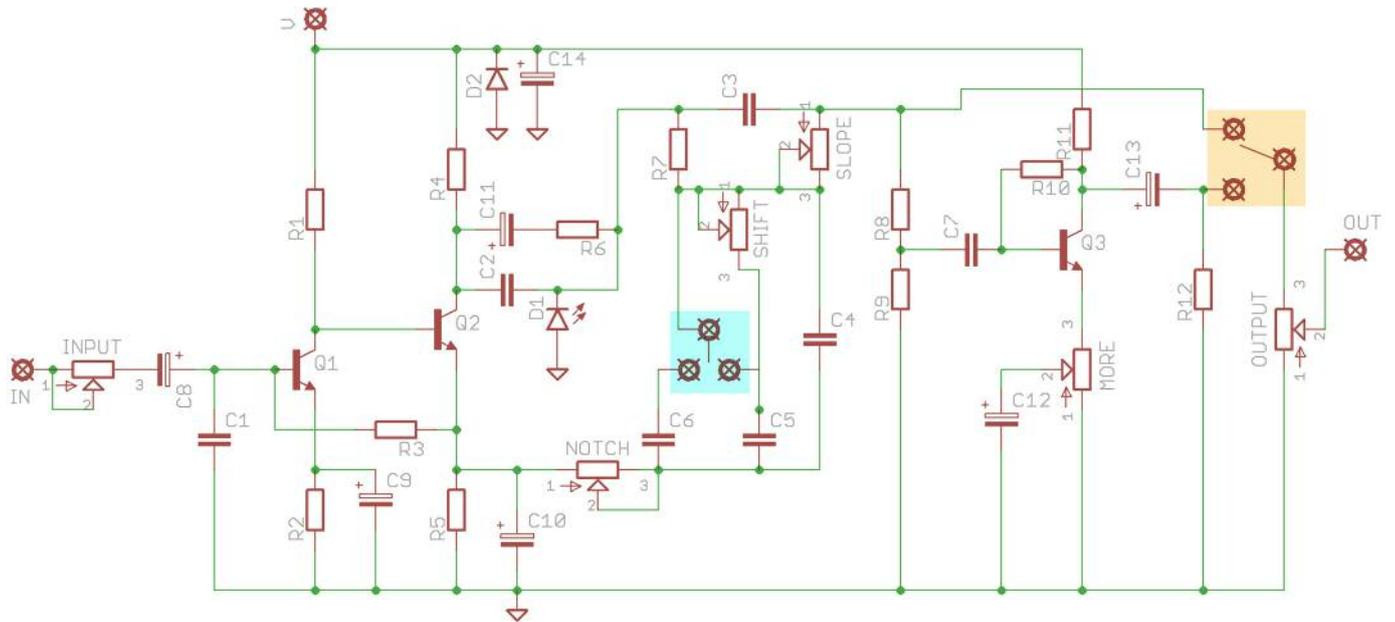


GimpFX Ultr-Fk

More sludgy bass fuzz than you can shake a thigh-bone at



Schematic



Switch marked in blue above is the optional Notch Shift control, which is SPDT ON-OFF-ON. This is not required if using the SHIFT pot.

Switch marked in orange is the MORE footswitch on the daughterboard.

