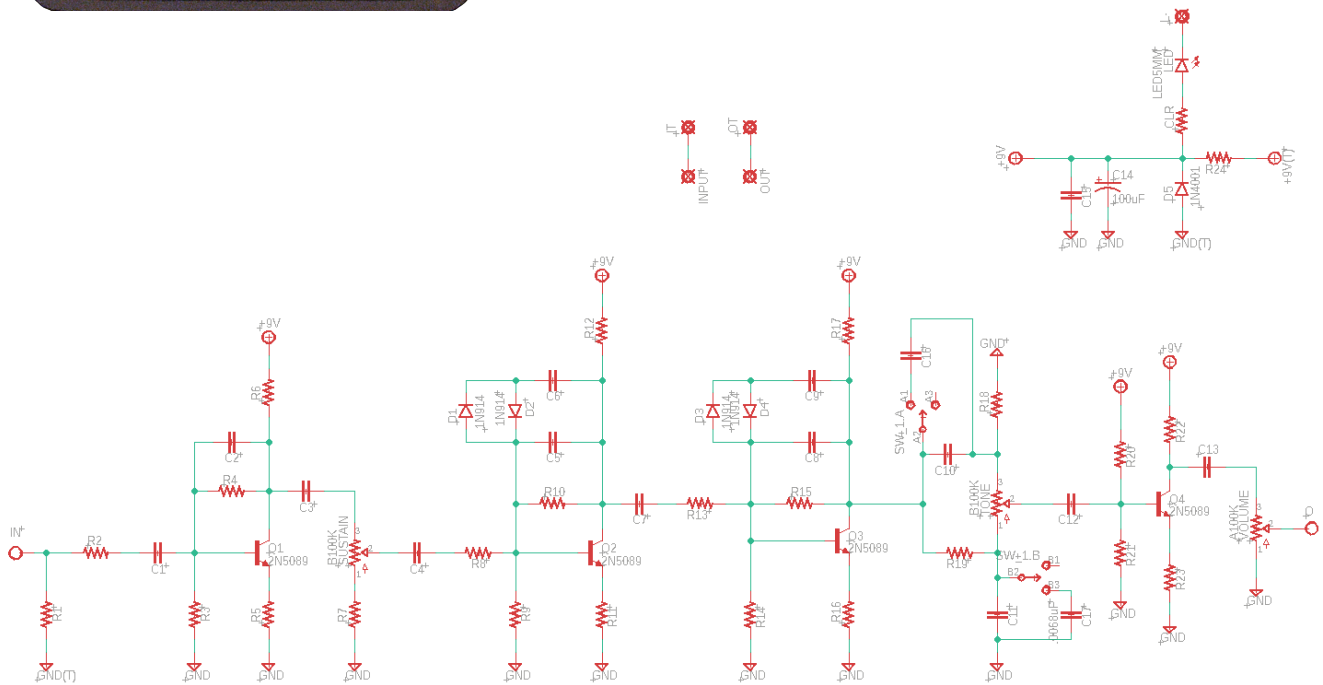
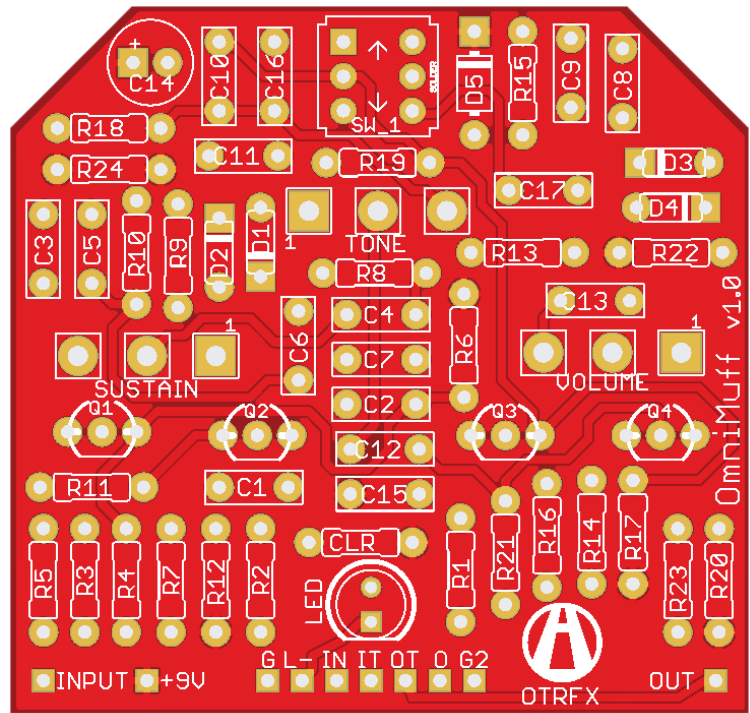
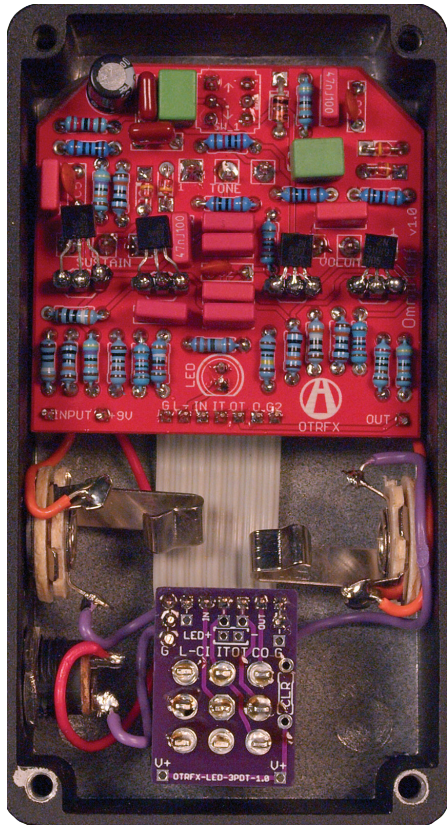




