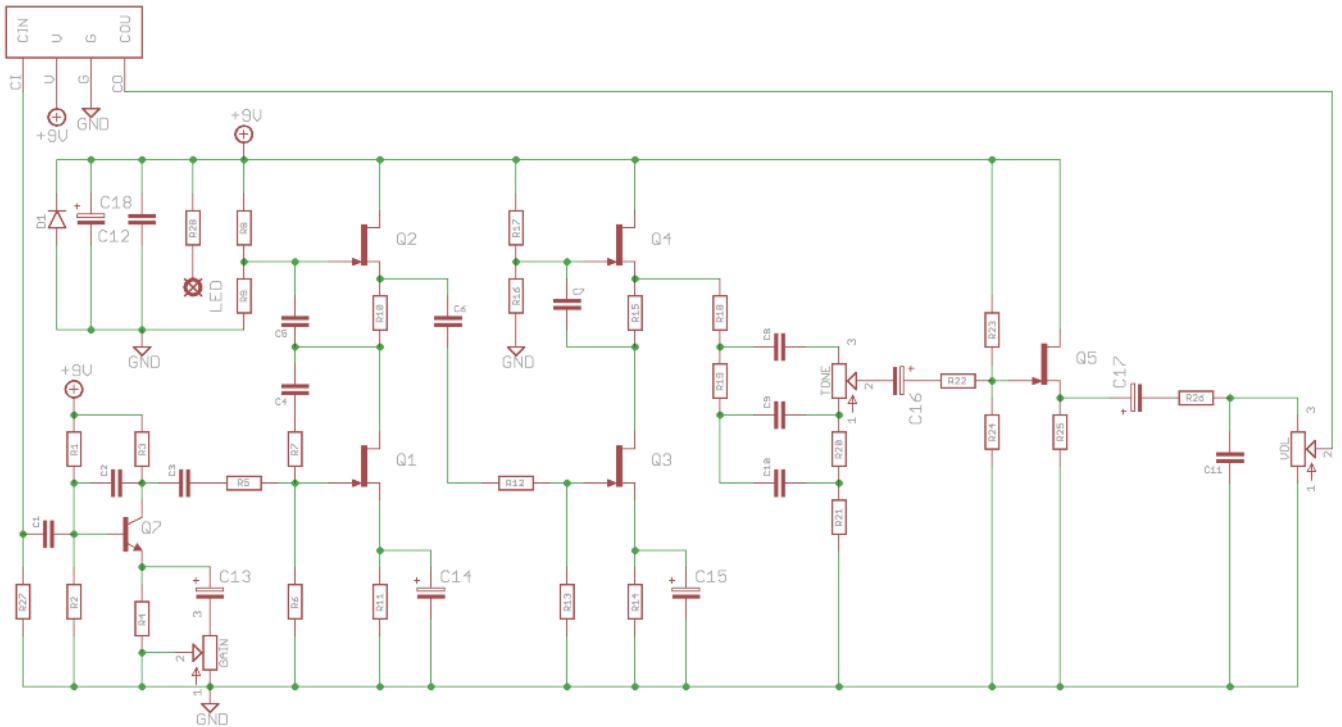


Figaro Drive

A box of of Brian May's
Treble Boost + AC30 Tone



Schematic + BOM



R1	220K	R20	62K	C1	4n7
R2	68K	R21	12K	C2	47p
R3	10K	R22	1K	C3	10n
R4	8K2	R23	2M2	C4	100n
R5	100K	R24	2M2	C5	100n
R6	470K	R25	4K7	C6	470p
R7	680K	R26	8K2	C7	220n
R8	1M	R27	1M*	C8	47p
R9	1M	R28	2K2 (CLR)	C9	22n
R10	1K	Q1-5	MPF4393	C10	22n
R11	1K	Q7**	P2N2222A	C11	1n
R12	56K	D1	1N4001	C12	680n
R13	470K	TONE	1MA	C13	47u elec
R14	1K	VOL	250KB	C14	2u2 elec
R15	1K	GAIN	5KC	C15	22u elec
R16	1M			C16	1u elec
R17	1M			C17	2u2 elec
R18	10K			C18	47u elec
R19	100K				

*Optional anti-pop resistor not in original circuit.

