

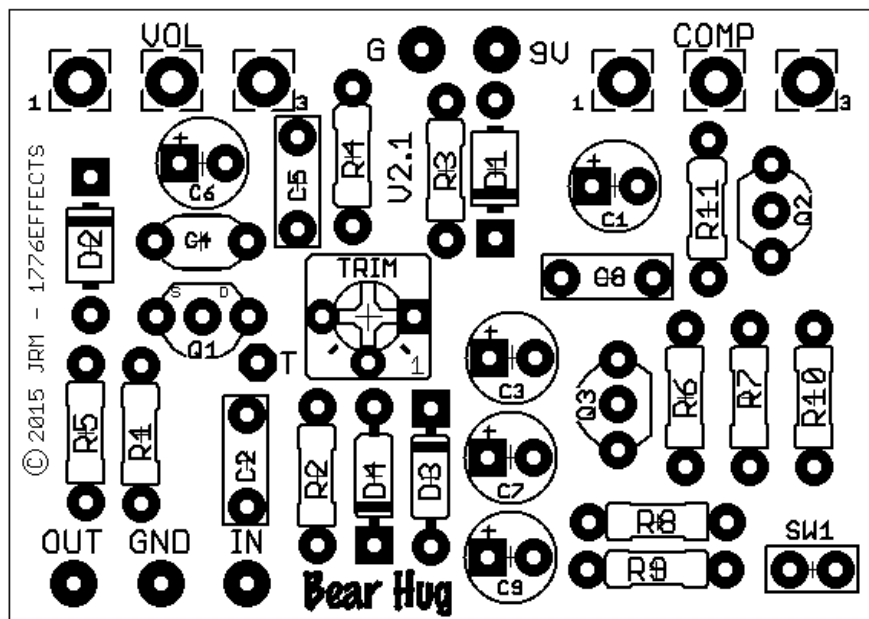
# Bear Hug Compressor

Project by 1776 Effects/JRM ©2015

Circuit Design by Jon Patton

V2.1

[Click for original Bear Hug BOM](#)



## *Jon's notes on the circuit:*

This is a tonally transparent, ultra-quiet, tiny, and easy-to-build compressor. It occupies some middle ground between the ultra-subtle compressors like the Flatline/Afterlife and Orange Squeezer and the super squishy compressors like the Ross. The comp knob ranges from almost no compression to “you can tell it’s working.” The L/H toggle switches between a short decay for subtle peak limiting and a long decay for a mild “duck and swell” sustainer effect, as well as changing the overall amount of compression available. The Bear Hug also makes a good lead boost — it will give you roughly 10-15dB of boost even on higher compression settings.

