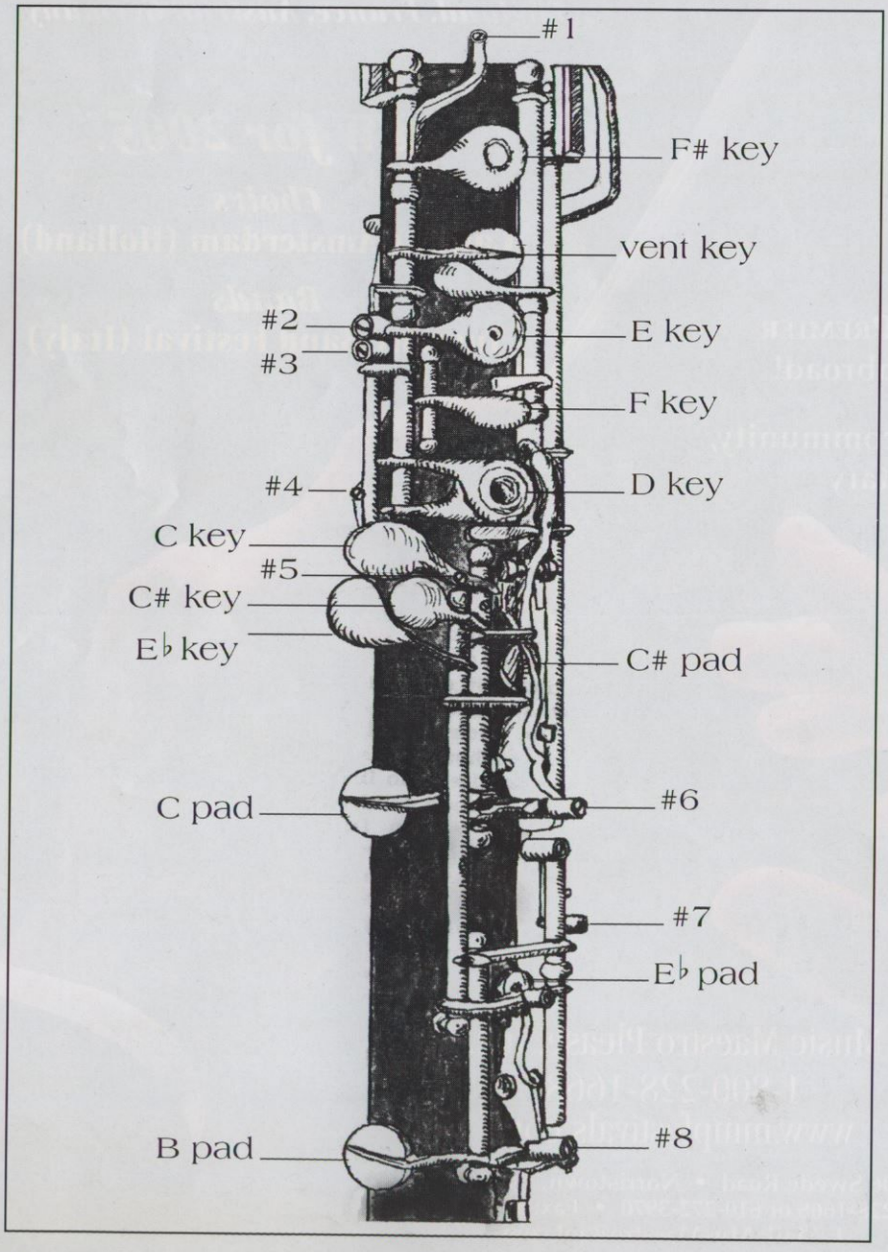
Basic Oboe Adjustments

by Allison Baker

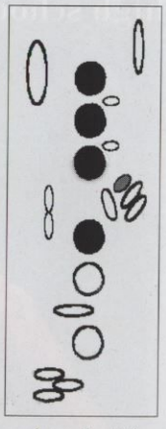
Far too many student oboists struggle to play on instruments that are out of adjustment. The delicate balance of the key mechanisms is easily disrupted, and yearly maintenance is rarely enough to keep an oboe in good playing condition. Keys may shift and rods may stick when the wooden body of the instrument contracts in the winter or expands in the summer, while regular practice and assembly can loosen screws to the point where a pad may no longer seal properly. Fortunately, most common adjustment problems are fixable without the help of a qualified repairperson. With a little patience and a steady hand, directors and even students can improve the sound and response of a poorly adjusted instrument.

