

SpectreVerb

Spring Reverb tones, from
slapback to spacey ambient



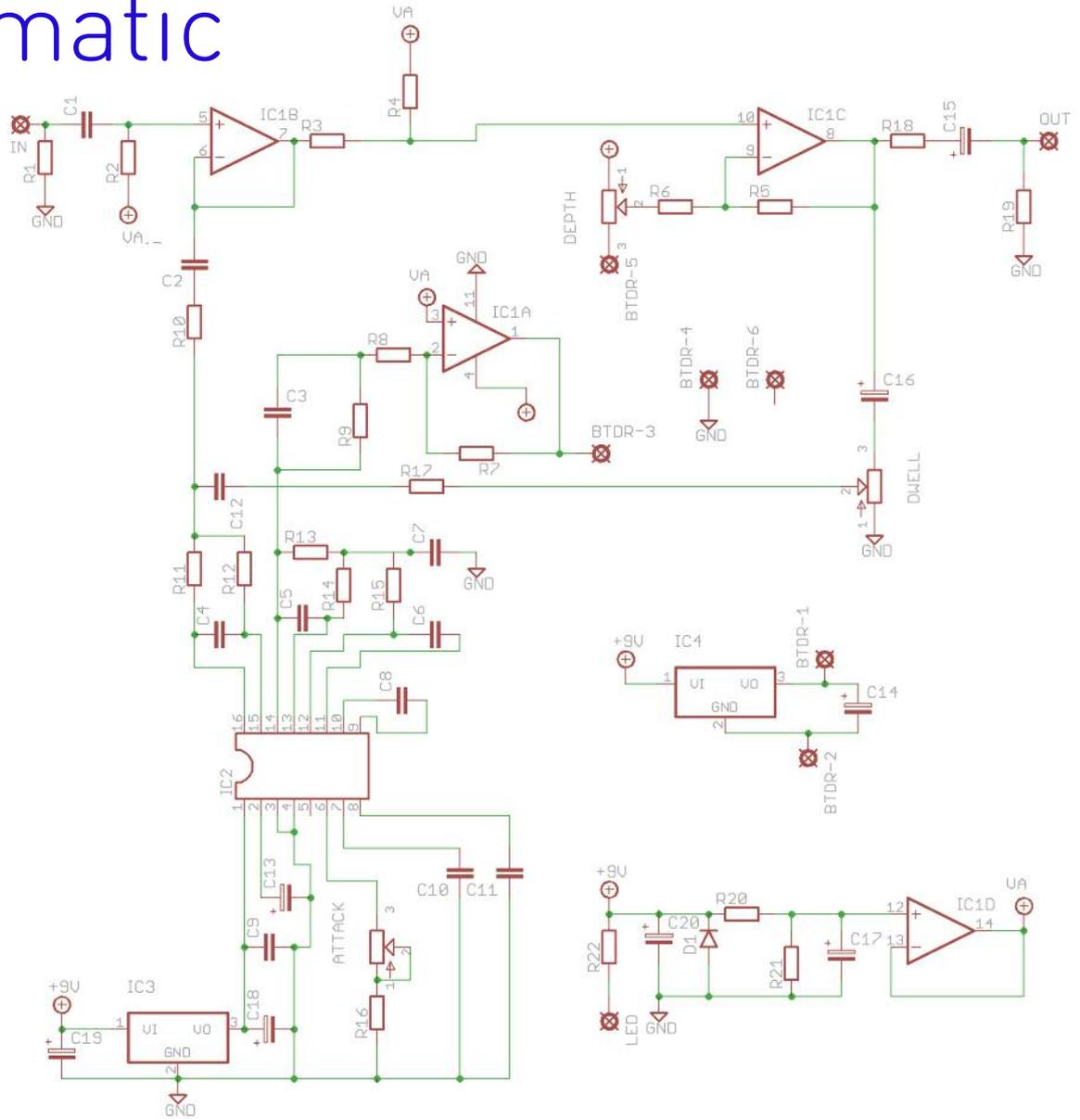
Schematic

BOM

R1	1M
R2	1M
R3	22K
R4	12K
R5	10K
R6	10K
R7	10K
R8	22K
R9	33K
R10	10K
R11	10K
R12	15K
R13	15K
R14	10K
R15	15K
R16	1K
R17	22K (12K)
R18	470R
R19	100K
R20	10K
R21	10K
R22	2K2 (CLR)

