

# ES335 Complete (assembled)

**Please Read All Instructions Before Beginning.**

## **Tools you will need:**

- Soldering Iron (35 watt preferably)
- Solder
- Wet Sponge
- Wire Clippers
- Wire Strippers
- 3/8 Drill Bit
- 1/2 Drill Bit
- Variable Speed Dremel Rotary Tool
- Fine surfaced, Cone Shaped Rotary Stone bit. **NOTE: a variable speed Drill and step drill bit can be used in place of the Rotary Tool and Stone bit.**
- Phillips Screwdriver
- Pliers
- Cloth (an old T-shirt will work fine)
- Scissors
- Hair Dryer or mini torch for heat shrink
- 1/2 nut driver, socket or wrench
- Spool of string
- Electrical or masking tape
- Small bowl to hold screws and knobs

**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 up on a firm yet soft surface (a couple of bath towels will do) to keep the back of your guitar from getting scratched.

**Step 2.** With the cloth remove the knobs on the guitar. Work the cloth under knob and then wrap it completely around the base of the knob and pull up. (see fig. 1)

**Step 3.** Remove the nuts from the pots, jack and switch. Now carefully push the pots and switch into the body of the guitar and then slowly fish them out of the "F" hole. As the pots come out unsolder the pickup wires and the ground wire from the pots be sure to identify the pickup wires with tape so you will know which is the bridge and which is the neck pickups.

**Step 4.** If the holes for your volume and tone pots and jack are not 3/8" and the hole for your switch is not 1/2" then you will have to open them up for the new jack, pots and switch to fit. Remove 1 of the washers from one of the pots on your new wire assembly. This will be your guide and your safety net while modifying these holes without damaging your finish. Center the washer over one of the pot holes, then take your electrical tape and tape it securely to the body of your guitar (see fig. 2. A Les Paul is used in these photos but the concept is the same).

Now take your Rotary tool and carefully widen the face of the hole. BE CAREFUL AND TAKE YOUR TIME or you will chip your finish. I prefer the fine stone bit and rotary tool because it makes a smooth cut and is less likely to grab and chip the finish. As you widen the hole you will hear it start to hit the washer and you will know that you have gone far enough. You are only trying to open up enough to get past the finish, do not attempt to go all the way through with the stone bit. If you are using a drill and step bit do not tape the washer to the guitar because the bit may grab the washer and scratch your finish. Use the drill free hand but be slow and careful, taking 5 to 15 minutes to do this step right will save you many days of disgust for your impatience and lots of money to repair your finish (see fig. 3).

Now take a 3/8 drill bit and turn it by hand to finish widening the hole all the way through. I do this instead of using a drill motor to keep the inside of the cavity from chipping (see fig. 3).

Repeat this step to the other 3 holes and the jack if needed. For the Switch you need to end with a 1/2" drill bit. Once again take your time so you do not damage your finish and it should come out looking fine.

**Step 5.** If you have enough length on your pickup wires then solder your pickup leads to the pots while the kit is still on the board, if not then do this once you remove the kit from the board. Solder the hot lead of the pickups to lug 1 of their respective volume pots (i.e. neck pickup to neck volume) and solder the grounds to the top of their respective volume knobs (See fig4). Put your wire against the solder, heat the solder with your iron until the solder flows then gently push the wire through the hole (we have left enough room under the volume mod for the wire to fit) then remove your iron and blow on the connection till it cools.

If your guitar has a ground wire from the bridge solder it to the top of the neck tone pot.

**Step 6.** Use a long piece of solder or some other flexible material that has some rigidity and fish it through a control hole and out the "F" hole (see fig. 5). Now make a hook in the solder and tie the end of a long string to it and then pull it through. Now identify it with a piece of tape by naming it the same as the hole it came through (i.e. Neck Tone, Bridge Volume etc.). Now take the same string and tie it to the top of the control (Neck Tone etc.) that coincides with the hole that string came through. Do this to all your controls. For the output jack tie a loop in the string, feed it down through the hole and loop it once over the tip arm of the output jack so that when you are done you can just push the string through, it will come off the output jack and then you can pull it out. (See Fig. 6)

**Step 7.** Remove the electronics from the board. Attach the pickups and the bridge ground wire at this point if you could not attach them in step 5. Now carefully feed the electronics through the "F" hole and carefully use the strings to pull the electronics up through their holes. (See Fig. 7)

**Step 8.** While holding the string up on a control, feed the washer and nut down the string, tighten down the control and then remove the string. Do this for each control. (See Fig. 7)

**Step 9.** Attach the Volume knobs to your control pots and you are finished. (See Fig. 8) Now plug it in and take it for a spin. If something is not working properly go over the instructions and your connections again carefully and see if you can find the problem. Be sure that the Braided wire is not touching anything other than ground. If you cannot find the problem email us at [customerservice@bcsguitars.com](mailto: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 Removing the Knobs

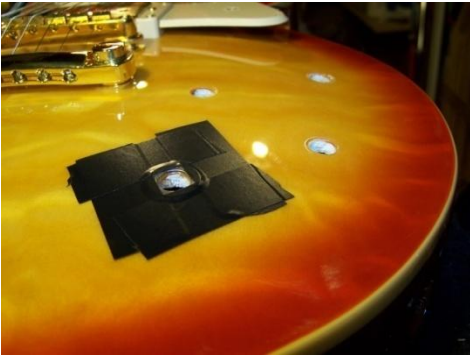


Fig. 2 Use a washer as your guide

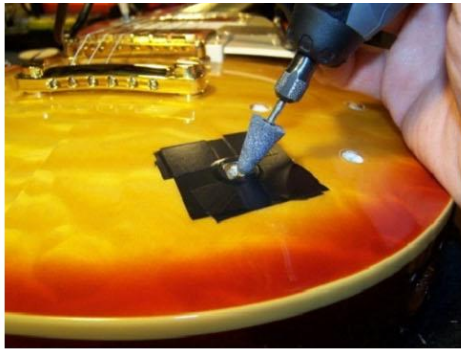


Fig. 3 Widen the top of the hole



3/8 drill bit by hand to finish



Patience will bring good results

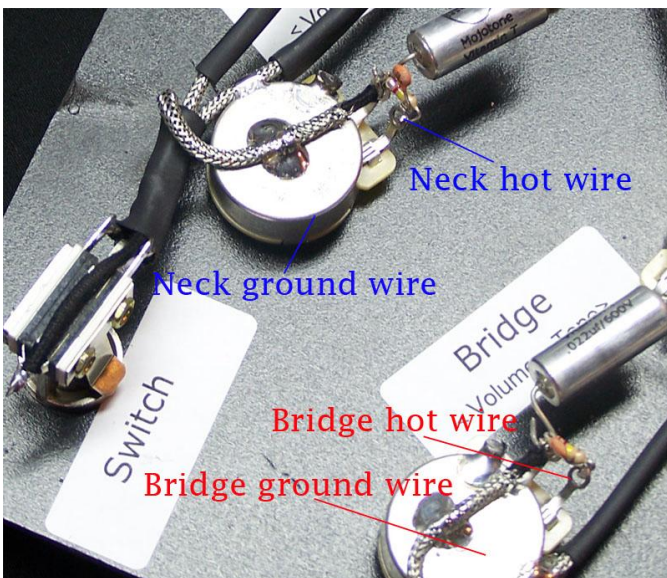


Fig. 4 Hook up the pickup wires to their respective volume pots





Fig. 5 Use a long piece of solder or some other material that is flexible yet has some rigidity.



Fig. 6 Running strings for installation



Fig. 7 Installation



Fig. 8 Finished