

Installation Instructions for RG-03, RG-03 Std, RG-03 Pro and RG-03A Active Pickups For Spider Bridge Dobro Type Instruments

This pickup is designed to work on "Dobro" type guitars with a spider bridge. Tools that you will need are: electric hand drill, assorted drill bits, assorted screw drivers, wire cutters / strippers, an old guitar string, a bit of masking tape, and a low wattage soldering iron and a bit of solder.

**Starting Installation**

- 1) Slack off the strings, remove them from the tailpiece and tape them away from the cover plate. Remove the cover plate screws and set the cover plate aside. Remove the tailpiece and resonator cone complete with the spider bridge and set the rest of the guitar aside.
- 2) Remove the screw that connects the spider bridge to the resonator cone. There are two replacement screws provided, one is a 3 mm. metric, the other is a 4-40 sae. Check to see which of the two screws fits your resonator cone properly. The correct screw should thread in very easily, do not force it. Also, make sure that the head of the replacement screw fits into the saddle slot properly. If the screw head is too large to fit in the slot, grind off or file away whatever small amount of the head diameter is necessary to make it fit in the slot properly. Once the screw is properly fitted, use it to snugly attach the spider to the cone.
- 3) It is suggested that at this point you reinstall the cone with the spider and saddles into the dobro (leave the cover plate off), reinstall the strings, tune the instrument and tighten the machine screw that connects the spider to the cone so that the sound and response is set to original levels. When this is done, remove the strings, set the cone and spider assembly on your workbench and set the rest of the instrument aside.

**Installing the Pickup Element**

- 1) Place the pickup on your workbench with the brass side facing up. From the supply of putty provided, run a single bead around the outside of the diameter of the brass so that the putty covers only the colored potting material outboard of the brass. This bead should be about 3/16" in diameter. If possible, no putty should be on the brass surface. **See fig 1** Note: On some cones, such as a Quaterman, the cone has a much steeper slope than is normal. In order for the pickup to not come into direct contact with the cone, the putty must be moved further outboard than normal so that it is partly on the edge of the pickup and partly on the underside.
- 2) Place the small length of rubber tubing over the already installed cone mounting screw. Slide the tubing down as close to the cone as you can. The tubing has two functions: it acts as a damper and it isolates the pickup from coming into contact with the mounting screw.
- 3) With the putty and brass side towards the cone, install the pickup by centering the pickup over the mounting screw and sliding the pickup over the rubber tubing and just allowing the putty to come into contact with the underside of the cone.
- 4) The rubber tubing is supplied longer than is necessary so that it will fit all installations. We want the tubing to stick up above the pickup by about 1/8". Take a pen and draw a line on the tubing at a point 1/8" above the top of the pickup. Remove the tubing and cut on that line. Reinstall the tubing on the mounting screw making sure to get it down as close to the bottom of the mounting screw as before. **See fig 2**
- 5) Place the small washer, and then the appropriate nut on the cone mounting screw. Tighten the nut down until the putty starts to compress. Then tighten the nut down another 2 or 3 turns. Over compression of the putty or allowing the pickup itself to come into contact with the cone surface will make the pickup extremely harsh. **See fig 2.**



fig 1

**Installing the Endpin Jack on an RG-03 (basic model) or Endpin Jack Preamp on an RG-03A Active**

- 1) Remove the existing strap button. If the strap button screw also functioned to hold the tailpiece in place, then reinstall the screw without the strap button (as shown in **fig 4**).
- 2) Measure the actual depth of your resonator cone (it is generally in the range of 2"). Allowing for the amount that the resonator cone is recessed into the top (usually about 1/8" to 1/4"), add that to the depth figure for the cone (usual total 2 1/4"). Add extra 1/2" for clearance and measure down from the top of the instrument about 2 3/4".
- 3) Drill a pilot hole through the end block approximately 3/16" in diameter in the area you wish to place the end pin jack.
- 4) Using a fluted burr, chamfer the edges of the hole so that you will not damage the finish of the instrument when you use the larger sizes of bits required.
- 5) Drill through the guitar end block using a 3/8" bit and re-chamfer the hole. Repeat drilling with a 31/64" bit to complete the drilling operations.
- 6) Remove the Outer strap button, and the small nut and washer from the endpin jack or preamp. Reach inside the instrument and poke the endpin jackpart through the drilled hole in the end block. The jack should protrude approximately 5/16" outside the guitar. Reinstall the flat washer and small nut.
- 7) Insert a small allen wrench or other small round (like a drill bit) through the 2 holes in the end of the endpin jack to keep the jack assembly from rotating; tighten the small nut.



fig 2



fig 4

### **Installing the Battery Holder** - If you are using an internal battery.

- 1) In order to make sure that the battery wires will reach to where you want to position the holder, install a battery in the holder and attach the battery connector to it.
- 2) Choose a spot on the inside of your instrument where you would like to place the battery holder. Make certain that the battery and holder is out of the way of the resonator and the jack.
- 3) Make sure that the spot you choose is relatively flat and that it is clean and dry.
- 4) Once you have confirmed the location, peel the backing to expose the sticky tape on the battery holder and press it into place.

