Death by Fuzz IV: Overlord

Based on:
Death By Audio Thee Ffuzz Warr Overload

Effect type:
Balanced Muff + Tone Bender Muff fuzz type

Build difficult:
Intermediate

Amount of parts:
Average, total 57 components

Technology:
Silicon transistors

Power consumption:
9V

Enclosure type:
125b

Get your board at:
Death by Fuzz IV: Overlord

Get your kit at:
Das Musikding (Europe)

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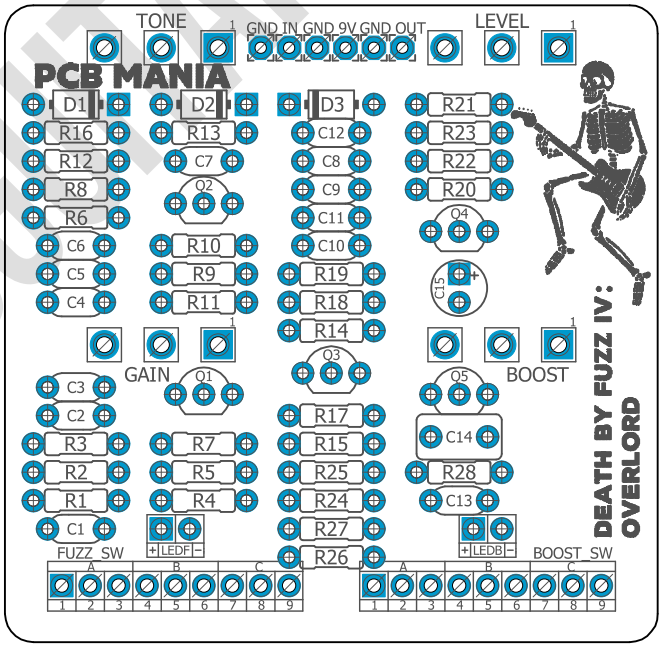
Project overview:

The ultimate fuzz is here! Introducing Death by Fuzz IV – This update of the Fuzz War platform is the golden mean between a Sovtek Muff and a Tone Bender making the pedal that can take your sound to new heights of fuzzdom!

Death By Audio, the brand responsible for such sound mangles as the Audio Reverberation Machine and Echo Dream 2 Lo-Fi Delay, did it again and took the fuzz pedal design to new extreme territories. Continuing the Fuzz War saga but going a step forward into distortion insanity, the limited edition Thee Ffuzz Warr Overload delivers even more fuzz with an added Boost control that changes the treble character response of the pedal.



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Introduction

Since its introduction in 2010, Death by Audio's Fuzz War has quickly become THE fuzz of the underground and a modern fuzz classic in its own right. That is why fuzz lovers worldwide got excited when hearing that the Death by Audio crew, with the help of John Dwyer (of Thee Oh Sees), had an even more brutal fuzz machine in mind. The Ffuzz Warr Overload is what happens when Fuzz War meets treble boosted, giving birth to the ultimate tool for unleashing your inner fuzz beast.

The point of departure for the original Fuzz War circuit is the Supa Tone Bender, a Colorsound-branded Big Muff design that was, in many ways, a louder, nastier version of the mythical Big Muff. In the hands of Death by Audio, the Supa Tone Bender template was twisted into an even more powerful circuit while maintaining the four-transistor, three-knob—level, gain, and tone—control configuration used by most Muff-type pedals.

The limited-edition Thee Ffuzz Warr Overload has all that brawn you could ever want from a Muff, but with the addition of a rich and present midrange that is rarely strident or overpowering. This pedal comes with four knobs that allow it to create a multitude of ultimate fuzz, boost, overdrive, and distortion sounds. It is gorgeously balanced, complex, and probably the thickest-sounding sustaining fuzz pedal we have ever heard!

Controls

Potentiometers

- Boost
- Gain
- Level
- Tone

Switches

- Boost_SW
- Fuzz_SW

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Bill of materials

Resistors	
Part	**Value**
R1	1M
R2	1k5
R3	100k
R4	390R
R5	15k
R6	8k2
R7	1k
R8	100k
R9	100R
R10	470k
R11	15k
R12	8k2
R13	12k
R14	470k
R15	15k
R16	100k
R17	390R
R18	33k
R19	6k8
R20	10k
R21	100k
R22	2k2
R23	430k
R24	910k
R25	430k
R26	6k8
R27	6k8
R28	1M

Capacitors	
Part	**Value**
C1	100n
C2	470p
C3	100n
C4	100n
C5	470p
C6	100n
C7	100n
C8	680p
C9	2n2
C10	6n8
C11	100n
C12	100n
C13	1n
C14	470n

Electrolytic Capacitors	
Part	**Value**
C15	100u

Potentiometers	
Part	**Value**
BOOST	B250k
GAIN	B100k
LEVEL	A100k
TONE	B100k

Transistors	
Part	**Value**
Q1	2N5088
Q2	2N5088
Q3	2N5088
Q4	2N5088
Q5	2N5088

Diodes	
Part	**Value**
D1	1N5277B
D2	1N5277B
D3	1n5817
LEDB	3mm red LED
LEDF	3mm red LED

