JFET Vulcan by Joe Davisson

gaussmarkov

June 29, 2008

http://gaussmarkov.net/wordpress/circuits/jvulcan/

Notes

SOURCE: http://diystompboxes.com/analogalchemy/sch/jfetvulcan.html.

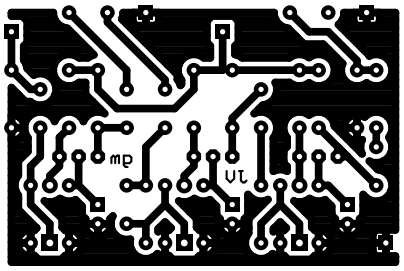
I happened to notice a thread on diystompboxes.com started by Aron about Joe Davisson's JFET Vulcan. You can listen to some mp3 clips that Aron posted in that thread. I had a layout for the BJT Vulcan from several years back so I decided to update it and convert it to the JFET version. This layout has not been verified yet, but I am confident that it is correct. If you do verify it, please let me know. You should be able to fit it into a Hammond 1590B enclosure.

Note that no power supply filter is included. Depending on your power source, you may want to add one.

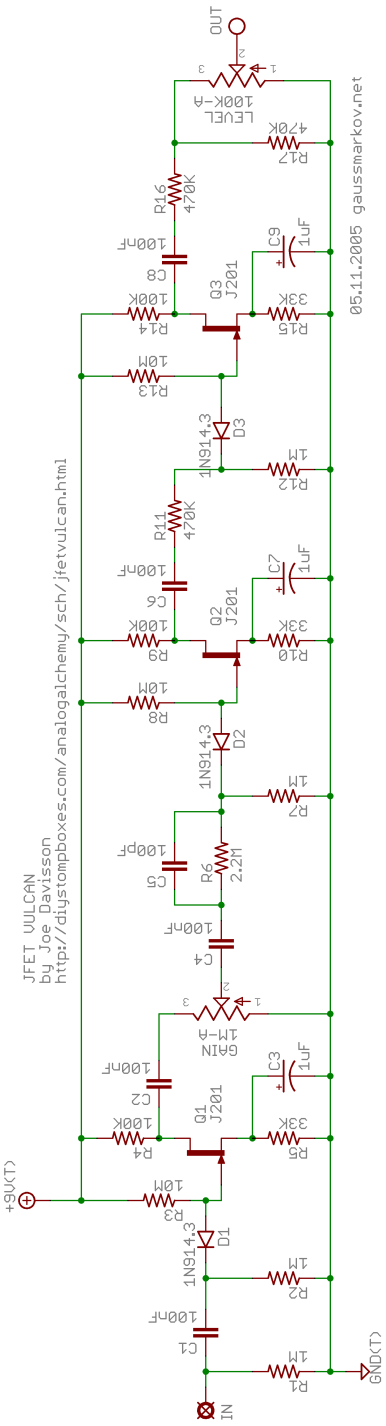
You may want to breadboard your build first in order to get the bias right for the JFETs. Choose values for the three 100K resistors that give you JFET drain voltages of 4.5V to 5V. Also, check out Joe's notes about component values for higher gain.

PCB Image

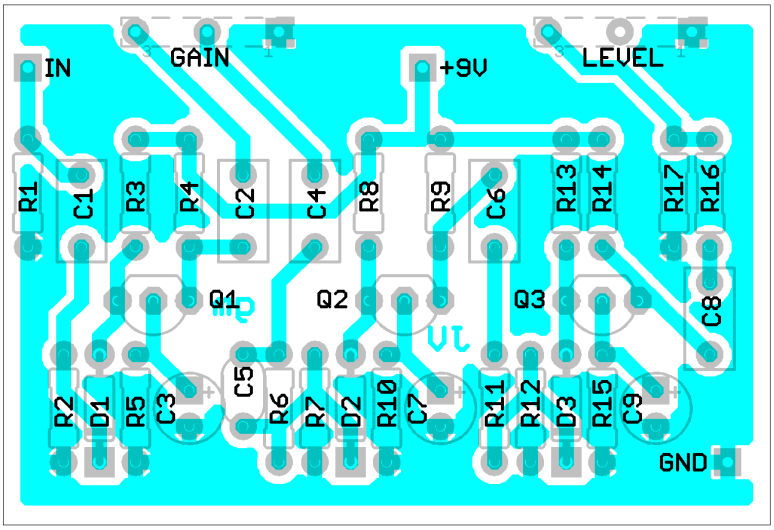
When printing this image, use "Page Scaling: None" in the Adobe Reader print dialog.

