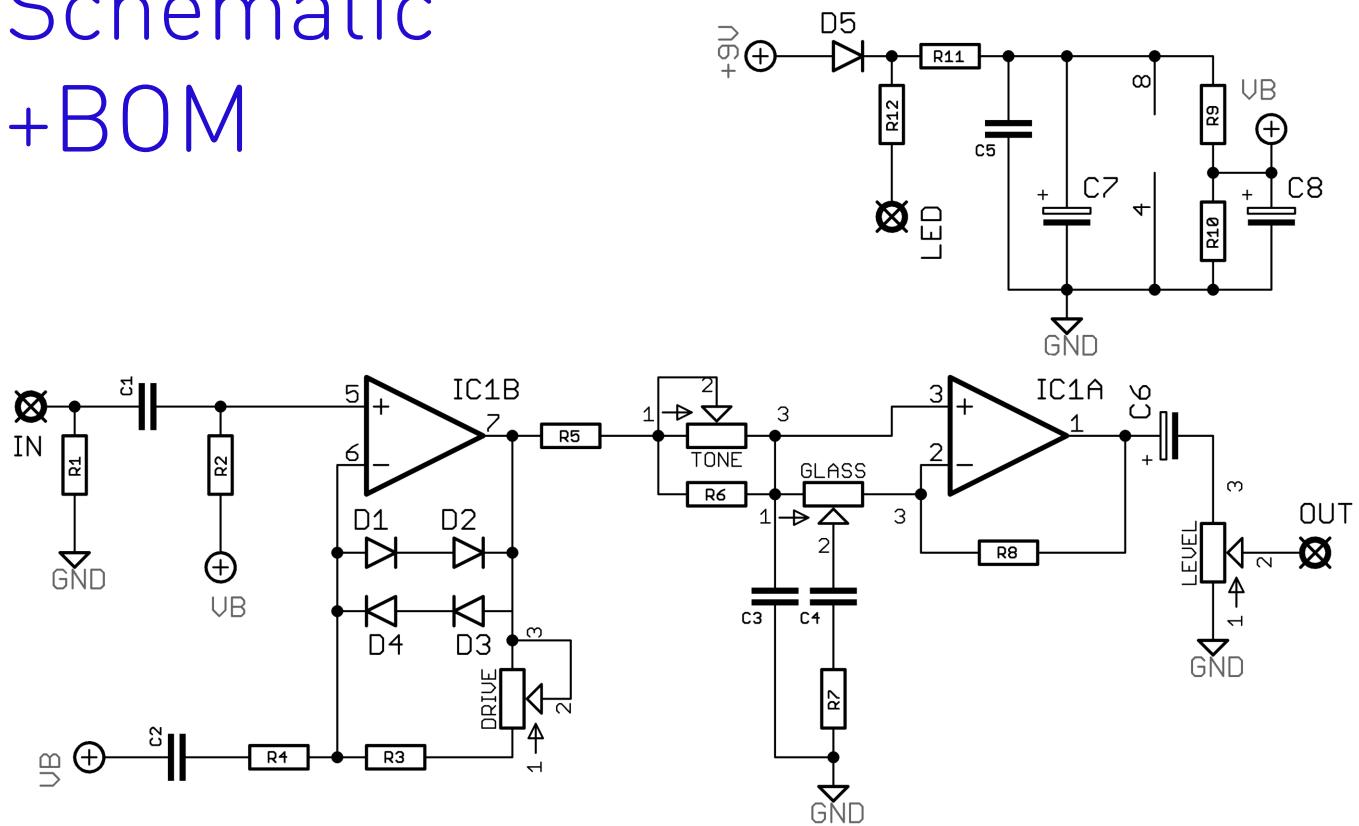


# Dirty Kazoo

Yet. Another. Tube Screamer  
but a very nice variation



# Schematic +BOM



R1	1M	C1	47n	D1-5	1N4148
R2	1M	C2	100n		
R3	22K	C3	100n	IC1	4558*
R4	3K3	C4	220n		
R5	1K	C5	100n	TONE	5KB
R6	2K7	C6	10u elec	DRIVE	500KB**
R7	330R	C7	47u elec	GLASS	5KB
R8	1K	C8	47u elec	LEVEL	100KB
R9	10K				
R10	10K				
R11	100R				
R12	2K2 (CLR)				

\*You could try other dual op-amps, such as TL072, OPA2134

\*\*This is the original value, but you may find 500KA has a better sweep.