### **Installing External Output Jacks for all RG-03 Passive models**

- 1) Drill a hole 5/32" (0.070") in diameter on the face of the instrument directly under the tailpiece. The hole should be placed about 1 1/2" from the end of the guitar so that it misses the end block.
- 2) Take an old guitar string and insert it down through the hole in the top. Tape the end of the pickup lead wire to the string and pull it back through the hole.

### **Hanging Jack Mounting - RG03 (basic model)**

- 1) Install the clip as shown in **fig 3**, slide the jack into the clip and tighten down the strap button.

### **Wiring The Jack Assembly - RG03 Std, RG-03 Pro**

- 1) Remove the two screws holding the cover on the jack assembly.
- 2) Insert the shielded cable from the pickup through the rubber grommet at the rear of the jack assembly.
- 3) Shielded cables are normally comprised of 2 conductors: the first conductor just under the outer insulation is the ground (-) of the pickup. The ground wire is to be soldered to 'Lug B' of the jack. The second conductor is contained within an inner insulated covering and is the positive (+) of the pickup. This wire is to be soldered to the upper lug of the volume control pot 'Lug A' on Pro Models as shown in fig 6.
- 4) On **Std Models** there is no volume pot contained within the control box. The ground wire is still to be soldered to 'Lug B' of the jack however, the positive (+) is to be soldered to the other jack lug. You will probably find it easier to remove the jack from the box to do the soldering and then reinstall the jack.

### **Jack Assembly Mounting - RG03 Std, RG-03 Pro- Wiring**

- 1) You now have the option of either having the jack assembly mount directly to the surface of the instrument or have it mount to the stand off plate. The stand off plate will use the same VHB mounting method but the point of adhesion is moved more to the area under the tailpiece. If you wish, you may trim the VHB so that it matches the outline of the tailpiece which would hide any possible finish damage that later jack mounting removal might cause. (Fig 5)
- 2) If you are going to install the jack assembly right to the surface of the instrument then make sure that the area is clean and dry. Remove the backing from the VHB on the underside of the jack assembly and firmly press the unit into place as shown.
- 3) If you are going to use the stand off plate, firmly press the jack assembly to the plate on the opposite surface of and directly above the black protective material.
- 4) Slide the plate between the tailpiece and the surface of the instrument and check for fit and clearance.
- 5) Mark the position of the plate on the surface of the instrument with a few small pieces of masking tape.
- 6) Remove the tailpiece, remove the backing from the VHB on the underside of the plate and firmly press the plate into place.
- 7) Reinstall the tailpiece as required.

### **Finishing Up**

- 1) Prior to reinstalling the resonator assembly, the supplied wire clips should be installed in the well area to hold down any excess wire.
- 2) At this point it is suggested that you reinstall the resonator into the instrument (without the cover plate). Reinstall the highest treble string and lowest bass string and tune to pitch. If you are using the RG-03 passive system plug it into your amp. If you are using the RG-03A with preamp, install a 9 volt battery and then plug the system into your amp. Check that the quality of the sound is good and that string output is balanced. If everything is fine, take off the strings and remove the resonator from the instrument. Put a small bit of masking tape or scotch tape or a drop of glue on the exposed part of the mounting screw so that the nut cannot back off or rattle.
- 3) Reinstall the resonator assembly and the cover plate.
- 4) Restring, tune, and check.

### **Warranty**

We warrant to the original purchaser that our pickups are free from defects in materials and workmanship for a period of 2 (two) years. Should a product fail to perform properly within the specified warranty period you may contact your dealer or Schatten Design for instructions. No product will be accepted for warranty return by Schatten Design without a Return Authorization number.



fig 3

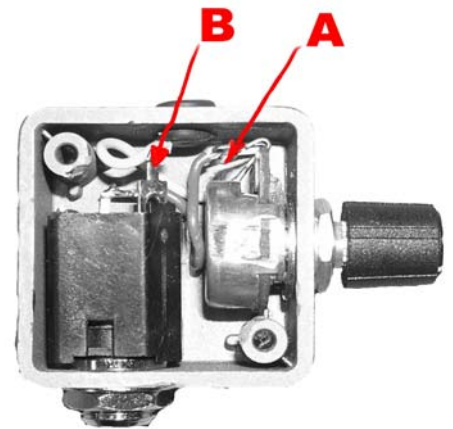


fig 6