http://www.madbeanpedals.com PRESENTS

UPROAR

FX TYPE: DISTORTION

Based on the Suhr® Riot™
PCB artwork ©2011 madbeanpedals
*Special thanks to **culturejam**!*
*Release date: 01.30.11 – **REVISED 02.08.11***

This version of the **Uproar** (ver.2) has been updated to include more pads for the clipping diodes, added one formal mod, the **Presence** control, and two informal mods, the **Super-Duper Mid-Range Booster (SDMB)** and the **Facemelter**. The PCB is slightly larger than previous versions, and if you include the **Presence** or **SDMB** mod, then a 125B-sized enclosure is recommended. Additional changes were made to the tone control area to bring it in line with the stock Riot™ design.

Circuit analysis: **Heavy Metal Thunder**.

The controls are as follows

GAIN: This control varies the distortion produced by the effect.
TONE: This control reduces treble by turning it counter-clockwise.
VOL: The output level.
CLIP: This switch allows you to select three different clipping modes.
PRES: This switch adds a presence boost by adding an additional cap and switch.
SDMB: This mod allows you to switch in an additional cap at the input for a neat “stuck wah” type effect. This mod would also be very useful when playing slide.

SmallBear Parts Guide – www.smallbearelec.com

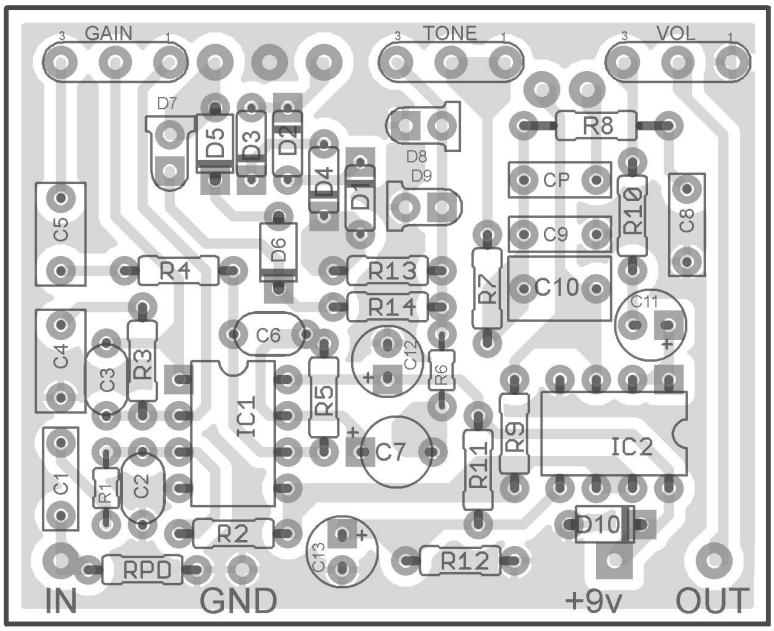
- Panasonic ECQ-B / V film caps or Topmay box caps
- 1/4W metal film resistors
- 16v electrolytic radial caps
- Ceramic or Silver Mica caps (for pF values)
- 16mm Alpha Pots

Notes

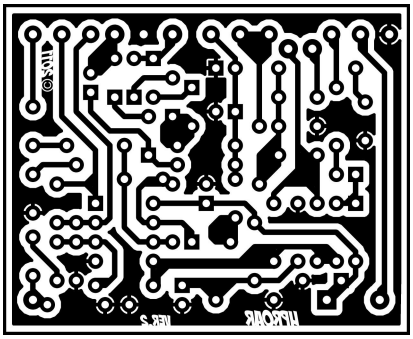
- The **CLIP** switch needs to be an On/Off/On SPDT. The **PRES** switch can be either SPST or SPDT On/On. The **SDMB** is an SPDT On/On.
- Stock unit does not include a pulldown resistor. Space has been left on the board should you want to add one in the **RPD** slot. A 1M or 2M2 will suffice.
- **C8** & **C9** were measured at 36n in the stock. These were found to make the Uproar a bit darker sounding than the Riot. Suggested substitutes are 10n for **C9** and 33n for **C8** for a more balanced control. Socketing the two caps and experimenting with different values is recommended.

