

Supa-J

Bringing the Reeves Electro
fuzz to the masses



in collaboration with

REEVES
E L E C T R O N I C S

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:

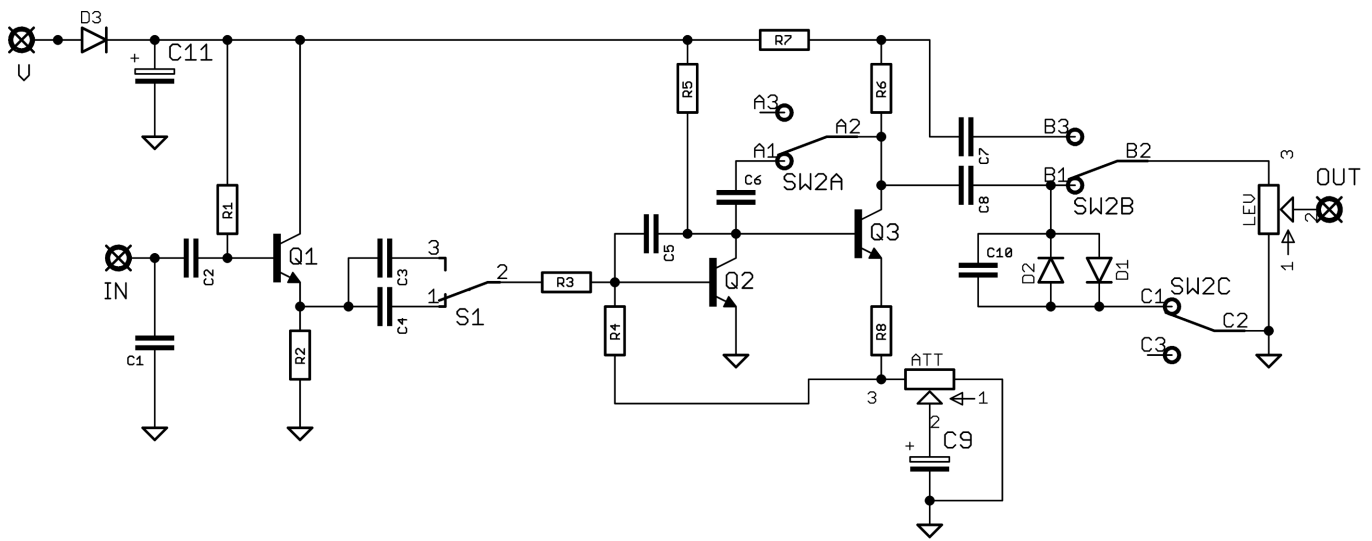
- Resistors should be 0.25W. You can use those with higher ratings but check the physical size of them.
- Electrolytics caps should be at least 25V for 9V circuits, 35V for 18V circuits. Again, check physical size if using higher ratings.

