

Woodwind Clinic

Getting Saxophonists in Tune

By [Andrew J. Allen](#)

FONT SIZE: [+](#) [-](#)

“The most common mistake made by young saxophonists when putting the instrument together is placing the mouthpiece too far out on the cork. To play in tune with the mouthpiece out too far takes a tight, pinched embouchure.”

Young saxophonists frequently seem to play out of tune. Many of the saxophone’s pitch problems are largely the result of some common misconceptions among teachers.



Equipment

Many intonation errors are caused by a poor mouthpiece and reed combination. Students should use a mouthpiece designed for classical playing, which will have a moderate tip opening and a moderate facing. Jazz mouthpieces offer more power and sound brighter, making them inappropriate for concert band.

For the first month or two of playing, a 2½ strength reed is permissible for young students. After that, a strength 3 reed is sufficient for almost every intermediate and advanced player. In this case, stronger is certainly not better.

Over time, reeds grow weaker with use, and an old, worn-out reed can cause intonation havoc. Students should have at least four reeds in rotation at the same

time. This way, if one breaks there is a ready replacement. Also, if one starts to soften up it will be extremely noticeable compared to the others. A student who plays on just one or two reeds will get used to a gradually weakening reed without realizing it, causing the embouchure to lose strength. A new reed will feel too hard by comparison. Reeds that begin to soften with age should be immediately discarded.

To make reeds last, students should get a reed case that keeps the tip flat. They should also wring the reed out by using the thumb and forefinger to very gently squeeze off excess moisture. Getting rid of that moisture keeps the reed from warping, and its life will be substantially prolonged.

Reed Placement

The tip of the reed should line up with the tip of the mouthpiece. If it is too far in, there will be problems getting the reed to respond. This can lead to the upper range being quite flat because the student is working so hard just to get the instrument to sound. If the reed is too far past the tip of the mouthpiece, there will likely be intonation problems in the lower register. If a student looks at his mouthpiece and pushes the reed down, the tip of the reed should line up exactly with the tip of the mouthpiece.

Fingerings

Some misconceptions about fingerings still occur. The most widespread is the one-and-one Bb, played with the index fingers of each hand. While widely taught, mostly to beginners, this fingering is abysmally out of tune, almost a quarter tone flat on some saxophones. Most professional and advanced saxophonists use the side Bb and Bis Bb for almost every situation. One-and-one Bb is seldom used by serious players.

The side C fingering is so far off pitch as to be unusable and should be relegated to trills between B and C. Whenever C must be sustained, the second-finger fingering should be used. Moving between B and C is a concept similar to crossing the break on clarinet; sometimes teachers make such a big deal about it that it causes the problem they were trying to avoid. If beginning students are taught to make a smooth transition between B and C when they first learn the fingerings, and make sure they understand that hearing a blip is unacceptable, then many of those problems will never occur. If teachers do not mention the potential problem, there will rarely be one, and the change from first-finger B to second-finger C should be no more of a problem than the change from C# to D.

One popular fingering among saxophonists is called covered C#. Used for C#5, the fingering is the octave key plus the left-hand third finger. It opens the first octave key, which raises the pitch slightly but does not cause the note to jump the octave. C#5 is normally extremely unstable, but this fingering will correct the pitch and better match D5 and C5 in timbre. Once students get used to it, it is an extremely smooth fingering, especially going to D. The D5 and D#5 will be more

in tune as well, because students are not making awkward adjustments to bring the C# in tune.

Tuning

The most common mistake made by young saxophonists when putting the instrument together is placing the mouthpiece too far out on the cork. To play in tune with the mouthpiece out too far takes a tight, pinched embouchure. Also, by making this mistake, the saxophone becomes too long, and the nodes will not be in correct positions. This destroys the acoustical integrity of the saxophone, resulting in intonation discrepancies across the entire range and causing some notes to become unplayable, especially low C, B, and Bb.

With the mouthpiece too far out, response on low notes is also going to be considerably diminished. If the mouthpiece is pushed in to the proper position, as long as the embouchure is relaxed, the low range, after a little bit of work, actually responds quite well on most well-maintained saxophones. When band directors ask why students can't play E, D, or C, I check the mouthpieces first, and the offending saxophonists usually have them pulled too far out by half an inch.

The saxophone should be tuned to concert A with saxophonists playing written F#4, C#5, and F#5. While any one of these notes may be forced in tune on an out-of-tune horn, if all three of these are relatively well in tune, it will be possible to play all of the other notes in tune as well. It is much easier to lower pitch on the saxophone than to raise it, which is another reason to keep the saxophone mouthpiece pushed in.

Adjusting Intonation

The phrases "lip up" and "lip down" should disappear from teachers' vocabularies, although this approach to adjusting saxophone intonation is still too frequent. Tightening or loosening the embouchure actually causes many intonation and tonal problems rather than fixing them. The embouchure should remain almost entirely static regardless of dynamics or range. Instead, adjust intonation by changing tongue position in the mouth. Introduce students to this concept using vowel syllables. Have them say the letters E and O, and point out that the back portion of the tongue is nearer the roof of the mouth on E and lower in the mouth on O. Have them use the feeling of the E syllable to raise pitch and O to lower it.

To practice this concept have students bend pitches downward without using the embouchure. Start on B5 and see how far they can bend the note. This will take students some time to learn to do, but once students can do this, adjusting pitch by smaller degrees across the saxophone is a matter of fine-tuning and listening. Saxophonists should work on pitch-matching exercises, starting with unisons, then moving to octaves and fifths. When students can tune such intervals well, and if they have ear training incorporated into band warmups, they will have little difficulty adjusting pitch on the fly.

Students who struggle with moving the tongue rather than the embouchure

should practice in a mirror, and if there is perceptible movement of the facial muscles, have the student reset the embouchure and start again. The purpose of the saxophone embouchure, properly formed, is to keep the air sealed in and the reed cushioned.

Finding Resonance

Something that will help both tone and pitch in the upper range is to listen for resonance. B5 and A5 are extremely out of tune, especially with young players, and these notes usually possess a dull, thin sound. Have students manipulate the pitch of these notes until they sounds resonant; there will be a sweet spot for each note. The saxophone is meant to play in tune, so when a student produces the resonance, chances are he is in tune anyway.

It is worth noting that many young saxophonists prefer the sound of one part of their range over the others. To expand this pleasing resonant sound, young players should be encouraged to do resonance matching exercises. Students should find a note on their instrument that they like the sound of, determine what they like about it, and then try to reproduce those same qualities on other notes, starting near the favorite and working toward both ends of the range. Students will adjust automatically if they know what qualities to listen for.

Beginners and Dynamics

The saxophone sounds best when the sound is allowed to resonate freely at all dynamics. In beginning band, sax players will naturally play louder than many of the beginning woodwinds, and when directors force their volume down to match the other sections, saxophonists get into the habit of producing a stuffy, thin sound while trying to control volume. It is okay if beginning saxophonists play a bit loudly if it means the sound is good and the embouchure is correct. Better volume control with a fine sound will come in time.

Given these pointers, the saxophone should be able to shed its reputation as an intonation problem and take its rightful place in band rooms as the wonderful instrument it is.