



MACHEEN

FX TYPE: FUZZ

The Macheen is a cross-over distortion maker circuit for a sweeping effect. It is primarily intended to be used with another effect in series, such as a fuzz or distortion. When used this way, single notes in lead playing will exhibit a certain amount of “bloom”. As notes ring out, a sweeping type effect is heard similar to classic crossover distortion heard on highly over-driven amps. It will make your leads “come alive” with a character of their own.

Controls

GAIN: Gain is controlled by a mosfet boost at the front-end of the effect.

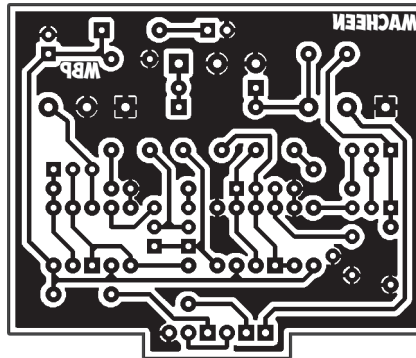
LIMIT: This provides a range of waveform clipping at the end of the circuit via two back to back germanium diodes to ground.

VOL: The output level.

T1: This can be either an internal trimpot or external potentiometer. This controls the gain of a second stage between the two frequency tripler stages. Turning this control up will increase the intensity of the effect.

Traces

2.18" W x 1.86"H



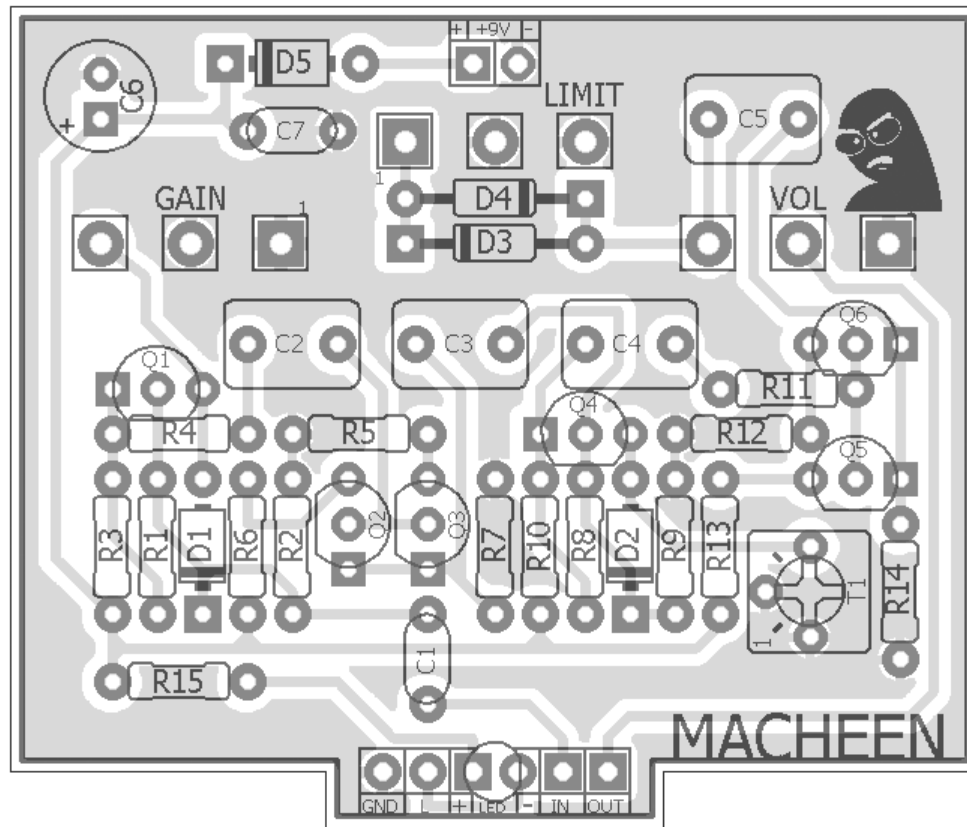
B.O.M.

