

WOLFshirt

FX TYPE: FUZZ/OCTAVE

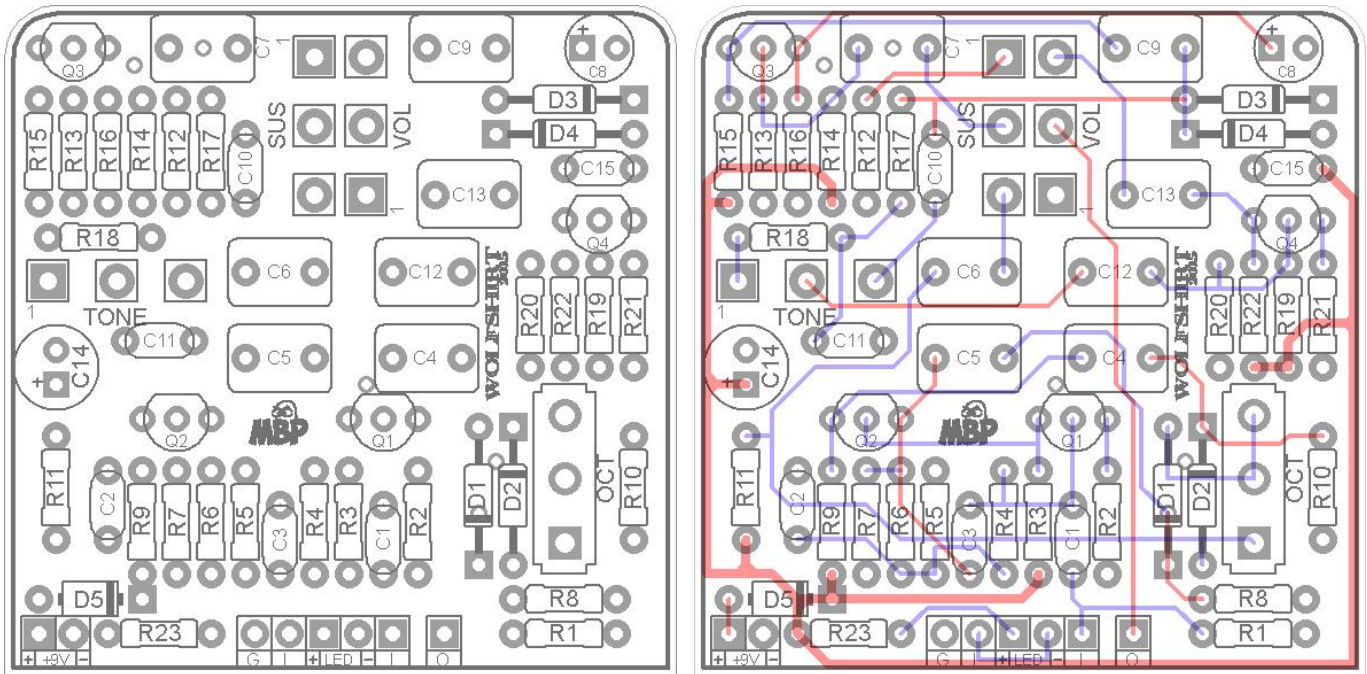
Based on the Foxx Tone Machine™

2015 ed. © madbeanpedals

Download the previous version here:

<http://www.madbeanpedals.com/projects/Wolfshirt/docs/Wolfshirt.zip>

1.95" W x 1.95" H



2015 Change-log

- Changed 1N4001 to 1N5817
- Changed 10uF electrolytic caps in the signal path to 1uF film.

Terms of Use: You are free to use purchased **Wolfshirt** circuit boards for both DIY and small commercial operations. You may not offer **Wolfshirt** PCBs for resale or as part of a "kit" in a commercial fashion. Peer to peer re-sale is, of course, okay.

