

Bassoon Fingering Issues

By Michael Burns

One of the things that distinguishes the bassoon from the other woodwinds is its illogical, awkward fingering system. What other instrument demands so much of the players' thumbs, or requires so many diverse techniques as using forked fingerings, half-holes, and flicking? Many people (including Boehme who developed the comparatively logical fingering systems for the flute, oboe, and clarinet) have tried to tame the bassoon's fingerings without too much success. Small improvements have been made, but overall the bassoon is a fingering nightmare! There are nine keys that the left thumb is responsible for, four for the right thumb (all other woodwinds only use the right thumb to support the instrument!) There are five open tone holes on the bassoon, which as well as being covered or uncovered have (in at least one instance) to be manually opened or closed in multiple variants. There are also numerous “fork” and “cross” fingerings still required as standard fingerings. Not only this, but the instrument is large, heavy, and unwieldy!

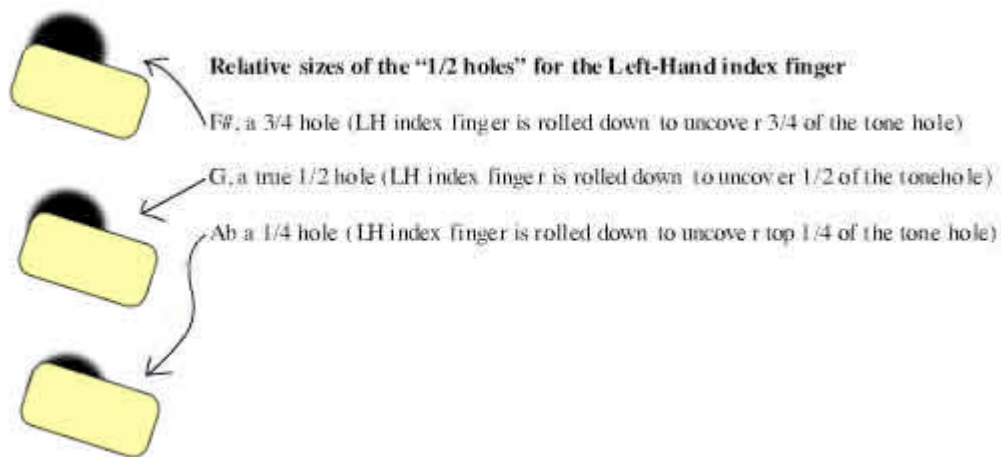
Bassoon fingerings are very similar to those of the clarinet beneath the break. The bassoon, like all of the woodwinds but the clarinet, overblows an octave so many fingerings are more or less repeated above the break. However, the octave key on the bassoon (called the whisper key) is opposite to the other woodwinds in that it is **on** in the low register and comes **off** for the higher registers.

Many of the inconsistencies you will hear in a student's playing stem from the fact that they have not yet mastered the techniques required to fix some basic bassoon fingering problems. A player must know when to use, and be good at, the fingering techniques of half-holing, and flicking to avoid ‘cracking.’ It used to be thought that cracking on the bassoon was unavoidable, but that is no longer the case today.

Cracking. This tends to happen most in the middle register from F-sharp at the top of the staff up to the D above the staff. This is the bassoon’s break and cracking is a term used to describe an

unpleasant extraneous noise along with or instead of the desired note. The solution to cracking is to use the two most infamous bassoon techniques: **half-holing** for the F#, G, and Ab, and **flicking** for the A, Bb, B, C, and D. These techniques are both somewhat involved, but here are some basic tips:

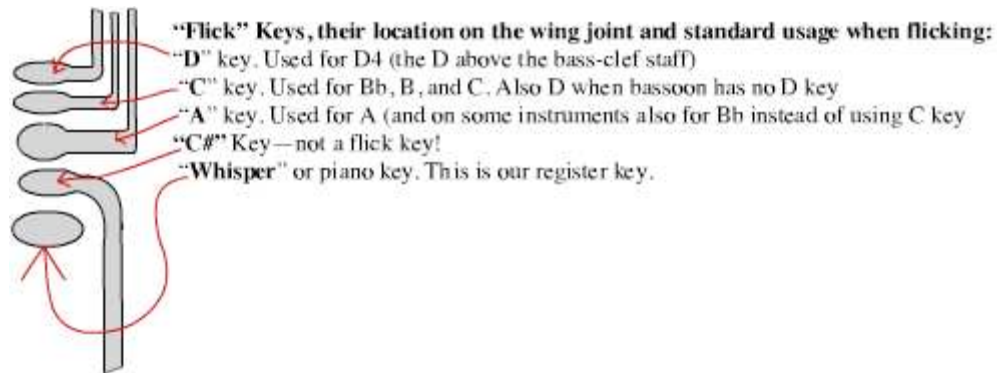
Each of the three **half-hole** notes at the top of the bass clef staff requires a different size hole opening: F# requires the largest opening with approximately two-thirds of the hole being open, G is probably a true half-hole, Ab is the fussiest of these notes. It requires approximately one quarter of the hole to be open.



If the opening is too small either a low-pitched “growl” or the lower octave will come out (as is the case with all half-holes,) but also with the A-flat if the opening is too large a high-pitched multiphonic squawk or squeak results! Two additional rules that should be observed are: 1. The left index finger should roll down (not slide) to uncover the necessary hole opening, and 2. The whisper key should be on whenever there is a half-hole. The G and Ab of the next higher (3rd) octave also require the use of the half-hole and, in fact, each note uses the same size hole opening as in the lower octave. There are many possible fingerings available for the F# in that 3rd octave, some of which also require a half-hole. Once again, even though the notes are in a high register, the whisper key should be on if possible (although please see the exceptions noted below.)

