



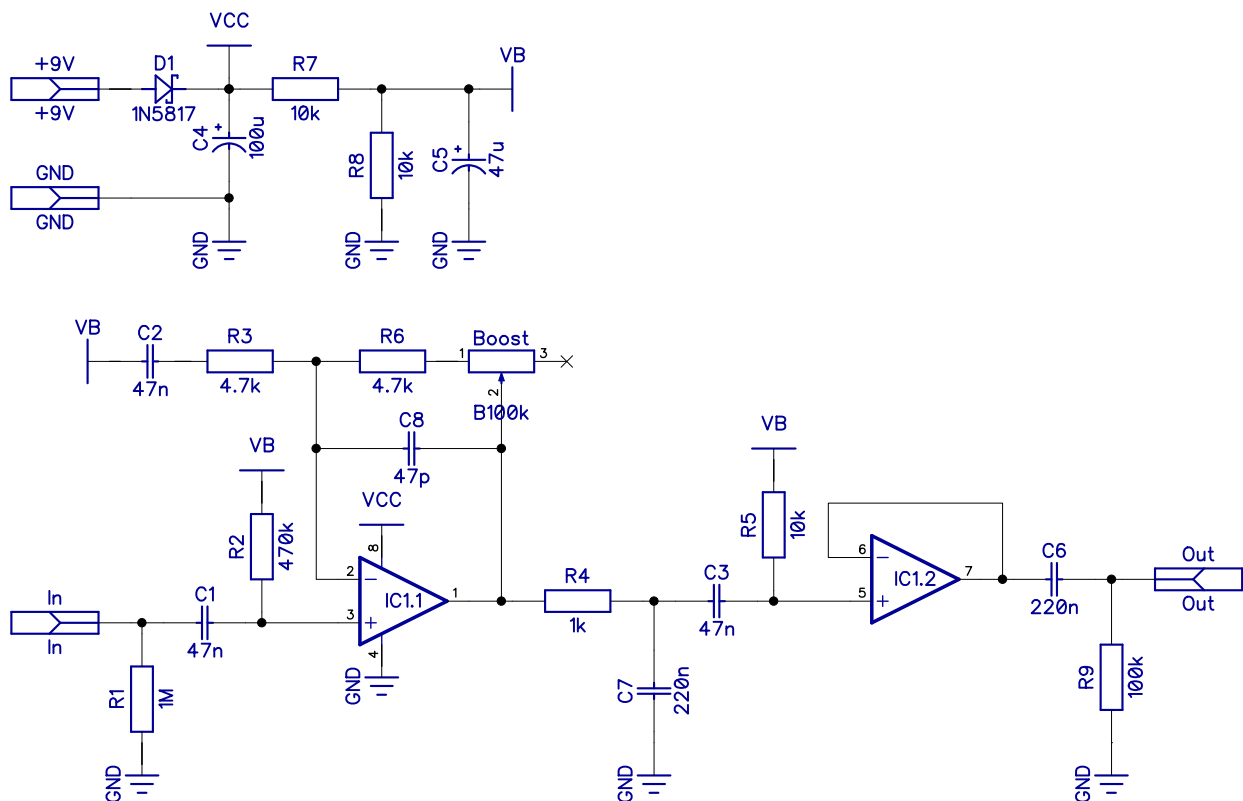
Rooster Booster Reloaded

PCB artwork ©2021 drdFX

Release date: 2021. 09. 25.

Rooster Booster is an original drdFX design. It is a booster pedal based on the well known Tube Screamer circuit. The goal was to achieve a clean booster with a very similar frequency response and without the unnecessary things like the tone stack, the input and output buffers and the distortion. The frequency response tries to emulate the Tube Screamer with the Tone pot set halfway.

SCHEMATIC

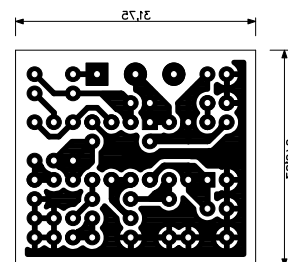
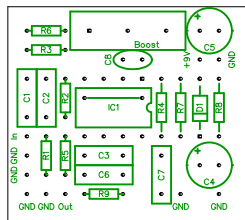


BOM

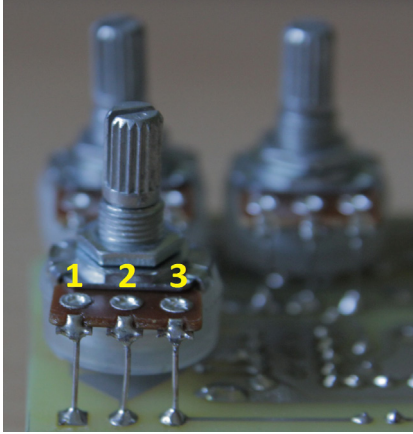
Resistors		Capacitors		Semiconductors		Others	
R1	1M	C1	47n	D1	1N5817	Boost	B100k
R2	470k	C2	47n	IC1	4558		
R3	4.7k	C3	47n				
R4	1k	C4	100u				
R5	10k	C5	47u				
R6	4.7k	C6	220n				
R7	10k	C7	220n				
R8	10k	C8	47p				
R9	100k						

LAYOUT

Print out the PCB design without any resizing options and make sure you switch off the “fit to page” option. The design is free for personal/home use and you also may build one or two for your friends, but the PCB layout is my artwork, therefore protected by copyright and is not permitted to be used for commercial purposes. The layout fits into a 1590A enclosure or anything bigger than that.



