

3PDT-01

FX TYPE: Bypass

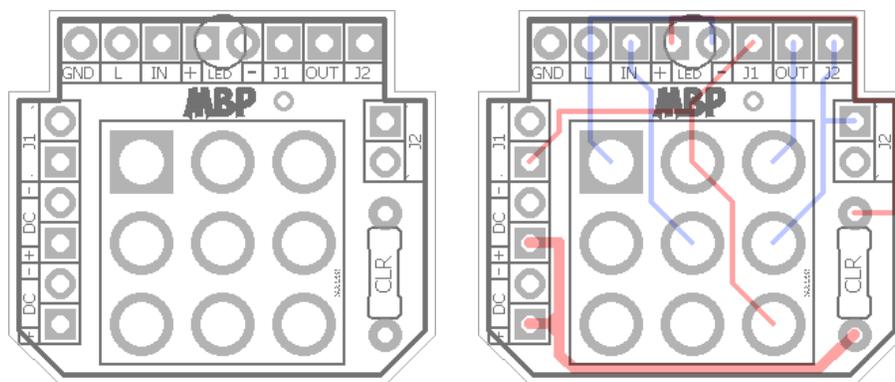
Enclosure Size: 1590B and up

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Overview

The 3PDT-01 is a simple bypass PCB designed to work with most mbp projects as well as any DIY project utilizing true bypass operation.



Part	Value	Type	Rating
CLR	your choice	Metal / Carbon Film	1/4W
LED	any	3 or 5mm	
3PDT		Lug	

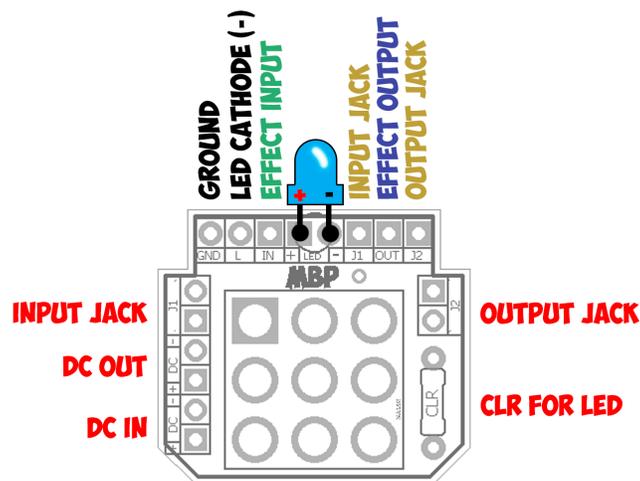
Terms of Use: You are free to use purchased **3PDT-01** circuit boards for both DIY and small commercial operations. You may not offer **3PDT-01** PCBs for resale or as part of a “kit” in a commercial fashion. Peer to peer re-sale is fine, though.

Technical assistance for your build(s) is available via the [madbeanpedals forum](http://madbeanpedals.com). Please go there rather than emailing me for assistance on builds. This is because (1) I’m not always available to respond via email in a timely and continuous manner, and (2) posting technical problems and solutions in the forum creates a record from which other members may benefit.

The 3PDT-01 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 in the following pages of this document.

The 3PDT-01 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-01 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 but all the ones I've tried so far have fit fine.

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.

