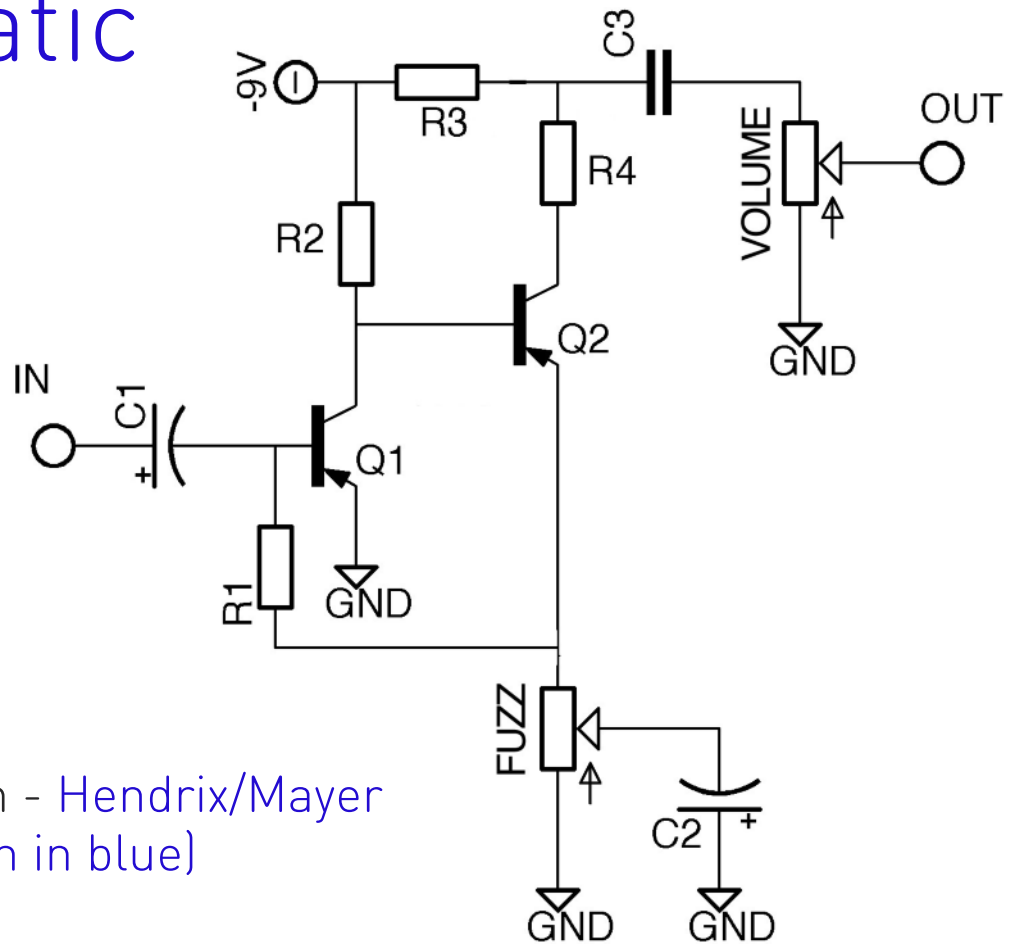


Fuzz Face

Classic loveliness for all!

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Schematic



BOM

Classic version - Hendrix/Mayer changes shown in blue)

R1	100K
R2	33K
R3	470R / 1K
R4	preset 10K / 22K
C1	2.2u
C2	22u
C3	0.01u
Q1,2	So Many Options!!!
FUZZ	1KB / 2KB
VOL	470-500KA

