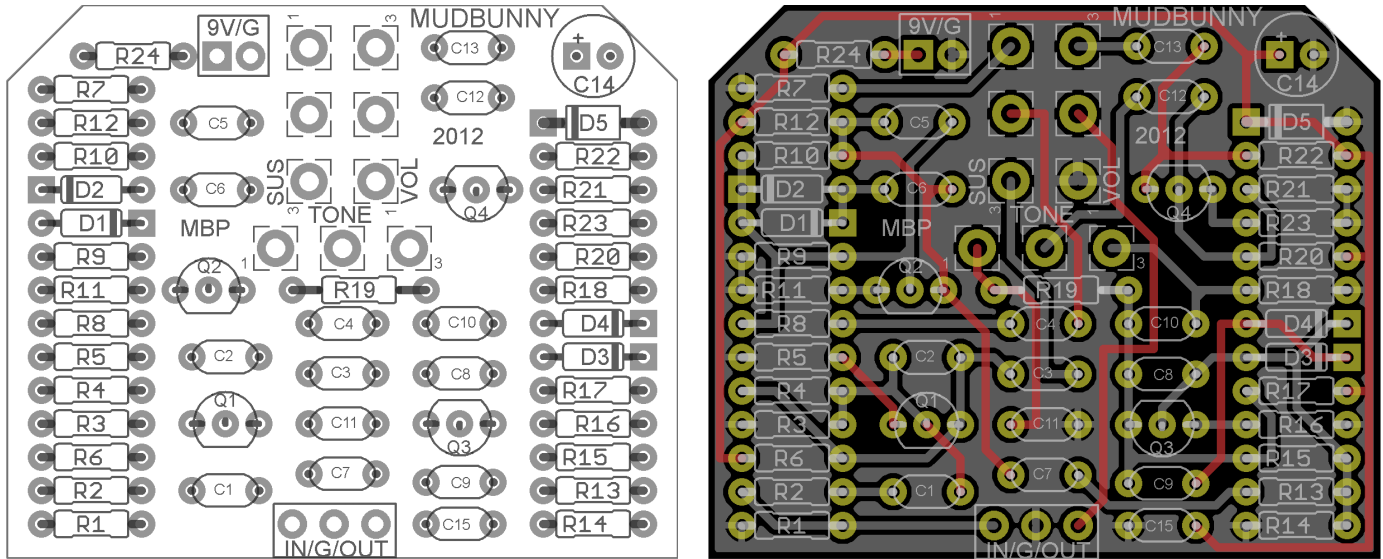


MUDBUNNY - 2012 ED.

FX Type: Distortion
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2" W x 1.65" H



[Download previous version of the Mudbunny \(before 03.2012\).](#)

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.

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 | 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 | 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 | 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 | 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 | | | | |

