

Before you start, **read these instructions first** to understand what you need to do to install this product. This document describes how to install and use the T3PJ-Switch in your PJ bass to get 21 pickup tones.

## Assumptions

These upgrade products can use our VT-1 stacked Volume-Tone control. The top (*smaller*) knob controls the Tone and the bottom (*larger*) knob controls the Volume. Your instrument has a PJ pickup configuration.

**Note:** Active or *Pizeo* pickups are not supported.

## Tools Needed

You *may* need one or more of the following tools (*not included with purchase*) to install this product.

- Wire cutters / strippers, regular pliers
- Small Phillips & straight slot screwdrivers
- Electric drill; drill bits 1/4" and smaller sizes
- Ohmmeter to measure electrical continuity
- Soldering iron (25/30 watt max.) with fine tip, rosin-core solder .022" diameter

## Preamble

You will need to drill 5 holes to mount the T3PJ-Switch product. The mounting holes are 1/4" dia. and spaced 1/2" center-to-center.

This upgrade also will have you cutting existing wires on your instrument. You may also need to increase the length of existing wires.

Because you will make changes to your instrument, you need to have a plan to install this **Pickup Switch Upgrade™** product.

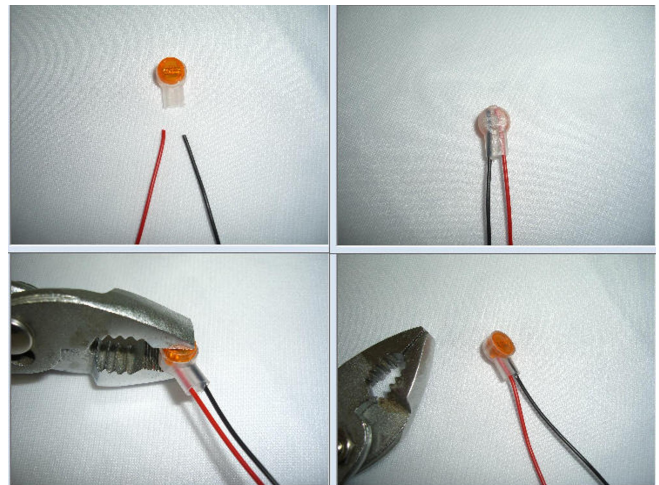
See the **Reference Drawing** on page 5 of this document. If needed, use a pencil to draw the original circuit of your instrument **before** you proceed. When you document where the wires on your instrument (*and the colors of these wires*) were connected, you will have a way to restore it to its original condition should it become necessary. Since there is a large

variation of wiring schematics that can span 50 years, you need to draw the circuit that is specific to your own instrument.

## Adding Extra Wire

After cutting the pickup wires (*described later*), the pickup wires may be too short to reach the specified connection of the Green terminal strip (J1) on the **Pickup Switch Upgrade™** product. You will cut the RED and BLACK wires that are in the included **PARTS BAG** into shorter lengths and electrically connect them together to permit the wire to reach the Green terminal strip connections. You will use the provided 2-wire UY2 yellow/clear connector.

Insert the unstripped wires to be connected so they "bottom" completely into the UY2 connector. Use pliers to firmly squeeze the UY2 connector top yellow button so it is flush with the clear body to create a permanent electrical connection. After extending the wires, verify electrical continuity between the two pickup wires using an ohmmeter (*some coil resistance will be present*).



The remainder of this document describes how to install, connect and use the **T3PJ-Switch** (*it has five mini toggle switches*).

## A. T3PJ-SWITCH INSTALLATION

This T3PJ-Switch is designed for a Bass with a PJ pickup configuration. After it is correctly installed, it will give you 21 unique pickup tones. You can use our VT-1 stacked volume and tone control with this switch. You mount this switch in holes you make. The mounting holes are 1/4" diameter and spaced 1/2" center-to-center.

This upgrade includes a **PARTS BAG** with the following items used for installation.

- An equal length each of black and red insulated wire (to lengthen pickup and input jack wire if needed)
- Several yellow/clear connectors (UY2) to extend wire connections if needed
- One grey wire nut (71B) to connect your bridge ground wire and (*if it exists*) body cavity ground wire to your instrument's output jack ground wire

### A1. Preparation

If needed, remove your strings. Remove your existing control plate attaching screws. Document your existing wiring (see *Preamble* on page 1) *before* you start.

