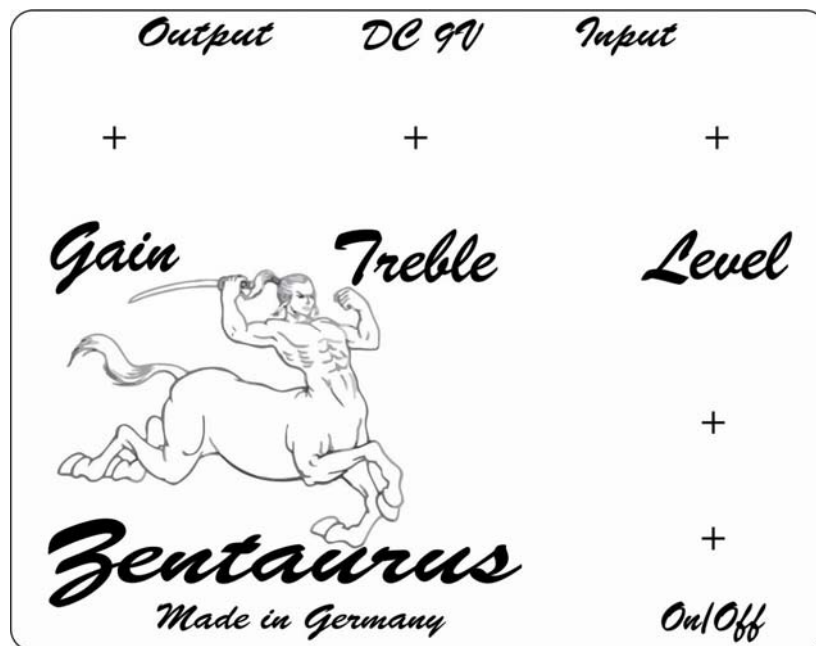


UK-electronic ©2012/19

Manual for the Kit Zentaurus Rev 1.22 with buffer or True bypass

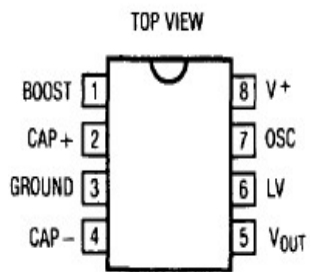
Page 1.....	Cover
Page 2..3.....	Allocations, basics
Page 4...5.....	Bill of material
Page 6...7.....	Soldering the pcb
Page 8.....	Building
Page 9.....	Wiring TB
Page 10.....	Wiring with buffer
Page 11...20.....	drill template, foil template, circuit diagram

Please download the manual at the store. Thank's!

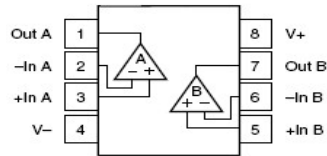


Important connections of some components

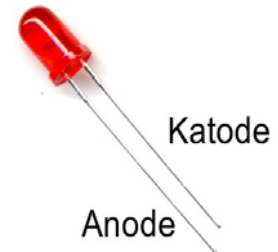
ICL7660SCPA



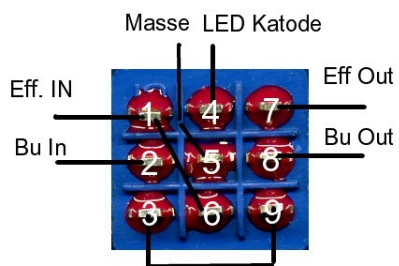
TL 072



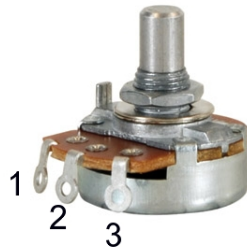
Leuchtdiode (LED)



