Dome Device

Based on:
EQD Spires

Number of parts:
Average, total 38 components

Enclosure type:
125b

Effect type:
Versatile Fuzz

Technology:
NPN bipolar junction transistor

Get your board at:
Dome Device

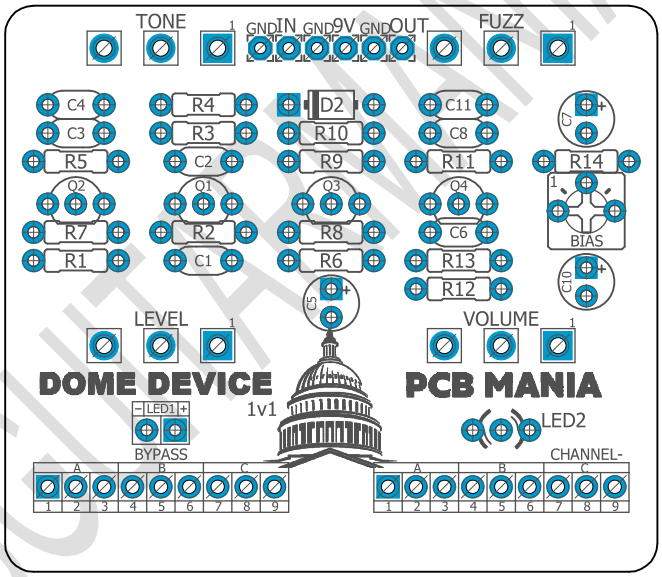
Build difficult:
Easy

Power consumption:
9V

Get your kit at:
Das Musikding (Europe)

Project overview:

Dome Device is a unique 2-in-1 fuzz board that combines the classic sound of two legendary pedals into one compact unit. Inspired by the now-discontinued EQD Spires it offers a one-of-a-kind playing experience that is sure to take your sound to new heights. Get ready to double down on the fuzz factor!



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Introduction

Dome Device combines the sound of two legendary fuzz pedals – the Rosac Nu-Fuzz and EQD's Dream Catcher (a modified Fuzz Face). Both pedals are known for their warm and harmonic distortion tones, producing a smooth, velvety sound perfect for blues, rock, and heavy metal.

But the Dome Device isn't just a replica but a modern take. The Nu-Fuzz section comes with more easy-to-find values, while the Dream Catcher section ventures furthest from the original source while maintaining its roots. This means lots of experimentation and fun as you explore the different sounds this pedal can produce.

With two footswitches, you have the ultimate flexibility in tone shaping. Turn on the unit and switch between the two fuzz circuits with ease.

Controls

Potentiometers

- Fuzz
- Level
- Tone
- Volume

Switches

- Bypass
- Channel

Bill of materials

Resistors	
Part	**Value**
R1	1m
R2	620k
R3	750k
R4	47r
R5	750k
R6	1M
R7	1m2
R8	100k
R9	33k
R10	47r
R11	470r
R12	4k7
R13	4k7
R14	470r

Capacitors	
Part	**Value**
C1	47n
C2	47n
C3	1n
C4	10n
C6	100p
C8	68n
C11	10n

Electrolytics Capacitors	
Part	**Value**
C5	1u
C7**	22u
C10	100u

Potentiometers	
Part	**Value**
FUZZ	1K C
LEVEL	50K B
TONE	500K B
VOLUME	500K A

Trimpots	
Part	**Value**
BIAS	10k

Transistors	
Part	**Value**
Q1	**2N3904***
Q2	**2N3904***
Q3	**2N3904***
Q4	**2N3904***

Switches	
Part	**Value**
BYPASS	3PDT On/On/On
CHANNEL	3PDT On/On/On

Diodes	
Part	**Value**
D2	1n5817
LED2	LED Dual Common Cathode
LED1	3mm red LED

Shopping list

Resistors		
Qty	**Value**	**Parts**
1	100k	R8
2	1m	R1, R6
1	1m2	R7
1	33k	R9
1	470r	R14
1	470r	R11
1	47r	R4
1	47r	R10
2	4k7	R12, R13
1	620k	R2
2	750k	R3, R5

Capacitors		
Qty	**Value**	**Parts**
1	100p	C6
2	10n	C4, C11
1	1n	C3
2	47n	C1, C2
1	68n	C8

Electrolytics Capacitors		
Qty	**Value**	**Parts**
1	100u	C10
1	1u	C5
1	22u	**C7****

Potentiometers		
Qty	**Value**	**Parts**
1	1K C	FUZZ
1	500K A	VOLUME
1	500K B	TONE
1	50K B	LEVEL

