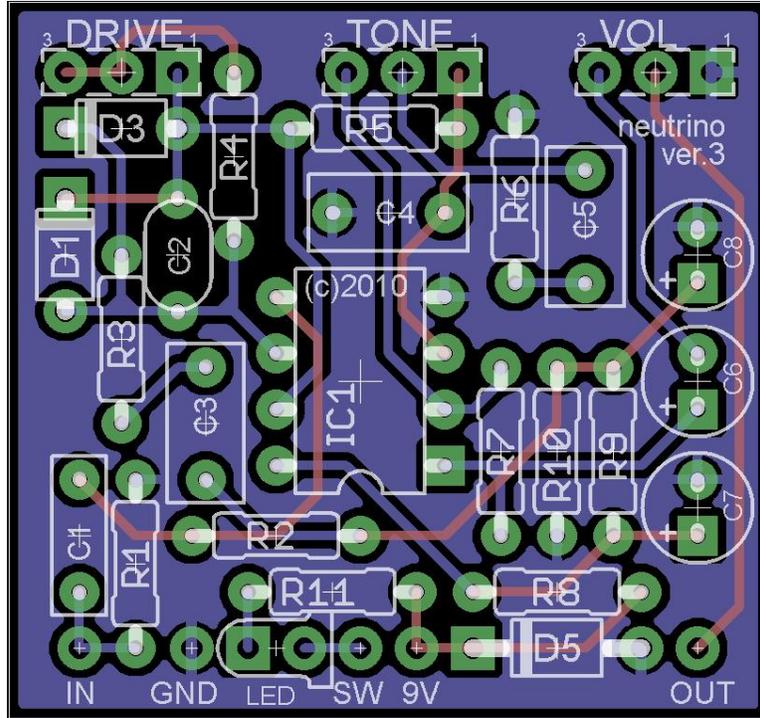


MADBEANPEDALS PRESENTS

NEUTRINO

(based on the Lovepedal Eternity)
 PCB artwork ©2010 madbeanpedals
 Ver.3 10.15.10



"Burst" version

Resistors		Caps		Diodes	
R1	1M	C1	47n	D1 - D4	1n4148
R2	1M	C2	47p	D5	1n4001
R3	1k	C3	220n		
R4	10k	C4	150n		
R5	1k	C5	220n		
R6	330R	C6	10uF		
R7	1k	C7	47uF		
R8	330R	C8	47uF		
R9	10k				
R10	10k				
R11	4k7				

IC

IC1 LM1458

Pots

DRIVE 500kA
 TONE 5kB
 VOL 500kA

"Black" version

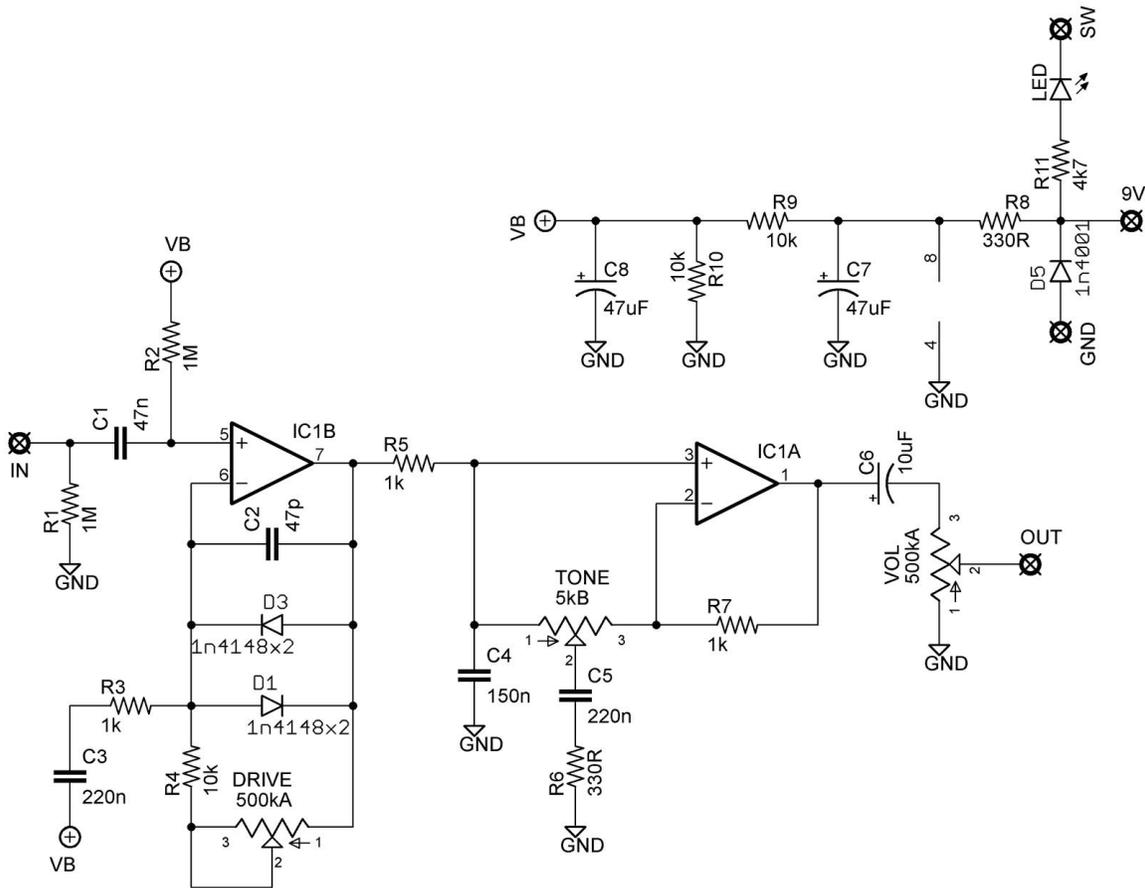
Resistors		Caps		Diodes	
R1	1M	C1	56n	D1 - D3	1n4148
R2	1M	C2	omit	D4	omitted
R3	1k	C3	220n	D5	1n4001
R4	10k	C4	150n		
R5	1k	C5	150n		
R6	470R	C6	22 uF		
R7	1k	C7	47 uF		
R8	390R	C8	47 uF		
R9	10k				
R10	10k				
R11	2k2				

