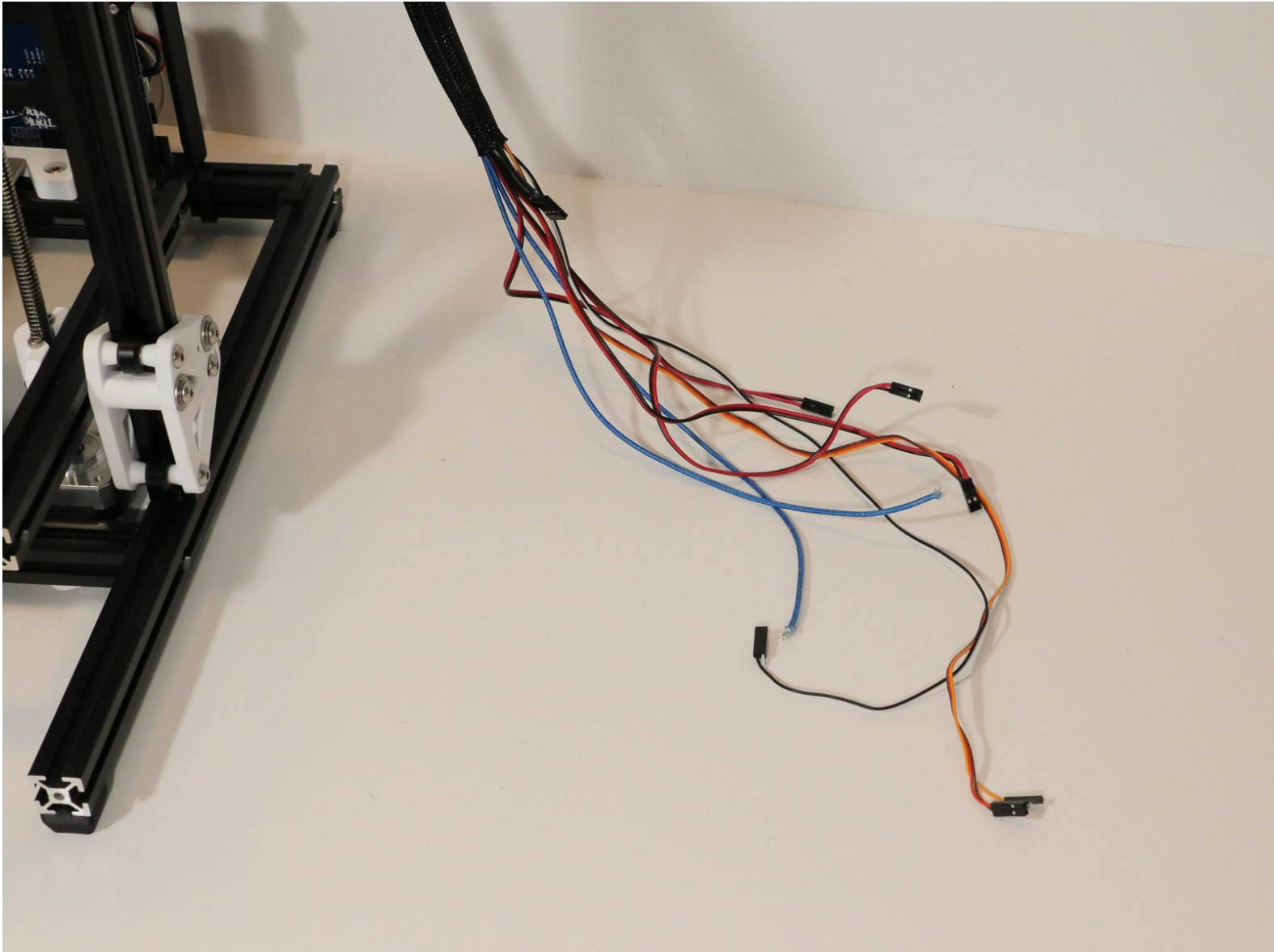


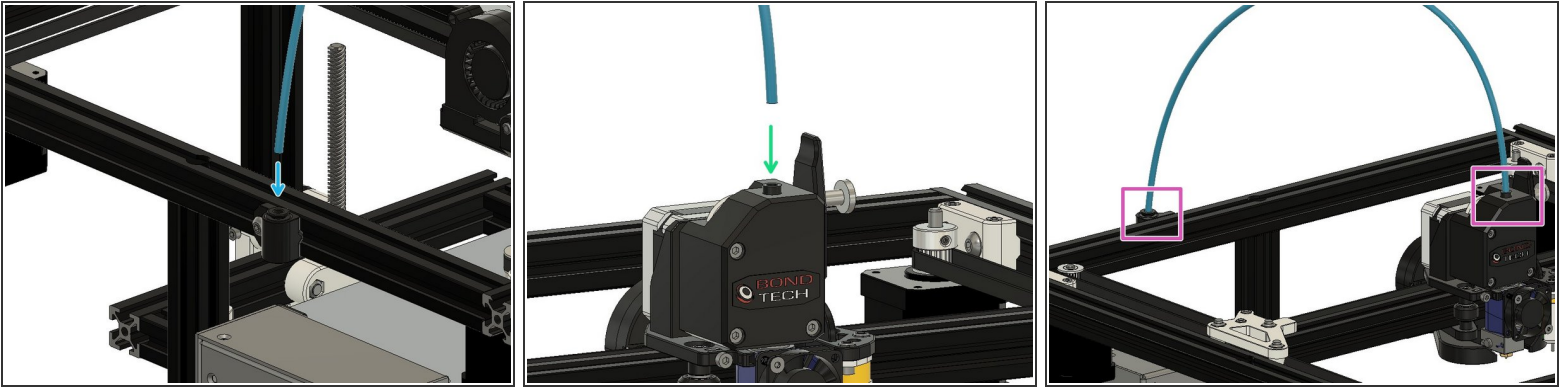


Section 3.3: Wiring

Written By: Leland Crowther

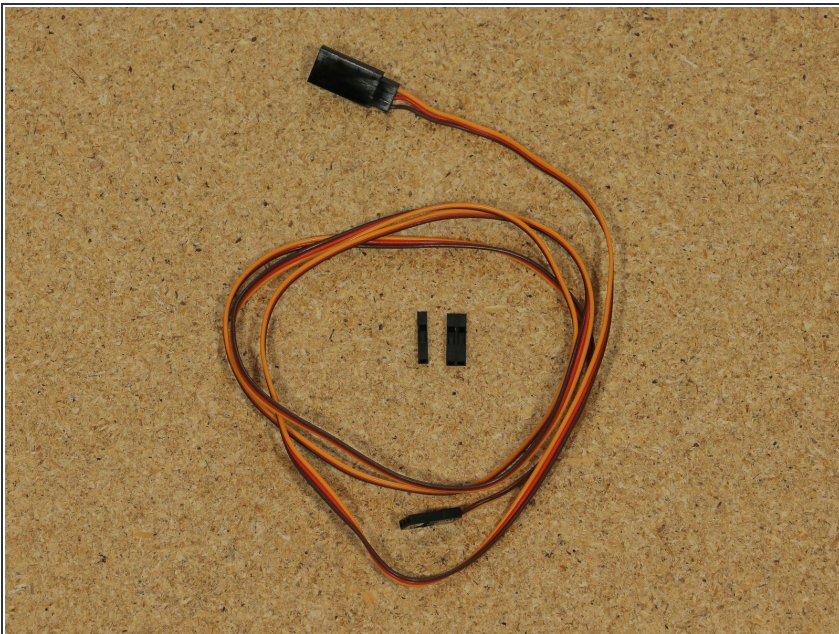


Step 1 — Insert Bowden Tube



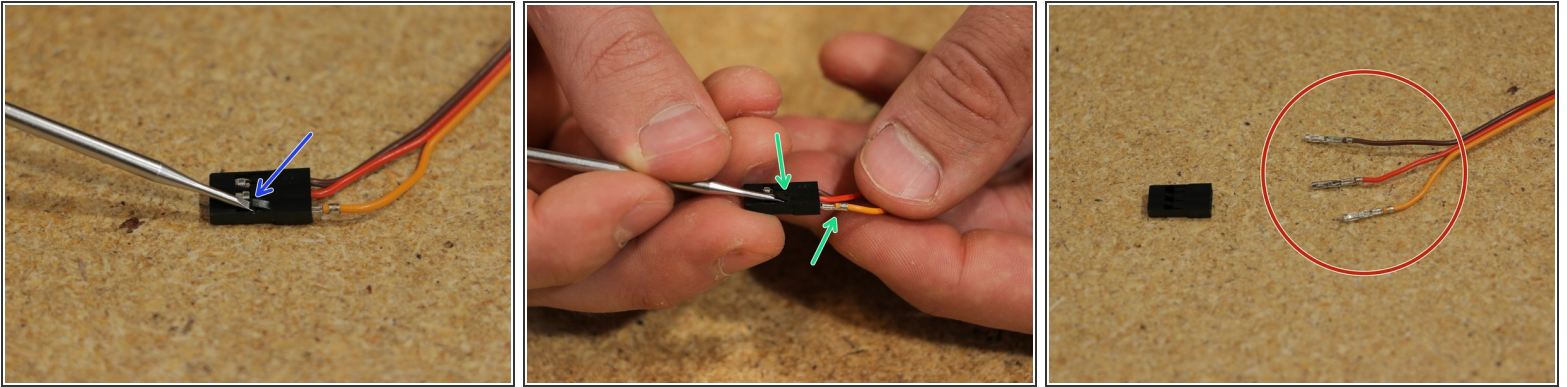
