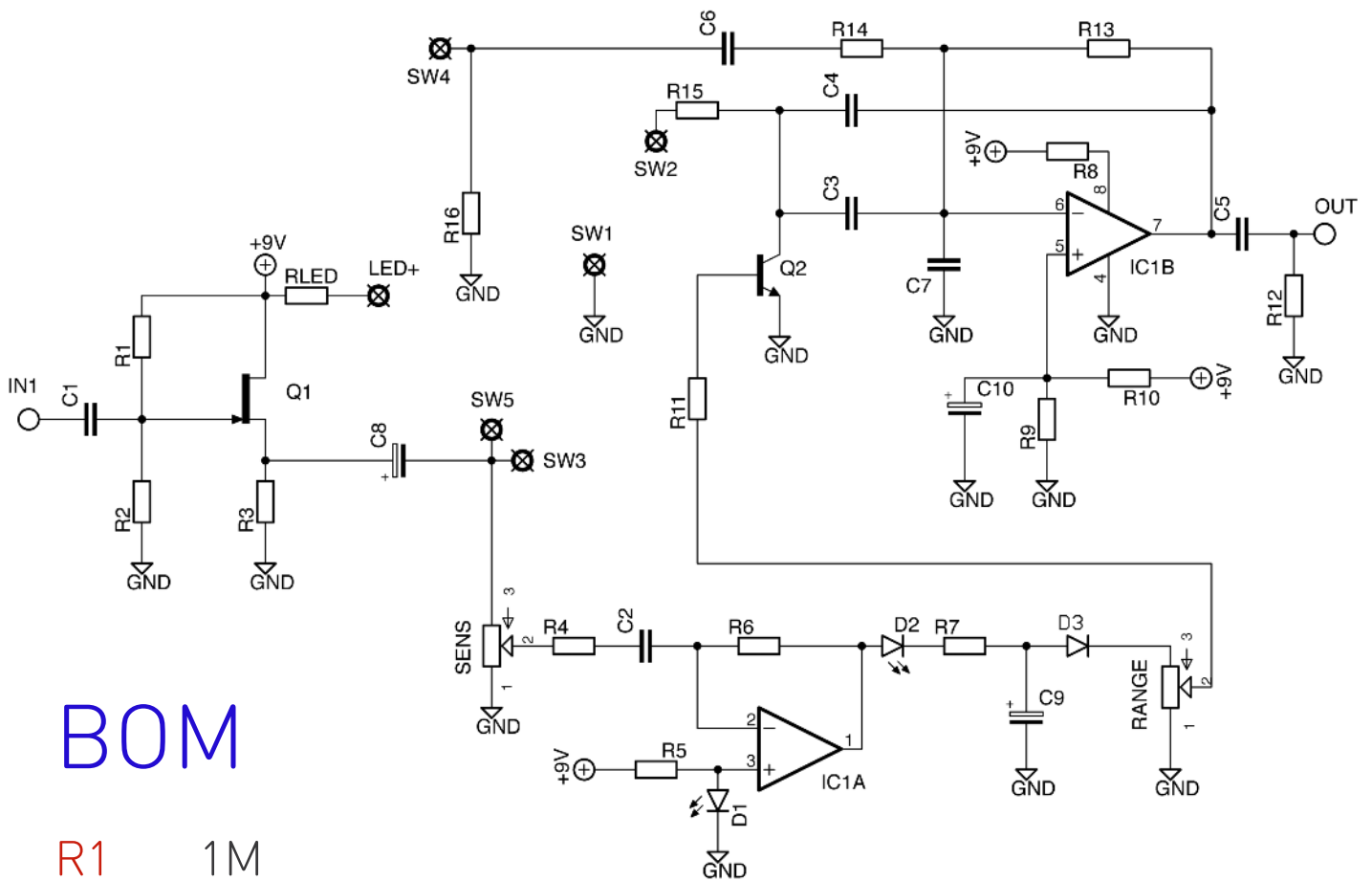


Quack Machine

Dr Quack
Auto Envelope Filter

PedalParts.co.uk

Schematic

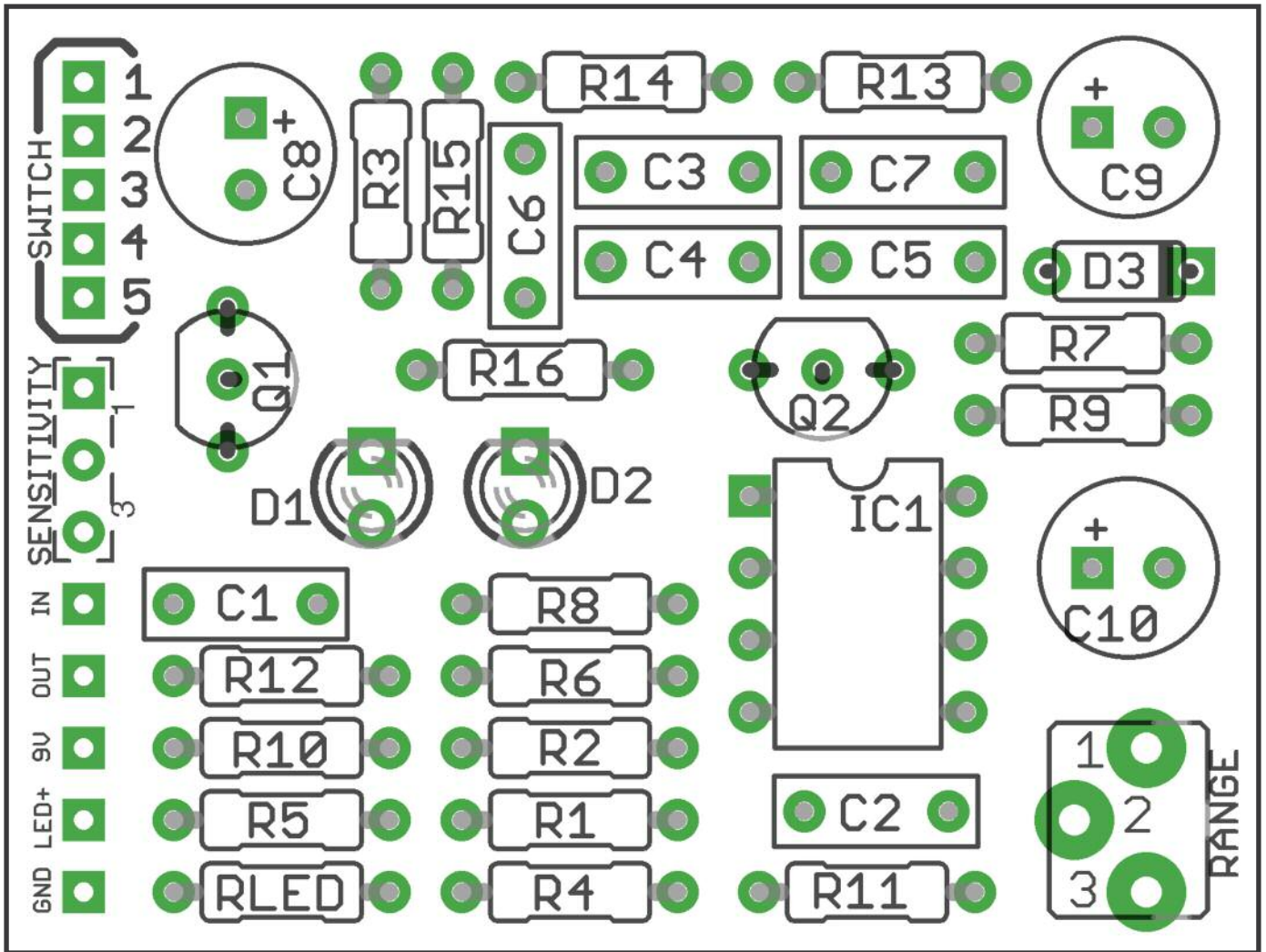


BOM

R1	1M	C1	47n	D1,2	Red 3mm LED
R2	1M	C2	47n	D3	1N4148
R3	10K	C3	4n7	Q1	2N5457
R4	47K	C4	4n7	Q2	2N3904
R5	10K	C5	47n	IC	TL072
R6	2.2M*	C6	10n	RANGE	20KB
R7	100R	C7	1n	SENS	100KB
R8	47R	C8	10u		
R9	47K	C9	10u		
R10	47K	C10	10u		
R11	22K				
R12	470K				
R13	470K				
R14	470K				
R15	47K				
R16	47K				

The classic Auto Envelope Filter with Jack Orman's Dr Quack Mods to make it sound much better. Auto FUNK!

*R6 can be adjusted if you find the circuit give too much / too little gain. Not enough gain, raise the value. Too much, lower it. Standard value should suit 99% of the time.



