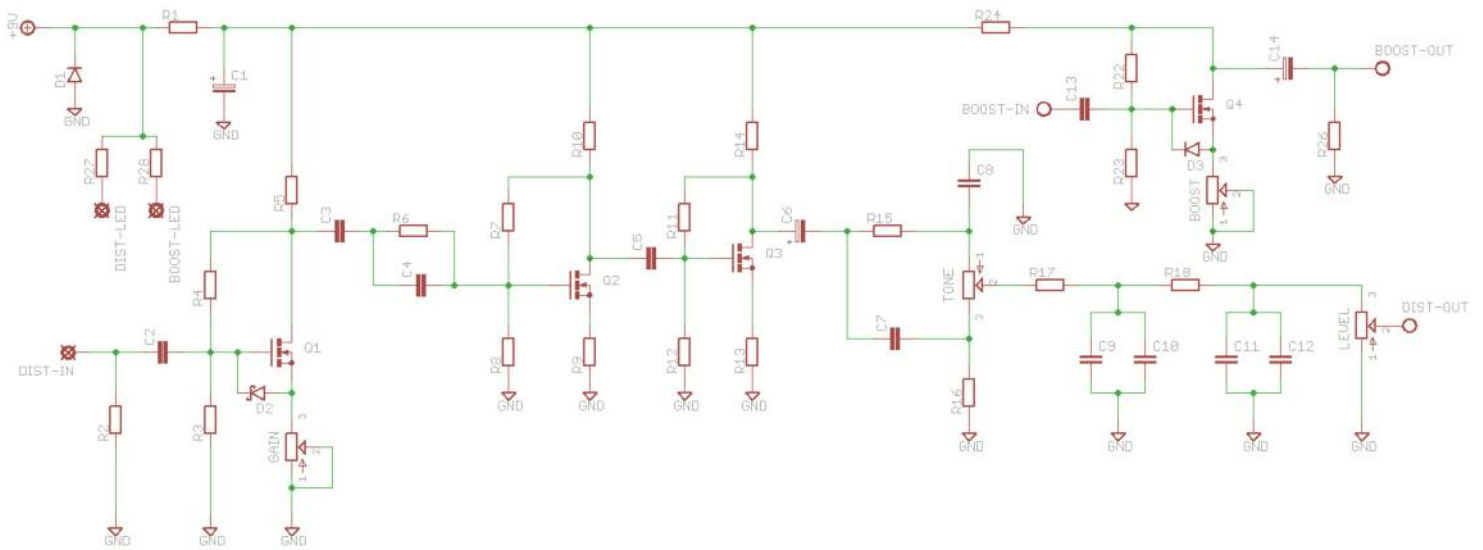


Rock Box

Full-on Rock Distortion
with a nice post-Boost

PedalParts.co.uk

Schematic + BOM



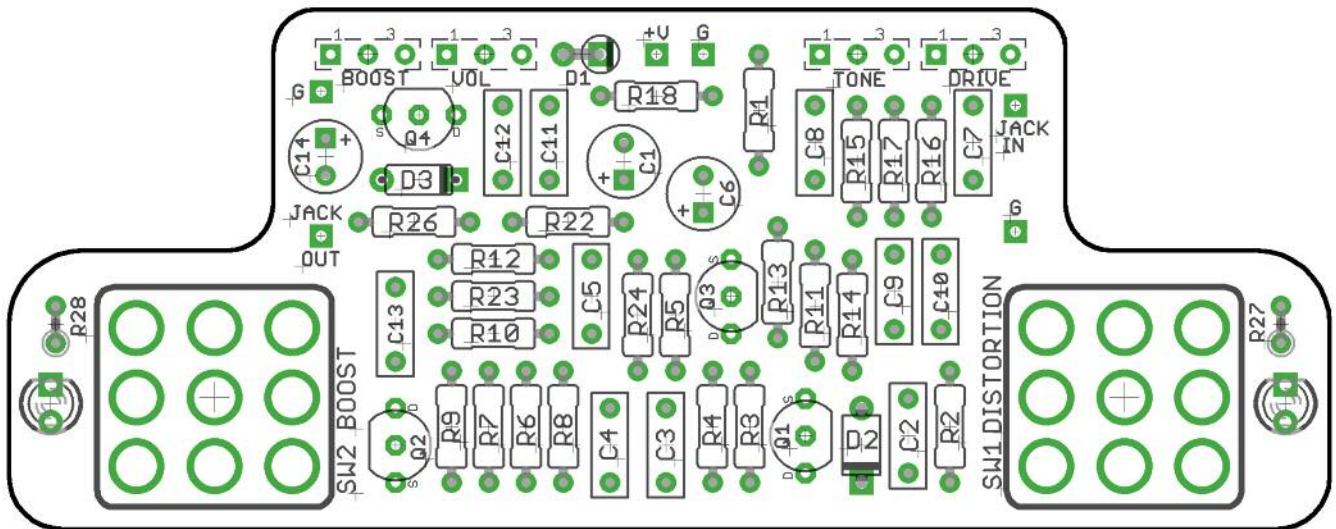
| | |
|-----|--------------|
| R1 | 82R |
| R2 | 1M |
| R3 | 1M |
| R4 | 1M |
| R5 | 5K1 |
| R6 | 470K |
| R7 | 1M |
| R8 | 1M |
| R9 | 100R 270R |
| R10 | 5K1 |
| R11 | 1M 510K* |
| R12 | 1M |
| R13 | 330R 360R |
| R14 | 5K1 |
| R15 | 47K |
| R16 | 82K |
| R17 | 10K |
| R18 | 10K |
| R22 | 1M |
| R23 | 1M |
| R24 | 5K1 |
| R26 | 47K |
| R27 | 2K2 |
| R28 | 2K2 |

