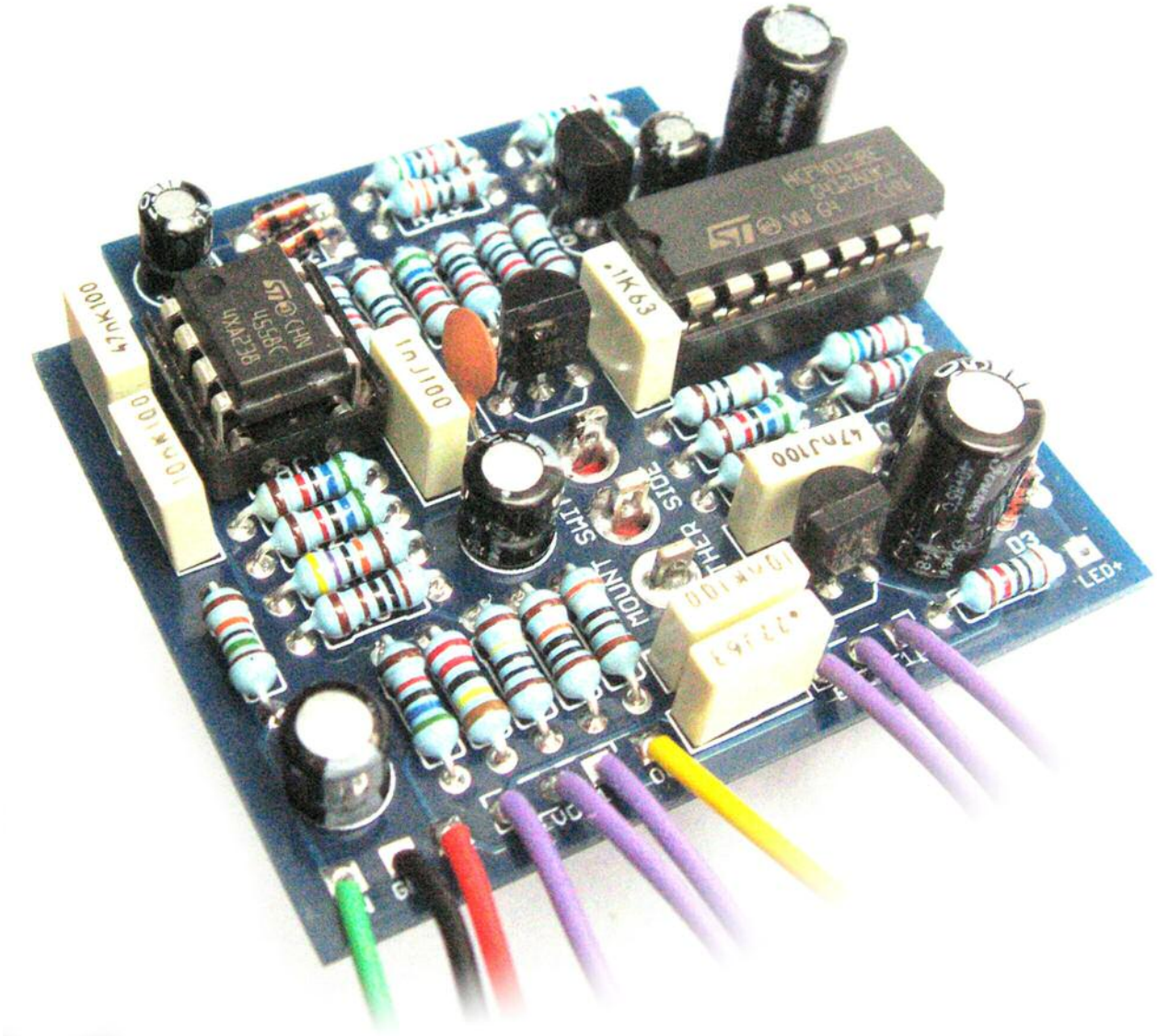
