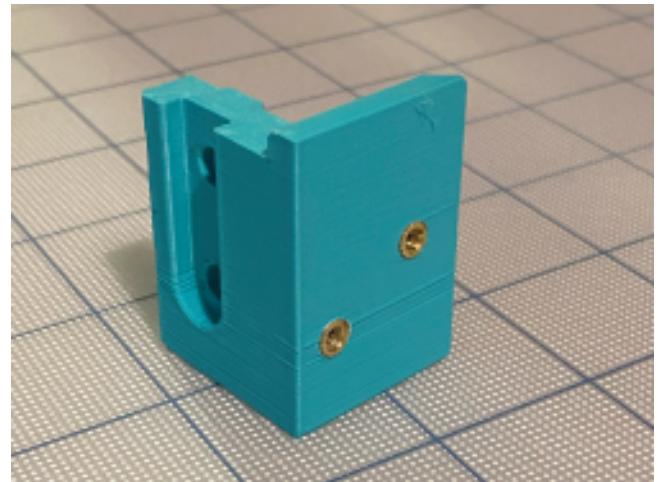
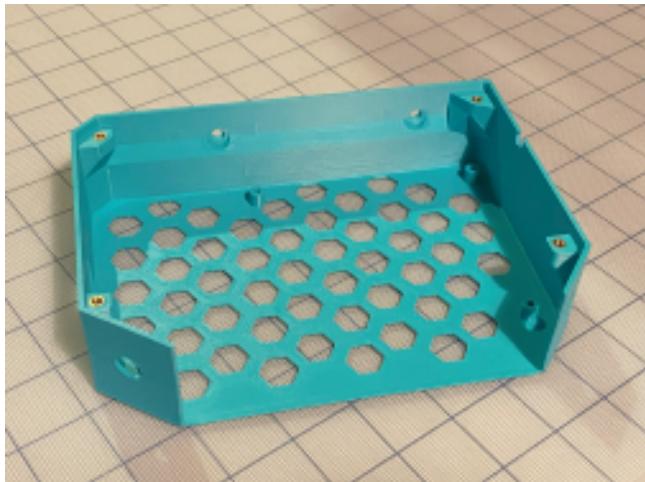
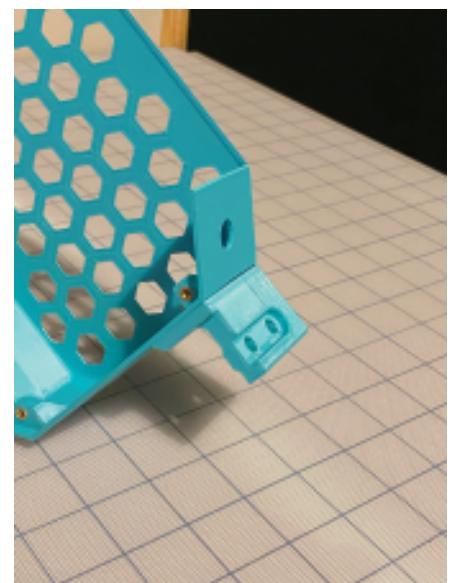
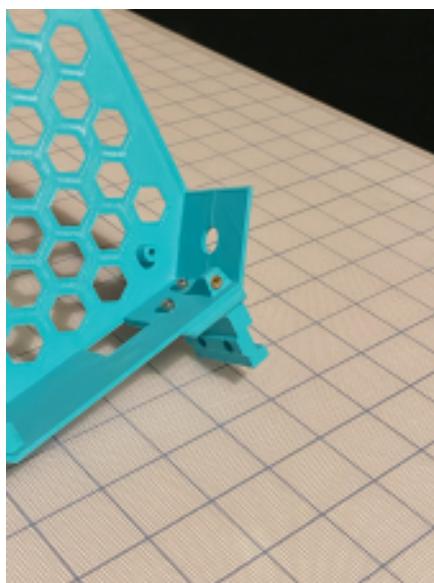


