SSDBP

FX Type: **UTILITY**
Build Level: Beginner

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Overview

The **SSDBP** is a dual bypass board which allows you to combine any two Standard Series projects into a dual combo pedal that fits in a 1590BB2 enclosure. It also includes the ability to change the order of effects between A:B and B:A. This opens up a lot of tonal possibilities since some pedals produce very different tones depending on the order in which they are placed. The SSDBP minimizes the wiring required by board mounting all switches.

Controls

- **BYP1/BYP2:** 3PDT foot-switches for true bypass operation.
- **ORDER:** 3PDT toggle switch to change the effect order. The switch points toward the effect first in line. So, for example, if the right channel is a compressor and the left channel is an overdrive, when the order switch is placed right the order is compressor then overdrive. When placed left, the order then becomes overdrive then compressor.
- **T1/T2:** These trimmers allow you to adjust the brightness of the bypass LEDs.

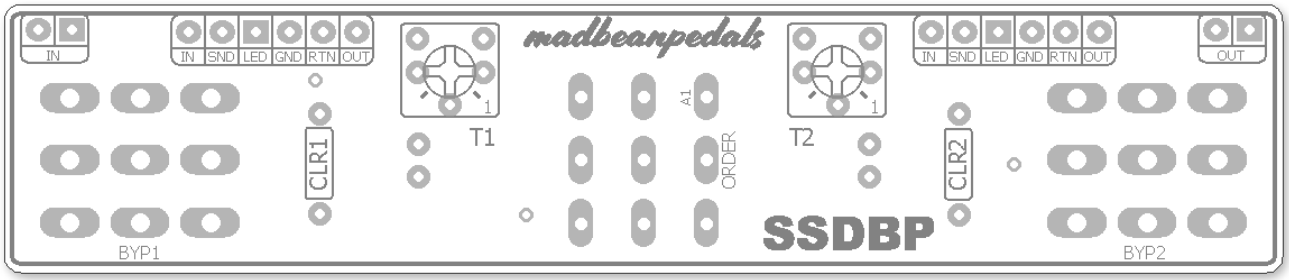
Build Notes

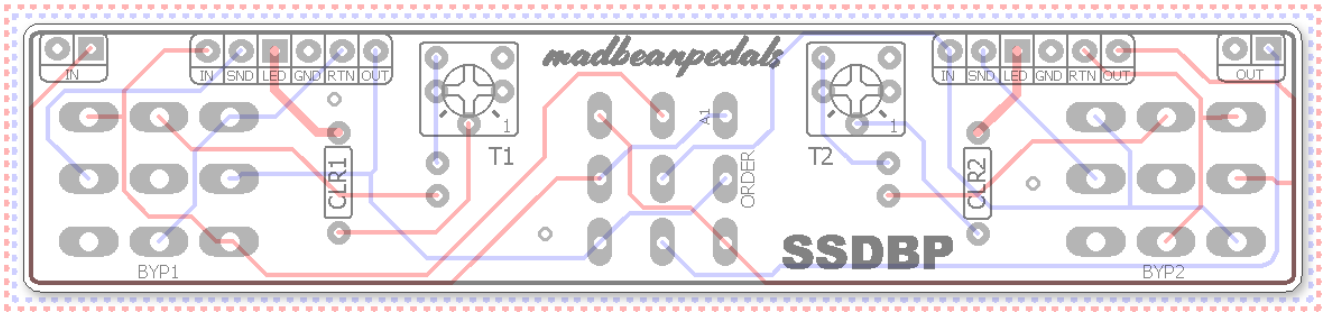
- The switches and LEDs should be mounted to the bottom and resistors and trimmers on the top. For soldering the 3PDTs, it will be easiest if you drill your enclosure first then mount the switches. That way you can place the SSDBP in place and ensure everything will be mounted flat to the PCB. The 3PDT order switch will just barely poke above the enclosure to flip the switch. It will not require a nut fastener.

