CHAPTER 1

# GENERAL CONSIDERATIONS AND PREREQUISITES

**THROUGHOUT** the twentieth century and now into the new millennium, composers of serious orchestral, band, and chamber music have been attracted to the inherent compositional potentialities of percussion instruments more than at any time previously in the history of music. By exploring these potentialities and writing more imaginatively and abundantly for percussion, these composers have imposed increasing demands on music organizations to provide a larger inventory of percussion instruments and more well-trained percussionists to perform on these instruments. The average school percussionist is now likely to be called upon to perform technically and musically demanding parts that are far beyond the capabilities developed through the average school music program. To address these demands of percussion writing, today's percussion students and teachers must adopt a system of study that develops a musical understanding of percussion instruments, their techniques, and their literature. The objectives of such a system can only be fully realized when consideration is given to all aspects of the percussionist's education and the environment in which the study and performance occur.

Too often, the standard music aptitude tests will result in a person's being assigned to "play the drums" because he or she indicated a weakness in perceiving relative pitch or seemed to be lacking in "intelligence" or "seriousness" with regard to musical ability and study. As will be clear from the following chapters, the musical demands on the percussionists are equal to, if not greater than, the complexity of those encountered in the study of any musical instrument. Therefore, the person who undertakes the study of percussion should at least possess average musical skills and perhaps display exceptional intelligence and seriousness.

The percussion student's (and teacher's) initial exposure to percussion study should include discussions about the historical considerations of percussion music and styles and the development of a complete theoretical understanding of music. This understanding of the rhythmic, melodic, harmonic, and structural elements in music is most naturally developed while pursuing the technical and aural study of *both* the drums and percussion keyboard instruments. In addition, piano study is highly recommended, although starting the percussionist first on some band or orchestra instrument other than percussion is not. If a marimba, xylophone, or vibraphone is definitely not available, then a "percussion kit" may be used that includes a drum or pad and bells. As soon as possible, the school and/or the serious student should acquire one of the larger keyboard instruments for continued study.

To advance the musical and technical development of the percussionist further, solo literature should be studied and a percussion ensemble established. It is through

percussion ensemble performance that the student will learn musical ensemble listening and sensitive playing habits, become familiar with a variety of percussion instruments, and be challenged technically and musically beyond the average demands of band or orchestral literature. Working with the percussion ensemble will also enable the teacher, and especially the nonpercussionist music educator, to best understand the percussion instruments and his or her percussionists.

Successful percussion education and acquisition of musical concepts of performance are facilitated when the training of the percussion student

- Is based on practical and logical development of playing techniques and aural skills
- Examines percussion's heritage, literature development, and organization considerations
- Cultivates an aesthetic appreciation and general understanding of music
- Offers the student meaningful and provocative musical experiences

## PERCUSSION PERFORMANCE AND EDUCATION

### General Considerations

Percussion writing has evolved to its present prestigious and complex level in music. Composers incorporated percussion sounds into their scores gradually, after careful experimentation and consideration over a long period. These evolutionary developments in percussion writing have resulted in increased use of percussion in music at all educational levels, from college down through elementary school band, orchestra, and small ensemble literature—with greater technical and musical demands placed on the performing school percussionist. The percussion teacher and performer need to concern themselves initially with adopting a percussion teaching and playing system that addresses these technical and musical demands *and* develops a knowledgeable musician. The need for a consistent playing system on all percussion instruments is primary in this era of the total percussionist. In preparation for the study of the techniques of playing, a familiarity with the instruments and their notation is essential.

### Classification of Instruments

A survey of the modern symphony orchestra will reveal a division of the instruments into three major families: the strings, the winds (perhaps further divided into woodwinds and brass), and the percussion. Similarly, the instruments in a concert or marching band can be categorized as the winds (again, perhaps woodwinds and brass) and the percussion. Yet while comprising one-third of the instrumental families in an orchestra and one-half of the instrumental families in a band, the instruments of the percussion section are entrusted to a very few performers. Each percussionist must possess an immediate familiarity with the many different instruments that he or she is called upon to play. This great variety of percussion instruments is commonly divided into two separate groups: those of definite pitch and those of indefinite pitch (or, as Cecil Forsyth's *Orchestration* states, "musical" and "unmusical").[1] However, a more detailed examination and logical classification of this large family of instruments will yield Curt Sachs's classification of *idiophones, membranophones, chordophones,* and *aerophones*[2]; this classification, then, as Reginald Brindle suggests, may be subdivided further according to possible musical characteristics, resulting in: (1) tuned instruments, (2) instruments of indefinite pitch, and (3) instruments usually considered to be of indefinite pitch but that can be tuned.[3]

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**Idiophones** The idiophones produce sounds through the vibration of their entire body. Although they are usually struck to make a sound—as is a cymbal, triangle, wood

block, clave, slapstick, or keyboard percussion instrument—they may be shaken, scraped, rubbed, or bowed, as is a maraca or guiro. (See DVD demonstrations.) The keyboard percussion instruments, chromatic cowbells, steel drums, and authentic gongs comprise the tuned idiophone list, with most other idiophones classified as indefinite pitch even though a set of temple blocks or wood blocks or a number of graduated cymbals or triangles may be grouped in an intervallic relationship to sustain melodic ideas. The unique tonal quality or timbre of most indefinite pitch idiophones (as well as indefinite pitch membranophones) allows for a blending of their sound with pitched orchestral and band instruments without unpleasant dissonances.

**Membranophones** The membranophones produce sounds through the vibration of a membrane, usually an animal skin or plastic head, stretched over a shell or bowl. There are various constructions of these drums: shells with open ends, as is the case with timbales, bongos, and some tom toms shells with ends closed by a membrane that sympathetically vibrates with the struck membrane and air chamber within the shell, as with snare drums and most bass drums and tom toms; and the closed shell or bowl of the timpani or tabla. (See DVD demonstrations.) Timpani and the tabla are tuned to specific pitches and, along with the shell-less roto-toms, are clearly discernible as tuned membranophones. Most other drums are considered indefinite pitch, although many of the open-end or single-headed bongos and tom toms are capable of being tuned to definite pitches. Developments in marching percussion include multi-toms and tonal bass drums that are deliberately tuned to definite pitches (see Chapter 9). However, their pitch is often unclear, and therefore they are not generally classified as tuned membranophones but indefinite pitch membranophones that can be tuned.

DVD

**Chordophones** Chordophones produce sounds through the vibration of strings stretched over or through a resonating box that helps to amplify the sound. Most chordophones are tuned and are played by striking, stroking, rubbing, or plucking, as with the cimbalom or zither, or are played by a hammer striking or plucking a string through a keyboard action, as with the piano or harpsichord. Because of this, the piano is sometimes called a percussion instrument. The lion's roar is a common percussion chordophone. (See DVD demonstration.)

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**Aerophones** Aerophones produce sounds through the vibration of an enclosed air column, usually set into motion by air blown across a reed or special aperture. Percussion aerophones include various kinds of train, bird, boat, and slide whistles as well as sirens, horns, wind machines, and bull roarers, the latter causing air itself to vibrate when swung overhead. Although some percussion aerophones produce a definite pitch, they are generally not classified as tuned. (See DVD demonstrations.)

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## Electrophones

*Contributions by Scott Deal*

Another category of percussion instruments is the electronic percussions or *electrophones.* In addition to electronic instruments, these include the use of microphones with acoustic instruments for sound amplification, reinforcement, or to obtain unique effects when fed through complex filters, processors, mixers, and amplifiers.

The growth and development of the electronic and percussion media over the last century and a half are strikingly intertwined. Their nearly simultaneous development is rooted to enormous technological innovations in the late nineteenth century that served as a catalyst for new and revolutionary musical thought. As technology progressed through the twentieth century, composers and musicians sought new forms of expression, and perhaps the most important medium that came out of this quest was noise, or un-pitched sound. Early pioneers in the use of noise as an expressive medium produced great works in both electronic and percussion genres.