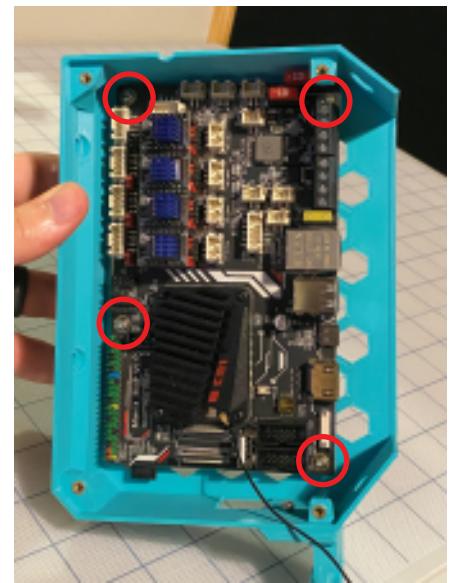
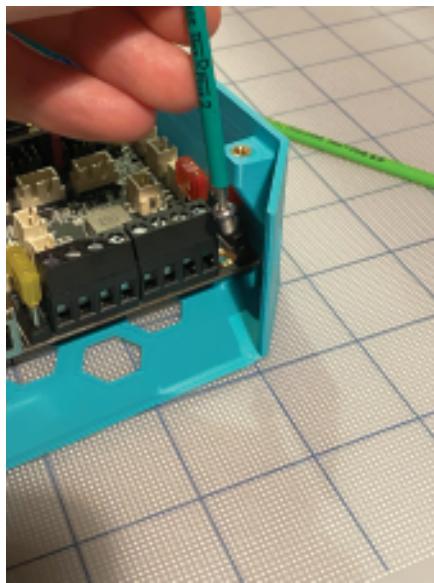
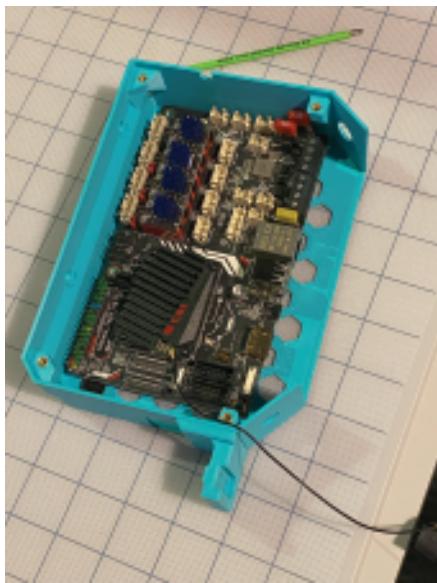
Manta MINI Bear Wiring Guide



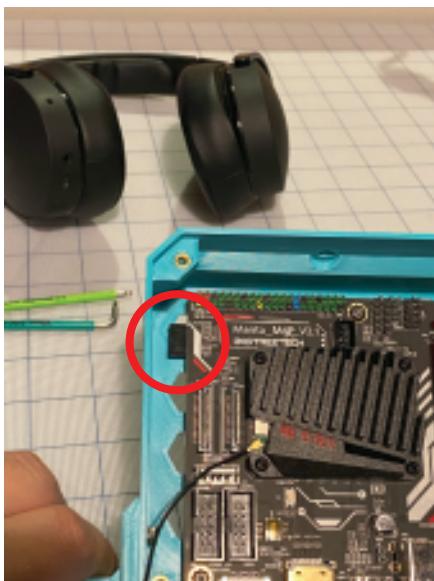
Add threaded inserts to the Manta Bear box and base mount.



Secure the base mount to the box using 2 M3x5 screws.

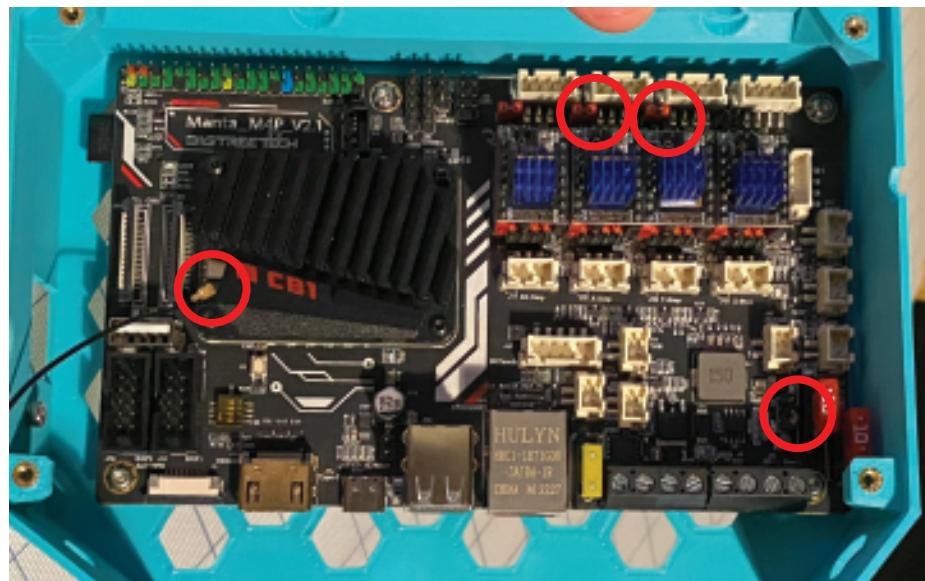


Insert control board into the control box and secure in place with M3x5 screws.

