNICAL CHARACTERISTICS:

Facilities:
Loudspeakers: 12
Tone Generator: For signaling over system
Piped in Sound: Provided for
Intercommunication: Among any and all stations
Type Controls: Sound-mixing, volume, loudspeaker selector, press-to-talk
Frequency Range: 50 cps to 10,000 cps
Power Output: 50 w ±10% distortion maximum
Power Input:
Amplifier: 255 w, 2.2 amp
Control Unit: 20 w, 0.2 amp
Power Requirements:
Available Source: 275 w; 115- or 23-v, 50- to 60-cycle, 1-phase ac
Power Unit PE-214-B, or Equal: 300 w; 120- or 240-v, 60-cycle, 1-phase ac

AN/TIQ-3( ) PUBLIC ADDRESS SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Public Address Set AN/TIQ-3:			
1	Amplifier AM-34/TIQ-3	2C449-34 FSN: 5830-164-7276	18 x 15 x 8	65
1	Chest CY-96/TIQ-3	6C13-96 FSN: 5965-407-6684	27 x 17 x 21	
1	Control Unit C-104/TIQ-3	2C684-104 FSN: 5830-160-2465	18 x 15 x 8	40.75
12	Loudspeaker LS-104/TIQ-3	6C42-104 FSN: 5965-221-5786	19-9/16 lg x 13-1/4 dia	20.25
12	Loudspeaker Stand MT-128A/TIQ-2	6C83-128A FSN: 5965-498-8177	53 minimum, 90 maximum	19
1	Power Unit PE-214, PE-214A, B, or C	3H4600-214 FNS: 6115-230-4002	17-3/4 x 14-1/8 x 12-3/16	60.75
	For Public Address Set AN/TIQ-3A:			
1	Amplifier AM-700/TIQ-3	2C448A-700 FSN: 5830-254-2155	18 x 15 x 8	
1	Chest CY-96/TIQ-3	6C13-96 FSN: 5965-407-6684	27 x 17 x 21	
1	Control Unit C-1090/TIQ-3A	2C684-1090	18 x 15 x 8	
1	Handset H-33/PT, H-33B, C, D	2B620-33 FSN: 5805-163-9947		
1	Handset H-94/U	2B613 FSN: 5805-164-6632		
12	Loudspeaker LS-104/TIQ-3	6C42-104 FSN: 5965-221-5786	19-9/16 lg x 13-1/4 dia	20.25
12	Loudspeaker MT-128A/TIQ-2	6C83-128A FSN: 5965-498-8177	53 minimum, 90 maximum	19
1	Power Unit PE-214, PE-214A, PE-214B or PE-214C	3H4600-214 FSN: 6115-230-4002	17-3/4 x 14-1/8 x 12-3/16	60.75

REFERENCE DATA AND LITERATURE:

TM 11-2531

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
8	67.4	1,324

PUBLIC ADDRESS SET **AN/TIQ-3( )**

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C (RCUE)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERCOMMUNICATION SET AN/TIQ-type

5 December 1958
Cognizant Serv: USA FSN: 5830–171–2859

PA–8

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	6C208	--	--



PA-8

FUNCTIONAL DESCRIPTION:

Intercommunication Set PA–8 is a rugged, portable, sound-amplifying and projecting equipment used as a loudspeaker intercommunication system.

This equipment consists of a single amplifier unit, battery boxes, a head-and-chest set, and related accessories. The master control unit and remote station speaker units are blastproof and waterproof.

It can be used for two-way half-duplex type communication and can interconnect up to six remote speaker station units on a single station or all call basis. It provides for calling the master or control station from a speaker station unit only when the master station selector switch is in the ON position.

TECHNICAL CHARACTERISTICS:

Facilities Afforded: Communication with one or all remote stations on a listen-talk basis; remote station can communicate with central station only if central station is standing by for that (or all) remote stations

Power Output: 1.5 w

Power Requirements: Three BA–54 in series; 6 v from three batteries in series, or 6 v from six batteries in series parallel

AN/TIQ-type INTERCOMMUNICATION SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
9	Battery BB–54		5-1/2 x 3 x 4	3.25
1	Box CH–291		6-1/4 x 11-3/4 x 5-1/2	3.25
1	Chest Set TD–4		1-3/8 x 3 x 6	.7
1	Control Amplifier Unit BC–1346		10-5/8 x 16 x 13-3/4	36
1	Headset H–16/U		8 x 3-3/4 x 6	.75
4	Loudspeaker LS–13		7 x 11-7/8 x 8-1/2	11.25
1	Microphone T–45		3/8 x 1-1/4 x 1-1/4	.11

REFERENCE DATA AND LITERATURE:

TM 11–2564

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	17	296

PROCUREMENT DATA

PROCURING SERVICE: USA DESIGN COG: USA, Sig C

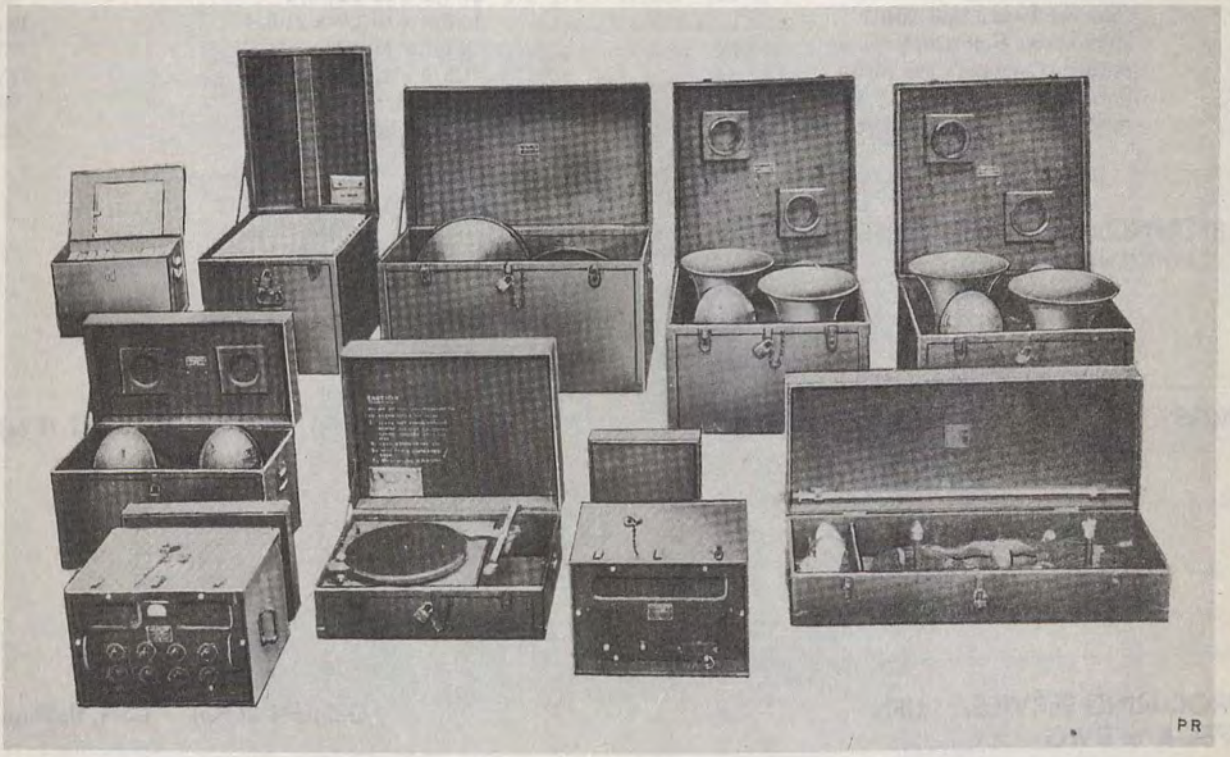
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

PORTABLE SOUND REPRODUCING EQUIPMENT AN/TNP-type

5 December 1958
Cognizant Serv: USN FSN: PR

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Portable Sound Reproducing Equipment PR is designed for use in connection with activities at Naval and Marine Corps shore stations and provides a loudspeaker system for voice, electrical transcriptions, and radio programs.

TECHNICAL CHARACTERISTICS:

Frequency Range: 50 to 8000 cps

Amplifier Output: 60 w

Input Impedance:

Microphone 1, 2, 3: 50/230/500 ohms

Radio: 600 ohms

Miscellaneous: 5,000/500,000 ohms

Output Impedance: 2.5, 4, 8, 15, 30, and 50 ohms

Power Requirements: 115-v 50–60-cycles ac

AN/TNP-type PORTABLE SOUND REPRODUCING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Accessory Carrying Case 10504	----------	10-1/4 x 18 x 45-1/4	72
1	Amplifier Unit 50252	----------	14-3/4 x 19-1/8 x 21-3/4	91
1	Record Carrying Case 10500	----------	21-1/2 x 22 x 25-3/4	99
1	Rectifier Power Unit 20403	----------	14-3/4 x 19-1/8 x 21-3/4	106
1	Reproducer Unit 67015	----------	10-7/8 x 23 x 30	70
1	Speaker Carrying Case 10501	----------	21-3/8 x 22-1/8 x 39	123
2	Speaker Carrying Case 10502	----------	19 x 23-3/4 x 28-3/4	96
1	Speaker Carrying Case 10503	----------	17-1/8 x 19 x 32	60

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900741

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
10	107.5	1,583

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

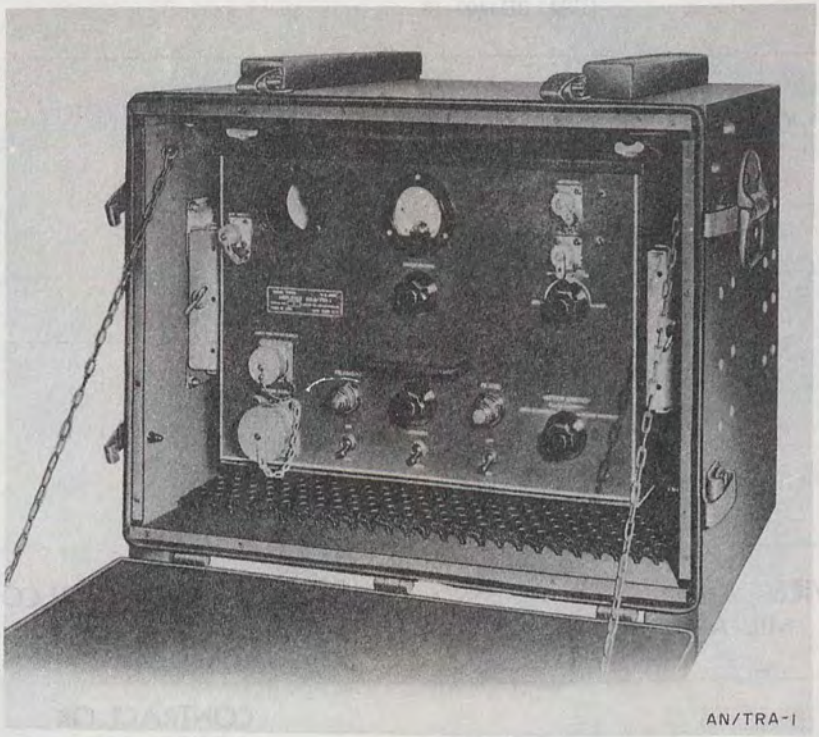
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hoffman Radio Corp.	Los Angeles, Calif.	NXsr-83353	

AMPLIFIER EQUIPMENT AN/TRA-1( )

1 July 1958
Cognizant Serv: USA FSN: 5820-164-7146

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S5006-1	--	--



AN/TRA-1

FUNCTIONAL DESCRIPTION:

Amplifier Equipment AN/TRA-1( ) is a transportable, fm, high-power amplifier used to increase the power output and range of Radio Set AN/TRC-1, Radio Terminal Set AN/TRC-3, and Radio Relay Set AN/TRC-4.

The frequency range and power output of the various models of the amplifier are the same; it can be used with all models of Radio Transmitter T-14/TRC-1 (part of the AN/TRC-1, -3, and -4).

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 70 to 100
Type Modulation: FM
Type of Signal: Voice
Power Output:
AN/TRA-1: 250 w
AN/TRA-1A, -1B, -1C, -1D: 200 w
Power Requirements: 800 w, 115-v 50/60-cycle ac (from Power Supply PP-13/TRA-1)

AN/TRA-1( ) AMPLIFIER EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier AM–8/TRA–1	(FSN) 5895–164–7136 (USA) 2C449–8	10-3/4 x 12-3/4 x 19-1/8	48
1	Power Supply PP–13/TRA–1	(FSN) 5820–498–4504 (USA) 3H4497–13	9-3/8 x 14 x 25	130

REFERENCE DATA AND LITERATURE:

TM 11–2601

SHIPPING DATA

PGKS	VOLUME (Cu Ft)	WEIGHT (Lb)
3	----	547

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–A–10725

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
F. M. Link Radio Co.	New York, N. Y.	3203–P–51–06	$1,257.52

REMOTE CONTROL EQUIPMENT AN/TRA-2

1 July 1958
Cognizant Serv: USA FSN: 5820-324-8744

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S5006-2	--	--



FUNCTIONAL DESCRIPTION:

Remote Control Equipment AN/TRA-2 is a transportable assemblage that permits operational control of Radio Set AN/TRC-1, Radio Terminal Set AN/TRC-3, and Radio Relay Set AN/TRC-4 from distances up to 2 miles. This equipment also enables automatic radio-relay operation when the transmitter and receiver of the radio set are more than 10 feet apart, and provides intercommunication between local and remote operating locations.

TECHNICAL CHARACTERISTICS:

Power Requirements: 115/230-v 50/60-cycle ac

AN/TRA-2 REMOTE CONTROL EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Unit C–113/TRA–2	5820–164–7154	9 x 12 x 12	20
1	Remote Control Unit C–112/ TRA–2	5820–164–6303	9 x 12 x 12	20

REFERENCE DATA AND LITERATURE:

TM 11–2621

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	5	98

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 271–3086

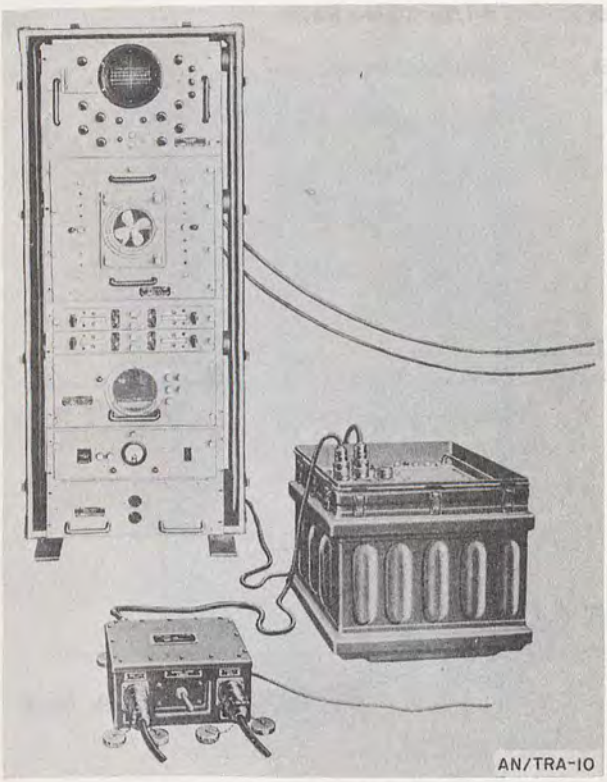
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Co.	Clifton, N. J.	2200–MPD–44	$190.12
Scott Radio Laboratories Inc.	Chicago, Ill.	16802–P–51–38	342.87

PULSE FORM RESTORER GROUP AN/TRA-10

1 July 1958
Cognizant Serv: USA FSN: 5820-510-1600

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2C5615-10	--	--


AN/TRA-10

FUNCTIONAL DESCRIPTION:

Pulse Form Restorer Group AN/TRA-10 reshapes the 23- or 45-channel pulse train received from microwave radio receiving equipment into a standard wave shape before it is fed to the radio transmitter at a microwave radio relay system.

This equipment is inserted into the system once every four or five hops.

In addition to reshaping the video signal, this equipment provides communication at the relay station by two drop-and-insert channels.

This set is a major component of Radio Repeater Set AN/TRC-40.

TECHNICAL CHARACTERISTICS:

Facilities Required: Radio Set AN/TRC-29 or equivalent
Facilities Provided: Restores pulse train of 23- or 45-channel voice system, and allows for two drop-and-insert voice channels.
Type of Signal: Pulse position, time-division multiplex
Frequency (Each vf channel):
Modulating Bandwidth: 300 to 3,500 cps
Signaling: 20 cps
Video Signal Characteristics:
Pulse Rate: 192 kc
Pulse Width: 0.6 microsecond
Bandwidth: 1 mc
Power Requirements: 785 w, 115/230-v (±10%) 47.3-63-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Monitor C-1151/TC	(FSN) 5805-503-3288 (USA) 2C684-1151	19 x 19 x 10-1/2	
1	Electrical Equipment Rack MT-1434/TRA-10	(FSN) 5805-537-7901 (USA) 6F8400-1434	20-3/4 x 19 x 24-3/8	
1	Electrical Standardized Components Case CY-1719/G	(FSN) 5820-310-2438 (USA) 6F300-1719	26-1/2 x 27 x 60	*595
1	Power Supply PP-691/G	(FSN) 5805-548-1669 (USA) 3H4497-691	19 x 19 x 12	123

* Weight of case is total weight of case plus equipment normally installed therein.

AN/TRA-10 PULSE FORM RESTORER GROUP

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Pulse Form Restorer TD–68/G	(FSN) 5820–510–1600 (USA) 2C5620–68	22-3/4 x 19 x 15-5/8	
2	Remote Switching Control C–1509/TC	(FSN) 5805–503–1103 (USA) 2C684–1509	4-1/2 x 2-3/4 x 5-1/2	
4	Telephone Modem MD–179/TC	(FSN) 5805–503–1065 (USA) 4B1925B–179	16 x 2-1/2 x 8-1/2	5.5
1	Voltage Regulator CN–236/G	(USA) 3H4498–236	23 x 17-1/2 x 19-1/2	215

REFERENCE DATA AND LITERATURE:

TM 11–2141
TM 11–2682

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	98.7	1,746

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–M–10615

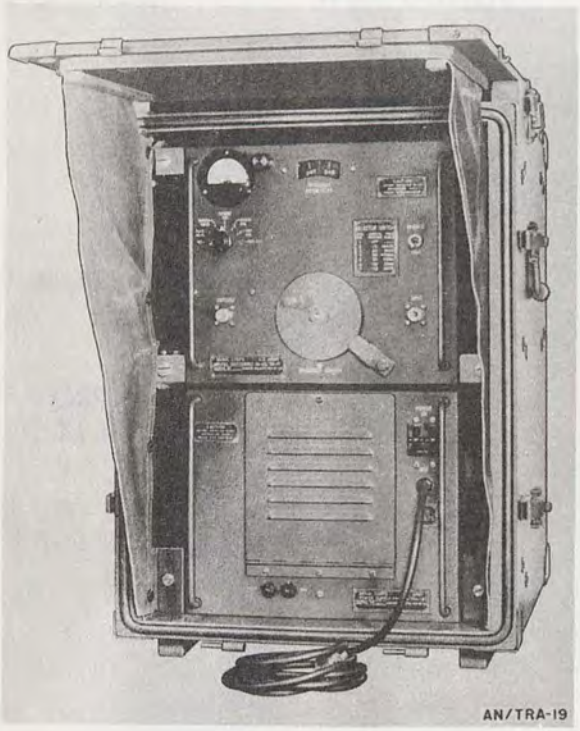
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
International Tel. & Tel. Corp., Federal Radio & Telephone Co. Division	Clifton, N. J.		

AMPLIFIER-POWER SUPPLY GROUP AN/TRA-19

1 July 1958
Cognizant Serv: USA FSN: 5820-503-3282

	USA	USN	USAF
TYPE CLASS:	S/Std	--	L/Std
STOCK NO:	2C-6656A.2	--	--


AN/TRA-19

FUNCTIONAL DESCRIPTION:

Amplifier-Power Supply Group AN/TRA-19 is auxiliary equipment used with such vhf radio equipment as Radio Set AN/TRC-8, Radio Terminal Set AN/TRC-11, and Radio Relay Set AN/TRC-12 to extend the effective transmission range of the transmitter components of these equipments.

This group consists essentially of a Class C RF power amplifier and a power-supply unit contained in a standardized equipment cabinet.

It can be used to improve transmission over long distances, grazing paths, and shadow areas, and to overcome other adverse conditions.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 230 to 250
Type Modulation: FM
Type of Signal: Voice, teletypewriter, facsimile (composite)
Power Output: 75 w (nominal)
Power Requirements: 400 w, 115/230-v ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Electrical Standardized Components Case CY-1204/TRA-19	5820-351-8207	26-1/2 x 18-3/8 x 17-3/4	53
1	Power Supply PP-840/TRA-19	5820-500-4380	10-1/2 x 12-7/8 x 14-3/4	64
1	Radio Frequency Amplifier AM-456/TRA-19	5820-503-3375	11 x 12-7/8 x 13-11/16	46

AN/TRA-19 AMPLIFIER-POWER SUPPLY GROUP

REFERENCE DATA AND LITERATURE:

TM 11-618A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	13.7	275

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-A-0010489B

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Lewyt Mfg. Corp.	Long Island City, N. Y.	25745-P-54-55	$547.11

CONTROL UNIT AN/TRA-type

1 July 1958
Cognizant Serv: USA FSN: 5815-162-8257

C-292( )/TRA-7

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C684-292	--	--



C-292( )/TRA-7

FUNCTIONAL DESCRIPTION:

Control Unit C-292( )/TRA-7, together with other components of a radioteletype system, provides facilities for establishing radioteletype full-duplex, half-duplex, one-way reversible, emergency cw, or frequency-shift transmission and reception.

This equipment is a single component containing an integral power supply and may be used in several different systems such as those using Radio Set AN/GRC-26 or AN/MRC-2.

It is an electronic repeater of polar and neutral teletypewriter signals and converts polar telegraph signals received from a dual-diversity converter into neutral signals to operate a receiving teletypewriter. This control unit also translates neutral signals from a sending teletypewriter into polar signals for transmission over a wire line to control a frequency-shift exciter.

When not used in a specific system, this control unit may be located at the receiving station, the transmitting station, or any desired location within 10 miles of the two.

The C-292/TRA-7, C-292A/TRA-7, and C-292B/TRA-7 are functionally interchangeable and differ from each other in design details only.

TECHNICAL CHARACTERISTICS:

Type of Signal:
Polar input: Mark, +0.025 amp; space, −0.025 amp
Polar output: Mark, +0.020 amp; space, −0.025 amp
Neutral input and output: Mark, +0.060 amp; space, 0 amp
Power Requirements: 170 w, 115-v 50-60-cycle ac

AN/TRA-type CONTROL UNIT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSION (Inches)	WEIGHT (Lbs)
1	Control Unit C–292( )/ TRA–7	5815–162–8257	12-1/4 x 16-7/8 x 21-1/2	100

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–262

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5	100

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–13172

DESIGN COG: USA, Sig C

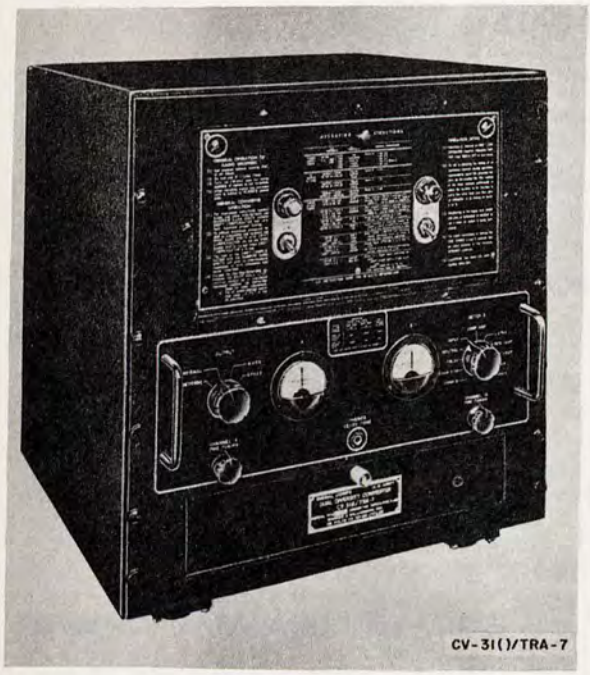
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Barker & Williamson, Inc. Stelma, Inc.	Upper Darby, Pa. Stamford, Conn.	25751–P–54–55	$413.77

DUAL DIVERSITY CONVERTER AN/TRA-type

1 July 1958
Cognizant Serv: USA FSN: 5815-503-2602

CV-31( )/TRA-7

	USA	USN	USAF
TYPE CLASS:	Std	--	Used by
STOCK NO:	2C720-31	--	--



FUNCTIONAL DESCRIPTION:

Dual Diversity Converter CV-31( )/TRA-7 is a component of a radioteletype system that provides full-duplex, half-duplex, or one-way reversible, frequency-shift transmission and reception. In an emergency, it also can provide the same service in a cw system.

This equipment consists of one component that contains its own meters, power supply, and oscillator. The oscillator provides an audible means of indicating mark and space signals when required.

The output of each of the two receivers is applied to the, dual- diversity converter to combine the received frequency-shifted signals and to convert the stronger receiver output into dc neutral and polar signals.

The CV-31/TRA-7, CV-31A/TRA-7, CV-31B/TRA-7, CV-31C/TRA-7, and CV-31D/TRA-7 are identical except for minor electrical and mechanical differences.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
CV-31, -31A, early -31C/TRA-7: 0.400 to 0.470
CV-31C, -31D/TRA-7: 0.440 to 0.510
Type of Communication Circuit: Radioteletype
Power Requirements: 175 w, 115-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Dual Diversity Conver CV-31( )/TRA-7	5815-503-2602	25-1/4 x 20-5/8 x 22	220
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11-261
TM 11-264
TM 11-278

AN/TRA-type DUAL DIVERSITY CONVERTER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–13172

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Barker & Williamson, Inc.	Upper Darby, Pa.	3135–P–51–31	$1,333.63

RADIO TRANSMITTER MODULATOR AN/TRA-type MD-280/TRC

4 December 1958
Cognizant Serv: USN FSN:

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitter Modulator MD-280/TRC is used to amplitude modulate Radio Transmitter T-597/TRC.

TECHNICAL CHARACTERISTICS:

Frequency Response: 300 to 3,000 cps

Input Impedance: 150 ohms

Output Impedance: 6,500 ohms

Power Output: 10 w (maximum)

Power Requirements: 12-v dc (storage battery)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter Modulator MD-280/TRC	----------	2-1/4 x 5 x 6-3/4	

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/TRA-type RADIO TRANSMITTER MODULATOR

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

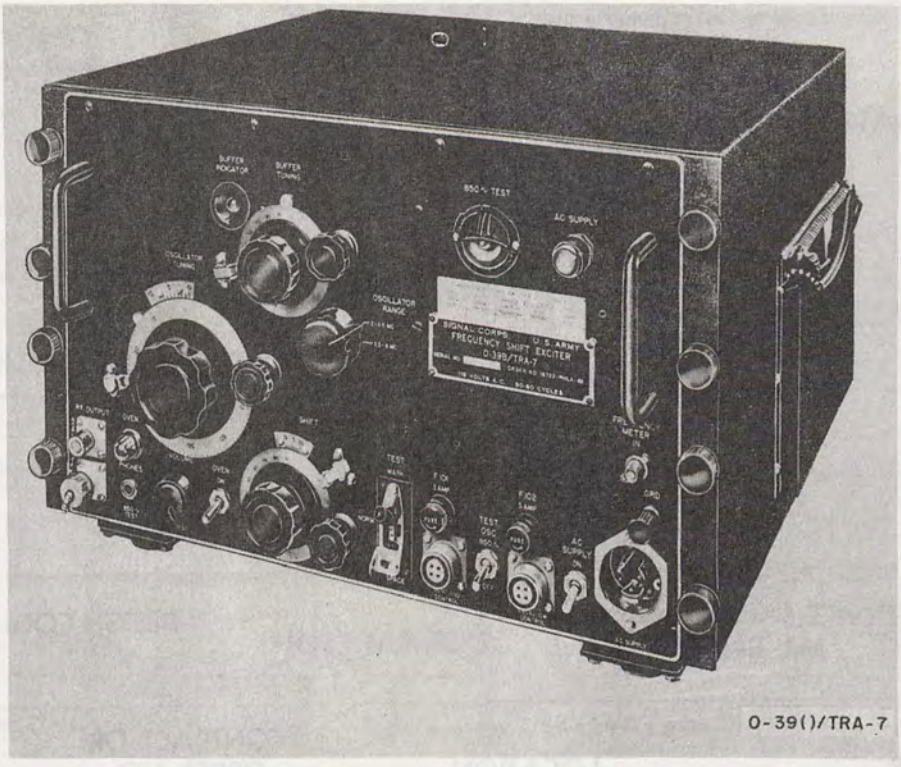
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

FREQUENCY SHIFT EXCITER AN/TRA-type

1 July 1958
Cognizant Serv: USA FSN: 5815-224-5287

0-39( )/TRA-7

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C2710-39	--	--



O-39()/TRA-7

FUNCTIONAL DESCRIPTION:

Frequency Shift Exciter 0-39( )/TRA-7 functions as the oscillator of the radio transmitter with which it is associated. It translates a teletypewriter signal into low-power, frequency-shift keyed, RF signals.

The 0-39/TRA-7, 0-39A/TRA-7, and 0-39B/TRA-7 and 0-39C/TRA-7 are identical except for minor electrical and mechanical differences.

TECHNICAL CHARACTERISTICS:

Type of Signal:

Dc Input: Mark, +0.02 amp; space, −0.025

Frequency shift: 212.5 to 850 cycles, depending on frequency multiplication of associated radio transmitter

Output Frequency: 2 to 6 mc

Power Requirements: 185 w, 115-v 50/60-cycle ac

AN/TRA-type FREQUENCY SHIFT EXCITER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency Shift Exciter O–39( )/TRA–7	(FSN) 5185–224–5287	16-7/8 x 21-1/2 x 13	125

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–257
TM 11–264
TM 11–278
TM 11–624

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–13171

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Barker & Williamson, Inc.	Upper Darby, Pa.	32053–P–55–55	$1,184.05
The Hallicrafter Co.	Chicago, Ill.	3467–P–52–06	868.71

MULTIPLEXER AN/TRA-type

5 December 1958
Cognizant Serv: USN FSN: TD-164/TRC

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Multiplexer TD-164/TRC is used between two receiver-transmitter units at a repeater station. This equipment provides one channel part-line order-wire communications to the attendants at all repeater stations of a multi-hop link. All channels originated at a terminal station pass unaltered through this drop and insert unit with the exception of the order-wire channel.

TECHNICAL CHARACTERISTICS:

Input Channel:
Video:
Number Channels: 24
Frequency: 3 mc
Impedance: 93 ohms
Audio:
Number Channels: 1
Frequency Range: 300 to 3,500 cycle
Impedance: 600 ohms
Output:
Video:
Frequency: 3 mc
Voltage: 24 umin
Impedance: 93 ohms
Audio:
Frequency Range: 300 to 3,500 cycles
Voltage: 1.5-v maximum (+4 dbm)
Impedance: 600 ohms
Power Requirements: 115-v 400-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Multiplexer TD-164/TRC	----------	10 x 14-1/4 x 25-1/4	50

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/TRA-type MULTIPLEXER

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

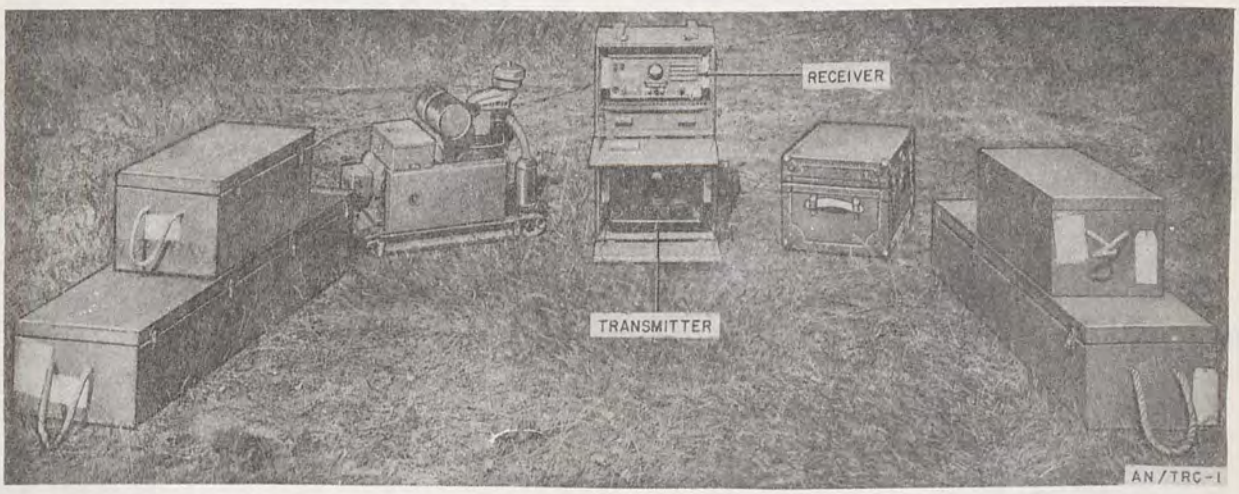
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/TRC-1( )

1 July 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	Used by	L/Std
STOCK NO:	2S5002–1	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC–1( ) is a transportable, crystal-controlled, fm radio receiving and transmitting equipment for radio-relay or point-to-point communication in the vhf band. When operated as the terminal of a radio-relay link in a tactical communication system, it provides one-way or simultaneous two-way facilities.

With appropriate auxiliary equipment, four channels of voice signals can be accommodated. Multichannel radioteletype signals or a facsimile signal can be accommodated with appropriate additional equipment.

The set can be operated from a distant control point on a two-wire or four-wire basis by means of Remote Control Equipment AN/TRA–2. Amplifier Equipment AN/TRA–1 can be added when necessary to increase transmitter power output. Antenna tower, dipole elements, power supply, and accessory items are included.

This equipment is intended for operation on an intermittent or prescheduled basis only. It does not include spare operating components.

For continuous operation, Radio Terminal Set AN/TRC–3, composed essentially of two Radio Sets AN/TRC–1( ), is available. In addition, two AN/TRC–1( ) sets (including necessary spares) operating back-to-back at an intermediate point in a system constitute Radio Relay Set AN/TRC–4.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 70.0 to 99.9
Type Modulation: FM
Type of Signal: Voice, teletypewriter (with additional equipment)
Power Output:
High Power: 50 w
Low Power: 10 w
Power Requirements:
Transmitter: 250 w, 115-v 50/60-cycle ac
Receiver: 110 w, 115-v 50/60-cycle ac

AN/TRC-1( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna System AS–19/TRC–1	(FSN) 5985–221–9002	----------	470
1	Power Unit PE–75	(USA) 3H4575	26-1/2 x 19-1/2 x 36	330
1	Radio Receiver R–19/TRC–1	(USA) 2C4180–19	22-1/2 x 16 x 17-3/4	95
1	Radio Transmitter T–14/ TRC–1	(FSN) 5820–164–7147	22-1/2 x 16 x 17-3/4	108

REFERENCE DATA AND LITERATURE:

TM 11–2601

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	78	2,000

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–10174

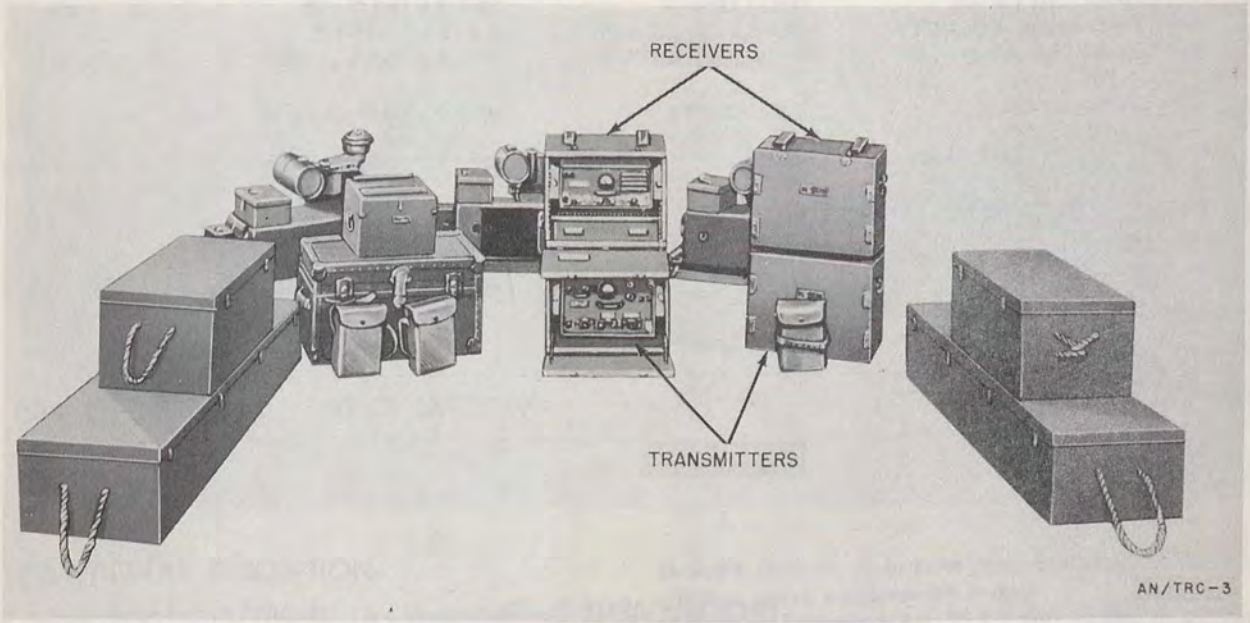
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	3333–P–52–06	$1,464.00
Vulcan Steel Products Co., Inc.	----	21357–P–50–06	1,423.00

RADIO TERMINAL SET AN/TRC-3( )

1 July 1958
Cognizant Serv: USA FSN: 5820-193-7107

	USA	USN	USAF
TYPE CLASS:	Std	--	L/Std
STOCK NO:	2S5002-3	--	--



FUNCTIONAL DESCRIPTION:

Radio Terminal Set AN/TRC-3( ) is a transportable, crystal-controlled, FM, field, radio transmitting and receiving equipment that can be used in point-to-point, single or multichannel communication or as the terminal or a radio relay system.

This equipment consists essentially of two Radio Sets AN/TRC-1, one of which is a spare, assuring continuous operation. It can be used in conjunction with telephone and telegraph equipment to provide various combinations of voice, telegraph or teletypewriter, and facsimile communication.

It can operate in a system in which the remote terminal consists of another Radio Terminal Set AN/TRC-3( ), or Radio Set AN/TRC-1( ), and in which Radio Relay Set AN/TRC-4( ) may be used as the intermediate repeater facility.

When it is necessary to increase power output of the transmitter, Amplifier Equipment AN/TRA-1 (not a component of this equipment) can be used.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 70.0 to 99.9
Type Modulation: FM
Type of Signal: Voice, teletypewriter (with additional equipment)
Power Output: High power, 50 w; low power, 10 w
Power Requirements:
Commercial power source, Power Unit PE-75 or equivalent
Transmitter: 250 w, 115-v 50/60-cycle ac
Receiver: 100 w, 115-v 50/60-cycle ac

AN/TRC-3( ) RADIO TERMINAL SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
3	Antenna System AS–19/TRC–1	(FSN) 5985–221–9002	26-3/8 x 33-1/2 x 105-1/2	470
3	Power Unit PE–75	(USA) 3H4575	26-1/2 x 19-1/2 x 36	330
2	Radio Receiver R–19/TRC–1	(FSN) 5820–164–6368	8 x 12-3/4 x 19-1/8	43
2	Radio Transmitter T–14/ TRC–1	(FSN) 5820–164–7147	10-3/4 x 12-3/4 x 19-1/8	66
3	Telephone EE–8	(USA) 4B5008	9-9/16 x 3-1/2 x 7-11/16	9.75

REFERENCE DATA AND LITERATURE:

TM 11–2601

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	132	3,150

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–3010

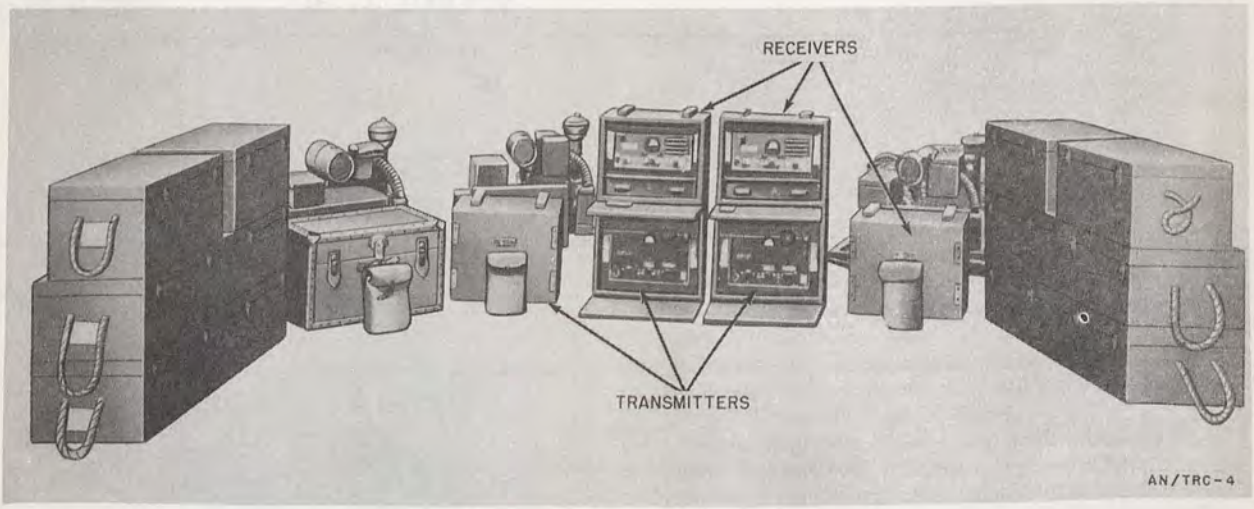
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
American Machine & Foundry Co.	New York, N. Y.	25831–P–54–55	$2,928.87
The Hallicrafter Co.	Chicago, Ill.	3466–P–52–06	3,706.56
Transmitter Equip. Mfg. Co. Inc.	New York, N. Y.	25639–P–53–36	3,133.94

RADIO RELAY SET AN/TRC-4( )

1 July 1958
Cognizant Serv: USA FSN: 5820-186-9253

	USA	USN	USAF
TYPE CLASS:	Std	--	L/Std
STOCK NO:	2S5002-4	--	--



FUNCTIONAL DESCRIPTION:

Radio Relay Set AN/TRC-4( ) is a transportable, crystal-controlled, FM, field, radio transmitting and receiving equipment that can be used in point-to-point single or multichannel communication, but which is designed as the repeater facility of a radio-relay link of a system using Radio Terminal Set AN/TRC-3.

This equipment consists essentially of two Radio Sets AN/TRC-1, operating back-to-back at intermediate points of a radio-relay facility terminated by Radio Set AN/TRC-1 or Radio Terminal Set AN/TRC-3. It can accommodate various combinations of voice, telegraph, teletypewriter, and facsimile channels. It includes spare operating components antenna, power, and accessory items.

Amplifier Equipment AN/TRA-1 may be used to increase the transmitter output power of this radio-relay set.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 70.0 to 99.9
Type Modulation: FM
Type of Signal: Voice, teletypewriter (with additional equipment)
Power Output: 10 w or 50 w
Power Requirements:
Transmitter: 250 w, 115-v 50/60-cycle ac
Receiver: 100 w, 115-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
6	Antenna System AS-19/TRC-1	(FSN) 5985-221-9[illegible]02	26-3/8 x 33-1/2 x 105-1/2	470
4	Power Unit PE-75	(USA) 3H4575	26-1/2 x 19-1/2 x 36	330
3	Radio Receiver R-19/TRC-1	(FSN) 5820-164-6368	8 x 12-3/4 x 19-1/8	43
3	Radio Transmitter T-14/TRC-1	(FSN) 5820-164-7147	10-3/4 x 12-3/4 x 19-1/8	66

AN/TRC-4( ) RADIO RELAY SET

REFERENCE DATA AND LITERATURE:

TM 11-2601

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	187	4,500

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-3010

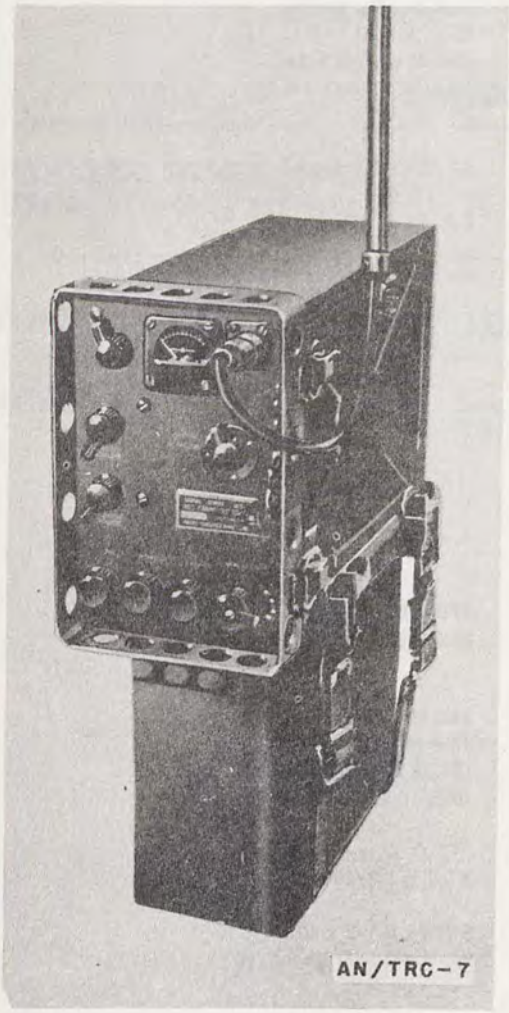
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
American Machine & Foundry Co.	New York, N. Y.	25831-P-54-55	$5,200.14
The Hallicrafters Co.	Chicago, Ill.	21886-P-50-06	4,677.20
Transmitter Equipment Mfg. Co., Inc.	New York, N. Y.	25639-P-53-36	5,512.56

RADIO SET AN/TRC-7, -7A, -7B

1 December 1958
Cognizant Serv: USAF FSN: 5820-537-4006

	USA	USN	USAF
TYPE CLASS:	Used by	Used by	Ltd-Std (all models)
STOCK NO:	AN/TRC-7, AN/TRC-7A: 2S5002-7 AN/TRC-7B: 2S5002-7B		--


AN/TRC-7

FUNCTIONAL DESCRIPTION:

Radio Sets AN/TRC-7, AN/TRC-7A, and AN/TRC-7B are portable, low-power, two-way receiver-transmitter units used for ground-to-air and point-to-point communication. The radio sets are designed for short distance operation in the very high frequency range.

Normally, these equipments are controlled locally but can be controlled from remote point as far as 2 miles by means of Remote Control Equipment RC-261.

Power may be supplied either from a Battery BA-70 or from handcranked Generator G-3( )/TRC-7, or both. Battery life is a minimum of 4 hours for continuous transmission, and 20 hours maximum for continuous reception.

These sets are basically similar, differing only in details of the various components.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 100 to 156
Number of Channels: 561
Number of Preset Channels: 2
Type Modulation: AM
Type Emission and Reception: A3 (voice)
Frequency Control: Crystal controlled oscillator
Type Receiver: Superheterodyne
Power Output:
Transmitter: 0.4 to 1.5 w
Receiver: 60 mw
Antenna:
Type: Whip or ground plane conical
Polarization: vertical
Impedance: 50 ohms
Power Requirements:
Battery B-70 or Hand Generator G-3/TRC-7 or both: Current drain 1.106 amp (max)
Battery Life: 20 to 25 hours on reception only; 4 to 5 hours continuous transmission

AN/TRC-7, -7A, -7B RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
	For Radio Set AN/TRC-7 and TRC-7A:			
1	Antenna AT-59/TRC-7	2A203-59	27-11/16 x 5/32 dia	
1	Antenna Assembly AS-110/TRC-7	2A264-110	30 ft high	
1	Antenna Base AB-37/TRC-7	2A282-37		
2	Bag CW-47/TRC-7	3H160-47	14-5/8 x 8-5/8 x 16	
2	Bag CW-48/TRC-7	2Z553-48	37 x 14 x 10	
2	Bag CW-49/TRC-7	3B295-49	12-5/8 x 6-5/8 x 14	
1	Battery BA-70	FSN: 6135-128-1633	10-5/16 x 4-1/2 x 8-1/4	
1	Control, Radio Set C-1200/GRC	2C680-52 FSN: 5820-129-9306		
1	Control, Radio Set C-1201/GRC	2C680-53 FSN: 5820-221-0204	3-1/2 x 4-3/16 x 7-1/2	
1	Generator G-3/TRC-7 or G-3A/TRC-7	3H2320-3	7-1/4 x 6-3/8 x 7-1/4	
1	Hand Set H-23C/U	2B620-23C FSN: 5805-223-4739	2-3/4 x 3-15/16 x 9-1/16	
1	Headset HS-30	2B830 FSN: 5965-164-7259		
1	Microphone T-45	FSN: 5965-164-7314		
1	Receiver-Transmitter RT-53/TRC-7	2C5130-53		
	or			
	RT-53A/TRC-7	2C5130-53A		
	For Radio Set AN/TRC-7B:			
1	Antenna AT-59/TRC-7	2A203-59	27-11/16 x 5/32 dia	
1	Antenna Assembly AS-110/TRC-7	2A264-110	30 ft high	
1	Antenna Base AB-37/TRC-7	2A282-37		
2	Bag CW-47/TRC-7	3H160-47	14-5/8 x 8-5/8 x 16	
2	Bag CW-48/TRC-7	2Z553-48	37 x 14 x 10	
2	Bag CW-49/TRC-7	3B295-49	12-5/8 x 6-5/8 x 14	
1	Battery BA-70	FSN: 6135-128-1633	10-5/16 x 4-1/2 x 8-1/4	
1	Control, Radio Set C-1200/GRC	2C680-52 FSN: 5820-129-9306		
1	Control, Radio Set C-1201/TRC	2C680-53 FSN: 5820-221-0204	3-1/2 x 4-3/16 x 7-1/2	
1	Generator G-3B/TRC-7	3H2440-6	8-7/8 x 6-1/2 x 10	
1	Hand Set H-23C/U	2B620-23C FSN: 5805-223-4739	2-3/4 x 3-15/16 x 9-1/16	
1	Headset HS-30	2B830 FSN: 5965-164-7259		
1	Microphone T-45	FSN: 5965-164-7314		
1	Receiver-Transmitter RT-53B/TRC-7	2C5130-53B		

RADIO SET AN/TRC-7, -7A, -7B

REFERENCE DATA AND LITERATURE:

AN/TRC-7, AN/TRC-7A: TM 11-617
AN/TRC-7B: TO 31R2-2TRC7-14
TO 16-30TRC7-3
TO 16-30TRC7-2

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	9.4	157

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: 271-3103

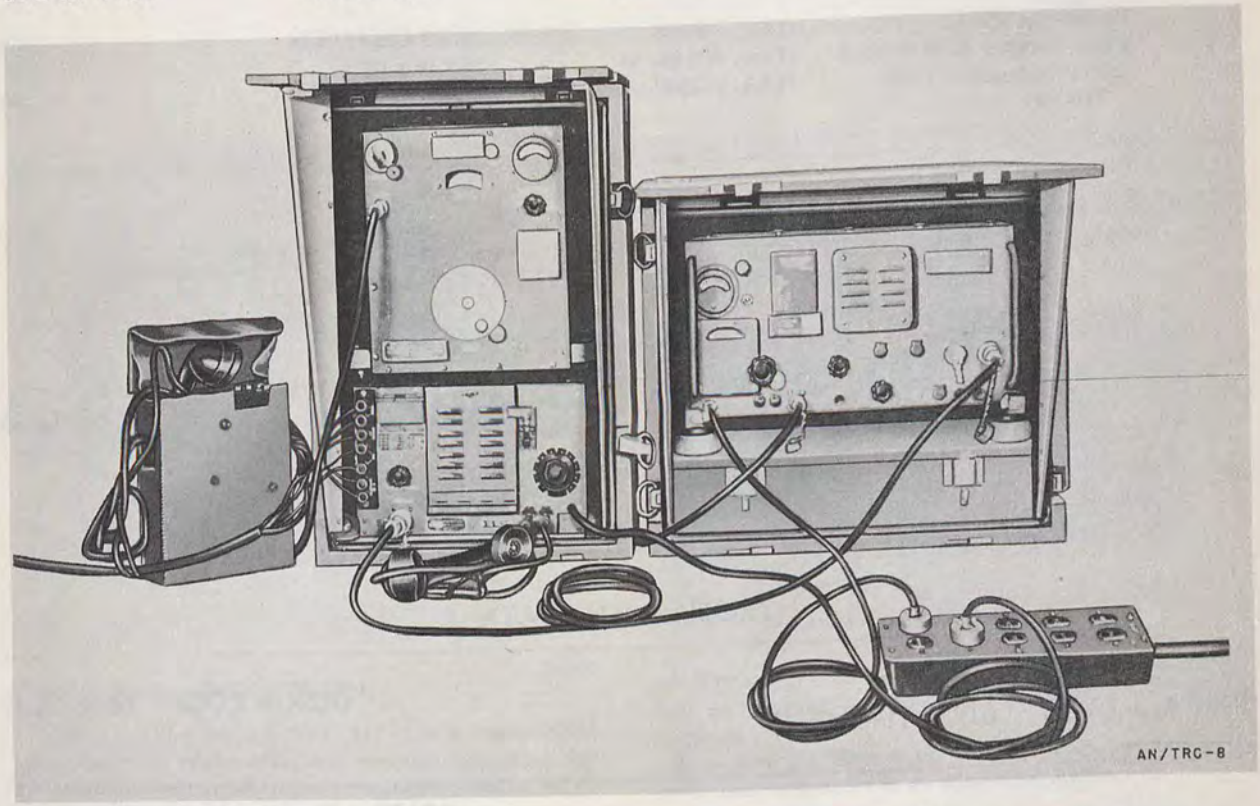
DESIGN COG: USAF (RCUE)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Andrea Radio Corp.	Long Island City, New York, N. Y.		

RADIO SET AN/TRC-8

1 July 1958
Cognizant Serv: USA FSN: 5820-193-7106

	USA	USN	USAF
TYPE CLASS:	S/Std	--	A/Std
STOCK NO:	2S5002-8.1	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-8 is a transportable, vhf, FM, single-channel radio receiving and transmitting equipment used for point-to-point or radio relay applications.

This equipment consists of a radio transmitter, a radio receiver, an antenna, and power accessories but does not include spare operating components. It is intended for use on an intermittent or prescheduled basis. It is designed for communication by voice signals and, in conjunction with additional equipment, for radioteletype applications.

For continuous operation, spare operating components are added (constituting Radio Terminal Set AN/TRC-11). For radio relay use, the same primary operating components and the necessary spares (constituting Radio Relay Set AN/TRC-12) are operated back-to-back at intermediate points of a system.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 230 to 250
Type Modulation: FM
Type of Signal: Voice, teletypewriter (with additional equipment)
Power Output: 5 w
Power Requirements: Commercial power source, Power Unit PE-75, or equivalent
Transmitter: 350 w, 115/230-v 50/60-cycle ac
Receiver: 120 w, 115/230-v 50/60-cycle ac

AN/TRC-8 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna Assembly AS–52/ TRC–8	(FSN) 5985–248–4277	33-1/2 x 14 x 24	110
1	Power Unit PE–75	(USA) 3H4575	26-1/2 x 19-1/2 x 36	330
1	Radio Receiver R–48/TRC–8	(USA) 2C4180–48	23 x 16 x 19	126
1	Radio Transmitter T–30/ TRC–8	(USA) 2C6900–30–1	17-1/2 x 16 x 24-1/2	135

REFERENCE DATA AND LITERATURE:

TM 11–618A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
9	48	1,250

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–3244

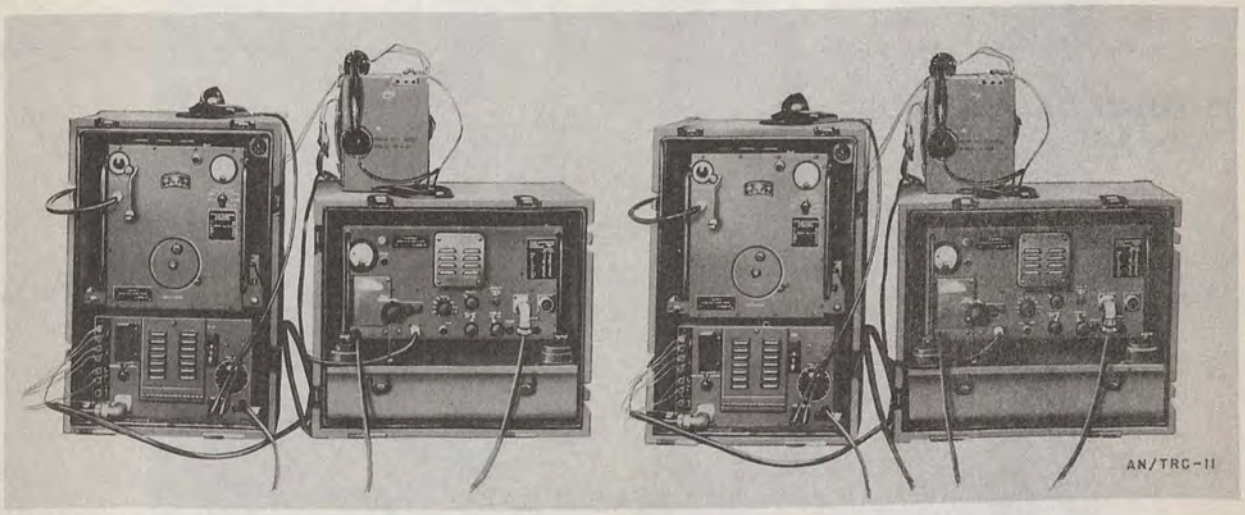
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Espey Mfg. Co., Inc.	New York, N. Y.	25456–P–49–61	$4,083.55

RADIO TERMINAL SET AN/TRC-11( )

1 July 1958
Cognizant Serv: USA FSN: AN/TRC-11, -11A: 5820-192-7149
AN/TRC-11B: 5820-503-1717

	USA	USN	USAF
TYPE CLASS:	S/Std	--	L/Std
STOCK NO:	AN/TRC-11: 2S5002-11.1 AN/TRC-11B: 2S5002-11B	--	1760-04875050



FUNCTIONAL DESCRIPTION:

Radio Terminal Set AN/TRC-11( ) is a transportable, fm (voice), vhf, transmitting and receiving equipment used for single-channel, point-to-point communication or as the terminal of a radio relay system.

This equipment consists essentially of two receivers and two transmitters (one of each being a spare), antenna components, and power equipment. It is designed for continuous operation. It can be used in single-channel applications on a half-duplex basis or, with additional equipment, for full-duplex radioteletype communication as the terminal or a radio link in a wire or cable system.

It is designed primarily to operate continuously as the terminal of a radio relay system in which the opposite or remote terminal equipment consists of Radio Set AN/TRC-8, or another AN/TRC-11, and in which Radio Relay Set AN/TRC-12 is used at intermediate points of the system as may be required to extend the distance range between terminals.

It requires 115/230 v ac operate and can be powered by its power unit component or an equivalent source.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 230 to 250
Type Modulation: Fm
Type of Signal: Voice; teletypewriter or composite (with additional equipment)
Power Output: 5 w
Power Requirements:
Transmitter: 350 w, 115/230-v 50/60-cycle ac
Receiver: 120 w, 115/230-v 50/60-cycle ac

AN/TRC-11( ) RADIO TERMINAL SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna Assembly AS–52/TRC–8	5985–248–4277	33-1/2 x 14 x 24	110
2	Power Unit PE–75	6115–228–5815	26-1/2 x 19-1/2 x 36	330
2	Radio Receiver R–48/TRC–8	5985–164–7182	23 x 16 x 19	126
2	Radio Transmitter T–30/TRC–8	5820–194–0972	17-1/2 x 16 x 24-1/2	135

REFERENCE DATA AND LITERATURE:

TM 11–618A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
13	76	2,300

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–12887

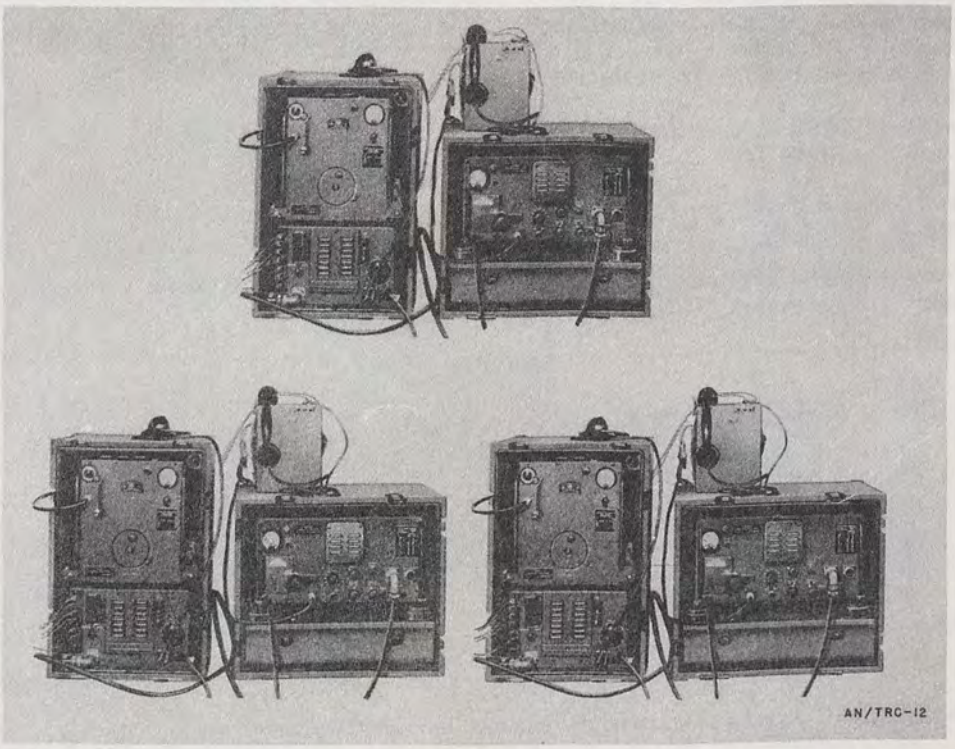
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Amer. Machine & Foundry Co., Electronics Division	New York, N. Y.	25833–P–54–55	$3,704.72
Espey Mfg. Co.	New York, N. Y.	3478–P–52–06	5,400.00

RADIO RELAY SET AN/TRC-12( )

1 July 1958
Cognizant Serv: USA FSN: 5820-192-7147

	USA	USN	USAF
TYPE CLASS:	S/Std	--	L/Std
STOCK NO:	2S5002-12.1	--	--



FUNCTIONAL DESCRIPTION:

Radio Relay Set AN/TRC-12( ) is a transportable, fm (voice), vhf transmitting and receiving equipment used for single-channel, point-to-point communication or as a repeater station at intermediate points of a radio-relay system.

This equipment consists essentially of three or four radio transmitters and three or four radio receivers (two of each in operation), antenna components, and power equipment. It is designed to be used primarily on a continuous basis for half-duplex or full-duplex communication in a system terminated by Radio Set AN/TRC-8 or Radio Terminal Set AN/TRC-11 or as a single-channel voice communication facility.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 230 to 250
Type Modulation: Fm
Type of Signal: Voice, teletypewriter
Power Output: 5 w
Power Requirements:
Transmitter: 350 w, 115/230-v 50/60-cycle ac
Receiver: 120 w, 115/230-v 50/60-cycle ac

AN/TRC-12( ) RADIO RELAY SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1 or 2	Accessory kits			
4 or 6	Antenna Assembly AS–52/ TRC–8	2A264–52.1	33-1/2 x 14 x 24	110
4 or 5	Antenna Support AB–33B/ TRC–1	2A248–33B		
2 or 3	Power Unit PE–75–( )	3H4575	26-1/2 x 19-1/2 x 36	330
3 or 4	Radio Receiver R–48( )/ TRC–8	2C4180–42–2	23 x 16 x 19	126
3 or 4	Radio Transmitter T–30( )/ TRC–8	2C6900–30	17-1/2 x 16 x 24-1/2	135

* Quantities vary in different models and procurements. Refer to appropriate supply manual for exact quantities issued with specific models of this equipment.

REFERENCE DATA AND LITERATURE:

TM 11–618A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
19	167.78	3,013

* Shipping data varies with different models and procurements. Data given here is for earliest model, first procurement order.

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–12887

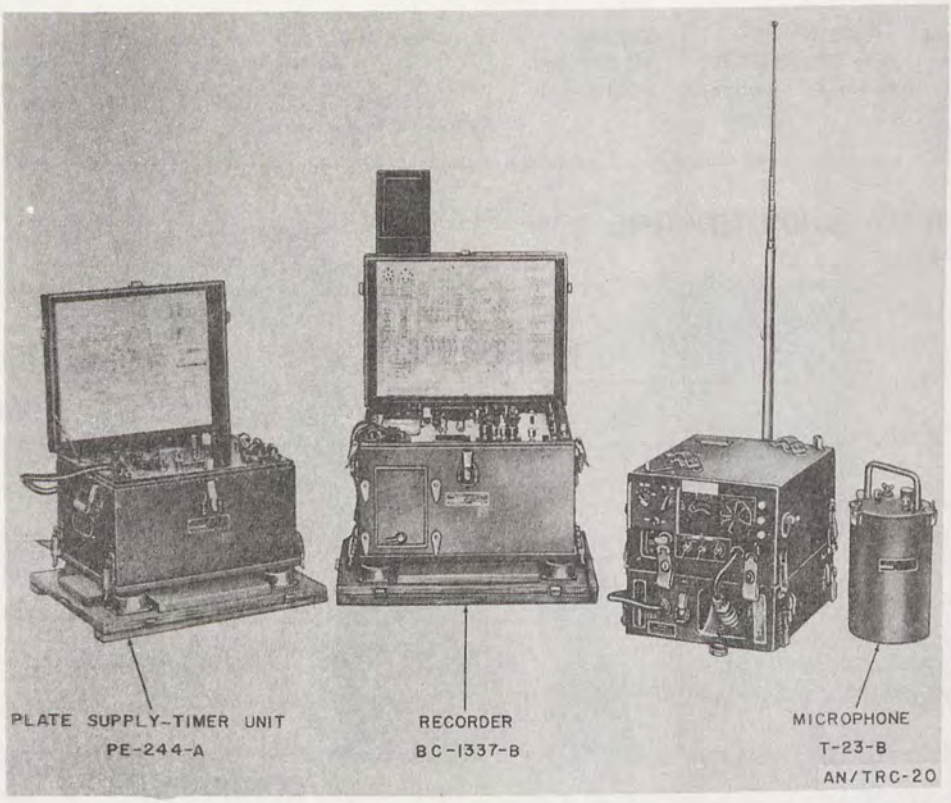
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
American Machine & Foundry Co., Electronics Division	New York, N. Y.	25833–P–54–55	$5,833.86
Espey Mfg. Co., Inc.	New York, N. Y.	3478–P–52–06	8,150.00

RADIO SET AN/TRC-20

1 July 1958
Cognizant Serv: USA FSN: 5820-519-4106

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S5002-20	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-20 is a low power, short-range, fm (voice), transmitting and receiving equipment. It is used as part of a sound ranging system to detect low-frequency artillery reports or shell explosions in the field, and to relay this information to a central location for plotting purposes.

This set consists of the basic components of Radio Set SCR-610-( ), which have been modified for use in the AN/TRC-20. The modified components have been assigned new type numbers (*see* MAJOR COMPONENTS), but are capable of performing the same functions as the SCR-610.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9
Type Modulation: Fm
Type of Signal: Voice
Power Output: 1.3 w
Power Requirements:
Transmitting: 2.0 amp, 24-v dc from storage battery
Receiving: 1.5 amp at 24-v dc from storage battery

AN/TRC-20 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AN–29–C	2A229C	----------	2.0
1	Power Supply PP–1067/GR	3H4497–1067	8-7/8 x 16-1/2 x 18-7/8	33.8
1	Radio Receiver-Transmitter RT–111	2C5130–111	11-7/8 x 16-3/8 x 21-1/2	35.13

REFERENCE DATA AND LITERATURE:

TM 11–615, changes 2

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, Sig C

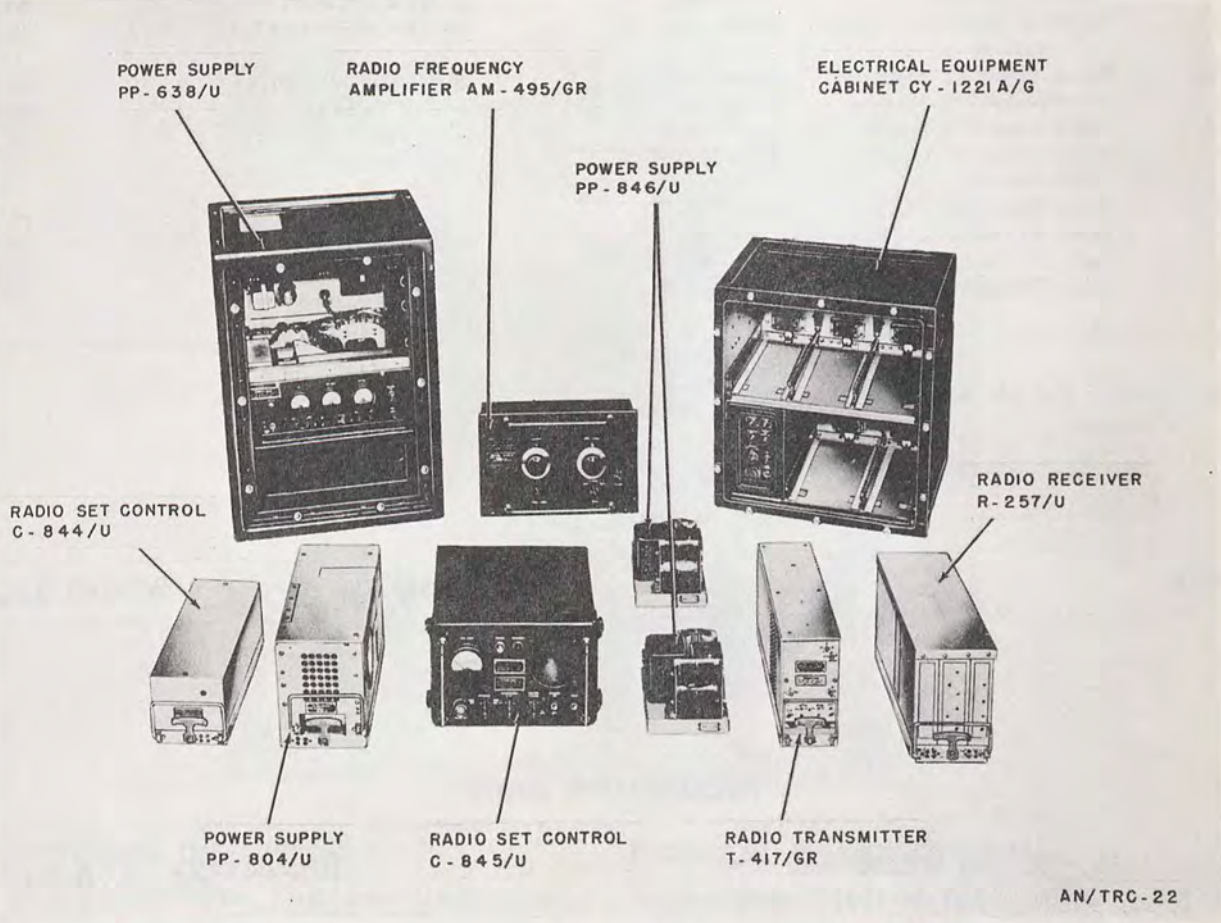
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/TRC-22

1 July 1958
Cognizant Serv: USA FSN: 5820-503-1129

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S5002-22	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-22 is an fm (voice) vhf, crystal-controlled receiving and transmitting equipment, used by military police, guard, and security organizations.

This equipment consists of a radio transmitter, power amplifier, receiver, and auxiliary components.

It is normally operated on a simplex basis but can be arranged for duplex operation by the addition of another receiver and an extra antenna. It can also provide automatic retransmission service between two stations too distant from each other for direct communication.

Remote control with intercommunication between the local and distant operating locations is provided by means of the radio set controls supplied.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 25 to 50
Type Modulation: Fm
Type of Signal: Voice
Power Output: 45 w without amplifier; 250 w with amplifier
Power Requirements:
Power Supply PP-638/U: 660 w, 115/230-v 60-cycle ac
Power Supply PP-804/U: 230 va, 115/230-v 50/65-cycle ac
Power Supply PP-846/U: 46 va, 115/230-v 50/65-cycle ac

AN/TRC-22 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AS–612/U	2A249–612	11-1/2 x 41 x 5-1/4	30
1	Electrical Equipment Cabinet CY–1221/G	6F290–1221	21-1/4 x 16-7/8 x 20-1/2	58
1	Power Supply PP–638( )/U	3H4497–638	26-3/4 x 16-1/2 x 20-1/4	187
1	Power Supply PP–804/U	3H4497–804	8-5/8 x 7 x 14-1/2	40
2	Power Supply PP–846/U	3H4497–846	5-1/8 x 6-1/4 x 7-1/16	10.5
1	Radio Frequency Amplifier AM–495/GR	2C448A–495	9-3/4 x 9-1/2 x 15	13.5
1	Radio Receiver R–257/U	2C4180–257	8-1/2 x 14-1/2 x 5-3/4	19
1	Radio Set Control C–844/U	2C684–844	8-3/4 x 14-3/4 x 5-7/8	6.5
1	Radio Set Control C–845/U	2C684–845	8-7/16 x 13-3/4 x 13-1/2	17.5
1	Radio Transmitter T–417/GR	2C6900–417	8-1/2 x 14-1/2 x 4-1/2	9

REFERENCE DATA AND LITERATURE:

TM 11–691

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	30.7	618

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–N–11539

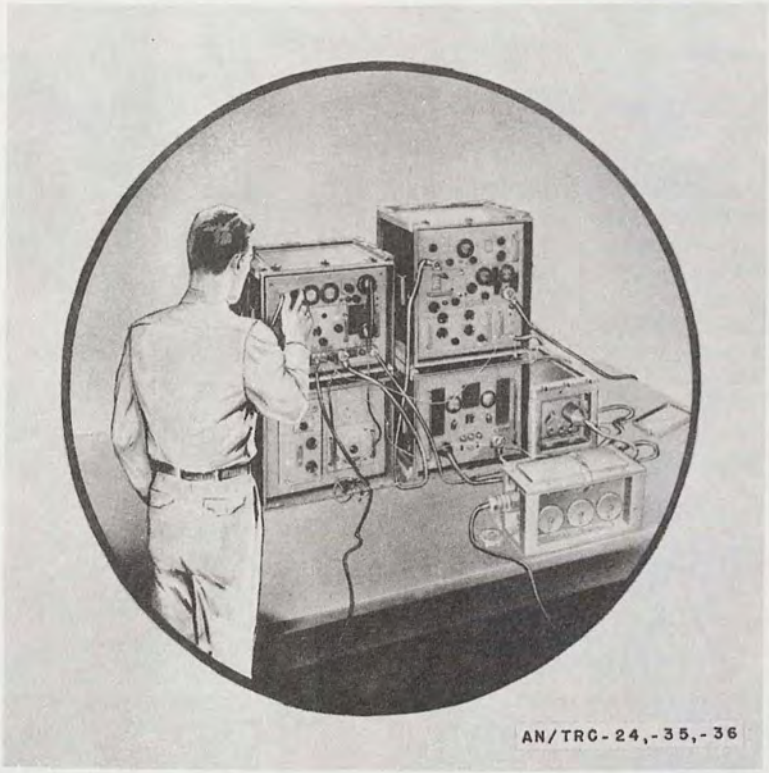
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	11661–P–52–51	$2,642.94

RADIO SET AN/TRC-24( )

1 July 1958
Cognizant Serv: USA FSN: 5820-503-1133

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S5002-24	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-24( ) is the basic fm radio transmitting and receiving equipment used in Radio Terminal Set AN/TRC-35( ) and Radio Relay Set AN/TRC-36( ).

This basic set comprises all components necessary for simultaneous point-to-point transmission and reception of a maximum of 12 multiplexed telephone channels. The channel multiplexing equipment is not included in this equipment, which is designed to accommodate baseband signals generated by Telephone Terminal AN/TCC-7 or similar telephone carrier equipment.

Although designed to operate in one of four bands (A, B, C, or D) by selection of appropriate components, only two of these bands (B and C) are available as of this date.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Band A: 50 to 100 (not available)
Band B: 100 to 225
Band C: 225 to 400
Band D: 400 to 600 (not available)

Type Modulation: Fm

Type of Signal: Voice (up to 12 channels with additional equipment)

Baseband Frequency Range: 250 to 68,000 cps

Power Output: 50 to 120 w

Power Requirements:
Transmitter: 875 va, 115-v 50/60-cycle ac
Receiver: 185 w, 115-v 50/60-cycle ac

AN/TRC-24( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Group OA–482/TRC	(FSN) 5985–264–7538		
1	Filter Kit MK–123/TRC	(USA) 3Z1894–34	18-1/4 x 12-1/4 x 20-1/2	
1	Filter Kit MK–124/TRC	(USA) 3Z1894–34.1	18-1/4 x 12-1/4 x 20-1/2	
1	Mast AB–235/G	(FSN) 5985–264–7472		
1	Power Accessories Kit MK–122/TRC	(USA) 3H4428–122		
1	Radio Set Group OA–483/TRC, consisting of 1 each of following major components:	(USA) 2C5137–483		
	Accessory Kit MK–133/TRC	(FSN) 5820–537–3782	18–5/8 x 20–5/8 x 21–1/2	94
	Amplifier-Converter AM–913/TRC	(USA) 2C448A–913		
	Amplifier-Converter AM–914/TRC	(USA) 2C448A–914		
	Autotransformer Fixed Power Transformer TF–167/TRC	(FSN) 5950–309–5334		
	Electrical Standardized Components Case CY–1338/TRC	----------	18-3/8 x 17-1/8 x 20-5/8	39
	Power Supply PP–685/TRC	(USA) 3H4497–685		
	Power Supply Case CY–1340/TRC	----------	17-1/8 x 18-3/8 x 20-5/8	115
	Radio Frequency Amplifier AM–912/TRC	(USA) 2C488–912		
	Radio Frequency Amplifier-Multiplier AM–915/TRC	(USA) 2C448A–915		
	Radio Receiver R–417/TRC	(USA) 2C4180–417		
	Radio Transmitter T–302/TRC	(USA) 2C6900–302		
	Receiver Case CY–1339/TRC	----------	17-1/8 x 18-1/4 x 20-5/8	96.5
	Transmitter Case CY–1341/TRC	----------	18-1/2 x 22 x 20-5/8	120.75
1	Supplementary accessory group consisting of two Gasoline Engine Generator Sets PU–286/G and various minor components			

* Weight in each instance includes weight of operating components or accessories normally mounted or stored in each case.

REFERENCE DATA AND LITERATURE:

TM 11–687, TO 31R2–2TRC24–11

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
18	140.1	2,561

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10616

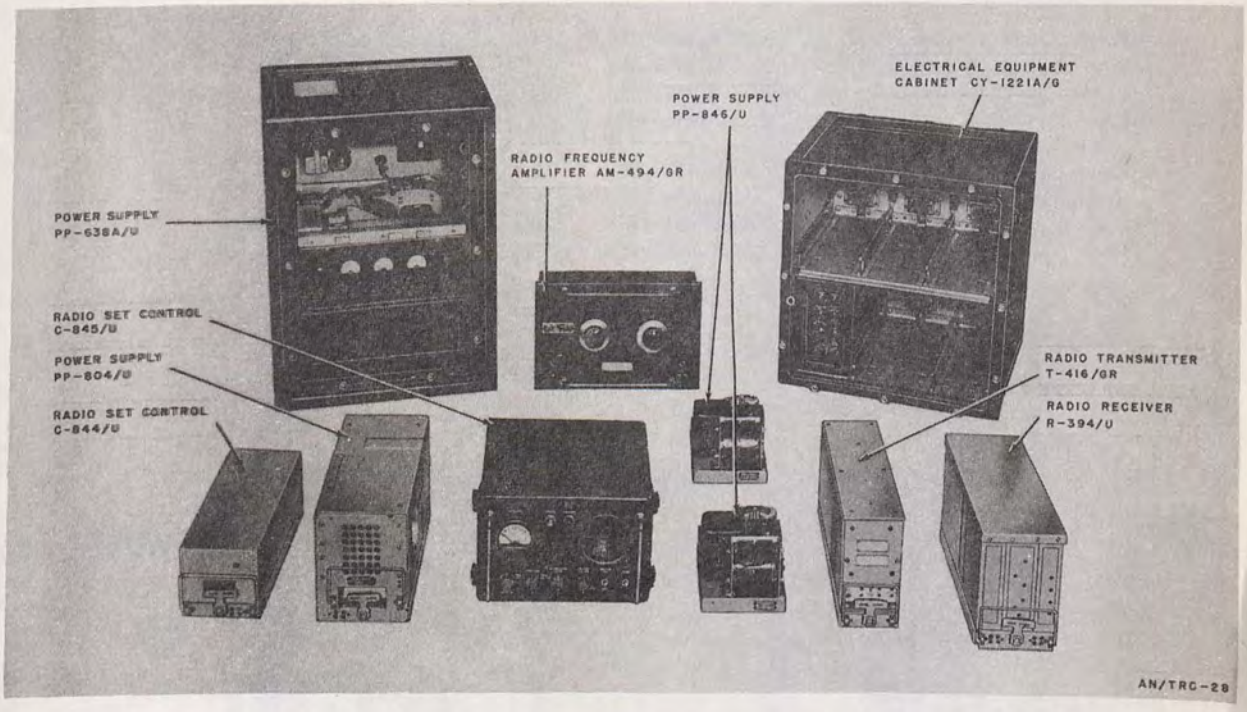
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CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Philco Radio Corp.	Philadelphia, Pa.	32146-P-51-93	$13,008.94
Western Electric Co., Inc.	New York, N. Y.	08720-P-55-55	14,087.87

RADIO SET AN/TRC-28

1 July 1958
Cognizant Serv: USA FSN: 5820-503-1130

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S5002-28	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-28 is vhf, fm voice communication equipment designed for fixed-station operation, with remote control facilities up to 10 miles. It is used primarily by military police, guard and security organizations.

Operation is primarily simplex; duplex operation is possible with two frequency assignments and additional equipment.

This equipment may also be used as an automatic relay station (retransmission) to extend the distance between terminal stations.

Remote control with intercommunication between the local and distant operating locations is provided; local start-stop operation must be used.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 152 to 174
Type Modulation: Fm
Type of Signal: Voice
Power Output: 45 w without amplifier; 250 w with amplifier
Power Requirements:
Power Supply PP-638/U: 660 w, 115/230-v 60-cycle ac
Power Supply PP-804/U: 230 va, 115/230-v 50-65-cycle ac
Power Supply PP-846/U: 46 va, 115/230-v 50-65-cycle ac

AN/TRC-28 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT–438/GR	(FSN) 5985–264–7498	6-1/2 x 31 x 5-1/2	10
1	Electrical Equipment Cabinet CY–1221( )/G	(USA) 6F290–1221	21-1/4 x 16-7/8 x 20-1/2	58
1	Power Supply PP–638( )/U	(USA) 3H4497–638	26-3/4 x 16-1/2 x 20-1/4	187
1	Power Supply PP–804/U	(USA) 3H4497–804	8-5/8 x 7 x 14-1/2	40
2	Power Supply PP–846/U	(USA) 3H4497–846	5-1/8 x 6-1/4 x 7-1/16	10
1	Radio Frequency Amplifier AM–494/GR	(USA) 2C448A–494	9-3/4 x 9-1/2 x 15	13.5
1	Radio Receiver R–394/U	(USA) 2C4180–394	8-1/2 x 14-1/2 x 5-3/4	19
1	Radio Set Control C–844/U	(USA) 2C684–844	8-3/4 x 14-3/4 x 5-7/8	10
1	Radio Set Control C–845/U	(USA) 2C684–845	8-7/16 x 13-3/4 x 13-1/2	17.5
1	Radio Transmitter T–416/GR	(USA) 2C6900–416	8-1/2 x 14-1/2 x 4-1/2	9

REFERENCE DATA AND LITERATURE:

TM 11–252

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	30	621

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–N–115399

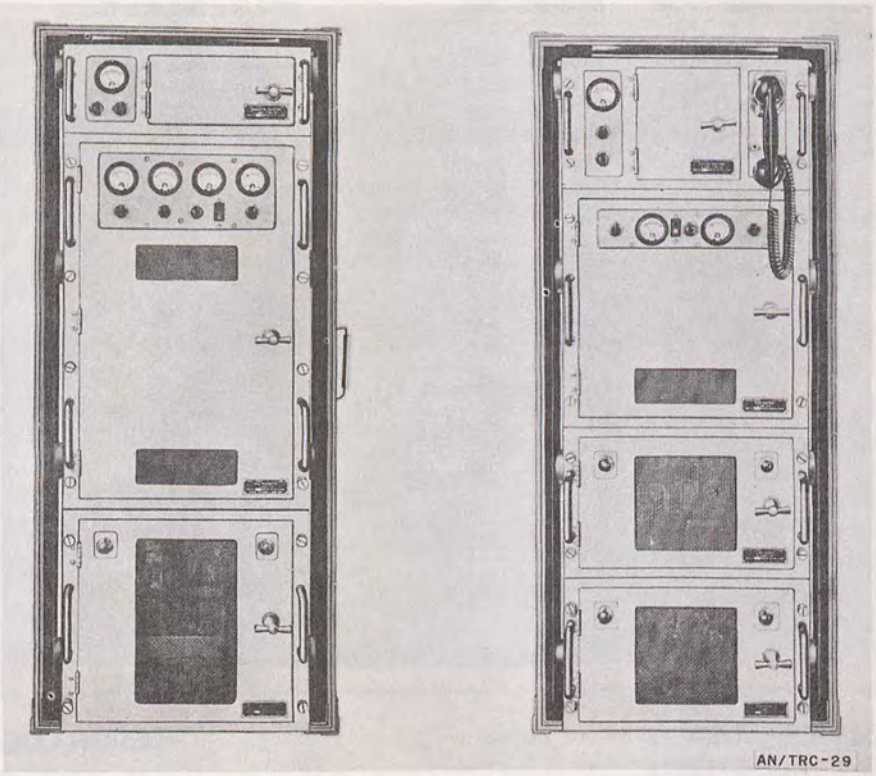
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	11661–P–52–51	$2,811.99

RADIO SET AN/TRC-29

1 July 1958
Cognizant Serv: USA FSN: 5820–503–2581

	USA	USN	USAF
TYPE CLASS:	Std	--	Used by
STOCK NO:	2S5002–29	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC–29 is a two-way, multichannel fm, microwave receiving and transmitting equipment used in radio-relay systems. Although normally used in a rear area radio-relay system, it is built to satisfy full field service handling requirements. It is contained in equipment transit cases and can be transported by suitable military vehicles, or it can be mounted in standard relay racks.

This equipment consists of receivers, transmitters, and associated components for handling multichannel telephone, facsimile, telegraph, radar data, or television signals. It can be arranged in a radio-relay system as a terminal or as repeater stations with additional equipment.

This set is designed to operate continuously for long periods of time. It will provide communication trunk service over as many as 20 tandem hops to form circuits up to 600 miles in length.

This equipment is used as a major component of Radio Terminal Set AN/TRC–38 and Radio Repeater Sets AN/TRC–39 through –41.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1,700 to 2,400
Type Modulation: Fm
Type of Signal: Fsk, voice, facsimile, TV, composite
Power Output: 4 to 10 w
Power Requirements: 2,300 w, 115/230-v 50/60-cycle ac

AN/TRC-29 RADIO SET

MAJOR COMPONENT

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Fixed autotransformer power transformer	5950–568–4835	27-3/8 x 19-1/8 x 19-5/8	
1	Power Supply PP–689/G	5820–548–1671	21 x 19-3/8 x 21-1/4	
1	Power Supply PP–690/G	5820–548–1673	21-5/8 x 19-3/8 x 12-1/4	
1	Power Supply PP–764/G	5820–548–1674	21 x 19-3/8 x 17-1/2	
1	Radio Receiver R–418/G	5820–503–1401	21-5/8 x 19-3/8 x 19-1/4	
1	Radio Transmitter T–303/G	5820–503–13422	21 x 19-3/8 x 17-1/2	

REFERENCE DATA AND LITERATURE:

TM 11–689

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
13	226.6	3,682

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–10615

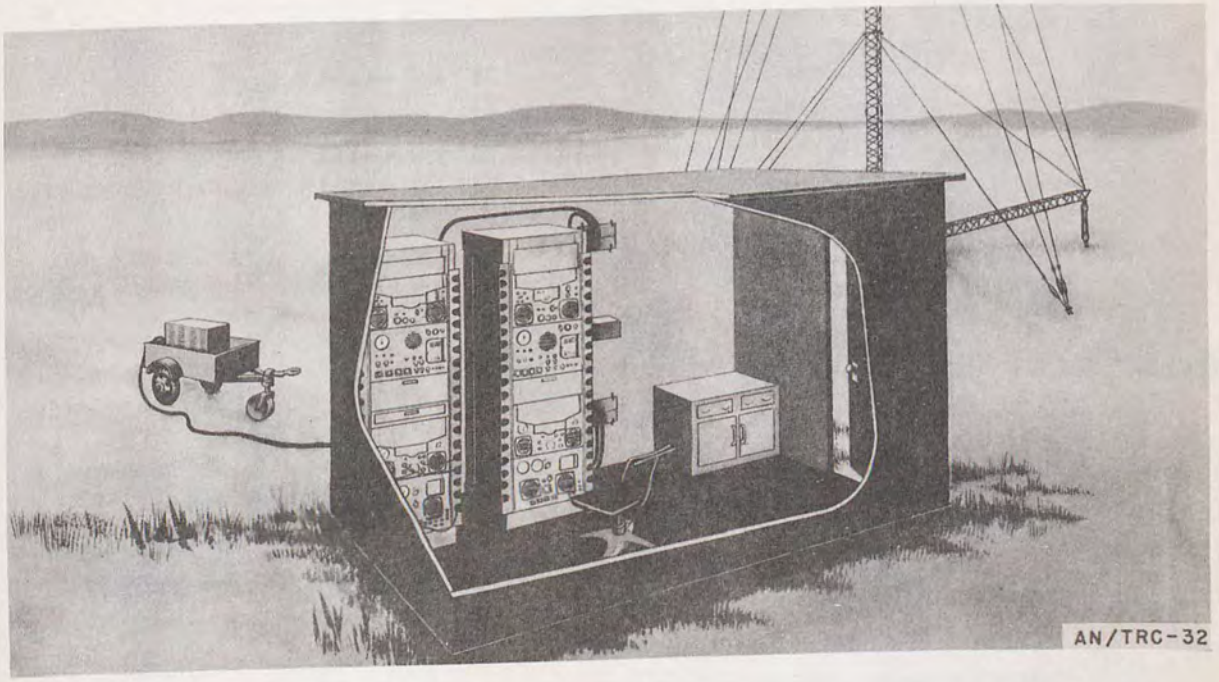
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Tel. & Radio Co. Div., International Tel. & Tel. Corp.	Clifton, N. J.	21765–P–56–55	$5,487.40
Radio Receptor Co., Inc.	Cedar Rapids, Iowa	31238–P–55–55	7,597.74

RADIO SET AN/TRC-32

1 December 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Alt-Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC–32 is a fixed, ground or mobile, ultra high frequency communication equipment designed for contact with aircraft equipped with Radio Sets AN/ARC–27, AN/ARC–33, AN/ARC–34, or similar units.

This equipment consists essentially of two transmitters, two receivers, and two units of all necessary items required in dual operation.

Radio Transmitter T–217/GR operates on any 10 preset channels between 225 and 399.9 megacycles. Radio Receiver R–278/GR operates on any 10 preset channels between 225 and 399.9 megacycles, including any two crystal-controlled guard frequencies in the 238 or 248 megacycle frequency range.

The set matches 53-ohm coaxial cable, such as RG–8/U. A total of three antennas are supplied as part of the set.

All equipment, with the essential operating accessories, is normally transported in 2-1/2 ton truck (modified K–53) and a 1/2 ton triler for the power unit.

Remote control operation is possible for a maximum distance of 10 miles over a single field wire pair.

Radio Set AN/TRC–32 is intended to replace Radio Set AN/MRC–21.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 399.9
Number of Channels: 1,750
Channel Separation: 100 kc
Range of Guard Frequency: 238 to 248 mc
Type Modulation: AM
Type Emission and Reception: Voice, cw, mcw
Power Output:
Transmitter: 100 w each
Receiver: 3 w each (maximum)
Power Requirements: 115- or 230-v, 50- to 60-cycle, 1-phase ac (commercial power) or power unit, approximately 4.5 kw

AN/TRC-32 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AS–505/GR			60
2	Antenna AT–197/GR			6.5
1	Mast AB–158/GR			650
2	Modulator Power Supply MD–129/GR		19 x 12-1/4 x 22-3/8	180
1	Power unit		73 x 72 x 144	2,600
2	Radio Set Control C–565/GR		19 x 12-1/4 x 11-1/2	90
2	Receiver R–278/GR		19 x 12-1/4 x 22-3/8	144
2	Receiver-Transmitter Control Group OA–193/GR		23 x 13-1/2 x 21	105
2	Transmitter T–217/GR		19 x 12-1/4 x 22-3/8	150
1	Truck K–53 (Modified)		130 x 96 x 256	11,575

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	2,270	16,750

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: Eng–283 & 284

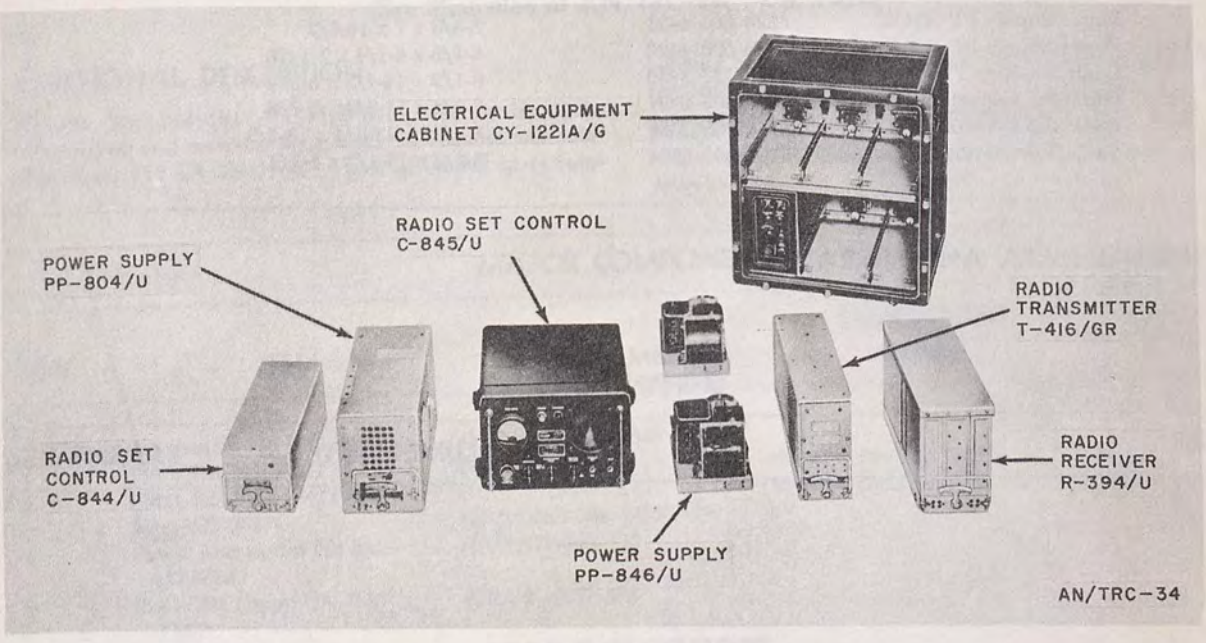
DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/TRC-34( )

1 July 1958
Cognizant Serv: USA FSN: 5820-503-1128

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S5002-34	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-34( ) is a vhf, fm, low-powered radio receiving and transmitting equipment used in various communication applications. It is transportable; its fixed-plant counterpart is Radio Set AN/FRC-27.

This equipment consists of receiver and transmitter components, local- and remote-control units, equipment cabinet, power supplies, and accessories.

It can be operated in simplex, duplex, and retransmission applications. Push-to-talk operation over either of two preset frequency channels is provided either locally or at a maximum distance of 10 miles from the transmitter site. Duplex operation requires an additional antenna and can be conducted from the local operating site only. The remote control unit can be used to transmit tone signals for signaling and for transmitter adjustment, to monitor reception, and to intercommunicate between the remote point and the set.

Radio Sets AN/TRC-34 and AN/TRC-27 are identical, except for a base stand supplied only with the latter.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 152 to 174
Type Modulation: F,
Type of Signal: Voice
Transmitter Power Output: 50 w
Power Requirements:
PP-804/U: 230 va, 115/230-v 50/60-cycle ac
PP-846/U: 46 va, 115/230-v 50/60-cycle ac

AN/TRC-34( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna A–438/GR	5985–264–7498		
1	Electrical Equipment Cabinet CY–1221/G	5820–503–0792		
1	Power Supply PP–804/U	5820–500–4421	8-5/8 x 7 x 14-1/2	40
2	Power Supply PP–846/U	5820–500–4426	5-1/8 x 6-1/4 x 7-1/16	10
1	Radio Receiver R–394/U	5820–537–3950	8-1/2 x 14-1/2 x 5-3/4	19
1	Radio Set Control C–844/U	5820–503–0997	8-3/4 x 14-3/4 x 5-7/8	10
1	Radio Set Control C–845/U	5820–503–1004	8-7/16 x 13-3/4 x 13-1/2	17.5
1	Radio Transmitter T–416/GR	5820–503–3304	8-1/2 x 14-1/2 x 4-1/2	9

REFERENCE DATA AND LITERATURE:

TM 11–226

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	18.7	343

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–N–11539

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Great American Industries, Inc.	Meriden, Conn.	32046–P–55–55	$ 743.00
Motorola, Inc.	Chicago, Ill.	11661–P–52–51	1,644.00

RADIO TERMINAL SET AN/TRC-35( )

1 July 1958
Cognizant Serv: USA FSN: 5820-503-2578

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S5000-35	--	--

(See Illustration of AN/TRC-24( ), p. 1489)

FUNCTIONAL DESCRIPTION:

Radio Terminal Set AN/TRC-35( ) is an fm radio transmitting and receiving equipment. It includes one complete Radio Set AN/TRC-24( ) plus additional spare components in sufficient quantities to insure 24-hour-a-day radio terminal operation.

TECHNICAL CHARACTERISTICS:

For detailed description and technical characteristics, refer to Radio Set AN/TRC-24( ).

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Group OA-482/TRC	(FSN)5895-264-7538		
1	Filter Kit MK-123/TRC	(USA)3Z1894-34	18-1/4 x 12-1/4 x 20-1/2	
1	Filter Kit MK-124/TRC	(USA)3Z1894-34.1	18-1/4 x 12-1/4 x 20-1/2	
1	Mast AB-235/G	(FSN)5985-264-7472		
1	Power Accessories Kit MK-122/TRC	(USA)3H4428-122		
2	Radio Set Group OA-483/TRC*	(USA)2C5137-483		
1	Supplementary accessories group consisting of two Gasoline Engine Generator Sets PU-286/G and various minor components			

* Refer to Radio Set AN/TRC-24( ) for major components of this group.

REFERENCE DATA AND LITERATURE:

TM 11-687 TO 31R2-2TRC24-11

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
24	187.5	3,531

AN/TRC-35( ) RADIO TERMINAL SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10616

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Philco Radio Corp.	Philadelphia, Pa.	32146-P-51-93	
Western Electric Co., Inc.	New York, N. Y.	08720-P-55-55	$23,002.38

RADIO RELAY SET AN/TRC-36( )

1 July 1958
Cognizant Serv: USA FSN: 5820-569-0031

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S5000-36	--	--

(See Illustration of AN/TRC-24( ), p. 1489)

FUNCTIONAL DESCRIPTION:

Radio Relay Set AN/TRC-36( ) is an fm radio repeater station used to extend the range of systems using Radio Terminal Set AN/TRC-35( ). It includes one complete Radio Set AN/TRC-24( ) plus two additional sets of radio components and sufficient accessories to insure 24-hour-a-day, radio-relay operation. Two sets of radio transmitting and receiving equipment are in operation at all times, with the third group of equipment as standby.

Multiplexing equipment is not included as part of this equipment, but may be separately provided to permit partial channel dropoff at any of the relay points using this equipment.

TECHNICAL CHARACTERISTICS:

For detailed description and technical characteristics, refer to Radio Set AN/TRC-24( ).

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna Group OA-482/TRC	(FSN)5895-264-7538		
2	Filter Kit MK-123/TRC	(USA)3Z1894-34	18-1/4 x 12-1/4 x 20-1/2	
2	Filter Kit MK-124/TRC	(USA)3Z1894-34.1	18-1/4 x 12-1/4 x 20-1/2	
2	Mast AB-235/G	(FSN)5985-264-7472		
1	Power Accessories Kit MK-522/TRC	(USA)3H4428-122		
3	Radio Set Groups OA-483/TRC*	(USA)2C5137-483		
1	Supplementary accessories group consisting of two Gasoline Engine Generator Sets PU-286/G and various minor components			

* See Radio Set AN/TRC-24( ) for major components of this group.

REFERENCE DATA AND LITERATURE:

TM 11-687/TO 31R2-2TRC24-11

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
40	310.0	5,814

AN/TRC-36( ) RADIO RELAY SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10616

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Philco Radio Corp.	Philadelphia, Pa.	32146-P-51-93	
Western Electric Co., Inc.	New York, N. Y.	08720-P-55-55	$35,783.33

RADIO TERMINAL SET AN/TRC-38

1 July 1958
Cognizant Serv: USA FSN: 5820-545-7292

	USA	USN	USAF
TYPE CLASS:	Std	--	Used by
STOCK NO:	2S9012A-2	--	--

(See Illustrations of AN/TRC-29, p. 1495 and AN/TCC-13, p. 1357)

FUNCTIONAL DESCRIPTION:

Radio Terminal Set AN/TRC-38 consists of two Radio Sets AN/TRC-29 and one Multiplexer Set AN/TCC-13.

It provides microwave radio-relay terminal facilities for 23 voice channels.

TECHNICAL CHARACTERISTICS:

For technical characteristics of this equipment, see the entry under individual components.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Multiplexer Set AN/TCC-13	4B2135-13	60 x 64 x 26-1/2	1,284
2	Radio Set AN/TRC-29	2S5002-29	60 x 64 x 26-1/2	1,051

REFERENCE DATA AND LITERATURE:

TM 11-689
TM 11-2141

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
32	612.7	9,970

AN/TRC-38 RADIO TERMINAL SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO REPEATER SET AN/TRC-39

1 July 1958
Cognizant Serv: USA FSN: 5820-501-3618

	USA	USN	USAF
TYPE CLASS:	Std	--	Used by
STOCK NO:	2C5347A-1	--	--

(See Illustration of AN/TRC-29, p. 1495)

FUNCTIONAL DESCRIPTION:

Radio Repeater Set AN/TRC-39 consists of three Radio Sets AN/TRC-29.

It provides microwave radio-relay repeater facilities for the composite radio signals transmitted by Radio Terminal Set AN/TRC-38; Radio Repeater Set AN/TRC-40 or -41; or another AN/TRC-39. No facilities are provided by this equipment for translation of the composite signal, which consists of 23 voice channels.

TECHNICAL CHARACTERISTICS:

For technical characteristics of this equipment, see the entry for Radio Set AN/TRC-29.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
3	Radio Set AN/TRC-29	2S5002-29	60 x 64 x 26-1/2	1,051

REFERENCE DATA AND LITERATURE:

TM 11-689

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
39	679.8	11,046

AN/TRC-39 RADIO REPEATER SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO REPEATER SET AN/TRC-40

1 July 1958
Cognizant Serv: USA FSN: 5820-646-4759

	USA	USN	USAF
TYPE CLASS:	Std	--	Used by
STOCK NO:	--	--	--

(See Illustrations for AN/TRC-29, p. 1495 and AN/TRA-10, p. 1455)

FUNCTIONAL DESCRIPTION:

Radio Repeater Set AN/TRC-40 consists of three Radio Sets AN/TRC-29 and one Pulse Form Restorer Group AN/TRA-10.

It provides microwave radio-relay repeater facilities for the composite radio signals transmitted by Radio Terminal Set AN/TRC-38; Radio Repeater Set AN/TRC-39 or -41; or another Radio Repeater Set AN/TRC-40. It also provides facilities to reshape the 23- or 45-channel pulse train received from the radio receiver into a standard wave shape before inserting the signal into the radio transmitter. This equipment (or Radio Repeater Set AN/TRC-41) is used once every four or five jumps throughout the system to increase the maximum number of jumps. In addition, this set provides for drop-out and reinsertion of channels 1 and 2 of the 23-channel composite signal.

TECHNICAL CHARACTERISTICS:

For technical characteristics of this equipment, see the entries for Radio Set AN/TRC-29 and Pulse Form Restorer AN/TRA-10.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Pulse Form Restorer Group AN/TRA-10	2C5615-10	26-1/2 x 27 x 60	810
3	Radio Set AN/TRC-29	2S5002-29	60 x 64 x 26-1/2	1,051

REFERENCE DATA AND LITERATURE:

TM 11-689
TM 11-2141

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
44	778.5	12,892

AN/TRC-40 RADIO REPEATER SET

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO REPEATER SET AN/TRC-41

1 July 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	--	Used by
STOCK NO:	--	--	--

(See Illustrations of AN/TRC-29, p. 1495 and AN/TCA-1, p. 1333)

FUNCTIONAL DESCRIPTION:

Radio Repeater Set AN/TRC-41 consists of three Radio Sets AN/TRC-29 and one Multiplexer Group AN/TCA-1.

It provides microwave radio-relay repeater facilities for the composite radio signals transmitted by Radio Terminal Set AN/TRC-38; Radio Repeater Set AN/RTC-39 or AN/TRC-40; or another Radio Repeater Set AN/TRC-41.

It provides the same pulse restoration facilities as provided by Pulse Form Restorer Group AN/TRA-10 in Radio Repeater Set AN/TRC-40. In addition, the AN/TRC-41 provides for dropout of channels 1 to 8 of the 23-channel composite signal.

TECHNICAL CHARACTERISTICS:

For technical characteristics of this equipment, see the entries for Radio Set AN/TRC-29 and Multiplexer Group AN/TCA-1.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Multiplexer Group AN/TCA-1	2Z6823-2	60 x 64 x 26-1/2	
3	Radio Set AN/TRC-29	2S5002-29	60 x 64 x 26-1/2	1,051

REFERENCE DATA AND LITERATURE:

TM 11-689
TM 11-2141

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
45	839.3	13.622

AN/TRC-41 RADIO REPEATER SET

PROCUREMENT DATA

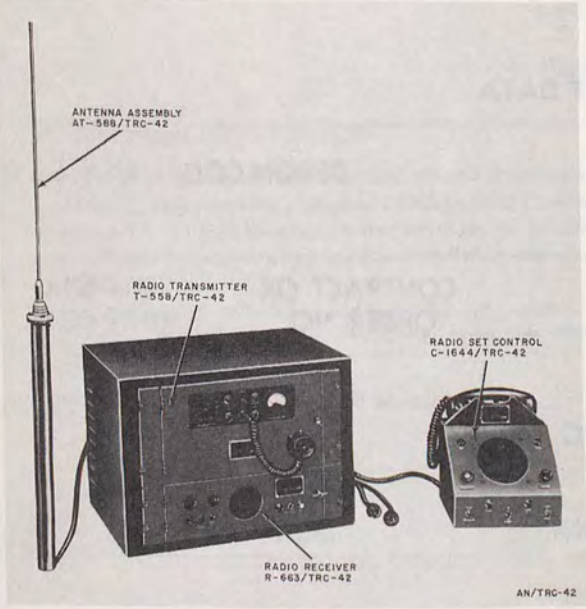
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

1 July 1958
Cognizant Serv: USA FSN: 5820-503-2582

USA	USN	USAF

TYPE CLASS: S/Std
STOCK NO: 2S5010-2



FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC-42( ) is a transportable vhf single-channel, two-way radio equipment used for ground-to-air communication.

This equipment consists of a radio receiver and a transmitter housed in a single cabinet, and includes a radio set control with handset and accessory items.

It may be operated in the cabinet supplied, or mounted on a standard 19-inch rack.

The radio set control enables operation of the radio equipment from a remote point.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 116 to 132
Type Modulation: Am
Type of Signal: Voice
Power Output: 10 w
Power Requirements: 350 w (max), 115/230-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AT-588/TRC-42	2A288A-44		
1	Cabinet (transmitter and receiver)	6F207-133	16 x 22-3/4 x 14-3/4	
1	Radio Receiver R-663/TRC-42	2C4575-20	5-1/4 x 15-1/2 x 19	30
1	Radio Set Control C-1644/TRC-42	2C715-70	11-3/4 x 9-5/8 x 11	
1	Radio Transmitter T-558/TRC-42	2C6703-24	8-3/4 x 14-1/2 x 19	47

REFERENCE DATA AND LITERATURE:

TM 11-221

AN/TRC-42( ) RADIO SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	8.16	140

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: RAC-1584B

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Varo Mfg. Co. Inc., Schuttig & Co. Div.	Garland, Tex.	7531-54-55	$898.00

RADIO SET AN/TRC-69

1 December 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Used by
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/TRC–69 is an air and ground transportable transmitting and receiving equipment that provides two-way communication within its specified frequency range. It utilizes single sideband and/or a compatible amplitude modulated mode of transmission.

This equipment provides air-to-ground and ground-to-ground communications and allows duplex operation with 10 preset channels.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 29.999
Number of Bands: 4
Number of Channels: 28,000
Channel Spacing: 100 kc
Type Modulation: Am
Type Emission and Reception: A3
Transmitter Power Output: 1,000 w nominal
Power Requirements: 115-v, 400-cycle, 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	(USA)			
1	Antenna Assembly			
1	Antenna Coupler Control Mounting MT–1962/TRC–69( )			
1	Antenna Coupler CU–523/ARC–58( )			
1	Antenna Coupler Control C–1940/ARC–58( )			
1	Antenna Coupler Mounting MT–1959/TRC–69( )			
1	Fan, Van, Axial HD–277/U( )			
1	Filter, Band Pass F–355/UR( )			
1	Helicopter hut			
1	Interconnecting Box J–934/TRC–69( )			
1	Motor Generator PU–419/TRC–69( )			
2	Mounting, Radio Receiver MT–1960/TRC–69( )			
1	Mounting, Radio Transmitter MT–1961/TRC–69( )			
2	Radio Receiver R–761/ARC–58( )			
1	Radio Transmitter T–605/ARC–58( )			

AN/TRC-69 RADIO SET

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

DESIGN COG: USAF

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	AF30(635)–4504	

RADIO TRANSMITTER-RECEIVER AN/TRC-type 25/FSTR

3 November 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter-Receiver 25/FSTR is a radio receiver and transmitter, complete with self-contained power supplies and accessories, used as an operating two-way communication system in a fixed station. It is designed for either coordinated local or remote control in the 30- to 40-mc range.

The unit consists of a radio transmitter (Link Radio, Type 25–UFS, ed. 2), a radio receiver (Link Radio, Type 12–UF, ed. 6), and a speaker panel mounted in a cabinet. The cabinet is designed for rack mounting. A handset is provided for local control of the equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 40
Frequency Control: Crystal
Type Signal: Fm
System Audio Response: ±3 db at 300 to 3,000 cps
Power Consumption:
Standby: 125 w
Transmitting: 230 w
Power Requirements: 115-v 50- to 60-cycle 1-phase ac
Transmitter:
Frequency Deviation: ±15 kc
Type Transmission: Voice
Power Output: 25 w (nominal)
Output Impedance: Any—usually fed into 50- to 70-ohm concentric line
Power Input (From 115-v ac):
Standby: 60 w
Transmitting: 165 w
Receiver:
Frequency Range: 30 to 44 mc
Frequency Deviation: ±15 kc
Type Reception: Voice
Audio Response: Sharp cut-off filter attenuates frequencies above 3,000 cps
Power Output: 1 w (approximately) into 500 ohms
Output Impedance: 500 ohms
Power Consumption: (From 115-v Ac): 65 w

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
3	Cable			
1	Handset, local control			
1	Rack cabinet			
1	Radio Receiver, Type 12–UF, ed. 6			
1	Radio Transmitter, Type 25–UFS, ed. 2			
1	Speaker			

AN/TRC-type RADIO TRANSMITTER-RECEIVER

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91070

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.7	120

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

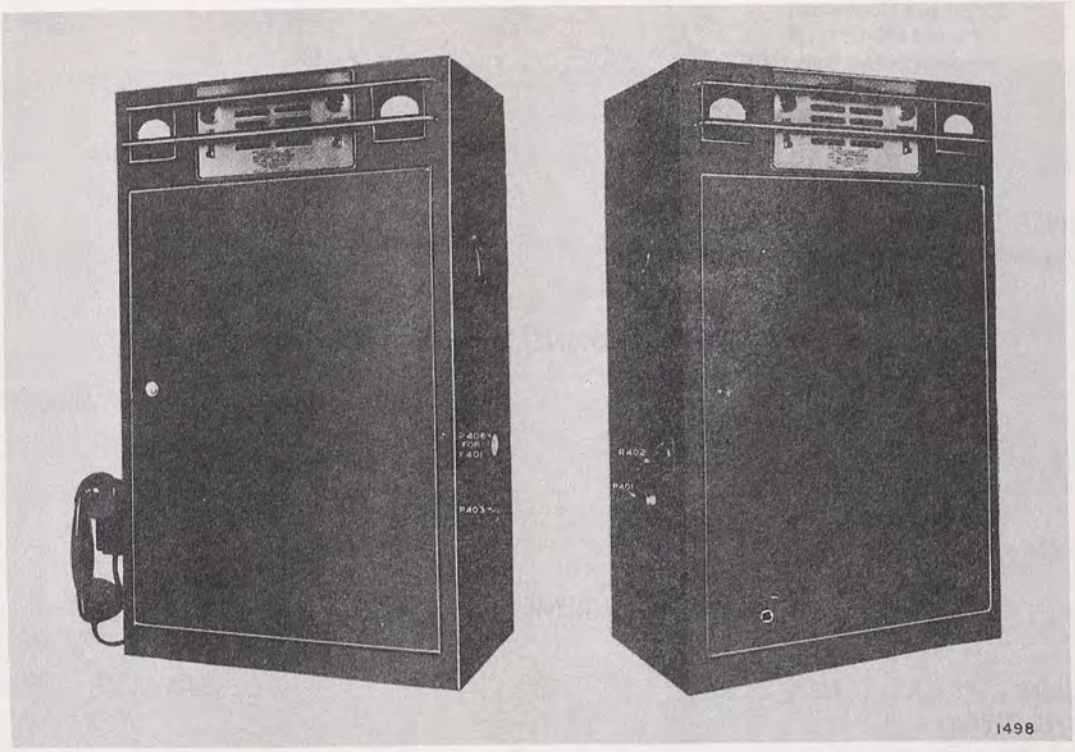
DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Link Radio Corp.	New York, N. Y.		

RADIO TRANSMITTER-RECEIVER AN/TRC-type

10 November 1958
Cognizant Serv: USN FSN: 5820-665-2353 1498

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter-Receiver 1498 is designed to provide radiotelephone communication over distances up to 100 miles when line-of-sight signaling is possible. The equipment utilizes the Armstrong frequency-modulation method of transmission and reception.

The transmitter-receiver is completely self-contained with the exception of the antenna assembly, the remote control unit, and the primary power source.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 70 to 100
Frequency Deviation: ±15 kc
Type Signal: Fm
Type Transmission and Reception: Voice
Crystal Frequency Range: 2,187.5 to 3,125 kc
Audio Response: ±2 db at 300 to 2,750 cps overall transmitter-receiver
Power Output: 500 w (maximum)
Output Impedance: 50 to 100 ohms into concentric line
Input Power: 3 amp at 6.3-v ac, 220 ma at 500-v dc
Power Requirements: 115-v 50- to 60-cycle ac

AN/TRC-type RADIO TRANSMITTER-RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet, consisting of:		11 x 21 x 34-1/4	151
1	Antenna Assembly 1509	----------	100 feet long	
1	Radio Receiver 1498–R			
1	Radio Transmitter 1498–T			
1	Relay and Connection Panel 1498–C			
1	Remote Control Unit 1504	----------	9 x 11 x 15	35
	Transmitter Power Supply 1498–P			

REFERENCE DATA AND LITERATURE:

Technical manual for Radio Transmitter-Receiver 1498

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5		

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

DESIGN COG: Commercial

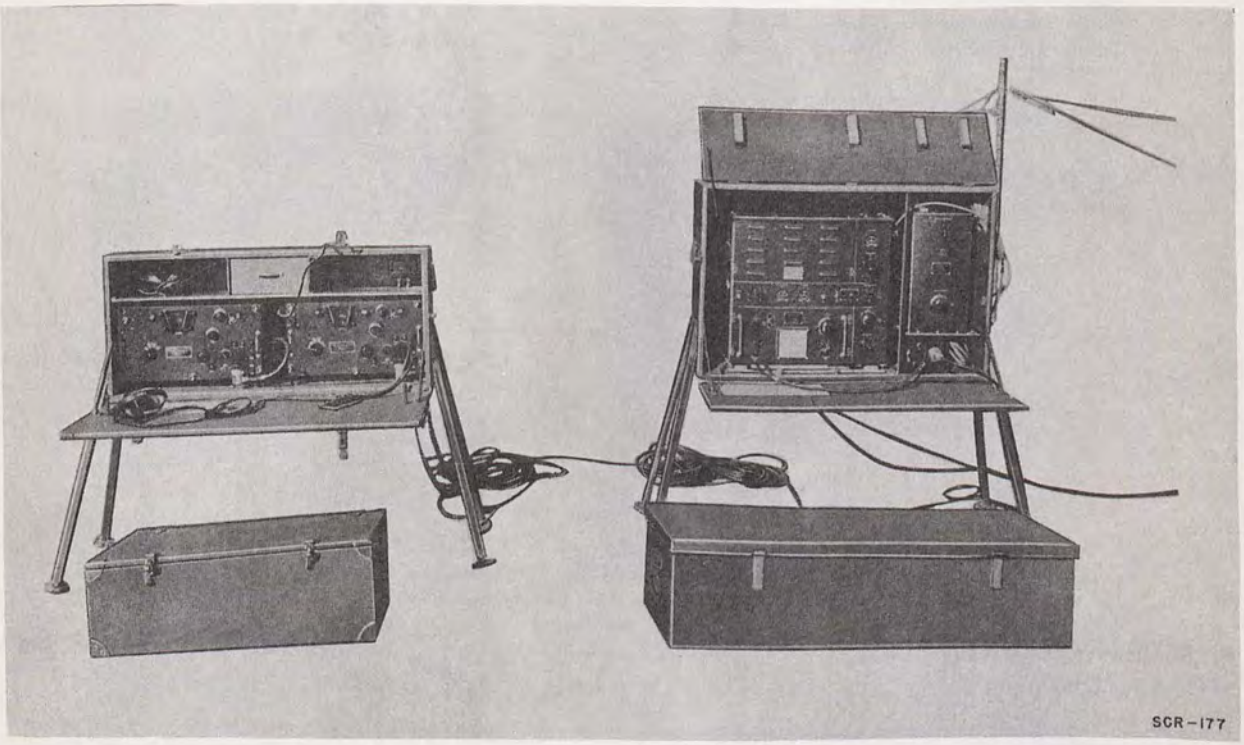
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Link Radio Corp.	New York, N. Y.		

RADIO SET AN/TRC-type

1 July 1958
Cognizant Serv: USA FSN: 5820-196-1737

SCR-177( )

	USA	USN	USAF
TYPE CLASS:	SCR-177-( ): Std SCR-177-H: L/Std	--	--
STOCK NO:	2S177( )	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-177-( ) is a transportable, am (voice and cw) radio station providing communication in the low- and medium-frequency range for ground-to-air, point-to-point, and similar applications at division and higher headquarters, and at air fields.

This equipment consists of a transmitter, related transmitter-tuning units, two radio receivers, and associated components. It is packed in carrying cases and can be installed under shelter or in the open, and has been operated in aircraft.

This set uses appropriate types of antenna systems and has provision for automatic antenna changeover in the transmitter.

It is powered by a gasoline-engine-driven field power unit plus a 6-v storage battery.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitting: 0.4 to 0.8 and 1.5 to 4.5
Receiving: 0.15 to 1.5 and 1.5 to 18.0
Type Modulation: Am
Type of Signal: Voice and cw
Power Output:
Voice: 25 w
Cw: 75 w
Power Requirements: 12-v dc from storage battery plus 350 ma at 1,000-v dc and 25 ma at 14.6-v dc from Power Unit PE-49

AN/TRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Power Unit PE–49	3H4549	22 x 35 x 22	260
1	Radio Receiver BC–312	2C4312	10-3/4 x 18 x 9	49.5
1	Radio Receiver BC–314	2C4314	10-3/4 x 18 x 9	47.5
1	Radio Transmitter BC–191	2C6191	21-3/4 x 23-1/8 x 9-3/8	55
1	Tuning Unit BC–306 (in Chest CH–27)	2C616	17-3/4 x 9-1/2 x 9-1/8	59

REFERENCE DATA AND LITERATURE:

TM 11–232

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	40	1,265

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

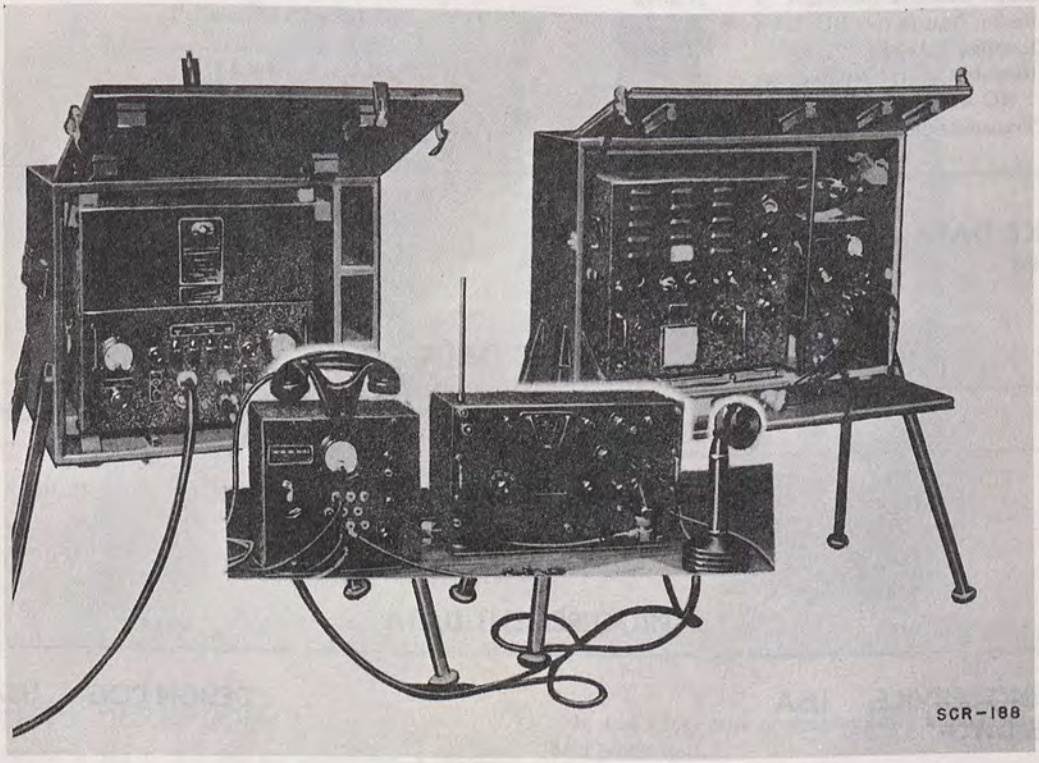
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/TRC-type

1 July 1958
Cognizant Serv: USA FSN: SCR-188: 5820-196-1738
SCR-188A: 5820-393-1212

SCR-188-( )

	USA	USN	USAF
TYPE CLASS:	SCR-188-( ): Std SCR-188: L/Std	--	L/Std
STOCK NO:	2S188, 2S188A	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-188-( ) is a transportable, field, am (voice and cw) transmitting and receiving equipment used for air-ground, or point-to-point communication in the low- and medium-frequency bands.

This equipment consists essentially of a transmitter, provided with tuning units for the selection of operating frequencies; a receiver a field power unit; a remote control; and related items.

It can be used as a complete self-contained field tactical radio station and can be remotely controlled at distances of up to 5 miles over a field telephone pair, and up to 7-1/2 miles over facilities of higher quality

A vehicular version of this equipment is Radio Set SCR-193-( ).

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitter: 1.5 to 12.5
Receiver: 1.5 to 18.0
Type Modulation: Am
Type of Signal: Voice, cw
Power Output:
Voice: 25 w
Cw: 75 w
Power Requirements: 115/230-v ac

AN/TRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Power Unit PE–75–( )	3H4575	36 x 9-1/2 x 26-1/2	290
1	Radio Receiver BC–342–( )	2C4342	10 x 9 x 18	61.5
1	Radio Transmitter BC–191–( )	2C6191.7	22-1/2 x 23-1/2 x 9-1/2	55
1	Rectifier RA–34	3H4674	----------	240
1	Remote Control Equipment RC–47	2S47	3-1/2 x 3-1/2 x 2-1/4	.42
6	Transmitting tuning unit	----------	7-5/8 x 16-3/4 x 8-3/4	72

REFERENCE DATA AND LITERATURE:

TM 11–233

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	100	2,018

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

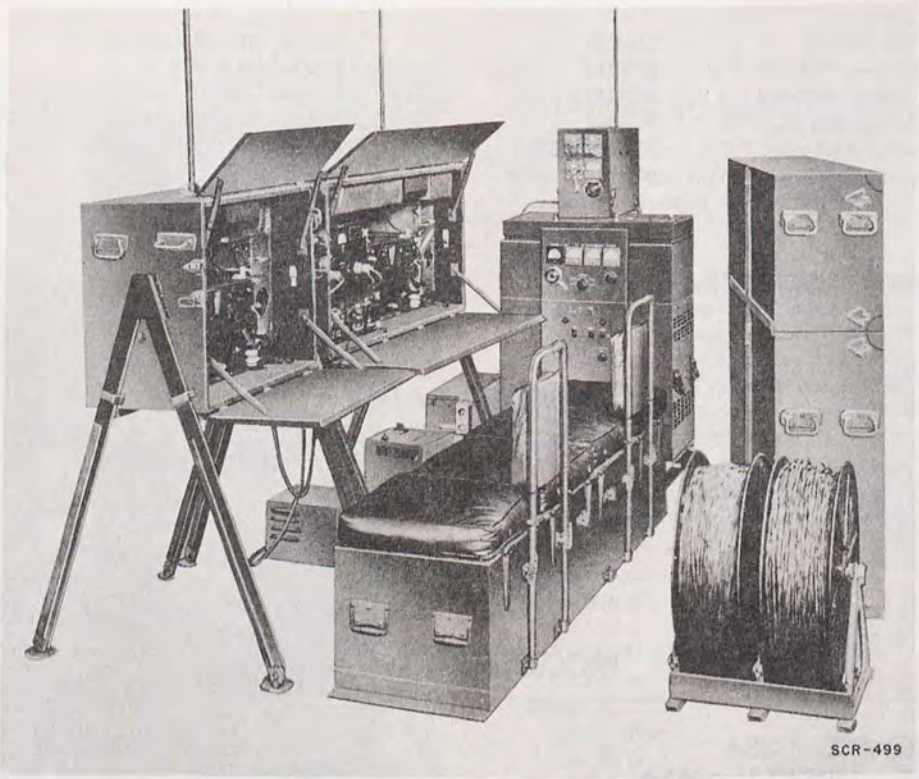
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/TRC-type

1 July 1958
Cognizant Serv: USA FSN: 5820-186-3550 SCR-499-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	Std
STOCK NO:	2S499B	--	--


SCR-499

FUNCTIONAL DESCRIPTION:

Radio Set SCR-499-( ) is the air transportable version of Radio Set SCR-399 and is a medium power, field radio station for AM (voice, tone, and cw) communication over intermediate and long distances in semipermanent or fixed station applications.

This equipment consists of radio receiving and transmitting components plus associated power and control accessories, and is designed for installation in a sheltered or semipermanent location.

By means of standard remote control equipment this radio set can be operated from a distance of about 2 miles over a field telephone pair.

It can be arranged to operate in the 1-mc range by the addition of Frequency Conversion Kit MC-509.

It uses a long-wire or doublet antenna and includes a 5-kw field power unit.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitting: 2 to 18 (in 3 bands)
Receiving: 1.5 to 18 (in 6 bands)
Type Modulation: AM
Type of Signal: Voice, tone, or cw
Power Output:
Voice: 300 w
Cw: 400 w
Power Requirements: Power Unit PE-95 and 12-v storage battery; or 2,500 w (minimum), 115-v 60-cycle ac commercial power

AN/TRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Power Unit PE–95	3H4595	75-1/2 x 28-1/2 x 38-1/2	1,545
1	Radio Receiver BC–312	2C4312	10 x 9-1/16 x 18-1/16	58
1	Radio Receiver BC–342	2C4342	10 x 9-1/16 x 18-1/16	61.5
1	Radio Transmitter BC–610	2C6500	32-5/8 x 21-3/8 x 39-7/8	452
1	Rectifier RA–63	3H4691–63E	13-1/2 x 9-1/2 x 7-1/2	29.25
1	Speech Amplifier BC–614	2C214	16 x 9-1/4 x 11	31

REFERENCE DATA AND LITERATURE:

TM 11–281

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
11	895	10,025

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–1683A

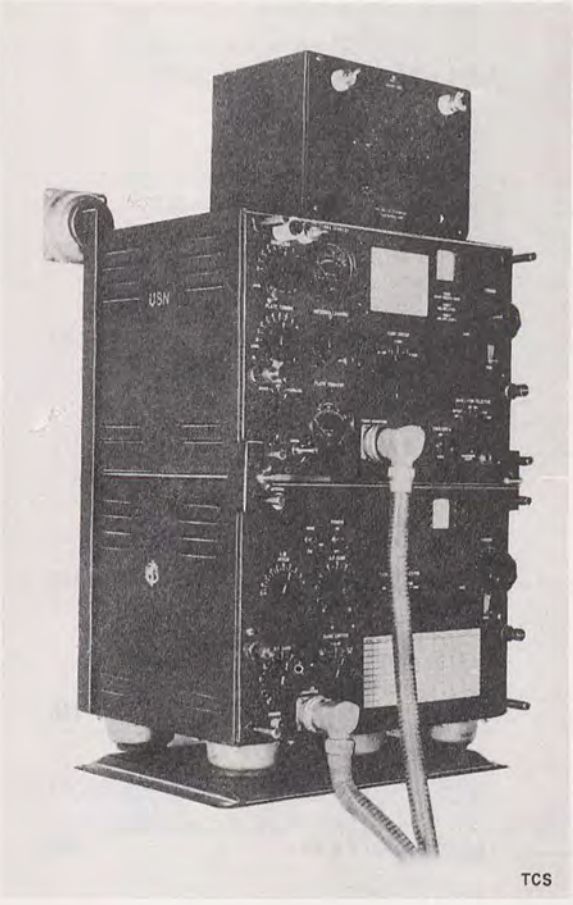
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafter Co.	Chicago, Ill.	3167–P–51–06	$7,511.72

RADIO TRANSMITTING AND RECEIVING EQUIPMENT AN/TRC-type

5 December 1958
Cognizant Serv: USN FSN: TCS, TCS–1 thru –15

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



TCS

FUNCTIONAL DESCRIPTION:

Radio Transceivers TCS, TCS–1 through –15 are semi-portable transmitting-receiving equipments that are designed for medium and high frequency telegraph and telephone operation. These equipments are used extensively on patrol and landing craft, reconnaissance vehicles, and similar purposes.

TECHNICAL CHARACTERISTICS:

For Transmitters 52245 and 52245–A:
Frequency Range: 1,500 to 12,000 kc
Frequency Response: ±3db (52245), ±5 db (52245–A) from 300 to 3000 cps
Frequency Stability:
Line Voltage: Changes of ±10% from normal will not exceed 0.01% variation in frequency
Humidity: Increase from normal to 95% humidity will cause frequency variation of 0.10% max
Frequency Control: Crystal or master oscillator
Audio Frequency Distortion: Less than 10% rms measured with 90% modulation at 400 cps
Residual Noise Level (On Carrier): 40 db min (52245), 46 db min (52245–A) below the 100% modulation level
Audio Inputs: 0.86 v required to modulate the carrier 90% at 400 cps
Type of Signal: Cw, voice
Power Output:
52245:
Voice: 20 w
Cw: 40 w
52245–A:
Voice: 10 w
Cw: 25 w
For Receivers 46159 and 46159–A:
Frequency Range: 1,500 to 12,000 kc
Distortion: Less than 5% with the gain control set for 1 w audio output
Audio Output Circuit: Designed to work into a 500 ohm load
Maximum Audio Output: 1.5 w measured at output jack with a signal 30% modulated at 400 cps being fed into the receiver at the antenna terminal
Sensitivity: 6 mw audio power with less than 15 μv input (on all bands).
Selectivity: 2 stages of if amplification
Type of Reception: Cw, mcw, voice
Antenna: 20-ft vertical whip or 20- to 75-ft single-wire
Power Supplies Available: Dynamotors—12 or 24 v dc; Motor Generator Sets—24, 32, 115 and 230 v dc—115, 60 cps, single phase ac; Rectifiers—115 or 230 v, 60 cps, single phase

AN/TRC-type RADIO TRANSMITTING AND RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Loading Coil NT–23270, –A		6 x 6-3/4 x 9-1/2	3.69
2	Carbon Microphones			
1	Dynamotor NT–21770 (12-v dc)		6-5/8 x 7-15/16 x 13-1/32	28.5
	or			
1	Dynamotor NT–21881, –A, –B (12-v dc)		7-1/4 x 7-5/8 x 12-3/4	27
	or			
1	Dynamotor NT–211035 (12-v dc)		7-1/4 x 7-5/8 x 12-3/4	27
	or			
1	Dynamotor NT–211330, –A, –B (12 or 24-v dc)		8-25/32 x 9-5/8 x 12-5/16	35
1	Filter Kit NT–10597		4-7/32 x 7-23/32 x 9-25/32	
1	Set of Interconnecting Cables			
1	Motor Generator Set NT–21774 (24-v dc)		11-1/2 x 17-1/4 x 23	115
	or			
1	Motor Generator Set NT–21826 (24-v dc)		11-1/2 x 17-1/2 x 23	115
	or			
1	Motor Generator Set NT–21775 (32-v dc)		11-1/2 x 17-1/2 x 23	115
	or			
1	Motor Generator Set NT–21776 (115-v dc)		11-1/2 x 17-1/2 x 23	115
	or			
1	Motor Generator Set NT–211100 (115-v dc)		11-1/2 x 17-1/2 x 23	115
	or			
1	Motor Generator Set NT–21827, –A (230-v dc)		11-1/2 x 17-1/2 x 23	115

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Motor Generator Set NT–21777 (115-v ac)		11-1/2 x 17-1/2 x 23	115
	or			
1	Motor Generator Set NT–21909 (115-v ac)		11-1/2 x 17-1/2 x 23	115
1	Noise Limiter Adapter Unit NT–50159		2-21/32 x 3 x 3-1/4	
1	Receivers NT–46159, –A		11-11/16 x 11-13/16 x 13-3/4	36.81
1	Rectifier NT–20218 (115-v ac)		10-5/16 x 16-1/4 x 16-1/4	91
	or			
1	Rectifier NT–20242 (230-v ac)		10-5/16 x 16-1/4 x 16-1/4	91
	or			
1	Rectifier NT–20309 (115 or 230-v ac)		10-1/8 x 16-1/4 x 17-1/4	93
1	Remote Control Unit NT–47205		6 x 6-3/4 x 9-1/2	3.69
1	Set of Spare Parts			
1	Telegraph Key Cord and Plug			
1	Transmitters NT–52245, –A		11-11/16 x 11-13/16 x 13-3/4	41.81

REFERENCE DATA AND LITERATURE:

Technical Manuals for Radio Telephone and Telegraph Transmitting and Receiving Equipment TCS, TCS–1 through TCS–15.

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/TRC-type RADIO TRANSMITTING AND RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

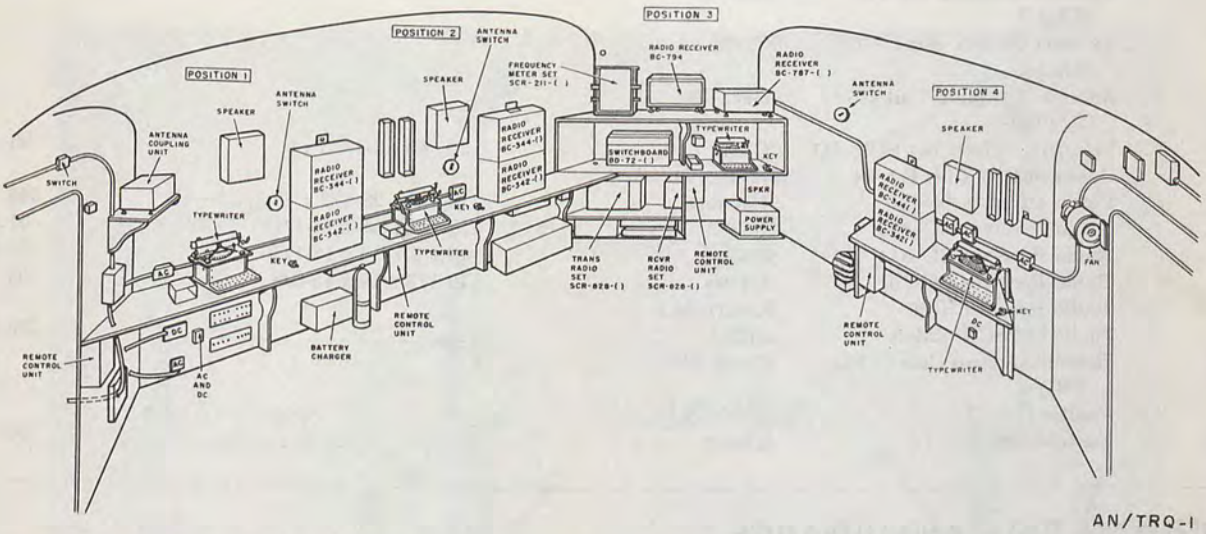
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
		N5SR–8595, N5SR–10539, NOS–84440, NXSR–LL–36727, NXSR–38307, NXSR–38314, NXSR–48390, NXSR–86279, NXSR–91960, NXSS–LL–8142, NXSS–16730, NXSS–18844, NXSS–22666, NXSS–29815, NXSS–33361	$200.00

RADIO CONTROL CENTRAL AN/TRQ-1

1 July 1958
Cognizant Serv: USA FSN: 5820-243-3288

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S5004-1	--	--



AN/TRQ-1

FUNCTIONAL DESCRIPTION:

Radio Control Central AN/TRQ-1 is a transportable control station used for monitoring, intercept, and mobile communication applications in the mf, hf, and vhf bands.

This equipment consists of radio components, telephone switching equipment, test items and accessories installed in a field-type shelter that can be transported on a 2-1/2-ton 6 x 6, cargo truck. It includes necessary types of antenna equipment.

This set has four operating positions. At all positions coverage of medium and high frequencies is maintained, and provision is made for wire communication with, and remote control of, radio transmitters located at distances up to 1 mile from the control central. Position 3, in addition, communicates with similar control centrals by means of fm radio and a 12-line switchboard.

The equipment derives its power from a trailer-drawn power unit and includes a battery charger.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Positions 1, 2, and 4: 0.15 to 18.0
Position 3: 1.25 to 143.0; 27.0 to 38.9 (fm)

Type Modulation:
Positions 1, 2, and 4: AM
Position 3: AM and FM

Type of Signal: Voice, tone, and cw

Power Output (Radio Transmitter BC-924): 30 to 35 w

Power Requirements:
Ac: 10 kw, 115 v, 60 cycle from Power Unit PE-95 (-G or -H)
Dc: 12-v storage battery; 10 Batteries BA-30; and 6 Batteries BA-2

AN/TRQ-1 RADIO CONTROL CENTRAL

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna Assembly AS-93/MRQ-2	2A264-93		
1	Antenna Control Box C-109/MRQ-2	2C1738		
1	Antenna Coupling Unit CU-23/TRQ-1	3C472-23		
1	Frequency Meter Set SCR-211	2C1411	9-1/4 x 13-1/16 x 9	38
1	Power Supply Unit RA-84	3H4496-84		
1	Power Unit PE-95-G	3H4595G	72-1/2 x 28-1/2 x 38-1/2	1,545
3	Radio Receiver BC-342	2C4342	10 x 9-1/16 x 18-1/16	61.5
3	Radio Receiver BC-344	6C4344	10 x 9-1/16 x 18-1/16	61.5
1	Radio Receiver BC-794	2C4794	10-1/2 x 19 x 15-3/8	55
1	Radio Receiver S-36	2C4537-36.1		
1	Radio Set SCR-828-A	2S828A	----------	373.5
4	Remote Control Unit C-103/TRQ-1	2C684-103		
1	Shelter HO-17	2Z1305-1		
1	Switchboard BD-72	4C9972	----------	72

REFERENCE DATA AND LITERATURE:

TM 11-2619

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	225	4,500

PROCUREMENT DATA

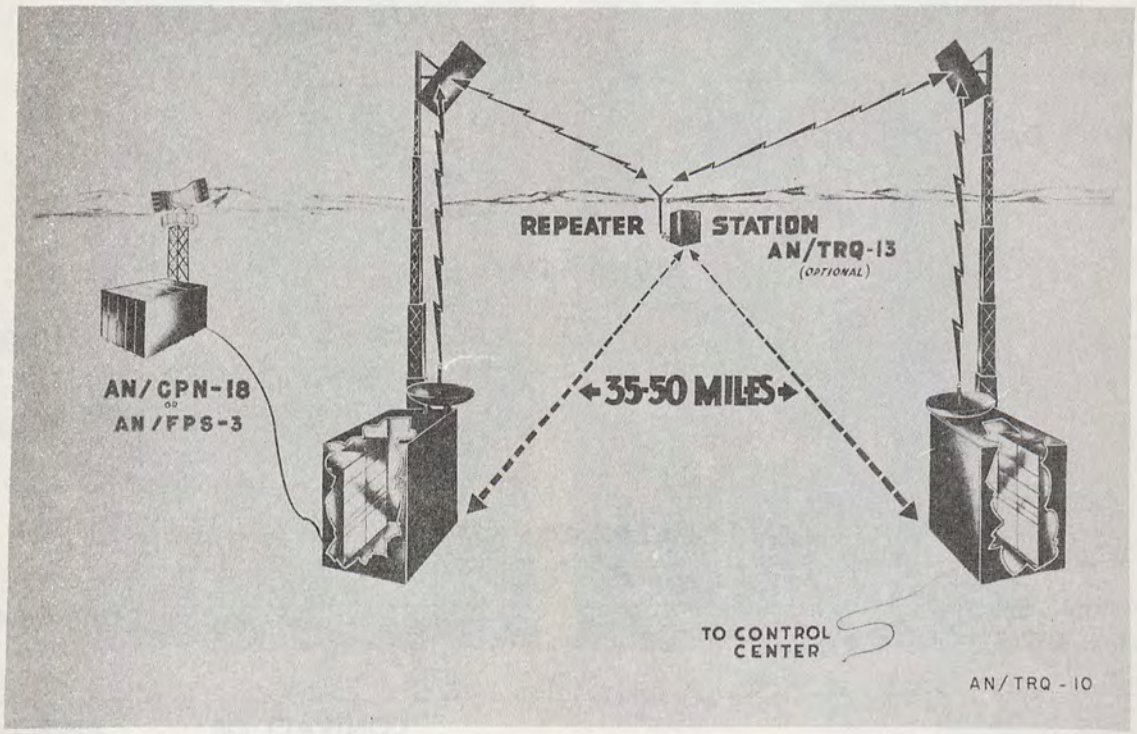
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: (USA) 271-3081

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
		2140-MPD-44	

RADAR DATA TRANSFER SYSTEM AN/TRQ-10

1 December 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Tent-Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radar Data Transfer System AN/TRQ–10 provides radio communication facilities for transmitting radar data from such surveillance units as Radar Sets AN/CPN–18, AN/CPS–5, and AN/FPS–3, and from Radio Set AN/TPS–1, and for receiving such data at a remote control center.

This equipment consists of: a radio transmitting set at the radar site to transmit radar search data; a radio receiving set at the control center to receive this data.

Approximately 2.5 kilowatts are required to power each function. Towers and reflectors may be added if required.

The range of the system may be increased by using one or more Radio Repeater Sets AN/TRQ–13.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 7,125 to 8,000
Type Modulation: FM
Type Emission and Reception: F9
Operational Range: Line of sight (approximately 35 to 50 miles)
Power Output: 100 mw (each of 4 channels)
Power Requirements: 5 kw, 115-v 60-cycle 1-phase ac

AN/TRQ-10 RADAR DATA TRANSFER SYSTEM

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Receiving Set, Radio AN/TRR–9	----------	80 x 80 x 100	1,800
1	Transmitting Set, Radio AN/TRT–4	----------	80 x 80 x 100	1,800

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	720 (net)	3,600 (net)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: RADC–2464

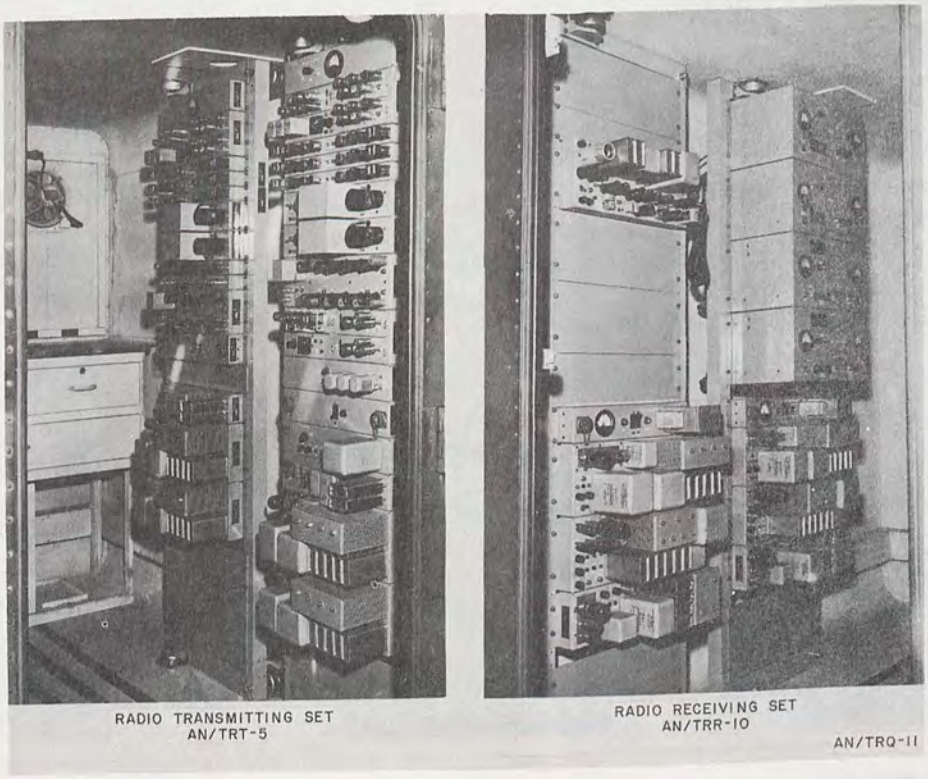
DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.		

RADAR DATA TRANSFER SYSTEM AN/TRQ-11

1 December 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Tent-Std
STOCK NO:	--	--	--



RADIO TRANSMITTING SET AN/TRT-5

RADIO RECEIVING SET AN/TRR-10

AN/TRQ-11

FUNCTIONAL DESCRIPTION:

Radar Data Transfer System AN/TRQ–11 provides facilities for transmitting precision radar data by radio from a ground controlled radar set, and receiving of such data at a remote control center.