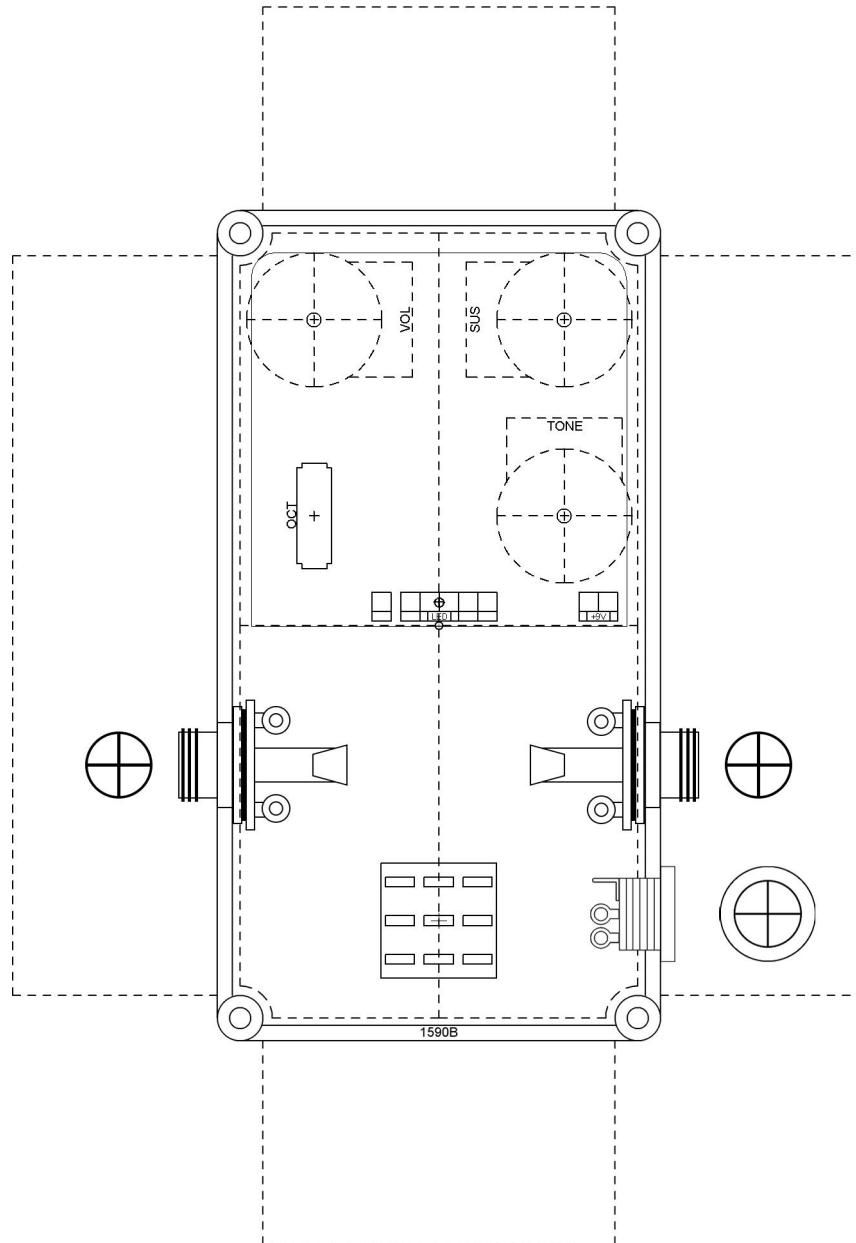
B.O.M.					
Resistors		Caps		Diodes	
R1	1M	C1	100n	D1 - D4	1n34a
R2	1k	C2	100n	D5	1N5817
R3	47k	C3	1n	Transistors	
R4	47k	C4	1uF	Q1 - Q4	see notes
R5	100k	C5	1uF	Switch	
R6	100k	C6	1uF	OCT	SPDT
R7	4k7	C7	1uF	Pots	
R8	100k	C8	10uF	SUS	50kB
R9	4k7	C9	1uF	TONE	50kB
R10	100k	C10	3n	VOL	50kB
R11	100k	C11	50n		
R12	220R	C12	1uF		
R13	15k	C13	1uF		
R14	150k	C14	100uF		
R15	10k	C15	100n		
R16	1k				
R17	22k				
R18	4k7				
R19	470k				
R20	47k				
R21	1k5				
R22	10k				
R23	4k7				

