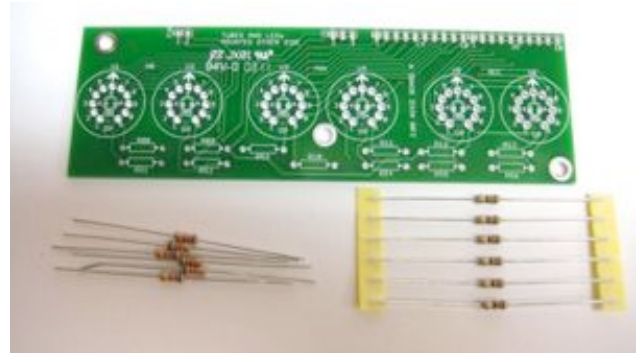


## Tube PCB V1.08b 'Blue Dream'

### Parts provided

- tube pcb V1.08d
- 6 anode resistors 6.8K Ohm (R8-R13)
- 6 resistors 330 Ohm for the blue LEDs (R51-R56)
- All other colors will have the correct resistors in the bag.



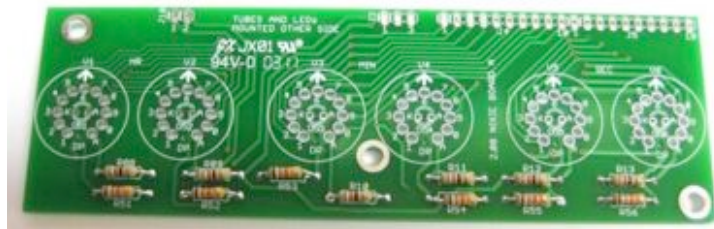
The pcb is connected to our "universal nixie clock pcb V1.08" in a sandwich connection.

Dieter Wächter from [www.nocrotec.com](http://www.nocrotec.com) provides you with 6 matched and tested IN-8 tubes, 6 LEDs and 66 pin receptacles.



### Solder the resistors

First solder all resistors onto the pcb as shown on the right. Please make sure that the resistors are soldered with no distance onto the pcb. Cut the wires from the other side of the pcb.



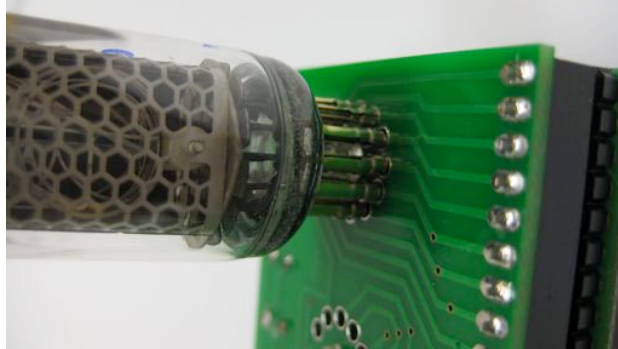
### Solder the pin receptacles

**Attention:** The pin receptacles are mounted on the other side than the resistors. This side has a print that says "Tubes and LEDs mounted this side". **Never solder the pin receptacles into the pcb without using the tube as a holder. You might destroy your tube.**

Now place the pin receptacles onto the 11 pins of the IN-8 tube.



Place the tube into the holes in the pcb and arrange them in a right angle. Solder the pins and be careful not to short circuit them. Use thin solder, please. You can now take the tube out and solder the rest of the pin receptacles as you did for the first tube.



### **Solder the LEDs**

Solder the first LED to the board. It must be assembled from the top side, of course. The distance between LED and tube bottom should be kept small. Note the drawing on the right "Section drawing of the socket with IN-8 tube". The LED has an anode and a cathode. The anode has a long wire, the cathode a short one. On the pcb you will see "A" and "K".

### **Attention:**

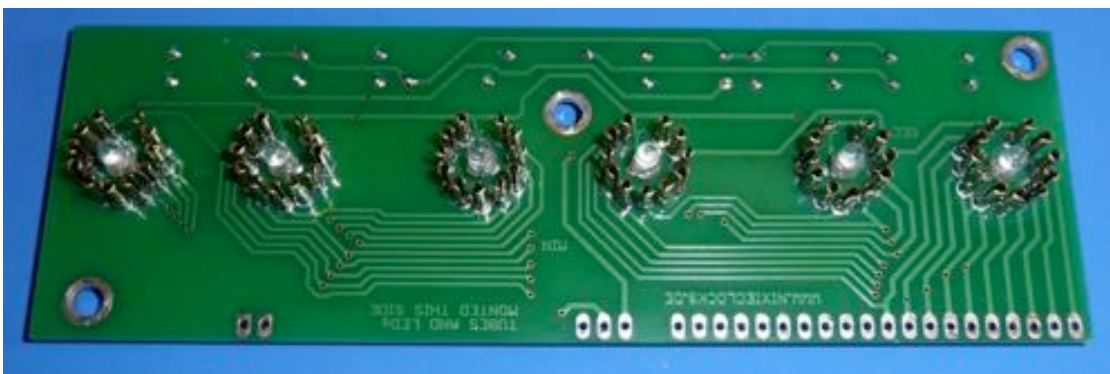
**Please make sure that you do not solder them too long- the LEDs are very sensitive to heat!** After the first LED has been mounted please mount the rest of them.