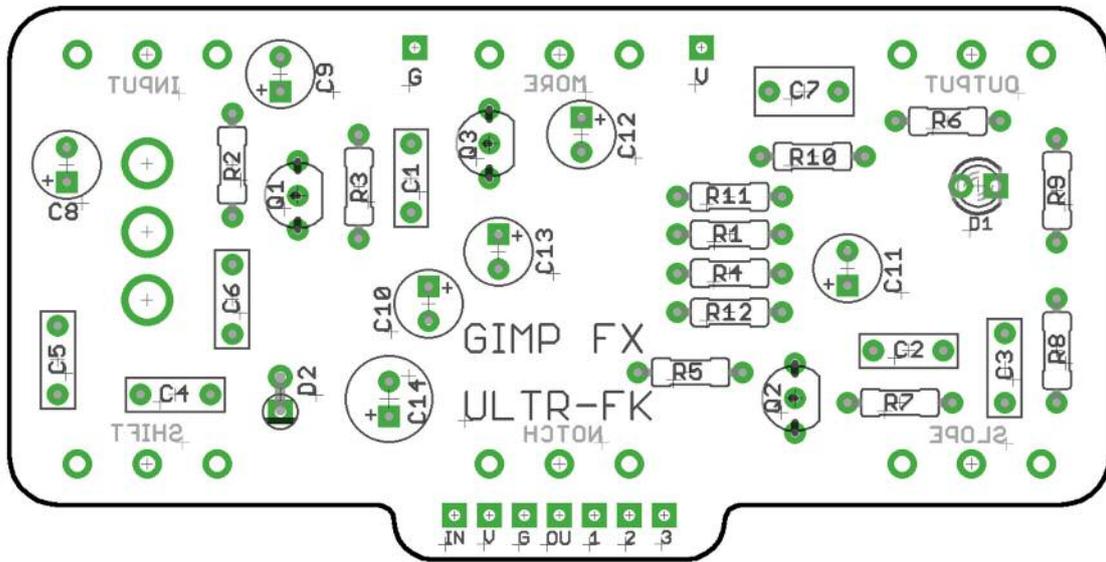
BOM

R1	100K	C1	22n	Q1,3	BC550
R2	4K7	C2	4n7	Q2	2N5088
R3	47K	C3	1n	D1	3mm OrangeLED
R4	47K	C4	10n	D2	1N4001
R5	10K	C5	22n	INPUT	1MC
R6	51K	C6	10n**	OUTPUT	100KB
R7	33K	C7	470n	MORE	5KB
R8	330K	C8	10u elec	NOTCH	50KA
R9	51K	C9	47u elec	SLOPE	100KB
R10	4M7	C10	47u elec	SHIFT	100KB***
R11	51K	C11	47u elec	SWITCH	SPDT
R12	1M	C12	47u elec		ON-OFF-ON
CLR	2K2*	C13	47u elec		
		C14	100u elec		

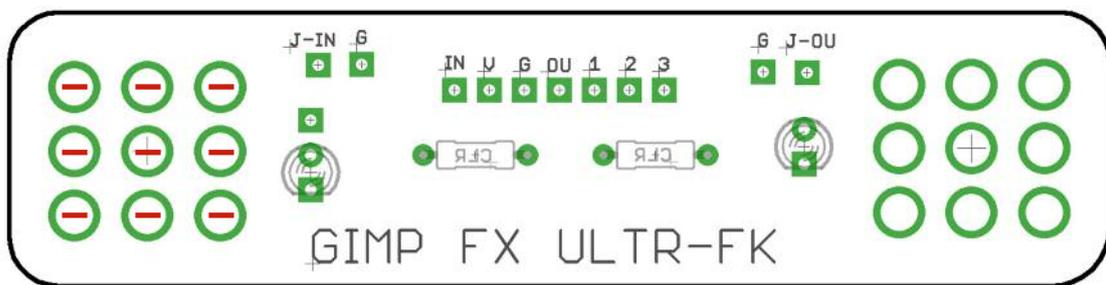
*2 x CLR's are required on the daughterboard. Use whatever you prefer as your normal LED current limiter.

** Only required if using the Notch Shift switch rather than the pot.

***Not required if using the Notch Shift switch.



PCB Layout ©2015 Pedal Parts Ltd.



Be very careful when soldering the diodes, 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 them. Keep exposure to heat to a minimum (under 2 seconds).

The striped leg (cathode) of the diodes go into the square pads. For the LEDs, the shorter leg goes into the square pad.

The long leg (anode) of the electrolytic capacitors go into the square pads. These can all lay flat 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 re-adjust any that are off.

