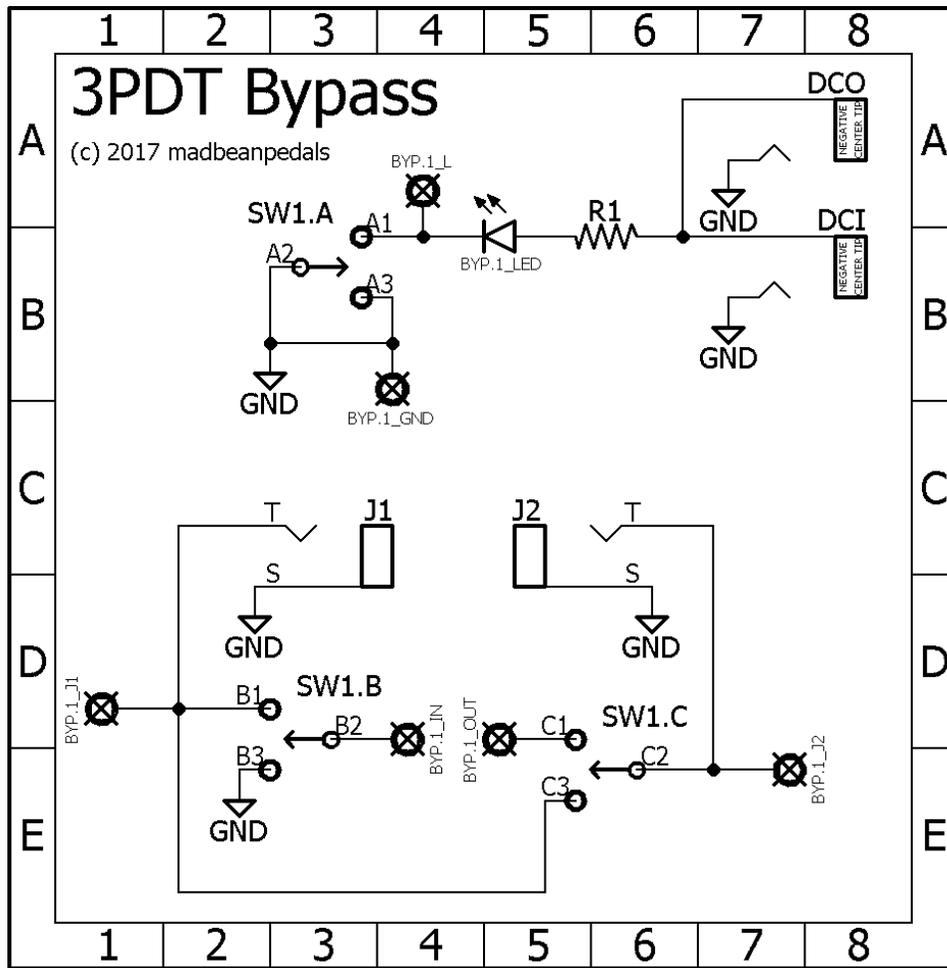
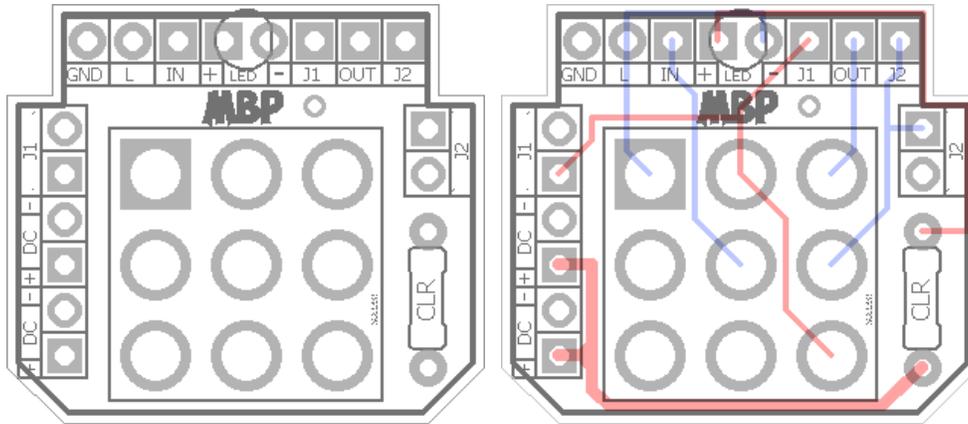


