Rooster Booster

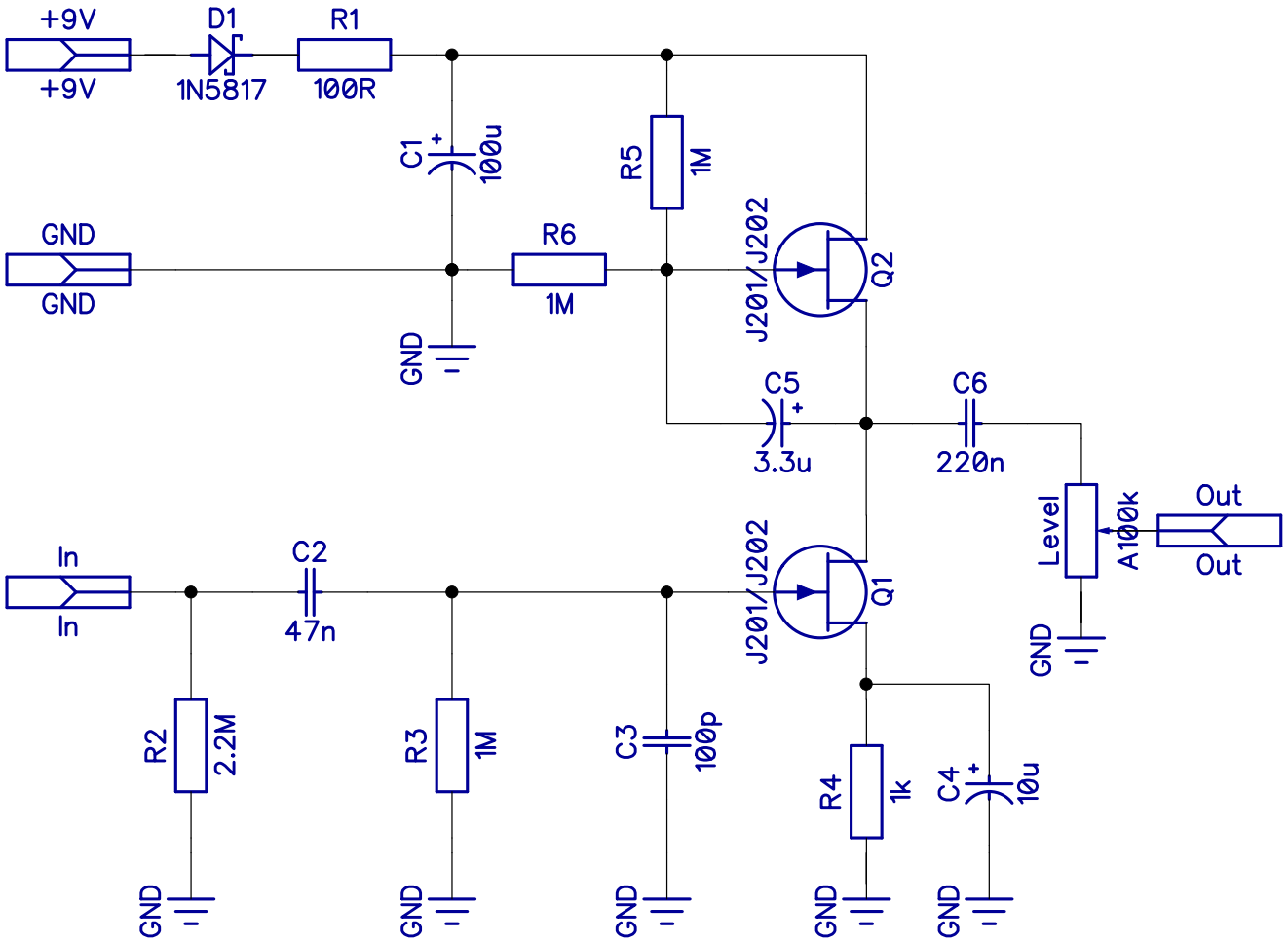
Based on AMZ Mini Booster

Release date: 2019. 09. 01.

