

Noise Terminator

Based on:
Decimator G strong II

Effect type:
Noise gate

Build difficult:
Advanced

Amount of parts:
High, total 81 components

Technology:
THAT 4301

Power consumption:
9V

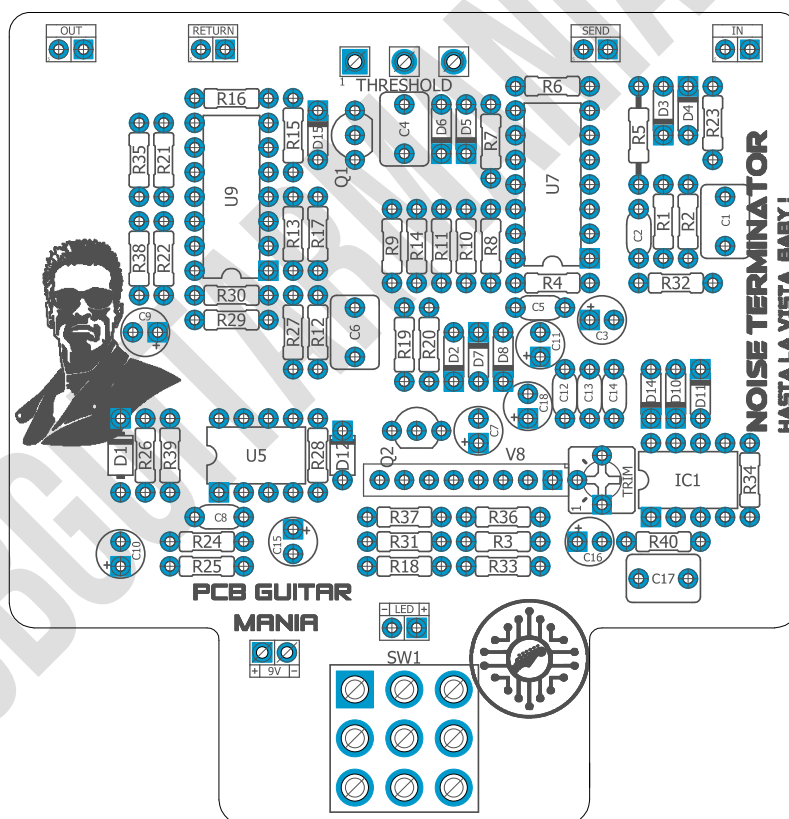
Enclosure type:
1590bb

Get your board at:
[Noise Terminator](#)

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

Project overview:

Here comes Judgment Day for all that annoying unwanted noise. Inspired by the circuit of Decimator II™, the second generation of the Decimator Noise reduction, a board that offers a new approach to noise reduction processing.



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Introduction

Noise Terminator arrived on this earth to do one thing, and that's getting rid of that extra noise you don't want. Let's see how it manages to do its job in a transparent, highly performative way.

When talking about most noise suppressors, we encounter a significant problem regarding the response to very short-term staccato notes. The typical sound reduction system suffers from a dead zone in the release response feature that causes problems when tracking both fast decaying notes and long sustained notes. That's why Noise Terminator's technology features an innovative approach to tracing the envelope of the input signal. The board will instantly respond to short staccato notes and, at the same time, will provide a prolonged ripple free control of long sustained notes.

You can insert Noise Terminator at the end of your chain of existing pedals or put it in the effects loop of your amplifier to clean up the noise present at the amplifier input and the noise in the amplifier pre-amp section.

Try this machine and witness how it terminates its job effectively and with style. It is time to say 'Hasta la vista, baby' to that annoying noise once for all.

Controls

Potentiometers

- THRESHOLD

Switches

- SW1

Bill of materials

Resistors	
Part	Value
R1	1k
R2	1m
R3	20k
R4	5k1
R5	22m
R6	10k
R7	10k
R8	1m
R9	27k
R10	100k
R11	5k1
R12	10m
R13	20k
R14	20k
R15	20k
R16	20k
R17	100k
R18	2k7
R19	10k
R20	200k
R21	68k
R22	47k
R23	1m
R24	20k
R25	100r
R26	100k
R27	10k
R28	20k
R29	20k
R30	10k
R31	750r
R32	100k
R33	1m
R34	1m
R35	270k
R36	1k
R37	620r
R38	100k
R39	100k

R40	1k
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Capacitors	
Part	Value
C1	470nf
C2	100pf
C4	330nf
C5	100nf
C6	330nf
C8	22pf
C12	100nf
C13	100nf
C14	100nf
C17	470nf

Electrolytics Capacitors	
Part	Value
C3	10uf
C7	1uf
C9	10uf
C10	22uf
C11	100uf
C15	22uf
C16	10uf
C18	10uf

Potentiometers	
Part	Value
THRESHOLD	10K B

Trim pots	
Part	Value
TRIM	1M

Transistors	
Part	Value
Q1	2N5551
Q2	MPS2222A

Switches	
Part	Value
SW1	3PDT

IC	
Part	Value
IC1	TL072
U5	LF353N
U7	LF347
U9	LF347
V8	THAT 2181

Jacks	
Part	Value
9V	Jack 635
IN	Jack 635
OUT	Jack 635
RETURN	Jack 635
SEND	Jack 635

Diodes	
Part	Value
D1	1n5819
D2	1n4148
D3	1n4148
D4	1n4148
D5	1n4148
D6	1n4148
D7	1n4148
D8	1n4148
D10	1n4148
D11	1n4148
D12	1n5819
D14	1n4148
D15	1n4148
LED	3mm red LED