# 3PDT

FX TYPE: Utility

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1.05" x 0.925" H



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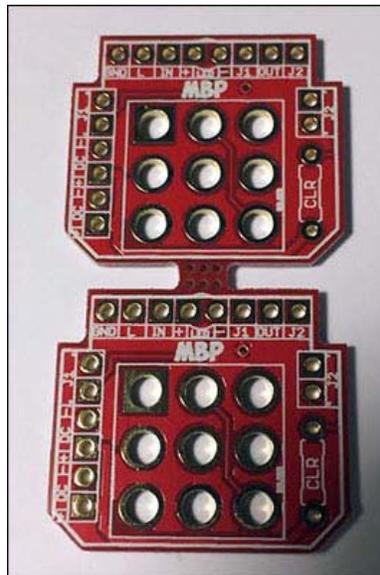
## Overview

The 3PDT board is used for true bypass switching on your pedal builds. It's designed to be flexible enough to work with many different types of PCBs, not just madbeanpedals projects. Different wiring applications are shown at the end of this document.

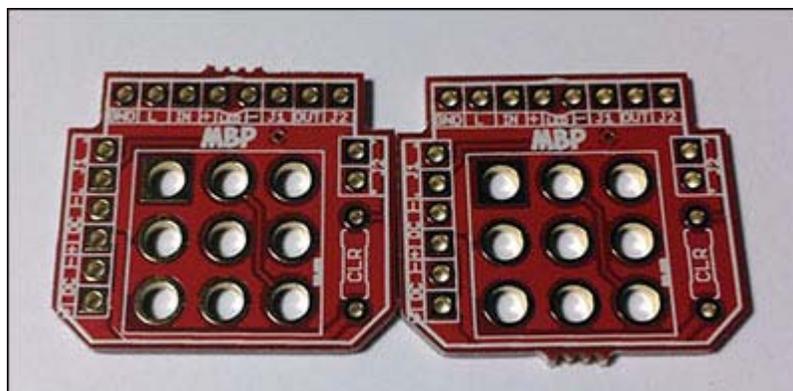
The 3PDT board is designed for effect input grounding. IOW, then the effect circuit is bypassed, its input is sent to ground. This can be helpful in reducing switching noise in some cases and in general it is good practice. The 3PDT PCB will fit either solder lug or PCB pin mount 3PDT switches. Note that these are designed for the ubiquitous "blue" (CIC) switches. Other manufacturers may have different pin spacing that this PCB.

The 3PDT project includes two identical boards. These boards need to be separated before using. Simply break them apart with finger pressure to separate. You can use wire cutters to trim any excess bridge material left between the two boards.

Two identical boards with bridge.

