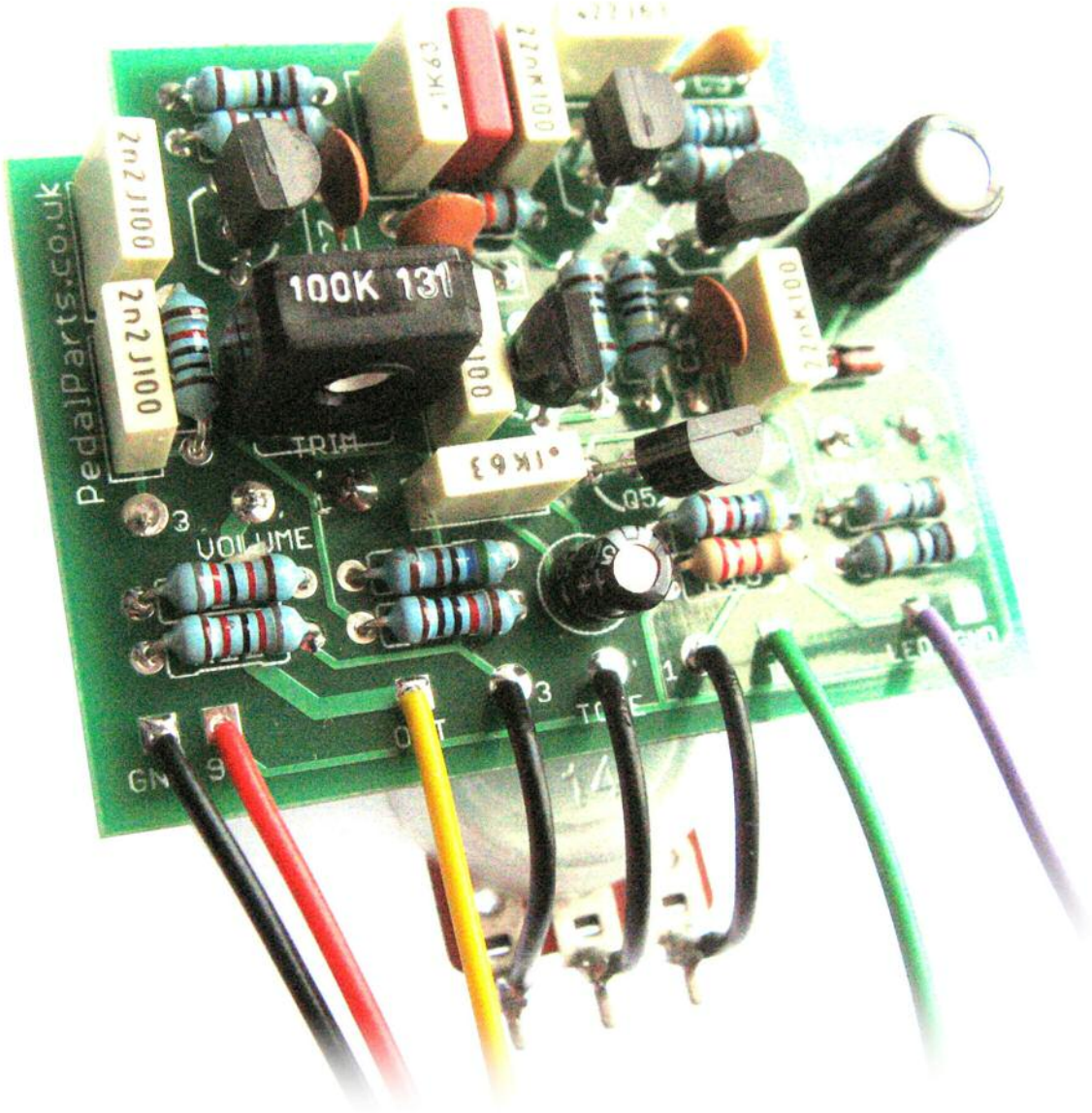
