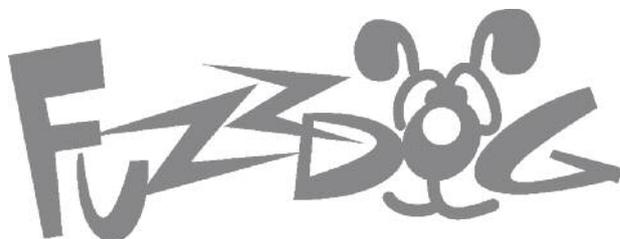
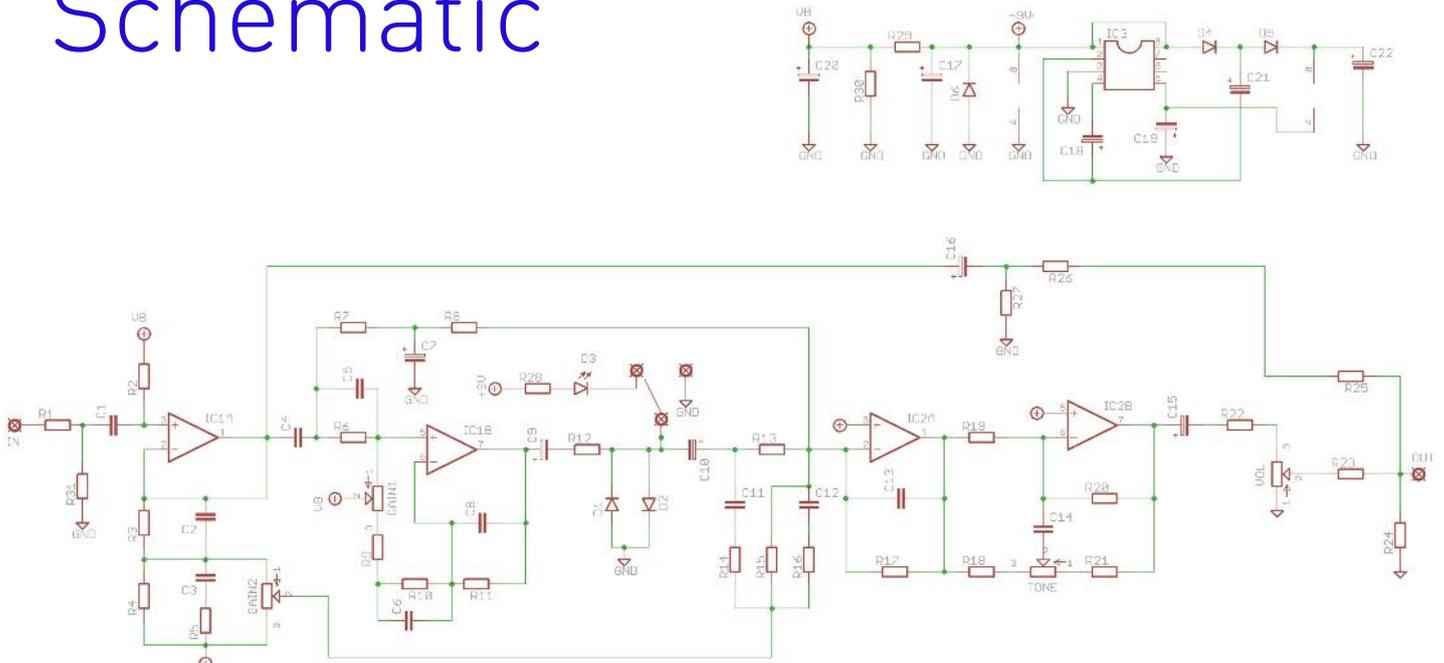


Klone

Ultimate box of
transparent overdrive



Schematic



*If using a 7660 it is best to get one that has an S suffix. This will ensure it operates at a frequency high enough to be inaudible in the circuit.

