

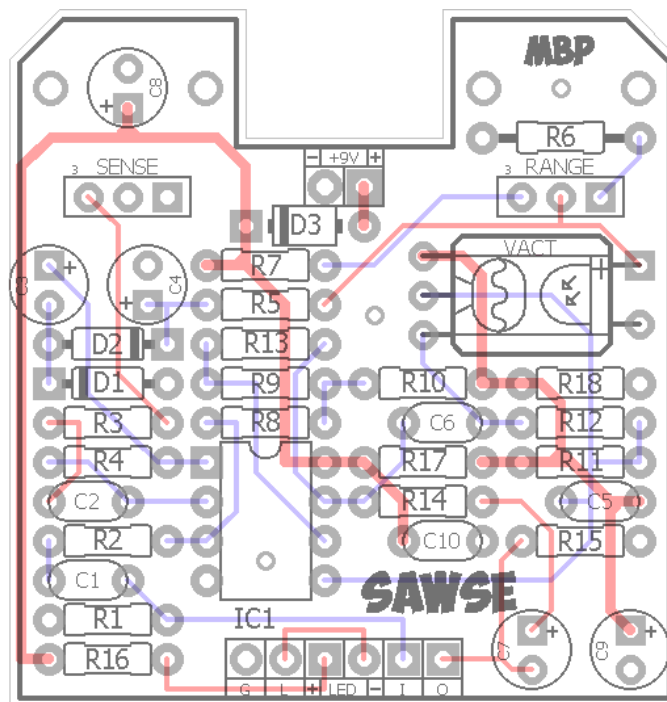
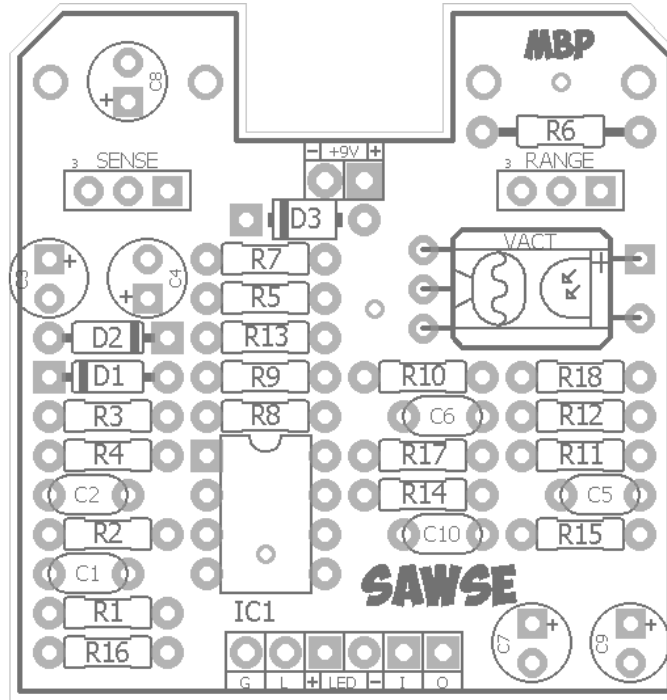
SAWSE

