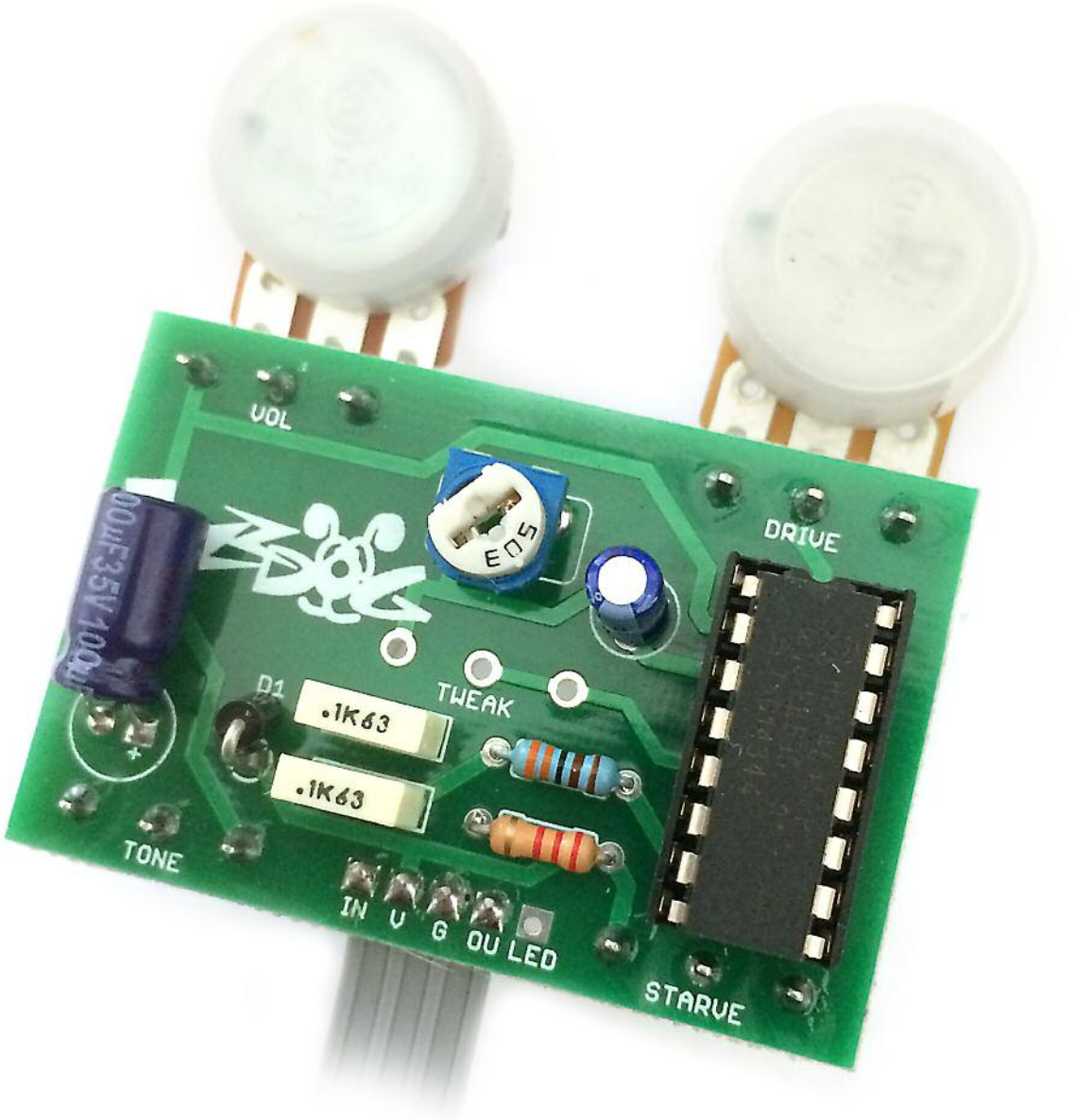
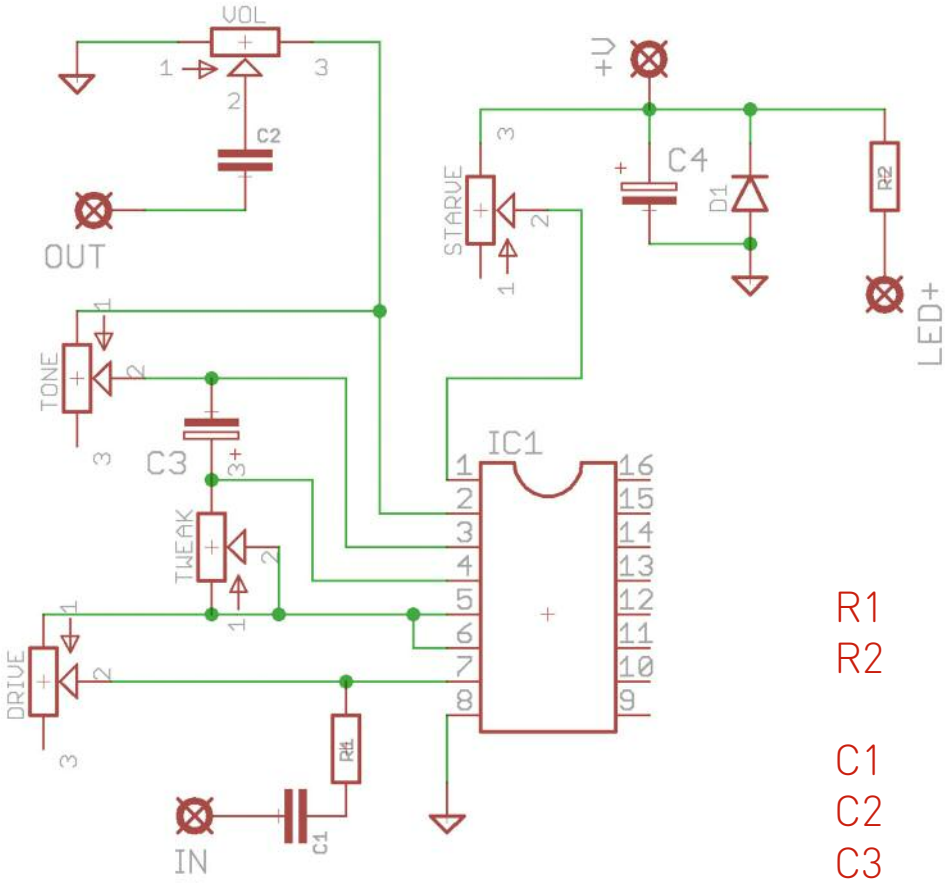


