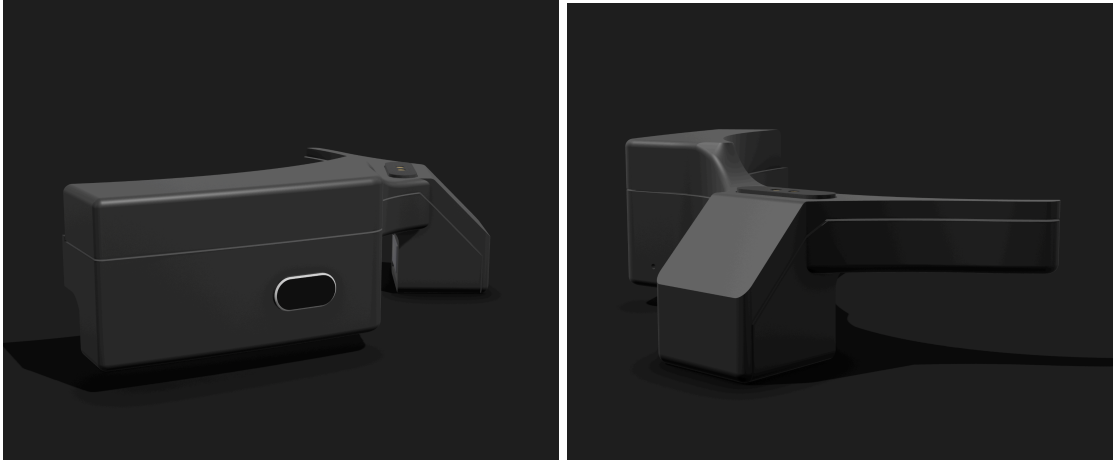


u/herojeff02 @ r/headphones



I might have mixed some steps up, so read the whole thing before actually following the guide step by step.

If there's something wrong or ambiguous, please leave a comment so everyone can see.

Bluetooth Adapter Guide for HD600 with angled edges(post-2019)

Compatible with HD600 lookalikes (HD600, HD650, HD660S)

The headphone must have angled edges like the picture on the left. If the headphone has round edges like the picture on the right, the adapters might not fit.



Skills and Equipment

Soldering tiny pads
 Disassembly of small electronics
 FDM 3D printer (For charger - You can outsource this)
 DLP 3D printer (For units - You can outsource this)
 PH00 screwdriver
 Cutter knife
 Tweezers
 Instant adhesive

Pogo pins *2 pairs (aliexpress, 2.54mm,

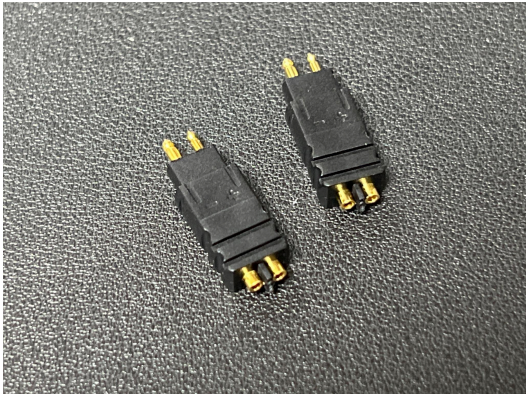


<https://www.aliexpress.us/item/3256804404617608.html>)

- You need to cut

the edge nibs off before assembly

HD600 connectors *2 (aliexpress, <https://www.aliexpress.us/item/3256804484390353.html>)



TRN BT20S Pro (aliexpress, connector type doesn't matter since we're not going to use it. TRN BT30 may be compatible, but it has NOT BEEN TESTED)
 30AWG silicone copper cable (prep at least 1 meter)
 Cylinder magnets *4 (3mm diameter, 1.5mm thickness)
 Sponge tape (4mm thickness)