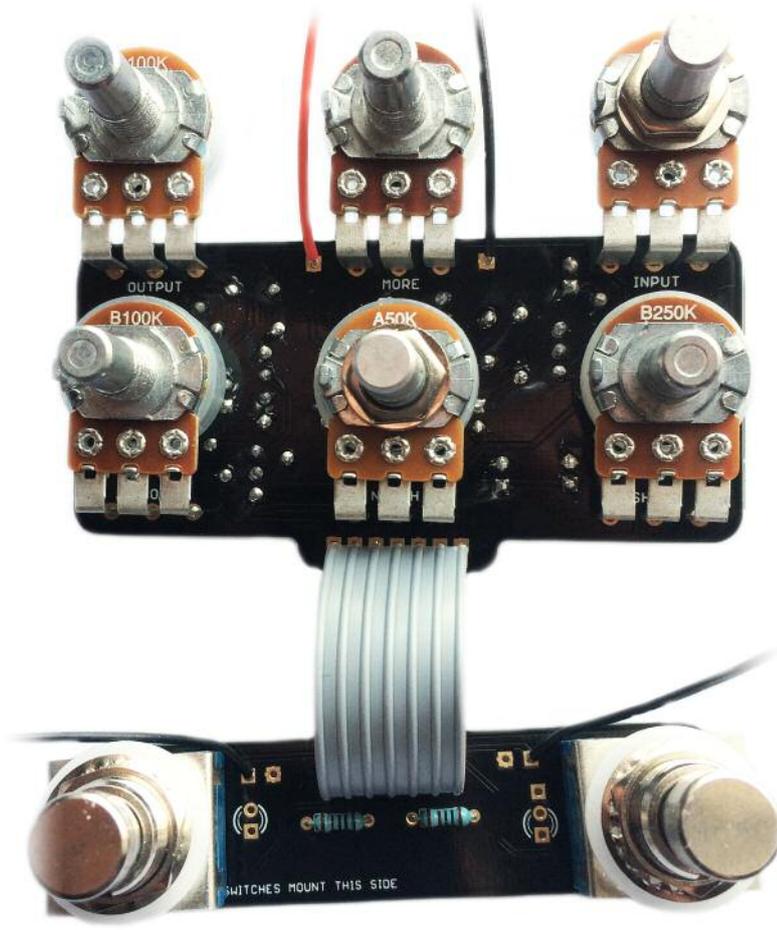


Similarly, for the toggle switch it's best to solder a single lug then check it for position. If not straight or flat, melt the joint and reposition before soldering the other two lugs.

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.

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.

Make sure your footswitch lugs are horizontal as shown above when soldering into the daughterboard. It's a good idea to place them in the holes in the enclosure when doing this to ensure they line up ok.



Ensure you mount the footswitches on the right side of the daughterboard. It's clearly marked. Otherwise your ribbon cable connections won't line up.

The boards are designed for a 7-way ribbon cable connection between them, but you can use any wire you want. just make sure you connect the correct pads.

LEDs

You should leave these until you're actually boxing up the circuit. They don't need to be in place for the circuit to work, so plug it in and test it before you add them.

