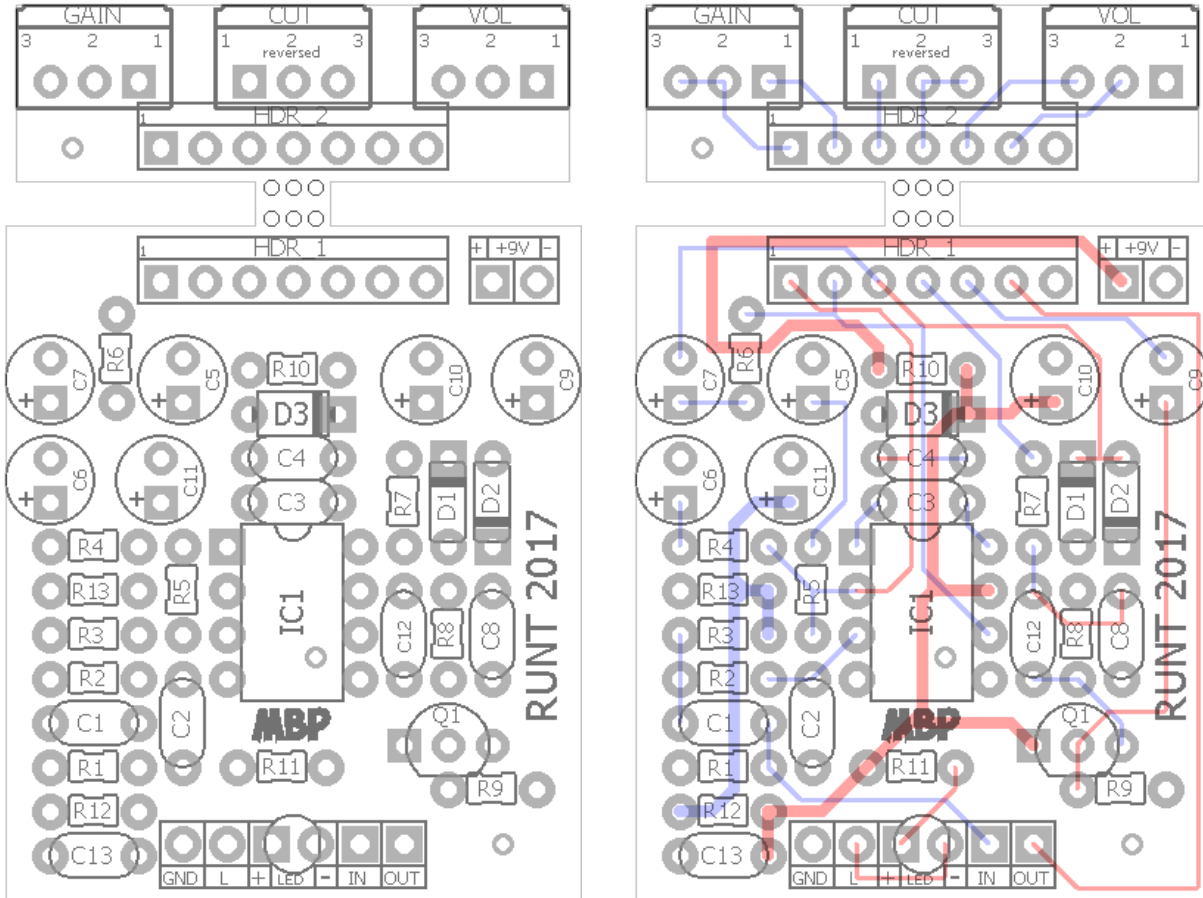


RUNT

FX Type: Distortion
Based on the ProCo® Rat™
© 2017 madbeanpedals

1.3" W x 1.525" H (main board)



