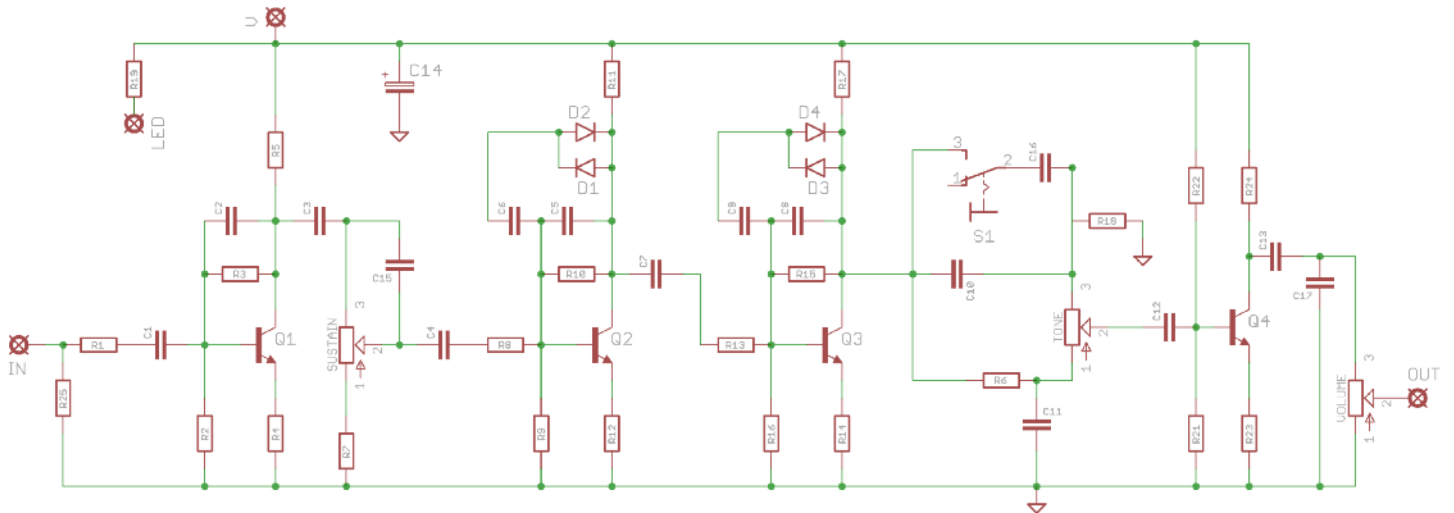


19 Bells

Two boutique Muff-based builds to get you "The Wall" fuzz tones



PIG - Schematic + BOM

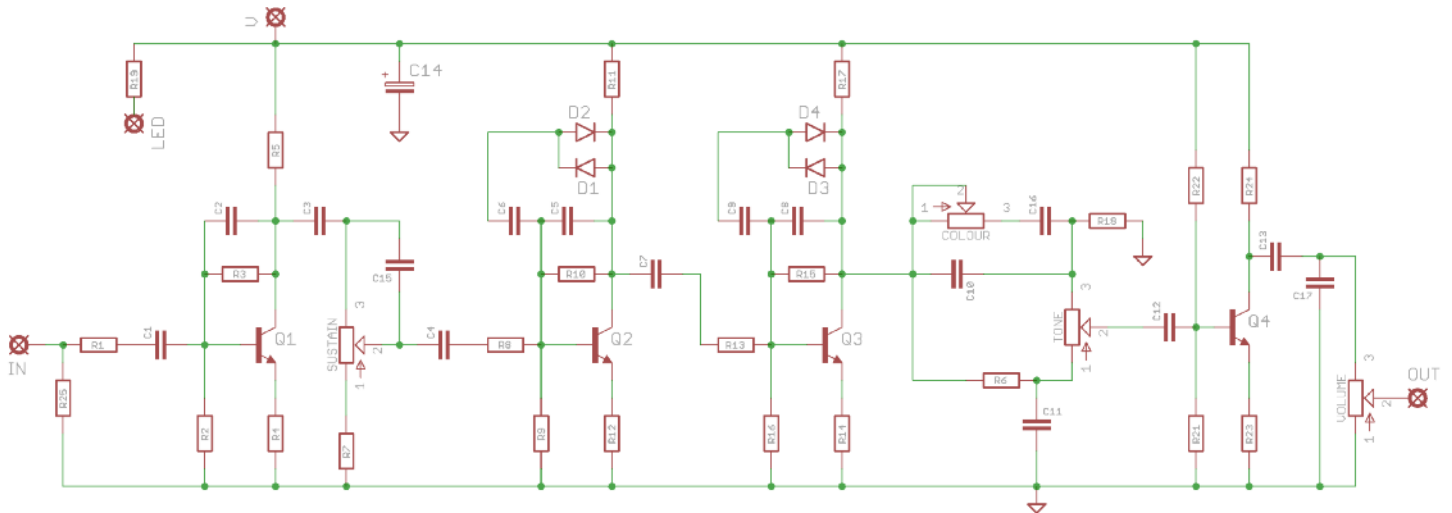


R1	33K	C1	68n	D1-4	1N4148
R2	100K	C2	560p	Q1-4	BC550C*
R3	470K	C3	47n	TONE	50KB
R4	200R	C4	100n	VOL	100KA
R5	10K	C5	560p	SUST	100KB
R6	18K	C6	100n	S1	SPDT ON-ON
R7	820R	C7	100n		
R8	10K	C8	560p		
R9	56K	C9	100n		
R10	470K	C10	6n8		
R11	10K	C11	10n		
R12	200R	C12	330n		
R13	10K	C13	100n		
R14	200R	C14	100u elec		
R15	470K	C15	2n2		
R16	100K	C16	6n8		
R17	10K	C17	560p		
R18	33K				
R19	CLR (2K2)				
R21	100K				
R22	470K				
R23	2K7				
R24	10K				
R25	1M				

*The PCB has been designed to take 2N5088 which have the opposite pinout to BC550C, so the transistors need to be reversed for this build. See the cover image.

The COLOUR pot space should be empty.

BELLS - Schematic + BOM



R1	33K	C1	68n	D1-4	1N4148
