

Mini Maxi Tone

Based on:
Smallsound/Bigsound Mini

Effect type:
Unique Overdrive

Build difficult:
Medium

Number of parts:
Average, total 40 components

Technology:
JFET and BJT transistors

Power consumption:
9V

Enclosure type:
125b

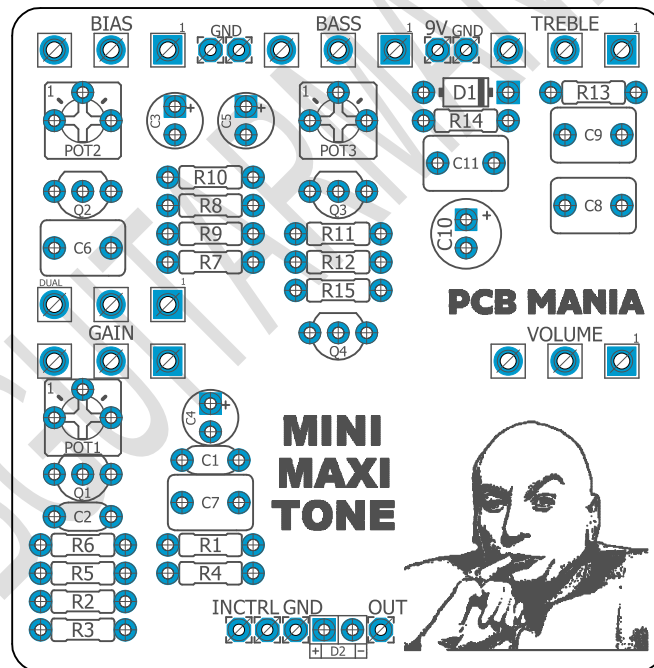
Get your board at:
[Mini Maxi Tone](#)

Get your kit at:
[Das Musikding \(Europe\)](#)

Project overview:

Mini Maxi Tone takes inspiration from the Mini pedal by Smallsound/Bigsound.

The Mini is the revamped little version of the Fuck Overdrive, with the same extremely unique crackling, disintegrating effects but with some additional features that make it a unique gem on its own.



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Introduction

If you ever feel like hearing experimental melancholic music that perfectly depicts decay and degradation, give William Basinski's The Disintegration Loops a try. But this series of compositions is not just great music but also the inspiration for a fantastic pedal. Fuck Overdrive (yes, I'm not kidding).

Brian Hamilton, the proprietor of Smallsound/Bigsound, set out to bring the sound of "The Disintegration Loops" to life in the form of a pedal. And I can confidently say he was successful. The Fuck Overdrive is an incredibly unique effect that stands apart from all others, offering tones reminiscent of overdriven tapes, compressed distortion, shredded speakers, and overloaded tubes or amp "sag".

The warm-toned overdrive is powered by multiple JFET gain stages, offering a wide range of sound options from clean boosting to gritty drive to thick fuzz. Not only does it sound fantastic on its own, but it also pairs exceptionally well with other pedals, delicately altering your signal to produce surprising and intricate results.

But what has all to do with the Mini? Well, this second pedal came to be when many musicians started asking for a smaller version of Fuck Overdrive. The outcome is an amplified, distinct iteration of the original. To enhance its appeal, the circuit was reinforced with additional bass, making it an attractive option for bassists and keyboard players, and the controls were simplified to make it more user-friendly.

With the Mini, you have access to the same remarkable JFET overdrive at its core. The bias knob is a simple yet effective tool that allows you to adjust your tone from a saggy, lo-fi, low-watt amp tone to a clean, bright, hi-fi tone. The added bass and bass cut knob offer even more versatility, allowing you to create clean, sparkling treble boost tones or massive low end for a bass overdrive or full-range boost.

So, do yourself a favor, listen to some demos, and check for yourself what this pedal can do. Trust me, you won't regret it!

Controls

Potentiometers

- BASS
- BIAS
- TREBLE
- VOLUME
- GAIN

Bill of materials

Resistors	
Part	Value
R1	1m
R2	47k
R3	1m
R4	1k
R5	1k
R6	33k
R7	4k7
R8	1k
R9	4k7
R10	1k
R11	1k
R12	4k7
R13	1k
R14	10r
R15	10r

Capacitors	
Part	Value
C1	1n
C2	220n
C6	1u
C7	1u
C8	1u
C9	15n
C11	100n

Electrolytics Capacitors	
Part	Value
C3	10u
C4	10u
C5	10u
C10	100u

Potentiometers	
Part	Value
BASS	500k C
BIAS	10k B
TREBLE	10k B
VOLUME	100k A
GAIN	100k B DUALGANG

