

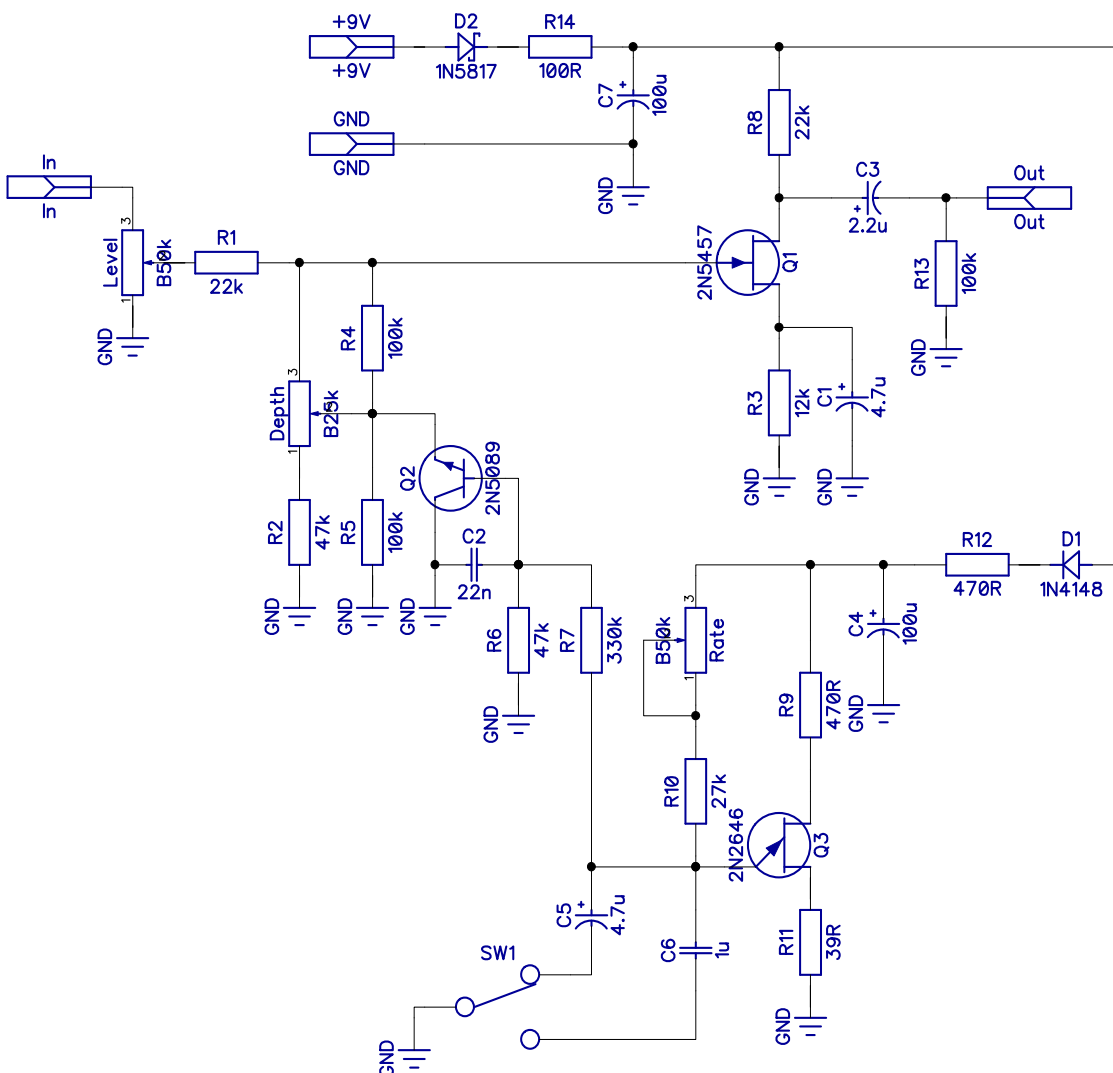


# 300BPM

Based on Earthquaker Devices Hummingbird  
PCB artwork ©2016 drdFX  
Release date: 2016. 11. 25.

**300BPM is a quite extreme tremolo effect. It is quite choppy, goes to motorboat-like sounds with a flip of a switch. If you look for some mild, subtle effect go and look elsewhere, this is not for the faint of heart. If however you are looking for a tremolo that punches you in the face twice at every cycle of the modulation then you are at the right place. 300BPM is a clone of the Earthquaker Devices Hummingbird, which in turn is a slightly modified Vox Repeat Percussion.**

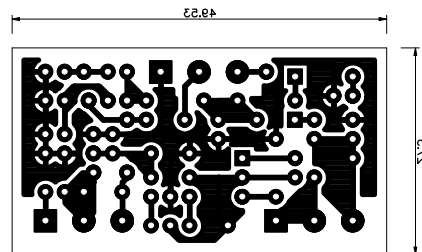
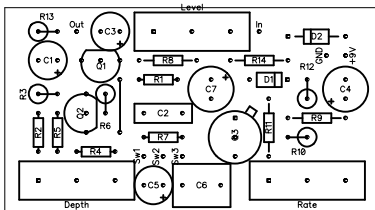
## SCHEMATIC