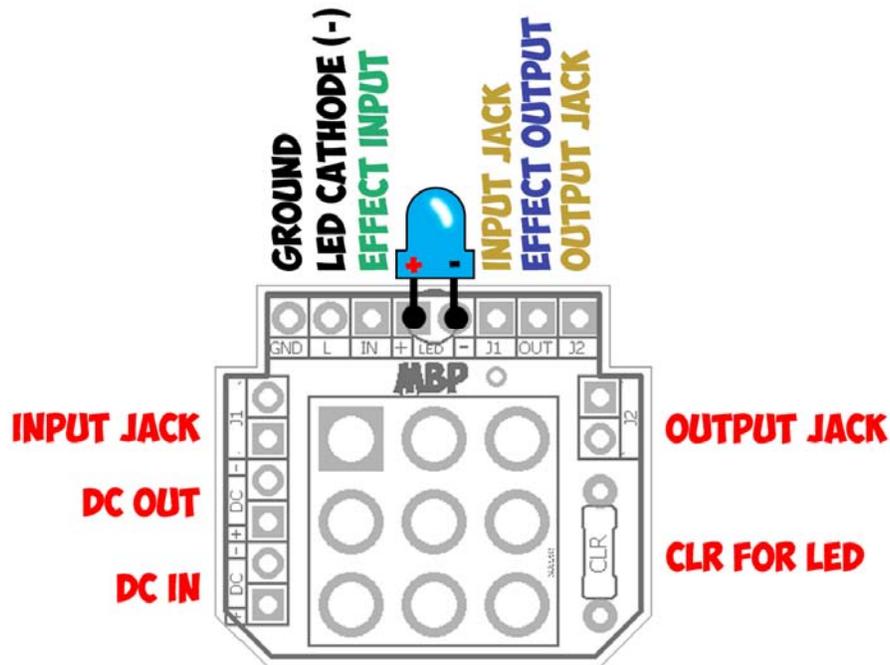


They will easily break apart. Use wire cutters to trim excess.



*The 3PDT board is designed to use in the 1590B, 125B, 1590BB and up. It may be possible to use them in 1590A and/or 1590G builds, but that really depends on the build and how much space you have.*

## WOW! MANY PADS! SO CONNECTING!



**DC IN:** Connects directly to the DC Jack. This is only used when you are soldering the indicator LED to the 3PDT board.

**DC OUT:** When using the DC IN pads, the DC OUT is used to connect power to the effect PCB.

**INPUT/OUTPUT JACK (SIDES):** For builds that do not have top-mounted jacks. These connect directly to their respective jacks.

**GROUND:** To connect ground between the 3PDT board and your effect PCB. Note: you only need one ground connection between the boards so if you are using the DC OUT connection, you do not need to connect the GROUND pad to the effect PCB.

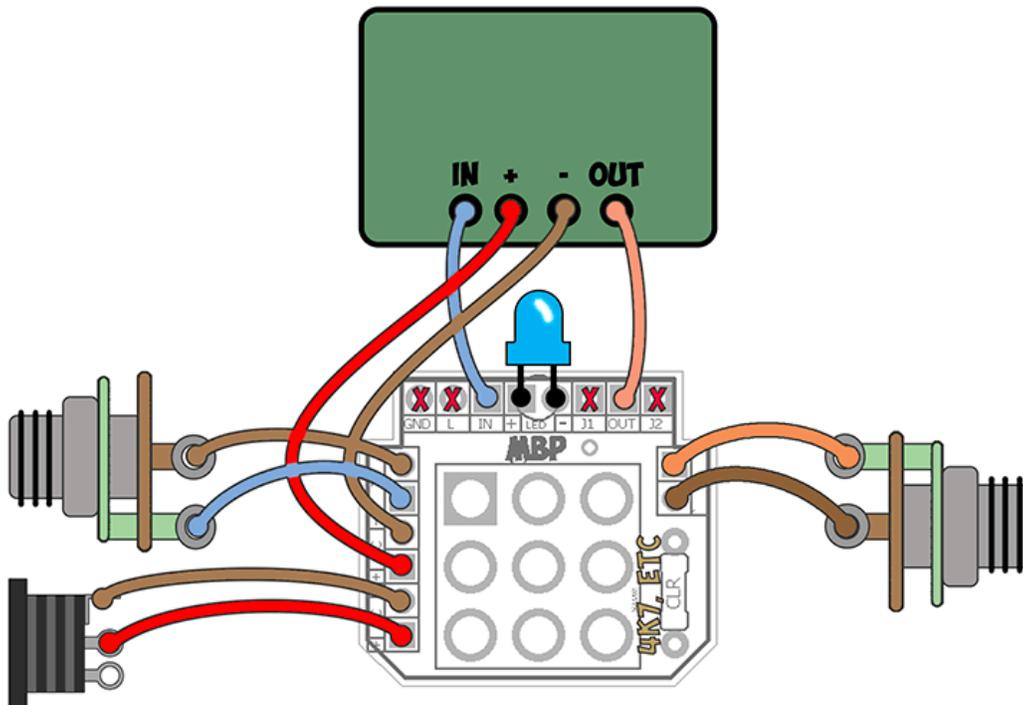
**LED CATHODE (-):** Used for MBP style boards that have the indicator LED mounted on the effect PCB. This pad connects the 3PDT ground to the LED cathode to illuminate the LED when the effect is turned on.

