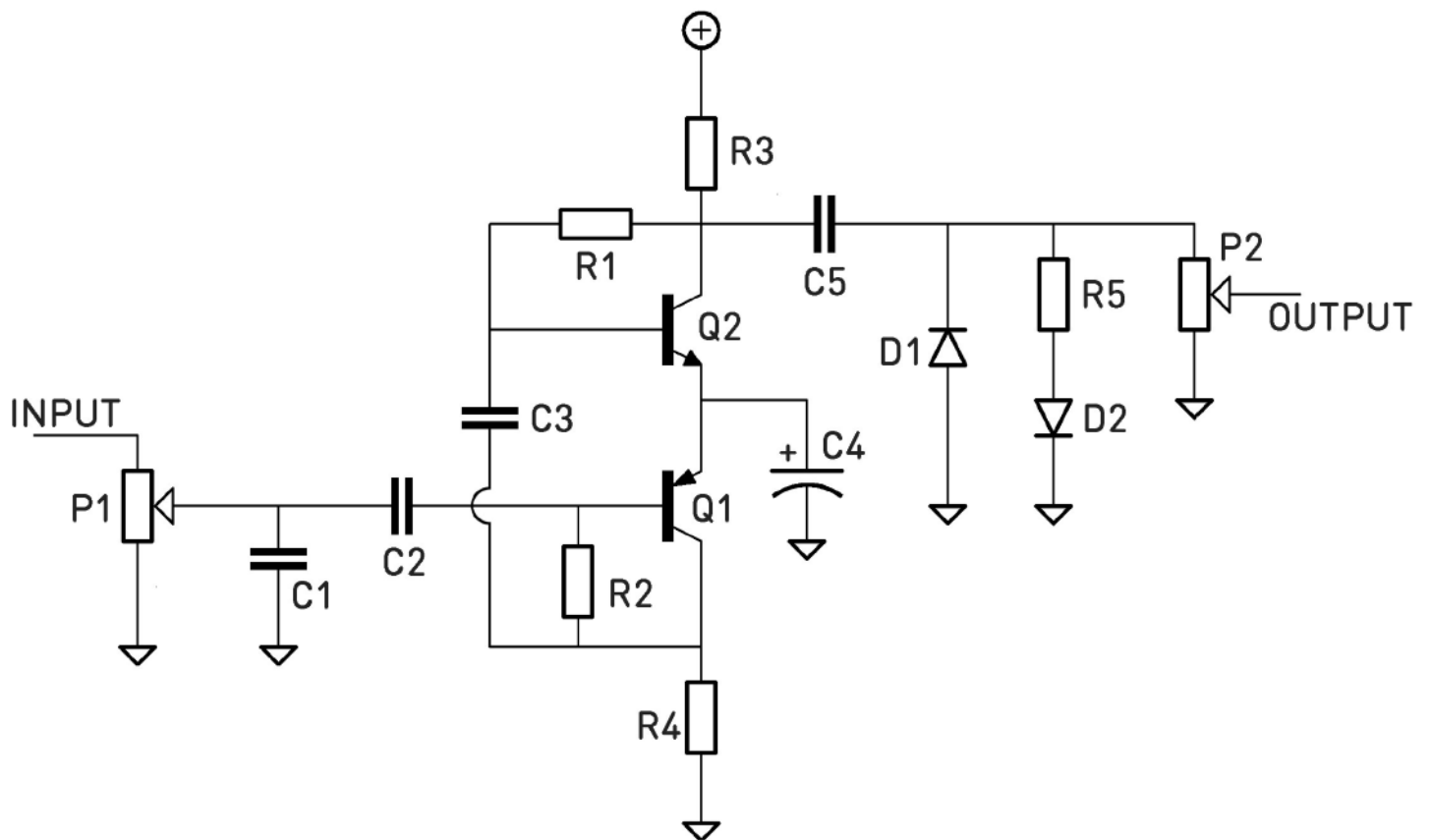


Harmonic Percolator

Recreate the delightful
Interfax HP-1

PedalParts.co.uk

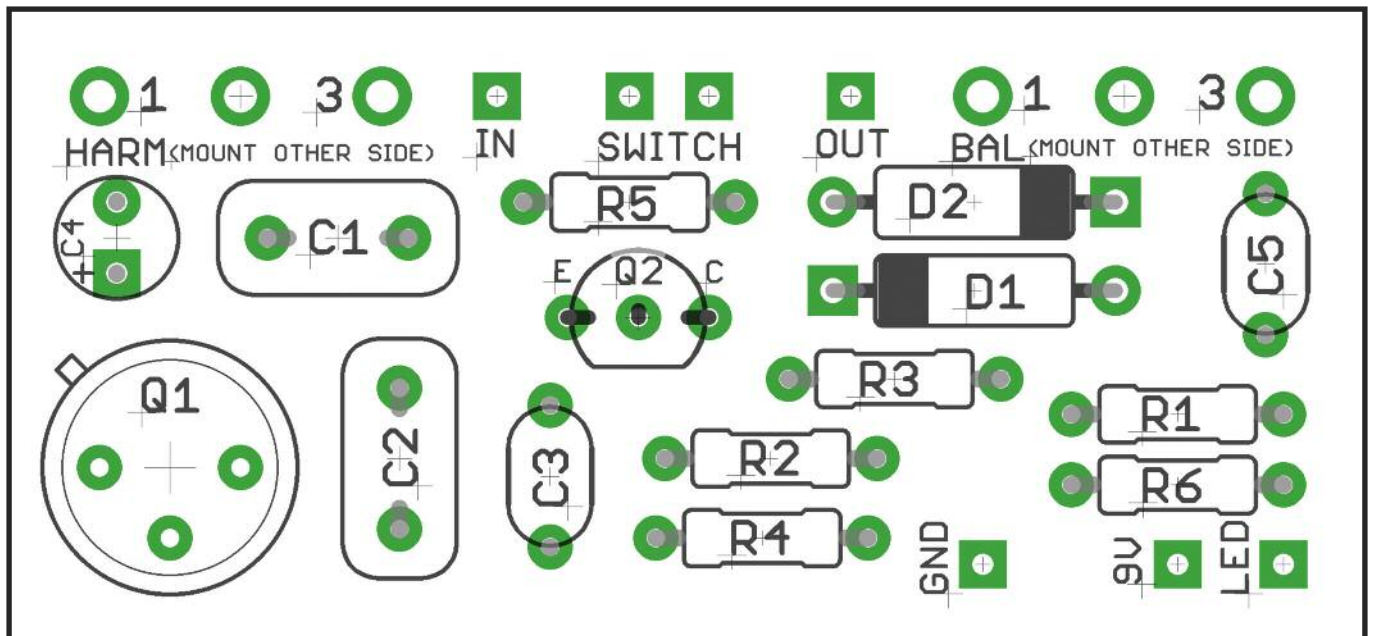
Schematic



BOM

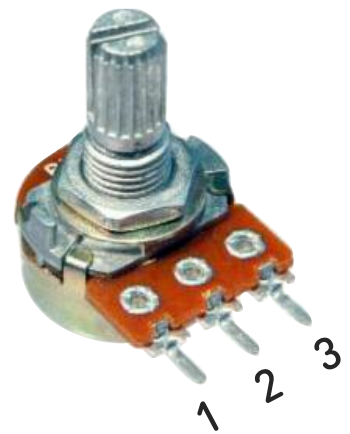
R1	750K	Q1	2N404
R2	220K	Q2	2N3565
R3	91K	D1,2	Germanium (1N695, 1N60P, 1N34A etc)
R4	91K	P1	100KA (Harmonics)
R5	4K7	P2	50KA (Balance)
C1	100p silver mica		
C2	47n greencap		
C3	100n ceramic		
C4	47u tantalum		
C5	100n ceramic		

There's a space on the board to connect a switch to take the diode clipping section in or out of the circuit. Taking them out gives a crunchier tone and much louder output. If you prefer you can either leave it out altogether to bypass the diode section, or keep them permanently connected by soldering a jumper across the two switch pads on the board.