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

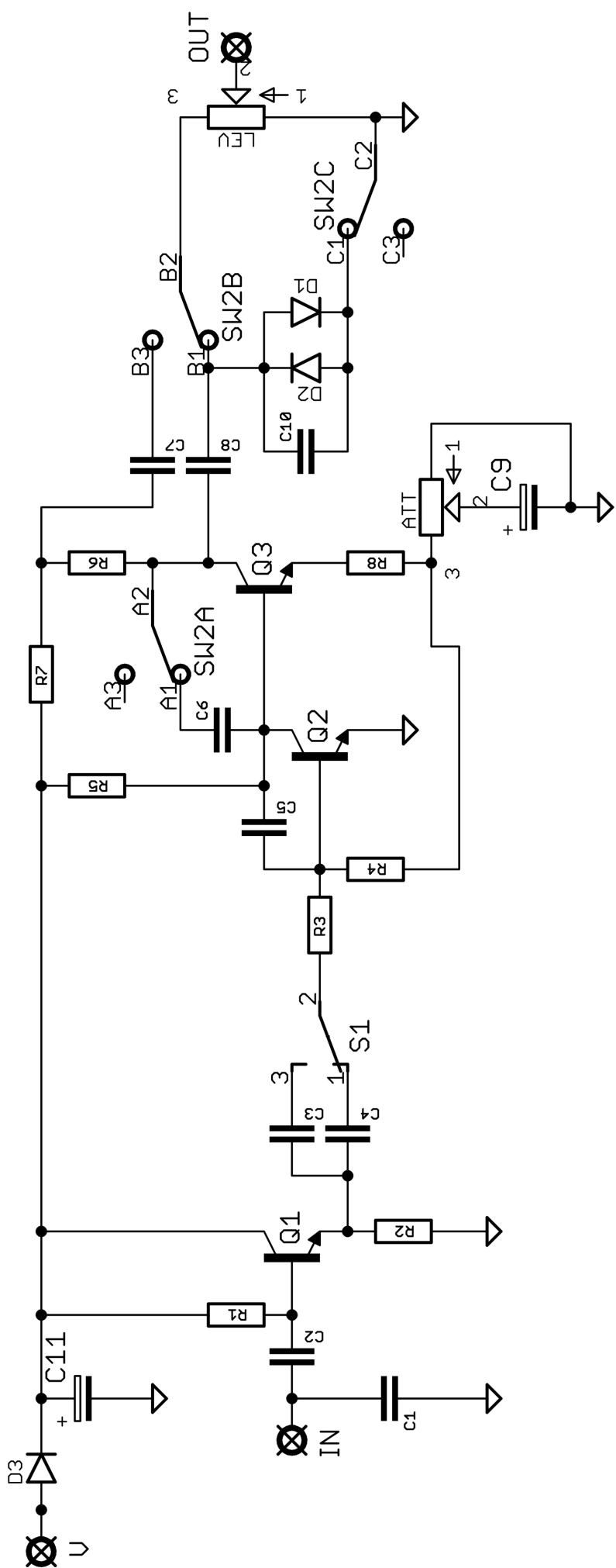


R1	1M	C1	22n	D1-2	BAT46
R2	10K	C2	10n	D3	1N5817
R3	4K7	C3	10n		
R4	68K	C4	100n	Q1	2N2222A
R5	33K	C5	100p	Q2	BC108
R6	8K2	C6	330p	Q3	BC108C
R7	470R	C7	22n	ATT	1KC
R8	68R	C8	33n	LEV	50KA
		C9	22u elec		
		C10	1n		
		C11	100u elec*	S1	SPDT ON-ON
				S2	3PDT ON-ON

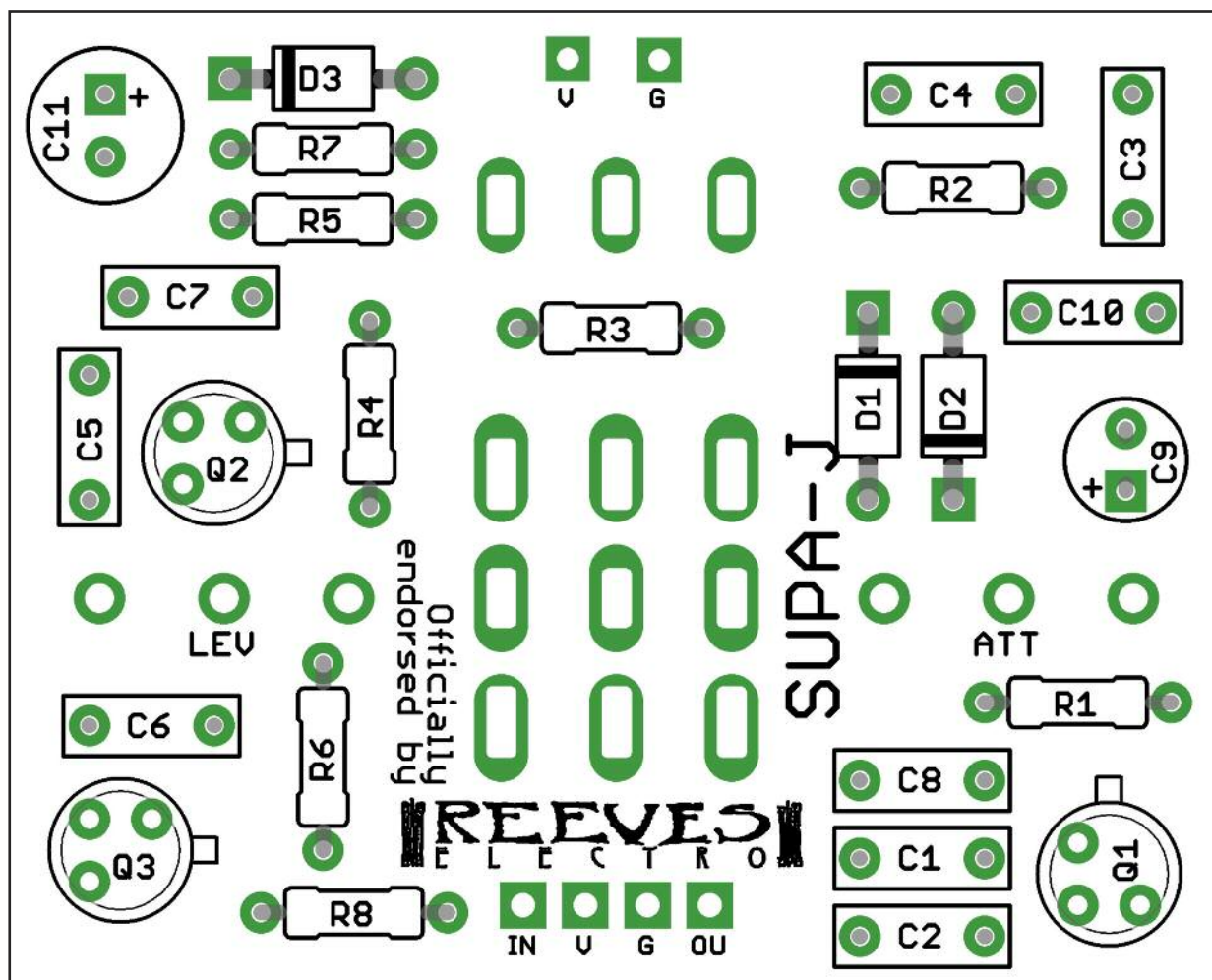
S1 switches between C3 and C4, changing the voicing

