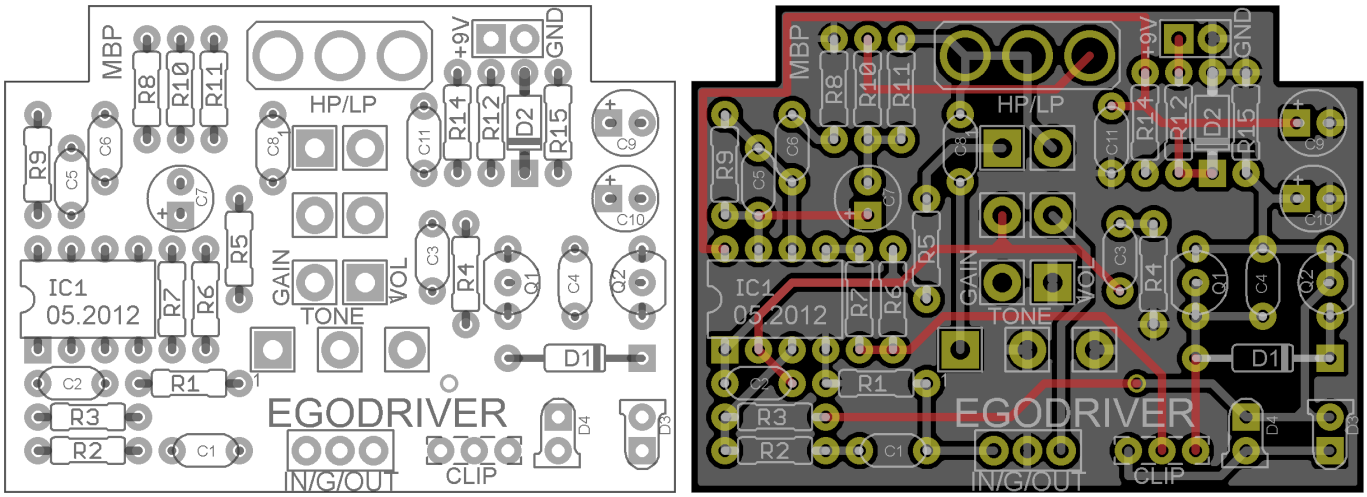
EGODRIVER

FX Type: Overdrive

Released: 05.2012

2”W x 1.45”H



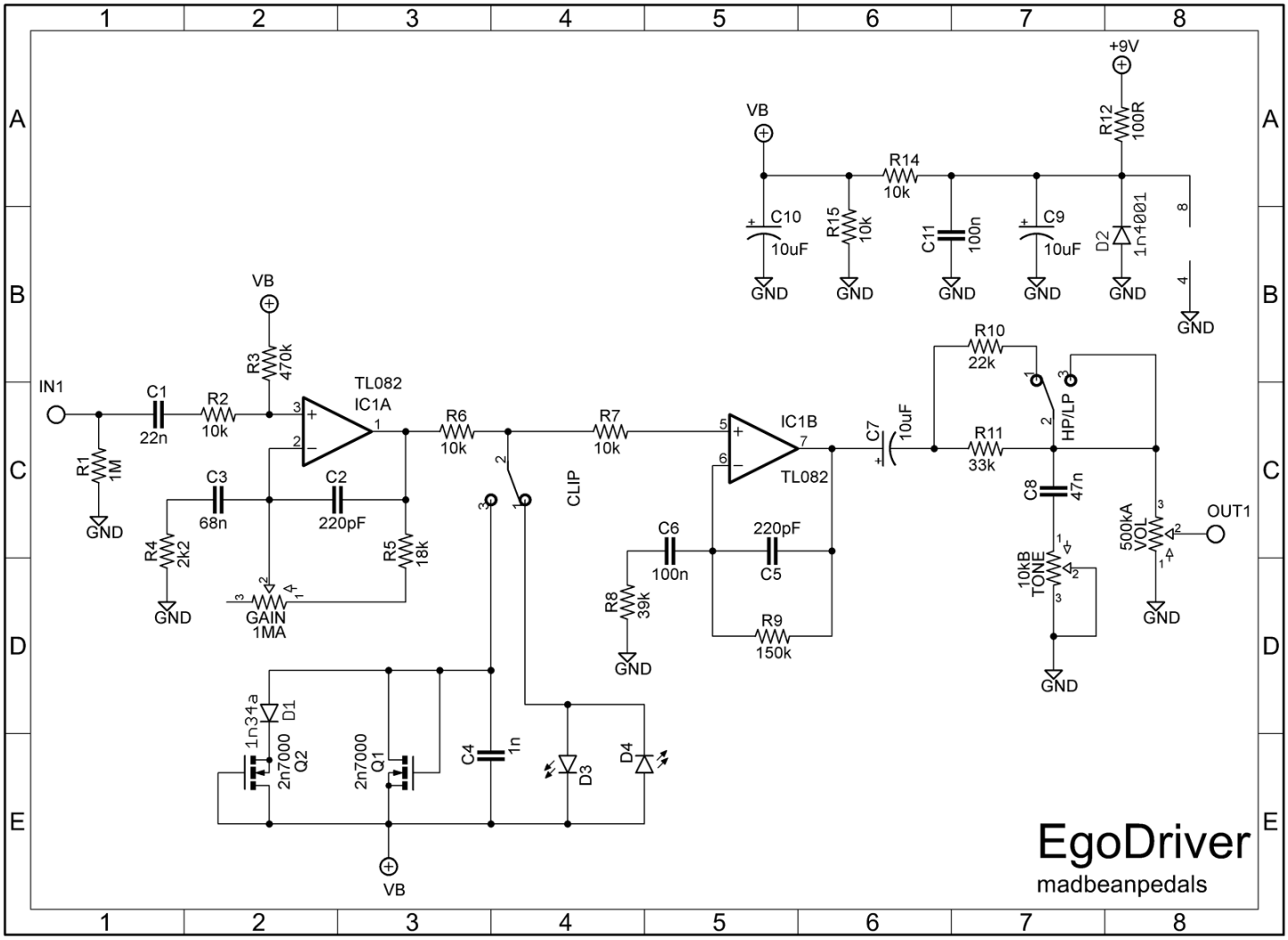
Download the previous version of the EgoDriver here.

Bill of Materials

Resistors		Caps		Diodes	
R1	1M	C1	22n	D1	1n34a
R2	10k	C2	220pF	D2	1n4001
R3	470k	C3	68n	D3, D4	LED
R4	2k2	C4	1n	**Transistors**	
R5	18k	C5	220pF	Q1, Q2	2n7000
R6	10k	C6	100n	**IC**	
R7	10k	C7	10uF	IC1	TL082
R8	39k	C8	47n	**Switches**	
R9	150k	C9	10uF	CLIP	SPDT
R10	22k	C10	10uF	HP/LP	SPDT
R11	33k	C11	100n	**Pots**	
R12	100R			GAIN	1MA
R14	10k			TONE	10kB
R15	10k			VOL	500kA

Important: The previous version of the EgoDriver released 09.11 also featured the CLIP mod, but had a mistake in the layout which required connecting a wire from the LEDs to the VB rail. That error has been corrected for this version dated 05.2012, and no modification is required to make the LED clipping work.

Schematic



Overview

The newest version of the EgoDriver (based on the Fulltone® OCD™) features PCB mounted pots and switch. One additional mod has been included to allow you to switch from the stock Mosfet-based clippers to LED clipping. With LEDs, the EgoDriver gains a bit of volume and somewhat higher clarity with chords for a little more variety.

GAIN: Sets the overall distortion.
TONE: A simple low pass filter to reduce the high end.
VOL: Output volume.
HP/LP: In “HP” mode, a 22k resistor is added in parallel to the 33k output resistor. This reduces the overall resistance and thus gives you added output. It is essentially a small boost switch.
CLIP: This optional mod lets you select between stock and LED clipping.

