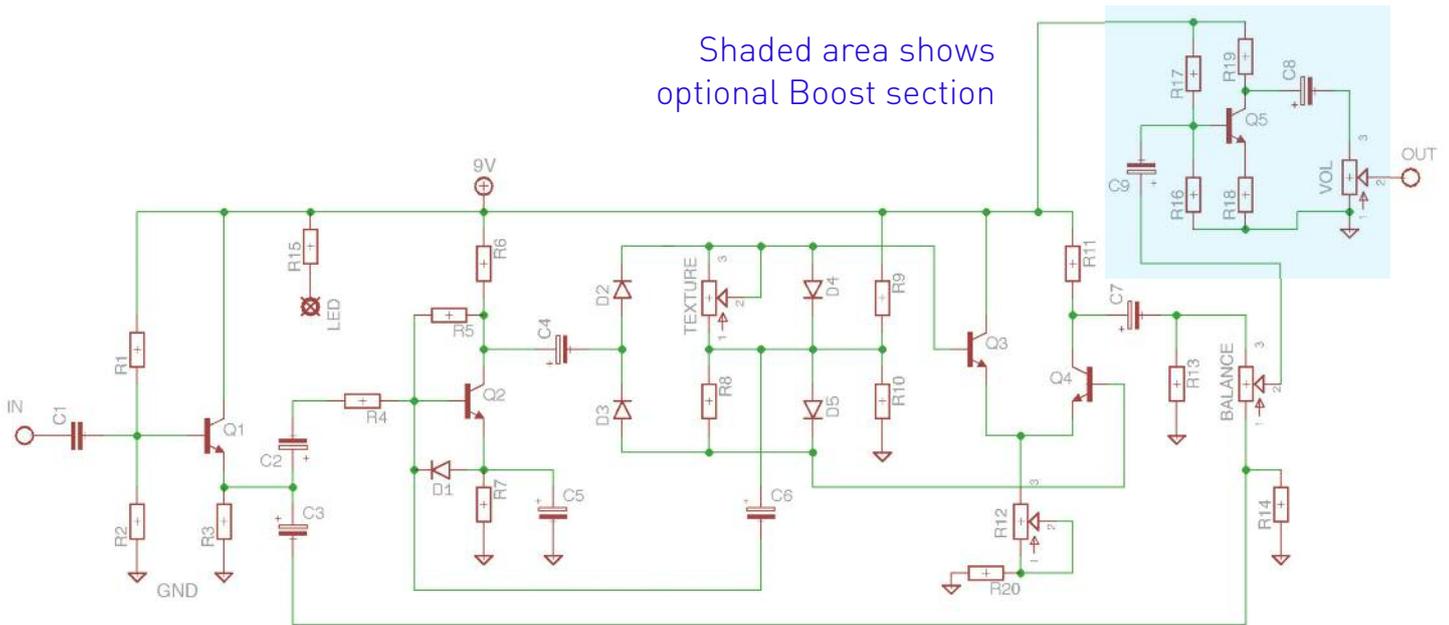


Scrambler

Ampeg Scrambler with
optional Post-Boost (v2.0)

PedalParts.co.uk

Schematic



BOM

The cover image shows v1.0 of the PCB which required a hack to add C9. This is no longer the case.

R1	1M	C1	10n
R2	1M	C2	4u7 elec
R3	4K7	C3	1u elec
R4	2K2	C4	4u7 elec
R5	470K	C5	100u elec
R6	4K7	C6	4u7 elec
R7	220R	C7	1u elec
R8	8K2	C8	1u elec
R9	220K	C9	1u elec
R10	220K	D1-5	1N4148
R11	1K	Q1,3,4	MPSA13**
R12	4K7*	Q2	2N3904***
R13	47K	Q5	2N5088
R14	47K	BAL	50KB
R15	2K2 (CLR)	TEXT	10KB
R16	100K	VOL	100KA
R17	1M		
R18	390R		
R19	10K		
R20	470R		

