Assembly instructions LED-NIXIE

Please note: The kit is delivered partially assembled (applies to pos. 2,4,5,7,9). It has been proven that this can prevent incorrect installation. In this respect, DIAMEX wishes much success in the construction of this extraordinary timepiece.

1. All plexi glas or acrylic parts are laser cut. The resulting smoke would attack bare areas. Therefore, all acrylic parts are coated with protective film on both sides (green or blue). All protective films must be removed before construction. Please do not mount with protective foil, especially the cut-outs in the MDF are exactly 2mm, the width of the engraved discs without protective foil. Otherwise the discs could break. If you leave fingerprints on the discs during this work, they should be rubbed off with a soft microfiber cloth before installation, which will not leave any scratches. Fingerprints are very ugly because 10 discs are arranged one behind the other and should be as clear as possible. Please do not use liquid detergent, alcohol or ethanol, as this will permanently damage the discs.
2. The MDF part B is covered with a foil. Peel off the gold foil sticker from the carrier, check if all cutouts are detached. Position on part B, remove again if necessary and readjust. Start in the middle and put on the outside. Fix the sticker with a microfiber cloth from the middle outwards and stroke out the air inclusions.
3. Mounting the spacers: Position MDF part A under part B (note the engraved direction). Check again in the back light if all cut outs have been removed. Screw the spacer [8mm M3] into part B. Screw with cap nuts on top (gold sticker side). Put down the LED boards at the bottom, secure with M3 screws. The boards are aligned pointing in the direction of the arrow from left to right. Mount all six boards.
4. Connection: Solder connector (male / male) to the first (left) board. Black on GND, green on DataInput, red on + 5V. The boards are connected 1: 1 with each other with short pieces of copper or silver wire. So GND to GND, DataInput to DataOutput, + 5V to + 5V.
5. Connect or solder the connecting cable female / female to the controller (if necessary, consult the data sheet of the controller used). Black to GND, green to DataOutput, red to + 5V. Connect controller and LED-Nixie, connect controller to USB. At each LED board, two LEDs should now light up synchronously after a few seconds.
6. Insert discs (without protective foils!!!): starting from front to back, insert 0,1,2,3,4,5,6,7,8,9. The zero is engraved on the back. All other numbers are engraved on the front. Please check again for fingerprints, if necessary wipe with a microfiber cloth.
7. Mount the controller, if necessary insert the CR2032 cell first, insert the spacers 5mm M3 into the four ears and screw them to the 5mm M3 nut. Now push the controller into the acrylic body. This must be done carefully and as straight as possible and at the same time, because the cutouts are cut without play. Please make sure that the signal transmitter slides into the corpus at the right place (recess). The spacers should now be flush with the carcass. Now put on the upper and lower plate, fasten with M3-5mm screws.
8. Now connect LED nixie and controller, plug USB into the controller. Either use a power bank or a cell phone power adapter or the PC / notebook USB socket. If LED-Nixie now starts to count at zero, then on the PC please synchronize the time by means of the started LED-BASIC-Editor. If LED-Nixie "forget" the time after disconnecting the power supply, please check the CR2032-cell (backup battery for the RTC = Real time clock).
9. You can record the used controller with the LED Nixie demos. In the Basic Editor select the hardware and play the demo. The included program on LED-Nixie is available in the folder "Samples" of the Basic-Editor. Of course, you can customize LED Nixie to your needs, functions, effects, operation or coloring - no problem with LED-BASIC.
10. Questions, hints, reprogramming to info@diamex.de

Good luck wishes DIAMEX.