- Push bowden tube into coupling
- Push other end of bowden tube into Bondtech BMG
- ⓘ Bowden tube in couplings

Step 2 — Prepare Parts



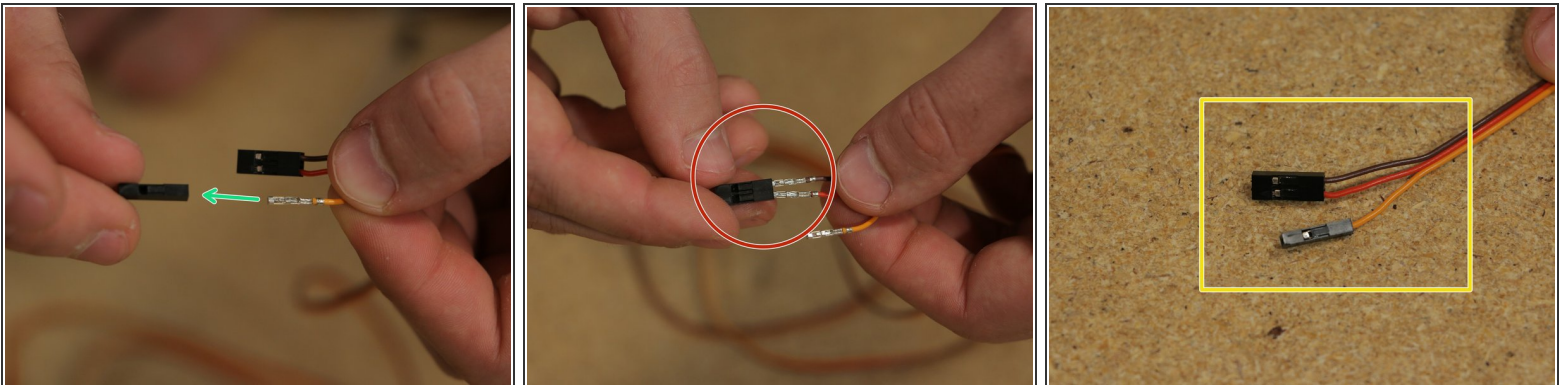
- 3-Wire BLTouch Extension (1x)
- Single Female Dupont Connector (1x)
- Double Female Dupont Connector (2x)

Step 3 — Remove BLTouch Extension Connectors



- Use small flathead screwdriver to lift tab
- While holding tab up, slide wire out
- Repeat last step for all three wires

