

Mad Honey Overdrive

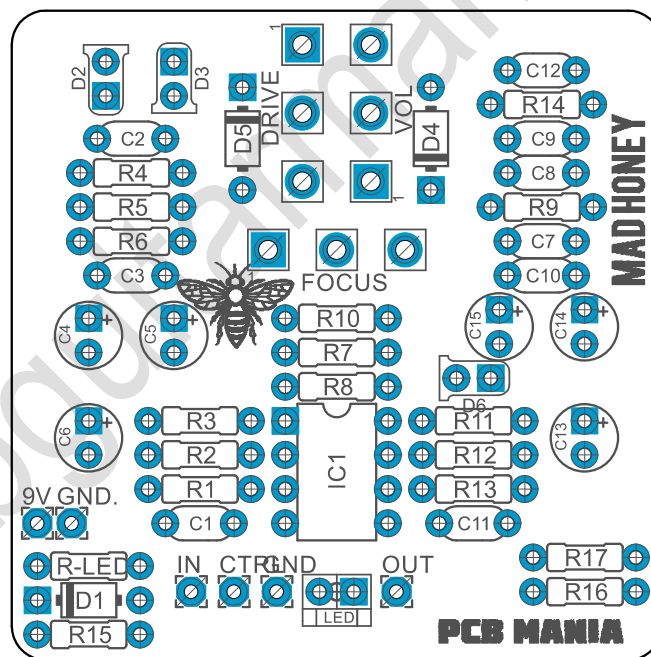
Based on:
Mad Professor Sweet Honey
Overdrive
Effect type:
Low Gain Drive
Build difficult:
Average

Amount of parts:
Average, total 45 components
Technology:
Dual OpAmp based overdrive
Power consumption:
5mA (9v) 10mA (18v)

Enclosure type:
1590b
Get your board at:
[Mad Honey Overdrive](#)
Get your kit at:
[Das Musikding \(Europe\)](#)

Project overview:

The Mad Honey is a touch sensitive low gain Overdrive; ideally suited to giving a clean sound a little pepper or for pushing crunch sounds. It is the dynamics provided by this pedal that make it convincing; the treble can be emphasized with the focus controller, distorting earlier without losing in transparency and dynamics.



Real measures are:

48mm width x 48mm height

1.82" width x 1.82" height

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Introduction

The Mad Honey is a touch sensitive low gain overdrive pedal; designed to overdrive distorted amplifiers and give dynamically controlled light overdrive on clean sounds.

Based on Mad Professor's Sweet Honey Overdrive, this circuit has also roots on the Honey Bee Overdrive by BJFe Pedals, which was inspired by the sound of an old Supro amp.

The magic of this circuit is on the Focus Control, which delivers a very dynamic and tube-like tone, making of this pedal a really outstanding and sensitive overdrive.

Distortion level can be controlled by pick attack and pickup strength. Harder picking for overdrive and softer for a cleaner tone. With the unique Focus control, you can adjust the feel and dynamics of the pedal as well as overall EQ. Turning Focus CCW you need to play harder to get distortion and the tone is softer, great for jazz and blue. Focus turned CW gives a slight treble boost and earlier distortion.

Controls

- **VOLUME:** Sets the output volume.
- **DRIVE:** Controls the amount of overdrive.
- **FOCUS:** Controls how easily the circuit distorts as well as adjusting overall EQ. Turning CCW gives less distortion and a mellow effect, turning CW gives a slight treble boost and earlier distortion. Good starting point is 11 o'clock.

Bill of materials

Resistors	
Part	Value
R1	1m
R2	6k8
R3	360k
R4	3k
R5	1k
R6	5k6
R7	2k
R8	15k
R9	10k
R10	150k
R11	1m
R12	5k6
R13	2k7
R14	47k
R15	51r
R16	47k
R17	47k
R-LED	4k7

Diodes	
Part	Value
D1	1N5817
D2	LED 3mm
D3	LED 3mm
D4	1n4007
D5	1n4007
D6	LED 3mm
LED	LED 3mm

Pots	
Part	Value
VOL	50k B
DRIVE	500K A
FOCUS	50K B

Capacitors	
Part	Value
C1	4n7
C2	100p
C3	220n
C7	22n
C8	4n7
C9	22n
C10	22n
C11	1n
C12	4n7

Electrolytic Capacitors	
Part	Value
C4	22u electro
C5	1u electro
C6	22u electro
C13	100u electro
C14	22u electro
C15	1u electro

Ics	
Part	Value
IC1	OP275

Shopping list

Resistors		
Qty	Value	Parts
2	1m	R1, R11
1	150k	R10
1	2k7	R13
3	47k	R14, R16, R17
1	51r	R15
1	6k8	R2
1	360k	R3
1	3k	R4
1	1k	R5
2	5k6	R6, R12
1	2k	R7
1	15k	R8
1	10k	R9
1	4k7	R-LED

Diodes		
Qty	Value	Parts
1	1N5817	D1
4	LED 3mm	D2, D3, D6, LED
2	1n4007	D4, D5

Pots		
Qty	Value	Parts
1	500K A	DRIVE
2	50K B	FOCUS, VOL

Ics		
Qty	Value	Parts
1	OP275	IC1

Capacitors		
Qty	Value	Parts
3	4n7	C1, C8, C12
1	1n	C11
1	100p	C2
1	220n	C3
3	22n	C7, C9, C10

Electrolytic Capacitors		
Qty	Value	Parts
1	100u	C13
3	22u	C4, C6, C14
2	1u	C5, C15

Components Recommendations

As many people like to experiment some pedals with higher voltage, always ensure the max tolerance of your **electrolytic capacitors** is over 25v.