| | |
|-----|-------------|
| C1 | 47u |
| C2 | 100n |
| C3 | 22n 10n |
| C4 | 470p |
| C5 | 22n 10n |
| C6 | 1u |
| C7 | 10n 100n |
| C8 | 22n |
| C9 | 1n 2n2 |
| C10 | 1n empty |
| C11 | 1n 2n2 |
| C12 | 1n empty |
| C13 | 100n |
| C14 | 10u |

| | |
|-------|------------|
| Q1-4 | BS170 |
| D1 | 1N4001 |
| D2 | 9.1v zener |
| D3 | 9.1v zener |
| GAIN | 5KC |
| TONE | 100KB |
| LEVEL | 100KB |
| BOOST | 5KC |
| SW1-2 | 3PDT |

Main BOM is JTM45 version.
Tweaks for '59 Bassman in blue.

*520K in original. 510K is fine.

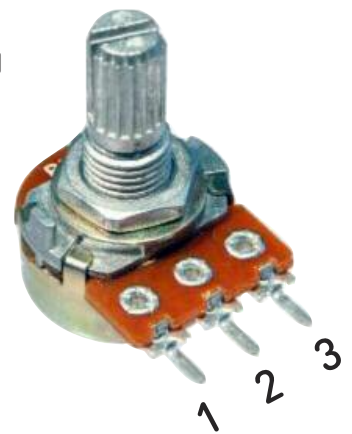


As the GAIN and BOOST controls on this babe are actually Boner Boost circuits, they will produce a crackle when you adjust them. This is normal. Panic not.

At full crank this circuit puts out a LOT of signal, so always start off with the 'BOOST' turned right back.

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

You MUST use some kind of heat sink on the legs of the diodes and the BS170s when soldering. They aren't keen on heat. Any more than 3-4 seconds of iron and they're toast.



ALL the components mount on the top side of the board. It's also recommended that all wires go this side, thus cutting down the risk of anything shorting on the lid of the enclosure when finished.

LEDs - leave these out until you're boxing it all up - see later.

POT WIRING

Give yourself enough wire to be able to manoeuvre things around in the box without ending up with spaghetti junction in there. 35-40mm is plenty.

JACK and DC WIRING

I'd recommend longer wires until the circuit has been tested. Then you can detach them, put everything in place in the box, then make them as short as possible (without tension) in the final boxing up.

FOOTSWITCHES

The holes for the footswitch tags have been made deliberately a little bigger than required so there's a bit of slack for placement. If you've ordered a pre-drilled enclosure the holes for the footswitches are 1mm bigger than would normally be supplied. Wiggle room is always good.

To attach the footswitches to the board, first put them in place in the enclosure. Don't fully tighten them - just enough to hold them in place.

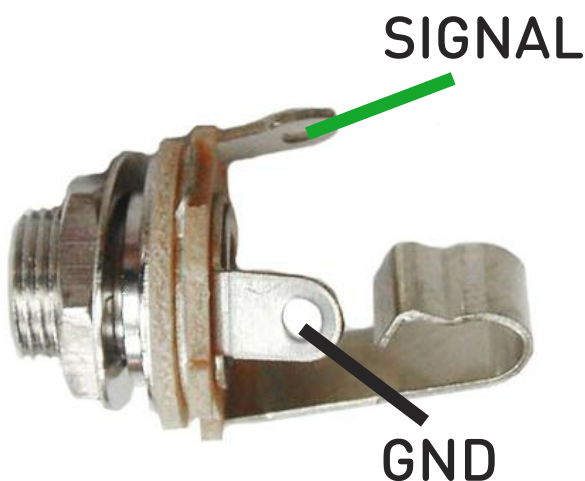
Now place the PCB down on top of the footswitches and manoeuvre until you're happy with placement. Now solder them in. Get plenty of solder in there. It isn't necessary to completely fill the holes but it won't harm to be sure of a good connection.

