



# The United States Army Field Band

## *presents: Saxophone Basics*

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### **HISTORY**

The saxophone is a versatile single reed instrument belonging to the woodwind family. The entire family of saxophones ranges from the seldom used sopranino and contrabass to the more commonly used soprano, alto, tenor, and baritone saxophones. The saxophone was invented in 1838 by Belgian-born instrument maker, Adolphe Sax, and was patented in 1846 in Paris, France.

Although designed to augment low voices of the symphony orchestra brass section, the saxophone was first commonly used in French military bands. As it gained exposure around the world, the saxophone established itself as a permanent fixture in band repertoire. Since its introduction into vaudeville and early jazz, the saxophone has continued to hold a prominent place in popular music.

Whether in marching band, jazz ensemble, concert band, or saxophone quartet, many student saxophonists have difficulty playing in tune and blending with other instruments. For proper intonation and good blending in an ensemble, saxophonists must evaluate these factors: the condition of the instrument, breath support, mouthpiece/reed setup, embouchure, vibrato, and sound concept. By addressing all of these areas, saxophonists can use this knowledge to enjoy practicing, playing, and performing all types of music.

### **INSTRUMENT MAINTENANCE**

Saxophones are like cars-without regular maintenance they will not respond well. Common problems include leaky pads, bent keys and rods, missing felts and corks, broken springs, unregulated keys, and faulty alignment.

Saxophonists can do many things to keep their instruments in good playing condition. First, use a swab to wipe the moisture out of the saxophone neck and body after playing. This will help remove the condensation from the bore and pads. Failure to do this regularly can cause pads to wear out quickly. The instrument may also develop an unpleasant odor-green and blue bacteria may even grow on the pads and bore! Second, use both hands when holding or moving the instrument, especially when getting it out or putting it away. Be especially careful not to bend the rods. Third, inspect the instrument regularly. Look for loose pads, cracked corks, and unusual clicks; have them checked before they become major problems. Finally, have the instrument evaluated periodically by a qualified professional repairman. Doing this preventative maintenance will fix many minor problems and eliminate the need for costly major repairs later. Remember that a properly maintained instrument will work better and be more fun to play.

### **BREATH SUPPORT**

The lungs must be trained to produce the steady, focused, sustained air stream needed to make the reed vibrate. Good posture with a straight back and neck will greatly aid the breathing process. Do not raise and lower the shoulders when breathing. Lifting the shoulders creates tension that will affect the sound and the fingers. Players should try to use their entire lung capacity, allowing the lower part of the lungs to push the stomach forward, then filling the upper cavity. The air is then released steadily, controlled by a muscle called the diaphragm. The air stream should always be steady, never choppy. A player can think of filling the instrument or the whole room, never stopping the air except at the end of a phrase or during a rest. Using too little air can result in playing sharp, while using too much air can cause a note to go flat. A good way to practice producing a steady air stream is to play scales at various speeds using the full range of the instrument (see Example 1). Concentrate on producing an even air stream and consistent sound all the way up and down.

### Example 1

The image displays three musical staves, each representing a different scale in the key of Bb. The first staff is labeled 'Bb Major' and shows a scale starting on Bb4 and ascending to Bb5, then descending back to Bb4. The second staff is labeled 'Bb Harmonic minor' and shows a scale starting on Bb4, ascending to Bb5, then descending through Ab5, Gb5, Fb5, Eb5, Db5, Cb5, and Bb4. The third staff is labeled 'Bb Chromatic' and shows a scale starting on Bb4 and ascending chromatically to Bb5, then descending chromatically back to Bb4. All three staves are in 4/4 time and use a treble clef.

