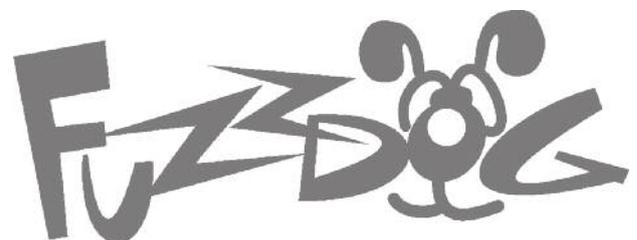
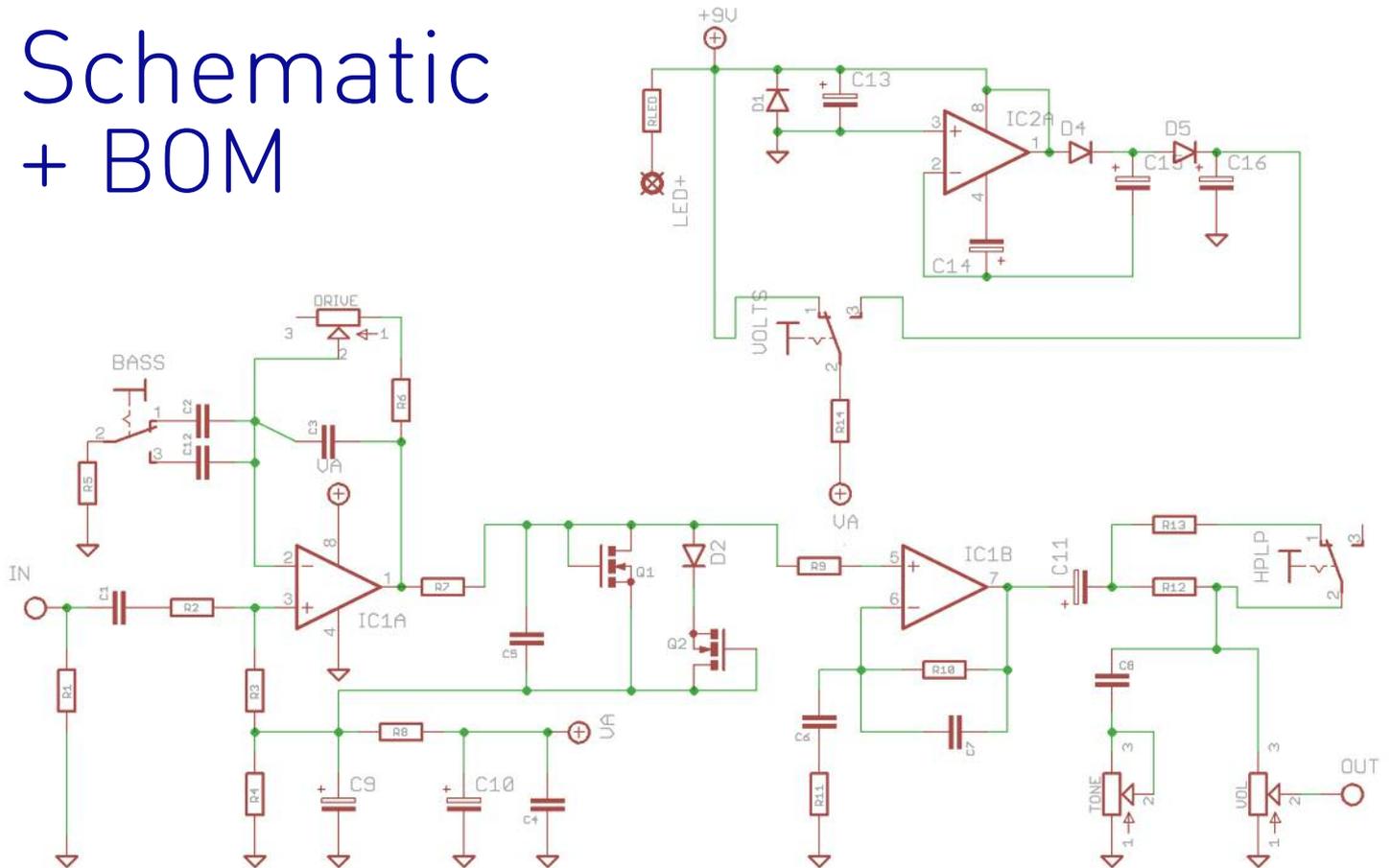


