

Milky Fuzz

60s Vox amp onboard drive -
White Album 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:

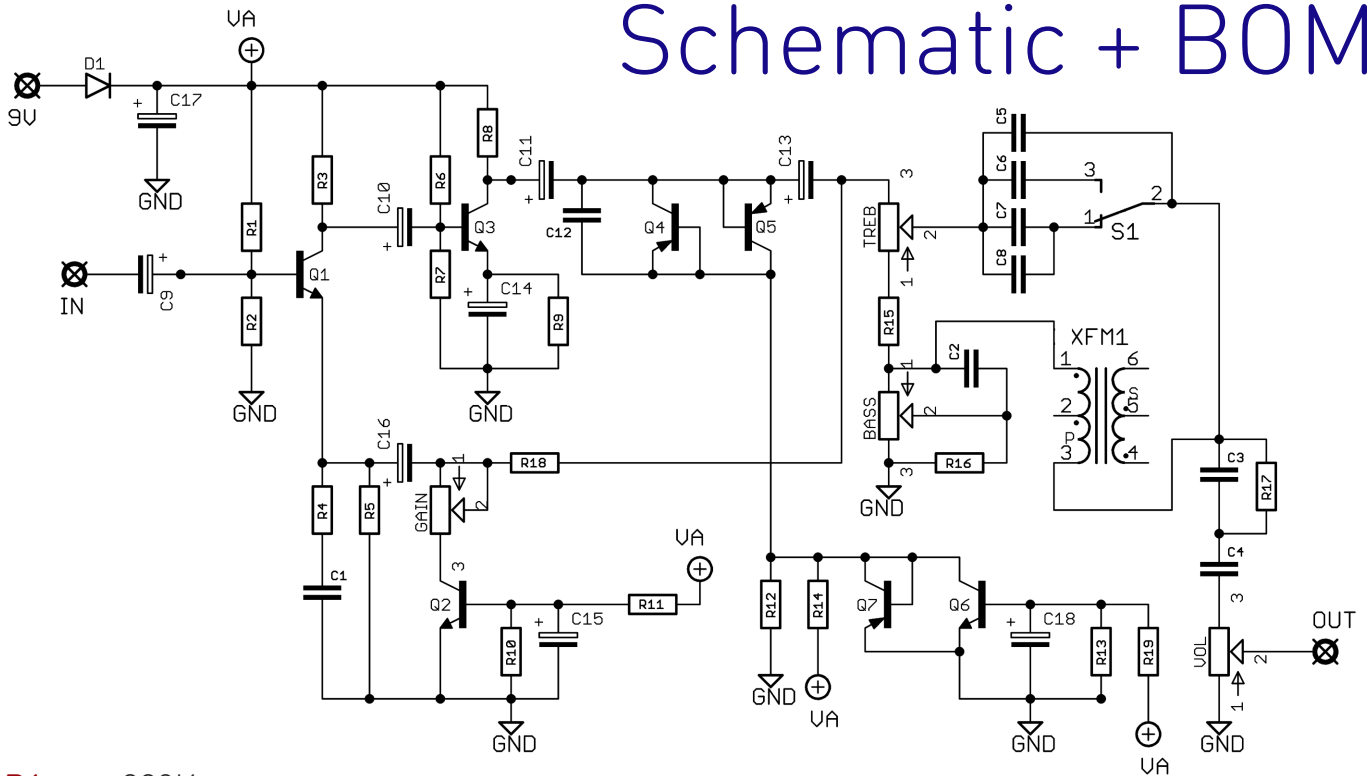
- Resistors should be 0.25W. You can use those with higher ratings but check the physical size of them.
- Electrolytics caps should be at least 25V for 9V circuits, 35V for 18V circuits. Again, check physical size if using higher ratings.

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.

