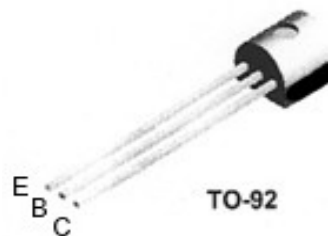
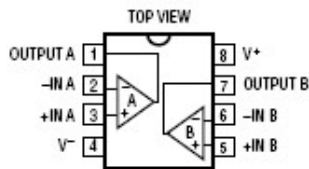


Assembly Manual for the Kit Ze(h)ndrive

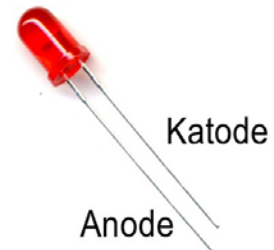
Page 2.....	Bill of material
Page 3.....	Soldering the PCB
Page 4..6.....	Wiring diagram, mechanical description
Page 7.....	Drill table
Page 8.....	Printable pic for foil or decal

Some connections of important components

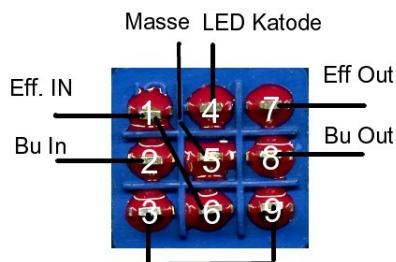
AD712



Leuchtdiode (LED)



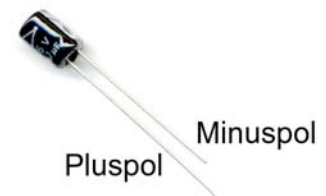
3PDT



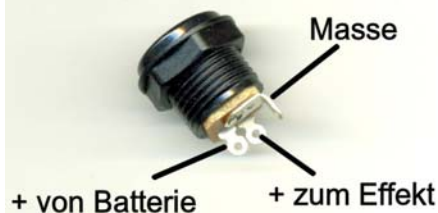
BC549



Elektrolytkondensator



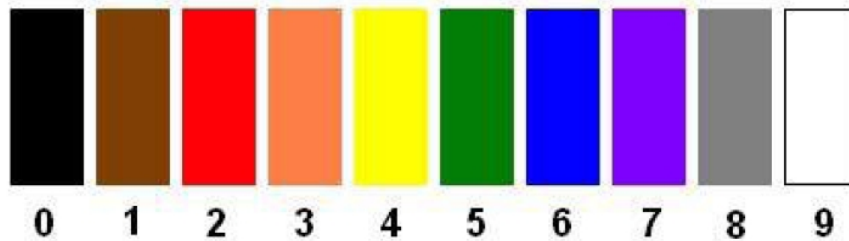
DC-Buchse isoliert



Bases of building and the assembly

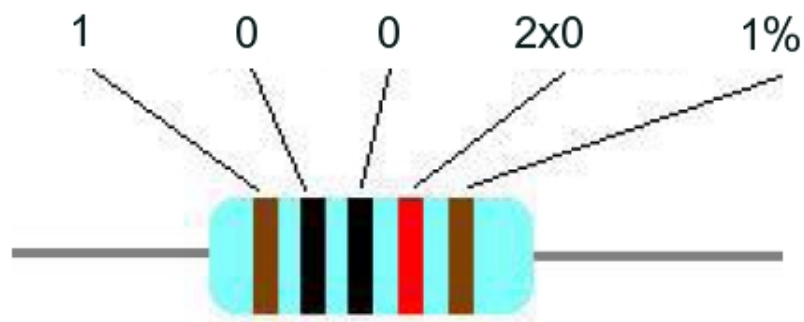
Color chart of resistances MF207 FTE52 1% and example F

