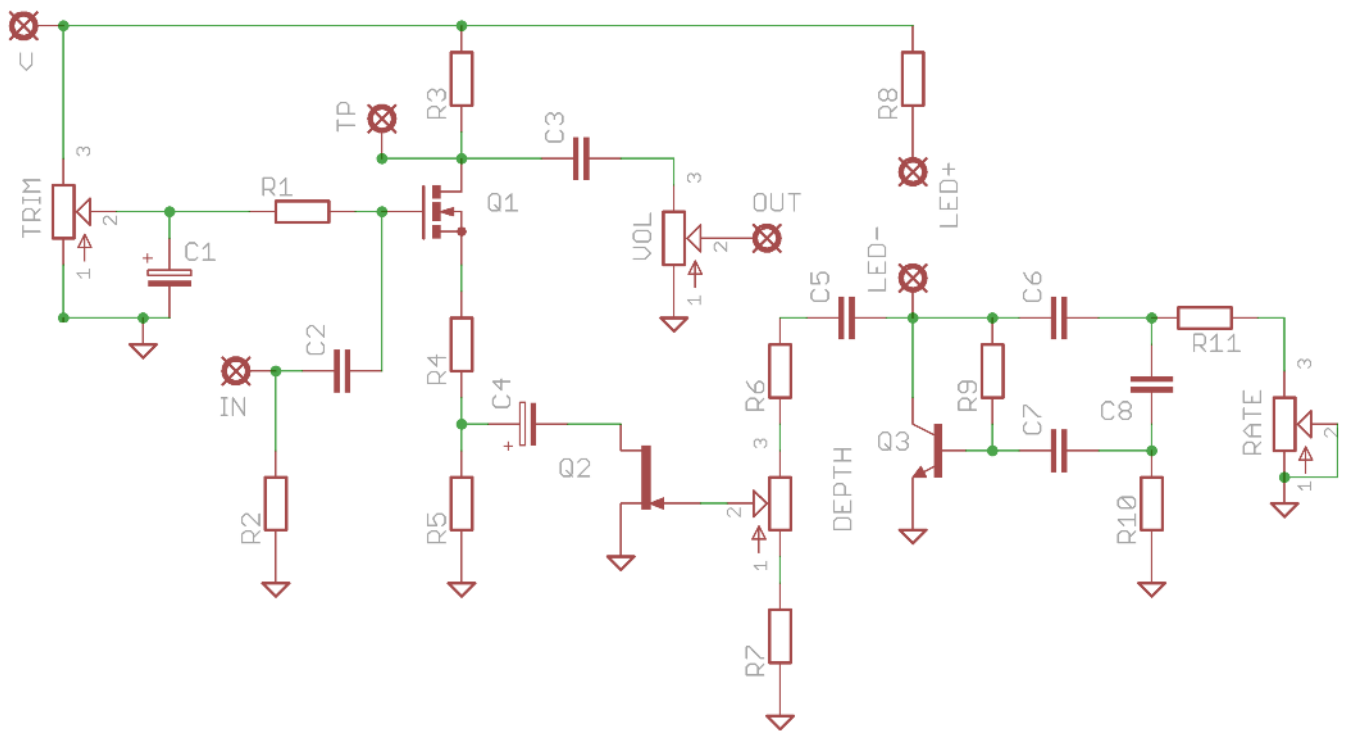


# EA Tremolo

Wobbling your tone in the  
nicest possible way



# Schematic



## BOM

\*10K if using a flashing LED.

15K if not, and place a jumper across the LED+ and - pads

R1	1M	C1	47u elec
R2	1M	C2	100n
R3	4K7	C3	470n
R4	180R	C4	22u elec
R5	1K2	C5	470n
R6	120K	C6	1u
R7	68K	C7	1u
R8	10K/15K*	C8	1u
R9	2M2	T1	100K trim
R10	15K	RATE	100KB
R11	1K	DEPTH	250KB
Q1	BS170	VOL	100KA
Q2	J201		
Q3	2N5088		

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. However, you can't use a daughterboard AND have a flashing LED.

Be very careful when soldering the 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

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

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.

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

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.

