TC 1-19.30

PERCUSSION TECHNIQUES

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PERCUSSION TECHNIQUES

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Preface

TC 1-19.30, *Percussion Techniques,* provides Army percussionists and auxiliary percussionists with common techniques and considerations for the successful performance of their job. It describes percussion instruments used by Army Bands, with performance and maintenance techniques for each instrument. This publication is a reference guide to be used when needed.

The principal audience for TC 1-19.30 is Army percussionists, auxiliary percussionists, trainers, and musical supervisors. Army percussionists hold military occupational specialty (MOS) 42R and additional skill identifier (ASI) 9M. Auxiliary percussionists are MOS 42R and normally hold the ASI 9H, 9K, 9N, 9T, 9U, 9V, or 9X.

Commanders, staffs, and subordinates ensure that their decisions and actions comply with applicable United States, international, and in some cases host-nation laws and regulations. Commanders at all levels ensure that their Soldiers operate in accordance with the law of armed conflict and the rules of engagement (see FM 6-27/MCTP 11-10C).

This publication is not the proponent publication for any Army terms.

This publication serves as the primary reference for both resident and nonresident percussion techniques instruction presented to Soldiers, noncommissioned officers, warrant officer bandmasters, and commissioned officers. Trainers and first-line supervisors should ensure Soldiers holding ASI of 9M, 9H, 9K, 9N, 9T, 9U, 9V, and 9X (skill level 1-4) have access to this publication. It should be made available in the Soldiers' work area, unit learning center, and unit libraries.

As this publication is a guide, and as all possible situations and eventualities cannot be foreseen or covered by the manual, great reliance must be placed upon the application of sound judgment and common sense by all members of an Army Band. In situations not covered by this manual and where doubt arises as to the proper action to be taken, the individual must consider their mission and apply sound judgment in making the required decision(s).

TC 1-19.30 applies to the Active Army, the Army National Guard, the Army National Guard of the United States, and the United States Army Reserve unless otherwise stated.

The proponent of TC 1-19.30 is the United States Army School of Music. The preparing agency is the Directorate of Training and Doctrine, the United States Army School of Music. Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to Commandant, U.S. Army School of Music, ATTN: ATSG-SMZ, 1420 Gator Boulevard, Virginia Beach, VA 23459-2617.

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Introduction

TC 1-19.30 is a reference guide for MOS percussionists (MOS 42R, with the ASI of 9M) and auxiliary percussionists (MOS 42R, with the ASI of 9H, 9K, 9N, 9T, 9U, 9V, and 9X).

This revision of TC 1-19.30 reorganizes the content for better readability and discusses how Army percussionists support Army Bands operations.

Army percussionists are expected to be proficient in a wider variety of instruments than any other ASI in the proponent. While civilian percussionists may specialize on one percussion instrument, the Army requires a percussionist to be responsible for over 50 percussion instruments. It is not possible to attain proficiency in all percussion instruments solely in the time allotted during Army institutional training (e.g., advanced individual training (AIT)). Therefore, this publication is intended to be used as a reference when a percussionist or auxiliary percussionist is tasked to perform on an instrument with which they are less familiar.

TC 1-19.30 should be used in conjunction with TC 1-19.10 as a reference for Soldiers seeking further knowledge of Army Bands ceremonial music topics discussed in chapter three of this publication.

Text conventions: This publication uses unique text conventions in chapter three to facilitate understanding: preparatory commands are ***Italicized in Bold***, commands of execution and directives are **CAPITALIZED IN BOLD**, references to positions and movements are *Italicized*, and names of music or bugle calls are placed in "*Italicized Quotations*."

Although this publication can be used as a reference, Soldiers are highly encouraged to research for themselves the wealth of resources available in print and on the internet. A brief list of recommended resources is provided in appendix A. For advanced percussion studies, Soldiers are encouraged to pursue private lessons with local professionals, or with U.S. Army School of Music percussion instructors via Microsoft Teams or similar live video call mediums. Additionally, Soldiers are encouraged to request mentorship through the Army Musician Mentorship Program (AMMP).

TC 1-19.30 contains four chapters and one appendix:

Chapter 1 describes the history, task organization, and general rules for percussion performance in Army Bands.

Chapter 2 provides an overview of the drum set in Army Bands small ensembles.

Chapter 3 provides an overview of military ceremonial music with performance considerations and techniques for the percussion instruments used in ceremonial ensembles.

Chapter 4 provides general considerations and playing techniques for the most common instruments used in concert band.

Appendix A provides instrument-specific resources for self-study and maintenance.

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Chapter 1

Percussion in Army Bands

From rolling in the national colors during a military ceremony to performing in concert halls, Army percussionists are expected to be proficient on a wider variety of instruments and can perform in more instrumental ensembles than any other ASI in Army Bands. This chapter describes the history, task organization, and general rules for percussion performance in Army Bands.

HISTORY

1-1. The Army has employed drummers since its inception. The use of drummers in American military bands derives from the European tradition. Colonial militias based on British design used fife and drums for field music. This music was used to summon Soldiers, practice drills, and conduct movements on the battlefield. Several regiments in the militias had "bands of musick" that operated in addition to the fifes and drums to provide concert music for troop morale, entertainment, and civil engagement.

1-2. The Army continued to use the drum as a signaling device from its victory during the American Revolution through the Civil War, where it gave way to the bugle. During the Civil War, drummers were used for conducting troop movement on and off the battlefield, with several being awarded the Medal of Honor. Off the battlefield, drummers entertained Soldiers and civilians while performing with brass or wind bands which became the most accessible means of presenting popular music of the time.

1-3. As popular music changed through the "Golden Age of the March," to the introduction of ragtime and jazz in the beginning of the 20th century, to the introduction of rock and roll and beyond, the skills required of Army percussionists have changed dramatically. Today, modern Army Bands continue to provide field music while providing musical support to military ceremonies. Bands also provide popular music while engaging local, regional, national, and international audiences, both at home and abroad (see ATP 1-19).

1-4. With these varied mission requirements, today's Army percussionists must be versatile enough to perform in a variety of musical situations. They must:

- Adapt their drum set skills to perform modern popular music as well as popular music from the last hundred years.
- Maintain the rudimental proficiency required for martial field music.
- Maintain proficiency on the performance of concert percussion instruments.

TASK ORGANIZATION IN ARMY BANDS

1-5. Army Bands have a variety of resources with which to accomplish musical support missions. Bands operate as the collective unit, or they are task-organized into small, individually employed music performance teams (MPT). A *music performance team* is a team that offers the flexibility to support concurrent musical missions in multiple geographical areas (ATP 1-19). Army percussionists are utilized in a variety of musical elements that fall into three main categories: small ensembles, ceremonial ensembles, and concert band.

SMALL ENSEMBLES

1-6. Depending on local mission requirements, the largest percentage of an Army percussionist's job is performing on drum set in small ensembles. Percussionists are assigned to MPTs with a variety of instrumentation, and repertoire spanning many musical genres and styles (see paragraphs 2-1 through 2-3).

CEREMONIAL ENSEMBLES

1-7. Bands provide support to military ceremonies as a whole unit or smaller groups of musicians to form a ceremonial ensemble. Percussionists primarily perform on snare drum, bass drum, and cymbals while assigned to ceremonial ensembles. Depending on the availability of personnel, non-ASI percussionists (ASIs 9H, 9K, 9N, 9T, 9U, and 9V) that do not double on another brass or wind instrument, may be assigned as

auxiliary percussionists to perform bass drum and cymbals. The two common types of ceremonial ensembles are the marching band and ceremonial band.

Marching Band

1-8. The marching band is an instrumental element that is organized into a prescribed formation and is led by a drum major or conductor. The percussion section consists of a bass drum, cymbals, and one to three snare drums, but varies depending on the formation size and available personnel. This ensemble is the only ceremonial ensemble that plays while marching, and is used for military review ceremonies, parades, and military tattoo performances.

Ceremonial Band

1-9. Ceremonial bands are led by a conductor, and musicians perform either seated or standing. There are no prescribed formations for these ensembles, they conform to the space available and may adopt a variety of shapes such as platoon in line, platoon in column, concert arcs, or horseshoe formations (see TC 1-19.10). The percussion section consists of a bass drum, cymbals, and a snare drum, but can vary based on musical and mission requirements.

Concert Band

1-10. Typically using all available unit personnel, the concert band is an instrumental element capable of performing symphonic music and arrangements from musical theatre and popular music. Percussionists perform on a wide variety of pitched instruments (e.g., timpani, keyboard percussion, etc.), non-pitched instruments (e.g., snare drum, bass drum, cymbals, etc.), and drum set, often playing multiple instruments within a single piece depending on musical requirements and available personnel. Rhythm players (ASIs 9N, 9T, 9U) are often tasked as auxiliary percussionists due to the number of instruments and personnel required for modern symphonic compositions.

GENERAL RULES FOR PERCUSSION PERFORMANCE

1-11. Army percussionists must understand that it is their personal responsibility to achieve and sustain a high level of proficiency on their assigned instrument(s). The reality of most percussionists and percussion sections is that players have varying strengths and weaknesses based on their personal performance experience, education, and musical backgrounds. Weaknesses are often highlighted due to a lack of experience and the sheer number of instruments in the percussion family, which each require many years of study to master.

1-12. Experience is the percussionist's greatest asset. Only through listening, study, practice, trial and error, and performance can the percussionist learn the techniques necessary to perform the repertoire. This publication is designed to guide percussionists' study and explain common techniques and considerations for the successful performance of their job.

1-13. Many skills are transferrable on percussion instruments, as instruments share common techniques and striking areas. For example, the matched grip used on snare drum can be transferred for use on timpani or keyboard percussion instruments. Therefore, with small technique adjustments, basic techniques on many percussion instruments can easily be learned.

Tone Production

1-14. Applying technique to performance requires that the performer develop knowledge in five categories of percussive tone production: striking areas, striking implement choice, stroke technique, muffling technique, and instrument selection. Percussionists must become proficient in applying these categories for each instrument they play, as they can be used as a checklist for accurate practice and performance. To address these categories further, discussion of instrument specifics in chapters two through four will examine (when applicable):

- Physical composition and construction.
- Acoustical characteristics.
- Correct tuning.

- Proper playing position(s).
- Standard performance directions.

Striking Areas

1-15. The sound of a percussion instrument changes drastically depending on where it is struck. Percussionists must know the physical sound qualities of each instrument with respect to tone production. Only then can they determine the best striking areas to use for performance. The player must apply their knowledge of those qualities, use their imagination, be creative, and experiment to produce the sounds required by the music.

Striking Implement Choice

1-16. Musical timbre and articulation are directly related to the implement used to strike a percussion instrument. Articulations must be analyzed to determine the attack and timbre needed for the music. Choose implements according to these general rules:

- Select an implement with the appropriate mass (i.e., weight) to achieve the desired or characteristic sound of the instrument (determined by the genre or style of music). For example:
  - Do not use heavy marching snare sticks when playing jazz drum set.
  - Do not use lighter drum set sticks when playing concert snare drum.
- The harder the implement, the sharper the attack (i.e., how articulate the sound is).
- The softer the implement, the mellower the attack (i.e., how round the sound is).
- Never strike an instrument with anything harder than the surface or material of the instrument (e.g., never use a metal mallet on wood).

Stroke Technique

1-17. The motions involved in striking any percussion instrument determine the intensity of the sound. There are myriad grips, techniques, and approaches used to strike percussion instruments, and many are used interchangeably or in conjunction with each other. Regardless of the grip or technique used, in its simplest form, a stroke has two parts, the attack and rebound.

Attack

1-18. Attack is the motion of the striking implement to the point of impact on the instrument. The height and speed of the stroke determines the intensity of the sound.

Rebound

1-19. Rebound is the motion of the striking implement after impact. A natural rebound, when the implement freely bounces off the playing surface, is preferred in most circumstances. Controlling the natural rebound allows for quicker dynamic changes (e.g., differentiating between accented and unaccented notes).

Muffling Techniques

1-20. Muffling is the control of tone duration. The style of articulation, acoustics of the performance venue, resonance and pitch of the instrument, tempo, complexity of the melodic lines, and the harmonic structure of the music determine the type and degree of muffling required. Instruments which require muffling or resonance control can be muffled manually (e.g., with the fingers, hand, or body) or with a muffling device (e.g., towel, handkerchief, gels, tone rings, etc.). Muffling varies based on the instrument and style of music being performed, but can be applied via two general rules:

- Always give the note its full value (e.g., articulations or note duration).
- Avoid changing the instrument's characteristic sound (e.g., over muffling).

Instrument Selection

1-21. Instrument selection can have a significant effect on overall tone production and each of the previous categories. The myriads of variations in percussion instruments allow performers endless opportunities to

achieve their desired musical sound. The variations in musical timbre and articulation requirements will determine instrument selection. For instance:

- A thicker ride cymbal may be appropriate for rock music, but not jazz.
- A concert snare drum or deeper snare drum (e.g., field drum) would be inappropriate for a drum set.
- A bigger drum set (e.g., 22” bass drum, 14/16” tom-toms) would be inappropriate for an intimate jazz combo mission.

ENSEMBLE DYNAMICS

1-22. A commonly overlooked aspect of percussion performance is the application of dynamics. Percussion instruments in general are very loud and can easily overpower both large and small ensembles. Percussionists and non-9M ASI performers that have little to no experience with varying styles of music or performing in different ensembles often overplay percussion instruments. Percussionists must approach dynamics within ensemble dynamics. Playing with ensemble dynamics is matching the volume of the entire ensemble or section within an ensemble. Unless the music is notated otherwise (e.g., part marked as “solo”) or the ensemble leader specifically requests the instrument to play louder, it is recommended to play slightly softer than the marked dynamic. This will help the instrument to blend into the texture and avoid overpowering the ensemble.

Chapter 2

Small Ensembles

Army Bands are task-organized into small individually employed MPTs that perform a spectrum of diverse musical genres and styles. These teams employ percussionists in a variety of ways through drum set and world percussion performance. This chapter provides percussionists with an overview and performance considerations for the drum set in Army Bands small ensembles.

SECTION I – TASK ORGANIZATION

2-1. Throughout their career in Army Bands, percussionists will be assigned to perform on drum set in various MPTs, each presenting unique challenges and opportunities. The contemporary Army percussionist must possess a multifaceted skill set, capable of navigating a diverse musical landscape. With repertoire spanning from modern pop and rock to intricate jazz ensembles, to ceremonial marches and vibrant salsa rhythms, percussionists must be proficient in adapting between musical genres and styles.

2-2. Regardless of the type of ensemble assigned, Army percussionists should resist the temptation of taking shortcuts. While there are countless resources available in print and on the internet, true proficiency on drum set stems from a deep immersion in each musical genre and style. It is through dedicated practice and a commitment to mastering diverse rhythms and techniques that percussionists ensure their performances resonate with stylistic authenticity.

2-3. Percussionists may be assigned to perform on drum set or percussion in the following MPTs:

- **Rhythm Ensembles** – Jazz or popular elements consisting of rhythm instruments with optional horns or vocals. Examples include big band, New Orleans jazz band, jazz combo, contemporary pop or rock band, Latin band, and country band.
- **Brass Ensembles** – Chamber or popular elements consisting of brass instruments with occasional percussion. Examples include brass quintet, trombone quartet, and brass band.
- **Woodwind Ensembles** – Instrumental elements consisting of woodwind instruments, French horn, and occasionally percussion. Examples include woodwind quintet, clarinet quartet, and non-traditional instrumentation mostly consisting of woodwind instruments.
- **Other** – Instrumental elements performing regionally-specific music. Examples include German fest band, pipes and drums, and steel drum ensemble.

SECTION II – THE DRUM SET IN SMALL ENSEMBLES

2-4. This section describes the function of the drum set and its role within small ensembles.

FUNCTION OF THE DRUM SET

2-5. The drum set has the following functions:

- To provide a steady pulse for the ensemble.
- To help define the feel, style, and genre.
- To clearly mark the form.
- To provide accents, kicks, and fills to assist other members of the ensemble in the performance of their parts.

TIME AND PULSE

2-6. All musicians have personal responsibility to correctly interpret time and pulse. However, it is the drummer and rhythm section's interpretation that will set the foundation for ensemble cohesion. Drummers develop a solid foundation of time and pulse through experience playing with other musicians and consistent practice with a metronome and recordings.

GENRE AND STYLE

2-7. As popular music has evolved, the repertoire for drum set has expanded to include a variety of musical genres and styles. In its simplest form, genre is used to categorize types of music (e.g., rock, pop, jazz, world, etc.), and style informs how the music is performed (e.g., straight or swung). Understanding both is essential for authentic performance on drum set.

2-8. How a drummer contributes to the music greatly informs both the genre and style of the music being performed. For example, it would be stylistically incorrect to perform a straight eighth-note rock groove when performing big band jazz. With the exception of arrangements in a contrasting style or when specifically directed by the ensemble leader, drummers should perform stylistically authentic grooves appropriate for both the genre and style of the music.

SONG FORM

2-9. Every piece of music has a form that should be analyzed and understood to ensure proper performance. When performers know the form of the tune, they rarely get lost, will play better because they can listen and contribute rather than be buried in their music, and be able to treat the tune as a whole, rather than mechanically, measure by measure.

2-10. A phrase is a grouping of measures into a larger unit. Phrases typically fall in 4, 8, 12, and 16 bar groups. To mark the form, the drummer must be able to hear and feel these phrases. This greatly aids counting, reading, and playing. The simplest form is the three-part ABA form: A = Statement, B = Departure or Bridge, and A = Return or Restatement.

2-11. Most popular music uses a variation of this form. The ‘A’ phrase is commonly repeated, producing an AABA form. The ‘B’ phrase, better known as the bridge, is a transition or release that departs from the ‘A’ phrase melodically and harmonically. The ‘A’ phrase returns to complete the form, usually differing in musical texture and dynamics from the original ‘A’ phrase. If more than half of the last ‘A’ phrase is materially different, then the form will be AABC.

2-12. Drummers must know the sequence of these phrases to play effectively with the ensemble. It is good practice to emphasize the beginning of a phrase to let the band know exactly where they are, especially during improvised solos. This can be done by accenting the down beat on a crash cymbal, or by varying the timbre on the drum set (e.g., switching from the hi-hat to ride cymbal) to indicate a contrast or change in the form.

2-13. Fills are used to connect phrases together and should be played to fit the musical texture at that point in the music. By analyzing the form, the drummer will know how to treat each fill and contribute tastefully to the overall effectiveness of the piece.

ACCENTS AND KICKS

2-14. Accents, kicks, and fills are used to assist the band in the performance of their parts, or to mark sections within the form, and are divided into three parts: the prep, the accent or kick, and the return.

The Prep

2-15. The prep is the note(s) that set(s) up the figure to be accented or kicked. The prep should be in the style of the music being performed. Preps are usually played on the snare drum but may be played on any drum including the bass drum.

The Kick

2-16. The kick is the note(s) or figure(s) being emphasized. The figure may be on the beat, off the beat, or several notes played in succession. Long notes/figures will usually, but not always, be accented with the bass drum and cymbal. Short notes will usually be played on a shorter sounding instrument (e.g., snare drum or tom-tom). The drummer must not destroy the integrity of the articulation of the line being accented (e.g., playing a long sound for a short figure).

The Return

2-17. Following the accent or kick, or when marking the form, the drummer resumes playing time on the next full beat.

FILLS

2-18. Fills are functionally extended preps. In most cases, a fill will terminate in a kick with a section, the entire band/ensemble, or by marking the new section of the form. The following concepts must be considered when performing fills:

- Individual technique (i.e., "chops").
- Rhythmic motifs within the style.
- Dynamic contrasts.
- Use of available instrumental timbres for tonal variety.

Note. Many drummers have a tendency to fluctuate their time when performing fills. Drummers must maintain strict time when setting up an ensemble figure or new section of the form.

RHYTHM ENSEMBLES

2-19. Rhythm ensemble is a task organization identification and is associated with a type of ensemble (i.e., instrumentation), rather than a specific genre of music. Rhythm ensembles in Army Bands are smaller in size and vary in instrumentation, with the exception of the larger big band jazz ensemble. These ensembles include, but are not limited to, big band, New Orleans jazz band, jazz combo, contemporary pop or rock band, Latin band, and country band. Ensembles typically have an amplified rhythm section (e.g., bass, guitar(s), and piano). These ensembles have a versatile repertoire including, but not limited to, the genres and subgenres of rock, funk, Latin, and jazz.

2-20. The following are considerations for the drummer's role in the genres commonly performed in rhythm ensembles. The information provided is not meant to be all inclusive but rather a broad overview. These concepts can be applied to other ensembles when performing these genres.

ROCK

2-21. There are many approaches to the rock genre, encompassing various subgenres and generational styles (including subgenres of pop and country). Most rock genres rely on foundational straight eighth-note grooves that have stood the test of time. Despite their simplicity, mere replication of notes falls short when performing these grooves. Authentic sounding grooves in this genre result from the balance between the component parts of the drum set.

2-22. The bass drum and snare drum are the dominant voices in most rock drum grooves. Bass drum notes should be played with intensity and often match the bass player. Backbeats performed on the snare drum must be consistent and require relentless practice and refinement. The hi-hat and ride cymbal maintain time within the groove and provide sonic variation between sections of songs (e.g., hi-hat for verses and ride cymbal for choruses). Cymbals should be played slightly lower in volume to allow the bass drum and snare drum to maintain their dominance.

FUNK

2-23. Funk is characterized by the interlocking rhythmic pattern of the electric bass and drum set. The grooves commonly associated with funk music range from foundational straight eighth-note grooves like those used in rock, to complex linear grooves requiring greater limb independence (e.g., any drum groove in which no two limbs play at the same). Depending on the generational style of funk, these grooves may be played with a straight, swung, or a "between the cracks" (i.e., between straight and swung) interpretation of eighth notes. Groove authenticity relies on eighth-note interpretation and balance between the component parts of the drum set.

2-24. The bass drum and snare drum remain the dominant voices in funk grooves. Bass drum notes should be played with intensity and are often more syncopated to match the bass player. Backbeats must maintain

consistency and intensity, but their placement may vary. Many funk grooves involve a strong backbeat on two and four, but the backbeat may (and often) moves to the "and" or "ah" of beats two and four. The hi-hat and ride cymbal maintain time within grooves and are often rhythmically busier (e.g., sixteenth notes or accented notes on the bell of the ride cymbal). When playing linear grooves, ensure balance of volume between the limbs while maintaining the intensity of the snare drum and bass drum.

LATIN

2-25. Latin music encompasses the musical genres and styles of the Spanish and Portuguese speaking countries of the Western hemisphere. These genres are heavily influenced by African rhythms and are traditionally performed with a section of percussion instruments. Modern interpretations require the drum set player to perform an approximation of the percussion section's parts, requiring advanced limb independence. The ability to synthesize these disparate percussion parts into a unified whole is paramount for authenticity in these styles, and varies based on the country of origin, and instruments being imitated.

2-26. There is not a dominant voice in most Latin drum grooves, but rather a dominant motor rhythm known as the clave. Drummers must balance the volume between their limbs in service of the groove while maintaining and supporting the clave rhythm. The bass drum often matches or supports the underlying bass groove. When performing with traditional percussion instruments, drum set parts should change based on the instruments being played (e.g., avoid playing congas parts on tom-toms if playing with a conga player).

JAZZ

2-27. Jazz music serves as a cultural touchstone, reflecting the spirit of its time while leaving an indelible mark on the trajectory of the popular music of today. Early jazz evolved with popular dances, becoming the preferred dance music of the first half of the 20th century. As the genre evolved into its many subgenres it shifted from the more straightforward and rhythmically uniform style associated with dance music to the introduction of new levels of complexity and dynamism requiring greater musical and technical prowess from its performers.

2-28. The defining characteristic of jazz and the swing style of drumming is the division of the beat. This division uses the 2/3:1/3 ratio emphasizing the triplet, rather than the 1/2:1/2 ratio of straight eighth-notes. The ride cymbal pattern and its variations are the dominant voice in jazz grooves, as it establishes the swing feel for the ensemble. The other essential voice in jazz grooves is the hi-hat, which provides the "backbeat" of the groove depending on the meter (e.g., on two and four in 4/4, or two and three in 3/4). The bass drum and snare drum voices are more interactive and serve to accompany or react to other musicians in the ensemble. Later subgenres of jazz see the drum set move away from being a straightforward timekeeper to more of a melodic voice in compositions.

BRASS ENSEMBLES

2-29. Brass ensemble is another task organization identification and is associated with a type of ensemble, rather than a specific genre of music. Brass ensembles in Army Bands are divided into two types, the brass band and the brass quintet. These ensembles have versatile repertoire including, but not limited to, ceremonial marches, chamber music, and arrangements of popular music from the genres and subgenres of rock, funk, Latin, and jazz.

2-30. The following are considerations for the drummer's role in these ensembles. The information provided is not meant to be all inclusive, but rather a broad overview.

BRASS BAND

2-31. Brass bands in Army Bands are elements consisting of brass instruments (supplemented by saxophones) and percussion. This modular ensemble is non-amplified and is capable of performing stationary or while moving. This ensemble often provides ceremonial music support due to its instrumentation and modular nature. Because of the variety of performance possibilities, drummers are required to prepare a wide range of genres and styles.

2-32. In its popular music capacity, brass bands perform arrangements of popular music replicating the New Orleans brass band style, characterized by the infusion of jazz and marching music. Music may be from any of the genres and subgenres of rock, funk, Latin, and jazz. The groove and style of this ensemble is based on

the second-line clave rhythm established by the drums and bass voice (e.g., the tuba), with supplemental rhythm provided by the horn section, that blends syncopated grooves with improvisation.

2-33. Depending on available personnel, MPT leader preference, and mission requirements, the percussion part may be divided into two players (e.g., snare drummer, and bass drummer) with additional percussion instruments. When used in parades, drummers provide groove patterns that are easy to march to, while supporting the style of the music.

2-34. In its ceremonial capacity, brass bands perform standard ceremonial pouch music consisting of commonly performed marches and patriotic music. Drummers will perform standard percussion parts (e.g., snare drum, bass drum, and cymbals) on drum set.

BRASS QUINTET

2-35. Brass quintets are traditionally chamber music ensembles that do not use percussion. In Army Bands, drummers are often assigned to brass quintets to aid in the performance of chamber, ceremonial, and popular music. Because of the variety of musical genres and styles, drummers are required to prepare accordingly.

2-36. When performing chamber music, drummers perform from written percussion parts. However, there are often times when drummers are asked to add percussion parts to brass quintet arrangements of symphonic music. This requires the drummer to simplify and combine parts originally written for a percussion section (e.g., snare drum, bass drum, cymbals, triangle, tambourine, etc.) onto the drum set.

2-37. When performing ceremonial music, drummers perform standard ceremonial pouch music consisting of commonly performed marches and patriotic music. Drummers will perform standard percussion parts (e.g., snare drum, bass drum, and cymbals) on drum set.

2-38. When performing popular music, drummers perform on drum set in the style appropriate for the genre being performed. Drummers should balance their volume to prevent overpowering the ensemble.

WOODWIND ENSEMBLES

2-39. Woodwind ensembles in Army Bands are traditional woodwind quintets or non-traditional instrumentation woodwind groups with repertoire including, but not limited to, chamber music, ceremonial music, and arrangements of popular music. While rare, drummers may be assigned to perform in woodwind ensembles.

2-40. Woodwind chamber music does not often include drum set parts. When used in chamber music, added percussion parts are often lighter percussive sounds (e.g., tambourine, triangle, or world percussion instruments).

2-41. When performing ceremonial music, drummers perform standard pouch music consisting of commonly performed marches and patriotic music. Drummers will perform standard percussion parts (e.g., snare drum, bass drum, and cymbals) on drum set. When performing these parts on drum set, drummers must perform with extreme dynamic sensitivity to avoid overpowering the ensemble.

2-42. When performing popular music, drummers may perform on drum set in the style appropriate for the genre being performed. Many drummers find success by adapting and performing stylistically appropriate grooves on the cajon or other world percussion drums (e.g., conga(s), or djembe).

OTHER ENSEMBLES

2-43. Army Bands often form ensembles to perform regionally specific music. These ensembles allow bands to engage with the local public when stateside, or to enhance relations with local nationals and allies when overseas. These ensembles may include, but are not limited to:

- **Latin Ensembles** – Salsa band, Tejano band.
- **Caribbean Ensembles** – Steel drum ensemble.
- **European Ensembles** – German fest band, klezmer band.

2-44. When assigned to these ensembles, drummers are encouraged to immerse themselves in these musical styles by listening to and studying recordings. Furthermore, drummers are encouraged to research the wealth of resources available in print and on the internet. Usually, but not always, there will be a subject matter

expert available (e.g., MPT Leader or local national) to provide further guidance for the performance of these unique musical styles.

SECTION III – PERFORMANCE CHARTS

2-45. This section provides guidance on reading and creating performance charts used for drum set.

MANUSCRIPT/PUBLISHER CONVENTIONS

2-46. There are variations from arranger to arranger and publisher to publisher, however, most drum set parts are written within the convention of other percussion parts, with:

- The bass drum notated on the bottom space (i.e., F space in treble clef or A space of bass clef).
- The snare drum on the 3rd space (i.e., C space in treble clef or E space of bass clef).
- Other drums/cymbals identified on the part (e.g., drums within the staff, and cymbals above (e.g., played with the hands) and below the staff (e.g., played with the feet)).

TYPES OF CHARTS

2-47. There are two common types of drum parts: verbatim parts, and style sheets.

VERBATIM PARTS

2-48. The most literal version of a verbatim part is a transcription. These parts are written note for note from a recorded performance. These parts are helpful when studying other drummers or when trying to replicate recognizable popular recordings and performances.

2-49. The most common types of verbatim parts are not strict transcriptions, but rather include drum parts, patterns, or ensemble hits to be performed. The notation is a guide to illustrate the composer/arranger's intent. How closely the drummer follows these parts will be dependent on their experience level and the ensemble leader's preference.

STYLE SHEETS

2-50. Most drum set parts are written as style sheets. These are often minimally written, outlining the generic style of the music (e.g., swing, rock, or Latin) and illustrating kicks and fills where appropriate or required. They may or may not identify sections of the form. These types of parts rely on drummers to interpret the music (see figure 2-1). When performing from style sheets, inexperienced drummers are encouraged to study recordings (when possible) and mark their parts with notes that will aid in performance. See paragraph 2-56 and 2-59 for suggested notes that may be added to style sheets.



Figure 2-1. Drum set style sheet

CREATING CHARTS

2-51. For many rhythm ensembles (e.g., contemporary pop or rock band, country band, and jazz combo), written drum set parts are not available or do not exist. These ensembles often perform covers from popular recordings, or from lead sheets that may provide the melody, form, and chord changes. Depending on the drummer's experience this may or may not provide them with enough information for rehearsal and performance.

2-52. Although many drummers perform from memory, they are encouraged to create charts when learning new tunes for rehearsals and as a resource for substitute drummers. There are many different ways to create parts for drum set and their level of detail may vary based on personal preference, experience, and familiarity with the source material.

POPULAR MUSIC

2-53. As described in paragraphs 2-9 through 2-13, every piece of music has a form. When creating charts for popular music it is helpful to label sections of the form with commonly used form language. Most popular songs from the last seventy-five years were written using varying combinations of the following sections:

- **Intro** – Introduces the song and sets the mood.
- **Verse** – Tells the "story" of the song.

- **Pre-Chorus** – Used to introduce or heighten the impact of the chorus.
- **Chorus** – Usually the most identifiable part of the song and often from where the title is derived.
- **Bridge** – Used to break up the repetition of a song. May contain solos, changes in lyrics, rhythm, and harmonies.
- **Break** – Often an instrumental break that allows for solos to build or transition to a new section.
- **Outro** – Finishes the song.

2-54. Some of the most common song forms include:

- **Verse-Chorus** – (Verse – Chorus – Verse – Chorus).
- **ABABCB** – (Verse – Chorus – Verse – Chorus – Bridge – Chorus).
- **No Chorus** – (Verse – Verse – Bridge – Verse).

2-55. Although variations exist, sections and phrases often fall into 4, 8, 12, and 16 bar groupings. When creating charts, begin by sketching out the form of the song into sections. Prior to, or as rehearsals begin, it is helpful to talk through forms with other members of the ensemble to ensure everyone has labeled sections and phrase groupings the same.

2-56. Once the form has been sketched out, the amount of detail added will be dependent on personal preference of the performer. Possible details to include into charts are:

- Time signatures.
- Example drum groove(s):
  - At the top of the chart.
  - Within the part as, if, or when it changes (e.g., bass drum pattern changes).
  - Underneath the form, with labels (e.g., verse groove, chorus groove, etc.).
- Fills:
  - Generic indication of "Fill" leading into sections.
  - Iconic or well-known fills may be written in.
- Ensemble hits or breaks.
- Cymbal crashes to mark phrases or sections.
- Changes in dynamics.
- Timbre changes (e.g., hi-hat for verse, ride cymbal for chorus).

2-57. Charts may be handwritten or entered into music notation software as needed. Ensure charts are marked with any changes if or when the ensemble chooses to modify the song. See figures 2-2 through 2-3 for examples.

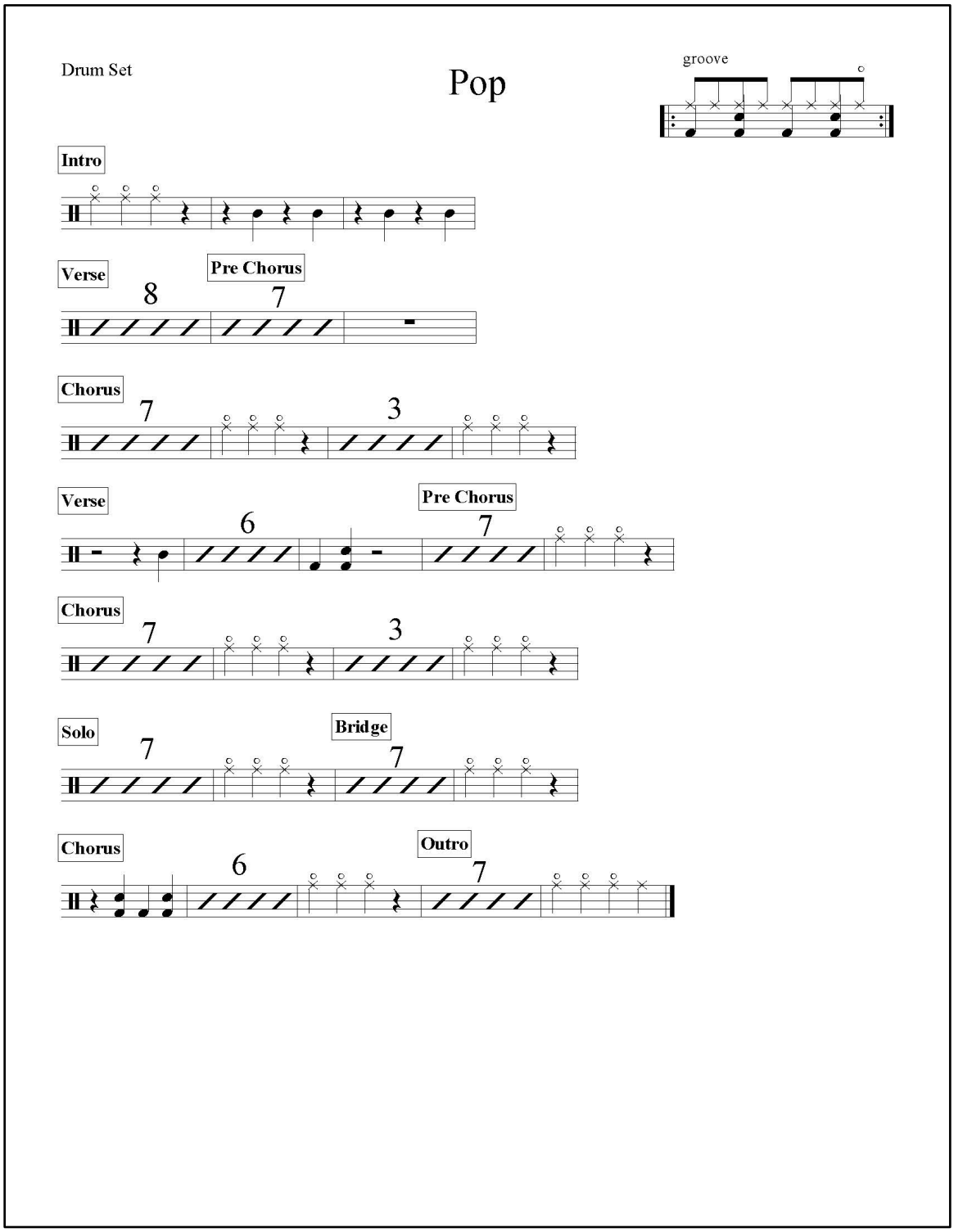


Figure 2-2. Simple chart

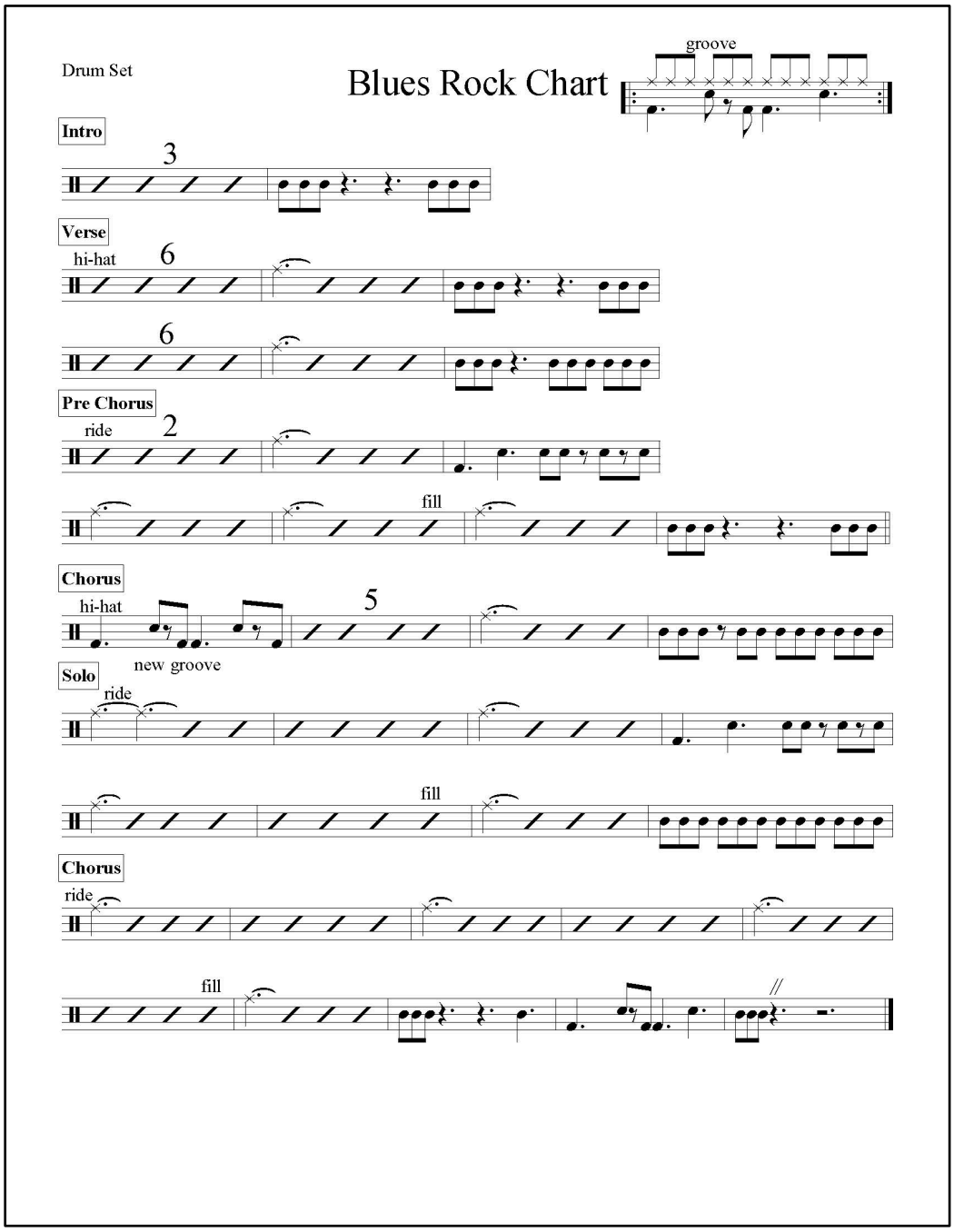


Figure 2-3. Detailed chart

JAZZ

2-58. When performing with a jazz combo, creating a dedicated drum chart may not be necessary. Jazz combos often perform from lead sheets that provide the tempo (e.g., ballad, medium, fast, bright, etc.), style (e.g., swing, bop, Latin, bossa, samba, etc.), the melody, and chord changes. The form is usually not labeled, but is generally easily identified based on common jazz forms including:

- **32 Bar Forms**:
  - AABA – The first A section may be written out twice or as a single 8-measure phrase repeated.
  - AB.

- **24 Bar** – Usually AAB.
- **16 Bar**.
- **12 Bar** – Usually 12 Bar "Blues."

2-59. The drummer's level of experience will determine the level of information needed when performing from lead sheets. Experienced jazz drummers may only need to know the form of the tune and which instruments are soloing over the form. Inexperienced players may need to write notes into the lead sheet including:

- Example drum grooves.
- Ensemble hits or breaks.
- Labels for sections.
- Timbre changes (e.g., identifying different cymbals for sections or soloists).
- Solo information:
  - How many?
  - Order.
  - Are they soloing over the whole form or splitting sections between players (e.g., splitting the form or "trading fours" within the form)?
- Endings:
  - Hard stop.
  - Vamp – How many times?
  - "Basie Ending."
  - "Ellington Ending."

SECTION IV – INDIVIDUAL TECHNICAL SKILLS

2-60. This section provides a broad overview of the individual technical skills required of drum set players. The information provided may apply to several subject areas.

TECHNIQUE

2-61. When discussing technique on drum set, it primarily applies to limb independence, coordination, and control over the hands and feet. Coordination and balance between limbs must reach a high level to overcome rigidity in grooves and requires diligent work. For example, when performing a basic rock groove:

- For the hands:
  - The lead/dominant hand should maintain consistent eighth notes on the hi-hat with accents on every beat using the stick's shaft, while striking the upbeats with the stick's tip.
  - The snare drum must maintain consistent and intense backbeats on beats two and four.
- For the feet:
  - The bass drum foot should be powerful while matching the intensity of the backbeat.
  - The pressure applied to the hi-hat pedal will determine how open the hi-hats sound.

2-62. Rigid coordination, such as accenting bass drum notes (e.g., syncopations) with the hi-hat, indicates a lack of separation between limb movements. The alignment of limbs and notes must be precise and accurate. For example, if playing a "4 on the floor" groove, bass drum notes on beats two and four should precisely align with snare drum notes on the same beats.

ACCURACY

2-63. Accuracy on drum set covers a gamut of considerations, including:

- Stylistic accuracy (e.g., Is the groove correct for the style of music?).
- Attention to detail in note placement:
  - Are limbs aligning together in time?
  - Are rhythms being played correctly (e.g., straight or swung) and in time?
- Marking the form:
  - Is the drummer clearly marking the form by hitting a cymbal crash at the beginning of each section?

    - Is the drummer marking the form through changes in texture (e.g., switching from closed to open hi-hat between sections)?
- Catching ensemble breaks or figures:
    - Are figures being hit in the right place?
    - Avoid playing through breaks.