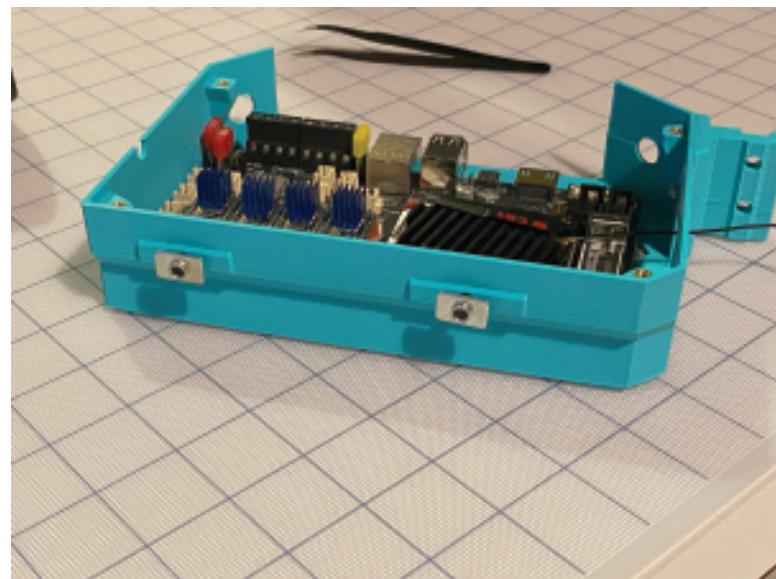
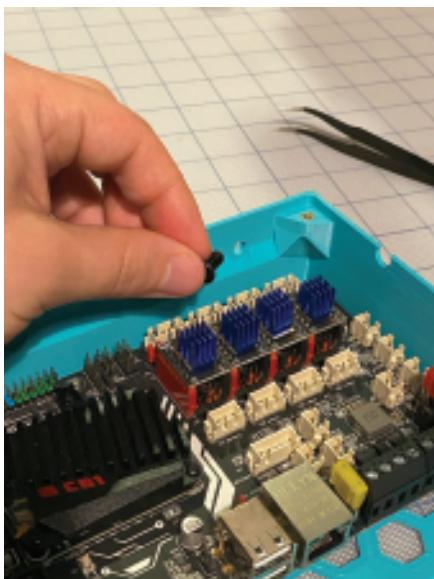


Note: It is easier to preload the Manta M4P with the MicroSD card before installing the board into the box. It is possible to gently remove and reinstall the MicroSD card with a pair of needle nose pliers.

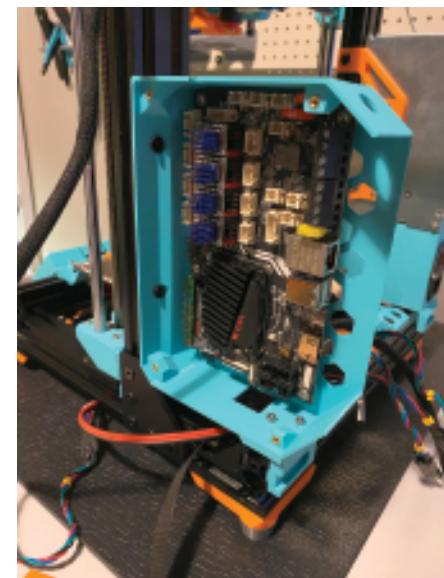
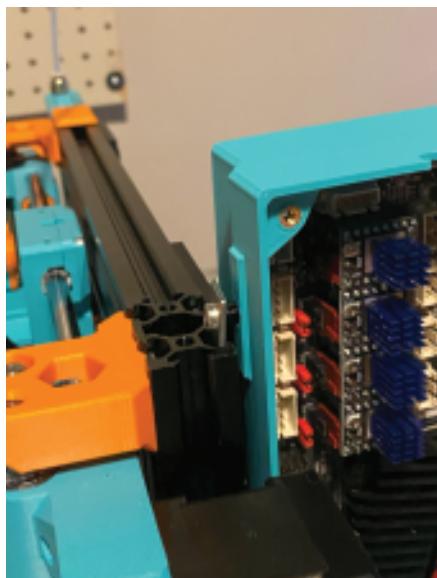
Prepare the BTT Manta M4P control board



