Djentleman

Based on:
Abasi Pathos

Number of parts:
High, total 89 components

Enclosure type:
125b

Effect type:
Overdrive

Technology:
Dual Op Amp

Get your board at:
Djentleman

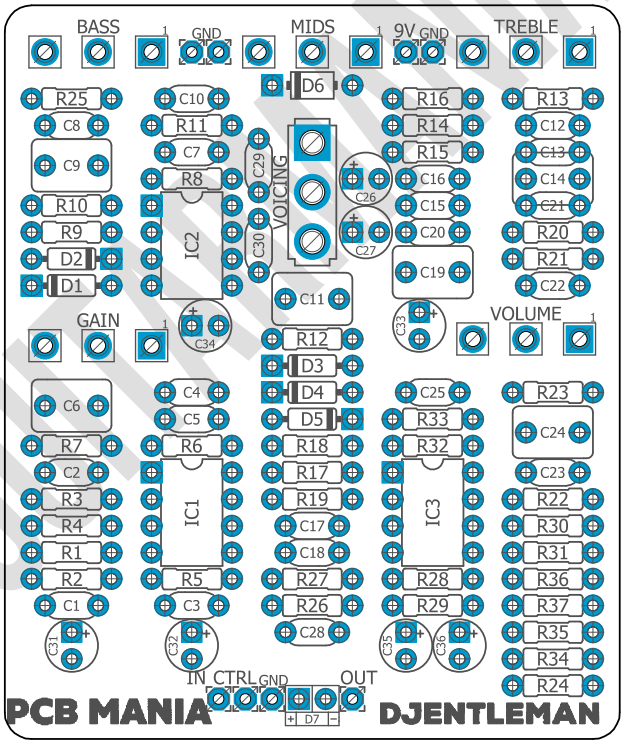
Build difficult:
Advanced

Power consumption:
9V

Get your kit at:
Das Musikding (Europe)

Project overview:

This is a distinctive board designed to appeal to the needs of versatile guitarists everywhere. Whether you want an impressive sustain, crunchy attack, full-blown distortion, or other drive effects, Djentleman pedal delivers. And its 3-band EQ gives you the tonal control you need to fit into any mix.



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Introduction

The Pathos is the first design to emerge from the collaboration between Tosin Abasi, acclaimed guitarist of Animals as Leaders, and the pedal guru Brian Wampler. The result? A pedal that performs so well that it may be the only overdrive your pedalboard will need.

Djentleman is the perfect PCB for those who demand both detail and dynamism. Its high-gain overdrive/distortion circuitry provides the killer tone you need for any performance, while its various controls let you sculpt your sound to perfection. Whether you're playing on stage or in the studio, Djentleman will give you the edge you need to rock out like a true champion!

With a straightforward set of controls: bass, mid, treble, volume, and gain knobs and a mini-toggle switch for "smooth" or "edge" voicings, Djentleman can accomplish lots of great stuff.

The first thing you will notice is that its dynamic range can get genuinely impressive in certain settings. Just for fun, try this: get your guitar volume knob in the lowest reaches of its output, and notice how you can still reach clear arpeggiated, open-voiced, triad figures. Impressive.

It also has no problem dealing with complex harmonies from modern jazz. Such harmonic structures are often full of intricate dissonances, and many amps and pedals can obscure such details. The Djentleman, however, easily handles and communicates these sonorities. This pedal will inspire you to explore more chord shapes that usually wouldn't work in high-gain environments.

Maximum gain is excellent for muted, single-note riffs. The setting can even work well for intricate chords. Complex chords display pleasingly whether you brushed across the strings one at a time or struck the whole chord with force.

Don't be fooled by the term overdrive; this board can go above and beyond. It’s time to build the perfect pedal for the modern gentleman.

