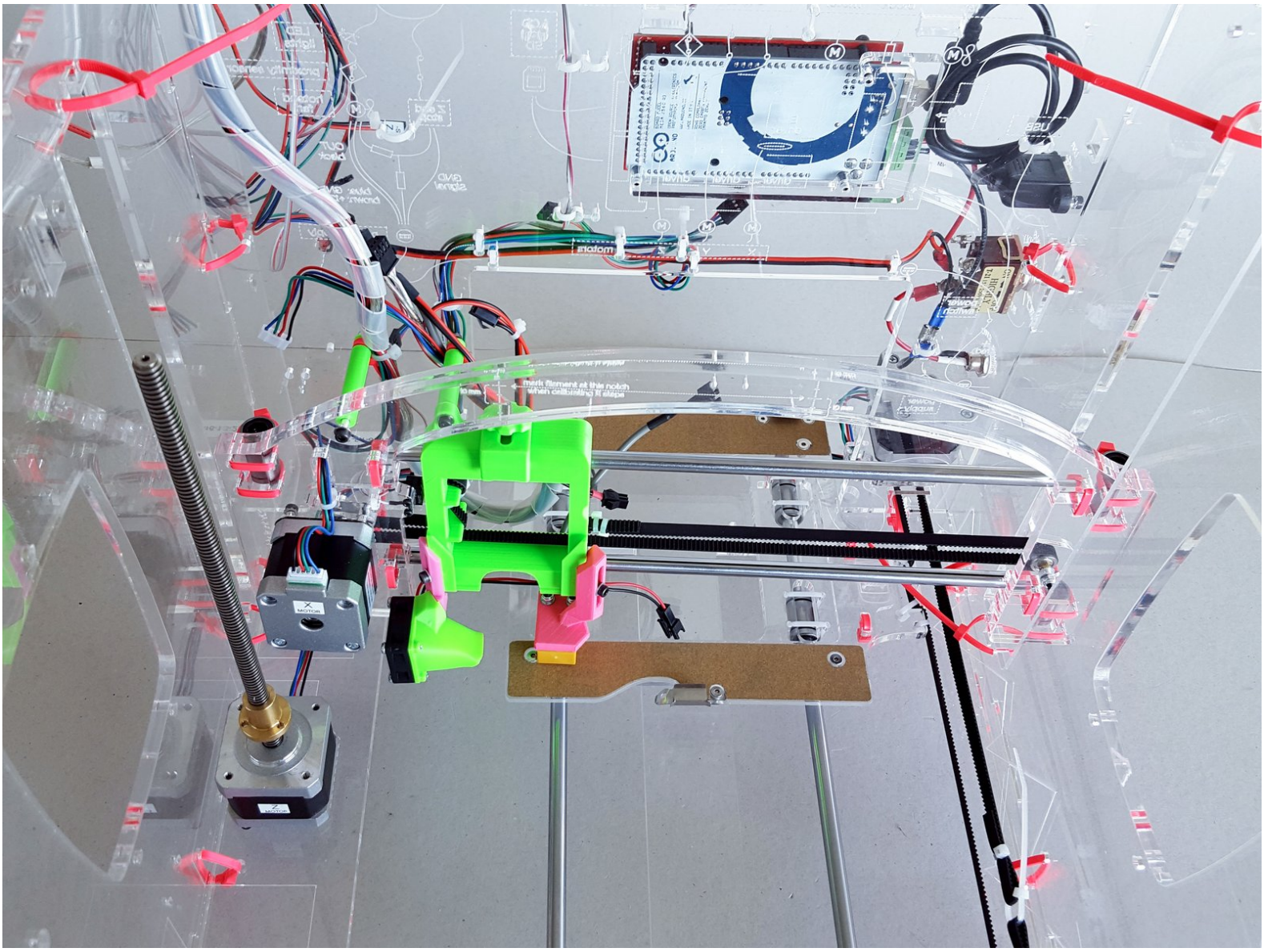
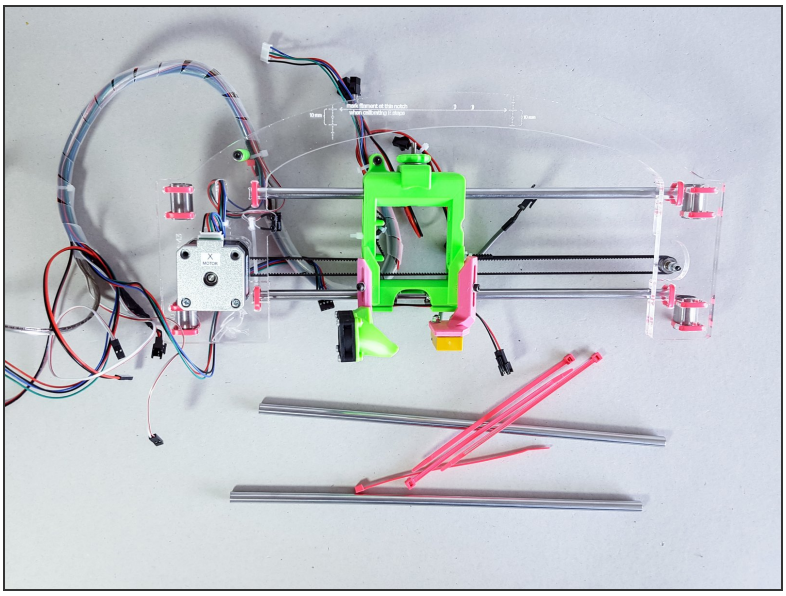
Install the X Assembly

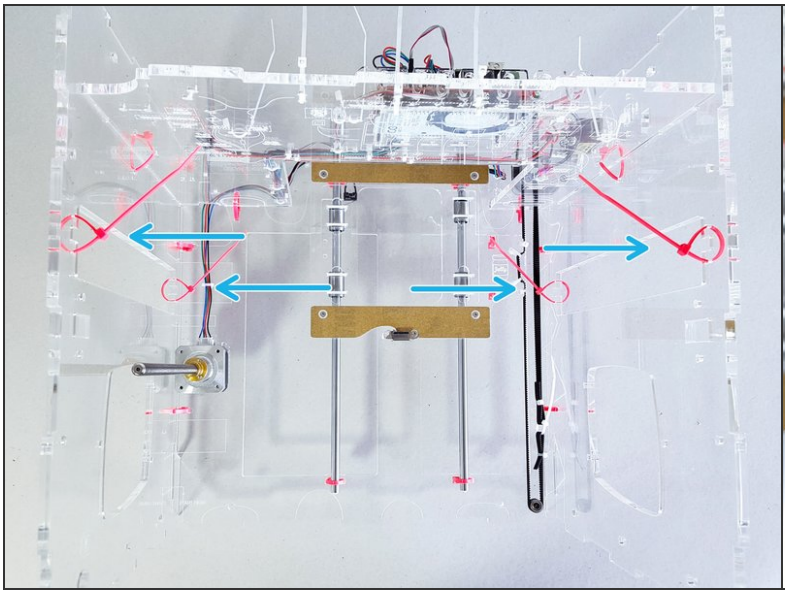


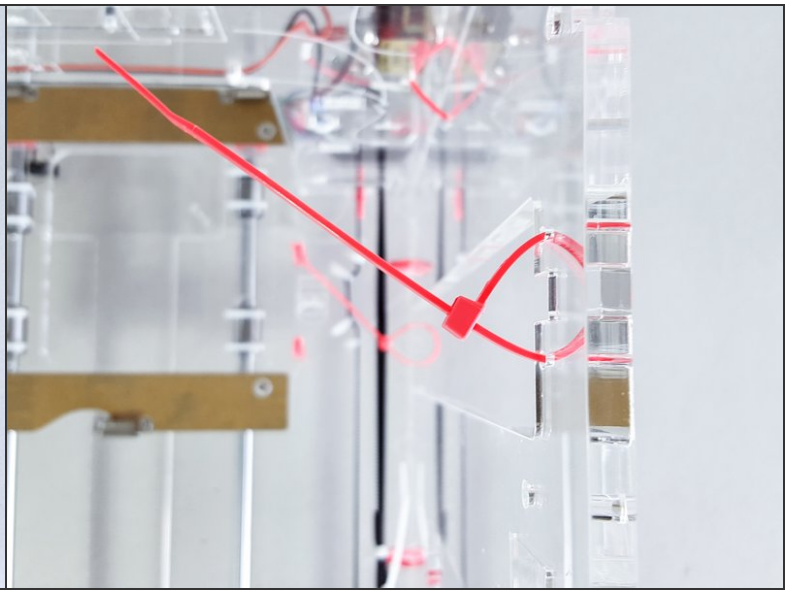
Step 1 — ↳ Install the X Assembly



- X assembly
- 5" zip ties
- Smooth rods (2)

