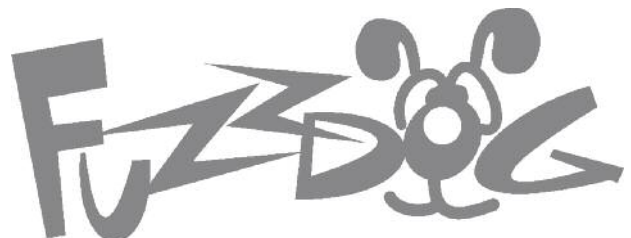
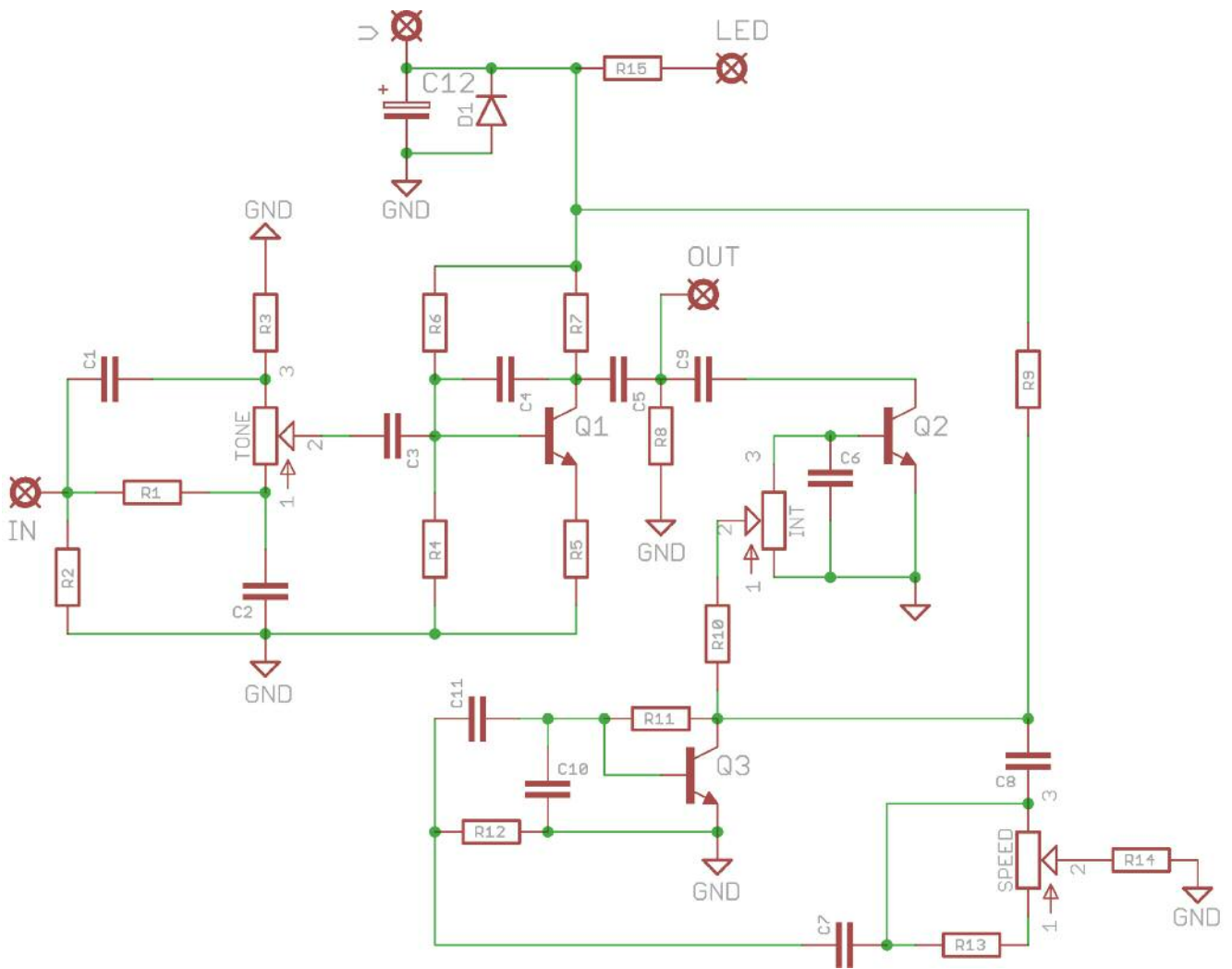