*Full range scales using Bb Major, Harmonic minor, and Chromatic scales*

## MOUTHPIECES AND REEDS

There are many different kinds of reeds and mouthpieces developed for the diverse styles of music a saxophonist must play. Generally, a medium-sized mouthpiece will meet most marching and concert band needs. A medium facing will produce a round, focused sound typically needed for these groups. The mouthpiece will aid in blending with the dynamic, tone color, and style of the other musicians. A Selmer C\* is a good medium-sized mouthpiece. If cost or availability are a problem, it should be noted that most mouthpieces that come with a new instrument have a medium facing and will be adequate. When performing in jazz groups, a mouthpiece with a larger tip opening may be needed to project the sound and match the flexible styles and brighter timbre of the other musicians. Good mouthpieces and facings for this style include Meyer 5, 6, or 7 or Otto Link 5, 6, or 7. Mouthpieces are usually made of hard rubber or metal. These materials produce different timbres and have distinct advantages and disadvantages. Make an educated choice when

picking a mouthpiece. Use the knowledge of a band director, private teacher, local professional musician, or music dealer to find a match that will suit the playing needs. However, remember that the price of a mouthpiece has little to do with its suitability.

It is important to match the strength of the reed to the mouthpiece. The air stream blows against the mouthpiece/reed setup, creating the vibrations that become the sound. Soft reeds may encourage using a weak air stream or poor embouchure to produce the sound. Reeds that are too soft will produce low notes too easily, cause high notes to be out of tune, and sound stopped and mushy. The reed will vibrate too easily and unpredictably against the mouthpiece, so the focus of the sound and pitch will always fluctuate. Hard reeds, which require excessive amounts of air to make them vibrate, may hamper low note playing, encourage a biting embouchure, and promote excessive air use. Select a reed strength that will produce a sound that has a consistent tone throughout the full range of the instrument. Octaves and intervals should be changed just with fingerings, not with absurd throat and embouchure movement (See Example 2).

Generally, a medium strength reed fits a medium mouthpiece facing. For example, 3 or 3 1/2 Vandoren reeds would fit a Selmer C\* mouthpiece. A lower strength reed fits a large, open mouthpiece (i.e., 2 or 2 1/2 reeds may better match a Meyer 7 mouthpiece). Consult a band director, private teacher, or professional for help in matching the reed to the mouthpiece. Keep in mind that reed strengths vary between manufacturers—a #3 Vandoren reed, a #3 Rico reed, and a #3 Hemke reed are very different.

### Example 2



The ligature is an important part of the mouthpiece/reed setup, which can also have a substantial effect on tone. Make sure the ligature is in good condition, allowing for a snug fit of the reed against the mouthpiece. Ligatures that are bent, broken, or missing screws might work to a limited extent, but they do not allow the reed to vibrate effectively against the mouthpiece.

## REED AND MOUTHPIECE CARE

Be sure to routinely wipe out the mouthpiece with a soft cloth, not a brush. This cleaning will prevent gurgles and foreign objects from hampering sound production. Exercise care to avoid chipping the tip or scratching the bore and rails of the mouthpiece.

Saxophonists should maintain a minimum of four playable reeds at all times. Reeds that are waterlogged, chipped, cracked, or covered in lipstick should not be played.

When putting the saxophone away, do not leave a reed on the mouthpiece. It can easily chip, become discolored, or develop an unpleasant odor. Reeds should be stored in a reed guard or—at minimum—the plastic covers that come with some reeds. This will keep them safe until the next use and they will dry evenly without warping. A reed guard can be made from a piece of glass, with rounded sides for safety, and rubber bands to hold the reeds in place. Reeds should be rotated frequently, allowing them to dry out properly and last longer; this will cost less in the long run because fewer reeds will be needed.