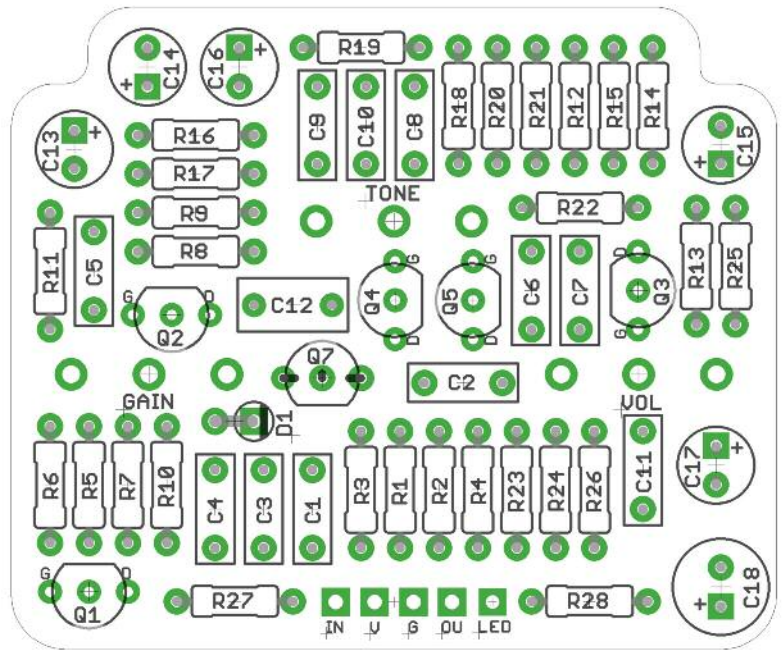
**See note overleaf regarding different types of 2N2222A for Q7.

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.

Be very careful when soldering the diode and transistors. 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). Best to use a socket for the chip.

The striped leg (cathode) of the diode goes into the square pad.

The long leg (anode) of the electrolytic capacitors goes into the square pads.



PCB Layout ©2015 Pedal Parts Ltd.

There's room to lay C18 flat across the top of R28. This will give you plenty of clearance in the enclosure.

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

Pots mount on the back side of the board. You can use vertical-mount pots or just wire up 'normal' ones. Ensure you get them all at the same height, and if there are no plastic covers on them make sure you have plenty of clearance between the pot body and the solder side of the PCB, otherwise you'll short out components. Best way to do this is get some thick cardboard and put it between the pots and the board when soldering. Remove it once they're in place.

To get them all the same height its best to solder a single pin of each so you have all three pots in place. See if they all line up ok. If not, simply melt the connection of any that aren't right and adjust. Much easier than trying to do it if all three pints are soldered. Once they're aligned, solder the other two pins of each pot.

Favourite technique at FDHQ is to put the pots into the holes on the top side of the enclosure to get everything lined up nicely while soldering.

Q7 CONFUSION

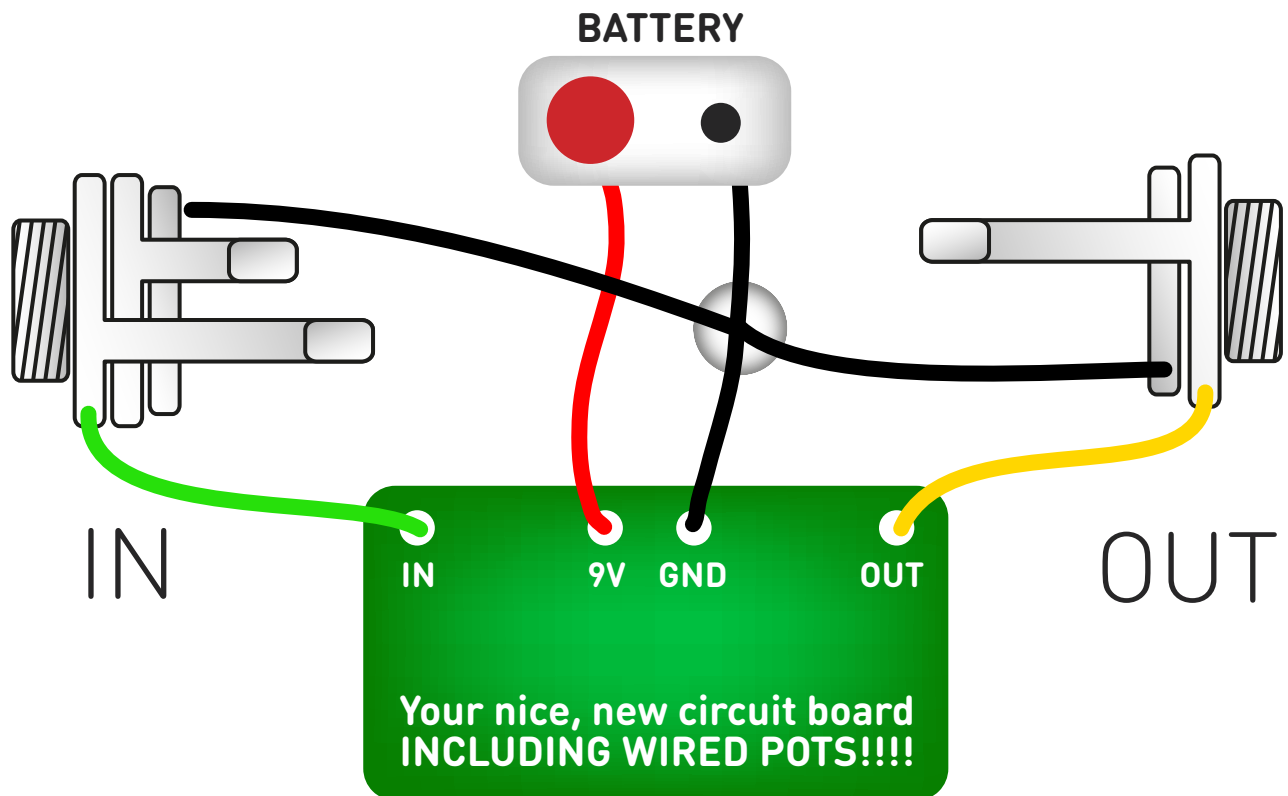
Usefully, different manufacturers use different pinouts for their versions of 2N2222A. We will supply one of two kinds - you should check which you have before placing Q7.

