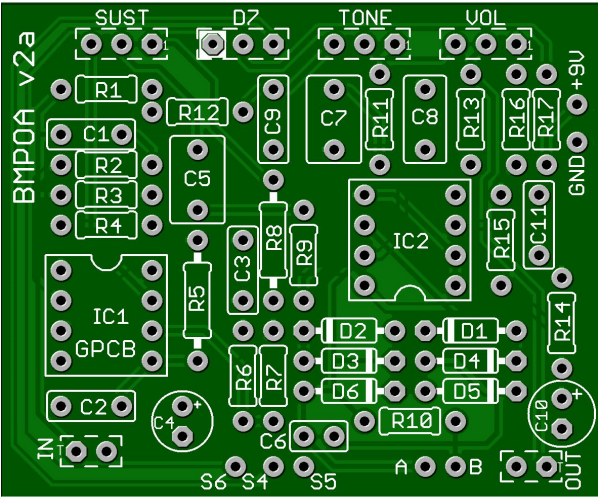


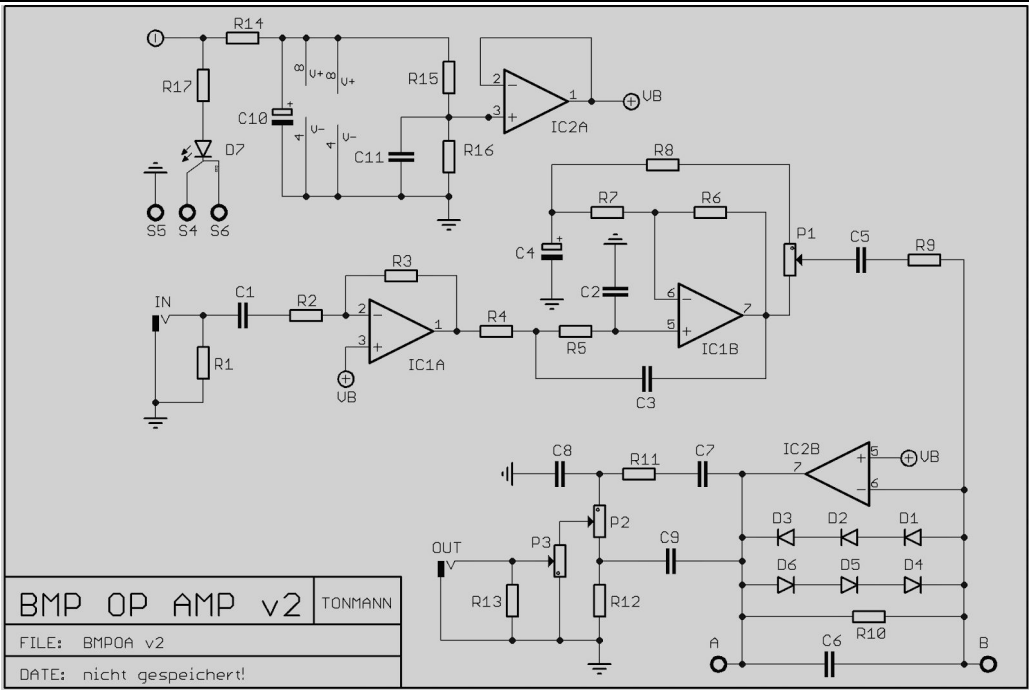
BMP OP AMP v2

The Opamp version of the Muff made famous by many guitarists.
Sounding uniquely amazing and heavy ours has A/B pads allowing further modding (see more below)

Board Dimensions (W x H) 2" x 1.65" ca. 50.2 mm x 42mm



R1	1M	R11	10k	C1	100n	D1 - D6	1N914
R2	47k	R12	10k	C2	10n	D7	Bi-Color LED CA
R3	330k	R13	220k	C3	4n7		
R4	10k	R14	100R	C4	10μ	Sustain	B100k
R5	47k	R15	220k	C5	470n	Tone	B50k
R6	330k	R16	220k	C6	150p	Volume	A100k
R7	33k	R17	3k3	C7	470n		
R8	1k			C8	220n	IC1	4558
R9	5k6			C9	10n	IC2	4558
R10	330k			C10	100μ		
				C11	100n		