R2	100K	C2	560p	Q1-4	2N5088
R3	470K	C3	56n	TONE	50KB
R4	140R	C4	100n	VOL	100KB
R5	10K	C5	560p	SUST	100KB
R6	18K	C6	100n	COLOUR	100KB
R7	820R	C7	100n		
R8	10K	C8	560p		
R9	56K	C9	100n		
R10	470K	C10	6n8		
R11	10K	C11	10n		
R12	120R	C12	330n		
R13	10K	C13	100n		
R14	390R	C14	100u elec		
R15	470K	C15	2n2		
R16	100K	C16	33n		
R17	15K	C17	560p		
R18	33K				
R19	CLR (2K2)				
R21	100K				
R22	470K				
R23	2K				
R24	10K				
R25	1M				

S1 space should be empty.

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 transistors and diodes. 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.

The cathode (striped end) of the diodes go into the square pads.

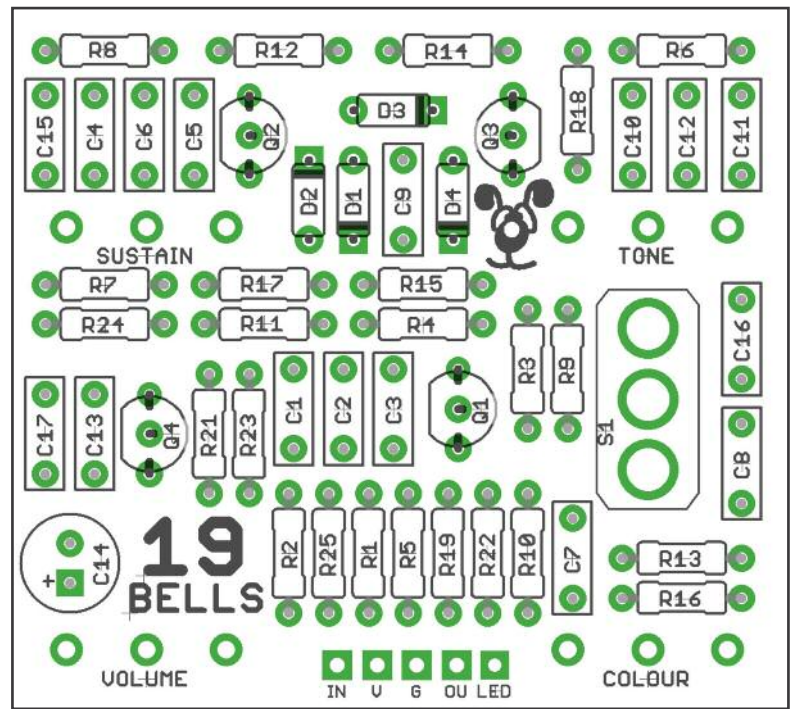
The anode (long leg) of electrolytic capacitor goes into the square pad. C14 can be placed flat across the PCB as shown in the cover image to ensure plenty of clearance in the enclosure.

