



ARC

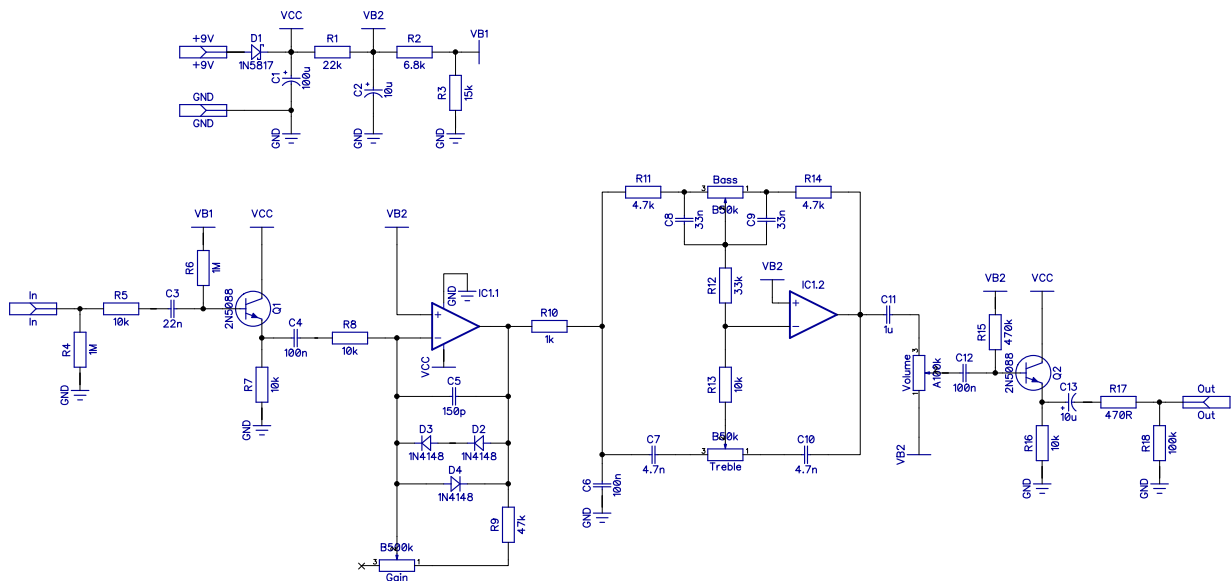
Based on Xotic AC Booster

PCB artwork ©2018 drdFX

Release date: 2018. 10. 15.

ARC is a clone of the Xotic AC Booster. A very nice, transparent low to mid gain overdrive with very versatile tone control.