This equipment consists essentially of: a radio transmitting set in Electrical Equipment Shelter S–118/TR at the radar site to transmit the radar data; a radio receiving set in another Electrical Equipment Shelter S–118/TR near the control center to receive this data.

Radar Repeater Set AN/TRQ–13( ) is used with this system when distance or terrain require such procedure.

Approximately 2.5 kilowatts are required to power each function. Towers and reflectors may be added if required.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 7,125 to 8,500
Type Modulation: FM
Band: Single
Type Emission and Reception: F9
Operational Range: Line of sight (approximately 35 to 50 miles)
Overall Gain: 140 db
Can Transmit: Trigger, video, and synchro data
Receiver Threshold Sensitivity: −86 dbm
Power Output: 100 mw (each of four channels)
Power Requirements: 115-v 60-cycle 1-phase ac

AN/TRQ-11 RADAR DATA TRANSFER SYSTEM

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AS–830/GRA–33			
1	Antenna Support AB–444/GR			
1	Receiving Set, Radio AN/TRR–10	----------	80 x 80 x 100	1,800
2	Shelter, Electrical Equipment S–118/GR			
1	Transmitting Set, Radio AN/TRT–5	----------	80 x 80 x 100	1,800
1	Wave-Guide Assembly CG–1396/U			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	720 (net)	3,600 (net)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

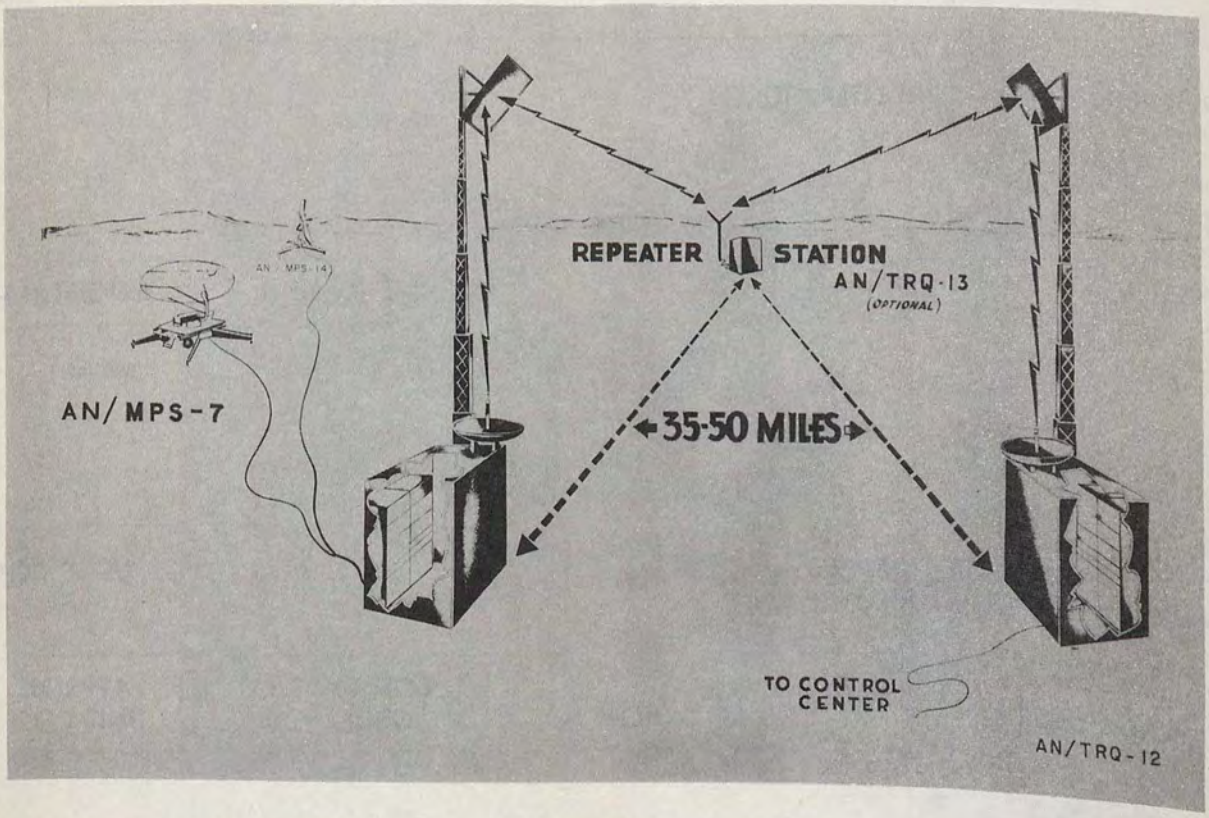
DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.		

RADAR DATA TRANSFER SYSTEM AN/TRQ-12

1 December 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Tent-Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radar Data Transfer System AN/TRQ–12 provides radio facilities for transmitting radar and height finder data, respectively, from such equipment as Radar Sets AN/FPS–3 and AN/FPS–6 to a control center.

This equipment consists essentially of: a radio transmitting set housed in Electrical Equipment Shelter S–118/TR at the radar site to transmit radar search and height finding data by radio; a radio receiving set in another Electrical Equipment Shelter S–118/TR near the control center to receive this data.

Approximately 3 kilowatts are required to power each function. Towers and reflectors normally are not supplied but may be added if required

TECHNICAL CHARACTERISTICS.

Frequency Range in Mc: 7,125 to 8,000
Type Modulation: FM
Type Emission and Reception: F9
Operational Range: Line of sight (approximately 35 to 50 miles)
Number of Channels: 6
Power Output: 100 mw (each of six channels)
Power Requirements: 6 kw, 115-v 60-cycle 1-phase ac

AN/TRQ-12 RADAR DATA TRANSFER SYSTEM

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Receiving set, radio	----------	80 x 80 x 100	1,800
1	Transmitting set, radio	----------	80 x 80 x 100	1,800

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	720 (net)	3,600 (net)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: RADC–1568

DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO REPEATER SET AN/TRQ-13

1 December 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Tent-Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Repeater Set AN/TRQ–13 provides facilities for increasing the range of Radar Data Transfer Systems AN/TRQ–10 and AN/TRQ–11 so that radar data may be fed to a control center located as far as 500 miles from the radar site. The total distance of such a system depends on the number of radio repeater sets used.

This equipment is employed to overcome distance and terrain obstacles.

As many as 15 repeater sets may be applied to extend the range to a maximum of about 500 miles.

Towers and reflectors normally are not supplied but may be added if required.

TECHNICAL CHARACTERISTICS:

Frequency Range Mc: 7,125 to 8,000
Type Modulation: FM
Type Emission and Reception; F9
Operational Range: Line of sight
Number of Channels: 8
Power Output: 1 mw (each of eight channels)
Power Requirements: 2.5 kw, 115-v 60-cycle 1-phase ac

AN/TRQ-13 RADIO REPEATER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna Group AN/GRA-29	----------	----------	250
1	Radio Repeater Group OA-1111/TRQ-13	----------	75 x 22 x 15	300
1	Receiver Group OA-997/TRR-9	----------	75 x 22 x 15	300
1	Shelter, Electrical Equipment S-118/TR	----------	80 x 80 x 100	1,000
1	Transmitter Group OA-998/TRT-4	----------	75 x 22 x 15	300

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	360 (net)	2,000 (net)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: RADC-1568

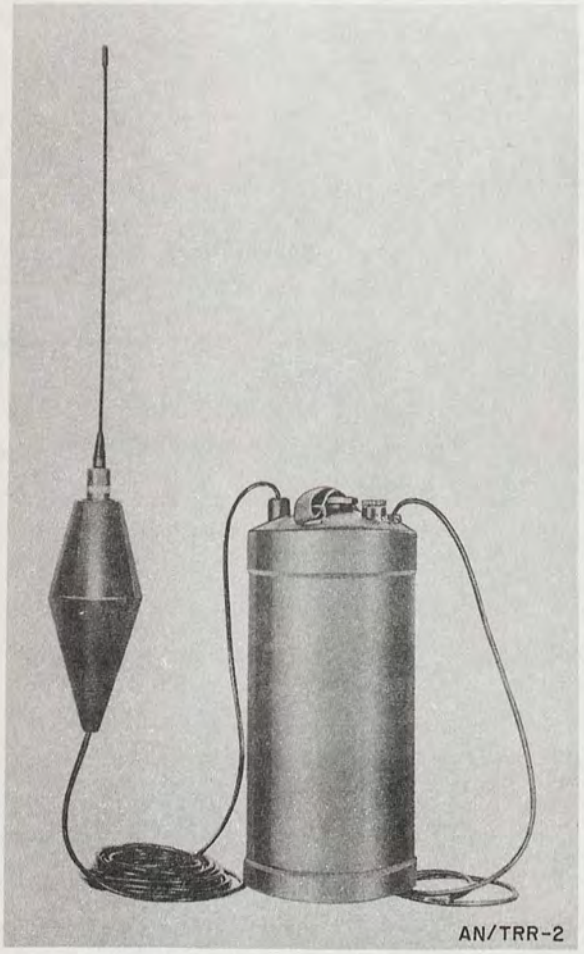
DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/TRR-2

1 July 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	--	--	--



AN/TRR-2

FUNCTIONAL DESCRIPTION:

Radio Set AN/TRR–2 is a radio receiver used in conjunction with Radio Set AN/TRT–1 to comprise a remote detonating system for land and water mines.

This receiving set is connected to the detonating device and is left in operation. Selective detonating of any one, or group, of mines is available in this system by selection of coded signal combinations of radio frequency, audio tone signals, and pulse code groups. A total of 21,600 different code combinations is available.

This equipment is installed in a waterproof container, and the antenna can be mounted on a float and connected to the receiver through coaxial cable for underwater operation.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 28 to 40 (25 channels 0.5 mc apart; presently available for operation on only 32.0, 31.5, 31.0, 30.5, 30.0, and 29.5 mc)
Type Modulation: AM
Type of Signal: Coded pulses of definite rf and audio frequency
Power Requirements: 570 mw from eight Batteries BA–2, one Battery BA–34, and two Batteries BA–35

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna and float	----------	38	4
1	Radio receiver	----------	20.5 high x 9 dia	51

AN/TRR-2 RADIO SET

REFERENCE DATA AND LITERATURE:

TM 11–269

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	7.8	180

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 471–2118

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Submarine Signal Co.	Boston, Mass.	3102–P–45–08	

AN/TRR-2 RADIO SET

REFERENCE DATA AND LITERATURE:

TM 11-269

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	7.8	180

PROCUREMENT DATA

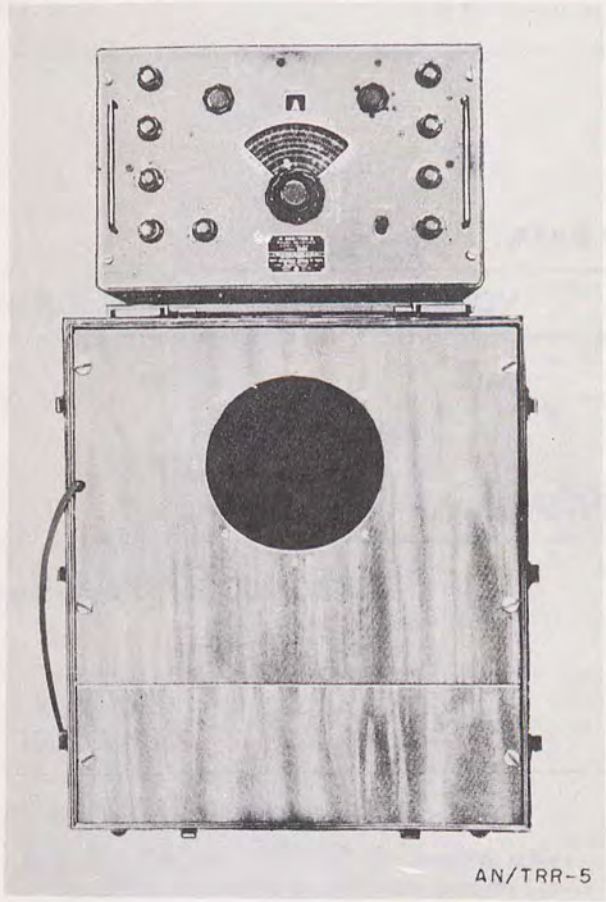
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: (USA) 471-2118

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Submarine Signal Co.	Boston, Mass.	3102-P-45-08	

RADIO RECEIVING SET AN/TRR-5

1 December 1958
Cognizant Serv: USN FSN: 5820-665-3411

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-120203-100	--



AN/TRR-5

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/TRR-5 is a general purpose communication and entertainment unit for use at shore stations under adverse weather conditions. It has tone, selectivity, continuous-wave oscillator, automatic gain, and standby controls.

This equipment is of rugged construction and can withstand hard use.

TECHNICAL CHARACTERISTICS:

Frequency Range: 540 kc to 30,000 kc
Number of Bands: 5
Type Modulation: AM
Type Reception: A1, A2, A3 (cw, mcw, voice)
Audio Output: 5 w into 6-ohm loudspeaker or 600-ohm line terminals
Scanning Channel Output: 100 uv with respect to 70-ohm load at scanning output jack
Intermediate Frequency: 455 kc
Over-all Fidelity: Flat within ±3 db between 100 and 5,000 cps, 1,000 cps reference
Sensitivity:
A1: 10 uv
A2, A3: 15 uv
Signal/Noise Ratio:
A1: 20 db
A2, A3: 10 db
Beat Frequency: 1,000 cps
Calibration Accuracy: ±1%
Image Rejection: 25 db to 80 db
Power Requirements: 112 w, 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Adaptor E-301	----------	3/4 x 1-7/32 x 1-3/16	0.076
1	Case CY-851/TRR-5	----------	27-1/4 x 25 x 22-1/2	65.42
1	Clamp H-301	----------	1-5/64 x 15/16 dia	.029
1	Connector J-301	----------	2-15/16 x 13/16 dia	.207
1	Connector J-302	----------	1-21/32 x 11/16 dia	.05
1	Connector J-303	----------	1-7/16 x 1-1/8 dia	.056
1	Dynamic Loudspeaker	----------	4-11/16 x 10-3/16 dia	3.1
1 set	Maintenance parts	----------	6-3/4 x 3-1/2 x 15-1/4	2.2

AN/TRR-5 RADIO RECEIVING SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Cable Assembly W–102	----------	120 lg	1.39
1	Radio Receiver R–366/TRR–5	----------	14 x 19-3/4 x 19-3/8	83
1	Wire, field	----------	72 lg	.734

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91454

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	11.8	248

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

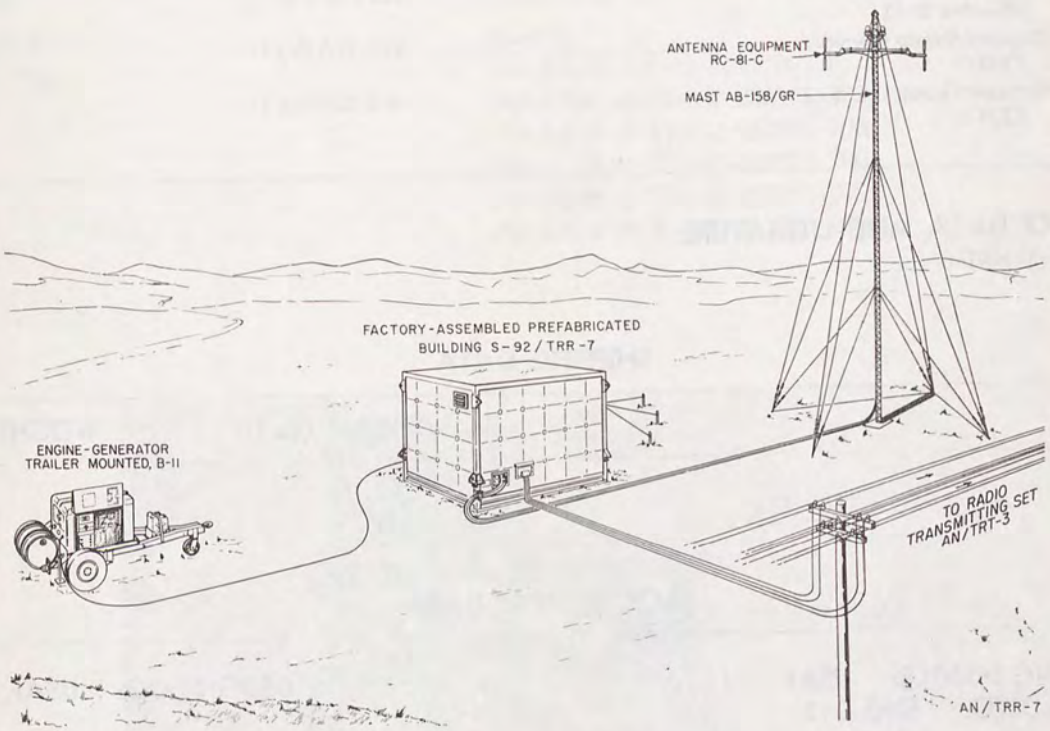
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACTOR ORDER NO.	APPROX UNIT COST
Espey Manufacturing Co., Inc.	New York, N. Y.	NObsr–43229, 15 March 1949	

RADIO RECEIVING SET AN/TRR-7

1 December 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/TRR–7 is a complete radio receiving station used for air-to-ground communication. It may also be employed to provide two-way ground-to-air communication when used with Radio Transmitting Set AN/TRT–3, which is a complete mobile radio transmitting station operable through remote control from the radio receiving site.

This equipment includes two radio receivers housed in a prefabricated building.

A trailer-mounted engine generator is provided to furnish the necessary power when a suitable commercial power source is not available.

The set is intended to replace Radio Set SCR–574–A.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 100 to 156
Type Modulation: AM
Type Reception: A1, A3 (cw, voice)
Power Output: 1.2 w
Power Requirements: 6.3 v, 3.5 amp ac; 115-v 1-phase ac (for lighting and ventilation blower motors); 60 ma dc at 210 v

AN/TRR-7 RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna Equipment RC–81–C			6.75
1	Building, Prefabricated, Factory-Assembled S–92/TRR–7		140-3/4 x 84 x 77	3,300
1	Engine-Generator Trailer Mounted B–11		125 x 63 x 65	2,450
1	Receiver Group OA–582/TRR–7		19 x 12-7/8 x 11	394
1	Receiver Group OA–583/TRR–7		19 x 12-7/8 x 11	268

REFERENCE DATA AND LITERATURE:

TO 31R2–2TRR7–( )

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: ENG–317

DESIGN COG: USAF, RCUE

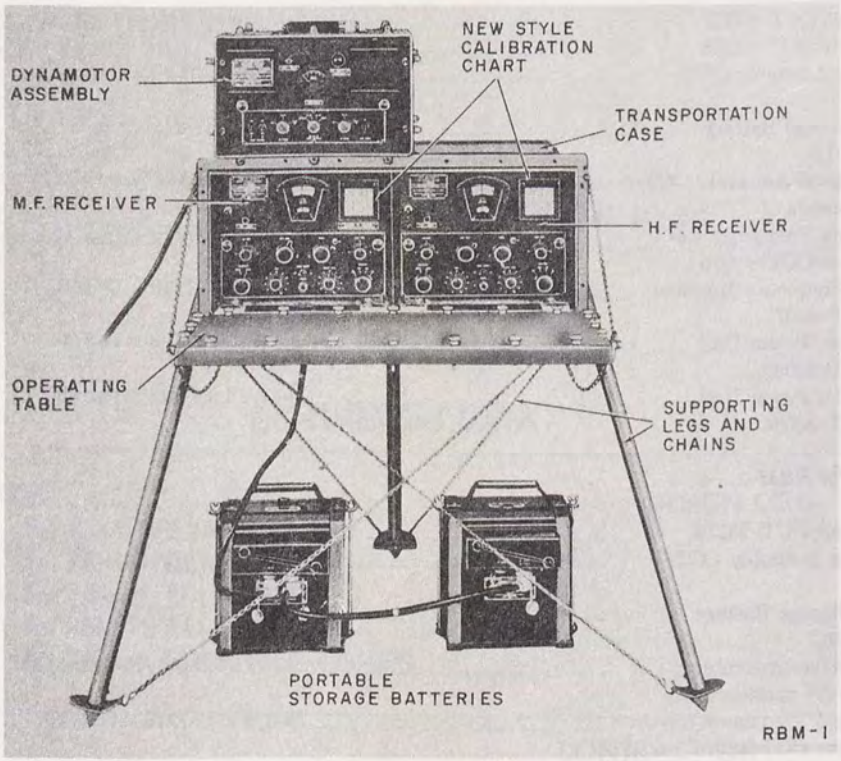
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

PORTABLE RADIO RECEIVING EQUIPMENT **AN/TRR-type**

5 December 1958
Cognizant Serv: USN **FSN:** For RBM: 5820-669-9354
For RBM-1: 5820-665-2119
For RBM-2: 5820-665-2246
For RBM-3: 5820-665-3829
For RBM-4: 5820-665-3712
For RBM-5: 5820-665-3758

RBM, RMB-1, -2, -3, -4, -5

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	*For RBM:* F16-Q-252270-200	
	For RBM-1: F16-Q-252275-200	
	For RBM-2: F16-Q-252301-200	
	For RBM-3: F16-Q-252302-200	
	For RBM-4: F16-Q-252303-200	
	For RBM-5: F16-Q-252320-200	



AN/TRR-type PORTABLE RADIO RECEIVING EQUIPMENT

FUNCTIONAL DESCRIPTION:

Portable Radio Receiving Equipments RBM, RBM–1, –2, –3, –4, and –5 are semiportable receivers intended for field service and for use with Portable Radio Transmitting Equipment TBW-series, or for use at Naval shore stations or on shipboard. They consist of two receivers which may be operated separately or together, permitting simultaneous reception in the medium-frequency and high-frequency range.

The RBM, RBM–1 through –5 are components of the Semi Portable Aircraft Radio Advance Base Station Equipment MM-series.

The following equipment is used with, but is not supplied with, Portable Radio Receiving Equipments RBM, RBM–1, –2, –3, –4, and –5: two Headsets NT–49015; frequency measuring equipment; equipment for charging storage batteries or suitable line power supply; and antenna installation. In addition, suitable transmitting equipment must be supplied for transmitter-receiver operation.

TECHNICAL CHARACTERISTICS:

Frequency Range: 200 to 2,000 kc, 2,000 to 20,000 kc

Type Reception: A1, A2, A3

Output Impedance: 600 ohms

Sesntivity: 15 uv at 16 mw output

Power Requirements:

Field Operation: 12-v dc storage battery

Base Operation: 115-v, 25- to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBM, RBM–2, RBM–3			
1	Control Unit CCT–23277		8-13/16 x 7 x 8	8
1	Control Unit CCT–23278		8-13/16 x 7 x 8	8
1	Dynamotor Assembly CCT–21387		10-7/16 x 16 x 12	30
1	Portable Storage Battery CES–19017		12-1/2 x 11-3/4 x 8-3/4	41
1	Radio Receiver Assembly CCT–46078 consists of:		12-7/16 x 29-1/16 x 19-7/16	95
1	Medium Frequency Receiver CCT–46076		9-3/4 x 12-7/16 x 17-1/16	31
1	High Frequency Receiver CCT–46077		9-3/4 x 12-7/16 x 17-1/16	31
1	Rectifier Power Unit CCT–20085		9-11/16 x 7-7/8 x 14-3/16	25
1	Rectifier Power Unit CCT–20086		9-11/16 x 7-7/8 x 14-3/16	31
	For RBM–1, –4			
1	Control Unit CCT–23278		8-13/16 x 7 x 8	8
1	Dynamotor Assembly CCT–21387		10-7/16 x 16 x 12	30
1	Portable Storage Battery CES–19017		12-1/2 x 11-3/4 x 8-3/4	41
1	Radio Receiver Assembly CCT–46078 consists of:		12-7/16 x 29-1/16 x 19-7/16	95
1	Medium Frequency Receiver CCT–46076		9-3/4 x 12-7/16 x 17-1/16	31
1	High Frequency Receiver CCT–46077		9-3/4 x 12-7/16 x 17-1/16	31
1	Rectifier Power Unit CCT–20086		9-11/16 x 7-7/8 x 14-3/16	31

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBM–5			
1	Control Unit CAY–23278A		8-13/16 x 7 x 8	11
1	Dynamotor Assembly CAY 21387A		10-7/16 x 16 x 12	30
1	Portable Storage Battery CES–19017		12-1/2 x 11-3/4 x 8-3/4	41
1	Radio Receiver Assembly CAY–46078A consists of:		12-7/16 x 29-1/16 x 19-5/16	95
1	Medium Frequency Receiver CAY–46076A		9-3/4 x 12-7/16 x 17-7/16	30
1	High Frequency Receiver CAY–46077A		9-3/4 x 12-7/16 x 17-1/16	30
1	Rectifier Power Unit CAY–20086A		9-11/16 x 7-7/8 x 14-3/16	31

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,385

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	32.55	590

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

SPEC &/or DWG: For RBM: RE13A610B
For RBM–1: RE13A610B
For RBM–2: RE13A610
For RBM–3: RE13A610
For RBM–4: EN28/1500–43SHIPS

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Stromberg-Carlson Co.	Rochester, N. Y.	*For RBM* NOs–65690, 16 March 1939	$1,200.00 with spares

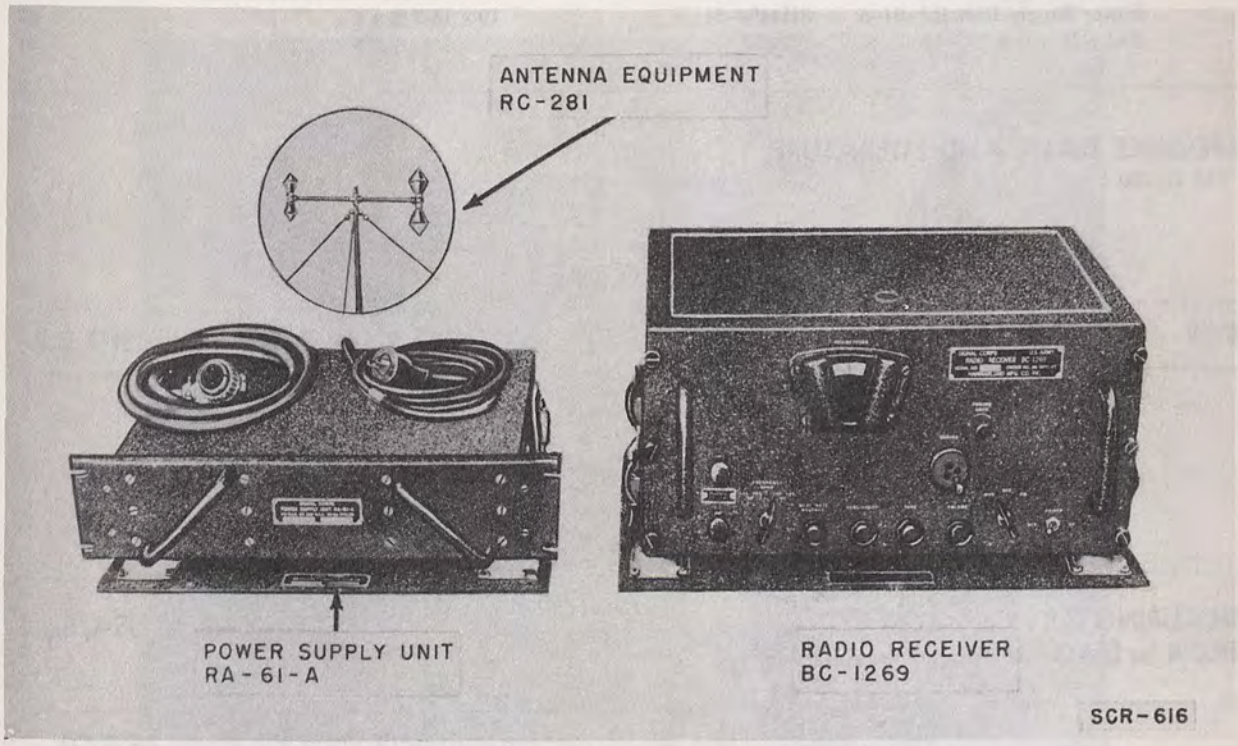
AN/TRR-type PORTABLE RADIO RECEIVING EQUIPMENT

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	*For RBM–1* NOs–72056, 26 February 1940 *For RBM–2* NOs–95095, 8 December 1941 *For RBM–4* NXs–19329, 21 December 1942 *For RBM–5* NXsr–38081, 28 September 1943 NXsr–51520, 13 March 1944	

RADIO SET AN/TRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-164-8148 SCR-616

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S616	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR–616 is a compact, transportable, AM and FM (voice, tone, and cw) radio receiving equipment for intercept, monitoring, or communication applications in the vhf and uhf ranges.

This equipment consists of a shock-mounted radio receiver and associated power-supply unit and includes a rotatable antenna array consisting of two center-fed biconical elements and accessories.

It can be operated from 110-volt or 230-volt ac power or from a 12-volt storage battery by substituting Power Supply Unit PE–223 for Power Supply Unit RA–61–A.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 145 to 600 in 2 bands
Type Modulation: AM, FM
Type of Signal: Voice, tone, cw
Power Requirements: 0.85 amp, 115-v 50/60-cycle ac; or 0.45 amp, 230-v 50/60-cycle ac

AN/TRR-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna Equipment RC–281	2A289–281	----------	60
1	Power Supply Unit RA–61–A	3H4496–61	19 x 13-7/8 x 4	67
1	Radio Receiver BC–1269	2Z5927	19 x 16 x 8-3/4	44

REFERENCE DATA AND LITERATURE:

TM 11–260

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	16.05	250

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–002250A

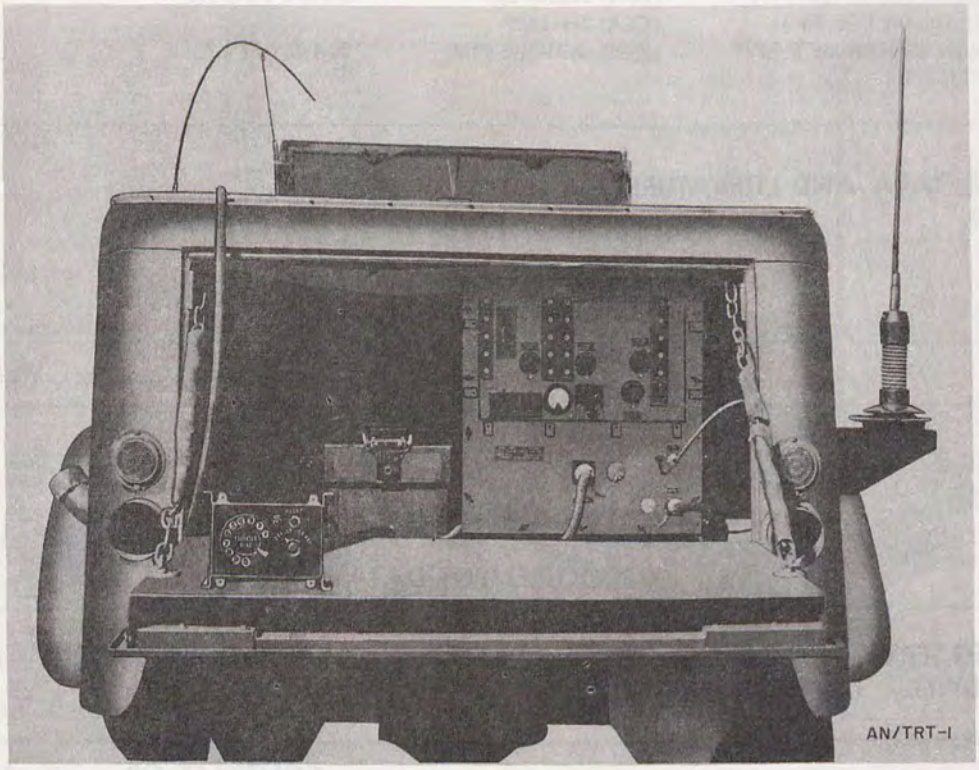
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO	APPROX UNIT COST
Dubrow Development Co.	Burlington, N. J.	21762–P–56–55	$1,625.00

RADIO SET AN/TRT-1

1 July 1958
Cognizant Serv: USA FSN: 5820-164-7144

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S5012-1	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/TRT-1 is a radio transmitter used in conjunction with Radio Set AN/TRR-2 to comprise a remote detonating system for land and water mines.

Selective detonation is available by adjustment of transmitter RF, audio frequency tone, and coded pulses to correspond with the preset code in the desired Radio Set AN/TRR-2. A total of 21,600 different code combinations are presently available.

This equipment can be installed in a vehicle, an aircraft or placed on the ground. An external source of 12- or 24-v dc power is required.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 28 to 40 (25 channels 0.5 mc apart; presently available for operation on only 32.0, 31.5, 31.0, 30.5, 30.0, and 29.5 mc)

Type Modulation: AM

Type of Signal: Coded pulses of definite RF and audio frequency

Power Output: 40 to 50 w

Distance Range: 8 miles over land, 12 to 20 miles over water, 40 miles from aircraft at 5,000 ft

Power Requirements: 456 w, 12/24-v storage battery

AN/TRT-1 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly AS–149/ TRT–1	(USA) 2A264–149	----------	20
1	Control Box C–152/TRT–1	(USA) 2C666–152	5-1/2 x 7 x 5-1/2	4
2	Dynamotor DM–35–D	(USA) 3H–1635		
1	Radio Transmitter T–87/ TRT–1	(FSN) 5820–164–7150	24-1/2 x 14 x 23	99

REFERENCE DATA AND LITERATURE:

TM 11–269

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	17.1	400

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 471–2118

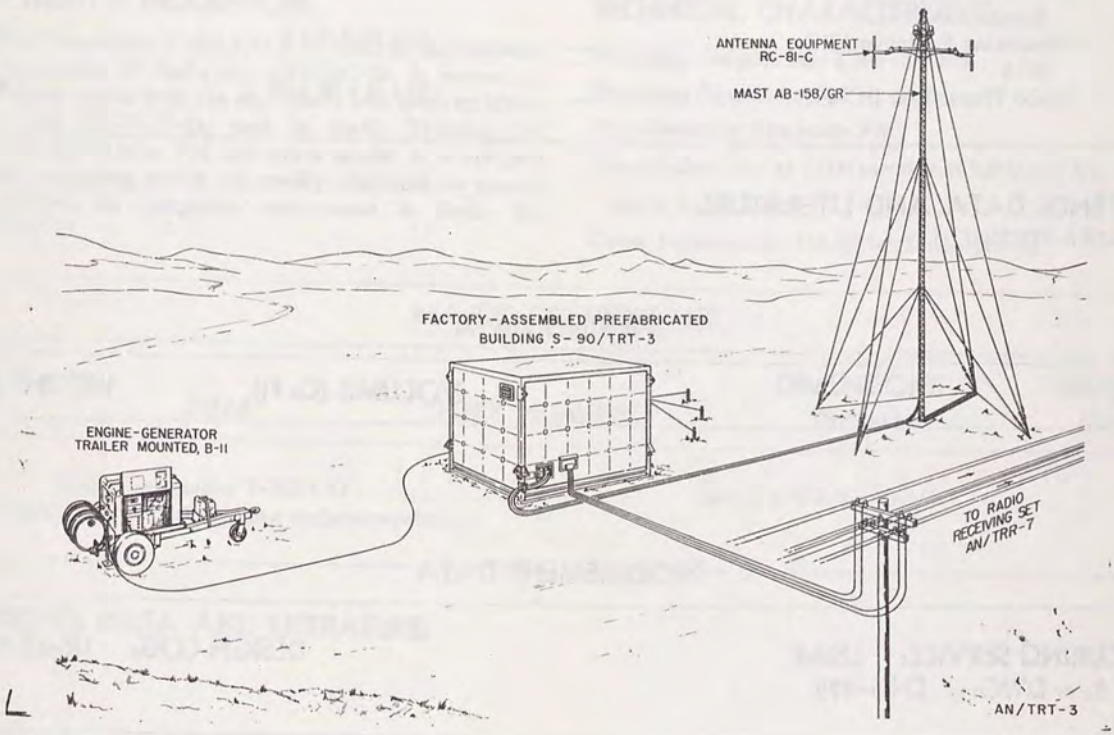
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Submarine Signal Co.	Boston, Mass.	3102–P–45–08	

RADIO TRANSMITTING SET AN/TRT-3

1 December 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/TRT–3 is a complete mobile radio transmitting station equipped for local or remote radiotelephone and radiotelegraph operation in ground-to-air communication.

The set has two transmitters that can be operated simultaneously on any two desired channels. Operated in conjunction with Radio Receiving Set AN/TRR–7, two-way communication with aircraft or remote radiotelephone and radiotelegraph operation is possible.

This equipment consists essentially of two transmitters housed in a prefabricated building. The building is equipped with alternating current power. Monitoring equipment provides facilities for local and remote operation of the transmitters, and also makes possible two-way telephone communication with as many as five mobile radio stations.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 100 to 156
Type Modulation: AM
Type Emission: A2, A3 (tone, voice)
Power Output: 50 w
Power Requirements: 4.5 kw, 115- or 230-v, 50- to 60-cycle, 1-phase ac

AN/TRT-3 RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Antenna Equipment RC–81–C			6.75
1	Building, Prefabricated, Factory-Assembled S–90/TRT–3		140-3/4 x 84 x 77-3/4	3,300
1	Engine-Generator, Trailer Mounted B–11		125 x 63 x 65	2,450
1	Monitoring Equipment RC–80–A		72 x 20-1/2 x 3	163
2	Radio Transmitter BC–640–D		21-1/4 x 20 x 72	601

REFERENCE DATA AND LITERATURE:
TO 31R2–2TRT3–( )

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG: ENG–322
DESIGN COG: USAF, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TRANSMITTER AN/TRT-type

20 November 1958
Cognizant Serv: USA FSN: 5820-503-3422 T-303A/G

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Used by
STOCK NO:	--	--	--

(See Illustration AN/TRC-29, p. 1495)

FUNCTIONAL DESCRIPTION:

Radio Transmitter T-303A/G is designed as the transmitting component of Radio Set AN/TRC-29. It converts a video signal output from the multiplexer unit (such as Multiplexer Set AN/TCC-13, used in Radio Terminal Set AN/TRC-38) into an FM microwave carrier. It is designed for rack mounting, and is not readily adaptable for general use without its companion components in Radio Set AN/TRC-29.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1,700 to 2,400

Frequency Control: Crystal

Type Emission: Composite FM

Power Output: 8 w at 1,700 mc; 6 w at 2,000 mc; 5 w at 2,200 mc; 4 w at 2,400 mc

Power Requirements: 115/230-v 50-60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter T-303A/G	----------	19-3/8 x 21-5/8 x 29-3/4	

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-689

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

(Unit is shipped as part of Radio Set AN/TRC-29.)

AN/TRT-type RADIO TRANSMITTER

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

(See Radio Set AN/TRC-29.)

ORDER WIRE TRANSMITTER AN/TRT-type

20 November 1958
Cognizant Serv: USA FSN: T-389A/TRC-29

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Used by
STOCK NO:	--	--	--

(See Illustration AN/TRC-29, p. 1495)

FUNCTIONAL DESCRIPTION:

Order Wire Transmitter T-389A/TRC-29 is the transmitting component of the separate order-wire facilities incorporated into Radio Set AN/TRC-29. This equipment provides low-quality voice facilities for transmission within the system of engineering and operational orders and information from one fixed installation to another fixed installation using certain microwave equipment.

It is designed for installation in the cabinet of the transmitting section of AN/TRC-29, and is not readily adaptable for general use without its companion components in Radio Set AN/TRC-29.

TECHNICAL CHARACTERISTICS:

Transmitting Frequency Range in Mc: 5.5 to 6.5
Order-Wire Frequency Range: 300 to 3,450 cps
Keyed Carrier Signaling: 400 mc/500 ohms impedance power output
Power Requirements: 115-v 50-60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Order Wire Transmitter T-389A/TRC-29	----------	7 x 19-3/8 x 21-5/8	

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-689

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

(Unit is shipped as part of Radio Set AN/TRC-29.)

AN/TRT-type ORDER WIRE TRANSMITTER

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

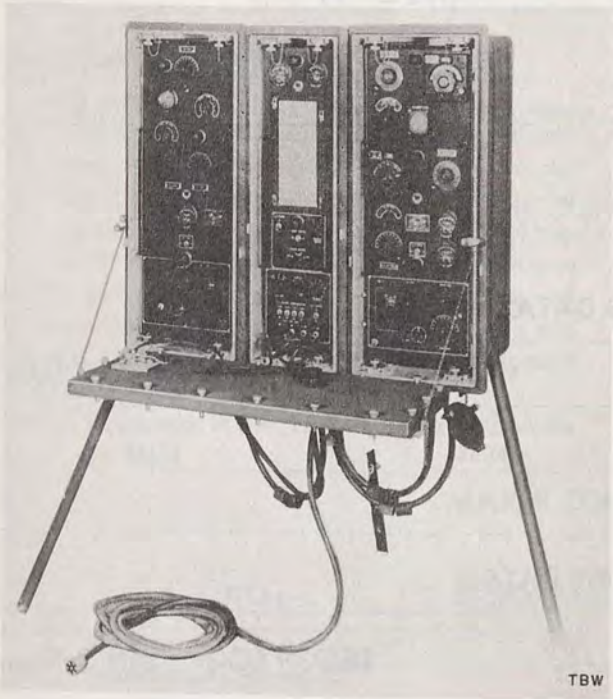
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

(See Radio Set AN/TRC–29.)

PORTABLE RADIO TRANSMITTING EQUIPMENT AN/TRT-type

4 December 1958
Cognizant Serv: USN FSN: TBW

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F–16–Q–316175–200	--



TBW

FUNCTIONAL DESCRIPTION:

Portable Radio Transmitting Equipment TBW, when used in conjunction with suitable receiving equipment, provides a complete advanced base radio communications station. The transmitting equipment provides cw, mcw, and voice transmission in two frequency ranges. The equipment designed so that the entire system including antenna and counterpoise, may be erected in less than one hour by a crew of six men. The transmitter is operated from the front panel position of the rectifier unit.

All equipments in the TBW series are functionally identical but differ electrically, principally in power source requirements.

The TBW, when used in conjunction with Portable Radio Receiving Equipment RBM, forms Semiportable Transmitting and Receiving Equipment MM.

TECHNICAL CHARACTERISTICS:

Frequency Range: 350 to 1,000 kc; 3,000 to 18,100 kc
Frequency Control: Master oscillator
Type of Signal: Cw, mcw, voice
Nominal Power Output:
Cw and mcw: 100 w
Voice: 25 w
Power Requirements: 115/230-v 25/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna and Counterpoise:			
	Bag 1	----------	60 x 12 dia	45
	Bag 2	----------	60 x 12 dia	45
	Gasoline Engine Generator CDO–73004	----------	17-3/8 x 21-1/4 x 26-1/4	168
1	HF Transmitter Unit CAY–52120	----------	33-1/4 x 13-7/16 x 17-1/4	86.5
1	MF Transmitter Unit CAY–52119	----------	33-1/4 x 13-7/16 x 17-1/4	56.5
1	Motor Generator and Controller CDO–21648 (115/230-v, 60-cycle ac)	----------	14-1/2 x 32-1/2 x 20-7/8	296

AN/TRT-type PORTABLE RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Motor Generator and Controller CDO–21652 (115/230-v, 25-cycle ac)	----------	14-1/2 x 32-1/2 x 20-7/8	296
1	Rectifier-modulator	----------	33-1/4 x 10-7/8 x 17-1/4	71

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,246

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
8	86.11	1,445

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: RE13A625A
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore Md.	NOs–65690, 16 Mar 1939	$3,595.00 including equipment spares

PORTABLE RADIO TRANSMITTING EQUIPMENT AN/TRT-type

4 December 1958
Cognizant Serv: USN FSN:

TBW–1

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(See Illustration TBW, p. 1561)

FUNCTIONAL DESCRIPTION:

Portable Radio Transmitting Equipment TBW–1, when used in conjunction with suitable receiving equipment provides a complete advanced base radio communications station. The transmitting equipment provides for cw, mcw or voice transmission in two frequency ranges: 350 to 1,000 kilocycles and 3,000 to 18,100 kilocycles. The equipment is so designed that the entire system, including antenna and counterpoise, may be erected in less than one hour by a crew of six men. The transmitter is operated from the front panel position of the rectifier unit.

All the equipments in the TBW series are functionally identical but differ electrically, principally in the power source requirements.

The TBW–1, when used in conjunction with Portable Radio Receiving Equipment RBM–1 forms Semiportable Transmitting and Receiving Equipment MM–1.

TECHNICAL CHARACTERISTICS:

Frequency Range: 350 to 1,000 kc; 3,000 to 18,100 kc
Frequency Control: Master oscillator
Type of Signal: Cw, mcw, voice
Nominal Power Output:
Cw and Mcw: 100 w
Voice: 25 w
Power Requirements: 115/230-v 25/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna and Counterpoise Bag 1	----------	60 x 12 dia	45
	Bag 1	----------	60 x 12 dia	45
	Gasoline Engine Generator CDO–73004	----------	17-3/8 x 21-1/4 x 26-1/4	168
1	HF Transmitter Unit CAY–52120	----------	33-1/4 x 13-7/16 x 17-1/4	86.5
1	MF Transmitter Unit CAY–52119	----------	33-1/4 x 13-7/16 x 17-1/4	56.5
1	Motor Generator and Controller CDO–21648 (115/230-v, 60-cycle ac)	----------	14-1/2 x 32-1/2 x 20-7/8	296
	or			
1	Motor Generator and Controller CDO–21652 (115/230-v, 25-cycle ac)	----------	14-1/2 x 32-1/2 x 20-7/8	296
1	Rectifier-Modulator	----------	33-1/4 x 10-7/8 x 17-1/4	71

AN/TRT-type PORTABLE RADIO TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,246

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
8	86.11	1,445

PROCUREMENT DATA

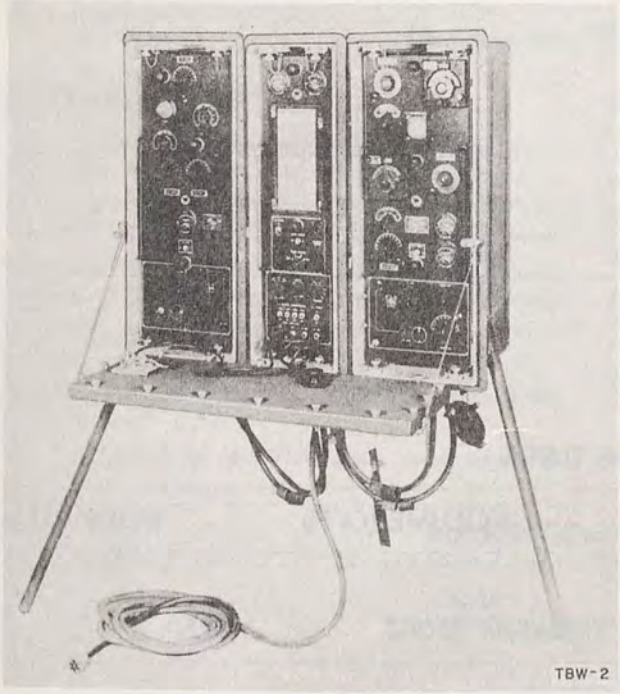
PROCURING SERVICE: USN
SPEC &/or DWG: RE13A625A; S-500-1257
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs-72056, 26 Feb 1940	$3,595.00 including equipment spares

PORTABLE RADIO TRANSMITTING EQUIPMENT AN/TRT-type

4 December 1958
Cognizant Serv: USN FSN: TBW-2

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–Q–316216–200	--


TBW-2

FUNCTIONAL DESCRIPTION:

Portable Radio Transmitting Equipment TBW–2, when used in conjunction with suitable receiving equipment provides a complete advanced base radio communications station. The transmitting equipment provides for cw, mcw, or voice transmission in two frequency ranges: 350 to 1,000 kilocycles and 3,000 to 18,100 kilocycles. The equipment is so designed that the entire system, including antenna and counterpoise, may be erected in less than one hour by a crew of six men. The transmitter is operated from the front panel position of the rectifier unit.

All the equipments in the TBW series are functionally identical but differ electrically, principally in the power source requirements.

The TBW–2, when used in conjunction with Portable Radio Receiving Equipment RBM–2 forms Semiportable Transmitting and Receiving Equipment MM–2.

TECHNICAL CHARACTERISTICS:

Frequency Range: 350 to 1,000 kc; 3,000 to 18,100 kc
Frequency Control: Master oscillator
Type of Signal: Cw, mcw, voice
Nominal Power Output:
Cw and Mcw: 100 w
Voice: 25 w
Power Requirements: 115/230-v 25/60-cycle 1-phase ac; 220/330-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna and Counterpoise			
	Bag 1	----------	60 x 12 dia	45
	Bag 2	----------	60 x 12 dia	45
	Gasoline Engine Generator CDO–73004	----------	17-3/8 x 21-1/4 x 25-1/4	168
1	HF Transmitter Unit CAY–52239	----------	33-1/4 x 13-5/8 x 17-1/4	84
1	MF Transmitter Unit CAY–52238	----------	33-1/4 x 13-5/8 x 17-1/4	76.5
1	Motor Generator and Controller CDO–21648 (115/230-v, ac, 60-cps ac)	----------	14-1/2 x 32-1/2 x 20-7/8	296

AN/TRT-type PORTABLE RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Motor Generator and Controller CDO–21652 (115/230-v, 25-cps, ac)		14-1/2 x 32-1/2 x 20-7/8	296
	or			
1	Motor Generator and Controller CDO–21737 (220/330-v, dc)		14-1/2 x 32-1/2 x 20-7/8	296
1	Rectifier-modulator		33-1/4 x 10-7/8 x 17-1/4	71

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,247

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	87.26	1,392

PROCUREMENT DATA

PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG: RE13A625A; S–500–3448

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs–88873, 30 Jun 4941	$3,595.00 including equipment spares

PORTABLE RADIO TRANSMITTING EQUIPMENT AN/TRT-type

4 December 1958
Cognizant Serv: USN FSN: TBW-3

USA	USN	USAF

TYPE CLASS: -- Used by --
STOCK NO: -- 25 cps: F16–Q–316240–200 ----
60 cps: F16–Q–316243–200

(See Illustration TBW, p. 1561)

FUNCTIONAL DESCRIPTION:

Portable Radio Transmitting Equipment TBW–3, when used in conjunction with suitable receiving equipment provides a complete advanced base radio communications station. The transmitting equipment provides cw, mcw, and voice transmission in two frequency ranges: 350 to 1,000 kilocycles and 3,000 to 18,100 kilocycles. The equipment is so designed that the entire system, including antenna and counterpoise, may be erected in less than one hour by a crew of six men. The transmitter is operated from the front panel position of the rectifier unit.

All the equipments in the TBW series are functionally identical but differ electrically, principally in the power source requirements.

The TBW–3, when used in conjunction with Portable Radio Receiving Equipment RBM–3 forms Semiportable Transmitting and Receiving Equipment MM–3.

TECHNICAL CHARACTERISTICS:

Frequency Range: 350 to 1,000 kc; 3,000 to 18,000 kc
Frequency Control: Master oscillator
Type of Signal: Cw, mcw, voice
Nominal Power Output:
Cw and Mcw: 100 w
Voice: 25 w
Power Requirements: 115/230-v 25/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna and Counterpoise Bag 1	----------	60 x 12 dia	45
	Bag 2	----------	60 x 12 dia	45
	Gasoline Engine Generator CDO–73004A	----------	17-3/8 x 21-1/4 x 26-1/4	168
1	HF Transmitter Unit CAY–52239	----------	33-1/4 x 13-5/8 x 17-1/4	84
1	MF Transmitter Unit CAY–52238	----------	33-1/4 x 13-5/8 x 17-1/4	76.5
1	Motor Generator and Controller CDO–21648 (115/230-v, 60-cycle ac)	----------	14-1/2 x 32-1/2 x 20-7/8	296
	or			
1	Motor Geenrator and Controller CDO–21652 (115/230-v, 25-cycle ac)	----------	14-1/2 x 32-1/2 x 20-7/8	296
1	Rectifier-Modulator	----------	33-1/4 x 10-7/8 x 17-1/4	71

AN/TRT-type PORTABLE RADIO TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,247

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	87.26	1,392

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: RE13A625

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NXs–4744, 2 Jun 1942	$3,595.00 including equipment spares

PORTABLE RADIO TRANSMITTING EQUIPMENT AN/TRT-type

4 December 1958
Cognizant Serv: USN FSN: TBW–4

USA	USN	USAF

TYPE CLASS: -- Used by --
STOCK NO: -- 25 cps: F16–Q–316260–200 --
60 cps: F16–Q–316280–200

(See Illustration TBW, p. 1561)

FUNCTIONAL DESCRIPTION:

Portable Radio Transmitting Equipment TBW–4, when used in conjunction with suitable receiving equipment provides a complete advanced base radio communications station. The transmitting equipment provides cw, mcw, or voice transmission in two frequency ranges: 350 to 1,000 kilocycles and 3,000 to 18,100 kilocycles. The equipment is so designed that the entire system, including antenna and counterpoise, may be erected in less than one hour by a crew of six men. The transmitter is operated from the front panel position of the rectifier unit.

All the equipments in the TBW series are functionally identical but differ electrically, principally in the power source requirements.

The TBW–4, when used in conjunction with Portable Radio Receiving Equipment RBM–4 forms Semiportable Transmitting and Receiving Equipment MM–4.

TECHNICAL CHARACTERISTICS:

Frequency Range: 350 to 1,000 kc; 3,000 to 18,100 kc
Frequency Control: Master oscillator
Type of Signal: Cw, mcw, voice
Nominal Power Output:
Cw and Mcw: 100 w
Voice: 25 w
Power Requirements: 115/230-v 25/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna and Counterpoise			
	Bag 1	----------	60 x 12 dia	45
	Bag 2	----------	60 x 12 dia	45
	Gasoline Engine Generator CDO–73004A	----------	17-3/8 x 21-1/4 x 26-1/4	168
1	HF Transmitter Unit CAY–52239	----------	33-1/4 x 13-5/8 x 17-1/4	84
1	MF Transmitter Unit CAY–52238	----------	33-1/4 x 13-5/8 x 17-1/4	76.5
1	Motor Generator and Controller CDO–21648 (115/230-v, 60-cycle ac)	----------	14-1/2 x 32-1/2 x 20-7/8	296
	or			
1	Motor Generator and Controller CDO–21652 (115/230-v, 25-cycle ac)	----------	14-1/2 x 32-1/2 x 20-7/8	296
1	Rectifier-Modulator	----------	33-1/4 x 10-7/8 x 17-1/4	71

AN/TRT-type PORTABLE RADIO TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,247

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	87.26	1,392

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips
SPEC &/or DWG: EN28/1500-43/SHIPS; EN28/1813-43/NSA

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NXsa-19329, 21 Dec 1942	$3,595.00 including equipment spares

PORTABLE RADIO TRANSMITTING EQUIPMENT AN/TRT-type

4 December 1958
Cognizant Serv: USN FSN: TBW–5

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	110–115 ac: F16–Q–316295–200 115/230 ac: F16–Q–316300–200 230 ac: F16–Q–316305–200	--

(See Illustration TBW, p. 1561)

FUNCTIONAL DESCRIPTION:

Portable Radio Transmitting Equipment TBW–5, when used in conjunction with suitable receiving equipment provides a complete advanced base radio communications station. The transmitting equipment provides cw, mcw, or voice transmission in two frequency ranges: 350 to 1,000 kilocycles and 3,000 to 18,100 kilocycles. The equipment is so designed that the entire system, including antenna and counterpoise, may be erected in less than one hour by a crew of six men. The transmitter is operated from the front panel position of the rectifier unit.

All equipments in the TBW series are functionally identical but differ electrically, principally in the power source requirements.

The TBW–5, when used in conjunction with Portable Radio Receiving Equipment RBM–5 forms Semiportable Transmitting and Receiving Equipment MM–5.

TECHNICAL CHARACTERISTICS:

Frequency Range: 350 to 1,000 kc; 3,000 to 18,100 kc
Type of Signal: Cw, mcw, voice
Nominal Power Output:
Cw and Mcw: 100 w
Voice: 25 w
Frequency Control: Master oscillator
Power Requirements: 115/230-v 25/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna and Counterpoise			
	Bag 1	----------	60 x 12 dia	45
	Bag 2	----------	60 x 12 dia	45
	Gasoline Engine Generator CDO–73004B	----------	17-3/8 x 21-1/4 x 26-1/4	168
1	HF Transmitter Unit CAY–52239	----------	33-1/4 x 13-5/8 x 17-1/4	84
1	MF Transmitter Unit CAY–52238	----------	33-1/4 x 13-5/8 x 17-1/4	76.5
1	Motor Generator and Controller CDO–21648 (115/230-v, 60-cycle ac)	----------	14-1/2 x 32-1/2 x 20-7/8	296
	or			
1	Motor Generator and Controller CDO–21652 (115/230-v, 25-cycle ac)	----------	14-1/2 x 32-1/2 x 20-7/8	296
1	Rectifier-Modulator	----------	33-1/4 x 10-7/8 x 17-1/4	71

AN/TRT-type PORTABLE RADIO TRANSMITTING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,247

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	87.26	1,392

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

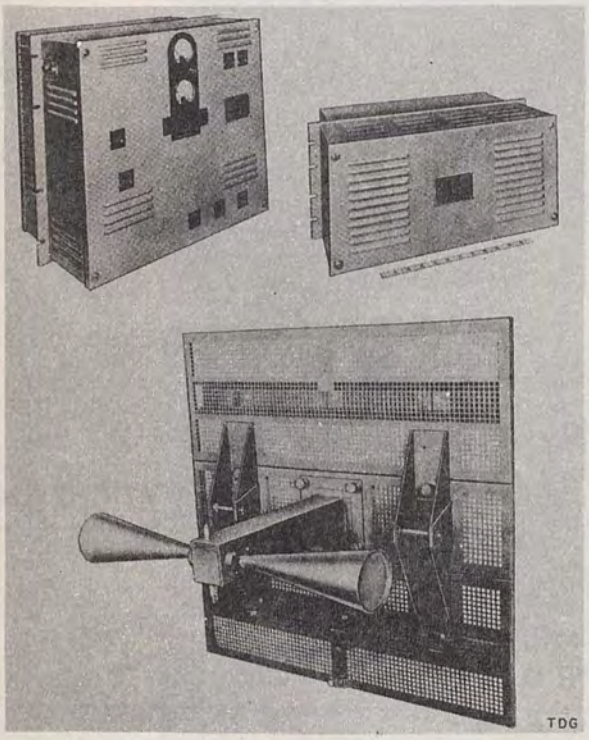
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NXsr–51520, 21 Mar 1944	$3,595.00 including equipment spares

HIGH FREQUENCY RADIO TELEPHONE TRANSMITTER EQUIPMENT AN/TRT-type

5 December 1958
Cognizant Serv: USN FSN: TDG, TDG–1

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	--	16–Q–332907–200 (TDG)	--



FUNCTIONAL DESCRIPTION:

High Frequency Radio Telephone Transmitter Equipments TDG and TDG–1 are low-powered VHF radio transmitters suitable for short-distance point-to-point communication. The transmitters are suitable for multichannel telegraph transmission using voice-frequency tones for voice transmission, or for combinations of voice and telegraph transmissions that are derived from suitable subcarrier demodulation equipment. The equipments are designed to be located at a point close to their antenna systems and are connected to the system by a 7/8-inch nitrogen-filled, low-loss, concentric, transmission line.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 132 to 156
Type of Emission: A2, A3
Power Supply Equipment: Rectifier power unit
Nominal Power Output: 12 w
Frequency Control: Crystal
Power Source Required: 390 w; 115-v ±10%, 1-phase 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For TDG			
1	Heater Panel for Outdoor Cabinet	CW–634378	3-1/2 x 19 x 4-7/8	11
1	High-Gain Antenna, 9db	----------	124 x 41 x 64-1/2	40
1	Indoor Cabinet	CW–10604	84 x 26-3/4 x 17	200
1	Low-Gain Antenna, 3db	----------	20 x 41 x 64-1/2	12
1	Outdoor Cabinet	CW–10589	64-1/2 x 32 x 18	311
1	Radio Transmitter	CW–52255	15-3/4 x 19 x 10	43
1	Rectifier Power Unit	CW–20143	8-3/4 x 19 x 11-1/4	75
1	Spare Parts Panel	CW–10568	3-1/2 x 19 x 5	3

AN/TRT-type HIGH FREQUENCY RADIO TELEPHONE TRANSMITTER EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For TDG–1			
1	Broad Band Portable Antenna	CW–66157	40 x 40 x 20	65
1	Heater Panel for Outdoor Cabinet	CW–634378	3-1/2 x 19 x 4-7/8	11
1	High-Gain Antenna, 9 db	----------	124 x 41 x 6-1/2	40
1	Indoor Cabinet	CW–10604	84 x 26-3/4 x 17	200
1	Low-Gain Antenna, 3 db	----------	20 x 41 x 64-1/2	12
1	Outdoor Cabinet	CW–10589	64-1/2 x 32 x 81	311
1	Radio Transmitter	CW–52255	15-3/4 x 19 x 10	43
1	Rectifier Power Unit	CW–20143	8-3/4 x 19 x 11-1/4	75
1	Spare Parts Panel	CW–10568	3-1/2 x 19 x 5	3

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95330

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: RE13A641A

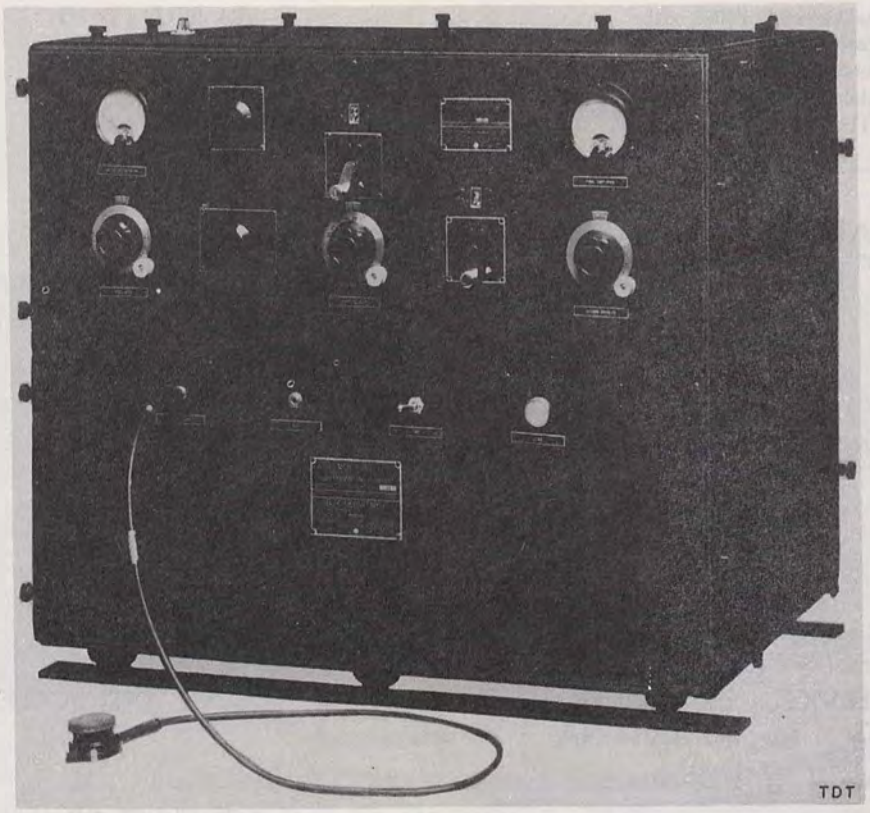
DESIGN COG: BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	Nxs–149, NXsr–83392	$1,650.00

RADIO TRANSMITTING EQUIPMENT AN/TRT-type

16 October 1958
Cognizant Serv: USN FSN: 5820-665-2291 (with equipment spares) TDT

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16-Q-337285-200	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TDT is a general purpose, semiportable, vhf transmitting equipment designed for use at shore installations for point-to-point or ground-to-plane communication. It may be used to transmit either modulated-continuous-wave or voice signals on any one preset crystal oscillator controlled frequency within the range of the equipment.

The transmitter is used with Radio Receiving Equipments RBK and RCK. A telegraph key is required for operation.

The radio transmitter is self-contained except for the antenna and microphone. It is equipped with a shock-mounted base for table or bench mounting.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 115 to 156 on any one preset crystal frequency
Frequency Control: Crystal
Type Signal: AM
Type Transmission: Mcw, voice
Type Keying: Relay
Keying Speed: 40 wpm
Power Output: 35 w
Impedance: 50 ohms, unbalanced
Audio Response: ±2 db from 200 to 4,000 cps
Antenna: One-quarter wave vertical with ground plane rods
Power Consumption: 750 w
Power Source Requirements: 110- to 120-v 50- to 60-cycle 1-phase ac

AN/TRT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly 66091 with 100 feet of cable	----------	28-3/8 x 49-1/2 x 49-1/2	16.5
1 set	Equipment spares	----------	10-1/2 x 25-1/2 x 19-1/2	90
1	Microphone Assembly 51004C			
1	Radio Transmitter 52322	----------	26-3/4 x 31-1/2 x 26-1/2	400

REFERENCE DATA AND LITERATURE:
NAVSHIPS 95337

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	33	640

PROCUREMENT DATA

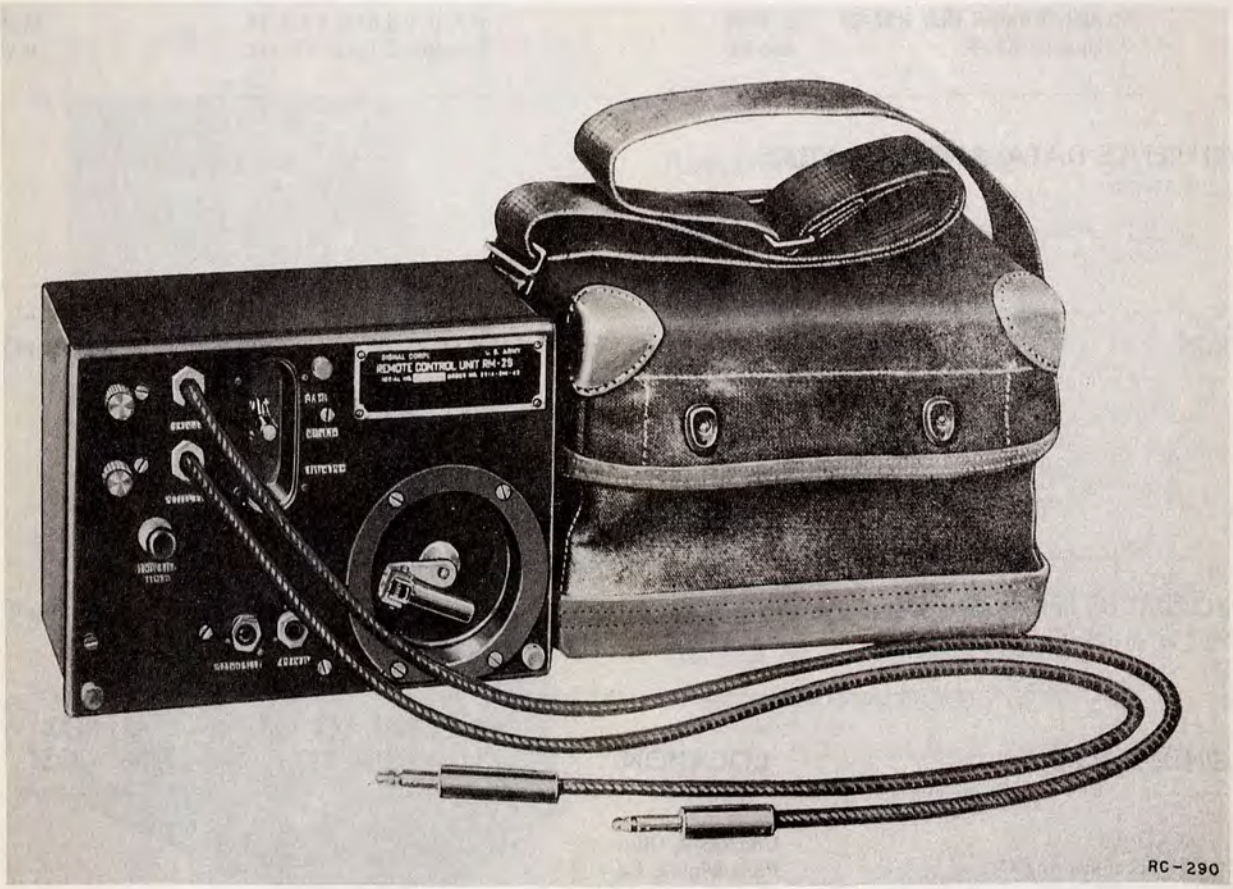
PROCURING SERVICE: USN, BuShips
SPEC &/or DWG: Spec No. 43014-NA
DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Aircraft Accessories Corp.	Kansas City, Kans.	NXss-30269 27 May 1943	$1,500 with equipment spares

REMOTE CONTROL EQUIPMENT AN/TTA-type

1 July 1958
Cognizant Serv: USA FSN: 5820-240-0515 RC-290

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C7600-290	--	--



FUNCTIONAL DESCRIPTION:

Remote Control Equipment RC-290 is an assemblage of items enabling the erection of a local-battery telephone facility between a displaced operating and control position and the actual operating site of field radio equipment.

This equipment consists essentially of a steel case inclosed Telephone EE-8 used at the radio set and a standard field Telephone EE-8 used at the remote control point. The connecting facility is usually a conventional field telephone pair.

The modes of operation available are telephone communication between the remote point and the radio operator, the control of radio equipment from the remote Telephone EE-8, voice circuit monitoring by the radio operator at the radio equipment, and operation of the radio set with monitoring at either the remote station or the radio set.

It is powered by dry batteries and uses the hand generator in the remote control unit or in a Telephone EE-8 for ringing.

TECHNICAL CHARACTERISTICS:

Type of Signal: Voice
Type Communication Circuits: Conventional field telephone
Controls: Selection of operational positions: RADIO, THROUGH, TELEPHONE
Power Requirements: Battery BA-27

AN/TTA-type REMOTE CONTROL EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Remote Control Unit RM–29	2C7629	9-5/16 x 6 5/16 x 5-3/16	13.5
1	Telephone EE–8	4B5008	9-9/16 x 7-11/16 x 3-1/2	9.5

REFERENCE DATA AND LITERATURE:

TM 11–308

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

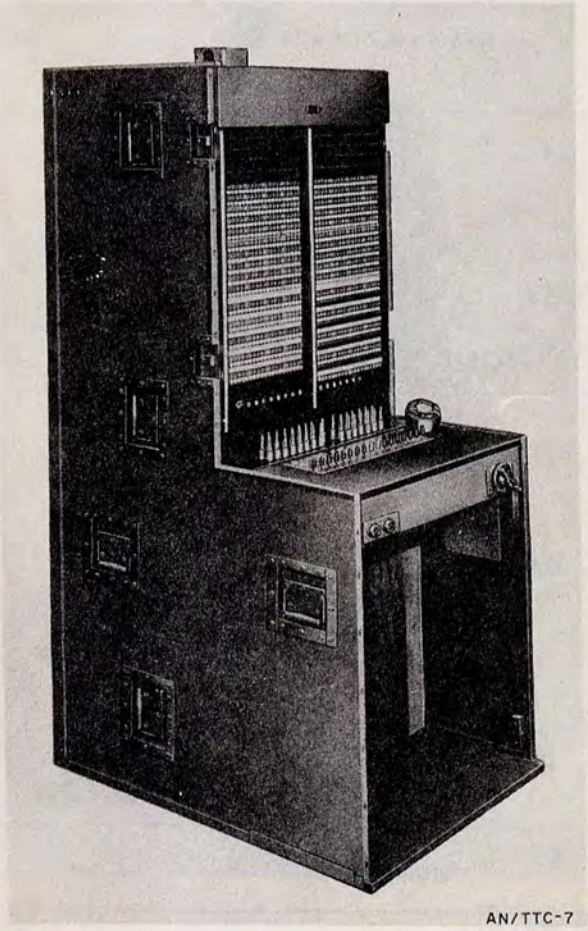
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Crosley Corp.	Cincinnati, Ohio		
Galvin Manufacturing Co.	Philadelphia, Pa.		
International Telephone & Radio Manufacturing Co.	East Newark, N. J.		
Zenith Radio Corp.	Chicago, Ill.		

MANUAL TELEPHONE CENTRAL OFFICE AN/TTC-7

1 July 1958
Cognizant Serv: USA FSN: 58205-503-1210

	USA	USN	USAF
TYPE CLASS:	S/Std	--	Std
STOCK NO:	4C27000-7	--	1790-431584030



AN/TTC-7

FUNCTIONAL DESCRIPTION:

Manual Telephone Central Office AN/TTC-7 is a complete, transportable, three-position multiple field telephone exchange designed for rapid installation. It can handle local or common battery lines.

This equipment consists essentially of three two-panel manual switchboards connected in multiple, each board with a maximum capacity of 200 lines and 20 trunks. It includes power and accessory components.

Each position is equipped with 15 cord circuits, thus giving a maximum capacity of 45 simultaneous calls. The face equipment of each position is wired to accommodate 500 lines and 80 trunks. For each additional 200 lines, three more switchboard positions are required.

To handle more than 400 lines, multipling on a four-panel basis is recommended; in this manner, the exchange may be expanded to accommodate 1,000 lines and 160 trunks.

TECHNICAL CHARACTERISTICS:

Number of Switchboard Positons: 3 minimum, expandable in multiples of 3 or 4
Number and Type of Circuits: 45 cord; 200 line; 20 trunk
Ringing: 20 cps at 90 v
Power Requirements: 110-v ac; 48-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Line Relay Telephone Circuit TA-223/TTC	5805-503-3339	26-5/8 x 31-5/16 x 17	230

AN/TTC-7 MANUAL TELEPHONE CENTRAL OFFICE

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Line Relay Telephone Circuit TA–224/TTC	5805–503–3340	26-5/8 x 31-5/16 x 17	275
3	Manual Telephone Switchboard SB–249/TTC	5805–503–2657	72 x 26-3/16 x 26-1/2	850
1	Telephone Main Distributing Frame TA–257/TTC	5805–503–1070	26-5/8 x 31-5/16 x 17	150

REFERENCE DATA AND LITERATURE:

TM 11–2146

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
30	413	6,117

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–C–14255

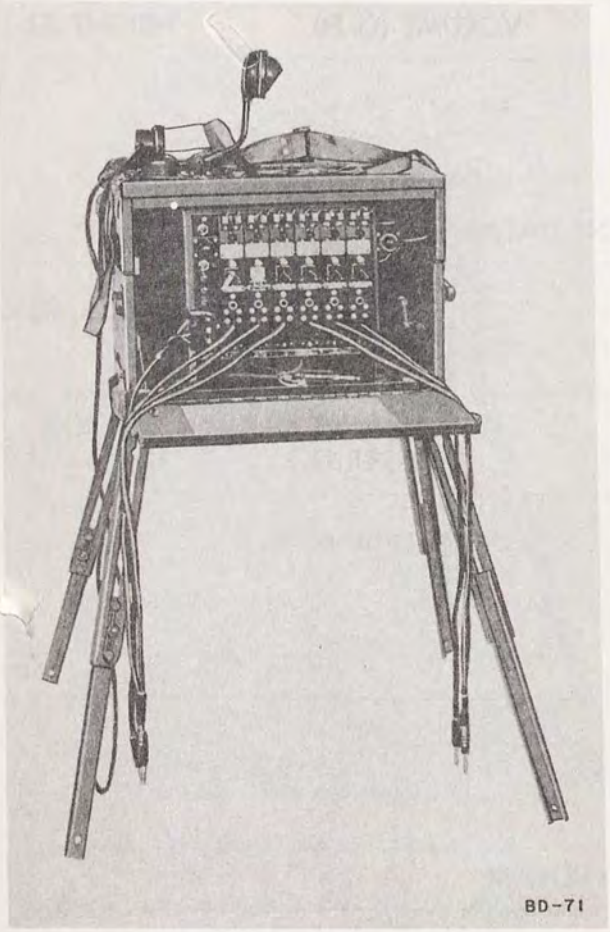
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Stromberg-Carlson Div., General Dynamics Corp.	Rochester, N. Y.	11659–P–52–93	

SWITCHBOARD AN/TTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805–164–7084 BD–71

	USA	USN	USAF
TYPE CLASS:	L/Std	--	L/Std
STOCK NO:	4C9971	--	--



FUNCTIONAL DESCRIPTION:

Switchboard BD–71 is a portable, monocord, magneto telephone switchboard used for terminating and switching tactical field wire circuits.

This equipment consists of all required apparatus, housed in a carrying case having adjustable legs, permitting a variety of installation arrangements. Repeating coils are permanently installed on two lines.

Two Switchboards BD–71 may be connected in parallel to accommodate additional lines.

The estimated range over nonloaded Wire W–110–B is from 14 to 22 miles.

TECHNICAL CHARACTERISTICS:

Number of Positions: 1
Number and Type of Circuits: 6 cord; 6 line
Power Requirements: 6 batteries BA–30

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Chest Set H–18/GT	5965–164–8076		
1	Headset HS–30			
1	Switchboard BD–71 (bare unit)	5805–164–7084	18-1/2 x 10-1/4 x 15	48
6	Switchboard Unit EE–2			

AN/TTC-type SWITCHBOARD

REFERENCE DATA AND LITERATURE:

TM 11-330

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.6	84

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

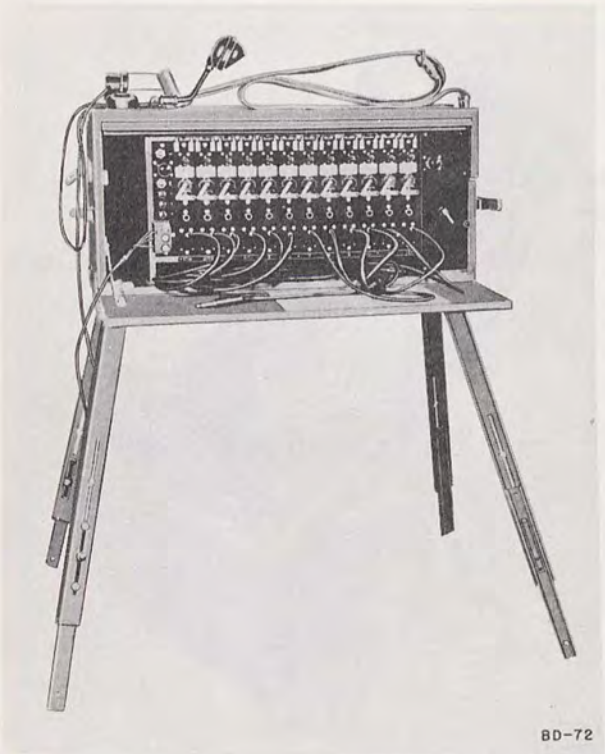
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
		78-PHIBP-52-16	

SWITCHBOARD AN/TTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-164-7088 BD-72-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4C9972	--	--


BD-72

FUNCTIONAL DESCRIPTION:

Switchboard BD-72-( ) is a portable, monocord, magneto, manual, telephone switchboard used primarily in field wire systems.

This equipment consists of a switchboard fitted with all apparatus required, and arranged for transportation in the field in a carrying case. It has adjustable legs permitting different installation arrangements.

Repeating coils are permanently installed on four lines. Estimated range over Wire W-110-B (nonloaded) is from 14 to 22 miles. Two Switchboards BD-72-( ) may be used together, by trunking between them, to provide additional line capacity.

TECHNICAL CHARACTERISTICS:

Number of Switchboard Positions: 1
Number and Types of Circuits: 12 cord, 12 line
Power Requirements: Six Batteries BA-30

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Chest Set H-18/GT	5965-164-8076		0.32
1	Headset HS-30	5965-164-7259		72
1	Switchboard BD-72 (bare unit)	5905-164-7088	27 x 10-1/4 x 15	1.2
1	Switchboard Unit EE-2	5805-222-4408		

AN/TTC-type SWITCHBOARD

REFERENCE DATA AND LITERATURE:

TM 11-330

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5	137

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-686

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEPHONE REPEATER AN/TTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-164-8052 EE-89-( )

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	4B3289A	--	--



FUNCTIONAL DESCRIPTION:

Telephone Repeater EE-89-( ) is a portable, two-wire repeater equipment installed at intermediate points of a tactical field wire system (at junctions of sections having similar characteristics) to extend the normal transmission range of facilities serving division and higher headquarters.

It may be used at the exact center of a loaded section but not at junctions of loaded and nonloaded sections. Two repeaters can be used in tandem in the same circuit.

This equipment consists of amplifier equipment and related control apparatus contained in a wooden field case fitted with carrying straps. The case has space for the necessary batteries.

Telephone EE-8 can be bridged across this equipment.

TECHNICAL CHARACTERISTICS:

Number and Type of Facilities: Simplex telegraph, telephone, and 20-cps ringing, over two-wire system
Power Requirements: Self-contained Battery BA-40

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Telephone Repeater EE-89	5805-164-8052	8-1/2 x 9 x 7	6.5
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11-2006

AN/TTC-type TELEPHONE REPEATER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1	20

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–4–42

DESIGN COG: USA, Sig C

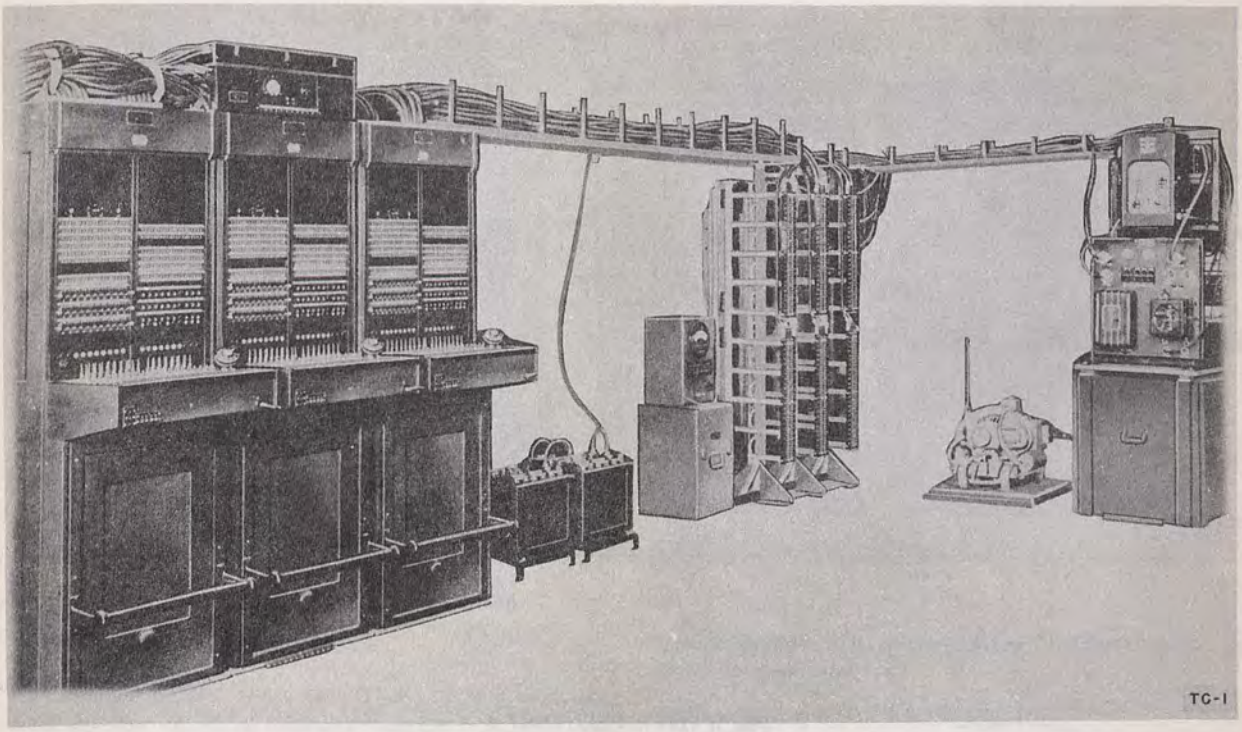
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Daven Co.	Livingston, N. J.	29390–P–44–23	$60.41
Federal Telephone & Radio Co.	Clifton, N. J.	29391–P–44–23	57.30

TELEPHONE CENTRAL OFFICE SET AN/TTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-221-1137

TC-1

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4C27001	--	--



FUNCTIONAL DESCRIPTION:

Telephone Central Office Set TC–1 is a complete, transportable, manual, telephone exchange that serves both local- and common-battery lines. It is capable of handling local traffic, as well as originating and terminating trunk and tie-line traffic. It is used as a telephone central of a tactical field wire or cable system.

This equipment consists essentially of a three-position switchboard, power equipment, and associated accessories.

Each switchboard section is a single-position, two-panel, manually operated unit arranged to serve magneto and common battery lines, as well as common battery manual and dial trunks.

Power is supplied by four Batteries BB–46, one Panel BD–90 (which includes ringing equipment), a rectifier, and a gasoline engine-driven field power unit.

Traffic-handling capacity of this central office may be increased as required by alternating the corresponding position of two TC–1 equipments in the same lineup.

TECHNICAL CHARACTERISTICS:

Number of Positions: 3

Number and Type of Circuits: 45 universal cord (3 dial), 90 local-battery lines; 180 common-battery lines; 12 two-way dial or manual trunks

Power Supplied:

Power Unit PE–75: 2.5-kva, 115-v 60-cycle ac
Rectifier RA–36: 12 amp at 0– to 65-v dc
Battery BB–46: 90 ampere-hours, 40- to 56-v dc

AN/TTC-type TELEPHONE CENTRAL OFFICE SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
4	Battery BB–46	----------	15-1/2 x 6-1/2 x 14-9/16	119
1	Cabinet BE–70	3F2405	12 x 9 x 18	32
1	Cabinet BE–72	3H672	26-1/2 x 7 x 9-3/16	61
1	Cabinet BE–75	4E1175	13-1/3 x 4-5/8 x 9-3/4	25
3	Frame FM–19	4E2119	17-1/4 x 23 x 80	180
1	Panel BD–90	3H4090	35-1/2 x 25 x 26-1/4	230
1	Power Unit PE–75	3H4575	40 x 19 x 27-1/2	275
1	Rectifier RA–36	3H4676	----------	75
3	Switchboard BD–80	4C9980	37-7/8 x 26-3/8 x 77-9/16	739

REFERENCE DATA AND LITERATURE:

TM 11–335

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	543	10,596

PROCUREMENT DATA

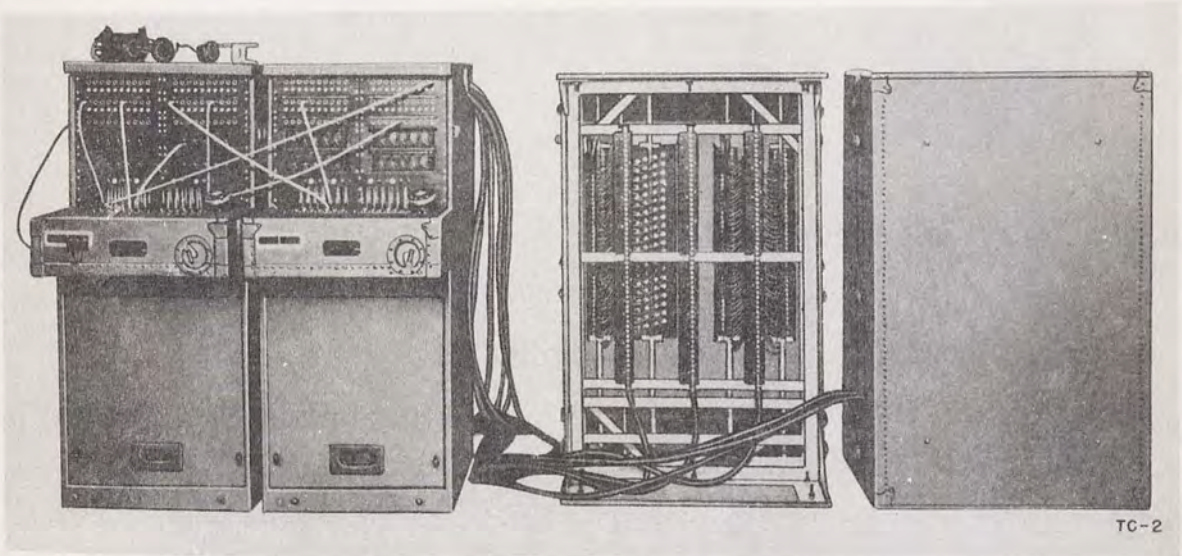
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEPHONE CENTRAL OFFICE SET AN/TTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-221-1136 TC-2-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4C27002	--	--



FUNCTIONAL DESCRIPTION:

Telephone Central Office Set TC-2-( ) is a complete, transportable, telephone exchange designed to handle local traffic and to originate and terminate trunk and tie-line calls in field wire systems.

This equipment consists essentially of a single-position, local- and common-battery, nonmultiple, two-panel, manual switchboard; main distributing frame; power panel; rectifier; power unit; and associated accessories.

Two Switchboards BD-89 (the principal component of this equipment) can be connected as illutrated above, and operated by one operator. (The power panel and rectifier units are not shown in the illustration.)

TECHNICAL CHARACTERISTICS:

Number of Positions: 1

Number and Type of Circuits:

Model BD-89-A through -E: 13 universal cord (1 dial); 20 local-battery line; 37 common-battery line; 2 common-battery trunk; 1 dial trunk

Model BD-89-G: 13 universal cord (1 dial); 40 line; 4 trunk

Power Supplied:

Power Unit PE-75-( ): 2,500 w, 115-v 60-cycle ac

Rectifier RA-91 or RA-36: 2 to 12 amp at 6- to 48-v dc

Battery BB-46: 90 ampere-hours, 40- to 56-v dc

AN/TTC-type TELEPHONE CENTRAL OFFICE SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Cabinet BE–79	4E1179	40-1/2 x 23 x 18-1/2	300
1	Panel BD–98	3H4098	30 x 30 x 29	110
1	Power Unit PE–75	3H4575	32 x 25-1/2 x 24-1/2	275
1	Rectifier RA–36	3H4676	21 x 20 x 11-3/4	130
1	Rectifier RA–91	3H4699–91	21 x 20 x 11-3/4	130
1	Switchboard BD–89	4C9989	47-1/2 x 21 x 35	400

REFERENCE DATA AND LITERATURE:

TM 11–340

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
18	146	3,412

PROCUREMENT DATA

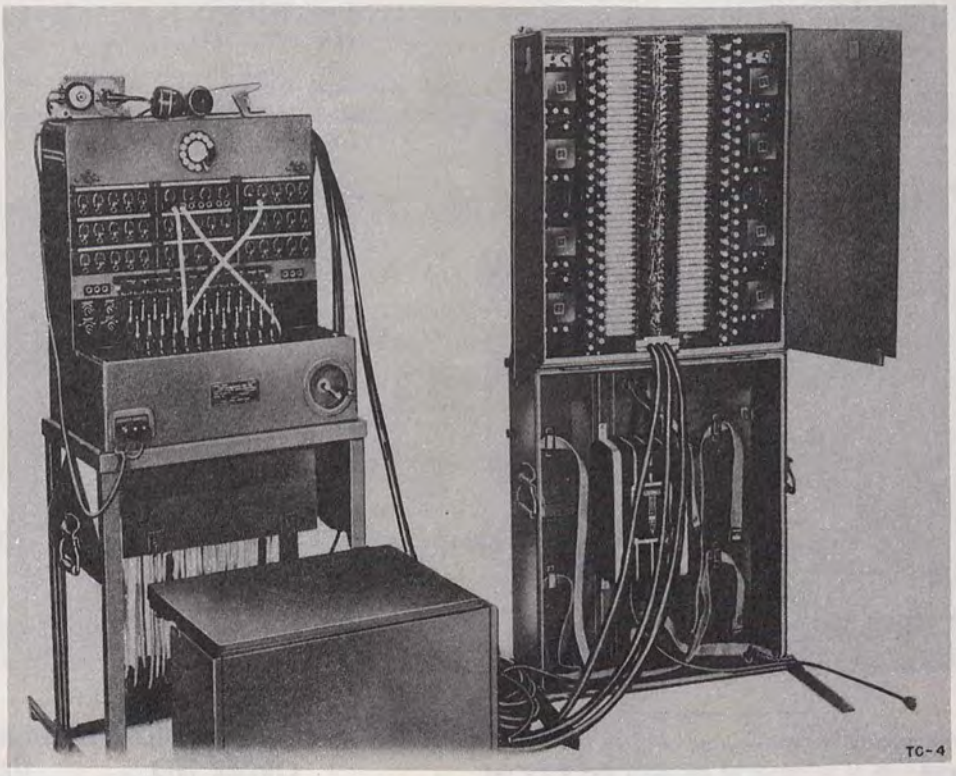
PROCURING SERVICE: USA DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEPHONE CENTRAL OFFICE SET AN/TTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805-221-1132 TC-4

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4C27004	--	--



FUNCTIONAL DESCRIPTION:

Telephone Central Office Set TC–4 is a complete, transportable, field telephone exchange for handling magneto line traffic, and for originating and terminating common battery trunk line and ring-down tie line traffic.

This equipment consists of a single-position, manual, nonmultiple switchboard, a power converter, and associated accessories. Currently, this equipment includes Headset HS–30, Chest Set H–18/GT, and Microphone T–45, rather than the head and chest set illustrated. It can be installed in a cargo truck for mobile telephone central applications.

Two switchboards BD–96 (the principal component of this equipment) can be connected and operated by a single operator.

TECHNICAL CHARACTERISTICS:

Number of Positions: 1
Number and Type of Circuit: 12 universal cord (a dial); 40 local battery line; 4 common battery manual or dial trunk
Power Requirements: Operator's Set Transmitter and Night Alarm: 6 Batteries BA–30
Converter M–222: 2 Batteries BA–23

AN/TTC-type TELEPHONE CENTRAL OFFICE SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Converter M–222	4F222	8 x 7 x 7	11
1	Panel BD–97	4E3697	27-1/2 x 24-1/2 x 11	150
1	Switchboard BD–96	4C9996.6	25 x 22 x 15	200

REFERENCE DATA AND LITERATURE:

TM 11–332

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	21	650

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

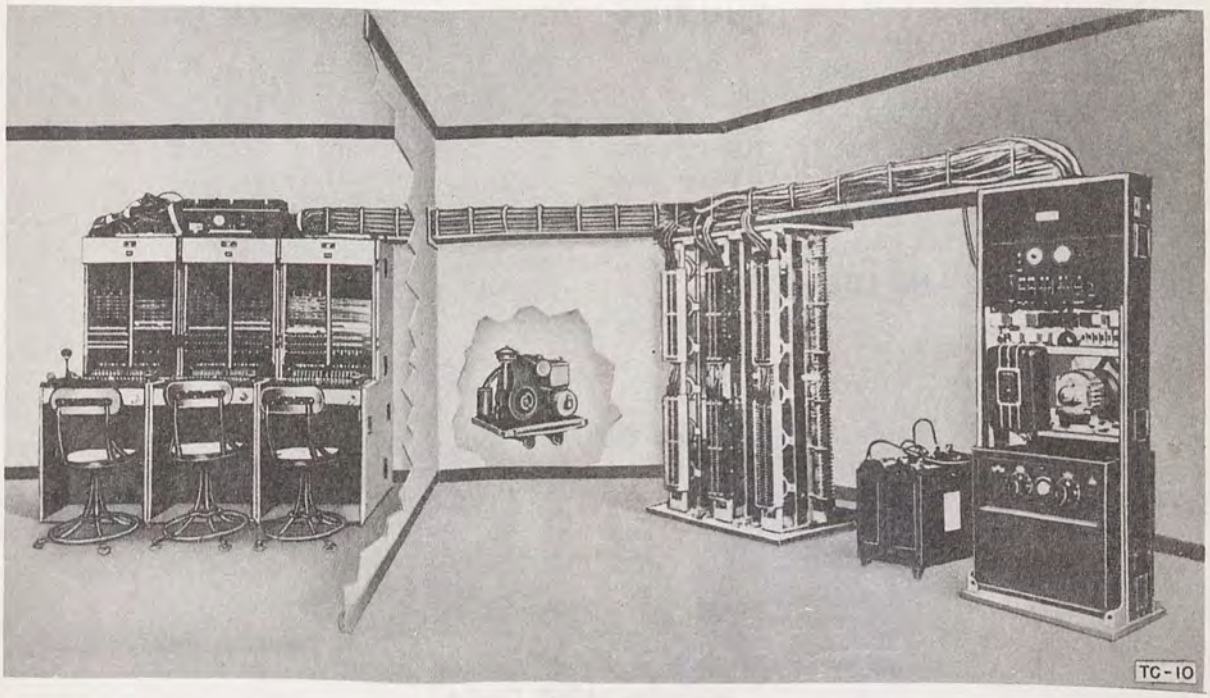
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEPHONE CENTRAL OFFICE SET AN/TTC-type

1 July 1958
Cognizant Serv: USA FSN: 5805–356–2736

TC–10–( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	L/Std
STOCK NO:	4C27010–1	--	--



FUNCTIONAL DESCRIPTION:

Telephone Central Office Set TC–10–( ) is a complete, transportable, 270-line manual telephone exchange. It serves both local battery and common battery lines, and is arranged for handling, originating, and terminating trunk and tie-line traffic.

It is used for establishing tactical communications from forward areas to rear echelons.

This equipment can be connected into an existing telephone system, either manual or automatic. A maximum of 45 conversations can be handled simultaneously. Local battery line circuits also can be used for toll lines or two-way ring-down trunks. Trunks can be extended to manual or automatic exchanges.

TECHNICAL CHARACTERISTICS:

Number of Positions: 3

Number and Type of Circuits: 45 universal cord (3 dial), 270 line (180 common battery and 90 local battery), 12 two-way trunk

Power Requirements: 1,000 w, 110–120-v 50/60-cycle 1-phase ac

AN/TTC-type TELEPHONE CENTRAL OFFICE SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
4	Battery BB–46	(FSN) 6140–126–1544	15-1/2 x 6-1/2 x 14-9/16	119
1	Cabinet BE–72	(FSN) 6625–241–7869	26-1/2 x 7 x 9-3/16	61
3	Frame FM–19	(FSN) 5805–171–1362	17-1/4 x 23 x 80	180
1	Panel BD–90	(USA) 3H4090	35-1/2 x 25 x 26-1/4	230
	or			
1	Panel BD–132–A	(USA) 3H4100–132	26 x 18 x 58	625
2	Power Unit PE–75	(USA) 3H4575	40 x 19 x 27-1/2	324
3	Switchboard BD–110–A	(USA) 4C10110	26-1/4 x 36-1/2 x 63-3/4	850

REFERENCE DATA AND LITERATURE:

TM 11–338

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	543	10,593

PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, Sig C

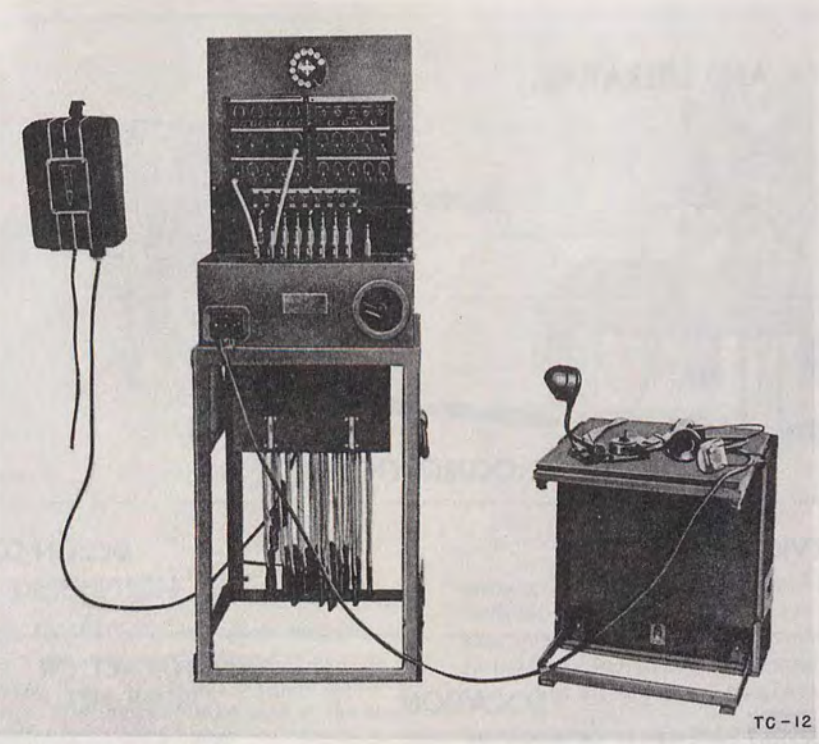
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

TELEPHONE CENTRAL OFFICE SET AN/TTC-type

4 December 1958
Cognizant Serv: USA FSN: 5805-221-1138 TC-12

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4C27012	--	--



FUNCTIONAL DESCRIPTION:

Telephone Central Office Set TC-12 is a complete, transportable or mobile, tactical telephone exchange for handling, originating, and terminating trunk and tie line traffic and is used primarily in field wire and cable systems.

This equipment consists essentially of a single-position, nonmultiple, manually operated telephone switchboard and related components. Currently this equipment includes Headset HS-30, Chest Set H-18/GT, and Microphone T-45 rather than the head and chest set illustrated.

The TC-12 can be used for handling magneto line calls and for originating and terminating manual common battery, automatic (dial), and ring-down tie-line traffic.

Two Switchboard BD-91 equipments (equivalent to two Telephone Central Office Set TC-12) can be connected and operated by one operator.

This central office is dry battery operated.

TECHNICAL CHARACTERISTICS:

Number of Switchboard Positions: 1

Number and Type of Circuits:

Cord: 8 universal; 1 dial

Line: 20 local battery

Trunk: 4 common battery, manual, and dial

Power Requirements: Six Battery BA-30, to furnish transmitter current for operator's telephone set and night alarm buzzer; and two Battery BA-23, to furnish power to Converter M-222 .

AN/TTC-type TELEPHONE CENTRAL OFFICE SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Switchboard BD–91	4C9991	25-1/2 x 19 x 17-1/2	215
1	Converter M–222	4F222	6-1/2 x 6-1/2 x 7-7/8	11

REFERENCE DATA AND LITERATURE:

TM 11–336

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	16.27	415.0

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

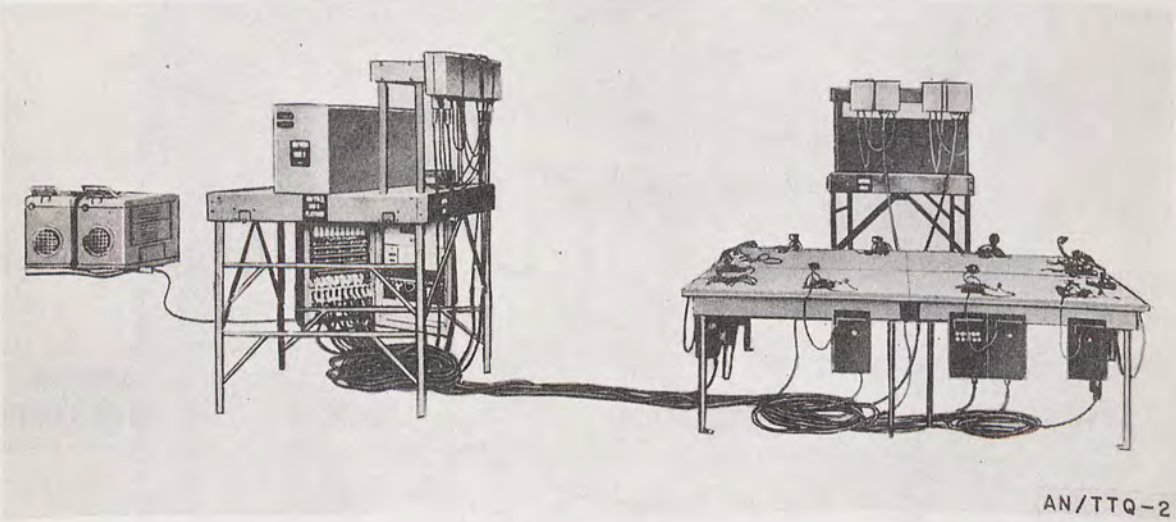
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

OPERATIONS CENTER AN/TTQ-2

1 July 1958
Cognizant Serv: USA FSN: 5895-171-2682

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	4C5990-2	--	--



AN/TTQ-2

FUNCTIONAL DESCRIPTION:

Operations Center AN/TTQ-2 is a complete, transportable assemblage of items that can be rapidly erected to serve as an antiaircraft operations room, an aircraft warning center or similar control center. It is designed to be used as the headquarters of an antiaircraft control system.

This equipment consists essentially of telephone, line switching, lighting, and plotting equipment and includes items of furniture, a power supply, control components, and supplies.

Communication between this center and other military units or installations is maintained by radio and telephone facilities. Internal operational and administrative communication is conducted by means of an intercommunication system. Switchboard BD-95 is used to connect to incoming wire facilities and to switch internal telephones serving the center.

TECHNICAL CHARACTERISTICS:

Type Communication Circuits: Conventional wire and radio circuits
Controls: Eight radio channel control circuits
Power Requirements: 115-v 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
14	Line Unit TA-10/TTQ	.C5577-10	4-1/2 x 5/8 x 9	
2	Power Unit PE-197	3H4600-197	44 x 31 x 22	790
1	Relay Unit RE-24( )/TTQ-1	2Z7670-24	48 x 24 x 12	220
1	Telephone Power Unit SB-26/TTQ	3H5460-36	48 x 24 x 12	298
20	Telephone Unit TA-9/TTQ	4B7030-9	9 x 7-5/8 x 4-1/2	

AN/TTQ-2 OPERATIONS CENTER

REFERENCE DATA AND LITERATURE:

TM 11-448

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
18	318.5	7,836

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-3170

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.	10302-P-50-7	

RADIO INTERCEPT CONTROL SET AN/TTQ-3

1 July 1958
Cognizant Serv: USA FSN: 5825-333-9687 5820-309-3234

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S5360-3	--	--



FUNCTIONAL DESCRIPTION:

Radio Intercept Control Set AN/TTQ-3 provides facilities for the supervision and control of a number of such equipment as Radio Intercept Group OA-596/TTQ-3. In a complete radio intercept system, the AN/TTQ-3 can supervise and control eight such groups.

Operating in such a system, it provides monitoring of radio signals intercepted by the operating positions located at the remote groups; local monitoring of intercepted radio signals; wire communication with all operating positions; establishment of conference calls between all intercept operator positions that are connected through one control position; and coordination of direction-finding operations.

The components of this set are grouped into three operating positions. Two identical control operator positions provide communication and monitoring facilities for supervisory personnel. The third position provides similar facilities for the coordination of direction-finding operations. Wiring within the AN/TTQ-3 is such that each control operator position controls and supervises half the remote groups; the df tracker position can receive signals from all intercept operator positions.

TECHNICAL CHARACTERISTICS:

Power Requirements: 1,500 w, 115-v, 55-65-cycle ac

AN/TTQ-3 RADIO INTERCEPT CONTROL SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control, Power Supply Group OA–323/G	(USA) 3H1099–323	----------	128
2	Frequency Meter Set SCR–211–A	(USA) 2C1411A		
1	Generator Set PU–236/G	(FSN) 6130–245–9673		
1	Holder, Antenna Coupler MT–1032/GR	----------	24-1/2 x 10 x 17-1/2	19
1	Interconnecting Box	(USA) 2Z3105–40		
2	Rectifier Power Unit RA–133–B	(FSN) 6130–245–9673		
1	Shelter S–44/G	(FSN) 5410–356–2484	136 x 71 x 74	2,127
1	Switchboard, Direction Finder Control SB–214/TTQ–3	(USA) 4C9905–214	20-1/4 x 23-1/4 x 71-1/2	145
2	Switchboard, Radio Intercept Control SB–213/TTQ–3	----------	20-1/4 x 23-1/4 x 71-1/2	1,166
2	Test Set, Telephone TS–725/TTQ–3	----------	----------	46

REFERENCE DATA AND LITERATURE:

TM 11–5067

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	445.8	6,000

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–I–10768

DESIGN COG: USA, Sig C

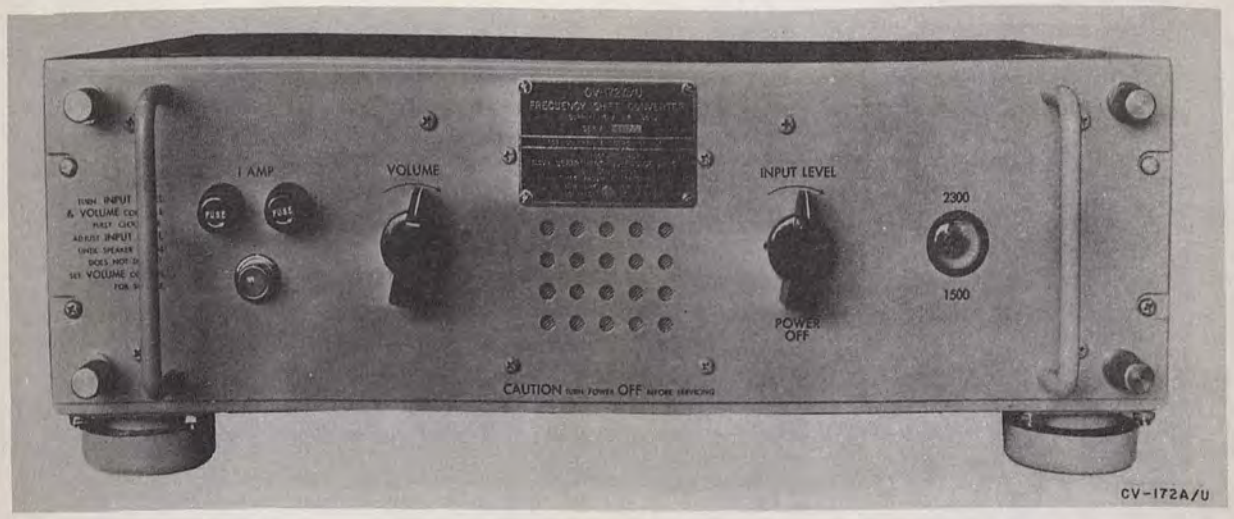
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Emerson Radio & Phonograph Corp.	Jersey City, N. J.	14195–51–93	

FREQUENCY SHIFT CONVERTER AN/TXA-type

26 November 1958
Cognizant Serv: USN FSN: CV-172/U: F5815-665-1995
CV-172A/U: 5815-096-6992 (USA)
F5815-665-1991 (USN)

CV-172/U, -172A/U

	USA	USN	USAF
TYPE CLASS:	Used by	Used by	Ltd-Std
STOCK NO:	CV-172A/U: 2C722A-172	--	--



FUNCTIONAL DESCRIPTION:

Frequency Shift Converters CV-172/U and CV-172A/U convert 1,500- and 2,300-cps audio-frequency-shift facsimile signals to amplitude-modulated signals for a facsimile recorder. Provisions are made for audible monitoring of the incoming signal and for visual checking of frequency limits.

The input signal is fed through an amplifier to a limiter and then through a frequency discriminator. A loudspeaker is connected to the output of the amplifier and has a separate volume control. The output of the limiter is also fed to two tuned circuits, resonated at 1,500 and 2,300 cycles per second respectively, to operate the tuning eye.

Frequency Shift Converters CV-172/U and CV-172A/U are used as part of terminal equipment at the receiving end of a radio facsimile circuit of the audio-frequency-shift or radio-frequency-shift type. The signal from the radio receiver with either system is an audio-frequency-shifted signal in which 1,500 cps represents maximum signal (black) and 2,300 cycles per second represents minimum signal output (white) from the facsimile transmitter at the sending terminal. The amplitude of the signal to the converter may vary as much as 50 decibels due to transmission effects of the radio circuit.

These converters are used primarily with Facsimile Recorder RD-92/UX, and may be installed in shore or shipboard stations.

The CV-172/U and CV-172A/U are electrically and mechanically interchangeable but the CV-172A/U is an improved design.

TECHNICAL CHARACTERISTICS:

Frequency Range: 1,500 to 2,300 cps, frequency swing ±400 cps

Input Data:
Impedance: 500 ohms, balanced
Facsimile Signal: 1,500 to 2,300 cps, frequency shift
Level: 0 to −40 dbm

Output Data:
Impedance: 500 ohms, balanced
Facsimile Signal: 1,500 cps at .25-v ac; 2,300 cps at 0.01-v ac

Power Requirements: 30 w 100-130-v 50-60-cycle ac

AN/TXA-type FREQUENCY SHIFT CONVERTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Frequency Shift Converter CV–172/U	----------	5-5/8 x 16-1/2 x 19-3/16	
	or			
1	Frequency Shift Converter CV–172A/U	2C722A–172	6-3/4 x 16-1/2 x 19-1/8	56

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91394
TM 11–5105

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG: Spec: SHIPS–F–264; Dwg: 45C–00–00–00

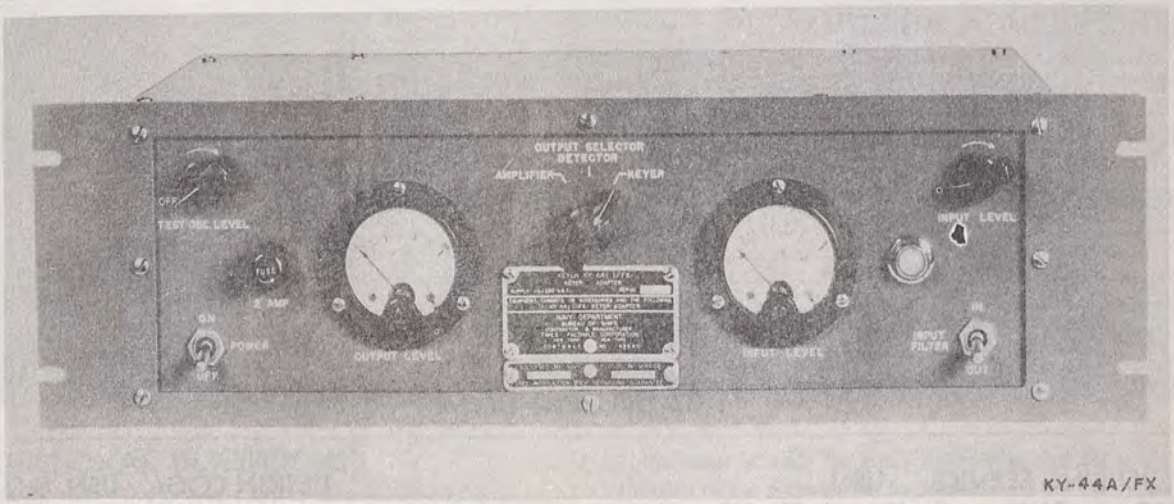
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Times Facsimile Corp.	New York, N. Y.	*For CV–172/U* NObsr–52041, 10 September 1951	$590.00 with spares
		For CV–172A/U NObsr–71329, 25 May 1956	$630.00 with spares

ADAPTER KEYER AN/TXA-type

25 November 1958
Cognizant Serv: USN FSN: KY-44/FX: F5815-372-3043
KY-44A/FX: F5820-642-8023
KY-44B/FX: 5815-642-7470
KY-44C/FX: F6625-643-2883

KY-44/FX, -44A/FX, -44B/FX, -44C/FX

	USA	USN	USAF
TYPE CLASS:	Used by	Used by	Std
STOCK NO:	*KY-44B/FX:* 2C640-44B	--	--



KY-44A/FX

FUNCTIONAL DESCRIPTION:

Adapter Keyers KY-44/FX, KY-44A/FX, KY-44B/FX, and KY-44C/FX are primarily used to convert facsimile signals to direct current. They simplify and rectify amplitude-modulated facsimile signals to provide a variable direct current voltage for the control of frequency-shift exciter units in radio transmitting equipment. They can also be used as unfiltered detectors of amplitude-modulated filters or as line amplifiers.

Meters are provided to monitor the input and output signals. Controls are available for adjusting the output level and for selecting the type of output signal.

The KY-44/FX, KY-44A/FX, KY-44B/FX, and KY-44C/FX are interchangeable with each other and are similar except for changes in design and component parts. They may be installed at shore or shipboard stations.

These equipments are used in conjunction with Keyers KY-30/GRT, KY-58/GRT, KY-75/SRT; Frequency Shift Keyer Equipment FSA; Radio Transmitting Set AN/URT-2, AN/URT-3, AN/URT-4; and similar types of frequency-shift keyers.

TECHNICAL CHARACTERISTICS:

Frequency Range: 100 to 7,000 cps
Type Modulation: AM
Type Signal:
Input: Facsimile
Output: Keying signals, dc; detected signals, unfiltered; amplified signals
Signal Level:
Input: −20 to +6 dbm
Output: Linear within ±5% to 20 v dc or ac
Impedance: 600 ohms, balanced or unbalanced
Mounting Data: Table or 19-inch relay rack
Power Requirements: 40 w, 115- or 230-v 60-cycle 1-phase ac

AN/TXA-type ADAPTER KEYER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Keyer Adapter KY–44/FX, KY–44A/FX, KY–44B/FX, or KY–44C/FX	----------	6-1/2 x 15 x 19 3/4	40
	Power cable			
1 set	Spare parts	----------	6-1/2 x 10-1/2 x 19-1/2	31

REFERENCE DATA AND LITERATURE:

For KY–44A/FX: NAVSHIPS 91441
For KY–44B/FX: NAVSHIPS 91877
For KY–44C/FX: NAVSHIPS 91627

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	3.801	111

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips
SPEC &/or DWG: For KY–44B/FX: NE–634–2810, NE–PO8–002

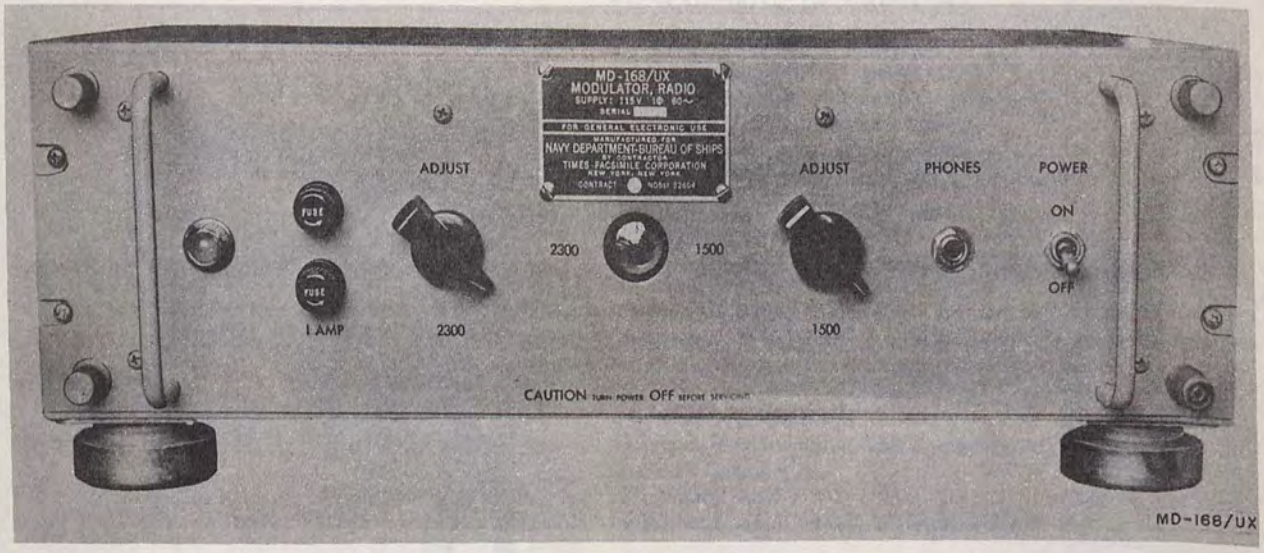
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For KY–44/FX Times Facsimile Corp.	New York, N. Y.	NObsr–43340, 15 March 1950	
For KY–44A/FX Times Facsimile Corp.	New York, N. Y.	NObsr–52102, 27 November 1950	$436.00 with spares
For KY–44B/FX Northeastern Engineering, Inc.	Manchester, N. H.	NObsr–52137, 15 December 1950 NObsr–49167, 31 May 1950	$279.00 with spares
For KY–44C/FX Times Facsimile Corp.	New York, N. Y.	NObsr–43340, 15 March 1950	

RADIO MODULATOR AN/TXA-type

4 December 1958
Cognizant Serv: USN FSN: 5815-219-9671

MD-168/UX

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	2C2537-168	F16-M-44293-9801	--



FUNCTIONAL DESCRIPTION:

Radio Modulator MD-168/UX is a subcarrier frequency-shift unit for facsimile operation primarily with ultra-high- and very-high-frequency transmission. It converts amplitude modulated facsimile signals to audio-frequency shift signals of 1,500 to 2,300 cycles per second and constant amplitude, which in turn are used to amplitude modulate a voice radio transmitter.

This equipment can be used with any facsimile transmitter having an output within the range of 1.5 to 10 kilocycles, and keying speeds up to 900 cycles per second.

Provision is made for audio monitoring and for visual indication of the correct shift frequencies.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.5 to 10
Type of Modulation: FM
Type of Signal: Pulse (facsimile)
Input and Output Impedances: 500 ohms (balanced)
Power Output: 0 dbm to +10 dbm across 600-ohm load
Power Requirements: 70 w, 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Modulator MD-168/UX	(USA) 2C2537-168 (USN) F16-M-42293-9801 (FSN) 5815-219-9671	5-5/8 x 14-3/4 x 19-1/8	56

(Equipment consists of only one major component.)

AN/TXA-type RADIO MODULATOR

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91629

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	2	139

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Times Facsimile Corp.	New York, N. Y.	NObsr-52604	

FACSIMILE SET AN/TXC-1( )

1 July 1958
Cognizant Serv: USA FSN: 5815-356-3753

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	6C25-TXC1	--	--


AN/TXC-1

FUNCTIONAL DESCRIPTION:

Facsimile Set AN/TXC-1( ), is a transmitting and receiving equipment for communication of graphic material, such as documents, photographs, drawings, and charts, over conventional communication channels.

This equipment consists essentially of a rotating drum, an optical system, and related control mechanisms that can be synchronized with compatible transmitting or receiving facsimile sets operating on the same connecting facility.

This set can be used in wire lines by coupling directly to such facilities through input and output terminals provided on the equipment, or through a coil magnetically coupled to the receiver of a handset, or inductively to certain types of wire lines. It can also be used on radio circuits by using Converter CV-2( )/TX to convert to subcarrier frequencies, and by means of one model of this converter (CV-2C/TX) in conjunction with Exciter Unit 0-5/FR to operate in frequency shift transmission.

TECHNICAL CHARACTERISTICS:

Page Size: 12 x 18-1/4 inches
Transmission Time: 20 minutes; 40 minutes at half speed
Scanning Lines Per Inch: 96
Keying Frequency: 900 cps
Carrier Frequency: 1,800 cps
Signal Band Required: 900 to 2,700 cps
Diametral Index of Cooperation: 576
Speed of Drum Rotation: 60 rpm; 30 rpm also available in AN/TXC-1D,-1E, and -1F
Power Requirements: 250 w, 100-130-v 50-65-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Facsimile Transceiver TT-1/TXC-1	(USA) 6C310-1	10-3/4 x 17-5/8 x 34-5/8	85
1	Photographic Equipment PH-549/TXC-1	----------	----------	83
1	Rectifier Power Unit PP-86/TXC-1	(FSN) 6130-225-0171	9 x 10 x 12	48
1	Table MT-252/TXC-1	(FSN) 5815-244-4359	32 x 22 x 37	86

AN/TXC-1( ) FACSIMILE SET

REFERENCE DATA AND LITERATURE:

TM 11-489
TM 11-2258

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	39	783

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71-3107

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Espey Manufacturing Co., Inc.	New York, N. Y.	14644-P-49-2	$3,565.00
Time Telephoto Equipment, Inc.	New York, N. Y.	6437-P-51-01	2,031.00

TRANSCEIVER AN/TXC-type

5 December 1958
Cognizant Serv: USA FSN: CNP

	USA	USN	USAF
TYPE CLASS:	Obs	Used by	--
STOCK NO:	6C305.1	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Acme Transceiver Model CNP (Facsimile Equipment TT-29/FX) is a facsimile equipment which is designed to transmit or receive photographs, printed material, drawings, etc., by means of electrical communication. The set contains a 100-rpm revolving drum designed to receive or transmit between machines of the same type, or between other equipments that employ an index of cooperation of 290.6.

It is designed to communicate by means of 1,500 to 2,500 cycles per second amplitude-modulated facsimile signals. Special accessory equipment is required to translate this amplitude-modulated signal to narrow band frequency modulated signals for transmission by radio; the reverse is necessary for reception of signals at the receiver.

Frequency-modulated transmission can also be obtained by using the direct current component of the modulation envelope, to swing the radio frequency carrier. Suitable means for detecting this swing are provided by the receiver.

TECHNICAL CHARACTERISTICS:

Carrier Frequency: 1,920 cps
Copy Size: 7 by 9 in. maximum
Drum Speed: 100 rpm
Scanning Data:
Lines: 100 per in.
Lateral Rate: 1 in. per minute
Transmission Speed: 7 minutes for 7 by 9 in. copy
Power Requirements: 265 w, 2.3 amp nominal, 100 to 125 v, 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Acme Trancéiver Model CNP	6C305.1	17-1/4 x 17-1/2 x 18	

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/TXC-type TRANSCEIVER

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Acme Newspictures, Inc.	Cleveland, Ohio		

CONVERTER **AN/TXC-type**

1 July 1958
Cognizant Serv: USA FSN: CV-2/TX: 5815-243-4494
CV-2A/TX: 5815-498-8152

CV-2/TX, -2A/TX, -2B/TX

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	CV-2/TX: 6C24-2 CV-2A/TX: 6C24-2A CV-2B/TX: 6C24-2B	--	--

(See Illustration of CV-2C/TX)

Note—Converters CV-2/TX, CV-2A/TX, and CV-2B/TX are similar in appearance to Converter CV-2C/TX, except that the positions of the front-panel controls were rearranged on the CV-2C/TX; also, an additional jack and an additional switch appear on the front panel of the CV-2C/TX.

FUNCTIONAL DESCRIPTION:

Converters CV-2/TX, CV-2A/TX, and CV-2B/TX are used with facsimile equipments to translate their normal am signal output into fm facsimile signals for use over radio systems, or to reconvert received FM signals into am signals to operate the facsimile receiver. These sets produce only one type of FM signal, ranging from 1,800 to 3,000 cps. They have no provisions for take-off of dc signals for operation of fsk radio transmitters.

TECHNICAL CHARACTERISTICS:

Type of Signal: FM to AM; AM to FM

Signal Frequency:

AM: 1,800 cps

FM: 1,800 to 3,000 cps

Power Requirements: 100-130-v 54-65-cycle 1-phase ac; or 5.6-6.3-v dc (unlettered model only)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Converter CV-2/TX	5815-243-4494	9-1/2 x 11-9/16 x 13-5/8	35
	or			
	Converter CV-2A/TX	5815-498-8152	9-3/8 x 12-9/16 x 9-1/4	
	or			
	Converter CV-2B/TX			

(Equipment consists of only one major operating component.)

REFERENCE DATA AND LITERATURE:

TM 11-489, TM 11-2252

AN/TXC-type CONVERTER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.7	55

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: (USA) 71-3055; MIL-C-13928

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Rudolph Wurlitzer Co.	Tonawanda, N. Y.	6516-P-51-10	$599.51

CONVERTER AN/TXC-type

1 July 1958
Cognizant Serv: USA FSN: 5815-503-2598

CV-2C/TX

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	6C24-2C	--	--



CV-2C/TX

FUNCTIONAL DESCRIPTION:

Converter CV-2C/TX is similar to the earlier models, except that provisions have been included for a dc signal signal output, and a choice of FM signal frequencies is available.

TECHNICAL CHARACTERISTICS:

Type of Signal: FM to AM; AM to FM
Signal Frequency:
AM: 1,800 cps
FM: 1,800 to 3,000 cps or 1,500 to 2,300 cps
Power Requirements: 100–130-v 54–65-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Converter CV-2C/TX	5815-503-2598	9-1/2 x 11-9/16 x 13-5/8	35

(Equipment consists of only one major component.)

AN/TXC-type CONVERTER

REFERENCE DATA AND LITERATURE:

TM 11–489, TM 11–2252A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.7	55

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: (USA)71–3055; MIL–C–13928

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Wilcox-Gay Corp.	Charlotte, Mich.	2116–P–54–53	$638.44

FACSIMILE TRANSMITTER-RECEIVER EQUIPMENT AN/TXC-type

5 December 1958
Cognizant Serv: USN FSN: FOA

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Facsimile Transmitter-Receiver Equipment FOA is designed for transmission and reception of pictures to and from remote points. As a transmitter, it generates signals which may be carried by the telephone wires or by radio waves; as a receiver, it is capable of recording the signals on film for negative operation or on photographic paper for positive operation.

When negative reception is employed, the exposed film is handled like any other photographic negative from which any number of prints in any size may be made by projection printing; or any number of prints of the same size may be made by contact printing.

The FOA is capable of receiving or transmitting 100 lines per inch. It is similar to Facsimile Transmitter-Receiver Equipment FOC except that the FOC receives or transmits 300 lines per inch.

TECHNICAL CHARACTERISTICS:

Frequency Range in Cps: 1,500 to 2,500
Paper Accommodated: 7 in. by 9 in. sheet
Power Requirements: 110- or 220-v 50- to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transceiver Unit FOA consists of:	----------	17-1/4 x 17-1/2 x 18	160
1	Bed plate	----------	5 x 16-3/8	
1	Front panel	----------	10-3/4 x 17	
1	Lamp supply drawer	----------	5 x 11 x 15-3/4	
1	Multivibrator drawer	----------	4 x 11 x 15-3/4	
1	Optical unit	----------	3-1/2 x 4-1/2 x 4-3/4	
1	Picture amplifier drawer	----------	3-1/8 x 11 x 15-3/4	
1	Power supply drawer			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95004
NAVSHIPS 95005

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/TXC-type FACSIMILE TRANSMITTER-RECEIVER EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Acme Newspictures	Cleveland, Ohio	NXsr–85015	

FACSIMILE TRANSMITTER-RECEIVER EQUIPMENT AN/TXC-type

5 December 1958
Cognizant Serv: USN FSN: FOC

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Facsimile Transmitter-Receiver Equipment FOC is designed for transmission and reception of pictures to and from remote points. As a transmitter, it generates signals which may be carried by the telephone wires or by radio waves; as a receiver, it is capable of recording the signals on film for negative operation, or on photographic paper for positive operation.

When negative reception is employed, the exposed film is handled like any other photographic negative from which any size or number of prints may be made by projection printing, any number of prints of the same size may be made by contact printing.

The FOC is capable of receiving or transmitting 300 lines per inch. It is similar to Facsimile Transmitter-Receiver Equipment FOA except that the FOA receives or transmits 100 lines per inch.

TECHNICAL CHARACTERISTICS:

Frequency Range in Cps: 1,500 to 2,500
Paper Accommodated: 7 in. by 9 in. sheet
Power Requirements: 110- or 220-v, 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transceiver Unit FOC consists of:	----------	17-1/4 x 17-1/2 x 18	160
1	Bedplate	----------	5 x 16-3/8	
1	Front panel	----------	10-3/4 x 17	
1	Lamp supply drawer	----------	5 x 11 x 15-3/4	
1	Multivibrator drawer	----------	4 x 11 x 15-3/4	
1	Optical unit	----------	3-1/2 x 4-1/2 x 4-3/4	
1	Picture amplifier drawer	----------	3-1/8 x 11 x 15-3/4	
1	Power supply drawer			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95004
NAVSHIPS 95005

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/TXC-type FACSIMILE TRANSMITTER-RECEIVER EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

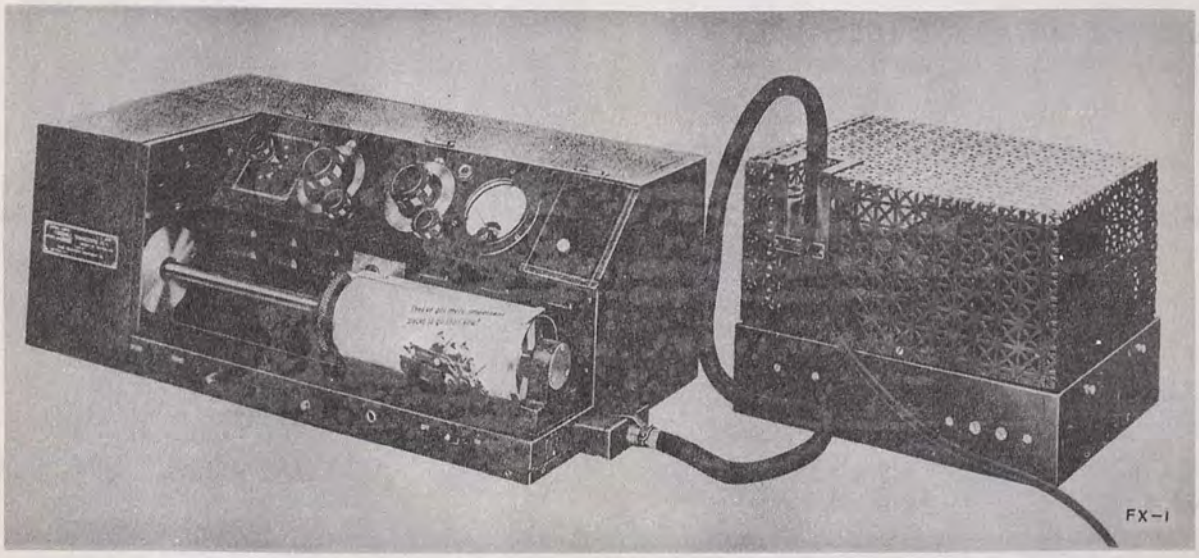
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Acme Newspictures	Cleveland, Ohio	NXsr–85015	

FACSIMILE TRANSCEIVER AN/TXC-type

26 November 1958
Cognizant Serv: USA FSN: FX-1: 5815-501-3794
FX-1A: 5815-665-3140
FX-1B: 5815-665-1092

FX-1, -1A, -1B

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Facsimile Transceivers FX-1, FX-1A, and FX-1B are the basic operating components in corresponding Facsimile equipments RC-120, RC-120-A, and RC-120-B. With their power supplies and accessories, they provide for the transmission and reception of printed, written, drawn, or photographic copy over regular voice communication channels (radio or wire). Copy 7 by 7-3/8 inches can be transmitted in 7 minutes. The copy can be recorded on material requiring no further processing or on material that must be photographically processed.

Facsimile Transceivers FX-1, FX-1A, and FX-1B become Facsimile Equipment RC-120-( ) with addition of the following equipment: one Power Supply PE-140, PE-140-A, PE-140-B, or PE-150; one Photographic Equipment PH-411; one Chest CH-117; one Chest CH-116; one Bag BG-124

TECHNICAL CHARACTERISTICS:

Keying Frequency: 900 cps
Carrier Frequency: 1,800 cps
Signal Band Required: 900 to 2,700 cps
Page Size: 7 x 8-5/8 inches
Transmission Time: 7.5 minutes
Scanning Lines per Inch: 96
Allowable Delay Distortion: ±278 microseconds
Diametral Index of Cooperation: 264
Speed of Drum Rotation: 90 strokes per minute
Power Requirements: 250 w, 100-130-v 50-60-cycle 1-phase ac; or 25 amp at 6-v dc

AN/TXC-type FACSIMILE TRANSCEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Facsimile Tranceiver FX–1, FX–1A, or FX–1B (Equipment consists of only one major component.)	----------	10 x 12 x 22	60

REFERENCE DATA AND LITERATURE:

TM 11–375B, TM 11–489, TM 11–4038

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: 71–1679

DESIGN COG: USA, Sig C

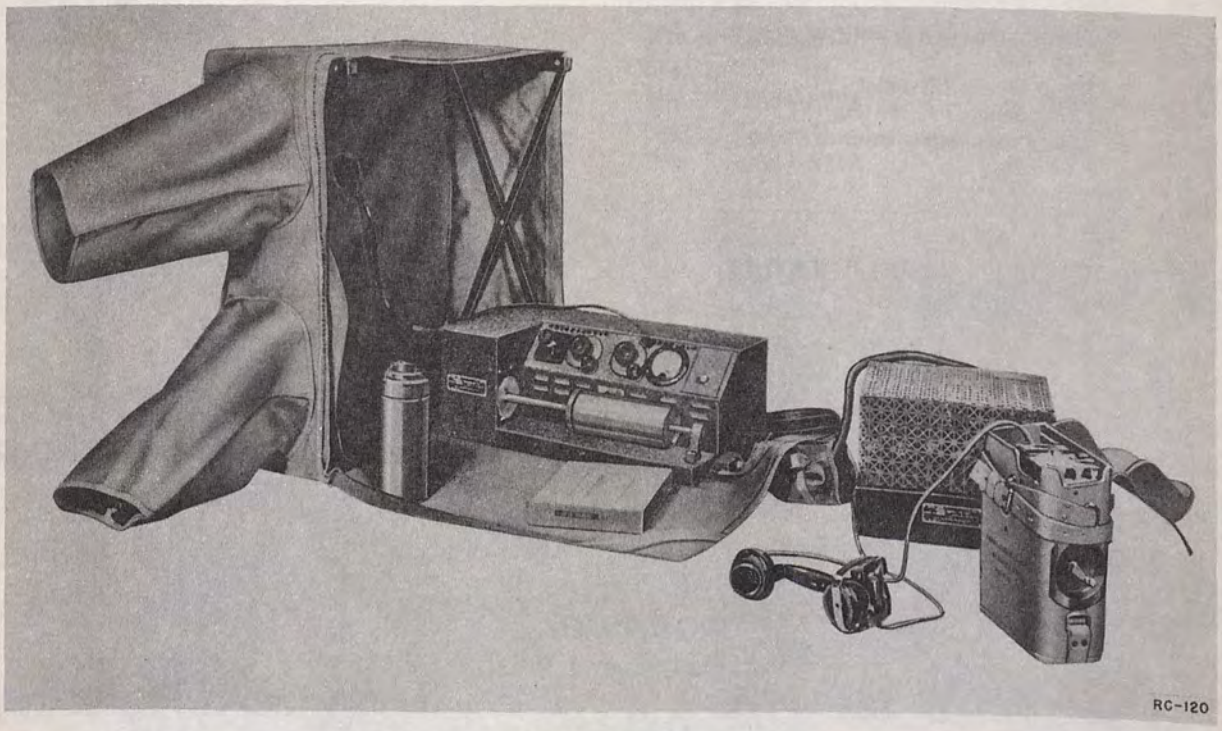
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Times Telephoto Equipment, Inc.	New York, N. Y.	NObsr–42035, 5 April 1944	$3,250.00 with spares

FACSIMILE EQUIPMENT AN/TXC-type

1 July 1958
Cognizant Serv: USA FSN: 5815–164–7106

RC–120–( )

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	6C25–120	--	--



FUNCTIONAL DESCRIPTION:

Facsimile Equipment RC–120–( ) is a transmitting and receiving set used for communicating graphic copy. It will receive positive and negative photographs, printed or written copy, and similar material on film or direct on special papers. It is used in fixed or field stations.

This equipment consists of a receiver-transmitter unit, power supply, and associated accessories. A portable darkroom tent is included for field use.

TECHNICAL CHARACTERISTICS:

Maximum Page Size: 7 x 8-5/8 inches
Transmission Time: 7 minutes
Drum Speed: 90 rpm
Diametral Index of Cooperation: 264
Scanning Lines Per Inch: 96
Carrier Frequency: 1,800 cps
Power Requirements: 100–130-v 50–65-cycle ac

AN/TXC-type FACSIMILE EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Bag BG–140			
1	Facsimile Transceiver FX–1–( )	----------	22 x 12 x 10	60
1	Photographic Equipment PH–411			
1	Power Supply PE–140–( )	----------	10 x 12 x 12	50
1	Power Supply PE–150 (Supplied only with unlettered models)	----------	8-3/4 x 11 x 14	60

REFERENCE DATA AND LITERATURE:

TM 11–375B

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

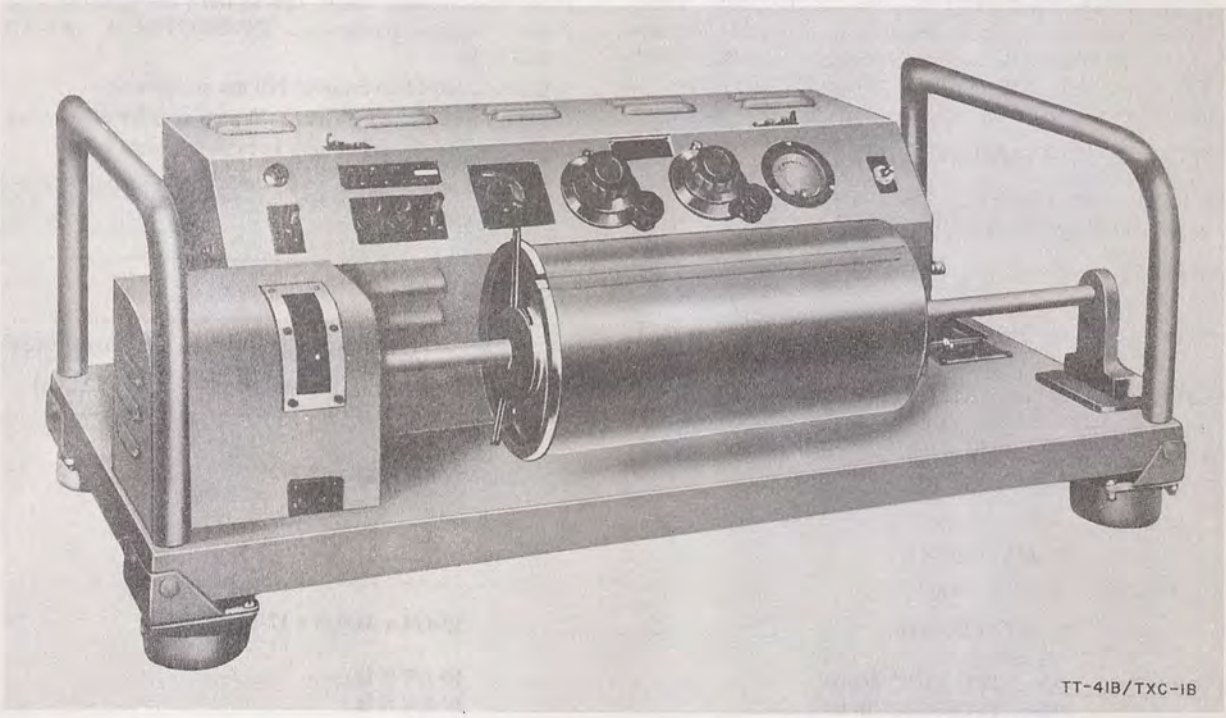
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

FACSIMILE TRANSCEIVER AN/TXC-type

22 October 1958
Cognizant Serv: USN FSN: TT-41/TXC-1B, 5815-669-9903
TT-41A/TXC-1B, 5815-642-8047
TT-41B/TXC-1B, 5815-642-8046

TT-41/TXC-1B,
TT-41A/TXC-1B,
TT-41B/TXC-1B

	USA	USN	USAF
TYPE CLASS:	Used by	Used by	Std
STOCK NO:	--	TT-40/TXC-1B: F16-F-12564-8221 TT-41A/TXC-1B: F16-F-12564-8223 TT-41B/TXC-1B: F16-F-12564-8243	--



TT-41B/TXC-1B

FUNCTIONAL DESCRIPTION:

Facsimile Transceivers TT-41/TXC-1B, TT-41A/TXC-1B, and TT-41B/TXC-1B are electromechanical-optical facsimile equipments of the revolving drum type. They are used for the transmission and reception of page copy in the form of photographs, sketches, or text between fixed stations over point-to-point voice communication channels, either wire or radio. They may be used in either ship or shore installations.

Received copy is recorded either directly on chemically treated paper or photographically in either positive or negative form. The transceivers can transmit or receive a 12- by 18-inch page of copy in 20 minutes at regular speed. The TT-41A/TXC-1B and TT-41B/TXC-1B are capable of operating at half-speed. For interoperation, the same speed must be used for both transmitting and receiving.

Functionally, these equipments are interchangeable. The TT-41A/TXC-1B uses a vacuum tube in the first signal amplifier to eliminate the necessity of tube selection; in addition, it has a potentiometer to eliminate hum pattern. The TT-41B/TXC-1B has its power supply designed to eliminate radio interference.

When operated over wire lines, the facsimile transceivers can be connected directly to the line by any one of several

AN/TXC-type FACSIMILE TRANSCEIVER

input and output terminals of various impedances and levels. They can also be connected to the line by a coupling coil, either through the receiver of a conventional telephone headset or to certain types of lines that have no ringing or signaling circuits. When used on radio communication circuits for subcarrier amplitude modulation, subcarrier frequency modulation, or frequency-shift modulation, additional equipment is required to connect the transceiver to the radio transmitter and receiver. Typical equipment includes Radio Modulator MD–168/UX, Frequency Shift Converter CV–172/U, Keyer Adapter KY–44/FX, and Frequency Shift Keyer KY–58/GRT or KY–75/SRT. For photographic reception, photographic supplies and darkroom facilities must be available.

Facsimile Transceivers TT–41/TXC–1B through TT–41B/TXC–1B will work in a system with Facsimile Transceivers TT–1/TXC–1 through TT–1F/TXC–1 (part of Facsimile Sets AN/TXC–1 through AN/TXC–1F). Except for the color of the finish, these transceivers are identical. The TT–41/TXC–1B, however, cannot be operated with the TT–1D/TXC–1, TT–1E/TXC–1, or TT–1F/TXC–1 at other than full-speed operation.

TECHNICAL CHARACTERISTICS:

Maximum Copy Size: 12 by 18-11/16 inches
Size of Scanning Spot: 0.01 by 0.01 inch
Drum Size:
Diameter: 6 inches
Length: 12 inches
Speed of Drum:
Rotation: 60 rpm, with option of 30 rpm in TT–41A/TXC–1B and TT–41B/TXC–1B
Lateral Movement: 12-1/2 inch in 20 minutes, with option of 12-1/2 inches in 40 minutes in TT–41A/TXC–1B and TT–41B/TXC–1B
Drum Speed Control: 1,800 cps fork ocsillator
Scan: 96 lines per inch
Audio Carrier Frequency: 1,800 cps
Frequency Control: Tuning fork
Frequency Band Limits: 900 to 2,700 cps
Signal Levels:
Reception Input: −45 to 0 dmb
Transmission Output: 0 and/or +26 dbm
Power Requirements: 250 w, 100- to 130-v 50- to 60-cycle ac
Power Supply Equipment: PP–86D/TXC–1 (TT–41B/TXC–1B)
Unregulated Plate Supply: 270 ma at 450-v dc
Filament Supply: 6.25 and 1.75 amp at 6.3-v 60-cycle ac
Start Motor Supply: 2 amp at 115-v 60-cycle ac
Exciter Lamp Supply: 2.74 amp at 6-v (regulated ±.1-v), 1,800-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Facsimile Transceiver TT–41/TXC–1B		22-1/2 x 35 x 18-1/2	85
	or			
	TT–41A/TXC–1B			
	or			
	TT–41B/TXC–1B including:		12-1/4 x 34-5/8 x 17-13/16	70
1	Cord TFC–34–37–00–00		10-1/2 ft lg	
1	Cord TFC–34–37–01–00		10-1/2 ft lg	
1 set	Equipment spares		30 x 15 x 9	80
1	Magnifying lens		1/8 dia x 49/64	
1	Rectifier Power unit		10-5/16 x 12 x 8	30
1	Spring Scale, TFC–34–44–00–00		5-7/8 x 1 x 21/32	
1	Test Lead, TFC–34–37–03–00		8-1/2 lg	
1	Test Lead, TFC–90–37–02–00		6 ft lg	
10 pkg	Timefax ND			7.5
1	Tube Puller, TFC–90–00–90–00		7-1/4 x 1-1/16 x 3/16	

REFERENCE DATA AND LITERATURE:

For TT–41/TXC–1B: NAVSHIPS 90168
(TM 11–2258)
(TM 11–489)
For TT–41B/TXC–1B: NAVSHIPS 91068A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For TT–41/TXC–1B:		
4	14.9	483
For TT–41B/TXC–1B		
4	19.2	458

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

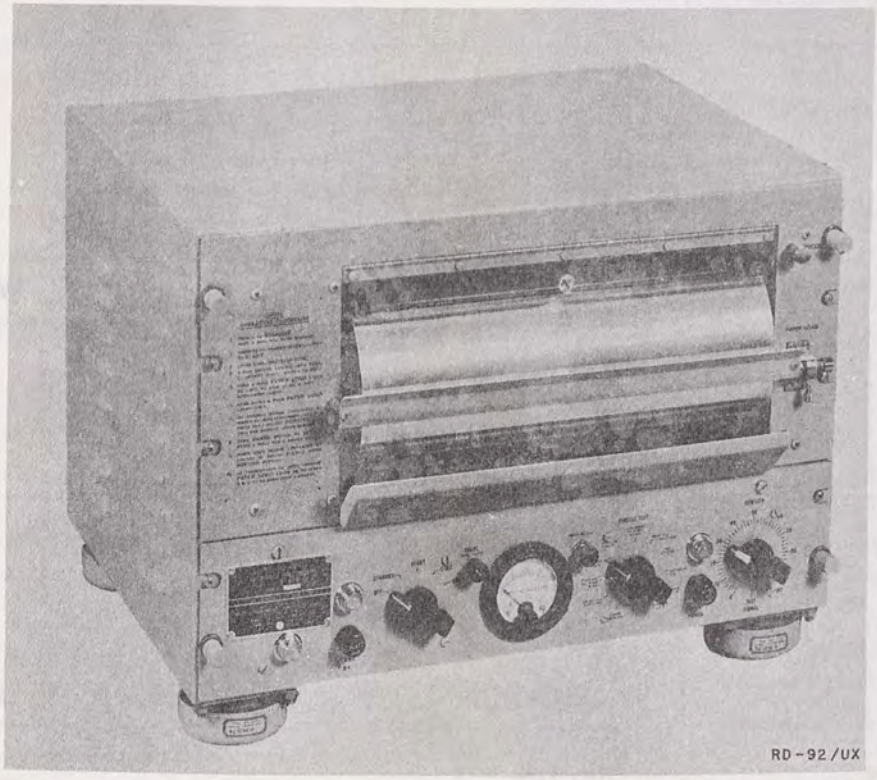
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Times Facsimile Corp.	New York, N. Y.	NObsr–42445 (TT–41/TXC–1B) NObsr–52042 (TT–41B/TXC–1B), 6 October 1950	

FACSIMILE RECORDER AN/TXR-type

20 November 1958
Cognizant Serv: USN FSN: RD-92/UX

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	6C262-92	F16-R-40501-1008	--



FUNCTIONAL DESCRIPTION:

Facsimile Recorder RD-92/UX is designed to make direct capable recordings of copy transmitted by Facsimile Set AN/TXC-1. It is capable of recording facsimile signals either from wire or radio communication circuits. When used with wire lines, it can be connected directly to the line; when used without wire lines, it can be connected directly to an am. radio receiver having a 500-ohm output, provided that the signals are amplitude modulated. For subcarrier FM signals, Frequency Shift Converter CV-172/U or Converter CV-2C/TX is used in addition to the radio receiver.

