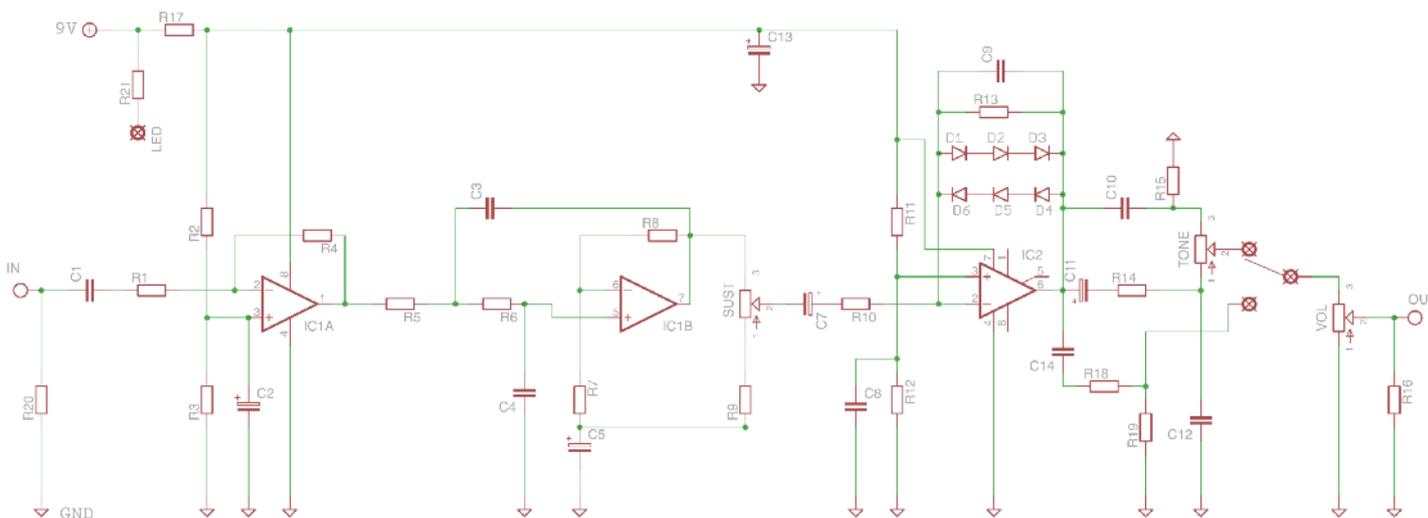


IC Big Muff '78

Chip-based Big Muff Pi.
Smooooooth!

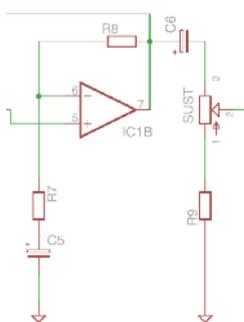
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Schematic



BOM

R1	56K
R2	220K
R3	220K
R4	330K
R5	10K
R6	47K
R7	62K
R8	560K
R9	47R
R10	8K2
R11	820K
R12	1M
R13	470K
R14	5K6
R15	1K2
R16	100K
R17	47R
R18	47K
R19	47K
R20	1M
R21	2K2 (CLR)