For those unfamiliar with the construction of oboes, perhaps the easiest way to check for adjustment problems is with sound. Well-intentioned directors may try to repair an instrument by over-tightening loose screws, but this also prevents pads from covering the holes and may affect other keys that are attached to the same rod. All key work is delicate, and even a quarter turn may tighten a screw too much. Whenever the cause of a problem is not readily apparent, I will check and isolate each key on the oboe, starting at the top. I never rotate a screw more than ⅛ of a turn and adjust only one key at a time. After any adjustment, it is important to play the instrument to determine whether the problem has diminished. Whenever an adjustment makes a problem worse, I move the screw back to its original position.



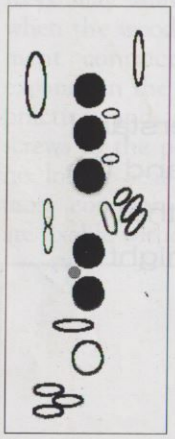
Most young oboists have difficulty playing in the low register, and this problem will be compounded if keys in the lower joint are out of adjustment. I recommend that repairs by amateurs be limited to the bottom half of the instrument. Most of these screws are specific to a single function and are easy to isolate. Keys on the top joint are regulated by a set of three to six screws, depending on the make and model. Even one misaligned screw on the top joint can upset the balance of the mechanisms and render the entire instrument unplayable.

The first screw I normally check is on the curved arm that extends up from the F♯ key. When this key is depressed, it closes the G♯ pad on the top joint. To test this, play an F♯ and add the G♯ key. The pitch should not change when this key is added, but if the G♯ key does not seal properly, turn screw #1 clockwise and test each adjustment until the note stabilizes. If the screw has been tightened as far as it will go and the problem remains, the thin cork on top of the G♯ key has likely worn thin and should be replaced. The screw may need to be backed out again when the new cork is applied because an over-adjustment will prevent the F♯ key from closing, making any note below a G4 nearly impossible to play.



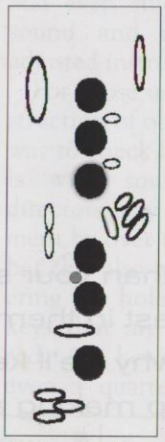
The small vent key between the first and second keys on the bottom joint connects to both the E and D keys, and these two screws should be adjusted as a set. Before proceeding, I recommend checking the F resonance

key. Not all student models have this key, but if there is one, press the D key to make sure the resonance key closes. It should only be tight enough to prevent air from leaking out of the resonance hole when the D key is depressed, and a tiny bit of play is acceptable. Tap the resonance key with the tip of a finger, if there is any visible movement, screw #4 may have to be tightened, and if there is no play at all, the same screw should be loosened slightly. At this point, it is only necessary to check that this screw is not too tight, as it will affect the adjustments of screws #2 and 3.

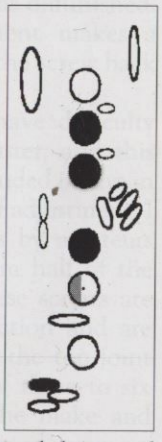


While playing an E4, apply additional pressure to the E key with the second finger of the right hand. If the tone quality of this note improves, turn screw #2 slightly counter-clockwise until the E key closes completely and without force. Next, play the same note, using the third finger of the right hand to close the E key, and tap the small vent key with the second finger. The amount of closure should be equal for both keys; if the vent key leaks, the sound will change when held closed by the finger, and screw #2 will need minute adjustments in a clockwise direction.

The process for testing the connection between the D and vent keys is roughly the same. If the tone quality of D4 improves when the ring finger presses firmly down on the key, screw #3 is too tight. The third finger then moves up to the E key and the pinky closes the D key as the vent is tested again; if it is too difficult to cover the tone holes with such an awkward fingering, another set of hands may be necessary. The balance between these two keys should not equal; if it was, the E key would not close. In the low register, the E key is covered for all fingerings below E4, and screw #3 only needs to be tight enough for the vent key not to leak. When screw #2 is in adjustment, this is rarely a problem.