Trimpots	
Part	Value
POT1	50k
POT2	50k
POT3	50k

Transistors	
Part	Value
Q1	J201
Q2	J201
Q3	J201
Q4	2N5089

Diodes	
Part	Value
D1	1n5817
D2	3mm red LED

Shopping list

Resistors		
Qty	Value	Parts
2	10r	R14, R15
6	1k	R4, R5, R8, R10, R11, R13
2	1m	R1, R3
1	33k	R6
1	47k	R2
3	4k7	R7, R9, R12

Capacitors		
Qty	Value	Parts
1	100n	C11
1	15n	C9
1	1n	C1
3	1u	C6, C7, C8
1	220n	C2

Electrolytics Capacitors		
Qty	Value	Parts
1	100u	C10
3	10u	C3, C4, C5

Potentiometers		
Qty	Value	Parts
1	100k A	VOLUME
2	10k B	BIAS, TREBLE
1	500k C	BASS

1	100k B DUALGANG	GAIN
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Trim pots		
Qty	Value	Parts
3	50k	POT1, POT2, POT3

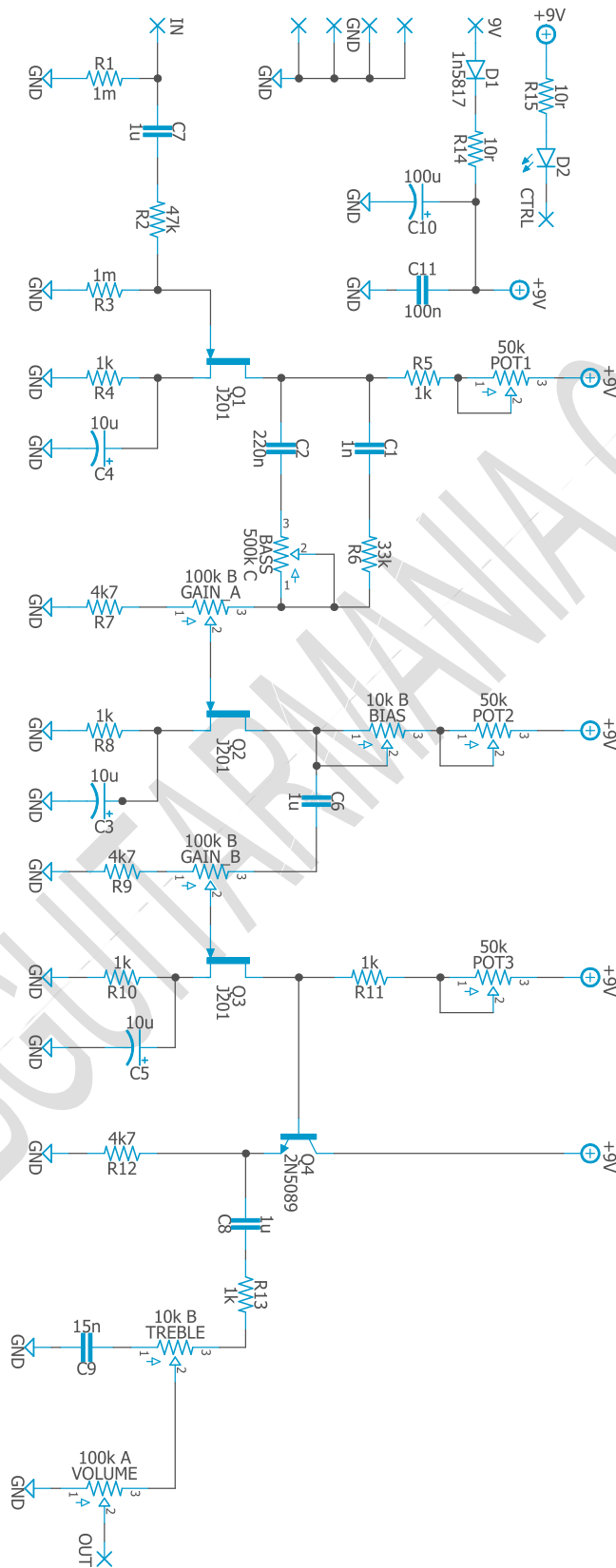
Transistors		
Qty	Value	Parts
3	J201	Q1, Q2, Q3
1	2N5089	Q4

Switches		
Qty	Value	Parts
1	3PDT Stomp foot	-

Diodes		
Qty	Value	Parts
1	1n5817	D1
1	3mm red LED	D2

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

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.

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