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Principles of Fingering Choices on the Boehm System Clarinet

by Phillip O. Paglialonga, D.M.A.

In the 1830s Theobald Boehm created a new system of fingerings for the flute that would revolutionize woodwind fingerings. This system was the outgrowth of a very basic idea: that tone holes should be placed and sized according to their acoustical ideal, and not limited to what felt comfortable in the fingers. To accommodate this approach a mechanism was crafted to enable the fingers to comfortably allow this placement (and in some cases allow larger sized holes than could be covered by the fingers).

Hyacinthe Klosé and Auguste Buffet applied the basic premise behind Boehm's flute fingering system to the clarinet between 1839 and 1843 to create the modern French fingering system. Today we refer to this fingering system as the "Boehm System", but it should be noted that this name is somewhat misleading, as Boehm himself had no direct part in creating the fingering system used on the clarinet.

The Boehm System was incredibly successful in France and largely replaced the popular Albert System by the end of the 1870s. The success of the Boehm System was made possible by Klosé's influence as the primary teacher at the Paris Conservatory where his students trained on the new fingering system.

The Boehm System affords clarinetists with multiple possible fingerings of a single note in many cases; however, not all fingerings can be used interchangeably.

Using the incorrect fingering can cause a variety of audible problems, including sloppy or slow technique as well as pitch issues.

To learn which fingering is the correct one to be used one must understand a series of simple principles. In some cases these principles are easily applied, however, in other cases a less advanced student may struggle to apply all of these subtle rules correctly.

Principle #1: Whenever possible alternate the left and right pinkies.

The most basic principle is that whenever possible you should always alternate the use of the left and right pinkies. Alternating pinkies allows for an absolutely clean transition from note-to-note as well as allowing for quicker finger motion.

To figure out how to correctly alternate pinkies you must first realize that two pitches can only be fingered one way¹. C#4 can only be fingered using the left pinky and G#3 can only be fingered using the right pinky.

C#4 'L'



G#3 'R'



1 Those instruments that have the extra "alternate left hand pinky" allow for an exception to this statement since they allow G#3 to be fingered using either pinky. Despite the ability to finger G# using either pinky the preference should always be to use the right pinky since this helps keep your hands from having to reach out to the alternate key which can bring them out of the proper hand position.

When these notes are encountered in a passage the correct fingering should be marked in first (“L” or “R” next to the note in the music) then the surrounding notes that require a pinky can be marked in so that one alternates pinkies. I always teach my students to mark in the C# and G# fingerings first and to ‘work around them’ in order to avoid errors.

In some cases, you will find that it is not possible to alternate pinkies in the manner described above because of the sequence of notes. In this rare case, one must slide the pinky on one side to complete the passage (‘L-L’ or ‘R-R’). If a slide is required you should always try to slide from the higher row of keys to the lower row of keys. Furthermore, the finger should not lift, but instead hit the edge of the top key and then gently slide down to the bottom row of keys so that there is a minimum amount of disruption between notes.

In some passages a note that does not require a pinky divides notes that require pinkies. In such a case it is always best to alternate pinkies as if the middle note is not there. This is not only a sound practice because it enables the clean execution of the passage at an extremely fast speed but also because it helps to train the fingers to always move in the same manner.



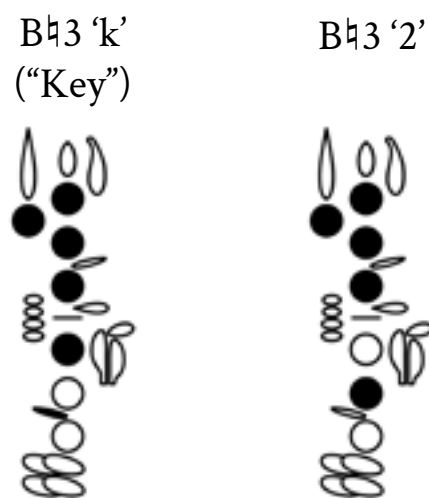
Principle #2: When possible finger motion should be contained in one hand.