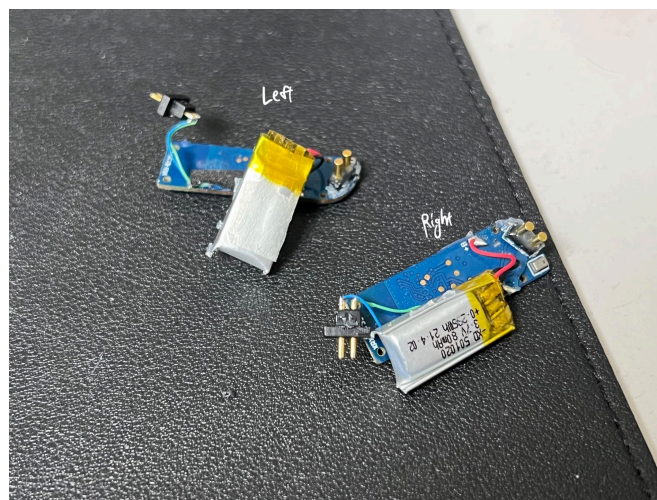
Unit Disassembly

1. Watch this video before disassembly : [TRN BT20S PRO Connection problem between ears \(design flaw\) Part 2 - DIY fixing](#)
2. Open the housing of TRN BT20S Pro units. softly stick a cutter knife into the gap, which is on the opposite side of the power button and TRN logo. pry it out, keeping in mind not to puncture the battery or scratch the motherboard. Sticking the knife 3mm deep should be safe.



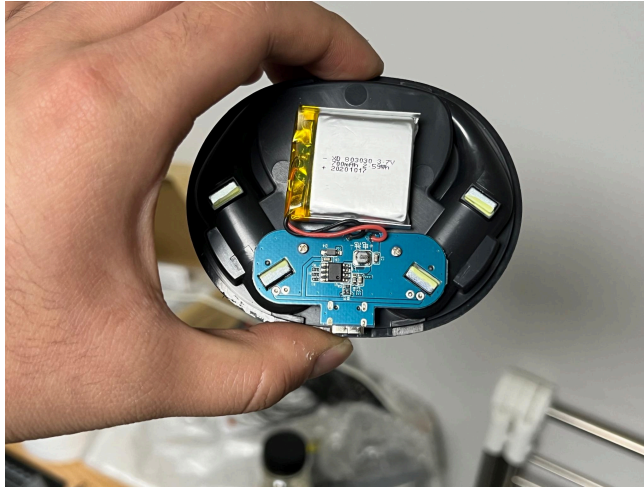
3. Disassemble TRN BT20S Pro units, and take out the motherboards (and everything attached to it including the batteries, headphone connectors), antennae, and aluminum buttons. Do not pull on the wire (If the metal contact is pulled off with the wire, the board is toast). Do not mix up L/R (I wrote L/R on the batteries with a marker pen)
4. Take the sponge (on top of the blue and green wires) off, remember where the + / - is (use a marker pen or just take a picture), and desolder the blue and green wires.
5. Desolder and remove all vertical pins (2 pins per set, 2 sets per unit). 2 of them face the antenna, and 2 are charging pins. The antenna pins should come off easily, but the charging pins go through the motherboard so it won't be as easy. Leave a small drop of solder on the antenna pins, since it will be required later.

result :



Charger Disassembly

1. Watch this video before disassembly : <https://www.youtube.com/watch?v=7vSRJporTwQ>
2. Pry and pull out the upper plastic housing.



3. Unstick the battery carefully from the housing. Do not pull on the cable.
4. Take the screw out of the board and take the board out. Stick the screws to the magnet for safekeeping. You won't need the magnets, but you will need the screws.
5. Desolder and remove the charge pins. + / - of the pins will already be marked on the board, but check just in case.

result :

