



Quagmire Fuzz

Highly tweakable
Band Of Gypsies in a box



Important notes

If you're using any of our footswitch daughterboards, DOWNLOAD THE DAUGHTERBOARD DOCUMENT

- Download and read the appropriate build document for the daughterboard as well as this one BEFORE you start.
- DO NOT solder the supplied Current Limiting Resistor (CLR) to the main circuit board even if there is a place for it. This should be soldered to the footswitch daughterboard.

POWER SUPPLY

Unless otherwise stated in this document this circuit is designed to be powered with 9V DC.

COMPONENT SPECS

Unless otherwise stated in this document:

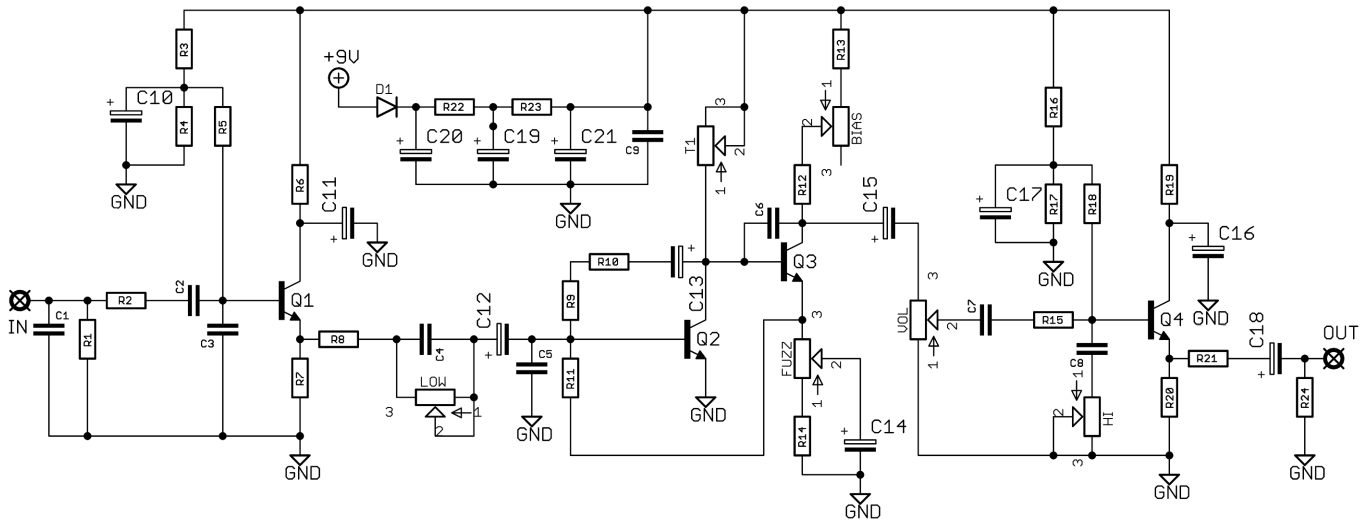
- Resistors should be 0.125W. You can use those with higher ratings but check the physical size of them.
- Electrolytics caps should be at least 25V for 9V circuits, 35V for 18V circuits. Again, check physical size if using higher ratings.

LAYOUT CONVENTIONS

Unless otherwise stated in this document, the following are used:

- **Electrolytic capacitors:**
Long leg (anode) to square pad.
- **Diodes/LEDs:**
Striped leg (cathode) to square pad. Short leg to square pad for LEDs.
- **ICs:**
Square pad indicates pin 1.

