Vintage LP Switch Harness (assembled)

Please Read All Instructions Before Beginning.

Tools you will need:

- Soldering Iron (35 watt preferably)
- Solder
- Wet Sponge
- 1/2” Wrench
- 3/8” Drill bit
- Scissors
- Hair Dryer or mini torch for heat shrink
- 2 foot or more piece of string or un-broken solder

ATTENTION: At the very least basic soldering skills are needed to install this kit. If you do not have these skills or are not confident enough in your skills to install this kit than please take it to someone who does, such as a certified guitar technician.

Soldering tips:

Remember to clean the tip of your soldering iron before soldering each connection, a dirty or bad solder joint can add excessive noise into your guitar, especially when using distortion. Be sure to apply a small amount of solder to your iron before trying to heat a connection, this will help your iron transfer heat better and the solder will flow faster

Removing Current Wiring:

Step 1. Place your guitar face down on a firm yet soft surface (a couple of bath towels will do) to keep the face of your guitar from getting scratched.

Step 2. With the Phillips screwdriver remove the two cavity covers on the back of your guitar and place the screws in a small bowl so they will not get lost. You should see something similar to fig. 1.

Step 3. Removing the switch. Identify the wires coming from the Switch Cavity (Fig. 2) and where they come out in the Control Cavity (circled in Green) and where they connect to the pots (circled in Yellow) (see fig.3).

Step 4. With the soldering iron heat the solder joints where the wires connect to the pots and remove the wires.

Step 5. With the screwdriver remove the output jack plate from the body of the guitar (see fig. 4)

Step 6. With the soldering iron heat the solder joints where the wires connect to the output jack, remove the wires from the jack and set the jack aside. Follow these two wires back to where they connect to the pots and remove them in the same fashion.

Step 7. With the pliers CAREFULLY loosen the ring on the 3-way toggle switch on the front of your guitar and remove it. Once the ring is clear carefully push the toggle switch through the switch hole (see fig. 5).

Step 8. Take the string or uncut length of solder and tie it/wrap it to the end of the switch wires that you removed in step 4 so that they will not pull off as you pull the cable through the body (see fig. 6). If installing this kit into a guitar without electronics already in it see the highlighted part of Step 19.

Step 9. Slowly pull the switch out of the switch cavity until all the wires have been removed from the guitar and the tracing line is out of the switch cavity. Remove the tracing line from the switch cables and then tie the two ends of the line together so that it cannot be accidentally pulled out of the body. Performing this step will keep you from having to remove the strings and pickups to feed the new wire harness through the body (see fig. 7). If installing this kit into a guitar without electronics already in it see the highlighted part of Step 12.

Modifications before Installation

If your guitar is an actual Gibson made in the USA then these steps will not be necessary.

Step 10. Now remove the output jack from the jack plate, this should need a 1/2 wrench or nut driver. Once you have removed the jack you may find that the hole is oblonged and that the Epiphone jack has two flat sides. This hole needs to be opened up for the new jack to fit through it. Take the 3/8 drill bit and by hand and open up the hole on the jack plate (see fig. 8).

You can use the cutting edge of the drill bit to clean up the burrs on the cut edges of the plastic. Hold the face of the bit at an angle against the cut edge lightly and slowly move the bit along the edge and it will remove the burrs and leave a much smoother edge. If you try this with a sharp knife or razor blade it may cut to deep into the plastic and leave a bad edge.

Step 11. A cream or black switch tip should have come with your switch but if it does not match your other trim then use the old switch tip by following these instructions. If your old switch tip is from a Switchcraft switch then it should fit without modification. Now take the cap off of your old 3-way toggle switch and with a 5/32 drill bit widen the hole by hand until it is deep enough for it to fit on the new 3-way switch snuggly (see fig. 9). You will want to make it deep enough that you need to twist it on at the end so that it will cut some threads into the cap. The alternative is that you can purchase a cap that matches the color of your old cap and will fit the Switchcraft switch.

Installing Your New Kit:

Step 12. Now reverse step 9 and feed the new wire harness and 3-way switch through the guitar. Untie the tracing line from itself and tie the end that is coming out of the switch cavity to the end of the new wire harness (refer to Fig 7). Then pull the tracing line through the body and feed the wire harness through the switch cavity. If you are installing this in a guitar that had no electronics then feed either a pipe cleaner or uncut piece of solder through the body from the switch cavity to the control cavity, attach the switch harness to the pull line you just fed in and then pull it through the body. When inserting the switch make sure that the single point is pointing toward the headstock and the 3 pins are pointing towards the control cavity (refer to Fig. 2). If you do not align the switch this way the switch will be backwards when you try to change your pickup positions. Now set the guitar on your lap in a playing position and look down at your switch, flip it and see if it is moving straight up and down, if not than adjust the switch so that it does. Once you are satisfied with its positioning put the nut on the switch and carefully tighten it down with the pliers.

Step 13. Soldering points. You are now ready to solder your wires to the pots. Please refer to Fig. 10 to see the locations of the numbers in this step.