# Disorder Drive v2

An overdrive worth  
obsessing over



# Schematic + BOM



## Version 4

R1	1M	C1	22n	D1	1N4001
R2	10K	C2	100n	D2	1N34A*
R3	470K	C3	220p	D4,5	1N4148
R4	10K	C4	100n	Q1,2	2N7000
R5	2K2	C5	1n	IC1	TL082
R6	18K	C6	100n	IC2	7660S
R7	10K	C7	220p	GAIN	1MA
R8	10K	C8	47n	TONE	10KB
R9	10K	C9	10u elec	VOL	500KA
R10	150K	C10	10u elec	SW1-3	SPDT (ON-ON)
R11	39K	C11	1u tantalum		
R12	33K	C12	See page 4		
R13	22K	C13	100u elec		
R14	10R	C14	10u elec		
RLED	2K2 (CLR)	C15	10u elec		
		C16	10u elec		

\*D2 appears in very few units so is not supplied. Add one if you want, otherwise place a jumper across it.

Parts in green are the optional 18V charge pump. Just leave them empty if you're not adding one.

## Version 1

C8	100n
GAIN	500KA
TONE	25KA
VOL	100KB

## Version 2

C8	100n
GAIN	500KA
TONE	25KA
VOL	500KB

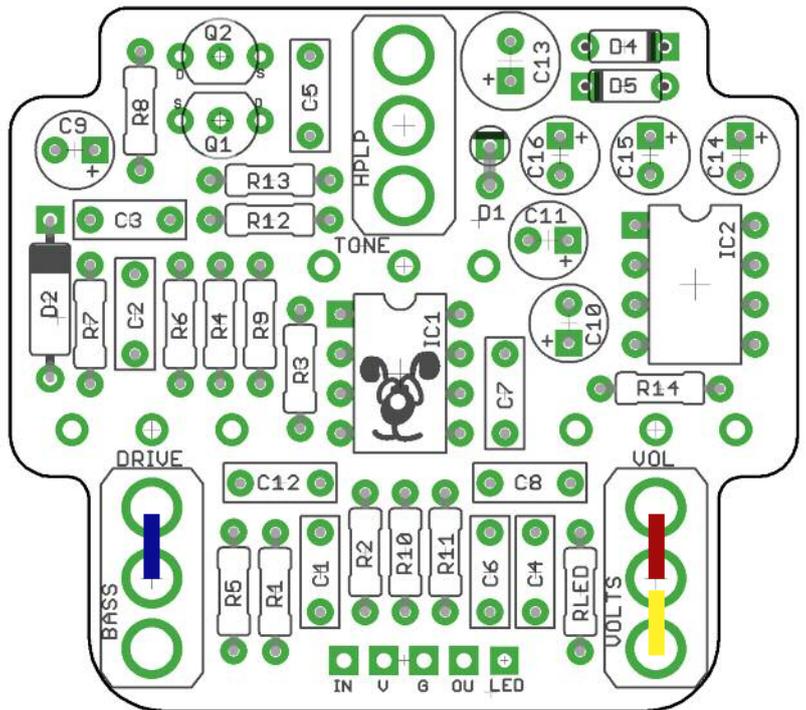
## Version 3

C8	47n
GAIN	1MA
TONE	10KB
VOL	500KB

**NOTE - ignore the D-S markings on Q1-2. We used footprint for a BS170 when laying out the board and forgot to remove those. You should place your 2N7000 as per the part outline, and as shown on the cover image. All is well.**

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 diodes, LED 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).



PCB Layout ©2015 Pedal Parts Ltd.

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

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

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

Pot mounts 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.

## Charge Pump

If you're sticking with 9V just leave out the charge pump parts (the green ones on the BOM), and add a jumper across the switch pads shown in RED above. If you're adding a charge pump and want the circuit to run at 18V all the time, add the YELLOW jumper instead. If you want to switch between 9V-18V, add a SPDT toggle switch in the VOLTS pads.