Widerstands Farbcode

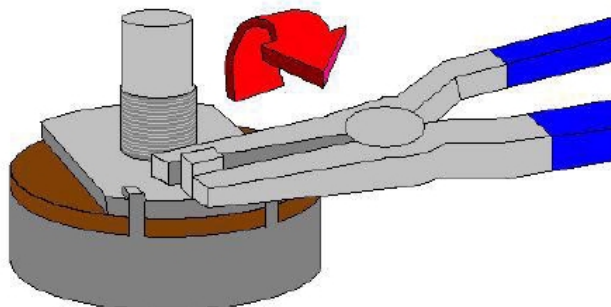


Bsp.: Widerstand MF207 10K 1%

Wert: 10000 Ohm = 10KOhm



Nase am Poti mit einer Flachzange abbrechen



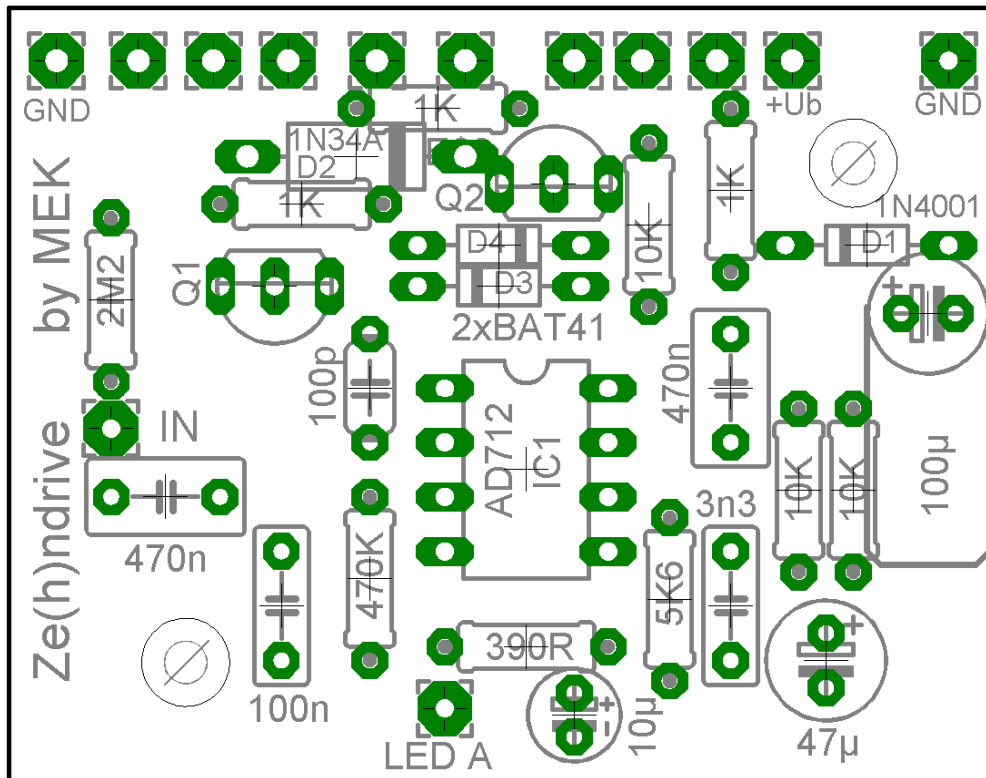
Bill of material

Quantitiy	Description
1	Mono jack ¼"
1	Stereo jack ¼"
1	3PDT switch
1	LED blue 3mm clear
1	LED bezel for 3mm led
1	Pot 10K-B (linear)
1	Pot 100K-B (linear)
1	Pot 50K-B (linear)
1	Pot 500K-B (linear)
2	Self adhesive spacer (4,8mm)
1	DC-jack isolated
2	DMOS-FET 2N7000 (TO92)
1	SI-Diode 1N4001
2	Schottky Diode BAT41
1	Germanium Diode 1N34A
1	AD712 Dual OPV, High speed
1	IC Socket 8-polig
1	Resistor 390R (orange/white/black/black/brown)
3	Resistor 1K (brown/black/black/brown/brown)
1	Resistor 5K6 (green/blue/black/brown/brown)
3	Resistor 10K (brown/black/black/red/brown)
1	Resistor 470K (yellow/violet/black/orange/brown)
1	Resistor 2M2 (red/red/black/yellow/brown)
1	Capacitor ceramic 100pF (101)
1	Capacitor foil MKT 3,3nF (0.0033μF)
1	Capacitor foil MKT 100nF (0.1μF)
2	Capacitor foil MKT 470nF (0.47μF)
1	Electrolytic RASM 10μF/25V
1	Electrolytic RASM 47μF/16V
1	Electrolytic RASM 100μF/16V
1	Battery connector
1	Some colored wires
1	PCB
3	Cable fastener

Soldering the PCB

The first step is soldering the components onto the PCB as shown in the diagram below. Begin with the resistors, diodes and the IC socket. The capacitors and two transistors are next. Make sure that the 100uf capacitor is mounted with its side to the board. Check the polarity of the diodes and capacitors and mount them according to the polarity shown on the board.