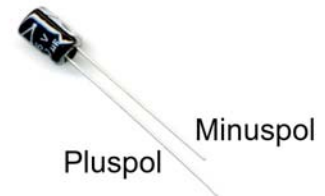
3PDT



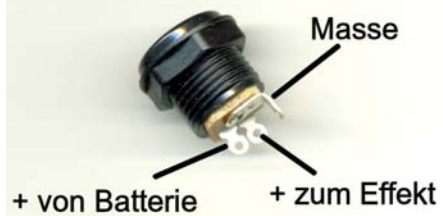
Standard Potentiometer



Elektrolytkondensator













DC-Buchse isoliert



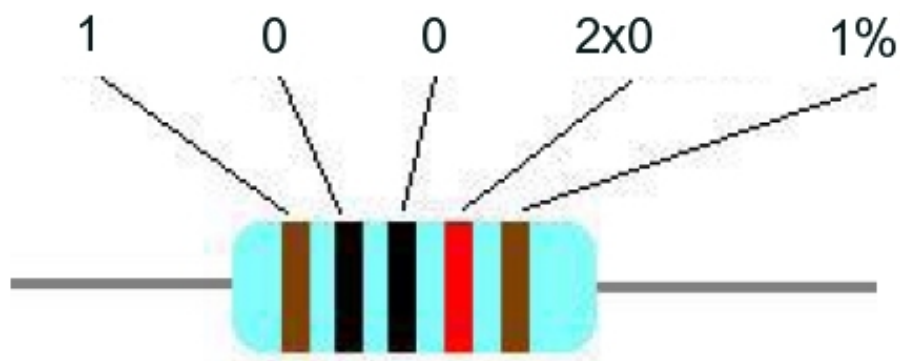
Color table for resistors MF207 FTE52 1% and a example

Resistor color code

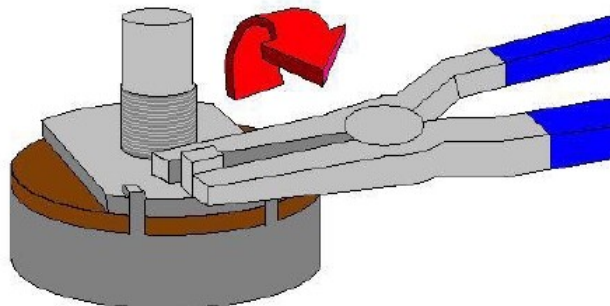
									
0	1	2	3	4	5	6	7	8	9

Example: Resistor MF207 10K 1%

Value: 10000 Ohm = 10KOhm



Breaking nose at the potentiometer
Nase am Poti mit einer Flachzange abbrechen



Bill of material

Quantity	Description
resistor	
1	Resistor 390R (orange/white/black/black/brown)
2	Resistor 560R (green/blue/black/black/brown)
2	Resistor 1K (brown/black/black/brown/brown)
2	Resistor 1K5 (brown/green/black/brown/brown)
1	Resistor 1K8 (brown/grey/black/brown/brown)
1	Resistor 2K (red/black/black/brown/brown)
1	Resistor 4K7 (yellow/violet/black/brown/brown)
2	Resistor 5K1 (green/brown/black/brown/brown)
2	Resistor 10K (brown/black/black/red/brown)
1	Resistor 12K (brown/red/black/red/brown)
2	Resistor 15K (brown/green/black/red/brown)
1	Resistor 22K (red/red/black/red/brown)
3	Resistor 27K (red/violet/black/red/brown)
1	Resistor 47K (yellow/violet/black/red/brown)
2	Resistor 68K (blue/grey/black/red/brown)
4	Resistor 100K (brown/black/black/orange/brown)
1	Resistor 390K (orange/white/black/orange/brown)
1	Resistor 422K (yellow/red/red/orange/brown)
1	Resistor 1M (brown/black/black/yellow/brown)
1	Resistor 2M2 (red/red/black/yellow/brown)
capacitors	
1	Capacitor ceramic 390pF (391)
1	Capacitor ceramic 820pF (821)
1	Capacitor MKT 3n9 (0.0039μF) 392
1	Capacitor MKT 2n2 (0.0022μF) 222
1	Capacitor MKT 27nF (0.027μF) 273
2	Capacitor MKT 68nF (0.068μF) 683
1	Capacitor MKT 82nF (0.082μF) 823
2	Capacitor MKT 100nF (0.1μF) 104
1	Capacitor MKT 390nF (0.39μF) 394
1	Capacitor MKT 1μF - 105
5	Electrolytic RASM 1μF/50V
3	Electrolytic RASM 4,7μF/50V
1	Electrolytic RASM 10μF/50V
2	Electrolytic RASM 47μF/25V
Diodes	
1	Z-Diode 12V – ZPD12 – Cathode line
2	Si-Diode 1N4148 – Cathode line
2	Ge-Diode 1N34A/ OA90/ AA119/D6E or other – Cathode line
1	LED 3mm blue
semiconductors	
1	ICL 7660 SCPA (DC-DC pump charge)
2	TL072 CN oder CP