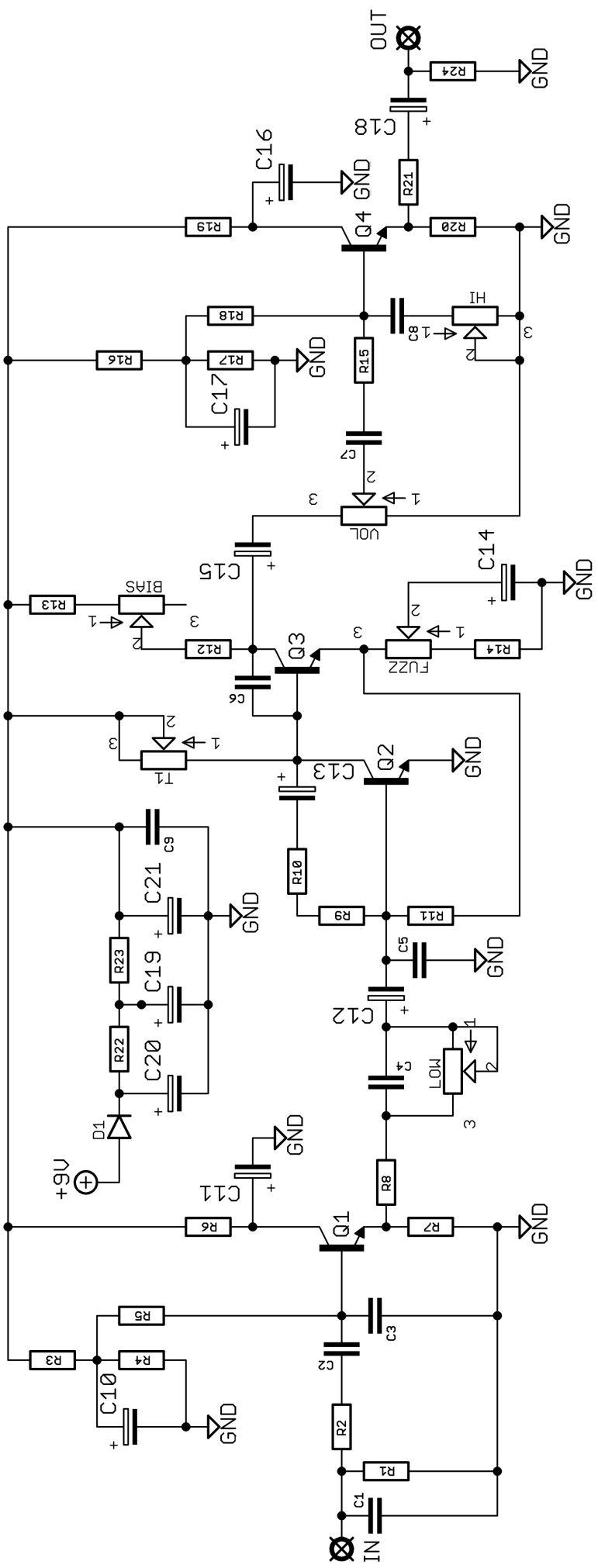
Schematic + BOM

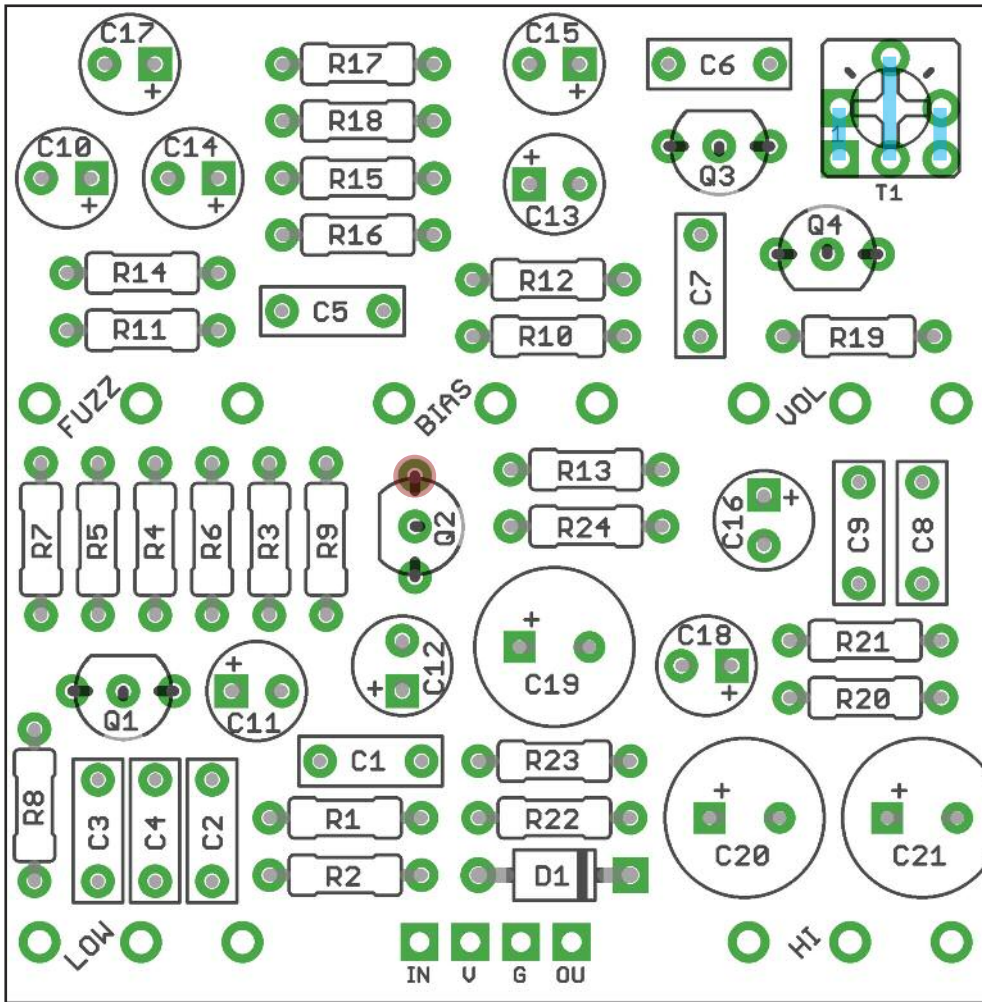


R1	1M	C1	100p	D1	1N5817
R2	68K	C2	100n	Q1-4	BC549C
R3	22K	C3	1n	BIAS	10KB
R4	47K	C4	4n7	FUZZ	1KC
R5	1M	C5	100p	HI	100KA
R6	1K	C6	220p	LOW	100KA
R7	10K	C7	100n	VOL	100KA
R8	10K	C8	3n3	T1	50K trim
R9	100K	C9	10n		
R10	100K	C10	22u elec		
R11	100K	C11	22u elec		
R12	15R*	C12	22u elec		
R13	1K	C13	22u elec		
R14	220R	C14	22u elec		
R15	68K	C15	22u elec		
R16	22K	C16	22u elec		
R17	47K	C17	22u elec		
R18	1M	C18	22u elec		
R19	1K	C19	220u elec**		
R20	10K	C20	220u elec**		
R21	1K	C21	220u elec**		
R22	220R				
R23	220R				
R24	100K				

*Absolutely not critical. 12R in the original, but you'll not notice any difference with any value 10-47R in here.