Step 4 — Attach BLTouch Extension Connectors



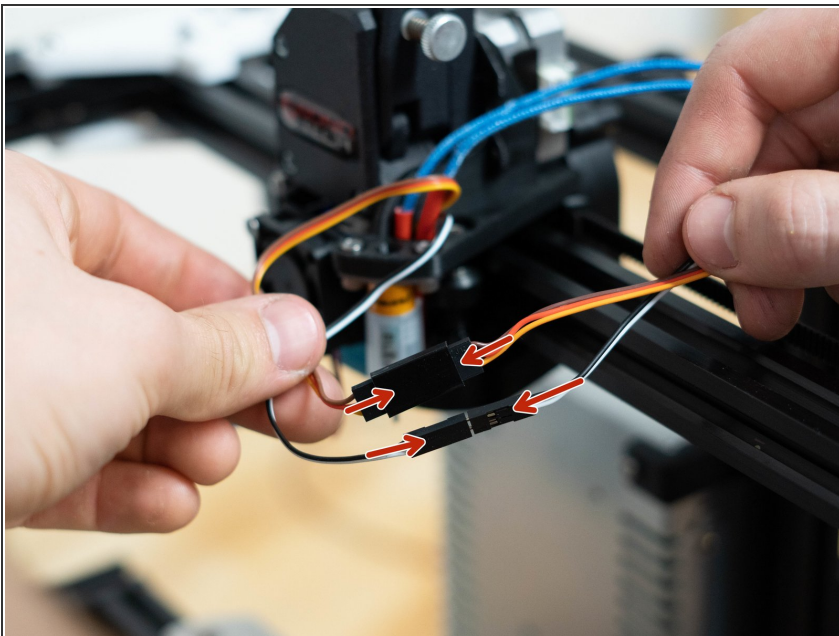
- Insert orange wire into connector
- ❗ Pin orientation is important. when inserted properly it will make a small click and you will not be able to pull out
- Insert brown and red wire into double connector
- Finished extension with correct connectors

Step 5 — Prepare Parts



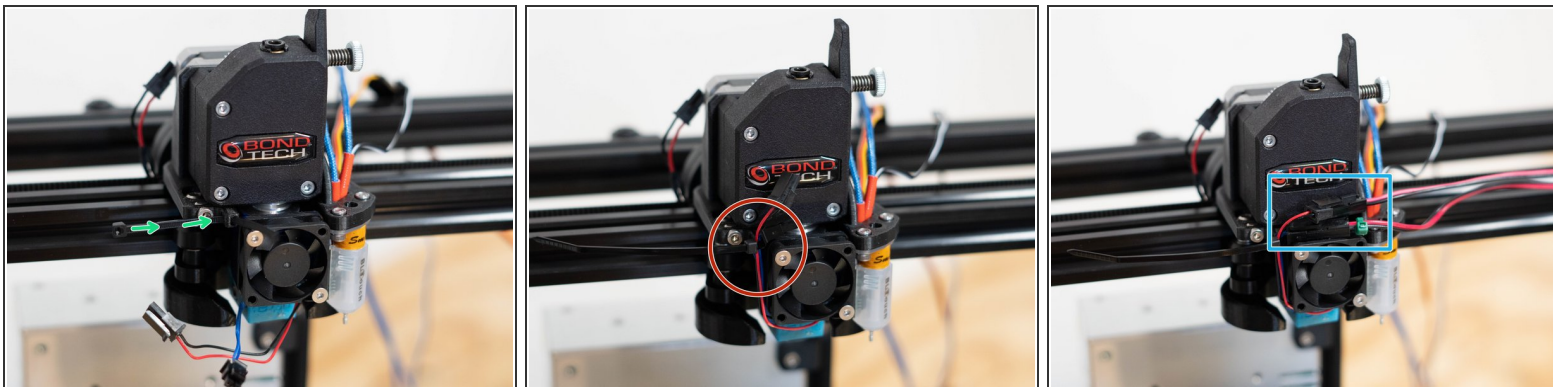
- Zip-Ties
- Wire Clips (No Zip-tie) (11x)
- Wire Clip (Zip-Tie) (6x)

