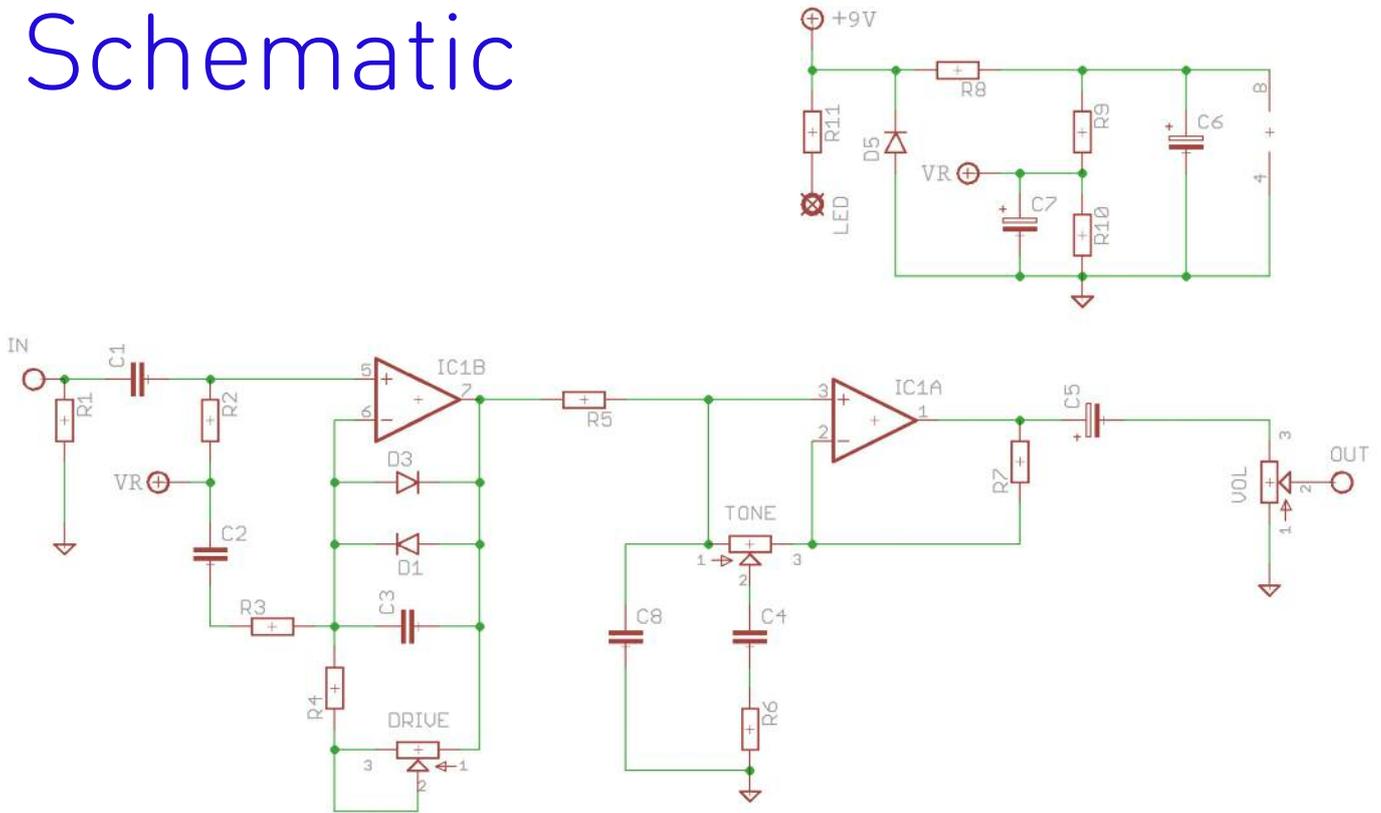


Little Screamer

Stripped-back, bufferless
Tube Screamer

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Schematic



Schematic and BOM shown are for the stock version of Jack Orman's stripped back Tube Screamer circuit. Overleaf are BOMs and clipping variations used on a couple of boutique versions of the circuit.

