

# UberBolt

## Based on:

JHS Superbolt

## Effect type:

Old-school overdrive preamp

## Build difficult:

Intermediate

## Number of parts:

Average, total 49 components

## Technology:

Jfet N-Channel Transistor

## Power consumption:

9V

## Enclosure type:

125b

## Get your board at:

[UberBolt](#)

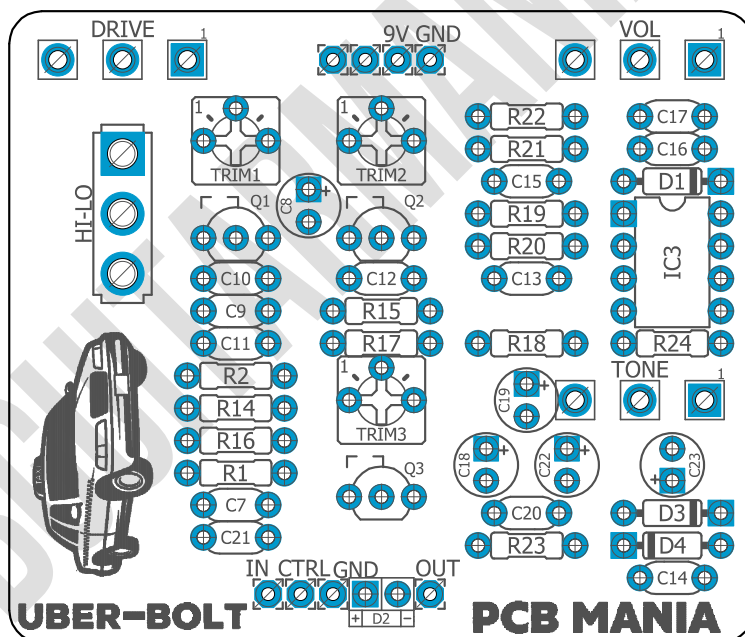
## Get your kit at:

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

## Project overview:

UberBolt is the newest and improved version of Superbolt, one of the most distinguished pedals in the history of JHS, a stompbox that managed to recreate the classic sound of a Supro amps of the 1960.

It's so acclaimed because tons of guitarists out there love the classic, crunchy, old-school overdrive tones with plenty of warmth and roundness the pedal has to offer. If you are one of them, this PCB has been specially designed for you!



# 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

---

Hey! Would you like to have a pedal that lets you experience the feel and sound of the original amp that inspired players like Jimmy Page, Brian Setzer, and Switchfoot's Drew Shirley? What are you waiting for then?! Just call an UberBolt and ride it into the homeland of the classic, amp-like rock tones. Just a warning: UberBolt can drive you through nasty tonal roads. At lower settings, you get a more subtle, darker tone. And since it's an updated version of the original, this pedal boasts an improved taper on the volume control for a wider sweet spot.

Now that you are in, let's check what this great pedal can do. Fits of all, notice that there's no spiky, modern-style distortion to be found here. The control set is stray forward and will lead you exactly where you want to go:

A Volume knob that doesn't need to turn it much to get some severe overdrive—a Tone knob for adjusting the brightness and a Drive knob for the gain.

The gain switch allows you to switch between two different styles of overdrive. Put it in the down position to achieve smoother and less aggressive tones that enable you to emulate the sound of an amp that's just breaking up into overdrive - ideal for blues-like styles. Change it to the up position for a dirtier tone with higher headroom and upper-mid emphasis for that classic heavy rock tone.

## Controls

---

### *Potentiometers*

- Drive
- Tone
- Vol

### *Switches*

- Hi-Lo

# Bill of materials

Resistors	
Part	Value
R1	1m
R2	120k
R14	1m
R15	1k5
R16	470k
R17	2k7
R18	10k
R19	470k
R20	330r
R21	12k
R22	12k
R23	4k7
R24	10k

Capacitors	
Part	Value
C7	22n
C9	470p
C10	4n7
C11	4n7
C12	470p
C13	10n
C14	4n7
C15	10n
C16	3n3

C17	3n3
C20	100n
C21	100n

Electrolytic Capacitors	
Part	Value
C8	33u
C18	100u
C19	10u
C22	10u
C23	10u

Potentiometers	
Part	Value
DRIVE	500K A
TONE	500K A
VOL	50K A

Trimpots	
Part	Value
TRIM1	100k
TRIM2	100k
TRIM3	100k

IC	
Part	Value
IC3	TC1044SCPA

IC3	TC1044SCPA
-----	------------

Switches	
Part	Value
Hi-LO	SPDT On/On
-	3PDT Stomp foot

Transistors	
Part	Value
Q1	J201
Q2	J201
Q3	J201

Diodes	
Part	Value
D1	1n5817
D2	3mm red LED
D3	1n5817
D4	1n5817

Jacks	
Part	Value
-	DC JACK
-	AUDIO JACK
-	AUDIO JACK

# Shopping list

Resistors		
Qty	Value	Parts
2	10k	R18, R24
1	120k	R2
2	12k	R21, R22
1	1k5	R15
2	1m	R1, R14
1	2k7	R17
1	330r	R20
2	470k	R16, R19
1	4k7	R23

