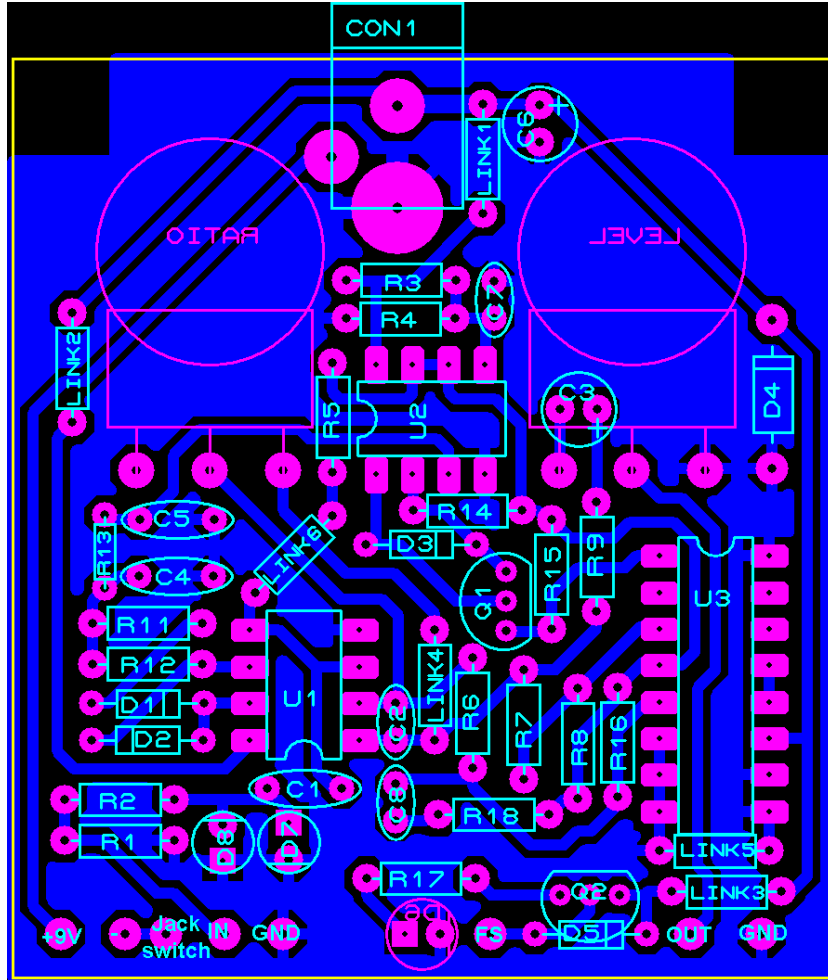


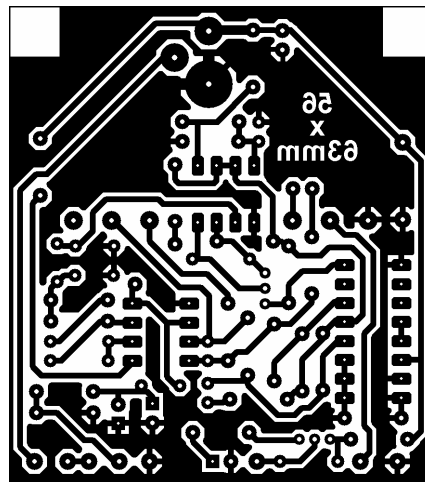
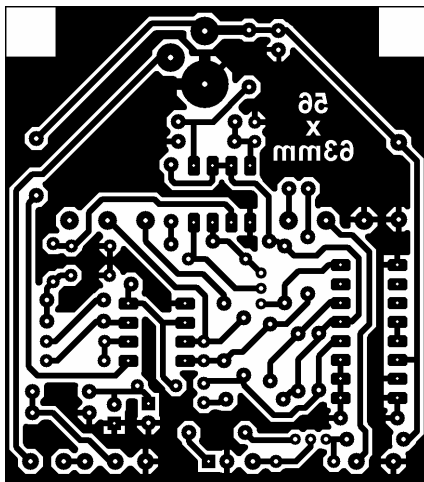
The Engineer's Thumb

