



KINNAIRD  
BAGPIPES  
& REEDS

### Setting Up Kinnaird Carbon Fibre Drone Reeds.

Kinnaird Carbon Fibre Drone reeds have been developed and tested to perform in most makes of bagpipes. The sound that you will get from your instrument will depend on the reed set-up *and* the condition of your bagpipe.

To get the best sound out of the reeds, check the following prior to installation.

#### Check the condition of the bagpipe

1. Check that all joints including the stocks are tightly hemped and that no air is leaking from the joints.
2. Check for cracks in the drones or a loose drone bush. Take each section of the drone and plug one end with your finger and blow on the other end. No air should escape
3. Check the bores of the drones for obstructions.
4. If you use a canister system, check to ensure the hose connections to the stocks are tight and not cracked.

When you are certain that your instrument is in good condition, you can begin to set-up the drone reeds. Ensure that:

1. The reeds are properly seated in the reed seats. If air leaks past the reed through the reed seat, the reeds will not function correctly. If needed, add or remove some black waxed hemp from the reed until they seat solidly in the bottom of the drone. If you have very small reed seats, you may need to enlarge them with a tapered reamer.
2. Ensure that the reeds are seated straight in the bottom of the drone and that they are not in contact with the sides of the stocks.

#### Altering the Reed Pitch:

##### Raising the Pitch (Drones will tune higher on the tuning pins).

The pitch of the reeds can be raised by removing the nose cone from the end of the reed and unscrewing (counterclockwise) the setscrew in the nose cone. This reduces the length of the air column in the reed, which will raise its overall pitch. The drone will have to be lengthened to compensate. When removing the nose cone, only twist to pull it out. Do not rock it from side to side as this may crack the body of the reed.

Seating the reeds further into the drone reed seats can also increase the pitch. Remove some hemp and re-install the reed further into the reed seat.

##### Lowering the Pitch (Drones will tune lower on the tuning pins).

The pitch of the reeds can be lowered by removing the nose cone from the end of the reed and screwing (clockwise) the setscrew into the nose cone. This will lengthen the air column in the reed, which will lower the overall pitch. The drone will have to be shortened to compensate. When removing the nose cone, only twist to pull it out. Do not rock it from side to side as this may crack the body of the reed.

The pitch can also be lower by seating the reed further out of the reed seats. Add some hemp and re-install the reed in the reed seat.

#### Alter Reed Strength:

##### Increasing the Strength (Reeds will be harder to shut off)

Moving the bridle away from the vibrating end of the reed will increase the strength of the reed. This will also make the drone tune lower, which may need to be compensated for. See **Raising the Pitch**.

The tongue of the reed can also be bent upwards slightly to allow more air through the reed. To do this, place a small knife underneath the blade right beside the bridle. With your other thumb pressing down on the bridle, gently pry the tongue with the knife away from the bed of the reed. Be very careful that you do not break the tongue. Small adjustments and frequent testing are in order.

##### Decreasing the Strength (Reeds will be easier to shut off)

Moving the bridle towards the vibrating end of the reed will decrease the strength of the reed. This will also make the drone tune higher, which may need to be compensated for. See **Lowering the Pitch**.

The tongue of the reed can also be bent downwards slightly to restrict air through the reed. To do this, place a small knife underneath the blade right beside the bridle. With your other thumb pressing down on the free end of the reed, gently pry the tongue next to the bridle to flatten the tongue. Be very careful that you do not break the tongue. Small adjustments and frequent testing are in order.

#### Troubleshooting

**Reed Double Tones:** The reed is probably too strong for your blowing set up. See **Decreasing the Strength**.

**Reed Squeals:** Tongue length is too short for drone acoustics. Move the bridle away from the free end of the reed.

**Reed Squeals During Strike In:** Check your strike-in technique. Try striking the bag in different locations. Try striking the bag more gently. Move the bridle away from the free end of the reed.