IC1	TL074
IC2	PT2399
IC3,4	78L05*
D1	1N4001
DEP	2KB
DWE	5KB (25KB)
ATT	10KB

C1	1u
C2	470n
C3	470n
C4	1n
C5	2n2
C6	100n
C7	10n
C8	100n
C9	100n
C10	100n
C11	100n
C12	470n
C13	10u elec
C14	10u elec
C15	1u elec
C16	2u2 elec
C17	10u elec
C18	100u elec
C19	100u elec
C20	100u elec



R17 and Dwell values in blue are for the out-there mega-dwell self-oscillation mod.

*see note on next page re placement of IC3 and 4.

The 5V power regulators, IC3 and 4, should be placed in the opposite orientation to how they're shown on the silkscreen. The image on the first page of this document is correct.

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, LED and regulators. 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).

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

The long leg (anode) of the electrolytic capacitors go into the square pads. The large 100u capacitors should lay flat over the other components as shown in the image on the first page. 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.

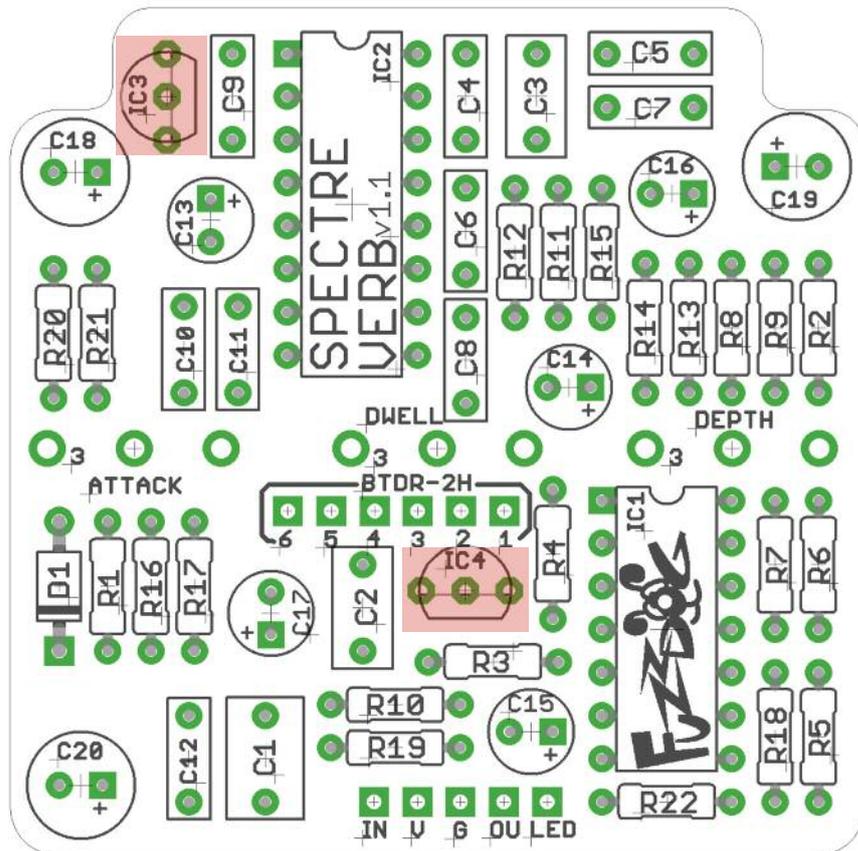
Pot mounts on the back side of the board. You can use vertical-mount pots or just wire up 'normal' ones. It's a good idea to place the pots in their holes in the enclosure when you're soldering them in place on the PCB. That way you know they're going to line up ok. Best way to do it is to solder a single 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 have protective plastic covers you should remove them, as there won't be space for them to sit side by side on the board. You'll have to keep a decent gap between the pots and the underside of the board. Place a strip of thick card between them and the board when soldering to keep them even.