Potentiometer

- 1 Dual potentiometer 2x100K-B (linear)
- 2 Potentiometer 10K-B (linear)

Mechanical

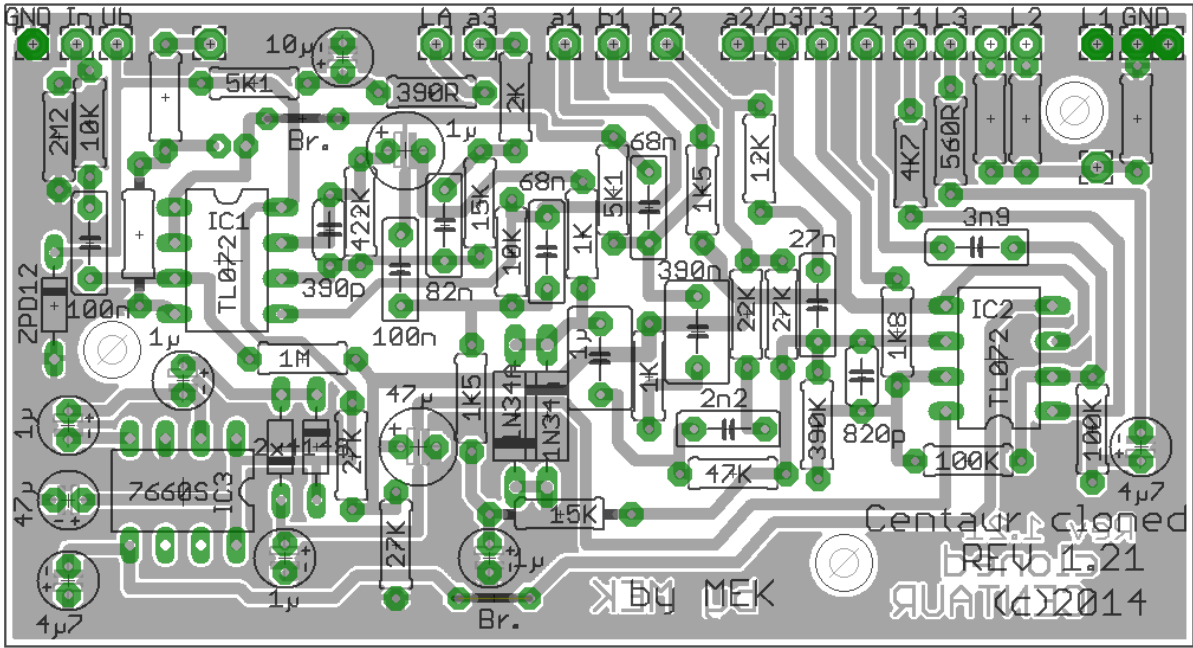
- 1 Mono jack 6,35mm
- 1 3PDT Switch
- 1 DC-jack isolated (5,5/2,1)
- 2 washer 10.4mm (Audio jacks)
- 3 Washer 7,4mm (Potentiometer)
- 1 Battery connector
- 3 Adhesive self spacer 12,7mm
- 1 LED bezel chrome f. 3mm outer reflector
- 1 Some coloured wire
- 1 PCB Zentaurus REV 1.22
- 3 Cable fastener

There are no more bridges on the board, because version 1.22 is a DKL board! The values printed in brackets correspond to the version "Silver".