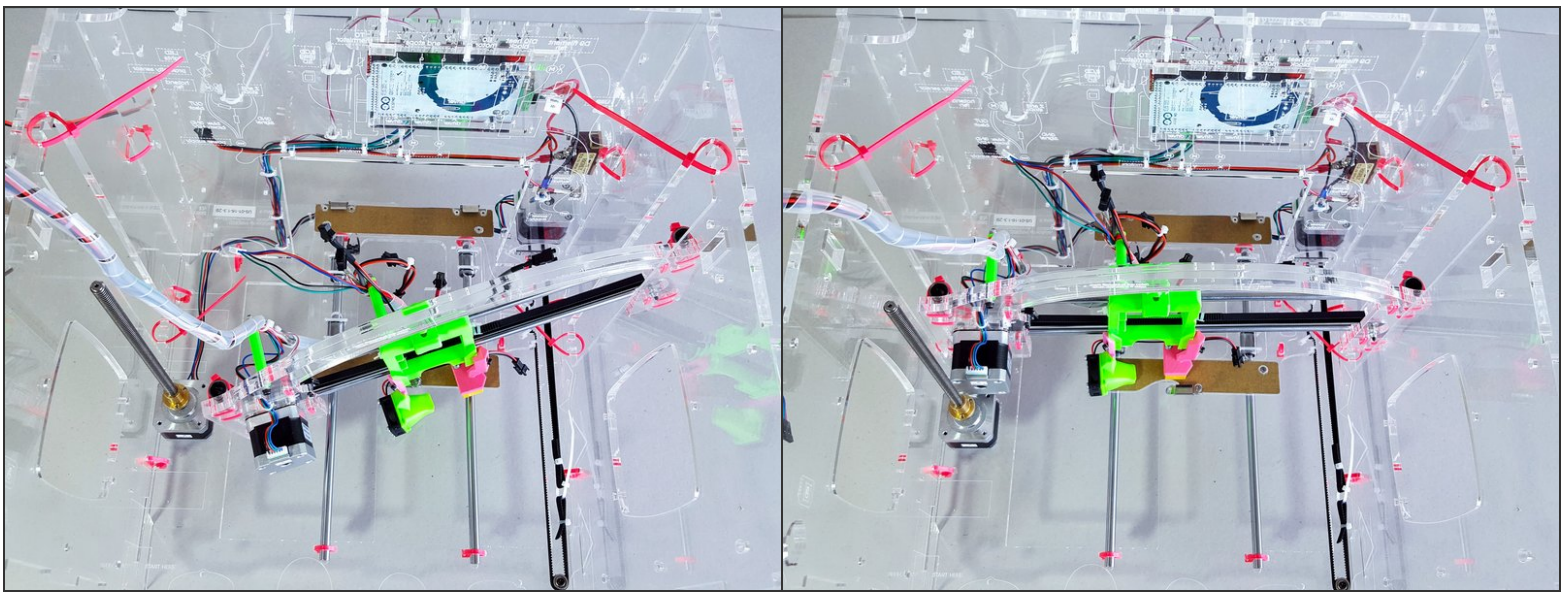
Step 2





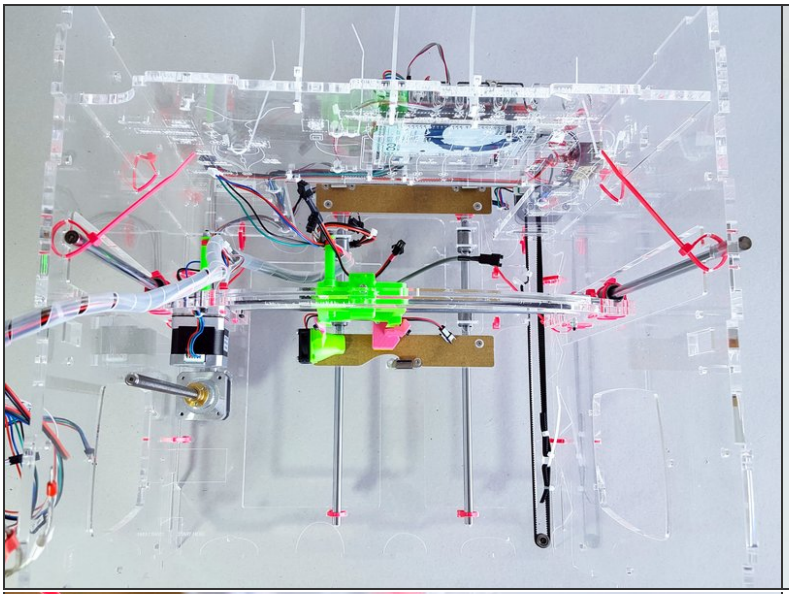
- Loosely place 4 zip tie loops on either side of the printer - head on the inside.

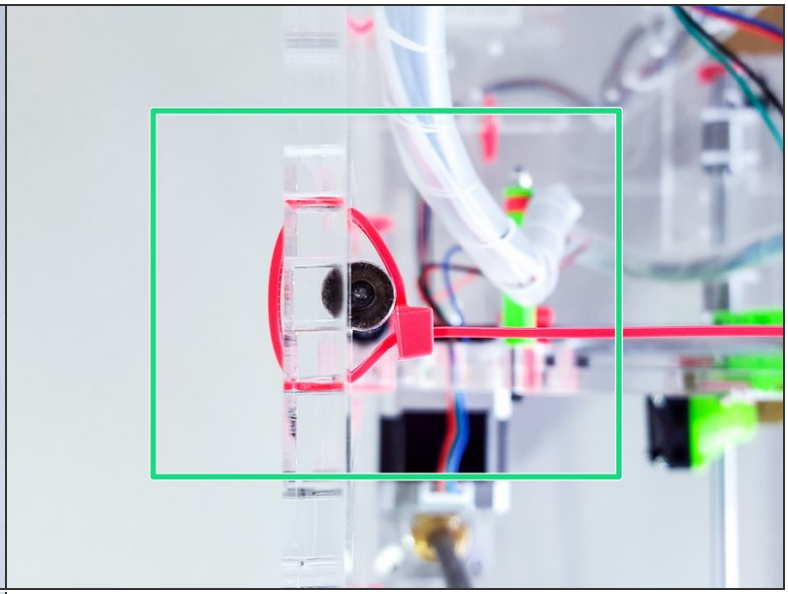
Step 3

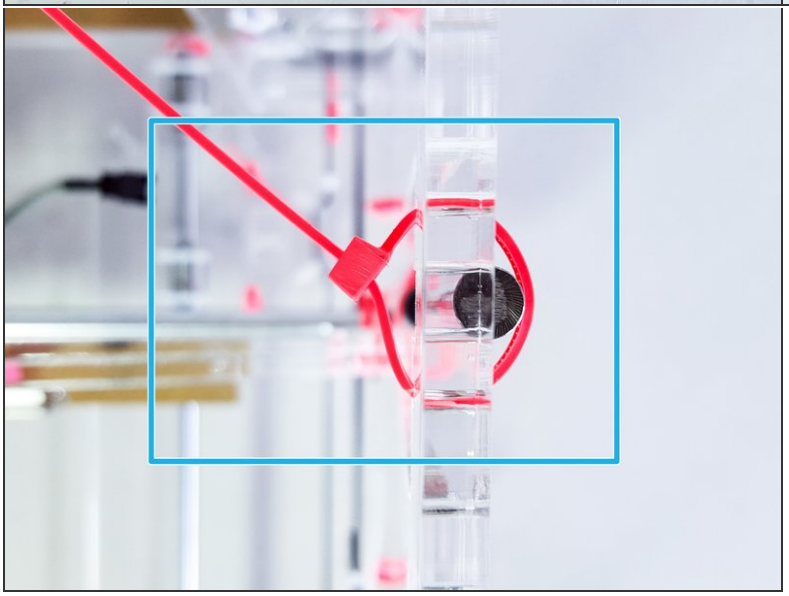


- Put the X assembly inside the box.

