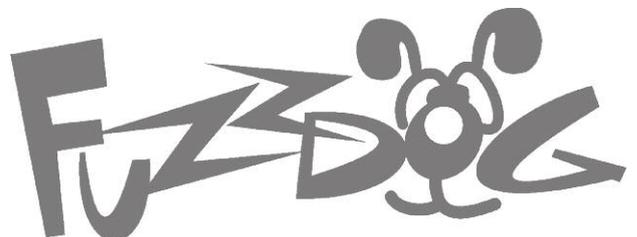
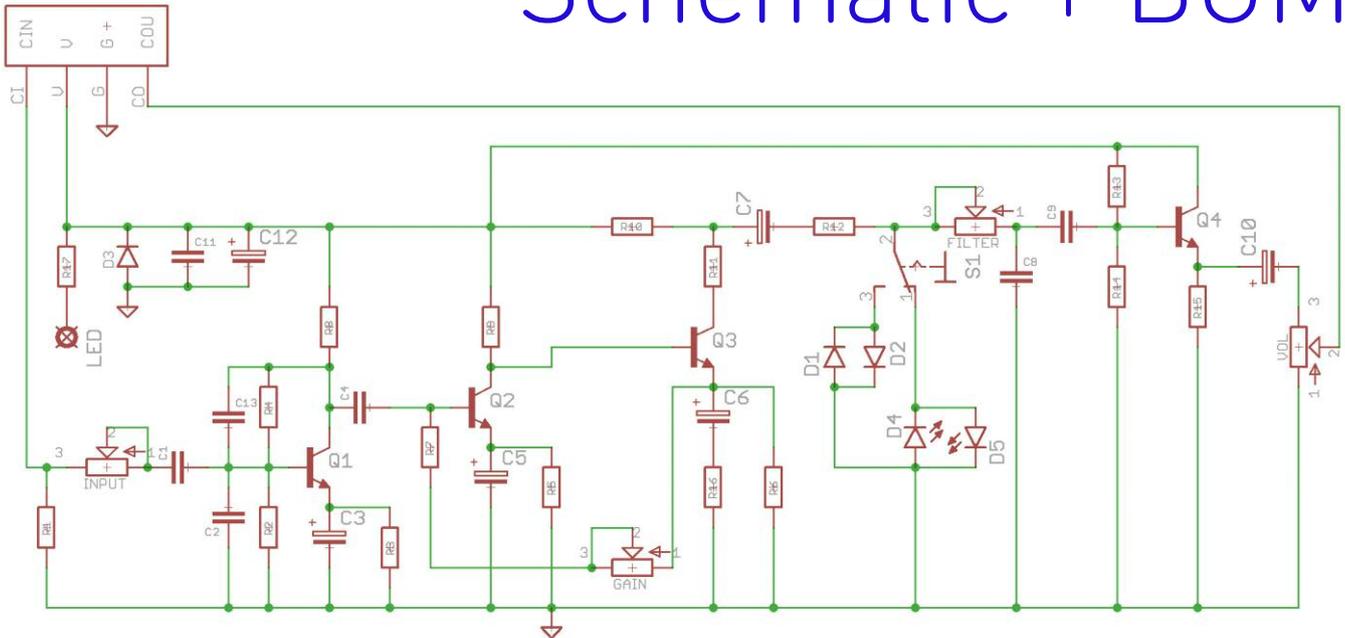


# Pussy King

Glorious mash-up of a  
ToneBender MkII and a Rat



# Schematic + BOM



R1	1M	C1	68n	D1-2	1N4148
R2	100K	C2	1n	D3	1N4001
R3	1K	C3	22u elec	D4-5*	Your choice
R4	470K	C4	150n	Q1-4**	2N3904
R5	1K	C5	10u elec	GAIN	50KA
R6	1K	C6	22u elec	VOL	100KA
R7	3K9	C7	4u7 elec	FILT	100KA
R8	10K	C8	3n3	INP	250KB
R9	22K	C9	220n	SW1‡	SPDT ON-ON
R10	3K9	C10	1u elec		
R11	2K2	C11	10n		
R12	1K	C12	47u elec		
R13	1M	C13	47p		
R14	1M				
R15	3K3				
R16	150R				
R17	2K2 (CLR)				