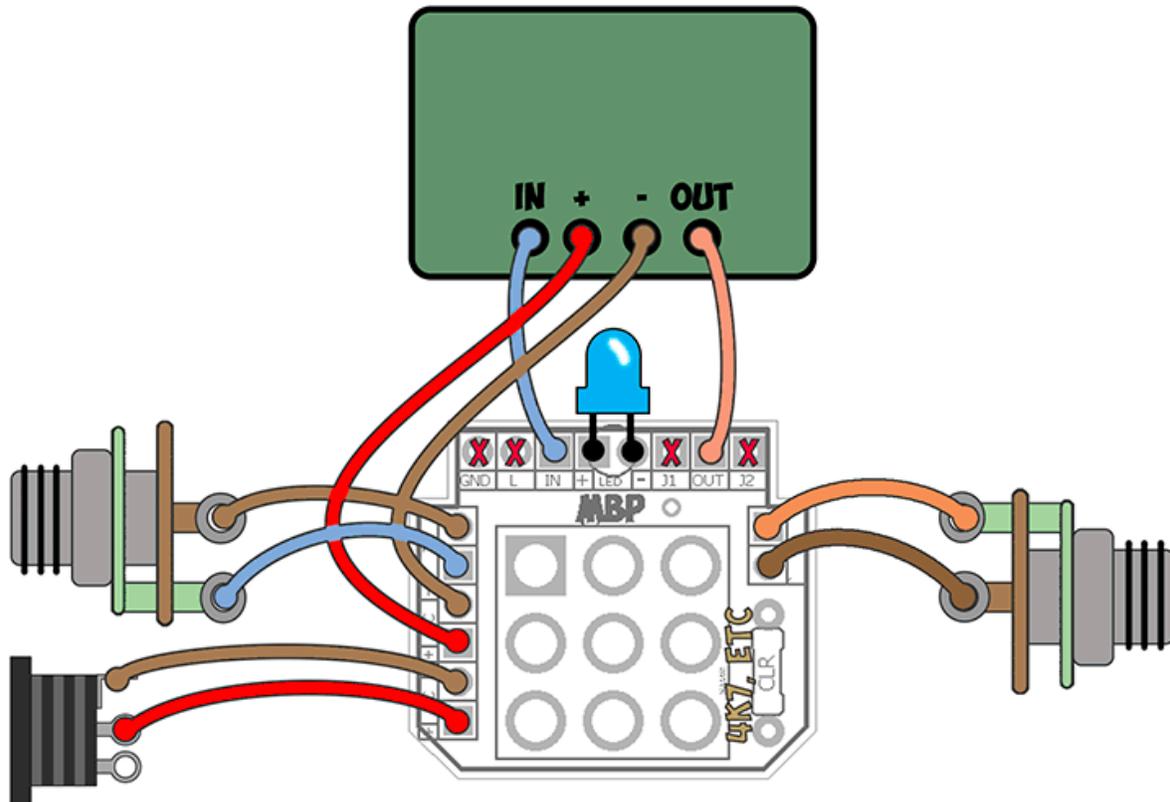
GROUND: To connect ground between the 3PDT-01 board and your effect PCB. Note: you only need one ground connection between the boards so if you are using the DC OUT connection, you do not need to connect the GROUND pad to the effect PCB.

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.

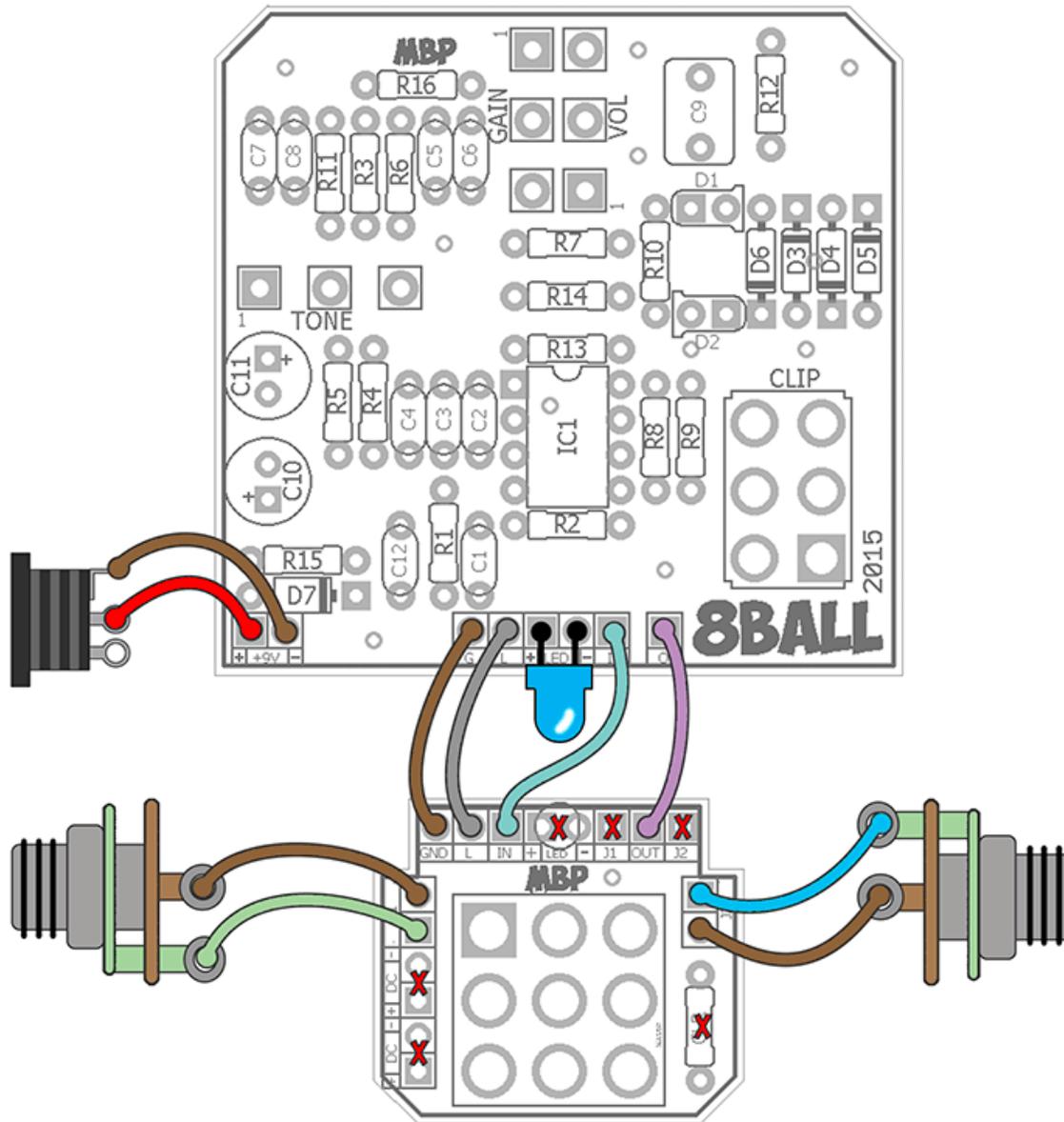
EFFECT INPUT/OUTPUT: To connect the switch to the circuit input and output (always used).