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Controls

Potentiometers

- Bass
- Mids
- Treble
- Gain
- Volume

Switches

- Voicing

Bill of materials

Resistors	
Part	**Value**
R1	1m
R2	1k
R3	10k
R4	470k
R5	6k8
R6	1k
R7	10k
R8	470k
R9	1k
R10	47k
R11	100k
R12	1k
R13	470k
R14	4k7
R15	10k
R16	1k
R17	470k
R18	47k
R19	47k
R20	33k
R21	33k
R22	680k
R23	10k
R24	4k7
R25	10r
R26	10k
R27	10k
R28	10k
R29	10k
R30	10k
R31	10k
R32	10k
R33	10k
R34	10k
R35	10k
R36	10k
R37	10k

Capacitors	
Part	**Value**
C1	220p
C2	220n
C3	33n
C4	560p
C5	220n
C6	1u
C7	220p
C8	220n
C9	1u
C10	220p
C11	1u
C12	4n7
C13	47n
C14*	1u
C15	47n
C16	100n
C17	470p
C18	47n
C19	1u
C20	100n
C21	47n
C22	330p
C23	330p
C24	1u
C25	4n7
C28	100n
C29	100n
C30	100n

Electrolytic Capacitors	
Part	**Value**
C26	100u
C27	100u
C31	100u
C32	100u
C33	100u
C34	100u
C35	100u
C36	100u

Switches	
Part	**Value**
VOICING	SPDT On/On
3PDT Stomp foot	-

Potentiometers	
Part	**Value**
BASS	100K B
GAIN	100K A
MIDS	100K A
TREBLE	50K A
VOLUME	100K A

Trimpots	
Part	**Value**
IC1	JRC4580
IC2	JRC4580
IC3	JRC4580

Diodes	
Part	**Value**
D1	1N4148
D2	1N4148
D3	1N4148
D4	1N4148
D5	1N4148
D6	1N5817
D7	3mm red LED

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Shopping list

Resistors		
Qty	**Value**	**Parts**
1	100k	R11
16	10k	R3, R7, R15, R23, R26, R27, R28, R29, R30, R31, R32, R33, R34, R35, R36, R37
1	10r	R25
3	1k	R6, R12, R16
2	1k	R2, R9
1	1m	R1
2	33k	R20, R21
2	470k	R4, R13
2	470k	R8, R17
2	47k	R18, R19
1	47k	R10
1	4k7	R24
1	4k7	R14
1	680k	R22
1	6k8	R5

Capacitors		
Qty	**Value**	**Parts**
2	100n	C16, C20
3	100n	C28, C29, C30
6	1u	C6, C9, C11, **C14***, C19, C24
1	220n	C5
2	220n	C2, C8
3	220p	C1, C7, C10
1	330p	C22
1	330p	C23
1	33n	C3
1	470p	C17
4	47n	C13, C15, C18, C21
1	4n7	C12
1	4n7	C25
1	560p	C4

Electrolytic Capacitors		
Qty	**Value**	**Parts**
8	100u	C26, C27, C31, C32, C33, C34, C35, C36

Switches		
Qty	**Value**	**Parts**
1	SPDT On/On	VOICING
1	3PDT Stomp foot	-

Potentiometers		
Qty	**Value**	**Parts**
3	100K A	GAIN, MIDS, VOLUME
1	100K B	BASS
1	50K A	TREBLE

IC		
Qty	**Value**	**Parts**
3	JRC4580	IC1, IC2, IC3

Diodes		
Qty	**Value**	**Parts**
5	1N4148	D1, D2, D3, D4, D5
1	1N5817	D6
1	3mm red LED	D7

