

BNV-Battery Pack Assembly Guide

Bootleg Night Vision Battery Pack

General Description

This is the assembly guide for the BNV-Battery Pack. Updates will be made over time if necessary.

Parts list

Housing components

1 x	Secure Nob
1 x	Top
1 x	Main Body
1 x	Bottom
1 x	Top Gasket
1 x	DIN 913 M4 x 25
1 x	DIN 6799 2.3 mm
2 x	ISO 7380-1 M2 x 6
2 x	Thread Insert Ruthex M4
2 x	Thread Insert Ruthex M2
1 x	APEM U1331 Sealing Boot
1 x	Top PCB
1 x	Switchcraft L722RAS
1 x	Switchcraft JCAP Sealing Cap
4 x	Keystone 5224 Battery Contacts
1 x	Bottom PCB
4 x	Keystone 5202 Battery Spring Contact
1 x	MIC2940A-12WU Voltage regulator

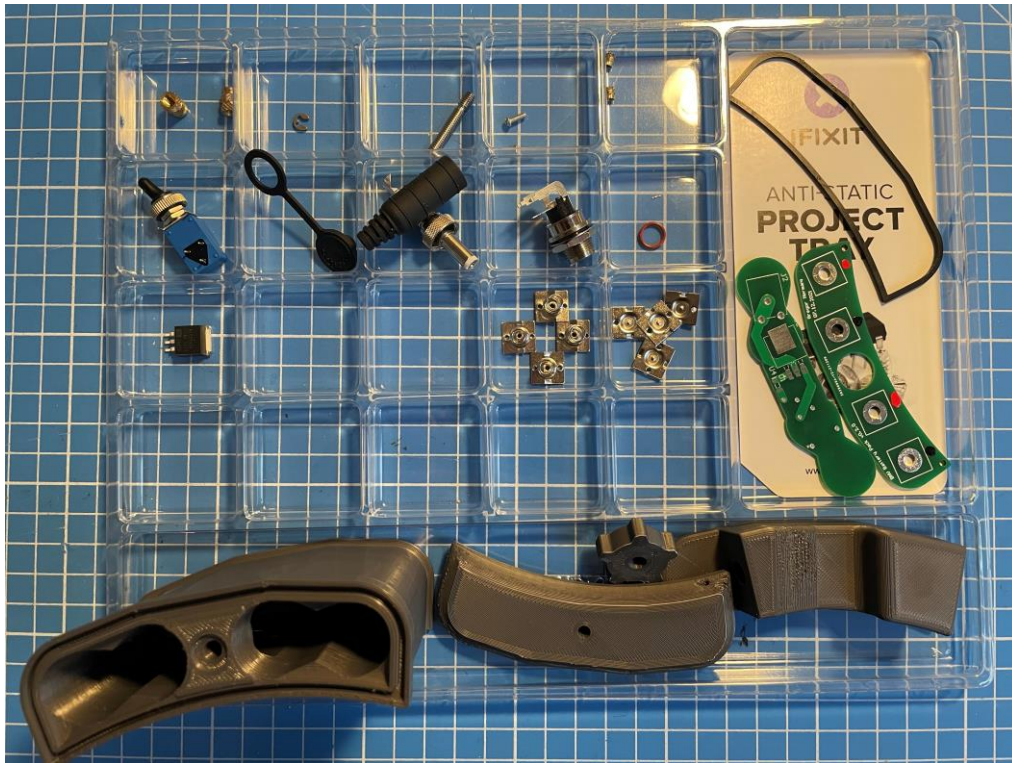
Other resources

Kapton/Polyimide Tape

High Performance Glue (i.e. Loctite 3090)