Flicking involves the venting of specific wing-joint keys to aid the response of certain notes above the break. There are various means of achieving the technique but it gets its name from a

motion which touches and then releases the appropriate 'flick-key' at the beginning of the note. The flicking register is immediately above the half-hole register described above. The most commonly accepted flick keys are shown in figure 1:



Many bassoon teachers have their students hold down the correct flick key for the duration of the note, a technique often referred to as 'venting.' If it is taught as being just part of the fingering then the students do not usually have any difficulty with the technique. However, it most often is added on after the player has already established the fingering and then it can be difficult for the student to assimilate. In the bassoon chapters of *Teaching Woodwinds*, Dietz outlines a very effective method for learning the technique of flicking.

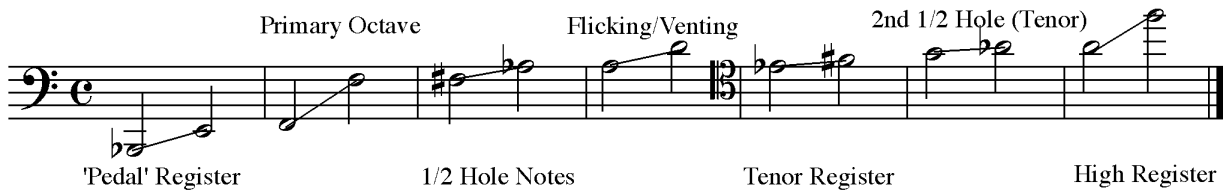
Fork Fingerings: A fork fingering is one in which the first and third fingers of one hand are down while the middle (2nd) finger is raised. While most instruments have evolved beyond the point of requiring this type of fingering for most of their primary or standard fingerings, the bassoon still requires the use of several: Eb in the staff, Tenor register E and F, high F#, Bb, B, C (all require Right Hand 1,2,4), high C# (requires a DOUBLE fork—1,3 in both hands!)

An **interesting phenomenon** occurs on the bassoon due to the method that keys are named or labeled. All keys receive their names (Eb key, C# key, etc.) from the LOWEST note that they affect. This can cause confusion in higher registers because the note with the same name often will NOT use that key. For example the Ebs both in and the octave above the staff do NOT use the Eb key, but ALL notes from the E-natural above the staff and up do. Neither of the F# keys (there are two) are used for high F#, the Ab keys are not used for high Ab, and the Bb keys are not used for high Bb. This latter is particularly confusing as the high B-natural and C do use the Bb key.

As mentioned above, there are very complicated patterns and techniques involved in fingering on the bassoon. Not only this, but there are several rules that need to be established (e.g. the whisper key [WK] is on for all half-hole notes) that then must have definite **exceptions**. When moving rapidly from a half-hole note to a flicked note it is often problematic for the left thumb to attempt to go from the WK to the appropriate flick key at speed. Often there is extraneous noise involved and/or the thumb arrives late and cracking or unevenness occurs. In this instance, it is usually more important to flick the higher note to prevent cracking than to have the whisper key on for the half-hole. To prevent this I will often suggest that a student learn to deliberately play the half-hole note WITHOUT the whisper key to expedite the smooth transition from note to note. This also becomes particularly important in the 3rd octave going from either the half hole G or G#/Ab to an A-natural or above. The high A, Bb, B, C, C#, D, etc. ALL require that the left thumb press and hold a specific key or combination keys for the duration. In this instance the whisper key on the half-hole notes is not essential but the left thumb keys for the higher notes are. If a problem is created with the left thumb traveling from the WK to the vent keys then deliberately leaving the WK off the half-hole notes will often greatly aid the smooth transition.

Another important and common exception to a standard fingering occurs when moving to and from the lowest notes of the bassoon. Again, the left thumb is primarily involved. The six chromatic notes from Eb down to the lowest Bb all require the left thumb to engage specific keys, in fact, the only differences between these six chromatic notes are produced by the left pinky and left thumb. When moving from a higher note that requires the whisper key down to one of these lower notes it is best for the thumb to leave the whisper key early in order to arrive on the appropriate key(s) in time for the necessary low note. The opposite is true when coming from a low note requiring the thumb up to a higher one. Here, the thumb should arrive late on the whisper key. Another way to avoid this issue in some circumstances can be to use a **whisper key lock**. This is a device that engages the whisper key permanently thereby closing the hole in the bocal and facilitating low register playing. All professional and good student model bassoons usually have this device. It can be very useful and in fact essential for certain passages in the literature but its use must be learned and the player must identify when to engage and disengage it. If left on, the whisper key lock will cause many response and cracking issues in the flicking and higher registers.

Fingering Registers of the Bassoon:



- Low Bb-E** **'Pedal' Register** below primary octave. All tone holes are closed and one (just the Right for the E) or both thumbs are engaged. Left thumb and pinky control different pitches
- F-F** **Primary Octave.** Majority of notes produced by raising or lowering fingers on open tone holes.
- F#-Ab** **Half-hole notes.** Primary octave notes overblown one octave higher, controlled by opening the left hand first finger tone hole the correct amount as discussed above.
- A-D** **"Flicking/Venting Register.** Primary octave notes overblown one octave higher, controlled by touching and releasing (flicking) or holding down (venting) the appropriate keys as discussed above.
- Eb-F#** **Tenor Register.** Fingerings have little to no relationship to the lower octave.
- G-Ab** **2nd Half-hole Register (Tenor).** Left hand is very similar to half-hole register an octave lower. Right hand has little to no relationship to lower octave, however.
- A and above** **High Register.** Fingerings have little to no relationship to the lower octave. Left thumb key(s) required for all notes. Fingering patterns are awkward and complicated.