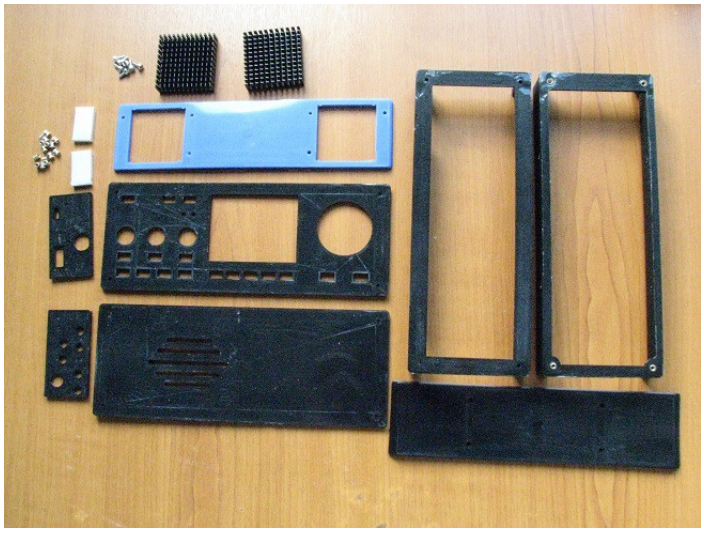
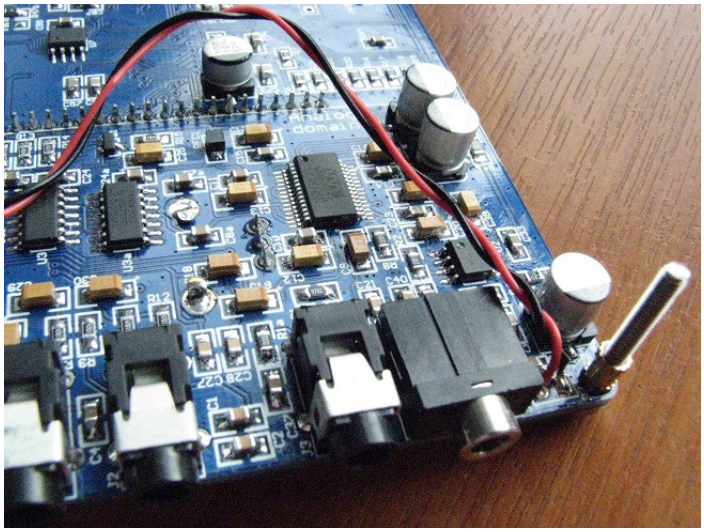
Putting it all together

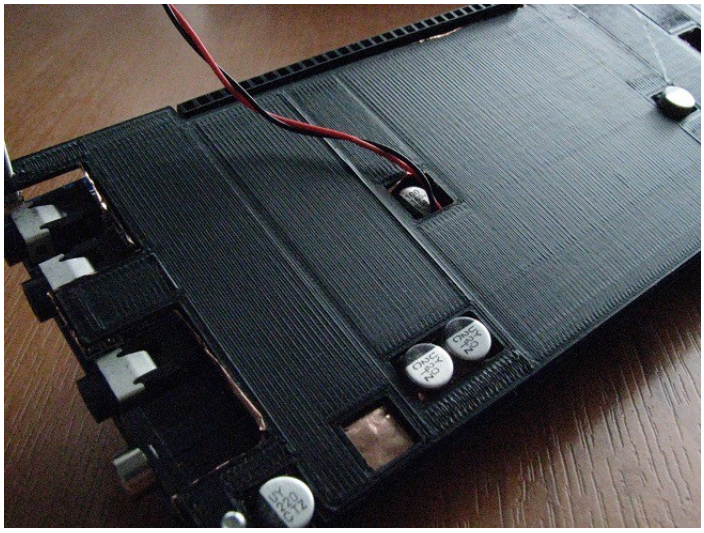
The mcHF assembly requires eight pieces of 3D printed parts, two heatinks, two aluminium stud pieces and number of M2.5 knurled inserts, bolts and nuts. Also four encoder knobs and 17 button caps.



