



8. Electronics assembly

Electronics guide

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INTRODUCTION

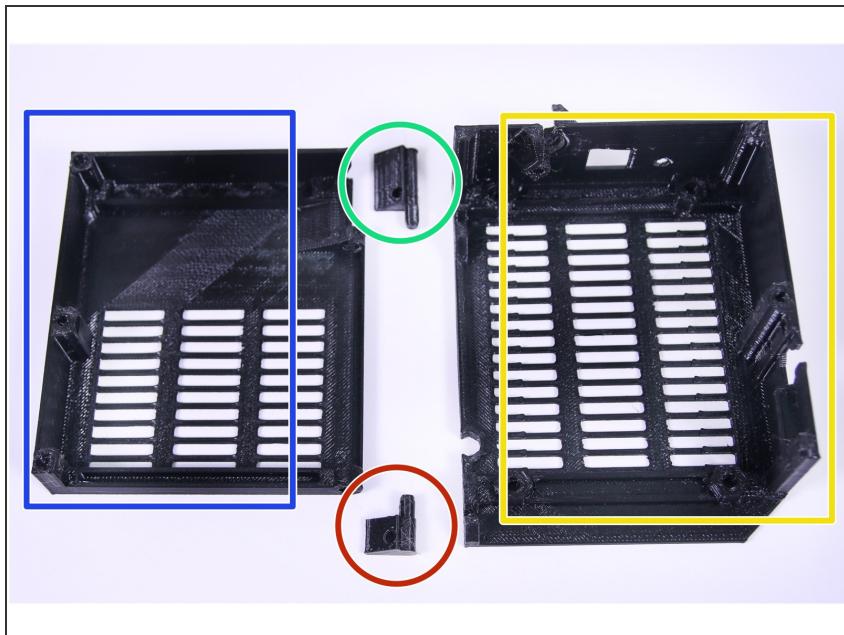
Outline what you are going to teach someone how to do.

Step 1 — Getting the necessary tools



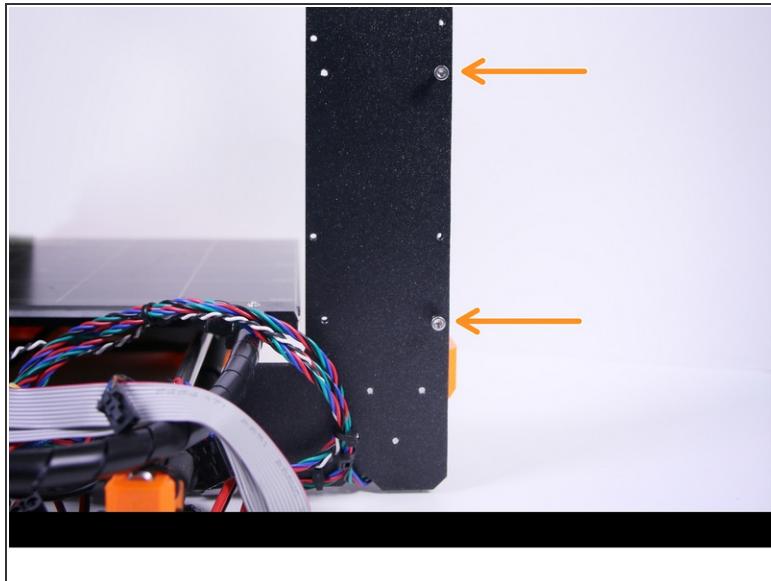
- 2.5mm Allen key
- Needle-nose pliers

Step 2 — 3D printed parts



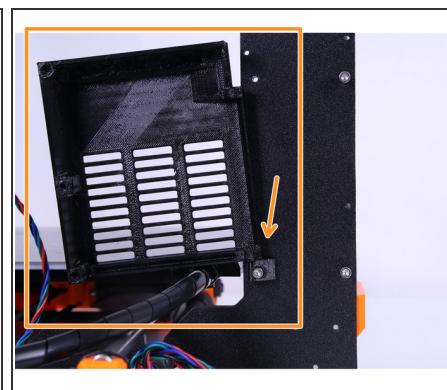
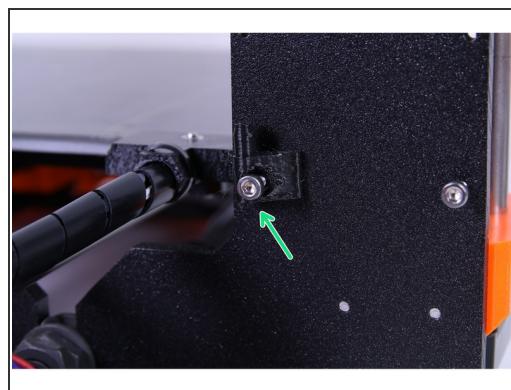
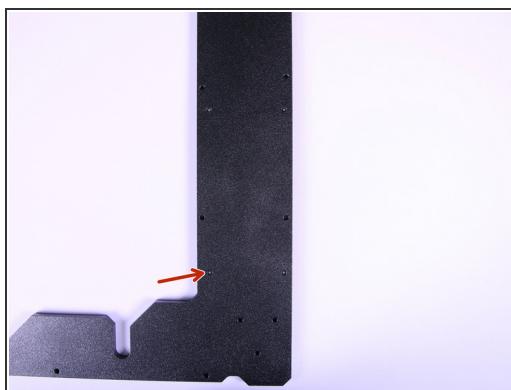
- Rambo-cover-base
 - Rambo-cover-door
 - Rambo-cover-hinge top
 - Rambo-cover-hinge bottom
- (i)* Casing parts can slightly differ from pictures.

