

### A Bit About Overtones,-Yours.

Many of us have played or are currently playing a wind instrument. If you haven't or don't, you have probably heard some one, at some time in your past life, play a tune on the mouth piece alone. While recognizable, it was far from pretty. It sounded very much like Donald Duck on a good day. The reason? What you are hearing is the pitch produced by the stretched and taught lips as they vibrate against the mouthpiece. It is not a very smooth motion and due to physiologic limitations rather jerky. This jerkiness can't be seen or felt because it is so fast but it can be measured with scientific instruments. What you hear is the fundamental tone plus about four octaves of overtones. The pitch can be maneuvered up or down by tightening the lip muscles but the raucous buzz will not win anybody's contest for beauty. There are probably more than 4 octaves of overtones being produced. This is a real cacophony, a garbage basket of sound.

So what do we do if we want to hear "Beautiful Dreamer" without becoming a permanent insomniac. We send for a talented musician to solve our problem. The only current instrumentalist in our group that I know of is Cal Claus. Now Cal doesn't waste his time producing glorified raspberries with his mouthpiece, he attaches it to his tuba and right away we have a much more soothing sound.

What's happened? Cal, clever dog that he is, knows how to combine his buzzing embouchure with the correct valve openings and closings, and modifies the garbage basket of overtones by amplifying some, damping some, combining some, etc. The result is a recognizable sound, a musical note that has the timbre of a tuba and is pleasing to the ear.

But what about those of us who are non-tubists, us poor run-of-the-mill barbershoppers? What can we do for fun?

Our vocal cords produce a similar garbage basket of sound, the raucous Donald Duck-like gargle that buzzing our lips into the mouthpiece of an instrument does. A singer singing G below middle C will put out more than seventeen measurable overtones over four octaves in range. This is what most of us do. We are, however aware of only one note or sound. Why? We have no valves to press but we have a mobile and talented tongue, a changeable jaw position, a flexible palate, shapeable lips, etc. These are our valves and are infinitely changeable, much more so than those of an instrument. With them we can take four octaves worth of overtones and do something with it.

As a quartet or a chorus, the more similar the moves of our jaws, palates, tongues, lips, etc. are, the more uniform our vocalization will be and the better we will sound. When our moves are dissimilar more overtones are released to race about the room, interfere with each other, push each other around, and in general cause trouble. On the other hand, if we use similar positions of our vocal apparatus, the overtones will be similar and will reinforce each other and we will "ring" the chords. This is an obviously desirable goal.

Last month we saw how knowing our words would help decrease comparisons to Porky Pig. Now, with proper vowel formation, we can become less like Donald Duck. Next month, the Mouse.

### Also Regarding Overtones...

There are singers in certain parts of the world who are able utilize their harmonics and sing duets with themselves. The best known region for this is in Siberia, some area called the Tuva. It sounds a little like a bagpipe and a flute playing together, kind of weird. Maybe we could get one to sing bass and tenor at the same time. There aren't many people in Siberia and it beats watching the grass grow or ?. And we all know that sheep lie. Ask Gerry.

Feb Arlingtuner