S2 does quite a lot, switching between Supa-J and Marshall Supa-Fuzz modes

*C11 needs to mount horizontally due to the height issues with the 3PDT.



There are extra power pads in case you want to have your DC socket at the top of the enclosure.



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.

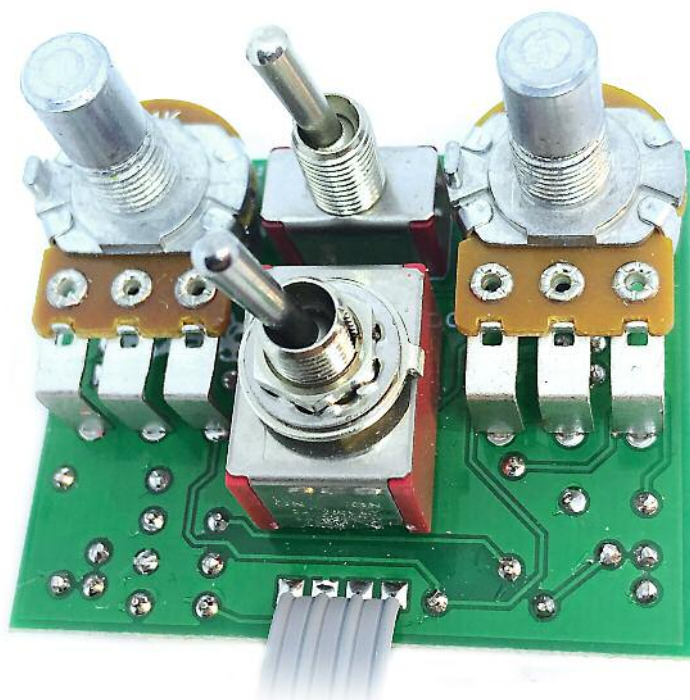
Be very careful when soldering the diodes and transistors. They're very sensitive to heat. You should use some kind of heat sink (crocodile clip or reverse action tweezers) on each leg as you solder them. Keep exposure to heat to a minimum (under 2 seconds).