P2N2222A - this should be inserted as shown on the PCB silkscreen, flat side towards C1.

PN2222A - this should be reversed - flat side towards C12.



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 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.

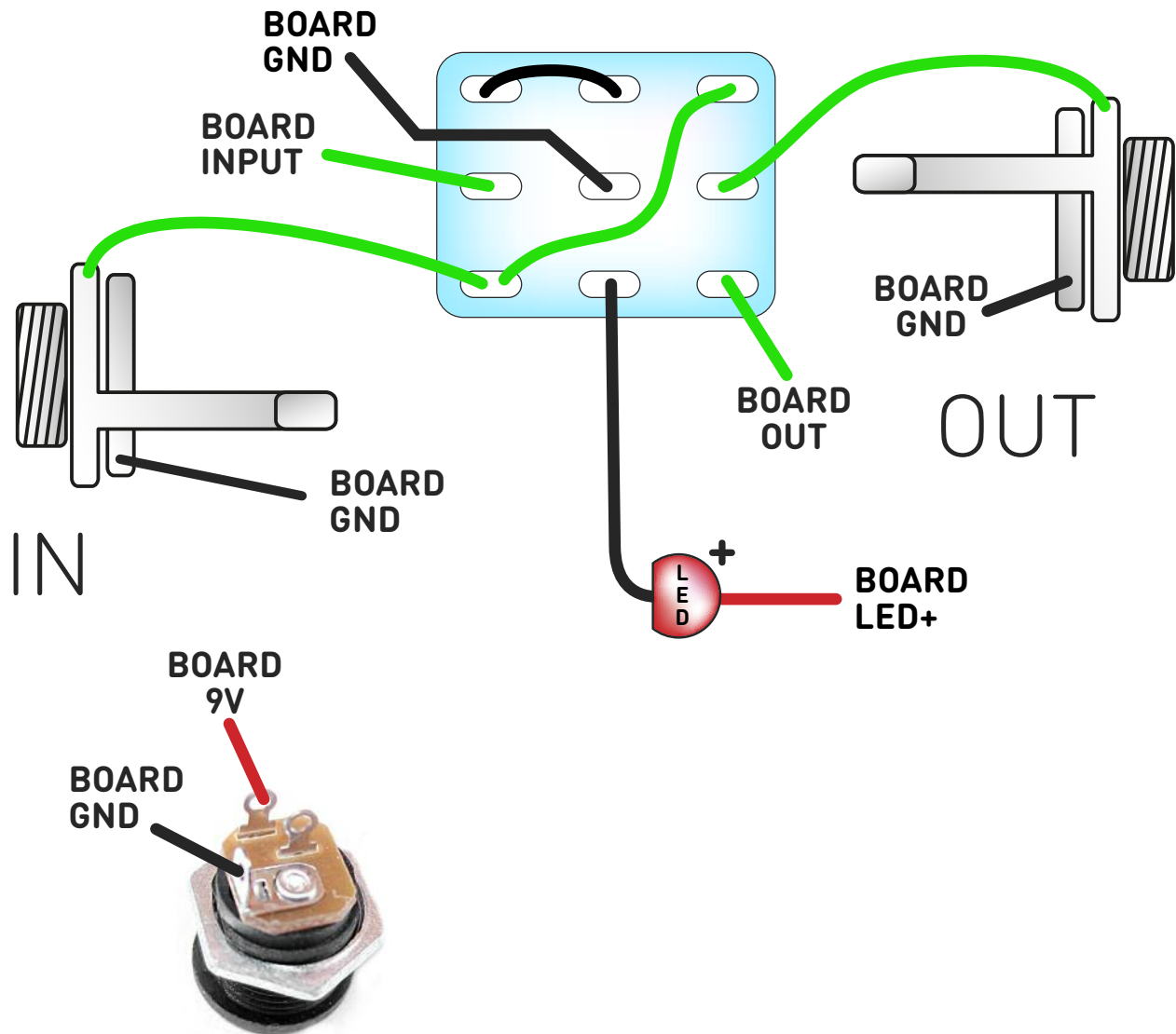
Solder some nice, long lengths of wire to the board connections for 9V, GND, IN and OUT. Connect IN and OUT to the jacks as shown. Connect all the GNDs together (twist them up and add a small amount of solder to tack it). Connect the battery + lead to the 9V wire, same method. Plug in. Go!

