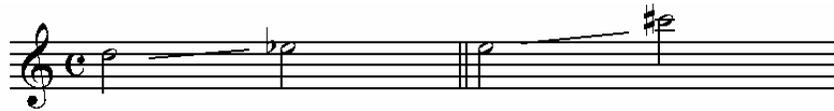


Octave Systems for Flute, Oboe and Bassoon

Flute, Oboe and Bassoon overblow at the octave, resulting in the fingerings for the second octave notes being the same as for the first. Achieving this second harmonic is accomplished with some combination of air, embouchure and key manipulation. On the flute, this second octave begins with D5, an octave and a second above middle C. Fingerings from there up to C-sharp are the same as the first octave. On the oboe, the 2nd octave begins with C-sharp5 and climbs to C6. The bassoon 2nd octave is similar, starting on F-sharp 3, but the fingerings are identical to the first octave only up to D5.

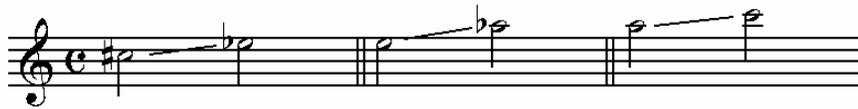
The second octave for the flute is primarily gained by a change of air and embouchure. The airspeed is increased, and the direction of the air is pressed more outward than downward. For the notes D and E-flat, and additional assistance is gained by lifting the first finger of the left hand.



Lift Left 1st finger

Identical to 1st octave

The Oboe has three mechanisms to produce the second octave. For C-sharp, D, and E-flat, the left 1st finger is slid downward to expose the hole in the first finger key. This is known as the "half hole." (One way to remember the notes involved is that it is for all notes spelled D-something, i.e. D-flat, D-natural, and D-sharp.) As we climb the scale, a higher octave mechanism is required, and the 1st octave key, operated by the left thumb, is used. This key is required for the notes E5 through A-flat 5. Climbing further, the 2nd octave key is used, operated by the side of the left-hand first finger. This key has an automatic system that closes the 1st octave key when in use.

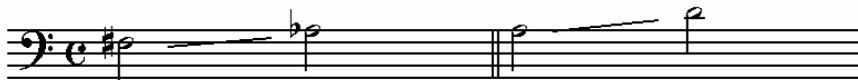


Half-hole

1st octave key

2nd octave key

The bassoon, like the oboe, also uses a half hole, though here the hole is literally uncovered half way, without the aid of a key. This is used for F-sharp, G, and A-flat (remember the notes involved are those spelled G-something, i.e. G-flat, G-natural, and G-sharp). Climbing upward, the half-hole is covered, and the left thumb lifts off the whisper key, venting the hole in the bocal. An additional technique is useful for aiding certain notes in this long span between the half-hole and whisper vent. This technique is known as "flicking" and will be dealt with later. Once above D5, the fingerings for bassoon no longer resemble the lower octave.



Half-hole

Lift whisper key