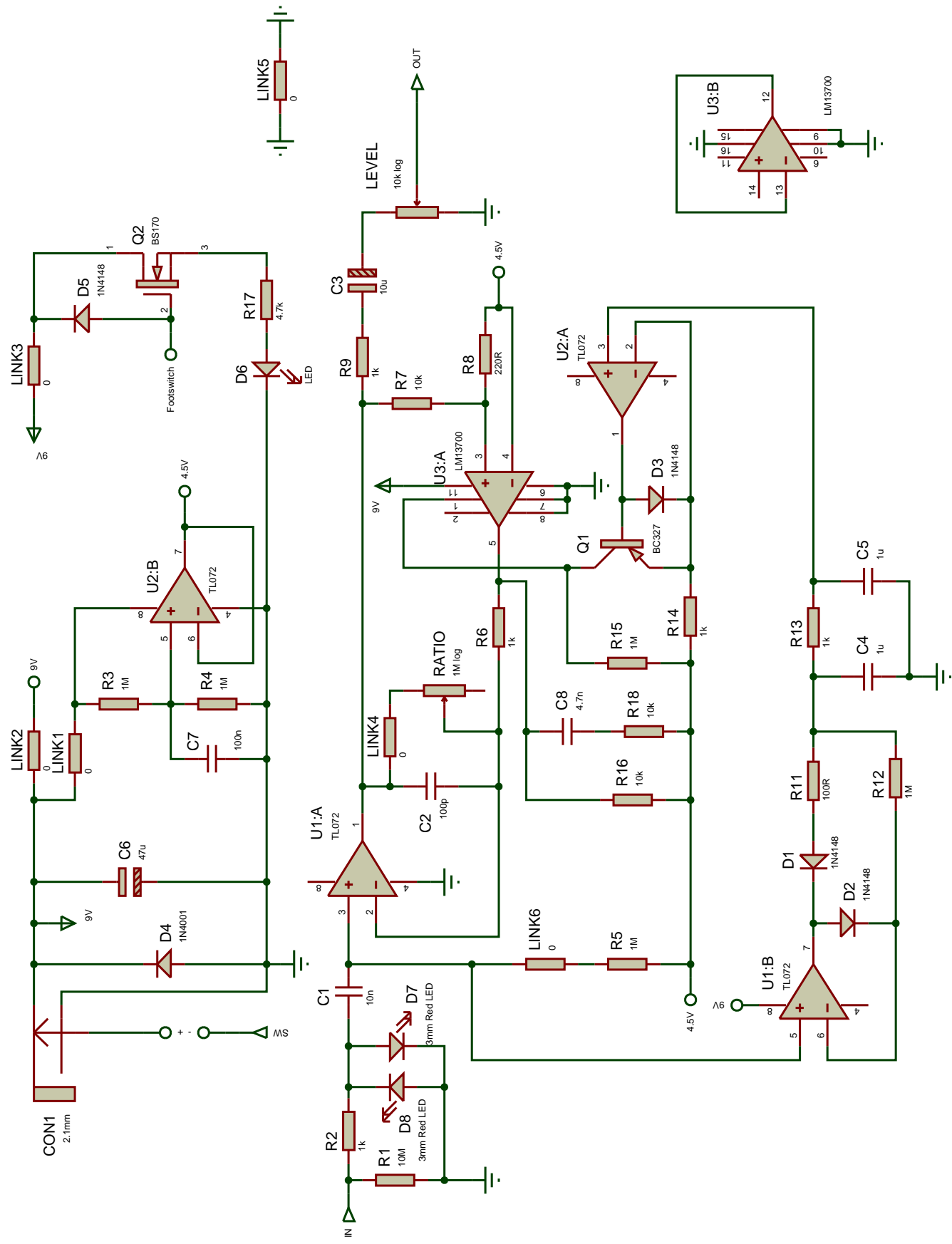
Compressor / Sustainer

A ValveWizard Effect



PCB 56 x 63mm





Bill Of Materials For Engineer's Thumb Compressor

Design Title : Engineer's Thumb Compressor
Author : ValveWizard
Revision :
Design Created : 27 January 2012
Design Last Modified : 20 April 2012
Total Parts In Design : 47