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 - DC only version

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

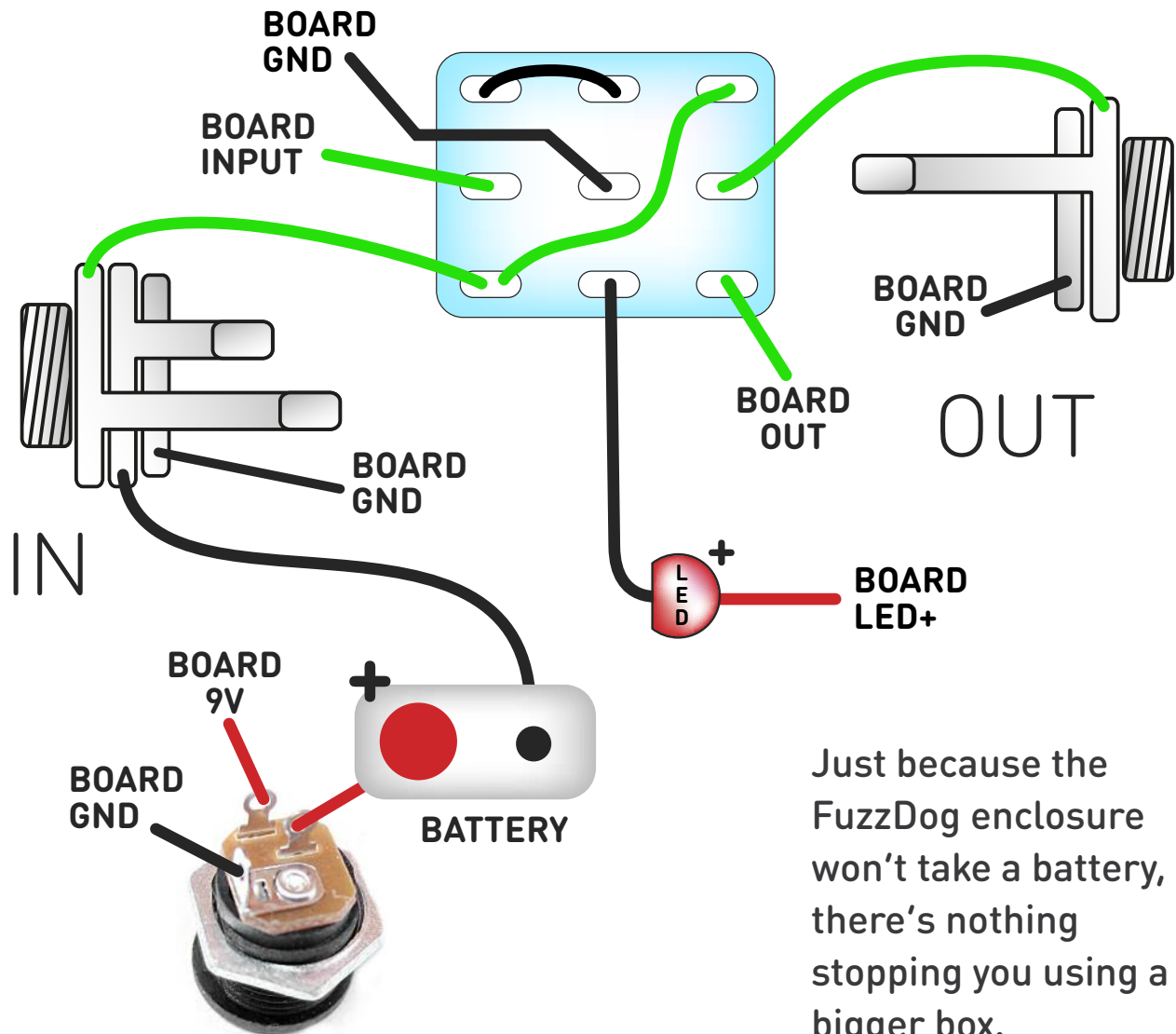


This circuit is standard, Negative GND. Your power supply should be Tip Negative / Sleeve Positive. That's the same as your standard pedals (Boss etc), and you can safely daisy-chain your supply to this pedal.

