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This upgrade product is one of our growing family of revolutionary **Pickup Tone Multiplier™** switching system products. This **GIB-KIT** upgrade 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.

This product is designed for use with 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](http://AweSome-Guitars.com) *Document Library* for guidance on how to wire and connect your pickups into a 2-wire configuration.

### This Product Contains The Following Items

- A zip bag labeled **GIB-KIT A** that contains the following items:
  - 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)
  - 1 – T2-Board – a printed circuit board (1.00" x 1.75", 2.54cm x 4.54cm)
  - 1 – 10" [254mm] length of Black insulated wire (to make two 4" lengths and two 1" lengths)
  - 1 – 4" [101mm] length of Red insulated wire
  - 1 – 3" [76mm] length of Blue insulated wire (used only in the Testing Procedure)
  - 1 – 3" [76mm] length of ten conductor multicolor ribbon cable
  - 1 – 2" [51mm] length of bare copper wire
  - 1 – 1/8" [3mm] thick rectangular foam spacer 1/2" x 5/8" [13mm x 16mm]
- A zip bag labeled **GIB-KIT B** that contains (depending on your ordered product) the following items:
  - 2 – 500K Audio Taper push-pull controls (3/8" [9.5mm] length threaded mount designed for friction/push-on knobs)
  - 1 – Terminal strip, green, 6-position

The following PDF documents must be downloaded from our website: [www.AweSome-guitars.com/docs](http://www.AweSome-guitars.com/docs)

- GIB-KIT Assembly Instructions
- GIB-ASY Testing Instructions
- GIB-ASY Installation Instructions

### Tools You Need To Assemble This Upgrade

- Soldering iron (25w – 30w maximum)
- Solder, 60/40 rosin core
- Small needle nose pliers
- Small side cutters
- Exacto knife or suitable blade cutter
- Wire strippers

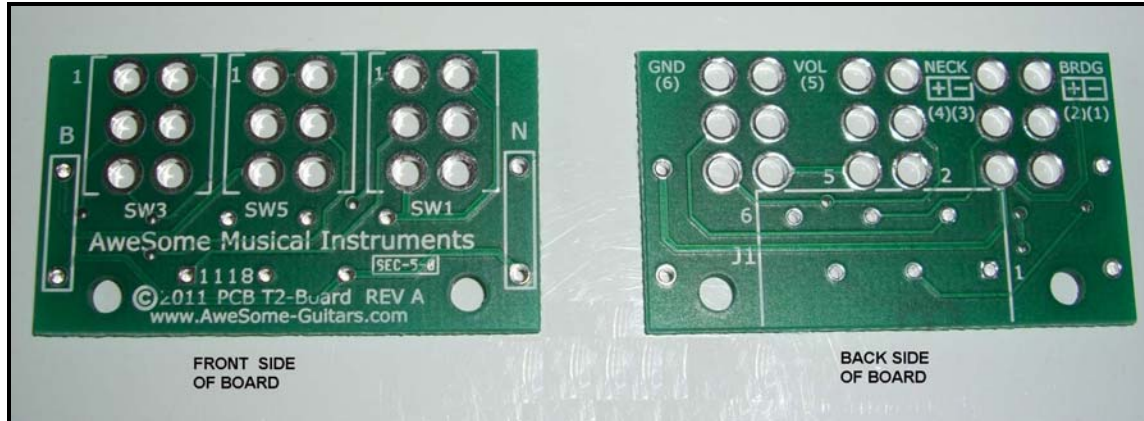
### Upgrade Installation Requirements

**BEFORE YOU DO ANYTHING**, first refer to *Section A* in the **Testing Instructions For GIB-ASY Upgrade** document to verify the included push-pull controls function properly *before* you start assembling this product.

It is not practical for us to test each kit component. We cheerfully replace any unsoldered / uninstalled push-pull controls that are defective.

## T2 Circuit Board Legend

The front side of the circuit board contains the inscriptions for the switches SW3, SW5 and SW1 as well as the “B” and “N” connection pads. The back side identifies where the various wires are connected to the mounted green terminal strip.