Cut to remove the pickup wires where they are connected to your stock volume-tone controls so all pickup wires are of maximum length. Leave a small (1/4") length with wire insulation's color behind after cutting.

### A2. Pickup Wires

There is no industry standard for pickup wire lead colors. More common color pairs are red/black, red/white and black/white. You are advised to use consistency when connecting *your* pickup wire color pairs to the **[+]** and **[-]** pickup connections on the green terminal strip (J1). Typically, the black wire is the ground (-) wire.

Determine which wire color for each pickup coil will be attached to the **[+]** and **[-]** green terminal strip connector on our Jazz Bass upgrade. **We use Black for the ground (-) wire and Red for the hot (+) wire.**

Determine if there is enough wire length from each pickup coil to *comfortably* reach the corresponding connectors on the green terminal strip on the **Pickup Switch Upgrade™** circuit board. If not, refer to the "*Adding Extra Wire*" topic (page 1).

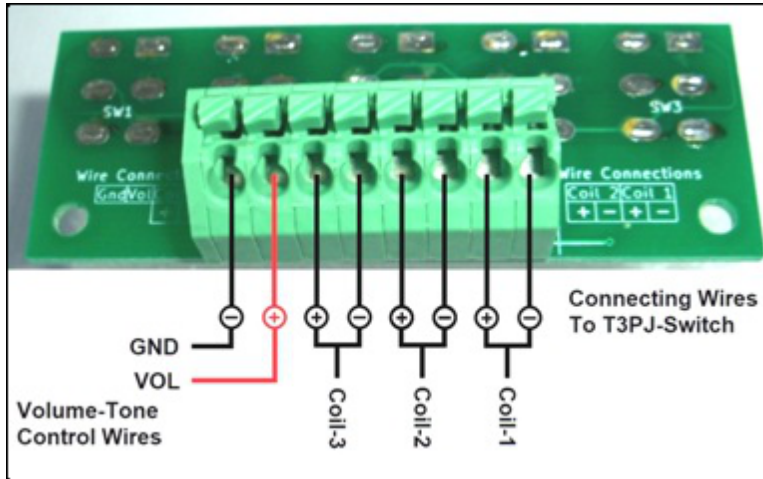
Strip off 3/16" (4.76mm) insulation from the end of each pickup wire then twist the exposed wire strands so they are tightly bound. Lightly "tin" the wires to Insert the wires of each pickup pair into the correct location on the green terminal strip (J1) using the process described in the below "*Terminal Strip*" topic.

**Note:** If you have a ground wire coming from the bridge (*and maybe from body cavity shielding*), connect them to ground lead on the output jack using the provided grey wire nut. Simply twist the wires together in a clockwise direction, then twist on the grey wire nut in a clockwise direction.

### A3. T3PJ-Switch Terminal Strip

Attach your pickup wires to the **green** terminal strip (J1) that is on the upgrade circuit board. Use a small screwdriver 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 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.

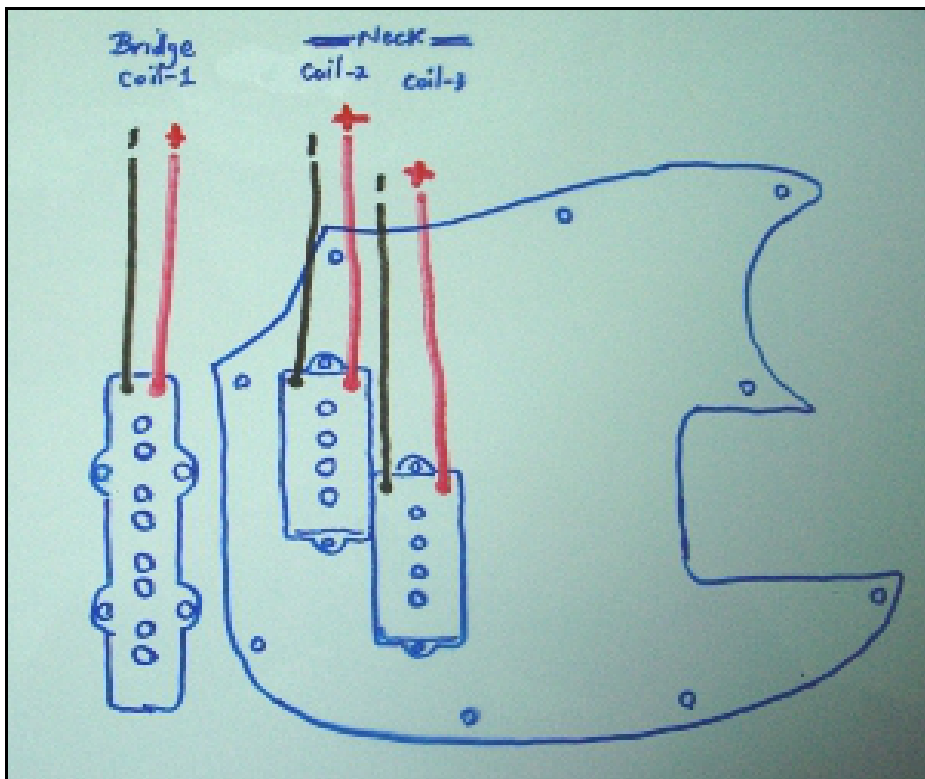
T3PJ-Switch (8-hole terminal strip): [GND] [VOL] [ + ]Coil-3[ - ] [ + ]Coil-2[ - ] [ + ]Coil-1[ - ]