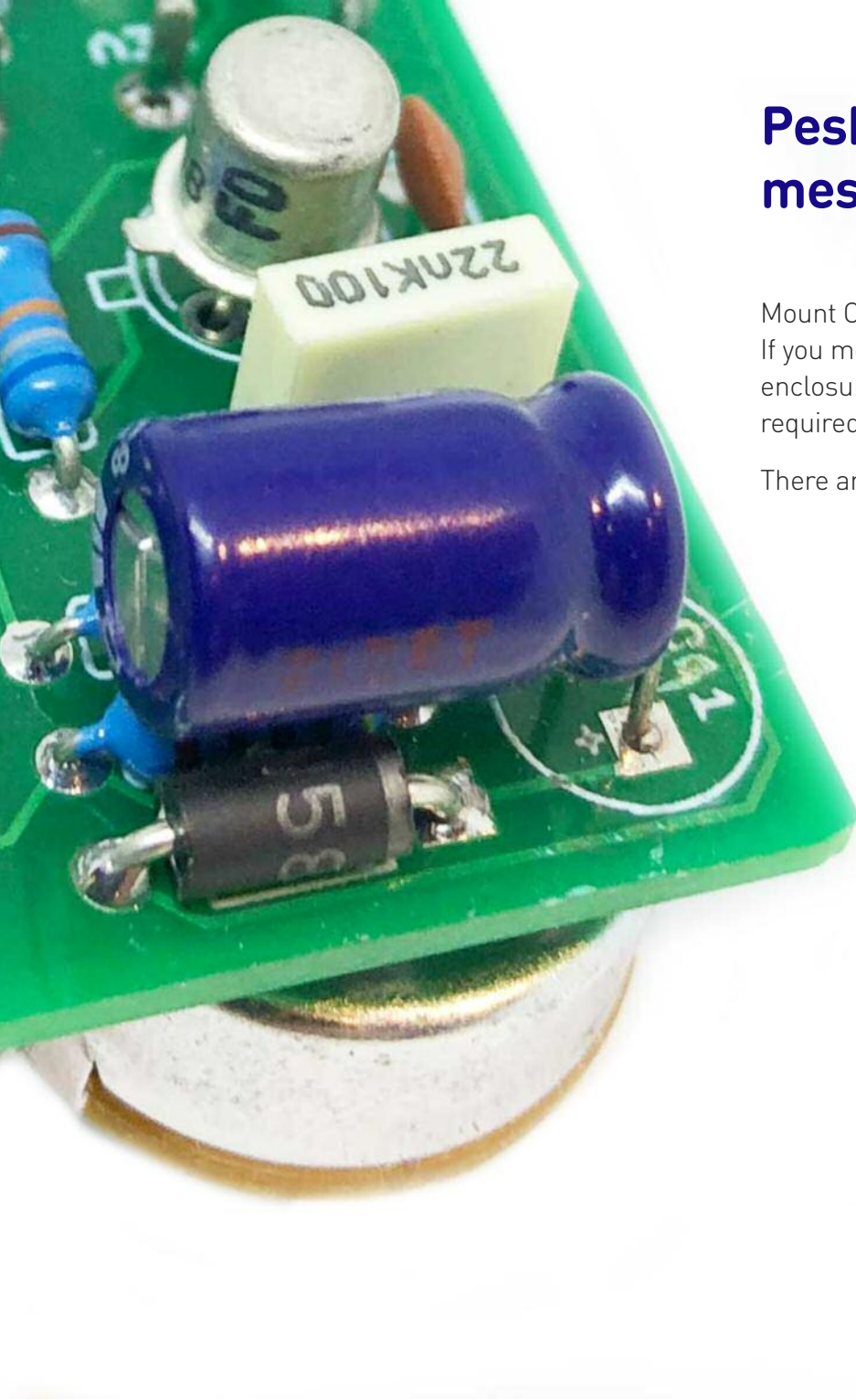
Snap the small metal tag off the pots so they can be mounted flush in the box.

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.

See page 7 before you solder the pots and toggles - there's a little fiddling to do to get things lined up nicely.





Pesky tall switches, messing with the plan...

Mount C11 as shown, above D3, R5 and R7. If you mount it normally then it'll likely stop the enclosure from closing due to the extra height required for the 3PDT toggle switch.

There are no rules. Whatever works man.

A little note on DC sockets

If you've opted for a top mount DC, you'll have received a mini two-pin socket.

The longer pin is your +.

That is all.



Getting things straight...

Unfortunately we have to deal with the extra height of the 3PDT toggle switch when getting the controls lined up. It's not hard, just a little fiddly.