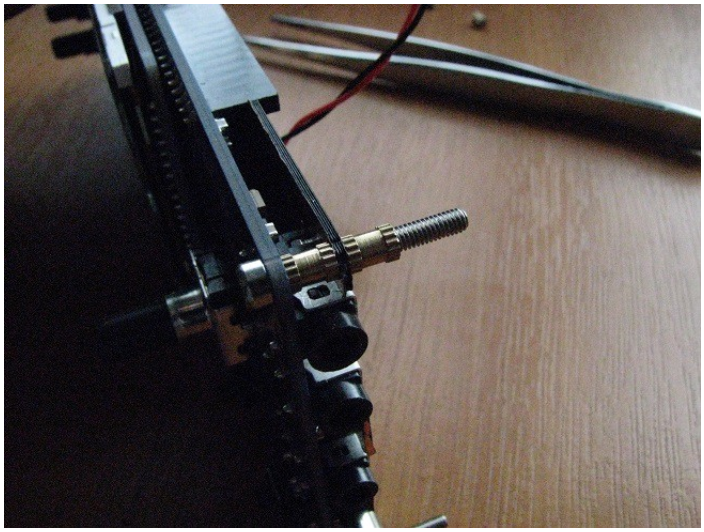
First we install 4 pcs of M2.4x20mm bolts onto the UI board and tighten them with M2.5x5mm knurled spacers. Then we solder the speaker wire at P7



Next is the install of the shielding plate into the M2.5 bolts while routing the wire via the capacitor hole in the middle

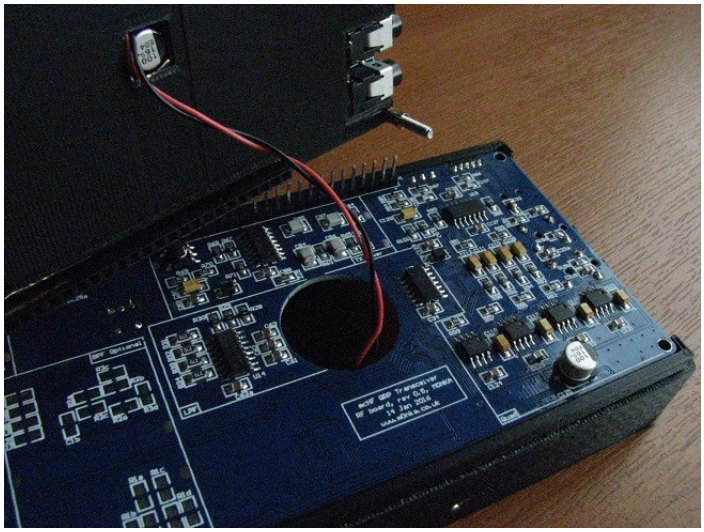


Now is time to install the second spacer on each bolt, so the shielding plate is kept in place

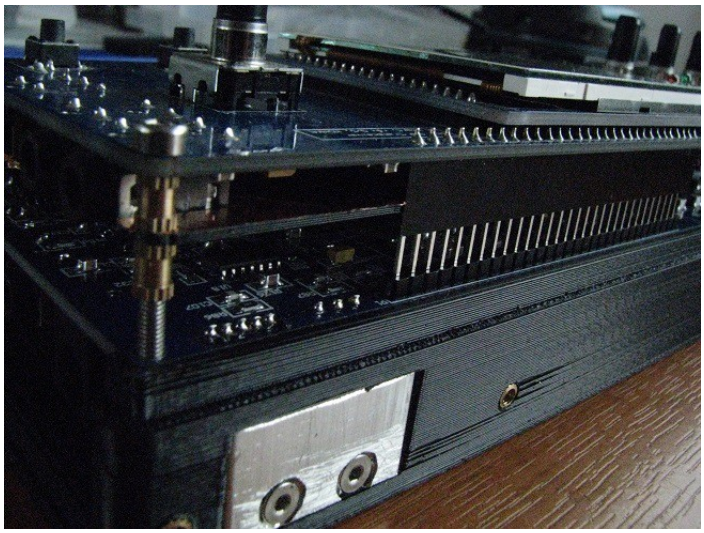


Then we need the prepared back support shell with the RF boards, and aluminium stud pieces already bolted to the regulators/transistors

Before assembling the front and back shell together, we need to route the speaker wire through the big hole on the RF board