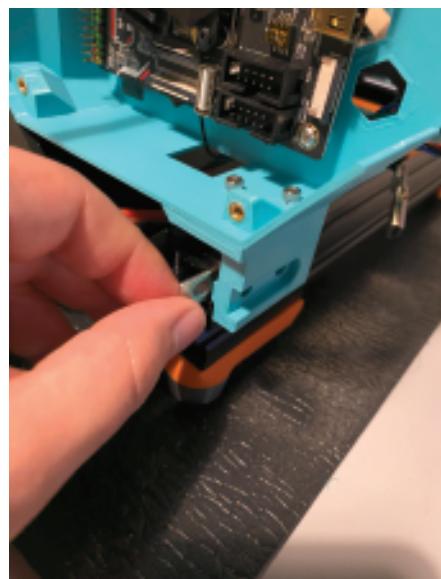
- Add jumpers the diag pins for sensorless homing in X and Y
- Do not add jumper for Z. The P.I.N.D.A. probe will be the Z enstop.
- Install TMC2209 Stepper Drivers and heatsinks.
- Ensure fan jumper is set to 24V.
- Install WiFi antena on CB1



Install 2 M5x10 bolts into the holes on the side of the control box. Loosely secure with t-nuts. Be sure the the t-nuts are not fully tightened.

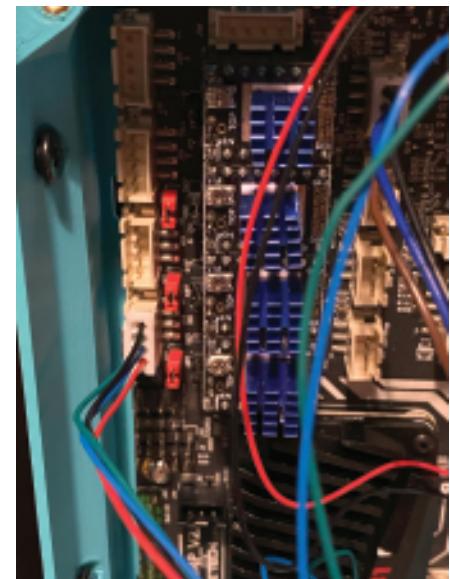
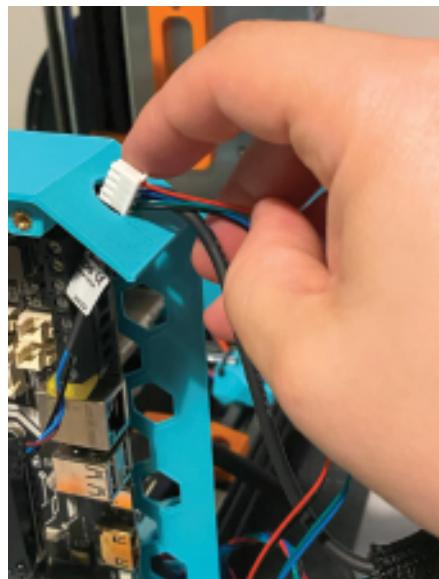


Slide the control box into the right side aluminum extrusion and lightly secure in place by tightening the preloaded M5x10 screws.

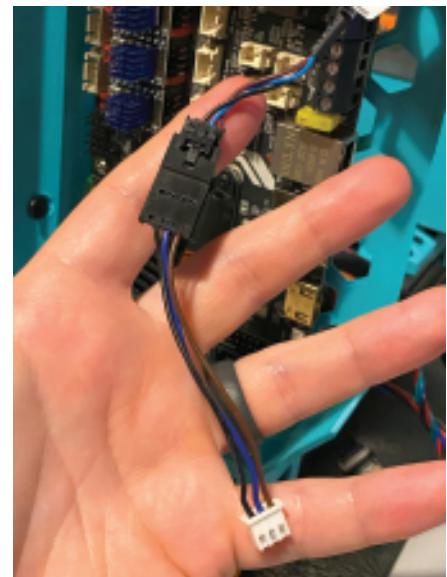
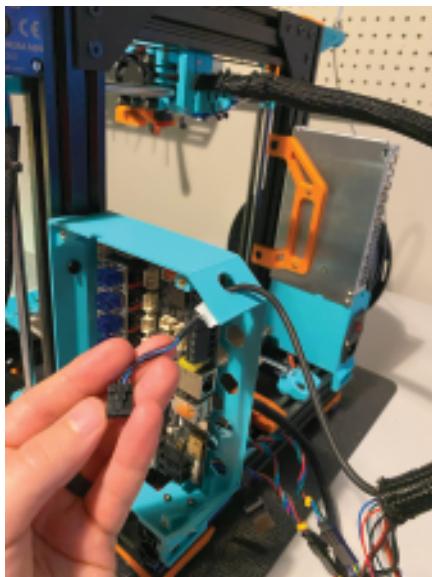


Slide 2 M5 t-nuts into the rear extrusion. Secure in place using 2 M5x10 screws.