HF Modulator

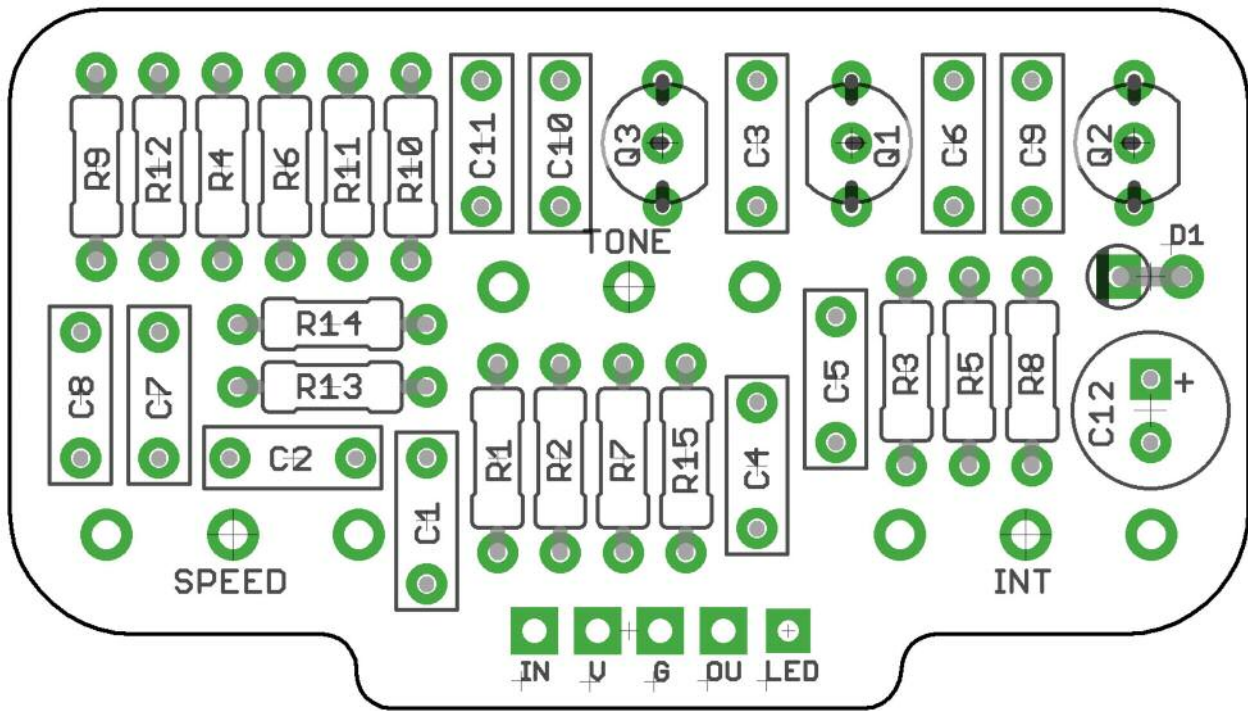
Whacky Pseudo Ring Mod



Schematic + BOM



R1	33K	C1	3n3	Q1-3	2N3904/2N5088 or similar
R2	1M	C2	10n	D1	1N4001
R3	33K	C3	220n	INT	100KB
R4	100K	C4	220p	SPEED	100KA
R5	1K2	C5	220n	TONE	100KB
R6	560K	C6	100n		
R7	12K	C7	47n		
R8	220K	C8	47n		
R9	18K	C9	220n		
R10	220K	C10	2n2		
R11	2M2	C11	47n		
R12	10K	C12	100u elec		
R13	100K				
R14	2K2				
R15	2K2 (CLR)				



The power and signal pads on the PCB conform to the FuzzDog Direct Connection format, so can be paired with the appropriate daughterboard for quick and easy offboard wiring. Check the separate daughterboard document for details.

Be very careful when soldering the transistors, LED and diode. They're very sensitive to heat. You should use some kind of heat sink (crocodile clip or reverse action tweezers) on each leg as you solder them. Keep exposure to heat to a minimum (under 2 seconds).

Snap the small metal tag off the pots so they can be mounted flush in the box.