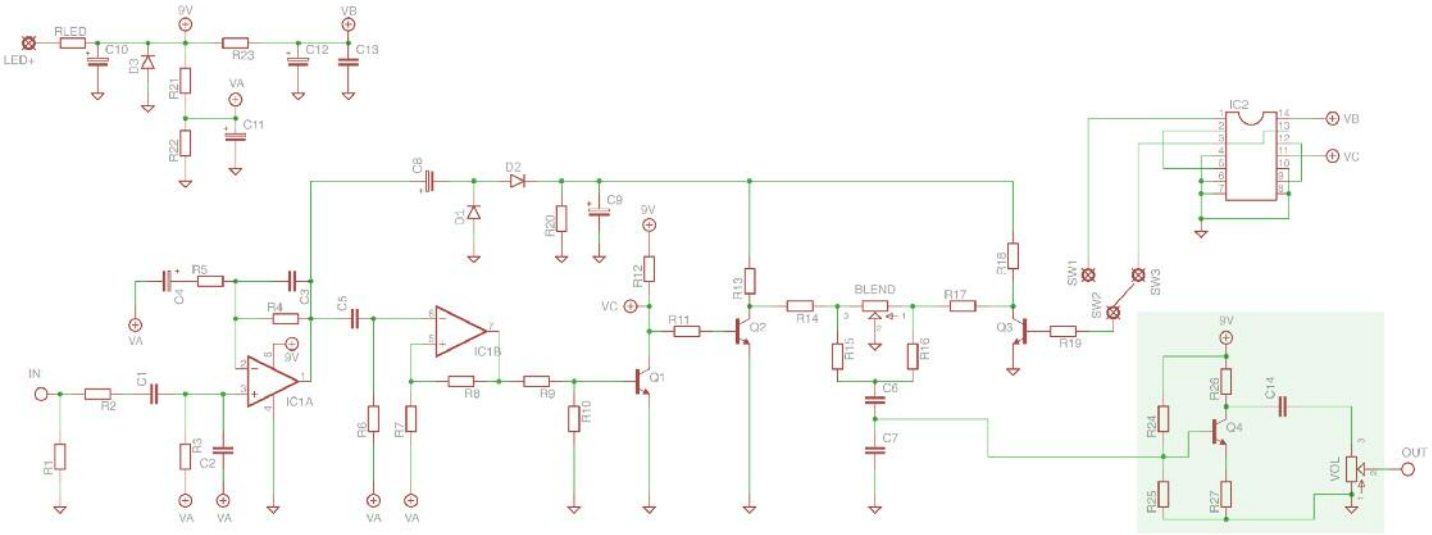