**That's a ludicrous amount of filtering. 100u will be more than enough, and you don't really need all three.





There are extra pads for T1 to allow different types of trimmer to be used. As long as one leg goes into each column as shown here you're good.

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. Check the separate daughterboard wiring document for details.

Be very careful when soldering the diodes 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).

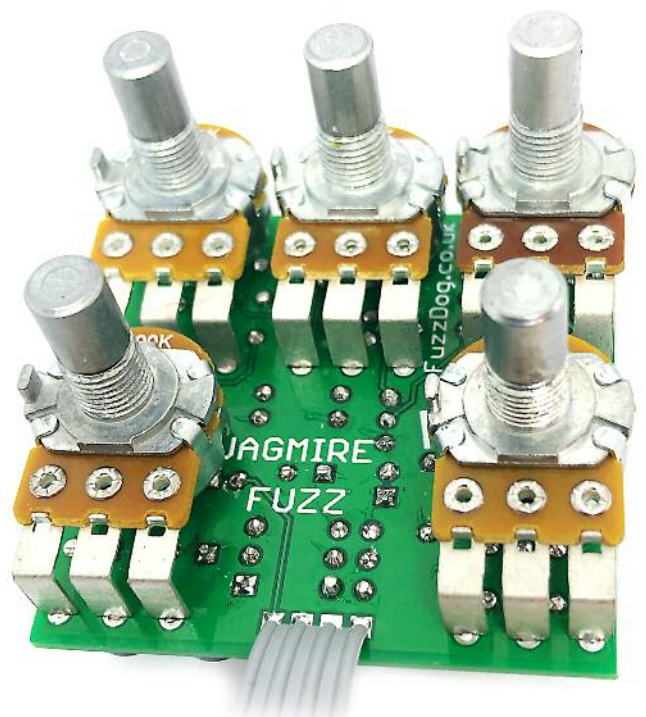
Snap the small metal tag off the pots so they can be mounted flush in the box.

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 board. Make sure your pots all line up nicely.

