

Practicing Scales with Harmonics

BY ERIC RUYLE

Teachers often give beginning flutists simple harmonic exercises to build flexibility and tone quality. The problem with these is that most method books include exercises that have large intervals that are hard for younger students to hear. The result is that the player overcompensates with changes in breath support or embouchure, either of which defeats the goal of gaining flexibility. Students become frustrated and discontinue the harmonic exercises.

To alleviate this problem it is best to use harmonic exercises that are based on major scales and thirds. The following exercises are simple enough that beginners will gain confidence with the overtone series.

The G major scale should be played first using regular fingerings, then with harmonic fingerings. Start by using the G2 fingering for C1, which will produce the second harmonic based on low C. The A2 can be produced by fingering D1 and the B2 based on E1. The C3 is produced by playing the third harmonic from C1. Continue up the scale, using the lowest possible note as the basis for the harmonic. This example gives the complete harmonic fingerings for the G major scale. This method can be used for the A^b and A major scales.



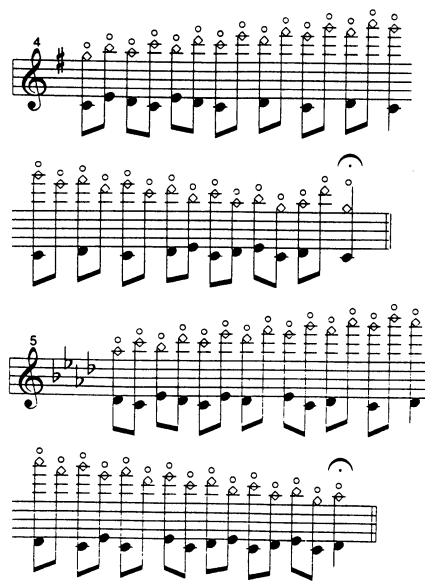
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Students should anticipate the next note in the scale and be free to concentrate on the minor adjustments. The work should be done by the breath support and air stream, and gradually students will become more attuned to the minute changes. An example of this is the change from the second harmonic for B to the third for C; this requires only a small increase in the air speed, not the expected large one.

All exercises should be slurred and at a soft dynamic level, which is challenging at first. These exercises will encourage using good breath support and experiments with the air stream and aperture to produce the higher harmonics. They also develop a firm, focused embouchure because harmonics, especially the higher ones, will not respond to a pinched or forced aperture.

Harmonic fingerings can be used when practicing scales in thirds. This is even more challenging: these intervals require greater focus and flexibility because the adjacent notes are often produced with the same fingerings. In this example the same fingering is used in going from C3 to E3. The air stream should change slightly to produce the D2 and again for F#3. The adjustments should be to the direction and speed of the air stream, not the embouchure. The next step is to play thirds based upon the G, A^b, and A major scales using the fingerings in the second example. The thirds in the G major scale are the most challenging and beneficial because so many notes use the same fingering.



When the student goes back and plays a G major scale using the regular fingerings but with the embouchure and air stream adjustments that were used for the harmonics, there should be a considerable change in the tone. The exercises should be worked on early in the warm-up routine to focus attention on the embouchure adjustments that will improve the balance of the practice session.

Harmonic exercises can fatigue the lips so they should not be practiced for extended periods. Instead of improving the tone, when these exercises are overpracticed the sound can become pinched. Develop clear goals of the musical result before attempting to practice harmonics to achieve optimum results.

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