DEPARTMENT OF THE ARMY TECHNICAL MANUAL

DEPARTMENT OF THE AIR FORCE TECHNICAL ORDER

TM 11-5805-243-12

TO 31W1-2PT-421

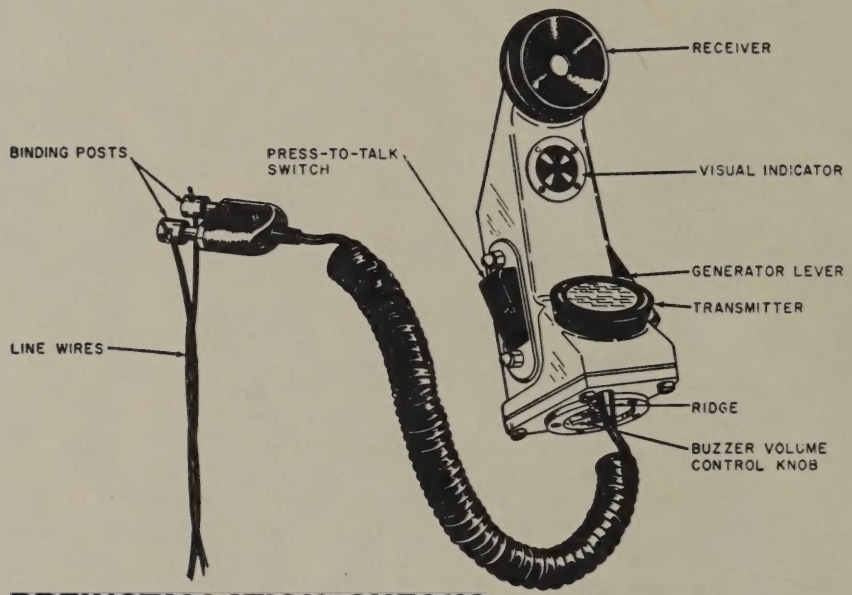
OPERATION AND ORGANIZATIONAL MAINTENANCE

TELEPHONE SET TA-1/PT

DEPARTMENTS OF THE ARMY AND THE AIR FORCE

SEPTEMBER 1959

CONDENSED OPERATING INSTRUCTIONS FOR TELEPHONE SET TA-1/PT



PREINSTALLATION CHECKS

1. IF NO BUZZER SOUND IS DESIRED, ROTATE BUZZER VOLUME CONTROL KNOB TO "OFF" POSITION (IN LINE WITH RIDGE).
2. IF BUZZER SOUND IS DESIRED, ROTATE BUZZER VOLUME CONTROL KNOB TO "LOUD" POSITION.
3. IF VISUAL INDICATOR SHOWS WHITE MARKINGS, PRESS PRESS-TO-TALK SWITCH TO RESET INDICATOR.

CONNECTIONS

4. REMOVE INSULATION FROM ENDS OF LINE WIRES.
5. DEPRESS BINDING POST CAPS, INSERT BARED WIRES IN SLOTS, AND RELEASE CAPS.

OUTGOING CALL

6. PRESS GENERATOR LEVER RAPIDLY AND RELEASE.
7. LISTEN FOR DISTANT PARTY. BE SURE PRESS-TO-TALK SWITCH IS NOT DEPRESSED WHEN LISTENING.
8. WHEN READY TO TALK, PRESS PRESS-TO-TALK SWITCH FIRMLY AND SPEAK DIRECTLY INTO TRANSMITTER.

INCOMING CALL

9. WHEN BUZZER SOUNDS, OR WHEN VISUAL INDICATOR SHOWS WHITE MARKINGS, PRESS PRESS-TO-TALK SWITCH AND ANSWER CALLING PARTY.
10. RELEASE PRESS-TO-TALK SWITCH TO LISTEN TO DISTANT PARTY.

ADJUSTING BUZZER VOLUME

11. REQUEST BUZZER SIGNAL FROM DISTANT PARTY.
12. ROTATE BUZZER VOLUME CONTROL KNOB FOR DESIRED VOLUME.

TM5805-243-12-10

TECHNICAL MANUAL
No. 11–5805–243–12
TECHNICAL ORDER
No. 31W1–2PT–421

DEPARTMENTS OF THE ARMY
AND THE AIR FORCE

WASHINGTON 25, D. C., *14 September 1959*

TELEPHONE SET TA–1/PT

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*** This manual supersedes so much of TM 11–2153, 20 June 1956, including C 1, C 2, 7 July 1958, and C 3, 17 December 1958, as is applicable to operation and organizational maintenance of the equipment.**

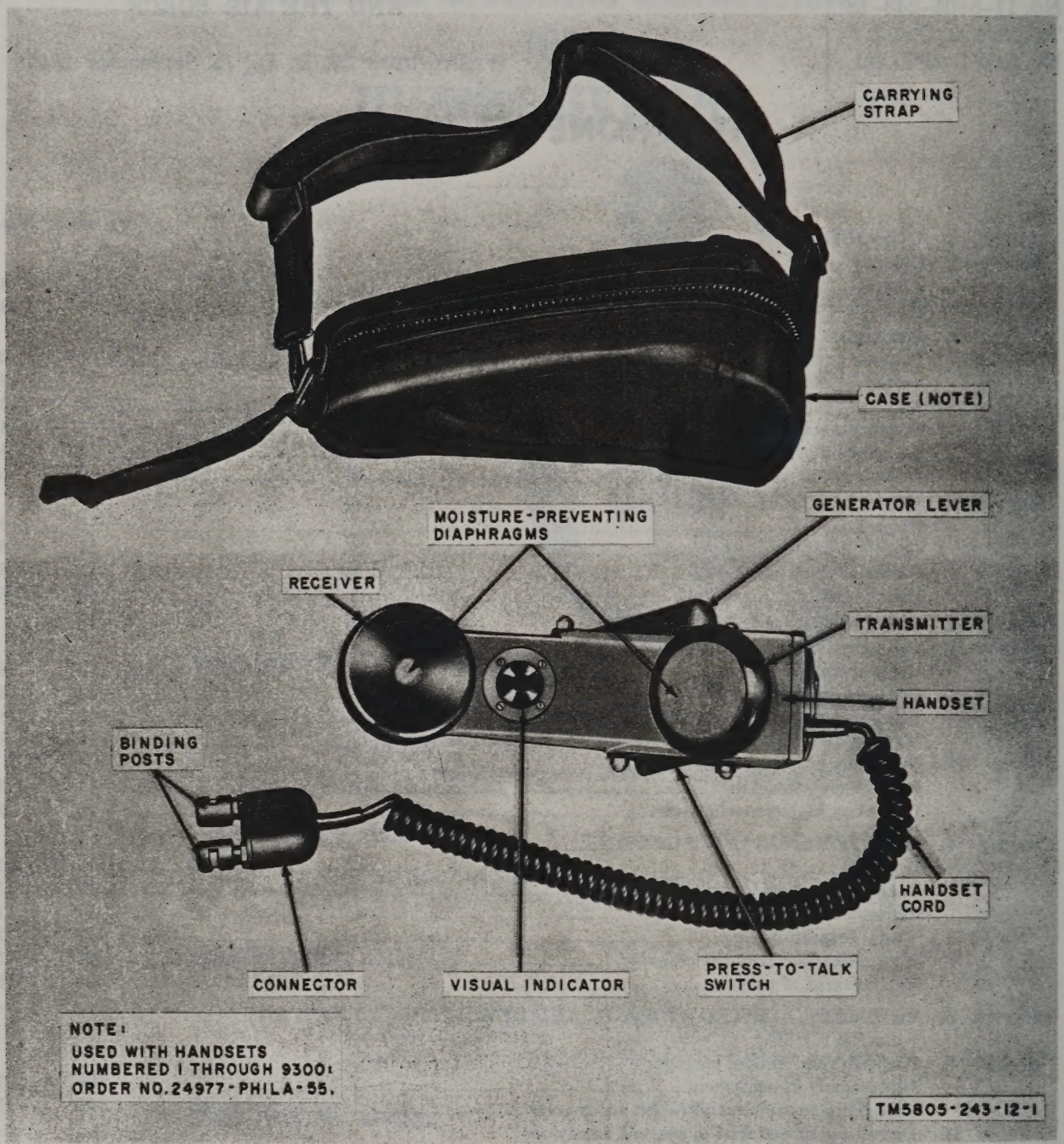


Figure 1. Telephone set TA-1/PT.

CHAPTER 1
INTRODUCTION

Section I. GENERAL

1. Scope

a. This manual describes Telephone Set TA–1/PT and covers its installation, operation, and first and second echelon maintenance. It includes instructions for operation under usual and unusual conditions, cleaning and inspection of the equipment, and replacement of parts available to second echelon maintenance personnel.

b. Apendix II contains the maintenance allocation chart.

c. The first and second echelon repair parts and special tools lists are in TM 11–5805–243–12P.

2. Forms and Records

a. Unsatisfactory Equipment Reports.

(1) Fill out and forward DA Form 468 (Unsatisfactory Equipment Report) to the Commanding Officer, U. S. Army Signal Equipment Support Agency, Fort Monmouth, N. J., as prescribed in AR 700–38.

(2) Fill out and forward AF TO Form 29 (Unsatisfactory Report) to the Commander, Air Materiel Command, Wright-Patterson Air Force Base, Ohio, as prescribed in AF TO 00–35D–54.

b. Report of Damaged or Improper Shipment. Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700–58 (Army), Navy Shipping Guide, Article 1850–4 (Navy), and AFR 71–4 (Air Force).

c. Preventive Maintenance Forms. Prepare DA Form 11–240 (figs. 6 and 7), (Maintenance Check List for Signal Equipment (Telephone Set, Handset, Headset, and Chestset)) in accordance with instructions on the form.

d. Parts List Form. Forward DA Form 2028 (Recommended Changes to DA Technical Manual Parts List or Supply Manuals 7, 8, or 9) direct to the Commanding Officer, U. S. Army Signal Equipment Support Agency, Fort Monmouth, N. J., with comments on parts listings.

e. Comments on Manual. Forward all other comments on this publication direct to the Commanding Officer, U. S. Army Signal Publications Agency, Fort Monmouth, N. J.

Section II. DESCRIPTION AND DATA

3. Purpose and Use

Telephone Set TA–1/PT is a lightweight, sound-powered field telephone for use on field wire lines in forward areas. It can be used for communication with field telephones or local battery switchboards.

4. Technical Characteristics

Voice transmission range using Field Wire WD–1/TT	Approximately 4 miles.
Signaling range using Field Wire—WD–1/TT	Approximately 4 miles.
Frequency range	300 to 4,000 cps.
Signaling voltage	65 to 80 volts ac, 20 cps.
Operating temperature limits	−40° to +131° Fahrenheit.