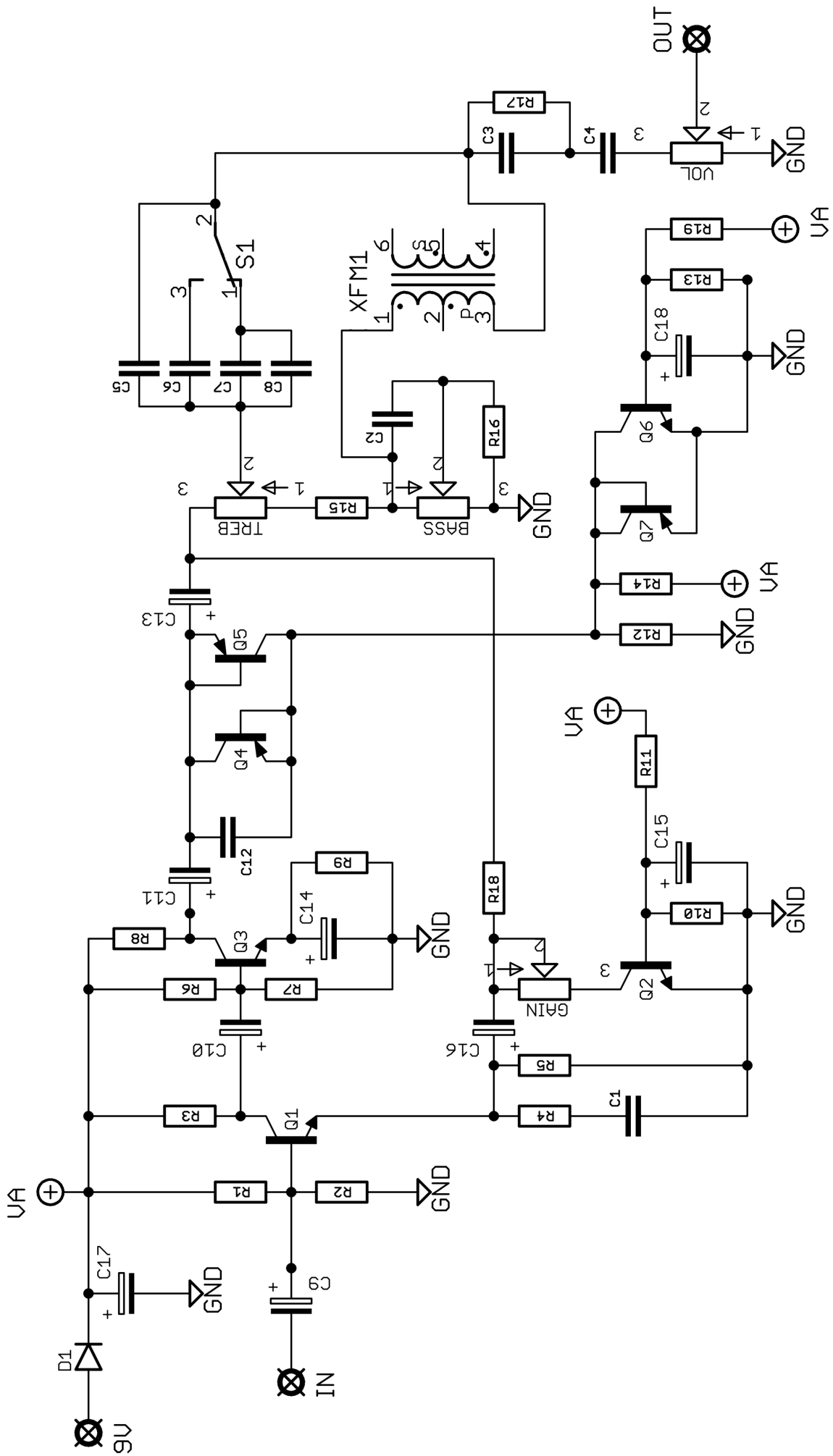
Schematic + BOM

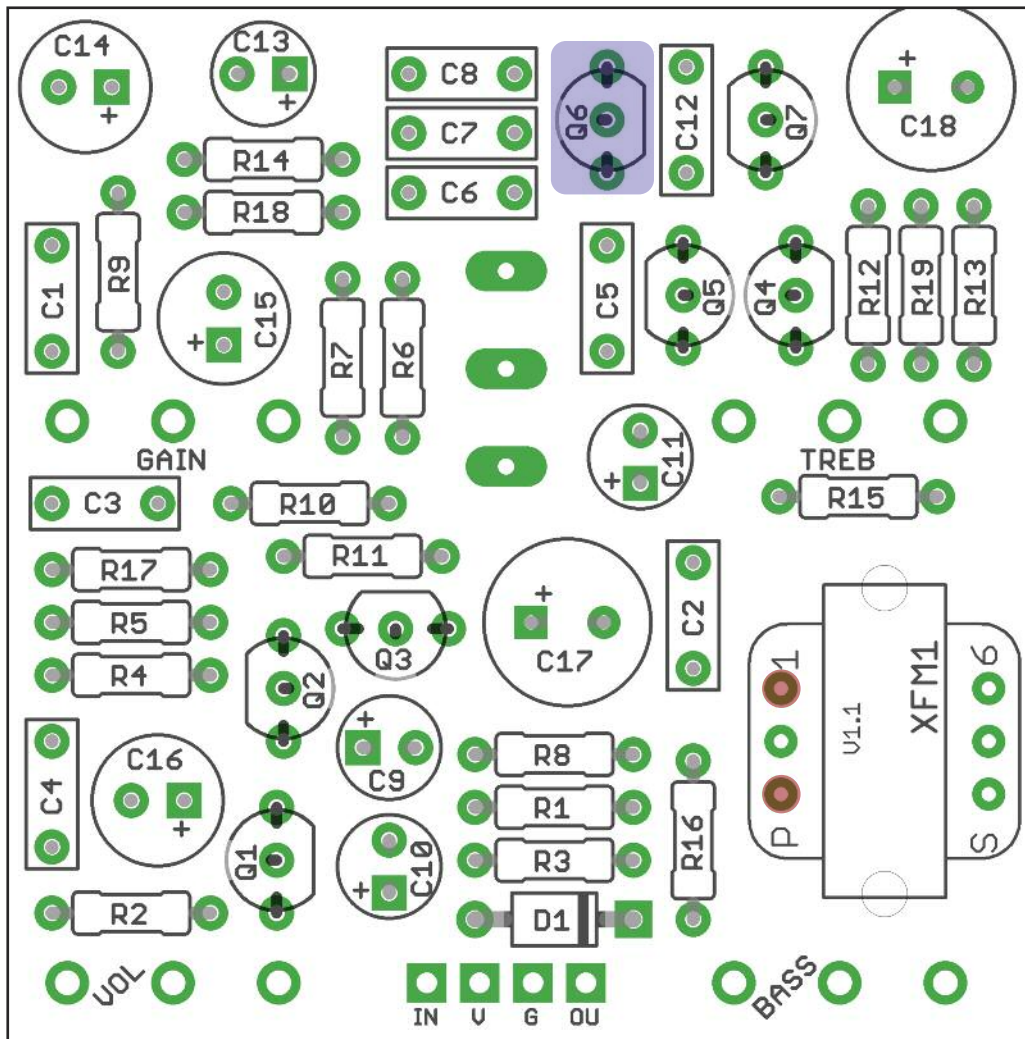


R1	220K	C1	68n	D1	1N5817
R2	100K	C2	100n	Q1-3	BC548
R3	18K	C3	10n	Q4-5	2N3906
R4	1K	C4	220n	Q6	BC548*
R5	10K	C5	47n	Q7	2N3906
R6	20K	C6	47n	BASS	10KA
R7	22K	C7	150n	GAIN	5KC
R8	470R	C8	22n	TREB	1KB
R9	330R	C9	10u elec	VOL	25KA
R10	10K	C10	10u elec	XFM1	42TL013**
R11	15K	C11	10u elec	S1	SPDT ON-OFF-ON
R12	1K5	C12	100n		
R13	47K	C13	10u elec		
R14	2K2	C14	47u elec		
R15	220R	C15	47u elec		
R16	220R	C16	47u elec		
R17	10K	C17	220u elec		
R18	18K	C18	220u elec		
R19	4K7				

*Q6 should be reversed compared to the silk screen on the PCB.

