Crisalida

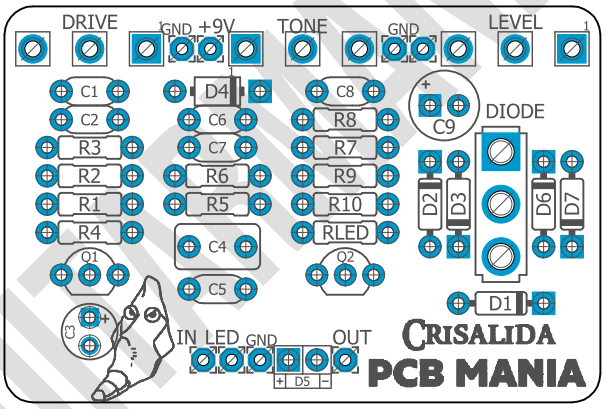
Based on:
Earthquaker Chrysalis
Effect type:
Transparent high quality vintage overdrive
Build difficult:
Easy

Amount of parts:
Low, total 32 components
Technology:
NPN silicon transistor
Power consumption:
9V

Enclosure type:
125b
Get your board at:
Crisalida
Get your kit at:
Das Musikding (Europe)

Project overview:

Inspired by Earthquaker Chrysalis, a board that will make your output signal emerge as the most high-quality vintage transparent-sounding overdrive you will ever hear.



Index

1. Project overview
2. Index, Introduction & Controls
3. Bills of Materials, BOM
4. Shopping Lists
5. Schematic
6. Components, Build Notes, Wiring Diagram
7. Drill Template, Licensing and Usage

Introduction

Crisalida is a unique transistor-based board that not only emulates the sonic qualities of vintage amps but also captures that vintage amp sound you can hear on a record. An amp on a box, but also on a record!

With just Level, Tone, and Drive, plus a handy On/Off switch, this pedal makes things simple so you can focus on the important stuff. It's voiced with an emphasis on the midrange, which makes it cut in a live band scenario with its aggressive presence, yet it still has a lot of texture in the low end. Never flabby, full of organic life, and a presence that helps push the guitar forward with loads of clarity and harmonics.

Let your raw signal go through this metamorphoser PCB that will transform your wave into a transparent vintage overdrive sound like you never heard before.

Controls

- Drive
- Level
- Tone

Bill of materials

Resistors	
Part	**Value**
R1	2M2
R2	2M2
R3	4K7
R4	470R
R5	8K2
R6	1K
R7	470K
R8	47K
R9	10K
R10	1K
RLED	4K7

Capacitors	
Part	**Value**
C1	1n
C2	100n
C4	220n
C5	100p
C6	4n7
C7	100n
C8	100n

Electrolytics Capacitors	
Part	**Value**
C3	4u7
C9	100u

Potentiometers	
Part	**Value**
DRIVE	B50K
LEVEL	A50K
TONE	B25K

Transistors	
Part	**Value**
Q1	MPSA18
Q2	MPSA18

Diods	
Part	**Value**
D1	BAT48
D2	BAT48
D3	BAT48
D4	1N5817
D5	3mm red LED
D6	Your choice
D7	Your choice

Shopping list

Resistors		
Qty	**Value**	**Parts**
1	10K	R9
2	1K	R6, R10
2	2M2	R1, R2
1	470K	R7
1	470R	R4
1	47K	R8
2	4K7	R3, RLED
1	8K2	R5

Capacitors		
Qty	**Value**	**Parts**
3	100n	C2, C7, C8
1	100p	C5
1	1n	C1
1	220n	C4
1	4n7	C6

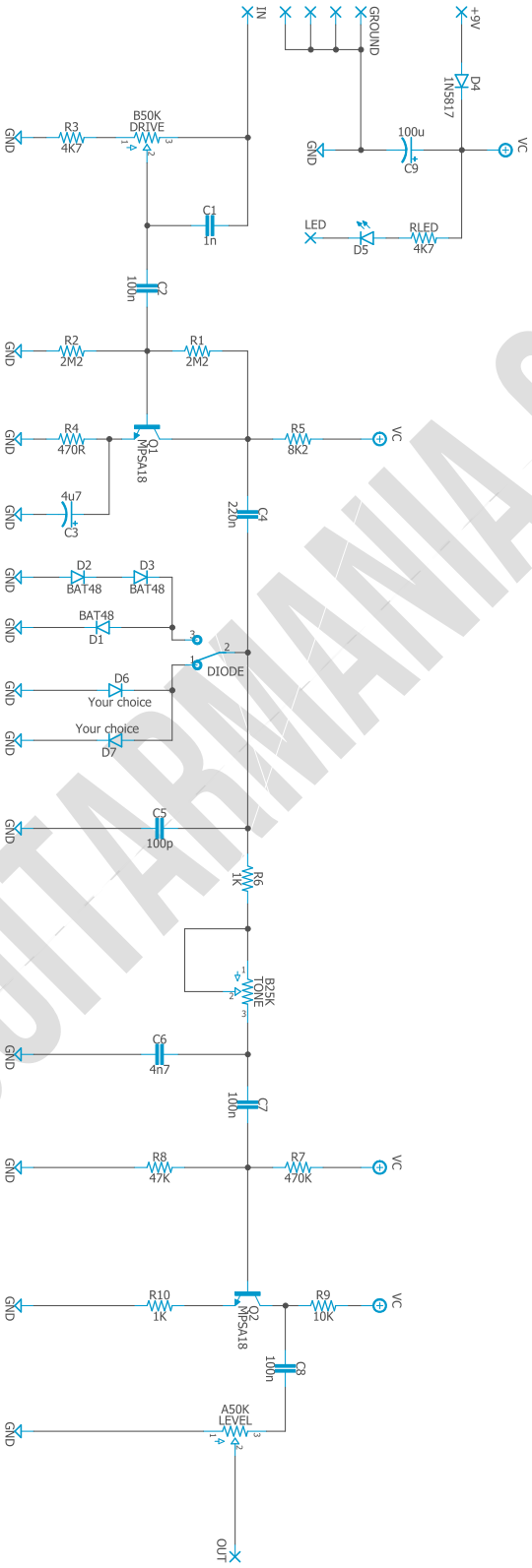
Electrolytics Capacitors		
Qty	**Value**	**Parts**
1	100u	C9
1	4u7	C3

Potentiometers		
Qty	**Value**	**Parts**
1	A50K	LEVEL
1	B25K	TONE
1	B50K	DRIVE

Transistors		
Qty	**Value**	**Parts**
2	MPSA18	Q1, Q2

Diods		
Qty	**Value**	**Parts**
1	1N5817	D4
3	BAT48	D1, D2, D3
1	3mm red LED	D5
2	Your choice	D6, D7

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!