# More / Less Bass Mods

There's a spot for an extra cap - C12. Use this in conjunction with the BASS switch (SPDT) to add or take away some bass response from the circuit. There are no rules here - experiment with different values to find your ideal.

To increase the bass response you should add a cap with a bigger value than C2. To be honest it'll start getting a bit woolly. A far more useful mod is to decrease the bass. Drop the value below that of C2. Try 68n or even as low as 47n. You'll notice a big difference.

If you're sticking with the stock circuit just place a jumper on the BASS switch pads as shown on the previous page in blue.

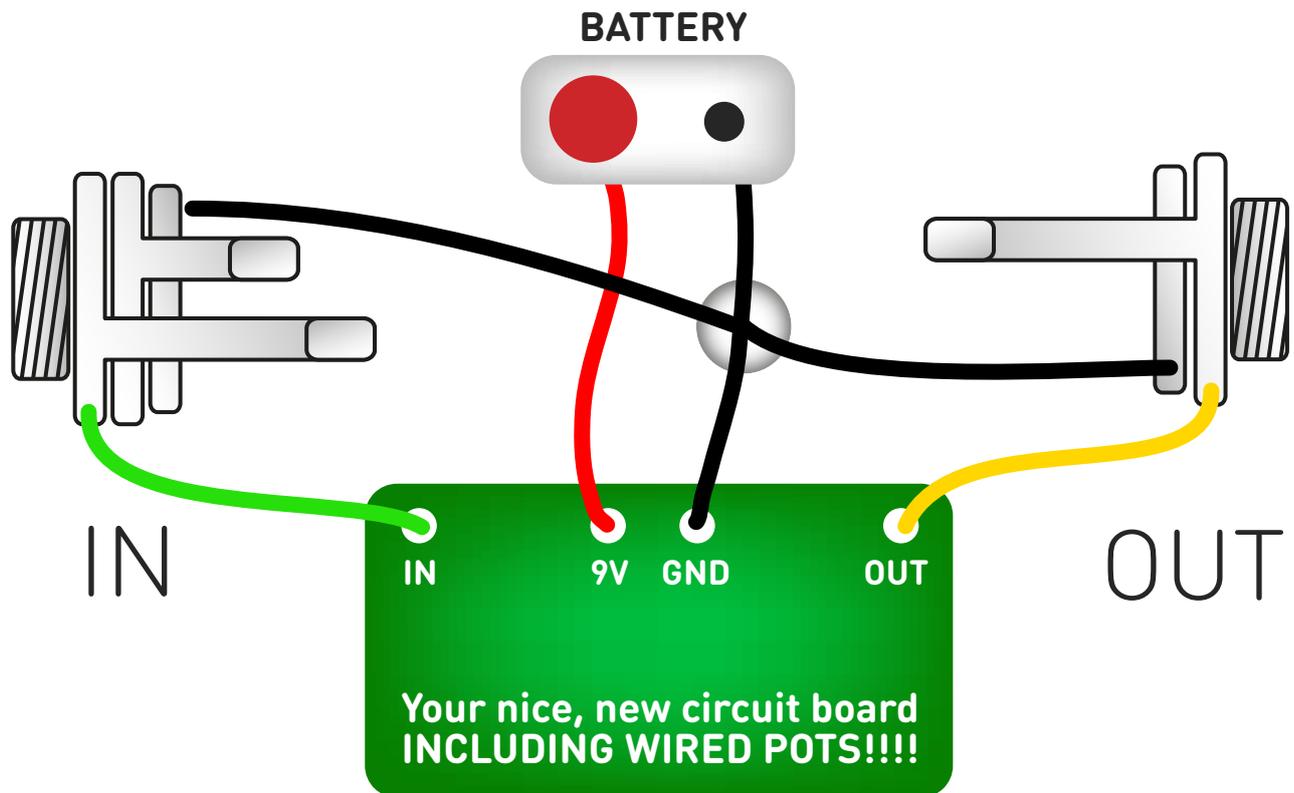
## HP/LP Switch

This is part of the original circuit and makes it very versatile.