17 Resistors

<u>Quantity:</u>	<u>References</u>	<u>Value</u>	<u>Notes</u>
1	R1	10M	
5	R2, R6, R9, R13, R14	1k	
4	R3-R5, R15	1M	
2	R7, R16	10k	
1	R8	220R	
1	R11	100R	Increase for longer attack (e.g., 100k)
1	R12	1M	Reduce for quicker release (e.g., 330k)
1	R17	4.7k	Adjust for LED brightness
1	R18	10k	Use only for treble boost mod

8 Capacitors

<u>Quantity:</u>	<u>References</u>	<u>Value</u>	<u>Notes</u>
1	C1	10n	Reduce for some bass cut (e.g., 1nF)
1	C2	100p	
1	C3	10u	
2	C4, C5	1u	
1	C6	47u	
1	C7	100n	
1	C8	4.7n	Use only for treble boost mod

3 Integrated Circuits

<u>Quantity:</u>	<u>References</u>	<u>Value</u>	<u>Notes</u>
2	U1, U2	TL072	
1	U3	LM13700	

2 Transistors

<u>Quantity:</u>	<u>References</u>	<u>Value</u>	<u>Notes</u>
1	Q1	BC327	Any general purpose PNP
1	Q2	BS170	

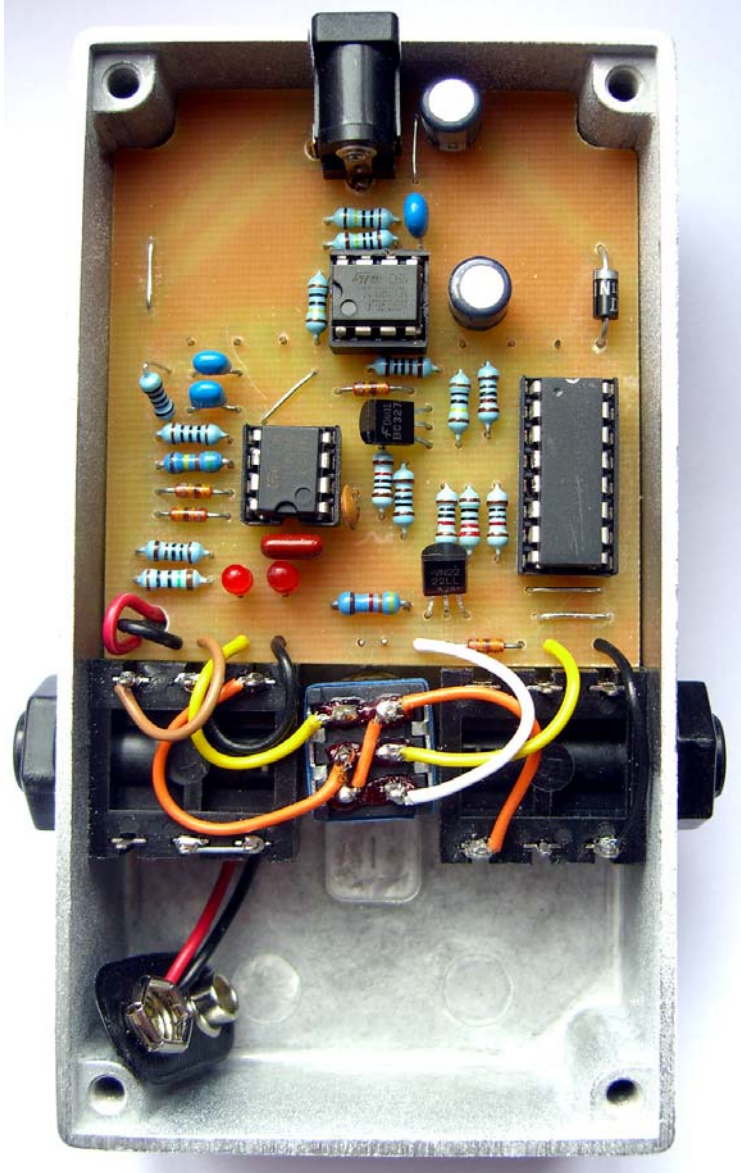
8 Diodes

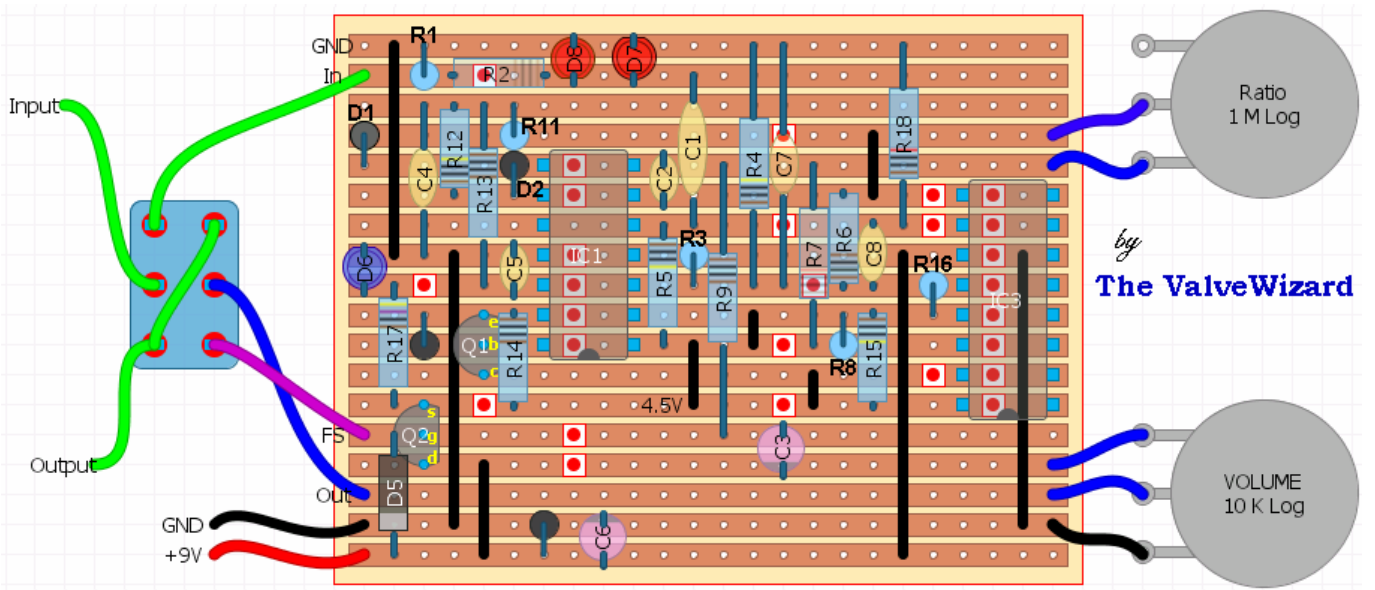
