

# Pluma Drive

**Based on:**

EQD Plumes

**Effect type:**

Overdrive

**Build difficult:**

Average

**Amount of parts:**

Average, total 41 components

**Technology:**

Dual OpAmp + charge pump

**Power consumption:**

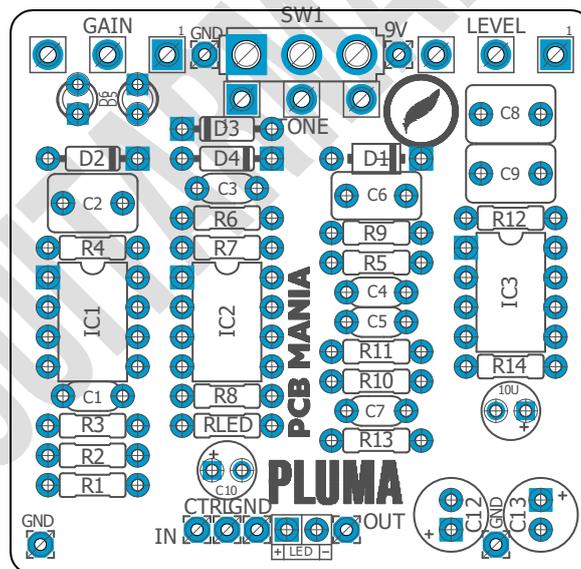
9V

**Enclosure type:**

125b

**Get your board at:**[Pluma Drive](#)**Get your kit at:**[Das Musikding \(Europe\)](#)**Project overview:**

The Pluma drive is a modern and fresh take on the classic Tube screamer, designed to fulfil all the needs of the modern (and classic guitar player). The guys from EQD have updated the classic Ibanez circuit with some key features such as a diode selection toggle to switch in between diodes and set the unit as an open booster or a compressed overdrive. They also included an internal Charge pump that gives you plenty of headroom!



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## Introduction

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Earthquaker devices Plumes™ is a more rooted in the soil pedal then the fun and weird stuff we used to get from them and this is good. Because it delivers what you expect on a modern but intuitive overdrive with a big part TubeScreamer™ in its circuit.

But wait, another TS... what make it so different and why do you see so many guys online posting pictures of one on their boards. It's simple. A lot of headroom, capable of more gain and an all new tone control that allows a way bigger range and more natural sounding range. Also has three different clipping options depending on your needs as boost or a dedicated drive. All in all very well done from the guys in Ohio and a highly recommended build.

## Controls

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### Potentiometers

- Volume
- Gain
- Tone

### Switches

- Diode toggle

# Bill of materials

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Resistors	
Part	Value
R1	1M
R2	1K
R3	10M
R4	10K
R5	1K
R6	47K
R7	1K
R8	10K
R9	330r
R10	1K
R11	1K
R12	1M
R13	100r
R14	100K
RLED	4K7

Capacitors	
Part	Value
C1	33n
C2	1u
C3	56p
C4	100n
C5	47n
C6	470n
C7	56p
C8	1u
C9	1u

Electrolytics Capacitors	
Part	Value
10U	10u
C10	100u
C12	100u
C13	100u

Potentiometers	
Part	Value
GAIN	B1M
LEVEL	B100K
TONE	W20K

IC	
Part	Value
IC1	TL072
IC2	TL072
IC3	TC1044SCPA

Switches	
Part	Value
SW1	ON/OFF/ON

Diodes	
Part	Value
D1	1N5817
D2	1N4148
D3	1N4148
D4	1N4148
D5	RED LED
D6	RED LED

# Shopping list

## Resistors

Qty	Value	Parts
1	100r	R13
1	100K	R14
2	10K	R4, R8
1	10M	R3
5	1K	R2, R5, R7, R10, R11
2	1M	R1, R12
1	330r	R9
1	47K	R6
1	4K7	RLED

## Capacitors

Qty	Value	Parts
1	100n	C4
3	1u	C2, C8, C9
1	33n	C1
1	470n	C6
1	47n	C5
2	56p	C3, C7