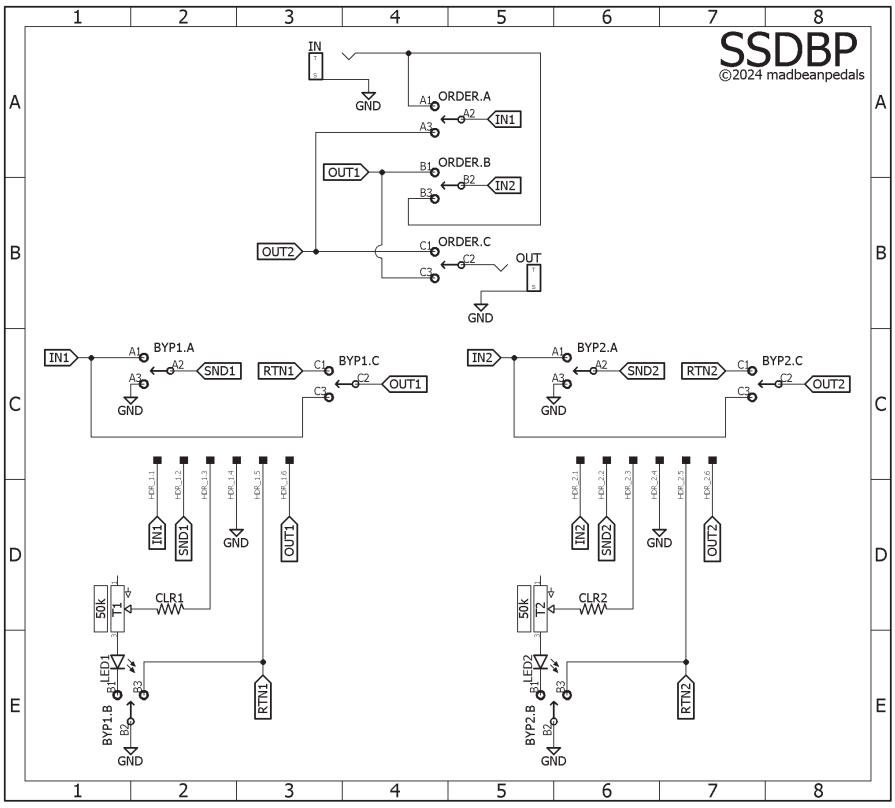
- You'll need to create a unique drill template for a given combo since each project has different control configurations. The Standard Series project have fixed drill spots (unless otherwise noted in their individual documents) so this shouldn't be difficult to do.

- You can use the Tayda Master Drill file (linked on the last page) to help create one if you plan on using their drilling service. You'll need to remove the unneeded drill spots, but that is very easy to do. If you are creating your own paper drill template, each Standard Series projects has a .psd file which you can use to create a new drill file that matches your combo project. I have already verified the Tayda drill service for this project and the drilling came out pretty much perfect.