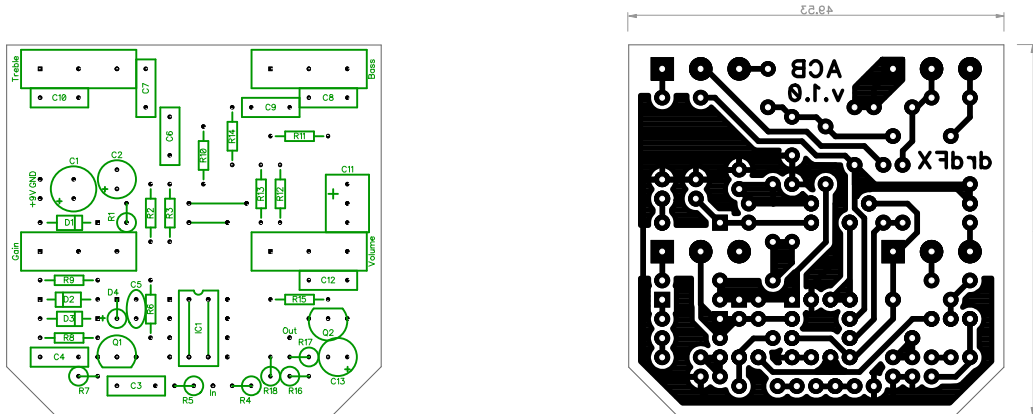
SCHEMATIC



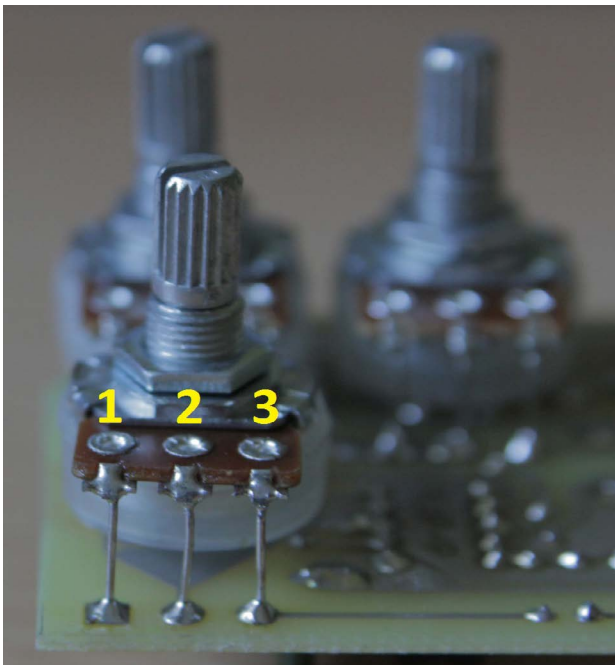
BOM							
Resistors		Capacitors		Semiconductors		Others	
R1	22k	C1	100u	D1	1N5817	Bass	B50k
R2	6.8k	C2	10u	D2	1N4148	Gain	B500k
R3	15k	C3	22n	D3	1N4148	Treble	B50k
R4	1M	C4	100n	D4	1N4148	Volume	A100k
R5	10k	C5	150p	IC1	4558		
R6	1M	C6	100n	Q1	2N5088		
R7	10k	C7	4.7n	Q2	2N5088		
R8	10k	C8	33n				
R9	47k	C9	33n				
R10	1k	C10	4.7n				
R11	4.7k	C11	1u				
R12	33k	C12	100n				
R13	10k	C13	10u				
R14	4.7k						
R15	470k						
R16	10k						
R17	470R						
R18	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 PCB fits in a standard 1590B box, or if you trust yourself less, then in a 125B you would have more than enough space.



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. I prefer to use a 1M pot instead of the 500k for the Gain control.

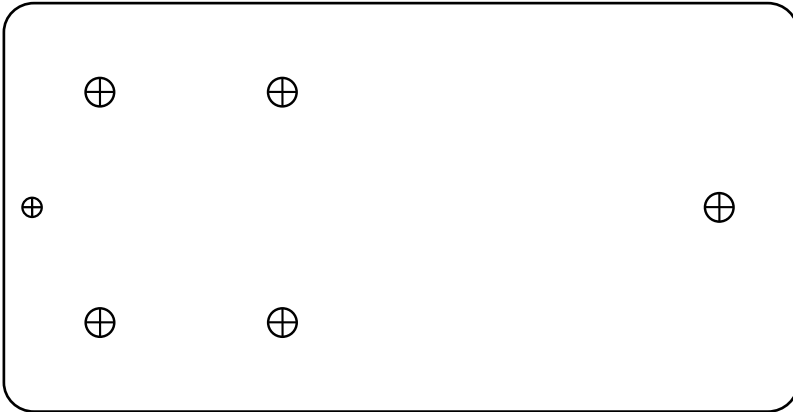
The same PCB can be used for RC Booster as well, here are the differences:

- C3 = 47nF
- C4 = 1uF non-polarized
- C6 = omit
- R8 = 22k
- R10 = jumper
- Gain = 250k

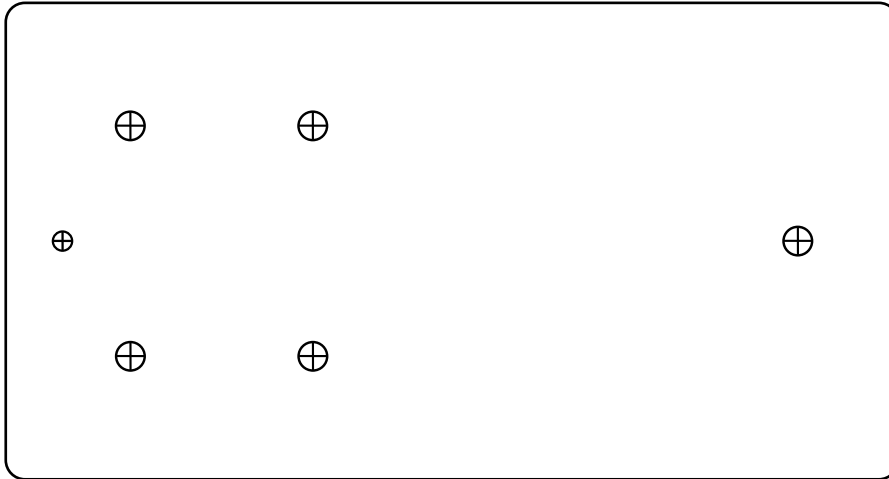
Clipping-Diodes = This is a bit more tricky. The RC Booster has three 1N4148s in both directions (so 6 in total). With some knack and creativity one might be able to put those in the pads existing on the AC Booster layout. Or you can try to substitute them simply with two LEDs. That should give a similar sound with a smaller footprint.

DRILLING TEMPLATES

Here are two 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 easier to work with.



1590B



125B