BOM

R1	1M	D1	1N4148/1N914
R2	470K	D2	Jumper*
R3	4K7	D3	1N34A
R4	47K	D4	Jumper*
R5	1K	D5	1N4001
R6	220R	IC	4558 or similar
R7	1K	DRIVE	500KB
R8	390R	TONE	25KB
R9	10K	VOL	100KB
R10	10K		
R11	2K2 (CLR)		
C1	47n (470n)		
C2	47n (220n)		
C3	47p		
C4	220n		
C5	1u elec		
C6	47u elec		
C7	47 u elec		
C8	220n		

C1 & C2 values shown in blue are mods to make the circuit more suitable for bass.

*D2 and D4 are there to accommodate alternative clipping options as shown on the boutique versions overleaf.

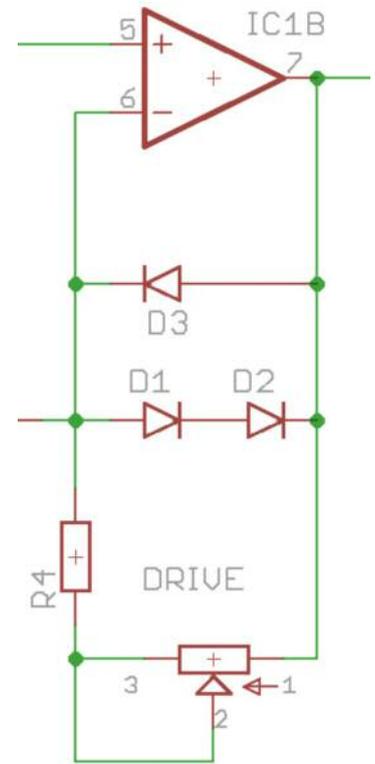
You may notice there are also spots for a D6 and D7. More on those later.

Boutique variations

Different component values and slightly different clipping sections as shown.

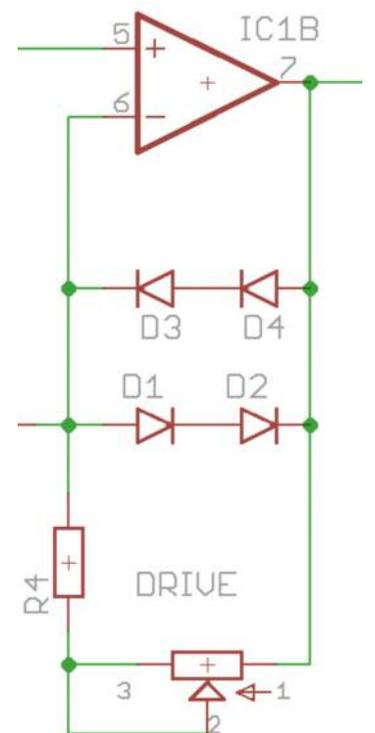
Boutique "Forever"