Step 3 — Identifying mount hole A



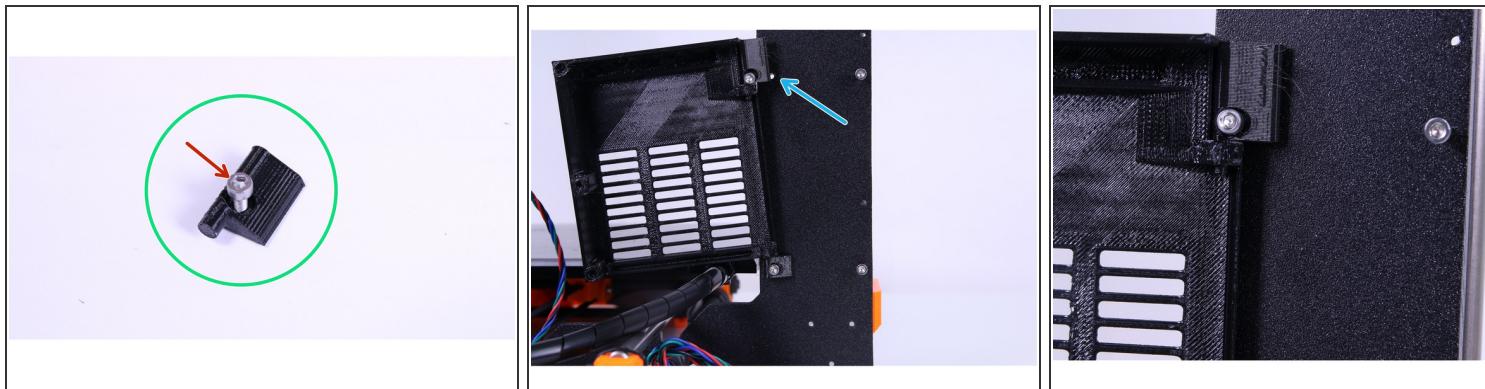
- M3x10 screws (2 pcs)
- Use the highlighted holes.

Step 4 — Rambo-cover-door



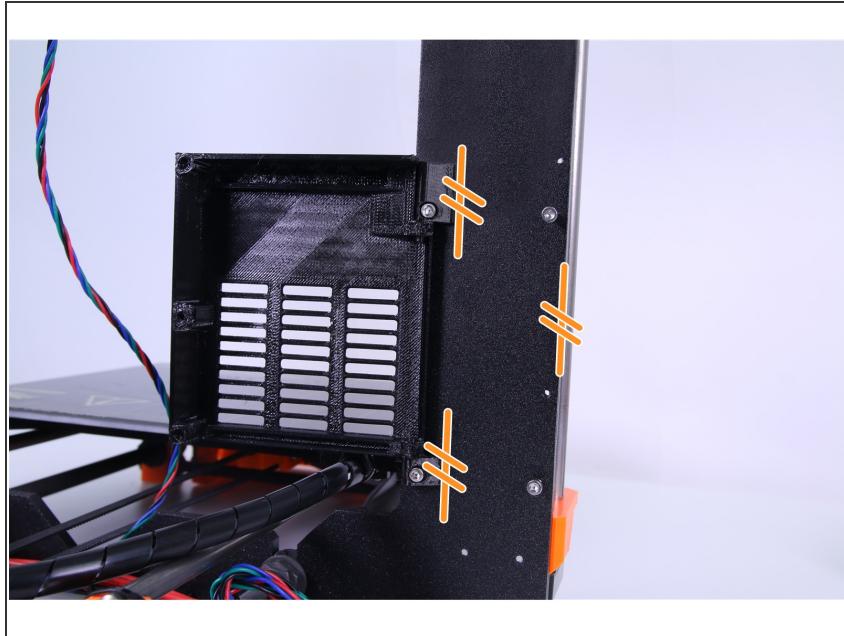
- In the next step use the highlighted hole.
- Tighten the Rambo cover hinge bottom to the frame using one M3x10 screw and supplied 2.5 mm allen key.
- Place the rambo-cover-door on the hinge.