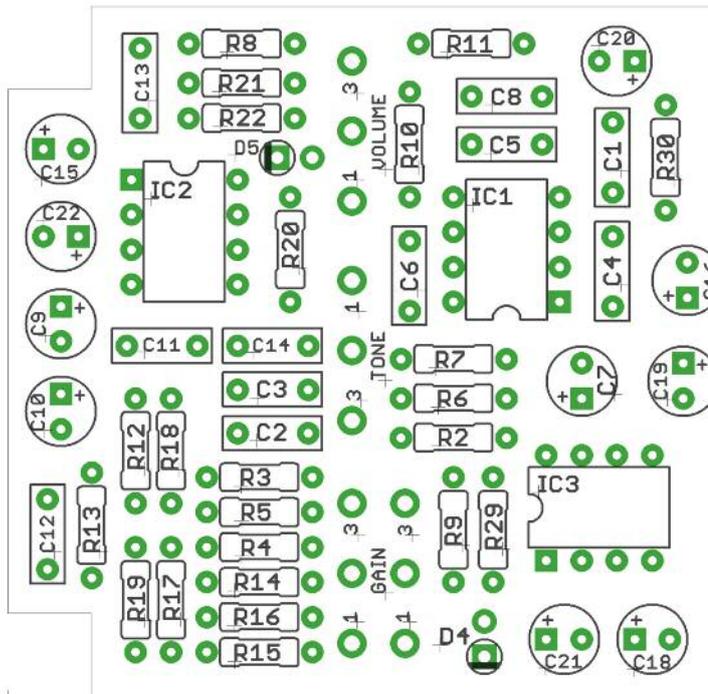
**330n will be fine.

Near-as-dammit values will suffice for some parts, i.e. 420K for R11. Please do not email asking what can be subbed. Use your judgement.

Gold version values shown in blue. 1N60 was always a best-guess sub.

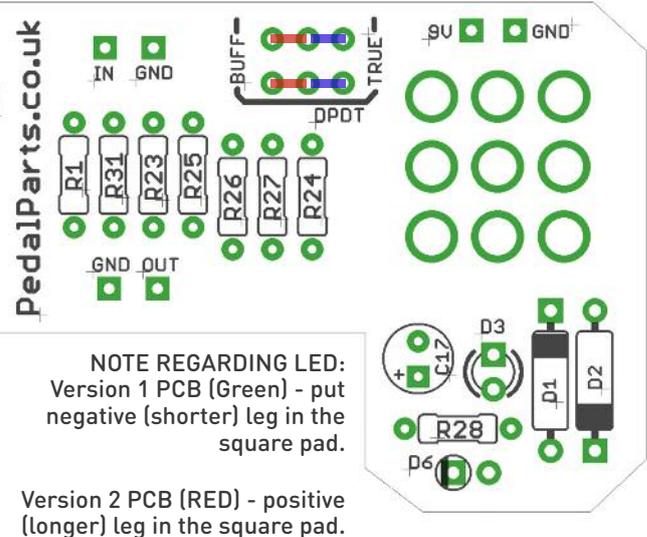
BOM

R1	10K		
R2	2M		
R3	5K1		
R4	1K5		
R5	1K		
R6	10K		
R7	1K5		
R8	15K		
R9	47R (2K)		
R10	15K		
R11	422K		
R12	1K		
R13	47K		
R14	22K		
R15	10K (27K)		
R16	4K7 (12K)		
R17	392K		
R18	4K7 (1K8)		
R19	100K		
R20	100K		
R21	1K8 (4K7)		
R22	560R		
R23	Jumper		
R24	100K		
R25	Empty		
R26	560R		
R27	100K		
R28	3K9		
R29	27K		
R30	27K		
R31	2M		
D1-2	D9E (1N60)	C1	100n
D3	LED	C2	68n
D4-5	1N4001	C3	390n**
D6	9.1V zener	C4	100n
		C5	68n
IC1-2	TL072	C6	82n
IC3	MAX1044 or 7660S*	C7	1u tant
		C8	390p
		C9	1u elec
		C10	1u elec
		C11	2n2
		C12	27n
		C13	560p (820p)
		C14	3n9
		C15	4u7 elec
		C16	4u7 elec
		C17	47u elec
		C18	1u elec
		C19	1u elec
		C20	47u elec
		C21	1u elec
		C22	1u elec
VOL	10KA (10KB)		
TONE	10KB		
GAIN	100KB		
	DUAL GANG		



If you want to hardwire the bypass, jumper one way or the other as shown:

BUFFERED **TRUE BYPASS**



The Buffered/True-Bypass selection is designed for a 2.54mm-pitch miniature slide switch. This can be soldered on the top or bottom of the board, depending on the depth of the switch. Those supplied with the kit are small enough for either.