Notes

- **R1** is optional…the stock unit does not have a pull-down resistor.
- You can usually find the TL082's at Radio Shack. Good subs are TLC2272 or the NE5532.
- **C7** is a tantalum in the stock unit.
- Not all LEDs may work for **D3** and **D4**. I had great luck with two water-clear 5mm but others ran into some trouble with them. Regular diffused should work well (red is pretty standard for clipping).
- 16MM PCB mounted pots and solder lug SPDTs are standard for this build. Note that the **GAIN**, **TONE**, **VOL** pots and **HP/LP** switch mount underneath the PCB! The **CLIP** mod, if used, should be wired off-board.
- Please refer to the stock madbeanpedals wiring diagram if you need guidance on wiring the board: http://www.madbeanpedals.com/tutorials/downloads/StandardWiring_MBP.pdf

Mods

A common complaint about DIY versions of the OCD is that it has too much gain, and/or has too much volume. This can be easily fixed with two value changes. For the **GAIN** pot, a 500kA is suggested. While this reduces the total gain some, you get a wider range of control. Many people find that the stock OCD loses its character once the gain pot passes the midpoint position. A 500kA will fix that. For the **VOL** pot, use a standard 100kA. This reduces the output volume AND makes unity closer to the midpoint.

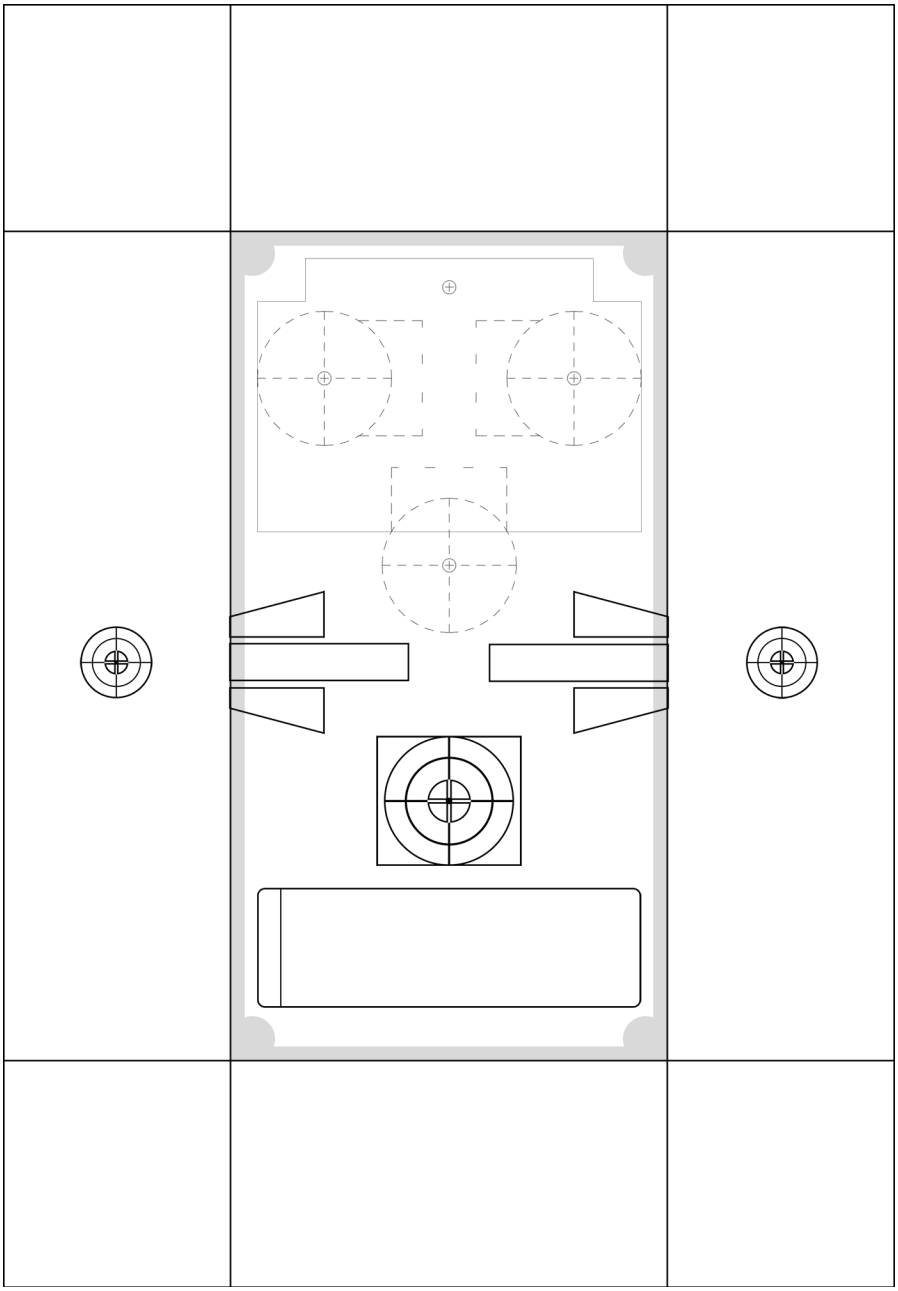
You can increase or decrease the range of clipped frequencies by altering **C3**. Higher values, such as 100n, will produce more bass. You can reduce a little bass by using 47n.