Step 4



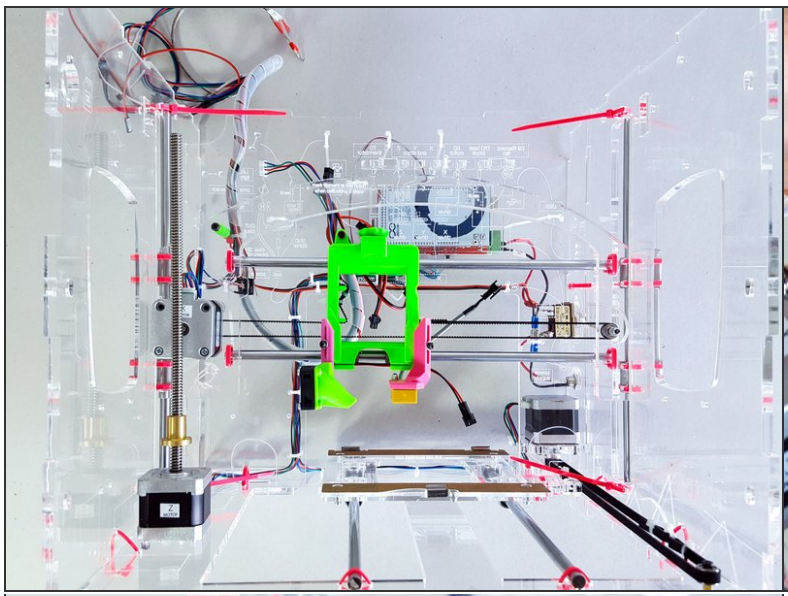


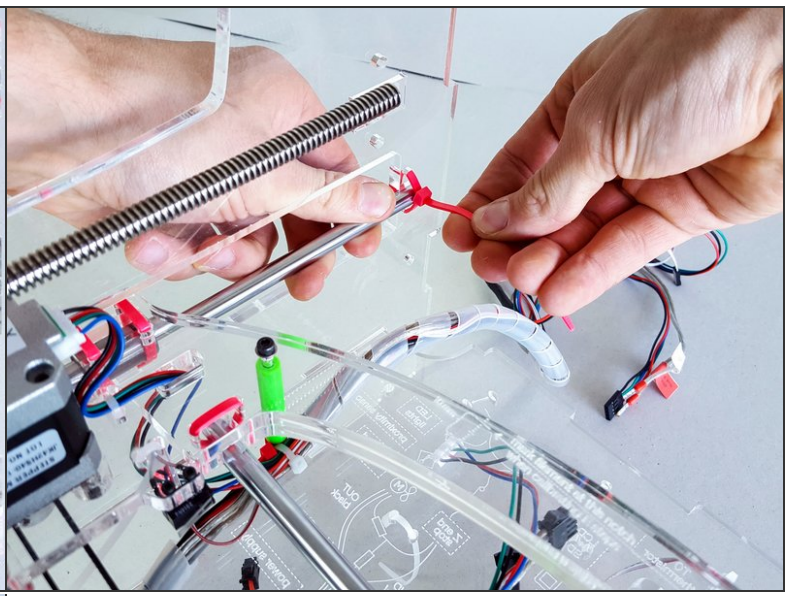


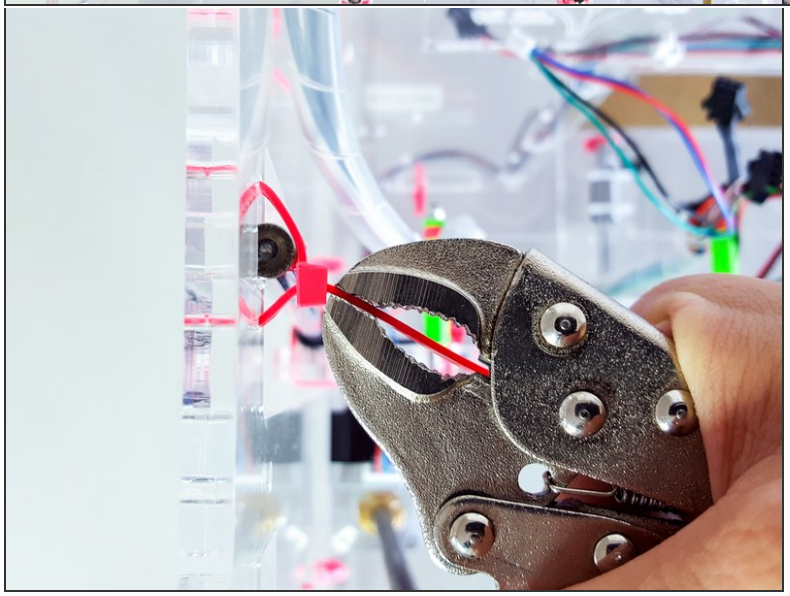
- Slide in the rods through the loops AND the bearings.
- The **left** rod is on the **inside** of the box.
- The **right** rod is on the **outside** of the box.

⚠ Careful; if you force the rods at an angle you may knock out some balls from the bearings.