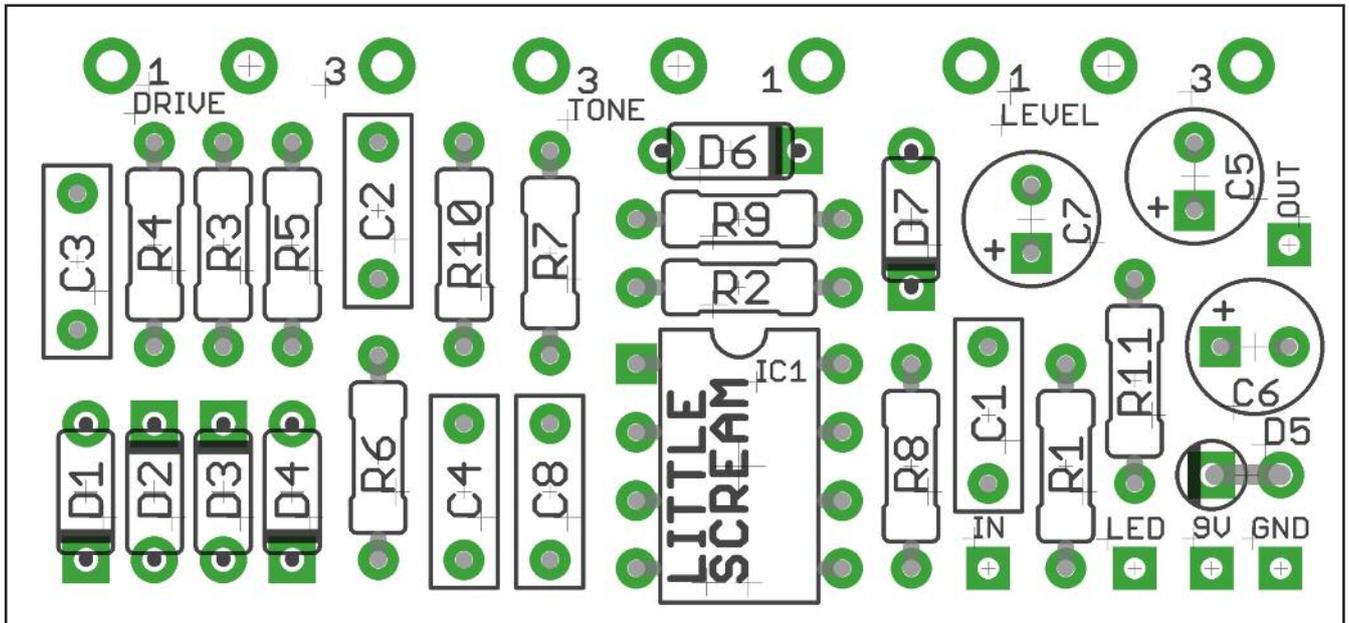
R1	1M	C1	56n
R2	1M	C2	220n
R3	1K	C3	empty
R4	10K	C4	150n
R5	1K	C5	22u elec
R6	470R	C6	47u elec
R7	1K	C7	47 u elec
R8	390R	C8	150n
R9	10K	IC	4558 or similar
R10	10K	D1	1N4148/1N914
R11	2K2 (CLR)	D2	1N4148/1N914
DRIVE	100KB	D3	1N4148/1N914
TONE	5KB	D4	Jumper
VOL	100KB	D5	1N4001



Boutique "Forever Explosion"

R1	1M	C1	47n
R2	1M	C2	220n
R3	1K	C3	empty
R4	10K	C4	220n
R5	1K	C5	10u elec
R6	330R	C6	47u elec
R7	1K	C7	47 u elec
R8	390R	C8	150n
R9	10K	IC	4558 or similar
R10	10K	D1	1N4148/1N914
R11	2K2 (CLR)	D2	1N4148/1N914
DRIVE	500KB	D3	1N4148/1N914
TONE	5KB	D4	1N4148/1N914
VOL	500KB	D5	1N4001





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

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

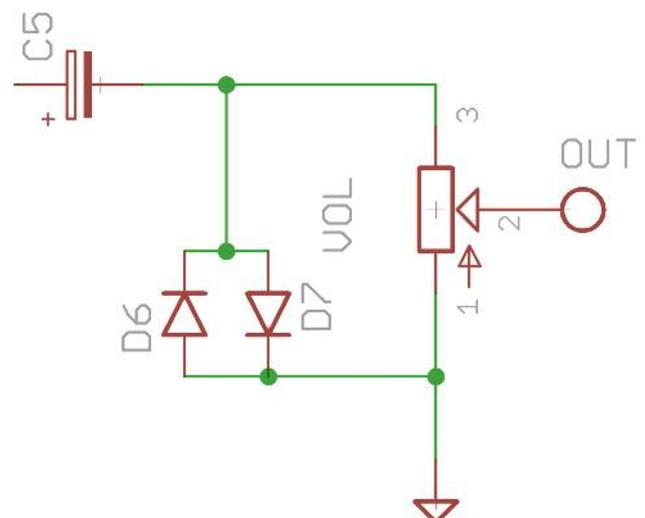
I've incorporated the Current Limiting Resistor for the LED into the board for your pleasure.