5. Table of Components
(figs. 1, 2, and 3)

The components of Telephone Set TA–1/PT are listed in the following table:

Quantity	Item	Dimensions (in.)			Unit weight
		Height	Depth	Width	
1	Handset, including 1 Earphone Element TA–118/PT 1 Microphone Element TA–121/PT	9 (less cord)	4	3¼	2¾ lb
1	Telephone set case (rubberized) with carrying strap (fig. 1).	10	4¼	3½	14 oz
	or				
1	Telephone set case (plastic) with carrying strap fig. 2).	9⅝	3 9/16	5⅛	11½ oz
	or				
1	Telephone set case (plastic) with carrying strap (fig. 3).	10	4¼	3½	9 oz

6. Common Names

Item	Common name
Telephone Set TA–1/PT	Telephone set
Earphone Element TA–118/PT	Receiver element
Microphone Element TA–121/PT	Transmitter element
Telephone set case	Case

7. Description of Telephone Set

Telephone Set TA–1/PT is a sound-powered field telephone, consisting of a handset and a waterproof case with a carrying strape. Some sets are provided with a rubberized zipper-closing case (fig. 1); others are provided with a plastic case with a hinged cover (figs. 2 and 3). A visual indicator is mounted in the handset, near the receiver. A buzzer volume control

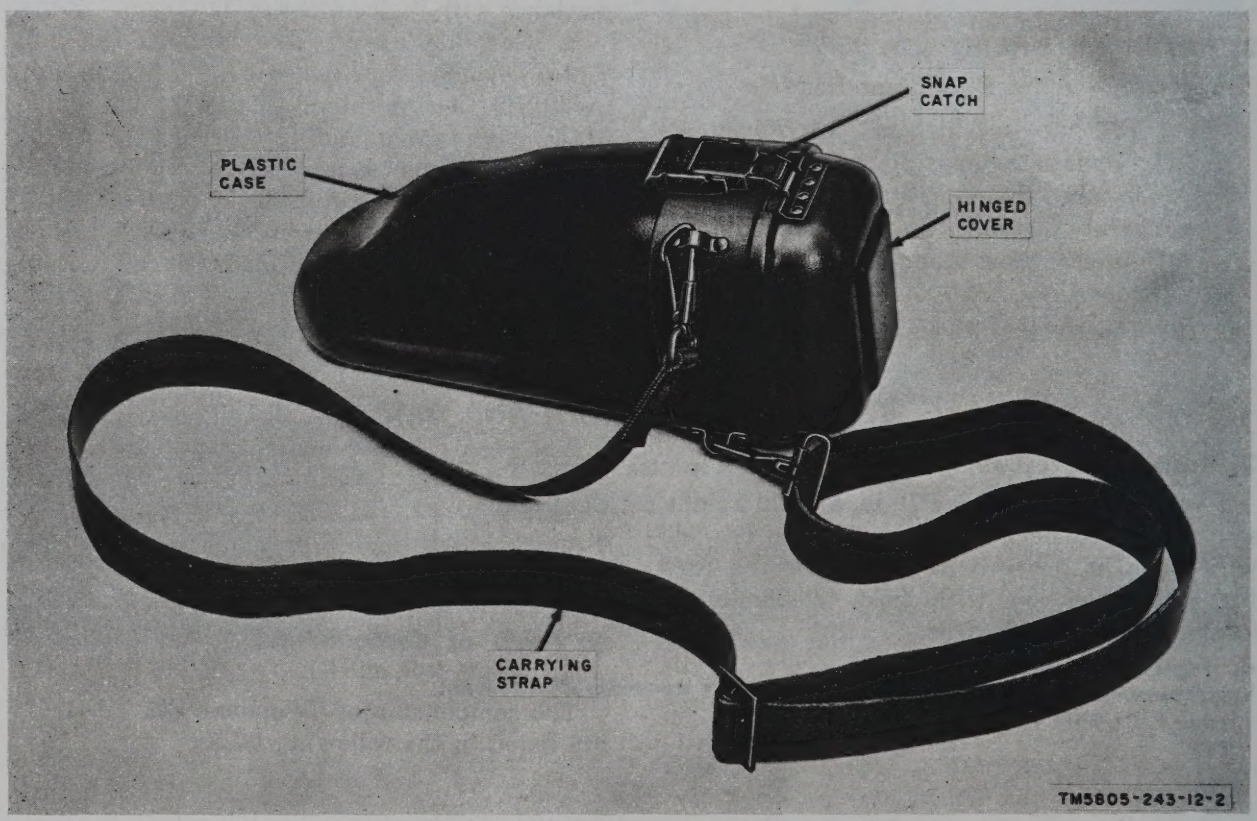


Figure 2. Plastic carrying case for Telephone Set TA–1/PT (Order No. 24977–Phila–55 (serial numbers 9301 and higher), and Orders No. 38659–Phila–56 and No. 21101–Phila–57).

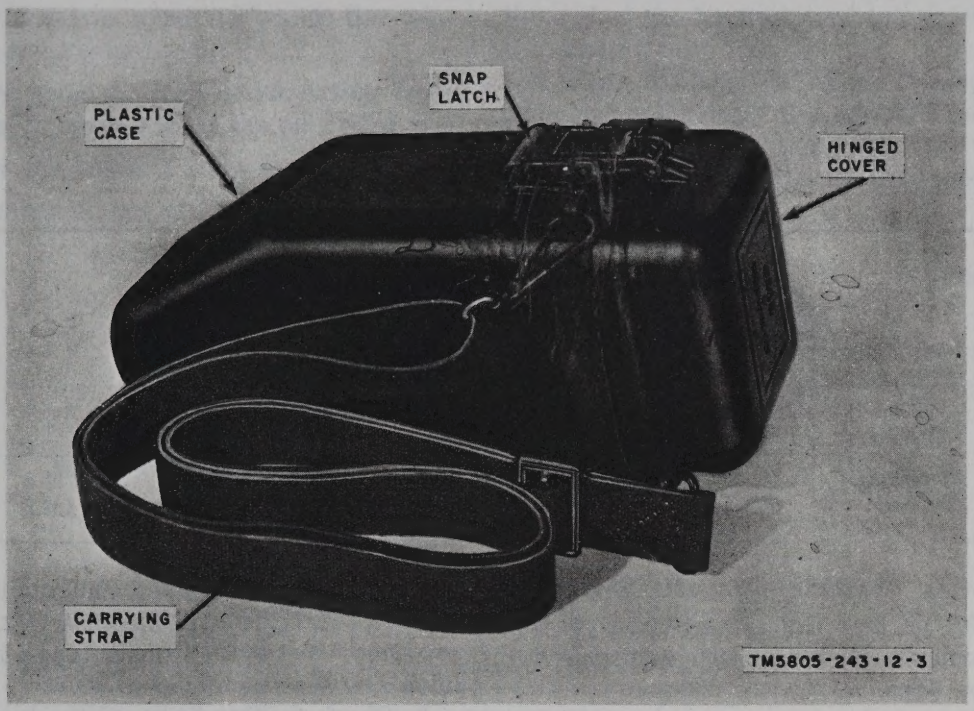


Figure 3. Plastic carrying case for Telephone Set TA–1/PT (Order No. 19629–Phila–58).

knob and a belt clip are at the bottom of the handset (fig. 5). A coiled handset cord enters the bottom of the handset; the other end of the handset cord terminates in a connector fitted with two rubber-covered binding posts.

8. Differences in Models

Telephone Sets TA–1/PT, procured on order No. 24977–Phila–55, 38695–Phila–56, 21101–Phila–57, and 19629–Phila–58, are similar except for certain modifications to improve operational features. The external differences are listed below.

Item	Order No.			
	24977-Phila-55	38695-Phila-56	21101-Phila-57	19629-Phila-58
Case	Rubberized, with zipper-closing (serial numbers 1 through 9300). Plastic, with hinged cover (serial numbers 9301 and higher).	Plastic, with hinged cover.	Plastic, with hinged cover.	Plastic, with hinged cover.
Telephone transmitter cap	Metal	Metal	Metal	Plastic
Telephone transmitter cushion (rubber).	Used	Used	Used	Not used
Telephone receiver cap	Metal	Metal	Metal	Plastic
Telephone receiver cushion (rubber).	Used	Used	Used	Not used

CHAPTER 2
INSTALLATION

9. Unpacking
(fig. 4)

a. Packaging Data.

Packing method	Sets per box	Height (in.)	Width (in.)	Depth (in.)	Volume (cu ft)	Weight (lb)
Domestic	12	11	18	15¾	1.81	55.2
Export	36	15¾	33	18	5.42	194.5

b. Removing Contents, Domestic Shipment.

(1) Cut or tear the sealing tape on the domestic packing case, and open the top flaps.

(2) Remove the cartons that contain the individual telephone sets.

(3) Open an individual carton by cutting or tearing the sealing tape, and remove the telephone set and the technical manual from the carton.

(4) Open the case and remove the handset (fig. 1).

c. Removing Contents, Export Shipment.

(1) Cut and remove the metal straps (if used).

(2) Remove the nails from the export packing case cover and remove the cover.

(3) Cut or tear open the waterproof liner.

(4) Remove the cartons that contain the individual telephone sets.

(5) Complete the unpacking as indicated in *b*(3) and (4) above.

10. Checking Unpacked Equipment

Check the equipment against the packing list. When no packing list accompanies the equipment, use the table of components (par. 5) as a general check. If the equipment has been damaged, refer to paragraph 2. When a telephone set is removed from its individual carton, make the following checks:

a. Check the condition of the case and carrying strap. If a rubberized case (fig. 1) is provided, check for proper functioning of the slide fastener. If a plastic case (fig. 2 or 3) is provided, check for proper operation of the latch and seating of the cover.

b. Check the condition of the handset cord; remove any kinks found in the cord. Check the binding posts (fig. 1) for proper spring action.

c. Check the rubber covers on the generator lever, the press-to-talk switch, and the binding posts (fig. 1) for signs of deterioration.

d. Check the press-to-talk switch and the generator lever for proper action by pressing in and releasing them. They should spring out quickly when released.

e. Check the buzzer volume control knob (fig. 5) for ease of rotation.

f. Check the belt clip for firm spring pressure against the back of the handset.

11. Preinstallation Check

Make the following checks before connecting the handset to the line:

a. If the visual indicator shows white markings (fig. 1), depress the press-to-talk switch to reset the indicator to the nonoperated position.

b. If no sound is desired from the buzzer, rotate the buzzer volume control knob to the OFF (extreme clockwise) position in line with the off-indicating ridge (fig. 5).

12. Installation

To install the telephone set, proceed as follows:

a. Locate the two wires to which the telephone set is to be connected.

b. Remove about ½ inch of insulation from the end of each conductor of the pair of wires.

c. Remove the handset from the case.

d. Press down on one of the binding posts on the end of the handset cord to open the slot in the binding post (fig. 1).

e. Place the bare end of one conductor in the open slot and release the pressure on the binding post. Be sure that the wire is firmly clamped in the slot. Repeat this procedure for the other conductor.

