

Woodwind Clinic

Improving High Notes on the Saxophone

By [Sean Murphy](#)FONT SIZE: [±](#) [-](#)

The highest notes on the saxophone are nothing to fear. Here are some tips for playing on the palm keys and beyond.

The high range of the saxophone can frequently cause difficulties for both saxophonists and music educators. These problems include voicing, finger coordination, and intonation. Educating saxophonists on the acoustic aspects of each of these high tones will allow students to make more informed decisions when performing and lead to a more firm control over their sound quality.

Palm Keys

The first task that must be accomplished when approaching these pitches is finger coordination. All too often, students are unaware of the correct fingerings for high D, Eb, E, and F. This knowledge can be efficiently instilled upon students through the use of full-range major scales. These scales will force the students to perform these pitches in every key, by ascending to the highest possible note of each key. Make sure students are aware that ascending means opening more keys and descending means closing or taking off keys. This logical pattern of ascending and descending can help solidify the physical muscle memory required for the performance of these tones.

Students may have trouble getting these palm key notes to sound at first. Often times, an undertone will accidentally sound. The primary causes for this hindrance are embouchure and voicing. In the high register the reed must vibrate faster, thus any hindrance on its ability to vibrate will be magnified in this range. If students have too much lower lip present on the reed, they will muffle the reed's potential to vibrate and disallow any high notes from existing. This muffled reed is usually a product of the lower lip being rolled too far inward. A slight amount of the pink-colored skin of the lower lip should be visible while playing. Others have described this ideal balance as the ability to form the embouchure and bite your



teeth together without the teeth coming in contact with the lip.

Voicing can sometimes also cause a problem. Students may unknowingly be doing something with the tongue that is counterproductive to the high notes sounding. Have students experiment with raising the back of the tongue as though making a hee sound, which is needed in this register. In some cases it may be more effective to have a student work on singing or humming the desired pitch and then trying to replicate it on the saxophone, with the body making the necessary voicing adjustments.

Once students are proficient in performing at this range of the saxophone, noticeable pitch problems frequently will arise. Usually students will be extremely sharp on the highest notes. In this particular register there exists a wide range of flexibility, and students can develop the skills to be able to go to the correct throat position for numerous notes. In some cases, the dynamic is too soft or goes by too quickly for such an adjustment. In these situations keys can be left off of some notes in order to produce more accurate pitch. In these instances, the key that sounds a pitch one half step lower than the desired sound can be left closed to lower the sound of the written high tone. For example, high Eb can be fingered with only the second left-hand side key, leaving the high D key closed. The high D key can also be left closed to lower the pitch when playing high E. Saxophonists must investigate how fingering changes affect the timbre and pitch at various dynamic levels to understand when such options are the best choice.

Knowledge of the acoustics of the palm keys can also help students create a working knowledge of valuable alternate fingerings. Because the palm keys are used only to produce high tones, few saxophonists realize that they also produce a fundamental pitch when used without the octave key. On the alto saxophone, these fundamentals are roughly one half step flat and can be advantageous in passages where cross fingering may slow down technique. For example, an alternate D on the staff can be achieved by pressing only the Eb palm key. This works because the fundamental pitch of the Eb palm key is one half step flat creating a sounding D. An E can be played with the third left side key, and an F with the high F# key. The pitch discrepancy on these fingerings will vary among instruments, so each saxophonist must investigate the pitch before using them in performance. These alternate fingerings produce a slightly different timbre that may be undesirable, particularly if using these fingerings in loud passages.

Altissimo

Sharp overtones have allowed saxophonists to develop a system of fingerings to produce the notes of the altissimo register. Eugene Rousseau identifies three acoustical fingering systems for sounding these pitches in his text *Saxophone High Tones*. In what he has identified as Mode A fingerings, altissimo notes are created by manipulating the second overtone, which is very sharp. In this fingering system the second overtone should be a fifth higher, but this overtone is so naturally sharp that it produces a tone one half step higher. The saxophonist then vents the pitch

using left side key 3 operated by the front F key, and the high tone is produced. For example, the second overtone of an A should be E, but it is a half step sharp. By fingering an A but using the index finger to operate front F, rather than the normal first finger pearl, a F above the staff will be sounded. This concept can be extrapolated up half steps until altissimo notes are produced.

Another method of utilizing overtones to the advantage of high tone fingerings is what Eugene Rousseau identifies as Mode B fingerings. Like Mode A, they are based on second overtones, but they differ because the overtone is so sharp the sound produced is a whole step too sharp. This occurs because in Mode B fingerings the tone is vented with the high F# key, rather than the front F key of the Mode A fingerings. An example of a Mode B fingering for altissimo G would be left-hand first finger, right-hand first finger, the top right-hand side key, and the high F# key. It can sometimes be difficult to over blow these fingerings and produce the high tones, so to make things easier, the middle and ring fingers are frequently left off for additional venting. Lastly, Rousseau identifies Mode C Fingerings as not relying on imperfect overtones, but simply as third overtones.

The acoustics of the saxophone are complex. Study of the saxophone's acoustics will help saxophonists understand why specific fingerings work and also impart students with the knowledge needed to determine what fingering combinations will produce altissimo tones.