Reasonably Good Mangler

Sometimes your signal needs destroying

Schematic + BOM

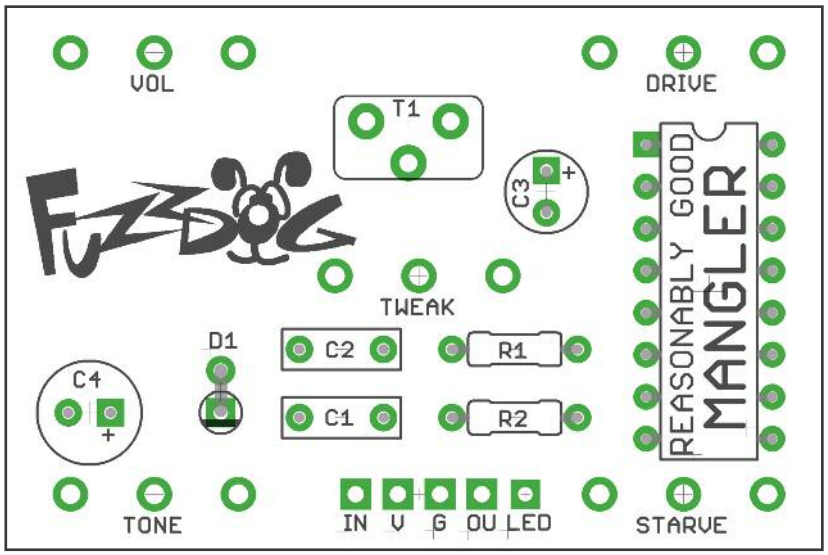


R1	3K3
R2	2K2 (CLR)
C1	100n
C2	100n
C3	1u elec
C4	100u elec
IC1	CD4049BE*
D1	1N4001
STARVE	2KB
DRIVE	1MA
TONE	5KB
VOL	100KA
TWEAK	10-50KB**

*The original uses the buffered version of the IC exclusively. The more common unbuffered one will work, but you'll find the circuit responds differently to the original.

