# Zombie Choir II

**Based on:**
Zombie Chorus II

**Amount of parts:**
Average, total 48 components

**Enclosure type:**
125b

**Effect type:**
Analog Chorus/Vibrato

**Technology:**
MN3207 Analog Chorus

**Get your board at:**
Zombie Choir II

**Build difficult:**
Advanced

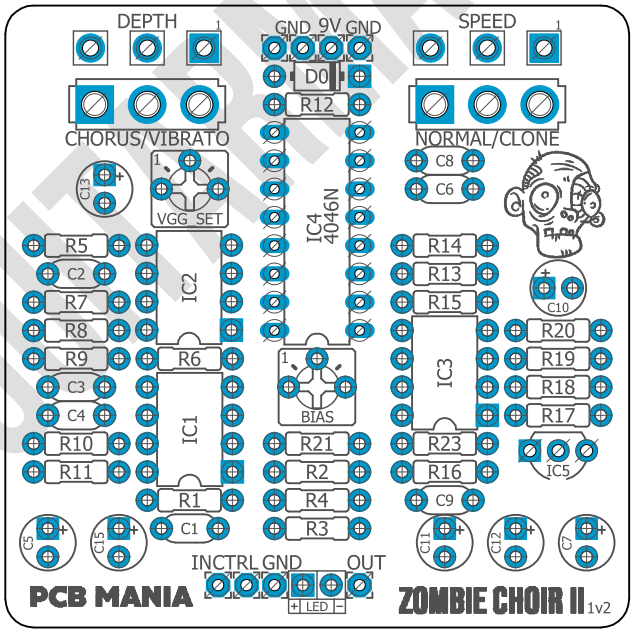
**Power consumption:**
9V

**Get your kit at:**
Das Musikding (Europe)

**Project overview:**

The Zombie Chorus is one pedal you've never heard of outside the DIY pedals community, but it's definitely a classic that deserves a place on each player's pedal board. This circuit was originally designed by John Hollis and has been updated and improved through the years on many online forums.

Here you have our latest version ready to build, so you can make your analog dreams come true with this powerful brain eater Chorus/Vibrato!



# Index



# Introduction

This one is a circuit you cannot buy as a pedal. This makes it rare to own and gives you tones that non-DIY consumers will never have in their hands. The schematic has been around the DIY community for years, and it is pretty fun to mess with. So we simply added every mod we could research to give you all the possible options this weird wobbling twangy chorus can give. We added two toggles to let you choose between chorus and vibrato. Normal mode or its own clone setting. I cannot wait to get feedback on how you guys like it.

# Controls

*Potentiometers*

- Depth
- Speed

*Switches*

- Chorus/Vibrato Toggle
- Normal/Clone Toggle

# Bill of materials

| Resistors | |
|---|---|
| **Part** | **Value** |
| **R1** | 1M |
| **R2** | 10m |
| **R3** | 47k |
| **R4** | 100k |
| **R5** | 10k |
| **R6** | 100k |
| **R7** | 47k |
| **R8** | 47k |
| **R9** | 47k |
| **R10** | 10k |
| **R11** | 1M |
| **R12** | 10k |
| **R13** | 100k |
| **R14** | 68k |
| **R15** | 4m7 |
| **R16** | 47k |
| **R17** | 100k |
| **R18** | 4k7 |
| **R19** | 10k |
| **R20** | 10k |
| **R21** | 4.7k |
| **R23** | 6k8 |

| Capacitors | |
|---|---|
| **Part** | **Value** |
| **C1** | 1n |
| **C2** | 1n |
| **C3** | 220pf |
| **C4** | 2n2 |
| **C6** | 1n |
| **C8** | 1n |
| **C9** | 10n |

| Electrolytic Capacitors | |
|---|---|
| **Part** | **Value** |
| **C5** | 1u |
| **C7** | 47u |
| **C10** | 100u |
| **C11** | 10u |
| **C12** | 100u |
| **C13** | 3u3 |
| **C15** | 1u |

| Potentiometers | |
|---|---|
| **Part** | **Value** |
| **DEPTH** | 100k A |
| **SPEED** | 100k A |

| Trimpots | |
|---|---|
| **Part** | **Value** |
| **BIAS** | 10k |
| **VGG_SET*** | 20k |

| IC | |
|---|---|
| **Part** | **Value** |
| **IC1** | TL062 |
| **IC2** | MN3207 |
| **IC3** | jrc4558 |
| **IC4** | 4046N |
| **IC5** | 78L09 |

| Switches | |
|---|---|
| **Part** | **Value** |
| **Chorus/Vibrato** | SPDT ON/ON |
| **Normal/Clone** | SPDT ON/OFF/ON |

| Diodes | |
|---|---|
| **Part** | **Value** |
| **D0** | 1n5817 |
| **LED** | 3mm red LED |

