

# Carcass Fuzz

**Based on:**  
DOD Carcosa Fuzz

**Effect type:**  
Versatile fuzz

**Build difficult:**  
Average

**Amount of parts:**  
Average, total 52 components

**Technology:**  
Silicon transistors

**Power consumption:**  
9V

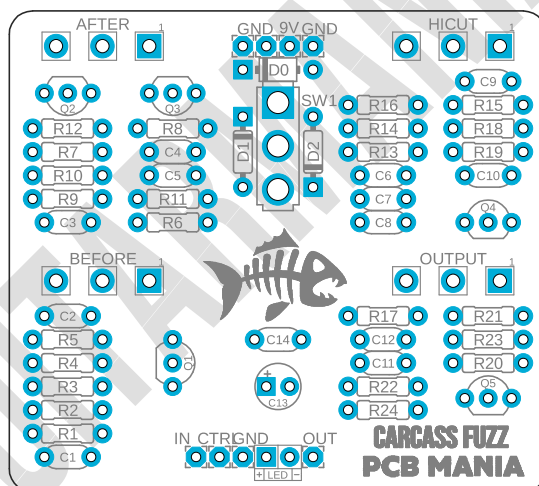
**Enclosure type:**  
125b

**Get your board at:**  
[Carcass Fuzz](#)

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

## Project overview:

This fuzz machine inspired by DOD's Carcosa Fuzz produces a plethora of vintage and modern silicon waves able to shake you and your audience to the core of your bones.



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## Introduction

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The Carcass Fuzz and the pedal in which is inspired, have their roots on silicon transistor-based fuzz pedals from the 70s, especially the circuitry of the Maestro FZ-1S. But make no mistake; our board is much more than a typical standard two- or three-knob vintage fuzzbox.

Two modes toggle adapt the pedal to practically any amp and player. The first one allows you a more traditionalist approach: Pair with an already dirty amp and experience smooth classic-rock leads and overdriven chord crunch to all-out fuzz mayhem waves that will get you shaken to the bones. The second mode is designed for a high-headroom clean amp, enhancing low-mid punch and adding complex harmonics for a fuller voice even when natural amp clipping isn't present. Pair this one with a dirty amp at your own risk!

Before (gain) and After (bias) controls provide an impressive range of fuzz tones. But, before you get overwhelmed, you can start with both controls in the middle for a traditional fuzz tone, then raise the gain and peel back the bias and watch your notes melt into a puddle before you.

With tons of output, the Carcass can be used as a clean or crunchy boost before you begin getting into the domain of fuzz. The pedal has a natural voicing strong in presence to cut through a band mix, with plenty more available in that area by turning the Hi-Cut knob clockwise.

These are some of the several features this pedal offers, but there are many more to discover. And this is where you enter the scene.

## Controls

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- After
- Before
- HI cut
- Output

# Bill of materials

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Resistors	
Part	Value
R1	510k
R2	1k
R3	1m
R4	1m
R5	100k
R6	1k
R7	1m
R8	47k
R9	9k1
R10	1m
R11	100k
R12	220k
R13	220k
R14	220k
R15	100k
R16	220k
R17	1k
R18	1m
R19	100k
R20	1k
R21	1m
R22	100k
R23	470k
R24	4k7

Capacitors	
Part	Value
C1	100n
C2	100n
C5	100n
C6	10n
C7	10n
C8	100n
C9	220n

C10	100n
C11	100n
C12	680p
C14	100n

Electrolytics Capacitors	
Part	Value
C13	100u

Potentiometers	
Part	Value
AFTER	100k C
BEFORE	100k B
HICUT	5k A
OUTPUT	100k A

Transistors	
Part	Value
Q1	2N5089
Q2	2N5089
Q3	2N5089
Q4	2N5089
Q5	2N5089

Switches	
Part	Value
SW1	SPDT ON/ON

Diodes	
Part	Value
D0	1n5817
D1	bat41
D2	bat41
LED	3mm Red Led

# Shopping list

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Resistors		
Qty	Value	Parts
5	100k	R5, R11, R15, R19, R22
4	1k	R2, R6, R17, R20
6	1m	R3, R4, R7, R10, R18, R21
4	220k	R12, R13, R14, R16
1	470k	R23
1	47k	R8
1	4k7	R24
1	510k	R1
1	9k1	R9

Capacitors		
Qty	Value	Parts
9	100n	C1, C2, C3, C4, C5, C8, C10, C11, C14
2	10n	C6, C7
1	220n	C9
1	680p	C12

Electrolytics Capacitors		
Qty	Value	Parts
1	100u	C13

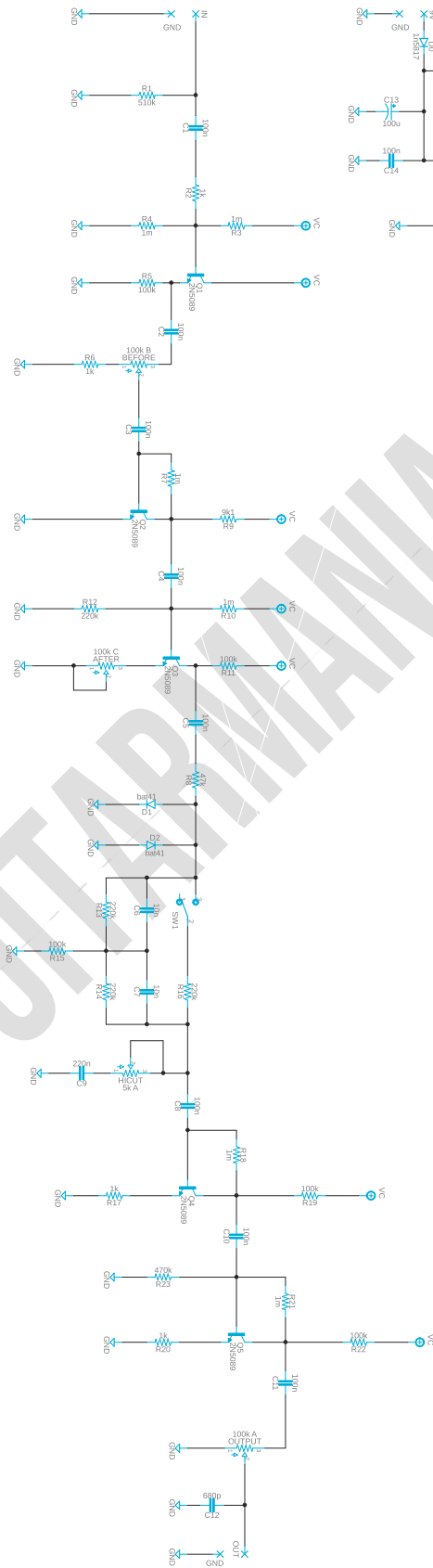
Potentiometers			
Qty	Value	Parts	Parts
1	100k A	OUTPUT	
1	100k B	BEFORE	
1	100k C	AFTER	
1	5k A	HICUT	

Transistors		
Qty	Value	Parts
5	2N5089	Q1, Q2, Q3, Q4, Q5

Switches		
Qty	Value	Parts
1	SPDT ON/ON	SW1

Diodes		
Qty	Value	Parts
1	1n5817	D0
2	bat41	D1, D2
1	3mm Red Led	LED

# Schematic



# Components Recommendations

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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

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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

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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

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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

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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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