C12 should be placed flat across R3, R5 and R8 as shown in the cover image to ensure plenty of clearance when boxing up the circuit.

Negative (cathode) legs of the diode goes to the square pad. Postive (anode) of C12 to square pad.

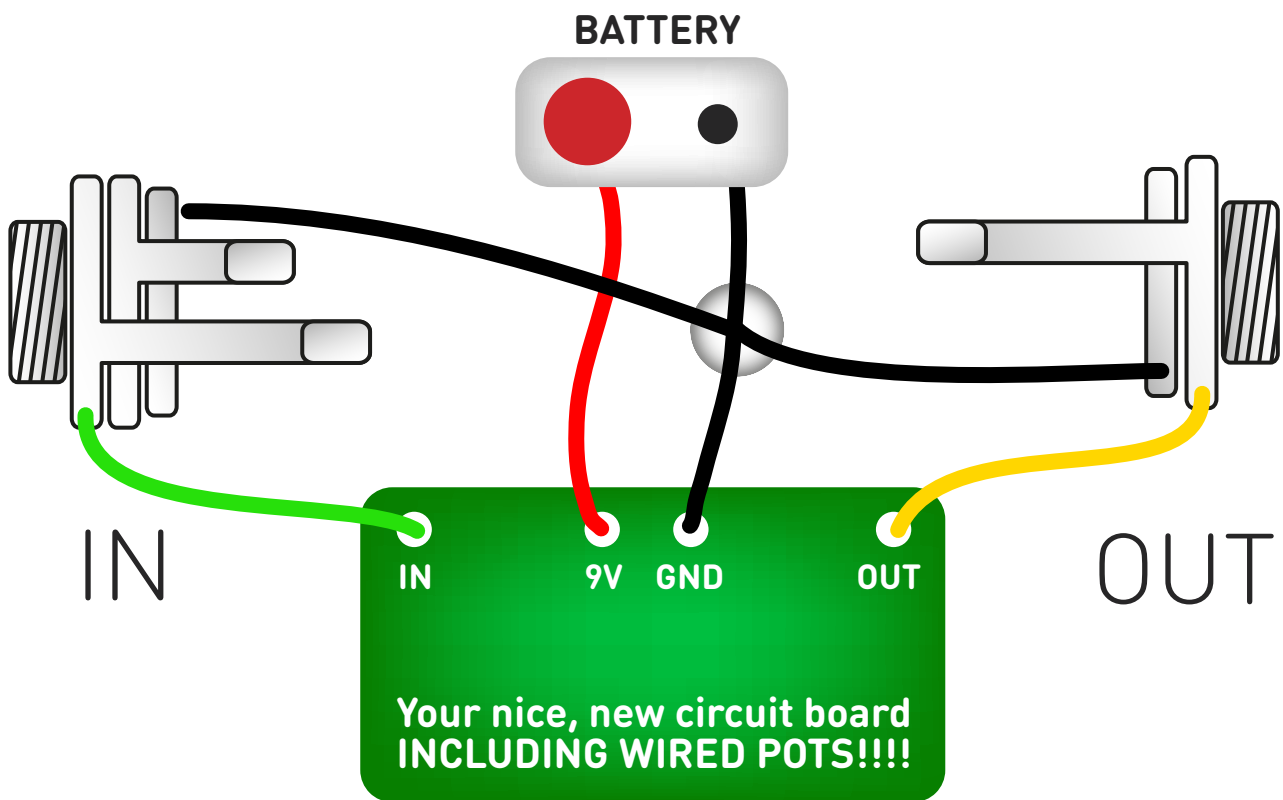
Pots mount on the back side of the board. You can use vertical-mount pots or just wire up 'normal' ones. It's a good idea to place the pots in their holes in the enclosure when you're soldering them in place on the PCB. That way you know they're going to line up ok. Best way to do it is to solder a single pin of each pot in place, then do a visual check to see that they're all sitting at the same height. If not, melt the joints and readjust any that are off.

If your pots don't have protective plastic covers you should place a strip of thick card between them and the board when soldering to keep them a good distance from the pcb to avoid shorting other components.

You should solder all other board-mounted components before you solder the pots. Once they're in place you'll have no access to much of the underside of the board.



Test the board!