Latest version of the PCB lets you mount the pots straight onto it, saving on wiring and eliminating the worry of how to fix the board inside the box. You can wire them off-board if you like, just connect wires to HARM and BAL pads 1-3 instead of sticking the pot into it.

The wires for OUT, IN, 9V and GND can be connected on either side of the board, depending how you want to route the wiring. The pads are connected to both sides of the PCB.



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

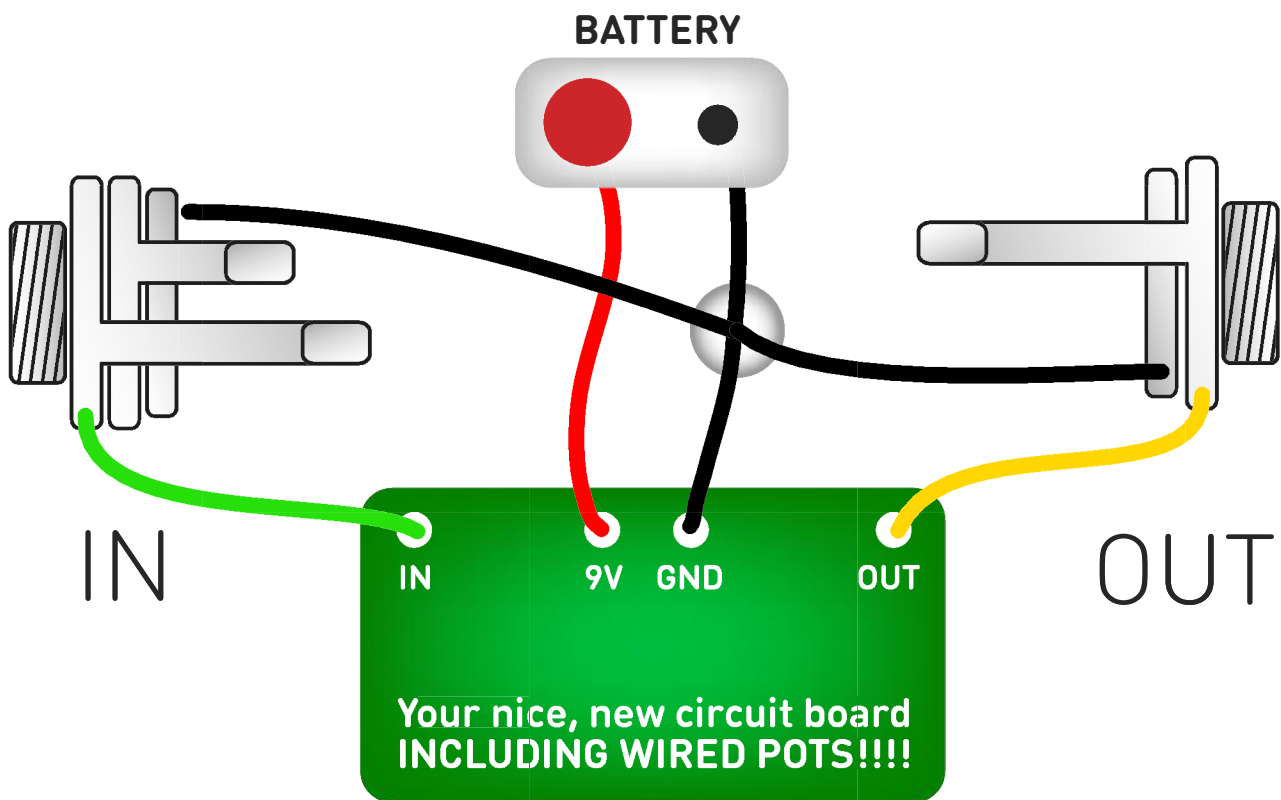
Snap the little metal tag off the pots to mount them flush in the box.

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

Be very careful when bending the legs of the diodes. The glass case is very delicate and can be easily cracked. Get your needle-nosed pliers and hold the leg with them right up against the glass case. Then bend the leg with your fingers. That way there's no strain on the casing.

If your 2N3565 is in a TO-106 housing (like a little black pill), the emitter is the leg next to the small flattened edge. Standard TO-92 case - just mount it as shown on the PCB.

Test the board!

