

Death by Flamming Ring

Based on:

DBA Flaming Lips Space Ring

Effect type:

Powerful right modulator

Build difficult:

Intermediate

Amount of parts:

High, total 65 components

Technology:

Dual Op Amp + charge pump

Power consumption:

9V

Enclosure type:

125b

Get your board at:

[Death by Flamming Ring](#)

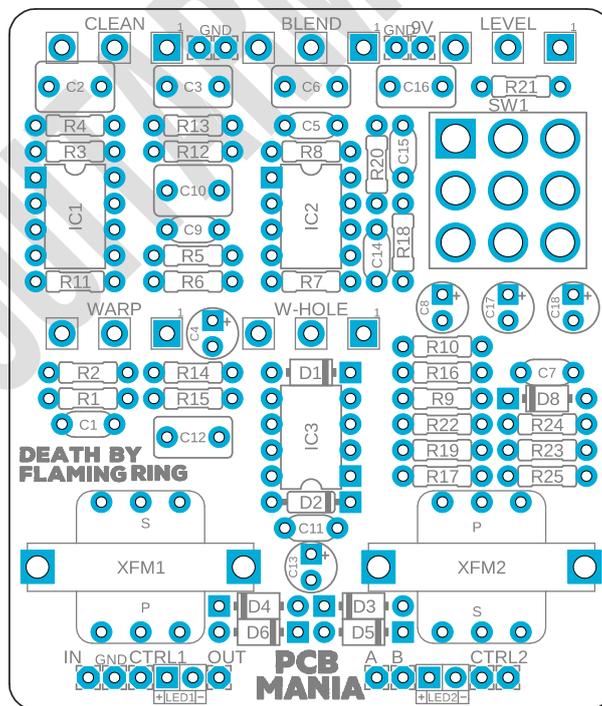
Get your kit at:

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

Project overview:

Yoshimi! Let's show those pink robots what's up!

The Death by Flaming Lips is a pedal hard to describe, but the closest description would probably be a ring modulator tripping at the gates of hell. This crazy device allows you to create the wildest sounds you thought you can't even imagine. The fact that this pedal is based on a discontinued model adds even more to the mystery, but at the same time reassures us that DIY is the way to go, as otherwise it would be next to impossible to explore the sonic chaos generated by this pedal.



Index

1. Project overview
2. Index, Introduction & Controls
3. Bills of Materials, BOM
4. Shopping Lists
5. Components Recommendations
6. Build Notes
7. Schematic
8. Wiring Diagram
9. Drill Template
10. Licensing and Usage

Introduction

It's hard to say that it's possible to improve something that is imperfect by its nature, but we think we found a way! First off, apart from the VOLUME knob found in the original, which allows you to set the overall loudness of the effect, we have also incorporated a BLEND knob which lets you decide how much (or even if any at all!) of the clean signal is mixed with the engaged effect. This addition allows you to tame this crazy unit.

The WARP control is a standard frequency selector found in ring modulators. It's the heart of the controls in this pedal and you'll find yourself turning this pot back and forth like an addict!

We have also included an additional footswitch that enables cross-talk between the ring modulation sections - we called this the MELTDOWN mod and this is the most suitable name for what comes out of the speaker cab when this mode is engaged.

This leads us to the WORMHOLE control as it's only operative when the MELTDOWN mode is active. It allows you to control the cross-talk even further, and if you think that this control would be a great candidate for an expression pedal, then you're in luck - future updates will include an expression pedal option for the WORMHOLE parameter.

With all this said, if you're ready to feel yourself disintegrate, then look no further, as this pedal is an embodiment of a psychedelic experience available to anyone who is ready to give this unique DIY project a chance.

Controls

Potentiometers

- Blend
- Clean
- Level
- W-hole
- Warp

Switches

- Hole
- XYZ
- BYPASS

Bill of materials

Resistors	
Part	Value
R1	1m
R2	1m
R3	540r
R4	100k
R5	681k
R6	10k
R7	681k
R8	1m
R9	27k
R10	43k
R11	47k
R12	100k
R13	510r
R14	1k
R15	1k
R16	10k
R17	681k
R18	10k
R19	681k
R20	1m
R21	47k
R22	CLR
R23	10k
R24	10k
R25	CLR

Capacitors	
Part	Value
C1	100n
C2	1u
C3	470n
C5	330p
C6	470n
C7	22n
C9	100p
C10	1u
C11	100n
C12	470n
C14	100n
C15	330p
C16	470n

Electrolytics Capacitors	
Part	Value
C4	1u
C8	1u
C13	1u
C17	100u
C18	47u

Potentiometers	
Part	Value
BLEND	50k B
CLEAN	250k B
LEVEL	100k A
W-HOLE	20k B
WARP	1m C