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

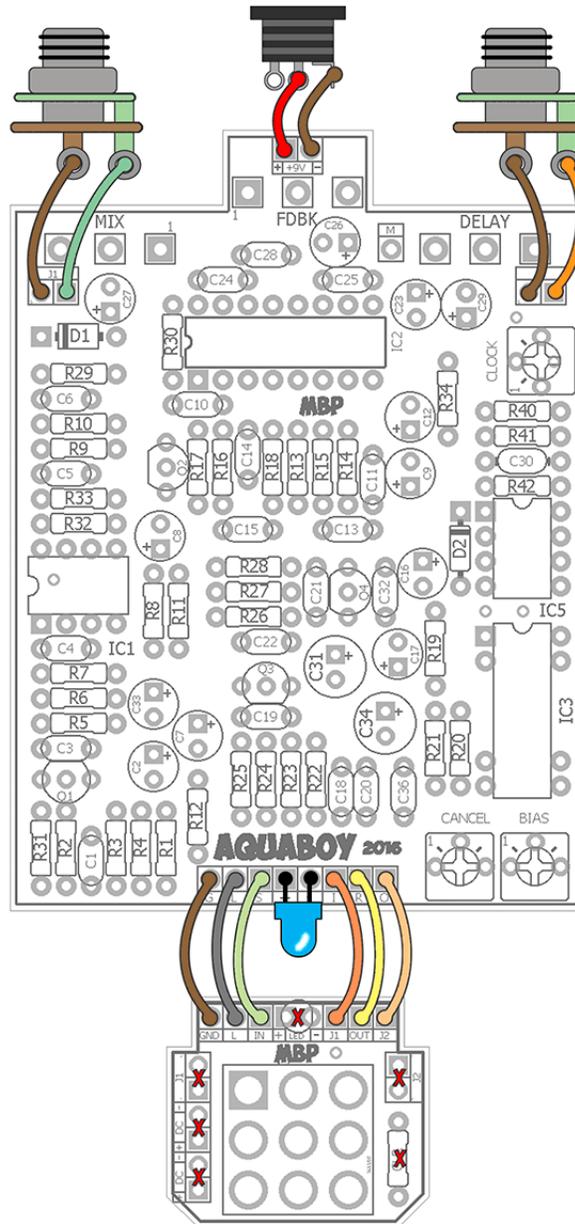
CLR: Used for a current limiting resistor on the LED. This is only used when mounting an LED to the 3PDT-01 board. It is not needed when you are using an LED mounted to the effect PCB.