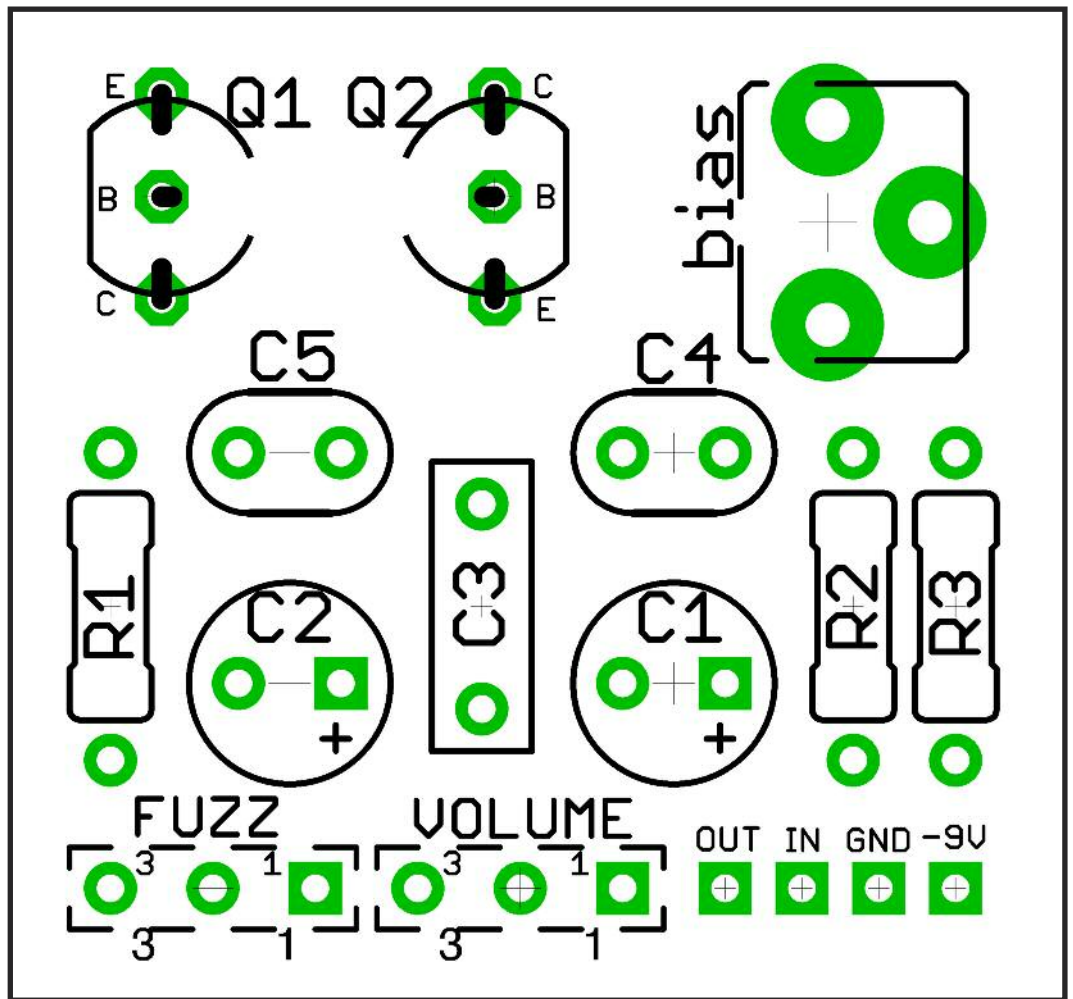
Oh my. If ever there was an essential addition to a rig then the Fuzz Face surely is it. A bit of fiddling will get you anywhere from creamy smoothness to ear-splitting youch with the right/wrong selection of those all-important transistors sitting at Q1 and Q2. Biasing is key!

The schematic above shows the original PNP - Positive-Ground layout, which is also how the PCB is designed. What does that mean? Well, basically it means it won't play nicely with 'normal' pedals if you try to daisy chain them on the same power supply. Don't do it. The world will implode and we'll all look at you.

It's perfectly simple to make a NPN - Negative-Ground version. Use NPN transistors, flip the orientation/polarity of C1 and C2, then follow the appropriate wiring diagram later in these instructions. The -9V connection become +9v.

Probably sounds more complicated than it actually is.

A standard 6-pin DIL socket will fit into the holes for Q1+2, enabling easy transistor swappage if you so desire.



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 pot to mount it flush in the box.

