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This **GIB-ASY** product is a non-invasive (i.e., drills no holes) and *transparent* upgrade that is designed to give you 100 percent *MORE* pickup tones (not capacitor tones) on your Les Paul style or similar instrument with two pickups. These instructions assume that your instrument has two pickups that are either 2-wire single-coil pickups or 2-wire humbucker pickups. If you have one or two 4-wire humbuckers and you wish to use this upgrade, refer to the document titled “*Humbucker Wiring Information*” for information at AweSome-Guitars.com *Document Library* for guidance on how to wire and connect your pickups into a 2-wire configuration.

This upgrade product is one of our growing family of revolutionary **Pickup Tone Multiplier™** switching system products. Although these instructions are for *right-hand* instruments, by inference you can use this product to upgrade a left-hand instrument.

Product Content

The following items were included with your GIB-ASY upgrade product. If you purchased our GIB-KIT upgrade product, these items will be left over from the Assembly Procedure.

- Assembled and tested GIB-ASY upgrade product
- 6” [152mm] Black insulated wire (sub-divided to create two 1” [25.4mm] lengths and one 4” length [101mm])
- 5 Business cards (you can share business cards with others)
- 1 AweSome Musical Instruments headstock decal (slightly bend decal on backside to expose backing removal area)

Tools You Need To Install This Upgrade

- Soldering iron (25w – 30w maximum)
- Solder, 60/40 rosin core
- Screwdrivers; small straight slot, small phillips
- Small needle nose pliers
- Small side cutters
- Wire strippers
- Nut drivers or sockets: 10mm and perhaps other sizes (or 6” [152mm] adjustable wrench)
- Multimeter to measure continuity

Green Terminal Strip Detail

Here is how to attach wires to the **green** terminal strip (J1) that is on the T2-Board. Use a small screwdriver or writing pen tip and press down on the square *release button* located directly above the wire hole. Hold the button down and insert the stripped wire completely into the wire connection hole and then release the button. Lightly tug on the wire to confirm it is firmly gripped by the Terminal Strip. A legend is printed on the circuit board with the name of each terminal strip wire hole from left-to-right. Attach each wire to the correct terminal strip hole. For this product, the **VOL (5)** terminal strip hole will NOT be used. See *Figure 3* or *Figure 6* for additional connection details.

T2-Board (6-hole terminal strip):	GND	VOL	NECK	BRDG
	(6)	(5)	[+] [-]	[+] [-]
			(4) (3)	(2) (1)

Caution: Do not insert hard items in the wire holes because it will decrease reliable electrical connection.

Special Pickup Grounding Note

There is a certain situation where your GIB-ASY product may not work properly when installed.

This situation is where either/both of your pickups have a metallic housing that is also electrically connected to the pickup coil. You can confirm whether your pickups are connected to the metallic housing by using an ohmmeter. Determine if there is continuity between each of the pickup wires and the metallic housing. If your measurements indicate infinity (i.e., no continuity) then no action is required.

A separate ground wire may be directly attached to the pickup metallic housing for added shielding, but this is not a pickup coil wire.

However, if you measure continuity between any of the coil wires and the metallic housing, take note if your pickups are in a body cavity that is *grounded* (this typically involves a body cavity that contains a special grounding paint, copper foil or perhaps a ground wire.) If this situation exists, you must insulate/isolate the pickup package from any ground connection. This can be achieved with the use of foam rubber between the pickup housing and the grounded body cavity. If your situation involves a ground wire, you can simply disconnect the wire. To not do so may result in certain pickup coil selections shorting directly to ground with no sound being produced.

Upgrade Requirements and Specifications

The GIB-ASY product has the following Body Cavity Depth Installation Requirements: 1-1/2" [38mm]

The push-pull controls have a 3/8" [9.5mm] length threaded mount.

The push-pull controls are designed to use friction (push on) knobs. Knobs with a locking set screw may also be used.

We recommend that you read this document completely before installing this product. This will permit you to become more familiar with the installation process and to identify any issues and solutions prior to the installation.

