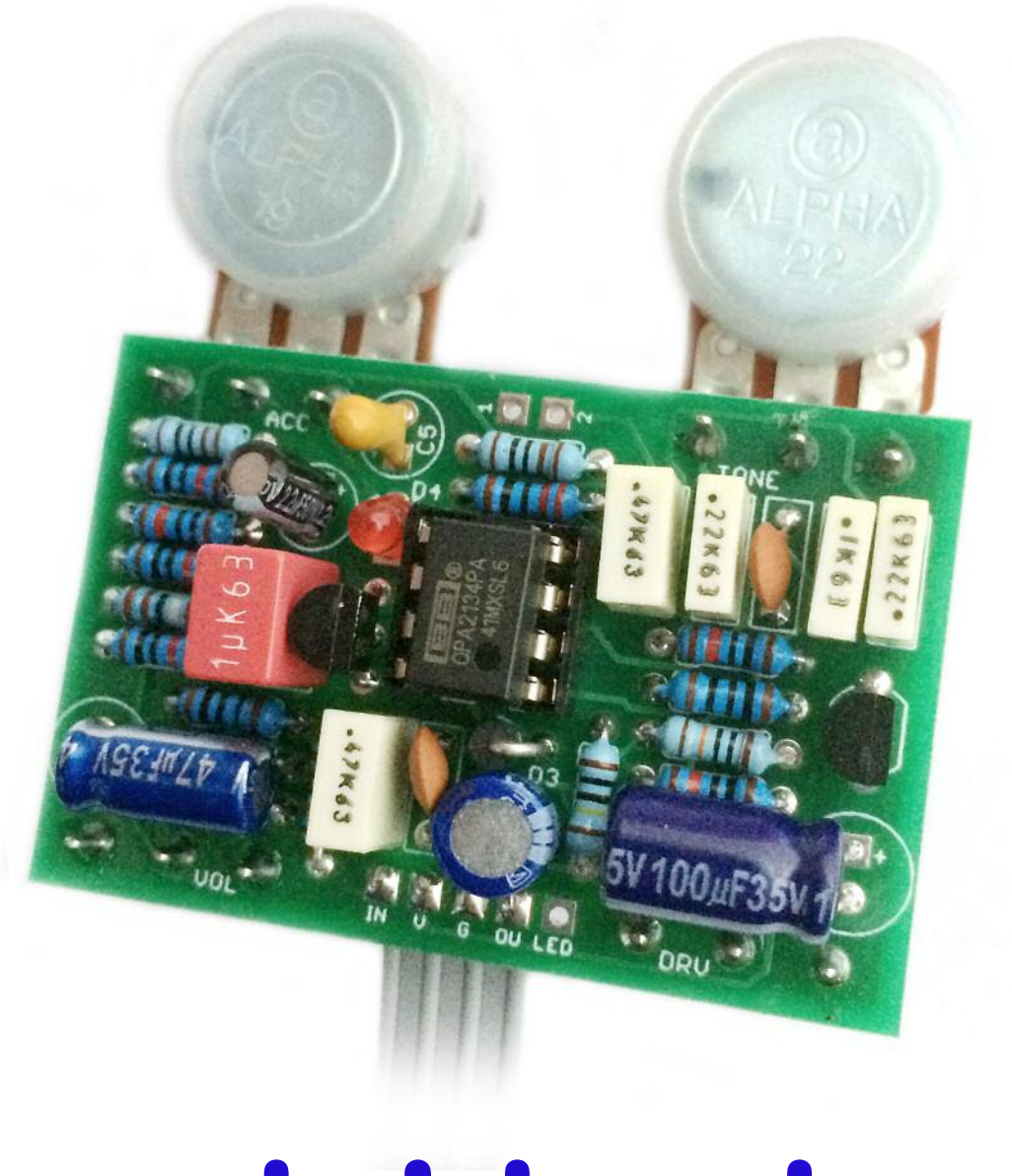