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

Recommended assembly order:
Resistors, Caps, Transistors, Wires, Pots

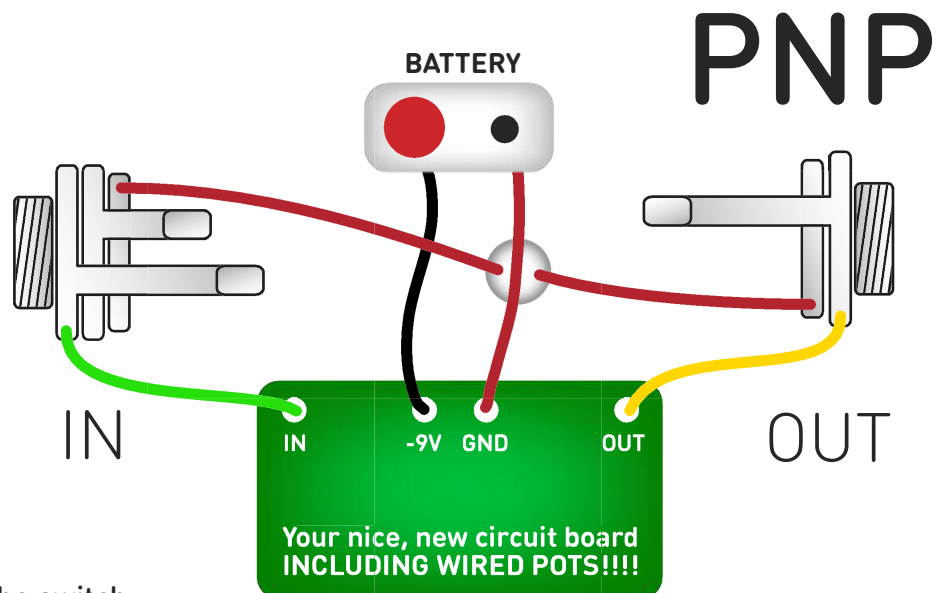
As stated on the previous page, this is labelled for PNP builds. Reverse C1 and C2 and treat -9V as +9v for NPN builds.



R4 is actually a preset variable resistor, marked 'bias' on the board. More about the importance of that overleaf.

HANG ON!!!!??! The board has two extra caps - C4 and C5? Yes. There's space there for optional smoothing caps for both transistors (C5 for Q1, C4 for Q2). If you find there's too much top-end fizz going on just put a cap in one, t'other or even both those spots. The bigger the cap, the more frequency it'll tame. Anything from 10pf to 150pf will work. Have a fiddle and see what works for you. Socket them and switch around until you have aural nirvana.

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.

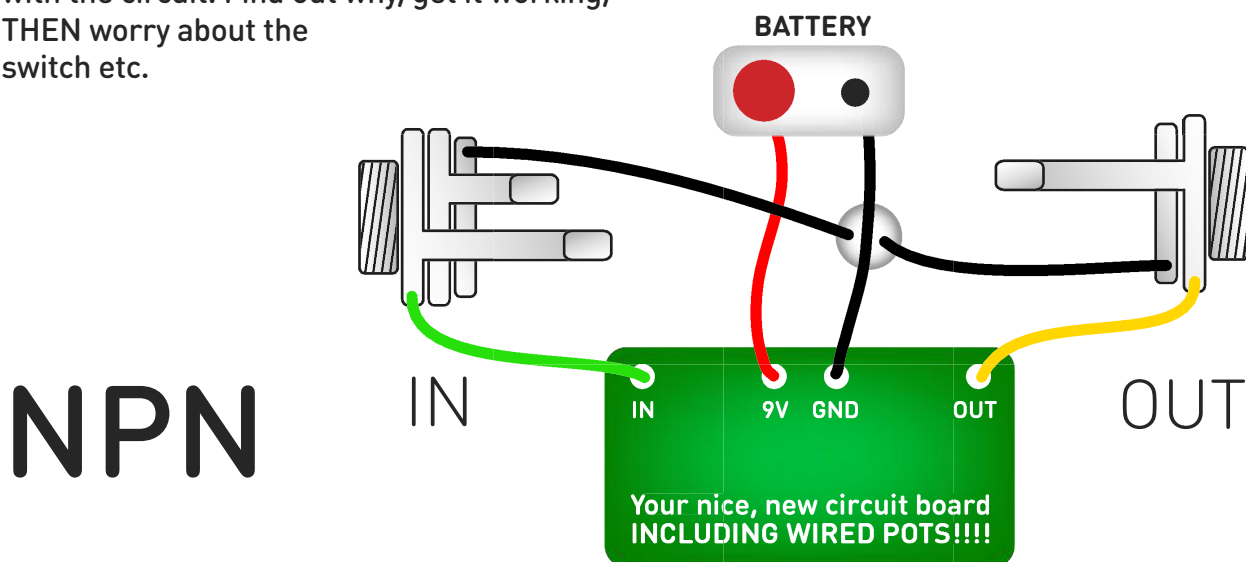
Before you start, take a small screwdriver and position the biasing preset in the middle of its turn. You'll adjust this shortly.

Refer to the appropriate diagram depending on the polarity of your build. 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!