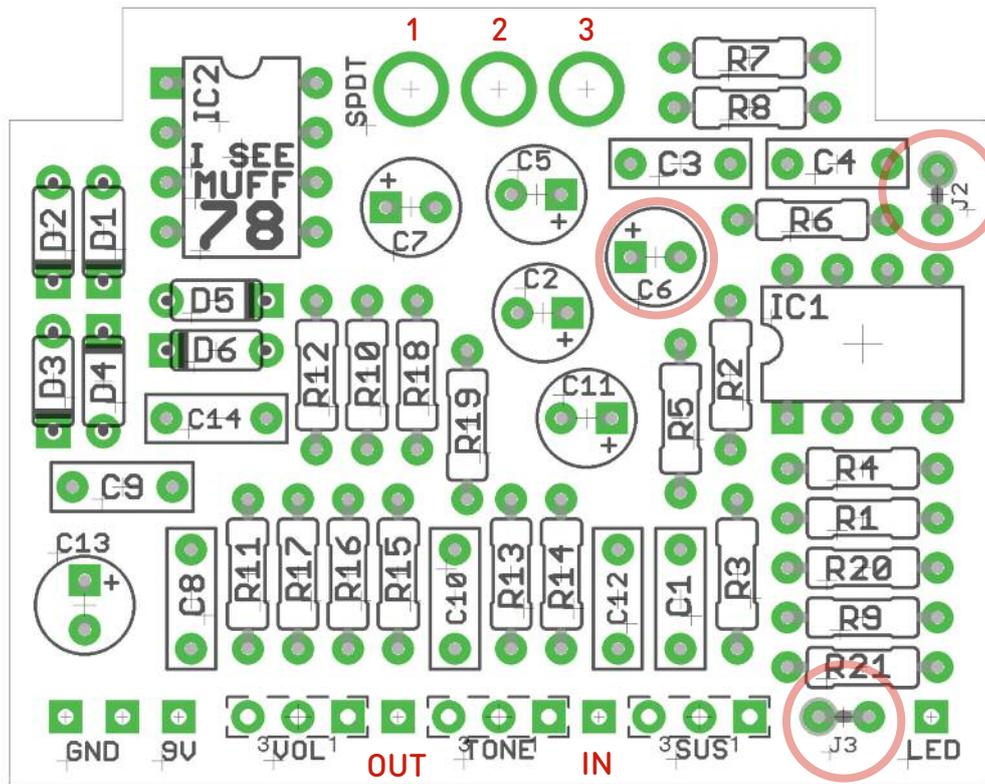
Original schematic above gives nice, smooth sustained fuzz tones. AnalogGuru's suggested changes to the negative feedback section shown left give a slight crunch to the sound. More on that on the next page.

C1	150n
C2	1u
C3	4n7
C4	10n
C5	10u elec
C6	10u elec*
C7	4u7 elec
C8	220n
C9	330p
C10	100n
C11	1u
C12	120n**
C13	220u
C14	150n

*omit C6 if making the original circuit. Replace with a jumper wire.

D1-6	1N4148
IC1	4558
IC2	741
SUST	10KB
TONE	10KB
VOL	100KA
SW1	SPDT (ON-ON)

**original has 120n. You could use 100n without making too much impact on the tone range.



To make the original (and in my opinion, best) circuit, solder a jumper wire across J2 and across the pads of C6. You can include C6 if you like - it just adds more DC blocking and won't affect the tone. Ignore J3.

To make the crunchier version with AnalogGuru's suggested mods, solder a jumper wire across J3 and include C6. Ignore J2.

BOOB!

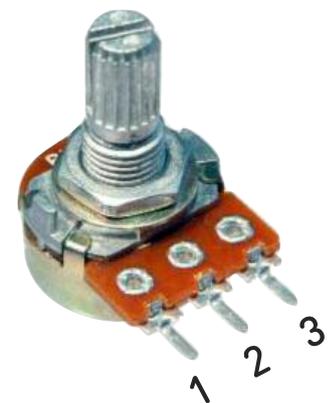
Labels for IN and OUT were missed off the silkscreen. See above.

Wiring shown overleaf will disconnect the battery when you remove the jack plug from the input, and also when a DC plug is inserted.

Snap the little metal tag off the pots to mount them flush in the box.

You should use some kind of heat sink on the legs of the diodes when soldering. They aren't keen on heat. Any more than 3-4 seconds of iron and they're toast.

I've incorporated the Current Limiting Resistor for the LED into the board for your pleasure.

