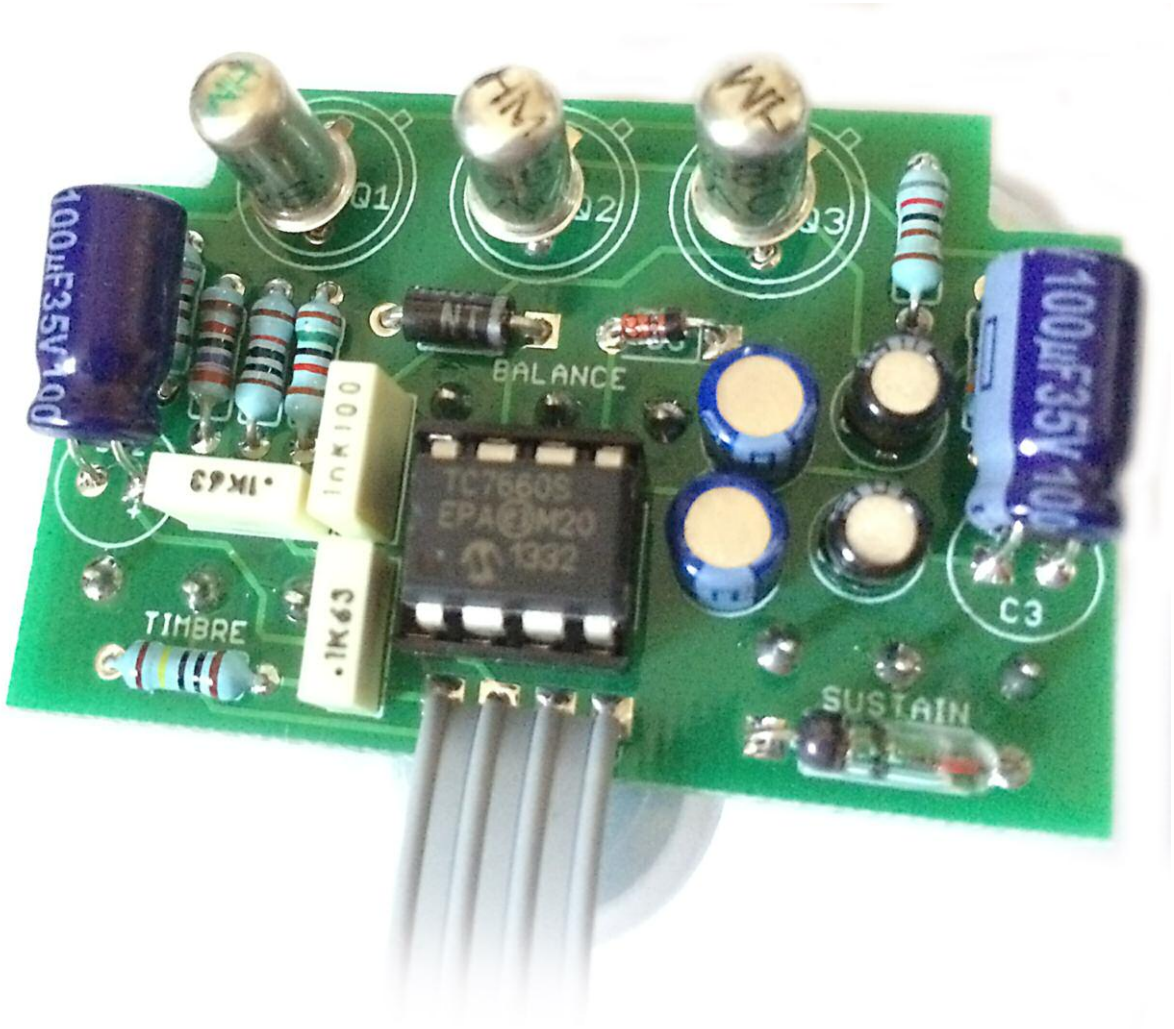
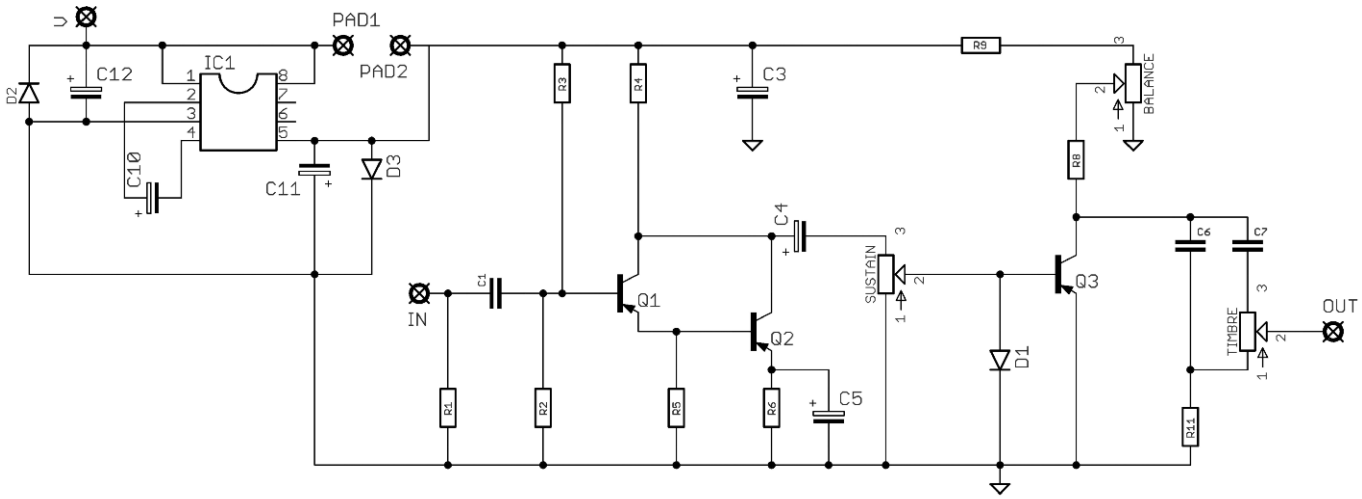