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Shopping list

Resistors		
Qty	**Value**	**Parts**
1	100R	R9
4	100k	R3, R8, R16, R21
1	10k	R20
1	12k	R13
3	15k	R5, R11, R15
2	1M	R1, R28
1	1k	R7
1	1k5	R2
1	2k2	R22
1	33k	R18
2	390R	R4, R17
2	430k	R23, R25
2	470k	R10, R14
3	6k8	R19, R26, R27
2	8k2	R6, R12
1	910k	R24

Capacitors		
Qty	**Value**	**Parts**
7	100n	C1, C3, C4, C6, C7, C11, C12
1	1n	C13
1	2n2	C9
1	470n	C14
2	470p	C2, C5
1	680p	C8
1	6n8	C10

Electrolytic Capacitors		
Qty	**Value**	**Parts**
1	100u	C15

Potentiometers		
Qty	**Value**	**Parts**
1	A100k	LEVEL
2	B100k	GAIN, TONE
1	B250k	BOOST

Transistors		
Qty	**Value**	**Parts**
5	2N5088	Q1, Q2, Q3, Q4, Q5

Switches		
Qty	**Value**	**Parts**
2	3PDT Stomp Foot	BOOST_SW, FUZZ_SW

Diodes		
Qty	**Value**	**Parts**
2	1N5277B	D1, D2
1	1n5817	D3
2	3mm red LED	LEDB, LEDF

Jacks		
Qty	**Value**	**Parts**
1	DC JACK	-
2	AUDIO JACK	-

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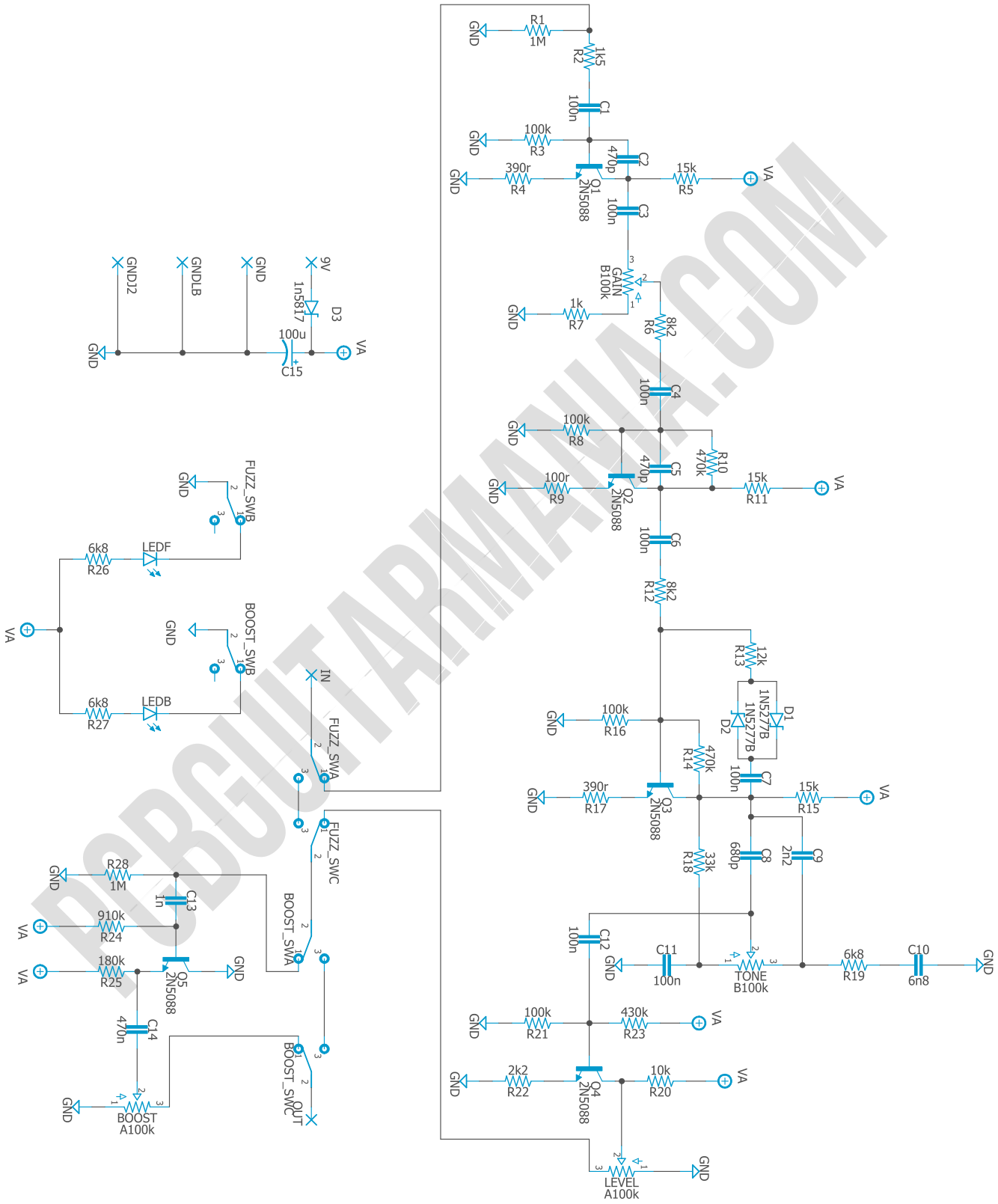
Schematic



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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

Important:

If you have the giveaway version of this board, you will need to add a 470k resistor in C2 parallel to the 470p capacitor. This problem was fixed from the 1.1 version onwards.

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.

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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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