OmniMuff (v1.0) Build Guide



OmniMuff (v1.0) Build Guide

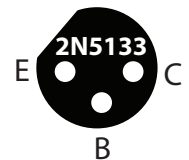
The OmniMuff allows you to build nearly any transistor-based Big Muff circuit you desire. The only modern enhancements include polarity protection, power filtering and switch pop suppression. Finally, a 'scooped/flat/boosted' mids switch mod has been added for greater tone control. You can opt to omit the parts in **RED** if you prefer a more stock build.

For the transistorless Op-Amp Big Muff, please see our **FuzzMOP PCB**.

BUILD NOTES:

♦ Transistors:

All versions will work with **2N5088** transistors, which are readily available and will sound great. Many other NPN transistors can also be substituted, such as 2N3904, BC549C, BC184, BC550, 2N5089, MPSA13, MPSA18, 2N5133, etc. Transistors with different gains (hfe) will affect the character of the distortion and noise level of the pedal. You should socket the transistors, and you **MUST** confirm the proper pinout, as some will **not** be the same orientation as the 2N5088. Be sure to refer to the datasheet of the specific transistor you use.



Capacitors:

- * **C10 & C11:** Use stock values if building a stock version with no mids switch mod. If you are using the mids switch mod, change the values of both C10 & C11 to **.0033uF (3n3)** caps.

- ** **C16 & C17:** These are for the mids switch mod. If you are not including this mod in your build, do not install **C16**, **C17** and **SW1**, which is a **Sub-Miniature DPDT On-Off-On Toggle Switch (PCB Pins)**.

Example toggle switch link: <https://www.taydaelectronics.com/sub-mini-toggle-switch-2m-series-dpdt-on-off-on-short-lever-pcb-pins.html>

C14 (100uF) is a polarized electrolytic capacitor. Caps in pF can be ceramic caps, all others can be film caps.

Diodes:

D1-D4: 1N914 or 1N4148 silicon diodes are the standard in a Big Muff. You are also welcome to socket these and experiment with germanium diodes or LEDs for different sounds.