**The original circuit has a fixed 2K2 resistor between pints 5 and 4 of the IC. Replacing this with a pot gives you even more control over the wild output of the pedal. If you want to keep it stock, put a 2K2 resistor across the Tweak pot position, one leg in each of the outer pads, ignoring the centre pad. You can alternatively use an internal trimmer to set the tweak control to your liking. Use ONLY a pot, a trimmer or the fixed resistor, not a combination of them.

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 LED 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). Same goes for the IC if you aren't using a socket (why not??)

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

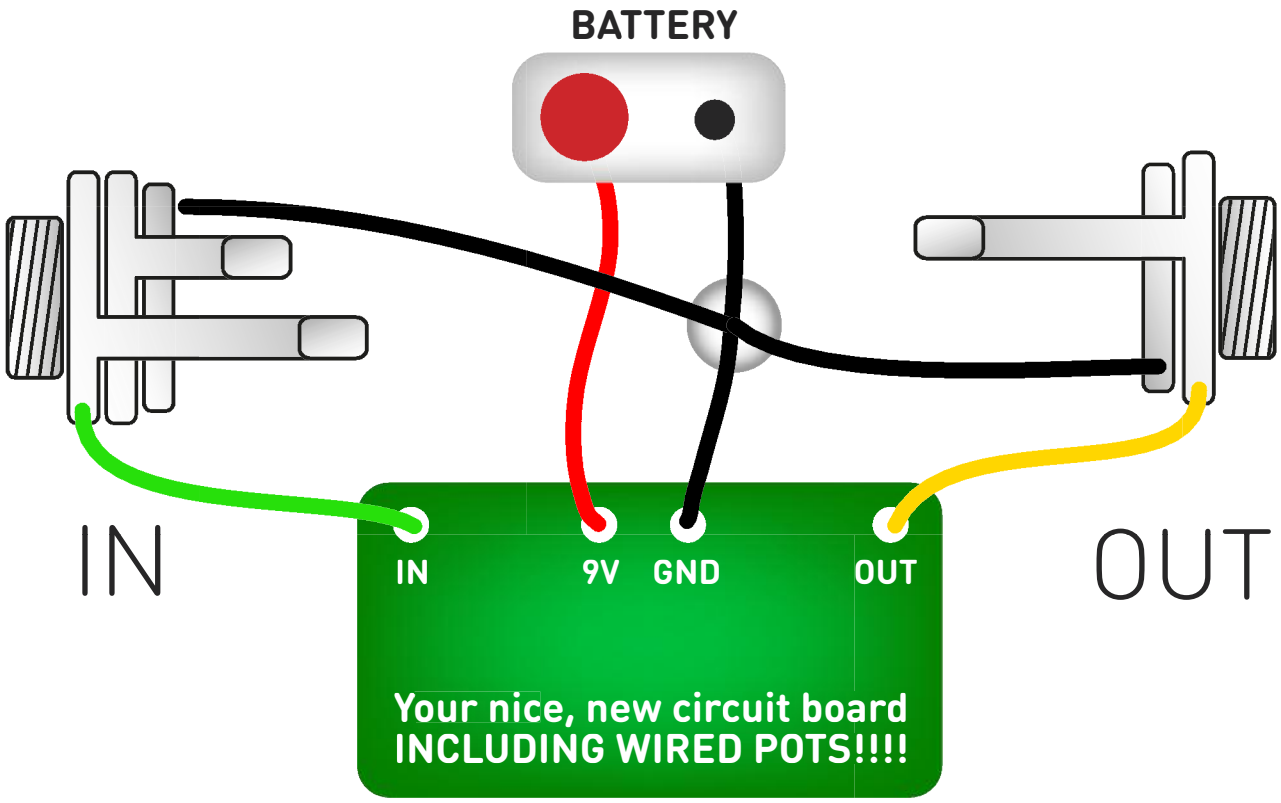
Pots mount on the rear of the PCB. If you don't have plastic covers on them you should ensure they sit well above the surface of the board to avoid shorting out other components. Put strips of card between the pot body and the board when positioning to keep an even space between them. Its best to solder in a single pin of each pot at first, then adjust (melt and reposition) any that don't line up. Once they all do, solder the rest. A good way to keep everything nice and even is to place the pots in the holes in the enclosure when soldering, on the top side rather than within.