Step 5

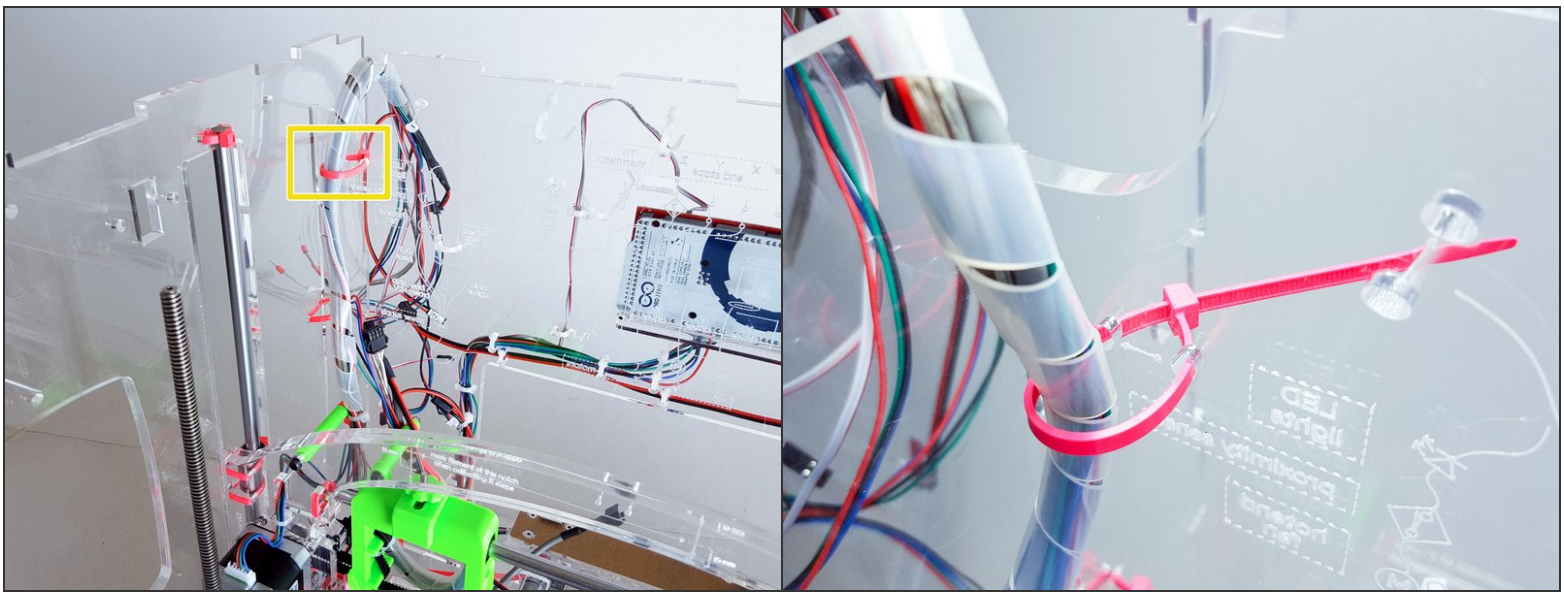






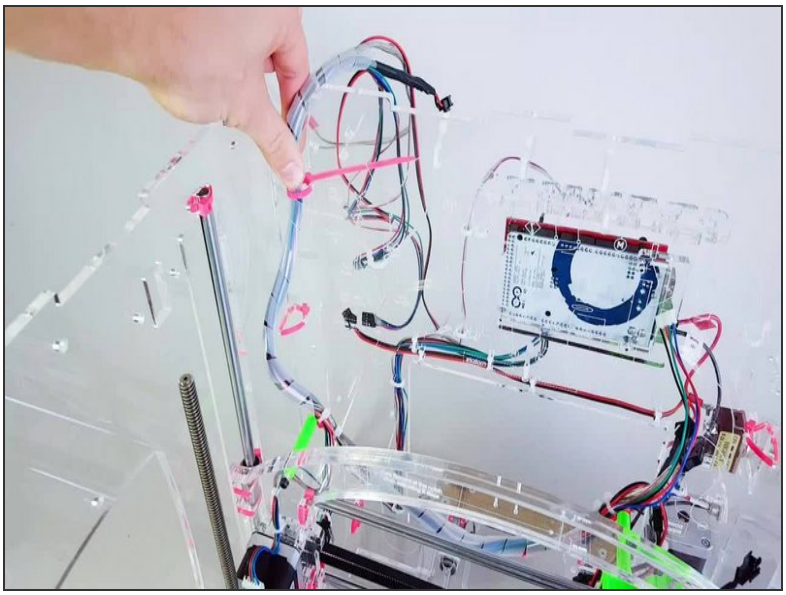
- Place the box on its back to alleviate gravitational pull.
- Make sure the rods are in their slots.
- Tighten and trim the zip ties.

Step 6



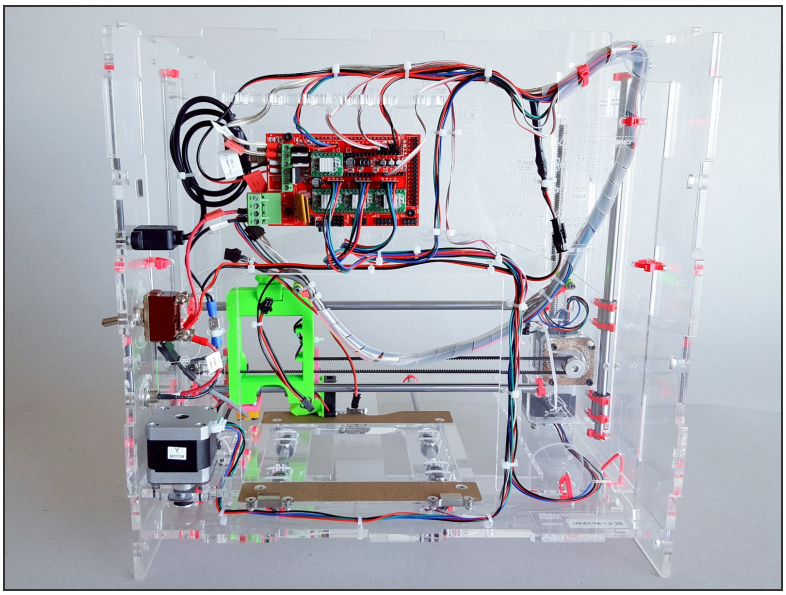
- 5" zip tie loop, keep loose

Step 7



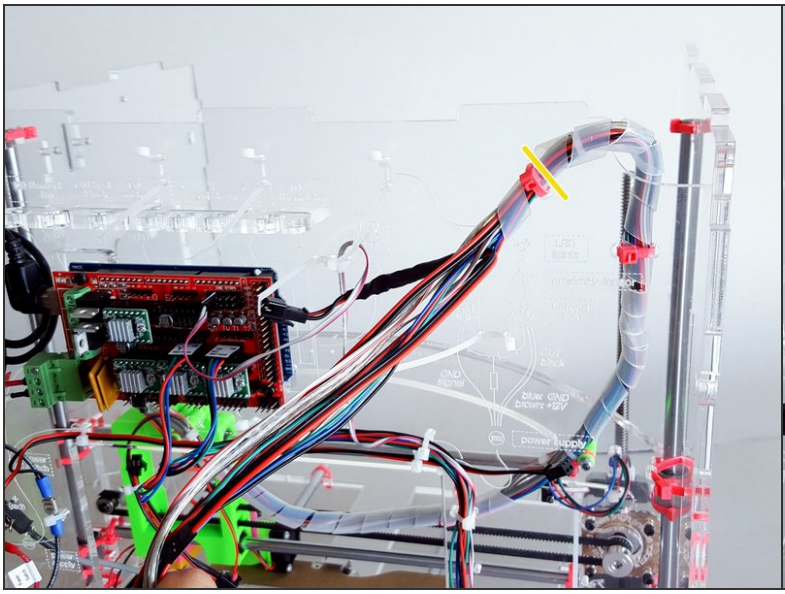
- Hold the x wire harness in place with your hand, and move the x assembly up and down.
- Adjust the mounting point as needed so that the **harness is folding nicely and predictably.**
- Tighten in place.

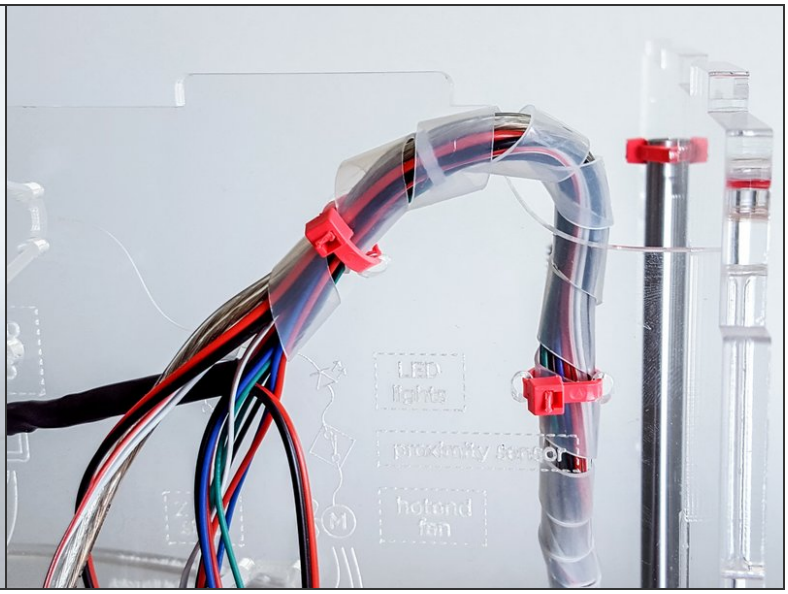
Step 8 — ↳ Wire Up the X Assembly



- In short, connect all the wires according to their labels.
- Then we'll clean it all up.