High Peak = more distortion, more bottom end, more upper mids.

Low Peak = none of the above, less tonal colouration.

# 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.

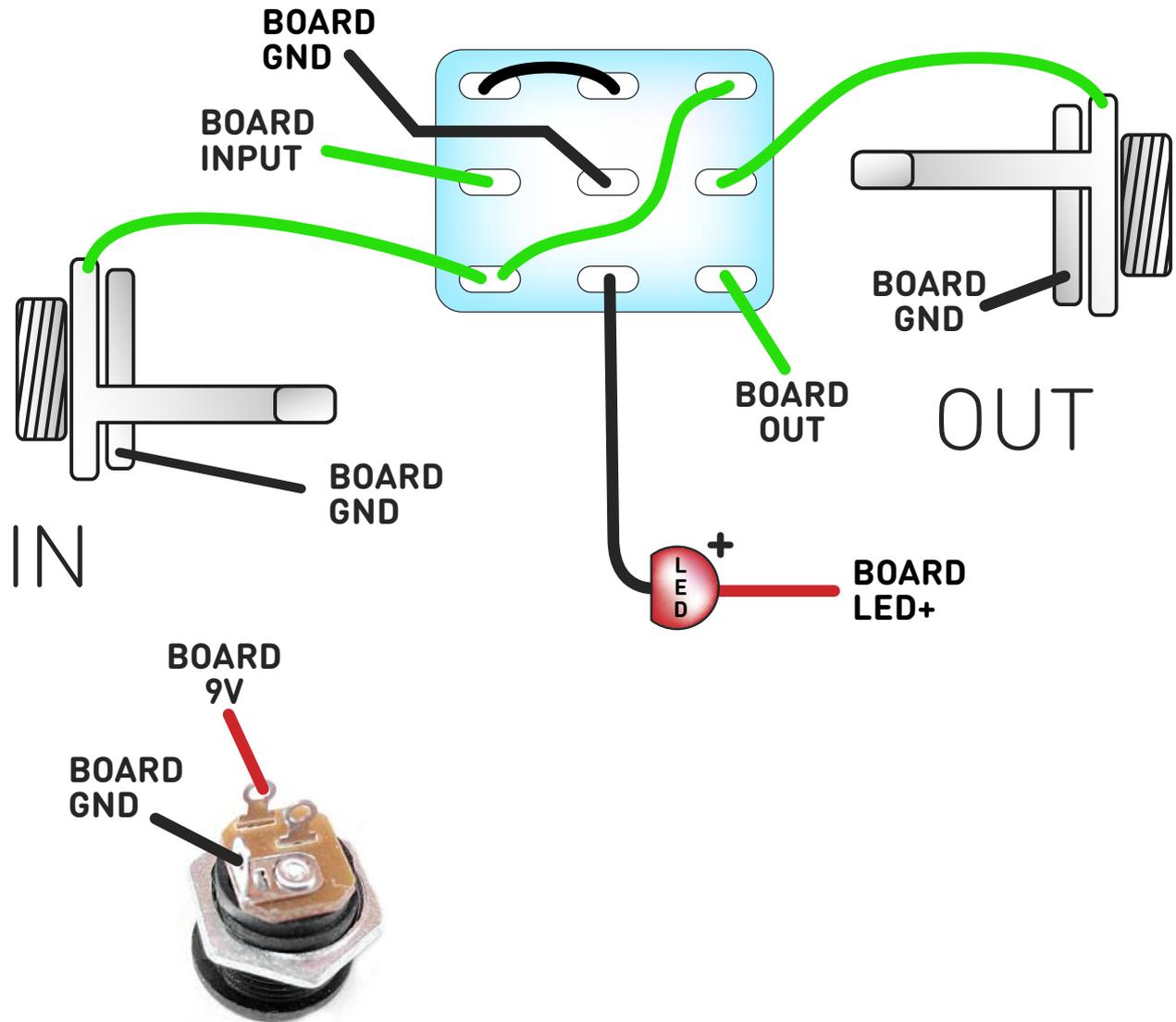
Solder some nice, long lengths of wire to the board connections for 9V, GND, IN and OUT. Connect IN and OUT to the jacks as shown. Connect all the GNDs together (twist them up and add a small amount of solder to tack it). Connect the battery + lead to the 9V wire, same method. Plug in. Go!

