

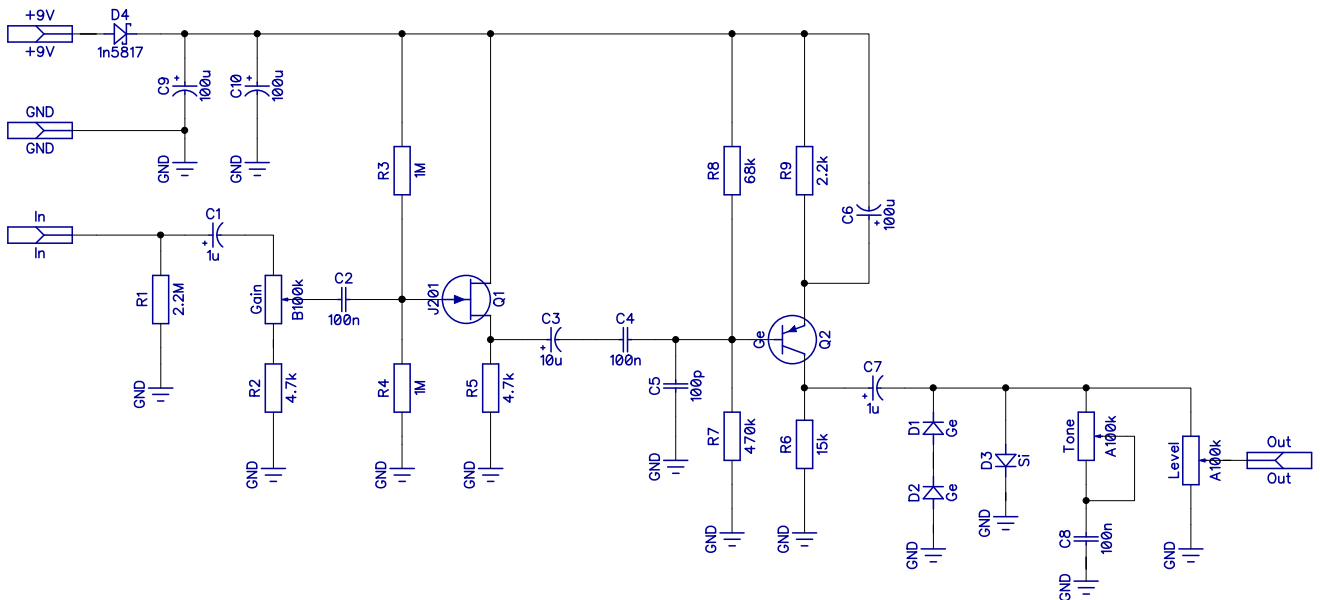


Drive It!

Based on Earthquaker Devices Crimson Drive
PCB artwork ©2015 drdFX
Release date: 2015.09.03.

Drive It! is a simple Ge transistor based overdrive with Ge diodes for clipping. The effect is a clone of the Earthquaker Devices Crimson Drive. It has a slightly fuzzy OD sound capable of low to mid gain, with a considerable treble content (which is not to wonder about since it is based around the Rangemaster treble booster design)

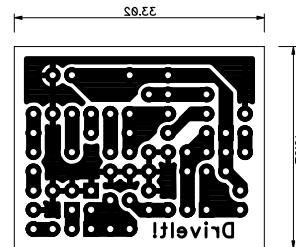
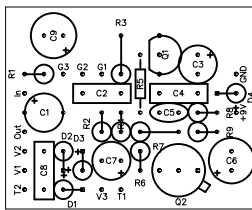
SCHEMATIC



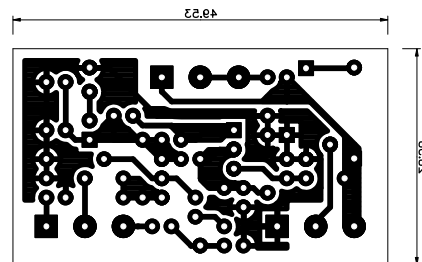
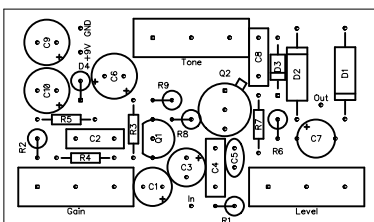
LAYOUT

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.