The best way to do that is to solder a single pin of each pot in place then melt and adjust if necessary before soldering in the other two pins. If your pots don't have protective plastic jackets ensure you leave a decent gap between the pot body and the PCB otherwise you risk shorting out the circuit.

BIASING

Adjust the trimmer until you get around 2V on the collector of Q2 (shown above). Test the range of sounds you get when adjusting the BIAS pot. Tweak the trimmer until you're happy. There's no fixed correct value.



Test the board!

Check the relevant daughterboard document for more info before you undertake this stage.

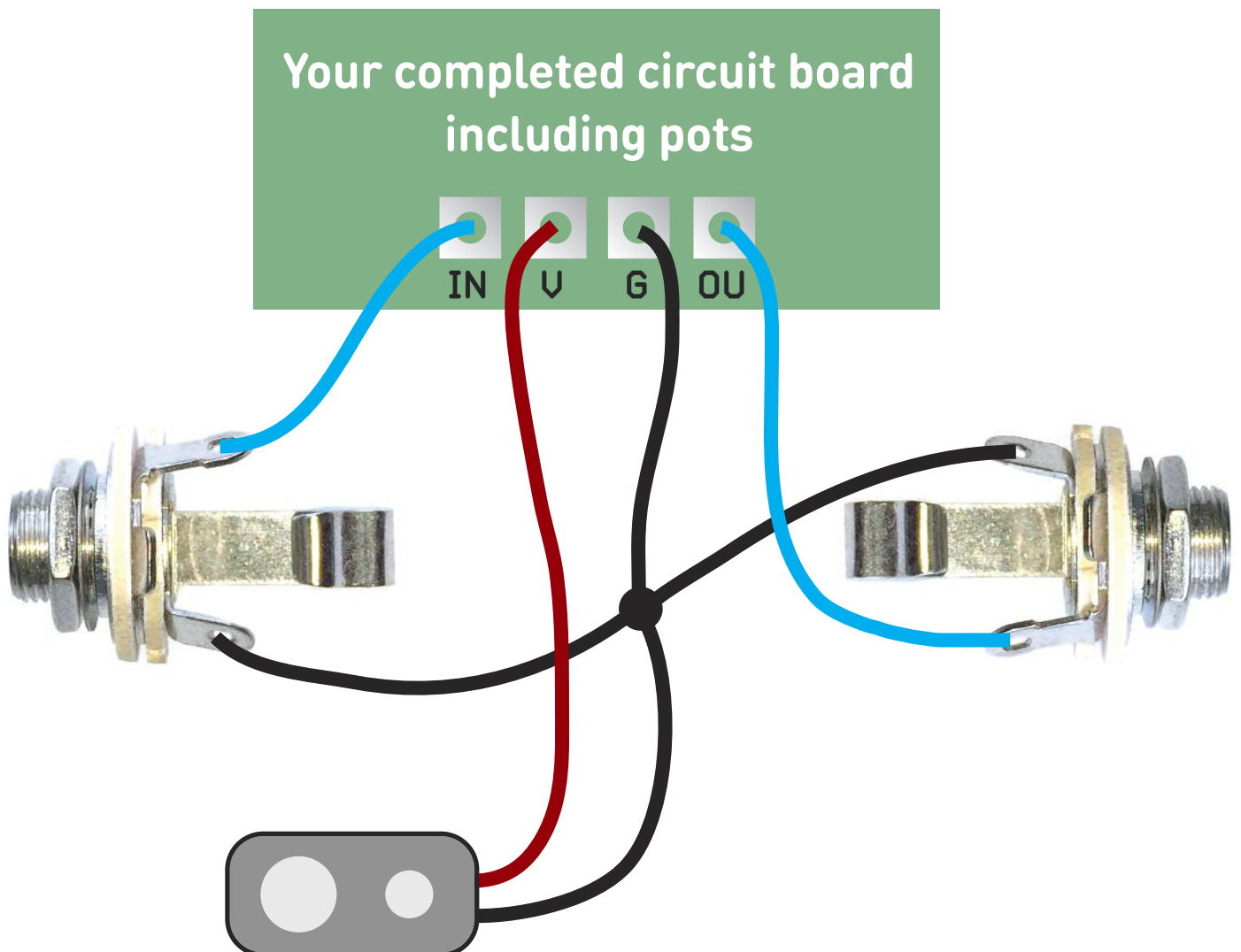
UNDER NO CIRCUMSTANCES will troubleshooting help be offered if you have skipped this stage. No exceptions.

