

# Dimehead

**Based on:**  
Randall x2 Warhead

**Effect type:**  
Overdrive

**Build difficult:**  
Advanced

**Number of parts:**  
High, 104 components

**Technology:**  
Monolithic, CMOS switched-capacitor voltage converters

**Power consumption:**  
9V

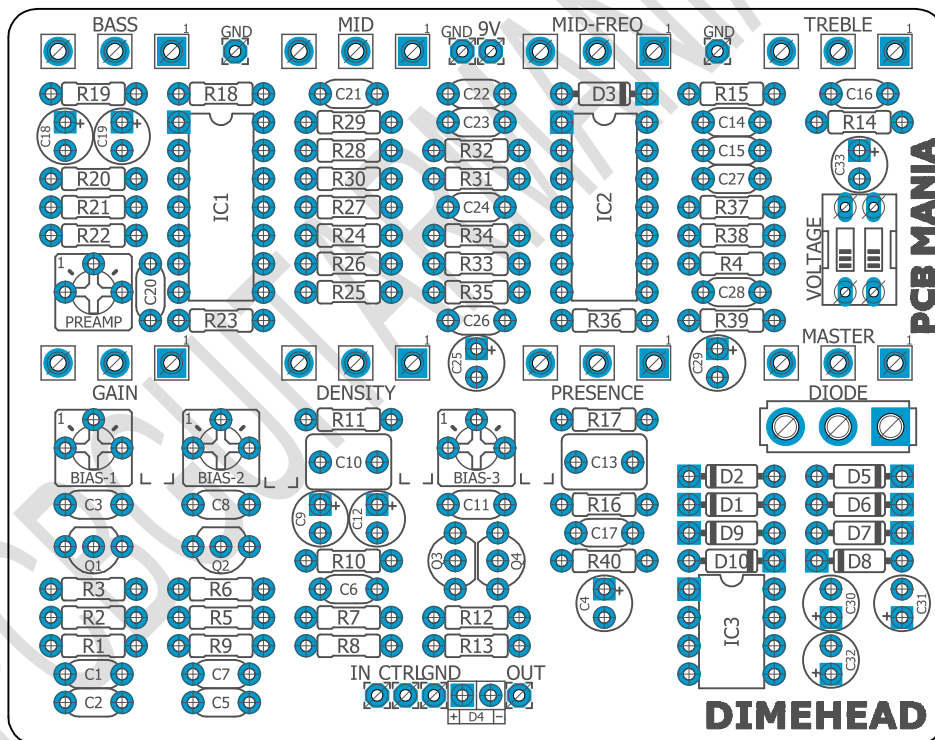
**Enclosure type:**  
125b

**Get your board at:**  
[Dimhead](#)

**Get your kit at:**  
[Das Musikding \(Europe\)](#)

## Project overview:

Dimehead preamp features the famous and hard-to-find Randall Warhead x2 Amp in a box. This awesome-sounding high-gain head makes Dimebag Darrell's those guitar tones iconic in Pantera.



# 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

---

Dimehead is a face melter. This beast of a preamp is all about delivering bone-crushing tones that'll shake the earth beneath your feet.

Designed to meet the demands of metal legends by replicating the Warhead X2 that combines the legendary Randall sounding but with modern-day features, including an extra hi-gain stage.

With its straightforward controls, this pedal keeps things intuitively simple to use while still offering a ton of flexibility for shaping your sound. Whether you're after classic rock vibes or mind-blowing extremes, the mix of active and passive EQ controls has got you covered. If you're a serious hi-gain guitarist on the hunt for the ultimate tone, don't waste another second – grab this bad boy and brace yourself for an epic ride!