Step 5 — Preparing the Rambo cover upper hinge



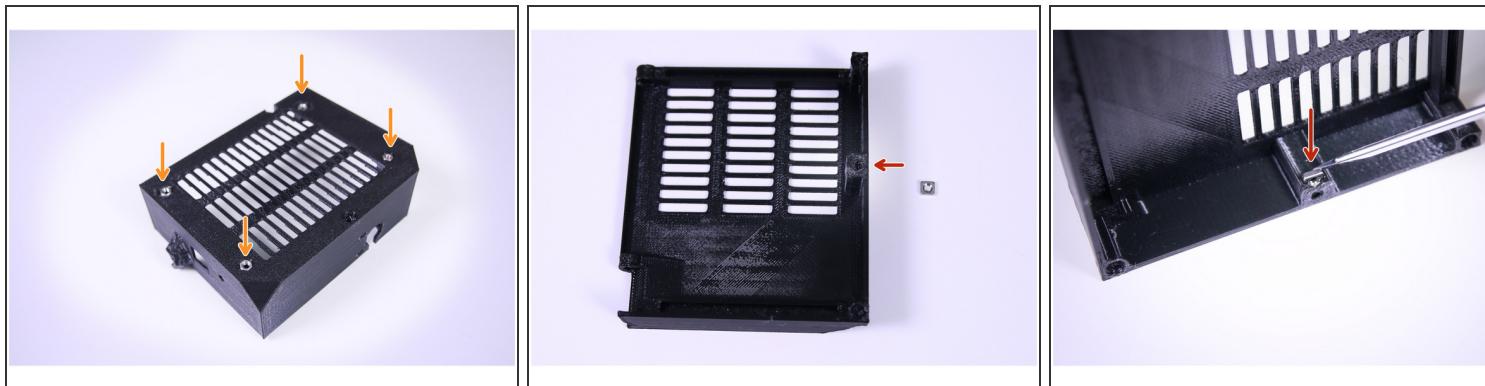
- M3x10 screw (1 pcs)
- Rambo-cover upper hinge
- Insert M3x10 screw into the hinge.
- Move the heatbed all the way towards the LCD for easier access.
- Assemble the Rambo-cover doors on the lower hinge attached to the frame and slide the upper hinge in place.
- Fasten the Rambo-cover upper hinge into the highlighted hole.
- Secure the upper hinge to the frame.

Step 6 — Verticality of the hinges



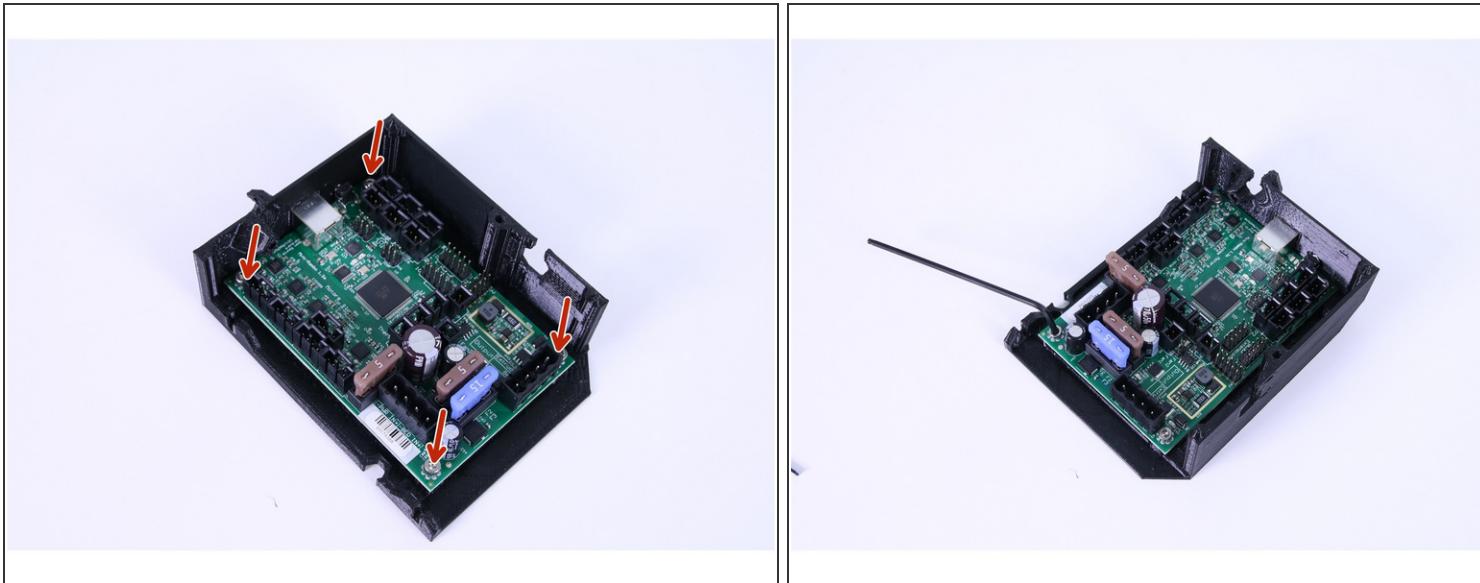
- Make sure both hinges are vertical and parallel to the edge of the frame.

