

Poly Pig

Based on:

Pigtronix Poly Saturators

Effect type:

Versatile overdrive/distortion

Build difficult:

Average

Amount of parts:

Mid-high, total 65 components

Technology:

Opamps + CMOS

Power consumption:

9V

Enclosure type:

125b

Get your board at:

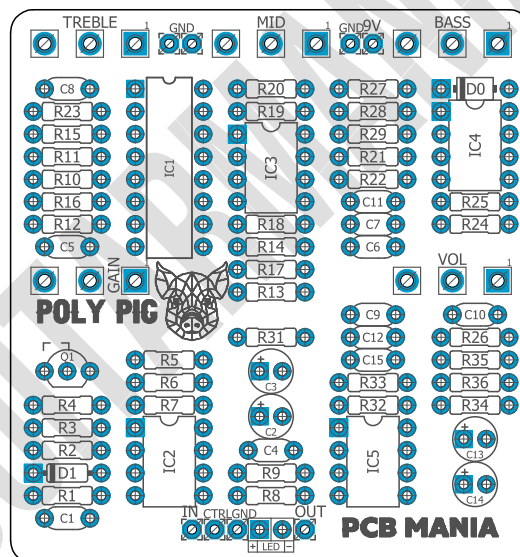
[Poly-pig](#)

Get your kit at:

[Das Musikding \(Europe\)](#)

Project overview:

This circuit delivers everything from subtle overdrive to heavy distortion. Inspired by Pigtronix Poly Saturators, this versatile and multifaceted board was made for any type of music and player.



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Introduction

The Poly Pig is a dirty, chunky, snarly creature that can be tamed to become the most docile and fluffy mate. Get everything from face-melting distortion to mild overdrive with hi-fi definition and clarity.

Its unique JRC4558D-powered EQ circuits will allow you to have all the accuracy you need to shape your frequencies, and the A-Class A, JFET front end assures you a wide range of warm, tube-flavored gain.

This pedal is perfect for detuning and grinding; we warn you: if you piss off the pig, things will get serious! With high gain settings, it squeals and growls like a wild beast.

When the gain is backed off, the Poly Pig emits a bluesy and gritty soft grumble. It becomes wholly docile and cleans up nicely by backing off the guitar volume, making it highly versatile and usable.

This compact pedal plays well with guitar, bass, and synth and sounds great while doing it. It's your choice: domesticate the beast or explore its wildest side!

Controls

- Bass
- Gain
- Mid
- Treble
- Vol

Bill of materials

Resistors	
Part	Value
R1	10m
R2	10k
R3	560k
R4	2m2
R5	27k
R6	51k
R7	1k
R8	4k7
R9	6k8
R10	51k
R11	130k
R12	130k
R13	130k
R14	130k
R15	100k
R16	100k
R17	100k
R18	82k
R19	15k
R20	10k
R21	10k
R22	39k
R23	2k7
R24	1k5
R25	470r
R26	100k
R27	1k
R28	470r
R29	100k

R31	2m2
R32	10m
R33	150r
R34	4k7
R35	100k
R36	100k

Capacitors	
Part	Value
C1	68n
C4	250p
C5	330n
C6	180n
C7	560p
C8	8n2
C9	33n
C10	100n
C11	220n
C12	220n
C15	47p

Electrolytics Capacitors	
Part	Value
C2	100u
C3	2u2
C13	1u
C14	2u2

Potentiometers	
Part	Value
BASS	100k B
GAIN	1m A
MID	100k B
TREBLE	100k B
VOL	100k B

Trim pots	
Part	Value
IC1	CD4049UBE
IC2	TL072
IC3	JRC4558
IC4	JRC4558
IC5	JRC4558

Transistors	
Part	Value
Q1	J201

Diodes	
Part	Value
D0	1N5817
D1	9v1
LED	3mm red LED

Shopping list

Resistors		
Qty	Value	Parts
5	100k	R15, R26, R29, R35, R36
2	100k	R16, R17
3	10k	R2, R20, R21
2	10m	R1, R32
4	130k	R11, R12, R13, R14
1	150r	R33
1	15k	R19
2	1k	R7, R27
1	1k5	R24
1	27k	R5
1	2k7	R23
2	2m2	R4, R31
1	39k	R22
2	470r	R25, R28
2	4k7	R8, R34
2	51k	R6, R10
1	560k	R3
1	6k8	R9
1	82k	R18

Capacitors		
Qty	Value	Parts
1	100n	C10
1	180n	C6
2	220n	C11, C12
1	250p	C4
1	330n	C5
1	33n	C9
1	47p	C15
1	560p	C7
1	68n	C1
1	8n2	C8

Electrolytics Capacitors		
Qty	Value	Parts
1	100u	C2
1	1u	C13
2	2u2	C3, C14

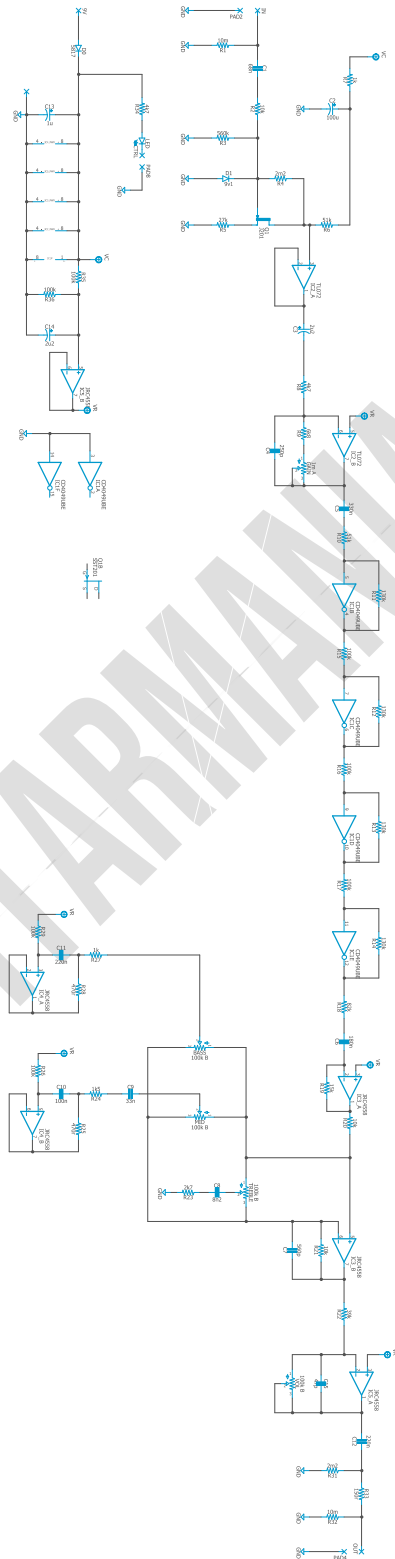
Potentiometer		
Qty	Value	Parts
4	100k B	BASS, MID, TREBLE, VOL
1	1m A	GAIN

IC		
Qty	Value	Parts
1	CD4049UBE	IC1
3	JRC4558	IC3, IC4, IC5
1	TL072	IC2

Transistors		
Qty	Value	Parts
1	J201	Q1

Diodes		
Qty	Value	Parts
1	1N5817	D0
1	9v1	D1
1	3mm red 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.

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