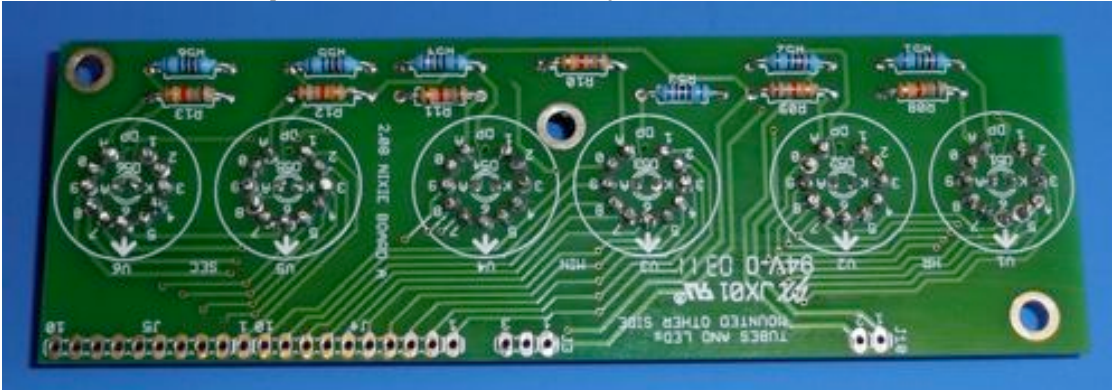
Please check your work and be sure that there are no short circuits on the board, especially between the pin receptacles.

### **Solder the connectors**

Unplug the tubes . Your tube pcb should now look like this:



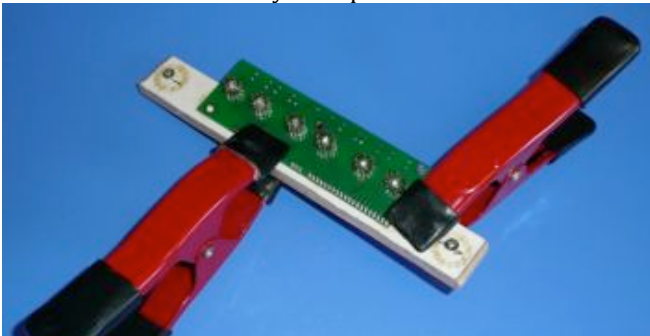
Cut the ends of the receptacles of the 6 tubes short, if you have not done that before.



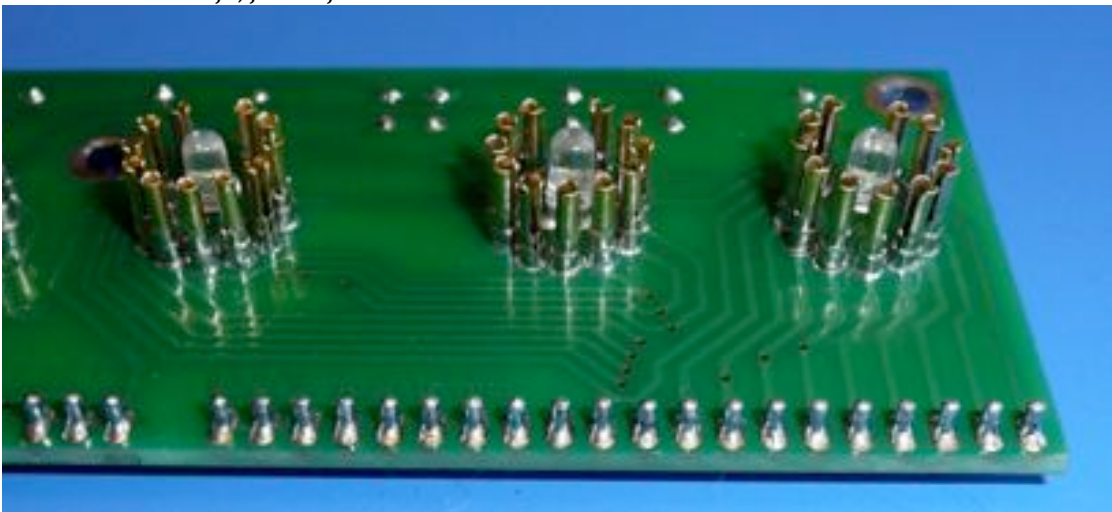
Insert the micro solder sockets into the holes of the pcb as shown on the picture.