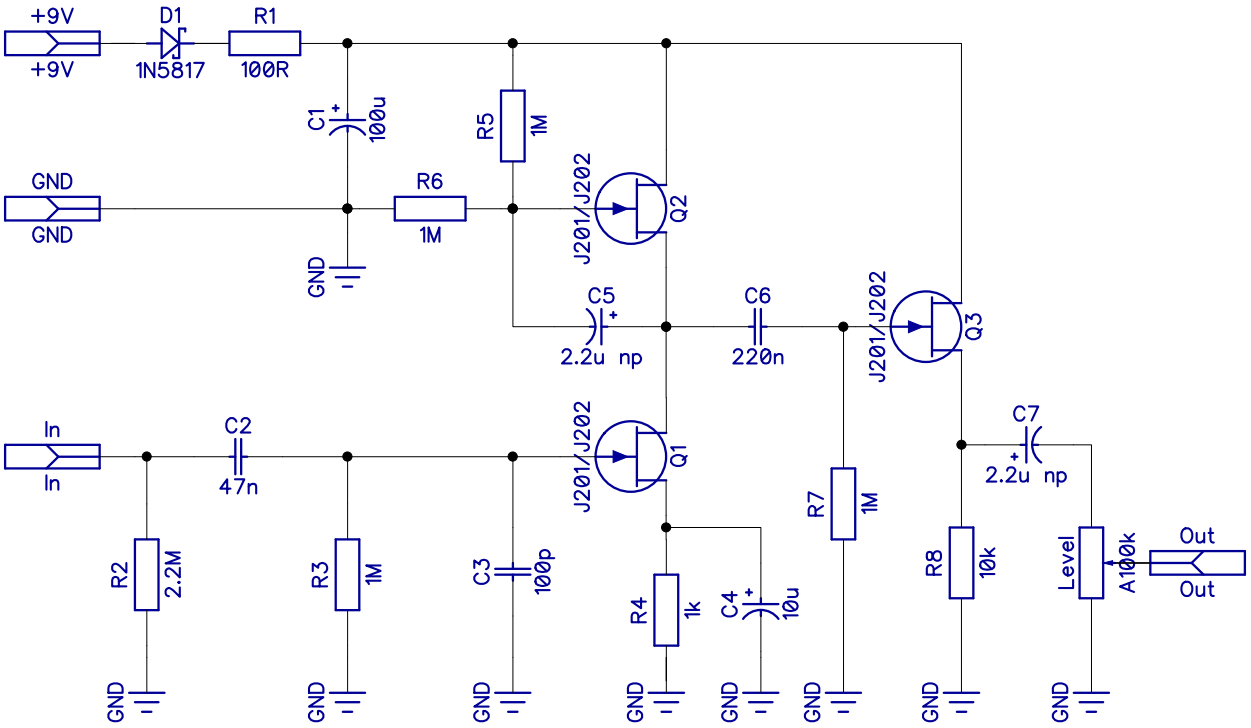
Rooster Booster is a clone of the AMZ Mini Booster. It is a quite high gain booster that is more or less transparent, however it breaks up by itself already, so I would consider it as a „dirty booster”. I'd rather use it as a pre-boost in front of a distortion device or an amp already breaking up to increase the level of dirt.

SCHEMATIC

Without buffer:



With buffer:


+9V
+9V
D1
1N5817
R1
100R
C1
100u
R5
1M
GND
GND
R6
1M
GND
J201/J202
Q2
C5
2.2u np
C6
220n
J201/J202
Q3
In
In
C2
47n
J201/J202
Q1
C7
2.2u np
R2
2.2M
R3
1M
C3
100p
R4
1k
C4
10u
R7
1M
R8
10k
Level
A100k
Out
Out
GND
GND
GND
GND
GND
GND
GND
GND

BOM

Without buffer:

BOM							
Resistors		**Capacitors**		**Semiconductors**		**Others**	
R1	100R	C1	100u	D1	1N5817	Level	A100k
R2	2.2M	C2	47n	Q1	J201/J202		
R3	1M	C3	100p	Q2	J201/J202		
R4	1k	C4	10u				
R5	1M	C5	3.3u				
R6	1M	C6	220n				

