Super Bro FUZZ

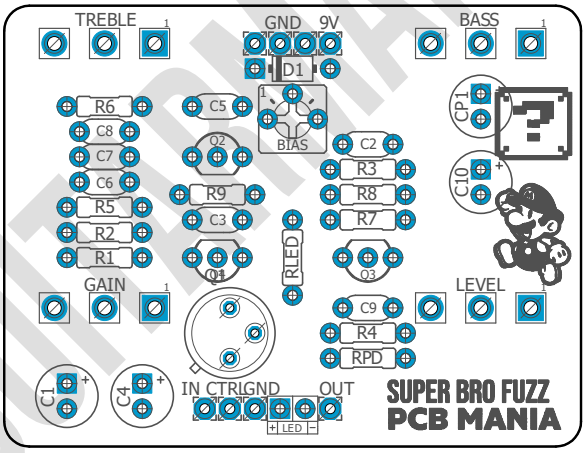
Based on:
Supro Fuzz
Effect type:
Germanium Fuzz
Build difficult:
Average

Amount of parts:
Average, total 35 components
Technology:
Germanium transistor + Silicon transitors
Power consumption:
9V

Enclosure type:
125b
Get your board at:
Super Bro Fuzz
Get your kit at:
Das Musikding (Europe)

Project overview:

Inspired by Supro Fuzz. The Super Bro FUZZ has elements from some of the most admired fuzz boxes in history.



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Introduction

This pedal gives you the dynamics of a Fuzz Face, the unparalleled sustains from a Big Muff, loads of harmonics from a Tone Bender while the EQ behaves like the ones on the Supro™ amps. Sounds pretty promising, and he'll, yeah, it is.

Also, it's a good entry into Germanium fuzz projects since only the first stage is Germanium while the others are easy to source silicon transistors. This will allow you to experiment with different hfe's and how their gain affects the overall tone without busting the bank.

This circuit features an internal Bias Trimpot that regulates how much voltage is feeding on the first germanium transistor, allowing you to experiment with different transistors and configuring your favorite settings for an exquisite tone.

Don't miss this touch-sensitive, vintage 60's flavor amalgamated with a destructive modern sound. The Super Bro FUZZ delivers the goods while keeping your noise floor amazingly low.

Controls

- BASS
- GAIN
- LEVEL
- TREBLE

Bill of materials

Resistors	
Part	**Value**
R1	3K3
R2	100K
R3	220R
R4	4K7
R5	100K
R6	100K
R7	10K
R8	220K
R9	220K
RLED	4K7
RPD	1M

Capacitors	
Part	**Value**
C2	10n
C3	470p
C5	150p
C6	47n
C7	22n
C8	100n
C9	100n

Electrolytics Capacitors	
Part	**Value**
C1	2u2
C4	33u
C10	100u
CP1	100u

Potentiometers	
Part	**Value**
BASS	B250K
GAIN	C1K
LEVEL	A500K
TREBLE	B250K

Trimpots	
Part	**Value**
BIAS	100K

Transistors	
Part	**Value**
Q1	2n1304 (germ hfe 40-50)
Q2	2N5088
Q3	2N5088
Q4	2N5087

Diods	
Part	**Value**
D1	1n5817
LED	3mm LED

Shopping list

Resistors		
Qty	Value	Parts
3	100K	R2, R5, R6
1	10K	R7
1	1M	RPD
2	220K	R8, R9
1	220R	R3
1	3K3	R1
2	4K7	R4, RLED

Capacitors		
Qty	Value	Parts
2	100n	C8, C9
1	10n	C2
1	150p	C5
1	22n	C7
1	470p	C3
1	47n	C6

Electrolytic Capacitors		
Qty	Value	Parts
2	100u	C10, CP1
1	2u2	C1
1	33u	C4

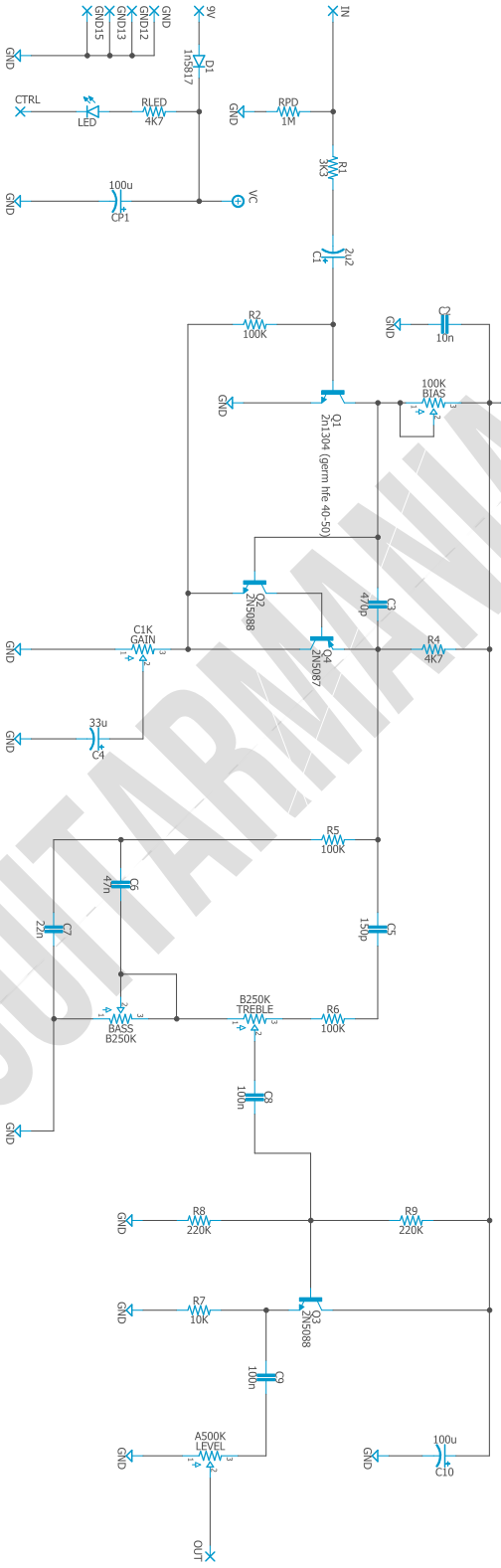
Potentiometers		
Qty	Value	Parts
1	A500K	LEVEL
2	B250K	BASS, TREBLE
1	C1K	GAIN

Trimpots		
Qty	Value	Parts
1	100K	BIAS

Transistors		
Qty	Value	Parts
1	2N5087	Q4
2	2N5088	Q2, Q3
1	2n1304 (germ hfe 40-50)	Q1

Diods		
Qty	Value	Parts
1	1n5817	D1
1	3mm 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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