## Upgrade Requirements and Specifications

The assembled **GIB-KIT** 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 assembling this product. This will help you to become more familiar with the assembly process and to identify any issues and solutions prior to the assembly.**

The reason one of the push-pull controls is connected via 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.

## Special Pickup Grounding Note

There is a certain situation where your assembled GIB-KIT 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.

## Assembly Instructions for GIB-KIT Product

### Steps:

1. From the back side of the circuit board, mount the 6-position green terminal strip into the board. There is a white rectangle on the board to identify where the terminal strip is to be mounted.

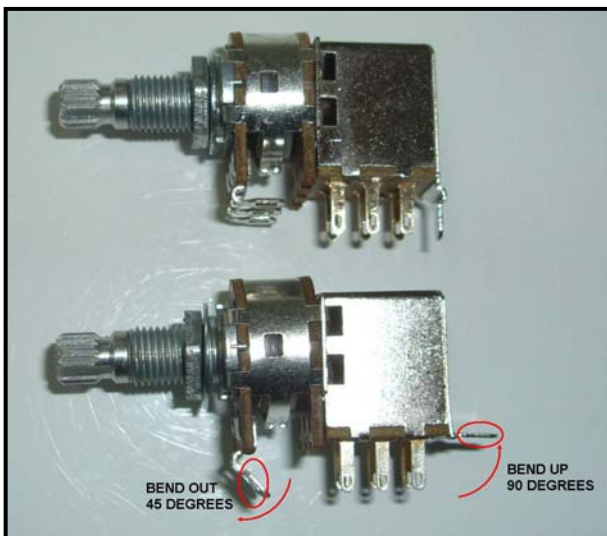
**Warning:** Make sure the terminal strip is correctly oriented, with the mounting holes facing away from the edge of the circuit board. The edge of the circuit board will be flush with the green terminal strip body.



2. Turn the circuit board over so the terminal strip is on the bottom and the front side of the board is facing up. Confirm that the terminal strip is firmly pressed against the circuit board. Solder each of the six terminal strip pins to the circuit board pads.



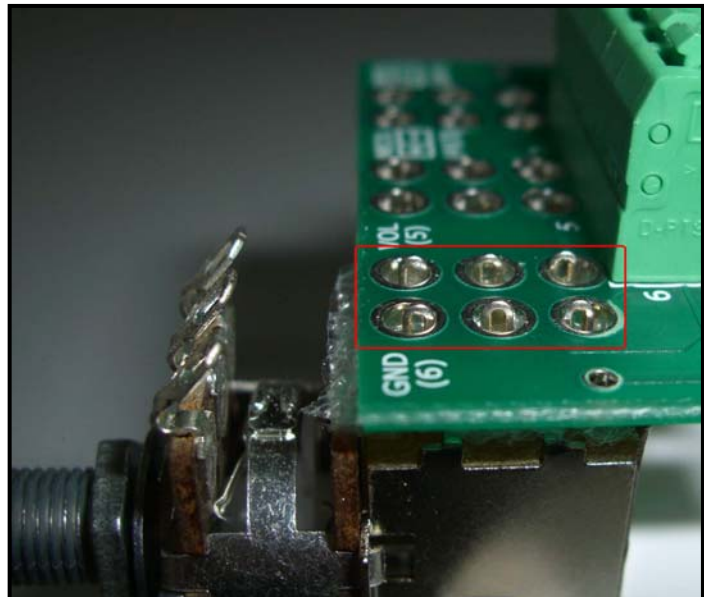
3. Take one of the included **push-pull controls** and use needle nose pliers to bend the tab on the back of the metal housing out of the way (90 degrees).



4. Use the needle nose pliers to bend the three push-pull control terminals into a 45 degree angle. (see previous picture)
5. Push the included white 1/8" [3mm] thick **foam spacer** over the six pins on this push-pull control so that the pins push completely through the foam spacer. The foam spacer is against the control body. If needed, use a straight slot screwdriver blade to push down on the foam spacer to coax the pins to puncture and pass through the foam spacer.