It is always easier to coordinate moving two fingers together at the same time in one hand than it would be to coordinate a finger from each hand. So whenever possible, the motion should be limited to one hand. This rule makes it so that your right pinky will always be busier than your left pinky. I would say about 70% of the time you should be using your right pinky as

opposed to the left pinky, when both choices allow for the proper alternation of the left and right pinkies.

Principle #3: Whenever B \natural and B \flat are next to each other use the ‘key’ fingering.

Special care should be taken to never finger B \natural using the middle finger when it is placed next to B \flat . Alternating between these notes in this manner inevitably causes a bump in the sound since it is impossible to time the exchange of fingers precisely enough to get it clean².



This decision is further supported by the fact that the ‘key’ fingering for B \natural should always be considered the primary fingering for B \natural . A primary fingering is the fingering that should be used as a default because it produces the best sound and intonation. It is a good rule of thumb to always use the primary fingering for a note unless there is a good reason to do otherwise.



The only exception to this rule happens when the note that follows the B \natural requires a right pinky. It is generally difficult to move from the B \natural key fingering to a note that requires the right pinky, so in this case it is considered acceptable to ‘hop’ between B \flat and B \natural in order to leave the B \natural cleanly.

2 It should be noted that all of these principles are described in the chalumeau register, but also apply in similar fashion up a 12th in the clarion register.



Principle #4: The primary fingering for Eb4 is with the side key.

There are several ways to finger Eb4, but preference should always be given to the side key fingering.

Eb4 's'



Though it often contradicts Principle #2 by requiring you to split the motion between two hands, using the side-key to finger Eb4 is preferential because of both the tone quality and intonation it provides.

In a passage that is moving quite rapidly, where the quality of sound and pitch is not easily audible you can choose to use the key-fingering for Eb4 instead in order to keep the motion confined to one hand.

Eb4 'k'



Those passages that might require the use of the 'key' fingering are often tremolo or trill figures.

Principle #5: The question of the 'side' or 'first finger' for F#.

How to properly finger F#4 depends on which school of thought you chose to adopt.

Legendary clarinetist Robert Marcellus taught that the primary fingering for F#4 is always using the first finger. Marcellus believed that both the quality of tone and intonation achieved using the side-key fingering

was inferior to that of the first finger. He also believed that in rapid passages the side-key fingering was not as clean.

F#4 '1'



F#4 's'



Other prominent clarinetists instead teach that the primary fingering for F#4 is the side-key fingering. They disagree with Marcellus and find the side key gives a more desirable tone quality and intonation.

When I was younger I was always taught to play the F# with the first finger as suggested by Mr. Marcellus; however, when I got to college in Chicago I switched my preference toward the alternative view. I can see the logic in both lines of thought, and think that the older instruments that Mr. Marcellus was playing on tended to make the first finger fingering sound preferable; however, today I think the difference is hardly noticeable. Usually when I am teaching young students I teach them to use the side key as the primary fingering because most students never get to a level of proficiency where using the first finger can be done cleanly at faster tempos. But with more advanced students who are capable of using the first finger cleanly at a rapid tempo I tend to have them favor this fingering.

Whichever fingering you chose I think you should be consistent in your approach, but at the end of the day you should realize that the difference between the two approaches is minute.

The best way to learn to use the correct fingerings is to work through the mechanism studies found in *Klose's Celebrated Method for the Clarinet*. These short exercises

were, in fact, written to introduce people to the Boehm System. I often start young students within only a few months of starting on the instrument on these exercises. I have them perform each 'cell' slowly with a completely homogeneous sound being sure to use all of the correct fingerings. Once a student has worked

through all of these exercises I generally will have them work through Fritz Kroepsch's *416 Progressive Daily Studies* until I am confident in their facility on the instrument.



About the Author...

Clarinetist **Phillip O. Paglialonga** teaches at Virginia Tech in Blacksburg, Virginia. He is a founding member of the PEN Trio (www.PENtrio.com), which regularly tours throughout the United States and is represented by Price Rubin & Partners. In the summer months Dr. Paglialonga is on the faculty at Blue Lake Fine Arts Camp in Michigan. More information about Dr. Paglialonga is available on his website (www.thefirstgissilent.com).



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