IC	
Part	Value
IC1	TL072
IC2	TLC27m2
IC3	LM567n

Transformer	
Part	Value
XFM1	42TM018
XFM2	42TM018

Switches	
Part	Value
HOLE	3PDT
XYZ	3PDT TOGGLE ON/ON
BYPASS	3PDT

Diodes	
Part	Value
D1	1n5227b
D2	1n4001
D3	1n5227b
D4	1n5227b
D5	1n5227b
D6	1n5227b
D8	1n4001
LED 1	3mm Red LED
LED 2	3mm Red LED

Shopping list

Resistors		
Qty	Value	Parts
2	100k	R4, R12
5	10k	R6, R16, R18, R23, R24
2	1k	R14, R15
4	1m	R1, R2, R8, R20
1	27k	R9
1	43k	R10
2	47k	R11, R21
1	510r	R13
1	540r	R3
4	681k	R5, R7, R17, R19
2	CLR	R22, R25

Capacitors		
Qty	Value	Parts
3	100n	C1, C11, C14
1	100p	C9
2	1u	C2, C10
1	22n	C7
2	330p	C5, C15
4	470n	C3, C6, C12, C16

Electrolytics Capacitors		
Qty	Value	Parts
1	100u	C17
3	1u	C4, C8, C13
1	47u	C18

Potentiometers		
Qty	Value	Parts
1	100k A	LEVEL
1	1m C	WARP
1	20k B	W-HOLE
1	250k B	CLEAN
1	50k B	BLEND

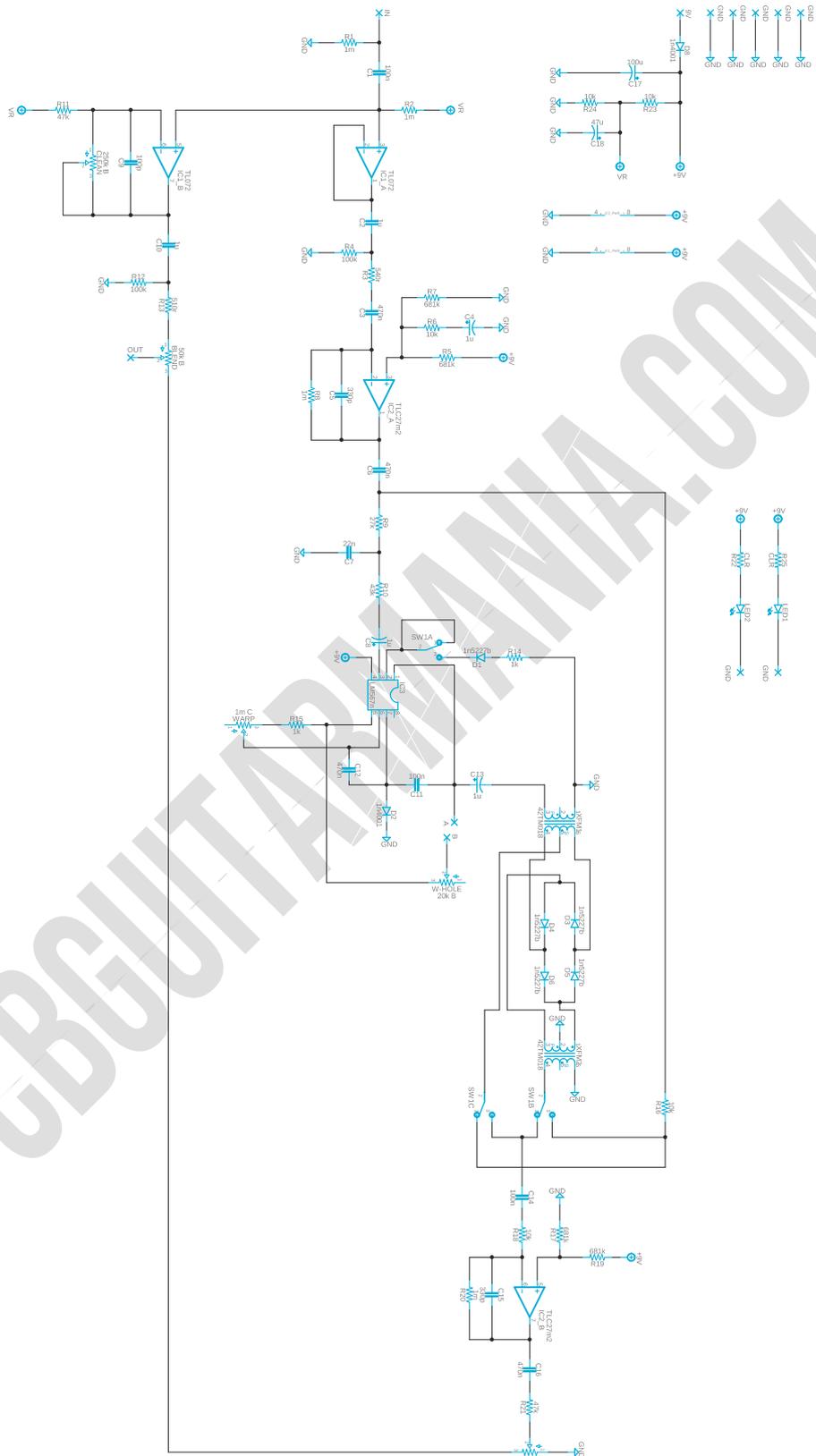
IC		
Qty	Value	Parts
1	LM567n	IC3
1	TL072	IC1
1	TLC27m2	IC2