Step 6 — Connect BLTouch Extensions



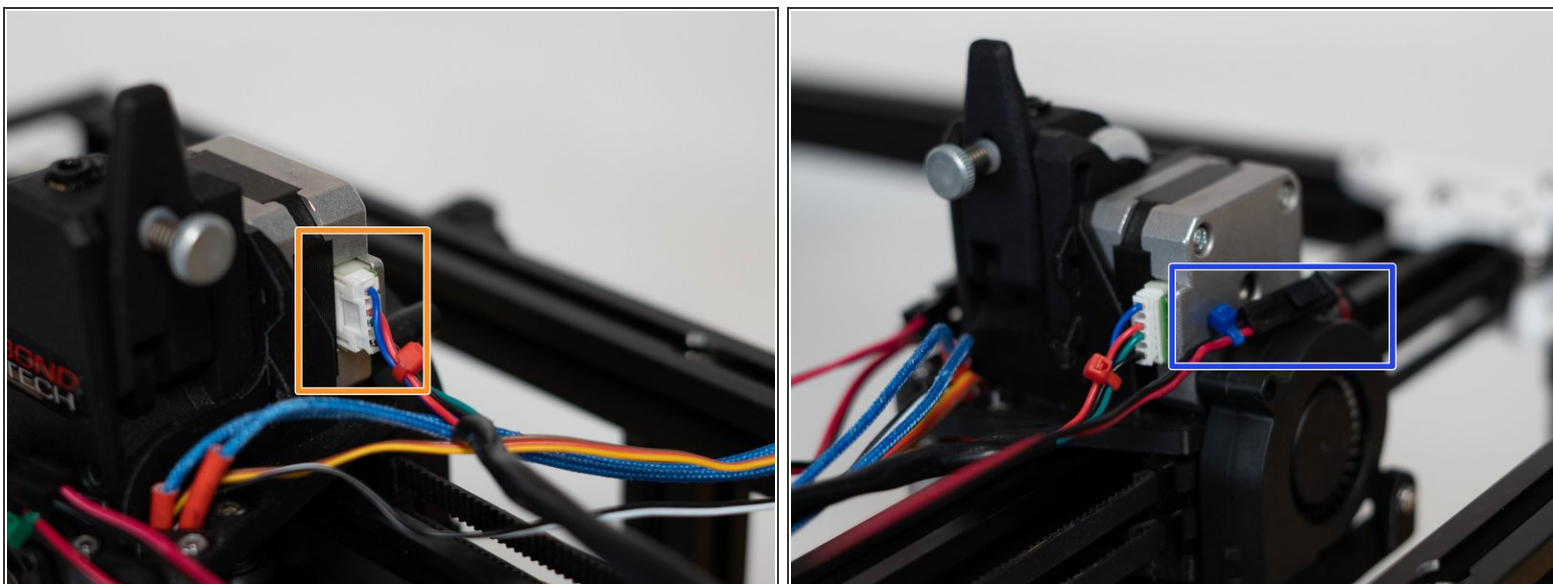
- Plug in extension cables
- ① It is important to make sure all wires are aligned with their matching colors

Step 7 — Fasten Hotend Fan and Thermistor Wires



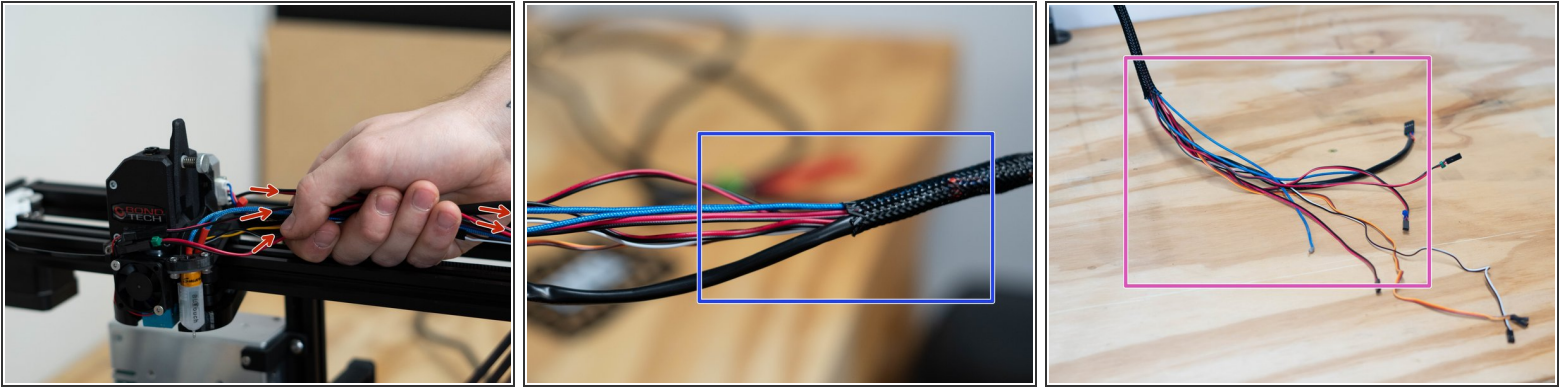
- Insert Zip-Tie
- Fasten thirmistor and hotend fan wire with Zip-Tie
- Plug in (un labeled black and red extension) into hotend fan and (green label) extension into hotend thermistor