TECHNICAL CHARACTERISTICS:

Type: Rotating drum
Input Frequency: 500 to 10,000 cps
Signal Level: 0 to −40 dbm
Size of Copy: 12 x 18-3/4 inches
Transmission Time: 20 min
Type Modulation: AM
Type Recording: Direct stylus
Lines per Inch: 96
Drum Speed: 60 rpm
Drum Diameter: 6 inches
Phasing Signal: Pulses, 1 per sec
Input Impedance: 1,600 ohms
Index of Cooperation: 576 (International Index)
Mounting: Self-contained unit for either table or bench mounting
Power Requirements: 150 w, 90-130-v 55-65-cycle 1-phase ac

AN/TXR-type FACSIMILE RECORDER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Facsimile Recorder RD–92/UX	(USA) 6C262–92 (USN) F16–R–40501–1008	14-1/2 x 20 x 16-1/2	71

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91401

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

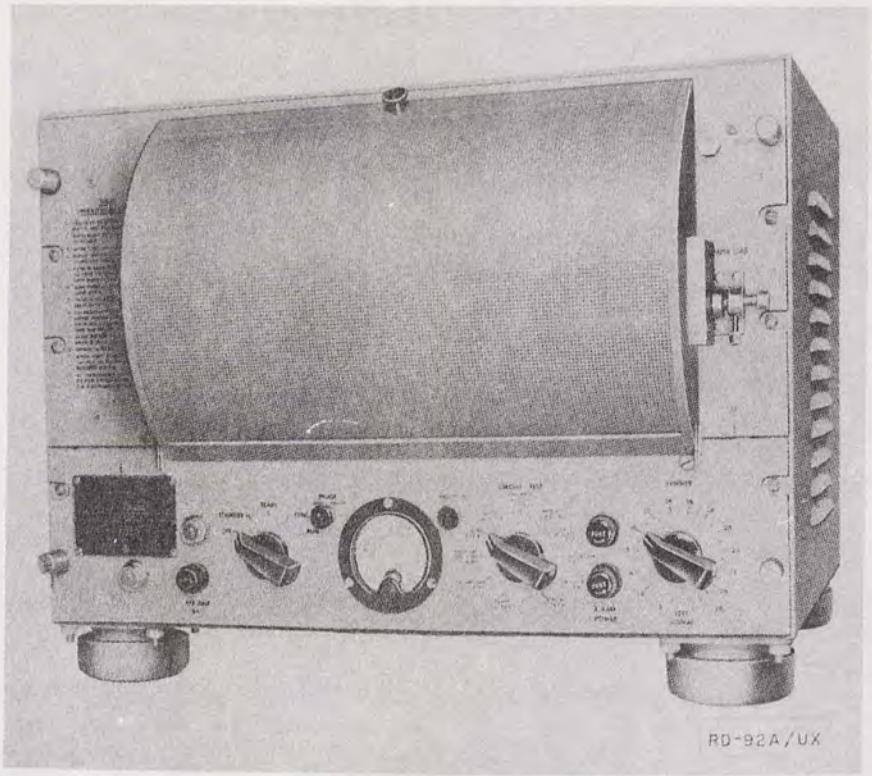
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Times Facsimile Corp.	New York, N. Y.		

FACSIMILE RECORDER AN/TXR-type

20 November 1958
Cognizant Serv: USN FSN: 5815-665-3146

RD-92A/UX

	USA	USN	USAF
TYPE CLASS:	--	Used by	L/Std
STOCK NO:	6C262-92A	F16-Q-239754-200	--



FUNCTIONAL DESCRIPTION:

Facsimile Recorder RD-92A/UX is similar to the unlettered model, the major difference being in the required input impedance. This equipment makes direct recordings of copy transmitted by Facsimile Set AN/TXC-1 or its equivalent. The recorded image may be pictures, maps, sketches, typewritten or printed text, or handwriting. When used with wire lines, the recorder is connected directly to the line. Or it may be connected to an AM. receiver, provided that the received facsimile signal is amplitude modulated. Other types of modulation must be converted to amplitude-modulated facsimile signals by use of Frequency Shift Converter CV-172/U or Converter CV-2( )/TX.

It is a self-contained unit which may be mounted on a standard 19-inch relay rack. The rack may be equipped with shock mounts for bench use or with rollers to permit use as a file drawer.

TECHNICAL CHARACTERISTICS:

Type: Rotating drum
Input Frequency: 500 to 10,000 cps
Signal Level: 0 to −40 dbm
Size of Copy: 12 x 18-3/4 inches
Transmission Time: 20 minutes
Type Modulation: AM
Type Recording: Direct stylus
Lines per Inch: 96
Drum Speed: 60 rpm
Drum Diameter: 6 inches
Phasing Signal: Pulses, 1 per sec
Input Impedance: 2,000 ohms
Index of Cooperation: 576 (International Index)
Mounting: Self-contained unit, suitable for rack or bench mounting
Power Requirements: 150 w, 90-130-v 55-65-cycle 1-phase ac

AN/TXR-type FACSIMILE RECORDER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Facsimile Recorder RD–92A/UX	(FSN) 5815–665–3146 (USA) 6C262–92A (USN) F16–Q–239754–200	14 x 19-1/8 x 17-21/32	75

(This equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91630

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	10.4	280

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: (USN) F–262

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Times Facsimile Corp.	New York, N. Y.	NObsr–52050	

PROJECTION GROUP AN/UFA-3

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Projection Group AN/UFA–3 is a portable, still, silent projector unit with advance mechanism, amplifier, filter unit, and cabinet. A 70-cycle keying tone is received from a record player and amplified to operate the advance mechanism. Suitable filters make the keying tone inaudible; the keying tone is recorded on the sound disk which produces the proper sounds to accompany the picture being projected on the screen.

TECHNICAL CHARACTERISTICS:

Type: Still, silent
Film size: 35 mm
Keying Tone Frequency: 70 cps
Power Requirements: 115-v, 50- to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Projector Group AN/UFA–3	----------	16 x 24 x 37	124

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/UGA-type CARRIER TELEGRAPH RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Carrier Telegraph Receiver R-466/UC	----------	8-23/32 x 14-3/8 x 19	36.5

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91612

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	9.25	94.5

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-R-15890 (Ships)

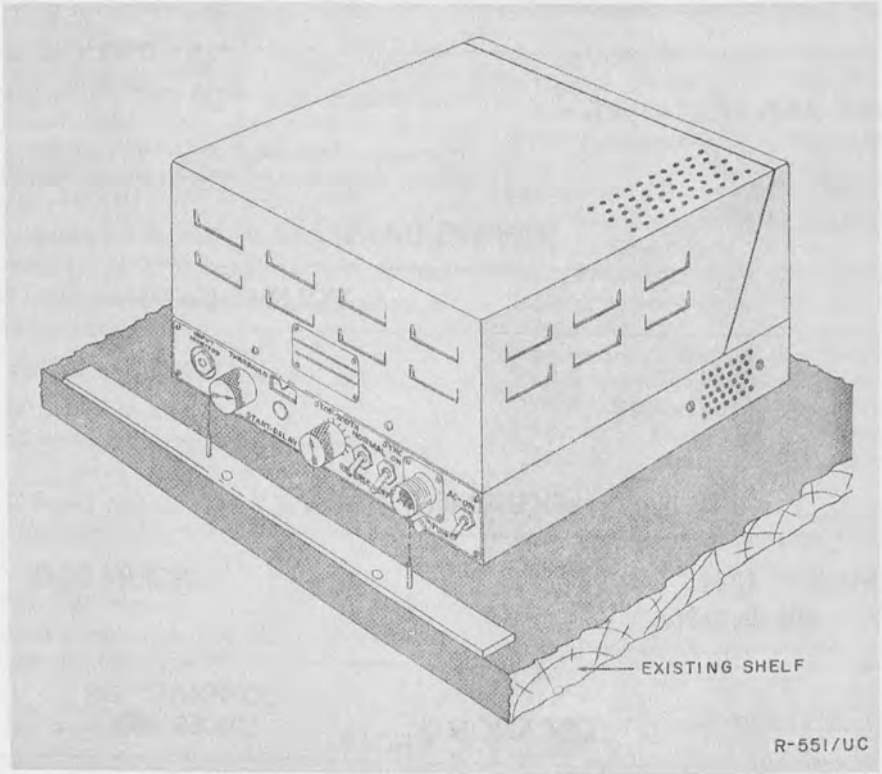
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
CGS Laboratories, Inc.	Stamford, Conn.	NObsr-52314, 25 February 1952	$620.00

TELEGRAPH CARRIER RECEIVER AN/UGA-type

5 December 1958
Cognizant Serv: USN FSN: 5805-347-9194 R-551/UC

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Carrier Receiver R-551/UC is designed to convert keyed audio tone teletypewriter signals to direct current on-off pulses suitable for operating a teletypewriter printer.

Provisions are included for generating teletypewriter synchronizing pulses of variable rate and duration when used with an appropriately equipped teletypewriter receiver.

TECHNICAL CHARACTERISTICS:

Impedance Data:
Input: 600 ohms (nominal)
Output: 40 to 200 ohms
Input Frequency: 400 to 8,000 cps
Input Level: 0.1 to 2 v rms
Output: 60 ma
Power Requirements: 100 w, 115-v 60-cycle 1-phase ac

AN/UGA-type TELEGRAPH CARRIER RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph Carrier Receiver R-551/UC	----------	8-1/2 x 12 x 13-1/2	33

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91907

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2		

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-D-16284

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Schuttig & Co. Inc.	Washington, D. C.	NObsr-52670	$345.00

TELEGRAPH TERMINAL AN/UGC-2(XN-1)

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Telegraph Terminal AN/UGC-2(XN-1) is designed to provide a two-channel radio circuit. Two synchronous or nonsynchronous telegraph transmissions modulate a single radio carrier wave that can be transmitted over one of four specific frequencies.

This equipment provides demultiplexing input frequencies of 1,955 cycles, 2,355 cycles, 2,755 cycles, and 3,155 cycles. The keying speed is 240 words per minute. The equipment is suitable for either single or dual diversity operation.

TECHNICAL CHARACTERISTICS:

Multiplexer TD-121(XN-1)/UGC-2:
- Keying Input: Positive, negative or polar dc and voltage pulses
- Input Level: ±10-v dc minimum; 45 ma dc minimum
- Keying Input Impedance:
  - Dc Voltage: 100,000 ohms
  - Direct Current: 220 ohms
- Keying Speed: 240 wpm
- Output Impedance: 10,000 ohms
- Output Level:
  - Neutral: 0 to 25 v
  - Polar: +6 to −6 v
- Power Requirements: 50 w, 110-v or 220-v, 50- to 60-cycle ac

Demultiplexer TD-122(XN-1)/UGC-2:
- Input Impedance: 600 ohms, unbalanced
- Input Level: +8 vu to −50 vu
- Input Frequencies: 1,955, 2,355, 2,755, 3,155 cps
- Input Frequency Shifts: 400 cps minimum; 1,200 cps maximum
- Receiver Input: Single or dual diversity
- Keying Speed: 100 dot cps (240 wpm)
- Output: 2 floating outputs, isolated from each other, supply neutral dc pulses of 65 ma maximum into 2,000 ohms external load or to a teleprinter line with 2,000 ohms impedance

Power Requirements: 200 w; 110-v or 220-v, 50- to 60-cycle ac

Power Supply PP-1307(XN-1)/UGC-2:
- Controls: Power on-off switch; regulated voltage adjustment
- Indicators: Power on-off lamp
- Power Requirements: 200 w; 110-v or 220-v, 50- to 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Demultiplexer TD-122/XN-1)/UGC-2	----------	5-1/4 x 13-1/2 x 19	27
1	Interconnecting cable	----------	72 lg	
1	Multiplexer TD-121(XN-1)/UGC-2	----------	3-1/2 x 10 x 19	15
1	Power cord	----------	23 lg	
1	Power Supply PP-1307(XN-1)/UGC-2	----------	5-1/4 x 14 x 19	30

AN/UGC-2(XN-1) TELEGRAPH TERMINAL

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92444

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

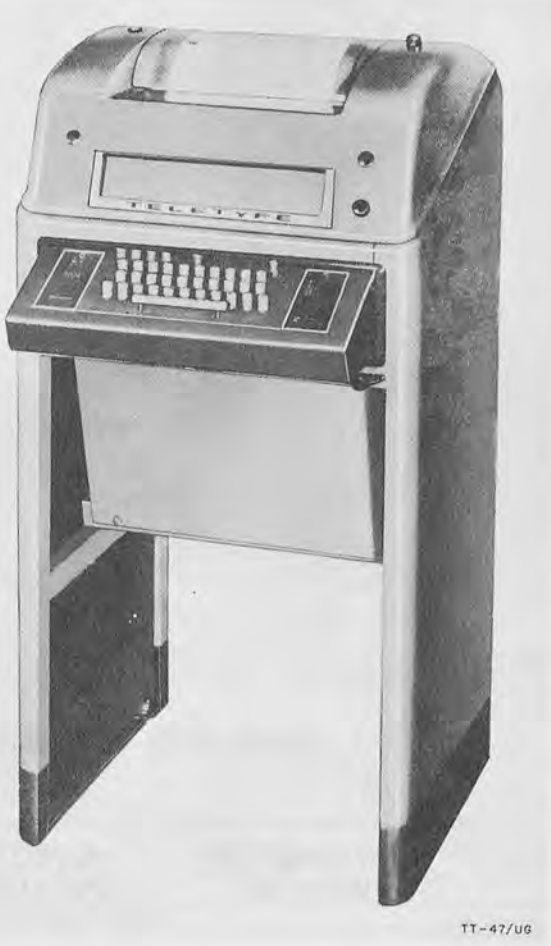
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Northern Radio Co., Inc.	New York, N. Y.	NObsr–63201, 23 February 1953	$4,000.00

TELETYPEWRITER AN/UGC-type

23 October 1958
Cognizant Serv: USN FSN: TT-47/UG, 5815-370-0063
5815-564-6789
TT-48/UG, 5815-370-0059

·TT-47/UG, TT-48/UG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Std
STOCK NO:	TT-47/UG: 4TTT47 TT-48/UG: NSN	TT-47/UG: F17-T-350013-319 TT-48/UG: F17-T-350013-309	--



TT-47/UG

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-47/UG and TT-48/UG are sending and receiving page-printing teletypewriter sets used for the transmission and reception of teletypewriter messages over wire or radio communication circuits. The signals transmitted and received are of the open-and-closed dc type. The equipments are adjustable to speeds of 460 and 600 operations per minute in addition to their regular speed of 368 operations per minute.

The TT-47/UG and TT-48/UG are electrically and mechcanically interchangeable with the exception of their motors. The TT-47/UG is equipped with synchronous ac Motor PD-17/U; the TT-48/UG is equipped with series-governed ac Motor PD-18/U. The cabinet supplied with either unit is suitable for deck mounting.

Teletypewriter TT-47/UG and TT-48/UG differ from the TT-47A/UG and TT-48A/UG in several respects. In addition to electrical and mechanical differences, the A models have an increased number of terminal connectors, a new and improved keyboard, and an increase to 85 characters per line.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Standard communications
Characters Per Line: 72
Operating Speed:
368 opm, 60 wpm
460 opm, 75 wpm
600 opm, 100 wpm
Code: 5-unit, start-stop
Number of Channels: 2
Type Motor:
TT-47/UG: Synchronous (PD-17/U)
TT-48/UG: Series-governed (PD-18/U)
Current Rating:
TT-47/UG (PD-17/U):
Starting: 9 amp
Operating: 1.85 amp
TT-48/UG (PD-18/U):
Starting: 1.75 amp
Operating: 1 amp
Heat Dissipation:
TT-47/UG (PD-17/U): 50 w
TT-48/UG (PD-18/U): 75 w
Power Requirements:
TT-47/UG (PD-17/U): 65 w, 0.3 pf, 115-v ±10% 50- to 60-cycle ±0.5 cycle 1-phase ac
TT-48/UG (PD-18/U): 95 w, 0.83 pf, 115-v ±10% 50- to 60-cycle 1-phase ac

AN/UGC-type TELETYPEWRITER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor			
	PD–17/U for TT–47/UG	----------	4-3/8 x 8 x 4	8
	PD–18/U for TT–48/UG	----------	5-5/8 x 8-1/8 x 4	9
1	Automatic Keyer MX–1115/UG	----------	9-3/4 x 10-1/2 x 15-1/2	19
1	Cabinet CY–870/UG	----------	39-1/2 x 20-1/2 x 18-1/4	81
1 set	Equipment spares			
	151681 for TT–47/UG	----------	21-1/2 x 19-1/2 x 7-7/8	5
	151682 for TT–48/UG	----------	21-1/2 x 19-1/2 x 7-7/8	5
1 set	Gears 151060			
1	Keyboard MX–1114/UG	----------	4-3/4 x 15-1/2 x 17-1/2	11
1	Power Distribution Panel SB–154/UG	----------	8-1/8 x 4-5/8 x 15	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91393

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1 For TT–47/UG	24.09	314
1 For TT–48/UG	24.09	315

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: Spec No. CS898
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr–42434, 28 June 1948	$1,500 with equipment spares

TELETYPEWRITER AN/UGC-type

23 October 1958
Cognizant Serv: USN FSN: TT-47A/UG, 5815-644-3407
TT-48A/UG, 5815-665-2070

TT-47A/UG, TT-48A/UG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	TT-47A/UG: 4TT47 TT-48A/UG: NSN	--	--



TT-48A/UG

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-47A/UG and TT-48A/UG are sending and receiving page-printing teletypewriter sets used for the transmission and reception of teletypewriter messages over wire or radio communication circuits. Signaling between stations is accomplished by the five-unit, start-stop permutation code and utilizes the 7.42-unit transmission pattern. The operating speed of 60 words per minute may be increased to 75 or 100 words per minute by changing to other gears that are available as optional equipment.

The TT-47A/UG and TT-48A/UG are electrically and mechanically interchangeable with the exception of their motors. The TT-47A/UG is equipped with synchronous ac Motor PD-17A/U; the TT-48A/UG is equipped with series-governed ac Motor PD-18/U. The cabinet supplied with either unit is suitable for deck mounting.

Teletypewriters TT-47A/UG and TT-48A/UG differ from the TT-47/UG and TT-48/UG in several respects. In addition to electrical and mechanical differences, the later types have an increased number of terminal connectors, a new and improved keyboard, and an increase to 85 characters per line.

The TT-47A/UG and TT-48A/UG are identical with the TT-128A/UG and TT-129A/UG, respectively, except for their keyboards. The keyboards of the TT-128A/UG and TT-129A/UG have weather symbols instead of the standard communications keyboards on the TT-47A/UG and TT-48A/UG. The TT-47A/UG also is similar to Teletypewriter TT-171/UG except for the sending keyboard.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Improved communications
Characters Per Line: 85

AN/UGC-type TELETYPEWRITER

Operating Speed:
368 opm, 60 wpm
460 opm, 75 wpm
600 opm, 100 wpm
Code: 5-unit, start-stop
Transmission Pattern: 7.42-unit
Signaling Frequency:
60 Wpm: 22.8 dot-cycles
75 Wpm: 28.5 dot-cycles
100 Wpm: 37.1 dot-cycles

Output Signal: On-off dc, 0.06 amp nominal from external 115-v source, either positive or negative polarity
Input Signal: On-off dc, 0.06 amp nominal from external source, either positive or negative polarity
Type Motor:
TT–47A/UG: Synchronous (PD–17A/U)
TT–48A/UG: Series-governed (PD–18/U)
Power Requirements:
TT–47A/UG (PD–17A/U): 65 w, 0.3 pf, 115-v ±10%, 60-cycle ±.5 cycle, 1-phase ac
TT–48A/UG (PD–18/U): 95 w, 0.83 pf, 115-v ±10% 50- to 60-cycle 1-phase

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor			
	PD–17A/U for TT–47A/UG	----------	5-3/4 x 8-1/2 x 4	9
	PD–18/U for TT–48A/UG	----------	5-3/4 x 8-1/2 x 4	10
1	Automatic Typer MX–1115A/UG	----------	9-3/4 x 10-1/2 x 15-1/2	19
1	Cabinet CY–780/UG	----------	40-1/2 x 20-1/2 x 18-1/4	81
1 set	Equipment spares			
	152730 for TT–47A/UG	----------	21-1/2 x 19-1/2 x 7-7/8	5
	152731 for TT–48A/UG	----------	21-1/2 x 19-1/2 x 7-7/8	5
1 set	Gears 151060			
1	Keyboard MX–1114A/UG	----------	4-3/4 x 15-1/2 x 17-1/2	11
1	Power Distribution Panel SB–154A/UG	----------	8-1/8 x 4-5/8 x 15	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91713

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For TT–47A/UG:		
1	24.09	316
For TT–48A/UG:		
1	24.09	315

TELETYPEWRITER **AN/UGC-type**

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

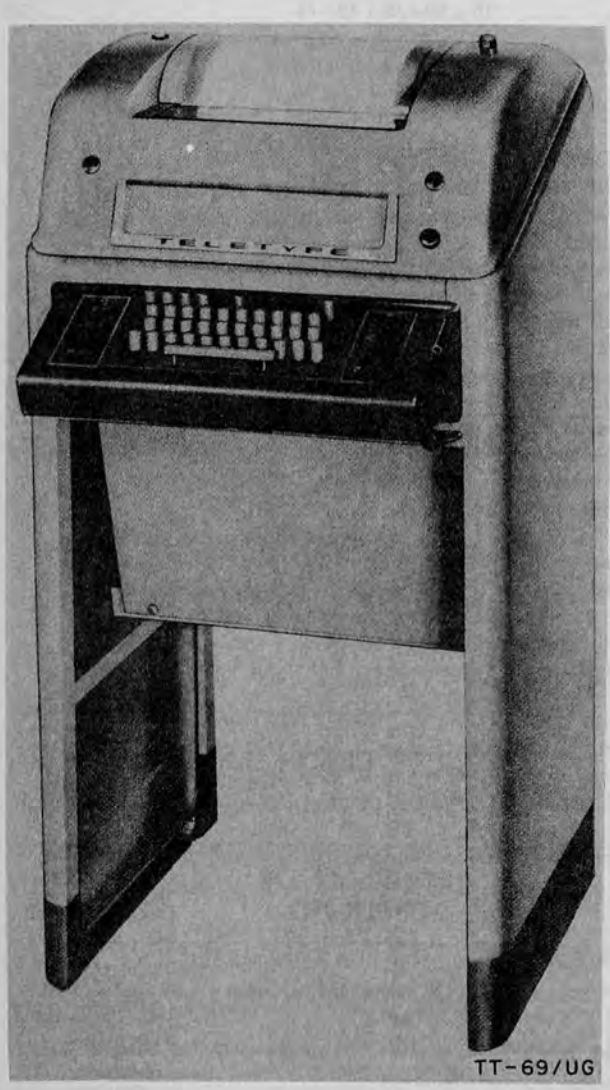
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr–52088, 4 December 1950	$1,510 (TT–47A/UG) with equipment spares
		NObsr–52089, 7 December 1950	$1,590 (TT–48A/UG) with equipment spares

TELETYPEWRITER AN/UGC-type

24 October 1958
Cognizant Serv: USN FSN: TT-69/UG, 5815-370-0075
5815-503-2766
TT-70/UG, 5815-370-0074

TT-69/UG, TT-70/UG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	L/Std
STOCK NO:	TT-69/UG: 4TTT-69 TT-70/UG: NSN	TT-69/UG: F17-T-350013-420 TT-69/UG: F17-T-350013-419	--



TT-69/UG

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-69/UG and TT-70/UG are sending and receiving page-printing teletypewriter sets used for the transmission and reception of teletypewriter messages over wire or radio communication circuits. The signals transmitted and received are of the open-and-closed dc type. The equipments are adjustable to speeds of 460 and 600 operations per minute in addition to their regular speed of 368 operations per minute.

The TT-69/UG and TT-70/UG are electrically and mechanically interchangeable with the exception of their motors. The TT-69/UG is equipped with synchronous ac Motor PU-17/U; the TT-70/UG is equipped with series-governed ac Motor PU-18/U. The cabinet supplied with either unit is suitable for bulkhead mounting.

Teletypewriters TT-69/UG and TT-70/UG differ from the TT-69A/UG and TT-70A/UG in several respects. In addition to electrical and mechanical differences, the A models have an increased number of terminal connectors, a new and improved keyboard, and an increase to 85 characters per line.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Standard communications
Characters Per Line: 72
Operating Speed:
368 opm, 60 wpm
460 opm, 75 wpm
600 opm, 100 wpm
Code: 5-unit, start-stop
Number of Channels: 2
Type Motor:
TT-69/UG: Synchronous (PD-17/U)
TT-70/UG: Series-governed (PD-18/U)
Current Rating:
TT-69/UG (PD-17/U):
Starting: 9 amp
Operating: 1.85 amp
TT-70/UG (PD-18/U):
Starting: 1.75 amp
Operating: 1 amp
Heat Dissipation:
TT-69/UG (PD-17/U): 50 w
TT-70/UG (PD-18/U): 75 w
Power Requirements:
TT-69/UG (PD-17/U): 65 w, 0.3 pf 115-v ±10% 60-cycle ±.5 cycle, 1-phase ac
TT-70/UG (PD-18/U): 95 w, 0.83 pf, 115-v ±10% 50- to 60-cycle 1-phase ac

AN/UGC-type TELETYPEWRITER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor			
	PD–17/U for TT–69/UG	----------	4-3/8 x 8 x 4	8
	PD–18/U for TT–70/UG	----------	5-5/8 x 8-1/8 x 4	9
1	Automatic Keyer MX–1115/UG	----------	9-3/4 x 10-1/2 x 15-1/2	19
1	Cabinet CY–871/UG	----------	15 x 20-1/2 x 18-1/4	70
1 set	Equipment spares			
	151681 for TT–69/UG	----------	21-1/2 x 19-1/2 x 7-7/8	5
	151682 for TT–70/UG	----------	21-1/2 x 19-1/2 x 7-7/8	5
1 set	Gears 151060			
1	Keyboard MX–1114/UG	----------	4-3/4 x 15-1/2 x 17-1/2	11
1	Power Distribution Panel SB–154/UG	----------	8-1/8 x 4-5/8 x 15	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91393

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For TT–69/UG:		
1	18.88	249
For TT–70/UG:		
1	18.88	250

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: Spec No. CS–898

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr–42434, 28 June 1948	$1,100 (TT–68/UG) with equipment spares $1,075 (TT–70/UG) with equipment spares

TELETYPEWRITER **AN/UGC-type**

28 October 1958
Cognizant Serv: USN FSN: TT-69A/UG, 5815-503-2766
5815-644-4705
TT-70A/UG, 5815-665-2068

TT-69A/UG, TT-70A/UG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	L/Std
STOCK NO:	TT-69A/UG: 4TTT-69 TT-70A/UG: NSN	TT-69A/UG: TT-70A/UG: F16-Q-305165-100	

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-69A/UG and TT-70A/UG are sending and receiving page-printing teletypewriter sets used for the transmission and reception of teletypewriter messages over wire or radio communication circuits. Signaling between stations is accomplished by the five-unit, start-stop permutation code and utilizes the 7.42-unit transmission pattern. The operating speed of 60 words per minute may be increased to 75 or 100 words per minute by changing to other gears that are available as optional equipment.

The TT-69A/UG and TT-70A/UG are electrically and mechanically interchangeable with the exception of their motors. The TT-69A/UG is equipped with synchronous ac Motor PD-17A/U; the TT-70A/U is equipped with series-governed ac Motor PD-18/U. The cabinet supplied with either unit is suitable for bulkhead mounting.

Teletypewriters TT-69A/UG and TT-70A/UG differ from the TT-69/UG and the TT-70/UG in several respects. In addition to electrical and mechanical differences, the later types have an increased number of terminal connectors, a new and improved keyboard, and an increase to 85 characters per line.

The TT-69A/UG and TT-70A/UG are identical with the TT-130A/UG and TT-131A/UG, respectively, except for their keyboards. The keyboards of the TT-130A/UG and TT-131A/UG have weather symbols instead of the standard communications keyboards on the TT-69A/UG and TT-70A/UG. The TT-69A/UG also is similar to Teletypewriter TT-171/UG except for the sending keyboard.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Improved communications
Characters Per Line: 85
Operating Speed:
368 opm, 60 wpm
460 opm, 75 wpm
600 opm, 100 wpm
Code: 5-unit, start-stop
Transmission Pattern: 7.42-unit
Signaling Frequency:
60 Wpm: 22.8 dot-cycles
75 Wpm: 28.5 dot-cycles
100 Wpm: 37.1 dot-cycles
Output Signal: On-off dc, 0.06 amp nominal from external 115-v source, either positive or negative polarity
Input Signal: On-off dc, 0.06 amp nominal from external source, either positive or negative polarity
Type Motor:
TT-69A/UG: Synchronous (PD-17A/U)
TT-70A/UG: Series-governed (PD-18/U)
Power Requirements:
TT-69A/UG (PD-17A/U): 65 w, 0.3 pf, 115-v ±10% 60-cycles ±.5 cycles 1-phase ac
TT-80A/U (PD-18/U): 95 w, 115-v ±10% 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor			
	PD-17A/U for TT-69A/UG	----------	5-3/4 x 8-1/2 x 4	9
	PD-18/U for TT-70A/UG	----------	5-3/4 x 8-1/2 x 4	10
1	Automatic Typer MX-1115A/UG	----------	9-3/4 x 10-1/2 x 15-1/2	19

AN/UGC-type TELETYPEWRITER

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet CY–781/UG		16 x 20-1/2 x 18-1/4	70
1 set	Equipment Spares			
	152730 for TT–69A/UG		21-1/2 x 19-1/2 x 7-7/8	5
	152731 for TT–70A/UG		21-1/2 x 19-1/2 x 7-7/8	5
1 set	Gears 151060			
1	Keyboard MX–1114A/UG		4-3/4 x 15-1/2 x 17-1/2	11
1	Power Distribution Panel SB–154A/UG		8-1/8 x 4-5/8 x 15	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91713

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For PP–69A/UG:		
1	18.88	249
For PP–70A/UG:		
1	18.88	250

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: Spec No. CS–989

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr–52088, 4 December 1950	$1,310 (TT–69A/UG) with equipment spares
		NObsr–52089, 7 December 1950	$1,570 (TT–70A/UG) with equipment spares

TELETYPEWRITER AN/UGC-type

28 October 1958
Cognizant Serv: USN FSN: TT-128A/UG, TT-129A/UG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-128A/UG and TT-129A/UG are sending and receiving page-printing teletypewriter sets used for the transmission and reception of weather aerological information by teletypewriter over wire or radio communication circuits. Signaling between stations is accomplished by the five-unit, start-stop permutation code and utilizes the 7.42-unit transmission pattern. The normal operating speed of 60 words per minute may be increased to 75 or 100 words per minute by changing to other gears which are available as optional equipment.

The TT-128A/UG and TT-129A/UG are electrically and mechanically interchangeable with the exception of their motors. The TT-128A/UG is equipped with synchronous ac Motor PD-17A/U; the TT-129A/UG is equipped with series-governed ac Motor PD-18/U. The cabinet supplied with either unit is suitable for deck mounting.

Teletypewriters TT-128A/UG and TT-129A/UG are identical to the TT-47A/UG and TT-48A/UG respectively, with the exception of their keyboards. The keyboards of the TT-128A/UG and TT-129/UG have weather symbols instead of standard communications keyboards.

TECHNICAL CHARACTERISTICS:

Type Keyboards: Improved weather
Characters Per Line: 85
Operating Speed:
368 opm, 60 wpm
460 opm, 75 wpm
600 opm, 100 wpm
Code: 5-unit, start-stop
Transmission Pattern: 7.42-unit
Signaling Frequency:
60 Wpm: 22.8 dot-cycles
75 Wpm: 28.5 dot-cycles
100 Wpm: 37.1 dot-cycles
Output Signal: On-off dc, 0.06 amp nominal from external 115-v source, either positive or negative polarity
Input Signal: On-off dc, 0.06 amp nominal from external source, either positive or negative polarity
Type Motor:
TT-128A/UG: Synchronous (PD-17A/U)
TT-129A/UG: Series-governed (PD-18/U)
Current Rating:
TT-128A/UG (PD-17A/U):
Starting: 9 amp
Operating: 1.85 amp
TT-129A/UG (PD-18/U):
Starting: 1.75 amp
Operating: 1 amp
Heat Dissipation:
TT-128A/UG (PD-17A/U): 50 w
TT-129A/UG (PD-18/U): 75 w
Power Requirements:
TT-128A/UG (PD-17A/U): 65 w, 0.3 pf, 115-v ±10% 60-cycle ±.5 cycle 1-phase ac
TT-129A/UG (PD-18/U): 95 w, 0.83 pf, 115-v ±10% 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor			
	PD-17A/U for TT-128A/UG	----------	4 x 5-3/4 x 8-1/2	9
	PD-18/U for TT-129A/UG	----------	4 x 5-3/4 x 8-1/2	10
1	Automatic Typer MX-1422A/UG	----------	9-3/4 x 10-1/2 x 15-1/2	19
1	Cabinet CY-870/UG	----------	18-1/4 x 20-1/2 x 40-1/2	81
1 set	Equipment spares			
	CTT-152730 for TT-128A/UG	----------	7-7/8 x 19-1/2 x 21-1/2	5
	CTT-152731 for TT-129A/UG	----------	7-7/8 x 19-1/2 x 12-1/2	5

PROJECTION GROUP AN/UFA-3

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Projection Group AN/UFA–3 is a portable, still, silent projector unit with advance mechanism, amplifier, filter unit, and cabinet. A 70-cycle keying tone is received from a record player and amplified to operate the advance mechanism. Suitable filters make the keying tone inaudible; the keying tone is recorded on the sound disk which produces the proper sounds to accompany the picture being projected on the screen.

TECHNICAL CHARACTERISTICS:

Type: Still, silent
Film size: 35 mm
Keying Tone Frequency: 70 cps
Power Requirements: 115-v, 50- to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Projector Group AN/UFA–3	----------	16 x 24 x 37	124

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/UGA-type CARRIER TELEGRAPH RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Carrier Telegraph Receiver R-466/UC	----------	8-23/32 x 14-3/8 x 19	36.5

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91612

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	9.25	94.5

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-R-15890 (Ships)

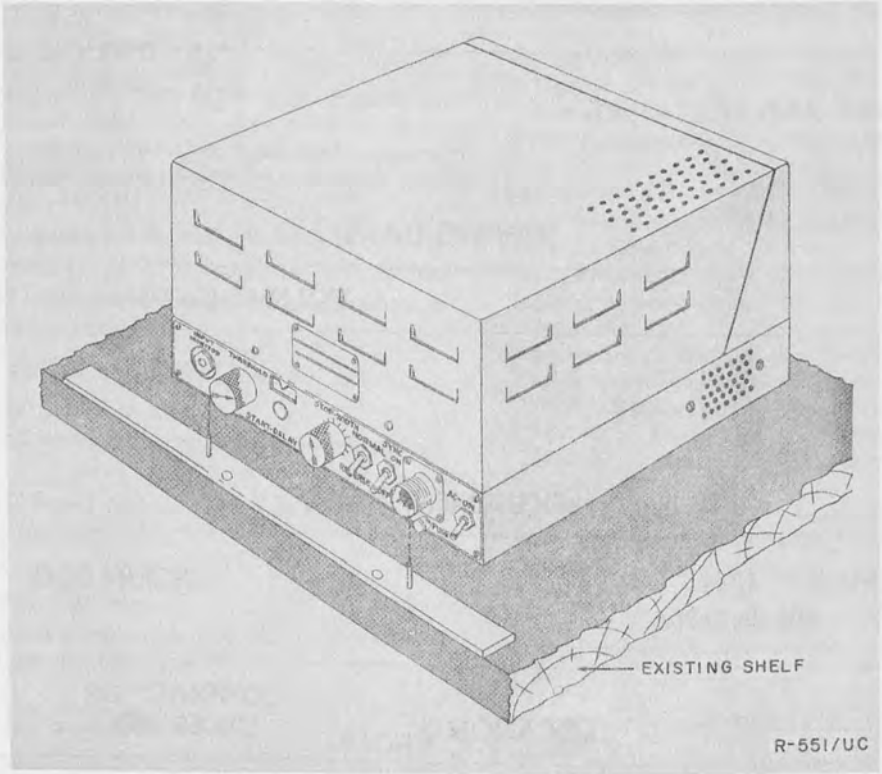
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
CGS Laboratories, Inc.	Stamford, Conn.	NObsr-52314, 25 February 1952	$620.00

TELEGRAPH CARRIER RECEIVER AN/UGA-type

5 December 1958
Cognizant Serv: USN FSN: 5805-347-9194 R-551/UC

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Carrier Receiver R-551/UC is designed to convert keyed audio tone teletypewriter signals to direct current on-off pulses suitable for operating a teletypewriter printer.

Provisions are included for generating teletypewriter synchronizing pulses of variable rate and duration when used with an appropriately equipped teletypewriter receiver.

TECHNICAL CHARACTERISTICS:

Impedance Data:
Input: 600 ohms (nominal)
Output: 40 to 200 ohms
Input Frequency: 400 to 8,000 cps
Input Level: 0.1 to 2 v rms
Output: 60 ma
Power Requirements: 100 w, 115-v 60-cycle 1-phase ac

AN/UGA-type TELEGRAPH CARRIER RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telegraph Carrier Receiver R-551/UC	----------	8-1/2 x 12 x 13-1/2	33

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91907

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2		

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-D-16284

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Schuttig & Co. Inc.	Washington, D. C.	NObsr-52670	$345.00

TELEGRAPH TERMINAL AN/UGC-2(XN-1)

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Telegraph Terminal AN/UGC-2(XN-1) is designed to provide a two-channel radio circuit. Two synchronous or nonsynchronous telegraph transmissions modulate a single radio carrier wave that can be transmitted over one of four specific frequencies.

This equipment provides demultiplexing input frequencies of 1,955 cycles, 2,355 cycles, 2,755 cycles, and 3,155 cycles. The keying speed is 240 words per minute. The equipment is suitable for either single or dual diversity operation.

TECHNICAL CHARACTERISTICS:

Multiplexer TD-121(XN-1)/UGC-2:
- Keying Input: Positive, negative or polar dc and voltage pulses
- Input Level: ±10-v dc minimum; 45 ma dc minimum
- Keying Input Impedance:
  - Dc Voltage: 100,000 ohms
  - Direct Current: 220 ohms
- Keying Speed: 240 wpm
- Output Impedance: 10,000 ohms
- Output Level:
  - Neutral: 0 to 25 v
  - Polar: +6 to −6 v
- Power Requirements: 50 w, 110-v or 220-v, 50- to 60-cycle ac

Demultiplexer TD-122(XN-1)/UGC-2:
- Input Impedance: 600 ohms, unbalanced
- Input Level: +8 vu to −50 vu
- Input Frequencies: 1,955, 2,355, 2,755, 3,155 cps
- Input Frequency Shifts: 400 cps minimum; 1,200 cps maximum
- Receiver Input: Single or dual diversity
- Keying Speed: 100 dot cps (240 wpm)
- Output: 2 floating outputs, isolated from each other, supply neutral dc pulses of 65 ma maximum into 2,000 ohms external load or to a teleprinter line with 2,000 ohms impedance

Power Requirements: 200 w; 110-v or 220-v, 50- to 60-cycle ac

Power Supply PP-1307(XN-1)/UGC-2:
- Controls: Power on-off switch; regulated voltage adjustment
- Indicators: Power on-off lamp
- Power Requirements: 200 w; 110-v or 220-v, 50- to 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Demultiplexer TD-122/XN-1)/UGC-2	----------	5-1/4 x 13-1/2 x 19	27
1	Interconnecting cable	----------	72 lg	
1	Multiplexer TD-121(XN-1)/UGC-2	----------	3-1/2 x 10 x 19	15
1	Power cord	----------	23 lg	
1	Power Supply PP-1307(XN-1)/UGC-2	----------	5-1/4 x 14 x 19	30

AN/UGC-2(XN-1) TELEGRAPH TERMINAL

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92444

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

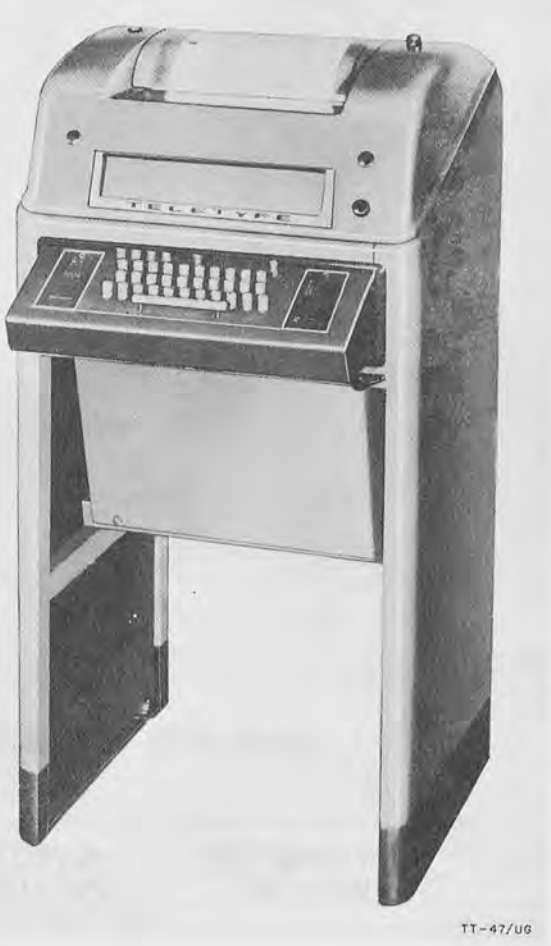
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Northern Radio Co., Inc.	New York, N. Y.	NObsr–63201, 23 February 1953	$4,000.00

TELETYPEWRITER AN/UGC-type

23 October 1958
Cognizant Serv: USN FSN: TT-47/UG, 5815-370-0063
5815-564-6789
TT-48/UG, 5815-370-0059

·TT-47/UG, TT-48/UG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	Std
STOCK NO:	TT-47/UG: 4TTT47 TT-48/UG: NSN	TT-47/UG: F17-T-350013-319 TT-48/UG: F17-T-350013-309	--



TT-47/UG

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-47/UG and TT-48/UG are sending and receiving page-printing teletypewriter sets used for the transmission and reception of teletypewriter messages over wire or radio communication circuits. The signals transmitted and received are of the open-and-closed dc type. The equipments are adjustable to speeds of 460 and 600 operations per minute in addition to their regular speed of 368 operations per minute.

The TT-47/UG and TT-48/UG are electrically and mechcanically interchangeable with the exception of their motors. The TT-47/UG is equipped with synchronous ac Motor PD-17/U; the TT-48/UG is equipped with series-governed ac Motor PD-18/U. The cabinet supplied with either unit is suitable for deck mounting.

Teletypewriter TT-47/UG and TT-48/UG differ from the TT-47A/UG and TT-48A/UG in several respects. In addition to electrical and mechanical differences, the A models have an increased number of terminal connectors, a new and improved keyboard, and an increase to 85 characters per line.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Standard communications
Characters Per Line: 72
Operating Speed:
368 opm, 60 wpm
460 opm, 75 wpm
600 opm, 100 wpm
Code: 5-unit, start-stop
Number of Channels: 2
Type Motor:
TT-47/UG: Synchronous (PD-17/U)
TT-48/UG: Series-governed (PD-18/U)
Current Rating:
TT-47/UG (PD-17/U):
Starting: 9 amp
Operating: 1.85 amp
TT-48/UG (PD-18/U):
Starting: 1.75 amp
Operating: 1 amp
Heat Dissipation:
TT-47/UG (PD-17/U): 50 w
TT-48/UG (PD-18/U): 75 w
Power Requirements:
TT-47/UG (PD-17/U): 65 w, 0.3 pf, 115-v ±10% 50- to 60-cycle ±0.5 cycle 1-phase ac
TT-48/UG (PD-18/U): 95 w, 0.83 pf, 115-v ±10% 50- to 60-cycle 1-phase ac

AN/UGC-type TELETYPEWRITER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor			
	PD–17/U for TT–47/UG	----------	4-3/8 x 8 x 4	8
	PD–18/U for TT–48/UG	----------	5-5/8 x 8-1/8 x 4	9
1	Automatic Keyer MX–1115/UG	----------	9-3/4 x 10-1/2 x 15-1/2	19
1	Cabinet CY–870/UG	----------	39-1/2 x 20-1/2 x 18-1/4	81
1 set	Equipment spares			
	151681 for TT–47/UG	----------	21-1/2 x 19-1/2 x 7-7/8	5
	151682 for TT–48/UG	----------	21-1/2 x 19-1/2 x 7-7/8	5
1 set	Gears 151060			
1	Keyboard MX–1114/UG	----------	4-3/4 x 15-1/2 x 17-1/2	11
1	Power Distribution Panel SB–154/UG	----------	8-1/8 x 4-5/8 x 15	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91393

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1 For TT–47/UG	24.09	314
1 For TT–48/UG	24.09	315

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: Spec No. CS898
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr–42434, 28 June 1948	$1,500 with equipment spares

TELETYPEWRITER AN/UGC-type

23 October 1958
Cognizant Serv: USN FSN: TT-47A/UG, 5815-644-3407
TT-48A/UG, 5815-665-2070

TT-47A/UG, TT-48A/UG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	TT-47A/UG: 4TT47 TT-48A/UG: NSN	--	--



TT-48A/UG

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-47A/UG and TT-48A/UG are sending and receiving page-printing teletypewriter sets used for the transmission and reception of teletypewriter messages over wire or radio communication circuits. Signaling between stations is accomplished by the five-unit, start-stop permutation code and utilizes the 7.42-unit transmission pattern. The operating speed of 60 words per minute may be increased to 75 or 100 words per minute by changing to other gears that are available as optional equipment.

The TT-47A/UG and TT-48A/UG are electrically and mechanically interchangeable with the exception of their motors. The TT-47A/UG is equipped with synchronous ac Motor PD-17A/U; the TT-48A/UG is equipped with series-governed ac Motor PD-18/U. The cabinet supplied with either unit is suitable for deck mounting.

Teletypewriters TT-47A/UG and TT-48A/UG differ from the TT-47/UG and TT-48/UG in several respects. In addition to electrical and mechanical differences, the later types have an increased number of terminal connectors, a new and improved keyboard, and an increase to 85 characters per line.

The TT-47A/UG and TT-48A/UG are identical with the TT-128A/UG and TT-129A/UG, respectively, except for their keyboards. The keyboards of the TT-128A/UG and TT-129A/UG have weather symbols instead of the standard communications keyboards on the TT-47A/UG and TT-48A/UG. The TT-47A/UG also is similar to Teletypewriter TT-171/UG except for the sending keyboard.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Improved communications
Characters Per Line: 85

AN/UGC-type TELETYPEWRITER

Operating Speed:
368 opm, 60 wpm
460 opm, 75 wpm
600 opm, 100 wpm
Code: 5-unit, start-stop
Transmission Pattern: 7.42-unit
Signaling Frequency:
60 Wpm: 22.8 dot-cycles
75 Wpm: 28.5 dot-cycles
100 Wpm: 37.1 dot-cycles

Output Signal: On-off dc, 0.06 amp nominal from external 115-v source, either positive or negative polarity
Input Signal: On-off dc, 0.06 amp nominal from external source, either positive or negative polarity
Type Motor:
TT–47A/UG: Synchronous (PD–17A/U)
TT–48A/UG: Series-governed (PD–18/U)
Power Requirements:
TT–47A/UG (PD–17A/U): 65 w, 0.3 pf, 115-v ±10%, 60-cycle ±.5 cycle, 1-phase ac
TT–48A/UG (PD–18/U): 95 w, 0.83 pf, 115-v ±10% 50- to 60-cycle 1-phase

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor			
	PD–17A/U for TT–47A/UG	----------	5-3/4 x 8-1/2 x 4	9
	PD–18/U for TT–48A/UG	----------	5-3/4 x 8-1/2 x 4	10
1	Automatic Typer MX–1115A/UG	----------	9-3/4 x 10-1/2 x 15-1/2	19
1	Cabinet CY–780/UG	----------	40-1/2 x 20-1/2 x 18-1/4	81
1 set	Equipment spares			
	152730 for TT–47A/UG	----------	21-1/2 x 19-1/2 x 7-7/8	5
	152731 for TT–48A/UG	----------	21-1/2 x 19-1/2 x 7-7/8	5
1 set	Gears 151060			
1	Keyboard MX–1114A/UG	----------	4-3/4 x 15-1/2 x 17-1/2	11
1	Power Distribution Panel SB–154A/UG	----------	8-1/8 x 4-5/8 x 15	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91713

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For TT–47A/UG:		
1	24.09	316
For TT–48A/UG:		
1	24.09	315

TELETYPEWRITER **AN/UGC-type**

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

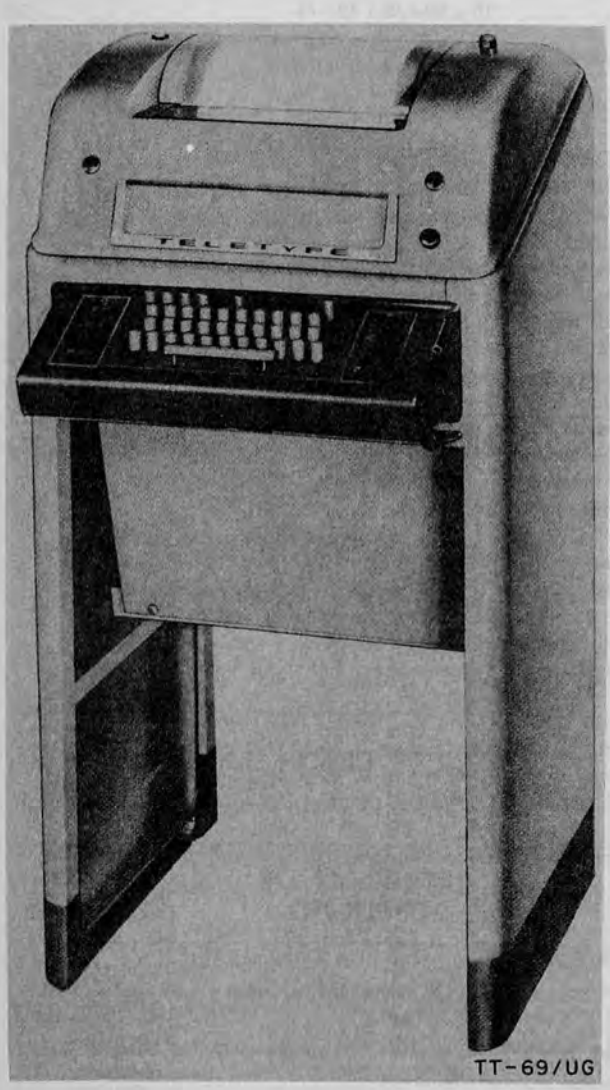
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr–52088, 4 December 1950	$1,510 (TT–47A/UG) with equipment spares
		NObsr–52089, 7 December 1950	$1,590 (TT–48A/UG) with equipment spares

TELETYPEWRITER AN/UGC-type

24 October 1958
Cognizant Serv: USN FSN: TT-69/UG, 5815-370-0075
5815-503-2766
TT-70/UG, 5815-370-0074

TT-69/UG, TT-70/UG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	L/Std
STOCK NO:	TT-69/UG: 4TTT-69 TT-70/UG: NSN	TT-69/UG: F17-T-350013-420 TT-69/UG: F17-T-350013-419	--



TT-69/UG

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-69/UG and TT-70/UG are sending and receiving page-printing teletypewriter sets used for the transmission and reception of teletypewriter messages over wire or radio communication circuits. The signals transmitted and received are of the open-and-closed dc type. The equipments are adjustable to speeds of 460 and 600 operations per minute in addition to their regular speed of 368 operations per minute.

The TT-69/UG and TT-70/UG are electrically and mechanically interchangeable with the exception of their motors. The TT-69/UG is equipped with synchronous ac Motor PU-17/U; the TT-70/UG is equipped with series-governed ac Motor PU-18/U. The cabinet supplied with either unit is suitable for bulkhead mounting.

Teletypewriters TT-69/UG and TT-70/UG differ from the TT-69A/UG and TT-70A/UG in several respects. In addition to electrical and mechanical differences, the A models have an increased number of terminal connectors, a new and improved keyboard, and an increase to 85 characters per line.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Standard communications
Characters Per Line: 72
Operating Speed:
368 opm, 60 wpm
460 opm, 75 wpm
600 opm, 100 wpm
Code: 5-unit, start-stop
Number of Channels: 2
Type Motor:
TT-69/UG: Synchronous (PD-17/U)
TT-70/UG: Series-governed (PD-18/U)
Current Rating:
TT-69/UG (PD-17/U):
Starting: 9 amp
Operating: 1.85 amp
TT-70/UG (PD-18/U):
Starting: 1.75 amp
Operating: 1 amp
Heat Dissipation:
TT-69/UG (PD-17/U): 50 w
TT-70/UG (PD-18/U): 75 w
Power Requirements:
TT-69/UG (PD-17/U): 65 w, 0.3 pf 115-v ±10% 60-cycle ±.5 cycle, 1-phase ac
TT-70/UG (PD-18/U): 95 w, 0.83 pf, 115-v ±10% 50- to 60-cycle 1-phase ac

AN/UGC-type TELETYPEWRITER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor			
	PD–17/U for TT–69/UG	----------	4-3/8 x 8 x 4	8
	PD–18/U for TT–70/UG	----------	5-5/8 x 8-1/8 x 4	9
1	Automatic Keyer MX–1115/UG	----------	9-3/4 x 10-1/2 x 15-1/2	19
1	Cabinet CY–871/UG	----------	15 x 20-1/2 x 18-1/4	70
1 set	Equipment spares			
	151681 for TT–69/UG	----------	21-1/2 x 19-1/2 x 7-7/8	5
	151682 for TT–70/UG	----------	21-1/2 x 19-1/2 x 7-7/8	5
1 set	Gears 151060			
1	Keyboard MX–1114/UG	----------	4-3/4 x 15-1/2 x 17-1/2	11
1	Power Distribution Panel SB–154/UG	----------	8-1/8 x 4-5/8 x 15	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91393

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For TT–69/UG:		
1	18.88	249
For TT–70/UG:		
1	18.88	250

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: Spec No. CS–898

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr–42434, 28 June 1948	$1,100 (TT–68/UG) with equipment spares $1,075 (TT–70/UG) with equipment spares

TELETYPEWRITER **AN/UGC-type**

28 October 1958
Cognizant Serv: USN FSN: TT-69A/UG, 5815-503-2766
5815-644-4705
TT-70A/UG, 5815-665-2068

TT-69A/UG, TT-70A/UG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	L/Std
STOCK NO:	TT-69A/UG: 4TTT-69 TT-70A/UG: NSN	TT-69A/UG: TT-70A/UG: F16-Q-305165-100	

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-69A/UG and TT-70A/UG are sending and receiving page-printing teletypewriter sets used for the transmission and reception of teletypewriter messages over wire or radio communication circuits. Signaling between stations is accomplished by the five-unit, start-stop permutation code and utilizes the 7.42-unit transmission pattern. The operating speed of 60 words per minute may be increased to 75 or 100 words per minute by changing to other gears that are available as optional equipment.

The TT-69A/UG and TT-70A/UG are electrically and mechanically interchangeable with the exception of their motors. The TT-69A/UG is equipped with synchronous ac Motor PD-17A/U; the TT-70A/U is equipped with series-governed ac Motor PD-18/U. The cabinet supplied with either unit is suitable for bulkhead mounting.

Teletypewriters TT-69A/UG and TT-70A/UG differ from the TT-69/UG and the TT-70/UG in several respects. In addition to electrical and mechanical differences, the later types have an increased number of terminal connectors, a new and improved keyboard, and an increase to 85 characters per line.

The TT-69A/UG and TT-70A/UG are identical with the TT-130A/UG and TT-131A/UG, respectively, except for their keyboards. The keyboards of the TT-130A/UG and TT-131A/UG have weather symbols instead of the standard communications keyboards on the TT-69A/UG and TT-70A/UG. The TT-69A/UG also is similar to Teletypewriter TT-171/UG except for the sending keyboard.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Improved communications
Characters Per Line: 85
Operating Speed:
368 opm, 60 wpm
460 opm, 75 wpm
600 opm, 100 wpm
Code: 5-unit, start-stop
Transmission Pattern: 7.42-unit
Signaling Frequency:
60 Wpm: 22.8 dot-cycles
75 Wpm: 28.5 dot-cycles
100 Wpm: 37.1 dot-cycles
Output Signal: On-off dc, 0.06 amp nominal from external 115-v source, either positive or negative polarity
Input Signal: On-off dc, 0.06 amp nominal from external source, either positive or negative polarity
Type Motor:
TT-69A/UG: Synchronous (PD-17A/U)
TT-70A/UG: Series-governed (PD-18/U)
Power Requirements:
TT-69A/UG (PD-17A/U): 65 w, 0.3 pf, 115-v ±10% 60-cycles ±.5 cycles 1-phase ac
TT-80A/U (PD-18/U): 95 w, 115-v ±10% 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor			
	PD-17A/U for TT-69A/UG	----------	5-3/4 x 8-1/2 x 4	9
	PD-18/U for TT-70A/UG	----------	5-3/4 x 8-1/2 x 4	10
1	Automatic Typer MX-1115A/UG	----------	9-3/4 x 10-1/2 x 15-1/2	19

AN/UGC-type TELETYPEWRITER

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet CY–781/UG		16 x 20-1/2 x 18-1/4	70
1 set	Equipment Spares			
	152730 for TT–69A/UG		21-1/2 x 19-1/2 x 7-7/8	5
	152731 for TT–70A/UG		21-1/2 x 19-1/2 x 7-7/8	5
1 set	Gears 151060			
1	Keyboard MX–1114A/UG		4-3/4 x 15-1/2 x 17-1/2	11
1	Power Distribution Panel SB–154A/UG		8-1/8 x 4-5/8 x 15	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91713

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For PP–69A/UG:		
1	18.88	249
For PP–70A/UG:		
1	18.88	250

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: Spec No. CS–989

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr–52088, 4 December 1950	$1,310 (TT–69A/UG) with equipment spares
		NObsr–52089, 7 December 1950	$1,570 (TT–70A/UG) with equipment spares

TELETYPEWRITER AN/UGC-type

28 October 1958
Cognizant Serv: USN FSN: TT-128A/UG, TT-129A/UG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-128A/UG and TT-129A/UG are sending and receiving page-printing teletypewriter sets used for the transmission and reception of weather aerological information by teletypewriter over wire or radio communication circuits. Signaling between stations is accomplished by the five-unit, start-stop permutation code and utilizes the 7.42-unit transmission pattern. The normal operating speed of 60 words per minute may be increased to 75 or 100 words per minute by changing to other gears which are available as optional equipment.

The TT-128A/UG and TT-129A/UG are electrically and mechanically interchangeable with the exception of their motors. The TT-128A/UG is equipped with synchronous ac Motor PD-17A/U; the TT-129A/UG is equipped with series-governed ac Motor PD-18/U. The cabinet supplied with either unit is suitable for deck mounting.

Teletypewriters TT-128A/UG and TT-129A/UG are identical to the TT-47A/UG and TT-48A/UG respectively, with the exception of their keyboards. The keyboards of the TT-128A/UG and TT-129/UG have weather symbols instead of standard communications keyboards.

TECHNICAL CHARACTERISTICS:

Type Keyboards: Improved weather
Characters Per Line: 85
Operating Speed:
368 opm, 60 wpm
460 opm, 75 wpm
600 opm, 100 wpm
Code: 5-unit, start-stop
Transmission Pattern: 7.42-unit
Signaling Frequency:
60 Wpm: 22.8 dot-cycles
75 Wpm: 28.5 dot-cycles
100 Wpm: 37.1 dot-cycles
Output Signal: On-off dc, 0.06 amp nominal from external 115-v source, either positive or negative polarity
Input Signal: On-off dc, 0.06 amp nominal from external source, either positive or negative polarity
Type Motor:
TT-128A/UG: Synchronous (PD-17A/U)
TT-129A/UG: Series-governed (PD-18/U)
Current Rating:
TT-128A/UG (PD-17A/U):
Starting: 9 amp
Operating: 1.85 amp
TT-129A/UG (PD-18/U):
Starting: 1.75 amp
Operating: 1 amp
Heat Dissipation:
TT-128A/UG (PD-17A/U): 50 w
TT-129A/UG (PD-18/U): 75 w
Power Requirements:
TT-128A/UG (PD-17A/U): 65 w, 0.3 pf, 115-v ±10% 60-cycle ±.5 cycle 1-phase ac
TT-129A/UG (PD-18/U): 95 w, 0.83 pf, 115-v ±10% 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor			
	PD-17A/U for TT-128A/UG	----------	4 x 5-3/4 x 8-1/2	9
	PD-18/U for TT-129A/UG	----------	4 x 5-3/4 x 8-1/2	10
1	Automatic Typer MX-1422A/UG	----------	9-3/4 x 10-1/2 x 15-1/2	19
1	Cabinet CY-870/UG	----------	18-1/4 x 20-1/2 x 40-1/2	81
1 set	Equipment spares			
	CTT-152730 for TT-128A/UG	----------	7-7/8 x 19-1/2 x 21-1/2	5
	CTT-152731 for TT-129A/UG	----------	7-7/8 x 19-1/2 x 12-1/2	5

AN/UGC-type TELETYPEWRITER

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Gears CTT–151060			
1	Keyboard MX–1421A/UG	----------	4-3/4 x 15-1/2 x 17-1/2	11
1	Power Distribution Panel SB–154A/UG	----------	4-5/8 x 8-1/8 x 18	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91713
NAVSHIPS 98350

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For TT–128/UG		
1	24.09	314
For TT–129A/UG		
1	24.09	315

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr–52088, 4 Dec 1950 NObsr–52089, 1 Dec 1950	

TELETYPEWRITER AN/UGC-type

28 October 1958
Cognizant Serv: USN FSN:

TT-130A/UG, TT-131A/UG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Teletypewriters TT-130A/UG and TT-131A/UG are sending and receiving page-printing teletypewriter sets used for the transmission and reception of weather aerological information by teletypewriter over wire or radio communication circuits. Signaling between stations is accomplished by the five-unit, start-stop permutation code and utilizes the 7.42-unit transmission pattern. The normal operating speed of 60 words per minute may be increased to 75 or 100 words per minute by changing to other gears that are available as optional equipment.

The TT-130A/UG and TT-131A/UG are electrically and mechanically interchangeable with the exception of their motors. The TT-130A/UG is equipped with synchronous ac Motor PD-17A/U; the TT-131A/UG is equipped with series-governed ac Motor PD-18/U. The cabinet supplied with either unit is suitable for bulkhead shelf mounting.

Teletypewriters TT-130A/UG and TT-131A/UG are identical to the TT-69A/UG and TT-70A/UG, respectively, with the exception of their keyboards. The keyboards of the TT-130A/UG and TT-131A/UG have weather symbols instead of standard communications keyboards.

TECHNICAL CHARACTERISTICS:

Type Keyboard: Improved weather
Characters Per Line: 85
Operating Speed:
368 opm, 60 wpm
460 opm, 75 wpm
60 opm, 100 wpm
Code: 5-unit, start-stop
Transmission Pattern: 7.42-unit
Signaling Frequency:
60 Wpm: 22.8 dot-cycles
75 Wpm: 28.5 dot-cycles
100 Wpm: 37.1 dot-cycles
Output Signal: On-off dc, 0.06 amp nominal from external 115-v source, either positive or negative polarity
Input Signal: On-off dc, 0.06 amp nominai from external source, either positive or negative polarity
Type Motor:
TT-130A/UG: Synchronous (PD-17A/U)
TT-131A/UG: Series-governed (PD-18/U)
Current Rating:
TT-130A/UG (PD-17A/U):
Starting: 9 amp
Operating: 1.85 amp
TT-131A/UG (PD-18/U):
Starting: 1.75 amp
Operating: 1 amp
Heat Dissipation:
TT-130A/UG (PD-17A/U): 50 w
TT-131A/UG (PD-18/U): 75 w
Power Requirements:
TT-130A/UG (PD-17A/U): 65 w, 0.3 pf, 115-v ±10% 60-cycle ±.5 cycle 1-phase ac
TT-131A/UG (PD-18/U): 95 w, 0.83 pf 115-v ±10% 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor			
	PD-17A/U for TT-130A/U	----------	4 x 5-3/4 x 8-1/2	9
	PD-18/U for TT-131A/U	----------	4 x 5-3/4 x 8-1/2	10
1	Automatic Typer MX-1422A/UG	----------	9-3/4 x 10-1/2 x 15-1/2	19
1	Cabinet CY-871/UG	----------	18-1/4 x 20-1/2 x 16	70

AN/UGC-type TELETYPEWRITER

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares			
	CTT–152730 for TT–130A/UG		7-7/8 x 19-1/2 x 21-1/2	5
	CTT–152731 for TT–131A/UG		7-7/8 x 19-1/2 x 12-1/2	5
1	Keyboard MX–1421A/UG		4-3/4 x 15-1/2 x 17-1/2	11
1	Power Distribution Panel SB–154A/UG		4-5/8 x 8-1/8 x 18	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91713
NAVSHIPS 98350

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For TT–130A/UG		
1	18.88	249
For TT–131A/UG		
1	18.88	250

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr–52088, 4 December 1950 NObsr–52089	

TELETYPEWRITER AN/UGR-type

28 October 1958
Cognizant Serv: USN FSN:

TT-171/UG

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Teletypewriter TT-171/UG is a receiving only page-printing teletypewriter set used to receive typewritten messages over wire or radio telegraph circuits from equipment located at a ship or shore station. The normal operating speed of 60 words per minute may be increased to 75 or 100 words per minute by changing to other gears that are available as optional equipment.

The TT-171/UG is similar to the TT-47A/UG and TT-69A/UG with the exception of the sending keyboard. The TT-171/UG is equipped with synchronous ac Motor PD-17A/U, and the cabinet supplied with the unit is suitable for deck mounting.

TECHNICAL CHARACTERISTICS:

Characters Per Line: 85

Operating Speed:
368 opm, 60 wpm
460 opm, 75 wpm
600 opm, 100 wpm

Code: 5-unit, start-stop

Transmission Pattern: 7.42-unit

Signaling Frequency:
60 Wpm: 22.8 dot-cycles
75 Wpm: 28.5 dot-cycles
100 Wpm: 37.1 dot-cycles

Input Signal: On-off dc, 0.06 amp nominal from external source, either positive or negative polarity

Type Motor: Synchronous (PD-17A/U)

Current Rating:
Starting: 9 amp
Operating: 1.85 amp

Heat Dissipation: 50 w

Power Requirements: 65 w, 0.3 pf, 115-v ±10% 60-cycle ±.5 cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac Motor PD-17A/U	----------	4 x 5-3/4 x 8-1/2	9
1	Automatic Typer MX-1115A/UG	----------	9-3/4 x 10-1/2 x 15-1/2	19
1	Base NT-1443/UG	----------	4-5/8 x 14-1/2 x 15-1/2	6.5
1	Cabinet CY-870/UG	----------	18-1/4 x 20-1/2 x 40-1/2	81
1 set	Equipment spares CTT-152853	----------	7-7/8 x 19-1/2 x 21-1/2	5
1 set	Gears CTT-151060			
1	Power Distribution Panel SB-154/UG	----------	4-5/8 x 8-1/8 x 15	5

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91713

AN/UGR-type TELETYPEWRITER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	24.09	310

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

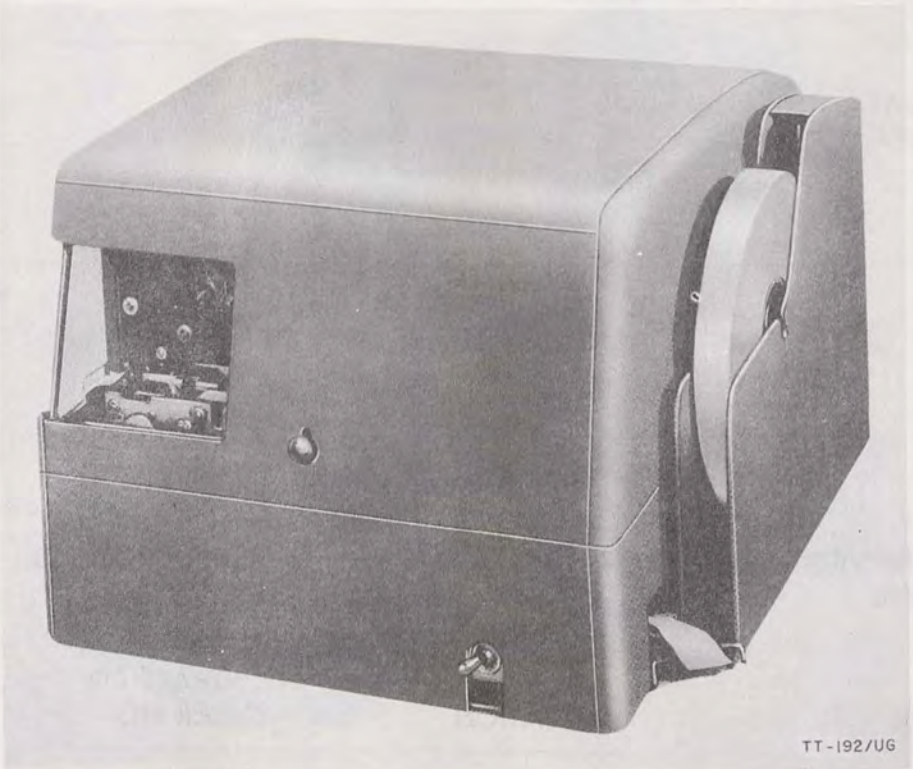
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.	NObsr-63205	

TELETYPEWRITER REPERFORATOR AN/UGR-type

30 October 1958
Cognizant Serv: USN FSN: TT-192/UG

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Teletypewriter Reperforator TT-192/UG is a receiving only unit used to receive messages transmitted over wire or radio circuits and to record the message both in code perforations and typed characters on the same tape. It is used for relaying purposes in teletypewriter receiving and distributing center. Messages received by the typing reperforator may be retransmitted to one or more stations by a transmitter distributor. The printed characters simplify tape relay procedures by eliminating the necessity of reading the code perforations.

The typing reperforator may be used with five-unit code teletypewriter equipment geared for 368 operations per minute. The operating speed of 60 words per minute may be increased to 100 words per minute by changing to other gear that are available as optional equipment.

TECHNICAL CHARACTERISTICS:

Type Tape: Chadless
Operating Speed: 368 opm, 60 wpm
Code: 5-unit, start-stop
Signal Line Current:
Series: 0.02 amp
Parallel: 0.06 amp
Type Motor: Synchronous
Motor Speed: 3,600 rpm
Power Requirements: 115-v ±10% 60-cycle ±.5 cycle 1-phase ac

AN/UGR-type TELETYPEWRITER REPERFORATOR

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Teletypewriter Reperforator TT–192/UG (Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92734

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

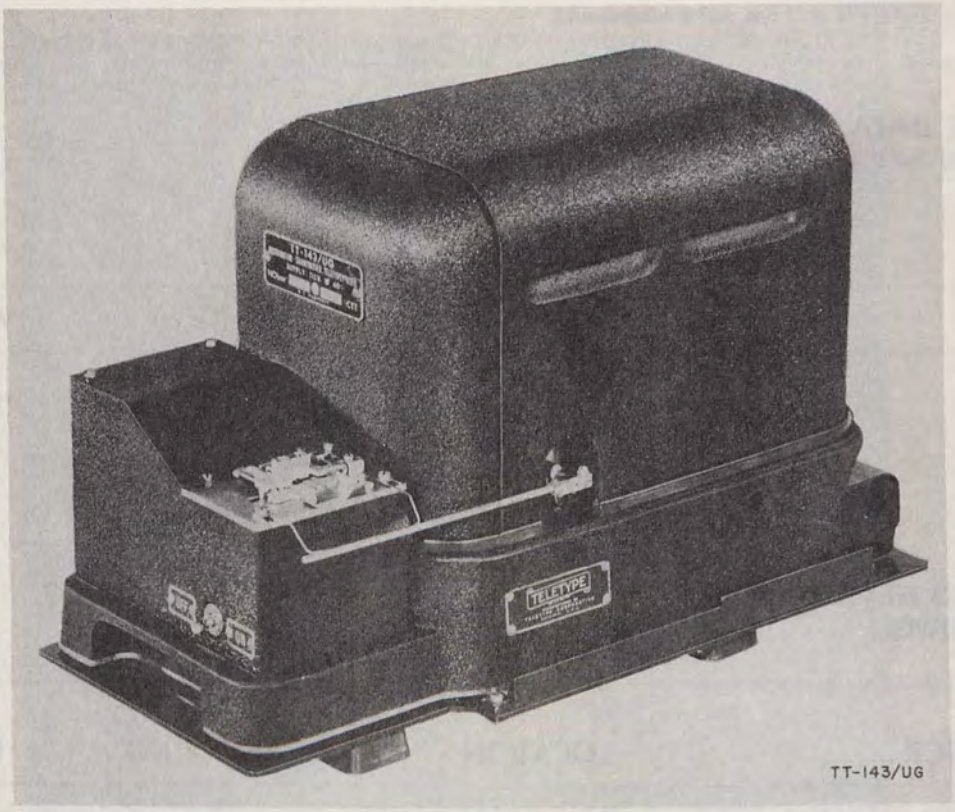
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	Chicago, Ill.	NObsr–64214, 27 May 1954	$1,320 with equipment spares

TELETYPEWRITER DISTRIBUTOR-TRANSMITTER AN/UGT-type

17 November 1958
Cognizant Serv: USN FSN: TT-143/UG

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Teletypewriter Distributor-Transmitter TT–143/UG is an automatic transmitter distributor designed for use in transmitting or relaying stations where large amounts of traffic must be handled with minimum delay. The unit translates code impulses from fully perforated or chadless tape into electrical impulses and transmits these impulses, in the form of a five-unit, start-stop permutation code to one or more receiving stations.

The TT–143/UG consists principally of tape sensing and tape feeding mechanisms, a distributor commutator, and a motor. The entire unit is housed in a metal case.

TECHNICAL CHARACTERISTICS:

Type Tape: Fully perforated or chadless
Operating Speed:
Type Signaling Code: 5-unit, start-stop
Type Motor: Synchronous
Motor Speed: 1,800 rpm
Power Requirements: 115-v, 60-cycle, 1-phase ac

AN/UGT-type TELETYPEWRITER DISTRIBUTOR-TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Teletypewriter Distributor-Transmitter TT-143/UG	----------	7-7/8 x 9-1/2 x 15-1/2	33

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

Teletype Manual 103MA

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	7.4	110

PROCUREMENT DATA

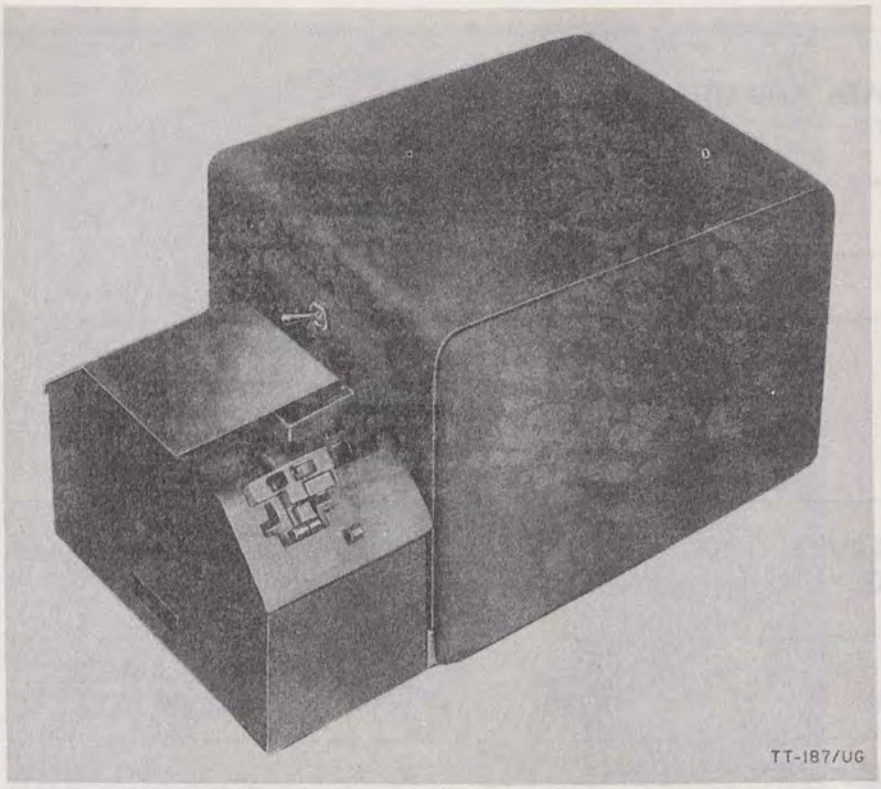
PROCURING SERVICE: USN DESIGN COG: USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Teletype Corp.	Chicago, Ill.		

TELETYPEWRITER DISTRIBUTOR-TRANSMITTER AN/UGT-type

30 October 1958
Cognizant Serv: USN FSN: TT–187/UG

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Teletypewriter Distributor-Transmitter TT–187/UG is an automatic transmitter distributor designed for use in transmitting or relaying stations where large amounts of traffic must be handled with minimum delay. The unit translates code impulses from fully perforated or chadless tape into electrical impulses and transmits these impulses, in the form of a five-unit, start-stop permutation code to one or more receiving stations.

The TT–187/UG consists principally of tape sensing and tape feeding mechanisms, a distributor commutator, and a motor, all of which are housed in a metal cabinet. It has an all steel external expansion clutch, sensing pins with longer travel located in line with the axis of the feed wheel, and an increased number of feed pins engaging the feed holes in the tape.

TECHNICAL CHARACTERISTICS:

Type Tape: Chad (perforated) or chadless

Operating Speed:
368 opm, 60 wpm
460 opm, 75 wpm
600 opm, 100 wpm

Type Signaling Code: 5-unit, start-stop

Transmission Pattern: 7.42-unit

Signaling Frequency:
60 Wpm: 22.8 dot-cycles
75 Wpm: 28.5 dot-cycles
100 Wpm: 37.1 dot-cycles

Type Motor: Synchronous

Motor Speed: 3,600 rpm

Current Rating:
Starting: 9 amp
Operating: 1.85 amp

Power Requirements: 65 w, 0.3 pf, 115-v ±10% 60-cycle +75%, 1-phase ac

AN/UGT-type TELETYPEWRITER DISTRIBUTOR-TRANSMITTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transmitter Distributor TT–187/UG (Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92733

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

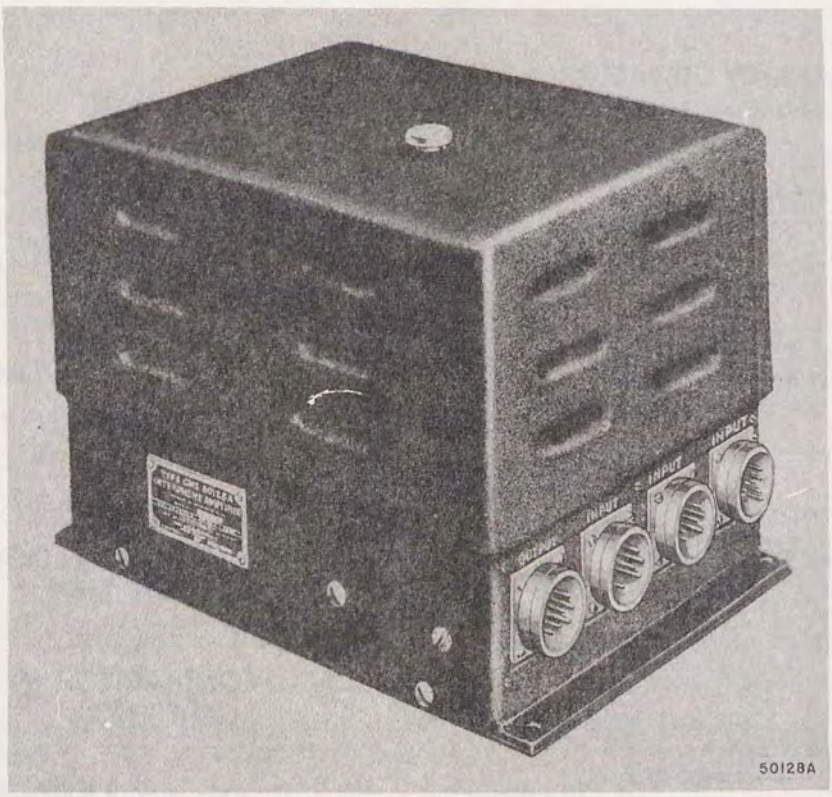
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	Chicago, Ill.	NObsr–64214, 27 May 1954	$1,320 with equipment spares

INTERPHONE AMPLIFIER AN/UIA-type

7 November 1958
Cognizant Serv: USN FSN: 50128, 5820-253-1075
50128A, 5820-253-0174

50128, 50128A

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Interphone Amplifier 50128 or 50128A is designed for use in vehicles and aircraft equipped with Radio Transmitting and Receiving Equipment TCS and carrying a two-to five-man crew. The amplifier permits two-way communication between crew members. It also permits control of the TCS transmitter and receiver by any crew member.

Equipment required for the operation of the interphone amplifier include Remote Control Unit 23355, 23366, or 23429, Radio Transmitting and Receiving Equipment TCS, and connecting cables.

TECHNICAL CHARACTERISTICS:

Power Requirements: 12- to 14-v dc

AN/UIA-type INTERPHONE AMPLIFIER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares			
1	Interphone Amplifier 50128 or 50128A	----------	7-1/8 x 7-9/16 x 10-3/8	17

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

Technical manual for Interphone Amplifier 50128
NAVSHIPS 95623

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Magnovox Co.	Fort Wayne, Ind.	NXss-20701, 4 January 1943 NXss-24341, 1 March 1943 NXsr-49686, 19 February 1944 (50128A)	

AUDIO FREQUENCY AMPLIFIER AN/UIA-type

4 December 1958
Cognizant Serv: USN FSN:

AM-215/U, AM-215A/U, AM-215B/U

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	AM-215/U: F16-A-27990-9968	--
	AM-215A/U, AM-215B/U: F16-M-83-259	

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Audio Frequency Amplifiers AM-215/U, AM-215A/U, and AM-215B/U are multiple input, general purpose, audio frequency amplifiers. Any of five input channels may be used by means of a selector switch.

The equipments are similar and are interchangeable although components are not interchangeable between models.

TECHNICAL CHARACTERISTICS:

Frequency Range: 250 to 4,000 cps

Input Impedance: 600 ohms

Output Impedance: 600 ohms center tapped at 15 ohms

Audio Input Power: 2 w (maximum) each input; 6 mw (minimum) full power output

Power Gain: 32.2 db

Power Output: 10 w (maximum) at 10% total harmonic distortion

Mounting Data: Wall, shelf, or table mounting

Power Requirements: 55 w, 110- to 120-v 50 to 60-cycle ac, 1-phase with built-in rectifier power supply.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For AM-215/U:			
1	Audio Frequency Amplifier AM-215/U		8-3/8 x 12 x 6-1/16	19
1 set	Equipment spares		6-3/4 x 13-1/2 x 10-1/2	24
	For AM-215A/U, or AM-215B/U:			
1	Audio Frequency Amplifier AM-215A/U, or AM/215B/U		8-3/8 x 12 x 7	23.5
1 set	Equipment spares		6-3/16 x 13-1/4 x 7-1/4	22

REFERENCE DATA AND LITERATURE:

For AM-215/U: NAVSHIPS 900-995

For AM-215A/U, or AM-215B/U: NAVSHIPS 91078

AN/UIA-type AUDIO FREQUENCY AMPLIFIER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For AM-215/U:		
2	2.48	70
For AM-215A/U, or AM-215B/U:		
2	1.30	51.8

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

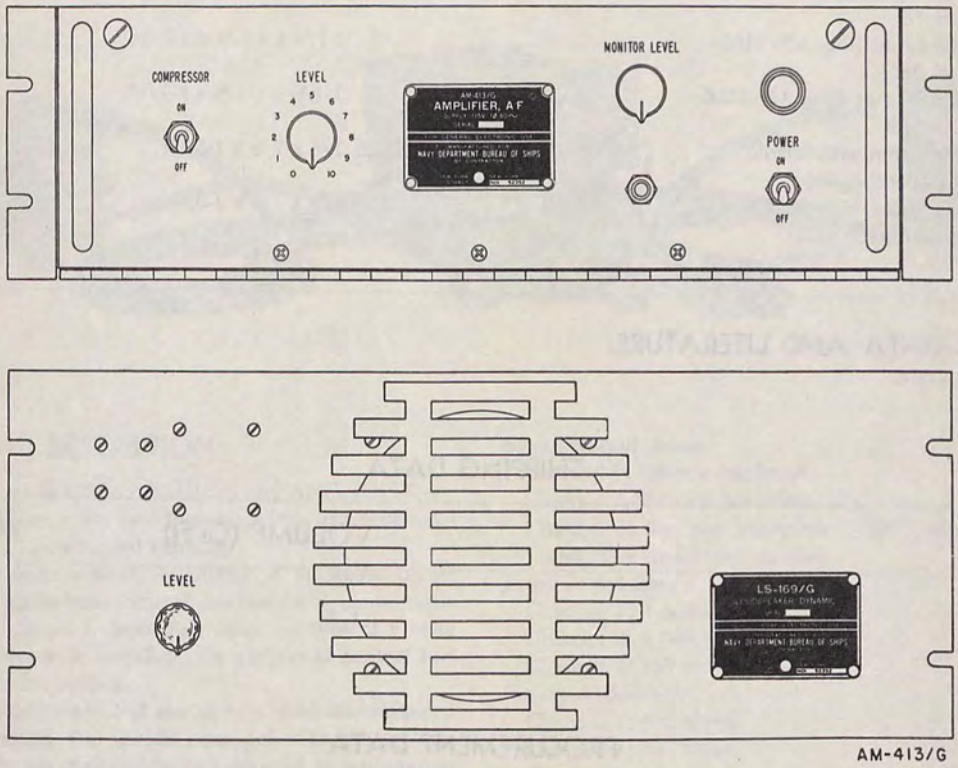
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For AM-215/U:			
David Bogen Co. Inc.	New York, N. Y.	NObsr-39055, 23 October 1946	$100.00 with spares
For AM-215A/U:			
Hoffman Radio Corp.	Los Angeles, Calif.	NObsr-39405, 30 June 1947	$100.00 with spares
For AM-215B/U:			
Dynamic Electronics-N. Y., Inc.	Glendale, N. Y.	NObsr-52347	$100.00 with spares

AUDIO AMPLIFIER AN/UIA-type

4 December 1958
Cognizant Serv: USN FSN:

AM-413/G, AM-413A/G

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



AM-413/G

FUNCTIONAL DESCRIPTION:

Audio Amplifiers AM–413/G and AM–413A/G are suitable for general communication purposes when operating in conjunction with naval radio receiving sets and associated equipment.

Each equipment consists of an audio amplifier and a volume compressor. Use of the volume compressor is optional and is controlled by a switch mounted on the front panel. The compressor keeps the signal output voltage constant regardless of the magnitude of the input signal.

TECHNICAL CHARACTERISTICS:

Frequency Response: ±1 db from 200 to 5,000 cps
Input Impedance: 600 ohms
Input Level: 0.001 to 6 mw
Outputs: 2 w, 600 ohms, balanced; 6 mw, 600 ohms, balanced; 1 mw, 600 ohms, unbalanced
Compression Range: 0.001 to 6 mw
Output Variation of Compressor: Not more than 3 db
Distortion: Not more than 7%
Signal Plus Noise to Noise Ratio: Not less than 50 db
Power Requirements: 50 w, 105-, 115-, or 125-v 50 to 60 cycle 1-phase ac

AN/UIA-type AUDIO AMPLIFIER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Audio Amplifier AM–413/G or AM–413A/G	----------	5-1/4 x 8-3/4 x 19	15-1/2
1	AC Power Plug AN–3106–14S–7S	----------	1-1/8 x 1-1/8 x 1-7/16	2 oz
2	Audio Input Plug AN–3106–14S–2S	----------	1-1/8 x 1-1/8 x 1-7/16	2 oz
2	Audio Output Plug AN–3106–14S–2P	----------	1-1/8 x 1-1/8 x 1-7/16	2 oz
1	Cable clamp with ferrule (MCOS–2 cable)	----------	7/8 x 7/8 x 1-5/64	1 oz
4	Cable clamp with ferrule (RG–108/U cable)	----------	7/8 x 7/8 x 1-5/64	1 oz

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91905

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.3	38

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** USN, BuShips

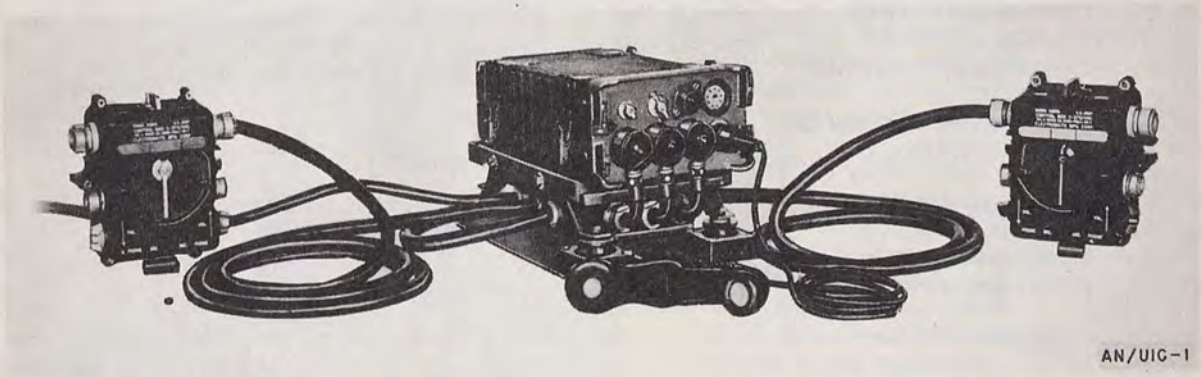
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For AM–413/G: Harman-Kardon Inc.	New York, N. Y.	NObsr–52352, 22 March 1951	
For AM–413A/G: American Measuring Instrument Co.	Long Island City, N. Y.	NObsr–64107, 3 February 1954 NObsr–64833, 28 January 1955	

INTERCOMMUNICATION SET AN/UIC-1, -1X

1 December 1958
Cognizant Serv: USA FSN: 5830-030-0132

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4301-1/12-2	--	--



AN/UIC-1

FUNCTIONAL DESCRIPTION:

Intercommunication Sets AN/UIC–1 and AN/UIC–1X are vehicular interphone units used to provide two-way communication in inclosed or armored vehicles.

These equipments consist essentially of an audio power amplifier, two interphone control stations, and power components plus accessories, depending upon the type of vehicle in which the system is installed. An additional control box can be added to the system.

The sets provide control of one or two radio sets installed and operated within the vehicle equipped with the system. These radio sets are designed to be employed in conjunction with an integrated series of radio equipment.

Power is obtained from vehicular 12- or 24-volt storage batteries through appropriate power supply components.

Both models of this set are similar, with the exception of the power supply. Intercommunication Set AN/UIC–1 is furnished with a 12-volt power supply; the AN/UIC–1X is furnished with a 24-volt power supply.

TECHNICAL CHARACTERISTICS:

Signal Input Levels:
Channel 1: 5 v maximum
Channel 2: 5 v maximum
Channel 3: 0.25 v maximum

Signal Output Levels:
Channel 1: 350 mw minimum
Channel 2: 350 mw minimum
Channel 3: 800 mw minimum; 1,800 mw minimum (5 v and .25 v signal into channel)

Input Impedance:
Channel 1: 1,500 ohms
Channel 2: 1,500 ohms
Channel 3: 150 ohms

Output Impedance:
Channel 1: 600 ohms
Channel 2: 600 ohms
Channel 3: 600 ohms

Af Response: Flat to within 4 db for frequencies between 400 and 2,500 cps; sharp cutoff beyond these limits

Distortion Due to Overload: 10% maximum each channel

Crosstalk Between Channels 1 and 2: 50 db down, minimum

Amplifier Power Requirements:
Plates: 135 v at 35 ma
Filaments; 12- or 24-v Operation: 12.6 va at 0.6 amp
Relay: 6.3 v at 166 ma
Microphone: 6.3 at 30 ma

Operating Temperature Range: −40°F to +149°F.

Power Requirements:
AN/UIC–1: 3.85 amp at 12 v dc
AN/UIC–1X: 2.4 amp at 24 v dc

AN/UIC-1, -1X INTERCOMMUNICATION SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Intercommunication Set AN/UIC-1:			
1	AF Amplifier AM-65/GRC	2C449-65.1	4-1/4 x 12-7/8 x 7-7/8	10
2	Control Box C-375/VRC	5830-170-7868	6-13/16 x 7 x 3-1/4	3.25
1	Mounting MT-300/GR	5820-221-5515	3-1/16 x 13 x 8-5/16	10
1	Power Supply PP-281/GRC	3H4497-281.1	4-1/4 x 5-3/4 x 2-15/16	5.5
	For Intercommunication Set AN/UIC-1X:			
1	AF Amplifier AM-65/GRC	2C449-65.1	4-1/4 x 12-7/8 x 7-7/8	10
2	Control Box C-375/VRC	5830-170-7868	6-13/16 x 7 x 3-1/4	3.25
1	Mounting MT-300/GR	5820-221-5515	3-1/16 x 13 x 8-5/16	10
1	Power Supply PP-282/GRC	3H4497-282.1	4-1/4 x 5-3/4 x 2-15/16	5.5

REFERENCE DATA AND LITERATURE:

TM 11-2643

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	1.72	71

PROCUREMENT DATA

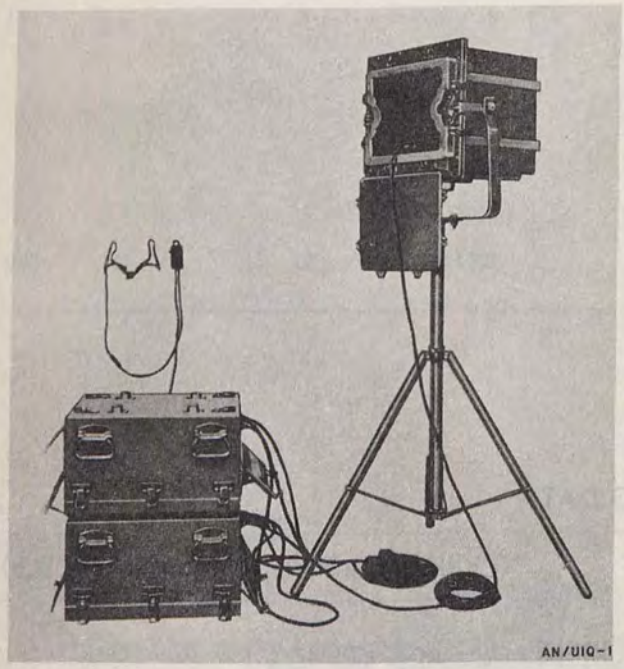
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

PUBLIC ADDRESS SET AN/UIQ-1, -1A, -1B

1 December 1958
Cognizant Serv: USA FSN: 5830-164-6621

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	6C200-1	--	--



FUNCTIONAL DESCRIPTION:

Public Address Sets AN/UIQ-1, AN/UIQ-1A, and AN/UIQ-1B are high-power, transportable, field, sound amplifying and projecting units capable of delivering commands, instructions, and similar matter to distances as far as 2 miles. The units are used to direct landings, command ground operations from aircraft, issue instructions to enemy personnel under combat conditions, and similar applications.

This equipment consists essentially to two amplifiers, which operate in parallel, and loudspeaker equipment with accessories.

There are two general types of this equipment, one is equipped with a megaphone-type horn fitted to the loudspeaker face. This set is carried in watertight carrying cases which will permit the floating of the set ashore during amphibious operations. All of these items are generally similar, differing only in some component details.

Power is derived from the two field power units which are components of these equipments.

TECHNICAL CHARACTERISTICS:

Facilities: Single channel
Type Controls: Volume and power on-off switches
Frequency Response: 800 cps to 5,000 cps
Operating Range: 2 miles
Power Output:
Normal: 175 w ±2.5 db from 800 to 5,000 cps
Peak: 350 w
Input Impedance: 200 ohms
Power Requirements:
Each Amplifier: 4.5 amp, 115-v 60-cycle, 1-phase ac
Each Power Unit: 2,500 w at 100% pf; 120-v, 60-cycle, 3-wire, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Amplifier Bogen Model MC-225 (AN/UIQ-1)	5830-164-7275	21 x 17-1/2 x 10-3/4	157
	or			
	Amplifier AM-76/UIQ-1 (AN/UIQ-1A)	5830-164-7275	21 x 17-1/2 x 10-3/4	123

AN/UIQ-1, -1A, -1B PUBLIC ADDRESS SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
	Amplifier AM–76A/UIQ–1 (AN/UIQ–1B)	5830–164–7275	21 x 17-1/2 x 10-3/4	123
1	Loudspeaker LS–111/UIQ–1 (AN/UIQ–1)	5965–170–5248	16-1/2 x 21 x 22	
	or			
	Loudspeaker LS–111A/UIQ–1 (AN/UIQ–1A, –1B)	5965–170–5248	16-1/2 x 21 x 22	
2	Power Unit PE–75	6115–288–5815	25-1/2 x 19-1/2 x 36	330

REFERENCE DATA AND LITERATURE:

TM 11–2505

SHIPPING DATA

PGKS	VOLUME (Cu Ft)	WEIGHT (Lb)

PROCUREMENT DATA

PROCURING SERVICE: USA DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

PUBLIC ADDRESS SET AN/UIQ-3

1 December 1958
Cognizant Serv: USA FSN: 5830-164-6623

	USA	USN	USAF
TYPE CLASS:	Obsolete	Used by	Ltd-Std
STOCK NO:	6C199-3	--	--



FUNCTIONAL DESCRIPTION:

Public Address Set AN/UIQ-3 is a transportable, high-power, long-range, sound amplification and projecting unit used in direct landing, commanding ground operations, issuing orders under combat conditions, and similar operations.

This equipment consists essentially of corrosion-resistant components which are easily assembled, are watertight when container covers are closed, and can be floated ashore during amphibious operations. The set may be operated on power supplied by a field power unit.

The set is replaced by Public Address Set AN/TIP-2.

TECHNICAL CHARACTERISTICS:

Facilities: Single channel
Type Controls:
Power: On-off switch
Microphone: On-off switch
Power Output:
Normal: 175 w, 105 ohms, 800 to 5,000 cps
Peak: 350 w
Operational Range: 2 miles
Frequency Response: 800 to 5,000 cps
Power Requirements:
Rated Output: 440 w; 115-v to 127-v, 60-cycle, 1-phase ac
Peak Output: 520 w; 115-v to 127-v, 60-cycle, 1-phase ac

AN/UIQ-3 PUBLIC ADDRESS SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier MC–225	5830–164–7275	21 x 17-1/2 x 11-3/4	157
1	Microphone T–45			
1	Speaker AA–7	----------	24-1/2 x 18-1/4 x 23-1/4	205
1	Stand	----------	44 high	19

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	15.6	540

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–P–13108

DESIGN COG: USN, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

PUBLIC ADDRESS SET AN/UIQ-6

3 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Public Address Set AN/UIQ–6 is a portable, high level, high gain, audio amplifying system intended for the transmission of sound. Three of these units forms a portable announcing system designed to be carried by three men. The system may be used on board ship as a semipermanent installation.

TECHNICAL CHARACTERISTICS:

Frequency Range: 500 cps to 3,000 cps
Harmonic Distortion: Less than 10%
Power Output: 50 w
Output Impedance: 5 ohms
Input Impedance: 225 ohms
Amplifier Power Consumption: 290 w
Battery Charger:
Charging Rate: 4 to 8 amp
Power Source: 115-v 60-cycle 1-phase ac
Power Consumption: 300 w
Power Requirements (Power Source): 12-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier, Audio Frequency AM–1329/PIC	----------	9-1/4 x 9-3/8 x 20-1/4	35
1	Battery Assembly BB–260/U	----------	6 x 10 x 21-7/8	48
1	Charger, Battery PP–1390/U	----------	14-1/8 x 26-3/8 x 30	115
1	Mount Reproducer Assembly Stromberg Carlson #43511	----------	9-1/2 x 14-1/4 x 21-1/2	47
1	Public Address Group AN/SIA–68	----------	6 x 10 x 21-7/8	48
1	Spare Battery Assembly BB–260/U	----------	9-1/4 x 16 x 18-1/2	72
1 Box	Spare parts	----------	9-1/4 x 16 x 18-1/2	61
1 Box	Spare parts			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 365–0188

AN/UIQ-6 PUBLIC ADDRESS SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Stromberg Carlson Co.	Rochester, N. Y.	NObsr–20002	

SOUND RECORDER SET AN/UNH-6

3 December 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Sound Recorder Set AN/UNH–6 is a general purpose unit designed for airborne requirements. It is lightweight and has a high fidelity dual track. The set functions as a recorder only.

This equipment has single speed only. It has two tracks for simultaneous recording of either voice or data with erasure head for clearing tape ahead of recording.

TECHNICAL CHARACTERISTICS:

Type: Electromagnetic
Number of Tracks: 2
Tape:
Type: Mylar base
Width: 1/4 in.
Feed: 7.5 in. per sec
Frequency Response: ±2 db from 50 cps to 10,000 cps
Input Impedance (Each Channel):
Microphone: 200 ohms
Data: 500 ohms
Recording Time: 45 minutes maximum; continuous
Power Requirements: 108 to 121-v, 380 to 420 cps, 1-phase ac, 0.32 amp; 25- to 29-v dc, 6.0 amp

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Mounting MT–2013/UNH–6			
1	Recorder, Sound RO–28/UNH–6			
1	Set of cabling accessories			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/UNH-6 SOUND RECORDER SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

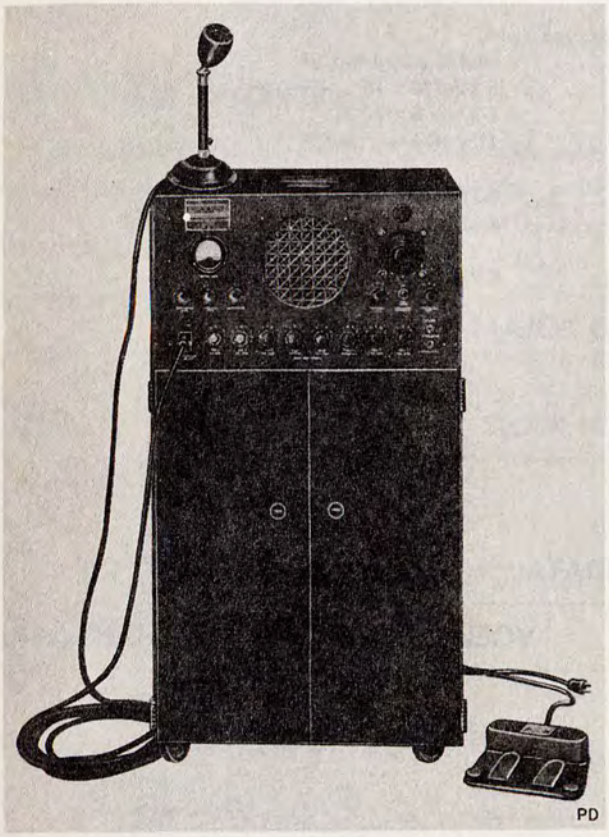
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
AMPEX Corp.			

VOICE RECORDING EQUIPMENT AN/UNH-type

5 December 1958
Cognizant Serv: USN FSN: 5835-347-9182

PD, PD-1

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



PD

FUNCTIONAL DESCRIPTION:

Voice Recording Equipment PD and PD-1 is a complete voice recording equipment for transcribing voice or other audio signals on discs and reproducing the signals from the discs.

The equipment is suitable for transcribing and reproducing cw or voice signals and may be monitored with headphones or reproduced through headphones or a loudspeaker. There are separate transcribing and reproducing amplifiers, so arranged as to permit reproduction of signals from the discs without interfering with the continuity of the recording process.

TECHNICAL CHARACTERISTICS:

Audio Frequency Range: 200 to 3000 cps
Input Impedance: 50, 600, or 5,000 ohms
Output Impedance: 4, 8, or 50 ohms
Transcriber Speed: 22 rpm
Reproducer Speed: 2-3/4 to 33 rpm
Power Output: 10 w (max)
Power Requirements: 110/115/120-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For PD:			
1	Cabinet 10106		16-3/4 x 20-1/4 x 37	96
1	Rectifier Power Unit 20150		8 x 8-7/8 x 15	39
1	Transcriber-Reproducer Amplifier 50110		11 x 16-1/4 x 20-1/8	65
1	Desk Microphone 51034		4-1/4 x 5-3/4 x 11	3.5
1	Reproducer Unit 67006		6-7/8 x 10 x 12-5/8	16
4	Transcriber-Reproducer Unit 67005		6-7/8 x 10 x 12-1/4	72

AN/UNH-type VOICE RECORDING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For PD–1:			
1	Cabinet 10106	----------	16-3/4 x 20-1/4 x 37	96
1	Rectifier Power Unit 20150–A	----------	8 x 8-7/8 x 15	39
1	Stepback-Bracke Control 23345	----------	1-3/4 x 6 x 7-3/4	4.5
1	Transcriber-Reproducer Amplifier 50110–A	----------	11 x 16-1/4 x 20-1/8	65
1	Desk Microphone 51049	----------	4-1/4 x 5 x 11	3.5
1	Variable Speed Reproducer Unit 67002	----------	8-7/8 x 10 x 12-5/8	18
4	Transcriber-Reproducer Unit 67005–A	----------	6-7/8 x 10 x 12-1/4	75

REFERENCE DATA AND LITERATURE:

PD: NAVSHIPS 95203
PD–1: NAVSHIPS 95204

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
PD 3	----	658
PD–1 3	----	650

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Soundscriber Corp.	New Haven, Conn.	PD–NXs–3288; PD–1–NXss–15306	$600.00

VOICE RECORDING EQUIPMENT AN/UNH-type

5 December 1958
Cognizant Serv: USN FSN: PE, PE–1

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Voice Recording Equipment PE( ) is a complete voice recording equipment for transcribing voice or other audio signals on discs and for reproducing the signals from the discs.

TECHNICAL CHARACTERISTICS:

Frequency Range: 200 to 3000 cps
Input Impedance: 500 to 5000 ohms
Transcriber Speed: 185 rpm
Reproducer Speed: 78 or 33-1/3 rpm
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For PE:			
1	Cabinet 10122	----------	24-1/2 x 25-5/8 x 50-1/2	
1	Power Control Unit 23316			
1	Signal Input Panel 23317			
2	Transcriber-Reproducer Unit 67007			
1	Microphone			
	For PE–1:			
1	Cabinet 10122	----------	24-1/2 x 25-5/8 x 50-1/2	
1	Power Control Unit 23316			
1	Signal Input Panel 23117			
2	Transcriber-Reproducer Unit 67010			
1	Desk Microphone 51051			

REFERENCE DATA AND LITERATURE:

PE: NAVSHIPS 95205
PE–1: NAVSHIPS 96206

AN/UNH-type VOICE RECORDING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Memovox Inc.	Beverly Hills, Calif.	NXs 3289 (PE); NX s 15073 (PE–1)	

SOUND REPRODUCING EQUIPMENT AN/UNH-type

5 December 1958
Cognizant Serv: USN FSN: PH

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Sound Reproducing Equipment PH is a complete sound reproducing equipment for reproducing voice or other audio signals at variable speeds from discs recorded on Sound Recording Equipment PJ, Voice Recording Equipment PD and PD–1, or other similar constant angular velocity recording equipment.

The equipment is suitable for reproducing cw or voice signals. Headphones or the built-in loudspeaker may be used for listening.

TECHNICAL CHARACTERISTICS:

Frequency Range: 200 to 3000 cps
Output Impedance: 600 ohms
Reproducer Speed: 33 rpm
Power Requirements: 0.51 amp, 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Sound Reproducing Equipment PH	----------	11-1/2 x 13-1/4 x 18-1/2	150

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95208

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/UNH-type SOUND REPRODUCING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Soundscriber Corp.	New Haven, Conn.	NXss–16639	

5 December 1958

SOUND RECORDING EQUIPMENT AN/UNH-type

Cognizant Serv: USN FSN:

PJ

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --		--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Sound Recording Equipment PJ is a complete voice recording equipment for transcribing voice or other audio signals on discs and reproducing the signals from the discs.

The equipment is suitable for recording and reproducing voice or cw signals. The signals may be monitored with headphones during the recording operations.

TECHNICAL CHARACTERISTICS:

Frequency Range: 200 to 3000 cps
Power Requirements: 55 w, 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transcriber-Reproducer Unit 67009	----------	11 x 11-1/2 x 18-1/2	68

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95209

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/UNH-type SOUND RECORDING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

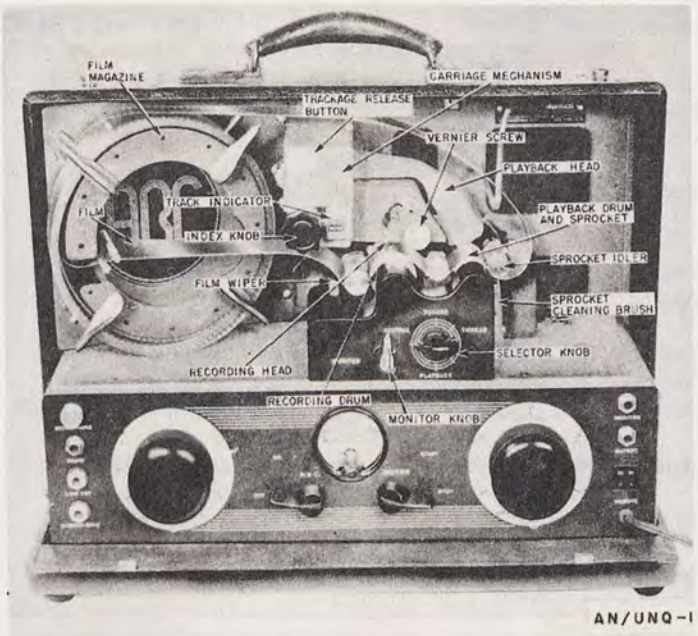
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Soundscriber Corp.	New Haven, Conn.	NXss–16639	

SOUND RECORDING SET AN/UNQ-1, -1A, -1B

3 December 1958
Cognizant Serv: USA FSN: 5835-241-7574

	USA	USN	USAF
TYPE CLASS:	AN/UNQ-1: L/Std AN/UNQ-1A: L/Std AN/UNQ-1B: L/Std	Used by	--
STOCK NO:	6C274-1 (identical for all models)	--	--



AN/UNQ-1

FUNCTIONAL DESCRIPTION:

Sound Recording Sets AN/UNQ-1, AN/UNQ-1A, and AN/UNQ-1B are portable, compact, self-contained recording and playback units. Recordings are made on noninflammable, cellulose-acetate, 35-millimeter film. At normal operating speed, continuous recording is possible for approximately 1-1/2 hours. The recording may be played back immediately.

These equipments provide for the use of a booster transformer or amplifier; to further increase amplification, numerous loudspeakers or earphones may be connected to the recording set. The sets can be adapted for use on 110-volt direct current.

The various models of this equipment differ in some of their components; functionally, however, they are similar.

TECHNICAL CHARACTERISTICS:

Type: Electromechanical

Frequency Response: 150 cps to 4,000 cps at 60 fpm; narrower range at 40 fpm

Operating Period:
40 Fpm: 2 hr 23 minutes
60 Fpm: 1-1/2 hr

Power Output (Amplifier): 3 w

Gain:
Microphone Terminal: 114 db
Radio Input Terminal: 85 db

Earphone Impedance: 40,000 ohms at 500 cps (AN/UNQ-1, -1A); 600 ohms (AN/UNQ-1B)

Recording Head:
Type: Balanced-armature, magnetic
Impedance: 6 ohms at 1,000 cps
Frequency Range: 150 to 3,500 cps

Playback Head:
Type: High-impedance, magnetic
Impedance: 10,000 ohms at 1,000 cps
Frequency Range: 150 to 3,500 cps

Power Requirements: 125 w to 130 w; 110-v, 50- to 60-cycle 1-phase ac

AN/UNQ-1, -1A, -1B SOUND RECORDING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Sound Recording Set AN/UNQ-1, -1A:			
1	Sound Recording Set AN/UNQ-1 and AN/UNQ-1A including:	6C274-1 FSN: 5835-241-7574	9-7/8 x 18-1/2 x 13	53
1	Headset, electrical (40,000-ohm)	2B932 FSN: 5965-184-0849	1-1/2 x 7-1/2 x 7-1/2	.5
1	Microphone, magnetic (100,000-ohm)	2B1746-3 FSN: 5965-162-8267	5 x 7 x 9-1/2	2.35
1	Stylus, recording, sound	6C93-1 FSN: 7490-241-2678		
1	Stylus, reproducing	6C93 FSN: 5835-241-2676		
	For Sound Recording Set AN/UNQ-1B:			
1	Sound Recording Set AN/UNQ-1B including:	6C274-1 FNS: 5835-241-7574	9-7/8 x 18-1/2 x 13	53
1	Headset, electrical (600-ohm)	2B954-1 FSN: 5965-128-8756	1-1/2 x 7-1/2 x 7-1/2	.5
1	Microphone, dynamic (35- to 50-ohm)	2B1749 FSN: 5965-164-7318	5 x 7 x 9-1/2	2.35
1	Stylus, recording, sound	6C295-3 FSN: 7490-164-7254		
1	Stylus, reproducing	6C93 FSN: 5835-241-2676		

REFERENCE DATA AND LITERATURE:

TM 11-2522 (AN/UNQ-1, -1A)
TM 11-5501 (AN/UNQ-1B)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	14.2	192

SOUND RECORDING SET **AN/UNQ-1, -1A, -1B**

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Amertype Recordograph Corp.	New York, N. Y.		

RECORDER-REPRODUCER SET AN/UNQ-2

3 December 1958
Cognizant Serv: USN FSN:

USA USN USAF

TYPE CLASS:
STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Recorder-Reproducer Set AN/UNQ-2 is an electromagnetic wire tape apparatus designed to record and reproduce sound signals.

This equipment is intended for general ground-type installations. Thirty spools of recording wire are included as part of the set.

TECHNICAL CHARACTERISTICS:

Type: Electromagnetic
Recording Medium:
Subject Recorded: Sound signals
Operation: Recording and reproducing

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Recorder-Reproducer Set AN/UNQ-2			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/UNQ-2 RECORDER-REPRODUCER SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.			

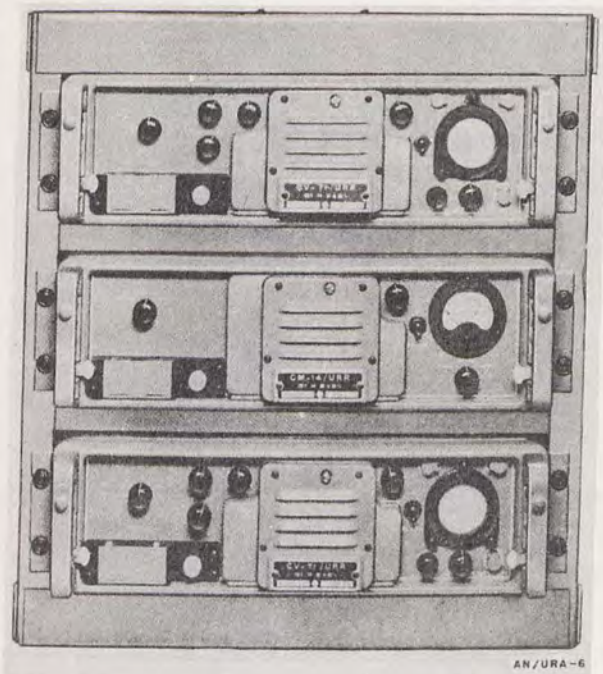
FREQUENCY SHIFT CONVERTER-COMPARATOR GROUP AN/URA-6, -7

3 December 1958
Cognizant Serv: USN FSN: AN/URA-6: 5840-642-8362
AN/URA-7: 5840-644-4841

USA	USN	USAF

TYPE CLASS:
STOCK NO:

Used by
AN/URA-6: F16-Q-123395-200
AN/URA-7: F16-Q-123397-200


AN/URA-6

FUNCTIONAL DESCRIPTION:

Frequency Shift Converter-Comparator Groups AN/URA-6 and AN/URA-7 are dual diversity equipments designed for demodulation of frequency-shift keyed radiotelegraph signals. These equipments thus provide keying facilities for teletypewriters, printers, or similar automatic recording devices. Keying speeds up to 100-dot cycles per second are possible. This corresponds to four-channel multiplex at 100 words per minute for each channel.

Both equipments are intended for table mounting; however, the converter and comparator units may be removed and installed in a standard relay rack.

Basically, both equipments are similar. The AN/URA-6 is used with Radio Receiving Equipments RBB, RBC, and Diversity Radio Receiving Equipment of the RDM series. The AN/URA-7 is used with Diversity Radio Receiving Equipments RBP and RCP.

Two receiving channels are used in a diversity arrangement, Comparator CM-14/URR selecting the stronger signal to control the teletypewriter loop and the keyed tone.

TECHNICAL CHARACTERISTICS:

Frequency Range:
AN/URA-6: 395 kc to 470 kc (dual channel)
AN/URA-7: 50 kc (dual channel)
Type Modulation: Fm
Type Reception: Frequency-shift keying
Power Output:
Electron Tube Keyer for Keying 60-ma Teletypewriter Loop Tone: 12 mw into 600-ohm load
Rf Input:
Input Signal Level: 2,500 uv to 0.5 v
Frequency Shift: 10 to 200 cps for narrow-band operation and 200 to 1,000 cps for wide-band operation
Keying Speeds: To 100 dot cps
Input Impedance:
AN/URA-6: 70 ohms, unbalanced
AN/URA-7: 910 ohms, unbalanced
Tone Signal Frequencies: 595; 765; 935; 1,105; 1,275; 1,445; 1,615; 1,785 cps
Power Requirements: 240 w; 105-, 115-, or 125-v 60-cycle, 1-phase ac

AN/URA-6, -7 FREQUENCY SHIFT CONVERTER-COMPARATOR GROUP

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet	----------	21 3/4 x 20-1/4 x 17-5/32	
1	Comparator CM–14/URR	----------	5-1/8 x 19 x 15-1/4	
2	Frequency Shift Converter CV–57/URR (supplied with Frequency Shift Converter-Comparator Group AN/URA–6)	----------	5-1/8 x 19 x 15-1/4	
	or			
	CV–71/URR (supplied with Frequency Shift Converter-Comparator Group AN/URA–7)	----------	5-1/8 x 19 x 15-1/4	
2	Panoramic Coupling Kit CN–10563 (supplied only with Frequency Shift Converter-Comparator Group AN/URA–6)	----------	4-5/16 x 1-7/8 x 3-3/16	
1 set	Equipment spares (supplied with Frequency Shift Converter-Comparator Group AN/URA–6	----------	12 x 12 x 6	
1 set	Equipment spares (supplied with Frequency Shift Converter-Comparator Group AN/URA–7)	----------	12 x 12 x 6	
1 set	Interconnecting cables			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91355

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	8.25	

FREQUENCY SHIFT CONVERTER-COMPARATOR GROUP AN/URA-6, -7

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: CS–730

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division, Radio	Camden, N. J.	NObsr–39421, 30 June 1947	AN/URA–6 $2,774.00 AN/URA–7 $2,656.00

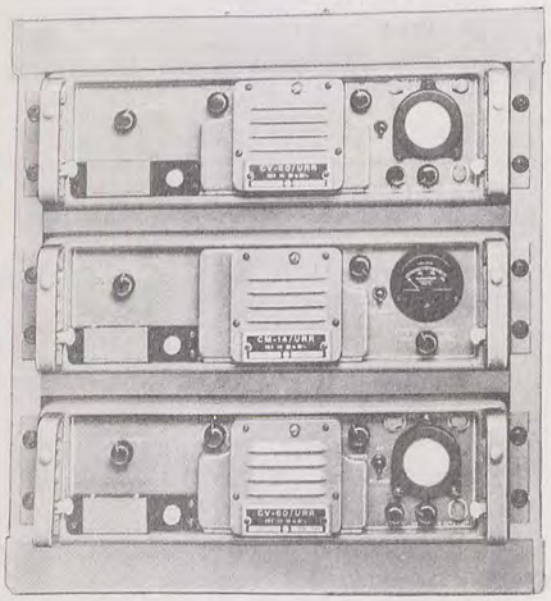
FREQUENCY SHIFT CONVERTER-COMPARATOR GROUP AN/URA-8, -8A

3 December 1958
Cognizant Serv: USN FSN: AN/URA-8: 5840-644-4842
AN/URA-8A: 5840-642-8360

USA	USN	USAF

TYPE CLASS: --
STOCK NO: --

Used by
AN/URA-8: F16-Q-123399-200
AN/URA-8A: F16-Q-123390-200



AN/URA-8

FUNCTIONAL DESCRIPTION:

Frequency Shift Converter-Comparator Groups AN/URA-8 and AN/URA-8A are designed to operate on frequency-shift keyed radiotelegraph signals. These signals are derived from the audio frequency outputs of radio receivers and provide keying facilities for the operation of teletypewriter printers or other automatic recording devices.

Two receiving channels are used in a diversity arrangement but the frequency-shift converters may be used separately for single receiver reception. A comparator selects the stronger signal to control the teletypewriter loop and the keyed tone.

It is possible to obtain keying speeds of up to 60 words per minute for a single telegraph channel, or of 100 words per minute if external apparatus is used. These keying speeds are useable in the reception of four-channel, multiplex, telegraph signal, diversity, or single-unit operation.

The two equipments are used with two radio receivers and a standard or high-speed teletypewriter with loop power supply. Radio Receiving Equipments RBA, RBB, RBC, or equivalent may be used. The AN/URA-8 and AN/URA-8A are electrically and mechanically interchangeable and differ only in contractual data.

TECHNICAL CHARACTERISTICS:

Frequency Range: Audio; with center frequency of either 1,000 cps or 2,550 cps

Type Modulation: Fm

Type Reception: Frequency-shift keying

Power Output:
- Electron Tube Keyer: For keying 60-ma teletypewriter loop
- Tone Signal: 12 mw into 600-ohm load

Audio Input:
- Input Power: 60 uw to 60 mw
- Frequency Shifts: 10 to 200 cps for 1,000-cps center frequency, narrow band; 200 to 1,000 cps for 2,500-cps center frequency, wide band
- Impedance: 600 ohm, balanced or unbalanced

Maximum Keying Speed:
- Single Telegraph Channel: 23 dot cps
- Four-channel Multiplex Telegraph Signals: 100 dot cps

Tone Signals Frequencies: 595; 765; 935; 1,105; 1,275; 1,445; 1,615; 1,785 cps

Power Requirements: 160 w or 220 w; 105-v, 115-v, or 125-v 50- to 60-cycle, 1-phase ac

AN/URA-8, -8A FREQUENCY SHIFT CONVERTER-COMPARATOR GROUP

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Frequency Shift Converter-Comparator Group AN/URA-8:			
1	Comparator CM-14/URR		5-1/8 x 19 x 15-1/4	
2	Frequency Shift Converter CV-60/URR		5-1/8 x 19 x 15-1/4	47
1	Rack		21-3/4 x 20-1/4 x 17-5/32	
1 set	Equipment spares		12 x 12 x 6	95
1 set	Interconnecting cables			
	For Frequency Shift-Converter Comparator Group AN/URA-8A:			
1	Comparator CM-22/URA-8A		5 x 17 x 17	36
2	Frequency Shift Converter CV-89/URA-8A		5-1/4 x 17 x 17	47
1	Rack MT-719/URA-8A		18 x 19-9/16 x 14-3/4	15.25
1 set	Equipment spares		12-1/2 x 25 x 16-1/2	
1 set	Interconnecting cables			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91339 (AN/URA-8)
NAVSHIPS 91278 (AN/URA-8A)

SHIPPING DATA

PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs)
AN/URA-8	3	15.8	321
AN/URA-8A	2	13.10	389

FREQUENCY SHIFT CONVERTER-COMPARATOR GROUP AN/URA-8, -8A

PROCUREMENT DATA

PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG: BUSHIPS Dwg RE67D2017 (AN/URA-8)
BUSHIPS Dwg RE67F2013 (AN/URA-8A)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
(AN/URA-8) Radio Corp. of America, RCA Victor Division	Camden, N. J.	NObsr-39421, 30 June 1947	$3,745.00
(AN/URA-8A) Hoffman Radio Corp.	Los Angeles, Calif.	NObsr-42027, 8 October 1947	2,440.00

CODER-TIMER GROUP AN/URA-11

3 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Coder-Timer Group AN/URA-11 is designed for either shock mounting, on the bulkhead of a ship, or for rack mounting. It is used for the program control of a radio beacon.

This equipments consists of two coders, one being of fixed code wheels and the other equipped with 80 push-button keys for setting any desired four letter code.

TECHNICAL CHARACTERISTICS:

Mount: Shock
Major Materials: Aluminum
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Beacon Coder KY-64/UR			
1	Cabinet CY-867/URA-11	----------	18 x 24 x 24	
1	Electric Timer TD-48/UR			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URA-11 CODER-TIMER GROUP

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: CG-16427C

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Wallace and Tiernan Products Inc.	----	Tcg-38070	

COMPARATOR-CONVERTER GROUP AN/URA-17( )

3 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Comparator-Converter Group AN/URA–17( ) accepts audio signals from its associated receivers, separates the tones, compares and selects the better of two signals, and provides a direct current output for operation of an associated teletypewriter printer.

Audio is provided for headphone monitoring and transmission by way of wire or radio links to remote teletypewriter printers.

This equipment consists essentially of two frequency-shift converters housed in one cabinet. It is suitable for either table or standard 19-inch rack mounting. Shock mounting is utilized for shipboard and brackets for shore installations.

This group is similar to Frequency Shift Converter-Comparator Group AN/URA–8B except for transistors, use of external oscilloscope for tuning purposes, and different packaging.

TECHNICAL CHARACTERISTICS:

Frequency Range: 772 cps to 3,650 cps
Number of Bands: 2
Indication: Tuning and cycle shift meters
Impedance:
Input: 600 ohms
Output: 600 ohms
Mounting:
Shock Mounted: For shipboard use
Bracket Mounted: For shore installations
Power Requirements: 115-v, 60-cps, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Electrical Equipment Cabinet CY–1862( )/URA–17			
2	Frequency Shift Converter CV–483/URA–17			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URA-17( ) COMPARATOR-CONVERTER GROUP

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: SHIPS–C–1975

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hoffman Laboratories Inc.	Los Angeles, Calif.	NObsr–71119	

RADIO SET CONTROL GROUP AN/URA-19

3 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	Tent-Std
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set Control Group AN/URA–19 provides facilities that permit the calling of individual aircraft by normal ground-to-air communication apparatus. The group utilizes existing types of ground-to-air transmitters and airborne receivers.

This equipment relieves the pilot of the continuous monitoring of voice circuits. Ultimately, it will provide an emergency calling feature as well as a limited message capability.

TECHNICAL CHARACTERISTICS:

No information available.

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
11	Digital-tone-code generator Digital-tone-decoder			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	DIMENSIONS (Inches)	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URA-19 RADIO SET CONTROL GROUP

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-R-9542

DESIGN COG: USN, RCUE

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

SPEECH INPUT EQUIPMENT AN/URA-type

12 November 1958
Cognizant Serv: USN FSN: 5820-253-0168 50254
5820-665-1488 (with equipment spares)

USA USN USAF

TYPE CLASS:
STOCK NO:

Used by

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Speech-Input Equipment 50254 is designed to deliver amplified audio-frequency power to Transmitting Equipment TBL-2 and later TBL equipments. The speech-input equipment derives audio energy at a maximum input level of approximately 0.006 watt from a 35-ohm microphone or from 200- or 600-ohm audio lines and delivers the amplified energy to a 500-ohm load at levels up to 28 decibels.

The equipment can be used as a straight audio amplifier or with fixed compression and limiting characteristics. The normal output level is approximately 1.6 watts into a 500-ohm load. The input and output circuits are ungrounded.

Handset Assembly 51062 is included as part of the equipment.

TECHNICAL CHARACTERISTICS:

Frequency Response: 300 to 3,500 cps
Amplitude Distortion: 5%
Power Output: 5.5 w
Noise Level: −50 db below 3.5 w output
Permitted Output Load Variation: ±10%
Input Impedance: 600 and 200 ohms
Power Requirements: 125 w, 110-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares			
1	Speech Input Equipment 50254		12-3/8 x 14-1/4 x 16-1/2	

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,857

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URA-type SPEECH INPUT EQUIPMENT

PROCUREMENT DATA

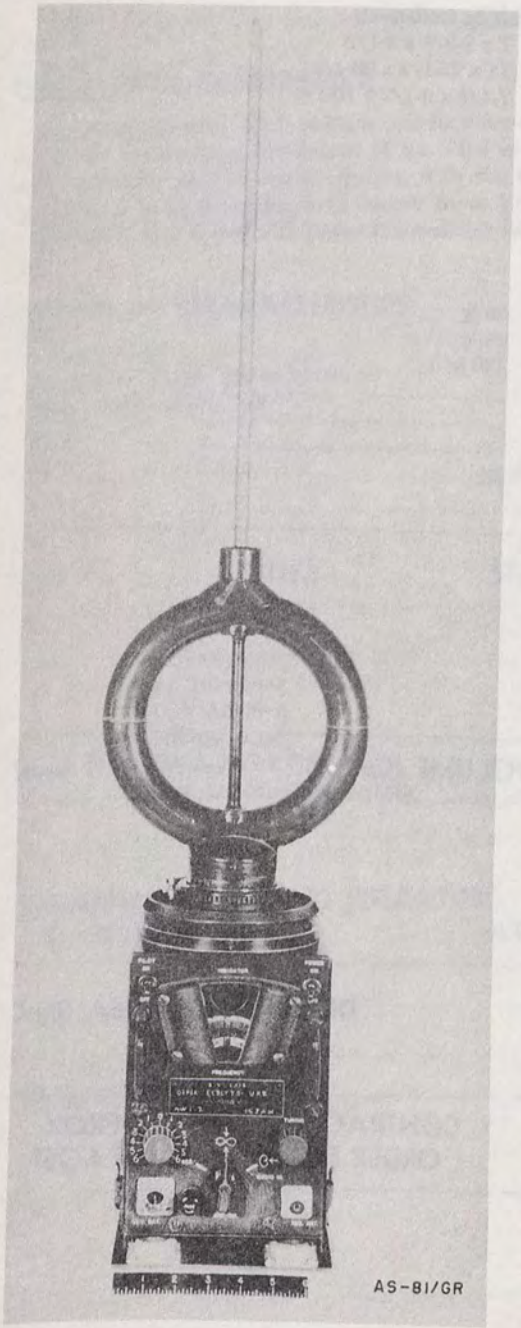
PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division of Radio Corp. of America	Camden, N. J.	NXsr-65279, 12 June 1944	

4 December 1958
Cognizant Serv: USA FSN:

ANTENNA SYSTEM AN/URA-type AS-81/GR

	USA	USN	USAF
TYPE CLASS:	Used by	Used by	--
STOCK NO:	--		--



FUNCTIONAL DESCRIPTION:

Antenna System AS-81/GR is a one-tube directional antenna system designed as an additional to communication receivers. This system permits the operator to make use of unidirectional reception. Antijamming is the function of the equipment. By proper use, the pickup of any signal can be reduced greatly or completely. Satisfactory performance of the antenna system depends on the skill of the operator in adjusting it. Effective operation of the system will provide satisfactory communication and will eliminate the possibility of complete jamming by enemy or friendly station operating on the same frequency.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.1 to 16
Power Requirements: 12-v dc

AN/URA-type ANTENNA SYSTEM

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AN–45–G	2A245G	16 lg (collapsed)	0.75
1	Antenna Mounting AB–9/GR	2A2571–9	7 x 8-3/8 x 8-1/2	4.25
1	Case CY–48/GR	2Z1891–48	14 x 15-1/2 x 20-1/2	26.25
1	Control Box C–98/GR consists of:	2C6666–98	7-1/2 x 9-1/2 x 10-1/2	18.75
3	Fuse 3AG	3Z1927		
4	Lamp GE53	2Z5933.1		
2	Spring and contact assembly	2Z8879–19, –20, or –21		
2	Tube JAN12J5GT	2J12J5GT		
3	Vibrator	3H4496–110/N1		
1	Cord CG–52/GR	3E6015–52	96 lg	.75
1	Cord CG–57/GR	3E6015–57	48 lg	.375
1	Cord CX–105/GR	3E6000–105	120 lg	1
1	Loop AT–27/GR	ZA1990–27	----------	3.75
1	Loop AT–28/GR	ZA1990–28	----------	3.75
1	Loop AT–29/GR	ZA1990–29	----------	3.75
1	Loop AT–30/GR	ZA1990–30	----------	3.75

REFERENCE DATA AND LITERATURE:

TM 11–2608

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

MODULATOR ASSEMBLY AN/URA-type

5 December 1958
Cognizant Serv: USN FSN: CRV–50194

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16–C–85601–1036	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Modulator Assembly CRV–50194 is used for voice-modulating Radio Transmitting Equipment of the TBK series. The speech-amplifier unit of this equipment, with the telephone assembly, is interchangeable with Speech Input Equipment DRV–50064, that is used with Radio Transmitting Equipment TBL.

TECHNICAL CHARACTERISTICS:

Modulator Unit:
Frequency Range: 250 to 3,500 cps
Type Modulation: Am
Type Emission: A1, A2
Modulation Obtainable: 100%
Input Impedance: 600 ohms
Power Output: 250 w into 12.5 ohm load
Speech Amplifier:
Frequency Range: 300 to 3,000 cps
Amplitude Distortion: Less than 10%
Input Impedance: 600 or 200 ohms
Power Output: 3 w into 500 ohm load
Hand Telephone Assembly:
Impedance of Earphones at 1,000 cps: 600 ohms
Impedance of Microphones: 35 to 45 ohms
Power Requirements: 755 w at 115-v, 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares	.....	15 x 18 x 18	
1	Hand Telephone Assembly CRV–51008–A	.....	5 x 11-3/4 x 3-3/8	4.75
1	Modification kit	.....	24 x 23 x 17	75
1	Modulator Unit CRV–50193	.....	14-1/2 x 24 x 17-1/2	120
1	Speech Amplifier CRV–50055	.....	16 x 16 x 15-13/16	75

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,778

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	22.7	480

AN/URA-type MODULATOR ASSEMBLY

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

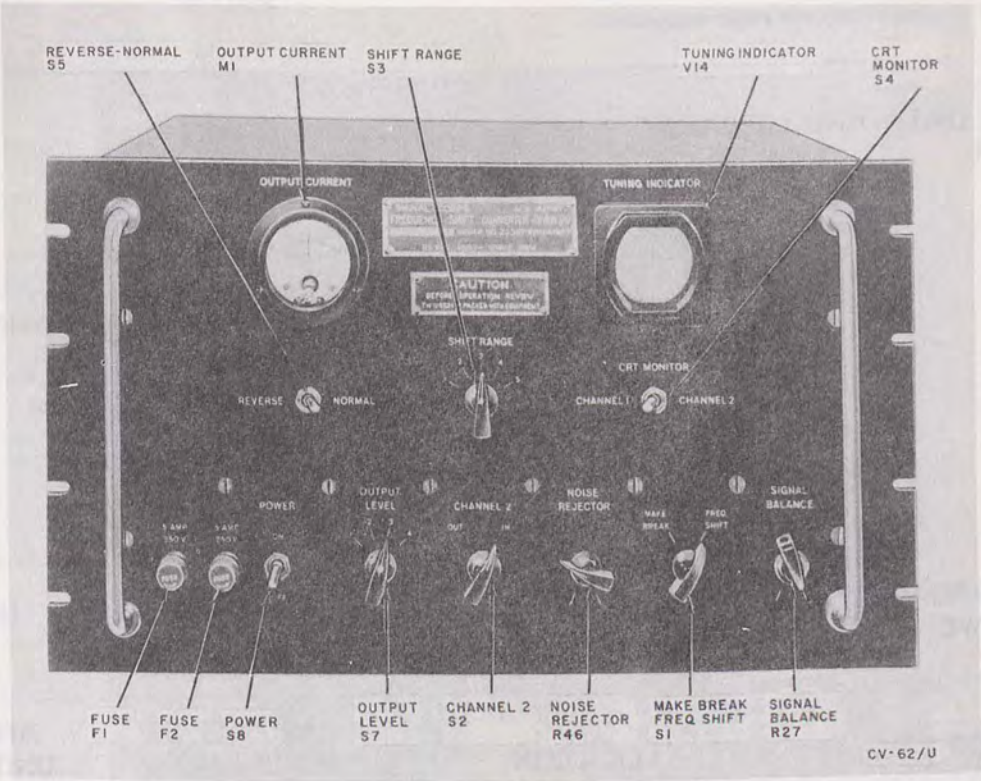
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Corp. of America	Camden, N. J.	NXsr–65285	$987.00

FREQUENCY SHIFT CONVERTER AN/URA-type

1 July 1958
Cognizant Serv: USA FSN: 5815-337-7277 CV-62/U

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Frequency Shift Converter CV-62/U is used to convert AF, fsk signals or make-and-break teletypewriter signals into dc output pulses for the operation of a teletypewriter.

It is intended for use at the receiving terminal of a radio-teletype system and is arranged for rack-and-panel mounting.

TECHNICAL CHARACTERISTICS:

Type of Communication Circuits: Dual-diversity (or single received signal) fsk, center frequency of 2,500 cycles with shifts of 100 to 1,100 cps or dual-diversity (or single received signal) for make-and-break signal in range of 500 to 5,000 cps or conversion of single received signal (using external discriminator) with center frequency between 850 and 5,000 cps

Power Requirements: 130 va, 115-v (±10%) 50/60-cycle 1-phase ac

AN/URA-type FREQUENCY SHIFT CONVERTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency Shift Converter CV–62/U	(FSN)5815–337–7277	10-1/2 x 13-1/2 x 19	60

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–5524

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	12.1	155

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–C–10232

DESIGN COG: USA, Sig C

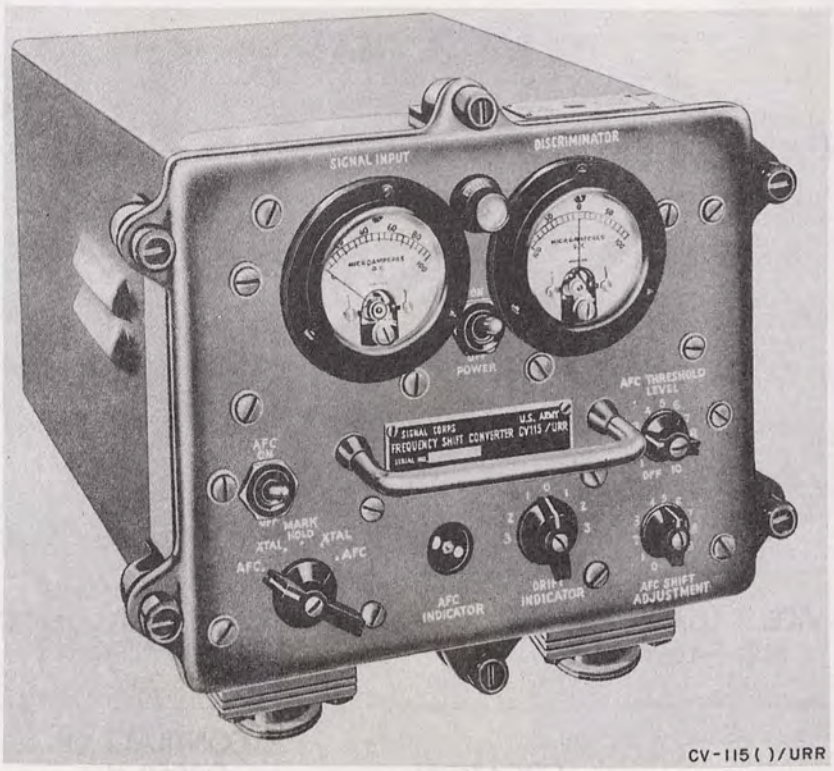
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Frequency Labs, Inc.	Boonton, N. J.	31478–P–51–04	$516.04

FREQUENCY SHIFT CONVERTER AN/URA-type

1 July 1958
Cognizant Serv: USA FSN: 5815-503-2601

CV-115( )/URR

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	2C716-4	--	--



CV-115( )/URR

FUNCTIONAL DESCRIPTION:

Frequency Shift Converter CV-115( )/URR converts frequency-shift keyed signals into dc output pulses that key a receiving teletypewriter.

This equipment is designed for continuous duty and operates from the intermediate frequency (450 to 510 kc) output of a single radio receiver. It can convert fsk signals at speeds as high as 100 dot-cycles per second, and has facilities to reverse the polarity of the mark and space signals. It can generate mark output signals for adjustment purposes.

An intermediate unit is usually required between the converter and the teletypewriter to effect an impedance match between the two units.

TECHNICAL CHARACTERISTICS:

If Input from Receiver: 450 to 510 kc
Signal Input Voltage: 100 microvolts (minimum)
Input Frequency Shift: 150 to 1,000 cps
Input Impedance: 50 ohms
Power Requirements: 110 w, 115-v 50/60-cycle 1-phase ac

AN/URA-type FREQUENCY SHIFT CONVERTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Frequency Shift Converter CV–115( )/URR (Equipment consists of only one major component.)	5815–503–2601	7-3/8 x 13-1/8 x 9	39

REFERENCE DATA AND LITERATURE:

TM 11–5085

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.95	43

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–F–10610

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hoffman Laboratories, Inc.	Los Angeles, Calif.	14222–P–51–93	$2,180.00

FREQUENCY SHIFT CONVERTER AN/URA-type

1 July 1958
Cognizant Serv: USA FSN: 5815-503-2600

CV-116/URR

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C716-3	--	--



FUNCTIONAL DESCRIPTION:

Frequency Shift Converter CV-116/URR changes fsk signals into dc pulses to key the loop circuit of teletypewriters. It operates from the if output of one or two radio receivers arranged in either space of frequency diversity.

This equipment consists of the converter unit, cables, and accessories.

The converter unit is designed for continuous duty and is used in a radioteletype communication system. In addition to the CV-116/URR, a typical system consists of a teletypewriter, a control unit, a frequency-shift keyer, a radio transmitter, two radio receivers, two or three antennas (one or two receiving and one transmitting), and another teletypewriter.

This equipment is used with such sets as Radio Receiving Set AN/FRR-38.

TECHNICAL CHARACTERISTICS:

Operating Speed: 100 dot-cycles per second
Power Requirements: 200 w, 115-v 50/60-cycle 1-phase ac

AN/URA-type FREQUENCY SHIFT CONVERTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency-shift converter (Equipment consists of only one major component.)		8-3/4 x 17 x 19	65

REFERENCE DATA AND LITERATURE:

TM 11–2241

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.13	110

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–F–10532

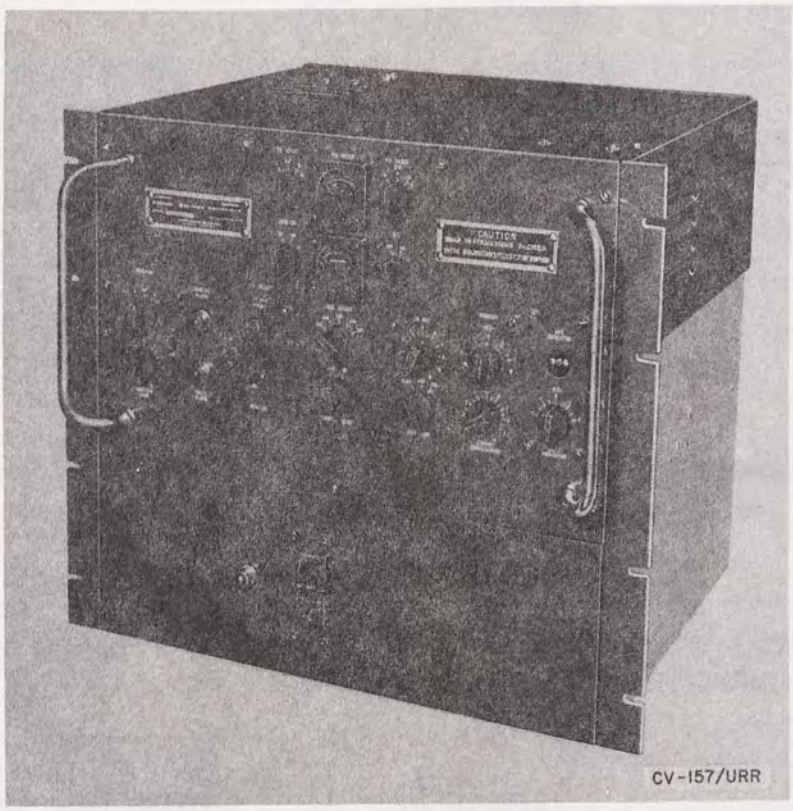
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hoffman Laboratories, Inc.	Los Angeles, Calif.	14222–P–51–93	$2,166.24

SINGLE SIDEBAND CONVERTER AN/URA-type

1 July 1958
Cognizant Serv: USA FSN: 5820-503-2594 CV-157/URR

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C722-157	--	--



FUNCTIONAL DESCRIPTION:

Single Sideband Converter CV-157/URR is used at the receiving end of a radio communication system that operates in single-sideband reduced carrier transmission.

It may also be used as an aid in the reception of am double-sideband signals under severe atmospheric conditions.

This equipment consists of a single operating component arranged for rack-mounting and is intended for the handling of heavy traffic at fixed installations. In such applications, operating with a receiver, it is used to feed carrier terminal equipment that handles several channels of telephone, teletypewriter, and facsimile.

TECHNICAL CHARACTERISTICS:

Type Modulation: Am
Type of Signal: Ssb or twin ssb
Power Requirements: 250 w, 105-125/210-250-v 50/60-cycle ac

AN/URA-type SINGLE SIDEBAND CONVERTER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Single Sideband Converter CV–157/URR	5820–503–2594	----------	104

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–266

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	7.2	177

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–C–11957A

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Dubrow Development Co.	Burlington, N. J.	50964–P–57–55	$2,391.00
Hoffman Laboratories, Inc.	Los Angeles, Calif.	08722–P–55–51	1,999.60
Munston Manufacturing & Service, Inc.	Islip, L. I., N. Y.	38706–P–56–55	3,366.53

EXPERIMENTAL ELECTRONIC RELAY EQUIPMENT AN/URA-type

5 December 1958
Cognizant Serv: USN FSN: CXES

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Electronic Relay Equipment CXES is a device which utilizes the intermediate-frequency output of an associated signal keyed in accordance with a continuous wave input to the receiver. This audio-frequency output is relatively noise-free, compared with reproduction of the telegraphic signal by conventional means, particulary under conditions of high-noise levels. Interchangeable coil assemblies permit operation of Experimental Electronic Relay Equipment CXES with receivers having intermediate frequencies of 175, 400, or 460 kilocycles.