## EMBOUCHURE

There are many different variations on teaching good saxophone embouchures. A standard method is to first cover the bottom teeth with the fleshy part of the lower lip to form a cushion. Next, place the bottom lip on the reed at the point where the mouthpiece curves away from it. Then place the top teeth on top of the mouthpiece at approximately the same spot above the bottom lip. Create pressure around the mouthpiece so that no air escapes from the corners of the mouth. To maintain good intonation, the pressure should be fairly consistent all the way around the mouthpiece. The embouchure should remain consistent for the entire range of the instrument. There should be no radical movement of the jaw to produce any note-avoid opening up for low notes or squeezing for high notes. The embouchure is generally consistent, though the tongue placement changes in playing different registers. Saxophonists should be able to play all pitches by simply producing a steady air stream and pressing fingerings.

## VIBRATO

Vibrato, added for warmth and expressiveness, is a slight and rapid variation in the pitch of a note. It can greatly enhance the tone, adding a wide variety of colors. It does not have to be used all the time or at a steady rate. Eventually the saxophonist will recognize notes and phrases where vibrato is best used. While in marching band, vibrato may never be needed. In playing big band standards, one should mimic a vibrato style of the band that originally played the piece. In concert band, consider adding vibrato as dictated by the style of music. Vibrato can be an invaluable tool for adding life and emotion to saxophone playing.

When practicing vibrato, use a metronome. First, pick a scale and play it in whole notes. Next try to alter the tone of each pitch by dropping the jaw one time per beat at a metronome marking of 60 beats per minute. The jaw motion for altering the pitch is similar to chewing bubble gum; however, as one develops the technique, the dip of the pitch will become less noticeable.

After developing this exercise, work to create four alterations per beat, gradually moving the metronome marking up to 76. This is approximately 300 repetitions per minute. With this facility, one can effectively alter vibrato to change mood, intensity, and style of a piece.

## INTONATION

All saxophones have pitch inconsistencies that must be identified and compensated for in order to achieve good intonation. No two saxophones are the same, although some are better than others. However, various registers of all instruments do have similar tendencies. Typically, low Bb through low D# are sharp, low E through middle C# are flat, and middle D through high F are sharp. Many of the elements discussed in earlier sections (such as mouthpiece, reed, condition of the instrument, and air support) can greatly affect the intonation.

The pitch and timbre of some notes can be extremely troublesome. High A can be very sharp, middle C# extremely flat, and middle D and E can be somewhat sharp. These notes need to be corrected with alternate fingerings or by tightening or loosening the embouchure. Ask a band director or private instructor about correct use of alternate fingerings. Two rules can guide the tuning of individual pitches: first, tighten the

embouchure to raise the pitch of a note; second, loosen the embouchure to lower the pitch of a note. Use caution to avoid disrupting the embouchure so much that it affects the quality of tone.

## **SOUND CONCEPT**

Realizing how a saxophone is supposed to sound should be a primary consideration when attempting to tune and blend with others. The saxophone is very versatile and can be played in many genres. Each style has a unique vocabulary based on the sound, articulation, and scales used. In order to properly learn the musical language of each style one must listen to the music. Fortunately, there are recordings available of each genre that can enable a student to progress effectively. The recordings listed as recommended resources later in this chapter can help the saxophonist learn the sound concepts for various styles of playing.

Classical saxophone playing is rarely heard on the radio and is often not the sound cultivated in band; yet, concert bands and marching bands usually require this type of sound. Generally, classical saxophone playing calls for a thick, round, luscious sound. Good examples to imitate would be a horn player, a cellist, or a vocalist.

Jazz and rock 'n' roll are easily identified by listening to popular radio. These commercial styles call for a brighter, edgier sound. Use different reeds and mouthpieces (as previously discussed) to help duplicate these tone concepts.