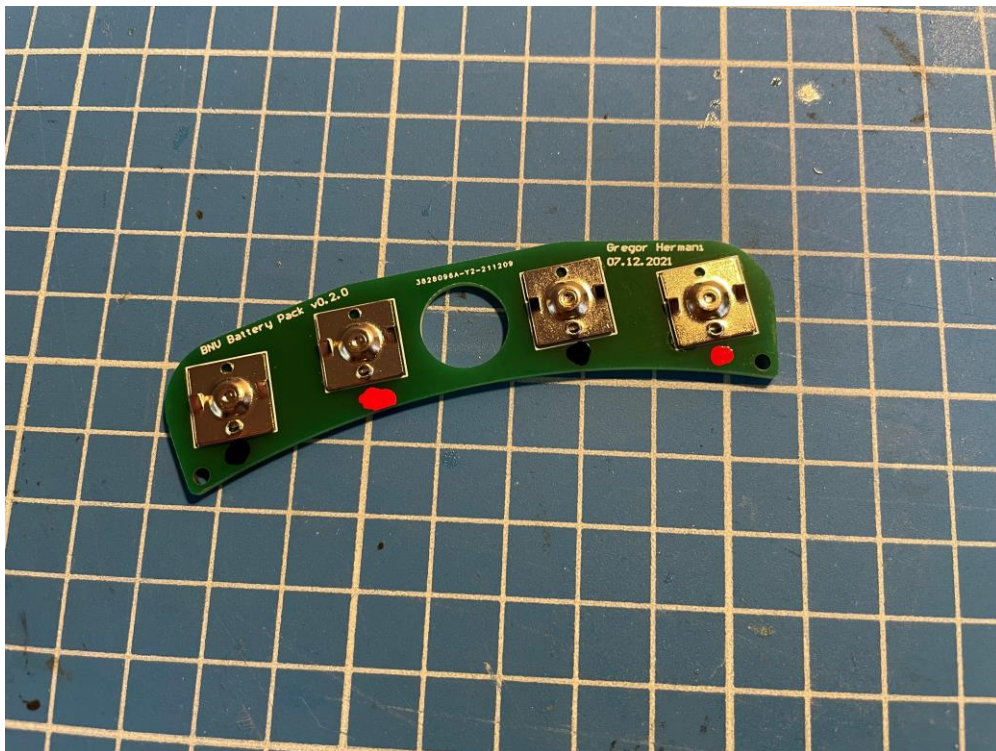
Potting compound

Thread locker



Top

First solder the battery contacts to the PCB.



Insert the heat inserts into secure nob and top.



Secure the Top PCB to the Top Assembly.



Put a small notch into the DIN 913 M4 set screw for the safety washer and attach it.



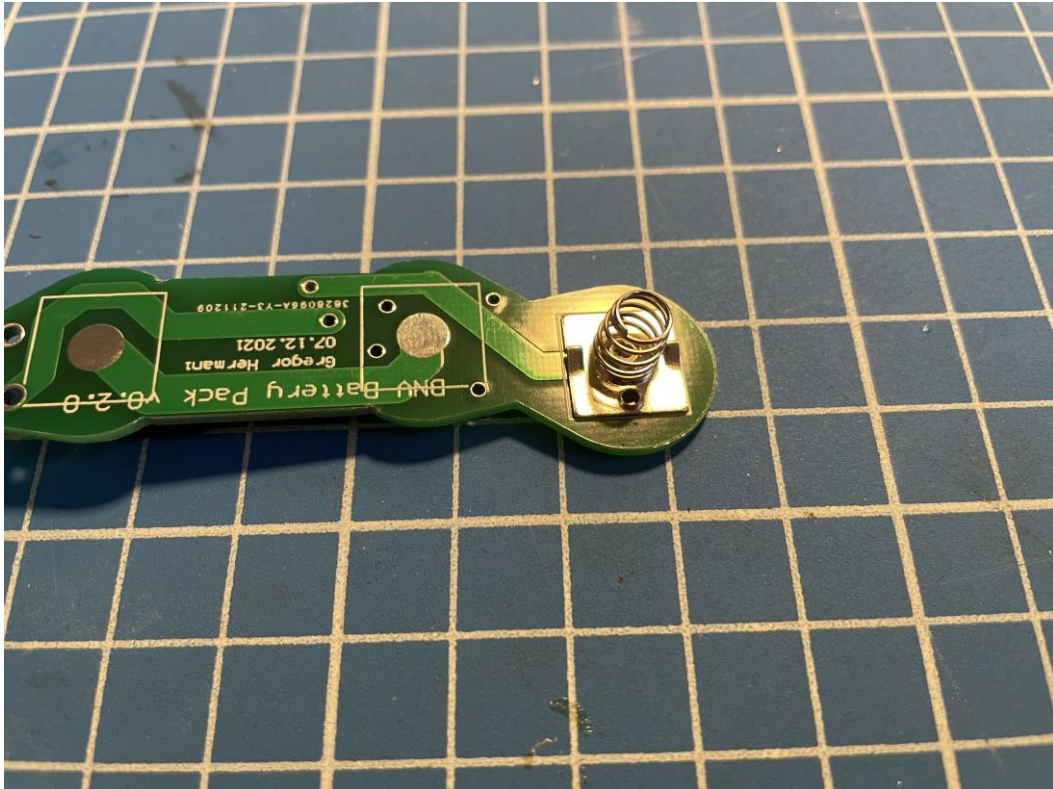
Put the set screw through the top and screw it into the secure nob and secure it using thread locker.