<u>Quantity:</u>	<u>References</u>	<u>Value</u>	<u>Notes</u>
4	D1-D3, D5	1N4148	
1	D4	1N4001	
1	D6	LED	
2	D7, D8	3mm Red LED	Optional but recommended

9 Miscellaneous

<u>Quantity:</u>	<u>References</u>	<u>Value</u>	<u>Notes</u>
1	CON1	2.1mm	
1	LEVEL	10k log	
6	LINK1-LINK6	0	
1	RATIO	1M log	

20 April 2012 15:55:21





THE ENGINEER'S THUMB COMPRESSOR / SUSTAINER

Note:



Name	Value	Qty
C1	10 nF	1
C2	100 pF	1
C3	10 uF	1
C4/5	1 uF	2
C6	47 uF	1
C7	100 nF	1
C8	4.7 nF	1
D1/2/3/5	1N4148	4

Name	Value	Qty
D4	1N4001	1
D6	Indicator LED	1
D7/8	Cheap red LED	1
IC1	TL074	1
IC3	LM13700	1
Q1	BC327 (Any PNP)	1
Q2	BS170	1
R1	10 M	1

Name	Value	Qty
R2/6/9/13/14	1 K	5
R3/4/5/12/15	1 M	5
R7/16/18	10 K	3
R8	220 Ω	1
R11	100 Ω	1
R17	4.7 K	1
Ratio	1 M Log	1
VOLUME	10 K Log	1

C8+R18 give a bright boost. Omit these components for a flat response.

Increase R11 for longer attack (e.g., 100k) Reduce R12 for quicker release (e.g, 330k)