The reason one of the push-pull controls is connected with a ribbon cable is because there is no standard dimension that is established for the Volume and Tone control mounting holes. The distance between the mounting hole centers vary, and depending on where the instrument was manufactured the mounting holes may be in SAE or Metric dimensions. Because of this, the only practical way to address all of these variants was to provide one control that offered the flexibility of being mounted in a variety of instruments and avoid the need to have customers drill holes in their instruments.

This document contains the following two sections. Refer to the section that applies to your instrument.

- A. Upgrade Installation Instructions for Instruments with Two Volume Controls and Two Tone Controls**
- B. Upgrade Installation Instructions for Instruments with One Volume Control and One Tone Control**

A. Upgrade Installation Instructions for Instruments with Two Volume Controls and Two Tone Controls

Refer to Figures 1, 2 and 3 during this upgrade.

Steps:

1. Carefully remove the instrument's original **Neck** (top) **Tone** control knob. If the knob does not have an attaching set screw, the knob can be removed by simultaneously rocking the knob from end-to-end while pulling up on the knob. Unscrew and remove the mounting nut and washer. Transfer the wire connections *one-to-one* from the original Neck Tone control to the push-pull control mounted in the SW1 position on the T2-Board (*see Figure 1*).
2. Carefully remove the instrument's original **Bridge** (bottom) **Tone** control knob. Unscrew and remove the mounting nut and washer. Transfer the wire connections *one-to-one* from the original Bridge Tone control to the push-pull control connected by ribbon cable to the SW5 position of the T2-Board (*see Figure 1*).
3. Unsolder and remove the **Neck** pickup wires from the #2 terminal on the Neck Volume control (*see Figure 1*).
4. Unsolder and remove the **Bridge** pickup wires from the #2 terminal on the Bridge Volume control (*see Figure 1*).

Important Note: If your pickup wires consist of two separate wires (hopefully with different colors), go to the next step. If the pickup wires consist of a center wire and a braided shield, you need to carefully solder and insulate a 1" [25mm] length of the included BLACK wire to the shield so it can go into the green terminal strip connection.

5. Take the **RED** wire that is attached to the "N" connection on the T2-Board and solder it to terminal 2 of the **Neck Volume** control (*see Figure 2*).
6. Take the **BLACK** wire that is attached to the "B" connection on the T2-Board and solder it to terminal 2 of the **Bridge Volume** control (*see Figure 2*).
7. Insert the two **Neck** pickup wires (*see Fig. 3*) into the NECK connectors (4), (3) of the green terminal strip on the T2-Board. Use wire color consistency for the NECK connectors as you use for the BRDG connectors in step #8.
8. Insert the two **Bridge** pickup wires (*see Fig. 3*) to the BRDG connectors (2), (1) of the green terminal strip on the T2-Board. Use wire color consistency for the BRDG connectors as you use for the NECK connectors in step #7.
9. Solder one end of the included 4" [101mm] **BLACK** wire to a common ground (*see Fig. 3*). Insert the other end into the GND connector (6) of the green terminal strip on the T2-Board.
10. Insert the push-pull control that is directly attached to the T2-Board into the Neck Tone control hole. Attach the flat washer, screw on and tighten the attaching nut.
11. Insert the push-pull control that is attached to the T2-Board via the ribbon cable into the Bridge Tone control hole. Attach the flat washer, screw on and tighten the attaching nut.

At this point **do not** attach the tone control knobs until after everything checks out ok.

12. Plug into your amplifier and using minimal volume, confirm that everything works ok.

Your correctly-upgraded instrument will work as before. Your 3-way toggle switch is still used to select the Bridge, Both, and Neck pickups. If the 3-way toggle switch is in the "Both" position and the pickups sound tinnier than they originally did, just reverse the pickup wires for either pickup (but not both) that are connected to the green terminal strip.

This upgrade is designed so that when the 3-way toggle switch is in the middle position (Both) you now also have access to three *additional* pickup tones.