Shopping List			
Value	QTY	Type	Rating
220R	1	Carbon / Metal Film	1/4W
1k	2	Carbon / Metal Film	1/4W
1k5	1	Carbon / Metal Film	1/4W
4k7	4	Carbon / Metal Film	1/4W
10k	2	Carbon / Metal Film	1/4W
15k	1	Carbon / Metal Film	1/4W
22k	1	Carbon / Metal Film	1/4W
47k	3	Carbon / Metal Film	1/4W
100k	5	Carbon / Metal Film	1/4W
150k	1	Carbon / Metal Film	1/4W
470k	1	Carbon / Metal Film	1/4W
1M	1	Carbon / Metal Film	1/4W
1n	1	Film	16v min.
3n	1	Film	16v min.
50n	1	Film	16v min.
100n	3	Film	16v min.
1uF	7	Film	16v min.
10uF	1	Electorlytic	16v min.
100uF	1	Electorlytic	16v min.
1n34a	4	or, 1n270 or work-alike	
1N5817	1		
SPDT	1	On/On, PCB Mount	
50kB	3	PCB Mount	16mm

3n and 50n are not common values. Use 3n3 and 47n as subs.

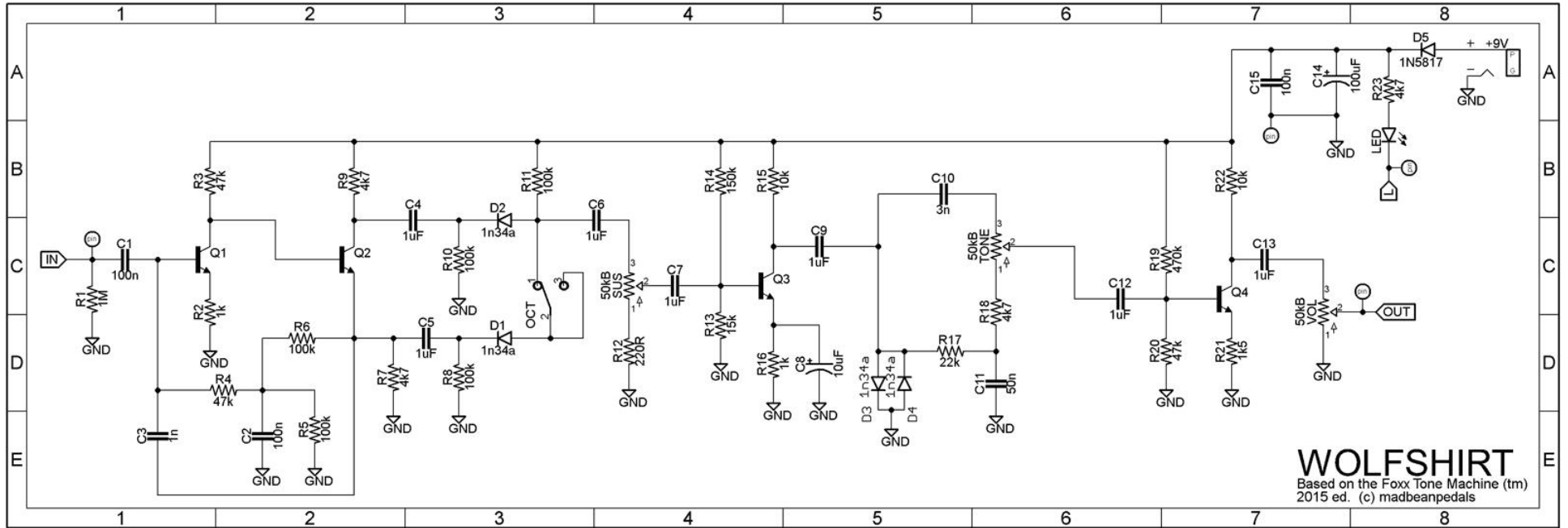
1590B Drill Guide

4.43" W x 6.46" H

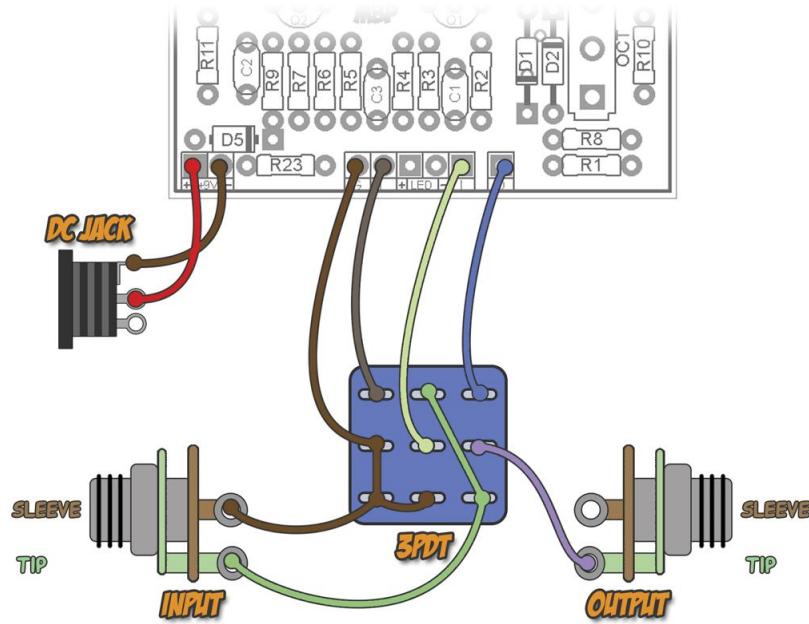


Download the Photoshop file used to make this guide here:

http://www.madbeanpedals.com/projects/Wolfshirt/docs/Wolfshirt_DRILL.zip



Wiring Guide



The **Wolfshirt** is a modified Foxx Tone Machine™ (a widely used and revered fuzz/octave stompbox). The effect is broken down into four distinct sections. The first stage comprises a “fuzz face” type gain stage with feedback, followed by the octave stage (generated by waveform clipping with germanium diodes). After the passive gain control there is another gain stage and passive tone control with added clipping and lastly a gain recovery stage.

All of these gain stages add up to a blistering fuzz/octave which will work well on both guitar and bass.

Controls

SUS: An attenuator to control the overall fuzz.

TONE: A Big Muff™ tone control derivative with added clipping via two additional back to back germanium diodes.

VOL: The output level.

OCT: This allows you to switch off the octave portion of the circuit and use it as fuzz only.

Notes

2n3565 are the stock transistors used for the Wolfshirt.

<http://smallbear-electronics.mybigcommerce.com/transistor-2n3565/>

These transistors have a round body with one side flattened off a bit. The pin closest to that flat spot is the emitter. So, for example, you would put the 2n3565 in Q1 with the flat spot on the right side.

Other transistors can be subbed. The 2n3904 seems to work alright. Stick to mid-gain transistors (300Hfe and under) if you are using something besides the 2n3565.

Voltages

Q1	vDC
C	2.27
B	0.76
E	0.15

Q2	vDC
C	7.5
B	2.27
E	1.65

Q3	vDC
C	7.12
B	0.83
E	0.22

Q4	vDC
C	7.94
B	0.81
E	0.2