

Assembly instructions for QCX transceiver enclosure

A prerequisite for successful installation of the QCX in the housing kit is the accurate construction of the QCX transceiver according to the assembly instructions. Especially the exact placement of the mechanical controls, sockets, the 7805 voltage regulator and the LCD display on the board.

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Fully assemble and test the QCX transceiver before installation in the enclosure.

Parts list:

- 1 piece Housing bottom
- 1 piece Upper housing part with printed legend
- 4 piece equipment feet
- 4 piece pan head screw M3x10 (for equipment feet)
- 1 piece DC socket (Ø 5.5 / Øi 2.1 mm)
- 1 piece Shrink tubing for insulation of the DC socket
- 2 piece Extension adapter (for potentiometer and rotary encoder)
- 4 piece (2 pieces spare!) Grub screws M3x4 with tip (for extension adapters)
- 2 piece aluminium chassis mounting (button extension)
- 2 piece Hexagon nut M10x1 SW13 (button extension)
- 2 piece plunger plastic black (button extension)
- 1 piece Allen key SW1.5 (for mounting the extension adapter)
- 4 piece pan head screw M3x6 (for the enclosure cover)
- 2 piece pan head screw M2x5 (GPS cover)
- 2 piece Hex nut M2 (GPS cover)
- 1 piece Cover plate (GPS cover)
- 1 piece spacer Ø 5.5 x 4.5 mm (connection 7805 to the housing)
- 1 piece Button flat screw M3x10 (1x connection 7805 to the housing)
- 1 piece Hex nut M3 (for connection of 7805 to the housing)

Assembly:

In the lower part of the housing, the installation of the DC power socket and, if necessary, the installation of the cover plate at the opening of the GPS connector using the two screws M2x5 and hex nuts.

The button extension chassis mountings are inserted into the two \emptyset 10.2 mm holes of the upper part of the housing and fastened from below with the hexagon nuts M10x1. Please be very careful NOT to over-tighten. Apply only moderate force. If you over-tighten these nuts, the printed film on the front of the enclosure will easily be twisted.

Now the power supply socket is wired to terminals 2 (+) and 1 (-) on the top of the board. Please make sure that the wires on the underside protrude as little as possible over the board (to avoid danger of short circuit!)

For insulation from the underside of the PCB, fit the supplied shrink tubing on the shank of the DC panel socket.

Wire length approx. 10-12 cm

Carefully thread the assembled QCX board with the antenna socket into the lower housing shell.



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The device feet are each provided with a pan head screw M3x10, which is quite tight (sorry). Now you can screw the device feet with the screws through the housing base in the nylon spacers of the circuit board. Please do not tighten yet, so that you can easily correct the position of the board in the enclosure.



Next is the extension adapter mounted on the encoder (# 1).

Please screw down as far as possible. This is followed by the second extension adapter on the potentiometer (# 2).

It is important that the grub screw of the adapter is screwed into the gap between the split sides of the potentiometer shaft!

The height of the knobs can be aligned so that the rotary encoder and gain control knobs are at the same height.



Now you can put on the sample to the hood and check whether the extension adapter without grinding on the housing, can rotate freely.

Does the hood close correctly? (the height of the 7805 is critical)

At the same time, a visual check can be made for the buttons. Through the opening of the cover rosettes you should see the buttons on the PCB.

The board is still loose, so you can compensate for minor deviations by moving the board in the enclosure base. Then screw the device feet to the spacers on the board.



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Now the connection from the voltage regulator 7805 to the enclosure. Mount the spacer with the oval head screw M3x10 and hexagon nut. This only works if the 7805 has been soldered in as deep as possible, as described in the manual!



Next, the extensions of the two buttons. It is best to place the top of the housing with the short leg on the table.

From the inside, push black plastic plungers into the chassis-mounted extension mounts for the two buttons, with the long end first. The plungers must move easily in the chassis mounts and then protrude from the top about 2 mm.



Now the preassembled lower housing part is pushed from the left into the upper housing part. That's what it should look like. The buttons on the board must be easy to operate and the potentiometer and encoder should be able to rotate without grinding on the housing.



If any issues are found, loosen the four screws on the underside. Slightly shift the entire board until the alignment seems correct. Then tighten the screws again.



Finally, the housing lower and upper parts are assembled with the four remaining M3x6 screws. Mount the washer and hex nut on the antenna socket and the two knobs.

Now enjoy the transceiver!



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