

Why not extend your palette with multiphonics? By Dean Stallard

"What are multiphonics?" I was shocked when a student in her final year at college asked that question of me, but the question is legitimate. What are multiphonics and what possible reason could there be that I practice them?

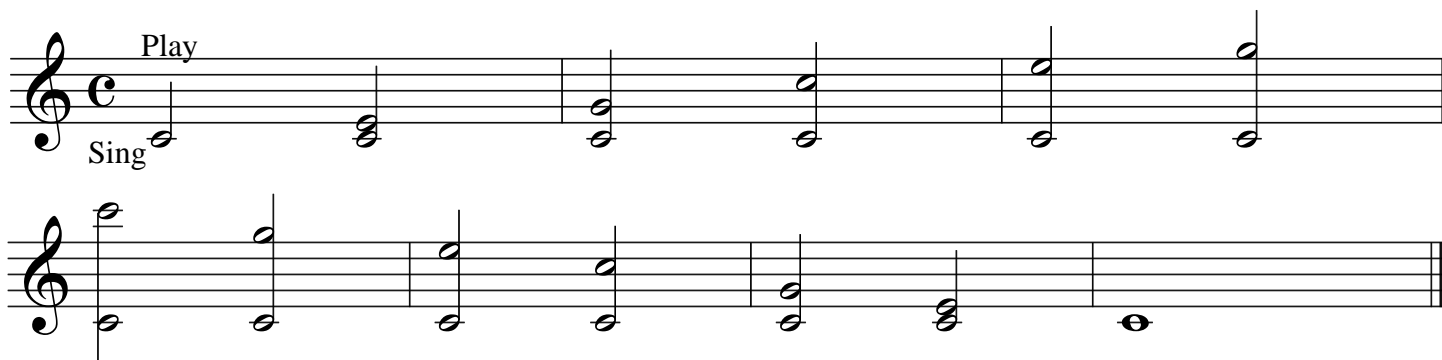
The simplest answer to the latter is that we live in a modern age where composers are constantly exploring new sounds and sonorities. Multiphonics have been around in flute music for nearly 50 years so they can't really be described as new, but as composers are still exploring the possibilities you can be sure that they will turn up more frequently in the future. Even if you choose to ignore their presence in post-war repertoire, just think that you will be asking your students and their students in the future, to ignore a whole century of flute repertoire!

Another reason to practice multiphonics is that they will stretch your flexibility and control, which will help you to improve all aspects of your playing.

Multiphonics. "Term for the sounding of two or more pitches simultaneously on an instrument that sounds normally only single notes, or with the voice" (The Groves concise dictionary of music 1988, ed. Stanley Sadie).

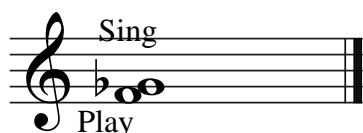
According to this description, we have already looked at one way to produce multiphonics in Flutewise issue 54, by singing and playing in polyphony. "Aha!" cry the more cynical readers "singing and playing is in effect using two instruments, the flute and the voice". This of course is true but the fact is that singing and playing two different notes will produce a third difference tone (the mathematical difference in frequencies of the two notes sounded, sets up a new tone), so in theory at least, either the voice or the flute is producing a multiphonic. So "aha!" yourselves and I choose first to take a new look at singing and playing.

Try this example;



Concentrate hard on holding the tonic steady and avoid making a crescendo as you rise through the chord. Not only is this excellent practice for your ears it will help you to focus the embouchure in a relaxed and precise way. Apply this exercise to all major and minor chords listening closely for difference tones. If you find it difficult to hear because of your singing then record yourself.

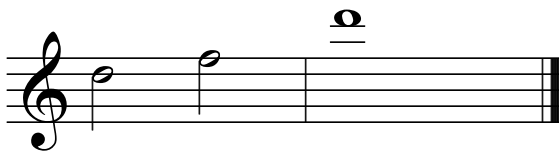
Another kind of difference effect can create a very interesting sonority;



The beating set up between these two notes should be clearly audible and create a hammer-drill like vibration!?! A very unpleasant effect that could be used successfully in a film score, theatre music or at Halloween!