Done

Bottom

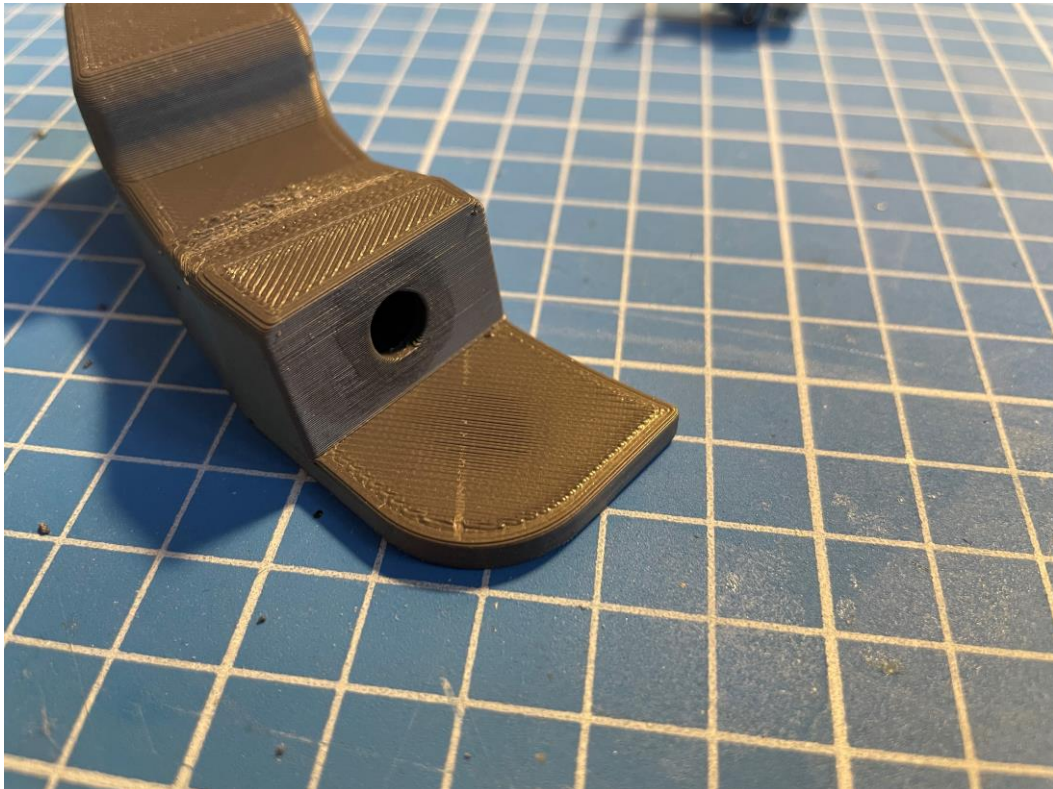
Solder the first battery spring connector and voltage regulator to the Bottom PCB. If not further defined, bridge all pads.



Slightly hand sand the top of the bottom housing.



When printed using FDM, I like to put a little super glue on the surfaces first, to level out irregularities.