2-64. While striving for "virtually error-free" performance, attention to detail in note placement, phrasing, and interpretation should be a primary focus for every drummer, as these elements contribute to overall accuracy. While playing a downbeat on count one of every verse or chorus may seem straightforward, the key question to ask is: "How can the drummer guide the band seamlessly to the next section?" This requires employing various musical tools to convey the song's intent: dynamics, additional notes (e.g., fills), different textures, or atmospheric sounds. In most genres simplicity often prevails.

Note. Drummers should opt for playing material that falls comfortably within their skill threshold, allowing for growth and development.

TIME AND RHYTHM

2-65. As described in paragraph 2-6, all musicians have responsibility for maintaining time and pulse. Consistency in tempo is fundamental for drummers in every musical genre, ensuring predictability for the ensemble. Maintaining an even spacing between beats is essential for achieving a steady tempo, which, in turn, enhances the groove and overall feel of the music. A steady tempo not only facilitates musical cohesion but also contributes to the enjoyment and engagement of both performers and listeners.

2-66. Beyond technical proficiency, accuracy, and tempo maintenance, drummers must also cultivate a deep understanding of musical context and stylistic nuances. This includes familiarizing themselves with the rhythmic conventions (e.g., straight, swung, or "between the cracks") of different genres and adapting their playing accordingly. Whether it is the driving eighth notes of rock, the intricate syncopations of funk, or the dynamic improvisations of jazz, drummers must tailor their rhythmic approach to suit the demands of each style and time signature.

FEEL/GROOVE

2-67. Feel and groove is how music flows, a seemingly intangible quality that resonates with both performers and listeners alike. It is about feeling the rhythm rather than overthinking it. For drummers, it is about creating a groove that is catchy, makes people move, and keeps them engaged. This involves:

- Keeping steady time.
- Playing a groove that matches the music's style and genre.
- Staying in sync with other musicians.

2-68. Finding the right balance between consistency and creativity is key and may be as simple as adding interesting touches while staying true to the groove (e.g., ghost notes on the snare drum or hi-hat). However, drummers should not let their creativity derail the established groove. Alterations to grooves should be within the abilities of the performer and should serve the music rather than the performer's ego.

2-69. Performers can easily evaluate their feel by watching the audience:

- Is the groove infectious?
- Are they dancing?
- Are they nodding their heads?

MUSICALITY

2-70. Musicality on drum set results from a combination of the previous skills. Drummers should make informed musical choices that align with the style, form, and the context of the music. They should understand the nuances of the genre and employ stylistic elements that enhance rather than detract from the music. Being attuned to the groove, understanding stylistic nuances, and navigating musical dynamics contribute to a compelling performance.

SECTION V – MAINTENANCE

2-71. The following sections describe operator-level maintenance for drum set.

DRUMS

2-72. The following paragraphs describe operator-level maintenance for snare drum, tom-toms, and bass drum. Operators should consult the manufacturer's maintenance paperwork for brand specific considerations.

DISASSEMBLE THE INSTRUMENT

2-73. The steps for disassembling snare drum, tom-toms, and bass drum are:

- Remove snares (when applicable).
- Loosen and remove tension rods.
- Remove rims.
- Remove heads.

INSPECT THE INSTRUMENT

2-74. The steps for inspecting snare drum, tom-toms, and bass drum are:

- Inspect the drumhead, checking for broken, cracked, dented, or pulled areas.
- Inspect the rims, checking for dents and warping (i.e., is the rim "out of round?").
- Inspect the shell:
  - Check for dents, scratches, and cracks.
  - Check the condition of the finish (if applicable).
  - Check hardware for stripped or loose nuts, screws, or bolts. Replace or retighten as needed.
  - Check hardware for corrosion or pitting.
- Inspect the tension rods:
  - Check for cleanliness.
  - Check for bent rods.
  - Check for missing spacer washers (metal or plastic).

CLEAN THE INSTRUMENT

2-75. The steps for cleaning snare drum, tom-toms, and bass drum are:

- Wipe inside and outside of shell with a clean cloth to remove built up dirt and dust.
- Remove old lubricants from tension rods with a clean cloth.
- Lightly lubricate tension rod threads and lug casing with fresh lubricant.

ASSEMBLE THE INSTRUMENT

2-76. The steps for assembling snare drum, tom-toms, and bass drum are:

- Replace the resonant (bottom), or snare side head.
- Replace the rim.
- Replace the snare assembly, ensuring that it is uniform (i.e., centered on head), straight, and moves freely via the throw off mechanism.
- Replace the tension rods and finger tighten.
- Replace the batter (playing) head.
- Replace the rim.
- Replace the tension rods and finger tighten.
- Tune heads to player's preference and stylistic requirements.

CYMBALS

2-77. The following paragraphs describe operator-level maintenance for cymbals.

INSPECT THE INSTRUMENT

2-78. The steps for inspecting cymbals are:

- Check for cracks or damage to the body of the cymbal.
- Check mounting holes for keying or damage from metal-on-metal contact from cymbal stands.

CLEAN THE INSTRUMENT

2-79. The steps for cleaning cymbals are:

- Clean using a commercial off-the-self cymbal cleaner. Avoid using heavy abrasive cleaners.
- Dry immediately with a clean, soft, cloth.
- Clean as needed.

HARDWARE

2-80. The following paragraphs describe operator-level maintenance for hardware.

INSPECT THE HARDWARE

2-81. The steps for inspecting hardware and stands are:

- Check for damage:
  - Bent posts on cymbal stands (e.g., straight, boom, and hi-hat stand).
  - Spring, chain(s), cable(s) on hi-hat and bass drum pedal.
  - Corrosion of metal.
- Check for missing pieces:
  - Check for the post protector on each cymbal stand to prevent metal on metal contact.
  - Check for cymbal felts – are there enough for each cymbal stand?
  - Check for missing rubber caps for stand legs/feet.
  - Check for missing wingnuts for cymbal and snare drum stands.
  - Check for missing hi-hat clutch.
- Inspect moving parts to ensure all parts move as intended:
  - Hi-hat pedal.
  - Bass drum pedal.
  - Arms on cymbal boom-stands.
  - Tilting mechanism on tom-tom mount(s).
  - Tilting mechanism on snare drum stand.
  - Throne height adjustment (e.g., hydraulic thrones).

STORAGE AND TRANSPORT

2-82. The steps for proper storage and transportation of drum sets are:

- Ensure each drum is stored and transported in properly sized individual cases.
- Keep hardware in proper case(s) to prevent damage to moving parts (e.g., hi-hat and bass drum pedals).
- If possible, cymbal bag/case should have separators between cymbal plates.
- Inspect cases for serviceability every three to six months, checking for:
  - Cracks.
  - Broken straps and handles.
  - Missing or broken wheels.

Chapter 3

Ceremonial Ensembles

Army Bands provide support to military ceremonies as a whole unit configured into a marching band or a smaller group to form a ceremonial band. This chapter provides an overview of ceremonial music and performance considerations and techniques for the percussion instruments commonly used in ceremonial ensembles.

SECTION I – CEREMONIAL MUSIC

3-1. Army Bands have been an integral part of military ceremonies since the Army's inception. Traditionally, ceremonial music helped to build enthusiasm, maintain motivation, and increase devotion to duty. Today, bands preserve tradition by performing honors to the host and to the Nation while also performing marching music to augment the ceremony. Ceremonial music includes official music, marches, patriotic selections, and organizational songs. See ATP 1-19 and TC 1-19.10 for more details.

SECTION PERSONNEL

3-2. Percussionists primarily perform on snare drum, bass drum, and cymbals while assigned to ceremonial ensembles. Section leaders are strongly encouraged to rotate percussionists through the section to ensure that percussionists are maintaining proficiency on bass drum and cymbals. When possible, it is recommended that the percussion section for ceremonial ensembles consist of ASI percussionists.

3-3. Depending on the number of concurrent missions and availability of personnel, non-ASI percussionists (ASIs 9H, 9K, 9N, 9T, 9U, 9V, and 9X) that do not double on another brass or wind instrument, may be assigned as auxiliary percussionists to perform bass drum or cymbals. These ASIs receive training and perform on auxiliary percussion during AIT. ASI percussionists serve as subject matter experts for the ceremonial percussion section and are responsible for ensuring that non-ASI percussionists are properly trained.

3-4. Careful consideration should be given prior to using non-ASI percussionists in ceremonial ensembles such as:

- Have they received training on proper playing techniques for bass drum and cymbals?
- Are they familiar with commonly used ceremonial music, including cadences?
- If playing cymbals, have they been trained on commonly performed and often unwritten "solo" crashes?
- How much experience do they have marching and playing?
- Can they set and maintain consistent tempo while marching (e.g., on bass drum)?
- Is there time in the schedule to sufficiently train them?

PERFORMANCE PRACTICE

3-5. Ceremonial music can be performed stationary (e.g., ceremonial band, while seated or standing) or while on the move (e.g., marching band). A common practice for the performance of ceremonial music (stationary or on the move) is the use of flip folders. Musicians use flip folders to position their music in front of, or near their faces, allowing for a line of site between their instrument, music, and the drum major or conductor. The use of flip folders is advantageous while performing music on the move and is often used for stationary ceremonies where traditional music stands cannot or should not be used.

3-6. The percussion section is the only section that is unable to consistently use printed music or flip folders during ceremonial music performances. Over time, this has created differing performance practices for percussionists when performing ceremonial music while stationary or while on the move.

WHILE STATIONARY

3-7. The percussion section for stationary performances consists of a bass drum, cymbals, and a snare drum. When performing for stationary ceremonies the percussion section brings a single music stand and perform printed parts as written. Music may be placed in a flip folder or a three-ring binder with sheet protectors.

Bass Drum

3-8. When performing from printed parts, the bass drum plays an important role in the projection and control of ensemble dynamics for the band. The bass drum dynamics and accents should be balanced with and support the tuba or bass part. Dynamics should not be as out of context as they might be when moving troops.

3-9. When performing marches, most bass drummers will not play on every beat as notated. If they do play on every beat, the dynamics should support the sound of the tuba/low brass section and not as a timekeeper. The part can be interpreted as a drum set player would "feather" the bass drum for older styles of swing: the part is present, but not necessarily audible.

3-10. To clearly define the spacing of the bass drum part, the player must first listen to the harmonic rhythm (i.e., frequency of chord changes) of the march and attempt to outline that rhythm with the bass drum. This gives greater freedom to play accents and prep cymbal crashes. Usually, the harmonic rhythm increases closer to cadence points or ends of phrases, so the bass drum part may become more involved in these sections.

Cymbals

3-11. When playing marches, the cymbal player often reads and doubles the bass drum on all parts where the dynamic level is mezzo-forte (***mf***) or above unless specifically notated otherwise (e.g., separately notated or labeled as "solo"). In older printings of marches, the note duration often implied dynamic shading or accents which corresponded to accented or longer notes in the melodic line (see figure 3-1). In figure 3-1, dotted quarter notes are interpreted and played at a lower dynamic level, while the dotted half note would be accented.

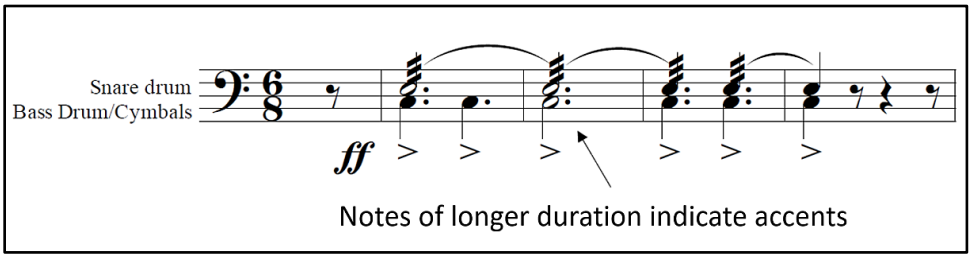


Figure 3-1. Cymbal notation

3-12. Playing cymbals within ensemble dynamics is crucial when performing marches. Players should avoid overplaying dynamics and creating static white noise. It is common practice to omit cymbals during softer sections of marches that primarily feature the woodwinds, as this matches and supports the change in ensemble timbre and balance. Omitting cymbals during these sections also gives the performer a break, as playing cymbals throughout an entire march can be very tiring.

3-13. Over time, conductors (and sometimes their percussion sections) have developed and added special accented or "solo" cymbal notes throughout many commonly performed marches. These notes are often unwritten and are added to enhance melodic peaks, accents within melodies, or dramatic rests in the music. These unwritten parts often create ambiguity and frustration for conductors, percussionists, and non-ASI percussionists, as they may vary from conductor to conductor, or performer to performer.

3-14. Section leaders should consult with conductors prior to rehearsing or performing marches to determine any preferred additions or alterations to cymbal parts. Pencil-in any alterations to the percussion parts and disseminate the changes to members of the section. This is crucial for non-ASI percussionists as they are often unfamiliar with these alterations. Performers may be exposed to several versions of these cymbal alterations throughout their careers. When in doubt, consult with the conductor.

Bass Drum with Attached Cymbal

3-15. Depending on the availability of personnel or to reduce the number of personnel in the section, a common practice is to use one player to perform bass drum with attached cymbal. There are several commercial off-the-shelf cymbal attachments, and the type used will depend on the bass drum (e.g., rope tensioned or modern). When selecting cymbals, it is recommended to use a mis-matched pair of cymbals (e.g., different diameters). Mount the larger cymbal to the bass drum (upside down), while holding and playing with the smaller cymbal. This allows the performer to see where the cymbals make contact, while also allowing adjustment of the angle of contact to prevent a vacuum between the cymbals.

3-16. Careful consideration should be used when using bass drum with attached cymbal, as players may not have experience or the coordination to perform the parts simultaneously. Non-ASI percussionists should not be assigned to perform bass drum with attached cymbal without proper training and guided practice with an ASI percussionist.

Snare Drum

3-17. When playing marches while stationary, the snare drummer should read and perform printed parts as written. The parts should be balanced with and support the horn section when performing offbeats. Roll interpretation will depend on the drum used and the tempo and meter of the march. When using smaller, higher tensioned drums (e.g., 6 ½ x 14 or smaller), rolls may be performed as closed or "buzzed" rolls. If using a deeper drum with lower tension (e.g., 10x14, 14x14, or rope drum (16x16)) rolls may be performed as closed or open double-stroke rolls. When using deeper and larger drums, dynamics and accents should be performed with consideration of ensemble dynamics, to avoid overpowering the ensemble.

3-18. Regardless of the type of roll performed (e.g., open or closed), the tempo of the march will determine roll speed. Offbeat rolls are performed as either five-stroke or seven-stroke rolls. When performing marches in compound-duple (e.g., 6/8), offbeat rolls must be slightly compressed to align with the third partial of the beat to maintain the natural lilt of the time signature.

Note. Regarding tempo, it is common practice to perform offbeat rolls as seven-stroke rolls for tempos up to 110 beats per minute. Five-stroke rolls are used for tempos at 110 beats per minute and higher.

3-19. Whether performing in simple duple or compound-duple, a common issue for performers (especially in the final strain) is rushing or dragging offbeat rolls. When performing faster tempos, seven-stroke rolls may be too long (i.e., duration) or too fast (i.e., hand speed) to fit within an offbeat causing the performer to drag. The five-stroke roll on the other hand, may be too short in both duration and hand speed causing the performer to rush.

3-20. A solution is to perform an alternative six-stroke roll, sometimes referred to as a "flam five." These rolls are non-alternating and use an inverted open roll sticking (see figure 3-2). While tricky to perform, these rolls bridge the gap between the five- and seven-stroke roll and allow the performer to maintain consistent time. For further discussion on the use of alternative six-stroke rolls, refer to Keith Brion's *Sousa's Marches: As He Performed Them*.

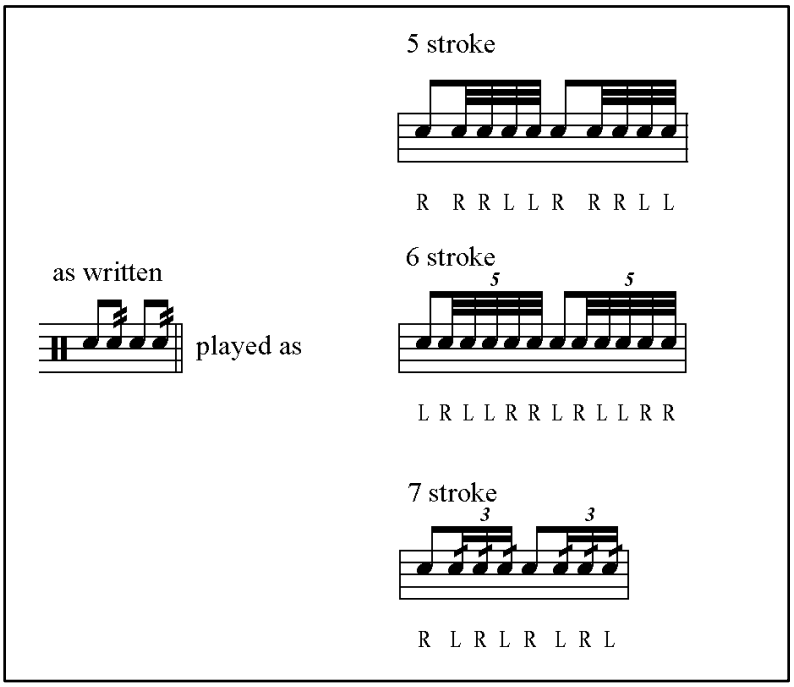


Figure 3-2. Roll variations

Alterations

3-21. There may be situations during stationary performances where the use of a music stand is impractical due to mission constraints (e.g., logistical, terrain, weather, etc.). In these situations, the section will often perform memorized simplified parts used for performance while on the move. The bass drummer may switch to playing "*Heavy Left*" (within ensemble dynamics unless accompanying troop movement), while the snare drummer and cymbal player perform from memory.

WHILE ON THE MOVE

3-22. The primary function of the military marching band is to provide troop support. Whenever Soldiers are moving (i.e., marching), the percussion section keeps the band and the larger formation in step. The percussion section will vary depending on the band's formation size and available personnel but consists of a bass drum, cymbals, and one to three snare drums.

Bass Drum

3-23. During military review ceremonies the bass drum player primarily plays "*Heavy Left*" (see figure 3-3) to keep Soldiers in step. If there are breaks or rests in the music, the bass drum continues to play as if the rests do not exist. Platoon sergeants or platoon leaders are listening for the bass drum to help keep their formations in step. The bass drummer is, in effect, "calling cadence" for the entire formation.

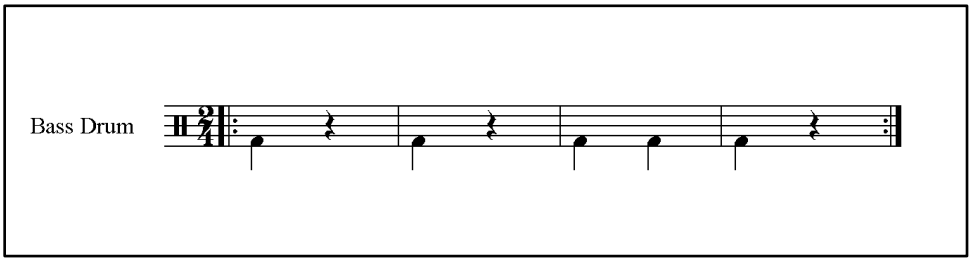


Figure 3-3. Heavy Left

3-24. During street parades, bass drummers may play musically appropriate parts that support the sound of the tuba/low brass section, rather than serving as a timekeeper or cadence caller. If "*Heavy Left*" is used during parades the volume should be reduced to ensemble dynamics.

3-25. Careful consideration should be given when selecting personnel to perform on bass drum. They must be able to set and maintain consistent tempo while on the move. Music used for marching is performed at a tempo between 112-118 beats per minute, with 116 as the preferred tempo for most occasions.

Cymbals

3-26. There are several approaches to performing cymbals while on the move, each dependent on the performer's experience and the commander's preference. While on the move, cymbals may be performed in the following ways:

- Doubling "*Heavy Left*" with the bass drum.
- Playing time while matching the harmonic rhythm of the march (i.e., keeping steady pulse).
- Only playing "solo" or special accented notes cued by the conductor.

Note. Regardless of the performance method used, players should perform any "solo" or special accented notes.

Snare Drum

3-27. While there are ways to attach flip folders to marching snare drums, their practical use is limited. Flip folders that are attached to the rim of the drum force the player to look down while marching and performing, making it difficult to simultaneously read the music while maintaining situational awareness of commands and signals from the drum major. A level of complexity is added when using rope tensioned snare drums since the drum naturally moves in conjunction with the leg making the use of flip folders impractical.

3-28. A common practice is for percussionists to perform marches from memory using simplified parts. These simplified parts utilize easy to remember "check patterns," which are one to two bar phrases. The practice of memorizing common ceremonial music, including music consistently played on the move, is highly encouraged (see TC 1-19.10). The percussion section leader is further encouraged to create a standardized set of simplified parts for use on the move. See section four of this chapter for discussion on creating simplified snare drum parts for marching band.

MARCH FORM

3-29. It is helpful when rehearsing, memorizing, or performing marches, to identify and understand march form. While there is not a standard form (i.e., all the same), commonly performed marches share many of the same building blocks including the introduction, first strain, second strain, trio, break strain, and final strain. Sections and their variations are identified and separated by double bar lines or repeats.

INTRODUCTION

3-30. Introductions vary in length but are usually four to eight measures long. Percussion parts during introductions may accent the melodic line with short notes. They may also match the melodic line's longer notes (e.g., long rolls in the snare drum part, or longer cymbal notes). "Solo" cymbal notes may be and are often added in the last measure to setup the first strain (e.g., "*Washington Post March*" – J.P. Sousa).

FIRST STRAIN

3-31. The first strain is sixteen measures repeated or thirty-two measures in length. Percussion parts should support rather than lead the ensemble. The bass drum (while stationary) should support the attack of the tubas. The cymbals accentuate the melodic line (in the brass) by matching or supporting long notes. The snare drum compliments the horn section's offbeats but often supports the melodic line through rolls. Percussion parts often increase in rhythmic density to match the melody approaching cadence points, ends of phrases, and leading into the second strain.

SECOND STRAIN

3-32. The second strain is sixteen measures repeated or thirty-two measures in length. Like the first strain, percussion parts should support rather than lead the ensemble. The second strain is often louder in dynamic and more powerful in character but may also have dynamic contrast when repeated (e.g., loud then soft, or soft then loud).

TRIO

3-33. The trio is thirty-two measures but may be sixteen measures repeated. The trio may be preceded by an introduction of four or eight measures (e.g., "*Bravura*" – C.E. Duble). The ensemble's orchestration often drastically changes to feature the woodwinds, while often omitting the trumpets and trombones. Percussion parts are usually sparse during trios and are played at a softer dynamic to support the change in ensemble balance. Cymbal parts that keep steady pulse (i.e., doubling the bass drum) may be omitted during trios to avoid overpowering the woodwinds. The practice of omitting cymbals during trios is encouraged while on the move, especially during pass in review ceremonies to allow the player to rest.

BREAK STRAIN

3-34. The break strain, sometimes referred to as the "dogfight," is typically sixteen measures in length. This section, as the name implies, provides a break between the trio and the final strain. They are often very loud and contain short rhythmic ideas (e.g., fanfare or rhythmic "stabs") played by most of the ensemble. Percussion parts are sparse and either double the ensemble's rhythmic patterns or support sustained notes with snare drum rolls and longer cymbal crashes. Added "solo" cymbal notes appear in break strains and often occur during moments of rest, immediately preceding or following an ensemble rhythmic moment.

FINAL STRAIN (TRIO REPEATED)

3-35. The final strain of a march is a repeat of the trio with heavier orchestration (e.g., woodwinds and brass doubling the melody). They are sixteen measures repeated or thirty-two measures in length. If the trio ends a march, it usually has a short percussive note called a "stinger" as the last note of the march. "Stingers" are typically only performed while stationary, but performers should confirm with conductors prior to performance.

3-36. Percussion parts should support the ensemble. Snare drum parts in final strains are often continuously repeated short roll figures. Players should pick a roll speed (e.g., five-, alternative six-, or seven-stroke) that allows them to maintain consistent time. While on the move, especially during parades and longer ceremonies, the band may rush or drag the final strain. The snare drummer(s) and bass drummer can and should help prevent tempo fluctuations during the final strain.

3-37. For many marches conductors will cue extra cymbal or bass drum notes in final strains to enhance melodic peaks or accents within melodies. Cymbal players are encouraged to carefully watch the conductor for any added cues during final strains.

ALTERNATE ENDINGS

3-38. There are some common alternate endings to marches such as:

- The final strain repeats back to the break strain and finishes with the final strain.
- With a marking at the end of the trio to go back to another section of the march using:
  - A ***da capo*** **(D.C. al fine) –** these marches return to the beginning of the march, and end immediately before the trio, marked by "**Fine**." When returning to the beginning, it is common practice to perform second endings for the first and second strains. Performers should confirm with conductors prior to performance.
  - A ***dal segno*** **(D.S. al fine)** – these marches will return to the sign and play until the "**Fine**" marking.

Note. Although unwritten, a common practice is for percussion sections to perform a *Seven-Count Cutoff* to end a march. When performing in parades, the seven-count cutoff is followed by a stick-tap or cadence depending on the drum major's command.

SECTION II – MILITARY CEREMONIES

3-39. This section describes percussion-specific ceremonial music and the procedures of common military ceremonies with specific instructions related to percussion performance.

PERCUSSION-SPECIFIC CEREMONIAL MUSIC

3-40. The following are cadences and signals specific to the percussion section used in ceremonial music performances.

CADENCES

3-41. Cadences are short musical selections that feature the percussion section. The percussion section performs cadences:

- To move the formation:
  - When stationary the drum major may command "***Drummers on the head***" and signal *Forward March*. The snare drum(s) will perform the pick-up nine-stroke roll and the band steps off on the down beat of measure one.
  - When stationary the drum major may verbally command "***Drummers on the head;" Forward***, **MARCH** without a mace signal. The snare drum(s) will perform the pick-up nine-stroke roll and the band will step off on the down beat of measure one.
- Preceding or following a march:
  - When performing in parades and longer review ceremonies cadences are played between marches.
  - The type of cadence performed (e.g., simple duple or compound duple) is dictated by the meter of the march that it precedes.

Simple Duple Cadence

3-42. The simple duple cadence (often referred to as "2/4 cadence") is the default cadence used by Army Bands (see figure 3-4). It is used for troop movement or when preceding a musical selection in the same meter. Non-ASI percussionists may change the bass drum to a "*Heavy Left*" pattern if the syncopated rhythms are too difficult. Cymbal players may omit or improvise an appropriate part (e.g., starting on the downbeat, play a crash every four measures).

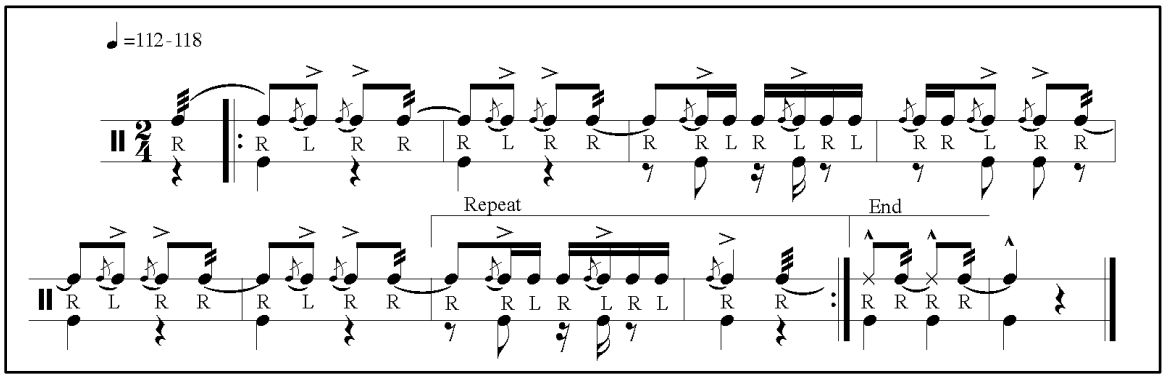


Figure 3-4. Simple duple cadence

Compound Duple Cadence

3-43. The percussion section performs the compound duple cadence (often referred to as "6/8 cadence") when preceding a march in the same meter. Non-ASI percussionists may change the bass drum to a "*Heavy Left*" pattern if the syncopated rhythms are too difficult. Cymbal players may omit or improvise an appropriate part (e.g., starting on the downbeat, play a crash every four measures). See figure 3-5.

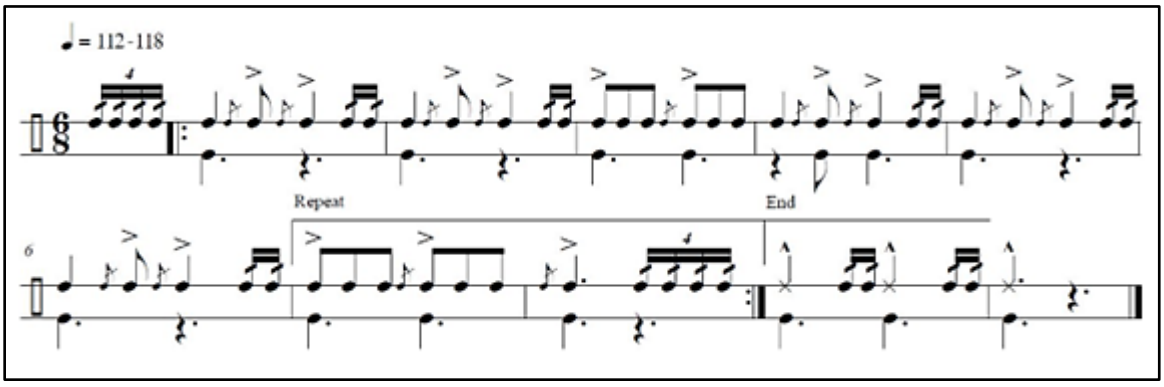


Figure 3-5. Compound duple cadence

Note. It is common to perform cadences between service songs during the "*Service Medley.*" The simple duple cadence (i.e., "2/4 cadence") is used to precede the Army, Navy, and Marine Corps service songs. The compound duple cadence (i.e., "6/8 cadence") is used to precede the Air Force and Space Force service songs.

Funeral Dirge Drum Cadence

3-44. The percussion section performs the "*Funeral Dirge Drum Cadence*" shown in figure 3-6 during a funeral procession. The cadence is performed at tempo of 100 beats per minute. If the distance from the chapel to the grave is extremely great, the percussion section gradually increases the tempo to 112-118 beats per minute. The escort marches at this cadence until it is a reasonable distance from the grave. The drum section gradually resumes the slower tempo. The conductor will instruct the escort commander and the band on these tempo changes before the ceremony.

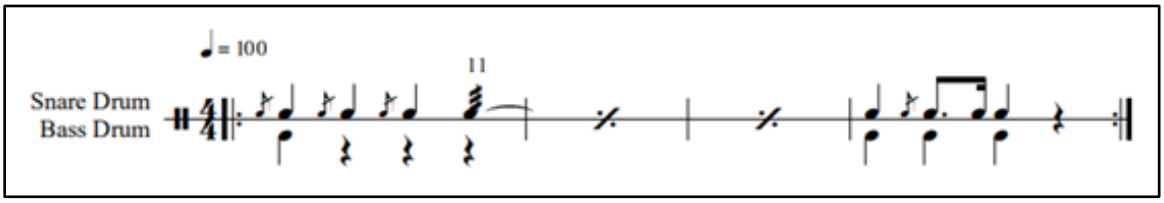


Figure 3-6. Funeral dirge drum cadence

SIGNALS

3-45. The following signals are used by the percussion section to begin (roll off), and end (cut off) marches or other musical selections used in a ceremonial setting.

Seven-Count Roll Off – Simple Duple

3-46. The percussion section plays the "*Seven-Count Roll Off*" one beat after the *Roll Off* signal is given preceding a march in simple duple meter (see figure 3-7).

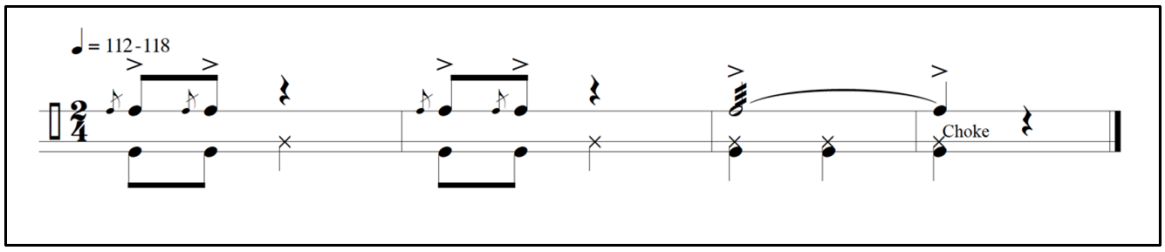


Figure 3-7. Seven-Count Roll Off – simple duple

Seven-Count Roll Off – Compound Duple

3-47. The percussion section plays the "*Seven-Count Roll Off*" one beat after the *Roll Off* signal is given preceding a march in compound duple meter (see figure 3-8).

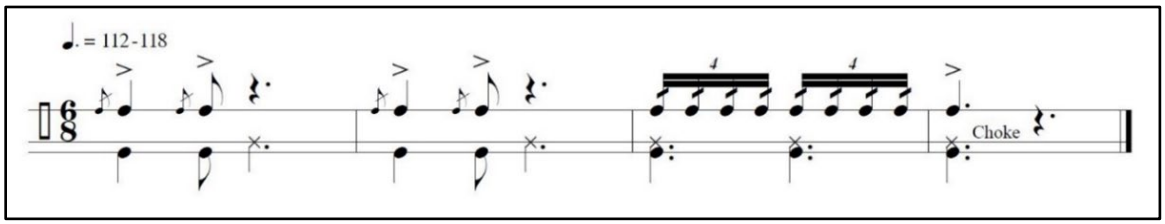


Figure 3-8. Seven-Count Roll Off – compound duple

Seven-Count Cutoff – Simple Duple

3-48. The percussion section plays this "*Seven-Count Cutoff*" when given the *Seven-Count Cutoff* signal while playing a march in simple duple meter. While on the move, immediately following the "*Seven-Count Cutoff*," play the pickups into a cadence in the same meter as the next programmed march. If no other marches are programmed, stay in simple duple (see figure 3-9).

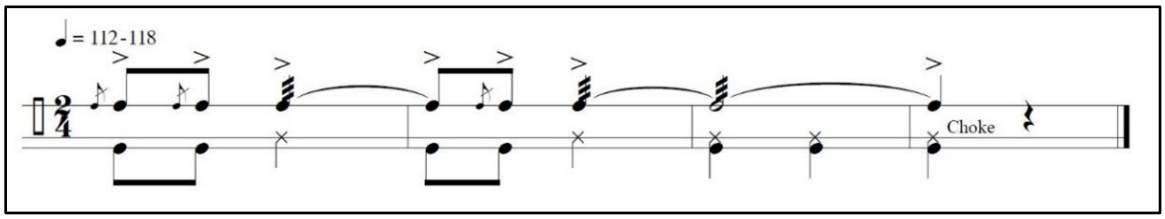


Figure 3-9. Seven-Count Cutoff – simple duple

Seven-Count Cutoff – Compound Duple

3-49. The percussion section plays this "*Seven-Count Cutoff*" when given the *Seven-Count Cutoff* signal while playing a march in compound duple meter. While on the move, immediately following the "*Seven-Count Cutoff*," play the pickups into a cadence in the same meter as the next programmed march. If no other marches are programmed, stay in compound duple (see figure 3-10).

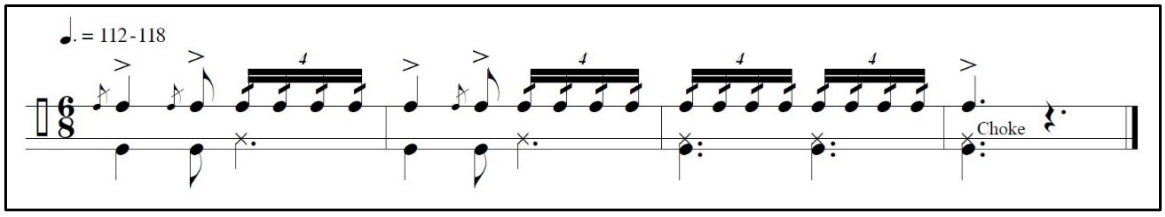


Figure 3-10. Seven-Count Cutoff – compound duple

Note. Although not notated, the roll in the penultimate measure of the "*Seven-Count Cutoff"* (simple and compound duple) may be performed as six-stroke rolls, with accents on the first, fourth, fifth, and eighth sixteenth notes.

INDOOR CEREMONIES

3-50. Indoor ceremonies vary by type and are conducted as described in TC 3-21.5.

3-51. The band may perform pre-ceremonial music, consisting of common marches or patriotic selections, until the ceremony begins. Conductors may signal cutoffs using the *Seven-Count Cutoff* signal or by using traditional conducted cutoffs.

3-52. Music performed within indoor ceremonies varies, but at a minimum will include:

- For the posting and retiring of the flag of the United States of America.
- National anthem(s).
- Honors to the reviewing officer (as applicable).
- Service song(s).

Note. A drum roll is typically used for the posting and retiring of the Colors but may be substituted with appropriate martial music if circumstances dictate. The drum roll or music will be played only while the Colors are moving. Once the Colors have been posted, music is not played for the color guard as they depart, nor as they return to retrieve the Colors. This courtesy is extended to all foreign national flags entitled to courtesies as described in AR 600-25.

REVIEW CEREMONIES

3-53. The most common ceremony that Army Bands participate in is the review ceremony. Review ceremonies are performed outdoors, with music provided by the marching band. Music is performed both stationary and while on the move. Review ceremonies and their variations are conducted for a variety of events including:

- To honor a visiting, high-ranking commander, official, or dignitary, or permit them to observe the state of training of a command.
- Commemorating an event (e.g., a division review).
- Change of command, activation, or inactivation of units.
- Graduations (e.g., Basic Combat Training).

Note. See TC 3-21.5, *Drill and Ceremonies* and TC 1-19.10, *Army Ceremonial Music Performance* for more information on the history, types, and sequence of events and individual actions during reviews.

3-54. The steps and sequence performed depend on the type of review being conducted, but generally Army Bands select and prepare music for the following:

- Formation of troops.
- Sound Off (optional).
- Presentation and honors.
- Inspection (optional).
- Honors to the Nation.
- Remarks (Colors Back).
- March in Review.
- Conclusion.

3-55. Band leadership will typically develop a standard list of music for ceremonial use. This list consists of official music, marches, patriotic selections, and organizational songs. Percussion section leaders are encouraged to develop a standardized ceremonial music packet for the percussion section to use during ceremonies to ensure:

- Section cohesion (i.e., removes ambiguity).
- Faster memorization of music used on the move.
- Performers are aware of special "solo" cymbal notes (if applicable).

Note. The marches provided during the steps of the ceremonial sequence are only suggestions. Aside from official music, music performed during ceremonies varies from unit to unit.

FORMATION OF TROOPS

3-56. Some bands perform pre-ceremonial "shows" to entertain audiences before review ceremonies. The types of music performed varies from unit to unit. These shows use arrangements of music that is not traditionally performed while marching and may take longer to memorize for percussionists.

3-57. If the band does not perform a pre-ceremonial "show," the drum major will march the band onto the ceremonial field and position it as described in TC 3-21.5. Once in position, the band may perform pre-ceremonial music, consisting of common marches or patriotic selections, until the ceremony begins.

3-58. When troops (i.e., the entire formation) march directly to the final line, the band may lead the formation onto the field playing marches, interspersed with cadences, concluding when all troops are on the field. Common marches used to march troops to the final line include:

- *"Black Jack"* – Fred K. Huffer.
- *"National Emblem"* – E.E. Bagley.
- *"The Thunderer"* – J.P. Sousa.

3-59. When the adjutant directs the band to **SOUND ATTENTION**, the trumpet(s) will execute as described in TC 1-19.10.

3-60. When the adjutant directs the band to **SOUND ADJUTANT'S CALL**, take the following action:

- If troops are already formed on the final line, the conductor says, "Trumpets and Drums," signals *Instruments Up*, conducts "*Adjutant's Call*," then signals *Instruments Down.*
- If troops are to be marched from the ready line to the final line, trumpets and drums will be signaled to perform "*Adjutant's Call*," immediately followed by the full band playing marches, interspersed with cadences until all troops are on line. See figure 3-11 for "*Adjutant's Call*" percussion parts.



Figure 3-11. Adjutant's Call

Note. Although not notated, it is common practice for snare drummers to perform "*Adjutant's Call"* with flams. Flams are added to the downbeat of measure one (first time only), the eighth notes on beat two of measure three, and the downbeat of measure four.

3-61. See TC 1-19.10 for information and instructions for mounted reviews.

SOUND OFF

3-62. Sound off, if requested, is performed here. The drum major initiates the *Sound Off Beginning Sequence* described in TC 1-19.50: the drum major signals *Instruments Up,* commands **SOUND OFF**, and the band

plays the "*Sound Off Chords"* at the drum major's direction. The drum major faces about and signals a modified *Forward March*. The band steps off playing a march. Commonly performed marches include:

- "*Bravura*" – C.E. Duble.
- "*Queen City*" – W.H. Boorn.

3-63. After the step off, the band will complete a left turn to march in front of the formation. After conducting a countermarch, the band will march back to their starting position, making a right turn followed by another countermarch returning to the starting position. When the band reaches its starting position, the drum major signals the *Seven-Count Cutoff*, and initiates the *Sound Off Ending Sequence*: the drum major commands **SOUND OFF**, directs the "*Sound Off Chords,"* signals a modified *Seven-Count Cutoff*, and signals a modified *Instruments Down*. See figure 3-12 for "*Sound Off Chords."*

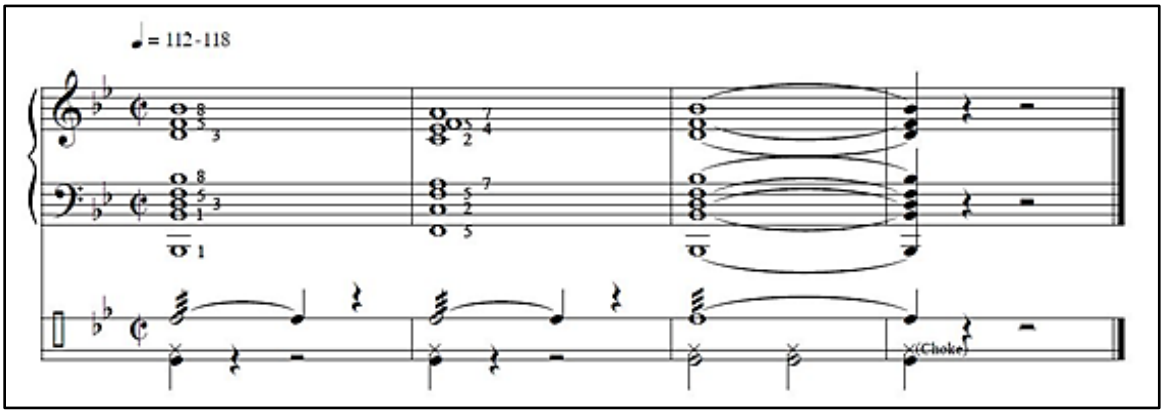


Figure 3-12. Sound Off Chords

PRESENTATION AND HONORS

3-64. If the reviewing officer is entitled to honors, the conductor signals *Instruments Up*. The conductor indicates the required number of "*Ruffles and Flourishes*" by holding up the appropriate number of fingers on the left hand. The conductor conducts "*Ruffles and Flourishes*" followed by any other music prescribed by AR 600-25. Variety exists in the performance of the bass drum and cymbal parts. The written bass drum and cymbal parts provided here represent one way to perform "*Ruffles and Flourishes,"* (see figure 3-13).