UNDER NO CIRCUMSTANCES will troubleshooting help be offered if you have skipped this stage. No exceptions.

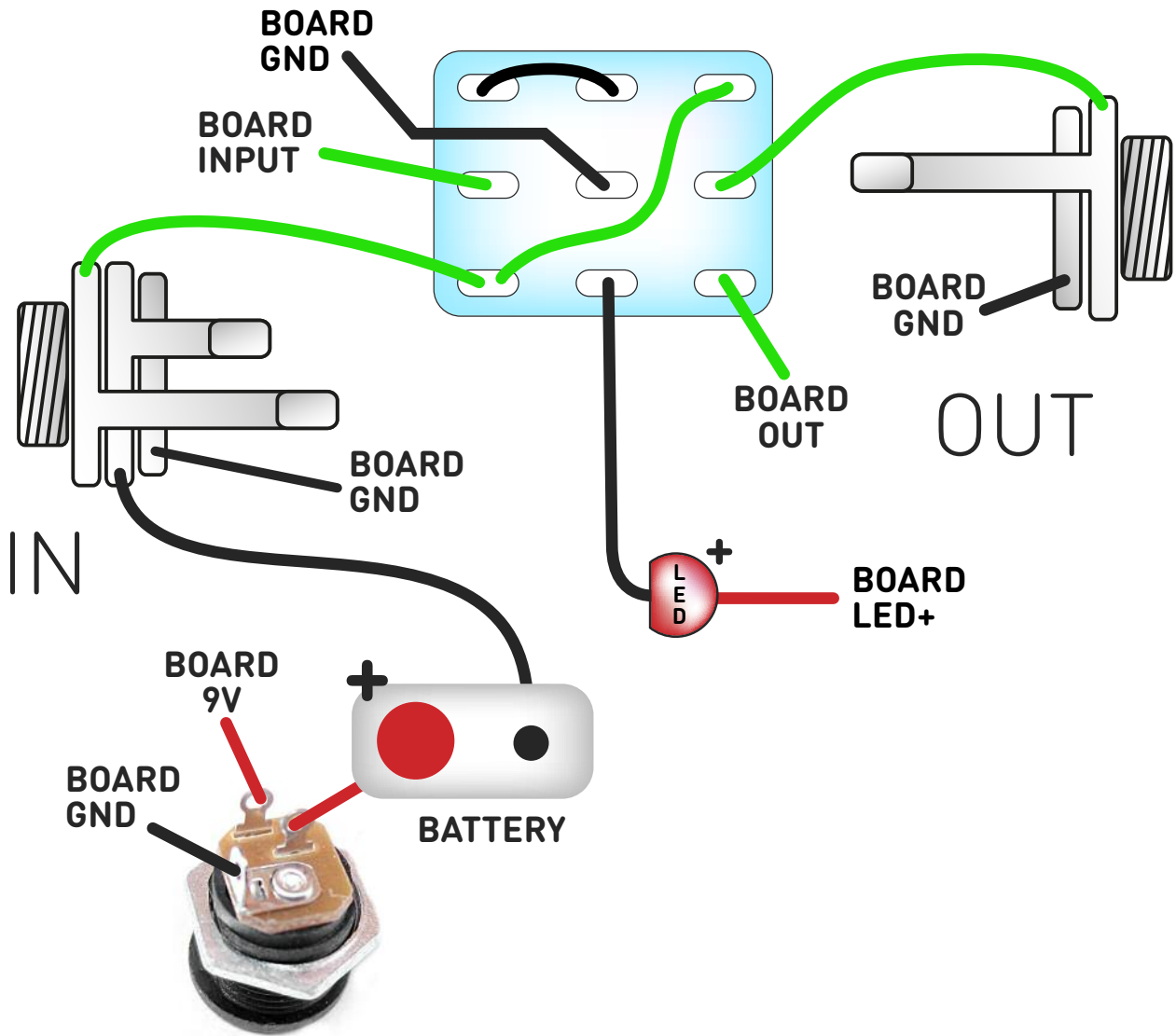
Once you've finished the circuit it makes sense to test it before starting on the switch and LED wiring. It'll cut down troubleshooting time in the long run. If the circuit works at this stage, but it doesn't once you wire up the switch - guess what? You've probably made a mistake with the switch.

