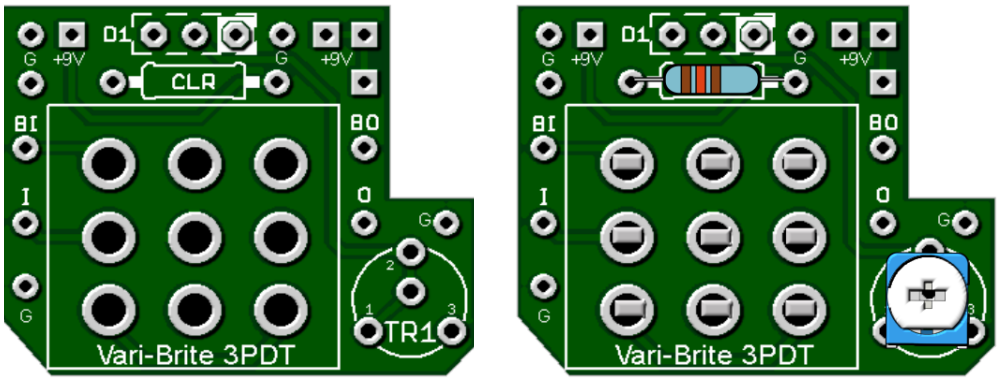
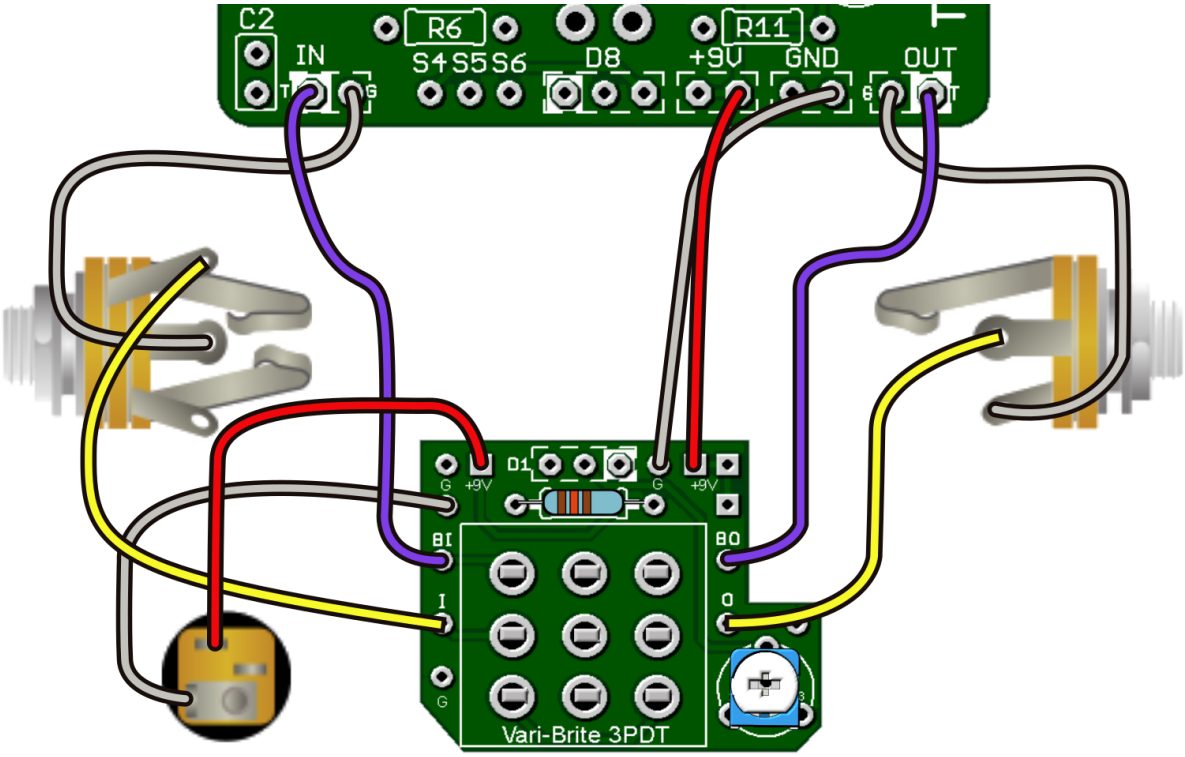
3PDT Vari-Brite™

3PDT Wiring Board w/ Trimmer Adjustable Brightness

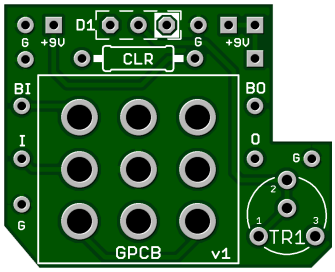
All the features of our Standard 3PDT Wiring Board now with control over your Bi-Color or Standard LED Brightness. Use a 1k8 - 2k (CLR) in tandem with a 2k - 5k Trimmer for max variance.