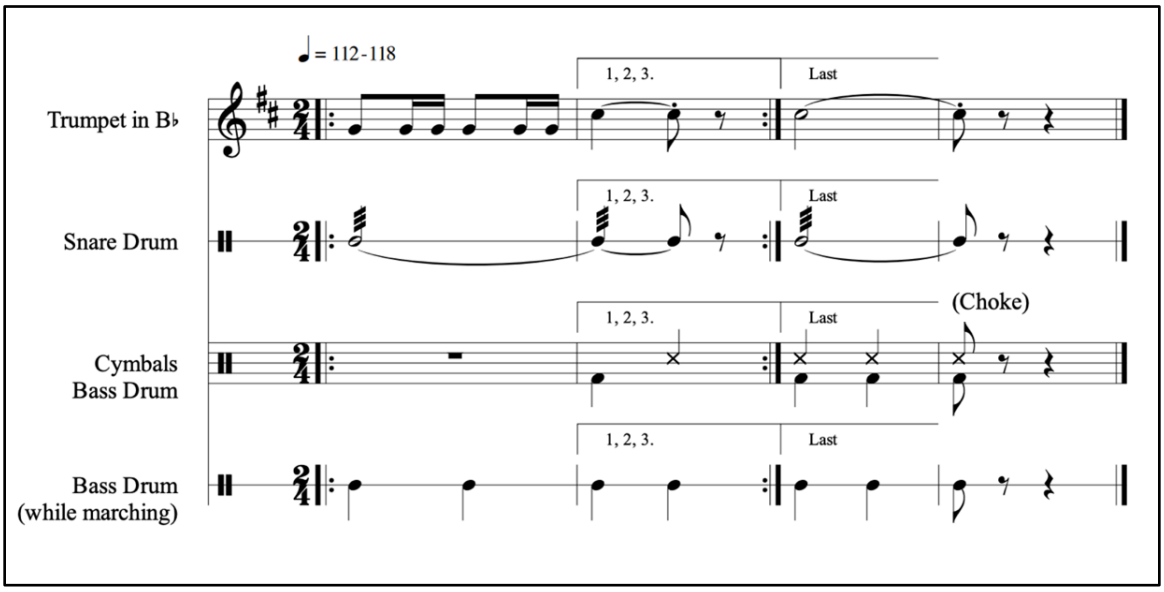


Figure 3-13. Ruffles and Flourishes

3-65. The "*General's March*" is the prescribed honors music for General Officers of the Army and Air Force. The Department of Defense arrangement of the "*General's March*" is played immediately following the playing of the appropriate number of "*Ruffles and Flourishes*" (see figure 3-14). See AR 600-25 and TC 1-19.10 for other selections performed for honors.



Figure 3-14. General's March

INSPECTION

3-66. When included, the inspection allows the reviewing party to inspect the formation. Marches performed during the inspection will be from a stationary position and depending on the size of the formation they may be repeated several times. Commonly performed marches include:

- "*Black Horse Troop*" – J.P. Sousa.
- "*Washington Post March*" – J.P. Sousa.

HONORS TO THE NATION

3-67. During the honors to the Nation sequence, follow these procedures: the commanding officer of troops (known as COT) directs **BRING YOUR UNITS TO ATTENTION**. After the band comes to the *Position of Attention*, the conductor faces about and signals *Instruments Up*. When the COT commands ***Colors Center*, MARCH**, the conductor gives the preparatory beat and begins conducting a march (e.g., "*You're A Grand Old Flag"* – George M. Cohan, arr. Yoder). When the COT and color detail have marched forward and halted, the conductor signals a *Seven-Count Cutoff*, then signals *Instruments Down*. The conductor faces to the front.

3-68. The COT then directs **BRING YOUR UNITS TO PRESENT ARMS**. The conductor faces about. The drum major salutes at the same time the conductor brings *Instruments Up*. The conductor begins

conducting "*The Star-Spangled Banner*" as directed in TC 3-21.5. Upon completion of "*The Star-Spangled Banner,"* the conductor will either: signal *Instruments Down* after the music is complete, then faces about and salutes; or the conductor commands **STAND FAST** when the music is complete, faces about and salutes, and musicians bring *Instruments Down* in three counts in time on the command ***Order***, **ARMS.**

REMARKS

3-69. After the formation assumes parade rest, the drum major may move from their post on the right flank of the formation to the rear of the formation. Using the drum major's movement as a cue, the percussion section leader commands ***Ready***, **DOWN** in a voice loud enough for only the band to hear. The musicians with large instruments lower their instruments to the ground in unison and remain in position until the percussion section leader commands ***Ready***, **UP**. The musicians with large instruments rise and assume *Parade Rest* in unison.

3-70. When placing instruments on the ground, avoid making extraneous noises to avoid bringing attention to the band's formation. If using modern drums, snare drummers may place the drum and carrier on the ground or place the drum on the ground while continuing to wear the carrier. Bass drummers should place the drum and carrier on the ground. If the carrier has hook locks, ensure that the locks are tightened to avoid extraneous noise when removing the drum and placing it on the ground (see figure 3-15). If using heraldic rope drums allow extra time to remove drums from slings or straps.



Figure 3-15. Drum carrier hook lock

3-71. When the last speaker begins making closing remarks (e.g., "In closing…") the percussion section leader commands ***Ready***, **DOWN** in a voice loud enough for the band to hear. The musicians with large instruments lower themselves to the ground in unison, secure their instruments, and remain in position until the percussion section leader commands ***Ready***, **UP**. The musicians with large instruments rise and assume parade rest in unison.

3-72. When picking up instruments from the ground, the percussion section leader should wait until the bass drummer is ready before commanding ***Ready***, **UP**. This is especially important if the bass drummer is using a strap style harness, as bass drummers often struggle when reattaching harness clips to the drum. If using strap style harnesses, bass drummers are encouraged to practice clipping/unclipping the drum from the ground.

Note. Although described as a voice command, ***Ready,*** **DOWN (UP)** may be performed using stick clicks. The preparatory command ***Ready*** is two clicks, and the command of execution **DOWN (UP)** is one click. The stick clicks should only be loud enough for the band to hear.

3-73. The COT directs **BRING YOUR UNITS TO ATTENTION**. After the band comes to the *Position of Attention*, the conductor faces about and signals *Instruments Up*. The COT commands ***Detachment***, **POST MARCH**. One beat after the command of execution, the conductor gives the preparatory beat and begins conducting a march (e.g., "*Grandioso*" from "*The Stars and Stripes Forever*" – J.P. Sousa). When the COT and color detail have marched back to their posts and halted, the conductor signals a *Seven-Count Cutoff*, then signals *Instruments Down*. The conductor and drum major change posts. The drum major faces the band, and the conductor faces to the front.

MARCH IN REVIEW

3-74. After the COT directs **PASS IN REVIEW,** the drum major commands, **AUTOMATIC SEQUENCE**; ***Right***, **FACE**; ***Forward***, **MARCH**. The drum major marches the band to the position described in TC 3-21.5, and commands ***Mark Time,*** **MARCH**; ***Band,*** **HALT**. On the command **HALT**, the band executes the automatic sequence in tempo: halt in two counts, face to the left in two counts, and executes *Instruments Up* in three counts (percussionists move to *Prepare to Play* on count three). The drum major signals *Instruments Up* to correspond to the band's movements.

Note. Following the command ***Forward,*** **MARCH** the percussion section leader begins playing "*Heavy Left"* as the band steps off. "*Heavy Left*" may be performed as stick clicks, on the rim, or on the head.

3-75. The drum major turns their head to the left and extends the left arm to signal the first unit commander. The first unit commander commands ***Right Turn (pause)*** **MARCH.** The drum major gives the supplementary command ***Forward*** during the pause. One beat after the command **MARCH**, the drum major signals a modified *Forward March*. The band steps off playing two beats after the command **MARCH**. Commonly performed marches during a pass in review include:

- "*The American Soldier*" – Koff and Jones.
- "*Bravura*" – C.E. Duble.
- "*Queen City*" – W.H. Boorn.
- "*The Thunderer"* – J.P. Sousa.

3-76. The drum major marches the band as described in TC 1-19.10 and TC 3-21.5. Once halted, the band continues to play as the formation passes the reviewing stand. Depending on the size or length of the formation, the band may perform several marches, interspersed with cadences, as the troops march in review.

CONCLUSION

3-77. When the last element of troops executes *Ready Front*, the conductor signals a *Seven-Count Cutoff*, initiating the concluding sequence. If special martial music has been requested (e.g., Division/Corps Song), it is played at this time. If multiple musical selections are to be played, they may be interspersed with a cadence. When the special music concludes, the conductor signals a *Seven-Count Cutoff*, and the percussion section initiates an eight-bar drum cadence. On the first beat following the drum cadence, the band begins playing (in place) the "*Service Medley*" or the official version of "*The Army Goes Rolling Along*." The drum major signals *Forward March* so that the band steps off on the downbeat of the second time through measure 37 of "*The Army Goes Rolling Along*." The drum major signals a *Left Turn* to maneuver the band onto the line of march. The band continues the play through the end of the chorus. The drum major signals a *Seven-Count Cutoff* so that the band stops playing on the downbeat of measure 62. The percussion section immediately begins playing a stick tap (e.g., stick clicks, on the rim, or on the head) or drum cadence, and the drum major maneuvers the band off the parade field.

Note. Music performed in the conclusion sequence will vary from unit to unit and ceremony to ceremony but will always conclude with "*The Army Goes Rolling Along*."

FUNERALS

3-78. When performing for funerals drum shells should be completely covered with black crepe material. When available, drumheads may also be changed to solid black without manufacturer's labels or logos. Snare drums should be muffled with the snare mechanism turned off. If using rope drums, either remove the snare strainer and snares completely or place a piece of fabric between the snares and bottom head.

3-79. The "*Funeral Dirge Drum Cadence*" is performed as described in paragraph 3-44. If entitled to honors, "*Ruffles and Flourishes*" followed by the march appropriate to the grade of the deceased is performed. Honors are played at a tempo of 80-100 beats per minute to preserve the solemn dignity of the ceremony.

***Note*.** Cymbals are not used during the performance of ceremonial funeral music.

STREET PARADES

3-80. Army Bands perform in street parades when conducting community engagement missions. Bands typically perform a small number of commonly performed marches interspersed with cadences. The number of marches selected varies depending on the length of the parade and are frequently performed in alphabetical order and repeated as necessary.

3-81. Parades can be taxing on the percussion section. The percussion section should resist the temptation to play loudly throughout (see paragraph 3-24 for the performance of "*Heavy Left"* during parades). Depending on the length and audience spacing there may be several miles of non-stop or stop and go performance. The drum major and commander will balance the audience's experience with the band's level of fatigue. As a result, there may be prolonged periods where the percussion section performs a drum cadence. The percussion section is encouraged to use vocal communication during parades to ensure the drum major's commands and signals are being followed (e.g., "Roll Off," "Cadence," or march title).

SECTION III – HERALDIC ROPE TENSIONED DRUMS

3-82. Heraldic rope tensioned drums (often simply referred to as rope drums) have been used by percussionists since the Army's inception. Their use in Army Bands today varies by unit and largely depends on several factors including:

- Availability of instruments.
- Commander or section preference.
- Snare drummers' proficiency using traditional grip.
- Section personnel having knowledge of maintenance requirements.
- Difficulty associated with marching (e.g., snare drum).

3-83. Many Soldiers do not have experience using, maintaining, or marching with rope drums. This section provides a brief overview of rope drums, including their construction, maintenance, and considerations for marching.

CONSTRUCTION

3-84. Rope drums come in several different sizes for both snare drum and bass drum. Snare drums range from 16 to 20 inches in depth and 16 to 17 inches in diameter. Bass drums range from 14 to 20 inches in depth and 24 to 30 inches in diameter.

3-85. Unlike their modern counterparts, rope drums are composed almost entirely of wood, with the notable exception of the snare strainer system, and any optional accessories such as carry hook(s), rim guards, and feet (see figure 3-16). These drums are noticeably lighter than modern drums and produce less strain on player's bodies over extended usage. The main components of a drum include:

- Hoops.
- Heads.
- Shell.
- Rope.
- Leather ears.
- Carry hook(s).
- Feet.
- Rim guards (if applicable).
- Snare strainer.
- Pigtail knot.
- Drag rope.



Figure 3-16. Rope drums

HEADS

3-86. Heads for snare drums can be made of plastic, synthetic/hybrid, or calfskin membranes. The most common heads used by Army Bands are synthetic/hybrid heads (e.g., a woven fiber blend, such as the Rotex head from Loyal Drums) on the batter side, and plastic heads on the snare side.

3-87. Bass drums use modern plastic marching bass drumheads, as used on modern corps-style drums. These plastic heads provide the best sound and durability for ceremonial music use. Recommended commercial off-the-shelf options include the Evans MX2 or Remo Powermax head, which include pre-installed internal muffling.

Note. While calfskin drumheads are the traditional and most stylistically appropriate choice for rope drums, synthetic and plastic heads offer better durability, weather resistance, and cost effectiveness for Army Band usage.

ROPE

3-88. As the name implies, rope drums are tensioned by rope. One single length of rope is pulled through the drum, providing tension to the heads. The rope passes through holes in the hoops, then through leather ears, terminating in a pigtail knot which secures the rope and maintains tension around the drum. Common types of rope used include:

- Hemp.
- Natural linen.
- Synthetic polyester fiber (e.g., Filament Dacron).

EARS

3-89. The heads can be "tuned" (also referred to as braced) by adding further tension with leather ears. Much like using a drum key to tighten the tension rods on a modern drum, pushing (or pulling) the ears down on a rope drum will add tension to the rope causing the drum to raise in pitch. It is important to pull ears in pairs (e.g., one ear on each side of the drum) moving around the shell, when tensioning the drum (see figure 3-17).



Figure 3-17. Pulling leather ears

***Note*.** Avoid pulling ears individually as this creates uneven tension on the heads and may lead to warping of the shell and hoops.

3-90. When drums are not in use (e.g., while stored) the ears should remain loose (i.e., without tension on the rope), to prevent strain on the shell. This also prevents the rope and heads from stretching from constant tension. An exception would be immediately following the application of new rope or drumheads. New rope stretches over time and may need to be repulled after it settles. Leaving tension on the drum after applying new rope (e.g., overnight) may speed the process of stretching the rope.

SNARES

3-91. The most common type of snares on a rope tension drum are natural gut snares, and like calfskin heads, they may be affected by weather changes. The snare strainer on a rope drum does not typically include a quick release lever. The snares are tensioned by a screw and are secured in place by a locking nut/washer. When adjusting snare tension, ensure that the locking nut/washer is secure to avoid losing the screw (e.g., falls out while marching) or losing tension on the snares.

3-92. If the use of a rope drum with the snares off is required (e.g., during a funeral), it may be difficult to loosen the snares enough without completely loosening the snare strainer and removing the screw and locking nut/washer. If this is the case, it may be best to remove the snare unit completely. If removing the snares is impractical, another option is to loosen the snares enough to place a piece of cloth between the snares and the bottom head.

BASS DRUM

3-93. Bass drums have the same component parts as snare drums apart from the snare strainer. The carry hooks are positioned on the shell of the drum rather than on the hoop. Depending on the manufacturer and type of harness used, carry hooks may be set up as two points (e.g., equidistant to attach to shoulder straps), or as three points (e.g., equidistant shoulder hooks and one hook that attaches to the belt). This allows the drum to be held in front of the torso with the playing surfaces facing outwards.

MAINTENANCE

3-94. Maintenance can be intimidating for those unfamiliar with rope drums. General maintenance can be broken down into disassembly, assembly, and tuning.

DISASSEMBLY

3-95. Disassembling a rope drum begins with the drag rope and pigtail. The drag rope and pigtail are tied in such a way that they can be easily untied and pulled out for re-tensioning or rope removal. It is of the utmost importance when doing so that even tension is maintained around the drum to prevent warping of the shell or hoops.

3-96. The steps for disassembling a rope drum are:

- Detach and untie the drag rope.
- Slowly release the tension of the pigtail by unwinding the knot.
- Release the rope tension in small increments. Starting from the end point of the rope (e.g., the pigtail), pull a little bit of tension out of each strand of rope, one at a time, zigzagging around the drum until the heads visibly begin to wrinkle.

Note. When the heads begin to visibly wrinkle, it is then safe to completely pull out or remove the rope from the drum. If the rope will not be re-used, it may be quicker to cut the rope once the heads visibly begin to wrinkle, to aid in faster removal.

- When disassembling a snare drum, remove or loosen the snare strainer to allow for removal of the bottom head.
- When disassembling a snare drum, using painter's or electrical tape, mark the location of the pigtail and the carry hook on both the rim and the shell to ensure proper placement during reassembly.
- If disassembling a bass drum, using painter's or electrical tape, mark the location of the pigtail on both the rim and the shell to ensure proper placement during reassembly.

ASSEMBLY

3-97. Once the drum is disassembled check for:

- Warping of the shell or hoops.
- Check for loose internal hardware (e.g., mounting hooks for bass drum).
- Condition of the heads (e.g., excessive dents, pulls, tears, or ripping).

3-98. To assemble the drum, ensure that there is a clean work surface, free of dust or debris, and that there are no missing components.

Note. The following paragraphs apply to the assembly of a snare drum. The drum will be assembled upside down with the carry hook on the work surface, facing the operator. These steps may also be used for assembling bass drums. When assembling a bass drum, ensure that the taped locations marked during disassembly (see paragraph 3-96) are on the top of the drum (e.g., the side opposite the work surface) and facing the operator.

Component Assembly

3-99. The steps for assembling the components of a rope drum are:

- Place the batter hoop down, upside down (e.g., flat side facing up).
- Seat the batter head, upside down, so that the flat side of the batter hoop makes full contact with the counter hoop of the batter head.
- Place the drum shell onto the batter head, upside down, so that the bearing edge of the shell is seated just inside the counter hoop of the batter head.
- If the drum has artwork, ensure that it will be aligned front and center of the drum.

Note. Artwork will typically be centered opposite the carry hook(s) for snare drums and bass drums.

- Place the snare side head, right side up, on top of the shell so that the bearing edge is seated just inside the counter hoop.

- Ensure that the snare system is installed:
  - When viewed upside down, the snare strainer will typically be two holes to the right of the carry hook.
  - When viewed as worn, the snare strainer will be accessible by the player, typically two holes to the left of the carry hook.
- Place the snare hoop on the snare head, ensuring that the snares sit inside the snare gates (hoop cut outs), so that the flat side of the snare hoop makes full contact with the counter hoop of the head.
- Check for alignment:
  - The holes in each hoop should be offset, not in line.
  - The snare bed should lie two holes to the right of the carry hook (when the drum is upside down and the carry hook is facing the operator).

Pulling the Rope

3-100. The steps for assembling and pulling the rope are:

- Feed the rope through the hole just to the left of the snare bed, starting from the inside (i.e., the head side of the hoop) and pulling out and then down (i.e., toward the operator). Pull the entire length of the rope until the eye splice knot rests against the inside of the hoop. From here, the rope will be fed and pulled around the drum to the left.
- For bass drum, feed the rope through the hole marked with tape during disassembly. Starting from the inside (i.e., the head side of the hoop) and pulling out and then down (i.e., toward the operator). From here, follow the remainder of the step above.

Note. Rope can be ordered in pre-measured lengths based on drum size from manufacturers (e.g., Cooperman, Loyal Drums). When ordering rope, it is recommended to request that the eye splice is pre-tied.

- Feed the rope down and to the left, through an ear, ensuring that it is properly oriented (i.e., upside down), with the wide (larger) opening facing the snare head (top head for bass drum) and the smaller opening facing the batter head (bottom head for bass drum).
- Wrap the rope around the batter hoop, feeding it back through the hole, from the inside then out, pulling the rope back up and to the left.

Note. Over time, friction from the rope creates divots in the rim which are especially obvious on painted rims. When pulling the rope around the rim ensure that the rope sits inside these divots.

- Feed the rope back through the same ear (the smaller opening), and wrap around the snare hoop, feeding through the next hole (to the left of the starting hole), from the inside then outwards, pulling the rope down and to the left.

Note. At the conclusion of this step the rope should form the first "V." The ear should rest against the batter hoop. Ensure the rope is pulled tight enough to remove excess slack, but not so tight as to disrupt the positioning of other components (e.g., unseating the head from the bearing edge).

- Repeat the previous three steps moving around the drum (to the left), returning to the eye splice loop.

Note. As the rope is pulled around the drum, ensure that it is threaded through the ears and that ears are facing the same direction. Each "V" should have an ear.

- When returning to the starting hole, instead of feeding the rope through the hole in the hoop, feed it through the loop of the eye splice knot. Ensure the loop is pulled to the outside of the hoop. The tension of the rope being pulled should assist in this.

- Remove excess slack in the rope by working back around the drum (from the left, in a clockwise motion when viewed from above), pulling a bit of rope in each section. When pulling the rope both sides of the "V" will be pulled.
- Once back at the eye splice, pull the rope down to remove the slack and check the head tension. When the desired tension is achieved, hold the end of the rope in place.

Note. The previous two steps may need to be repeated several times to remove excess slack and achieve the desired playing tension. The ears will be used to tighten the drum even further, so the tension of the drum at this step (with the ears completely loosened) will still be a bit lower than the desired playing tension.

Pigtail Knot

3-101. The pigtail knot is used to tie off the end of the rope, securing it in place while maintaining tension on the rope (see figure 3-18).



Figure 3-18. Pigtail knot

3-102. The steps for tying a pigtail knot are:

- Ensure the rope is pulled all the way through (around) the drum, with no slack, and that tension has not been lost.
- Secure the rope with the thumb by pressing it against itself at the intersection with the loop. The pressure maintained at this intersection should hold the tension of the rope.
- With the opposite hand, twist the rope with the fingers to tighten the strands/weave of the rope. Once the rope strands are tight, twist the rope in a circular (clockwise) fashion, as close as possible to the intersection point. As the rope is twisted it should fold over on itself, making a C-shape.
- While maintaining the tension of the strands/weave of the rope, continue to wrap the rope clockwise, around and behind itself, pulling straight down to secure.
- Repeat the previous step as many times as necessary until the rope holds the tension on itself and does not unwrap when released. Often this will need to be done four to five times, but the greater the tension is on the drum, the smaller the pigtail will be.

Note. If the pigtail becomes too long (e.g., two to three inches away from the drum), then there is still too much slack remaining in the rope. If this happens, leave the pigtail secured and re-pull the rope. Once extraneous slack is removed, retie the pigtail knot. Repeat this process until the pigtail becomes smaller (e.g., four to five wraps at the most).

Drag Rope

3-103. After completion of the pigtail, excess rope can be used to create what is called a drag rope (see figure 3-19). The drag rope serves multiple functions including:

- It is aesthetically pleasing.
- Allows excess rope to be preserved.
- Provides a comfortable way to carry the drum when not playing.



Figure 3-19. Drag rope

3-104. The steps to create a drag rope are:

- Start by laying the excess rope across the bottom head, stretching from the pigtail straight across to the opposite side of the drum.
- At the point where the rope crosses the hoop (to the left of the pigtail in figure 3-19), create a small loop.
- Pinch the rope just beyond this loop into a U-shape and pull it through the loop.
- Once through, always keep two fingers inside the newly created loop. Using those fingers, reach and pull the next section of rope through and tight.

Note. Repeat the previous step as many times as needed to cover the diameter of the drum.

- To close the drag rope:
  - On the last loop simply pull the rope straight through instead of using a pinched U-shape.
  - Tuck the rope underneath itself on the opposite side of the drum (i.e., opposite the pigtail).
  - Depending on how much rope is left, either tie it off or feed it back through the drag rope.

General Maintenance and Tuning

3-105. Over time, the heads and rope will stretch, causing the drum to lower in pitch. This is undesirable and requires regular maintenance and tuning. While more tedious than modern rod-tensioned drums, tuning of rope tensioned drums can be both simple and quick. For general maintenance and tuning much of the assembly process can be applied.

3-106. The steps for general maintenance and tuning are:

- Ensure all ears are completely loosened (i.e., pulled up towards the batter head).
- Detach and untie the drag rope.
- Turn the drum on its side so that the ropes (i.e., the "Vs") are facing the operator.
- Rotate/spin the drum placing the beginning section of rope (i.e., the start of the assembly process – eye splice or pigtail knot) so that it is facing the operator.
- Take hold of the rope while letting the drum hang (using gravity as an advantage) and pull the rope.
- Ensure not to release any slack and transfer the weight of the drum to the next section of rope (i.e., the following side of the "V").

Note. Repeat the previous two steps moving around the drum returning to the pigtail.

- From here it may be best to rotate the drum so that the drumhead (e.g., the batter head on the snare drum) is facing the operator to allow the operator to brace the drum between their legs.
- Without releasing any tension (i.e., continue holding the rope), pull and release (unwind) the pigtail knot.
- Pull any excess new slack created through the eye splice loop.
- Place the thumb at the intersection point with the loop.
- Tie a new pigtail knot and check the pitch of the drum.
- If the desired tension has been reached and the new pigtail remains small, remake the drag rope.
- Tuning is complete.

Note. The further the operator pulls around the drum the more rope will be pulled through. To ensure even tension around the drum, start small and increase the intensity of each pull working around the drum.

MARCHING

3-107. Although preferred for their traditional sound and connection to history and tradition, marching with rope drums provides a unique set of challenges. Except for those with experience in the fife and drum corps, or historically black colleges and universities community, most Army percussionists have little experience marching with sling worn drums. Rope snare drums are worn with a cross-body sling (or strap), with the drum hanging via a carry hook. When worn, the drum rests on the performer's left leg, and while on the move the drum naturally moves with the leg.

3-108. The difficulty of marching with a rope drum can be contributed to a combination of factors including:

- The depth of the drum.
- The length of the sling/strap (i.e., is it adjustable?).
- Where the drum rests on the leg (e.g., below, on, or above the knee).
- The height of the performer.
- Step size.
- Navigating *Left (Right) Square Turns* unique to Army Bands ceremonial marching performances.

3-109. These factors present challenges and are often highlighted by differences in individual body size and mechanics. This often leaves many performers intimidated and frustrated when using and marching with rope drums. Performers are encouraged to experiment and adjust the drum to their unique body size and mechanics. Making small incremental adjustments to the drum's setup can greatly affect freedom of movement and ease of playing while on the move.

DRUM ADJUSTMENT

3-110. The most important factor for marching with rope snare drums is the adjustment of how and where the drum sits on the performer's body. With the primary limitation of drum depth, the easiest way to adjust the drum's position is by adjusting the sling. Generally, the sling should be adjusted so that the carry hook sits just below or above the top of the hip bone. This position allows the drum to sit in a comfortable playing position for most players.

3-111. Where the drum rests on the leg can have a huge impact on comfort and how the left leg moves while marching. The length of the performer's femur (thigh bone) and the depth of the drum often do not coincide. After adjusting their sling for proper playing height, many performers find that the drum hits the knee while marching, which is often very painful.

3-112. To compensate for this, adjustments are often made to both the drum and how the leg moves. Adjustments to the drum include the addition of a knee pad or adjustment of the ear(s) where the drum rests on the knee. As seen in figure 3-20, a knee pad has been added between the shell and rope to provide added cushioning for the knee. Depending on the preferred angle of the drum, performers may also adjust the position of the ears (i.e., loosen or tighten) to allow the knee to wedge (or sit) inside or between the "V" of the rope. Ear adjustment may be applied to the ear(s) immediately to the right of the carry hook as seen in figure 3-20. In this figure, the knee could sit under the lighter colored ear immediately to the right of the carry hook, or between the ears directly under the drum badge. This slight variation will affect the playing angle of the drum but can have a huge impact on the comfort level to the knee.



Figure 3-20. Knee adjustments

MARCHING TECHNIQUE ADJUSTMENT

3-113. After adjustments have been made to both the sling and knee position, performers must often modify their marching technique. To prevent excess motion or bouncing of the drum while marching, performers often appear to have a slight limp. The limp is a result of keeping the left leg predominately straight while marching. Movement is initiated from the knee and hip rather than the foot. When marching in place (e.g., *Mark Time March*) performers may lower their heel height to prevent excess up and down motion of the drum. Strive for a uniform heel height across the entire section when marching in place.

3-114. The band's step size can also have an impact on marching with rope drums, especially when performing *Left (Right) Square Turns*. Although step size should remain constant, the reality in most situations is that step size fluctuates. As step size increases the snare drummer's limp becomes more pronounced and performers often have difficulty maintaining spacing between ranks. When performing square turns, performers in the back of the formation must take larger steps to reach pivot points. When combined with larger step size, the sharp pivot required for turns often causes the drum to swing away from the performer. Although not preferred, an option to prevent excessive drum swing during square turns is to stop playing and grab the drum with the left hand during the pivot. Performers should resume playing upon completion of the turn. In a section of two to three snare drummers the momentary gap in playing should not be noticeable.

BASS DRUM

3-115. There is little difference between marching with a rope or modern corps-style bass drum. The primary difference being how the drum is held. Rope bass drums are worn with leather or cloth straps versus a metal and plastic harness. When worn with straps the drum rests on the performer's chest and stomach. Performers are encouraged to adjust straps to their body size, placing the drum in a comfortable and relaxed playing position (see paragraphs 3-141 through 3-143).

SECTION IV – SNARE DRUM

3-116. This section provides percussionists instruction on creating simplified parts for marching band, the manual of instruments, and maintenance. Musical performance practices are described in sections one and two of this chapter.

3-117. Snare drummers are encouraged to use and perform with their preferred grip for marching snare drum (e.g., matched, or traditional), except for when rope drums are used. Unless uniformity is desired or required, players should use the grip that is most comfortable to them.

SIMPLIFIED PARTS FOR MARCHING BAND

3-118. As described in section one, it is common practice for percussionists to create simplified snare drum parts for use while marching. These parts are easy to memorize and when used as a snare section (e.g., two or more players) they encourage section cohesion.

3-119. These simplified parts are not standardized across the field and each percussion section may play them slightly differently. These variations allow sections to create parts that establish a section identity or sound. They also provide a starting template for sections to build upon if they wish to challenge themselves.

3-120. These parts are essential for the integration of new members to the section. Over a percussionist's career through multiple changes in duty stations and section members, these simplified parts may evolve and change. Percussion section leaders are encouraged to develop and maintain a standardized ceremonial music packet for the percussion section containing commonly performed music used for marching band. During reception and integration to the unit, new members of the section should be given the section's ceremonial music packet with any simplified parts used.

CHECK PATTERNS

3-121. These parts are created using "check patterns," which are one to two bar phrases (see figure 3-21). These check patterns provide parts that keep the player's hands engaged rather than simply playing repeated offbeats. They also allow players to quickly learn and memorize the form of the march (e.g., how many times does the check pattern fit within a phrase or strain?).

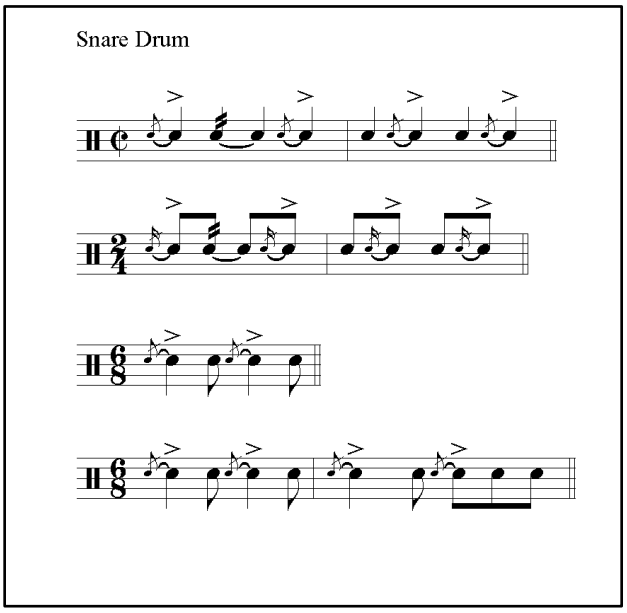


Figure 3-21. Snare drum check patterns

CREATING SIMPLIFIED PARTS

3-122. There are many ways to create simplified parts, but the following principles should be followed:

- Use the published material for the introduction (e.g., first 4-8 measures) as closely as possible.
- Use check pattern(s) as much as possible.
- Support long notes in the melody with roll figures.
- Capture ensemble rhythms and rests.
- Used the published material for the break strain.
- Final strains with repeated offbeat rolls may be played as written or with check patterns.

Note. The principles are presented for application to standard march forms. They may be used to create simplified parts for other music as needed.

3-123. Using the principles above, the following steps describe how to create a simplified snare drum part for "*The Thunderer"* by John Phillip Sousa. These steps are a guide and may be adjusted as needed. Simplified parts may be penciled-in over published parts, handwritten, or notated in music notation software.

3-124. The steps for creating a simplified snare drum part for "*The Thunderer"* are:

- Beginning with the published part, clearly identify and label the sections of the march.
- **Introduction** – Use published material for measures 1-4.
- **First Strain**:
  - Use a check pattern for measures 5-18.
  - Measures 19-20 double the melody with 9-stroke rolls leading into the repeat (see figure 3-22).
- **Second Strain**:
  - 1st Option – Use check pattern throughout, stopping on measure 36.
  - 2nd Option – Use 5-stroke roll figure to compliment trumpet melody and low brass figures (e.g., measures 27-28). See figure 3-22.
- **Trio** – Use check pattern while following melody line in measures 45-46 (see figure 3-22).
- **Break Strain** – Use published material for measures 55-69.
- **Final Strain**:
  - 1st Option – Use check pattern throughout, stopping on measure 84.
  - 2nd Option – Use 5-stroke rolls and follow melody line in measures 76-77 (see figure 3-22).



Figure 3-22. Simplified snare drum part



Figure 3-22. Simplified snare drum part (continued)

Note. The discussion and part provided is not prescriptive or standardized. It is provided as an option for percussion sections to use while marching as described in paragraphs 3-118 through 3-120. Simplified parts already exist for many commonly performed marches, and percussionists are encouraged to share and collaborate across the field.

MANUAL OF INSTRUMENTS

3-125. Snare drummers execute the manual of instruments dependent on the type of drum used as described in the following paragraphs.

MODERN DRUMS

3-126. Execute the manual of instruments for modern marching snare drum as shown in figure 3-23. Snare drummers may use matched grip (as shown) or traditional grip, but the drumsticks should remain parallel to the ground at the *Position of Attention/Carry* and *Ready Instruments.*

3-127. The "rest" position shown may be executed, when directed, from any of the *Rest* positions including *Parade Rest*, *Stand at Ease*, *At Ease,* and *Rest*. Alternately, drummers may rest the instrument on the body to prevent damage to the snares in austere environments.



Figure 3-23. Snare drum manual of instruments

ROPE DRUMS

3-128. Execute the manual of instruments for rope snare drum as shown in figure 3-24. Snare drummers use traditional grip (as shown), but the drumsticks should remain parallel to the drum at the *Position of Attention/Carry*, and *Ready Instruments.*

3-129. The *Rest* position shown may be executed, when directed, from any of the *Rest* positions including *Parade Rest*, *Stand at Ease*, *At Ease,* and *Rest*. Alternately, drummers may rest the instrument on the body to prevent damage to the snares in austere environments. The *Alternate Carry* can also be used when marching without playing for a period of time. Grip the sticks with the right hand as at the *Position of Attention* and swing the arm naturally.

3-130. The *Alternate Carry* position can also be used as an alternate position for the *Position of Attention* and *Parade Rest*.

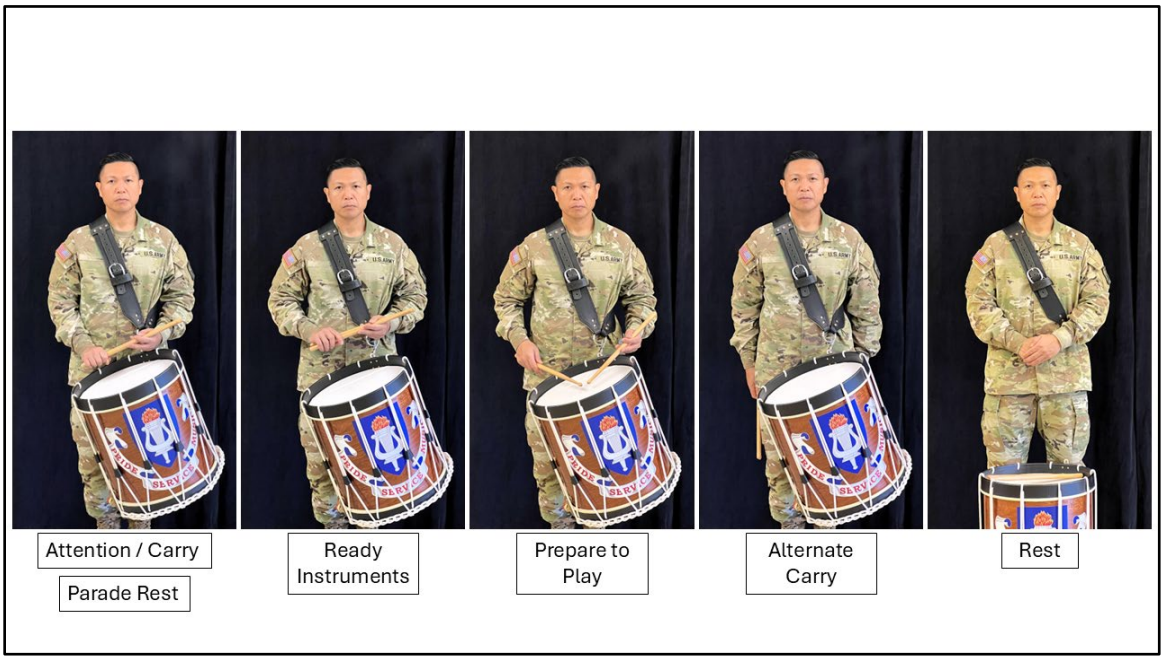


Figure 3-24. Rope drum manual of instruments

MAINTENANCE

3-131. There should be very little maintenance required for marching snare drums. Damage, abuse, neglect, or disuse to the instrument will require maintenance. Heads should be changed as needed (e.g., broken, overly dented, loss in tone (i.e., overplayed)). Periodic maintenance checks should be performed on carriers and straps. Carriers should be checked for loose or missing hardware. Straps (e.g., cloth or leather), should be checked for cuts, tears, or fraying.

3-132. The following paragraphs describe operator-level maintenance for modern marching snare drums. Operators should consult the manufacturer's maintenance paperwork for brand specific considerations.

DISASSEMBLE THE INSTRUMENT

3-133. The steps for disassembling a marching snare drum are:

- Remove snares from the drum.
- Loosen and remove tension rods.
- Remove rims.
- Remove heads.

INSPECTION

3-134. The steps for inspecting a marching snare drum are:

- Inspect the drumhead, checking for broken, cracked, dented, or pulled areas.
- Inspect the rims, checking for dents and warping (i.e., is the rim "out of round").
- Inspect the shell:
  - Check for dents, scratches, and cracks.
  - Check the condition of the finish (if applicable).
  - Check hardware for stripped or loose nuts, screws, or washers. Replace or retighten as needed.
  - Check hardware for corrosion or pitting.

CLEAN THE INSTRUMENT

3-135. The steps for cleaning a marching snare drum are:

- Wipe inside and outside of shell with a clean cloth to remove built up dirt and dust.

- Remove old lubricants from tension rods with a clean cloth.
- Lightly lubricate tension rod threads and lug casing with fresh lubricant.

ASSEMBLE THE INSTRUMENT

3-136. The steps for assembling a marching snare drum are:

- Replace the snare side head.
- Replace the snare assembly, ensuring that it is uniform (i.e., centered on the head), straight, and moves freely via the throw off mechanism.
- Replace the tension rods and finger tighten.
- Replace the batter (playing) head.
- Replace the rim.
- Replace the tension rods and finger tighten.
- Once drum is reassembled retune heads.

SECTION V – BASS DRUM

3-137. This section provides percussionists with general rules for marching bass drum performance, the manual of instruments and maintenance. Musical performance practice is addressed in sections one and two of this chapter.

GENERAL RULES FOR PERFORMANCE

3-138. The marching bass drum should provide a sharp, distinct, and deep tone. It emphasizes strong beats of the music, making it easy for the band and other troop formations to march in step, primarily by playing "*Heavy Left*." The bass drummer must be able to set and maintain consistent tempo while on the move.

3-139. The following are general rules for performance on marching bass drum, including instrument setup, grip, stroke technique, and striking area. The information provided is only a guide and represents one of many ways to succeed while performing on marching bass drum.

INSTRUMENT SETUP

3-140. Marching bass drums used in Army Bands are available in sizes from 14 to 20 inches in depth and 24 to 30 inches in diameter. Heads should be tuned to the same pitch, to allow for a consistent sound when playing "*Heavy Left*." If used, rope drums will naturally be tuned to the same pitch as the heads are tensioned equally. Tuning is dependent on drum size but generally sounds best when tuned to notes between C2 and C3.

3-141. Drums may be worn using a modern drum corps-style carrier/harness, or by using adjustable cloth or leather straps. Regardless of how worn, the drum must be adjusted to the player. This is often overlooked especially for non-ASI percussionists.

3-142. The drum should be positioned so that as the performer moves their arms/hands into playing position, the forearm is parallel (e.g., 90° angle) or slightly below parallel (e.g., 75–85° angle) to the marching surface. The hand will maintain a 45° angle from the forearm. For most players this is the most relaxed and comfortable position for the arms and hands and places the mallet head in the center of the drum. This position is referred to as *Prepare to Play* in the manual of instruments. Once in this position, if the mallet head does not sit in the center of the head, then the drum must be adjusted (see figure 3-25).



Figure 3-25. Bass drum prepare to play position

3-143. Adjust the drum by raising or lowering the drum in relation to the marching surface. Modern corps-style carriers have multiple adjustment points that can be adjusted with a drum key or hex/Allen wrenches. Strap style harnesses are easier to adjust but have less adjustment options. If multiple carriers/harnesses are available, it is recommended to adjust, label, and assign them to section personnel. If only one carrier is available, although time-consuming, it is recommended to re-adjust the carrier for each use.

GRIP

3-144. With the lack of technical demand and frequent use of non-ASI percussionists, an easy grip to train and use for marching band is a back of hand grip. Most modern bass drum implements have a flared taper towards the handle (i.e., the shaft is thicker towards the bottom). Traditional wooden mallets used on rope drums often include a notched bulb design that encourages a back of hand grip.

3-145. To form the grip, place the mallet diagonally across the hand. Following the design of the mallet, wrap the back two fingers around the thickest portion of the shaft. If using a traditional wooden mallet, place the pinky inside the notch. This becomes the fulcrum point (i.e., where the mallet pivots within the hand). Apply only enough pressure to secure the mallet and resist the urge to squeeze the mallet into the hand. The middle and pointer finger wrap around the mallet naturally without tension or squeezing. The thumb wraps around and touches the pointer finger. The top of the grip should remain open to allow the mallet to freely move within the hand (see figure 3-26).



Figure 3-26. Bass drum grip

3-146. Resist the urge to squeeze the hand as if holding a baseball bat, as this creates unnecessary tension in the hand and forearm. Once formed, the grip should remain loose and feel as if holding an ice cream cone without crushing it.