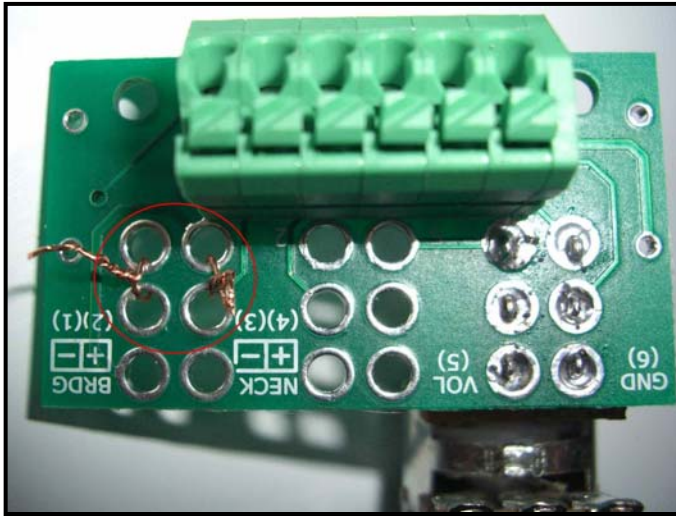
6. From the front side of the circuit board insert the six switch terminals of the push-pull control into the six SW1 pads with the control shaft facing away from the circuit board as illustrated below.



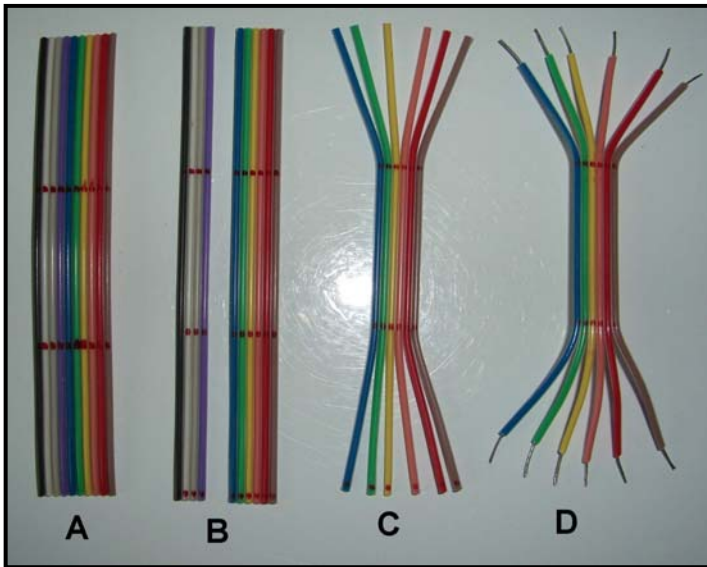
**Special Note:** Do NOT insert the push-pull control terminal pins all the way through the board so the body is flush. The purpose of the foam spacer is to prevent complete insertion of the terminals of the push-pull control. The switch terminal pins should slightly protrude through the back side of the board.

7. From the back side of the circuit board, solder each of the six push-pull control terminals to the circuit board pads.
8. Take the included 2" [51mm] bare copper wire and cut it equally in half to produce two 1" [25.5mm] pieces.
9. From the front side of the circuit board, insert a 1" [25.5mm] bare copper wire into terminal #2 and terminal #3 of **SW3**. The terminals are numbered in a "U" pattern starting from left to right, with terminal #1 (inscribed) being in the upper left and ending with terminal #6 (not inscribed) in the upper right. From the back side of the circuit board, twist the two wire ends together and completely solder both terminal pads. Clip off excess wire with sidecutters.

10. From the front side of the circuit board, insert a 1" [25.5mm] bare copper wire into terminal #4 and terminal #5 of SW3. From the back side of the circuit board, twist the two wire ends together and completely solder both terminal pads. Clip off excess wire with sidecutters.