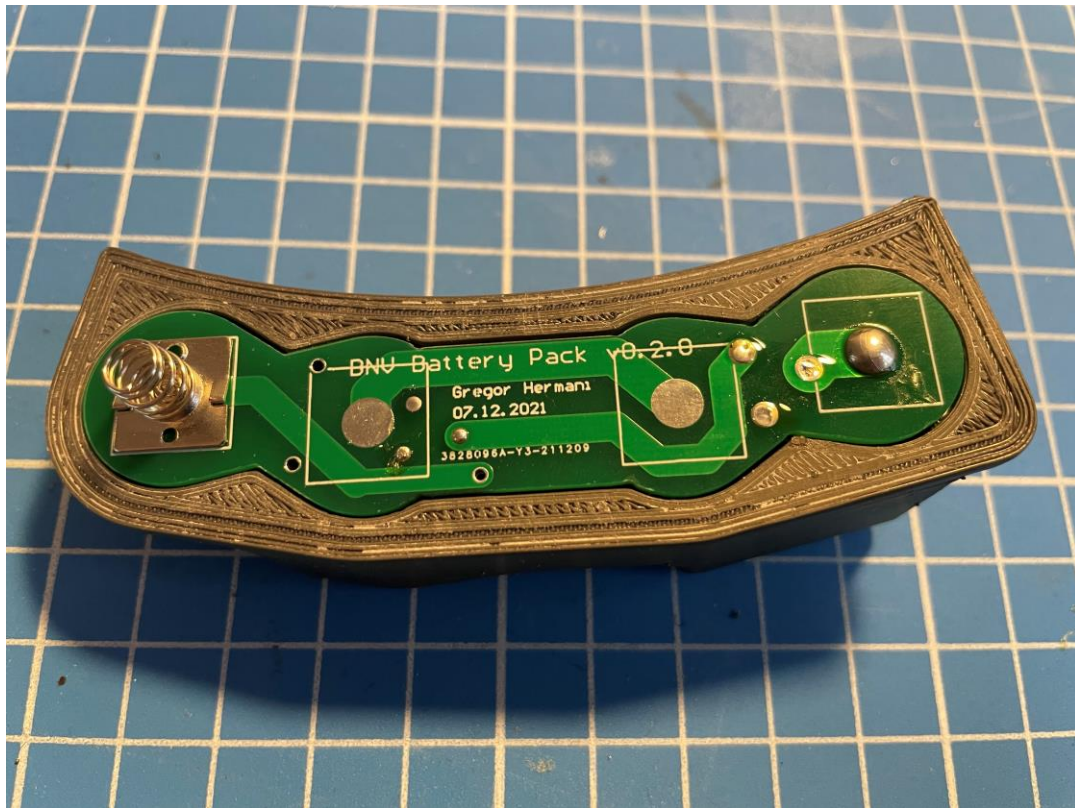


Put connector and switch into the bottom housing and secure them tight!

