## **RIBBON TRANSDUCER** INSTALLATION MANUAL & USER'S GUIDE

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## **READ THIS FIRST**

1. For optimum performance of this pickup, the bridge slot must have a clean, flat surface free of any debris or over-spray from the finish. The slot must be a minimum of .125" (1/8") deep, but we suggest a depth of .187" (3/16") to avoid excessive saddle tilt (see figure 6).

2. Installing a .090" pickup in a .120" slot is not recommended.

3. Do not remove the black material that is affixed to the bottom of the pickup.

4. Avoid unnecessary hard bending of the pickup. Repeated removal and replacement of the pickup during the course of the installation is not advised.

5. Do not use of shims under the saddle or pickup as a remedy for string balance problems or to adjust the action.

6. Failure to secure the loose end of the pickup under the bridge will produce bizarre audio consequences and eventually ruin the pickup.

7. The quality of sound, output level, balance and feedback resistance are all determined by how well the pickup mates with the saddle and the bridge. Uneven or partial contact between the saddle and the pickup will cause a boomy sound with low output, excessive body sensitivity and poor string balance.

## INSTALLATION

1. Remove the strings from the guitar. If you wish to duplicate the string height exactly, scribe a line along the front edge of the saddle where it extends above the bridge. The line will later be used as a guide when removing material from the bottom of the saddle to compensate for the thickness of the pickup (.025" total).

2. Remove the saddle to drill the hole for the pickup. The drill bit needs to be as large as the saddle slot will allow. Inspect the inside of the guitar and note the position of the braces in relation to the saddle slot. Drill at either end of the slot on the side that will enable you to avoid all braces as you penetrate the top, as shown in figures 1 and 2. Important: Round the inside of the hole where it meets the bottom of the slot with a small, sharp knife or a small file to avoid pinching the pickup as the saddle lies on it.

3. Feed the pickup into the slot from inside the guitar with the yellow side up. Inserting a toothpick or similar object through the hole from the outside is helpful in finding the location of the hole on the inside of the guitar. Sand the bottom surface of the saddle on a belt sander until the scribe line (from step 1) lines up with the bridge top. Leave the saddle just a hair tall and finish sanding the bottom by hand. It is best to do this against a machined flat surface with fine sand paper. Use a straight edge with a strong light source to inspect the flatness of your saddle.

Important: The fit of the saddle in the slot is the single most important factor in this installation. It is crucial that the bottom of the slot and the lower surface of the saddle be flat to make even contact with the pickup. The saddle should fit in the slot loose enough to be able to be just pulled out with your fingertips. If it is too tight or binds at all, this will have a negative effect on the string balance. Likewise, if the saddle is too loose, it will have a substantial forward tilt when under string pressure, causing it to make poor contact with the pickup (see figure 4).

A saddle that fits correctly in the slot will have a slight forward tilt under string pressure (see figure 3). It is necessary to compensate for this angle by intentionally sanding a slight tilt in the bottom of the saddle so that when it leans forward it sits flat on the pickup (see figure 3). The saddle material can be a key element in curing string balance problems. This pickup responds most favorably to a rigid saddle material such as bone. Using softer, moreflexible materials may cause the outside strings to be lower in volume than the other strings.

If you are replacing the saddle, prepare the bottom of the new one as explained above (see step 3). Place it in the slot and scribe the same line on the front of it like the original saddle. To duplicate the action, lay the old saddle on the new



one, match up the scribe lines, and trace the shape of the old saddle onto the new one. We recommend either bone or Micarta for your saddle. Softer materials tend to sound overly boomy.

4. If you are installing a preamp with this pickup, do so now. If you are not installing a preamp, solder the pickup wire directly to the output jack and shield the connection. Note: slide the jack barrel over the wire before soldering. Solder the center wire to the tip and the braided wire to the sleeve.

5. Insert the pickup all the way into the slot, lay the saddle on top of it and temporarily secure it with a piece of tape. Remove the backing from the adhesive on the end of the pickup hanging inside the guitar and attach it to the bridge plate or the underside of the top as shown in figures 5 or 6. Be careful not to place the adhesive over the bridge pin holes.

6. Choose a location for the wire clip between the pickup and preamp several inches away from the pickup. If there is a brace that the wire will cross, make a little slack in the wire so it does not touch the brace. Secure the pickup wire in the wire clip and plug the pickup into the preamp (if applicable). You can now remove the tape from the saddle and re-string the guitar.

