



USB-C Portable Charger for BaoFeng UV-5R Radio

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Summary

Portable USB-C charger for BaoFeng UV-5R radio.

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Tags: [charger](#) [radio](#) [hamradio](#) [portable](#) [usbc](#)
[amateurradio](#) [baofeng](#) [baofenguv5r](#) [uv5r](#) [uv5g](#)

This model is remixed from <https://www.thingiverse.com/thing:5270394>

This is a small portable USB-C charger for the BaoFeng UV-5R and similar models that take the same BL-5 battery. I've tested this on the UV-5R and UV-5G.

Note that tolerances are pretty tight for getting a good firm fit on the radio. Each slicer and printer and filament is different - you may need to do some sanding or adjust the file to get a perfect fit. The STEP file is included should you need to edit it.

Also note that lipo batteries and chargers can be hazardous if things aren't done correctly. Double check your work.

You will need:

- * Solid core wire (I used 22AWG)

- * **USB-C charging module** - MUST BE the 2S version as the BL-5 battery is two cells in series (7.4V nominal). 1 Amp input (.55A charging) is a safe

charge current for an 1800mah battery. You may be able to use the 2A version (1.1A charging) - do so at your own risk, I haven't tested it and I have not seen official specifications for the battery. The original link was dead; this new link appears to be the same module but I have not confirmed.

- * Two small 5.1k resistors

- * Four M1.4x8 screws (often available in variety packs of small electronics screws)

- * Hot glue (optional but recommended)

Note: You must add the 5.1k resistors for the charger to function with proper USB-C power supplies. This requires very fine soldering work. Otherwise you will be limited to using “dumb” USB-A to USB-C cables.

Print Settings:

- * 0.2mm layer height recommended

- * Supports only holding up the top of the body, not needed elsewhere

- * Tree supports strongly recommended (see images)

Assembly:

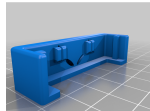
Several steps of the assembly process are shown in the pictures for this model, refer to them as needed.

1. Remove supports and clean up print
2. Cut two lengths of wire and strip ~3cm from one end
3. Loop the stripped wires through the holes to create the charging contacts
4. Solder the ends of the wires back onto themselves carefully - do not melt the plastic
5. Cover the exposed wire inside the charger with kapton or electrical tape to prevent shorting to the board
6. Add a 5.1k resistor separately to each of the two middle pins of the USB-C connector and connect the other end of both resistors to the GND pad in the corner of the board. Check that the resistors are not connected to each other or the other pins of the USB-C connector. DANGER: if this is incorrect, you could create a short that may harm this device or the device supplying the power. Not adding resistors is safe but will limit what power supplies can be used.
7. After soldering, additionally secure the resistors in place with hot glue
8. Solder the other end of the wires to the correct terminals. Ground is the wire from the contact closest to the USB-C opening in the case, and attaches to the pad labeled GND on the far side of the board. The positive wire is the opposite. DOUBLE CHECK these are correct by looking at the contacts on your battery - they are labeled +/-.
9. Insert the board fully, push down, and secure with hot glue (optional)
10. Attach the back panel with the screws
11. Without a battery inserted, plug the empty charger into a power supply. Confirm the blue light turns on through the small hole in the

back panel. Confirm power draw from the power supply is minimal (<1W).

12. Insert the radio/battery into the charger. Confirm the light turns red and the battery is charging. Power draw should be under 10W.

This remix is based on



Baofeng UV-5R portable charger

by HStakhiv

Model files

charger_for_baofeng_uv5r.step



body.stl



back-panel.stl

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