Trimpots		
Qty	**Value**	**Parts**
1	10k	BIAS

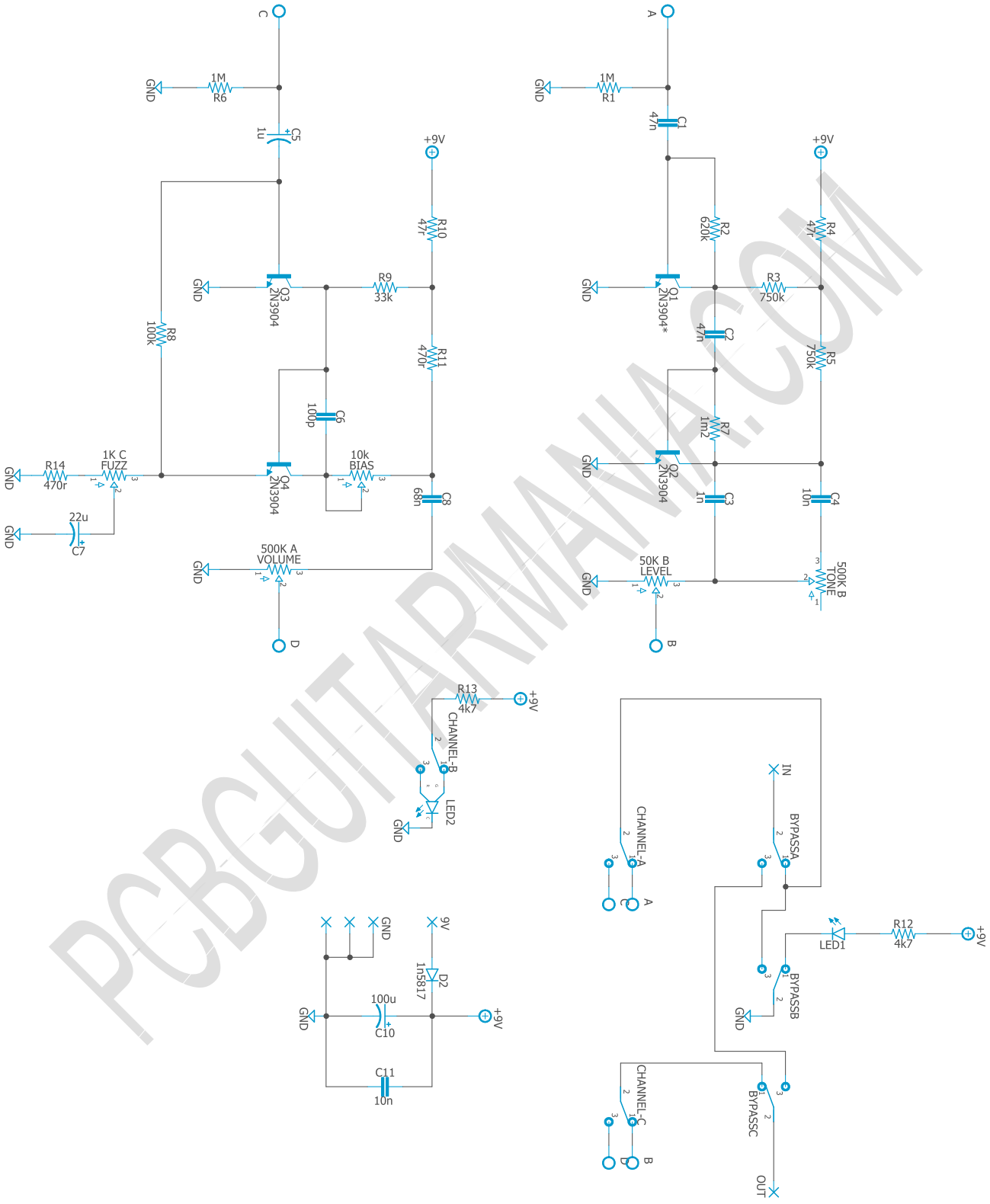
Transistors		
Qty	**Value**	**Parts**
4	**2N3904***	Q1, Q2, Q3, Q4

Switches		
Qty	**Value**	**Parts**
2	3PDT On/On/On	BYPASS, CHANNEL

Diodes		
Qty	**Value**	**Parts**
1	1n5817	D2
1	LED Dual Common Cathode	LED2
1	LED.1	LED1

Jacks		
Qty	**Value**	**Parts**
1	DC JACK	-
2	AUDIO JACK	-

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

2N3904*

The original design uses 2N5550 type NP transistor, which may be difficult to obtain. However, alternative low gain transistors such as the 2N2222A and 2N3904 can be used as suitable substitutes.

C7**

In the 1.0v version, the orientation of C7 on the silkscreen is incorrect, so if you got that one, flip the capacitor before placing it. However, this error has been rectified starting from the 1.1v version, so you can place C7 as shown.

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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