You need to solder the 3PDT in place before the other switch and pots.

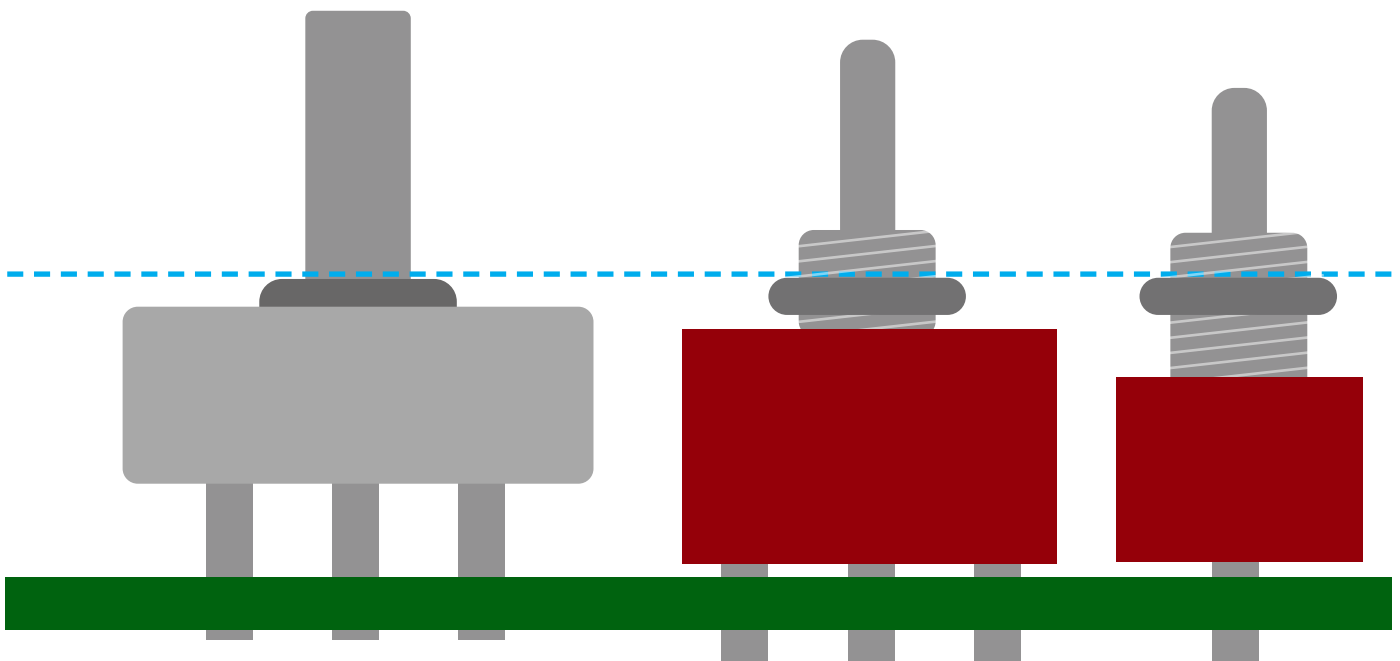
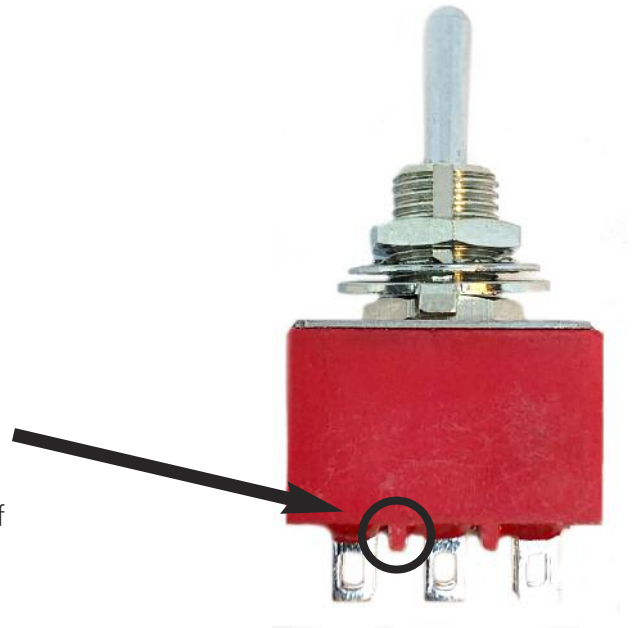
Your switch may have some spacer ridges on the bottom edge, between the metal lugs. If you're handy with needle-nosed pliers you can try removing this to give you an extra millimetre. If not, don't sweat it. There's plenty of play in the other parts we're dealing with.