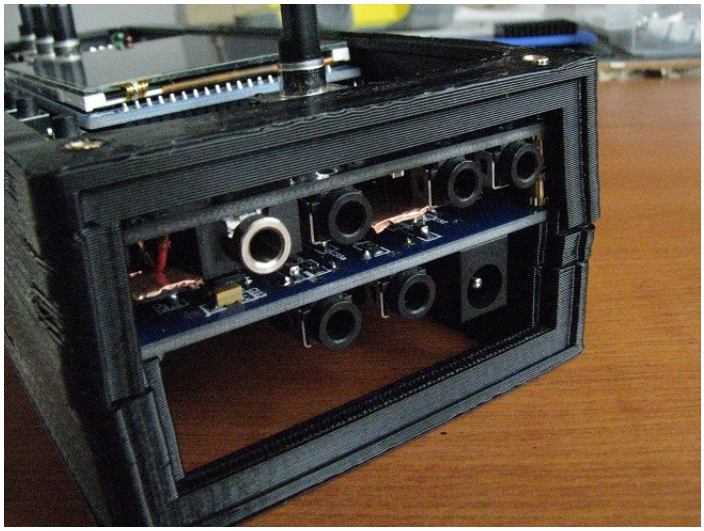


Plug all four bolts the same time into the RF board corner holes, while making sure the 30 pin connector is also plugged correctly

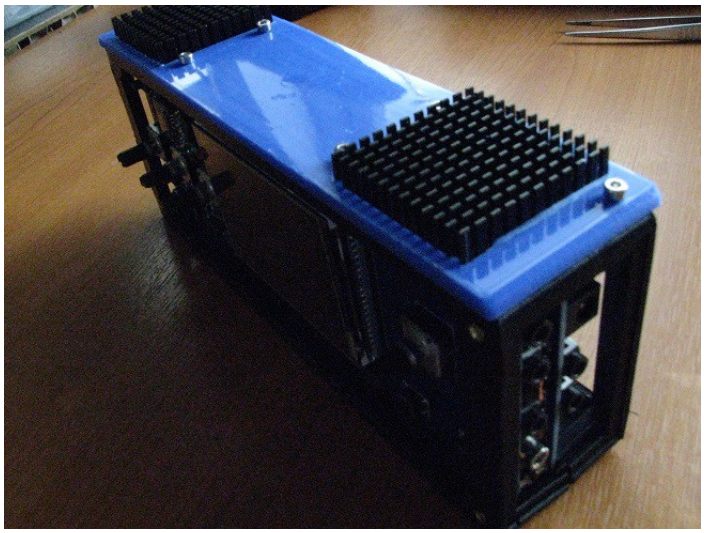


Gently push the UI board, till it fully engages to the RF board

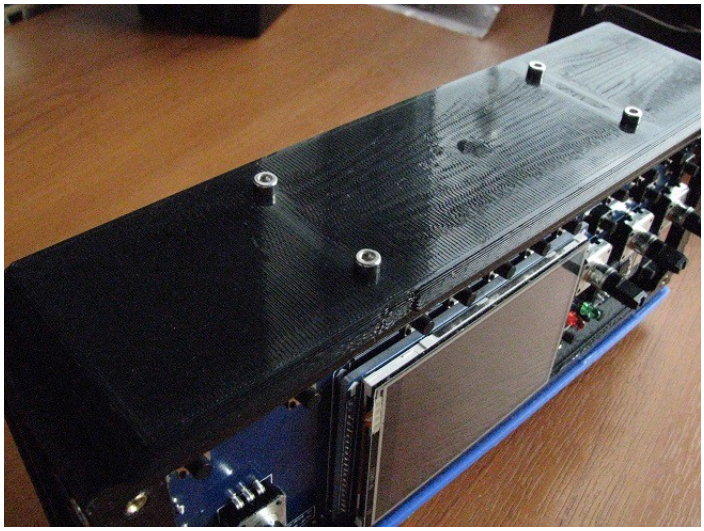
Next is the front support shell, it should fit without resistance on top of the UI board