Jacks		
Qty	**Value**	**Parts**
1	CD Jacks	-
2	Audio Jacks	-

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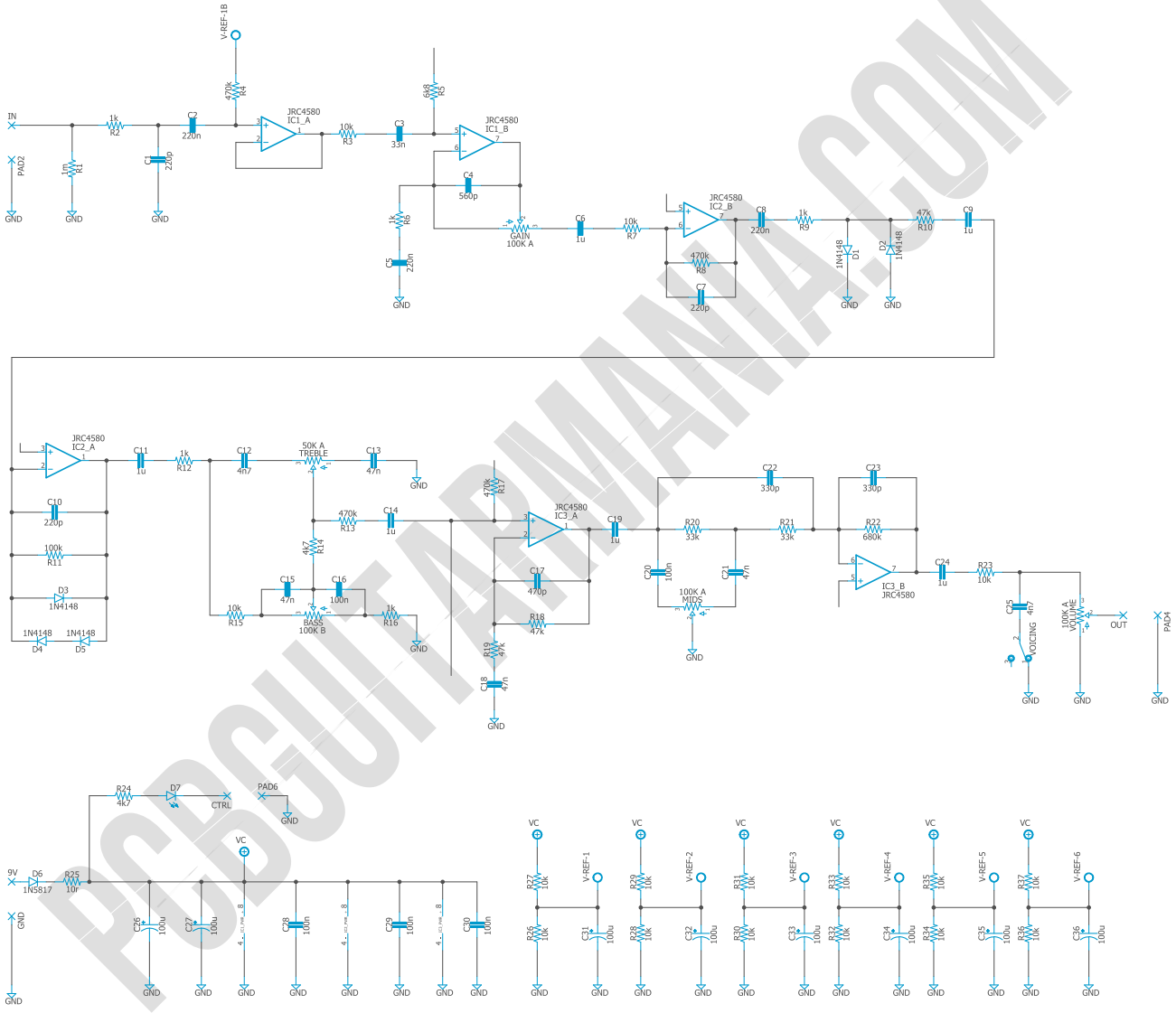
Schematic



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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

C14*
In the 1v version of this board, please use an MLCC or a Tantalum capacitor, which is smaller and can fit. This problem doesn't exist in the following versions so you can use any type of capacitor.

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.

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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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