## Electrolytics Capacitors

Qty	Value	Parts
1	100u	10U
2	10u	C12, C13

1		C10
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## Potentiometers

Qty	Value	Parts
1	B100K	LEVEL
1	B1M	GAIN
1	W20K	TONE

## IC

Qty	Value	Parts
1	TC1044SCPA	IC3
2	TL072	IC1, IC2

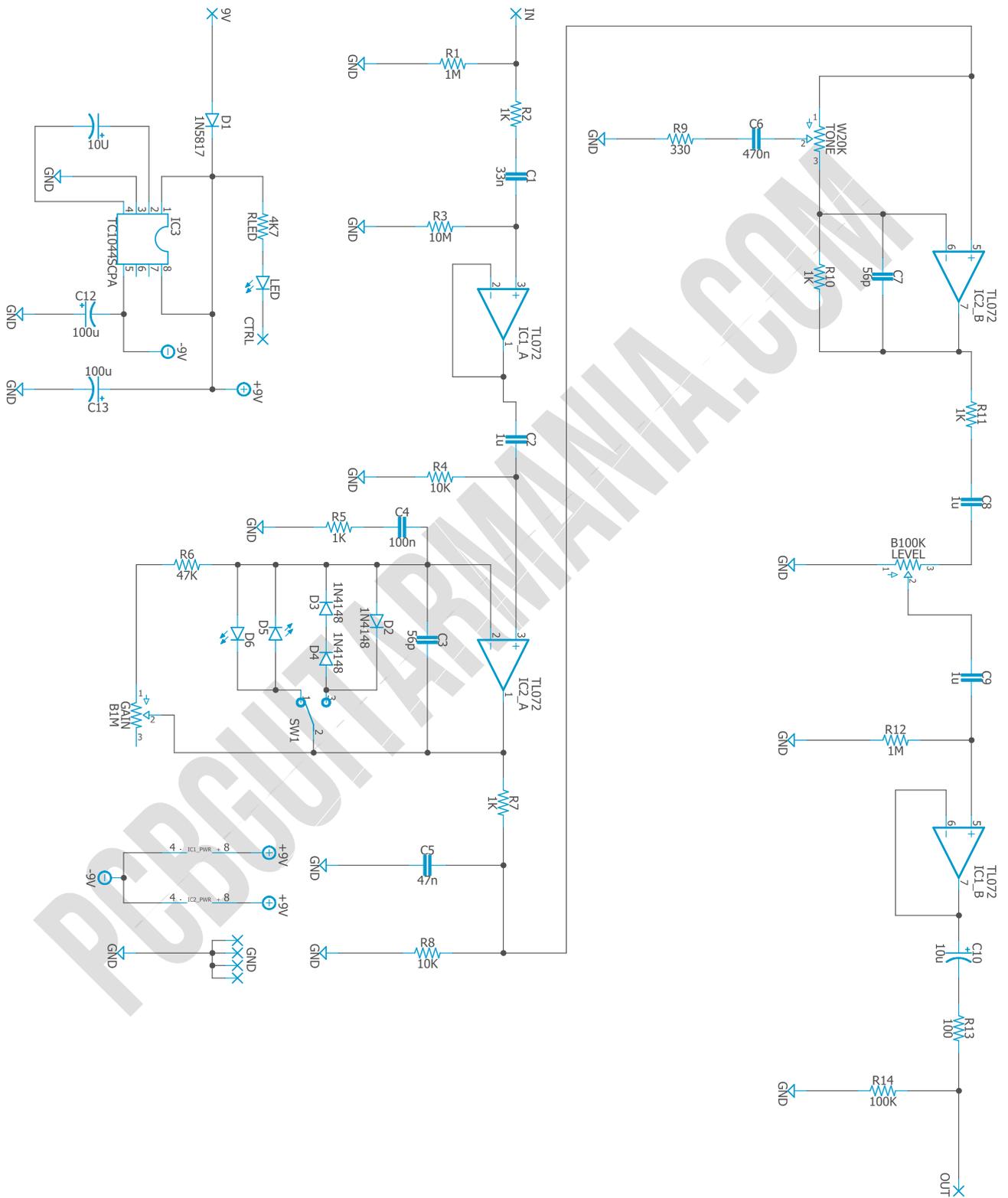
## Switches

Qty	Value	Parts
1	ON/OFF/ON	SW1

## Diodes

Qty	Value	Parts
3	1N4148	D2, D3, D4
1	1N5817	D1
2	RED LED	D5, D6

# Schematic



# Components Recommendations

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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.

**IT MIGHT BE A GOOD IDEA TO PLACE A BIT OF TAPE, FOAM, OR ANY KIND OF PLASTIC TO IN BETWEEN THE LEGS OF THE TONE CONTROL AND THE DIODE TOGGLE TO AVOID UNWANTED SHORTS DUE THEM TOUCHING EACH OTHER.**

## Build Notes

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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

## 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 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

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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 in an A4 page.

## Licensing and Usage

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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!