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 you're using a ribbon cable you can tack the wires to the ends of that. It's a lot easier to take them off there than it is to desolder wires from the PCB pads.

If it works, carry 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.



Now's the time
to refer to the
daughterboard
document for
your chosen
bypass method.

Enjoy your pedal!

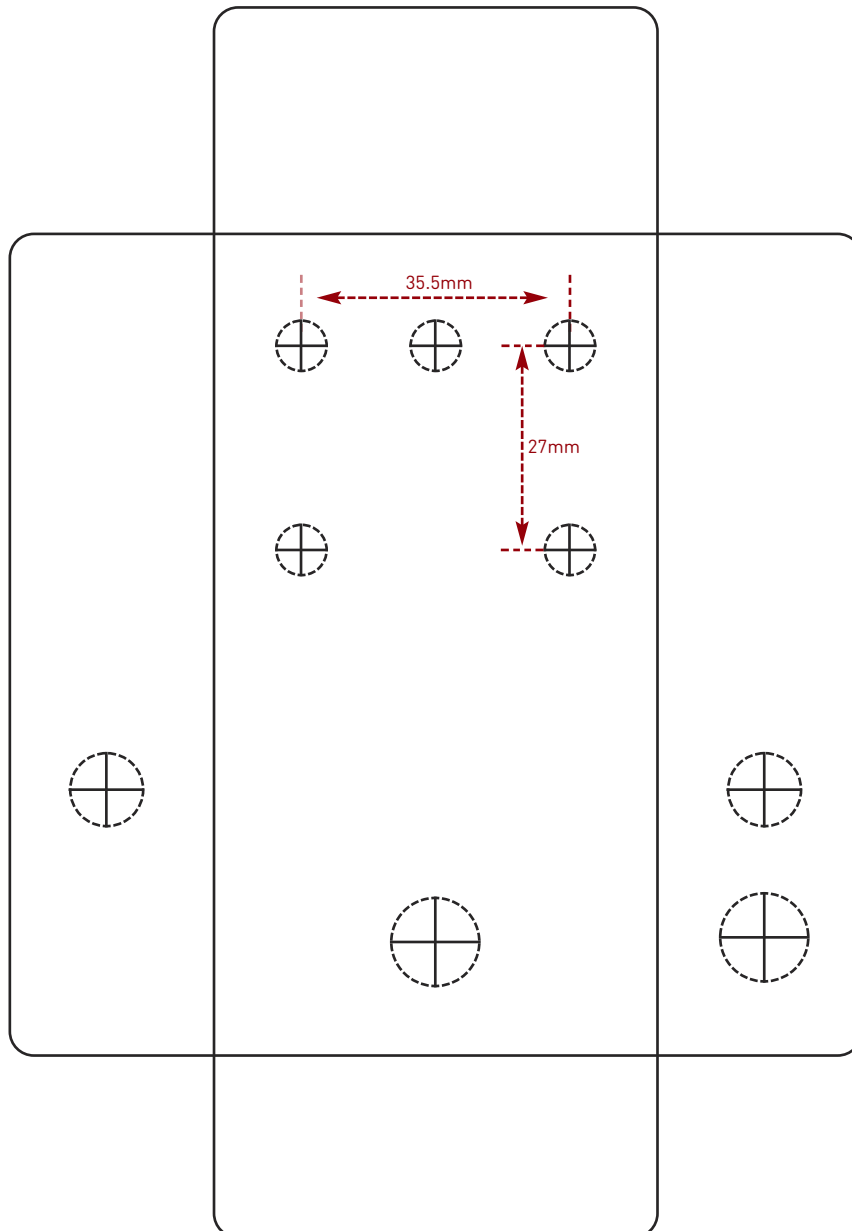
Drilling template without battery

Hammond 1590B - 60 x 111 x 31mm

It's a good idea to drill the pot and
toggle switch holes 1mm bigger if
you're board-mounting them.
Wiggle room = good!

Recommended drill sizes:

Pots	7mm
Jacks	10mm
Footswitch	12mm
DC Socket	12mm
Toggle switches	6mm



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.

FuzzDog.co.uk