Clean work when soldering connections is very important at all times to exclude assembly errors and faults.

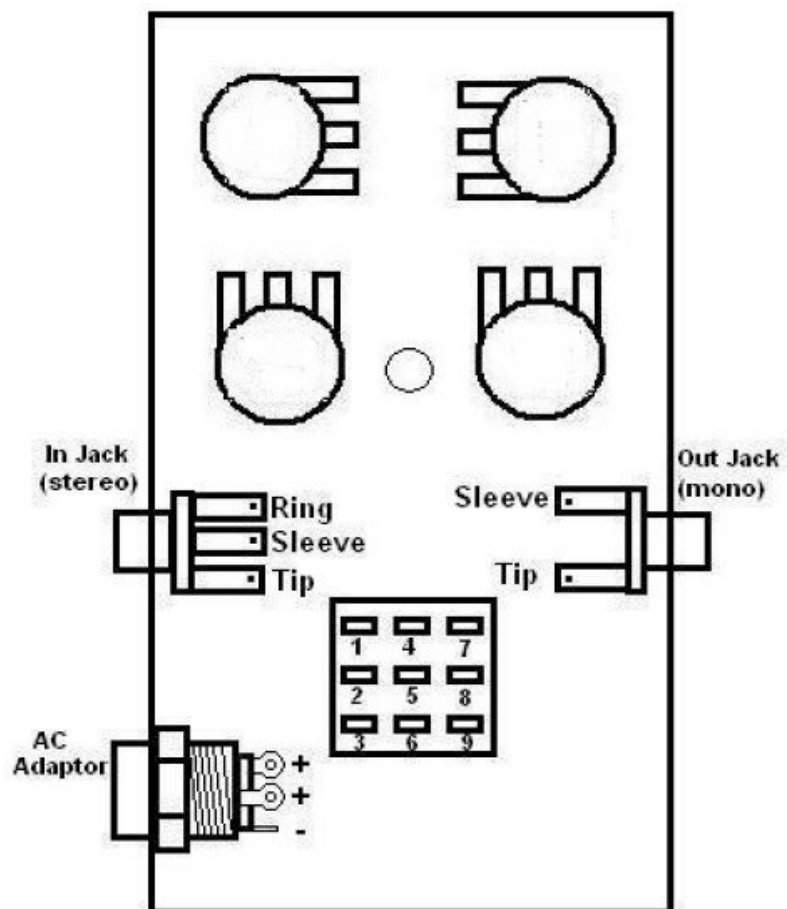


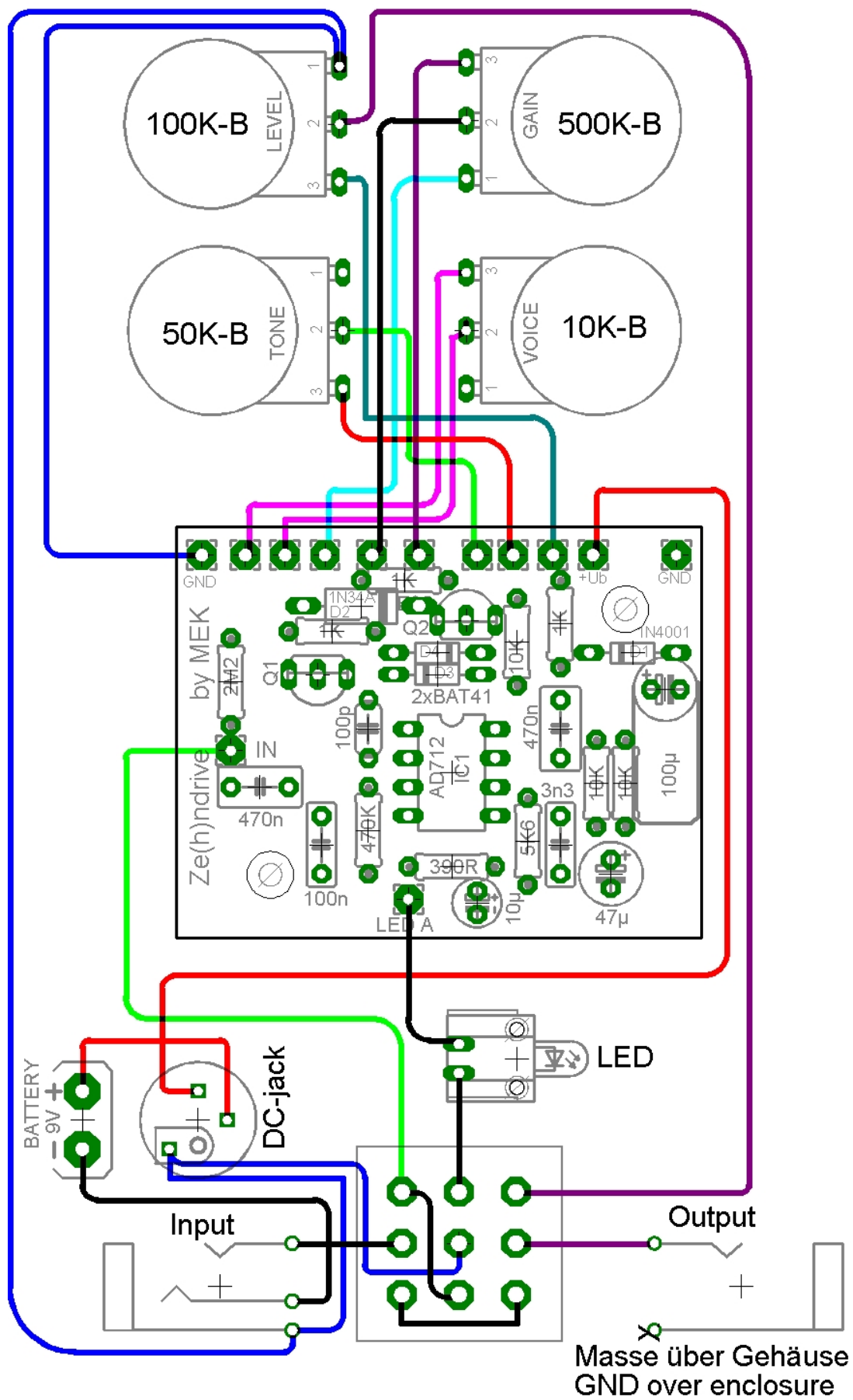
After the components on the PCB are soldered into corresponding locations and orientation, cut nine [9] wires approximately six [6] to seven [7] cm in length. Solder these wires into the correct points from the *underside* of the PCB as shown in the wiring layout diagram and photo below. These wires will later be connected to the potentiometers with one connection to the DC jack.

Inputbuchse vorverdrahtet



Mounting Mechanical Components





The next step will be mounting the mechanical components into the predrilled enclosure. These components are the audio jacks, potentiometers, DC jack, 3PDT switch and the bezel for the LED. The short leg [katode] of LED will be connected to the 3PDT switch. . It is necessary to mount these components in a recommended sequence.

The potentiometers need some preparation *before* mounting. This involves removing a tab on the side of the casing as shown in the diagram above. They then can be mounted in the enclosure. Their positions according to their value are shown below on the wiring diagram. Also refer to the photo below for the best way for the terminals of the pots to face each other. The LED bezel can now be mounted.

The next stage is to prepare the Input jack as shown below. These connections are made *before* the Input jack is mounted, as it is too difficult to solder them after the jack is placed in position inside the enclosure. The Output jack can be mounted, as shown, as making connections to it is much easier.

The DC power jack is mounted next and then connecting wires are soldered to the appropriate terminals as shown in the wiring diagram. When mounting the LED make sure to insulate the katode leg with a piece of shrink-wrap in preparation for connection to the switch.

The 3PDT switch is mounted with the white plastic washer on the outside face of the enclosure under the nut. The nut on the under side is best turned down as far as possible to allow clearance between the switch terminals and the back on the enclosure.

At this stage all the necessary connections between the mechanical components and the switch can be made. Refer to the wiring diagram as well as the image of this stage above. Make sure to insulate the crossover wire on the back of the switch as shown.

Now by referring again to the wiring diagram connect the wires from the PCB to the terminals of the potentiometers. Also connect the switch and DC jack to the PCB. The LED can be connected at this time to the PCB and switch, as advised insulate the cahtode before soldering. The PCB is now turned so the components face upward.