The following equipment is used, but is not supplied with, the Equipment: receiver (1), loudspeaker (1), earphones (1 pair), alternating current input plug (1).

TECHNICAL CHARACTERISTICS:

Intermediate Frequencies: 175 kc, 400 kc, and 460 kc
Power Factor: 0.9
Power Requirements: 70 va at 115-v, 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Audio-Output Plug AN3106–145–10S			
1	Electronic Relay CXES	----------	9-1/16 x 11-1/2 x 15-15/32	25
2	IF cable			
1	Phone plug			
8	Plug-in coil assembly			
1	Plug-in container			
1	Power cable			
1 set	Spare parts in container			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,399

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	10.8	135

AN/URA-type EXPERIMENTAL ELECTRONIC RELAY EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hoffman Radio Corp.	Los Angeles, Calif.	NXss–32200, 22 June 1943	

TUNING INDICATOR AN/URA-type

25 November 1958
Cognizant Serv: USN FSN: IP-352(XN-1)/UR

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Tuning Indicator IP-352(XN-1)/UR consists of a 2-inch cathode ray tube and its associated circuitry and controls. It is primarily intended for use as a remote monitor with Frequency Shift Converter CV-89A/URA-8A. However, the IP-352(XN-1)/UR can be used with any frequency shift converter that has the proper output characteristics and an external monitor jack. It provides means for the following procedures: observing the tuning of the frequency shift converter's associated receiver, indicating the output of the discriminator, checking the approximate amount of the frequency shift, observing the polarity of the mark-space characters, and observing other pertinent details of the signal such as noise, etc.

The unit is designed for table-top mounting with a swivel type mounting bracket to permit orientation within a 90-degree arc in a horizontal plane, and within a 45-degree tilt from the horizontal position.

The following equipment is used with, but is not supplied with Tuning Indicator IP-352(XN-1)/UR: one or two Frequency Shift Converters CV-89A/URA-8A or equivalent.

TECHNICAL CHARACTERISTICS:

Frequency Input: Dc square waves 23 cps (usable to 100 cps)
Frequency Response: 0 to 500 cps on Y-axis
Input Impedance: 1 megohm
Power Input: 10 w
Vertical Deflection Sensivitiy:
Through Amplifier: 2.5 v per inch
Direct Connection: 74 to 100 v per inch (to plate)
Power Requirements: 105- to 125-v ±10% 60-cycle ±5% 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Tuning Indicator IP-352 (XN-1)/UR	----------	6 x 7-1/2 x 12	15

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URA-type TUNING INDICATOR

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hoffman Laboratories Inc.	Los Angeles, Calif.	NObsr–64744, 5 May 1955	

KEYER AN/URA-type

25 November 1958
Cognizant Serv: USN FSN: 5820-508-7335

KY-32/GRT

USA USN USAF

TYPE CLASS:
STOCK NO:

Used by
F16-K-1404-2

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Keyer KY-32/GRT is an electronic unit that adapts Radio Transmitting TCK-series to frequency-shift emission as an alternate to its regular A1 type emission.

This equipment may be used on any transmitters in the TCK series without overloading the transmitter power supply.

TECHNICAL CHARACTERISTICS:

Frequency:
Comparison: 425 cps
Nominal Phase Modulation: 200 cps
Nonimal Frequency Shift During Keying: 850 cps

Output Impedance: 600 ohms
Keying Input:
Neutral Keying:
Mark: +30 to +120 v
Space: Open circuit
Polar Keying:
Mark: +30 to +120 v
Space: −15 to −120 v
Keying Output: Reactance-tube circuit to master oscillator tank
Mounting Data: Mounted in side panel of associated TCK series transmitter, a 9-1/4- by 4-1/8-inch cutout is required

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSION (Inches)	WEIGHT (Lbs)
1 set	Accessories			16
1	Keyer KY-32/GRT		5-7/8 x 12-3/4 x 16-1/4	6

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91109

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	2.45	46

AN/URA-type KEYER

PROCUREMENT DATA

PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG: BuShips Specification CS–521

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Corp.	Clifton, N. J.	NObsr–39150, 13 June 1947	$240.00 with spares

KEYER AN/URA-type

25 November 1958
Cognizant Serv: USN FSN: KY–43/URT

	USA	USN	USAF
TYPE CLASS:	--	Used by	Ltd-Std
STOCK NO:	--	F16–M–83–151	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Keyer KY–43/URT is designed for use with appropriate transmitters to adapt them for frequency-shift operation. It is a reactance modulated amplifier used to shift the frequency of the transmitter master oscillator in accordance with direct current signals from a polar keyer which is, in turn, actuated by a standard teletypewriter.

This equipment is designed primarily for use with, Transmitting Equipment TAB–5, TAB–6, or TAB–7. Provision is made for mounting of the keyer on the TAB-series transmitter.

The KY–43/URT is basically identical with Keyer KY–43A/URT except for minor changes in circuitry.

TECHNICAL CHARACTERISTICS:

Frequency Range: 100 to 555 kc
Frequency Shift Range: 170 cps
Rf Source: TAB–5, –6, –7 master oscillator
Output: To TAB–5, –6, –7 master oscillator through coaxial cable
Keying Voltage: Polar Keyer output of 40 to 120 v
Mounting Data: Left-hand side of TAB–5, –6, –7 exciter
Power Requirements: 110 w, 220-v, 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Accessories			
1 set	Equipment spares	----------	12-1/4 x 12-3/8 x 12-1/4	
1	Keyer KY–43/URT	----------	22-1/2 x 8 x 15-1/2	34

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91138

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	3.2	70

AN/URA-type KEYER

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

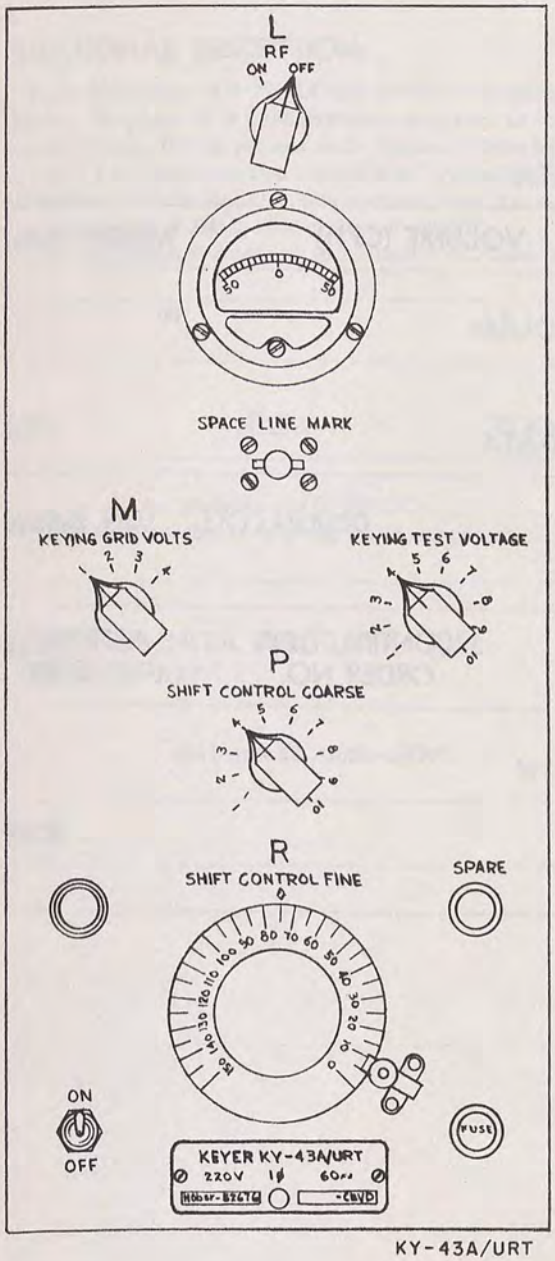
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Munston Manufacturing and Service Inc.	New York, N. Y.	NObsr-42175, 19 March 1948	$300.00 with spares

KEYER AN/URA-type

25 November 1958
Cognizant Serv: USN FSN: 5805-665-1514

KY-43A/URT

	USA	USN	USAF
TYPE CLASS:	--	Used by	Std
STOCK NO:	--	--	--



KY-43A/URT

FUNCTIONAL DESCRIPTION:

Keyer KY–43A/URT is designed for use with appropriate transmitters to adapt them for frequency-shift operation. It permits the impression of intelligence on an radio frequency carrier by the frequency-shift method in order to minimize the effects of fading, noise interference, and static disturbances on the receiving equipment.

The KY–43A/URT is a reactance-modulated amplifier used to shift the frequency of the transmitter master oscillator in accordance with the direct current polar mark and space impulses from a teletypewriter keyer. It employs a reactance tube circuit to convert the polar direct current signals into a radio frequency carrier shift that is symmetrical with respect to the assigned frequency.

This equipment is designed primarily for use with Transmitting Equipment TAB–5, TAB–6, or TAB–7. The keyer consists of a rectangular chassis and front panel mounted on a plate for mounting of the unit on the side of the master oscillator section of the TAB-series transmitters. All controls for the keyer are located on the front panel.

The KY–43A/URT is basically identical with Keyer KY–43/URT except for minor changes in circuitry.

TECHNICAL CHARACTERISTICS:

Frequency Range: 100 to 555 kc
Frequency Shift Range: 170 cps (nominal)
Type Modulation: FM (F1)
Type Signal: Fsk
RF Source: TAB–5, –6, –7 master oscillator
Output: To TAB–5, –6, –7, master oscillator through coaxial cable
Keying Speed Maximum: At least 60 wpm
Keying Voltage: Dc polar ±40 to ±120 v
Keying Input Impedance: 3,800 ohms
Mounting Data: Left-hand side of TAB–5, –6, –7 exciter
Power Requirements: 110 w, 220-v ±10% 60-cycle 1-phase ac

AN/URA-type KEYER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares	----------	6 x 12 x 6	14
1	Keyer KY–43A/URT	----------	22-1/2 x 8 x 15-1/2	34

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91645

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.6	66

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL–K–15651

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Fidelity Amplifier Co.	Chicago, Ill.	NObsr–52676, 22 June 1953	

RADIO MODULATOR AN/URA-type

4 December 1958
Cognizant Serv: USN FSN: 5820-642-8492 MD-209/UC

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Modulator MD-209/UC is a device for electronically shifting the phase of a radio-frequency signal at an audio-frequency rate. Its use permits audio frequency transmission by an A-1 emission-type transmitter. Audio-frequency modulation signals used for this purpose must be in the frequency range of 250 to 6000 cycles per second.

This equipment is intended to be used with radio transmitters whose output frequency is in the range of 4 to 20 megacycles.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 5
Input Impedance: 500 to 600 ohms
Input Frequency: 250 to 6,000 cps
Power Requirements: 115/230-v 50- to 70-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Modulator MD-209/UC	----------	10-19/32 x 17-29/32 x 20-1/2	
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92459

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URA-type RADIO MODULATOR

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

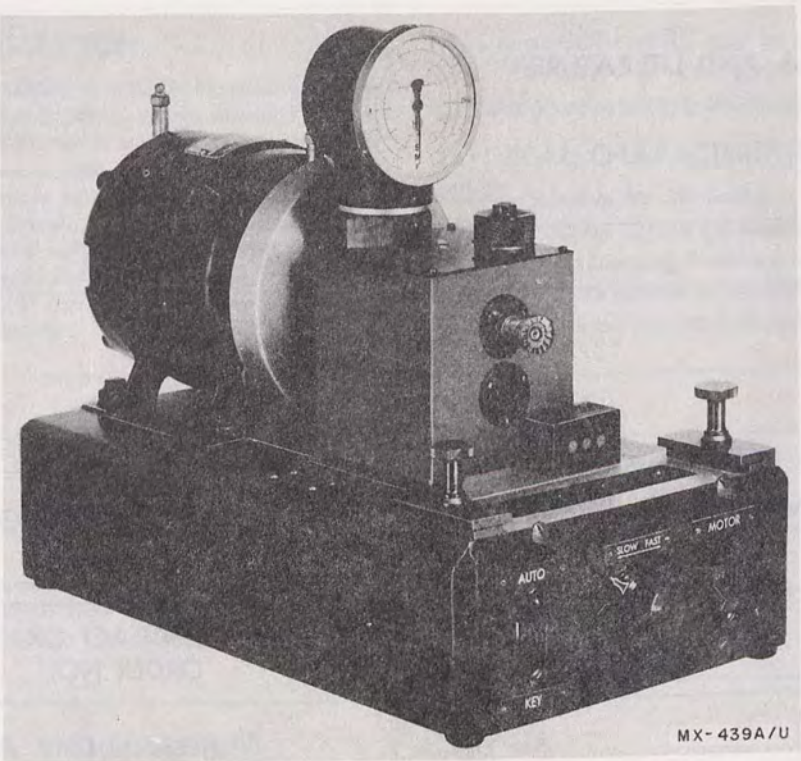
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Schuttig & Co., Inc.	Washington, D. C.	NObsr-52566	$1,490.00

KEYING HEAD DRIVE AN/URA-type

5 December 1958
Cognizant Serv: USN FSN:

MX–439( )/U

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Keying Head Drive MX–439( )/U is designed to drive an automatic keying head through its entire speed range. The MX–439( )/U is used in conjunction with an associated mechanical keying head to provide high speed automatic transmission of radiotelegraph signals in International Morse Code.

The MX–439( )/U is capable of driving the keying head at any desired speed between approximately 20 to 400 words per minute.

The MX–439/U is similar to and interchangeable with the MX–439A/U except for the noninterchangeable keying relay and omission of the remote hand key indicator light found on the MX–439/U.

TECHNICAL CHARACTERISTICS:

Driving Range: 20 to 400 wpm
Power Requirements:
MX–439/U: 150 w, 110-v dc
MX–439A/U: 150 w, 115-v dc

AN/URA-type KEYING HEAD DRIVE

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Keying Head Drive MX-439( )/U (Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92220

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
H. O. Boehme Co.	New York, N. Y.	NObsr-63004	

RADIO FREQUENCY OSCILLATOR AN/URA-type

5 December 1958
Cognizant Serv: USN FSN: O–406(XN–1)/URC

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Frequency Oscillator P–406(XN–1)/URC is a radio frequency crystal synthesizer. It is basically intended to serve as an exciter for a transmitter of a high-frequency oscillator for a receiver. In its functions as an exciter or high-frequency oscillator, it can replace a complete crystal kit numbering over 1,750 individual crystals.

It has both a mechanical and an electrical readout. The electrical readout is primarily designed as a memory box for a remote-control system. It can also serve as an easily read, exact indicator of frequency.

The O–406(XN–1)/URC may be used with transmitters of the AN/URT–7 or TED types and receivers of the AN/URR–13 or AN/URR–28 types.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Transmitter Setting: 1/12 of the transmitter output
Receiver Setting: Incoming frequency ± the if. frequency
Warmup Time: 15 minutes to stabilize
Power Requirements: 115/230-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Frequency Oscillator O–405(XN–1)/URC (Equipment consists of only one major component.			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1		

AN/URA-type RADIO FREQUENCY OSCILLATOR

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: SHIPS–S–1807

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Manson Laboratories	Stamford, Conn.	NObsr–64716	$3,826.32

CODE PRACTICE EQUIPMENT AN/URA-type

5 December 1958
Cognizant Serv: USN FSN: OAH, OAH-1, OAH-2

USA	USN	USAF

TYPE CLASS: --
STOCK NO: --

Used by
OAH: F16-Q-116291-200
OAH-1: F16-Q-196292-100
OAH-2: F16-Q-196293-100

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Code Practice Equipment OAH, OAH-1 and OAH-2 are used for training purposes in telegraphic code, to maintain and increase the proficiency of personnel already trained as operators. For group instruction it is possible to train up to six students at one time. The equipment may also be used for practice in the receiving of an external signal.

The OAH, OAH-1, and OAH-2 are electrically and mechanically interchangeable and may be operated on either ac or dc.

TECHNICAL CHARACTERISTICS:

Frequency Range:
OAH, OAH-1: 100 to 1,000 cps
OAH-2: 460 to 1,500 cps
Frequency Control: Continuously variable
Output Impedance:
OAH, OAH-1: 25 ohms
OAH-2: 100 ohms
Power Output: OAH, OAH-1: 1 w
OAH-2: 25 mw
Send-Receive Circuits: 7
Power Requirements: 20 w, 110-v 60-cycle 1-phase ac; or two 1.5-v batteries type CNC-19010, and two 45-v batteries type CNC-19005

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For OAH, OAH-1:			
1	Oscillator Amplifier Unit COQ-35029		7-5/8 x 7-3/8 x 9-1/4	
1	Distribution Unit COQ-62077		78 long	
1	Accessories Box COQ-20170		8-1/32 x 7-17/32 x 15-3/16	
1	Shipping Chest MCH-1			
	For OAH-2:			
1	Oscillator Amplifier Unit CUZ-35058		7-3/8 x 8-7/8 x 7-7/8	15
1	Distribution Unit CUZ-62148		78 long	
1	Accessories Box CUZ-10362		8-3/4 x 15-1/2 x 8-1/4	13.5
1	Shipping Chest CUZ-10361		9-1/2 x 19-3/4 x 17-3/8	25

AN/URA-type CODE PRACTICE EQUIPMENT

REFERENCE DATA AND LITERATURE:

OAH, OAH–1: NAVSHIPS 95159
OAH–2: NAVSHIPS 900552

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5.78	124

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: USN, BuShips
SPEC &/or DWG: OAH, OAH–1: Spec SSD–1, RE9325; EN28/1397–43/Ships
OAH–2: Spec No. RE9325A

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Automatic Signal Corp.	East Norwalk, Conn.	NXss–29645	$300.00
U.S. Television Manufacturing Corp.	New York, N. Y.	NXsr–49707	300.00

CODE PRACTICE EQUIPMENT AN/URA-type

5 December 1958
Cognizant Serv: USN FSN:

OW-2

USA USN USAF

TYPE CLASS: Used by
STOCK NO:

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Code Practice Equipment OW–2 is used for the training of radio telegraph operators. It is designed to accommodate 40 positions.

TECHNICAL CHARACTERISTICS:

Audio Oscillator Frequency: 100 to 1,000 cps
Power Requirements: 110-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Distribution Unit 49174			
40	Headphones 49016			
1	Mounting Rack		20 x 22 x 73-1/4	
1	Oscillator-Amplifier Unit 35009			
40	Patch Cords			
1	Storage Battery, 6-volt			
40	Telegraph Keys 26001			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95196

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URA-type CODE PRACTICE EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

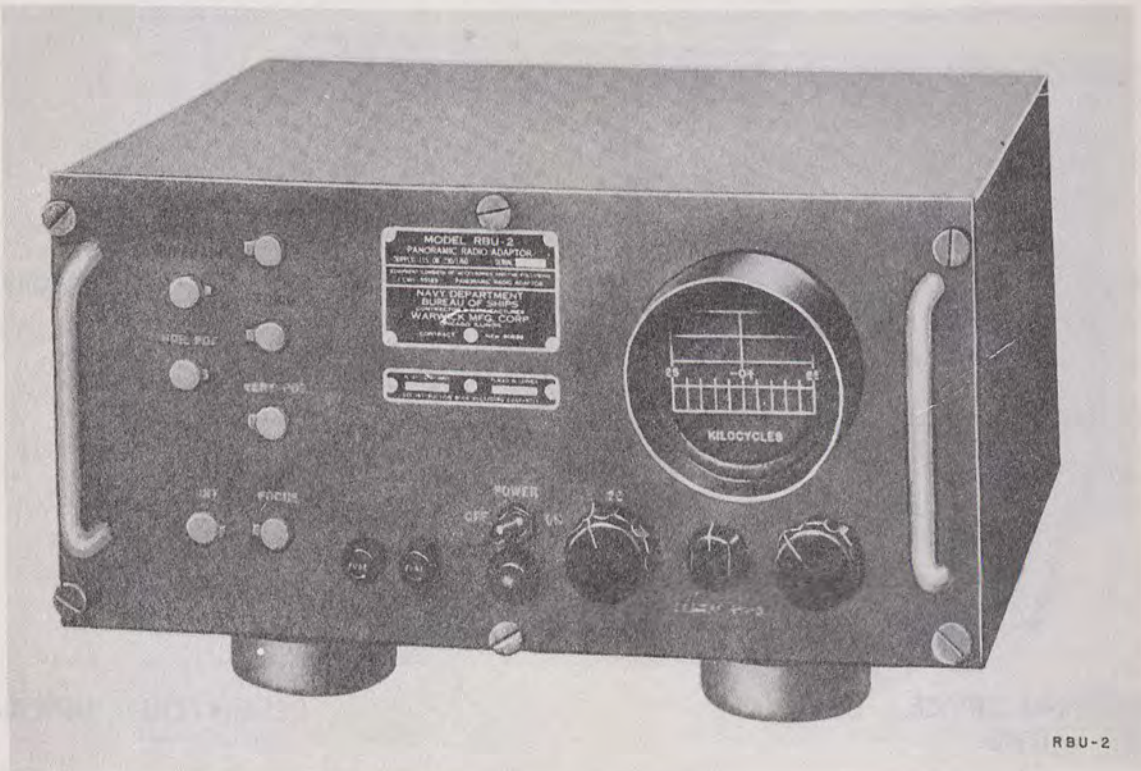
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
U.S. Navy Yard	Washington, D. C.	MB-381-43	

PANORAMIC RADIO ADAPTOR AN/URA-type

4 December 1958
Cognizant Serv: USN FSN: RBU, 5820-347-9186
RBU-1, 5820-665-1069
RBU-2, 5820-347-9186

RBU, RBU-1, RBU-2

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	RBU: F16-Q-255899-200	--
		RBU-1: F16-Q-255910-200	
		RBU-2:	



RBU-2

FUNCTIONAL DESCRIPTION:

Panoramic Radio Adaptors RBU, RBU-1, and RBU-2 are cathode-ray-tube oscilloscopes used with radio receiving equipment to indicate simultaneously, as vertical deflections on the screen. all stations receivable within a band that extends approximately 25 kilocycles above and below the frequency to which the receiver is tuned. This permits quick interception of stations appearing on the air for short periods of time. The adaptor indicates the frequency of a signal with respect to the station to which the receiver is tuned, indicates roughly the strength of the signal, and reveals the character of the signal and type of modulation—continuous wave, voice, amplitude modulation, frequency modulation, pulse, etc.

The RBU-1, and RBU-2 are designed for use with Radio Receiving Equipments RBB. They are essentially the same as the RBU except that they have greater sensitivity.

Equipment required for the operation of the panoramic radio adaptor are Coupling Kit 10563, and ac power cord with plug, and Radio Frequency Cable RG-11/U.

TECHNICAL CHARACTERISTICS:

Presentation: 3-inch cathode-ray tube
Input Frequency: 400 kc
Maximum Sweep Width: 50 kc
Sweep Frequency: 30 cps
Sensitivity: 50-uv input for deflection amplitude of more than 1/4 inch
Type Input: Cathode follower
Power Requirements: 60 w, 115/230-v to 60-cycle 1-phase ac

AN/URA-type PANORAMIC RADIO ADAPTOR

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares			
1	Panoramic Adaptor 55185 (RBU–2)		7-1/2 x 16 x 13	38
1	Panoramic Radio Adaptor:			
	55088 (RBU)		5-1/2 x 11 x 11-7/8	40
	55088–A (RBU–1)		8-3/4 x 16 x 13	44

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,288–1B
NAVSHIPS 900,717
NAVSHIPS 900,501–1B

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For RBU:		
1		
For RBU–1:		
1	10.4	151
For RBU–2:		
1	7.1	138

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division, Radio Corp. of America	Camden, N. J.	NXsr–43377 (RBU)	$615 with equipment spares
Panoramic Radio Corp.	New York, N. Y.	NXss–33781, 9 July 1943 (RBUL1)	$615 with equipment spares
Warwick Manufacturing Corp.	Chicago, Ill.	NXsr–90839, 20 February 1945 (RBU–2)	$615 with equipment spares

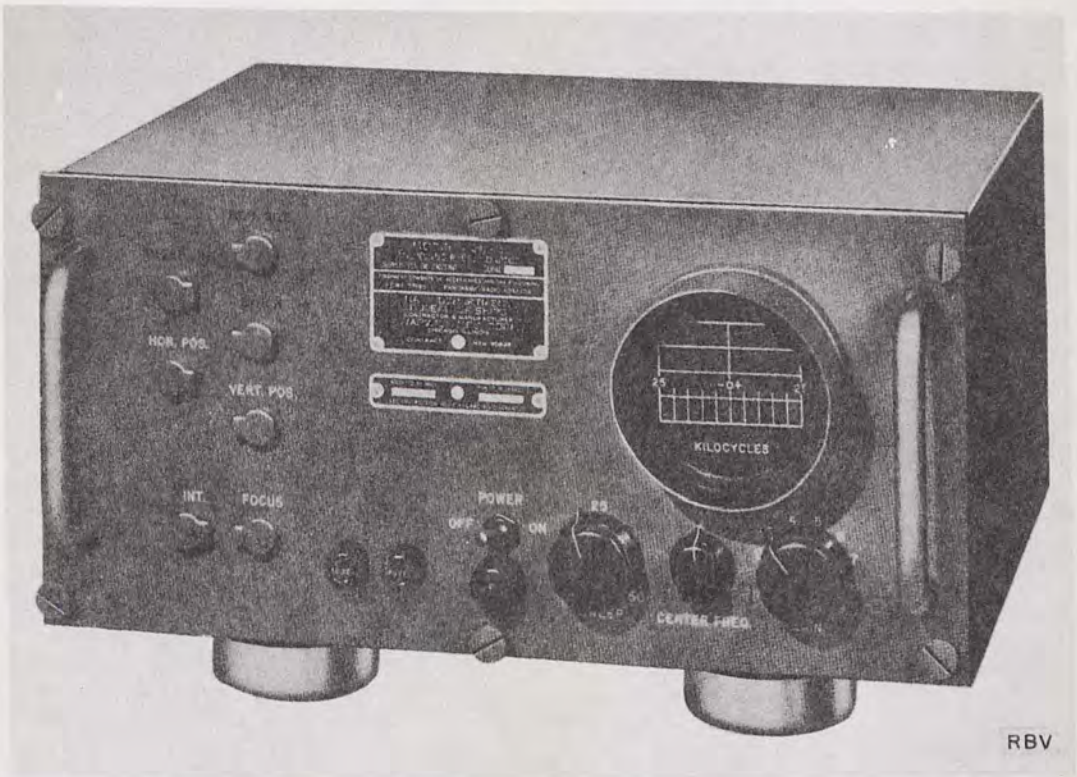
PANORAMIC RADIO ADAPTOR AN/URA-type

4 December 1958

Cognizant Serv: USN FSN: RBV, 5820-644-4816
RBV-1, 5820-665-2065
RBV-2, 5820-644-4816

RBV, RBV-1, RBV-2

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	RBV: F16-Q-256280-200	--
		RBV-1: F16-Q-256300-200	
		RBV-2: F16-Q-256320-200	



RBV

FUNCTIONAL DESCRIPTION:

Panoramic Radio Adapters RBV, RBV-1, and RBV-2 are cathode-ray-tube oscilloscopes used with radio receiving equipment to indicate simultaneously, as vertical deflections on the screen, all stations receivable within a band that extends approximately 50 kilocycles above and below the frequency to which the receiver is tuned. This permits quick interception of stations appearing on the air for short periods of time. The adaptor indicates the frequency of a signal with respect to the station to which the receiver is tuned, indicates roughly the strength of the signal, and reveals the character of the signal and type of modulation—continuous wave, modulated continuous wave, voice, amplitude modulation, frequency modulation, pulse, etc.

The RBV, RBV-1, and RBV-2 are designed for use with Radio Receiving Equipments RBC. They are essentially identical; however, the RBV-2 has greater sensitivity.

Equipment required for the operation of the panoramic radio adaptor are Coupling Kit 10563, an ac power cord with plug, and Radio Frequency Cable RG-11/U.

TECHNICAL CHARACTERISTICS:

Presentation: 3-inch cathode-ray tube
Input Frequency: 400 kc (±5 kc only)
Maximum Sweep Width: 100 kc
Sweep Frequency: 30 cps
Sensitivity: 50-uv input for deflection amplitude or more than 1/4 inch
Input Impedance: 50 ohms
Power Requirements: 60 w, 115/230-v 50- to 70-cycle 1-phase ac

AN/URA-type PANORAMIC RADIO ADAPTOR

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares			
1	Panoramic Adaptor			
	55089 (RBV)	----------	7-1/4 x 13 x 13-1/4	46
	55090–A (RBV–1)	----------	8-3/4 x 13-1/2 x 15	44
	55186 (RBV–2)	----------	7-1/2 x 16 x 13	38

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,288–1B
NAVSHIPS 900,501–1B
NAVSHIPS 900,717

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For RBV:		
1	10.4	151
For RBV–1:		
1	7.1	138
For RBV–2:		

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division, Radio Corp. of America	Camden, N. J.	NXsr–43377, 8 December 1943 (RBV)	
Panoramic Radio Corp.	New York, N. Y.	NXss–33781, 9 July 1943 (RBV-1)	$552 with equipment spares
Warwick Manufacturing Corp.	Chicago, Ill.	NXsr–90839, 20 February 1945 (RBV-2)	$742 with equipment spares

PANORAMIC RADIO ADAPTOR AN/URA-type

4 December 1958
Cognizant Serv: USN FSN: RCC

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16–Q–258126–200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Panoramic Radio Adaptor RCC is a cathode-ray-tube oscilloscope designed to provide visual observation of radio-frequency signals, utilizing the intermediate-frequency signal from suitable radio receiving equipment. It is used primarily for the quick interception and identification of transmissions, including those which are on the air for a short period of time.

All signals of sufficient amplitude, within 100 kilocycles above and below the frequency to which the receiver is tuned, are included in the sweep across the screen. Graph lines on the face of the tube permit a frequency check of any signal in the sweep and a relative signal strength indication. In addition, the shape of any signal deflection in the sweep reveals the character of the signal and the type of modulation.

TECHNICAL CHARACTERISTICS:

Presentation: 3-inch cathode-ray tube
Input Frequency: 450 to 470 kc, adjusted to 455 kc at factory
Maximum Sweep Width: 200 kc
Sweep Frequency: 30 cps
Input Impedance: 50,000 ohms
Power Requirements: 105/115-v 25/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Panoramic Radio Adapter RCC	----------	12-3/8 x 25-3/8 x 15-1/2	76

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

Preliminary instruction book for Panoramic Radio Adaptor RCC

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URA-type PANORAMIC RADIO ADAPTOR

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Panoramic Radio Corp.	New York, N. Y.	NXss-18159, 24 November 1942	

RADIO RECEIVING EQUIPMENT AN/URA-type

20 November 1958
Cognizant Serv: USN FSN: RDC-1

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16-Q-265520-200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RDC-1, when used with a suitable panoramic display unit or recording device, is designed to detect radio and certain radar signals being transmitted within any one of three frequency bands. The selected frequency band is mechanically swept by a continuously rotating, motor driven, variable capacitor. A synchronizing switch is driven by the same motor.

This equipment is housed in a cabinet equipped with shock mounts for table or bench mounting. It may be removed from its cabinet and installed in a standard 19 inch rack.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 28 to 134 in three bands
Reception: Cw, mcw, or pulse with repetition frequencies of the order of several hundred per second
Input Impedance: 50 ohms
Sweep Frequency: 15 cps
Output Impedance: 50 to 70 ohms
Sensitivity: (For signal deflection five times the average maximum noise deflection) Bands 1 and 2: 10 mv input, Band 3: 20 mv input
Antenna Requirements: Any broadly tuned antenna suitable for the frequency range or band to be covered
Power Requirements: 118 w, ±15% power factor, 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Panoramic Search Receiver CHL-46253	----------	16 x 27 x 26-1/2	90

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,486

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	12.5	286

AN/URA-type RADIO RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: RE13A1024A

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	NXsr-64110 NObsr-39300 NXsr-85057	$1,000.00

PANORAMIC RADIO ADAPTOR AN/URA-type

20 November 1958
Cognizant Serv: USN FSN: RDK

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–Q–269190–200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Panoramic Radio Adaptor RDK, when connected to a radio receiver, enables an operator to see on a cathode-ray tube all stations that are receivable within a 3-mc band of the frequency to which the receiver is tuned. This allows quick interception of stations appearing on the air for short periods of time, even if slightly off the assigned frequency.

This equipment must be used with a superheterodyne radio receiver having an intermediate frequency of 30 mc.

TECHNICAL CHARACTERISTICS:

Sensitivity: 1/4-inch deflection at 200 uv input
Presentation: 3-inch cathode-ray tube
Input Frequency in Mc: 30
Maximum Sweep Width in Mc: 3
Sweep Frequency:
50-cycle power source: 25 cps
60-cycle power source: 30 cps
Power Requirements: 115/230-v 50–70-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USN)		
1	Panoramic Radio Adaptor CPN–55145	----------	8-3/4 x 13-1/2 x 15	43

(This equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95259

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URA-type PANORAMIC RADIO ADAPTOR

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Panoramic Radio Corp.	New York, N. Y.	NXss-33781	$150.00

RADIO RECEIVING EQUIPMENT AN/URA-type

20 November 1958
Cognizant Serv: USN FSN: RDO

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16-Q-270690-200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RDO is a search receiver used to measure the frequency of radio signals within its frequency range. The frequency band of 38 to 1,000 mc is covered in three bands by plug-in tuning units. Tuning over the band is accomplished by manual or automatic means. This equipment is a superheterodyne receiver and is designed for RCM search applications on Naval vessels.

A panoramic adaptor and pulse analyzer equipments are required for visual presentation of received signals.

The receiver cabinet is equipped with shock mounts and is designed for table or bench mounting. A clearance of 6-1/4 inches is required in back of the receiver.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 38 to 1,000 in three bands:
Band 1: 28 to 105 mc (Tuning Unit TN-1B/APR-1)
Band 2: 75 to 300 mc (Tuning Unit TN-2B/APR-1)
Band 3: 300 to 1,000 mc (Tuning Unit TN-3B/APR-1)
Reception: Panoramic voice for audio output; pulses for scanning and analyzing
Power Output: 45 mw into a 600-ohm load
Output Impedance: 600-ohm phone; 30- to 600-ohm line
Sensitivity: Varies considerably over the frequency range
Input Impedance: 50-ohms unbalanced to ground; transmission line connects to coaxial connector
Radiation: Unsafe at all frequencies
Power Requirements:
Receiver: 126 w, 110/115/120-v 55-65-cycle 1-phase ac
Tuning Motor: 28-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet	----------	10-5/8 x 18-1/8 x 24-3/4	
1	IF-AF Amplifier CZC-50198	----------	9-13/16 x 12-23/32 x 10-13/16	16
1	Preselector Frame CZC-10369	----------	9-13/16 x 14-3/32 x 7-5/16	4
1	Rectifier Power Supply CZC-20314	----------	8-3/16 x 16-1/2 x 8	37
1	Tuning Unit TN-1B/APR-1	----------	7-3/4 x 6-1/2 x 13-5/8	
1	Tuning Unit TN-2B/APR-1	----------	7-3/4 x 6-1/2 x 13-5/8	
1	Tuning Unit TN-3B/APR-1	----------	7-3/4 x 6-1/2 x 13-5/8	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,527

AN/URA-type RADIO RECEIVING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: Spec. No. RE9424A

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Galvin Manufacturing Co.	Chicago, Ill.	NXss–48318	
E. H. Scott Radio Laboratories, Inc.	Chicago, Ill.	NXsr–48318	$6,500.00

RADIO TELEPHONE SIMULATOR AN/URA-type

20 November 1958
Cognizant Serv: USN FSN: SM–40/UR

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Telephone Simulator SM–40/UR provides simulated radio communication in Combat Information Center training. It permits a training activity to use the CIC and Helm Station communication equipments during a training exercise. (These communication equipments normally are used aboard ship in the execution of an actual tactical problem.

TECHNICAL CHARACTERISTICS:

Audio Output Impedance: 600 ohms
Heat Dissipation: 100 w
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Telephone Simulator SM–40/UR	----------	15-3/4 x 22-3/4 x 28-1/4	98

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91512

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	9.0	180

AN/URA-type RADIO TELEPHONE SIMULATOR

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

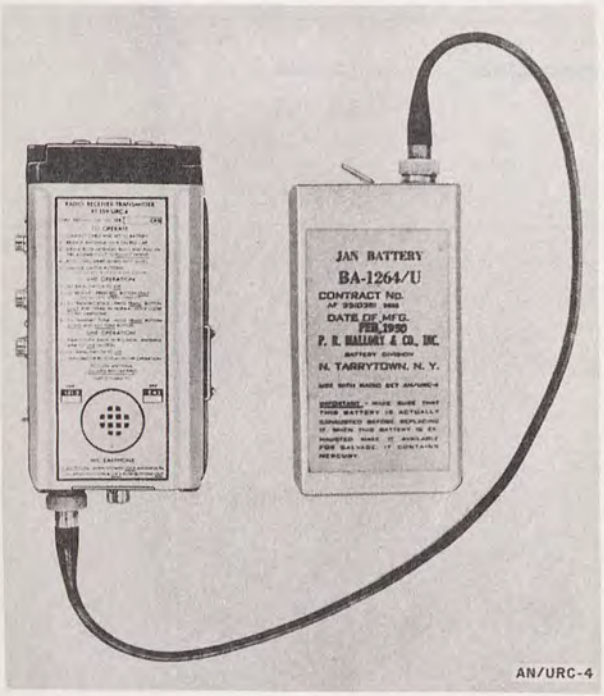
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Mare Island Naval Shipyard	Vallejo, Calif.	46700/51	$500.00

RADIO SET AN/URC-4

3 December 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S5509–4	--	1600–266509670 (Ref)



FUNCTIONAL DESCRIPTION:

Radio Set AN/URC–4 is a portable, hand-operated, ultra-high frequency and very-high frequency unit designed to furnish two-way air-to-ground and point-to-point communication in emergency rescue situations. It is dropped from aircraft in a watertight container which floats on the surface of the water.

The transmitter is crystal-controlled and, depending upon the crystal in use, operates on any preset frequency within the given bands. The receiver is of the superregenerative type and can be tuned independently of the transmitter to any frequency within the given range.

The antenna is located in the top of the radioset from where it can be quickly extended.

This equipment may be operated while in motion and will function continuously for 24 hours in cycles of 5 minutes for transmitting and 5 minutes for receiving.

The unit can also be used for emergency airdrome traffic control.

Radio Carrier Vest AN/URC–4 and Droppable Kit AN/URC–4 are part of the radio set and are supplied in addition to the basic components if required.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Preset Frequency in Mc: 120 to 130
Harmonic Operation: 240 mc to 260 mc
Number of Crystal-controlled Preset Frequencies: 1
Type Modulation: Am
Type Emission and Reception: Voice, tone, or mcw
Power Output:
Receiver: 75 mw
Transmitter: 35 mw
Power Requirements:
45 Ma Plate Supply: 125-v dc
520 Ma Filament Supply: 125-v dc
Battery Life: 24 hr when operated in cycles of 5 minutes transmitting and 5 minutes receiving

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Battery BA–1264/U	6135–164–8769	3-3/8 x 6-1/4 x 2-1/4	3
1	Droppable kit, aerial delivery consisting of: Parachute, Cargo G–7 and Container, Aerial Delivery A–20	2010–559570	22 x 13	20

AN/URC-4 RADIO SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Kit-survival radio extra large	2010–559560–4		
	or			
	large	2010–559560–3		
	or			
	medium	2010–559560–2		
	or			
	small	2010–559560–155		
1	Radio Receiver-Transmitter RT–159/URC–4	1600–218997008		
	or			
	RT–159A/URC–4	1600–218997024		
	or			
	RT–159B/URC–4	1600–013570005		
1	Special Purpose Cable Assembly CX–1093/U (2 ft 6 in.)	1600–324763581		
	or			
	CX–1093/U (5 ft 6 in.)	1600–324763582		
	or			
	CX–1093A/U (2 ft 6 in.)	1600–010732050		

REFERENCE DATA AND LITERATURE:

TO 16–30URC4–2
TO 12R2–2URC4–1
TO 12R2–2URC4–2
TO 12R2–2URC4–4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.9	29.3

PROCUREMENT DATA

PROCURING SERVICE: USAF, GFAE, AMC
DESIGN COG: USAF, ARDC (WCLN)
SPEC &/or DWG: MIL-R-6373; R-7240

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Philharmonic Radio and Television Corp.	New Brunswick, N. J.	AF33(600)24751	$200.00

RADIO SET AN/URC-7Z

Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/URC–7Z is a pretuned radio-frequency transmitter and receiver designed for two-way general communication purposes.

This equipment is intended for deck or table mounting.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 kc to 7,000 kc
Number of Channels: 2
Type Reception and Emission: A3
Frequency Control: Crystal
Transmitter Power Output: 25 w
Power Requirements: 115-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet CY–1027/URC–7			
2	Cable assembly			
1	Handset NT–51032			
1	Modulator-Power Supply MD–223/URC–7Z			
1	Radio Receiver R–413/URC–7			
1	Radio Transmitter T–298/URC–7			
1	Terminal Box J–442/URC–7			
1	Terminal Box J–612/URC–7			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URC-7Z RADIO SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: RTRS-350-A (USCG)

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp. of America	New York, N. Y.	TCG-39362	

RADIO SET AN/URC-11

3 December 1958
Cognizant Serv: USAF FSN:

	USA	USN	USAF
TYPE CLASS:	--	--	Std
STOCK NO:	--	--	1600–013388080



FUNCTIONAL DESCRIPTION:

Radio Set AN/URC–11 is a portable, subminiature, hand-operated, ultra-high frequency receiver-transmitter used for two-way communication between distressed personnel and searching aircraft.

This equipment can operate on any preset frequency within the band, and its receiver portion can be tuned, independently This equipment can operate on any preset frequency within the band, and its receiver portion can be tuned, independently of the transmitter, to any frequency within the specified range.

The radio set uses a one-half wave length telescopic antenna that is collapsible and storable within the receiver-transmitter case.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 240 to 260
Type Modulation: AM
Type Reception and Emission: A3 (voice, tone)
Power Output:
Transmitter: 75 mw
Receiver: 25 mw
Operational Range: Line of sight
Power Requirements:
Power Source: Battery BA–1315/U
Battery Life: 24 hr of continuous operation in cycles of 5 minutes transmitting and 5 minutes receiving
Data: 1.25 v, 550 ma dc; 120 v, 35 ma dc (continuous operation) 550 ma at 1.25-v dc; 35 ma at 120-v dc for continuous operation

AN/URC-11 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Battery BA–1315/U			
1	Receiver-Transmitter, Radio RT–285/URC–11	1600–013388080		
1	Special Purpose Cable Assembly CX–1093A/U	1600–012732050	30 or 66 lg	

REFERENCE DATA AND LITERATURE:

TO 12R2–2URC11–1
TO 12R2–2URC11–2
TO 12R2–2URC11–4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

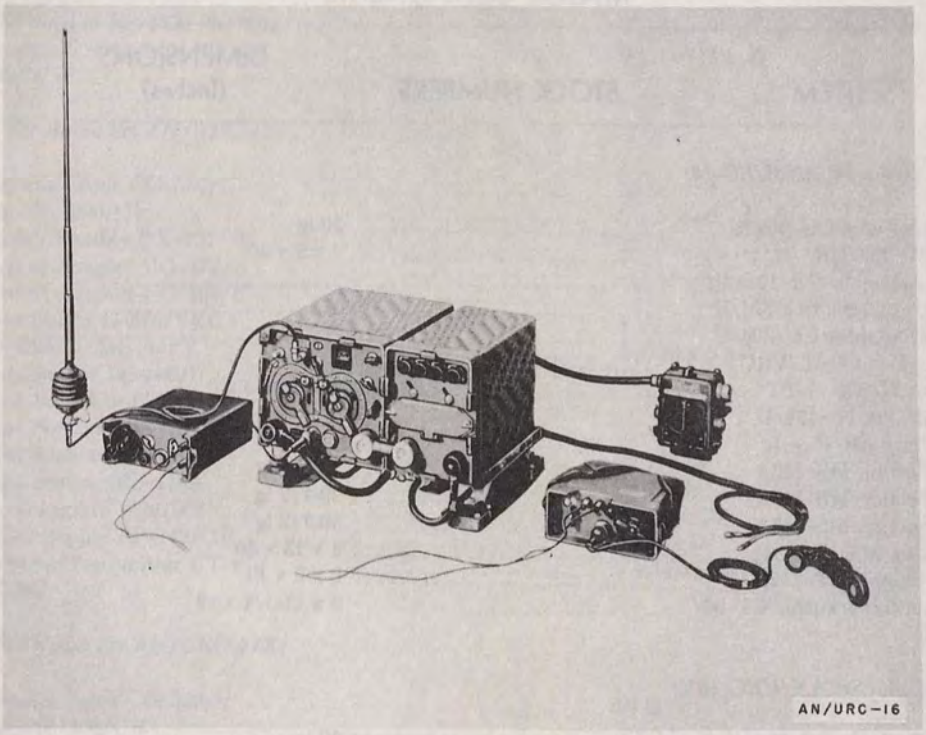
PROCURING SERVICE: USAF, GFAE, AMC
SPEC &/or DWG: MIL–R–8178 (USAF)
DESIGN COG: USAF, ARD, WCLN

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Philharmonic Radio and Television Corp.	New Brunswick, N. J.	AF33(600)27621	$125.00

RADIO SET AN/URC-16, -16X, -16Y, -17, -17X, -17Y, -18, -18X, -18Y

3 December 1958
Cognizant Serv: USN FSN: AN/URC-16: 5820-665-3859
AN/URC-16X: 5820-665-3861
AN/URC-16Y: 5820-665-3851
AN/URC-17: 5820-644-4880
AN/URC-17X: 5820-644-4881
AN/URC-17Y: 5820-501-3059
AN/URC-18: 5820-665-3857
AN/URC-18X: 5820-665-3860
AN/URC-18Y: 5820-665-3858

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Sets AN/URC-16, AN/URC-16X, AN/URC-16Y, AN/URC-17, AN/URC-17X, AN/URC-17Y, AN/URC-18, AN/URC-18X, AN/URC-18Y are portable transmitting and receiving equipments designed to operate within the frequency range of 20 to 54.9 megacycles.

These equipments are similar to Radio Sets AN/SRC-10' AN/SRC-10X, AN/SRC-10Y, AN/SRC-11, AN/SRC-11X, AN/SRC-11Y, AN/SRC-12, AN/SRC-12X, AN/SRC-12Y, AN/SRC-13, AN/SRC-13X, AN/SRC-13Y, AN/SRC-14, AN/SRC-14X, AN/SRC-14Y, AN/SRC-15, AN/SRC-

AN/URC-16, -16X, -16Y, RADIO SET -17, -17X, -17Y, -18, -18X, -18Y

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Mast Section MS–118A		39-1/2 lg	.5
1	Mounting MT–299/GR		4 x 13 x 20	24
1	Power Supply PP–109/GR		8 x 9 x 13	33
1	Receiver-Transmitter RT–67/GRC		9 x 11-1/4 x 13	35
	For Radio Set AN/URC–17Y:			
1	Bag CW–206/GR		3 x 5 x 40	3.5
5	Battery BA–403/U			
1	Battery BA–419/U			
1	Loudspeaker LS–166/U			
1	Modification Kit MX–898/GR			
1	Receiver-Transmitter RT–68/GRC		9 x 11-1/4 x 13	35
	For Radio Set AN/URC–18:			
1	Antenna Cable CG–530/U		50 lg	.5
1	Bag CW–206/GR		3 x 5 x 40	3.5
1	Cable Assembly CX–1211/U			.4
1	Coaxial Adapter UG–273/U			.34
1	Coaxial Adapter UG–306/U			.36
1	Control Box C–375/VRC		4 x 7 x 7	3.5
2	Handset H–33( )/PT		2-1/16 x 3 x 3	2
1	Loudspeaker LS–166/U			
1	Mast Base AB–15/GR			
1	Mast Section AB–24/GR		23-1/2 lg	.13
1	Mast Section MS–117A		39-1/2 lg	1.4
1	Mounting MT–299/GR		4 x 13 x 20	24
1	Power Supply PP–109/GR		8 x 9 x 13	33
1	Receiver-Transmitter RT–68/GRC		9 x 11-1/4 x 13	35
	For Radio Set AN/URC–18X:			
1	Antenna Cable CG–530/U		50 lg	.5
1	Bag CW–206/GR		3 x 5 x 40	3.5
1	Cable Assembly CX–1211/U			.4
1	Coaxial Adapter UG–273/U			.34
1	Coaxial Adapter UG–306/U			.36
1	Control Box C–375/VRC		4 x 7 x 7	3.5
2	Handset H–33( )/PT		2-1/16 x 3 x 3	2
1	Loudspeaker LS–166/U			
1	Mast Base AB–15/GR			
1	Mast Section AB–24/GR		23-1/2 lg	.13
1	Mast Section MS–117A		39-1/2 lg	1.4
1	Mounting MT–299/GR		4 x 13 x 20	24
1	Power Supply PP–109/GR		8 x 9 x 13	33
1	Receiver-Transmitter RT–68/GRC		9 x 11-1/4 x 13	35

RADIO SET AN/URC-16, -16X, -16Y, -17, -17X, -17Y, -18, -18X, -18Y

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Set AN/URC-18Y:			
1	Bag CW-206/GR	----------	3 x 5 x 40	3.5
5	Battery BA-403/U			
1	Battery BA-419/U			
1	Loudspeaker LS-166/U			
1	Modification Kit MX-898/GR			
1	Receiver-Transmitter RT-68/GRC	----------	9 x 11-1/4 x 13	35

REFERENCE DATA AND LITERATURE:

TM 11-286
BuShips Ltr S67/1-7 Ser 881E-1-3528, 1 September 1955

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USA Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
		AN/URC-16, -16X, -17, -17X, -18, -18X MIPR-800-29092, MIPR-800-29094, MIPR-800-29500	$1,500.00
		AN/URC-16Y, -17Y, -18Y MIPR-800-39406	1,500.00

RADIO SET AN/URC-22

3 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Set AN/URC–22 is designed for general purpose communication use. It permits vehicular or ground application.

This equipment is similar to Radio Set AN/URC–18Y except that it includes different mounting provisions.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 38 to 54.9
Number of Bands: 1
Type Reception and Emission: F3 (voice, tone)
Type Modulation: Fm
Number of Frequency Channels: 170
Separation Between Channels: 100 kc
Type Tuning: Choice of channels or continuous
Operational Range: 10 to 15 miles
Transmitter Power Output: 13 w
Receiver Output:
At Speaker: 1 w
At Phones: 50 mw
At Fixed Level (Not Used): 30 mw
Microphone Input Impedance: 150 ohms
Audio Input Impedance: 600 ohms at all audio output terminals
Receiver Sensitivity: 30 dv signal-plus-noise to noise ratio with 0.5 uv input signal
Power Requirements: Supplied by Hand Generator G–8/GRC

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Adapter UG–273/U			
1	Adapter UG–306/U			
1	Bag CW–187/GR			
1	Bag CW–188/GR			
1	Bag CW–189/GR			
1	Bag CW–206/GR			
1	Cable, Special Purpose, Assembly CX–1211/U	----------	----------	0.4
1	Cable Special Purpose UM–46/U			
1	Case CY–590/GR			
1	Case CX–684/GR			
1	Connector and bond nut			
1	Control Box C–374/VRC			
1	Generator G–8/GRC			
2	Handset H–33/PT	----------	2-1/16 x 3 x 3	2
1	Local Control C–434/GRC			
1	Mast Base AB–15/GR			
1	Mast Section AB–22/GR			
1	Mast Section AB–23/GR			
2	Mast Section AB–24/GR			
1	Mast Section AB–25/GR			
2	Mast Sections MS–117–A			
1	Mounting MT–299/GR	----------	4 x 13 x 20	24
1	Mounting MT–652/GR			

AN/URC-22 RADIO SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Cable Assembly CX–1209/U			
1	Power Cable Assembly CX–1210/U			
1	Power Supply PP–112/GR			
1	Receiver-Transmitter RT–68/GRC	----------	9 x 11-1/4 x 13	35
1	Remote Control C–433/GRC			
1	RF Cable Assembly CG–530/U			

REFERENCE DATA AND LITERATURE:

TM 11–286

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN DESIGN COG: USA, Sig C

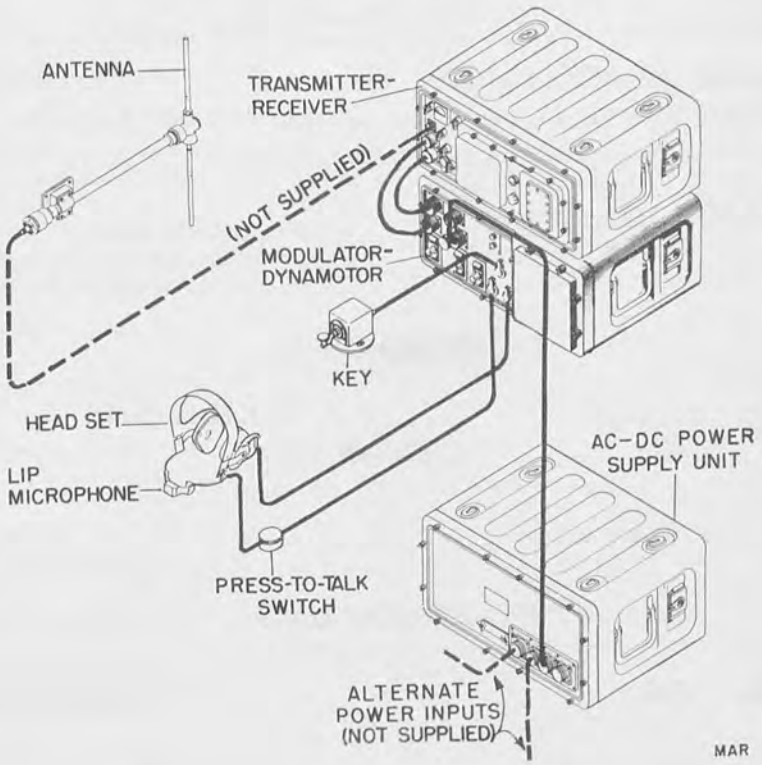
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

VHF RADIO TRANSMITTING AND RECEIVING EQUIPMENT AN/URC-type

4 December 1958
Cognizant Serv: USN FSN: 5820-665-3816 MAR

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

VHF Radio Transmitting and Receiving Equipment MAR is a general purpose, amplitude-modulated (Modulated continuous wave, voice) transportable communication set that uses a motor-driven selector mechanism for automatic selection of 10 preset crystal-controlled frequencies within the very-high-frequency band.

This equipment is comprised of two units of the same form and size—one case containing the transmitter-receiver; the other, the modulator-dynamotor sections. In addition to these basic units, modification kits for shipboard, vehicular, and field adaptations are supplied.

The use of these kits provides for widely varying power supply inputs and operating environments.

Remote Control Unit 23485 provides for remote control up to distances of one mile. Communication between a remote and local operator, without resultant radio emission, is controlled by a panel switch on the modulator-dynamotor unit.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 390 on 10 preset frequencies
Frequency Control: Crystal
Type Modulation: Am
Type of Signal: Mcw, voice
Power Output:
Transmitter: 8 w
Receiver: 1 w into 600-ohm load
Power Requirements: 430-w 13/24/115/230-v dc; or 430 w, 115/230-v 50/60-cycle 1-phase ac

AN/URC-type VHF RADIO TRANSMITTING AND RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Ac-dc Power Supply Unit 20379	----------	10-7/8 x 21-1/4 x 16-1/4	100
1	Antenna Assembly 66147	----------	22 x 2-1/2 x 25	3.5
1	Field application kit			
1	Modulator-Dynamotor Unit 50248	----------	9-1/2 x 21-1/4 x 16-1/4	45
1	Shipboard installation kit			
1	Transmitter-Receiver 43067	----------	9-1/2 x 21-1/4 x 16-1/4	45

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900719(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	32.4	788

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RECA Victor Division, Radio Corp. of America	Camden, N. J.	NXsr-60008	$7,000.00

RADIO TELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT AN/URC-type

4 December 1958
Cognizant Serv: USN FSN: 5820-642-8382 MO-1

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-173744-200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting and Receiving Equipment MO-1 is a mobile transmitter-receiver for use in naval craft, combat vehicles, and for other applications where space is at a premium.

Provision is made for remote-control operation of the set, with the exception of channel switching and emission selection. The set provides sidetone and interphone facilities.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 3 to 8 (4 channels)
Frequency Control: Crystal
Type of Signal: A2, A3
Power Output: 25 w
Output Impedance: 600 ohms
Power Requirements: 6/12-v dc (storage battery)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Unit 23343	----------	3 x 3-1/2 x 10	5
1	Dynamotor 21983 or Dynamotor 21984	----------	5 x 4-1/2 x 8-1/2	11.5
1	Radio Transmitter-Receiver 43043	----------	9-1/2 x 17 x 10-1/2	27.5
1	Vibrator Power Assembly 20190			
	or			
	Vibrator Power Assembly 20193	----------	11 x 10-1/8 x 17	36.5

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URC-type RADIO TELEPHONE TRANSMITTING AND RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Communications Co., Inc.	Coral Gables, Fla.	NXs-5884	

KEYER **AN/URN-type**

3 December 1958
Cognizant Serv: USN FSN: 5825-644-4434

KY-122/URN

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Keyer KY-122/URN is used in navigation applications to automatically key any of several radio transmitters with a selectable identification code group.

This equipment has a magnetic circuit breaker for stopping and starting the keyer motor. A green indicator lamp lights when the keyer motor is energized. The KY-122/URN also has a momentary "on-off" push button switch and a red indicator lamp for use in remote-control operation of the radio transmitter.

Keyer KY-122/URN is identical with Keyer KY-123/URN except that the KY-123/URN does not have the provisions for remote-control operation of the radio transmitter.

TECHNICAL CHARACTERISTICS:

Speed Range: 24 letters per minute
Power Requirements: 20 w, 110-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Keyer KY-122/URN	----------	6 x 7 x 13-7/16	17

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92003

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.5	20

AN/URN-type KEYER

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Electrical Machine Shops, Inc.	Silver Springs, Md.	NObsr–63112	$200.00

KEYER **AN/URN-type**

3 December 1958
Cognizant Serv: USN FSN: 5825-665-2067

KY-123/URN

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Keyer KY-123/URN is used in navigation applications to automatically key any of several radio transmitters with a selectable identification code group.

This equipment has a magnetic circuit breaker for stopping and starting the keyer motor. A green indicator lamp lights when the keyer motor is energized.

The KY-123/URN is identical with Keyer KY-122/URN except that the KY-122/URN also has provisions for remote-control operation of the radio transmitter. The KY-123/URN and the KY-123A/URN are electrically and mechanically interchangeable.

TECHNICAL CHARACTERISTICS:

Speed Range: 24 letters per minute
Power Requirements: 20 w, 110-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Keyer KY-123/URN	----------	6 x 6-3/4 x 11-1/2	15

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92003

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.3	18

AN/URN-type KEYER

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Thiebolt Aircraft Co., Inc.	Washington, D. C.	NObsr-64575	$200.00

KEYER **AN/URN-type**

3 December 1958
Cognizant Serv: USN FSN: KY-123A/URN

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Keyer KY-123/URN is a coding keyer for ultra high frequency homing facility.

It is electrically and mechanically interchangeable with Keyer KY-123/URN.

TECHNICAL CHARACTERISTICS:

Speed Range: 24 letters per minute
Power Requirements: 20 w, 110-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Keyer KY-123A/URN	----------	6 x 6-3/4 x 11-1/2	

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1		

AN/URN-type KEYER

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

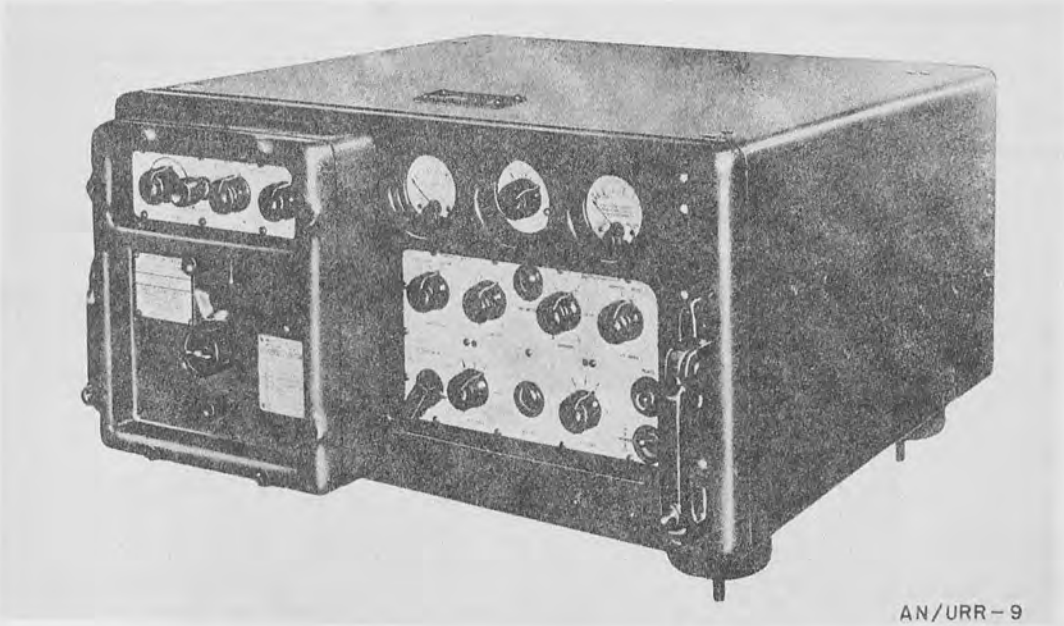
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Nems-Clark Inc.	Silver Springs, Md.	NObsr–71173	

RADIO RECEIVING SET AN/URR-9

3 December 1958
Cognizant Serv: USN FSN: 5820-665-1244

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-123870-200	--



AN/URR-9

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR-9 is a general purpose voice communication unit for either shipboard or shore installations. It has automatic control for local or remote operation; manual tuning is provided only for local operation. To increase selectivity, the superheterodyne receiver provides double conversion for variable bandwidths. Connections to and from the receiver are filtered to eliminate possible interference. Terminals are provided for a scan output to be connected to a panoramic viewer.

This equipment operates with a vertically polarized, unbalanced broadband, coaxial stub antenna, such as Antenna Assembly AS-390/SRC, or with a broad-band dipole antenna, such as Antenna AT-150/SRC.

The set is similar to Radio Receiving Equipment RDZ except that continuous manual tuning, double conversion, and other improvements have been added. It is intended for use with Radio Transmitting Equipment TDZ. However, it will also net with Radio Transmitters AN/URT-9 and TED, and with Radio Sets AN/GRC-27, AN/GRC-32, AN/ARC-27, and MAR.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Number of Preset Channels: 10
Frequency Control:
Automatic: Crystal
Manual: Self-excited
Type Receiver: Double conversion superheterodyne
Type Modulation: Am
Type Reception: A3 (voice)
Output Impedance:
Audio Channel: 600 ohms
Phone Jack: 600 ohms
Video Channel: 1,000 ohms
Scan Channel: 50 ohms
Input Impedance: 50 ohms (nominal)
Sensitivity:
225 to 240 Mc: 10 uv
240 to 400 Mc: 5 uv
Intermediate Frequency:
Double Conversion: 3.85 mc
Single Conversion: 18.6 mc
Antenna Characteristics: Half-wave, center takeoff, dipole type of approximately 50 ohms impedance
Power Requirements: 150 w or 230 w; 115- to 120-v, 50- to 60-cycle, 1-phase ac

AN/URR-9 RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R–289/URR–9	----------	13-1/8 x 22 x 23	150
3	Set of equipment spares			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91201

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	20.3	477

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

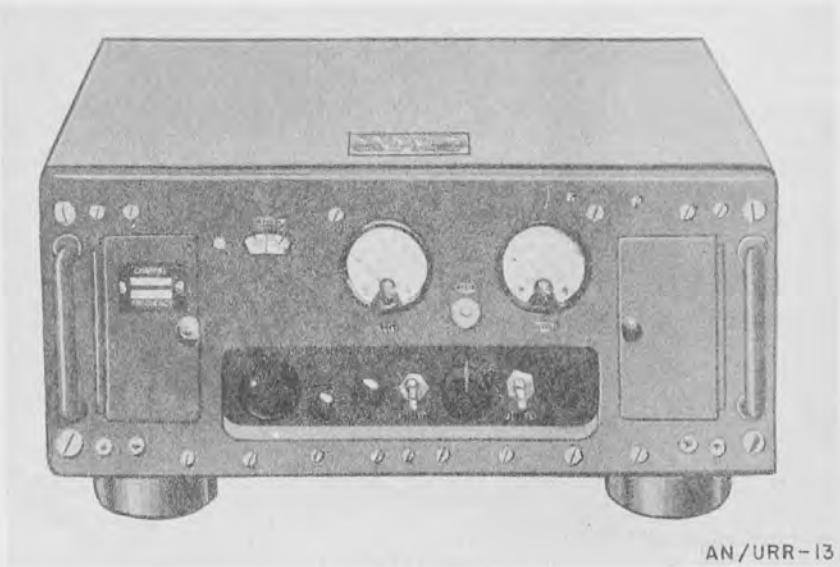
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.	Malden, Mass.	NObsr–39298, 16 June 1949	

RADIO RECEIVING SET AN/URR-13, -13A, -13B, -13C

3 December 1958
Cognizant Serv: USN FSN: AN/URR-13: 5820-644-4777
AN/URR-13A: 5820-642-8244
AN/URR-13B: 5820-665-2374
AN/URR-13C: 5820-644-3395

	USA	USN	USAF
TYPE CLASS:	--	Used by	Std
STOCK NO:	--	AN/URR-13: F16-Q-123880-200	--
		AN/URR-13A: F16-Q-123881-200	
		AN/URR-13B: F16-Q-123882-200	
		AN/URR-13C: F16-C-123883-200	



AN/URR-13

FUNCTIONAL DESCRIPTION:

Radio Receiving Sets AN/URR-13, AN/URR-13A, AN/URR-13B, and AN/URR-13C are general purpose, compact communication units designed to provide ultra-high frequency reception on naval vessels at naval air and shore stations or at other military establishments.

These equipments are used on conjunction with Radio Transmission Equipment TED. They replace Radio Receiving Equipment RED.

Each set consists of a panel, frame, and chassis assembly housed in a cabinet equipped with shockmounts for shipboard installation. For shore installation the set may be mounted in a standard 19-inch relay rack.

The circuit components are grouped on a functional basis into five major sections within the cabinet and consist of the preselector, intermediate frequency/audio frequency, power supply, cable filtering, and front panel sections.

The sets may be operated on a single crystal-controlled channel, or, through the self-excited conversion oscillator, on continuously variable manual tuning. Provision is made for connecting a panoramic type radio receiver to provide a visual image of the received signal.

All of the equipments are mechanically and electrically interchangeable but have minor differences in components. The AN/URR-13C has two additional test cables not supplied with the previous models. These sets are also similar to Radio Receiving Equipment RDZ and RCN.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Type Modulation: Am
Type Reception: A2, A3 (voice, mcw)

AN/URR-13, -13A, -13B, -13C RADIO RECEIVING SET

Number of Channels: Single
Type Control: Crystal or continuously variable
Type Receiver: Double conversion superheterodyne
Intermediate Frequency: 18.6 mc (center frequency ±2 kc)
Sensitivity: Better than 8 uv for a 10 db signal-to-signal plus noise ratio
Audio Output:
60 mw maximum into a 600-ohm load, 7% maximum distortion or 600 mc into a 60-ohm load, 7% maximum distortion
Scanning Channel Bandwidth: 600 kc, flat to within 6 db
Heat Dissipation: 120 w
Antenna: Quarter-wave, broad-band with 50-ohm terminal impedance
Power Requirements: 125 w; 110- to 120-v, 50-to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiving Set AN/URR–13( ) including:	----------	8-7/16 x 17-1/2 x 19-1/8	57
1	Band Suppression Filter F–89/URR–13			
1	Radio Receiver R–266/URR–13			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91270

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	7.4	167

PROCUREMENT DATA

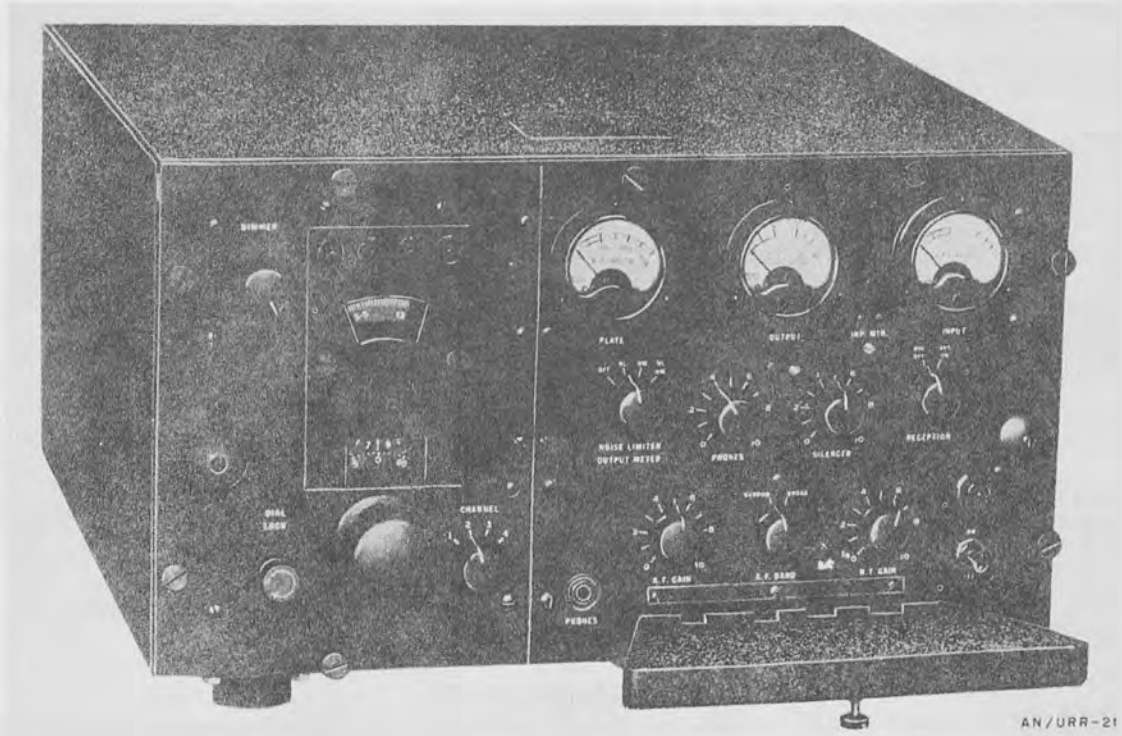
PROCURING SERVICE: USN DESIGN COG: USN, BuShips (RCUE)
SPEC &/or DWG: MIL–R–1513A(Ships), 16R53(RE), MIL–R–1513B(Ships)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Clifton, N. J.	AN/URR–13: NObsr–43176, 6 January 1949	$1,500.00
		AN/URR–13A: NObsr–52051, 13 November 1951	1,500.00
		AN/URR–13C: NObsr–52398, 21 May 1951	1,500.00
Espey Manufacturing Co., Inc.	New York, N. Y.	AN/URR–13B: NObsr–49274, 18 June 1950	1,500.00

RADIO RECEIVING SET AN/URR-21, -21A

3 December 1958
Cognizant Serv: USN FSN: 5820-501-4986 (AN/URR-21A)

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	AN/URR-21A: F16-Q-123889-200	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Sets AN/URR-21 and AN/URR-21A are very-high frequency units used in conjunction with Radio Transmitting Equipment TDQ on aircraft carriers, and at shore stations, for communication with aircraft. They have a high degree of stability, freedom from cross modulation and radiation, and quickly selectable preset channels. In addition, they employ a squelch circuit which operates when the input signal level drops below a predetermined value.

Both receivers are designed for use with a 50-ohm fixed antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range: 115 mc to 156 mc
Preset Channels: 4
Frequency Control: Crystal
Intermediate Frequency: 12 mc
Type Modulation: Am
Type Reception: A3 (voice)
Type Receiver: Superheterodyne
Output: 65 mw into 600-ohm phones or loudspeaker
Sensitivity: 5 uv
Input Impedance: 50 ohms
Features: Noise limiter, squelch circuits, automatic gain control, 10 w oscillator radiation
Mounting Data: Shock mounted for table or bench
Power Equirements: 106 w, 110, 115 to 120 v, 55 to 60 cps, pf 0.95 or more

AN/URR-21, -21A RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Receiving Set AN/URR-21:			
1	Radio Receiver R-432/URR-21	----------	10-7/8 x 18-1/8 x 23	112
1	Set of equipment spares			
	For Radio Receiving Set AN/URR-21A:			
1	Radio Receiver R-432A/URR-21	----------	11-21/64 x 18-1/8 x 17-1/2	117
1	Set of equipment spares			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91642(A)
NAVSHIPS 91497

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	9.72	187

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Air Associates Inc., Electronics Division	Orange, N. J.	NObsr-52171, 5 January 1951	

RADIO RECEIVING SET AN/URR-23, -23A

3 December 1958
Cognizant Serv: USN FSN: AN/URR-23: 5820-642-6418
AN/URR-23A: 5820-642-6855

USA	USN	USAF

TYPE CLASS: --
STOCK NO: --

Used by
AN/URR-23A: F16-R-38281 --



AN/URR-23

FUNCTIONAL DESCRIPTION:

Radio Receiving Sets AN/URR-23 and AN/URR-23A are designed for long-range, ship or shore communication application requiring maximum stability and dial accuracy. They are suitable for amplitude modulated and continuous wave reception or for presetting at a specific frequency without repeated search or frequency readjustment.

Radio Receiving Set AN/URR-23 is essentially the commercial Collins Model 51J-2; the AN/URR-23A is the Collins Model 51J-3. Both sets are similar except that the AN/URR-23A has an antenna trimmer control and chassis handles.

The sets tune with normal setting error and a drift of less than 1 kilocycle at any frequency within their range.

The fundamental or harmonic output of the frequency oscillator is controlled by one of 10 quartz crystals selected by the band-change control.

A high-impedance whip type or single-ended antenna is recommended for use with these equipments.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 30.5
Number of Bands: 30
Band Width: 1.0 mc
Frequency Stability: Dial calibration within 300 cps if nearest 100-kc calibration point is used to adjust the fiducial
Type Modulation: Am
Type Reception: A1, A2, A3 (cw, mcw, voice)
Power Output: 1.5 w at 1,000 cps, less than 15% distortion
Sensitivity:
Band 1: Better than 15 uv gives 1 w with 10 db s/n
Band 2-30: Better than 5 uv gives 1 w with 10 db s/n
Selectivity:
Crystal Filter In: Total bandwidth 0.2 kc at 6 db down; 12 kc at 60 db down
Crystal Filter Out: Total bandwidth 5.5 to 6.5 kc at 6 db down; 17 to 20 kc at 60 db down
Automatic Volume Control:
Less than 5 Db Increase in Audio Power: From 100 mw with an increase in rf input from 5.0 to 125,000 uv at 1,000 cps modulated 30%
Maximum of 7 Db Increase: From 125,000 to 500,000 kc
Noise Limiter: Series type
Meter: Calibrated 0 to 20, 40, 60, 80, 100 db above automatic volume control threshold, and −10 to +6 dbm audio level
Output Impedance: 4.0 and 600 ohms
Power Requirements: 85 w; 115- or 230-v, 45- to 70-cycle, 1-phase ac

AN/URR-23, -23A RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Receiving Set AN/URR-23:			
1	Dynamic Loudspeaker LS-175/U	----------	10-9/16 x 15 x 8-7/8	
1	Radio Receiver R-381A/URR-23	----------	10-1/2 x 19 x 13	
	For Radio Receiving Set AN/URR-23A:			
1	Case CY-1235/URR			
1	Dynamic Loudspeaker LS-199/U	----------	10-1/16 x 15 x 8-7/8	
1	Radio Receiver R-388/URR	----------	12-1/4 x 21-1/8 x 13-7/8	

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

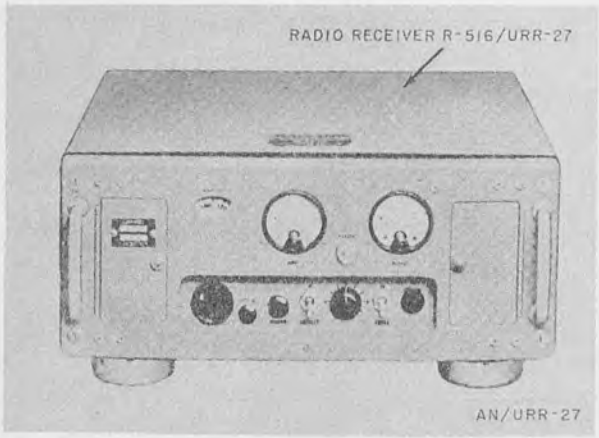
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NObsr-49132, 15 May 1950 NObsr-52527, 22 June 1951	

RADIO RECEIVING SET AN/URR-27

3 December 1958
Cognizant Serv: USN FSN: 5820-644-4991

	USA	USN	USAF
TYPE CLASS:	--	Used by	Std
STOCK NO:	--	F16-Q-123894-100	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR-27 is an amplitude modulated communication unit used aboard ship, at shore stations, or by other military establishments in general application. It is designed primarily for operation as a pretuned, single-channel receiver with provisions for continuous variable tuning as well as crystal control.

This equipment includes provisions for connecting a panoramic adapter to obtain a visual indication of the received signal frequency. The scanning channel has a bandwidth of 600 kilocycles, flat to within 6 decibels.

The AN/URR-27 is similar to Radio Receiving Set AN/URR-13 in electrical design and mechanical construction. However, the AN/URR-13 covers a frequency range of 225 to 400 megacycles.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Rated: 105 to 190
Maximum: 103.9 to 191.9

Tuning Bands: Complete coverage of range with 19 consecutive turns of the tuning control crank

Preset Frequencies:
Manual Tuning: None
Crystal Tuning: One; determined by crystal unit installed

Frequency Control: Crystal-controlled oscillator (crystal tuning only)

Type Receiver: Superheterodyne

Intermediate Frequency: 18.6 mc ±2 kc

Type Reception: A2 (mcw, tone)

Type Modulation: Am

Input Impedance: 51 ohms

Output:
Audio Channel: 60 mw maximum into 600-ohm load, or 600 mw maximum into 60-ohm load with 7% distortion
Phone Jack: 60 mw maximum into 600-ohm load
Scanning Channel: 10 uv minimum across 50-ohm load for signal input of 10 uv maximum

Mounting: Shock mounted for bench or shelf; bracket supplied for standard relay-crack mounting

Power Requirements: 112 w nominal, 120 w maximum; 110-, 115- to 120-v 60-cycle, 1-phase ac

AN/URR-27 RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Instruction Book NAVSHIPS 91771			
1	Radio Receiver R-516/URR-27	----------	8-7/16 x 17-1/2 x 19-1/8	57
	including:			
4	Plugs			
2	Mounting brackets			
1 set	Equipment spares	----------	6-1/8 x 19 x 10	23

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91771
NAVSHIPS 91771.2
NAVSHIPS 91771.4

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	7.4	166.25

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-R-15872(SHIPS) and Amendment No. 2

DESIGN COG: USN, BuShips (RCUE)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.	Malden, Mass.	NObsr-52699, 28 June 1951	

RADIO RECEIVING SET AN/URR-28

3 December 1958
Cognizant Serv: USN FSN: 5820-665-2245

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR-28 is a double conversion type superheterodyne unit designed for table mounting. However, brackets are supplied for adaption to rack mounting.

This equipment has projection dial tuning and provisions for local or remote control of 10 preset crystal-controlled channels. No provisions for the use of plug-in coils are furnished.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Number of Bands: 1
Number of Preset Channels: 10
Frequency Control: Crystal
Operation: Local or remote
Type Modulation: Am
Type Reception: Cw, voice
Type Receiver: Double conversion superheterodyne
Special Feature: Projection dial tuning
Mounting: Table with adapters for rack
Power Requirements: 105-, 115-, or 125-v, 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Filter assembly			
1	Radio receiver			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92563

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URR-28 RADIO RECEIVING SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-R-16981 (SHIPS)

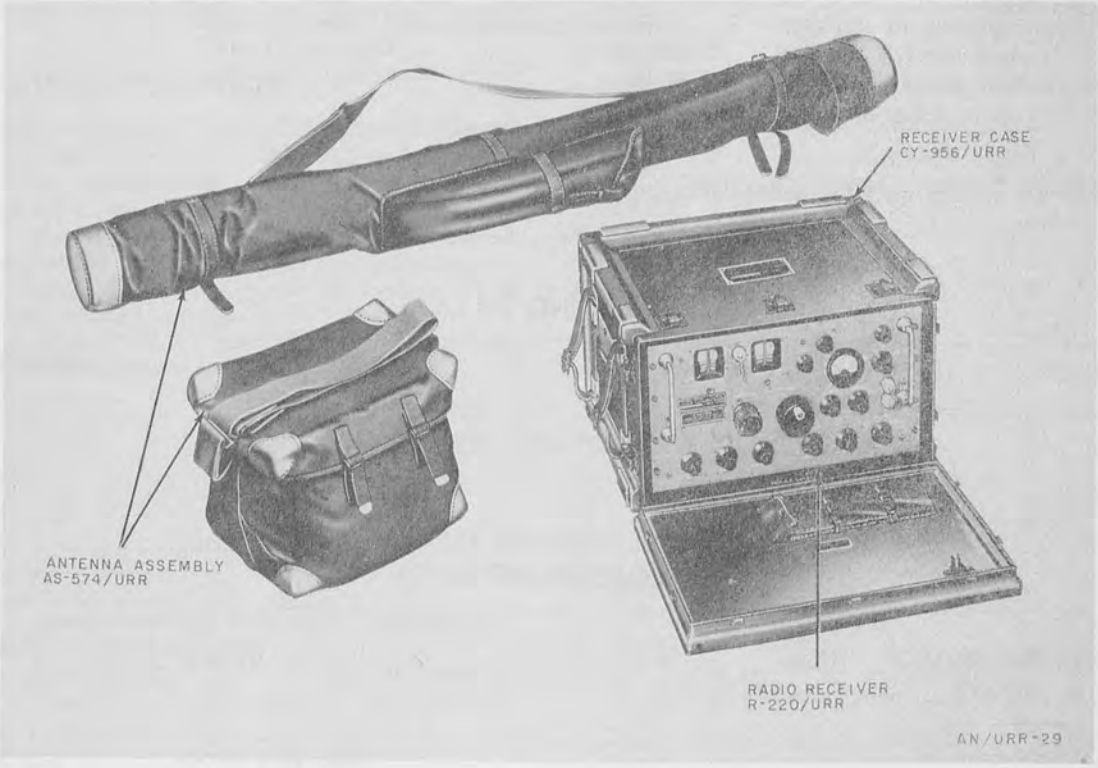
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.	Malden, Mass.	----	$10,000.00

RADIO RECEIVING SET AN/URR-29

1 July 1958
Cognizant Serv: USA FSN: 5820-567-2358

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2C4565-29	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR-29 is a transportable general purpose HF and VHF equipment used for the monitoring and reception of CW, AM, and FM signals. It can be used in fixed, semifixed, and transportable applications.

This equipment consists essentially of Radio Receiver R-220/URR, an internal power supply, and accessory components.

It can be used for diversity reception, direction-finding, frequency-shift radioteletype, facsimile, signal analysis, and single-sideband reception, when operated with suitable associated equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20 to 230
Type Modulation: AM, FM
Type of Signal: Cw, mcw, fsk, voice
Power Requirements: 253 w, 115/230-v 48-62-cycle ac

AN/URR-29 RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna Assembly AS-574/URR	2A264-574	9-3/8 x 7 x 67-3/4	
1	Power Supply PP-660/URR	----------	6-1/4 x 5-3/4 x 11-1/2	30
1	Radio Receiver R-220/URR	2C4180-220	10-1/2 x 14-3/4 x 19	96
1	Receiver Case CY-956/URR	6F300-956	17-1/8 x 13-1/4 x 22	38

REFERENCE DATA AND LITERATURE:

TM 11-882

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	10.7	270

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10584A

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	08714-P-55-51	

RADIO RECEIVING SET AN/URR-29X

3 December 1958
Cognizant Serv: USA FSN: 5820-511-8151

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR-29X is a portable communication unit suitable for fixed, semifixed, or portable installations. It is designed for the reception and monitoring of amplitude-modulated and frequency-modulated signals.

The receiver has provisions for output connections to standard equipments as required for diversity reception, direction finding, carrier-shift radio teletypewriter, facsimile, signal analysis and sideband reception.

This equipment consists essentially of Radio Receiver R644/URR, and related accessory components.

The set is generally similar to Radio Receiving Set AN/URR-29; however, it differs in respect to the radio receiver and other components.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20 to 230
Number of Bands: 7
Type Modulation: Am, fm
Type Reception: A9, F9 (mcw, cw)
Type Presentation: Electric meter
Power Requirements: 22-v to 32-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Assembly AS-574/URR	5985-264-7527		
1	Cord CD-307A	5995-196-9564	70-13/32	
1	Headset, Electrical H-113/U	5965-504-6370		
	or			
1	Headset, Electrical USN Type No. 49507	5965-128-8757		
1	Receiver Case CY-956/URR	5820-503-1650	13-1/4 x 17-1/8 x 22	
1	Receiver, Radio R-644/URR	5820-519-3939	19 x 14-7/8 x 10-1/2	

REFERENCE DATA AND LITERATURE:

TM 11-5016

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URR-29X RADIO RECEIVING SET

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

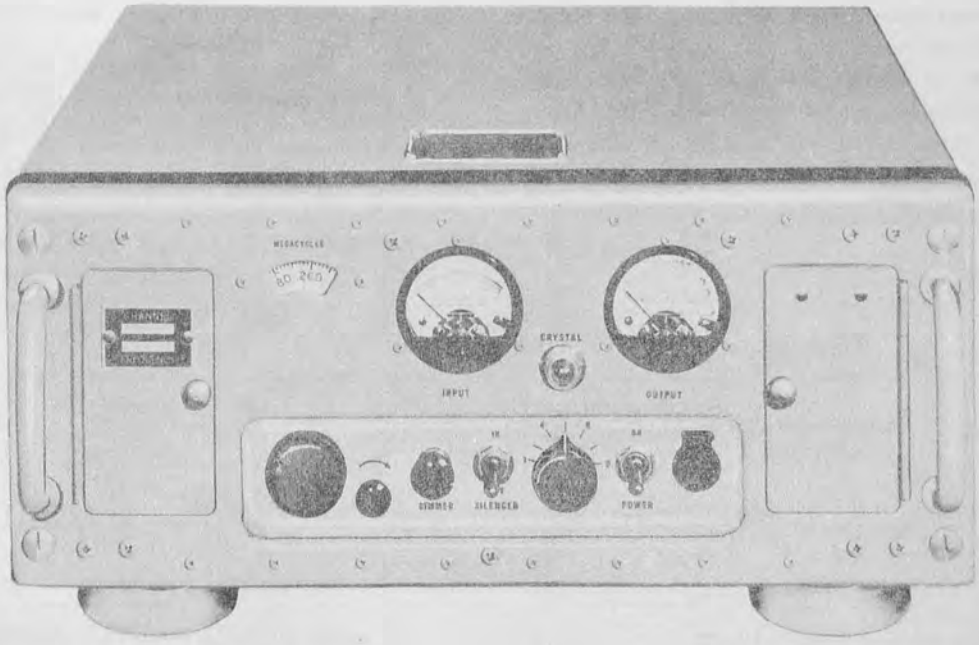
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVING SETS AN/URR-35, -35A, -35B, -35C

3 December 1958
Cognizant Serv: USN FSN: AN/URR-35: 5820-665-2375
AN/URR-35A: 5820-665-1245
AN/URR-35B: 5820-642-8747
AN/URR-35C: 5820-644-4773

	USA	USN	USAF
TYPE CLASS:	--	Used by	AN/URR-35A: Std
STOCK NO:	--	--	--



AN/URR-35

FUNCTIONAL DESCRIPTION:

Radio Receiving Sets AN/URR-35, AN/URR-35A, AN/URR-35B, and AN/URR-35C are general purpose very-high-frequency and ultra-high-frequency units used on naval vessels, at naval air and shore stations, or at other military establishments. They provide amplitude-modulated point-to-point communications.

All of these equipments are similar functionally and in appearance. The frequency range, operating modes, sensitivity, and response characteristics are the same for the entire series.

The AN/URR-35 and AN/URR-35A are identical except for minor changes in the values of two resistors.

The AN/URR-35B contains a new blower and a plug-and-jack type connection for the blower circuit.

The AN/URR-35C eliminates the entire scanning circuit and the test cables included with previous models. There are, in addition, a few minor modifications of resistance values.

Auxiliary apparatus necessary to operate these equipments are the antenna, antenna transmission line, crystal units, power cable, audio output cable, headphones, and loudspeaker or other responsive devices.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:

Nominal: 225 to 400

Maximum: 222.75 to 404.0

Tuning Bands: 1 (continuous)

AN/URR-35, -35A, -35B, -35C RADIO RECEIVING SETS

Number of Preset Frequencies:
Manual Tuning: None
Crystal Tuning: 1; as determined by crystal unit installed
Type of Frequency Control: Crystal-controlled oscillator
Type Receiver: Double superheterodyne
Intermediate Frequencies: 18.6 mc; 1.775 mc
Type Modulation: Am
Type Reception: A1, A3 (voice, mc, mcw)
Outputs:
Audio Channel Output: 60 mw into 600-ohm load; 7% maximum distortion
Phone Jack Output: 60 mw into 600-ohm load; 7% maximum distortion
Scan Channel Output: 10 μv minimum across a 50-ohm load, for maximum signal input of 75 μv (AN/URR-35 and AN/URR-35A only)
Frequency Stability: Overall stability for any selected frequency, operating between 103.5 and 126.5 v ac (suing 115-v transformer tap), between −4° F. and +122° F. and between 30% and 90% humidity:
For Voltage Variation:
Crystal Operation: Negligible
Manual Operation: ±0.02%
For Temperature Variation:
Crystal Operation: ±0.008%
Manual Operation: ±0.1%
Silencer Circuit:
Effective; Silencing Range: 300-uv input (maximum)
Audio Output Reduction: 40 db under standard output conditions (maximum)
Time-Constant: Less than 0.2 sec
Impedance:
Antenna Input: 50 ohms, coaxial
Audio Channel Output: 600 ohms, nominal
Phone Jack Output: 600 ohms, nominal
Scan Channel Output: 50 ohms, coaxial (AN/URR-35, AN/URR-35A only)
Sensitivity: 8 uv, in series with 50 ohms, for 10-db signal-to-noise ratio (signal modulated 30% at 1,000 cps)
Selectivity: 70 to 85 kc down 6 db; less than 190 kc down 60 db
Power Requirements: 98 w (with blower off), 108 w (with blower on); 0.97 amps, 105 to 125 v, 50- to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Receiving Set AN/URR-35:			
1	Electrical Power Cable Assembly CX-1869/U		1-1/2 x 1-3/4 x 52	0.81
1	Maintenance parts kit			
1	Pair relay rack mounting brackets		1-1/8 x 7 x 12	1.31
1	Radio Receiver R-482/URR-35		8-7/16 x 17-1/2 x 19-1/8	57
1	RF Cable Assembly CG-839/U		1 x 1 x 50	.25
1	Set connector plugs			
	For Radio Receiving Set AN/URR-35A:			
1	Electrical Power Cable Assembly CX-1869/U		1-1/2 x 1-3/4 x 52	.81
1	Maintenance parts kit			
1	Pair relay rack mounting brackets		1-1/8 x 7 x 12	1.31
1	Radio Receiver R-482A/URR-35		8-7/16 x 17-1/2 x 19-1/8	57
1	RF Cable Assembly CG-839/U		1 x 1 x 50	.25
1	Set connector plugs			

RADIO RECEIVING SETS AN/URR-35, -35A, -35B, -35C

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Receiving Set AN/URR-35B:			
1	Maintenance parts kit			
1	Pair relay rack mounting brackets	----------	1-1/8 x 7 x 12	1.31
1	Radio Receiver R-482B/URR-35	----------	8-7/16 x 17-1/2 x 19-1/8	57
1	Set connector plugs			
	For Radio Receiving Set AN/URR-35C:			
1	Maintenance parts kit			
1	Pair relay rack mounting brackets	----------	1-1/8 x 7 x 12	1.31
1	Radio Receiver R-482C/URR-35	----------	8-7/16 x 17-1/2 x 19-1/8	55
1	Set connector plugs			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91906 (AN/URR-35 and AN/URR-35B)
NAVSHIPS 92022 (AN/URR-35A)
NAVSHIPS 92676 (AN/URR-35C)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	5.79	125

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-R-10584 (AN/URR-35A)
MIL-R-16620 (Each other model)
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
AN/URR-35, -35B:			
Federal Telephone and Radio Corp.	Clifton, N. J.	NObsr-57142, 14 January 1952	$1,000.00
AN/URR-35A:			
National Co., Inc.	Malden, Mass.	NObsr-57143, 14 January 1952	1,000.00
AN/URR-35C:			
Rauland-Borg Corp.	Chicago, Ill.	NObsr-64647, 28 February 1955	1,000.00

RADIO RECEIVING SET AN/URR-35D

3 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	Std
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR-35D is a very-high-frequency and a ultra-high-frequency unit used on naval vessels, at naval air and shore stations, or at any other military establishments.

This equipment is designed primarily for operation as a pretuned, single-channel, crystal-controlled receiver. By selecting a suitable crystal, any channel within the frequency range of the set may be used.

An adjustable carrier relay circuit is provided to allow operation over an input signal range of 2 to 20 microvolts. A panel-mounted pilot light indicates the operation of the carrier relay.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Type Modulation: Am
Type Reception: Voice, mcw
Frequency Control: Crystal or manual
Type Receiver: Double superheterodyne
Presentation: Audio type
Input Signal Voltage:
Power Requirements: 105-, 115-, or 125-v, 50- to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Filter, Low Pass F-318( )/ URR-35			
1	Radio Receiver R-482( )/ URR-35			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	5.79	125

AN/URR-35D RADIO RECEIVING SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-R-16620A(SHIPS)

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Rauland-Borg Corp.	Chicago, Ill.		
and			
Western Electric Co.	New York, N. Y.		

RADIO RECEIVING SET AN/URR-36

3 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustrations Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR-36 is a general purpose amplitude-modulated communication unit used aboard ship or at shore installations. It is essentially a commercial National Company Model HRO-50-1 receiving set. Frequency range coverage is accomplished by use of 12 coil sets.

This equipment includes provisions for connecting a frequency-modulated adapter and a crystal calibrator unit. These accessories may be permanently installed and switched on or off by means of a single front panel control.

Facilities for connecting a vibrator power supply to permit operation from a storage battery are also provided.

TECHNICAL CHARACTERISTICS:

Frequency Range:
- Total Coverage: 50 kc to 430 kc and 480 kc to 35,000 kc
- Number of Bands: 12
- Coil Set A:
  - General Coverage: 14 mc to 30 mc
  - Bandspread: 27 mc to 30 mc
- Coil Set B:
  - General Coverage: 7 mc to 14.4 mc
  - Bandspread: 14 mc to 14.4 mc
- Coil Set C:
  - General Coverage: 3.5 mc to 7.3 mc
  - Bandspread: 7 mc to 7.3 mc
- Coil Set D:
  - General Coverage: 1.7 mc to 4 mc
  - Bandspread: 3.5 mc to 4 mc
- Coil Set E:
  - General Coverage: 900 kc to 2,050 kc
- Coil Set F:
  - General Coverage: 480 to 960 kc
- Coil Set G:
  - General Coverage: 180 kc to 430 kc
- Coil Set H:
  - General Coverage: 100 kc to 200 kc
- Coil Set J:
  - General Coverage: 50 kc to 100 kc
- Coil Set AA:
  - Bandspread: 27.5 mc to 30 mc
- Coil Set AB:
  - General Coverage: 25 mc to 35 mc
- Coil Set AC:
  - Bandspread: 21 mc to 21.5 mc

Type Modulation: Am; fm by use of accessory unit
Type Reception: A1, A2, A3 (Cw, mcw, tone, voice)
Audio Output:
- Undistorted: 8 w, approximately
- Maximum: 10 w

Imput Impedance: 300 to 600 ohms
Antenna: 50 to 100 ft single-wire, or other transmission line of 70 ohms minimum 300- to 600-ohm line is recommednded (not supplied)
Power Requirements: 115 w; 110- to 120-v, or 220- to 240-v, 50- to 60-cycle, 1-phase ac; or 6-v dc from storage battery

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
12	Coil sets A through AC			
1	Loudspeaker HRO-50-TS (for table mounting)			
	or			
	HRO-50-RS (for relay rack mounting)			
1	Receiver HRO-50-1			

AN/URR-36 RADIO RECEIVING SET

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91648

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.	Malden, Mass.		

RADIO RECEIVING SET AN/URR-36A

3 December 1958
Cognizant Serv: USN FSN: 5820-665-2372

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR-36A is a double conversion superheterodyne communication unit suitable for direct current or alternating current operation. Visual indication of tuning is accomplished by a frequency calibrated slide rule dial and a micrometer dial with 0° to 350° rotation calibrated from 0 to 500

This equipment is furnished with 10 plug-in coil sets as well as an 8-section coil container and an 8-inch permanent magnet loudspeaker.

The AN/URR-36A and Radio Receiving Set AN/URR-36 are basically similar; however, the an/URR-36 has 12 bands while the AN/URR-36A has 10 bands.

TECHNICAL CHARACTERISTICS:

Frequency Range: 50 kc to 430 kc; 480 kc to 35,000 kc
Number of Bands: 10
Number of Channels: 1
Number of Plug-in Coil Sets: 10
Type Modulation: AM
Type Reception: A1, A2, A3 (cw, mcw, voice)
Type Receiver: Double conversion supeheterodyne
Loudspeaker:
Size: 8 in.
Type: Permanent magnet
Type Mounting: Rack
Power Requirements: 115-v or 230-v, 50- to 60-cycle, 1-phase ac; or 6-v and 180-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
10	Coil set			
1	Combination unit			
1	Crystal calibrator			
1	Mounting rack			
1	Radio Receiver R-5234/URR-36A	----------	12-5/8 x 20-1/2 x 29	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92563

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URR-36A RADIO RECEIVING SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: 880F-1(831-138)7115-A, 7 November 1955

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.	Malden, Mass.	NObsr-71193	$1,160.00

RADIO RECEIVING SET AN/URR-39

3 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/URR–39 is a superheterodyne, table-mounted communication unit designed for amplitude-modulated reception.

This equipment incorporates a built-in crystal filter, a beat frequency oscillator, and an accessory socket.

TECHNICAL CHARACTERISTICS:

Frequency Range: 50 kc to 150 kc; 0.54 mc to 31 mc

Number of Bands: 5

Type Modulation: AM

Type Reception: Cw, mcw, voice

Mounting: Table

Number of Plug-in Coils: None

Built-in: Crystal filter

Power Requirements: 110-v to 120-v or 220-v to 240-v, 50- to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiving Set AN/URR–39 including:	----------	14-3/4 x 20-1/2 x 27-1/4	
1	Electrical Equipment Rack MT–1529/U			
1	Permanent Magnet Loudspeaker LS–228/U			
1	Radio Receiver R–651/URR–39			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URR-39 RADIO RECEIVING SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

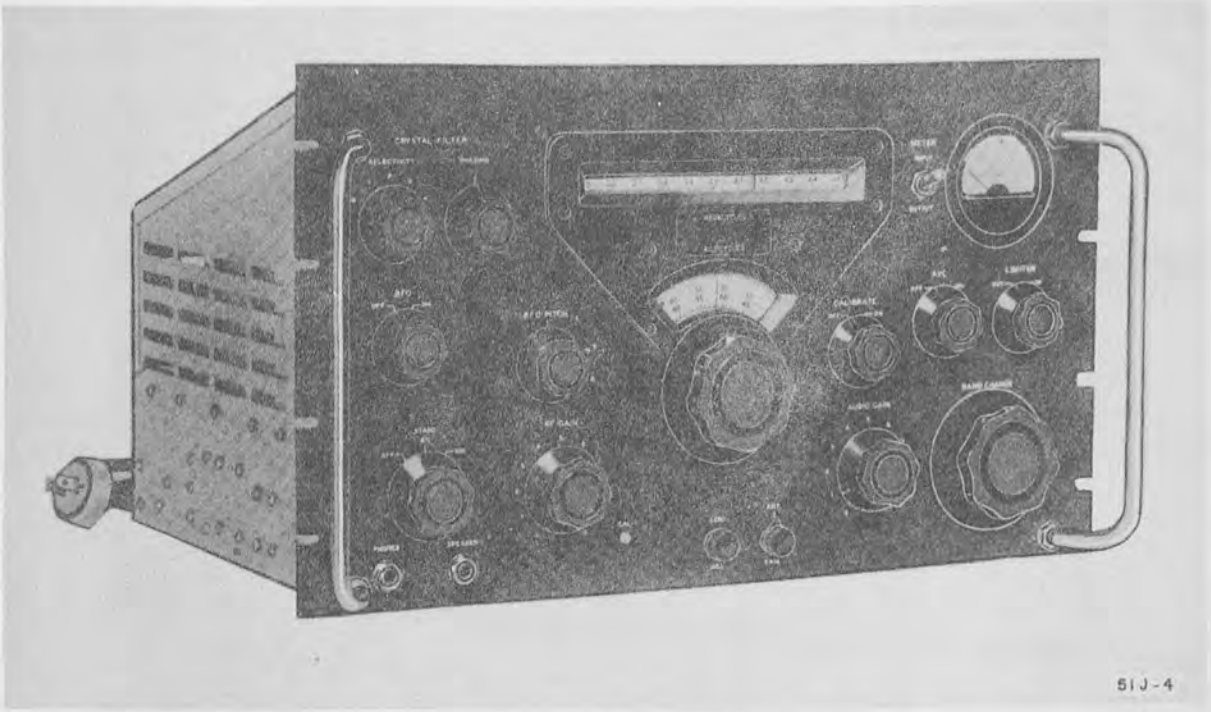
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.	Malden, Mass.	NObsr–64281	

RECEIVER AN/URR-type

5 November 1958
Cognizant Serv: USN FSN:

51J-4

	USA	USN	USAF
TYPE CLASS:	Used by	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Receiver 51J–4 is a superheterodyne radio receiver capable of being tuned to any amplitude-modulated signal within the frequency range of the unit. When advantageous, it uses single, double, or triple conversion in tuning throughout its entire frequency range. The equipment is calibrated for direct reading in both megacycles and kilocycles, and tuning is linear with a uniform bandspread.

The receiver is designed for fixed or mobile station use. The antimagnetic case, made of aluminum, is suitable for either table or rack mounting.

The 51J–4 is similar to Radio Receiver R–388/URR, part of Radio Sets AN/GRC–26A, AN/GRC–26B, and AN/GRC–26C.

TECHNICAL CHARACTERISTICS:

Frequency Range: 540 kc to 30.5 mc

Frequency Stability: Dial calibration at room temperature—within 300 cps if nearest 100-kc calibration point is used to adjust the fiducial

Type Signal: AM

Type Reception: Cw, mcw

Sensitivity:

Band 1: Less than 15 μv gives 1 w with 10 db signal-to-noise ratio

Band 2: Less than 5 μv gives 1 w with 10 db signal-to-noise ratio

Frequency Response:

Spurious: Down at least 40 db

Audio (Overall): 3 db (maximum) at 200 cps and 7 db (maximum) at 2,500 cps when 6-kc filter is used

Automatic Volume Control: Less than 3.5 db increase in audio power output with increase in RF signal from 5 to 125,000 μv

Noise Limiter: Series type ahead of first audiostage

S Meter: Calibrated in 20, 40, 60, 80, and 100 db above avc threshold and −10 to +6 db audio level with 6 mw as reference

Audio Power Output: 1.5 w at 1,000 cps with less than 15% distortion

Output Impedance:

Audio Output: 4 and 600 ohms

IF Output: 50 ohms

RF Output: Designated to operate into high impedance whip or single-ended antenna

Temperature Range: −20° to +60°C

Power Requirements: 85 w, 115- or 230-v 45- to 70-cycle ac

AN/URR-type RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares			
1	Mechanical filter, 1.4 kc			
1	Mechanical filter, 3.1 kc			
1	Mechanical filter, 6 kc			
1	Receiver 51J–4	----------	12-3/8 x 13-1/8 x 21-1/8	43
1	Speaker	----------	7 x 11 x 13	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92324

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NObsr–71045, 26 September 1955	$1,307 with equipment spares

AMATEUR-BAND RECEIVER AN/URR-type

6 November 1958
Cognizant Serv: USN FSN:

75A–4, 75A–4 (MOD)

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



75A-4

FUNCTIONAL DESCRIPTION:

Amateur-Band Receivers 75A–4 and 75A–4 (mod) are used primarily for amateur reception on the seven high-frequency amateur bands. They are dual conversion receivers on all bands except 160 meters where single conversion is used. They are designed for single-sideband reception.

Both receivers incorporate the following features: separate detectors for double- or single-sideband reception; a fast attach; a slow release automatic-volume-control system fast enough to respond to the first few cycles of a sideband transmission that does not require a carrier for operation; a band-pass tuning system where the receiver beat frequency oscillator is mechanically ganged and tracked with the main tuning dial; a Q multiplier that results in less loss of intelligibility while still eliminating heterodynes; space for three mechanical filters that allow the operator to tailor the set to his requirements; a noise limiter designed to clip both the positive and negative peaks of the detected signal; a crystal calibrator circuit that presents calibration signals every 100 kilocycles.

The 75A–4 and 75A–4 (mod) differ only in that the 75A–4 (mod) frequency bands are different and minor mechanical changes have been incorporated. In both receivers, more than one frequency band may be included in a single frequency range.

The amateur-band receivers are designed for table mounting. However, a rack mounting bracket assembly is available so that they can be adapted for standard relay rack mounting.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.5 to 30
Frequency Band Data:

75A–4:

1.5 to 2.5 mc
3.2 to 5.2 mc
6.8 to 7.8 mc
14 to 15 mc
20.8 to 21.8 mc

AN/URR-type AMATEUR-BAND RECEIVER

26.5 to 27.5 mc
28 to 30 mc
75A–4 (Mod):
1.5 to 2.5 mc
3.2 to 6.2 mc
6.8 to 7.8 mc
13 to 15 mc
29 to 30 mc

Type Signal: AM

Type Reception: Ssb, cw, mcw

Sensitivity: 1 μv for 6 db signal-to-noise ratio with 3-kc bandwidth

Selectivity: Determined by choice of mechanical filter

Avc Data:

Audio Rise: Less than 3 db for 5- to 200,00 μv inputs

Time Constants:

Rise Time: 0.01 second fast, .01 second slow

Release Time: 0.1 second fast, 1 second slow

IF and Image Rejection: All greater than 50 db down

Audio Data:

Output: 0.75 w with a 3-μv signal, 30% modulated

Output Impedance: 500 ohms, 4 ohms

Audio Circuit Response: ±3 db at 100 to 5,000 cps

Distortion: Less than 10%

Noise Limiter:

AM: Adjustable clip point, automatic carrier reference

Cw—ssb: Adjustable clip point, clip reference controlled by flat avc

Frequency Stability (At 14.5 Mc):

Temperature: Not more than 1,200 cps drift from 0° to 60°C

Warm-up: Drift does not exceed 100 cps during any 10-minute period after 30-minute warmup.

Voltage: Frequency does not change more than 100 cps for line voltage changes of ±10%.

Humidity: Frequency does not change more than 50 cps for humidity changes from 0 to 90%.

Dial Accuracy After Calibration, All Bands: ±300 cps

Antenna Input: 50 to 150 ohms terminal impedance

Power Requirements: 85 w, 105- to 125-v 50- to 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amateur-Band Receiver, Collins Type 75A–4 or 75A–4 (mod) consisting of:	----------	10-1/2 x 15-1/2 x 17-1/4	35
1 set	Equipment maintenance parts			
1	Connector UG–21B/U (75A–4 only)			
1	Mechanical filter, 0.8 kc			
1	Mechanical filter, 3.1 kc			
1	Mechanical filter, 6.0 kc			
1	Speaker, Collins Type 270–G–3 (75A–4 only)	----------	9-1/8 x 11-1/8 x 15	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92788

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AMATEUR-BAND RECEIVER **AN/URR-type**

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

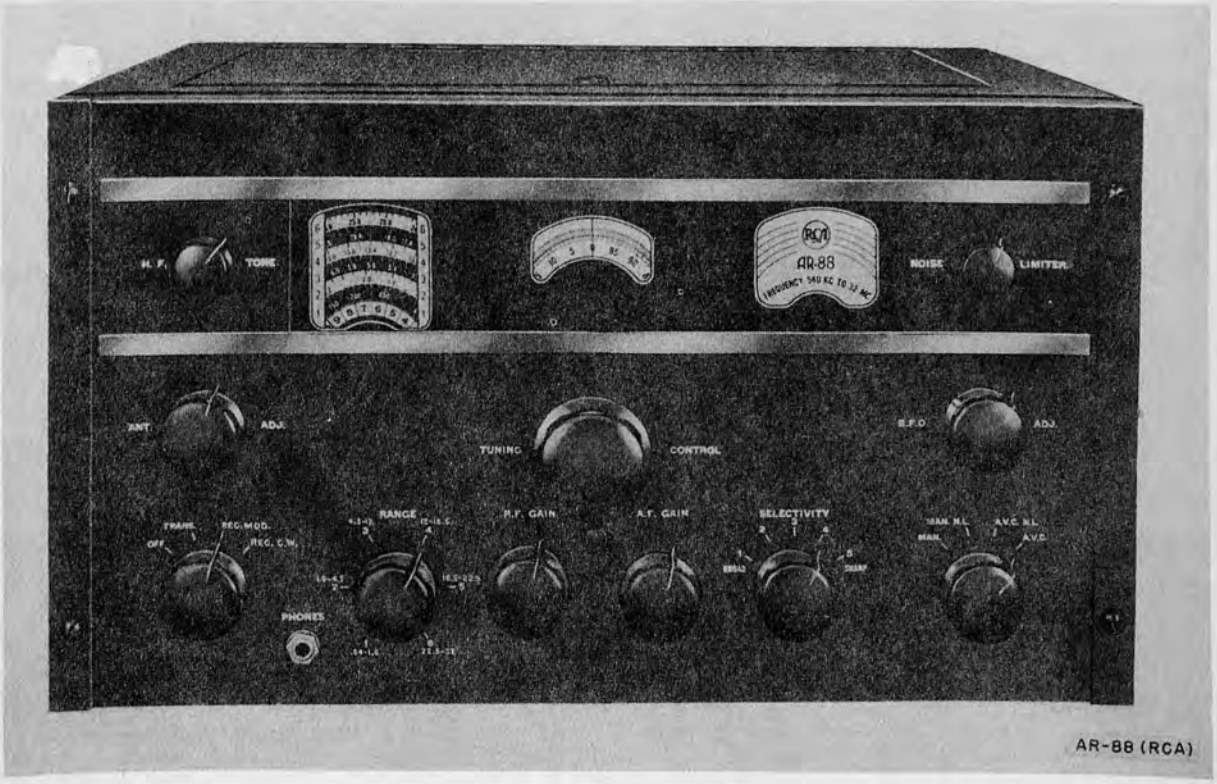
DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NObsr–71287, 27 April 1956 (75A–4)	$1,126 with equipment spares
		NObsr–71289, 27 April 1956 (75A–4 MOD)	$1,126 with equipment spares

RADIO RECEIVER AN/URR-type

1 July 1958
Cognizant Serv: USA FSN: AR–88 (RCA)

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	--	--	--



AR-88 (RCA)

FUNCTIONAL DESCRIPTION:

Radio Receiver RCA Model AR–88 is a commercial radio receiving equipment, two models of which have been procured. The AR–88–D (shown above) is the cabinet-inclosed version and is used for AM (voice, cw, and mcw) communication in the HF range in point-to-point, ground-to-air, ship-to-shore, and similar applications.

The AR–88–F (not illustrated) is panel-mounted and is designed for diversity applications at fixed-plant installations.

The AR–88–F differs from the AR–88–D by having automatic volume control, IF gain control, a diode output circuit, and provision for connection to a tone keyer rather than to a transmitter relay.

Both models have the same technical characteristics.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.54 to 32.0
Type Modulation: AM
Type of Signal: Voice, cw, mcw
Power Requirements: 100–165/190–260-v 50/60-cycle ac

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver AR–88 (RCA) (Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11–880

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	8.15	140

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

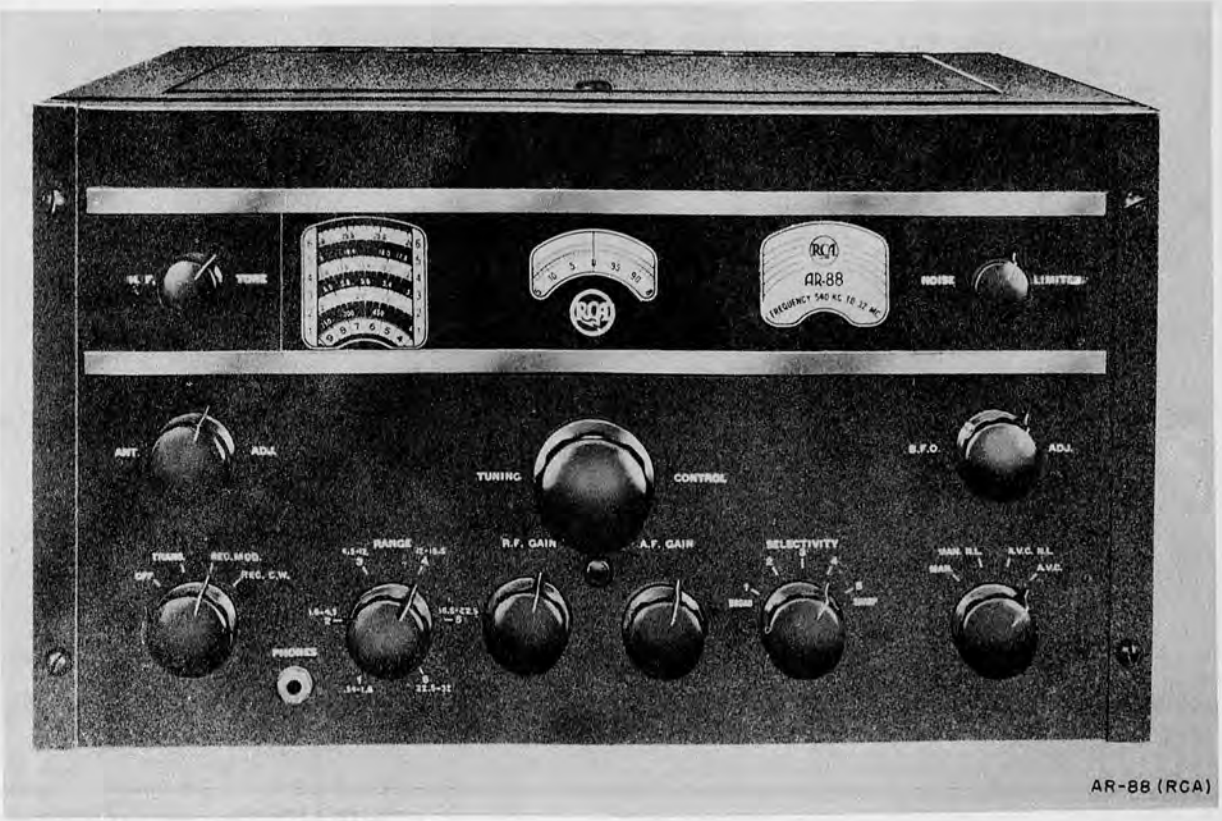
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVER AN/URR-type

4 December 1958
Cognizant Serv: USA FSN:

AR-88D(RCA)

	USA	USN	USAF
TYPE CLASS:	Used by	Used by	--
STOCK NO:	--	--	--



AR-88 (RCA)

FUNCTIONAL DESCRIPTION:

Radio Receiver AR–88D is a 14-tube, general purpose medium frequency receiver used principally for communication at corps and higher headquarters in point- to-point, ground-to-air, ship-to-shore, and similar applications. The equipment is contained in a metal cabinet for table mounting.

The following equipment is used, but is not supplied with Radio Receiver AR–88D: antenna, headset or loudspeaker.

Radio Receiver AR–88F has been procured under official nomenclature Radio Receiver R–320/FRC, and is described in this handbook under that type number.

TECHNICAL CHARACTERISTICS:

Frequency Range: 540 to 32,000 kc in 6 bands
Band 1: 540 to 1,600 kc
Band 2: 1,570 to 4,550 kc
Band 3: 4,450 to 12,150 kc
Band 4: 11,900 to 16,600 kc
Band 5: 16,100 to 22,700 kc
Band 6: 22,000 to 32,000 kc

Reception: Cw, mcw, or AM voice

Antenna: Various types

Receiver Type: Superheterodyne

Intermediate Frequency: 455 kc

Output Impedance: 2.5 ohms and 600 ohms

Maximum Undistorted Output: 2.5 w

Power Input: 100 w

Power Requirements: 100- to 165-v or 190- to 260-v, 50- to 60-cycle ac; or 6-v and 250- to 300-v dc from battery or vibrator

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Coil-adjustment tool	6R38476		
1	Plunger-trimmer tool	6R38475		
1	Radio Receiver AR–88D	----------	11 x 19-1/4 x 19-1/4	98
1	Set screw wrench	6R57400		

REFERENCE DATA AND LITERATURE:

IB–25927–3
TM 11–880

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	8.15	140

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC & / or DWG:

DESIGN COG: USA, Sig C

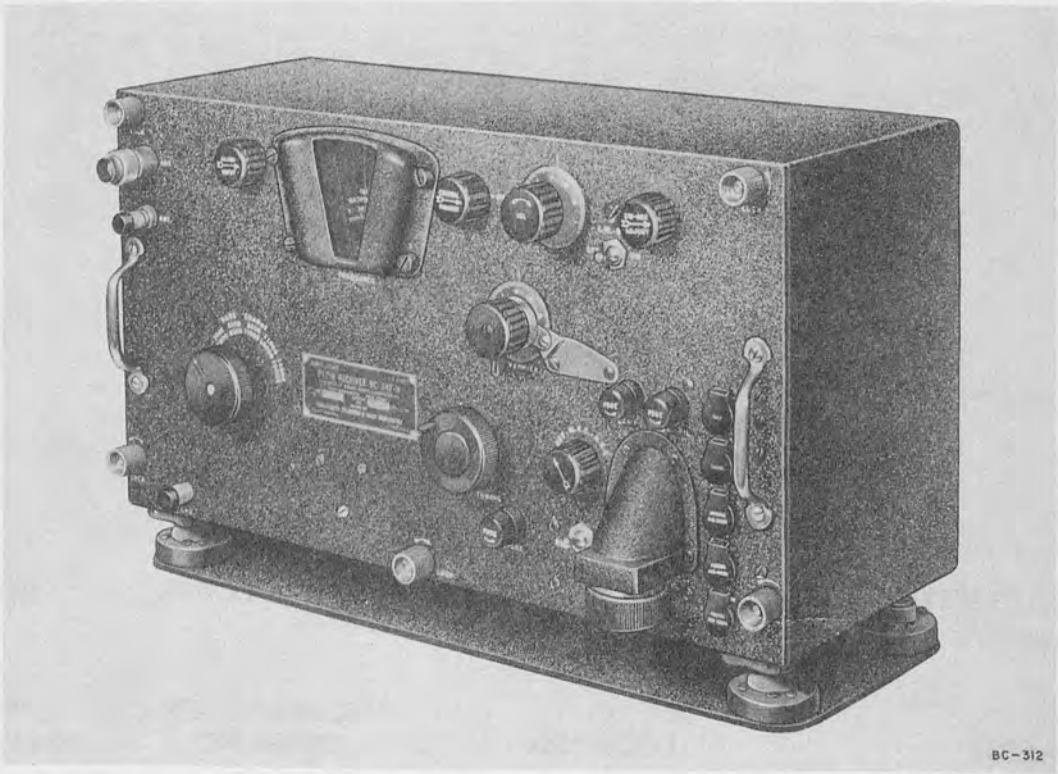
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Corporation of America	Camden, N. J.		

RADIO RECEIVER **AN/URR-type**

1 July 1958
Cognizant Serv: USA FSN: BC–312, –A, –C thru N: 5820–164–7230
BC–312–HX, –NX: 5820–164–6371

BC–312–( )

	USA	USN	USAF
TYPE CLASS:	Std	--	L/Std
STOCK NO:	2C4312	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver BC–312–( ) is an MF and HF, AM (voice, tone, and cw) general utility radio receiving equipment widely used as part of such radio sets as the AN/GRC–26 and SCR–399. It can be used in mobile, vehicular, fixed-plant, or airborne radio communication applications.

This equipment consists of a single primary operating component. It can be used with a loudspeaker or headphones.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.5 to 18.0 in 6 bands
Type Modulation: AM
Type of Signal: Cw, tone, voice
Power Requirements: BC–312 (most models): 12–14-v dc (storage battery); BC–312–HX, –NX: 24–28-v dc (storage battery)

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Radio Receiver BC–312 (Equipment consists of only one major component.)	5820–164–7230	10 x 9-1/16 x 18-1/16	58

REFERENCE DATA AND LITERATURE:

TM 11–850

SHIPPING DATA

PKGS		VOLUME (Cu Ft)	WEIGHT (Lbs)
1	25-3/8 x 21-7/8 x 14-3/8	4.7	120

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA)71–914

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Farnsworth Television & Radio	Ft. Wayne, Ind.	4611–P–42	

RADIO RECEIVER AN/URR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-164-6374 BC-314-( )

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C4314	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver BC-314-( ) is a lightweight, portable, battery-operated, AM radio receiving equipment used for voice, cw, and tone signal communication in the LF and MF bands. It is a general purpose equipment that can be used in fixed-station, mobile, or vehicular applications.

This equipment consists of a single cabinet-inclosed superheterodyne radio receiver, which is the battery-operated version of Radio Receiver BC-344, and is used as a component of such equipment as Radio Set SCR-177-B.

It uses a conventional straight wire or a vehicular whip-type antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.15 to 1.5
Type Modulation: AM
Type of Signal: Cw, tone, voice
Power Requirements: 12- to 14-v dc from storage battery

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Radio Receiver BC–314–( )	5820–164–6374	10 x 9-1/16 x 18-1/16	61.5
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11–850
TM 11–4002

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.7	120

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

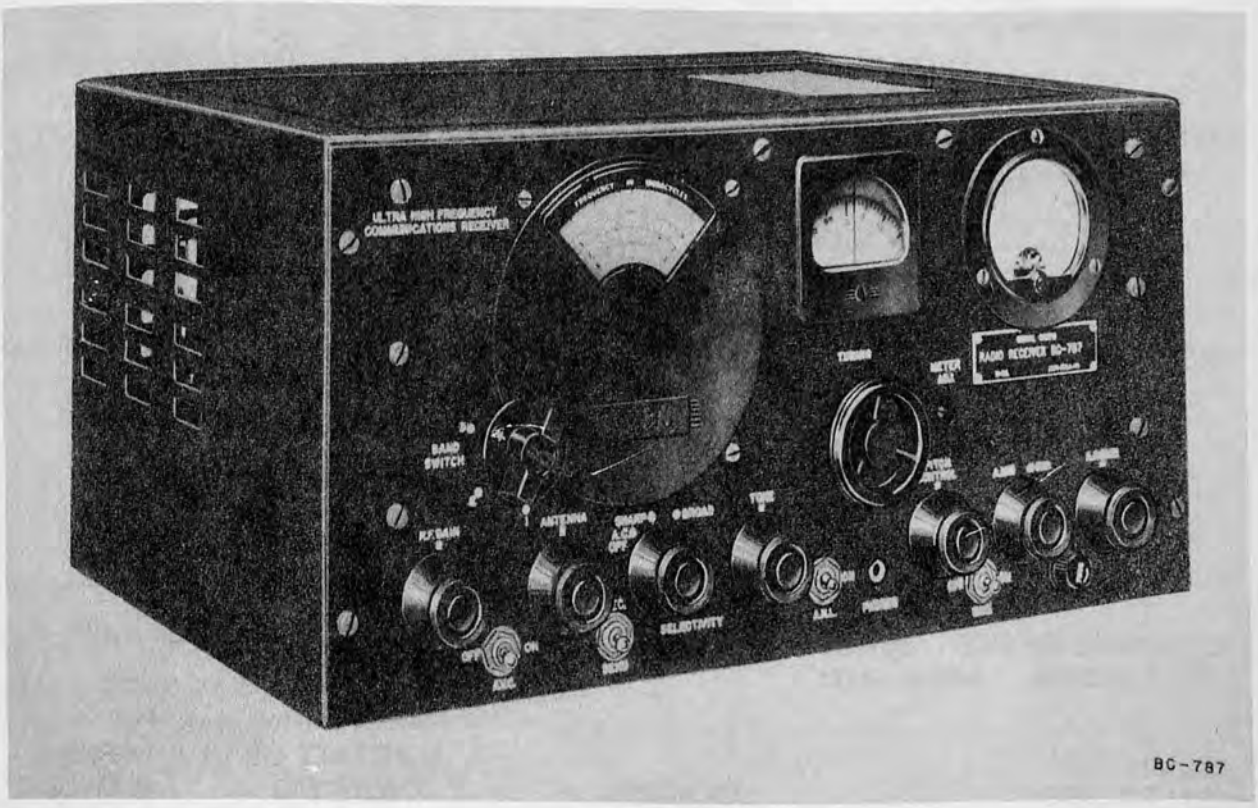
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Farnsworth Television & Radio Co.	----	13462–P–42	

RADIO RECEIVER AN/URR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-162-8759 BC-787-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C4787	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver BC-787-( ) is a 3-band, AM and FM, voice and cw equipment operating in the VHF range. It can be used in fixed-plant, point-to-point communication, for intercept or monitoring purposes, and for special applications in vehicles as a mobile equipment.

This equipment consists of a commercial (Hallicrafter S-36) table model, communication-type radio receiver, and a shock mount. It can be installed on a standard relay rack and arranged for standby operation at a distance by means of remote control equipment. It is the principal operating component of Radio Set SCR-607 and similar equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.8 to 142
Type Modulation: AM, FM
Type of Signal: Voice, cw
Power Requirements: 110 w, 115/230-v 50/60-cycle ac; or 4.5 amp at 6-v dc from A battery and 145 ma at 270-v dc from B battery

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Radio Receiver BC–787	5820–162–8759	9-5/16 x 21-1/4 x 14-1/2	78
(Equipment consists of only one major component.)				

REFERENCE DATA AND LITERATURE:

TM 11–867

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	5.2	170

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–10235

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	21686–P–50–51	$379.22

RADIO RECEIVING EQUIPMENT AN/URR-type

4 December 1958
Cognizant Serv: USN FSN: BF

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment BF is used basically for shipboard or shore installations; it is designed to be used with Radio Transmitting Equipment BE.

The equipment is remotely operated by a receiving control unit at a fixed frequency of 470 mc, and is primarily used to provide visual means of recognition between vessels with Radio Transmitting Equipment BE installed.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 470
Intermediate Frequency: 40 mc
Reply Signal: Indicating lamp and warning buzzer
Circuit: Superheterodyne
Antenna: Vertically polarized dipole
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Receiver Antenna 66AAB	----------	16	0.35
1	Receiver Control 23AAD	----------	7-3/4 x 12-1/4 x 19-1/2	36
1	Receiver unit 46AAB	----------	13-3/8 x 36 x 48	25

REFERENCE DATA AND LITERATURE:

Technical Manual for Radio Receiving Equipment BF

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URR-type RADIO RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

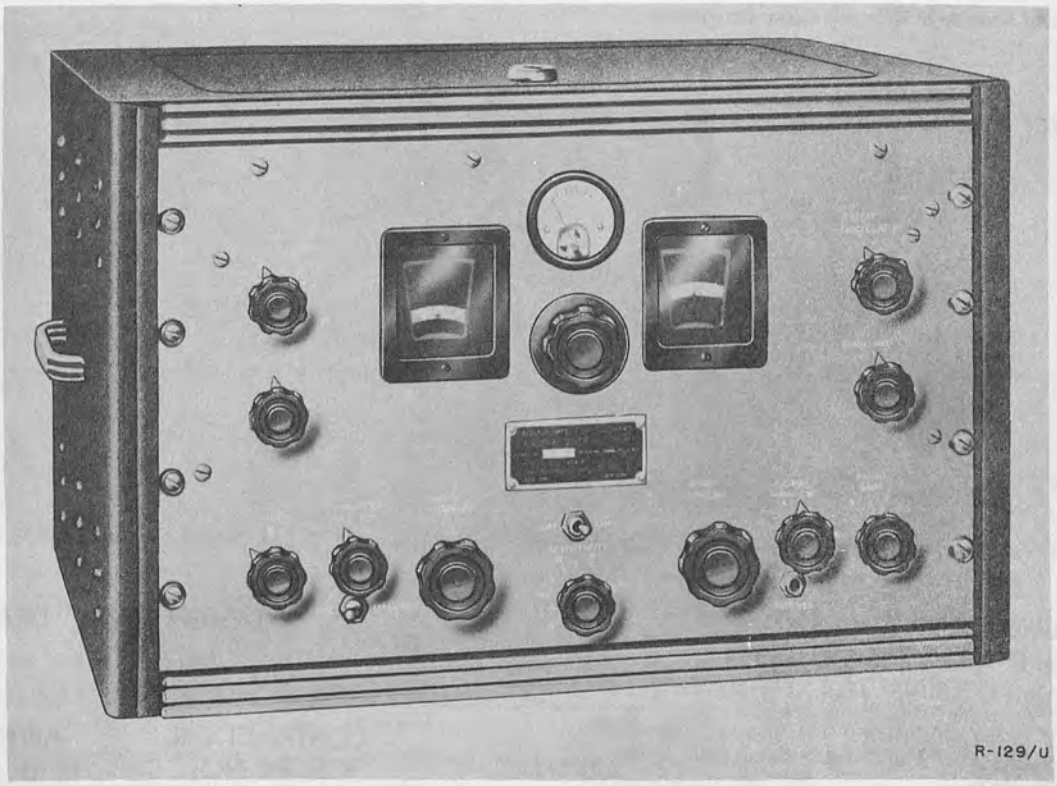
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Bridgeport, Conn.	NOs–82256	

RADIO RECEIVER **AN/URR-type**

1 July 1958
Cognizant Serv: USA FSN: 5820-164-6361 R-129( )/U

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C4180-129	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R-129( )/U is a transportable, AM (voice, tone, and cw) radio receiving equipment operating in the medium- and high-frequency bands in fixed station communication, monitoring, or intercept applications.

This equipment is a table model, cabinet-inclosed radio receiver that can be removed from the cabinet and mounted on a standard 19-inch rack. It can be installed and operated in a vehicle by means of appropriate shock mounts.

It uses a doublet antenna with balanced transmission line, a straight wire and ground, or similar antenna system.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.3 to 10.0 in 5 bands
Type Modulation: AM
Type of Signal: Cw, voice, tone
Power Requirements:

Battery: One 6-v storage battery, five 45-v B batteries, and one 45-v C battery

Ac: 180 w, 95–130/190–260-v 25/60-cycle ac or 180 w, 115/230-v 50/60-cycle ac. (Ac operation requires use of Power Supply Unit RA-74( ), RA-84( ), or RA-94-A.)

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R–129/U in Cabinet CH–104A	(FSN) 5820–164–6361 (USA) 2C4180–129	12-1/4 x 16-1/2 x 23	73

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11–4054

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	4.3	90

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–1523

DESIGN COG: USA, Sig C

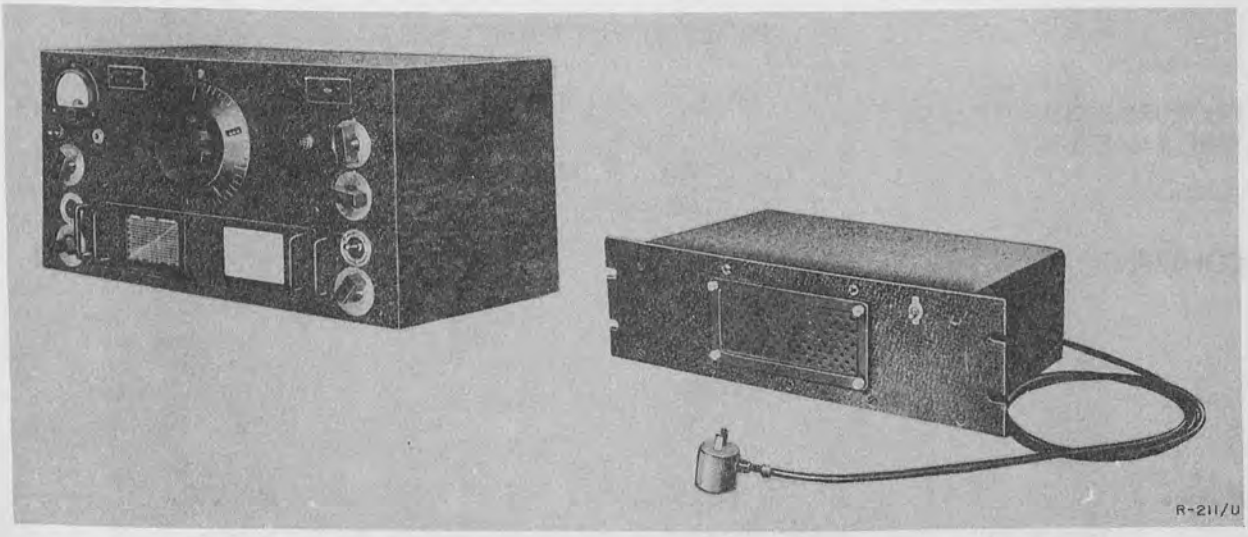
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Hammarlund Manufacturing Co.	New York, N. Y.		

RADIO RECEIVER AN/URR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-194-2998

R-211( )/U

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C4529-22	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R-211( )/U is a general purpose, lightweight, AM (voice, tone, and cw) receiving equipment used for communication in the LF, MF, and HF bands.

This equipment consists of a single radio receiver, which may be table-or rack-and-panel-mounted, and has an external power supply. It operates in nine frequency bands, selected by means of interchangeable coils, and has a crystal-controlled band-pass filter that operates at 0.456 mc.

This receiver can be operated with a conventional single wire or doublet antenna system.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.05 to 0.43 and 0.48 to 30.0 in 9 overlapping bands selected by RF coil inserts
Type Modulation: AM
Type of Signal: Cw, voice, tone
Power Requirements: 115-v 50/60-cycle ac with National Type SPU-697 Power Supply; or 6-v dc with National Type SPU-686-S Power Supply

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-211/U	(FSN) 5820-194-2998 (USA) 2C4529-22	----------	79.5

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

AN/URR-type RADIO RECEIVER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	9.1	211

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

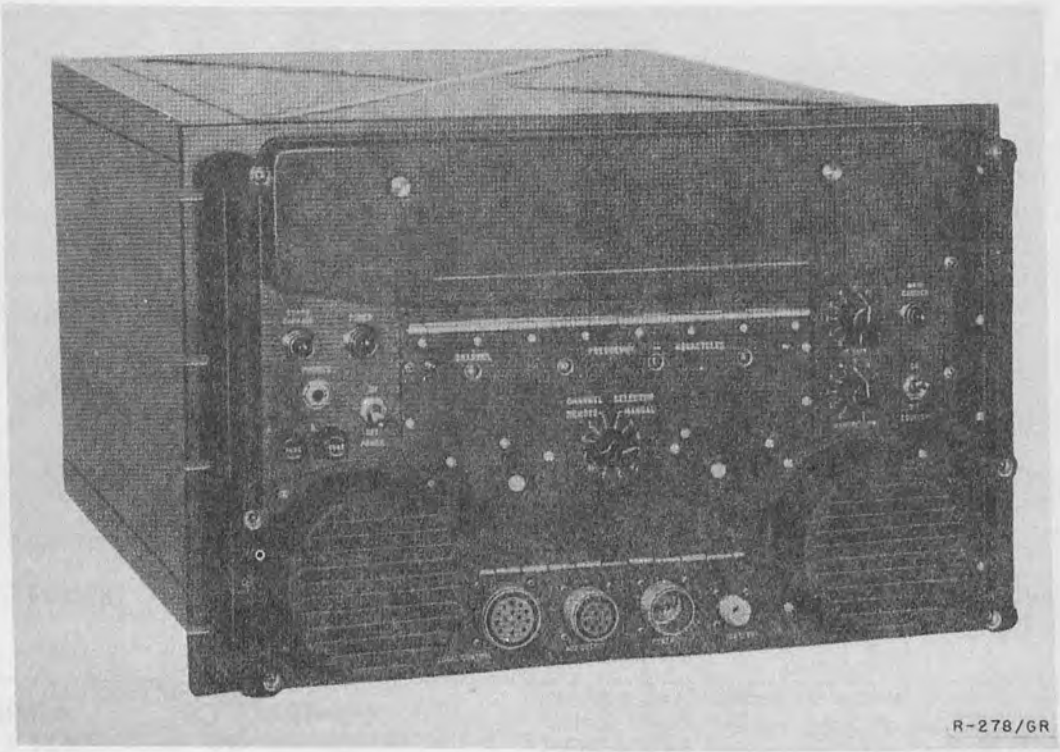
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO	APPROX UNIT COST

RADIO RECEIVER AN/URR-type

5 December 1958
Cognizant Serv: USAF FSN: R-278/GR

	USA	USN	USAF
TYPE CLASS:	--	--	S/Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R-278/GR is a ground-operated, UHF, crystal-controlled AM receiver, operating on any one of 10 preset channels (of a total of 1,750 available channels spaced 100 kilocycles apart) in the 225 to 399.9 megacycle range. It also monitors either of two crystal-controlled, preset, standby, guard frequencies in the 238 to 248 mc range.

The equipment is used in fixed or mobile installations for ground-to-air and point-to-point communication and can be used for navigation applications with Radio Direction Finder Set AN/CRD-6.

The R-278/GR can be remotely controlled over distances up to five miles by means of Radio Set Control C-565/GR and Control Indicator C-806/GR.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 399.9

Type of Modulation: AM

Type of Signal: Voice or tone

Power Output: 3w

Power Requirements: 470 w, 115/230-v 60-cycle 1-phase ac

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-278/GR (Equipment consists of only one major component.)	----------	19 x 12-1/2 x 20	115

REFERENCE DATA AND LITERATURE:

TO 16-35-OA-192-3

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	6	135

PROCUREMENT DATA

PROCURING SERVICE: USAF

DESIGN COG:

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVER AN/URR-type

1 July 1958
Cognizant Serv: USA, USN FSN: 5820-537-3895

R-388( )/URR

	USA	USN	USAF
TYPE CLASS:	Std	Std	Std
STOCK NO:	2C4180-388	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R-388( )/URR is a general purpose, AM (voice, cw, and frequency-shift keying) radio receiving equipment operating in the MF and HF bands for fixed-station or mobile applications.

This equipment, consisting of a single self-contained rack-mounted radio receiver, having unusual stability and calibration accuracy, is especially useful for operating on known frequencies without searching or readjustment, and for reception of frequency-shift-keyed signals. It includes a 100-kc, crystal-calibrated oscillator, a coaxial antenna input connector, a coaxial connector for tapping the IF output, and has provision for connecting an external circuit to control the built-in remote-disabling relay. It can be operated with straight wire or doublet-type antenna systems.

Radio Receiver R-388A/URR, procured by the USN, is identical to the R-388/URR, except that it uses mechanical filters and nonmagnetic side panels.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 30.5
Type Modulation: AM
Type of Signal: Cw, voice, fsk
Power Requirements: 85 w, 115/230-v 45-70-cycle ac

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-388/URR (Equipment consists of only one major component.)	5820-537-3895	10-1/2 x 19 x 13-11/16	35

REFERENCE DATA AND LITERATURE:

TM 11-854

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1		

PROCUREMENT DATA

PROCURING SERVICE: USA, USN

DESIGN COG: USA, Sig C
USN, BuShips

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co. (R-388/URR)	Cedar Rapids, Iowa	3470-P-52	
Collins Radio Co. (R-388A/URR)	Cedar Rapids, Iowa	Nobsr-69046	$755.0(

RADIO RECEIVER **AN/URR-type**

1 July 1958
Cognizant Serv: USA FSN: 5820-503-1417

R-389( )/URR

	USA	USN	USAF
TYPE CLASS:	Std	--	Used by
STOCK NO:	2C4180-389	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R-389( )/URR is a general purpose, low- and medium-frequency, fixed station equipment used in communication, intercept, and direction-finding applications.

For radioteletype applications, this equipment has a 455-kc output that can be connected to a suitable frequency-shift converter to operate teletypewriter equipment.

It is intended for standard rack-and-panel installation in fixed-plant applications, but may also be used in mobile applications where suitable power is available.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.015 to 1.5
Type Modulation: AM
Type of Signal: Cw, mcw, voice, fsk
Power Requirements: 250 w, 115/230-v 48-62-cycle ac

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-389( )/ URR	----------	10-1/2 x 17-1/4 x 19	82

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-855

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	12.4	115

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10474

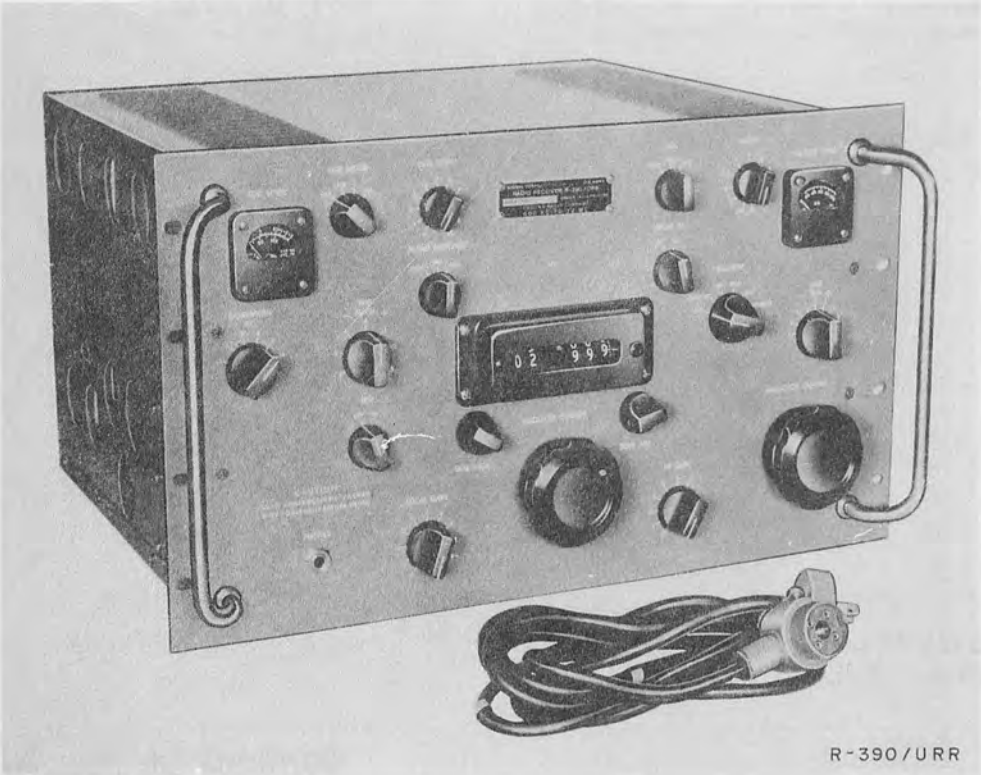
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVER AN/URR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-503-1242 R-390/URR

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2C4180-390	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R-390/URR is a general purpose am (cw, mcw, and voice) medium- and high-frequency equipment of exceptional stability characteristics, used in fixed and mobile applications.

This equipment can be operated in space-diversity and single sideband arrangements for radioteletype communication, in conjunction with such equipment as Radioteletype Terminal Equipment AN/FGC-1, Frequency Shift Converter CV-116/URR, or Single Sideband Converter CV-157/URR.

This receiver is composed of seven subchassis assemblies that can be removed for troubleshooting and repair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 32
Type Modulation: AM
Type of Signal: Cw, mcw, voice, fsk, composite transmissions
Power Requirements: 225/270 w, 115/230-v 48-62-cycle ac

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Radio Receiver R-390/URR	5820-503-1242	10-1/2 x 17-1/4 x 19	84.7
(Equipment consists of only one major component.)				

REFERENCE DATA AND LITERATURE:

TM 11-264B
TM 11-856

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.89	99.76

PROCUREMENT DATA

PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG: MIL-R-10474; MIL-R-13947

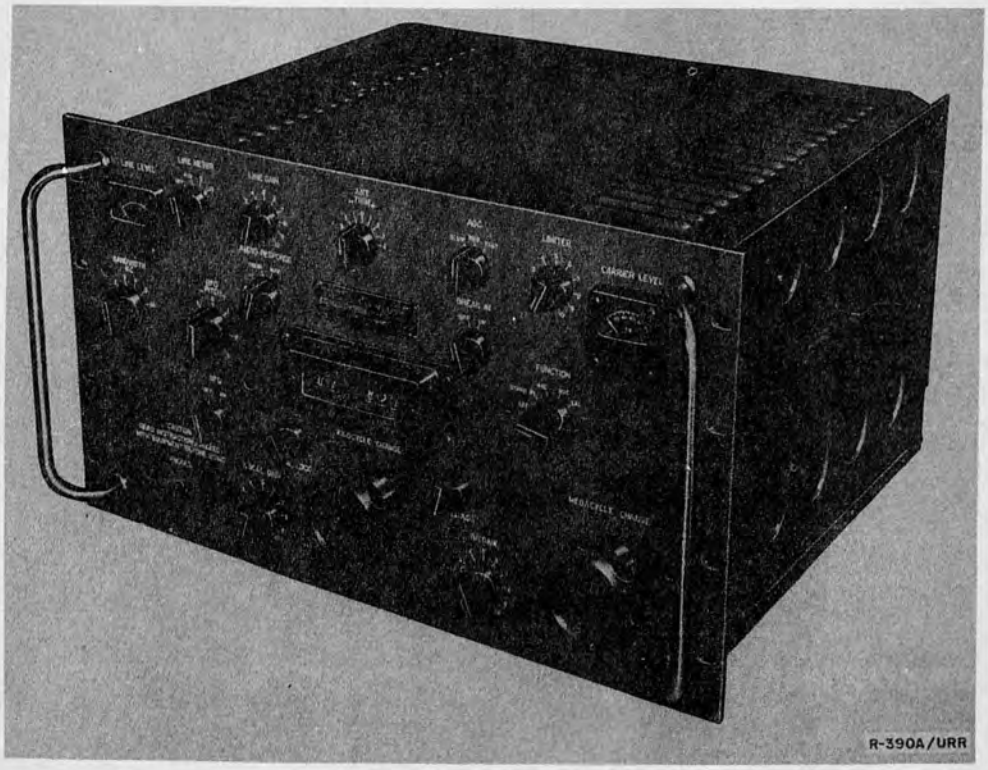
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	0014-P-56-93	$431.88

RADIO RECEIVER AN/URR-type

5 December 1958
Cognizant Serv: USA FSN: 5820-510-1605

R-390A/URR

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	2C4180-390A	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R-390A/URR is a high performance, exceptionally stable, general purpose superheterodyne receiver for use in fixed and mobile applications. It provides reception of continuous wave, modulated continuous wave, voice and frequency-shift keyed signals within a frequency range of 0.5 to 32 megacycles.