**Originally a 500mH inductor. If you can source one you can hack it into to two pads shown on page 5.





Don't forget to flip Q6

PCB layout ©2023 Pedal Parts Ltd.

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 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 and switches. 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 you have an inductor you need to connect it to the two pads marked in red above.



Test the board!

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

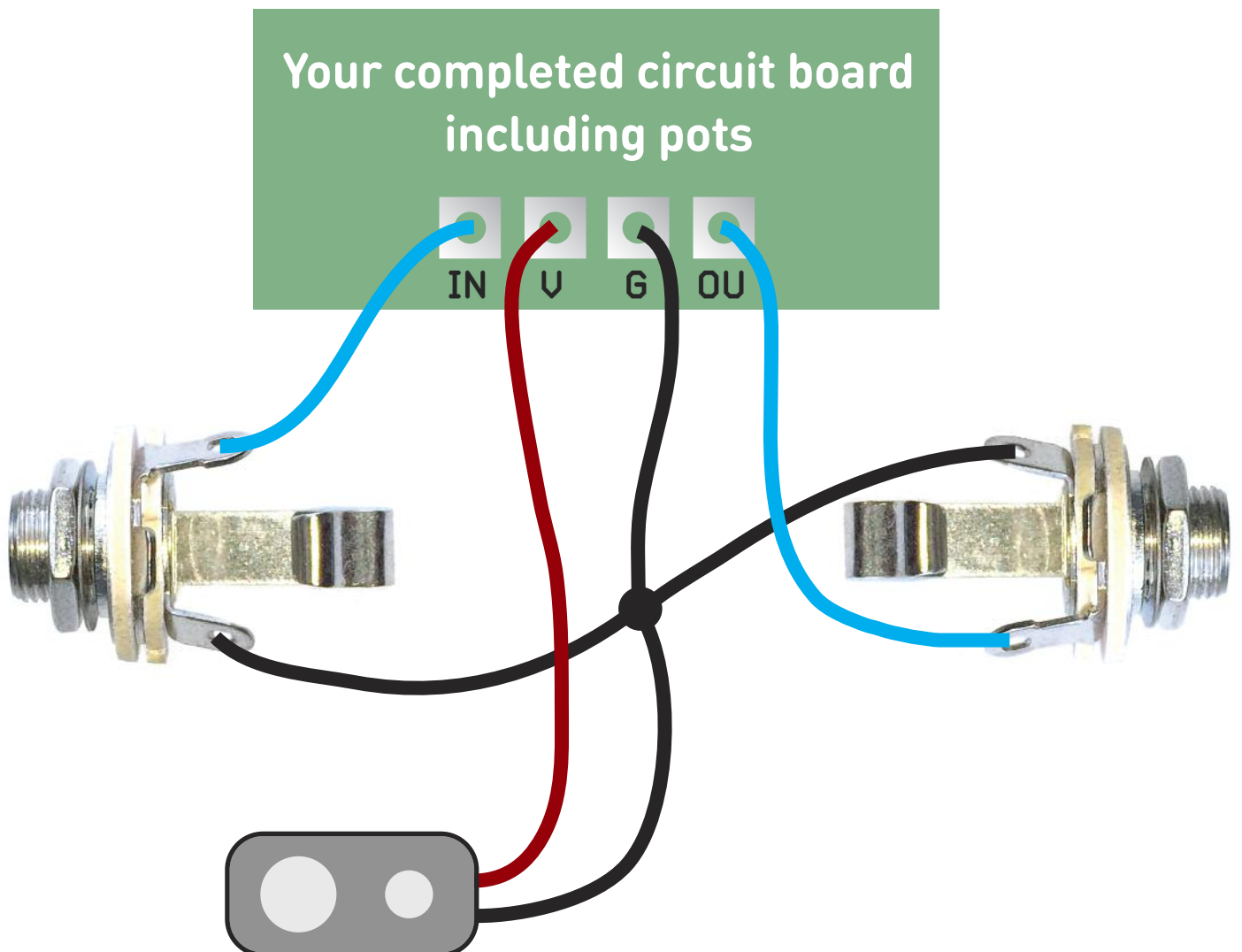
UNDER NO CIRCUMSTANCES will troubleshooting help be offered if you have skipped this stage. No exceptions.

