The Secret Art of Tuning

by Noelette Stout

Okay, so it's not really a secret art, but far too many people approach it that way – especially when it comes to the pipes. Despite the discouraging rumors you may have heard, tuning is something that any player can learn to do. It is a skill, and like all skills, it takes some practice.

To start out, you need to know a few terms in the tuning lingo. These are the basic terms to help describe what you're doing.

- Pitch – the pitch is the note you're trying to tune.
- Flat – the pitch is lower than it should be.
- Sharp – the pitch is higher than it should be.
- Beats – when used in the context of tuning, this refers to the effect of the opposition of two pitches that are very close, but not exactly in tune with each other. It's that sort of “wow-wow-wow” sound you sometimes hear.
- Air pressure – how much, or how hard, you are blowing.
- Air column – this is the path the air takes through your instrument. Adjusting the length of the air column is the most common and effective way to bring your pipes in tune.

Now that we've got a common language, we can look at what is involved in the skill of tuning. Most people can tell when an instrument is out of tune. At the very least, they will know that it “sounds bad.” When you play with one or two other people, you can probably already hear if you are in tune or not. When many pitches are being played at the same time, it is more difficult it is to hear which one is out of tune. At first, you will probably find it much easier to tune one thing at a time, i.e. chanter, bass drone, middle tenor drone, outer tenor drone. We'll focus on tuning by ear. You can use an electronic tuner, but you should also know how to tune by ear in case an electronic tuner is not available.

When tuning by ear, it is easiest to tune to a reference pitch. A reference pitch is a pitch that is known (or assumed) to be in tune already. In pipe bands, the Pipe Major generally plays the reference pitch. You'll want to start out by playing the same note as the reference pitch. (You can tune intervals [different pitches], which is how we tune the bass drone to the tenor drones, but tuning the same pitch is a much easier way to start.) The goal is to match the reference pitch exactly, so that the two sound as one.

In the beginning, you may feel like you are doing a lot of guesswork when it comes to knowing which way to adjust. Don't worry. You are tuning your ear (and your mind, for that matter) to hear much subtler differences in pitch than you normally think about on a day-to-day basis. The more you practice tuning, the more easily you will be able to hear whether you are higher than the reference pitch (sharp) or lower than the reference pitch (flat).

When two pitches are close to each other, but not exactly in tune, you will get beats. Beats are that kind of “wow-wow-wow” sound you hear. The slower the beats are, the closer you are to being in tune. If you are sharp, you will want to lengthen the air column. When tuning your drones, this is most easily accomplished by pulling out

the top (or middle, in the case of the bass) section of the drone. For tuning the chanter, pull the reed out some. Adding tape to the holes (most commonly for the high A and high G) is another way to lengthen the air column. If you are flat, you will want to shorten the air column. You can do this by pushing in the reed or the top (or middle) drone section. Let the speed of the beats help you know how far to adjust. The faster the beats are, the more you will need to adjust.

As you become more experienced with playing your pipes, you will find you can fix minor pitch problems with air pressure. Since you want to maintain as steady of an amount of pressure on the bag as possible, you will not want to use this as a primary means of tuning. It can, however, be useful in learning to tune.

Decreasing the air pressure will bring the pitch down; increasing the air pressure will make the pitch go up. If you are unsure which way to adjust your reed or drone, try increasing or decreasing the air pressure to hear which way seems to bring you closer in tune.

As mentioned before, air pressure can be used to make minor tuning adjustments when your pipes are otherwise in tune. A common example of this is a slightly flat high A. All of the other notes on the chanter are in tune, but the high A remains slightly flat. A slight increase in pressure when playing the high A should bring this note in tune. The opposite can be done for a note that is slightly sharp. (However, in the case of being sharp, it is preferable to tape the holes and maintain a steady air pressure throughout the range of the pipes.) It should be mentioned that this technique is really only effective once the player is experienced enough to be able to consistently maintain a steady air pressure. It is also worthwhile to note that consistent tuning problems may be indicative of a bad reed, especially if the tuning seems to vary widely from note to note.

Now that you have the basics of tuning, let's review a few key points.

- Adjusting the length of the air column is how the majority of tuning is done. If you are sharp, make the air column longer – pull out. If you are flat, make the air column shorter – push in.
- Two pitches that are not in tune will create beats. The faster the beats, the farther out of tune the two pitches are. Very slow beats indicate that the pitches are almost in tune.
- Air pressure effects pitch. Higher air pressure will make the pitch go up; lower air pressure will bring the pitch down.

All players can learn to tune their pipes. Practice tuning your pipes just as you practice playing your pipes. Feel free to make adjustments that take them wildly out of tune, just so you can bring them back in tune. The more familiar you become with your pipes, the more easily you will be able to tune them. Pipes are like spouses, after a while, you start to figure out which way they like to go ;-)