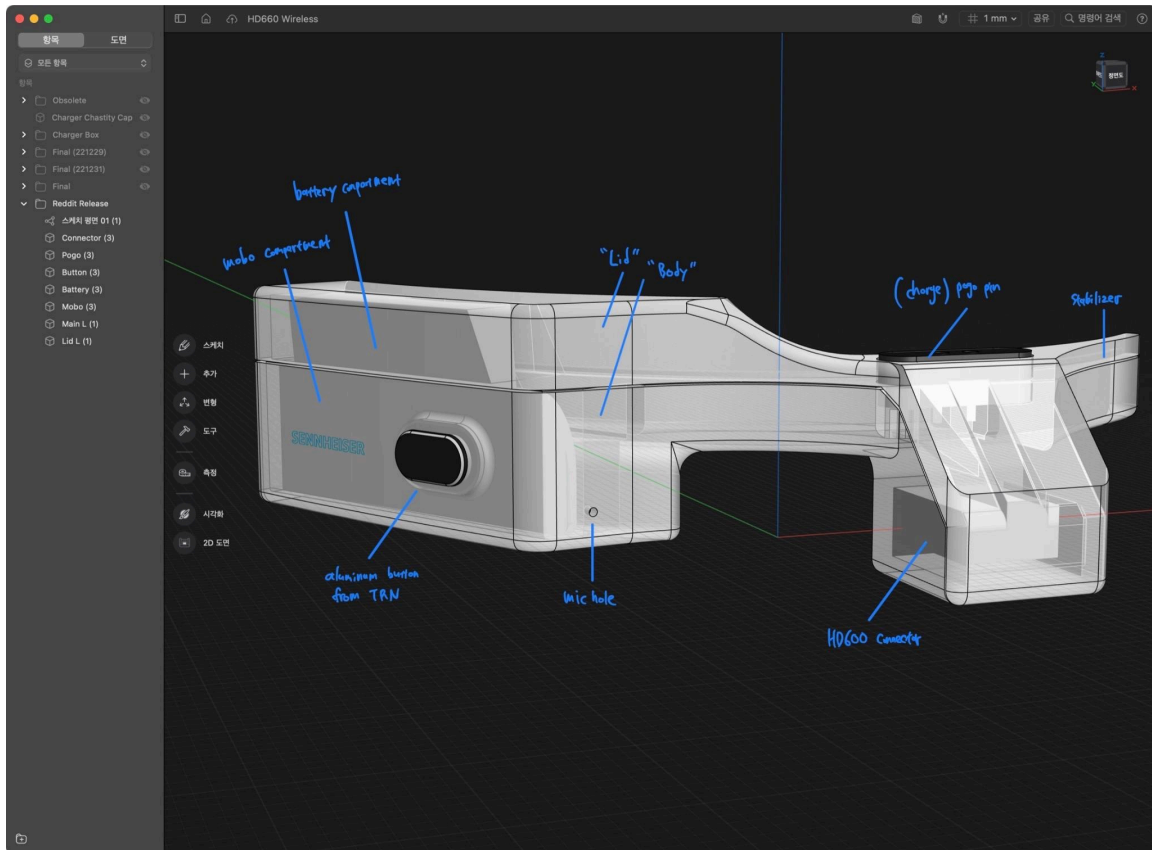


Unit Assembly

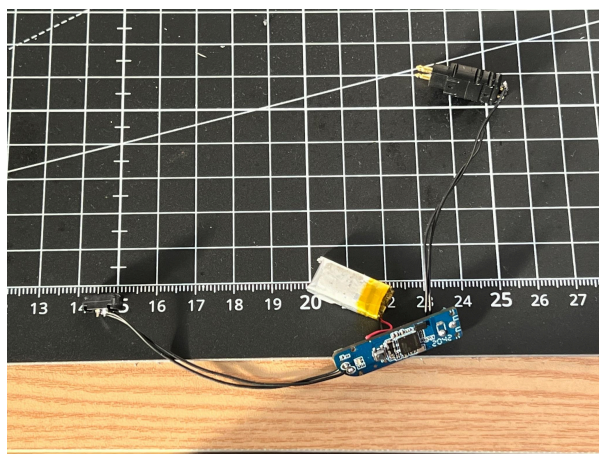
You need :

At least 6cm of 30AWG silicone cable for each connection(8 pieces total)

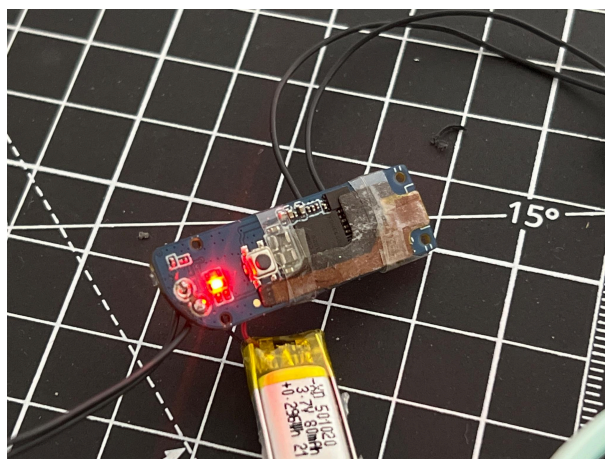
DLP printed housings(left lid, left body, right lid, right body)