NOTE: When soldering the outer shield of the wires to the back of the pot push the wire against the pot with the tip of the iron and then touch the tip and the wire with the solder till a sufficient amount has melted onto the wire. While continuing to hold the wire down with the iron grab a pair of needle nose (or some other tool) with your free hand and then use it to pin the wire to the pot so you can then remove your soldering iron. Quickly use your iron to attach the sides of the wire to the back of the pot so that the wire is held fast against the back of the pot (See fig. 12). You do not want the iron on the components for too long or you will burn up the pot.

NOTE: When soldering the ground from the switch (the wire with the black tape) solder both the tip of the wire and the outer shield to the back of the pot, this is what makes the common ground connection for the entire circuit run to the output jack.

NOTE: Remember that the metal braiding on the outside of the wires is all connected to ground so they cannot touch any other connections or else your signal will die. Move them around, cut them back, push the braid back or wrap them in electrical tape if you need to, do whatever it takes to keep them from touching anything except the back of the pots or the metal braid ONLY of the other wires.

- Take the black wire from the Switch wire harness and solder it to the back of the pot at point 1. Solder both the inner wire and the outer shielding to the pot. This will ground the wire harness and the rest of the circuit when the output jack is hooked up.
- Take the blue wire from the Switch wire harness and solder the inner wire to the pin at point 2 and solder the outer shielding to the back of the pot at 2b.
- Take the red wire from the Switch wire harness and solder the inner wire to the pin at point 3 and solder the outer shielding to the back of the pot at 3b.

Step 21. Take the white wire and feed it through the output jack hole and Solder the tip of the inner wire to the hot pin of the jack and the outer braid (ground) to the ground pin. There should be enough room between the two pieces of heat shrink to solder the braid to the output jack ground pin and this section of the braid should already be tinned. Do not remove the heat shrink, this is to keep the ground on the outside of the wire from touching any hot points in the guitar and killing your signal. Now attach the jack to the jack plate and place it in the jack hole and insert a guitar cable plug into the jack and make sure that it snaps in well. If there is a lot of resistance or it won't snap in then the hole is a little narrow, bend the tip of the jack in a little and try it again. It should take some effort to remove the jack but it should go in easily. Once it feels right then attach the jack to the jack plate securely and screw it down to the body.

Your connections are now finished, refer to Fig. 11 and it should look something like that.

Step 15. Replace all the cavity covers and screw them down. Now plug it in and take it for a spin.

Trouble Shooting

If something is not working properly go over the instructions and your connections again carefully and pay particular attention to the following;

1. Make sure that the pins on the switch are not touching each other. Sometimes during installation these pins can bebent and the pins or the solder on the pins will touch causing the pickup signals to ground out. If any are touching then CAREFULLY bend the pin away so that it is no longer touching.
2. Make sure that both the inner wire and the outer shielding of the black wire are soldered to the back of the pot. This is absolutely necessary to make sure that the common ground has been created for the switch.
3. Make sure that the white wire is connected to the jack properly as stated in step 13 and that the outer shield (including ANY small strands) is not touching the hot pin or the tip of the guitar cable when it is inserted. Use the included heat shrink to keep the shielding from grounding out (use heat shrink as described in step 14).
4. Be sure that the outer shield of the wires is not touching anything other than ground.

If you cannot find the problem email us at customerservice@bcsguitars.com and we will get a technician to call you as soon as they are available and try to help you trouble shoot the problem.

Fig.1 Control Cavity

Fig.2 Switch Cavity

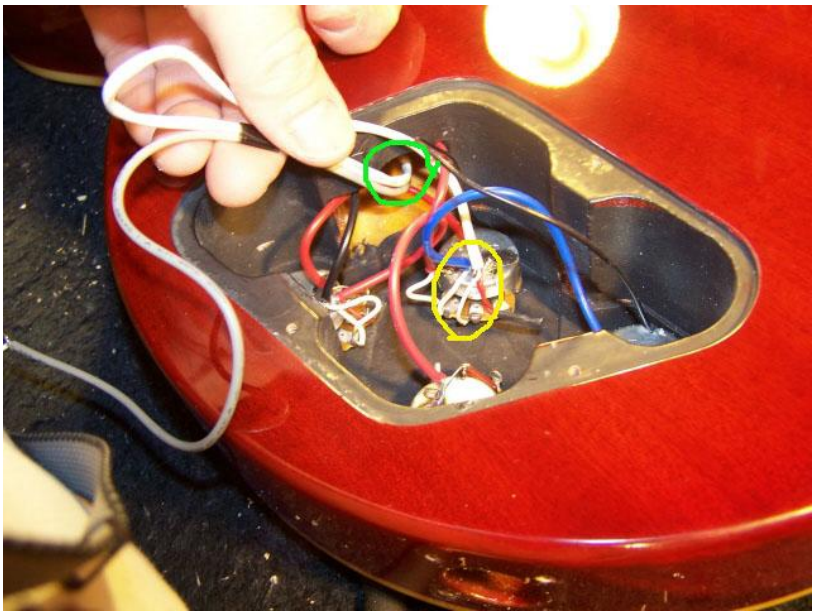

Fig. 3 Trace the Switch wires.