Main Board

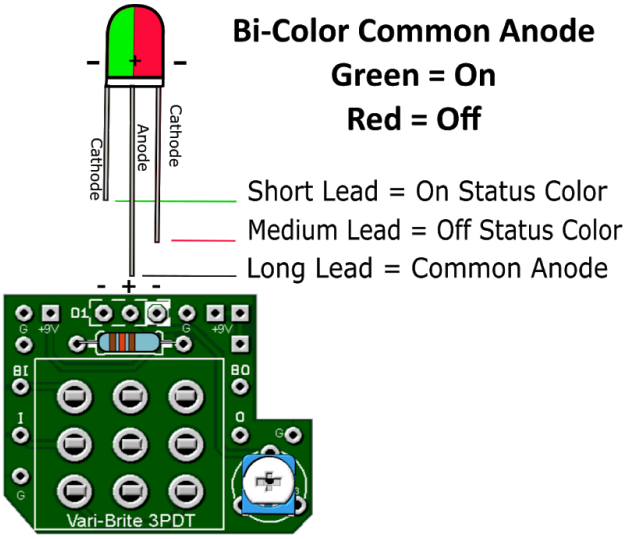


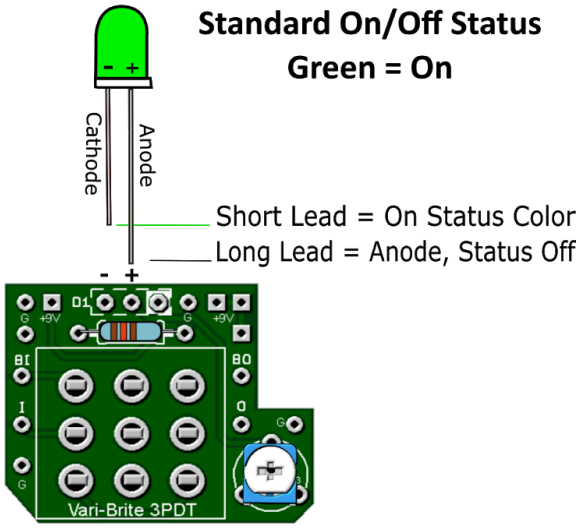
The Board is labeled as follows:



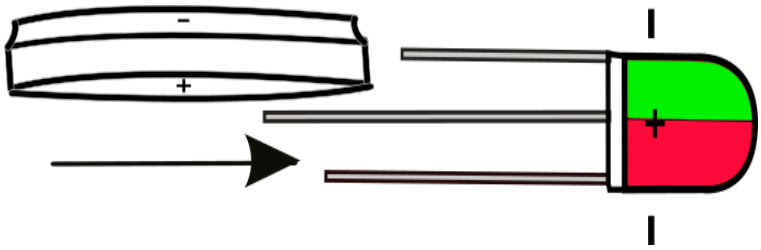
G	**Ground pads, five in total**
+9V	**+9V supply, four in total**
BI	**Wiring from the Main Circuit Board Input**
I	**Wiring from the Input Jack Tip**
O	**Wiring to the Output Jack Tip**
BO	**Wiring from the Main Circuit Board Output**
D1	**Common Anode LED (Bi-Color) or Standard**
CLR	**Current Limiting Resistor - Use 1K8 to 2K**
TR1	**Trimmer (6mm) - Use 2K to 5K**

Note: There are extra pads for Ground and 9v. They are for the convenience of add-on boards and making combo builds allowing neater wiring options and a solid ground plane to work from.





Insert the LED leads into the corresponding pads as shown above. If you wish to change the color of the On Status then simply flip the LED to change to the cathode of the color you wish to use.
TIP: Use a 3v to 5v coin battery to test your LED before installing. Note: 9v direct will blow the LED.



GuitarPCB sells a common anode Bi-Colour Red / Green, Red/Blue and Blue Green in the Shop.
How to use the CLR and Trimmer together: We suggest using a **1K8** resistor for the CLR position on the board. This will give you a very Bright LED without blowing it. That will be your base resistance. With the added trimmer resistance based on the value you choose will make the LED dimmer as you turn it. We suggest anything between **2K** and **5K** as your trimmer choice. In this example you will end up with a minimum resistance of 1K8 to a maximum of 6K8 using a 5K Trimmer. *1K8 (CLR) + 5K (TR1) = 6K8*

Wiring: The +9v pad is connected to the +ve power supply jack while the other +9v pad can be used to run power to the Main circuit board or add-on board. As long as the 3PDT Wiring board is grounded by the Power Supply Jack any of the ground pads may also be used to share a common ground.