3-147. When used, this grip allows the weight of the mallet to work for the player. The resulting stroke will have the necessary power and volume for marching use. When the mallet is gripped higher on the shaft, often referred to as "choking up," it produces a thinner sound and forces the player to work harder.

STROKE TECHNIQUE

3-148. For general-purpose playing an easy stroke to use and train is a tear drop stroke. It is called a tear drop stroke because the path of the mallet head forms a tear drop as it travels through the air. When used with a loose back of hand grip this motion provides the power and volume necessary for performing "*Heavy Left*" without straining to force the sound.

3-149. From *Prepare to Play* the motion can be broken into four parts:

- Initiate the stroke from the shoulder. Keeping the forearm and wrist set, open the arm from the shoulder. Avoid turning the forearm and wrist toward the drumhead. The motion should feel like performing a chest fly.
- Once in the open position, rotate and extend the forearm away from the body.
- Pull the elbow towards the body.
- As the elbow moves towards the body, the forearm rotates towards the drumhead, allowing the mallet to strike the drum.

3-150. When performed in time it should be a continuous motion. The point of the tear drop is at the beginning and end of the stroke. As the mallet head moves through space it forms the bulb of the tear drop, with the forearm extension being the top of the bulb (see figure 3-27). For an example, refer to the video "*Marching Bass Drum Fundamentals – A Guide by Dave Loyal*" from the Society of International Rudimental Drummers (https://www.youtube.com/watch?v=4mTqKgRc5rg).

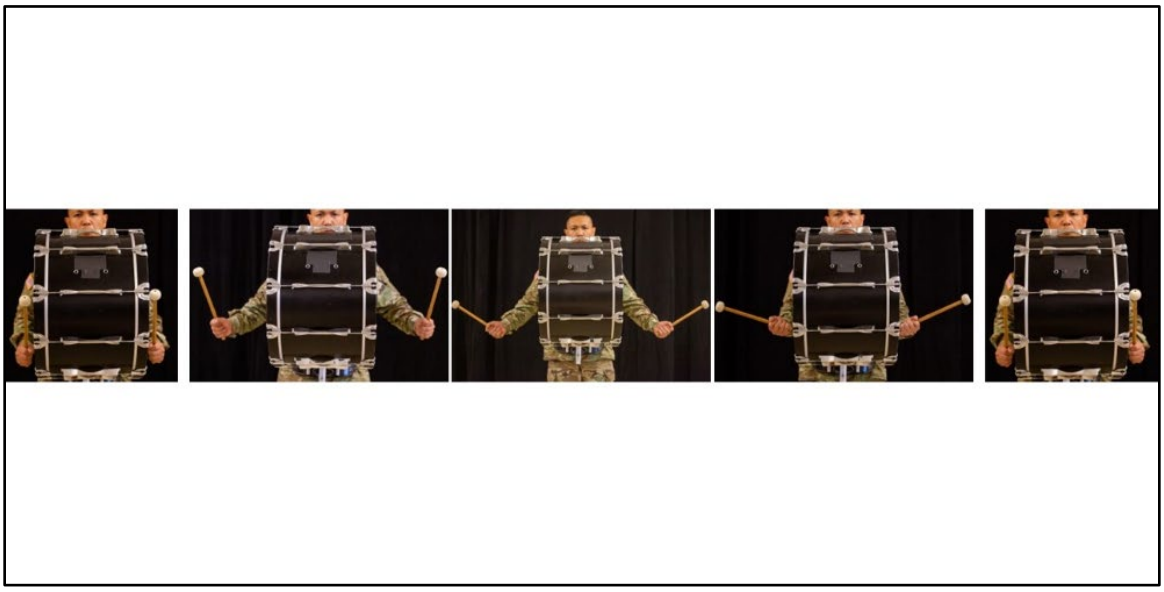


Figure 3-27. Tear drop stroke

***Note*.** The goal of this stroke technique is to use larger muscles combined with the weight of the mallet to produce the biggest sound.

STRIKING AREA

3-151. For general-purpose playing the marching bass drum should be struck in the direct center of the head. Playing in the center of the head produces the deepest, most resonant, and powerful sound required for "*Heavy Left*."

3-152. Striking areas other than the center of the head produce a thinner sound. Inexperienced performers often overplay (i.e., hit harder) on areas of the head other than the center to play louder. The sonic difference between striking areas can be felt by the performer. When struck in the center, the drum fully resonates and should be felt in the performer's chest. If the drum has been properly positioned and the performer uses the grip and stroke technique described, they should naturally strike in the drum in the center of the head.

MANUAL OF INSTRUMENTS

3-153. Execute the manual of instruments for bass drum as shown in figure 3-28. Bass drum players remain at the *Position of Attention* for *Ready Instruments*. The *Rest* position may be executed, when directed, from any of the *Rest* positions including *Parade Rest*, *Stand at Ease*, *At Ease,* and *Rest*. Keeping the arms at the sides, as in the *Position of Attention*, is an alternate arm position for *Parade Rest.*

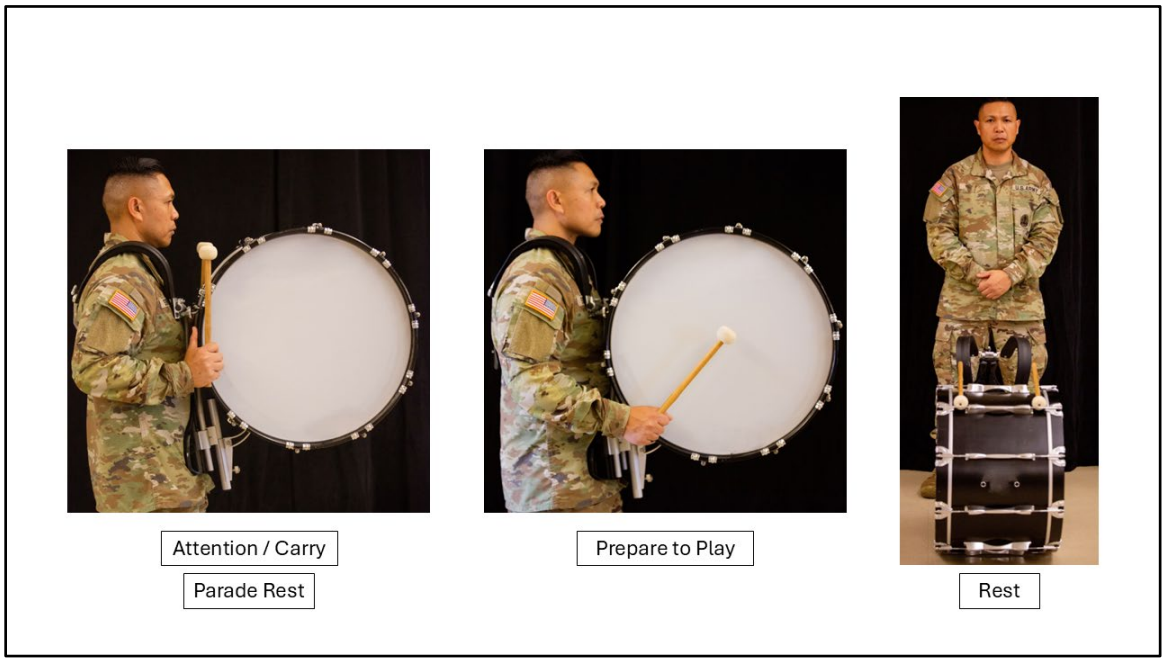


Figure 3-28. Bass drum manual of instruments

MAINTENANCE

3-154. There should be very little maintenance required for marching bass drums. Damage, abuse, neglect, or disuse to the instrument will require maintenance. Heads should be changed as needed (broken, overly dented, loss in tone (overplayed)). Periodic maintenance checks should be performed on carriers and straps. Carriers should be checked for loose or missing hardware. Straps (e.g., cloth or leather), should be checked for cuts, tears, or fraying.

3-155. The following paragraphs describe operator-level maintenance for marching bass drum. Operators should consult the manufacturer's maintenance paperwork for brand specific considerations.

DISASSEMBLE THE INSTRUMENT

3-156. The steps for disassembling a marching bass drum are:

- Loosen and remove tension rods/claws.
- Remove rims.
- Remove heads.

INSPECT THE INSTRUMENT

3-157. The steps for inspecting a marching bass drum are:

- Inspect the drumhead, checking for broken, cracked, dented, or pulled areas.
- Inspect the rims, checking for dents and warping (i.e., is the rim "out of round?").
- Inspect the shell:
  - Check for dents, scratches, and cracks.
  - Check the condition of the finish (if applicable).
  - Check hardware for loose or stripped nuts, screws, or washers. Replace or tighten as needed.

CLEAN THE INSTRUMENT

3-158. The steps for cleaning a marching bass drum are:

- Wipe inside and outside of shell with a clean cloth to remove built up dirt and dust.
- Remove old lubricants from tension rods with a clean cloth.
- Lightly lubricate tension rods threads and lug casing with fresh lubricant.

ASSEMBLE THE INSTRUMENT

3-159. The steps for assembling a marching bass drum are:

- Replace the drumhead.
- Replace the rim, ensuring that the flat side of the rim rests on the hoop of the drumhead.
- Replace the tension rods/claws.
- Retune head.

SECTION VI – CYMBALS

3-160. This section provides percussionists with general rules for marching cymbal performance, the manual of instruments and maintenance. Musical performance practice is addressed in sections one and two of this chapter.

GENERAL RULES FOR PERFORMANCE

3-161. Hand cymbals used in marching band range in size from 16 to 20 inches in diameter and vary in thickness. When selecting cymbals for outside use there must be a balance between size and weight. Larger and heavier cymbals will project better (i.e., easier to play loud), but their weight requires greater physical stamina over long periods. Smaller and lighter cymbals, while easier to play over long periods, may distort or wash out (i.e., sound thin) when trying to project over the band.

3-162. If possible, the section should select and assign a pair of cymbals strictly for outside use. Choose commonly used commercial off-the-shelf cymbals designed for outdoor use such as:

- 18-inch A Zildjian Stadium – Medium.
- 18-inch Sabian Marching Band AAX.

3-163. The following are general rules for performance on marching cymbals, including instrument setup, grip, and stroke technique. The information provided is only a guide and represents one of many ways of performing on marching cymbals.

INSTRUMENT SETUP

3-164. Cymbals are held by straps made of leather or nylon. Although leather straps require a slight break-in period most players prefer them. This break-in period softens the material making it flexible, allowing the straps to stretch and mold to the player's hand(s). Over time the cymbal knot also becomes more secure and easier to tie. Leather straps are also double sided, with a rough unfinished side that is easier to grip when the hands are sweaty or a more secure grip is desired, and a smoother side for players with drier hands. Nylon straps do not require a break-in period but are prone to fray or break with heavy use.

3-165. Straps are secured underneath the bell of the cymbal by the cymbal knot, which is a variation of the crown or friendship knot. Begin by pulling the four ends of the straps through the cymbal hole. The size of the hand loop will determine the length of material available to tie the knot. The steps for how to properly tie the cymbal knot are shown in figure 3-29. It is important that this knot is extremely tight. If there is excess material after tying the initial knot, it is recommended to double the cymbal knot.

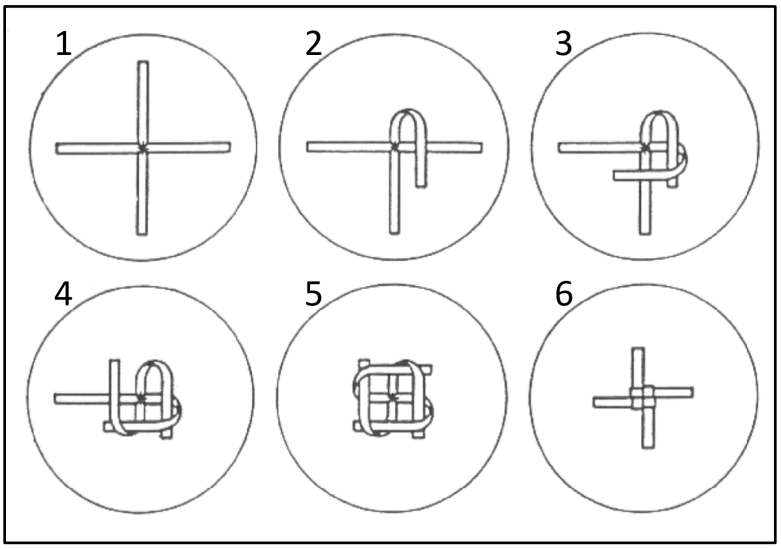


Figure 3-29. The cymbal knot

3-166. Pads are often added to marching cymbals to reduce the pressure exerted on the knuckles, hands, and fingers. They are small stiff leather disks that rest on the dome of the cymbal. If pads are used, the cymbal knot may have to be adjusted and re-tied to accommodate the grip.

GRIP

3-167. A good grip is essential to controlling cymbals. When held the cymbal should feel like a natural extension of the performer's hand and arm. The size of the hand loop must be adjusted to accommodate the individual performer's hand size.

3-168. The grip is formed using the following steps (see figure 3-30):

- While holding the cymbal with the opposite hand, slide the grip hand through the loop created opposite the cymbal knot, with the palm facing the cymbal. Slide the hand through the strap until it is just past the wrist.
- Rotate the hand down and away from cymbal so that the palm faces out.
- Rotate the hand down and back towards the cymbal. The knot end of the strap should rest at the base of the thumb and first finger.

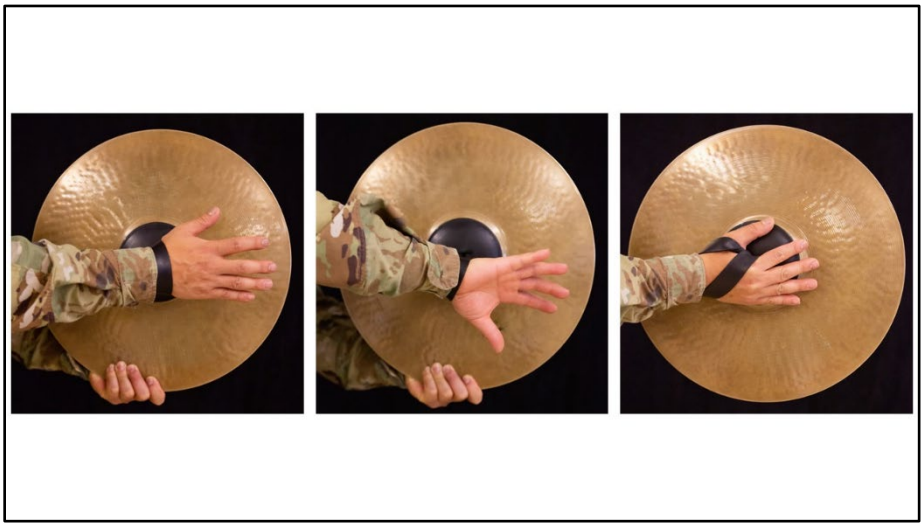


Figure 3-30. Marching cymbal grip

3-169. Once the strap is set, the palm of the hand rests on the pad (if used) or the bell of the cymbal. The fingertips rest on the pad or surface of the cymbal except when struck together. When struck together, the fingers and thumb hover above the pad or cymbal surface and the cymbal should be able to freely move under the palm. If the cymbal strap restricts movement or is too tight on the hand it must be readjusted.

STROKE TECHNIQUE

3-170. Control of the stroke is necessary to produce proper tone quality on hand cymbals. Sloppy technique leads to failure in producing clean, brilliant cymbal crashes. Improper technique can lead to creating an air pocket or air vacuum that produces a thin or dampened crash. This happens when the cymbals strike exactly edge-to-edge or flat with all the edges meeting simultaneously. Depending on the level of vacuum, the cymbals could either stick/suction together or invert themselves.

3-171. There are many approaches to playing cymbal crashes. The information provided here is only a guide and represents only a few ways to perform cymbals in marching band. The techniques are described for right-hand dominant players but may also be adapted for left-hand dominant players.

Prepare to Play

3-172. The *Prepare to Play* position from the manual of instruments will be the starting point for most cymbal crashes. Hold the cymbals away from the body with the knots/hands at mid-chest (i.e., bottom of the sternum). The cymbals are held at an angle bisecting the body from the left shoulder to the right hip (e.g., like a seatbelt). Cymbals are parallel to each other with the right cymbal hovering one to two inches above the left (see figure 3-31).



Figure 3-31. Cymbals prepare to play

Basic Cymbal Strokes

3-173. The following are basic types of cymbal strokes used in marching band.

> ***Note.*** The flat and orchestral crash described below are general-purpose cymbal strokes. Either stroke is acceptable for playing marching cymbals, and performers should use the stroke that allows them to produce consistent cymbal crashes.

Flat Crash

3-174. To set up a flat crash from the *Prepare to Play* position bring the right cymbal back to the right shoulder, while simultaneously flexing the left hand to bring the inner edge of the cymbal against the forearm.

Begin the crash by driving the right cymbal towards the left. When driving forward with the right hand, release the tension of the left hand just before impact to allow the cymbal to rotate into the right cymbal. The right cymbal should strike the left cymbal approximately one to two inches from the outer edge. End the right hand's motion centered in front of the sternum. Upon impact release the fingertips, while holding the cymbals one to two inches apart to allow the cymbals to fully vibrate (see figure 3-32).



Figure 3-32. Flat crash

Orchestral Crash

3-175. From the *Prepare to Play* position raise the right hand up the center line of the body so that the cymbal is perpendicular to the ground. For the crash, bring the right cymbal down striking the bottom edge of the right cymbal approximately one to two inches from the bottom edge of the left cymbal. Upon impact, the right palm turns down (i.e., parallel to the ground), while the left palm turns up and out towards the left shoulder. When performed in time this will be a single continuous motion. The angle of the cymbals upon impact causes the bottom edges to touch first, instantaneously followed by the top edges. If done properly, it will sound like one attack.

3-176. Let the weight of the right arm and cymbal provide the energy for the cymbals to make contact. Do not force or push the cymbals together. After supplying the energy to raise the right arm the motion should feel like letting the cymbal drop. As the cymbals impact, release the fingertips from the cymbals to allow the instrument to fully vibrate (see figure 3-33).



Figure 3-33. Orchestral crash

Choke

3-177. To choke the cymbals, perform either a flat or orchestral crash. Immediately after contact bring the cymbals into the armpits while simultaneously pushing the cymbals into the forearms with the fingertips to mute the cymbals (see figure 3-34).



Figure 3-34. Choke

Repeated Notes

3-178. For repeated notes keep the hands in the *Prepare to Play* position. Raise the right hand towards the left shoulder to offset the cymbals slightly so that the right cymbal overlaps the left cymbal. When viewed

from above the performer should be able to see the bottom few inches of the left cymbal. Tilt the right hand so that the bottom edge of the cymbal slightly points down towards the left cymbal. To play, simply bring the hands together as if clapping the hands (see figure 3-35).



Figure 3-35. Repeated notes

Hi-hat

3-179. From *Prepare to Play* flatten the cymbals approximately parallel to the ground while bracing the cymbals against the stomach. To play, raise and lower the top cymbal into the bottom cymbal in a hinge motion. The cymbals should be aligned to produce a choked sound replicating the drum set hi-hat sound. For a tighter sound apply slight pressure upon impact (see figure 3-36).



Figure 3-36. Hi-hat

MANUAL OF INSTRUMENTS

3-180. Execute the manual of instruments for cymbals as shown in figure 3-37. Cymbal players may rest the instrument on the ground when directed, such as during speeches in a ceremony. Position the cymbals neatly on the ground and assume the *Rest* position as shown for bass drum in figure 3-28.

3-181. While marching in the *Carry* position, the arms may swing in a natural motion as described in TC 3-21.5 or they may be held at the sides. The *Alternate Carry* can also be used when marching without playing. When marching with the *Alternate Carry,* keep the arm holding the cymbals stationary and swing the opposite arm as described in TC 3-21.5.

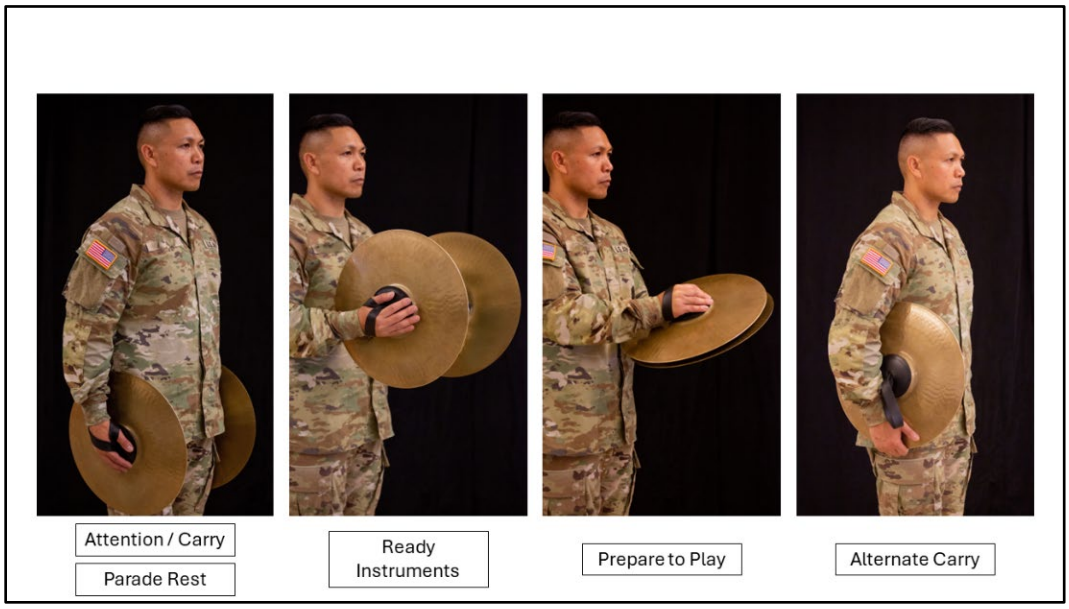


Figure 3-37. Cymbals manual of instruments

MAINTENANCE

3-182. There should be very little maintenance required for marching cymbals. Damage, abuse, neglect, or disuse to the cymbal plates and straps will require maintenance. Overtime and heavy use cymbal straps may stretch requiring the knot to be adjusted and re-tied. Straps may also wear down from friction, appearing as cuts through leather or fraying in nylon near the cymbal hole.

3-183. Operator-level maintenance is encouraged before each use, including:

- Check for cracks or damage to the cymbal plate(s).
- Check straps for wear or damage.
- Ensure hand loop size is appropriate for user.
- Check the cymbal knot for correctness, strength, and tightness. Secure double knot if able.
- Ensure pads are present and secured to the straps (if applicable).

3-184. Cymbals should be cleaned as needed. The steps for operator-level cleaning are:

- Clean using commercial off-the-shelf cymbal cleaner following manufacturer’s directions.
- Do not use heavy abrasive cleaners.
- Dry immediately with a clean, soft cloth.

Chapter 4

Concert Band

Army Bands perform symphonic music while configured in a concert band – an instrumental ensemble capable of performing symphonic music by the addition of instruments not adapted to marching (see ATP 1-19). This chapter provides general considerations and playing techniques for the most common instruments used in concert band.

SECTION I – GENERAL CONSIDERATIONS

4-1. Symphonic music can be demanding on percussion sections due to the number of players and instruments required for each musical selection. When performing modern concert band/wind ensemble literature, most Army Band percussion sections are unable to perform all the printed parts, which require the use of non-ASI percussionists. Aside from ceremonial ensembles, concert band requires the greatest supplemental use of non-ASI percussionists. During AIT, Soldiers in the following ASIs receive training and perform on auxiliary percussion in concert band: 9N, 9T, and 9U.

4-2. Many non-ASI percussionists have little to no experience playing percussion instruments or playing in concert band. Percussion notation and the basic playing techniques of most instruments can be confusing. Usually, but not always, there is at least one experienced ASI percussionist that can act as a subject matter expert to assist in the training of these non-ASI percussionists. Careful consideration should be given prior to using non-ASI percussionists such as:

- Have they received training on percussion instruments other than bass drum and cymbals?
- Is there time in the schedule to sufficiently train them on proper playing techniques?

PERCUSSION NOTATION

4-3. Percussion notation in concert band music is a common concern for both ASI percussionists and non-ASI percussionists, as notation can differ by composer, editor, or publisher. Parts may be notated as:

- A single line with:
  - Notation below, on, or above the line, to differentiate between instruments. The instruments are usually clearly labeled at the beginning of the part and sometimes relabeled after multiple bars of rest.
  - Notation with different note head symbols (e.g., dot, diamond, or “x”) to differentiate between non-pitched instruments.
- A traditional staff with:
  - Lower sounding instruments notated on the bottom (i.e., F space in treble clef or A space of bass clef).
  - Mid-range instruments (e.g., snare drum, tambourine in the middle (i.e., C space in treble clef or E space of bass clef).
  - Higher sounding instruments (e.g., triangle, cymbal) on the higher spaces or just above the staff (i.e., top space E or G above the staff in treble clef, and top space G or B above the staff in bass clef).
- Combined with mallet percussion on a traditional staff:
  - Mallet instrument(s) will be notated in the staff.
  - Percussion instruments will either be clearly labeled within the staff, or notated with a different note head (e.g., diamond or “x”).
- A percussion score with separate staves containing any of the above combinations.

4-4. Aside from the variety in the general presentation of percussion parts, composers have also struggled with how to accurately convey note lengths for percussion instruments between the notation and the resulting sound (i.e., how long or short a note sounds relative to the instrument). This notational issue causes ambiguity for performers when interpreting their parts.

4-5. Percussion instruments can broadly be divided into two categories:

- Sustaining instruments – those that ring or sustain after the initial attack (e.g., cymbals, timpani, triangle).
- Non-sustaining instruments – those with a short, pointed attack (e.g., snare drum, tambourine, xylophone).

4-6. Typically, duration is shown with traditional notation used for any other instrument (e.g., a whole note would sustain for four beats). However, to account for sustaining and non-sustaining percussion instruments there are several additional common conventions used to notate sustained note values including:

- Roll indications:
  - Tremolo (***tr***).
  - Slashes on the note stem (two or three depending on the note value).
- Duration indications:
  - Using ties (i.e., the end of the tie stops the sound).
  - Using an open tie (i.e., let the note sustain).
  - *Laissez vibrer* or *let vibrate* (l.v.) – often used in conjunction with an open tie.

4-7. Generally, percussionists will not perform a roll unless it is indicated within the part. The performer's experience and ear will ultimately guide their interpretation of how to perform their part(s). A common discrepancy seen in percussion parts (especially bass drum and cymbal parts) is when the passage is notated in a short note value (e.g., eighth note), when the desired sound is longer (e.g., half note or longer).

4-8. Regardless of the type of notation, performers must study their parts and understand the notational intricacies within each. This is especially important when assigning parts to non-ASI percussionists, and section leaders should train and assist non-ASI percussionists unfamiliar with reading percussion notation.

PART SELECTION AND ASSIGNMENTS

4-9. When programming concert repertoire, commanders should carefully consider the number of players required to accurately perform each piece. When repertoire is selected without consideration of the required and available players, it places stress on the percussion section and section leader to determine how or if the parts can be performed.

4-10. Assigning parts and personnel for concert band can be a daunting task for section leaders, especially for those with little to no section leader experience. When assigning parts, section leaders must consider:

- Commander's intent:
  - Use of non-ASI percussionists (e.g., do they have a preference on the use of these players?).
  - Permission to omit parts/instruments (if necessary).
- The number of rehearsals scheduled.
- The number of 9Ms available.
- The number of non-ASI percussionists available.
- Strengths and weaknesses of players combined with the difficulty of the parts.
- Instruments available (see paragraphs 4-26 through 4-28).

4-11. Being proactive is essential when it comes to assigning parts for concert band. The section leader should begin the process of assigning parts as soon as repertoire is determined. Once the unit's librarian distributes parts to the band, it is recommended that the section leader double checks the parts against the score. This will serve two purposes:

- To verify that there are no missing or misplaced parts.
- To determine the availability of non-ASI percussionists (e.g., 9N, 9T, 9U).

4-12. Once the section leader has verified the availability of non-ASI percussionists and that all necessary parts are accessible, they may begin the process of assigning parts. To begin, the section leader must analyze the music to determine how many personnel are required for each piece, the equipment needed, how many parts, if any, must be substituted or omitted due to lack of equipment or personnel, and production pace (i.e., time between pieces).

PERSONNEL

4-13. There are several areas of concern when determining the number of personnel needed for concert band including part formats, publisher organization of parts, and strengths and weaknesses of players.

Part Formats

4-14. Parts for concert band are published in a variety of formats which often makes determining the number of required personnel difficult. Parts may be labeled by:

- Single instrument (e.g., snare drum, bass drum, timpani, etc.) with one player/instrument per part.
- Percussion 1, 2, 3, etc., with one player covering multiple instruments within the part.

Note. Some parts labeled as "Percussion 1" may require multiple players playing separate instruments within the part (e.g., bass drum, cymbals, suspended cymbal). In this example, the section leader must determine if the part requires two or three players.

- A single undivided part with all instruments needed for the entire section (sometimes including timpani) on one part.
- A percussion score with separate staves. The staves may be labeled as:
  - Single instrument (e.g., snare drum, bass drum, xylophone).
  - Percussion 1, 2, 3, etc. with multiple instruments required for a single player.
  - Percussion 1, 2, 3, etc. with multiple instruments requiring multiple players simultaneously.

Note. Usually, but not always, timpani parts are separate from percussion parts.

4-15. Regardless of the type of part, section leaders must look for sections within the part(s) where several instruments are written to sound at the same time. Usually, but not always, the number of instruments written to sound at the same time corresponds to the number of personnel needed within a part.

Publisher Organization of Parts

4-16. Another common issue (that often occurs due to poor editing) is that parts may be divided, but the publisher's organization or division is impractical due to personnel, space, or equipment constraints. Some examples include:

- Creating a separate part that could be covered by one or several other players.
- Having separate mallet parts (e.g., bells, xylophone, chimes) when one player could cover multiple instruments.
- Dividing an instrument into several separate parts, forcing players to share an instrument (e.g., mallet instruments), or requiring multiples of the same instrument (e.g., cymbals) if the players are unable to share due to logistical concerns.
- Parts written in score format that unnecessarily change players or instruments within the part.
- Parts written for one player that include a fast switch between instruments requiring assistance from another player.

4-17. When reviewing a piece, look at the composer/editor/publisher's organization first. Sometimes it is the most logical arrangement of equipment and players. Next look at the unit's percussion section and available auxiliary players. When assigning parts, answer the following:

- If using the composer/editor/publisher's organization, are there enough personnel to cover all the parts?
- Can the section leader combine or "pencil/write in" parts for the players available?
  - For example, if the piece requires seven players and currently only three are assigned to the section, either there must be aggressive doubling or rewriting of parts, or some parts must be omitted.
  - Another example would be if the publisher has parts for multiple players but several of those parts could be combined into a single part for one player.

4-18. Publishers may also change or edit parts when a new printing or revision is published. A great example of this are the percussion parts for Leroy Anderson's "*Sleigh Ride*." Older versions of the piece were printed with a single part that is divided into two staves showing all instruments, while newer versions of the piece are printed with separate individual parts divided by the publisher.

4-19. The older single part provides an easy visualization for several possible assignment options:

- For three players:
  - Drum set and whip.
  - Orchestra bells, xylophone, and temple blocks.
  - Sleigh bells.
- For four players:
  - Drum set and whip.
  - Orchestra bells and xylophone.
  - Temple blocks.
  - Sleigh bells.
- For five players:
  - Snare drum and temple blocks.
  - Bass drum and whip.
  - Cymbals.
  - Sleigh bells.
  - Orchestra bells and xylophone.
- For seven players:
  - Snare drum.
  - Bass drum.
  - Cymbals.
  - Orchestra bells and xylophone.
  - Whip.
  - Temple blocks.
  - Sleigh bells.

Note. Common performance practice in Army Bands with smaller percussion sections is to perform the drum battery parts (i.e., snare drum, bass drum, cymbals) from measures 45-63 (letter C-D) and measures 103-119 (letter F-G) on drum set.

4-20. If using the newer parts, the section leader must examine the separate parts to determine how the parts were divided and how many players are required for each part. The newer published parts are divided into three separate parts:

- Mallet percussion (bells, xylophone).
- Percussion 1 (temple blocks, snare drum, bass drum, cymbals, whip crack).
- Percussion 2 (sleigh bells).

4-21. With these newer parts, the combination of part format and publisher organization presents challenges to the section leader and section members. Depending on the size of the section, the section leader will likely need to rearrange or "pencil/write in" parts to accommodate the available players. These types of decisions are only possible after thorough examination of the parts. With time and experience the section leader will be able to identify these challenges and become empowered to make logical personnel and part assignments.

Section Strengths and Weaknesses

4-22. Army percussionists must understand that it is their personal responsibility to achieve and sustain a high level of proficiency on their assigned instrument(s). The reality of most percussionists and percussion sections is that players have varying strengths and weaknesses based on their performance experience, and due to the sheer number of instruments in the percussion family.

4-23. Section leaders are encouraged to mentor and challenge members of their sections. Unless part assignments are being used to train personnel or provide professional growth opportunities, it may be better to assign parts according to the strengths of the players in the section such as:

- Who is the strongest timpanist?
- Who is the most experienced mallet percussionist?
- Who is the best snare drummer?
- Who has the most consistent crash cymbal sound?
- If drum set is required, whose skillset best fits the requirements of the music (e.g., genre, or style)?

4-24. The abilities of non-ASI percussionists should also be taken into consideration as well:

- Do they primarily play bass drum or cymbals in ceremonial/marching band?
- Can they play mallet percussion parts?
- Can they read and understand percussion notation?
- Is there time in the schedule to sufficiently train them on proper playing techniques?

Priority of Part Assignments

4-25. If there are a limited number of players available for performances, the section leader must coordinate with the command team to determine a course of action and the priority of which parts to cover or omit. The following is a workable list to determine the priority of assignments:

- Perform everything as written.
- Rewrite parts for available personnel.
- Omit parts and perform the prominent parts (this will change according to the instrumentation of each piece):
  - Snare drum/bass drum/cymbals (if severely limited on personnel, play these parts on drum set).
  - Timpani (may be omitted if there are no distinct solo passages).
  - Accessory percussion (as much as can be covered).
  - Mallet percussion (this may move up if solo passages need to be covered or omitted if strictly doubling another instrument).

EQUIPMENT

4-26. When assigning parts, it is recommended to make a master list of all instruments required for the concert repertoire. This will serve several purposes:

- It allows the section leader to verify instruments available:
  - Does the unit have all the required instruments?
  - Can missing instruments be purchased or rented?
- Informs the section of which instruments to set up for rehearsals and concerts.
- It can be used as a checklist for load planning and packing instruments for transport.

4-27. Equipment authorization and policies differ greatly between bands, and the best source of information is the logistics and resource management section of the band. Most bands only have one each of the mallet percussion instruments, and most do not have the more exotic instruments (e.g., crotales or celeste). See CTA 50-909, Table 78, for specific large instrument authorizations, and the unit's logistics and resource management section for smaller instruments.

4-28. In situations where the unit does not own the required instruments, available budget and proper planning will determine whether the unit purchases or rents the instrument or arranges a loan for the instrument from a school or another band. If the required instruments cannot be procured or substituted, the section leader must omit the part. If funding is a constraint, there may be acceptable substitutes for some instruments to include:

- If a part calls for crotales, strike the notes on orchestral bells using finger cymbals.
- If the unit does not own a marimba, play the part (depending on octave written) on the lower octave of a xylophone with yarn mallets.

PRODUCTION PACE

4-29. As bands are moving to faster paced productions for concert band concerts, the percussion section often has little time to transition between pieces. Taking the section's strengths and weaknesses into consideration, it is recommended to assign parts by instrument station or pod. These stations are broken into instrument

families (e.g., timpani, mallets, drum battery, accessories, and drum set), with performers assigned to a station for the entire concert.

4-30. These stations will allow players to focus on one instrument family and reduces the amount of movement between pieces. If using the station method of part assignments, it is recommended to rotate section members through the different instrument stations throughout the year to give them variety while also allowing them to maintain proficiency across all percussion instruments.

4-31. See table 4-1 for an example part assignment chart using instrument station or pod. Although there is some movement between pieces, this chart assigns ASI percussionists to the following overarching stations or pods: drum set, mallets, and timpani.

Table 4-1. Instrument station part assignments

Concert Series – Part assignments					
	9M	**9M**	**9M**	**Auxiliary**	**Auxiliary**
A Christmas Festival	Snare Drum	Triangle, chimes, sleigh bells, bells, cymbals @ 15	Timpani	Bass drum	Cymbals
A Childhood Remembered	Triangle, snare drum, sus cymbal	Mallets	Timpani	Bass drum, triangle	Cymbals a2
Santa Claus is Coming to Town	Drum set	Bells	Sleigh bells	Tacet	Tacet
Grown-up Christmas List	Drum set	Auxiliary perc	Timpani	Tacet	Tacet
Swinging Dreidel	Drum set	Tacet	Tacet	Tacet	Tacet
The Christmas Song	Drum set	Vibes, sleigh bells	Bells	Tacet	Tacet
Run, Run Rudolph	Drum set	Tacet	Tacet	Tacet	Tacet
Christmas Eve in Sarajevo	Drum set	Perc 3 (xylophone, chimes)	Perc 1 (chimes, vibraphone)	Tacet	Perc 2 (bells)
This Christmas	Drum set	Tacet	Tacet	Tacet	Tacet
Sing Along	Tacet	Snare drum	Timpani	Tacet	Bass drum, cymbals
Bring Me Love	Drum set	Vibraphone	Tacet	Tacet	Tacet
Sleigh Ride	Drum set, slapstick	Bells, xylophone, temple blocks	Sleigh bells	Tacet	Tacet
Love in Your Heart	Drum set	Tacet	Tacet	Tacet	Tacet
Equipment: Timpani – 4 drums Mallets – xylophone, bells, chimes, vibraphone Battery Instruments – bass drum, snare drum, cymbals (crash (a2) and suspended (sus)) Auxiliary Instruments – triangle (x2), sleigh bells, temple blocks, shaker, mark tree/wind chimes, slapstick Drum set Music stands – x7 Trap table – x2					

MULTIPLE PERCUSSION PERFORMANCE

4-32. Percussion parts in concert band often require one person to play two or more instruments simultaneously, or several instruments throughout a part. This is referred to as multiple percussion performance. Many (but not all) percussionists have experience playing multiple instruments simultaneously and this should be taken into consideration when analyzing and assigning parts. Non-ASI percussionists should not be expected to cover multiple instruments within a part or to play two percussion instruments simultaneously. Several factors are involved in successfully performing multiple parts including ease of reading, and logic of setup.

Ease of Reading

4-33. Parts written for several instruments (e.g., Perc 1 – snare drum, woodblock, tambourine, suspended cymbal) can be notated in many ways, and differ by composer, editor, or publisher. For parts intended for a single player, most publishers include a "key" at the top of the part labeling instruments. If there is not a "key," it is recommended to write one into the part.

4-34. When learning and practicing these parts, performers are encouraged to pencil-in notes throughout the parts as necessary. For parts with multiple measures of rest between instruments, mark the part with each instrument change (e.g., mark the last note played on an instrument with "To X" (X= the new instrument)).

4-35. Sometimes publishers will separate instruments into parts to be played by several players. Often these parts can be combined into a single part for one player or divided or added into multiple players' parts, turning these into multiple percussion parts. If combining parts, consider penciling in cues. If writing in cues makes the part difficult to read, consider rewriting the part to make it more legible. Sometimes it may be more efficient to rewrite parts, as parts can then be saved and reused in the section.

Logic of Setup

4-36. One of the most difficult things about performing multiple percussion parts is determining the setup. There is no prescribed way to set up instruments when playing multiple percussion parts, and setup often comes down to personal preference. The instruments must be accessible and arranged in a logical fashion. If the part requires multiple-pitched toms, arrange them according to personal preference (e.g., low to high, or high to low). If the part calls for multiple timbred instruments, consider arranging them in pitch relation (e.g., low to high, or high to low). If pitch class accessibility is not important, place the most often played instrument (e.g., snare drum) centered on the music stand, and arrange all other instruments (e.g., triangle, tambourine, etc.) comfortably within arm's reach.

4-37. In addition to the instruments, the performer must have all mallets, sticks, and other striking implements within easy reach. This is particularly important when playing a wide variety of different instruments such as bass drum, snare drum, suspended cymbal, and triangle all on the same part.

SECTION SETUP

4-38. The setup of the concert band percussion section is often overlooked. In most cases, the percussion section forms a row or arc around the back of the band. The setup is usually left up to the discretion of the conductor but can be modified by the section leader to meet section requirements. A common setup is bookended by the timpani and mallet instruments, with the drum battery and accessories in the middle (see figure 4-1).

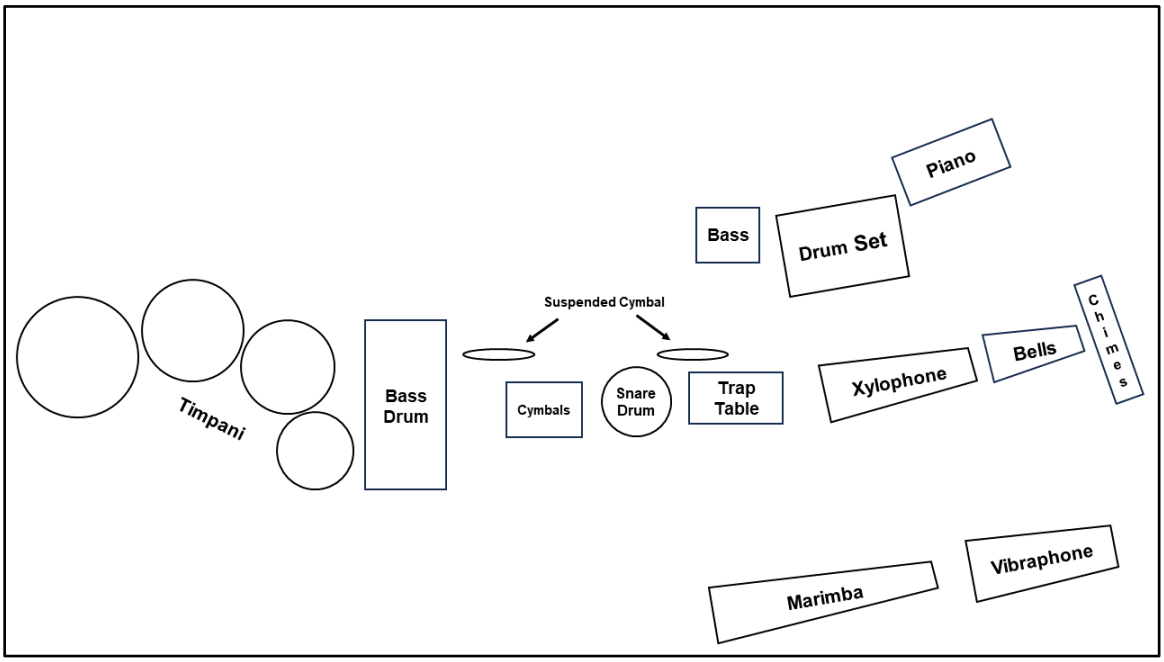


Figure 4-1. Concert band setup

4-39. The position of the trap table/case (used for small accessory instruments, e.g., tambourine, woodblock) can vary depending on the section and the proximity of the performers that need access to it. The trap table should not be a "catch all" table, and the section should avoid keeping unnecessary instruments and implements on the trap table/case. Setup also includes having the proper number of chairs, music stands, required music, and any accessories or implements needed for each instrument station.