The receiver can be operated in a space-diversity receiving system, either of two types of space-diversity radioteletype receiving systems, and in a single-side band radioteletype receiving system.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 32
Type of Signal: A1, A2, A3, A9, F1
Audio Power Output:
600-ohm Unbalanced Line: 500 mw (minimum)
600-ohm Balanced Line: 10 mw (minimum)
Headphones: 1 mw
IF Selectivity: 100 cps to 16 kc
Antenna:
Unbalanced: Straight wire or random length or vehicular mounted whip
Balanced: 125-ohm terminating impedance
Power Requirements: 225 w, 115/230 v (±10%) 48- to 62-cycle ac

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier, radio frequency	(FSN) 5820–697–9667 (USA) 2C332–31	11-3/4 x 4-11/16 x 5	
1	Audio Assembly	(FSN) 5820–694–1061 (USA) 2C640C–1	11-1/8 x 5-1/4 x 3-5/16	
1	Meter, audio level	(FSN) 6625–510–1815 (USA) 3F3307.6–5	1-1/2 dia (body) x 1 dia	

REFERENCE DATA AND LITERATURE:

TM 11–856A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	16.29	99.76

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–4–1D474

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	14214–Phila–51–93	$2,210.00

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier, radio frequency	(FSN) 5820–697–9667 (USA) 2C332–31	11-3/4 x 4-11/16 x 5	
1	Audio Assembly	(FSN) 5820–694–1061 (USA) 2C640C–1	11-1/8 x 5-1/4 x 3-5/16	
1	Meter, audio level	(FSN) 6625–510–1815 (USA) 3F3307.6–5	1-1/2 dia (body) x 1 dia	

REFERENCE DATA AND LITERATURE:

TM 11–856A

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	16.29	99.76

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–4–1D474

DESIGN COG: USA, Sig C

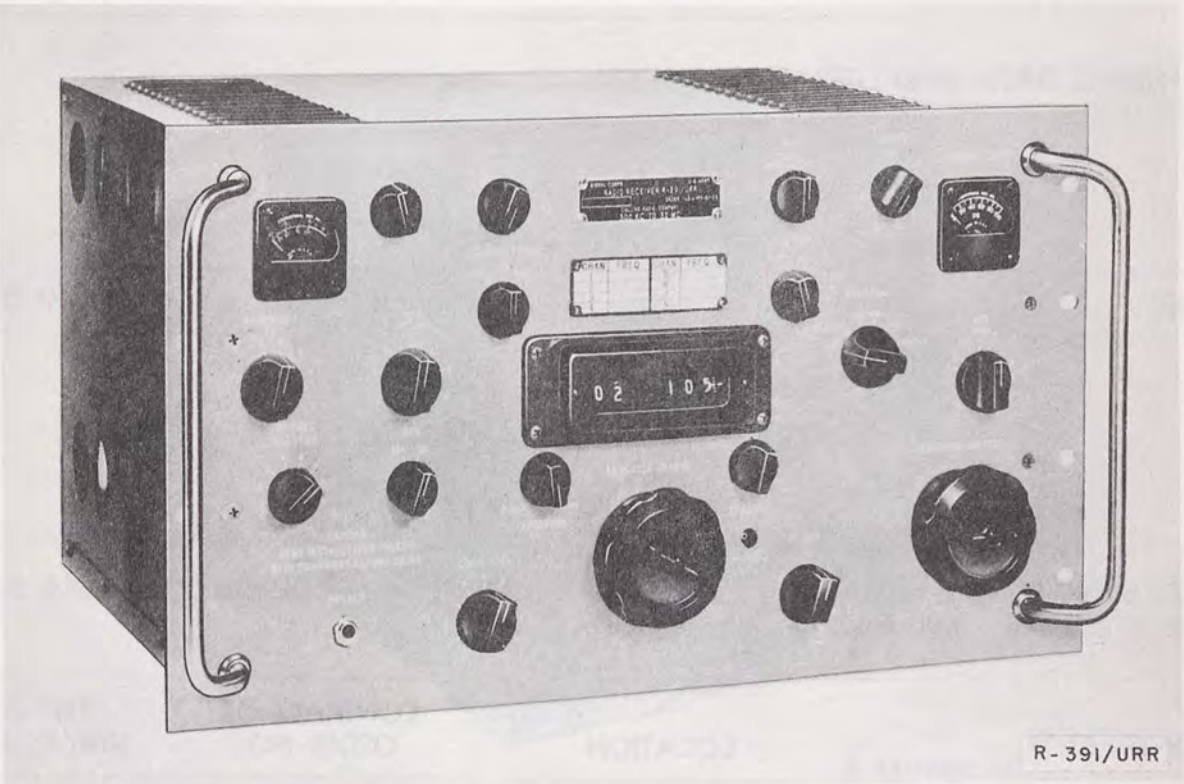
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	14214–Phila–51–93	$2,210.00

RADIO RECEIVER **AN/URR-type**

1 July 1958
Cognizant Serv: USA FSN: 5815–503–1256

R–391/URR

	USA	USN	USAF
TYPE CLASS:	Std	--	Used by
STOCK NO:	2C4180–391	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R–391/URR is a general purpose MF and HF equipment for both fixed and mobile service and provides reception of AM (cw, mcw, voice) and fsk signals.

This equipment consists of the receiver, which contains its own power supply, and necessary cable assemblies. The antenna, headset, speaker, transmission line, adapter connectors, and a separate power supply for use with an autotune system are required but not supplied.

Two or three receivers may be connected as a space-diversity receiving system for reception of voice signals.

This receiver is one of a series that also includes the R–389/URR and R–390/URR. Eqch one, differing in the method of tuning and frequency range, has a number of features in common, such as unitized construction and interchangeable subchassis.

This receiver, in mobile applications, requires an external Power Supply PP–629/URR.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 32 in 32 steps
Type Modulation: AM
Type of Signal: Cw, mcw, voice, fsk
Power Requirements: 270 w, 115/230-v (±10%) 48–62-cycle ac; or 3 amp at 24-v dc with Power Supply PP–629/URR for autotune systems only

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-391/URR	----------	10-1/2 x 17-1/4 x 19	87.2
	(Equipment consists of only one major component.)			

REFERENCE DATA AND LITERATURE:

TM 11-863

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	12.4	

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-R-10474

DESIGN COG: USA, Sig C

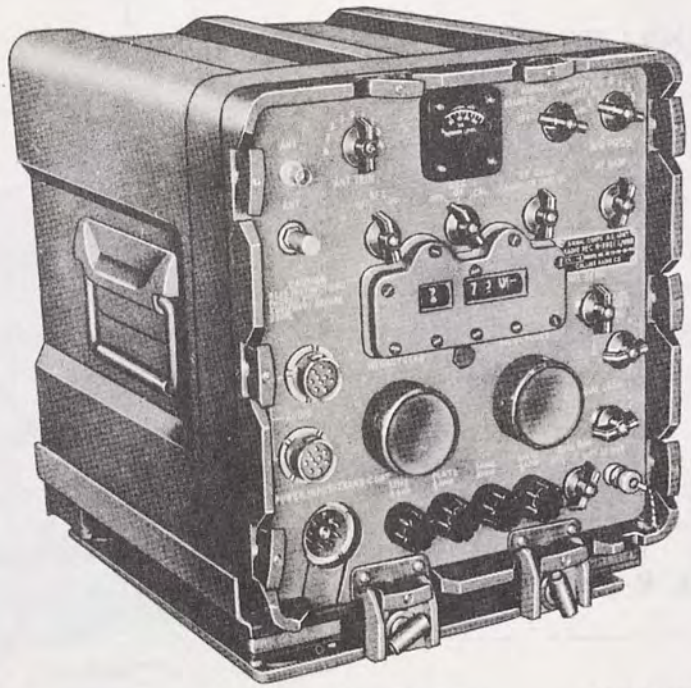
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	11424-P-51-53	$2,808.00

RADIO RECEIVER AN/URR-type

1 July 1958
Cognizant Serv: USA FSN: 5820–503–1250

R–392/URR

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C4180–392	--	--



R–392/URR

FUNCTIONAL DESCRIPTION:

Radio Receiver R–392/URR is a vehicular equipment used for receiving radiotelegraph, voice, and single-channel, frequency-shift radioteletype signals.

This equipment consists of the receiver and tube case. Additional equipment required, but not supplied, includes an antenna, a headset, a speaker, the mounting, power source, and accessories.

It can be used as a conventional communication receiver; as part of a vehicular two-way communication system; or as part of a single-channel, frequency-shift radioteletype system.

This receiver is immersionproof and is sufficiently rugged to withstand parachute delivery when mounted in a truck or in standard U.S. Army parachute delivery container.

It has provision for connection of its 455-kc IF signal output to a frequency-shift radioteletype converter.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 32 in 32 bands
Type Modulation: AM
Type of Signal: Cw, mcw, voice, fsk
Power Requirements: 3 amp, 22–28-v dc

AN/URR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Electron Tube Case CY–1298/URR	(USA) 6F1298–1298	4 x 3-1/16 x 10-1/8	2
1	Radio Receiver R–392/URR	(FSN) 5820–503–1250	11-1/2 x 14-1/8 x 11	52

REFERENCE DATA AND LITERATURE:

TM 11–858

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.6	80

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–R–10474

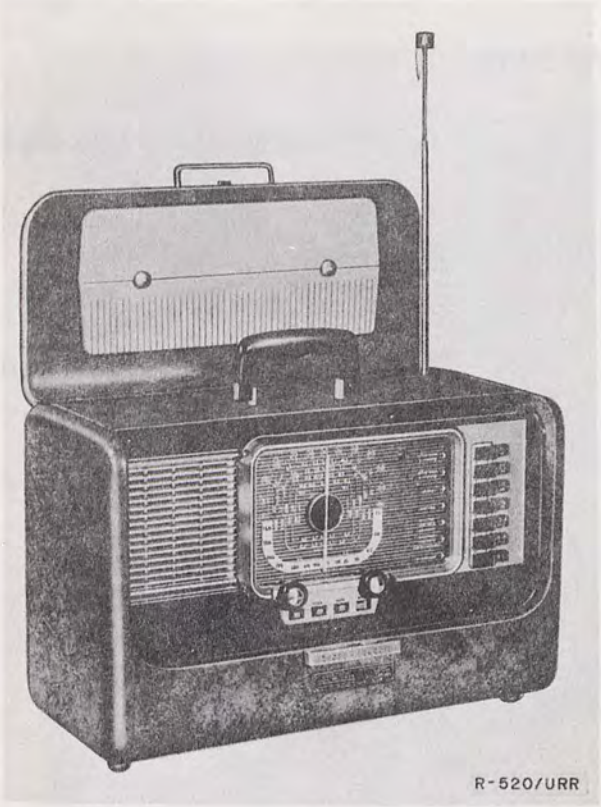
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	3075–P–51–93	

RADIO RECEIVER AN/URR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-503-1403 R-520( )/URR

	USA	USN	USAF
TYPE CLASS:	S/Std	--	--
STOCK NO:	2C4180-520	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiver R-520( )/URR is a portable superheterodyne receiving equipment used for troop information. It is capable of receiving AM signals over the broadcast and shortwave bands (total of seven), and of operating with an internal loudspeaker or an externally connected, low-impedance headset.

Accessory equipment, such as a headset and a long-wire antenna, is not supplied with this equipment.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.54 to 1.6; 2 to 4; 4 to 8; 9.4 to 9.8; 11.6 to 12; 14.9 to 15.5; 17.5 to 18.1
Type Modulation: AM
Type of Signal: Voice
Power Requirements: 10/20 w, 115/230-v ac; 7.5/15 w, 115/230-v dc; or 67 ma at 9-v dc (A battery) and 17 ma at 90-v dc (B battery)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R-520( )/URR	(FSN) 5820-503-1403 (USA) 2C4180-520	11-1/16 x 7-3/32 x 17-5/16	20

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-877

AN/URR-type RADIO RECEIVER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.9	29.5

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: PT/DWG SG 6640

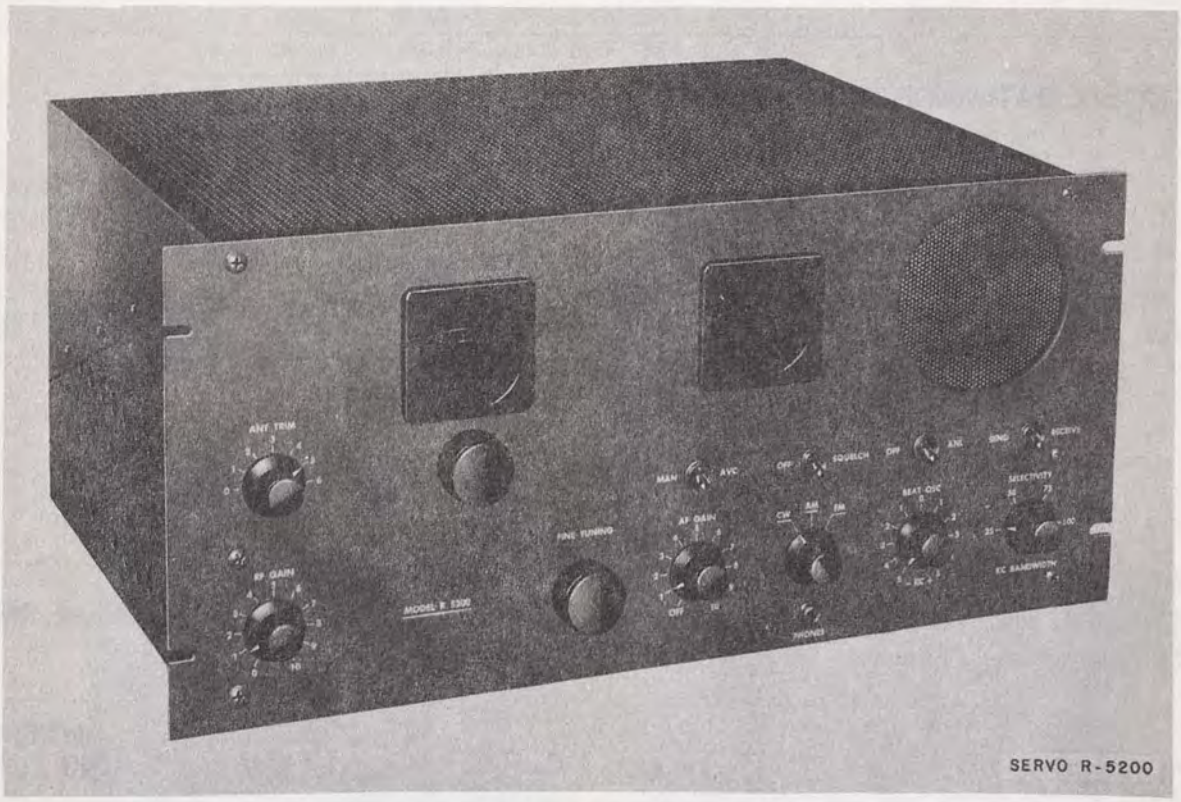
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACTOR ORDER NO.	APPROX UNIT COST
Zenith Radio Corp. (R–520A/URR)	Chicago, Ill.	31241–P–55	$73.00

VHF RECEIVER AN/URR-type

5 December 1958
Cognizant Serv: USAF FSN: R–5200

	USA	USN	USAF
TYPE CLASS:	--	--	A/Std
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

VHF Receiver, Servo Model R–5200 is an amplitude-modulated and frequency-modulated radio receiving equipment for general communication, laboratory measurements, and direction-finding applications.

This equipment includes all features normally required for communication and laboratory work as integral parts of the receiver. In addition, special outputs are provided for the operation of external apparatus and accessory units to permit use of this receiver as a component of complete communication telemetering and direction-finding systems.

The R–5200 is used with Direction Finder Set AN/TRD–10.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 50 to 200
Type Modulation: AM (A0, A1, A2, A3); FM (F1, F2, F3)
Type of Signal: Cw, mcw, tone, voice, fsk
Power Output: 1 w
Power Requirements: 125 w, 115/230-v 50/60-cycle ac

AN/URR-type VHF RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	VHF Receiver R–5200 (Equipment consists of only one major component.)	----------	19 x 14 x 8-3/4	60

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	1.3	

PROCUREMENT DATA

PROCURING SERVICE: USAF
SPEC &/or DWG:

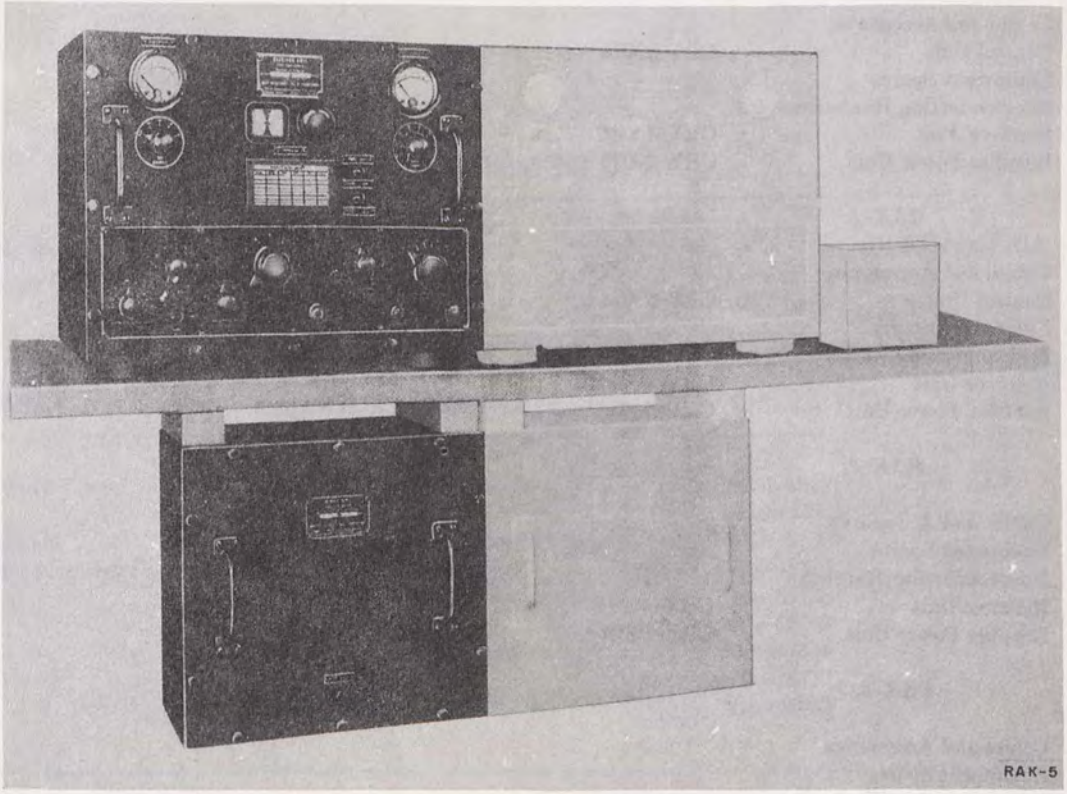
DESIGN COG: USAF, RADC

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Servo Corporation of America	Long Island, N. Y.		

RADIO RECEIVING EQUIPMENT **AN/URR-type**

5 December 1958
Cognizant Serv: USN FSN: RAK: 5820-665-1689 — RAK, RAK-1 thru -8
RAK-1: 5820-665-3667
RAK-2: 5820-644-4759
RAK-3: 5820-665-3828
RAK-4: 5820-642-8841
RAK-5: 5820-665-2250
RAK-6: 5820-665-3740
RAK-7: 5820-642-8845
RAK-8: 5820-665-3824

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	--	RAK: F16-Q-241810-200	--
		RAK-1: F16-Q-241830-200	
		RAK-2: F16-Q-241850-200	
		RAK-3: F16-Q-241870-200	
		RAK-4: F16-Q-241890-200	
		RAK-5: F16-Q-241910-200	
		RAK-6: F16-Q-241931-200	
		RAK-7: F16-Q-241950-200	
		RAK-8: F16-Q-241970-200	


RAK-5

AN/URR-type RADIO RECEIVING EQUIPMENT

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RAK and RAK–1 through 8 are communication receivers used for ship, submarine, and shore use. These equipments may operate independently but are generally used with one of the Radio Receiving Equipment RAL series to allow two-channel guarding by one operator. In an emergency, any RAL- and RAK-series equipment combination may use a common antenna.

A control unit may be used with any RAL, RAK-series combination for combining the output of the two receivers and thus make available signals from either or both receivers through two headphone jacks. Use of this control unit is optional and it is not part of any RAK- or RAL-series equipment; however, it is shipped with the RAK–1 through 4 equipments as an accessory, as is the hardware for securing any of these RAK series equipments to any other corresponding series equipment. The control unit and hardware are shipped with the RAL–5, when the RAK–5,—RAL–5 combination is desired.

The RAK and RAK–1 through 8 are essentially similar; however, the RAK operates on batteries and thus requires no ac power unit. The RAK–6, 7, and 8 have been progressively improved to insure elimination of radar interference.

TECHNICAL CHARACTERISTICS:

Frequency Range: 15 to 600 kc
Power Output: 170 mw
Sensitivity: 2 to 5 μv approx
Output Impedance: 600 ohms
Circuit Type: TRF
Type of Reception: A1, A2, A3
Power Source Required:
RAK: 6-v storage battery, 180 v B battery
RAK–1 through –8: 200 w; 115-v $\pm$10%, 60-cycle 1-phase ac
Mounting Data: Receiver, power and control units; Shelf
Antenna: 6 feet from any parallel stay, mast, or stack, and erected as high as possible

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	RAK, RAK–1, 2, 3:			
1 set	Cables and Accessories			
1	Control Unit	CRV–23073	4-3/4 x 5-3/8 x 3-5/8	2
1 set	Equipment Spares			
1 set	Interconnecting Hardware			
1	Receiver *V*nit	CRV–46044	13-5/16 x 18 x 16-3/32	69
1	Rectifier Power Unit	CRV–20036	12-1/4 x 14 x 8	41
	RAK–4:			
1 set	Cables and Accessories			
1	Control Unit	CRV–23073	4-3/4 x 5-3/8 x 3-5/8	2
1 set	Equipment Spares			
1 set	Interconnecting Hardware			
1	Receiver Unit	CRV–46044	13-5/16 x 18 x 16-3/32	69
1	Rectifier Power Unit	CRV–20036A	12-1/4 x 14 x 8	41
	RAK–5:			
1 set	Cables and Accessories			
1 set	Equipment Spares			
1 set	Interconnecting Hardware			
1	Receiver Unit	CRV–46044	13-5/16 x 18 x 16-3/32	69
1	Rectifier Power Unit	CRV–20036A	12-1/4 x 14 x 8	41
	RAK–6, 7:			
1 set	Cables and Accessories			
1 set	Equipment Spares			
1 set	Interconnecting Hardware			

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver	CRV or CND–46155	13-5/16 x 18 x 16-3/4	74
1	Rectifier Power Unit	CRV or CND–20131	12-1/4 x 14 x 8	41
	RAK–8:			
1 set	Cables and Accessories			
1 set	Equipment Spares			
1 set	Interconnecting Hardware			
1	Radio Receiver	CMV–46155–A	13-5/16 x 18 x 16-3/4	41
1	Rectifier Power Unit	CMX–20131–A	12-1/4 x 14 x 8-5/8	41

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95231, 900,480, 95232, Instructions, Models RAK and RAK–1 Radio Receiving Equipment, Instructions, Models RAK–2 Radio Receiving Equipment, Instructions, Models RAK–3 Radio Receiving Equipment, Instructions, Models RAK–4 Radio Receiving Equipment, Instructions, Models RAK–5 Radio Receiving Equipment

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	17.0	371

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: BuShips

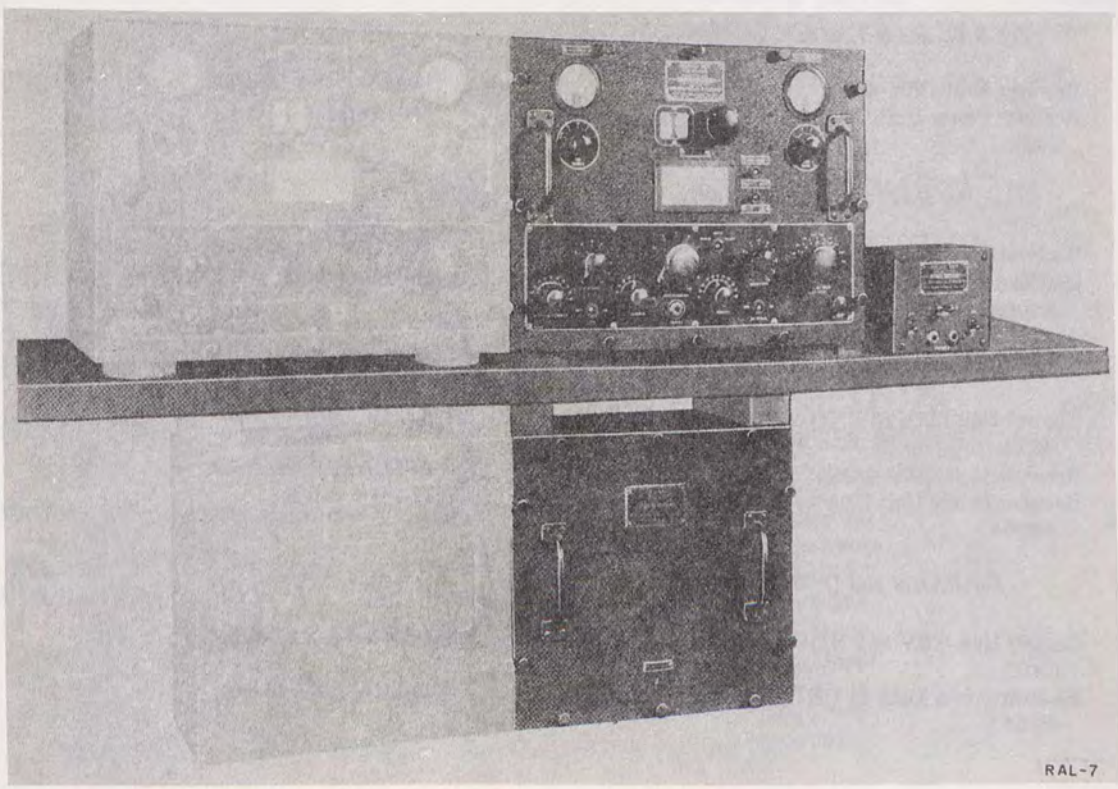
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Andrea Radio Corp.	Camden, N. J.	NXss–19101 NXsr–38089	
Magnavox Co.	Fort Wayne, Ind.	NXss–21827	
RCA Manufacturing Co., Inc.	Camden, N. J.	NOs–41370 NOs–51782 NOs–55482 NOs–61536 NOs–70577 NOs–95022	$1,800.00

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958
Cognizant Serv: USN FSN: RAL: 5820-665-2058
RAL-1: 5820-665-3666
RAL-3: 5820-644-4760
RAL-4: 5820-642-8844
RAL-5: 5820-665-2131
RAL-6: 5820-642-8556
RAL-7: 5820-642-8843
RAL-8: 5820-665-3825

RAL, RAL-1 thru -8

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	--	RAL: F-16-Q-242680-200	--
		RAL-1: F-16-Q-242701-200	
		RAL-2: F-16-Q-242702-200	
		RAL-3: F-16-Q-242703-200	
		RAL-4: F-16-Q-242720-200	
		RAL-5: F-16-Q-242740-200	
		RAL-6: F-16-Q-242760-200	
		RAL-7: F-16-Q-242780-200	
		RAL-8: F-16-Q-242800-200	



RAL-7

AN/URR-type RADIO RECEIVING EQUIPMENT

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RAL and RAL–1 through 8 are broad range communication receivers for ship, submarine, and shore use. These equipments may operate independently, but are generally used with one of the Radio Receiving Equipments of the RAK-series to allow two-channel guarding by one operator. In an emergency, any RAL- and RAK-series equipment combination may use a common antenna.

A control unit may be used with any RAL-, RAK-series combination for combining the output of the two receivers and thus make available signals from either or both receivers through two headphone jacks. Use of this control unit is optional and it is not part of any RAL- or RAK-series equipment; however, it is shipped with the RAK–1 through 4 equipments as an accessory, as in the hardware for securing any of these RAK-series equipments to any corresponding RAL-series equipment. The control unit and hardware are shipped with the RAL–5, when the RAK–5—RAL–5 combination is desired.

The RAL and RAL–1 through 8 are essentially similar; however, the RAL operates on batteries and thus requires no ac power unit. The RAL–6 through 8 have been progressively improved to eliminate radar interference.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.3 to 23
Type: TRF
Type of Reception: A1, A2, A3
Power Output: 170 mw
Sensitivity: 2 to 5 μv
Output Impedance: 600 ohms
Power Source Required:
RAL: 6-v storage battery, 180-v B battery
RAL–1 through 8: 200 w; 115-v ±10%, 60-cycle, 1-phase ac
Power Supply Equipment: Rectifier power unit for RAL–1 through 5 only.
Mounting Data: Receiver and Power Unit—Shelf Antenna—6 ft from any parallel stay, mast, or stack, and erected as high as possible

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RAL, RAL–1, 2, 3:			
1	Receiver Unit CRV–46045		13-5/16 x 18 x 16-3/32	69
1	Rectifier Power Unit CRV–20036		12-1/4 x 14 x 8	41
	For RAL–4:			
1	Receiver Unit CRV–46045		13-5/16 x 18 x 16-3/32	69
1	Rectifier Power Unit CRV–20036A		12-1/4 x 14 x 8	41
	For RAL–5:			
1	Control Unit CRV or CND–23073		4-3/4 x 5-3/8 x 3-5/8	2
1	Receiver Unit CRV–46045		13-5/16 x 18 x 16-3/32	69
1	Rectifier Power Unit CRV–20036A		12-1/4 x 14 x 8	41
	For RAL–6 and 7:			
1	Control Unit CRV or CND–23073		4-3/4 x 5-3/8 x 3-5/8	2
1	Radio Receiver CRV or CND–46156		13-5/16 x 18 x 16-3/4	69

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RAL–8:			
1 set	Cables and Accessories			
1	Control Unit CMX–23073–A		4-3/4 x 5-3/8 x 3-5/8	2
1 set	Equipment Spares			
1	Radio Receiver CMX–46156–A		13-5/16 x 18 x 16-3/4	69
1	Rectifier Power Unit CMX–20131–A		12-1/4 x 14 x 8-5/8	64

REFERENCE DATA AND LITERATURE:

NAVSHIPS 480, 900, 95233, 95234 Instructions, Models RAL and RAL–1 Radio Receiving Equipment; Instructions, Model RAL–2 Radio Receiving Equipment; Instructions, Model RAL–3 Radio Receiving Equipment; Instructions, Model RAL–4 Radio Receiving Equipment; Instructions, Model RAL–5 Radio Receiving Equipment

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	17.	368

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Andrea Radio Corp. for RCA Victor Div.	Camden, N. J.	NXss 10101 NXss 38089	$1,800.00
The Magnavox Co.	Fort Wayne, Ind.	NXss 21877	
RCA Manufacturing Co., Inc.	Camden, N. J.	NOs 41370 NOs 51782 NOs 55482 NOs 61436 NOs 70577 NOs 95022	

AN/URR-type RADIO RECEIVING EQUIPMENT

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RAO–2 through 7 are superheterodyne receivers intended for general purpose radiotelegraph and radiotelephone reception aboard ship or at shore stations. Radiation of RF power from the internal heterodyne oscillator has been reduced to less than 400 micromicrowatts at the antenna terminals.

The Radio Receiving Equipment RAO–9 is very similar to the above equipments; however, circuit modifications better adapt this model for countermeasures use. It is used with a panoramic adaptor to detect radio signals within its frequency range and is relatively unaffected by nearby electrical noise.

TECHNICAL CHARACTERISTICS:

Frequency Range: 0.54 to 30.0 mc
Type of Reception: A1, A2, A3
Sensitivity: 15 μv for A3, 10 μv for A1
Signal/Noise Ratio: A1: 20 db; A2: 10 db
Power Output:
RAO–2, 3, 4, 6, 7, and 9—0.3 W into 600 ohm load
RAO–5—0.015 W for headset; 2.0 W for loudspeaker
Output Impedance: 600 ohms
Power Source Required: 6 w; 115-v, 50- to 60-cycle ac. (In emergencies the RAO–2 through 7 are powered from 6.3-v 22-w and 135-v 5.4 w batteries)
Antenna: Single-wire, 50- to 200-foot long at 70 ohms impedance

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RAO–2:			
1	Mounting Base	CNA–10125	2-9/16 x 17-11/16 x 17-1/32	5.75
1	Radio Receiver	CNA–46187	10-11/16 x 17-3/16 x 17-1/4	75
	For RAO–3:			
1	Mounting Base	CWQ–10125–A	2-11/16 x 16-1/16 x 16-1/16	5.75
1	Radio Receiver	CWQ–46187–A	10-11/16 x 17-3/16 x 17-1/4	75
	For RAO–4:			
1	Headphone	NT–49016	3/4 x 1-3/4 dia.	
1	Mounting Base	CWQ–10125–A	2-11/16 x 16-1/16 x 16 1/16	5.75
1	Radio Receiver	CWQ–46187–B	10-11/16 x 17-3/16 x 17-1/4	75
	For RAO–5:			
1	Loudspeaker	CJS–49493	8-1/4 x 8-1/4 x 4-3/8	
1	Mounting Base	CWQ–10125–A	2-11/16 x 16-1/16 x 16-1/16	5.75
1	Radio Receiver	CWQ–46229	10-11/16 x 17-3/16 x 17-1/4	75
	For RAO–6:			
1	Mounting Base	CNA–10125	2-9/16 x 17-11/16 x 17-1/32	5.75
1	Radio Receiver	CWQ–46229	10-11/16 x 17-3/16 x 17-1/4	75
	For RAO–7:			
1	Radio Receiver	CNA–46233	12-7/16 x 19 x 17-3/4	97
	For RAO–9:			
1	Radio Receiver	CNA–46263	12-7/16 x 19 x 17-3/4	97
1 set	Equipment spares			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,351, 900,489 1B; 900,359 1B; 900,356

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	8.6	215

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG:

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.	Malden, Mass.	NXs4681 NXsr38306 NXsr55614 NXsr85045	
Wells-Gardner and Co.	Chicago, Ill.	NXss-21446 NXsr-38492	

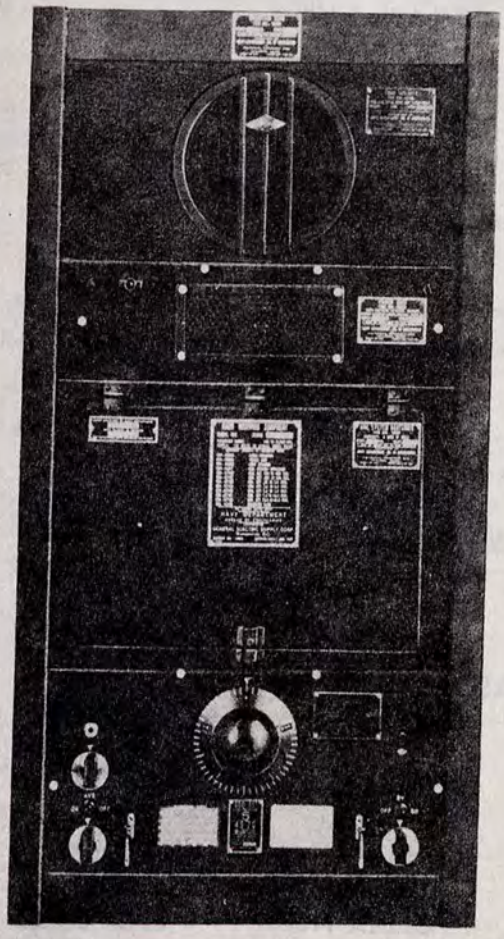
RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958
Cognizant Serv: USN FSN: RAS–2: 5820–644–4758
RAS–3: 5820–665–3672
RAS–4: 5820–501–0641
RAS–5: 5820–665–2134

RAS, RAS–1 thru –5

USA	USN	USAF

TYPE CLASS: --
STOCK NO: --



RAS

Used by --
RAS: F16–Q–244458–200
RAS–1: F16–Q–244461–200
RAS–2: F16–Q–244462–200
RAS–3: F16–Q–244463–200
RAS–4: F16–Q–244464–200
RAS–5: F16–Q–244465–200

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RAS and RAS–1 through –5 are rack-mounted superheterodyne receivers designed for shipboard or shore station reception. All models are supplied with Receiver Unit 46080 which has a narrow IF pass band. IF modification kits may be assembled to convert the 46080 to Receiver Unit 46080A, which has a wide IF pass band.

Noise Limiter 50142 is an adapter used to reduce the effects of pulse-type noise picked up by antenna system.

TECHNICAL CHARACTERISTICS:

Frequency Range: 0.19 to 30.0 mc
Type of Signal: Cw, mcw, voice
Power Output: 10 mw into 600-ohm load; 2 w into 5,000-ohm load
Output Impedance: 600 ohms for headphones; 5,000 ohms for loudspeaker
Sensitivity:
Cw: 12 μv for 6 mw output
Mcw: 7 μv for 6 mw output
Antenna:
Input Impedance: 500 ohms when using coil sets types CNA–47159 to 417162 inclusive; coil sets types CNA–47156 to 47158 inclusive have higher values but in no case does the impedance exceed 5,000 ohms
Length: 50 to 200 ft long
Power Requirements: 70 w, 110/120-v 25/50-60-cycle ac

AN/URR-type RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Coil Set 47156	----------	2-7/16 x 10-3/8 x 5-3/8	
1	Coil Set 47157	----------	2-7/16 x 10-3/8 x 5-3/8	
1	Coil Set 47158	----------	2-7/16 x 10-3/8 x 5-3/8	
1	Coil Set 47159	----------	2-7/16 x 10-3/8 x 5-3/8	
1	Coil Set 47160	----------	2-7/16 x 10-3/8 x 5-3/8	
1	Coil Set 47161	----------	2-7/16 x 10-3/8 x 5-3/8	
1	Coil Set 47162	----------	2-7/16 x 10-3/8 x 5-3/8	
1	Coil System Container 10037	----------	12-1/4 x 19 x 5-7/8	
1	Loudspeaker 49105 (rack mounting)	----------	8-3/4 x 19 x 4-1/16	9
1	Loudspeaker 49106 (table mounting)	----------	9-3/8 x 10-1/4 x 7-1/4	11
1	Mounting Rack 10036	----------	39-1/2 x 20-1/2 x 12-3/8	27
1	Receiver Unit 46080	----------	8-3/4 x 19 x 10-1/4	35
1	Rectifier Power Unit 20090 (when 25 cps source is used)	----------	5-1/4 x 19 x 9-3/4	22

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95236, 95237, 95238, 95239, Instructions for Radio Receiving Equipment Model RAS, Instructions for Radio Receiving Equipment Model RAS–1.

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Supply Corp.	Washington, D. C.	NOs–66920 NOs–70176 NOs–79121 NOs–94477 NXs–455 NXs–20976	

SUPER FREQUENCY AIRCRAFT RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958
Cognizant Serv: USN FSN: RAY

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiver RAY is a self-contained crystal-controlled superheterodyne receiver designed for use in high frequency communication. It may be operated on any frequency within 23 to 28 mc band by installing the proper crystal.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 23 to 28
Sensitivity: 3 μv or better with 0.5 w output
Selectivity: The IF selectivity is down at least ten times at 20 kc off resonance and is down approximately 1000 times at 60 kc off resonance
Automatic Volume Control: The audio voltage developed across a 500 ohm load does not vary more than 25% from 100 μv to 1 v
Power Output: 2 w into 500 ohm load
Fidelity: 3 db variation maximum from 200 to 3000 cps into a 500 ohm load
Power Requirements: 11 to 14 v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver Model RAY	----------	9-1/4 x 10 x 13-1/2	22

REFERENCE DATA AND LITERATURE:

Technical Manual for Radio Receiver Navy Model RAY (Doolittle & Falknor Model PR–3N)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	.75	22

AN/URR-type SUPER FREQUENCY AIRCRAFT-RADIO RECEIVING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: BUSHIPS DESIGN COG: BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Doolittle & Falknor, Inc.	Chicago, Ill.	69814 dated 20 November 1939	

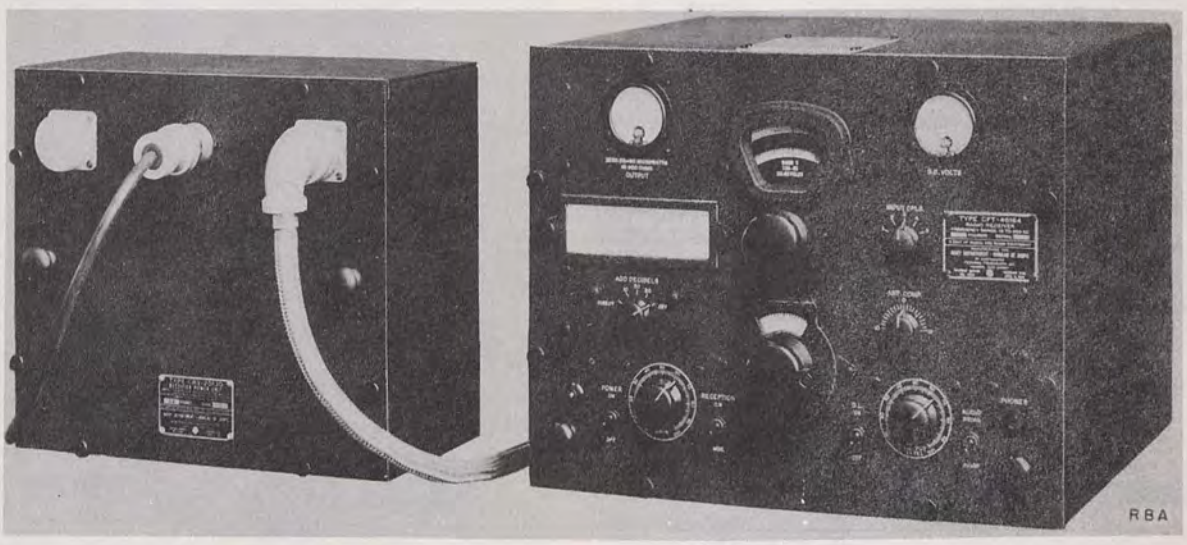
RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958

Cognizant Serv: USN FSN: RBA–1: 5820–665–3671
RBA–2: 5820–665–3739
RBA–3: 5820–642–6842
RBA–5: 5820–665–2363
RBA–5A: 5820–644–3393

RBA, RBA–1, –2, –3, –5, –5A

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RBA, RBA–1, –2, –3, –5, and –5A are designed for use aboard vessels and in shore stations for the reception of cw, or modulated or interrupted continuous wave radiotelegraph signals.

Provisions are included for operation of a number of receivers from a common antenna and transmission line, for simultaneous emergency operation of two receivers from a common power unit, and for automatic regulation of receiver output signal voltage as a function of load resistance, so that from one to twenty 600 ohm headphones may be connected across the output circuit with less than 40% change in output voltage.

TECHNICAL CHARACTERISTICS:

Frequency Range: 14.5 to 600 kc

Type of Reception: Cw, mcw, or voice is possible, but some distortion is present below 300 kc due to the high order of selectivity, and the characteristics of filters employed in the audio frequency amplifier.

Output Impedance: 600 and 30 ohms

Input Impedance: Adjustable over a wide range

Sensitivity: 10 μv input for 6 mw output on cw operation

Frequency Calibration Dial Accuracy: $\pm 1\%$

Power Output:

600 ohm load: 50 mw

30 ohm load: 50 mw

Power Requirements:

RBA, RBA–1, –2, –3, –5: 67 w (one receiver, 100 w (two receivers); 110/115/120-v 55–65-cycle 1-phase ac

RBA–5A: 115-v 400-cycle 1-phase ac

AN/URR-type RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBA, RBA-1, -2, -3:			
1	Cable, Power	49162		
1	Radio Receiver	46154		
1	Rectifier Unit	20130		
	For RBA-5:			
1	Adapter	49509		
1	Cable, Power	49162		
1	Radio Receiver	46154A		
1	Rectifier Unit	20130-B		
	For RBA-5A:			
1	Adapter	49509		
1	Cable, Power	49162(MOD)		
1	Radio Receiver	46154A(MOD)		
1	Rectifier Unit	20130-B(MOD)		

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,473, 900,708, 91319

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	28.0	365

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** BuShips

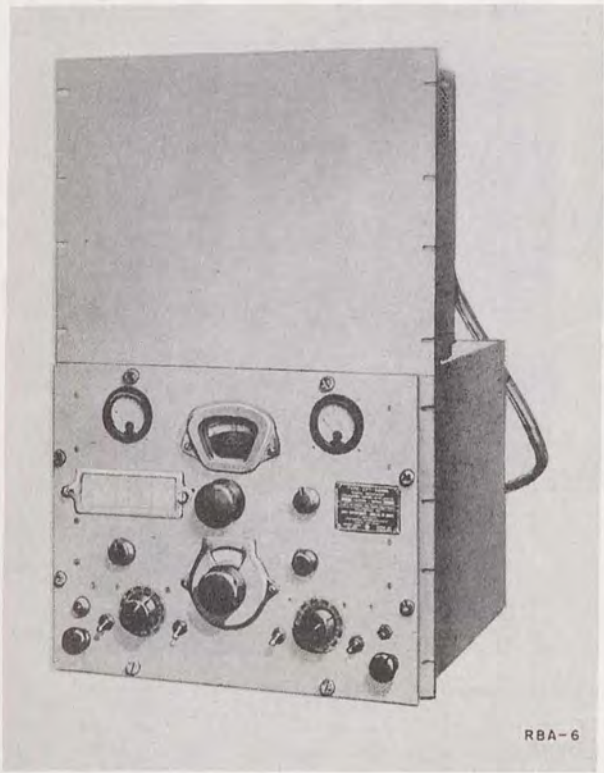
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Newark, N. J.	NOs-73055 NOs-91165 NXss-11780 NXss-16498 N5sr-17829 NOsr-39341	$3,000.00
Radio Corporation of America	Camden, N. J.	NObsr-43335	

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958
Cognizant Serv: USN FSN: 5820-642-8486 RBA-6

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RBA-6 is designed for use aboard vessels and for shore stations for the reception of cw or modulated or interrupted continuous wave radio signals in the frequency range of 14.5 to 600 kilocycles.

Provisions are included for operation of a number of receivers from a common antenna and transmission line, for simultaneous emergency operation of two receivers from a common power unit, and for automatic regulation of receiver output signal voltage as a function of load resistance, so that from one to twenty 600-ohm headphones may be connected across the output circuit with less than 40 per cent change in output voltage.

This equipment is designed for rack mounting and is electrically and mechanically interchangeable with the other models in the RBA series.

TECHNICAL CHARACTERISTICS:

Frequency Range: 14.5 to 600 kc
Power Output:
600 Ohm Load: 50 mw
30 Ohm Load: 500 mw
Impedance Data:
Output: 600 and 30 ohms
Input: Adjustable over a wide range
Type Modulation: Cw, mcw, voice
Sensitivity: 10 μv for 6 mw output on A1 operation
Power Requirements: 67 w (one receiver), 100 w (two receiver); 110/115/120-v 55-65-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Meter, audio level decibel; range −10 to +5 db	(USA) 3F3307.9-1 (FSN) 6625-220-9981		
1	Meter, voltmeter DC: 0-300 v	(USA) 3F8300-22 (FSN) 6625-196-8977		
1	Power Supply 20130-C	(USA) 3H4496.10-2 (FSN) 5820-231-0649		
1	Receiver 46300	(USA) 2C4027-1 (FSN) 5820-221-0161		
1	Rectifier Unit 20130-B			

AN/URR-type RADIO RECEIVING EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,708

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	28	365

PROCUREMENT DATA

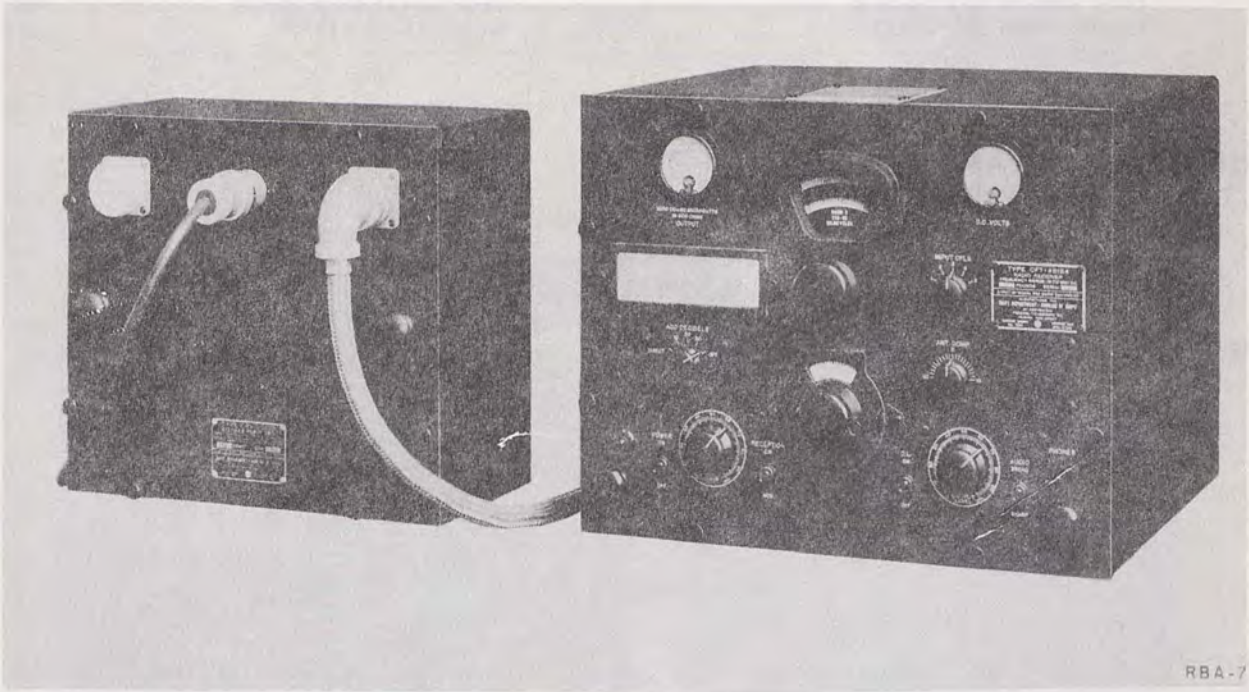
PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Newark, N. J.	NObsr–39341, 30 June 1947	$3,000.00
Radio Corporation of America	Camden, N. J.	NObsr–43335 15 June 1949	3,000.00

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958
Cognizant Serv: USN FSN: 5820-665-2204 RBA-7

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RBA–7 is an amplitude-modulated long-wave communications receiver designed for use aboard ship or land-based stations. The equipment is capable of receiving cw and mcw. Voice reception is possible but some distortion is present below .3 mc because of audio frequency filtering action and selectivity.

Automatic regulation of receiver output signal voltage (as a function of load resistance) permits from one to twenty 600-ohm headphones to be connected across the output circuit with less than 40 per cent change in output voltage.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Band 1: .015 to .038
Band 2: .038 to .095
Band 3: .095 to .235
Band 4: .235 to .600
Input Impedance: Adjustable over a wide range
Receiver Output: 500 mw into 30-ohm load; 50 mw into 600-ohm load
Reception, type: A1, A2, and A3
Sensitivity: 10 μv input for 6 mw (cw)
Power Requirements: 115 v, 55- to 65-cycle 1-phase ac

AN/URR-type RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Set Equipment Maintenance Parts	----------	9-3/16 x 13-1/4 x 25-3/4	70
1	Radio Receiver CFT–46154–B	----------	14-23/32 x 18-1/2 x 20-9/16	98
1	Rectifier Power Unit CBOG–20130–D	----------	9-3/4 x 13-1/2 x 15	52

REFERENCE DATA AND LITERATURE:

Technical Manual for Radio Receiver Equipment Model RBA–7.

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	13.4	270
1	3.1	92

PROCUREMENT DATA

PROCURING SERVICE: BuShips DESIGN COG: BuShips

SPEC &/or DWG:

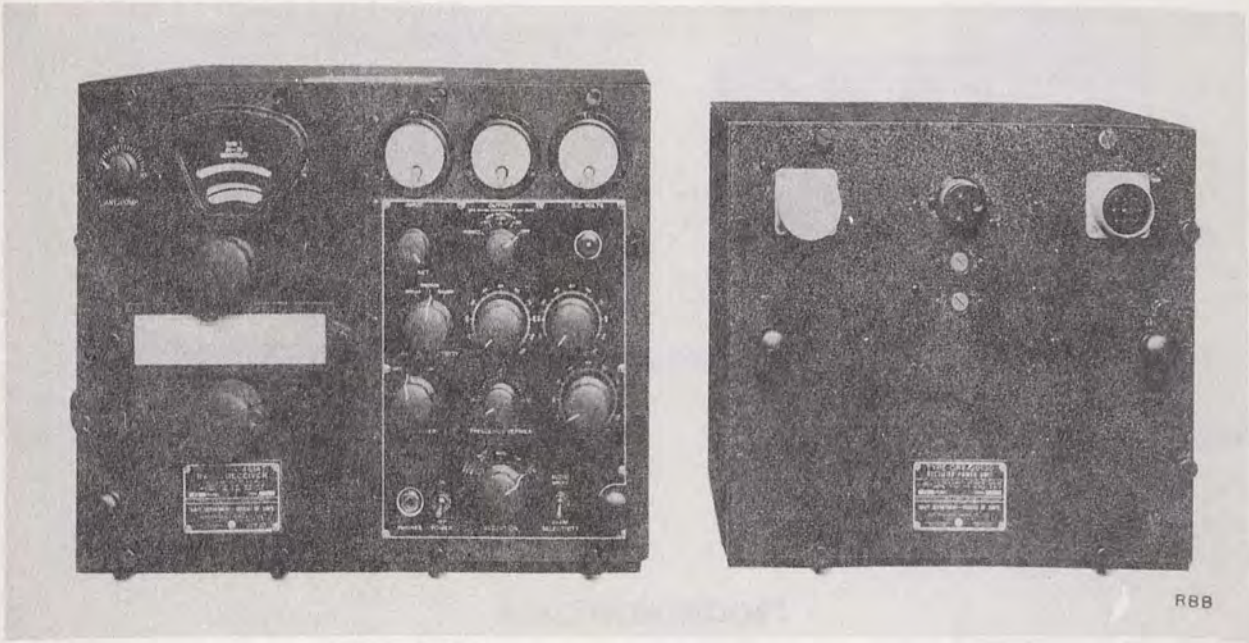
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Corp.	Clifton, N. J.	NObsr–52110 26 May 1952	$2,900.00

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958
Cognizant Serv: USN FSN: RBB: 5820–260–5319
RBB–1: 5820–644–3396
RBB–2: 5820–665–3720
RBB–3: 5820–501–3999
RBB–4: 5820–501–3994
RBB–5: 5820–665–2361
RBB–6: 5820–665–3713

RBB, RBB–1, –2, –2A, –3 thru –6

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



RBB

FUNCTIONAL DESCRIPTION:

The Radio Receiving Equipments RBB, RBB–1, –2, –2A, –3 through –6 are primarily designed for operation aboard ship and at shore stations. The equipments are designed for voice, mcw, and cw reception. More than one receiver can be operated on a single antenna system with little frequency separation, even when the antenna is adjacent to a transmitter antenna. These sets also have provisions for connecting a panoramic adapter or a frequency-shift converter unit.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.5 to 4

Type of Signal: Cw, mcw, voice
Type of Receiver: Superheterodyne
Power Output: 15 mw
Intermediate Frequency: 400 kc
Output Impedance: 600 ohms
Input Impedance:
Transmission line—70 ohms
Antenna—300 ohms at lowest frequency of band 1, up to 1500 ohms at high frequency end of band 4
Power Requirements:
RBB, RBB–1, –2, –3, –4, –5, –6: 100 w (one receiver), 160 w (two receiver); 110–120-v 55–65-cycle ac
RBB–2A: 115-v 400-cycle 1-phase ac

AN/URR-type RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBB, RBB–1, –2, –3, –4:			
1	Radio Receiver	46147	14-3/4 x 18-1/8 x 20-1/8	82
1	Rectifier Power Unit	20130	9-7/8 x 13-7/16 x 15	52
	For RBB–2A:			
1	Radio Receiver	47147(MOD)	14-3/4 x 18-1/8 x 20-1/8	82
1	Rectifier Power Unit	20130(MOD)	9-7/8 x 13-7/16 x 15	52
	For RBB–5:			
1	Radio Receiver	46147–D	14-11/16 x 18-1/8 x 20-7/8	85
1	Rectifier Power Unit	20130–B	9-1/2 x 13-7/16 x 15	55
	For RBB–6:			
1	Radio Receiver	46296–A	14-3/16 x 19 x 20-7/8	88
1	Rectifier Power Unit	20130–B	9-13/16 x 14 x 19	59

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,477; 91101, 91469, 91319

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	22.8	312

PROCUREMENT DATA

PROCURING SERVICE: USN **DESIGN COG:** BuShips

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division, Radio Corporation of America	Camden, N. J.	NOs–73056 NOs–91265 NXss–17001 NXsr–39262 NObsr–43335 NObsr–39340 NObsr–52028	$2,700.00

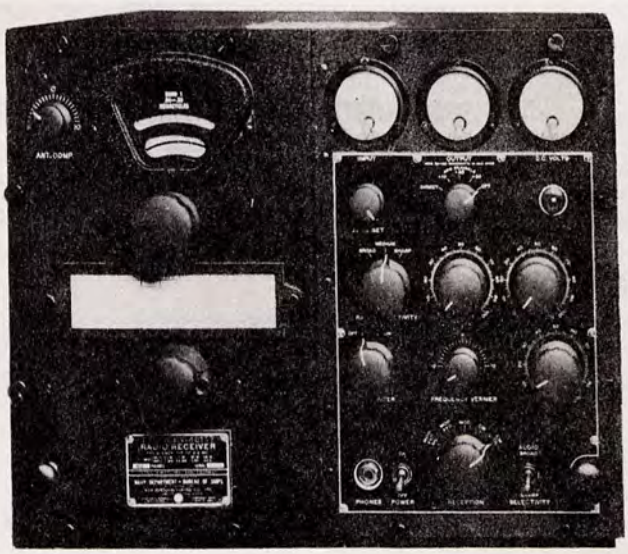
RADIO RECEIVING EQUIPMENT AN/URR-type

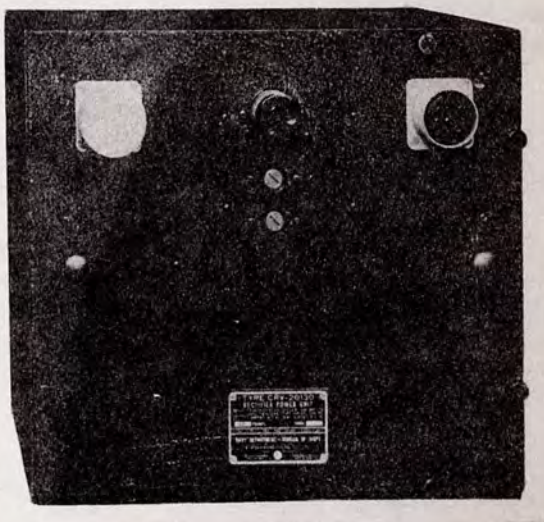
5 December 1958

Cognizant Serv: USN FSN: RBC: 5820-642-7832
RBC-1: 5810-665-2366
RBC-2: 5820-642-8395
RBC-3: 5820-665-2133
RBC-4: 5820-665-2367
RBC-5: 5820-665-2132
RBC-6: 5820-665-3827

RBC, RBC-1, -2, -3, -3a, -4, -5, -6

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--





RBC

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RBC, RBC-1, -2, -3, -3a, -4, -5, and -6 are general purpose, radiotelegraph, or radiotelephone receivers designed for operation aboard all types of naval vessels and at shore stations. More than one receiver can be operated on a single antenna system with little frequency separation when the antenna is adjacent to a transmitter antenna. These equipments have provisions for connecting a panoramic adapter or a frequency shift converter unit.

The RBC series may be used with Radio Receiving Equipment RBB series to provide continuous coverage in the 0.5 to 27 megacycle range.

The RBC series are electrically and mechanically interchangeable with the exception of mountings and RBC-3a which is modified to operate on 400 cycles instead of 55 to 65 cycles. RBC-4 and RBC-6 are for rack mounting; RBC-5 and RBC-6 include Panoramic Adapter Kit 10335 for coupling to Frequency Shift Converter CV-57/URR or Panoramic Adapter Units RBU and RBV.

An antenna and headset are used with Radio Receiving Equipments RBC, RBC-1, -2, -3, -3a, -4, -5, and -6. However, the antenna and headset are not supplied with the equipments.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 4 to 27
Band Data:
Band 1: 4 to 6.45 mc
Band 2: 6.45 to 10.30 mc
Band 3: 10.30 to 16.50 mc
Band 4: 16.50 to 27 mc
Intermediate Frequency: 400 kc
Reception: A1, A2, A3
Type Receiver: Superheterodyne
Type Modulation: AM

AN/URR-type RADIO RECEIVING EQUIPMENT

Type of Signal: Cw, icw, mcw, voice
Impedance Data:
Output: 600 ohms
Input:
Transmission Line: 70 ohms
Antenna: 300 ohms
Power Output: 15 mw

Power Requirements:
For RBC, RBC–1, –2, –3, –4, –5, –6:
One Receiver: 100 W, 96% pf; 110- to 120-v, 55- to 65-cycle, 1-phase ac
Two Receivers: 160 W, 97% pf; 110- to 120-v, 55- to 65-cycle, 1-phase ac
For RBC–3a: 115-v, 400-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBC, RBC–1, –2, –3, –3a, –4, –5, –6:			
1 set	Accessories			
1 set	Equipment spares			
	For RBC:			
1	Radio Receiver NT–46148		14-3/4 x 18-1/8 x 20-1/8	82
1	Rectifier Power Unit NT–20130		9-7/8 x 13-7/16 x 15	52
	For RBC–1:			
1	Radio Receiver NT–46148 or NT–46148–B		14-3/4 x 18-1/8 x 20-1/8	82
1	Rectifier Power Unit NT–20130		9-7/8 x 13-7/16 x 15	52
	For RBC–2:			
1	Radio Receiver NT–46148–B		14-3/4 x 18-1/8 x 20-1/8	82
1	Rectifier Power Unit NT–20130		9-7/8 x 13-7/16 x 15	52
	For RBC–3:			
1	Radio Receiver NT–46148–C		14-3/4 x 18-1/8 x 20-1/8	82
1	Rectifier Power Unit NT–20130–B		9-1/2 x 13-7/16 x 15	48
	For RBC–3a:			
1	Radio Receiver NT–46148–C (MOD)		14-3/4 x 18-1/8 x 20-1/8	82
1	Rectifier Power Unit NT–20130–B (MOD)		9-1/2 x 13-7/16 x 15	48
	For RBC–4:			
1	Radio Receiver NT–42697		14-11/16 x 18-1/8 x 20-7/8	82
1	Rectifier Power Unit NT–20130–B		9-1/2 x 13-7/16 x 15	48

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBC–5:			
1	Radio Receiver NT–46148–D	----------	14-11/16 x 18-1/8 x 20-7/8	82
1	Rectifier Power Unit NT–20130–B	----------	9-1/2 x 13-7/16 x 15	48
	For RBC–6:			
1	Radio Receiver NT–46297–A	----------	14-3/16 x 19 x 20-7/8	82
1	Rectifier Power Unit NT–20130–B	----------	9-1/2 x 13-7/16 x 15	48

REFERENCE DATA AND LITERATURE:

RBC, RBC–1, –2: NAVSHIPS 900,477
RBC–3, –4: NAVSHIPS 91101
RBC3a: NAVSHIPS 91319
RBC–5, –6: NAVSHIPS 91469

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For RBC, RBC–1, –2:		
2 Wood Box	22.8	305
2 Corrugated Carton:	18.3	261
For RBC–3, –3a, –4:		
2	18.3	261
For RBC–5:		
3	22.2	380
For RBC–6:		
3	25.1	382

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Div., Radio Corporation of America	Camden, N. J.	*For RBC:* NOs–73056, 12 April 1940	$2,400.00 with spares

AN/URR-type RADIO RECEIVING EQUIPMENT

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
		For RBC–1: NOs–91265, 2 September 1941 *For RBC–2:* NXss–17001, 17 June 1943 NXsr–39262, 3 November 1943 *For RBC–3:* NObsr–39151, 28 April 1947 *For RBC–3a:* NObsr–43335, 15 June 1949 *For RBC–4:* NObsr–39340, 30 June 1947 *For RBC–5, –6:* NObsr–52028, 25 September 1950	

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958
Cognizant Serv: USN FSN: RBJ, RBJ–1, –2, –3, –4

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RBJ, RBJ–1, –2, –3, and –4 are each complete radio receiving equipments suitable in all respects for use at Naval radio shore stations or aboard Naval vessels. The equipments are suitable for the reception of radiotelephone or radiotelegraph signals (cw or mcw) by either headphone or loudspeaker methods. The equipments are of the self-supported rack mounted type—the racks can be table mounted.

A loudspeaker or headphone and an antenna are used with, but not supplied with, Radio Receiving Equipments RBJ, RBJ–1, –2, –3, and –4.

TECHNICAL CHARACTERISTICS:

Frequency Range: 50 to 400 kc and 480 to 30,000 kc
Intermediate Frequency: 456 kc
Type of Receiver: Superheterodyne
Type of Reception: Cw or amplitude modulated mcw
Out Impedance:
Phones: 600 ohms
Loudspeaker: 5,000 ohms
Input Circuit: Single wire antenna or balanced feedline
Band Changing Method: Frequency range is covered by means of nine plug-in coil sets
Power Output:
Phones: 10 mw
Loudspeaker: 2 w
Power Requirements:
For RBJ, and RBJ–4: 220- to 240-v, 50- to 60-cycle, 1-phase ac
For RBJ–1, and 2: 110- to 120-v, 50- to 60-cycle, 1-phase ac; or, 180-v dc and 6-v dc
For RBJ–3: 220- to 240-v, 50- to 60-cycle, 1-phase ac; or 180-v dc, and 6-v dc; or 6.3-v dc, with Vibrator Power Supply NT–20146

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBJ, RBJ–1, –2, –3, and –4:			
1	Blank panel (7 in.)			
1	Coil Set 47163	----------	2-7/16 x 5-3/8 x 10-3/8	
1	Coil Set 47164	----------	2-7/16 x 5-3/8 x 10-3/8	
1	Coil Set 47165	----------	2-7/16 x 5-3/8 x 10-3/8	
1	Coil Set 47166	----------	2-7/16 x 5-3/8 x 10-3/8	
1	Coil Set 47167	----------	2-7/16 x 5-3/8 x 10-3/8	
1	Coil Set 47168	----------	2-7/16 x 5-3/8 x 10-3/8	
1	Coil Set 47169	----------	2-7/16 x 5-3/8 x 10-3/8	
1	Coil Set 47181	----------	2-7/16 x 5-3/8 x 10-3/8	
1	Coil Set 47182	----------	2-7/16 x 5-3/8 x 10-3/8	
1	Coil System Container 10075	----------	11-5/8 x 14 x 19	
1	Mounting Rack 10036	----------	12-3/8 x 20-1/2 x 39-1/2	
1	Radio Receiver 46081	----------	8-3/4 x 10-1/4 x 19	
	For RBJ, and RBJ–4:			
1	Power Unit 20125	----------	5-1/4 x 9-3/4 x 19	

AN/URR-type RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBJ–1, and –2:			
1	Power Unit 20090		5-1/4 x 9-3/4 x 19	
	For RBJ–3:			
1	Power Unit 20125		5-1/4 x 9-3/4 x 19	
1	Vibrator Power Unit 20146 (for each two equipments)			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For RBJ–3: General Electric Supply Corp.	Washington, D. C.	11–N140s–98876, 6 March 1942	
For RBJ–4: National Company, Inc.	Malden, Mass.	NXs–11–8604, 1 October 1942	

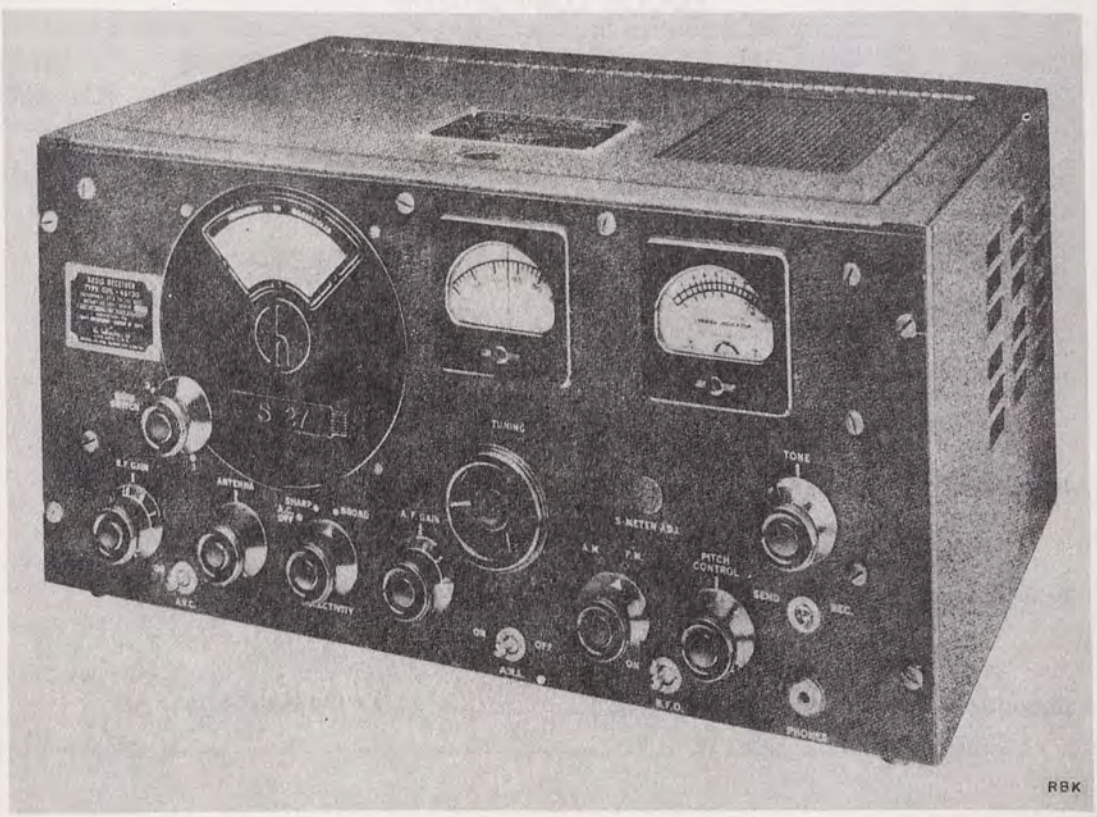
RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958

Cognizant Serv: USN FSN: RBK-1: 5820-665-2377
RBK-5: 5820-665-1683
RBK-7: 5820-665-2052
RBK-9: 5820-665-1688
RBK-12: 5820-665-3714
RBK-14: 5820-644-3423

RBK, RBK-1, -5, -7, -8, -9, -12, -13, -14

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	RBK: F16-M-83-261	--
		RBK-1: F16-Q-250581-200	
		RBK-5: F16-Q-250585-200	
		RBK-7: F16-Q-250597-200	
		RBK-8: F16-Q-250589-200	
		RBK-9: F16-Q-250591-200	
		RBK-12: F16-Q-250700-200	
		RBK-13: F16-Q-250720-200	
		RBK-14: F16-Q-250740-200	



RBK

AN/URR-type RADIO RECEIVING EQUIPMENT

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RBK, RBK–1, –5, –7, –8, –9, –12, –13, and –14 are superheterodyne very high frequency communication receivers designed for the reception of signals within the frequency range from 27.8 to 143 megacycles.

Panoramic Radio Adaptor RBW can be used with RBK to RBK–13, and Dual Panoramic Adaptor Equipment REM with RBK–14.

The RBK, RBK–1 and –9 are identical to Hallicrafters Model S–27D receivers. RBK–5, –7, and –8 are similar to Hallicrafters Model S–27D. Facilities are provided for connection to a panoramic adaptor, and a different power transformer allows operation from either 115- or 230-volts alternating current.

The RBK–12 and –13 are similar to earlier models except that they have hermetically sealed transformers and chokes and permeability- tuned intermediate frequency transformers. The RBK–14 is similar to RBK–12 and –13, except for the addition of a blanking circuit to operate with a dual display panoramic adaptor.

The following equipment is used with, but not supplied with, Radio Receiving Equipments RBK, RBK–1, –5, –7, –8, –9, –12, –13, and –14: A receiving antenna, 600-ohm headset or a 500-ohm or 5,000-ohm loudspeaker.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.8 to 143.0, in three bands
- Band 1: 27.8 to 46.0
- Band 2: 46 to 82
- Band 3: 82 to 143

Type of Reception: A1, A2, A3, F3

FM Bandpass: ±75 kc

Sensitivity:
- AM: 7 μv input for 100 db signal to noise ratio
- FM: 20 μv input for 20 db reduction of hiss level

Output Impedance: 500 ohms, 600 ohms balanced, 5,000 ohms

Antenna Requirements: 50 to 100 ft, single wire; half wave double or multiple dipole

Mounting Data: The chassis and panel assembly are housed in a metal cabinet with a hinged lid and rubber feet for table top use. If desired, the receiver may be installed in a standard relay rack.

Power Output: 3 w at less than 5% distortion

Power Requirements: 115 w; 115- to 230-v, 50- to 60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBK, RBK–1, –5, –7, –8, –9, –12, –13, –14:			
1 set	Equipment spare parts	----------	12-3/4 x 15 x 20-1/2	88
	For RBK, RBK–1, –9:			
1	Radio Receiver CHL–46130			
	For RBK–5, –7, –8:			
1	Radio Receiver CHL–46130–A			
	For RBK–12, –13:			
1	Radio Receiver CHL–46130–C	----------	9-5/16 x 19-1/8 x 15-13/16	63
	For RBK–14:			
1	Radio Receiver CHL–46130–D	----------	9-1/2 x 19-1/8 x 15-5/16	63

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95244
RBK–9: NAVSHIGS 95245
RBK–12, –13, –14: NAVSHIPS 900,235

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For RBK–12, –13, –14:		
1	6.7	228

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	*For RBK:* NOs–87293, 16 June *For RBK–1:* NXs–3265, 20 April 1942 *For RBK–5:* NXs–9513, 9 July 1942 *For RBK–7:* NXss–21514 *For RBK–8:* NXss–28816 *For RBK–9:* NXss–32842 *For RBK–12:* NXsr–39265, 10 June 1944 *For RBK–13:* NXsr–56768, 2 February 1945 NXsr–67988, 10 June 1944 *For RBK–14:* NXsr–39265, 30 June 1944 NXsr–85032, 30 December 1944	

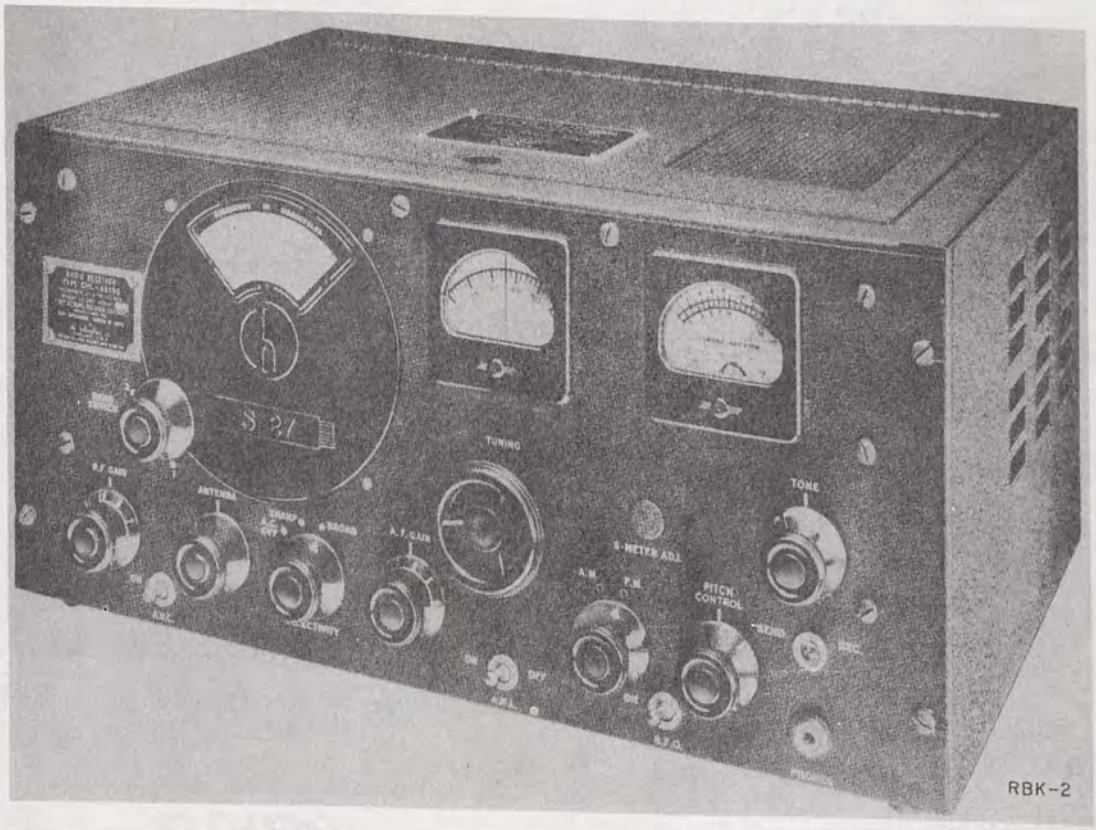
5 December 1958

RADIO RECEIVING EQUIPMENT **AN/URR-type**

Cognizant Serv: USN FSN: RBK–11: 5820–665–1686

RBK–2, –11

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	*RBK–2:* F16–Q–250582–200	--
		RBK–11: F16–Q–250590–200	



RBK–2

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RBK–2 and –11 are superheterodyne receivers designed to receive amplitude modulated or frequency modulated radiotelephone and radiotelegraph signals. Receiver disabling is provided by means of a "Send-Receive" switch located on the front panel, and a special socket for connection to the control circuit of the associated transmitter.

An antenna and headset are used with, but not supplied with, Radio Receiving Equipments RBK–2 and –11.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.8 to 143.0
Type Receiver: Superheterodyne
Type of Reception: A1, A2, A3, and F1, F2, F3
Audio Response: Within ±3 db, 40 to 10,000 cps
Audio Output: 3 w into 500, 600, or 5,000 ohms
Features: BFO, AVC
Power Requirements: 80 w; 117-v, 50- to 60-cycle, 1-phase ac

AN/URR-type RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBK–2:			
1	Loudspeaker CHL–49172	----------	10-7/8 x 16 x 11	20
1	Radio Receiver CHL–46162	----------	9-3/8 x 19-1/8 x 14-3/16	63
	For RBK–11:			
1	Radio Receiver CHL–46241	----------	9-5/16 x 19-1/8 x 15-13/16	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95244
NAVSHIPS 95245

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

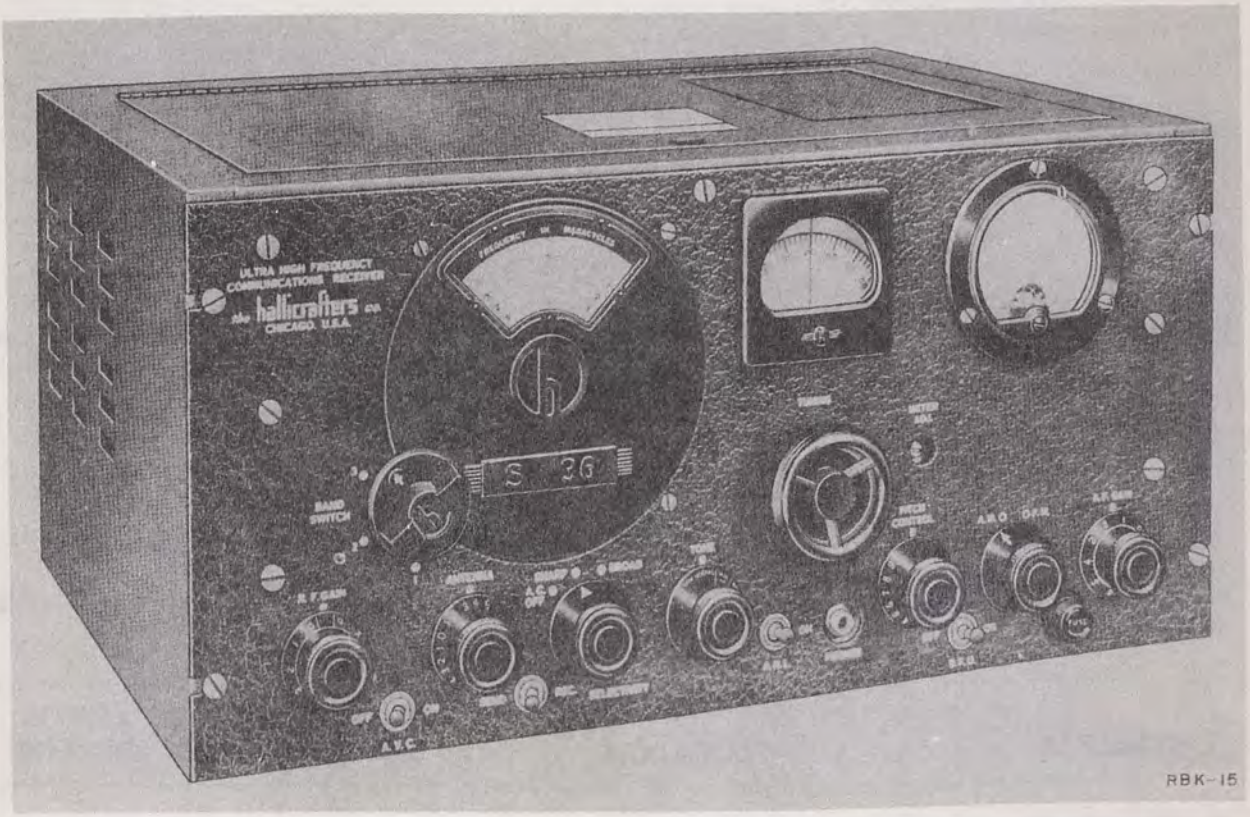
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	*RBK–11:* NXsr–47385	

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958
Cognizant Serv: USN FSN: 5820-644-0920 RBK-15

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RBK–15 consists of a very high frequency receiver mounted in a sheet-steel, table mounted cabinet. The receiver is entirely self-contained except for headset or speaker, panoramic adapter, and 115- or 230-volt source.

The receiver is capable of receiving both amplitude modulated and frequency modulated phone signals and continuous wave telegraph signals. Automatic volume control and automatic noise limiter circuits are incorporated.

The following equipment is used with, but is not supplied with, Radio Receiving Equipment RBK–15: headset, speaker, or panoramic adapter; single wire or doublet antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.8 to 143 in three bands
Intermediate Frequency: 5.25 mc
Type of Reception: AM or FM, cw or voice
Output Impedance: Variable, 500, 600, or 5,000 ohms
Tuning Indicator: Meter calibrated in "S" units, 160–0–40 microamperes movement
Antenna: Single wire or doublet
Type of Operation: Local or remote
Cw Audio Frequency: Set at 1,000 cps
Power Requirements: 115- or 230-v, 50- to 60-cycle, 1-phase ac; or 4.5 amp, 6-v, dc; or 145 ma, 270-v dc

AN/URR-type RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiving Equipment RBK–15 consists of:			
1	UHF Radio Receiver NT–46298			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

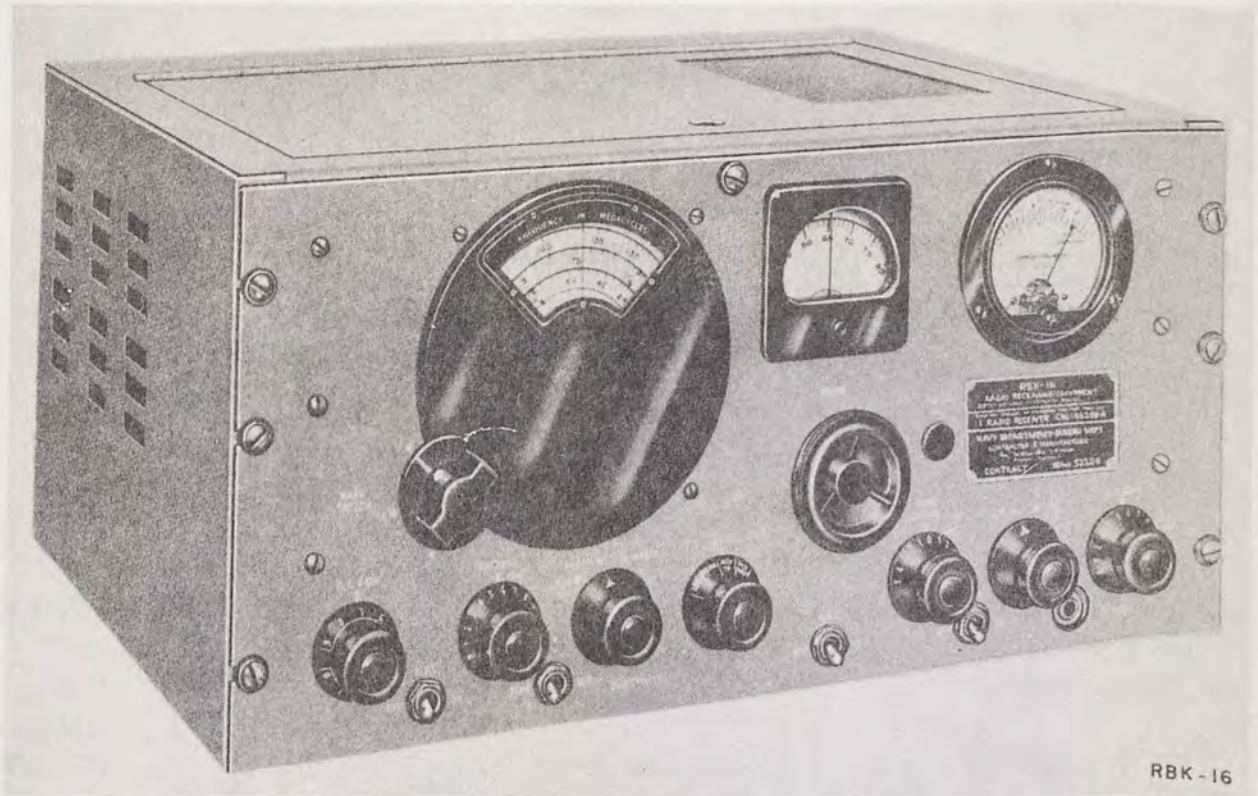
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	NObsr–39304	$750.00 with spares

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958
Cognizant Serv: USN FSN: 5820-665-1976 RBK-16

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--



RBK-16

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RBK–16 is intended primarily for use on ships and other stations as a very high frequency receiver. It is conventional in design but incorporates two features not found in most receivers: a radio frequency amplifier used as a radiation suppressor and a receptacle for connecting a panoramic adaptor.

The receiver is designed for satisfactory operation under extreme conditions of temperature, humidity, and vibration often encountered in marine service. It is especially treated to resist the attack of fungus which may be encountered in tropical areas. An outisde case (dust cover) is provided with each receiver so that it can be mounted on a desk or table. The receiver is self-contained, except for speaker or headset, the antenna, and the receiver connection to an external power source. An automatic noise limiter is provided for the reduction of impulse noise such as that caused by man-made interference.

The following equipment is used with, but is not supplied with Radio Receiving Equipment RBK–16: headphones or loudspeaker, and antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.8 to 143
Band 1: 27.8 to 47
Band 2: 47 to 82
Band 3: 82 to 143
Intermediate Frequency: 5.25 mc
Frequency Control: Local self-excited oscillator
Receiver Type: Superheterodyne
Audio Output: 3 w
Distortion: Less than 5%
Reception: AM, FM, and cw
Impedance:
Output: 500 and 600 ohms
Input (Antenna): 50 ohms
Power Requirements: 115 w; 115- or 230-v, 50- to 60-cycle, 1-phase ac; or 4.5 amp, 6-v dc; or 145 ma, 270-v dc

AN/URR-type RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiving Equipment RBK–16	----------	9-5/16 x 15-3/4 x 19-1/8	78
1 set	Spare parts			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91616

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	10.1	200

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

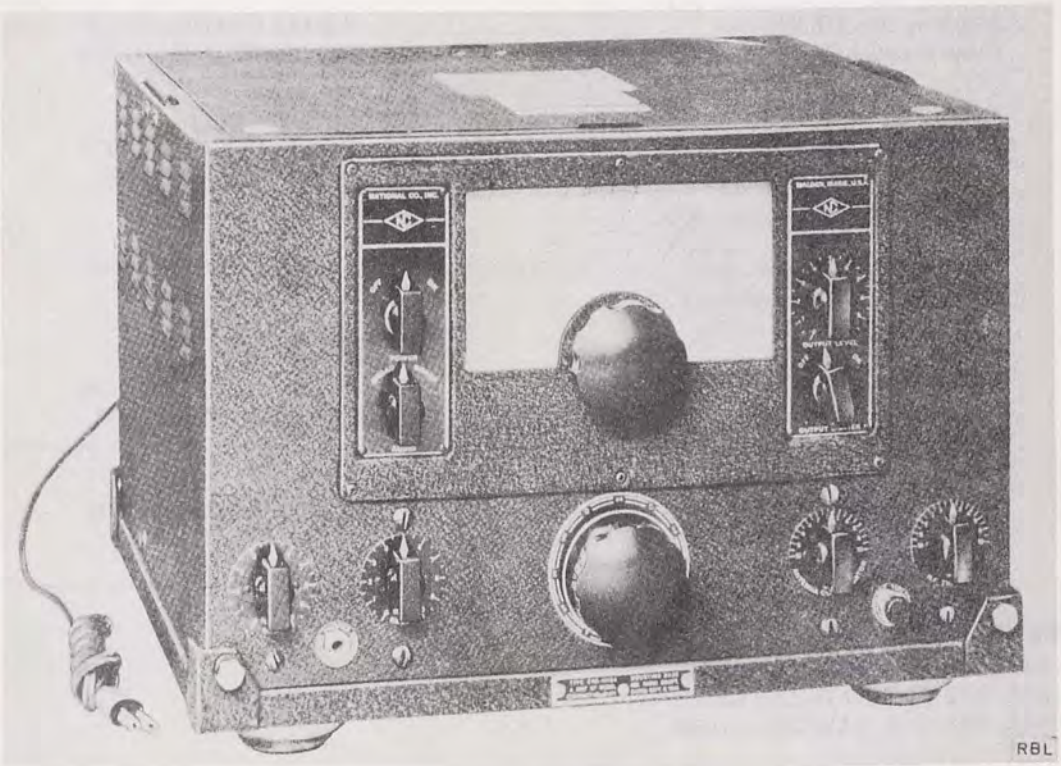
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Hallicrafters Co.	Chicago, Ill.	NObsr–52200, 6 January 1951	$750.00 with spares

5 December 1958
Cognizant Serv: USN FSN: RBL–1: 5820–644–3387
RBL–2: 5820–665–1680
RBL–5: 5820–665–2026
RBL–6: 5820–665–2025

RBL, RBL–1, –2, –3, –4, –5, –6

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	RBL–1: F16–Q–251441–200	--
		RBL–2: F16–Q–251442–200	
		RBL–3: F16–Q–251460–200	
		RBL–4: F16–Q–251480–200	
		RBL–5: F16–Q–251500–200	
		RBL–6: F16–Q–251520–200	



RBL

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipments RBL, RBL–1, –2, –3, –4, –5, and –6 are tuned radio frequency receivers operating in the frequency range of 15 to 600 kilocycles. The receivers are used at either shore stations or on Naval vesse.s. They are designed for low radiation and are considered safe for use in combat areas.

The RBL series are electrically and mechanically interchangeable with the exception of the power transformer used in the RBL–4 which is for 115– or 230-volts, alternating current.

TECHNICAL CHARACTERISTICS:

Frequency Range: 15 to 600 kc in six bands
Type Reception: A1 and A2

AN/URR-type RADIO RECEIVING EQUIPMENT

Power Output: 300 mw undistorted power into a 600-ohm load
Impedance:
Input: Antenna capacitance can vary from 150 μμf to 2,000 μμf. Receiver includes a variable compensator control
Output: 600 ohms
A1 Sensitivity:
Sharp: 5 μv input for 6 mw
Broad: 10 μv input for 6 mw
Audio Fidelity:
Sharp: 500 cps band-pass at 20 db down, peak response at 750 cps
Broad: 3,500 cps band-pass at 20 db down, peak response at 1,500 cps
Mounting Data: Receiver is provided with shock-proof mounting base for table mounting only.
Power Requirements:
Built-in Rectifier Power:
Supply: 45 w; 115-v, 50- to 60-cycle, 1-phase ac
Emergency Operation: 6-v heater battery, and 135-v B battery

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBL, RBL-1, -2:			
1	Mounting Base CNA-10124		2-9/16 x 17-21/32 x 16-5/16	6
1	Radio Receiver CNA-46161		12-5/16 x 17-11/16 x 17-1/4	75
	For RBL-3:			
1	Mounting Base CWQ-10124-A		2-9/16 x 17-17/32 x 16-5/16	6
1	Radio Receiver CWQ-46161-A		10-1/2 x 17-5/16 x 17-5/8	79
	For RBL-4:			
1	Mounting Base CWQ-10124-A		2-9/16 x 17-17/32 x 16-5/16	6
1	Radio Receiver CWQ-46230		12-5/16 x 17-5/16 x 17-5/8	79
	For RBL-5:			
1	Mounting Base CNA-10124		2-9/16 x 17-21/32 x 16-5/16	6
1	Radio Receiver CNA-46161B		12-5/16 x 17-5/8 x 18-1/16	81
	For RBL-6:			
1	Mounting Base CNA-10124		2-9/16 x 17-21/32 x 16-5/16	6
1	Radio Receiver CNA-46235		12-7/16 x 19 x 17-7/8	104

REFERENCE DATA AND LITERATURE:

For RBL, RBL-1, -2: NAVSHIPS 900,353
For RBL, RBL-3, -4: NAVSHIPS 900,292
For RBL, RBL-5, -6: NAVSHIPS 900,350

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1		

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.	Malden, Mass.	*For RBL:* NOs–91741, 8 September 1941 *For RBL–1:* NXs–456, 10 March 1942 *For RBL–2:* NXs–4683, 30 April 1942 *For RBL–3:* NXss–21446, 11 January 1943 *For RBL–4:* NXsr–38492, 24 September 1943 *For RBL–5:* NXsr–38306, 22 September 1943 *For RBL–6:* NXsr–38306, 22 September 1943	$2,420.00 with spares
Wells-Gardner Co.	Chicago, Ill.	NXsr–55614, 5 April 1944	

RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958
Cognizant Serv: USN FSN: RBO: 5820-669-7046
RBO-1: 5820-642-8446
RBO-2: 5820-636-4746
RBO-3: 5820-644-3400
RBO-4: 5820-642-8249

RBO, RBO-1, -2, -2a, -3, -4

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



RBO

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RBO, RBO-1, -2, -2a, -3, and -4 are superheterodyne receivers for entertainment use aboard ships and for shore installations. The RBO-series is specifically designed to provide optimum performance and high quality reception of voice or tone modulated signals on all frequency bands covered. Provision is made for headphone or loudspeaker reception. The equipment is designed to minimize radiation from the high frequency oscillator and is considered safe for use in combat areas.

The RBO, RBO-1, -2, -3, and -4 are identical except for minor component differences, the addition of a noise limiter in the RBO-1 and -2, and other minor circuit modifications. The RBO-2a is the RBO-2 modified for operation from a different power source than the other models.

The following equipment is used with, but is not supplied with, Radio Receiving Equipments RBO, RBO-1, -2, -2a, -3, and -4: 600 ohm headphones or loudspeaker with coupling transformer to match 600 or 5,000 ohms, power cord, and antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: Three bands
Band 1: 0.53 to 1.60
Band 2: 5.55 to 9.55
Band 3: 9.2 to 15.6

AN/URR-type RADIO RECEIVING EQUIPMENT

Type Reception: A2 and A3
Impedance:
Input: Antenna input circuit includes a 2-position switch for operation of the receiver with a long or short, single-wire antenna
Output:
For RBO: 600 and 5,000 ohms
For RBO–1, –2, –2a, –3: 600 and 60, 600 or 5,000 ohms (late RBO–3's have balanced output)
For RBO–4: 600 to 30 ohms (variable), and 600 ohms balanced or unbalanced.

Sensitivity: 12 μv
Signal to Noise Ratio: 20 db
Antenna Input: Concentric antenna jack 49120 mounted at rear of receiver for RF connection
Mounting: Rack or shock mounting to table or bench at shore installations; shock mounting aboard ship
Power Output: 30 mw into 600 ohm load; 2 w maximum undistorted power into 600 ohm or 5,000 ohm load
Power Requirements:
For RBO, RBO–1, –2, –3, –4: 85 w; 115-v, 600-cycle, 1-phase ac
For RBO–2a: 85 w; 115-v, 400-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RBO–1:			
1	Radio Receiver NT–46139 or NT–46224	----------	13-3/4 x 18-1/2 x 20-1/2	103
	For RBO–2:			
1	Radio Receiver NT–46225	----------	13-3/4 x 18-1/2 x 20-1/2	104
	For RBO–3:			
1	Radio Receiver NT–46225–A	----------	13-3/4 x 18-1/2 x 20-1/2	104
	For RBO–4:			
1	Radio Receiver NT–46279	----------	13-3/4 x 18-1/2 x 20-1/2	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95247
For RBO–2: NAVSHIPS 95259(A)
NAVSHIPS 95248
NAVSHIPS 95249
For RBO–2a: NAVSHIPS 91290
For RBO–3: NAVSHIPS 95249(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1		

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

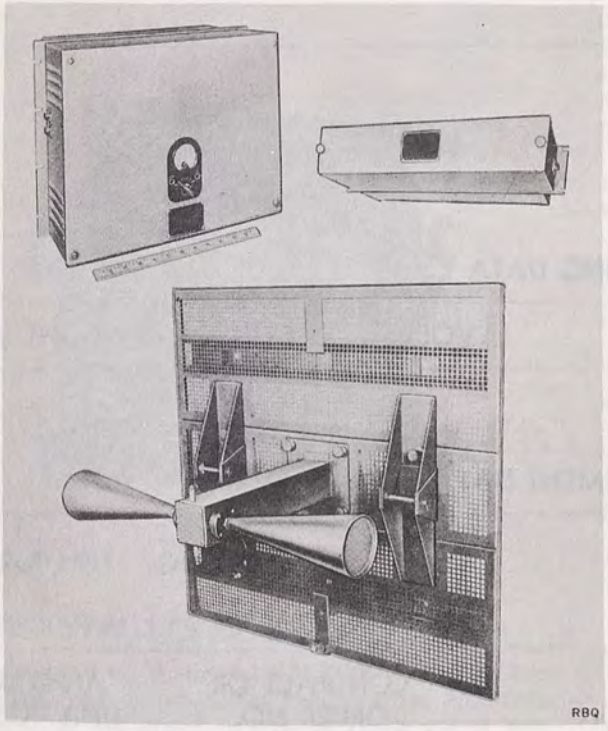
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
E. H. Scott Radio Labs, Inc.	Chicago, Ill.	*For RBO:* NOs–99260, 18 March 1952 *For RBO–1:* NXss–20313 *For RBO–2, –3:* NXsr–38078 *For RBO–2a:* NObsr–43407 *For RBO–4:* NXsr–95080	$800.00 with spares

HIGH FREQUENCY RADIO RECEIVING EQUIPMENT AN/URR-type

5 December 1958
Cognizant Serv: USN FSN: 5820-642-7793 RBQ

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

High Frequency Radio Receiving Equipment is a radio receiving equipment used in ultra-high frequency radio link. The equipment is suitable for reception or single channel voice, multichannel voice carrier telegraph, or multichannel voice carrier telegraph and two channel voice carrier telephone signals.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 132 to 156
Frequency Control: Crystal
Type of Reception: A2, A3
Power Requirements: 115-v 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna D-150423			
1	Antenna D-150427			
1	Antenna Outfit D-150426			
1	Cable Outfit D-150418			
1	Indoor Cabinet X-6360BA List 1	----------	17 x 26-1/2 x 84	
1	Outdoor Cabinet D-150426	----------	18 x 32 x 64-1/2	
1	Radio-Frequency Panel D-151285			
	or			
1	Radio-Frequency Panel D-150966			

AN/URR-type RADIO RECEIVING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Accessories kit		3-1/2 x 5-1/2 x 7-1/2	
1	Antenna adapter assembly (for RBS–2 and –2a)			
1 set	Equipment spares		9-3/4 x 16-1/4 x 19-1/8	
1	Mounting Rack Assembly 10227 (for RBS, RBS–1)		11-3/4 x 17-3/4 x 19	
1	Radio Receiver 46217 (for RBS, RBS–1)		9-3/4 x 12-1/2 x 17	32
1	Radio Receiver 46217A (for RBS–2, –2a)		10 x 14-1/2 x 17	43
1	Rectifier Power-Amplifier Unit 20234A (for RBS and RBS–1 with serial Nos. 1157 and above)		10-3/4 x 11 x 14	
1	Rectifier Power-Amplifier Unit 20235 (for RBS and RBS–1 with serial Nos. 1 through 1156)		10-3/4 x 11 x 14	
1	Rectifier Unit 20235B (for RBS–2, –2a)		10-3/4 x 11-1/4 x 16	56
1	Splashproof Cabinet		11-1/2 x 16-7/8 x 20-1/2	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,324
NAVSHIPS 91353

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For RBS:		
1	19.5	333
For RBS–1:		
1	19.5	360
For RBS–2, –2a:		
3	11.12	301

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Maryland Electronic Manufacturing Corp.	College Park, Md.	(RBS–2a)	$1,000 with equipment spares
Stromberg-Carlson Co.	Rochester, N. Y.	NXs–12481, 27 August 1942 (RBS)	$1,000 with equipment spares
		NXsr–33641, 30 June 1943 (RBS–1, RBS–2)	$1,000 with equipment spares
		NObsr–49085, 3 April 1950	$1,000 with equipment spares
		NObsr–52687, 26 June 1951	$1,000 with equipment spares

RADIO RECEIVING EQUIPMENT AN/URR-type

3 December 1958
Cognizant Serv: USN FSN:

RBS–3

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RBS–3 is a general-purpose, high-frequency radio receiving equipment designed for use aboard ship or at shore stations. It will receive a continuous range of frequencies from 2 to 20 megacycles in four calibrated channels. A beat-frequency oscillator is incorporated to permit satisfactory reception of continuous-wave signals. The RBS–3 can communicate with any radio transmitter operating within the same frequency ranges.

The equipment consists of a radio receiver with a separate rectifier power-amplifier unit. It is ruggedly constructed and designed for table mounting.

Additional equipment required for the operation of the radio receiving equipment are Headphones 49016, a loudspeaker, Speaker Cable NT–DHFA–3, Power Cable NT–MCOS–2, and an antenna.

The RBS–3 is similar to the RBS, RBS–1, and RBS–2 with the exception of minor differences in components and mounting facilities.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 20
Number of Channels: 4
Band 1: 2 to 3.6 mc
Band 2: 3.6 to 6.5 mc
Band 3: 6.5 to 11.4 mc
Band 4: 11.4 to 20 mc
Type Receiver: Superheterodyne
Type Signal: AM
Type Reception: Cw, mcw, voice
Sensitivity: Below 8 μv on all bands with a signal-to-noise ratio of 10 to 1 on cw and 3.2 to 1 on mcw
Power Output:
Phonejack: 150 mw
Speaker Receptacle: 8 w
Output Impedance: 600 ohms
Antenna Requirements: Any antenna having a capacitance of 80 to 500 $\mu\mu$f
Power Requirements: 120 w, 115-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Accessories kit			
1	Equipment spare parts box (Type M), including:			
1 set	Spare parts			
1	Radio Receiver R–303/FRR, including:			
1	Antenna Connection Adapter Assembly E–521 or 49120			
1	Mounting Plate A–505			
1	Rectifier power-amplifier unit, including:			
1	Mounting Plate A–901			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91944

AN/URR-type RADIO RECEIVING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	8.33	235

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Z and W Machine Products, Inc.	Cleveland, Ohio	NObsr–43286, 16 July 1953	$400 with equipment spares

RADIO RECEIVING EQUIPMENT AN/URR-type

Cognizant Serv: USN FSN: RCE-2

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Equipment RCE–2 is a single-frequency superheterodyne communications receiver for service in the 2- to 30-megacycle frequency range. It permits the reception of amplitude-modulated phone, modulated-continuous wave, or unmodulated-continuous-wave radio-frequency signals.

Front panel controls provide selection of crystal filter operation and automatic volume control. An "S" meter serves to indicate the strength of a received signal. Four plug-in coil assemblies, each consisting of three RF and one oscillator coil, are provided to cover the frequency range.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20 to 30 in four bands by means of four coil sets

Band Data: 2 to 4 mc; 4 to 7 mc; 7 to 14 mc ;14 to 30 mc

Sensitivity: 1 μv to deliver 2-w output wkth a 7000-ohm load

Selectivity:

Crystal Filter Off: Ratio 2, bandwidth 3 kc; ratio 10, bandwidth 7.5 kc; ratio 100, bandwidth 14 kc; ratio 1,000, bandwidth 21.5 kc

Crystal Filter In: 200-cycle bandwidth maximum selectivity, 2.5-kc bandwidth minimum selectivity

CW, Noise Equivalent: 0.2 μv

Signal-to-Noise Ratio: 16 db at 5 μv

Input Impedance: 500 ohms (average) at antenna terminals

Undistorted Power Output: 1.5 w (maximum)

Automatic Volume Control Characteristic: Flat within $\pm$10 db between 1.0 and 100,000 μv

Power Requirements: 230-v 50/60-cycle 1-phase ac

MAJOR COMPONENT

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Coil Set 47166–S (2 to 4 mc)			
1	Coil Set 47167–S (4 to 7 mc)			
1	Coil Set 47168–S (7 to 14 mc)			
1	Coil Set 47169–S (14 to 30 mc)			
1	Radio Receiver 46198			
1	Rectifier Power Unit 20180			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95255

AN/URR-type RADIO RECEIVING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

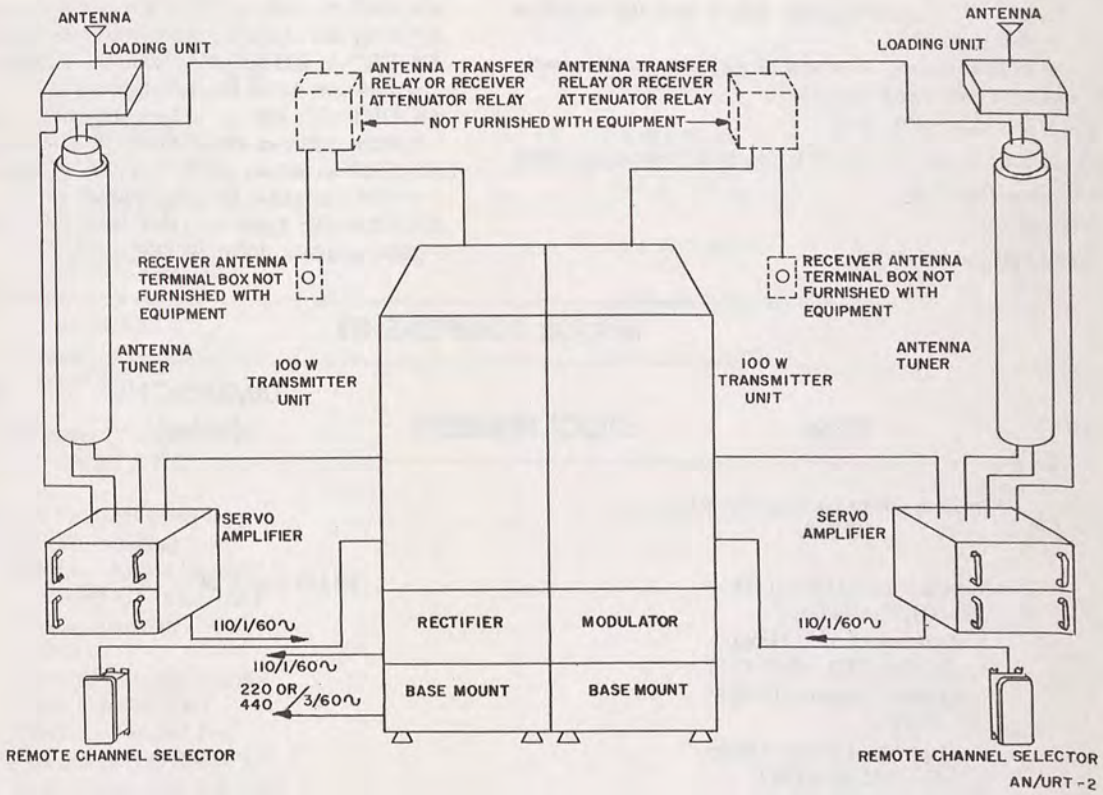
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
National Co., Inc.	Malden, Mass.	N40's–13791A, 29 December 1942	

RADIO TRANSMITTING SETS AN/URT-2, -2X, -3, -3X, -4, -4X

3 December 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	AN/URT-2: F16-Q-123896-200 AN/URT-3: F16-Q-123897-200 AN/URT-4: F16-Q-123395-100	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Sets AN/URT-2, AN/URT-2X, AN/URT-3, AN/URT-3X, AN/URT-4, and AN/URT-4X are medium-frequency and high-frequency units designed for shipboard installation and ship-to-shore use. They operate in conjunction with such receivers as Radio Receiving Equipments RBA, RBB, and RBC and the shipboard remote control system.

These equipments provide two frequency bands, 300 kilocycles to 26 megacycles and 2 megacycles to 26 megacycles, with higher power output on the latter. The AN/URT-4 consists of the AN/URT-2 and the AN/URT-3, both of which may be operated simultaneously. The AN/URT-2 may be used as a replacement for Radio Transmitting Equipment TBL, TDE, or TCZ; the AN/URT-3 may replace Radio Transmitting Equipment TBA, TBK, TBM, or TCK. The AN/URT-2X, -3X, and -4X are identical with the AN/ART-2, -3, -4 respectively, except that these latter sets may require a 400-cycle alternating current power supply.

The transmitters are designed for use with either a 35-foot whip antenna or an L-type wire antenna.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
100 Watts: 0.3 to 26
500 Watts: 2 to 26
Tuning Bands in Mc:
Band 1: 0.3 to 0.8
Band 2: 0.8 to 2
Band 3: 2 to 5
Band 4: 5 to 11
Band 5: 11 to 19
Band 6: 19 to 26

AN/URT-2, -2X, -3, -3X, -4, -4X RADIO TRANSMITTING SETS

Number of Preset Frequencies:
AN/URT–2, –2X, –3, –3X: 10
AN/URT–4, –4X: 20
Nominal Carrier Output in Watts:
AN/URT–2, –2X:
A1, F1, F4 Type Emission: 100 w
A3 Type Emission: 67 w
AN/URT–3, –3X:
A1, F1, F4 Type Emission: 100 w, 500 w
A3 Type Emission: 67 w, 333 w
AN/URT–4, –4X:
A1, F1, F4 Type Emission: 100 w and 100 w/500 w simultaneously
A3 Type Emission: 67 w and 67 w/333 w simultaneously
Channels: 10 preset and manual
Type Modulation: AM, FM
Type Emission: A1, F1, A3, F4 (cw, mcw, icw, tone, voice)
Modulation Capability:
A1: 100%
F1: 1,000-cps total shift
A3: 100%
F4: From 0- to +2,000-cps shift
Frequency Control: Crystal oscillator; frequency-shift oscillator
Squelch Circuit: Conventional circuit; cuts off audio amplifier in absence of audio frequency input signal
Harmonic Attenuation (RF Amplifier): 40 db below carrier level from 0.3 mc to 2 mc; 50 db below carrier level from 0 mc to 5 mc; 60 db below carrier level above 5 mc
Automatic Tuning Time: 30 to 90 sec
Power Requirements:
AN/URT–2: 1,000 w; 115-v, 60-cycle 1-phase ac
AN/URT–2X: 1,000 w; 115-v, 400 cycle, 1-phase ac
AN/URT–3: 800 w; 115-v, 60-cycle, 1-phase ac: or 1,800 w; 200-v or 440-v, 60-cycle, 3-phase ac
AN/URT–3X: 800 w; 115-v; 400-cycle, 1-phase ac: or 1,800 w, 220-v or 440-v, 400-cycle, 3-phase ac
AN/URT–4: 800-w; 115-v, 60-cycle, 1-phase ac: or 1,800 w; 220-v or 440-v, 60-cycle, 3-phase ac
AN/URT–4X: 1,800 w; 115-v, 400-cycle, 1-phase ac: or 220-v or 440-v, 400-cycle, 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Transmitting Set AN/URT–2:			
1	Antenna Control Group OA–297/URT including:	----------	17-1/2 x 18 x 19	128
1	Antenna Control Group Cabinet CY–1047/URT			
1	Control Indicator C–915/URT			
2	Electronic Control Amplifier AM–555/URT			
2	Electronic Control Pre-Amplifier AM–556/URT			
1	Power Supply PP–708/URT			
1	Capacitor Assembly CB–5/URT	----------	10-1/4 x 12-3/4 x 15	25
1	Equipment spare parts	----------	15-1/2 x 16-1/4 x 44	140
1	Radio Frequency Tuner TN–197/URT	----------	13-1/2 x 15-1/4 x 48	165
1	Transmitter Control C–916/URT	----------	4-3/4 x 5-1/4 x 10-3/4	5.3
1	Transmitter Group OA–353/URT	----------	16 x 26-1/4 x 55-1/4	765
	For Radio Transmitting Set AN/URT–3:			
1	Antenna Control Group OA–297/URT including:	----------	17-1/2 x 18 x 19	128
1	Antenna Control Group Cabinet CY–1047/URT			

RADIO TRANSMITTING SETS AN/URT-2, -2X, -3, -3X, -4, -4X

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Indicator C–915/URT			
2	Electronic Control Amplifier AM–555/URT			
2	Electronic Control Pre-Amplifier AM–556/URT			
1	Power Supply PP–708/URT			
1	Capacitor Assembly CB–5/URT		10-1/4 x 12-3/4 x 15	25
1	Cover CW–287/URT–3		2-1/2 x 16 x 24-1/2	12
1	Equipment spare parts		15-1/2 x 16-1/4 x 44	140
1	Radio Frequency Tuner TN–197/URT		13-1/2 x 15-1/4 x 48	165
1	Radio Modulator-Power Supply OA–354/URT		16 x 20 x 26-1/8	325
1	Transmitter Control C–916/URT		4-3/4 x 5-1/4 x 10-3/4	5.3
1	Transmitter Group OA–353/URT		16 x 26-1/4 x 55-1/4	765
	For Radio Transmitting Set AN/URT–4:			
2	Antenna Control Group OA–297/URT including:		17-1/2 x 18 x 19	128
2	Antenna Control Group Cabinet CY–1047/URT			
2	Control Indicator C–915/URT			
4	Electronic Control Amplifier AM–555/URT			
4	Electronic Control Pre-Amplifier AM–556/URT			
2	Power Supply PP–708/URT			
2	Capacitor Assembly CB–5/URT		10-1/4 x 12-3/4 x 15	25
1	Equipment spare parts		15-1/2 x 16-1/4 x 44	140
1	Radio Frequency Tuner TN–197/URT		13-1/2 x 15-1/4 x 48	165
1	Radio Modulator-Power Supply OA–354/URT		16 x 20 x 26-1/8	325
2	Transmitter Control C–916/URT		4-3/4 x 5-1/4 x 10-3/4	5.3
2	Transmitter Group OA–353/URT		16 x 26-1/4 x 55-1/4	765

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91833(A)

AN/URT-2, -2X, -3, -3X, -4, -4X RADIO TRANSMITTING SETS

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7 (AN/URT–2)	108.8	2,370
8 (AN/URT–3)	122.6	2,803
11 (AN/URT–4)	190.2	4,550

PROCUREMENT DATA

PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG: MIL–T–15480A (SHIPS)

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Clifton, N. J.	NObsr–43409 12 August 1949 NObsr–52021	(AN/URT–2) $21,340.00 (AN/URT–3) $24,390.00 (AN/URT–4) $44,220.00

RADIO TRANSMITTING SET AN/URT-6(XN-1)

3 December 1958
Cognizant Serv: USN FSN: 5820-644-4898

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16-Q-123892-100(USN)	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/URT-6(XN-1) is a very high-frequency unit used aboard ship or submarine, or at shore stations. It employs a control unit that provides limited remote control up to 5 miles. The set can be operated from standard shipboard remote units.

This equipment, when operating with a handset, provides carrier control, audio input to modulator, and receiver monitoring. Two associated amplifier units are employed for monitoring.

The modulator contains special circuits to provide expander, automatic volume control, and clipper-filter action; these features increase the average carrier sideband power under A3 operating conditions. A 1,000-cycle oscillator is included for A2 operation.

Radio Transmitting Sets AN/URT-6(XN-1), AN/URT-7, and AN/URT-10 are functionally similar; however, they differ electrically and mechanically. The AN/URT-6(XN-1) replaces the transmitting sections of Radio Transmitting and Receiving Equipment TBS.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 60 to 80
Frequency Stability: ±0.007%
Frequency Control: Crystal
Type Modulation: AM
Type Emission: A2, A3
Modulation Capability: 100%
Power Output: 30 w
Audio Input: 25 db to +5 db from a reference level of 0.1 to 3.4 v
AF Response: Flat within ±3 db, 300 to 3,500 cps
Impedance:
Microphone: 600 ohms
Antenna: 50 ohms
Mounting: Either table or relay rack
Power Requirements: 750 w, 115-v or 230-v, 50- to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Electrical Specials Purpose Cable Assembly CX-1826/U	----------	----------	1.75
1	Electrical Special Purpose Cable Assembly CX-1827/U	----------	----------	1.50
1	Electrical Special Purpose Cable Assembly CX-1828/U	----------	----------	1
1	Maintenance parts kit	----------	----------	.03
2	Radio Frequency Jack UG-21B/U	----------	----------	.03
1	Radio Transmitter T-334 (XN-1)/URT-6 including:	----------	13-23/32 x 19 x 15	146
1	Amplifier Oscillator AM-633(XN-1)/URT			
1	Electrical Equipment Cabinet CY-1126/URT			
1	Power Supply PP-773/URT			
1	Radio Modulator MD-163/URT			
1	Transmitter Control CFT-23555	----------	5-13/16 x 4-7/16 x 3-5/16	4

AN/URT-6(XN-1) RADIO TRANSMITTING SET

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91576

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2		

PROCUREMENT DATA

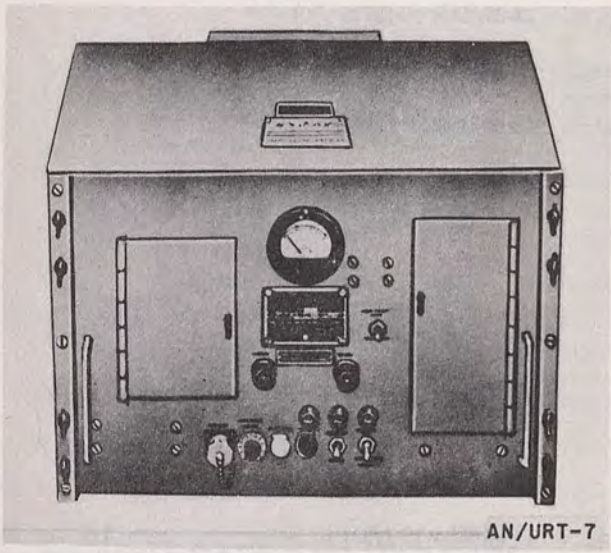
PROCURING SERVICE: USN
DESIGN COG: USN, BuShips
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Clifton, N. J.	NObsr–52221, 11 January 1951	

RADIO TRANSMITTING SETS AN/URT-7, -7A, -7B, -7C

3 December 1958
Cognizant Serv: USN FSN: 5820-665-2473 (AN/URT-7B)

	USA	USN	USAF
TYPE CLASS:	--	Used by	AN/URT-7: Ltd-Std AN/URT-7A: Std
STOCK NO:	--	F16-Q-123893-100	--



AN/URT-7

FUNCTIONAL DESCRIPTION:

Radio Transmitting Sets AN/URT-7, AN/URT-7A, AN/URT-7B, and AN/URT-7C are low power, general purpose units designed for radiotelephone and modulated continuous wave communication on ship, submarine, or at shore installations.

This equipment may be mounted on a table or may be removed from its cabinet and mounted in a standard 19-inch relay rack. Remote control operation may be from a standard Remote Radiophone Unit NT-23500 or equivalent. Limited control from a remote location may be obtained with Transmitter Control NT-23555.

Radio Transmitting Sets AN/URT-7, AN/URT-7A, AN/URT-7B, and AN/URT-7C are interchangeable but differ in minor electrical and mechanical design.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 115 to 156
Frequency Control: Crystal
Frequency Stability: ±0.007%
Type Modulation: AM
Type Emission: A2, A3 (cw, mcw, voice)
Power Output: 30 w, nominal
Impedance:
Microphone: 600 ohms input
Antenna: 50 ohms output
Audio Input Voltage: 25 to +5 db from a 0.006-w reference level (0.1 to 3.4 v)
Audio Frequency Response: Flat within ±3 db from a 1,000-cps reference level, from 300 to 3,500 cps
Audio Frequency Filter: Flat within ±2db from a 1,000-cps reference level, and −50 db at 5,000 cps and over
Input to Clipping Stage: Normally held at 20 ±5 db above the clipping level by action of the avc circuit for variations in the input of −25 to +5 db from 0.006-w reference level
Heat Dissipation: 700 w
Power Requirements: 750 w; 115- or 230-v ±10%, 50- to 60-cycle ±5%, 1-phase ac, 0.85 pf

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Transmitting Set AN/URT-7:			
1	Cable Assembly CX-1826/U	----------	----------	1.75
1	Cable Assembly CX-1827/U	----------	----------	1.50
1	Cable Assembly CX-1828/U	----------	----------	1
2	Connector, Plug UG-21B/U	----------	13/16 x 13/16 x 1-3/4	0.03

AN/URT-7, -7A, -7B, -7C RADIO TRANSMITTING SETS

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter T–336/ URT–7 including:		13-23/32 x 16-1/2 x 19	146
1	Amplifier-Oscillator AM–638/URT		5 x 9-31/32 x 14-1/2	
1	Electrical Equipment Cabinet CY–1126/URT		13-23/32 x 14-13/16 x 19	
1	Power Supply PP–773/ URT		12-7/32 x 16-1/4 x 19	
1	Radio Modulator MD–163–URT		4 x 9-31/32 x 14-3/8	
1 set	Equipment spares		12-1/8 x 16-3/8 x 25-1/8	85
	For Radio Transmitting Set AN/URT–7A:			
1	Cable Assembly CX–1826/U			1.75
1	Cable Assembly CX–1827/U			1.50
1	Cable Assembly CX–1828/U			1
2	Connector, Plug UG–21B/U		13/16 x 13/16 x 1-3/4	.03
	For Radio Transmitting Set AN/URT–7A:			
1	Radio Transmitter T–336A/ URT–7 including:		13-23/32 x 16-1/2 x 19	146
1	Amplifier-Oscillator AM–638A/URT–7		5 x 9-31/32 x 14-1/2	
1	Electrical Equipment Cabinet CY–1126A/URT		13-23/32 x 14-13/16 x 19	
1	Power Supply PP–773A/ URT		12-7/32 x 16-1/4 x 19	
1	Radio Modulator MD–163A/URT		4 x 9-32/32 x 14-3/8	
1 set	Equipment spares		12-1/8 x 16-3/8 x 25-1/8	85
	For Radio Transmitting Set AN/URT–7B:			
1	Cable Assembly CX–1826/U			1.75
1	Cable Assembly CX–1827/U			1.50
1	Cable Assembly CX–3154/U			1
2	Connector, Plug UG–21B/U		13/16 x 13/16 x 1-3/4	.03
1	Radio Transmitter T–336B/ URT–7 including:		13-23/32 x 16-1/2 x 19	146
1	Amplifier-Oscillator AM–638B/URT		5 x 9-31/32 x 14-1/2	
1	Electrical Equipment Cabinet CY–1126B/URT		13-23/32 x 14-13/16 x 19	
1	Power Supply PP–773B/ URT		12-7/32 x 16-1/4 x 19	

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Modulator MD–163B/URT		4 x 9-31/32 x 14-3/8	
1	Set of equipment spares		12-1/8 x 16-3/8 x 25-1/8	85
	For Radio Transmitting Set AN/URT–7C:			
1	Cable Assembly CX–1826/U			1.75
1	Cable Assembly CX–1827/U			1.50
1	Cable Assembly CX–3154/U			1
2	Connector, Plug UG–21D/U		13/16 x 13/16 x 1-3/4	.03
1	Radio Transmitter T–336C/URT–7 including:		13-23/32 x 16-1/2 x 19	146
1	Amplifier-Oseillator AM–638C/URT		5 x 10 x 13-3/4	
1	Electrical Equipment Cabinet CY–1126A/URT		13-23/32 x 15 x 19	
1	Power Supply PP–773C/URT		12-7/32 x 16-1/4 x 19	
1	Radio Modulator MD–163C/URT		4 x 10 x 13-3/8	
1	Set of equipment spares		7-1/2 x 01-1/2 x 21-1/2	27

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91684 (AN/URT–7, –7A, –7B)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
For AN/URT–7, –7A, –7B:		
2	11	301
For AN/URT–7C:		
2	11.1	336

AN/URT-7, -7A, -7B, -7C RADIO TRANSMITTING SETS

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-R-15591 (AN/YRT-7, -7A, -7B)
MIL-T-15244B (AN/URT-7C)

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Clifton, N. J.	(AN/URT-7, -7A) NObsr-52311, 27 June 1951	
Rauland-Borg Corp.	Chicago, Ill.	(AN/URT-7, -7A, -7B) NObsr-64523, 30 July 1954 (AN/URT-7C) NObsr-71142, 22 December 1955	

RADIO TRANSMITTING SETS AN/URT-8(XN-1), -9(XN-1)

3 December 1958
Cognizant Serv: USN FSN: 5340-205-4797 (AN/URT-9(XN-1))

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Sets AN/URT-8(XN-1) and AN/URT-9(XN-1) are very-high-frequency and ultra-high-frequency units designed for shipboard or shore station installation. Both are capable for complete remote operation.

The AN/URT-8(XN-1) employed four separate radio-frequency units, each providing four crystal-controlled operating channels. The desired radio frequency can be quickly selected by using a telephone dial system.

The AN/URT-9(XN-1) essentially has the same operating principles as the AN/URT-8(XN-1); however, the AN/URT-9(XN-1) contains 10 radio frequency units. Any two of these units may be operated simultaneously, with separate or the same information being transmitted over each of the channels in operation. The AN/URT-9(XN-1) used two modulators; each with its own independent selector system, capable of applying modulation to any one of the 10 radio frequency units.

The AN/URT-9(XN-1) replaces Radio Transmitting Equipment TDZ. It nets with Radio Receiving Equipment RDZ, AN/URR-13( ), AN/URR-35, and Radio Receiver R-278/GR.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Number of Preset Channels:
AN/URT-8(XN-1): 16
AN/URT-9(XN-1): 40
Frequency Control: Crystal
Type Modulation: AM
Modulation: 100%
Type Emission: A2, A3
Operating Range: Line of sight
Frequency Stability: 0.007%
AF Response: Flat within ±3 db (1,000-cps reference level) from 300 to 3,500 cps
Input Voltage: −25 db to +4 db from a 0.006-w reference level (0.1 to 3.4 v)
Impedance:
Antenna Terminal: 50 ohms
Microphone: 600 ohms
Power Output: 15 w, nominal
Power Requirements: 115-v or 230-v, 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Transmitting Set AN/URT-8(XN-1):			
1	Blower-Cable Assembly HD-134(XN-1)/URT			
1	Maintenance parts kit			
1	Radio Transmitter T-394 (XN-1)/URT-8 including:			
4	Amplifier-Oscillator Unit AM-803(XN-1)/URT			
1	Modulator Unit MD-186 (XN-1)/URT			
1	Special Purpose Electrical Cable Assembly CX-2183(XN-1)/URT			

AN/URT-8(XN-1), -9(XN-1) RADIO TRANSMITTING SETS

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Radio Transmitting Set AN/URT-9(XN-1):			
1	Blower-Cable Assembly HD-134(XN-1)/URT			
1	Maintenance parts kit			
1	Radio Transmitter T-395 (XN-1)/URT-9 including:			
10	Amplifier Oscillator Unit AM-803(XN-1)/URT			
2	Modulator Unit MD-186(XN-1)/URT			
1	Special Purpose Electrical Cable Assembly CX-2183 (XN-1)/URT			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

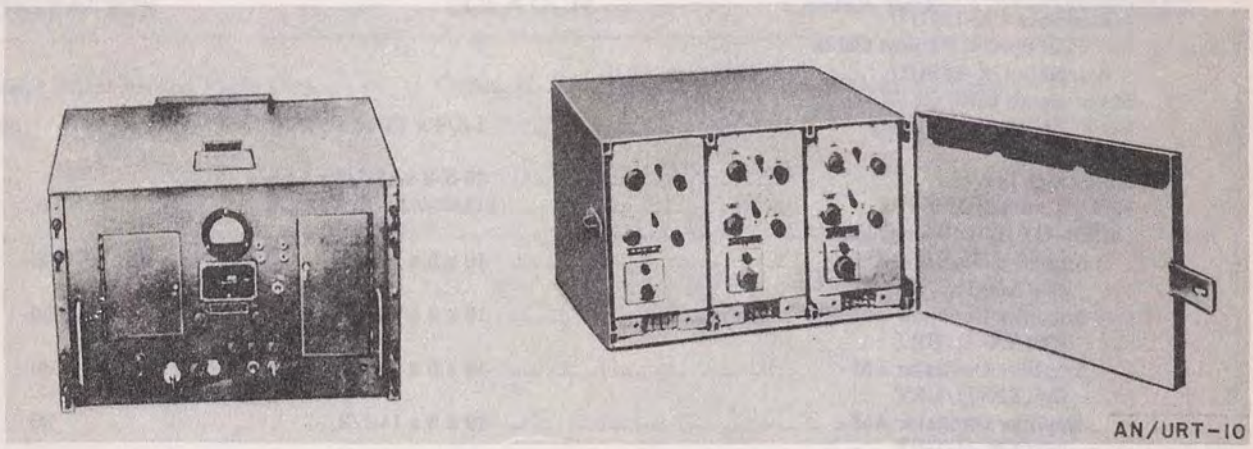
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Clifton, N. J.	NObsr-52139, 20 December 1950	

RADIO TRANSMITTING SET AN/URT-10(XN-1)

3 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/URT-10(XN-1) is a very-high-frequency and ultra-high-frequency unit used aboard ship or submarine, or at shore installations. A control unit is employed to provide limited remote control up to 5 miles. It can be operated from standard shipboard remote control facilities. Carrier control, audio input to modulator, and receiver monitoring are available when operating with handset.

This equipment incorporates four interchangeable amplifier-oscillator units designed to cover a specific frequency range. Each employs crystal-controlled master oscillator control.

The modulator contains special circuits to furnish expander, automatic volume control, and clipper-filter action to increase the average carrier sideband power under A3 operating conditions. A 1,000 cycle-per-second oscillator is included for A2 operation.

Radio Transmitting Sets TED, AN/URT-6( ), AN/URT-7( ), and AN/URT-10(XN-1) are all similar functionally; however, they differ electrically in the frequency determining components. Mechanically all sets are similar.

The sets may be table or rack mounted.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
AM-634/URT: 30 to 60
AM-635/URT: 60 to 115
AM-636/URT: 115 to 225
AM-637/URT: 225 to 400
Frequency Control: Crystal
Type Modulation: AM
Type Emission: A2, A3
Modulation Capability: 10%
Power Output:
30 to 115 Mc: 30 w
115 to 400 Mc: 15 w
Audio Input: −25 to +5 db from a 0.006 reference level
AF Response: Flat within ±3 db, 300 to 3,500 cps (from a 1,000-cps reference level)
Impedance:
Microphone: 600 ohms
Antenna: 50 ohms
Frequency Stability: +0.007%
Mounting: Table or relay rack
Power Requirements: 750 w; 115-v or 230-v, 50- to 60-cycle, 1-phase ac

AN/URT-10(XN-1) RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Electrical Special Purpose Cable Assembly CX–1826/U			
1	Electrical Special Purpose Cable Assembly CX–1827/U			
1	Electrical Special Purpose Cable Assembly CX–1828/U			
1	Maintenance parts kit			
2	Radio Frequency Jack UG–21B/U	----------	1-3/4 x 13/16 x 13/16	.03
1	RF storage box	----------	10-5/8 x 18-5/8 x 14-3/4	
1	Radio Transmitter T–335 (XN–1)/URT–10 including:	----------	13-23/32 x 19 x 16-1/2	146
1	Amplifier Oscillator AM–634(XN–1)/URT	----------	10 x 5 x 14-1/2	30
1	Amplifier Oscillator AM–635(XN–1)/URT	----------	10 x 5 x 14-1/2	30
1	Amplifier Oscillator AM–636(XN–1)/URT	----------	10 x 5 x 14-1/2	30
1	Amplifier Oscillator AM–637(XN–1)/URT	----------	10 x 5 x 14-1/2	30
1	Electrical Equipment Cabinet CY–1126/URT	----------	13-3/4 x 19 x 14-13/16	
1	Power Supply PP–773/URT	----------	12-7/32 x 19 x 16-1/4	
1	Radio Modulator MC–163/URT	----------	10 x 4 x 14-3/8	
1	Transmitter Control CFT–63555	----------	5-13/16 x 4-7/16 x 3-5/16	4

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91623

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	2.75	240

RADIO TRANSMITTING SET **AN/URT-10(XN-1)**

PROCUREMENT DATA

PROCRING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone and Radio Corp.	Clifton, N. J.	NObsr–52221, 11 January 1951	

RADIO TRANSMITTING SET AN/URT-12

3 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	Std
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/URT-12 is a general purpose communication equipment designed for ship and shore use. It provides eight bands to facilitate the employment of the frequency range.

This equipment consists essentially of a radio transmitter, a power supply, a cabinet, and associated accessories.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2 mc to 30 mc

Number of Bands: 8

Type Modulation: AM

Type Emission: A1, A3

Frequency Control: Crystal

Power Output:

Emission A1: 100 w

Emission A3: 75 w

Power Requirements: 1,050 w; 115-v or 230-v, 50- to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitting Set AN/URT-12 includes:	----------	20 x 20 x 36	
1	Cabinet CY-1369/URT-12			
1	Power Supply PP-950/URT-12			
1	Radio Transmitter T-408/URT-12			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs

AN/URT-12 RADIO TRANSMITTING SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

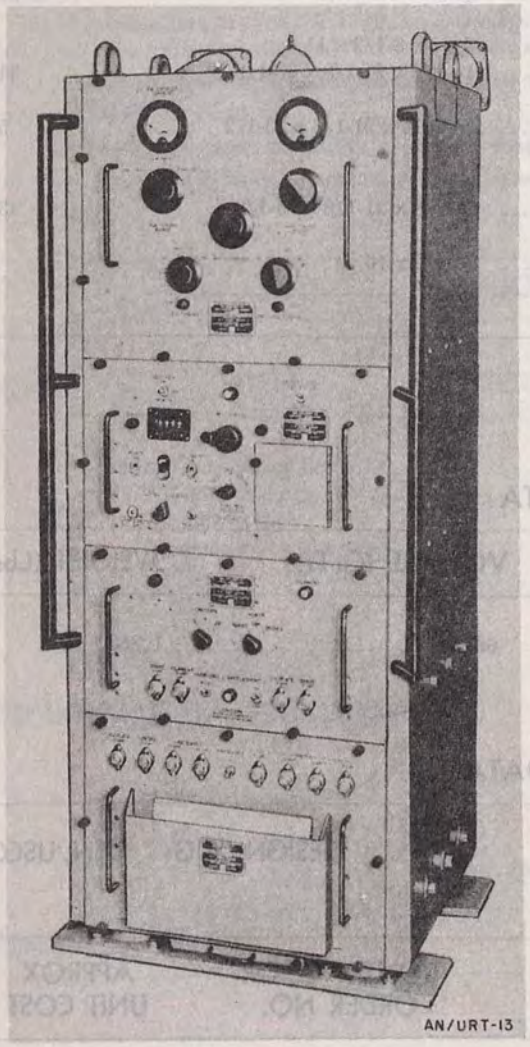
DESIGN COG: USN, USCG

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corporation of America	New York, N. Y.	Teg–38554	

RADIO TRANSMITTING SET AN/URT-13

3 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/URT-13 is a transmission facility intended for use on Coast Guard vessels and shore stations. It is designed to operate under widely varying climatic conditions.

This equipment is complete with the exception of antenna, power source, channel frequency crystals, and keying items. It is designed to operate at ambient temperatures between 0° to 55°C. and in a relative humidity up to 95 percent.

TECHNICAL CHARACTERISTICS:

Frequency Range: 239 kc to 556 kc
Frequency Control: Crystal or master oscillator
Number of Crystal Channels: 4
Type MO Control: Manual, continously variable over entire range in 3 bands
Type Modulation: AM
Type Emission: A1, A2
Modulation Frequency: 1,000 cps, −10 to +20%
Modulation Capability: 100%
Keying Type: On–off (electron tube)
Keying Speed:
CW: Up to 100 wpm
MCW: Up to 60 wpm; keys carrier and modulation
Control: Local or remote start–stop and keying, manual or automatic
RF Output: 200 w, 4 ohms, 750 μμf
Spurious Radiation: 50 db minimum below carrier
Hum Level: Less than 1% of value equivalent to 100% modulation
Accuracy and Stability: Within ±0.02% of desired carrier frequency
Operating Temperature: 0° to 55° C.
Line Voltage: ±10%
Line Frequency: ±5%
Heat Dissipation: 1,510 w
Power Requirements: 115-v or 230-v, 50- to 60-cycle, 1-phase ac

AN/URT-13 RADIO TRANSMITTING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Box maintenance parts kit		15 x 15 x 24	275
1	Radio Transmitting Set AN/URT-13 including:		24 x 27 x 63-5/8	840
1	Amplifier-Oscillator AM-854/URT-13		12-11/16 x 21-1/8 x 23-5/8	75
1	Cabinet, Electrical Equipment CY-1384/URT-13		24 x 27 x 63-5/8	240
1	M. O. Calibration chart		3/32 x 8-1/2 x 11	
1	Power Supply PP-965/URT-13		14-1/2 x 21-1/8 x 23-1/2	340
1	Radio Frequency Tuner Assembly TN-222/URT-13		18-3/16 x 21-1/8 x 23-1/2	50
1	Radio Modulator MD-197/URT-13		11-3/8 x 21-1/8 x 23-1/2	135
2 sets	Servicing diagrams		13-1/2 x 10	1
1 set	Test cables			5

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	66	1,350

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, USCG

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corporation of America	New York, N. Y.	Tcg-38556, 26 June 1951	

RADIO TRANSMITTING SET AN/URT-14

3 December 1958
Cognizant Serv: USN FSN:

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/URT–14 is a general purpose communication equipment designed for ship and shore use. It provides four channels to facilitate the employment of the available frequency range.

This equipment consists essentially of a radio frequency oscillator, an amplifier tuner, a power supply and associated accessories.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 kc to 535 kc
Number of Channels: 4
Type Modulation: AM, FM
Type Emission: Al, A2, F1
Type Frequency Control: Crystal and master oscillator
Power Output: 500 w
Power Requirements: 5.5 kva; 220-v or 400-v, 50- to 60-cycle, 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitting Set AN/URT–14 including:	----------	24 x 36 x 72	
1	Amplifier-tuner			
1	Modulator-power supply			
1	RF Oscillator O–396/URT–14			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URT-14 RADIO TRANSMITTING SET

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, USCG

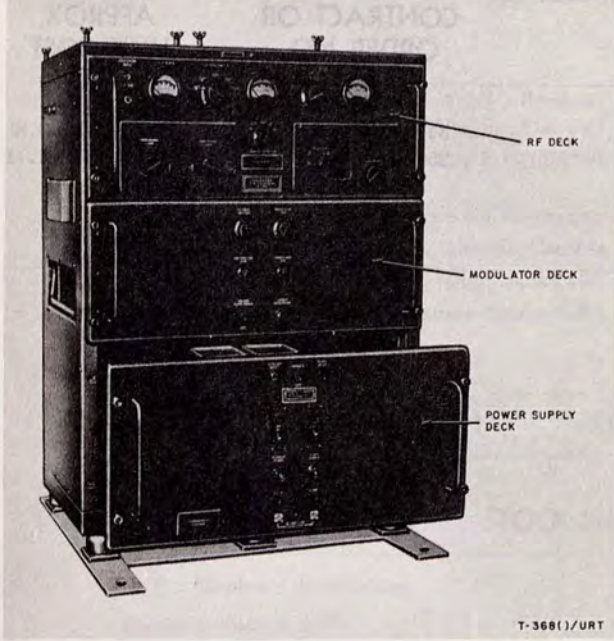
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Air Associates, Inc.	Orange, N. J.		

RADIO TRANSMITTER AN/URT-type

1 July 1958
Cognizant Serv: USA FSN: 5820-503-2640

T-368( )/URT

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2C6900-368	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitter T-368( )/URT is a medium-power, AM (cw, voice), HF transmitter that can be used as mobile or fixed-station equipment.

It may also be used as an RF amplifier for low-powered exciter units or as a driver of high-power transmitters. In such applications, it will transmit frequency-shift keying, narrow-band FM, and a combination of frequency-shift keying with voice AM.

This equipment consists of the transmitter and accessory items, and requires a tuning unit when a long-wire or whip-type antenna is used. It also requires auxiliary equipment for frequency-shift keying or other special modes of transmission.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 1.5 to 20
Type Modulation: AM, FM
Type of signal: Cw, icw, voice, fsk
Power Output:
AM: 4000 w
Cw: 450 w
Power Requirements: 2.2 kw, 115-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Radio Transmitter T-368/URT	5820-503-2640	57 x 31 x 32	700

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TM 11-809

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	38	940

AN/URT-type RADIO TRANSMITTER

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-T-11770; MIL-T-11437

DESIGN COG: USA, Sig

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Barker & Williamson, Inc.	Upper Darby, Pa.	3472-P-52-31	$3,230.8
		25070-P-54-55	3,301.11

RADIO TELEGRAPH TRANSMITTING EQUIPMENT AN/URT-type

1 December 1958
Cognizant Serv: USN FSN: TAG

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Telegraph Transmitting Equipment TAG is designed for either shipboard or shore station installation. The two models are similar, except for the power supply equipment furnished with each type.

This equipment is primarily used as the main high frequency transmitter for Fleet and Force Flagships, Aircraft Carriers first line, Cruisers first line, and for certain remote shore stations where the primary requirement is to effect distant radio transmission to the fleet components.

TECHNICAL CHARACTERISTICS:

Frequency Range: 4,000 to 4,525 kc; 8,000 to 9,050 kc; 12,000 to 13,575 kc; and 16,000 to 18,100 kc
Power Output:
At Frequencies below 9,050 kc: 6 kw
In 12,000- to 13,575-kc band: 4.8 kw
In 16,000- to 18,100-kc band: 3.0 kw
Antenna: Single wire, approximately 58 feet long
Power Requirements:
Shipboard: 240-v dc
Shore Station: 220-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For Shipboard Installation:			
1	Automatic Starter 3093			
1	Automatic Starter 3229			
1	Automatic Starter 3248			
1	External monitor lamp and resistor			
1	Low power motor generator filter unit			
1	Motor generator set, consisting of:			
1	Generator 3091			
1	Generator 3092			
1	Motor 3090			
1	Motor generator set, consisting of:			
1	Motor 3094			
1	Motor 3095			
1	Protective and filter unit (for 7,500-v generator)			
1	Radio Transmitter 3079			
1	Transmitter start–stop switch			
1	Water Cooling Unit 3096			
	For Shore Station Installation:			
1	Automatic Starter 3098			
1	Automatic Starter 3105			
1	Automatic Starter 3247			

AN/URT-type RADIO TELEGRAPH TRANSMITTING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Low power MG filter unit			
1	Motor generator set, consisting of:			
1	Generator 3091			
1	Generator 3092			
1	Motor 3097			
1	Motor generator set, consisting of:			
1	Generator 3095			
1	Generator 3100			
1	Motor 3099			
1	Protective and filter unit (for 7,500-v generator)			
1	Radio Transmitter 3079			
1	Water Cooling Unit 3096-A			

REFERENCE DATA AND LITERATURE:

GEI 3973

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	----	NOs-4374	

RADIO TRANSMITTING EQUIPMENT AN/URT-type

1 December 1958
Cognizant Serv: USN FSN: TBK–4

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(See Illustration TBK–11 under AN/FRT-type: TBK–6, TBK–11, TBK–15, TBK–16, p. 619)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TBK–4 is a medium power, high frequency transmitter capable of relay keying speeds up to 100 words per minute. The transmitter power may be reduced from full power to 75 watts by disconnecting the power amplifier. This set is designed for either shipboard or shore station use.

Remote operation of this transmitter is possible on shipboard installations by use of a standard 4- or 6-wire control system; in shore stations, remote control may be accomplished through a landline telegraph circuit.

This equipment is essentially the same as the TBM series of transmitters, except that the TBK series does not have provisions for modulated continuous wave signaling.

Models of this equipment suitable only for shipboard installation (classified and described under AN/SRT-type) are the TBK–3, TBK–5, TBK–7, through TBK–10, TBK–12 through TBK–14, and TBK–17 through TBK–20.. Models designed for use at shore installations, classified and described under AN/FRT-type equipments, are the TBK–6, TBK–11, TBK–15, and TBK–16.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2.0 to 18.1
Frequency Control: Master Oscillator
Type of Signal: Cw
Power Output: 75 or 500 w
Keying Speed: 100 wpm (maximum)
Antenna: 80 feet (maximum length)
Power Requirements: 440-v 60-cycle 3-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Auto Transformer 30286	----------	9-3/4 x 11-13/16 x 21-3/4	171
1	Junction Box 23055	----------	11-7/8 x 23-7/16 x 46-1/8	117
1	Radio Transmitter 52032	----------	24 x 32 x 72	688
1	Rectifier Power Unit 20018	----------	22-7/8 x 23-15/16 x 71-7/8	976
1	Remote Control Unit 23084	----------	12-15/16 x 19 x 20	88

REFERENCE DATA AND LITERATURE:

Technical Manuals for Navy Model TBK–3, 4, 5, 6, 7, 8, 10, and 17, Radio Transmitting Equipment

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URT-type RADIO TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NOs 44507	

RADIO TELEPHONE TRANSMITTING EQUIPMENT AN/URT-type

4 December 1958
Cognizant Serv: FSN: TCA

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Telephone Transmitting Equipment TCA is designed for voice communication. Rapid frequency change to any one of four preselected frequencies in the range of 3,000 to 10,000 kilocycles is accomplished by manipulation of a single switch. Audio-frequency response and harmonic content are held to values that will give high quality transmission for the service for which designed.

TECHNICAL CHARACTERISTICS:

Frequency Range: 3,000 to 10,000 kc
Frequency Control: Crystal
Power Output: 15 w
Channels: 4
Types of Signal: Voice
Audio Frequency Response: Within 2 db from 500 to 2,500 cps with sharp cutoff below 500 cps and above 2,500 cps, and down 30 db at 60 cps and 5,000 cps
Power Requirements: 110-v 50/60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cabinet assembly			
1	Filter unit			
1	Microphone			
1	Modulator unit			
2	Mounted crystal			
1	Oscillator coil			
2	Output cable			
1	Panel assembly			
1	Power supply			
1	RF assembly			

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URT-type RADIO TELEPHONE TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

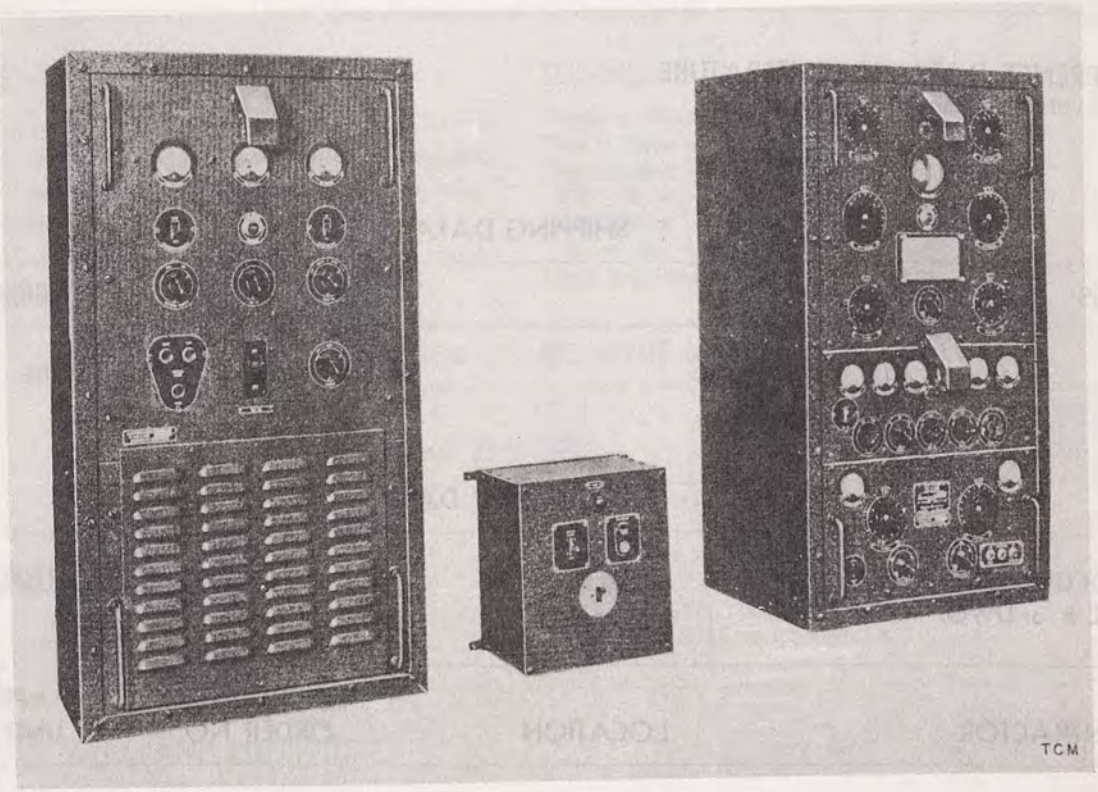
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Corp.	Cedar Rapids, Iowa	NOs–66284, 22 April 1939	$750.00 with spares

RADIO TRANSMITTING EQUIPMENT AN/URT-type

5 December 1958
Cognizant Serv: USN FSN: TCM

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCM and the TCM–1 and –2 are designed for use in either shore or shipboard installations where a compact medium-powered radio transmitter is required.