# Blue Fool

Octave-down fuzz fun from this MXR Blue Box clone

**PedalParts.co.uk**

# Schematic




# BOM

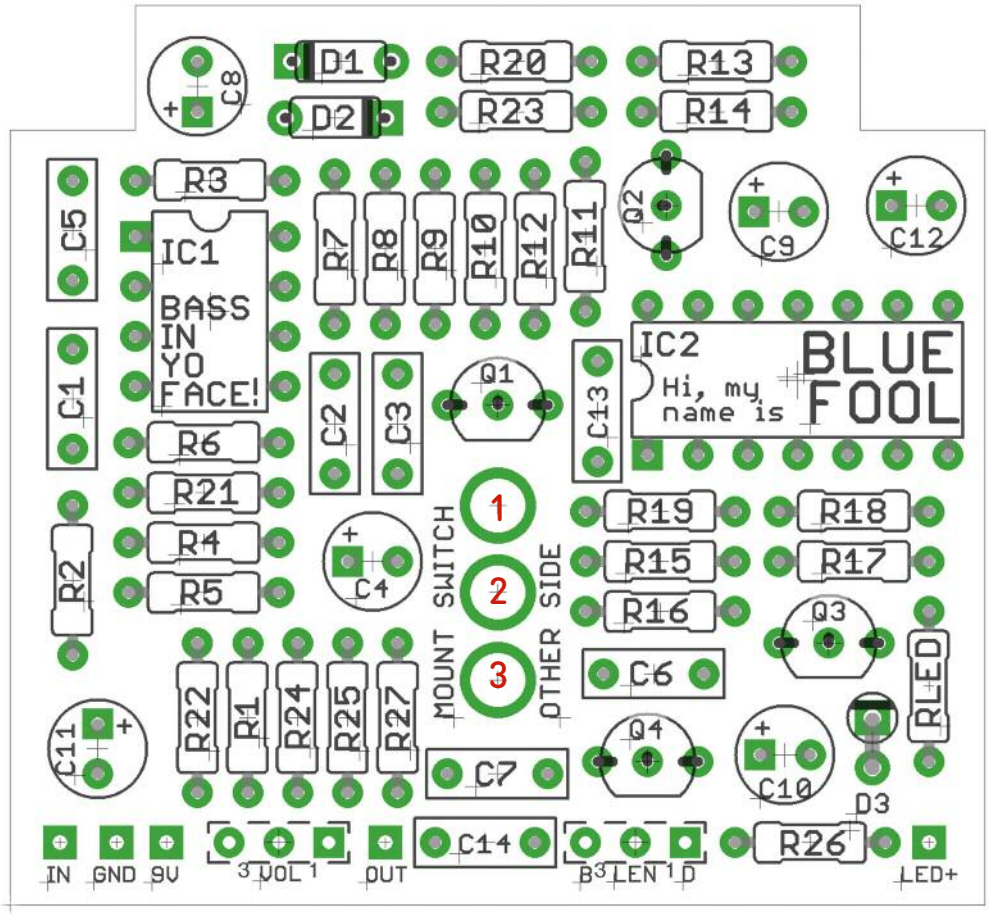
| | |
|---|---|
| R1 | 2M2 |
| R2 | 150K |
| R3 | 1M |
| R4 | 470K |
| R5 | 1K |
| R6 | 56K |
| R7 | 10K |
| R8 | 1M |
| R9 | 56K |
| R10 | 10K |
| R11 | 1M |
| R12 | 10K |
| R13 | 56K |
| R14 | 56K |
| R15 | 56K |
| R16 | 56K |
| R17 | 56K |
| R18 | 56K |
| R19 | 1M |
| R20 | 56K |
| R21 | 56K |
| R22 | 56K |
| R23 | 330R |
| R24 | 1M |
| R25 | 100K |
| R26 | 10K |
| R27 | 390R |
| RLED | 2K2 (CLR) |

| | |
|---|---|
| C1 | 10n |
| C2 | 1n |
| C3 | 330p |
| C4 | 10u elec |
| C5 | 47n |
| C6 | 47n |
| C7 | 10n |
| C8 | 1u elec |
| C9 | 1u elec |
| C10 | 100u elec |
| C11 | 10u elec |
| C12 | 100u elec |
| C13 | 100n |
| C14 | 220n |

| | |
|---|---|
| D1-3 | 1N4148 |
| IC1 | 4558 |
| IC2 | CD4013 |
| Q1-3 | 2N3904 |
| Q4 | 2N5088 |
| BLEND | 50KA |
| VOL | 100KA |
| SW1 | SPDT (ON-ON) |

Green shaded area is a LPB boost circuit to bring the signal level up to above unity. This isn't in the original circuit.

The switch selects between 2-octaves down (original) and 1-octave down (mod).




## SWITCH

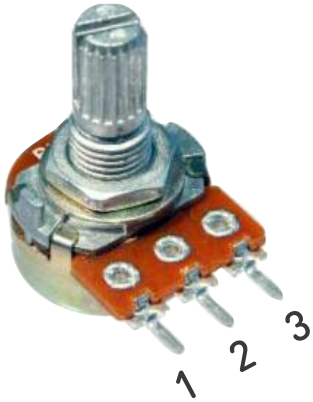
This is optional, but why wouldn't you include it?

If you want to take it out, connect the switch pads in one of these combinations:

2-OCTAVE DOWN (ORIGINAL)
- connect pads 1 and 2

1-OCTAVE DOWN
- connect pads 2 and 3

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 and transistors 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.