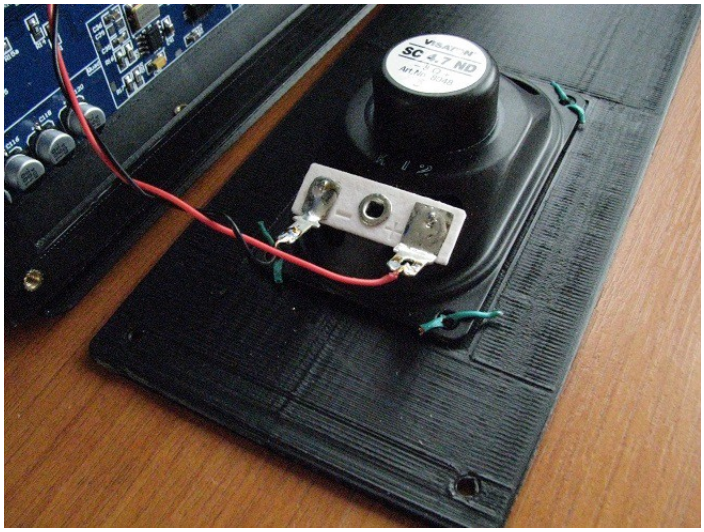
Then install the already prepared top support panel with the heatsinks. Not bad idea to put some silicone paste onto the aluminium stud pieces for better thermal contact



Next is the bottom holder panel

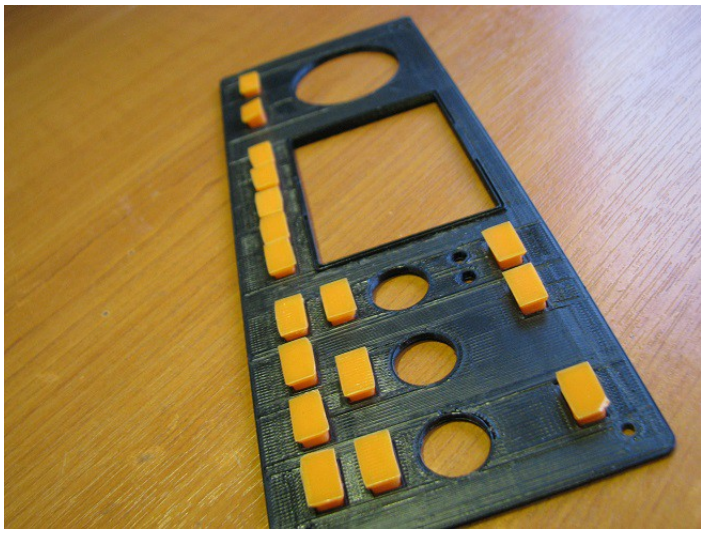


Solder the speaker wires to the speaker



And install the panel with the bolts

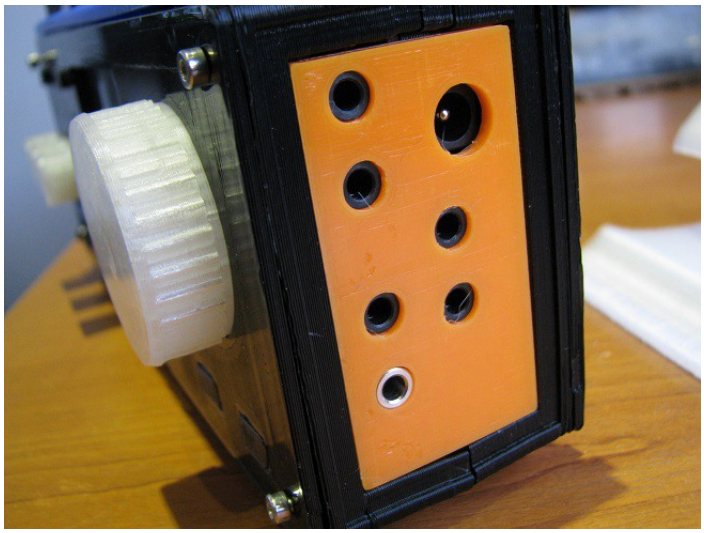
It is time to prepare the front panel and buttons. Lay the panel flat, on its front facing side down, then insert all buttons into the holes. It is not bad idea to check first if every button moves freely into the each hole. If not, bit more filing is needed.



Lift the panel up, as it is,without touching any button and put the mcHF assemby on top of it, while still not touching the buttons. When the front panel is fully alligned and inserted onto the front support shell, then rotate the whole assembly 180 deg and put on the table. If not of the buttons had dropped down onto the UI board, you can tighten all four screws.

You can also put the encoder knobs. Those should enter the front panel, at least for half a millimetre. If not expand the holes a bit.

Now isert the right panel, it should click into the connectors and be held there securely, not too loose or sticking out. If the latter, do a bit a filing on the holes.



And finally install the left panel as well. Make sure the BNC is not too tight of a fit, otherwise would be almost impossible to remove the panel later for maintenance.

And that is it – your mcHF casing is done.

73, Chris
M0NKA