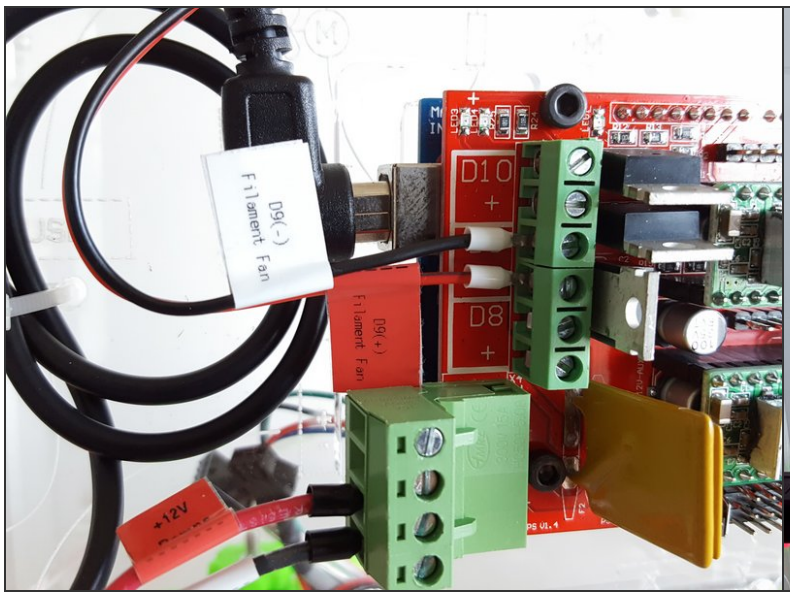
Step 9

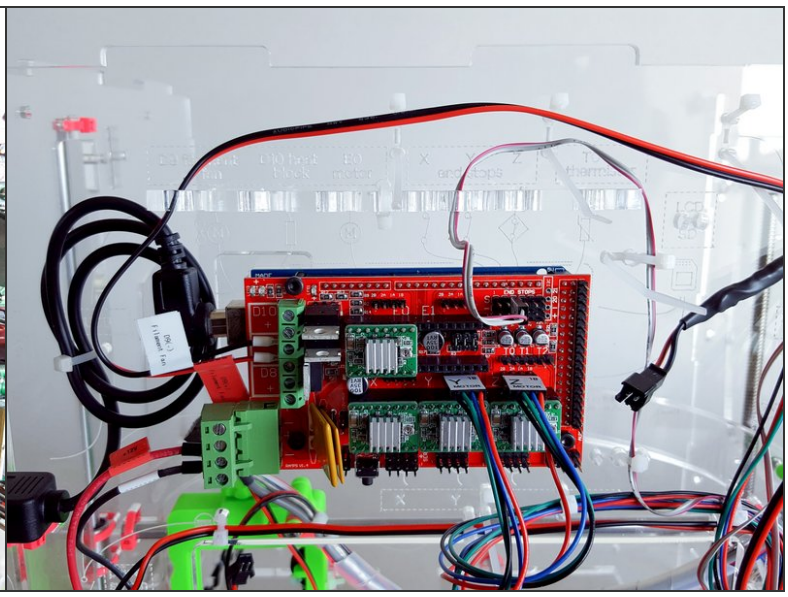




- 5" zip tie
- First, secure the whole harness with a 5" zip tie. Now, no motion from the X or Z axis will disturb our electronic connections.

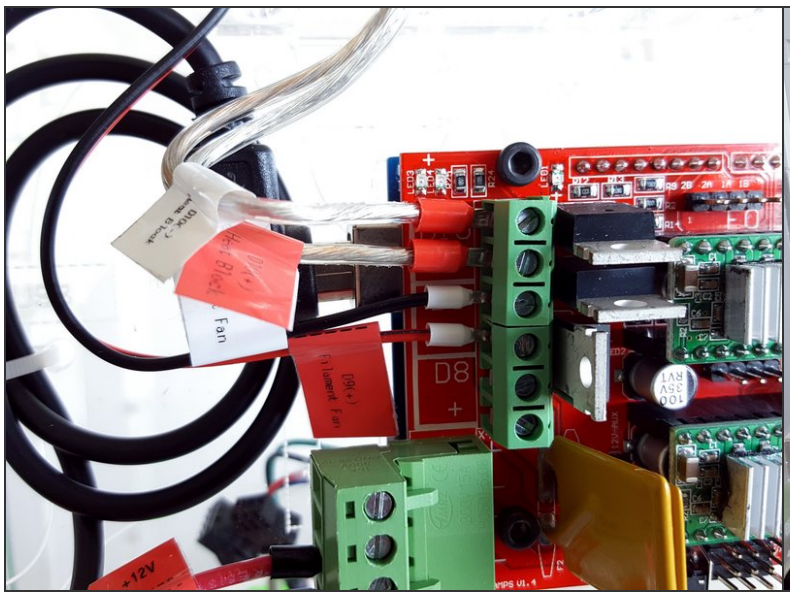
Step 10

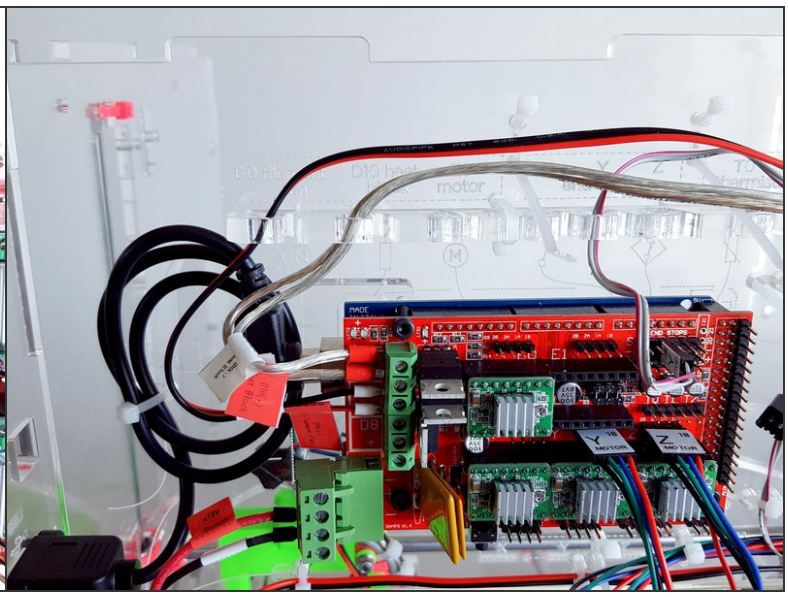




- Filament Fan: D9
- + and - matter!