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

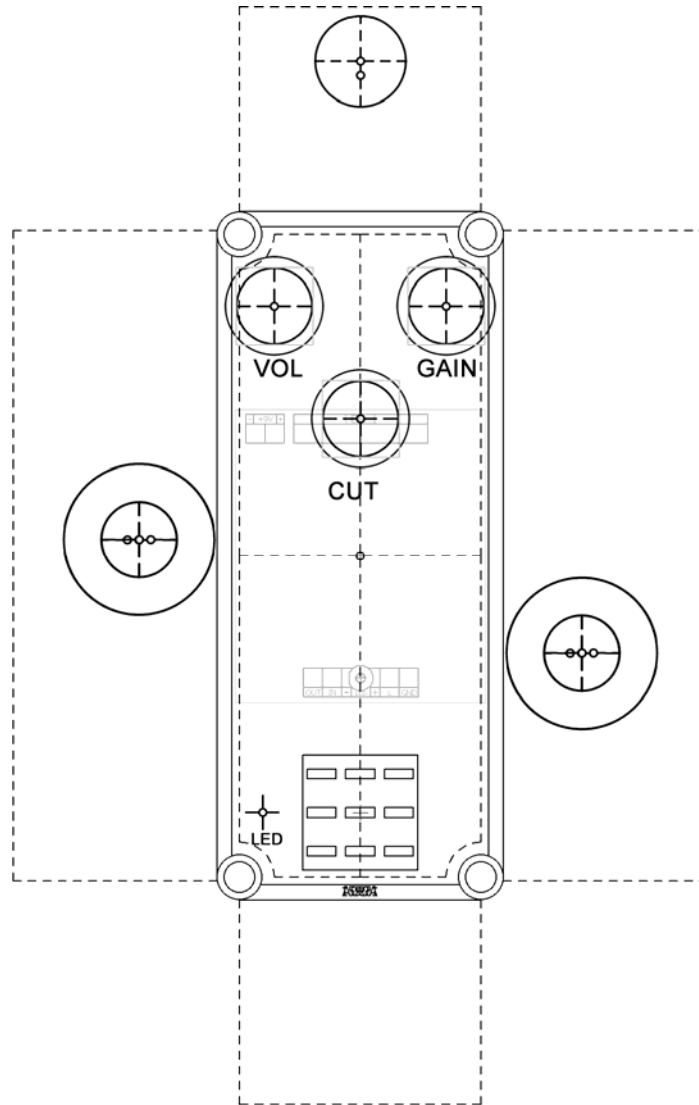
| B.O.M. | | | | | |
|-----------|------|------|-------|-------------------|--------|
| Resistors | | Caps | | Diodes | |
| R1 | 1M | C1 | 22n | D1 | 1N914 |
| R2 | 1k | C2 | 1n | D2 | 1N914 |
| R3 | 1M | C3 | 30pF | D3 | 1N4002 |
| R4 | 47R | C4 | 100pF | Transistor | |
| R5 | 560R | C5 | 4u7 | Q1 | 2N5457 |
| R6 | 1k | C6 | 2u2 | IC | |
| R7 | 1k5 | C7 | 4u7 | IC1 | LM308 |
| R8 | 1M | C8 | 3n3 | Pots | |
| R9 | 10k | C9 | 1uF | VOL | 100kA |
| R10 | 47R | C10 | 47uF | CUT | 100kA |
| R11 | 4k7 | C11 | 10uF | GAIN | 100kA |
| R12 | 100k | C12 | 22n | | |
| R13 | 100k | C13 | 100n | | |

| Shopping List | | | |
|---------------|-----|---------------------|----------|
| Value | Qty | Type | Rating |
| 47R | 2 | Metal / Carbon Film | 1/8W |
| 560R | 1 | Metal / Carbon Film | 1/8W |
| 1k | 2 | Metal / Carbon Film | 1/8W |
| 1k5 | 1 | Metal / Carbon Film | 1/8W |
| 4k7 | 1 | Metal / Carbon Film | 1/8W |
| 10k | 1 | Metal / Carbon Film | 1/8W |
| 100k | 2 | Metal / Carbon Film | 1/8W |
| 1M | 3 | Metal / Carbon Film | 1/8W |
| 30pF | 1 | Ceramic / MLCC | 16v min. |
| 100pF | 1 | Ceramic / MLCC | 16v min. |
| 1n | 1 | Film | 16v min. |
| 3n3 | 1 | Film | 16v min. |
| 22n | 2 | Film | 16v min. |
| 100n | 1 | Film | 16v min. |
| 1uF | 1 | Electrolytic | 16v min. |
| 2u2 | 1 | Electrolytic | 16v min. |
| 4u7 | 2 | Electrolytic | 16v min. |
| 10uF | 1 | Electrolytic | 16v min. |
| 47uF | 1 | Electrolytic | 16v min. |
| 1N914 | 2 | | |
| 1N4002 | 1 | or, 1N4001 | |
| 2N5457 | 1 | | |
| LM308 | 1 | | |
| 100kA | 3 | PC Mount | 9mm |

Pots: <http://smallbear-electronics.mybigcommerce.com/alpha-single-gang-9mm-pc-mount>

