Hairy Elephant

Based on:
Zvex Woolly mammoth

Amount of parts:
Low, total 23 components

Enclosure type:
125b

Effect type:
Fuzz Monster

Technology:
Silicon NPN Transistors

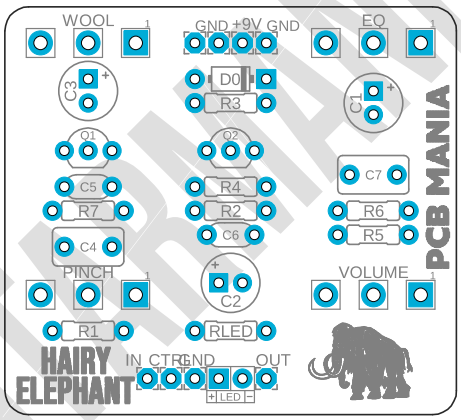
Get your board at:
Hairy Elephant

Build difficult:
Beginner

Power consumption:
9V

Get your kit at:
Das Musikding (Europe)

Project overview:
Based on the Zvex Woolly mammoth, this mighty beast will preserve your sub-frequencies and bring the lowest lows like no fuzz you ever heard before. Are you ready to tame it?



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Introduction

Here comes the Hairy Elephant! The low frequencies produced by its uncontrolled stampede can terrify the bravest of the hearts. Lucky for you, this board has a half-gated feel that will give you a roaring fuzz with clear precision in between notes and phrases and an EQ control that smoothly selects between more bass and more treble. This will provide you with absolute control, and once you hold the reins firmly, riding on the back of this behemoth will be a straightforward experience.

The original Zvex Woolly mammoth was initially built as a bass pedal, but you see it on plenty of guitar pedalboards as well. When you look at the schematic, there is no high pass filter that cuts what a bass player needs, and its rough sound benefits from it no matter the scale your favorite instrument has. Also, conveniently, the pinch knob affects the overtone behavior. The sounds of the four knobs easy-to-source project with silicon transistors go from something with the flavor of a broken noise gate to blowing up the amp.

Controls

- EQ
- PINCH
- VOLUME
- WOOL

Bill of materials

Resistors	
Part	**Value**
R1	1M
R2	51K
R3	20K
R4	2K2
R5	10K
R6	5K
R7	100K
RLED	4K7

Capacitors	
Part	**Value**
C4	220n
C5	10n
C6	10n
C7	220n

Electrolytics Capacitors	
Part	**Value**
C1	100u
C2	100u
C3	100u

Potentiometers	
Part	**Value**
EQ	10K A
PINCH	500K A
VOLUME	10K A
WOOL	2K A

Transistors	
Part	**Value**
Q1	2N3904
Q2	2N3904

Diods	
Part	**Value**
D0	1N5817
LED	3mm Red LED

Shopping list

Resistors		
Qty	**Value**	**Parts**
1	100K	R7
1	10K	R5
1	1M	R1
1	20K	R3
1	2K2	R4
1	4K7	RLED
1	51K	R2
1	5K	R6

Capacitors		
Qty	**Value**	**Parts**
2	10n	C5, C6
2	220n	C4, C7

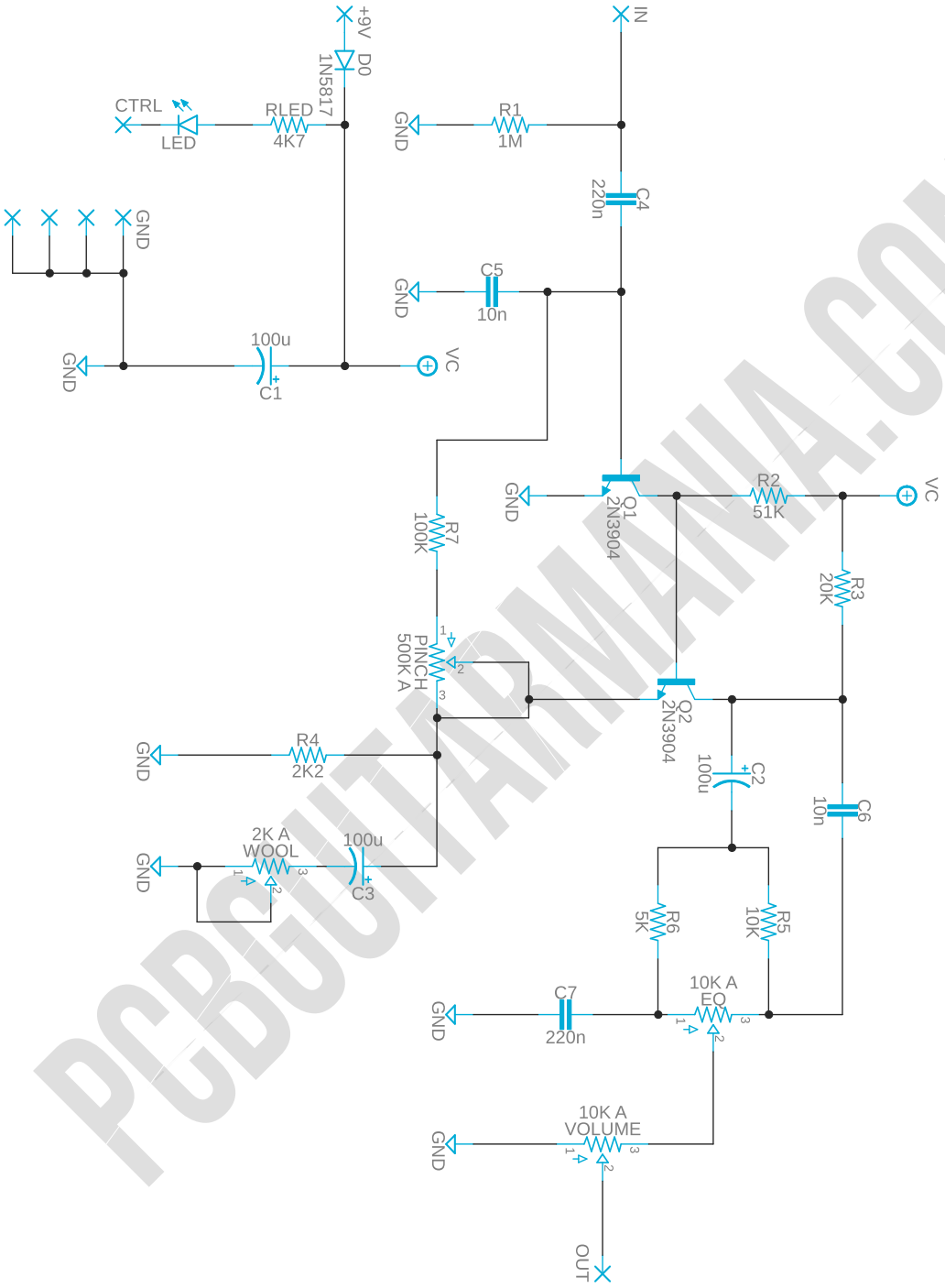
Electrolytics Capacitors		
Qty	**Value**	**Parts**
3	100u	C1, C2, C3

Potentiometers		
Qty	**Value**	**Parts**
2	10K A	EQ, VOLUME
1	2K A	WOOL
1	500K A	PINCH

Transistors		
Qty	**Value**	**Parts**
2	2N3904	Q1, Q2

Diods		
Qty	**Value**	**Parts**
1	1N5817	D0
1	3mm Red LED	LED

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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