Solder the switch, ensuring it is completely straight in all directions - you don't want a wonky toggle. Make sure you have the internal nut in place on the thread, just above the switch body.

Once in place, you can add your pots. The pins will not be fully located through the PCB when the pots line up with the toggle.

Do the same with the SPDT. You have a couple of options with this one. You can either locate the lugs partially through the PCB rather than fully, so you have more of the switch on the enclosure surface. Or you can locate it fully into the PCB and wind the internal nut much further up the thread so it lines up with that on the 3PDT.

That all likely sounds much more complicated than it is. Just line things up.



Test the board!

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

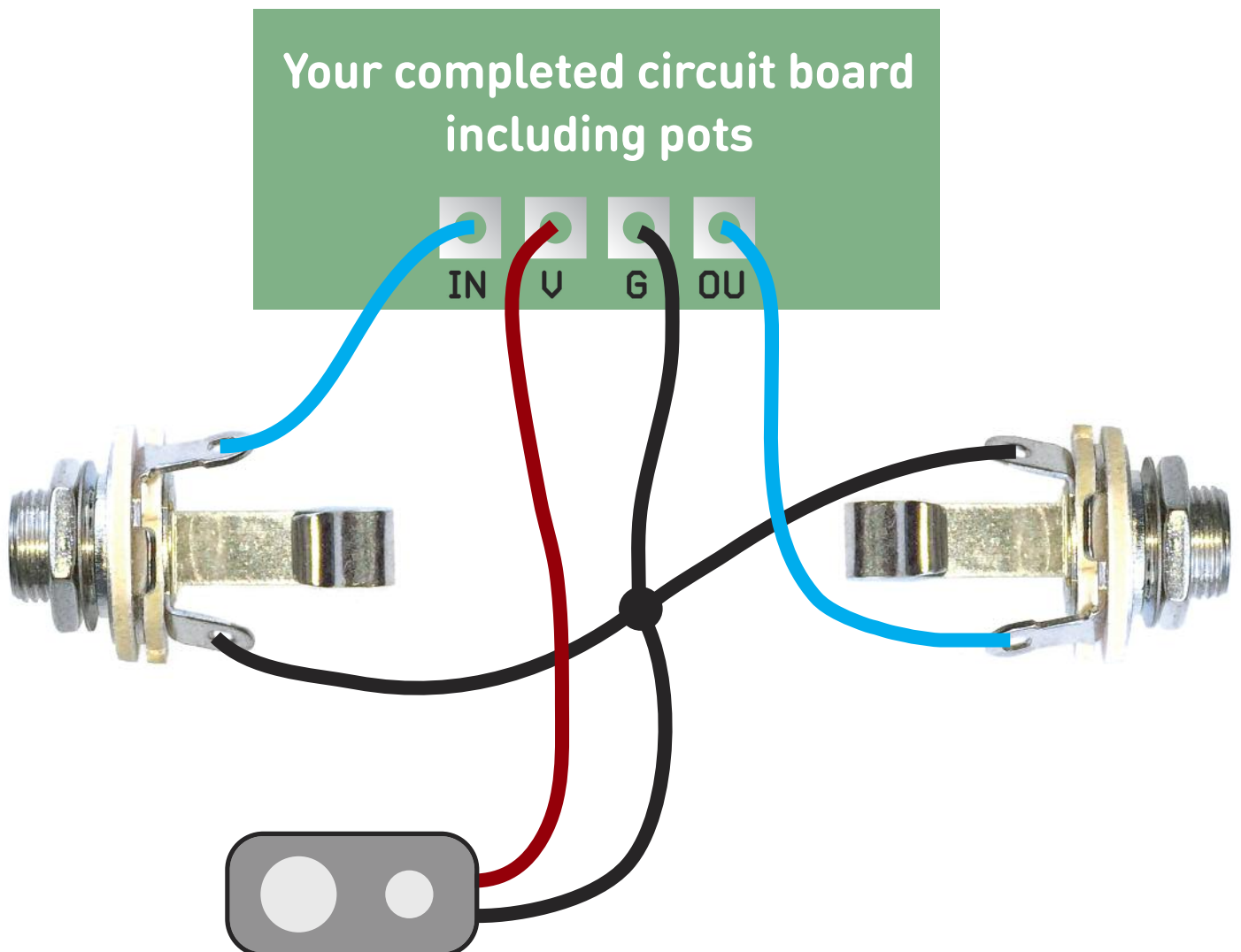
UNDER NO CIRCUMSTANCES will troubleshooting help be offered if you have skipped this stage. No exceptions.