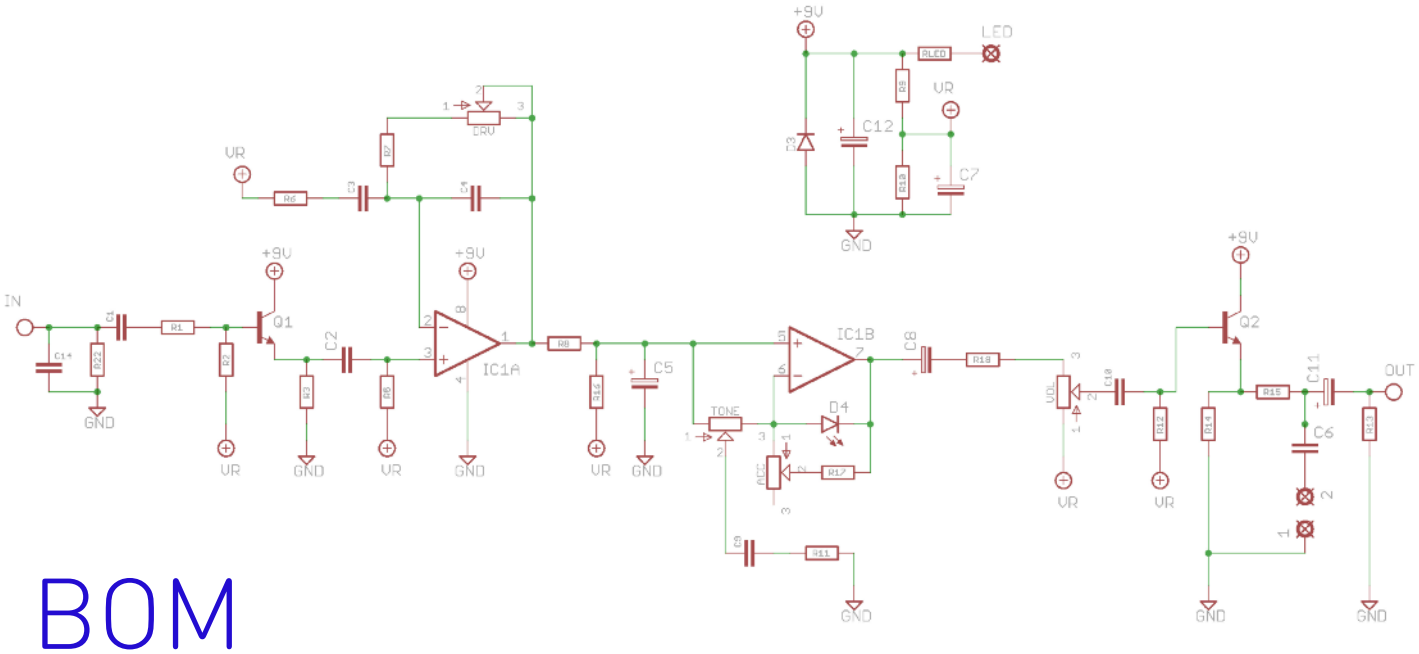