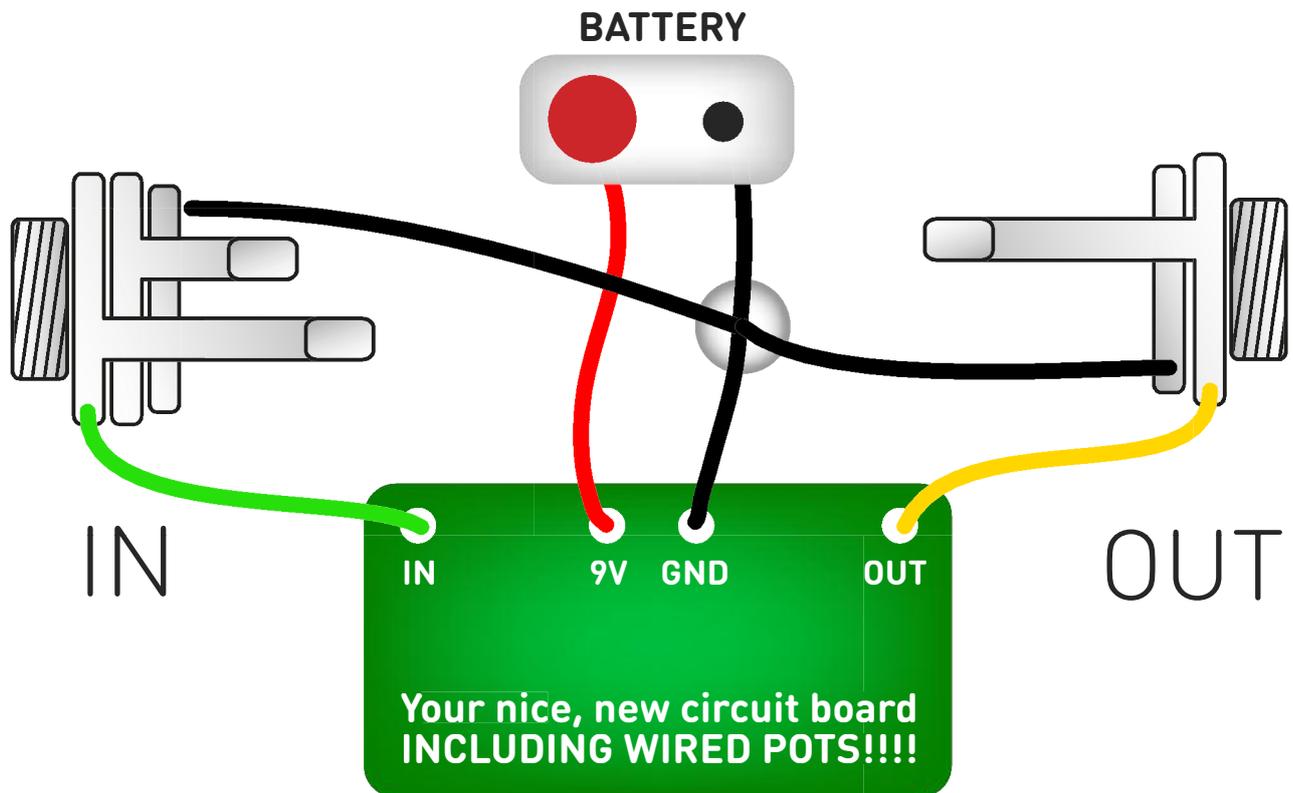
You should solder all other board-mounted components before you solder the pots. Once they're in place you'll have no access to much of the underside of the board. Solder the BTDR-2H brick last. Make sure it's quite close to the board or it will stop the pots sitting tight to the enclosure.