• Pots:

Linear pots (B100K) for all controls will work fine. Optionally, volume and sustain controls can be audio taper (A100K) for a more refined pot sweep.

Most all version information comes from the amazing Big Muff resource page found at <https://bigmuffpage.com>. Be sure to visit this site for all kinds of history, documentation and sound samples of the various versions.

Triangle

Part	Value	Part	Value
R1	1M	C1	100n
R2	33K	C2	500pF
R3	82K	C3	100n
R4	390K	C4	100n
R5	820R	C5	560pF
R6	22K	C6	50n
R7	1K	C7	100n
R8	8K2	C8	560pF
R9	82K	C9	50n
R10	390K	C10	3n9/3n3*
R11	150R	C11	10n/3n3*
R12	12K	C12	100n
R13	8K2	C13	100n
R14	82K	C14	100uF
R15	390K	C15	100n
R16	820R	C16	6n8**
R17	22K	C17	6n8**
R18	39K	Q1-4	2N5088 [♦]
R19	39K	D1-4	1N914
R20	390K	D5	1N4001
R21	100K	Vol	B100K [•]
R22	12K	Tone	B100K
R23	2K7	Sus	B100K [•]
R24	100R		
R25	CLR		

Late 70's (3rd Edition)

Part	Value	Part	Value
R1	1M	C1	100n
R2	39K	C2	470pF
R3	100K	C3	1uF
R4	470K	C4	1uF
R5	100R	C5	470pF
R6	15K	C6	100n
R7	1K	C7	1uF
R8	8K2	C8	470pF
R9	100K	C9	100n
R10	470K	C10	3n9/3n3*
R11	100R	C11	10n/3n3*
R12	15K	C12	100n
R13	8K2	C13	100n
R14	100K	C14	100uF
R15	470K	C15	100n
R16	100R	C16	6n8**
R17	15K	C17	6n8**
R18	22K	Q1-4	2N5088 [♦]
R19	39K	D1-4	1N914
R20	390K	D5	1N4001
R21	100K	Vol	B100K [•]
R22	10K	Tone	B100K
R23	2K2	Sus	B100K [•]
R24	100R		
R25	CLR		

Foxy Lady

Part	Value	Part	Value
R1	1M	C1	120n
R2	33K	C2	omit
R3	100K	C3	120n
R4	470K	C4	120n
R5	100R	C5	470pF
R6	12K	C6	120n
R7	8K2	C7	120n
R8	7K5	C8	470pF
R9	100K	C9	120n
R10	470K	C10	3n9/3n3*
R11	100R	C11	10n/3n3*
R12	12K	C12	120n
R13	7K5	C13	120n
R14	100K	C14	100uF
R15	470K	C15	100n
R16	100R	C16	6n8**
R17	12K	C17	6n8**
R18	33K	Q1-4	2N5088 [♦]
R19	100K	D1-4	1N914
R20	390K	D5	1N4001
R21	100K	Vol	B100K [•]
R22	12K	Tone	B100K
R23	3K3	Sus	B100K [•]
R24	100R		
R25	CLR		

Violet Ram's Head

Part	Value	Part	Value
R1	1M	C1	100n
R2	39K	C2	470pF
R3	100K	C3	100n
R4	470K	C4	100n
R5	100R	C5	470pF
R6	15K	C6	100n
R7	1K	C7	100n
R8	8K2	C8	470pF
R9	100K	C9	100n
R10	470K	C10	3n9/3n3*
R11	100R	C11	10n/3n3*
R12	10K	C12	100n
R13	8K2	C13	100n
R14	100K	C14	100uF
R15	470K	C15	100n
R16	100R	C16	6n8**
R17	15K	C17	6n8**
R18	39K	Q1-4	2N5088 [♦]
R19	39K	D1-4	1N914
R20	390K	D5	1N4001
R21	100K	Vol	B100K [•]
R22	10K	Tone	B100K
R23	2K7	Sus	B100K [•]
R24	100R		
R25	CLR		