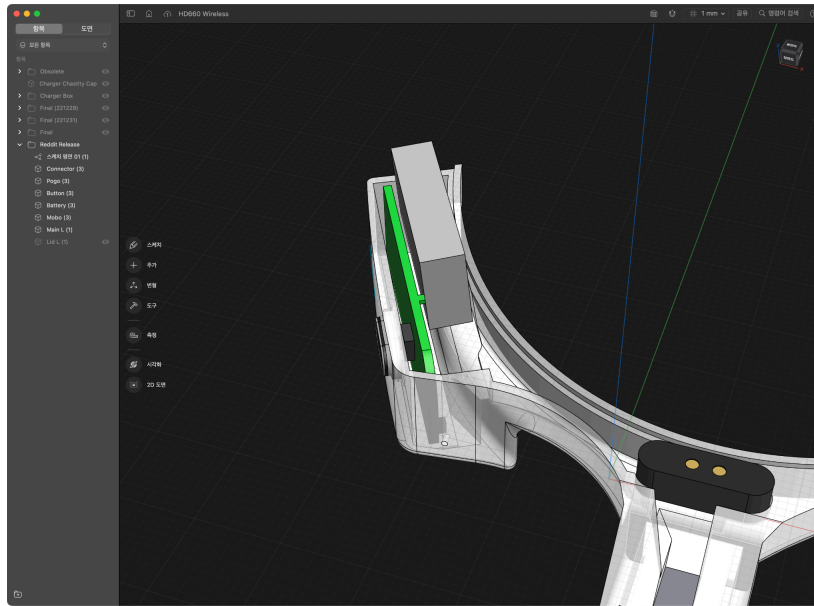
1. Solder the charge pads to the pogo pins. L/R must use the same polarity or you'll end up frying the board. Use the flat pogo pins instead of the springy ones.
2. Solder the audio pads to the HD600 connectors. match + / - on the mobo and connector.
3. The direction of the soldered cables on the mobo shouldn't matter much, since there's enough space to fold them up and make it point in the right direction.
4. The direction of the soldered cables on the pogo pin/hd600 connector will matter. For the pogo pins, the cables should lead to the longer part of the pogo pin(See picture). For the hd600 connector, the cable should lead to the opposite side to the + / - marking(See picture).



5. Wrap the antenna with tape, making sure the gold contact area of the antenna comes in contact with the drop of solder (where the antenna pins used to be). Then, add tiny pieces of sponge tape to both sides of the mobo to press the antenna into the solder drops. Make the pieces of sponge tape as small as possible, while covering the area where the solder drops are.



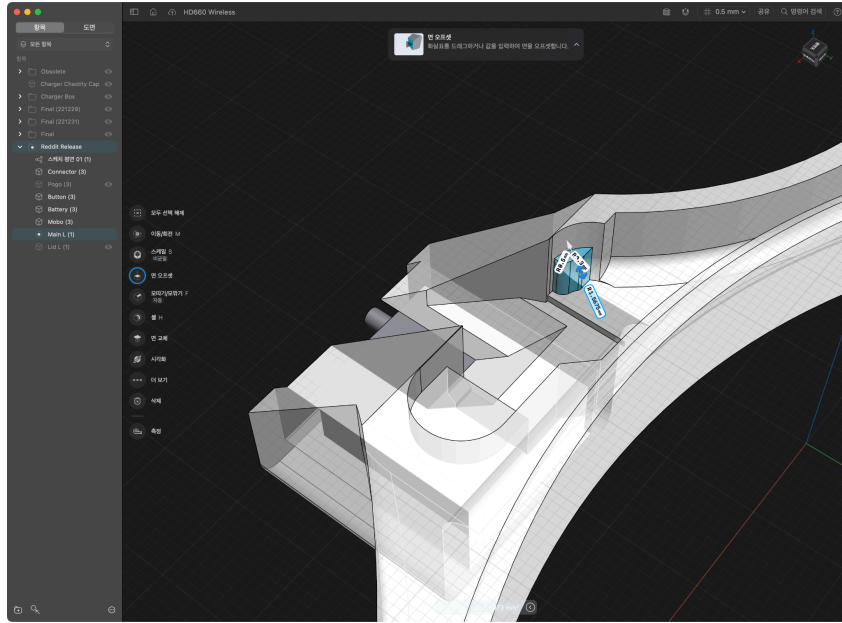
- Put the aluminum button in the housing(body)'s hole.
- Put the mobo in the housing(body), pressing the sponge slightly with tweezers. If the button is too jiggly, add sponge tape to the mobo(opposite side of where the button is).