4580D
http://www.mouser.com/ProductDetail/NJR/NJM4580D/?qs=sGAEpiMZZMtOXy69nW9rM1TWnpQq6N5ww%252bQw6dDfEL8%3d
4580DD
http://www.mouser.com/ProductDetail/NJR/NJM4580DD/?qs=sGAEpiMZZMtOXy69nW9rM1TWnpQq6N5wLnB%2f0wl9Up0%3d

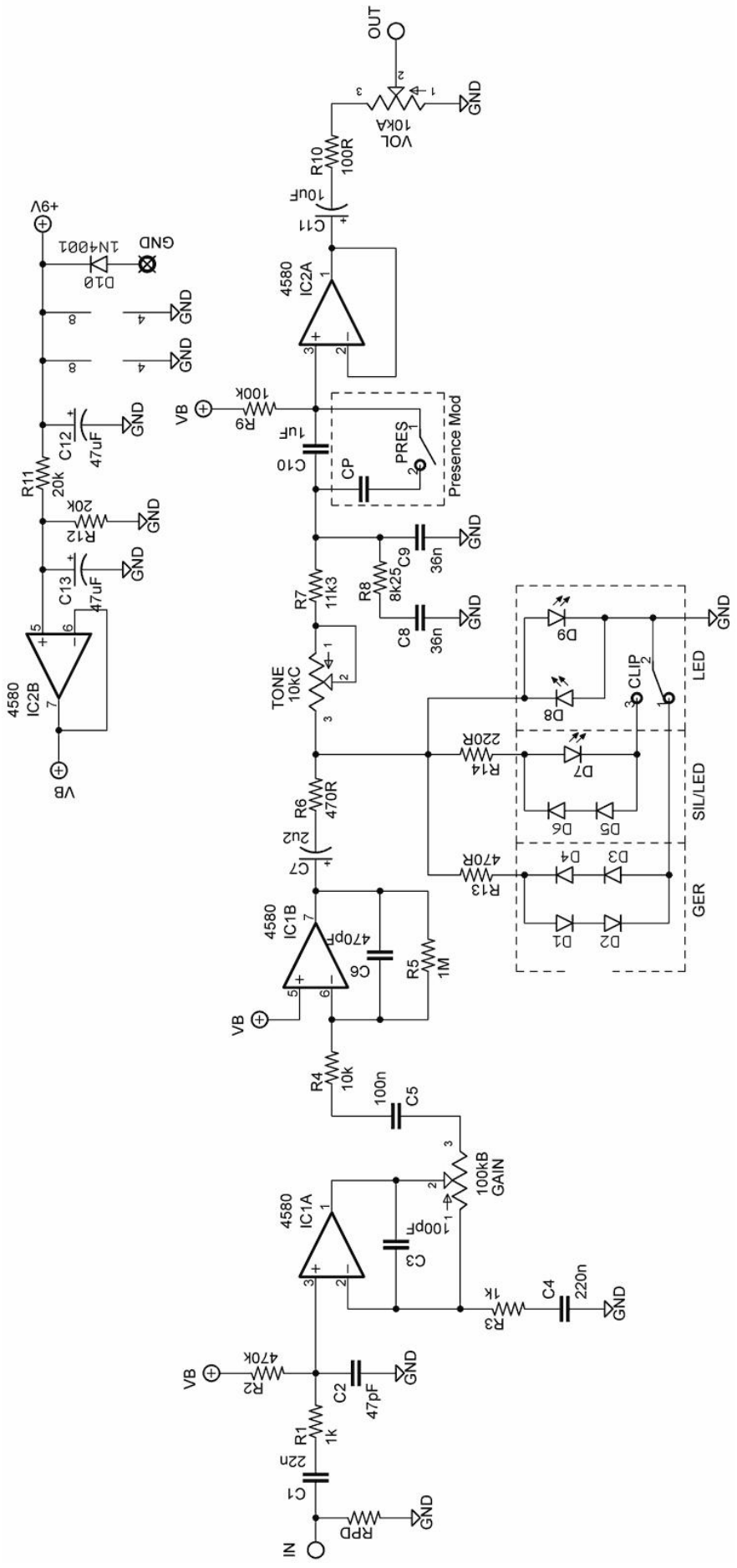
Subs: JRC4558, TCL2272. Many other dual op-amps will work.