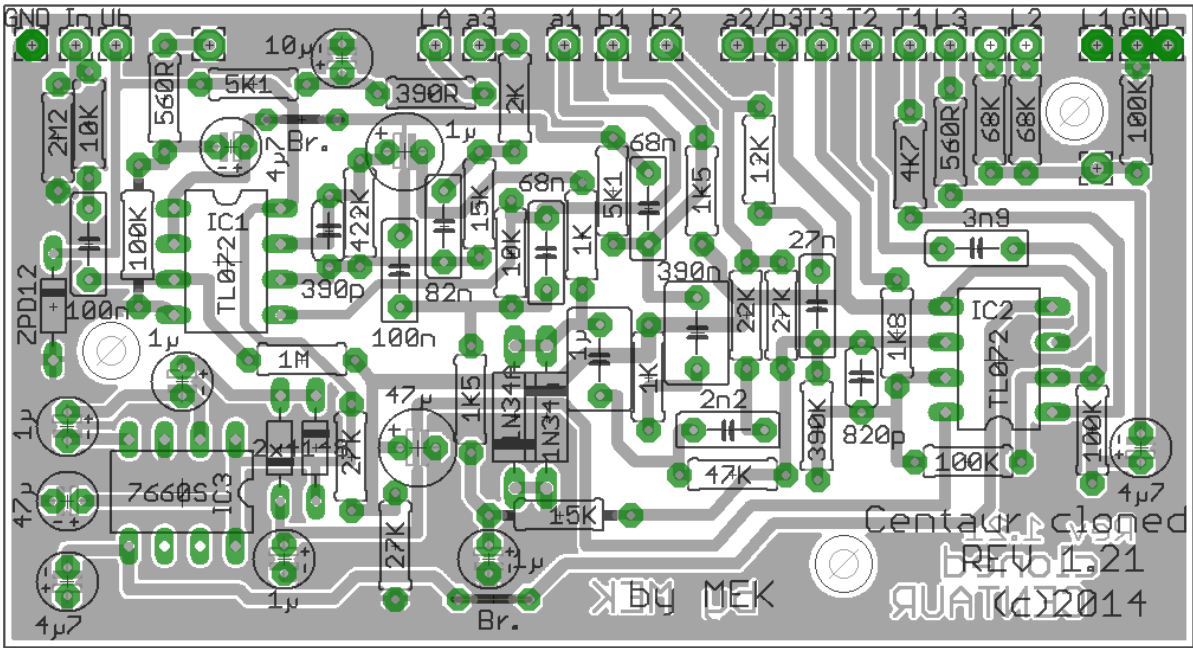
Soldering the pcb

First, the printed circuit board is assembled by means of the placement schedule shown below. You should decide at the outset whether the Buffered or True Bypass version is built. **In the true bypass version of the unlabeled components need not be loaded (loading images in the description)!** For this we should start with the lowest components to be fitted, ie first the 2 bridges (Br), resistors, diodes, IC sockets, capacitors. Then the circuits are used at the end. Clean work, especially the execution of the solder joints should have top priority to generally be eliminated in order to save a painstaking troubleshooting from the outset assembly and solder defects.

