

Death by Overdrive

Based on:

Death by Audio Interstellar
Overdrive

Effect type:

Unique Overdrive

Build difficult:

Easy

Number of parts:

Low, total 23 components

Technology:

NPN Silicon Transistors

Power consumption:

9V

Enclosure type:

125b

Get your board at:

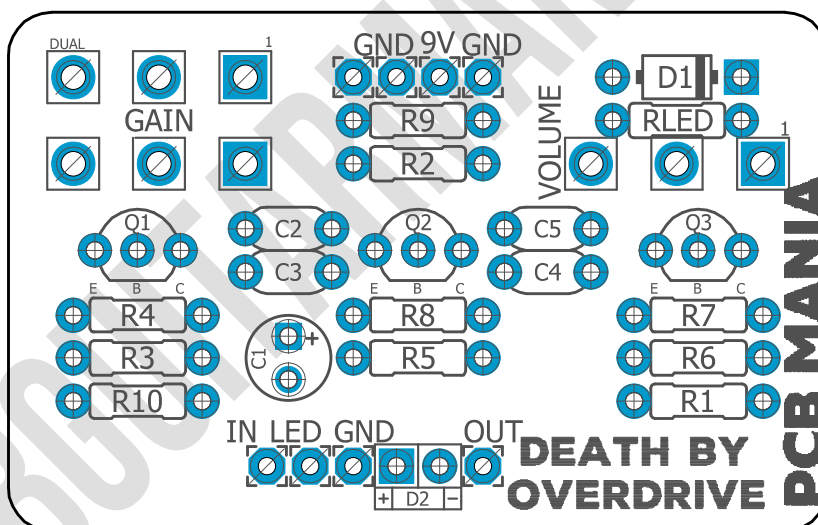
[Death by Overdrive](#)

Get your kit at:

[Das Musikding \(Europe\)](#)

Project overview:

WARNING! Death by Overdrive was designed to blast your amp and is especially good at it. Pure and transparent this pedal is all about the natural, wonderful sound of turning an amp up too loud and to its limits.



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Introduction

60s, 70s, 80s... but what about the 50s?!

Death by Overdrive is a time machine of sorts that will make your signal go back to the 50s and come back overdriven like nothing else out there. Aiming at providing a retro sound that is uniquely transparent, this circuit can also be pushed to show a little more of its pushed tube amp teeth. A set of beautiful, pearly teeth that is. Let's bite in!

The Death by Overdrive circuit comes with only two controls, GAIN and VOLUME, but after only a few moments with this pedal, you'll understand that it's all that you need.

The VOLUME knob lets you control the loudness of the pedal when it's turned on - there's no secret about it.

With GAIN you are able to set the amount of saturation of the overdriven tone and just like with old tube amps, the more saturated the sound, the bigger the smile on everyone's face.

With all the vintage equipment reaching new price levels of ridiculousness, that ability of dipping your toes into those exclusive waters is something you shouldn't ignore. Build your own 50s machine today and save money for... more DIY projects!

Controls

- Volume
- Gain

Bill of materials

Resistors	
Part	Value
R1	33R
R2	10K
R3	180K
R4	910K
R5	910K
R6	180K
R7	910K
R8	180K
R9	3K3
R10	1m
RLED	4K7

Diodes	
Part	Value
D1	1N5817
D2	3mm red LED

Capacitors	
Part	Value
C2	100n
C3	10n
C4	100n
C5	100n

Electrolytics Capacitors	
Part	Value
C1	47u

Potentiometers	
Part	Value
VOLUME	100K A
GAIN	100K B Dual

Transistors	
Part	Value
Q1	2N5089
Q2	2N5089
Q3	2N5089

Shopping list

Resistors		
Qty	Value	Parts
1	10K	R2
3	180K	R3, R6, R8
1	1m	R10
1	33R	R1
1	3K3	R9
1	4K7	RLED
3	910K	R4, R5, R7