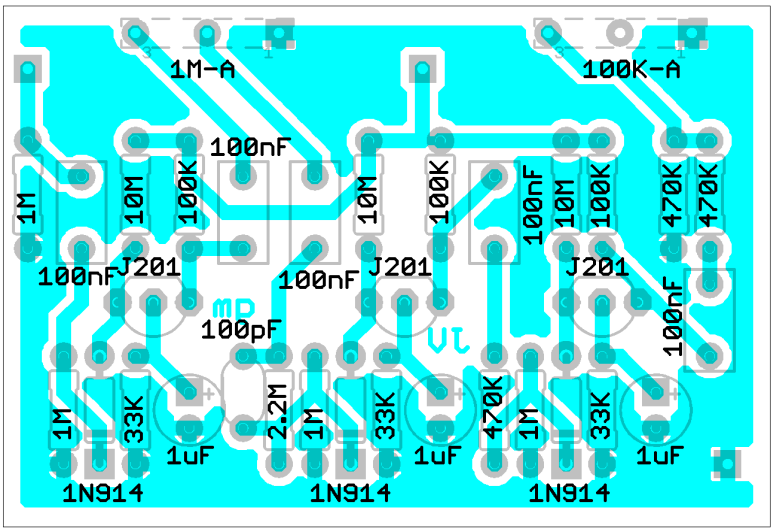


Schematic


JFET VULCAN
by Joe Davisson
http://diystompboxes.com/analogalchemy/sch/jfetvulcan.html
05.11.2005 gaussmarkov.net
OUT
IN
+9V(T)
GND(T)
LEVEL
100K-A
GAIN
1M-A
R17 470K
R16 470K
R11 470K
R8 10M
R13 10M
R3 10M
R9 100K
R14 100K
R4 100K
R10 33K
R15 33K
R5 33K
R12 1M
R7 1M
R6 2.2M
R2 1M
R1 1M
C9 1uF
C7 1uF
C3 1uF
C8 100nF
C6 100nF
C5 100pF
C4 100nF
C2 100nF
C1 100nF
Q3 J201
Q2 J201
Q1 J201
D3 1N914.3
D2 1N914.3
D1 1N914.3

Layout


IN
GAIN
+9V
LEVEL
R1
C1
R3
R4
C2
C4
R8
R9
C6
R13
R14
R17
R16
Q1
Q2
Q3
C8
R2
D1
R5
C3
C5
R6
R7
D2
R10
C7
R11
R12
D3
R15
C9
GND


1M-A
100K-A
100nF
1M
10M
100K
10M
100K
100nF
10M
100K
470K
470K
100nF
J201
100nF
J201
J201
100pF
100nF
1M
33K
1uF
2.2M
1M
33K
1uF
470K
1M
33K
1uF
1N914
1N914
1N914

Parts

Part	Value	Library	Part	Value	Library
C1	100nF	gm-caps-nonpolar	R1	1M	gm-resistors
C2	100nF	gm-caps-nonpolar	R2	1M	gm-resistors
C3	1uF	gm-caps-polar	R3	10M	gm-resistors
C4	100nF	gm-caps-nonpolar	R4	100K	gm-resistors
C5	100pF	gm-caps-ceramic	R5	33K	gm-resistors
C6	100nF	gm-caps-nonpolar	R6	2.2M	gm-resistors
C7	1uF	gm-caps-polar	R7	1M	gm-resistors
C8	100nF	gm-caps-nonpolar	R8	10M	gm-resistors
C9	1uF	gm-caps-polar	R9	100K	gm-resistors
D1	1N914	gm-diodes	R10	33K	gm-resistors
D2	1N914	gm-diodes	R11	470K	gm-resistors
D3	1N914	gm-diodes	R12	1M	gm-resistors
Q1	J201	gm-transistors	R13	10M	gm-resistors
Q2	J201	gm-transistors	R14	100K	gm-resistors
Q3	J201	gm-transistors	R15	33K	gm-resistors
			R16	470K	gm-resistors
			R17	470K	gm-resistors
			GAIN	1M-A	gm-pots
			LEVEL	100K-A	gm-pots