FX TYPE: Filter

Based on the DOD® 440™

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1.7" W x 1.775" H



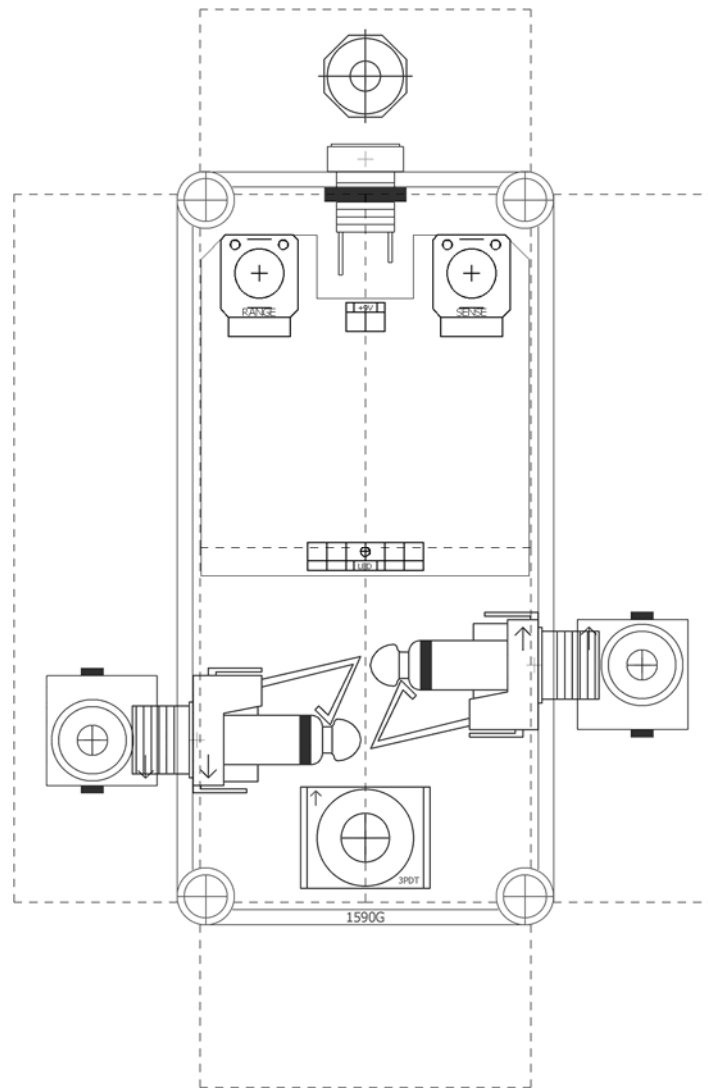
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B.O.M.					
Resistors		Caps		Diodes	
R1	1M	C1	10n	D1	1n914
R2	10k	C2	100n	D2	1n914
R3	4k7	C3	4u7	D3	1N5817
R4	470k	C4	1uF	IC	
R5	6k8	C5	22n	IC1	TL022
R6	22k	C6	22n	Vactrol	
R7	100k	C7	1uF	VACT	VTL5C4/2
R8	100k	C8	47uF	Pots	
R9	220k	C9	10uF	RANGE	100kB
R10	100k	C10	100n	SENSE	100kC
R11	220k				
R12	220k				
R13	430k				
R14	470R				
R15	100k				
R16	4k7				
R17	22k				
R18	22k				

Shopping List			
Value	QTY	Type	Rating
470R	1	Metal / Carbon Film	1/4W
4k7	2	Metal / Carbon Film	1/4W
6k8	1	Metal / Carbon Film	1/4W
10k	1	Metal / Carbon Film	1/4W
22k	3	Metal / Carbon Film	1/4W
100k	4	Metal / Carbon Film	1/4W
220k	3	Metal / Carbon Film	1/4W
430k	1	Metal / Carbon Film	1/4W
470k	1	Metal / Carbon Film	1/4W
1M	1	Metal / Carbon Film	1/4W
10n	1	Film	16v min.
22n	2	Film	16v min.
100n	2	Film	16v min.
1uF	2	Electrolytic	16v min.
4u7	1	Electrolytic	16v min.
10uF	1	Electrolytic	16v min.
47uF	1	Electrolytic	16v min.
1n914	2		
1N5817	1		
TL022	1	or, 4558	
VTL5C4/2	1		
100kB	1	PCB Right Angle, Metal Shaft	9mm
100kC	1	PCB Right Angle, Metal Shaft	9mm

1590G Drill Guide

3.66"W x 5.63"H



Indicator LED can be mounted directly to the PCB. Drill spot is directly above the “LED” text.

Photoshop Drill Guide: <http://www.madbeanpedals.com/projects/1590G/DrillGuides>

Overview

The Sawse is based on the venerable DOD 440 envelope filter.

Controls

- **Sense:** Controls the sensitivity of the envelope to pick attack.
- **Range:** The range of frequencies over which the envelope operates.

Notes

If you cannot get the 430k resistor, use a 100k and 330k in series.

The TL022 is spec'd in the original design but a 4558 works very well too (this is what I used in my build).

The VTL5C4/2 is essential for making this project work correctly (the 5C3/2 will not work for this circuit). Unfortunately, it looks like they are no longer being made and are extremely scarce. I purchased mine just a few months ago from Smallbear but they apparently no longer stock them. There are a few left here:

<http://www.alliedelec.com/excelitas-technologies-sensors-vtl5c4-2/70219700/>

<https://www.banzaimusic.com/Vactec-VTL5C4-2.html>

02.17 UPDATE: **Pedal Parts and Kits** has a decent stock of the 5C4/2. You can find it here: <https://www.pedalpartsandkits.com/vtl5c4-2/#cc-m-product-11145806357>

Voltages

IC1	V
1	4.58
2	4.59
3	4.51
4	0
5	4.58
6	4.61
7	4.57
8	9.18