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-01 board (or wired if you prefer to place the LED somewhere else). 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.

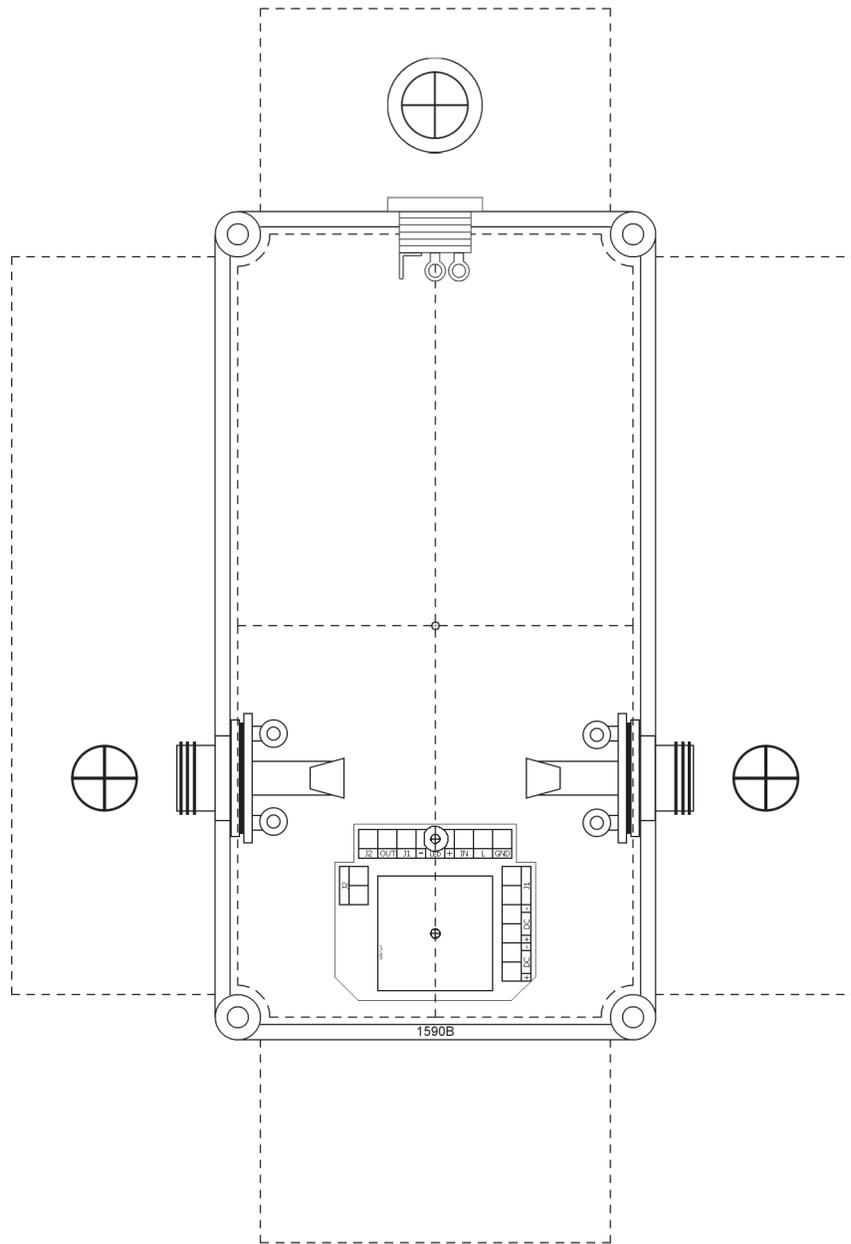


Here is an example of a typical mbp 1590B board. The LED indicator is soldered to the 8-Ball PCB which also has the CLR already on it. The DC Jack is connected directly to the effect PCB, as well.

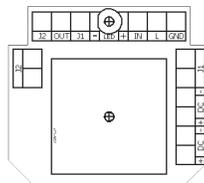


Finally, here is an example of a design that uses top mounted jacks. Like the previous example, the LED is mounted on the effect board. We can ignore all the pads on either side of the 3PDT-01 board, as well.

Note: Drill Guides are approximate and may require tweaking depending on the types of jacks, switches and pots you use.



This template shows a typical layout for a 1590B using the 3PDT-01.



This shows the exact footprint of the 3PDT-01 PCB. The LED is 12.6mm from the center of the 3PDT.