# Shopping list

| Resistors | | |
|---|---|---|
| **Qty** | **Value** | **Parts** |
| **4** | 100k | R4, R6, R13, R17 |
| **5** | 10k | R5, R10, R12, R19, R20 |
| **1** | 10m | R2 |
| **2** | 1M | R1, R11 |
| **1** | 4.7k | R21 |
| **5** | 47k | R3, R7, R8, R9, R16 |
| **1** | 4k7 | R18 |
| **1** | 4m7 | R15 |
| **1** | 68k | R14 |
| **1** | 6k8 | R23 |

| Capacitors | | |
|---|---|---|
| **Qty** | **Value** | **Parts** |
| **1** | 10n | C9 |
| **4** | 1n | C1, C2, C6, C8 |
| **1** | 220pf | C3 |
| **1** | 2n2 | C4 |

| Electrolytic Capacitors | | |
|---|---|---|
| **Qty** | **Value** | **Parts** |
| **2** | 100u | C10, C12 |
| **1** | 10u | C11 |
| **2** | 1u | C5, C15 |
| **1** | 3u3 | C13 |
| **1** | 47u | C7 |

| Potentiometers | | |
|---|---|---|
| **Qty** | **Value** | **Parts** |
| **2** | 100k A | DEPTH, SPEED |

| Trimpots | | |
|---|---|---|
| **Qty** | **Value** | **Parts** |
| **1** | 10k | BIAS |
| **1** | 20k | **VGG_SET*** |

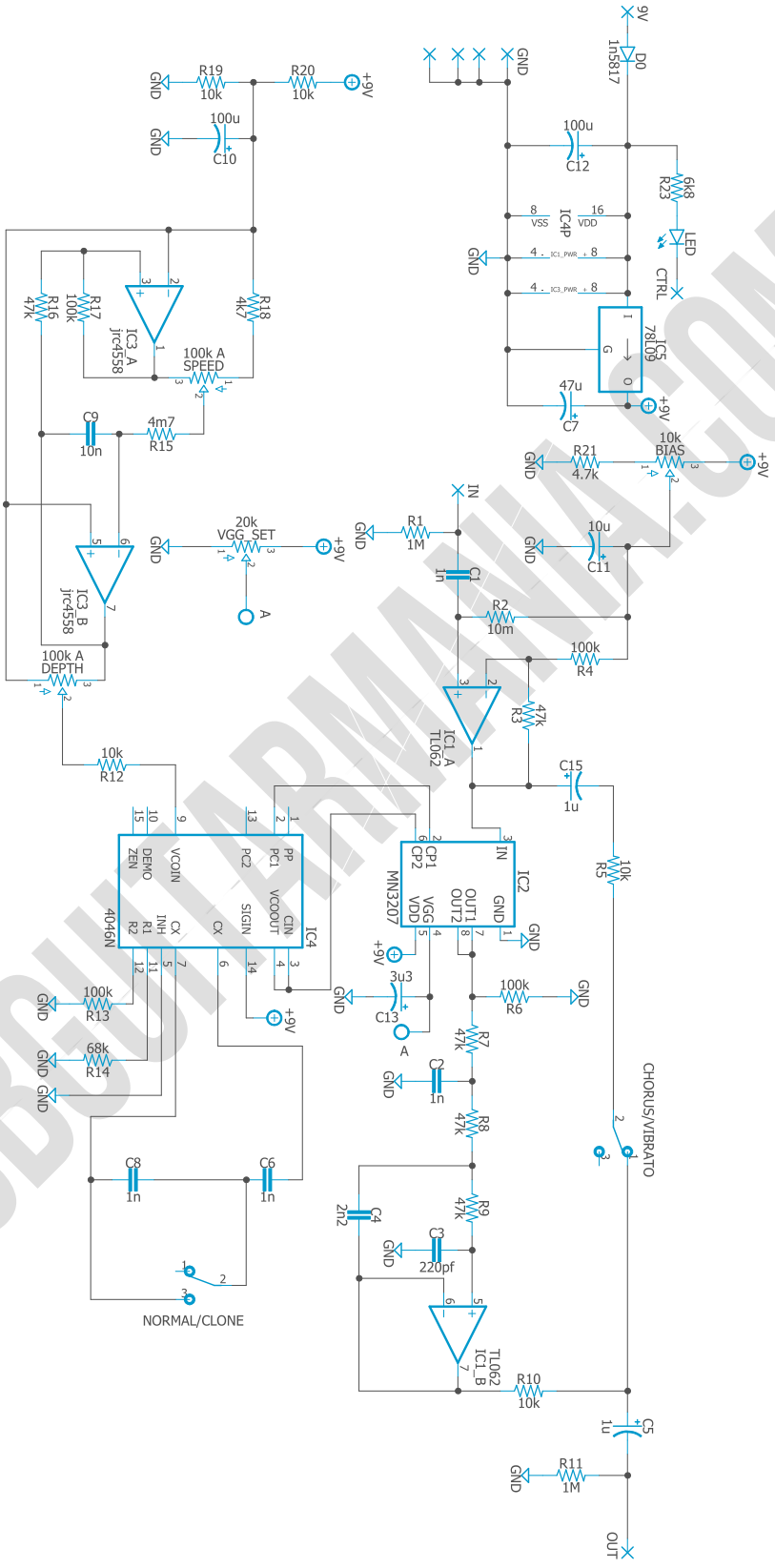
| IC | | |
|---|---|---|
| **Qty** | **Value** | **Parts** |
| **1** | 4046N | IC4 |
| **1** | 78L09 | IC5 |
| **1** | MN3207 | IC2 |
| **1** | TL062 | IC1 |
| **1** | jrc4558 | IC3 |