Edgar Varese's *Ionization* (1931) for 13 percussionists is regarded as one of the great musical masterpieces of the twentieth century. In it and his other works of the 1930s (he used the Thereminvox in *Equitorial* in 1943), Varese took acoustic sounds and sonorities as far as he could with the compositional materials available. With the advent of *musique concrete* on tape in the 1940s and electronic laboratories in the 1950s, Varese and other composers now had new composition materials. In 1954 he produced *Deserts*, one of his most important works, for wind instruments, percussion, and electronically produced sounds on tape. Varese created his *Poème Electronic* for 425 loudspeakers at the Brussels Exposition in 1957, after a nearly two-decade hiatus from composing as he waited for these new musical resources. *Poème Electronic* is one of the landmark electronic compositions of the twentieth century.

In addition to Varese's works, John Cage's *Amores* (1943), for percussion ensemble with prepared piano, is regarded as a classic, and his *Imaginary Landscape* series (1942–1951) is a monumental work for percussion and electronic sounds. Cage further experimented with electronics in 1960 with his *Cartridge Music* and used it in his lecture, "Where Are We Going and What Are We Doing?" in the same year. In addition, Karlheinz Stockhausen's *Electronic Studies* (1954) became the first published score of electronic music. His *Kontakte* (1960) for piano, percussion, and electronic sounds on tape and his *Microphonie I* (1966) for amplified tam tam are examples of his style of incorporating acoustic percussion with electronics. In light of the way these two media were used in tandem, it is not surprising that electronic percussion instruments were eventually created and became an essential part of the percussionist's tool kit.

The use of electronics and percussion was generally confined to experimental music until the 1960s, when continued technological and cultural advancements paved the way for widespread musical use. The ability to build affordable high-quality electronic devices meant that many more people could create meaningful music. Consequently, electronic sound as a medium sprang forth from the culture of experimental music and spread to virtually every other genre. The first commercially accessible synthesizer was the Mini Moog synthesizer, which became very popular after Wendy Carlos recorded *Switched on Bach* in 1968. This album of Johann Sebastian Bach's compositions was performed entirely on the larger and more expensive Moog synthesizer and became a huge international success.

With the widespread popularity of the Mini Moog, other synthesizers became available commercially, so that by the 1970s many devices were in use across the spectrum of musical styles, including Classical, jazz, funk, rock, pop, and country. The first widely marketed drum synthesizer was the Moog 1130 Drum Controller. This device, introduced in 1973, gave audiences their first exposure to synthesized drums in the concerts of progressive rock bands such as Emerson, Lake & Palmer. Other devices, most featuring minimal built-in synthesizers, followed in the pre-MIDI era of the later 1970s and can be heard in much of the dance/disco music of that time, notably the Pearl synthetic drums, the Synares, the Syndrum, and the percussion interfaces from ElectroHarmonix.[4]

In the 1980s, as computer microprocessors became more integral to synthesizers, a computer protocol called musical instrument digital interface (MIDI) was developed to enable instruments to be connected and to work in tandem. With the advent of MIDI, many new devices came into the music market, including programmable drum machines capable of playing dance beats independently and percussion controllers, which when struck would measure contact and impact velocity and send MIDI information to modules containing drum and percussion sounds.

Samplers also became very popular in the 1980s. A sampler differs from a synthesizer in that it plays recorded sounds as opposed to electronically produced sounds. The Linn LM-1, built by Roger Linn in 1980, was the first drum machine to use sampled drum sounds. A host of drum machines followed, including the Linn Drum, the ⌐ Mu Systems Drumulator, and the Roland TR-808. In 1982, the Simmons Company c the United Kingdom introduced the first digital drum set. In 1985, Roland followed Sim-

mons with an electronic drum kit of its own, the DDR-30. Soon, drum machines and electronic drum sets were made by Dynacord, E-Mu Systems, Kawai, Korg, Oberheim, Pearl, Sequential Circuits, and Yamaha. As manufacturers perfected the MIDI specification over the next several years, other percussion controllers came into the marketplace. In 1985 Simmons introduced the Silicon Mallet, the first commercially available mallet configured controller. In 1986, Roland introduced the Pad-8 (later known as the Octa-Pad), a dedicated percussion controller with eight playing surfaces and a variety of MIDI controlling functions. In the early 1990s Bill Katoski, founder of the Massachusetts-based KAT Corporation (now called Alternate Mode), invented the MalletKAT, a mallet controller with up to a four-octave range and in 1995 introduced the DrumKAT, a percussion controller very similar to the Octa-Pad and TrapKAT. In 1999 Roland introduced its V-drums electronic drum technology to the world of hand percussion with their HPD-15 HandSonic Hand Percussion Pad, capable of triggering 300 drum sounds by hand from 15 pads. See Scott Deal's comments and demonstrations of the MalletKAT and DrumKAT and their use in education on the DVD. Also see video and audio demonstrations of electrophones at www.alternatemode.com and www.roland.co.uk/drum_room.asp

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By the 1990s MIDI controllers had become very powerful and quite sophisticated in their number of functions and the degree to which they could perform according to the wishes of musicians. Aesthetically, however, many musicians and concertgoers found that MIDI percussion controllers did not measure up to the sophistication of acoustic percussion instruments in their sound and in the way they are performed, and since the late 1990s there has been a trend toward refining uses for MIDI percussion controllers. Although MIDI controllers have retreated somewhat from the concert stage in favor of acoustic instruments, they thrive in recording studios, and the MIDI protocol has become an indispensable component to the modern musician.

MIDI is used as the basis for notation software programs such as *Finale* and *Sibelius*, and it is also the foundation for DAW, or digital audio workstation software. DAW software is multi-use and can record and play back musical sound sources such as samplers, synthesizers, and sound processors. These sound devices are available as stand-alone boxes or as software. DAW software is also capable of digital recording and sound processing, so a musician can have MIDI signals playing sound modules while simultaneously playing a recording of a singer or instrumentalist. Today, music technology has become so sophisticated that it becomes hard to imagine what it cannot do. Most of what is heard in commercial and industrial music today is produced on software.

Percussion controllers are found in almost every aspect of music performance and production, and music technology in general has become an integral part of the total music experience. Enhancing the band or orchestra classroom with percussion controllers ensures young students are receiving a realistic exposure to the music world at large. (See DVD demonstrations of electronic drum set in Chapter 8.)

## Tone Production on Percussion Instruments

The acoustical properties of percussion instruments vary greatly according to instrument size and construction. Membranophones produce sound when the membrane or head is put into vibration, usually in combination with air within the drum. They have three basic sound-producing head areas: (1) *center*—producing the lowest, fundamental tone, with a dry, non-ringing quality; (2) *off center*—producing a very low tone with much greater resonance than center; and (3) *edge*—producing a very ringy, light, superficial tone. Excluding timpani, this edge area is unsuitable for loud playing. These playing areas are discussed in greater detail in Chapter 2 (snare drum), Chapter 5 (timpani), and Chapter 6 (bass drum) and are demonstrated on the DVDs.

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Idiophones produce sound when their bodies are caused to vibrate. Excepting keyboard instruments, most idiophones have a fundamental playing spot (sometimes referred to as "sweet spot") and other playing areas that may be struck for effect or color sounds but are not generally recognized as the best characteristic sound-producing

areas of the instrument. However, the deliberate manipulation of timbre and tone color by varying playing spots on keyboard percussion instrument bars is essential to performance with musical expression. Stick selection aside, the musical context of a passage will suggest the use of a particular playing spot to a sensitive performer. Great care must be taken to maintain the selected playing spot to achieve tonal consistency throughout the performance.