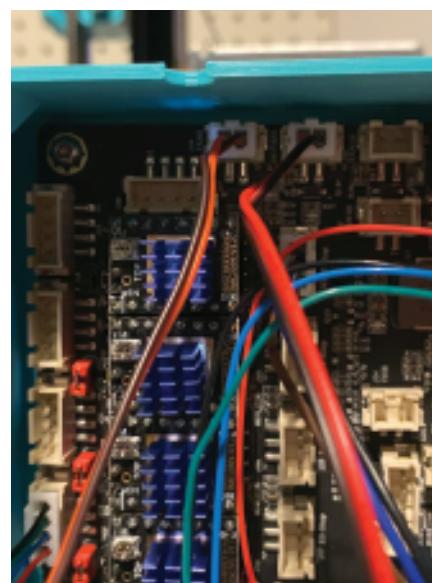
The groove on the base mount should align up with the upper groove on the extrusion.



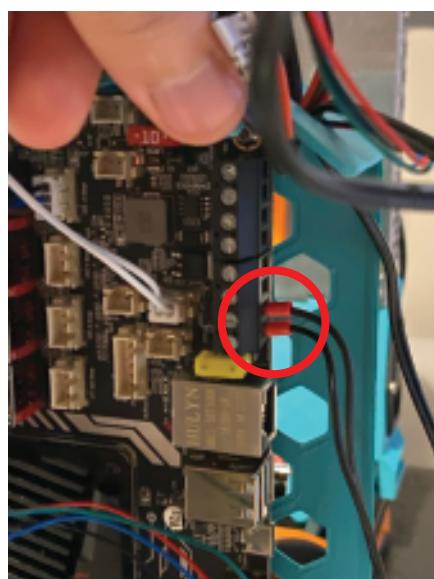
Insert e-stepper cable in through the top rear hole in the bear box. It may go in easier sideways. Plug the e-stepper into the bottom stepper slot.



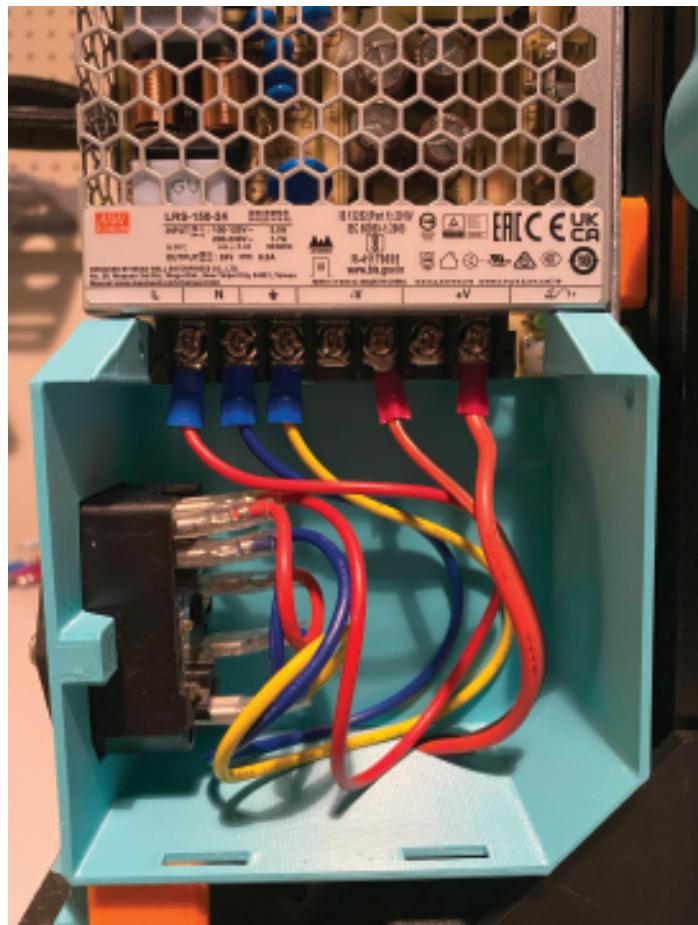
Prepare P.I.N.D.A. Adapter cable. The white cable will not be used and can be removed.



