

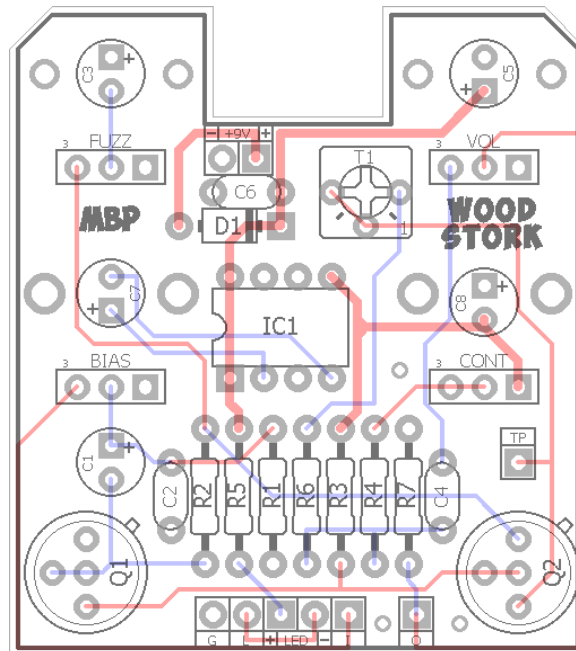
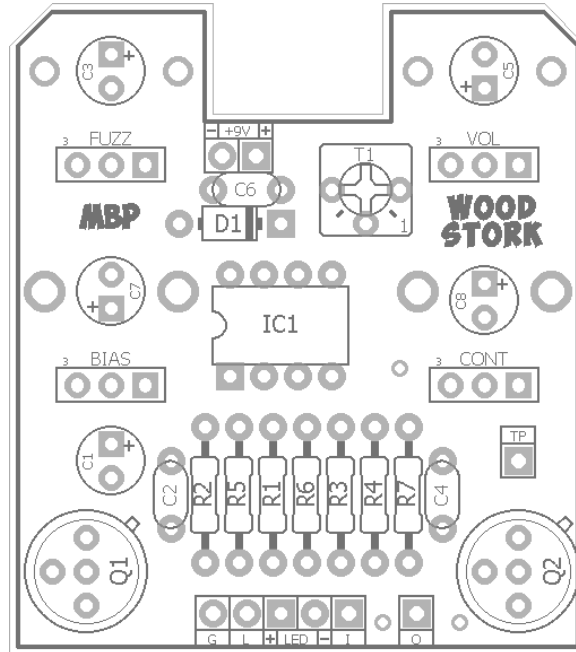
# WOODSTORK

FX TYPE: Fuzz

Based on the Fulltone® '69™

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1.7" W x 1.925" H



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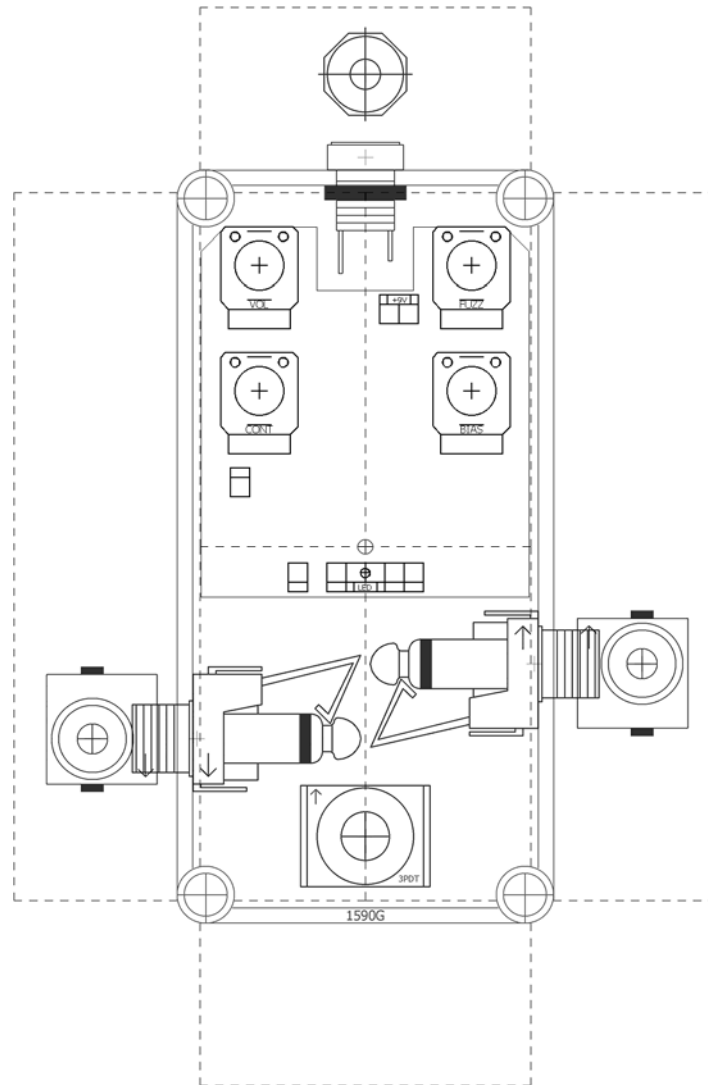
B.O.M.					
Resistors		Caps		Diodes	
R1	1M	C1	2u2	D1	1N5817
R2	100k	C2	100pF	Transistors	
R3	33k	C3	22uF	Q1, Q2	PNP
R4	220R	C4	100n	IC	
R5	4k7	C5	47uF	IC1	TC1044SCPA
R6	1k	C6	100n	Trimmer	
R7	1M	C7	10uF	T1	10k
		C8	10uF	Pots	
				CONT	1kB
				FUZZ	1kC
				BIAS	50kB
				VOL	500kA

