Once you have gained some facility with forming and changing your embouchure, give the following exercise a try. It is an excellent one for becoming aware of embouchure changes and is also a great embouchure warm-up.

Play a low D and gradually, without articulating, change to the D an octave higher. This second D is the first overtone of the fundamental note (low D). By continuing to change your embouchure in this way you can reach the second overtone, which is an A a fifth higher than the second D. Continuing to change your embouchure you can reach several of the higher overtones. The third one is a D two octaves higher than the fundamental. The fourth is an F-sharp above that and the fifth is an A above that. If you can reach the fifth overtone, you are doing extremely well. Note that some of these overtones, especially the F-sharp, sound out of tune to our ears.

Once you can play these tones, try climbing up *and* down the series of overtones in a controlled way. This may require quite a bit of practice and your facial muscles will get tired. Don't overtax them. Try this exercise starting on other notes of the scale, such as low E, F-sharp, G, etc.

As you gain more control, you can try moving among these overtones with specific rhythms, creating simple slow melodies using only the overtones of the fundamental. When you are able to do this you will have gained a fine degree of embouchure control. Two examples of such exercises are shown below, and you can make up your own. Those shown below in Figure 6-12 are played on the fundamental note of low D, but you can transpose them using any of the low register notes as fundamental tones. Try playing these note sequences slurred, articulated, and with combinations of slurs and articulations. (The small circles above these notes indicate that they are played as overtones, or harmonics.)

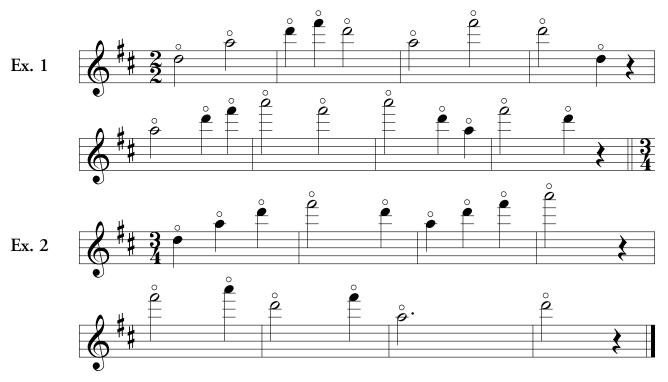


Figure 6-12. Two examples of embouchure exercises using the overtones of low D.

## LONG TONES: ANOTHER VERY USEFUL EXERCISE

Here is a warm-up that very effectively tunes your embouchure and wakes up your breathing apparatus. Classical wind players use this type of exercise in a wide variety of ways to work on tone.

Starting with B in the first octave, take a deep, full breath and play a long, steady note using the kind of tone that you most like. Around the middle of your breath, drop cleanly down to A. Maintain the same steady tone quality