Step 8 — Plug In Extruder Motor and Part Cooling Fan



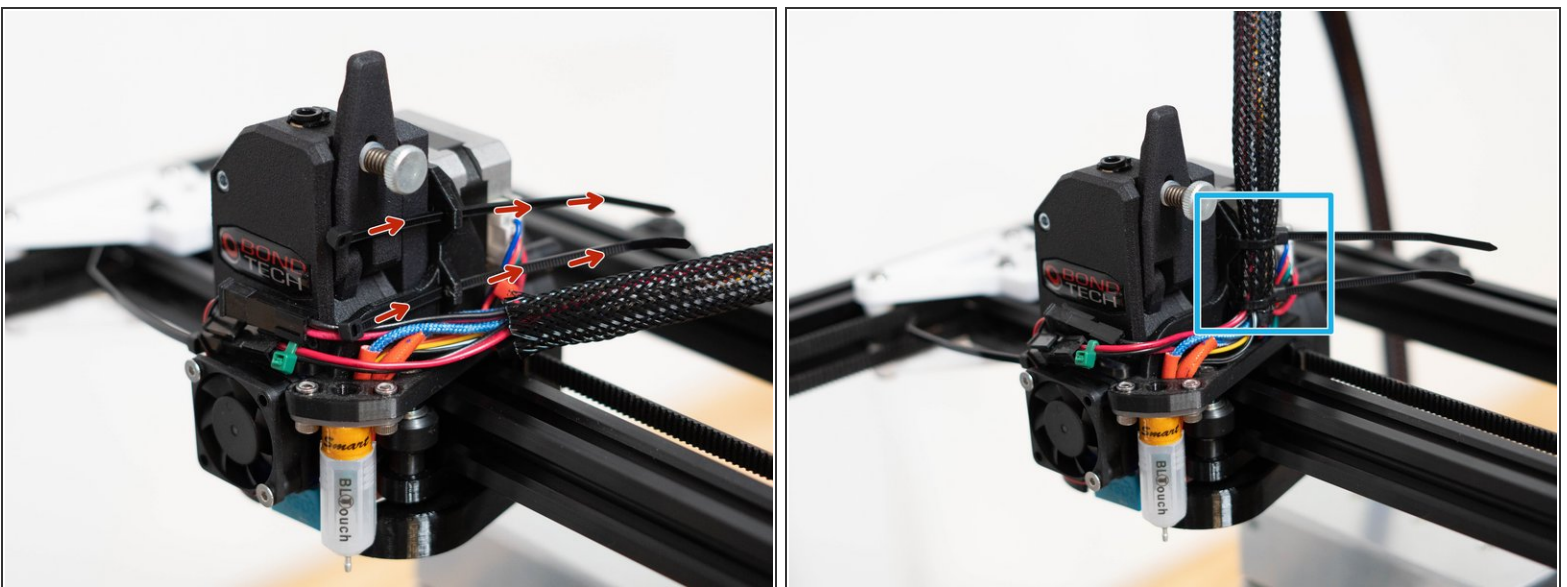
- Plug (red label) extension into extruder motor
- Plug in (blue label) extension cable into part cooling fan

