

Drone Reed Adjustment

By Chris Apps © October 2000

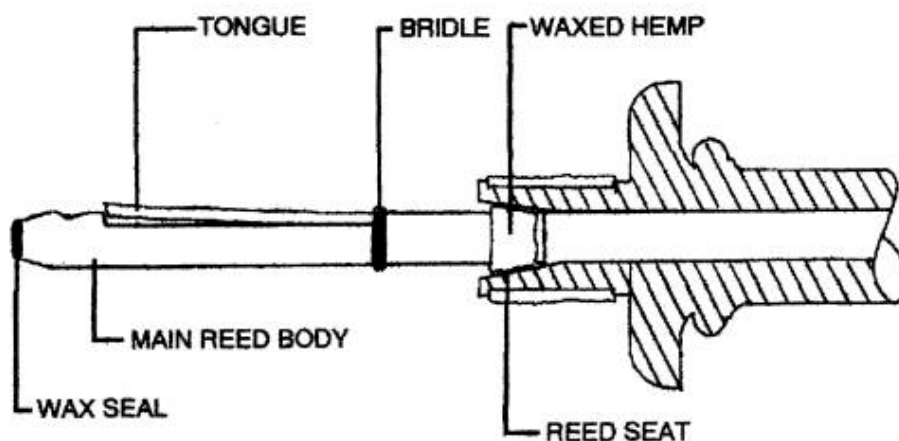
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I like the sound of cane drone reeds but don't use them because plastic is so much easier to set up and maintain. Are there any techniques for success with cane drone reeds?

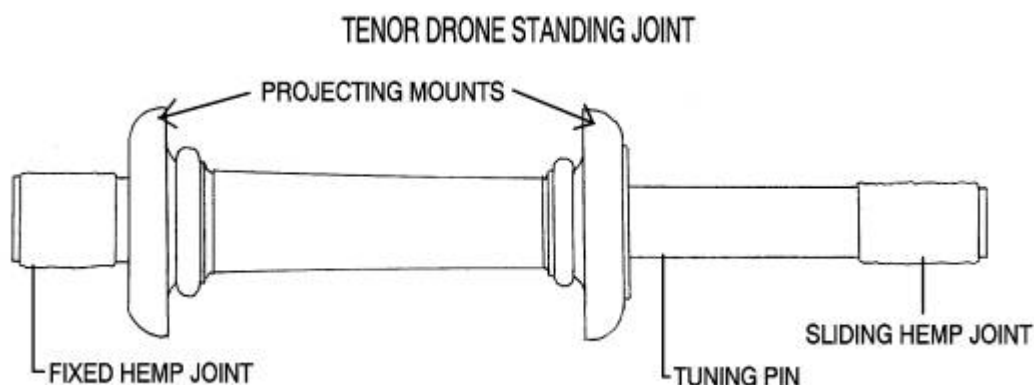
A lot of pipers become frustrated by cane because of a lack of basic understanding of the mechanics of a drone reed and ways of modifying them to make them produce the sound that you are that is required. Cane does take more care and adjustment, but for a lot of pipers there is no substitute for the warm full sound produced from a well set up set of drones with cane reeds.

The first step to success with cane is in the selection of reed. It must be inspected for faults. Drone reeds are made from lengths of tube cane, which are cut just past the node. The area within the node is pithy and porous and must be correctly sealed off with sealing wax. If the wax doesn't completely cover the end it can be melted further by using a match or lighter. The tongue of the reed should be clean and free from any loose pieces of cane. Any stray pieces of cane or faults along the split to the tongue will impede the performance of the reed and may cause a leak. Any small slivers of cane can be carefully removed with a blade. Once the reed has been visually inspected it can be tested for airtightness. The reed is placed in the mouth and blown. Whilst blowing pass a finger over the open end so that the tongue stops vibrating and closes. This must be an immediate stop with no sound of air leaking from the reed whatsoever. It is also important to ensure that the split on the tongue goes up to or just beyond the bridle. If it doesn't pull the bridle back towards the open end of the reed and pull the tongue up so that the split reached the bridle. The bridle can now be put back to its original position. The reed can now be tested in the pipes.

