Kloned Centaur

Based on:
Klon Centaur

Amount of parts:
Average, total 58 components

Enclosure type:
125b

Effect type:
Transparent Overdrive

Technology:
Op Amp

Get your board at:
Kloned Centaur

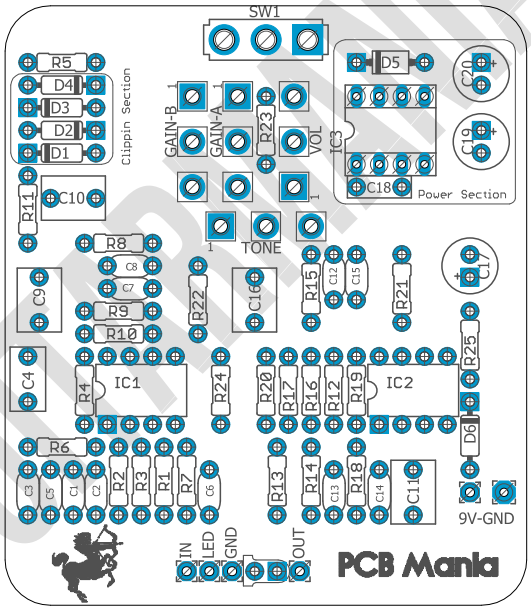
Build difficult:
Intermediate

Power consumption:
9V

Get your kit at:
Das Musikding (Europe)

Project overview:

Kloned Centaur is based on the legendary Klon Centaur, keeping the original's soul but with some modern features.



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Introduction

This mythical creature is one of the most highly regarded and in-demand effect pedals ever created. Appreciated for its creamy overdrive, it's also used as a Clean Boost for warming up the signal. This transparent overdrive adds gain to your signal without significantly altering the tone of the guitar.

The introduction of the Klon back in the early to mid '90s is arguably one of the most relevant events in the history of overdrive pedals.

His cloned brother is as fabled as the original but adding some modern features. It's ready to be wired as True Bypass, has a switch for the Diode clipping selection, and comes in a tight design made to fit in a 125B Enclosure.

Are you ready to add this mythological board to your collection?

Controls

- TONE
- VOL
- GAIN

Bill of materials

Capacitors	
Part	**Value**
C1	220pf
C2	100n
C3	68n
C4	390n
C5	100n
C6	68n
C7	82n
C8	390pf
C9	1uf
C10	1uf
C11	1uf
C12	2n2
C13	27n
C14	1n
C15	3n9
C16	1uf
C17	100uf
C18	100n
C19	10uf
C20	10uf

Diodes	
Part	**Value**
D1	1n34a
D2	1n34a
D3	Your Choice
D4	Your Choice
D5	Zener 12v
D6	1n5817

Pots	
Part	**Value**
Gain	100k B Dual
Tone	10k B
Vol	10k A

Resistors	
Part	**Value**
R1	2m2
R2	1k
R3	1m
R4	5k1
R5	1k5
R6	1k
R7	10k
R8	2k
R9	15k
R10	422k
R11	1k
R12	47k
R13	1k5
R14	15k
R15	22k
R16	27k
R17	12k
R18	390k
R19	100k
R20	1k8
R21	100k
R22	4k7
R23	470r
R24	4k7
R25	22r

IC	
Part	**Value**
IC1	TL072
IC2	TL072
IC3	TC 1044SCPA

Switch	
Part	**Value**
SW1	Spdt on-on

Shopping list

Resistors		
Qty	Value	Parts
1	12k	R17
2	15k	R9, R14
3	1k	R2, R6, R11
2	1k5	R5, R13
1	1k8	R20
1	1m	R3
1	390k	R18
1	422k	R10
1	470r	R23
1	47k	R12
2	4k7	R22, R24
1	5k1	R4
1	22k	R15
1	22r	R25
1	27k	R16
1	2k	R8
1	2m2	R1
1	10k	R7
2	100k	R19, R21