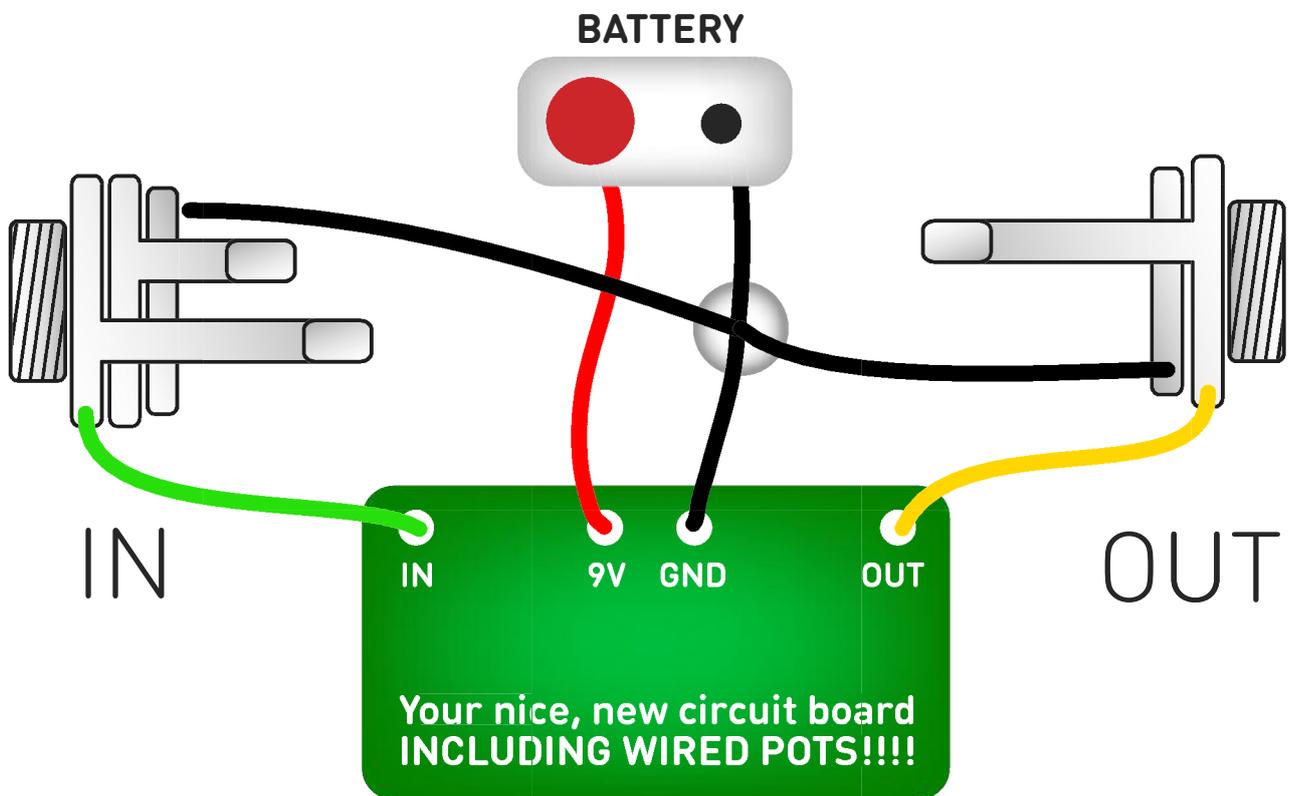


Tone Bypass switch

This should be soldered to the underside of the PCB (opposite side to the other components). You can mount the PCB into the enclosure using the switch. Handy!

If you aren't using the switch, jumper pads 1 and 2 together.

Test the board!