Basic tone production on all struck percussion instruments requires an understanding of grip and stroke. In general, if a resonant, full-sounding, or *legato* tone is desired, a relaxed grip and fluid stroke is employed with a stick or beater. (Although *legato* actually refers to the connection of notes, the term is used here in its traditional sense to convey a fully sustained, resonant tone quality. It also connotes the proper type of stroke that is fundamental to optimum technical and musical development.) On membranophones especially, the stroke is usually made in such a way that the beater is allowed to rebound off the playing surface free of any resistance in the grip or stroke. This initial *legato* approach to tone production (presented consistently throughout this text) will develop a flexible technique that will later enable the performer to alter the grip and stroke to varying degrees, as intended, and therefore affect the sound produced. A slight alteration in the grip or stroke can result in a sharper and dryer attack sound or, conversely, a lighter sound. The sharper attack requires a firmer grip and shorter, stiffer stroke, which together result in the beater's remaining on the playing surface slightly longer (a fraction of a second) and therefore creating a dryer or more *staccato* sound. A lighter tone requires a more relaxed grip and quicker lifting of the beater from the playing surface than is obtained by allowing a natural rebound.

The ring length, timbre (harmonic structure), and dynamic shading of a tone produced on idiophones, especially keyboard instruments, is most greatly affected by the *velocity* of the stroke. The basic relevant equation for bar ring on keyboard instruments is $\frac{1}{2}M \times V^2$ (one-half the mass of the mallet times the velocity of the mallet squared). Relaxed, wrist-generated strokes allow for the best control of velocity in keyboard performance. Any subtle alteration in grip or stroke type should only aid in creating an "attitude" toward tone production and phrasing that ultimately enhances musical expression. Although easily described, these articulations are only produced with well-developed technique and musical sensitivity.

Other factors in tone production are the size, weight, and construction of the beater and stroke angle. In general, a soft beater will absorb high overtones and produce a more fundamental tone. As hardness is increased, more partials are heard and, in some cases, less fundamental. Great care must be taken in selecting appropriate mallets for the instrument and passage to be played. While in general one may assume a smaller-headed beater produces a smaller, more compact (or *staccato*) tone, the *weight* more than the size of a beater in many playing situations determines whether a characteristic sound is produced. Too often timpani mallets are used for rolls on a large bass drum or tam tam instead of appropriate heavier bass drum or tam tam mallets. Similarly, a yarn marimba mallet or heavy snare drum stick used on a high-tuned small bongo will "overplay" or muffle the characteristic tone that should be achieved by using lightweight dowels or fingers. This muffling of tone that results from using too heavy or too large a mallet is caused by the mallet's staying on the striking surface too long because of weight or by too many vibrations from the instrument being absorbed into the contact area of the mallet head due to its large size. The relation of stroke angle to playing surface also greatly affects mallet contact area. (See DVD demonstrations.)

DVD

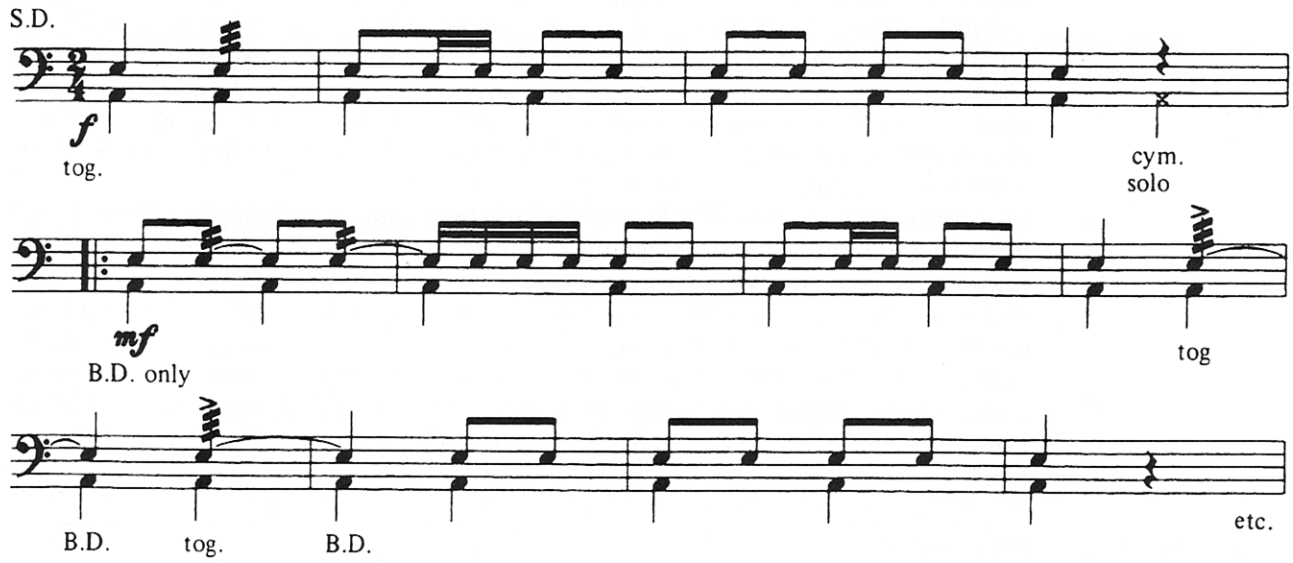
Other artistic concepts regarding tone production must be considered when performing. The reader is referred to sections in each chapter for further discussion of ideas concerning the playing areas on the instrument, placement of strokes relative to each stick's striking point in the playing area, sticking choice, direction of stroke (whether straight up and down or in a slightly clockwise or counter-clockwise curve), the projection of tone to the listener, and basic concept of tone desired according to the musical context of the particular note in the phrase line and the performer's mental/aural/kinesthetic image of the music.

## Notation Systems for Percussion

With an understanding of the classification of the many percussion instruments, the percussionist must next learn about the various systems for percussion notation and become aware of their advantages and disadvantages. The objective of any musical notation should be to show the performer as clearly as possible what he or she is expected to play. For percussion writing this would imply using the least number of written instructions or symbols and the fewest lines as possible. Notation for tuned percussion instruments presents few problems, since a standard five-line staff is used with appropriate clef signs and key signatures. However, the lack of standardization and discrepancies in notational practices for untuned percussion result in serious notational problems for the percussionist as well as the composer and conductor.

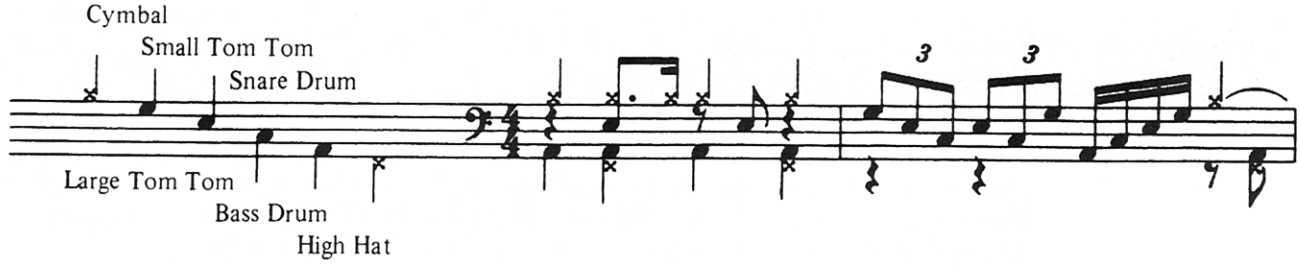
Of the basic systems of notation generally used—(1) staff, (2) line score, (3) symbol notation, (4) combined line score and symbol notation, and (5) adapted keyboard notation—the conventional five-line staff is most common. Standard orchestral and band percussion parts written on a conventional staff afford the performer a clear understanding of what needs to be played as long as only a few instruments are written on the same staff. Example 1-A is a typical march part for snare drum, bass drum, and cymbals (three players). The cymbals and bass drum play together (notated *tog.*) unless stated separately.