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.

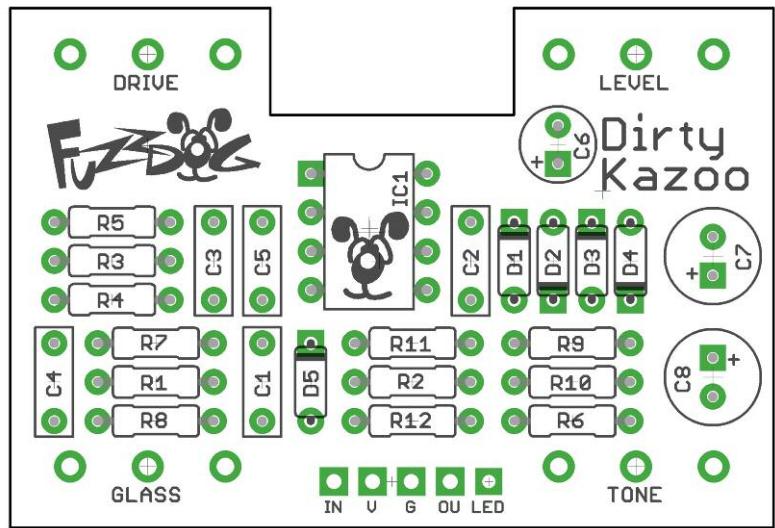
Be very careful when soldering the LED and diodes). They're very sensitive to heat. You should use some kind of heat sink (crocodile clip or reverse action tweezers) on each leg as you solder them. Keep exposure to heat to a minimum (under 2 seconds). You should use a socket for IC1 or be ultra careful when soldering.

The cathode (striped end) of the diodes go into the square pads. The anode (long leg) of electrolytic capacitors go into the square pads. C7-8 can be bent over the adjacent resistors to save on height (see pic on first page), giving more clearance when mounting in the enclosure.

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

If you're using a footswitch daughterboard don't bother soldering R12. You'll use that on the daughterboard instead. What does CLR mean? Current Limiting Resistor. It's what stops your LED from popping. You can use anything from 1K-4K7 here, depending how bright you want your LED to be. Lower value = brighter.

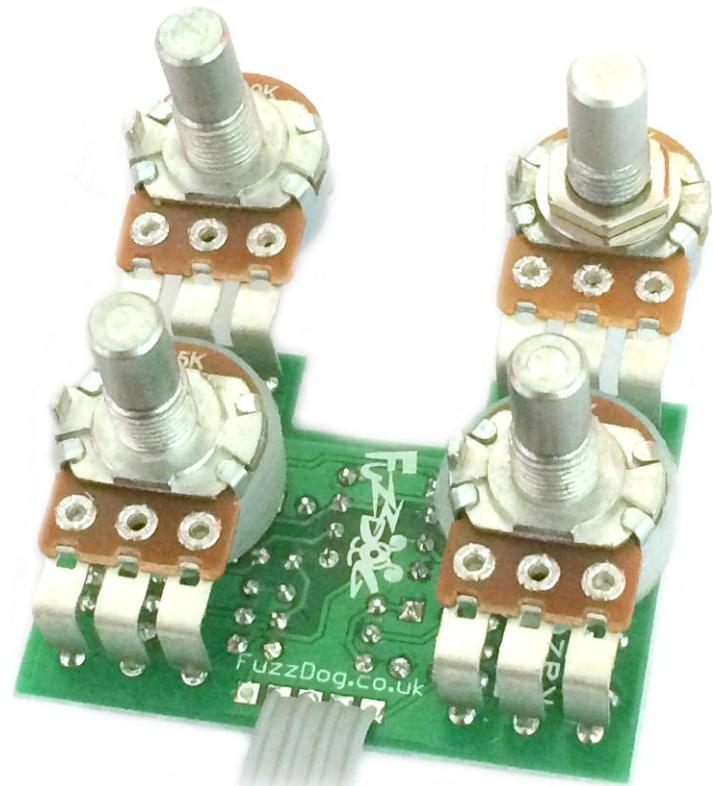
Pots mount on the back side of the board. You can use vertical-mount pots or just wire up 'normal' ones. It's a good idea to place the pots in their holes in the enclosure when you're soldering them in place on the PCB. That way you know they're going to line up ok. Best way to do it is to solder a single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