### A4. Connecting your pickups to our T3PJ-Switch

Connect your **NECK** pickup coil to  
 Connect your **MIDDLE** pickup coil to  
 Connect your **BRIDGE** pickup coil to

[ + ]Coil-3[ - ] connections on the green terminal strip  
 [ + ]Coil-2[ - ] connections on the green terminal strip  
 [ + ]Coil-1[ - ] connections on the green terminal strip



## A5. T3PJ-Switch Identification and Use Summary

The T3PJ-Switch contains five mini-toggle switches (from rear-to-front): (SW1, SW4, SW2, SW5, SW3). SW1 and SW2 are ON-OFF-ON switches; SW4, SW5 and SW3 are ON-ON switches. You mount this switch in holes you make. The mounting holes are 1/4" diameter and spaced 1/2" center-to-center.

Here is a summary of switch use for this product.

**SW1** is an ON-OFF-ON switch used to turn the Bridge "J" (Jazz Bass) pickup coil-1 Off and On. The middle position of this switch is Off. The Down position turns the pickup On (in *normal-phase*) and the Up position turns the pickup on (in *reverse-phase*).

**SW4** is an ON-ON switch used to put the Bridge "J" and "P" pickup coils in either a Parallel connection or Series Connection. Down is Parallel, and Up is Series. When Down, the "J" pickup (*coil-1*) or the "P" pickup coils (*coil-2 and coil-3*) can be turned On either separately or together. When Up, all three PJ pickup coils **MUST** be in an On position (*see SW1 and SW2*) or no sound will be produced.

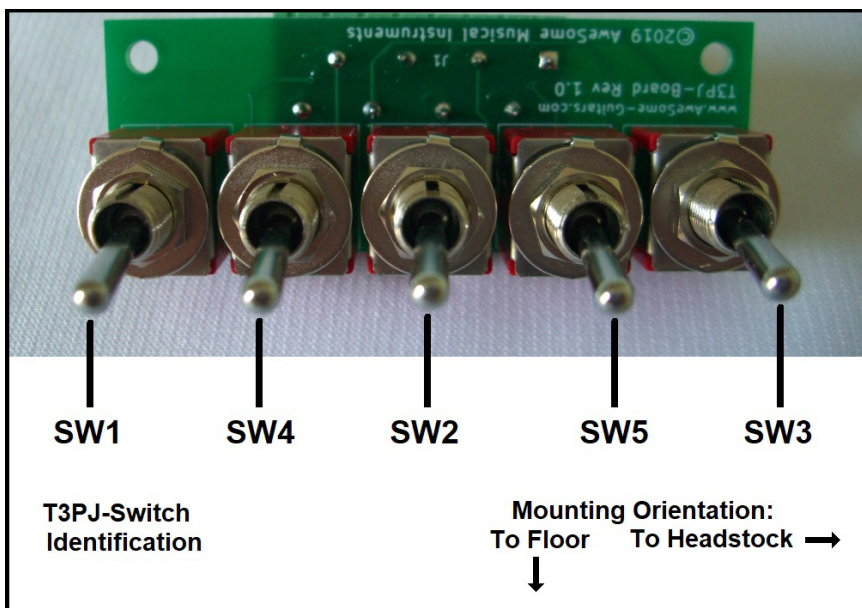
**SW2** is an ON-OFF-ON switch used to put the "P" pickup coils (*coil-2 and coil-3*) On. The middle position of this switch is Off. The Down position turns the "P" pickup coils On. When Down, the "P" pickup coils can be further controlled by SW5 and SW3 using the rules described for these switches.