Figure 1 – Original Wiring (typ.) with two volume and two tone controls

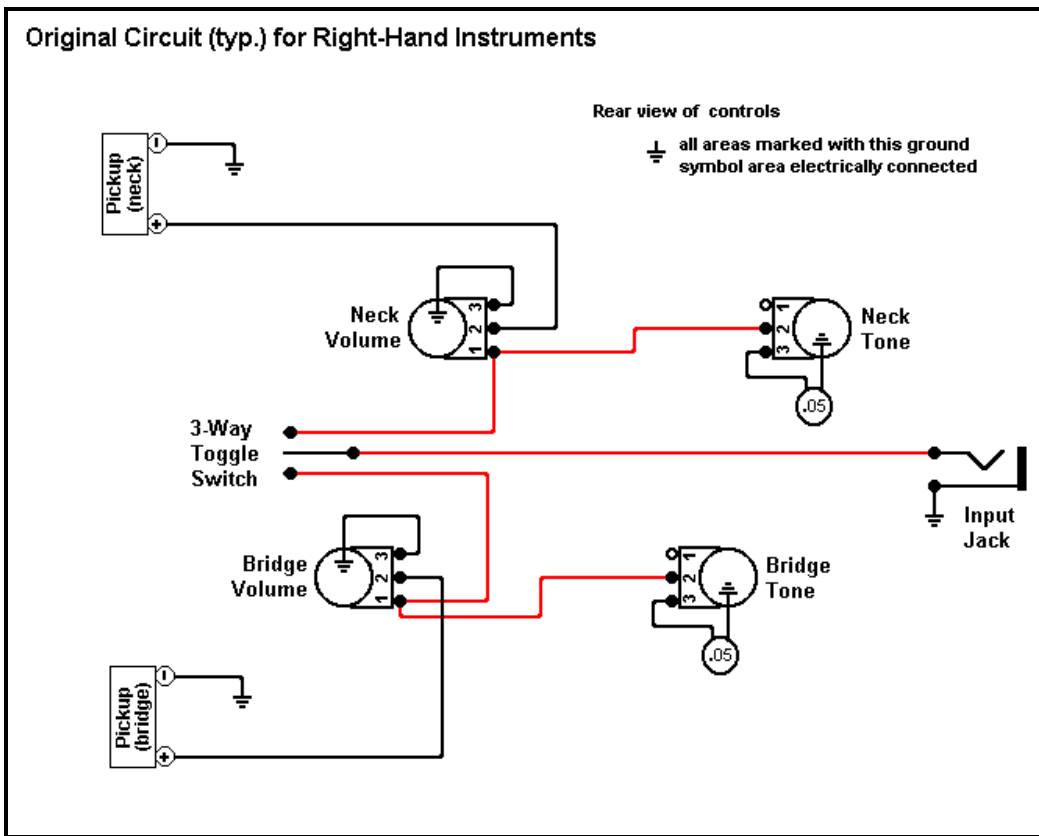


Figure 2 – Revised Wiring (typ.) with two volume and two tone controls

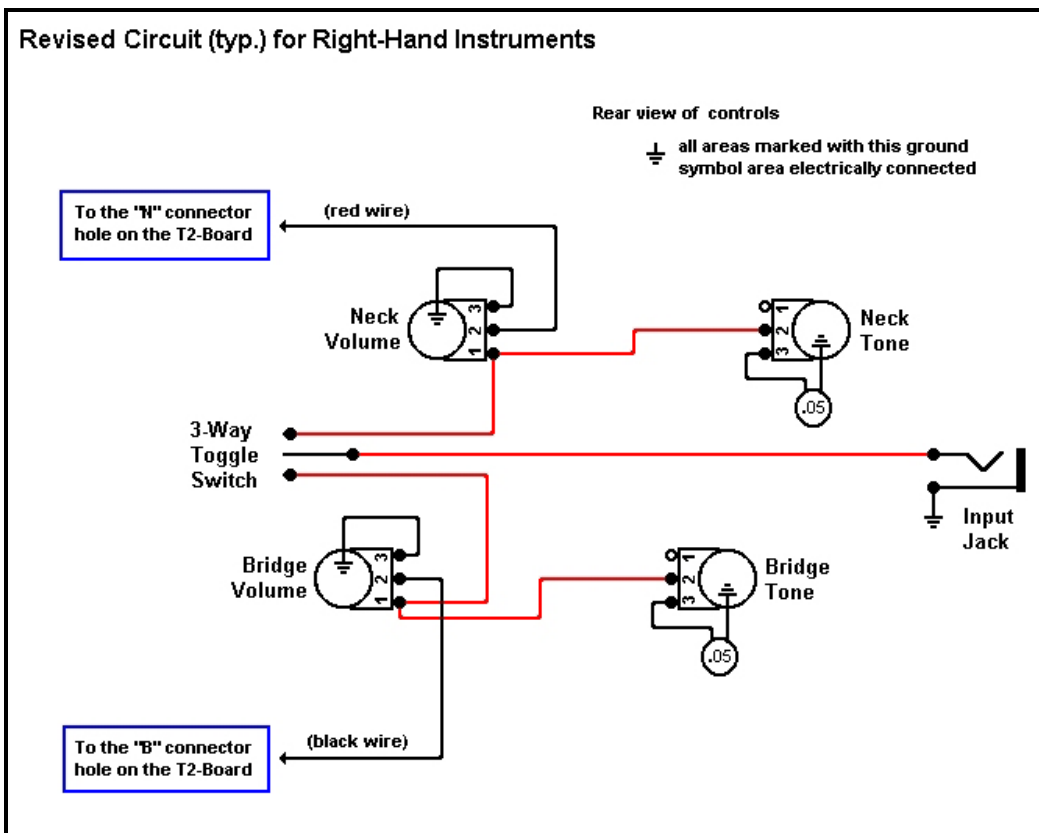
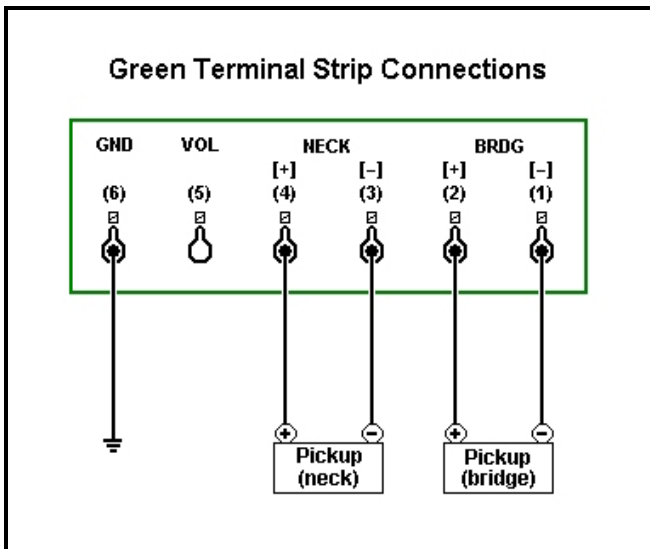


Figure 3 – Green Terminal Strip (J1) Connections



Here Is How Your Upgrade Works

To access the additional three pickup tones, the 3-way toggle switch must be in the middle position.

When you gently pull out the Neck Tone control shaft, you put the two pickups (that are normally in an in-phase and parallel circuit) out-of-phase with each other (producing tone #4). Push the control shaft in to put both pickups back into the normal in-phase state.

When you gently pull out the Bridge Tone control shaft, you are putting the two pickups (that are normally in a parallel circuit) into a series circuit (producing tone #5). Push the control shaft in to put both pickups back into a parallel circuit.

When you gently pull out both the Bridge Tone control shaft AND the Neck Tone control shaft, you are putting the two pickups in series as well as out-of-phase (producing tone #6). Push both control shafts in to put both pickups back into a parallel circuit with the pickups in the normal in-phase state.

Note: To use your 3-way toggle switch to get either the separate stock Neck or Bridge pickup tones, both push-pull controls MUST be pushed in or you will not hear any sound.

If you get the stated results, tighten everything up and put your instrument back together. Complete the final step.

13. Rotate both Tone controls clockwise and attach the correctly-oriented plastic Tone knobs to the push-pull controls. If the knobs do not grip firmly, insert a flat head screwdriver into the control shaft slot and slightly bend outward to increase gripping effectiveness.

IMPORTANT NOTE for Push On Control Knobs: After you attach the plastic control knobs to the push-pull controls, if you need to remove them you MUST grab and hold the extended shaft with small pliers while carefully rocking the control knob off the shaft. You must do this to prevent pulling the shaft out of the control. This does not apply to knobs that use a shaft locking screw.