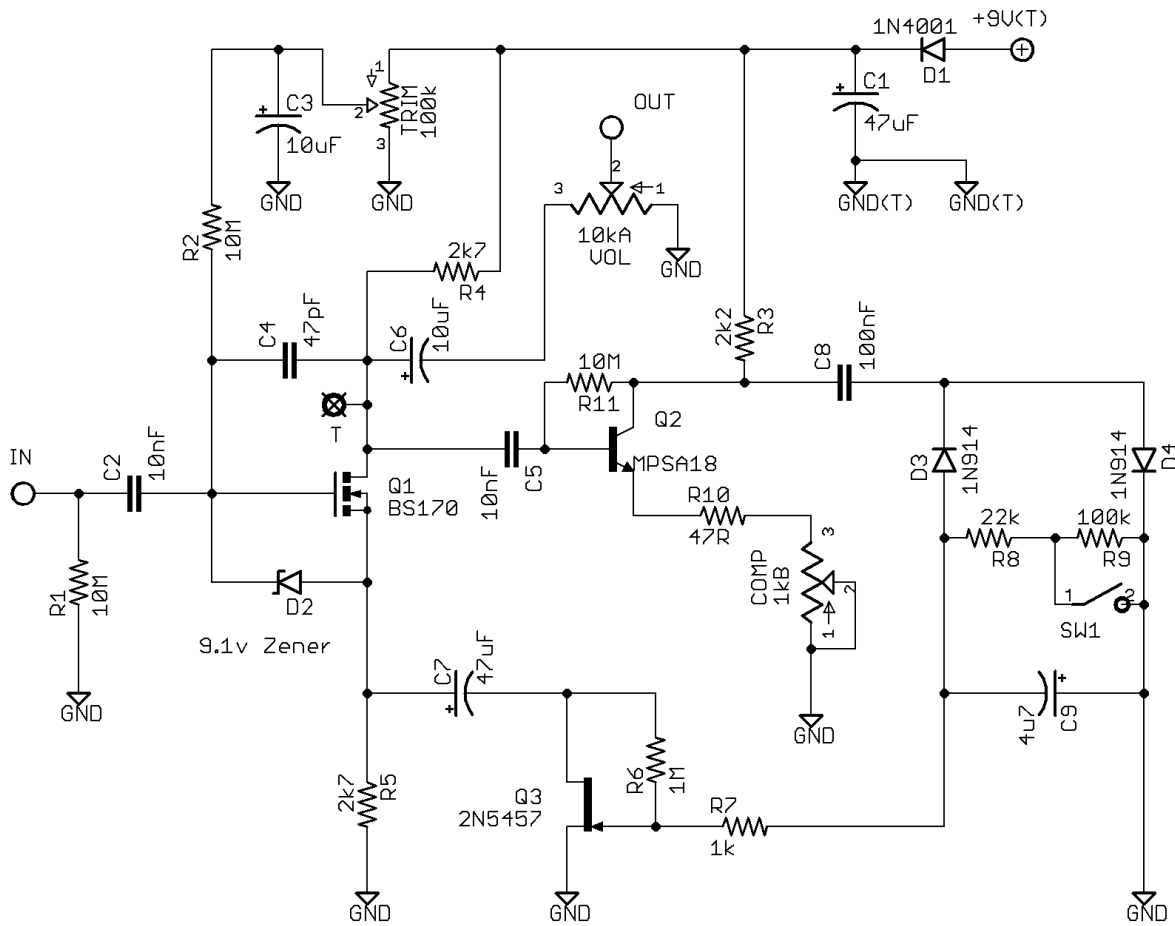
*Jon would like to credit:*

This circuit design uses some elements from the Lovesqueeze and Jack Orman's (AMZ) Mosfet booster. Mark Hammer and PRR on DIYstompboxes helped me understand the rectifier. Extra props to R O Tyree on DIYSB for his help in understanding compressors in general.

### *PARTS*

<i>Resistors</i>		<i>Capacitors</i>		<i>Diodes</i>	
R1	10M	C1	47uF	D1	1N4001
R2	10M	C2	10nF	D2	9.1V Zener
R3	2k2	C3	10uF	D3-D4	1N914
R4	2k7	C4	47pF	<i>Transistors</i>	
R5	2k7	C5	10nF	Q1	BS170
R6	1M	C6	10uF	Q2	MPSA18
R7	1k	C7	47uF	Q3	2N5457
R8	22k	C8	100nF	<i>Potentiometers</i>	
R9	100k	C9	4u7	VOL	10kA
R10	47R	<i>Switch</i>		COMP	1kB
R11	10M	SW1	SPST On/Off	TRIM	100k

Bearhug V2.1  
A Jon Patton Design



Notes:

The drain test pad of the BS170 should bias around 5 - 5.5V

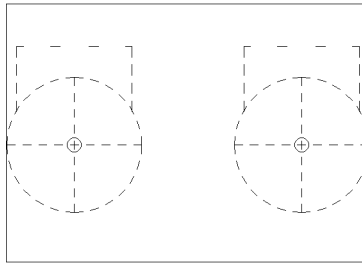
Optional: for low output pickups change R3 to 4k7

More about how the circuit works can be found here:

<http://www.madbeanpedals.com/forum/index.php?topic=6802.0>

# Drill Guide

Print this document 100% scale.



## Board Dimensions

49mm x 34mm (1.93" x 1.34")

The Bear Hug PCBs can be used for small quantities of commercial pedal building. You may not however, offer these PCBs as part of a “kit” or redistribute the PCB’s for sale as a commercial endeavor. All PCB artwork is property of 1776 effects.

If using PCB’s for commercial building please rename your project so there is no confusion to the end user and it will be clear I offer no official support to those you sold your pedal to :)