Transformer		
Qty	Value	Parts
2	42TM018	XFM1

Switches		
Qty	Value	Parts
1	3PDT	HOLE
1	3PDT TOGGLE ON/ON	XYZ
1	3PDT	BYPASS

Diodes		
Qty	Value	Parts
1	1n4001	D2
1	1n4001	D8
5	1n5227b	D1, D3, D4, D5, D6
2	3mm Red LED	LED1, LED2

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:

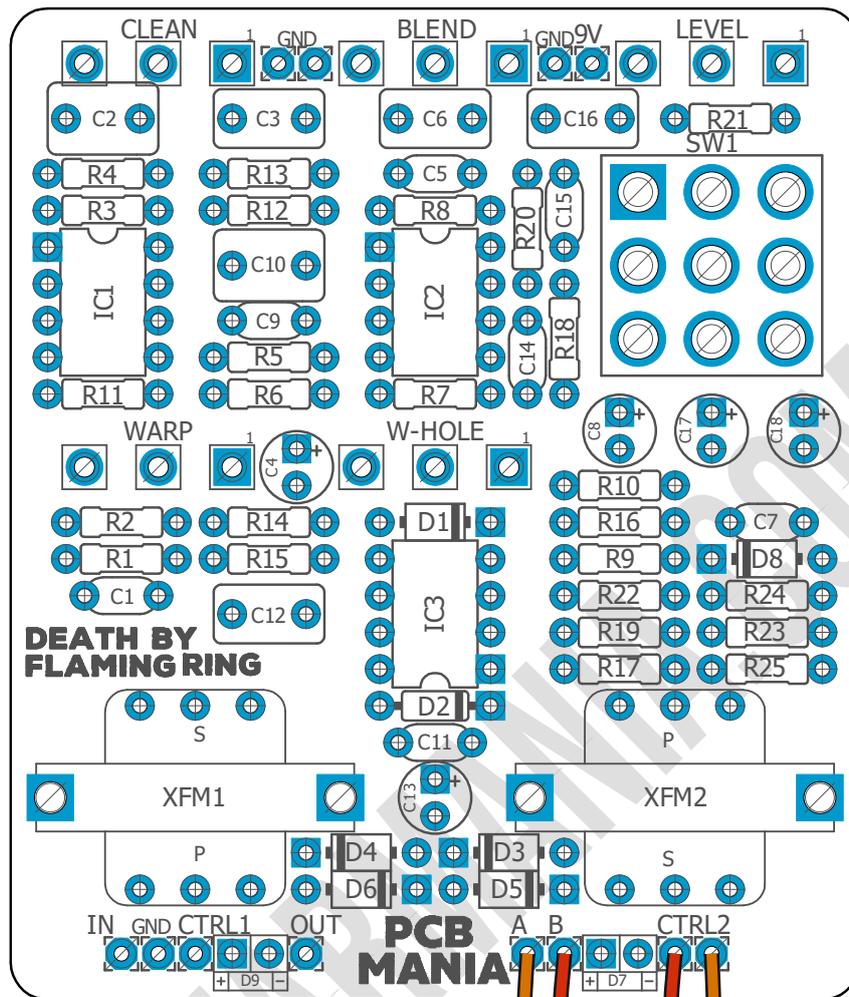
1. Resistors & diodes
2. Capacitors, starting with the smaller ones and the ceramic ones.
3. Electrolytic capacitors (always check the polarity)
4. Transistors
5. Wires
6. Potentiometers and switches
7. Off-board wiring

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.

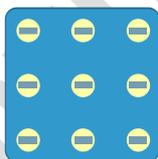
The pad named "Ctrl" or "LED" is the one that controls the status of the led; wire it to the "LED" pad on the 3PDT board or in the control slug of your 3PDT.

This board has been designed to match our EZ 3PDT PCB; check it [here](#) to access our [Pedal Wiring Guide](#).

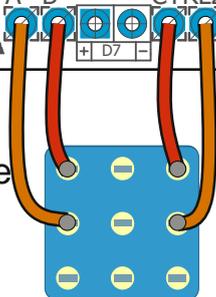


**DEATH BY
FLAMMING RING**

**PCB
MANIA**



Always place the 3PDT like this!



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!