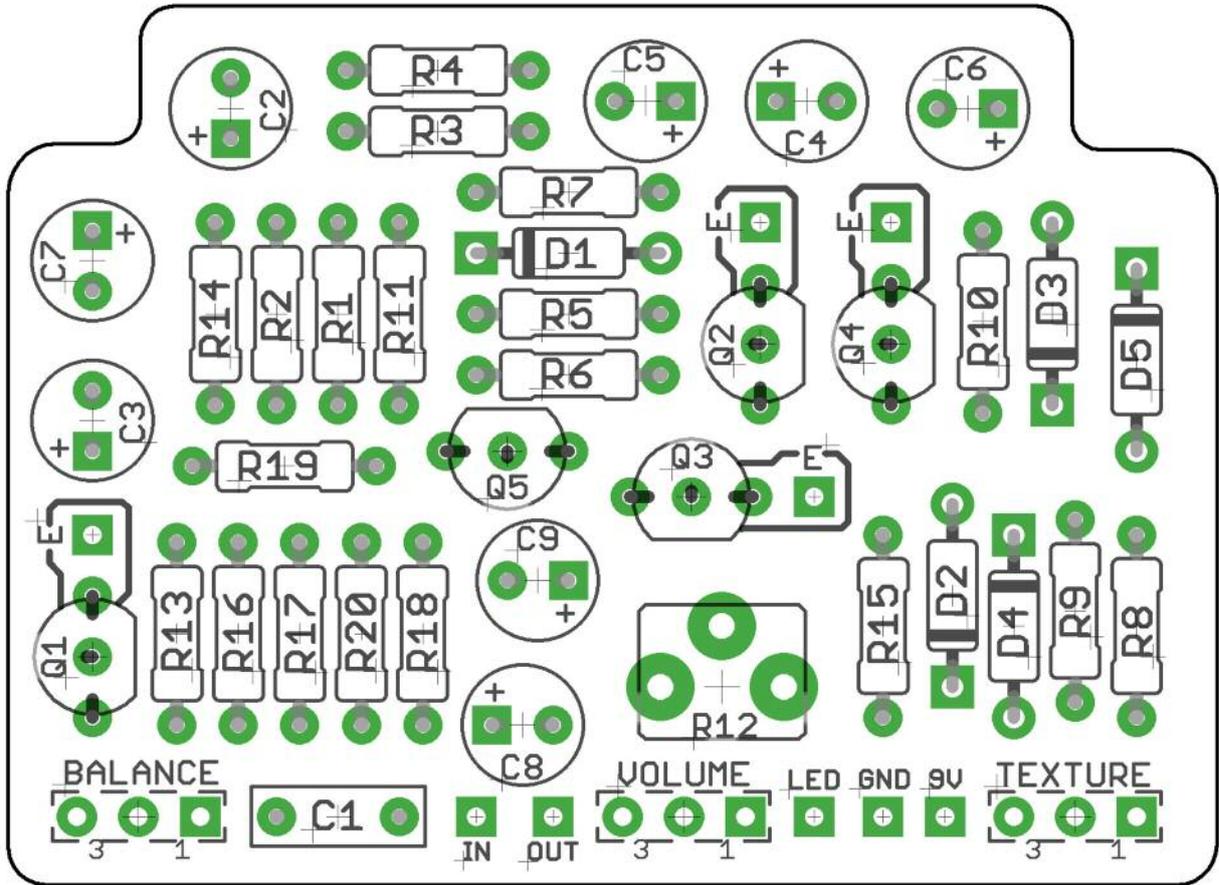
R16-19, C8-9, Q5 and VOL are the optional post-boost section. More info later.

*10K trimpot supplied in place of fixed 4K7 to allow you to tune the octave fuzz to your own taste.

**High-gain NPN darlington transistors are required. Original used 2N5306.

***Original used BC169B.

Please see later notes regarding transistor pin-outs.



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

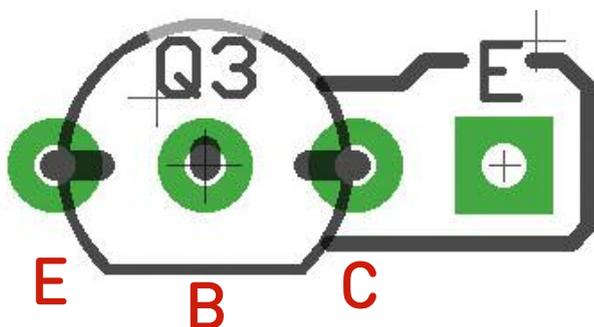
Snap the metal tag off the pots to mount them flush in the box.