Ram's Head '73 Gilmour

Part	Value	Part	Value
R1	1M	C1	100n
R2	33K	C2	470pF
R3	100K	C3	100n
R4	470K	C4	100n
R5	100R	C5	470pF
R6	10K	C6	100n
R7	560R	C7	100n
R8	10K	C8	470pF
R9	100K	C9	100n
R10	470K	C10	3n9/3n3*
R11	100R	C11	12n/3n3*
R12	10K	C12	100n
R13	10K	C13	100n
R14	100K	C14	100uF
R15	470K	C15	100n
R16	100R	C16	6n8**
R17	10K	C17	6n8**
R18	33K	Q1-4	2N5088 [♦]
R19	33K	D1-4	1N914
R20	470K	D5	1N4001
R21	100K	Vol	B100K [•]
R22	10K	Tone	B100K
R23	2K7	Sus	B100K [•]
R24	100R		
R25	CLR		

Civil War / Red Army

Part	Value	Part	Value
R1	1M	C1	100n
R2	39K	C2	430pF
R3	100K	C3	100n
R4	470K	C4	100n
R5	390R	C5	430pF
R6	12K	C6	47n
R7	1K	C7	100n
R8	10K	C8	430pF
R9	100K	C9	47n
R10	470K	C10	3n9/3n3*
R11	390R	C11	10n/3n3*
R12	12K	C12	100n
R13	10K	C13	100n
R14	100K	C14	100uF
R15	470K	C15	100n
R16	390R	C16	6n8**
R17	12K	C17	6n8**
R18	22K	Q1-4	2N5088 [♦]
R19	20K	D1-4	1N914
R20	470K	D5	1N4001
R21	100K	Vol	B100K [•]
R22	10K	Tone	B100K
R23	2K7	Sus	B100K [•]
R24	100R		
R25	CLR		

Green Russian

Part	Value	Part	Value
R1	1M	C1	100n
R2	39K	C2	470pF
R3	100K	C3	100n
R4	470K	C4	100n
R5	390R	C5	470pF
R6	12K	C6	47n
R7	1K	C7	100n
R8	10K	C8	470pF
R9	100K	C9	47n
R10	470K	C10	3n9/3n3*
R11	390R	C11	10n/3n3*
R12	12K	C12	100n
R13	10K	C13	100n
R14	100K	C14	100uF
R15	470K	C15	100n
R16	390R	C16	6n8**
R17	12K	C17	6n8**
R18	22K	Q1-4	2N5088 [♦]
R19	20K	D1-4	1N914
R20	470K	D5	1N4001
R21	100K	Vol	B100K [•]
R22	10K	Tone	B100K
R23	2K	Sus	B100K [•]
R24	100R		
R25	CLR		

Black Russian

Part	Value	Part	Value
R1	1M	C1	100n
R2	39K	C2	470pF
R3	100K	C3	100n
R4	470K	C4	100n
R5	390R	C5	470pF
R6	12K	C6	47n
R7	1K	C7	100n
R8	10K	C8	470pF
R9	100K	C9	47n
R10	470K	C10	3n9/3n3*
R11	390R	C11	10n/3n3*
R12	12K	C12	100n
R13	10K	C13	100n
R14	100K	C14	100uF
R15	470K	C15	100n
R16	390R	C16	6n8**
R17	12K	C17	6n8**
R18	22K	Q1-4	2N5088 [♦]
R19	22K	D1-4	1N914
R20	470K	D5	1N4001
R21	100K	Vol	B100K [•]
R22	10K	Tone	B100K
R23	2K7	Sus	B100K [•]
R24	100R		
R25	CLR		