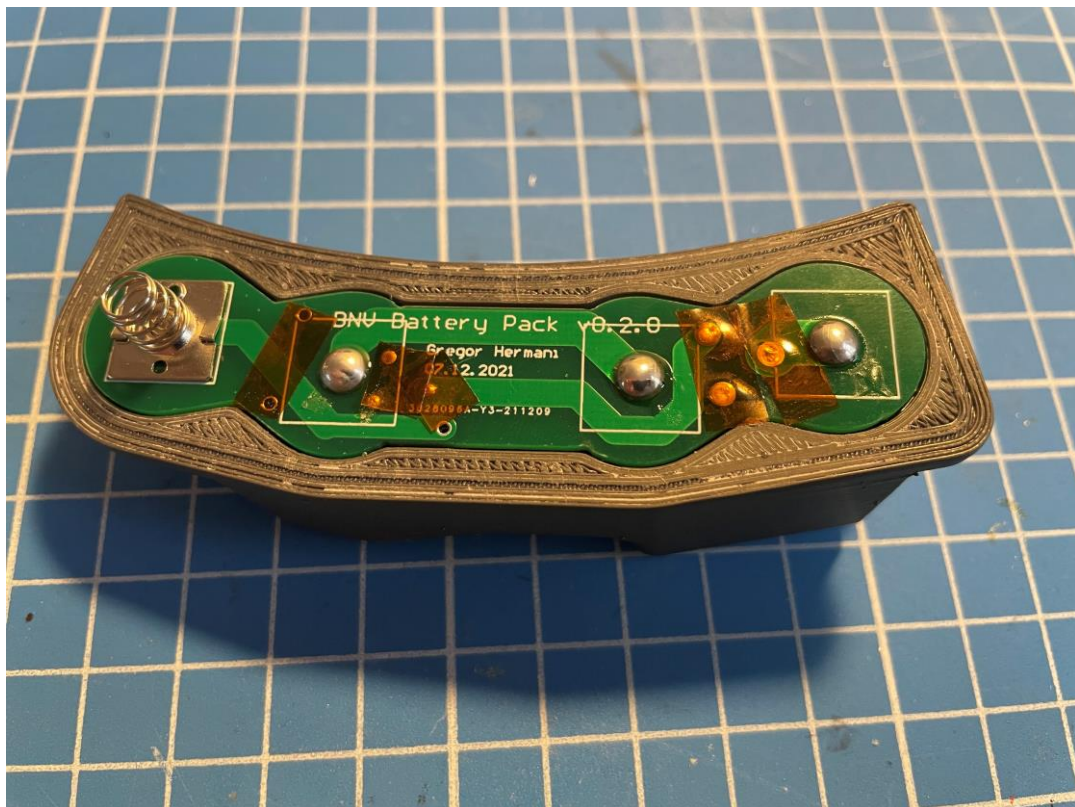
- I missed taking that picture, sorry!

Check for fitment if necessary. Also, if required, pot the bottom assembly.

Put on Bottom PCB and solder it to connector and switch. Check for connection!



Put Kapton on all open solder points and vias.



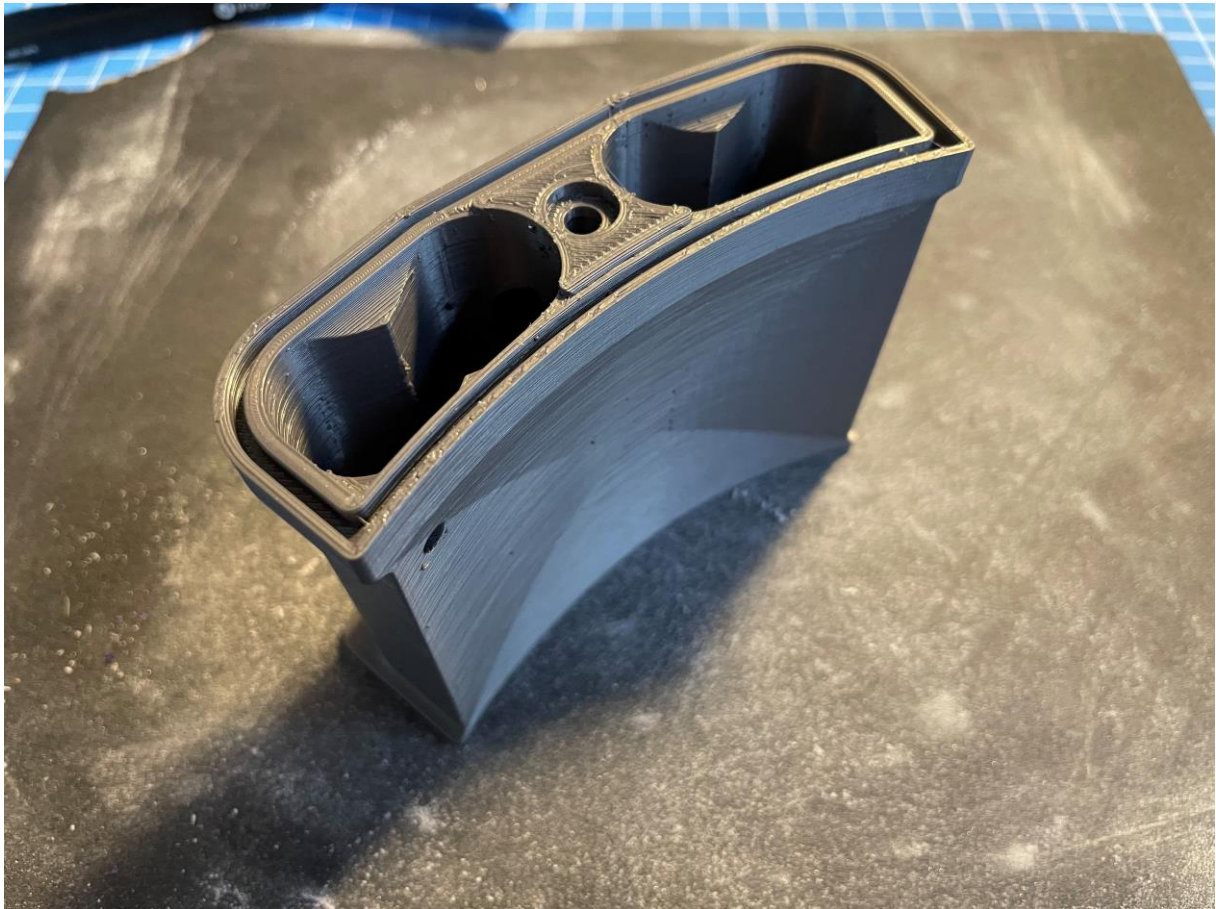
Solder the three remaining spring contacts to the board.



