

Dirt Device

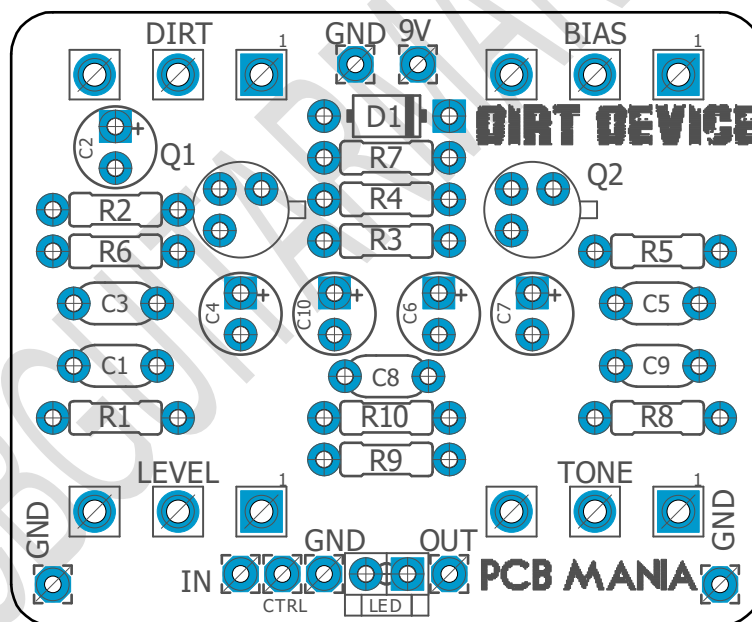
Based on:
EQD Dirt Transmitter
Effect type:
Fuzz driver
Build difficult:
Easy

Amount of parts:
Low, total 28 components
Technology:
Silicon Fuzz face + Bias Control
Power consumption:
9V(3mA)

Enclosure type:
1590b
Get your board at:
[Dirt Device](#)
Get your kit at:
[Das Musikding \(Europe\)](#)

Project overview:

Clearly a Fuzz Face inspired circuit, but with two interesting features that totally changes the nature of this pedal, a knob for Bias control that regulates how much voltage is fed into the second transistor, and a big muff tone stack just before the output that allows you to shape the tone at taste.



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Introduction

The circuit starts as two gain stages running into each other with an input gain control and a sag on the second stage (bias). Then you have the voltage feedback added and it became similar to a fuzz face in topology but it sounds nothing like one!. In this case the sound is totally dependent on the transistors, the original version works with a couple of 2N1711 NPN silicon, replace them and it's a whole different beast.

Controls

- Volume
- Bias
- Dirt
- Tone

Bill of materials

Resistors	
Part	Value
R1	1m
R2	4k7
R3	22k
R4	100k
R5	1k
R6	1k
R7	3k3
R8	22k
R9	68k
R10	4k7

Capacitors	
Part	Value
C1	100pf
C3	470pf
C5	100pf
C8	6n8
C9	6n8

Electrolytics Capacitors	
Part	Value
C2	4.7uf
C4	22uf
C6	47uf
C7	22uf
C10	100u

Potentiometers	
Part	Value
BIAS	5K B
DIRT	1M A
LEVEL	100K A
TONE	50K B

Transistors	
Part	Value
Q1	2n1711
Q2	2n1711

Diodes	
Part	Value
D1	1N4001
LED	3mm LED

Shopping list

Resistors		
Qty	Value	Parts
1	100k	R4
2	1k	R5, R6
1	1m	R1
2	22k	R3, R8
1	3k3	R7
2	4k7	R2, R10
1	68k	R9

Capacitors		
Qty	Value	Parts
2	100pf	C1, C5
1	470pf	C3
2	6n8	C8, C9

Electrolytics Capacitors		
Qty	Value	Parts
1	100u	C10
2	22uf	C4, C7
1	4.7uf	C2
1	47uf	C6

Potentiometers		
Qty	Value	Parts
1	100K A	LEVEL
1	1M A	DIRT
1	50K B	TONE
1	5K B	BIAS

Transistors		
Qty	Value	Parts
2	2n1711*	Q1, Q2

Diodes		
Qty	Value	Parts
1	1N4001	D1
1	3mm LED	LED

Components Recommendations

As many people like to experiment some pedals with higher voltage, always ensure the max tolerance of your **electrolytic capacitors** is over 25v.

This board has been tested using Film box capacitors for most of the values over 1nf, and ceramics discs for the ones 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 exclusively regarding this project. It doesn't include all the hardware like the 3PDT bypass switch, audio/dc jacks, enclosure, etc.