BuzzAround MkII

Germanium Fuzz with optional voltage inverter

Schematic + BOM



R1	1M
R2	100K
R3	470K
R4	10K
R5	10K
R6	3K3
R8	15K
R9	27K
R11	10K

C1	100n
C3	100u elec*
C4	4u7 elec*
C5	4u7 elec*
C6	1n
C7	100n
D1	1N34A**

Q1,2,3	PNP Ge***
SUST	100KB
BAL	5KB
TIMB	100KB

*Reverse the orientation of C3-C5,
i.e. + leg into round hole.

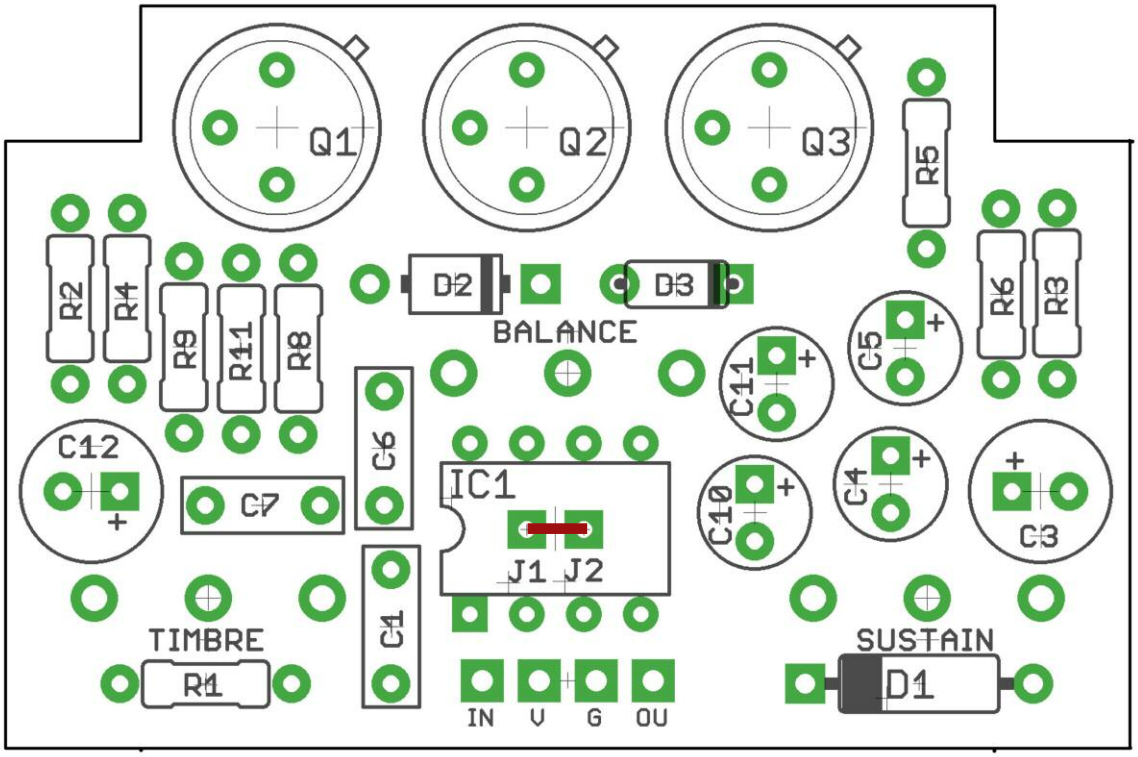
**Other germanium diodes can be tried.