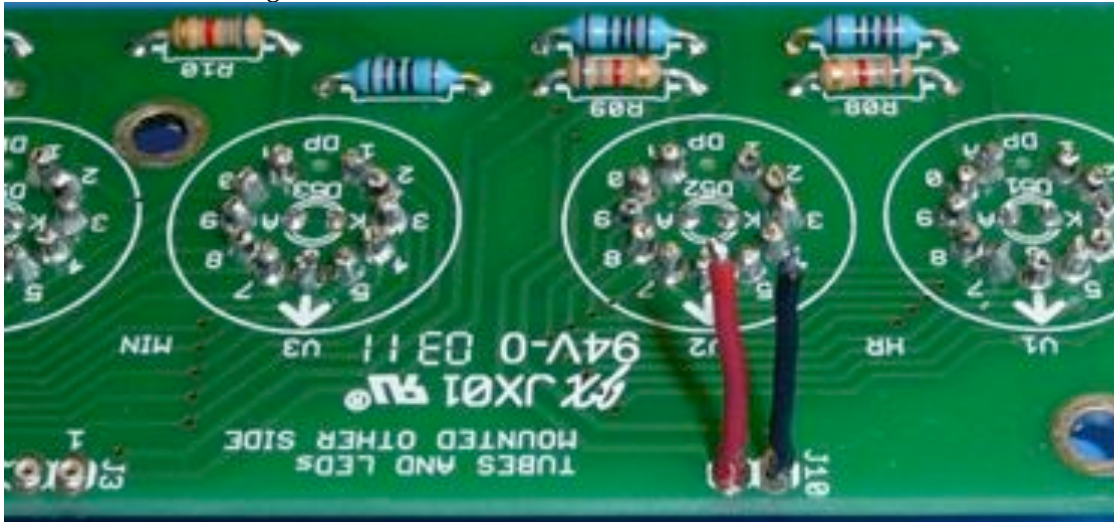
A good tip is to place the pcb on a wooden board, fix it und turn it. We use a woollen cloth glued to the board. This enables you to press the sockets down easily.



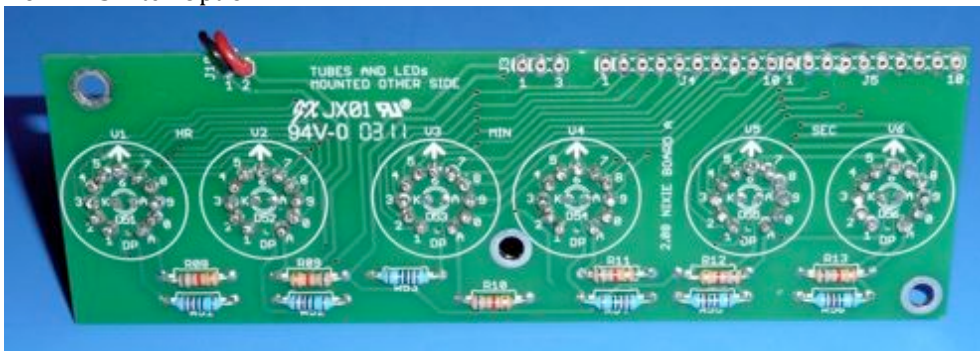
Solder the sockets J3, J4 and J5:



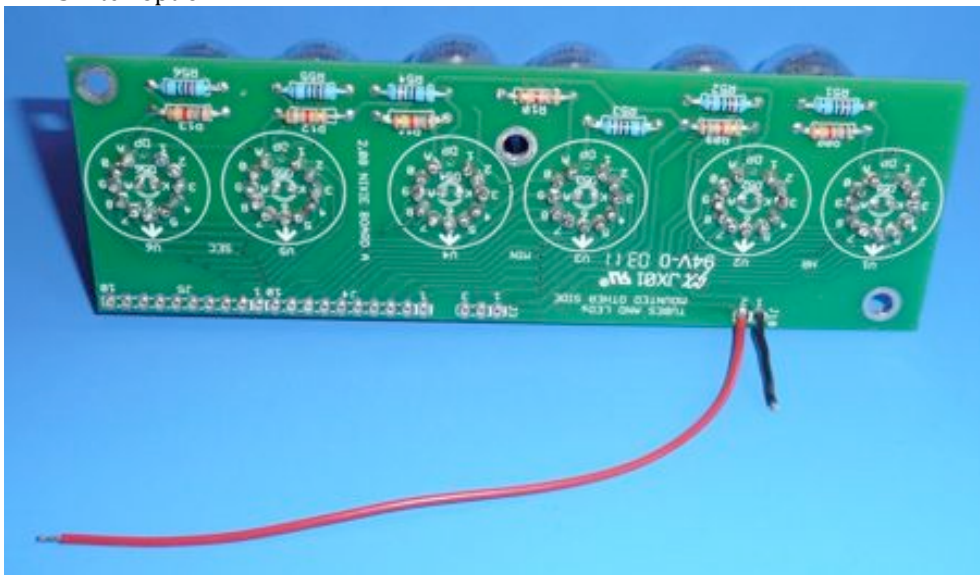
Solder two 30 mm wires to J1. This is the 5 Volt connection to the clock board.  
If you want to use an LED switch option with the 'black brilliance' case use a 30mm long black wire and a 150 mm long red wire.



