

Installation Instructions: TC Player, TC Std, TC Pro Passive Models and TCA Active Model Tricone Pickups

Before You Start, A Word About Amplification:

TC 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 TC 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.

Tools Required for Installation: Soldering iron (small approx. 15 to 35 watts), Solder, Electric drill, Assorted drill bits, Deburring tool, Clear tape, Masking tape, scissors

Installing the pickup sensor

- 1) Remove the strings and cover plate from the instrument and set them safely aside. Remove the T bridge.
- 2) Using some of the supplied 3M VHB tape, cut a piece to fit and adhere it to the brass side of the pickup sensor.
- 3) As per *figure 1*, press the pickup into position. Make sure that you hold onto the T bridge while pressing the pickup into place.
- 4) Reinstall the T bridge

Strap Button Mounting of Output Jack - TC Player

- 1) Reinstall the cover plate and strings.
- 2) Run the lead wire out of the slot in the cover plate and allowing enough wire to reach the strap button (approximately 10") cut the wire to length. Slide the cover from the jack assembly onto the lead wire.
- 3) Strip back an inch of the black outer insulation of the lead wire exposing the copper shield. Twist this copper shield into a straight lead and solder it to the longest lug, this is the ground (-). The whitish coloured insulation from the centre lead should be stripped back about a quarter inch and this will be soldered to the shortest lug on the output jack, this is the hot (+).
- 4) As per *figure 2*, unscrew the strap button, insert the screw through the hole in the nylon jack holder, put the output jack half way through the loop in the jack holder and tighten the screw down on the strap button. The output jack should be securely held in place.
- 5) You may wish to fasten down the exposed wire with a few small strips of clear tape

Wiring The Jack Assembly - TC Std, TC 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 *figure 3*.
- 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.



Figure 1

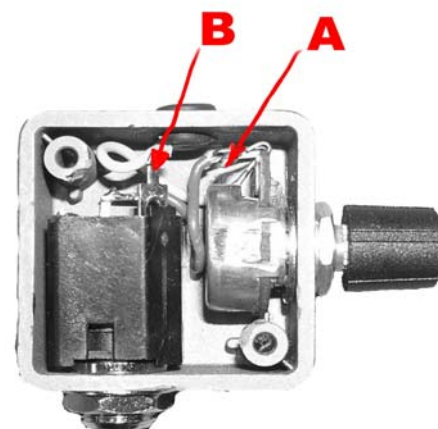
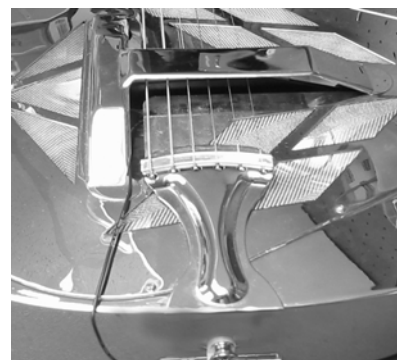


Figure 3



Figure 4

Jack Assembly Mounting - TC Std, TC Pro

- 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.
- 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. See *figure 4*.
- 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.
- 8) There is some room within the jack assembly to store a bit of excess wire, you may take the cover off of the top of the assembly and push wire inside as possible. See *figure 5*
- 9) A quantity of black self adhesive material is supplied with the pickup. This material may be used to stick the pickup lead wire down to the cover plate so that it doesn't rattle. Cut and trim several pieces as required and install.



Figure 5

Installing the pickup sensor for Side Jack Mounting or End Pin Jack Mounting

- 1) Remove the strings, cover plate, T bridge and the three aluminum cones from the instrument and set them safely aside.
- 2) Drill a small 1/4" hole through the deck in the position shown in *figure 6*. Make sure that the hole is clean and has no sharp burrs or edges. Insert the supplied rubber grommet into the hole.
- 3) The TC Player and TCA pickups come with an end pin jack or endpin jack preamp. Either unit requires a hole through the body 3/8" diameter.
- 4) The lead wire is supplied 18" in length and should be long enough for any installation. Insert the lead wire through the grommet in the deck and bring the end of the wire up through one of the cone holes in the deck so that you can work with the wire.
- 5) Strip back an inch of the black outer insulation of the lead wire exposing the copper shield. Twist this copper shield into a straight lead and solder it to the longest lug, this is the ground (-). The whitish coloured insulation from the centre lead should be stripped back about a quarter inch and this will be soldered to the shortest lug on the output jack, this is the hot (+).
- 6) It is suggested that you secure wire that is running below the deck to the body so that it cannot rattle or move around. You may use a few small pieces of masking tape or a few small pieces of the supplied putty to do this.
- 7) Take a small amount of the dark gray putty (marked outside putty) about the size of a large pea. Stretch and knead the putty until it softens and then spread it on the brass surface of the pickup. Ideally, the putty should be about 1/16" thick and evenly distributed. You will find that you can push the putty around by stretching it into the position that you want with your thumbs. The thinner the amount of putty used, the better the pickup will work.
- 8) As per *figure 6*, press the pickup into position. Make sure that you hold onto the T bridge while pressing the pickup into place. It helps to seat the pickup if you move it slightly from side to side as you are applying pressure.
- 9) Reinstall the cones, T bridge, cover plate and the strings.

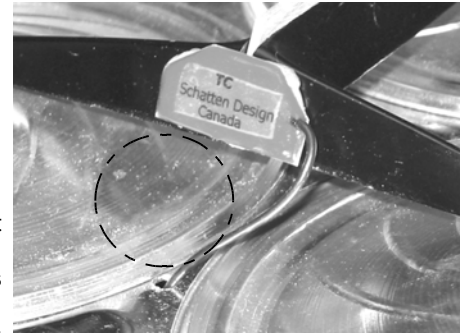


Figure 6

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.