Creamy Dreamer

Part	Value	Part	Value
R1	1M	C1	1uF
R2	39K	C2	470pF
R3	100K	C3	47n
R4	470K	C4	1uF
R5	JUMPER	C5	470pF
R6	15K	C6	1uF
R7	1K	C7	1uF
R8	8K2	C8	470pF
R9	100K	C9	1uF
R10	470K	C10	4n7/3n3*
R11	JUMPER	C11	10n/3n3*
R12	15K	C12	100n
R13	8K2	C13	100n
R14	100K	C14	100uF
R15	470K	C15	100n
R16	JUMPER	C16	6n8**
R17	15K	C17	6n8**
R18	47K	Q1-4	2N5088 [♦]
R19	47K	D1-4	1N914
R20	390K	D5	1N4001
R21	100K	Vol	B100K [•]
R22	10K	Tone	B100K
R23	2K2	Sus	B100K [•]
R24	100R		
R25	CLR		

Cornish P-1

Part	Value	Part	Value
R1	1M	C1	10uF
R2	33K	C2	470pF
R3	47K	C3	100n
R4	470K	C4	100n
R5	120R	C5	470pF
R6	10K	C6	1uF
R7	1K	C7	100n
R8	10K	C8	470pF
R9	100K	C9	1uF
R10	470K	C10	3n9/3n3*
R11	150R	C11	10n/3n3*
R12	10K	C12	100n
R13	10K	C13	1uF
R14	100K	C14	100uF
R15	470K	C15	100n
R16	150R	C16	6n8**
R17	15K	C17	6n8**
R18	22K	Q1-4	2N5088 [♦]
R19	33K	D1-4	1N914
R20	430K	D5	1N4001
R21	100K	Vol	B100K [•]
R22	15K	Tone	B100K
R23	3K3	Sus	B100K [•]
R24	100R		
R25	CLR		

Tone Wicker

Part	Value	Part	Value
R1	1M	C1	1uF
R2	39K	C2	470pF
R3	100K	C3	470n
R4	470K	C4	1uF
R5	120R	C5	470pF
R6	10K	C6	1uF
R7	560R	C7	1uF
R8	10K	C8	470pF
R9	100K	C9	2.2uF
R10	470K	C10	3n3/3n3*
R11	120R	C11	10n/3n3*
R12	10K	C12	470n
R13	10K	C13	1uF
R14	100K	C14	100uF
R15	470K	C15	100n
R16	120R	C16	6n8**
R17	10K	C17	6n8**
R18	27K	Q1-4	2N5088 [♦]
R19	27K	D1-4	1N914
R20	470K	D5	1N4001
R21	100K	Vol	B100K [•]
R22	10K	Tone	B100K
R23	2K2	Sus	B100K [•]
R24	100R		
R25	CLR		

NYC Reissue

Part	Value	Part	Value
R1	1M	C1	1uF
R2	39K	C2	470pF
R3	100K	C3	1uF
R4	510K	C4	1uF
R5	100R	C5	470pF
R6	10K	C6	1uF
R7	1K8	C7	1uF
R8	10K	C8	470pF
R9	100K	C9	1uF
R10	470K	C10	3n9/3n3*
R11	390R	C11	10n/3n3*
R12	10K	C12	1uF
R13	10K	C13	1uF
R14	100K	C14	100uF
R15	470K	C15	100n
R16	390R	C16	6n8**
R17	10K	C17	6n8**
R18	22K	Q1-4	2N5088 [♦]
R19	22K	D1-4	1N914
R20	470K	D5	1N4001
R21	100K	Vol	B100K [•]
R22	10K	Tone	B100K
R23	2K	Sus	B100K [•]
R24	100R		
R25	CLR		

CLR = LED Current Limiting Resistor. Try 2.2K.

OmniMuff (v1.0) Build Guide

GENERAL INSTRUCTION STEPS:

Important: do the assembly in the following order to avoid unnecessary hardship!

1. Install/solder all resistors & diodes that lay flat on the PCB.
2. Install/solder any sockets (for IC's, diodes, resistors.. anywhere you might want to change a part, value or type).
3. Install/solder any DIP switches (if any).
4. Install/solder all capacitors & transistors.
5. Install/solder ribbon cable connector and/or any other wiring on the PCB which go to the jacks/stomp switch.
6. Install/solder PCB mounted pots & LED
(Important: use *pot dust caps* or some other non-conductive material to keep back of pots from touching the back of the pcb)
7. Attach/solder wiring to the jacks & stomp switch.