If you prefer to hardwire one way or the other, see the note above.

You can use an external toggle switch if you prefer. Just solder the tags of the switch to the corresponding pads in the same configuration.

IMPORTANT - If sourcing your own parts, ensure they will comfortably fit below the pots when mounted in the enclosure. **C6, C9, C10, C12, C13, C15** and **C22** must have a depth of less than 8mm to fit into a standard 1590B box.

Snap the little metal tag off the pots to mount them flush in the box.

You should use some kind of heat sink on the legs of the diodes when soldering. They aren't keen on heat. Any more than 3-4 seconds of iron and they're toast.

Be **VERY** careful when bending the legs of the germanium diodes. The glass case is very fragile and likely to break. Best to hold the leg with some needle-nosed pliers against the case, and bend the leg with your finger so the pliers are taking any strain away from the diode.

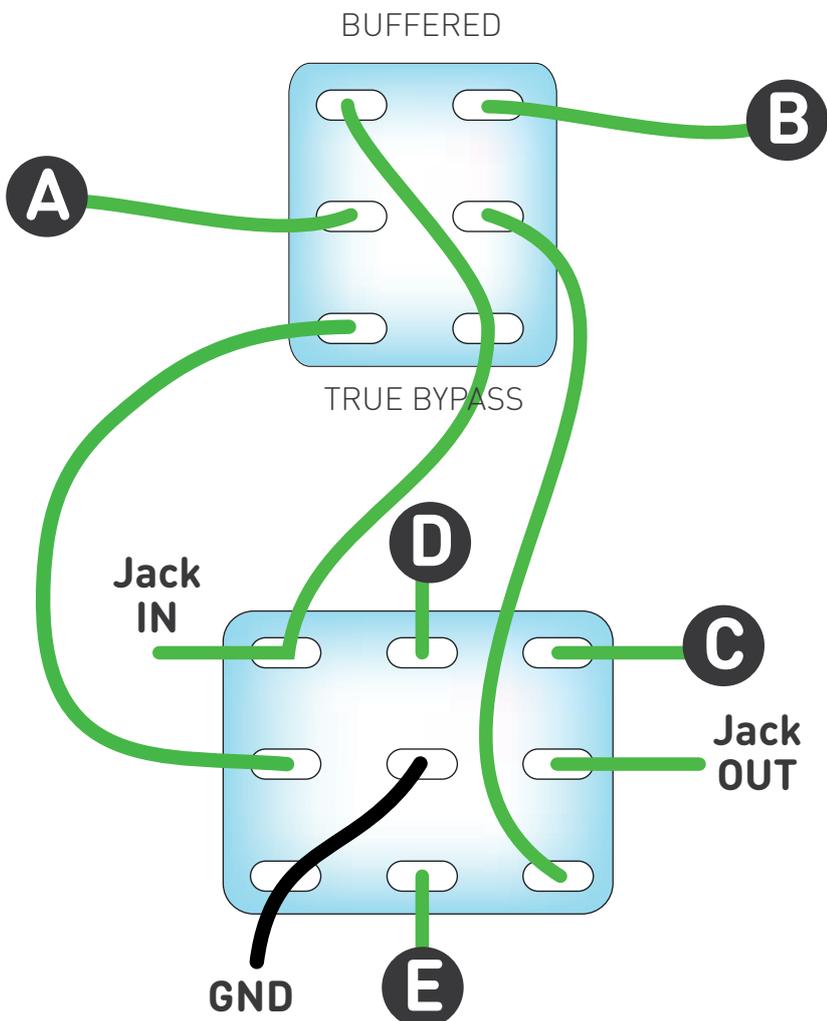
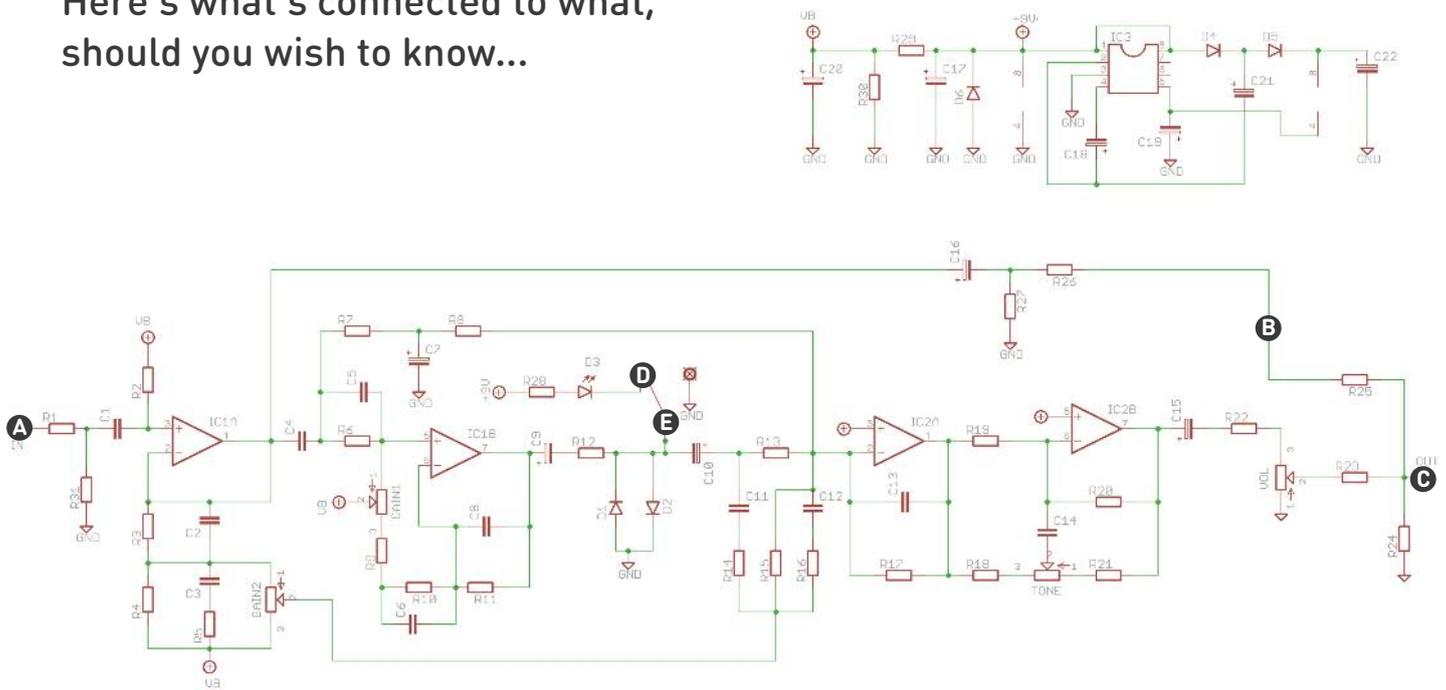


DUAL-GANG POT - looking at the above PCB layout, solder the bottom pins of the pot to the left-hand pads, the top pins to the right-hand ones.

Try to keep your pot wiring fairly short. You want to avoid spaghetti in there, but you also need a bit of wiggle room. Strike a balance.

What's going on with those switches?

Here's what's connected to what, should you wish to know...