PITCHED PERCUSSION

4-40. Place the timpani as close as possible to the low brass section since most timpani parts support or double the low brass. Mallet instruments are usually positioned close to the upper brass and woodwinds, and placement may vary depending on the prominence of the parts (e.g., bells, xylophone, and chimes are used more frequently) or how quick transitions are between instruments within a piece (e.g., moving from bells to chimes).

BATTERY PERCUSSION

4-41. There is often disagreement on the placement of the battery percussion instruments. The bass drum is often placed next to or close to the timpani. The disagreement comes in the placement of the snare drum and cymbals. The bass drum and cymbals operate as a team, with parts often played in unison or with rhythmic interplay between the instruments. These instruments should be placed next to each other to allow for cohesion and interplay. Since many cymbal parts include both crash and suspended cymbals, it is recommended to place a suspended cymbal in between the bass drum and crash cymbals to allow either player to quickly cover the suspended cymbal part(s) as needed.

4-42. Modern publishers often divide the bass drum and cymbals into separate parts. The bass drum parts are often paired and printed with the snare drum part. If this is the case, use separate parts for the bass drum and snare drum performers rather than moving the snare drum in between the bass drum and cymbals. If drum set style parts are written for the battery percussion section, it is recommended to perform them on the drum set if available. If the part must be performed in the section, place and use a high-hat stand and an additional suspended cymbal near the snare drum station of the setup. The parts should be performed by two performers: the bass drummer and snare drummer respectively.

DRUM SET

4-43. Many bands incorporate smaller MPT performances and large ensemble arrangements of commercial music (e.g., musical theatre medleys, or popular tunes) into concert band productions that require the use of a drum set. Usually, but not always, the conductor marks sections of the form and leads tempo changes, while allowing the rhythm section to maintain time for the ensemble. Space permitting, position the drum set as close to the band and rhythm section as possible to promote rhythmic cohesion. The exact position will vary depending on the stage size and position of the rhythm section (e.g., off to one side (i.e., stage left or stage right), or depth (i.e., front to back)). The drummer should position the drum set so that their music and stand have a direct line of sight to the conductor. Regardless of placement, ensure that there is a clear path between the drum set and percussion section to allow for easy transition between rhythm and percussion sections.

AVAILABLE SPACE

4-44. Rehearsal space and usage permitting, is it recommended to leave the percussion section setup in place between rehearsals. This will reduce the amount of equipment that must be moved both for the percussion section and the rest of the band (e.g., chairs and stands). When setting up the percussion section in the rehearsal space, avoid expanding the setup and using more of the room than required. This will keep the section in a more realistic training environment, allows section members to practice in the setup (e.g., moving between instruments), and allows the room to be used for other rehearsals as needed.

4-45. Whenever possible (and this will be dependent on the rehearsal space), set up the percussion section exactly as it will be at the performance venue. This is especially important for venues with narrow (i.e., left to right) or shallow (i.e., front to back) stages. Section leaders should communicate with operations representatives for approximate stage dimensions to determine available space for the section. If the concert venue has unusual stage dimensions, a best practice is to measure out, mark, and tape off the stage dimensions in the band's rehearsal space. This will help anticipate any logistical problems that could occur with section setup and allows the section to train in an environment as close to actual venue dimensions as possible.

4-46. Along with unusual stage dimensions, another issue regarding stage setup is the use of stage risers to elevate sections of the band. When used they often block off portions of the stage requiring the percussion section to move to a smaller footprint (e.g., to one side of the band, left or right). Depending on the riser configuration the timpani may also be placed on the opposite side of the stage from the percussion section to accommodate being closer to the low brass (see figure 4-2).

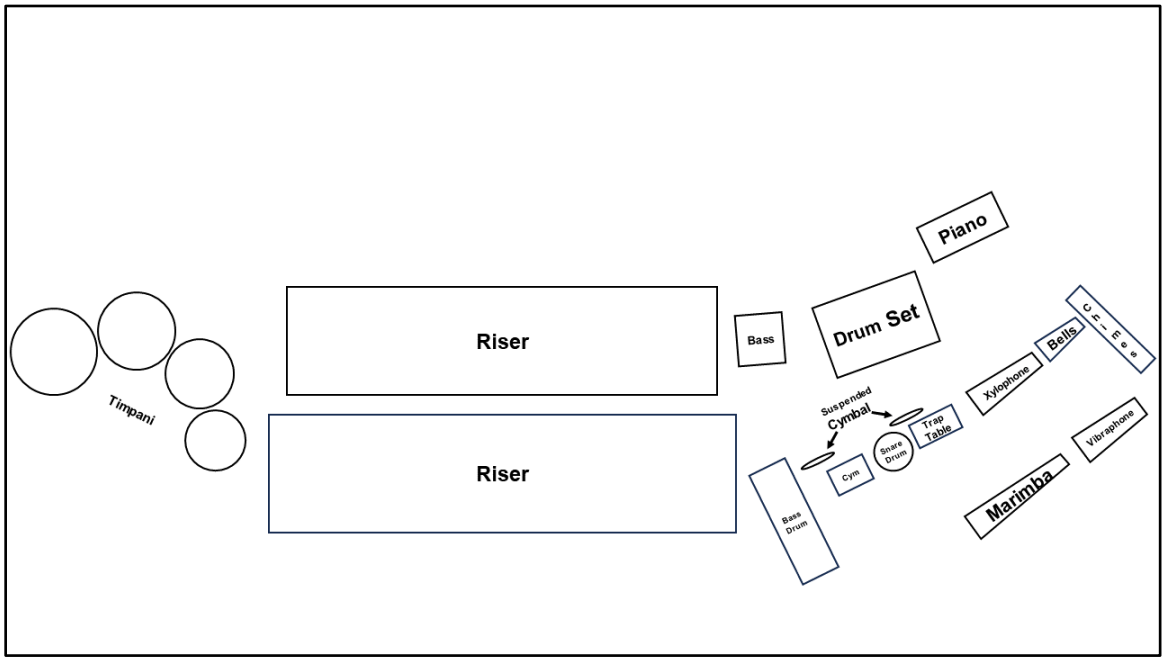


Figure 4-2. Setup with risers

4-47. The section leader should communicate with the commander, production team, and operations representatives prior to the start of rehearsals to determine the placement of the percussion section if risers are to be used. Once section placement is determined and confirmed, it is recommended to rehearse in the approximate configuration (with risers if possible). This will allow the percussion section to train in an environment as close to the actual performance environment as possible.

MUSICAL REQUIREMENTS

4-48. Sometimes due to lack of personnel or equipment, percussionists must cover and perform on multiple instruments which requires careful consideration of instrument setup. The section's setup may not be advantageous to all performers, or able to accommodate all possible situations. There may be situations that require the use of extra or multiple instruments (e.g., suspended cymbals, triangles) or having a member of the section that is closer in proximity to an instrument cover the part. Section members must communicate logistical issues (e.g., fast switches between instruments, sharing of instruments) to ensure that parts are performed as accurately as possible. It is not uncommon to have multiple suspended cymbals or triangles in several different stations within percussion setups.

SECTION II – KEYBOARD PERCUSSION

4-49. The family of keyboard percussion instruments (often referred to as mallets instruments or simply mallets) have a wide role in concert band music, ranging from doubling woodwind lines to featured solo moments. Contemporary concert band/wind ensemble literature often requires multiple mallet parts. For smaller percussion sections, the ASI percussionists may not be able to cover all or any of these parts, which requires the use of non-ASI percussionists (e.g., 9Ns). Usually, but not always, there is at least one experienced ASI percussionist in the section that can cover the bulk of the mallet parts or assist the training of non-ASI percussionists.

4-50. This section describes the common characteristics of the keyboard percussion instruments commonly used in Army Bands: the marimba, xylophone, vibraphone, orchestral bells, and chimes.

COMMON CHARACTERISTICS

4-51. Aside from bar material (wood vs. metal), keyboard percussion instruments have several common characteristics including their construction, striking point on the bars, and playing technique.

CONSTRUCTION

4-52. Keyboard percussion instruments are manufactured in the same set up as piano keyboards, with raised accidental keys. The exception is the vibraphone, which has all keys on a flat playing surface due to the dampening pedal mechanism. The bars (tubes for chimes) are suspended by cords, strings, or pins via nodal points. Sound projection is assisted by resonators on xylophone, marimba, and vibraphone. Chimes and orchestral bells do not require resonators, although most orchestra bell sets are held in wooden cases which act as a resonating chamber.

4-53. Resonators are hollow tubes lined up beneath the center of the bars to reinforce the intensity of the tone. Resonator tubes are closed at one end to provide an acoustic air spring that vibrates and resonates with the sound waves produced by the bar. The effective length of the tube corresponds to the pitch of its assigned note (i.e., the lower the note, the longer the tube). See figure 4-3 for examples.

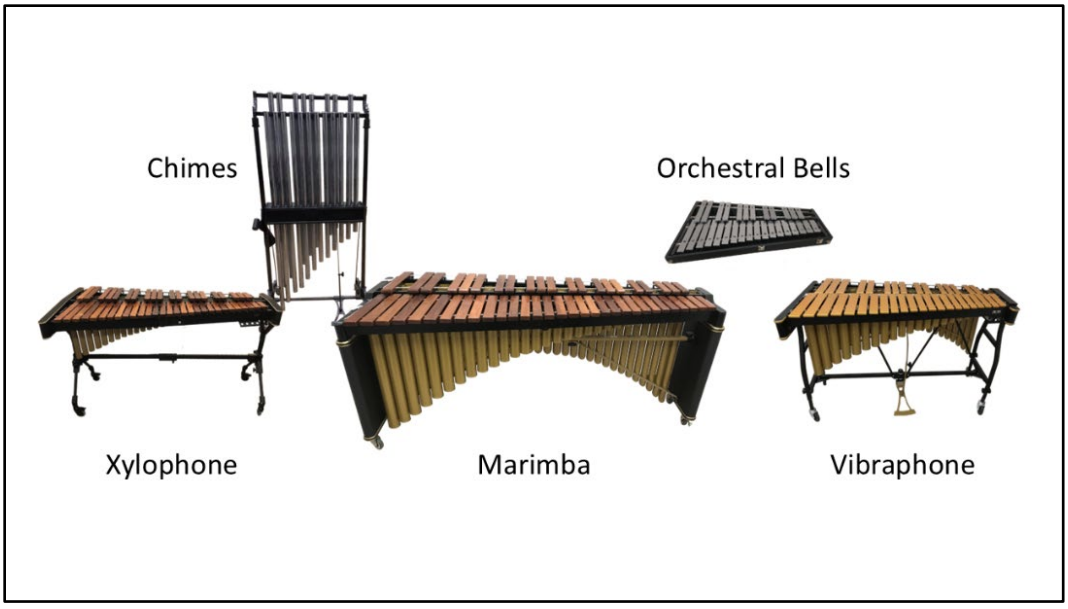


Figure 4-3. Keyboard percussion instruments

STRIKING POINT OF THE BARS

4-54. There are two schools of thought on the correct striking point of the bars. These points relate to all instruments except chimes, which has their own specific striking point. The preferred striking point is the center or slightly off-center of the bar. This provides the most consistent sound, the greatest vibration of the bar, and is directly over the resonator openings (see figure 4-4).

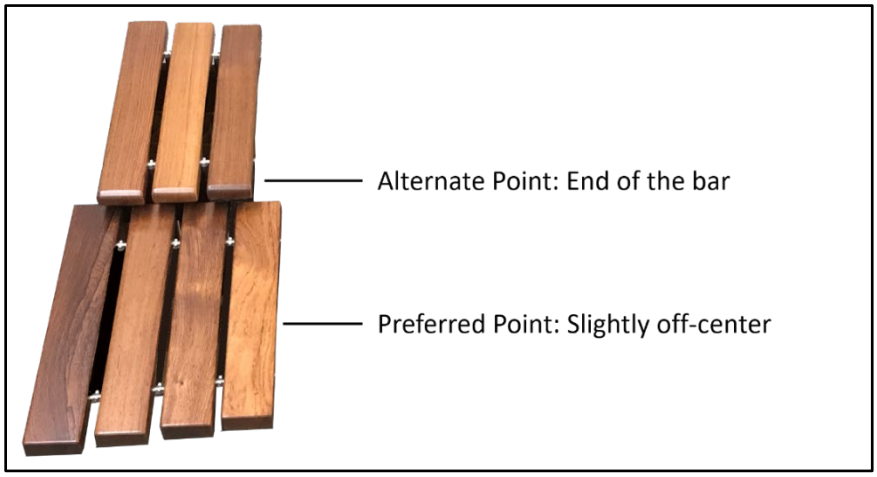


Figure 4-4. Keyboard percussion striking points

4-55. The alternate striking point is at the end/edge of the bar. The edge of the bar produces a resonant tone, but projection is slightly restricted. This works well for marimba and xylophone when executing fast passages and using more than two mallets. While some use this striking point for all accidental keys, others will avoid using it unless necessary.

4-56. Either striking area is correct and is determined by personal preference, specific mallet instrument (e.g., vibraphone and orchestral bells), or musical requirements. The player must decide if the distance the mallet(s) must travel to reach the center of the bar is practical in the tempo of the passage and their technique. Avoid striking the node of the bar (i.e., location of the cord, string, or pins) as this area of the bar produces the least amount of tone and resonance.

PLAYING TECHNIQUE

4-57. Use a matched grip (i.e., both palms facing down) for two-mallet playing. As with most other percussion instruments the most effective stroke on mallet instruments is a direct up-down stroke. Mallet instruments have little natural rebound, but in most cases, the existing rebound coupled with the flex of the mallet handle will provide sufficient rebound and response. As much as is practical, keep the mallet shafts parallel to the playing surface, and keep the mallets relatively close to the bars to minimize excess motion. This also aids the player's proprioception to sense the position of the bars more accurately.

4-58. Sticking is often a problem on keyboard percussion. Traditionally, passages are sticked alternately hand-to-hand for an even and consistent sound. This is usually the best sticking method, but problems often arise that require double sticking (i.e., striking two consecutive notes with the same mallet) for a more consistent flow or speed. Whenever possible, avoid double sticking great interval leaps. Use the sticking method best suited for fluid execution of the passage.

4-59. Sustained notes are played as rolls on the marimba and xylophone. Rolls are performed as rapidly alternating single strokes that must be played evenly and smoothly. The roll speed will be determined by the type of mallet used and the register of the instrument (e.g., lower registers require slower roll speed, while higher registers require faster speed). They may be played on one note or between two notes and are notated with a tremolo sign or written as 32nd notes.

MAINTENANCE

4-60. Maintenance requirements for mallet instruments are very similar, with the primary difference being the difference in bar material. Mallet instruments should be covered when not in use to prevent dirt and dust buildup on the bars.

4-61. The steps for inspecting keyboard percussion instruments and identifying any deficiencies are:

- Check the bars for cracks, dents, or damage.
- Check the spacers between the bars:
  - Are any bent, missing, or damaged?
  - Check rubber post isolators for dry rot.
- Check the bar support cords for proper tension and bar height.
- Check for bent or damaged mounting posts.
- Check all bolts, screws, and nuts.
  - Ensure proper tension.
  - Check for stripped or missing hardware.
- Check the pedal spring for proper tension (vibraphone or bells (if applicable)).
- Check the felt strip for even muffling (vibraphone or bells (if applicable)).
- Check resonator tubes for dents or damage.
- Check the vibraphone motor (if applicable).
  - Ensure fans turn freely.
  - Ensure the motor works properly (i.e., speed changes).
- Ensure wheel casters roll freely and lock properly.

4-62. The steps for cleaning key board percussion instruments are:

- Wipe the instrument with a clean, soft cloth.
- Lightly oil rosewood marimba and xylophone bars with wax-free lemon oil.
- Do not use metal polish on metal or wood bars.
- Lightly oil the vibraphone resonator fan drive rods with light machine oil.
- Lightly oil the vibraphone foot pedal pivot points.
- Clean quarterly or as needed.

MARIMBA

4-63. The marimba became the standard mallet instrument for classical solo work in the latter part of the 20th century. Based on its popularity as a solo instrument its use in contemporary concert band/wind ensemble has increased significantly.

CHARACTERISTICS

4-64. The bars of the marimba are made from rosewood, or a synthetic material called Kelon® or Acoustilon®. On professional models, the bars are graduated in size (i.e., the lower the note, the wider the bar). Marimbas have resonators, but no damper pedal because all tones decay rapidly (see figure 4-5).

Note. The center of the bars on the lower range of the instrument (C2-A2) are extremely thin and can crack or break when overplayed. Exercise caution when playing with harder mallets at louder dynamics.



Figure 4-5. Marimba

IMPLEMENT SELECTION

4-65. Yarn-covered mallets are most often used on marimba, but there are exceptions. For a more articulate attack sound, rubber mallets may be used. Cord-covered mallets (which are more suitable for vibraphone) may be used, but usually the harder versions sound harsh and brittle when used on marimba. The mallet shafts (handles) come in a variety of materials and offer different amounts of flex when used.

4-66. When purchasing marimba mallets, purchase either a set of four mallets or two pairs. This allows for consistent sound if four-mallet playing is required, and the player can reduce the wear on the yarn if mallets are used two at a time.

Yarn Mallets

4-67. These mallets have a rubber or synthetic core (which may be covered in additional layers of rubber) and are covered with varying types of synthetic or natural yarn. Yarn mallets may be used in the following applications:

- Hard yarn mallets are good for ensemble and solo (e.g., concerto) playing because they provide clear articulation throughout the entire range of the instrument while allowing the instrument to be heard over band accompaniment. Avoid over playing with harder mallets in lower registers to prevent damage to the bars.
- Medium or medium-hard yarn mallets are also good for ensemble playing and are recommended for best overall tone production throughout the instrument.
- Soft yarn mallets are excellent for background or accompanying parts. They produce an organ-like tone quality in the lower octaves, but the sound in the upper octaves is choked.
- Extra soft yarn mallets are used only in the lower octaves for a pizzicato string bass effect or a mellow sustained sound.

Rubber Mallets

4-68. Rubber mallets are another option and provide better articulation throughout all registers of the instrument. These mallets may be used in the following applications:

- Soft rubber mallets are similar in sound to medium yarn mallets but provide more attack.
- Medium or medium-hard rubber mallets provide a brittle xylophone-like sound in the upper registers and are good for sharper attacks required in staccato passages, and solo work.

Note. Do not use hard rubber mallets, synthetic plastic mallets (e.g., xylophone mallets), or metal mallets on marimba because they will damage the bars.

Shaft Material

4-69. The choice of mallet shaft (handle) is up to personal preference, with two common options being wooden (e.g., birch, cedar, maple, or hickory) or rattan. Wooden handles have almost no flex and are preferred by soloists for maintaining consistent interval spreads, which aid in accuracy for four-mallet playing. Rattan handles have a range of thicknesses and degrees of flex. Many players prefer rattan for two-mallet playing.

XYLOPHONE

4-70. The xylophone is one of the oldest instruments in the mallet family. Its characteristic high, brittle sound makes it usable as a solo voice, as an added accompanying timbre with other instruments in concert band, or to accentuate rhythmic passages. In many cases, the xylophone is used to double woodwind lines to add additional brightness to the line.

CHARACTERISTICS

4-71. The bars of the xylophone are made from rosewood, Kelon® or Acoustilon®. The bars are typically the same width throughout the range. Xylophones have resonators but can be used without them due to the piercing tone quality of the instrument (see figure 4-6).



Figure 4-6. Xylophone

4-72. Most of the performance problems on xylophone stem from the bar width (usually the same, not graduated like the marimba or vibraphone) and the demands of the intricate passages written for the instrument.

IMPLEMENT SELECTION

4-73. Implement selection for xylophone follows similar considerations to marimba. To produce the tone characteristic of the xylophone, use hard rubber, synthetic plastic, or wooden (e.g., rosewood) mallets. For greater depth of tone, hard rubber works better on rosewood bars. Hard synthetic plastic mallets on Kelon® will project better but may sound thin or brittle. Yarn mallets may be used on the lower register to substitute for marimba if no marimba is available. Softer rubber mallets do not project well. Do not use metal mallets, as they will damage the instrument.

Note. Avoid lengthy practice sessions on rosewood xylophones with extremely hard rubber or synthetic plastic mallets. Over time, these mallets will leave dents in the bars (e.g., C6-C8).

4-74. Like marimba mallets, the choice of handle material is determined by personal preference. Most players prefer using rattan handles because of the flex of the shafts. Xylophone bars are thicker and denser than marimba bars, and the flex of rattan mallets will assist the rebound of the mallet and provides a better feel in the hands.

4-75. In the last 20 years, more and more contemporary composers have been writing four-mallet parts for xylophone, which requires purchasing sets of four mallets. If buying pairs, check for evenness of tone as well as evenness of handle thickness and flex (rattan), because this is more obvious on xylophone (especially one with Kelon® bars).

VIBRAPHONE

4-76. Often associated with jazz music, the vibraphone has seen increased usage in contemporary concert band/wind ensemble literature. Its distinctive sound makes it usable as a solo voice, as an added accompanying timbre to other instruments in concert band, or to accentuate rhythmic passages. Performance on vibraphone requires understanding of the instrument's characteristics, dampening techniques, and implement selection.

CHARACTERISTICS

4-77. Vibraphone bars are made from anodized aluminum. The material produces a tone much longer in duration than wooden bars. The bars are generally graduated in width (i.e., wider for the low notes and narrower for the high notes). The keyboard is flat because of a dampening mechanism that requires the bars to be at the same level as the felt dampening bar. The dampening bar is attached to a pedal operated by the foot. The dampening pedal is operated in a similar manner as the damper pedal on a piano, but the pedal must be depressed before the attack for the note to sustain (see figure 4-7).



Figure 4-7. Vibraphone

4-78. The vibraphone name comes from the vibrato effect produced by fans (rotating discs held by a single axle) at the top of the resonators. The fans are turned by an electric motor that (on most professional models) has a variable speed switch to achieve the desired tremolo speed. Ensure the fans are in the open position when not using the tremolo effect to make full use of the resonators. The volume and tone are noticeably softer when they are closed.

DAMPENING TECHNIQUES

4-79. Specific performance problems on the vibraphone relate to pedaling and dampening. Pedaling on the vibraphone is much like a piano, but, with the smaller range and vibrato (when the motor is turned on), the pedal is used less than the piano.

4-80. Three methods of dampening are available, and they can be used separately or in combination with each other: they are pedal dampening, hand dampening, and mallet dampening.

Pedal Dampening

4-81. The notes are muffled according to their duration and phrase markings. The pedal must be depressed before the attack for the note to sustain and released to dampen the note.

Hand Dampening

4-82. This technique uses the fingers, hands, or a combination of both. With the pedal depressed using hand damping allows the player to mute single notes within a passage while allowing other notes to continue ringing.

Mallet Dampening

4-83. This technique is accomplished by pressing the mallets against the bars. This method allows desired notes to ring while muffling others. This method is also effective in creating a legato or slurred effect. Muffle one bar with the mallet while simultaneously attacking the next note. The pedal must be depressed for this dampening method. Using mallet dampening allows the vibraphone to be more expressive with the sustained notes, playing ties and slurs with almost wind-instrument accuracy. *Vibraphone Technique*, by David Friedman, is an excellent book on the subject (see Appendix A).

IMPLEMENT SELECTION

4-84. A wide variety of mallets are available for the vibraphone. Cord or yarn-covered mallets are used almost exclusively on vibes. For general playing, varying degrees of hardness in cord or yarn-covered mallets will suffice and several sets may be necessary for solo playing. As with marimba and xylophone, when buying mallets specifically for vibe playing, buy sets of four, or two pairs.

4-85. Mallets for vibraphone are generally categorized by hardness levels:

- Soft mallets provide less attack and more tone. They are used mostly for background accompaniments.
- Medium mallets are good for general-purpose playing.
- Hard mallets are used for solo passages where less tone and more precise articulation is required.
- Rubber mallets are generally used for practice purposes, special effects, or for additional attack and articulation.

ORCHESTRAL BELLS

4-86. Orchestral bells (often shortened to bells), or glockenspiel (shortened to glock), are the sopranino voice of the percussion section. They are the oldest mallet percussion instrument in the orchestra (adapted from the celeste) and are used as a solo voice and to provide a brighter timbre to sustained passages (usually accompanying woodwinds).

CHARACTERISTICS

4-87. The bars are made from chrome plated (finished) or natural (unfinished) tempered steel. Bars are mounted in a flat wooden frame and are secured by padded screws, tacks, or pins (see figure 4-8). Bells do not need tube resonators because of their natural resonance. The resonance is aided by the wooden frame or case that they are mounted in. Modern manufacturers (e.g., Adams, or Yamaha) may include a pedal dampener mechanism. If a pedal mechanism is included, resonators will also be added to the instrument. The pedal mechanism may operate like a vibraphone pedal (e.g., depressing the pedal allows sustain), or it may be the opposite (e.g., depressing the pedal dampens the bars).

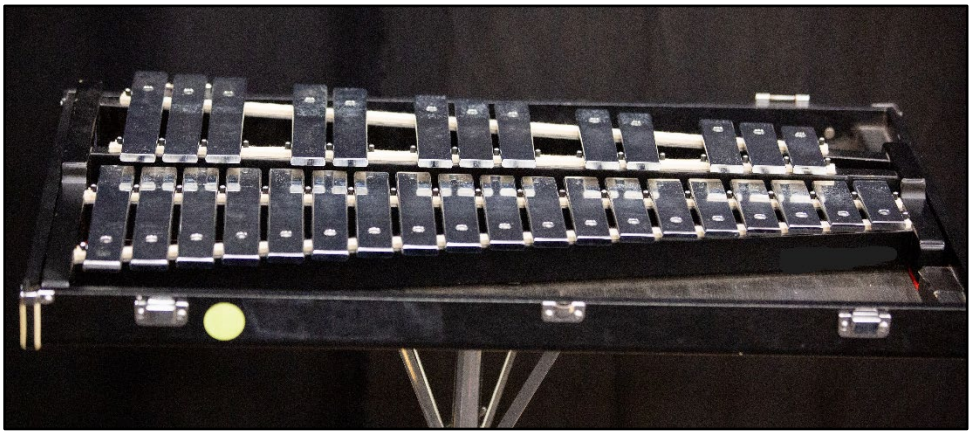


Figure 4-8. Orchestra bells

4-88. Like the xylophone, performance on bells is somewhat difficult due to the bar spacing and size. Another difficulty lies in the fact that playing on the end of the accidental keys may cause the bars to jump or dislodge from their mounting points. This requires the player to play slightly off center. Due to the small size of the bars, the center becomes a secondary nodal point.

IMPLEMENT SELECTION

4-89. With metal bars, the bells are relatively impervious to damage. This allows for a wide range of options when selecting mallets. Handle selection will be personal preference, but rattan is preferred (the flex assists the rebound of the mallet). The following types are common choices:

- Brass mallets are excellent for loud solo passages, or most parts that require metallic, penetrating, bell tones (a popular choice for Sousa marches).
- Synthetic plastic or hard rubber mallets are excellent as general use mallets. They provide the best overall tone production with varying levels of attack sound (depending on the weight and density of core material).
- Medium rubber mallets are the softest mallets recommended for use on bells. They produce a celesta-type sound. This sound, however, is easily buried in heavy musical textures.

Note. Hearing protection is highly recommended during practice sessions and performances when playing orchestral bells.

CHIMES

4-90. Chimes are an orchestral adaptation of carillon bells and are referred to in Europe as tubular bells. Because of the complex overtone series in a chime tube, the player must listen for balance when playing the instrument. Chimes tend to stand out in soft passages and get buried in loud passages.

CHARACTERISTICS

4-91. Chimes are large, pitched metal tubes made of brass and suspended in a vertical rack (see figure 4-9). Each tube is capped with a striking cap to prevent damage to the tube when struck. The tubes are set up in

piano keyboard order when used as a set. If fewer notes are needed, single tubes may be suspended on a rack or cymbal stand to save space on stage. The pedal works on the same principle as the vibraphone pedal (i.e., depress the pedal to sustain pitches). Most chimes have a pedal locking mechanism that allows the player to lock the instrument in the open position (i.e., when struck the tube will ring until muted by hand). Locking the pedal is helpful when players have quick changes between instruments when they are unable to depress the pedal prior to playing.



Figure 4-9. Chimes

PLAYING TECHNIQUE

4-92. The side of the cap of each tube is the only playing area. The other parts of the tube can be used for special effects (e.g., chime scrape – drag the mallet/hammer across the body of the natural tubes), but the player must be careful not to damage the tubes.

4-93. The angle of attack is very important for proper tone production. Strike the tube on the side of the cap, straight in, at a 90° angle to the tube (see figure 4-10). Striking at any other angle produces tones full of unwanted overtones, causing them to sound out of tune.

4-94. Striking the tube straight in with a good rebound requires the mallet handle to be parallel to the tube. Play the row of accidentals with the mallet held horizontally (i.e., perpendicular) to the tube while still making the stroke straight in on the playing cap (see figure 4-10).

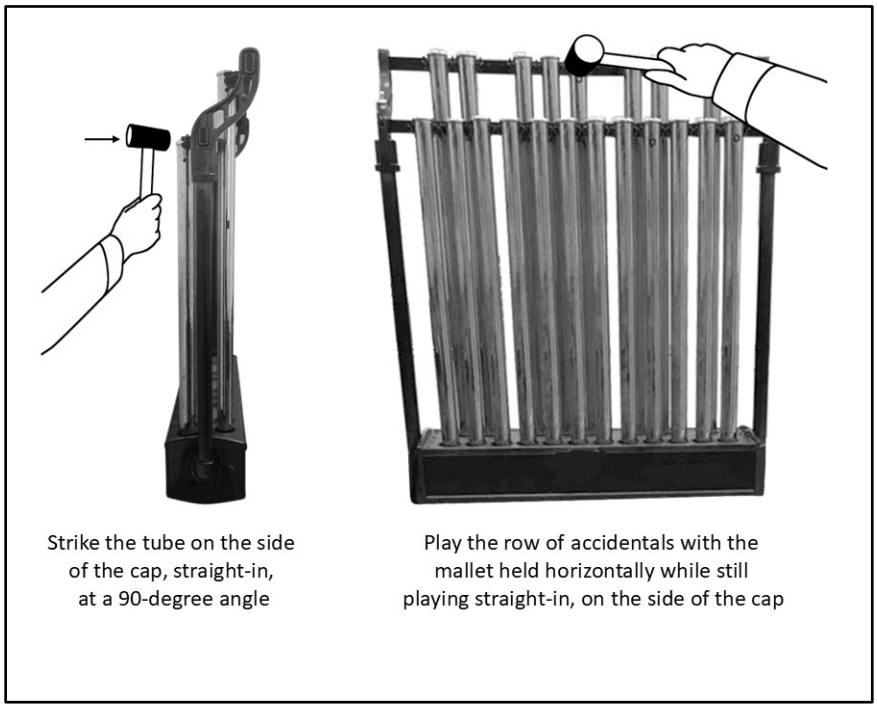


Figure 4-10. Chimes striking technique

4-95. Chimes are muffled with the pedal (e.g., depressing it) or with the hands. The hands are generally used to muffle one note while another rings (i.e., like vibraphone dampening). With the pedal depressed, the tube is muffled by grabbing its top with the non-striking hand.

IMPLEMENT SELECTION

4-96. Use rawhide hammers or other commercially available hammers specifically designed for chimes, as anything else may damage the cap. Two mallets must be available for rapid passages. The mallets must be heavy enough to produce a full tone from the tube. For softer attacks and rounder tone quality, one end of the mallet may be covered with layers of a soft material such as moleskin or felt.

SECTION III – TIMPANI

4-97. Timpani are the largest tunable, definite pitch drums in the percussion section, capable of dynamics softer or louder than any other instrument in the band. They have a versatile instrumental role that ranges from punctuating the tonic and dominant to functioning as a soloist.

4-98. Timpani are available in sizes from 32 to 20 inches in diameter. The required pitch(es) will determine the size used, as each drum has a practical range of a perfect fifth (see figure 4-11). The larger the diameter, the lower the possible pitch. A large portion of early concert band literature can be performed on at least two timpani (e.g., the 26-inch and 29-inch drums). Composers in the latter half of the 20th century and early 21st century pushed the boundaries of timpani writing with many compositions requiring four drums (32”, 29”, 26”, 23”). If higher notes are required (F3-C4) a fifth drum (20”) is added.

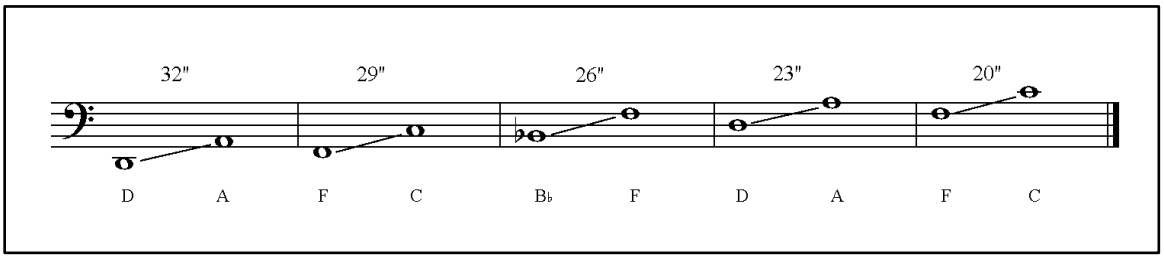


Figure 4-11. Timpani tonal ranges

PEDAL TYPES

4-99. Modern timpani change pitch using a foot pedal to adjust the tension of the head. The use of a pedal facilitates fast tuning changes, the performance of glissandos, and other advanced techniques. The two common pedal mechanisms are balanced action and locking.

BALANCED ACTION PEDAL

4-100. The pitch of a balanced action drum is maintained through the balance of tension between the timpani head and the pedal spring. This balance sets the pitch of the drum and allows the player to remove their foot from the pedal. The lowest pitch (least amount of head tension) is achieved with the pedal in the bottom position (heel down). As the pedal is pressed forward (towards the drum with the foot) the head tension tightens and raises the pitch. When properly maintained, this pedal system is very easy to operate and is useful when playing glissandos and pieces that require frequent pitch changes (see figure 4-12).

Note. Some balanced action drums are equipped with a hand-operated adjustment knob for fine-tuning.



Figure 4-12. Balanced action pedal

LOCKING PEDAL

4-101. Locking pedals mechanically lock the head tension in place via a clutch or a toothed ratchet, with fine-tuning aided by a hand-operated adjustment knob (see figure 4-13). To change pitches the player disengages and holds the pedal lock (clutch) by using the heel of the foot. The lowest pitch (least amount of

head tension) is achieved with the pedal in the bottom position (heel down). As the pedal is pressed forward (towards the drum with the foot) the head tension tightens and raises the pitch. Once the desired pitch is reached (up or down), release the pedal lock (clutch) to reengage the clutch/ratchet, locking the pitch in place. This pedal system is relatively easy to operate once the player learns to use the heel of the foot to operate the pedal lock (clutch). This type of pedal mechanism is preferred by professional tympanists.



Figure 4-13. Locking pedal

GENERAL RULES FOR PERFORMANCE

4-102. Professional timpanists devote countless hours to the mastery of their instrument and there is a wealth of published resources available. Army percussionists are not expected to be experts on timpani, but they should have a basic understanding of the fundamentals required to perform on the instrument(s) as required in concert band. This includes the instrument's setup, playing areas, stroke technique, implement selection, muffling, and tuning.

SETUP

4-103. There are two common playing set-ups for timpani: German and American. The German set-up places the smallest drum to the left, and the largest drum on the right (i.e., 23", 26", 29", 32"). The American set-up is the opposite: largest on the left and smallest on the right (i.e., 32", 29", 26", 23"). Set-up is determined by personal preference; however not all members of the section may play the same set-up which may cause logistical concerns if players rotate during concerts. The center of the timpani set-up (i.e., the 29", 26" drums) should be in line with the music stand and the conductor.

4-104. Playing position is very important. Some players prefer to stand, while others prefer to sit. This is up to personal preference, and determined by the following:

- Arrange the timpani in a semi-circle ensuring all pedals are within easy reach of the feet.
- The drums should be close together but not touching. This allows free movement of the heads while tuning and prevents the drums from rattling against each other.
- Players should center themselves within the setup keeping the drums they are playing in front of them. Being centered allows the player to perform passages across several drums.
- Playing position should allow the performer to pivot/rotate at the waist when playing across several drums.

PLAYING AREAS

4-105. Generally, the playing area on the timpani head is two to three inches from the rim, depending on the size of the drum. The playing area on a larger drum will be further away from the rim. Playing near the rim produces a thin sound and playing close to or in the center produces a dull sound with several high overtones and minimal fundamental pitch (see figure 4-14).

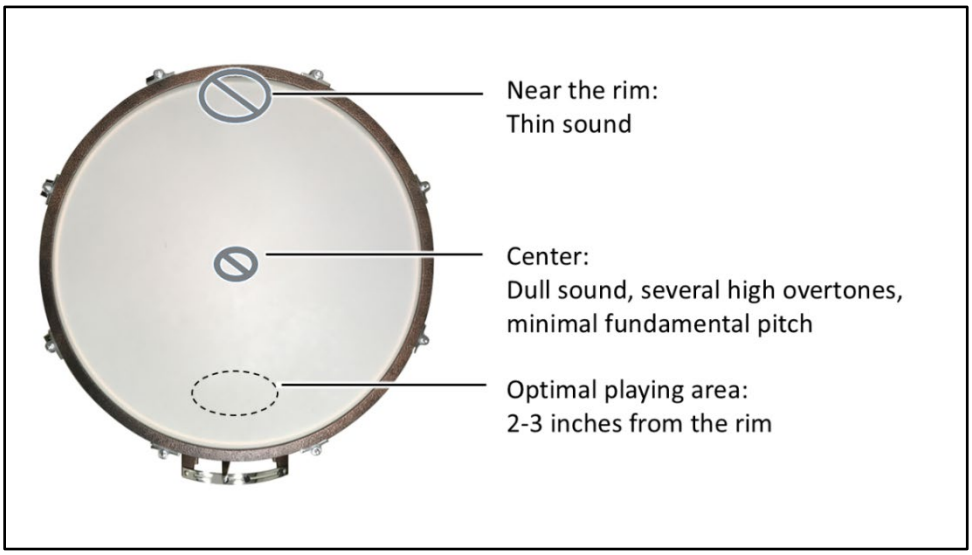


Figure 4-14. Timpani playing areas

4-106. Playing areas should be reachable by turning from the waist. Using a stool is recommended for easier movement unless the player is too short to reach the pedals. If a stool is used, ensure that it is spaced so that the feet can comfortably reach the pedals, and the hands can reach the correct areas for playing and hand muffling. If standing, use a comfortable, relaxed stance leaning slightly forward from the waist for better leverage. In either case, movement from drum to drum should primarily be from the waist.

STROKE TECHNIQUE

4-107. The basic stroke for percussion instruments consists of two parts: a down motion (the stroke) and an up motion (the rebound). On most instruments the rebound is aided by the relatively constant tension of the playing surface (e.g., snare drum). On timpani however, it is more difficult since the relative tension varies from drum to drum and note to note. These variations do not allow for the maximum use of the energy generated by the stroke. This means that the player may have to assist the rebound a bit (especially on larger drums or lower notes).

4-108. There are three common grips taught and used by professional timpanists, and the best grip to use depends on player preference. A complete examination of grips may require further study through published materials or with a qualified instructor. The three common grips used are:

- **German grip** – is a matched grip with the hands turned over and palms facing the floor. It is similar to the matched grip for snare drum. This grip primarily uses the wrist to produce the stroke.
- **French grip –** is made by holding the hands with the thumbs up and palms facing each other. The wrist is used to initiate the stroke (e.g., like turning a doorknob). This grip relies heavily on the fingers to control the stroke and for playing rolls.
- **American grip** – is a matched grip with the hands turned over with the thumb approximately 45° from the playing surface. This grip is similar to the matched grip for snare drum and allows the use of wrist and finger strokes.

4-109. Rolls are performed as rapidly alternating single strokes. The speed of the stroke is critical to tone production of the timpani roll. The size and pitch of the head will determine the speed of the roll. The smaller the timpani and higher the pitch (i.e., higher head tension), the faster the roll speed. The larger the timpani and lower the pitch (i.e., lower head tension), the slower the roll. This gives great flexibility when playing

fortepiano (***fp***) rolls and crescendo or decrescendo rolls. When playing soft rolls on any drum or louder rolls on larger drums, the roll speed should be a bit slower. This will help to avoid possible phase problems with the vibrations of the drumhead. The roll speed increases as the dynamic increases or when moving to a smaller drum with higher tension.

IMPLEMENT SELECTION

4-110. There should be at least three pairs of mallets available when playing timpani:

- Hard mallets for staccato and rapid rhythmic passages.
- Medium mallets for general-purpose playing.
- Soft mallets for smooth legato notes or sustained roll passages.

4-111. Using mallets with a solid core material (e.g., wood, hard felt, or cork) will provide enough weight to produce the desired sound. The articulation of the notes and the technique used will ultimately determine the type of mallet(s) to use.

4-112. Several types of mallets are available, providing a wide range of possible sounds. They range from wooden mallets that produce a very articulated staccato tone to extra soft mallets that provide a velvet-like tone with minimal contact sound. Special effects or composer's instructions may require the use of other implements such as drumsticks, yarn mallets, or superball-type mallets. Use musical discretion and common sense when using these non-traditional implements, making sure to prevent damage to the heads.

MUFFLING

4-113. When muffling on timpani, the object is to give notes their full value while keeping them from interfering with the succeeding harmonic structure. When playing notes on two or more timpani in succession, the ringing tones produce a clustered harmonic effect. Muffling one timpani while striking the other will produce a clean and precise tone.

4-114. The best method of muffling is to play with one hand and use the other hand to muffle the head. The muffling hand must make total contact with the fingers spread in the playing area. Be careful not to slap the head or bend the pitch by applying too much pressure on the head. A sweeping motion with the hand and fingers inward towards the rim of the drum usually works best.

4-115. Fast passages require muffling and playing with the same hand. While holding the mallet between the thumb and forefinger, use the other fingers to muffle the head. Do not let the mallet strike the head while muffling. The best way to muffle is to use a sweeping or wiping motion with as much hand contact as possible. (see figure 4-15).

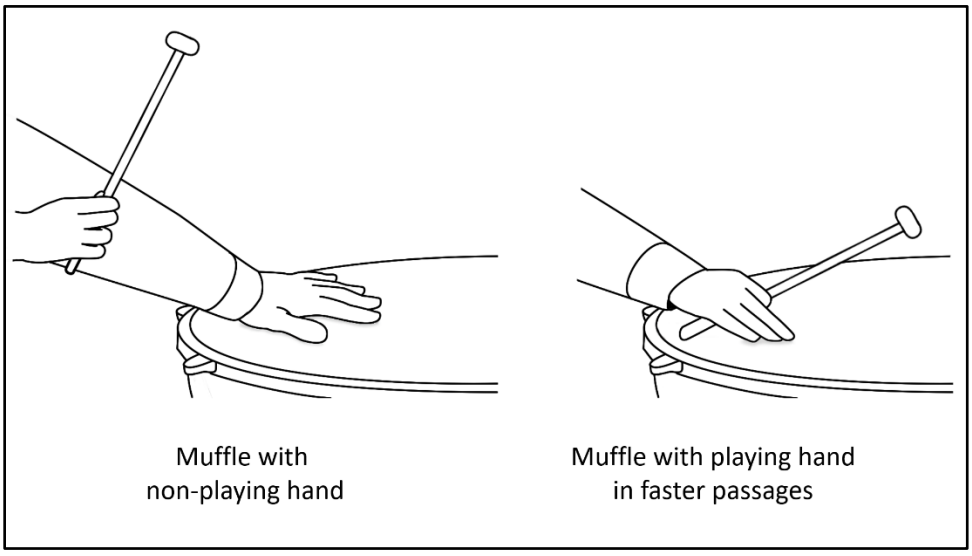


Figure 4-15. Timpani muffling techniques

4-116. When using hand muffling techniques, dirt and oil from the fingertips and hands will transfer to the heads. Over time, this will build up in the playing areas and dampen the heads. This can be prevented by cleaning the hands prior to playing and cleaning the heads with a lint free cloth (e.g., microfiber cleaning cloth) following rehearsals or performances.