Equipment required but not supplied: one hand Microphone NT–51006–A, one Chest Microphone NT–51016A, and one set of cables.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc
Type of Signal: Cw, mcw, voice
Power Output:
Cw: 125 w
Mcw: 30 w
Voice: 30 w
Power Requirements: 115-v 60-cycle 1-phase ac

AN/URT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Unit 23241	----------	9 x 11-1/2 x 12-3/8	35
1	Hf Radio Transmitter 52206	----------	18-3/4 x 20-1/2 x 36-3/4	200
1	Rectifier 20122	----------	14-3/4 x 20-1/2 x 36-3/4	259

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,401

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	96.01	1,079

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	NOs-48078, 4 Jan 1941	$2,500.00 including equipment spares

RADIO TRANSMITTING EQUIPMENT AN/URT-type

5 December 1958
Cognizant Serv: USN FSN: TCM–1

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(See Illustration of TCM, p. 1935)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCM–1 and the TCM and TCM–2 are designed for use in either shore or shipboard installations where a compact medium-powered radio transmitter is required.

Equipment required but not supplied: one set of cables.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc
Type of Signal: Cw, mcw, voice
Power Output:
Cw: 125 w
Mcw: 30 w
Voice: 30 w
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Chest Microphone 51046			
1	Control Unit 23241	----------	9 x 11-1/2 x 12-3/8	35
1	Hand Microphone 51006A			
1	Hf Radio Transmitter 52206	----------	18-3/4 x 20-1/2 x 36-3/4	200
1	Rectifier 20122	----------	14-3/4 x 20-1/2 x 36-3/4	259

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,401

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7	96.01	1,013

AN/URT-type RADIO TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co..	Schenectady, N. Y.	98843, 11 Feb 1942	$3,930.00 including equipment spares

RADIO TRANSMITTING EQUIPMENT AN/URT-type

5 December 1958
Cognizant Serv: USN FSN: TCM-2

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(See Illustration of TCM, p. 1935)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCM–2 and TCM and TCM–1 are designed for use in either shore or shipboard installations where a compact medium-powered radio transmitter is required.

Equipment required but not supplied: one Chest Microphone 51016A, and one set of cables.

TECHNICAL CHARACTERISTICS:

Frequency Range: 2,000 to 18,100 kc
Type of Signal: Cw, mcw, voice
Power Output:
Cw: 125 w
Mcw: 30 w
Voice: 30 w
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Unit NT–23241	----------	9 x 11-1/2 x 12-3/8	35
1	Hand Microphone NT–51004C			
1	Hf Radio Transmitter NT–52206	----------	18-3/4 x 20-1/2 x 36-3/4	200
1	Rectifier NT–20122	----------	14-3/4 x 20-1/2 x 36-3/4	259

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,401

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	96.01	1,013

AN/URT-type RADIO TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

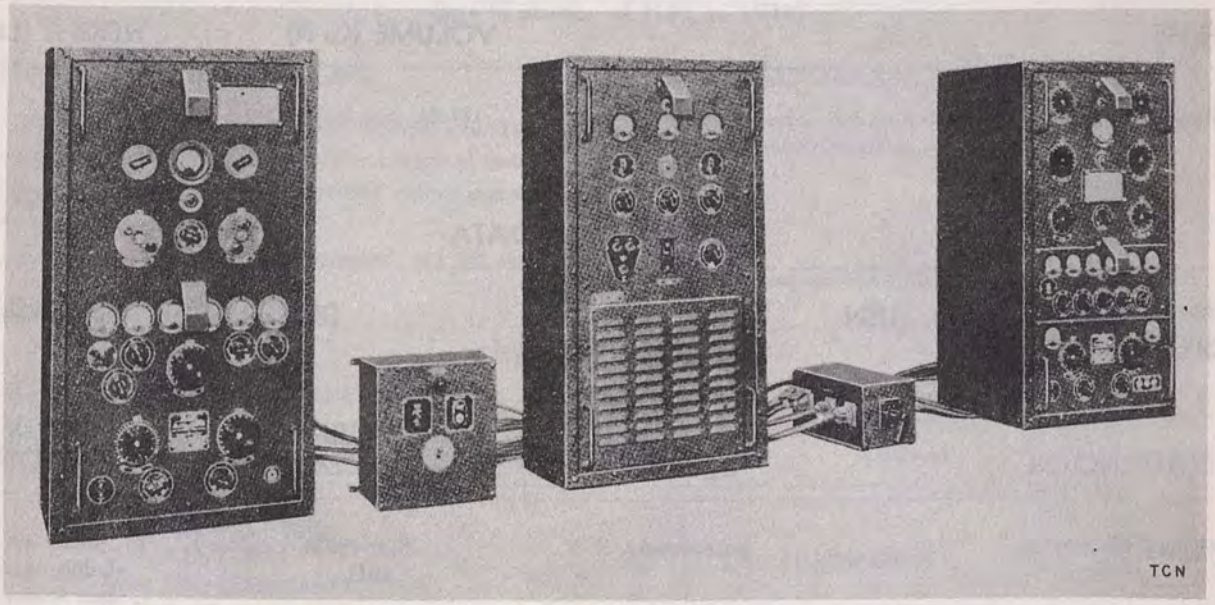
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	NXs–15910, 1 Jun 1943	$3,930.00 including equipment spares

RADIO TRANSMITTING EQUIPMENT AN/URT-type

5 December 1958
Cognizant Serv: USN FSN: TCN

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCN and TCN–1 are designed primarily for either shore or shipboard installation wherever a compact medium-powered radio transmitter is required.

Equipment required but not supplied: one Hand Microphone 51106–A, one Chest Microphone 51016–A and, one set of cables.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 to 2,000 kc; 2,000 to 18,100 kc
Type of Signal: Cw, mcw, voice
Power Output:
Cw: 125 w
Mcw: 30 w
Voice: 30 w
Power Requirements: 115-v 50–62-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Unit 23241	----------	9 x 11-1/2 x 12-3/8	35
1	Hf Radio Transmitter 52206	----------	18-3/4 x 20-1/2 x 36-3/4	200
1	IF Radio Transmitter 52205	----------	18-3/4 x 20-1/2 x 36-3/4	175
1	Power Transfer Switch 24094	----------	6-1/4 x 10 x 18-3/4	25
1	Rectifier 20122	----------	14-3/4 x 20-1/2 x 36-3/4	259

AN/URT-type RADIO TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

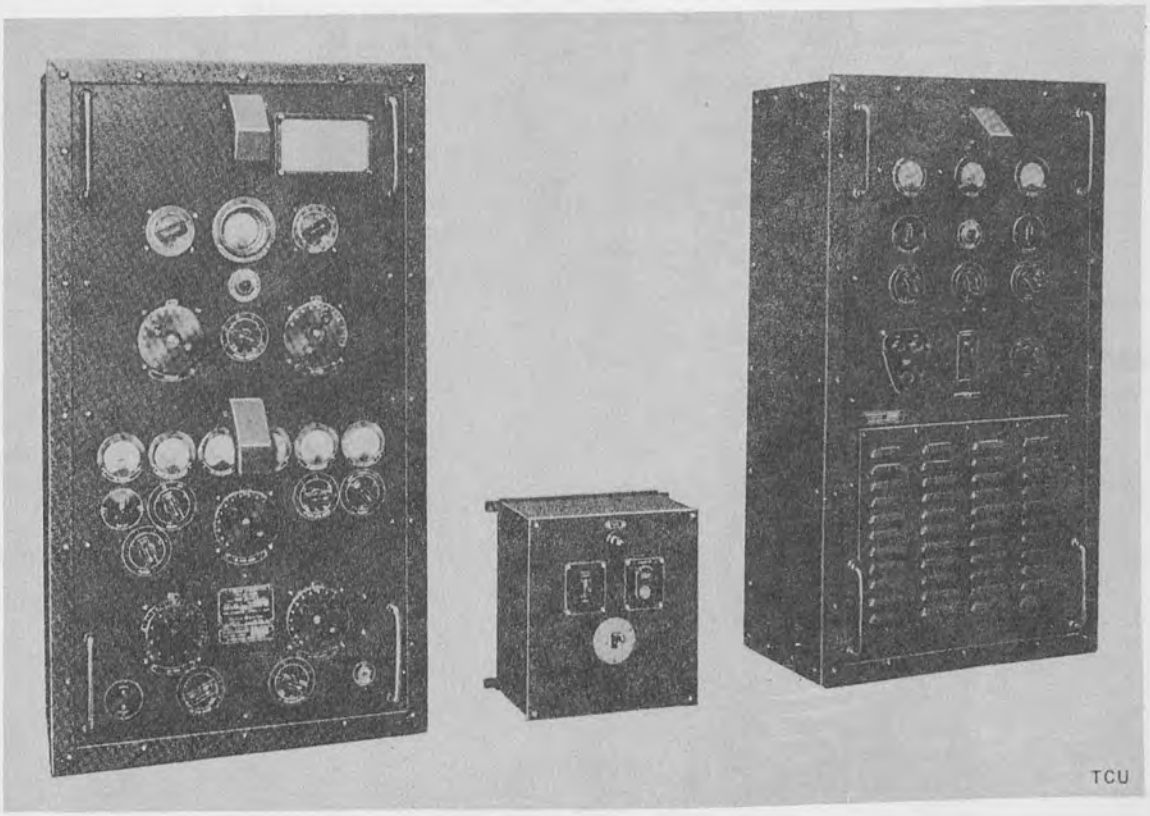
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	NOs–98843, 11 February 1942	$6,270.00 including equipment spares

RADIO TRANSMITTING EQUIPMENT **AN/URT-type**

2 December 1958
Cognizant Serv: USN FSN:

TCU, TCU–1, 2

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	--	--	--



TCU

FUNCTIONAL DESCRIPTION:

Radio Transmitters TCU, TCU–1 and 2 are compact medium-powered sets designed for shore or shipboard use. The equipments are constructed to provide efficient, reliable, and rapid communication.

TECHNICAL CHARACTERISTICS:

Frequency Range: 300 to 2000 kc
Power Output:
Cw (A1) — 125 W
MCW (A2) — 30 W
Power Requirements: 115-v, 50 to 60-cycle, 1-phase ac

AN/URT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For TCU:			
1	Case Spare Parts 23241			
1	Control Unit 23241	----------	9 x 11-1/2 x 12-3/8	35
1	IF Radio Transmitter 52205	----------	18-3/4 x 20-1/2 x 36-3/4	175
1	Rectifier 20122	----------	14-3/4 x 20-1/2 x 36-3/4	259
	For TCU–1, 2:			
1	Case Spare Parts 23241	----------	----------	93
1	Control Unit 23241	----------	9 x 11-1/2 x 12-3/8	30
1	IF Radio Transmitter 52205	----------	18-3/4 x 20-1/2 x 36-3/4	146
1	Rectifier 20122	----------	14-3/4 x 20-1/2 x 36-3/4	229

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,401

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
5	95.0	986

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

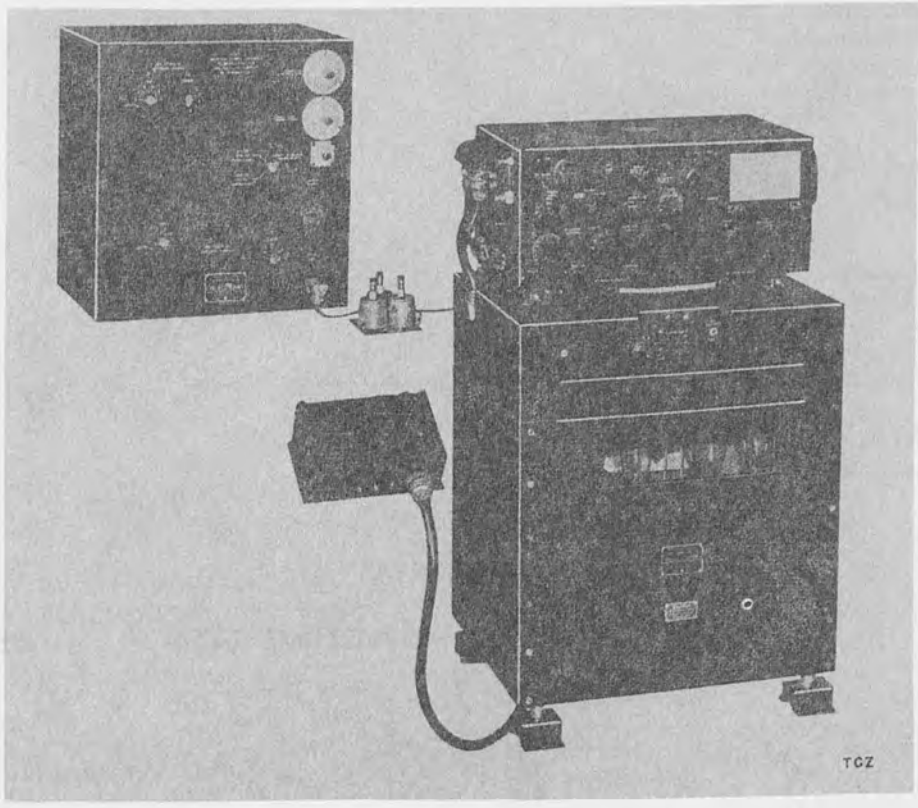
DESIGN COG: BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric Co.	Schenectady, N. Y.	Nos 48078 Nos 98843 NXs 15910	$3,500.00

RADIO TRANSMITTING EQUIPMENT AN/URT-type

5 December 1958
Cognizant Serv: USN FSN: TCZ

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–Q–328525–200 (115-v dc)	F16–Q–328535–200 (115-v dc)



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TCZ is designed for either a ship- or a shore-based installation. Two bands of transmission frequencies are available within the specified range of th's model. Transmission facilities include A1, A2, and A3; remote control operation is also provided.

TECHNICAL CHARACTERISTICS:

Frequency Control: Master oscillator
Type Emission: A1, A2, A3
Power Output: 100 w
Type Keying: Relay, 30 wpm
Power Requirements: 4.5 kw, 115-v 60-cyc'e 1-phase ac
Antenna: Whip, 20 to 35 feet in length

AN/URT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Loading Coil COL–47370	----------	10-7/32 x 18-5/8 x 10-3/4	14.5
1	Antenna Shunt Capacitor COL–481628	----------	3-7/8 x 5 x 4-1/8	1.6
1 set	Equipment spares	----------	----------	100
1 set	Interconnecting cables			
1	Motor-Generator Rectifier COL–211101 (ac)	----------	29-7/16 x 23-7/16 x 20-1/8	320
	or			
	Dynamotor Assembly Power COL–21102	----------	29-7/16 x 23-7/16 x 20-1/8	210
	(dc)			
1	Radio Transmitter COL–52286	----------	10-3/4 x 23-9/16 x 13-1/4	66
1	Remote Control Unit COL–23140	----------	4-3/4 x 9-31/32 x 6-9/16	8

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,854

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	61.05	1,202

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

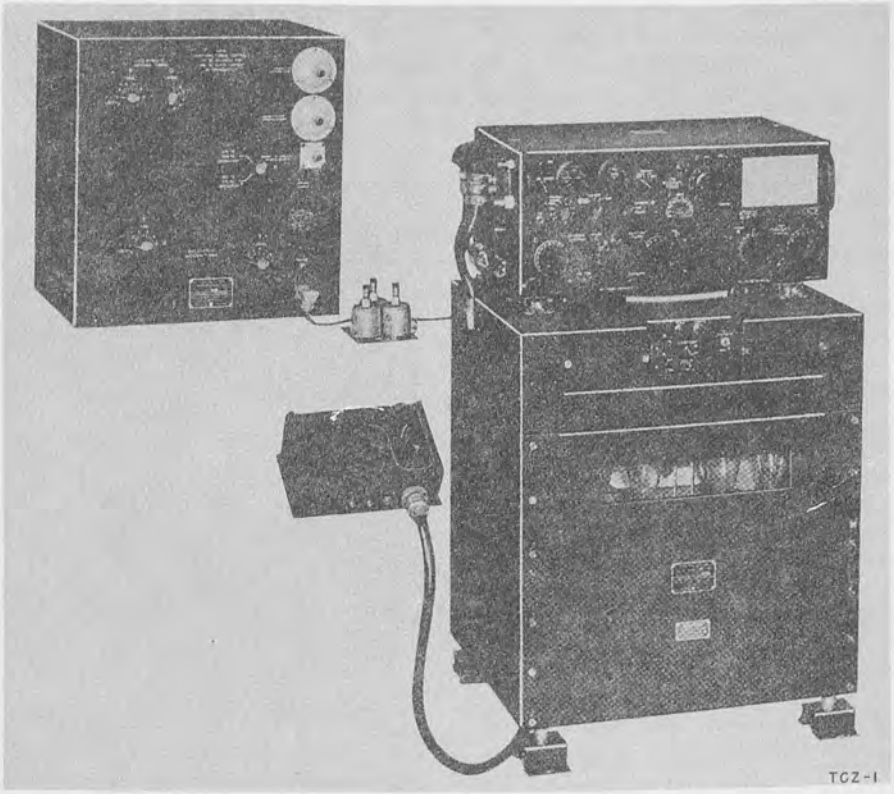
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NXs–491 9 May 1942	$5,540.00 including equipment spares

RADIO TRANSMITTING EQUIPMENT AN/URT-type

5 December 1958
Cognizant Serv: USN FSN: TCZ–1, TCZ–2

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	F16–Q–328560–200 (TCZ–1) F16–Q–328570–200 (TCZ–2)	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TCZ–1 and TCZ–2 are medium-power equipments designed for sh'p to shore use. An auto-tune system allows rapid automatic selection of eleven preset channels or, if desired, manual tuning is possible throughout the frequency range. Provision is also made for break-in operation, so that an associated receiver may be used with the transmitter. Remote control is possible through the use of one or more remote selector units, or through four- or six-wire radiophone units.

These two models are similar, except that this model operates from an alternating current source while the TCZ–2 uses a direct current source of power.

Both models are adaptations of the Aircraft Radio Transmitting Equipment ATC.

Equipment required but not supplied: microphone, telegraph key, head-phone, and antenna.

TECHNICAL CHARACTERISTICS:

Frequency:
Range: 200 to 18,100 kc
Control: Master oscillator
Type Emission: A1, A2, A3
Modulation Capability: 90%
Power Output: 100 w maximum
Keying Speed: 30 wpm
Tuning System: Automatic selection of 11 channels, and manual control
Input Impedance: 40 to 200 ohms
Antenna Type: Vertical, 20 to 35 feet
Power Requirements:
For TC2–1–1, 200 w; 110- or 115-v, 50- to 60-cycle, 1-phase ac, 80% pf
For TC2–2, 1,300 w at 115-v dc
Mounting Data: Deck mounted

AN/URT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna Load Coil COL–47505		19-3/4 x 18-5/8 x 15-1/2	48
1	Antenna Shunt Capacitor COL–481628		3-7/8 x 5 x 4-1/8	1.56
1	Crystal Unit CR–2B/U		7/16 x 1-1/16 x 1-1/2	.03
4	Interconnecting Cables 65X–7		11-11/32 long	.62
	65X–8		11-9/16 long	.56
	65X–9		120 long	.62
	65X–10		120 long	4
1	Motor-Generator Rectifier COL–211322 (for TCZ–1)		29-7/16 x 23-7/16 x 20-1/8	320
1	Radio Transmitter COL–52286–A		10-3/4 x 23-9/16 x 13-1/4	70
1	Remote Control Unit COL–23410		4-3/8 x 9-31/32 x 6-1/2	8
1	Dynamotor Assembly COL–211624 (for TCZ–2)		29-7/16 x 23-7/16 x 20-1/8	210

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,481(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7	8.06	1,765

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

DESIGN COG: USN, BuShips

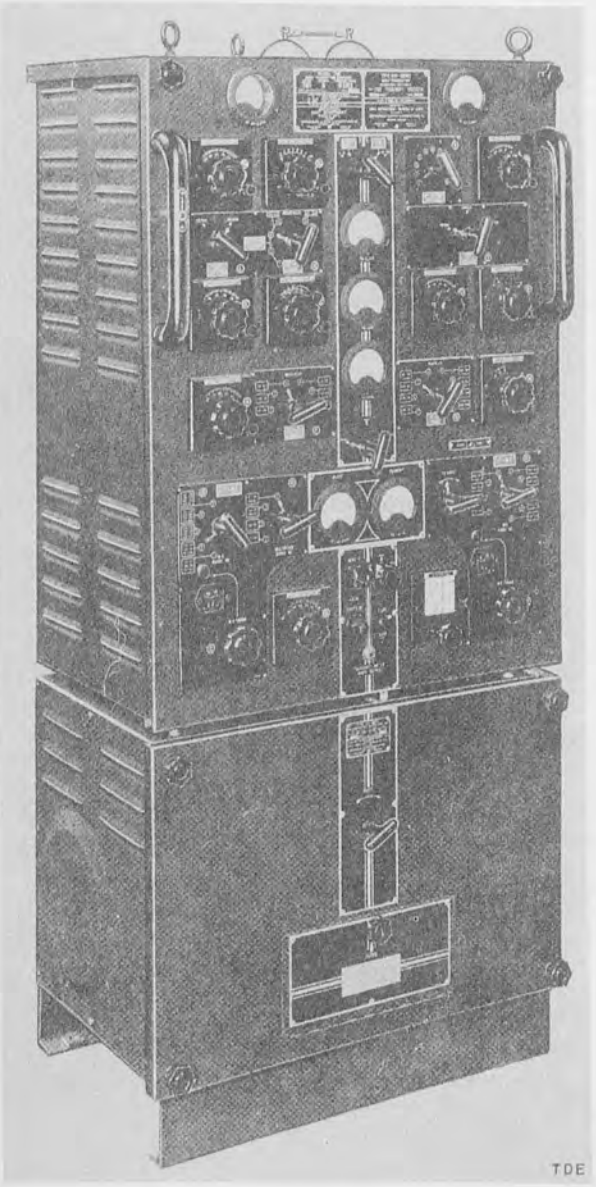
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa	NXsr–65358, 29 June 1944	

5 December 1958

RADIO TRANSMITTING EQUIPMENT **AN/URT-type**

Cognizant Serv: USN FSN: TDE, TDE–1, 2, 3

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	--	TDE: 16–Q–332125–200 TDE–1: 16–Q–332145–200 (115–230 ac) TDE–1: 16–Q–332196–200 (115 dc) TDE–1: 16–Q–332176–200 (220–440 ac) TDE–1: 16–Q–332155–200 (230 dc) TDE–2: 16–Q–332198–200 (115 dc) TDE–2: 16–Q–332178–200 (220–440 ac) TDE–2: 16–Q–332199–200 (230 dc) TDE–2: 16–Q–332200–200 (115 dc) TDE–3: 16–Q–332235–200 (440 ac)	--



TDE

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TDE and TDE–1, 2, and 3 are low-power sets designed to facilitate rapid installation aboard surface vessels or at shore stations. They may be operated from the front panel or from a remote point by a 4- or 6-wire remote control system. An hf and an mf transmitter may be used as a single unit, readily matched to a wide range of antennas; or, separate antennas may be used for the mf and hf sections.

These equipments are similar in design and operation; however, the major units vary with the type of power source available.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 0.3 to 1.5, and 1.5 to 18.1
Type of Emission: A1, A2, A3
Keying Speed: 100 wpm, maximum
Frequency Control: Master Oscillator
Power Output: A1—124 W; A2—35 W; A3—30 W
Power Source Required:
TDE and TDE–2—1, 2 kw, 115- or 230-v dc; or 1.2 kw, 60-cycle 3-phase ac
TDE–1 and TDE–3—1.2 kw, 115- or 230-v dc; or, 1.2 kw at 115- and 230-v 60-cycle, 1-phase ac; or 1.2 kw at 208-v 220-v, or 440-v 60-cycle 3-phase ac
Power Supply Equipment: Motor-generator set and rectifier power unit

AN/URT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	TDE:			
1 set	Equipment Spares	----------	----------	155
1	Motor Generator and Rectifier Power Unit	21848 or	22-13/16 x 28 x 19-7/16	372
		21849 or	22-13/16 x 28 x 19-7/16	372
		21850 or	22-13/16 x 28 x 19-7/16	355
		211030	22-13/16 x 28 x 19-7/16	360
1	Radio Transmitter	52267	39-13/16 x 28-1/4 x 20-1/2	334
1	Remote Control Unit	23305	3-9/16 x 5-7/16 x 5-3/16	3
	TDE–1, 3:			
1	Auto Transformer	301145	3-1/8 x 7 x 5-1/2	6.5
1 set	Equipment Spares	----------	----------	155
1	Motor Generator and Rectifier Power Unit	21848 or	22-13/16 x 28 x 19-7/16	372
		21849 or	22-13/16 x 28 x 19-7/16	372
		21850 or	22-13/16 x 28 x 19-7/16	355
		211030	22-13/16 x 28 x 19-7/16	360
1	Radio Transmitter	52267–A	39-13/16 x 28-1/4 x 20-1/2	334
1	Remote Control Unit	23381	3-11/16 x 5-7/16 x 5-1/8	3.5
	TDE–2:			
1 set	Equipment Spares	----------	----------	155
1	Motor Generator and Rectifier Power Unit	21848 or	22-13/16 x 28 x 19-7/16	372
		21849	22-13/16 x 28 x 19-7/16	372
1	Radio Transmitter	52267–A	39-13/16 x 28-1/4 x 20-1/2	334
1	Remote Control Unit	23305	3-9/16 x 5-7/16 x 5-3/16	3

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,389–1B; 95328

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	6.19	205

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG, BuShips

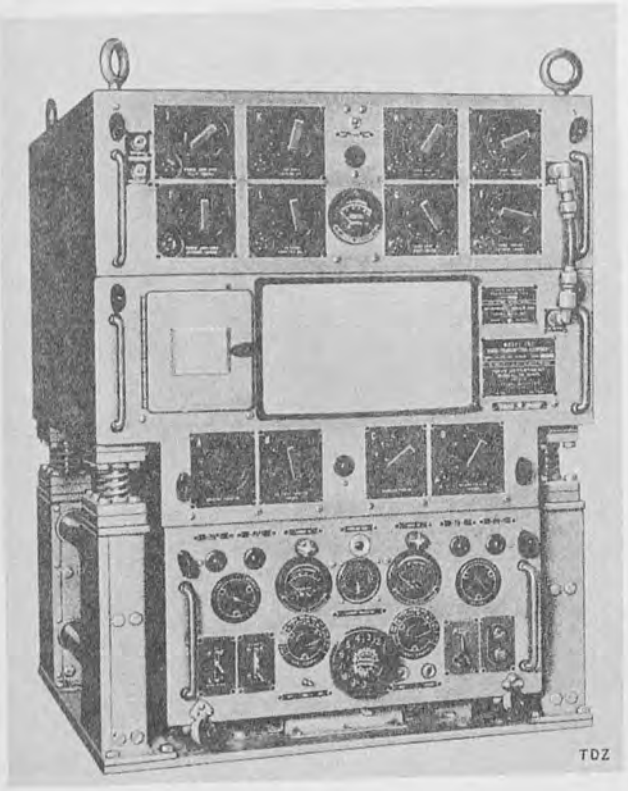
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Farnsworth Television & Radio Corp.	Fort Wayne, Ind.	NXss–33636	
Westinghouse Electric & Mfg. Co.	Baltimore, Md.	NXs–3179, NXs–20802, NXss–33634, NXsr–38682	

RADIO TRANSMITTING EQUIPMENT AN/URT-type

16 October 1958
Cognizant Serv: USN FSN: 110/220/440-v Ac, 5820-665-0003; 5820-644-3405 (with equipment spares)
115-v Dc, 5820-642-7709;
115-v Dc, 5820-642-7709; 5820-665-1804 (with equipment spares)
230-v Dc, 5820-665-0002; 5820-644-4872 (with equipment spares)

TDZ, TDZ-a

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



TDZ

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TDZ and TDZ-a are medium-powered, multichannel very-high-frequency/ultra-high-frequency equipments designed for shipboard, vehicular, or shore station communication within line-of-sight distances. Either of these equipments will provide manual or automatic selection of any one of 10 preset crystal-controlled channels by the use of a telephone type dial.

Features of the equipment include the selection of the type of emission and starting and stopping the equipment, in addition to automatic frequency selection, either at the transmitter or through a remote channel selector and indicator unit or a six-wire radiophone remote control unit. As many as four channel selector and indicator units and four radiophones may be used at one time.

Keying may be accomplished either locally or at a remote station. Relay keying speeds up to 40 words per minute are possible.

A carbon microphone such as the 510046C is required for operation but is not a part of the equipment. A vertical dipole type antenna such as the 66147 also may be used.

The TDZ and TDZ-a are physically and functionally identical. The TDZ-a differs from the TDZ in that it has been converted from 60- to 400-cycle power frequency operation.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Frequency Control: Crystal
Type Signal: AM, 95% maximum capability
Type Transmission: Mcw, voice
Type Keying: Relay
Keying Speed: 40 wpm max
Nominal Power Output: 30 w
Heat Dissipation:
Transmitter: 875 w (maximum)
Motor Alternator:
115-v Dc: 800 w (key down)
230-v Dc: 730 w (key down)
Power Requirements:
TDZ:
Ac Operation: 0.87/0.995/0.99 kva, 110/220/440-v 50- to 60-cycle 1 phase ac
Dc Operation: 1.6/1.53 kw, 115/230-v dc
TDZ-a: 110-v 400-cycle ac

AN/URT-type RADIO TRANSMITTING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Accessories			
1 set	Equipment spares			
1	Magnetic Controller:			
	21137 (for 115-v dc operation)		10-5/8 x 11-9/16 x 17-5/16	48
	211375 (for 230-v dc operation)		10-5/8 x 11-9/16 x 17-5/16	48
1	Motor-Generator Set:			
	211403 (for 230-v dc operation)		10-1/4 x 13-1/2 x 31-15/16	250
	211405 (for 115-v dc operation)		10-1/4 x 13-1/2 x 31-15/16	250
1	Radio Transmitter 52342		24-3/4 x 25-11/16 x 32-1/16	760
1	Remote Channel Selector 23445		4-7/8 x 6-7/8 x 6-7/8	7

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,809 (TDZ)
NAVSHIPS 91284 (TDZ–a)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	101.2	1,800

Note. Power conversion equipment for use with dc power source supplied as a separate shipment.

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Melpar, Inc.	Alexandria, Va.	NXsr–55652 (TDZ), 7 April 1944 NObar–43140 (TDZ-a), 13 December 1948	$8,992 with equipment spares

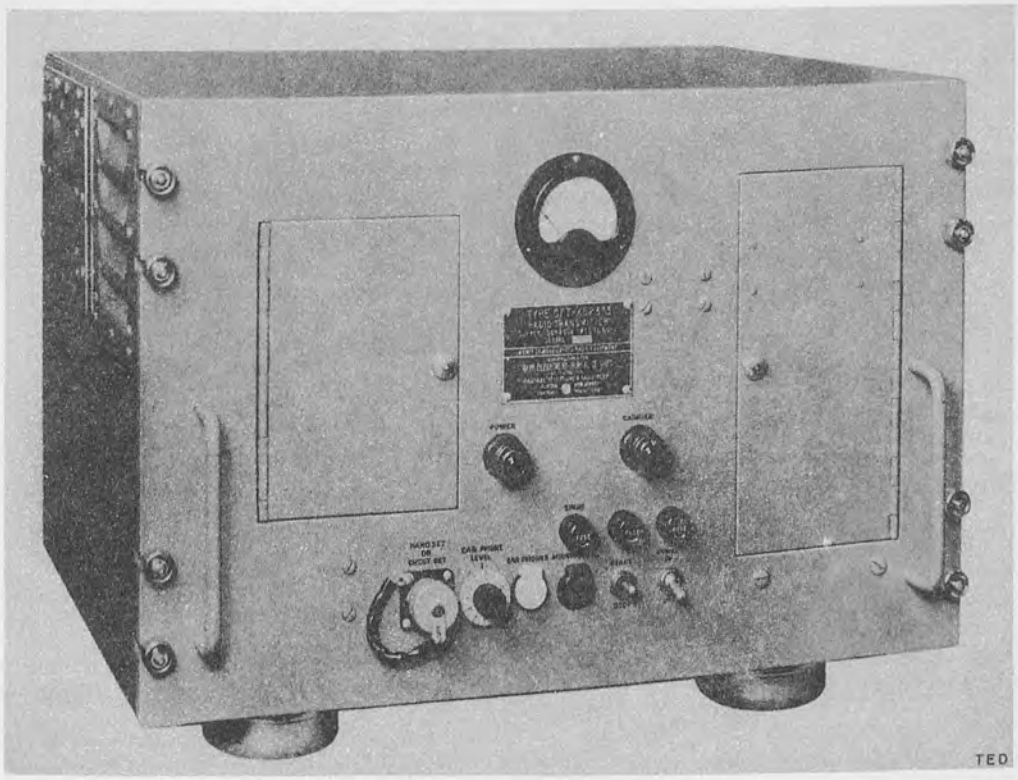
RADIO TRANSMITTING EQUIPMENT **AN/URT-type**

17 October 1958

Cognizant Serv: USN FSN: TED, 5820-643-6151; 5820-644-3331 (with equipment spares)
TED-1, 5820-642-6155; 5820-665-2005 (with equipment spares)
TED-2, 5820-642-6150; 5820-665-1661 (with equipment spares)

TED, TED-1, TED-2

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	TED: F16-Q-339598-200 TED-1: F16-Q-339599-200 TED-2: F16-Q-339597-200	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipments TED, TED-1, and TED-2 are single-channel, low-powered ultra high frequency radiotelephone transmitters used either for shipboard or shore aircraft control. The transmitters may be installed in surface ships or submarines or at shore stations. Each unit may be table mounted in its own cabinet or installed on a standard relay rack.

The equipment is designed for microwave or voice-modulated transmission within line-of-sight distances. The transmitters may be used in conjunction with an associated Radio Receiving Set AN/URR-13 and a standard shipboard remote control system. They also may be controlled through two control units, one for local operation and one for limited remote control.

Additional equipment required for operation includes

AN/URT-type RADIO TRANSMITTING EQUIPMENT

Radiophone Unit 23500, Handset 51081, Chest Set 51090, Crystal Unit CR–24/U, and Antenna AT–150/SCR, AS–390/SCR, or, for submarines, AS–468/B.

The TED, TED–1, and TED–2 are identical except for the remote control unit supplied with the TED only for land operation.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400

Frequency Control: Crystal

Type Signal: AM, 100% max capability

Type Transmission: Mcw, Voice

Power Output: 15 w

Imput Impedance: From microphone, 600 ohms

Output Impedance: To antenna, 50 ohms

Power Requirements: 750 w, 115/230-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Transmitted 23555 (TED only)	----------	5-13/16 x 4-7/16 x 3-5/16	4
3	Electrical Special Purpose Cable Assembly:			
(1)	CX–1826/U			
(1)	CX–1827/U			
(1)	CX–1828/U			
1	Radio Frequency Plug UG–218/U			
1	Radio Transmitter 52373	----------	13-23/32 x 19 x 15	145
1 box	Spare parts (TED only)	----------	15-1/8 x 43-1/8 x 16-3/8	139
1 box	Spare parts	----------	12-1/8 x 25-1/8 x 16-3/8	60

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91357

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	19	557

PROCUREMENT DATA

PROCURING SERVICE: USN

DESIGN COG: USN, BuShips

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Corp.	Clifton, N. J.	NObsr–39187 (TED)	$2,200 0
		NObsr–43268 (TED)	2,200.00
		NObsr–52036 (TED–1)	2,200.00
Westinghouse Electric Corp.	Baltimore, Md.	NObsr–49237 (TED–2)	2,200.00
		NObsr–52310 (TED–2)	2,200.00

RADIO TRANSMITTING EQUIPMENT AN/URT-type

7 October 1958
Cognizant Serv: USN FSN: 5820-642-6203 TED-3
5820-665-2051 (with equipment spares)

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TED-3 is a short range radio transmitting equipment that can be used aboard ships or submarines or in shore installations. The unit may be table mounted in the cabinet supplied or it may be installed in a standard 19-inch relay rack.

The equipment is designed for modulated continuous-wave or voice-modulated transmission in the frequency range of 225 to 400 megacycles. Its effective range normally is limited to line-of-sight distances. For voice transmission, special circuits in the transmitter modulator section provide higher speech intelligibility for a given carrier level than is obtained with conventional circuits.

Four remote radiophone units, plus antenna, crystal units, and interconnecting cables, are required in the operation of this equipment. Standard shipboard remote control units may be used, or Transmitter Control Unit 23555 may be used for limited control of the equipment from a point not normally equipped with standard remote control units.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Frequency Control: Crystal
Type Signal: AM
Type Transmission: Mcw, voice
Carrier Output: 12 to 15 w
Power Output: 35 w
Impedance:
Input: 600 ohms (for microphone)
Output: 50 ohms (to antenna)
Power Requirements: 750 w, 115/230-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Electrical Special Purpose Cable Assembly CX-1826/U			
1	Electrical Special Purpose Cable Assembly CX-1827/U			
1	Electrical Power Cable Assembly CX-3134/U			
1 set	Equipment spares	----------	12-1/8 x 16-1/2 x 25-1/4	89
2	Plug UG-2158/U			
1	Radio Transmitter 52373-B	----------	13-23/32 x 15 x 19	144

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91796

AN/URT-type RADIO TRANSMITTING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	14.7	331

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Westinghouse Electric Corp.	Pittsburgh, Pa.	NObsr–52310 NObsr–64599	$2,040.00 2,040.00

RADIO TRANSMITTING EQUIPMENT AN/URT-type

8 October 1958
Cognizant Serv: USN FSN: 5820-503-2472 (with equipment spares) TED-7

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TED-7 is a short-range radio transmitting equipment that can be used aboard ships or submarines or in shore installations. The unit may be table mounted in the cabinet supplied or it may be installed in a standard 19-inch relay rack.

The equipment is designed for modulated continuous-wave or voice-modulated transmission in the frequency range of 225 to 400 megacycles. Its effective range normally is limited to line-of-sight distances. For voice transmission, special circuits in the transmitter modulator section provide higher speech intelligibility for a given carrier level than is obtained with conventional circuits.

Four remote radiophone units, plus antenna, crystal units, and interconnecting cables, are required in the operation of this equipment. Standard shipboard remote control units may be used, or Transmitter Control Unit 23555 may be used for limited control of the equipment from a point not normally equipped with standard remote control units.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Frequency Control: Crystal
Frequency Stability: ±0.007% under any conditions or combination of conditions
Type Signal: AM
Type Transmission: Mcw, voice
Modulation:
Mcw: 90%
Voice: 100%
Carrier Output: 12 to 15 w
Impedance:
Input: 600 ohms
Output: 50 ohms (to antenna)
Audio Input Voltage: −25 db to +5 db from 0.006 with reference level (0.1 to 3.4 v)
Af Response: Flat within ±3 db from 1,000 cps response level, from 300 to 3,500 cps
Heat Dissipation: 725 w
Power Requirements: 750 w, 0.85 pf, 115/230-v 50- to 60-cycle 1 phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares	----------	12-1/2 x 16-1/4 x 16-1/4	51
2	Plug UG-218/U	----------	----------	.5
1	Radio Transmitter 52373-E	----------	13-23/32 x 15 x 19	144

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92701

AN/URT-type RADIO TRANSMITTING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	9.9	263

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-T-15244B(Ships)

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
CBS Columbia-Division of Columbia Broadcasting, Inc.	Long Island City, N. Y.	NObsr-64800 NObsr-59925	$860.00 860.00

RADIO TRANSMITTING EQUIPMENT AN/URT-type

8 October 1958
Cognizant Serv: USN FSN: TED-8

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Transmitting Equipment TED-8 is a short-range radio transmitting equipment that can be used aboard ships or submarines or in shore installations. The unit may be installed in the cabinet supplied or it may be mounted in a standard 19-inch relay rack.

The equipment is designed for modulated continuous-wave or voice-modulated transmission in the frequency range of 225 to 400 megacycles. Its effective range normally is limited to line-of-sight distances. For voice transmission, special circuits in the transmitter modulator section provide higher speech intelligibility for a given carrier level than is obtained with conventional circuits.

Four remote radiophone units, plus antenna, crystal units, and interconnecting cables, are required in the operation of this equipment. Standard shipboard remote control units may be used, or Transmitter Control Unit 23555 may be used for limited control of the equipment from a point not normally equipped with standard remote control units.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 225 to 400
Frequency Control: Crystal
Frequency Stability: ±.0007%
Type Signal: AM
Type Transmission: Mcw, voice
Modulation Capability: 100%
Nominal Carrier Output: 12 to 15 w
Impedance:
Input: 600 ohms
Output: 50 ohms
Audio Frequency Response: Flat within ±3 db from a 1,000 cps response level from 300 to 3,500 cps
Maximum Permissible Line Voltage Variation: ±10%
Heat Dissipation: 725 w
Power Requirements: 750 w, 0.85 pf, 115/230-v 50- to 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 set	Equipment spares	----------	10-3/4 x 16-3/8 x 16-3/8	45
2	Plug UG-21D/U	----------	----------	.5
1	Radio Transmitter 52373-F	----------	13-23/32 x 15 x 19	144

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92703

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	16.4	266

AN/URT-type RADIO TRANSMITTING EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Rauland-Borg Corp.	Chicago, Ill.	NObsr–71106	

CONTROL-MONITOR AN/URW-type

5 December 1958
Cognizant Serv: USN FSN: C–1947/U

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Control-Monitor C–1947/U provides audio remoting facilities for up to four channels for any receivers and transmitters in the high-frequency, very-high-frequency, and ultra-high-frequency range.

TECHNICAL CHARACTERISTICS:

Range of Audio Frequency Signals: 30 to 3,500 cps
Power Requirements: 110 v, 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control-Monitor C–1947/U			

(This equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/URW-type CONTROL-MONITOR

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN

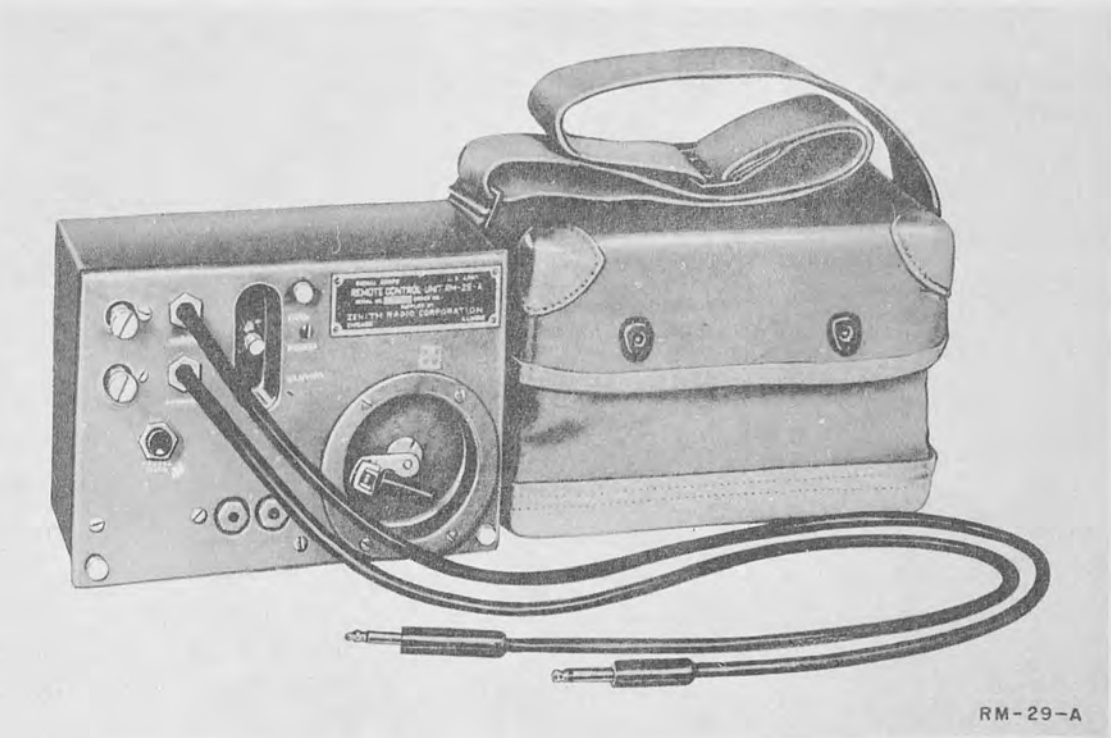
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

REMOTE CONTROL UNIT AN/URW-type

20 November 1958
Cognizant Serv: USA FSN: 5820-162-1306

RM-29-A

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	2C7629	--	--



FUNCTIONAL DESCRIPTION:

Remote Control Unit RM-29-A is a self-contained unit which provides for remote control voice operation of Radio Sets SCR-178, SCR-284 series, SCR-299 series, SCR-608 series, SCR-609 series, SCR-610 series, SCR-628 series, and other models of similar design.

The unit operates in conjunction with Telephone EE-8A over a two-wire telephone line. Microphone T-17 and Headset P-19 (or equivalents), when plugged into the unit, are used for transmission and reception of signals via the radio set, for monitoring signals between the telephone and the radio set and for direct telephonic communication with Telephone EE-8A.

Operational functions are selected by a switch on the front panel of the remote control unit.

This equipment is similar to Remote Control Unit RA-29-B, except for the mechanical placement of component parts.

TECHNICAL CHARACTERISTICS:

Power Requirements: 4-1/2 volts from Battery BA-27



MIL-HDBK-161

AN/URW-type REMOTE CONTROL UNI

MA

QTY	ITEM	ST
1	Case CS–76–B	------
1	Remote Control Unit RM–29–A	------

REFERENCE DATA AND LITERATURE:
TM 11–308

PKGS

PRO

PROCURING SERVICE: USA
SPEC &/or DWG:

CONTRACTOR LOC

Zenith Radio Corp — Chicag

1968

T

JOR COMPONENTS

OCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
----------	7 x 9-1/4 x 10-1/2	2.0
----------	5-3/16 x 6-5/16 x 9-5/16	13.5

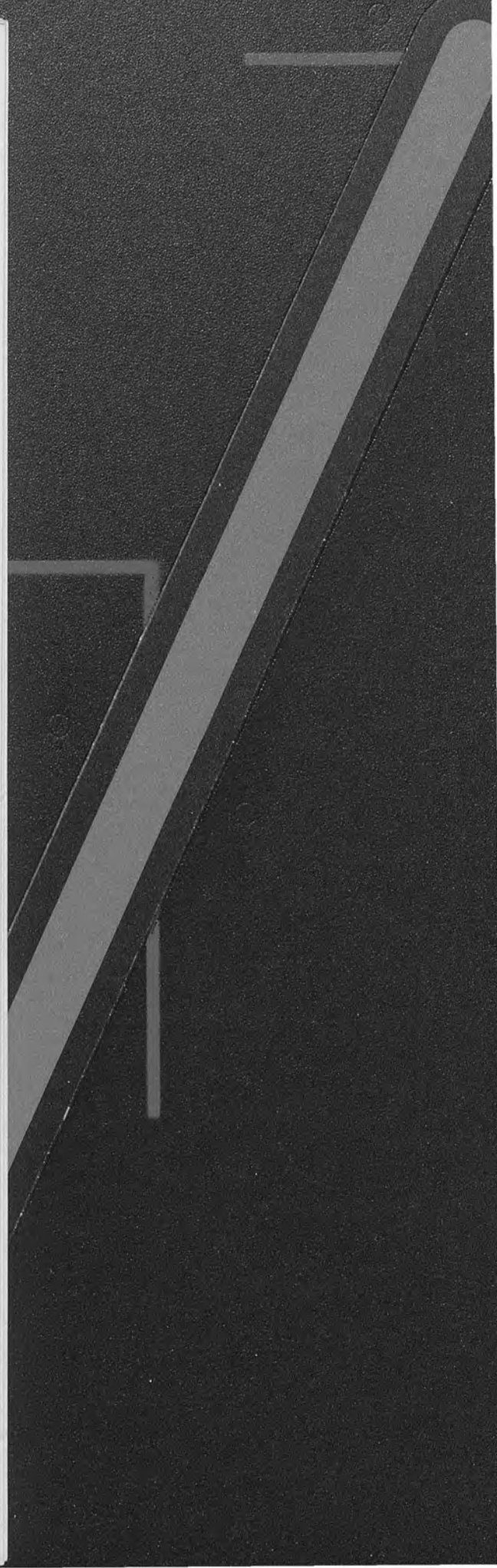
SHIPPING DATA

	VOLUME (Cu Ft)	WEIGHT (Lbs)

OCUREMENT DATA

DESIGN COG: USA, Sig C

CATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
go, Ill.	Order No. 7880–Phila–40	



VOLTAGE REGULATOR AN/USA-type

5 December 1958
Cognizant Serv: USN FSN: CN–154/U

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --		--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Voltage Regulator CN–154/U is an electromechanical unit designed to automatically regulate fluctuating alternating current lines and to maintain a constant output voltage regardless of line or load changes.

It provides a constant output of 117 volts, alternating current, 1-phase, at 4 kilovolt-amperes with inputs ranging from 100 to 135 volts at any frequency from 45 to 65 cycles per second.

Voltage Regulator CN–154/U is similar to Voltage Regulator CN–154A/U except that in the CN–154A/U an aluminum cabinet is used instead of steel and no mounting plate is included.

Equipment required, but not supplied, with Voltage Regulator CN–154/U consists of connecting cables as required.

TECHNICAL CHARACTERISTICS:

Output Range: 4-kva (max) at 110- to 120-v, ±1%, 60-cycle 1-phase ac

Heat Dissipation:
1/4 load: 23.5 w
1/2 or Full Load: 25 w

Power Requirements: 40 amp (max) 100- to 135-v, 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Maintenance parts kit	----------	6 x 6 x 12	2.5
1	Voltage Regulator CN–145/U	----------	13-3/16 x 13-1/4 x 32-1/4	176

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91546(A)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	20.4	524

AN/USA-type VOLTAGE REGULATOR

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: SHIPS-S-228

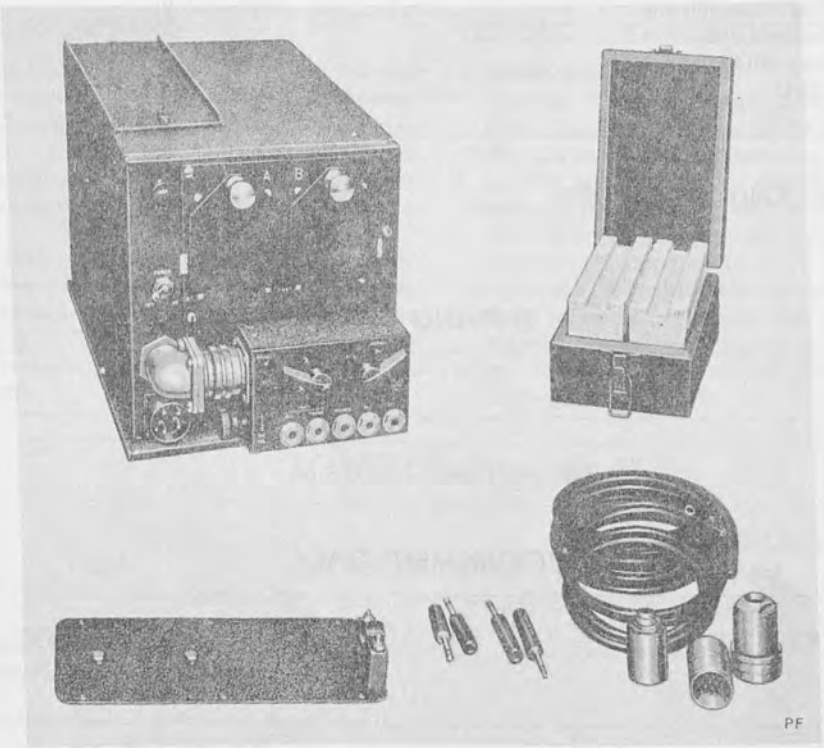
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Sangamo Electric Co.	Springfield, Ill.	NObsr-43419 NObsr-52018 NObsr-52043 NObsr-52186 NObsr-52339 NObsr-52509 NObsr-64056	$570.00 with spares

AUDIO SIGNAL SCRAMBLING EQUIPMENT AN/USA-type

5 December 1958
Cognizant Serv: USN FSN: 5805–644–4703 PF

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Audio Signal Scrambling Equipment PF is a device for obtaining voice or telegraphy privacy by scrambling (or coding) either type of signal at the transmitting terminal of a communication link, and unscrambling (or decoding) at the receiving terminal. It normally is used in conjunction with a suitable radio transmitter and receiver for this purpose.

TECHNICAL CHARACTERISTICS:

Temperature Range: −40° F. to +140° F.
Power Requirements: 22–30-v dc

AN/USA-type AUDIO SIGNAL SCRAMBLING EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Audio Signal Scrambling Unit and Enclosure 68AAA		8-1/2 x 8-1/2 x 14	22.8
1	Control Unit 23ACT		2-1/2 x 3 x 6	.9
1	Mounting Plate Assembly for Remote Control 10131		1-1/2 x 4 x 9	.3
1	Mounting Base 10140		2 x 9 x 13	.6
1	Card Set 151541		3-3/4 x 4-3/4 x 7-1/2	3.8

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900922

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co., Inc.	New York, N. Y.	NXS 4526	$1,650.00

TELEPHONE TERMINAL AN/USA-type TA-269/U

1 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Telephone Terminal TA-269/U provides two-way telephone conversation over a radio circuit from a two-wire or four-wire telephone system. Connections are provided to extend the two-wire voice circuit to a point remote from the terminal; or a local four-wire handset can be used to communicate over either the radio circuit or over the two-wire voice line to a remote point.

By setting a remote three-position switch, the internal circuits of this equipment can be switched by relays for communication with the local handset over the radio circuit, to the remote station (or PBX board), or for the usual communication from the remote station on the two-wire line over the four-wire radio circuit.

TECHNICAL CHARACTERISTICS:

Frequency Range:
Amplifier Response: Within 2 db from 200 to 3,500 cps
Filter Band-Pass: Within 3 db from 200 to 3,000 cps
Power Output: +8 dbm (maximum) output level of both receiver and transmitter amplifier
Sensitivity: Input signal to the limiter circuit at level of −15 dbm to to +6 dbm appears at limiter circuit output at level of −28 dbm to −18 dbm
Amplification: Signal from limiter output (−28 dbm to −18 dbm) amplified by transmitting amplifier with adjustable amplification gain of 8 to 35 db
Power Requirements: 35 w, 115/230-v (±10%) 50-60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Telephone Terminal TA-269/U	----------	5-1/4 x 16 x 19	53

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92181

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.5	83

AN/USA-type TELEPHONE TERMINAL

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: Part No. HD-5700

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radio Frequency Laboratories, Inc.	Boonton, N. J.	NObsr-52374	$3,850.00

MODULATOR AN/USM-type

4 December 1958
Cognizant Serv: USN FSN: MD-83A/ARN

	USA	USN	USAF
TYPE CLASS:	--	Used by	Used by
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Modulator MD-83A/ARN is designed to facilitate the testing and calibrating of omni-range navigation receivers for aircraft use.

In conjunction with Signal Generator SG-1/ARN, this equipment provides a synthesis of signals encountered in reception and interpretation of omni-range, tone localizer, voice, and glide slope facilities. In addition, the various components of these signals are available singly and in combination for test purposes.

All voltages obtained from the modulator are generated mechanically.

TECHNICAL CHARACTERISTICS:

Output Voltage: 3 v
Voltage Stability: ±5%
Frequency Stability: Dependent upon power source
Phase Angle Stability: ±0.2
Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Modulator MD-83A/ARN	----------	12 x 12 x 15	60

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

TO 33A1-8-37-1

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/USM-type MODULATOR

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuAer

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Collins Radio Co.	Cedar Rapids, Iowa		

DUAL RECORDING EQUIPMENT AN/USP-type

5 December 1958
Cognizant Serv: USN FSN: CXDB

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Dual Recording Equipment CXDB is an electromechanical equipment, versatile in its functions and highly accurate. It provides a means for recording, playback, or rerecording of an applied signal. Signals continuing for an extended period of time can be recorded without loss of continuity by means of overlap recording, since the CXDB provides two recorder-reproducer units.

The equipment has been designed for the recording, playback, and dubbing (rerecording) of 16-inch acetate coated recording disks rotated at a speed of 33-1/3 revolutions per minute. The rotating speed is maintained to high accuracy by internal means. The design of the equipment is such that both cutterhead and pickup are held by the same carriage arm which facilitates their tracking in a radial line. Variable equalizers, attenuators, and amplifier controls serve to make the frequency response of the recording and playback processes widely controllable. The equipment contains a monitoring speaker and test equipment consisting of an oscilloscope and a dial test indicator.

All units have been treated for moisture and fungus.

The following equipment is used with, but not supplied with, Dual Recording Equipment CXDB: dividers (1 set), Chatillion scale (1), and test equipment as required.

TECHNICAL CHARACTERISTICS:

Frequency Response: 30 to 10,000 cps; 70 to 8,000 cps±3 db (amplifier-equalizer control knobs in counterclockwise position and pickup equalizer at position 3)

Impedances:
- Amplifier Input: 50, 250, and 500 ohms, balanced or unbalanced
- Amplifier Output: 500 and 8 ohms
- Attenuator: 500 ohms
- Cutterhead: 500 ohms
- Pickup: 50 ohms
- Repeater Transformer: 500 ohms
- Speaker: 8 ohms

Rotating Speed: 33-1/3 rpm

Accuracy: One part in 100,000

Cutterhead: Magnetic type

Pickup: Dynamic type with diamond-tipped stylus

Cutter or Pickup Equalizer: A capacitance and resistance network

Heat Dissipation:
- Amplifier Cabinet: 175 w
- Recorder Cabinet: 275 w

Power Requirements: 11.9 amp (max) at 115-v, 60- cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Amplifier Cabinet (including jack panels) 10AYE	----------	16-7/8 x 22-3/4 x 82-1/2	180
2	Amplifier Equalizer Unit 10AYC	----------	11-5/8 x 19 x 21	50
3	Attenuator Unit 10AYD	----------	4-3/16 x 5-3/16 x 19	8
1	Constant Voltage Transformer 10AYJ	----------	5-5/8 x 6-15/16 x 14-1/2	38
2	Control and Speaker Unit 10AYF	----------	4-7/8 x 10-1/2 x 19	15
1	Dial indicator	----------	----------	8
1	External cables	----------	99 ft	10
1	Frequency Comparator Unit 10AYG	----------	3-1/2 x 5-1/16 x 19	8

AN/USP-type DUAL RECORDING EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Frequency Standard Unit 35135–A		7 x 7-1/8 x 19	13
2	Inverter Power Supply Unit 20550–A		10-1/2 x 14-1/8 x 19	75
2	Maintenance repair part box (Case 1 and 2)		9-1/2 x 16 x 25	90
1	Maintenance repair parts box (Case 3)		12-1/2 x 19-1/2 x 37-1/2	180
1	Maintenance repair parts box (Case 4)		9-1/2 x 13 x 13	30
1	Oscilloscope Unit OBL–3b		7 x 15-5/16 x 19	29
2	Recorder Cabinet 10AYM		20-1/2 x 23-3/8 x 53-1/4	260
2	Recorder Unit 10AYK (with microscope)		17 x 17-1/2 x 21	65
1	Repeater Transformer Unit 10AYH		3-1/2 x 5-1/16 x 19	10
2	Stroboscope and Control Unit 10AYL		5-1/4 x 11-1/4 x 19	15

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91830

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
20	136.2	2,600

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Engineering Research Associates, Inc.	St. Paul, Minn.	NObsr–28476, 7 February 1946 NObsr–42001, 4 August 1947 NObsr–63010	

COMBINATION RADIO RECEIVER AND RECORD PLAYER AN/USP-type

5 December 1958
Cognizant Serv: USN FSN: RCT: 5820-644-3401
RCU: 5853-644-4509
RCU-1: 5835-323-9075

RCT, RCU, RCU-1

USA	USN	USAF
TYPE CLASS: --	Used by --	--
STOCK NO: --	*RCT:* F16-Q-263230-200	--
	RCU: F16-Q-263980-200	
	RCU-1: F16-Q-263981-100	

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Combination Radio Receiver and Record Players RCT, RCU, and RCU-1 are combination radio receiver and record player units, installed in a console cabinet that also houses dual speakers. An auxiliary cabinet is also supplied ,which accommodates 200 10- or 12-inch records in four compartments.

The RCT, RCU, and RCU-1 are identical in all respects except for the type of record player supplied. The RCT is equipped with a manual player with a turntable capable of 33-1/3 revolutions per minute for transcriptions only and 78 revolutions per minute for records or transcriptions. It plays recordings up to 12-inch diameter. The RCU and RCU-1 incorporate an automatic record changer that will accommodate 10- and 12-inch records, but the sizes cannot be intermixed.

TECHNICAL CHARACTERISTICS:

Radio:

Frequency Range:

Broadcast: 535 to 1720 kc

Police: 1,667 to 5,680 kc

Short Wave: 5.6 to 18.4 mc

Phonograph:

RCT: Manual record player

RCU: Automatic record player

RCU-1: Automatic record player

Power Requirements: 180 w, 110- to 220-v 50- to 60-cycle ac (Switch located in rear of cabinet provides selection of 110- to 220-v power source operation).

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	For RCT:			
1	Radio Phonograph Combination 46226		36-1/4 x 36-1/4 x 19-1/2	
1	Record Cabinet 10280		13-7/8 x 14 x 24-7/8	
	For RCU:			
1	Radio Phonograph Combination 46227		36-1/4 x 36-1/4 x 19-1/2	
1	Record Cabinet 10280		13-7/8 x 14 x 24-7/8	
	For RCU-1:			
1	Radio Phonograph Combination 46228		36-1/4 x 36-1/4 x 19-1/2	
1	Record Cabinet 10280		13-7/8 x 14 x 24-7/8	

AN/USP-type COMBINATION RADIO RECEIVER AND RECORD PLAYER

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,914

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
The Magnavox Co.	Fort Wayne, Ind.	NXss–31869, 18 June 1943 NXss–8655	

RADIO RECEIVING AND REPRODUCING EQUIPMENT AN/USQ-type

20 November 1958
Cognizant Serv: USN FSN: REK

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	F16–Q–276590–200	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving and Reproducing Equipment REK is designed for hospital ship or shore use to amplify and distribute program material from recordings and microphones or from either of two radio receivers. Programs can be distributed to the various wards; patients receive them by means of earphones plugged into convenient outlets.

Four amplifiers provide four program channels which may be switched to one or more wards. The two radio receivers are identical and provide coverage of standard and short-wave broadcasts or cw transmission. An adjustable-speed turntable is provided for recording, and an automatic record changer provides for reproduction. A microphone may be plugged into each of the four amplifiers for announcements; a comprehensive switching system allows selection of the desired input to each amplifier.

This equipment is designed to be installed in two cabinet-type racks side-by-side, bolted together. In addition, the two racks may be securely bolted to the floor or deck.

TECHNICAL CHARACTERISTICS:

Receiver Frequency Range: 535 to 32,000 kc.
Outlet Capacity: Approximately 800
Power Requirements: 610 w, 105–125-v 50–60-cycle ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
4	Aeropressure microphone	----------	6 x 2 x 2-1/2	2.5 ea
4	Amplifier panel and shelf assemblies	----------	10 x 19 x 19-1/2	31.0 ea
2	Distribution transformer panel			
2	Monitor speaker panel			
2	Output distribution switch panel	----------	19 (wide) x 3-1/2 (deep)	
2	Radio receiver CRV–46246	----------	11 x 19-1/4 x 19-1/4	
1	Record changer and shelf assembly	----------	12-7/16 x 20-3/16 x 16-3/16	
2	Relay rack			
2	Relay rack			
2	Switch and fuse panel	----------	5-7/32 x 19 x 2-3/4	8.5 ea
1	Turntable and pickup shelf			
2	Volume indicator and control panel	----------	5-7/32 x 19 x 2-1/2	

REFERENCE DATA AND LITERATURE:

NAVSHIPS 900,961

AN/USQ-type RADIO RECEIVING AND REPRODUCING EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
RCA Victor Division, Radio Corporation of America	Camden, N. J.	NXsr-62358 NXsr-95123 N5sr-4661	$2,372.00

TELEVISION CAMERA GROUP AN/UXA-5(XN-1)

3 December 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Television Camera Group AN/UXA-5 (XN-1) consists of a complete unit designed for the generation and presentation of a television image.

A camera unit views the scene to be televised, and under control of the camera control unit generates a television signal of 525 sequentially scanned lines at a frame rate of 50 per second. The signal is presented on a picture display monitor, contained in the control-monitor unit.

The power supply unit furnishes power for the camera and the control-monitor units.

Controls for the camera unit are provided in the control-monitor unit. This permits unattended operation of the camera unit.

TECHNICAL CHARACTERISTICS:

Camera Unit:
Type of Pickup Tube: Vidicon
Maximum Location From Point of Control: 100 ft
Maximum Lens Aperture: F/2.7
Focal Length of Lens: 25 mm
Light Filter Density: 0 to 2.1 in 8 steps of 0.3 density
Scene Highlight Brightness: 100 to 10,000-ft lamberts

Scanning:
Total Lines: 525
Line Rate: 26 kc; adjustable from 22 to 32 kc
Frame Rate: 50 cps; adjustable from 40 to 69 cps

Presentation:
Picture Monitor: 10-in. cathode-ray tube
Wave Form Monitor: 3-in. cathode-ray tube

Video Amplifier Bandwidth: 10 mc

Wave Form Monitor Sweep Rates: 18 kc and 25 cps

Blanking Pulse Duration:
Horizontal Period: 12 to 18%
Vertical Period: 4 to 8%

Power Consumption:
Control Monitor Unit: 800 w
Video Indicator Unit: 300 w

Power Requirements: 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Ac power cord	----------	120 lg	1.5
1	Camera	----------	5-1/2 x 7-3/4 x 50	15
1	Camera cable	----------	600 lg	23
1	Camera cable	----------	300 lg	13
1	Control monitor	----------	17-1/4 x 18-1/4 x 19	138
1	Indicator, Video IP-178 (XN-1)UX	----------	14 x 18-1/4 x 18-1/2	127
1	Power cable	----------	180 lg	5
1	Power supply	----------	12-1/2 x 15 x 21-1/2	146

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91677

AN/UXA-5(XN-1) TELEVISION CAMERA GROUP

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Allen B. DuMont Laboratories, Inc.	Passaic, N. J.	NObsr-52594, 13 June 1951	

FREQUENCY SHIFT RECEIVER EQUIPMENT AN/UXA-type

5 December 1958
Cognizant Serv: USN FSN: FRB

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--



FUNCTIONAL DESCRIPTION:

Frequency Shift Receiver Equipment FRB is designed for ship or shore installations, and is used to convert audio frequency shift facsimile signals to amplitude-modulated audio signals. The signals are fed to a local facsimile machine by use of a loss pad, or to a remote facsimile machine by opening the loss pad circuit. The equipment is engineered to eliminate modulation caused by fading.

Audio FM keyer Equipment FSJ is often used with this equipment to form a converter-inverter system in conjunction with Facsimile Transmitter-Receiver Equipment TT–41/TXC–1B and Facsimile Transmitter-Receiver Equipment TT–66/TXC.

TECHNICAL CHARACTERISTICS:

Frequency Range in Kc: 1.0 to 2.5, and 2.1 to 3.0
Type Modulation: FM
Type of Signal: Frequency shift
Input Impedance: 600 ohms
Signal Output Level: Adjustable, 0 to +20 db
Output Carrier Frequency: 1,800 cps
Power Output:
Output level: 0 dbm to +10 dbm across 600 ohm load
Power Consumption: 87 w
Power Requirements: 100- to 125-v, 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Frequency Shift Receiver Inverter Model FRB	----------	10-1/2 x 14-3/4 x 22	74

(This equipment consists of only one major component.)

AN/UXA-type FREQUENCY SHIFT RECEIVER EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVPERS 10857
NAVSHIPS 95002

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Acme Newspictures, Inc.	Cleveland, Ohio	NXsr-85015	$3,000.00 with spares

AUDIO FM KEYER EQUIPMENT AN/UXA-type

26 November 1958
Cognizant Serv: USN FSN: 5815-665-1996 FSJ

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Audio FM Keyer Equipment FSJ is for converting facsimile or amplitude-modulated audio carrier to a frequency-shifted audio tone. It is intended for either shore or ship use.

TECHNICAL CHARACTERISTICS:

Terminal Impedance: 600 ohms
Input Level, Minimum: 0 dbm
Output Level: 9 to 10 dbm
Maximum Keying Frequency: Greater than 900 cps
Power Requirements: 150 w, 115-v 60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Audio FM Keyer FSJ	----------	8-3/4 x 12-1/8 x 19	75

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95002

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

AN/UXA-type AUDIO FM KEYER EQUIPMENT

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

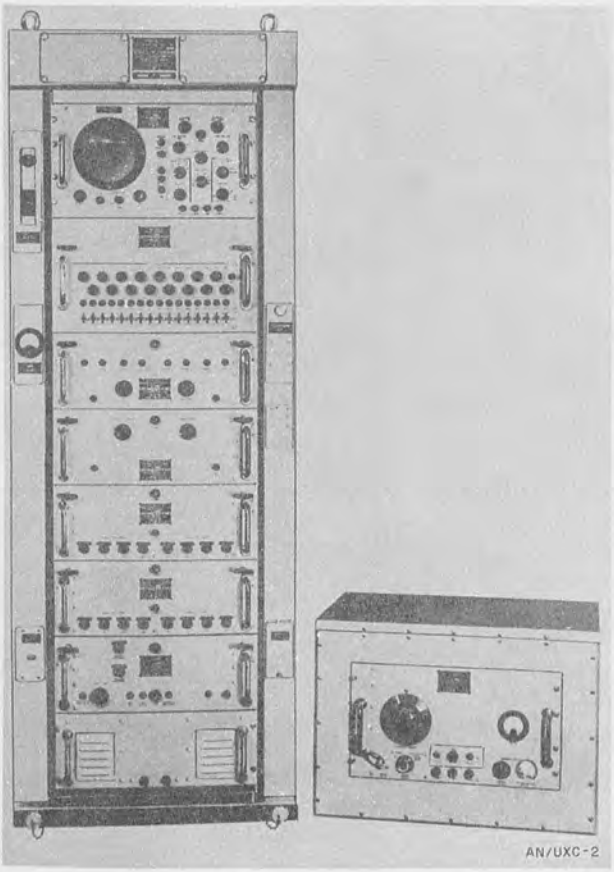
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Acme Newspictures	Cleveland, Ohio	NXsr–85015	$700.00 with spares

TELEGRAPH MULTIPLEX SET AN/UXC-2

3 December 1958
Cognizant Serv: USN FSN: 5815-644-4808

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Telegraph Multiplex Set AN/UXC-2 is a single channel time and frequency division multiplex system that will combat the effects of propagational disturbances during radio transmission. It is used as terminal equipment at each end of a radio circuit to handle mark-space information that can withstand being sampled at 1 millisecond intervals without any objectionable loss of information.

This equipment effectively eliminates fading and multipath propagation disturbances. Special features include a telegraph key for manual continuous wave type transmission.

The set is intended to be installed in a fixed location. It can be used with any facsimile equipment operating from 1 millisecond, or slower, mark-space information.

TECHNICAL CHARACTERISTICS:

Frequency: 875; 1,125; 1,375; 1,625; 1,875; 2,125; 2,375; 2,625; 2,875; 3,125; 3,375; 3,625; 3,875; 4,125; 4,375; 4,625 cps
Bandwidth: 125 cps for each channel
Type Modulation: 125 cps lower side band
Impedance:
Input to Transmitter: 75 ohms
Output from Transmitter: 600 ohms
Input to Receiver: 600 ohms
Output from Receiver: 75 ohms
Heat Dissipation:
Main Cabinet Equipment:
Transmitting Position: 1,035 w at 115-v 60-cycle 1-phase ac, 59 BTU per minute
Receiving Position: 920 w at 115-v 60-cycle 1-phase ac, 52 BTU per minute
RF Oscillator O-216/U:115 w at 115-v 60-cycle 1-phase ac, 6.6 BTU per minute
Power Requirements: 20 amp, 115-v ±10%, 50- to 60-cycle, 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Blower Assembly	----------	7 x 10-1/6 x 19	16
1	Cabinet CY-859/UXC-2	----------	22 x 26 x 72-7/16	440
1	Electrical Synchronizer SN-110/UXC-2	----------	7 x 19 x 20-3/4	48
1	Filter Assembly F-100/UXC-2	----------	7 x 19 x 20-3/4	79

AN/UXC-2 TELEGRAPH MULTIPLEX SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Oscilloscope OS–41/U		10-1/2 x 19 x 20-3/4	48
1	RF Oscillator O–216/U		18-3/8 x 21-3/4 x 26-1/2	107
1 Set	Equipment spares		17 x 26 x 31	
1	Telegraph line Control C–1120/UXC–2		7 x 19 x 20-3/4	58
1	Telegraph Multiplex Receiver R–370/UXC–2		7 x 19 x 20-3/4	53
1	Telegraph Multiplex Transmitter T–423/UXC–2		7 x 19 x 20-3/4	67
1	Telegraph Multiplex Transmitter T–424/UXC–2		7 x 19 x 20-3/4	67

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92153

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	68.20	1,632

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL–T–16295(SHIPS)

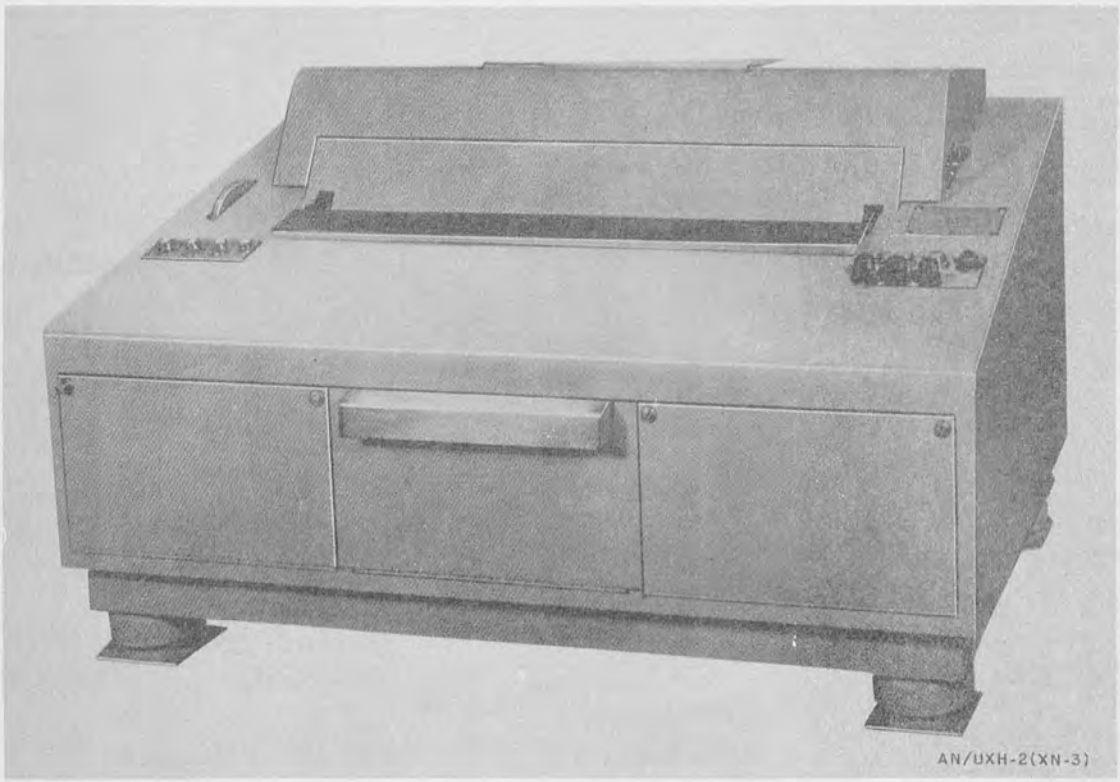
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Melpar, Inc.	Alexandria, Va.	NObsr–52652, 25 June 1951	$21,000.00

FACSIMILE RECORDER SET AN/UXH-2(XN-3)

3 December 1958
Cognizant Serv: USN FSN:

USA	USN	USAF
TYPE CLASS:	Used by	Tent-Std
STOCK NO:		



FUNCTIONAL DESCRIPTION:

Facsimile Recorder Set AN/UXH-2(XN-3) is a continuous web-type unit designed to automatically produce a record of information transmitted by facsimile. It permits long periods of unattended operation while recording data received from a transmitter capable of sending the proper control signals.

This equipment automatically compensates for changes in signal level between transmissions; it will automatically phase, and start the recording as well as stop the apparatus when the transmission is completed.

The control signal adapter of the AN/UHX-2(XN-1) is an accessory used between any one of the Facsimile Transmitters AN/TXC-1, AN/TXC-1A, AN/TXC-1B, AN/TXC-1C or AN/TXC-1D and the Facsimile Recorder Set AN/UXH-2(XN-3).

TECHNICAL CHARACTERISTICS:

Recording Width: 18.85 in.
Type Recording: Direct stylus
Scans Per Minute: 30, 60, 120
Type Modulation: AM
Input Frequency: 450 cps to 2,700
Speed Control: Synchronous motor controlled by 1,800 cps fork oscillator
Signal Level: +4 to −36 dbm
Input Contrast: 8 to 16 db
Power Consumption: 270 w at 11-v or 230-v
Power Requirements: 115-v or 230-v, 45- to 65-cycle, 1-phase ac

AN/UXH-2(XN-3) FACSIMILE RECORDER SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONJ (Inches)	WEIGHT (Lbs)
1	Facsimile Recorder Set AN/ UXH-2(XN-3)	----------	16 x 21-3/4 x 30	180

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92735

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG: MIL-F-19480

DESIGN COG: USN, BuAer

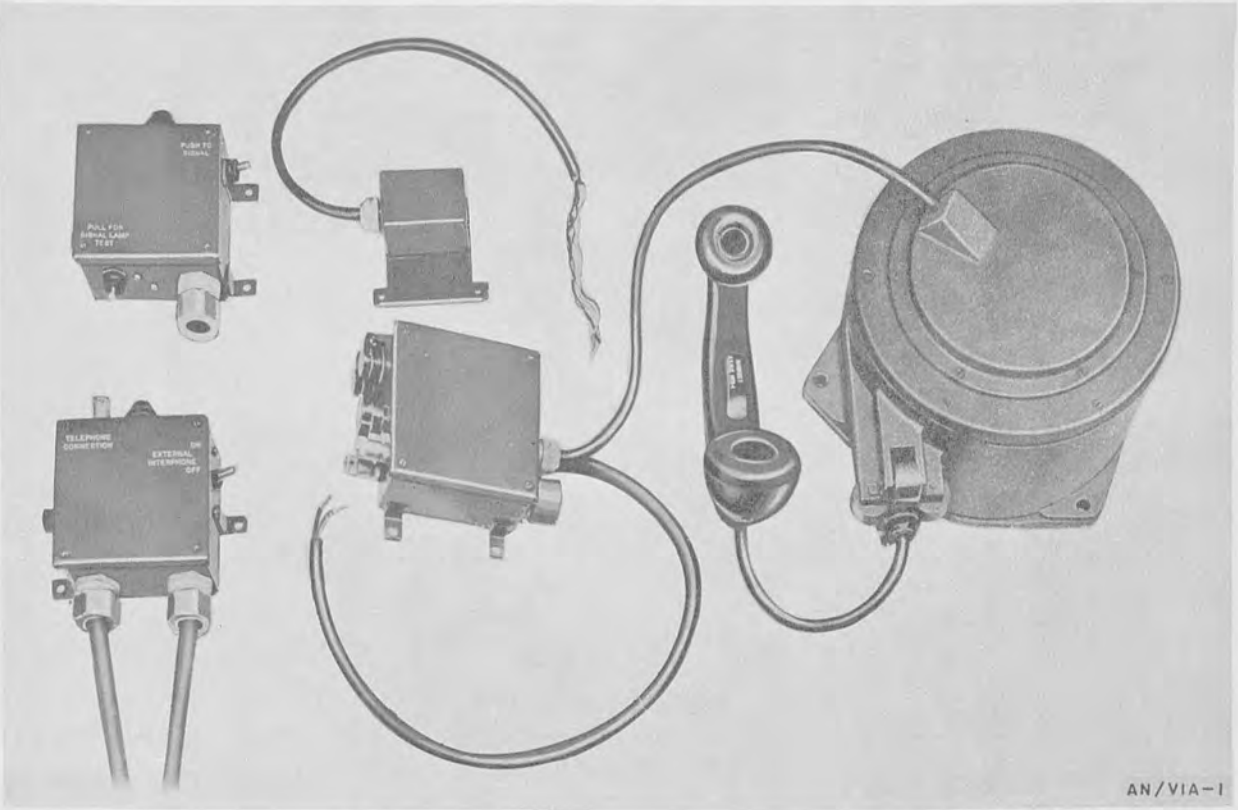
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Times Facsimile Corp.	New York, N. Y.	NObsr-57278, 1 April 1952	

AUXILIARY INTERPHONE EQUIPMENT AN/VIA-1

1 December 1958
Cognizant Serv: USA FSN: 5830-539-7728

USA	USN	USAF

TYPE CLASS: Std
STOCK NO: 2C2100-1



FUNCTIONAL DESCRIPTION:

Auxiliary Interphone Equipment AN/VIA-1 is an assemblage of components used to extend a vehicular interphone system to the exterior of the vehicle. It is used in inclosed or armored vehicles.

This equipment consists essentially of interphone station control units that are installed within the vehicle, and a cable reel which includes a handset and a control unit designed to be mounted on the exterior of the vehicle to provide an outside interphone station.

The stations of this system have call signal lamps to indicate that control with the exterior station is desired.

The only adjustment provided is for control of volume.

The equipment is powered by the electrical system of the vehicle in which it is installed.

TECHNICAL CHARACTERISTICS:

Facilities: Can be used with Radio Sets SCR-508, -528, -608, -628, or AN/VRC-3 or with Interphone Equipment RC-99 or similar types of units.

Type Controls:
C-663: External interphone ON-OFF switch
C-664: External interphone PUSH TO SIGNAL switch
C-665: VOLUME

Power Output: Dependent on interphone system

Power Requirements: Draws required power from system to which it is connected.

AN/VIA-1 AUXILIARY INTERPHONE EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cable Reel RL-149/VIA-1		10-3/16 x 9-13/16 x 5-13/16	
1	Handset MTS-1 (USMC)		8-7/8 x 2-3/4 x 3-1/2	
1	Interphone Control C-663/VIA-1		6-3/8 x 4-7/16 x 5-15/16	
1	Interphone Control C-664/VIA-1		6-3/16 x 6-9/16 x 2-17/32	
1	Interphone Control C-665/VIA-1		8-1/2 x 5-5/8 x 3-13/16	
1	Interphone Control C-666/VIA-1		4-7/16 x 4-3/32 x 1-11/16	

REFERENCE DATA AND LITERATURE:

TM 11-704

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, Sig C

SPEC & / or DWG:

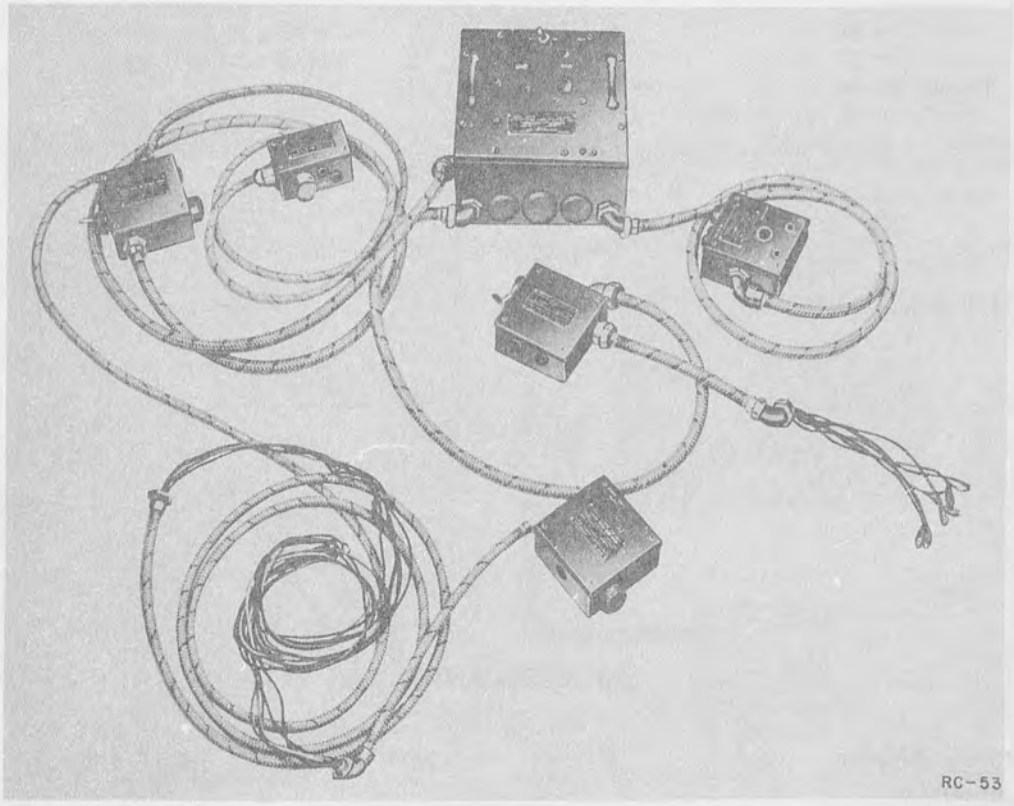
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERPHONE EQUIPMENT AN/VIC-type

5 December 1958
Cognizant Serv: USA FSN:

RC–53

	USA	USN	USAF
TYPE CLASS:	--	--	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Interphone Equipment RC–53 is a vehicular interphone communication system for tanks and other inclosed vehicles.

This equipment consists essentially of an amplifier, control and jack boxes, and related components.

Through this equipment, the radio operator and vehicle commander may control the vehicular radio equipment and maintain communication contact.

The RC–53 is powered by the 12-v storage battery of the vehicle in which it is installed.

TECHNICAL CHARACTERISTICS:

Facilities Afforded: Radio and voice, between interphone station
Type Controls: Selector switch, volume control, on-off switch
Power Output: 2 w
Power Requirements: 3 to 3.5 amp at 12-v dc from vehicular storage battery

AN/VIC-type INTERPHONE EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Control Box BC–422	----------	5-11/16 x 2-3/16 x 4-3/16	2
1	Control Box BC–449	----------	5-11/16 x 2-3/16 x 4-3/16	1.7
6	Headset HS–18	FSN 5965–296–1956 2B818		
1	Interphone Amplifier BC–367	----------	8-15/16 x 8-15/16 x 5-5/8	18.5
1	Jack Box BC–378, –379, –448	----------	2-3/16 x 4-11/16 x 5-1/2	3.2
5	Microphone T–30–A	FNS 5965–170–5234 2B1630	----------	.3
1	Terminal Block TM–183			

REFERENCE DATA AND LITERATURE:

TM 11–700

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

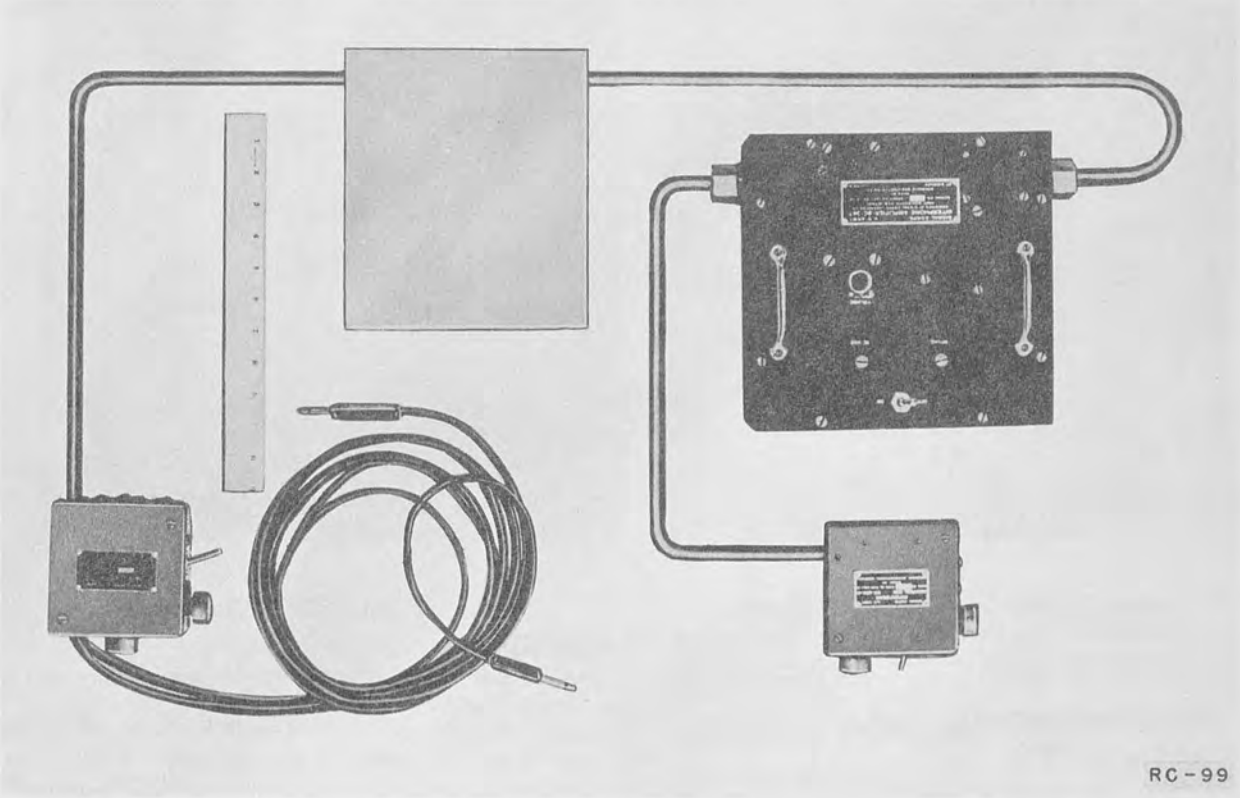
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

INTERPHONE EQUIPMENT AN/VIC-type

5 December 1958
Cognizant Serv: USA FSN: 5830-224-5345 (12-v dc)
5830-224-5346 (24-v dc)

RC-99

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S99	--	--



RC-99

FUNCTIONAL DESCRIPTION:

Interphone Equipment RC-99 is a vehicular, multistation, intercommunication system used in inclosed vehicles, such as tanks.

This equipment consists of a master-station amplifier unit, two control boxes, and associated accessories. It provides intercommunication facilities within the vehicle and permits the radio operator and vehicle commander to retain partial control of the vehicle's radio equipment.

This interphone equipment is powered by the 12- or 24-volt storage battery of the vehicle in which it is installed, through appropriate dynamotor equipment.

TECHNICAL CHARACTERISTICS:

Type of Signal: Af, vf

Type Communication Circuits: Interphone and radio communication circuits

Controls: Volume control; radio-interphone switch; and on-off switch

Power Requirements: 12-v or 24-v dc from vehicular storage battery

AN/VIC-type INTERPHONE EQUIPMENT

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Control Box BC–739	----------	4 x 4 x 2	2.5
1	Interphone Amplifier BC–367	---------- -----	8-3/4 x 8-3/4 x 4-1/2	19
	or			
1	Interphone Amplifier BC–667	----------	8-3/4 x 8-3/4 x 4-1/2	19
1	Interphone Control Box BC–606–D	2C1738 (FSN) 5830–160–4910	4 x 4 x 2	2

REFERENCE DATA AND LITERATURE:

TM 11–702

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

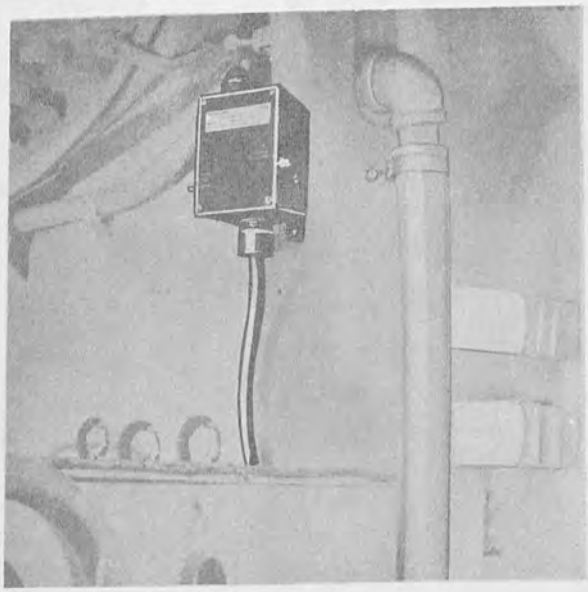
DESIGN COG: USA, Sig C

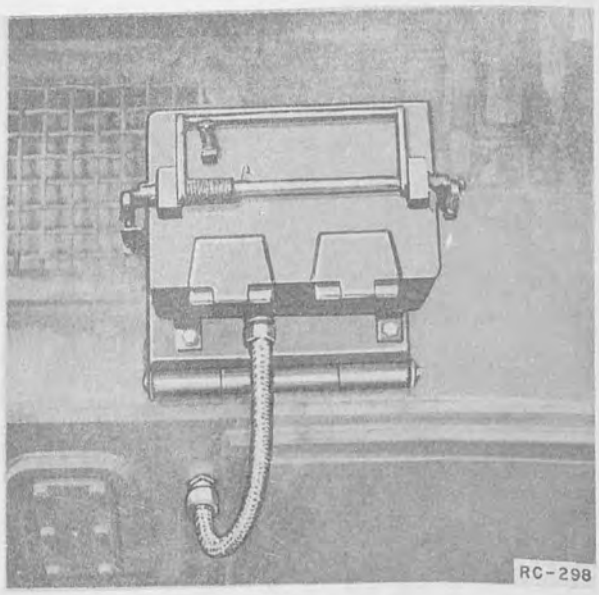
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
			$120.00

INTERPHONE EXTENSION KIT AN/VIC-type

5 December 1958
Cognizant Serv: USA FSN: RC–298

	USA	USN	USAF
TYPE CLASS:	S/Std	--	--
STOCK NO:	2C196–298	--	--





FUNCTIONAL DESCRIPTION:

Interphone Extension Kit RC–298 is an assemblage of components that can be added to the existing interphone equipment of inclosed vehicles (such as tanks) to provide an interphone station located outside the vehicle. It is used in conjunction with interphone systems designed for use in armored vehicles.

This equipment consists of an external interphone box, an internal interphone switchbox, and related components. The only adjustment provided is for control of volume. Internal and external interphone stations have call signal lamps to indicate that contact with the station outside the vehicle is desired.

TECHNICAL CHARACTERISTICS:

Type of Signal: Voice
Type Communication Circuits: Two-way; press-to-talk
Controls: Volume only (on external interphone station)
Power Requirements: Vehicular storage battery

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cordage CO–213 (hardware and necessary mounting)			
1	External Interphone Box BC–1362			
1	Switchbox BC–1361			
1	Toggle Switch ST52R			

AN/VIC-type INTERPHONE EXTENSION KIT

REFERENCE DATA AND LITERATURE:

TM 11-703

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	3.75	

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-1

1 July 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4502-1	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-1 is a short-range, hf and vhf, AM (voice, tone, and cw) radio transmitting and receiving equipment that may be installed in vehicles for ground-to-air communication.

This equipment consists essentially of a ground communication transmitter and receiver, plus transmitting and receiving equipment designed for airborne use. It is usually used for communication in ground point-to-point nets but can be used as a beacon for compass-equipped aircraft and for hf ground-air radio communication. Antenna and accessory equipment is included. It is powered by the 12-volt storage battery of the vehicle in which it is installed.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitters: 3 to 6.2 (hf); 100 to 156 (vhf)
Receivers: 1.5 to 18 (hf); 100 to 156 (vhf)
Type Modulation: AM
Type of Signal:
Hf: Cs, tone, and voice
Vhf: Voice
Power Output:
Hf: 40 s, (voice); 75 w (cw)
Vhf: 8 to 9 w
Power Requirements: 65.7 amps from 12-v dc vehicular storage battery (through dynamotors)

AN/VRC-1 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AN–24	2A224		
1	Antenna AN–27	2A275–27		
1	Dynamotor Unit BD–77	3H1777.2		
1	Dynamotor Unit PE–98–F	3H1898F		
1	Radio Control Box BC–602–D	2C3347D		
1	Radio Receiver BC–312	2C4312	10 x 9-1/16 x 18-1/16	58
1	Radio Receiver BC–624	2C4424	8-3/4 x 5-7/8 x 15-3/8	7
1	Radio Transmitter BC–191	2C6191.9	21-21/32 x 23-1/8 x 9-5/16	68
1	Radio Transmitter BC–625	2C6525	8-3/4 x 5-7/8 x 15-3/8	7

REFERENCE DATA AND LITERATURE:

TM 11–277

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) SC–D–7124

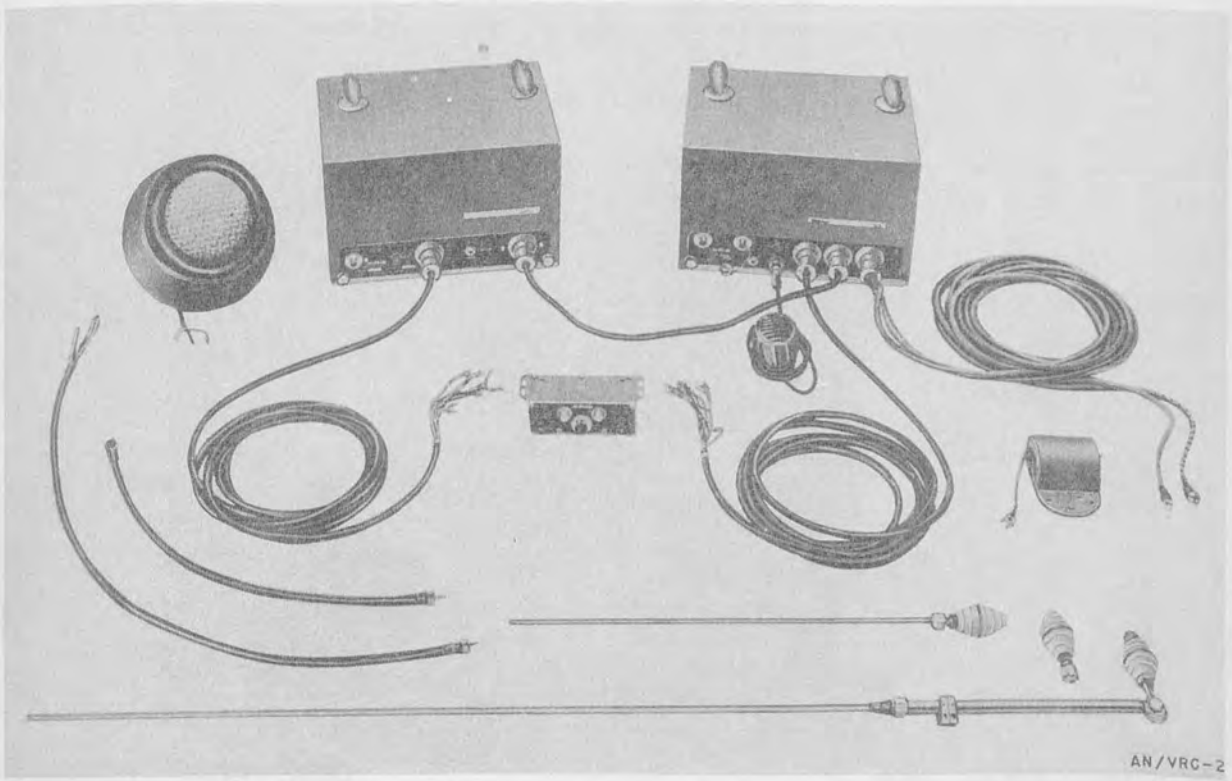
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Federal Telephone & Radio Corp.	Clifton, N. J.	22265–P–44–06	

RADIO SET AN/VRC-2

1 July 1958
Cognizant Serv: USA FSN: 5820-196-1710

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S4502-2	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-2 is a vehicular, short-range, vhf, FM (voice), radio receiving and transmitting equipment used by military police and security troops for highway traffic control and similar applications.

This equipment consists of a crystal-controlled radio transmitter and receiver controlled from the driver's position in a vehicle. It is powered through individual vibrator power supply units by the storage battery of the vehicle in which the equipment is installed.

It uses a single telescopic whip-type antenna controlled by an antenna change-over relay located in the transmitter.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 40
Type Modulation: FM
Type of Signal: Voice
Power Output: 45 w
Power Requirements:
Transmitter: 45 amp at 6.3 v dc and 0.15 amp at 540 v dc from vibrator power supply
Receiver: 14.5 amp at 6.3 v dc and 0.08 amp at 250 v dc from vibrator power supply

AN/VRC-2 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS (FSN)	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT-129/VR	5985-284-4849	1-1/2 x 1-1/2 x 78	3.25
1	Dynamic Loudspeaker LS-158/U	5965-232-4637	9-1/2 x 4-0/4 (diameter)	5
1	Radio Receiver R-237/VR	5820-163-1698	11-1/2 x 10 x 15	35
1	Radio Set Control C-493/VRC-2	5820-161-1523	2-1/4 x 3-1/4 x 7-1/4	1.5
1	Radio Transmitter T-193/VRC-2	5820-194-0964	11-1/2 x 10 x 15	41

REFERENCE DATA AND LITERATURE:

TM 11-607

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	8	168

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC & /or DWG: MIL-R-18872

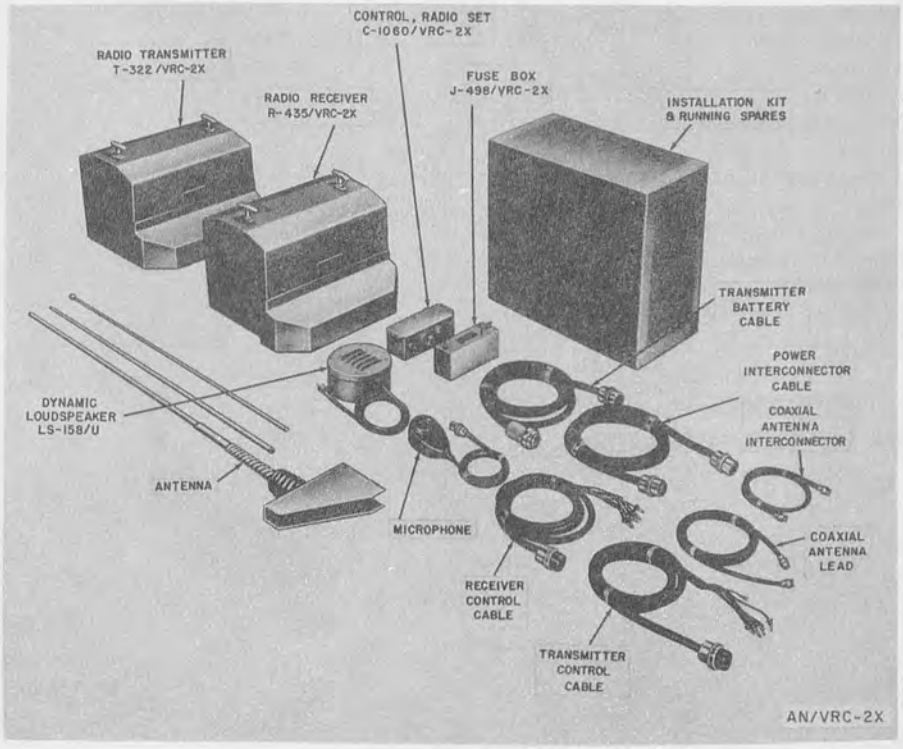
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Farnsworth Electronics Division, International Telephone & Telegraph Corp.	Palo Alto, Calif.	37214-P-53-51	$697.52
Utility Electronics Corp.		16816-P-51-31	566.33

RADIO SET AN/VRC-2X

3 December 1958
Cogniza. Serv: USA FSN: 5820-230-3958 (USA)
5820-501-0044 (USN)

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	Ltd-Std
STOCK NO:	2S4502-2X	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-2X is a complete communication unit, less primary power source, designed for vehicular operation.

This equipment provides two-way voice communication With similar fixed frequency radio sets. Reliable communication is possible to a maximum of 15 miles in an open terrain.

The communication circuit is of a single frequency, push-to-talk type. A single antenna is used and is switched by an antenna relay, located in the transmitter.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 40, in 3 bands
Frequency Deviation: ±15 kc for full modulation
Type Frequency Control: Crystal
Type Receiver: Dual conversion superheterodyne
Number of Crystal Oscillators: 2
Type Modulation: FM
Type Emission and Reception: Voice
Power Input of Receiver: 24 v at 3 amp
Power Output of Transmitter: 30 s
Power Input of Transmitter: 24 v at 10 amp
Antenna: 1/4 wave telescopic, whip
Power Requirements:

Receiver: 3 amp, 24 v

Transmitter: 10 amp, 24 v

AN/VRC-2X RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna		1-1/2 x 1-1/2 x 78	3.25
1	Cable group		5 x 11 x 11	13
1	Dynamic Loudspeaker		9-1/2 dia x 4-1/4	5
1	Fuse Box J-498/VRC-2X		2-3/16 x 2-1/2 x 6-1/8	.5
1	Installation components		3 x 4 x 4-1/2	1.75
1	Microphone M-38/U		3-1/2 x 3-3/4 x 5	1.25
1	Radio Receiver R-435/ VRC-2X		10 x 11-1/2 x 15	35
1	Radio Set Control C-1060/ VRC-2X		2-1/4 x 3-1/4 x 7-1/4	1.5
1	Radio Transmitter T-322/ VRC-2X		10 x 11-1/2 x 15	41
1 set	Transmitter plate coils (set of 3)		1-1/2 x 2-1/4 x 4	4
1	Spare parts group		5 x 6 x 8	10
2	Switch Guard MX-1368/ VRC-2X		3-3/4 x 4-1/4 x 14-7/8 1/2 x 8 x 10-1/2	.5 .5

REFERENCE DATA AND LITERATURE:

TM 11-607

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	12.3	205

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C (RCUE)

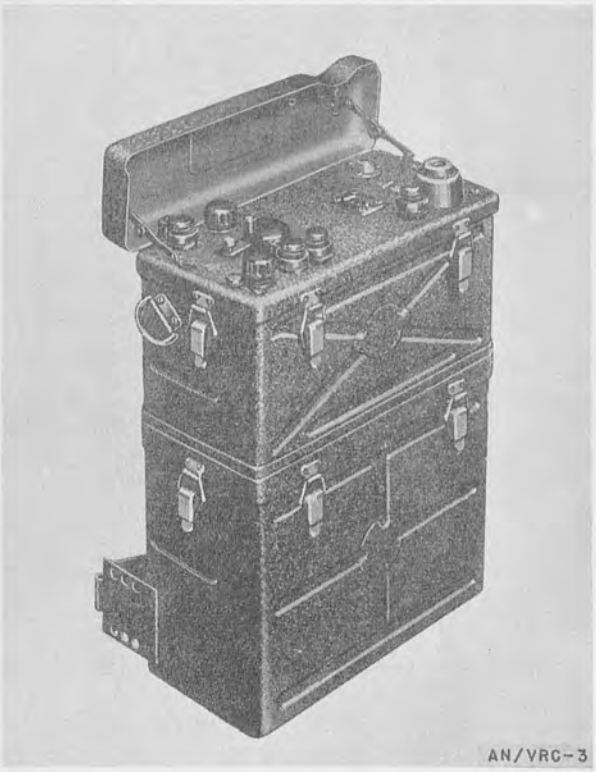
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
			$820.00

RADIO SET AN/VRC-3

1 July 1958
Cognizant Serv: USA FSN: 5820-196-1735

USA	USN	USAF

TYPE CLASS: L/Std
STOCK NO: 2S4502-3



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-3 is the vehicular version of Radio Set SCR-300. It is a crystal-controlled, short-range, FM (voice) transmitting and receiving equipment used for communication in the vhf band. It is used between tanks and supporting infantry.

This equipment consists of a dry-battery operated receiver-transmitter component. It uses a whip-type antenna and includes Battery BA-70, which can be replaced by Vibrator Power Supply PP-114/VRC-3 for operation from the vehicular storage battery.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 40 to 48
Type Modulation: FM
Type of Signal: Voice
Power Output: 0.3 s
Power Requirements: Battery BA-70

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Battery Case CS-139	----------	9-3/8 x 10-15/16 x 7-1/4	3.66
1	Radio Receiver and Transmitter BC-1000	5820-196-9042	5-5/8 x 11-5/16 x 7-1/8	13

AN/VRC-3 RADIO SET

REFERENCE DATA AND LITERATURE:

TM 11-637

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	11.9	21.5

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

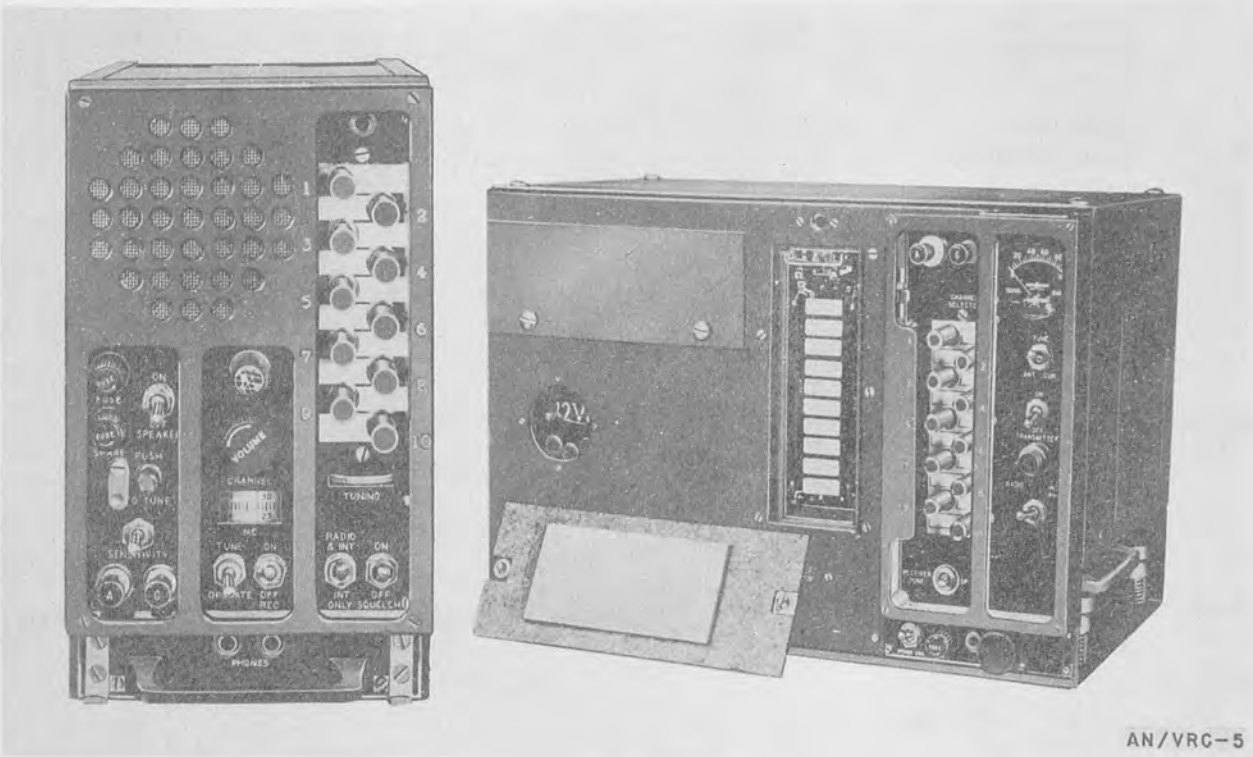
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-5

1 July 1958
Cognizant Serv: USA FSN: 5820-196-1709

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S4502-5/12	--	--



AN/VRC-5

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-5 is a short-range, low-power, FM (voice) radiotelephone equipment used for communication by vehicles of the armored forces.

This equipment consists of a crystal-controlled transmitter and a receiver, plus antenna and related accessories. The transmitter and the receiver operate on 10 preset channel frequencies selected by means of pushbuttons mounted on the front panels of each of these components.

A single whip-type antenna is used for transmission and reception, and provision is made for automatic disabling of receiver output during operation of the transmitter dynamotor.

The radio set can be operated from the storage battery of the vehicle in which it is used by means of appropriate dynamotors which are installed within the housings of the transmitter and the receiver.

This equipment has been replaced by Radio Set AN/GRC-4.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 40.0 to 47.9 (10 preset channels)
Type Modulation: FM
Type of Signal: Voice
Power Output: 30w
Power Requirements: 24 amp from 12-v storage battery through Dynamotors DM-34 & DM-35, or 14 amp from 24-v storage battery through Dynamotors DM-36 & DM-37

AN/VRC-5 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna A–62	2A262		
1	Dynamotor DM–34	3H1634	4-1/2 x 3 x 6-1/2	4.7
	or			
1	Dynamotor DM–36	3H1636	4-1/2 x 3 x 6-1/2	4.7
1	Dynamotor DM–35	3H1635	5-1/2 x 4-1/2 x 8-1/4	9.2
	or			
1	Dynamotor DM–37	3H1637	5-1/2 x 4-1/2 x 8-1/4	9.2
1	Radio Receiver BC–603	2C4403	11-1/2 x 6-3/4 x 12-1/2	35
1	Radio Transmitter BC–604	2C6494	11-1/2 x 10-1/4 x 18	67

REFERENCE DATA AND LITERATURE:

TM 11–600

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	29.6	645

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 71–1046

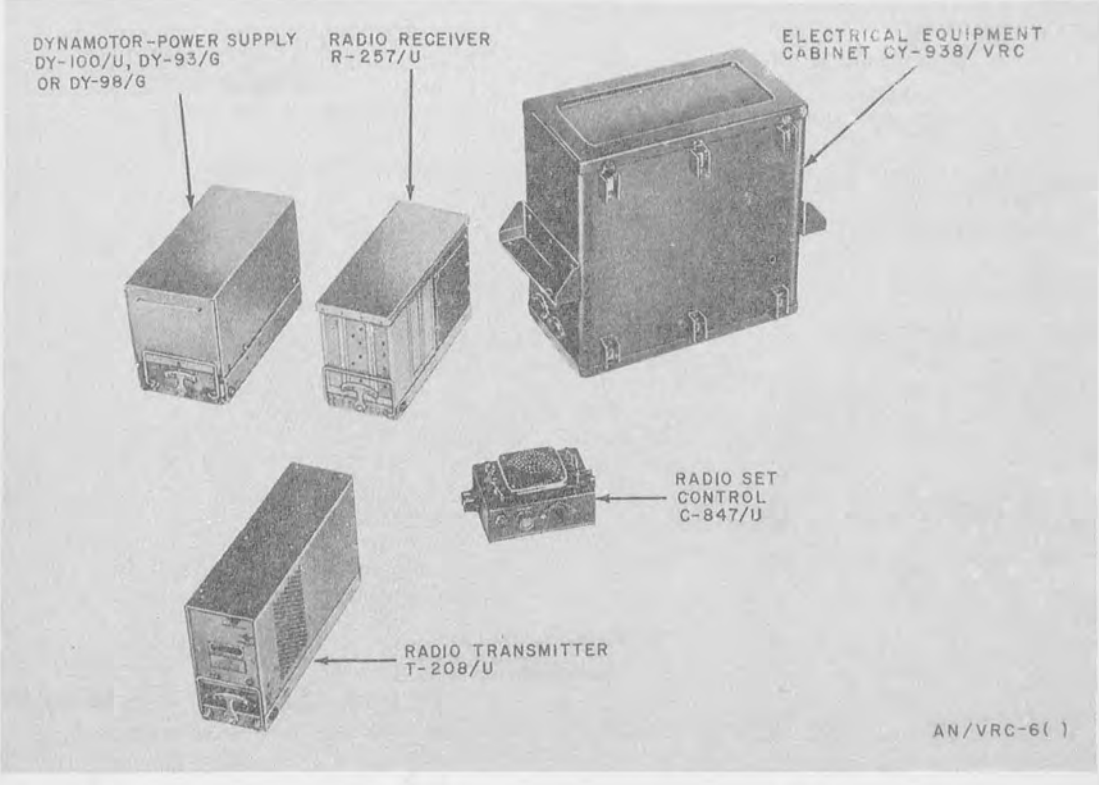
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-6( )

1 July 1958
Cognizant Serv: USA FSN: 5820-096-7009

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4502-6	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-6( ) is vehicular, HF, FM (voice) receiving and transmitting equipment used for nontactical radio communication with other vehicular and/or fixed stations, including civilian police authorities.

This equipment consists essentially of receiving and transmitting components, each with its own power supplies and associated components. It can be push-to-talk operated from a remote point by means of suitable remote control equipment.

The AN/VRC-6 and AN/VRC-6X enable operation from storage battery sources of 24 or 12 volts, respectively.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 25 to 50
Type Modulation: FM
Type of Signal: Voice
Power Output: 25 w
Power Requirements:
Transmitter: 20 amp at 12-v dc through Dynamotor DY-93/G; or 10 amp at 24-v dc through Dynamotor DY-98/G
Receiver: 2 amp at 12-v dc through Power Supply PP-868/U; or 1.1 amp at 24-v dc through Power Supply PP-867/U

AN/VRC-6( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(FSN)		
1	Dynamotor DY–93/G	6130–393–1706	13-13/16 x 6-7/8 x 6-1/4	
	or			
1	Dynamotor DY–98/G	6130–392–7185	13-13/16 x 6-7/8 x 6-1/4	
1	Electrical Equipment Cabinet CY–938/VRC	5820–503–0793	16-1/2 x 10-1/2 x 19-1/4	33
1	Electrical Equipment Rack MT–1236/VRC	5820–503–3446	7-3/4 x 10-3/4 x 23-1/2	10.5
1	Power Supply PP–868/U	5820–500–4381		
	or			
1	Power Supply PP–867/U	6130–284–0228		
1	Radio Receiver R–257/U	5820–503–1255	8-1/2 x 5-3/4 x 14-1/2	16
1	Radio Set Control C–847/U	5820–503–1015	5 x 2-1/4 x 7-1/2	4.5
1	Radio Transmitter T–208/U	5820–545–7268	8-1/2 x 4-1/2 x 14-1/2	8.5

REFERENCE DATA AND LITERATURE:

TM 11–283

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	10.3	249

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL–N–11539

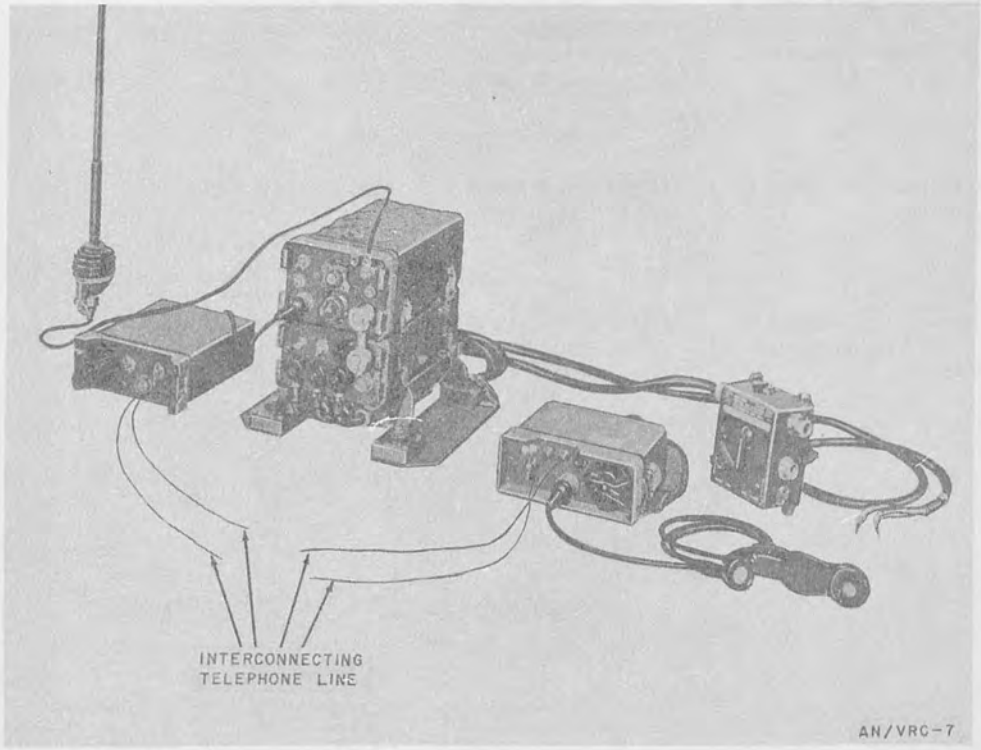
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	11661–P–52–51	$1,005.69

RADIO SET AN/VRC-7( )

1 July 1958
Cognizant Serv: USA FSN: 5820-196-8996

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4502-7/12-2	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-7( ) is a short-range, FM (voice), vehicular radiotelephone equipment used within and between artillery, infantry, and armored force units.

This set consists of a separate, short-range, low-power receiver-transmitter component, designated as set 2 when used as part of the integrated series of radio sets, such as the AN/GRC-3 through AN/GRC-8.

It includes a vehicular installation unit, power supply equipment, and an interphone amplifier, plus various control and accessory equipment such as microphone, headset, and loudspeaker.

It can be operated by means of Control Group AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 47.0 to 58.4
Type Modulation: FM
Type of Signal: Voice
Power Output: 500 mw
Power Requirements: 6/12/24-v dc from vehicular storage battery

AN/VRC-7( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM–65/GRC	(FSN) 5820–194–8303 (USA) 2C449–65.1	4-1/4 x 13 x 7-7/8	15.5
1	Control Group AN/GRA–6	(FSN) 5820–537–3848 (USA) 2C684A–6	See AN/GRA–6	20.85
1	Power Supply PP–281/GR	(FSN) 5820–500–4375 (USA) 3H4497–281.1	4-1/2 x 6 x 3	6
	or			
1	Power Supply PP–282/GR	(FSN) 5820–500–1684 (USA) 3H4497–282.1	4-1/2 x 6 x 3	6
	or			
1	Power Supply PP–448/GR	(FSN) 6130–231–0677	4-1/2 x 6 x 3	6
1	Receiver-Transmitter RT–70/GRC	(FSN) 5820–537–3913 (USA) 2C5130–70.2	4-3/4 x 13 x 7-1/8	45

REFERENCE DATA AND LITERATURE:

TM 11–285

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	4.92	164

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

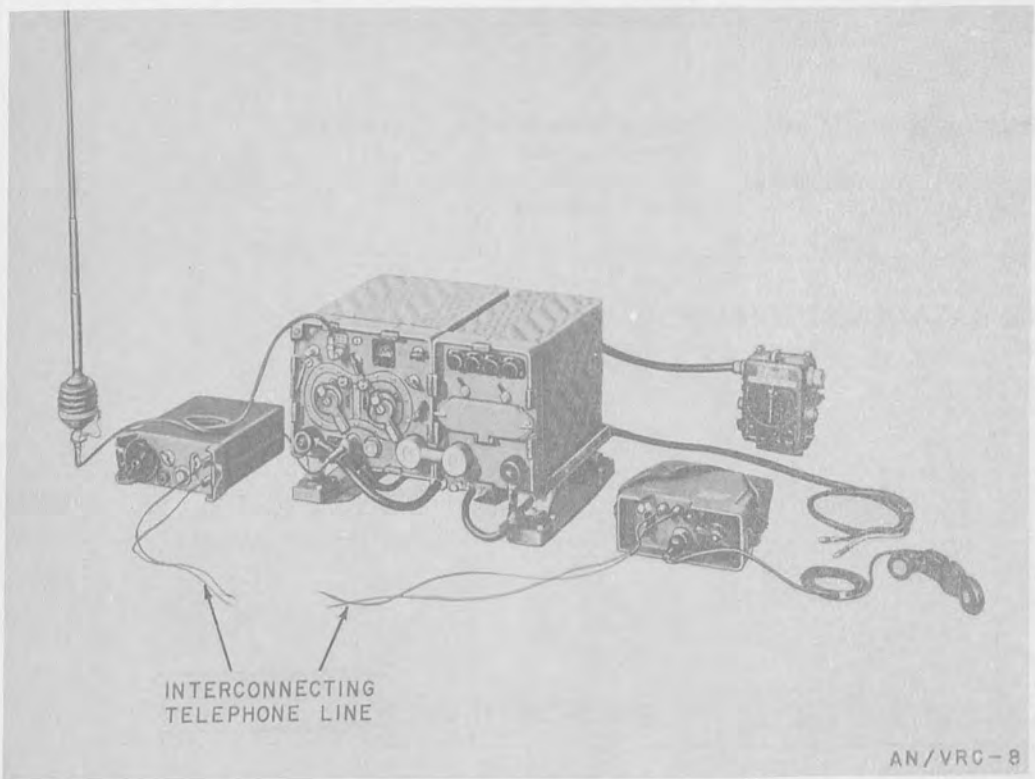
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-8( )

1 July 1958
Cognizant Serv: USA FSN: 5820-196-1718

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4502-8/12-2	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-8( ) is a short-range vehicular FM (voice) equipment for communication within and between armored units.

This set consists of a receiver-transmitter component designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-3 and AN/GRC-4. A vehicular installation unit, power supply equipment, and control and accessory components are included.

This equipment can be operated from a remote point up to a distance of about 2 miles over a telephone pair, by means of Control Group AN/GRA-6.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9
Type Modulation: FM
Type of Signal: Voice
Power Output:
High Power: 9 to 16 w
Low Power: 2 w
Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-8( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.85
1	Power Supply PP-109/GR	(FSN) 6130-284-0231 (USA) 3H4497-109.1	8 x 13 x 9	33
	or			
1	Power Supply PP-112/GR	(FSN) 6130-284-0230 (USA) 3H4497-112.1	8 x 13 x 9	33
1	Receiver-Transmitter RT-66/GRC	(FSN) 5820-503-1508 (USA) 2C5130-66.1	9 x 13 x 11-1/4	35

REFERENCE DATA AND LITERATURE:

TM 11-286

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	6.05	267

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

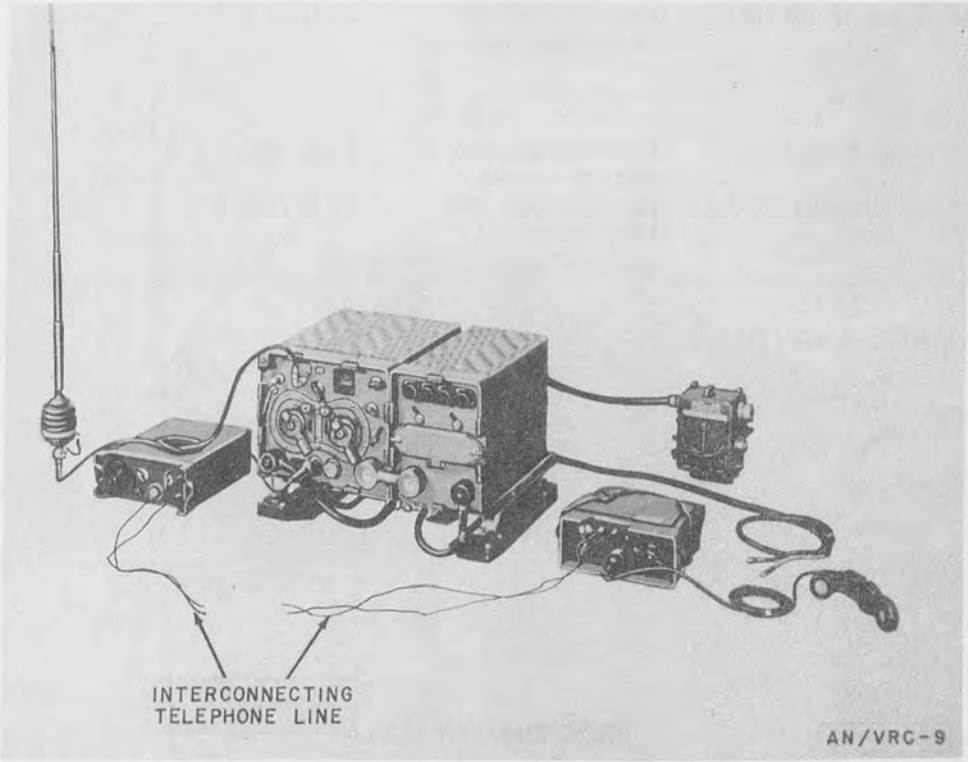
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-9( )

1 July 1958
Cognizant Serv: USA FSN: 5820-193-8809

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4502-9/24	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-9( ) is a short-range, vehicular, FM (voice) equipment for communication within and between artillery units.

This set consists of the receiver-transmitter component designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-5 and AN/GRC-6. A vehicular installation unit, power supply equipment, and control and accessory items are included.

This equipment can be operated by means of Control Group AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9
Type Modulation: FM
Type of Signal: Voice
Power Output:
High Power: 9 to 16 w
Low Power: 2 w
Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-9( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.8
1	Power Supply PP-109/GR	(FSN) 6130-284-0231 (USA) 3H4497-109.1	8 x 13 x 9	33
	or			
1	Power Supply PP-112/GR	(FSN) 6130-284-0230 (FSN) 3H4497-109.1	8 x 13 x 9	33
1	Receiver-Transmitter RT-67/GRC	(FSN) 5820-503-1507 (USA) 2C5130-67.1	9 x 13 x 11-1/2	35

REFERENCE DATA AND LITERATURE:

TM 11-286

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	6.05	267

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

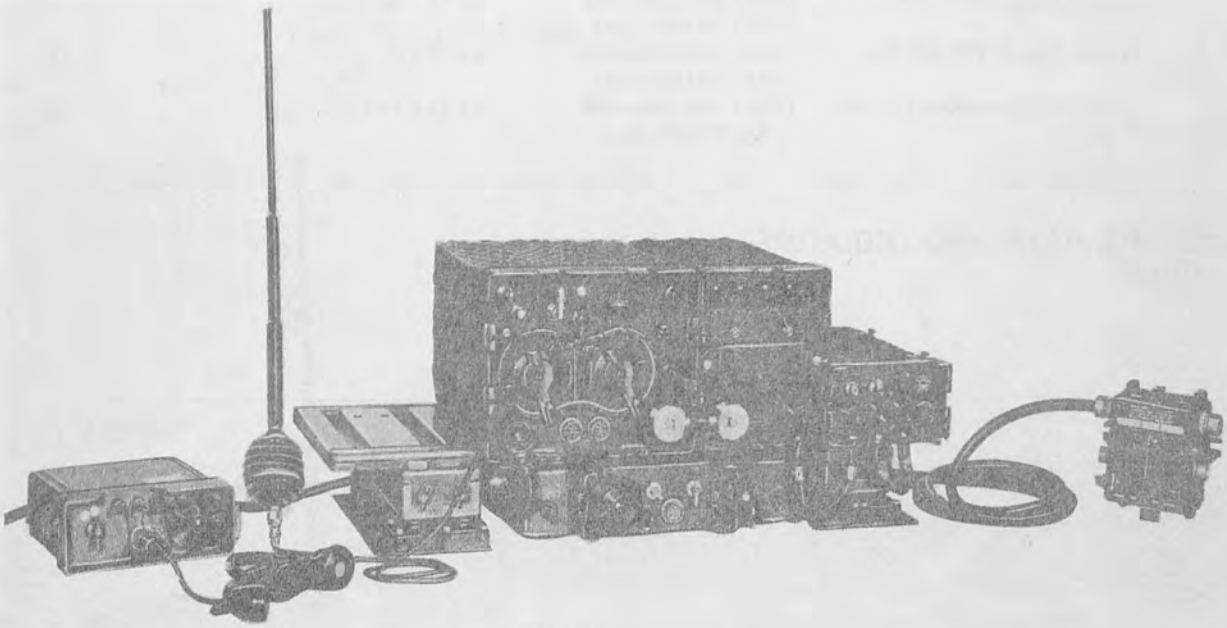
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-10( )

1 July 1958
Cognizant Serv: USA FSN: 5820-196-1721

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4502-10/25	--	--



AN/VRC-10

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-10( ) is a short-range, vehicular, FM (voice) equipment for communication within and between infantry units.

This set consists of the receiver-transmitter components, designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-7 and AN/GRC-8. A vehicular installation unit, power supply equipment, and control and accessory items are included.

This equipment can be operated by means of Control Group AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 38.0 to 54.9
Type Modulation: FM
Type of Signal: Voice
Power Output:
High Power: 9 to 16 w
Low Power: 2 w
Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-10( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.85
1	Power Supply PP-109/GR	(FSN) 6130-284-0231 (USA) 3H4497-109.1	8 x 13 x 9	33
1	Power Supply PP-112/GR	(FSN) 6130-284-0230 (USA) 3H4497-109.1	8 x 13 x 9	33
1	Receiver-Transmitter RT-68/GRC	(FSN) 5820-503-1505 (USA) 2C5130-68.1	8 x 13 x 11-1/4	35

REFERENCE DATA AND LITERATURE:

TM 11-286

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	6.05	267

PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, Sig C

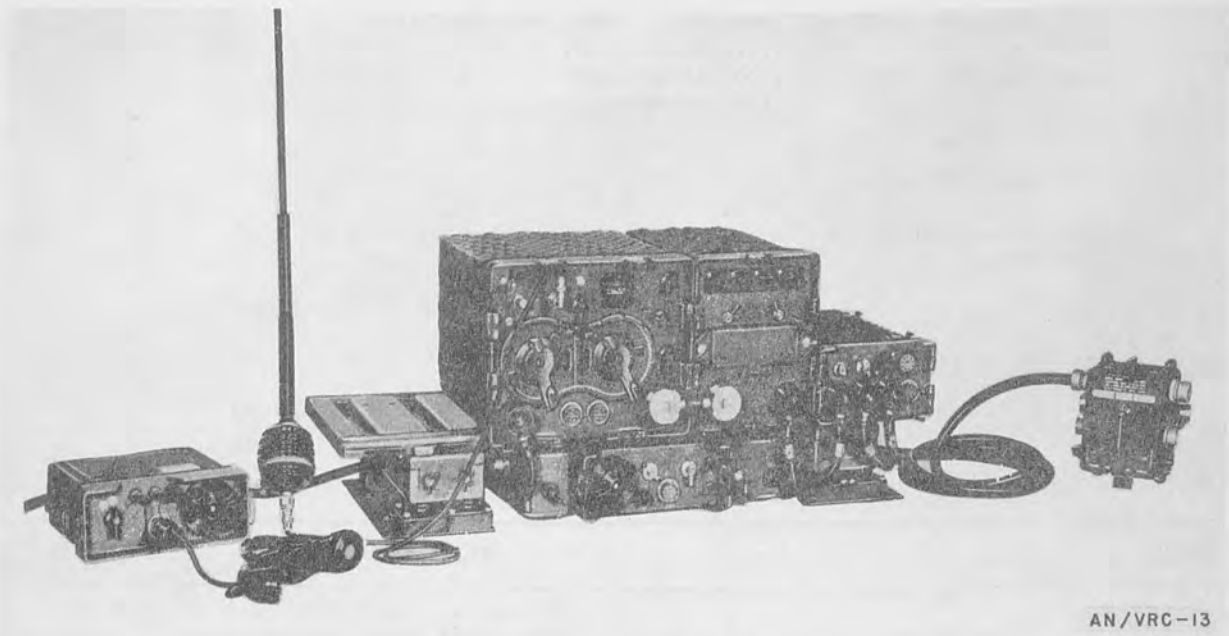
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-13( )

Cognizant Serv: USA **FSN:** AN/VRC–13: 5820–192–7133
AN/VRC–13X: 5820–192–7134

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	AN/VRC–13: 2S4502–13/24 AN/VRC–13X: 2S4502–13/12	--	--



AN/VRC–13

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC–13( ) is a short-range, vehicular, FM (voice) equipment for communication within and between armored units.

This set consists of the receiver-transmitter component, designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC–3 and AN/GRC–4. A vehicular installation unit, power-supply equipment, an interphone amplifier, an antenna, and accessory components are included.

This equipment can be operated by means of Control Group AN/GRA–6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9
Type Modulation: FM
Type of Signal: Voice
Power Output:
High Power: 9 to 16 w
Low Power: 2 w
Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-13( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM-65/GRC	(FSN)5820-194-8303 (USA)2C449-65.1	4-1/4 x 13 x 7-7/8	15.5
1	Control Group AN/GRA-6	(FSN)5820-537-3848 (USA)2C684A-6	See AN/GRA-6	20.85
1	Power Supply PP-109/GR	(FSN)6130-284-0231 (USA)3H4497-109.1	8 x 13 x 9	33
	or			
1	Power Supply PP-112/GR	(FSN)6130-284-0230 (USA)3H4497-109.1	8 x 13 x 9	33
1	Power Supply PP-281/GR	(FSN)5820-500-4375 (USA)3H4497-281.1	4-1/2 x 6 x 3	6
	or			
1	Power Supply PP-282/GR	(FSN)5820-500-1648 (USA)3H4497-282.1	4-1/2 x 6 x 3	6
1	Receiver-Transmitter RT-66/GRC	(FSN)5820-503-1508 (USA)2C5130-66.1	9 x 13 x 11-1/4	35

REFERENCE DATA AND LITERATURE:

TM 11-291

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	8.59	337

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

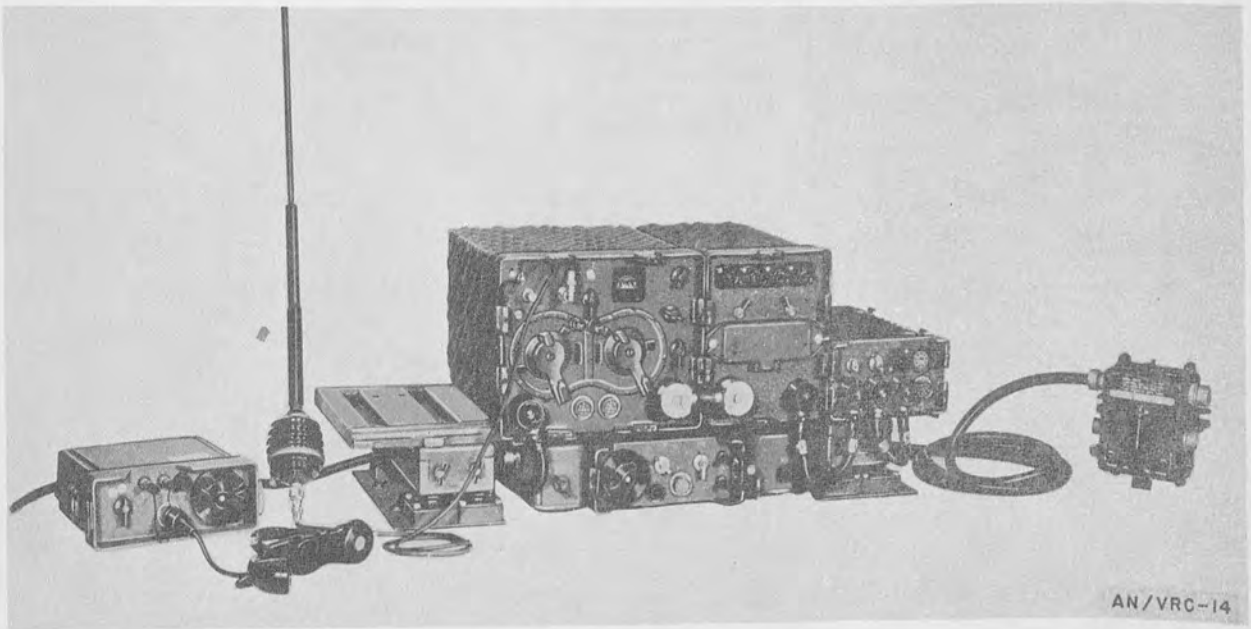
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-14

1 July 1958
Cognizant Serv: USA FSN: 5820-197-6532

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4502-14/12-2	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-14 is a short-range, vehicular, FM (voice) equipment for communication within and between artillery units.

This set consists of a receiver-transmitter component, designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-5 and AN/GRC-6. A vehicular installation unit, an interphone amplifier equipment, power supply equipment, and control and accesory items are included.

This equipment can be operated by means of Control Group AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9
Type Modulation: FM
Type of Signal: Voice
Power Output:
High Power: 9 to 16 w
Low Power: 2 w
Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-14 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM-65/GRC	(FSN) 5820-194-8303 (USA) 2C449-65.1	4-1/4 x 13 x 7-7/8	15.5
1	Control Box C-375/VRC	(FSN) 5839-170-7868 (USA) 2C666-375	7 x 4 x 7	3.5
1	Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.85
1	Power Supply PP-109/GR	(FSN) 6130-284-0231 (USA) 3H4497-109.1	8 x 13 x 9	33
	or			
1	Power Supply PP-112/GR	(FSN) 6130-282-0230 (USA) 3H4497-109.1	8 x 13 x 9	33
1	Power Supply PP-281/GR	(FSN) 5820-500-4375 (USA) 3H4497-281.1	4-1/2 x 6 x 3	6
	or			
1	Power Supply PP-282/GR	(FSN) 5820-500-1648 (USA) 3H4497-282.1	4-1/2 x 6 x 3	6
1	Receiver-Transmitter RT-67/GRC	(FSN) 5820-503-1507 (USA) 2C5130-67.1	9 x 13 x 11-1/2	35

REFERENCE DATA AND LITERATURE:

TM 11-291

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	8.59	337

PROCUREMENT DATA

PROCURING SERVICE: USA DESIGN COG: USA, Sig C

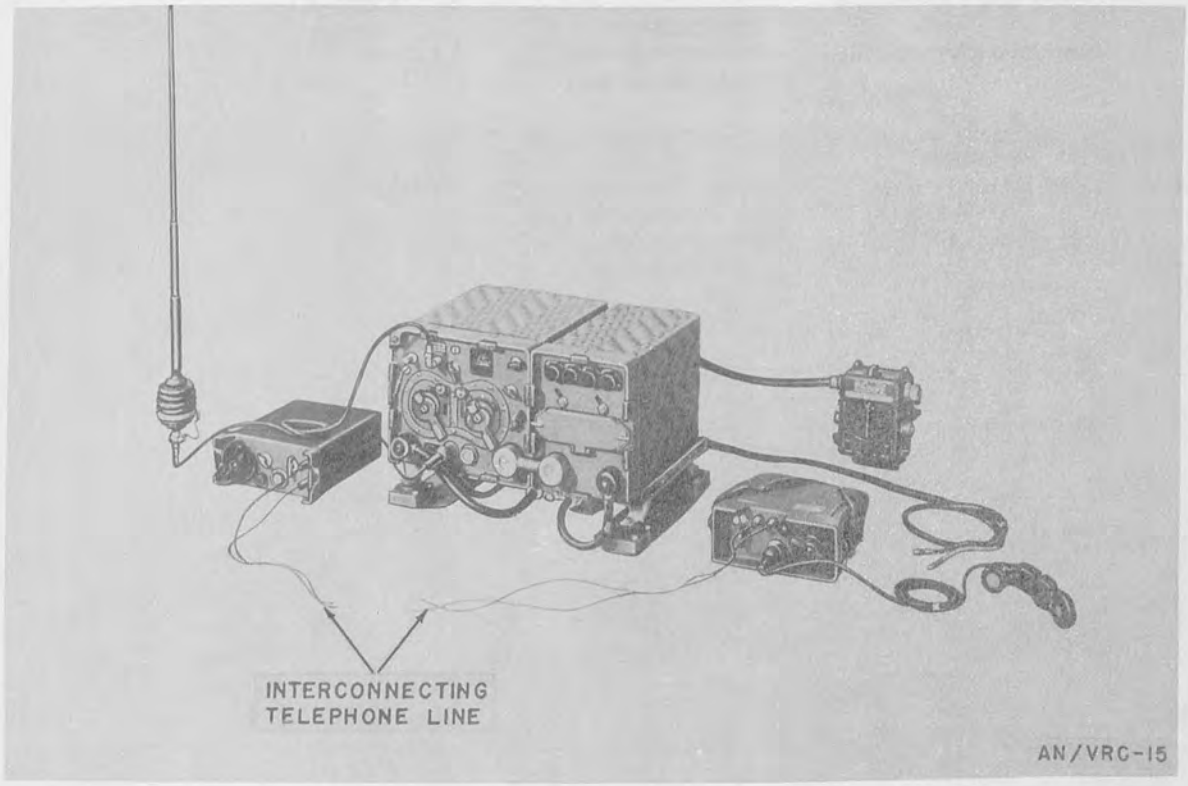
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-15( )

1 July 1958
Cognizant Serv: USA USN: AN/VRC-15: 5820-192-7111
AN/VRC-15X: 5820-192-7109

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4502-15/24	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-15 ( ) is a short-range, vehicular, FM (voice) equipment for communication within and between infantry units.

This set consists of the receiver-transmitter component designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-7 and AN/GRC-8. A vehicular installation unit, an interphone amplifier, power supply equipment, and control and accessory items are included.

This equipment can be operated by means of Control Group AN/GRA-6 from a remote point at a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 38.0 to 54.9
Type Modulation: FM
Type of Signal: Voice
Power Output:
High Power: 9 to 16 w
Low Power: 2 w
Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-15( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM/65-GRC	(FSN) 5820-194-8303 (USA) 2C449-65.1	4-1/4 x 13 x 7-7/8	15.5
1	Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.85
1	Power Supply PP-109/GR	(FSN) 6130-284-0231 (USA) 3H4497-109.1	8 x 13 x 9	33
	or			
1	Power Supply PP-112/GR	(FSN) 6130-284-0230 (USA) 3H4497-112.1	8 x 13 x 9	33
1	Power Supply PP-281/GR	(FSN) 5820-500-4375 (USA) 3H4497-281.1	4-1/2 x 6 x 3	6
	or			
1	Power Supply PP-282/GR	(FSN) 5820-500-1648 (USA) 3H4497-282.1	4-1/2 x 6 x 3	6
1	Receiver-Transmitter RT-68/GRC	(FSN) 5820-503-1505 (USA) 2C5130-68.1	9 x 13 x 11-1/4	35

REFERENCE DATA AND LITERATURE:

TM 11-291

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	8.59	337

PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, Sig C

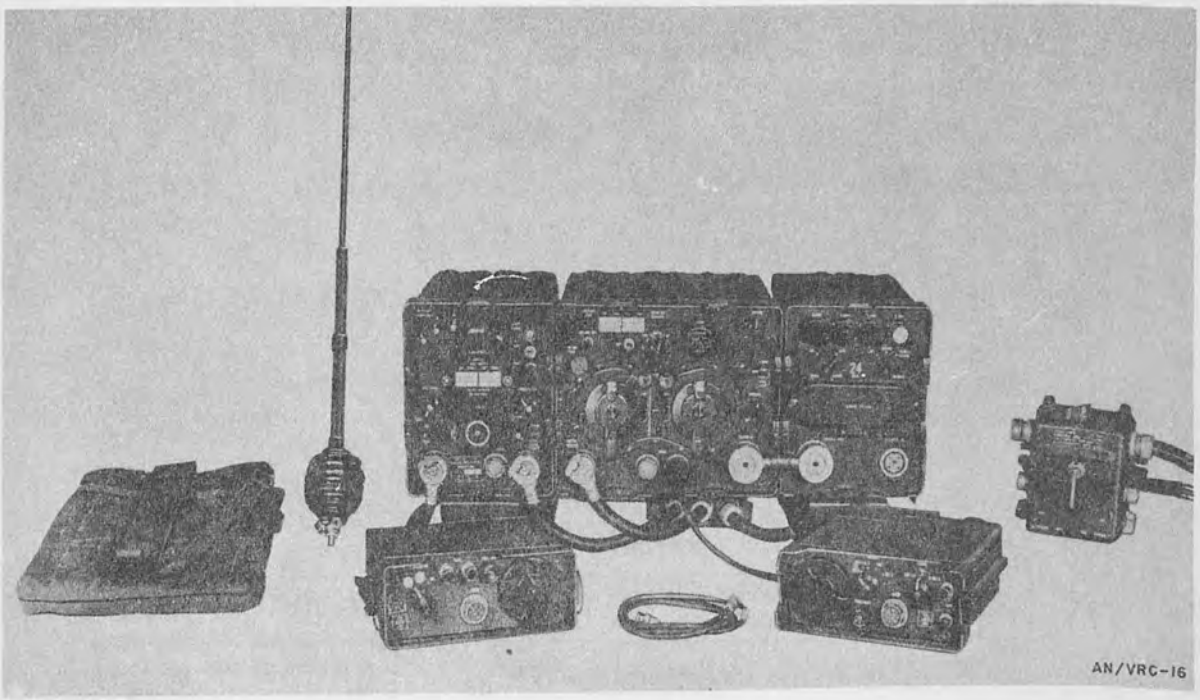
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-16( )

1 July 1958
Cognizant Serv: USA FSN: AN/VRC-16: 5820-253-6131
AN/VRC-16X: 5820-234-6398

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	AN/VRC-16: 2S4502-16/24 AN/VRC-16X: 2S4502-16/12	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-16 ( ) is a short-range, vehicular, FM (voice) equipment for communication within and between armored units.