**EXAMPLE 1-A** ■ Typical march notation




The conventional staff has also sufficed for notating simple standard drum set music (Example 1-B). See Chapter 8 for further examples.

**EXAMPLE 1-B** ■ Drum set notation



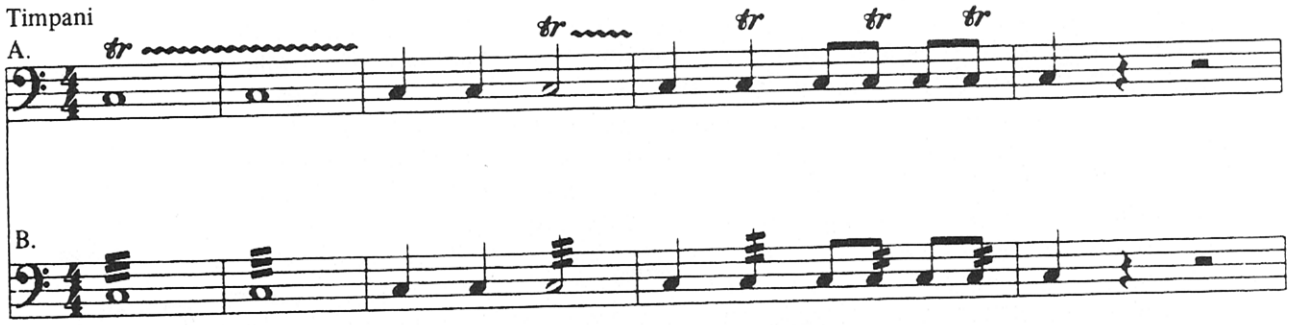
In both Examples 1-A and 1-B, the use of bass clef is quite standard, although no definite pitch is implied and therefore its use is unnecessary. In the past, various orchestration books and composers have used treble clef and even alto and tenor clefs to suggest a confusing pitch relationship among several percussion instruments. More recently the use of a "neutral" or "percussion clef" has become more widely adopted for notating untuned percussion (see Examples 3-A and 3-B). Further examination of line score, symbol notation, combined line score and symbol notation (sometimes referred to as expanded symbol notation), and adapted keyboard notation is taken up in Chapter 3. Refer to musical Examples 3-A to 3-I for more study of these notational concepts.

## Interpretation of Notation

Beyond understanding and being able to perform notes in a correct mathematical relationship to time—in other words, being able to play rhythms and dynamics accurately, sometimes referred to as "playing the ink"—there are other considerations that have to do with music interpretation. Once a basic proficiency in note reading has been acquired, the percussionist will need to consider the interpretation of the *duration* of notated percussion sounds. When a composer writes a note of any value, this note essentially tells the performer when to *start* the sound. Depending on the percussion instrument played, that sound may decay very rapidly or naturally vibrate and ring for several seconds. A sensitive musical problem arises when the percussionist attempts to interpret what the composer intended, or better, what the music demands in terms of muffling or allowing notes to ring. Specific comments about each instrument's physical and technical capabilities will be discussed in detail in individual chapters and in Chapter 10. Briefly, if the performer listens closely to the ensemble to determine the kind of sound that will match or enhance its sound, he or she can quickly decide whether to muffle or to allow a tone to ring. If a question remains concerning interpretation, one might investigate the score or other instrumental part or discuss note durations with the conductor.

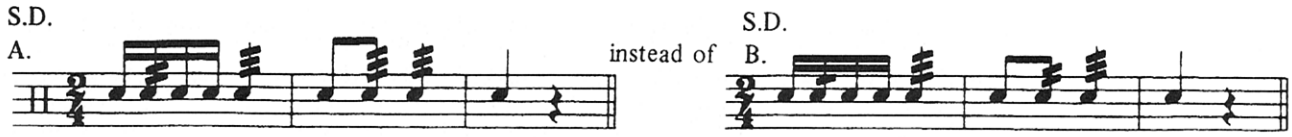
A problem similar to single-note performance is roll interpretation. Probably the most common question is whether or not to tie a roll into a successive roll or single release note (if no tie is written), or to roll a single release note. The performer should first listen, then check a score or part, or discuss the question with the conductor. The notation for rolls varies depending on the instrument, style, period of music, and the notational practices of the composer. Rolls may be indicated by writing a *tremolo* sign, or three or more slashes over a note, or merely by instructing the performer to "roll all notes." Generally, the beam or flag of the eighth note is counted as one of the three slashes designating the roll (see Example 1-C).

**EXAMPLE 1-C** ■ Roll notation



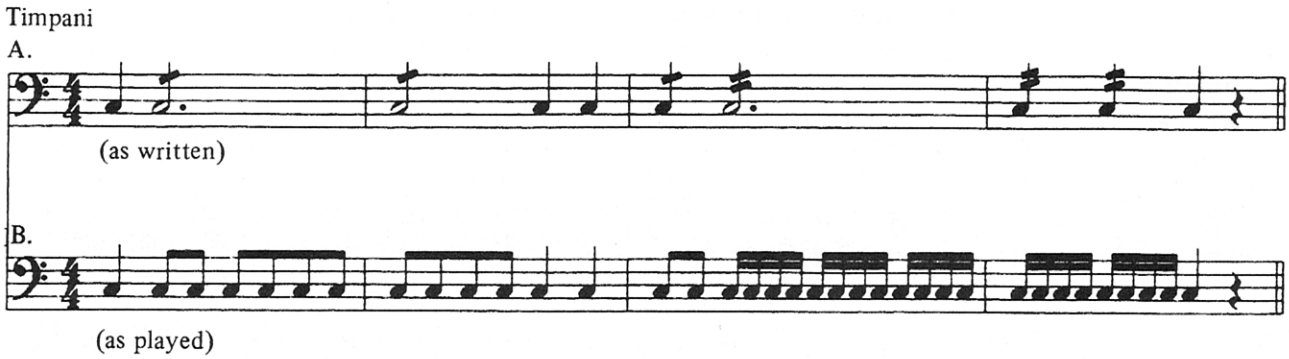

Confusion results when a roll is intended for a sixteen-note value, and only one slash is added to the sixteenth. To avoid this ambiguity, some composers have adopted the practice of using two or three slashes regardless of note value. However, the percussionist must be prepared to interpret and perform any version (Example 1-D).

**EXAMPLE 1-D** ■ Roll clarification



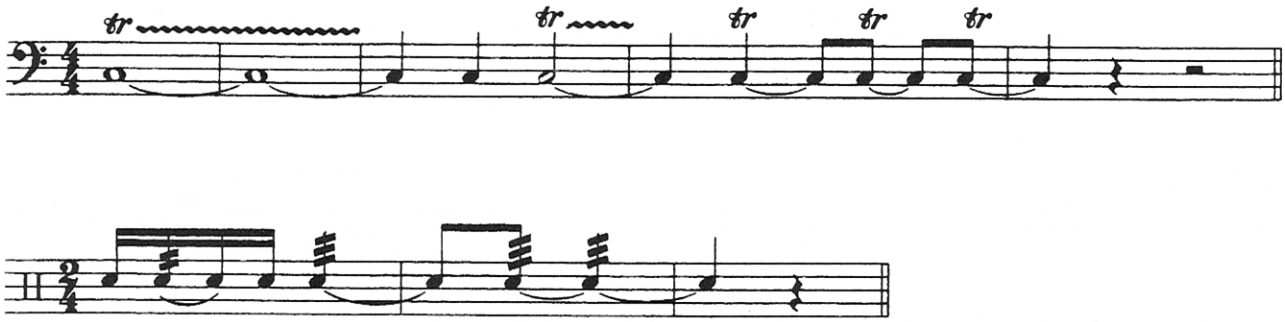

While most Classical composers indicate rolls with the *tr* sign, many times they will use abbreviated notation for strict eighth-note or sixteenth-note subdivision to give a "metered roll" effect (Example 1-E). Very often this will occur in orchestral passages where the timpani are reinforcing eighth or sixteenth notes in the strings. Correct interpretation of such abbreviated rhythms is critical to the musical outcome of the performance.

