

Uberknall + Amp Tonestack

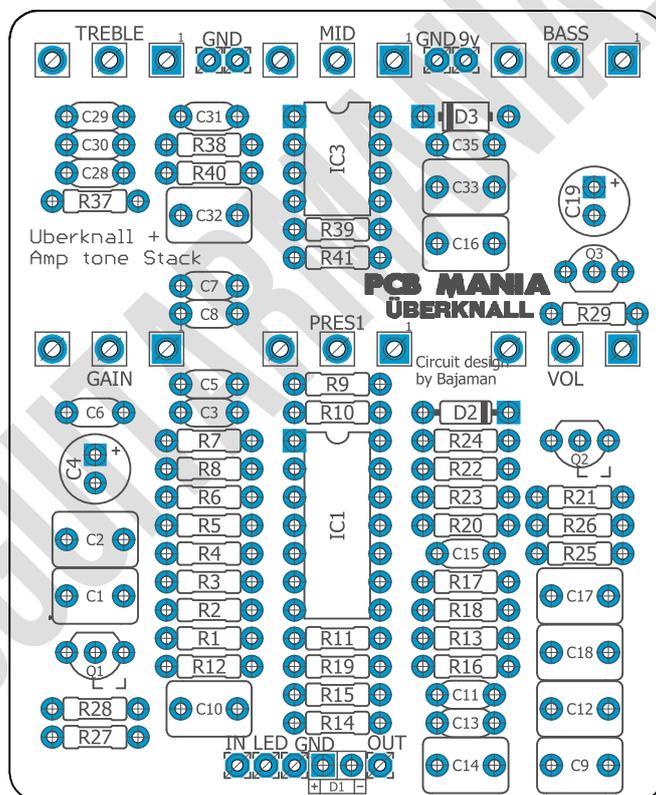
Based on:
Bogner Überschall Pre-amp
Effect type:
Overdrive
Build difficult:
Advanced

Number of parts:
High, total 78 components
Power consumption:
9V
Enclosure type:
125b

Get your board at:
[Uberknall + Amp Tonestack](#)
Get your kit at:
[Das Musikding \(Europe\)](#)

Project overview:

This preamp inspired by Bogner Überschall, a legend in the world of high-end, high-gain guitar amplification comes with an amp tone stack section that will grant you a new level of frequency control.



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

As you may know from our other Preamp projects Designed by Bajaman, we love his circuits, the authenticity of the sound compared to the real amps, the response, the air they are moving, or the charm they bring depending on the model and well.... this time he designed one that will smash you to the ground, eat you alive and spit you back out before maxing out the gain.

Actually, even I'm surprised that he did this monstrous metal beast based on the fantastic Bogner Überschall™ Tube Head. That one is, as far as my knowledge goes, the most brutal amp out there. Believe me; I tried them all. Even the Diezel VH4™ was just designed because Peter Diezel was so flashed by this amp that he wanted to build something similar in brutality and sound.

If you're looking for super heavy metal tones, you are in the right place. This version comes with an Amp Tone Stack section that adds Treble, Bass, Midrange and Presence in addition to the Volume and Gain knobs of present in our Uberknall Preamp. [Click here for more information.](#)

Controls

Potentiometers

- Bass
- Gain
- Mid
- Pres1
- Treble
- Vol

Bill of materials

Resistors	
Part	Value
R1	1M5
R2	1M
R3	10K
R4	470K
R5	6K8
R6	1K8
R7	2K7
R8	1K5
R9	10K
R10	10K
R11	2K7
R12	1K
R13	1K
R14	4K7
R15	6K8
R16	6K8
R17	820R
R18	2K7
R19	1K
R20	10K
R21	10K
R22	2K7
R23	1K
R24	2K2
R25	1M
R26	10K
R27	4K7
R28	10K
R29	10K
R37	47k
R38	22k
R39	1M
R40	4k7
R41	1k

Capacitors	
Part	Value
C1	1u
C2	1u
C3	22n
C5	10n
C6	4n7
C7	100n
C8	560p
C9	1u
C10	1u
C11	2n2
C12	1u
C13	39n
C14	1u
C15	3n9
C16	1u
C17	1u
C18	1u
C28	680p
C29	22n
C30	22n
C31	3n3
C32	1U
C33	1u
C35	100n

Electrolytics Capacitors	
Part	Value
C4	2u2
C19	220u

Switches	
Part	Value
3PDT Stomp foot	-

Potentiometers	
Part	Value
BASS	A 1M
GAIN	B100K
MID	A 25k
PRES1	B 25k
TREBLE	B 250k
VOL	B100K

IC	
Part	Value
IC1	TL074
IC3	TL062

Transistors	
Part	Value
Q1	J201
Q2	J201
Q3	BC547B

Diodes	
Part	Value
D1	3mm red LED
D2	1N4148
D3	1n5817

Jacks	
Part	Value
DC Jack	-
Audio Jacks	-

Shopping list

Resistors		
Qty	Value	Parts
8	10K	R3, R9, R10, R20, R21, R26, R28, R29
4	1K	R12, R13, R19, R23
1	1K5	R8
1	1K8	R6
3	1M	R2, R25, R39
1	1M5	R1
1	1k	R41
1	22k	R38
1	2K2	R24
4	2K7	R7, R11, R18, R22
1	470K	R4
1	47k	R37
3	4K7	R14, R27, R40
3	6K8	R5, R15, R16
1	820R	R17

Capacitors		
Qty	Value	Parts
2	100n	C7, C35
1	10n	C5
11	1u	C1, C2, C9, C10, C12, C14, C16, C17, C18, C32, C33
3	22n	C3, C29, C30
1	2n2	C11
1	39n	C13
1	3n3	C31
1	3n9	C15
1	4n7	C6
1	560p	C8
1	680p	C28

Electrolytics Capacitors		
Qty	Value	Parts
1	220u	C19

1	2u2	C4
---	-----	----

Switches		
Qty	Value	Parts
1	3PDT Stomp foot	-

Potentiometers		
Qty	Value	Parts
1	A 1M	BASS
1	A 25k	MID
1	B 250k	TREBLE
1	B 25k	PRES1
2	B 100K	GAIN, VOL

IC		
Qty	Value	Parts
1	TL074	IC1
1	TL062	IC3

Transistors		
Qty	Value	Parts
1	BC547B	Q3
2	J201	Q1, Q2

Diodes		
Qty	Value	Parts
1	1N4148	D2
1	1n5817	D3
1	3mm red LED	D1

Qty	Value	Parts
1	DC Jack	-
2	Audio Jacks	-

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!