Step 7 — Preparing the Rambo cover base



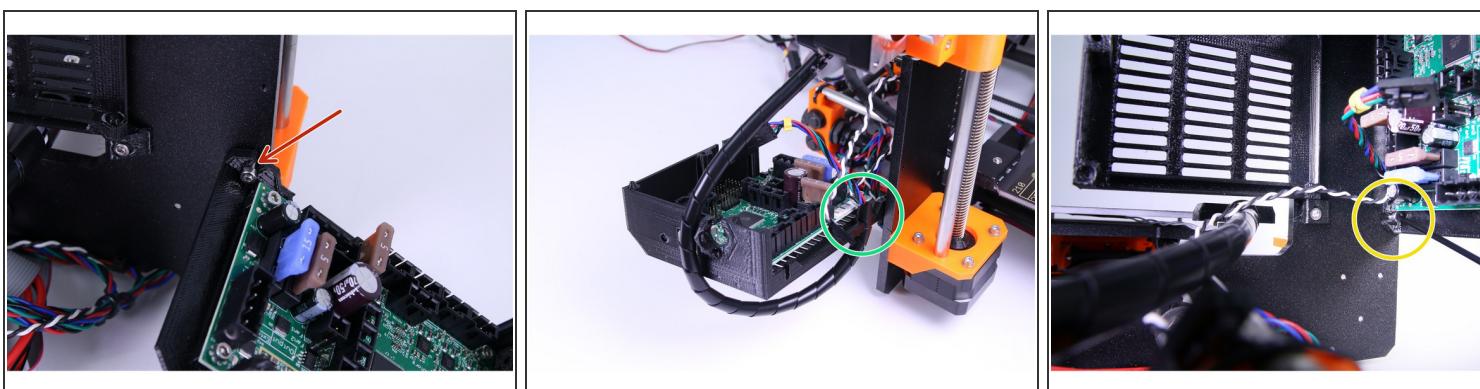
- Insert M3n nuts (4 pcs) in nut traps.
- Insert M3nS (1pcs)

Step 8 — Preparing the electronics



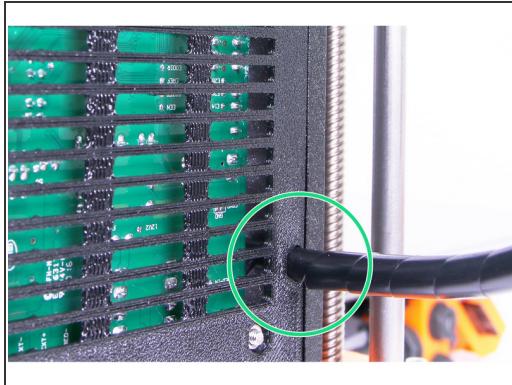
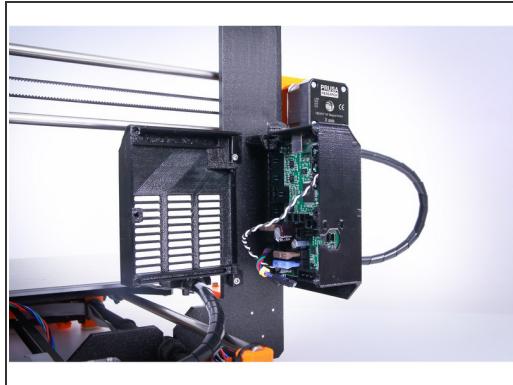
- M3x10 screws (4 pcs)
- Slide the electronics into the Rambo cover base and secure the board in place using M3x10 screws.
- *(i)* Use the needle nose pliers to help with positioning the screws.

Step 9 — The Rambo-cover-base putting on



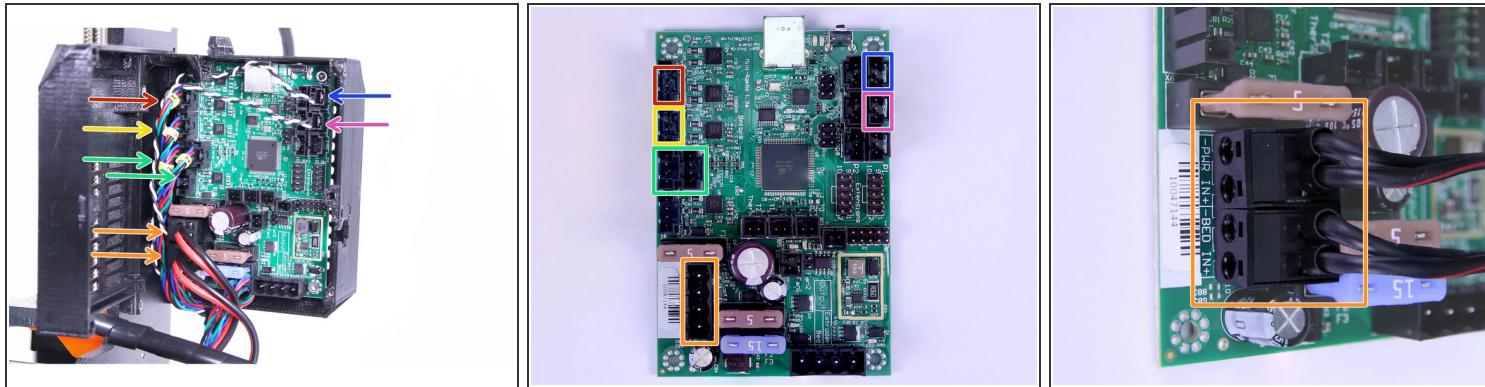
- Click shut the rambo-cover-base
- Keep the X-axis cables in the hole
- Secure the screw with 2.5 mm Allen key.