Note: While we show wiring to the 3PDT board going in through the top for clarity we actually prefer to wire the 3PDT board from underneath before finally soldering to the foot switch.
If there is no Trimmer or switch in its place installed the LED will not work. You would need a Jumper.

Use Fig. 1 with a GuitarPCB Main Board

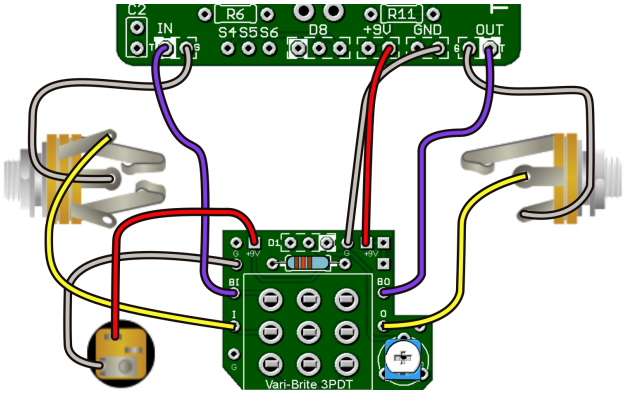


Fig. 1

Use Fig. 2 with all other boards

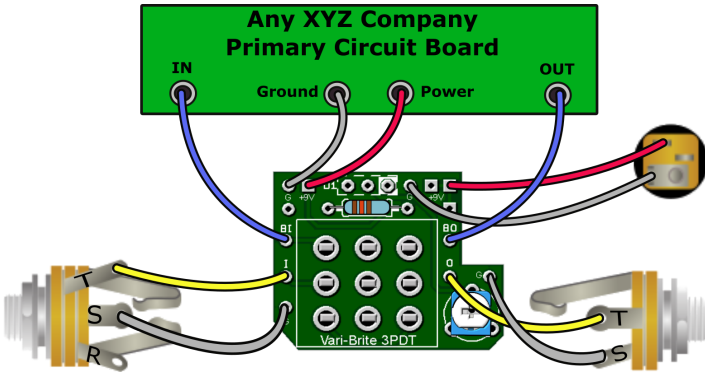


Fig. 2

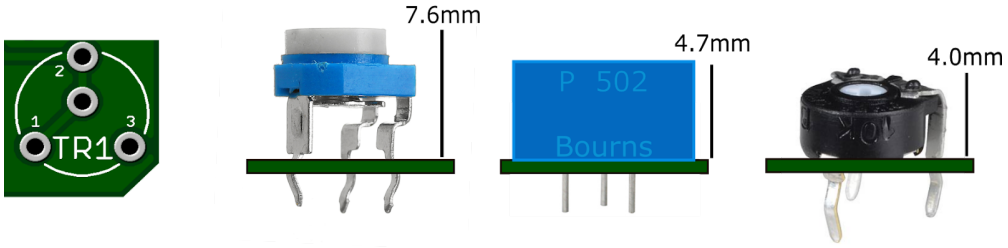
Pay close attention to your Jack Lugs when wiring. A Stereo Jack (required for battery only) has a RING lug which is used to connect to the battery ground. If you do not intend to use a battery there is no need for a Stereo Jack. If all you have is a Stereo Jack then only use just the Tip and Sleeve lugs.

T = Tip - R = Ring - S = Sleeve

Trimmer Selection

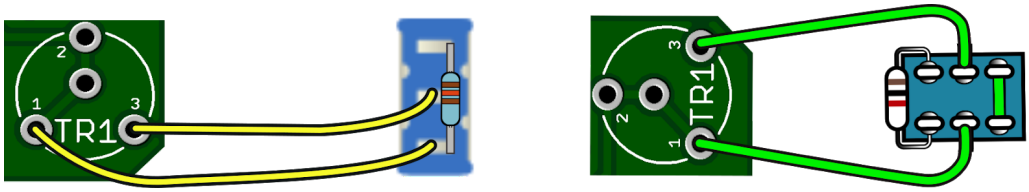
Many types of trimmers will work. If you are using a 125B or similar depth of enclosure there is no conflict with it fitting when attaching the lid. If you are using a 1590B type of enclosure with less available depth then you will want to check your part datasheets carefully. I have found that the RM-065 style of 6mm Trimmer fits in a 1590B but with no room to spare. You may wish to try a smaller profile trimmer like the Bourns or Piher as seen in the images below.