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.

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.

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Drilling template

Figaro Drive

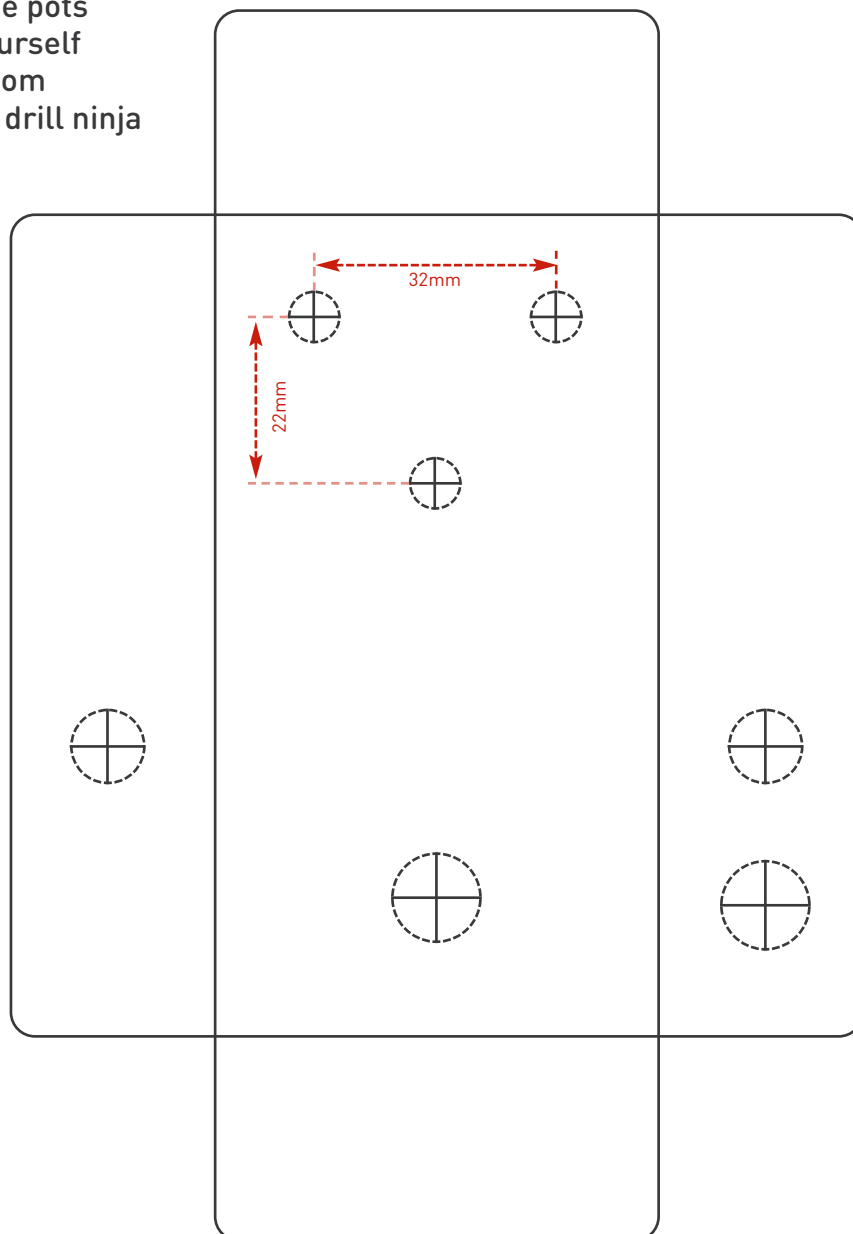
Hammond 1590B

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 8mm 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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