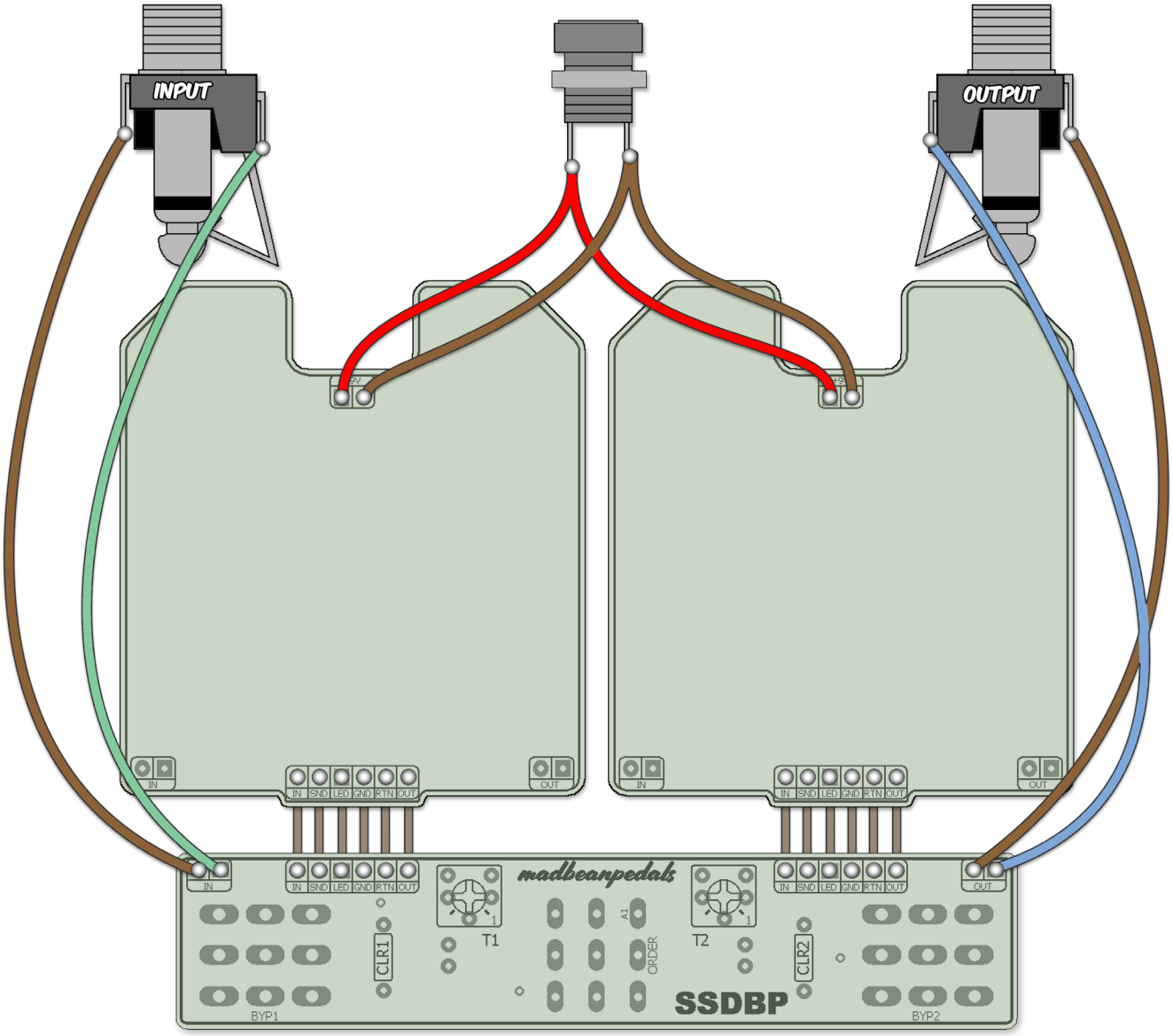
PCB Layout & Schematic







Wiring



The IN and OUT jacks on the individual PCBs are not used and are instead wired to the SSDBP. You'll need to wire the power and ground from the two SS PCBs to a single DC jack.