**EXAMPLE 1-E** ■ Metered rolls




A solution to unclear roll notation is the addition of a tie from the note value to be rolled to a successive roll or single release note. Use of a tie from the roll to the release note in Examples 1-C and 1-D would clarify the exact value of all the rolls, as shown in Example 1-F.

**EXAMPLE 1-F** ■ Tie clarification



Occasionally, when interpreting tied rolls the performer may choose to sustain the roll through the value of the single nonrolled release note. A common example would be a written quarter-note roll tied to a single quarter note when musically what is sounding is a half note in the ensemble. Again, careful listening and references to another instrumental part or score will detect such situations. The techniques of performing both tied and nontied rolls are discussed in later chapters.

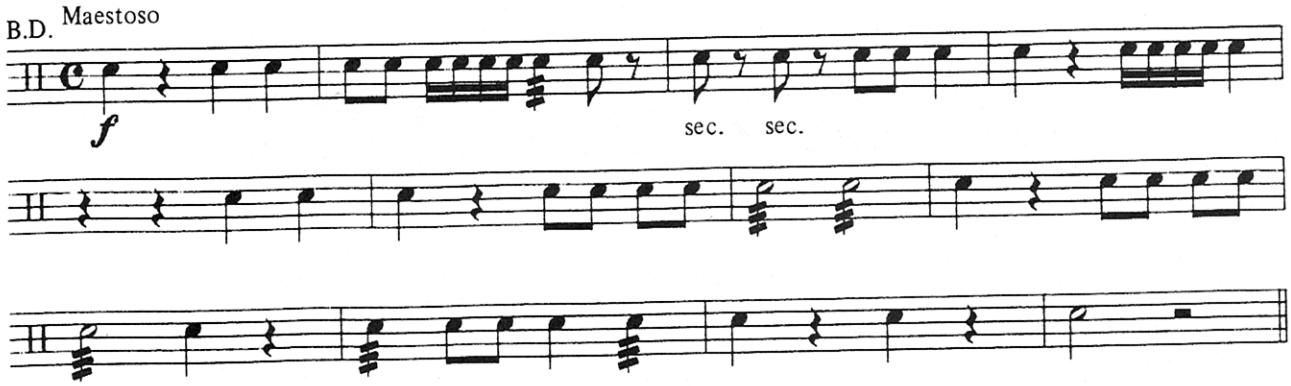
The phrasing of roll attacks and releases and single-note lengths should be marked by the percussionist in all parts. The use of standard articulation markings is suggested,

as follows: a *staccato* mark (), *secco* (*sec.*), or *caesura* (//) to indicate muffling; a breath mark or *luftpause* () used between nontied rolls or before a release note to indicate a slight separation; a *tenuto* () to suggest a note be allowed to ring or weight be given to the attack or release, yet without accenting. Other possible markings might include a half *staccato* () or slurred *staccato* () to suggest a slight muffle or separation. Of course, the tie would indicate a connected sound for rolls or to let ring if used with a note that was followed by a rest. Other common foreign terms could be employed, such as *laissez vibrer* (*l.v.*), meaning to let vibrate or ring. The use of these phrasing and articulation marks, especially in ensemble performance, can make the difference between a musically correct performance and just a bunch of notes.

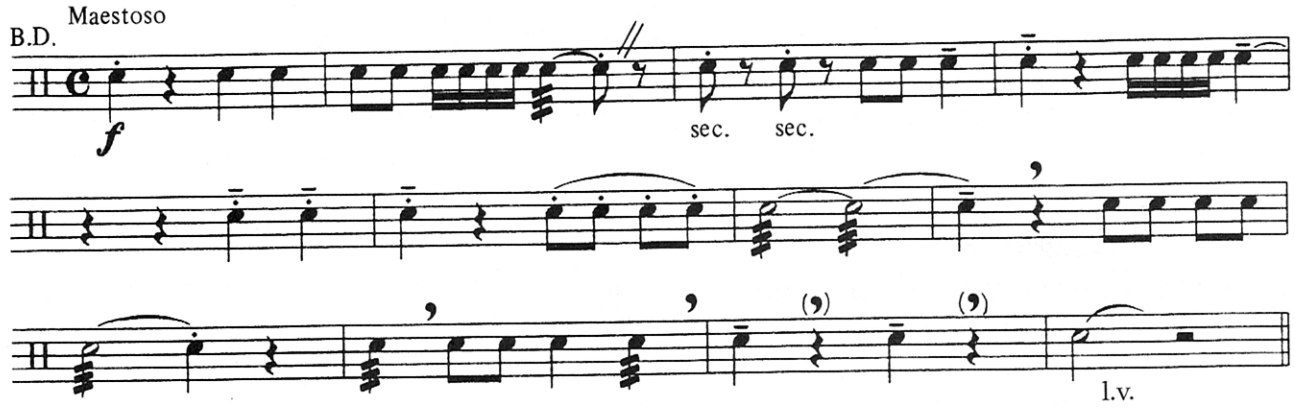
Example 1-G illustrates use of these markings. See Chapter 10 for these phrasing concepts expressed in a musical context. These same articulation marks can have further artistic meaning to the percussionist who has a clear musical understanding of expressive phrasing and tone production on percussion instruments.

**EXAMPLE 1-G** ■ Interpretive markings

AS WRITTEN:




AS MARKED AND PLAYED WITH ADDED PHRASING AND ARTICULATION:




## ■ ORGANIZING THE BEGINNING PERCUSSION PROGRAM

It is not uncommon for average percussionists who approach playing and understanding percussion instruments only through experiences in band or orchestra class to find themselves bored with the repetitious, unchallenging parts; consequently they never really gain much understanding of correct techniques and musical expression on percussion instruments. They are often weak in reading and incapable of advanced tech-

niques, and this often causes disturbances within the entire ensemble because of their frustrations.

To avoid this detrimental situation, a regular meeting time for training the percussionists must be established in addition to the regularly scheduled heterogeneous instrumental class meetings common to all music education programs. In many school systems this established time is called sectional, small ensemble, or class lesson time. Some systems divide the entire instrumental ensemble into homogeneous instrumental groups for regular meetings. In other systems scheduling any activities other than the regular band or orchestra rehearsal is a major problem. Separate percussion meetings must have priority over any other small instrumental session for several reasons: unique aspects of percussion techniques, problems with performance on all the various instruments, and organizational and maintenance considerations regarding the many instruments. Additional outside private instruction with a qualified teacher should be arranged if at all possible.

Although full ensemble experience is important to all musicians, thorough *beginning level* percussion training cannot be adequately accomplished through the heterogeneous class approach. Indeed, many educators support the homogeneous approach to successful beginning level instruction of all instruments. To initiate a beginning percussion class program, the director may choose to have the school system furnish materials in the form of practice pads and beginning keyboards, or, depending on the policies regarding early instrument purchase, the student may be asked to furnish a "percussion kit" consisting of a student line drum or pad and a set of bells. As soon as possible, full-size percussion keyboard instruments should be used.

The availability of instruments and established practices of the school system will, of course, affect the setting up of the percussion class. If drums are available (many times, hand-me-downs from the high school program), then only keyboards need to be furnished. Increasingly percussion instruments used in the marching band pit or front ensemble are used in the beginning percussion class and as regular concert instruments. Marching bass drums and tom toms may be converted to concert instruments for indoor use. In the situation where marching keyboard instruments are used in the beginning percussion class, only drums or pads need to be furnished.