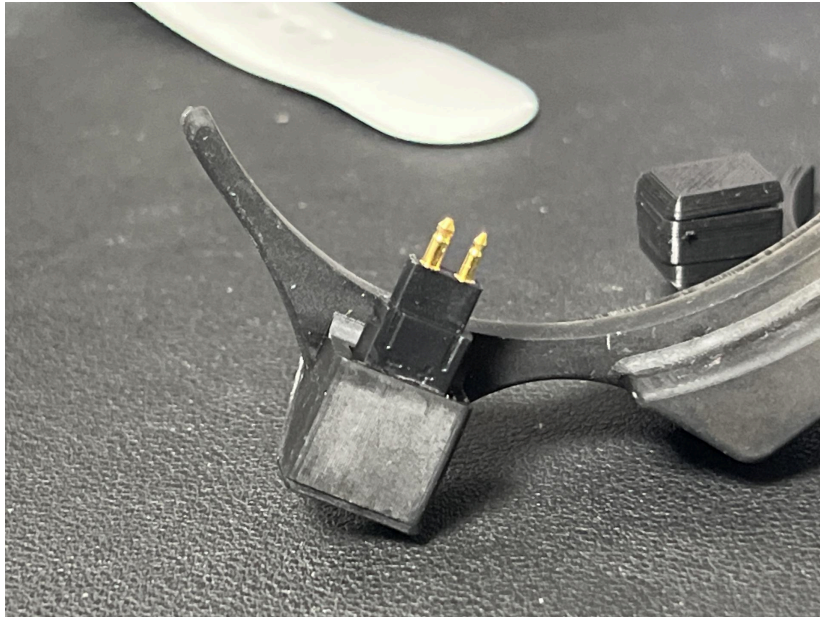
- Route the cables through the gap, place the hd600 connector in the slot, then place the pogo pin in the slot.



- There is a bump in the pogo pin slot, which keeps the pogo pin level. Remove the pogo pin from the slot, apply instant adhesive around the edge, reseal the pogo pin into the slot, making sure it is on top of the bump.



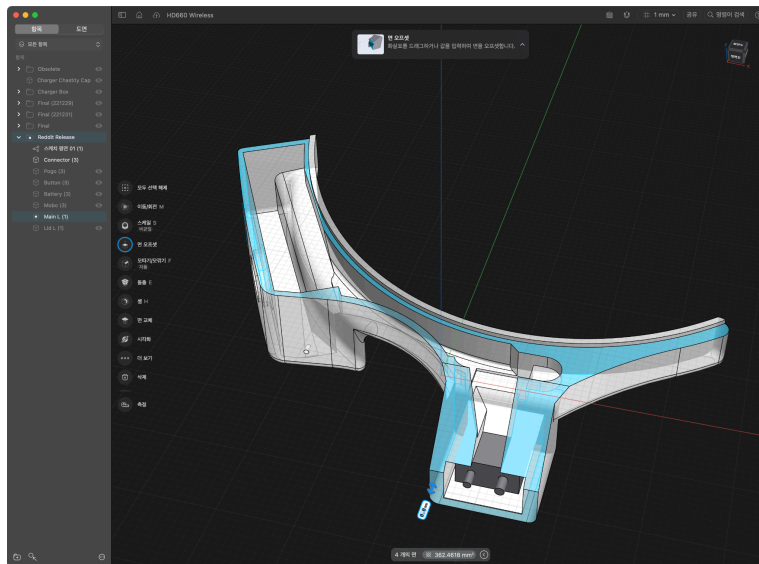
- Add instant adhesive to the hd600 connector. Slide it in until the + marking barely touches the edge of the housing. Make sure all the edges are level.



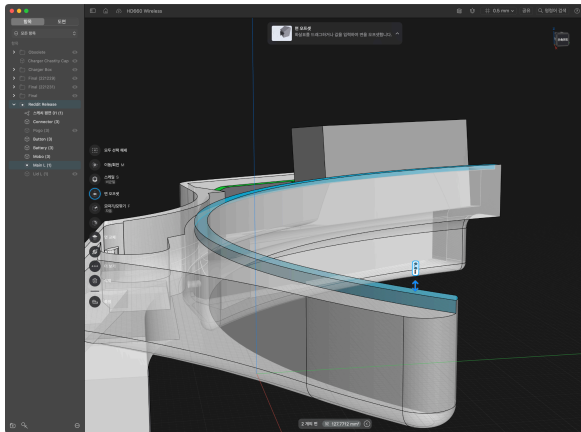
11. Fold the excess cables into the space in the housing(body).