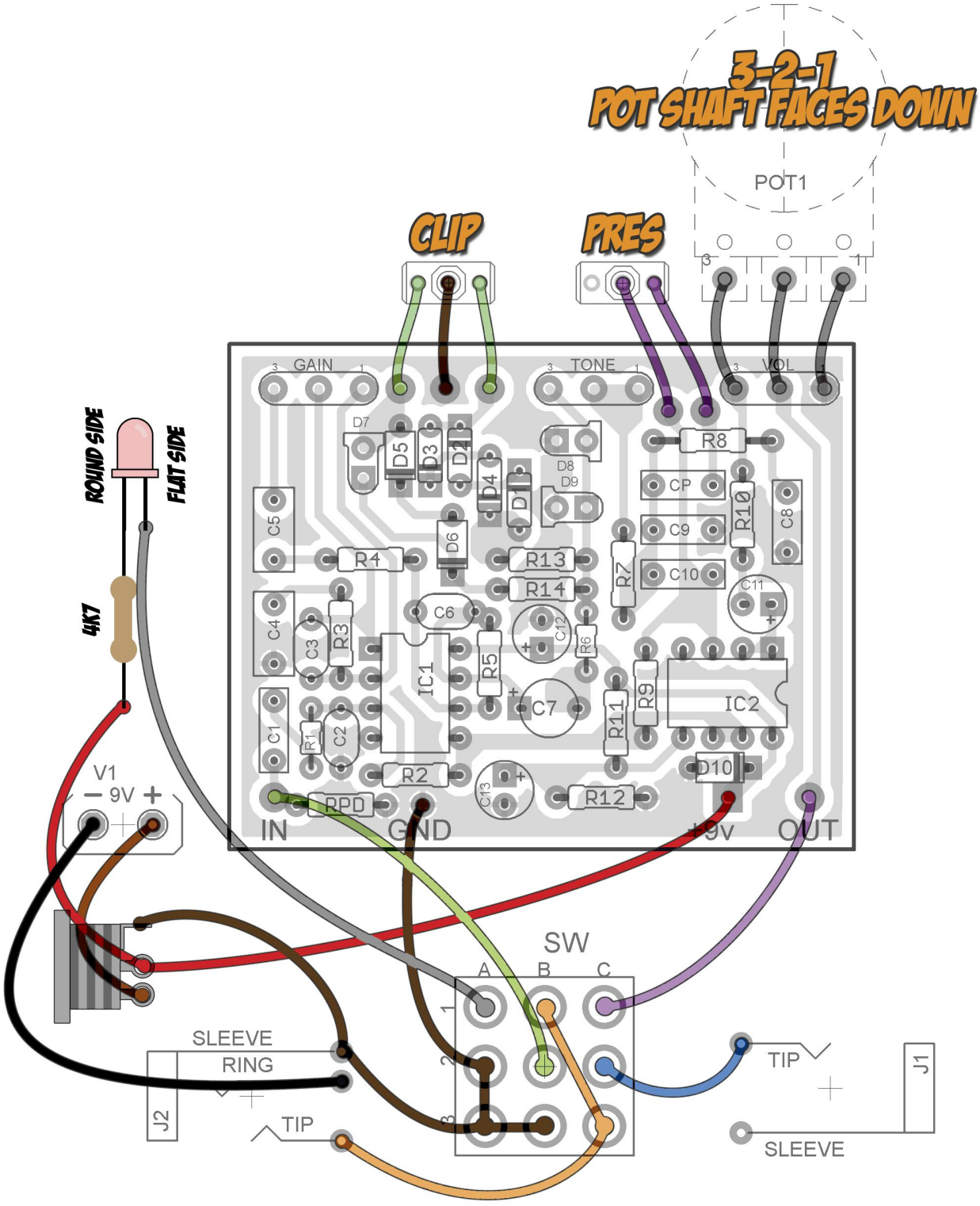


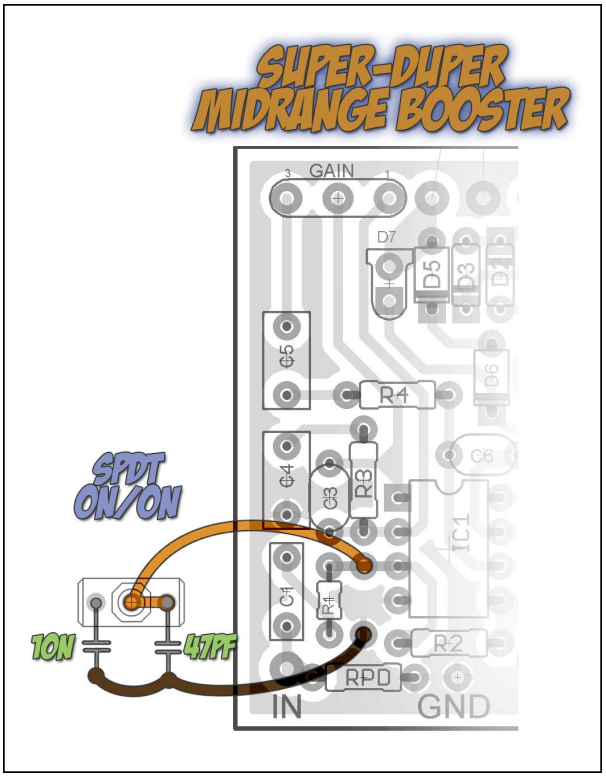
2.11” W x 1.72” H (including borders)