Welcome to the wonderful world of 100 percent More true pickup tones (not capacitor tones). To attach the AweSome Musical Instruments headstock decal, slightly bend decal on backside to expose backing area.

You can get additional *revolutionary* **Pickup Tone Multiplier**TM products for your other instruments at our website www.AweSome-Guitars.com

"We are known for creating dozens of the very best pickup tones in the world. You could be known for using them."

B. Upgrade Installation Instructions for Instruments with One Volume Control and One Tone Control

Refer to Figures 4, 5 and 6 during this upgrade.

Steps:

1. Carefully remove the instrument's original **Tone** control knob. If the knob does not have an attaching set screw, the knob can be removed by simultaneously rocking the knob from end-to-end while pulling up on the knob. Unscrew and remove the mounting nut and washer. Transfer the wire connections *one-to-one* from the original Tone control to the push-pull control mounted in the SW1 position on the T2-Board.
2. Carefully remove the instrument's original **Volume** control knob. Unscrew and remove the mounting nut and washer. Transfer the wire connections *one-to-one* from the original Volume control to the push-pull control connected by ribbon cable to the SW5 position of the T2-Board.
3. Unsolder / remove the **Neck** pickup wire from 3-way toggle switch. Note the switch terminal to which it was attached.
4. Unsolder / remove the **Bridge** pickup wire from 3-way toggle switch. Note the switch terminal to which it was attached (*see Figure 4*).

Important Note: If your pickup wires consist of two separate wires (hopefully with different colors), go to the next step. If the pickup wires consist of a center wire and a braided shield, you need to carefully solder and insulate a 1" [25mm] length of the included BLACK wire to the shield so it can go into the green terminal strip connection.

5. Take the **RED** wire that is attached to the "N" connection on the T2-Board and solder it to terminal on the 3-way switch that previously had the **Neck** pickup attached (*see Figure 5*).
6. Take the **BLACK** wire that is attached to the "B" connection on the T2-Board and solder it to terminal on the 3-way switch that previously had the **Bridge** pickup attached (*see Figure 5*).
7. Insert the two **Neck** pickup wires (*see Fig. 6*) into the NECK connectors (4) and (3) of the green terminal strip on the T2-Board. Use wire color consistency for the NECK connector as you use for the BRDG connector in step #8.
8. Insert the two **Bridge** pickup wires (*see Fig. 6*) to the BRDG connectors (2) and (1) of the green terminal strip on the T2-Board. Use wire color consistency for the BRDG connector as you use for the NECK connector in step #7.
9. Solder one end of the included **BLACK** wire to a common ground. Insert the other end into the GND connector (6) of the green terminal strip on the T2-Board (*see Fig. 6*).
10. Insert the push-pull control that is directly attached to the T2-Board into the Tone control hole. Attach the flat washer, screw on and tighten the attaching nut.
11. Insert the push-pull control that is attached to the T2-Board via the ribbon cable into the Volume control hole. Attach the flat washer, screw on and tighten the attaching nut.

At this point do not attach the control knobs until after everything checks out ok.

12. Plug into your amplifier and using minimal volume, confirm that everything works ok.

Your correctly-upgraded instrument will work as before. Your 3-way toggle switch is still used to select the Bridge, Both, and Neck pickups. If the 3-way toggle switch is in the "Both" position and the pickups sound tinnier than they originally did, you need to reverse the pickup wires for either pickup (but not both) that are connected to the green terminal strip.

This upgrade is designed so that when the 3-way toggle switch is in the middle position (Both) you now also have access to three *additional* pickup tones.

