

Patreon

Based on:

Wampler Pantheon

Effect type:

KOT Style Transparent overdrive

Build difficult:

Intermediate

Amount of parts:

Average, total 63 components

Technology:

Dual opamp

Power consumption:

9V

Enclosure type:

125b

Get your board at:

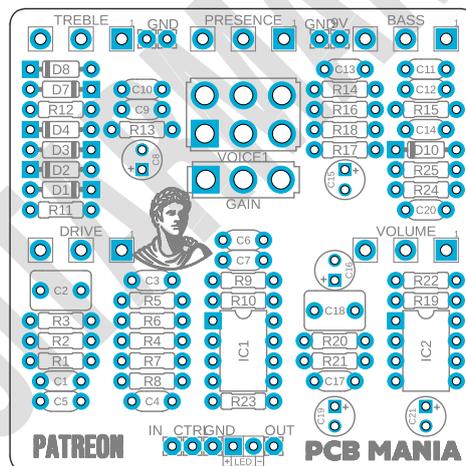
[Patreon](#)

Get your kit at:

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

Project overview:

Inspired by Wampler Pantheon Overdrive which in turn is a modern version of the long-discontinued, high-demanded Marshall Bluesbreaker Stompbox. It delivers that unique transparent British wave present in many of the now legendary Marshall's predecessors.



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Introduction

The classics are classics for a reason. So, it makes sense the Patreon is in high demand. Its capacity to offer that vintage high-searched sound plus some fresh features and modern functionality makes it popular among all those searching for a classically inspired drive pedal.

Equipped with a powerful EQ section that allows you to tailor your sound and an active Baxandall bass control so you can match the pedal to any amp/cab.

The Patreon delivers everything from sweet and creamy push to that cranked British Grind, with that particular way of introducing harmonics and grit into your specific tone without altering its natural sound. You can be confident that that tone you've already worked so hard to get will not acquire any drowning to your touch or needless extra compression or grit.

Controls

- Bass
- Drive
- Presence
- Treble
- Volume

Bill of materials

Resistors	
Part	Value
R1	1K
R2	1M
R3	1M
R4	47K
R5	1M
R6	1M
R7	33K
R8	27K
R9	10K
R10	220K
R11	6K8
R12	1K
R13	6K8
R14	100k
R15	10k
R16	220K
R17	390K
R18	68K
R19	1M
R20	4K7
R21	100K
R22	1K
R23	4K7
R24	10K
R25	10K

Capacitors	
Part	Value
C1	47p
C2	1u
C3	47p
C4	10n
C5	10n
C6	100n
C7	100P
C9	10n
C10	10n
C11	470p
C12	4n7
C13	330p
C14	3n3
C17	47p
C18	1u
C20	100n

Electrolytics Capacitors	
Part	Value
C8	4u7
C15	4u7
C16	1u
C19	100u
C21	10u

Potentiometers	
Part	Value
BASS	B1M
DRIVE	100K B
PRESENCE	B50K
TREBLE	25K B
VOLUME	A100 K

IC	
Part	Value
IC1	JRC4580
IC2	JRC4580

Switches	
Part	Value
GAIN	SPDT Toggle (On/Off/On)
VOICE	SPDT Toggle

Diodes	
Part	Value
D1	1N4148
D2	1N4148
D3	1N4148
D4	1N4148
D7	1N4148
D8	1N4148
D10	1N5817
LED	3mm Red LED

Shopping list

Resistors		
Qty	Value	Parts
1	100K	R21
1	100k	R14
3	10K	R9, R24, R25
1	10k	R15
3	1K	R1, R12, R22
5	1M	R2, R3, R5, R6, R19
2	220K	R10, R16
1	27K	R8
1	33K	R7
1	390K	R17
1	47K	R4
2	4K7	R20, R23
1	68K	R18
2	6K8	R11, R13

Capacitors		
Qty	Value	Parts
1	100P	C7
2	100n	C6, C20
4	10n	C4, C5, C9, C10
2	1u	C2, C18
1	330p	C13
1	3n3	C14
1	470p	C11
3	47p	C1, C3, C17
1	4n7	C12

Electrolytics Capacitors		
Qty	Value	Parts
1	100u	C19
1	1u	C16
2	4u7	C8, C15
1	C101	C21

Potentiometers		
Qty	Value	Parts
1	100K B	DRIVE
1	25K B	TREBLE
1	A100 K	VOLUME
1	B1M	BASS
1	B50K	PRESENCE

IC		
Qty	Value	Parts
2	JRC4580	IC1, IC2

Switches		
Qty	Value	Parts
1	SPDT Toggle (On/Off/On)	GAIN
1	SPDT Toggle	VOICE

Diodes		
Qty	Value	Parts
6	1N4148	D1, D2, D3, D4, D7, D8
1	1N5817	D10

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

IMPORTANT

Patreon's first release (giveaway) has the two toggles too close to each other. You will have to place the gain switch off-board to solve this issue.

If you had one of these boards and paid the full price, please contact us and ship you the new one for free.

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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