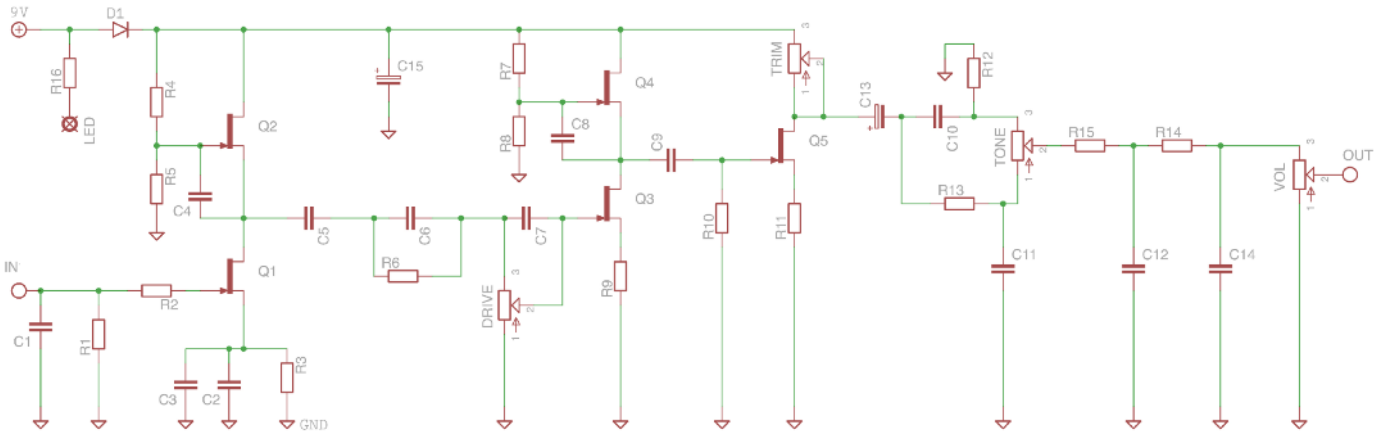


