

Drone reeds producing the Perfect Constant.

Drone reeds are either the cause or the solution to the problem of creating a great sound out of three instruments (two tenors and a bass) simultaneously. With some knowledge and strategy, anyone can produce at least a foundation for a great sound.

The Perfect Constant

In this modern age of piping very few pipers pause to consider what they are trying to do with a set of drones. To me, it's not about the reeds, the blowing, the squeezing, or even the set of drones that you play. These are all factors that play a role in the quality of a drone sound, but they do not constitute the bottom-line concept of "drones." Drones are a backdrop for the pipe music that comes out of the chanter. They play the note "A," in two different octaves, as well as a shocking number of more subtle "harmonics" that sound at various frequencies. The reason we don't usually have cause to point them out is because they fuse seamlessly into the drone sound. And, this is especially true when the sound is well constructed and tuned.

A great drone sound is the perfect constant. It is a rich combination of the bass and two tenors, and all of the harmonics that layer in underneath. Whenever there is a waver in the tone, or the tuning is even a split hair out, the constant disappears and so does the whole point of the concept of "drones."

Your goal here is to create this perfect constant for the chanter to play over top of.

Creating the perfect constant can at times be a tall order, chances are we've all seen it done! We've all seen that great performance with the perfect constant drone sound.

Steady Blowing, Good Tuning, and a Good (rich, harmonious) sounding set of reeds are all ingredients for the perfect constant. Your goal, with the help of this guide, is to put all of that together!

Drone Reed Basics

Let's start with some of the basics.

Upcoming are the parts of a drone reed. But first, let's talk about the difference between bass and tenor reeds. The only major difference most of ya need to know between these two kinds of reeds is their size and shape. Bass reeds are a bit longer, with a bigger/longer tongue and body. This is because it is to be creating a tone (with the help of the double-sized Bass Drone itself) that is a full octave below that of the tenors.

Other than these differences, you will find all types of reeds make the bass and tenors almost exactly the same.

While different makes of reeds are different in a variety of ways, they all have the same basic parts.

Basic Drone Reed Parts

Body

The "body" of the reed is the basic cylinder that the other parts connect to which is hollow inside. This is where the vibrations of the reed will resonate a bit before heading up into the drone.

Tongue

The tongue is the part of the reed that vibrates against the body of the reed to produce a musical tone. Sometimes it is connected to the body directly, but in most cases nowadays it is separate, and is held to the body with a bridal, or bridals.

Bridle

The Bridal is a Band (usually rubber) that wraps around the tongue and body of the reed, and is used to adjust the "openness" or strength of the reed. Adjustments will also alter the pitch, because the inherent

length of the tongue will change when the bridle moves up or down the tongue.

Sub Bridle

Sometimes there is a secondary bridle that sort of “anchors” the tongue to the reed. This will be “above” (ie closer to the drone itself) the primary bridle and you won’t need to adjust this ever.

Nose-cone/Screw/Pin

In the synthetic age, most drone reeds come with an adjustable end (some call it a “pin”), in the form of a screw or a nose cone. These are used to tweak the tuning of the reed, which in turn affects where the drone tune on its slide.

As a quick example, the more a screw is turned in a reed, the shorter the inside of the body becomes, therefore its overall pitch will be sharper. At this point, you know the drone itself will tune a bit higher on the slide (ie flatter), because the reed itself is producing a higher pitch.

Set up and adjustment of your drone reeds

Make sure the base of the reed is seated firmly in the reed seat. If the reed isn’t seated firmly in the reed seat, air will find its way around the reed, instead of all of it going through the reed itself. Not only will this cause your bagpipe to leak, but it will detract from the quality of sound you could have otherwise produced. Use waxed hemp, and wrap that baby up tight!

Create a Life Line

Unlike your chanter reed, which sit on top of the reed seat, your drone reeds are suspended from the bottom of your drone-seats. Therefore, if they come loose, they’ll fall in!

To avoid this, you can build in a “lifeline” for your reed during the hemping process.