Resistors		Caps		Diodes	
R1	10M	C1	100n	D1, D2	9.1v Zener
R2	10M	C2	1uF	D3, D4	1n34a
R3	5k1	C3	1uF	D5	1N5817
R4	22k	C4	1uF	Transistors	
R5	47k	C5	1uF	Q1	BS170
R6	47k	C6	100uF	Q2	2N3906
R7	22k	C7	100n	Q3	2n3904
R8	10M			Q4	BS170
R9	10M			Q5	2N3906
R10	5k1			Q6	2n3904
R11	22k			Trimmer	
R12	47k			T1	5k
R13	47k			Pots	
R14	22k			GAIN	5kC
R15	4k7			LIMIT	50kB
				VOL	100kB

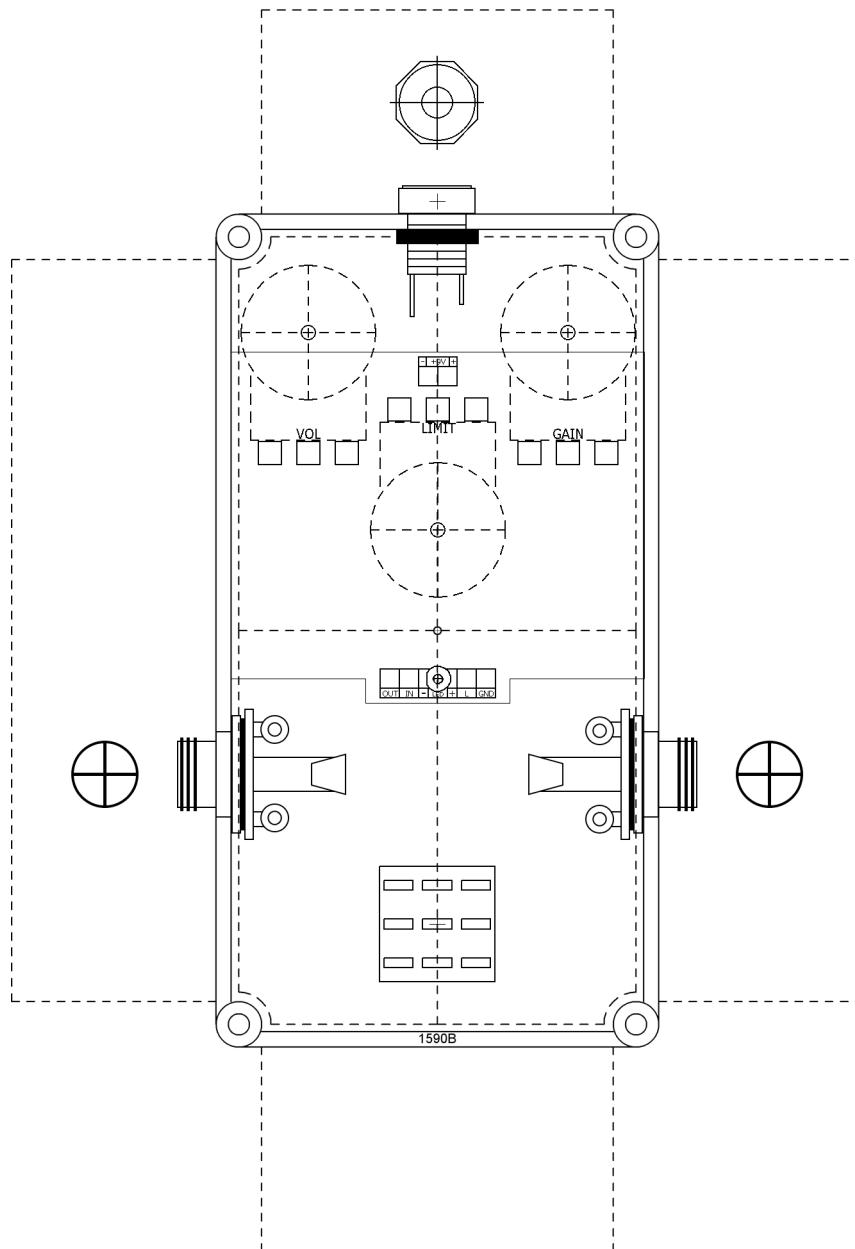
Shopping List

Value	QTY	Type	Rating
4k7	1	Metal / Carbon Film	1/4W
5k1	2	Metal / Carbon Film	1/4W
22k	4	Metal / Carbon Film	1/4W
47k	4	Metal / Carbon Film	1/4W
10M	4	Metal / Carbon Film	1/4W
100n	2	Film	16v min.
1uF	4	Film	16v min.
100uF	1	Electrolytic	16v min.
9.1v Zener	2		
1n34a	2	or, similar GE diode	
1N5817	1		
2n3904	2		
2N3906	2		
BS170	2		
5k	1	Bourns 3362p	
5kC	1	PCB Right Angle	16mm
50kB	1	PCB Right Angle	16mm
100kB	1	PCB Right Angle	16mm

Layout



1590B Drill Guide



Schematic