Figure 4 – Original Wiring (typ.) with one volume and one tone control

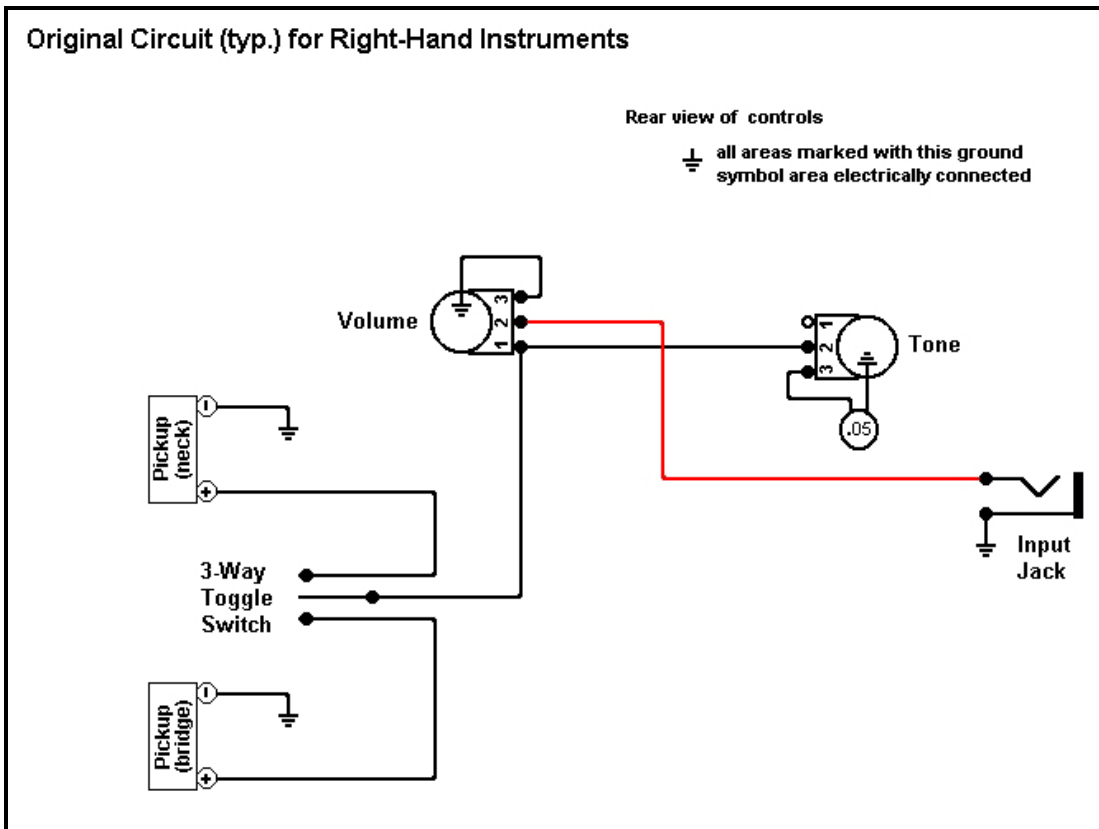


Figure 5 – Revised Wiring (typ.) with one volume and one tone control

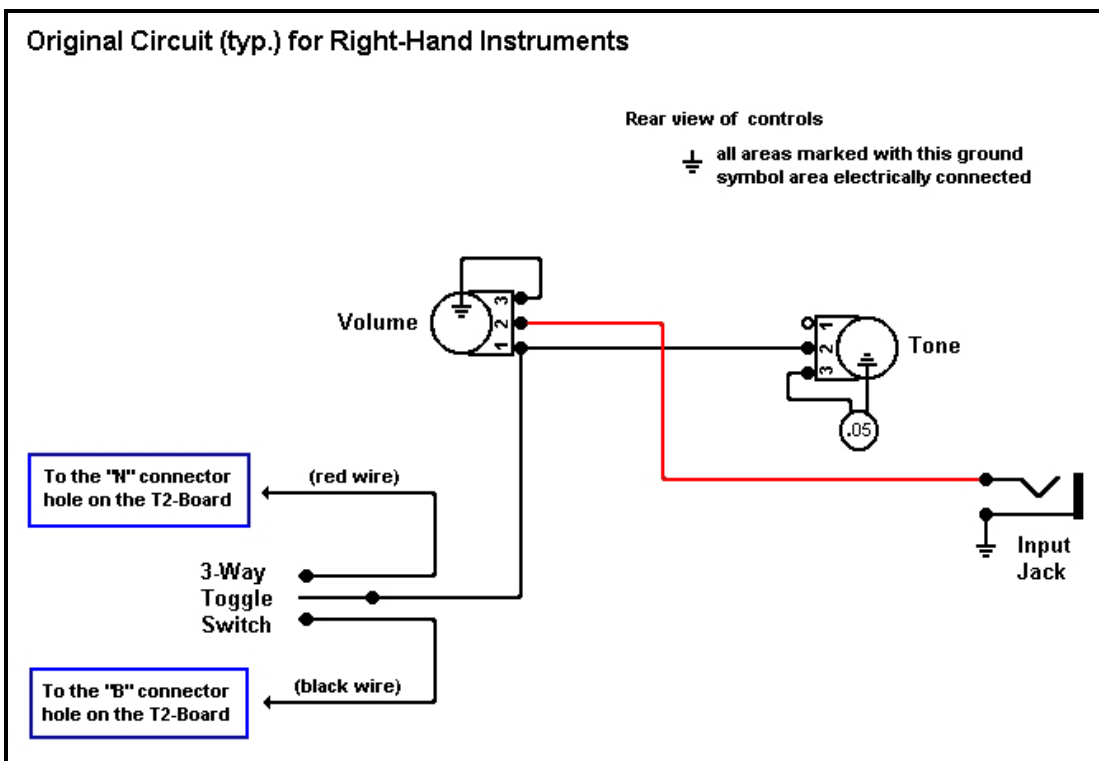
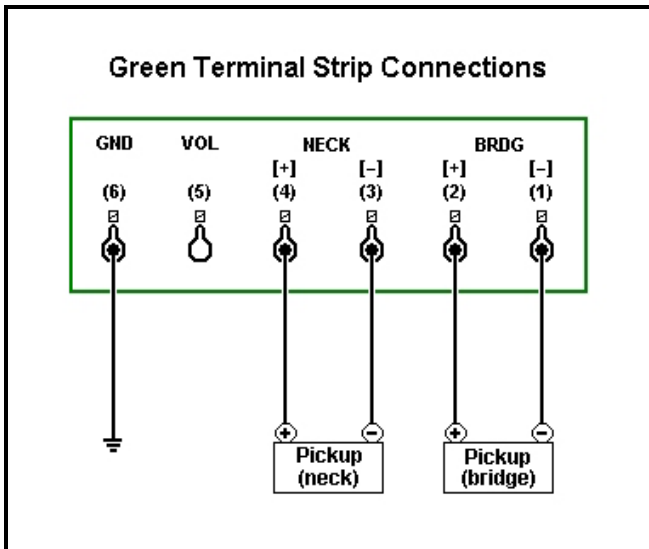


Figure 6 – Green Terminal Strip (J1) Connections



Here Is How Your Upgrade Works

To access the additional three pickup tones, the 3-way toggle switch must be in the middle position.

When you gently pull out the Tone control shaft, you put the two pickups (that are normally in an in-phase and parallel circuit) out-of-phase with each other (producing tone #4). Push the control shaft in to put both pickups back into the normal in-phase state.

When you gently pull out the Volume control shaft, you are putting the two pickups (that are normally in a parallel circuit) into a series circuit (producing tone #5). Push the control shaft in to put both pickups back into a parallel circuit.

When you gently pull out both the Volume control shaft AND the Tone control shaft, you put the two pickups in series as well as out-of-phase (producing tone #6). Push both control shafts in to put both pickups back into a parallel circuit with the pickups in the normal in-phase state.

Note: To use your 3-way toggle switch to get either the separate stock Neck or Bridge pickup tones, both push-pull controls MUST be pushed in or you will not hear any sound.

If you get the stated results, tighten everything up and put your instrument back together. Complete the final step.

13. Rotate both Volume and Tone controls clockwise and attach the correctly-oriented plastic Volume and Tone knobs to the push-pull controls. If the knobs do not grip firmly, insert a flat head screwdriver into the control shaft slot and *slightly* bend outward to increase gripping effectiveness.

IMPORTANT NOTE for Push On Control Knobs: After you attach the plastic control knobs to the push-pull controls, if you need to remove them you MUST grab and hold the extended shaft with small pliers while carefully rocking the control knob off the shaft. You must do this to prevent pulling the shaft out of the control. This does not apply to knobs that use a shaft locking screw.

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