This board has been tested using Film box capacitors for most of the values over 1nf, and ceramics discs for the ones under 1nf. However, high quality components such as Wima's Capacitors and Panasonic's electrolytics can deliver a better performance.

All the resistors used for testing this project are 1/4W Metal Film.

The BOM and Shopping list are exclusively regarding this project. It doesn't include all the hardware like the 3PDT bypass switch, audio/dc jacks, enclosure, etc.

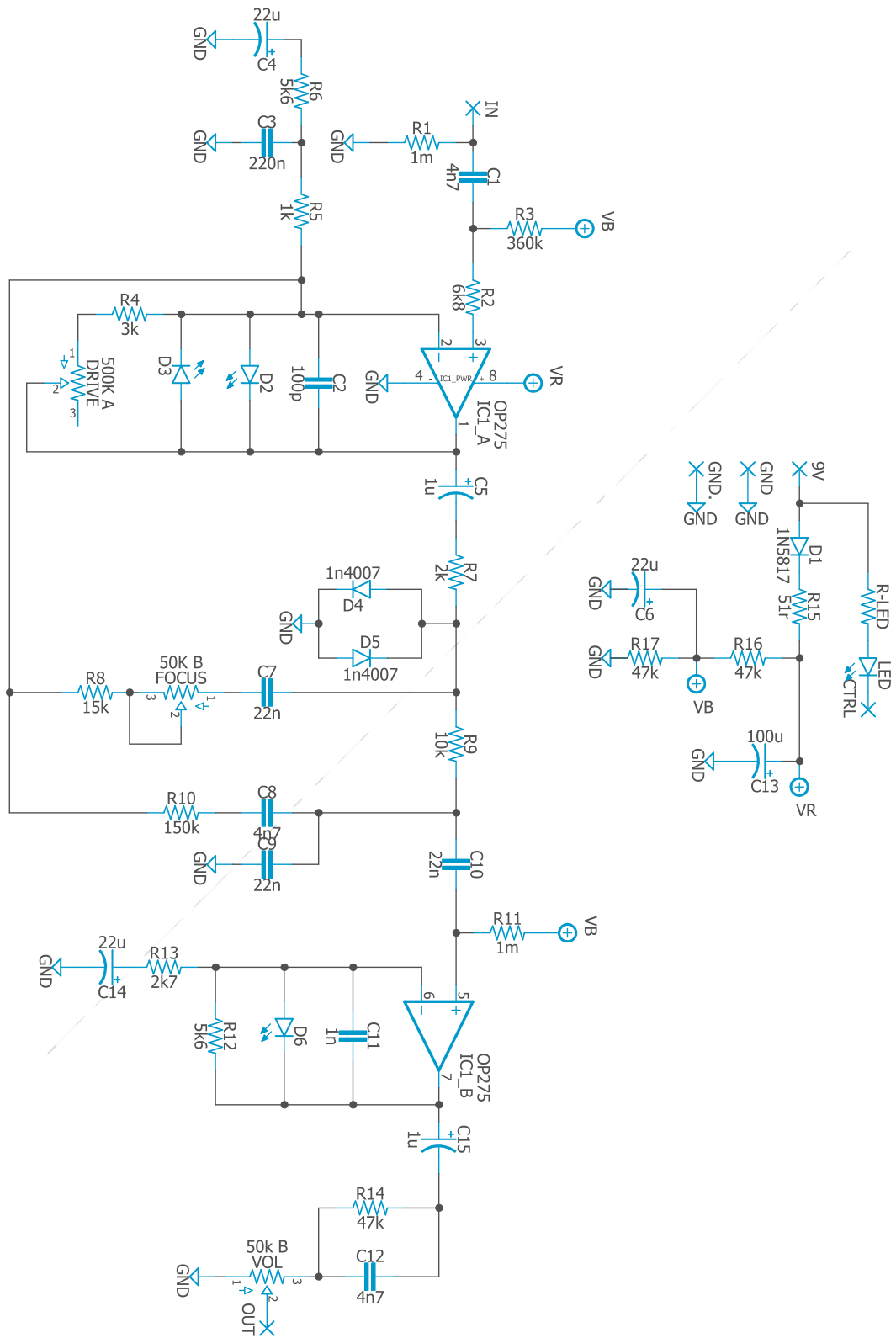
Build Notes

If this is one of your first projects I recommend you to take a look on our [Pedal Building Guide](#)