12. Apply instant adhesive on the blue area. It doesn't have to be thorough.



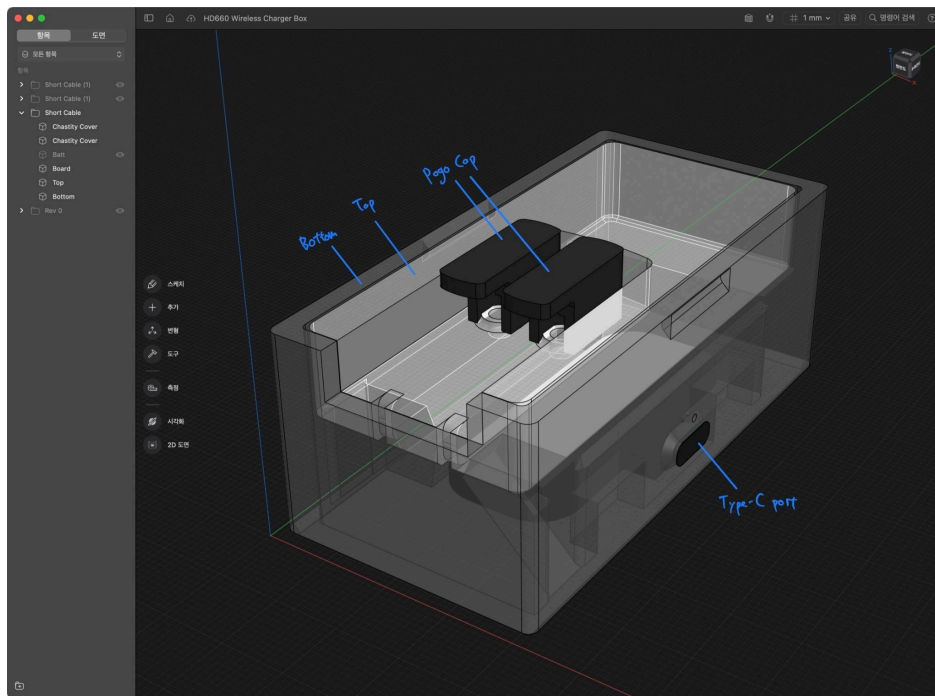
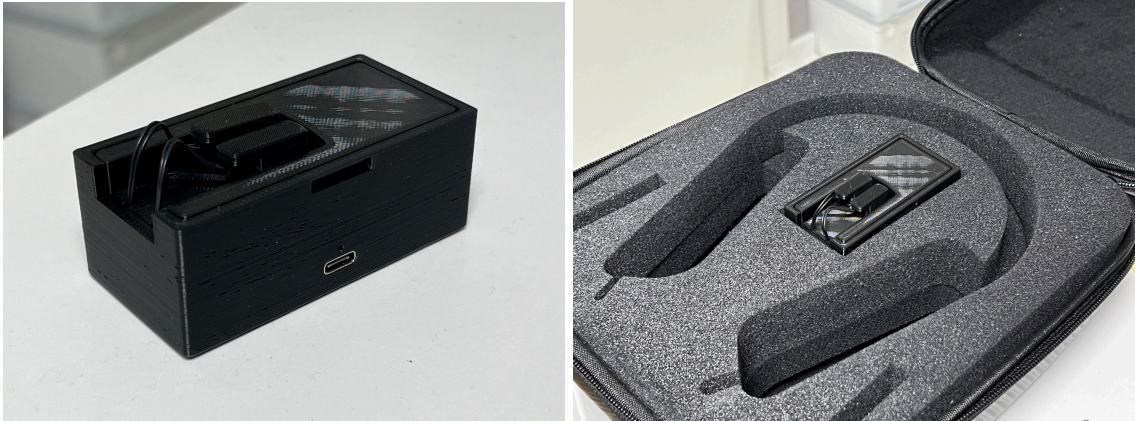
- Place and press the lid to the body. The lid should not sit on the bump, and should be adhered properly to the blue area on step 12.



result :



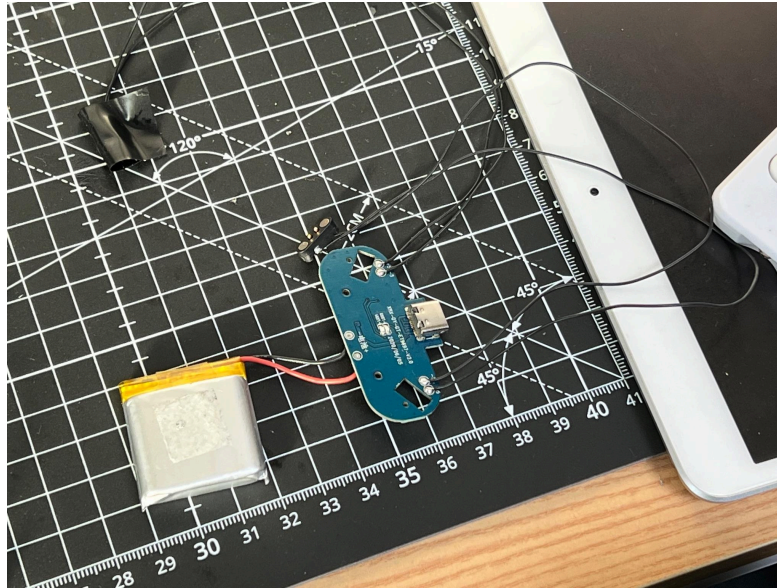
Charger Assembly



You need :