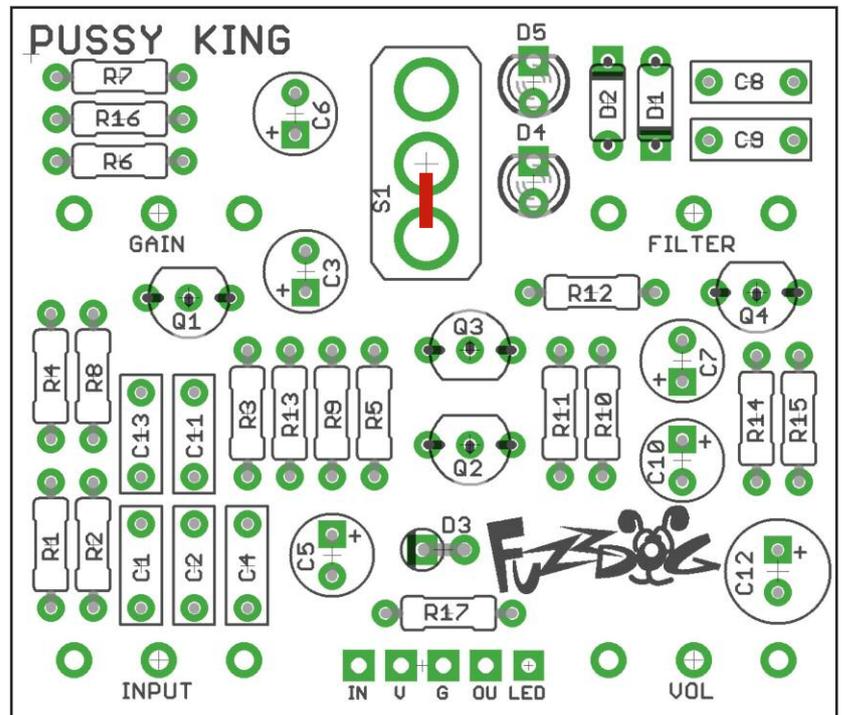
\*Optional extra clipping in conjunction with SW1.  
Experiment with different diodes here.  
At FuzzDog HQ we liked blue LEDs.

\*\*Original reportedly uses BC550B, but most NPN BJT's with an hFE around 350-400 will work ok.

‡Only required if you're going for the extra clipping.  
If not you need a jumper wire. See next page.

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 transistors and diodes. 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.

Positive (anode) legs of the electrolytic caps go to the square pads. C12 can be laid flat as shown in the cover image to give you extra clearance in the enclosure.

Negative (cathode) legs of the diodes go to the square pads.

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.

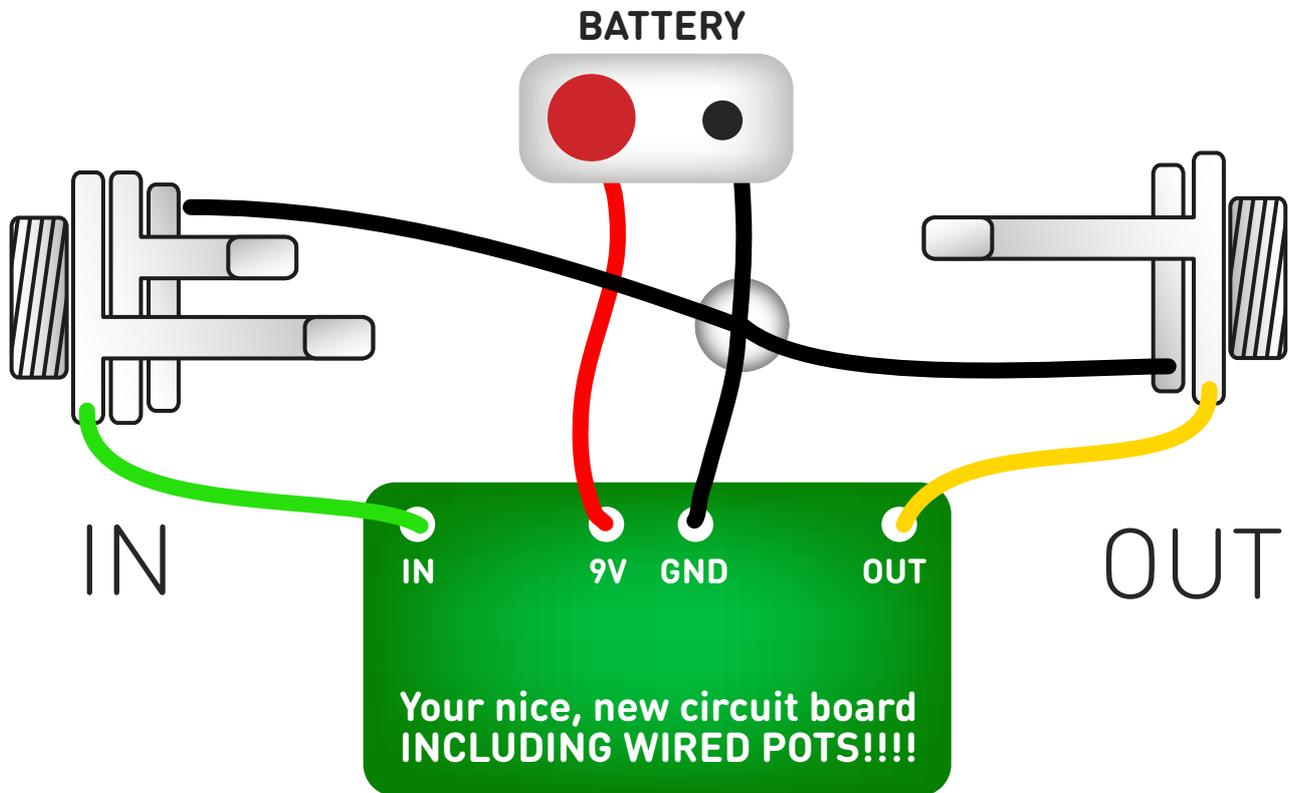
If you aren't going for the optional extra clipping diodes and switch, place a jumper wire as shown in red above. This will keep D1-2 in the circuit all the time.