4-117. Mechanical muffling is accomplished with circular felt pads, handkerchiefs, or similar devices. They are specified in timpani parts by the terms coperto (covered) and scoperti (uncovered). The devices must be easily accessible and removable. Common uses are to prevent sympathetic vibration and create muffled notes. They are placed in different areas of the head for different effects. Mechanical muffling can also be used to affect articulation (e.g., muffled drums sound drier and more articulate).

TUNING

4-118. Tuning timpani can be approached in several different ways. The best and recommended method is to approach the desired pitch from below. This is achieved by lowering the pedal (loosening the head) below the desired note and moving the pedal up (tightening the head) to the desired note.

4-119. Using a fixed reference pitch (e.g., note within the band, pitch from a piano, or tuning fork), strike or hum into the drum while moving the pedal up to the desired pitch. Players can check their tuning by striking the drum again to verify the tuning. If using the humming method, the drum will "sing back" or resonate the desired pitch.

4-120. Avoid using mallet instruments as a reference source, as most modern instruments are tuned to A=442, while bands tune to A=440. It is also recommended to avoid using pitch pipes for tuning. Pitch pipes are often out of tune themselves and are affected by the amount of air used, causing the pitch to be sharp or flat.

4-121. The best practice when tuning is to have the ear close to the drum to hear the fundamental pitch. The further away from the drum the ear moves, the more overtones will be heard.

***Note*.** Modern timpani are often equipped with tuning gauges with movable letters that correspond to pitches within the range of the drum attached to the frame. Gauges (i.e., the movable letters) may be adjusted and set by using an electronic tuner. Unless properly maintained and checked for accuracy tuning gauges should be used with caution, especially following long periods of storage, travel, or maintenance. When performing, as the intonation changes within the ensemble the player may have to adjust pitches relative to the gauge (e.g., sharp (i.e., above the gauge letter) or flat (i.e., below the gauge letter)).

4-122. Factors to consider when tuning several drums at once include:

- The requirements of the music (e.g., how many different pitches are in the part?).
- The range of the drums (e.g., do not expect to get a top space G (bass clef) on the 29-inch drum.).
- The tension of the head relative to the pitch (e.g., a second space C (bass clef) may sound better on the 29-inch drum (higher head tension) than on the 26-inch drum (lower head tension).
- The proximity of the pitch changes (e.g., can the pitch stay on the same drum, or does the pitch require moving to a different drum?).

4-123. If there is a part with multiple tuning changes, here are ways to approach the problem (see figure 4-16):

- Look over the part and find out how many drums are required (i.e., how many pitches and the ranges between pitches that occur in a single excerpt). Label the part with the starting pitches (e.g., F-A-C-Eb in figure 4-16). If there are only two pitches at a given time, the player may either play the piece with two drums and change pitches frequently or use more drums to save time.
- Find the most difficult tuning changes and see if there is a note in the part that can be used as a reference. If not, relate the new note to a previous note played. Ear training is essential, and players must be able to sing any interval within the space of one octave. This will help to find odd pitches when tuning on the fly.
- Mark the part with each tuning change (e.g., mark the last note played with "To X," or an arrow up/down "To X" (X= the new pitch)). Then practice making the tuning changes. Use a fixed pitch source to check progress and accuracy.

- During rehearsals or score study, identify notes that match other instruments in the ensemble. If the key changes during a passage find an instrument in the ensemble to match the new tonal center (e.g., tubas).
- For major changes (e.g., several pitches change during measures of rest), pencil-in the new pitch set over the rest section (e.g., G-B-D-F in figure 4-16). Order pitches from lowest to highest reflecting the order of the drums.

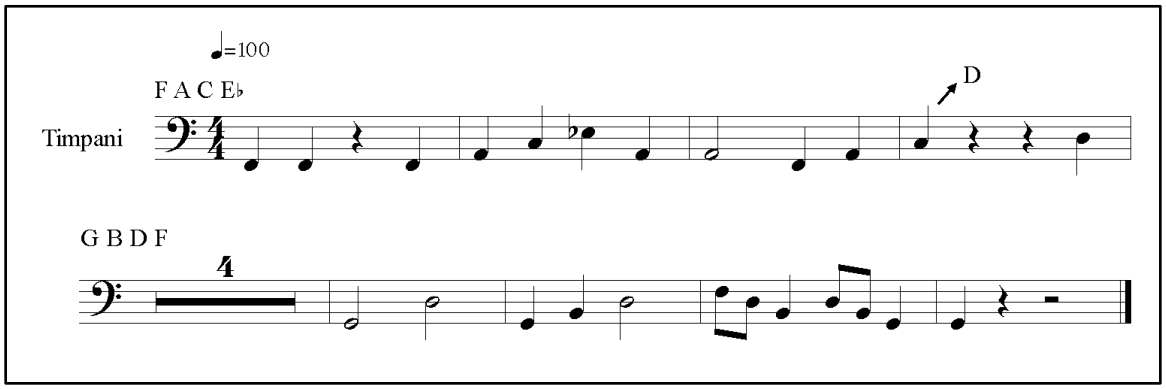


Figure 4-16. Tuning changes within part

MAINTENANCE

4-124. Operator-level maintenance on timpani is often neglected as many percussionists are unsure how to properly maintain the instruments. Problems usually arise from improperly seated heads, tuning and clearing the heads, and pedal mechanism issues. These problems are the result of misuse/mistreatment during transport or storage and neglect of routine maintenance overtime.

Note. This publication only provides general maintenance considerations. Operators should follow the specific steps provided in manufacturer's maintenance paperwork. See appendix A for more information.

SEATING THE HEAD

4-125. Timpani heads must be centered in the middle of the bowl with an even amount of space between the counter hoop (rim) and the bowl's edge. This allows the head to evenly stretch and freely move over the bowl during tuning. An improperly seated head will damage and shorten the life of the head, while also preventing it from being in tune with itself (also referred to as being clear).

TUNING AND CLEARING THE HEAD

4-126. Since timpani are tuned to specific pitches, the head must be tuned to the correct range (i.e., lowest and highest notes, see figure 4-11) while also being perfectly in tune with itself. This is achieved by tuning the head following manufacturer's specifications for the lowest pitch on each drum. Once the lowest pitch is achieved, ensure even tension by matching the pitch at all tuning bolts/tension rods. This process will clear all unwanted harmonics and puts the head in-tune with itself. This process will be completed as needed, with a minimum of once every six months. If tuning issues persist after the head is cleared and tuned to its proper range, there may be a problem with the pedal mechanism.

PEDAL MECHANISM ISSUES

4-127. A common issue for balanced action pedal mechanisms is pedal slipping (e.g., the pedal will not hold the desired pitch and the pedal either moves up or down). This occurs when the pedal spring is out of balance with the tension of the head. Prior to adjusting the pedal spring, the player must ensure that the head is cleared and tuned to the appropriate bottom note. If the pedal will not stay on the bottom note (pedal moves up), then the spring tension is too tight and should be loosened. If the pedal will not stay on a higher note (pedal moves down), then the spring tension is too loose, and should be tightened.

4-128. A common culprit for unbalanced pedal spring tension is forgetting to reset the middle (i.e., balanced) tension of the spring when changing timpani heads. Attempting to adjust the pedal spring tension on an unbalanced spring will cause further issues and prevent the operator from achieving pedal balance (i.e., holding pitch).

PROPER HANDLING DURING TRANSPORT AND STORAGE

4-129. For balanced action drums, the frame (sometimes referred to as struts) covers the tuning bolts/tension rods. When moving, rolling, or carrying the drums ensure to grip the drum by the frame. Pedals should be placed in the top position of the range (i.e., highest head tension) to prevent the head from being unseated (e.g., if the drum is dropped or hit while going through a door frame).

4-130. The tuning bolts/tension rods on locking pedal tympani are usually uncovered and there are separate frame supports for gripping. When moving, rolling, or carrying the drums ensure to grip the drum by the frame supports, not the tuning bolts/tension rods. Use extra caution with moving through doors to avoid damage to exposed tuning bolts/tension rods or unseating the head.

Note. Do not pull, grip, move, or carry timpani by their tuning bolts/tension rods or rims. Doing so may unseat, detune, or damage the head, which may cause issues with the tuning mechanism.

4-131. When possible, transport timpani in hard cases. Ensure that the drum's wheel caster locks are engaged, and the case's retention strap (if applicable) are used to prevent movement inside the case. When transported in cases, pedals may be placed in the middle of the drum's range to keep an even amount of tension on the head and pedal mechanism.

4-132. Timpani hard cases may be stacked during transport. If stacked, ensure that smaller cases are placed on bigger cases (e.g., 23" on 26," and 29" on 32"), with wheel caster locks engaged. If stacking cases, **DO NOT** flip the cases up-side-down. This will place extraneous stress on the heads and rims.

4-133. If cases are unavailable, balanced action drums can be secured to a wall of the equipment truck with ratchet straps. Straps should only be wrapped around the frame of the drum (at least two tuning bolt/tension rod supports/struts). Ensure that the pedals are angled towards the wall, and heads are covered with drop covers or hard timpani head covers to prevent damage to heads. Place the pedal in the top position (highest head tension) to prevent the head from being unseated if other equipment bumps or moves inside the vehicle.

Note. Locking pedal drums should always travel in hard cases during vehicle transport to prevent damage to exposed tuning bolts/tension rods.

4-134. For prolonged periods of storage, drums should be stored in a temperature-controlled environment. They may be stored in or out of cases (situation and space permitting). Ensure that the heads are covered to prevent accumulation of dust or dirt. To further prolong head life, place the pedals in the bottom position.

4-135. Following prolonged periods of storage, check for any changes in functionality:

- Have any of the heads unseated?
- Have the drums maintained their proper tonal ranges?
- Are the heads still clear and in tune?
- Do the pedal mechanisms operate smoothly and hold pitch?

4-136. If any issues are present, troubleshoot using information in paragraphs 4-124 through 4-128. If issues persist, consult the manufacturer's maintenance paperwork.

SECTION IV – SNARE DRUM

4-137. In concert music, the snare drum has wide-ranging opportunities to shape ensemble dynamics, time, and feel. It can provide rhythmic drive for the ensemble, accompaniment for individual sections, or add an interesting timbre to musical passages. While playing techniques are relatively the same across most types of snare drumming, concert snare drum performance requires mastery of the closed or "buzzed" roll. Those

selected to perform on snare drum should have a firm understanding of the technique and finesse required of the instrument.

GENERAL RULES FOR PERFORMANCE

4-138. The musical requirements of concert music demand careful consideration of snare drum selection, tuning, implement selection, and musical considerations. Performers must be deliberate in their choices when selecting and performing on snare drum for symphonic music. The objective is to produce a clear, crisp, and articulate sound for rhythmic passages while also producing a full, lush sound for rolls.

INSTRUMENT SELECTION

4-139. When choosing a drum for concert band use, players may be limited by the instrument(s) the unit has on hand. Players are encouraged to select a drum that will cover the various styles of music performed (e.g., concert marches, orchestral transcriptions, etc.). The variations in shell size, shell material, head choice, and snare type(s) offer players endless options to achieve and aid their personalized sound for concert band performance.

Shell Size

4-140. The size of the drum's shell can affect its tone. The depth of the drum determines its volume, and the diameter determines its pitch. Concert snare drums range in size from 2 ½ to 8 inches in depth and 13 to 14 inches in diameter. There are often parts written for Field or Tenor drum, with drums ranging in size from 10 to 16 inches in depth and 14 to 16 inches in diameter. The more common sizes used in concert band are listed in Table 4-2.

Table 4-2. Common snare drum sizes

Drum Type	*Size (in inches)*	*Description*
Piccolo Drum	2 ½ x 13 3 x 14 4 x 14	Used for light, delicate, or very articulate playing. These drum sizes are often used when "toy drum" is requested.
Concert Snare Drum	5 x 14 5 ½ x 14 6 x 14 6 ½ x 14 8 x 14	Used for general-purpose playing. As depth increases, overall volume increases.
Field/Tenor Drum	10 x 14 12 x 14 16 x 16	Used for louder passages or when a deeper rudimental sound is desired. A rope tensioned snare drum may be used for an authentic field drum sound.

Shell Material

4-141. Material composition of the drum's shell can also affect its tone, and manufacturers use a variety of materials including:

- Wood shells produce a mellow, well-rounded, and resonant tone. The type of wood (e.g. maple, birch, mahogany, etc.) can affect the overall timbre of the drum.
- Metal shells produce a pointed, sharp, and resonant metallic tone. The type of metal (e.g., aluminum, brass, titanium, etc.) can affect the overall timbre of the drum. These shells can play delicately soft ***pp*** passages, while also providing power and volume for ***ff*** passages.

Heads

4-142. The choice of drumhead also plays a role in the overall sound of the concert snare drum. Plastic heads are generally used because they are cheaper, more easily available, and are easier to maintain. Heads are

coated or textured (to resemble skin heads), labeled for concert use (e.g., "orchestral" or "concert"), and come in a variety of weights and thicknesses:

- Thin for lighter, delicate playing at softer dynamics.
- Medium for general all-purpose playing.
- Heavy for louder playing, or when a more durable head is required (e.g., Field/Tenor drum).

***Note*.** The snare side or bottom head is often much thinner which allows for better snare response.

4-143. For batter (playing side) heads, many players choose commercial off-the-shelf heads such as:

- Remo Diplomat Coated M5 Thin (5mm).
- Remo Diplomat Renaissance (7.5mm).
- Remo Diplomat Skyntone (8mm).
- Evans Orchestral (7.5mm).
- Evans Strata 700 (7.5mm).
- Evans Strata 1000 (10mm).

4-144. For snare side (bottom) heads, many players choose commercial off-the-shelf heads such as:

- Remo Diplomat Hazy Snare Side (2mm).
- Remo Ambassador Renaissance Snare Side (3mm).
- Evans Orchestral 200 Snare Side (2mm).
- Evans Orchestral 300 Snare Side (3mm).

Snare Types

4-145. The choice of snare type is determined by the music, the desired level of articulation, and player preference. The most common types of snare materials are:

- **Wire snares** – They come in a variety of strands (12,16, 20, 24, 30) and styles (straight or twisted), and are responsive across all dynamic ranges. While acceptable for concert band music, they are preferred for drum set applications.
- **Cable snares** (coated or uncoated) – These snares produce dry, crisp, and well-defined articulation, and are responsive across all dynamic ranges.
- **Gut snares** (natural or synthetic) – These snares produce the most articulation. They are preferred for louder dynamic applications and are recommended for use on bigger drums with lower tuned heads.

4-146. Most modern professional model concert snare drums are equipped with "multi-sonic/phonic" snare systems that have combinations of three to five different snare types. These snare systems give players a wide range of dynamic and timbre choices. Depending on the manufacturer, the different snare materials can be used independently or in multiple combinations.

TUNING

4-147. After selecting a preferred drum, head type, and snare type(s), attention should be given to proper tuning. To achieve the characteristic sound for symphonic music the performer must consider how they tune the heads and snares.

Head Tuning

4-148. There are many ways to tune snare drums. The type of tuning is dictated by the style of music being performed and the associated characteristic sound. For concert snare drums, tuning starts with the batter (playing) side head. Start by leveling and clearing the head to ensure that each tension rod is pulled down evenly across the drum, allowing for even tension of the head. Once the head is level, tune in small increments to reach the desired pitch. After the desired pitch is reached, re-check that the head is level and clear.

4-149. The depth of the drum will determine the tuning pitch, with the recommended following notes:

- Drums 2 ½ to 4 inches in depth are tuned to Bb4 to C4.
- Drums 5 to 6 ½ inches in depth are tuned to G4 to Bb4.

- Drums 8 to 16 inches in depth are tuned to E4 to G4.

4-150. The snare side (bottom) head is tuned in the range of a major 3rd to a tritone higher than the top head for drums ranging in size from 2 ½ to 6 ½ inches in depth. For deeper drums (10 to 16 inches in depth), the bottom heads are tuned to the same pitch as the top head. This replicates the sound of single (same) tensioned rope drums. These tuning pitches allow the drum to achieve the characteristic crispy and articulate sound required for concert music. The brand and thickness of head will be determining factors for any tuning scheme and experimentation is encouraged to achieve the player's desired sound.

Snare Tuning

4-151. For snare tuning, whether using a single snare type or a "multi-sonic/phonic" snare system, check the snare response at all dynamic levels. The snares should not be so loose that the drum sounds fuzzy, or so tight that the drum sounds choked. The snares should be tuned to achieve clear articulation while also allowing for smooth buzz rolls.

4-152. If using a drum with a "mutli-sonic/phonic" snare system it is recommended to follow the manufacturer's guidance for individual snare tuning, but most of these systems are used in the following way:

- Wire snares are tuned for softer dynamics with responsiveness at ***ppp*** to ***mp.***
- Cable snares are tuned for mid-level dynamics with responsiveness at ***mp*** to ***mf/f.***
- Gut snares are tuned for louder dynamics with responsiveness at ***f*** to ***fff.***

4-153. A common tuning method when using a "multi-sonic/phonic" snare system is the following:

- Start with the thickest material (gut or coated cable) and tighten them until the response is slightly choked at ***ff***.
- Next tune the medium material (uncoated cable or wire) and tighten them until they respond in the ***mp*** to ***mf*** dynamic range.
- Finally, tune the thinnest material (fine guitar string or curly wire) and tighten them until they respond at ***pp*** approximately an inch from the edge of the drum.

4-154. When used in combination and tuned to recommended dynamic ranges, combination snare systems provide a consistent sound across all dynamics levels. Usually, but not always, if the drum sounds slightly choked off from the players perspective, then it will sound great from the audience's perspective.

4-155. During rehearsal or performance, it is recommended to keep the snares disengaged whenever the drum is not in use to avoid unwanted sympathetic vibration of the snares. When storing or transporting snare drums, it is recommended to keep the snares engaged to keep them properly seated to the bottom head.

IMPLEMENT SELECTION

4-156. Concert snare drumsticks are made from a variety of materials including hickory, rosewood, persimmon, maple, or carbon fiber. The length, diameter, and weight of the stick to be used are determined by the size of the drum being used and the musical application. For example, a large stick will overpower a smaller drum and choke the sound. Smaller sticks (e.g., those used for drum set) are not heavy enough to provide a full sound for concert music. While stick choice involves personal preference, it is recommended to select a stick designed for concert band or orchestral use. These sticks fall in-between drum set (lighter) and marching (longer and heavier) sticks.

4-157. Parts are often written for brushes to provide a lighter sound or a swish effect. Depending on the requirements of the part, brushes used for drum set may not be loud enough to cut through the ensemble. The performer may have to play louder than indicated or use a thicker or heavier pair of brushes. If the part is fairly rhythmic, performers may substitute plastic brushes for better volume, clarity, and articulation.

4-158. Other implements such as yarn, felt, or timpani mallets can be used effectively for a tom-tom sound (with the snares off). Use discretion when playing with alternative implements to achieve the desired sound without damaging the head.

MUSICAL CONSIDERATIONS

4-159. Unlike its role in ceremonial or marching music where it is primarily used to keep tempo during troop movement, the snare drum provides more of a support role in symphonic music. It is used as a reinforcement

instrument to highlight accents, aid crescendos and decrescendos, support sustained passages (via rolls), or provide rhythmic accompaniment.

Rolls

4-160. Accurate performance of symphonic music requires the percussionist to have a mastery of the closed or "buzzed" roll, as most but not all rolls are performed as closed rolls. Details in closed rolls can be broken down by roll duration and roll shape.

4-161. To address roll duration, it is recommended to find a hand speed (sometimes called a motor rhythm) to meter rolls such as:

- Depending on the tempo, pick a rhythm (e.g., eighth-notes, triplets, or sixteenth notes) to buzz. There should not be a discernable rhythm heard, but rather it is used as a guide to stay in time.
- Crescendos can be performed as a single rhythm or by changing the hand speed by speeding up the motor rhythm (e.g., for a whole note duration, play the first two beats as triplets and the last two beats as sixteenths).
- Decrescendos can be performed as a single rhythm or by changing the hand speed by slowing down the motor rhythm (e.g., for a whole note duration, play the first two beats as sixteenths and the last two beats as triplets).

4-162. Roll shape refers to the density of overlapping buzzed strokes played by each hand paired with the chosen motor rhythm. Buzzed strokes can be performed in densities ranging from three to six bounces per stroke. There are many different approaches to define and aid roll shape. A common approach is to select a consistent buzz stroke density while finding a hand speed (motor rhythm) within the tempo that produces a full sound (e.g., three bounces per stroke and played as triplets or sixteenth notes at 120 beats per minute).

4-163. Players are encouraged to experiment with roll duration and shape as each drum is unique and may sound completely different depending on the performers technique and choices made. The following are different ways to approach rolls:

- Playing with lower density buzz strokes at faster hand speeds (e.g., three bounces per stroke and motor rhythm of quintuplets at 90 beats per minutes).
- Playing with higher density buzz strokes and higher hand speeds at slower tempos (e.g., four to five bounces per stroke and motor rhythm of quintuplets at 60 beats per minute).
- To round out the sound and prevent fatigue for longer rolls at louder dynamics, play with lower density strokes and slower hand speeds (e.g., three bounces per stroke and motor rhythm of triplets at 160 beats per minute).

Note. The goal of closed rolls is to produce a full sustained sound without discernable accents, rhythms, or pulses. Rolls are the percussionist's way of replicating the wind player's long tone.

4-164. Players may perform rolls as open double stroke rolls when parts are written for Field Drum. These parts are written to replicate the sound of the rudimental drumming tradition, specifically rope tensioned drums. When performing these types of parts, players should follow conventions for open rudimental rolls (e.g., 5, 7, 9, 15-stroke rolls). Another common convention is to perform concert marches from the late 19th and early 20th centuries with open double stroke rolls. See paragraphs 3-17 through 3-20 for more information.

Muffling

4-165. Performers may see an indication in snare drum parts such as "muffled," "damp," or "dampen." There is often discrepancy regarding what should be done to the drum for this. When dealing with concert band snare drum parts the word muffle means to disengage (i.e., turn off) the snares to produce an open tenor drum or tom-tom effect. Sometimes the word damp or dampen is used in place of muffle, although the term dampen usually refers to the muting of undesirable overtones.

4-166. Depending on the tuning and desired sound, many players prefer to add some form of muffling to dampen the batter head. This muffling is added to reduce ring from the head and to dry out the sound of the drum, which aids in articulation and clarity. The degree of muffling is a matter of personal preference, but

there should be a balance of tone (from the head) and clarity (from the snares). There are several commercial off-the-self or homemade drum mutes designed for snare drum including:

- A cotton handkerchief (can be folded to cover varying amounts of the head).
- A leather or felt timpani mute.
- A leather drum mute that attaches to the rim via string or clip (e.g., Black Swamp Percussion, Freer Percussion).
- Moongel Damper pads (commonly used on drum set toms).

4-167. If using muffling, ensure that the method is heavy enough or attached to the rim to prevent movement while playing. Avoid the practice of placing an ID card on the drum as a muffling device because it can move around the drum.

Dynamics

4-168. Percussionists that have little to no experience performing in concert band often overplay dynamics when playing concert snare drum. Since the snare drum mainly plays a supporting role in symphonic music, players must approach dynamics with an ensemble sound or dynamic. Playing with ensemble dynamics is matching the volume of the entire ensemble or section within an ensemble. Unless the music is notated otherwise (e.g., part marked as "solo") or conductor specifically requests the snare drum to play louder it is recommended to play slightly softer than the marked dynamic. This will prevent the snare drum from overpowering the ensemble.

MAINTENANCE

4-169. There should be very little maintenance required for concert snare drums. Damage, abuse, neglect, or disuse to the instrument will require maintenance. Heads should be changed as needed (broken, overly dented, loss in tone (overplayed)), or at least annually.

4-170. The following paragraphs describe operator-level maintenance for snare drum. Operators should consult the manufacturer's maintenance paperwork for disassembling "multi-sonic/phonic" snare systems.

DISASSEMBLE THE INSTRUMENT

4-171. The steps for disassembling a snare drum are:

- Remove the snares.
- Loosen and remove tension rods.
- Remove rims.
- Remove heads.

INSPECT THE INSTRUMENT

4-172. The steps for inspecting a snare drum are:

- Inspect the drumhead, checking for broken, cracked, dented, or pulled areas.
- Inspect the rims, checking for dents and warping (i.e., is the rim "out of round?").
- Inspect the shell:
  - Check for dents, scratches, and cracks.
  - Check the condition of the finish (if applicable).
  - Check the hardware for stripped nuts, screws, or bolts.
  - Check hardware for corrosion or pitting.
- Inspect the tension rods:
  - Check for cleanliness.
  - Check for bent rods.
  - Check for missing spacer washers (metal or plastic).

CLEAN THE INSTRUMENT

4-173. The steps for cleaning a snare drum are:

- Wipe inside and outside of shell with a clean cloth to remove built up dirt and dust.
- Remove old lubricants from tension rods with a clean cloth.

- Lightly lubricate tension rod threads and lug casing with fresh lubricant.

ASSEMBLE THE INSTRUMENT

4-174. The steps for assembling a snare drum are:

- Replace the snare side head.
- Replace the rim.
- Replace the snare assembly, ensuring that it is uniform (i.e., centered on head), straight, and moves freely via the throw off mechanism.
- Replace the tension rods and finger tighten.
- Replace the batter (playing) side head.
- Replace the rim.
- Replace the tension rods and finger tighten.
- Once drum is reassembled:
  - Tune heads as described in paragraphs 4-148 through 4-150.
  - Tune snares as described in paragraphs 4-151 through 4-155.

SECTION V – BASS DRUM

4-175. Unlike its role in ceremonial music, where it is used primarily for keeping time during troop movement, the bass drum has greater musical responsibilities in concert music. The bass drum provides a dark timbre to concert music that stresses accents and boosts dynamics, while also providing rhythmic drive.

GENERAL RULES FOR PERFORMANCE

4-176. Concert bass drums are available from 14 to 20 inches in depth, and 28 to 40 inches in diameter. The size of the drum will determine its pitch range (i.e., how high or low it can be tuned) and resonance (i.e., the amount of sustain). Smaller drums have a higher pitch and do not produce the resonant depth required for most standard wind band repertoire. Larger drums have a lower fundamental pitch and greater resonance but can be difficult to control rhythmically.

4-177. Since the bass drum has a greater musical role in concert music the fundamentals required to perform on the instrument are slightly different than those used for marching and troop movement. They are the playing areas, stroke technique, implement selection, muffling, and tuning.

PLAYING AREAS

4-178. The playing areas on the concert bass drum are in part dependent on the desired tone. Since concert bass drums are larger in diameter with lower head tension, they can be harder to control. The goal of performing on concert bass drum should be to play a full sound with the correct articulation.

4-179. Striking the head in the center or at the node provides a sharp, dead attack without many low overtones sounding. This area can be used for staccato rhythmic passages, or shorter articulated notes. When playing on calfskin heads, avoid overplaying the center or spine area of the head (a slightly thicker area that bisects the head), as this can cause the head to tear or break.

4-180. Most general playing will be done by striking the head slightly off center (usually one or two mallet-head widths from center). This provides the most tone, while still allowing for some degree of articulation. This area is great for legato notes where long note durations are desired while providing a good combination of high and low overtones.

4-181. Striking the head near the rim (approximately 2-3 inches from the rim) provides a thin, ringing sound with higher overtones predominating. It can be used for softer passages or when a thinner sound is desired (see figure 4-17).

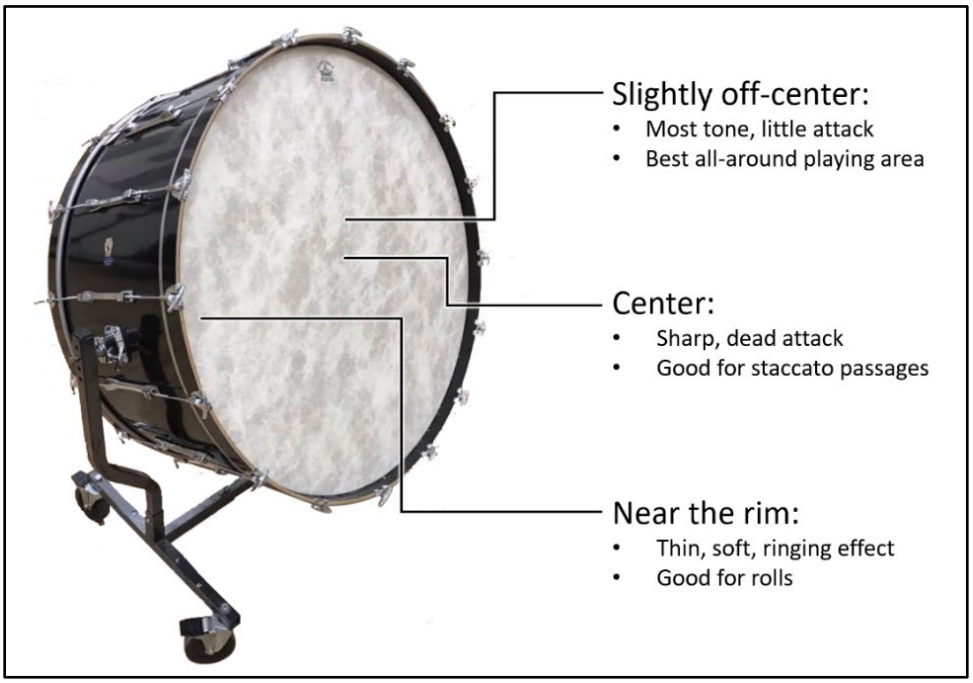


Figure 4-17. Bass drum playing areas

4-182. Composers looking for exotic sound effects have written parts to be played on the shell of the drum, the rim, and even the bass drum stand. Whatever area is called for, always use common sense to avoid damaging the instrument while using good musical taste to perform the part.

STROKE TECHNIQUE

4-183. The strokes and techniques used on the concert bass drum can be divided into single strokes and rolls.

Single Strokes

4-184. There are a variety of single strokes used on the concert bass drum. A direct in/out stroke (i.e., the mallet travels in a straight line perpendicular to the head) is the most useful overall stroke. Some players prefer using a rounder "J-stroke" (i.e., the mallet moves as if drawing the letter J). This stroke type can cushion the attack of the note as it hits the head to produce a rounder, fuller sound.

4-185. When performing single strokes/notes, hold the mallet towards the bottom of the shaft to let the weight of the mallet do the bulk of the work. This will produce the fullest sounding tone from the bass drum. Choking up or holding the middle of the mallet is less efficient and will produce a thinner tone.

Rolls

4-186. Rolls on bass drum are played with slow alternating single strokes. A general-purpose roll can be played with the beating spots approximately halfway between the center of the head and the rim (hands in the 12 and 6 o'clock position of a clock face). They can also be played on different areas of the head (closer to the rim, or both mallets in the same beating spot) to achieve different sounds and effects.

4-187. Due to the larger diameter and lower head tension of concert bass drums, the player must find a roll speed that is in phase with the vibrations of the head. Listen for an even sound while rolling and let the mallets rebound naturally. At softer dynamics the roll speed will be slower. As the dynamic increases the hand speed must increase as the vibrations of the head increase. Rolling too fast will interfere with the natural vibrations of the head and may begin to sound like a distinct rhythm. Experimentation is encouraged (e.g., drum size, head material, and implement choice) with the goal of producing a continuous, non-pulsating, low rumble.

IMPLEMENT SELECTION

4-188. There are a variety of commercial off-the-shelf striking implements available for use on concert bass drum. With various shaft, core, and covering materials used, these mallets allow the percussionist to produce a plethora of sounds and articulations. Most parts can be performed with some combination of the following:

- **Hard mallets** - wooden (e.g., uncovered or covered with a thin layer of chamois) or hard felt used for staccato and rapid rhythmic passages (preferably a matching pair).
- **Medium mallets** - covered in layers of felt or wool for general-purpose playing. These mallets are excellent for single legato notes that require a combination of depth and articulation.
- **Soft mallets** - feature a heavy core covered with thick and soft felt or wool. These mallets are used for single legato notes that primarily provide depth rather than articulation.
- **Rollers** - are slightly lighter in weight and easier to control when playing rolls (preferably a matching pair).

Note. Use caution and avoid overplaying when using uncovered or wooden mallets, as they may dent the head.

4-189. Composers write for a variety of effects and sounds that require a wide assortment of non-traditional implements or mallets (e.g., brushes, timpani mallets, snare drumsticks, rubber "super-ball" mallets). When using non-traditional implements the main concern should be performing with good musical taste while avoiding damage to the head or instrument.

MUFFLING

4-190. The style of articulation, acoustics of the venue, resonance and pitch of the instrument, tempo of the passage, and instrument(s) in the band being supported will dictate the type and degree of muffling required. Notes must be given their full duration, and this can be difficult while playing the bass drum.

4-191. Muffling on bass drum must be done with some discretion. If over muffled, the drum will lose its tone and have a sound closer to a drum set bass drum. If under muffled, the drum will continue to ring and lack definition. Calfskin heads need much less muffling on or after attacks, and only light muffling to stop sound at the end of the piece.

4-192. Most muffling is done on the batter (playing) side only, using a sweeping motion similar to that used on timpani. With the non-playing hand, sweep from the edge of the drum (near the rim) to a point nearer the center of the drum to stop the sound after an attack.

4-193. There are several advanced muffling techniques available. If the part requires a drier sound, the player may use (see figure 4-18):

- The non-playing hand (resting on the batter head).
- External dampening devices (clamp-on muffler or a small, folded towel held in the hand).
- The knee or leg on the batter head.
- A combination of the knee or leg on the batter head, while using the non-playing hand to muffle the resonant (non-playing side) head. This technique is especially useful while playing concert marches to match tuba articulation.

Note. Avoid leaving a towel permanently attached to the rim (with the bulk of towel material resting on the head). This should not be a default setting for general-purpose playing.

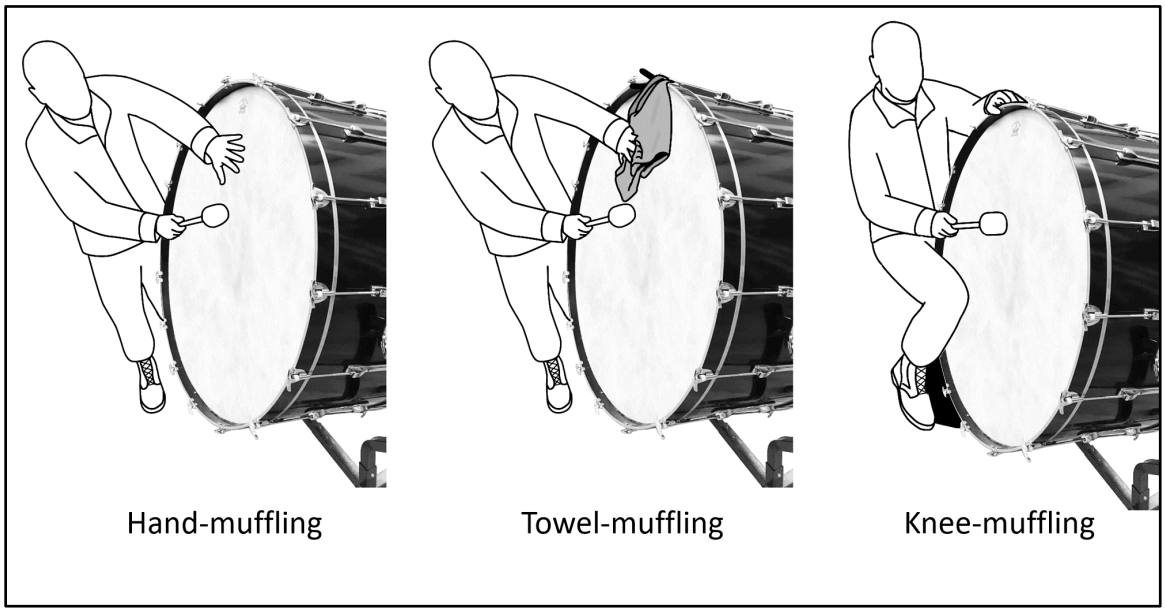


Figure 4-18. Bass drum muffling techniques

4-194. When using any external tone control (including the knee), be aware that the perceived pitch of the drum will go up, as any external tone control essentially reduces the functional diameter of the drum. If the drum must be silenced completely, use the playing hand on the batter side and the non-playing hand on the resonant side to stop the sound.

TUNING

4-195. The concert bass drum should be the lowest sounding non-pitched instrument in the percussion section. To achieve a characteristic bass drum sound, the heads should be tuned to different tensions. Start with the resonant (non-playing side). For general-purpose playing, tighten the head until a low sustained sound is achieved. If a defined pitch is heard, the head is tuned too high. Once the resonant head has been tuned to a low non-pitched sustained sound, flip the drum over and tune the batter (playing side) head. The batter head should be tuned slightly higher (approximately one to two half turns of each tension rod). The slightly higher tension of the batter head will aid in the articulation of rhythmic passages.

4-196. Once the drum is tuned, adjustment of the tension/tuning is based on the following:

- If a defined pitch is heard, the resonant head is too high/tight.
- If the drum does not ring long enough, the resonant head is too low.

MAINTENANCE

4-197. There should be very little maintenance required for concert bass drums. Damage, abuse, neglect, or disuse to the instrument will require maintenance. Heads should be changed as needed (broken, overly dented, loss in tone (overplayed)).

4-198. A common maintenance requirement is the development of a “rattling” sound when the instrument is played. Rattles often originate from the stand that the instrument is mounted on. Rattles may also be caused by loose or damaged hardware on the drum itself. If a rattle develops use the following steps prior to disassembling:

- Inspect the drumhead, checking for broken, cracked, dented, or overly worn surface spots.
- Inspect the rim, checking for dents, warping, cracks, and even seating on the head counter hoop/collar.
- Inspect the drum hardware:
  - Check for bent or stripped lug casings.
  - Check for stripped nuts, screws, bolts, or tension rods.
  - Check for loose claws or tension rods (may simply need to be tightened).

- Inspect the drum mounting stand:
  - Ensure all nuts, screws, and bolts are tightened.
  - Ensure wheel locks are locked.
  - Check rubber suspension bands for tension and dry rot (for suspended drum stands).
  - Check the swivel/tilt mechanism. Do not overtighten as this can strip or render the mechanism unusable.

Note. If a rattle persists after performing the checks outlined above, the player may have to remove one of the heads for further inspection and operator-level maintenance.

DISASSEMBLE THE INSTRUMENT

4-199. The steps for disassembling a concert bass drum are:
- Loosen and remove tension rods/claws.
- Remove rim.
- Remove head.

INSPECT THE INSTRUMENT

4-200. The steps for inspecting a concert bass drum are:
- Inspect the drumhead, checking for broken, cracked, dented, or overly worn surface spots.
- Inspect the rims, checking for dents, cracks, and warping (i.e., is the rim "out of round?").
- Inspect the shell:
  - Check for dents, scratches, and cracks.
  - Check for loose screws, nuts, bolts, or washers in or on the drum shell. Retighten or replace as needed.
- Inspect the tension rods:
  - Check for cleanliness.
  - Check for bent rods/claws.
  - Check for missing spacer washers (metal or plastic).

CLEAN THE INSTRUMENT

4-201. The steps for cleaning a concert bass drum are:
- Wipe inside and outside of shell with a clean cloth to remove built up dirt and dust.
- Remove old lubricants from tension rods with a clean cloth.
- Lightly lubricate tension rod threads and lug casing with fresh lubricant.

ASSEMBLE THE INSTRUMENT

4-202. The steps for assembling a concert bass drum are:
- Replace the drumhead.
- Replace the rim, ensuring that the flat side of the rim rests on the hoop of the drumhead.
- Replace the tension rods/claws.
- Retune head (see paragraphs 4-195 and 4-196).

STORAGE AND TRANSPORT

4-203. The following steps should be used for storing and transporting concert bass drums:
- Store the instrument free from temperature and humidity extremes.
- Store instrument in proper cases or in a secure area.
- Cover with an instrument specific dust/drop cover or blanket.
- If dust/drop cover is unavailable, recommend applying a circular cardboard cut-out on both heads (can be made from drumhead box). Secure cut-out via bungee cords or strings (attached to stand or tension rods).
- When transporting, ensure the drum is in a case or covered, with the wheels locked to prevent damage.

SECTION VI – CYMBALS

4-204. Composers use cymbals to highlight important or climatic moments in symphonic music. Whether a crash played by a pair of hand cymbals or a smooth crescendo from a suspended cymbal roll, cymbals allow the percussionist to add a brilliant and penetrating timbre to compositions.

HAND CYMBALS

4-205. Hand cymbals used in symphonic music range in size from 14 to 22 inches in diameter and vary in thickness from paper-thin to extra thick. To provide a greater spectrum of overtones, cymbals of the same size should have a slight difference of tone or pitch between them.

4-206. Large and thick cymbals produce higher fundamental pitches due to the abundance of higher partials produced by the thicker metal. These cymbals will sustain longer and may be played louder without the danger of overplaying or distortion. Large, thick cymbals however make rhythmic precision difficult and require greater physical stamina. Smaller and thinner cymbals produce lower fundamental pitches, yet have shorter sustain, faster decay, and distort or wash out faster (thereby limiting dynamic range).

4-207. The diameter and thickness of the cymbal is chosen using the following considerations:

- Requirements of the music:
  - Does the part require a “dark” or “brilliant” sound?
  - Dynamic extremes within the part.
  - The instruments being accompanied or supported (if playing with woodwinds, will the cymbals overpower their sound?).
  - Is it a solo crash or part of the ensemble sound?
- The musical taste of the performer and conductor.

Note. The player must be willing to experiment with different cymbals and choose accordingly.

NOTATION

4-208. Cymbal parts use traditional notation but there is often a discrepancy of note length (see paragraphs 4-4 through 4-8). When performing cymbals in concert band players should listen for instruments that they are matching or supporting to determine note length (e.g., cymbal part is notated as an eighth note, but brass is playing a whole note).

GENERAL RULES FOR PERFORMANCE

4-209. The general rules for performance on hand cymbals in concert band include consideration of instrument setup, grip, stroke technique, and muffling.

Instrument Setup

4-210. See Instrument Setup for marching band cymbals in paragraphs 3-164 through 3-166.

4-211. The differences in concert band cymbal setup are the use of pads and the length of the hand loop. Players often avoid using cymbal pads for concert band unless necessary. When pads are not used the cymbal straps may be pulled further through the bell of the cymbal making the hand loop shorter, while providing extra slack on the inside of the cymbal to tie a tighter cymbal knot(s).

Grip

4-212. The grip used for concert band playing is different than the grip used for marching cymbals and is formed using the following steps (see figure 4-19):

- Grip the cymbal strap between the thumb and forefinger where the strap meets the bell of the cymbal.
- Wrap the remaining fingers around the strap.