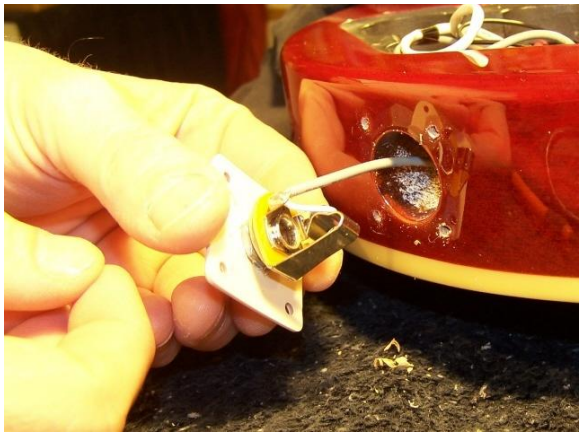

Fig. 4 Removing the Output Jack.

Fig. 5 Removing the 3-Way Toggle Switch

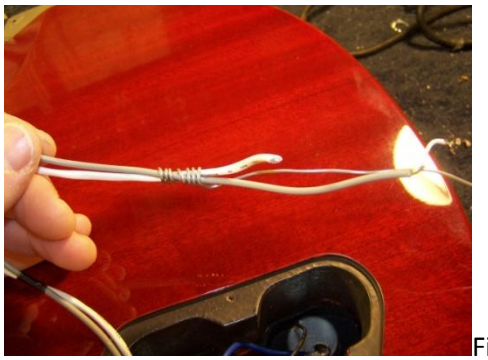
Fig. 6 Tie a tracing line to the switch cables


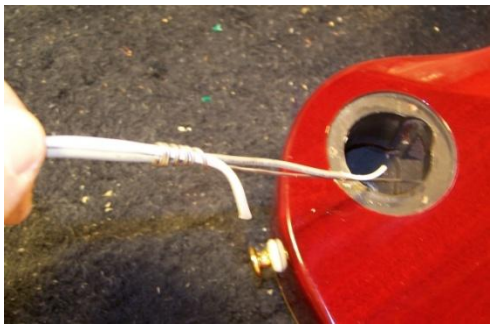


Fig. 7 Removing the old Switch and wire harness and tying off the tracing line.

Fig. 8 Open up the jack plate so that the new jack will fit through it.

Fig. 9 Modify your old switch cap if the new one is not the right color.

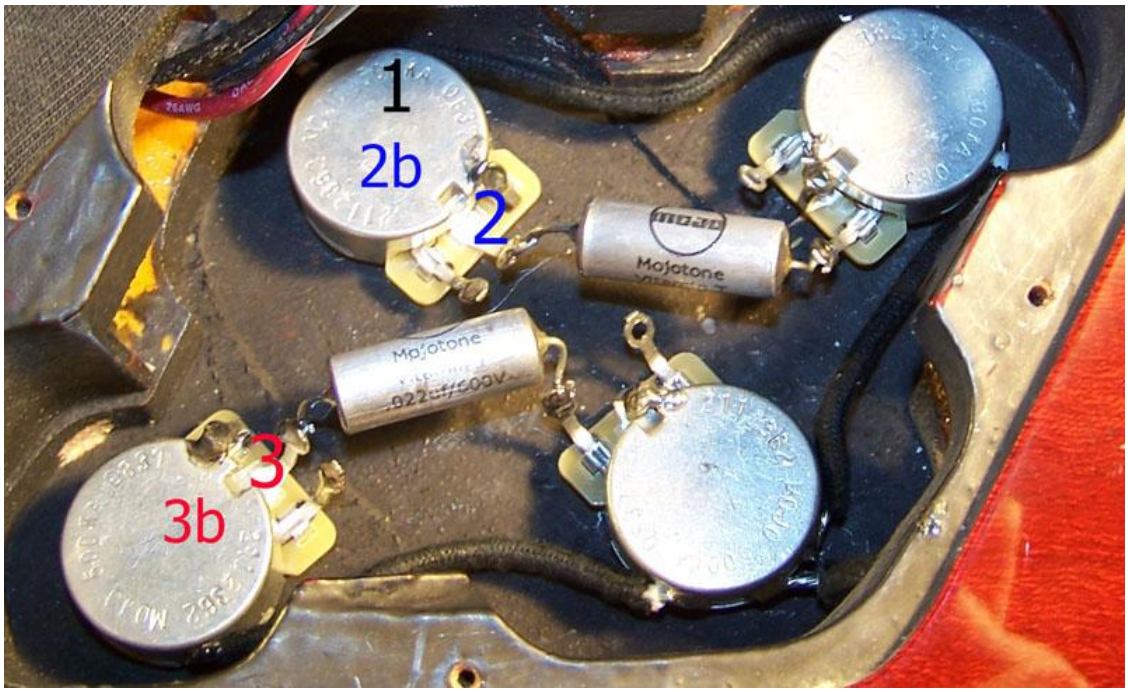

Fig. 10 Soldering points

Fig. 11