WIRING FOR TESTING

Connect everything up but the LEDs.

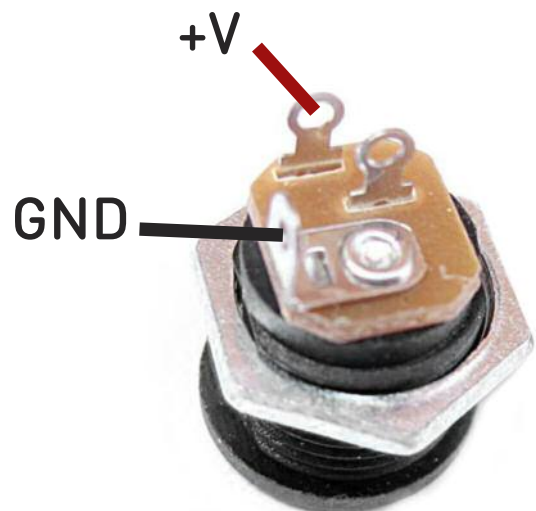
Ensure your power supply is 9V Tip Negative, or connect up a battery for now. If connecting a battery, solder long lengths of wire to the +V and GND pads on the PCB, then attach the battery to the other end of these. This saves desoldering stuff from the board, which is a pain.

JACK SOCKETS



SIGNAL is JACK IN and JACK OUT on the PCB. Each socket has its own GND connection conveniently placed.

DC SOCKET



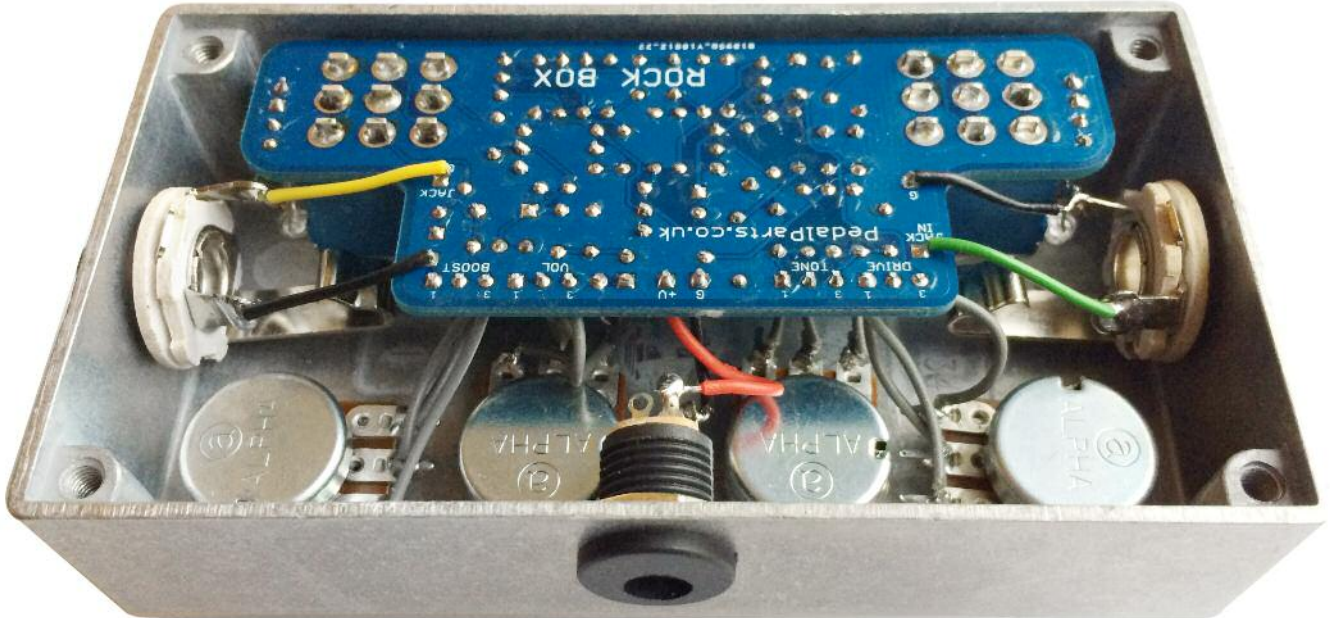
Ignore the third tag - you only need that if wiring up for battery.

Plug in. Go! Do remember to turn all the knobs fully counterclockwise before you start. This thing kicks out some serious volume.

If it works, crack on and get it in the box. If not, troubleshoot. Check you have everything in the right place and reflow any poor joints.