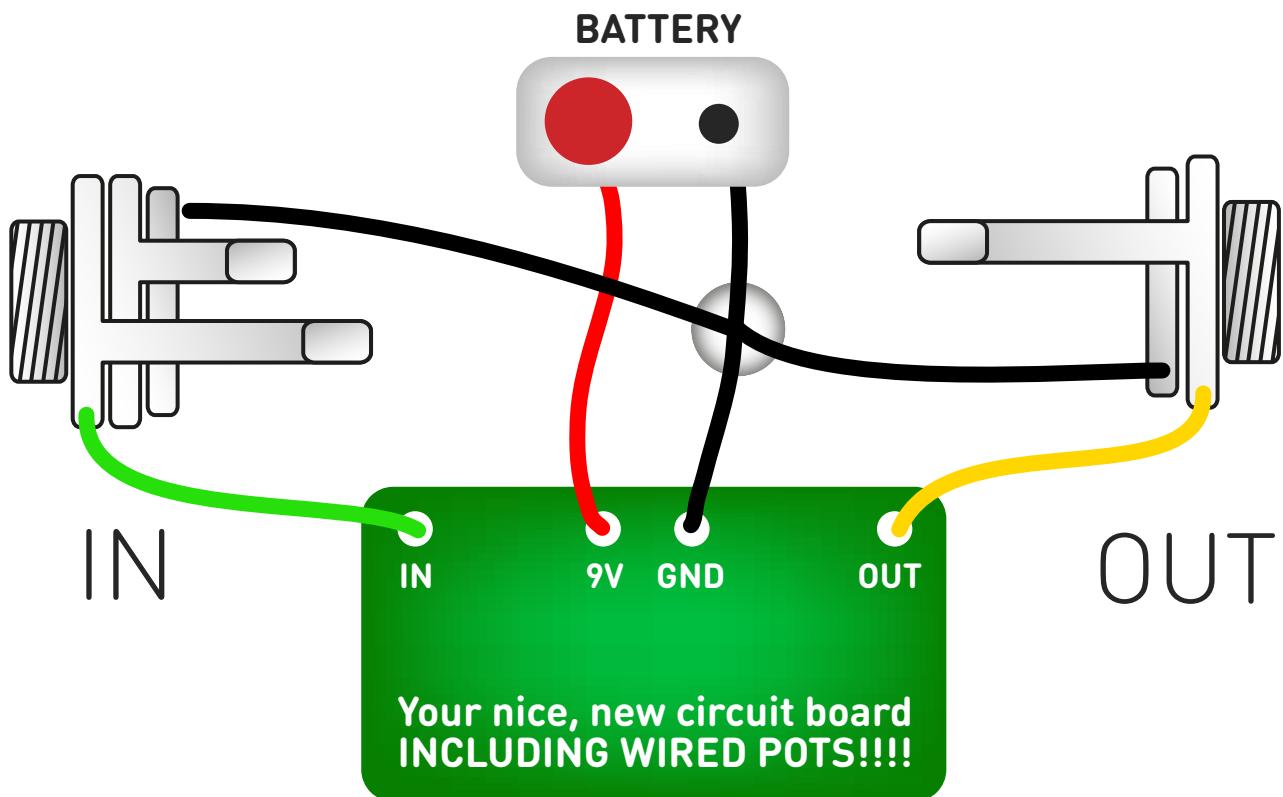
PCB Layout ©2016 Pedal Parts Ltd.