| Switches | | |
|---|---|---|
| **Qty** | **Value** | **Parts** |
| **1** | SPDT ON/ON | Chorus/Vibrato |
| **1** | SPDT ON/OFF/ON | Normal/Clone |
| **1** | 3PDT Stomp foot | - |

| Diodes | | |
|---|---|---|
| **Qty** | **Value** | **Parts** |
| **1** | 1n5817 | D0 |
| **1** | 3mm red LED | LED |

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

# Schematic



# Components Recommendations

As many people like to experiment some pedals with higher voltage, always ensure the max tolerance of your **electrolytic capacitors** is over 25v.

This board has been tested using Film box capacitors for most of the values over 1nf, and ceramics discs for the ones 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 exclusively 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 on 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

**VGG_SET***

Using Vgg trim you should set (14/15)th of Vdd voltage. So, leg 4 of your MN3207 chip should have 14/15 of voltage on leg 5.

# 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 control slug of your 3PDT.

This board has been designed to match our EZ 3PDT PCB check it here to access to 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 in an A4 page.

# Licensing and Usage

We really appreciate your trust and support buying this PCB, as well as your will to dive into the DIY electronics world. That’s why for us is really important that you can make this project work properly and to enjoy not only the building process, but also to experiment and play with it on your rig.

We try to reply to every question we receive on our email or in our social media, but we try to encourage all our customers to join our PCB Guitar Mania – Builders Group on Facebook, in order to post all your doubts, issues, suggestions or request, as well to share your builds and have some feedback from us and other fellow builders!

All of our projects have been tested following this same guide on their standard configurations. Although, not all of the variations and mods have necessarily been tested. These are suggestions based on the schematic analysis, and on the experiences and opinions of others. Feel free to share with us your opinions and suggestions regarding the mods your own personal experimentation.

These boards may be used for commercial endeavors in any quantity unless specifically noted. No attribution is necessary, though accreditation or a link back is always greatly 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 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 silk screen, 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 own designs, with your brand and logo we could certainly reach an agreement.

Follow us on Instagram and Facebook to stay in tune with the latest projects!