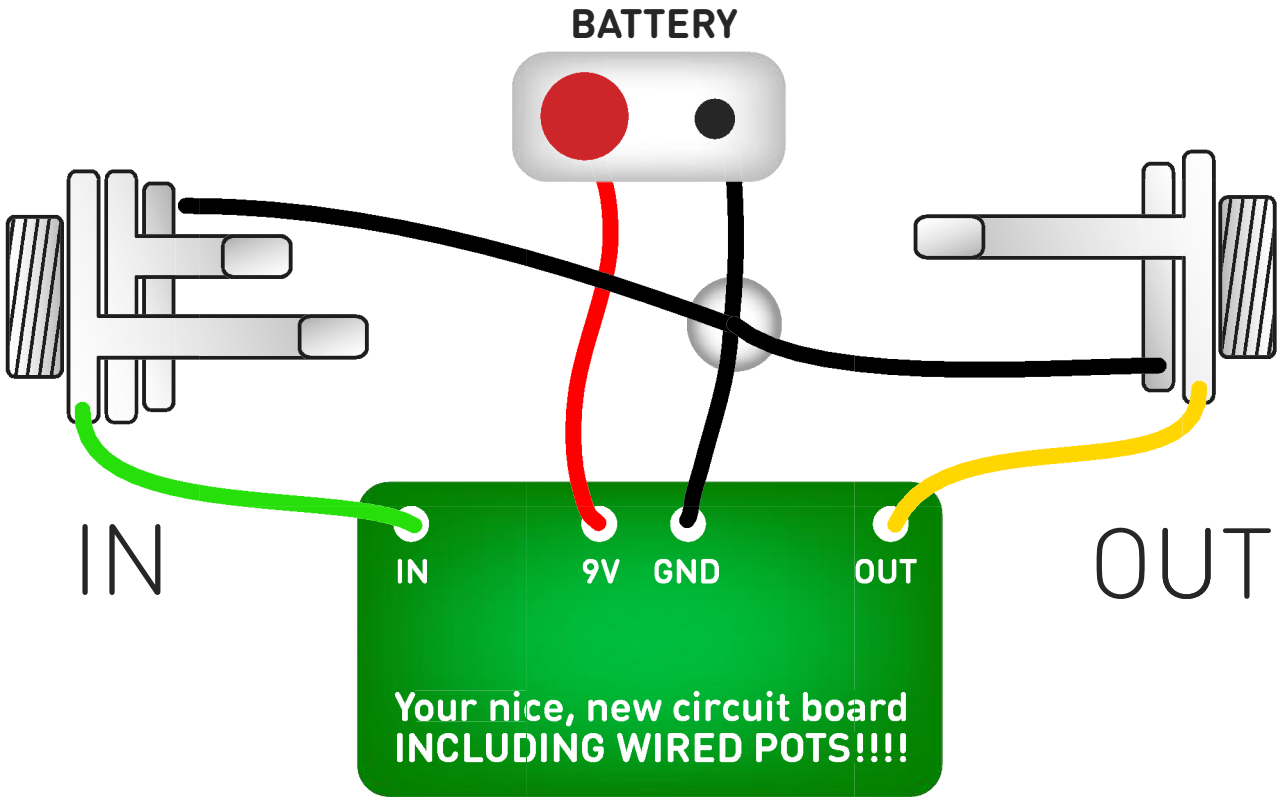
The switch mounts on the underside of the PCB. You can then mount the whole board in the enclosure using it. Nice!

I recommend not leaving the switch until last - it can be awkward to get the soldering iron in once all the components are in place.

VOLUME - kinda self explanatory. The LPB boost I've incorporated into the circuit will give you plenty of punch

BLEND - between Fuzz and Octave signal.