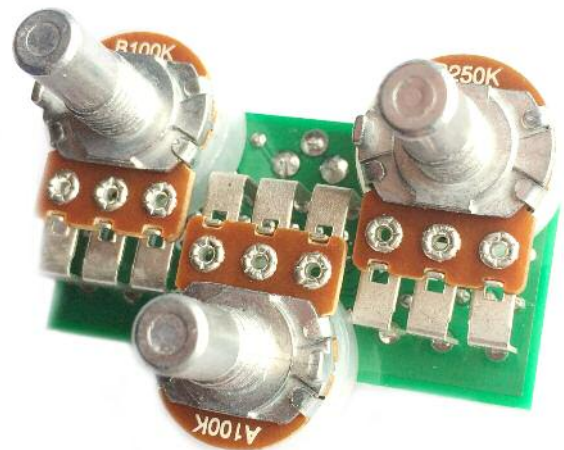
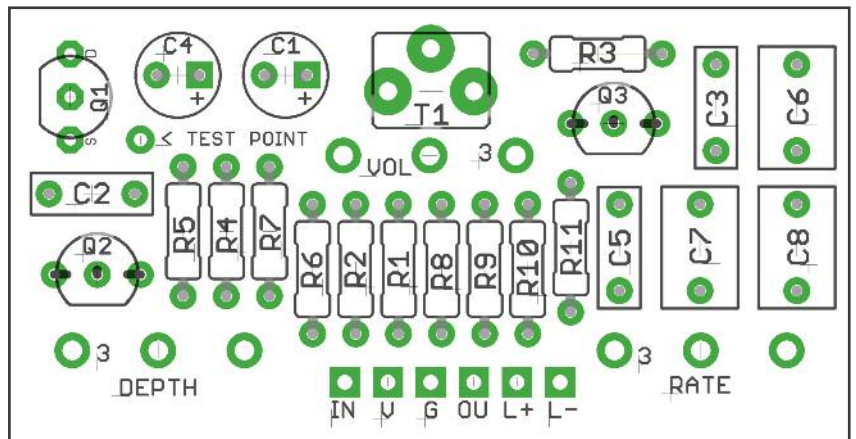
Pots mount on the back side of the board. You can use vertical-mount pots or just wire up 'normal' ones. It's a good idea to place the pots in their holes in the enclosure when you're soldering them in place on the PCB. That way you know they're going to line up ok. Best way to do it is to solder a single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

The bottom of your board should look like this >>>

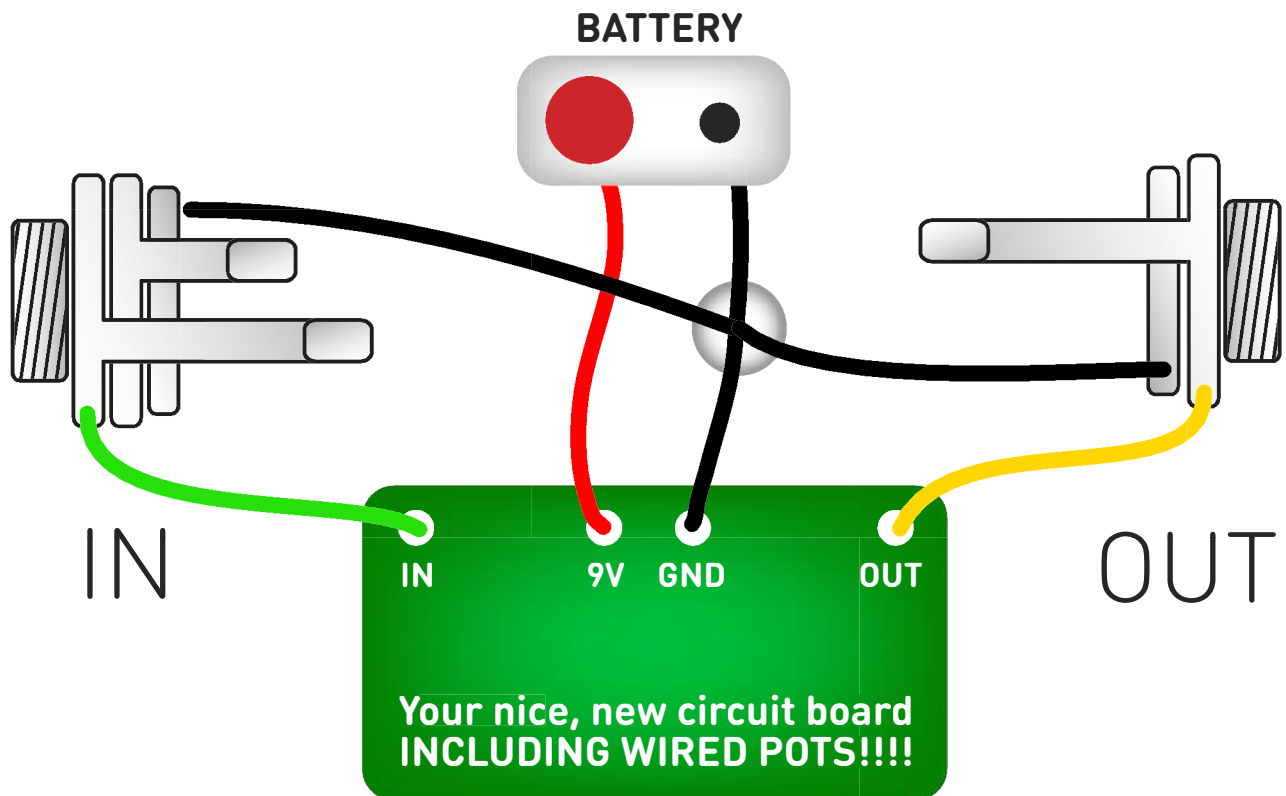
## FLASHING LED?