***Q1-3 should be in the hFE range of a standard Tone Bender set.
AC128 and 2N404 work well.

VOLTAGE INVERTER

C10	10u elec
C11	10u elec
C12	100u elec
D2	1N4001
D3	1N4148
IC1	TL7660S

If you want to build a positive ground version that will have its own isolated power supply, or be powered by battery, leave out the Voltage Inverter parts and connect pads J1 and J2 with a jumper wire (shown as Pad1-2 above).



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.

If you're not using the Voltage Inverter place a jumper wire across pads J1 and J2.

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).

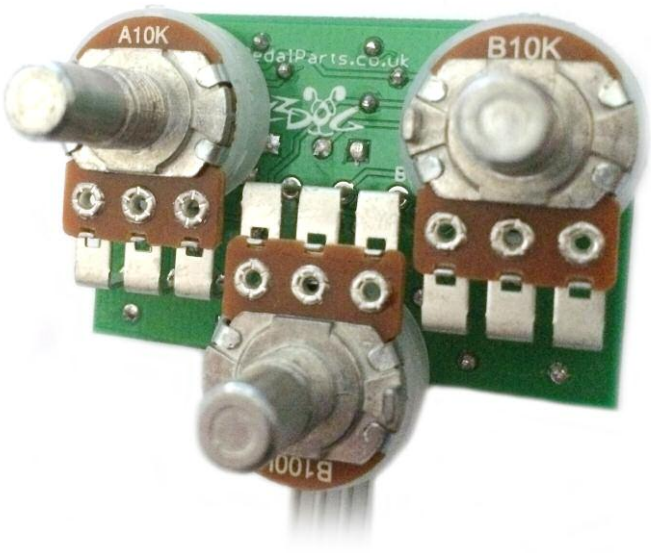
Snap the small metal tag off the pots so they can be mounted flush in the box.

C3 and C12 should be placed flat across the top of adjacent resistors as shown in the cover image to ensure plenty of clearance when boxing up the circuit.

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

Pots mount 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 readjust any that are off.