BSIAB2

Brown Sound In A Box -
high gain distortion fun

PedalParts.co.uk

Schematic



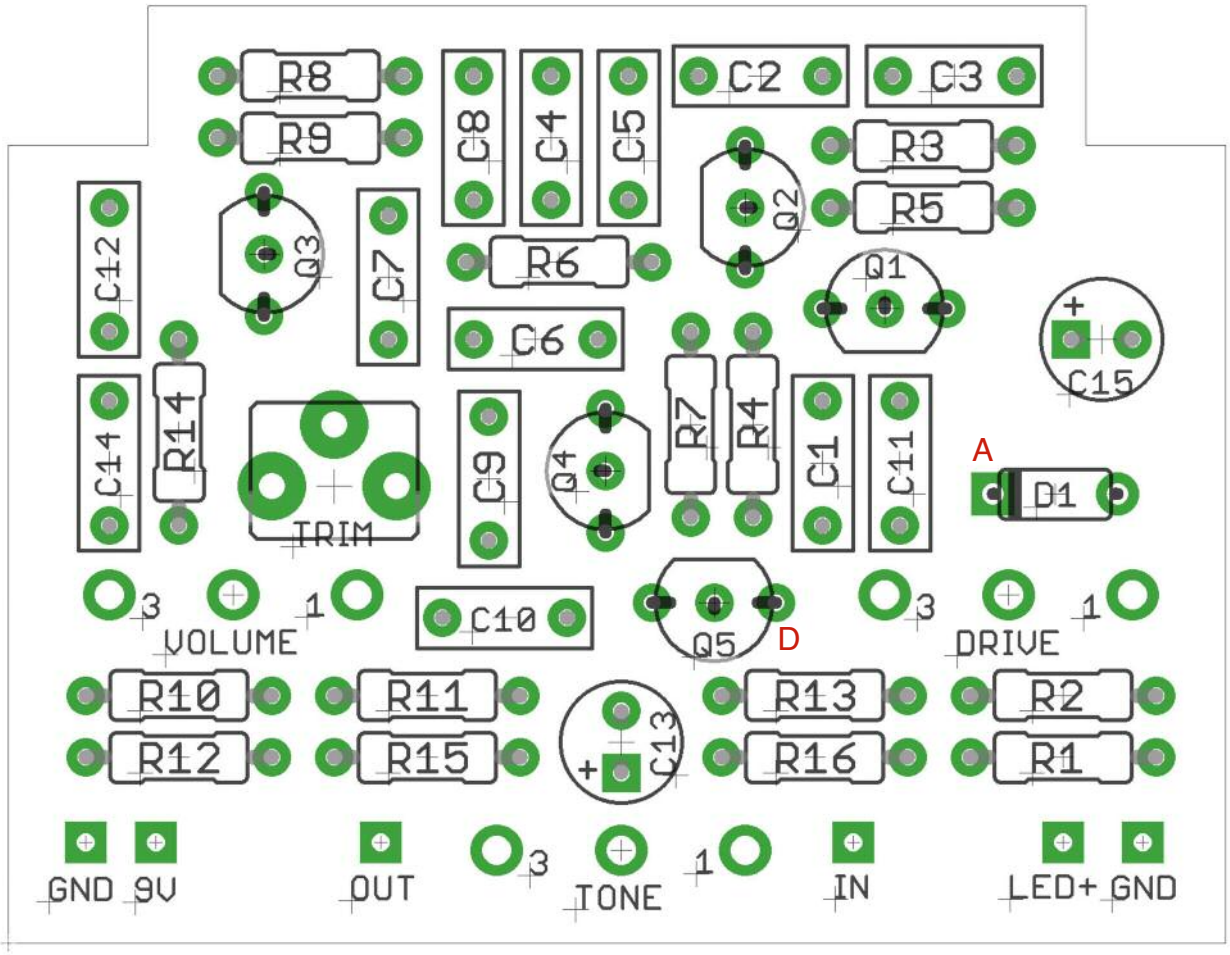
BOM

R1	1M
R2	390R
R3	680R
R4	1M
R5	1M
R6	470K
R7	1M
R8	1M
R9	120R
R10	82K
R11	5K6
R12	82K
R13	47K
R14	10K
R15	10K
R16	2K2 (CLR)

C1	250p
C2	220n
C3	1u
C4	68n
C5	22n
C6	470p
C7	150p
C8	100n
C9	22n
C10	100n
C11	22n
C12	2n2
C13	1u elec
C14	2n2
C15	100u elec

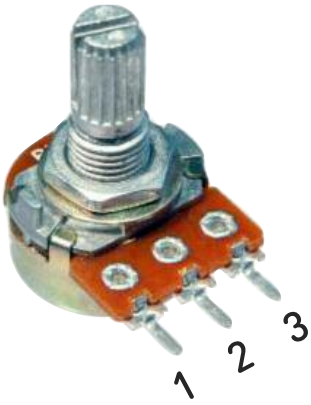
D1	1N4148
Q1	2N5457
Q2	2N5457
Q3	J201
Q4	J201
Q5	2N5457
DRIVE	500KA
TONE	100KB
VOL	100KA
TRIM	100K*

*Original spec is 100K - I supply 47K. Much easier to tweak the sweet spot.



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.