Plug P.I.N.D.A. Adapter cable into the Z-Stop port. Plug the heater fan into Fan0 and the Part Cooling fan into Fan1.



Plug the Revo Thermistor into TH0. Insert Revo heater cables into HEO. Revo heater wires are not polar and can be plugged into either HEO slot.



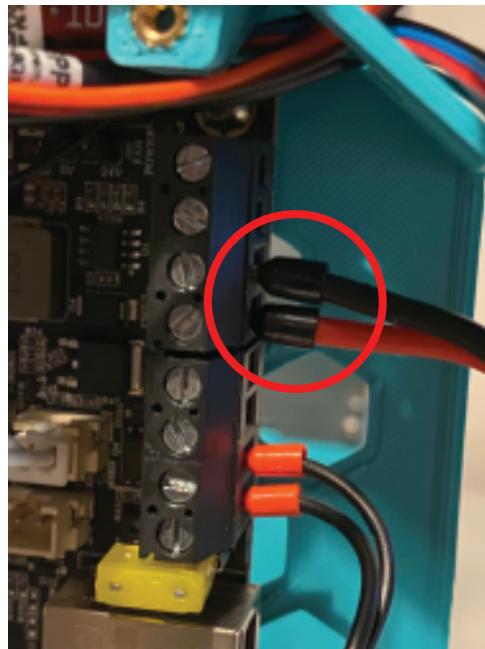
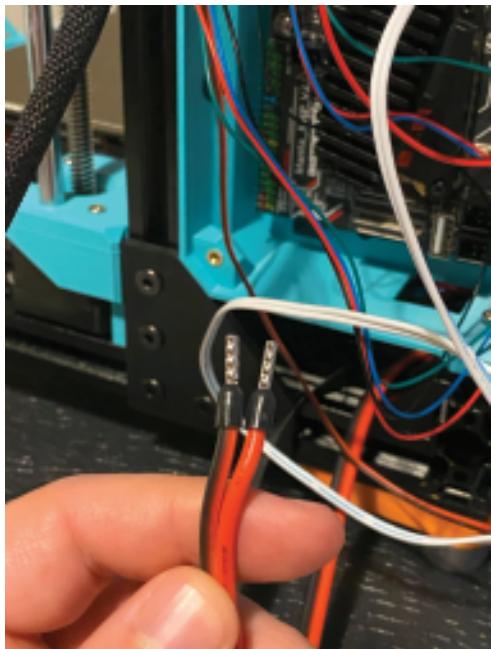
Prepare the power box (full assembly instructions to come at a later date).

Route the power inlet cables as shown:

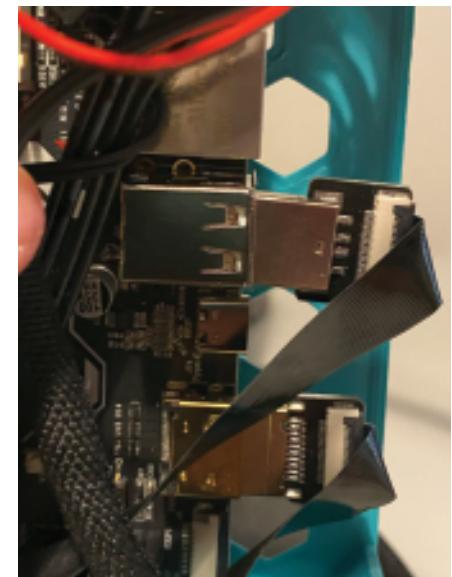
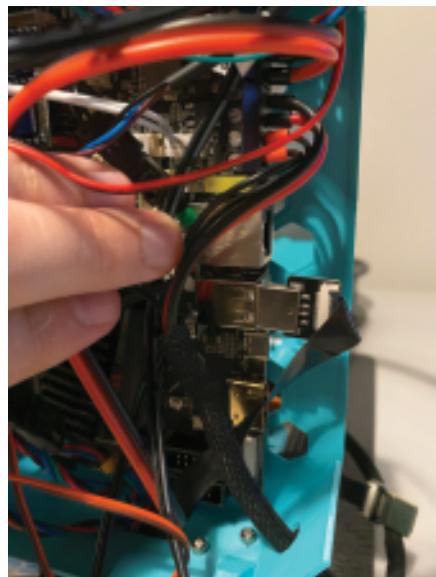
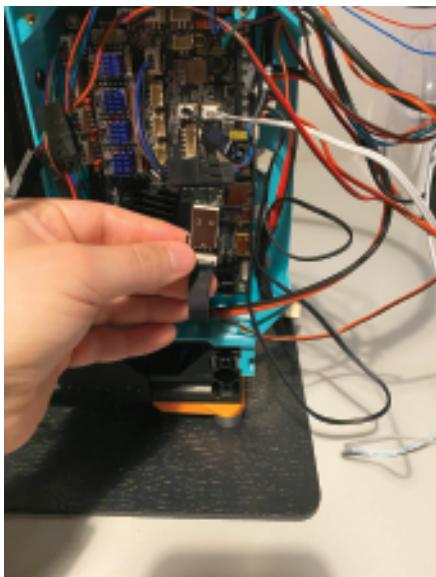
- Red to L
- Blue to N
- Yellow to Earth/Ground