Step 10 — Finalizing the Rambo cover base



- Slide X-axis cables through the Rambo cover while attaching the Rambo cover base to the frame as shown in the picture.
- The spiral wrap must run into the Rambo cover so it is held in place when tightened up.
- Tighten the Rambo cover base to the frame using supplied 2.5 mm Allen key.

Step 11 — Connecting electronics - part 1

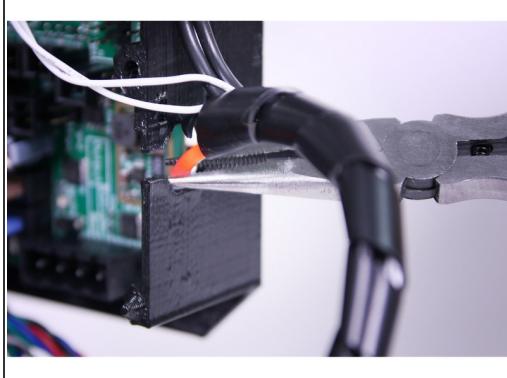


- X-axis motor
- Y-axis motor
- Z-axis motors (the order of Z-motors doesn't matter)
- X-axis endstop
- Y-axis endstop
- Low voltage main cables (wires going out from PSU)

⚠ Connect cables and arrange cables as shown in the picture. Check all connectors are properly plugged!

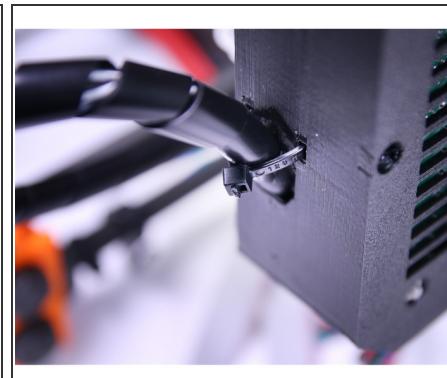
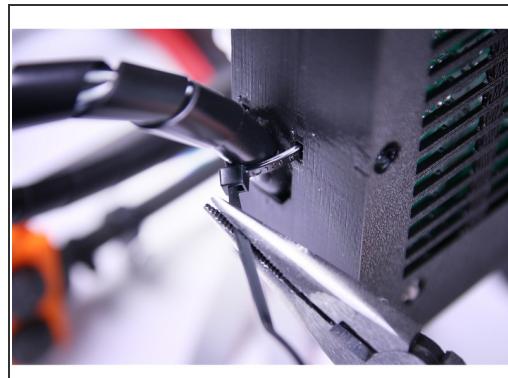
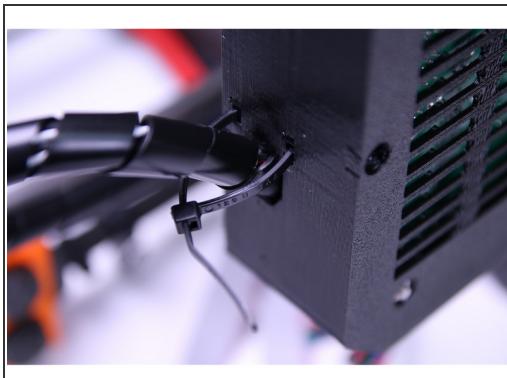
(i) All motor cables have their markings for easier assembly.

Step 12 — Heatbed and extruder cables guide



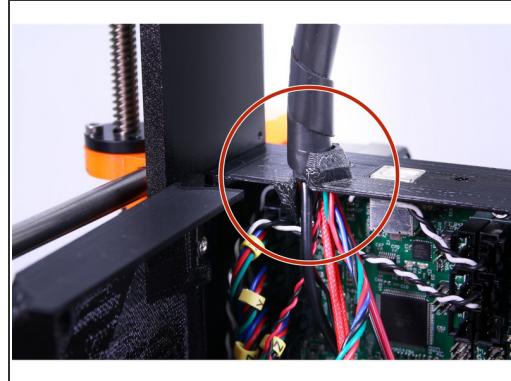
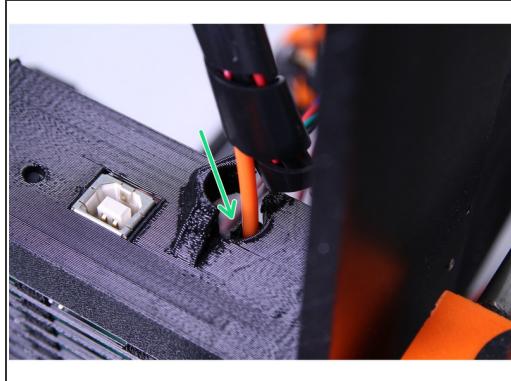
- Guide the cables from the heatbed through the bottom hole of the Rambo cover base.
 - Push the filament all the way down through the filament holder hole in the Rambo cover base.
 - Heatbed thermistor
 - Heatbed heater
- (i)** Note the white cable from heatbed can be also in black version, however their function is the same (see Chapter 7, Step 13).

Step 13 — Securing heat bed cables to the Rambo cover base



- ⚠** Using a ziptie, tie the cables from the heatbed to the Rambo cover base at the end of the spiral wrap.
- (i)** Double check the zip tie is tied firmly.