Pots should be placed as shown >>>

Swapping out the parts for the DWELL mod will change that control from subtle to extreme, with self-oscillations at the far right of the turn. Worth doing.



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.

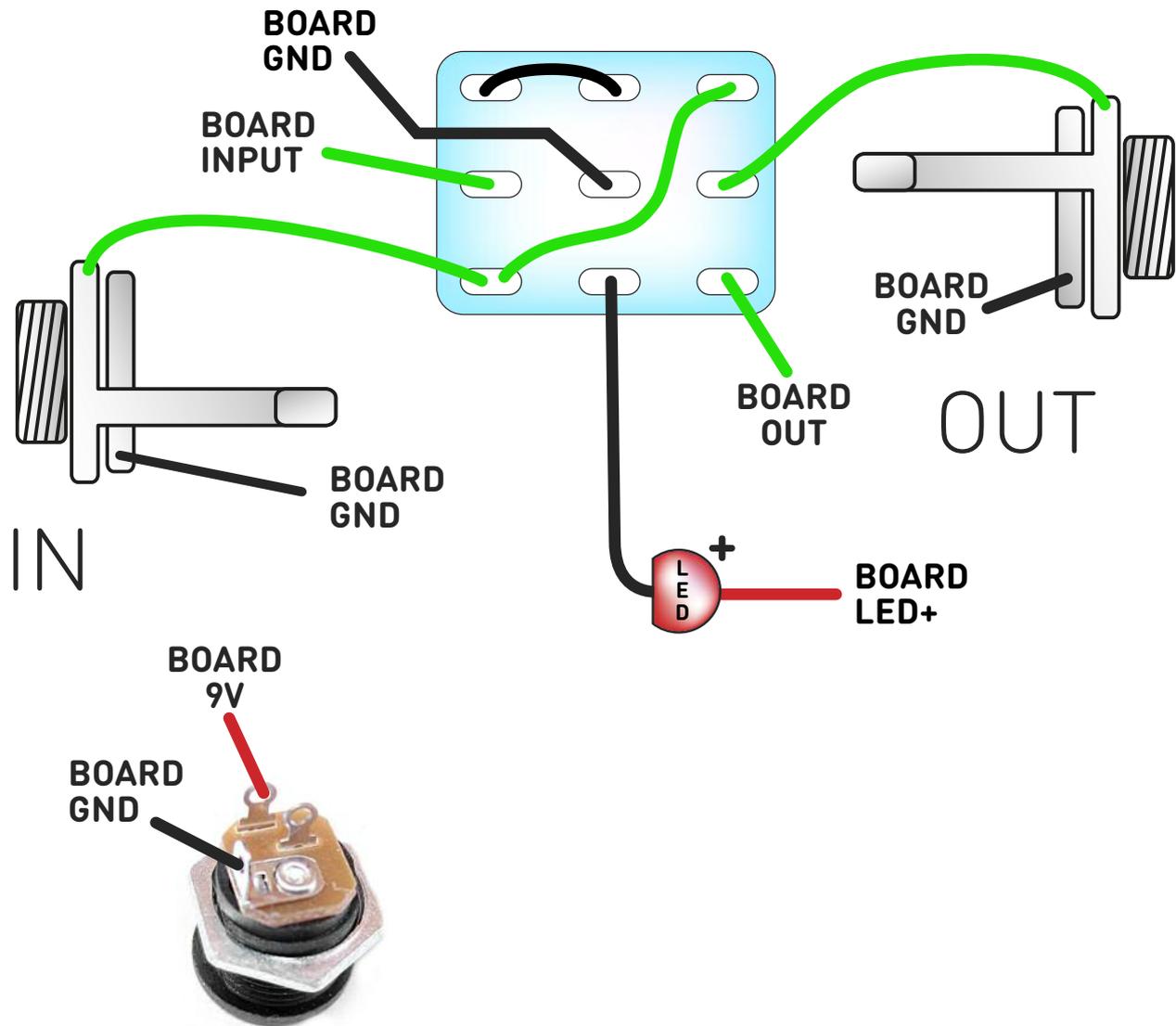
Solder some nice, long lengths of wire to the board connections for 9V, GND, IN and OUT. Connect IN and OUT to the jacks as shown. Connect all the GNDs together (twist them up and add a small amount of solder to tack it). Connect the battery + lead to the 9V wire, same method. Plug in. Go!