This set consists of the receiver-transmitter component designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-3 and AN/GRC-4. The auxiliary receiver component of these sets is also provided with this equipment. A vehicular installation unit, power supply equipment, an antenna, and control components are included.

This equipment can be operated by means of Control Group AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9
Type Modulation: FM
Type of Signal: Voice
Power Output:
High Power: 9 to 16 w
Low Power: 2 w
Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-16( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.85
1	Power Supply PP-109/GR	(FSN) 6130-284-0231 (USA) 3H4497-109.1	8 x 13 x 9	33
	or			
1	Power Supply PP-112/GR	(FSN) 6130-284-0230 (USA) 3H4497-112.1	8 x 13 x 9	33
1	Power Supply PP-281/GR	(FSN) 5820-500-4375 (USA) 3H4497-281.1	4-1/2 x 6 x 3	6
	or			
1	Power Supply PP-282/GR	(FSN) 5820-500-1648 (USA) 3H4497-282.1	4-1/2 x 6 x 3	6
1	Radio Receiver R-108/GRC	(FSN) 5820-503-1413 (USA) 2C4180-108.1	9 x 13 x 7-1/4	35
1	Receiver-Transmitter RT-66/GRC	(FSN) 5820-503-1508 (USA) 2C5130-66.1	9 x 13 x 11-1/4	35

REFERENCE DATA AND LITERATURE:
TM 11-611

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	6.6	306

PROCUREMENT DATA

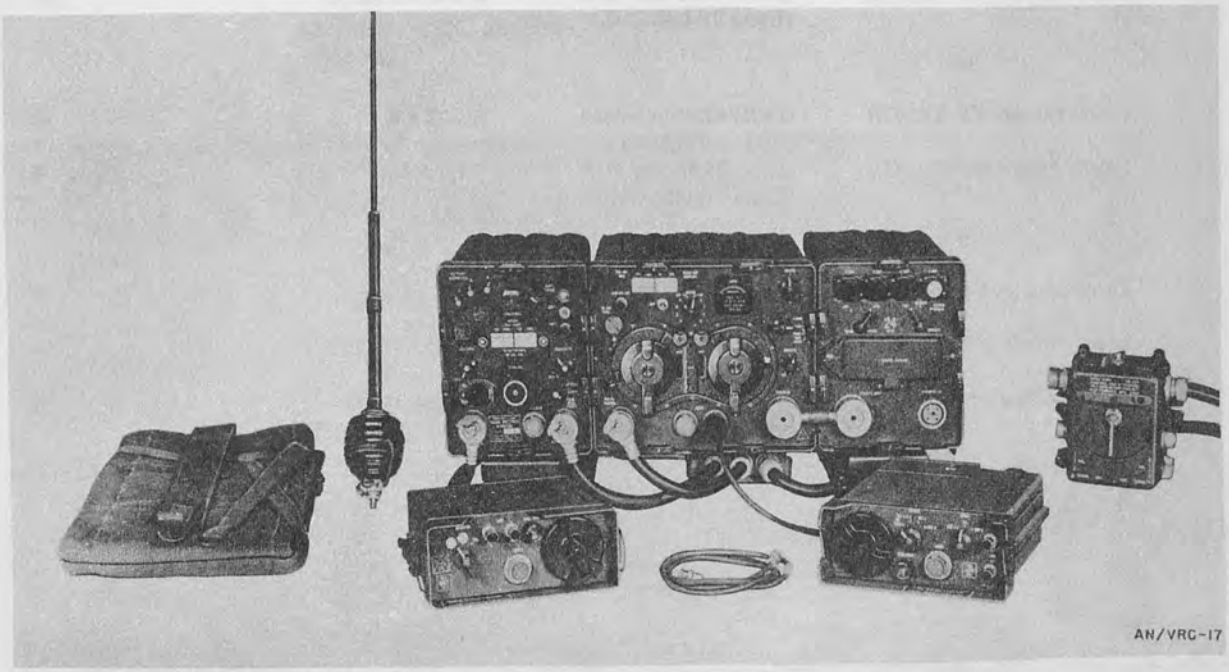
PROCURING SERVICE: USA **DESIGN COG:** USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-17

1 July 1958
Cognizant Serv: USA FSN: 5820-351-3384

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4502-17/24	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-17 is a short-range, vehicular, FM (voice) equipment for communication within and between artillery units.

This set consists of the receiver-transmitter component, designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-5 and AN/GRC-6. The auxiliary receiver component of these sets is also provided with this equipment. A vehicular installation unit, power supply equipment, an antenna, and control components are included.

This equipment can be operated by means of Control Group AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Bange in Mc: 27.0 to 38.9
Type Modulation: FM
Type of Signal: Voice
Power Output:
High Power: 9 to 16 w
Low Power: 2 w
Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-17 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.85
1	Power Supply PP-109/GR	(FSN) 6130-284-0231 (USA) 3H4497-109.1	8 x 13 x 9	33
	or			
1	Power Supply PP-112/GR	(FSN) 6130-284-0230 (USA) 3H4497-112.1	8 x 13 x 9	33
1	Power Supply PP-281/GR	(FSN) 5820-500-4375 (USA) 3H4497-281.1	4-1/2 x 6 x 3	6
	or			
1	Power Supply PP-282/GR	(FSN) 5820-500-1648 (USA) 3H4497-282.1	4-1/2 x 6 x 3	6
1	Radio Receiver R-109/GRC	(FSN) 5820-503-1413 (USA) 2C4180-109.1	9 x 13 x 11-1/2	35
1	Receiver-Transmitter RT-67/GRC	(FSN) 5820-503-1507 (USA) 2C5130-67.1	9 x 13 x 11-1/2	35

REFERENCE DATA AND LITERATURE:
TM 11-611

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	6.6	306

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

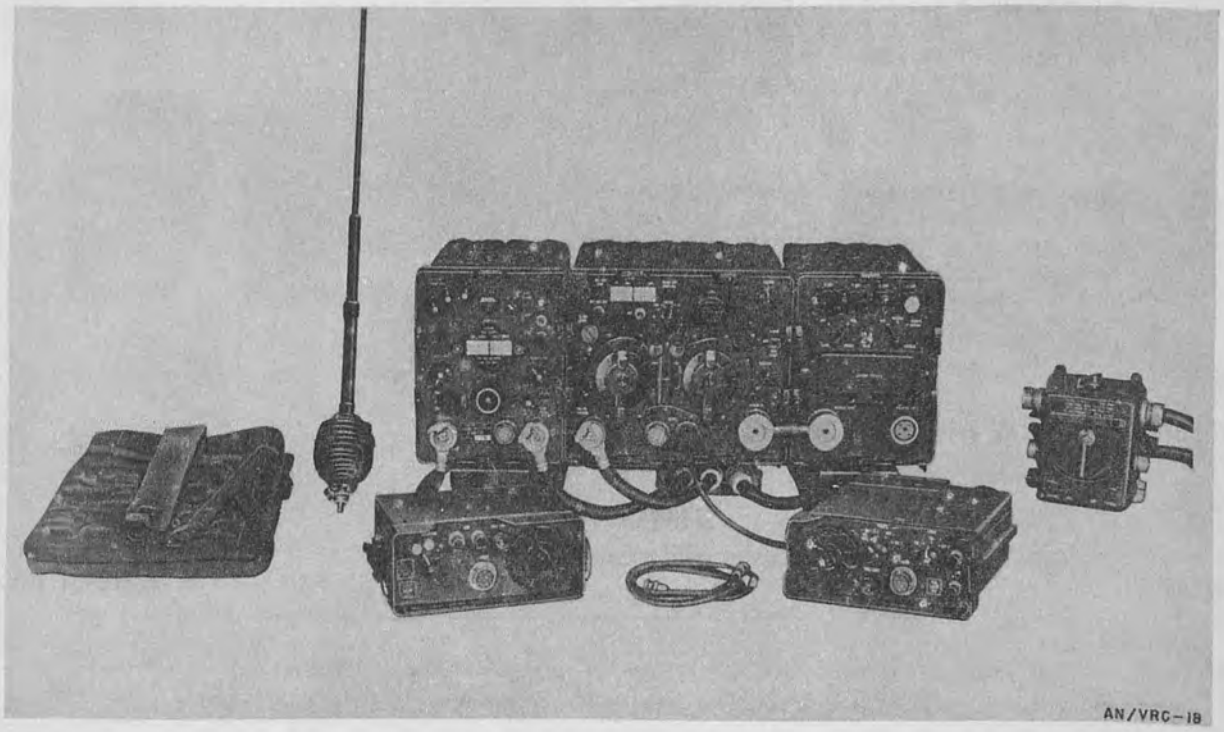
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-18( )

1 July 1958
Cognizant Serv: USA FSN: AN/VRC-18: 5820-234-6399
AN/VRC-18X: 5820-234-6397

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	AN/VRC-18: 2S4502-18/24 AN/VRC-18X: 2S4502-18/12	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-18 ( ) is a short-range, vehicular FM (voice) transmitting and receiving equipment used for communication within and between infantry units.

This equipment consists of the receiver-transmitter component, designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-7 and AN/GRC-8. The auxiliary receiver component of these sets is also provided with this equipment. A vehicular installation unit, power supply equipment, an antenna, and control components are included.

This equipment can be operated by means of Control Group AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 38.0 to 54.9
Type Modulation: FM
Type of Signal: Voice
Power Output:
High Power: 9 to 16 w
Low Power: 2 w
Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-18( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.85
1	Power Supply PP-109/GR	(FSN) 6130-284-0231 (USA) 3H4497-109.1	8 x 13 x 9	33
	or			
1	Power Supply PP-112/GR	(FSN) 6130-284-0230 (USA) 3H4497-112.1	8 x 13 x 9	33
1	Power Supply PP-281/GR	(FSN) 5820-500-4375 (USA) 3H4497-281.1	4-1/2 x 6 x 3	6
	or			
1	Power Supply PP-282/GR	(FSN) 5820-500-1648 (USA) 3H4497-282.1	4-1/2 x 6 x 3	6
1	Radio Receiver R-110/GRC	(FSN) 5820-503-1254 (USA) 2C4180-110.1	9 x 13 x 7-1/4	35
1	Receiver-Transmitter RT-68/GRC	(FSN) 5820-503-1505 (USA) 2C5130-68.1	9 x 13 x 11-1/4	35

REFERENCE DATA AND LITERATURE:

TM 11-611

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	6.6	306

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

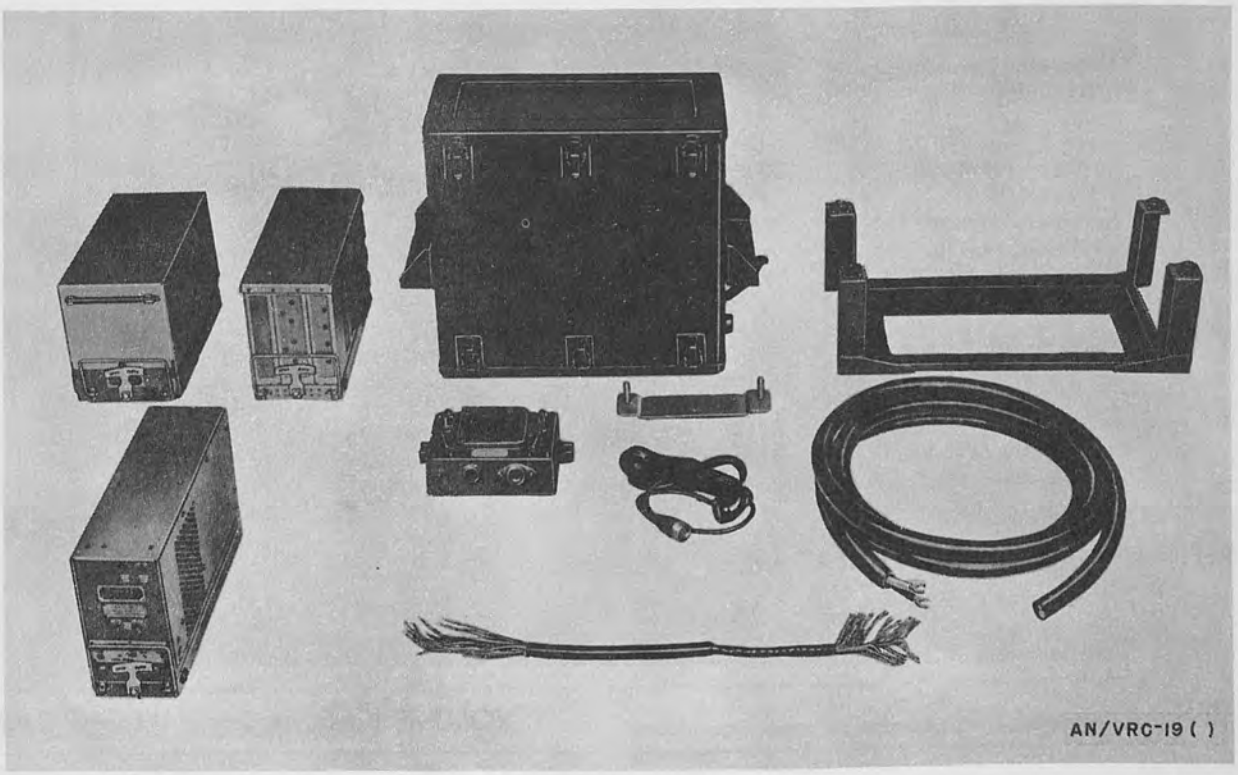
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-19( )

1 July 1958
Cognizant Serv: USA FSN: 5820-519-4103

	USA	USN	USAF
TYPE CLASS:	Std	--	Std
STOCK NO:	2S4502-19	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-19 ( ) is a small, battery-powered, vehicular, low-power, FM radio communication equipment used by military police, guard, and security troops. It can be installed in railroad trains and motor vehicles.

This equipment consists essentially of a radio receiver and power supply, a transmitter and power supply, a control unit, and an electrical equipment cabinet.

The AN/VRC-19 and AN/VRC-19X operate on a 24-volt and 12-volt, vehicular battery, respectively.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 152 to 174
Type Modulation: FM
Type of Signal: Voice
Power Output: 20 to 25 w
Power Requirements:
AN/VRC-19: 26.4 w (rcvr), 240 w (xmtr); 24-v dc
AN/VRC-19X: 24 w (rcvr), 240 w (xmtr); 12-v dc

AN/VRC-19( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Dynamotor-Power Supply DY–93/G	3H1535–93	8-5/8 x 6-7/8 x 14-1/2	24
	or			
1	Dynamotor-Power Supply DY–98/G	3H1535–98	8-5/8 x 6-7/8 x 14-1/2	24
	or			
1	Dynamotor-Power Supply DY–100/U	3H1535–100	8-5/8 x 6-7/8 x 14-1/2	24
1	Electrical Equipment Cabinet CY–938( )/VRC	6F290–938	10-1/2 x 19-5/16 x 16-1/2	33
1	Power Supply PP–867/U	3H4497–867	5 x 6-1/4 x 7	10
	or			
1	Power Supply PP–868/U	3H4497–868	5 x 6-1/4 x 7	10
	or			
1	Power Supply PP–869/U	3H4497–869	5 x 6-1/4 x 7	10
1	Radio Receiver R–394/U	2C4180–394	8-1/2 x 5-3/4 x 14-1/2	16
1	Radio Transmitter T–278/U	2C6900–278	8-1/2 x 4-1/2 x 14-1/2	8.5

REFERENCE DATA AND LITERATURE:

TM 11–297

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	10.3	249

PROCUREMENT DATA

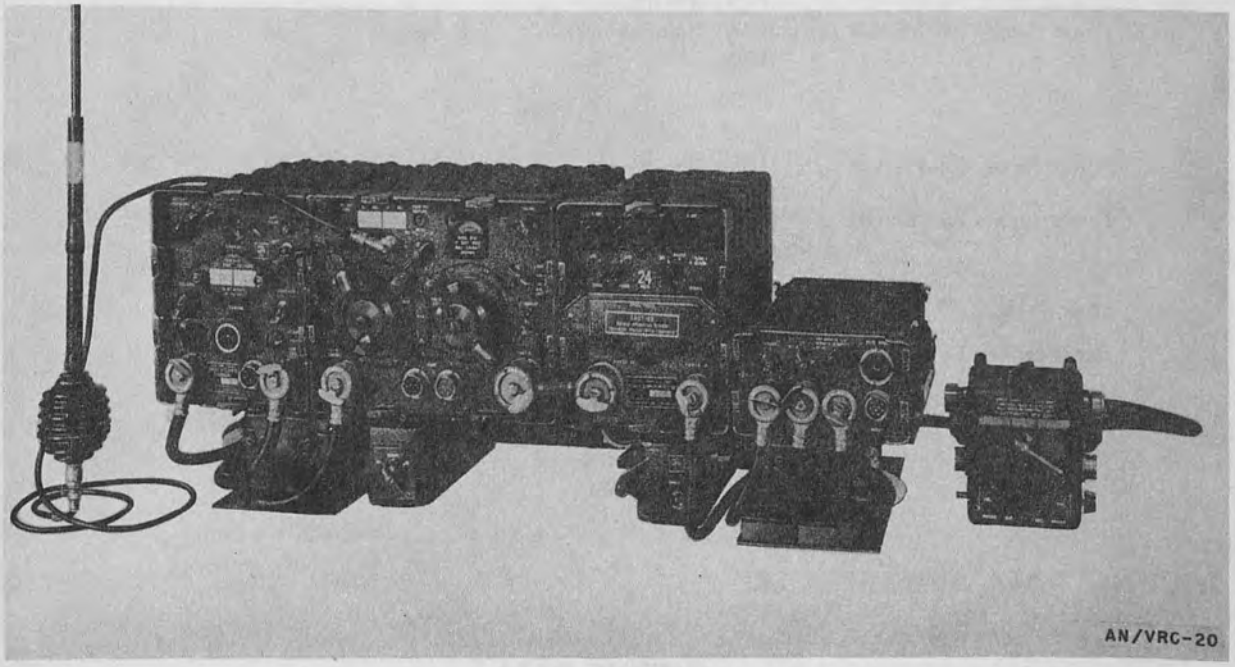
PROCURING SERVICE: USA
SPEC &/or DWG: MIL–N–11539
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	11661–P–52–51	$1,116.28

RADIO SET AN/VRC-20

1 July 1958
Cognizant Serv: USA FSN: 5820-519-4104

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4502	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-20 is a vehicular, short-range, FM (voice), radiotelephone equipment for communication within and between armored units.

This equipment consists of the receiver-transmitter component designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-3 and AN/GRC-4. The auxiliary receiver component of these sets is also provided with this equipment. A vehicular installation unit, power supply equipment, an antenna, and control components are included.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9
Type Modulation: FM
Type of Signal: Voice
Power Output:
High Power: 9 to 16 w
Low Power: 2 w
Power Requirements: 12/24-volt dc from vehicular storage battery

AN/VRC-20 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM-65/GRC	(FSN) 5820-194-8303 (USA) 2C449-65.1	4-1/4 x 13 x 7-7/8	15.5
1	Control Box C-375/VRC	(FSN) 5830-170-7868 (USA) 2C666-375	7 x 4 x 7	3.5
1	Power Supply PP-109/GR	(FSN) 6130-284-0231 (USA) 3H4497-109.1	8 x 13 x 9	33
	or			
1	Power Supply PP-112/GR	(FSN) 6130-284-0230 (USA) 3H4497-112.1	8 x 13 x 9	33
2	Power Supply PP-281/GR	(FSN) 5820-500-4375 (USA) 3H4497-281.1	4-1/2 x 6 x 3	6
	or			
2	Power Supply PP-282/GR	(FSN) 5820-500-1648 (USA) 3H4497-282.1	4-1/2 x 6 x 3	6
1	Radio Receiver R-108/GRC	(FSN) 5820-503-1258 (USA) 2C4180-108.1	9 x 13 x 7-1/4	35
1	Receiver-Transmitter RT-66/GRC	(FSN) 5820-503-1508 (USA) 2C5130-66.1	9 x 13 x 11-1/4	35

REFERENCE DATA AND LITERATURE:
TM 11-642

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	6.3	296

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

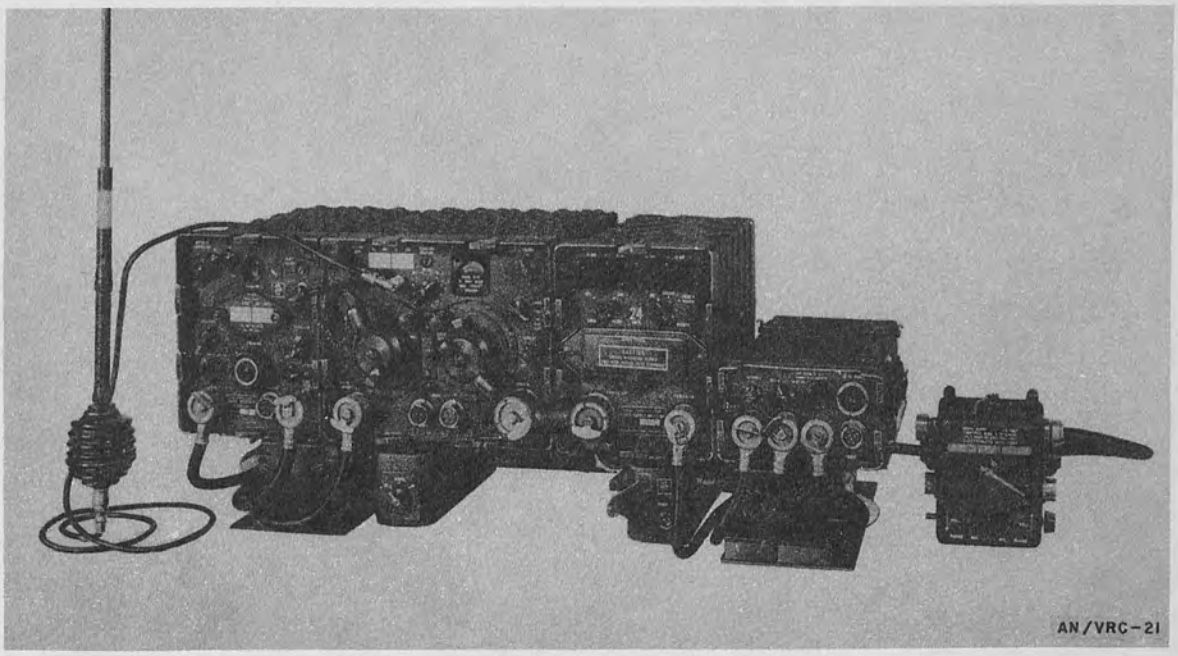
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-21

1 July 1958
Cognizant Serv: USA FSN: 5820-519-4102

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4502-21/24	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-21 is a vehicular, short-range, FM (voice), radiotelephone equipment for communication within and between artillery units.

This equipment consists of the receiver-transmitter component designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-5 and AN/GRC-6. The auxiliary receiver component of these sets is also provided with this equipment. A vehicular installation unit, power supply equipment, an antenna, and control components are included.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9
Type Modulation: FM
Type of Signal: Voice
Power Output:
High Power: 9 to 16 w
Low Power: 2 w
Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-21 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM–65/GRC	(FSN) 5820–194–8303 (USA) 2C449–65.1	4-1/4 x 13 x 7-7/8	15.5
1	Control Box C–375/VRC	(FSN) 5830–170–7868 (USA) 2C666–375	7 x 4 x 7	3.5
1	Power Supply PP–109/GR	(FSN) 6130–284–0231 (USA) 3H4497–109.1	8 x 13 x 9	33
	or			
1	Power Supply PP–112/GR	(FSN) 6130–284–0230 (USA) 3H4497–112.1	8 x 13 x 9	33
2	Power Supply PP–281/GR	(FSN) 5820–500–4375 (USA) 3H4497–281.1	4-1/2 x 6 x 3	6
	or			
2	Power Supply PP–282/GR	(FSN) 5820–500–1648 (USA) 3H4497–282.1	4-1/2 x 6 x 3	6
1	Radio Receiver R–109/GR	(FSN) 5820–503–1413 (USA) 2C4180–109.1	9 x 13 x 7-1/4	35
1	Receiver-Transmitter RT–67/GRC	(FSN) 5820–503–1507 (USA) 2C5130–67.1	9 x 13 x 11-1/2	35

REFERENCE DATA AND LITERATURE:
TM 11–642

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	6.3	296

PROCUREMENT DATA

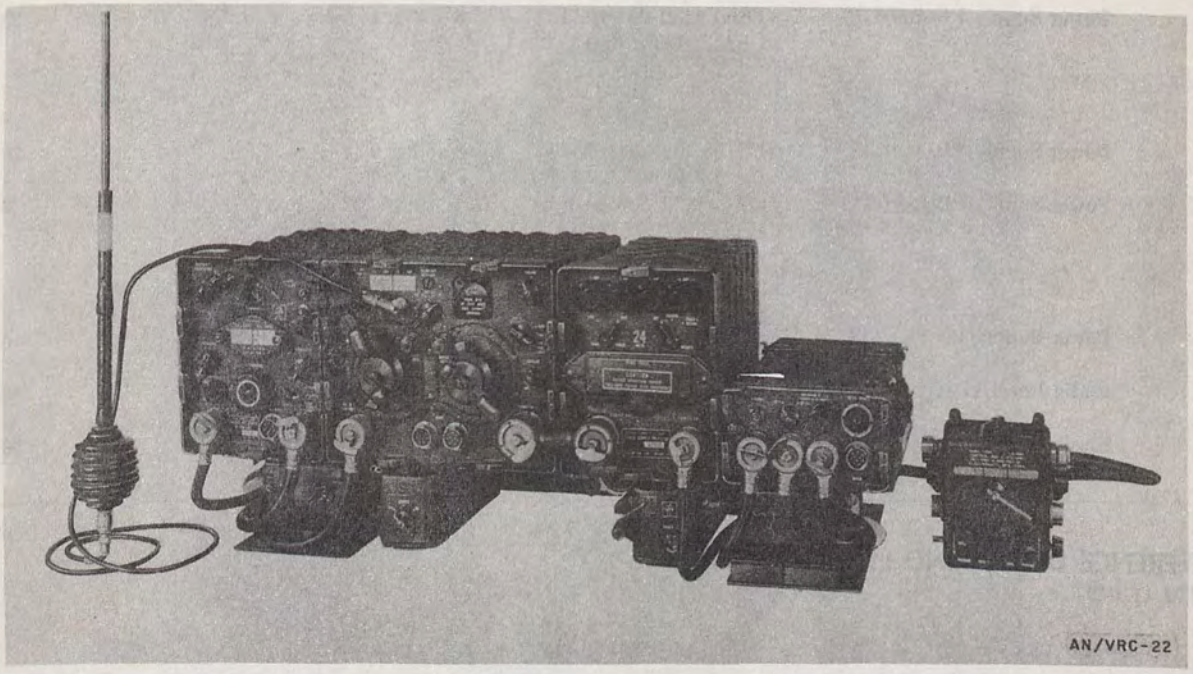
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-22

1 July 1958
Cognizant Serv: USA FSN: 5820-519-4101

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4502-22/24	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-22 is a vehicular, short-range, FM (voice) radiotelephone equipment for communication within and between infantry units.

This equipment consists of the receiver-transmitter component designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-7 and AN/GRC-8. The auxiliary receiver component of these sets is also provided with this equipment. A vehicular installation unit, and interphone amplifier, power supply equipment, and antenna and accessory components are included.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 38.0 to 54.9
Type Modulation: FM
Type of Signal: Voice
Power Output:
High Power: 9 to 16 w
Low Power: 2 w
Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-22 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	AF Amplifier AM–65/GRC	(FSN) 5820–194–8303 (USA) 2C449–65.1	4-1/4 x 13 x 7-7/8	15.5
1	Control Box C–375/VRC	(FSN) 5830–170–7868 (USA) 2C666–375	7 x 4 x 7	3.5
1	Power Supply PP–109/GR	(FSN) 6130–284–0231 (USA) 3H4497–109.1	8 x 13 x 9	33
	or			
1	Power Supply PP–112/GR	(FSN) 6130–284–0230 (USA) 3H4497–112.1	8 x 13 x 9	33
2	Power Supply PP–281/GR	(FSN) 5820–500–4375 (USA) 3H4497–281.1	4-1/2 x 6 x 3	6
	or			
2	Power Supply PP–282/GR	(FSN) 5820–500–1648 (USA) 3H4497–282.1	4-1/2 x 6 x 3	6
1	Radio Receiver R–110/GRC	(FSN) 5820–503–1254 (USA) 2C4180–110.1	9 x 13 x 7-1/4	35
1	Receiver-Transmitter RT–68/GRC	(FSN) 5820–503–1505 (USA) 2C5130–68.1	9 x 13 x 11-1/4	35

REFERENCE DATA AND LITERATURE:

TM 11–642

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	6.30	296

PROCUREMENT DATA

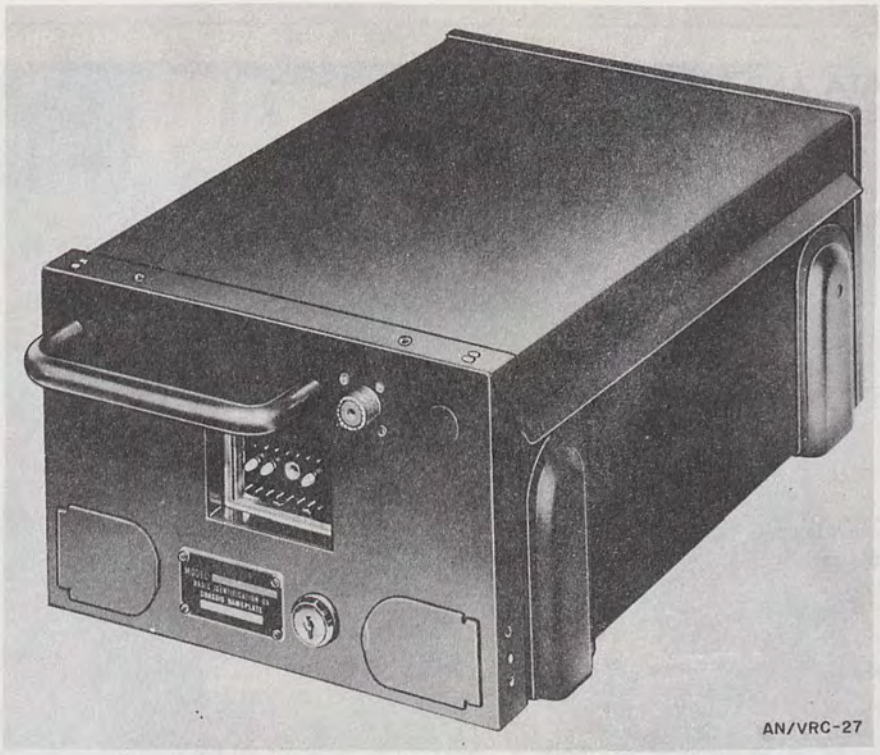
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-27( )

1 July 1958
Cognizant Serv: USN FSN:

	USA	USN	USAF
TYPE CLASS:	Used by	Std	--
STOCK NO:	--	--	--



AN/VRC-27

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-27 ( ) is a vehicular, medium-power, FM (voice) radio receiving and transmitting equipment of modified commercial design, used for short-range communication with land and/or mobile stations.

It provides two-way mobile communication for internal security and industrial control purposes. This equipment consists essentially of a transmitter, a receiver, and a power-supply chassis assembled in a drawer-type mobile housing. Accessories include control head with microphone, speaker, cable kit, installation kit and antenna. It is mounted at the rear, or installed in the trunk, of patrol- or passenger-type vehicles.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 42
Type Modulation: FM
Type of Signal: Voice
Power Output: 25 to 30 w
Power Requirements: 25 amp at 6-v dc; 12.5 amp at 12-v dc

AN/VRC-27( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Set AN/VRC–27	----------	6 x 9-5/8 x 18	50

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92757

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

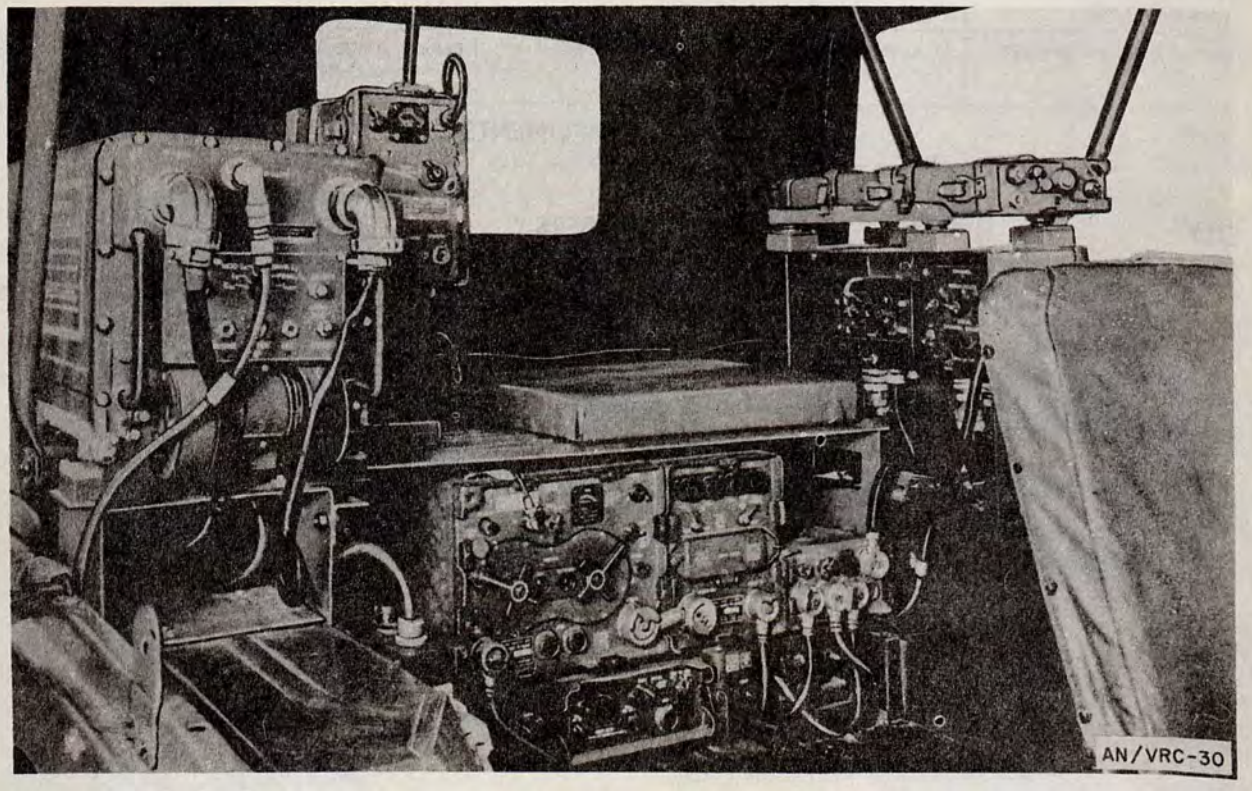
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill.	NObsr–64259	

RADIO SET AN/VRC-30

1 July 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4502-30-V76	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-30 is an assemblage of transmitting and receiving equipment arranged for vehicular installation and operation. Its components operate in different rf ranges, separately or simultaneously, to increase flexibility of ground and ground-to-air communication.

This equipment consists of the following radio sets: AN/ARC-27, AN/PRC-9, AN/TRC-7 (optional), and AN/VRC-14. The AN/TRC-7 is supplied only when a frequency range of 100 to 156 mc is required.

This equipment provides ground-to-air communication between forward observation posts on the ground and aircraft assigned to close support missions, as well as communication between the forward observation post and a similar radio set at a higher tactical ground-force headquarters.

It is usually installed in a 1/4-ton, 4 x 4 truck (M38 or M38A1) but may be mounted in a 3/4-ton truck, an armored personnel carrier, or a tank.

For installation in the 1/4-ton truck, 3/4-ton truck, or other vehicle, a heavy-duty generator must be installed to provide the necessary power to operate all equipment.

AN/VRC-30 RADIO SET

TECHNICAL CHARACTERISTICS:

SET	AN/ARC-27	AN/PRC-9	AN/TRC-7	AN/VRC-14
FREQUENCY RANGE IN MC	225.0 to 399.9	27.0 to 38.9	100 to 156	27 to 38.9
TYPE MODULATION	AM	FM	AM	FM
TYPE OF SIGNAL	Voice	Voice	Voice	Voice
POWER OUTPUT	10 w	1 w	0.5 to 1.5 w	2 or 20
POWER REQUIREMENTS	24- to 28-v dc	Battery BA-279/U	Battery BA-70 or Hand Generator G-3/TRC-7	12- or 24-v vehicular storage battery

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Set AN/ARC-27	(USA) 2S921-27	19-3/4 x 12-3/8 x 27-5/8	81.8
1	Radio Set AN/TRC-9	(FSN) 5820-254-9334	----------	26
1	Radio Set AN/TRC-7 (optional)	(FSN) 5820-537-4006	----------	143
1	Radio Set AN/VRC-14	(FSN) 5820-197-6532	----------	185

REFERENCE DATA AND LITERATURE:

TB SIG 283

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
11	25.6	621.1

PROCUREMENT DATA

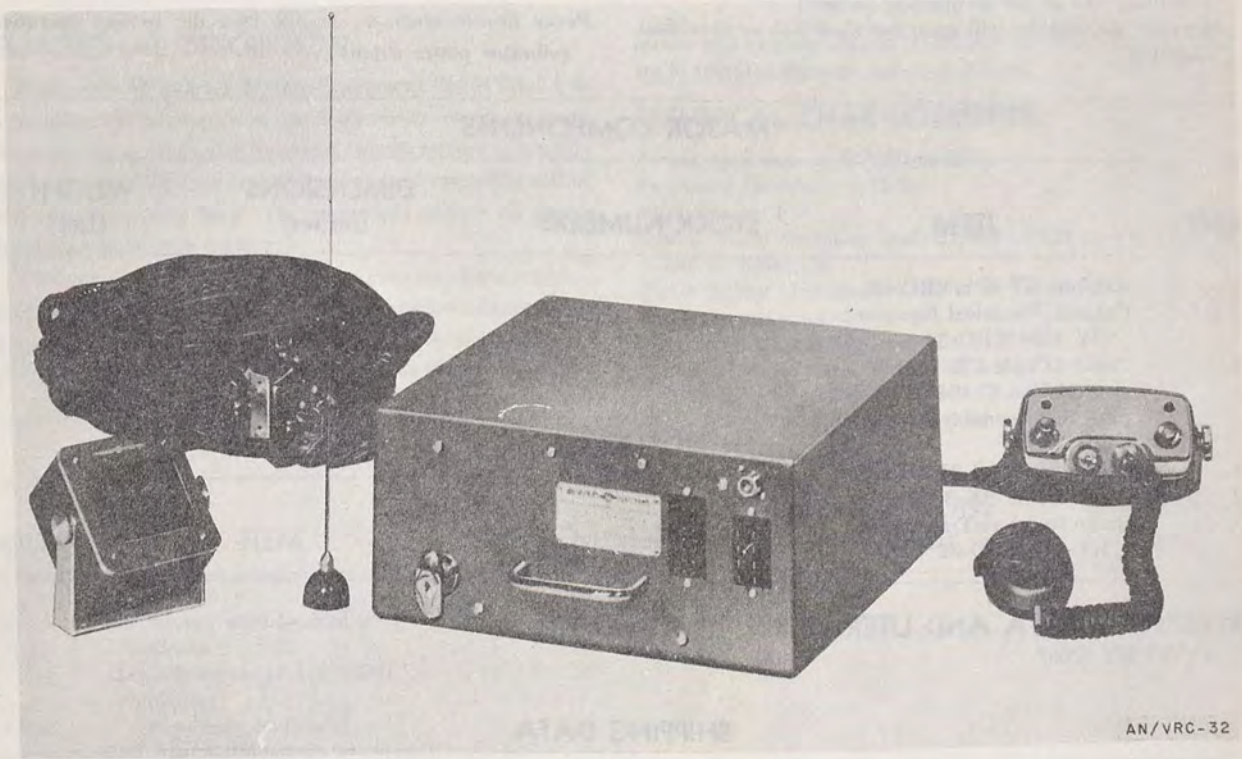
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-32

3 December 1958
Cognizant Serv: USN FSN: 5820-665-1423

	USA	USN	USAF
TYPE CLASS:	--	Used by	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRC-32 is a vehicular unit used for point-to-point, two-way communication. It is a militarized version of a commercial, General Electric Company Model MW13W, vehicular radio set.

This equipment operates in vehicles having battery-generator type power systems in which either the positive or negative terminal on the storage battery is grounded.

TECHNICAL CHARACTERISTICS:

Transmitter:

Frequency Range in Mc: 30 to 42
Frequency Stability:
Unheated Crystal: ±0.002%
Heated Crystal: ±0.0005%
Frequency Control: Crystal
Type Modulation: FM
Type Emission: F3 phase modulation
Audio Frequency: Between +1 to −3 db of a 6 db/octave preemphasis 300 to 3,000 cps (1,000 cps reference)
Spurious and Harmonic Radiation: At least 80 db below rated power out-put at any frequency
Hum and Noise Level: −40 db (below ±kc swing)
Channel separation (Maximum): 0.4% of operating frequency (160 kc approximately) for 2, 3, or 4 channel operation
Crystal Multiplication: 12 times
Ambient Temperature: −30°C. to +60°C.
Bandwidth:
Narrow Band: ±5 kc
Wide Band: ±15 kc

Receiver:

Frequency Range in Mc: 30 to 54

AN/VRC-32 RADIO SET

Frequency Stability:
Unheated Crystal: ±0.002%
Heated Crystal: ±0.0005%
Frequency Control: Crystal
Type Modulation: FM
Type Reception: F3 phase modulation
Audio Frequency: Within +2 to −8 db of a 6 db/octave deemphasis curve from 300 to 3,000 cps (1/000 cps reference)
Sensitivity: 0.4 μv (20 db quieting method)
Squelch: Adjustable, will open less than 0.15 μv at critical setting
Bandwidth: ±15 kc at the 6 db points (swing method of measurement)
Spurious Response: At least 100 db down
Ambient Temperature: −30°C. to 60°C.
Channel Separation: 0.4% operating frequency (160 kc approximately)
Intermediate Frequencies: 3.2 mc, 290 kc
Antenna: Vertical whip
Power Output: 30 w, nominal
Power Requirements: 6-, 12-, or 24-v dc; battery operated (vibrator power supply)

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AT–671/VRC–52			
1	Cabinet, Electrical Equipment CY–1908/VRC–32			
1	Control Cable CX–3659/U			
1	Control Unit C–1847/VRC–32			
1	Fuse Box Assembly J–735/ VRC–32			
1	Loudspeaker LS–255/U			
1	Power Cable CX–3658/U			
1	Radio Receiver-Transmitter RT–367/VRC–32			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 92652

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:
DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
General Electric	Electronics Park, Syracuse, N. Y.	NObsr–64749, 6 June 1955	$372.00

FREQUENCY MODULATED MOBILE EQUIPMENT AN/VRC-type

4 November 1958
Cognizant Serv: USN FSN: 5820-665-0404 35FMTR-7A

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Frequency Modulated Mobile Equipment 35FMTR-7A is a complete vhf radio set, less a primary power source, designed for vehicular operation. It provides two-way voice communication with similar fixed or mobile equipment operating within the same frequency band. The equipment derives its power from a 6-volt storage battery.

The complete radio set consists of a receiver, a transmitter, a control head, and associated operating and installation components. The transmitter contains a dynamotor power supply. All jacks and receptacles are mounted on the front of the transmitter and receiver chassis. There are no tuning controls; the set is operated through the control head.

TECHNICAL CHARACTERISTICS:

Frequency Range in MC: 30 to 44
Frequency Deviation: ±15 kc
Type Signal: FM
System Audio Response: ±db at 500 to 3,00 cps ±2.5 db at 350 to 5,000 cps
Power Output (Transmitter): 35 w
Power Requirements:
Standby: 13.5 w 2.25 amp at 6-v dc
Transmitting: 180 w 30 amp at 6-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Cadmium plated tapered steel antenna			
1	Radio Receiver 11-UF-ED7, including:			
1 bag	Accessories, containing: Automatic circuit breakers, bolts, cable clamps, capacitors, screws, suppressors, etc.			
1	Antenna cable with one coaxial fitting			
1	Antenna cable with two coaxial fittings			
1	Control head, two-way			
1	Handset mounting			
1	Loudspeaker with cable and plug			
1	Push-to-talk handset or hand microphone with cable attached			
1	Receiver control cable with plugs			
1	Universal or roof-top antenna mounting			

AN/VRC-type FREQUENCY MODULATED MOBILE EQUIPMENT

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitter 35-UFM–7A, including:	----------	----------	30.75
1	Primary power cable with plugs			
1	Transmitter control cable with plugs			

REFERENCE DATA AND LITERATURE:

NAVSHIPS 91070

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3		

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Link Radio Corp.	New York, N. Y.		

FREQUENCY MODULATED MOBILE RADIO EQUIPMENT AN/VRC-type

5 November 1958
Cognizant Serv: USN FSN: 50FMTR-7A

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Frequency Modulated Mobile Radio Equipment 50FMTR-7A is a complete vhf radio set, less a primary power source, designed for vehicular operation. It provides two-way voice communication with similar fixed or mobile equipment operating within the same frequency band. The equipment derives its power from a 6-volt storage battery.

The complete radio set consists of a superheterodyne type receiver, a transmitter, a control head, and associated operating and installation components. The transmitter contains a dynamotor power supply; the receiver has a built-in synchronous type vibrator unit. All jacks and receptacles are mounted on the front of the transmitter and receiver chassis. There are no tuning controls—the set is operated through the control head.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 44
Frequency Control (Receiver): Crystal
Frequency Deviation: ±15 kc
Type Signal: FM
System Audio Response: ±1 db at 500 to 3,000 cps ±2.5 db at 350 to 5,000 cps
Power Output (Transmitter): 50 w (nominal)
Output Impedance:
Transmitter: Any, usually fed into concentric line
Receiver: 6 or 500 ohms
Power Requirements:
Transmitter:
Standby: 22.8 w 3.8 amp at 6-v dc
Transmitting: 240 w 40 amp at 6-v dc
Receiver: 5 amp (approximately) at 6-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1 bag	Accessories, containing:			
1	Automatic reset circuit breakers, bolts, cable clamps, capacitors, screws, suppressors, etc.			
1	Antenna cable	----------	3 or 12 ft lg	
1	Antenna cable	----------	15 ft	
1	Cadmium plated steel antenna			
1	Hand microphone			
1	Handset mounting			
1	Permanent-magnet type loud speaker			
2	Quick release base assembly (receiver and transmitter)			
1	Radio Receiver 11-UF-ED7	----------	8 x 10 x 12-1/4	23.75
1	Radio Transmitter 50-UFM-ED7A	----------	8 x 10 x 12-1/4	31.75
1	Receiver control cable			
1	Remote control head			
1	Transmitter control cable			
1	Universal or roof-top antenna mounting			

AN/VRC-type FREQUENCY MODULATED MOBILE RADIO EQUIPMENT

REFERENCE DATA AND LITERATURE:
NAVSHIPS 91071

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3		

PROCUREMENT DATA

PROCURING SERVICE: USN, BuShips
SPEC &/or DWG:

DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Link Radio Corp.	New York, N. Y.		

TRANSMITTER-RECEIVER **AN/VRC-type**

26 November 1958
Cognizant Serv: USN FSN: FMTR–30D

USA	USN	USAF
TYPE CLASS: --	Used by	--
STOCK NO: --	--	--

(No Illustration Available)

FUNCTIONAL DESCRIPTION:

Transmitter-Receiver FMTR–30D (Motorola) is a crystal-controlled single-frequency radiotelephone transmitter and receiver designed for installation in commercial vehicles, specifically passenger automobiles. It provides two-way voice communication with a similar fixed or mobile equipment operating on the same frequency.

A single antenna is used, which receives or transmits in accordance with the operation of an antenna relay in the transmitter. The equipment employs a dynamotor power supply operated from the 6-volt storage battery of the vehicle.

The FMTR–30D is similar to Transmitter-Receivers FMTR–25 and FMTR–50D except for power output. It is also similar to Radio Set AN/VRC–2X except for mechanical and electrical differences and in accessories supplied.

TECHNICAL CHARACTERISTICS:

Frequency Range: 30 to 40 mc
Frequency Control: Crystal
Type of Signal: Voice
Type Modulation: FM
Type Receiver: Double superheterodyne
Receiver If: 4.3 mc and 455 kc
Power Output: 30 w
Antenna: 1/4 wave telescopic whip type
Power Requirements: 6-v storage battery

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Accessory Bag P–8055			
1	Antenna P–253			
1	Connecting Cable Kit K–8025			
1	Control Head P–8022			
1	Generator Filter P–345			
1	Microphone P–255 or P–278			
1	Receiver Unit PA–8033			
1	Speaker (3-ohm voice coil) (as selected)			
1	Transmitter Unit PA–8021			

REFERENCE DATA AND LITERATURE:

COMMERCIAL

AN/VRC-type TRANSMITTER-RECEIVER

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

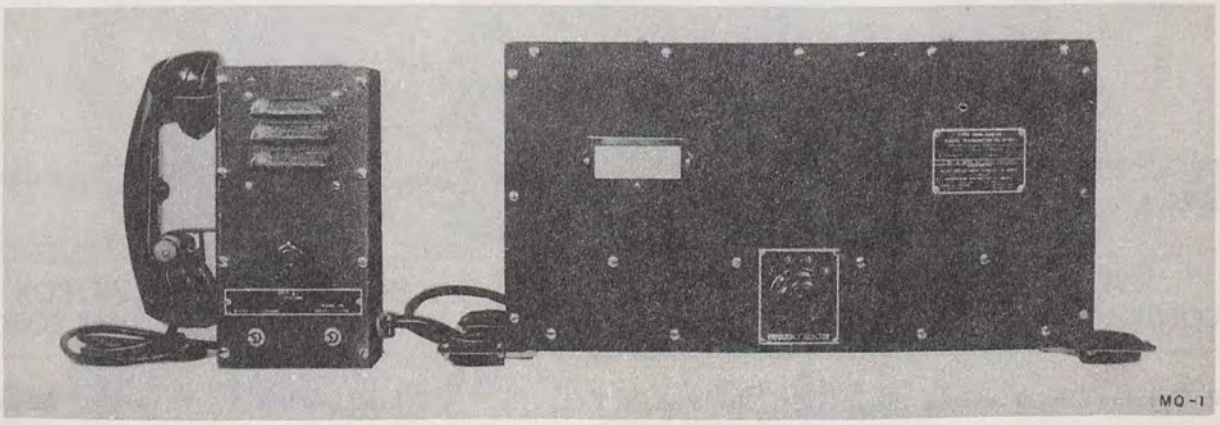
DESIGN COG: Commercial

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Galvin Mfg. Corp.	Chicago, Ill.		

RADIOTELEPHONE EQUIPMENT AN/VRC-type

4 December 1958
Cognizant Serv: USN FSN: 5820–665–1345 (6-v dc) MQ–1
5820–665–3818 (12-v dc)

	USA	USN	USAF
TYPE CLASS:	--	L/Std	--
STOCK NO:	--	F16–Q–174474–200 (6-v dc) F16–Q–174494–200 (12-v dc)	--



FUNCTIONAL DESCRIPTION:

Radiotelephone Equipment MQ–1 is a general purpose, compact, low-power, medium-frequency transmitter-receiver designed for two-way mobile radiotelephone communication.

Any simple single-wire antenna may be used with the MQ–1.

Remote control is provided, but does not include channel selection.

TECHNICAL CHARACTERISTICS:

Frequency Range in MC: 2 to 3.5
Type of Modulation: AM
Type of Signal: Voice
Power Output:
Transmitter: 5 w
Receiver: 50 mw
Power Requirements: 113 w 6.3-v dc or 151 w 12.6-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Remote Control Unit 23327	----------	10-5/8 x 8-1/2 x 4	7
1	Transmitter-Receiver 43023 (6-v dc)			
	or			
	Transmitter-Receiver 43024 (12-v dc)	----------	10-3/8 x 23-5/8 x 13-7/8	40

AN/VRC-type RADIOTELEPHONE EQUIPMENT

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95144

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	8.5	140

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

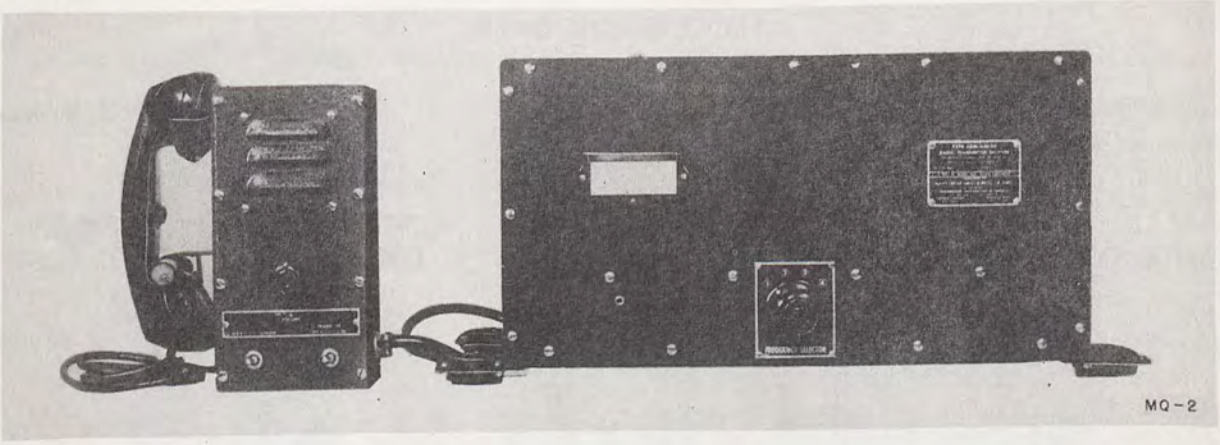
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp of America	New York, N. Y.	NXss-LL-23979	$500.00

RADIOTELEPHONE EQUIPMENT AN/VRC-type

4 December 1958
Cognizant Serv: USN FSN: 5820-665-2116

MQ-2

	USA	USN	USAF
TYPE CLASS:	--	L/Std	--
STOCK NO:	--	F16-Q-174514-200	--



FUNCTIONAL DESCRIPTION:

Radiotelephone Equipment MQ-2 is a general purpose, compact, low-power, medium-frequency transmitter-receiver designed for two-way mobile radiotelephone communication.

Any simple single wire antenna may be used with the MQ-2.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 2 to 3.5

Type of Modulation: AM

Type of Signal: Voice

Power Output:

Transmitter: 5 w

Receiver: 50 mw

Power Requirements: 189 w, 6-v dc; 161 w, 115-v 50/60-cycle 1-phase ac

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Transmitter-Receiver 43046	----------	12-1/8 x 23-5/8 x 18-1/8	71

(Equipment consists of only one major component.)

REFERENCE DATA AND LITERATURE:

NAVSHIPS 95145

AN/VRC-type RADIOTELEPHONE EQUIPMENT

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	8.5	140

PROCUREMENT DATA

PROCURING SERVICE: USN
SPEC &/or DWG:

DESIGN COG: USN, BuShips

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Radiomarine Corp of America	New York, N. Y.	NXs–12088	$500.00

RADIO SET AN/VRC-type

1 July 1958
Cognizant Serv: USA FSN: 5820-355-8098 SCR-193-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	L/Std
STOCK NO:	2S193.1/12-1	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-193-( ) is a medium frequency AM (voice and cw) field radio station used in command vehicles.

This equipment consists essentially of a transmitter (with appropriate tuning units for frequency channels in which the set is operated), a receiver, accessory items, and antenna components. The set is available in several models, each identified by model-letters indicating special application or design for the vehicle in which it is installed.

Radio Set SCR-193-( ) is a vehicular application of primary operating components of Radio Sets SCR-177 and SCR-188.

It operates from a vehicular storage battery and uses a whip-type antenna.

This set has been replaced by Radio Set AN/GRC-19.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitting: 1.5 to 6.2
Receiving: 1.5 to 18
Type Modulation: AM
Type of Signal: Voice or cw
Power Output: 75 w
Power Requirements: Vehicular storage battery

AN/VRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Dynamotor Unit BD–77	3H1777.2	11 x 11 x 7-1/2	37.3
1	Radio Receiver BC–312–( )	2C4312	18-3/4 x 18 x 9	58.0
1	Radio Transmitter BC–191–( )	2C6191.8	21 x 23-1/8 x 9-1/2	55.75
3	Tuning unit	----------	7-3/4 x 16-3/4 x 8-3/4	4.43

REFERENCE DATA AND LITERATURE:

TM 11–273

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	4.1	210 to 230

PROCUREMENT DATA

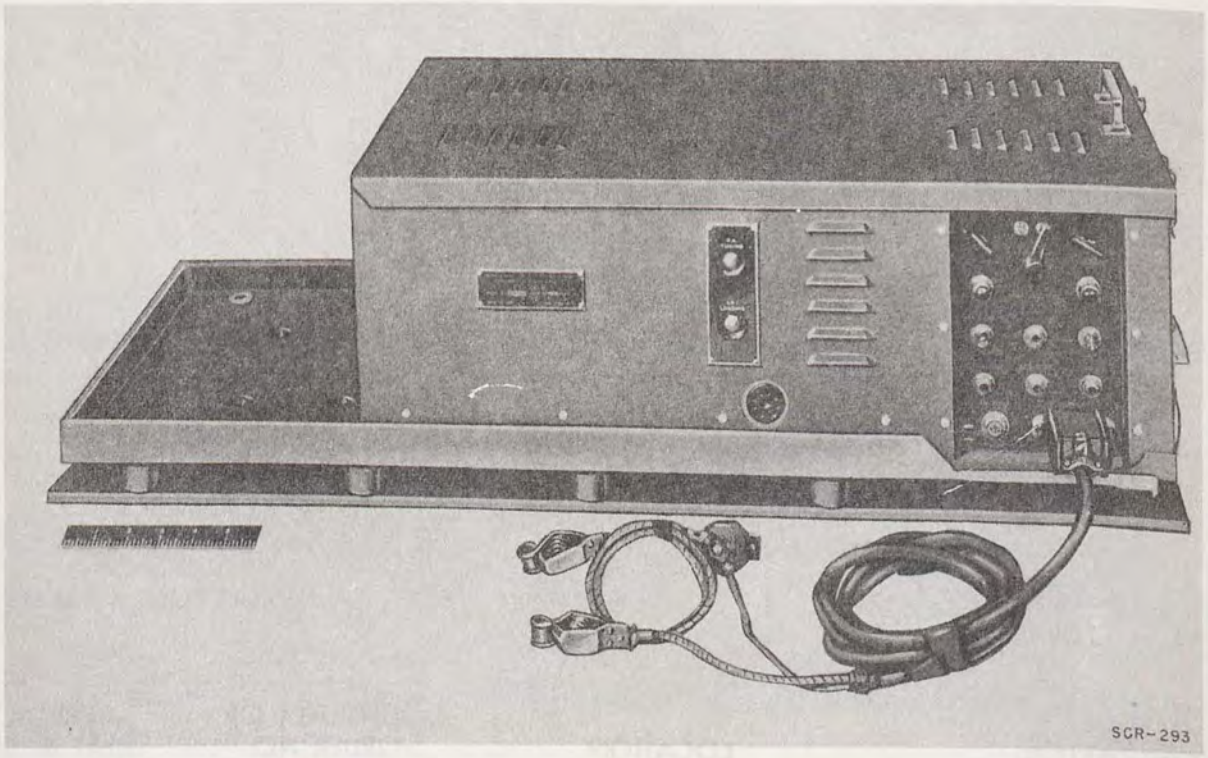
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-type

1 July 1958
Cognizant Serv: USA FSN: SCR–293–( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	--	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR–293–( ) is a vehicular short-range, medium-power, FM (voice) equipment used in inclosed vehicles for two-way voice communication within and between armored units or between armored and infantry units.

This set consists of a receiver-transmitter plus an additional receiver (not shown in the illustration) mounted on a common shock mount, and is powered by the storage battery of the vehicle in which it is installed. Radio Set SCR–293 is the 12-volt version, while the SCR–293–B is the 24- to 28-volt model of this equipment.

The additional receiver component Radio Receiver BC–499 mounted alone on the shock mount constitutes Radio Set SCR–294 (12 v) or SCR–294–B (24 v).

TECHNICAL CHARACTERISTICS:

Type Modulation: FM
Type of Signal: Voice only
Power Output:
High: 25 w
Low: 0.5 w
Power Requirements:
SCR–293: 12-v vehicular storage battery
SCR–293–B: 24-v vehicular battery

AN/VRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna AN–42–A			
1	Mounting FT–239			
1	Radio Receiver and Transmitter BC–500		Mounted: 12 x 14-1/2 x 34	115
1	Radio Receiver BC–499			

REFERENCE DATA AND LITERATURE:

Instruction Book, Radio Sets SCR–293 and SCR–294

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

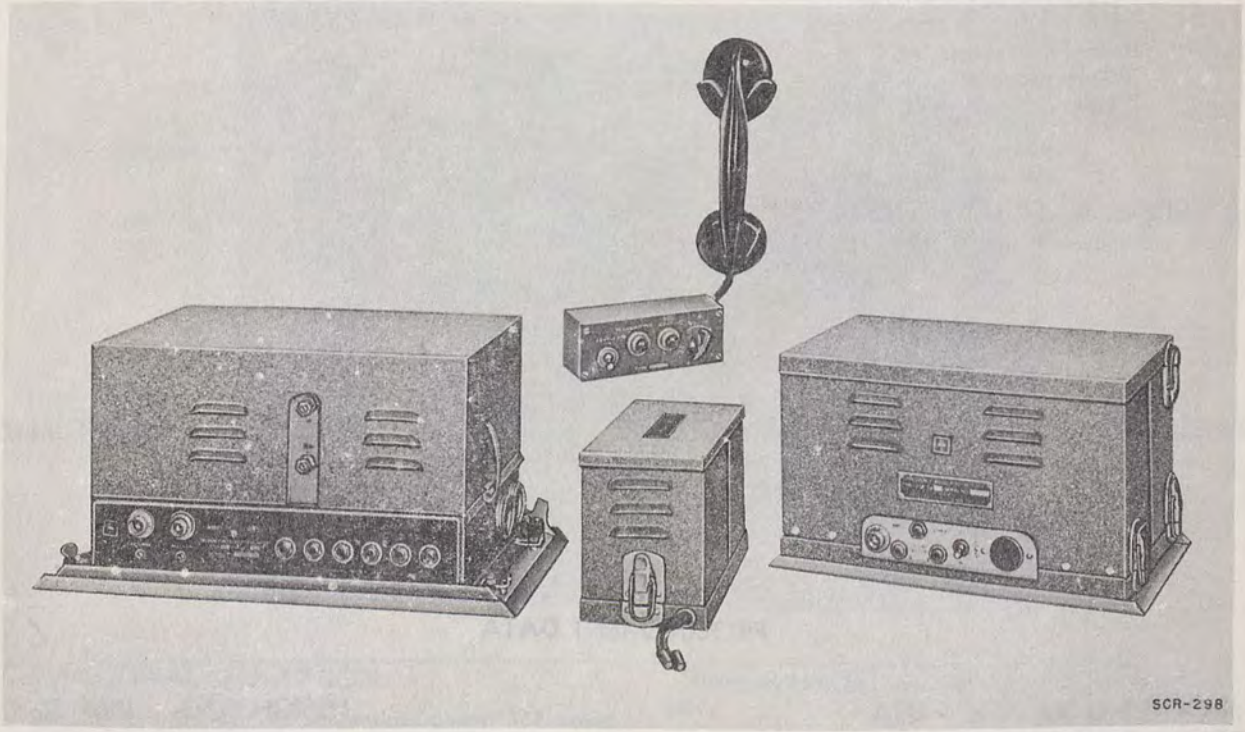
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-type

1 July 1958
Cognizant Serv: USA FSN: 5820-193-8866 SCR-298-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S298T-32	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-298-( ) is a vehicular, short-range, FM (voice) transmitting and receiving equipment used by military police, security troops, and similar units.

This equipment is usually installed in the luggage carrier compartment of a vehicle and consists of a commercial police type radio receiver and transmitter with a power supply. The set is operated by means of a remote control unit installed in the driver's compartment.

It can be used to monitor or operate in radio communication nets serving field artillery or armored force. It operates on power derived from the battery of the vehicle in which it is installed.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20 to 28
Type Modulation: FM
Type of Signal: Voice
Power Output: 25 w
Power Requirements: 6-v dc from vehicular storage battery (32 amp transmitting, 2.25 amp standby)

AN/VRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Power Unit VPA–3A		8-1/2 x 4-1/4 x 5	7.25
1	Radio receiver (F. M. Link Radio Co., Model No. LL–UF)		9 x 13 x 7-1/2	17.5
1	Radio transmitter (F. M. Link Radio Co., Model No. 35 UFM)		9 x 17 x 8-1/4	29

REFERENCE DATA AND LITERATURE:

Instruction Book, Radio Set SCR–298 (USA Sig C Stock Number 25298C/B1)

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	15	185

PROCUREMENT DATA

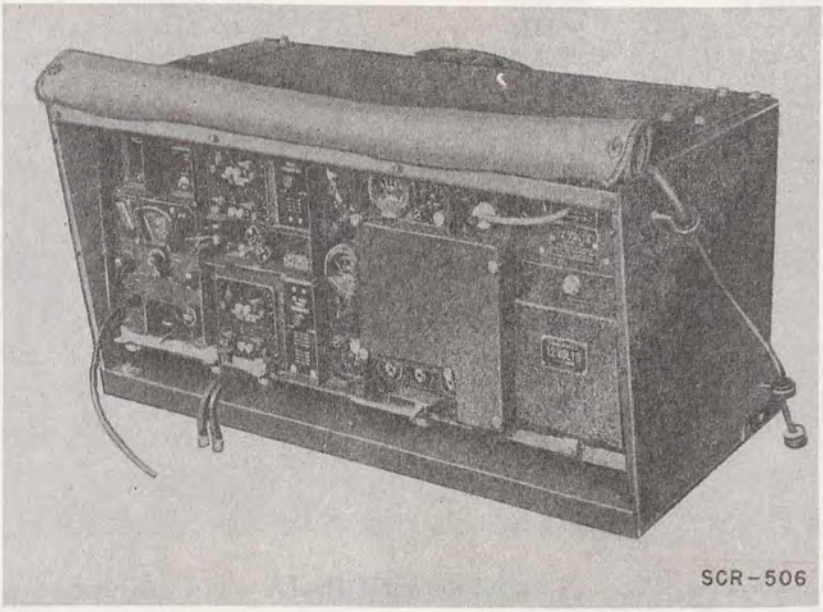
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
F. M. Link Radio Co.	New York, N. Y.		

RADIO SET **AN/VRC-type**

1 July 1958
Cognizant Serv: USN FSN: 5820-186-9271 SCR-506-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S506.1/12	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-506-( ) is a medium power, AM (voice) and cw, vehicular radio transmitting and receiving equipment used by motorized tactical units for ground-to-ground and ground-to-air communication in the medium-frequency range.

This equipment consists of a radio transmitter and a radio receiver mounted on a vehicular shock mounting common to both, and includes antenna, cording, and accessory items. It is usually installed in tanks, armored and amphibious vehicles, personnel carriers and similar vehicles. The set has provision for rapidly adjusting, and operating over, any of five preselected channels.

It operates from the storage battery of the vehicle in which it is installed.

This equipment has been replaced by Radio Set AN/GRC-19.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
Transmitter: 2.0 to 4.5 (126 channels)
Receiver: 2.0 to 6.0 (201 channels, 2 bands)

Type Modulation: AM

Type of Signal: Voice and cw

Power Output:
Voice: 10 to 25 w
Cw: 50 to 90 w

Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Dynamotor DM–42	3H1642	7 x 4″ (diameter)	
1	Radio Receiver BC–652	2C4452	12-1/2 x 14-5/8 x 7-5/8	46.5
1	Radio Transmitter BC–653	2C6530–653	12-1/2 x 14-5/8 x 25-9/32	143.0

REFERENCE DATA AND LITERATURE:

TM 11–630

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
4	25	535

PROCUREMENT DATA

PROCURING SERVICE: USA

DESIGN COG: USA, Sig C

SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-type

1 July 1958
Cognizant Serv: USA FSN: 5820-192-7137 (12 v)
5820-192-7138 (24 v)

SCR-508-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	2S508/12-24v	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-508-( ) is a vehicular, medium-range, crystal-controlled, FM (voice) radiotelephone equipment used by armored units.

This equipment consists of two receivers and one transmitter mounted on a common shock mount and provides a total of 20 receiving and 10 transmitting channels. It also provides for operation of the vehicular interphone system. Each receiver and the transmitter provide 80 frequency channels, 10 of which are preset, and are selected by means of a pushbutton mounted on the front panel of each. A whip-type vehicular antenna, a set of crystals, and related accessories are included.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9
Type Modulation: FM
Type of Signal: Voice
Power Output: 25 w
Power Requirements:
Transmitter: 20 amp at 12-v dc from vehicular storage battery, through Dynamotor DM-35; 12 amp at 24-v dc from vehicular storage battery, through Dynamotor DM-37
Receiver: 4 amp at 12-v dc from vehicular storage battery, through Dynamotor DM-34; 2 amp at 24-v dc from vehicular storage battery, through Dynamotor DM-36

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
2	Dynamotor DM-34	3H1634	4-1/2 x 3 x 6-1/2	4.7
	or			
2	Dynamotor DM-36	3H1636	4-1/2 x 3 x 6-1/2	4.7
1	Dynamotor DM-35	3H1635	5-1/2 x 4-1/2 x 8-1/4	9.2

AN/VRC-type RADIO SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
	or			
1	Dynamotor DM–37	3H1637	5-1/2 x 4-1/2 x 8-1/4	9.2
1	Interphone Control Box BC–606–H	2C1738	4-1/2 x 2-1/4 x 4-1/4	1.8
1	Mounting FT–237	2Z6721–237	5-1/2 x 13 x 33-5/8	26
2	Radio Receiver BC–603	2C4403	11-1/2 x 6-3/4 x 12-1/2	35
1	Radio Transmitter BC–604	2C6494	11-1/2 x 10-1/4 x 18	67

REFERENCE DATA AND LITERATURE:

TM 11–600

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7	31.6	710

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 271–1046

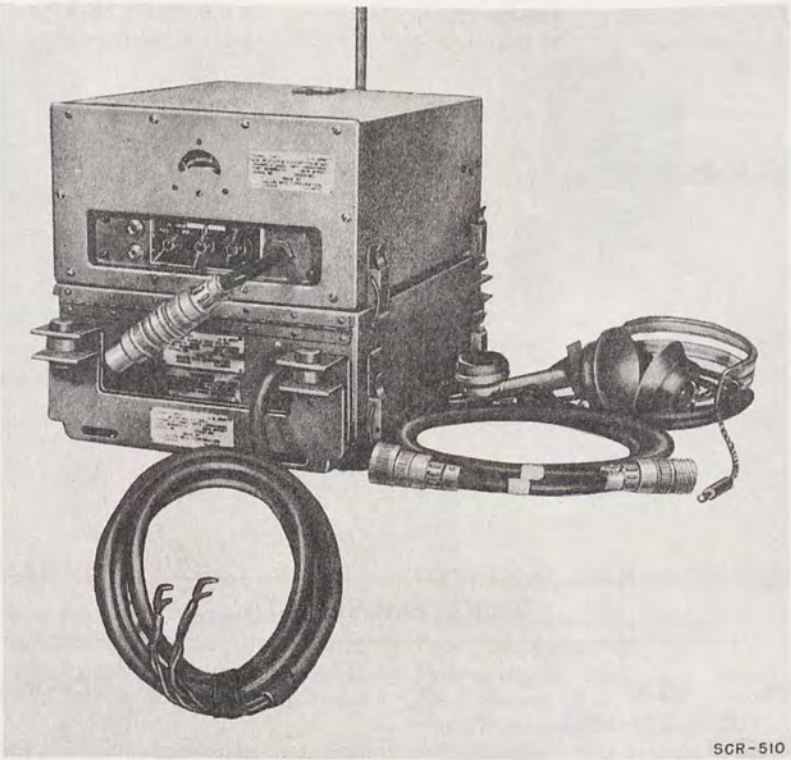
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET **AN/VRC-type**

1 July 1958
Cognizant Serv: USA FSN: 5820–355–8205 SCR–510–( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S5109/6–12v	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR–510–( ) is a pack and vehicular, short-range, low-power, FM radiotelephone equipment used as a command set by armored units.

This equipment consists of a receiver-transmitter, power-supply unit, and accessories. It provides 80 crystal-controlled channels spaced 100 kc apart, two of which can be preset.

It can be operated from a remote point over a telephone pair by means of standard remote control apparatus.

If it is operated on the ground from dry batteries in Case CS–79, it is then identical with Radio Set SCR–509.

This set has been replaced by Radio Set AN/PRC–8.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9
Type Modulation: FM
Type of Signal: Voice
Power Output: 1.8 w
Power Requirements: 6- or 12-v vehicular storage battery, Battery BA–41, and Plate Supply Unit PE–97 or Power Supply Unit PE–120

AN/VRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Case CS–79	3B879	4-1/2 x 13-3/16 x 15-9/16	10.00
1	Power Supply Unit PE–120	3H4496–120	6 x 15-3/16 x 14-15/16	20.00
1	Radio Receiver and Transmitter BC–620	2C5360	6-3/4 x 13-3/16 x 14-15/16	27.20

REFERENCE DATA AND LITERATURE:

TM 11–605

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	12	235

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 271–1057

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-type

1 July 1958
Cognizant Serv: USA FSN: 5820-164-8114

SCR-528

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	2S528/12	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-528 is a vehicular, short-range, crystal-controlled, FM (voice), transmitting and receiving equipment used for radio communication by vehicles of armored units. It also provides for operation of the interphone system of armored vehicles.

This equipment consists of a radio transmitter and radio receiver mounted on a common shock mount, dynamotors, antenna, and accessories. The transmitter and receiver operate on 10 preset channel frequencies selected by means of 10 push-buttons on the front panels of these components.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9 at 0.1 mc intervals
Type Modulation: FM
Type of Signal: Voice
Power Output: 30 w
Power Requirements:
Transmitter: 12-v vehicular battery through Dynamotor DM-35, 24-v vehicular battery through Dynamotor DM-37
Receiver: 12-v vehicular battery through Dynamotor DM-34, 24-v vehicular battery trhough Dynamotor DM-36

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Dynamotor DM-34	3H1634	4-1/2 x 3 x 6-1/2	4.7
	or			
1	Dynamotor DM-36	3H1636	4-1/2 x 3 x 6-1/2	4.7
1	Dynamotor DM-35	3H1635	5-1/2 x 4-1/2 x 8-1/4	9.2

AN/VRC-type RADIO SET

MAJOR COMPONENTS—Continued

QTY	ITEM	STOCK NUMBERS	DIMENSION (Inches)	WEIGHT (Lbs)
	or			
1	Dynamotor DM–37	3H1637	5-1/2 x 4-1/2 x 8-1/4	9.2
1	Interphone Control Box BC–606	2C1738	4-1/2 x 2-1/4 x 4-1/4	1.8
1	Mounting FT–237	2Z6721–237	5 x 12 x 33	26
1	Radio Receiver BC–603	2C4403	11-1/2 x 6-3/4 x 12-1/2	35
1	Radio Transmitter BC–604	2C6494	11-1/2 x 10-1/4 x 18	67

REFERENCE DATA AND LITERATURE:

TM 11–600

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	29.6	645

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA) 271–1046

DESIGN COG: USA, Sig C

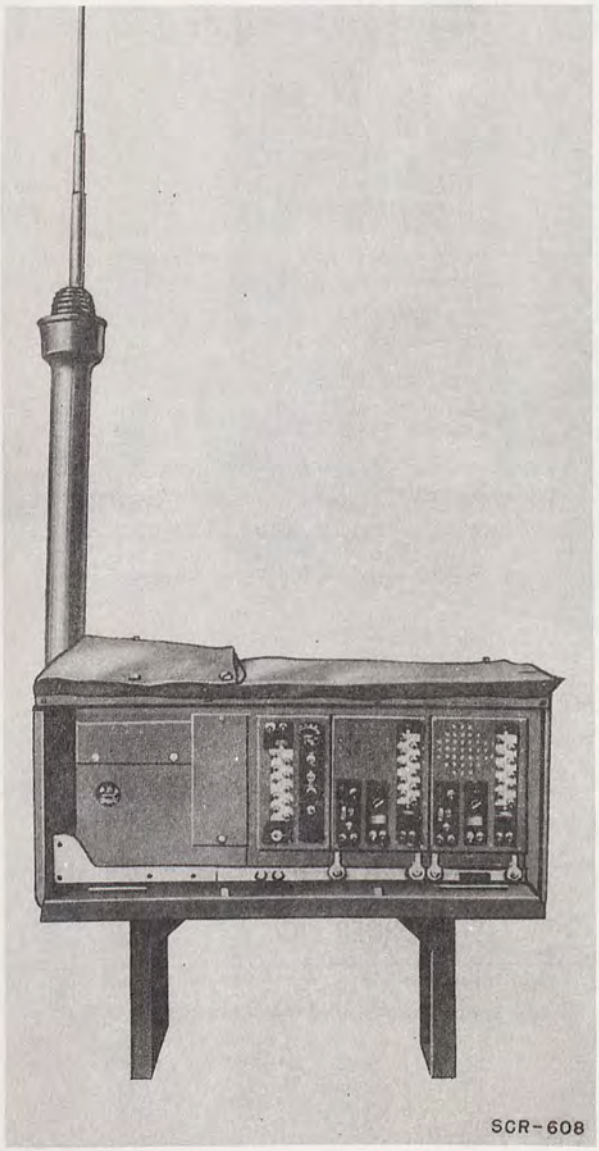
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRC-type

1 July 1958
Cognizant Serv: USA FSN: 5820-196-6130(12v)
5820-196-6131(24v)

SCR-608

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	2S608/12-24v	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-608 is a crystal-controlled, vehicular, short-range, low-power radiotelephone equipment used for FM (voice) communication in the frequency range assigned artillery units.

This equipment consists essentially of two receivers, one transmitter, appropriate dynamotors, antenna components, and accessories.

The transmitter and each of the receivers provide 120 channel frequencies, 10 of which may be preset, in each case. Each of these components has on its respective front panel 10 pushbuttons for selecting frequency channels. Thus, 10 transmitting and 20 receiving channels are provided.

This set provides for operation of the interphone equipment of the vehicle in which it is installed.

Through selection of appropriate dynamotors, it can operate from 12- or 24 volt vehicular storage batteries.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9
Type Modulation: FM
Type of Signal: Voice
Power Output: 20 w
Power Requirements:

Transmitter: 20 amp at 12-v dc from vehicular storage battery through Dynamotor DM-35, 12 amp at 24-v dc from vehicular storage battery through Dynamotor DM-37

Receiver: 4 amp at 12-v dc from vehicular storage battery through Dynamotor DM-34, 2 amp at 24-v dc from vehicular storage battery through Dynamotor DM-36

AN/VRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
2	Dynamotor DM–34	3H1634	4-1/2 x 3 x 6-1/2	4.7
	or			
2	Dynamotor DM–36	3H1636	4-1/2 x 3 x 6-1/2	4.7
1	Dynamotor DM–35	3H1635	5-1/2 x 4-1/2 x 8-1/4	9.2
	or			
1	Dynamotor DM–37	3H1637	5-1/2 x 4-1/2 x 8-1/4	9.2
1	Mounting FT–237	2Z6721–237	5-1/2 x 13 x 33-5/8	44.0
2	Radio Receiver BC–683	2C4460–683	11-1/2 x 6-3/4 x 12-1/2	35.0
1	Radio Transmitter BC–684	2C6530–684	11-1/2 x 10-1/4 x 18	67.0

REFERENCE DATA AND LITERATURE:

TM 11–620

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
7	31.6	660

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: (USA)271–1317

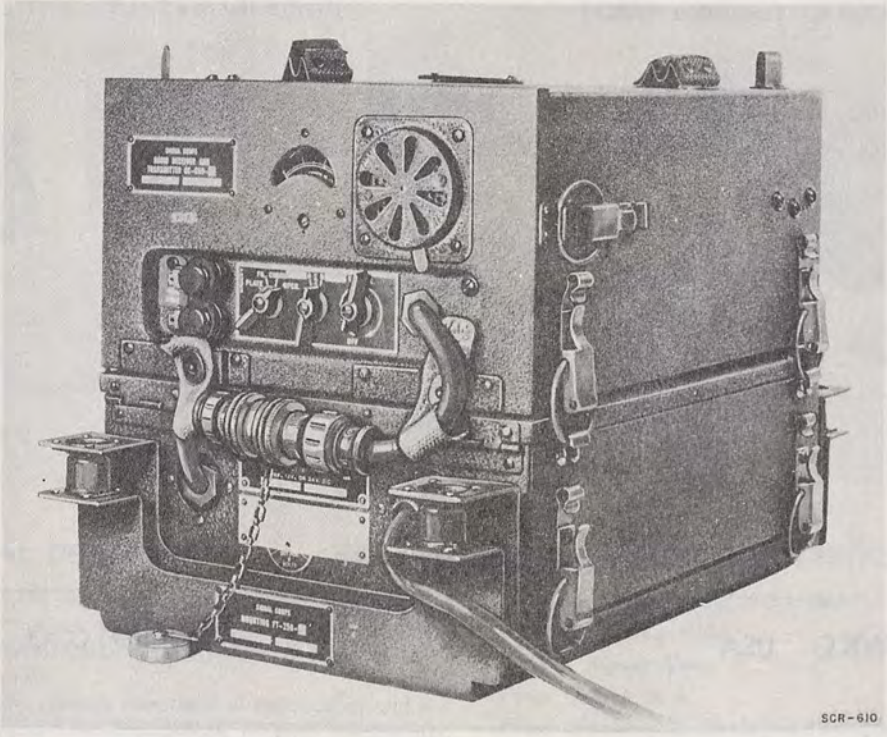
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Western Electric Co.	New York, N. Y.		

RADIO SET **AN/VRC-type**

1 July 1958
Cognizant Serv: USA FSN: 5820-355-8291 SCR-610-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S610.1/6-1	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-610-( ) is a transportable and vehicular, short-range, low-power, FM radiotelephone equipment used as a command set by field artillery units.

This equipment consists of a receiver-transmitter, power-supply unit, and accessories. It provides 120 crystal-controlled channels spaced 100 kc apart, two of which can be preset. This equipment can be operated from a remote point over a telephone pair by means of standard remote control equipment. When operated on the ground from batteries (in Case CS-79) the equipment is identical with Radio Set SCR-609.

TECHNICAL CHARACTERISTICS:

Frenquency Range in Mc: 27.0 to 38.9
Type Modulation: FM
Type of Signal: Voice
Power Output: 1.3 w
Power Requirements: Plate supply Unit PE-117 from 6- or 12-v storage battery or Power Supply Unit PE-120 from 6-, 12-, or 24-v storage battery

AN/VRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Power Supply Unit PE–120	3H4496–120	8-7/8 x 16-1/2 x 18-7/8	33.8
1	Radio Receiver and Transmitter B–659	2C5379	11-7/8 x 16-3/8 x 21-1/2	35.13

REFERENCE DATA AND LITERATURE:

TM 11–615

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
	13.04	280

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

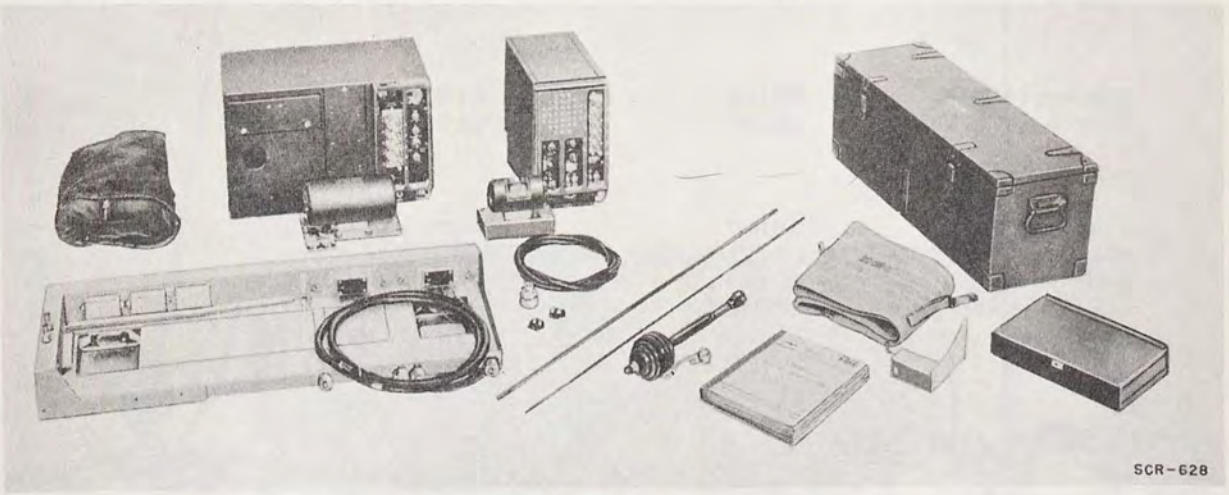
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Admiral Corp.	Chicago, Ill.	16130–P–44–01	

RADIO SET **AN/VRC-type**

1 July 1958
Cognizant Serv: USA 5820-193-7110 SCR-628

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	2S628/12	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-628 is a crystal-controlled, vehicular short-range, low-power radiotelephone equipment used for FM (voice) communication in the frequency range assigned field artillery units.

This equipment consists essentially of one receiver and one transmitter, appropriate dynamotors, antenna components, and accessories. The transmitter and the receiver each provide 120 channel frequencies, 10 of which may be preset. Each of the components are equipped with 10 pushbuttons for selecting frequency channels.

The SCR-628 also provides for operation of the interphone equipment of the vehicle in which it is installed.

It can operate from either 12- or 24-v vehicular storage batteries by installation of appropriate dynamotors.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9
Type Modulation: FM
Type of Signal: Voice
Power Output: 20 w
Power Requirements: 20 amp at 12-v dc or 12 amp at 24-v dc
Transmitter: 12-v vehicular battery through Dynamotor DM-35, 24-v vehicular battery through Dynamotor DM-37
Receiver: 12-v vehicular battery through Dynamotor DM-34, 24-v vehicular battery through Dynamotor DM-36

AN/VRC-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Dynamotor DM–34	3H1634	4-1/2 x 3 x 6-1/2	4.7
	or			
1	Dynamotor DM–36	3H1636	4-1/2 x 3 x 6-1/2	4.7
1	Dynamotor DM–35	3H1635	5-1/2 x 4-1/2 x 8-1/4	9.2
	or			
1	Dynamotor DM–37	3H1637	5-1/2 x 4-1/2 x 8-1/4	9.2
1	Mounting FT–284	----------	5 x 12 x 33	26
1	Radio Receiver BC–683–BM	2C4460–683	11-1/2 x 6-3/4 x 12-1/2	35
1	Radio Transmitter BC–684–BM	2C6530–684	11-1/2 x 10-1/4 x 18	67

REFERENCE DATA AND LITERATURE:

TM 11–620

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
6	31.5	660

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

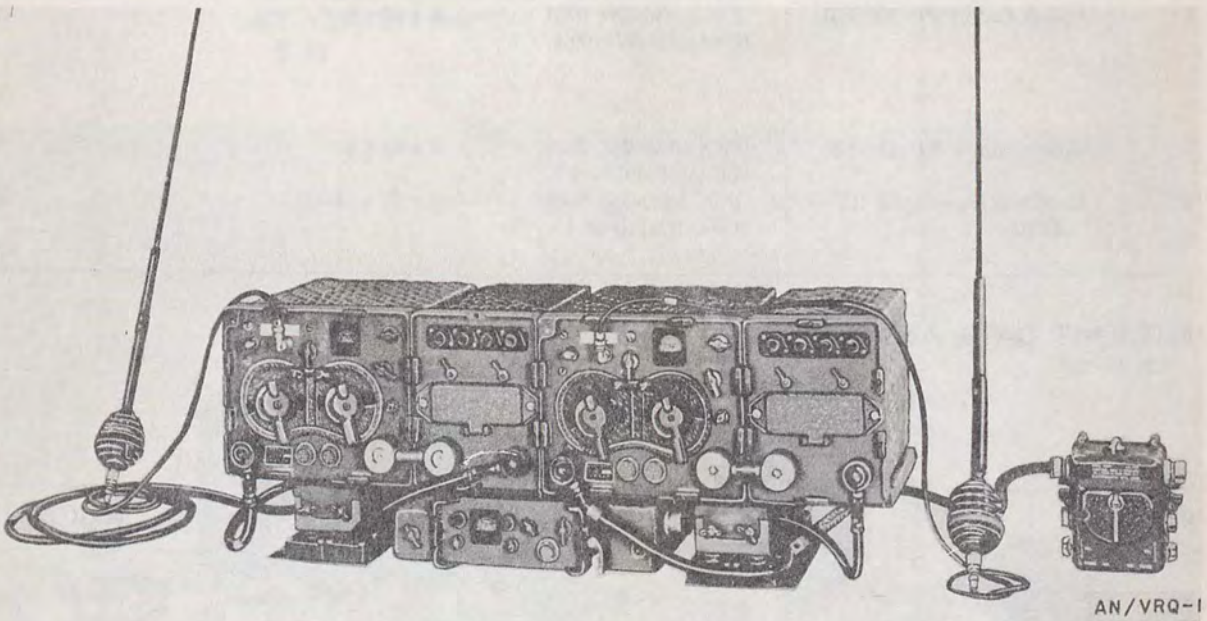
DESIGN COG: USA

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRQ-1

1 July 1958
Cognizant Serv: USA FSN: 5820-222-6404

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2S4505-1/24	--	--



AN/VRQ-1

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRQ-1 is a short-range, vehicular, FM (voice) equipment for point-to-point, retransmission, or radio-relay communication within and between armored units.

This set consists of two receiver-transmitters, designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-3 and AN/GRC-4. A vehicular installation unit, power-supply equipment, and control and accessory units are included.

This equipment can be operated by means of Control Group AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9
Type Modulation: FM
Type of Signal: Voice
Power Output (Each Transmitter):
High Power: 9 to 16 w
Low Power: 2 w
Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRQ-1 RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Group AN/GRA–6	(FSN)5820–537–3848 (USA)2C684A–6	See AN/GRA–6	20.85
2	Power Supply PP–109/GR	(FSN)6130–284–0231 (USA)3H4497–109.1	9 x 13 x 8	33
	or			
2	Power Supply PP–112/GR	(FSN)6130–284–0230 (USA)3H4497–112.1	9 x 13 x 8	33
2	Receiver-Transmitter RT–66/GRC	(FSN)5820–503–1508 (USA)2C5130–66.1	9 x 13 x 11-1/4	35

REFERENCE DATA AND LITERATURE:

TM 11–287

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	8.4	427

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

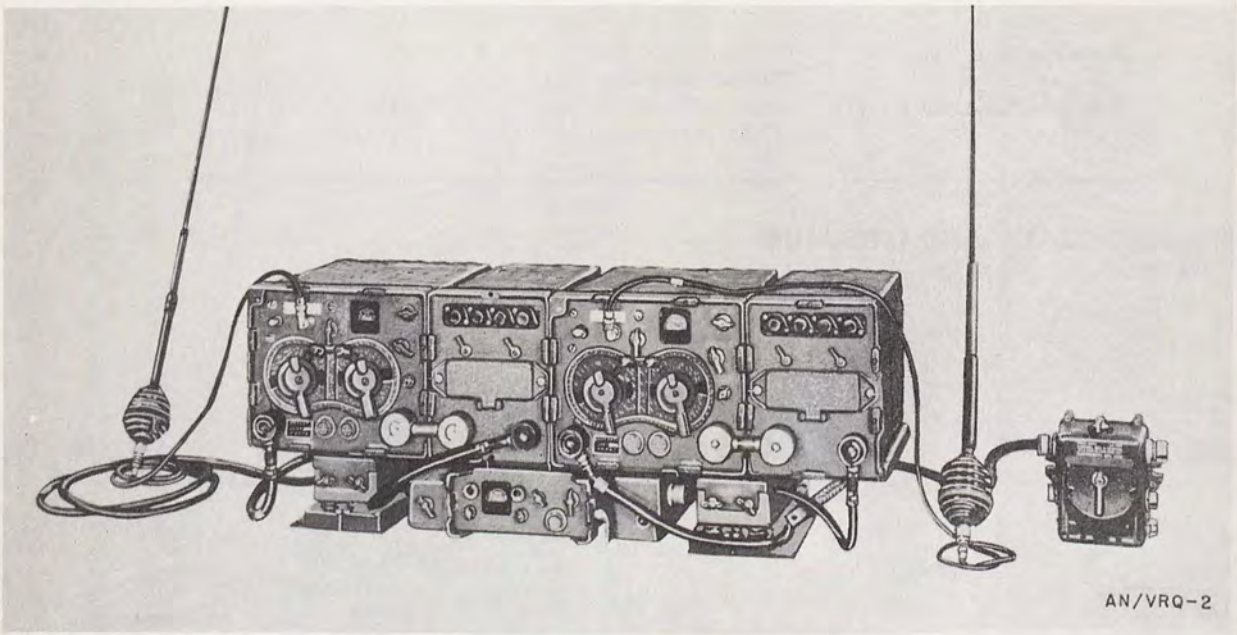
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRQ-2( )

1 July 1958
Cognizant Serv: USA FSN: AN/VRQ-2: 5820-193-8838
AN/VRQ-2X: 5820-193-8839

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	AN/VRQ-2: 2S4305-2/24 AN/VRQ-2X: 2S4305-2/12	--	--



AN/VRQ-2

FUNCTIONAL DESCRIPTION:

Radio Set AN/VRQ-2( ) is a short-range, vehicular, FM (voice) equipment for point-to-point, retransmission, or radio-relay communication within and between artillery units.

This set consists of two receiver-transmitters, designated as set 1 when used as part of the integrated series of radio sets, such as the AN/GRC-5 and AN/GRC-6. A vehicular installation unit, power-supply equipment, and control and accessory units are included.

This equipment can be operated by means of Control Group AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9
Type Modulation: FM
Type of Signal: Voice
Power Output (Each Transmitter):
High Power: 9 to 16 w
Low Power: 2 w
Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRQ-2( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Group AN/GRA-6	(FSN)5820-537-3848 (USA)2C684A-6	See AN/GRA-6	20.85
2	Power Supply PP-109/GR	(FSN)6130-284-0231 (USA)3H4497-109.1	9 x 13 x 8	33
	or			
2	Power Supply PP-112/GR	(FSN)6130-284-0230 (USA)3H4497-112.1	9 x 13 x 8	33
2	Receiver-Transmitter RT-67/GRC	(FSN)5820-503-1507 (USA)2C5130-67.1	9 x 13 x 11-1/4	35

REFERENCE DATA AND LITERATURE:

TM 11-287

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
3	8.4	427

PROCUREMENT DATA

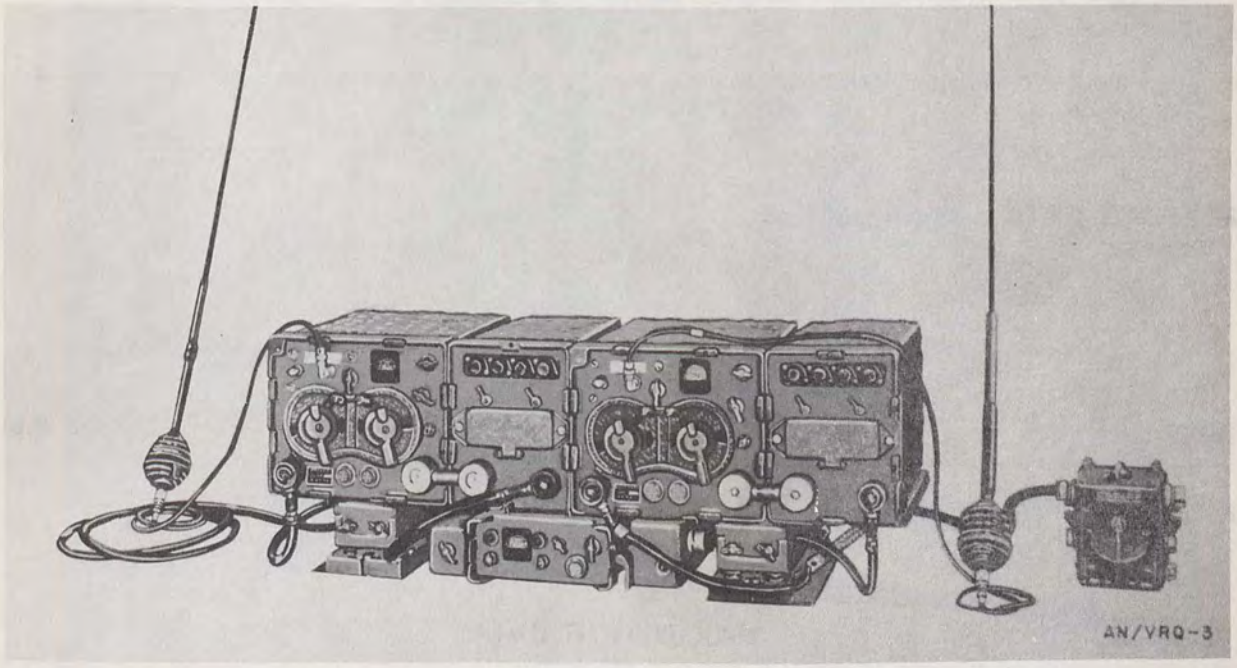
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRQ-3( )

1 July 1958
Cognizant Serv: USA FSN: AN/VRQ-3: 5820-193-8811
AN/VRQ-3X: 5820-193-8831

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	AN/VRQ-3: 2S4405-3/24 AN/VRQ-3X: 2S4505-3/12	--	--



FUNCTIONAL DESCRIPTION:

Radio Set AN/VRQ-3( ) is a short range,vehicular, FM (voice) equipment for point-to-point, retransmission, or radio-relay communication within and between infantry units.

This set consists of two receiver-transmitters designated as set 1 when used as part of the integrated series of radio sets such as the AN/GRC-7 and AN/GRC-8. A vehicular installation unit, power supply equipment, and control and accessory units are included.

This equipment can be operated by means of Control Group AN/GRA-6 from a remote point up to a distance of about 2 miles over a telephone pair.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 38.0 to 54.9
Type Modulation: FM
Type of Signal: Voice
Power Output (Each Transmitter):
High Power: 9 to 16 w
Low Power: 2w
Power Requirements: 12/24-v dc from vehicular storage battery

AN/VRQ-3( ) RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Control Group AN/GRA-6	(FSN) 5820-537-3848 (USA) 2C684A-6	See AN/GRA-6	20.85
2	Power Supply PP-109/GR	(FSN) 6130-284-0231 (USA) 3H4497-109.1	9 x 13 x 8	33
	or			
2	Power Supply PP-112/GR	(FSN) 6130-284-0230 (USA) 3H4497-112.1	9 x 13 x 8	33
2	Receiver-Transmitter RT-68/GRC	(FSN) 5820-503-1505 (USA) 2C5130-68.1	9 x 13 x 11-1/4	35

REFERENCE DATA AND LITERATURE:

TM 11-287

SHIPPING DATA

PGKS	VOLUME (Cu Ft)	WEIGHT (Lb)
3	8.4	427

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

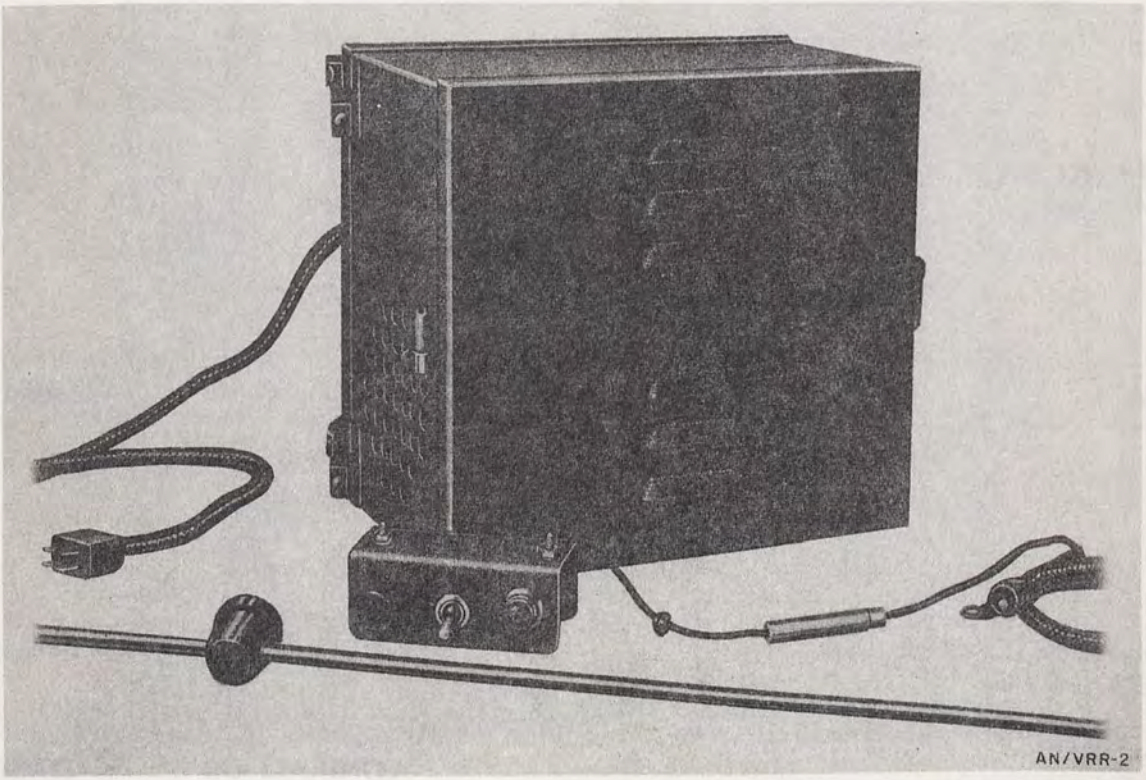
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVING SET AN/VRR-2

1 July 1958
Cognizant Serv: USA FSN: 5820-164-7197

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C6732	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/VRR-2 is a vehicular, single fixed-frequency, AM (voice), medium range, receiving equipment used in traffic control, monitoring, and similar applications by military police, guard, and security troops.

This equipment consists essentially of a commercial (KAAR Type 11X) police-type radio receiver and associated components. The radio receiver, which has an integral loudspeaker, is designed to be installed under the dashboard or instrument panel of the vehicle, with the control unit at the driver's position.

Control of volume, power, and squelch circuit is provided. A vehicular-type antenna is included.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: Single preset frequency in range 1.6 to 2.9

Type Modulation: AM

Type of Signal: Voice, tone

Power Requirements: 4.5 amp at 6-v dc from vehicular storage battery

AN/VRR-2 RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Antenna, Cable, Spare Parts, etc	----------	----------	6.75
1	Control Unit KAAR Type K–SR1	----------	2 x 2-5/8 x 4	.50
1	Radio Receiver KAAR Type 11X	----------	9-1/4 x 9-3/8 x 11-7/8	17.00

REFERENCE DATA AND LITERATURE:

TM 11–888

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

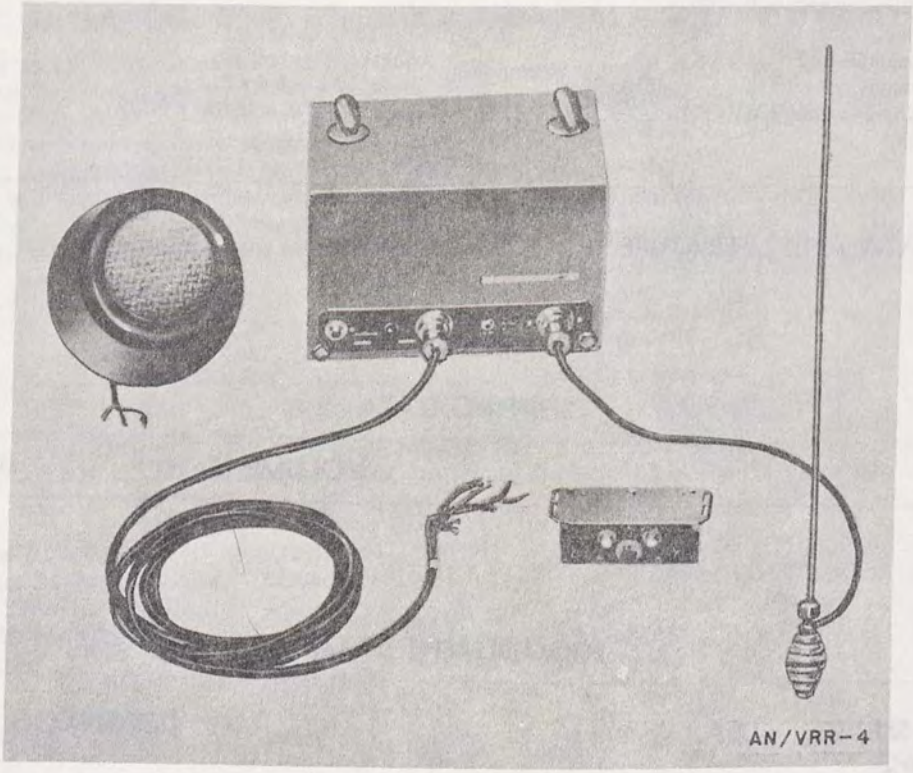
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVING SET AN/VRR-4

1 July 1958
Cognizant Serv: USA FSN: 5820-164-7175

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2C4520A-13V	--	--



FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/VRR-4 is a vehicular, short-range, FM, fixed-frequency, crystal-controlled radio receiver used by military police, guard, and security troops for traffic control and similar communication in the vhf band.

This equipment consists essentially of a commercial (Galvin FMR-13 v), police car radio receiver and loudspeaker, plus accessories.

This set is composed of the receiver components of Radio Set AN/VRC-2 and uses a whip-type vehicular antenna. It is powered by the storage battery of the vehicle in which it is installed.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30 to 40
Type Modulation: FM
Type of Signal: Voice
Power Requirements: 8 amp at 6-v from vehicular storage battery.

AN/VRR-4 RADIO RECEIVING SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna P–253			
1	Control Head w/cables P–8022 (Galvin)			
1	Loudspeaker P–327			
1	Power supply	3H6694–4	8-3/4 x 4 x 8	
1	Radio Receiver Unit FMR–13V (P8028)	----------	9-5/16 x 14-3/4 x 9-1/2	

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO RECEIVING SET AN/VRR-7

1 July 1958
Cognizant Serv: USA FSN:

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	--	--	--

(No Photograph Available)

FUNCTIONAL DESCRIPTION:

Radio Receiving Set AN/VRR–7 is a vhf, FM (voice) equipment used in monitoring and communications applications.

This set consists essentially of a radio receiver with an appropriate power supply, housed in a metal equipment cabinet, and includes either a roof mounted *whisker* type antenna for hard-top vehicles or a bumper-mounted coaxial antenna for canvas-top vehicles.

It is a vehicular version of Radio Receiving Set AN/FRR–36.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 152 to 174
Type Modulation: FM
Type of Signal: Voice
Power Requirements:
Power Supply PP–867/U: 1.1 amp at 24-v dc
Power Supply PP–868/U: 2 amp at 12-v dc
Power Supply PP–869/U: 3.7 amp at 6-v dc

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Antenna AT–496/G	2A204A–496		
1	Electrical Equipment Cabinet CY–1150/U	6F290–1150	10-5/8 x 21-1/4 x 7-1/2	14.5
1	Power Supply PP–867/U	.....	5 x 6-1/4 x 7	10
	or			
1	Power Supply PP–868/U	.....	5 x 6-1/4 x 7	10
	or			
1	Power Supply PP–869/U	.....	5 x 6-1/4 x 7	10
1	Radio Receiver R–394/U	2C4180–394	8-1/2 x 14-1/2 x 5-3/4	17

REFERENCE DATA AND LITERATURE:

TM 11–229

AN/VRR-7 RADIO RECEIVING SET

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	7.25	176

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG: MIL-N-11539

DESIGN COG: USA, Sig C

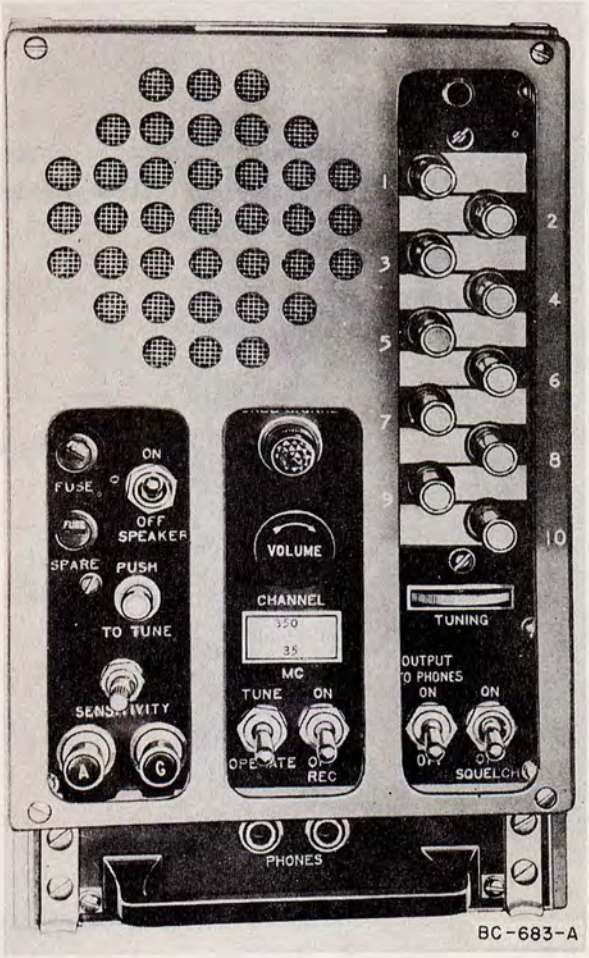
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
Motorola, Inc.	Chicago, Ill	11661-P-52-51	$615.24

RADIO RECEIVER AN/VRR-type

4 December 1958
Cognizant Serv: USA FSN: 5820-352-0033

BC-683-A, -B, -BM

	USA	USN	USAF
TYPE CLASS:	L/Std	Used by	--
STOCK NO:	2C4460-683	BC-683-A: F16-R-2019-0115	--
		BC-683-B: F16-R-2033-0007	
		BC-683-BM: F16-Q-125546-100	



BC-683-A

FUNCTIONAL DESCRIPTION:

Radio Receivers BC-683-A, BC-683-B, and BC-683-BM are components of Radio Sets SCR-608-( ) and SCR-628-( ). These receivers provide frequency modulated radiotelephone reception facilities for various types of ground units. The radio sets may be installed and operated in combat vehicles. The receivers are used with Radio Transmitter BC-684-BM and associated equipment for two-way communications.

The -A model differs operationally from the -B and -BM models in that it cannot be used with remote interphone control equipment. In addition, later models incorporate minor circuit changes. The overall performance of all the receivers is the same.

The following equipment is used with, but is not supplied with, Radio Receivers BC-683-A, BC-683-B, and BC-683-BM: whip antenna, dynamotor, and accessories.

TECHNICAL CHARACTERISTICS:

Frequency Range in MC: 27.0 to 38.9
Number of Preset Channels: 10
Bandwidth: 80 kc
Intermediate Frequency: 2.65 mc
Type Reception: FM
Sensitivity: 1 uv.
Power Output:
Speaker: 2 w
Headset: 0.2 w
Antenna: 10-ft whip
Power Requirements: 12-v dc vehicular battery through Dynamotor DM-34; or 24-v dc vehicular battery through Dynamotor DM-36

AN/VRR-type RADIO RECEIVER

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver BC–683–A, BC–683–B, or BC–683–BM	----------	6-3/4 x 12-1/2 x 11-1/2	35

REFERENCE DATA AND LITERATURE:

TM 11–4036

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

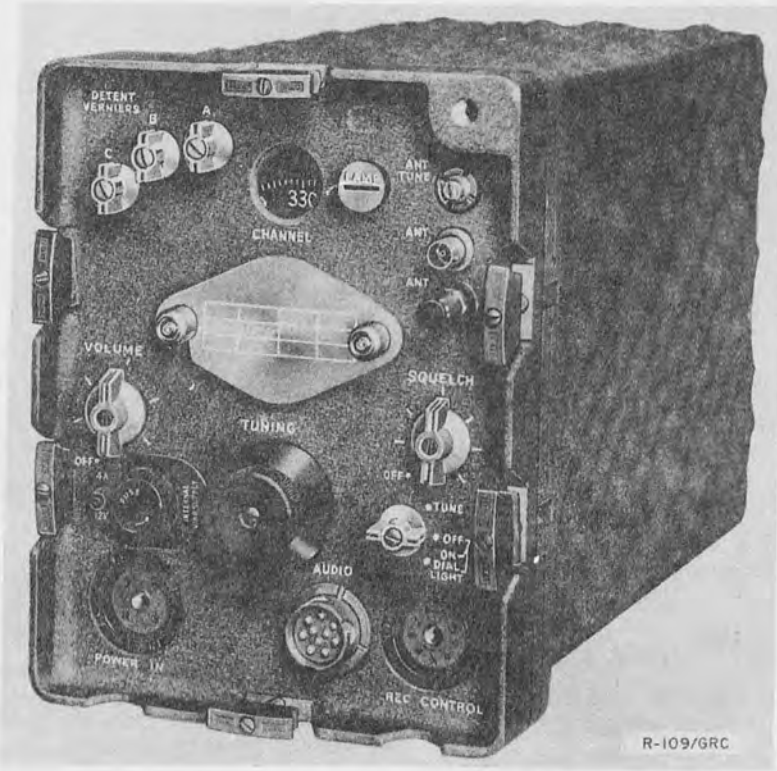
CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
			$239.00 with spares

RADIO RECEIVER AN/VRR-type

5 December 1958
Cognizant Serv: USA FSN: R-108/GRC: 5820-503-1258
R-109/GRC: 5820-503-1413
R-110/GRC: 5820-503-1254

R-108/GRC, -109/GRC, -110/GRC

	USA	USN	USAF
TYPE CLASS:	Std	Used by	--
STOCK NO:	R-108/GRC: 2C4180-108 R-109/GRC: 2C4180-109 R-110/GRC: 2C4180-110		--



FUNCTIONAL DESCRIPTION:

Radio Receivers R-108/GRC, R-109/GRC, and R-110/GRC are small, lightweight, frequency-modulated, superhetrodyne-type receivers designed for use in vehicular or ground installations. They provide for the reception of voice-modulated FM signals between the range of 20 to 55 megacycles, and are similar except for their operating frequency range, the components that determine the frequency range, and the bias source for the squelch oscillator.

The equipments contain continuously variable tuning; detent selection of three preset frequencies is also included. They may be operated from a storage battery, in conjunction with a plug-in vibrator-type voltage supply, or from an external power source.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc:
R-108/GRC: 20 to 28

AN/VRR-type RADIO RECEIVER

R–109/GRC: 27 to 39
R–110/GRC: 38 to 55
Channel Data:
R–108/GRC 80
R–109/GRC: 120
R–110/GRC: 170
Channel Spacing: 100 kc
Type of Signal: Voice or tone

Audio output:
Loudspeaker: 500 mw
Earphones: 40 mw
Output Impedance: 600 ohms (unbalanced)
Antenna Type: Portable whip
Power Requirements: Power Supply PP–448/GR with 6-v storage battery, Power Supply PP–281/GRC with 12-v storage battery, or Power Supply PP–282/GRC with 24-v storage battery

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Receiver R–108/GRC, R–109/GRC, or R–110/GRC (Equipment consists of only one major component.)	----------	7-1/4 x 9 x 12-13/16	20.25

REFERENCE DATA AND LITERATURE:

TM 11–898

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
1	0.69	38.6

PROCUREMENT DATA

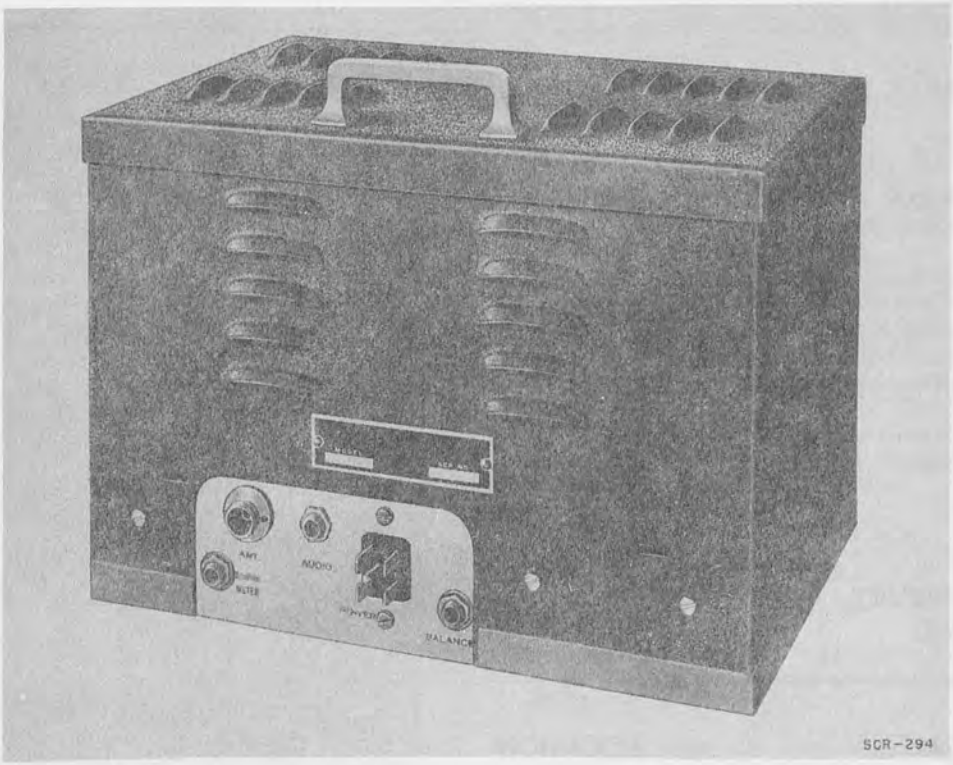
PROCURING SERVICE: USA
DESIGN COG: USA, Sig C
SPEC &/or DWG:

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST
For R–108/GRC: Lewyt Corp.	Brooklyn, N. Y.	DA–36–039–SC3769	$440.00
For R–109/GRC: Lewyt Corp.	Brooklyn, N. Y.	DA–36–039–SC12102	440.00
For R–110/GRC: Federal Telephone and Radio Corp.	Newark, N. J.	MIpr 881–53060	570.00

RADIO SET **AN/VRR-type**

1 July 1958
Cognizant Serv: USA FSN: 5820-194-7069 SCR-294-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S294	--	--



FUNCTIONAL DESCRIPTION:

Radio Set SCR-294-( ) is a vehicular, short-range FM (voice) radio receiving equipment used in armored vehicles. It is also part of Radio Set SCR-293 and is used as the *additional* receiver component of that equipment.

This equipment consists essentially of a single radio receiver and a shock mount. The receiver is capable of operating on five channels spaced 100 kc apart.

Radio Set SCR-294 is the 12-volt model of this equipment; Radio Set SCR-294-B is the 24-volt model.

Power is supplied by the battery of the vehicle in which the equipment is installed.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 20.0 to 27.9
Type Modulation: FM
Type of Signal: Voice
Power Requirements: 12- or 24-v dc from vehicular storage battery, depending on model

AN/VRR-type RADIO SET

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Mounting FT–239	----------	12-1/2 x 34-1/2 x 2-1/2	
1	Radio Receiver BC–499	----------	9 x 9-1/2 x 12-1/4	19

REFERENCE DATA AND LITERATURE:

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
		200

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

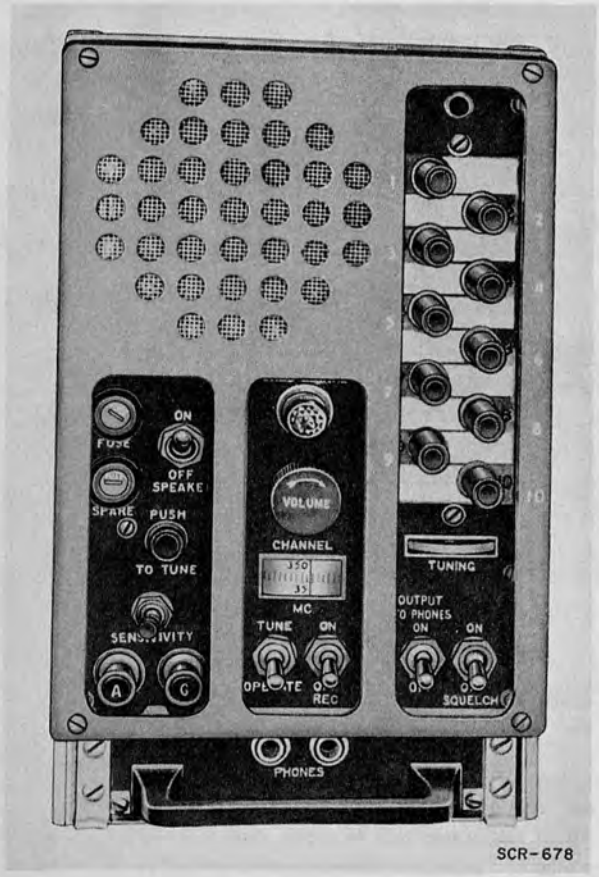
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO SET AN/VRR-type

1 July 1958
Cognizant Serv: USA FSN: 5820-268-3113 SCR-678-( )

	USA	USN	USAF
TYPE CLASS:	L/Std	--	--
STOCK NO:	2S678.1	--	--



SCR-678

FUNCTIONAL DESCRIPTION:

Radio Set SCR-678-( ) is a short-range, low-power, vehicular, FM (voice) receiving equipment used for monitoring, intercept, and communication.

This equipment consists essentially of the radio receiver component of Radio Set SCR-608, plus a vehicular-type shock mount and related accessories. It operates on 10 crystal-controlled preset frequencies selected by means of pushbuttons arranged on the front panel, and uses a whip-type vehicular antenna.

The set is powered by the storage battery (12 or 24 v) of the vehicle in which it is installed, through an appropriate dynamotor mounted within the receiver.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 27.0 to 38.9
Type Modulation: FM
Type of Signal: Voice
Power Requirements: 4 amp at 12-v dc or 2 amp at 24-v dc from vehicular storage battery through Dynamotor DM-34 or DM-36

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
		(USA)		
1	Dynamotor DM-34	3H1634	4-1/2 x 3 x 6-1/2	4.7
	or			
1	Dynamotor DM-36	3H1636	4-1/2 x 3 x 6-1/2	4.7
1	Radio Receiver BC-683	2C4460-683	11-1/2 x 6-3/4 x 12-1/2	35

AN/VRR-type RADIO SET

REFERENCE DATA AND LITERATURE:

TM 11–620
TM 11–4036

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

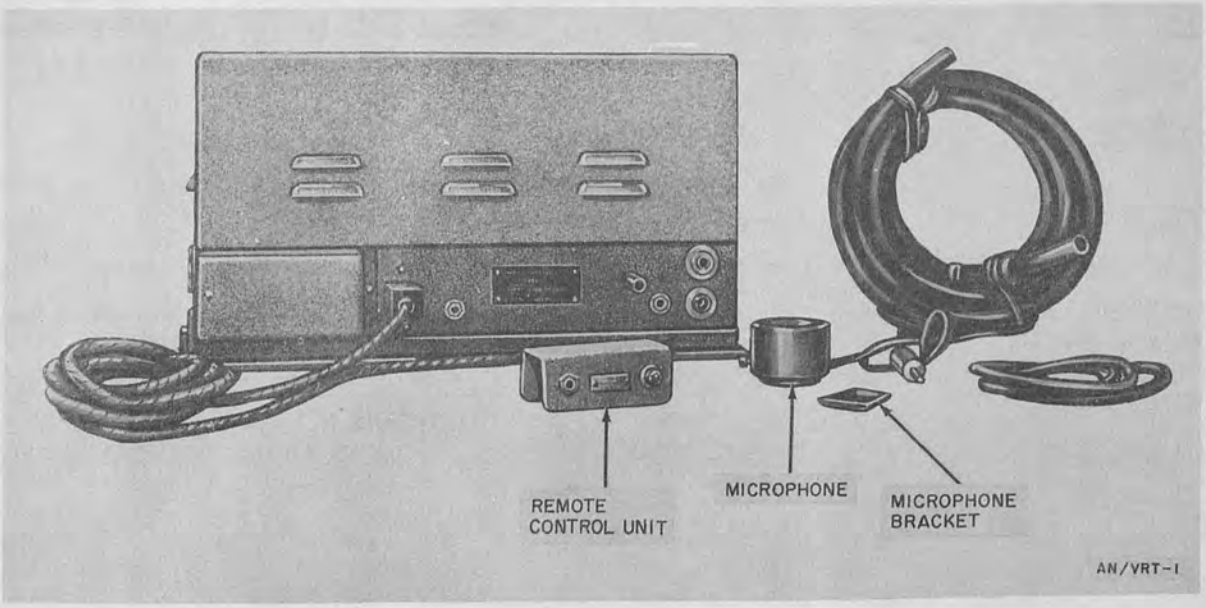
DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

RADIO TRANSMITTING SET AN/VRT-1

1 July 1958
Cognizant Serv: USA FSN: 5820-164-8117

	USA	USN	USAF
TYPE CLASS:	Std	--	--
STOCK NO:	2C6729	--	--



FUNCTIONAL DESCRIPTION:

Radio Transmitting Set AN/VRT–1 is a vehicular, short-range, high-frequency, AM (voice) equipment for use of military police, security troops, and similar units.

This equipment consists of a police-type radio transmitter and includes microphone, operator's remote control unit, and accessories permitting installation of the transmitter in the trunk of the vehicle or other convenient location. It uses a whip-type vehicular antenna.

It operates from the 6-volt battery of the vehicle in which it is installed. When operated from vehicular storage batteries of higher voltage, appropriate modifying equipment must be added.

TECHNICAL CHARACTERISTICS:

Frequency Range in Mc: 30.0 to 40.0
Type Modulation: AM
Type of Signal: Voice
Power Output: 22 w
Power Requirements:
6-v dc from vehicular storage battery

MAJOR COMPONENTS

QTY	ITEM	STOCK NUMBERS	DIMENSIONS (Inches)	WEIGHT (Lbs)
1	Radio Transmitting Set AN/VRT–1	----------	2.2	45

(Equipment consists of only one major component.)

AN/VRT-1 RADIO TRANSMITTING SET

REFERENCE DATA AND LITERATURE:
TM 11-842

SHIPPING DATA

PKGS	VOLUME (Cu Ft)	WEIGHT (Lbs)
2	3.9	73

PROCUREMENT DATA

PROCURING SERVICE: USA
SPEC &/or DWG:

DESIGN COG: USA, Sig C

CONTRACTOR	LOCATION	CONTRACT OR ORDER NO.	APPROX UNIT COST

APPENDIX I

GLOSSARY OF ABBREVIATIONS

This appendix is a listing of abbreviations used in this publication, arranged alphabetically. The exact word or phrase for which the abbreviation is used, is given in each case.

A/Std---Alternate Standard
ac---alternating current
ADF---Automatic Direction Finder
AF---audio frequency
Alt-Std---Alternate Standard
am---amplitude modulated (modulation)
amp---ampere(s)
approx---approximate, approximately
avc---automatic volume control
bfo---beat frequency oscillator
BuAer---Bureau of Aeronautics
BuOrd---Bureau of Ordnance
BuShips---Bureau of Ships
C---Centigrade
CHAN---Channel
CIC---Combat Information Center
Class---Classification
Cog---Cognizance
COMM---Communication(s)
Corp---Corporation
cps---cycle(s) per second
cu---cubic
cw---continuous wave (generally construed to mean continuous radio frequence, keyed in International Morse code).
cyc---cycle(s)
db---decibel(s)
dbm---decibels referred to 1 milliwatt
dc---direct current
Dept---Department
dia---diameter
dsb---double sideband
Dwg---Drawing
ea---each
Ed---Edition
fax---facsimile
fil---filament
fm---frequency modulated (modulation)
fpm---feet per minute
fsk---frequency-shift keyed (keying)
FSN---Federal Stock Number
ft---feet
GFE---Government Furnished Equipment
hf---high frequency (3 to 30 mc)
HI---High
icw---interrupted continuous wave (generally to be construed to mean a continuous radio frequency interrupted at regular intervals in order to produce an audio-frequency tone, and keyed by means of a telegraph key in International Morse code).
IF---intermediate frequency
In---Inch(es)
Inc---Incorporated
INPH---Interphone
INTER---Interphone
kc---kilocycle(s) per second
kva---kilovolt-ampere(s)
kw---kilowatt(s)
L/Std---Limited Standard
Lbs---pounds
lf---low frequency (30 to 300 kc)
ma---milliampere(s)
mc---megacycle(s) per second
mcw---modulated continuous wave (generally to be construed to mean a continuous radio frequency, modulated by a steady audio-frequency tone, and keyed by telegraph key in International Morse code).
mf---medium frequency (300 to 3,000 kc)
MIC---Microphone
MIL---Military
mv---millivolt(s)
mw---milliwatt(s)
NAV---Navigation
No---number
Obs---Obsolete
Obt---Obsolescent
opm---operations per minute
P/Std---Planned standard
pf---power factor
Pkgs---Packages
Qty---Quantity
RADC---Rome Air Development Center
RCUE---Rome Air Development Center
rcvr---receiver

REC---Receiver
RF---radio frequency
rms---root mean square
rpm---revolutions per minute
rtt---radioteletype (frequency-shift keyed)
S–Std---Substitute Standard
Serv---Service
shf---super high frequency (3,000 to 30,000 mc
Sig C---Signal Corps, U. S. Army
SOS---International distress signal (radiotelegraph)
Spec---Specification
SPL---Special
ssb---single sideband
Std---Standard
swr---standing wave ratio
T–Std---Tentative Standard
Tel---Telephone or Telegraph
Tent-Std---Tentative Standard
TM---Technical Manual
TO---Technical Order
TTY---Teletypewriter
uhf---ultra-high frequency (300 to 3,000 mc)
US---United States
USA---United States Army
USAF---United States Air Force
USCG---United States Coast Guard
usec---microsecond(s)
USN---United States Navy
uuf---micromicrofarad(s)
uv---microvolt(s)
uw---microwatt(s)
u/w---used with
v---volt(s)
va---volt-ampere(s)
vf---voice frequency
vhf---very high frequency (30 to 300 mc)
vps---vibrations per second (used to describe pitch of tuning fork)
vu---volume unit(s)
w---watts
WADC---Wright Air Development Center
WCLE---Wright Air Development Center
wpm---words per minute
xmtr---transmitter

APPENDIX II

INDEX OF ITEMS BY NAME

This appendix consists of a listing of all items described in this publication, arranged alphabetically by official nomenclature. In every case, nomenclature appears in narrative style rather than in catalogue style. For example, Frequency Shift Converter CV–62/U (*narrative style*) is found under *F* instead of being listed as Converter, Frequency Shift CV–62/U (catalogue style). Thus, all radio sets are found under the letter *R* and all teletypewriters under *T*.