Shopping List			
Value	QTY	Type	Rating
220R	1	Metal / Carbon Film	1/4W
1k	1	Metal / Carbon Film	1/4W
4k7	1	Metal / Carbon Film	1/4W
33k	1	Metal / Carbon Film	1/4W
100k	1	Metal / Carbon Film	1/4W
1M	2	Metal / Carbon Film	1/4W
100pF	1	Ceramic	16v min.
100n	2	Film	16v min.
2u2	1	Electrolytic	16v min.
10uF	2	Electrolytic	16v min.
22uF	1	Electrolytic	16v min.
47uF	1	Electrolytic	16v min.
1N5817	1		
PNP	2	PNP Germanium Transistors	
TC1044SCPA	1	or, MAX1044CPA	
10k	1	Bourns 3362P	
1kB	1	PCB Right Angle, Plastic Shaft	9mm
50kB	1	PCB Right Angle, Plastic Shaft	9mm
500kA	1	PCB Right Angle, Metal Shaft	9mm
1kC	1	PCB Right Angle, Metal Shaft	9mm

Note: 10n is the typical value for C4 used in Fuzz Faces, but it seems to be 100n in the '69.

# 1590G Drill Guide

3.66"W x 5.63"H



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 Woodstork is a PNP Fuzz Face with the Fulltone® '69™ mods incorporated. It also includes a charge pump to invert the supply voltage so that a regular 9vDC negative tip supply can be used for power.

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## Controls

**Vol:** Output level.

**Fuzz:** Fuzziness.

**Bias:** Adds series resistance at the circuit input.

**Cont:** Adds extra volume at the output.

**T1:** Sets the bias on the collector of Q2.

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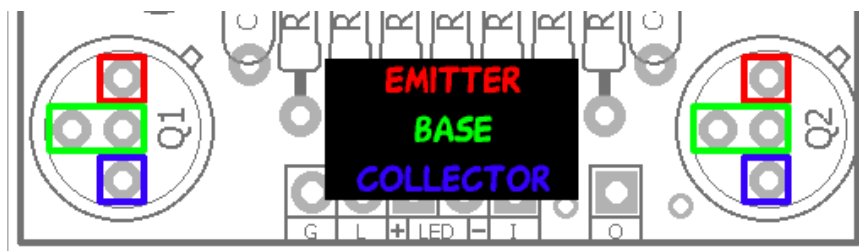
## Notes

Space is limited in these 1590G builds so I recommend going with T0-5 (“top hat”) style PNP transistors. These should be soldered flush to the PCB without sockets. You should be able to use other styles of PNP transistors, as well. If using transistors that are too large to fit on top of the PCB (so that the enclosure lid will actually close) then you can solder them to the bottom of the PCB instead. You may need to fold them over a bit to fit in that space, though.

Smallbear has many varieties of PNP transistors including matched pairs for the Fuzz Face:

<http://smallbear-electronics.mybigcommerce.com/fuzz-faces-and-similar/>

These often include resistor values used to bias the transistors in a Fuzz Face. I recommend using the values listed in the BOM to build the Woodstork.



“Bias” pot: This is not a true bias control...it’s just called that because reasons. When turned down it behaves similar to rolling the volume pot down on your guitar. People find this control useful because the Fuzz control tends to get murky when turned down. Leaving the Fuzz mostly all the way up and turning the Bias control all the way down is a way to reduce the total fuzz without things getting muddy.

The Cont pot (short for “Contour”) does not do much in the way of tone shaping but it will add extra volume output. With the Cont pot halfway up it is about the same output as a regular Fuzz Face. Turning it up further will give you some more dB to work with at the Volume control.

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## Biasing

Biasing the Woodstork is very easy. Using your multimeter, attach the black lead to a ground point on the PCB. Touch the red lead to the “TP” pad on the Woodstork. Now adjust the T1 trimmer until you get a reading of about -4.5vDC. Remember, the power here is inverted so you are supplying -9v to the circuit via the charge pump and adjusting the Q2 collector for -4.5v.

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