## **TECHNIQUE**

Developing good technique on the saxophone will allow one to comfortably play throughout the entire range of the instrument. Consequently, it will be easier to learn the notes of a new piece of music. After learning the notes and rhythms, concentrate on good tone and musicianship. To have good technique one must use correct posture. The back and neck should be straight, allowing for proper breathing. The neck strap must be pulled up far enough so that the mouthpiece comes to the mouth; do not shift the head to the mouthpiece. The tenor and baritone saxophones must be held along the right leg, although the alto saxophone can be positioned between the legs or to the side. Either way is acceptable, but the player must be sure not to lean the instrument against the chair or on the lap; this can change the placement of the mouthpiece in the mouth. The saxophone is primarily supported by the neck strap and the left and right thumbs. The right thumb is placed in the thumb guard so that the hand can gently curve with the fingertips on the pearls. The right pinky finger is placed where the Eb and C keys meet so that they can be used quickly. The left thumb acts as a balance to hold your instrument in place. The thumb should be placed so that it can easily reach the octave key. The rest of the left hand is curved around the palm keys so that the fingertips touch the pearls. The left pinky is placed on the G# key so it can be used quickly. It is important to keep the fingers that are not being used as close to the keys as possible. When playing middle C#, when no keys are depressed, all fingertips should still be touching the pearls. Keeping fingers close to the keys eliminates wasted motion and allows more rapid movement between notes. Another example occurs when playing a low G. The three left fingers should be down and the left pinky should touch the G# key. The fingers of the right hand should be resting on the pearls.

While in high school the saxophonist should strive to learn all major, harmonic minor, and chromatic scales over the full length of the instrument (refer to Example 1). Scales are part

of the language of music. If one knows the scales, they can be easily identified and performed as music is read. Almost all music is based on one scale or another. If one recognizes scales, playing pieces will be easier and making music will be more fun.


To be effective, technical learning must be slow and methodical. Slowly teach the fingers what they need to do. Establishing a good practice routine, setting short and long term goals, and employing constructive critical thinking will help one become a more accomplished saxophonist.

## TONGUING

Tonguing refers to the way the saxophonist articulates particular notes and rhythms. The tongue can produce light staccato, heavy marcato, long legato, emphasized accents, and many more sounds. The more variety of music played, the more types of articulation encountered. In general, the saxophonist creates the syllable to be produced with the tongue before sounding the note. Use the syllables "doo," "dah," or "dee" for a lighter tongue, "tah" or "tee" for a heavier tongue. The tip is arched forward and, as the syllable is produced, the part of the tongue slightly above its tip contacts the tip of the reed, momentarily blocks the air, and causes the note to be rearticulated when released. The air stream remains steady, without stopping. Problems with tonguing arise if too much of the surface of the tongue touches the reed; a slapping, thuddy sound results.


Tonguing should be practiced with scales (tongue Example 1 scales) and motives (see Example 3 below). Often, the hardest part of perfecting a technical tonguing passage is coordinating the tongue with the fingers. The speed of the tongue can be developed by doing exercises to strengthen it (see Example 4 below).

### Example 3



*Tonguing with technical passages employing motives from a G major scale. Repeat in all keys.*

### Example 4



*Increasing tongue speed*

When doing any exercise for speed, use a metronome to avoid rushing or dragging. Make sure the articulation is clear and correct every time. When setting a tempo, determine at what speed a passage can be cleanly tongued; then slowly increase the speed of the metronome. Practice tonguing in each register of the instrument, as each range will vary in response time.

Accents are played just like normal notes except that an extra push of air is added to emphasize the note. Use caution to avoid exploding attacks.

## INTERPRETATION

A saxophonist as a musician must realize that music is more than just notes. Pay attention to tone, intonation, and the markings on the music. All markings are written for a reason. Dynamics, accents, crescendos, etc., should be audible to the audience. Music is comprised of contrast, so emphasize differences. After interpreting the markings, use personal taste, the conductor, or a private teacher to refine how the music should be performed. Exaggerate these markings and refine them in rehearsal, striving for an enjoyable musical performance.

## PLAYING WITH AN ENSEMBLE

The key to playing in an ensemble is listening to others. In an ensemble:

- 1) Determine who is playing melody, harmony, and countermelodies; see where the saxophone part fits. Listen to things like dynamics, style, phrasing, etc.
- 2) Learn the saxophone part well; then, be flexible in order to adapt to the group.
- 3) Remember that playing with others takes teamwork.