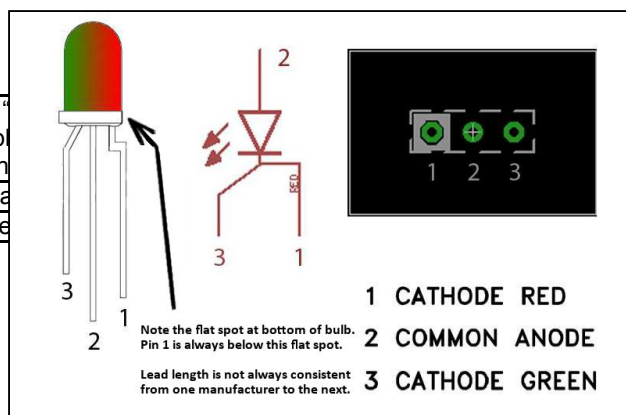
STATUS LED

D3 is a common anode bi-color LED. The diagram at right shows the pin-out, schematic symbol and pad connection for a common anode LED. The pin-out for the bi-color LED is typically (but not always) as follows:

1st Color Cathode	Is on the + (see graph bend in the lead)
Common Anode	Middle lead
2nd Color Cathode	45 degree bend in the lead

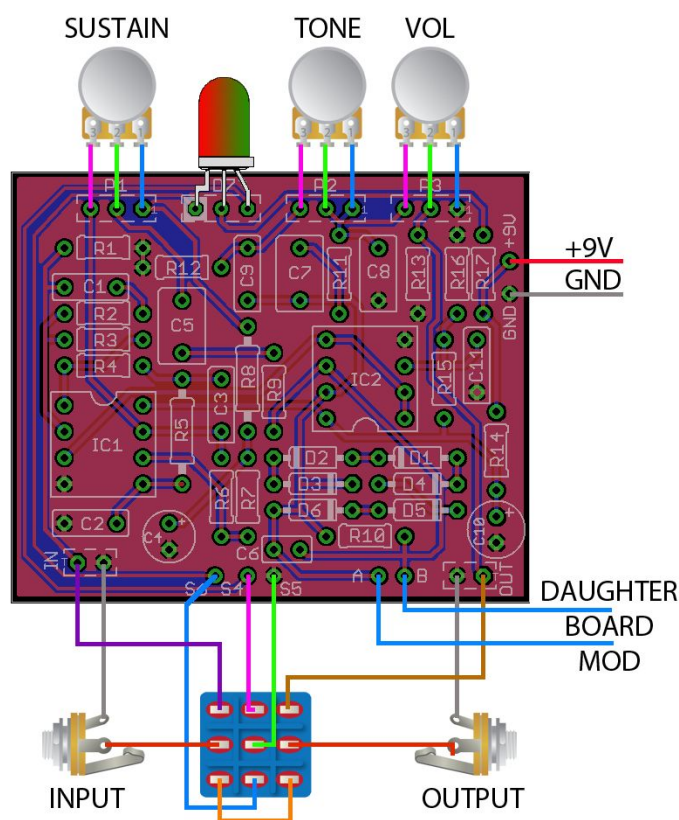
The lead 1 pad on the circuit board is marked with a white box.

When connected correctly, the LED will light red when power is applied and the circuit is in bypass mode. The LED will light green when in effects mode. **If you wish to use a standard LED, connect the anode to the middle pad and the cathode to the right (non-white) pad to show the circuit in effects mode.** If you use a 3PDT wiring board that includes an LED, you can omit this LED and R17. *R17 is the LED's Current Limiting Resistor (CLR). If you use a different LED, you may want to change this value to adjust LED brightness.

