SCHATTEN Pickups

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Instructions For The RG-03 Neo - Pickup For Spider Bridged Instruments

Starting Installation Tools required: electric hand drill, 11/64" drill bit, assorted screw drivers, an old guitar string or a bit of thin wire, piece of tape.

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. 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

The RG-03 sensor is not meant to come into direct contact with any part of the cone. The putty that is supplied with the pickup acts as both a means of attachment and as an isolator; there always has to be a bead of putty between the contacting surface of the sensor and the wall of the resonator cone. The sensor is meant to contact the sidewall of the only.
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 1/4" in diameter. If possible, no putty should be on the brass surface. *See fig 1* Note: On some cones, such as a Quarterman, 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. See the illustrations below:

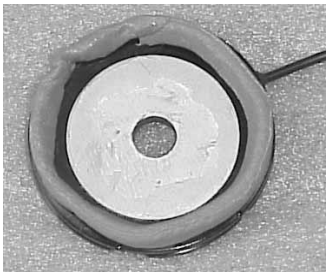
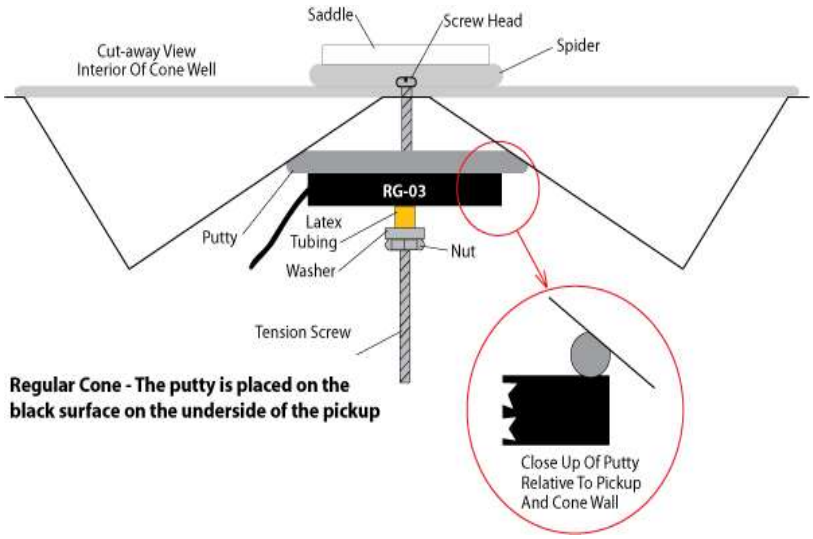
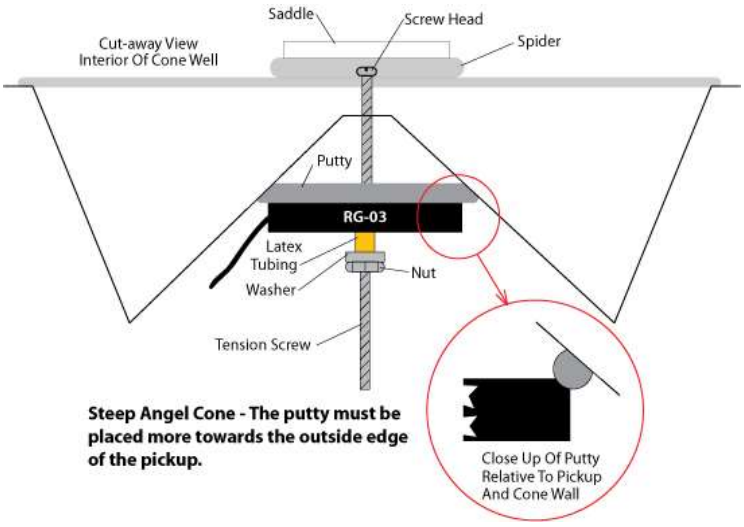


fig 1



Regular Cone - The putty is placed on the black surface on the underside of the pickup



Steep Angel Cone - The putty must be placed more towards the outside edge of the pickup.

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. Reinstall the pickup. *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 trebly and extremely harsh.

fig 2

6) As indicated by the red dot in the photo, drill a hole 11/64" (4mm) in the top in the area covered by the tailpiece approximately 1 1/2" up from the butt of the reso in order to miss the end block (fig 3).
7) Take an old guitar string or piece of wire and insert it down through the hole in the top. Tape it to the micro plug from the pickup and pull the plug up through the hole in the top.

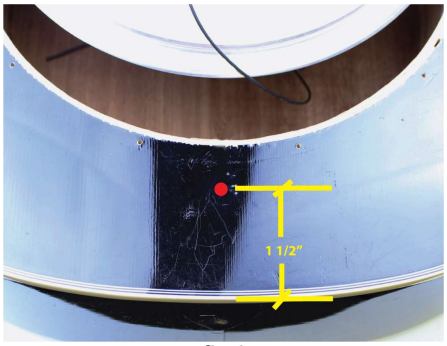


fig 3

Installing the Neo-Jack

1) The Neo-Jack is designed to fit directly onto the tailpiece. Dry fit the jack assembly onto the tailpiece; it should be a snug fit. Note that the hole in the tailpiece is visible through the slot in the Neo-Jack.
2) Remove the backing paper from the 3M VHB on the Neo-Jack, position the jack assembly properly over the tailpiece and press the Neo-Jack firmly into place on the tailpiece (fig 4).
3) Position the tailpiece as it would be mounted on the instrument and push any excess lead wire back into the instrument. Reinstall the tailpiece onto the instrument.
4) Insert the micro plug from the pickup into the Neo-Jack.

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. Plug 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. **Important:** 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.


fig 4

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.

A Word About Amplification:

RG-03 passive pickups have been designed to operate properly and sound good without the use of a preamp when plugged into any normal electric guitar amp. As a non-preamped piezo pickup the RG-03 has an impedance of approximately 2 mega ohms which most electric guitar amps will handle. As with any passive pickup, the sound can be further enhanced and EQ'd with an outboard preamp.

PA systems: If you require the added ability to be able to plug directly into a P.A. or mixer then a preamp designed for pickups will be necessary. The preamps that are built into PA systems are microphone preamps and generally will not work properly with a passive pickup.

Acoustic Amps: If you are plugging into an acoustic amp a preamp may be required depending upon the design of that acoustic amp. Acoustic amps may or may not require the use of a preamp with a passive pickup and that will depend upon whether or not there is a special built in preamp section within that amp that specifically allows for the choice of plugging in either a passive (non-preamped) or active (preamped) pickup. This choice is quite often a second channel or a pushbutton on the amp's control panel. Many acoustic amps show a selection that may indicate the choice of 'high impedance' and 'low impedance'. Low impedance in these instances usually indicates that in this range the amp will handle an impedance of 1000 ohms or less - which will allow active pickups with preamps to be used.

High impedance in these instances may indicate an allowable impedance in the 2 or 3 mega ohm range - which will allow passive pickups to be used. Or it may indicate a maximum input impedance allowed of 20,000 ohms or less - which will handle magnetic electric guitar pickups but not passive pickups. You should carefully read the technical specifications of your acoustic amp in order to see what it will do.