White plastic spacers are supplied to keep the underside of the PCB contacting the potentiometer casings. They also mount the board securely inside the enclosure. The diagram below shows the placement of the spacers. These spacers have a plastic film that covers the adhesive base of the spacer. *Before* removing the plastic film, carefully organise the wires so you are sure the each spacer base will sit on top of the backs of the potentiometer casings. This process needs some trial and error. When you have the wires organised remove the plastic film and press the spacers so base adheres to the potentiometer casings.

Enclosure Case Drilling Template

If you are supplying your own enclosure case a template for drilling the necessary holes is supplied below. Use a case such as an 1590B or an Eddystone 27134PSLA. Hole sizes are as follows.

Audio jacks : 9.4mm

Potentiometers : 7mm

LED Bezel : 6mm

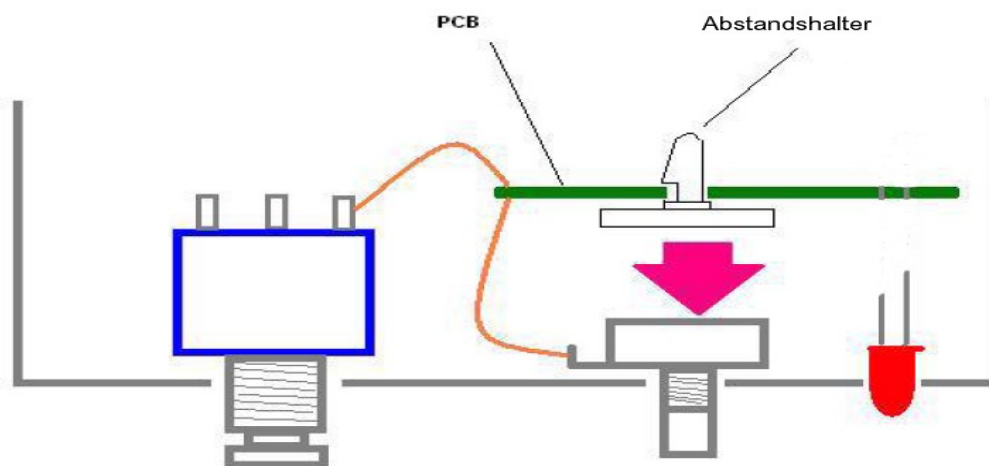
