

Fuzztone 69

Based on:

Fulltone 69 MKII

Effect type:

Germanium Fuzz Face

Build difficult:

Easy

Amount of parts:

Low, total 29 components

Technology:

Germanium transistors

Power consumption:

9V

Enclosure type:

125b

Get your board at:

[Fuzztone 69](#)

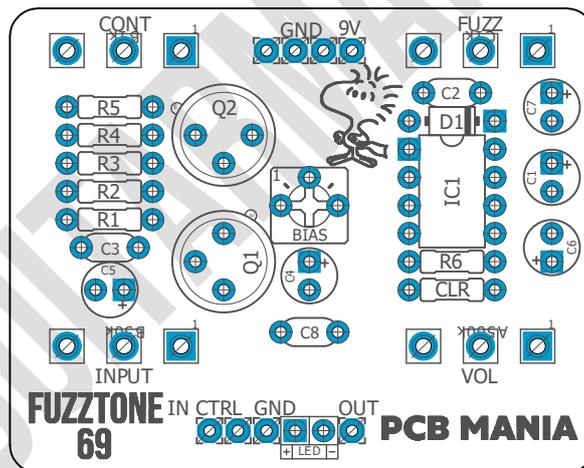
Get your kit at:

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

Project overview:

A fat and harmonic classic fuzz that cleans up like a vintage Fender amp when you turn down your guitar's volume control.

When using it with an already distorted sound, you will immediately recognize the waves that produce: It's Jimi Hendrix's sound, the early David Gilmour, Eric Johnson, and many other guitar icons!



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Introduction

This is the pedal we talk about when referring to THE classic fuzz. Fuzztone 69 delivers exactly the legendary Fuzzface sound with the Fulltone-typical quality and reliability of design.

Inspired by Fulltone '69 - with roots on the all-time classic fuzz face - this germanium fuzz incorporates some handy features:

The input knob that helps to dial just the right amount of signal you want to drive into the unit - independently of how hot are your pickups - and the Contour (Bias)control to perfect the midrange, harmonics, and sustain of the effect. It includes an additional trimer to do the fine-tuning bias on the second transistors. This pedal works with NPN Germanium transistors (Q1: hFE ~70, Q2: hFE ~100), which operates with negative voltage; that's why we included on board a voltage inverter so you can plug it into your everyday power supply simple and easy.

Controls

- Cont
- Fuzz
- Input
- Vol

Bill of materials

Resistors	
Part	Value
CLR	4k7
R1	1M
R2	33k
R3	100k
R4	220R
R5	1k
R6	1M

Capacitors	
Part	Value
C2	100nf
C3	100pf
C8	100nf

Electrolytic Capacitors	
Part	Value
C1	47uf
C4	10uf
C5	2u2
C6	10uf
C7	22uf

Potentiometers	
Part	Value
CONT	B1k

FUZZ	C1k
INPUT	B50k
VOL	A500k

Trim pots	
Part	Value
BIAS	10k

IC	
Part	Value
IC1	TC1044
IC2	PT2399
IC3	LM833
IC4	LM324A
IC5	JRC4580

Transistors	
Part	Value
Q1	PNP
Q2	PNP

Diodes	
Part	Value
D1	1N5817
LED	3mm LED

Shopping list

Resistors		
Qty	Value	Parts
1	100k	R3
2	1M	R1, R6
1	1k	R5
1	220R	R4
1	33k	R2
1	4k7	CLR

Capacitors		
Qty	Value	Parts
2	100nf	C2, C8
1	100pf	C3

Electrolytic Capacitors		
2	10uf	C4, C6
1	22uf	C7
1	2u2	C5
1	47uf	C1

Potentiometers		
Qty	Value	Parts
1	A500k	VOL
1	B1k	CONT
1	B50k	INPUT
1	C1k	FUZZ

Trim pots		
Qty	Value	Parts
1	10k	BIAS

IC		
Qty	Value	Parts
1	TC1044	IC1

Transistors		
Qty	Value	Parts
2	PNP	Q1, Q2

Diodes		
Qty	Value	Parts
1	1N5817	D1
1	3mm 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 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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