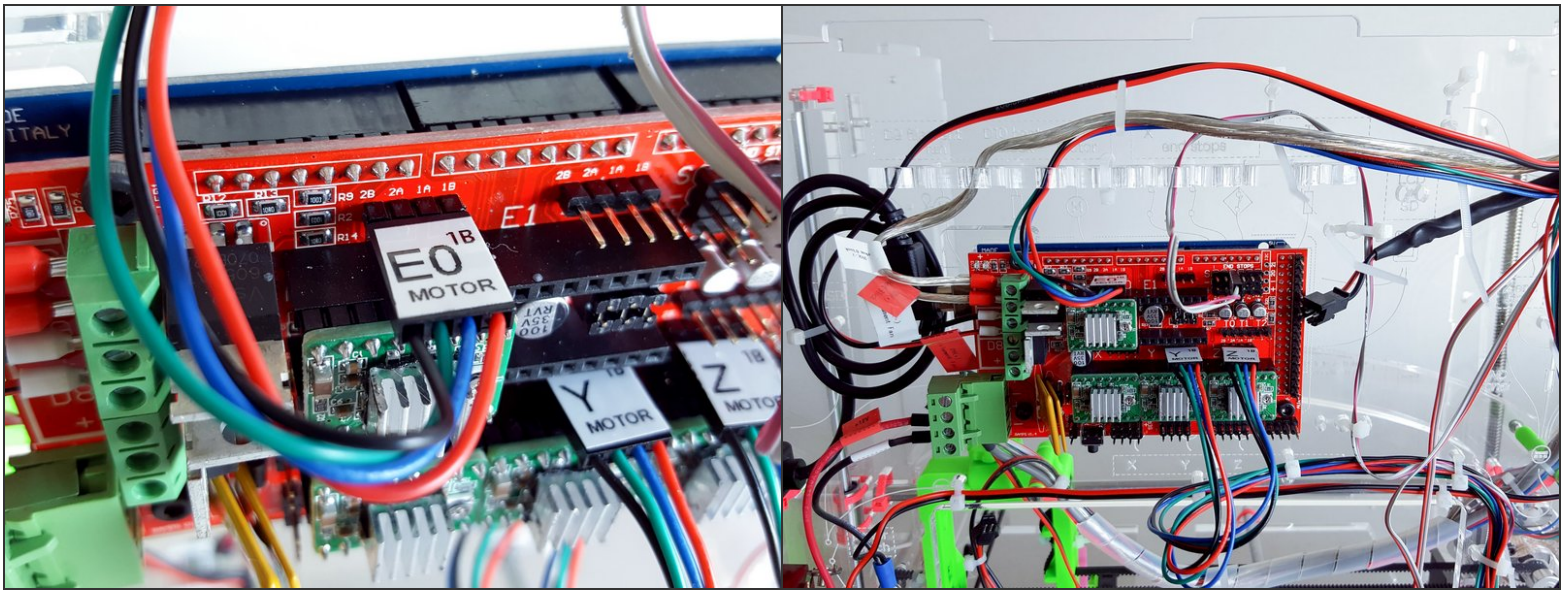
Step 11





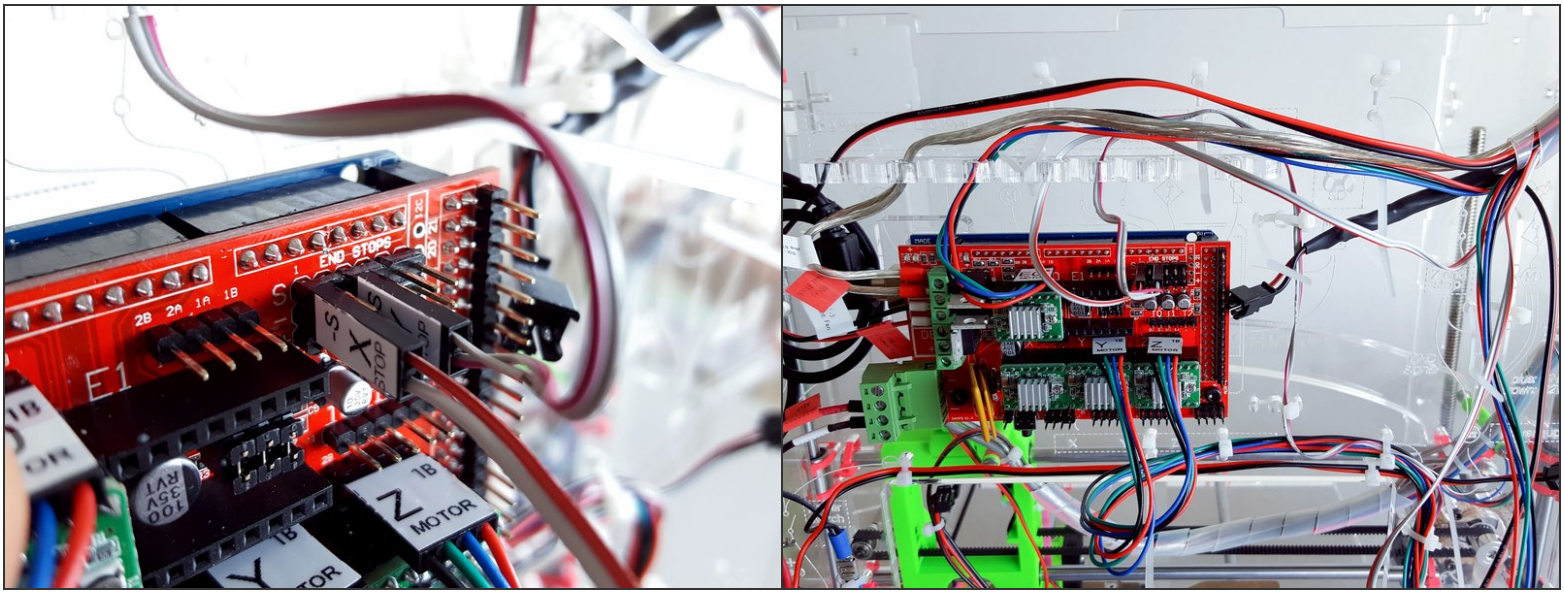
- Heat block: D10
- + and - matter, because we also power the hotend fan from these wires.

