Cavity noise canceling system (CVNCS) IN S for Strat
User's manual and installation instructions

Strat style guitars that have 5way pickup selector switch; Volume; Tone1; Tone2 and single coil guitar pickups can be retrofitted with the CVNCS IN S. The CVNCS IN S is placed down inside of the control cavity under the pickguard.

CVNCS IN S will NOT operate effectively/correctly with ALL Metal/Aluminum pickguard!

The CVNCS IN S contains a low impedance Air coil assembly so it effectively eliminates the noise, while the single coil pickup tone retains unaltered. The CVNCS IN S is an easy to install passive hum canceling system.

The best way to install the CVNCS IN S is to use professional service of a guitar builder or guitar repair shop but it can be also installed by anyone that is familiar with guitar electronics, guitar assembling and wire soldering.

Scratching isolation; Hard pulling of the yellow and red lead wires or heavy bending the CVNCS IN S could badly damage the unit and cause you to lose all terms of the warranty.

Tools and materials needed for installation:

Soldering tool, screwdriver, wire cutters, soldering wire, shrink tubing. Optional: a digital multimeter, a piece of foam, small plastic bag, electrical/masking tape.

Basic requirements:

1. All single coil pickups need to be same kind (i. e. Alnico rod poles) and within the selected best matching range
2. It is best if all pickups are wound in the same direction and the same magnetic polarity (NO RWRP middle pickup).
3. If there is a RWRP Middle pickup this pickup needs to be replaced with a regular one, or you can use a different wiring diagram we provide on the web: **http://www.ilitchelectronics.com/wirings/**
4. The pickups switching does not include any "in series" or "out of phase" combination.

Preparing the guitar for CVNCS IN S Installation:

1. Pull OFF all strings from the tuners. Now you can easily access the entire pickguard assembly.
2. On the guitar front - unscrew all mounting screws that hold the pickguard to the guitar body.
3. Carefully flip the pickguard assembly upside down so you can see all electronic parts at a glance.

Inspect the side cavity edges and cavity walls for wood chips or sticking sharp materials and smooth them if needed. You can tape a layer of masking tape over the vertical cavity wall to protect the CVNCS IN S coil from scratching.

Position the CVNCS-IN coil over the cavity in the best geometry matching way then gently shape it so it will be able to perfectly fit inside the cavity without any significant force. Lastly – use several pieces strong self adhesive type (duck type) to secure the CVNCS IN S inside of the control cavity

4. Take the Adjusting PCB and make sure that you will be able to fit it inside of the control cavity easily.

CVNCS IN S installation steps:

A. Cut or unsolder the three pickup ground wires (usually black) soldered to the housing of the Volume potentiometer

B. Strip (push back) all three pickup ground wires (Bg, Mg, Ng) by 1/8" (3mm) and tin them with fresh solder wire.

C. Solder the cables coming out of the **Adjusting PCB** as follows:

=Green wire to GND; White wire to Ng; Orange wire to Mg; Blue wire to Bg. Then isolate the created soldering joints.

E. Solder the wires coming out of the adjusting PCB with the cables coming out from the CVNCS IN S as follows: yellow wire from the adjusting PCB to yellow wire from the CVNCS IN S; red wire from the adjusting PCB to red wire from the CVNCS IN S. Then isolate the created soldering joints.

D. Flip the pickguard assembly back to its original position and screw some of the top located screws to hold it. Do not mount the bottom located screws so the Adjusting PCB could be easily placed inside later.

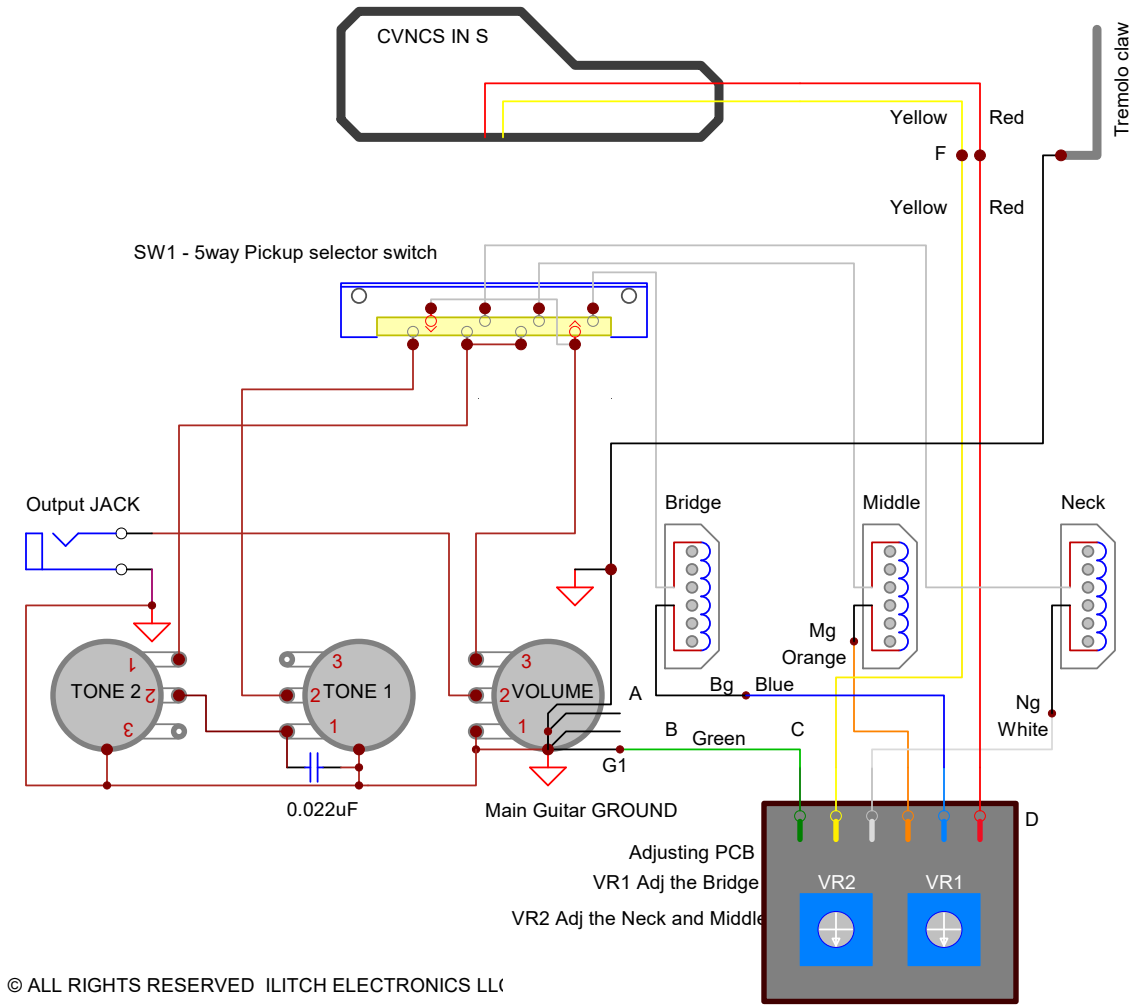
Adjusting the CVNCS IN S for best hum cancellation (Hold the guitar as you play it at more then 2m/6feet away from amplifier:

1. Put back ON some of the guitar strings (at least one), then turn the guitar volume and tone controls to their "MAX".
2. Use a guitar cable to connect the guitar to a guitar amplifier.
3. Use a correct size screwdriver to adjust the blue trim pots located on the Adjusting PCB.
4. Turn the two trim pots located on the adjusting PCB to their "MAX" (100%). In this way the guitar is at its original mode as the CVNCS IN S system hasn't been installed.
5. Turn "ON" the guitar amplifier and set it up with a gain and loudness, so you can hear some noticeable hum noise. Play over the strings to check that all pickups operate normally and the hum noise has almost the same level at all 5 position of the pickup selector switch SW1. Now set the two trimpots VR1 and VR2 to their middle position (50%)!
6. Hold the guitar as you would play it and get a position near the amplifier but not less than 6 feet (2 meter). Best noise canceling result will be achieved with the amplifier located behind your back and the guitar approximately parallel to the amplifier front face.
7. Put the pickup selector switch at position "1" (only Bridge pickup). Turn down (CCW) VR1 trim pot to reduce the noise level.

If the noise increases instead of decreasing, unplug the guitar from the amplifier, unscrew the guitar PG (go to step E of the installation instructions) and swap the wires connection: yellow wire from the adjusting PCB to the red wire from the CVNCS IN S; and red wire from the adjusting PCB to the yellow wire from the CVNCS IN S. Screw back the Pick guard and turn down VR1 trim pot until you get optimum noise cancellation at position "1".

8. Put the pickup selector switch at position "4" (Middle and Neck pickups in parallel). Turn slowly down VR2 trim pot to reduce the noise until you get optimal noise cancellation at position "4".
9. You can now go back and forth through all 5 positions of the SW1 and fine adjust the locations of the VR1 and VR2 until you get optimum noise cancellation. After you are satisfied with the noise reducing result wrap out the adjusting PCB with a small plastic bag or piece of foam, and insert it into the guitar electronics cavity.
10. Align the pickguard and screw in the rest of the pickguard mounting screws. Check for normal operation of the guitar.

Basic Wiring diagram. **Use this wiring ONLY if the three SC pickups are same polarity** (hum noise at ALL 5 positions)!
For RWRP Middle pickup and more - find your wiring diagrams on the website - www.ilitchelectronics.com/wirings/
You MUST disconnect the three pickup ground wires from the Volume potentiometer housing!



Terms of Limited Warranty. RETURN & EXCHANGE POLICY:

We offer to the original purchaser (**For DIRECT SALES from ILITCH ELECTRONICS ONLY**) the following terms of Limited Warranty and RETURN & EXCHANGE POLICY:

1. One year of warranty for all moving parts (i.e. trim potentiometers) of the product.
2. Two years warranty for all non-moving parts (i. e. - capacitors, resistors etc.) of the product. Ilitch Electronics reserves the right, based on visual observing and electrical measuring, to determine what has caused a defect. Damages caused by accident, abuse, alteration, or misuse are not covered by this warranty. Product appearance and normal "wear and tear" (worn paint, scratches, etc.) are not covered by this warranty.
3. If you are not satisfied with your purchase we offer a refund or exchange within 28 days from the Purchase Order receipt issuance. You MUST contact us first and get a Return Authorization Number (RAN) before you return/exchange.

A refund will exclude all shipping and handling costs PayPal fees and an additional 15% restocking fee will be applied. The product needs to be in its original condition and packaging that you have received it from us.

Customer's Name:..... Date of purchase :.....

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