

## Technique

The clarinet is nearly unique in its ability to play an extraordinary number of notes in the blink of an eye. Only the flute can surpass its speed. Consequently, much of our repertoire consists of extremely technical passages. Learning to play fast and with fluidity is important to any clarinetist. Learning to make efficient use of your limited practice time will speed you toward your goals.

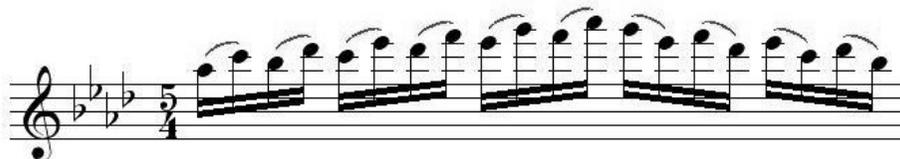
Since the bases of most western music are scales and arpeggios, mastery of them is of utmost importance. Knowing extended (full clarinet range) major and minor scales, arpeggios, and thirds can be obtained through scale books. Rudolf Jettel's *Klarinettenschule* vol. 2 is the best one. It also has exercises for fourths, fifths, sixths, sevenths, as well as seventh and ninth chords, whole tone exercises, diminished and augmented chords, and chromatic exercises. It is utterly comprehensive.

When learning these and any other technical passage, slow, isolated practice is of paramount importance. I cannot stress enough the importance of slow practice of small passages - and by small I mean anywhere from nine down to two notes! It is also IMPOSSIBLE to practice technique without a metronome. Use it. Listen to it. Play with it.

Let us take as an example of a technical passage one of Jettel's exercises in thirds:



Practicing the whole thing at once would be a complete waste of valuable practice time. When confronted with a hard passage, page, or work of music, I choose what I believe is the most difficult part and start there. In this case, it is the top-most portion of the exercise:



Let us first familiarize ourselves with the fingerings to be used (see section on fingering choices), and play the passage slowly, as if each note were a quarter-note at slow speed. Once we feel confident in our familiarity with the fingerings, it is time to pick a slow speed, say eighth-note equal to 50 beats a minute. You will have to find the appropriate starting point for yourself, but it is important to remember NEVER to play the passage sloppily, or you will practice playing sloppily very well. Choose a tempo in which you can play evenly, and securely. The object is to get your mind around the difficult finger combinations until they become easy (or are “in your fingers”). Play the passage through a few times until you start to feel comfortable. How does one define “comfortable”? I would consider it comfortable when I can play it twice in a row without making a mistake. When doing this, it is important to “fill up the beat.”

“Filling up the beat” is a term I use to describe being in perfect lock-step with the metronome, without being ahead at all. Imagine a graph of the beat in time, and you want the sound of that beat (triplets, quarter notes, whatever you’re working on) to fill up that graphic space to the utmost. This necessitates playing slower than you think, waiting until the last possible moment to move to the next note in perfect time with the clicking. This is particularly important for playing very fast passages calmly.

After you have played it twice in a row evenly, proceed to playing it un-evenly. This enables you to practice two notes at a time quickly. Begin with the following rhythm, making sure to make the short note as short as you can, and the long note as long as possible to fill up the beat:



After playing this twice in a row proceed to the next rhythm twice in a row:



And finally, twice in a row evenly again.

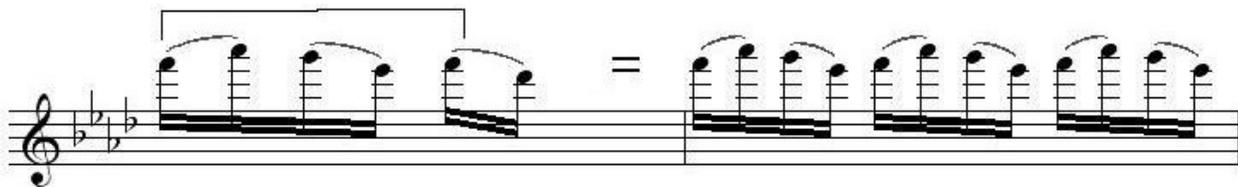
Only after completing this, do you move your metronome forward one or two clicks (standard metronome markings), and repeat the whole process.

Eventually, you will reach a point where you are unable to play the passage smoothly and cleanly at any faster speed. At this point, put the passage away for this session, and come back to it at a later time. Practice something else. When you come back to it later, you will not need to start as slowly as your first tempo from the first session, but you **MUST** start at a much slower tempo than where you left off. You will again work your way up to as fast as you can play it, never playing sloppily. After a few days (or weeks, depending on how difficult the chosen passage is for you), you will reach your goal tempo. Here it should be pointed out that in order to play anything reliably in performance, you need to practice it smoothly and calmly at a faster tempo than you will need in performance.