Be VERY careful when bending the legs of the 1N34A if you have one in your chosen kit. The glass case is very fragile and likely to break. Best to hold the leg with some needle-nosed pliers against the case, and bend the leg with your finger so the pliers are taking any strain away from the diode.

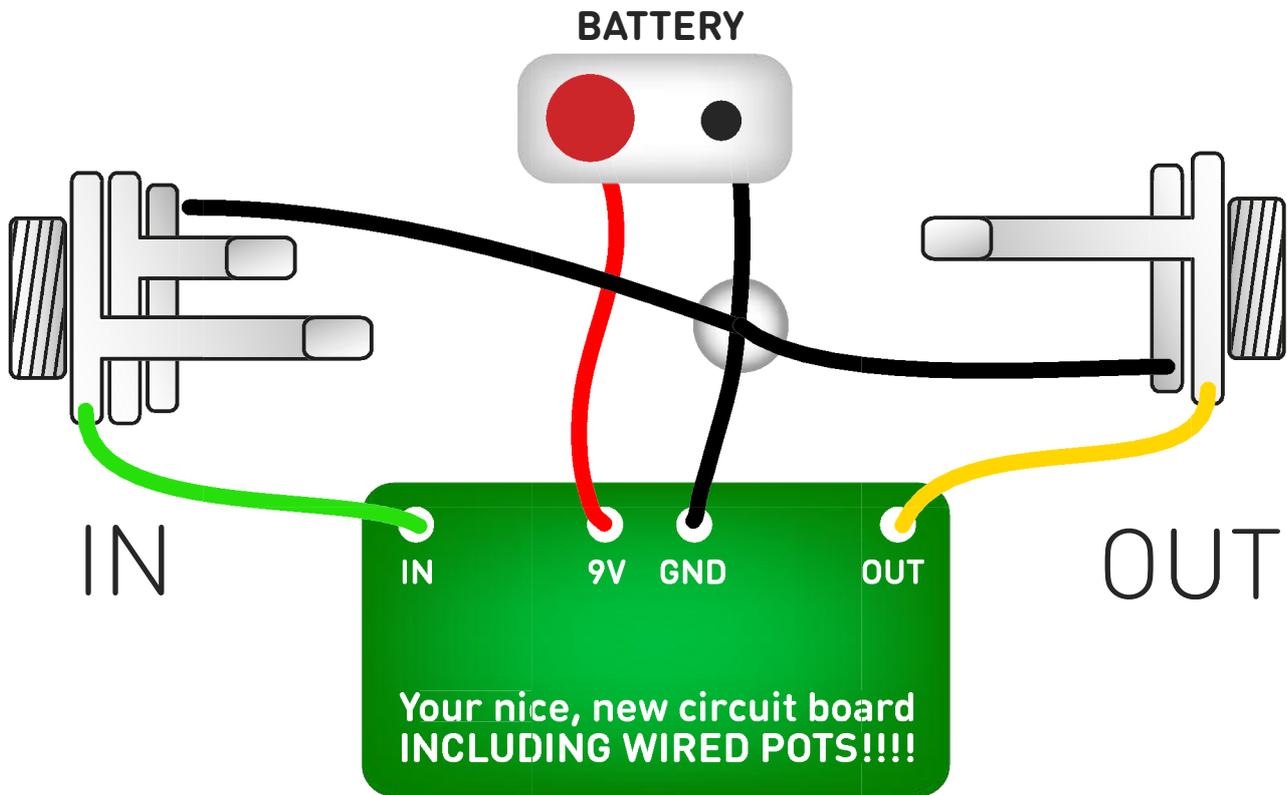
DRIVE and LEVEL pots mount on the back side of the board. TONE goes on the same side as the other components.



By request I've added spots for extra clipping on the output. This is for experimentation and is not part of the original circuits. Help yourself!



Test the board!