TIPS:

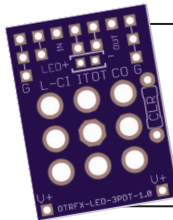
- Check to make sure your wiring is complete before firing up the pedal for the first time, especially the 9V & ground wiring.
- Snip your component leads short after soldering. Your solder joints should look like shiny little Hershey's Kisses when finished.
- Socket anything you might want to change, or anything that would be very difficult to remove if faulty (IC's/transistors).

RESOURCES:

Parts Ordering:	Website:	Specialties:
Tayda Electronics	taydaelectronics.com	resistors, capacitors, diodes, sockets, LEDs, pots, knobs
Mouser	mouser.com	resistors, capacitors, IC's
Love My Switches	lovemyswitches.com	switches, knobs, enclosures, pre-wired LEDs



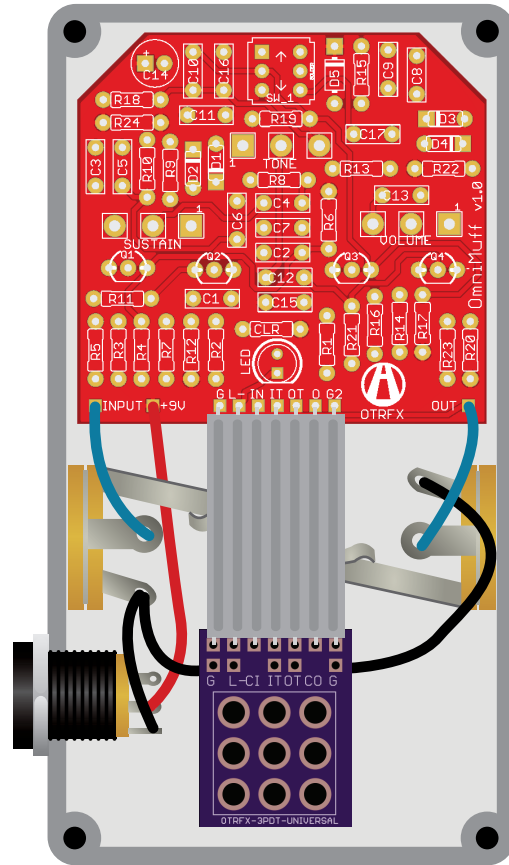
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 Plan, design, test-fit, & print your DIY pedals with ease!
 Visit ontheroadeffects.com



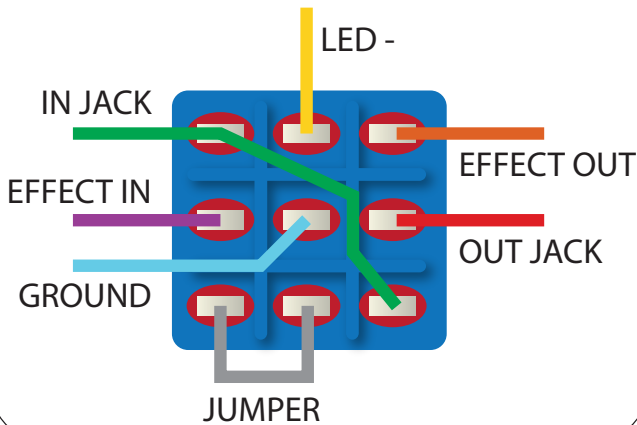
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 Stock up on our handy 3PDT wiring boards!
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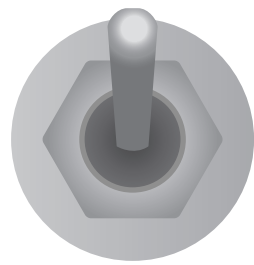
1590B Enclosure