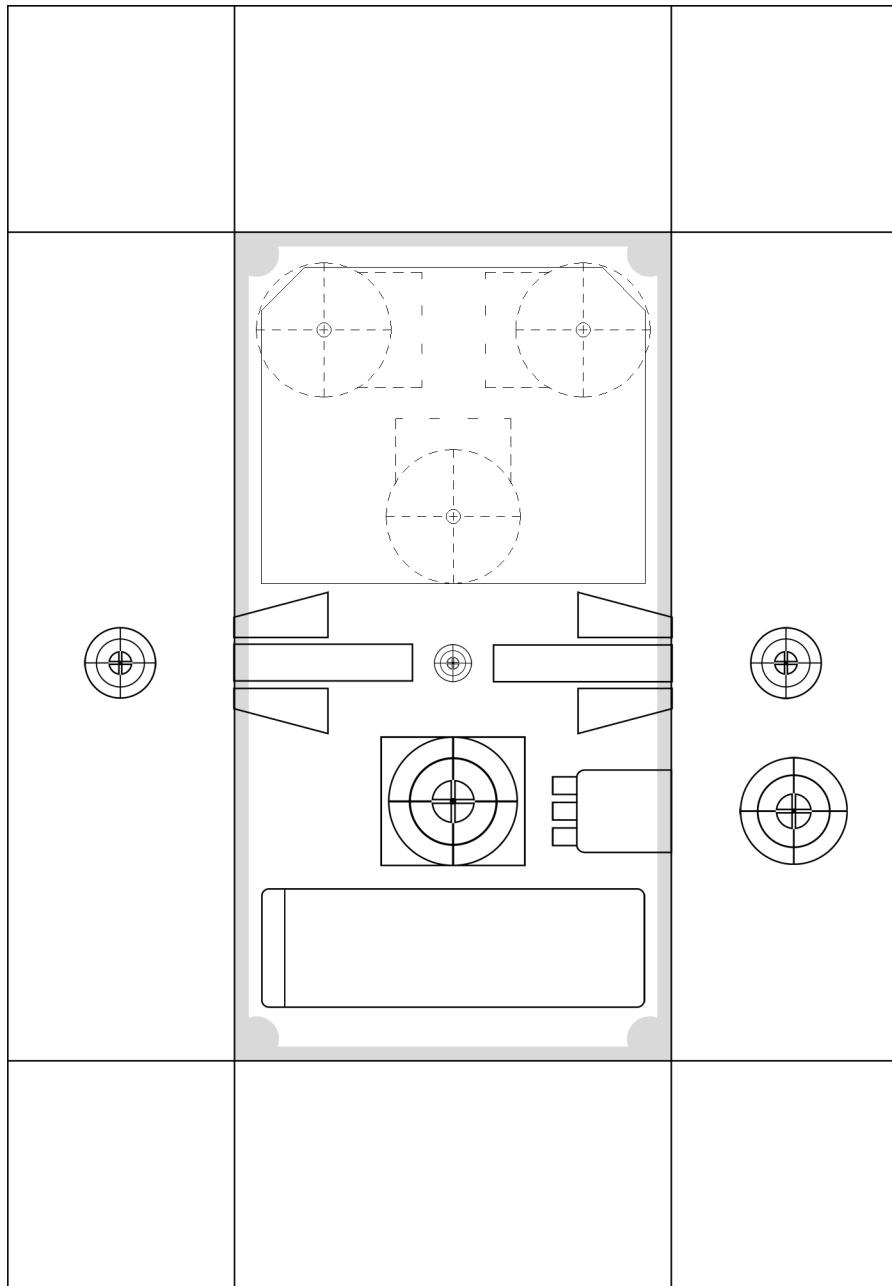
MAYO

| 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 | 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

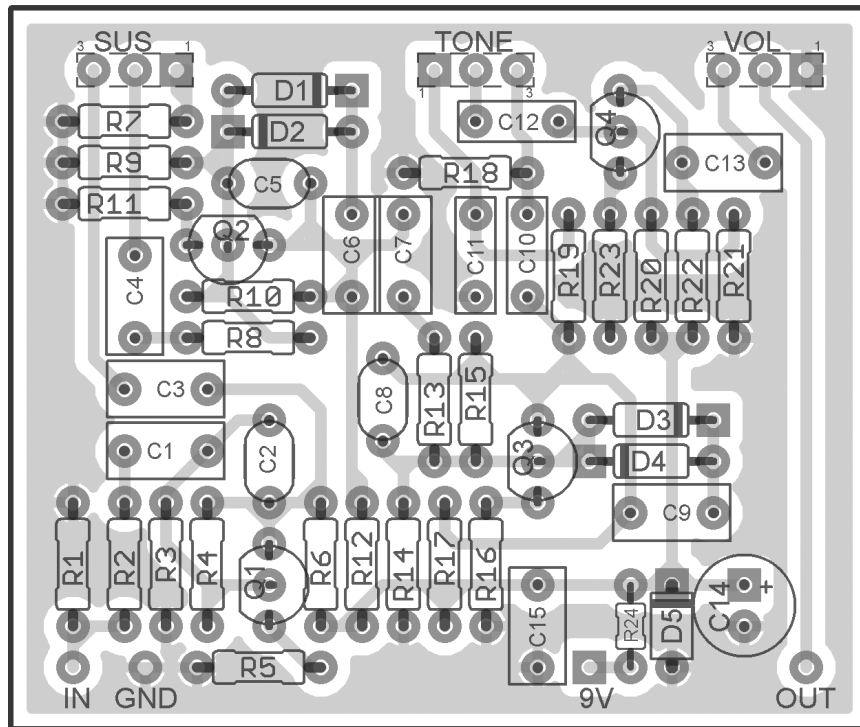
| Resistors | | Caps | | Diodes | |
|-----------|---------------|------|-------|--------------------|--------|
| R1 | 1M | C1 | 100n | D1 - D4 | 1n914 |
| R2 | 33k | C2 | 560pF | D5 | 1N4001 |
| R3 | 82k | C3 | 100n | Transistors | |
| R4 | 470k | C4 | 100n | Q1 | 2n5088 |
| R5 | jumper | C5 | 560pF | 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 | | | | |

1590B Drill Template
4.64"W x 6.69"H

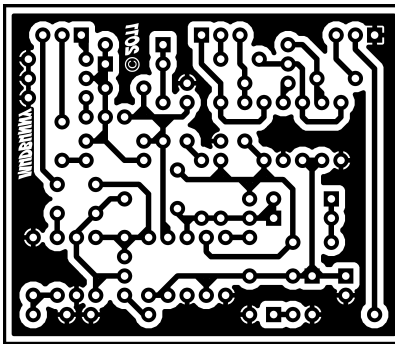


This template is approximate. Please check carefully before committing to drill.

PCB Artwork for etching



Transistors shown with BC549C pinout.
2.09" W x 1.77" H (including borders)



Licensing

PCBs purchased from madbeanpedals for the **Mudbunny** may be used for small quantities of commercial pedal building (keep in mind that bulk discounting on PCBs is not offered). The PCB artwork for etching is intended for DIY / non-commercial use only. All madbeanpedals PCBs are further prohibited from commercial re-distribution including "kits".

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