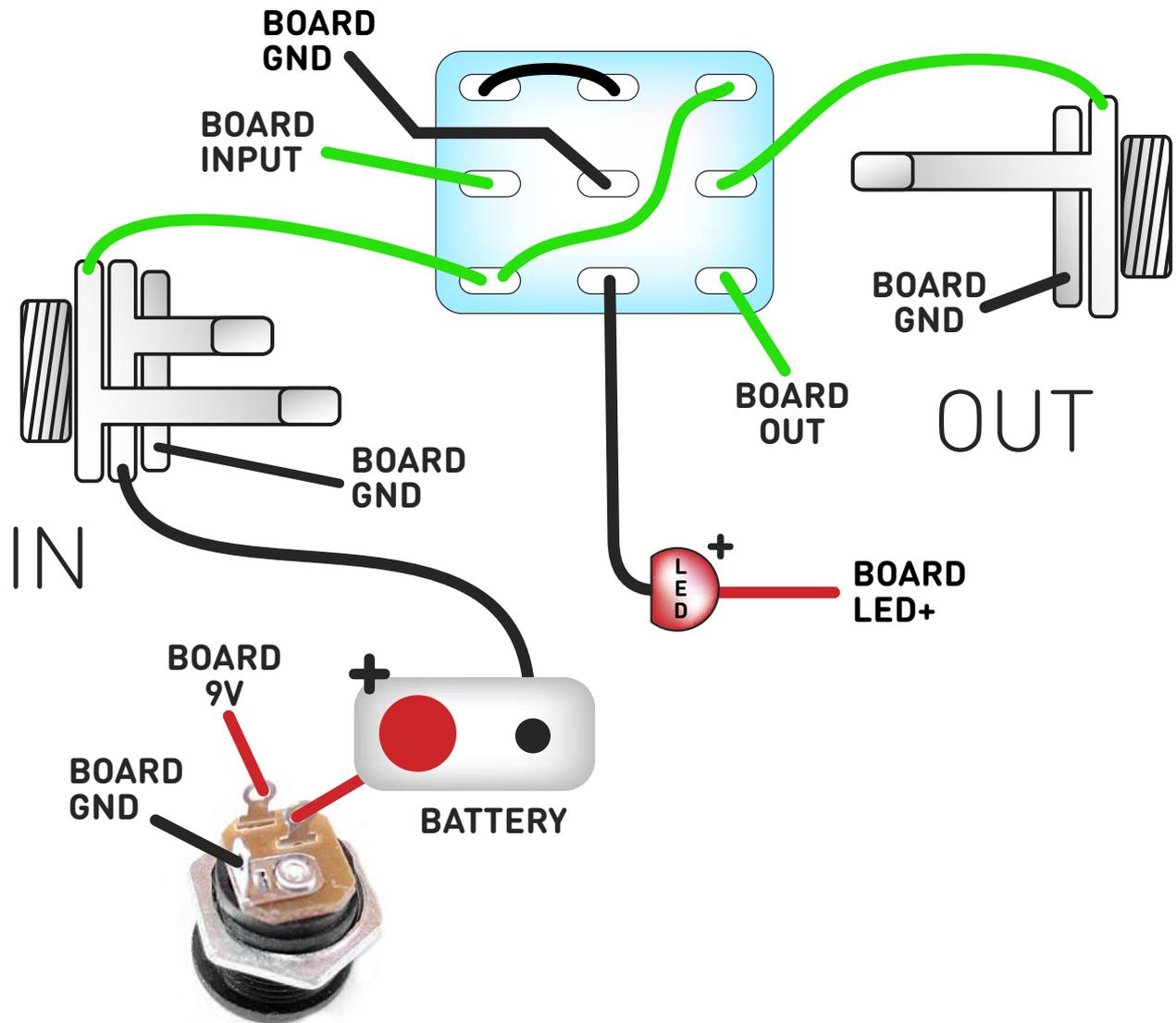


Once you've finished the circuit it makes sense to test it before starting on the switch and LED wiring. It'll cut down troubleshooting time in the long run. If the circuit works at this stage, but it doesn't once you wire up the switch - guess what? You've probably made a mistake with the switch.

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... SCREAM!

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