BOXING UP

Here's how it'll look when boxed up. Notice the two outer pots are turned inwards 90°. This keeps them well clear of the jacks.



What about my LEDs?

Pre-drilled enclosures are supplied with 3mm holes for the LEDs, rather than larger ones that require a mounting bezel. Why? Because you can hold the LED securely in place with the PCB. When you come to box up your lovely new circuit, get the pots in place first. Then the jacks. Now, slide your LEDs all the way into the PCB (long leg to square pad) and bend the legs ever so slightly so they don't fall out. Alternatively put a little bluetac on there. Now locate your footswitches into place and tighten.

When everything is secure, let your LEDs slide down into the holes - use some needle-nosed pliers or skinny fingers to position them fully in the holes.

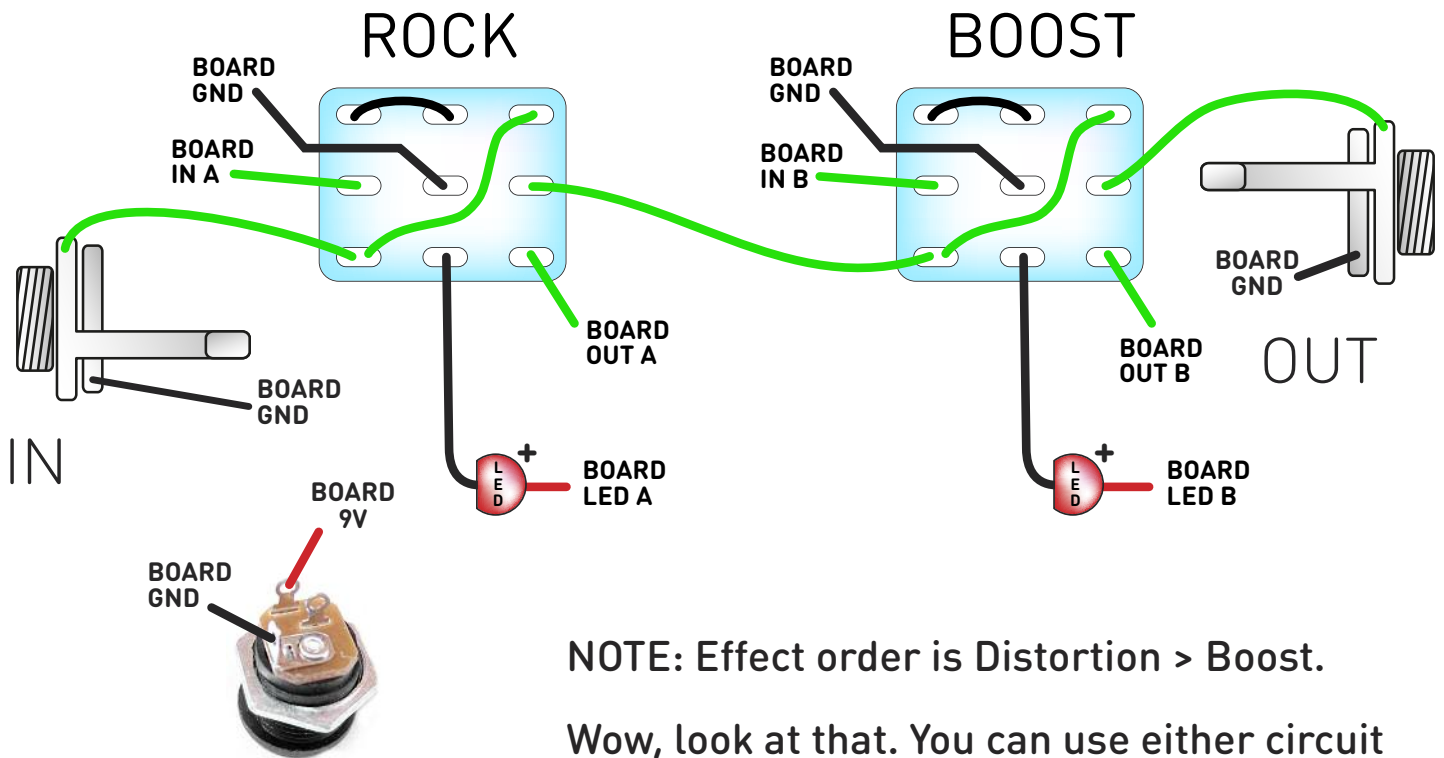
Once in place, solder.

Those little lights aren't going anywhere!



This is how the whole shebang is connected within the PCB traces.

NOTE: This is just for illustration purposes - none of this wiring needs to be done!



NOTE: Effect order is Distortion > Boost.

Wow, look at that. You can use either circuit on its own. Click in the BOOST section and you're rockin' a Boner Boost. NICE!

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.

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