A lifeline is a tail of hemp that is designed to get pinned in between your drone and the stock, so that if your reed does come loose, it will dangle instead of falling into the bag.

More adjustments

Adjustment of the Bridle

As explained earlier, your bridle can (and needs to be) adjusted to the overall strength of your bagpipe. To do this, you'll make tiny adjustments up (towards the drone) or down (towards the bag). Upwards will increase the strength of the reed; downwards will decrease it.

Careful here - a little adjustment goes a long way!

For more advanced strategy on reed bridle adjustment, see my earlier blog on drone reed calibration.

Adjustment of the screw

Sometimes the drone is tuning in the wrong spot on the tuning slide. Occasionally a tenor is tuning up so high, that it is barely able to stay on! Or, maybe the bass is tuning high that it won't start properly. Some players strive for an "optimal" position on the tuning pin to achieve the ultimate harmonic blend!

The tuning pin is good here to make adjustments of that sort.

Shortening the inner chamber of the reed makes it sharper, thus the drone will tune higher on the pin. Lengthening the inner chamber of the reed makes it flatter, thus the drone will tune lower on the pin.

Types of Drone Reeds

There are a million different brands of drone reeds out there. Very briefly here we will look at the two main types.

Synthetic Reeds

Synthetic Reeds are by far the dominant type of

drone reed today in the world. They are made from various synthetic materials like plastic, carbon fiber, composites, etc. Because they are engineered exactly, they are very reliable in terms of steadiness. The main draw back with most synthetic reeds is that they handle the onset of moisture very poorly. Unlike the organic cane reed, there is nowhere for moisture to go when it starts to hit the reed, so it gathers on and around the tongue. This causes tuning problems, and this happens a lot sooner that most pipers like to admit.

Cane Reeds

Cane reeds are still out there, but I think that this point it would be fair to say that are a dying art. Cane reeds have a beautiful, natural, harmonic sound that has a depth that no synthetic reed can parallel (no matter what they say on the box).

Cane reeds require a delicate balance of moisture to accheive the best, most stable sound. You have to re- ally “know your bagpipe” to make these work. However, it can be done, and I would stress that when this challenge is overcome, cane still produces a sublime (and superior) sound. I almost forgot, Cane reeds are also extremely affordable. You can typically buy 5 cane sets for around the price of 1 synthetic set.

Calibration: The Secret to a Great Drone Sound;

For this please refer to my earlier PM Blog “Drone Reed Calibration”.

The Endless Battle with Moisture

Keep moisture off the reeds!

This is especially important with most synthetic reeds. Condensation on the tongue makes the reeds vibrate unpredictably. Whenever a droplet moves on the tongue, your drones will go out of tune.

This is an extremely in-depth topic, but consider a few simple strategies:

a) Make sure your bag is seasoned properly. Seasoning helps subdue moisture issues in the bag

- b) If you play a moisture-control system like a canister bag, make sure the “granules” are dry.
- c) About ten minutes before a performance, check the reeds for condensation. If there’s a lot, wipe it off, then minimise the amount of air you put through them before you have to perform.
- d) Avoid cold environments. Even a few moments in a cold space could cause moisture in your bag to condense!!! On the same note, be aware that the colder the environment, the more moisture you’ll have forming on you

The Perfect Constant, Mission Accomplished?

I hope that this guide has helped you to achieve your perfect constant. I think one of the great ironies of this is that the closer you come to your perfect constant, the more discerning your ear becomes. Eventually, you realise that perfection is really going to be hard to achieve (if it can ever be achieved).

I have experienced the perfect constant during a few competition moments and I have heard it in others several times as well. It seems perfect at the time, but it’s not. It’s simply a moment where you realise another whole degree of tuning quality and bagpipe steadiness is possible. Then, knowing that, you set out to get that for yourself and it’s a long, yet amazing, journey. Just like in life, we must methodically strive for perfection, knowing it’s unlikely (if not impossible) to ever achieve it.