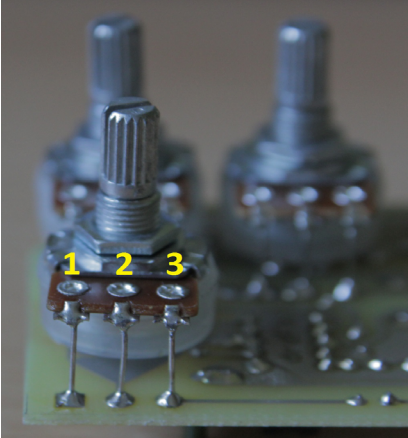
BOM							
Resistors		Capacitors		Semiconductors		Others	
R1	22k	C1	4.7u	D1	1N4148	Depth	B25k
R2	47k	C2	22n	D2	1N5817	Level	B50k
R3	12k	C3	2.2u	Q1	2N5457	Rate	B50k
R4	100k	C4	100u	Q2	2N5089	SW1	SPDT
R5	100k	C5	4.7u	Q3	2N2646		
R6	47k	C6	1u				
R7	330k	C7	100u				
R8	22k						
R9	470R						
R10	27k						
R11	39R						
R12	470R						
R13	100k						
R14	100R						

## 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.



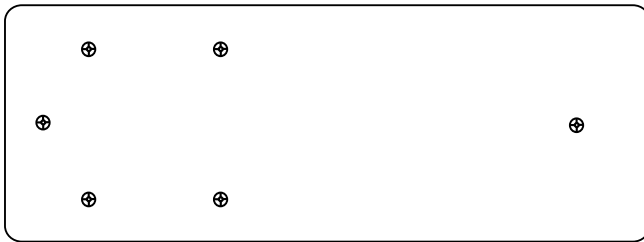
## NOTES



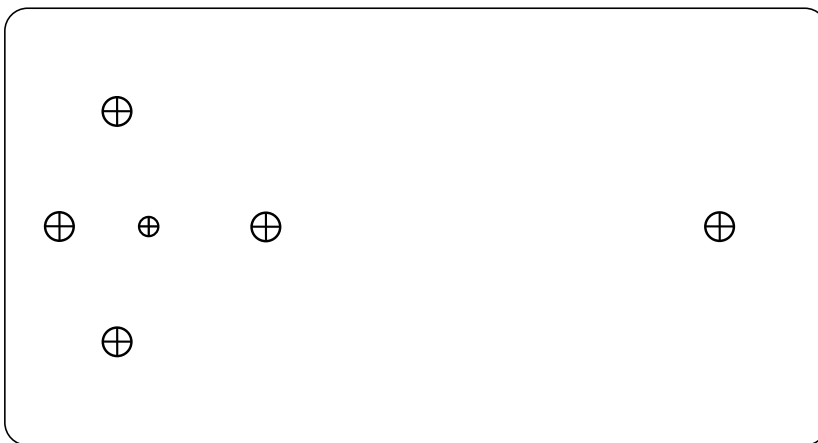
The pots are board mounted to the bottom of the board. The square pads mark the lug 1, for the numbering of the lugs see the picture. The switch is off-board mounted with wires. Due to the small size of the board it might be possible to squeeze it into a small 1590A box, but then low profile jack outlets and electrolytic caps and 9mm pots are a must. Also in this case you can't mount the pots on the board, they need to be mounted off-board with wires then.

## DRILLING TEMPLATES

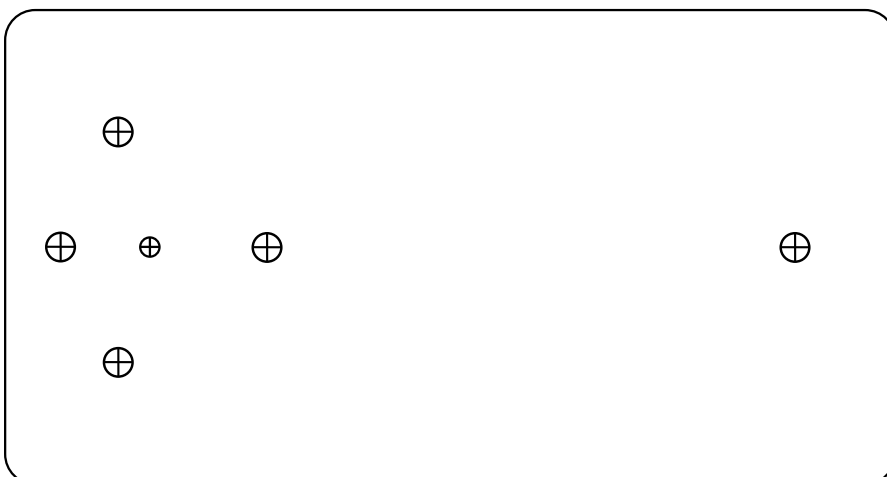
Here are three templates for the top of the box for the various box sizes. For 1590A only the rectangular arrangement would work. For the larger 1590B and 125B boxes the pots are arranged in a more traditional triangular shape and the switch is put to the top. The smaller cross indicates a possible placement for the LED. In these two cases I would suggest to put the power jack on the side next to the footswitch, as it would not have enough room on the top because of the switch.



1590A



1590B



125B