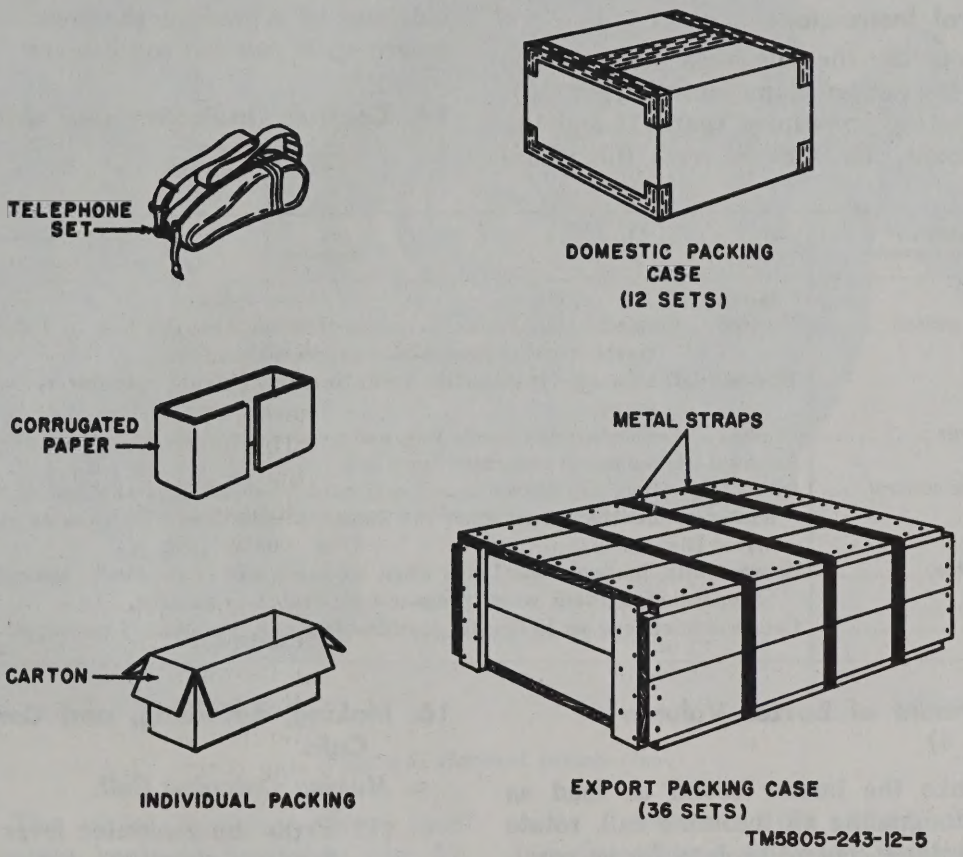


Figure 4. Typical packaging.

CHAPTER 3
OPERATING INSTRUCTIONS

Section I. OPERATION UNDER USUAL CONDITIONS

13. General Instructions

Do not operate the telephone set until the function of the indicator, the controls (par. 14), and all operating procedures (pars. 15 and 16) are understood. Be sure to reset the visual indicator by depressing the press-to-talk switch before operating the equipment.

14. Controls, Indicator, and Connector (figs. 1 and 5)

Control, indicator, or connector	Function
	Sw Pos — *Action*
Press-to-talk switch	Pressed —Connects transmitter to line so that operator can talk to distant party; also resets visual indicator to nonoperated position.
	Released—Disconnects transmitter from line and permits operator to listen to distant party.
Generator lever	Pressed —Connects generator to line, and rotates generator to signal distant party.
	Released—Disconnects generator from line.
Buzzer volume control	In OFF position, the buzzer is not activated when an incoming call is received. The buzzer volume increases when the buzzer volume control is rotated in direction by arrow (fig. 5).
Visual indicator	Shows white, luminous markings when incoming call is received. Indicator is reset to nonoperated position when press-to-talk switch is pressed.
Connector	Connects telephone set to line for transmission and reception of messages.

15. Adjustment of Buzzer Volume (fig. 5)

a. To make the buzzer sound as loud as possible for signaling an incoming call, rotate the buzzer volume control knob as far as possible in the LOUD direction (counterclockwise) indicated on the bottom of the handset.

b. To adjust the buzzer to an intermediate volume, proceed as follows:

(1) Depress the generator lever to call the distant party or switchboard operator (par. 16*a*(1) and (2)) and ask for a buzzer signal.

(2) When the buzzer sounds, rotate the buzzer volume control knob until the desired volume is obtained.

c. When no sound is desired from the buzzer, rotate the buzzer volume control knob to the OFF position (fig. 5).

16. Making, Receiving, and Completing Calls

a. Making Outgoing Call.

(1) Press the generator lever (fig. 1) in firmly to signal the distant party, and then release the lever. Be sure that the press-to-talk switch is not depressed.

(2) Listen for the distant party to answer.

(3) When ready to talk, press the press-to-talk switch in firmly and speak directly into the transmitter.

(4) When listening to the distant party, release the press-to-talk switch.

b. Receiving Incoming Call.

(1) An incoming call is indicated as follows:

(*a*) The buzzer sounds, except when the buzzer volume control is set in the OFF position (par. 11*b*).

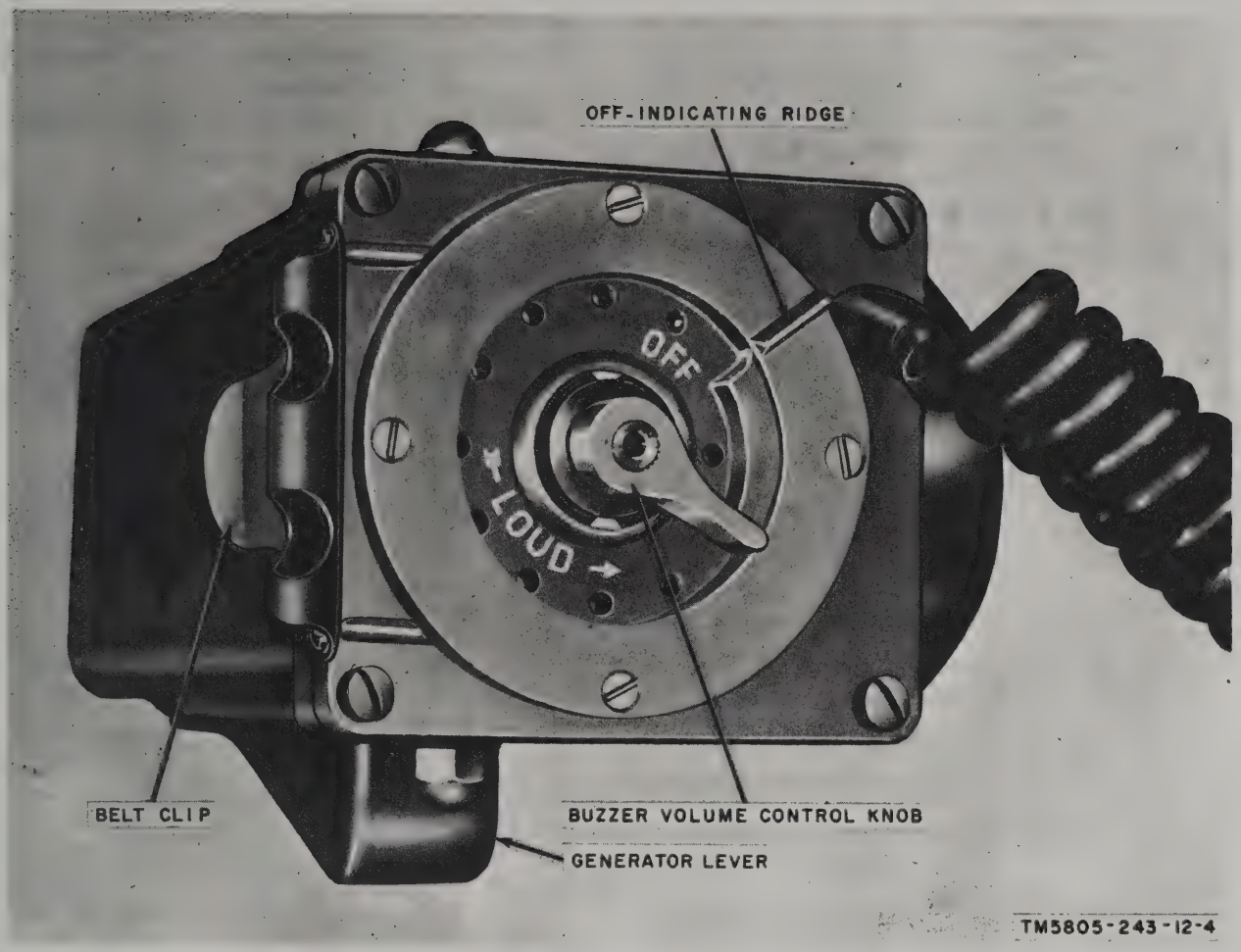


Figure 5. Handset, bottom view.

(*b*) The visual indicator shows four white luminous markings (fig. 1) that remain visible until the press-to-talk switch is depressed.

(2) To answer the incoming call and listen to the distant party, follow the procedure in *a*(3) and (4) above.

c. Completing Call on Switchboard Line. When connected to a switchboard line, depress the generator lever rapidly several times, when the conversation is ended, to signal the switchboard operator that the call is completed.

Section II. OPERATION UNDER UNUSUAL CONDITIONS

17. Emergency Operation (fig. 1)

If the telephone set is not operating properly and an emergency arises before repairs can be made, follow the procedures below.

a. If the transmitter is out of order, speak directly into the receiver. Do *not* press the press-to-talk switch. Listen at the receiver in the normal manner.

b. If the receiver is out of order, speak into the transmitter in the normal manner. Listen at the transmitter and keep the press-to-talk switch depressed while listening as well as transmitting.

18. Operation in Extreme Climates

The precautions indicated in *a* through *c* below should be followed when the telephone set is operated in an extreme climate.

a. Operation in Extremely Cold Climates.

(1) Extreme cold reduces the transmission efficiency of the handset. Protect

the handset from extreme cold as much as possible.

(2) The headset cord, the rubber covers on the generator lever and on the press-to-talk switch, and the rubberized case(when used) will become stiff in extreme cold; handle the telephone set carefully to prevent these items from cracking or breaking.

(3) If the moisture-preventing diaphragms are not in place on the transmitter or receiver, or if they are damaged, remove any moisture or ice from the affected part and cover the transmitter or receiver with a clean cloth.

b. Operation in Hot, Dry, Climates.

(1) Protect the telephone set from dust, dirt, and direct sunlight.

(2) Keep the case closed to keep dust and dirt out of the equipment.

c. Operation in Warm, Damp, Climates.

(1) Keep all exterior parts of the telephone set free from moisture and fungus. Clean with a lint-free cloth.

(2) If the moisture-preventing diaphragms are not in place on the transmitter or receiver, or if they are damaged, follow the procedure in *a*(3) above.

CHAPTER 4

MAINTENANCE INSTRUCTIONS

19. General

The procedures outlined in this chapter are to be performed by the operator or organizational maintenance personnel. Operator's maintenance consists of preventive maintenance (par. 21), visual inspection (par. 22, and checking equipment performance (par. 23). Organizational maintenance of the equipment is limited to preventive maintenance (par. 21), checking equipment performance (par. 23), and minor repairs (par. 24).

20. Tools and Material Required

The tools and material required for operator's and organizational maintenance are as follows:

a. Screwdriver TL–455/U.
b. Tool Equipment TE–33.
c. Lint-free cloth.

21. Preventive Maintenance

a. DA Form 11–240. DA Form 11–240 (figs. 6 and 7) is a preventive maintenance checklist to be used by the operator and organizational maintenance personnel. Items not applicable to the telephone set are lined out in the figures. References in the ITEM block in the figures are to paragraphs that contain additional maintenance information pertinent to the particular item. Instructions for the use of the form appear on the form.

b. Items. The information shown below supplements DA Form 11–240. The item numbers correspond to ITEM numbers on the form.

Item	Maintenance procedures
1	Remove dirt and dust from the inside of the telephone set case.
3	Inspect the buzzer volume control for ease of rotation.
5	Inspect the moisture-preventing diaphragms on the transmitter and receiver for good condition.
7	Inspect the belt clip for tight spring action.
8	Inspect the rubberized case (if provided) for tears or a broken zipper. Inspect the plastic case for cracks, a broken hinge, or improperly seated cover.
10	Inspect the binding posts for tight spring action.