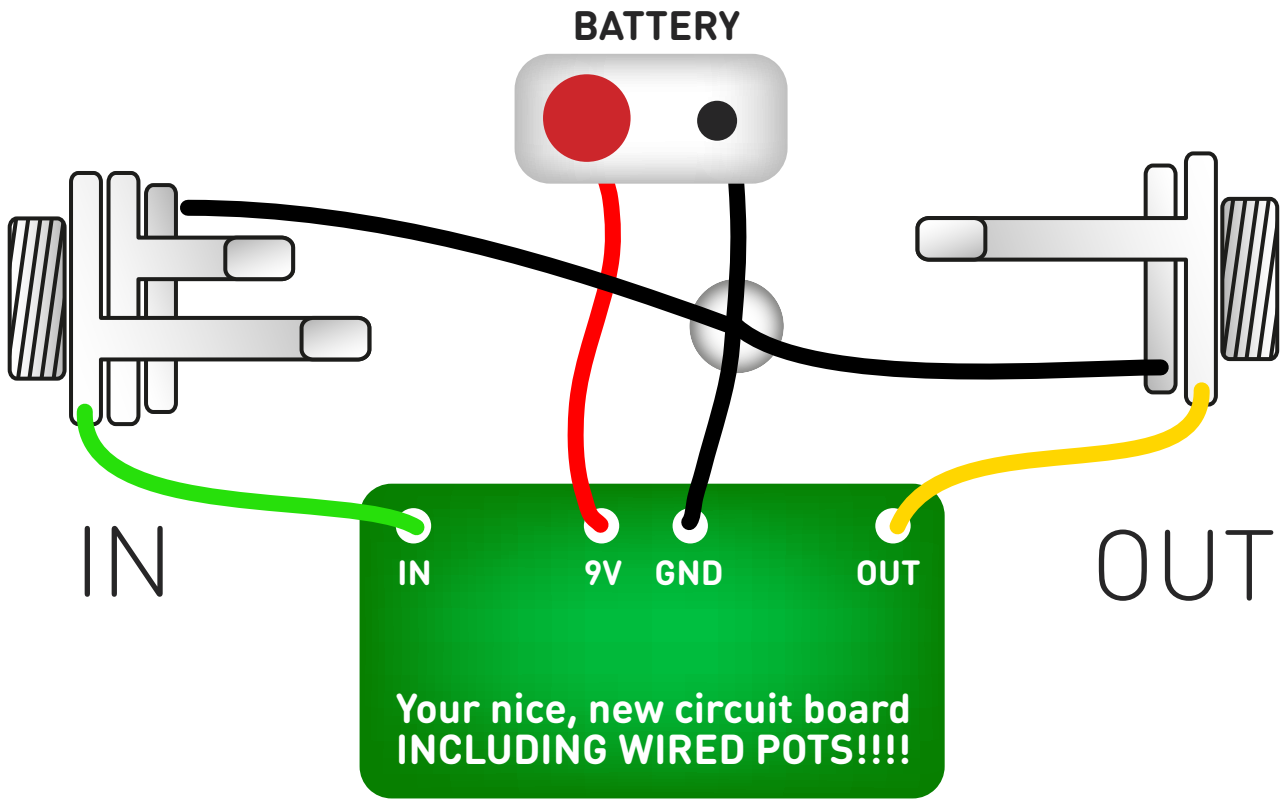
If your pots don't have protective plastic covers you should place a strip of thick card between them and the board when soldering to keep them a good distance from the pcb to avoid shorting other components.



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.

Test the board!

Builds including Voltage Inverter



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

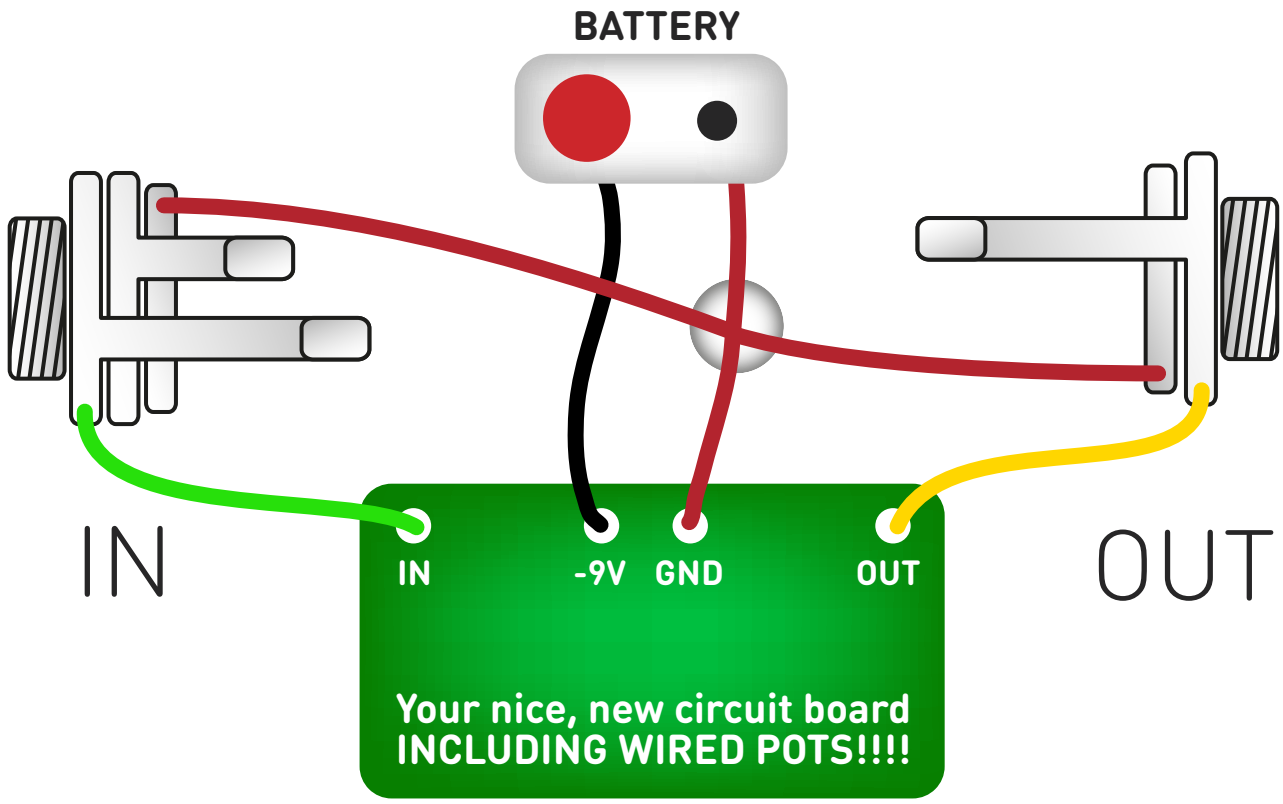
Once you've finished the circuit it makes sense to test is before starting on the switch and LED wiring. It'll cut down troubleshooting time in the long run. If the circuit works at this stage, but it doesn't once you wire up the switch - guess what? You've probably made a mistake with the switch.