Pots mounts on the back side of the board. You can use vertical-mount pots or just wire up 'normal' ones.

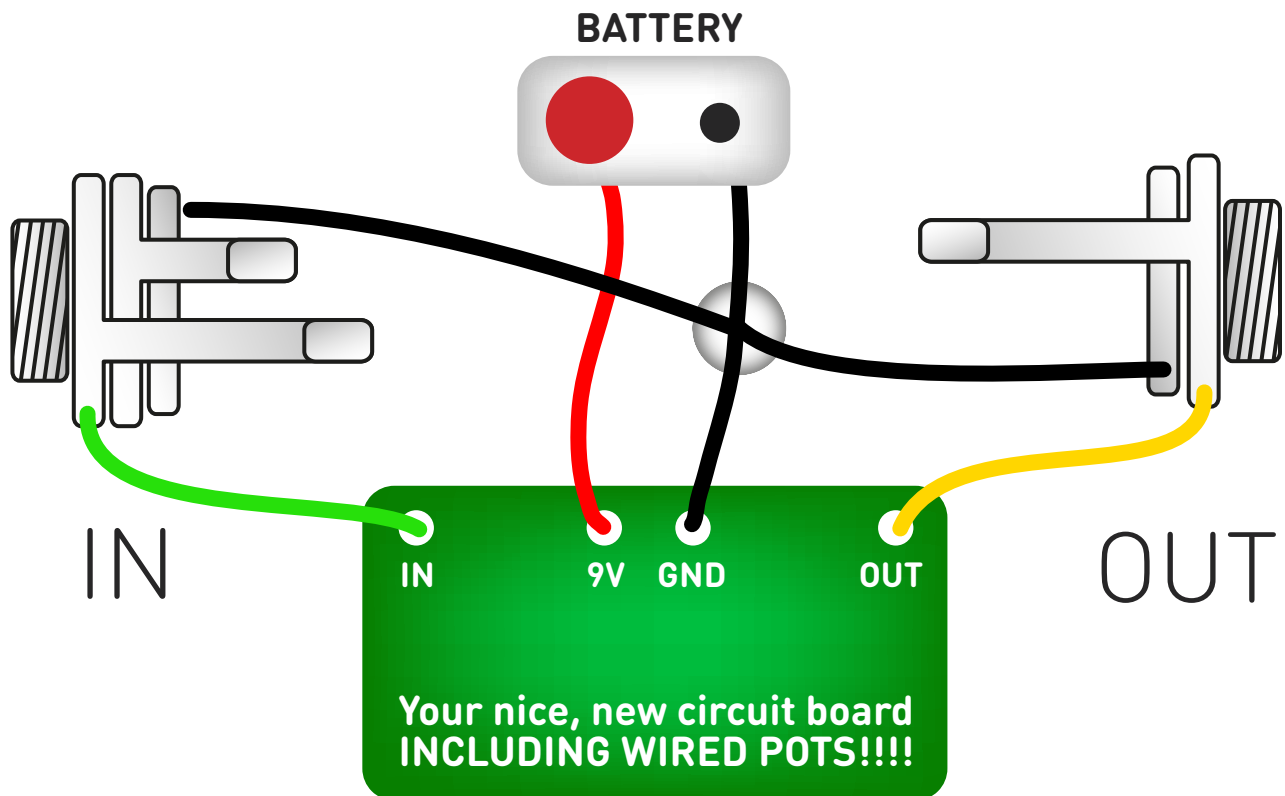
You should solder all components before you solder the pots. Once they're in place you'll have no access to much of the underside of the board.