INPUT and GAIN both effect the gain level in different ways. It's well worth spending some time experimenting with different settings.

The FILTER control works the opposite way to what you might expect. Deal with it.



# Test the board!



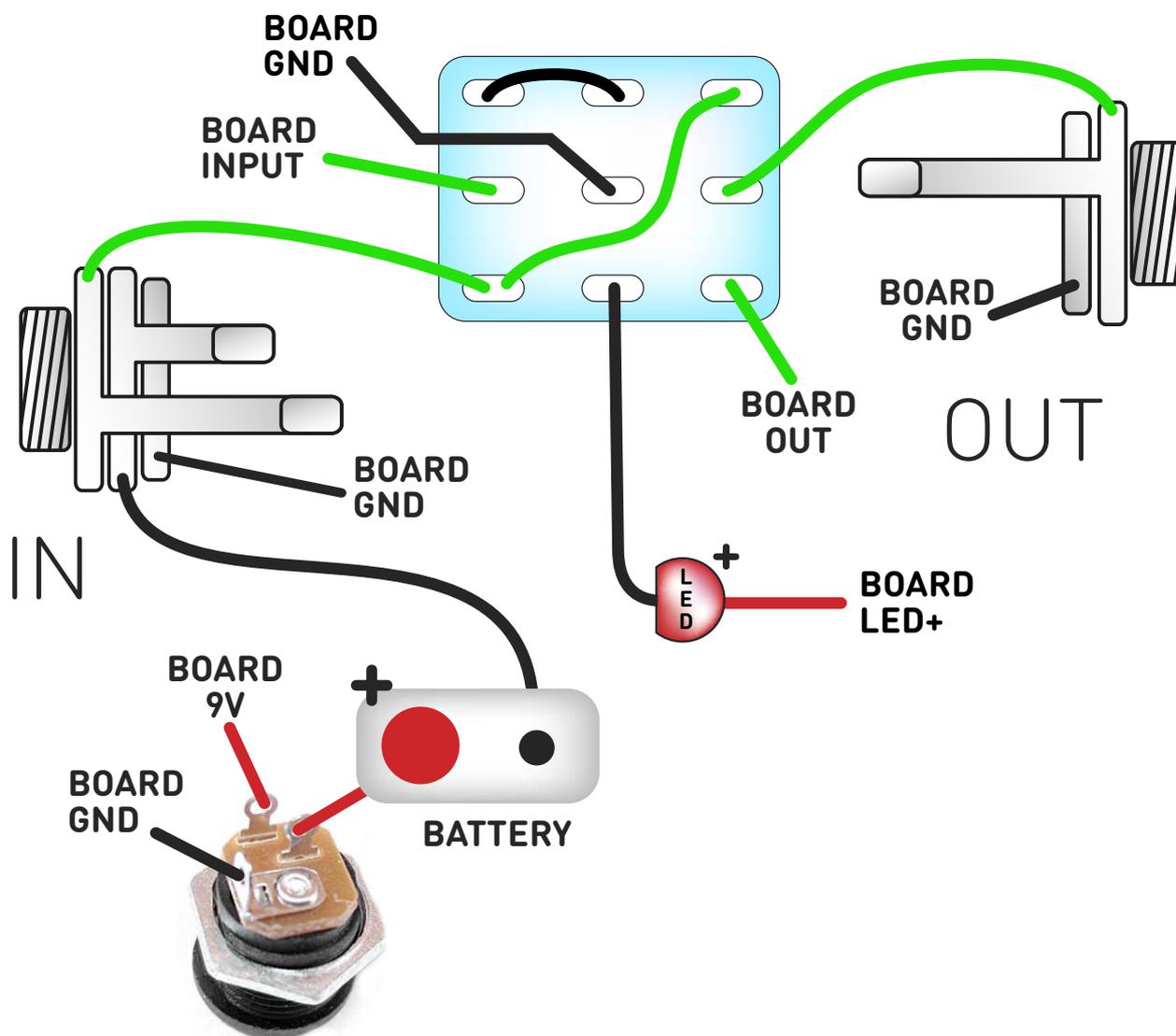
**UNDER NO CIRCUMSTANCES** will troubleshooting help be offered if you have skipped this stage. No exceptions.