**EFFECT INPUT/OUTPUT:** To connect the switch to the circuit input and output (always used).

**INPUT/OUTPUT JACK (TOP):** Used for MBP style boards that have top mounted switches (for example, on many of the 125B and 1590BB builds).

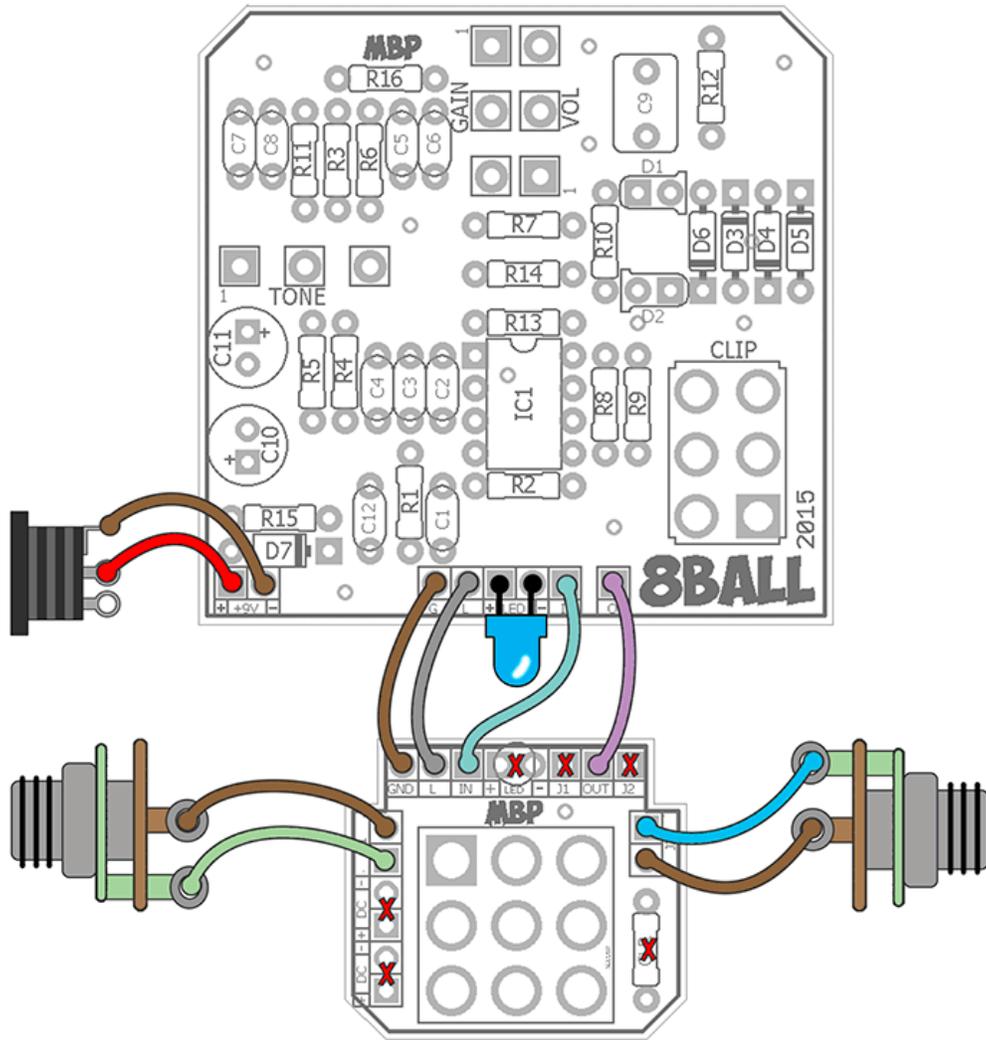
**CLR:** Used for a current limiting resistor on the LED. This is only used when mounting an LED to the 3PDT board. It is not needed when you are using an LED mounted to the effect PCB