3PDT switch : 12mm

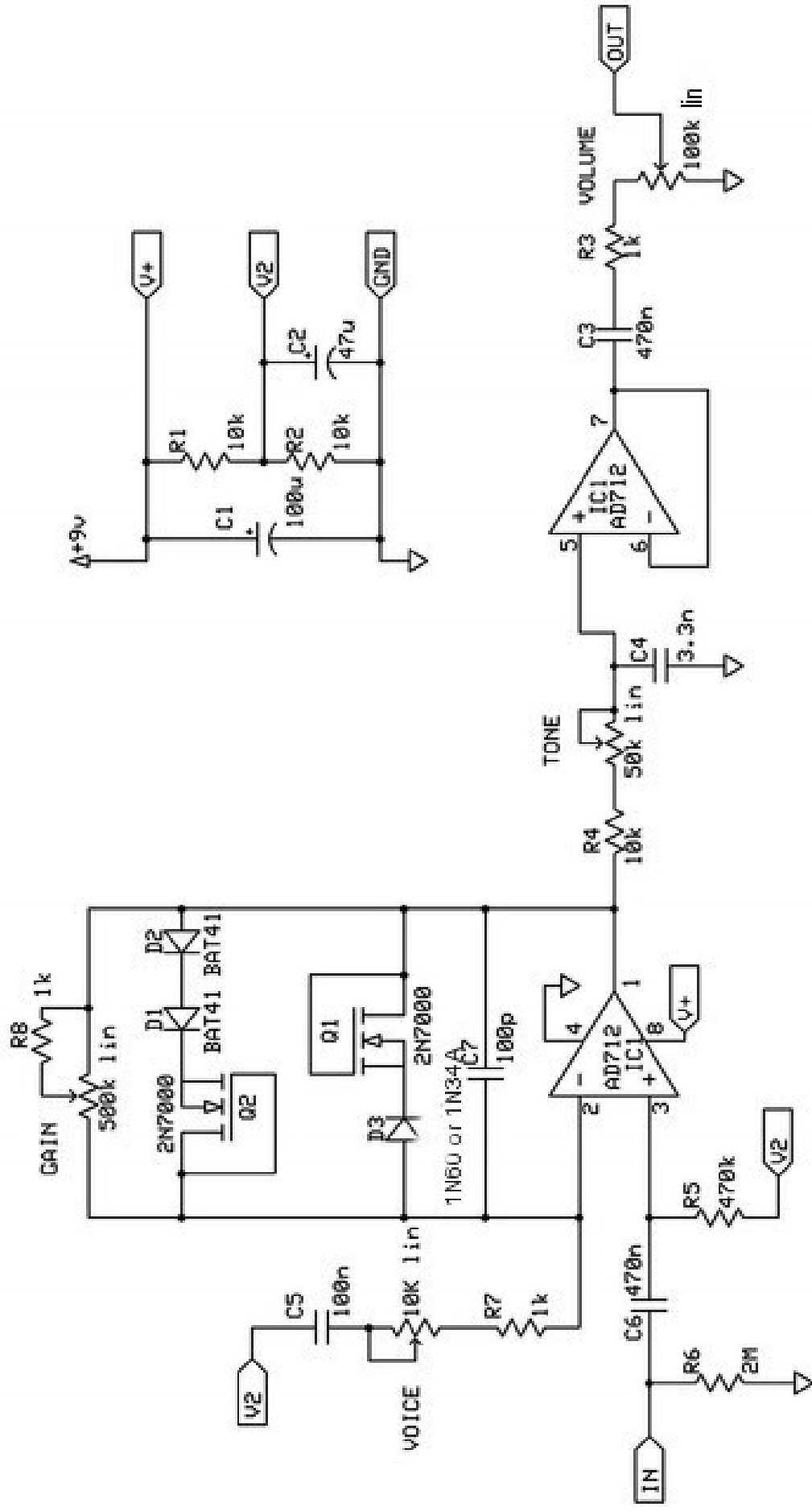
DC jack : 12mm

2008/13 © UK-electronic

In the appendix are also collecting mains for a drilling template and for the pressure of a possible foil. **With the expression of the *pdf print files, to adjust the printer on „no adjustment“** In the end of the mounting connections are only soldered on of the switch to the printed circuit board in accordance with far pattern shown above. In addition one turns the printed circuit board best on the component side. Now the spacers are only missing. That accommodate the wires under the printed circuit board can be a little pedantic, but it fits. One should remove however the protective plastic films of the spacers only if one is safe, which all wires have duly place.

**Thanks for the english correction of the description to
Andrew Darnley!**





Alternative values:

D1, D2, D3: MBR040, 1N34A

IC1: Burr-Brown OPA2604

Suggestions:

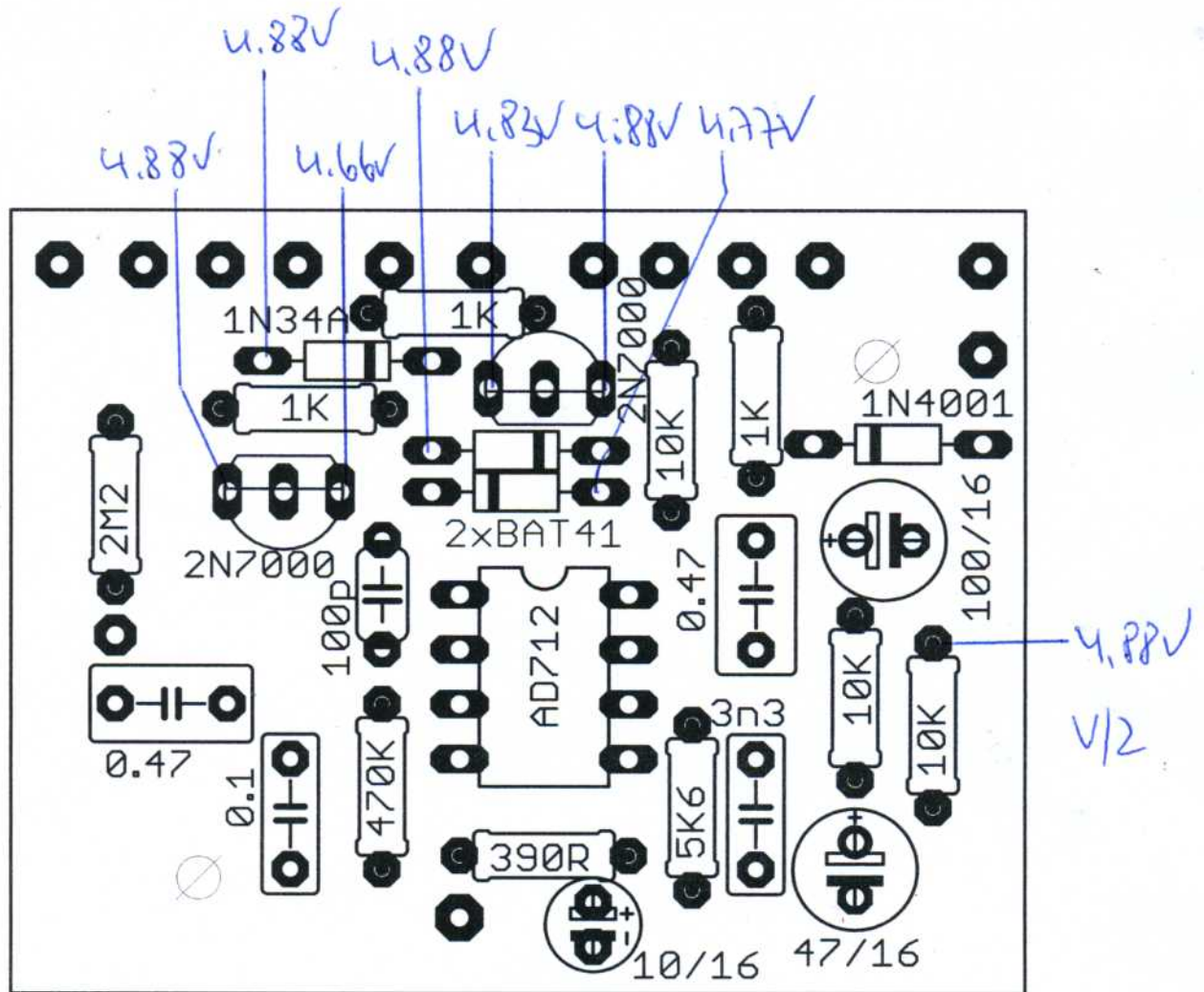
VOICE, GAIN, TONE: Audio

Z-Drive

30/03/2008

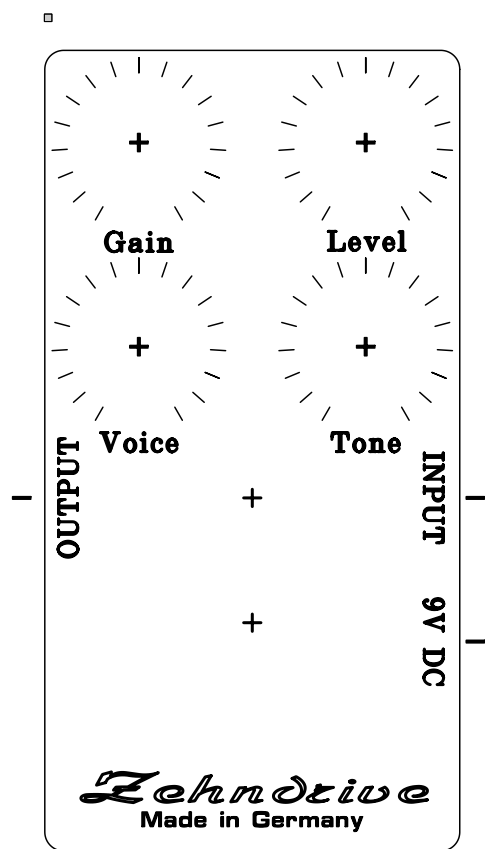
Page 1/1

$U_b = 3.8V$ fresh battery
 $E_{88} = 0.85$, All Pots middle



AD 712
 Pin 1 $4.87V$
 2 4.87
 3 4.66
 4 Gnd
 5 4.86
 6 4.86
 7 4.86
 8 $+U_b 3.8V$

Input: You must
 measure the PD
 Resistor $2M2$



□