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

The long leg (anode) of the electrolytic capacitors go into the square pads. Place C4 flat to the board as shown in the cover image to allow plenty of clearance when boxing up the circuit.

Beware - if you're making the 5-pot version spacing is VERY tight. Ensure none of the pot bodies is touching any of the legs of other pots.

Test the board!



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

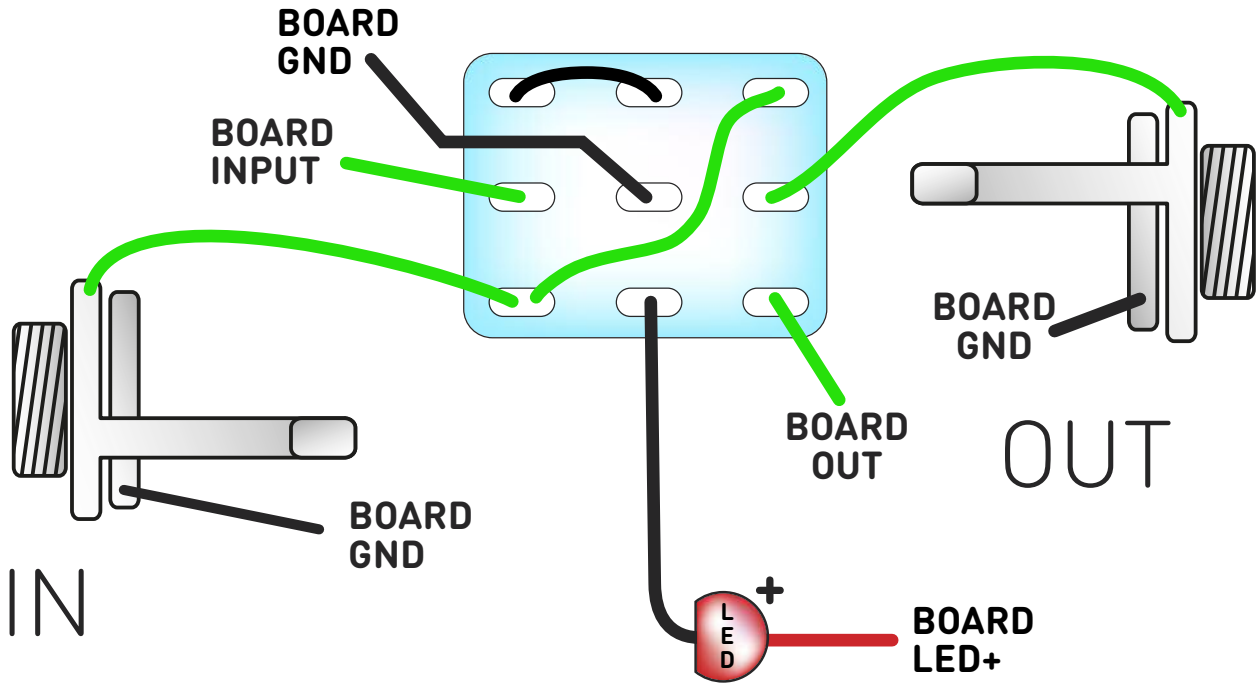
Once you've finished the circuit it makes sense to test is before starting on the switch and LED wiring. It'll cut down troubleshooting time in the long run. If the circuit works at this stage, but it doesn't once you wire up the switch - guess what? You've probably made a mistake with the switch.