CROSS SECTION OF DRONE WITH REED INSERTED



When testing tenor reeds set the drone to the ideal length, that is with the top section of the drone about 1/8th in. or 3 mm. above the bottom of the sliding hemp joint on the pin. When testing the bass set the top section joint the same as the tenor and the bottom about two inches or 50 mm. up the pin from the projecting mount. Place the reed firmly in the reed seat making sure there is enough waxed hemp on it to make a firm seal. Now blow the reed in the drone. It should produce a rough gurgling sound that will change as the pressure increases to the warm rich sound you would expect to hear. This won't always happen when you first try a reed. It will have undergone some changes since leaving the reedmakers bench and may need to be adjusted. Here are a few examples of the problems that can be encountered and their remedies.



1/ Reed too weak to play.

Reeds often close up in transit. If the reed is too weak pull the bridle back towards the open end of the reed. Now gently pull the tongue of the reed up at about its mid section to increase the gap between the reed body and tongue. This is known as 'springing' the reed. The reed should be 'sprung' by a small amount at first increasing if the procedure has to be repeated. Now pull the bridle back to where it was and test the reed again. It should work correctly at this point but may not be the right pitch. This can be adjusted by a combination of moving the bridle (away from the drone to sharpen and towards to flatten), and the depth of the reed in the reed seat, (further in to sharpen and further out to flatten).

2/ Reed won't vibrate but just clicks shut.

This can be caused by the tip of the tongue catching on the body of the reed. Take a small round file and carefully file around the inside of the tip of the tongue without breaking through the top surface. If the top edge is compromised the reed will leak and have to be discarded. Once this has been done you may need to strengthen the reed as above #1.

3/ reed squeals.

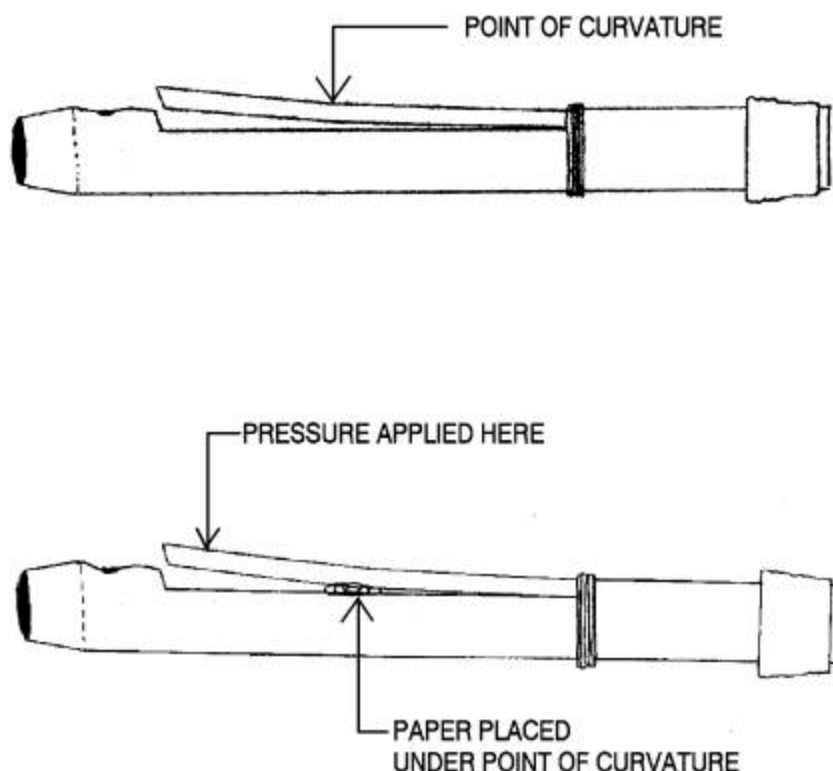
There can be more than one cause of this problem

a/ The bridle is too tight. Re-tie the bridle a little looser and test again (there are instructions for tying bridles later in this article).