**Important:** This circuit features a charge pump on board. When toggle 1 is up the circuit operates on 9v. When toggle 2 is up, the circuit operates on 18v. **Never set both switches up by any circumstances.**

## Controls

---

### *Potentiometers*

- Bass
- Density
- Gain
- Master
- Mif
- Mif-freq
- Presence
- Treble

### *Switches*

- Diode

# Bill of materials

---

Resistors	
Part	Value
R1	4m7
R2	1m
R3	2k2
R4	1k
R5	15k
R6	10k
R7	150k
R8	220k
R9	2k2
R10	2k2
R11	2k2
R12	2k2
R13	4k7
R14	10k
R15	10k
R16	220k
R17	Empty
R18	Empty
R19	4k7
R20	2k2
R21	47k
R22	47k
R23	Empty
R24	10k
R25	22k
R26	4k7
R27	10k
R28	10r
R29	2k2
R30	10k
R31	1k
R32	5k6
R33	2k2
R34	10k
R35	10k
R36	1k

R37	150k
R38	10k
R39	10k
R40	4k7

Capacitors	
Part	Value
C1	10n
C2	47p
C3	2n2
C5	4n7
C6	1n
C7	10n
C8	51p
C10	1u
C11	51p
C13	1u
C14	220n
C15	220n
C16	470p
C17	470pf
C20	33n
C21	47p
C22	100n
C23	10n
C24	47p
C26	10n
C27	47p
C28	22n

Electrolytics Capacitors	
Part	Value
C4	100u
C9	1u
C12	1u
C18	1u
C19	1u

C25	10u
C29	22u
C30	10u
C31	10u
C32	10u
C33	47u

Potentiometers	
Part	Value
BASS	50k B
DENSITY	50k B
GAIN	100k A
MASTER	1M A
MID	50k B
MID-FREQ	100k B
PRESENCE	50k B
TREBLE	50k B

Trim pots	
Part	Value
BIAS-1	100k
BIAS-2	100k
BIAS-3	100k
PREAMP	50k

ICs	
Part	Value
IC1	TL074
IC2	TL074
IC3	MAX1044

Transistors	
Part	Value
Q1	J201
Q2	J201
Q3	J201
Q4	J201

Switches	
Part	Value
DIODE	ON/OFF/ON SPDT
VOLTAGE	SW DIP 2

Diodes	
Part	Value
D1	1n4148
D2	1n4148
D3	1n5817
D4	3mm red LED
D5	1n5817
D6	1n5817
D7	1n5817
D8	1n5817
D9	ZENER
D10	ZENER

# Shopping list

Resistors		
Qty	Value	Parts
10	10k	R6, R14, R15, R24, R27, R30, R34, R35, R38, R39
1	10r	R28
2	150k	R7, R37
1	15k	R5
3	1k	R4, R31, R36
1	1m	R2
2	220k	R8, R16
1	22k	R25
8	2k2	R3, R10, R9, R11, R12, R20, R29, R33
2	47k	R21, R22
4	4k7	R13, R19, R26, R40
1	4m7	R1
1	5k6	R32

Capacitors		
Qty	Value	Parts
1	100n	C22
3	10n	C1, C23, C26
1	1n	C6
2	1u	C10, C13
2	220n	C14, C15
1	22n	C28
1	2n2	C3
1	33n	C20
2	470p	C16, C17
4	47p	C2, C21, C24, C27

1	4n7	C5
2	51p	C8, C11

Electrolytics Capacitors		
Qty	Value	Parts
1	100u	C4
4	10u	C25, C30, C31, C32
4	1u	C9, C12, C18, C19
1	22u	C29
1	47u	C33

Potentiometers		
Qty	Value	Parts
1	100k A	GAIN
1	100k B	MID-FREQ
1	1M A	MASTER
5	50k B	BASS, DENSITY, MID, PRESENCE, TREBLE