Triplet passages may be executed with the following uneven rhythms



Do not forget that you can isolate any passage, including this example, further to smaller components of three or four notes. It is often possible to loop a pattern if you have a passage where the last note of the isolated area is also the first note, becoming:

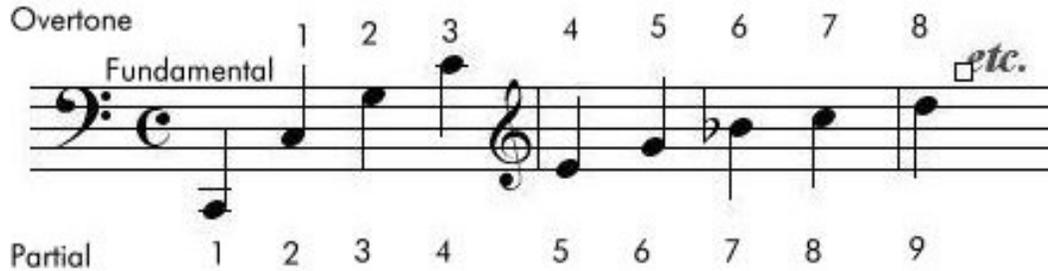


Once isolation of the most difficult portions has been mastered, practice (slow to fast) of larger portions should be added.

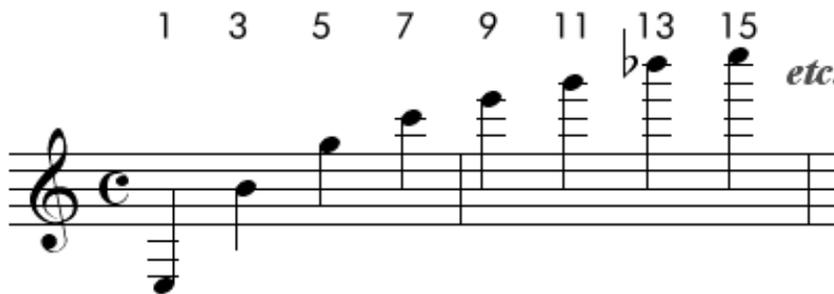
## **Overtones and Partials**

All sounds in the universe contain within them an infinite number of sounds that are called overtones. The relative strength and weakness of these overtones produce the color of that sound, and are the reason why a violin sounds different from a clarinet, and both sound different from a trash can lid. They all follow a specific pattern. Often, the Fundamental pitch (first partial) is the loudest thing you hear and the other overtones are too soft to be directly perceived.

The first overtone (second partial) sounds an octave higher than the fundamental, and the second (third partial) a fifth higher than that (a fifth being, acoustically, half an octave). The third overtone (fourth partial) sounds a fourth higher than the second, making it two octaves above the fundamental. The overtones then proceed as follows: major third, minor third, flat minor third, sharp major second (now three octaves above the fundamental) and so on, charted thus on low C:



One of the things that gives the clarinet its unique, “hollow” or “pure,” sound is that its cylindrical bore makes it skip the even partials, thereby over-blowing an octave and a fifth. On the other hand, the Violin has a much more present second partial and its overtones follow a nearly parabolic curve ascending and fading to inaudibility. Partial, charted from the clarinet's lowest note are thus:



### Fingerings

Contrary to some teachers, I do not believe in the concept of “alternate” fingerings. There are only the most appropriate fingerings for whichever particular passage you are working on. The clarinet almost always has multiple choices for each pitch, and almost always has one that works better than another. For example, there are 5 different ways to play middle-of-staff B, and dozens of ways to play high G. Some general guidelines I have are:

- 1) Avoid slipping
- 2) Avoid flipping (B-flat to B-natural, F to F-sharp)
- 3) Use one hand whenever possible (this rule has a few exceptions)



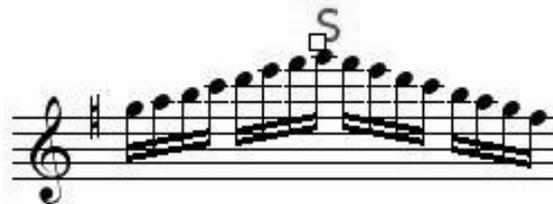
less clear example is the G-major arpeggio, which leaves you three main choices for “long” B (middle of the staff): Left pinky, right pinky, or both pinkies. Coming from G ascending to B, you must move both hands, and moving from B to D requires only one pinky of either hand to move (meaning the both pinkies fingering is out!) But, when moving from D to G, you will be moving your right hand only, so staying with your right hand from B to D is going to make things easier.

**Stay in the same partial, or register** - while I don’t advocate as strict adherence to this rule as my teacher Stanley Hasty (who, for example played the last big run of the second movement of Stravinsky’s “Three Pieces” all in the third partial), I do feel that it can be of great benefit as long as the tone of the chosen fingering is good. Some examples are as follows:

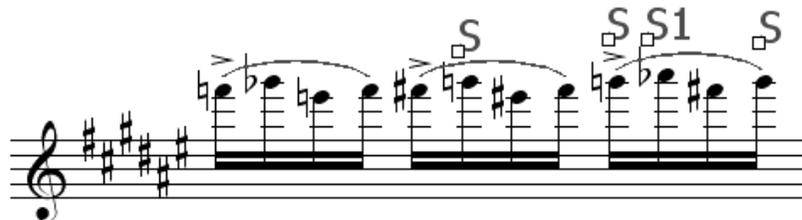
Rose Etude No. 1  
B in 1<sup>st</sup> partial



