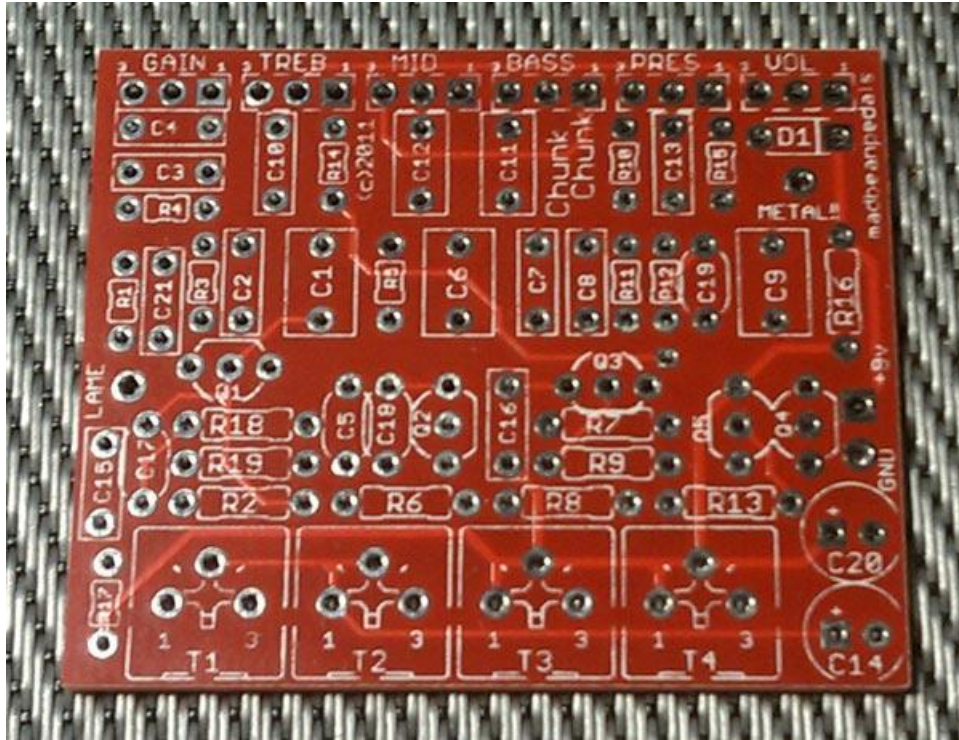


CHUNK CHUNK



FX TYPE: DISTORTION

Based on the Dr. Boogey

PCB artwork ©2011 madbeanpedals

Release date: 04.02.11

Revised 05.14.11 – fixed wiring diagram

The Dr. Boogey has a long history in the DIY community as a sort of “rite of passage” build. If you’ve been building pedals for more than a couple of years, there’s a good chance you will build this, if only because of peer pressure ☺

The Dr. Boogey is a high gain, JFET-based distortion with a TMB tone control and added presence control. It’s an attempt to model a Dual Rectifier type amp, such as [the Mesa Boogie™ Mark](#) series. The Chunk Chunk follows straight from the schematic drawing done by [Guassmarkov](#) and without any particular mods. If you are interested in finding out more about this circuit and its history, a good place to start is with a search on [DIYStompboxes](#). There you will find many examples and build reports of the Dr. Boogey in its various forms.

The controls are as follows

GAIN: This control changes the overall distortion produced.

BASS, TREBLE MID: These controls are very typical of an average TMB control you would find on an amp, with the exception of reduced values on the pots to lower the overall output impedance of the tone section.

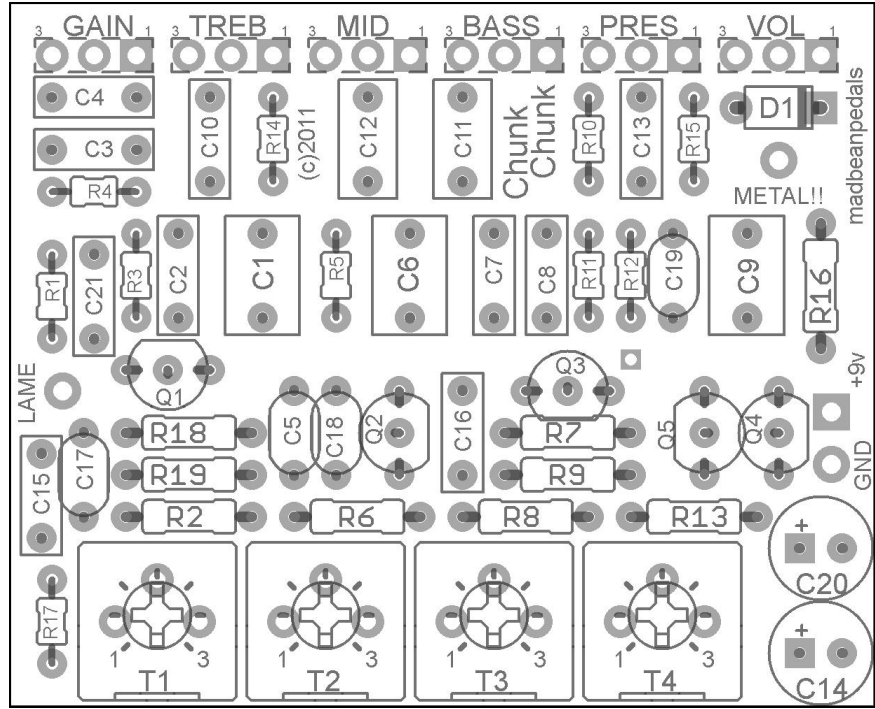
PRESENCE: This control reduces some lower mid-range to emphasize upper mid-range frequencies.