Capacitors		
Qty	Value	Parts
2	100n	C20, C21
2	10n	C13, C15
1	22n	C7
2	3n3	C16, C17
2	470p	C9, C12
3	4n7	C10, C11, C14

Electrolytic Capacitors		
Qty	Value	Parts
1	100u	C18
3	10u	C19, C22, C23
1	33u	C8

Potentiometers		
Qty	Value	Parts
2	500k A	DRIVE, TONE
1	50k A	VOL

Trim pots		
Qty	Value	Parts
3	100k	TRIM1, TRIM2, TRIM3

IC		
Qty	Value	Parts
1	TC1044SCPA	IC3

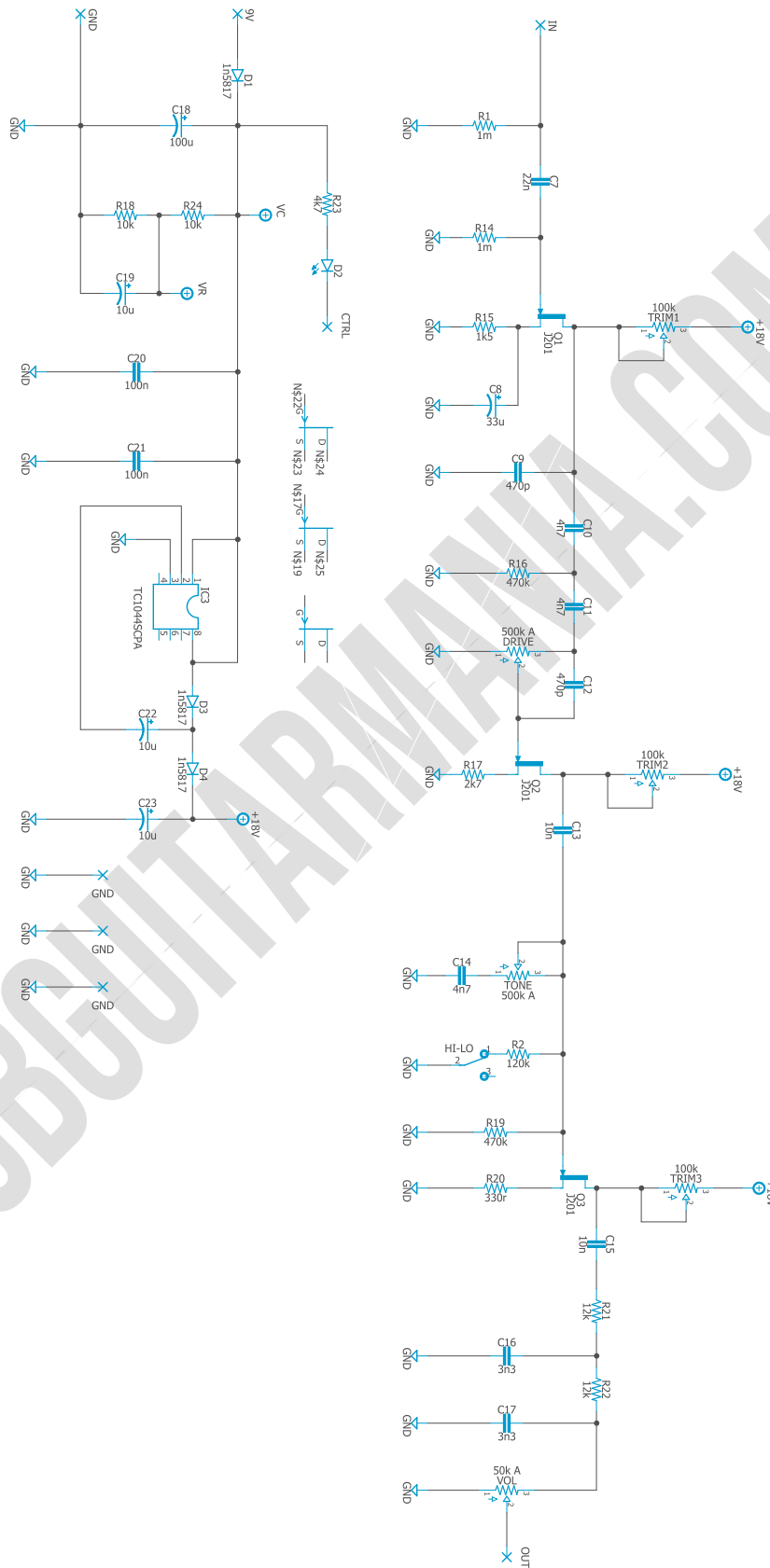
Transistors		
Qty	Value	Parts
3	J201	Q1, Q2, Q3

Switches		
Qty	Value	Parts
1	SPDT On/On	Hi-LO
1	3PDT Stomp foot	-

Diodes		
Qty	Value	Parts
3	1n5817	D1, D3, D4
1	3mm red LED	D2

Jacks		
Qty	Value	Parts
1	DC JACK	-
2	AUDIO JACK	-

# 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 electrolytes can perform better.

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 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, designed 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!