Layout for True Bypass

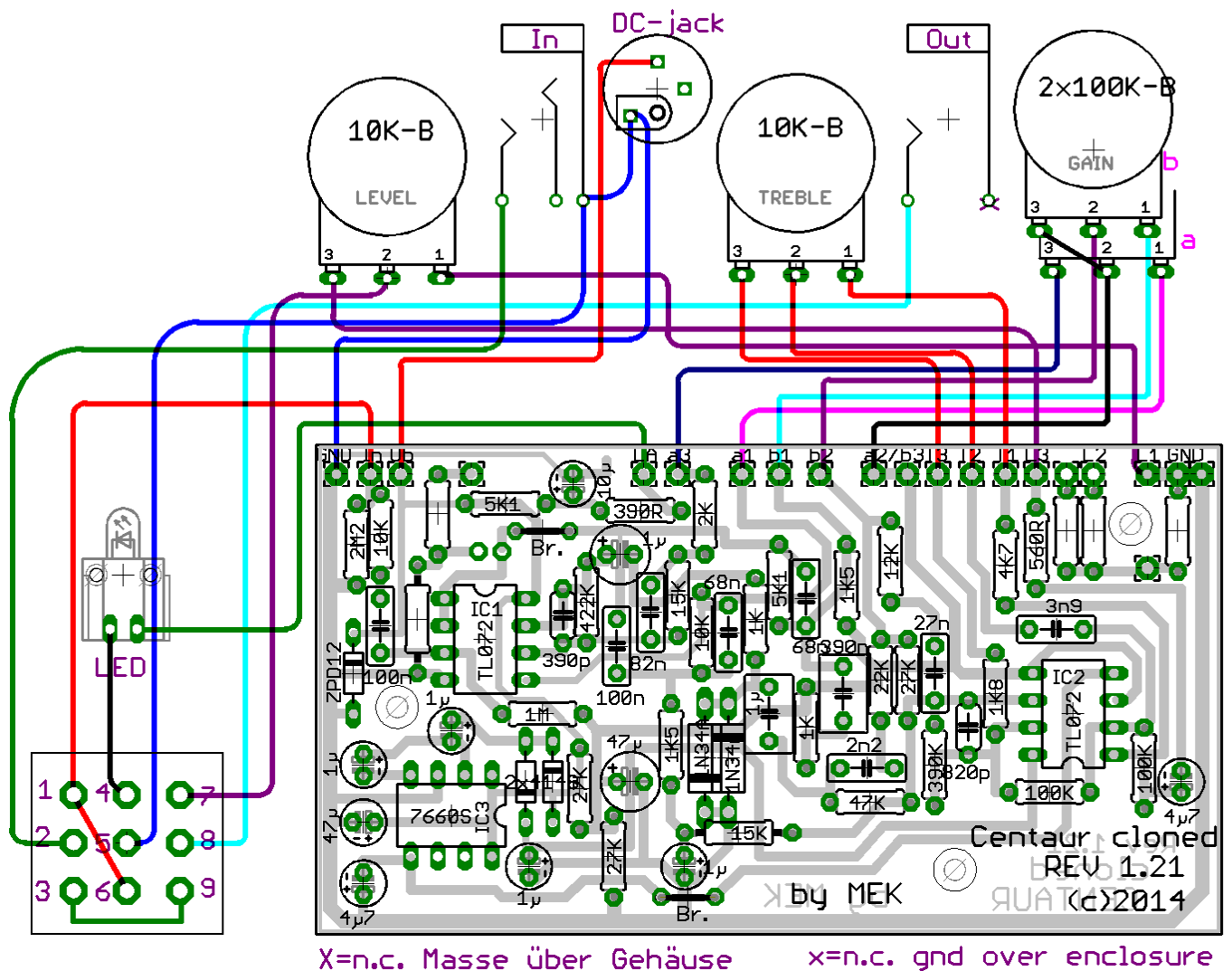


Layout for buffered version

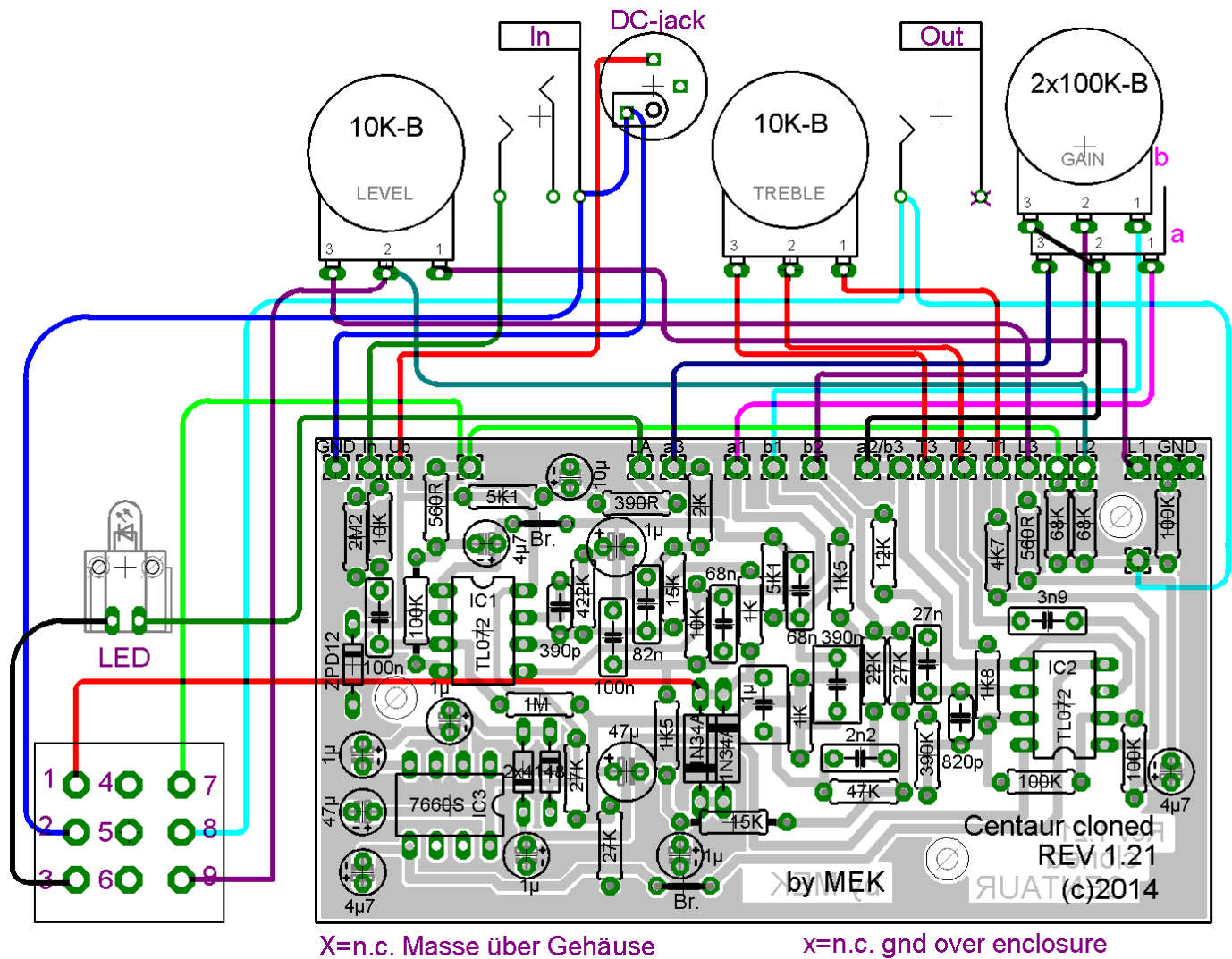


After the PCB is fully soldered to cut several wires from approx. 10 to 15 cm length and solder them into the points of the circuit board to which the potentiometers come from below. Next up is the enclosure that it has drilled before accordingly with the mechanical components (6.3 mm jacks, 3PDT switch, potentiometer-[the (guide tabs) to easily breaking the potentiometers with pliers from → see the picture.], DC jack and the bezel for the LED equipped.)
The wires for the power supply (red and blue), as well as the output signal of lug 2 of the level pots, are already pre-wired.

Wiring for True Bypass



Wiring the buffered version



The two green wires in the wiring diagram is soldered directly under the circuit board at the marked points.!

At the appendix you found templates for a drilling and a template for a foil for the enclosure. When printing the PDF files, the printer must set to "No adjustment" otherwise the print is not true to size

Finally, only the remaining connections are soldered displayed schema from the switch to the PCB according to the above. To do this turn the circuit board on the component side. To solder the Green wires in the wiring diagram, (buffered version), from the bottom of the circuit board where the both 68 k and 100 k resistance are connected, as well as the two GE diodes.

As enclosure choose Hammond 1590BB or GEH 090.

Drilling diameters:

Audio jacks: 9.3mm

DC-jack: 12mm

3PDT switch: 12mm

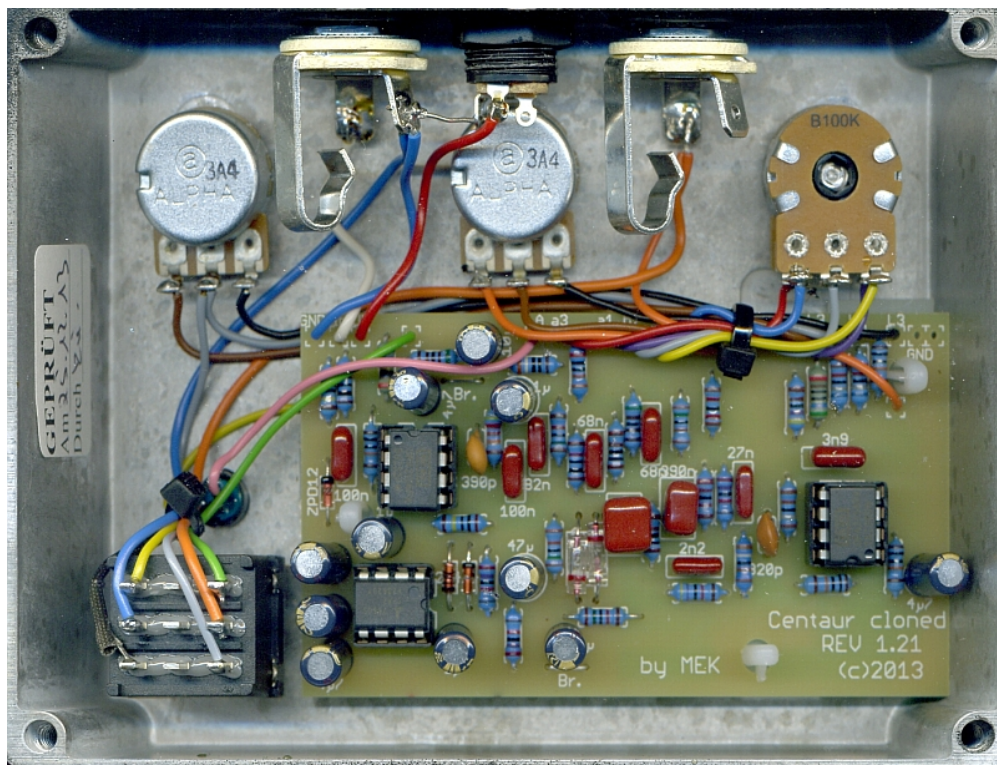
LED Bezel : 6mm

Have fun, the team of UK-electronic!

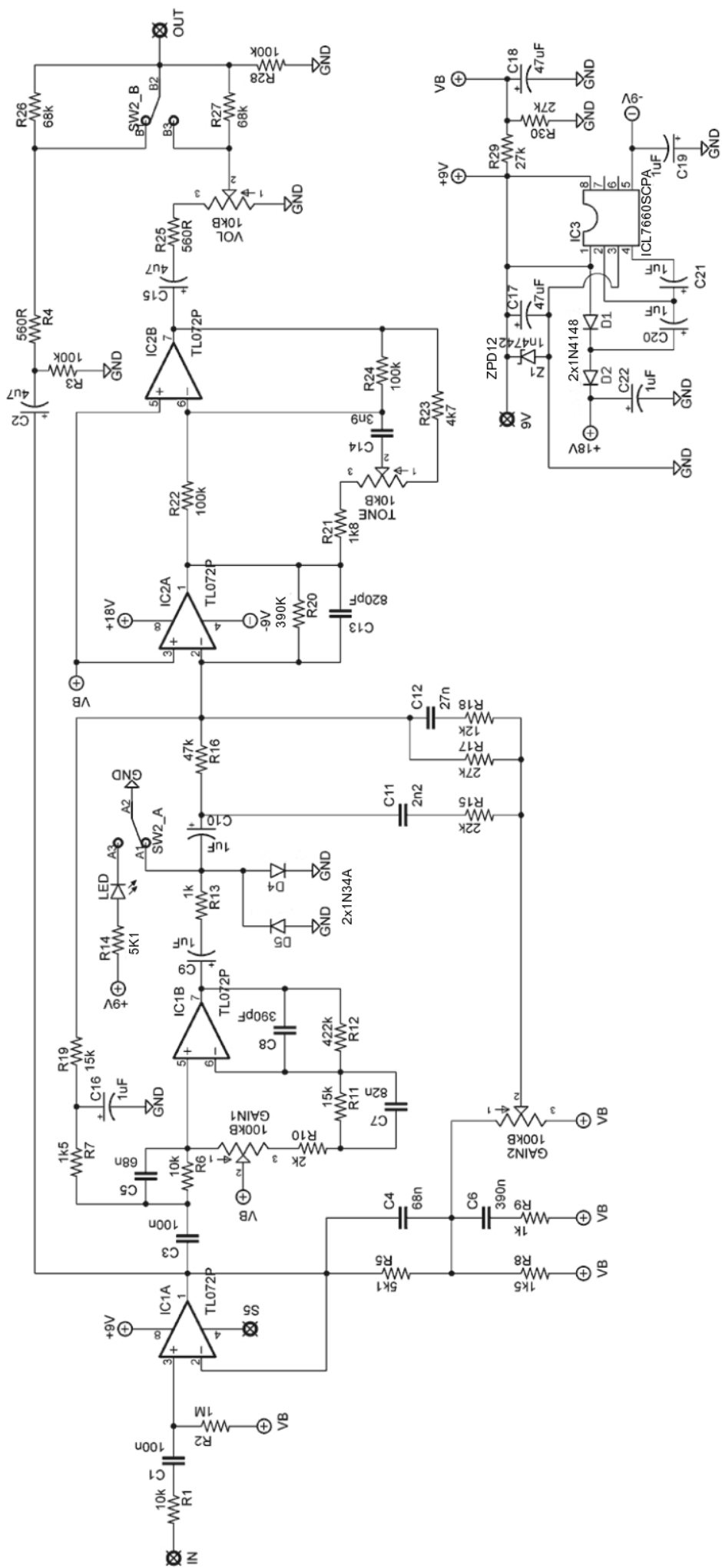
Voltage chart: Power supply 9V DC , measured again GND!!