At least 10cm of 30AWG silicone cable for each connection(4 pieces total)
 FDM printed housings(Bottom, Top, Pogo Cap *2)

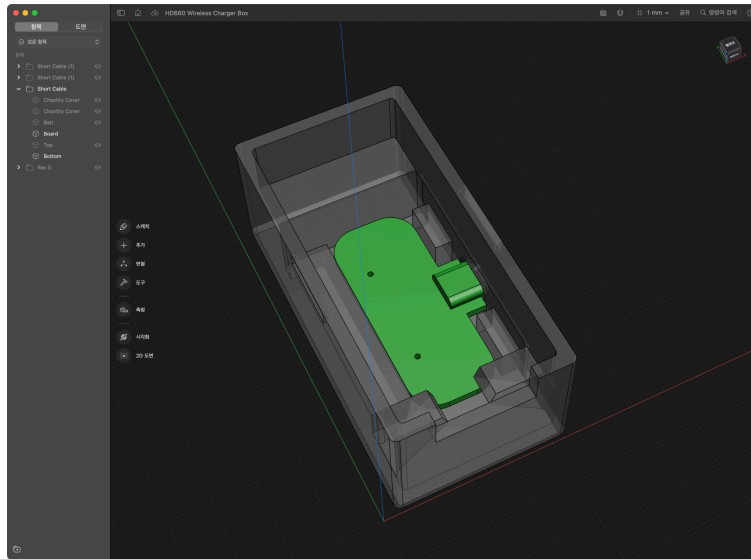
1. Solder the 30AWG silicone cable to the springy pogo pin. The magnet polarity and cable direction must be the same to Unit Assembly - step 4. **Make sure the pogo pins do not stick together in this stage, or something bad might happen...**



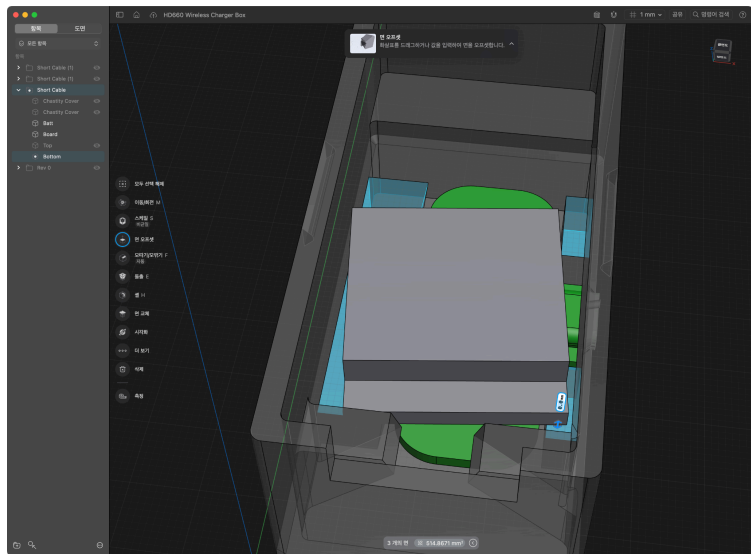
2. Insert the pogo pin into the pogo cap(it should fit perfectly, but I applied a drop of instant adhesive). The pogo pin must be pushed in so the springy bit of the pogo pin does not protrude out of the cap. The magnet's polar and cable direction must be like the second picture.