1590A layout and PCB

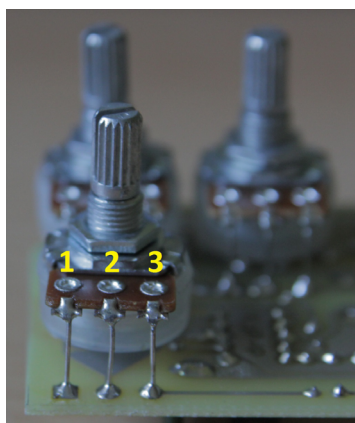


1590B/125B layout and PCB



BOM							
Resistors		Capacitors		Semiconductors		Others	
R1	2.2M	C1	1u	D1	Ge/Schottky	Gain	B100k
R2	4.7k	C2	100n	D2	Ge/Schottky	Level	A100k
R3	1M	C3	10u	D3	Si	Tone	A100k
R4	1M	C4	100n	D4	1n5817		
R5	4.7k	C5	100p	Q1	J201		
R6	15k	C6	100u	Q2	Ge (AC125, AC128, etc.)		
R7	470k	C7	1u				
R8	68k	C8	100n				
R9	2.2k	C9	100u				
		C10	100u				

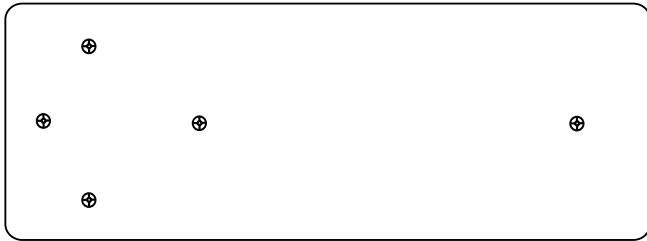
NOTES



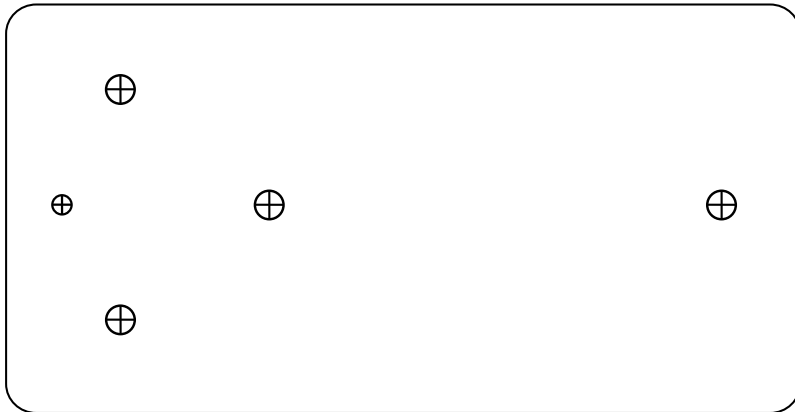
The pots are board mounted to the bottom of the board. The square pads mark the lug 1, for the numbering of the lugs see the picture. Since the part number is quite low it is possible to build the effect into a 1590A box too. That version however has simple pads for connecting the pots with wires. The numbering is the same as on the picture. D1 and D2 can be any Ge diodes or Schottky's too. D3 can be any Si diode (e.g.: 1N4148, 1N914, 1N4001, etc.) For Q1 you can use almost any JFET transistors, it is used as a simple buffer. The original has a J201, but you can try other types too (2N5458, 2N5457, J113, etc.) Q2 can be any PNP type Ge transistor, you can experiment. I used AC128, AC125 and GC509 with good results. The higher the hFE the more gain you will get out of the effect, about 100-120 or above would bring you to the right ballpark. Of course the leakage should be as low as possible too to avoid too much noise.

DRILLING TEMPLATES

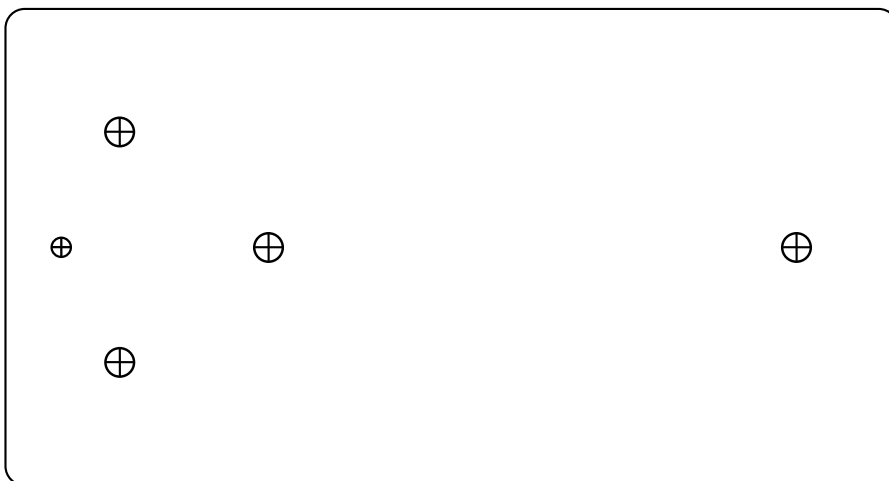
This effect has a smaller version that fits 1590A and a larger version that is meant for 1590B/125B. Here are the drilling templates for them:



1590A



1590B



125B