22. Visual Inspection

Inspect the telephone set (fig. 1) for damaged or excessively worn exterior parts.

a. When the equipment fails to perform properly, check the items listed below.

(1) Conductors poorly connected to binding posts.

(2) Buzzer volume control knob turned to off.

(3) Generator lever depressed instead of press-to-talk switch.

b. If the above checks do not locate the trouble, proceed to the equipment performance checklist (par. 23).

23. Equipment Performance Checklist

a. General. The equipment performance checklist provides a procedure for systematically checking equipment performance. All corrective measures that the operator or the organizational maintenance man can perform are given in the *Corrective measures* column. When using the checklist, start at step 1 and follow each step in order. If the corrective measures indicated do not repair the equipment, troubleshooting is required by higher echelon. Note on the repair tag how the equipment performed and the corrective measures taken. Perform the procedures indicated in *b* below.

MAINTENANCE CHECK LIST FOR SIGNAL EQUIPMENT
TELEPHONE SET, HANDSET, HEADSET AND CHESTSET
(AR 750-625)

EQUIPMENT NOMENCLATURE

TELEPHONE SET TA-1/PT

EQUIPMENT SERIAL NUMBER

1001

INSTRUCTIONS

This form may be used for a period of one month by using the correct dates and weeks of the month. It is to be used as a Preventive Maintenance check list for Signal equipment in actual use, or for a check on equipment prior to issue.

1. For detailed Preventive Maintenance instructions see:
   a. The Technical Manual *(in TM 11 series)* for the equipment. *(See DA Pamphlet Number 310-4)*
   b. The Supply Bulletin *(SB 11-100 series)* for the equipment. *(See DA Pamphlet Number 310-4)*
   c. The Department of the Army Lubrication Order. *(See DA Pamphlet Number 310-4)*

2. The following action will be taken by either the Communications Officer/ Chief for 1st echelon, or the Inspector for higher echelon:
   a. Enter Equipment Nomenclature and Serial Number.
   b. Strike out items that do not apply to the equipment.

3. Operator/Inspector will enter in the columns entitled CONDITION, on the proper line, a notation regarding the condition, using symbols specified under LEGEND.

4. After operator completes each daily inspection he will initial over the appropriate dates under "Daily Condition for Month", then return form to his supervisor.

FOLD

TYPE OF INSPECTION

OPER-ATOR	2/3 ECH-ELON	DATE	SIGNATURE
✓		7 AUG. 1959	F. James
	✓	7 AUG. 1959	F. Williams

4

DA FORM 1 MAY 57 11-240

REPLACES DA FORMS 11-240, 1 SEP 55 AND 11-241, 1 OCT 55, WHICH ARE OBSOLETE.

TM5805-243-12-6

Figure 6. DA Form 11-240, pages 1 and 4.

LEGEND for marking conditions:
Satisfactory, ✓.
Adjustment, Repair or Replacement required, X.
Defect corrected (X).

DAILY CONDITION FOR MONTH OF AUGUST 1959

NO.	DAILY ITEM	1 17	2 18	3 19	4 20	5 21	6 22	7 23	8 24	9 25	10 26	11 27	12 28	13 29	14 30	15 31	16	2D 3D ECHELON
1.	CLEAN DIRT AND MOISTURE FROM EXPOSED SURFACES OF CASES, ~~HOUSINGS~~, CORDS, HANDSETS, TRANSMITTERS, RECEIVERS, ETC. PAR. 21b	✓	✓	✓	✓	✓	✓	✓										✓
2.	INSPECT ~~SWITCH HOUSING AND~~ PUSH-TO-TALK SWITCHES FOR BINDING OR FAULTY ACTION. PAR. 10d	✓	✓	✓	✓	✓	✓	✓										✓
3.	INSPECT ~~GAIN~~ CONTROLS FOR BINDING, SCRAPING AND/OR EXCESSIVE LOOSENESS. PAR. 21b	✓	✓	✓	✓	✓	✓	✓										✓
4.	CHECK FOR NORMAL OPERATION. BE ALERT FOR UNUSUAL PERFORMANCE OR CONDITION. PAR. 16	✓	✓	✓	✓	✓	✓	✓										✓

WEEKLY	CONDITION EACH WEEK 1ST	2D	3D	4TH	5TH	2D 3D ECH
5. INSPECT SETS FOR BREAKS, CRACKS, DAMAGED FINISHES, LOOSE OR CROSS THREADED CAPS, AND LOOSE TRANSMITTER AND RECEIVER ELEMENTS. PAR. 21b	✓					✓
6. INSPECT CORDS FOR CUTS, BREAKS, FRAYING AND DETERIORATION.	✓					✓
7. INSPECT HOUSINGS FOR BREAKS, CRACKS, DAMAGED FINISHES, RUST AND CORROSION. PAR. 21b	✓					✓
8. INSPECT CANVAS ~~AND LEATHER~~ CARRYING CASES FOR FUNGUS, TEARS, FRAYING, BROKEN ZIPPERS ~~AND SNAP FASTENERS~~. PAR. 21b	X					X
9. INSPECT ~~PLUGS, JACKS AND~~ CONNECTORS FOR SNUG FIT AND GOOD CONTACTS.	✓					✓
10. INSPECT FOR BROKEN OR INOPERATIVE BINDING POSTS. PAR. 21b	✓					✓
11. ~~INSPECT BATTERY COMPARTMENTS FOR DIRT, MOISTURE AND CORROSION.~~						

ADDITIONAL ITEMS FOR 2D AND 3D ECHELON INSPECTIONS	CONDITION
12. INSPECT INTERIOR OF HOUSINGS AND CARRYING CASES FOR DIRT, MOISTURE, FUNGUS AND CORROSION.	✓
13. INSPECT INTERIOR WIRING FOR ABRASION, PROPER PLACEMENT, BROKEN OR LOOSE CONNECTIONS.	✓
14. INSPECT AND TIGHTEN ANY LOOSE ASSEMBLY AND MOUNTING SCREWS.	✓
15. INSPECT TERMINAL BLOCKS FOR LOOSE CONNECTIONS, CRACKS OR BREAKS.	✓
16. INSPECT GASKETS ~~AND BUSHINGS~~ FOR WEAR OR DAMAGE.	✓
17. ~~REMOVE ALL BATTERIES BEFORE STORING OR SHIPPING EQUIPMENT.~~	

IF DEFICIENCIES NOTED ARE NOT CORRECTED DURING THE INSPECTION, INDICATE ACTION TAKEN FOR CORRECTION. *(Continue on page 4, if more space is needed)*

ITEM 8. BROKEN HINGE ON CARRYING CASE.
EQUIPMENT TURNED IN FOR HIGHER ECHELON REPAIR.

2 3

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TM5805-243-12-7

Figure 7. DA Form 11-240, pages 2 and 3.

b. Checklist.

	Item No.	Item	Action or condition	Normal indication	Corrective measure
PREPARATORY	1	Binding posts	Connect incoming field telephone or switchboard lines to binding posts (par. 12).	Wires are held securely	Higher echelon repair required.
	2	Buzzer volume control knob.	Rotate in LOUD direction (counterclockwise) as far as possible.	Buzzer volume control knob moves freely.	Higher echelon repair required.
	3	Visual indicator	If in operated position, press press-to-talk switch in fully.	Visual indicator is reset to nonoperated position.	Higher echelon repair required.
START	4	Signaling circuit	Press generator lever rapidly and release (press-to-talk switch not operated).	Generator lever springs out rapidly when released.	Higher echelon repair required.
				Called telephone buzzes, or switchboard signal operates.	Higher echelon repair required.
EQUIPMENT PERFORMANCE	5	Voice receiving circuit	Distant party answers signal ((item 4) press-to-talk switch not operated).	Distant party is heard clearly in receiver.	Ask distant party to check his equipment.
			Distant party answers signal (item 4) by buzzer rather than voice.		Higher echelon repair required.
					Ask distant party to signal by buzzer if he can hear message. If buzzer sounds, ask distant party to check his equipment or use another telephone set, if available. If distant party still cannot be heard, turn in the telephone set for higher echelon repair.
	6	Voice transmission circuit.	Press press-to-talk switch in fully and speak into transmitter.	Press-to-talk switch springs out rapidly when released.	Higher echelon repair required.
				Distant party hears transmission clearly.	Higher echelon repair required.
	7	Buzzer and visual indicator.	Distant party operates generator to signal telephone set under test.	Buzzer sounds and visual indicator shows four white luminous markings.	Higher echelon repair required.
			Press press-to-talk switch in fully.	Visual indicator is reset to nonoperated position.	Higher echelon repair required.
	8	Buzzer volume control	Rotate buzzer volume control knob from LOUD (extreme counterclockwise) position to OFF (extreme clockwise) position while distant party sends buzzer signal.	Buzzer volume decreases from loud sound to no sound.	Higher echelon repair required.

	Item No.	Item	Action or condition	Normal indication	Corrective measure
STOP	9	Binding posts.....	Disconnect incoming field telephone or switchboard lines from binding posts.	Binding post cap springs out when lines are disconnected.	Higher echelon repair required.

24. Replacement of Parts (fig. 8)

a. Receiver Cushion or Transmitter Cushion.

Note. Not used on order No. 19629–Phila–58.

(1) Hold the handset (5) firmly in one hand.

(2) Place two fingers at the rear edge of the cushion (1) or (1d) and pull the cushion away from the handset.

(3) Hold the replacement cushion, with the lip facing outward, in the palm of one hand and press the cushion against the receiver cap (9) or the transmitter cap (2).

(4) Press around the edge of the cushion to insure a tight fit.

b. Receiver Cap or Transmitter Cap.

(1) Remove the cushion ((2) above, except on order No. 19629–Phila–58).

(2) Hold the handset so that the visual indicator (6) is turned upward. Turn the receiver cap (9) or the transmitter cap (2) counterclockwise and remove it from the handset.

Caution: **Remove the caps carefully so that the receiver element (7), the transmitter resonator (4), and the transmitter element (not shown (beneath the transmitter resonator)), do not fall out of the handset.**

(3) Remove the moisture-preventing diaphragm (3) or (8) from the receiver cap or the transmitter cap.

(4) Insert the moisture-preventing diaphragm inside the replacement cap.

Note. Insert the moisture-preventing diaphragm so that the attached gasket will press against the receiver element (7) or the transmitter resonator (4) when the cap is replaced on the handset. The moisture-preventing diaphragms are *not* the same size.

(5) Replace the receiver cap or the transmitter cap on the handset.

