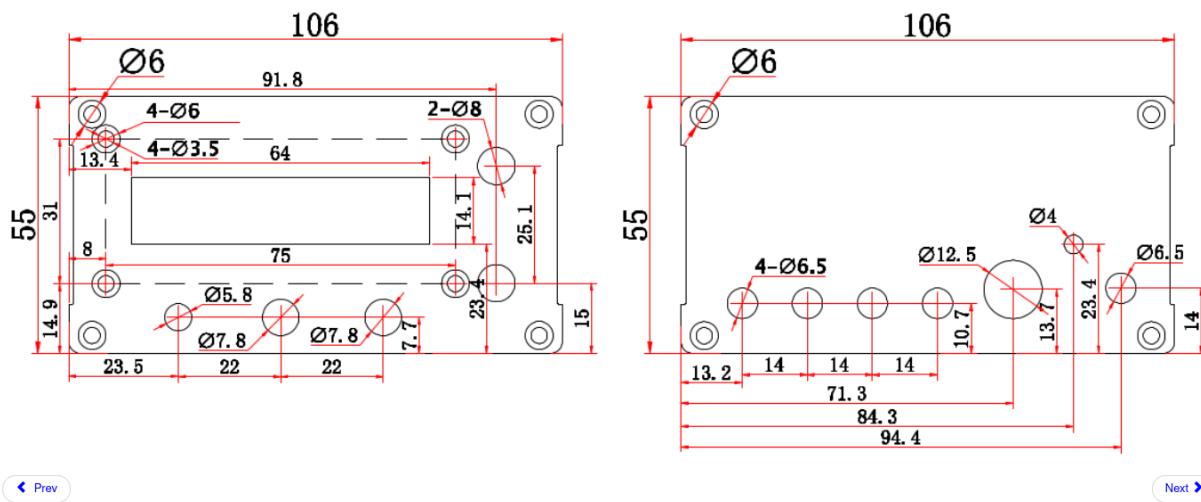


Housing Specs

Drilling Template (Front Plate: Left) (Back Plate: Right)

QCX+ Drilling template

Drawing is provided for personal use only for example for a personal 3D-printing project. Drawing is copyright QRP Labs and may not be reproduced, used for production etc.



The corner holes (4-O6) are for mounting LCD Display to controls board. The corner holes (O6) are for mounting controls-board to front plate.

Why Anodized Aluminum?

Anodized Aluminum converts the outer layer of material (aluminum) into a thick oxide layer aluminum oxide (Al_2O_3). It is lightweight, highly resistant to corrosion, and easy to come by. It is electrically insulated due to the oxide layer, so when mounting the boards to the case, we can avoid electrical conductivity between the aluminum and our components. Drilling through the oxide layer exposes the conductive aluminum core. It is essential to use insulated standoffs when mounting the boards onto the case. It is also important to avoid buffing or scratching the inside when cutting out the through-holes, as so avoid exposing the aluminum core.

Understanding and Specifying Anodizing:

<https://www.luxonengineering.com/resources/anodizing.pdf>

Wikipedia: <https://en.wikipedia.org/wiki/Anodizing>

Alternatives?

It is possible to 3D print a PLA insulation box to fit snugly inside of the case, however it might be more overhead in the end, as inner specification prompts recalculation of outer aluminum shell.

Housing Details

QCX+ is specifically designed to fit a custom-manufactured black anodized aluminum enclosure.

Inner Specifications

L: 146mm

W: 106mm

H: 55mm

Top/Base Plate Inner Area: $L \times W = 146mm \times 106mm = 15.476m^2$

Side1 Plate Inner Area: $W \times H = 106mm \times 55mm = 5.83m^2$

Side2 Plate Inner Area: $L \times H = 146mm \times 55mm = 8.03m^2$

$V = L \times W \times H = 146mm \times 106mm \times 55mm = 851.180m^3$

Component	Count	Inner Area
Top/Base Plate	2	$15.476m^2$
Side1 Plate	2	$5.830m^2$
Side2 Plate	2	$8.03m^2$

Example Pictures



QCX+ 5W CW transceiver kit: <https://qrp-labs.com/qcxp.html>

(Access to more information)