For a successful and tidy build it's recommended the following order:

1. Resistors & diodes
2. Capacitors, starting with the smaller ones and the ceramic ones.
3. Electrolytic capacitors (always check the polarity)
4. Transistors
5. Wires
6. Potentiometers and switches
7. Off board wiring

Schematic

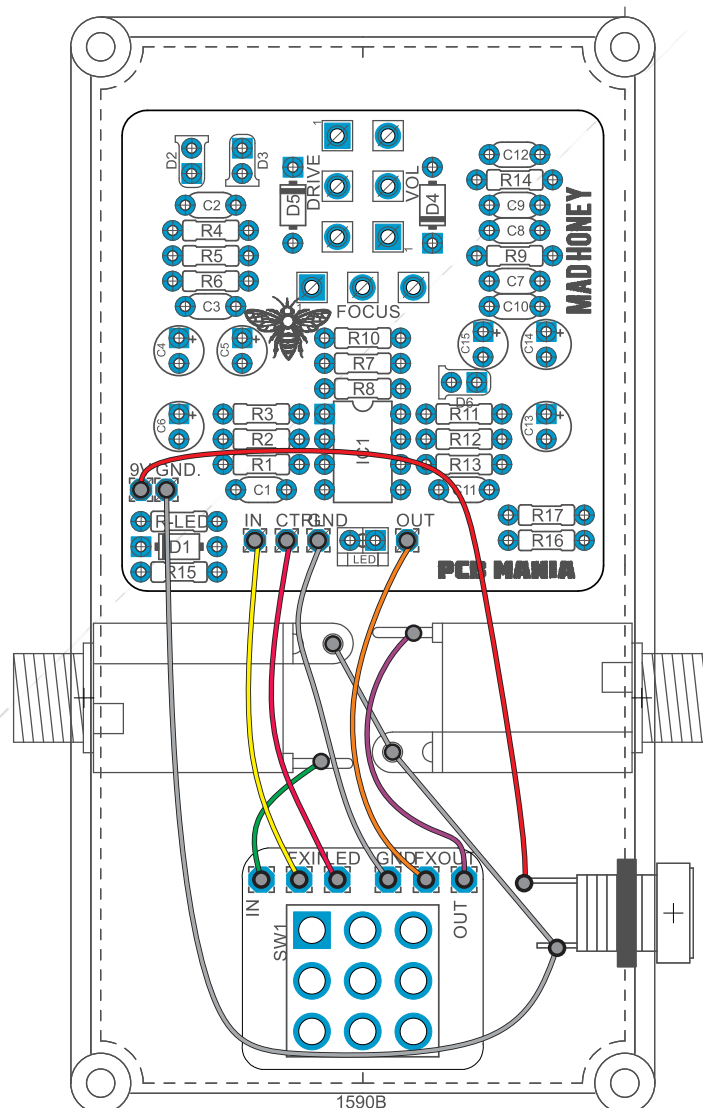


Wiring Diagram

All our projects include a free 3PDT Board to make the wiring easier and tidier. Also all of our PCBs feature the status LED on board.

The pad named “Ctrl” or “LED” is the one that controls the status of the led, wire it to the “LED” pad on the 3PDT board, or in control slug of your 3PDT.

You can take a look on the following diagram to understand the general connections. For further information check our [Pedal Wiring guide](#).



Drill Template

This Project has been planned to fit into a 1590B enclosure type (122x67x35mm approx.)

Check the Attached “Drilling templates” to drill the box properly. The files are on Scale 1:1, ready to print in an A4 page.

Licensing and Usage

We really appreciate your trust and support buying this PCB, as well as your will to dive into the DIY electronics world. That’s why for us is really important that you can make this project work properly and to enjoy not only the building process, but also to experiment and play with it on your rig.

We try to reply to every question we receive on our email or in our social media, but we try to encourage all our customers to join our [PCB Guitar Mania – Builders Group](#) on Facebook, in order to post all your doubts, issues, suggestions or request, as well to share your builds and have some feedback from us and other fellow builders!

All of our projects have been tested following this same guide on their standard configurations. Although, not all of the variations and mods have necessarily been tested. These are suggestions based on the schematic analysis, and on the experiences and opinions of others. Feel free to share with us your opinions and suggestions regarding the mods your own personal experimentation.

These boards may be used for commercial endeavors in any quantity unless specifically noted. No attribution is necessary, though accreditation or a link back is always greatly appreciated.

If you are a builder planning to make your own run of pedals we also offer the service of custom made boards with your brand and logo, design according your specifications.

The only usage restrictions are that, first, you cannot resell the PCB as part of a kit without prior arrangement with us, and second, you cannot scratch off the silk screen, or other way of trying to hide our logos and the source of the PCBs. Like it’s written above, if you want to have your own designs, with your brand and logo we could certainly reach an agreement.

Follow us on [Instagram](#) and [Facebook](#) to stay in tune with the latest projects!