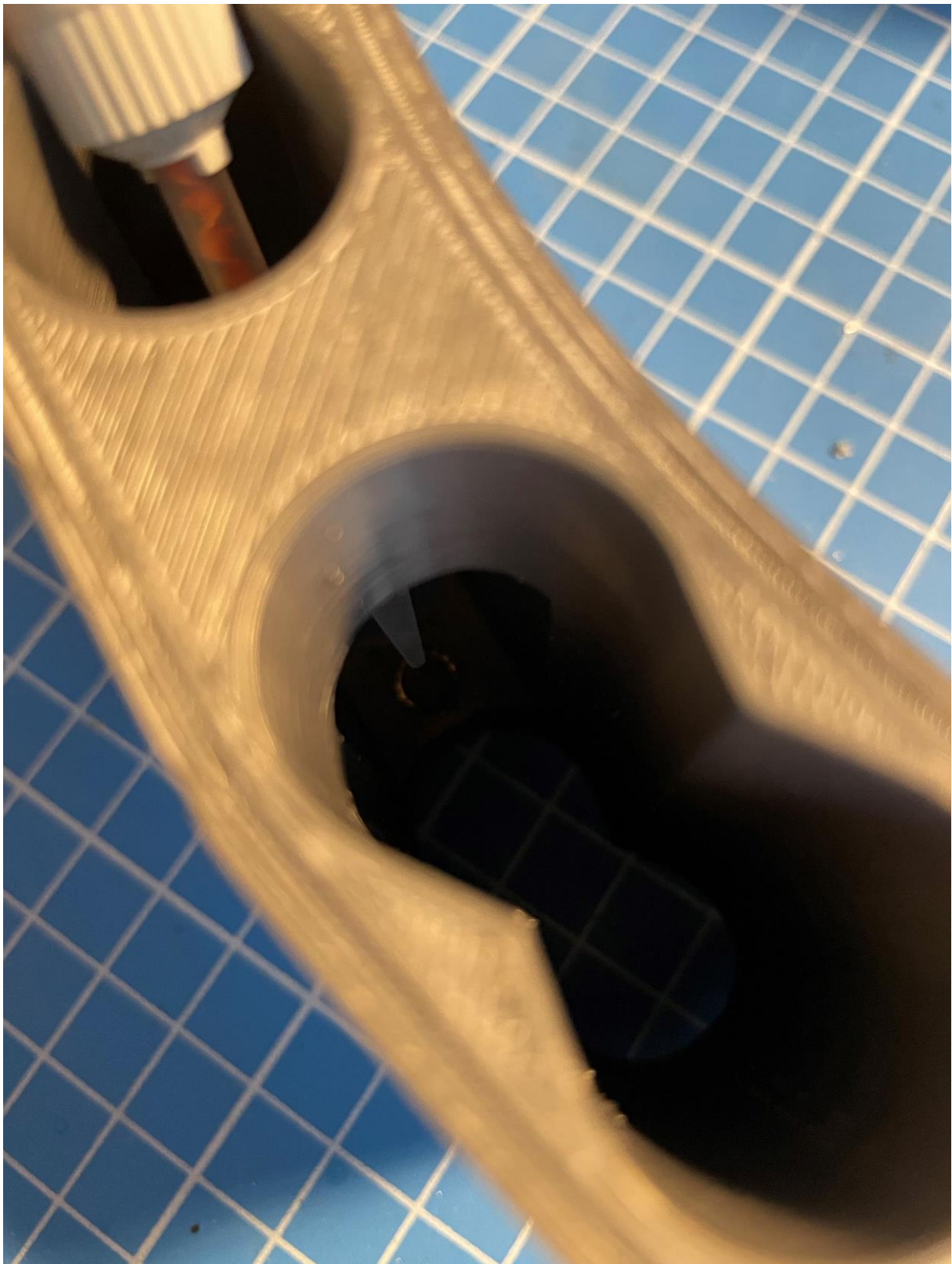
Done!