It's useful to place the pots in the holes in the enclosure when soldering to make sure you get them all the right height and position. Solder one leg of each pot first, then check them for position. Melt and adjust if necessary. Get them all even before soldering the other two pins of each. Same goes for the toggle switch if you're building the PIG. Get one tag soldered in, then melt and reposition before soldering the other two.

If your pots have plastic covers, sweet. If not, be careful to keep the bases away from the PCB pads. Slip some thick card between the pots and the PCB while you solder them in to space them nicely.



Test the board!



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

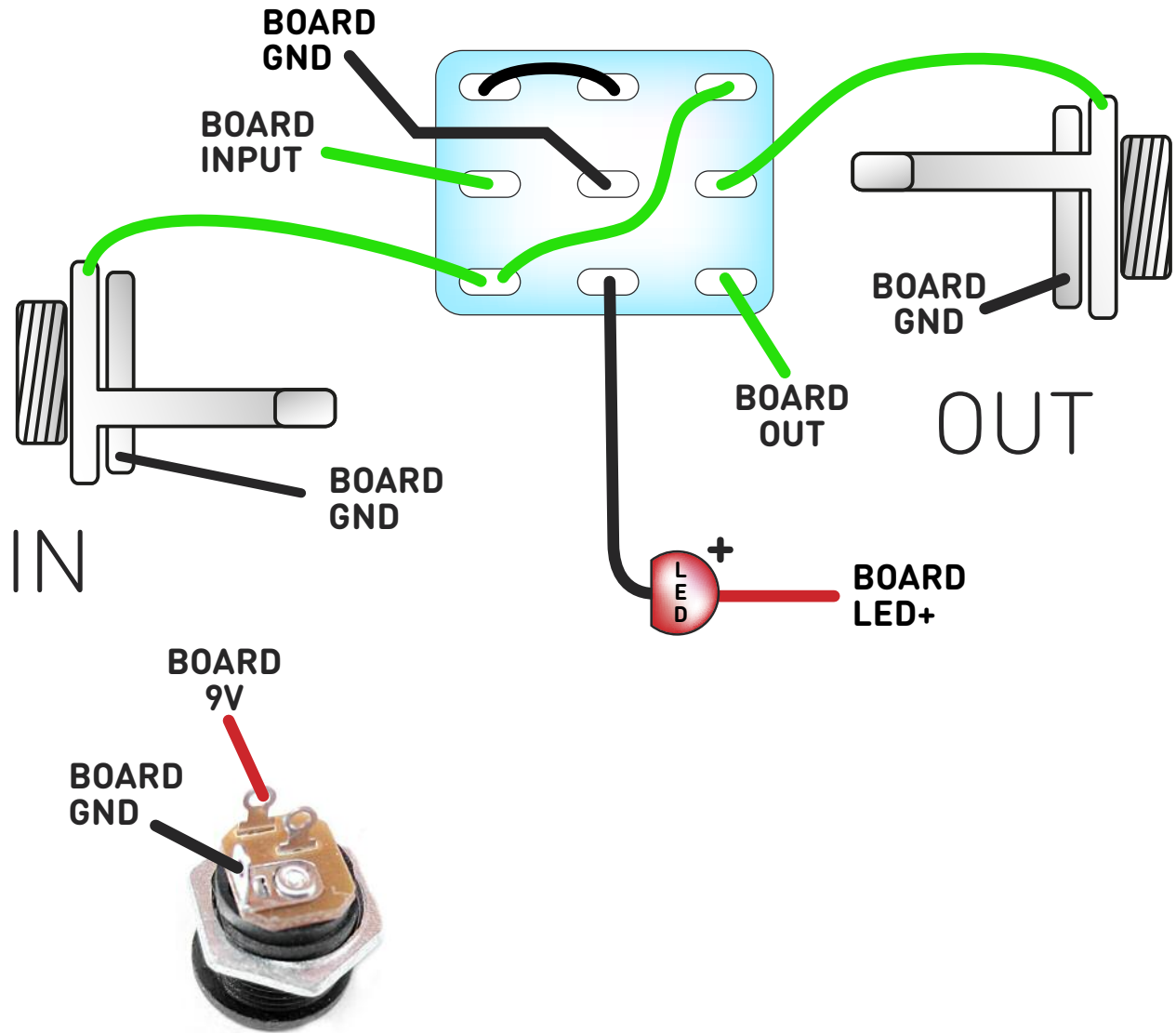
Once you've finished the circuit it makes sense to test it before starting on the switch and LED wiring. It'll cut down troubleshooting time in the long run. If the circuit works at this stage, but it doesn't once you wire up the switch - guess what? You've probably made a mistake with the switch.