Capacitors		
Qty	Value	Parts
3	100n	C2, C4, C5
1	10n	C3

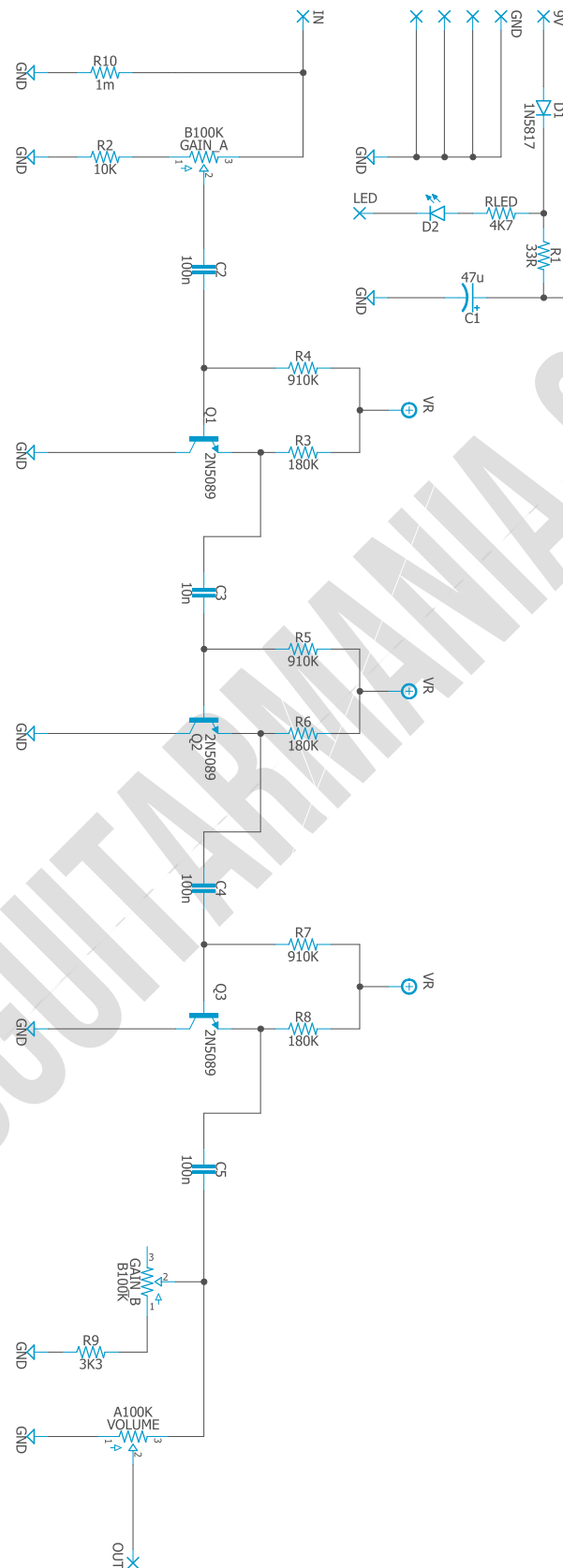
Electrolytics Capacitors		
Qty	Value	Parts
1	47u	C1

Potentiometers		
Qty	Value	Parts
1	100K A	VOLUME
1	100K B Dual	GAIN

Transistors		
Qty	Value	Parts
3	2N5089	Q1, Q2, Q3

Diodes		
Qty	Value	Parts
1	1N5817	D1
1	3mm red LED	D2

Schematic



Components Recommendations

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

This board has been tested using Film box capacitors for most of the values over 1nf and ceramics discs for those 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 exclusive 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 at 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

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 the control slug of your 3PDT.

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

Drill Template

This Project has been planned to fit into a 125b enclosure type.

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

Licensing and Usage

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

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

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

These boards may be used for commercial endeavors in any quantity unless expressly noted. No attribution is necessary, though accreditation or a link back is always much 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 to 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 silkscreen 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 designs with your brand and logo, we could undoubtedly reach an agreement.

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