Prepare a black and red power wire with fork connectors

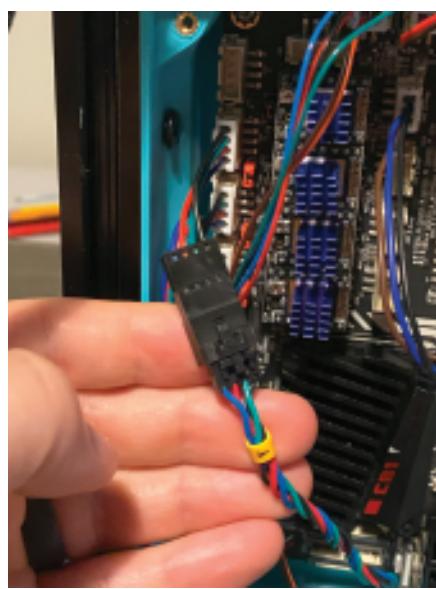
- Black goes to V-
- Red goes to V+
- NOTE: I am not trained in this, do at your own risk.
- I used 16awg wire, fork connectors, and ferrules



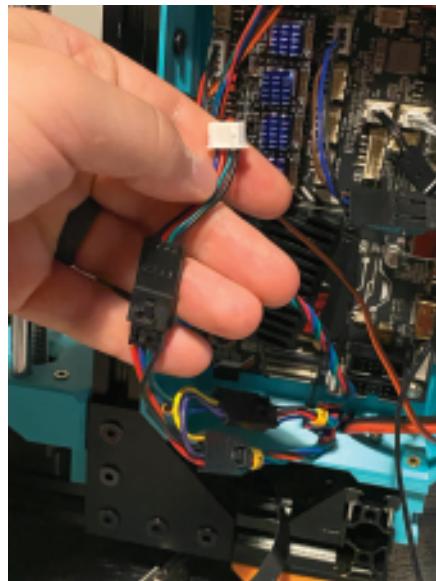
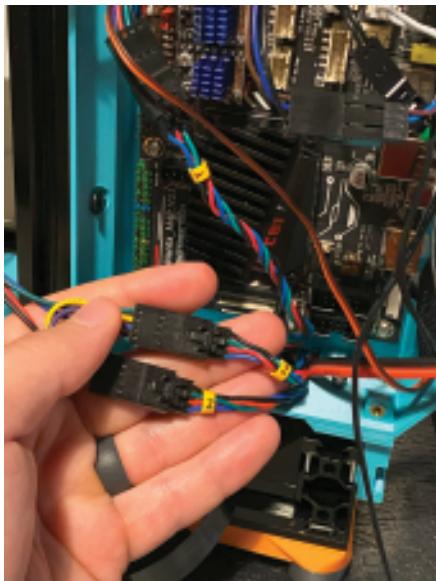
Rout the Mains power through the rectangular hole on bottom of the box and insert into the appropriate 24V and GND slot on DCIN (see picture).



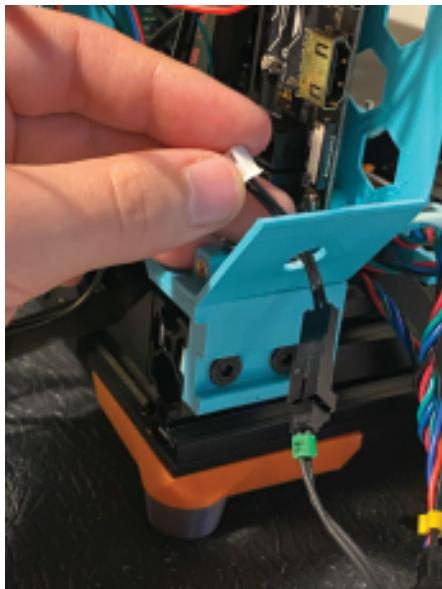
Route the screen ribbon cables through the bottom of the box and plug into the HDMI and USB ports.