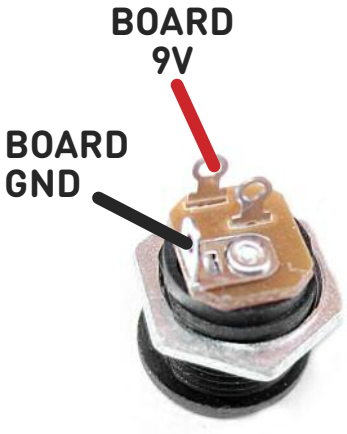
Solder some nice, long lengths of wire to the board connections for 9V, GND, IN and OUT. Connect IN and OUT to the jacks as shown. Connect all the GNDs together (twist them up and add a small amount of solder to tack it). Connect the battery + lead to the 9V wire, same method. Plug in. Go!

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)



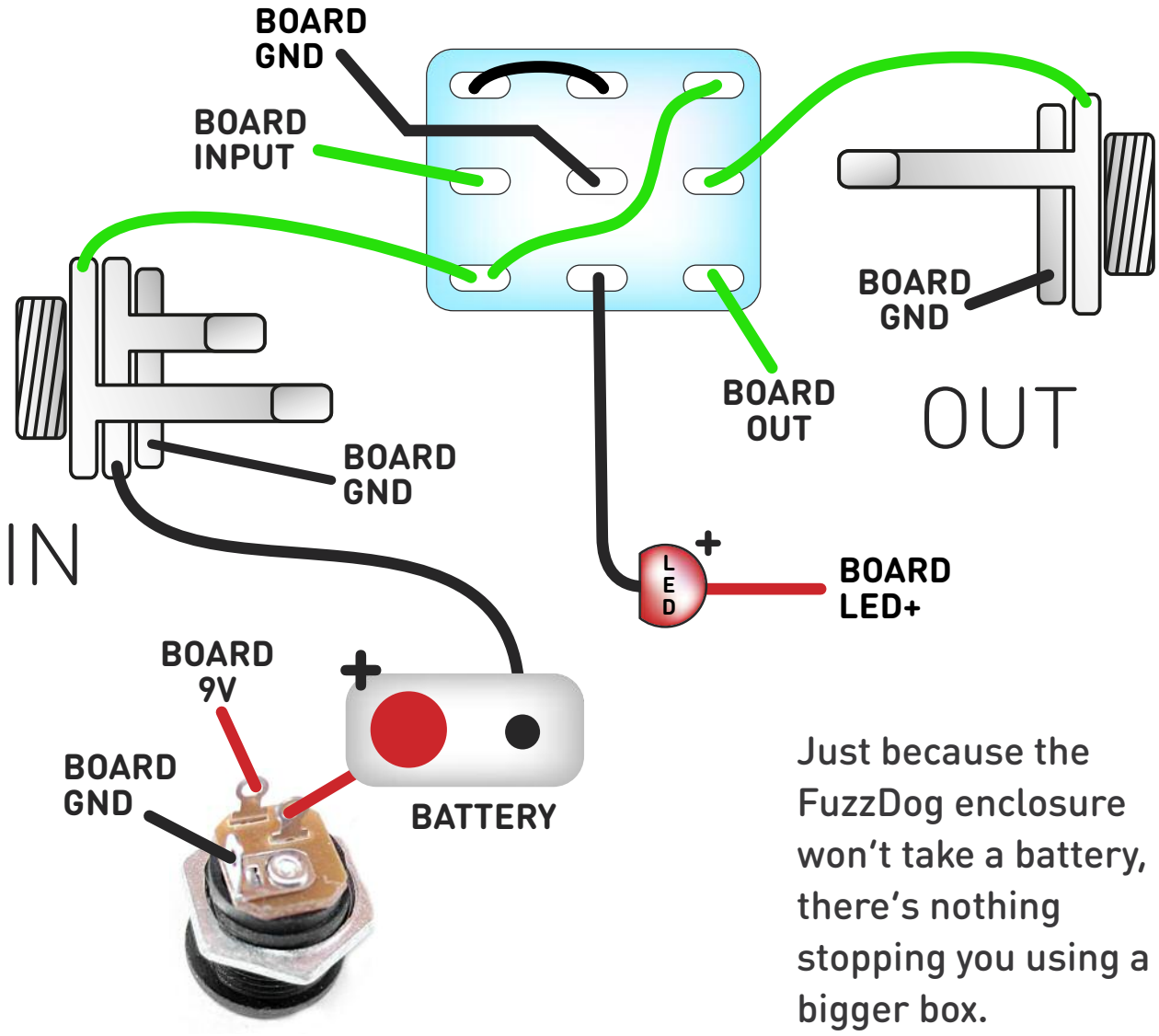


This circuit is standard, Negative GND. Your power supply should be Tip Negative / Sleeve Positive. That's the same as your standard pedals (Boss etc), and you can safely daisy-chain your supply to this pedal.