Step 9 — Cable Slewing



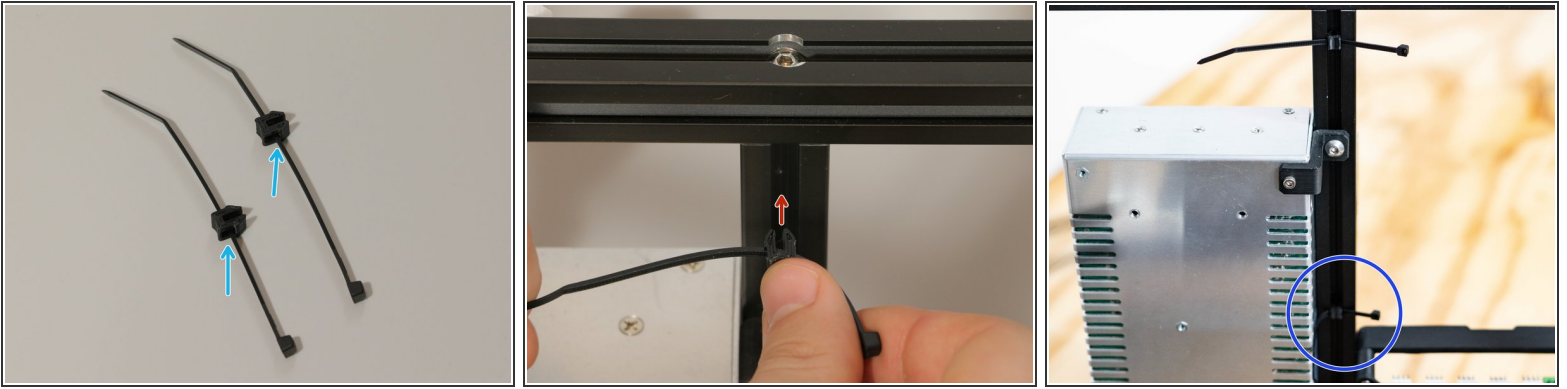
- Bundle all print carriage wires
- ❗ Wire bundle: Extruder Motor Wire, Part Cooling Fan Wires, Hotend Fan Wire, BLTouch Wires, Thermistor Wires and Hotend Wires
- Feed cables into sleeve
- Showing cables pulled all the way through sleeve

Step 10 — Anchor Cable Sleeve



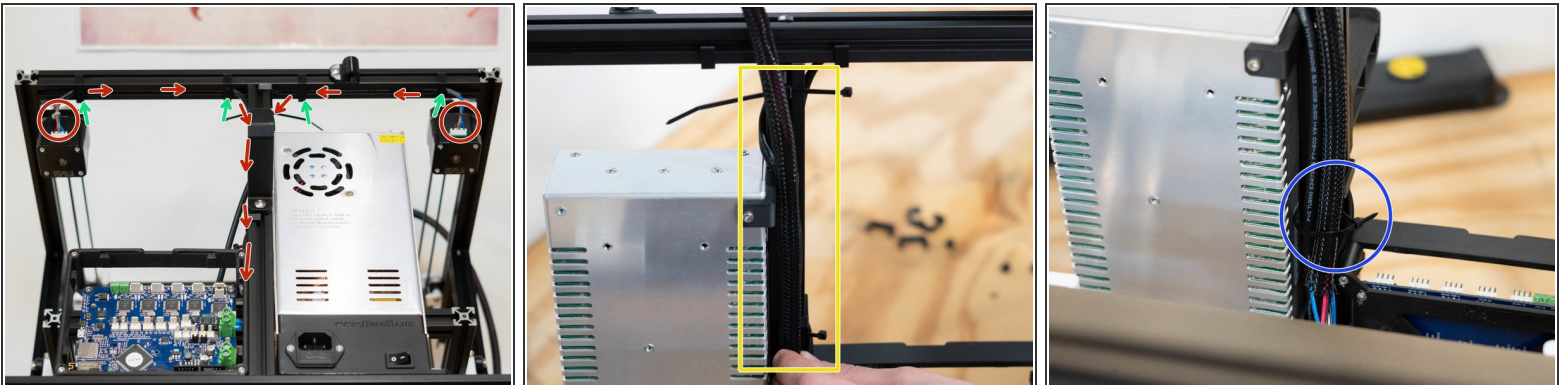
- Insert Zip-Ties into Zip-Tie Mounts on Carriage
- Fasten sleeve to carriage with Zip-ties