Trimpots		
Qty	Value	Parts
3	100k	BIAS-1, BIAS-2, BIAS-3
1	50k	PREAMP

IC		
Qty	Value	Parts
1	MAX1044	IC3
2	TL074	IC1, IC2

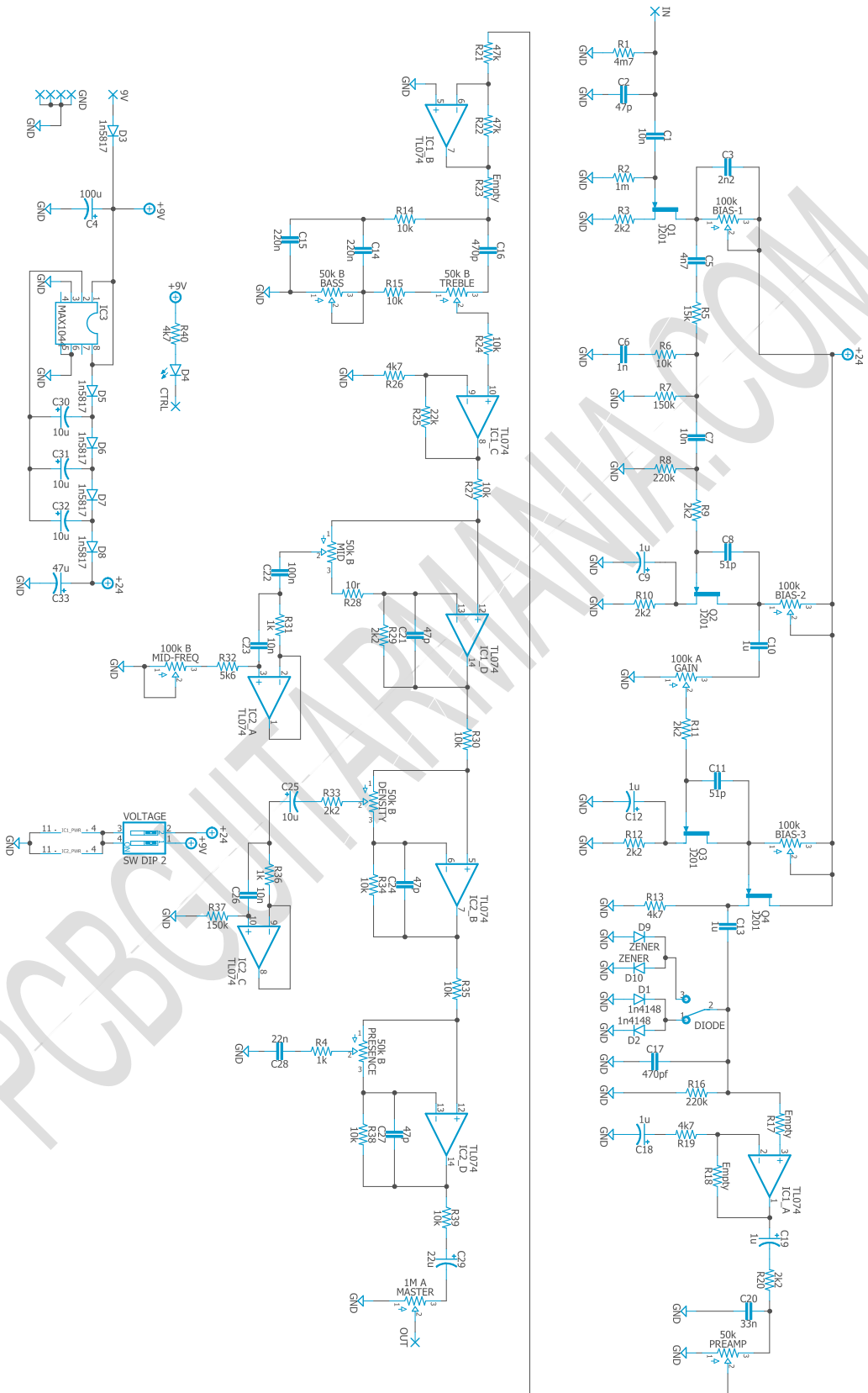
Transistors		
Qty	Value	Parts
4	J201	Q1, Q2, Q3, Q4

Switches		
Qty	Value	Parts
1	ON/OFF/ON SPDT	DIODE
1	SW DIP 2	VOLTAGE
1	3PDT Stomp foot	-

Diodes		
Qty	Value	Parts
2	1n4148	D1, D2
5	1n5817	D3, D5, D6, D7, D8
1	LED.1	D4
2	4v7 zener	D9, D10

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 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

