

MUDBUNNY

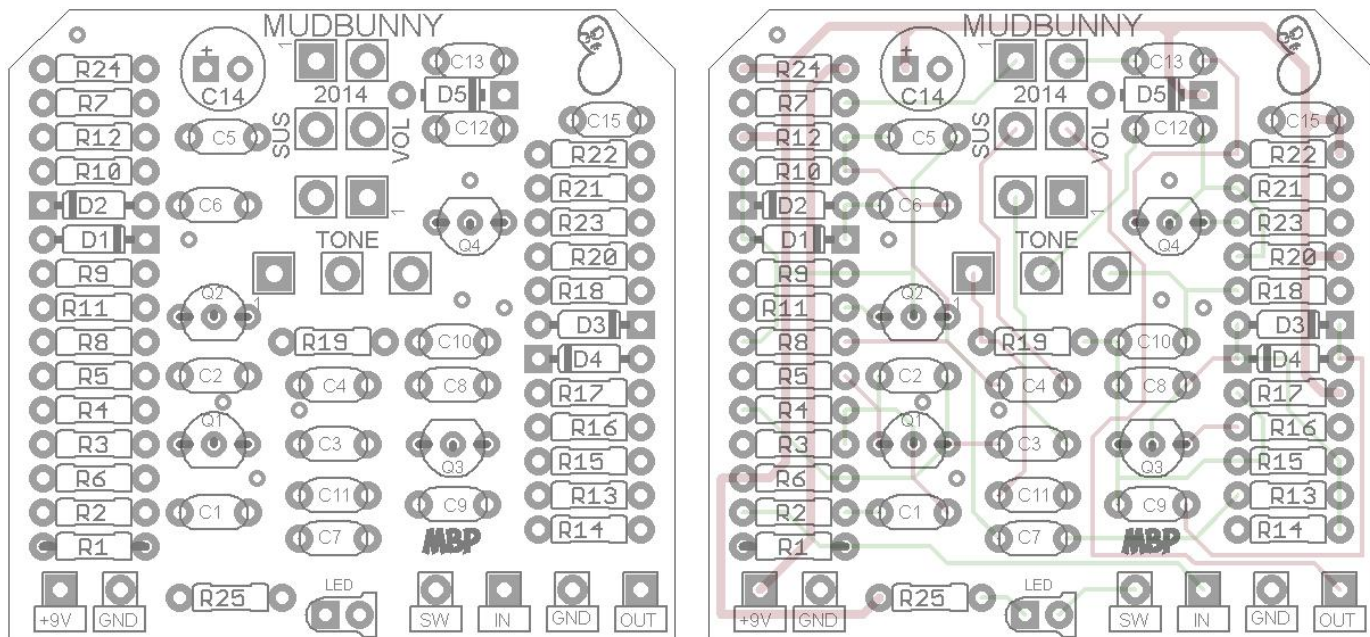
FX TYPE:Distortion

Based on the EHX® Big Muff™

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2014 changes: Added LED, minor layout changes

1.95" W x 1.85" H



The extra small pads on the PCB are vias. You do not need to do anything with them.

Note that R25 is not listed on the B.O.M. on pages 2-4. This is the current limiting resistor for the PCB mounted LED indicator added to the 2014 version. Use a 4k7 or appropriate value.

Download the pdf file for the previous versions of the Mudbunny here (before August 2014):
<http://www.madbeanpedals.com/projects/Mudbunny/docs/Mudbunny.zip>

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

TRIANGLE

Resistors		Caps		Diodes	
R1	1M	C1	100n	D1 - D4	1n914
R2	3K3	C2	omit	D5	1N4001
R3	82K	C3	100n	Transistors	
R4	390K	C4	100n	Q1-Q4	2n5088
R5	820R	C5	560p	Pots	
R6	22K	C6	50n	SUS	100kB
R7	1K	C7	100n	TONE	100kB
R8	8K2	C8	560p	VOL	100kA
R9	omit	C9	50n		
R10	390K	C10	4n		
R11	150R	C11	10n		
R12	12K	C12	100n		
R13	8K2	C13	100n		
R14	82K	C14	100uF		
R15	390K	C15	100n		
R16	820R				
R17	22K				
R18	39K				
R19	39K				
R20	390K				
R21	100K				
R22	12K				
R23	2K7				
R24	100R				