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)

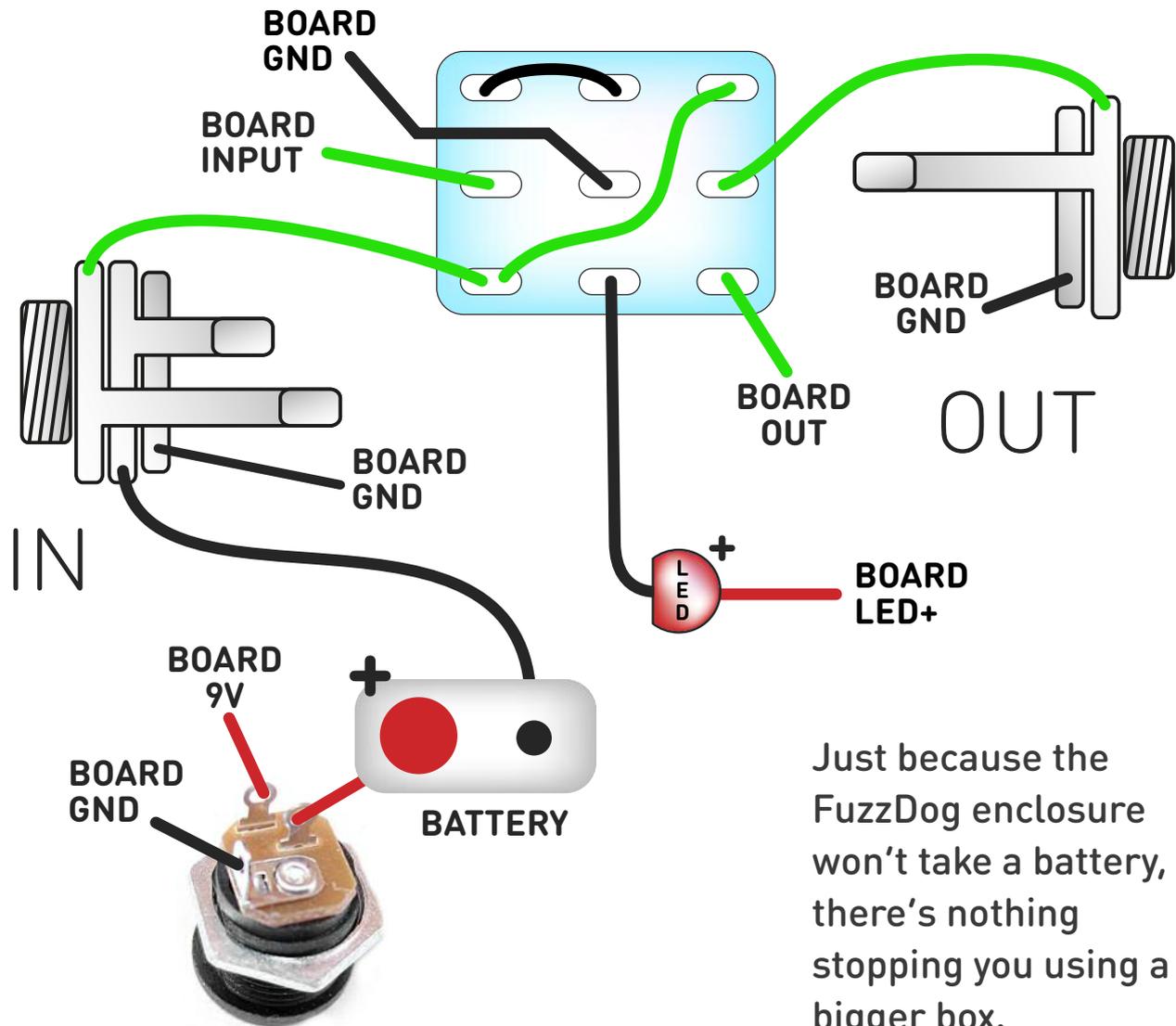


This circuit is standard, Negative GND. Your power supply should be Tip Negative / Sleeve Positive. That's the same as your standard pedals (Boss etc), and you can safely daisy-chain your supply to this pedal.