Dumb Lloyd v2

Dumble-ish drive with a Tube Screamer base

Schematic



BOM

R1	100R
R2	150K
R3	10K
R5	10K
R6	1K8
R7	10K
R8	10K
R9	10K
R10	10K
R11	220R
R12	100K
R13	10K
R14	10K
R15	100R
R16	10K
R17	1K
R18	1K
R22	1M
RLED	2K2 (CLR)

C1	470n
C2	1u
C3	220n
C4	82p*
C5	220n***
C6	470n**
C7	47u elec
C8	2u2 elec
C9	100n
C10	220n
C11	22u elec
C12	100u elec
C14	100p

IC	OPA2134
Q1,2	BC548B
D3	1N4001
D4	3mm Red LED
TONE	20-25KB
DRIVE	1MA
LEVEL	100KA
ACCENT	20-25KB

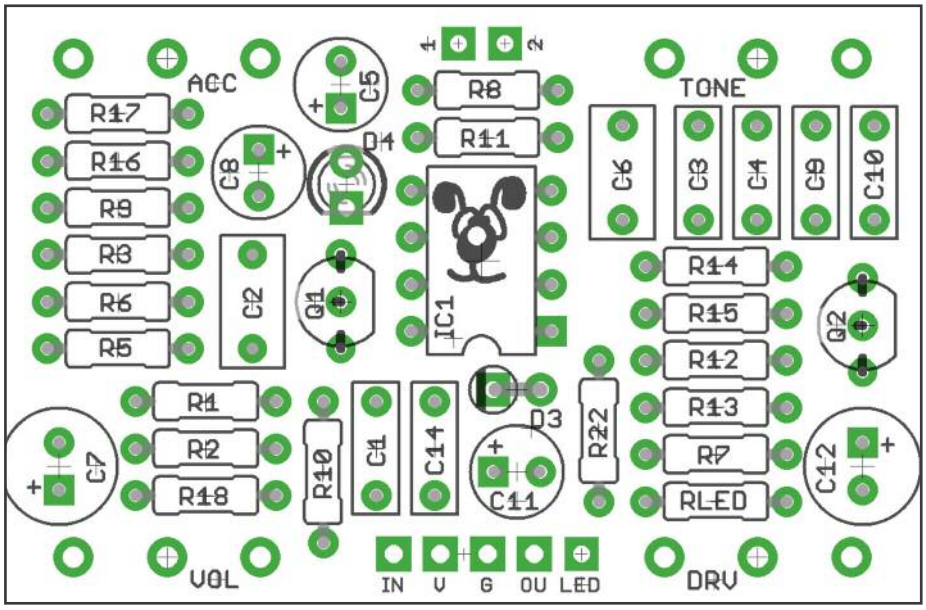
*It's very unlikely you'd hear any difference if you want to use a 100pf cap for C4.

**C6 has been included in case you want to make the 'Special' version. If not, leave it out. See overleaf.

***C5 was left as an electrolytic - a hangover from the Tube Screamer schematic. An electrolytic will work fine, but you can use a non-polarised cap if you can get one in 2.5mm pitch.

There's nothing particularly special about the IC or the transistors. Go ahead and try any other dual op-amps and BJTs. Note that the pinout of the BC548B is opposite to 2N3904/2N5088 etc.

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). You should really use a socket for the IC. If not, be extra careful not to overheat.

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. C7 and C12 can be laid flat over the adjacent resistors as shown in the cover image to give you extra clearance in the enclosure.

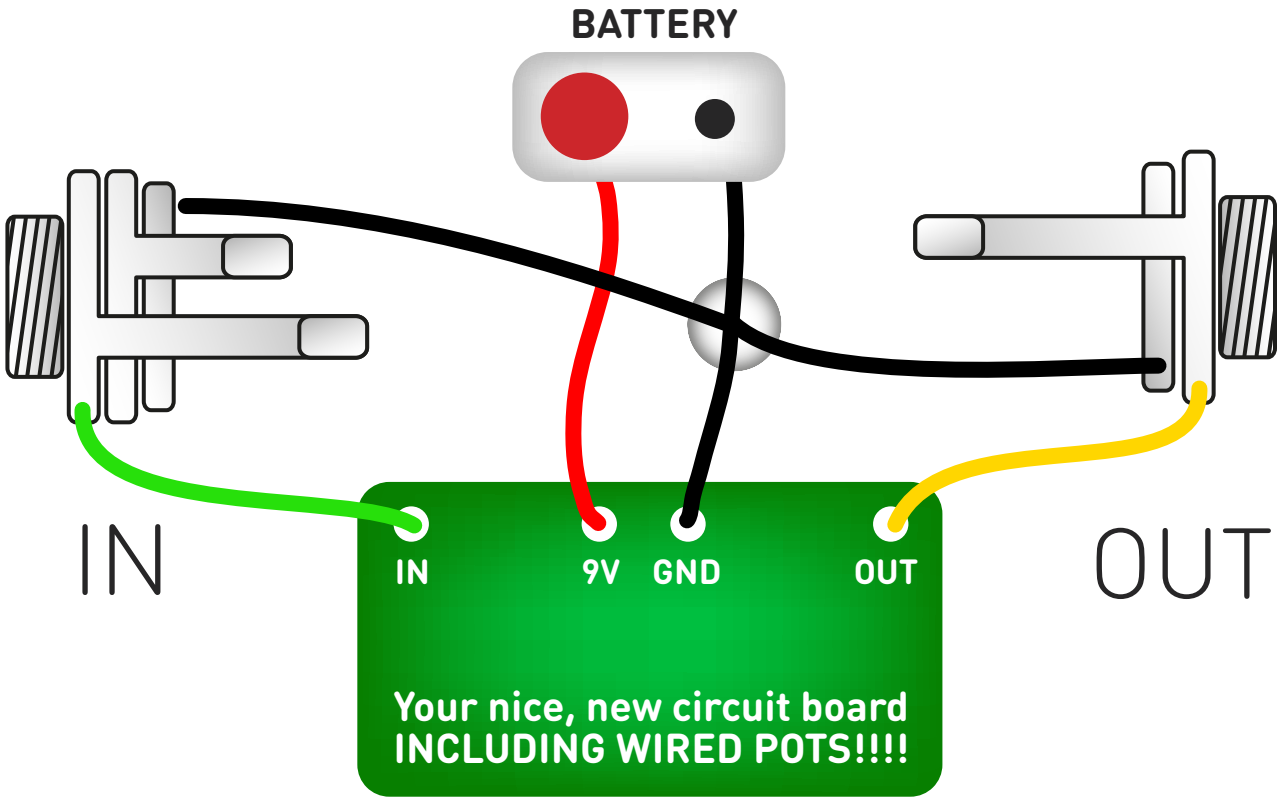
Negative (cathode) legs of the diodes go to the square pads. That's the short one on the LED.