Step 14 — Extruder cables guide



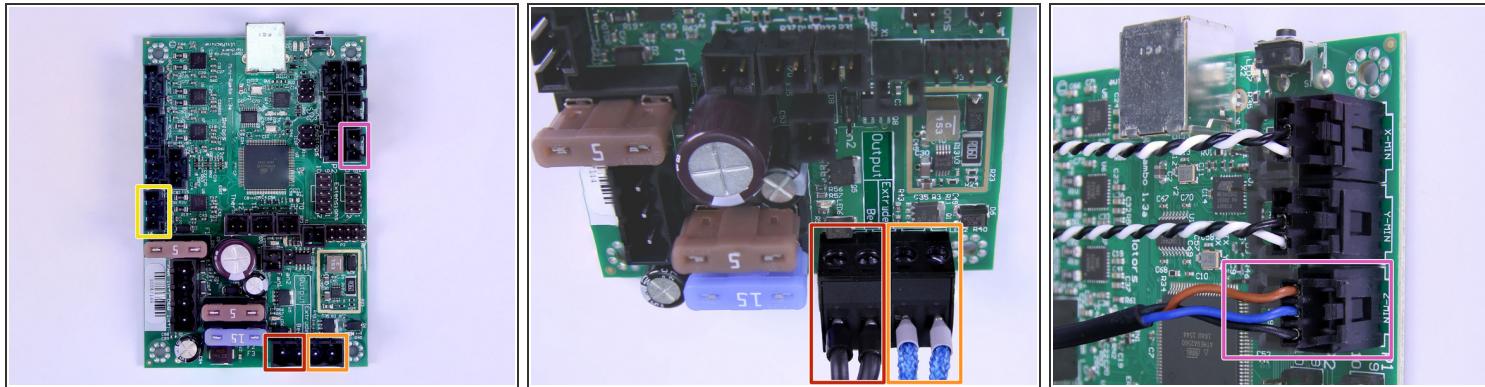
- Guide the cables from the extruder through the top hole of the Rambo cover base.
- Push the filament all the way down through the filament holder hole in the Rambo cover base.
- Force the last spin of the spiral wrap into the hole of the Rambo

Step 15 — Securing extruder cables to the Rambo cover base



- Using a ziptie, tie the cables from the extruder to the Rambo cover base at the end of the spiral wrap.

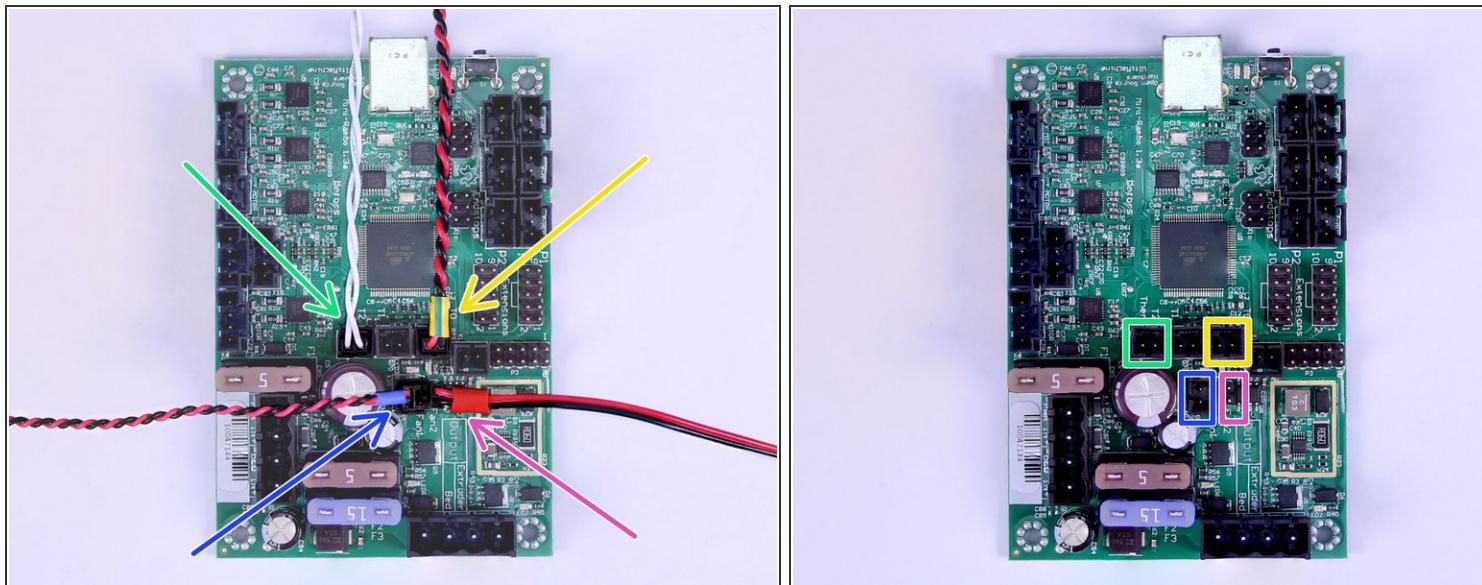
Step 16 — Connecting electronics - part 2