Shopping list

Resistors		
Qty	Value	Parts
6	100k	R10, R17, R26, R32, R38, R39
1	100r	R25
5	10k	R6, R7, R19, R27, R30
1	10m	R12
3	1k	R1, R36, R40
5	1m	R2, R8, R23, R33, R34
1	200k	R20
8	20k	R3, R13, R14, R15, R16, R24, R28, R29
1	22m	R5
1	270k	R35
1	27k	R9
1	2k7	R18
1	47k	R22
2	5k1	R4, R11
1	620r	R37
1	68k	R21
1	750r	R31

Capacitors		
Qty	Value	Parts
2	330nf	C4, C6
2	470nf	C1, C17
1	100pf	C2
1	22pf	C8
4	100nf	C5, C12, C13, C14

Electrolytics Capacitors		
Qty	Value	Parts
4	10uf	C3, C9, C16, C18
1	1uf	C7
2	22uf	C10, C15
1	100uf	C11

Potentiometers		
Qty	Value	Parts
1	10K B	THRESHOLD

Trim pots		
Qty	Value	Parts
1	1M	TRIM

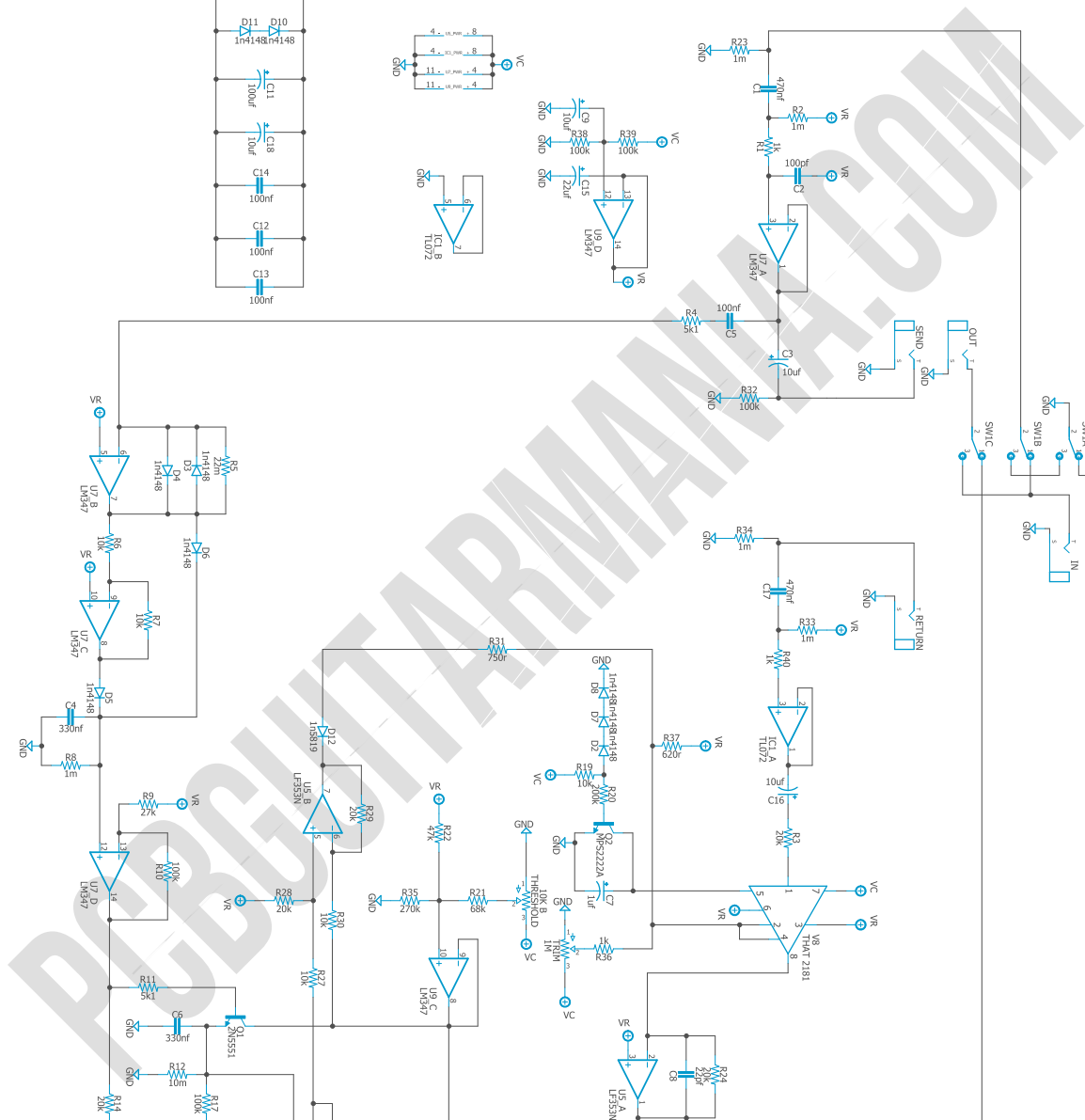
IC		
Qty	Value	Parts
1	TL072	IC1
1	LF353N	U5
2	LF347	U7, U9
1	THAT 2181	V8

Transistors		
Qty	Value	Parts
1	2N5551	Q1
1	MPS2222A	Q2

Switches		
Qty	Value	Parts
1	3PDT	SW1

Jacks		
Qty	Value	Parts
5	Jack 635	9V, IN, OUT, RETURN, SEND

Diodes		
Qty	Value	Parts
11	1n4148	D2, D3, D4, D5, D6, D7, D8, D10, D11, D14, D15
1	1n5819	D12
1	1n5819	D1
1	3mm red LED	LED



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 1590bb 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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