NOTES



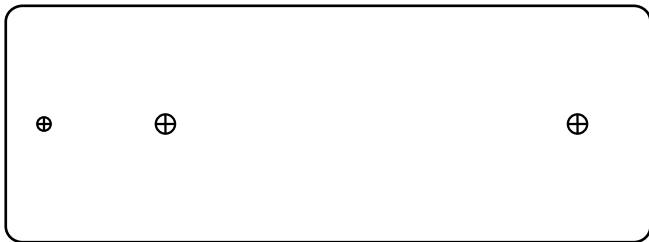
The Boost pot is board mounted, the square pad marks the lug 1, for the numbering of the lugs see the picture.

The circuit is designed to emulate the frequency response of the Tube Screamer circuit with the Tone pot halfway. The C3, R5 high-pass filter emulates the active tone circuit from the Tube Screamer. Feel free to play with any of the filters to get a completely different frequency response ;)

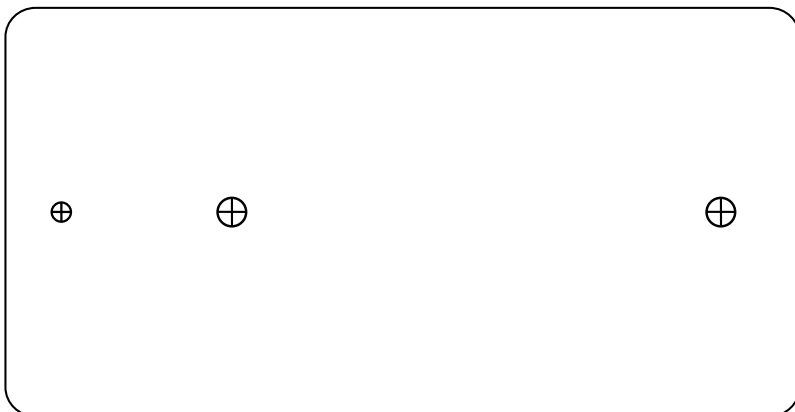
The feedback circuit is designed to yield about unity gain when the Boost pot is turned down. The Boost pot is sized so that even when turned fully up the op amp does not start to distort. Any larger pots will yield an amplification too big and the op amp will start to distort. An optional solution to that is to increase the power supply voltage to 18V, then theoretically you can go up to about 200k with the Boost pot. This would however yield a 20x amplification (~26dB) that in my opinion is way more than needed.

DRILLING TEMPLATES

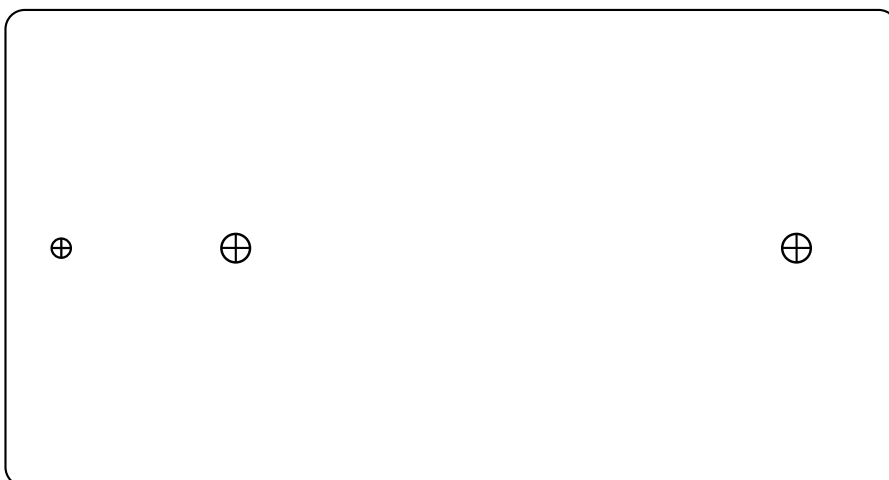
Here are three templates for the top of the box for the various box sizes. The design fits in both 1590B and 125B, however if you are less experienced you may find the 125B enclosure easiest to work with. With careful measurement and low profile parts it might fit into the small 1590A enclosure as well.



1590A



1590B



125B