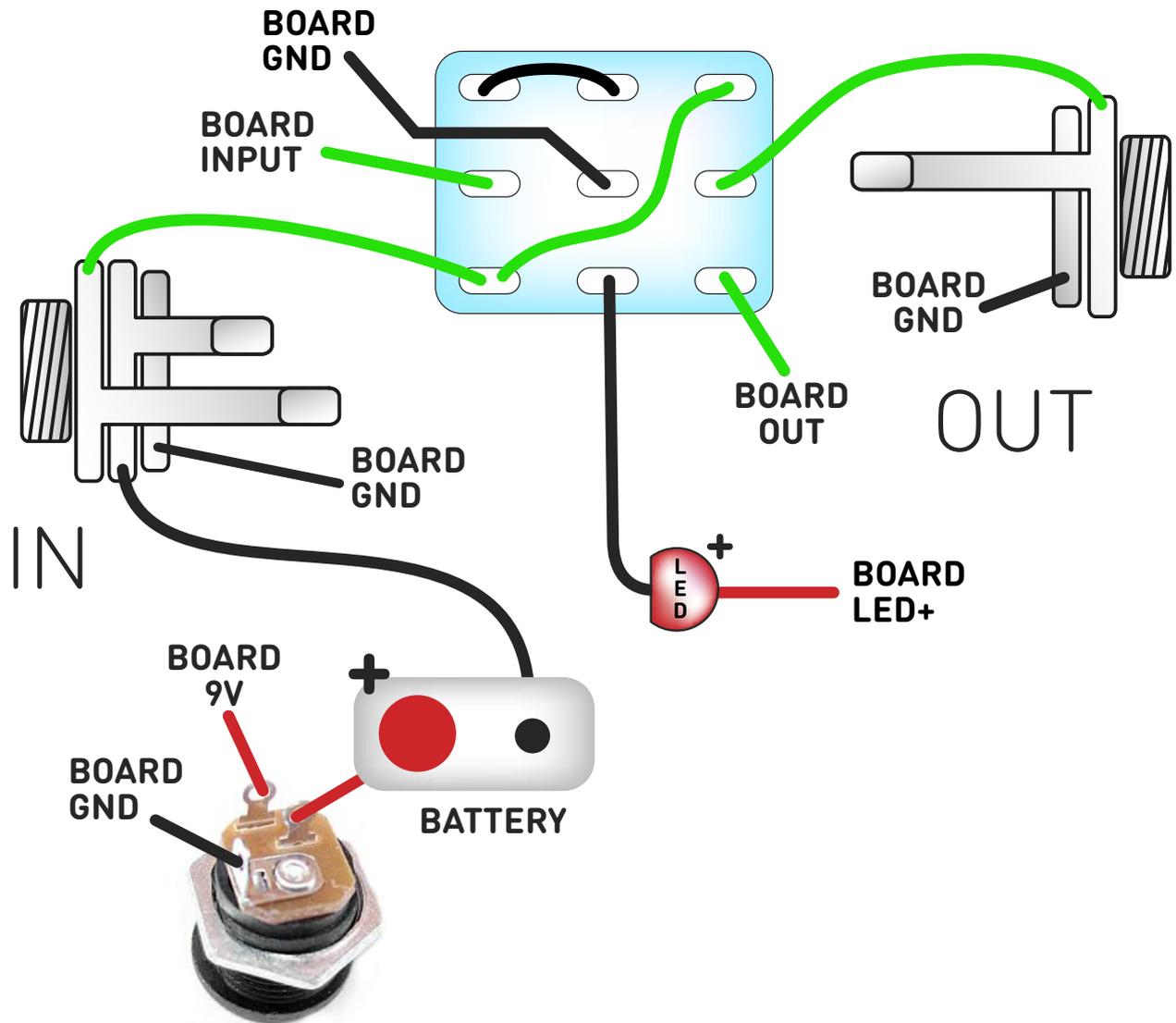


Once you've finished the circuit it makes sense to test it before starting on the switch and LED wiring. It'll cut down troubleshooting time in the long run. If the circuit works at this stage, but it doesn't once you wire up the switch - guess what? You've probably made a mistake with the switch.

Solder some nice, long lengths of wire to the board connections for 9V, GND, IN and OUT. Connect IN and OUT to the jacks as shown. Connect all the GNDs together (twist them up and add a small amount of solder to tack it). Connect the battery + lead to the 9V wire, same method. Plug in. Go!

If it works, crack on and do your switch wiring. If not... aw man. At least you know the problem is with the circuit. Find out why, get it working, THEN worry about the switch etc.

Wire it up



The Board GND connections don't all have to directly attach to the board. You can run a couple of wires from the DC connector, one to the board, another to the IN jack, then daisy chain that over to the OUT jack. It doesn't matter how they all connect, as long as they do.

This circuit is standard, Negative GND. Your power supply should be Tip Negative / Sleeve Positive. That's the same as your standard pedals (Boss etc), and you can safely daisy-chain your supply to this pedal. Now... go do your best Billy Corgan riffs!

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