4-213. When held, ensure that thumb and forefinger maintain contact with the bell of the cymbal. The pressure exerted by the thumb and forefinger may help the player in controlling large/heavy cymbals. When

held in playing position the cymbal will rest on the knuckles of the back three fingers (see figure 4-20). For periods of prolonged playing (e.g., during a concert march) players may transfer the weight and pressure of the grip to the back three fingers.



Figure 4-19. Concert cymbal grip

Stroke Technique

4-214. There are many approaches to playing cymbals in symphonic music. The information provided here is only a guide and represents only a few ways to perform cymbals in concert band. The techniques are described for right-hand dominant players but may also be adapted for left-hand dominant players.

Orchestral Crash

4-215. For general-purpose playing in concert band use the orchestral crash technique described in paragraphs 3-175 through 3-176 and shown in figure 3-33.

4-216. The orchestral crash described in chapter three uses a downward dominant hand motion. An alternative would be to use an upward dominant hand motion. From the *Prepare to Play* position lower the right hand away from the center line of the body so that the cymbal is parallel to the ground. For the crash, bring the right hand up striking the top edge of the right cymbal approximately one to two inches from the top edge of the left cymbal. Upon impact, the right hand turns up and out (i.e., 45° angle towards right shoulder), while the left hand turns down and out (i.e., 45° angle towards the ground). When performed in time this will be a single continuous motion.

4-217. Do not force or push the cymbals together. Provide enough energy for the cymbals to contact. As the cymbals impact, relax the hands and arms to allow the cymbals to rebound off each other and continue through the motion (see figure 4-20).

4-218. Whether using the downward or upward motion the follow-through is very important if the crash is a longer note or has the indication of *laissez vibrer* or *let vibrate* (l.v.). To achieve better sound projection after the attack, face the bottoms of the cymbals towards the audience.



Figure 4-20. Orchestral crash variation

Repeated Notes

4-219. Playing cymbals for an extended length of time requires strength and endurance (e.g., performing the "*Service Medley"* with cadences interspersed between songs). Repeated notes may be played using the repeated notes technique described in paragraph 3-178 and figure 3-35.

4-220. An alternative method is to rest the elbow of the non-dominant hand on the side of the torso. In this position the cymbal remains stationary, supported by the knuckles of the hand. The cymbal may be held at any angle between 45° and parallel to the floor. The dominant hand plays using a down/up stroke with the hand tilted so that the bottom edge of the cymbal strikes first. Ensure that the cymbals remain slightly offset, to prevent the edges from striking simultaneously.

Muffling

4-221. When muffling the cymbals, always give the note its full value. When composers fail to notate parts according to the length of sound(s) desired, muffling is left to the player's discretion. Listen to the rest of the band and judge note lengths according to the band's articulations. When playing "tutti" parts (e.g., playing with the bass drum) the cymbals should only be dampened at the ends of phrases or when the attack is staccato.

4-222. Muffle the cymbals quickly and easily by drawing them into the body (e.g., chest, stomach, armpits, or squeezing them into the forearms). When muffling cymbals in dress uniforms, avoid contact with any items on the uniform jacket (e.g., name tag, badges, medals, or buttons).

SUSPENDED CYMBALS

4-223. Suspended cymbals provide a wide spectrum of effects to heighten the overall musical expression of concert music. They can accompany or accentuate rhythmic passages or add a splash of timbre when using sticks or mallets. They may also drive ensemble crescendos through long sustained notes or dramatic swells.

GENERAL RULES FOR PERFORMANCE

4-224. The general rules for performance on suspended cymbal include consideration of cymbal selection, playing areas, playing technique, implement selection, and muffling.

Cymbal Selection

4-225. Choosing a suspended cymbal must be done with care and consideration of the type of music that will be performed and the characteristics of the cymbals available. Although many manufacturers make specifically branded "concert" or "symphonic" suspended cymbals, most medium or medium-heavy crash cymbals in the 17–20-inch range work well for most suspended cymbal parts. Important factors to consider when selecting a suspended cymbal include:

- How responsive is the cymbal at various dynamic levels:
  - How does the cymbal respond for a ***pp*** roll?
  - Does the sound choke or spread at louder dynamics?
- If the part needs rhythmic articulation, how clear is the sound? (i.e., what is the balance between wash and articulation?).

4-226. A problem occurs when the part requires rolls and articulated rhythmic passages. The obvious choice would be to use a cymbal that sounds good for both. If the cymbal(s) available do not sound good for both, players may have to use more than one cymbal (space permitting).

4-227. When possible, avoid using one of a pair of crash cymbals for suspended cymbal playing unless the cymbal is properly mounted. This means that the cymbal still has its strap and is suspended by the strap on a boom stand. The earliest uses of suspended cymbals were mounted in this way, or with a hook stand that used the strap as the attachment to the stand (see figure 4-21).

Playing Areas

4-228. Suspended cymbals offer an array of possible sounds. To explore the cymbal's sound palette players should experiment with using different playing areas on the cymbal. A general rule is that the closer to the edge that the cymbal is struck that lower partials predominate, and rhythmic clarity is reduced.

4-229. Striking the cymbal in the bell area gives a high, piercing "ping" sound. There is a lack of resonance, and the higher overtones predominate, but this area provides the sharpest rhythmic definition. Striking the cymbal in the ride area provides the best combination of high and low overtones. It is the best area for general rhythmic definition while still achieving a characteristic cymbal sound. Striking the edge of the cymbal provides a predominance of low overtones and the greatest resonance. It is the best area for sustained legato notes and rolls (see figure 4-21).

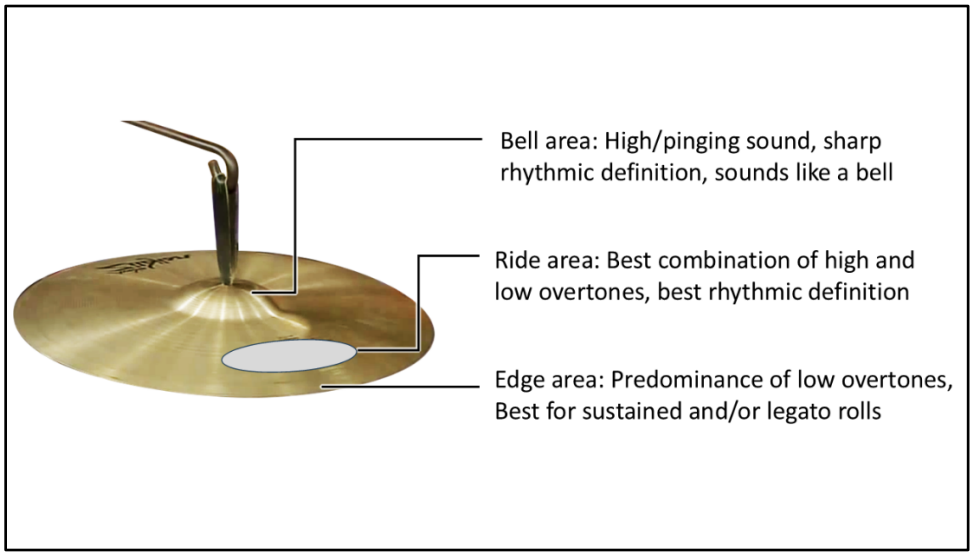


Figure 4-21. Suspended cymbal playing areas

Playing Technique

4-230. Except for special effects, single strokes are used for playing everything including rolls. Articulated rhythms played in the ride area are performed with technique similar to snare drum or drum set playing. For longer single notes, use a glancing strike near the edge of the cymbal to activate more of the cymbal.

4-231. Play rolls with single strokes near the edge of the cymbal to acquire a smooth, even, unarticulated sound. Position the mallets on opposite sides of the cymbal (approximately the 9 and 3 positions of a clock face) to keep the cymbal flat while playing rolls. Priming a roll is not necessary unless the cymbal is slow to respond because of its size or thickness. The same principles of rolling on the bass drum apply to rolling on suspended cymbals. The roll speed will generally be slower than expected. Louder dynamics do not necessarily require faster hand speed. Roll in phase with the vibrations of the cymbal at each dynamic level listening for an even, smooth, continuous tone (see figure 4-22).

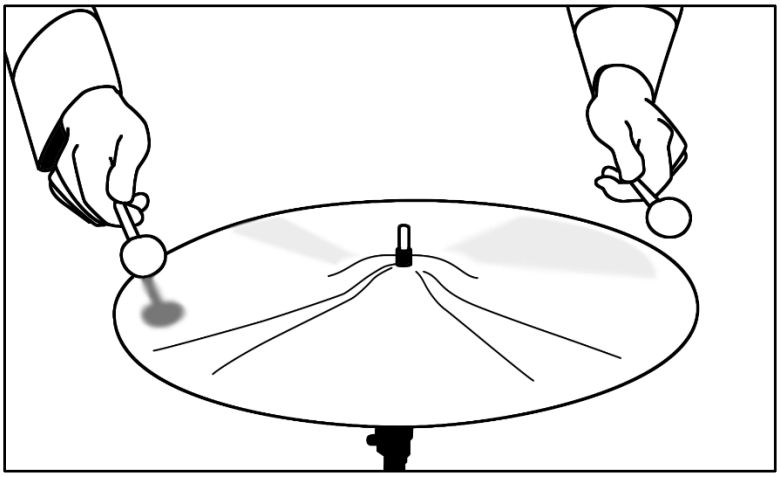


Figure 4-22. Playing a suspended cymbal roll

Implement Selection

4-232. Almost any striking implement will work on suspended cymbal, and unless specified, selection is determined by the performer. With a little experimentation, many interesting and imaginative sounds can be produced on suspended cymbal. The prime concern should be musical taste while preventing damage to the cymbal.

4-233. The commonly preferred mallet for suspended cymbal is a medium hardness yarn-covered mallet. This provides some degree of cushion to the attack while giving some heft to single notes and works for most rolls. If a softer (***pp***) attack to sound beyond the front of the stage is desired, use a slightly harder mallet than normal. This gives some edge to the note and allows the player to play it closer to the edge of the cymbal.

4-234. Soft yarn mallets produce a rounder sound with a loss of articulation. Heavier weight soft yarn-mallets may be substituted for playing rolls. When timpani mallets are called for in a part, yarn mallets are usually substituted. This provides a softer attack while avoiding damage to the felt covering on timpani mallets.

4-235. Snare drum sticks provide a faster response and a more rhythmically distinct attack than yarn mallets. They are generally used for crashes that require a sharp attack (e.g., short staccato notes), or faster rhythmic passages that require clear articulation. Depending on the volume, wooden sticks will provide the clarity needed for most situations. If more clarity is required, metal or nylon-tipped sticks provide crystal clear articulation that will cut through the ensemble texture.

Special Effects

4-236. Composers often request the use of non-traditional implements to achieve a variety of effects on suspended cymbal. When using non-traditional implements the prime concern should be musical taste while

preventing damage to the cymbal. Brushes produce a light, airy effect for rolls and soft rhythmic passages. For louder passages, use a specially made heavy, stiff, and thicker wired brush.

4-237. String Bass bows produce a screeching effect when the cymbal edge is bowed like a violin. Triangle beaters and coins produce a variety of sounds when scraped against the grain of the cymbal (e.g., from the bell to the edge). A beaded metallic chain (e.g., chain from I.D. tags) laid on the surface of the cymbal produces a sizzling effect when the cymbal is struck.

Muffling

4-238. Muffling is generally achieved by playing with one hand and grabbing the cymbal with the other to stop the tone. When notes are not in quick succession, use both hands to muffle. To make a passage more articulate, use the fingertips of one hand to partially muffle the underside of the cymbals while the other hand is playing. If the passage is rapid with notes in quick succession, lean into the cymbal with the body (e.g., chest, or stomach). Carefully regulate the pressure exerted by the body to ensure the proper amount of muffling.

MAINTENANCE

4-239. There is very little maintenance required for cymbals. The primary concerns will be to ensure that the cymbals are not damaged (e.g., cracked, dented, bent), and that the hand straps are properly maintained for the use of hand cymbals. For strap maintenance and replacement follow the steps in paragraph 3-165 and figure 3-29.

4-240. The steps for periodic cymbal maintenance are:

- Check for cracked or bent cymbals.
- Check leather straps for wear or damage by untying the cymbal knot and checking contact points that rub against the cymbal hole.
- Check the holes of suspended cymbals for keying or damage from metal-on-metal contact from cymbal stands.
- Check the post protector and cymbal felts on each cymbal stand for damage.
- Ensure that cymbal felts allow the cymbal to remain within the length of the plastic post protector.

SECTION VII – ACCESSORY PERCUSSION INSTRUMENTS

4-241. The accessory percussion instruments provide the largest variety of percussive timbres in symphonic music. Each instrument has its own unique playing technique and requires dedicated study and practice for accurate performance. This section is not all encompassing but rather provides a brief description and general playing considerations for the most common accessory instruments used in the concert band percussion section.

TAMBOURINE

4-242. Concert tambourines consist of a wooden shell or frame with mounted jingles and batter head tacked or glued on the frame. Tambourines used in commercial music styles are typically headless with frames made from wood or plastic. They range in size from 6 to 15 inches in diameter. To accommodate most musical requirements, the percussion section should have at least three tambourines described in Table 4-3.

Table 4-3. Tambourine types

Size (in inches)	*Description*	*Uses*
10	Double row of jingles	For general-purpose and loud playing
10	Single row of jingles	For softer, delicate playing
10	Double row of jingles, headless	For commercial music styles (e.g., rock, pop, funk)

4-243. Jingles are mounted in slot openings of the frame with steel pins. When choosing a tambourine, a player must decide what type and how many jingles are required for the music. Generally, the more jingle sound required, the more jingles the tambourine should have. Tambourines are available with one or two rows of jingles and a variety of jingle types.

4-244. Jingles come in a variety of materials and are described by their manufacturers in terms related to pitch (e.g., high, medium, low) and sustain (e.g., long, medium, short). Tambourines may be equipped with one jingle material or a combination of two or more varying materials. The four common metal types used for jingles are:

- **Silver jingles** (referred to as German Silver) – are cupped, smooth or hammered, and generally nickel-plated disks. They are used for the liveliest and highest pitched jingle sound with long sustain.
- **Copper jingles** (referred to as Beryllium Copper) – are cupped, smooth or hammered disks. They provide a medium to low pitched jingle sound with medium to long sustain.
- **Brass jingles** – are cupped, smooth or hammered disks. They provide medium pitched jingle sound with medium sustain.
- **Bronze jingles** (referred to as Phosphor Bronze) – are cupped, smooth or hammered disks. They provide the lowest pitch jingle sound with long sustain.

4-245. Heads on professional quality tambourines are traditionally made of calf skin. Natural skin heads are secured to the shell of the tambourine by glue, tacks, or a combination of the two. This decreases the weight of the instrument and makes the instrument easier to control.

4-246. Weather and climate can greatly affect natural skin heads. In dry climates with low relative humidity heads will dry out and become very tight. This may cause the shell of the tambourine to warp and increases the chance of the head breaking while playing. In climates with high humidity or damp weather, heads will absorb the moisture in the air and become loose. This also increases the chances of the head breaking while playing.

4-247. There are several methods to address the tension of natural skin heads. For drier climates players may dampen the head with water to loosen the tension. When applying moisture to a dry head, avoid completely saturating the head as it may loosen the head too quickly.

4-248. For climates with higher humidity players may use a hair dryer or a heating pad to tighten the head. If using a hair dryer, avoid prolonged direct exposure to any single area of the head to prevent damage or discoloration. For prolonged dehumidifying simply leave the tambourine on a heating pad.

4-249. For consistency, modern manufacturers have begun adding synthetic (i.e., plastic) heads to concert tambourines. This provides players with the traditional tone and response of natural skin with consistent head tension. The overwhelming advantage to these synthetic heads is their immunity to weather changes and the corresponding maintenance required.

4-250. Muffling is rarely necessary. To reduce the amount of head sound, strips of moleskin may be added to the underside of the head. To stop the jingles from sounding, turn the tambourine to a 45-degree angle or flat (i.e., parallel) to the ground.

4-251. Headless tambourines are preferred for commercial music styles due to their increased projection and difference in playing techniques.

GENERAL RULES FOR PERFORMANCE

4-252. Tambourines should be kept on a flat padded surface (e.g., trap table or music stand covered with a towel). Careful consideration should be given to how tambourines are picked up, held, and placed down to avoid extraneous noise.

4-253. The general rules for performance on tambourine include careful consideration of grip, playing areas, stroke technique, rolls and commercial music technique.

Playing Areas

4-254. The playing area on concert tambourines must be chosen according to the dynamics and the desired amount of head and jingle tone (see figure 4-23):

- Strike the tambourine near or on the center for ***mf*** and louder passages; this produces the greatest balance of head and jingle sound.
- Strike near or on the rim for ***mp*** and softer passages; this produces less head sound and more jingle sound.

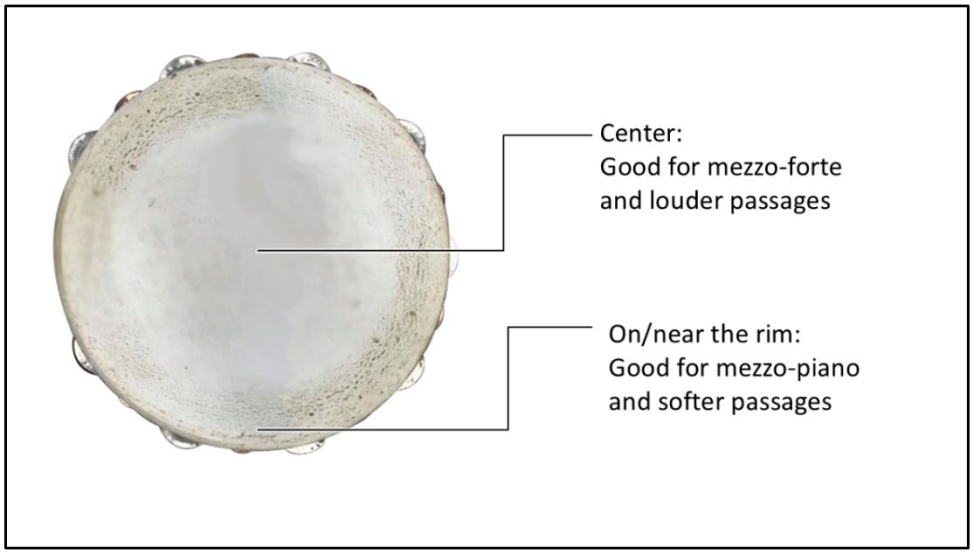


Figure 4-23. Concert tambourine playing areas

Grip

4-255. Personal preference will determine which hand is used to hold the tambourine. Most players hold the tambourine in their non-dominant hand, allowing them to play rhythms with their dominant hand. Experimentation is key and players should try holding and playing with either hand. To avoid extraneous noise, do not switch the instrument from hand to hand while performing.

4-256. The simplest grip will place the tambourine in the palm of the hand. Place the thumb on the head while the remaining fingers curl around the shell (see figure 4-24). The size of the player's hand and shell depth will affect the comfort of the grip. Avoid squeezing the tambourine to prevent unnecessary tension in the hand and forearm while playing.

4-257. Most tambourines have a mounting hole in the grip area designed to allow the player to mount the instrument to a stand. While not specifically designed for this purpose, players with smaller hands may use this hole to help support their grip. To utilize this, rest the tip of the middle or ring finger on the hole from inside the tambourine, then curl the rest of the hand around the rim until the thumb is firmly placed on the head. This provides stability and prevents unnecessary movement while playing.

4-258. The holding angle of the tambourine determines the activity of the jingles. Straight up and down (i.e., perpendicular to the floor) produces the most jingle activity and allows free vibration of the jingles. Parallel to the floor produces the least jingle activity, providing a dry and articulate jingle sound. A 45-degree angle produces medium jingle activity and is the preferred sound for general-purpose playing. (see figure 4-24).



Figure 4-24. Tambourine grip

Stroke Technique

4-259. The hands are generally used to play tambourine. Players can use a flat hand or fist for loud single notes. General playing and dynamic shading can be achieved by using varying combinations of fingers. Mallets or sticks are used when specifically directed by composers or when used in a multiple percussion setup. Dynamics and rhythmic difficulty determine the types of strokes used to play the tambourine. There are four types of strokes, and two types of rolls commonly used on the tambourine.

4-260. It may be necessary to switch between different stroke and roll techniques within a musical excerpt. Being able to transition between them will provide the player multiple options for performance.

Loud Strokes

4-261. Playing non-rhythmically dense passages at ***mf*** and above can be achieved by various combinations of the middle three fingers. Start by bracing the pad of the pointer finger against the pad of the thumb and play using wrist strokes. As the dynamic increases, add the middle and ring fingers to increase the volume of the stroke (see figure 4-25).



Figure 4-25. Loud strokes with fingers

4-262. For loud accented single notes, strike in the center of the head with a flat hand (i.e., palm) or a loose fist. When using the fist, strike the head as if knocking on a door, with the heel of the hand and fingers between the first and second knuckles (see figure 4-26). When using the fist avoid using the points of the knuckles, as they may puncture the head.



Figure 4-26. Loud strokes with hand

4-263. When using these stroke techniques avoid overplaying, as the tambourine tends to easily cut through an ensemble. Ensure that passages are played within ensemble dynamics.

Soft Strokes

4-264. Playing non-rhythmically dense passage at ***mf*** and below can also be achieved by combinations of the middle three fingers. Start by placing the heel of the hand in the center or just off center of the head. This decreases the amount of head sound and allows the jingles to speak more clearly. Extend the fingers so that the fingertips rest just beneath or on the rim.

4-265. To play, use finger strokes and hit the head or rim with the fingertips. Let gravity and the weight of the fingers produce the stroke and avoid flicking the tambourine. For dynamics at ***pp*** and below, try using only one finger. As the dynamic increases, add the middle and ring fingers to increase the volume of the stroke (see figure 4-27).



Figure 4-27. Soft strokes with fingers

Loud Multiple Strokes: Stand-Mounted

4-266. This method is used to play rhythmically dense passages at ***mf*** and above when playing several percussion instruments simultaneously (e.g., fast transition between instruments, or multiple percussion set-ups). Using the mounting hole, attach the tambourine to a cymbal stand. Use extra cymbal felts if necessary to keep the tambourine from moving or rotating excessively. Use both hands to perform the passage in the manner described in paragraph 4-261. If used in multiple percussion set-ups or required by the composer, use mallets or sticks. Use caution and avoid overplaying with mallets or sticks to avoid breaking or damaging the head.

Loud Multiple Strokes: Hand-Knee Technique

4-267. This technique is used for playing fast or rhythmically dense passages using alternating strokes between the hand and knee. Set-up for this technique will be determined by personal preference and body mechanics. One method is to place a foot on a chair or empty drum case to elevate the knee into a comfortable position. Hold the tambourine upside down (i.e., head towards the knee) while maintaining a 45-degree angle. Hold the dominant (playing) hand three to four inches over the center of the head. Use the braced finger or fist stroke described in paragraphs 4-261 through 4-263 (see figure 4-28).



Figure 4-28. Hand-knee technique

4-268. To play, alternate between striking the head with the dominant (playing) hand and moving the tambourine down (by the grip hand) to strike the knee. When striking the knee, keep the wrist of the grip hand relatively straight and make the stroke from the elbow (e.g., as if knocking on a door). While difficult, the goal is to achieve a consistent sound between the hand strike and knee strike. Experiment with the amount of playing hand (or fist) and area of the knee being struck to match articulation.

4-269. For rhythmic consistency use a “hand lead” system when using this technique. When playing rhythms, perform all down beats with the hand and upbeats with the knee (e.g., strong pulses, accented notes, and primary/motor rhythms, start with hand strokes). See figure 4-29 for example “sticking pattern.”

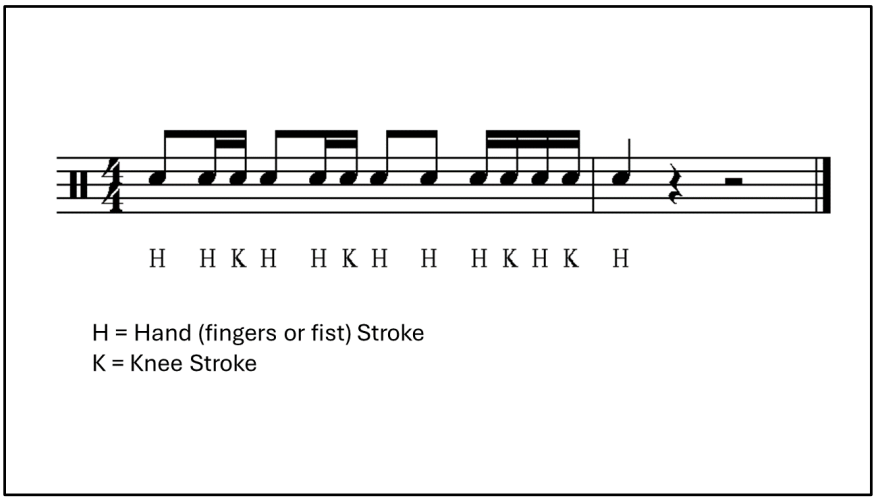


Figure 4-29. Hand-knee sticking pattern

4-270. It is impossible to turn a tambourine over during performance without making extraneous noise. The method described in paragraph 4-267 places the tambourine with the head facing the floor. There may be situations where players will be forced to play this technique with the head facing up. The primary change will be the necessity to rotate the grip hand to the side as shown in figure 4-30.



Figure 4-30. Alternate hand-knee technique

4-271. Both versions of this technique take time to develop but learning them allows for performance in any situation. Since it is impossible to turn a tambourine over during a performance without making extraneous noise, the player will be forced to play based on how they pick up the tambourine (e.g., head up or down). This can occur when quickly switching between instruments, or when sharing a tambourine within the percussion section.

Soft Multiple Strokes

4-272. The following techniques are used to play rhythmically dense passages at ***mf*** and below.

4-273. Lay the tambourine on a trap table or music stand cushioned with a towel or padding. With the head facing up, rest both wrists on the head and play using the fingers as described in paragraphs 4-264 through

4-265. With the head facing down (i.e., on the table), rest the heel of the hands on the frame (e.g., the 9 and 3 positions of a clock face), and play with the fingers on the rim as described in paragraphs 4-264 through 4-265. Ensure that the hands are positioned symmetrically for a consistent sound. See figure 4-31 for an example of both versions.



Figure 4-31. Soft multiple strokes on table

4-274. If a trap table or music stand is not available, prop the leg on a chair or case (similar to the hand-knee technique) and use the thigh to support the tambourine. With the tambourine resting on the leg, use the heels of the hands to hold the tambourine in place. Play with the fingers as described in paragraphs 4-264 through 4-265 (see figure 4-32).

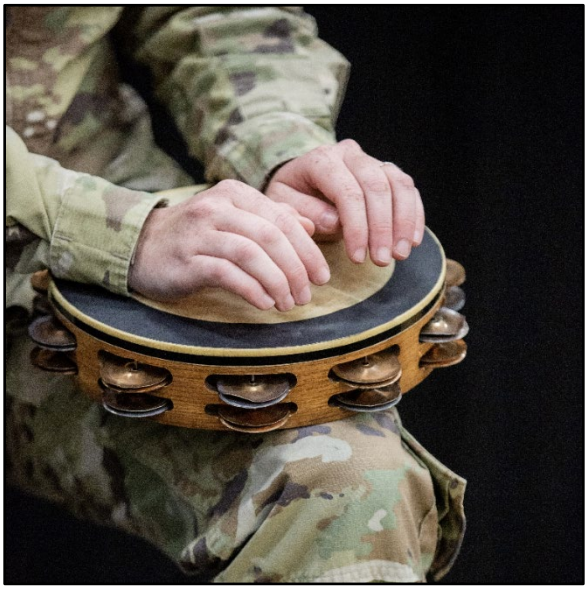


Figure 4-32. Soft multiple strokes on leg

Rolls

4-275. The two primary types of tambourine rolls are shake rolls and friction rolls (e.g., thumb and finger rolls). The goal for both types of rolls is to create a sustained sound rather than a rhythm.

Shake Rolls

4-276. Shake rolls are often used for louder dynamics during long sustained rolls and can be performed in several ways. To start, hold the tambourine vertically and twist the wrist back and forth (e.g., as if turning a doorknob) in an even, controlled manner. The speed of the wrist rotation will determine the sustain of the roll. Start slowly to learn the feel of the motion. As the speed increases the sound will shift from a rhythm to a sustained roll (resulting in a "shimmer" or "sizzle" sound). A second method is to hold the tambourine vertically and produce the back-and-forth (i.e., left to right) motion from the elbow.

4-277. Many players use a combination of the two methods. To start, begin with a wrist rotation and slowly morph into the elbow motion. During the transition, there will a "sweet spot" where the player will be using a combination of the wrist and elbow motions. Experimentation is key, and each player will find the best method for their body mechanics. The most important thing to remember is to keep the grip relaxed to avoid unnecessary tension in the hand and forearm.

4-278. Crescendos can be achieved by starting the roll with the hand below waist level, next to the leg. As the volume increases, simply raise the tambourine up to the normal playing height. For a decrescendo reverse the movement, starting at the normal playing height and lowering the tambourine as the dynamic decreases.

4-279. A general rule for shake rolls is that there should be clear articulation when starting and stopping rolls. This can be achieved by striking the tambourine to start and release the roll. When releasing the roll, strike the tambourine while simultaneously tilting the tambourine at a 45-degree angle to completely stop jingle movement. Be aware of the balance between the articulation of the roll and the actual roll. Avoid accenting the start or stop of the roll unless dictated by dynamic or articulation marking. The goal is to have a defined roll that fulfills the musical requirements.

Friction Rolls

4-280. Thumb and finger rolls are often used for softer dynamics and shorter rolls. Whether using the thumb or finger, this technique involves creating friction against the head to engage the jingles. Friction against the head can be aided in many ways by modifying the head. Players may apply beeswax, surf wax, or string bass rosin. Several tambourine manufacturers produce "roll rings," a thin curved strip of emery paper (i.e., fine grit sandpaper) with adhesive backing that adheres to the head. The method of modification will be determined by the individual player's preference or section preference when sharing instruments. These modifications are applied in a one-inch band around the outside of the head (see figure 4-33).



Figure 4-33. Tambourine head modifications

4-281. To perform, hold the tambourine at a 45-degree angle, and place the thumb of the dominant hand on the edge of the head (e.g., approximately the seven or eight-o-clock position of a clockface overlayed on the head). Rub the thumb pad (leading with the tip) around the outside of the head to create the friction needed to engage the jingles. As the thumb travels around the perimeter of the head the player will have to adjust the pressure applied. The pressure needed to maintain a sustained sound will largely be determined by the method of head modification described in paragraph 4-280, combined with head tension. Avoid pressing into the head, as this will cause the thumb to skip across the head. Too little pressure will cause the thumb to slide across the head without engaging the jingles. Experiment with the amount of pressure applied to find the "sweet spot" needed to produce a sustained sounding roll.

4-282. Thumb rolls also require clear articulations when starting and stopping. The start of the roll corresponds to the initiation of friction against the head. Terminate the roll by attacking the head with the heel of the hand (i.e., the pad at the base of the thumb). See figure 4-34 for example of thumb roll.

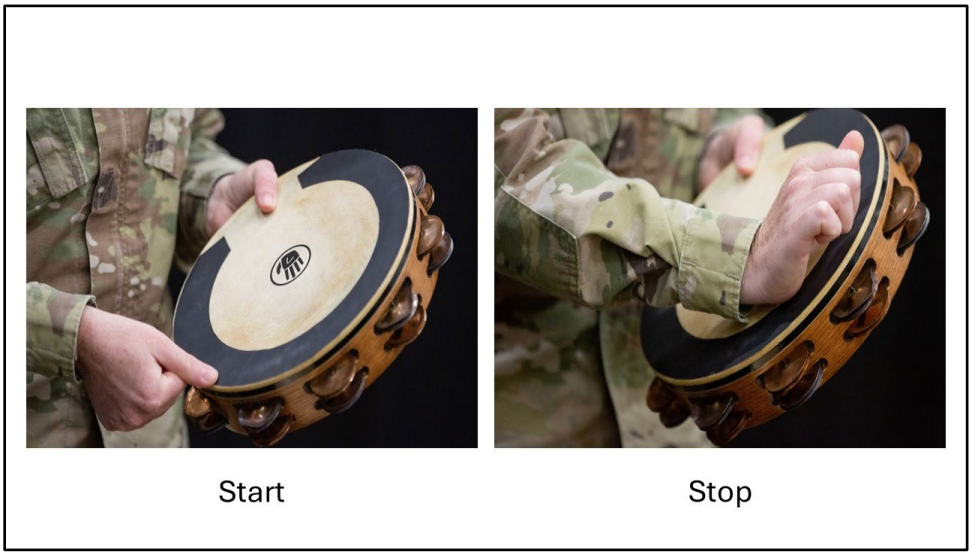


Figure 4-34. Tambourine thumb roll

4-283. Thumb rolls are excellent for playing crescendos. This can be achieved by maintaining pressure while simply increasing the speed of movement (i.e., as the speed increases, the volume will increase). When playing crescendo rolls ensure that there is enough space on the head to play the duration of the roll.

4-284. Fingers rolls are great for playing very soft dynamics. To perform, hold the tambourine at a 45-degree angle, and place the tip of the middle finger of the playing hand on the edge of the head. Brace the middle finger by placing the index finger on top of, or next to the middle finger (see figure 4-35), as this will provide better leverage while using this technique. Rub the finger around the outside of the head as described in paragraph 4-281 for thumb rolls.

4-285. Articulations and crescendos for finger rolls follow the same principles outlined in paragraphs 4-282 through 4-283 for thumb rolls, with the addition of terminating rolls by simply dropping the thumb (see figure 4-35).



Figure 4-35. Tambourine finger roll

4-286. To perform very soft finger rolls, place the tambourine on the leg similar to the soft multiple strokes set-up. The tambourine will be held in place by placing the heel of the non-playing hand in the center of the head. Perform the finger roll as described in paragraph 4-284. Terminate the roll by using the index or middle finger of the non-playing hand.

Commercial Music Technique

4-287. Commercial music tambourine is designed to reinforce the drummer's cymbal pattern, help keep the time steady, provide accents, and reinforce the basic pulse on beats two and four. A headless plastic framed tambourine with brass jingles is often used when accompanying a drum set. The player must judge what will fit within each genre and style of music (e.g., rock, pop, funk).

4-288. For headless tambourines, the rim of the shell is the only striking area available. Players often strike the rim directly across from the grip hand. For example, the grip hand holds the tambourine at the three-o-clock position of a clockface overlayed on the rim, and the striking hand strikes the nine-o-clock position.

4-289. A common part for commercial music is steady sixteenth notes with accents on beats two and four. Shake the tambourine back and forth (primarily from the elbow) for the sixteenth notes, while striking the rim with the palm or heel of the hand on the accented beats. The most important thing to remember is to keep the grip relaxed to avoid unnecessary tension in the hand and forearm.

TRIANGLE

4-290. Triangles are made of high-tempered carbonized steel, bronze, or an alloy of several metals bent in the shape of a triangle with an opening in one corner. The triangle is suspended by a string or mounting chord that is attached to a clasp (clip) held in the hand or mounted on a stand and struck with metal beaters.

4-291. The objective is to produce as many overtones as possible. The sound should be a shimmer of overtones rather than a definite pitch. The tone should not sound like an alarm bell or dinner call unless intended. Triangles, because of the variety of overtones, project tone surprisingly well. It is not unusual to have a triangle sound too soft to the player and too loud to the audience. Performers are encouraged to experiment with triangles to discover their musical personalities.

4-292. Triangle tone depends on the size, diameter, and vibrating qualities of its metallic composition. An assortment of triangle sizes and types should be available for the different musical effects required (see Table 4-4):

Table 4-4. Triangle types

Type	*Size (in inches)*	*Description*
Small	4-6	For brighter tone
Medium	6-8	For general-purpose playing
Large	10	For darker tone

GENERAL RULES FOR PERFORMANCE

4-293. The general rules for performance of triangle include careful consideration of clips, grip, implement selection, playing areas, stroke technique, muffling, and special effects.

Clips

4-294. Clips are used to suspend triangles for handheld use. 20-pound tested fishing line is a common material used as mounting cords. It provides strength without muffling the triangle's tone. Regardless of the material used, the loops used to suspend the triangle should only be large enough to fit the triangle inside the loop. Avoid clips that use bigger loops or long pieces of string/cord, as they may twist or spin the triangle while playing. Two cords, with one as a back-up, will avoid the catastrophe of a broken mounting cord (see figure 4-36).

Note. Check triangle clips prior to use for damaged or broken mounting cords.

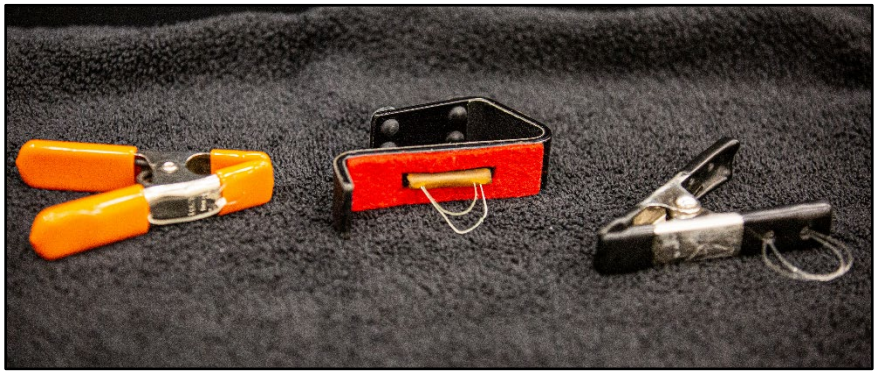


Figure 4-36. Triangle clips

4-295. While there are commercially available clips specifically made for triangle use, they can also be homemade from a spring clamp (e.g., used in home repair or woodworking) by drilling two small holes for the mounting cords (see figure 4-36 – the clips on either side). If it is necessary to mount the triangle to a

stand, the gripping end of each clip should be wrapped in rubber or other soft material to prevent vibrational transfer or noise from the stand (see figure 4-37).

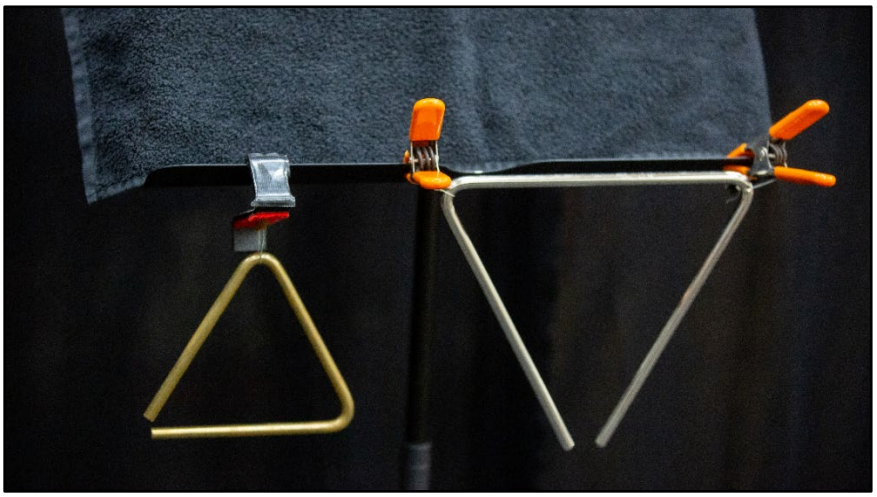


Figure 4-37. Mounted triangles

Grip

4-296. For handheld use, rest the clip across the thumb and middle finger of the non-dominant hand (assuming the use of the dominant hand for striking the triangle). Place the index finger over the top of the clasp to stabilize the clip. The third and fourth fingers are curled and in position to dampen the triangle when necessary. Face the open end of the triangle toward the elbow of the arm holding the clip. Hold the triangle high enough to see the playing surface, the music, and the conductor (see figure 4-38).

4-297. Grip the beater between the thumb and index finger, approximately 1-2 inches from the end of the beater. Place the middle finger below the index finger, near the end of the beater for support (see figure 4-38).

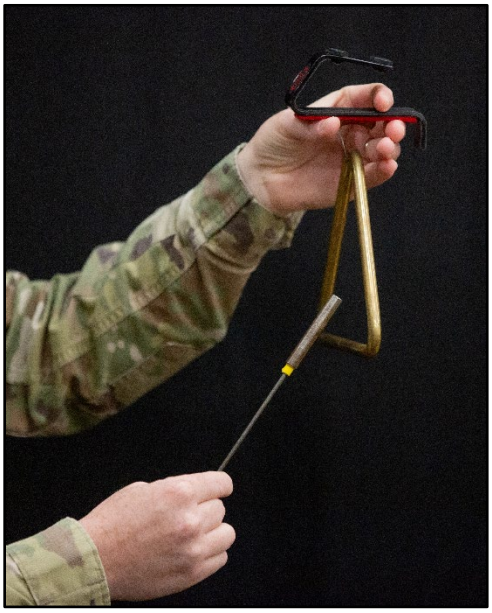


Figure 4-38. Triangle grip

Implement Selection

4-298. Triangle beaters are made of a variety of materials, often the same material as the triangle (e.g., stainless steel, brass, bronze, or other alloys). They are produced in the following ways:

- As solid tubular rods in various weights and diameters (e.g., Black Swamp Percussion, Grover Percussion).
- Two-step beaters have thin metal shafts covered with rubber insulation with varying tip shapes, sizes, and diameters:
  - Teardrop tipped beaters allow for multiple dynamic levels with a single beater (e.g., Black Swamp Percussion, Freer Percussion).
  - Tubular shaped tips are either solid (usually different metal than shaft) or hollow tubes isolated from the shaft by a rubber compound (e.g., Black Swamp Percussion, Grover Percussion, Stoessel).

4-299. Most companies market triangle beater sets, where several pairs of beaters of varying diameters and weights are packaged together. Sets also usually include pairs of each diameter/weight to allow for two handed playing. See figure 4-39 for examples of different types of triangle beaters.

4-300. When selecting triangle beaters for performance, consider the following:

- Use a smaller beater (e.g., weight or diameter) to produce high overtones and more delicate playing with less volume.
- Use a medium beater to produce a good mixture of high and low overtones for general playing.
- Use a large beater to highlight the lower overtones of the triangle for a fuller sound and louder dynamics.

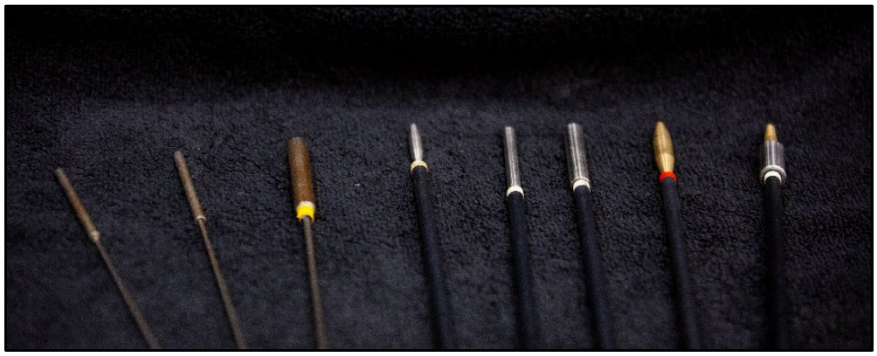


Figure 4-39. Triangle beaters

Playing Areas

4-301. Triangles may be struck on any side or angle. Because each triangle has its own personality, players must locate playing areas based on the sound they produce. Each playing area will produce a different combination of overtones, and the type of beater used will also affect each area differently. Players should strive to find the desired sound to accompany or enhance the musical passage being performed.

