

Ease of build	Medium
-partscount	Medium
-density	High
Parts sourcing	Easy
Enclosure fitting	Normal
Debugging level	Easy

Kittenqueen V1.0

Based on the “Katzenkönig”

Overview

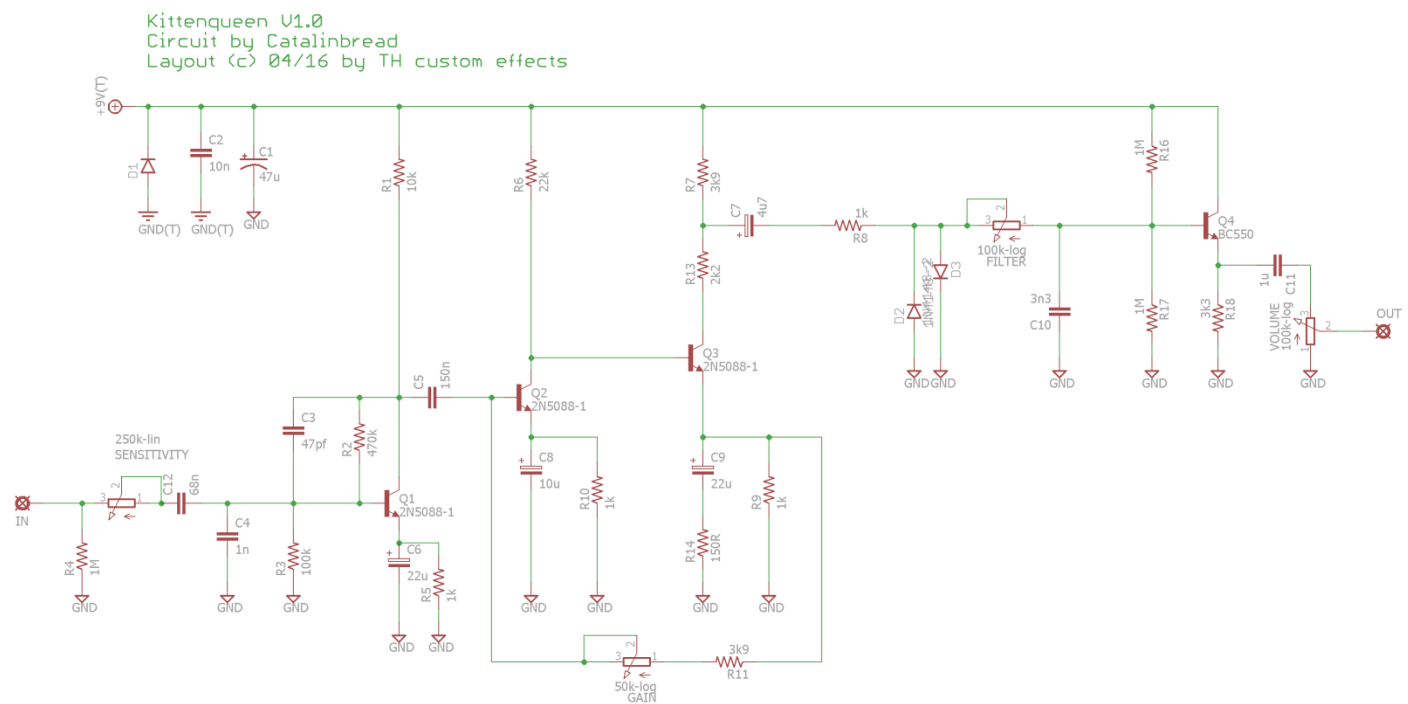
This is a try on the Katzenkönig. It is a direct clone in a small format.

General

The Katzenkoenig is said to be a mix of existing pedal circuits. In the end combining existing things in a special way will form something new and that's what you get here.

It is said that using NPN transistors with a hFe of 200-400 will lead to the best results. In the end its your choice. I built the first prototype with all BC 549 with a hFe of appx. 290 and it sounded good in most settings.