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.

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Drilling template

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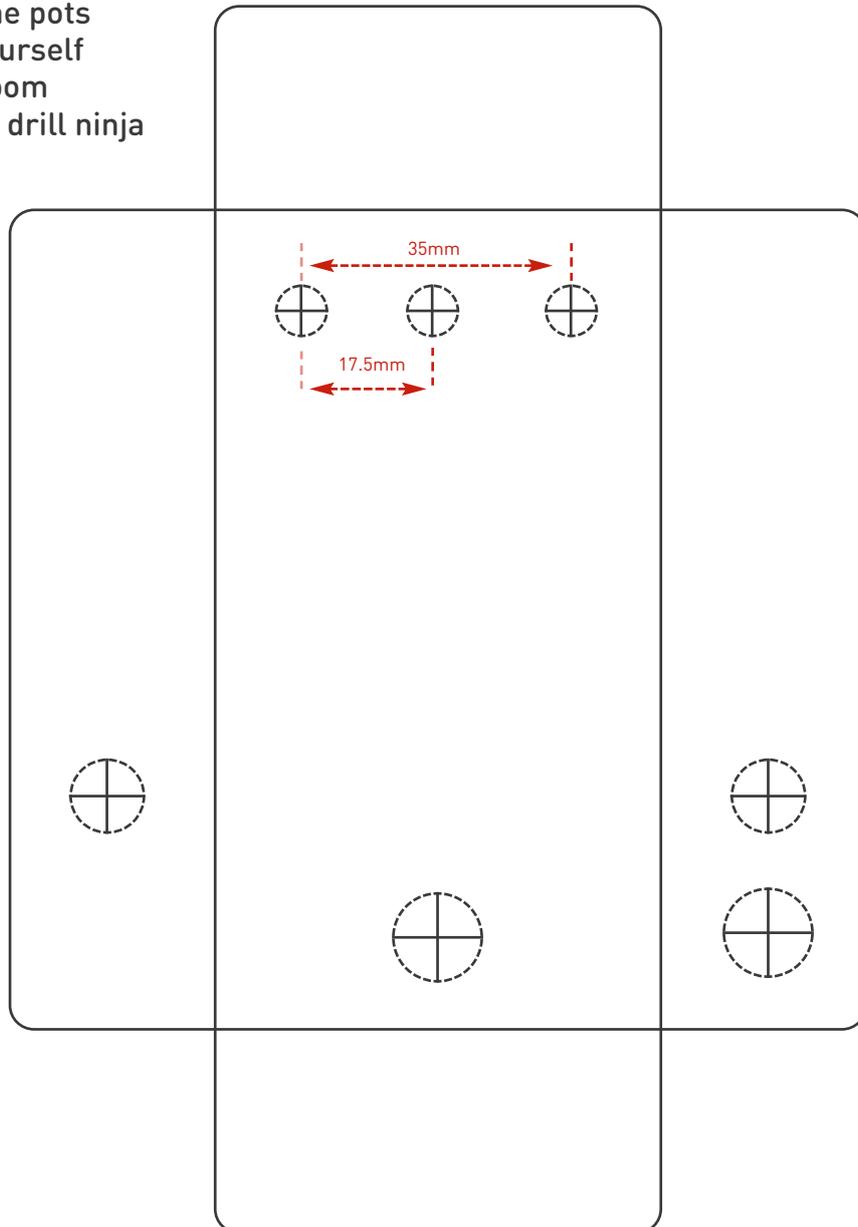
Hammond 1590B

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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