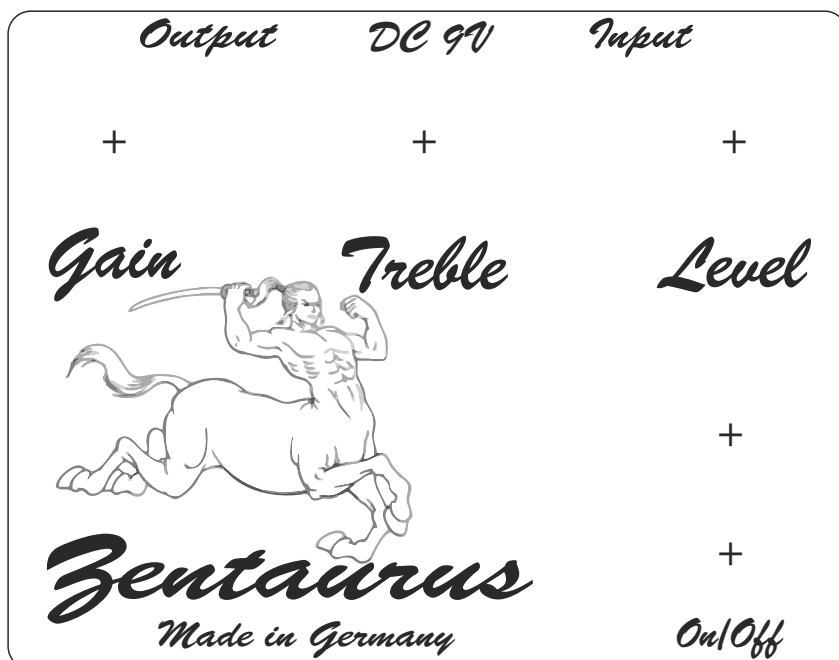
Pin	IC3 7660S	IC1 TL072	IC2 TL072
1	9.00V	4.5V	4.5V
2	4.48V	4.5V	4.5V
3	0.6V	4.00V	4.5V
4	-4.14V	0V	-8.38V
5	-8.39V	4.5V	4.5V
6	4.39V	4.5V	4.5V
7	6.94V	4.5V	4.5V
8	9.00V	9.00V	16.85V

Zentaurus PCB 2013 and 2019 (1.3) (at the new pcb, the 100K resistor is right from the adhesive spacer!





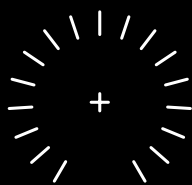




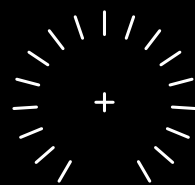
9V DC



GAIN



TREBLE



LEVEL

+

+

OUTPUT

INPUT

Zentaurus
Made in Germany