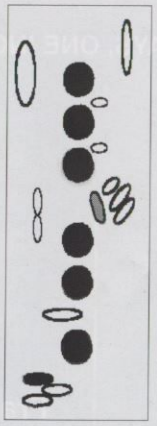


For oboes with an F resonance key, test the response of E4, D4, and C4. If these notes are difficult to play or still sound fuzzy, this key may not be closing completely. Again, the adjustment of screw #4 should be minimal. By playing these same three notes after each minute turn of the screw, players can quickly tell whether this adjustment is improving response in the low register. I pay close attention to the feel of the E key during this test; if it begins to feel sluggish, I know that screw #4 is too tight and needs to be backed out just enough for the E key to move freely again.



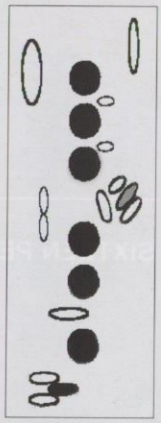
Because the C key closes both the E key and the E♭ pad, I intentionally move screw #6 counter-clockwise ¼ to ½ a turn before testing screw #5, which disengages the E♭ pad. Screw #5 regulates how the E key closes, and this adjustment is important for C♯6 and D6. If the E key leaks when the C key is down, these notes will sound sharp and wildly unstable. To test this connec-

tion, I play a high C♯ and tap the E key lightly, taking care not to cover the hole in the center of the key. This should not affect the pitch, but if it does, screw #5 should be tightened only until the note settles. An over adjustment will make the C pad hard to close and the notes below C4 even harder to play. While the C key should fully close both mechanisms, if this is not possible, it is more important for the C pad to close completely and without resistance.



Once the E key and C pad are balanced, it is important to return to screw #6, which was deliberately loosened earlier. Located above the E♭ pad, the screw holds this pad closed when the C key is depressed. Play a low C and trill the left-hand E♭ key. The pitch will definitely wobble at first, but #6 should be slowly tightened until the addition of the E♭ key no longer affects the C. Again, over tightening this screw will add resistance to the C key and prevent the C pad from closing.

Players should be able to use alternate fingerings for both B3 and B♭3 by closing the C♯ key instead of the C key. I recommend playing the low C♯ first, then adding the low B key. This interval should sound relatively smooth; if the B is fuzzy or won't come out, screw #8 is probably out of adjustment. If possible, try playing a low B as well, then sliding the right-pinky finger from the C to the C♯ key. The pitch should not change. It is more difficult to determine which direction to turn this screw than on other adjustments; both tests should work. If they do not, it is often easiest to rotate this screw at least ½ turn counter-clockwise or until neither test works. From there, tighten the screw ⅛ of a turn and play between adjustments until it is possible to move between the C♯ and B with ease. If this screw is too tight, the B pad will be held open by the C♯ key, which will make any adjustments to screw #7 pointless.



Once screw #8 is in adjustment, play a low B with the standard fingering, followed by a low B♭. Not all student oboes have a low B♭ key, but if there is one, screw #7 regulates the balance between the B and B♭ keys, which should be equal. It may not be possible to strike a perfect balance between these keys, especially on older instruments, because manufacturers rarely put cork pads over the three largest tone holes on the bottom of the second joint and the pads that are used instead do not always cover properly. If it is easier to play the B, the screw needs to be tightened, but if the B♭ is more responsive, the screw needs to be turned counter-clockwise.

Oboes require more maintenance than most band instruments, and an annual trip to the repair shop to check for bent keys, binding rods, or loose pads is essential. While these adjustments do not eliminate the need for regular check ups, they will greatly aid in keeping student oboes in optimal playing condition between yearly maintenance repairs. □

Allison Baker is associate editor of The Instrumentalist *magazine. She earned degrees in music performance from Illinois Wesleyan University, the University of Illinois at Urbana-Champaign, and the University of Michigan in Ann Arbor.*