- P.I.N.D.A. probe
- Extruder motor
- Heatbed heater
- Extruder heater

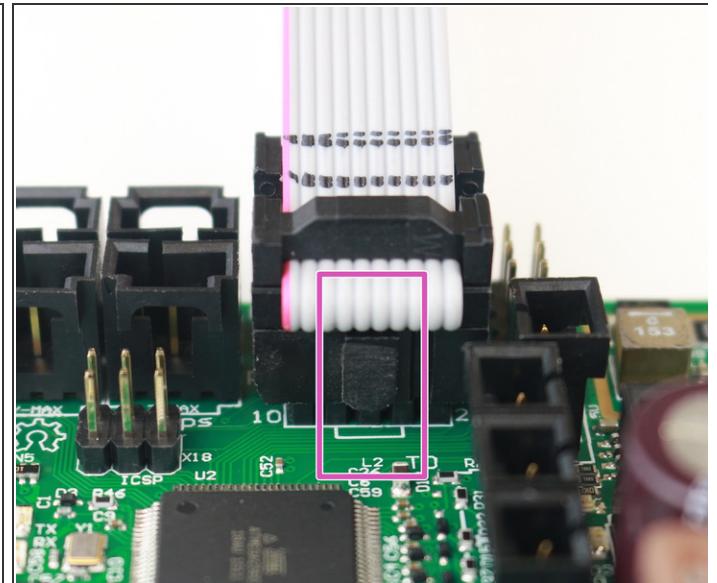
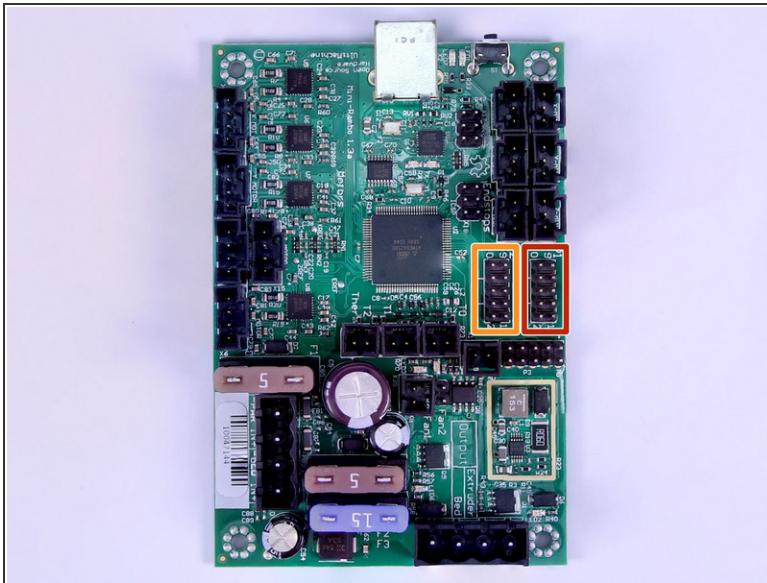
 DOUBLE CHECK the connection! It is so important to ensure the correct connections.

Step 17 — Connecting electronics - part 3



- Extruder thermistor (cable going from the extruder labeled with Yellow/Green heat shrink)
[Orientation does not matter]
 - Heatbed thermistor (white or black cable going from the heatbed)
 - Print fan (cable going from the extruder labeled with Red heat shrink)[make sure that the red wire is closer to the thermistor]
 - Extruder fan (cable going from the extruder labeled with Blue heat shrink)
- ⚠ DOUBLE CHECK the connection! It is important to ensure the correct connections!**

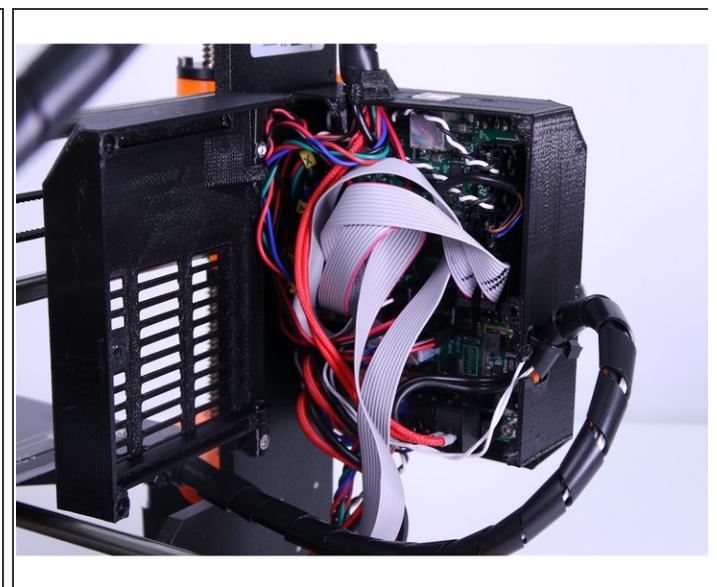
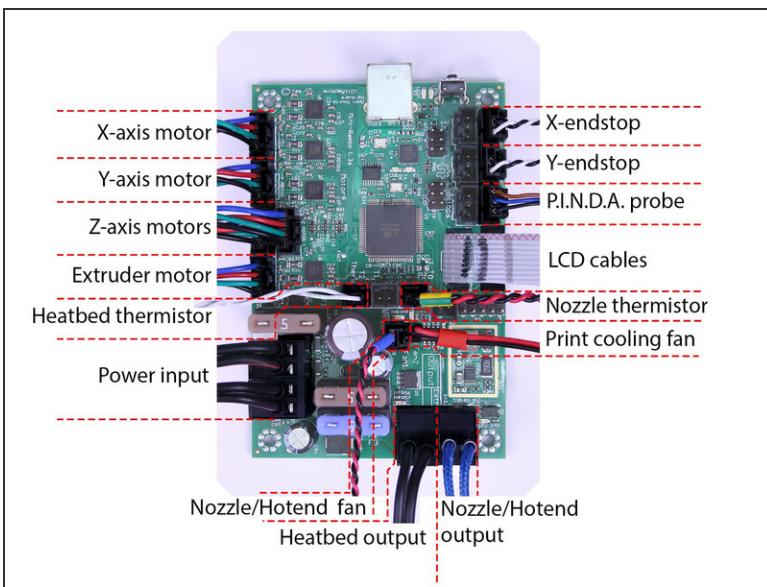
Step 18 — Connecting electronics - part 4