Drilling Template

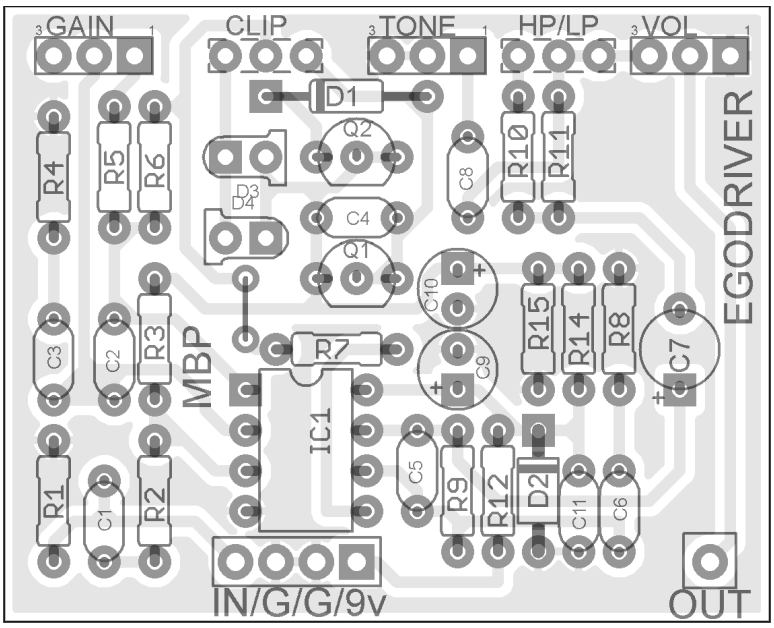
1590B

Image size – 4.64” x 6.69”

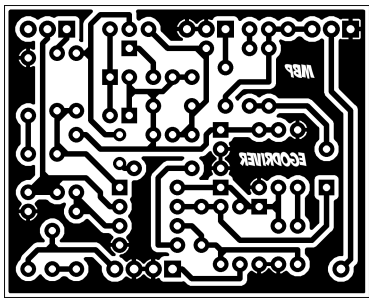
This drilling diagram illustrates the hole locations for the PCB mounted pots and switch. You will need to determine where you want to add your indicator LED and the CLIP switch (if used).



Etching Layout



1.9"W x 1.52"H



Licensing

*PCBs purchased from madbeanpedals (or etched from the artwork provided) for the **EgoDriver** are intended for DIY / non-commercial use only. If you are a commercial pedal builder or "work for hire", please do not use madbeanpedals materials for your product offerings. Similarly, madbeanpedals PCBs are prohibited from commercial re-distribution including "kits".*

www.madbeanpedals.com

BUILD.SHARE.LEARN