

Cataline's Spicy Chilli

Based on:

Catalinebread Naga Viper

Effect type:

Range master treble booster

Build difficult:

Easy

Amount of parts:

Low, total 17 components

Technology:

NPN Silicon Planar Switching
Transistor

Power consumption:

9V

Enclosure type:

125b

Get your board at:

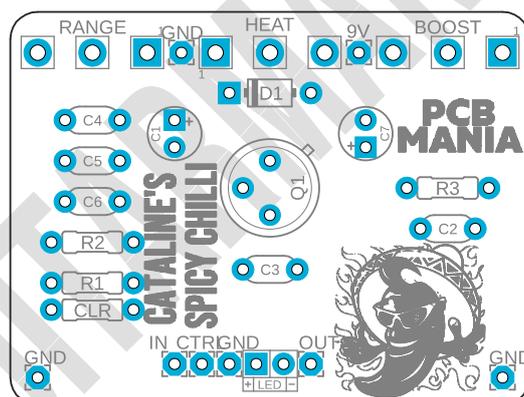
[Cataline's Spicy Chilli](#)

Get your kit at:

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

Project overview:

Inspired by Catalinebread Naga Viper, a take on the classic Dallas Rangemaster Treble Booster with added features that allows you to have more versatility and control.



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

The original Rangemaster has been used by many influential British guitarists, including Tony Iommi, Brian May, Marc Bolan, KK Downing, and Glen Tipton of Judas Priest. Yes, all of them had a unique style. Still, all shared a secret ingredient: the Rangemaster, allowing to boost their cranked British tube amps into a juicy, harmonic-laden rock tone that always cuts through the mix and is ultimately proto-metal.

The original Rangemaster had just one control, Boost. And this updated version comes with two extra ones: Range and Heat.

Boost, controls the output volume.

Range, is a continuous control that grants you to go from classic treble-boost to a full-range boost and anywhere in-between. The original could only function as a set frequency “treble-booster.”

Heat, allows you to control the gain level saturation, unlike the original, which was fixed at maximum gain.

Have all that's is good from the classic in this modern, more versatile, and spicy approach!

Controls

- Boost
- Heat
- Range

Bill of materials

Resistors	
Part	Value
CLR	4K7
R1	220k
R2	68K
R3	8K2

Capacitors	
Part	Value
C2	10nf
C3	47pf
C4	68nf
C5	3n3
C6	1nf

Electrolytics Capacitors	
Part	Value
C1	47u
C7	47u

Potentiometers	
Part	Value
BOOST	10K B
HEAT	1K B
RANGE	500K A

Transistors	
Part	Value
Q1	P2N2222

Diodes	
Part	Value
D1	1N5817
LED	3mm Red LED

Shopping list

Resistors		
Qty	Value	Parts
1	220k	R1
1	4K7	CLR
1	68K	R2
1	8K2	R3

Capacitors		
Qty	Value	Parts
1	10nf	C2
1	1nf	C6
1	3n3	C5
1	47pf	C3
1	68nf	C4

Electrolytics Capacitors		
Qty	Value	Parts
2	47u	C1, C7

Potentiometers		
Qty	Value	Parts
1	10K B	BOOST
1	1K B	HEAT
1	500K A	RANGE

Transistors		
Qty	Value	Parts
1	P2N2222	Q1

Diodes		
Qty	Value	Parts
1	1N5817	D1
1	3mm Red LED	LED

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!