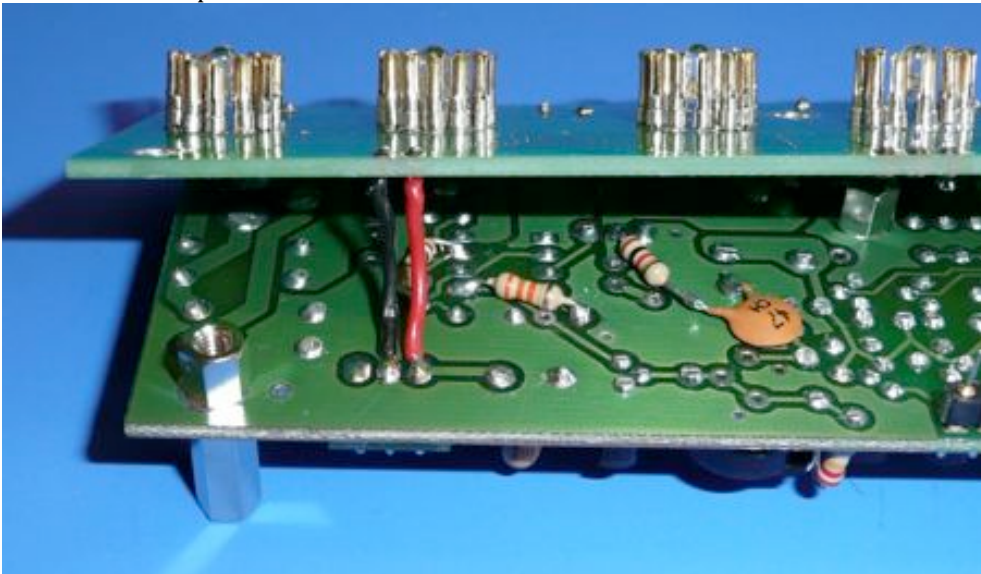
This is how it should look like:  
No LED-Switch Option:



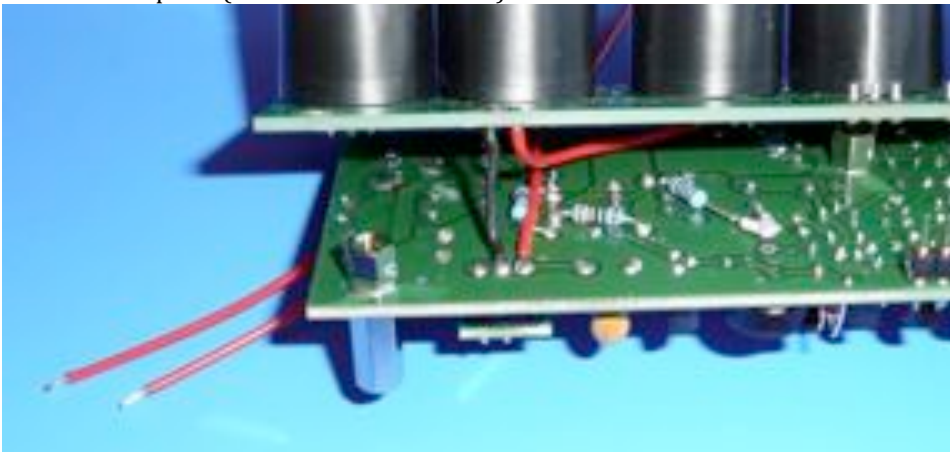
LED Switch option:



Solder the 5 Volt connection between the tubeboard and the clockboard as shown in the picture.  
No LED-Switch Option:



LED Switch Option (in Black Brilliance Case):



Connect the two pcbs carefully and fix them with the M3x4 screws.  
**Attention: There must be a distance of 5 mm between the two boards (also where the connectors are)**



Place the tubes back into their sockets and test your clock.  
**Be careful not to touch anything!(170V DC)**

After about 10 minutes adjust the voltage with R24 to 170V at TP1.  
We hope you like you new nixie clock!