## CLIPPING

The circuit sounds great as-is, but as with most circuits that involve clipping diodes, they're ripe for experimentation. Try asymmetrical, i.e. ditch one of the diodes and replace with a jumper wire so you have two in one direction, one in the other. Try different diodes - even LEDs. The world is your sonic oyster. Note: D5 is NOT involved in the clipping. Don't mess with that.



# Test the board!



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

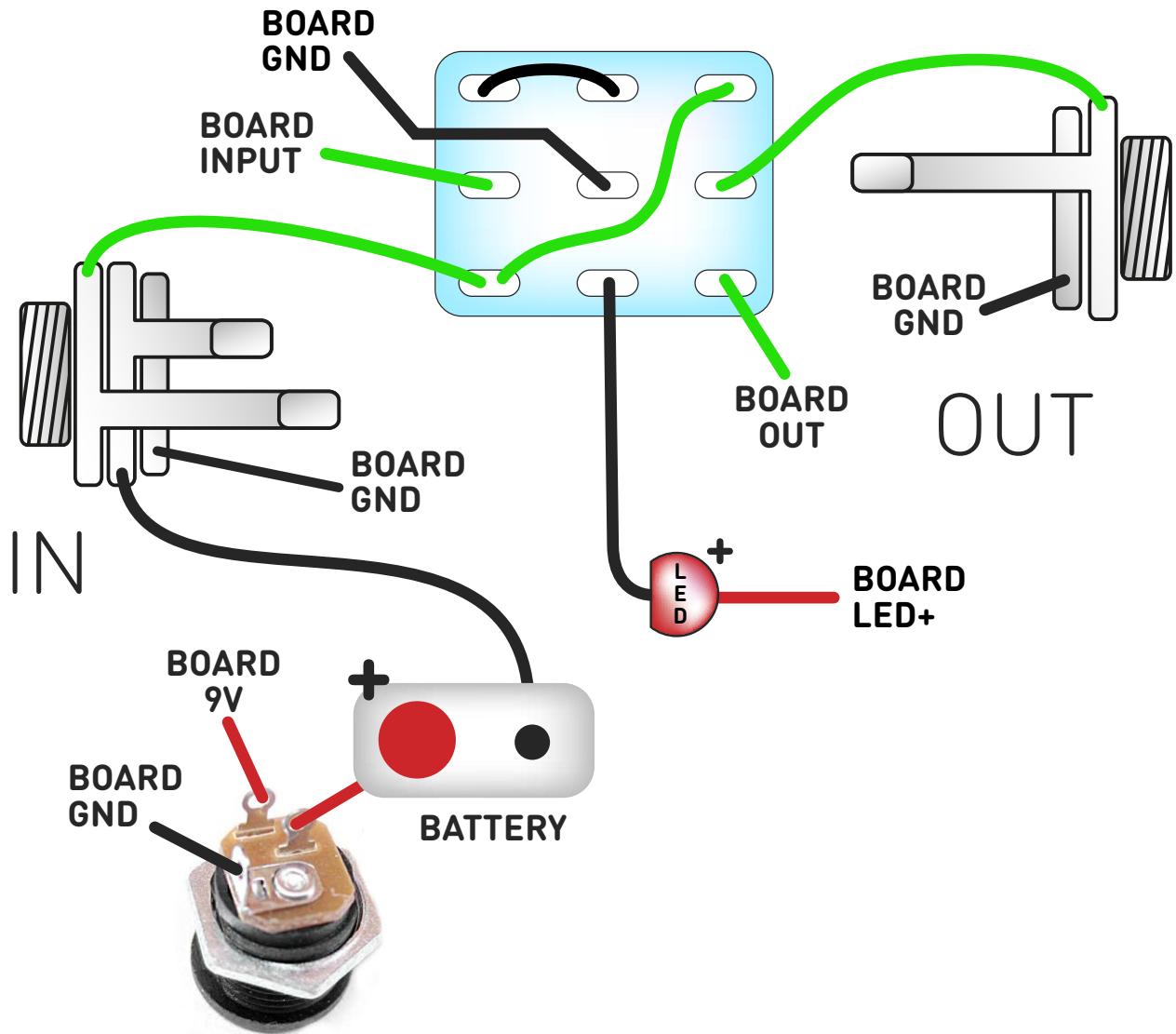
Once you've finished the circuit it makes sense to test it before starting on the switch and LED wiring. It'll cut down troubleshooting time in the long run. If the circuit works at this stage, but it doesn't once you wire up the switch - guess what? You've probably made a mistake with the switch.