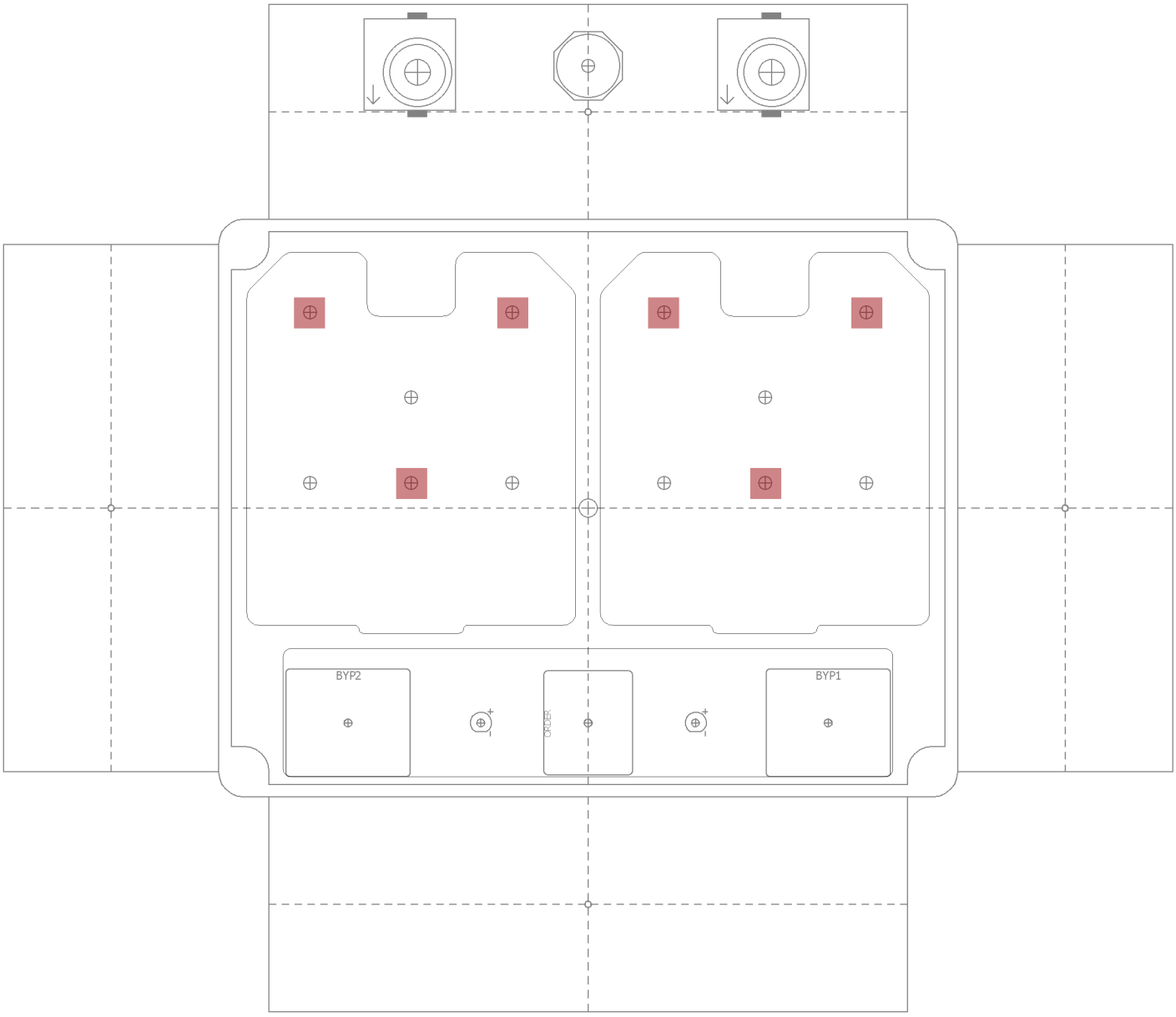
B.O.M.

Part	Value	Type
CLR1	1k	Metal Film, 1/4W
CLR2	1k	Metal Film, 1/4W
LED1	LED	5mm, any color
LED2	LED	5mm, any color
T1	50k	Bourns 3362p or 6mm
T2	50k	Bourns 3362p or 6mm
BYP1	3PDT	foot-switch, solder lug
BYP2	3PDT	foot-switch, solder lug
ORDER	3PDT	toggle switch, solder lug
(1) 1590BB2 Enclosure		
(2) Lumberg Compact 1/4” jacks		
(1) Slim DC Jack		

3PDT Toggle - use a short lever toggle here.
https://lovemyswitches.com/taiway-3pdt-on-on-switch-solder-lug-short-shaft/
https://stompboxparts.com/toggle-switches/3pdt-toggle-switch-on-on-solder-lug/

1590BB2 enclsoure: https://www.taydaelectronics.com/catalogsearch/result/?q=1590BB2