Diodes and transistors do NOT like heat. Be very careful when soldering them, and don't leave the iron on them for more than a couple of seconds. Using a heatsink (self-closing tweezers, crocodile clip) on the leg you're soldering will help avoid frying them. Same goes for the LED.



The PCB has been designed to take two different transistor pin-out configurations - standard **EBC** (MPSA13, 2N3904, 2N5088) and non-standard **BCE** (2N5306, BC169B).

Standard pin-out transistors should mount in the pads as normal, ignoring the extra E pad shown in each case. BCE pin-outs should mount with the emitter in the square E pad.



Standard version (no boost)

This should max out at around unity gain.

Don't use these parts:

R16-19

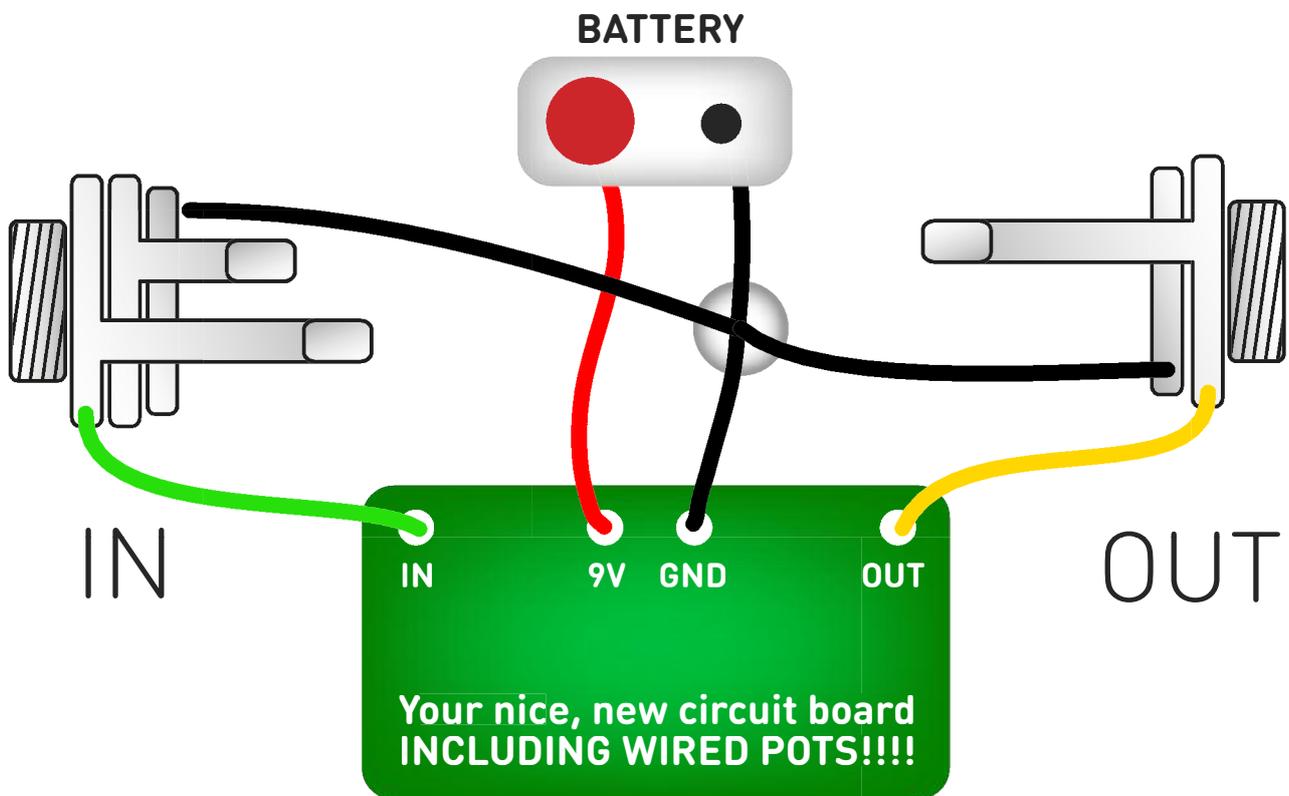
C8-9

Q5

VOL

Take your OUT wire from either pin 2 of the BALANCE pot (instead of connecting that pin to the PCB), or the + pad of C9.