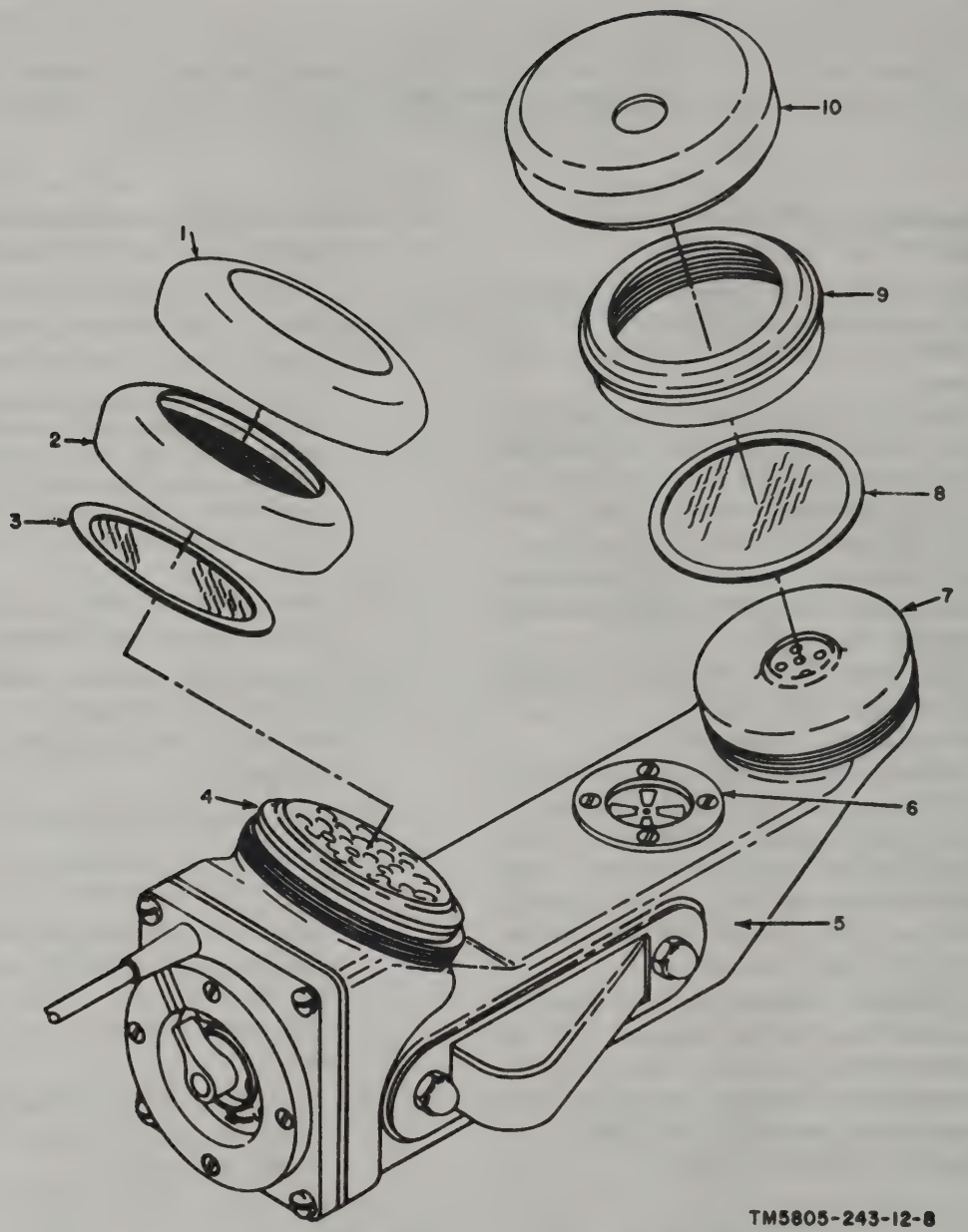
(6) Replace the receiver cushion (10) or the transmitter cushion (1 *a*(3) and (4) above, except on order No. 19629–Phila–58)).

c. Moisture-Preventing Diaphragh.

(1) Perform the procedures indicated in *b*(2) and (3) above.

(2) Insert the replacement moisture-preventing diaphragm (3) or (8) inside the receiver cap or the transmitter cap, and replace the cap on the handset.

(3) Replace the receiver cushion or transmitter cushion (except on order No. 19629–Phila–58).



1 Transmitter cushion (E30 (not provided on order No. 19629–Phila–58))
2 Transmitter cap (0 10 (or 0 77, provided on order No. 19629–Phila–58))
3 Moisture-preventing diaphragm (DP2).
4 Transmitter resonator (E18).
5 Handset
6 Visual indicator.
7 Receiver element (RE1).
8 Moisture-preventing diaphragm (DP3).
9 Receiver cap (0 9 (or 0 76, provided on order No. 19629–Phila–58))
10 Receiver cushion (E8 (not provided on order No. 19629–Phila–58))

Figure 8. Handset, partial exploded view.

CHAPTER 5

SHIPMENT, LIMITED STORAGE, AND DEMOLITION TO PREVENT ENEMY USE

Section I. SHIPMENT AND LIMITED STORAGE

25. Disassembly of Equipment

To prepare the telephone set for shipment or limited storage, proceed as follows:

a. Disconnect the two wires from the binding posts (fig. 1).

b. Place the telephone set in the case and stow the handset cord alongside the handset.

c. Close the cover and secure the latch (except on order No. 24977–Phila–55, serial numbers 1 through 9300).

26. Repacking for Shipment and Limited Storage

The exact procedure for repacking depends on the material available and the conditions under which the equipment is to be shipped or stored. Adapt the procedures outlined below whenever possible. The information concerning the original packaging (par. 9) will also be helpful.

a. Materials Required. The following material is required for packaging and packing 12 telephone sets. For stock numbers of materials, consult SB 38–100.

Material	Quantity
Corrugated paper	42 sq ft
Gummed paper tape	6 ft
Water-resistant, pressure-sensitive tape	19 ft

b. Packaging. Package the telephone set as outlined below.

(1) *Technical manual.* Package each manual within a close fitting bag fabricated of waterproof wrapping paper. Seal the bag securely with water-resistant, pressure-sensitive tape.

(2) *Telephone Set TA-1/PT.* Place the handset (fig. 1) within the case and secure the cover with the latch (except on order No. 24977–Phila–55, serial numbers 1 through 9300). Wrap each telephone set with corrugated paper. Secure the wrapping with gummed paper tape. Place the wrapped telephone set and the technical manual within the carton, and seal the carton with sealing tape.

c. Packing. Place 12 packaged telephone sets in a domestic packing case and seal the seams with water-resistant, pressure-sensitive tape. Place 36 packaged telephone sets in an export packing case and nail the caver in place.

Note. Strap each export packing case only for inter-theater shipment.

Section II. DEMOLITION OF MATERIEL TO TO PREVENT ENEMY USE

27. Authority for Demolition

Demolition of the equipment will be accomplished only upon the order of the commander. The destruction procedures outlined in paragraph 28 will be used to prevent further use of the equipment.

28. Methods of Destruction

a. Smash. Smash the visual indicator, handset, buzzer volume control knob, receiver element, transmitter element, and connector; use sledges, axes, handaxes, hammers, or crowbars.

b. Cut. Cut the handset cord, generator lever cover, press-to-talk switch cover, and the carrying strap; use knives, machetes, axes, or handaxes.

c. Burn. Burn the handset cord, case, carrying strap, transmitter and receiver cushions, and transmitter and receiver caps (if plastic);

use gasoline, kerosene, oil, flame throwers, or incendiary grenades.

d. Explode. If explosives are necessary, use firearms, grenades, or TNT.

e. Dispose. Bury or scatter the destroyed parts in slit trenches or foxholes, or throw them into streams.

APPENDIX I

REFERENCES

Following is a list of applicable references available to the operator and organizational maintenance personnel of Telephone Set TA–1/PT:

SB 38–100.....Preservation, Packaging and Packing Materials, Supplies and Equipment Used by the Army.

TM 11–5805–243–12P...Operator's and Organizational Maintenance Repair Parts and Special Tools Lists for Telephone Set TA–1/PT.

APPENDIX II

MAINTENANCE ALLOCATION CHART FOR TELEPHONE SET TA–1/PT

1. General

The maintenance allocation chart assigns maintenance functions and repair operations to be performed by the lowest appropriate maintenance echelon. It also specifies the facilities authorized at each echelon to perform the assigned maintenance functions.

2. Maintenance Allocation Chart

Column headings of the maintenance allocation chart are as follows:

a. Part or Component. Column 1 shows only the nomenclature or standard item name. Additional descriptive data is included only where clarification is necessary to identify the part. Components and parts comprising a major end item are listed alphabetically. Assemblies and subassemblies are in alphabetical order, with their components listed alphabetically immediately below the assembly listing.

b. Maintenance Function. Column 2 indicates the various maintenance functions allocated to the echelon capable of performing the operation. These are defined as follows:

(1) *Service.* To clean; to preserve; and to replenish fuel and lubricants.

(2) *Adjust.* To regulate periodically to prevent malfunction.

(3) *Inspect.* To verify serviceability and to detect incipient electrical or mechanical failure by scrutiny.

(4) *Test.* To verify serviceability and to detect incipient electrical or mechanical failure by use of special equipment such as gages and meters.

(5) *Replace.* To substitute serviceable assemblies, subassemblies, and parts for unserviceable components.

(6) *Repair.* To restore to a serviceable condition by replacing unserviceable parts or by any other action required. Utilize tools, equipment and skills available, to include welding, grinding, riveting, straightening, or adjusting.

(7) *Rebuild.* To restore to a condition comparable to new by disassembling the item to determine the condition of its component parts and reassembling it. Use serviceable, rebuilt, or new assemblies, subassemblies, and parts.

c. 1st, 2d, 3d, 4th, and 5th Echelon. The symbol X indicates that echelon *and* higher echelons are responsible for performing the maintenance function indicated. Repair parts may not necessarily be stocked at the echelon indicated. Refer to the applicable repair parts and special tools list.

d. Tools Required. The numbers in column 8 indicate tools and test equipment required to perform the maintenance function. These numbers are identified in paragraph 3, allocation of tools for maintenance functions.

e. Remarks. Column 9 contains any notations necessary to clarify the data cited in the preceding columns.

3. Allocation of Tools for Maintenance Functions

Column headings in the allocation of tools for maintenance functions are as follows:

a. Tools Required for Maintenance Functions. Column 1 lists the tools and test equipment required to perform the maintenance functions.

b. 1st, 2d, 3d, 4th, and 5th Echelon. A dagger (†) symbol indicates echelons allocated the facility. (Column 2 is not used.)

c. Tool Code. Column 7 lists the code numbers used in the maintenance allocation chart to refer to the indicated item.

d. Remarks. Column 8 is used for explanatory notes.

4. Maintenance By Using Organizations

When this equipment is used by signal service organizations organic to theater headquarters or communication zones to provide theater communications, those maintenance functions allocated up to and including fourth echelon are authorized to the organization operating this equipment.

5. Mounting Hardware

The basic entries of the maintenance allocation chart do not include mounting hardware such as screws, nuts, bolts, washers, brackets, and clamps.