Schematic



Bill of materials

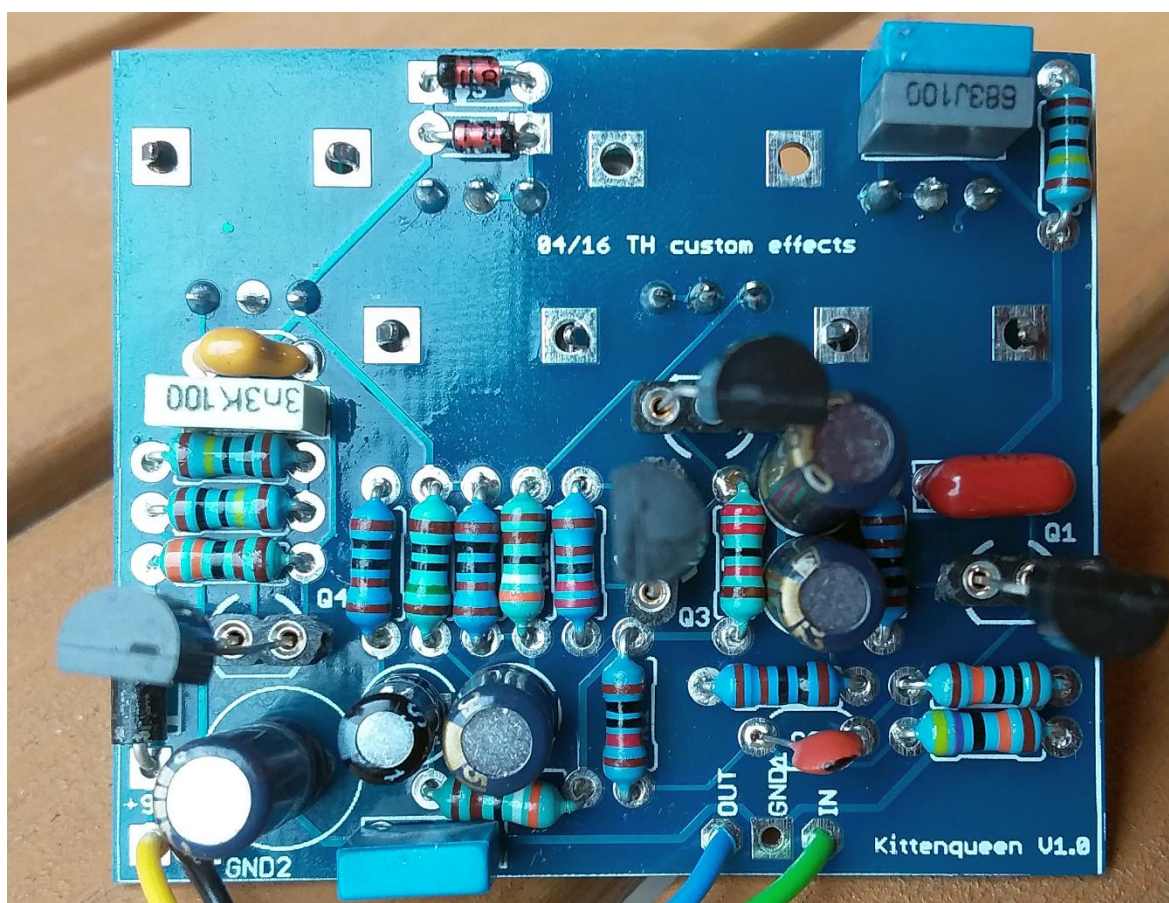
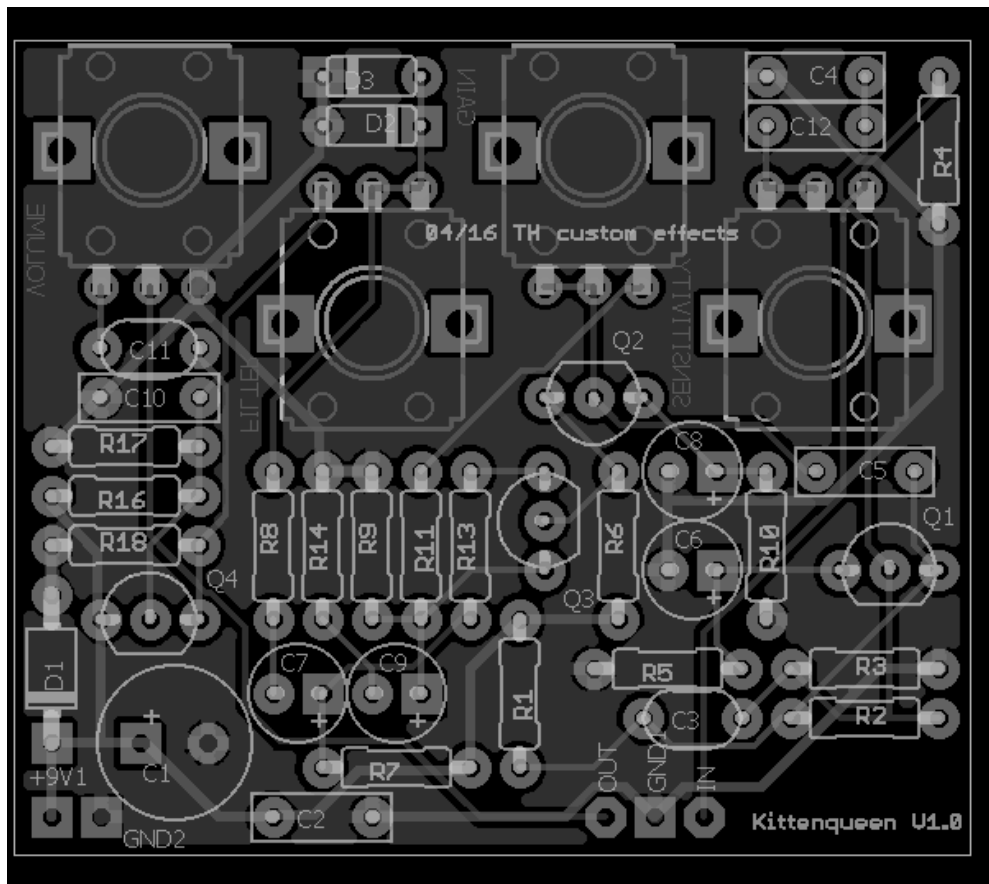
	Parts	Qty	Value	Description
Resistors	R1	1	10k	
	R2	1	470k	
	R3	1	100k	
	R4, R16, R17	3	1M	
	R5, R8, R9, R10	4	1k	
	R6	1	22k	
	R7, R11	2	3k9	
	R13	1	2k2	
	R14	1	150R	
	R18	1	3k3	
Capacitors	C1	1	47uF	polarized electro 5-8mm Ø / 8mm
	C2	1	10n	box film
	C3	1	47p	ceramic
	C4	1	1n	box film
	C5	1	150n	box film
	C6, C9	2	22uF	polarized electro 5-8mm Ø / 8mm
	C7	1	4u7	polarized electro 5-8mm Ø / 8mm
	C8	1	10u	polarized electro 5-8mm Ø / 8mm
	C10	1	3n3	box film
	C11	1	1u	MLCC
	C12	1	68n	box film
Diodes	D1	1	1N4001	diode
	D2, D3	2	1N4148	diode
Transistors	Q1-Q3	3	BC549	hFe ~ 290*
	Q4	1	BC549	hFe ~ 290* see Introduction
Pots	SENSITIVITY	1	250k lin	9mm Alpha
	VOLUME	1	100k log	9mm Alpha
	GAIN	1	50k log	9mm Alpha
	FILTER	1	100k log	9mm Alpha