When listening, determine how the saxophone has been used in the orchestration. For example, in concert band the saxophones can play as a section. The alto saxophones may be playing with the horns or blending with the clarinets and flutes. The tenor saxophones may double the bass clarinets, bassoons, or euphoniums. The baritone saxophone might play with tubas, trombones, or low woodwinds. Awareness of the musical environment will help determine who to listen to and blend with for good ensemble playing.

## RECOMMENDED RESOURCES

### ***Method Books***

48 Studies	Ferling
Selected Studies	Voxman
24 Etudes Faciles after Samies	Mule
18 Studies after Berbiguer	Mule
The Charlie Parker Omnibook	Atlantic Music Corps
The Universal Method for Saxophone	Paul Deville

### ***Solos***

Program Solos for Alto Saxophone	L. Teal
Solos for the Alto Saxophone Player	L. Teal
Concerto in Eb	A. Glazounov
Chanson et Passepeid	J. Rueff
Sicilienne	P. Lantier
Sonata	P. Creston
Introduction and Samba	M. Whitney
Aria	J. Ibert

Aria	E. Bozza
Introduction et Caprice	E. Bozza
Solo Album	E. Rousseau
Debussy Album	J. Harle

**AATB Quartet**

The Pink Panther	Mancini/Frankenpohl
Mississippi Rag	Krell/Frankenpohl
10 Saxophone Quartets	L. Teal
Quartet Repertoire	Voxman

**SATB Quartet**

Andante and Scherzo	E. Bozza
Fantasia	Gibbons/Hemke
Three Preludes	G. Gershwin
Quatour pour Sax	Jeanjean
Goldrush Suite	Marshall
Sonata No. 44	D. Scarlatti

**Reference Books**

<i>Saxophone Journal</i> (bi-monthly magazine)	Dorn Publications, Inc.
<i>The Art of Saxophone Playing</i>	Larry Teal (Summy-Birchard)
<i>Saxophone Soloists and Their Music, 1844-1985</i>	Harry Gee (Indiana University Press)
<i>Marcel Mule: His Life and the Saxophone</i>	Eugene Rousseau
<i>Sax and His Saxophone</i>	Leon Kochnitsky (North American Saxophone Alliance)
<i>Teachers' Guide to the Saxophone</i>	Frederick Hemke (Selmer)
<i>The Early History of the Saxophone</i>	Frederick Hemke (UMI)

**Selected Classical Recordings**

Soliloquy	Dale Underwood
The Contemporary Saxophone	John Sampan
Concertos for Alto Saxophone and Symphonic Band	Norbert Nozy
Saxophone Colors	Eugene Rousseau
Duo Vivo	Laura Hunter
Marcel Mule 'Le Patron' of the Saxophone	Marcel Mule
Hommage a Adolphe Sax	Daniel Gauthier
Reminiscence Quatuor	Alexander

Chicago Saxophone Quartet  
Rudy Wiedoeft, 'Kreisler of the Saxophone'

Chicago Saxophone Quartet  
Rudy Wiedoeft

***Selected Jazz Recordings***

Blue Trane  
Giant Steps  
Go!  
Tune Up!  
Tenor Madness  
Now's the Time  
Time Out  
Kind of Blue

John Coltrane  
John Coltrane  
Dexter Gordon  
Sonny Stitt  
Sonny Rollins  
Charlie Parker Quartet  
Dave Brubeck Quartet  
Miles Davis

***Sources for Music and Equipment***

If you cannot obtain these references from a local music supplier, contact:

The Saxophone Shop  
2834 Central St.  
Evanston, IL 60201  
(847) 328-5711  
(847) 328-4455

Eble Music Co.  
P.O. Box 2570  
Iowa City, IA 52244-2570  
(319) 338-0313

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