G major scale  
G in 5<sup>th</sup> partial



Daphnis and Chloe  
all 5<sup>th</sup> partial



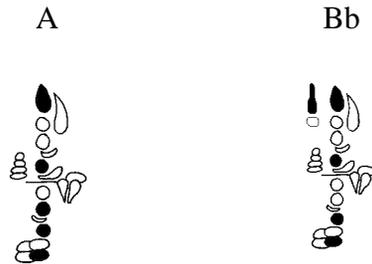
**Choose a note that sounds good, is in tune, and matches the notes around it** - this rule is the most subjective and can often be used to contradict rules 3 and 4. It is the reason you wouldn’t play a side D in the big solo from Rachmaninov’s Second Symphony, and other slow works with long notes in them.

### **Register keys, resonance keys, and resonance fingerings**

While the clarinet has only one key that is actually called the “register key,” it uses many other register keys to go between partials. A register key is defined as any open hole above the lowest closed hole on the clarinet, looking at it from top to bottom. For example, when playing the D above the staff, the “lowest closed hole” would be the one closed with the first finger of your right hand, and the “open holes” would be the “register key” and the hole opened with the

first finger of your left hand. Both open holes are functioning as register keys. Some experimentation with opening holes in this manner can lead to new fingering discoveries, novel sounds, and multi-phonics.

A resonance key is any hole opened or closed below the lowest closed hole on the clarinet. These fingerings are used primarily to change the tone color or pitch (or both) of notes. The most common uses of resonance fingerings are the Eb/Ab key used for high D and above, and in the throat Bb and A. My favorite throat resonance fingerings are:



Experiment with different pinky keys and different combinations of left and right ring- and middle-fingers to find the best-sounding and most in-tune fingerings for these notes. Having fingers in your right hand down also makes crossing the break to a “long” note (B, C, C#, etc.) easier and smoother.

Using resonance fingerings for “shading” of pitches to play in tune is often less damaging to the tone color than relaxing or tightening your jaw in the extreme.

## **Half-Hole**

Stanley Hasty says that “a register key is best when precisely placed and as small as possible.” It is with this in mind that people use half-holing. Half-holing notes in the 5<sup>th</sup> partial is principally for three things: playing those notes softly and/or fading out on them without a grunt; easily getting to 5<sup>th</sup> partial high G (see fingerings - 5 G) by rolling your left-hand first finger up from half- to whole-hole for the G; and ascending across the second break smoothly, especially with minor sixths and nearby intervals. Do not use half-hole to descend across the second break - it will become more difficult. Therefore, when faced with a 6<sup>th</sup>, for example F-D and back, you will have the best results by half-holing on the ascent, then picking up your left-hand first finger and moving it back down quickly (and maybe with a little pop) to make the F come out right away. This “rolling” half-hole is a good technique to master.

## **“Wave” technique**

When playing very fast, as the clarinet often does, one has to use a different type of finger movement than when playing moderate passages. I refer to this as “wave” technique, for the kind of wave-like appearance your fingers will take on when playing a fast scale. The main difference between this and “regular” movement is that before the first finger you move is done moving, you’re starting to move the next finger. This is as opposed to moving one finger at a time. Here as in many other aspects of clarinet playing, visualization is often valuable, as you see in your mind your fingers moving in a wave. You can also practice this by thrumming or drumming your fingers quickly on a table.

This technique is also applicable in other passages like chromatic scales, arpeggios, and even back-and-forth fast passages like the opening of the Second Suite of “Daphnis and Chloe.”

## **Fingerings**

It is important to have quick labels for fingerings in your music. Below are some symbols and some of my most commonly used high fingerings. All fingerings here use Thumb and Register Key.

**R** and **L** for Right and Left

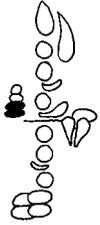
**F** for Fork

**S** for Side

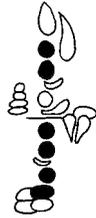
**+** for “cross” fingering (as opposed to Fork B and F#, and Side throat F#)

**Numbers** to denote partials (3, 5, 7, etc)

S C#



Long F# (7)



Alternate  
Long F#



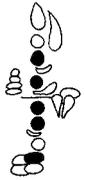
S F#



Fav. G



Chromatic to  
high C  
"C#" G



5 G



Sharp, but reliable  
1/12 G



NEVER G



This G is not used by pros. It is too sharp, which is why it's taught first, when kids can't play in tune up high.

S G (trill)



Fav G#



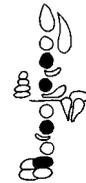
S1 G#



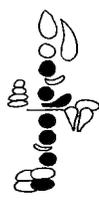
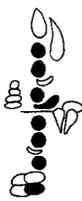
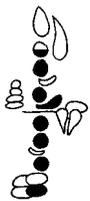
S2 G#



Chromatic to high C  
7 G#



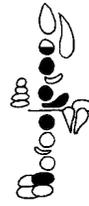
Best Bb



Chromatic  
Bb



Chromatic  
B



Best B



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