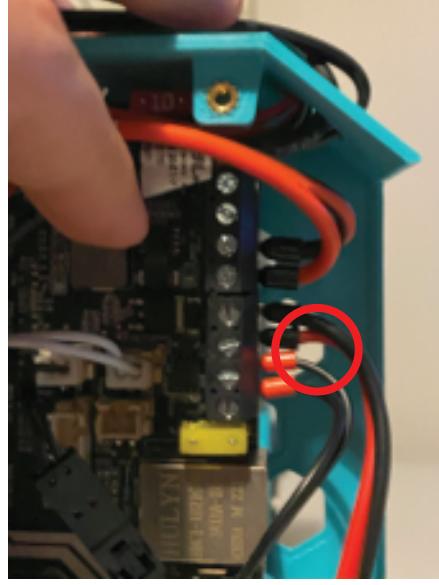
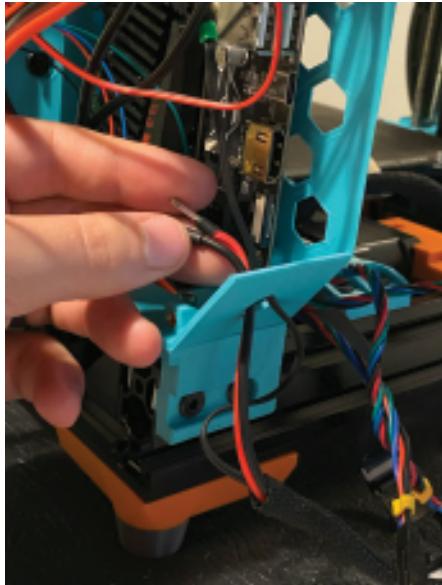
Route Y-motor cable through the bottom of the box. Attached adapter cable. Plug into Stepper Y port.



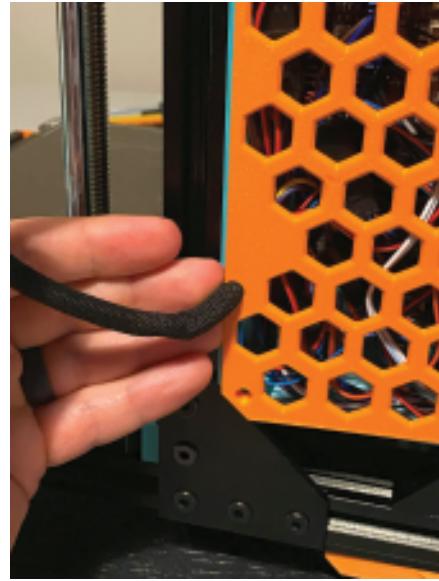
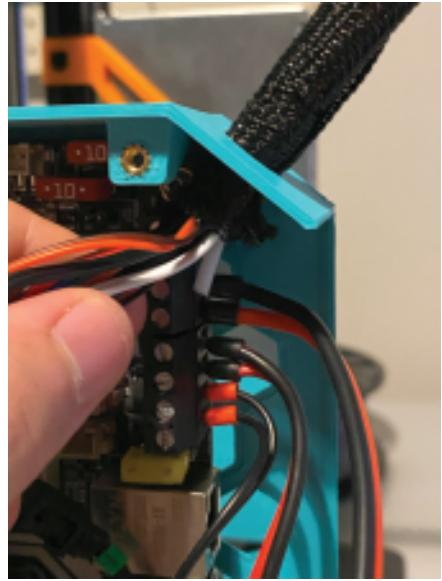
Route both Z-motor cables through the bottom of the box. Plug into and plug into Dual Z splitter cable. Attach stepper adapter cable to Dual Z Splitter and plug the set into Stepper Z port.



Route bed thermistor through the small hole in the bottom rear of the box. Apply adapter cable. Plug into THB port next.



Route bed heater cables through the small hole in the bottom rear of the box. Plug into BED power port. Red on bottom, Black on top (see picture).



Wrap the tool head cables similar to Prusa and Bear guidelines and gently press wrap through control box. Note, there is room to include a piece of Nylon 2.85mm filament to support wires. Press X-Motor cable into Slot on side of lid. Secure Bear Box Lid in place using 4 M3x5 screws.