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 it works, crack 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.

# Wire it up (if using a daughterboard please refer to the relevant document)



Wiring shown above will disconnect the battery when you remove the jack plug from the input, and also when a DC plug is inserted.

The Board GND connections don't all have to directly attach to the board. You can run a couple of wires from the DC connector, one to the board, another to the IN jack, then daisy chain that over to the OUT jack.

It doesn't matter how they all connect, as long as they do.

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

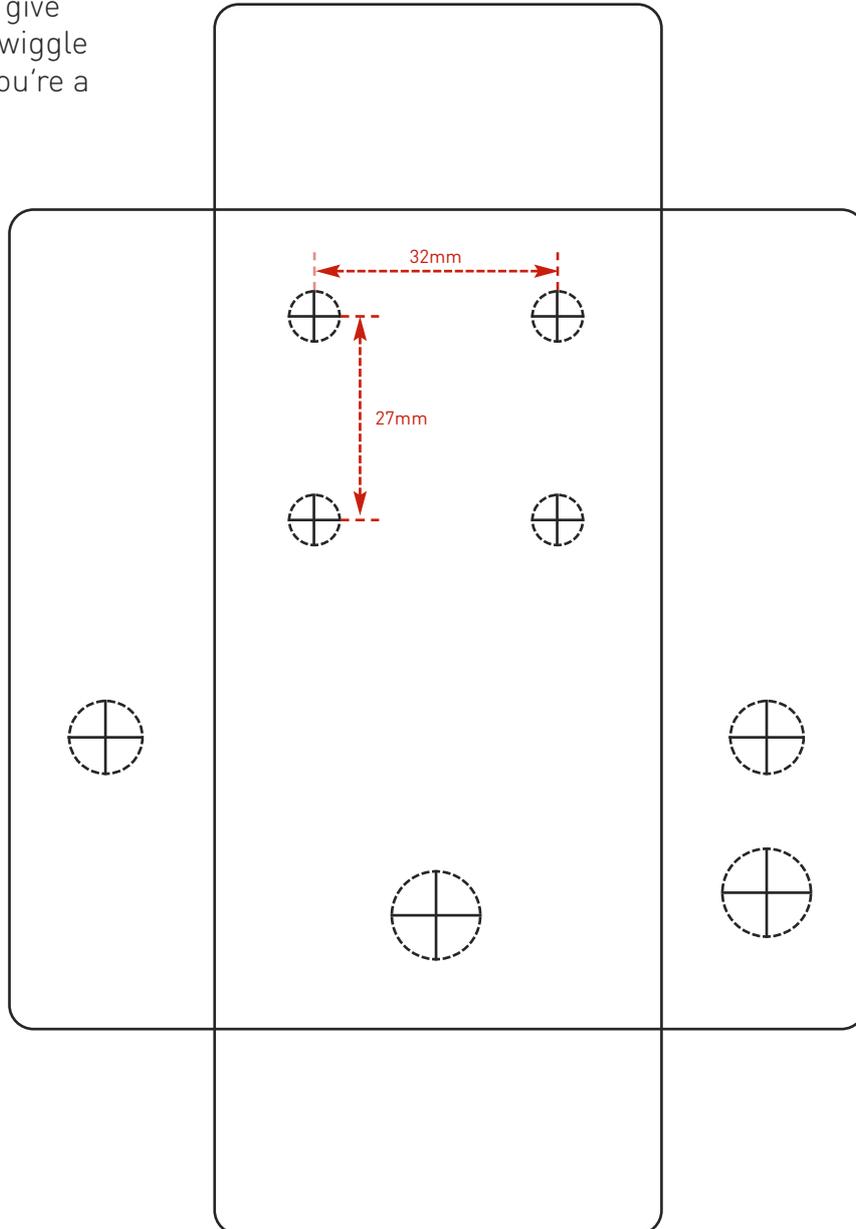
# Drilling template

Hammond 1590B  
60 x 111 x 31mm

Recommended drill sizes:

Pots	7mm
Jacks	10mm
Footswitch	12mm
DC Socket	12mm

It's a good idea to drill the holes for the pots 1mm bigger 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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