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)

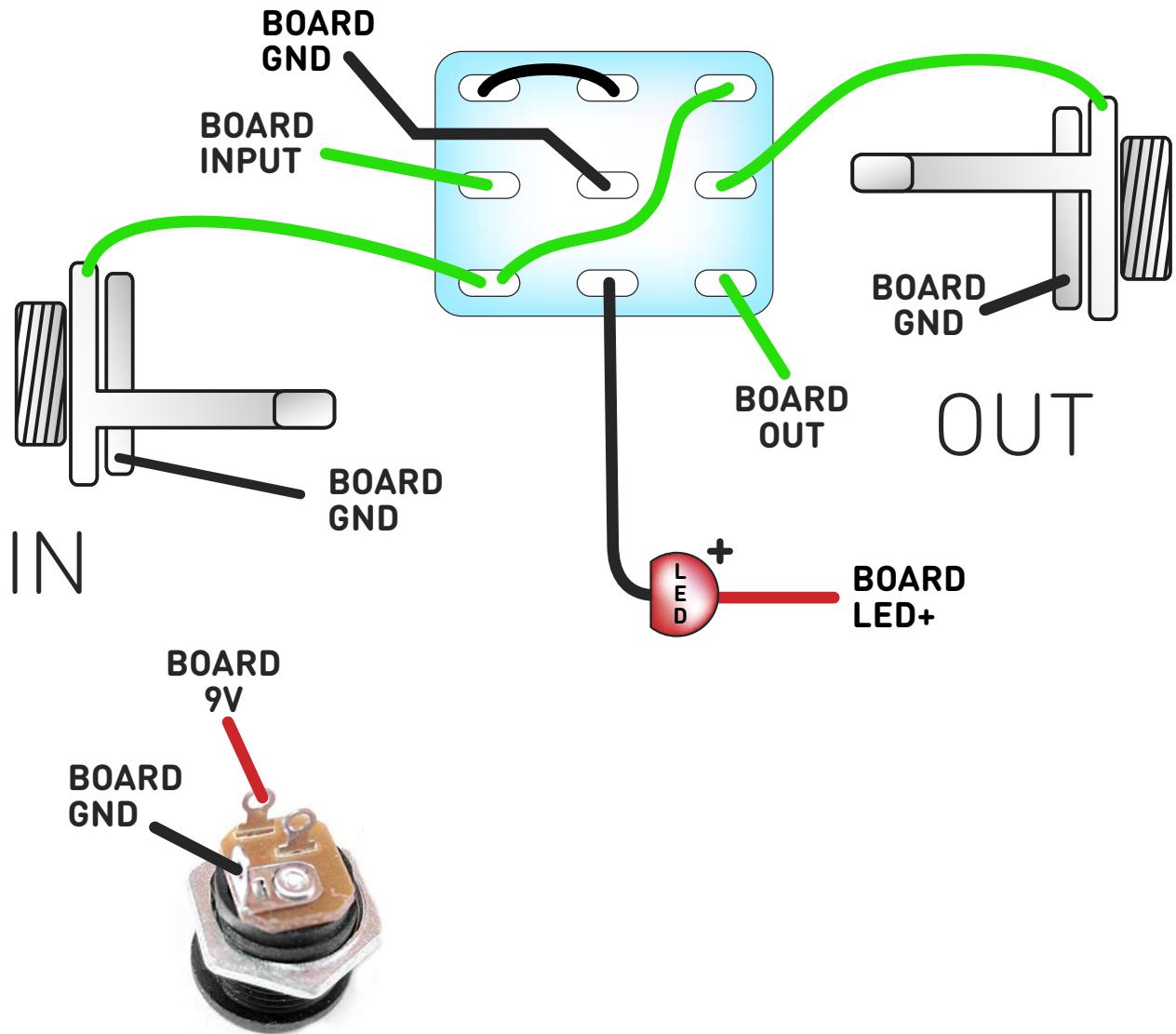


This circuit is standard, Negative GND. Your power supply should be Tip Negative / Sleeve Positive. That's the same as your standard pedals (Boss etc), and you can safely daisy-chain your supply to this pedal.