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.

Test the board!

PNP builds without Voltage Inverter



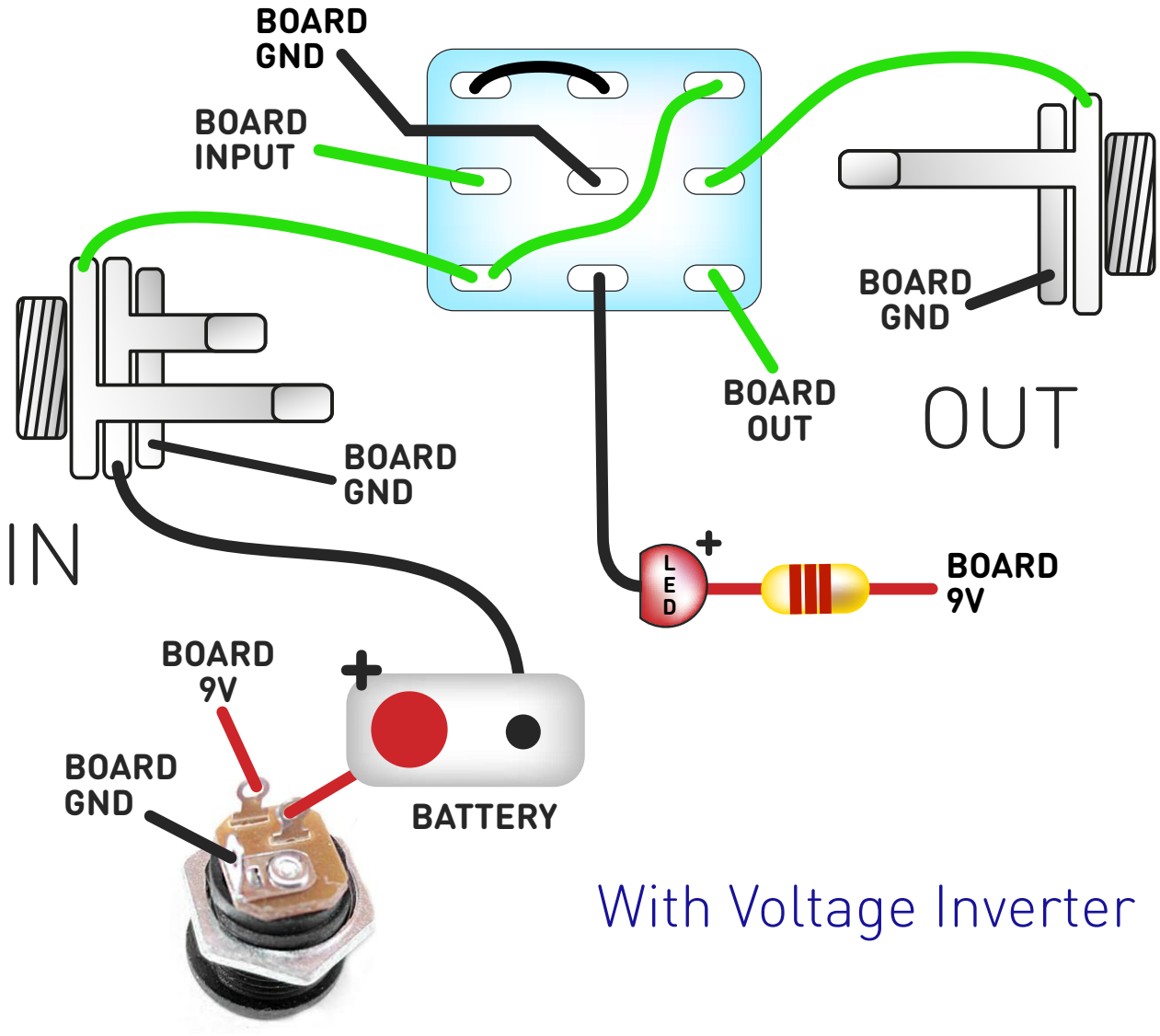
UNDER NO CIRCUMSTANCES will troubleshooting help be offered if you have skipped this stage. No exceptions.