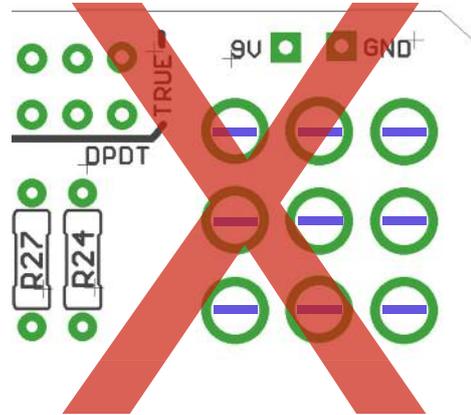
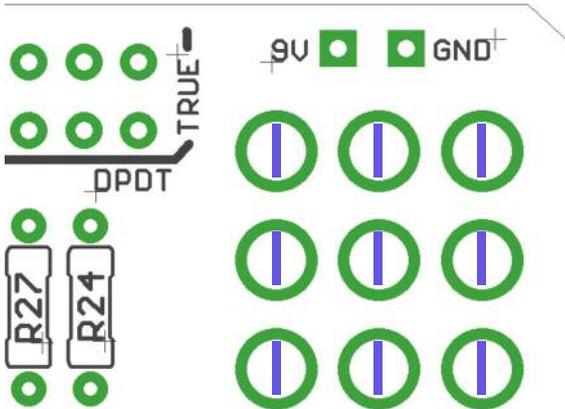


After some experimentation following a customer report of being unable to fully attenuate the buffered bypass signal, you should leave out R25 altogether and jumper R23. All the fun of buffered/true bypass switching and no problems.

Footswitch

Tags should orientate as shown on the left.

Get plenty of solder in there!



Test the board!

Well, there isn't really any way of doing that without wiring everything up, which is essentially the finished circuit.

Get everything in place, maybe with the exception of the LED as that needs careful positioning. Plug it in and try it.

You'll likely hear very little or no difference between the buffered and true-bypass settings.

This isn't a massive-gain circuit - don't expect metal!

The kit enclosure is supplied with a 3mm hole for the LED. This requires no bezel, as the LED sits tightly in the hole and is held in position by the PCB.

To fit the LED, once everything else is finished and working:

- pull the legs through the PCB. On the GREEN pcs the pads are reversed - put the shorter leg (negative) in the square pad. On the RED pcs put the longer leg (positive) in the square pad.
- Fit the circuit into the box, attaching the pots and footswitch in position.
- Push the LED down into its hole
- Solder!

Wire it up

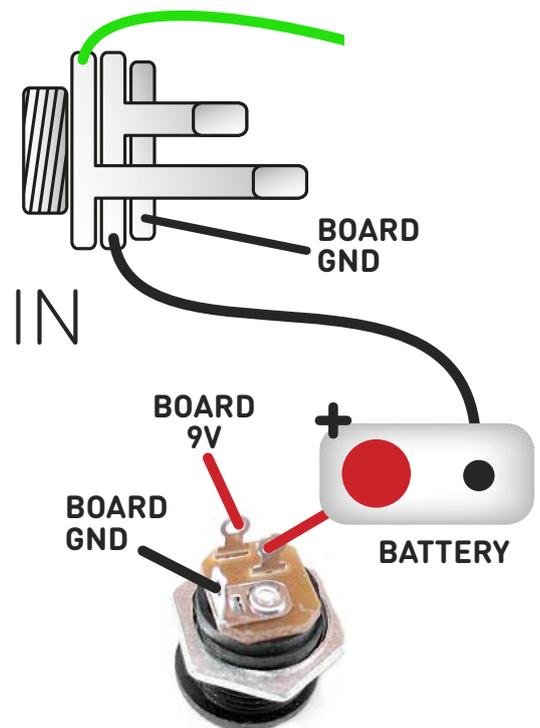
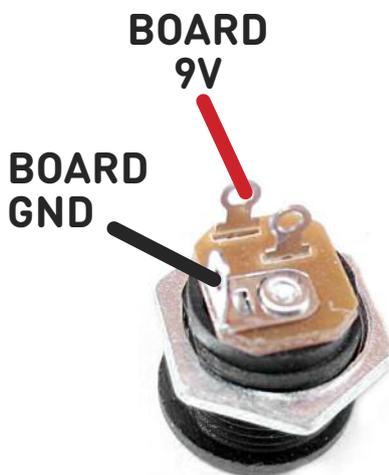
Hang on - there's very little to do!

Wire the jacks as shown -
GND connection to the inner tag,
signal (IN or OUT) to the outer tag.

SIGNAL
(i.e. IN or OUT)



DC Socket connections:



If you're using a bigger enclosure and want to add a battery, use a stereo jack for the input and wire it like this:

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.

PedalParts.co.uk