Resistos		Caps		Diodes	
R1	1k	C1	22n	D1 - D4	1n34a
R2	470k	C2	47pF	D5, D6	1n914
R3	1k	C3	100pF	D7	BLUE
R4	10k	C4	220n	D8	1n914 or RED
R5	1M	C5	100n	D9	RED
R6	470R	C6	470pF	D10	1N4001
R7	11k3	C7	2u2	**Switches**	
R8	8k25	C8	36n	PRES	SPST
R9	100k	C9	36n	SDMB	SPDT
R10	100R	C10	1uF	CLIP	SPDT
R11	20k	C11	10uF	**ICs**	
R12	20k	C12	47uF	IC1, IC2	4580
R13	470R	C13	47uF	**Pots**	
R14	220R	CP	**	GAIN	100kB
				TONE	10kC
				VOL	10kA

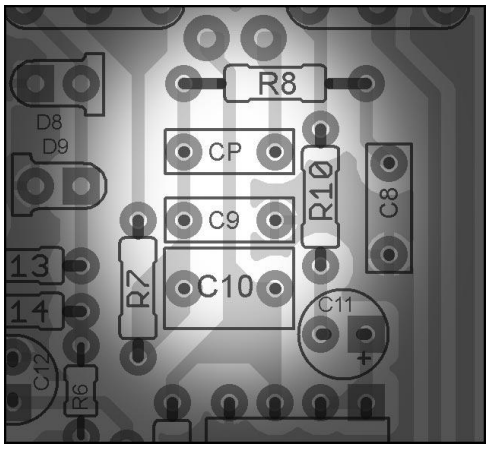

IN
RPD
GND
C1
22n
R1
1k
C2
47pF
R2
470k
VB
IC1A
4580
C3
100PF
100kB
GAIN
R3
1k
C4
220n
R4
10k
C5
100n
IC1B
4580
C6
470pF
R5
1M
C7
2u2
R6
470R
TONE
10kC
R7
11k3
R8
8k25
C8
36n
C9
36n
IC2A
4580
C10
1uF
R9
100k
Presence Mod
PRES
CP
C11
10uF
R10
100R
VOL
10KA
OUT
GND
IC2B
4580
C12
47uF
R11
20k
R12
20k
C13
47uF
D10
1N4001
+9V
D1
D2
D3
D4
D5
D6
D7
D8
D9
R13
470R
R14
220R
CLIP
LED
SIL/LED
GER


3-2-1
POT SHAFT FACES DOWN
POT1
CLIP
PRES
GAIN
TONE
VOL
ROUND SIDE
FLAT SIDE
4K7
V1
9V
IN
GND
+9V
OUT
RPD
SW
A
B
C
SLEEVE
RING
TIP
J2
J1
IC1
IC2



*The **Super Duper Mid-Range Booster** mod lets you roll off some bass from the input of the circuit to create a mid-range emphasis. This is accomplished by switching a larger capacitor in parallel with the default RF filtering cap (47pF at **C2**).*

*Remove **C2** and attach one lead to the outside lug of an On/On SPDT. Fold that lead over from the outside to center lug. Now attach a wire from the middle lug to the one of the **C2** pads on the board. Solder the lead and the wire in place. Next, attach a 10n to the empty lug on the SPDT. Solder in place. Now use a short bit of wire to solder the two free leads of the 10n and 47pF caps together (or twist the two leads together), solder a wire to that and attach the other end of the wire to the remaining **C2** pad on the board.*



*The **Presence** mod adjusts the filtering before the output buffer stage. This results in less bass to allow more mid-range content to be heard.*

*Move the stock 1uF cap from the **C10** position to the **CP** slot. Put a 6n8 – 10n cap in the **C10** spot. Wire an SPDT On/On as illustrated on pg.4. Note that the presence mod is enabled when the switch is "off". IOW, in that position the signal passes through the new cap which results in less low end woofiness and more mids to come through. When the switch is "on" the 1uF is added in parallel to give you the stock sound.*

*The **Facemelter** mod turns the Uproar into an infinitely sustaining/glitchy fuzz god! With minimal adjustment you can transmogrify the stock unit into an unearthly monster which will impress your girlfriend and strike fear upon your enemies. It's pretty much the sonic equivalent of "Releasing the Kraken".*

*Anyway, using the illustration for the **Presence** mod, replace **C10** with a 33n cap. In place of a cap in the **CP** slot, solder in a 22k resistor. That's it! When the switch is engaged the resistor will be in parallel with the 33n cap. This does two things: first it creates a filter which results in added presence, and second it acts as a bypass for **C10**. This allows a larger amount of signal to slam the front end of the output buffer. The actual value of the resistor is not too critical; smaller and larger values will also work. However, you do not want to use too large of a value because too much resistance will negate the bypass. Note also that replacing the 1uF with a 33n will actually have little impact on the overall stock tone*

***WARNING:** this mod will result in a significant jump in volume. Be aware of this when you are testing the mod out!*

125B Layout
5.41” W x 6.18” H