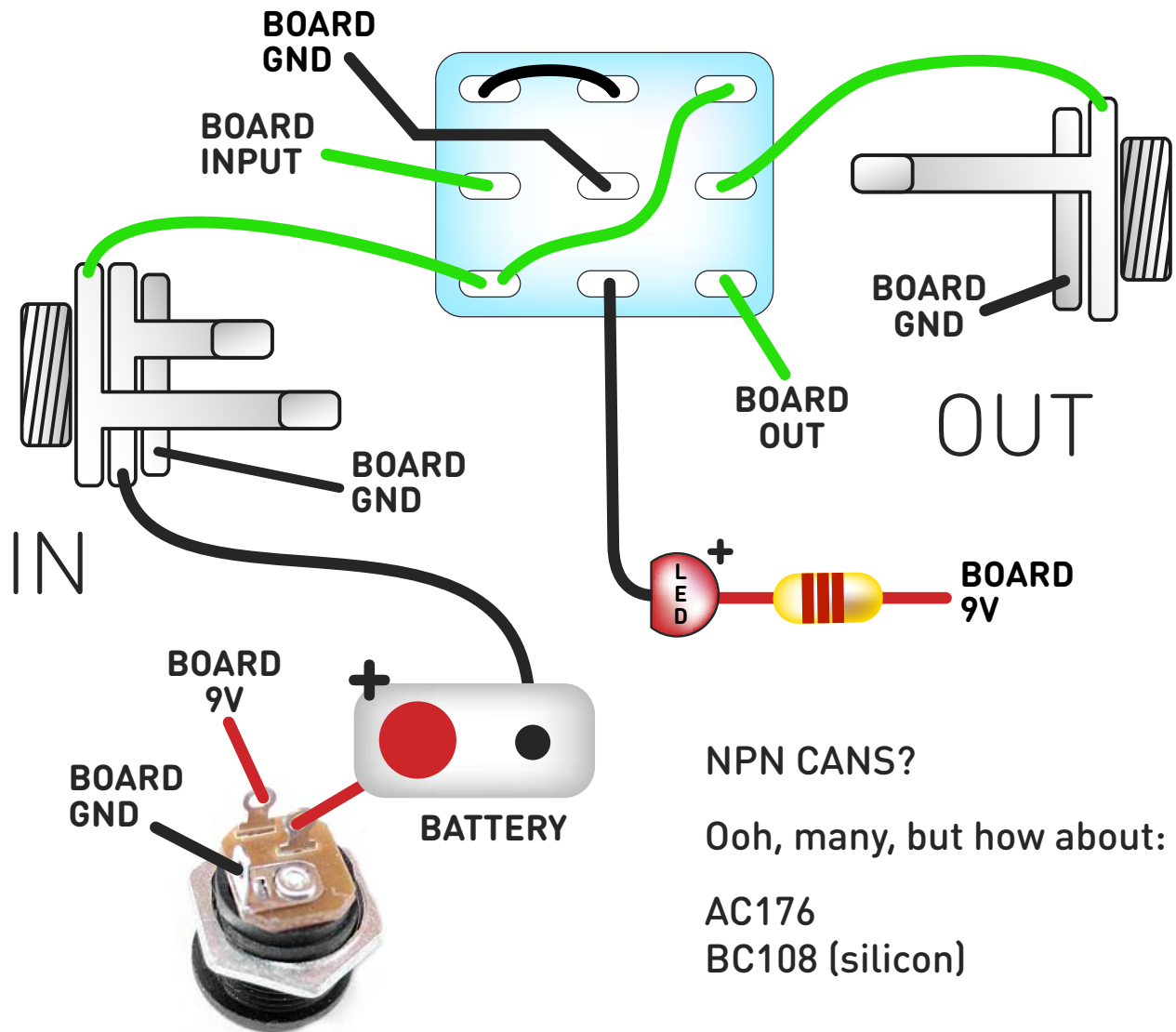
It may sound cack, as you haven't set the biasing of the transistors yet. For this you'll need either a digital multimeter (ideal) or your ears (hey, its your pedal and you know what sounds good).

Place the Negative DMM test probe on any GND point, place the other probe on the collector of Q2. You can actually place it on the left-hand pad of C4 as this connects directly to the collector, and you haven't soldered anything into C4 yet, probably. Adjust the bias preset (R4) until you get a reading of around 4.5V, give or take. Or, if you're using your ears, until you get the right balance between volume and fizz. It should be pretty obvious when it hits the sweet spot.

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.



NPN cans? Follow this.



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 GET FUZZY!

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