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.

SPECIAL EDITION - JAZZ or ROCK???

If you want to waste a capacitor and a toggle switch, go ahead and build the Deluxe version. Simply include C6 in your build, and add a toggle switch to pads 1 and 2, above R8 on the PCB. This can be a SPST. It just takes C6 in and out of the circuit.

Test the board!



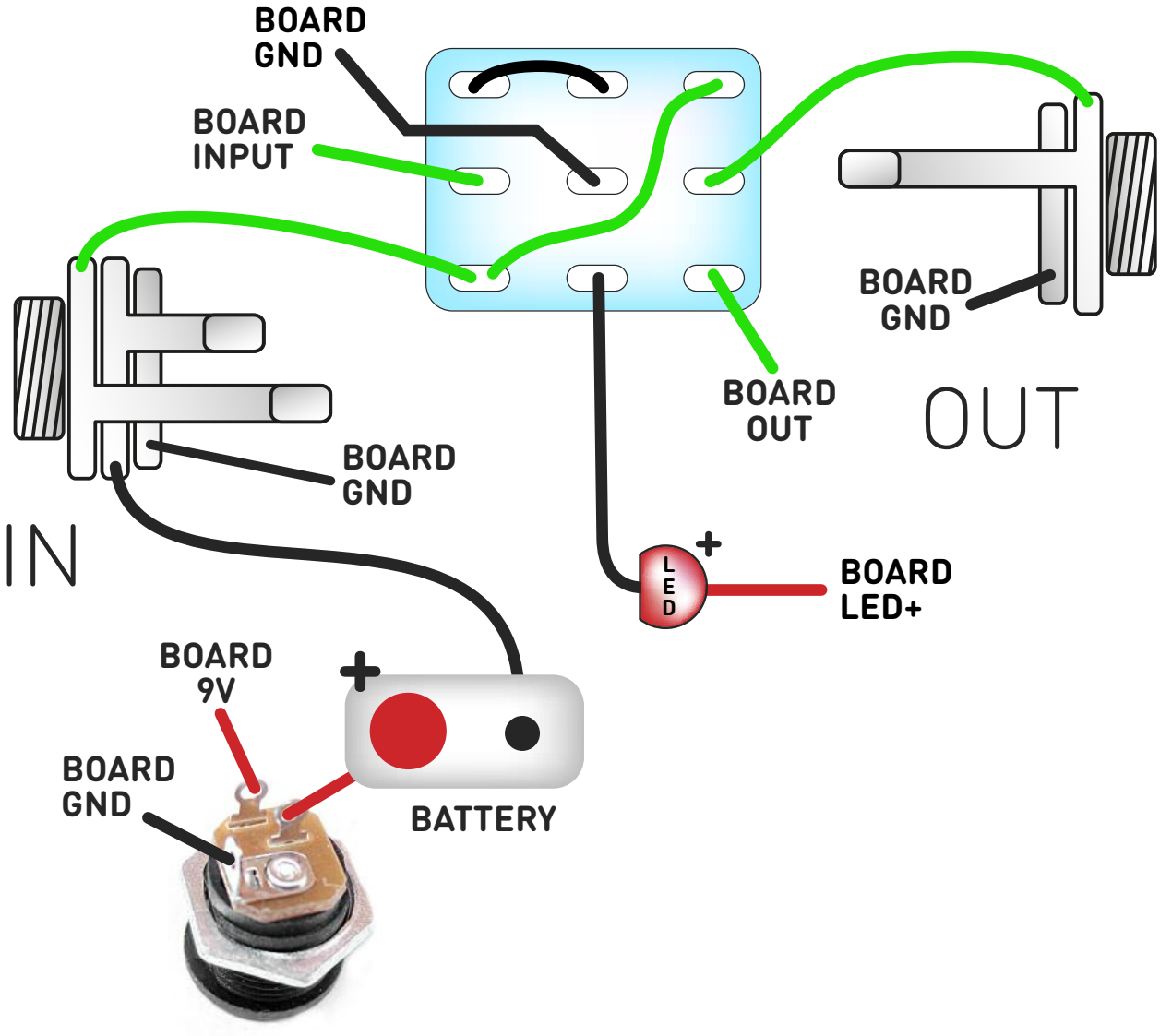
UNDER NO CIRCUMSTANCES will troubleshooting help be offered if you have skipped this stage. No exceptions.