4-302. A general-purpose striking area is on the base of the triangle, opposite the open corner. This area usually, but not always, produces the best cluster of overtones for general-purpose playing. Another common striking area is near the apex of the triangle, just below the clip. Experimentation is key as each triangle will produce a variety of sounds (see figure 4-40).

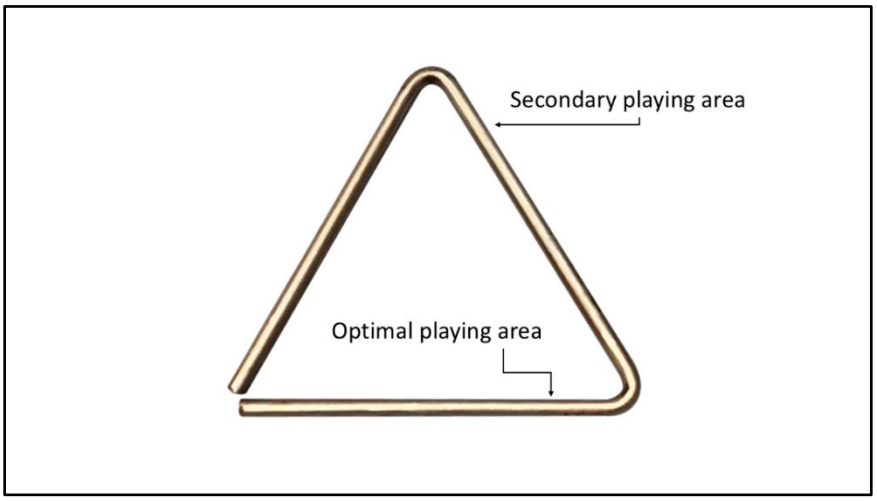


Figure 4-40. Triangle playing area

Stroke Technique

4-303. Rolls and rhythms are played with wrist strokes and may be performed while holding the triangle, or while the instrument is mounted. Players should consider the striking angle when hitting the triangle. Two common approaches would be a straight on (i.e., perpendicular) stroke (see figure 4-41), or a stroke that is 45° to the playing edge of the triangle as seen in figure 4-38).



Figure 4-41. Straight on triangle stroke

While Holding the Triangle

4-304. Most rhythmic passages can be performed using single strokes. The tempo of the music and the speed or density of the rhythms within will determine how they are performed. Rhythms may be played with single strokes on a singular playing area, or they may be played by alternating between two sides of the triangle near the corner.

4-305. When playing rhythms using the alternating technique take care to play each side of the triangle with the same stroke intensity, to avoid having rhythms sound uneven. The alternating technique requires careful

consideration and will require the player to determine a preferred "sticking" pattern (e.g., down and up strokes). See figure 4-42 for a sticking pattern example.

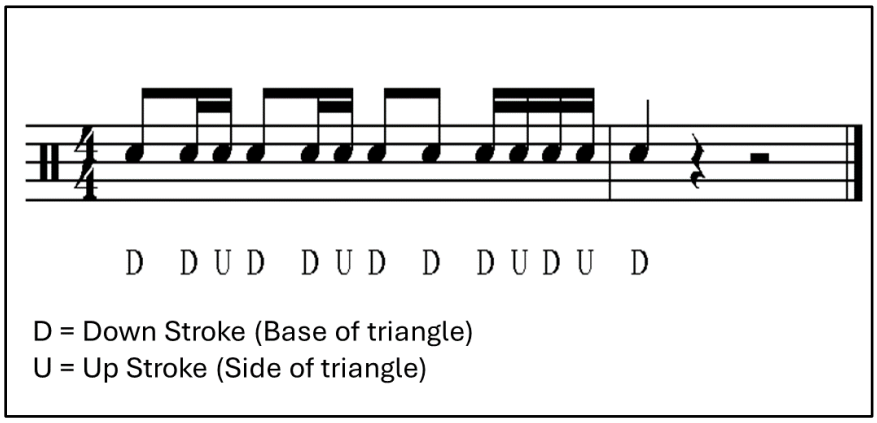


Figure 4-42. Triangle sticking pattern

4-306. When holding the triangle, rolls can be performed in either of the closed corners of the triangle. Rolls are performed by rapidly alternating strokes between two adjacent sides of the triangle. The goal should be to produce a sustained shimmer of overtones rather than a defined rhythm. Be sure to experiment with the striking angle as discussed in paragraph 4-303. The player should find the most comfortable playing angle to produce the best sound (see figure 4-43).

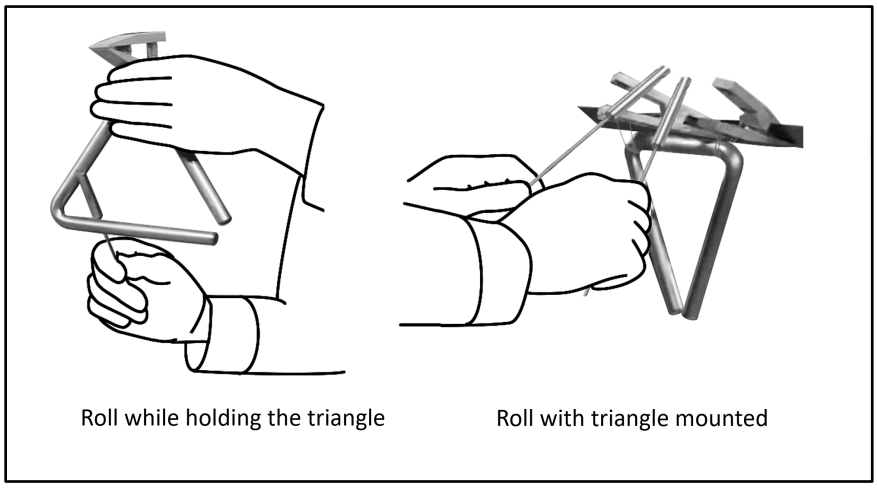


Figure 4-43. Triangle rolls

4-307. Crescendos and decrescendos within rolls can be achieved in several different ways. The closer to the corner the roll is played, the softer the roll will sound. To crescendo, move the beater further from the corner, as required by the length of the crescendo. To decrescendo, start the roll father away from the corner and move the beater towards corner, as required by the length of the decrescendo. If using a teardrop style beater, crescendos and decrescendos are assisted by using the shape of the beater. For crescendos start the roll with the tip of the beater (i.e., less mass and softer volume) and move towards the body of the teardrop (i.e., greater mass and louder volume). For decrescendos, reverse the process.

While Mounted

4-308. If the performer is playing multiple instruments the triangle may be mounted for ease of switching between instruments. Mount the triangle on a music stand using a triangle clip. When mounted on a single clip, rolls and rhythms may be played with a single beater. When a single clip, ensure that the mounting cords are short enough to avoid movement or twisting of the triangle while playing.

4-309. Using two clips allows for better stability and keeps the triangle from moving. This allows the player to use two beaters to perform rolls and fast rhythmic passages using alternating single strokes on the top edge of the triangle (see figure 4-43). Two clips will muffle some tone but allows for ease of performance.

Muffling

4-310. For general-purpose playing let the triangle ring. When necessary, muffle the triangle with the heel of the hand and the fingers (e.g., when held), or with the fingers of both hands (e.g., when mounted). Muffling should occur in obvious places, such as the end of the piece, at the end of fermatas, or on cut-offs. If muffling is required, try to match the note lengths of the instruments being accompanied.

Special Effects

4-311. A vibrato effect following single notes can be achieved by:

- After striking the triangle (e.g., while held), move the triangle up and down.
- After striking the triangle (e.g., while held), wave the hand with fingers cupped, over the base or in front of the instrument.

4-312. To create a ***fp*** effect, strike two triangles at the same time and muffle one of them after the attack.

GONG/TAM-TAM

4-313. The gong and tam-tam are often confused for one another. Gongs are instruments tuned to specific pitches, while tam-tams are instruments of indefinite pitch that produce a spread of unrelated overtones. In Western music composers and manufacturers often use the terms “gong” and “tam-tam” interchangeably, which adds further confusion for percussionists. This publication will use the term “gong” to refer to both instruments as this has become common usage. Regardless of the term used, unless the music has specific pitches notated, percussionists will generally use an unpitched tam-tam.

4-314. The gong produces a spreading tone of unrelated overtones. It is used for loud, thunderous, and climactic passages. Gong sizes range from 12 to 40 inches. Larger instruments have a lower fundamental pitch and slower response (see figure 4-44).



Figure 4-44. Gong/Tam-tam

GENERAL RULES FOR PERFORMANCE

4-315. The general rules for performance on the gong include careful consideration of implement selection, playing areas, stroke technique, and muffling.

Implement Selection

4-316. Because of the instrument's size, the player must use a mallet that is large and heavy enough to produce maximum tone from the instrument. Standard mallets have long metal or wooden handles, with heavy plastic, rubber, or metal disks that are covered in a variety of materials (e.g., felt, yarn, lamb's wool). A single mallet is used for the majority of all gong parts. The most important thing to remember is to choose a mallet with enough mass to make the entire instrument vibrate at any dynamic level.

4-317. When rolls are notated, the use of two mallets (e.g., a matched pair in shape, size, and weight) is recommended to achieve a consistent and balanced sound. For general-purpose rolls and softer dynamics, smaller mallets may be used. Smaller mallets have heads that are smaller in diameter, lighter, and allow for ease of control. Regardless of dynamic, the use of two matched mallets for performing rolls will produce a consistent and balanced sound.

4-318. Composers call for several special effects on gong which require the use of non-traditional striking implements. Bass drum beaters produce lighter and softer notes. Drumsticks, triangle beaters, and brushes allow for articulated rhythmic passages. The "scrape" effect is produced by rubbing a triangle beater or coin across the face of the instrument (e.g., circular motion), or along the rim or edge (i.e., perimeter) of the instrument. A high, whining effect can be produced by drawing a string bass bow across the edge of the gong. Produce a haunted house "wailing" effect by rubbing a rubber mallet across the surface of the instrument. A low suspended cymbal roll effect or a high, light, delicate, small effect can be produced with yarn mallets.

Playing Areas

4-319. To choose a playing area, the player must know which overtones (high or low) are predominant, the response needed for the attack, and the required duration of the note. The center produces a dull, dead attack on impact. A widely spreading tone follows with the lower overtones predominating. This is the slowest response area and is used when more attack and punch are required.

Note. Striking the exact center of the gong with extreme force or velocity can cause the instrument to crack.

4-320. Striking the gong off-center produces the best combination of high and low overtones, the greatest tonal duration, and the widest dynamic range. The distance off-center is relative to the size of the gong. This playing spot is used for general-purpose playing.

4-321. Striking the gong at the edge produces the highest overtones. The tone is shallow and of relatively short duration. Response is slightly slower than when striking the gong off-center.

4-322. The characteristic sound of the gong is an immediate decrescendo followed by a quick crescendo. If a faster attack is required, the gong must be primed.

4-323. Priming the gong means striking the gong softly anywhere on its surface to start it vibrating for a faster response to the actual attack with a mallet. This can be achieved by lightly tapping the instrument with the fingers or mallet, before playing the actual attack. In deciding whether to prime the gong, the player should consider the musical function of the part and the interaction of the instrument with other instruments (e.g., is the gong sound and attack part of the entrance of the other instruments or is it in response to another instrument's entrance?).

Stroke Technique

4-324. The strokes used on the gong should always be straight-in single strokes. Rolls may be performed like suspended cymbal rolls to provide better control. Roll in phase to produce an even, smooth, and non-pulsating

roll (e.g., slower hand speed). Rolls may be played with both mallets on the face of the instrument, or with a mallet on each side of the instrument.

Muffling

4-325. Composers write for the instrument with traditional notation. However, duration is normally not indicated, and the instrument's slow tone decay will require some degree of muffling. Refer to the score, listen to the band, confer with the conductor, and use good judgment when resolving duration questions.

4-326. To muffle the gong completely, put pressure on the back of the gong with widespread fingers and palm. At the same time, apply pressure to the front of the gong with the side of the leg. The more pressure applied, the quicker the tone is muffled. Be careful of buttons or other uniform items that may cause unwanted noise.

4-327. Control overtones by using the hand or the mallet and exerting light pressure against different playing areas. Muffling the center lightly will stop the low overtones while leaving the high overtones ringing. Muffling the edge lightly stops the upper overtones while allowing the low overtones to ring.

4-328. Grabbing the edge of the gong with the hand or rubbing the mallet head across the gong can produce a decrescendo. The decrescendo rate depends on how much pressure is exerted.

4-329. When not in use, a low, droning tone from sympathetic vibrations will be noticeably audible when the band stops playing. To eliminate this, cover the gong with a towel or its own cover when not in use.

WOODBLOCK

4-330. The woodblock used in concert band is usually made from a solid rectangular block of wood. Woodblocks used for world percussion are usually made of plastic. There are two common types used in traditional symphonic music:

- Double slotted woodblocks have ¼ inch wide slots on the two long sides that act as a resonating chamber.
- Single slotted woodblocks have a single ¼ inch slot along one side of the block that acts as a resonating chamber.

4-331. The tone produced is a penetrating, non-pitched, non-sustaining "tick" or "tock" sound. The block size, placement of the slotting, and density of the wood determine the resonance and pitch of the tone.

4-332. Woodblocks are 6 to 8 inches in length, 2½ to 3 inches wide, and 1½ to 2½ inches deep. There should be at least two sizes available to produce the required sounds: large for low tones, and small for high tones (see figure 4-45).



Figure 4-45. Woodblock

General Rules for Performance

4-333. The general rules for performance on woodblocks include careful consideration of implement selection, playing areas, and playing technique.

Implement Selection

4-334. Do not use extremely hard synthetic plastic xylophone or bell mallets, or any other implement that will damage the instrument.

4-335. Implement selection will be determined by the desired sound needed. Common choices include:

- Using the tip or bead of a drumstick produces a high and hollow "tick" sound, reminiscent of the sound of tap dancing. The shoulder or butt of the stick produces a lower, more resonant sound (i.e., akin to the sound of horse hoofs).
- Medium-hard rubber mallets produce the fullest and most resonant sound on woodblocks. Be careful not to strike too aggressively; these mallets can dent or possibly crack the woodblock.
- Medium rubber mallets are suitable for softer, rounder sounding notes where sharp percussive attacks are not needed.
- Softer mallets than described will not project through an ensemble.

Playing Areas

4-336. The playing area for each woodblock encountered will be different. Whether using a double or single slotted woodblock, playing in the center or just off center (when viewed from above) produces a resonant tone. Playing on the edge over the tone slot will produce a lower and less resonant tone. Do not strike the edge aggressively; it will crack easily. The edge opposite the tone slots and the sides of the woodblock are nodal areas and sound dead. Experimentation is key to finding the best sounding playing area.

Playing Technique

4-337. If desired, hold the woodblock in the palm of a cupped hand (e.g., between the fingers and pad beneath the thumb). Hold it at chest or eye level for easy rhythmic passages where only one mallet is needed. For rhythmically dense passages requiring two mallets, place the woodblock on a trap table that is padded with a towel or piece of foam.

TEMPLE BLOCKS

4-338. Temple blocks can be individual blocks but usually come in sets of five (see figure 4-46). The tone produced is much like that of a woodblock but lower, mellower, and less penetrating. Traditionally they are carved from wood and are relatively hollow inside. Modern manufacturers produce plastic temple blocks for durability and consistency. They tend to emit a definite pitch but will blend harmonically because of their short sound decay. Choose a set of temple blocks that produces evenly spaced tones. They need not be tuned to a pentatonic scale or specific pitches, although most commercially available temple block sets approximate a pentatonic scale tuning.

4-339. There are two types of commercially available temple block set-ups:

- Straight-row blocks are set up from high to low in a straight line.
- Double-tiered blocks are set up in two tiers with the two lowest notes on top, and the three highest notes on the bottom. This makes sight-reading difficult but makes certain sticking situations easier. Another version of the double-tiered setup has the three highest notes on top and the two lowest notes on the bottom.



Figure 4-46. Temple blocks

GENERAL RULES FOR PERFORMANCE

4-340. The general rules for performance on temple blocks are very similar to those used for woodblocks, and include careful consideration of implement selection, and playing areas.

Implement Selection

4-341. The general rules of implement choice for woodblocks apply for temple blocks (see paragraphs 4-334 through 4-335).

> ***Note.*** If using traditional wooden temple blocks, drumsticks may dent, crack, or chip the instrument if used aggressively. Metal implements and extremely hard rubber or plastic mallets, or plastic mallets will also damage the soft wood and should never be used.

Playing Areas

4-342. On wooden temple blocks, the top center of the front edge produces the best tone. On synthetic blocks, playing nearer the edge of the block will project more evenly throughout the range.

CASTANETS

4-343. Castanets consist of two pairs of wooden, shell-shaped clappers that are struck against each other to produce their characteristic sound. The wood can be any hardwood, such as rosewood (the most common), ebony, or mahogany. There are plastic castanets available, but they do not produce an authentic sound.

GENERAL RULES FOR PERFORMANCE

4-344. Performance on castanets is dependent on the type of castanets used. The two types of castanets commonly used are handle castanets, and machine-mounted castanets (see figure 4-47).

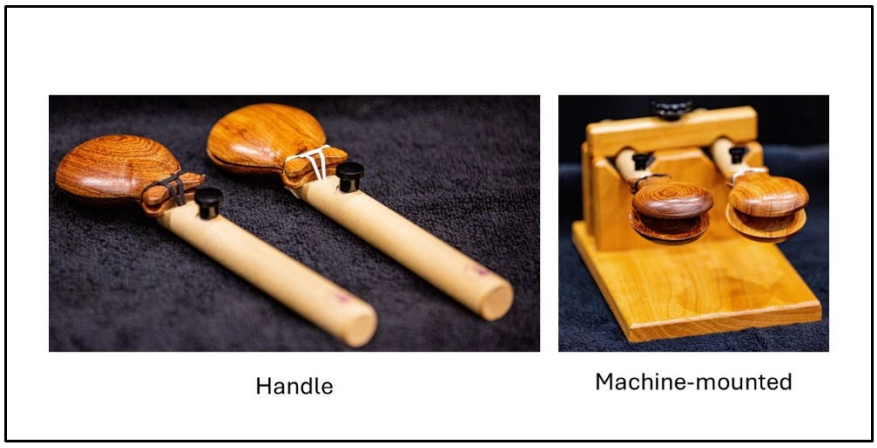


Figure 4-47. Castanet types

Machine-Mounted Castanets

4-345. Machine mounted castanets are spring-mounted in pairs on a wooden base that acts as a sound projector. Alternatively, handle castanets may be machine-mounted for use in multiple-percussion set-ups or when players are unable to pick up the handles when switching between instruments. Either configuration is played with the fingertips. The tension of the spring will determine the volume level and ease of articulation.

Handle Castanets

4-346. Handle castanets are mounted in pairs on wooden handles via string or cord and played as a set. Most modern handle castanets have a way to adjust the tension of the clappers which affects the volume, articulation, and playing technique. Depending on the manufacturer and clapper tension levels, handle castanets may be played in the following ways:

- For adjustable castanets, hold the handles and snap the wrist sharply for each note. The clappers will rebound according to the level of tension. This is effective for loud general-purpose playing.
- For non-adjustable castanets or better control of adjustable castanets, hold the handles and strike the clappers against a raised knee. Allow for natural rebound from the knee and do not press the castanets into the leg after the stroke. This is effective for general-purpose playing.
- For softer dynamics (***pp*** to ***mf***) and greater articulation control, place a forefinger on the top castanet clapper while striking the leg.

FINGER CYMBALS

4-347. Finger cymbals are two or three inches in diameter and made from bronze or brass alloy. They may be fitted on the fingers with an adjustable elastic strap or preferably held like hand cymbals by a string (see figure 4-48). They can also be suspended from a triangle clip or cymbal stand and struck. Finger cymbals produce a high shimmering sound with many high overtones. Some overtones are more predominant but not enough to produce a definite pitch.



Figure 4-48. Finger cymbals

General Rules for Performance

4-348. The general rules for performance on finger cymbals include careful consideration of implement selection, general playing, and special effects.

Implement Selection

4-349. Finger cymbals are struck against each other. Depending on the desired sound they may also be struck with a triangle beater, and brass or hard plastic mallets. Choose the implement best suited for the required attack needed to blend with the musical texture.

General Playing

4-350. For general concert playing, grip finger cymbals by their elastic straps or string, between the thumb and forefinger. The desired sound is generally achieved by striking the edge of one cymbal against the other (see figure 4-49). Hold the cymbals at a comfortable level to have visual contact with the playing area, conductor, and the music. When playing with a triangle beater or mallet the cymbal should be struck on its edge.

Note. Finger cymbals should not be played like crash cymbals



Figure 4-49. Finger cymbal playing technique

Special Effects

4-351. Forte-piano (***fp***) effects can be achieved by muffling one of the finger cymbals after the initial attack and rebound. Because one finger cymbal usually sounds higher than the other, choose the muffled cymbal carefully.

4-352. A vibrato effect will be achieved after striking, by an up-down, wrist motion with the finger cupped to project the sound.

4-353. If a part calls for crotales and the instrument is unavailable, an acceptable substitute is to strike the notes on orchestral bells using finger cymbals.

SLEIGH BELLS

4-354. Sleigh bells are attached to a leather strap or wooden handle. The inherent difficulty in playing sleigh bell parts is maintaining consistent time. There are two common methods used for playing sleigh bells (see figure 4-50):

- The first is to hold them vertically with the handle up and strike the handle with the fist or open palm. For softer dynamics, grip the handle with some of the hand above the end of the handle and strike the holding fist with either the other fist or palm.
- The second approach is to play the bells in the same manner as a shaker. Use the back-and-forth two-handed shaker technique, with the primary beats pulsed away from the body.

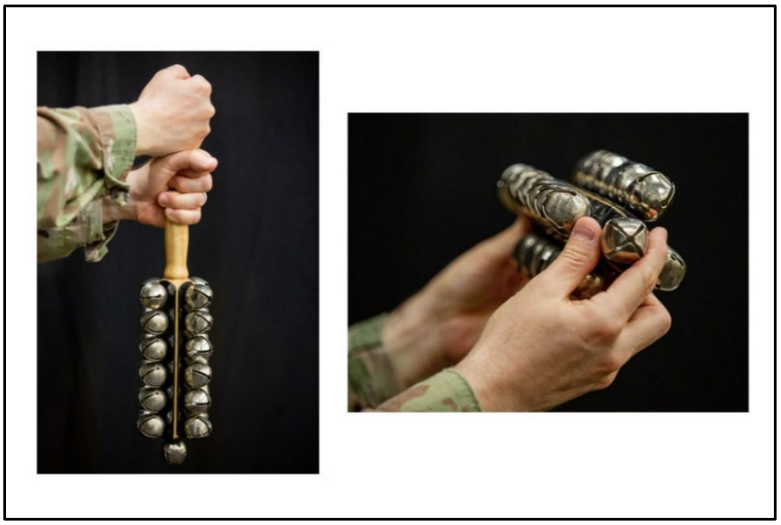


Figure 4-50. Sleigh bells playing techniques

4-355. Because of their ringing sound and placement in the ensemble, sleigh bells tend to sound behind the beat. Both playing methods are acceptable and will be determined by player preference. The most important decision factor will be picking the method that allows the player to play consistently in time as required by the part.

4-356. The most difficult thing about sleigh bells is figuring out how to pick them up or laying them down noiselessly. This takes practice, so be careful and take time. A common way to reduce extraneous noise from sleigh bells is to keep them in a large empty coffee tin/can that is padded with towels. This allows the instrument to remain vertical for pickup and replacement (via the handle).

RATCHET

4-357. Ratchets have a flat piece(s) of thin wood set against a geared wheel, causing an obnoxious, machinegun-like grinding sound (see figure 4-51). It is played by cranking or turning the handle for the notated duration. Rachet parts are often notated and performed in the same manner as snare drum rolls (in terms of duration). The difficulty lays in achieving exact starts and stops to the sound of the instrument to ensure correct duration and articulation.



Figure 4-51. Ratchet

SLAPSTICK

4-358. A slapstick is a pair of boards held together by a hinge. Larger ones have handles on each board; smaller ones have a spring hinge to help the striking board return to its position (see figure 4-52). If no commercial slapstick is available, construct one from hardwood boards about two feet long and four to five inches wide. Attach them with a hinge at one end and mount rigid handles about one-third of the way up the length from the hinges.

4-359. If using a spring hinged slapstick, it is normally played by a slapping wrist motion (e.g., like cracking a whip), causing a loud crack. If using a handled slapstick, it is played by hitting the boards together. Slapsticks are used as a whip effect or a substitute for any loud contact noise. Regardless of the type used, do not place the fingers between the striking surfaces at any time during performance.

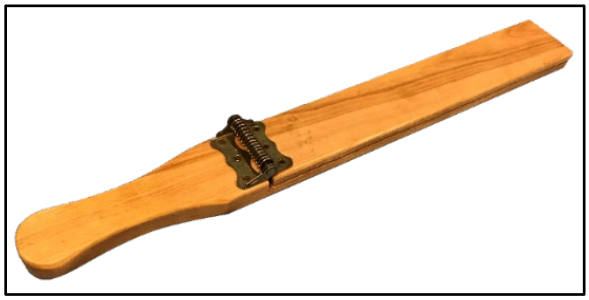


Figure 4-52. Slapstick

OTHER ACCESSORY INSTRUMENTS

4-360. The following paragraphs briefly describe other common accessory percussion instruments or sounds required for concert band; anvil, siren, sandpaper blocks, bell plate, whistle, thunder sheet, horse's hooves, auto horn, wind machine, brake drum, and flexatone.

ANVIL

4-361. It can be an actual anvil or a large piece of dense non-resonant metal, that replicates the sound of a blacksmith's anvil (i.e., a high pitched "ping"). For its characteristic sound, strike the instrument with a metal beater (e.g., brass bell mallet) or an actual metal hammer.

SIREN

4-362. Sirens are available in a whistle type (e.g., large or small, and handheld) or an automobile type (e.g., electric or hand-crank). Hand-crank sirens are hard to control dynamically and require the use of a dampener to control or completely silence.

SANDPAPER BLOCKS

4-363. As the name implies, sandpaper blocks are blocks of wood with sandpaper tacked onto them. The grit value of the sandpaper will determine the volume (e.g., coarser for louder dynamics and finer for softer dynamics). The blocks are rubbed together to play rhythms or sustained sounds and closely produce the vaudeville "soft shoe" effect. A cabasa is an acceptable and more durable substitute.

BELL PLATE

4-364. A bell plate is a resonant (pitched or unpitched) steel plate. It can be suspended (hanging) with heavy wire or suspended (flat) on foam padding and played with a hard beater. It can be used as a substitute for instruments such as the anvil.

WHISTLE

4-365. There are many different types of whistles used in concert band literature:

- Bird whistles, the most common include:
  - Rooster.
  - Hen.
  - Nightingale.
  - Bob-white.
  - Quail.
  - Duck.
- Sound effect whistles, the most common include:
  - Slide.
  - Police.
  - Tri-tone samba.
  - Bosun.
  - Tugboat.
  - Train/locomotive.

THUNDER SHEET

4-366. A thunder sheet is a large, thin, galvanized metal sheet that is shaken for a thunderstorm effect. The sheet may be held or suspended.

HORSE'S HOOVES

4-367. The sound of horse's hooves is replicated by using coconut shells or wooden cups on a wood slate. Temple blocks will also produce the desired sound (commonly used in Leroy Anderson's "*Sleigh Ride"*).

AUTO HORN

4-368. Often referred to as klaxon horns, auto horns are usually old squeeze type "honk" or "ooga" car horns. One of the most famous examples of klaxon horns is in George Gershwin's "*An American in Paris."* Experimentation is key when playing klaxon horns, as each squeeze bulb requires a different amount of pressure to achieve their sound. Special care should be taken as the rubber bulbs can dry rot. This can be avoided by applying a non-corrosive rubber lubricant.

WIND MACHINE

4-369. Wind machines are hand-cranked wooden cylinders that are covered with a canvas sheet. As the crank is turned, the resulting friction replicates the sound of blowing wind. The pitch and intensity of the sound is determined by how fast the crank is turned.

BRAKE DRUM

4-370. A brake drum is an actual brake cylinder from an automobile (see figure 4-53). When struck with a hard mallet (e.g., brass mallet, plastic mallet, or small ball-peen hammer), it gives a clear, bell-like tone. They can be suspended for better resonance or laid out on a padded table. When an anvil is not available, this is sometimes an acceptable substitute.



Figure 4-53. Brake drum

FLEXATONE

4-371. A flexatone is a small resonant, flexible metal strip with an attached striking ball. As the metal strip is bent (i.e., flexed) the pitch will rise or fall accordingly. It is used for glissando and microtonal sliding sound effects (see figure 4-54).



Figure 4-54. Flexatone

Appendix A

Instrument-Specific Resources

Self-development and study are essential for advanced percussion performance. Soldiers are encouraged to pursue private lessons with local professionals, or with School of Music percussion instructors via Microsoft Teams or similar live video call mediums. This appendix is not all-inclusive but provides instrument-specific resources for self-study and maintenance.

DRUM SET

A-1. The following sections provide resources for drum set study.

COORDINATION AND STYLES

A-2. The following are resources for drum set coordination and style study:

- Berry, Mick, and Jason Gianni. *The Drummer's Bible: How to Play Every Drum Style from Afro-Cuban to Zydeco*. See Sharp Press, 2012.
- Chaffee, Gary. *Linear Time Playing: Funk and Fusion Grooves for the Modern Styles*. Van Nuys, CA: Alfred Publishing, 2002.
- Chester, Gary. *The New Breed*. Edited by Rick Mattingly. Fairfield, NJ: Modern Drummer, 1985.
- Falk, Jared, and Brandon Toews. *The Best Beginner Drum Book*. Drumeo, 2018.
- Garibaldi, David. *Future Sounds*. Van Nuys, CA: Alfred Publishing, 1990.
- Houghton, Steve. *Essential Styles for the Drummer and Bassist: A Cross Section of Styles as Played by Today's Top Artists*. 2 vols. Van Nuys, CA: Alfred Publishing, 1990.
- Igoe, Tommy. *Groove essentials 1.0: The groove encyclopedia for the 21st Century drummer*. Briarcliff, NY: Hudson Music, 2008.
- Ramsay, John, and Alan Dawson. *The Drummer's Complete Vocabulary as Taught by Alan Dawson*. Alfred Music Publishing, 1998.
- Riley, Jim. *Survival Guide for the Modern Drummer: A Crash Course in All Musical Styles for Drumset*. Van Nuys, CA: Alfred Publishing, 2015.
- Reed, Ted. *Progressive Steps to Syncopation for the Modern Drummer*. New York, NY: Alfred Publishing, 1996.
- Soph, Ed. *Essential Techniques for Drum Set*. Galesville, MD: Meredith Music, 2001.
- Wessels, Mark, Stanton Moore. *A Fresh Approach to the Drumset.* Leander, TX: Mark Wessels Publications, 2014.
- Zoro. *The Commandments of R&B Drumming Play-Along: A Play-Along Guide to Soul, Funk, and Hip-Hop*. Van Nuys, CA: Alfred Publishing, 2009.

JAZZ

A-3. The following are resources for the study of jazz drum set:

- Cameron, Clayton. *Brushworks: the new language for playing brushes.* Carl Fischer, L.L.C., 2003.
- Goodwin, Gordon, and Bernie Dresel. *Drums: Gordon Goodwin's big phat band play-along series*. Van Nuys, CA Alfred Music Publishing, 2006.
- Hoenig, Ari. *Systems, Book 1: Drumming Technique and Melodic Jazz Independence*. Van Nuys, CA: Alfred Publishing, 2011.
- Morgan, Tom. *The Jazz Drummer's Reading Workbook*. Greensboro, NC: C. Alan Publications, 2020.
- Riley, John. *The Art of Bop Drumming*. Edited by Dan Thress. New York: Manhattan Music, 1998.
- Soph, Ed. *Big Band Primer for Drumset*. Denton, TX: RonJon Publishing, 1992.

LATIN

A-4. The following are resources for the study of Latin styles on drum set:

- Da Fonseca, Duduka, Bob Weiner, and John Riley. *Brazilian Rhythms for Drumset*. Alfred Music Publishing, 1993.
- Malabe, Frank and Bob Weiner. *Afro-Cuban Rhythms for Drumset*. New York: Manhattan Music, 1990.
- Moura, Duda. *Grooves Do Brasil: Cool Brazilian Rhythms for Drumset*. Portland, OR: Tapspace Publ., 2008.
- Uribe, Ed. *The Essence of Afro-Cuban Percussion and Drum Set: Rhythms, Songstyles, Techniques, Applications*. Warner Bros Publications, 1996.
- Uribe, Ed. *The Essence of Brazilian Percussion and Drum Set: With Rhythm Section Parts; Rhythms, Songstyles, Techniques, Applications*. Alfred Music Publishing, 1994.

SNARE DRUM

A-5. The following sections provide resources for snare drum study and reference.

METHOD BOOKS

A-6. The following are method books for snare drum technical study:

- Bachman, Bill. *Rudimental logic: A guide to the art of Rudimental Drumming*. Nashville, TN: Row-Loff Productions, 2003.
- Bachman, Bill. *Stick Technique*. Cedar Grove, NJ: Modern Drummer, 2011.
- Bailey, "Buster" Elden C. *Wrist Twisters: a musical approach to snare drumming*. Asbury Park, NJ: Keyboard Percussion Publications, 2005.
- Delecluse, Jacques. *Methode de Caisse-Claire*. Paris: Alphonse Leduc, 1969.
- James, William. *The modern concert snare drum roll: A comprehensive guide*. Galesville: Meredith Music Publ., 2014.
- Jones, Josh. *Spatial studies for hitting things.* New York, NY: Bachovich Music Publications, 2020.
- Morello, Joe. *Master Studies: Exercises for the Development of Control and Technique*. Edited by Rick Mattingly. Cedar Grove, NJ: Modern Drummer, 1983.
- Peters, Mitchell. *Developing Dexterity for Snare Drum*. Hollywood, CA: TRY Publishing, 2009.
- Rieppi, Pablo. *Snare drum technique: Essential exercises for daily practice*. New York: Bachovich Music, 2007.
- Sholle, Emil. *The roll for Snare drum: 83 exercises for developing the snare drum roll*. Cleveland Hts., OH: Brook Pub. Co., 1957.
- Stone, George Lawrence. *Accents and rebounds*: *For the snare drummer*. Albuquerque, NM: Stone Percussion Books, 2012.
- Stone, George Lawrence. *Stick Control: For the snare drummer*. Randolf, MA: Stone Percussion Books, 2009.
- Tilburg, Shaun. *The Regimen.* Phoenix, AZ: Pocket Publications, LLC, 2015.
- Wooten, John. *The Drummer's Rudimental Reference Book.* Nashville, TN: Row-Loff Productions, 1992.
- Wooten, John. *Rudimental Remedies.* Nashville, TN: Row-Loff Productions, 2010.

SOLOS AND ETUDES

A-7. The following sections contain snare drum solos and etudes.

Concert Snare Drum

A-8. The following contain concert snare drum solos and etudes:

- Albright, Fred. *Contemporary Studies for Snare Drum*. Miami: Warner Bros., 2001.
- Aleo, Keith. *Advanced Etudes for Snare Drum.* Everett, PA: HoneyRock Publishing, 1997.
- Cirone, Anthony J. *Portraits in Rhythm: 50 Studies for Snare Drum*. Van Nuys, CA: Alfred Publishing, 1966.
- Delecluse, Jacques. *Douze Etudes pour Caisse-Claire*. Paris: Alphonse Leduc, 1964.
- Delecluse, Jacques. *Keiskleriana 1.* Paris: Alphonse Leduc, 1987.

- Peters, Mitchell. *Advanced Snare Drum Studies*. Hollywood, CA: TRY Publishing, 2009.
- Peters, Mitchell. *Intermediate Snare Drum Studies*. Los Angeles: Mitchell Peters, 1976.

Rudimental Snare Drum

A-9. The following contain rudimental snare drum solos and etudes:

- Cuccia, Dominick. *Beat of a different drummer*. Hal Leonard Corporation, 2004.
- Davila, Lalo. *Contemporary Rudimental Studies and Solos*. Nashville, TN: Row-Loff Publications, 1999.
- Freytag, Edward. *The Rudimental Cookbook: A Collection of 25 State of the Art Rudimental Snare Drum Solos and Developmental Exercises From Easy to Extremely Advanced.* Nashville, TN: Row-Loff Productions, 1993.
- Hessler, Claus. *Claus Hessler's Camp Duty Update: Snare Drum Rudiments: Bridging the Gap Between Past and Present.* Alfred Music Publishing GmbH, 2021.
- Pratt, John S. *14 Modern Contest Solos for Snare Drum*. Miami: Warner Bros., 1987.
- Pratt, John S. *Rudimental Solos for the Accomplished Drummer*. Gatesville, MD: Meredith Music, 2000.
- Tompkins, Joseph. *Nine French-American Rudimental Solos Vol.1.* Columbus, OH: Bachovich Music Publications, 2007.
- Wilcoxon, Charlie. *All-American Drummer: 150 Rudimental Solos*. Boca Raton, FL: Ludwig Masters Publications, 2009.
- Wilcoxon, Charlie. *Modern Rudimental Swing Solos for the Advanced Drummer*. Cleveland, OH: Ludwig Masters Publications, 2016.

KEYBOARD PERCUSSION

A-10. The following sections provide resources for keyboard percussion instruments.

MARIMBA AND XYLOPHONE

A-11. The following are method books for technical studies on marimba and xylophone:

- Bailey, Elden C. *Mental and manual calisthenics for the modern mallet player: A collection of 249 technique-building exercises and 34 special contemporary studies for the advanced player of mallet instruments*. Van Nuys, CA: Alfred Publishing Co., Inc., 1999.
- Ford, Mark. *Marimba: Technique Through Music.* Nashville, TN: Innovative Percussion, 2009.
- Glassock, Lynn. *Mallets for Drummers: A Rhythmic Approach to Learning Melodic Percussion.* Galesville, MD: Meredith Music, 2008.
- Goldenberg, Morris. *Modern School for Xylophone, Marimba, Vibraphone*. Edited by Anthony J. Cirone. Alfred Music, 2002.
- Green, George Hamilton. *George Hamilton Green's Instruction Course for Xylophone*. Galesville, MD: Meredith Music, 1984.
- Howarth, Gifford. *Simply Four: 4-mallet technique as easy as 1-2-3 -- 4*. Portland, OR.: Tapspace Publ., 2009.
- Peters, Mitchell. *Fundamental method for mallets*. Van Nuys, CA: Alfred Publishing, 1995.
- Stevens, Leigh Howard. *Method of Movement for Marimba with 590 Exercises*. Asbury Park, NJ: Keyboard Percussion Publications, 2005.
- Stout, Gordon. *Ideo-Kinetics: a workbook for marimba technique*. Asbury Park, NJ: Keyboard Percussion Publications, 2001.

VIBRAPHONE

A-12. The following are method books for technical studies on vibraphone:

- Aebersold, Jamey. *The II-V7-I Progression*. New Albany, IN: Jamey Aebersold Jazz, 2012.
- Burton, Gary. *Four Mallet Studies*. Chicago: Creative Music, 1995.
- Friedman, David. *Vibraphone Technique, Dampening, and Pedaling*. Willow Grove, PA: Steve Weiss Music, 1990.

- Haerle, Dan. *Scales for Jazz Improvisation: A Practice Method for All Instruments*. Los Angeles: Alfred Publishing, 1983.
- Metzger, Jon. *The Art and Language of Jazz*. McLean, VA: EPM, 1996.

TIMPANI

A-13. The following sections provide resources for timpani.

METHOD BOOKS

A-14. The following are method books and etudes for timpani technical study:

- Beck, John H. *Concepts for Timpani*. Carl Fischer, 2001.
- Carroll, Raynor. *Exercises, Etudes, and Solos for the Timpani*. Pasadena, CA: Batterie Music, 2001.
- Delecluse, Jacques. *30 Studies for Timpani*. Paris: Alphonse Leduc, 1970.
- Goodman, Saul. *Modern Method for Tympani*. Miami: Warner Bros., 2000.
- Hochrainer, Richard. *Etudes for Timpani*. Vienna: Verlag Doblinger, 1983.
- Peters, Mitchell. *Fundamental method for timpani*. Van Nuys, CA: Alfred Pub., 1993.

MAINTENANCE

A-15. The following are links to manufacturer's manuals for timpani used in Army Bands:

- Balanced action pedal mechanisms:
  - https://usa.yamaha.com/files/download/other_assets/4/331934/Yamaha_Timpani_Owners_Manual_2014.pdf.
  - https://www.adams-music.com/download/44806a6a711640519fee729669f988be.
  - https://www.ludwig-drums.com/application/files/3214/6712/2669/AV3LU700.pdf.
- Locking pedal mechanisms:
  - https://pearldrum.com/sites/default/files/image_folder/SUPPORT/MANUAL/CONCERT/instructions_philharmonic.pdf.
  - https://www.adams-music.com/en/download/5090e65920004cd3ad0763bb0d517e25.

GENERAL PERCUSSION

A-16. The following sections provide resources for general percussion studies.

ACCESSORY PERCUSSION INSTRUMENTS

A-17. The following are books for the study of accessory percussion instruments.

- Aleo, Keith. *Complimentary Percussion: A handbook for developing Tambourine, Triangle, Cymbals, and Bass Drum Performance.* New York, NY: Bachovich Music Publications, 2011.
- Cirone, Anthony J., Neil Grover, and Garwood Whaley. *The Art of Percussion Playing*. Gatesville, MD: Meredith Music, 2006.
- Denov, Sam. *The Art of Playing the Cymbals: A Complete Guide and Text for the Artistic Percussionist.* Belwin Mills, 1966.
- Epstein, Frank. *Cymbalisms: A Complete Guide for the Orchestral Cymbal Player.* Hal Leonard, 2007.

PART ASSIGNMENTS

A-18. The following are resources for assigning parts for concert band.

- Girsberger, Russ. *Percussion Assignments for Band & Wind Ensemble Volume 1 A-K.* Galesville, MD: Meredith Music Publications, 2004.
- Girsberger, Russ. *Percussion Assignments for Band & Wind Ensemble Volume 2 L-Z.* Galesville, MD: Meredith Music Publications, 2004.

HISTORY AND PEDAGOGY

A-19. The following are books for the study of percussion history and percussion education.

- Beck, John H. *Encyclopedia of Percussion*. New York: Routledge, 2013.

- Blades, James, Evelyn Glennie, and Neil Percy. *Percussion Instruments and their history.* London: Kahn and Averill Pub, 2020.
- Cook, Gary. *Teaching Percussion, Enhanced (3rd ed.).* Cengage Learning, 2018.

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Glossary

The glossary lists acronyms and term withs Army definitions or joint definitions. Where Army and joint definitions differ, (Army) precedes the definition. The proponent manual for terms is listed in parenthesis after the definition.

SECTION I – ACRONYMS AND ABBREVIATIONS

AIT	Advanced Individual Training
AR	Army regulation
ASI	additional skill identifier
ATP	Army techniques publication
DA	Department of the Army
FM	field manual
MOS	military occupational specialty
MPT	music performance team
TC	training circular
U.S.	United States

SECTION II – TERMS

music performance team

A team that offers the flexibility to support concurrent musical missions in multiple geographical areas. (ATP 1-19)

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08 September 2025

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