The arrangement of instruments and students in the classroom will vary depending on the activities and instruction. A half-circle arrangement made with the instruments facing the instructor works well for general class explanations of techniques and instruments or when the entire class is playing related exercises together. If pads are used, they can be placed on music stands turned flat and adjusted to proper playing height, or they can be placed on a table or stool of the proper height. Tunable practice pads are very versatile when attached to suspended cymbal stands. Other keyboard instruments and drums may be arranged similarly for full class sessions. Mixed instrumentation sessions, like percussion ensembles, will obviously need to be set up according to the needs of the music and number of players. Utilizing the marching band front ensemble as the percussion class setting can be very effective and can serve as a natural transition to the percussion ensemble or indoor drum line activities.

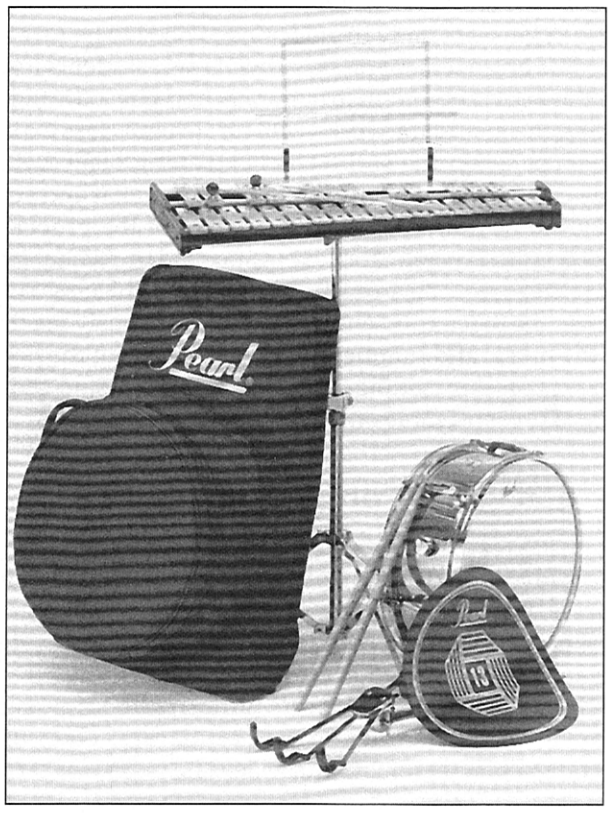
## Selecting the Percussion Student

Almost everybody would like to "play the drums" if only given the chance. Merely observe a lone drum or other percussion instrument standing in a hallway between classes. Hardly a student will pass without "tunking" on it, or more. However, the selection of the percussion student cannot be taken too lightly. The musical, technical, and organizational demands on today's percussionist require that this person have a high level of intelligence, a sincere curiosity about music in general and especially about playing percussion, and a dedication and clear understanding of what it takes to become a percussionist/musician. The degree of serious commitment and understanding will be measured by the student's performance and musical growth. In general, however, a student who indicates a sincere desire to participate in musical activities as a

percussionist and who has a reasonable amount of intelligence and organization would be a good candidate for percussion study. Other previous musical experience (like piano background, elementary music classes—Orff especially) and general sensitivity toward music should also be considered when selecting the percussion student. To attempt to evaluate any natural musical ability, the teacher might ask the prospective percussionist to clap or sing back simple (or complex) rhythmic dictations, keep time to recorded music (march and clap on and off beats), perhaps indicate intervallic relationships between notes (assuming he or she can match pitch and discern general differences in pitch), and even hold sticks and play some instruments. Allowing the student to explore several percussion instruments on their own (for example, picking out melodies by ear) will indicate to the teacher some of the student's natural musical attributes. Such testing does not necessarily expose exceptional talent, but it may provide some relative criteria for selecting the percussion student. Usually time and experience in the music program will determine the extent of the student's success, provided the program is musically and pedagogically sound.

## Training the Beginning Percussionist

As has been previously established, it is essential that early percussion training include instruction on both the drums and the keyboard percussion instruments. A convenient approach to this initial instruction is through the use of a beginning percussion kit, as pictured in Figure 1.1. However, full-size keyboard instruments must be used as soon as possible. It is assumed each instrument will be approached with instruction as set forth in the chapters of this text. In general, grip, stroke, and beginning technical exercises should be thoroughly explained and demonstrated by the instructor, and each student's comprehension should be checked. A counting system based on syllabic intoning for each beat, rest, and subdivision should be stressed. Fundamental reading and counting systems are presented in every good method; assuming the instructor tailors these to his




Pearl Corporation

**FIGURE 1.1**
Beginning percussion kit: snare drum, bells, stands, practice pad, sticks, and case

or her preferences, the student should develop an adequate understanding of elementary rhythms. A simultaneous progression through both the drum and keyboard methods should occur. The instructor should consider dividing students into different ability levels as soon as these are apparent and as resources allow so as not to retard or discourage any student's learning progress.

There is a great availability of recorded percussion music in all styles of performance as well as videos and DVDs concentrating on many topics of instruction. Listening and viewing sessions should be a regular part of the student's lesson experience. The importance of cultivating both a familiarity with the literature and heritage and good percussion sound concepts cannot be overemphasized. Attending live performances of all styles of music further develops the student's concepts of playing. The many books, videos, and DVDs available on such topics as mallet repair, instrument maintenance, percussion history, and composition should be required reading and viewing for the student. The instructor is reminded of the importance of encouraging the student to use his or her own imagination and ear in creating warm-up type exercises and picking out familiar melodies. The aural development of the student can be greatly enhanced by suggestions and routines for practice, such as playing familiar melodies in all keys, drill in aural melodic dictation—first playing back then writing out what was played—and eventual hearing of intervallic melodic structure and chordal progressions. Ear training is essential for timpani tuning and fundamental to the development of sight-reading skills on all percussion instruments. Good keyboard proficiency especially depends upon reading notes intervallically and in interrelated groups. This applies to both lines and vertical blocks of notes (chords). The ear and eye (through peripheral vision) need to work together with all appendages to develop playing proficiency.

As the student advances, the study of all accessory instruments, multiple percussion, drum set, and timpani should be introduced. The ideal vehicle for gaining experience on these other instruments is, again, the percussion ensemble. In general, the objectives of fine percussion instruction should be to develop in the students the necessary skills for competent musical performance and to help them acquire a personal aesthetic enjoyment and understanding of music for life. These objectives will only become a reality through a total percussion experience.