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 - DC only version

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

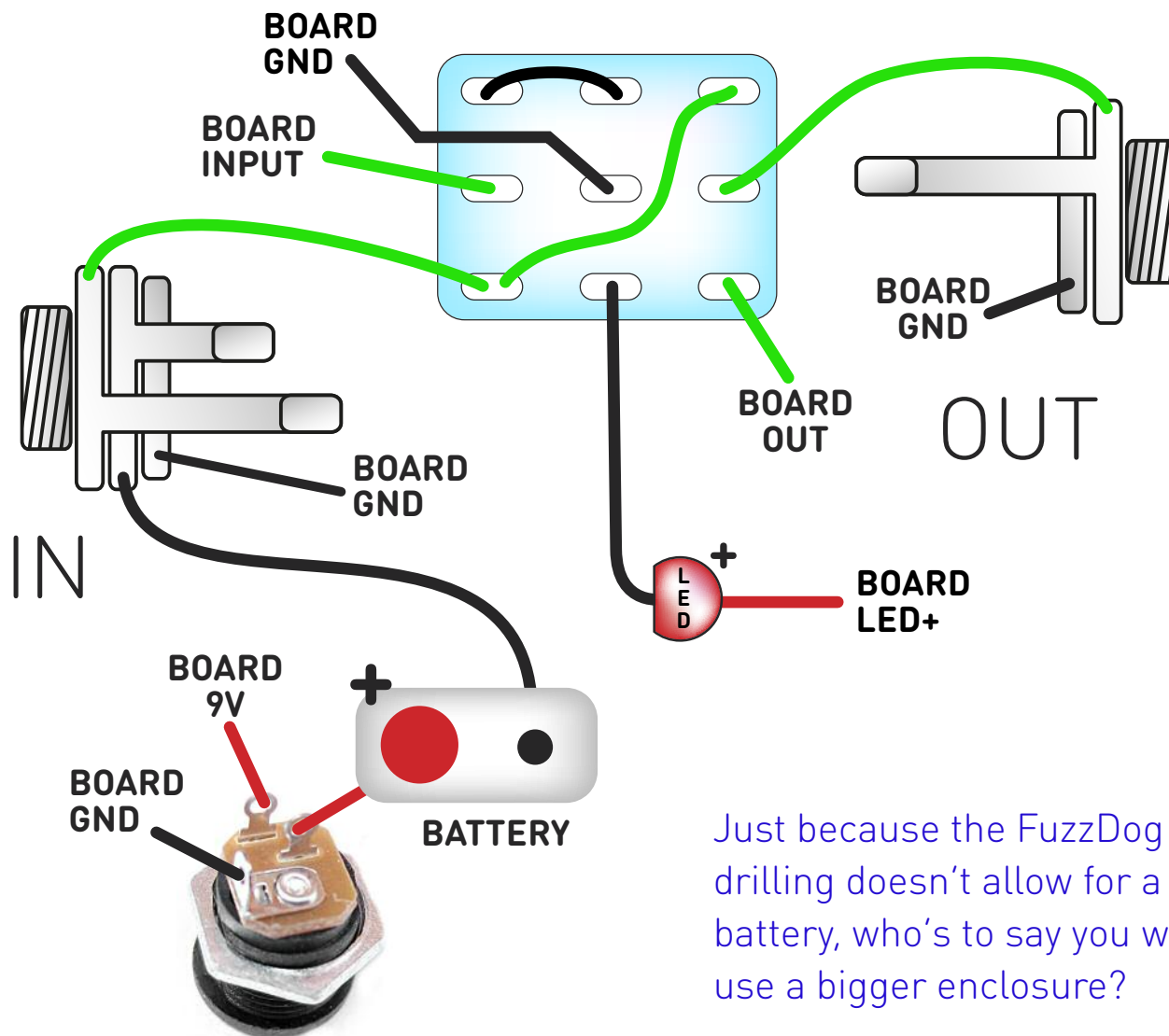


This circuit is standard, Negative GND. Your power supply should be Tip Negative / Sleeve Positive. That's the same as your standard pedals (Boss etc), and you can safely daisy-chain your supply to this pedal.