Main Housing

Slightly hand sand the bottom of the main housing.



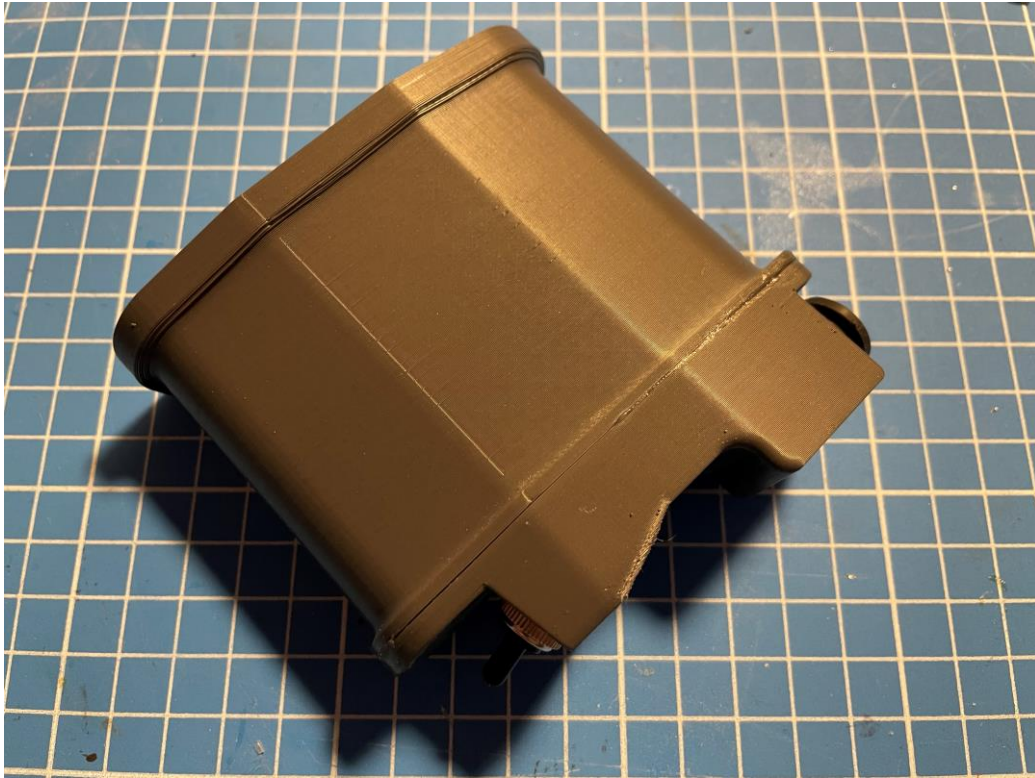
Insert the M4 thread insert into the prepared hole from the bottom!



Use a little shim to put on the bottom of the thread insert.

Put glue into the remaining cavity. This will insure waterproofness.

Glue and align the main housing and bottom housing.



Put the remaining Gaskets in place.



Done!



Now you can add a lanyard if required.