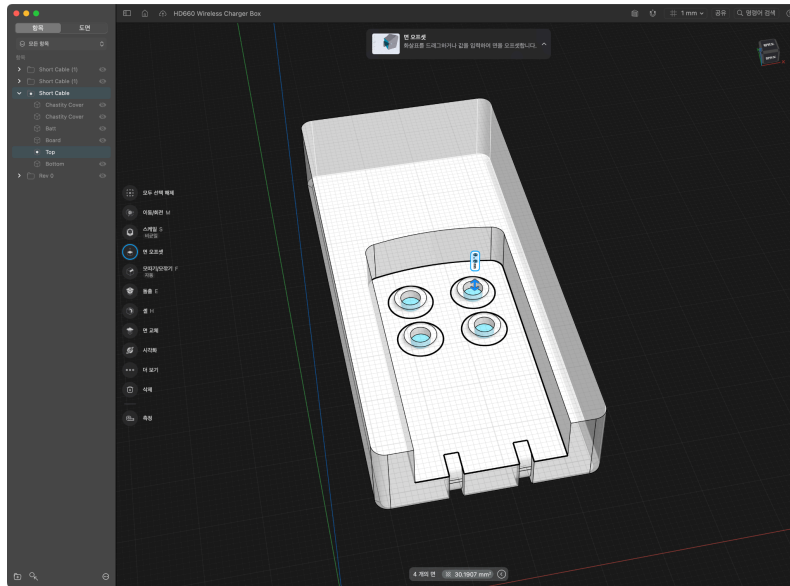
- Now that the pogo pins are safe, it's time to insert the board into the bottom housing. the type-c port should go in first.



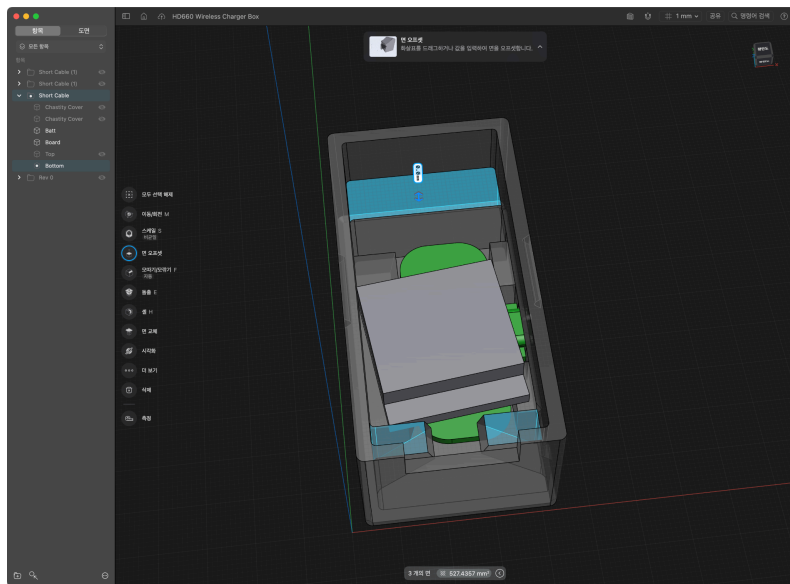
- Screw the board in with the screws from Charger Disassembly - step 4.
- Place the battery on top of the blue area. Do not use strong adhesive.



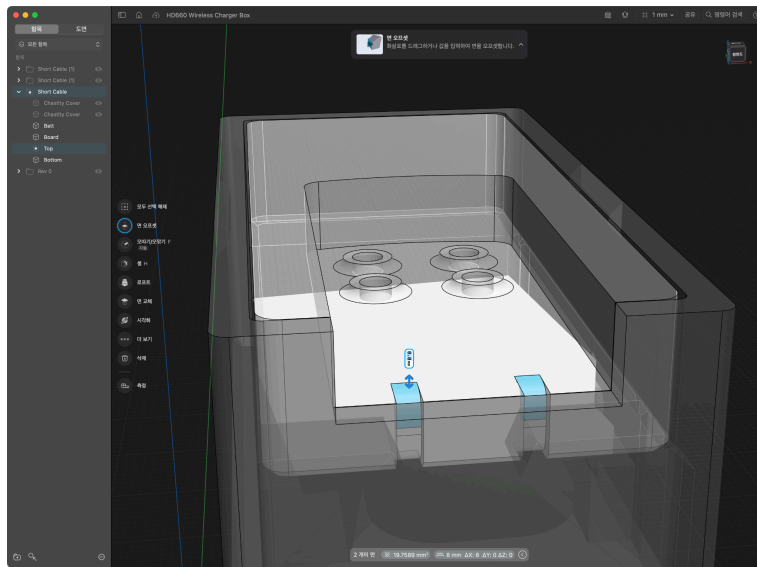
- Grab the top housing, and fix the cylinder magnets(1 per hole) with instant adhesive. Make sure the magnets' polarity matches the pogo pins'.



- Put adhesive on the blue marked area.



8. Insert the top housing into the bottom housing. The cables should be routed through the blue marked area/gap.



result :