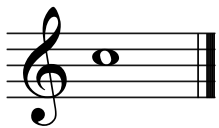
Moving on from singing and playing we get to multiphonics created from fingering combinations. These are combinations that will favour several notes equally well and a good deal of control and flexibility is needed from the player to "balance" between the two notes being played. The possibilities are almost endless and I encourage you to get either "Tone development through extended techniques" or "The other flute", both by Robert Dick and published by Multiple Breath Music, as a point of reference in your practice. We will however take a short look at the simpler possibilities here.

The most common combination to begin with is the fingering for F1 with the little finger (pinky) raised and both trill keys depressed. This will yield the following notes;



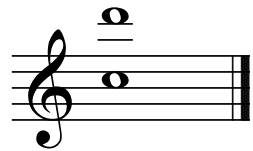
I find this multiphonic to be very unstable and difficult to keep two notes going. Novices often end up jumping between notes without ever having two notes sound simultaneously for any period of time.

I find it much better to have the uninitiated tackle fingerings that demand a bit more effort to switch between the notes as there is a much larger window of stability on the shift and they quickly manage to sustain two notes simultaneously. In fact the fingerings for most of the notes in 3rd register fit this bill perfectly and have the added advantage of the fingerings being familiar. Use the fingering for D3 and see if you can hit a lower note. You should find that you hit

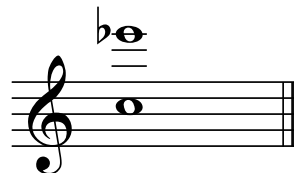


although it is quite muted. This note is available because you have opened the C# key but closed the next two holes which will draw the pitch down to C. This is the way that they played chromatics on pre-Boehm flutes.

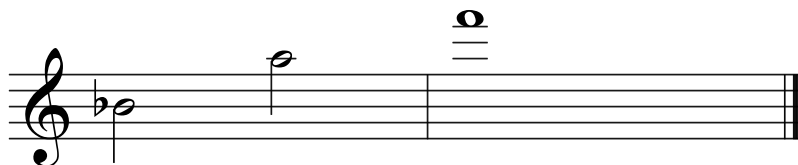
OK, now using this fingering play the C and concentrate hard on playing it with stability. Gradually move your lips towards "u" and if necessary increase the air pressure a bit. As the D3 starts sounding concentrate even harder on the C and try to increase volume. You should now be playing this multiphonic;



Congratulations, your first proper multiphonic!!
Add your left little finger (pinky) and you'll have your second multiphonic;



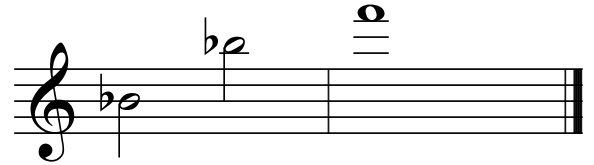
What about the fingering for F3?
The following notes should be available;



giving the possibility of these multiphonics



This is where you will find my evidence of the 3rd register notes being based on 3rd harmonics of left hand notes. F3 according to my school of thought is based on the fingering of Bb1. The notes available with Bb1 are;



Compare these notes with those available from the F3 fingering. They are not identical because the Bb2 has been flattened to A by the extra fingers (remember how C# became C?). Taking this modification into account then those that did their homework on the harmonic series in the last articles, will realise that the spacing of the available notes from an F3 fingering gives only one possible answer; the notes of the 3rd register are based on 3rd harmonics.

Explore the multiphonic possibilities open to you with the fingerings from D3-Ab3 (they won't all work, but most do). When you can comfortably sustain multiphonics with these fingerings you will be ready to explore the world of possibilities that Robert Dick lays out for you.