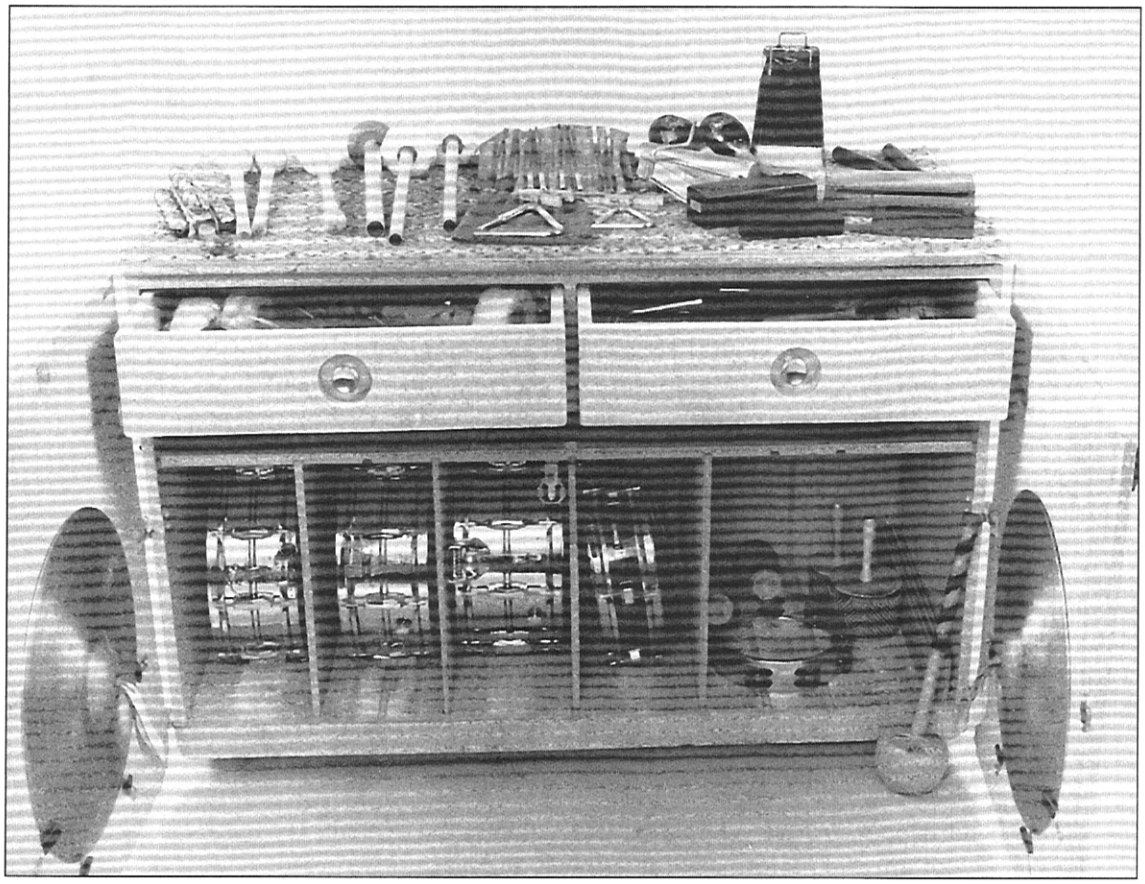
Method books for teaching total percussion in the beginning class are listed at the end of this chapter and in the remaining chapters of this text (see also Appendices A and B). Many heterogeneous instrumental methods have supplementary books adequate for homogeneous instruction. Belwin's *First Division Band Method* and *Band Today* series, *Essential Elements 2000* and *Band Expressions,* are typical heterogeneous methods that contain supplementary resources for percussion class methods. This text, *Teaching Percussion,* should be used as a companion instructional guide book with any of these methods or those recommended at the end of this chapter.

In addition to these methods, the use of oboe, trombone, and other instrumental parts in the full heterogeneous ensemble will give the percussionist excellent reading material for bells, xylophone, vibes, marimba, steel drum, electronic keyboards, or piano. Experience on the many accessory instruments can easily be gained by simply playing the intended snare drum part on tambourine, wood block, or triangle instead of, or in addition to, the snare drum. With a bit of imagination the instructor can enhance the percussion parts as printed in many of the heterogeneous ensemble methods.

## ORGANIZING THE PERCUSSION SECTION

The organizational and maintenance concerns of the percussion section for both the music program director and percussion student may seem more complex, troublesome, time-consuming, and expensive than any other aspect of percussion performance and education. However, even the finest players cannot produce musically pleasing and appropriate sounds on instruments and with mallets that are in need of repair or have not been set up in time or properly tuned.

**FIGURE 1.2** Percussion storage cabinet



One of the most helpful pieces of equipment for organizing the percussion section is the percussion storage cabinet (Figure 1.2). These cabinets can be purchased through school musical supply companies, such as Wenger, or they can be constructed by the school's shop department. One will find very detailed pictures and descriptions of such cabinets in school musical supply catalogs. The use of a percussion cabinet for storage helps in keeping instruments organized, safe, and in one common location. Additional storage can be found in closets, practice rooms, or by building a second or third storage cabinet.

Established school policies differ concerning the furnishing of sticks and mallets. Because schools invest several thousands of dollars in the large percussion instruments and hundreds of dollars in their maintenance, this author feels it is not too much to require the percussionist to furnish his or her own sticks and mallets. Invariably students take much greater care of "their" sticks than the "school's" and have a clear knowledge of sounds and articulations available to them with their own sticks. Comparatively speaking, the percussionist may invest at most only a few hundred dollars in sticks, mallets, and a stick bag or briefcase to carry them in, whereas woodwind, brass, or string players usually have several hundred dollars invested in their instruments. (Percussionists in advanced levels of performance, however, end up spending several *thousands* of dollars on their own drum set, timpani, keyboard, electronic, and ethnic percussion instruments.)

## Recommended Percussion Instrumentation

Specific stick, mallet, and instrument recommendations are given in each respective chapter. The following is offered for general consideration.

*Slapstick or Whip*—Two snare drum sticks held in one hand at their tips and slapped against the other hand. Rim shot.

*Sleigh Bells*—Tambourine only shaking jingles.

*Tambourine*—Snare drum or tom tom with sleigh bells lightly.

*Temple Blocks*—Wood block with medium rubber mallets. Xylophone or marimba bars muffled.

*Tenor Drum*—Field drum snares off, or tom tom.

*Timbales*—Two snare drums snares off or two tom toms, roto-toms.

*Tom Tom*—Snare drum snares off, tenor drum, roto-toms, timbales.

*Triangle*—Bell of cymbal with metal rod, high glockenspiel bar, tuning fork.

*Vibraphone*—Glockenspiel in lower register, soft rubber mallets.

*Whistles*—Human voice.

*Wood Block*—Drum shell, rim, or rim shot, high temple block.

*Xylophone*—Marimba one octave higher with hard rubber mallets.

## General Maintenance and Head Replacement

Maintenance of all the many instruments is obviously an important responsibility of both the director and the percussionist. Many comments are given in succeeding chapters regarding head replacement, tuning, and general repair.

The following remarks about instrument care and tuning are offered for consideration as a basis for developing good organizational practices. These are general guidelines for mounting and tuning a new head on any drum except timpani. (See Chapter 5 for timpani head replacement and fine-tuning instructions.)

1. Remove the old or broken head.
2. Clean and inspect the inside and outside of the drum. Tighten all nuts and bolts as needed. Clean lugs and tension rods. Clean any old lubricant off the top edge of the shell. Sand any burrs off the top edge of the shell with fine-grade sandpaper or emery cloth. Lubricate the tension rods with light lubricating grease or Latin-Percussion's Lug-Lube.
3. Check the roundness of the flesh hoop with the shell, then check the roundness of the flesh hoop with the counter hoop. Adjust where necessary by lightly bending the counter hoop into round to obtain the best fit.
4. Place lubricated tension rods into counter hoop and lugs and proceed to tighten until finger tight. Tune in opposite pairs around the drum, first dividing the head in half, then in quarters, eighths, and tenths or twelfths depending on the number of tension rods.
5. Tighten with a drum key until adequate tension is achieved. With adequate tension, the stick rebounds well off the head, and the tone is high-pitched, clear, and ringing. Be careful to maintain an even collar around the edge of the head between the counter hoop and the top of the shell. Proceed then to check the fine-tuning.
6. Fine-tuning involves striking the head softly about 1 to 2 inches in front of each tension point and matching the pitch in opposite pairs around the drum. Divide the head equally as in step 4. (See Chapter 5 on timpani, "Fine-Tuning/Clearing Heads.")
7. Tune concert snare drums with the bottom head sounding higher than the top head, although it will feel looser because it is thinner than the batter head. An A is a good starting tension for a 14" batter head. Adjust snares by tapping softly and turning the snare tension knob until a crisp tone is obtained (see DVD demonstration, Chapter 2). Remove unwanted ring with the tone control or by placing a small mute on the edge of the batter head. (See additional tuning comments about snare drum and bass drum in Chapters 2 and 6, respectively and on the DVDs.)