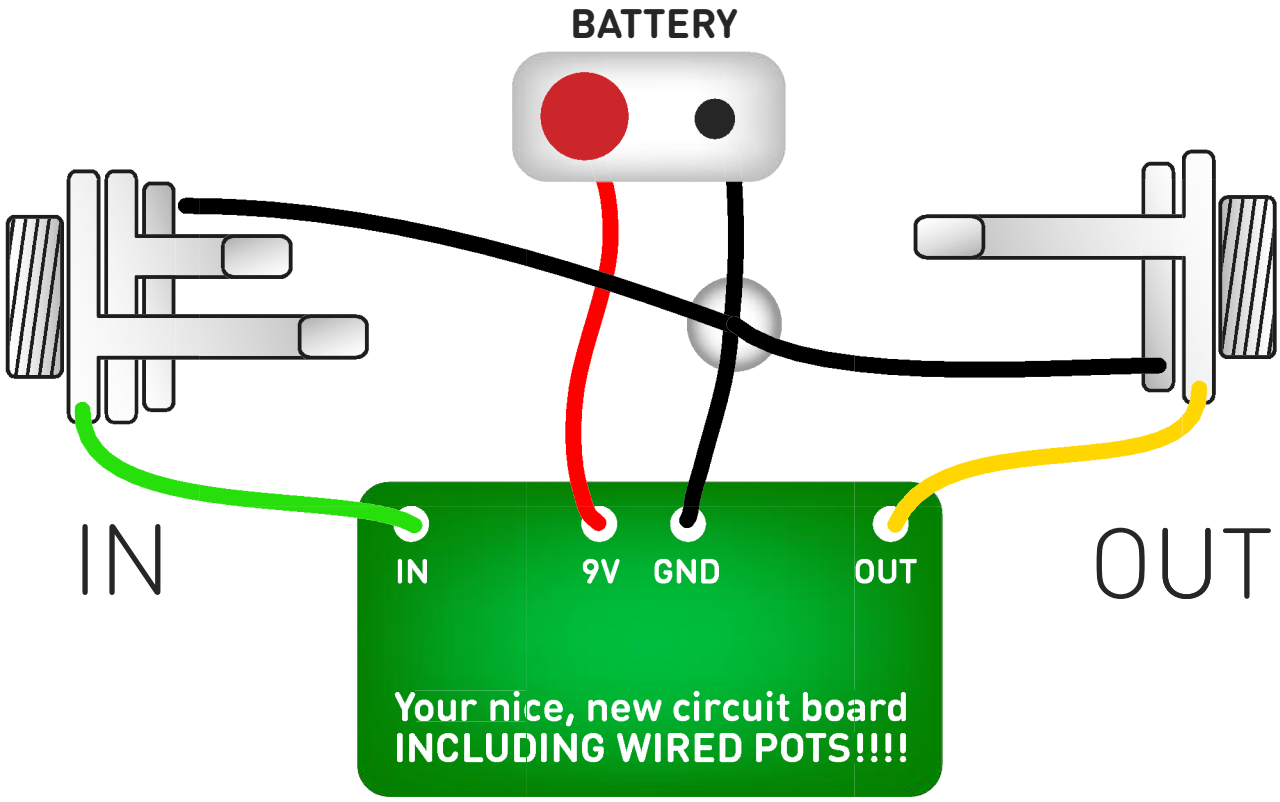
You should use some kind of heat sink on the legs of the diode and transistors when soldering. They aren't keen on heat. Any more than 3-4 seconds of iron and they're toast.

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

Once its all built and hooked up to test (see next page), adjust the trimmer. You're aiming to have the voltage at the Drain of Q5 at around 50% of the supply voltage. Note - the diode will drop the voltage going to the circuit by around 1V.

So.. get your multimeter and hook it up to a convenient GND point. Measure the voltage at the negative side of D1 (A). Now, measure the voltage at the Drain of Q5 (D) and adjust the trimmer until you hit around 50% of (A)'s voltage. That's your starting point. Now fine tune by ear until its perfect for you.

Test the board!