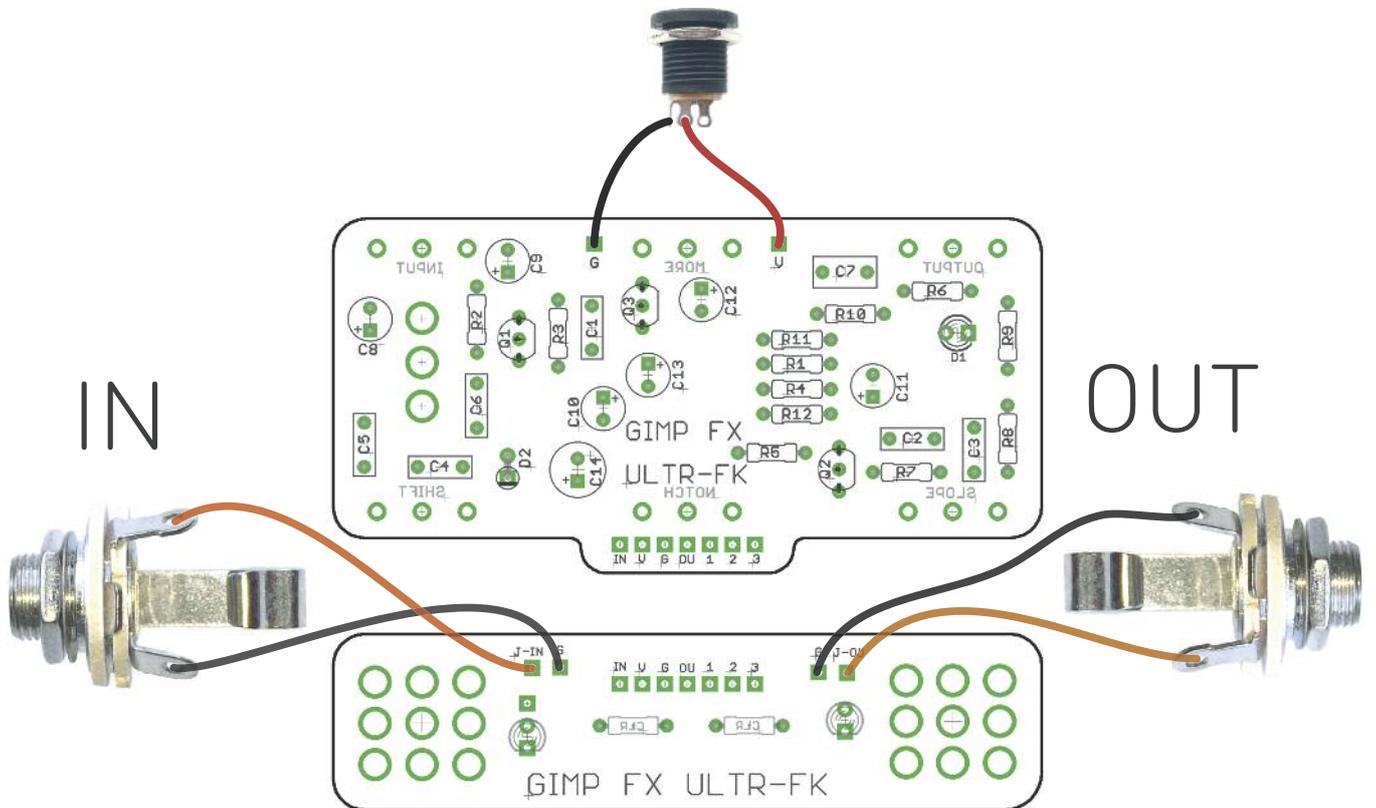
Pull them up through the PCB (short leg to square pad), and slightly bend the legs out so they don't fall back through. Position your daughterboard into the enclosure and lightly secure the footswitches. You should now push the LEDs down through the PCB and located them into their holes in the enclosure. Once done, tighten the footswitches, check the LEDs are still in place, then solder them in.

WHY IS THERE AN EXTRA PAD FOR THE 'MORE' FOOTSWITCH LED...?

Yes. You can use a bi-colour LED in there if you want, i.e. green for normal, red for MORE. Use a common-anode LED.

WIRING

Couldn't be much easier really. Once you have the daughterboard and main circuit connected (hopefully you've used a 7-way ribbon cable for extra simplicity and neatness), there are only six wires to connect as shown below.