**Note:** The Up position of SW2 is non-functional. (*if SW4 is Up, this switch must be On*).

**SW5** is an ON-ON switch used to put the "P" pickup coils (*i.e., coil-2 and coil-3*) in Parallel connection or Series Connection. When Down, the two coils are in Parallel connection. When Up, the two coils are in Series connection.

**SW3** is an ON-ON switch used to change the phasing of the "P" pickup coils (*i.e., coil-2 and coil-3*). Down puts the coils in *normal-phase* and Up position puts the pickup in *reverse-phase*.

You get 21 pickup tones with this upgrade.



**Special Note:** For easy identification, switches now have colored covers: White for pickup coil switches, Black for parallel-series switches. (*remove them if not needed.*)

Document #M3 will let you “map” the pickup tones you get from the T3PJ-Switch. It is available for download from our website’s Document Library at <http://www.AweSome-Guitars.com>

## A6. Validating

Connect your instrument to an amplified source with the volume set to low. Turn the switches on and off as described in “*T3PJ-Switch Identification and Use Summary*” topic while gently tapping the magnet of the pickup coil that should be “on” with a small screwdriver to confirm pickup response. Also confirm the correct operation of the Volume and Tone controls.

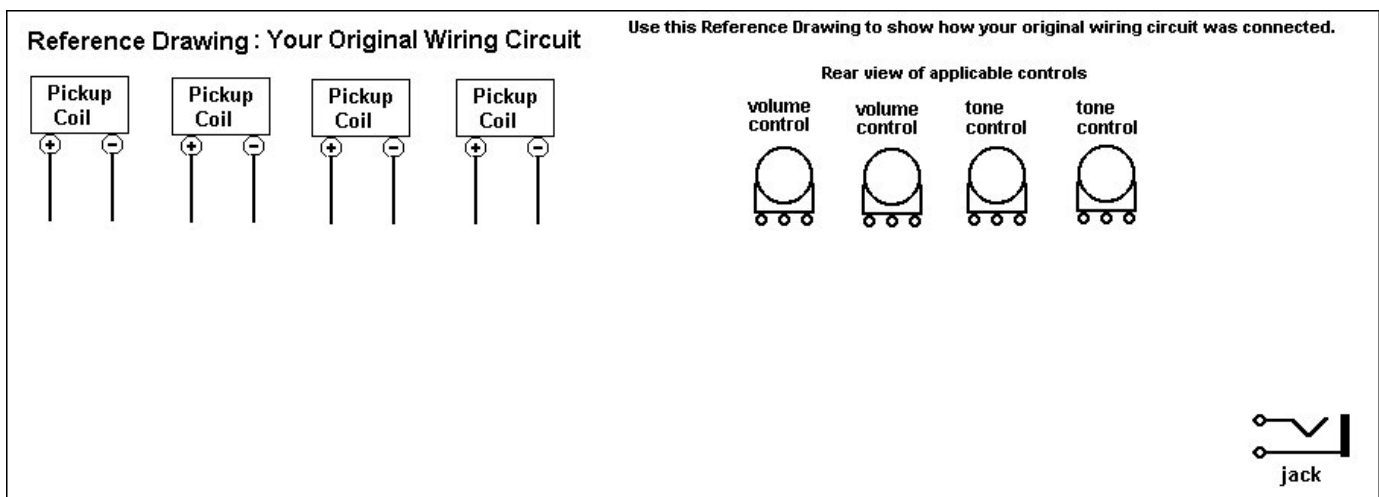
If used, our VT-1 stacked pot control (*a separate purchase*) is only available as right-hand audio taper item. The larger diameter Volume knob of the VT-1 control supports reliable “pinky” swells.

If you receive the stated results, button everything up. This product will produce a wide spectrum of unique pickup sounds that you cannot get from your stock instrument.

## B. ADDITIONAL SUPPORT ITEMS

### B1. Reference Drawing

Use this drawing to document your instrument’s original wiring. Add components as needed.



## B2. Wire Connections

The following drawing shows how to connect this upgrade product. It identifies how our VT-1 Volume and Tone control is connected. Our VT-1 product is only available in Right-Hand audio taper.

For separate Volume-Tone controls (such as our VT-2 Volume-Tone Control) refer to our website document library and select item P. *Typical Wiring for our VT-1 and VT-2 Volume-Tone Control products.*

