

Pickguard Shield Installation

Step 1 - Disassemble the pickguard and clean the bottom side of the pickguard with some windex or Alcohol. Once the pickguard is clean and dry you're ready to attach the shielding plate. Take the shielding plate and lay it flat onto an old piece of newspaper face up. Now take some spray adhesive (I use 3M Spray Adhesive but any brand will do) and apply a small amount onto the shield. Just enough to hold it secure when installed. You can also use tape or anything else you wish as long as it holds the shield in place. You can also use the pots to hold the Strat shield in place. Adhesive glue does not have to be applied to the complete shield, only enough to keep it in place.

Step 2 - When adhering to the pickguard, align the middle pickup hole on a Strat, or the neck pup on a Tele, first. Then work your way out from the middle making careful alignment adjustments as you adhere the shield to the pickguard.

Step 3 - If you are planning on shielding other parts of your guitar go ahead and skip to step 4. If not, go ahead and reassemble the pickguard. Don't worry about the metal parts of the pots and switches touching the shielding plate. This is desirable. It will help pull the noise and hum to ground and away from your pickups and main guitar signal. **NOTE TELE ONLY:** Now take a very small gauge wire and connect it from one of the pickguard screws to the back of the volume pot. Make sure the plate, screw and wire are touching. On a Strat there's no need to run a wire because the volume and tone pots act as a ground and will make contact with the shield pulling noise to ground. **NOTE JAZZ BASS ONLY:** The Tab that protrudes out where the Pickguard meets the Control Panel needs to be inserted under the metal Control Plate. This is necessary in order for the Pickguard Shield to make contact with the Jazz Bass's Grounding Plane. This will pull noise the shield picks up to the ground of the guitar.

Step 4 - In order to fully shield and maximize noise-rejection you need to shield all the cavities of your guitar. I suggest using my Adhesive-Backed Copper Shielding Foil. The Copper Sheets are 12" x 12" and are available from my website at https://monteallums.com/shielding_supplies.html. One Sheet will shield 2 or more guitars. Make sure the Copper shielding connects all cavities to a common ground point. Also, I suggest replacing all the unshielded wire that connects the inner electronics with the shielded wire I sell at the above link. Believe me, this makes a **BIG** difference. Keep exposed wire to a minimum, only enough to effectively solder connections. This wire is 90% silver and is Teflon-Coated which is heat-resistant. So not only does it have excellent shielding properties but it also is fantastic sounding guitar wire. Some say wiring has no effect on tone. They, obviously, have never used this shielded wire before.

Shielded Wire Installation

I suggest replacing one wire at a time starting with the input jack and working you way from there. **Important** - connect the braid shield of the wire to a common ground point. I suggest the back of a tone or volume pot. Also, ground the braid shield of the wire at **'one'** end only. Do not connect the braid shield to ground at both ends because this will create a ground loop and that is not going to reject or pull noise to ground. Use a very small gauge wire for connecting the braid shield of the wire to the ground point. This wire does not have to be shielded but it does need to be wrapped. Your regular small gauge cheap Radio Shack variety will do fine. **Note** - Expose only enough of the shielded wire required to solder. The least amount of shielded wire you leave exposed the better.

Copper Sheets (Non Adhesive-Backed) Shielding Installation

Cut out a strip large enough to cover the area you want to shield. Remember to use enough so the Copper overhangs the edges of the cavity. Form the Copper with your fingers until the Copper forms a snug fit in the cavity. Once formed remove the Copper and spray a little spray adhesive to the back of the form-fitted Copper. Insert and push the Copper to the body of the guitar until it adheres to the cavity. Repeat process until all cavities are shielded. **Important:** Make sure all Copper is connected together and is grounded to a common point, usually the back one of the tone or volume pots. When using my Adhesive-Backed Copper Foil you'll use the same technique except you will not have to spray adhesive on the back.

Some final thoughts. Performing these modifications will in no way change the tone of your guitar, other than it may sound a bit richer because some of the faint harmonics that were previously buried in hum and noise will now be audible. Shield the interior of every cavity that you can reach. **NOTE:** I do not recommend shielding the Input Jack Cavity on a Strat or Tele. There's just too little space and too much of a chance the copper will touch something and cause a short.

Remember, all grounds are not alike. Be careful not to create a ground loop. Follow these simple rules:

- + All grounds should come together at one and only one point (usually the back of a pot case).
- + Don't use the shield as ground, rather, use it to conduct noise to ground. The sheet resistance of the copper is a few ohms - not a good ground conductor, but low enough to conduct the noise to ground. Do you see the difference?
- + Thusly, there will never be two paths to ground.

This PDF contains Hyperlinks that when clicked on will take you to a web page where you can purchase these modding tools. All the links are Underlined.



READ ME FIRST! — If the Copper Shield was bent or folded during shipment you can easily flatten it back out. The copper I use is very soft and easy to shape back to a smooth surface. Take a Rolling Pin and roll the Copper Shield out on a flat surface like a counter top. See the pic above for illustration. You can buy a Rolling Pin [here](#).

OK – all is fine and well. After reassembly, you will hear significant improvement. After having completed all the above you WILL hear less noise, I guarantee it!

Thank!
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Here is the 3M Spray adhesive I recommend for attaching the shield to your pickguard. You can buy it [here](#). Or a cheaper alternative [here](#).