GREEN RUSSIAN

Resistors		Caps		Diodes	
R1	1M	C1	100n	D1 - D4	1n914
R2	39K	C2	470p	D5	1N4001
R3	100K	C3	100n	Transistors	
R4	470K	C4	100n	Q1-Q4	2n5088
R5	390R	C5	470p	Pots	
R6	12K	C6	47n	SUS	100kB
R7	1K	C7	100n	TONE	100kB
R8	10K	C8	470p	VOL	100kA
R9	100K	C9	47n		
R10	470K	C10	3n9		
R11	390R	C11	10n		
R12	12K	C12	100n		
R13	10K	C13	100n		
R14	100K	C14	100uF		
R15	470K	C15	100n		
R16	390R				
R17	12K				
R18	22K				
R19	20K				
R20	470K				
R21	100K				
R22	10K				
R23	2K				
R24	100R				

VIOLET RAM'S HEAD

Resistors		Caps		Diodes	
R1	1M	C1	100n	D1 - D4	1n914
R2	39K	C2	470p	D5	1N4001
R3	100K	C3	100n	Transistors	
R4	470K	C4	100n	Q1-Q4	2n5088
R5	100R	C5	470p	Pots	
R6	15K	C6	100n	SUS	100kB
R7	1K	C7	100n	TONE	100kB
R8	8K2	C8	470p	VOL	100kA
R9	100K	C9	100n		
R10	470K	C10	4n		
R11	100R	C11	10n		
R12	10K	C12	100n		
R13	8K2	C13	100n		
R14	100K	C14	100uF		
R15	470K	C15	100n		
R16	100R				
R17	15K				
R18	39K				
R19	39K				
R20	390K				
R21	100K				
R22	10K				
R23	2K7				
R24	100R				

CIVIL WAR

Resistors		Caps		Diodes	
R1	1M	C1	100n	D1 - D4	1n914
R2	39K	C2	430p	D5	1N4001
R3	100K	C3	100n	Transistors	
R4	470K	C4	100n	Q1-Q4	2n5088
R5	390R	C5	430p	Pots	
R6	12K	C6	47n	SUS	100kB
R7	1K	C7	100n	TONE	100kB
R8	10K	C8	430p	VOL	100kA
R9	100K	C9	47n		
R10	470K	C10	3n9		
R11	390R	C11	10n		
R12	12K	C12	100n		
R13	10K	C13	100n		
R14	100K	C14	100uF		
R15	470K	C15	100n		
R16	390R				
R17	12K				
R18	22K				
R19	20K				
R20	470K				
R21	100K				
R22	10K				
R23	2K7				
R24	100R				

MAYO

Resistors		Caps		Diodes	
R1	1M	C1	100n	D1 - D4	1n914
R2	33k	C2	500pF	D5	1N4001
R3	100k	C3	100n	Transistors	
R4	470k	C4	100n	Q1-Q4	BC550
R5	100R	C5	500pF	Pots	
R6	18k	C6	100n	SUS	100kB
R7	820R	C7	100n	TONE	100kB
R8	8k2	C8	500pF	VOL	100kA
R9	100k	C9	100n		
R10	470k	C10	4n		
R11	100R	C11	10n		
R12	10k	C12	100n		
R13	8k2	C13	100n		
R14	100k	C14	100uF		
R15	470k	C15	100n		
R16	100R				
R17	18k				
R18	33k				
R19	33k				
R20	390k				
R21	100k				
R22	10k				
R23	2k7				
R24	100R				