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!

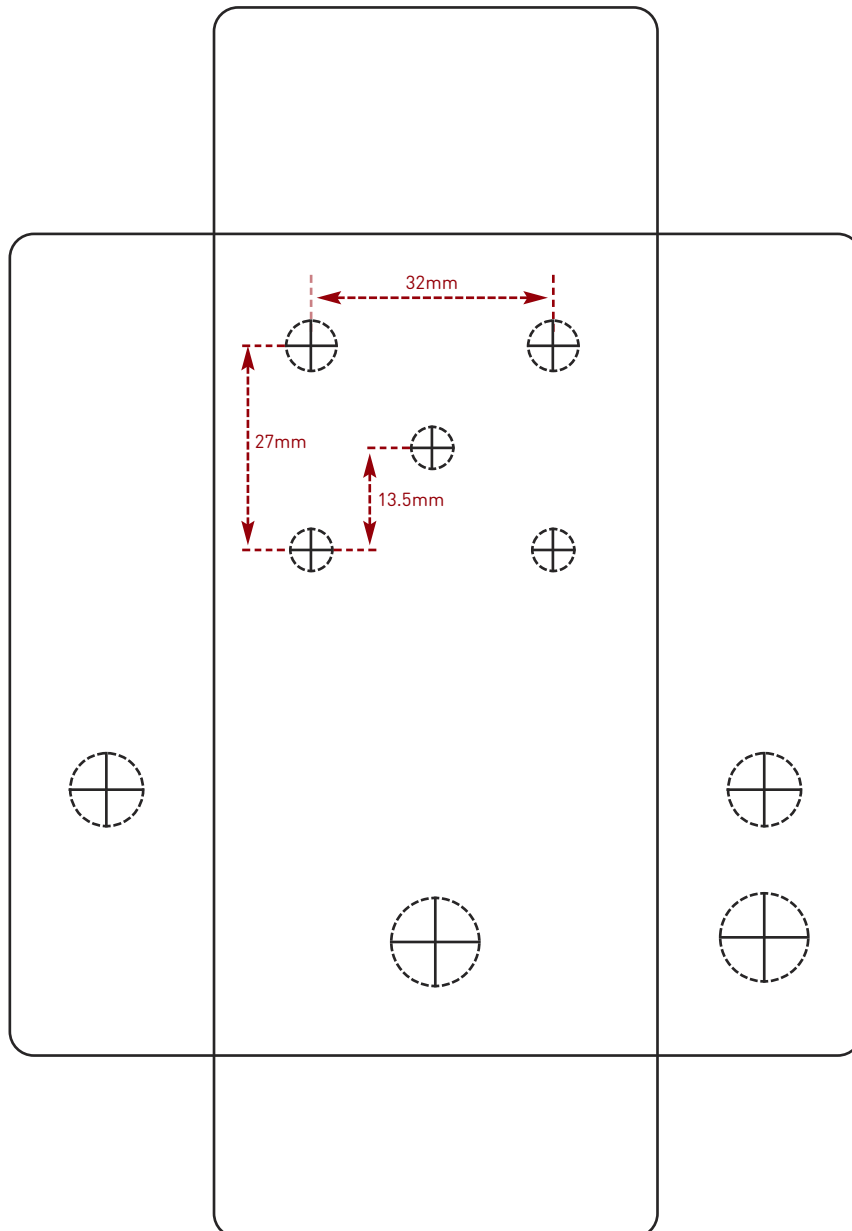
Drilling template without battery - side DC

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