MAINTENANCE ALLOCATION CHART

(1) PART OR COMPONENT	(2) MAINTENANCE FUNCTION	(3) 1ST ECH.	(4) 2ND ECH.	(5) 3RD ECH.	(6) 4TH ECH.	(7) 5TH ECH.	(8) TOOLS REQUIRED	(9) REMARKS
TELEPHONE SET TA-1/PT								
	repair			X			5	
	rebuild					X	5	
	inspect	X	X				2-4	PM per DA Forms 11-240
	service		X				2-4	and 11-241
	adjust			X	X	X	4-5	
	test			X	X	X	1-3	
	test				X	X	3	
BUSHING, RUBBER	replace			X				
BUZZER	replace			X				
CAP, ELECTRICAL	replace		X					
CAPACITOR	replace			X				
CASE, TELEPHONE	replace		X					
COIL, VISUAL INDICATOR	replace			X				
CONTACT ASSEMBLY	replace			X				
CORD ASSEMBLY	replace			X				
COVER, CORD ASSEMBLY	replace			X				
COVER, HANDLE, HANDSET	replace			X				
COVER, PROTECTIVE, HANDSET CHASSIS	replace			X				
CUSHIONS	replace		X					
DIAPHRAGM, MOISTURE PREVENTING	replace		X					
EARPHONE ELEMENT	replace			X				
GASKET	replace			X				
GENERATOR, HANDSET, TELEPHONE	replace			X				
HANDSET	replace			X				
INDICATOR, VISUAL, HANDSET RINGING	replace			X				
LEVER ASSEMBLY, ACTUATOR	replace			X				
LEVER ASSEMBLY, CRANKING GENERATOR	replace			X				
MICROPHONE ELEMENT	replace			X				
NUT	replace			X				
POST, BINDING	replace			X				
RESISTOR	replace			X				
RESONATOR, TRANSMITTER	replace			X				
SCREW, MACHINE	replace			X				
STRAP	replace		X					
SUPPORT, RESONATOR	replace			X				
WASHER	replace			X				
WINDOW, OBSERVATION	replace			X				

ALLOCATION OF TOOLS FOR MAINTENANCE FUNCTIONS

ALLOCATION OF TOOLS FOR MAINTENANCE FUNCTIONS

(1) TOOLS REQUIRED FOR MAINTENANCE FUNCTIONS	(2) 1ST ECH.	(3) 2ND ECH.	(4) 3RD ECH.	(5) 4TH ECH.	(6) 5TH ECH.	(7) TOOL CODE	(8) REMARKS
TA-1/PT							
MULTIMETER TS-352/U			†	†	†	1	
SCREWDRIVER TL-455/U		†				2	PM per DA forms 11-240 and 11-241
TEST SET AN/PTM-6				†	†	3	
TOOL EQUIPMENT TE-33		†				4	PM per DA forms 11-240 and 11-241
TOOL EQUIPMENT TE-49			†	†	†	5	

[AG 413.42 (19 August 1959)]

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OS Maj Comd (5)
OS Base Comd (5)
Log Comd (5)
MDW (1)
Armies (5) except
  First US Army (7)
Corps (2)
Div (2)
USATC (2)
Svc Colleges (5)
Br Svc Sch (5) except
  USASCS (425)
GENDEP (2) except
  Atlanta GENDEP (None)
Sig Sec, GENDEP (10)
Sig Dep (17)
Army Pictorial Cen (2)
Engr Maint Cen (1)
USA Ord Msl Comd (3)
Raritan Arsenal (5)
USA Med Rsch Lab (5)
USASSA (15)
USASSAMRO (1)
USA Sig Pub Agcy (8)
USA Sig Engr Agcy (1)
USA Comm Agcy (2)
USA Sig Eqp Spt Agcy (2)
USA Sig Msl Spt Agcy (13)
WRAMC (1)
AFIP (1)
AMS (1)
Ports of Emb (OS) (2)
Trans Terminal Comd (1)
Army Terminals (1)
OS Sup Agcy (2)
Yuma Test Sta (2)
USA Elct PG (1)
Sig Lab (5)
Sig Fld Maint Shops (3)
Mil Dist (1)
USA Corps (Res) (1)
Sector Comd, USA Corps
  (Res) (1)
JBUSMC (2)
11-57 (2)
11-97 (2)
11-117 (2)
11-155 (2)
11-500 AA-AE (2)
11-557 (2)
11-587 (2)
11-592 (2)
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17-25 (2)
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6-315 (2)
6-317 (2)

6–325 (2)	7–15 (2)	7–31 (2)
6–326 (2)	7–17 (2)	7–32 (2)
6–585 (2)	7–18 (2)	7–37 (2)
7–11 (2)	7–25 (2)	10–337 (2)
7–12 (2)	7–26 (2)	11–7 (2)
7–14 (2)	7–27 (2)	11–16 (2)

NG: State AG (3); units—same as Active Army except allowance is one copy to each unit.
USAR: None.
For explanation of abbreviations used, see AR 320–50.

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CHANGE
No. 6

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *7 September 1978*

Operation and Organizational Maintenance
TELEPHONE SET TA-1/PT
(NSN 5805-00-521-1320)

TM 11-5805-243-12/TO 31W1-2PT-421, 14 September 1959, is changed as follows to reflect a new Maintenance Allocation Chart:

Note: The parenthetical reference to previous changes (example: page 1 of C5) indicates that pertinent material was published in that change.

Page 1. After Forms and records, paragraph 2, add:

Reporting of errors 2.1
Reporting equipment improvement recommendations (EIR). 2.2

After Appendix II Maintenance Allocation Chart for Telephone Set TA-1/PT, add:

Section I Introduction II-1
II Maintenance Allocation Chart for Telephone Set TA-1/PT II-3
III Tool and Test Equipment Requirements for Telephone Set TA-1/PT II-4
IV Remarks II-5

Add NSN to title.

Page 3, Paragraph 2 (page 1 of C5). Delete subparagraphs *b* and *c* and substitute the following:

b. Report of Packaging and Handling Deficiencies. Fill out and forward DD Form 6 (Packaging Improvement Report) as prescribed in AR 700-58/NAVSUPINST 4030.29/AFR 71-13/MCO P4030.29A, and DLAR 4145.8.

c. Discrepancy in Shipment Report (DISREP) (SF 361). Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33B/AFR 75-18/MCO P4610.19C and DLAR 4500.15.

Page 3, Paragraph 2.1 (page 1 of C5). Delete and substitute the following:

2.1. Reporting of Errors

The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forwarded direct to Commander, US Army Communications and Electronics Materiel Readiness Command, ATTN: DRSEL-ME-MQ, Fort Monmouth, NJ 07703.

2.2. Reporting Equipment Improvement Recommendations (EIR)

EIR's will be prepared using SF 368 (Deficiency Report). Instructions for preparing EIR's are provided in TM 38-750, the Army Maintenance Management System. EIR's should be mailed direct to Commander, US Army Communications and Electronics Materiel Readiness Command, ATTN: DRSEL-ME-MQ, Fort Monmouth, NJ 07703. A reply will be furnished direct to you.

Page 20, Appendix II (as changed by C4, Dec 1964) delete and substitute:

APPENDIX II
MAINTENANCE ALLOCATION

Section I. INTRODUCTION

II-1. General

This appendix provides a summary of the maintenance operations for Telephone Set TA-1/PT. It authorizes categories of maintenance for specific

maintenance functions on repairable items and components and the tools and equipment required to perform each function. This appendix may be used as an aid in planning maintenance operations.

II-2. Maintenance Function

Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination.

b. Test. To verify serviceability and to detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (decontaminate), to preserve, to drain, to paint, or to replenish fuel, lubricants, hydraulic fluids, or compressed air supplies.

d. Adjust. To maintain, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to the specified parameters.

e. Align. To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test measuring and diagnostic equipments used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Install. The act of emplacing, seating, or fixing into position an item, part, module (component or assembly) in a manner to allow the proper functioning of the equipment or system.

h. Replace. The act of substituting a serviceable like type part, subassembly, or module (component or assembly) for an unserviceable counterpart.

i. Repair. The application of maintenance services (inspect, test, service, adjust, align, calibrate, replace) or other maintenance actions (welding, grinding, riveting, straightening, facing, remachining, or resurfacing) to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. Overhaul. That maintenance effort (service/action) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards (i.e., DMWR) in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours, miles, etc.) considered in classifying Army equipments/components.

II-3. Column Entries

a. Column 1, Group Number. Column 1 lists group numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. Column 2, Component/Assembly. Column 2 contains the noun names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, Maintenance Functions. Column 3 lists the functions to be performed on the item listed in column 2. When items are listed without maintenance functions, it is solely for purpose of having the group numbers in the MAC and RPSTL coincide.

d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a "worktime" figure in the appropriate subcolumn(s), the lowest level of maintenance authorized to perform the function listed in column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate "worktime" figures will be shown for each category. The number of task-hours specified by the "worktime" figure represents the average time required to restore an item (assembly, subassembly, component, module, end item or system) to a serviceable condition under typical field operating conditions. This time includes preparation time, troubleshooting time, and quality assurance/quality control time in addition to the time required to perform the specific tasks iden-

tified for the maintenance functions authorized in the maintenance allocation chart. Subcolumns of column 4 are as follows:

C - Operator/Crew
O - Organizational
F - Direct Support
H - General Support
D - Depot

e. Column 5, Tools and Equipment. Column 5 specifies by code, those common tool sets (not individual tools) and special tools, test, and support equipment required to perform the designated function.

f. Column 6, Remarks. Column 6 contains an alphabetic code which leads to the remark in section IV, Remarks, which is pertinent to the item opposite the particular code.

II-4. Tool and Test Equipment Requirements (sec. III)

a. Tool or Test Equipment Reference Code. The numbers in this column coincide with the numbers used in the tools and equipment column of the MAC. The numbers indicate the applicable tool or test equipment for the maintenance functions.

b. Maintenance Category. The codes in this column indicate the maintenance category allocated the tool or test equipment.

c. Nomenclature. This column lists the noun name and nomenclature of the tools and test equipment required to perform the maintenance functions.

d. National/NATO Stock Number. This column lists the National/NATO stock number of the specific tool or test equipment.

e. Tool Number. This column lists the manufacturer's part number of the tool followed by the Federal Supply Code for manufacturers (5-digit) in parentheses.

II-5. Remarks (sec. IV)

a. Reference Code. This code refers to the appropriate item in section II, column 6.

b. Remarks. This column provides the required explanatory information necessary to clarify items appearing in section II.

SECTION II MAINTENANCE ALLOCATION CHART
FOR
TELEPHONE SET TA-1/PT

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQPT.	(6) REMARKS
			C	O	F	H	D		
00	TELEPHONE SET TA-1/PT	Inspect		0.2					
		Test		0.1					A
		Test			0.5			3 & 4	
		Service		0.2					
		Adjust			0.5			1,2,3,& 4	
		Replace		0.5					
		Repair		1.0				1	
		Repair			2.0			1 thru 4	B
		Overhaul					5.0	1 thru 4	

SECTION III TOOL AND TEST EQUIPMENT REQUIREMENTS FOR

TELEPHONE SET TA-1/PT

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
1	O, F, H, & D	TOOL KIT, ELECTRONIC EQUIPMENT TK-101/G	5180-00-064-5178	
2	F, H, & D	TOOL KIT, ELECTRONIC EQUIPMENT TK-105/G	5180-00-610-8177	
3	F, H, & D	MULTIMETER TS-352(*)/U	6625-00-242-5023	
4	F, H, & D	TEST SET, TELEPHONE AN/PTM-6	6625-00-229-1048	

SECTION IV. REMARKS

REFERENCE CODE	REMARKS
A	Organizational test is limited to equipment operation.
B	Repair is limited to replacement of receiver and transmitter cushions, caps, and moisture preventing diaphragm, and telephone case.

By Order of the Secretary of the Army:

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Chief of Staff

Official:
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Brigadier General, United States Army
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To be distributed in accordance with DA Form 12-51, Operator maintenance requirements for TA-1/PT.

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TM 11-5805-243-12
C 5

Change No. 5

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 6 May 1974

Operation and Organizational Maintenance
TELEPHONE SET TA-1/PT

TM 11-5805-243-12/TO 31W1-2PT-421, 14 September 1959, is changed as follows:

Page 3. Delete paragraph 1.1 and substitute:

1.1. Indexes of Publications

a. DA Pam 310-4. Refer to the latest issue of DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining to the equipment.

b. DA Pam 310-7. Refer to DA Pam 310-7 to determine whether there are modification work orders (MWO's) pertaining to the equipment.