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)



Just because the FuzzDog drilling doesn't allow for a battery, who's to say you won't use a bigger enclosure?

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

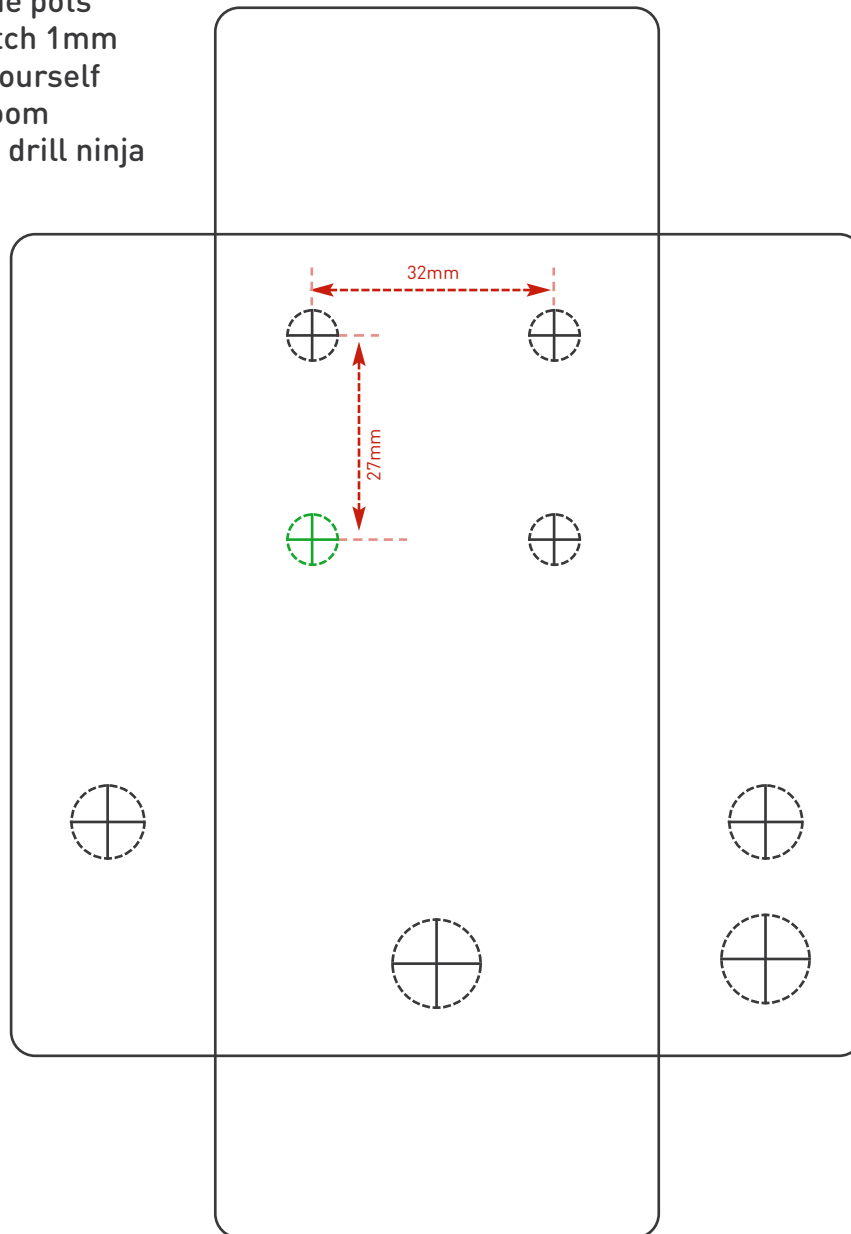
Hammond 1590B

60 x 111 x 31mm

It's a good idea to drill the holes for the pots and toggle switch 1mm larger to give yourself some wiggle room unless you're a drill ninja

Recommended drill sizes:

Pots	7mm
Jacks	10mm
Footswitch	12mm
DC Socket	12mm
Toggle switch	6mm



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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