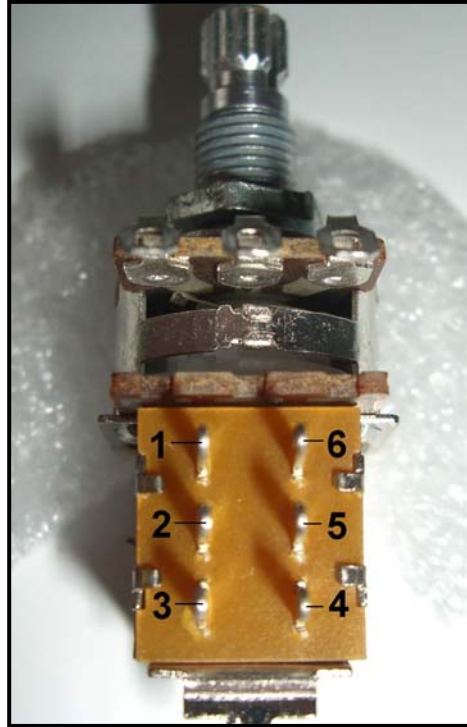


11. Use a permanent marker to draw a line on the included 3" [76mm] **multicolor ribbon cable** one inch from each cable end. *See item "A" below.*

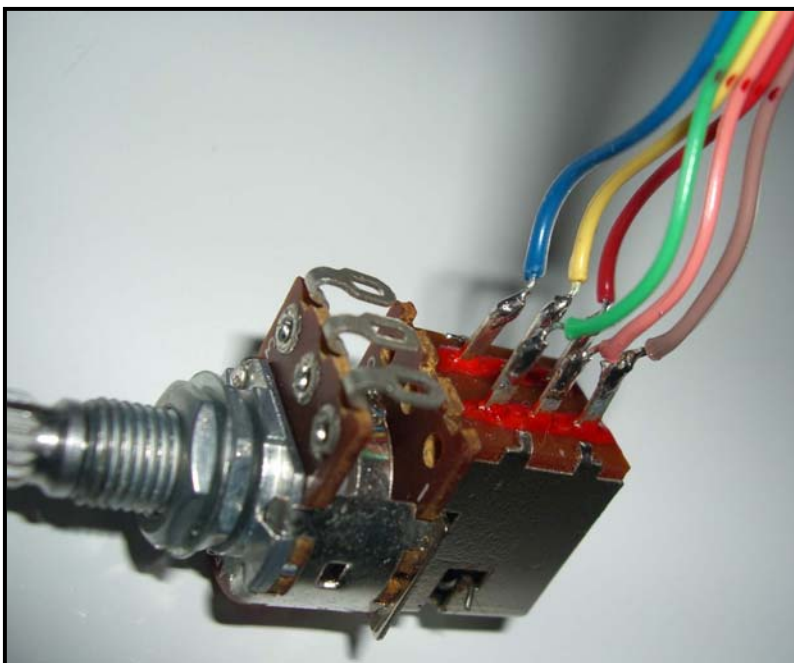


12. Use exacto knife blade to lightly score the 3" [76mm] multicolor ribbon cable lengthwise between the the Blue and Purple wires. This will cause the ribbon cable to separate into a 6-conductor length (blue, green, yellow, pink, red, brown) and a 4-conductor length (black, white, grey, purple) which is not used. *See item "B" above.*  
**Note:** you can use the 4-conductor length for practice when separating conductors and stripping insulation.
13. Use exacto knife blade to separate each conductor at both ends of the 6-conductor **multicolor ribbon cable** to be free 1" [25mm] from the edge of the cable. *See item "C" above.*
14. Use wire strippers to carefully remove ¼" [6mm] insulation from the end of each wire on both ends of the 6-conductor multicolor ribbon cable. *See item "D" above.*
15. Twist the exposed wire strands for all wires on both ends of the 6-conductor multicolor ribbon cable so as to be tightly bundled and use the soldering iron to "tin" (i.e., lightly solder) each wire end.

16. Use needle nose pliers to bend the six tinned wire ends on one end of the ribbon cable so as to create an open “hook”. Using the below figure, connect the applicable wire color to the specified terminal of the push-pull control. The terminals are numbered in a “U” pattern starting from left to right, with terminal #1 (not inscribed) being in the upper left and ending with #6 (not inscribed) in the upper right.