Delete paragraph 2 and substitute:

2. Forms and Records

a. Reports of Maintenance and Unsatisfactory Equipment. Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by TM 38-750.

b. Report of Packaging and Handling Deficiencies. Fill out and forward DD Form 6 (Report of Packaging and Handling Deficiencies) as prescribed in AR 700-58(Army)/NAVSUP PUB 378(Navy)/AFR 71-4 (Air Force)/MCO P4030.29(Marine Corps), and DSAR 4145.8.

c. Discrepancy in Shipment Report (DISREP) (SF 361). Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38(Army)/NAVSUPINST 4610.33/AFM 75-18/MCO P4610.19A(Marine Corps), and DSAR 4500.15.

2.1. Reporting of Errors

Report of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028, Recommended Changes to Publications and Blank Forms, and forwarded direct to Commander, US Army Electronics Command, ATTN: AMSEL-MA-C Fort Monmouth, NJ 07703.

Paragraph 5. Change title to: **Components and Dimensions.**

After paragraph 5 add:

5.1. Items Comprising an Operable Equipment

FSN	*QTY*	*Nomenclature*
5805-521-1320	1	Telephone Set TA-1/PT

Page 6, paragraph 10. Delete the second sentence and substitute: When no packing list accompanied the equipment, use the component comprising the operable end item chart (paragraph 5) as a general check.

Page 23. Delete appendix III and substitute:

APPENDIX III
BASIC ISSUE ITEMS LIST (BIIL) AND ITEMS TROOP INSTALLED OR AUTHORIZED LIST (ITIAL)

Section I. INTRODUCTION

1. Scope

This appendix lists only basic issue items required by the crew/operator for installation, operation, and maintenance of Telephone Set TA-1/PT.

2. General

This Basic Issue Items and Items Troop Installed or Authorized List is divided into the following sections:

a. Basic Issue Items List — Section II. A list, in alphabetical sequence, of items which are furnished with, and which must be turned in with the end item.

b. Items Troop Installed or Authorized List — Section III. Not applicable.

3. Explanation of Columns

The following provides an explanation of columns found in the tabular listings:

a. Illustration. This columns is divided as follows:

(1) *Figure Number.* Indicates the figure number of the illustration in which the item is shown.

(2) *Item Number.* Not applicable.

b. Federal Stock Number. Indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. Part Number. Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements, to identify an item or range of items.

d. Federal Supply Code for Manufacturer (FSCM). The FSCM is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., and is identified in SB 708-42.

e. Description. Indicates the Federal item name and a minimum description required to identify the item.

f. Unit of Measure (U/M). Indicates the standard of basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation, (e.g., ea, in., pr, etc.). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

g. Quantity Furnished with Equipment (Basic Issue Items Only). Indicates the quantity of the basic issue item furnished with the equipment.

Section II. BASIC ISSUE ITEMS LIST

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)
(A) FIG. NO.	(B) ITEM NO.	FEDERAL STOCK NUMBER	PART NUMBER	FSCM	DESCRIPTION USABLE ON CODE	UNIT OF MEAS	QTY FURN WITH EQUIP
3		5805-543-1881	SC-D-143140	80063	CASE, TELEPHONE SET	EA	1

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ARADCOM Rgn (2)
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Armies (2)
Corps (2)
HISA Ft Monmouth (18)
Svc Colleges (1)
USASESS (10)
USAADS (2)
USAFAS (2)
USAARMS (2)
USAIS (2)
USAES (2)
USAINTCS (3)
WRAMC (1)
ATS (1)
Instl (2) except
  Fort Gordon (10)
  Fort Huachuca (10)
  Fort Carson (5)
  Ft Richardson (ECOM Ofc) (2)
  WSMR (1)
Army Dep (2) except
  LBAD (14)
  SAAD (30)
  TOAD (14)
  ATAD (10)
USA Dep (2)
Sig Sec USA Dep (2)
Sig Dep (2)
Sig FLDMS (1)
USAERDAA (1)
USAERDAW (1)
MAAG (1)
USARMIS (1)
Harry Diamond Lab (3)
Units org under fol TOE:
  11-500 AA-AC (1)

NG: State AG (3); Units — Same as Active Army.

USAR: None

For explanation of abbreviations used, see AR 310-50.

900-816

U.S. GOVERNMENT PRINTING OFFICE : 1982 0-361-663/106

TM 11–5805–243–12
*C 4

Operation and Organizational Maintenance

TELEPHONE SET TA–1/PT

CHANGE
No. 4

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *18 December 1964*

TM 11–5805–243–12/TO 31 W1–2PT–421, 14 September 1959, is changed as follows:

Note. The parenthetical reference to previous changes (example: page 1 of C 3) indicate that pertinent material was published in that change.

Page 3, delete subparagraph 2*c* (page 1 of C 3, 8 Jul 1963) and substitute:

c. The direct reporting, by the individual user, of errors, omissions, and recommendations for improving this manual is authorized and encouraged. DA Form 2028 (Recommended Changes to DA Publications) will be used for reporting these improvements. This form will be completed in triplicate using pencil, pen, or typewriter. The original and one copy will be forwarded direct to Commanding General, U. S. Army Electronics Command, ATTN: AMSEL–MR–MA, Fort Monmouth, N. J. 07703. One information copy will be furnished to the individual's immediate supervisor (officer, noncommissioned officer, supervisor, etc).

Page 19, appendix I (as deleted by C 2, 28 Dec 62), delete TM 11–5805–243–12P.

Page 20, appendix II, (as changed by C 2, 28 Dec 62) delete and substitute:

Appendix III (as changed by C 2, 28 Dec 62) delete and substitute:

APPENDIX II

MAINTENANCE ALLOCATION

Section I. INTRODUCTION

1. General

a. This appendix assigns maintenance functions to be performed on components, assemblies, and subassemblies by the lowest appropriate maintenance category.

b. Columns in the maintenance allocation chart are as follows:

(1) *Part or component.* This column shows only the nomenclature or standard item name. Additional descriptive data are included only where clarification is necessary to identify the component. Components, assemblies, and subassemblies are listed in top-down order. That is, the assemblies which are part of a component are listed immediately below that component, and the subassemblies which are part of an assembly are listed immediately below that assembly. Each generation breakdown (components, assemblies, or subassemblies) is listed in disassembly order or alphabetical order.

(2) *Maintenance function.* This column indicates the various maintenance functions allocated to the categories.

(*a*) *Service.* To clean, to preserve, and to replenish lubricants.

* This change supersedes C 2, 28 December 1962.

(*b*) *Adjust.* To regulate periodically to prevent malfunction.

(*c*) *Inspect.* To verify serviceability and to detect incipient electrical or mechanical failure by scrutiny.

(*d*) *Test.* To verify serviceability and to detect incipient electrical or mechanical failure by use of special equipment such as gages, meters, etc.

(*e*) *Replace.* To substitute serviceable components, assemblies, or subassemblies, for unserviceable components, assemblies, or subassemblies.

(*f*) *Repair.* To restore an item to serviceable condition through correction of a specific failure or unserviceable condition. This function includes but is not limited to welding, grinding, riveting, straightening, and replacement of parts other than the trial and error replacement of running spare type items such as fuses, lamps, or electron tubes.

(*g*) *Align.* To adjust two or more components of an electrical system so that their functions are properly synchronized.

(*h*) *Calibrate.* To determine, check, or rectify the graduation of an instrument, weapon, or weapons system, or components of a weapons system.

(*i*) *Overhaul.* To restore an item to *completely serviceable* condition as prescribed by serviceability standards. This is accomplished through employment of the technique of "Inspect and Repair Only as Necessary" (IROAN). Maximum utilization of diagnostic and test equipment is combined with minimum disassembly of the item during the overhaul process.

(*j*) *Rebuild.* To restore an item to a standard as near as possible to original or new condition in appearance, performance, and life expectancy. This is accomplished through the maintenance technique of complete disassembly of the item, inspection of all parts or components, repair or replacement of worn or unserviceabe elements using original manufacturing tolerances and/or specifications and subsequent reassembly of the item.

(3) *Operator, organizational, direct support, general support, and depot maintenance levels.* The symbol X indicates the categories responsible for performing that particular maintenance operation, but does not necessarily indicate that repair parts will be stocked at that level. Categories higher than those marked by X are authorized to perform the indicated operation.

(4) *Tools required.* This column indicates codes assigned to each individual tool equipment, test equipment, and maintenance equipment referenced. The grouping of codes in this column of the maintenance allocation chart indicates the tool, test, and maintenance equipment required to perform the maintenance function.

(5) *Remarks.* Entries in this column will be utilized when necessary to clarify any of the data cited in the preceding columns.

c. Columns in the allocation of tools for maintenance functions are as follows:

(1) *Tools required for maintenance functions.* This column lists tools, test, and maintenance equipment required to perform the maintenance functions.

(2) *Operator, organization, direct support, general support, and depot.* The dagger (†) symbol indicates the categories normally allocated the facility.

(3) *Tool code.* This column lists the tool code assigned.

2. Maintenance by Using Organizations

When this equipment is used by signal services organizations organic to theater headquarters or communication zones to provide theater communications, those maintenance functions allocated up to and including general support are authorized to the organization operating this equipment.

SECTION II. MAINTENANCE ALLOCATION CHART

PART OR COMPONENT	MAINTENANCE FUNCTION	ECHELON O/C	ECHELON O	ECHELON DS	ECHELON GS	ECHELON D	TOOLS REQUIRED	REMARKS
TELEPHONE SET TA-1/PT	service		X				3	
	adjust			X			3	
	inspect	X						PM per DA forms 11-240 and 11-241
			X				3	
				X			1	Continuity
					X		1, 2	All test
	repair		X				3	Replace; replace boots, retainers and units.
				X			3	All repairs
	overhaul				X		3	

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SECTION III. ALLOCATION OF TOOLS FOR MAINTENANCE FUNCTIONS

TOOLS REQUIRED FOR MAINTENANCE FUNCTIONS	ECHELON O/C	O	DS	GS	D	TOOL CODE	REMARKS
TELEPHONE SET TA-1/PT							
MULTIMETER TS-352			†	†	†	1	
TEST SET AN/PTM-6				†	†	2	
TOOL EQUIPMENT TK-115/G		†	†	†	†	3	

APPENDIX III
BASIC ISSUE ITEMS LIST

Section I. INTRODUCTION

1. General

This appendix lists items supplied for initial operation. The list includes tools, parts, and material issued as part of the major end item. The list includes all items authorized for basic operator maintenance of the equipment. End items of equipment are issued on the basis of allowances prescribed in equipment authorization tables and other documents that are a basis for requisitioning. This equipment is combat essential.

2. Columns

Columns are as follows:

a. Federal Stock Number. This column lists the 11-digit Federal stock number.

b. Designation By Model. Not used.

c. Description. Nomenclature or the standard item name and brief identifying data for each item are listed in this column. When requisitioning, enter the nomenclature and description.

d. Unit of Issue. The unit of issue is each unless otherwise indicated and is the supply term by which the individual item is counted for procurement, storage, requisitioning, allowances, and issue purposes.

e. Expendability. Nonexpendable items are indicated by NX. Expendable items are not annotated.

f. Quantity Authorized. Under "Items Comprising an Operable Equipment", the column lists the quantity of items supplied for the initial operation of the equipment.

g. Illustration. The "Item No." column lists the reference designations that appear on the part in the equipment. These same designations are also used on any illustrations of the equipment. The numbers in the "Figure No." column refer to the illustrations where the part is shown.