RM-065 **Bourns** **Piher PT-6**

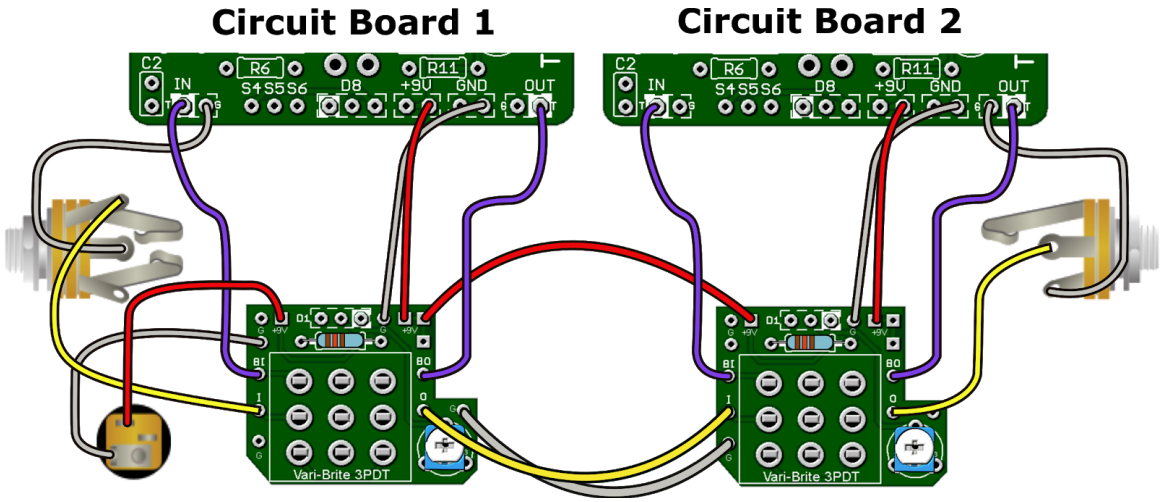


Optional Ideas

If you already know what CLR value in combination with Trimmer value works best for you and would like to have switchable LED Brightness available outside the enclosure you can simply add a switch to the Trimmer pads 1 and 3 while using your preferred resistance on the switch.



Easy “Combo Build” wiring using our convenient 3PDT Vari-Brite™ Boards for sharing Power, Ground & Audio with no need to double up on any lugs.



Create a service hole in your enclosure to access the Vari-Brite™ trimpot without needing to open the enclosure. This can be done through the back of the enclosure (see Fig. 1).

TIP: Use a standing trimpot mounted underneath the Vari-Brite™ board facing the foot wall of the pedal (see Fig. 2) this can be an alternate access point without needing to remove a pedal from its pedal board.

Fig. 1

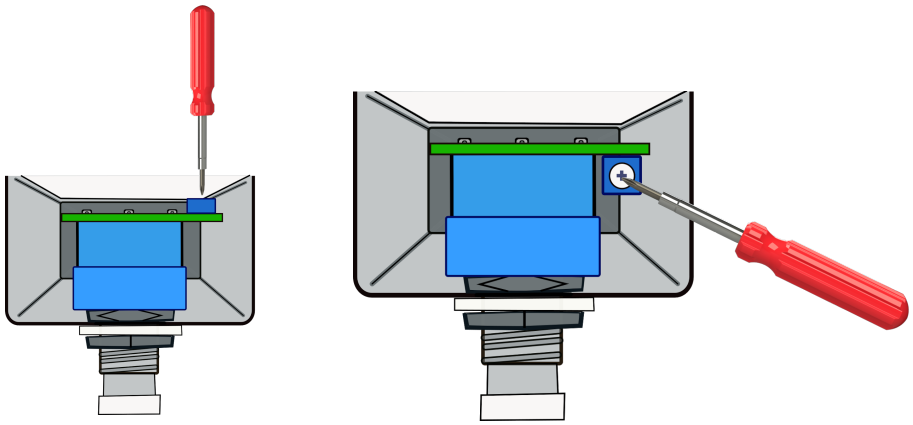
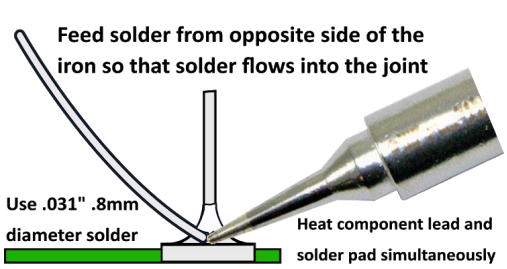


Fig. 2



A good solder joint should be shiny and look like this:

* Carefully re-flow suspect solder joints.
* Clean and tin your Tip regularly.

When soldering wire to the board push the protective PVC jackect flush with the board and pad.

Use the right tools for the job and be patient.
If you need help ask questions first at the GuitarPCB forum.
We are there to help and we know our products best.

Need a kit?
USA – Check out PedalPartsAndKits for all your needs.
Europe – Das Musikding carries both boards and kits as a service to our Europeans friends.
Australia - PedalPartsAustralia.com carries GuitarPCB Boards and Kits direct.
If they do not have a KIT listed send them a note asking if they can help you out.

Soldering Tutorial on Youtube

Before beginning any build or if you have questions please see our Guides Page on our site.