17. a. Connect **BLUE** wire to terminal #6 of the push-pull control’s six terminals. Squeeze connection and solder.  
b. Connect **YELLOW** wire to terminal #5 of the push-pull control’s six terminals. Squeeze connection and solder.  
c. Connect **RED** wire to terminal #4 of the push-pull control’s six terminals. Squeeze connection and solder.  
d. Connect **BROWN** wire to terminal #3 of the push-pull control’s six terminals. Squeeze connection and solder.  
e. Connect **PINK** wire to terminal #2 of the push-pull control’s six terminals. Squeeze connection and solder.  
f. Connect **GREEN** wire to terminal #1 of the push-pull control’s six terminals. Squeeze connection and solder.

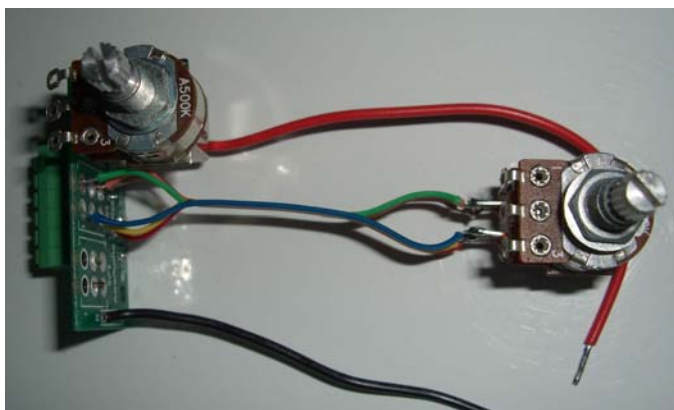


18. Take the 4" [101mm] length of included **RED** insulated wire and strip ¼" [6mm] insulation from each end. Twist wire strands so as to be tightly bundled. Use the soldering iron to "tin" each wire end.
19. From the back side of the circuit board, insert one end of the **RED** 4" [101mm] wire into the hole marked "N". Turn the board over and solder the wire to the circuit board pad. Clip off the excess wire using sidecutters. The loose end of this wire will be connected during the Installation Instructions.
20. Take the 10" [254mm] length of included **BLACK** insulated wire and cut it into two 4" [101mm] pieces and two 1" [25mm] pieces yielding four separate pieces. Strip ¼" [6mm] insulation from each end. Twist the strands so they are tightly bundled and "tin" each end of all four wires. **Note:** Three of these wires will be used during the *Installation*.
21. From the back side of the circuit board, insert one end of the **BLACK** 4" [101mm] wire into the hole marked "B". Turn the board over and solder the wire to the circuit board pad. Clip off the excess wire using sidecutters. The loose end of this wire will be connected during the Installation Instructions.
22. From the front side of the circuit board, take the free end of the **6-conductor multicolor ribbon cable** that is attached to the push-pull control and insert the stripped and tinned wire ends into the six **SW5** switch pads of the circuit board. The switch pads are numbered in a "U" pattern starting from left to right, with "1" (inscribed on the board) in the upper left pad and ending with "6" (not inscribed) in the upper right pad.



- a. Insert the **BLUE** wire into terminal #1 of SW5. Turn circuit board over and solder the hole closed.
- b. Insert the **YELLOW** wire into terminal #2 of SW5. Turn circuit board over and solder the hole closed.
- c. Insert the **RED** wire into terminal #3 of SW5. Turn circuit board over and solder the hole closed.
- d. Insert the **BROWN** wire into terminal #4 of SW5. Turn circuit board over and solder the hole closed.
- e. Insert the **PINK** wire into terminal #5 of SW5. Turn circuit board over and solder the hole closed.
- f. Insert the **GREEN** wire into terminal #6 of SW5. Turn circuit board over and solder the hole closed.

When done, work from the back side of the circuit board and clip off excess protruding wire using sidecutters.



This completes the assembly procedure for the GIB-KIT product.

Because this product is now assembled, it will be referred to as a GIB-ASY product.

**The Next Step:** Refer to *Section B* in the **Testing Instructions For GIB-ASY Upgrade** document to validate the correct operation of the switches that are mounted to the push-pull controls. We strongly recommend that you follow this step *before* you install this upgrade product.

You can get additional **Pickup Tone Multiplier™** products for your other instruments at **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."*