# Test the board!

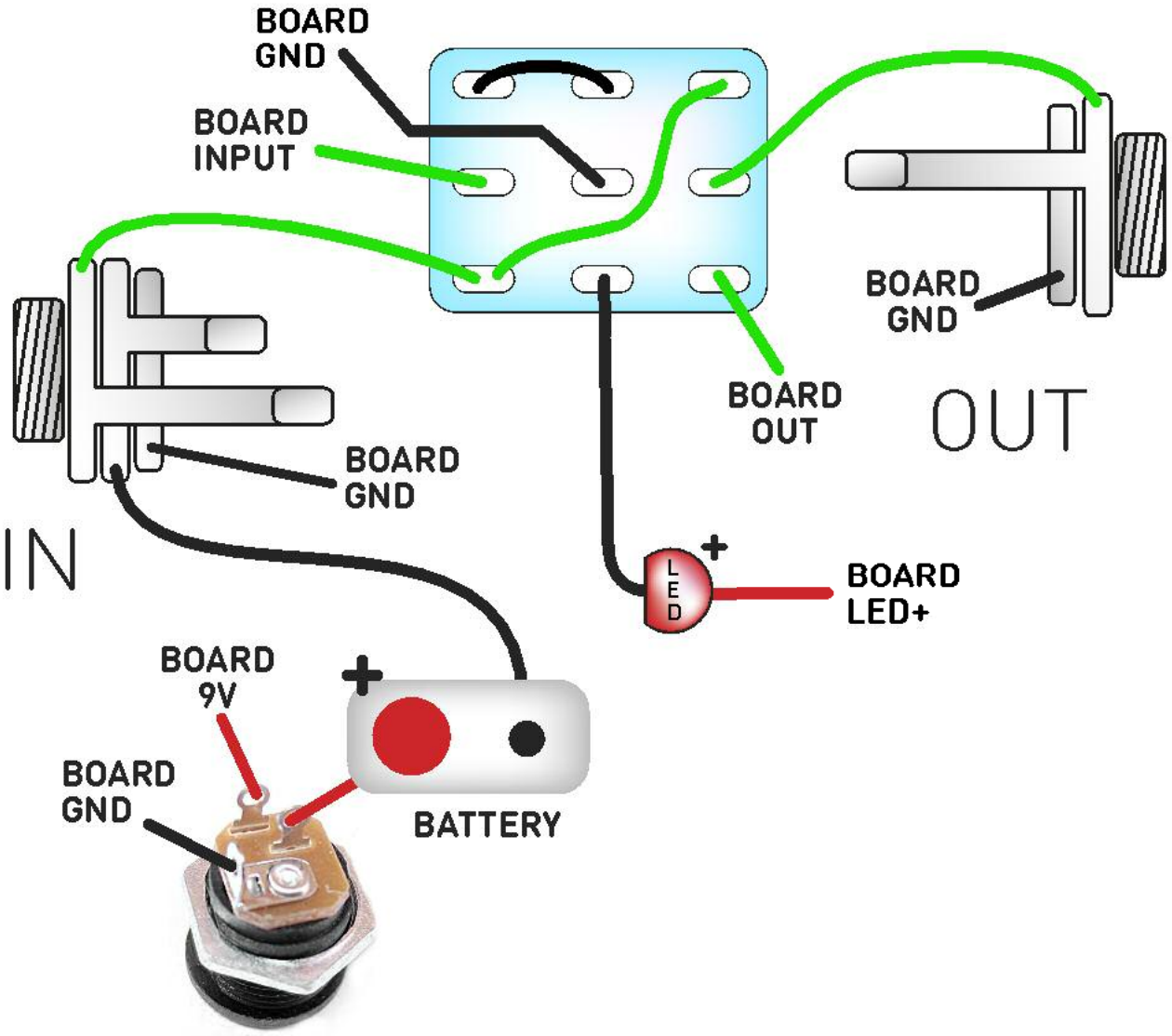



Once you've finished the circuit it makes sense to test is before starting on the switch and LED wiring. It'll cut down troubleshooting time in the long run. If the circuit works at this stage, but it doesn't once you wire up the switch - guess what? You've probably made a mistake with the switch.

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... rattle those speakers!

PedalParts.co.uk