Step 12



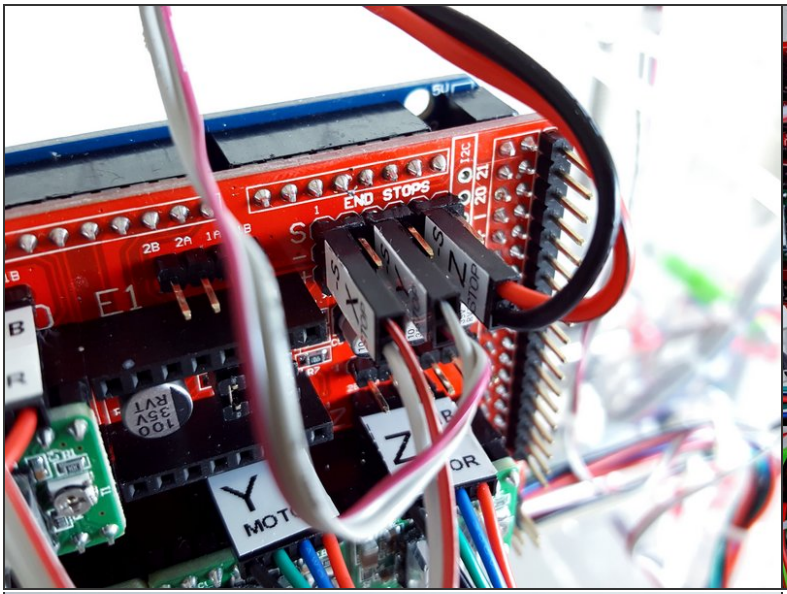
- E motor: E0

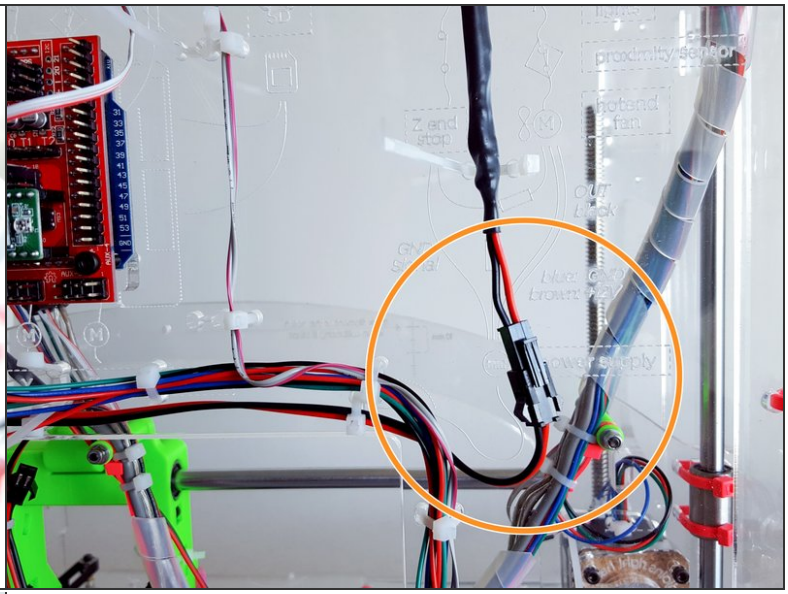
Step 13

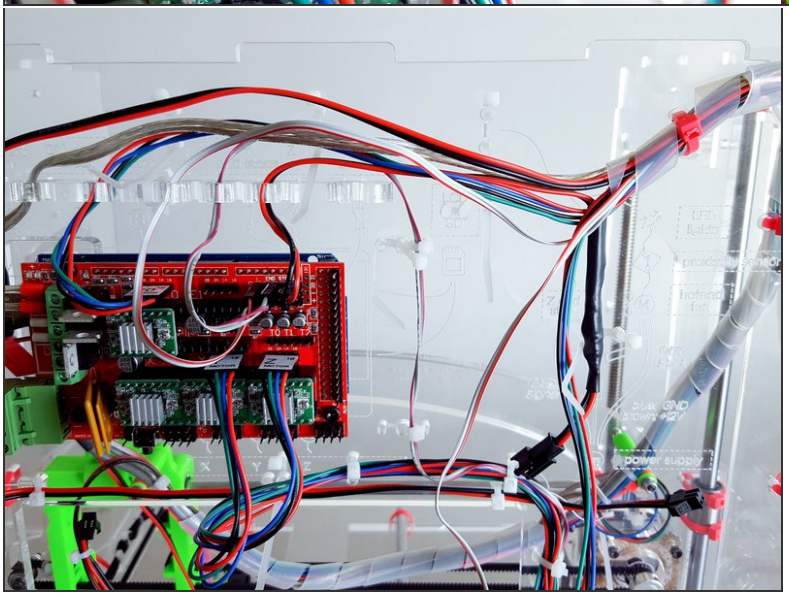


- X Endstop: END STOPS: X

Step 14

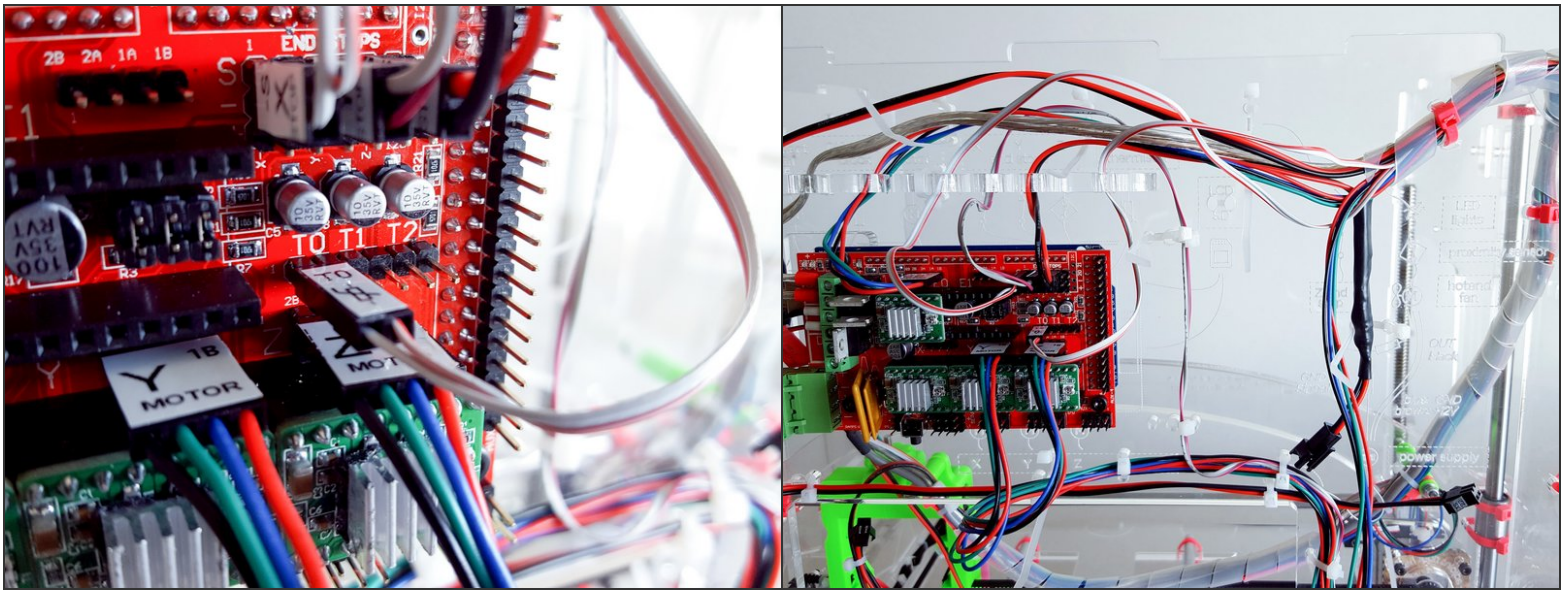






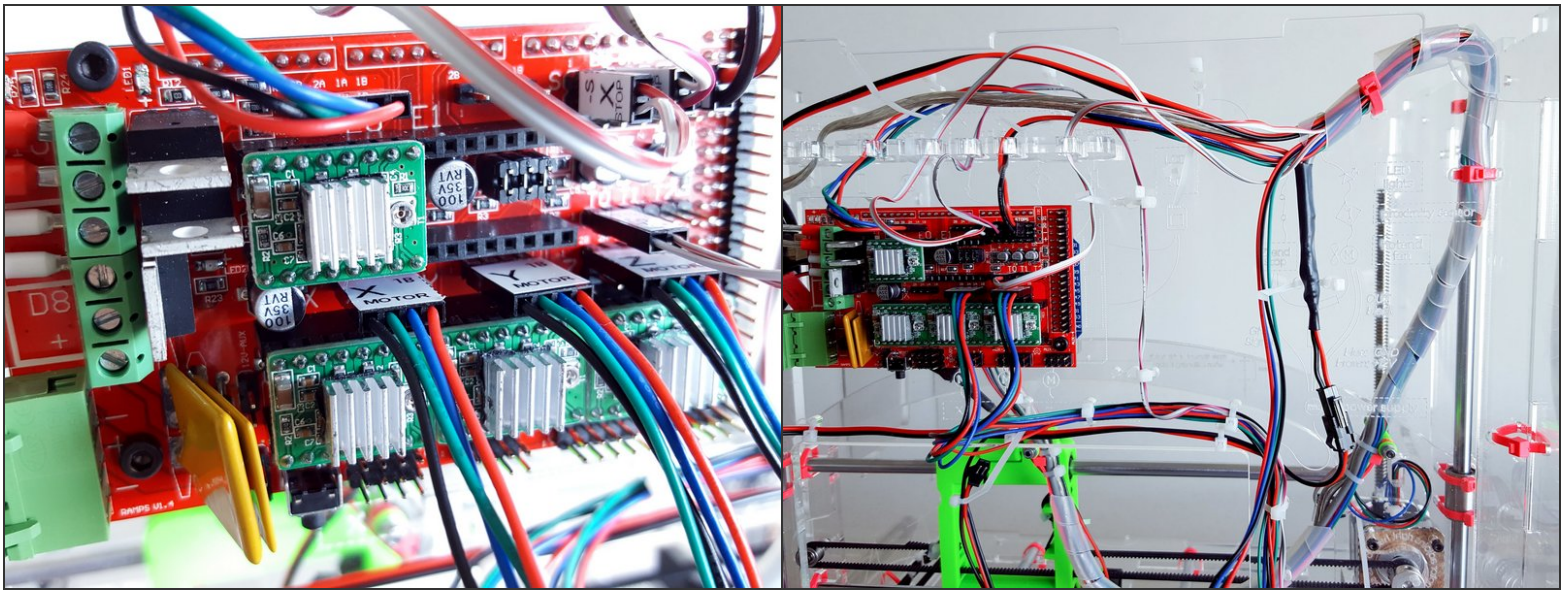
- Z Endstop: END STOPS: Z
- Connect the Z Probe external power supply.
- Z Endstop = Z Probe, being a proximity sensor, need a separate power source.