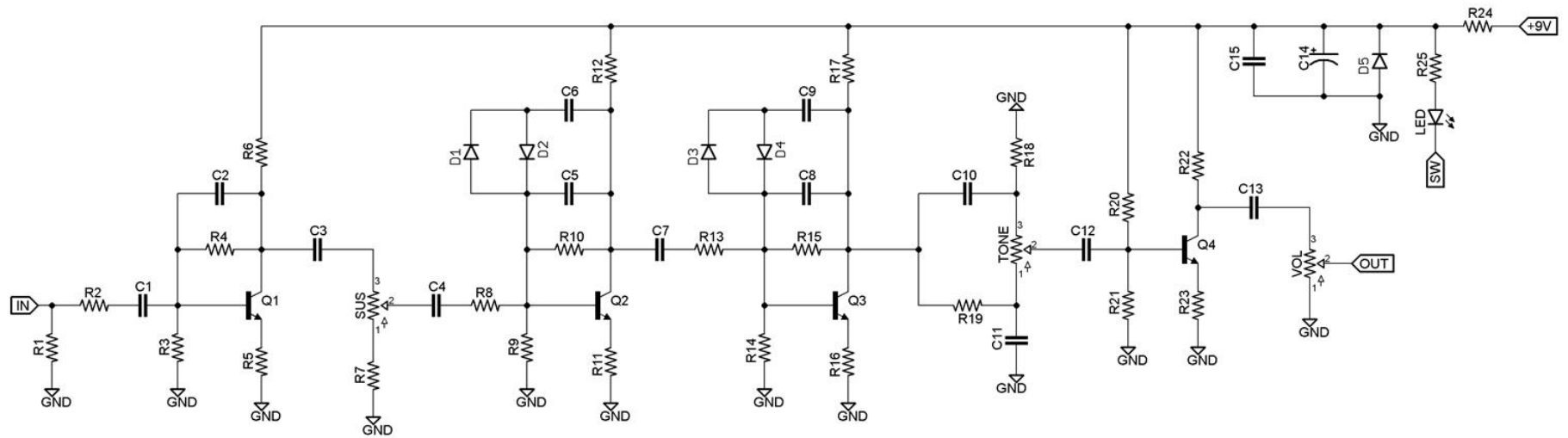
CREAMY DREAMER

Resistors		Caps		Diodes	
R1	1M	C1	100n	D1 - D4	1n914
R2	33k	C2	560pF	D5	1N4001
R3	82k	C3	100n	Transistors	
R4	470k	C4	100n	Q1-Q4	2n5088
R5	jumper	C5	560pF	Pots	
R6	22k	C6	50n	SUS	100kB
R7	1k	C7	100n	TONE	100kB
R8	15k	C8	560pF	VOL	100kA
R9	82k	C9	50n		
R10	470k	C10	4n		
R11	jumper	C11	10n		
R12	22k	C12	100n		
R13	15k	C13	100n		
R14	82k	C14	100uF		
R15	470k	C15	100n		
R16	jumper				
R17	22k				
R18	39k				
R19	39k				
R20	470k				
R21	100k				
R22	22k**				
R23	390R				
R24	100R				

22k may be incorrect. Socket for experimentation. A 2k2 seems to work.

Mudbunny

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The **Mudbunny** is an open-ended project in which you can create numerous versions of the hugely popular Electro-Harmonix® Big Muff™. The Big Muff™ is a staple of modern rock and has been used and popularized by innumerable players in the last three decades. A components list has been included below covering some of the many variations of this effect.

SUS: The overall gain of the effect.

TONE: A combination of high and low pass filters with the turn of a pot.