DVD

8. Tom tom tone can be changed by tuning the bottom head differently from the top head or by removing the bottom head. A full, resonant tone is best achieved from any two-headed tom-tom or tenor drum by tuning the top and bottom heads to the same pitch. Preference for sound is personal and involves experimentation after good tonal concepts have been acquired.

Timpani should be covered after use with ⅜- to ½-inch hardboard or plywood discs with felt backing to obtain longest head life (see DVD). Never move the timpani by grabbing the head, tension rod T-handles, or counter hoop area. Move the instrument from the bowl or braces.

Keyboard instruments should be covered between use. As instruments lose their true intonation, they should be sent to a manufacturer for retuning and possible bar replacement. Most manufacturers of keyboard percussion instruments offer bar retuning and replacement and some repair services. These include Musser/Ludwig, Kori, Ross, Malletech, Marimba One, Adams, and Yamaha. Keyboard bar retuning, refinishing, replating, repair, and replacement specialists include Century Mallet Instrument Service (Gilberto Cerna), 1770 W. Berteau Avenue, Chicago, IL 60613, (312) 248-7733, and Fall Creek Marimbas (Bill Youhass), 1445 Upper Hill Road, Middlesex, NY, 14507, (585) 554-4011, www.marimbas.com, and Salazar Fine Tuning (John Salazar): www.salazarfinetuning.com.

DVD

Complete percussion instrument repair services are provided by Repaircussions (Brian Stotz), 36 Church Street, LeRoy, NY, 14428, (716) 768-4970, Gilberto Cerna of Century Mallet Instrument Service, and other percussion specialty shops (see online Appendix C).

Timpani bowl and mechanical repair services may be obtained for any make of timpani through the American Drum Company (Marshall Light) of Denver, Colorado: www.americandrum-w-light.com. (See Chapter 5 for other timpani repair shops.) Many drum specialty shops will perform minor repairs on most percussion instruments. Also see *Percussion Repair and Maintenance* by Mark Bonfoey, *Percussion Crafts: A Handbook Service Manual* by David Kulb, and *Band Director's Percussion Repair Manual* by Ed Brown listed under "General Guides to Percussion" at the end of this chapter.

If correct sticks and mallets are always used and if instruments are always treated with respect equal to that of any other fine musical instrument, they will perform well and remain in good condition for many years.

## Motivating the Percussionist

The director's basic attitude toward the percussion section and his or her concern for its development and performance are the greatest factors affecting the motivational attitude of the school percussionist. There are many ways in which the director can convey sincere concern and a positive attitude to percussionists. Conducting regularly scheduled percussion meetings for class sessions, sectionals, and ensemble rehearsals indicates a genuine concern on the part of the director toward the percussionists. A respectful attitude displayed toward the percussionists in even such simple ways as referring to them as "percussionists" instead of "drummers," or worse, "drums" will invariably result in greater cooperation from the percussionists regarding their organization and performance in the section. The posting of music rehearsal order for organizational purposes, as mentioned previously, greatly facilitates rehearsal efficacy and influences conscientious performance. By encouraging or even sponsoring outside involvement in percussion and other music-related activities (not to mention non-music related)—such as private lessons, attendance at concerts and clinics, state Percussive Arts Society-sponsored "Days of Percussion" and the annual PAS International Convention (PASIC), and public performances with the percussion ensemble, soloists, or marching percussion section—the director will generate a healthy competitive attitude and enthusiasm. A special percussion library in the school with current Percussive Arts Society publications, *Modern Drummer* magazines, and other music periodicals will enable the percussion student to be informed of current developments and new ideas in all areas of interest. This library should include method books, CD recordings, videos, DVDs, solos and ensembles in all areas of percussion, and general guide books to percussion as listed throughout this text. Special mini-assignments can be made for reading and research in this percussion library, for individual enlightenment or even presentations during percussion class meetings. Periodic playing and comprehension evaluations,

although sometimes greeted with complaints from the students, relate the director's genuine concern for the students' development as well as keeping the director informed of each student's progress. In conclusion, conscientious, dedicated, and competent musical percussion instruction on the part of the director expressed with respect and a concerned attitude toward the percussion section will manifest itself in meaningful musical experiences for the percussionists and will transcend percussion mediocrity, especially if coupled with the performance of challenging, provocative musical literature.

## PERCUSSION METHOD BOOKS

### Individual Instrument Methods

Selected method books and instructional materials (audio and video tapes and DVDs) that specifically address individual areas of playing, as opposed to being *combined* percussion methods, are recommended throughout this text at the end of each respective chapter under "Individual Methods and Supplemental Studies." Their use privately or in smaller groups is highly recommended.

### Combined Percussion Methods

The following combined percussion methods attempt to address the development of playing skills and musicianship through integrated and coordinated materials suitable for percussion classes and ensembles.

*The Orchestral Snare Drummer, . . . Mallet Player, . . . Timpanist* by Anthony Cirone (Belwin/Warner Bros.). These three separate books function as beginning methods for each instrument and can be used together for beginning to intermediate class ensemble playing. Forty-six ensembles with four parts each (minimum). A conductor's part is available.

*Simple Steps to Snare Drum, . . . Keyboard Percussion, . . . Timpani* by Anthony Cirone (Belwin/Warner Bros.). Individual or classroom beginning level instruction books. Companion books to *Simple Steps to Percussion Ensemble* (see below).

*The Performing Percussionist, Bks. I–II* by Jim Coffin (C. L. Barnhouse Co.). Includes a thorough, modern approach to drumming with multiple-percussion etudes and accessory instruments introduced throughout. Keyboard (bell) study commences at the end of Book I and continues in Book II, which also introduces some basic drum set.

*A Fresh Approach to the Snare Drum for Classroom or Individual Study* by Mark Wessels. This book comes with accompaniments on CDs and an instructional CD-ROM. View samples online: www.mwpublications.com. Introduces bass drum, cymbals, and triangle.

*A Fresh Approach to Mallet Percussion for Classroom or Individual Study* by Mark Wessels. This book comes with instructional CD-ROM and introduces timpani through a "mini-book" of video lessons. Available at: www.mwpublications.com.

*Audition Etudes for Snare Drum, Timpani, Keyboard Percussion, and Multiple Percussion* by Garwood Whaley (Meredith Music Publications). A sourcebook of original graduated reading studies for band/orchestra placement, grading, sight reading, regional/state auditions, teacher training classes, and supplementary lesson material.

*More Audition Etudes for Snare Drum, Timpani, Keyboard Percussion, and Multiple Percussion*, Vol. II by Garwood Whaley (Meredith Music Publications). Volume II contains a CD providing interpretation of each etude. Excellent supplementary lesson material.

### Percussion Ensemble Collections

*Styles and Smiles* by Michael Aukofer and Arthur Lipner (Mallet-Works Music). Eight beginning percussion sextets, with enclosed CD performances, written in a variety of world percussion grooves using standard school percussion instruments. Two ensembles are for battery only with bells and xylophone replacing two battery parts to "aid in any transitioning" for students coming from a drum line to percussion ensemble.

*Groovesicles* by Chris Brooks, Jim Campbell, Chris Cockrell, Lalo Davila, et al. (Row-Loff Productions). A collection of eight sextets written for the young percussionist with setup guide, conductor's score, six student books, performance notes, and instructional CD-ROM.

*Rhythmsicles* by Chris Brooks, Jim Campbell, Chris Cockrell, Lalo Davila, et al. (Row-Loff Productions). A collection of eight sextets written for the young percussionist with setup guide, conductor's score, six student books, performance notes, and instructional CD-ROM.

*Drum Fun* by Thomas Brown (Kendor). Elementary–junior high percussion ensembles in five books—standard instruments.

*Percussion Studies* by Thomas Brown/Willar Musser (Kendor). Junior high–high school percussion ensembles in five books—standard instruments.