Drilling template

Ultr-Fk

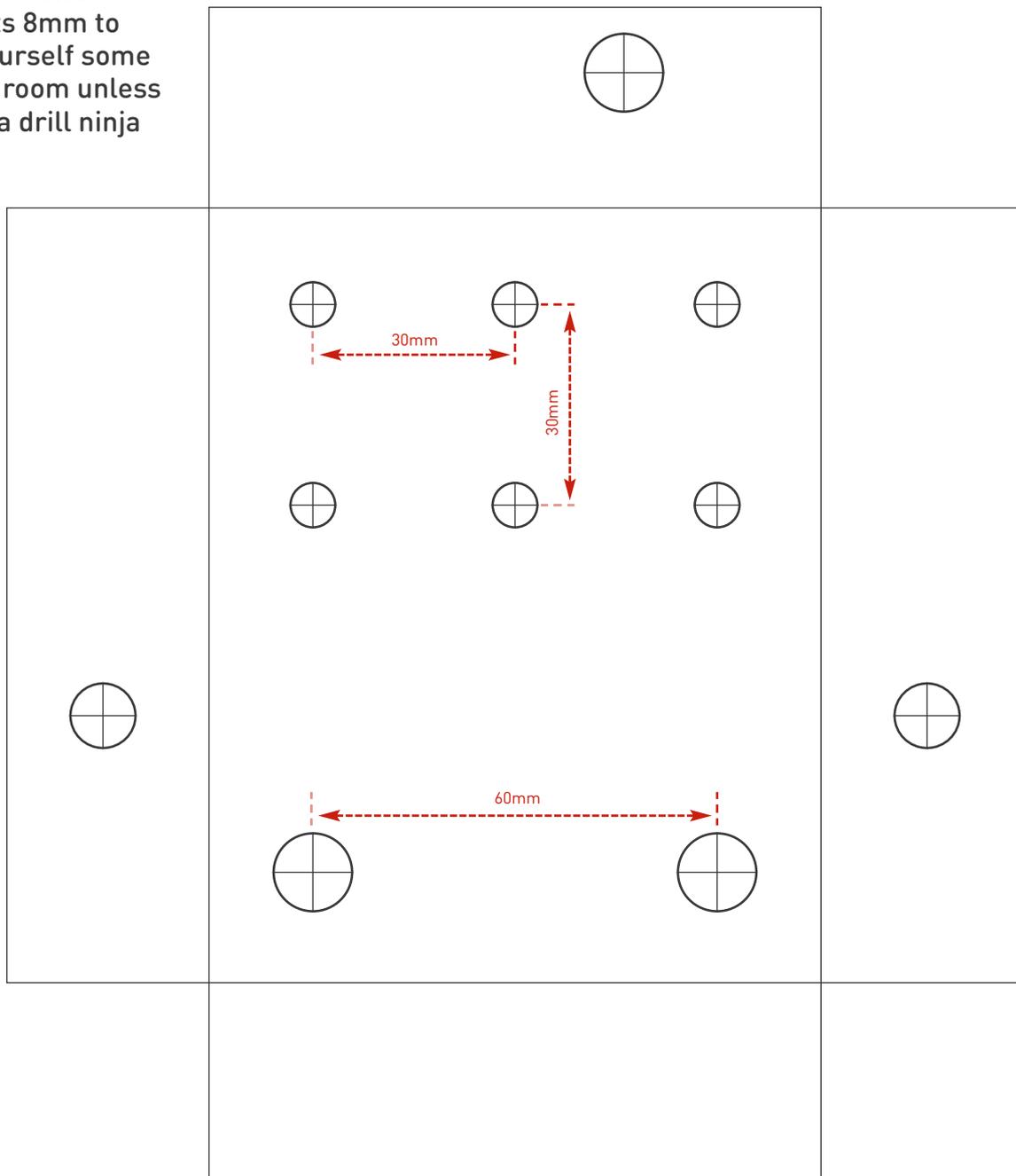
Recommended drill sizes:

Hammond 1590BB

91 x 116 x 31mm

Pots	7mm
Jacks	10mm
Footswitch	12mm
DC Socket	12mm
Toggle Switch	6-7mm

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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