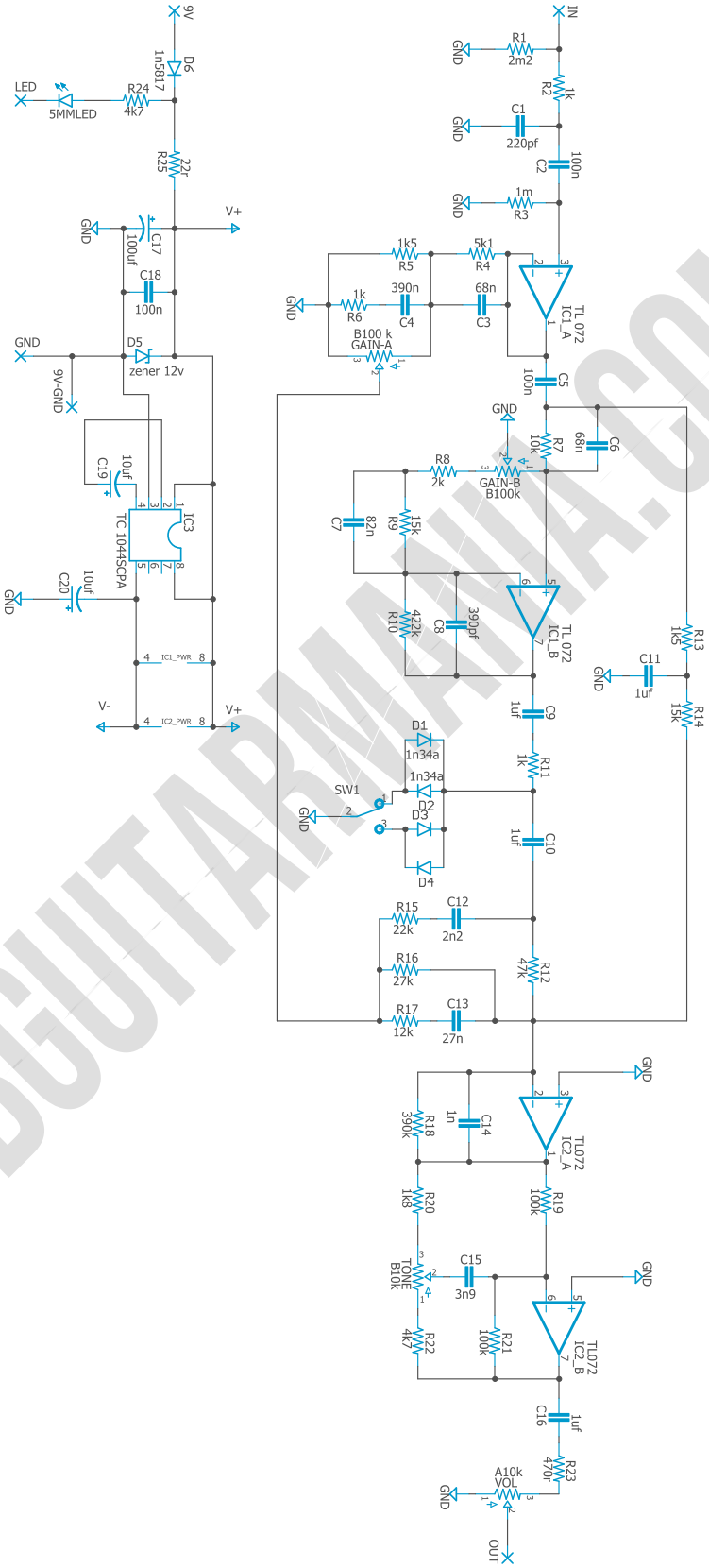
IC		
Qty	Value	Parts
1	TC 1044SCPA	IC3
2	TL072	IC1, IC2

Diodes		
Qty	Value	Parts
1	LED 3mm/5mm	5MMLED
2	1n34a	D1, D2
1	1n5817	D6
1	zener 12v	D5

Capacitors		
Qty	Value	Parts
2	10uf	C19, C20
2	100n	C2, C5
1	100n	C18
1	100uf	C17
1	1n	C14
4	1uf	C9, C10, C11, C16
1	220pf	C1
1	27n	C13
1	2n2	C12
1	390n	C4
1	390pf	C8
1	3n9	C15
2	68n	C3, C6
1	82n	C7

Pots		
Qty	Value	Parts
1	A10k	VOL
1	B100k dual	GAIN-B
1	B10k	TONE

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.

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