Test the board!

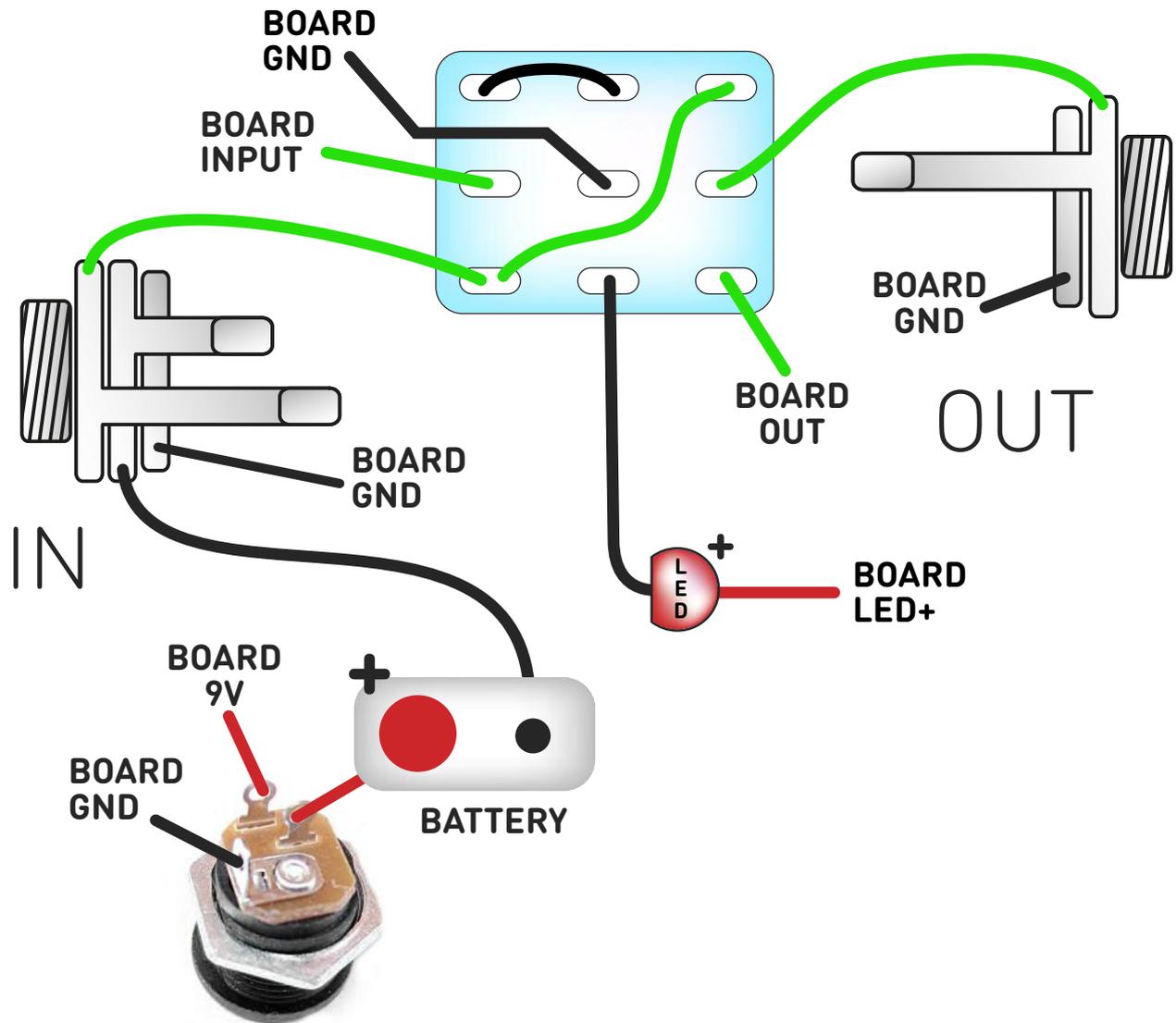


Once you've finished the circuit it makes sense to test it before starting on the switch and LED wiring. It'll cut down troubleshooting time in the long run. If the circuit works at this stage, but it doesn't once you wire up the switch - guess what? You've probably made a mistake with the switch.

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



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. Now... Scramble that signal!

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