Yes, you can have the LED flashing to indicated the rate of the trem. Unfortunately it isn't possible to wire this configuration using the daughterboard. Follow the Flashing LED footswitch wiring diagram instead. If you want the flashing LED, use a 10K resistor for R8. If you want to go for a static LED, use a 15K for R8 and jumper the L+ and L- pads together.

Once your circuit is fully assembled you should adjust T1 until you get approx 4.5V at the test point. This is biasing Q1. If you don't have a multimeter (why not? they're real cheap) you can simply adjust T1 until you get a trem effect going.



# 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.

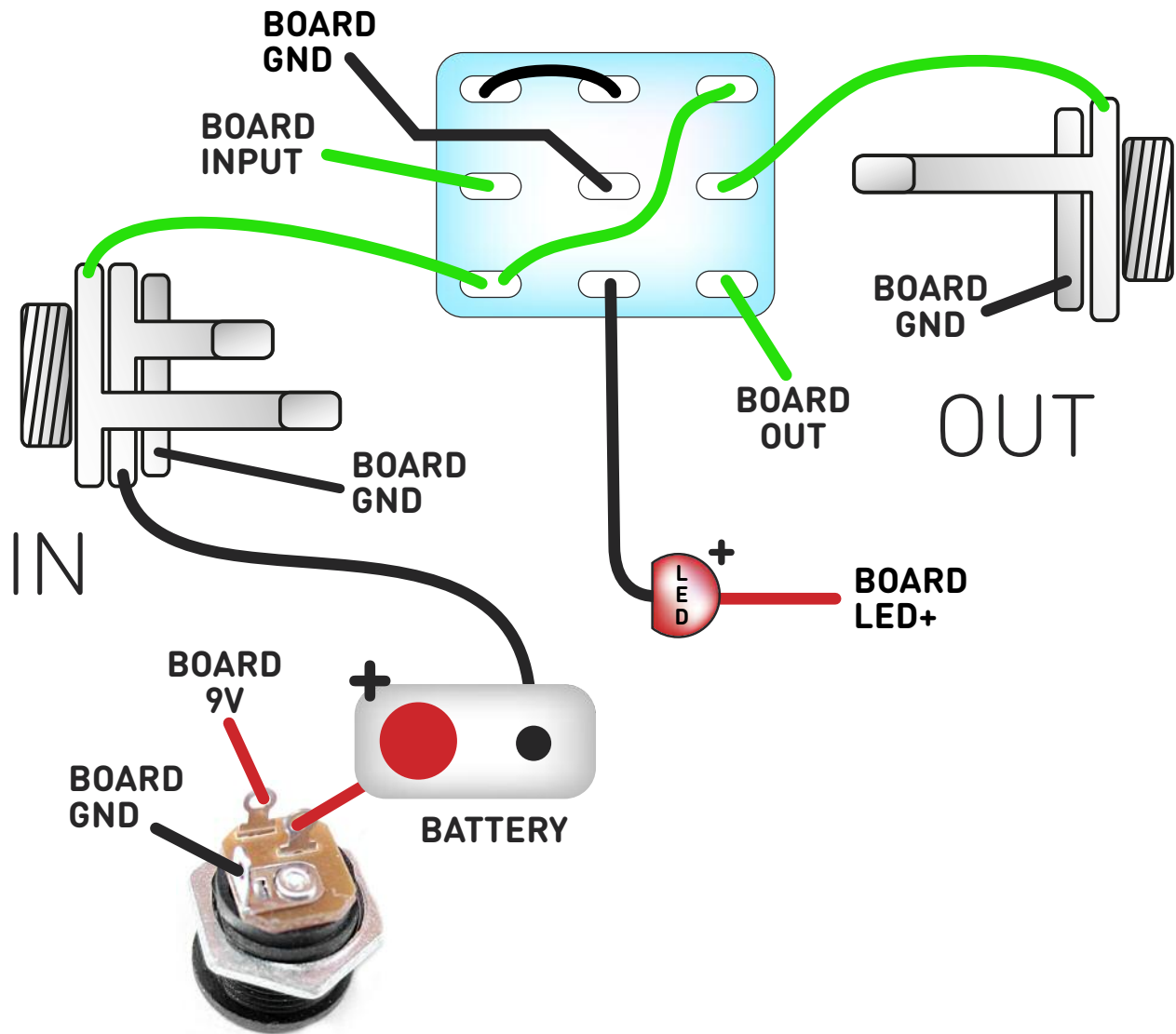
Solder some nice, long lengths of wire to the board connections for 9V, GND, IN and OUT. Connect IN and OUT to the jacks as shown. Connect all the GNDs together (twist them up and add a small amount of solder to tack it). Connect the battery + lead to the 9V wire, same method. Plug in. Go!

