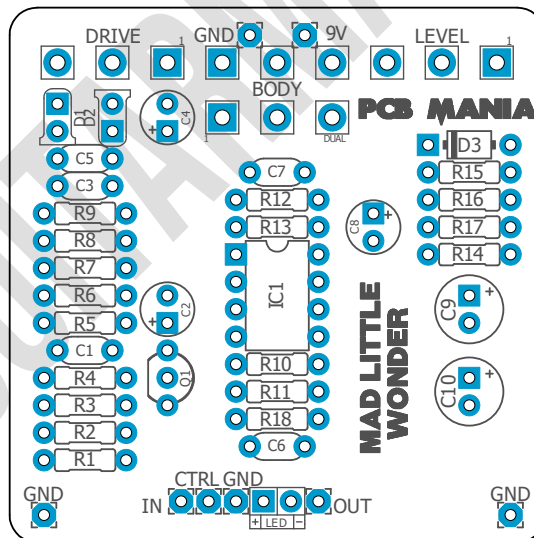


# Mad Little Wonder

<b>Based on:</b> Mad Professor Little green wonder	<b>Amount of parts:</b> Average, total 37 components	<b>Enclosure type:</b> 125b
<b>Effect type:</b> TS based overdrive	<b>Technology:</b> Jfet Buffer + dual OpAmp	<b>Get your board at:</b> <a href="#">Mad little wonder</a>
<b>Build difficult:</b> Average	<b>Power consumption:</b> 9V(9mA)	<b>Get your kit at:</b> <a href="#">Das Musikding (Europe)</a>

## Project overview:

Of course it is an overdrive pedal! A special little wonder that provides a clarity and transparency, not usually associated with TS based pedals. No mid-range dents, no bass loss, no audible compression, and a very convincing sound, thanks to the body control, a dual gang stereo pot that helps you to dial the perfect tone.



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## Introduction

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Holy Moly! I had a blast with this one!

As you can imagine, when making these PCBs available for you, we have to build plenty of Tube Screamer™ based circuits to give you the opportunity to build the best sounding devices out there and here comes what you already could read in the first line.

This one is outstanding good and dethroned my long time loved custom build TS I did just for myself. Let me say this clear, sound wise it does one thing major different from the million other versions of its kind. But first, does it still sound like you expect it? Yes, but it has that little extra no matter what way you turn the pots and its super hard to describe. You got to hear it and even better compare it to your favorite Screamer, you will be surprised. Now back to that one difference I mentioned before. The Body control instead of the normal Tone Knob. A dual taper Potentiometer that sits with one part in front of the first opamp stage and with the second part behind is insanely effective and gives you a bass loaded tone, the classic sound or a really mid pushed Flavor metal guitarists use to tickle there amps even harder without getting lost in the mix.

Rumors say, some guys build this with two individual Pots instead of the dual Taper and liked it. Personally I did not try this yet.

## Controls

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- Drive
- Level
- Volume

# Bill of materials

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Resistors	
Part	Value
R1	1M
R2	5k6
R3	1M
R4	10k
R5	5k6
R6	27k
R7	5k6
R8	1k
R9	2k
R10	2k
R11	27k
R12	2k
R13	470r
R14	5k6
R15	47r
R16	27k
R17	27k
R18	2k7

Capacitors	
Part	Value
C1	47n
C3	100p
C5	220n
C6	100n
C7	47n

Electrolytics Capacitors	
Part	Value
C2	1u
C4	1u
C8	1u
C9	100u
C10	100u

Potentiometers	
Part	Value
DRIVE	B 500k
LEVEL	B 50k
BODY	B 20K DUAL GANG

IC	
Part	Value
IC1	TLC272CP

Transistors	
Part	Value
Q1	2N5457

Diodes	
Part	Value
D1	3mm green led
D2	3mm green led
D3	1n4001
LED	3mm green

# Shopping list

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Resistors		
Qty	Value	Parts
1	10k	R4
2	1M	R1, R3
1	1k	R8
4	27k	R6, R11, R16, R17
3	2k	R9, R10, R12
1	2k7	R18
1	470r	R13
1	47r	R15
4	5k6	R2, R5, R7, R14

Capacitors		
Qty	Value	Parts
1	100n	C6
1	100p	C3
1	220n	C5
2	47n	C1, C7

Electrolytics Capacitors		
Qty	Value	Parts
2	100u	C9, C10
3	1u	C2, C4, C8

Potentiometers		
Qty	Value	Parts
1	B 500k	DRIVE
1	B 50k	LEVEL
1	B 20K DUAL GANG	BODY