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)

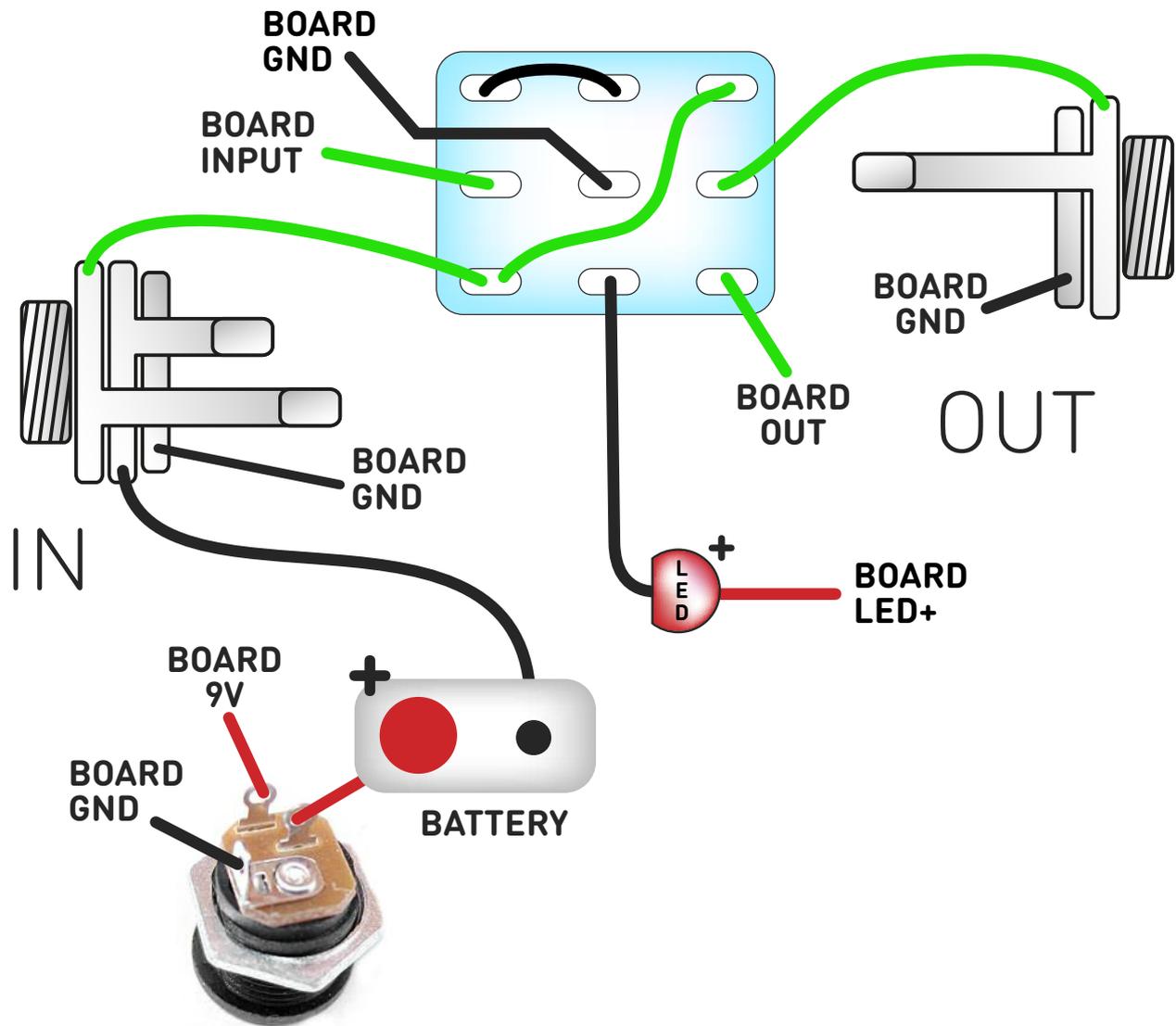


This circuit is standard, Negative GND. Your power supply should be Tip Negative / Sleeve Positive. That's the same as your standard pedals (Boss etc), and you can safely daisy-chain your supply to this pedal.