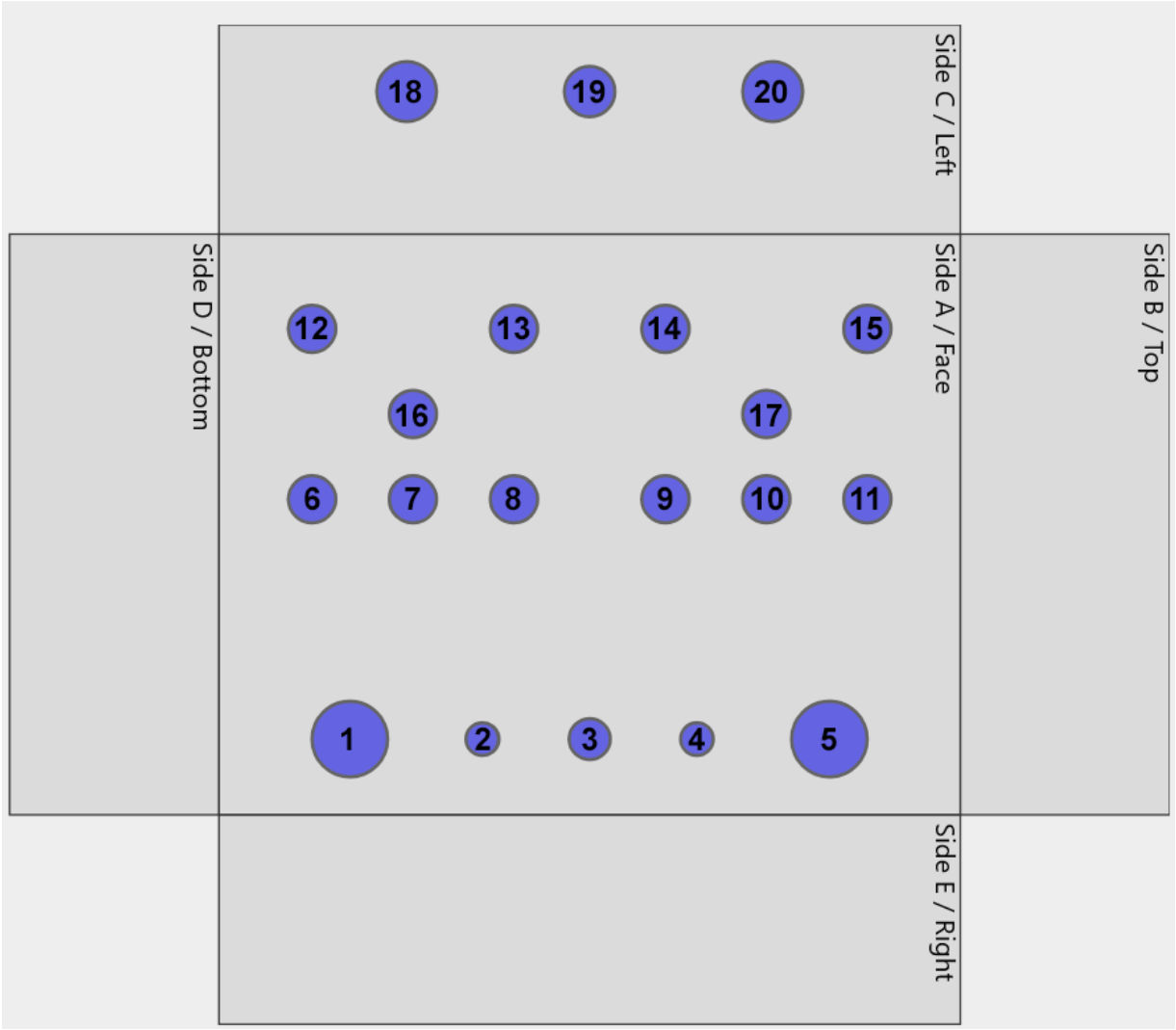
Drill Template



This template will work for nearly all the Standard Series projects. For clarity, the drill spots in red show the 3-knob configuration that's used in all Standard Series projects. Make sure you use the correct drilling spots that correspond to the projects you wish to combine.

You must use the 1590BB2 enclosure, Lumberg 1/4" jacks and slimline DC jack for the SSDBP.

Tayda Drill Template



The numbers correspond to the drill holes as designated by the Tayda drill app online. I've set the drill sizes according to the hardware spec'd in this doc (Lumberg jacks, slim 2.1mm DC jack, etc). Note that the pots use 7.5mm and switches require 6.5mm. These drills are slightly oversized from what's required but better to have a little more room than needed. You'll have to adjust the Tayda drill template according to the configuration of Standard Series projects you are combining. There are too many permutations to provide a definitive guide, so you will need to work this out on your own.

TIP: When working with the Tayda drill app on their website, it can be unclear which hole corresponds to what sometimes. Before you delete a hole, change its drill size first. This will tell you if have the right one!

https://drill.taydakits.com/box-designs/new?public_key=aFBFK0dsRWp4SDJuUUZHWGQwVExodz09Cg==