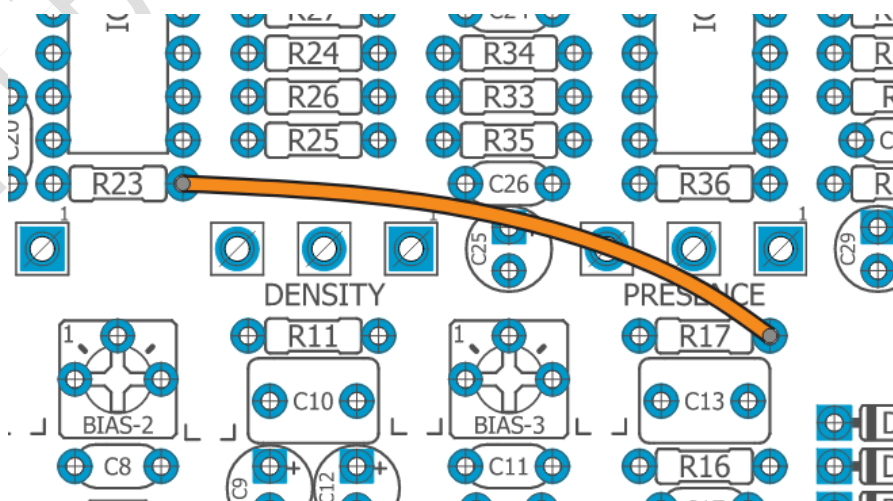
If this is one of your first projects, I recommend you to take a look at our [Pedal Building Guide](#).

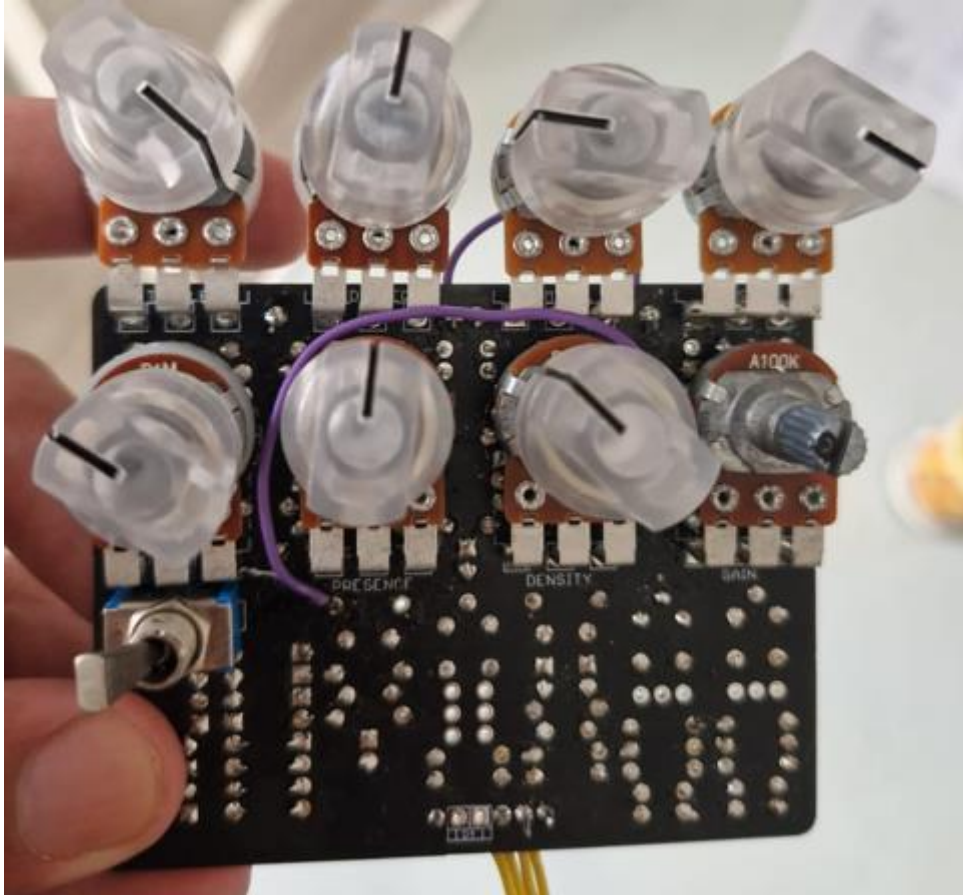
For a successful and tidy build, it's recommended the following order:

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 fix:

You will need to add a jumper from the right pad of R23 to the right pad of R17 to make your board work properly as in the examples below:





### Charge pump:

This circuit features a charge pump on board.  
When toggle 1 is up the circuit operates on 9v.  
When toggle 2 is up, the circuit operates on 18v.  
**Never set both switches up by any circumstances.**

## 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!