VOL: The output level.

Notes

- You will need to bias the J201's for optimal gain. Adjust **T1-T4** to get approximately 4.5v on the drains of **Q1**, **Q2**, **Q3** and **Q4**, (make sure to check which pins correspond to drain, gate and source on your transistors). **Q5** is a buffer and requires nothing further. Once you have biased the transistors, there's a good chance you will have oscillation with the gain and filter knobs all the way up. Try turning **T1** counter clockwise a bit until the oscillation goes away. If this produces an undesirable result, return **T1** to its previous position and follow the same process with the other trimmers. What you are shooting for is the most gain without oscillation, so let your ear guide you.
- You can use shielded wire on the input and/or output to reduce noise.
- To make the 2.5k Ω pot for the **MID** control, use a 5k pot and wire a 5k Ω resistor across lugs 3 and 1. This will give you approximately 2.5k.
- There are some specialized values listed such as a 2M resistor and 30n cap. These will be hard to find. You can use two 1M resistors in series for the 2M and two 15n caps in parallel for the 30n. Or, you can just pick the next closest value such as 2.2M and 27n or 33n (recommended).
- You can lower the overall distortion produced by substituting 2N5457 for all the transistors.

MANUFACTURED VERSION



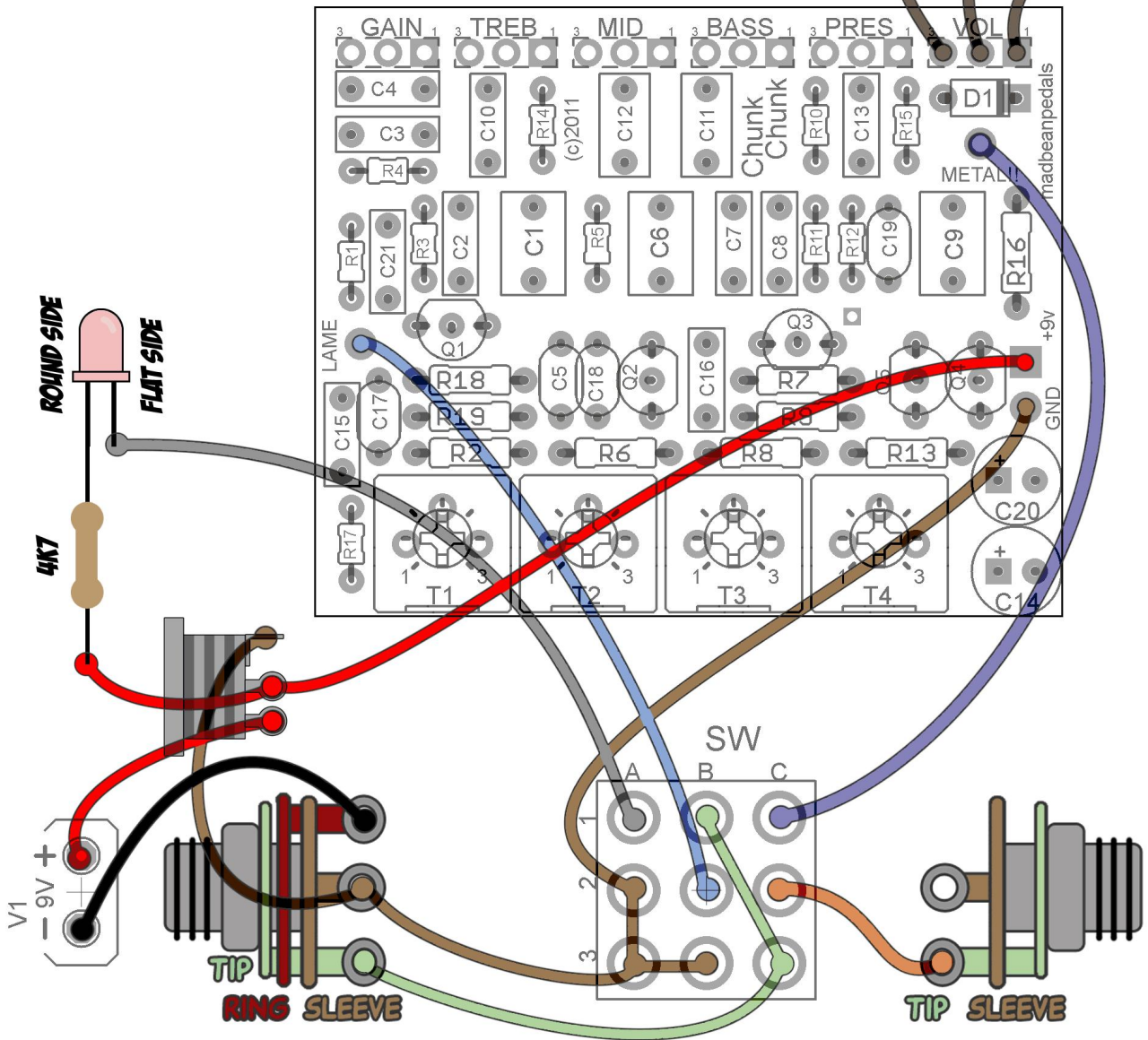
2.05"W x 1.675"H

This version will fit in a 1590BB, or 125B easily. You may be able to get it in a 1590B if you don't mind squeezing all six pots in the enclosure. You could use 9mm or 12mm pots in that case.

Resistors		Caps		Transistors	
R1	2M	C1	1uF	Q1 - Q5	J201
R2	1.8K	C2	22nF	Diodes	
R3	2.2M	C3	2.2nF	D1	1N4004
R4	680K	C4	1nF	Trimmers	
R5	470K	C5	20pF	T1 - T4	100K
R6	1.8K	C6	1uF	Pots	
R7	470K	C7	22nF	GAIN	1M-A
R8	1M	C8	22nF	MID	2.5K-B
R9	3.9K	C9	1uF	PRES	10K-B
R10	330K	C10	6.8nF	TREB	25K-A
R11	220K	C11	220nF	VOL	100K-A
R12	1.8K	C12	220nF	BASS	100k-A
R13	10K	C13	30nF		
R14	4.7K	C14	100uF		
R15	2.2K	C15	5nF		
R16	100R	C16	1nF		
R17	100R	C17	220pF		
R18	68K	C18	220pF		
R19	1M	C19	220pF		
		C20	100uF		
		C21	100n		

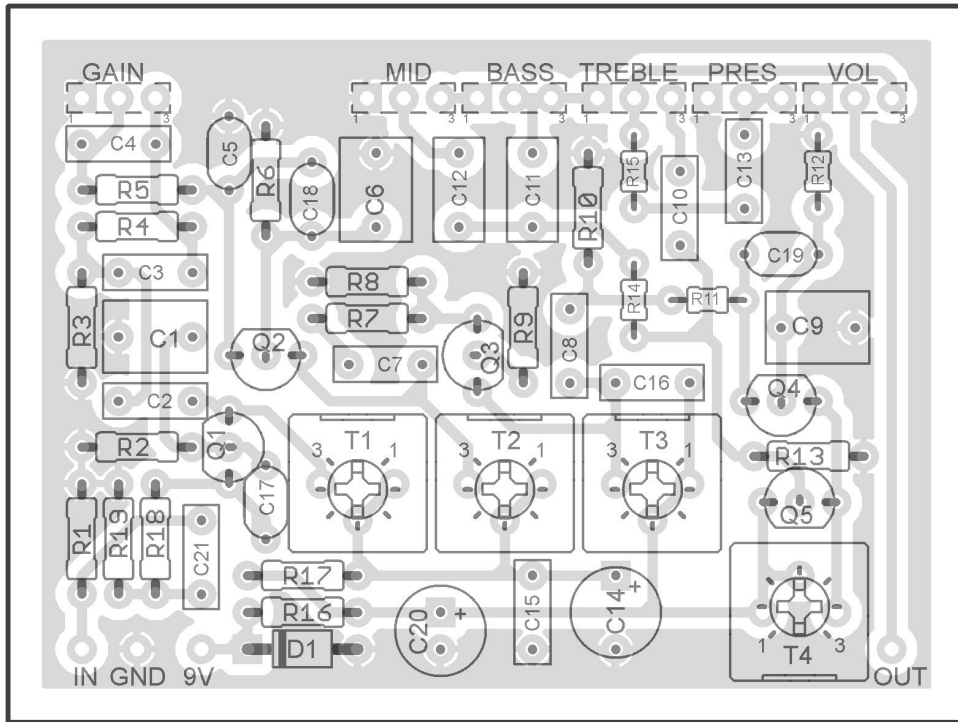


**3-2-1
POT SHAFT FACES DOWN**

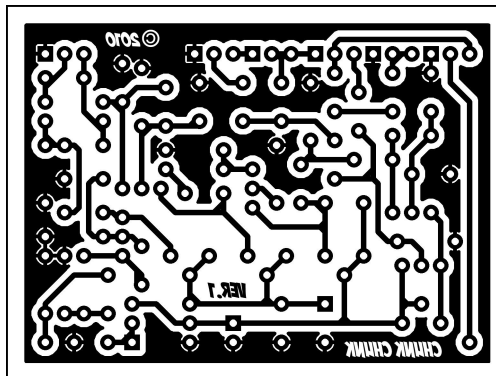


SINGLE SIDED VERSION FOR ETCHING

Note that pots are wired 1-2-3 (shaft up) on this version.



2.61" W x 1.96" H (including borders)



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