Nomenclature	*Type*	*Page*
A		
Adapter Keyer KY–44/FX, –44A/FX, –44B/FX, –44C/FX	AN/TXA	1603
AF Amplifier AM–65/GRC	AN/GIA	759
Aircraft Radio Equipment:		
AN/ARW–34	AN/ARW	137
ATB	AN/ART	125
RU–18, –19	AN/ARR	115
Aircraft Radio Receiver ARB	AN/ARR	111
Aircraft Radio Receiving Equipment:		
ABK, ABK–1, through –7	AN/ARR	107
ARA	AN/ARR	109
ARJ	AN/AXR	139
ARK	AN/AXR	141
RAX–1	AN/ARR	113
Aircraft Radio Transmitter-Receiver:		
MB	AN/ARC	85
ME	AN/ARC	87
Aircraft Radio Transmitting Equipment:		
ATA	AN/ART	123
ATD	AN/ART	127
ATK	AN/AXT	143
GP, GP–2	AN/ART	129
GP–7	AN/ART	131
Amateur-Band Receiver 75A–4, 75A–5(MOD)	AN/URR	1809
Amplifier Assembly AN/FRA–1( )	AN/FRA	337
Amplifier-Control Group:		
AN/SIA–35	AN/SIA	1123
AN/SIA–61	AN/SIA	1125
AN/SIA–62	AN/SIA	1127
Amplifier Equipment AN/TRA–1( )	AN/TRA	1451
Amplifier Group AN/FRA–2	AN/FRA	339
Amplifier-Modulator Group AN/GRA–24	ANGRA	769
Amplifier-Oscillator Group:		
AN/SIA–1	AN/SIA	1117
AN/SIA–3	AN/SIA	1119
AN/SIA–10	AN/SIA	1121
Amplifier-Power Supply Group AN/TRA–19	AN/TRA	1457
Antenna:		
AS–768/GR	AN/GRA	771
AT–150/SRC	AN/SRA	1165

Nomenclature	Type	Page
AT-249/GRD	AN/GRA	773
AT-317(XN-1)/BRR	AN/BRA	149
Antenna Assembly AS-390/SRC	AN/SRA	1163
Antenna Control C-1670/U	AN/SRA	1169
Antenna Coupler:		
CU-168/FRR	AN/FRA	353
CU-284/UR	AN/SRA	1171
CU-377/UR	AN/SRA	1173
Antenna Coupler Group:		
AN/SRA-13	AN/SRA	1153
AN/SRA-14	AN/SRA	1155
AN/SRA-15	AN/SRA	1157
AN/SRA-16	AN/SRA	1159
Antenna Group AN/SRA-3	AN/SRA	1147
Antenna System AS-81/GR	AN/URA	1707
Audio Amplifier AM-413/G, -413A/G	AN/UIA	1665
Audio Distributing Central AN/FIA-1	AN/FIA	311
Audio FM Keyer Equipment FSJ	AN/UXA	1987
Audio Frequency Amplifier:		
50101	AN/FCA	163
AM-215/U, -215A/U, -215B/U	AN/UIA	1663
CW-50101	AN/TCA	1335
Audio Frequency Monitor AN/PTA-1	AN/PTA	1093
Audio Signal Scrambling Equipment PF	AN/USA	1971
Automatic Transmitter for Perforated Tape XTR-442-C	AN/FRA	371
Auxiliary Interphone Equipment AN/VIA-1	AN/VIA	1993
Auxiliary Telephone Central Equipment TC-5	AN/FTC	749

C

Carrier Control System UN	AN/FCC	205
Carrier Hybrid CF-7	AN/TCC	1381
Carrier Repeater:		
OA-9/FC	AN/FCC	193
OA-10( )/FC	AN/FCC	195
Carrier Telegraph Receiver:		
R-405/MC through R-412/MC	AN/FGR	295
R-466/UC	AN/UGA	1633
Carrier Telegraph Transmitter:		
T-290/MC through T-297/MC	AN/FGT	305
T-341/UC	AN/FCT	211
Carrier Terminal:		
OA-4( )/FC	AN/FCC	183
OA-5( )/FC	AN/FCC	185
OA-11/FC	AN/FCC	197
OA-12/FC	AN/FCC	199
OA-13/FC	AN/FCC	201
Carrier Terminal Set AN/FCC-2	AN/FCC	167
Code Practice Equipment:		
OAH, OAH-1, OAH-2	AN/URA	1735
OW-2	AN/URA	1737
Coder-Timer Group AN/URA-11	AN/URA	1699
Code Tape Recorder:		
RD-110/U, RD-110A/U	AN/FRH	423
RD-112/U	AN/FRH	425
Code Training Set AN/GSC-T1( )	AN/GSC	883
Combination Radio Receiver and Record Player RCT, RCU, RCU-1	AN/USP	1979
Communications Central Office Group AN/MSA-1	AN/MSA	965
Communications Transmitter 431D-1	AN/FRT	563
Comparator-Converter Group AN/URA-17( )	AN/URA	1701

Nomenclature	Type	Page
Console CY-751/GR	AN/GRA	777
Control Group AN/GRA-6	AN/GRA	763
Control Indicator C-806/GR	AN/GRA	775
Control-Keyer Group AN/ARA-26	AN/ARA	19
Control-Monitor C-1947/U	AN/URW	1965
Control-Monitor Group:		
AN/FRA-6	AN/FRA	345
AN/FRA-11	AN/FRA	347
Control-Monitor Set AN/FSW-2	AN/FSW	717
Control-Oscillator Group AN/SAI-66	AN/SIA	1129
Control Switchboard SB-100/MTC	AN/MTC	967
Control Unit C-292( )/TRA-7	AN/TRA	1459
Converter:		
CF-4	AN/TCC	1375
CV-2/TX, -2A/TX, -2B/TX	AN/TXC	1611
CV-2C/TX	AN/TXC	1613
Converter Set TC-33-( )	AN/TCC	1395
D		
Demodulator CW-50124	AN/TCA	1337
Direction Finder Set AN/GRD-5	AN/GRD	845
Diversity Radio Receiving Equipment:		
RCP	AN/FRR	505
RDM, RDM-1	AN/FRR	511
Diversity Receiving Equipment:		
AN/FRR-3( )	AN/FRR	429
RBE	AN/FRR	495
Dual Diversity Converter CV-31( )/TRA-7	AN/TRA	1461
Dual Recording Equipment CXDB	AN/USP	1977
Electrical Filter Assembly:		
AN/SRA-9	AN/SRA	1149
AN/SRA-9A	AN/SRA	1151
Emergency Mobile Communication Equipment MAM	AN/ARC	83
Emergency Radio Telegraph Equipment TDK	AN/SRT	1329
Emergency Switchboard SB-18/GT	AN/PTC	1095
Exciter Unit 0-5/FR	AN/FRA	365
Experimental Electronic Relay Equipment CXES	AN/URA	1719
F		
Facsimile Equipment RC-120-( )	AN/TXC	1621
Facsimile Recorder:		
RD-92/UX	AN/TXR	1627
RD-92A/UX	AN/TXR	1629
Facsimile Recorder Set AN/UXH-2(XN-3)	AN/UXH	1991
Facsimile Set AN/TXC-1( )	AN/TXC	1607
Facsimile Transceiver:		
FX-1, -1A, -1B	AN/TXC	1619
TT-41/TXC-1B, TT-41A/TXC-1B, TT-41B/TXC-1B	AN/TXC	1623
Facsimile Transmitter Receiver Equipment:		
FOA	AN/TXC	1615
FOC	AN/TXC	1617
Frequency Modulated Mobile Equipment 35FMTR-7A	AN/VRC	2047
Frequency Modulated Mobile Radio Equipment 50FMTR-7A	AN/VRC	2049
Frequency Shift Converter:		
CV-62/U	AN/URA	1711
CV-115( )/URR	AN/URA	1713
CV-116/URR	AN/URA	1715
CV-172/U, -172A/U	AN/TXA	1601

Nomenclature	Type	Page
Frequency Shift Converter-Comparator Group:		
AN/URA-6, -7	AN/URA	1691
AN/URA-8, -8A	AN/URA	1695
Frequency Shift Converter Group AN/FRA-4	AN/FRA	343
Frequency Shift Exciter O-39( )/TRA-7	AN/TRA	1465
Frequency Shift Keyer Equipment:		
FSB	AN/FGA	213
FSD	AN/FRA	357
FSH	AN/FRA	359
Frequency Shift Receiver Converter FRC	AN/FRA	355
Frequency Shift Receiver Equipment FRB	AN/UXA	1985
G		
Generator GN-58-A	AN/GRA	779
Ground Station Transmitter 30K-5	AN/FRT	561
High Frequency Power Amplifier Equipment TPA	AN/FRA	367
High Frequency Radio Receiving Equipment:		
RBQ	AN/URR	1895
RBQ-1	AN/FRR	499
High Frequency Radio Telephone Transmitting Equipment TDG, TDG-1	AN/TRT	1573
Hybrid Circuit Network:		
TA-31( )/U	AN/TCC	1383
TA-255/TT	AN/TCC	1385
I		
Intercommunicating Station:		
LS-124( )/FI	AN/FIC	313
LS-125( )/FI	AN/FIC	315
LS-126( )/FI	AN/FIC	317
LS-127( )/FI	AN/FIC	319
LS-128( )/FI	AN/FIC	321
LS-129/FI	AN/FIC	323
LS-130( )/FI	AN/FIC	325
LS-138/FI	AN/FIC	327
Intercommunication Set:		
AN/AIC-8	AN/AIC	11
AN/AIC, -10A	AN/AIC	13
AN/UIC-1, -1X	AN/UIC	1667
PA-8	AN/TIQ	1447
Intercommunication Station:		
LS-100/FI	AN/FIC	329
LS-201/FI	AN/FIC	331
LS-202/FI	AN/FIC	333
Interphone Amplifier 50128, 50128A	AN/UIA	1661
Interphone Equipment:		
AN/AIC-2, -2A	AN/AIC	5
AN/AIC-3	AN/AIC	7
RC-53	AN/VIC	1995
RC-99	AN/VIC	1997
Interphone Extension Kit RC-298	AN/VIC	1999
Interphone-Radio Control Set AN/AIC-4	AN/AIC	9
K		
Keyer:		
KY-32/GRT	AN/URA	1723
KY-43/URT	AN/URA	1725
KY-43A/URT	AN/URA	1727

Nomenclature	Type	Page
KY-58/GRT	AN/FRA	363
KY-75/SRT	AN/SGA	1109
KY-83( )/S	AN/SRA	1175
KY-122/URN	AN/URN	1773
KY-123/URN	AN/URN	1775
KY-123A/URN	AN/URN	1777
TG-10, TG-10-F	AN/GGA	753
Keying Head Drive MX-439( )/U	AN/URA	1731
L		
Line Terminal Equipment UG	AN/TCC	1399
Loop Antenna System AT-317/BRR	AN/BRA	147
Loran Switching Equipment UM	AN/FRA	369
M		
Manual Telephone Central Office AN/TTC-7	AN/TTC	1579
Manual Telephone Switchboard:		
SB-22( )/PT	AN/PTC	1097
SB-86/P	AN/PTC	1099
Manual Telephone Switchboard Section SB-171/FTC	AN/FTC	747
Microwave Radio Relay Set:		
CLR-6, Philco	AN/FRC	419
CLR-7, Philco	AN/FRC	421
Modulator MD-83A/ARN	AN/USM	1975
Modulator Assembly CRV-50194	AN/URA	1709
Modulator-Power Supply AN/FRA-16	AN/FRA	349
Modulator Unit 50065-A	AN/SRA	1161
Multiplexer:		
TD-159/U	AN/TCA	1339
TD-164/TRC	AN/TRA	1467
Multiplexer Group AN/TCA-1	AN/TCA	1333
Multiplexer Set AN/TCC-13	AN/TCC	1357
O		
Ocean Cable Terminal Set AN/FGC-3	AN/FGC	225
Operations Center:		
AN/MTQ-1( )	AN/MTQ	969
AN/TTQ-2	AN/TTQ	1597
Order Wire Transmitter T-389A/TRC-29	AN/TRT	1559
P		
Panoramic Radio Adaptor:		
RBU, RBU-1, RBU-2	AN/URA	1739
RBV, RBV-1, RBV-2	AN/URA	1741
RCC	AN/URA	1743
RDK	AN/URA	1747
Portable Carrier Control System UF	AN/TCA	1341
Portable Emergency Radio Transmitting Equipment TCY, TCY-1	AN/SRT	1323
Portable Lifeboat Radio Transmitter 265	AN/SRT	1271
Portable Radio and Receiving Equipment:		
TBX	AN/PRC	1039
TBX-1	AN/PRC	1043
TBX-2	AN/PRC	1047
TBX-3	AN/PRC	1051
TBX-4	AN/PRC	1055
TBX-4a	AN/PRC	1057
TBX-5	AN/PRC	1061

Nomenclature	*Type*	*Page*
TBX-6	AN/PRC	1065
TBX-7	AN/PRC	1069
Portable Radio Receiving Equipment:		
RBM, RBM-1, -2, -3, -4, -5	AN/TRR	1547
RCB-1	AN/PRR	1085
RDR	AN/PRR	1087
Portable Radio Transmitting and Receiving Equipment:		
MAY, MAY-1	AN/PRC	1025
TBX-8	AN/PRC	1073
Portable Radio Transmitting Equipment:		
TBW	AN/TRT	1561
TBW-1	AN/TRT	1563
TBW-2	AN/TRT	1565
TBW-3	AN/TRT	1567
TBW-4	AN/TRT	1569
TBW-5	AN/TRT	1571
Portable Sound Reproducing Equipment PR	AN/TNP	1449
Portable Vhf Transmitting and Receiving Equipment MAW, MAW-1	AN/PRC	1023
Power Supply PP-1098/GRC-9	AN/GRA	781
Printer:		
TG-7	AN/TGC	1419
TG-7-A	AN/TGC	1421
Projection Group AN/UFA-3	AN/UFA	1631
Public Address Set:		
AN/AIC-13	AN/AIC	17
AN/PIP-1A	AN/PIP	975
AN/PIQ-1	AN/PIQ	977
AN/PIQ-2	AN/PIQ	979
AN/SIH-4	AN/SIH	1131
AN/SIH-6	AN/SIH	1133
AN/SIQ-1	AN/SIQ	1135
AN/TIP-1, -1A	AN/TIP	1435
AN/TIP-2	AN/TIP	1437
AN/TIQ-2( )	AN/TIQ	1439
AN/TIQ-3( )	AN/TIQ	1443
AN/UIQ-1, -1A, -1B	AN/UIQ	1669
AN/UIQ-3	AN/UIQ	1671
AN/UIQ-6	AN/UIQ	1673
Pulse Form Restorer Group AN/TRA-10	AN/TRA	1455
R		
Radar Data Transfer System		
AN/TRQ-10	AN/TRQ	1533
AN/TRQ-11	AN/TRQ	1535
AN/TRQ-12	AN/TRQ	1537
Radio Central AN/MRC-25	AN/MRC	923
Radio Communications Receiver SP-600-JX	AN/FRR	523
Radio Communication Transmitting Equipment TEG-1	AN/FRT	709
Radio Control Central AN/TRQ-1	AN/TRQ	1531
Radio Equipment:		
ABD	AN/ARR	105
AN/ARC-5	AN/ARC	35
Radio Frequency Oscillator O-406(XN-1)/URC	AN/URA	1733
Radio Frequency Switching Group AN/FRA-3	AN/FRA	341
Radio Frequency Tuner TN-273/URT	AN/ARA	23
Radio Intercept Control Set AN/TTQ-3	AN/TTQ	1599
Radio Modulator:		
MD-168/UX	AN/TXA	1605
MD-209/UC	AN/URA	1729

Nomenclature	Type	Page
Radio Receiver:		
AR-88(RCA)	AN/URR	1813
AR-88D(RCA)	AN/URR	1815
BC-312-( )	AN/URR	1817
BC-314-( )	AN/URR	1819
BC-342	AN/GRR	859
BC-344-( )	AN/GRR	861
BC-683-A, -B, -BM	AN/VRR	2089
BC-779	AN/FRR	469
BC-787-( )	AN/URR	1821
BC-794	AN/FRR	471
BC-1004	AN/FRR	473
R-62/PR	AN/PRR	1077
R-80( )/PR	AN/PRR	1079
R-96( )/SR	AN/SRR	1223
R-108/GRC	AN/VRR	2091
R-109/GRC	AN/VRR	2091
R-110/GRC	AN/VRR	2091
R-129( )/U	AN/URR	1825
R-137/GR	AN/GRR	863
R-203( )/SR	AN/SRR	1225
R-206( )/PR	AN/PRR	1081
R-208/FR	AN/FRR	481
R-209( )/FR	AN/FRR	483
R-210/U	AN/FRR	485
R-211( )/U	AN/URR	1827
R-212/SR	AN/SRR	1227
R-213/SR	AN/SRR	1229
R-215/SR	AN/SRR	1231
R-247/URR	AN/GRR	865
R-274/FRR	AN/FRR	487
R-274A/FRR, R-274C/FRR	AN/FRR	489
R-278/GR	AN/URR	1829
R-320/FRC	AN/FRR	491
R-320A/FRC	AN/FRR	493
R-361C/GR	AN/GRR	867
R-388( )/URR	AN/URR	1831
R-389( )/URR	AN/URR	1833
R-390/URR	AN/URR	1835
R-390A/URR	AN/URR	1837
R-391/URR	AN/URR	1839
R-392/URR	AN/URR	1841
R-520( )/URR	AN/URR	1843
RAZ	AN/SRR	1233
Radio Receiver Assembly:		
OA-58/FRC	AN/FRR	475
OA-58A/FRC	AN/FRR	477
OA-59/FRC	AN/FRR	479
Radio Receiver Transfer Switchboard SB-82/SRR	AN/SRR	1237
Radio Receiving and Reproducing Equipment REK	AN/USQ	1981
Radio Receiving Equipment:		
AN/ARR-1	AN/ARR	89
AN/ARR-2, -2A, -2X, -2AX	AN/ARR	91
AN/ARR-3A, -3B	AN/ARR	95
BF	AN/URR	1823
RAK, RAK-1 through -8	AN/URR	1847
RAL, RAL-1 through -8	AN/URR	1851
RAO-2 thru -7, -9	AN/URR	1855
RAS, RAS-1 through -15	AN/URR	1859
RBA, RBA-1 through -3, -5, -5A	AN/URR	1863

Nomenclature	Type	Page
RBA-6	AN/URR	1865
RBA-7	AN/URR	1867
RBB, RBB-1, -2, -2A, -3 through -6	AN/URR	1869
RBC, RBC-1 through -3, -3A, -4 through -6	AN/URR	1871
RBF-3	AN/FRR	497
RBJ, RBJ-1 through -4	AN/URR	1875
RBK, RBK-1	AN/URR	1877
RBK-2	AN/URR	1881
RBK-5, -7, -8, -9	AN/URR	1877
RBK-11	AN/URR	1881
RBK-12 through -14	AN/URR	1877
RBK-15	AN/URR	1883
RBK-16	AN/URR	1885
RBL, RBL-1 through -6	AN/URR	1887
RBO, RBO-1, -2, -2A, -3, -4	AN/URR	1891
RBS, RBS-1, -2, -2a	AN/URR	1897
RBS-3	AN/URR	1901
RBZ	AN/PRR	1083
RC-256	AN/FRR	501
RCE-2	AN/URR	1903
RCO	AN/FRR	503
RDC-1	AN/URA	1745
RDE	AN/FRR	507
RDE-1	AN/FRR	509
RDO	AN/URA	1749
RDZ, RDZ-1, RDZ-a	AN/SRR	1235
SLR-12B	AN/SRR	1239
SLR-H	AN/SRR	1241
Radio Receiving Set:		
AN/FRR-7( )	AN/FRR	433
AN/FRR-12	AN/FRR	435
AN/FRR-12X	AN/FRR	437
AN/FRR-21, -22, -23	AN/FRR	439
AN/FRR-24	AN/FRR	441
AN/FRR-27	AN/FRR	445
AN/FRR-28	AN/FRR	447
AN/FRR-30	AN/FRR	449
AN/FRR-31	AN/FRR	451
AN/FRR-32	AN/FRR	453
AN/FRR-33	AN/FRR	455
AN/FRR-34	AN/FRR	457
AN/FRR-36	AN/FRR	459
AN/FRR-38( )	AN/FRR	461
AN/FRR-39	AN/FRR	463
AN/FRR-40, -41	AN/FRR	465
AN/FRR-44	AN/FRR	467
AN/GRR-7	AN/GRR	857
AN/MRR-1( )	AN/MRR	949
AN/MRR-5	AN/MRR	951
AN/MRR-6	AN/MRR	953
AN/SRR-3	AN/SRR	1215
AN/SRR-11, -12, -13, -13A	AN/SRR	1217
AN/SRR-15	AN/SRR	1221
AN/TRR-5	AN/TRR	1543
AN/TRR-7	AN/TRR	1545
AN/URR-9	AN/URR	1779
AN/URR-13, -13A, -13B, -13C	AN/URR	1781
AN/URR-21, -21A	AN/URR	1783
AN/URR-23, -23A	AN/URR	1785
AN/URR-27	AN/URR	1787

Nomenclature	Type	Page
AN/URR-28	AN/URR	1789
AN/URR-29	AN/URR	1791
AN/URR-29X	AN/URR	1793
AN/URR-35, -35A, -35B, -35C	AN/URR	1795
AN/URR-35D	AN/URR	1799
AN/URR-36	AN/URR	1801
AN/URR-36A	AN/URR	1803
AN/URR-39	AN/URR	1805
AN/VRR-2	AN/VRR	2083
AN/VRR-4	AN/VRR	2085
AN/VRR-7	AN/VRR	2087
Radio Relay Set:		
AN/TRC-4( )	AN/TRC	1473
AN/TRC-12( )	AN/TRC	1483
AN/TRC-36( )	AN/TRC	1503
Radio Repeater Set:		
AN/FRC-26( )	AN/FRC	389
AN/FRC-34	AN/FRC	397
AN/GRC-40	AN/GRC	817
AN/GRC-77	AN/GRC	827
AN/GRC-80	AN/GRC	831
AN/TRC-39	AN/TRC	1507
AN/TRC-40	AN/TRC	1509
AN/TRC-41	AN/TRC	1511
AN/TRQ-13	AN/TRQ	1539
Radio Set:		
18S-4	AN/ARC	75
618S-1	AN/ARC	77
AN/ARC-1, -1X, -1A, -1AX	AN/ARC	25
AN/ARC-2	AN/ARC	29
AN/ARC-2A	AN/ARC	31
AN/ARC-3( )	AN/ARC	33
AN/ARC-8	AN/ARC	39
AN/ARC-12	AN/ARC	43
AN/ARC-21( )	AN/ARC	45
AN/ARC-27	AN/ARC	49
AN/ARC-28	AN/ARC	51
AN/ARC-33	AN/ARC	53
AN/ARC-34	AN/ARC	55
AN/ARC-36( )	AN/ARC	57
AN/ARC-38	AN/ARC	61
AN/ARC-44	AN/ARC	63
AN/ARC-48	AN/ARC	65
AN/ARC-49	AN/ARC	67
AN/ARC-55	AN/ARC	69
AN/ARC-60	AN/ARC	71
AN/ARC-66	AN/ARC	73
AN/ARR-15	AN/ARR	99
AN/ARR-15A	AN/ARR	101
AN/ARR-36	AN/ARR	103
AN/ARW-2	AN/ARW	133
AN/CRT-3A	AN/CRT	157
AN/CRT-5	AN/CRT	161
AN/FRC-6	AN/FRC	373
AN/FRC-7( )	AN/FRC	375
AN/FRC-9	AN/FRC	377
AN/FRC-10	AN/FRC	379
AN/FRC-10A	AN/FRC	381
AN/FRC-10B	AN/FRC	383
AN/FRC-15	AN/FRC	385

Nomenclature	Type	Page
AN/FRC-17( )	AN/FRC	387
AN/FRC-27( )	AN/FRC	391
AN/FRC-30	AN/FRC	393
AN/FRC-31( )	AN/FRC	395
AN/FRC-36	AN/FRC	401
AN/FRC-37(XN-1)	AN/FRC	403
AN/FRC-39	AN/FRC	405
AN/FRC-39(V)	AN/FRC	407
AN/FRC-42	AN/FRC	409
AN/FRC-44	AN/FRC	411
AN/FRC-45(V)	AN/FRC	413
AN/FRC-47	AN/FRC	415
AN/FRC-56(V)	AN/FRC	417
AN/FRR-4	AN/FRR	431
AN/GRC-3	AN/GRC	785
AN/GRC-4( )	AN/GRC	787
AN/GRC-5	AN/GRC	789
AN/GRC-6	AN/GRC	791
AN/GRC-7	AN/GRC	793
AN/GRC-8	AN/GRC	795
AN/GRC-9( )	AN/GRC	797
AN/GRC-10	AN/GRC	799
AN/GRC-19( )	AN/GRC	801
AN/GRC-26( )	AN/GRC	803
AN/GRC-27	AN/GRC	805
AN/GRC-27A	AN/GRC	807
AN/GRC-29	AN/GRC	809
AN/GRC-30	AN/GRC	811
AN/GRC-38( )	AN/GRC	813
AN/GRC-48	AN/GRC	821
AN/GRC-75	AN/GRC	823
AN/GRC-78	AN/GRC	829
AN/GRC-81	AN/GRC	833
AN/GRC-85	AN/GRC	837
AN/GRC-86	AN/GRC	839
AN/GRR-2	AN/GRR	851
AN/GRR-3	AN/GRR	853
AN/GRR-5( )	AN/GRR	855
AN/GRT-1	AN/GRT	871
AN/MRC-2( )	AN/MRC	895
AN/MRC-5C	AN/MRC	897
AN/MRC-6, -6A, -6B	AN/MRC	899
AN/MRC-6C	AN/MRC	901
AN/MRC-13( )	AN/MRC	903
AN/MRC-16	AN/MRC	905
AN/MRC-18	AN/MRC	907
AN/MRC-20	AN/MRC	911
AN/MRC-22	AN/MRC	913
AN/MRC-23	AN/MRC	917
AN/MRC-24	AN/MRC	921
AN/MRC-32	AN/MRC	925
AN/MRC-36	AN/MRC	929
AN/MRC-37	AN/MRC	931
AN/MRC-38	AN/MRC	933
AN/MRC-41	AN/MRC	935
AN/MRC-59	AN/MRC	937
AN/MRC-60	AN/MRC	939
AN/MRC-62	AN/MRC	941
AN/MRC-63	AN/MRC	943
AN/PRC-1( )	AN/PRC	991

Nomenclature	Type	Page
AN/PRC-5	AN/PRC	993
AN/PRC-6( )	AN/PRC	995
AN/PRC-7(XN-1)	AN/PRC	997
AN/PRC-8	AN/PRC	999
AN/PRC-9( )	AN/PRC	1001
AN/PRC-10( )	AN/PRC	1003
AN/PRC-16	AN/PRC	1005
AN/PRC-17	AN/PRC	1007
AN/PRC-21( )	AN/PRC	1009
AN/PRC-23, -24	AN/PRC	1011
AN/PRC-28	AN/PRC	1013
AN/PRC-29	AN/PRC	1015
AN/PRC-33	AN/PRC	1017
AN/PRC-37	AN/PRC	1019
AN/SRC-6( )	AN/SRC	1179
AN/SRC-7	AN/SRC	1181
AN/SRC-8( )	AN/SRC	1183
AN/SRC-9	AN/SRC	1187
AN/SRC-10, -10X, -10Y, -11, -11X, -11Y, -12, -12X, -12Y	AN/SRC	1189
AN/SRC-13, -13X, -13Y, -14, -14X, -14Y, -15, -15X, -15Y	AN/SRC	1195
AN/TRC-1( )	AN/TRC	1469
AN/TRC-7, -7A, -7B	AN/TRC	1475
AN/TRC-8	AN/TRC	1479
AN/TRC-20	AN/TRC	1485
AN/TRC-22	AN/TRC	1487
AN/TRC-24( )	AN/TRC	1489
AN/TRC-28	AN/TRC	1493
AN/TRC-29	AN/TRC	1495
AN/TRC-32	AN/TRC	1497
AN/TRC-34( )	AN/TRC	1499
AN/TRC-42( )	AN/TRC	1513
AN/TRC-69	AN/TRC	1515
AN/TRR-2	AN/TRR	1541
AN/TRT-1	AN/TRT	1553
AN/URC-4	AN/URC	1753
AN/URC-7Z	AN/URC	1757
AN/URC-11	AN/URC	1759
AN/URC-16, -16X, -16Y, -17, -17X, -17Y, -18, -18X, -18Y	AN/URC	1761
AN/URC-22	AN/URC	1767
AN/VRC-1	AN/VRC	2001
AN/VRC-2	AN/VRC	2003
AN/VRC-2X	AN/VRC	2005
AN/VRC-3	AN/VRC	2007
AN/VRC-5	AN/VRC	2009
AN/VRC-6( )	AN/VRC	2011
AN/VRC-7( )	AN/VRC	2013
AN/VRC-8( )	AN/VRC	2015
AN/VRC-9( )	AN/VRC	2017
AN/VRC-10( )	AN/VRC	2019
AN/VRC-13( )	AN/VRC	2021
AN/VRC-14	AN/VRC	2023
AN/VRC-15( )	AN/VRC	2025
AN/VRC-16( )	AN/VRC	2027
AN/VRC-17	AN/VRC	2029
AN/VRC-18( )	AN/VRC	2031
AN/VRC-19( )	AN/VRC	2033
AN/VRC-20	AN/VRC	2035
AN/VRC-21	AN/VRC	2037
AN/VRC-22	AN/VRC	2039
AN/VRC-27( )	AN/VRC	2041

Nomenclature	Type	Page
AN/VRC-30	AN/VRC	2043
AN/VRC-32	AN/VRC	2045
AN/VRQ-1	AN/VRQ	2077
AN/VRQ-2( )	AN/VRQ	2079
AN/VRQ-3( )	AN/VRQ	2081
SCR-177-( )	AN/TRC	1521
SCR-188-( )	AN/TRC	1523
SCR-193-( )	AN/VRC	2057
SCR-244, -244-A, -B, -C	AN/FRR	515
SCR-244-D	AN/FRR	517
SCR-281-( )	AN/SRC	1203
SCR-293-( )	AN/VRC	2059
SCR-294-( )	AN/VRR	2093
SCR-298-( )	AN/VRC	2061
SCR-300	AN/PRC	1027
SCR-399	AN/MRC	945
SCR-499-( )	AN/TRC	1525
SCR-506-( )	AN/VRC	2063
SCR-508-( )	AN/VRC	2065
SCR-509-( )	AN/PRC	1029
SCR-510-( )	AN/VRC	2067
SCR-528	AN/VRC	2069
SCR-536	AN/PRC	1031
SCR-543-( )	AN/GRC	841
SCR-573-( )	AN/MRT	961
SCR-593-( )	AN/PRC	1033
SCR-607-( )	AN/GRR	869
SCR-608	AN/VRC	2071
SCR-609-( )	AN/PRC	1035
SCR-610-( )	AN/VRC	2073
SCR-614-( )	AN/FRR	519
SCR-616	AN/TRR	1551
SCR-619	AN/PRC	1037
SCR-628	AN/VRC	2075
SCR-643	AN/FRT	585
SCR-678-( )	AN/VRR	2095
SCR-694-( )	AN/MRC	947
SCR-704	AN/FRR	521
Radio Set Central AN/MRC-35A	AN/MRC	927
Radio Set Control:		
C-692/SR	AN/SRA	1167
C-1846/FRC-42	AN/FRW	713
Radio Set Control Group:		
AN/GRA-11	AN/GRA	765
AN/GRA-14	AN/GRA	767
AN/URA-19	AN/URA	1703
Radio Telegraph Transmitting Equipment:		
TAG	AN/URT	1929
TAR-2	AN/BRT	153
TBU	AN/SRT	1317
TBU-1	AN/FRT	633
TBU-2	AN/SRT	1319
TBU-3	AN/FRT	635
TDA	AN/SRT	1325
TDB	AN/SRT	1327
Radio Telephone and Telegraph Transmitting Equipment:		
TCB	AN/FRT	637
TCB-1	AN/FRT	639
TCB-2	AN/FRT	641
TCC	AN/FRT	643

Nomenclature	Type	Page
TCC–1	AN/FRT	645
TCC–2	AN/FRT	647
TCC–3	AN/FRT	649
TCC–4	AN/FRT	651
Radiotelephone Equipment:		
MQ–1	AN/VRC	2053
MQ–2	AN/VRC	2055
Radio Telephone Simulator SM–40/UR	AN/URA	1751
Radio Telephone Terminal Set:		
AN/FRC–23( )	AN/FRC	389
AN/FRC–35	AN/FRC	399
Radio Telephone Transmitting and Receiving Equipment:		
MO–1	AN/URC	1771
TCP	AN/SRC	1205
TCP–1	AN/SRC	1207
TCP–2	AN/SRC	1209
TCP–3	AN/SRC	1211
Radio Telephone Transmitting Equipment:		
TCA	AN/URT	1933
TCR	AN/FRT	681
TDD, TDD–1 through –4	AN/FRT	683
Radioteletype Terminal Equipment AN/FGC–1( )	AN/FGC	223
Radio Teletype Terminal Set:		
AN/SGC–1	AN/SGC	1113
AN/SGC–1A	AN/SGC	1115
Radio Teletypewriter Set AN/GRC–46	AN/GRC	819
Radio Terminal Set:		
AN/GRC–39	AN/GRC	815
AN/GRC–76	AN/GRC	825
AN/GRC–82	AN/GRC	835
AN/TRC–3( )	AN/TRC	1471
AN/TRC–11( )	AN/TRC	1481
AN/TRC–35( )	AN/TRC	1501
AN/TRC–38	AN/TRC	1505
Radio Transmitter:		
149–a	AN/SRT	1269
AN/ARW–3	AN/ARW	135
BC–191–( )	AN/GRT	877
BC–329–( )	AN/FRT	565
BC–339–( )	AN/FRT	567
BC–365–( )	AN/FRT	569
BC–401	AN/FRT	571
BC–447–( )	AN/FRT	573
BC–610–( )	AN/GRT	879
MW	AN/FRT	577
MW–3	AN/FRT	579
T–4( )/FRC	AN/FRT	587
T–5( )/FRC	AN/FRT	589
T–83/SR	AN/SRT	1273
T–158( )/FRT	AN/FRT	591
T–159/FRT	AN/FRT	593
T–171( )/FR	AN/FRT	595
T–172/FR	AN/FRT	597
T–173/FR	AN/FRT	599
T–177/FR	AN/FRT	601
T–180/FR	AN/FRT	603
T–208/U	AN/MRT	963
T–265/FRC–10	AN/FRT	605
T–303A/G	AN/TRT	1557
T–368( )/URT	AN/URT	1927

Nomenclature	Type	Page
T-409/FRC-30	AN/FRT	607
T-417/GR	AN/GRT	881
Radio Transmitter Assembly OA-60( )/FRT	AN/FRT	581
Radio Transmitter Equipment TCA-1	AN/GRA	783
Radio Transmitter Modulator MD-280/TRC	AN/TRA	1463
Radio Transmitter-Receiver:		
25/FSTR	AN/TRC	1517
1498	AN/TRC	1519
Radio Transmitting and Receiving Equipment:		
MAB	AN/PRC	1021
MAC	AN/SRC	1201
TCS, TCS-1 through -15	AN/TRC	1527
Radio Transmitting and Receiving Set GF-11/RU-16	AN/ARC	79
Radio Transmitting Buoy T-616/SRT	AN/BRT	151
Radio Transmitting Equipment:		
AN/CRT-1A, -1B	AN/CRT	155
AN/CRT-4	AN/CRT	159
AN/FRT-1	AN/FRT	525
RC-52-( )	AN/FRT	583
TBA-3, -5, -6	AN/SRT	1291
TBA-8	AN/FRT	617
TBA-9	AN/SRT	1291
TBA-10, -11	AN/FRT	617
TBK-3	AN/SRT	1295
TBK-4	AN/URT	1931
TBK-5	AN/SRT	1295
TBK-6	AN/FRT	619
TBK-7 through -10	AN/SRT	1295
TBK-11	AN/FRT	619
TBK-12 through -14	AN/SRT	1295
TBK-15, -16	AN/FRT	619
TBK-17 through -20	AN/SRT	1295
TBL-10, -11	AN/FRT	623
TBM-4	AN/SRT	1303
TBM-5	AN/SRT	1305
TBM-6	AN/FRT	625
TBM-7	AN/SRT	1307
TBM-8	AN/FRT	629
TBM-9	AN/SRT	1309
TBM-10	AN/FRT	631
TBM-11	AN/SRT	1311
TBM-12	AN/SRT	1313
TCF	AN/FRT	653
TCG	AN/FRT	655
TCG-1	AN/FRT	657
TCG-2	AN/FRT	659
TCJ, TCJ-1	AN/SRT	1321
TCK	AN/FRT	661
TCK-1	AN/FRT	665
TCK-2	AN/FRT	667
TCK-3	AN/FRT	669
TCK-4	AN/FRT	673
TCK-5	AN/FRT	675
TCK-6	AN/FRT	677
TCK-7	AN/FRT	679
TCM	AN/URT	1935
TCM-1	AN/URT	1937
TCM-2	AN/URT	1939
TCN	AN/URT	1941
TCN-1	AN/URT	1943

Nomenclature	Type	Page
TCU, TCU–1, –2	AN/URT	1945
TCZ	AN/URT	1947
TCZ–1, –2	AN/URT	1949
TDE, TDE–1, –2, –3	AN/URT	1951
TDF	AN/FRT	687
TDH, TDH–2, –3, –4	AN/FRT	689
TDN	AN/FRT	693
TDN–2, –3, –4	AN/FRT	695
TDO	AN/FRT	699
TDT	AN/TRT	1575
TDZ, TDZ–a	AN/URT	1955
TEB	AN/FRT	701
TEC	AN/FRT	703
TED, TED–1, –2	AN/URT	1957
TED–3	AN/URT	1959
TED–7	AN/URT	1961
TED–8	AN/URT	1963
TEF	AN/FRT	705
Radio Transmitting Set:		
AN/ART–13	AN/ART	117
AN/ART–13A	AN/ART	119
AN/ART–28	AN/ART	121
AN/FRT–3	AN/FRT	527
AN/FRT–4	AN/FRT	529
AN/FRT–5	AN/FRT	531
AN/FRT–5A	AN/FRT	533
AN/FRT–5B	AN/FRT	535
AN/FRT–6	AN/FRT	537
AN/FRT–6A	AN/FRT	539
AN/FRT–6B	AN/FRT	541
AN/FRT–6C	AN/FRT	543
AN/FRT–15	AN/FRT	545
AN/FRT–15A	AN/FRT	547
AN/FRT–15B	AN/FRT	551
AN/FRT–19	AN/FRT	553
AN/FRT–22	AN/FRT	555
AN/FRT–23	AN/FRT	557
AN/FRT–26	AN/FRT	559
AN/GRT–2	AN/GRT	873
AN/GRT–3	AN/GRT	875
AN/MRT–5( )	AN/MRT	955
AN/MRT–6	AN/MRT	957
AN/MRT–7	AN/MRT	959
AN/SRT–1	AN/SRT	1243
AN/SRT–2	AN/SRT	1245
AN/SRT–3( )	AN/SRT	1247
AN/SRT–4( )	AN/SRT	1249
AN/SRT–10( )	AN/SRT	1251
AN/SRT–13( )	AN/SRT	1253
AN/SRT–14, –14A	AN/SRT	1255
AN/SRT–15, –15A	AN/SRT	1259
AN/SRT–16, –16A	AN/SRT	1263
AN/SRT–18(XN–2)	AN/SRT	1267
AN/TRT–3	AN/TRT	1555
AN/URT–2, –2X, –3, –3X, –4, –4X	AN/URT	1905
AN/URT–6(XN–1)	AN/URT	1909
AN/URT–7, –7A, –7B, –7C	AN/URT	1911
AN/URT–8(XN–1), –9(XN–1)	AN/URT	1915
AN/URT–10(XN–1)	AN/URT	1917
AN/URT–12	AN/URT	1921

Nomenclature	Type	Page
AN/URT-13	AN/URT	1923
AN/URT-14	AN/URT	1925
AN/VRT-1	AN/VRT	2097
Receiver 51J-4	AN/URR	1807
Receiver-Transmitter:		
RT-66/GRC (*See* AN/GRC-3, AN/GRC-4, AN/VRC-8, AN/VRC-13, AN/VRC-16, AN/VRC-20, AN/VRQ-1.)	AN/GRA	
RT-67/GRC (*See* AN/GRC-5, AN/GRC-6, AN/VRC-9, AN/VRC-14, AN/VRC-17, AN/VRC-21, AN/VRQ-2.)	AN/GRA	
RT-68/GRC (*See* AN/GRC-7, AN/GRC-8, AN/VRC-10, AN/VRC-15, AN/VRC-18, AN/VRC-22, AN/VRQ-3.)	AN/GRA	
RT-70/GRC (*See* AN/GRC-3, AN/GRC-4, AN/GRC-5, AN/GRC-6, AN/GRC-7, AN/GRC-8, AN/VRC-7, AN/PRC-16.)	AN/GRA	
Recorder		
RD-2/GXR	AN/GXR	891
RD-41B/U	AN/FSH	715
Recorder-Reproducer Assembly RD/153/SNH	AN/FNH	335
Recorder-Reproducer Set AN/UNQ-2	AN/UNQ	1689
Regenerative Repeater OA-3/FC	AN/FCC	181
Remote Control Console C-1624/FRC-36	AN/FRW	711
Remote Control Equipment:		
AN/TRA-2	AN/TRA	1453
RC-261	AN/PRW	1089
RC-289	AN/PRW	1091
RC-290	AN/TTA	1577
Remote Control Unit RM-29-A	AN/URW	1967
Repeater:		
CF-3	AN/TCC	1373
CF-5	AN/TCC	1377
Repeater Set:		
TC-18	AN/TGC	1417
TC-19	AN/TCC	1387
TC-23	AN/TCC	1393
TC-37	AN/TCC	1397
Repeater Telegraph TH-29/UG	AN/FCA	165
Reperforator:		
TT-15/FG	AN/FGC	281
TT-16/FG	AN/FGC	283
TT-17/FG	AN/FGC	285
TT-45/FG	AN/FGR	299
TT-46/FG	AN/FGR	299
Reperforator-Teletypewriter Set TC-16-( )	AN/TGC	1415
Reperforator Transmitter:		
TG-26	AN/FGC	265
TG-27	AN/TGC	1425
RF and AF Signal Distribution Unit RF, AF, Type A, B, C	AN/FGC	257

S

Signal Lamp Equipment:		
EE-80-( )	AN/PVC	1101
EE-84	AN/PVC	1103
SE-11	AN/PVC	1105
Single Sideband Converter CV-157/URR	AN/URA	1717
Single Side Band Radio Receiving Equipment REA, REA-1	AN/FRR	513
Sound Recorder-Reproducer:		
RD-31A/U	AN/PNH	983
RD-115/UN, -115A/UN, -115C/UN	AN/PNH	985
RD-133/UN	AN/PNH	987

Nomenclature	Type	Page
Sound Recorder-Reproducer Set:		
AN/SNH-1	AN/SNH	1137
AN/SNH-2	AN/SNH	1139
AN/SNH-3	AN/SNH	1141
AN/SNH-6	AN/SNH	1143
AN/SNH-7	AN/SNH	1145
AN/UNH-6	AN/UNH	1675
Sound Recording Equipment:		
PG	AN/PNH	981
PH	AN/UNH	1681
PJ	AN/UNH	1683
Sound Recording Set AN/UNQ-1, -1A, -1B	AN/UNQ	1685
Sound Reproducing Equipment:		
PG	AN/PNH	981
PH	AN/UNH	1681
Speak-O-Phone Sound Detector SDB	AN/PNS	989
Speech Input Equipment 50254	AN/URA	1705
Super Frequency Aircraft Radio Receiving Equipment RAY	AN/URR	1861
Switchboard:		
BD-71	AN/TTC	1581
BD-72-( )	AN/TTC	1583
SB-56/FTC	AN/FTC	729
SB-57/FTC	AN/FTC	731
SB-58/FTC	AN/FTC	733
SB-59/FTC	AN/FTC	735
SB-60/FTC	AN/FTC	737
SB-61/FTC	AN/FTC	739
SB-62/FTC	AN/FTC	741
SB-63/FTC	AN/FTC	743
SB-64/FTC	AN/FTC	745
SB-66( )/FGC	AN/FGC	263
T		
Telegraph Carrier Receiver R-551/UC	AN/UGA	1635
Telegraph Carrier Terminal:		
AN/FCC-3	AN/FCC	169
AN/FCC-8	AN/FCC	173
C-2T	AN/FCC	177
Telegraph Central Office Set TC-3	AN/TGC	1413
Telegraph Multiplex Set AN/UXC-2	AN/UXC	1989
Telegraph Printer Set EE-97-( )	AN/TGC	1407
Telegraph Repeater:		
OA-6/FC	AN/FCC	187
TH-7/FG	AN/FGA	217
TH-8/FG	AN/FGC	267
TH-9/FG	AN/FGC	269
Telegraph Set TG-5-B	AN/PGC	973
Telegraph Switchboard:		
SB-6( )/GG	AN/GGC	757
SB-65( )/FGC	AN/FGC	261
Telegraph-Telephone Signal Converter TA-182/U	AN/GCA	751
Telegraph-Telephone Terminal AN/TCC-14	AN/TGC	1359
Telegraph Terminal:		
AN/FGC-29	AN/FGC	251
AN/TCC-4	AN/TCC	1347
AN/TCC-20	AN/TCC	1361
AN/UGC-2(XN-1)	AN/UGC	1637
CF-2-( )	AN/TCC	1371
CF-6	AN/TCC	1379

Nomenclature	Type	Page
G–1T	AN/FGA	215
TH–1/TCC–1	AN/FCC	203
TH–5/TG	AN/TGC	1429
TH–21/UC	AN/FGA	219
Telegraph Terminal Set:		
AN/FGC–5	AN/FGC	229
TC–22–( )	AN/TCC	1391
Telephone Central Office Set:		
AN/FTC–9	AN/FTC	719
AN/FTC–25	AN/FTC	721
TC–1	AN/TTC	1587
TC–2–( )	AN/TTC	1589
TC–4	AN/TTC	1591
TC–10–( )	AN/TTC	1593
TC–12	AN/TTC	1595
Telephone Repeater:		
AN/TCC–5	AN/TCC	1349
AN/TCC–8	AN/TCC	1353
AN/TCC–11( )	AN/TCC	1355
AN/TCC–21	AN/TCC	1363
AN/TCC–22	AN/TCC	1365
EE–89–( )	AN/TTC	1585
OA–7/FC	AN/FCC	189
OA–8/FC	AN/FCC	191
TA–126/GT	AN/GTA	885
TP–14	AN/GTC	887
Telephone Switchboard:		
SB–53( )/FTC	AN/FTC	723
SB–54/FTC	AN/FTC	725
SB–55( )/FTC	AN/FTC	727
Telephone Terminal:		
AN/FCC–9	AN/FCC	175
AN/TCC–3	AN/TCC	1345
AN/TCC–7	AN/TCC	1351
AN/TCC–23	AN/TCC	1367
CF–1–( )	AN/TCC	1369
TA–269/U	AN/USA	1973
Telephone Terminal Set:		
TC–21–( )	AN/TCC	1389
Teletype Panel TT–23/SG, –23B/SG	AN/SGA	1111
Teletypewriter:		
TG–7–B	AN/TGC	1423
TG–37–( )	AN/TGC	1427
TT–4( )/TG	AN/TGC	1431
TT–5/FG	AN/FGC	271
TT–6/FG	AN/FGC	273
TT–7( )/FG	AN/FGC	275
TT–8/FG	AN/FGC	277
TT–10/FG	AN/FGC	279
TT–47/UG	AN/UGC	1639
TT–47A/UG	AN/UGC	1641
TT–48/FG	AN/UGC	1639
TT–48A/UG	AN/UGC	1641
TT–55–MGC	AN/MGC	893
TT–61/FG	AN/TGC	1433
TT–69/UG	AN/UGC	1645
TT–69A/UG	AN/UGC	1647
TT–70/UG	AN/UGC	1645
TT–70A/UG	AN/UGC	1647
TT–128A/UG	AN/UGC	1649

Nomenclature	Type	Page
TT-129A/UG	AN/UGC	1649
TT-130A/UG	AN/UGC	1651
TT-131A/UG	AN/UGC	1651
TT-171/UG	AN/UGR	1653
Teletypewriter Distributor-Transmitter:		
TT-143/UG	AN/UGT	1657
TT-187/UG	AN/UGT	1659
Teletypewriter Printer-Projector TT-71/UG	AN/FGQ	293
Teletypewriter Repeater PM	AN/FGC	255
Teletypewriter Repeater-Mixer AN/FGQ-1( )	AN/FGQ	291
Teletypewriter Repeater Set:		
AN/FGC-7	AN/FGC	235
AN/FGC-7A	AN/FGC	237
Teletypewriter Reperforator:		
TT-92/FG	AN/FGR	301
TT-107/FG	AN/FGR	303
TT-192/UG	AN/UGR	1655
Teletypewriter Reperforator-Transmitter:		
TT-102/FG	AN/FGC	289
TT-103/FG	AN/FGC	289
Teletypewriter Set:		
AN/FGC-4	AN/FGC	227
AN/FGC-6	AN/FGC	231
AN/FGC-8	AN/FGC	239
AN/FGC-9	AN/FGC	241
AN/FGC-10	AN/FGC	243
AN/FGC-20( )	AN/FGC	245
AN/FGC-21( )	AN/FGC	247
AN/FGC-25( )	AN/FGC	249
AN/FGC-38( )	AN/FGC	253
AN/FGC-39	AN/FGC	253
AN/GGC-3	AN/GGC	755
AN/PGC-1	AN/PGC	971
AN/TGC-1	AN/TGC	1401
AN/TGC-3	AN/TGC	1403
AN/TGC-6	AN/TGC	1405
EE-98-( )	AN/TGC	1409
EE-102	AN/TGC	1411
Television Camera Group AN/UXA-5(XN-1)	AN/UXA	1983
Tone-Keying Unit KY-7/FRT	AN/FRA	361
Tone Warning Generator Group OA-145/GT	AN/GTT	889
Trainer:		
AN/GRQ-T1	AN/GRQ	847
AN/GRQ-T1A	AN/GRQ	849
Transceiver CNP	AN/TXC	1609
Transmission Line Tuner TN-233/SRC	AN/SRA	1177
Transmitter KWS-1, KWS-1(MOD)	AN/FRT	575
Transmitter and Receiver Equipment TCH	AN/GRC	843
Transmitter Control-Monitor Group AN/FRQ-3	AN/FRQ	427
Transmitter-Distributor:		
TT-21/FG	AN/FGC	287
TT-25/FG	AN/FGA	221
TT-26/FG	AN/FGT	307
TT-57/FG	AN/FGT	309
Transmitter-Receiver FMTR-30D	AN/VRC	2051
Transmitter-Teletypewriter Control C-492/SG	AN/SGA	1107
Transmitting Equipment TBN-3	AN/SRT	1315
Transmitting Equipment, 2 Kw:		
TAB	AN/FRT	609
TAB-2	AN/FRT	613

Nomenclature	*Type*	*Page*
TAB–3, –4, –5	AN/FRT	609
TAB–6, –7	AN/FRT	615
TAQ–4, through –6b, –9, –10	AN/SRT	1287
Transmitting Equipment, 500 Watt, TAJ, TAJ–1 through –19	AN/SRT	1275
Tuning Indicator IP–352(XN–1)/UR	AN/URA	1721
Two Channel Rekeyer AFSAV 39C	AN/ARA	21
Two-Tone Carrier Control System UP	AN/FCC	209

V

Vacuum Tube Keyer Unit 50059	AN/FRA	351
Vhf Radio Transmitting and Receiving Equipment MAR	AN/URC	1769
VHF Radio Transmitting Equipment TDQ	AN/SRT	1331
VHF Receiver R–5200	AN/URR	1845
Voice Recording Equipment:		
PD, PD–1	AN/UNH	1677
PE, PE–1	AN/UNH	1679
Voltage Regulator CN–154/U	AN/USA	1969

APPENDIX III

INDEX OF ITEMS BY TYPE NUMBER

The list of items below, described in this publication is arranged in alpha-numerical sequence by officially designated military type number, or by manufacturer's model number in the case of equipment not assigned an official type number.

Type No.	*Item Name*	*Type*	*Page*
	Numerical Designatons		
18S–4	Radio Set	AN/ARC	75
25–FSTR	Radio Transmitter-Receiver	AN/TRC	1517
30K–5	Ground Station Transmitter	AN/FRT	561
35FMTR–7A	Frequency Modulated Mobile Equipment	AN/VRC	2047
50FMTR–7A	Frequency Modulated Mobile Radio Equipment	AN/VRC	2049
51J–4	Receiver	AN/URR	1807
75A–4, 75A–4(MOD)	Amateur-Band Receiver	AN/URR	1809
149–A	Radio Transmitter	AN/SRT	1269
265	Portable Lifeboat Radio Transmitter	AN/SRT	1271
431D–1	Communications Transmitter	AN/FRT	563
618S–1	Radio Set	AN/ARC	77
1498	Radio Transmitter-Receiver	AN/TRC	1519
50059	Vacuum Tube Keyer Unit	AN/FRA	351
50065–A	Modulator Unit	AN/SRA	1161
50101	Audio Frequency Amplifier	AN/FCA	163
50128, 50128A	Interphone Amplifier	AN/UIA	1661
50254	Speech Input Equipment	AN/URA	1705
	A		
ABD	Radio Equipment	AN/ARR	105
ABK, ABK–1 through –7.	Aircraft Radio Receiving Equipment	AN/ARR	107
AFSAV 39C	Two Channel Rekeyer	AN/ARA	21
AM–65/GRC	Af Amplifier	AN/GIA	759
AM–215/U, –215A/U, –215B/U.	Audio Frequency Amplifier	AN/UIA	1663
AM–413/G, –413A/G	Audio Amplifier	AN/UIA	1665
AN/AIC–2, –2A	Interphone Equipment	AN/AIC	5
AN/AIC–3	Interphone Equipment	AN/AIC	7
AN/AIC–4	Interphone-Radio Control Set	AN/AIC	9
AN/AIC–8	Intercommunication Set	AN/AIC	11
AN/AIC–10, –10A	Intercommunication Set	AN/AIC	13
AN/AIC–13	Public Address Set	AN/AIC	17
AN/ARA–26	Control-Keyer Group	AN/ARA	19
AN/ARA-type:			
AFSAV 39C	Two Channel Rekeyer	AN/ARA	21
TN–273/URT	Radio Frequency Tuner	AN/ARA	23
AN/ARC–1, –1X, –1A, –1AX.	Radio Set	AN/ARC	25
AN/ARC–2	Radio Set	AN/ARC	29
AN/ARC–2A	Radio Set	AN/ARC	31

Type No.	Item Name	Type	Page
AN/ARC-3( )	Radio Set	AN/ARC	33
AN/ARC-5	Radio Equipment	AN/ARC	35
AN/ARC-8	Radio Set	AN/ARC	39
AN/ARC-12	Radio Set	AN/ARC	43
AN/ARC-21( )	Radio Set	AN/ARC	45
AN/ARC-27	Radio Set	AN/ARC	49
AN/ARC-28	Radio Set	AN/ARC	51
AN/ARC-33	Radio Set	AN/ARC	53
AN/ARC-34	Radio Set	AN/ARC	55
AN/ARC-36( )	Radio Set	AN/ARC	57
AN/ARC-38	Radio Set	AN/ARC	61
AN/ARC-44	Radio Set	AN/ARC	63
AN/ARC-48	Radio Set	AN/ARC	65
AN/ARC-49	Radio Set	AN/ARC	67
AN/ARC-55	Radio Set	AN/ARC	69
AN/ARC-60	Radio Set	AN/ARC	71
AN/ARC-66	Radio Set	AN/ARC	73
AN/ARC-type:			
18S-4	Radio Set	AN/ARC	75
618S-1	Radio Set	AN/ARC	77
GF-11/RU-16	Radio Transmitting and Receiving Set	AN/ARC	79
MAM	Emergency Mobile Communication Equipment	AN/ARC	83
MB	Aircraft Radio Transmitter-Receiver	AN/ARC	85
ME	Aircraft Radio Transmitter-Receiver	AN/ARC	87
AN/ARR-1	Radio Receiving Equipment	AN/ARR	89
AN/ARR-2, -2A, -2X, -2AX.	Radio Receiving Equipment	AN/ARR	91
AN/ARR-3A, -3B	Radio Receiving Equipment	AN/ARR	95
AN/ARR-15	Radio Set	AN/ARR	99
AN/ARR-15A	Radio Set	AN/ARR	101
AN ARR-36	Radio Set	AN/ARR	103
AN/ARR-type:			
ABD	Radio Equipment	AN/ARR	105
ABK, ABK-1, -2, -3, -4, -5, -6, -7	Aircraft Radio Receiving Equipment	AN/ARR	107
ARA	Aircraft Radio Receiving Equipment	AN/ARR	109
ARB	Aircraft Radio Receiver	AN/ARR	111
RAX-1	Aircraft Radio Receiving Equipment	AN/ARR	113
RU-18, -19	Aircraft Radio Equipment	AN/ARR	115
AN/ART-13	Radio Transmitting Set	AN/ART	117
AN/ART-13A	Radio Transmitting Set	AN/ART	119
AN/ART-28	Radio Transmitting Set	AN/ART	121
AN/ART-type:			
ATA	Aircraft Radio Transmitting Equipment	AN/ART	123
ATB	Aircraft Radio Equipment	AN/ART	125
ATD	Aircraft Radio Transmitting Equipment	AN/ART	127
GP, GP-2	Aircraft Radio Transmitting Equipment	AN/ART	129
GP-7	Aircraft Radio Transmitting Equipment	AN/ART	131
AN/ARW-2	Radio Set	AN/ARW	133
AN/ARW-3	Radio Transmitter	AN/ARW	135
AN/ARW-34	Aircraft Radio Equipment	AN/ARW	137
AN/AXR-type:			
ARJ	Aircraft Radio Receiving Equipment	AN/AXR	139
ARK	Aircraft Radio Receiving Equipment	AN/AXR	141
AN/AXT-type:			
ATK	Aircraft Radio Transmitting Equipment	AN/AXT	143

Type No.	Item Name	Type	Page
AN/BRA-type:			
AT-317/BRR	Loop Antenna System	AN/BRA	147
AT-317(XN-1)/BRR	Antenna	AN/BRA	149
AN/BRT-type:			
T-616/SRT	Radio Transmitting Buoy	AN/BRT	151
TAR-2	Radio Telegraph Transmitting Equipment	AN/BRT	153
AN/CRT-1A, -1B	Radio Transmitting Equipment	AN/CRT	155
AN/CRT-3A	Radio Set	AN/CRT	157
AN/CRT-4	Radio Transmitting Equipment	AN/CRT	159
AN/CRT-5	Radio Set	AN/CRT	161
AN/FCA-type:			
50101	Audio Frequency Amplifier	AN/FCA	163
TH-29/UG	Repeater Telegraph	AN/FCA	165
AN/FCC-2	Carrier Terminal Set	AN/FCC	167
AN/FCC-3	Telegraph Carrier Terminal	AN/FCC	169
AN/FCC-8	Telegraph Carrier Terminal	AN/FCC	173
AN/FCC-9	Telephone Terminal	AN/FCC	175
AN/FCC-type:			
C-2T	Telegraph Carrier Terminal	AN/FCC	177
OA-3/FC	Regenerative Repeater	AN/FCC	181
OA-4( )/FC	Carrier Terminal	AN/FCC	183
OA-5( )/FC	Carrier Terminal	AN/FCC	185
OA-6/FC	Telegraph Repeater	AN/FCC	187
OA-7/FC	Telephone Repeater	AN/FCC	189
OA-8/FC	Telephone Repeater	AN/FCC	191
OA-9/FC	Carrier Repeater	AN/FCC	193
OA-10( )/FC	Carrier Repeater	AN/FCC	195
OA-11/FC	Carrier Terminal	AN/FCC	197
OA-12/FC	Carrier Terminal	AN/FCC	199
OA-13/FC	Carrier Terminal	AN/FCC	201
TH-1/TCC-1	Telegraph Terminal	AN/FCC	203
UN	Carrier Control System	AN/FCC	205
UP	Two-Tone Carrier Control System	AN/FCC	209
AN/FCT-type:			
T-341/UC	Carrier Telegraph Transmitter	AN/FCT	211
AN/FGA-type:			
FSB	Frequency Shift Keyer Equipment	AN/FGA	213
G-1T	Telegraph Terminal	AN/FGA	215
TH-7/FG	Telegraph Repeater	AN/FGA	217
TH-21/UC	Telegraph Terminal	AN/FGA	219
TT-25/FG	Transmitter Distributor	AN/FGA	221
AN/FGC-1( )	Radioteletype Terminal Equipment	AN/FGC	223
AN/FGC-3	Ocean Cable Terminal Set	AN/FGC	225
AN/FGC-4	Teletypewriter Set	AN/FGC	227
AN/FGC-5	Telegraph Terminal Set	AN/FGC	229
AN/FGC-6	Teletypewriter Set	AN/FGC	231
AN/FGC-7	Teletypewriter Repeater Set	AN/FGC	235
AN/FGC-7A	Teletypewriter Repeater Set	AN/FGC	237
AN/FGC-8	Teletypewriter Set	AN/FGC	239
AN/FGC-9	Teletypewriter Set	AN/FGC	241
AN/FGC-10	Teletypewriter Set	AN/FGC	243
AN/FGC-20( )	Teletypewriter Set	AN/FGC	245
AN/FGC-21( )	Teletypewriter Set	AN/FGC	247
AN/FGC-25( )	Teletypewriter Set	AN/FGC	249
AN/FGC-29	Telegraph Terminal	AN/FGC	251
AN/FGC-38( ), -39	Teletypewriter Set	AN/FGC	253

Type No.	Item Name	Type	Page
AN/FGC-type:			
PM	Teletypewriter Repeater	AN/FGC	255
RF, AF, Type A, B, C	Rf and Af Signal Distribution Unit	AN/FGC	257
SB-65( )/FGC	Telegraph Switchboard	AN/FGC	261
SB-66( )/FGC	Switchboard	AN/FGC	263
TG-26	Reperforator Transmitter	AN/FGC	265
TH-8/FG	Telegraph Repeater	AN/FGC	267
TH-9/FG	Telegraph Repeater	AN/FGC	269
TT-5/FG	Teletypewriter	AN/FGC	271
TT-6/FG	Teletypewriter	AN/FGC	273
TT-7( )/FG	Teletypewriter	AN/FGC	275
TT-8/FG	Teletypewriter	AN/FGC	277
TT-10/FG	Teletypewriter	AN/FGC	279
TT-15/FG	Reperforator	AN/FGC	281
TT-16/FG	Reperforator	AN/FGC	283
TT-17/FG	Reperforator	AN/FGC	285
TT-21/FG	Transmitter-Distributor	AN/FGC	287
TT-102/FG	Teletypewriter Reperforator-Transmitter	AN/FGC	289
TT-103/FG	Teletypewriter Reperforator-Transmitter	AN/FGC	289
AN/FGQ-1( )	Teletypewriter Repeater-Mixer	AN/FGQ	291
AN/FGQ-type:			
TT-71/UG	Teletypewriter Printer-Projector	AN/FGQ	293
AN/FGR-type:			
R-405/MC through R-412/MC	Carrier Telegraph Receiver	AN/FGR	295
TT-45/FG	Reperforator	AN/FGR	299
TT-46/FG	Reperforator	AN/FGR	299
TT-92/FG	Teletypewriter Reperforator	AN/FGR	301
TT-107/FG	Teletypewriter Reperforator	AN/FGR	303
AN/FGT-type:			
T-290/MC through T-297/MC	Carrier Telegraph Transmitter	AN/FGT	305
TT-26/FG	Transmitter Distributer	AN/FGT	307
TT-57/FG	Transmitter-Distributor	AN/FGT	309
AN/FIA-1	Audio Distributing Central	AN/FIA	311
AN/FIC-type:			
LS-124( )/FI	Intercommunicating Station	AN/FIC	313
LS-125( )/FI	Intercommunicating Station	AN/FIC	315
LS-126( )/FI	Intercommunicating Station	AN/FIC	317
LS-127( )/FI	Intercommunicating Station	AN/FIC	319
LS-128( )/FI	Intercommunicating Station	AN/FIC	321
LS-129/FI	Intercommunicating Station	AN/FIC	323
LS-130( )/FI	Intercommunication Station	AN/FIC	325
LS-138/FI	Intercommunication Station	AN/FIC	327
LS-200/FI	Intercommunication Station	AN/FIC	329
LS-201/FI	Intercommunication Station	AN/FIC	331
LS-202/FI	Intercommunication Station	AN/FIC	333
AN/FNH-type			
RD-153/SNH	Recorder-Reproducer Assembly	AN/FNH	335
AN/FRA-1( )	Amplifier Assembly	AN/FRA	337
AN/FRA-2	Amplifier Group	AN/FRA	339
AN/FRA-3	Radio Frequency Switching Group	AN/FRA	341
AN/FRA-4	Frequency Shift Converter Group	AN/FRA	343
AN/FRA-6	Control-Monitor Group	AN/FRA	345
AN/FRA-11	Control-Monitor Group	AN/FRA	347
AN/FRA-16	Modulator-Power Supply	AN/FRA	349

Type No.	Item Name	Type	Page
AN/FRA-type:			
50059	Vacuum Tube Keyer Unit	AN/FRA	351
CU–158/FRR	Antenna Coupler	AN/FRA	353
FRC	Frequency Shift Receiver Converter	AN/FRA	355
FSD	Frequency Shift Keyer Equipment	AN/FRA	357
FSH	Frequency Shift Keyer Equipment	AN/FRA	359
KY–7/FRT	Tone-Keying Unit	AN/FRA	361
KY–58/GRT	Keyer	AN/FRA	363
0–5/FR	Excitor Unit	AN/FRA	365
TPA	High Frequency Power Amplifier Equipment	AN/FRA	367
UM	Loran Switching Equipment	AN/FRA	369
XTR–442–C	Automatic Transmitter for Perforated Tape	AN/FRA	371
AN/FRC–6	Radio Set	AN/FRC	373
AN/FRC–7( )	Radio Set	AN/FRC	375
AN/FRC–9	Radio Set	AN/FRC	377
AN/FRC–10	Radio Set	AN/FRC	379
AN/FRC–10A	Radio Set	AN/FRC	381
AN/FRC–10B	Radio Set	AN/FRC	383
AN/FRC–15	Radio Set	AN/FRC	385
AN/FRC–17( )	Radio Set	AN/FRC	387
AN/FRC–23( )	Radio-Telephone Terminal Set	AN/FRC	389
AN/FRC–26( )	Radio Repeater Set	AN/FRC	389
AN/FRC–27( )	Radio Set	AN/FRC	391
AN/FRC–30	Radio Set	AN/FRC	393
AN/FRC–31( )	Radio Set	AN/FRC	395
AN/FRC–34	Radio Repeater Set	AN/FRC	397
AN/FRC–35	Radio Telephone Terminal Set	AN/FRC	399
AN/FRC–36	Radio Set	AN/FRC	401
AN/FRC–37(XN–1)	Radio Set	AN/FRC	403
AN/FRC–39	Radio Set	AN/FRC	405
AN/FRC–39(V)	Radio Set	AN/FRC	407
AN/FRC–42	Radio Set	AN/FRC	409
AN/FRC–44	Radio Set	AN/FRC	411
AN/FRC–45(V)	Radio Set	AN/FRC	413
AN/FRC–47	Radio Set	AN/FRC	415
AN/FRC–56(V)	Radio Set	AN/FRC	417
AN/FRC-type:			
CLR–6, Philco	Microwave Radio Relay Set	AN/FRC	419
CLR–7, Philco	Microwave Radio Relay Set	AN/FRC	421
AN/FRH-type:			
RD–110/U, RD–110A/U	Code Tape Recorder	AN/FRH	423
RD–112/U	Code Tape Recorder	AN/FRH	425
AN/FRQ–3	Transmitter Control-Monitor Group	AN/FRQ	427
AN/FRR–3( )	Diversity Receiving Equipment	AN/FRR	429
AN/FRR–4	Radio Set	AN/FRR	431
AN/FRR–7( )	Radio Receiving Set	AN/FRR	433
AN/FRR–12	Radio Receiving Set	AN/FRR	435
AN/FRR–12X	Radio Receiving Set	AN/FRR	437
AN/FRR–21, –22, –23	Radio Receiving Set	AN/FRR	439
AN/FRR–24	Radio Receiving Set	AN/FRR	441
AN/FRR–27	Radio Receiving Set	AN/FRR	445
AN/FRR–28	Radio Receiving Set	AN/FRR	447
AN/FRR–30	Radio Receiving Set	AN/FRR	449
AN/FRR–31	Radio Receiving Set	AN/FRR	451
AN/FRR–32	Radio Receiving Set	AN/FRR	453
AN/FRR–33	Radio Receiving Set	AN/FRR	455
AN/FRR–34	Radio Receiving Set	AN/FRR	457
AN/FRR–36	Radio Receiving Set	AN/FRR	459
AN/FRR–38( )	Radio Receiving Set	AN/FRR	461

Type No.	Item Name	Type	Page
AN/FRR-39	Radio Receiving Set	AN/FRR	463
AN/FRR-40,	Radio Receiving Set	AN/FRR	465
AN/FRR-44	Radio Receiving Set	AN/FRR	467
AN/FRR-type:			
BC-779	Radio Receiver	AN/FRR	469
BC-794	Radio Receiver	AN/FRR	471
BC-1004	Radio Receiver	AN/FRR	473
OA-58/FRC	Radio Receiver Assembly	AN/FRR	475
OA-58A/FRC	Radio Receiver Assembly	AN/FRR	477
OA-59/FRC	Radio Receiver Assembly	AN/FRR	479
R-208/FR	Radio Receiver	AN/FRR	481
R-209( )/FR	Radio Receiver	AN/FRR	483
R-210/U	Radio Receiver	AN/FRR	485
R-274/FRR	Radio Receiver	AN/FRR	487
R-274/FRR R-274C/FRR.		AN/FRR	489
R-320/FRC	Radio Receiver	AN/FRR	491
R-320A/FRC	Radio Receiver	AN/FRR	493
RBE	Diversity Receiving Equipment	AN/FRR	495
RBF-3	Radio Receiving Equipment	AN/FRR	497
RBQ-1	High Frequency Radio Receiving Equipment	AN/FRR	499
RC-256	Radio Receiving Equipment	AN/FRR	501
RCO	Radio Receiving Equipment	AN/FRR	503
RCP	Diversity Radio Receiving Equipment	AN/FRR	505
RDE	Radio Receiving Equipment	AN/FRR	507
RDE-1	Radio Receiving Equipment	AN/FRR	509
RDM, RDM-1	Diversity Radio Receiving Equipment	AN/FRR	511
REA, REA-1	Single Side Band Radio Receiving Equipment	AN/FRR	513
SCR-244, -A, -B, -C.	Radio Set	AN/FRR	515
SCR-244-D	Radio Set	AN/FRR	517
SCR-614-( )	Radio Set	AN/FRR	519
SCR-704	Radio Set	AN/FRR	521
SP-600-JX	Radio Communications Receiver	AN/FRR	523
AN/FRT-1	Radio Transmitting Equipment	AN/FRT	525
AN/FRT-3	Radio Transmitting Set	AN/FRT	527
AN/FRT-4	Radio Transmitting Set	AN/FRT	529
AN/FRT-5	Radio Transmitting Set	AN/FRT	531
AN/FRT-5A	Radio Transmitting Set	AN/FRT	533
AN/FRT-5B	Radio Transmitting Set	AN/FRT	535
AN/FRT-6	Radio Transmitting Set	AN/FRT	537
AN/FRT-6A	Radio Transmitting Set	AN/FRT	539
AN/FRT-6B	Radio Transmitting Set	AN/FRT	541
AN/FRT-6C	Radio Transmitting Set	AN/FRT	543
AN/FRT-15	Radio Transmitting Set	AN/FRT	545
AN/FRT-15A	Radio Transmitting Set	AN/FRT	547
AN/FRT-15B	Radio Transmitting Set	AN/FRT	551
AN/FRT-19	Radio Transmitting Set	AN/FRT	553
AN/FRT-22	Radio Transmitting Set	AN/FRT	555
AN/FRT-23	Radio Transmitting Set	AN/FRT	557
AN/FRT-26	Radio Transmitting Set	AN/FRT	559
AN/FRT-type:			
30K-5	Ground Station Transmitter	AN/FRT	561
431D-1	Communications Transmitter	AN/FRT	563
BC-329-( )	Radio Transmitter	AN/FRT	565
BC-365-( )	Radio Transmitter	AN/FRT	567
BC-399-( )	Radio Transmitter	AN/FRT	569
BC-401	Radio Transmitter	AN/FRT	571
BC-447-( )	Radio Transmitter	AN/FRT	573
KWS-1, KWS-1(MOD)	Transmitter	AN/FRT	575

Type No.	Item Name	Type	Page
MW	Radio Transmitter	AN/FRT	577
MW-3	Radio Transmitter	AN/FRT	579
OA-60( )/FRT	Radio Transmitter Assembly	AN/FRT	581
RC-52-( )	Radio Transmitting Equipment	AN/FRT	583
SCR-643	Radio Set	AN/FRT	585
T-4( )/FRC	Radio Transmitter	AN/FRT	587
T-5( )/FRC	Radio Transmitter	AN/FRT	589
T-158( )/FRT	Radio Transmitter	AN/FRT	591
T-159/FRT	Radio Transmitter	AN/FRT	593
T-171( )/FRT	Radio Transmitter	AN/FRT	595
T-172/FR	Radio Transmitter	AN/FRT	597
T-173/FR	Radio Transmitter	AN/FRT	599
T-177/FR	Radio Transmitter	AN/FRT	601
T-180/FR	Radio Transmitter	AN/FRT	603
T-265/FRC-10	Radio Transmitter	AN/FRT	605
T-409/FRC-30	Radio Transmitter	AN/FRT	607
TAB, TAB-3, TAB-4, TAB-5.	Transmitting Equipment, 2 KW	AN/FRT	609
TAB-2	Transmitting Equipment, 2 KW	AN/FRT	613
TAB-6, TAB-7	Transmitting Equipment, 2 KW	AN/FRT	615
TBA-8, TBA-10, TBA-11.	Radio Transmitting Equipment	AN/FRT	617
TBA-6, TBK-11, TBK-15, TBK-16.	Radio Transmitting Equipment	AN/FRT	619
TBL-10, TBL-11	Radio Transmitting Equipment	AN/FRT	621
TBM-6	Radio Transmitting Equipment	AN/FRT	623
TBM-8	Radio Transmitting Equipment	AN/FRT	629
TBM-10	Radio Transmitting Equipment	AN/FRT	631
TBU-1	Radio Telegraph Transmitting Equipment	AN/FRT	633
TBU-3	Radio Telegraph Transmitting Equipment	AN/FRT	635
TCB	Radio Telephone and Telegraph Transmitting Equipment	AN/FRT	637
TCB-1	Radio Telephone and Telegraph Transmitting Equipment	AN/FRT	639
TCB-2	Radio Telephone and Telegraph Transmitting Equipment	AN/FRT	641
TCC	Radio Telephone and Telegraph Transmitting Equipment	AN/FRT	643
TCC-1	Radio Telephone and Telegraph Transmitting Equipment	AN/FRT	645
TCC-2	Radio Telephone and Telegraph Transmitting Equipment	AN/FRT	647
TCC-3	Radio Telephone and Telegraph Transmitting Equipment	AN/FRT	649
TCC-4	Radio Telephone and Telegraph Transmitting Equipment	AN/FRT	651
TCF	Radio Transmitting Equipment	AN/FRT	653
TCG	Radio Transmitting Equipment	AN/FRT	655
TCG-1	Radio Transmitting Equipment	AN/FRT	657
TCG-2	Radio Transmitting Equipment	AN/FRT	659
TCK	Radio Transmitting Equipment	AN/FRT	661
TCK-1	Radio Transmitting Equipment	AN/FRT	665
TCK-2	Radio Transmitting Equipment	AN/FRT	667
TCK-3	Radio Transmitting Equipment	AN/FRT	669
TCK-4	Radio Transmitting Equipment	AN/FRT	673
TCK-5	Radio Transmitting Equipment	AN/FRT	675
TCK-6	Radio Transmitting Equipment	AN/FRT	677
TCK-7	Radio Transmitting Equipment	AN/FRT	679
TCR	Radio Telephone Transmitting Equipment	AN/FRT	681
TDD, TDD-1, -2, -3, -4.	Radio Telephone Transmitting Equipment	AN/FRT	683
TDF	Radio Transmitting Equipment	AN/FRT	687
TDH, TDH-2,	Radio Transmitting Equipment	AN/FRT	689
TDN	Radio Transmitting Equipment	AN/FRT	693
TDN-2, -3, -4	Radio Transmitting Equipment	AN/FRT	695

Type No.	Item Name	Type	Page
TDO	Radio Transmitting Equipment	AN/FRT	699
TEB	Radio Transmitting Equipment	AN/FRT	701
TEC	Radio Transmitting Equipment	AN/FRT	703
TEF	Radio Transmitting Equipment	AN/FRT	705
TEG–1	Radio Communication Transmitting Equipment	AN/FRT	709
AN/FRW-type:			
C–1624/FRC–36	Remote Control Console	AN/FRW	711
C–1846/FRC–42	Radio Set Control	AN/FRW	713
AN/FSH-type:			
RD–41B/U	Recorder	AN/FSH	115
AN/FSW–2	Control-Monitor Set	AN/FSW	717
AN/FTC–9	Telephone Central Office Set	AN/FTC	719
AN/FTC–25	Telephone Central Office Set	AN/FTC	721
AN/FTC-type:			
SB–53( )/FTC	Telephone Switchboard	AN/FTC	723
SB–54/FTC	Telephone Switchboard	AN/FTC	725
SB–55( )/FTC	Telephone Switchboard	AN/FTC	727
SB–56/FTC	Switchboard	AN/FTC	729
SB–57/FTC	Switchboard	AN/FTC	731
SB–58/FTC	Switchboard	AN/FTC	733
SB–59/FTC	Switchboard	AN/FTC	735
SB–60/FTC	Switchboard	AN/FTC	737
SB–61/FTC	Switchboard	AN/FTC	739
SB–62/FTC	Switchboard	AN/FTC	741
SB–63/FTC	Switchboard	AN/FTC	743
SB–64/FTC	Switchboard	AN/FTC	745
SB–171/FTC	Manual Telephone Switchboard Section	AN/FTC	747
TC–5	Auxiliary Telephone Central Equipment	AN/FTC	749
AN/GCA-type:			
TA–182/U	Telegraph-Telephone Signal Converter	AN/GCA	751
AN/GGA-type:			
TG–10, –10–F	Keyer	AN/GGA	753
AN/GGC–3	Teletypewriter Set	AN/GGC	755
AN/GGC-type:			
SB–6( )/GG	Telegraph Switchboard	AN/GGC	757
AN/GIA-type:			
AM–65/GRC	Af Amplifier	AN/GIA	759
AN/GRA–6	Control Group	AN/GRA	763
AN/GRA–11	Radio Set Control Group	AN/GRA	765
AN/GRA–14	Radio Set Control Group	AN/GRA	767
AN/GRA–24	Amplifier-Modulator Group	AN/GRA	769
AN/GRA-type:			
AS–768/GR	Antenna	AN/GRA	771
AT–249/GRD	Antenna	AN/GRA	773
C–806/GR	Control Indicator	AN/GRA	775
CY–751/GR	Console	AN/GRA	777
GN–58–A	Generator	AN/GRA	779
PP–1098/GRC–9	Power Supply	AN/GRA	781
RT–66/GRC	Receiver-Transmitter (*See* AN/GRC–3, AN/GRC–4, AN/VRC–8, AN/VRC–13, AN/VRC–16, AN/VRC–20, AN/VRQ–1.)	AN/GRA	
RT–67/GRC	Receiver-Transmitter (*See* AN/GRC–5, AN/GRC–6, AN/VRC–19, AN/VRC–14, AN/VRC–17, AN/VRC–21, AN/VRQ–2	AN/GRA	
RT–68/GRC	Receiver-Transmitter (*See* AN/GRC–7, AN/GRC–8, AN/VRC–10, AN/VRC–15, AN/VRC–18, AN/VRC–22, AN/VRQ–3.)	AN/GRA	
RT–70/GRC	Receiver-Transmitter (*See* AN/GRC–3, AN/GRC–4, AN–GRC–5, AN/GRC–6, AN/GRC–7, AN/GRC–8, AN/VRC–7, AN/PRC–16.)	AN/GRA	
TCA–1	Radio Transmitter Equipment	AN/GRA	783
AN/GRC–3	Radio Set	AN/GRC	785
AN/GRC–4( )	Radio Set	AN/GRC	787
AN/GRC–5	Radio Set	AN/GRC	789

Type No.	Item Name	Type	Page
AN/GRC-6	Radio Set	AN/GRC	791
AN/GRC-7	Radio Set	AN/GRC	793
AN/GRC-8	Radio Set	AN/GRC	795
AN/GRC-9( )	Radio Set	AN/GRC	797
AN/GRC-10	Radio Set	AN/GRC	799
AN/GRC-19( )	Radio Set	AN/GRC	801
AN/GRC-26( )	Radio Set	AN/GRC	803
AN/GRC-27	Radio Set	AN/GRC	805
AN/GRC-27A	Radio Set	AN/GRC	807
AN/GRC-29	Radio Set	AN/GRC	809
AN/GRC-30	Radio Set	AN/GRC	811
AN/GRC-38( )	Radio Set	AN/GRC	813
AN/GRC-39	Radio Terminal Set	AN/GRC	815
AN/GRC-40	Radio Repeater Set	AN/GRC	817
AN/GRC-46	Radio Teletypewriter Set	AN/GRC	819
AN/GRC-48	Radio Set	AN/GRC	821
AN/GRC-75	Radio Set	AN/GRC	823
AN/GRC-76	Radio Terminal Set	AN/GRC	825
AN/GRC-77	Radio Repeater Set	AN/GRC	827
AN/GRC-78	Radio Set	AN/GRC	829
AN/GRC-80	Radio Repeater Set	AN/GRC	831
AN/GRC-81	Radio Set	AN/GRC	833
AN/GRC-82	Radio Terminal Set	AN/GRC	835
AN/GRC-85	Radio Set	AN/GRC	837
AN/GRC-86	Radio Set	AN/GRC	839
AN/GRC-type:			
SCR-543-( )	Radio Set	AN/GRC	841
TCH	Transmitter and Receiver Equipment	AN/GRC	843
AN/GRD-5	Direction Finder Set	AN/GRD	845
AN/GRQ-T1	Trainer	AN/GRQ	847
AN/GRQ-T1A	Trainer	AN/GRQ	849
AN/GRR-2	Radio Set	AN/GRR	851
AN/GRR-3	Radio Set	AN/GRR	853
AN/GRR-5( )	Radio Set	AN/GRR	855
AN/GRR-7	Radio Receiving Set	AN/GRR	857
AN/GRR-type			
BC-342	Radio Receiver	AN/GRR	859
BC-344-( )	Radio Receiver	AN/GRR	861
R-137/GR	Radio Receiver	AN/GRR	863
R-247/URR	Radio Receiver	AN/GRR	865
R-361C/GR	Radio Receiver	AN/GRR	867
SCR-607-( )	Radio Set	AN/GRR	869
AN/GRT-1	Radio Set	AN/GRT	871
AN/GRT-2	Radio Transmitting Set	AN/GRT	873
AN/GRT-3	Radio Transmitting Set	AN/GRT	875
AN/GRT-type:			
BC-191-( )	Radio Transmitter	AN/GRT	877
BC-610-( )	Radio Transmitter	AN/GRT	879
T-417/GR	Radio Transmitter	AN/GRT	881
AN/GSC-T1( )	Code Training Set	AN/GSC	883
AN/GTA-type:			
TA-126/GT	Telephone Repeater	AN/GTA	885
AN/GTC-type:			
TP-14	Telephone Repeater	AN/GTC	887
AN/GTT-type:			
OA-145/GT	Tone Warning Generator Group	AN/GTT	889
AN/GXR-type:			
RD-2/GXR	Recorder	AN/GXR	891
AN/MGC-type:			
TT-55/MGC	Teletypewriter	AN/MGC	893

Type No.	*Item Name*	*Type*	*Page*
AN/MRC-2( )	Radio Set	AN/MRC	895
AN/MRC-5C	Radio Set	AN/MRC	897
AN/MRC-6, -6A, -6B.	Radio Set	AN/MRC	899
AN/MRC-6C	Radio Set	AN/MRC	901
AN/MRC-13A, -13B	Radio Set	AN/MRC	903
AN/MRC-16	Radio Set	AN/MRC	905
AN/MRC-18	Radio Set	AN/MRC	907
AN/MRC-20	Radio Set	AN/MRC	911
AN/MRC-22	Radio Set	AN/MRC	913
AN/MRC-23	Radio Set	AN/MRC	917
AN/MRC-24	Radio Set	AN/MRC	921
AN/MRC-25	Radio Central	AN/MRC	923
AN/MRC-32	Radio Set	AN/MRC	925
AN/MRC-35A	Radio Set Central	AN/MRC	927
AN/MRC-36	Radio Set	AN/MRC	929
AN/MRC-37	Radio Set	AN/MRC	931
AN/MRC-38	Radio Set	AN/MRC	933
AN/MRC-41	Radio Set	AN/MRC	935
AN/MRC-59	Radio Set	AN/MRC	937
AN/MRC-60	Radio Set	AN/MRC	939
AN/MRC-62	Radio Set	AN/MRC	941
AN/MRC-63	Radio Set	AN/MRC	943
AN/MRC-type:			
SCR-399	Radio Set	AN/MRC	945
SCR-694-( )	Radio Set	AN/MRC	947
AN/MRR-4( )	Radio Receiving Set	AN/MRR	949
AN/MRR-5	Radio Receiving Set	AN/MRR	951
AN/MRR-6	Radio Receiving Set	AN/MRR	953
AN/MRT-5( )	Radio Transmitting Set	AN/MRT	955
AN/MRT-6	Radio Transmitting Set	AN/MRT	957
AN/MRT-7	Radio Transmitting Set	AN/MRT	959
AN/MRT-type:			
SCR-573-( )	Radio Set	AN/MRT	961
T-208/U	Radio Transmitter	AN/MRT	963
AN/MSA-1	Communications Central Office Group	AN/MSA	965
AN/MTC-type:			
SB-100/MTC	Control Switchboard	AN/MTC	967
AN/MTQ-1( )	Operations Center	AN/MTQ	969
AN/PGC-1	Teletypewriter Set	AN/PGC	971
AN/PGC-type:			
TG-5-B	Telegraph Set	AN/PGC	973
AN/PIP-1A	Public Address Set	AN/PIP	975
AN/PIQ-1	Public Address Set	AN/PIQ	977
AN/PIQ-2	Public Address Set	AN/PIQ	979
AN/PNH-type:			
PG	Sound Recording Equipment	AN/PNH	981
RD-31A/U	Sound Recorder-Reproducer	AN/PNH	983
RD-115/UN, -115A/UN, -115C/UN.	Sound Recorder-Reproducer	AN/PNH	985
RD-133/UN	Sound Recorder-Reproducer	AN/PNH	987
AN/PNS-type:			
SDB	Speak-O-Phone Sound Detector	AN/PNS	989
SDB	Speak-O-Phone Sound Detector	AN/PNS	989
AN/PRC-1( )	Radio Set	AN/PRC	991
AN/PRC-5	Radio Set	AN/PRC	993
AN/PRC-6( )	Radio Set	AN/PRC	995
AN/PRC-7(XN-1)	Radio Set	AN/PRC	997
AN/PRC-8	Radio Set	AN/PRC	999

Type No.	Item Name	Type	Page
AN/PRC-9( )	Radio Set	AN/PRC	1001
AN/PRC-10( )	Radio Set	AN/PRC	1003
AN/PRC-16	Radio Set	AN/PRC	1005
AN/PRC-17	Radio Set	AN/PRC	1007
AN/PRC-21( )	Radio Set	AN/PRC	1009
AN/PRC-23, -24	Radio Set	AN/PRC	1011
AN/PRC-28	Radio Set	AN/PRC	1013
AN/PRC-29	Radio Set	AN/PRC	1015
AN PRC-33	Radio Set	AN/PRC	1017
AN/PRC-37	Radio Set	AN/PRC	1019
AN/PRC-type:			
MAB	Radio Transmitting and Receiving Equipment	AN/PRC	1021
MAW MAW-1	Portable Vhf Transmitting and Receiving Equipment	AN/PRC	1023
MAY, MAY-1	Portable Radio Transmitting and Receiving Equipment	AN/PRC	1025
SCR-300	Radio Set	AN/PRC	1027
SCR-509-( )	Radio Set	AN/PRC	1029
SCR-536	Radio Set	AN/PRC	1031
SCR-593-( )	Radio Set	AN/PRC	1033
SCR-609-( )	Radio Set	AN/PRC	1035
SCR-619	Radio Set	AN/PRC	1037
TBX	Portable Radio and Receiving Equipment	AN/PRC	1039
TBX-1	Portable Radio and Receiving Equipment	AN/PRC	1043
TBX-2	Portable Radio and Receiving Equipment	AN/PRC	1047
TBX-3	Portable Radio and Receiving Equipment	AN/PRC	1051
TBX-4	Portable Radio and Receiving Equipment	AN/PRC	1055
TBX-4a	Portable Radio and Receiving Equipment	AN/PRC	1057
TBX-5	Portable Radio and Receiving Equipment	AN/PRC	1061
TBX-6	Portable Radio and Receiving Equipment	AN/PRC	1065
TBX-7	Portable Radio and Receiving Equipment	AN/PRC	1069
TBX-8	Portable Radio Transmitting and Receiving Equipment	AN/PRC	1073
AN/PRR-type:			
R-62/PR	Radio Receiver	AN/PRR	1077
R-80( )/PR	Radio Receiver	AN/PRR	1079
R-206( )/PR	Radio Receiver	AN/PRR	1081
RBZ	Radio Receiving Equipment	AN/PRR	1083
RCB-1	Portable Radio Receiving Equipment	AN/PRR	1085
RDR	Portable Radio Receiving Equipment	AN/PRR	1087
AN/PRW-type:			
RC-261	Remote Control Equipment	AN/PRW	1089
RC-289	Remote Control Equipment	AN/PRW	1091
AN/PTA-1	Audio Frequency Monitor	AN/PTA	1093
AN/PTC-type:			
SB-18/GT	Emergency Switchboard	AN/PTC	1095
SB-22( )/PT	Manual Telephone Switchboard	AN/PTC	1097
SB-86/P	Manual Telephone Switchboard	AN/PTC	1099
AN/PVC-type:			
EE-80-( )	Signal Lamp Equipment	AN/PVC	1101
EE-84	Signal Lamp Equipment	AN/PVC	1103
SE-11	Signal Lamp Equipment	AN/PVC	1105
AN/SGA-type:			
C-492/SG	Transmitter-Teletypewriter	AN/SGA	1107
KY-75/SRT	Keyer	AN/SGA	1109
TT-23/SG, -23B/SG	Teletype Panel	AN/SGA	1111
AN/SGC-1	Radio Teletype Terminal Set	AN/SGC	1113
AN/SGC-1A	Radio Teletype Terminal Set	AN/SGC	1115
AN/SIA-1	Amplifier-Oscillator Group	AN/SIA	1117
AN/SIA-3	Amplifier-Oscillator Group	AN/SIA	1119
AN/SIA-10	Amplifier-Oscillator Group	AN/SIA	1121
AN/SIA-35	Amplifier-Control Group	AN/SIA	1123

Type No.	*Item Name*	*Type*	*Page*
AN/SIA–61	Amplifier-Control Group	AN/SIA	1125
AN/SIA–62	Amplifier-Control Group	AN/SIA	1127
AN/SIA–66	Control-Oscillator Group	AN/SIA	1129
AN/SIH–4	Public Address Set	AN/SIH	1131
AN/SIH–6	Public Address Set	AN/SIH	1133
AN/SIQ–1	Public Address Set	AN/SIQ	1135
AN/SNH–1	Sound Recorder-Reproducer Set	AN/SNH	1137
AN/SNH–2	Sound Recorder-Reproducer Set	AN/SNH	1139
AN/SNH–3	Sound Recorder-Reproducer Set	AN/SNH	1141
AN/SNH–6	Sound Recorder-Reproducer Set	AN/SNH	1143
AN/SNH–7	Sound Recorder-Reproducer Set	AN/SNH	1145
AN/SGA-type:			
C–492/SG	Transmitter-Teletypewriter	AN/SGA	1107
KY–75/SRT	Keyer	AN/SGA	1109
TT–23/SG, –23B/SG	Teletype Panel	AN/SGA	1111
AN/SGC–1	Radio Teletype Terminal Set	AN/SGC	1113
AN/SGC–1A	Radio Teletype Terminal Set	AN/SGA	1115
AN/SIA–1	Amplifier-Oscillator Group	AN/SIA	1117
AN/SIA–3	Amplifier-Oscillator Group	AN/SIA	1119
AN/SIA–10	Amplifier-Oscillator Group	AN/SIA	1121
AN/SIA–35	Amplifier-Control Group	AN/SIA	1123
AN/SIA–61	Amplifier-Control Group	AN/SIA	1125
AN/SIA–62	Amplifier-Control Group	AN/SIA	1127
AN/SIA–66	Control-Oscillator Group	AN/SIA	1129
AN/SIH–4	Public Address Set	AN/SIH	1131
AN/SIH–6	Public Address Set	AN/SIH	1133
AN/SIQ–1	Public Address Set	AN/SIQ	1135
AN/SNH–1	Sound Recorder-Reproducer Set	AN/SNH	1137
AN/SNH–2	Sound Recorder-Reproducer Set	AN/SNH	1139
AN/SNH–3	Sound Recorder-Reproducer Set	AN/SNH	1141
AN/SNH–6	Sound Recorder-Reproducer Set	AN/SNH	1143
AN/SNH–7	Sound Recorder-Reproducer Set	AN/SNH	1145
AN/SRA–3	Antenna Group	AN/SRA	1147
AN/SRA–9	Electrical Filter Assembly	AN/SRA	1149
AN/SRA–9A	Electrical Filter Assembly	AN/SRA	1151
AN/SRA–13	Antenna Coupler Group	AN/SRA	1153
AN/SRA–14	Antenna Coupler Group	AN/SRA	1155
AN/SRA–15	Antenna Coupler Group	AN/SRA	1157
AN/SRA–16	Antenna Coupler Group	AN/SRA	1159
AN/SRA-type:			
50065–A	Modulator Unit	AN/SRA	1161
AS–390/SRC	Antenna Assembly	AN/SRA	1163
AT–150/SRC	Antenna	AN/SRA	1165
C–682/SR	Radio Set Control	AN/SRA	1167
C–1670/U	Antenna Control	AN/SRA	1169
CU–284/UR	Antenna Coupler	AN/SRA	1171
CU–377/UR	Antenna Coupler	AN/SRA	1173
KY–83( )/S	Keyer	AN/SRA	1175
TN–233/SRC	Transmission Line Tuner	AN/SRA	1177
AN/SRC–6( )	Radio Set	AN/SRC	1179
AN/SRC–7	Radio Set	AN/SRC	1181
AN/SRC–8( )	Radio Set	AN/SRC	1183
AN/SRC–9	Radio Set	AN/SRC	1187
AN/SRC–10, –10X, –10Y, –11, –11X, –10Y, –11, –11X, –11Y, –12, –12X, –12Y.	Radio Set	AN/SRC	1189

Type No.	Item Name	Type	Page
AN/SRC–13, –13X, –13Y, –14, –14X, –14Y, –15, –15X, –15Y.	Radio Set	AN/SRC	1195
AN/SRC-type:			
MAC	Radio Transmitting and Receiving Equipment	AN/SRC	1201
SCR–281–( )	Radio Set	AN/SRC	1203
TCP	Radio Telephone Transmitting and Receiving Equipment	AN/SRC	1205
TCP–1	Radio Telephone Transmitting and Receiving Equipment	AN/SRC	1207
TCP–2	Radio Telephone Transmitting and Receiving Equipment	AN/SRC	1209
TCP–3	Radio Telephone Transmitting and Receiving Equipment	AN/SRC	1211
AN/SRR–3	Radio Receiving Set	AN/SRR	1215
AN/SRR–11, –12, –13, –13A.	Radio Receiving Set	AN/SRR	1217
AN/SRR–15	Radio Receiving Set	AN/SRR	1221
AN/SRR-type:			
R–96( )/SR	Radio Receiver	AN/SRR	1223
R–203( )/SR	Radio Receiver	AN/SRR	1225
R–212/SR	Radio Receiver	AN/SRR	1227
R–213/SR	Radio Receiver	AN/SRR	1229
R–215/SR	Radio Receiver	AN/SRR	1231
RAZ	Radio Receiver	AN/SRR	1233
RDZ, RDZ–1, RDZ–a.	Radio Receiving Equipment	AN/SRR	1235
SB–82/SRR	Radio Receiver Transfer Switchboard	AN/SRR	1237
SLR–12B	Radio Receiving Equipment	AN/SRR	1239
SLR–H	Radio Receiving Equipment	AN/SRR	1241
AN/SRT–1	Radio Transmitting Set	AN/SRT	1243
AN/SRT–2	Radio Transmitting Set	AN/SRT	1245
AN/SRT–3( )	Radio Transmitting Set	AN/SRT	1247
AN/SRT–4( )	Radio Transmitting Set	AN/SRT	1249
AN/SRT–10( )	Radio Transmitting Set	AN/SRT	1251
AN/SRT–13( )	Radio Transmitting Set	AN/SRT	1253
AN/SRT–14, –14A	Radio Transmitting Set	AN/SRT	1255
AN/SRT–15, –15A	Radio Transmitting Set	AN/SRT	1259
AN/SRT–16, –16A	Radio Transmitting Set	AN/SRT	1263
AN/SRT–18(XN–2)	Radio Transmitting Set	AN/SRT	1267
AN/SRT-type:			
149–A	Radio Transmitter	AN/SRT	1269
265	Portable Lifeboat Radio Transmitter	AN/SRT	1271
T–83/SR	Radio Transmitter	AN/SRT	1273
TAJ, TAJ–1 through TAJ–19.	Transmitting Equipment, 500 Watt	AN/SRT	1275
TAQ–4 through TAQ–6b, TAQ–9, TAQ–10.	Transmitting Equipment, 2 KW	AN/SRT	1287
TBA–3, TBA–5, TBA–6, TBA–9.	Radio Transmitting Equipment	AN/SRT	1291
TBK–3, TBK–5, TBK–7 through TBK–10, TBK–12 through TBK–14, TBK–17 through TBK–20.	Radio Transmitting Equipment	AN/SRT	1295

Type No.	Item Name	Type	Page
TBM–4	Radio Transmitting Equipment	AN/SRT	1303
TBM–5	Radio Transmitting Equipment	AN/SRT	1305
TBM–7	Radio Transmitting Equipment	AN/SRT	1307
TBM–9	Radio Transmitting Equipment	AN/SRT	1309
TBM–11	Radio Transmitting Equipment	AN/SRT	1311
TBM–12	Radio Transmitting Equipment	AN/SRT	1313
TBN–3	Transmitting Equipment	AN/SRT	1315
TBU	Radio Telegraph Transmitting Equipment	AN/SRT	1317
TBU–2	Radio Telegraph Transmitting Equipment	AN/SRT	1319
TCJ, TCJ–1	Radio Transmitting Equipment	AN/SRT	1321
TCY, TCY–1	Portable Emergency Radio Transmitting Equipment	AN/SRT	1323
TDA	Radio Telegraph Transmitting Equipment	AN/SRT	1325
TDB	Radio Telegraph Transmitting Equipment	AN/SRT	1327
TDK	Emergency Radio Telegraph Equipment	AN/SRT	1329
TDQ	VHF Radio Transmitting Equipment	AN/SRT	1331
AN/TCA–1	Multiplexer Group	AN/TCA	1333
AN/TCA-type:			
CW–50101	Audio Frequency Amplifier	AN/TCA	1335
CW–50124	Demodulator	AN/TCA	1337
TD–159/U	Multiplexer	AN/TCA	1339
UF	Portable Carrier Control System	AN/TCA	1341
AN/TCC–3	Telephone Terminal	AN/TCC	1345
AN/TCC–4	Telegraph Terminal	AN/TCC	1347
AN/TCC–5	Telephone Repeater	AN/TCC	1349
AN/TCC–7	Telephone Terminal	AN/TCC	1351
AN/TCC–8	Telephone Repeater	AN/TCC	1353
AN/TCC–11( )	Telephone Repeater	AN/TCC	1355
AN/TCC–13	Multiplexer Set	AN/TCC	1357
AN/TCC–14	Telegraph-Telephone Terminal	AN/TCC	1359
AN/TCC–20	Telegraph Terminal	AN/TCC	1361
AN/TCC–21	Telephone Repeater	AN/TCC	1363
AN/TCC–22	Telephone Repeater	AN/TCC	1365
AN/TCC–23	Telephone Terminal	AN/TCC	1367
AN/TCC-type:			
CF–1( )	Telephone Terminal	AN/TCC	1369
CF–2–( )	Telegraph Terminal	AN/TCC	1371
CF–3	Repeater	AN/TCC	1373
CF–4	Converter	AN/TCC	1375
CF–5	Repeater	AN/TCC	1377
CF–6	Telegraph Terminal	AN/TCC	1379
CF–7	Carrier Hybrid	AN/TCC	1381
TA–31( )/U	Hybrid Circuit Network	AN/TCC	1383
TA–255/TT	Hybrid Circuit Network	AN/TCC	1385
TC–19	Repeater Set	AN/TCC	1387
TC–21( )	Telephone Terminal Set	AN/TCC	1389
TC–22–( )	Telegraph Terminal Set	AN/TCC	1391
TC–23	Repeater Set	AN/TCC	1393
TC–33–( )	Converter Set	AN/TCC	1395
TC–37	Repeater Set	AN/TCC	1397
UG	Line Terminal Equipment	AN/TCC	1399
AN/TGC–1	Teletypewriter Set	AN/TGC	1401
AN/TGC–3	Teletypewriter Set	AN/TGC	1403
AN/TGC–6	Teletypewriter Set	AN/TGC	1405
AN/TGC–type:			
EE–97–( )	Telegraph Printer Set	AN/TGC	1407
EE–98–( )	Teletypewriter Set	AN/TGC	1409
EE–102	Teletypewriter Set	AN/TGC	1411
TC–3	Telegraph Central Office Set	AN/TGC	1413
TC–16–( )	Reperforator-Teletypewriter Set	AN/TGC	1415
TC–18	Repeater Set	AN/TGC	1417

Type No.	Item Name	Type	Page
TG–7	Printer	AN/TGC	1419
TG–7–A	Printer	AN/TGC	1421
TG–7–B	Teletypewriter	AN/TGC	1423
TG–27	Reperforator-Transmitter	AN/TGC	1425
TG–37–( )	Teletypewriter	AN/TGC	1427
TH–5/TG	Telegraph Terminal	AN/TGC	1429
TT–4( )/TG	Teletypewriter	AN/TGC	1431
TT–61/FG	Teletypewriter	AN/TGC	1433
AN/TIP–1, –1A	Public Address Set	AN/TIP	1435
AN/TIP–2	Public Address Set	AN/TIP	1437
AN/TIQ–2( )	Public Address Set	AN/TIQ	1439
AN/TIQ–3( )	Public Address Set	AN/TIQ	1443
AN/TIQ-type:			
PA–8	Intercommunication Set	AN/TIQ	1447
AN/TNP-type			
PR	Portable Sound Reproducing Equipment	AN/TNP	1449
AN/TRA–1( )	Amplifier Equipment	AN/TRA	1451
AN/TRA–2	Remote Control Equipment	AN/TRA	1453
AN/TRA–10	Pulse Form Restorer Group	AN/TRA	1455
AN/TRA–19	Amplifier-Power Supply Group	AN/TRA	1457
AN/TRA-type:			
C–292( )/TRA–7	Control Unit	AN/TRA	1459
CV–31( )/ TRA–7	Dual Diversity Converter	AN/TRA	1461
MD–280/TRC	Radio Transmitter Modulator	AN/TRA	1463
O–39( )/TRA–7	Frequency Shift Exciter	AN/TRA	1465
TD–164/TRC	Multiplexer	AN/TRA	1467
AN/TRC–1( )	Radio Set	AN/TRC	1469
AN/TRC–3( )	Radio Terminal Set	AN/TRC	1471
AN/TRC–4( )	Radio Relay Set	AN/TRC	1473
AN/TRC–7, –7A, –7B	Radio Set	AN/TRC	1475
AN/TRC–8	Radio Set	AN/TRC	1479
AN/TRC–11( )	Radio Terminal Set	AN/TRC	1481
AN/TRC–12( )	Radio Relay Set	AN/TRC	1483
AN/TRC–20	Radio Set	AN/TRC	1485
AN/TRC–22	Radio Set	AN/TRC	1487
AN/TRC–24( )	Radio Set	AN/TRC	1489
AN/TRC–28	Radio Set	AN/TRC	1493
AN/TRC–29	Radio Set	AN/TRC	1495
AN/TRC–22	Radio Set	AN/TRC	1497
AN/TRC–34( )	Radio Set	AN/TRC	1499
AN/TRC–35( )	Radio Terminal Set	AN/TRC	1501
AN/TRC–36( )	Radio Relay Set	AN/TRC	1503
AN/TRC–38	Radio Terminal Set	AN/TRC	1505
AN/TRC–39	Radio Repeater Set	AN/TRC	1507
AN/TRC–40	Radio Repeater Set	AN/TRC	1509
AN/TRC–41	Radio Repeater Set	AN/TRC	1511
AN/TRC–42( )	Radio Set	AN/TRC	1513
AN/TRC–69	Radio Set	AN/TRC	1515
AN/TRC-type:			
25/FSTR	Radio Transmitter-Receiver	AN/TRC	1517
1498	Radio Transmitter-Receiver	AN/TRC	1519
SCR–177–( )	Radio Set	AN/TRC	1521
SCR–188–( )	Radio Set	AN/TRC	1523
SCR–499–( )	Radio Set	AN/TRC	1525
TCS, TCS–1 through –15	Radio Transmitting and Receiving Equipment	AN/TRC	1527
AN/TRQ–1	Radio Control Central	AN/TRQ	1531
AN/TRQ–10	Radar Data Transfer System	AN/TRQ	1533
AN/TRQ–11	Radar Data Transfer System	AN/TRQ	1535

Type No.	*Item Name*	*Type*	*Page*
AN/TRQ–12	Radar Data Transfer System	AN/TRQ	1537
AN/TRQ–13	Radio Repeater Set	AN/TRQ	1539
AN/TRR–2	Radio Set	AN/TRR	1541
AN/TRR–5	Radio Receiving Set	AN/TRR	1543
AN/TRR–7	Radio Receiving Set	AN/TRR	1545
AN/TRR-type			
RBM, RBM–1, –2, –3, –4, –5	Portable Radio Receiving Equipment	AN/TRR	1547
SCR–616	Radio Set	AN/TRR	1551
AN/TRT–1	Radio Set	AN/TRT	1553
AN/TRT–3	Radio Transmitting Set	AN/TRT	1555
AN/TRT-type:			
T–303A/G	Radio Transmitter	AN/TRT	1557
T–389A/TRC–29	Order Wire Transmitter	AN/TRT	1559
TBW	Portable Radio Transmitting Equipment	AN/TRT	1561
TBW–1	Portable Radio Transmitting Equipment	AN/TRT	1563
TBW–2	Portable Radio Transmitting Equipment	AN/TRT	1565
TBW–3	Portable Radio Transmitting Equipment	AN/TRT	1567
TBW–4	Portable Radio Transmitting Equipment	AN/TRT	1569
TBW–5	Portable Radio Transmitting Equipment	AN/TRT	1571
TDG, TDG–1	High Frequency Radio Telephone Transmitting Equipment	AN/TRT	1573
TDT	Radio Transmiting Equipment	AN/TRT	1575
AN/TTA-type:			
RC–290	Remote Control Equipment	AN/TTA	1577
AN/TTC–7	Manual Telephone Central Office	AN/TTC	1579
AN/TTC-type			
BD–71	Switchboard	AN/TTC	1581
BD–72–( )	Switchboard	AN/TTC	1583
EE–89–( )	Telephone Repeater	AN/TTC	1585
TC–1	Telephone Central Office Set	AN/TTC	1587
TC–2–( )	Telephone Central Office Set	AN/TTC	1589
TC–4	Telephone Central Office Set	AN/TTC	1591
TC–10–( )	Telephone Central Office Set	AN/TTC	1593
TC–12	Telephone Central Office Set	AN/TTC	1595
AN/TTQ–2	Operations Center	AN/TTQ	1597
AN/TTQ–3	Radio Intercept Control Set	AN/TTQ	1599
AN/TXA-type:			
CV–172/U, –172A/U.	Frequency Shift Converter	AN/TXA	1601
KY–44/FX, –44A/FX, –44B/FX, –44C/FX.	Adapter Keyer	AN/TXA	1603
MD–168/UX	Radio Modulator	AN/TXA	1605
AN/TXC–1( )	Facsimile Set	AN/TXC	1607
AN/TXC-type:			
CNP	Transceiver	AN/TXC	1609
CV–2/TX, –2A/TX, –2B/TX.	Converter	AN/TXC	1611
CV–2C/TX	Converter	AN/TXC	1613
FOA	Facsimile Transmitter-Receiver Equipment	AN/TXC	1615
FOC	Facsimile Transmitter-Receiver Equipment	AN/TXC	1617
FX–1, –1A, –1B	Facsimile Transceiver	AN/TXC	1619
RC–120–( )	Facsimile Equipment	AN/TXC	1621
TT–41/TXC–1B, –41A/TXC–1B, –41B/TXC–1B.	Facsimile Transceiver	AN/TXC	1623

Type No.	Item Name	Type	Page
AN/TXR-type:			
RD-92/UX	Facsimile Recorder	AN/TXR	1627
RD-92A/UX	Facsimile Recorder	AN/TXR	1629
AN/UFA-3	Projection Group	AN/UFA	1631
AN/UGA-type:			
R-466/UC	Carrier Telegraph Receiver	AN/UGA	1633
R-551/UC	Telegraph Carrier Receiver	AN/UGA	1635
AN/UGC-2(XN-1)	Telegraph Terminal	AN/UGC	1637
AN/UGC-type:			
TT-47/UG	Teletypewriter	AN/UGC	1639
TT-47A/UG	Teletypewriter	AN/UGC	1641
TT-48/UG	Teletypewriter	AN/UGC	1639
TT-48A/UG	Teletypewriter	AN/UGC	1641
TT-69/UG	Teletypewriter	AN/UGC	1645
TT-69A/UG	Teletypewriter	AN/UGC	1647
TT-70/UG	Teletypewriter	AN/UGC	1645
TT-70A/UG	Teletypewriter	AN/UGC	1647
TT-128A/UG	Teletypewriter	AN/UGC	1649
TT-129A/UG	Teletypewriter	AN/UGC	1649
TT-130A/UG	Teletypewriter	AN/UGC	1651
TT-131A/UG	Teletypewriter	AN/UGC	1651
AN/UGR-type:			
TT-171/UG	Teletypewriter	AN/UGR	1653
TT-192/UG	Teletypewriter Reperforator	AN/UGR	1655
AN/UGT-type:			
TT-143/UG	Teletypewriter Distributor-Transmitter	AN/UGT	1657
TT-187/UG	Teletypewriter Distributor-Transmitter	AN/UGT	1659
AN/UIA-type:			
50128, 50128A	Interphone Amplifier	AN/UIA	1661
AM-215/U, -215A/U, -215B/U.	Audio Frequency Amplifier	AN/UIA	1663
AM-413/G, -413A/G.	Audio Amplifier	AN/UIA	1665
AN/UIC-1, -1X	Intercommunication Set	AN/UIC	1667
AN/UIQ-1, -1A, -1B	Public Address Set	AN/UIQ	1669
AN/UIQ-3	Public Address Set	AN/UIQ	1671
AN/UIQ-6	Public Address Set	AN/UIQ	1673
AN/UNH-6	Sound Recorder Set	AN/UNH	1675
AN/UNH-type:			
PD, PD-1	Voice Recording Equipment	AN/UNH	1677
PE, PE-1	Voice Recording Equipment	AN/UNH	1679
PH	Sound Reproducing Equipment	AN/UNH	1681
PJ	Sound Recording Equipment	AN/UNH	1683
AN/UNQ-1, -1A, -1B	Sound Recording Set	AN/UNQ	1685
AN/UNQ-2	Recorder-Reproducer Set	AN/UNQ	1689
AN/URA-6, -7	Frequency Shift Converter-Comparator Group	AN/URA	1691
AN/URA-8, -8A	Frequency Shift Converter-Comparator Group	AN/URA	1695
AN/URA-11	Coder-Timer Group	AN/URA	1699
AN/URA-17( )	Comparator-Converter Group	AN/URA	1701
AN/URA-19	Radio Set Control Group	AN/URA	1703
AN/URA-type:			
50254	Speech Input Equipment	AN/URA	1705
AS-81/GR	Antenna System	AN/URA	1707
CRV-50194	Modulator Assembly	AN/URA	1709
CV-62/U	Frequency Shift Converter	AN/URA	1711
CV-115( )/URR	Frequency Shift Converter	AN/URA	1713
CV-116/URR	Frequency Shift Converter	AN/URA	1715
CV-157/URR	Single Sideband Converter	AN/URA	1717
CXES	Experimental Electronic Relay Equipment	AN/URA	1719

Type No.	Item Name	Type	Page
IP-352(XN-1)/UR.	Tuning Indicator	AN/URA	1721
KY-32/GRT	Keyer	AN/URA	1723
KY-43/URT	Keyer	AN/URA	1725
KY-43A/URT	Keyer	AN/URA	1727
MD-209/UC	Radio Modulator	AN/URA	1729
NX-439( )/U	Keying Head Drive	AN/URA	1731
O-406(XN-1)/URC	Radio Frequency Oscillator	AN/URA	1733
OAH, OAH-1, -2	Code Practice Equipment	AN/URA	1735
OW-2	Code Practice Equipment	AN/URA	1737
RBU, RBU-1, -2	Panoramic Radio Adaptor	AN/URA	1739
RBV, RBV-1, -2	Panoramic Radio Adaptor	AN/URA	1741
RCC	Panoramic Radio Adaptor	AN/URA	1743
RDC-1	Radio Receiving Equipment	AN/URA	1745
RDK	Panoramic Radio Adaptor	AN/URA	1747
RDO	Radio Receiving Equipment	AN/URA	1749
SM-40/UR	Radio Telephone Simulator	AN/URA	1751
AN/URC-4	Radio Set	AN/URC	1753
AN/URC-7Z	Radio Set	AN/URC	1757
AN/URC	Radio Set	AN/URC	1759
AN/URC-16, -16X, -16Y, -17, -17X, -17Y, -18, -18X, -18X.	Radio Set	AN/URC	1761
AN/URC-22	Radio Set	AN/URC	1767
AN/URC-type:			
MAR	Vhf Radio Transmitting and Receiving Equipment	AN/URC	1769
MO-1	Radio Telephone Transmitting and Receiving Equipment	AN/URC	1771
AN/URN-type:			
KY-122/URN	Keyer	AN/URN	1773
KY-123/URN	Keyer	AN/URN	1775
KY-123A/URN	Keyer	AN/URN	1777
AN/URR-9	Radio Receiving Set	AN/URR	1779
AN/URR-13, -13A, -13B, -13C	Radio Receiving Set	AN/URR	1781
AN/URR-21, -21A	Radio Receiving Set	AN/URR	1783
AN/URR-23, -23A	Radio Receiving Set	AN/URR	1785
AN/URR-27	Radio Receiving Set	AN/URR	1787
AN/URR-28	Radio Receiving Set	AN/URR	1789
AN/URR-29	Radio Receiving Set	AN/URR	1791
AN/URR-29X	Radio Receiving Set	AN/URR	1793
AN/URR-35, -35A, -35B, -35C	Radio Receiving Set	AN/URR	1795
AN/URR-35D	Radio Receiving Set	AN/URR	1799
AN/URR-36	Radio Receiving Set	AN/URR	1801
AN/URR-36A	Radio Receiving Set	AN/URR	1803
AN/URR-39	Radio Receiving Set	AN/URR	1805
AN/URR-type:			
51J-4	Receiver	AN/URR	1807
75A-4, 75A-4-(MOD)	Amateur-Band Receiver	AN/URR	1809
AR-88 (RCA)	Radio Receiver	AN/URR	1813
AR-88D (RCA)	Radio Receiver	AN/URR	1815
BC-312-( )	Radio Receiver	AN/URR	1817
BC-314-( )	Radio Receiver	AN/URR	1819
BC-787-( )	Radio Receiver	AN/URR	1821
BF	Radio Receiving Equipment	AN/URR	1823
R-129( )/U	Radio Receiver	AN/URR	1825
R-211( )/U	Radio Receiver	AN/URR	1827

Type No.	Item Name	Type	Page
R-278/GR	Radio Receiver	AN/URR	1829
R-388( )/URR	Radio Receiver	AN/URR	1831
R-389( )/URR	Radio Receiver	AN/URR	1833
R-390/URR	Radio Receiver	AN/URR	1835
R-390A/URR	Radio Receiver	AN/URR	1837
R-391/URR	Radio Receiver	AN/URR	1839
R-392/URR	Radio Receiver	AN/URR	1841
R-520( )/URR	Radio Receiver	AN/URR	1843
R-5200	VHF Receiver	AN/URR	1845
RAK, RAK-1 through 8.	Radio Receiving Equipment	AN/URR	1847
RAL, RAL-1 through -8.	Radio Receiving Equipment	AN/URR	1851
RAO-2 through -7, -9.	Radio Receiving Equipment	AN/URR	1855
RAS, RAS-1 through -15.	Radio Receiving Equipment	AN/URR	1859
RAY	Super Frequency Aircraft Aircraft Radio Receiving Equipment	AN/URR	1861
RBA, RBA-1 through -3, -5, -5A.	Radio Receiving Equipment	AN/URR	1863
RBA-6	Radio Receiving Equipment	AN/URR	1865
RBA-7	Radio Receiving Equipment	AN/URR	1867
RBB, RBB-1, -2, -2A, -3 through -6.	Radio Receiving Equipment	AN/URR	1869
RBC, RBC-1 through -3, -3A, -4 through -6.	Radio Receiving Equipment	AN/URR	1871
RBJ, RBJ-1 through -4.	Radio Receiving Equipment	AN/URR	1875
RBK, RBK-1, -5, -7, -9, -12, -13, -14.	Radio Receiving Equipment	AN/URR	1877
RBK-2, -11	Radio Receiving Equipment	AN/URR	1881
RBK-15	Radio Receiving Equipment	AN/URR	1883
RBK-16	Radio Receiving Equipment	AN/URR	1885
RBL, RBL-1 through -6	Radio Receiving Equipment	AN/URR	1887
RBO, RBO-1, -2, -2A, -3, -4	Radio Receiving Equipment	AN/URR	1891
RBQ	High Frequency Radio Receiving Equipment	AN/URR	1895
RBS, RBS-1, -2, -2A.	Radio Receiving Equipment	AN/URR	1897
RBS-3	Radio Receiving Equipment	AN/URR	1901
RCE-2	Radio Receiving Equipment	AN/URR	1903
AN/URT-2, -2X, -3, -3X, -4, -4X.	Radio Transmitting Set	AN/URT	1905
AN/URT-6(XN-1)	Radio Transmitting Set	AN/URT	1909
AN/URT-7, -7A, -7b, -7C.	Radio Transmitting Set	AN/URT	1911
AN/URT-8(XN-1), -9(XN-1).	Radio Transmitting Set	AN/URT	1915
AN/URT-10(XN-1)	Radio Transmitting Set	AN/URT	1917
AN/URT-12	Radio Transmitting Set	AN/URT	1921
AN/URT-13	Radio Transmitting Set	AN/URT	1923
AN/URT-14	Radio Transmitting Set	AN/URT	1925
AN/URT-type: T-368( )/URT	Radio Transmitter	AN/URT	1927

Type No.	Item Name	Type	Page
TAG	Radio Telegraph Transmitting Equipment	AN/URT	1929
TBK–4	Radio Transmitting Equipment	AN/URT	1931
TCA	Radio Telephone Transmitting Equipment	AN/URT	1933
TCM	Radio Transmitting Equipment	AN/URT	1935
TCM–1	Radio Transmitting Equipment	AN/URT	1937
TCM–2	Radio Transmitting Equipment	AN/URT	1939
TCN	Radio Transmitting Equipment	AN/URT	1941
TCN–1	Radio Transmitting Equipment	AN/URT	1943
TCU, TCU–1, –2	Radio Transmitting Equipment	AN/URT	1945
TCZ	Radio Transmitting Equipment	AN/URT	1947
TCZ–1, –2	Radio Transmitting Equipment	AN/URT	1949
TDE, TDE–1 through –3.	Radio Transmitting Equipment	AN/URT	1951
TDZ, TDZ–a	Radio Transmitting Equipment	AN/URT	1955
TED, TED–1, –2	Radio Transmitting Equipment	AN/URT	1957
TED–3	Radio Transmitting Equipment	AN/URT	1959
TED–7	Radio Transmitting Equipment	AN/URT	1961
TED–8	Radio Transmitting Equipment	AN/URT	1963
AN/URW-type:			
C–1947/U	Control-Monitor	AN/URW	1965
RM–29–A	Remote Control Unit	AN/URW	1967
AN/USA-type:			
CN–154/U	Voltage Regulator	AN/USA	1969
PF	Audio Signal Scrambling Equipment	AN/USA	1971
TA–269/U	Telephone Terminal	AN/USA	1973
AN/USM-type:			
MD–83A/ARN	Modulator	AN/USM	1975
AN/USP-type:			
CXDB	Dual Recording Equipment	AN/USP	1977
RCT, RCU, RCU–1.	Combination Radio Receiver and Record Player	AN/USP	1979
AN/USQ-type:			
REK	Radio Receiving and Reproducing Equipment	AN/USQ	1981
AN/UXA–5(XN–1)	Television Camera Group	AN/UXA	1983
AN/UXA-type:			
FRB	Frequency Shift Receiver Group	AN/UXA	1985
FSJ	Audio FM Keyer Equipment	AN/UXA	1987
AN/UXC–2	Telegraph Multiplex Set	AN/UXC	1989
AN/UXH–2(XN–3)	Facsimile Recorder Set	AN/UXH	1991
AN/VIA–1	Auxiliary Interphone Equipment	AN/VIA	1993
AN/VIC-type:			
RC–53	Interphone Equipment	AN/VIC	1995
RC–99	Interphone Equipment	AN/VIC	1997
RC–298	Interphone Extension Kit	AN/VIC	1999
AN/VRC–1	Radio Set	AN/VRC	2001
AN/VRC–2	Radio Set	AN/VRC	2003
AN/VRC–2X	Radio Set	AN/VRC	2005
AN/VRC–3	Radio Set	AN/VRC	2007
AN/VRC–5	Radio Set	AN/VRC	2009
AN/VRC–6( )	Radio Set	AN/VRC	2011
AN/VRC–7( )	Radio Set	AN/VRC	2013
AN/VRC–8( )	Radio Set	AN/VRC	2015
AN/VRC–9( )	Radio Set	AN/VRC	2017
AN/VRC–10( )	Radio Set	AN/VRC	2019
AN/VRC–13( )	Radio Set	AN/VRC	2021
AN/VRC–14	Radio Set	AN/VRC	2023
AN/VRC–15( )	Radio Set	AN/VRC	2025
AN/VRC–16( )	Radio Set	AN/VRC	2027
AN/VRC–17	Radio Set	AN/VRC	2029
AN/VRC–18( )	Radio Set	AN/VRC	2031

Type No.	Item Name	Type	Page
AN/VRC-19( )	Radio Set	AN/VRC	2033
AN/VRC-20	Radio Set	AN/VRC	2035
AN/VRC-21	Radio Set	AN/VRC	2037
AN/VRC-22	Radio Set	AN/VRC	2039
AN/VRC-27( )	Radio Set	AN/VRC	2041
AN/VRC	Radio Set	AN/VRC	2043
AN/VRC-32	Radio Set	AN/VRC	2045
AN/VRC-type:			
35FMTR-7A	Frequency Modulated Mobile Radio Equipment	AN/VRC	2047
50FMTR-7A	Frequency Modulated Mobile Radio Equipment	AN/VRC	2049
FMTR-30D	Transmitter-Receiver	AN/VRC	2051
MQ-1	Radiotelephone Equipment	AN/VRC	2053
MQ-2	Radiotelephone Equipment	AN/VRC	2055
SCR-193-( )	Radio Set	AN/VRC	2057
SCR-293-( )	Radio Set	AN/VRC	2059
SCR-298-( )	Radio Set	AN/VRC	2061
SCR-506-( )	Radio Set	AN/VRC	2063
SCR-508-( )	Radio Set	AN/VRC	2065
SCR-510-( )	Radio Set	AN/VRC	2067
SCR-528	Radio Set	AN/VRC	2069
SCR-608	Radio Set	AN/VRC	2071
SCR-610-( )	Radio Set	AN/VRC	2073
SCR-628-( )	Radio Set	AN/VRC	2075
AN/VRQ-1	Radio Set	AN/VRQ	2077
AN/VRQ-2( )	Radio Set	AN/VRQ	2079
AN/VRQ-3( )	Radio Set	AN/VRQ	2081
AN/VRQ-2	Radio Receiving Set	AN/VRR	2083
AN/VRR-4	Radio Receiving Set	AN/VRR	2085
AN/VRR-7	Radio Receiving Set	AN/VRR	2087
AN/VRR-type:			
BC-683-A, -B, -BM.	Radio Receiver	AN/VRR	2089
R-108/GRC, -109/GRC, -110/GRC.	Radio Receiver	AN/VRR	2091
SCR-294-( )	Radio Set	AN/VRR	2093
SCR-678-( )	Radio Set	AN/VRR	2095
AN/VRT-1	Radio Transmitting Set	AN/VRT	2097
AR-88(RCA)	Radio Receiver	AN/URR	1813
AR-88D(RCA)	Radio Receiver	AN/URR	1815
ARA	Aircraft Radio Receiving Equipment	AN/ARR	109
ARB	Aircraft Radio Receiver	AN/ARR	111
ARK	Aircraft Radio Receiving Equipment	AN/AXR	141
ARJ	Aircraft Radio Receiving Equipment	AN/AXR	139
AS-81/GR	Antenna System	AN/URA	1707
AS-390/SRC	Antenna Assembly	AN/SRA	1163
AS-768/GR	Antenna	AN/GRA	771
AT-150/SRC	Antenna	AN/SRA	1165
AT-249/GRD	Antenna	AN/GRA	713
AT-317/BRR	Loop Antenna System	AN/BRA	147
AT-317(XN-1)/BRR	Antenna	AN/BRA	149
ATA	Aircraft Radio Transmitting Equipment	AN/ART	123
ATB	Aircraft Radio Equipment	AN/ART	125
ATD	Aircraft Radio Transmitting Equipment	AN/ART	127
ATK	Aircraft Radio Transmitting Equipment	AN/AXT	143

B

BC-191-( )	Radio Transmitter	AN/GRT	877
BC-312-( )	Radio Receiver	AN/URR	1817

Type No.	Item Name	Type	Page
BC–314–( )	Radio Receiver	AN/URR	1819
BC–329–( )	Radio Transmitter	AN/FRT	565
BC–339–( )	Radio Transmitter	AN/FRT	567
BC–342	Radio Receiver	AN/GRR	859
BC–344–( )	Radio Receiver	AN/GRR	861
BC–365–( )	Radio Transmitter	AN/FRT	569
BC–401	Radio Transmitter	AN/FRT	571
BC–447–( )	Radio Transmitter	AN/FRT	573
BC–610–( )	Radio Transmitter	AN/GRT	879
BC–683–A, –B, –BM	Radio Receiver	AN/VRR	2089
BC–779	Radio Receiver	AN/FRR	469
BC–787–( )	Radio Receiver	AN/URR	1821
BC–794	Radio Receiver	AN/FRR	471
BC–1004	Radio Receiver	AN/FRR	473
BD–71	Switchboard	AN/TTC	1581
BD–72–( )	Switchboard	AN/TTC	1583
BF	Radio Receiving Equipment	AN/URR	1823

C

C–2T	Telegraph Carrier Terminal	AN/FCC	177
C–292( )/TRA–7	Control Unit	AN/TRA	1459
C–492/SG	Transmitter-Teletypewriter Control	AN/SGA	1107
C–682/SR	Radio Set Control	AN/SRA	1167
C–806/GR	Control Indicator	AN/GRA	775
C–1624/FRC–36	Remote Control Console	AN/FRW	711
C–1670/U	Antenna Control	AN/SRA	1169
C–1846/FRC–42	Radio Set Control	AN/FRW	713
C–1947/U	Control-Monitor	AN/URW	1965
CF–1( )	Telephone Terminal	AN/TCC	1369
CF–2–( )	Telegraph Terminal	AN/TCC	1371
CF–3	Repeater	AN/TCC	1373
CF–4	Converter	AN/TCC	1375
CF–5	Repeater	AN/TCC	1377
CF–6	Telegraph Terminal	AN/TCC	1379
CF–7	Carrier Hybrid	AN/TCC	1381
CLR–6, Philco	Microwave Radio Relay Set	AN/FRC	419
CLR–7, Philco	Microwave Radio Relay Set	AN/FRC	421
CN–154/U	Voltage Regulator	AN/USA	1969
CNP	Transceiver	AN/TXC	1609
CRV–50194	Modulator Assembly	AN/URA	1709
CU–168/FRR	Antenna Coupler	AN/FRA	353
CU–284/UR	Antenna Coupler	AN/SRA	1171
CU–377/UR	Antenna Coupler	AN/SRA	1173
CV–2/TX, –2A/TX, –2B/TX	Converter	AN/TXC	1611
CV–2C/TX	Converter	AN/TXC	1613
CV–31( )/TRA–7	Dual Diversity Converter	AN/TRA	1461
CV–62/U	Frequency Shift Converter	AN/URA	1711
CV–115( )/URR	Frequency Shift Converter	AN/URA	1713
CV–116/URR	Frequency Shift Converter	AN/URA	1715
CV–157/URR	Single Sideband Converter	AN/URA	1717
CV–172/U, –172A/U	Frequency Shift Converter	AN/TXA	1601
CW–50101	Audio Frequency Amplifier	AN/TCA	1335
CW–50124	Demodulator	AN/TCA	1337
CXDB	Dual Recording Equipment	AN/USP	1977
CXES	Experimental Electronic Relay Equipment	AN/URA	1719
CY–751/GR	Console	AN/GRA	777

Type No.	Item Name	Type	Page
	E		
EE-80-( )	Signal Lamp Equipment	AN/PVC	1101
EE-84	Signal Lamp Equipment	AN/PVC	1103
EE-89-( )	Telephone Repeater	AN/TTC	1585
EE-97-( )	Telegraph Printer Set	AN/TGC	1407
EE-98-( )	Teletypewriter Set	AN/TGC	1409
EE-102	Teletypewriter Set	AN/TGC	1411
	F		
FMTR-30D	Transmitter-Receiver	AN/VRC	2051
FOA	Facsimile Transmitter-Receiver Equipment	AN/TXC	1615
FOC	Facsimile Transmitter-Receiver Equipment	AN/TXC	1617
FRB	Frequency Shift Receiver Equipment	AN/UXA	1985
FRC	Frequency Shift Receiver Converter	AN/FRA	355
FSB	Frequency Shift Keyer Equipment	AN/FGA	213
FSD	Frequency Shift Keyer Equipment	AN/FRA	357
FSH	Frequency Shift Keyer Equipment	AN/FRA	359
FSJ	Audio FM Keyer Equipment	AN/UXA	1987
FX-1, -1A, -1B	Facsimile Transceiver	AN/TXC	1619
	G		
G-1T	Telegraph Terminal	AN/FGA	215
GF-11/RU-16	Radio Transmitting and Receiving Set	AN/ARC	79
GN-58-A	Generator	AN/GRA	779
GP, GP-2	Aircraft Radio Transmitting Equipment	AN/ART	129
GP-7	Aircraft Radio Transmitting Equipment	AN/ART	131
	I		
IP-352(XN-1)/UR	Tuning Indicator	AN/URA	1721
KWS-1, KWS-1-(MOD)	Transmitter	AN/FRT	575
KY-7/FRT	Tone Keying Unit	AN/FRA	361
KY-32/GRT	Keyer	AN/URA	1723
KY-43/URT	Keyer	AN/URA	1725
KY-43A/URT	Keyer	AN/URA	1727
KY-44FX, -44A/FX, -44B/FX, -44C/FX.	Adapter Keyer	AN/TXA	1603
KY-58/GRT	Keyer	AN/FRA	363
KY-75/SRT	Keyer	AN/SGA	1109
KY-83( )/S	Keyer	AN/SRA	1175
KY-122/URN	Keyer	AN/URN	1773
KY-123/URN	Keyer	AN/URN	1775
KY-123A/URN	Keyer	AN/URN	1777
	L		
LS-124( )/FI	Intercommunicating Station	AN/FIC	313
LS-125( )/FI	Intercommunicating Station	AN/FIC	315
LS-126( )/FI	Intercommunicating Station	AN/FIC	317
LS-127( )/FI	Intercommunicating Station	AN/FIC	319
LS-128( )/FI	Intercommunicating Station	AN/FIC	321
LS-129/FI	Intercommunicating Station	AN/FIC	323
LS-130( )/FI	Intercommunicating Station	AN/FIC	325
LS-138/FI	Intercommunicating Station	AN/FIC	327
LS-200/FI	Intercommunication Station	AN/FIC	329
LS-201/FI	Intercommunication Station	AN/FIC	331
LS-202/FI	Intercommunication Station	AN/FIC	333

Type No.	Item Name	Type	Page
	M		
MAB	Radio Transmitting and Receiving Equipment	AN/PRC	1021
MAC	Radio Transmitting and Receiving Equipment	AN/SRC	1201
MAM	Emergency Mobile Communication Equipment	AN/ARC	83
MAR	Vhf Radio Transmitting and Receiving Equipment	AN/URC	1769
MAW, MAW–1	Portable Vhf Transmitting and Receiving Equipment	AN/PRC	1023
MAY, MAY–1	Portable Radio Transmitting and Receiving Equipment	AN/PRC	1025
MB	Aircraft Radio Transmitter-Receiver	AN/ARC	85
MD–83A/ARN	Modulator	AN/USM	1975
MD–168/UX	Radio Modulator	AN/TXA	1605
MD–209/UC	Radio Modulator	AN/URA	1729
MD–280/TRC	Radio Transmitter Modulator	AN/TRA	1463
ME	Aircraft Radio Transmitter-Receiver	AN/ARC	87
MO–1	Radio Telephone Transmitting and Receiving Equipment	AN/URC	1771
MQ–1	Radiotelephone Equipment	AN/VRC	2053
MQ–2	Radiotelephone Equipment	AN/VRC	2055
MW	Radio Transmitter	AN/FRT	577
MW–3	Radio Transmitter	AN/FRT	579
MX–439( )/U	Keying Head Drive	AN/URA	1731
	O		
O–5/FR	Exciter Unit	AN/FRA	365
O–39( )/TRA–7	Frequency Shift Exciter	AN/TRA	1465
O–406(XN–1)/URC	Radio Frequency Oscillator	AN/URA	1733
OA–3/FC	Regenerative Repeater	AN/FCC	181
OA–4)/FC	Carrier Terminal	AN/FCC	183
OA–5( )/FC	Carrier Terminal	AN/FCC	185
OA–6/FC	Telegraph Repeater	AN/FCC	187
OA–7/FC	Telephone Repeater	AN/FCC	189
OA–8/FC	Telephone Repeater	AA/FCC	191
OA–9/FC	Carrier Repeater	AN/FCC	193
OA–10( )/FC	Carrier Repeater	AN/FCC	195
OA–11/FC	Carrier Terminal	AN/FCC	197
OA–12/FC	Carrier Terminal	AN/FCC	199
OA– 3/FC	Carrier Terminal	AN/FCC	201
OA–58/FC	Radio Receiver Assembly	AN/FRR	475
OA–58A/FRC	Radio Receiver Assembly	AN/FRR	477
OA–59/FRC	Radio Receiver Assembly	AN/FRR	479
OA–60( )/FRT	Radio Transmitter Assembly	AN/FRT	581
OA–145/GT	Tone Warning Generator Group	AN/GTT	889
OAH, OAH–1, OAH–2	Code Practice Equipment	AN/URA	1735
OW–2	Code Practice Equipment	AN/URA	1737
	P		
PA–8	Intercommunication Set	AN/TIQ	1447
PD, PD–1	Voice Recording Equipment	AN/UNH	1677
PE, PE–1	Voice Recording Equipment	AN/UNH	1679
PF	Audio Signal Scrambling Equipment	AN/USA	1971
PG	Sound Recording Equipment	AN/PNH	981
PH	Sound Reproducing Equipment	AN/UNH	1681
PJ	Sound Recording Equipment	AN/UNH	1683
PM	Teletypewriter Repeater	AN/FGC	255
PP–1098/GRC–9	Power Supply	AN/GRA	781
PR	Portable Sound Reproducing Equipment	AN/TNP	1449

Type No.	Item Name	Type	Page
	R		
R-62/PR	Radio Receiver	AN/PRR	1077
R-80( )/PR	Radio Receiver	AN/PRR	1079
R-96( )/SR	Radio Receiver	AN/SRR	1223
R-108/GRC, R-109/GRC, R-110/GRC.	Radio Receiver	AN/VRR	2091
R-129( )/U	Radio Receiver	AN/URR	1825
R-137/GR	Radio Receiver	AN/GRR	863
R-230( )/SR	Radio Receiver	AN/SRR	1225
R-206( )/PR	Radio Receiver	AN/PRR	1081
R-208/FR	Radio Receiver	AN/FRR	481
R-209( )/FR	Radio Receiver	AN/FRR	483
R-210/U	Radio Receiver	AN/FRR	485
R-211( )/U	Radio Receiver	AN/URR	1827
R-212/SR	Radio Receiver	AN/SRR	1227
R-213/SR	Radio Receiver	AN/SRR	1229
R-215/SR	Radio Receiver	AN/SRR	1231
R-247/URR	Radio Receiver	AN/GRR	865
R-274/FRR	Radio Receiver	AN/FRR	487
R-274A/FRR, R-274C/FRR	Radio Receiver	AN/FRR	489
R-278/GR	Radio Receiver	AN/URR	1829
R-320/FRC	Radio Receiver	AN/FRR	491
R-320A/FRC	Radio Receiver	AN/FRR	493
R-361C/GR	Radio Receiver	AN/GRR	867
R-388( )/URR	Radio Receiver	AN/URR	1831
R-389( )/URR	Radio Receiver	AN/URR	1833
R-390/URR	Radio Receiver	AN/URR	1835
R-390A/URR	Radio Receiver	AN/URR	1837
R-391/URR	Radio Receiver	AN/URR	1839
R-392/URR	Radio Receiver	AN/URR	1841
R-405/MC through R-412/MC	Carrier Telegraph Receiver	AN/FGR	295
R-466/UC	Carrier Telegraph Receiver	AN/UGA	1633
R-520( )/URR	Radio Receiver	AN/URR	1843
R-551/ C	Telegraph Carrier Receiver	AN/UGA	1635
R-4200	VHF Receiver	AN/URR	1845
RAK, RAK-1 through -8.	Radio Receiving Equipment	AN/URR	1847
RAL, RAL-1 through -8.	Radio Receiving Equipment	AN/URR	1851
RAO-2 through -7, -9	Radio Receiving Equipment	AN/URR	1855
RAS, RAS-1 through -15.	Radio Receiving Equipment	AN/URR	1859
RAX-1	Aircraft Radio Receiving Equipment	AN/ARR	113
RAY	Super Frequency Aircraft Radio Receiving Equipment	AN/URR	1861
RAZ	Radio Receiver	AN/SRR	1233
RBA, RBA-1, -2, -3, -5, -5A.	Radio Receiving Equipment	AN/URR	1863
RBA-6	Radio Receiving Equipment	AN/URR	1865
RBA-7	Radio Receiving Equipment	AN/URR	1867
RBB- RBB-1, -2, -2A, -3 through -6.	Radio Receiving Equipment	AN/URR	1869
RBC, RBC-1, -2, -3, -3A, -4, -5, -6.	Radio Receiving Equipment	AN/URR	1871
RBE	Diversity Receiving Equipment	AN/FRR	495
RBF-3	Radio Receiving Equipment	AN/FRR	497

Type No.	Item Name	Type	Page
RBJ, RBJ–1, –2, –3, –4.	Radio Receiving Equipment	AN/URR	1875
RBK	Radio Receiving Equipment	AN/URR	1877
RBK–1	Radio Receiving Equipment	AN/URR	1877
RBK–2	Radio Receiving Equipment	AN/URR	1881
RBK–5	Radio Receiving Equipment	AN/URR	1877
RBK–7	Radio Receiving Equipment	AN/URR	1877
RBK–9	Radio Receiving Equipment	AN/URR	1877
RBK–11	Radio Receiving Equipment	AN/URR	1881
RBK–12	Radio Receiving Equipment	AN/URR	1877
RBK–13	Radio Receiving Equipment	AN/URR	1877
RBK–14	Radio Receiving Equipment	AN/URR	1877
RBK–15	Radio Receiving Equipment	AN/URR	1883
RBK–16	Radio Receiving Equipment	AN/URR	1885
RBL, RBL–1, –2, –3, –4, –5, –6.	Radio Receiving Equipment	AN/URR	1887
RBM, RBM–1, –2, –3, –4, –5.	Portable Radio Receiving Equipment	AN/TRR	1547
RBO, RBO–1, –2, –2A, –3, –4.	Radio Receiving Equipment	AN/URR	1891
RBQ	High Frequency Radio Receiving Equipment	AN/URR	1895
RBQ–1	High Frequency Radio Receiving Equipment	AN/FRR	499
RBS, RBS–1, –2, –2a	Radio Receiving Equipment	AN/URR	1897
RBS–3	Radio Receiving Equipment	AN/URR	1901
RBU, RBU–1, –2	Panoramic Radio Adaptor	AN/URA	1739
RBV, RBV–1, –2	Panoramic Radio Adaptor	AN/URA	1741
RBZ	Radio Receiving Equipment	AN/PRR	1083
RC–52–( )	Radio Transmitting Equipment	AN/FRT	583
RC–53	Interphone Equipment	AN/VIC	1995
RC–99	Interphone Equipment	AN/VIC	1997
RC–120–( )	Facsimile Equipment	AN/TXC	1621
RC–256	Radio Receiving Equipment	AN/FRR	501
RC–261	Remote Control Equipment	AN/PRW	1089
RC–289	Remote Control Equipment	AN/PRW	1091
RC–290	Remote Control Equipment	AN/TTA	1577
RC–298	Interphone Extension Kit	AN/VIC	1999
RCB–1	Portable Radio Receiving Equipment	AN/PRR	1085
RCC	Panoramic Radio Adaptor	AN/URA	1743
RCE–2	Radio Receiving Equipment	AN/URR	1903
RCO	Radio Receiving Equipment	AN/FRR	503
RCP	Diversity Radio Receiving Equipment	AN/FRR	505
RCT	Combination Radio Receiver and Record Player	AN/USP	1979
RCU, RCU–1	Combination Radio Receiver and Record Player	AN/USP	1979
RD–2/GXR	Recorder	AN/GXR	891
RD–31A/U	Sound Recorder-Reproducer	AN/PNH	983
RD–41B/U	Recorder	AN/FSH	715
RD–92/UX	Facsimile Recorder	AN/TXR	1627
RD–92A/UX	Facsimile Recorder	AN/TXR	1629
RD–110/U, RD–110A/U.	Code Tape Recorder	AN/FRH	423
RD–112/U	Code Tape Recorder	AN/FRH	425
RD–115/UN, –115A/UN, –115C/UN.	Sound Recorder-Reproducer	AN/PNH	985
RD–133/UN	Sound Recorder-Reproducer	AN/PNH	987
RD–153/SNH	Recorder-Reproducer Assembly	AN/FNH	335
RDC–1	Radio Receiving Equipment	AN/URA	1745
RDE	Radio Receiving Equipment	AN/FRR	507
RDE–1	Radio Receiving Equipment	AN/FRR	509
RDK	Panoramic Radio Adaptor	AN/URA	1747

Type No.	Item Name	Type	Page
RDM, RDM–1	Diversity Radio Receiving Equipment	AN/FRR	511
RDO	Radio Receiving Equipment	AN/URA	1749
RDR	Portable Radio Receiving Equipment	AN/PRR	1087
RDZ, RDZ–1, RDZ–a	Radio Receiving Equipment	AN/SRR	1235
REA, REA–1	Single Side Band Radio Receiving Equipment	AN/FRR	513
REK	Radio Receiving and Reproducing Equipment	AN/USQ	1981
RF, AF, Type A, B, C.	Rf and Af Signal Distribution Unit	AN/FGC	257
RM–29–A	Remote Control Unit	AN/URW	1967
RT–66/GRC	Receiver-Transmitter (*See:* AN/GRC–3, AN/GRC–4, AN/VRC–8, AN/VRC–13, AN/VRC–16, AN/VRC–20, AN/VRQ–1).	AN/GRA	
RT–67/GRC	Receiver-Transmitter (*See:* AN/GRC–5, AN/GRC–6, AN/VRC–9, AN/VRC–14, AN/VRC–17, AN/VRC–21, AN/VRQ–2.)	AN/GRA	
RT–68/GRC	Receiver-Transmitter (*See:* AN/GRC–7, AN/GRC–8, AN/VRC–10, AN/VRC–15, AN/VRC–18, AN/VRC–22, AN/VRQ–3).	AN/GRA	
RT–70/GRC	Receiver-Transmitter (*See:* AN/GRC–3, AN/GRC–4, AN/GRC–5, AN/GRC–6, AN/GRC–7, AN/GRC–8, AN/VRC–7, AN/PRC–16).	AN/GRA	
RU–18, –19	Aircraft Radio Equipment	AN/ARR	115

S

SB–6( )/GG	Telegraph Switchboard	AN/GGC	757
SB–18/GT	Emergency Switchboard	AN/PTC	1095
SB–22( )/PT	Manual Telephone Switchboard	AN/PTC	1097
SB–53( )/FTC	Telephone Switchboard	AN/FTC	723
SB–54/FTC	Telephone Switchboard	AN/FTC	725
SB–55( )/FTC	Telephone Switchboard	AN/FTC	727
SB–56/FTC	Switchboard	AN/FTC	729
SB–57/FTC	Switchboard	AN/FTC	731
SB–58/FTC	Switchboard	AN/FTC	733
SB–59/FTC	Switchboard	AN/FTC	735
SB–60/FTC	Switchboard	AN/FTC	737
SB–61/FTC	Switchboard	AN/FTC	739
SB–62/FTC	Switchboard	AN/FTC	741
SB–63/FTC	Switchboard	AN/FTC	743
SB–64/FTC	Switchboard	AN/FTC	745
SB–65( )/FGC	Telegraph Switchboard	AN/FGC	261
SB–66( )/FGC	Switchboard	AN/FGC	263
SB–82/SRR	Radio Receiver Transfer Switchboard	AN/SRR	1237
SB–86/P	Manual Telephone Switchboard	AN/PTC	1099
SB–100/MTC	Control Switchboard	AN/MTC	967
SB–171/FTC	Manual Telephone Switchboard Section	AN/FTC	747
SCR–177–( )	Radio Set	AN/TRC	1521
SCR–188–( )	Radio Set	AN/TRC	1523
SCR–193–( )	Radio Set	AN/VRC	2057
SCR–244, –A, –B, –C	Radio Set	AN/FRR	515
SCR–244–D	Radio Set	AN/FRR	517
SCR–281–( )	Radio Set	AN/SRC	1203
SCR–293–( )	Radio Set	AN/VRC	2059
SCR–294–( )	Radio Set	AN/VRR	2093
SCR–298–( )	Radio Set	AN/VRC	2061
SCR–300	Radio Set	AN/PRC	1027
SCR–399	Radio Set	AN/MRC	945
SCR–499–( )	Radio Set	AN/TRC	1525
SCR–506–( )	Radio Set	AN/VRC	2063
SCR–508–( )	Radio Set	AN/VRC	2065
SCR–509–( )	Radio Set	AN/PRC	1029
SCR–510–( )	Radio Set	AN/VRC	2067
SCR–528	Radio Set	AN/VRC	2069
SCR–536	Radio Set	AN/PRC	1031

Type No.	Item Name	Type	Page
SCR-543-( )	Radio Set	AN/GRC	841
SCR-573-( )	Radio Set	AN/MRT	961
SCR-593-( )	Radio Set	AN/PRC	1033
SCR-607-( )	Radio Set	AN/GRR	869
SCR-608	Radio Set	AN/VRC	2071
SCR-609-( )	Radio Set	AN/PRC	1035
SCR-610-( )	Radio Set	AN/VRC	2073
SCR-614-( )	Radio Set	AN/FRR	519
SCR-616	Radio Set	AN/TRR	1551
SCR-619	Radio Set	AN/PRC	1037
SCR-628	Radio Set	AN/VRC	2075
SCR-643	Radio Set	AN/FRT	585
SCR-678-( )	Radio Set	AN/VRR	2095
SCR-694-( )	Radio Set	AN/MRC	947
SCR-704	Radio Set	AN/FRR	521
SDB	Speak-O-Phone Sound Detector	AN/PNS	989
SE-11	Signal Lamp Equipment	AN/PVC	1105
SLR-12B	Radio Receiving Equipment	AN/SRR	1239
SLR-H	Radio Receiving Equipment	AN/SRR	1241
SM-40/UR	Radio Telephone Simulator	AN/URA	1751
SP-600-JX	Radio Communications Receiver	AN/FRR	523
	T		
T-4( )/FRC	Radio Transmitter	AN/FRT	587
T-5( )/FRC	Radio Transmitter	AN/FRT	589
T-83/SR	Radio Transmitter	AN/SRT	1273
T-158( )/FRT	Radio Transmitter	AN/FRT	591
T-159/FRT	Radio Transmitter	AN/FRT	593
T-171( )/FR	Radio Transmitter	AN/FRT	595
T-172/FR	Radio Transmitter	AN/FRT	597
T-173/FR	Radio Transmitter	AN/FRT	599
T-177/FR	Radio Transmitter	AN/FRT	601
T-180/FR	Radio Transmitter	AN/FRT	603
T-208/U	Radio Transmitter	AN/MRT	963
T-265/FRC-10	Radio Transmitter	AN/FRT	605
T-290/MC through T-297/MC	Carrier Telegraph Transmitter	AN/FGT	305
T-303A/G	Radio Transmitter	AN/TRT	1557
T-341/UC	Carrier Telegraph Transmitter	AN/FCT	211
T-368( )/URT	Radio Transmitter	AN/URT	1927
T-389A/TRC-29	Order Wire Transmitter	AN/TRT	1559
T-409/FRC-30	Radio Transmitter	AN/FRT	607
T-417/GR	Radio Transmitter	AN/GRT	881
T-616/SRT	Radio Transmitting Buoy	AN/BRT	151
TA-31( )/U	Hybrid Circuit Network	AN/TCC	1383
TA-126/GT	Telephone Repeater	AN/GTA	885
TA-182/U	Telegraph-Telephone Signal Converter	AN/GCA	751
TA-255/TT	Hybrid Circuit Network	AN/TCC	1385
TA-269/U	Telephone Terminal	AN/USA	1973
TAB	Transmitting Equipment, 2 KW	AN/FRT	609
TAB-2	Transmitting Equipment, 2 KW	AN/FRT	613
TAB-3 through -5	Transmitting Equipment, 2 KW	AN/FRT	609
TAB-6, -7	Transmitting Equipment, 2 KW	AN/FRT	615
TAG	Radio Telegraph Transmitting Equipment	AN/URT	1929
TAJ, TAJ-1 through -19.	Transmitting Equipment, 500 Watt	AN/SRT	1275
TAQ-4 through -6	Transmitting Equipment, 2 KW	AN/SRT	1287
TAQ-6b	Transmitting Equipment, 2 KW	AN/SRT	1287
TAQ-9, -10	Transmitting Equipment, 2 KW	AN/SRT	1287

Type No.	Item Name	Type	Page
TAR–2	Radio Telegraph Transmitting Equipment	AN/BRT	153
TBA–3	Radio Transmitting Equipment	AN/SRT	1291
TBA–5	Radio Transmitting Equipment	AN/SRT	1291
TBA–6	Radio Transmitting Equipment	AN/SRT	1291
TBA–8	Radio Transmitting Equipment	AN/FRT	617
TBA–9	Radio Transmitting Equipment	AN/SRT	1291
TBA–10	Radio Transmitting Equipment	AN/FRT	617
TBA–11	Radio Transmitting Equipment	AN/FRT	617
TBK–3	Radio Transmitting Equipment	AN/SRT	1295
TBK–4	Radio Transmitting Equipment	AN/URT	1931
TBK–5	Radio Transmitting Equipment	AN/SRT	1295
TBK–6	Radio Transmitting Equipment	AN/FRT	619
TBK–7 through –10	Radio Transmitting Equipment	AN/SRT	1295
TBK–11	Radio Transmitting Equipment	AN/FRT	619
TBK–12 through –14	Radio Transmitting Equipment	AN/SRT	1295
TBK–15	Radio Transmitting Equipment	AN/FRT	619
TBK–16	Radio Transmitting Equipment	AN/FRT	619
TBK–17 through –20	Radio Transmitting Equipment	AN/SRT	1295
TBL–10, –11	Radio Transmitting Equipment	AN/FRT	623
TBM–4	Radio Transmitting Equipment	AN/SRT	1303
TBM–5	Radio Transmitting Equipment	AN/SRT	1305
TBM–6	Radio Transmitting Equipment	AN/FRT	625
TBM–7	Radio Transmitting Equipment	AN/SRT	1307
TBM–8	Radio Transmitting Equipment	AN/FRT	629
TBM–9	Radio Transmitting Equipment	AN/SRT	1309
TBM–10	Radio Transmitting Equipment	AN/FRT	631
TBM–11	Radio Transmitting Equipment	AN/SRT	1311
TBM–12	Radio Transmitting Equipment	AN/SRT	1313
TBN–3	Transmitting Equipment	AN/SRT	1315
TBU	Radio Telegraph Transmitting Equipment	AN/SRT	1317
TBU–1	Radio Telegraph Transmitting Equipment	AN/FRT	633
TBU–2	Radio Telegraph Transmitting Equipment	AN/SRT	1319
TBU–3	Radio Telegraph Transmitting Equipment	AN/FRT	635
TBW	Portable Radio Transmitting Equipment	AN/TRT	1561
TBW–1	Portable Radio Transmitting Equipment	AN/TRT	1563
TBW–2	Portable Radio Transmitting Equipment	AN/TRT	1565
TBW–3	Portable Radio Transmitting Equipment	AN/TRT	1567
TBW–4	Portable Radio Transmitting Equipment	AN/TRT	1569
TBW–5	Portable Radio Transmitting Equipment	AN/TRT	1571
TBX	Portable Radio and Receiving Equipment	AN/PRC	1039
TBX–1	Portable Radio and Receiving Equipment	AN/PRC	1043
TBX–2	Portable Radio and Receiving Equipment	AN/PRC	1047
TBX–3	Portable Radio and Receiving Equipment	AN/PRC	1051
TBX–4	Portable Radio and Receiving Equipment	AN/PRC	1055
TBX–4a	Portable Radio and Receiving Equipment	AN/PRC	1057
TBX–5	Portable Radio and Receiving Equipment	AN/PRC	1061
TBX–6	Portable Radio and Receiving Equipment	AN/PRC	1065
TBX–7	Portable Radio and Receiving Equipment	AN/PRC	1069
TBX–8	Portable Radio Transmitting and Receiving Equipment	AN/PRC	1073
TC–1	Telephone Central Office Set	AN/TTC	1587
TC–2–( )	Telephone Central Office Set	AN/TTC	1589
TC–3	Telegraph Central Office Set	AN/TGC	1413
TC–4	Telephone Central Office Set	AN/TTC	1591
TC–5	Auxiliary Telephone Central Equipment	AN/FTC	749
TC–10–( )	Telephone Central Office Set	AN/TTC	1593
TC–12	Telephone Central Office Set	AN/TTC	1595
TC–16–( )	Reperforator-Teletypewriter Set	AN/TGC	1415
TC–18	Repeater Set	AN/TGC	1417
TC–19	Repeater Set	AN/TCC	1387
TC–21–( )	Telephone Terminal Set	AN/TCC	1389

Type No.	Item Name	Type	Page
TC-22-( )	Telegraph Terminal Set	AN/TCC	1391
TC-23	Repeater Set	AN/TCC	1393
TC-33-( )	Converter Set	AN/TCC	1395
TC-37	Repeater Set	AN/TCC	1397
TCA	Radio Telephone Transmitting Equipment	AN/URT	1933
TCA-1	Radio Transmitter Equipment	AN/GRA	783
TCB	Radio Telephone and Telegraph Transmitting Equipment	AN/FRT	637
TCB-1	Radio Telephone and Telegraph Transmitting Equipment	AN/FRT	639
TCB-2	Radio Telephone and Telegraph Transmitting Equipment	AN/FRT	641
TCC	Radio Telephone and Telegraph Transmitting Equipment	AN/FRT	643
TCC-1	Radio Telephone and Telegraph Transmitting Equipment	AN/FRT	645
TCC-2	Radio Telephone and Telegraph Transmitting Equipment	AN/FRT	647
TCC-3	Radio Telephone and Telegraph Transmitting Equipment	AN/FRT	649
TCC-4	Radio Telephone and Telegraph Transmitting Equipment	AN/FRT	651
TCF	Radio Transmitting Equipment	AN/FRT	653
TCG	Radio Transmitting Equipment	AN/FRT	655
TCG-1	Radio Transmitting Equipment	AN/FRT	657
TCG-2	Radio Transmitting Equipment	AN/FRT	659
TCH	Transmitter and Receiver Equipment	AN/GRC	843
TCJ, TCJ-1	Radio Transmitting Equipment	AN/SRT	1321
TCK	Radio Transmitting Equipment	AN/FRT	661
TCK-1	Radio Transmitting Equipment	AN/FRT	665
TCK-2	Radio Transmitting Equipment	AN/FRT	667
TCK-3	Radio Transmitting Equipment	AN/FRT	667
TCK-4	Radio Transmitting Equipment	AN/FRT	669
TCK-5	Radio Transmitting Equipment	AN/FRT	673
TCK-6	Radio Transmitting Equipment	AN/FRT	675
TCK-7	Radio Transmitting Equipment	AN/FRT	679
TCM	Radio Transmitting Equipment	AN/URT	1935
TCM-1	Radio Transmitting Equipment	AN/URT	1937
TCM-2	Radio Transmitting Equipment	AN/URT	1939
TCN	Radio Transmitting Equipment	AN/URT	1941
TCN-1	Radio Transmitting Equipment	AN/URT	1943
TCP	Radio Telephone Transmitting and Receiving Equipment	AN/SRC	1205
TCP-1	Radio Telephone Transmitting and Receiving Equipment	AN/SRC	1207
TCP-2	Radio Telephone Transmitting and Receiving Equipment	AN/SRC	1209
TCP-3	Radio Telephone Transmitting and Receiving Equipment	AN/SRC	1211
TCR	Radio Telephone Transmitting Equipment	AN/FRT	681
TCS, TCS-1 through -15.	Radio Transmitting and Receiving Equipment	AN/TRC	1527
TCU, TCU-1, -2	Radio Transmitting Equipment	AN/URT	1945
TCY, TCY-1	Portable Emergency Radio Transmitting Equipment	AN/SRT	1323
TCZ	Radio Transmitting Equipment	AN/URT	1947
TCZ-1, -2	Radio Transmitting Equipment	AN/URT	1949
TD-159/U	Multiplexer	AN/TCA	1339
TD-164/TRC	Multiplexer	AN/TRA	1467
TDA	Radio Telegraph Transmitting Equipment	AN/SRT	1325
TDB	Radio Telegraph Transmitting Equipment	AN/SRT	1327
TDD, TDD-1, through -4.	Radio Telephone Transmitting Equipment	AN/FRT	683
TDE, TDE-1	Radio Transmitting Equipment	AN/URT	1951
TDF	Radio Transmitting Equipment	AN/FRT	687
TDG, TDG-1	High Frequency Radio Telephone Transmitting Equipment	AN/TRT	1573
TDH, TDH-2 -4.	Radio Transmitting Equipment	AN/FRT	689
TDK	Emergency Radio Telegraph Equipment	AN/SRT	1329
TDN	Radio Transmitting Equipment	AN/FRT	693
TDN-2 through -4	Radio Transmitting Equipment	AN/FRT	695
TDO	Radio Transmitting Equipment	AN/FRT	699
TDQ	VHF Radio Transmitting Equipment	AN/SRT	1331

Type No.	Item Name	Type	Page
TDT	Radio Transmitting Equipment	AN/TRT	1575
TDZ, TDZ–a	Radio Transmitting Equipment	AN/URT	1955
TEB	Radio Transmitting Equipment	AN/FRT	701
TEC	Radio Transmitting Equipment	AN/FRT	703
TED, TED–1, –2	Radio Transmitting Equipment	AN/URT	1957
TED–3	Radio Transmitting Equipment	AN/URT	1959
TED–7	Radio Transmitting Equipment	AN/URT	1961
TED–8	Radio Transmitting Equipment	AN/URT	1963
TEF	Radio Transmitting Equipment	AN/FRT	705
TEG–1	Radio Communication Transmitting Equipment	AN/FRT	709
TG–5–B	Telegraph Set	AN/PGC	973
TG–7	Printer	AN/TGC	1419
TG–7–A	Printer	AN/TGC	1421
TG–7–B	Teletypewriter	AN/TGC	1423
TG–10, –10–F	Keyer	AN/GGA	753
TG–26	Reperforator Transmitter	AN/FGC	265
TG–27	Reperforator-Transmitter	AN/TGC	1425
TG–37–( )	Teletypewriter	AN/TGC	1427
TH–1/TCC–1	Telegraph Terminal	AN/FCC	203
TH–5/TG	Telegraph Terminal	AN/TGC	1429
TH–7/FG	Telegraph Repeater	AN/FGA	217
TH–8/FG	Telegraph Repeater	AN/FGC	267
TH–9/FG	Telegraph Repeater	AN/FGC	269
TH–21/UC	Telegraph Terminal	AN/FGA	219
TH–29/UG	Repeater Telegraph	AN/FCA	165
TN–233/SRC	Transmission Line Tuner	AN/SRA	1177
TN–273/URT	Radio Frequency Tuner	AN/ARA	23
TP–14	Telephone Repeater	AN/GTC	887
TPA	High-Frequency Power Amplifier Equipment	AN/GRA	367
TT–4( )/TG	Teletypewriter	AN/TGC	1431
TT–5/FG	Teletypewriter	AN/FGC	271
TT–6/FG	Teletypewriter	AN/FGC	273
TT–7( )/FG	Teletypewriter	AN/FGC	275
TT–8/FG	Teletypewriter	AN/FGC	277
TT–10/FG	Teletypewriter	AN/FGC	279
TT–15/FG	Reperforator	AN/FGC	281
TT–16/FG	Reperforator	AN/FGC	283
TT–17/FG	Reperforator	AN/FGC	285
TT–21/FG	Transmitter-Distributor	AN/FGC	287
TT–23/SG, –23B/SG	Teletype Panel	AN/SGA	1111
TT–25/FG	Transmitter Distributor	AN/FGA	221
TT–26/FG	Transmitter Distributor	AN/FGT	307
TT–41/TXC–1B, TT–41A/TXC–1B, TT–41B/TXC–1B.	Facsimile Transceiver	AN/TXC	1623
TT–45/FG	Reperforator	AN/FGR	299
TT–46/FG	Reperforator	AN/FGR	299
TT–47/FG	Teletypewriter	AN/UGC	1639
TT–47A/UG	Teletypewriter	AN/UGC	1641
TT–48/UG	Teletypewriter	AN/UGC	1639
TT–48A/UG	Teletypewriter	AN/UGC	1641
TT–55/MGC	Teletypewriter	AN/MGC	893
TT–57/FG	Transmitter-Distributor	AN/FGT	309
TT–61/FG	Teletypewriter	AN/TGC	1433
TT–69/UG	Teletypewriter	AN/UGC	1645
TT–69A/UG	Teletypewriter	AN/UGC	1647
TT–70/UG	Teletypewriter	AN/UGC	1645
TT–70A/UG	Teletypewriter	AN/UGC	1647
TT–71/UG	Teletypewriter Printer-Projector	AN/FGQ	293
TT–92/FG	Teletypewriter Reperforator	AN/FGR	301

Type No.	*Item Name*	*Type*	*Page*
TT–102/FG	Teletypewriter Reperforator-Transmitter	AN/FGC	289
TT–103/FG	Teletypewriter Reperforator-Transmitter	AN/FGC	289
TT–107/FG	Teletypewriter Reperforator	AN/FGR	303
TT–128A/UG	Teletypewriter	AN/UGC	1649
TT–129A/UG	Teletypewriter	AN/UGC	1649
TT–130A/UG	Teletypewriter	AN/UGC	1651
TT–131A/UG	Teletypewriter	AN/UGC	1651
TT–143/UG	Teletypewriter Distributor-Transmitter	AN/UGT	1657
TT–171/UG	Teletypewriter	AN/UGR	453
TT–187/UG	Teletypewriter Distributor-Transmitter	AN/UGT	1659
TT–192/UG	Teletypewriter Reperforator	AN/UGR	1655
UF	Portable Carrier Control System	AN/TCA	1341
UG	Line Terminal Equipment	AN/TCC	1399
UM	Loran Switching Equipment	AN/FRA	369
UN	Carrier Control System	AN/FCC	205
UP	Two-Tone Carrier Control System	AN/FCC	209

X

XTR–442–C	Automatic Transmitter for Perforated Tape	AN/FRA	371

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