Step 15



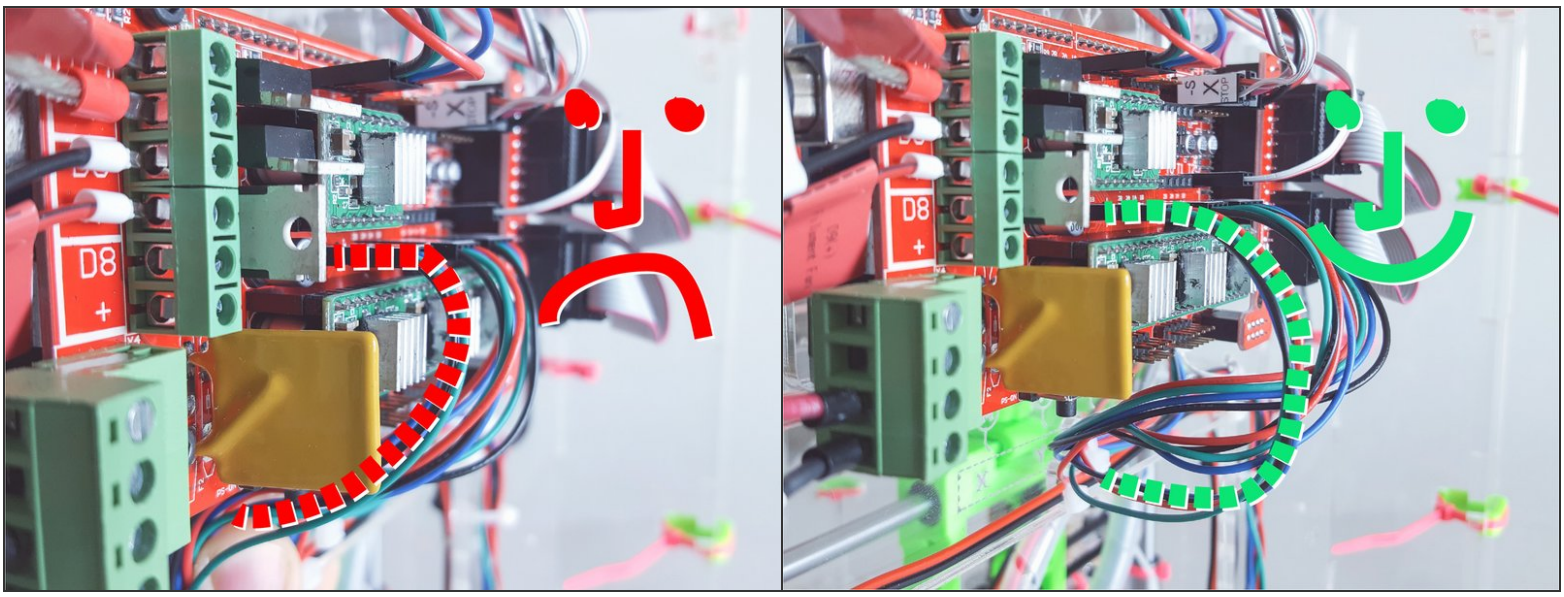
- Thermistor: T0

Step 16



- X motor: X

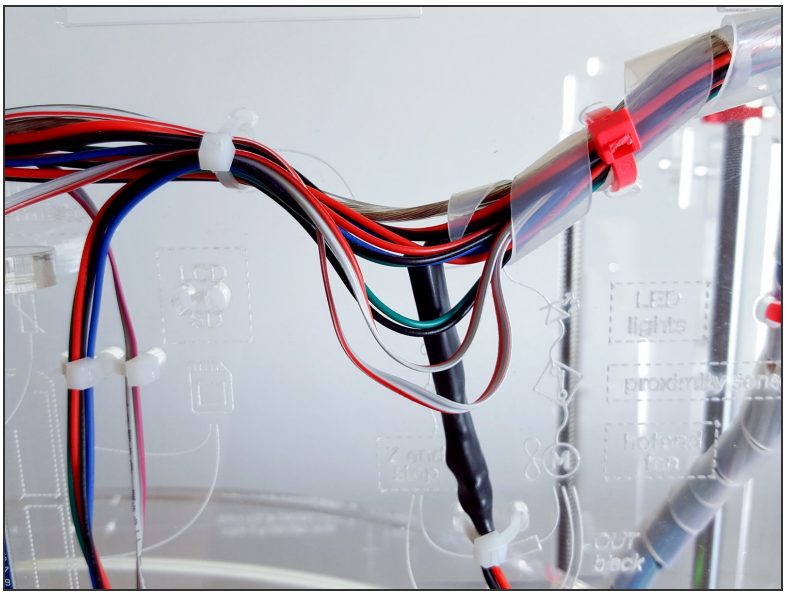
Step 17 — Wiring Concept: Slack



⚠ It is essential that you do NOT pull on the wires and the connectors.

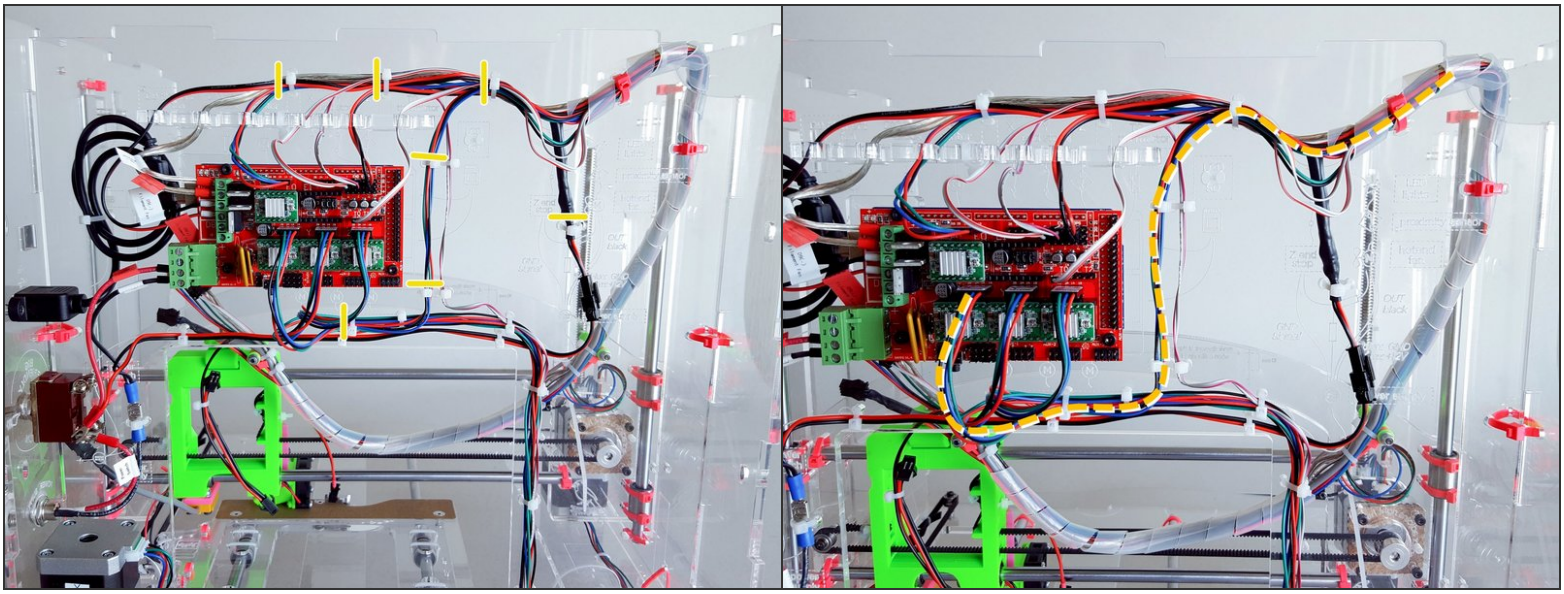
- Always leave enough slack in the wire, creating signature 'loops'.
- Giving your wires room will prolong the life of your printer and lead to less issues with electrical connections.

Step 18 — Wiring Concept: Overflow



- You'll always end up with some wires a bit longer than you may wish.
- You can pull in a bend where the harness exits the spiral wrap to adjust the wire lenghts in a controlled, elegant fashion.

Step 19 — Clean up the Wires



- 4" zip ties
- The X wire takes a scenic route, but it's worth it for the beauty of organization.