## Wiring



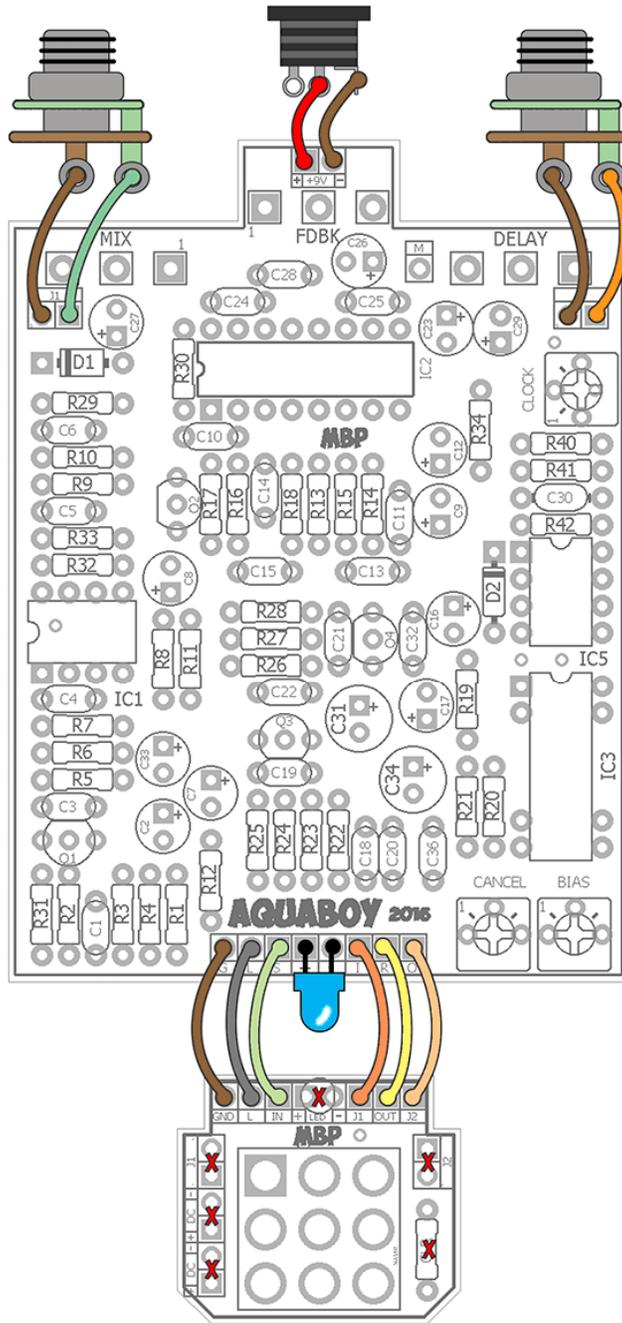
Case 1

This is a typical of example of a lot of PCB designs. The effect PCB has four connections (In, +, -, Out). In this case you will use a bypass LED soldered directly to the 3PDT board. The current limiting resistor is used, as well. This can be as low as 1k but it really depends on the type of LED you are using and how bright you want it to be. Higher resistance values will dim the LED.



Case 2

Here is an example of a typical MBP 1590B board. The LED indicator is soldered to the 8-Ball PCB which also has the CLR already on it. The DC Jack is connected directly to the effect PCB, as well.



Case 3

Finally, here is an example of a design that uses top mounted jacks. Like the previous example, the LED is mounted on the effect board. We can ignore all the pads on either side of the 3PDT board, as well.

**One point of potential confusion:** MBP boards from before 2016 labeled the I/O connections on these top-jack boards like this: G, L, S, [LED], I, R, O. In this case I and O are actually the input and output jacks, not the circuit input and output (those are labeled S for send and R for return). Starting in 2017, all new designs will use the same labels as the 3PDT board (GND, L, IN, [LED], J1, OUT, J2) to avoid confusion.