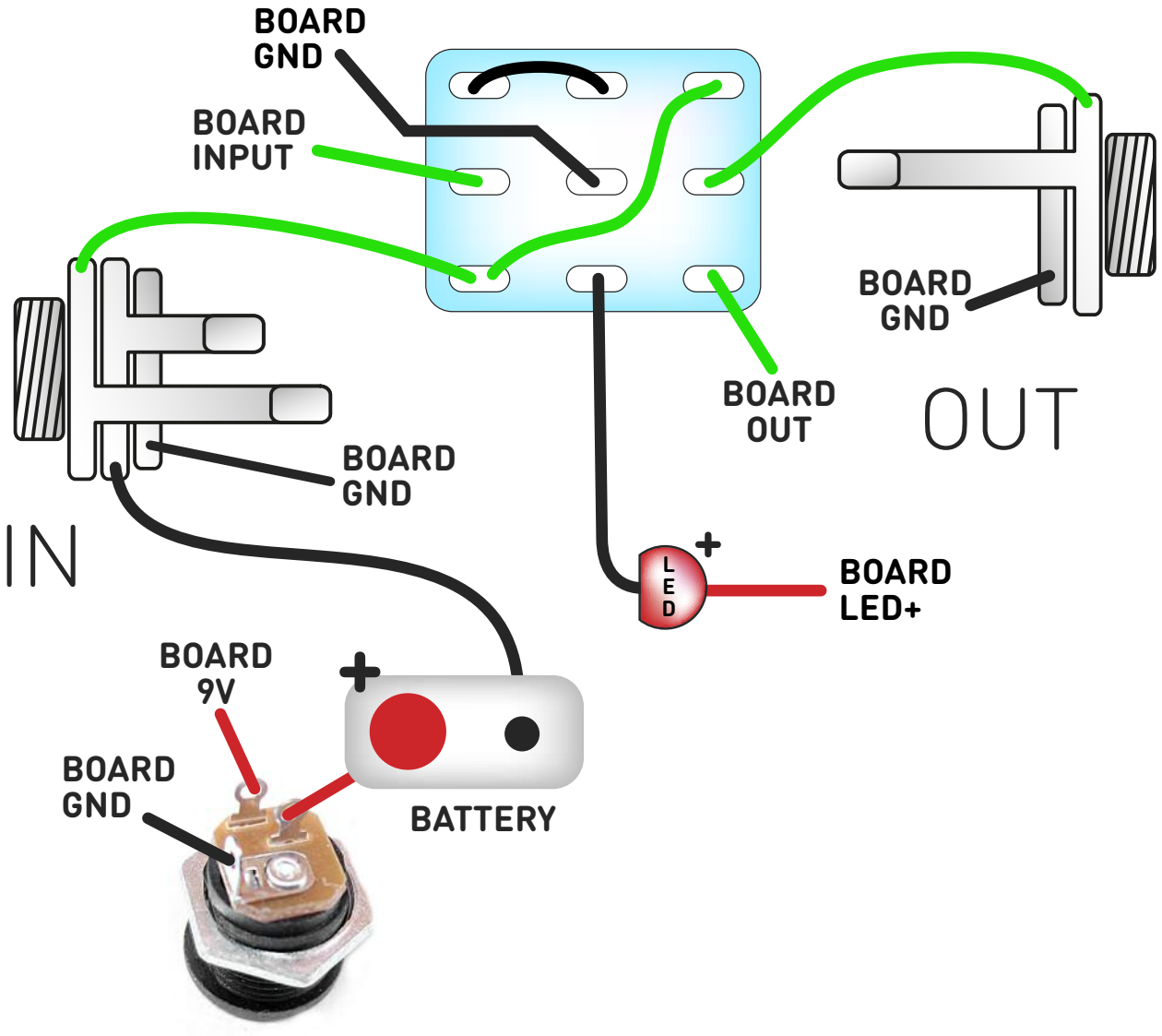


Once you've finished the circuit it makes sense to test is before starting on the switch and LED wiring. It'll cut down troubleshooting time in the long run. If the circuit works at this stage, but it doesn't once you wire up the switch - guess what? You've probably made a mistake with the switch.

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... CCCRAAAAAANNNNGGGGGGG!

PedalParts.co.uk