Once you've finished the circuit it makes sense to test is 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

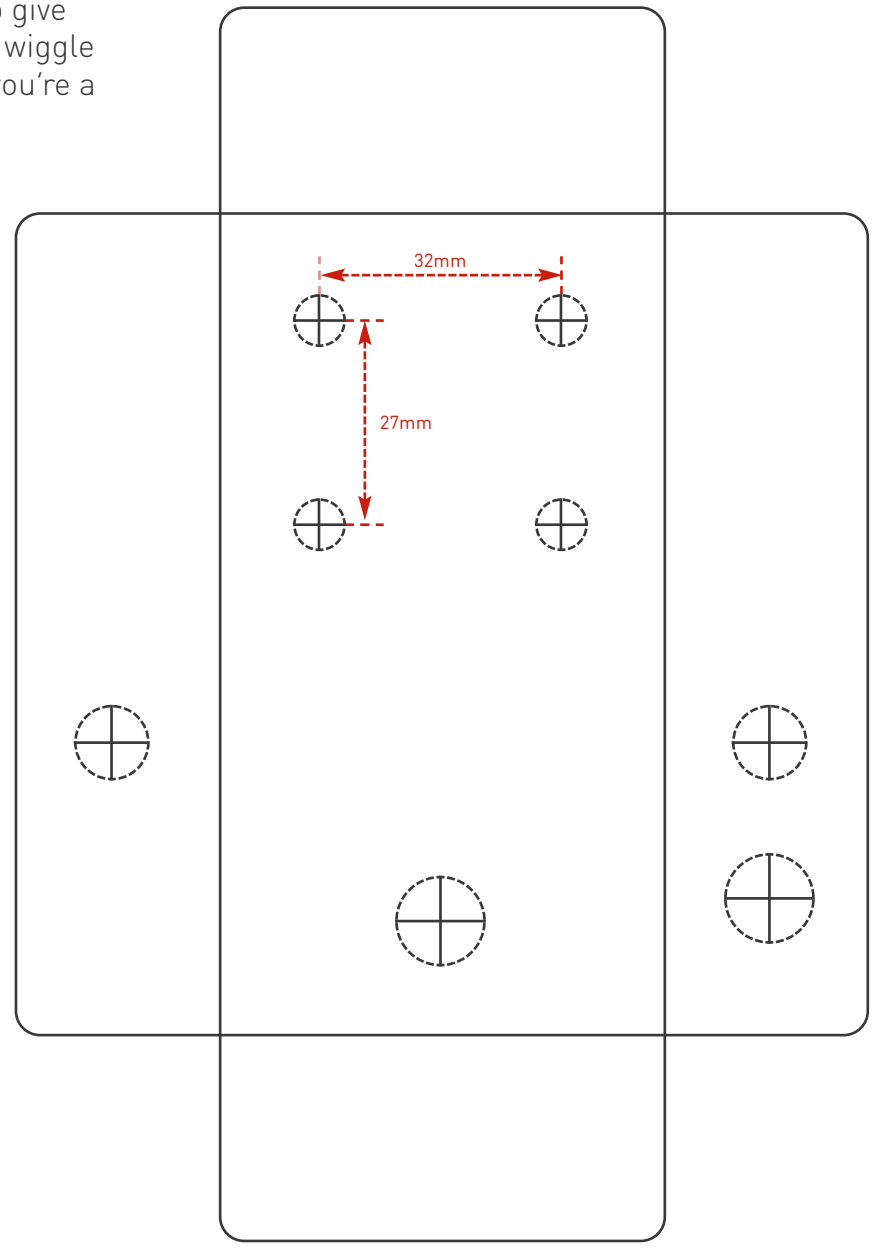
Hammond 1590B

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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