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.

# 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.

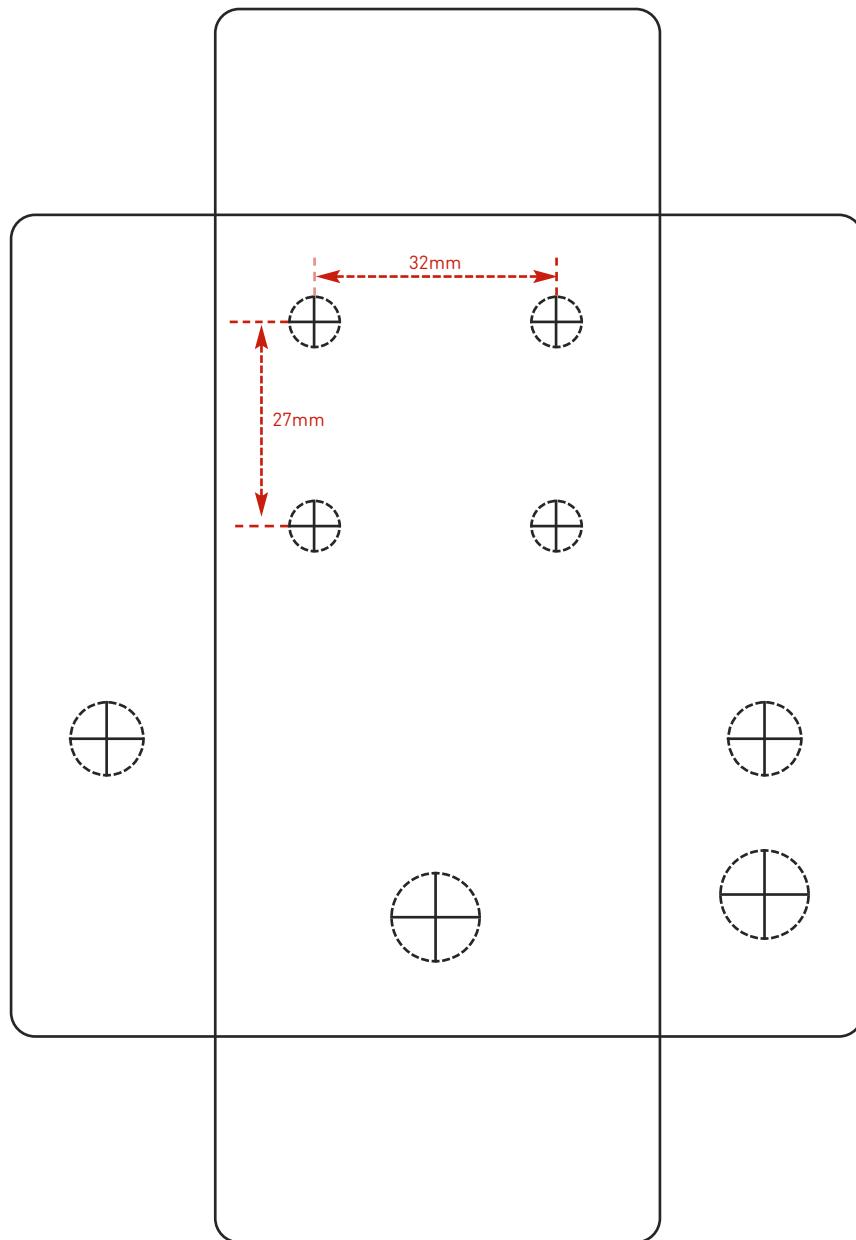
# Drilling template

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 pot holes 1mm bigger if you're board-mounting them.  
Wiggle room = good!



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.