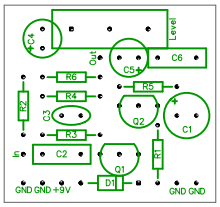
With buffer:

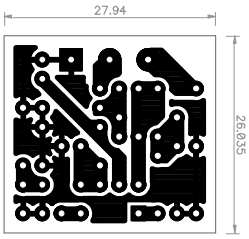
BOM							
Resistors		**Capacitors**		**Semiconductors**		**Others**	
R1	100R	C1	100u	D1	1N5817	Level	A100k
R2	2.2M	C2	47n	Q1	J201/J202		
R3	1M	C3	100p	Q2	J201/J202		
R4	1k	C4	10u	Q3	J201/J202		
R5	1M	C5	2.2u np				
R6	1M	C6	220n				
R7	1M	C7	2.2u np				
R8	10k						

LAYOUT

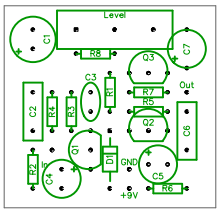
Print out the PCB design without any resizing options and make sure you switch off the “fit to page” option. The design is free for personal/home use and you also may build one or two for your friends, but the PCB layout is my artwork, therefore protected by copyright and is not permitted to be used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

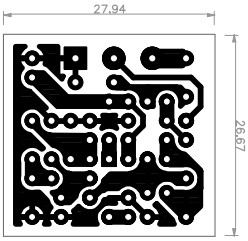
Without buffer:



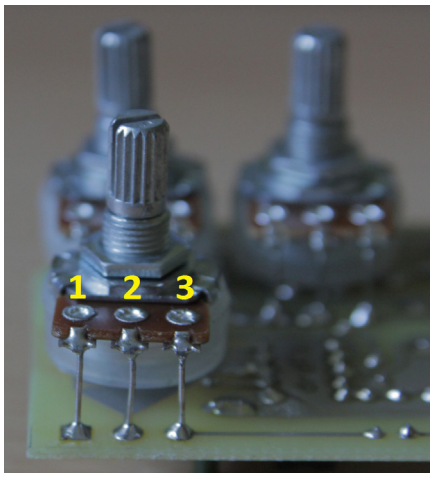


With buffer:





NOTES



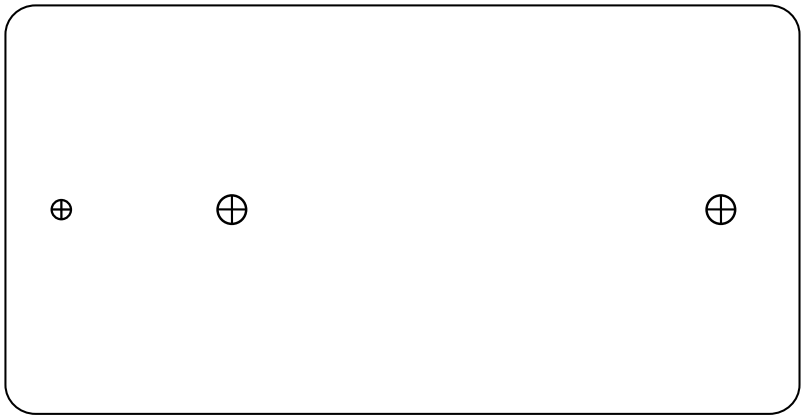
The pot is board mounted to the bottom of the board. The square pad marks lug 1, for the numbering of the lugs see the picture. Since the part number is quite low it is possible to build the effect into a 1590A box too. In this one you can experiment with different types of JFETs, neither the Mu-Amp, nor the buffer are too susceptible. I have used J201 and J202 with great success, but you can try 2N5457 or whatever you have access to. Pay attention to the pinout though, different types can vary.

C5 is different on the two schematics, but the exact value is not really crucial until it is high enough. You can use anything in the 1u-4.7u range, but here you can experiment too. It is also not necessary to have a non-polarized cap here, you can use polarized electrolytic caps. In that case follow the directions shown on the schematic and the layouts.

DRILLING TEMPLATES

Here are two drilling templates for 1590A (the smallest) and 1590B (the most common size):

1590A



1590B