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)

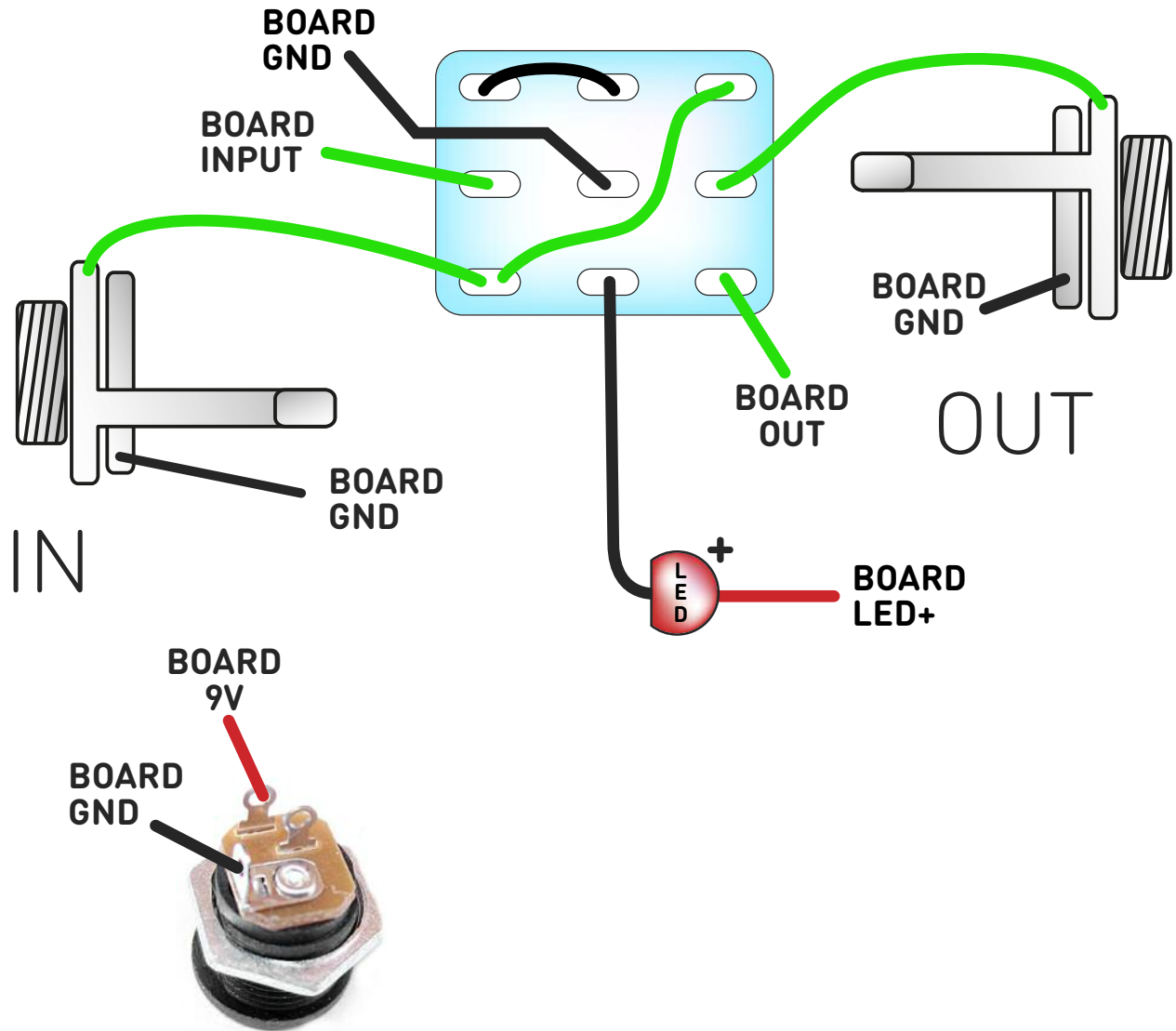


This circuit is standard, Negative GND. Your power supply should be Tip Negative / Sleeve Positive. That's the same as your standard pedals (Boss etc), and you can safely daisy-chain your supply to this pedal.