- LCD cable with ONE stripe (Connector P1)
- LCD cable with TWO stripes (Connector P2)

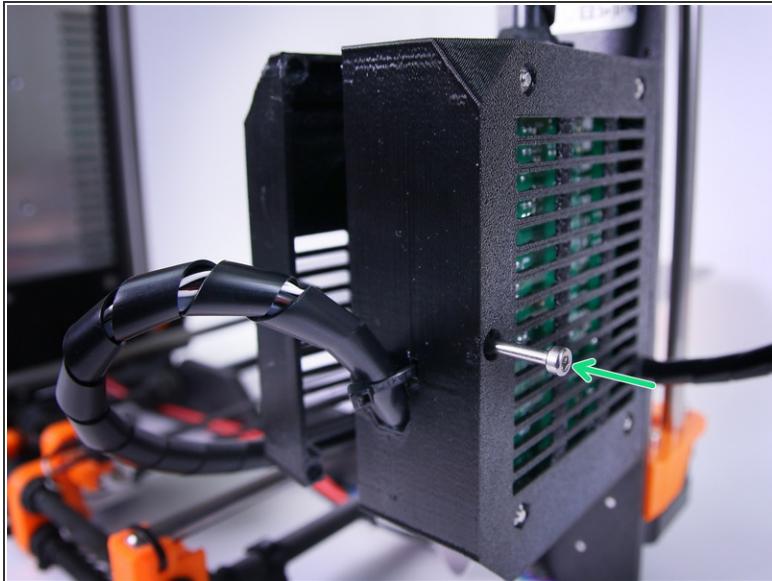
 Make sure that the key of connector is matching the key on the electronics.

Step 19 — Verify electronics connection



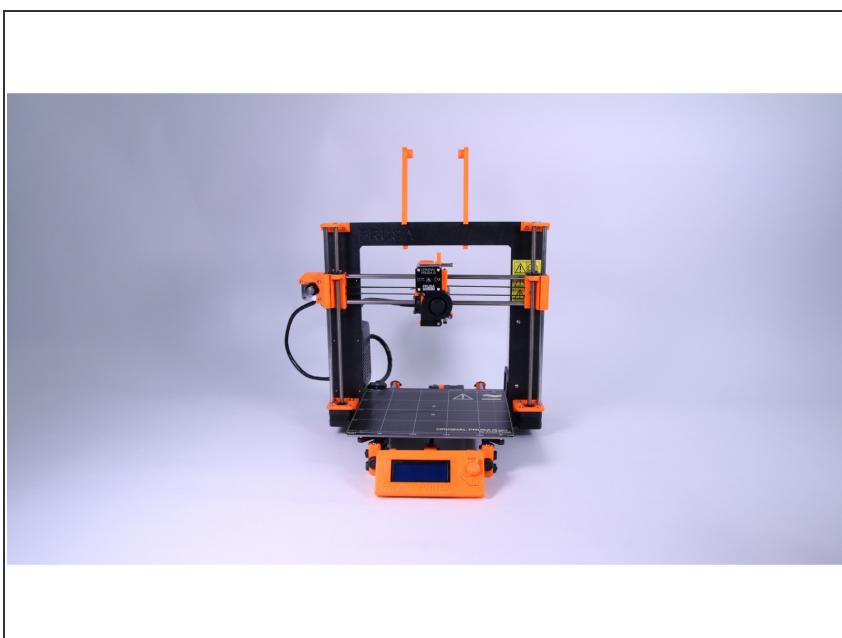
- Check your electronics connection with the attached picture.

Step 20 — Finalizing Rambo cover



- M3x40 screw (1 pcs)
 - Close the Rambo-cover doors
- ⚠ Make sure that no wire is pinched!
- Tighten M3x40 screw.

Step 21 — Hooray!



- Congratulations, you've just assembled the whole Original Prusa i3 MK2 3D printer!
- You're almost there... Just finish the chapter [9. Preflight check](#)

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