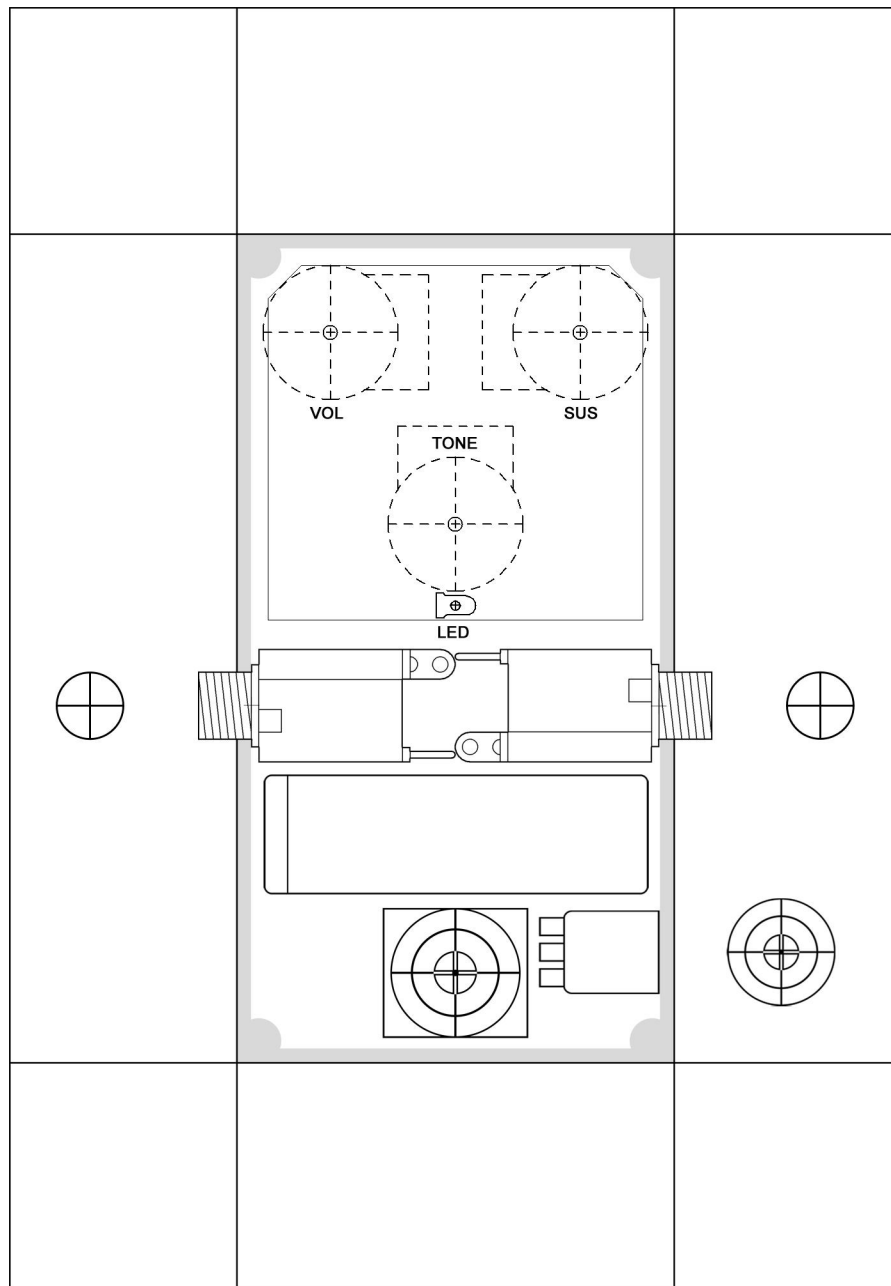
VOL: The overall output.

NOTES

- There are many transistors you can use in the Mudbunny. Alternatives to the 2n5088 include BC549C, BC550, BC182L, 2n5089, and MPSA18, as well as many more. Using different transistors will create unique variations in tone. Be careful to use the correct pin-outs, however. Some transistors, such as the BC549C will need to be rotated 180° from the silk screen drawing on the PCB due to its reversed pin-out. Always check the appropriate datasheet for your transistor BEFORE soldering.
- You can also create unique tones by using different diodes in place of the 1n914 (or the equivalent 1n4148). Different diodes such as germanium, LED, and mosfets (wired as diodes) offer the opportunity to customize the Mudbunny to your personal taste. Typical alternatives include 1n34a, 1n270, BAT41, red or green diffused 3mm or 5mm LEDs, and 2n7000 mosfets.
- Using germanium diodes in the D3/D4 position will sometimes create a very light octave effect. If you use them for both D1/D2 and D3/D4 you may get a slight “bloom” in the note decay (a VERY COOL effect). If using a mosfet for clipping, simply solder the gate and drain pins together on each mosfet and use the two leads (source and gate/drain) as the diode in a back to back configuration on the D1/D2 and/or D3/D4 positions.
- You can socket the clipping diodes (D1 – D4) to allow you to switch out different types at any time. Alternatively, you could use either an SPDT or DPDT wired in either spot to allow you to switch between different diode types on-the-fly.
- One useful way to develop your own variation (instead of breadboarding) is to use a PCB as a development board. By socketing most of the pads on the PCB you can easily swap out different values and component types to gauge changes in tone. You could also use pin headers for the pots to easily switch out different values for them. Experimentation is the key here, and this is an easy way to use the Mudbunny as a learning tool.

1590BDrill Guide

4.64" W x 6.68" H



Download the Photoshop file used to make this template:

http://www.madbeanpedals.com/projects/Mudbunny/docs/Mudbunny_Drill.zip

Wiring