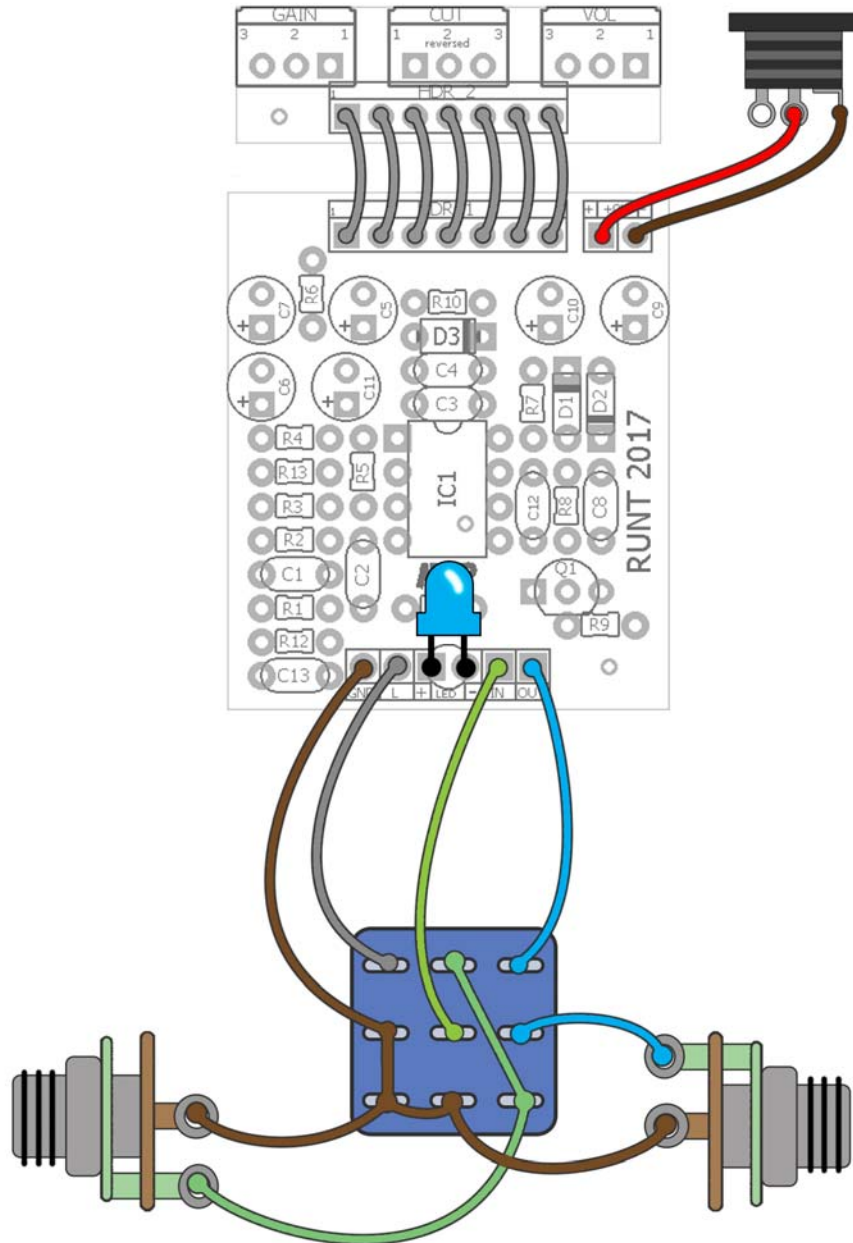
1590A Drill Guide

3.63" W x 5.72" H



Photoshop Template: http://www.madbeanpedals.com/projects/Runt/Runt2017_DRILL.zip

Wiring Guide



The indicator LED should be wired to the PCB, not mounted directly. LED location shown on the Drill Guide.

Overview

Much like the venerated Ibanez® Tube Screamer™ the Rat™ needs little introduction. It is part of the “holy trinity” of dirt pedals that nearly every rock guitar player has owned or played through at some point (the other being the Big Muff™). But, unlike the smooth and refined sound of the Tube Screamer™, the Rat™ is more like a distant uncle...you know, the one that always smells like stale cigars and bottom-of-the-well whiskey; rude, abrasive and sometimes just plain ol’ mean.

While the Rat™ lacks smoothness (and pushes the boundaries on acceptable signal to noise ratio) it makes up for it with lots of character. It is a textured distortion; like putting a fine layer of gritty sand over your guitar tone. One can almost imagine ripping fat riffs while playing “Round and Round” at your local bar gig, flipping your long mane of hair while the ladies swoon over your tiger striped spandex. Well, maybe that’s just me.

Controls are self-explanatory.

2017 updates: Updated to the current MBP Eagle library and small changes to the power supply section.

Notes

The main board (circuit) and daughter board (pots) need to be separated before populating. Gently break the two boards apart with finger pressure. You can use a wire cutter to clean up any jagged edges.

The three pots are soldered directly to the daughter board and wired to the main board as shown in the Wiring Guide. The VOL and GAIN pots are soldered to the top of the daughter board. **The CUT pot must be soldered underneath the daughter board.**