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 - with battery

(if using a daughterboard please refer to the relevant document)



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.

The BOARD GND connections don't all have to connect to one point. They can be daisy-chained around the circuit, using larger connection points (such as jack socket lugs) for multiple connections. As long as they all connect together in some way.

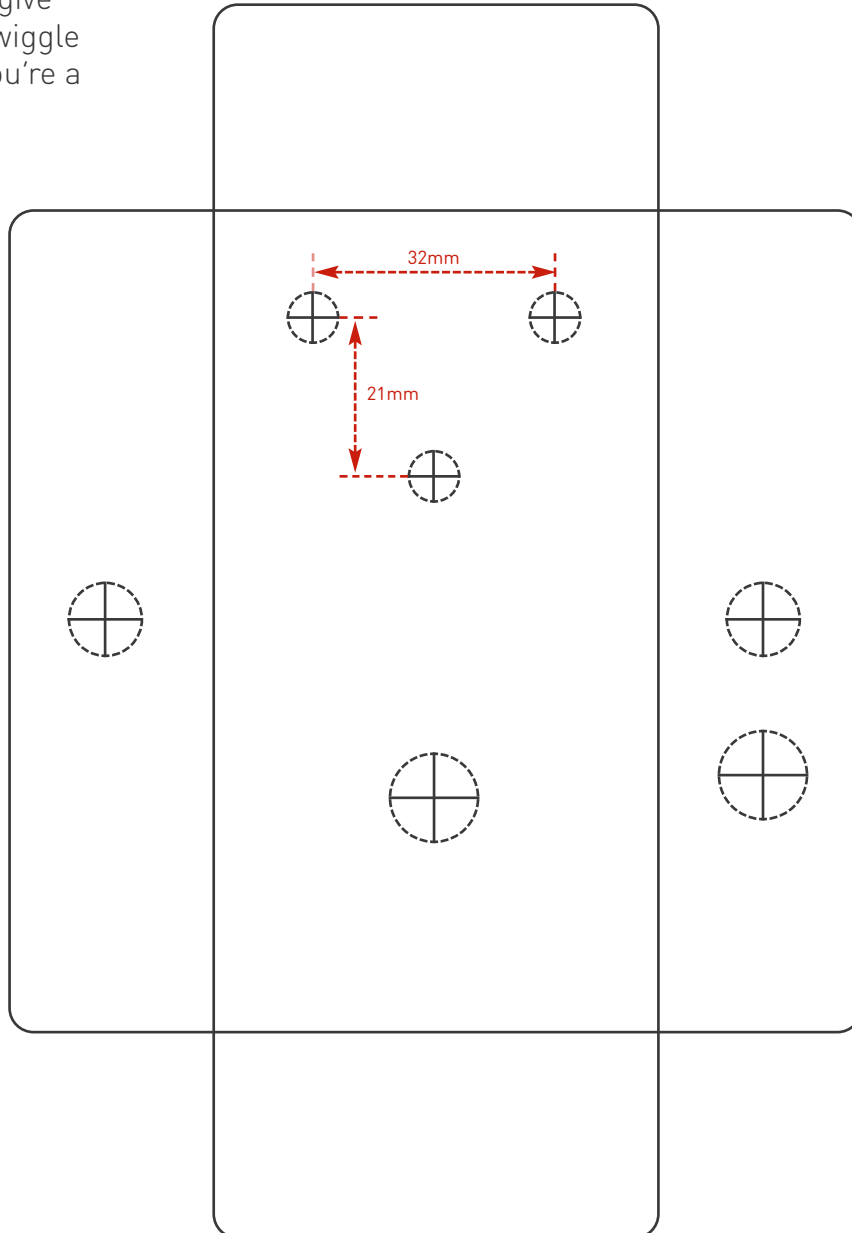
Drilling template

Hammond 1590B
60 x 111 x 31mm

Recommended drill sizes:

Pots	7mm
Jacks	10mm
Footswitch	12mm
DC Socket	12mm

It's a good idea to drill the holes for the pots 1mm bigger to give yourself some wiggle room, unless you're a drill ninja.



This template is a rough guide only. You should ensure correct marking of your enclosure before drilling. You use this template at your own risk. Pedal Parts Ltd can accept no responsibility for incorrect drilling of enclosures.

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