True Bypass Wiring



Mids Switch Mod



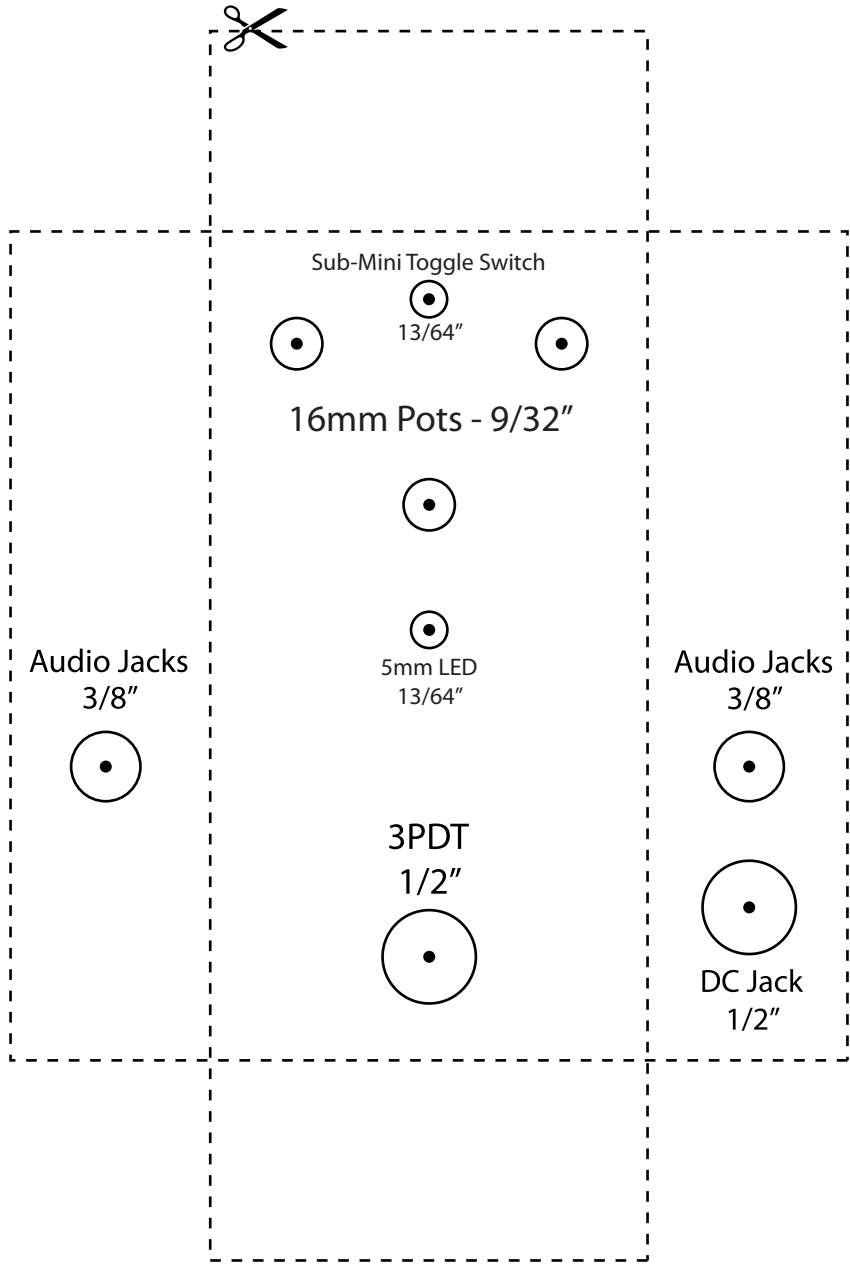
- SCOOPED MIDS (UP)**
- FLAT MIDS (MIDDLE)**
- BOOSTED MIDS (DOWN)**

If you do **not** wish to include the mids switch mod, omit **C16, C17** and the **sub-mini toggle switch**. (DPDT on-off-on sub-mini toggle switch w/PCB pins)

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Drilling Template

1590B Enclosure



Print at 100% and tape to enclosure for drilling