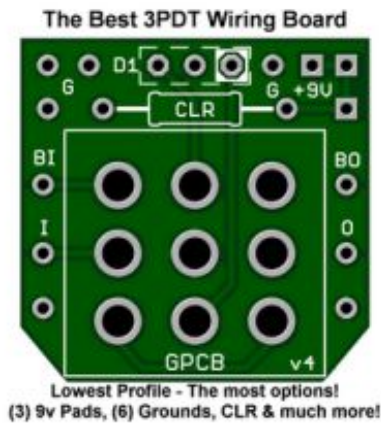


MODIFICATIONS

Diodes Although D1 – D6 are given as 1N914s there are many diode combinations to experiment with. To make wiring easier pads A and B have been added to the circuit board, diodes D1 – D6, along with any switching arrangement, would be installed on a daughter board which would then be connected to pads A and B.

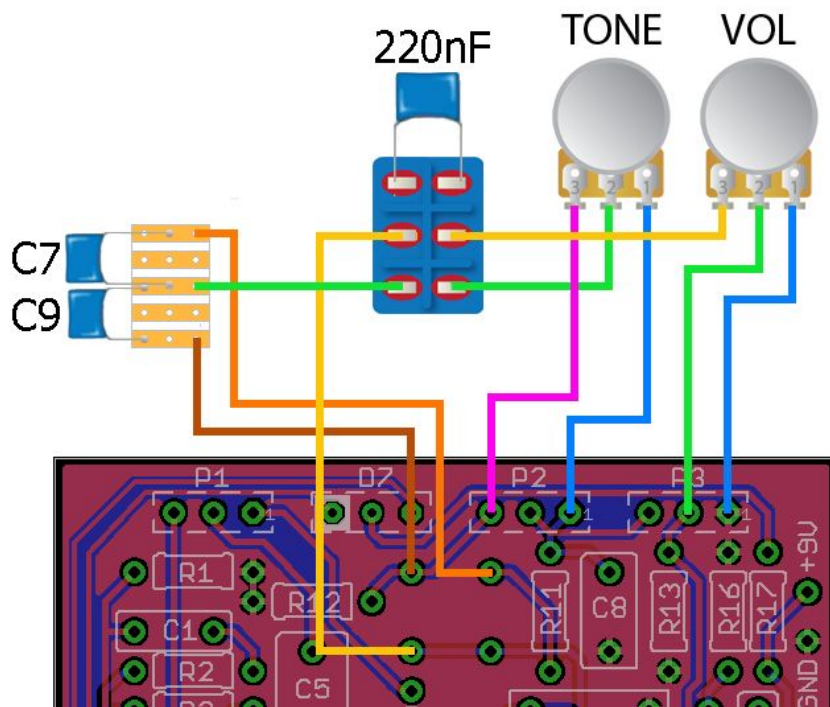


If you are using one of GuitarPCB's handy 3PDT wiring boards, pads S4, S5, S6 and D7 would be ignored and R17 would not be installed. See wiring guide below for reference.



Tonestack Bypass wiring mod:

This is for modders for experimentation, you must be able to build and or troubleshoot this yourself.



***Another Mod for the BMPOA using the Tone TweEQ circuit courtesy of Wilkie1:**

In regards to the BMP OPamp build:

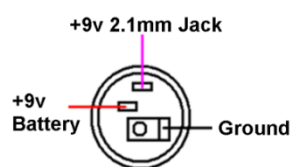
If you hook into the circuit at pin 7 of IC1B, you can discard the rest of the circuit and feed directly into the input of the Tone TweEQ. This would add the active tone circuit of the Tone Tweeq to the BMP OP AMP V2 and also replace the final VOL pot. The combination would give much more tone control to a great circuit and add an additional gain option.

This mod could be done without any cutting of traces or modification of the circuit board. Just connect the input of the Tone TweEQ to the Pad A on the BMP board and ignore all components downstream from that point.

Other important notes:

- Socket your Transistors – You may wish to change them later and makes troubleshooting a lot easier.
- Do not twist or braid wires.

IC's and transistors are easily damaged by heat from soldering and should never be directly soldered to the PCB. For transistors, diodes, and LED's, use SIP (Single inline package) sockets. You simply cut the number of sockets required with an Exacto / Stanley knife or by gripping and rocking with pliers. This allows for easy changes and troubleshooting.



[Soldering Tutorial on Youtube](#)

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If they do not have a KIT listed send them a note asking if they can help you out.



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