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)



With Voltage Inverter

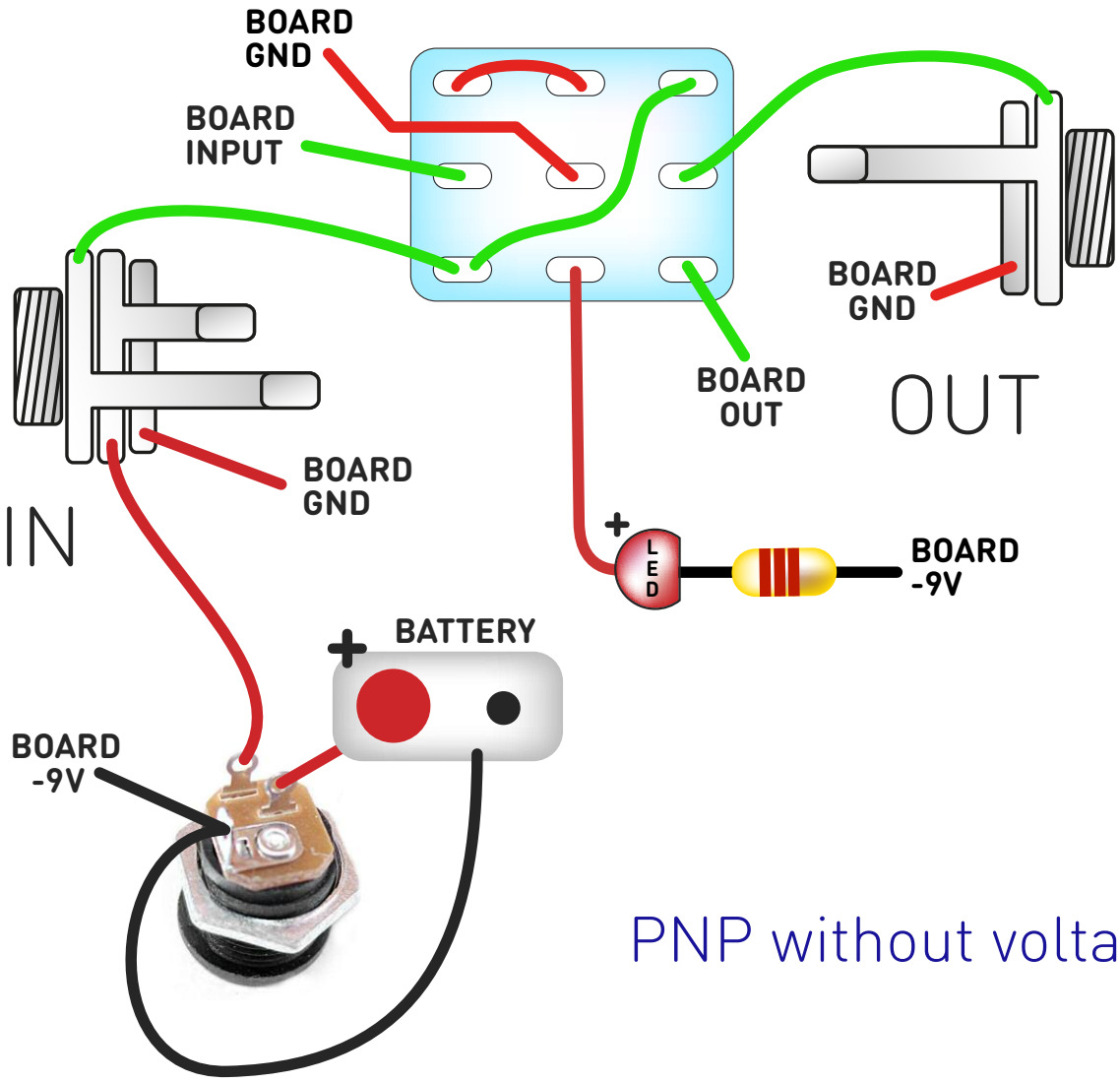
Wiring shown above will disconnect the battery when you remove the jack plug from the input, and also when a DC plug is inserted.