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

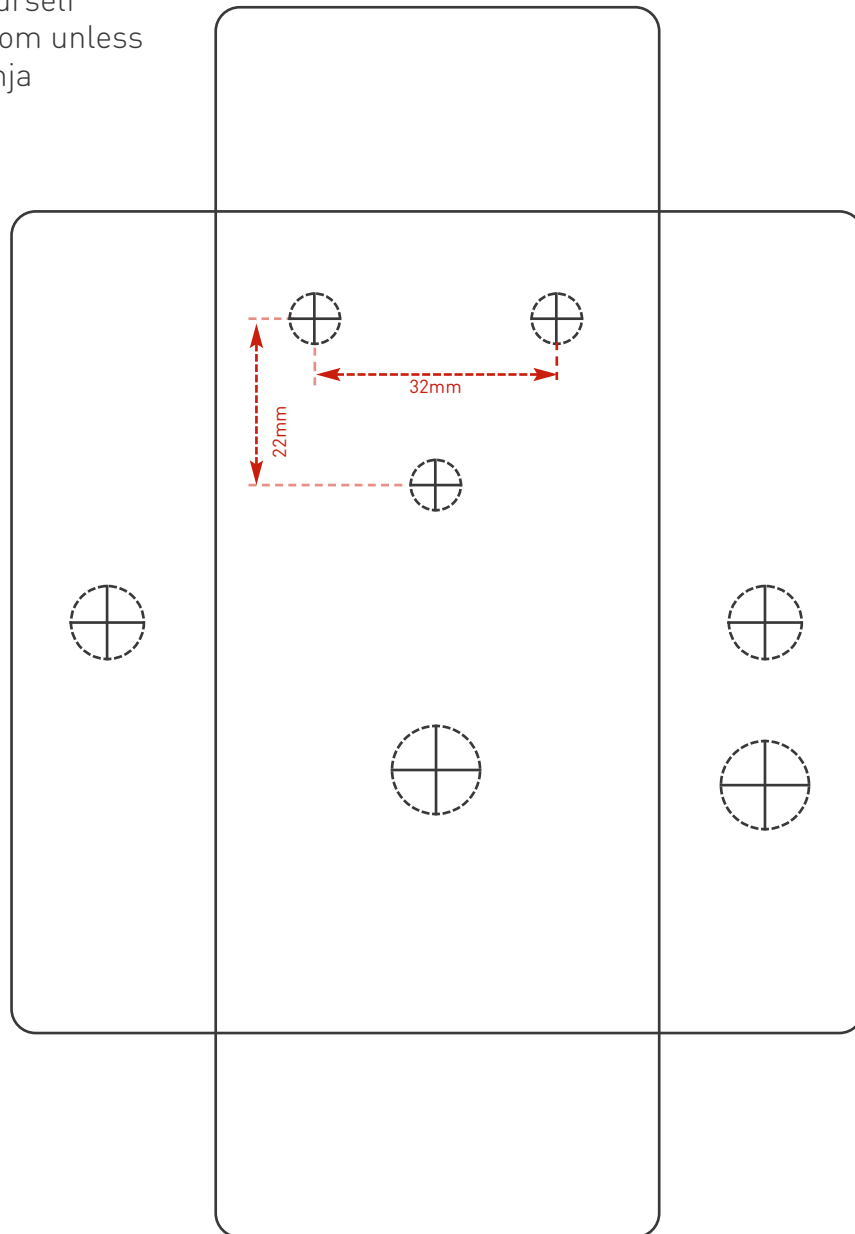
Recommended drill sizes:

Pots	7mm
Jacks	10mm
Footswitch	12mm
DC Socket	12mm
Rotary Switch	9mm

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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