SECTION II. FUNCTIONAL PARTS LIST

FEDERAL STOCK NUMBER	DESIGNATION BY MODEL	DESCRIPTION	UNIT OF ISSUE	EXP	QTY AUTH	ILLUSTRATION	
						FIGURE NO.	ITEM NO.
5805-521-1320		TELEPHONE SET TA-1/PT: portable field type; sound powered transmitted cur cupply; ringer self contained; 9 in lg x 2 in w x 2-1/2 in d o/a; push-to-talk sw incl; 2 ckt controlled; Sig dwg SC-DL-168899E				1	
		ITEMS COMPRISING AN OPERABLE EQUIPMENT					
		TELEPHONE SET TA-1/PT: (BASIC COMPONENT)		NX	1	1	
ORD THRU AGC		TECHNICAL MANUAL TM 11-5805-243-12			1		
5805-543-1881		CASE, TELEPHONE SET: Sig dwg SC-D-143140			1	3	
		RUNNING SPARE ITEMS					
		NO PARTS AUTHORIZED FOR STOCKAGE AT FIRST ECHELON					

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ARADCOM Rgn (2)
OS Maj Comd (3)
LOGCOMD (2)
USASMCOM (2)
USAMICOM (4)
USACDCCEA (2)
USACDCEA (1)
USACDCCBRA (1)
USACDCOA (1)
USACDCQMA (1)
USACDCTA (1)
USACDCADA (1)
USACDCARMA (1)
USACDCAVNA (1)
USACDCARTYA (1)
USACDCSWA (1)
USASCC (4)
MDW (1)
Armies (2)
Corps (2)
USA Corps (3)
USATC AD (2)
USATC Engr (2)
USATC FA (5)
USATC Inf (2)
USATC Armor (2)
USASTC (2)
USAINTC (5)
Instls (2) except
  Fort Monmouth (70)
  Fort Hancock (4)
  Fort Gordon (5)
USMA (5)
Svc Colleges (2)
Br Svc Sch (2) except
  USASESCS (40)
  USAAMS (40)
  USAARMS (40)
  USAES (5)
  USAQMS (5)
  USACMLCS (5)
GENDEP (OS) (2)
Sig Sec, GENDEP (OS) (5)
Sig Dep (OS) (12)
Army Dep (2) except
  FTWOAD (10)
  LXAD (14)
  SAAD (30)
  TOAD (14)
  LEAD (5)
  SHAD (3)
  SVAD (5)
  NAAD (5)
  CHAD (3)
  ATAD (4)
USARDAW (13)
USAERDAA (10)
POE (1)
Trans Tml Comd (1)
Army Tml (1) except
  Oakland Army Tml (5)
AMS (1)
WRAMC (1)
Army Pictorial Cen (2)
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29–109
30–25
30–27
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37–4
37–42
39–51
57
57–5
57–100

NG: State AG (3); units—same as Active Army except allowance is one copy for each unit.
USAR: None.
For explanation of abbreviations used, see AR 320–50.

☆ U. S. GOVERNMENT PRINTING OFFICE: 1964—570578

TECHNICAL MANUAL

OPERATION AND ORGANIZATIONAL MAINTENANCE TELEPHONE SET TA-1/PT

TM 11-5805-243-12
CHANGES No. 3

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON 25, D.C., *8 July 1963*

TM 11-5805-243-12, 14 September 1959, is changed as indicated to reflect new maintenance procedures in accordance with TM 38-750.

Note. The parenthetical reference to previous changes (example: page 1 of C 2) indicate that pertinent materia! was published in that change.

Page 3.

Heading (page 1 of C 2), last line. Change "Changes No. 3" to "Changes No. 2".

Add paragraph 1.1 after paragraph 1.

1.1. Index of Publications

Refer to the 'atest issue of DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining to your equipment. DA Pam 310-4 is an index of current technical manuals, technical bulletins, supply bulletins, lubrication orders, and modification work orders which are available through publications supply channels. The index lists the individual parts (-10, -20, -35P, etc) and the latest changes to and revisions of each equipment publication.

Paragraph 2 (page 1 of C 2). Delete and substitute:

2. Forms and Records

a. Reports of Maintenance and Unsatisfactory Equipment. Use equipment forms and records in accordance with instructions in TM 38-750.

b. Report of Damaged or Improper Shipment. Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700-58 (Army), NAVSANDA Publication 378 (Navy), AFR 71-4 (Air Force).

c. Comments on Manual. Forward all comments on this publication direct to: Commanding Officer, U.S. Army Electronics Materiel Support Agency, ATTN: SELMS-MP, Fort Monmouth, N. J. DA Form 1598 (Record of Comments on Publication), DA Form 2496 (Disposition Form), or letter may be used.

Page 11. Change chapter heading to ORGANIZATIONAL MAINTENANCE.

Add "Section I. OPERATOR'S MAINTENANCE" below heading.

Paragraphs 19, 20, 21, and 22. Delete and substitute:

19. Scope of Operator's Maintenance

The maintenance duties assigned to the operator of Telephone Set TA-1/PT are listed below with a reference to the paragraphs covering the specific function. The duties assigned do not require tools or test equipment.

a. Daily preventive maintenance checks and services chart (par. 22).

b. Cleaning (par. 22.1).

20. Preventive Maintenance

Preventive maintenance is the systematic care, servicing, and inspection of equipment to prevent occurrence of trouble, to reduce downtime, and to assure that the equipment is serviceable.

a. Systematic Care. The procedures given in paragraphs 21, 22, and 22.1 cover routine systematic care and cleaning essential to proper upkeep and operation of the equipment.

b. Preventive Maintenance Checks and Services. The preventive maintenance checks and services charts (par. 22) outline functions to be performed at specific intervals. These checks and services are to maintain Army electronic equipment in a combat serviceable condition; that is, in good general (physical) condition and in good operating

condition. To assist operators in maintaining combat serviceablity, the charts indicate what to check, how to check, and what the normal conditions are; the *References* column lists the paragraphs that contain supplementary information. If the defect cannot be remedied by the operator, higher echelon maintenance or repair is required. Records and reports of these services must be made in accordance with the requirements set forth in TM 38 750.

21. Preventive Maintenance Checks and Services Periods

Preventive maintenance checks and services of Telephone Set TA-1/PT are required daily. Paragraph 22 specifies the items to be checked and serviced. In addition to the daily checks and services, the equipment should be rechecked and serviced immediately before going on a mission and as soon after completion of the mission as possible.

22. Daily Preventive Maintenance Checks and Services Chart

Sequence No.	Item	Procedure	Reference
1	Telephone Set TA-1/PT	Inspect the Telephone set for completeness and satisfactory condition.	Functional parts list (app. III).
2	External surfaces	Remove dirt and moisture from carrying case, housing, handset, transmitter, receiver, etc. Inspect painted surfaces for bare spots, rust and corrosion. Check surfaces for breaks and cracks.	Par. 22.1.
3	Handset cord	Inspect cord for cuts, breaks, fraying, and deterioration. Inspect for broken or inoperative binding posts. Check the connector for cuts, breaks, and deterioration.	Fig. 1.
4	Carrying case	Inspect rubberized case (if provided) for tears and broken zipper. Inspect plastic case (if provided) for cracks, broken hinge, and improperly sealed cover. Inspect carrying strap for fungus, tears and fraying. Check carrying hardware for rust, corrosion and damage.	Figs. 2 and 3.
5	Press-to-talk switch	Inspect press-to-talk switch for binding or faulty action.	Par. 10*d*.
6	Generator lever	Inspect the generator lever for binding or faulty action.	
7	Buzzer volume control	Inspect control for binding, scraping, and excessive looseness.	
8	Operation	Check for normal operation. Be alert for unusual performance or condition. It should be possible to ring, transmit to and receive from a distant switchboard or telephone and to vary the loudness of the buzzer.	Par. 16.

22.1. Cleaning

The exterior surfaces should be free of dirt, dust, grease, and fungus.

a. Remove dust and loose dirt with a clean soft cloth.

Warning: **Cleaning compound (FSN 7930–395–9542) is flammable and its fumes are toxic; provide adequate ventilation. Do not use near a flame.**

b. Remove grease, fungus, and ground-in dirt from the case, cord, handset, housing, and handset connector; use a cloth dampened (not wet) with cleaning compound.

c. Remove dust or dirt from terminals, binding posts, control knobs, connectors, and handset with a brush.

After paragraph 22.1, add: Section II. SECOND ECHELON MAINTENANCE.

22.2. Scope of Second Echelon Maintenance

This section of the manual contains instructions covering second echelon maintenance of Telephone Set TA-1/PT. It includes instructions for performing preventive and periodic maintenance services and repair functions to be accomplished by the second echelon repairman. Refer to

appendix II for tools and test equipment required for second echelon maintenance.

22.3. Second Echelon Preventive Maintenance

a. Preventive maintenance is the systematic care, inspection, and servicing of equipment to maintain it in serviceable condition, prevent break down, and assure maximum operational capability. Preventive maintenance is the responsibility of all echelons concerned with the equipment, and includes the inspection, testing and repair or replacement of parts, subassemblies, or units that inspections and tests indicate would probably fail before the next schedu'ed periodic service. Preventive maintenance checks and services of Telephone Set TA-1/PT at the second echelon level are made at quarterly intervals unless otherwise directed by the commanding officer. The preventive maintenance checks and services should be scheduled concurrently with the per'odic service schedule of the carrying vehicle for all vehicular installations.

b. Maintenance forms and records to be used and maintained on this equipment are specified in TM 38-750.

22.4. Quarterly Maintenance

Quarterly preventive maintenance checks and services on Telephone Set TA-1/PT are required. Daily services consitute a part of the quarterly preventive maintenance checks and services and must be performed concurrently. All deficiencies or shortcomings will be recorded in accordance with the requirements of TM 38-750. Perform all checks and services listed in the quarterly preventive maintenance checks and services chart (par. 22.5) in the sequence listed.

22.5. Quarterly Preventive Maintenance Checks and Services Chart

Sequence No.	Item	Procedure	Reference
1	Internal components	Inspect interior of housing and carrying case for dirt, moisture, fungus and corrosion. Check interior wiring for abrasion, proper placement, broken or loose connections. Inspect and tighten loose assembly and mounting screws.	
2	Gasket	Inspect gasket for wear or damage.	
3	Receiver and transmitter housings.	Inspect the moisture-preventing diaphragms for breaks, tears, and deterioration. Check the receiver and transmitter caps for cross-threading and looseness. Inspect the cushions (if provided) for tears, breaks and deterioration.	Fig. 8.
4	Publications	The technical manual must be complete and in usable condition and all changes pertinent to the equipment must be on hand.	
5	Modification Work Orders	Check the equipment to determine that all URGENT MWO's have been applied and that all ROUTINE MWO's have been scheduled.	DA Pam 310-4.

Page 12. Delete figure 6.

Page 13. Delete figure 7.

Page 19. Add the following references to Appendix I:

DA Pam 310-4	Index of Technical Manuals, Technical Bulletins, Lubrication Orders, Supply Bulletins, and Modification Work Orders.
TM 9-213	Painting Instructions for Field Use.
TM 38-750	The Army Equipment Record System and Procedures.