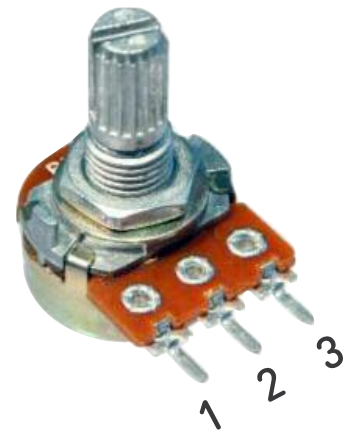
**** Reverse Sensitivity pot connections - 1 goes to board 3 and vice versa ****

Board is designed for a preset variable resistor in the Range position, but you can use an external pot for more control. Up to you.

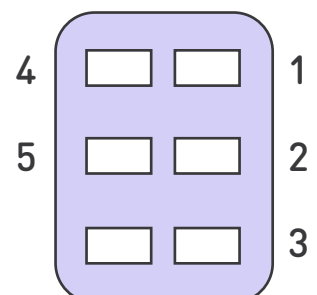
Wiring shown overleaf will disconnect the battery when you remove the jack plug from the input, and also when a DC plug is inserted.

Snap the little metal tag off the pot to mount it flush in the box.

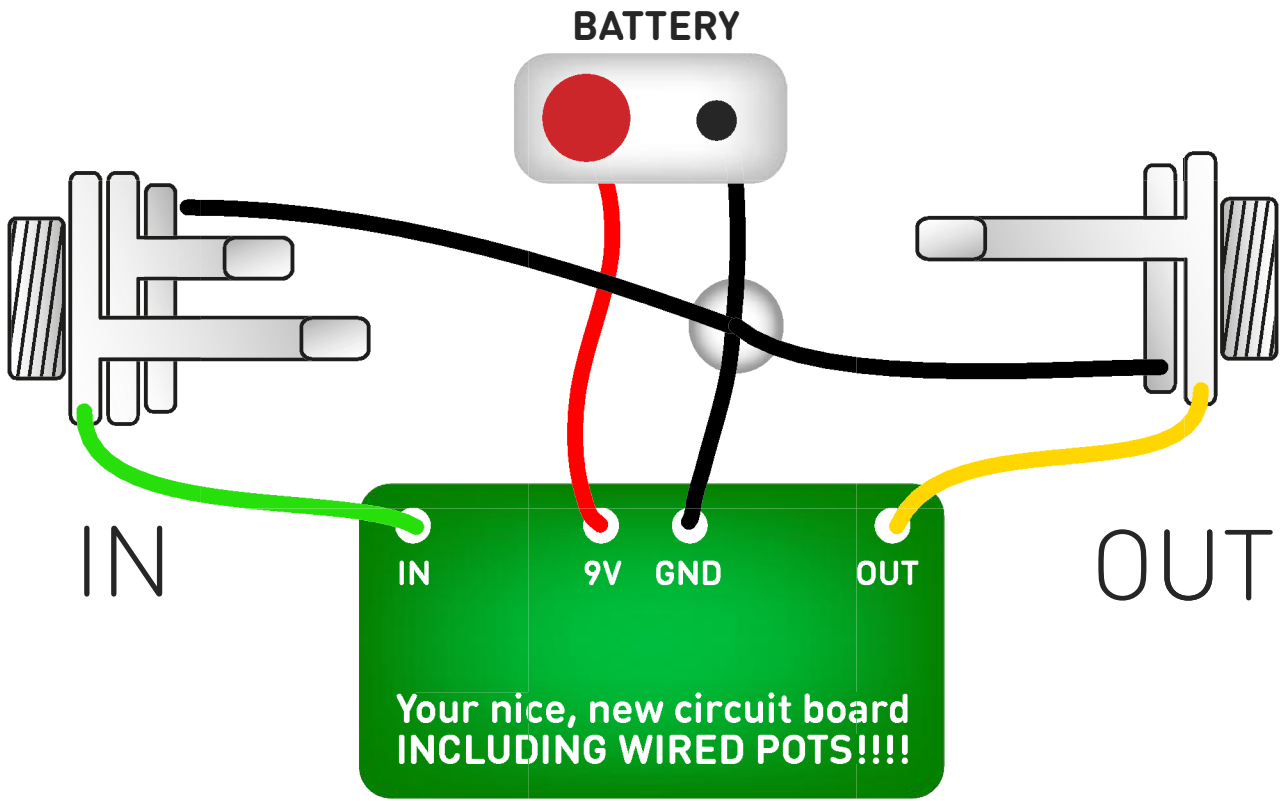
You MUST use some kind of heat sink on the legs of the LEDs, diode and the transistors when soldering. Also be very careful if you're soldering the IC directly to the board rather than using the socket. They aren't keen on heat. Any more than a couple of seconds of iron and they're toast.