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.

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



PNP without voltage

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

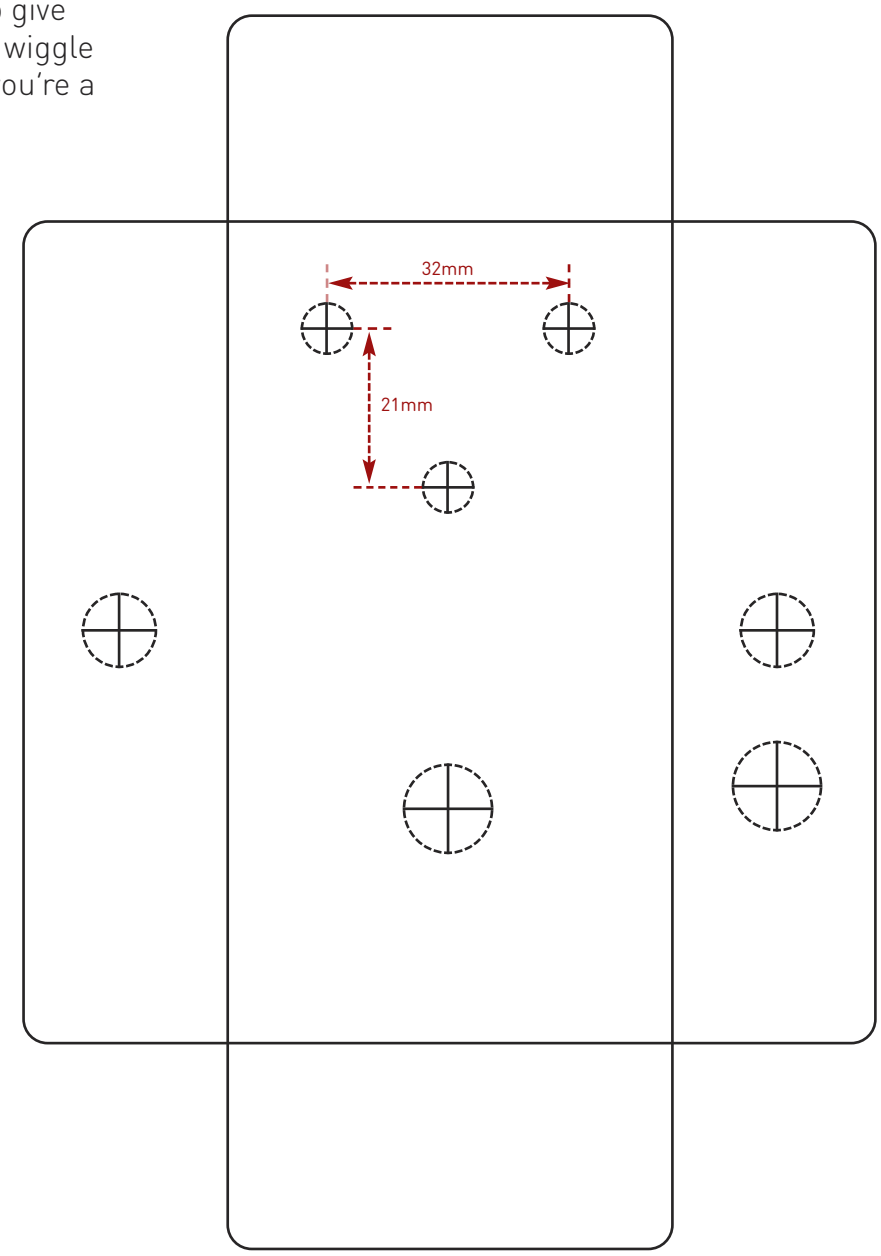
Hammond 1590B

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.

PedalParts.co.uk