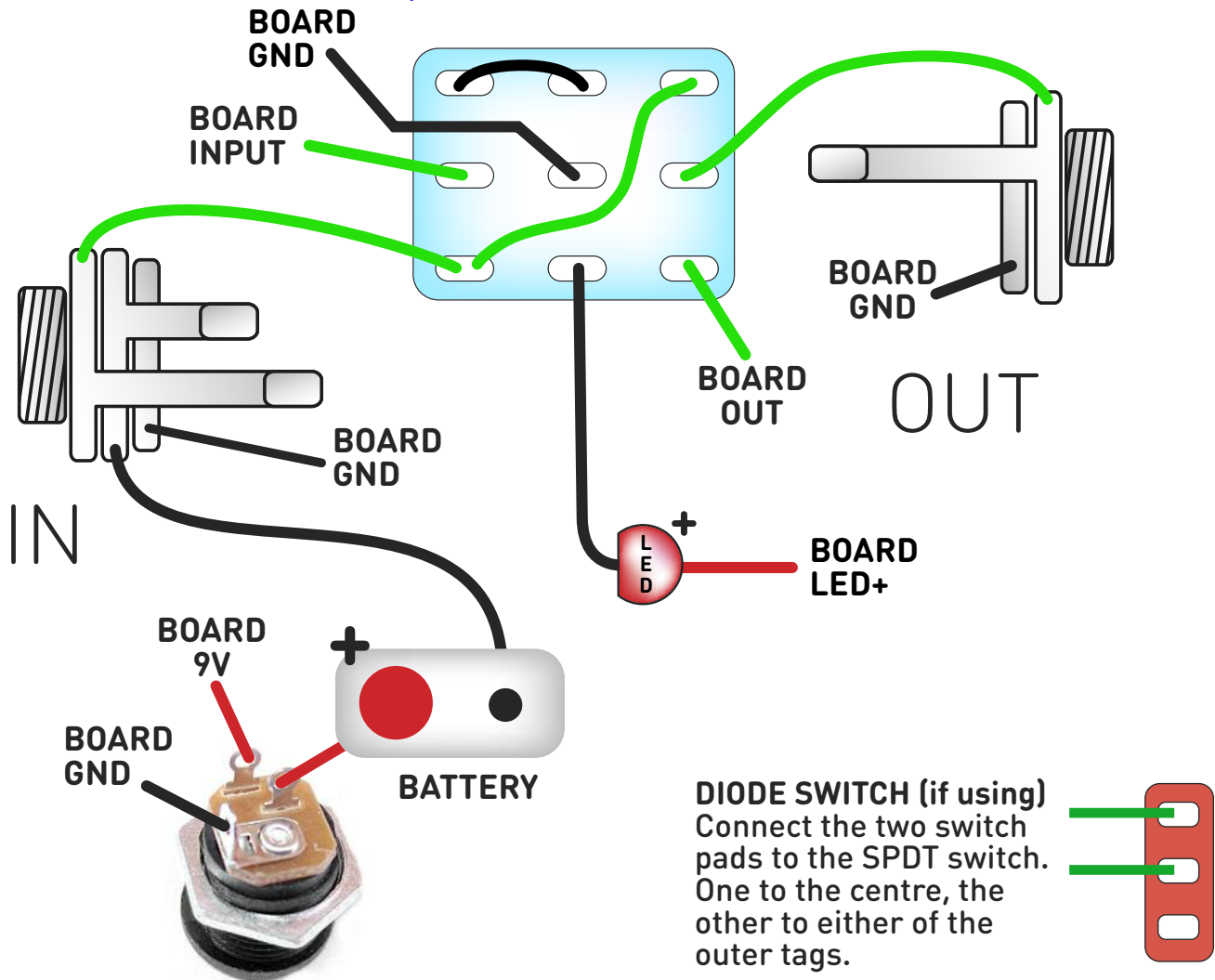


Once you've finished the circuit it makes sense to test it before starting on the switch and LED wiring. It'll cut down troubleshooting time in the long run. If the circuit works at this stage, but it doesn't once you wire up the switch - guess what? You've probably made a mistake with the switch.

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 GET PERC-Y!

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