2n1711* This transistor might be hard to source, however in theory you could try out any other low-medium gain silicon NPN transistor 2N2369, 2N5550, 2N3904. Just take in consideration the pinout of them might varies.

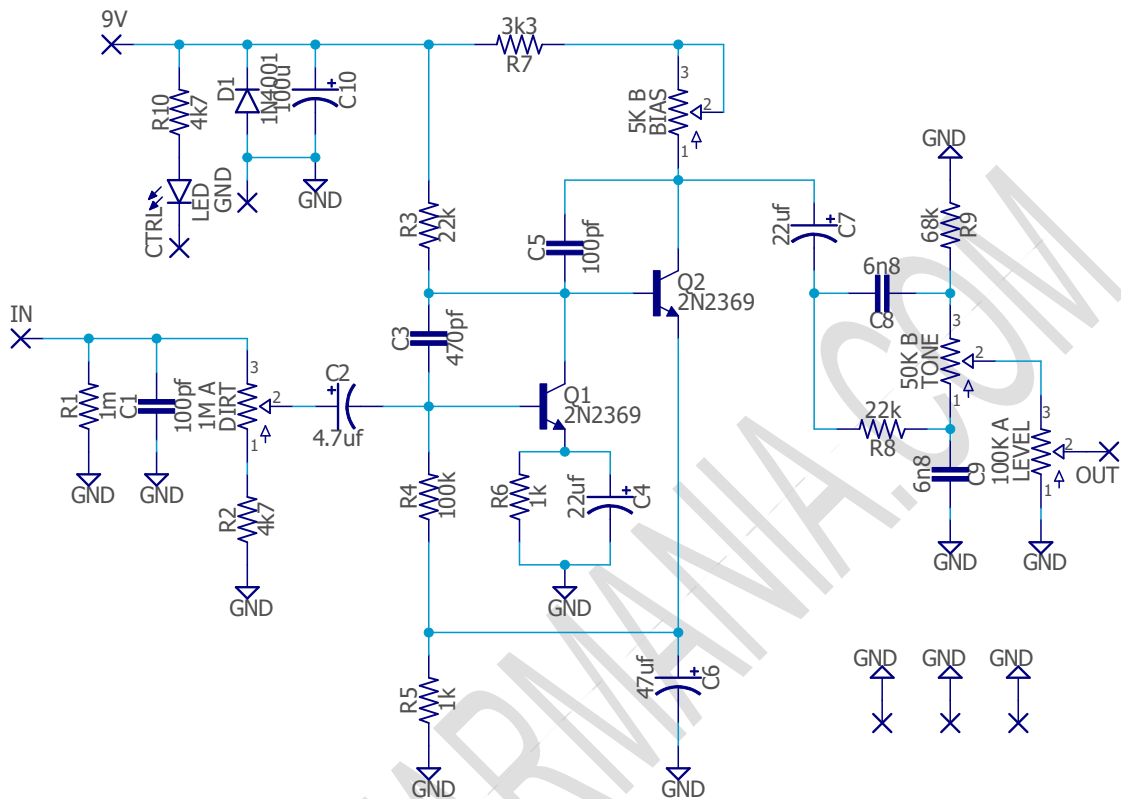
Build Notes

If this is one of your first projects I recommend you to take a look on 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

Schematic



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 control slug of your 3PDT.

This board has been designed to match our EZ 3PDT PCB check it [here](#) to access to our [Pedal Wiring Guide](#)

Drill Template

This Project has been planned to fit into a 1590bb enclosure type.

Check the Attached “Drilling templates” to drill the box properly. The files are on Scale 1:1, ready to print in an A4 page.

Licensing and Usage

We really appreciate your trust and support buying this PCB, as well as your will to dive into the DIY electronics world. That’s why for us is really important that you can make this project work properly and to enjoy not only the building process, but also to experiment and play with it on your rig.

We try to reply to every question we receive on our email or in our social media, but we try to encourage all our customers to join our [PCB Guitar Mania – Builders Group](#) on Facebook, in order to post all your doubts, issues, suggestions or request, as well to share your builds and have some feedback from us and other fellow builders!

All of our projects have been tested following this same guide on their standard configurations. Although, not all of the variations and mods have necessarily been tested. These are suggestions based on the schematic analysis, and on the experiences and opinions of others. Feel free to share with us your opinions and suggestions regarding the mods your own personal experimentation.

These boards may be used for commercial endeavors in any quantity unless specifically noted. No attribution is necessary, though accreditation or a link back is always greatly 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 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 silk screen, 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 own designs, with your brand and logo we could certainly reach an agreement.

Follow us on [Instagram](#) and [Facebook](#) to stay in tune with the latest projects!