IC		
Qty	Value	Parts
1	TLC272CP	IC1

Transistors		
Qty	Value	Parts
1	2N5457	Q1

Diodes		
Qty	Value	Parts
1	1n4001	D3
3	3mm green led	D1, D2, LED

# Components Recommendations

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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

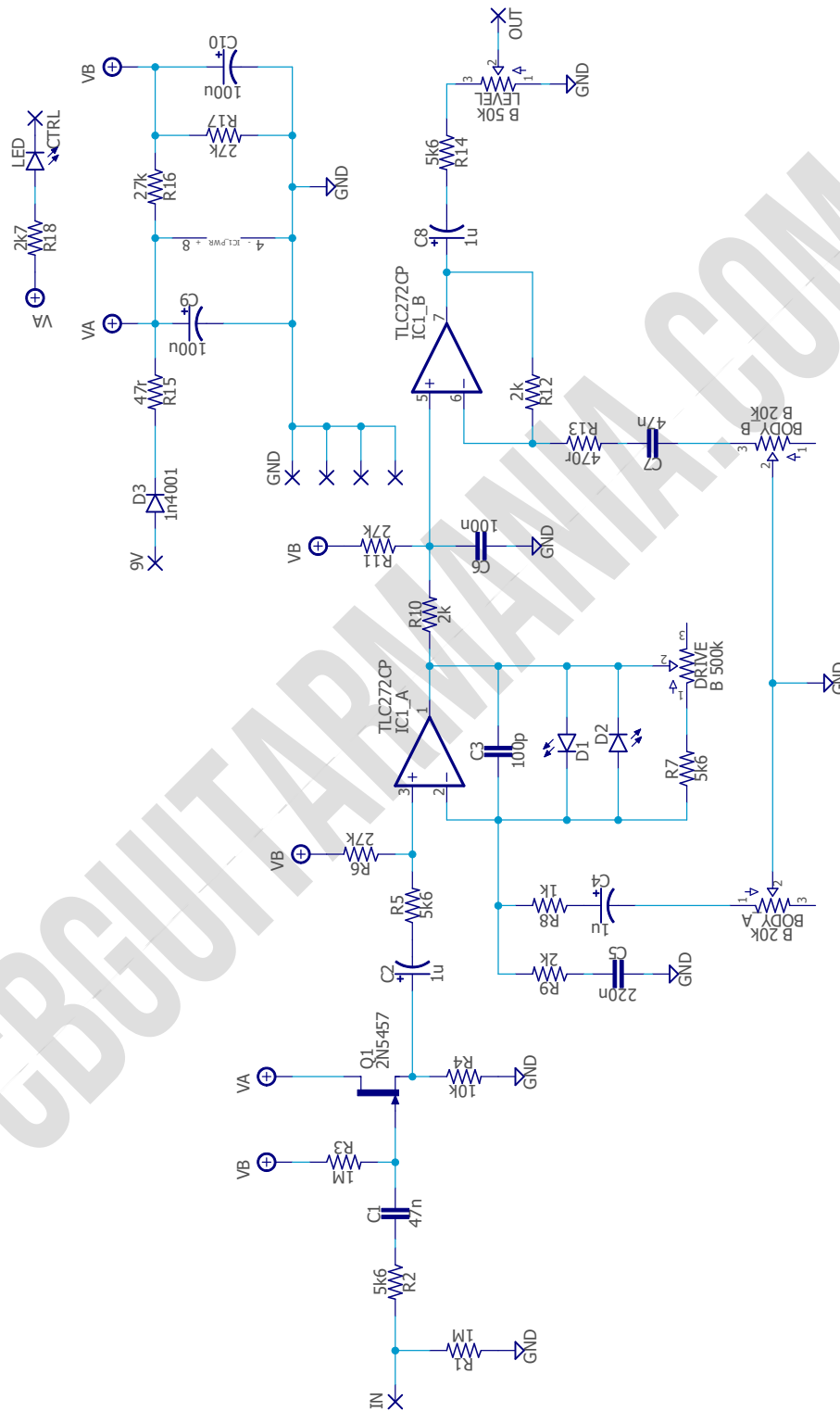
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If this is one of your first projects I recommend you to take a look on our [Pedal Building Guide](#)

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

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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.

This board has been designed to match our EZ 3PDT PCB check it [here](#) to access to our [Pedal Wiring Guide](#)

# Drill Template

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This Project has been planned to fit into a 1590bb enclosure type.

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

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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!