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.

# Drilling template

## Standard Switch

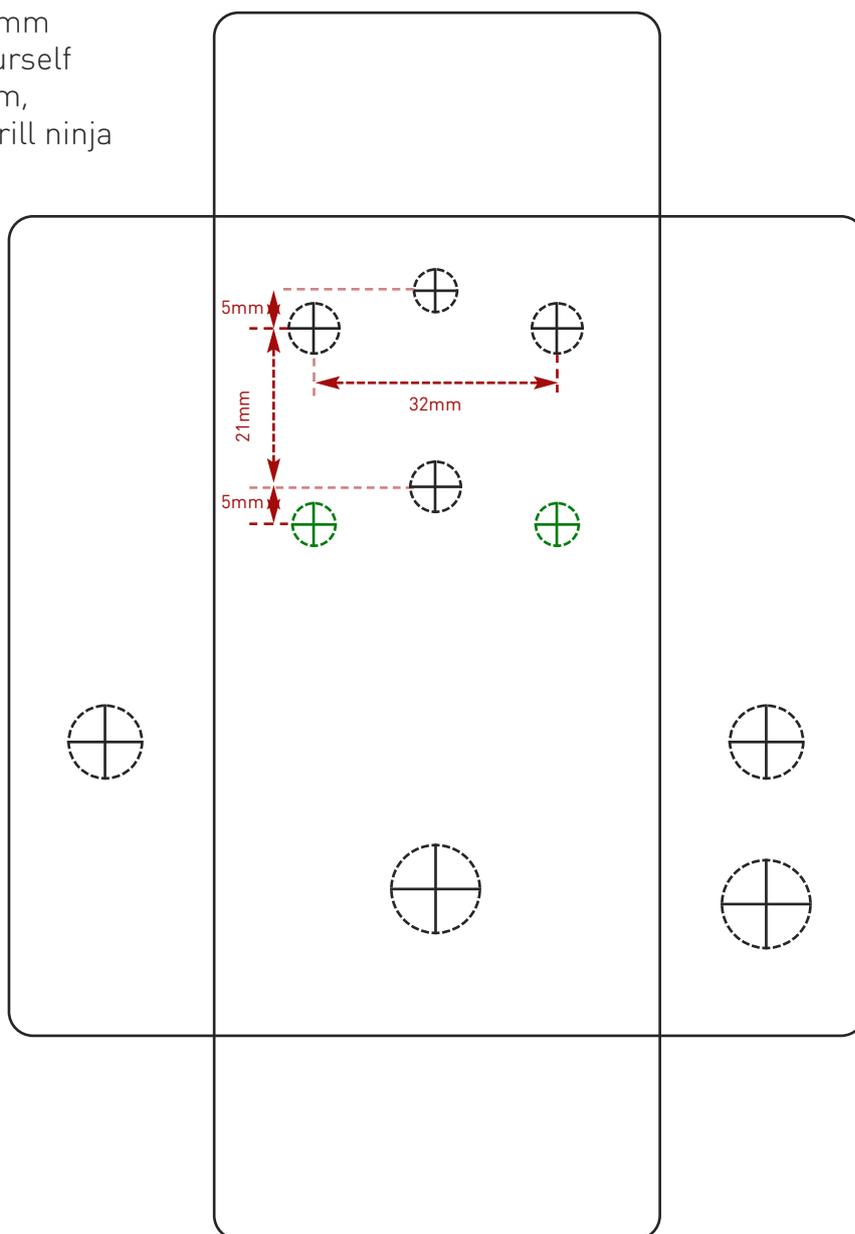
Hammond 1590B

60 x 111 x 31mm

Recommended drill sizes:

Pots	7mm
Jacks	10mm
Footswitch	12mm
DC Socket	12mm
Standard Toggle Switch	6mm

It's a good idea to drill the holes for the board-mounted parts 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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