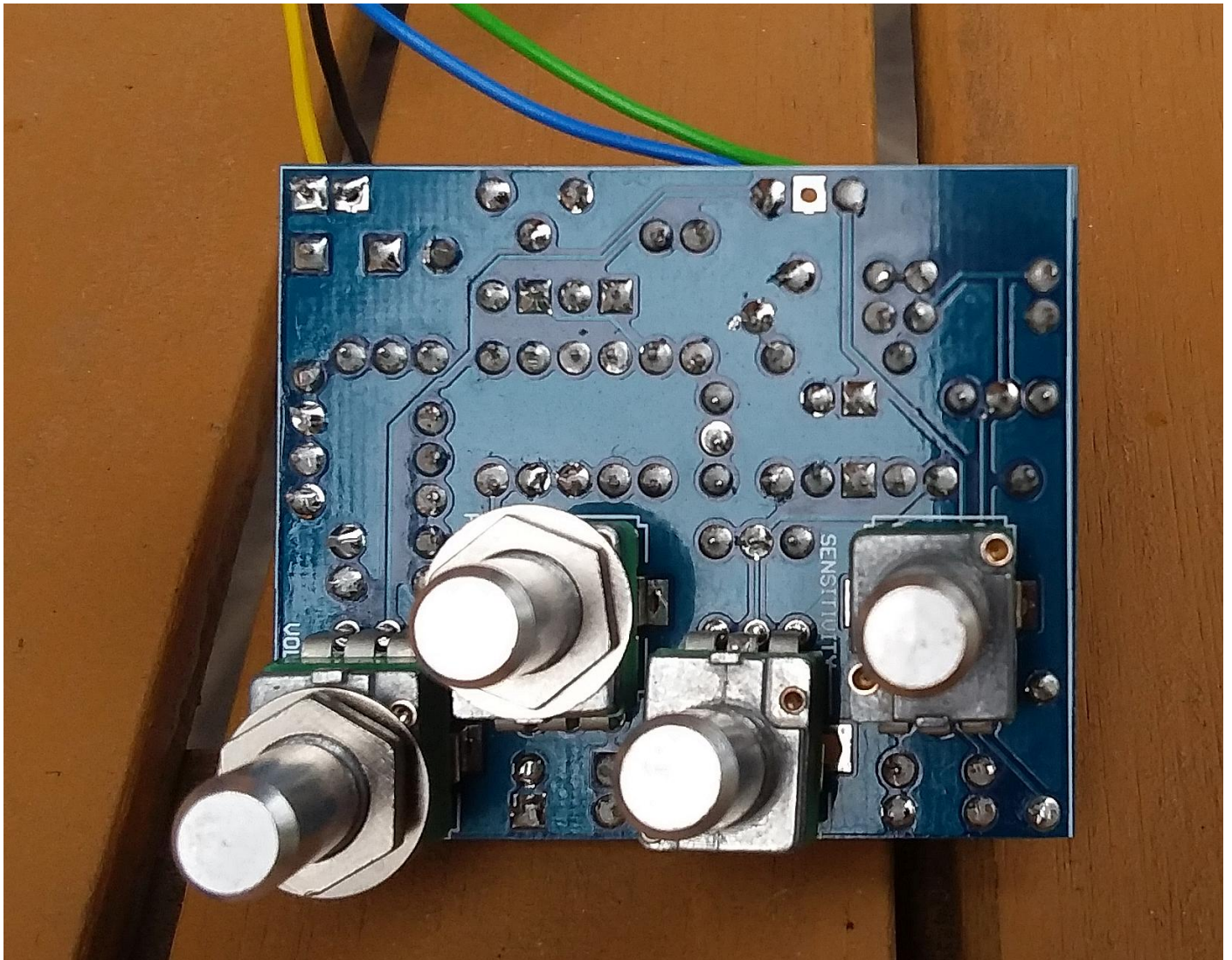
*Values in the BOM may differ from values in the schematic. Always use the BOM values!

The sensitivity pot may be omitted and a 150k resistor be used instead. (Other values - depending on pickup type in the guitar - may sound a little better, you may want to experiment with this)

Building

Start with populating the diodes and all resistors. Put in sockets for the transistors next if you want to play with them. You can use BC 550 or 2N5088 for all transistors, they just need to be turned 180° around. Then MLCC and ceramic caps, then box film caps and electros at the last. Pots are mounted from the backside.





Enclosure

This PCB does fit in a 1590B enclosure easily.

Finally

The Kittenqueen is a nice sounding circuit from distortion into fuzz territory – depending on the transistors being used. I found it to be useful in a lot of its settings. I am sure that you will have a lot of fun with it.

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