Bass/Normal toggle switch numbering
(viewed from bottom) >



Test the board!

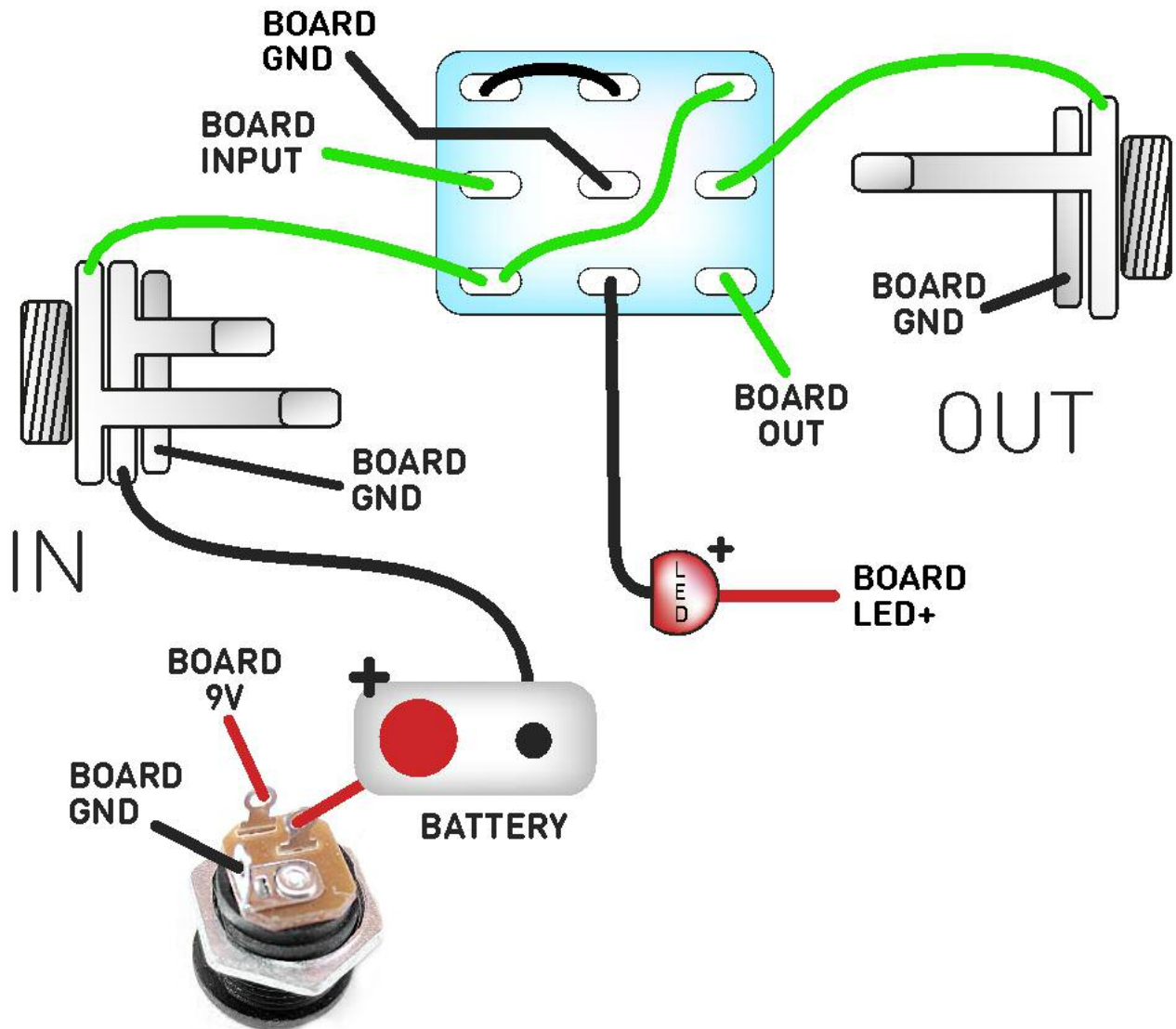


Once you've finished the circuit it makes sense to test it before starting on the switch and LED wiring. It'll cut down troubleshooting time in the long run. If the circuit works at this stage, but it doesn't once you wire up the switch - guess what? You've probably made a mistake with the switch.

Solder some nice, long lengths of wire to the board connections for 9V, GND, IN, 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.

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