IC

IC1 LM1458

Pots

DRIVE 100kA
 TONE 5kB
 VOL 100kA



Notes

- There are a number of ICs that will work for this effect. The stock unit is believed to be an LM1458. But, any of the other standard subs will work as well. These include the NE5532, LF353, OPA2134a and JRC4558.
- **D1** is TWO 1n4148's in series, as is **D3**. This was done to eliminate having to use a jumper if you want asymmetrical clipping. Feel free to experiment with different diodes, or use a switch to set up external clipping options.

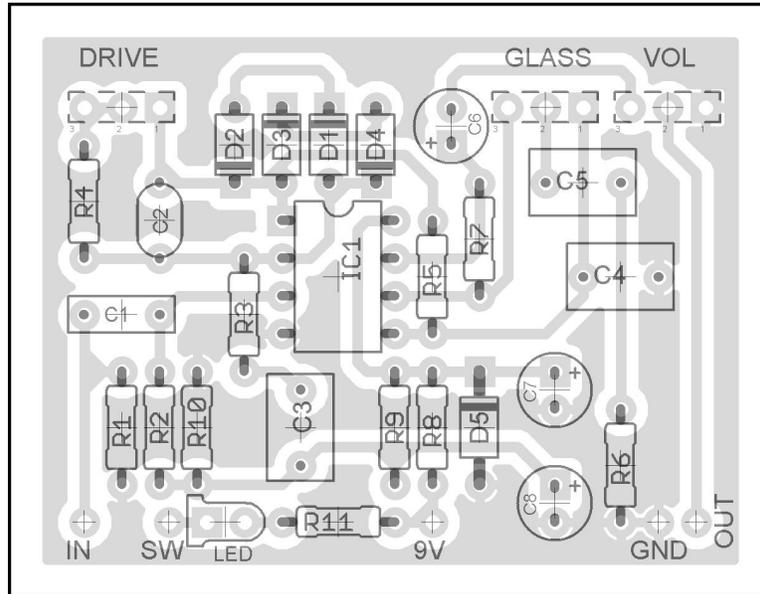
Black Ed. Values kindly provided by Rich Stevens

Parts

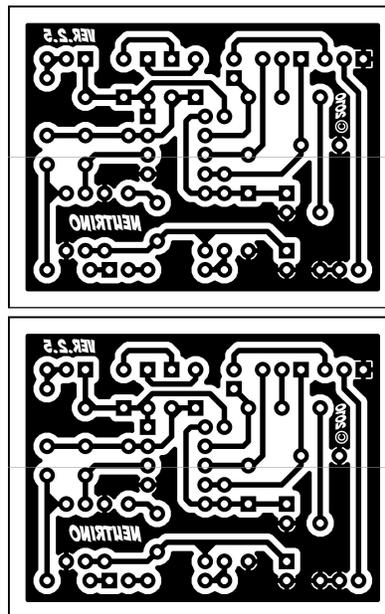
- Xicon General or Hi-Temp radial electrolytic caps, 25v
- Xicon carbon or metal film resistors, 1/4W
- Panasonic ECQ-V or WIMA box caps, 25v or above
- Alpha 16mm potentiometers

SINGLE SIDED VERSION – FOR ETCHING

The single sided version is slightly different than the double sided. This version has the input going into the non-inverting pin of the first stage of the op-amp, whereas the double-sided version the input connects to the non-inverting pin of the second half of the op-amp. This change was made for two reasons: it made the layout a little smaller, and it is truer to the original Eternity. Functionally, there is no difference in which half of a dual op-amp you use first. But, it don't hurt ☺



2.03" x 1.58" (w / borders)



Visit <http://www.madbeanpedals.com/learn/index.html> for helpful wiring diagrams and drilling templates!

This product is intended for DIY use. Commercial use is prohibited.