b/ The tongue is too heavy. It may be found that the tongue has too much cane on it and needs to be made lighter in order for it to vibrate freely. This is similar to a chanter reed that is tight and won't vibrate properly. Take a round file and file away some cane from the inside of the reed. This can be carried out from either the open end of the reed, holding the

tongue down as it is filed or by sliding the bridle back and gently lifting the tongue so that the filing can be carried out directly on the underside of the tongue. It is important to not remove any material from the hard outer shell of the reed as this gives it its vibrancy and tone and resists moisture.

c/ The tongue of the reed is curved too far up or curves up away from the main body of the reed suddenly rather than evenly. This can be easily cured by moving the bridle back towards the open end of the reed, lifting the tongue and sliding under it a small piece of folded paper under the point at which the tongue is too curved (see diagram). Pressure can now be applied to the top of the tongue with the thumb and it can be bend back the other way. The bridle can now be pulled back to its previous position and the reed re-tested.



4/ Reed sounds rough and is unstable.

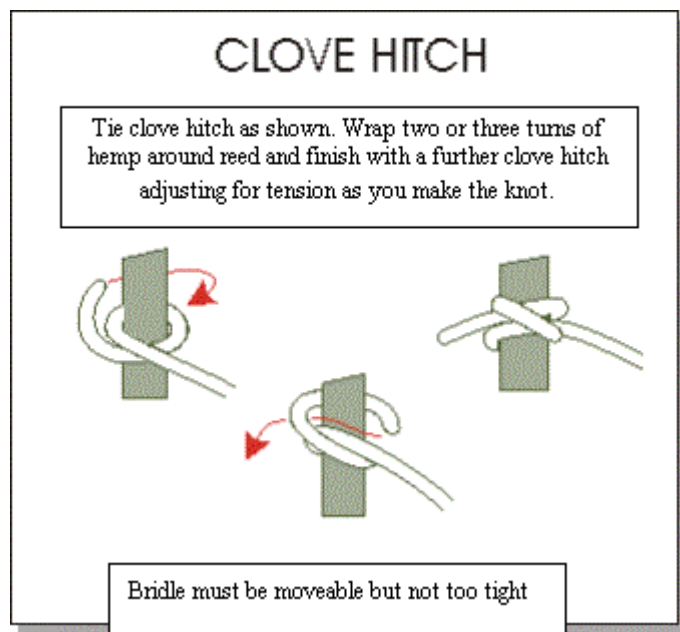
There could be two explanations for this.

a/ The first may be that the reed has been sprung too far open. This can be remedied by pulling the bridle back toward the open end of the reed, holding the tongue open either with fingers or with a piece of folded paper and bending the tongue back towards the main body of the reed. This is the same technique as used if the reed is squealing but the point at which the paper is placed must be as close to the bridle as possible.

b/ The bridle has been tied too loosely and must be re-tied with the correct pressure.

The importance of proper bridle tying cannot be overstressed. The bridle acts as a stop for the vibrations running down the tongue, which is the mechanism by which the sound is produced. This must be an efficient definite stop. If the bridle has been tied too loosely the effect of the vibration will effectively be 'dampened' and will not provide the crisp warm

sound that is required. Also because the length of the tongue determines the pitch of the reed if the vibrations do not end at a specific point the pitch will tend to vary easily with slight changes in pressure. If the bridle is overly tight the reed can squeal as mentioned previously. Below is a diagram showing the best way to tie a bridle. This must be done with either wax or rosined hemp or an equivalent material that is resistant to moisture. This must have resistance to moisture as a bridle tied with dry hemp will tighten up as the pipes are played causing changes in the sound of the drone.



It is important to be aware that unlike plastic reeds cane needs a certain amount of moisture getting to it in order to function properly. If played through a modern bag with a moisture control system which dries the air out too much some problems with stopping can be experienced. If this is the case try to allow more moist air through to the reeds.

It is easy to fall into the trap of only concentrating on the sound of the chanter and being content with the drone sound so long as they work and stay in tune with the chanter. This can result in the pipes being made up of two separate instruments, a drone sound and a chanter sound. When set up correctly the drones and chanter should blend together and compliment each other to produce a fully integrated sound.

Source: http://www.appsreeds.com/new_page_19.htm

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