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)



Just because the FuzzDog enclosure won't take a battery, there's nothing stopping you using a bigger box.

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.

PedalParts.co.uk

Drilling template

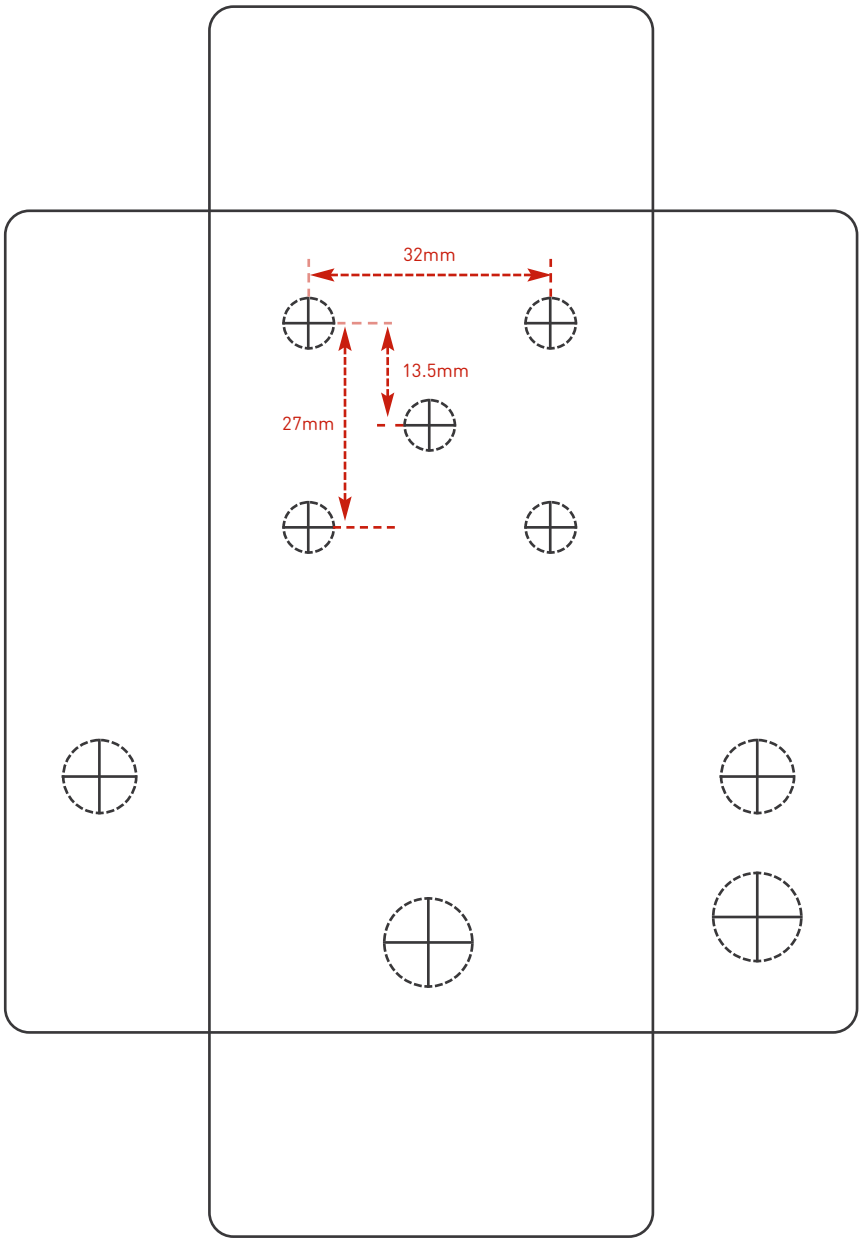
Recommended drill sizes:

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

Hammond 1590B

60 x 111 x 31mm

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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