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!

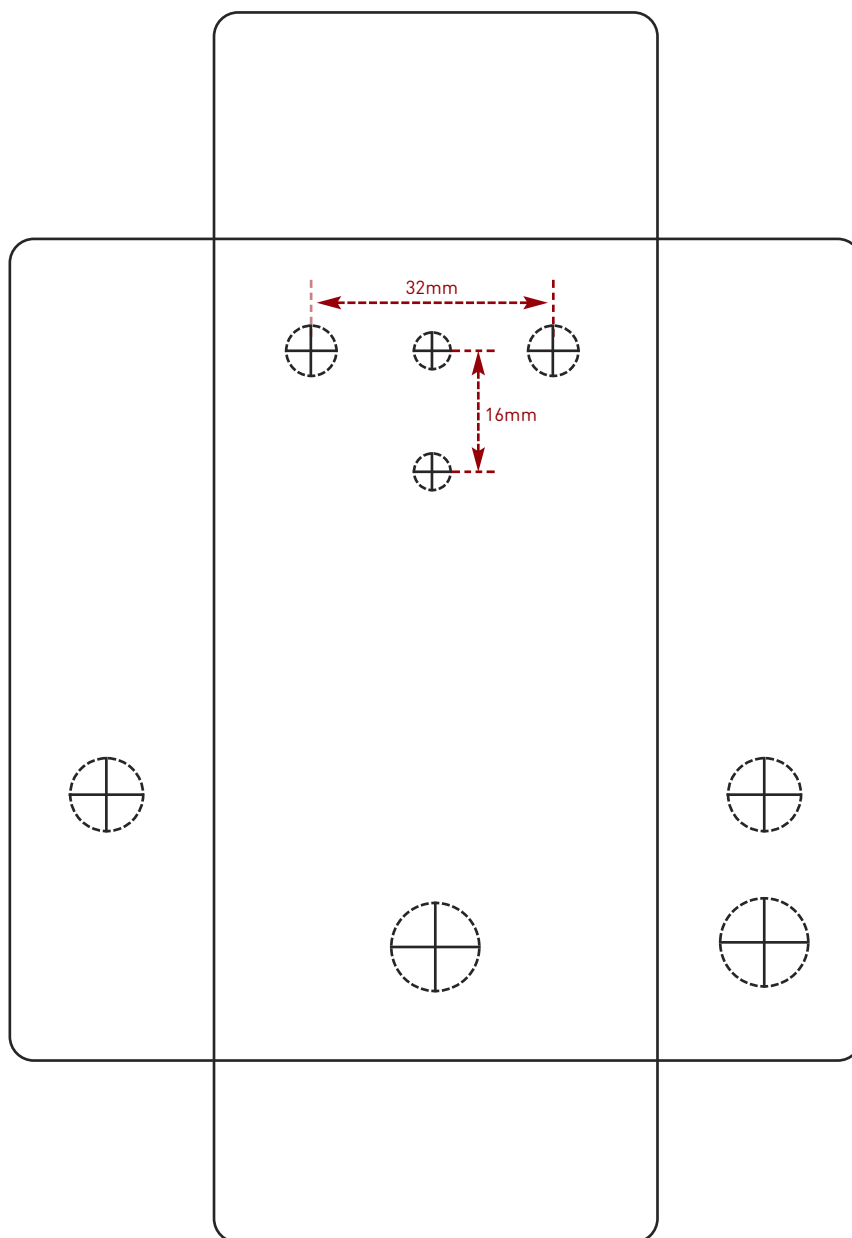
Drilling template without battery - side DC

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

Drilling template without battery - top DC

Recommended drill sizes:

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

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.
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