Step 11 — Prepare to Wire to Frame



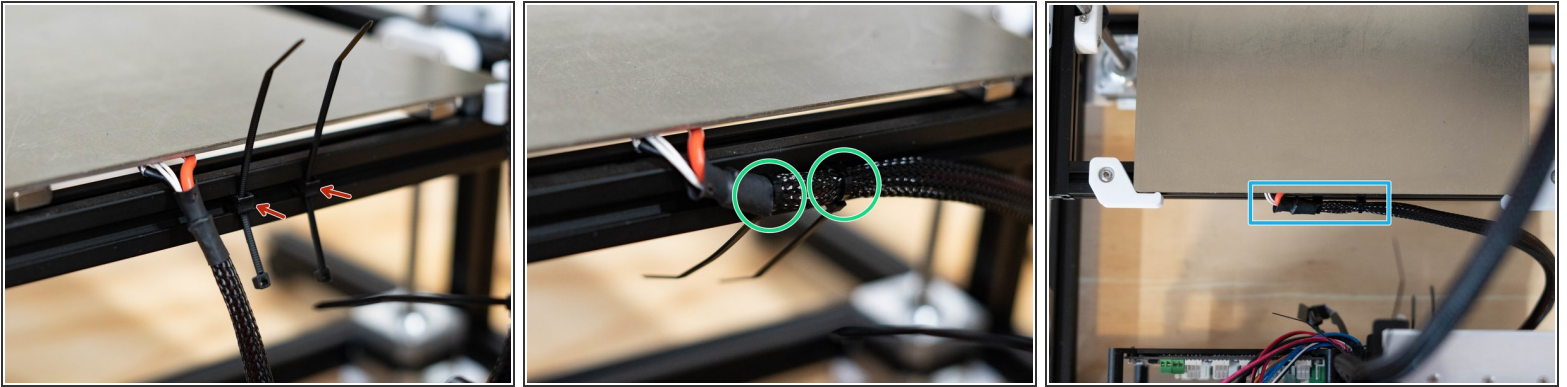
- Insert Zip-Ties into Printed Wire Clips
- Snap into extrusion slot
- Repeat last step

Step 12 — Plug in XY Motor Extensions and Fasten wires to Frame



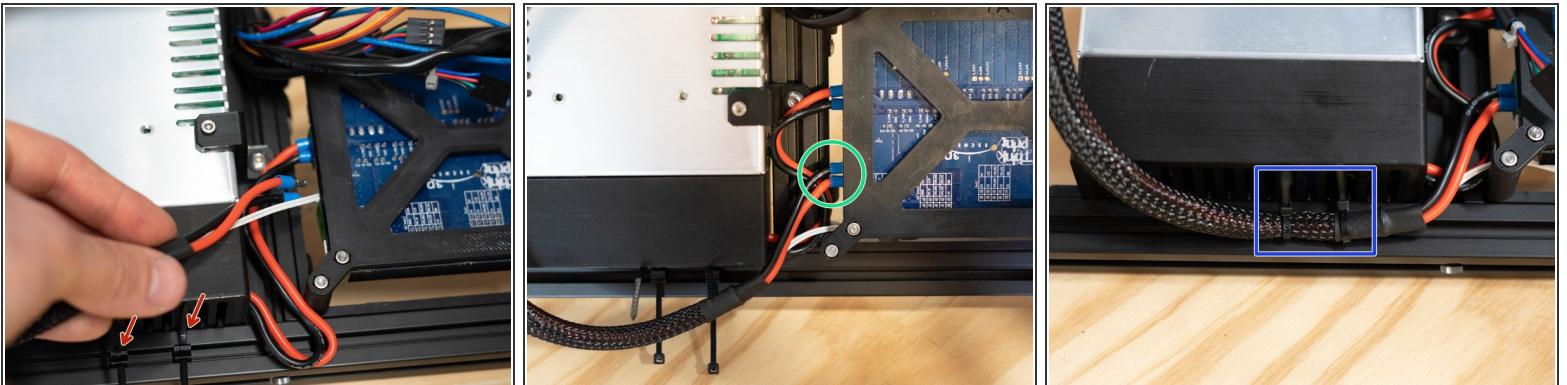
- Plug (brown label) wire into XY motor on side with power supply. Plug (grey label) wire into XY motor on control board side
- Snap Wire Clips on
- Prepare wires to be Zip-Tied
- Fasten sleeved cables and both XY motor cables with Zip-Tie

Step 13 — Strain Relief for Heated Bed Cable



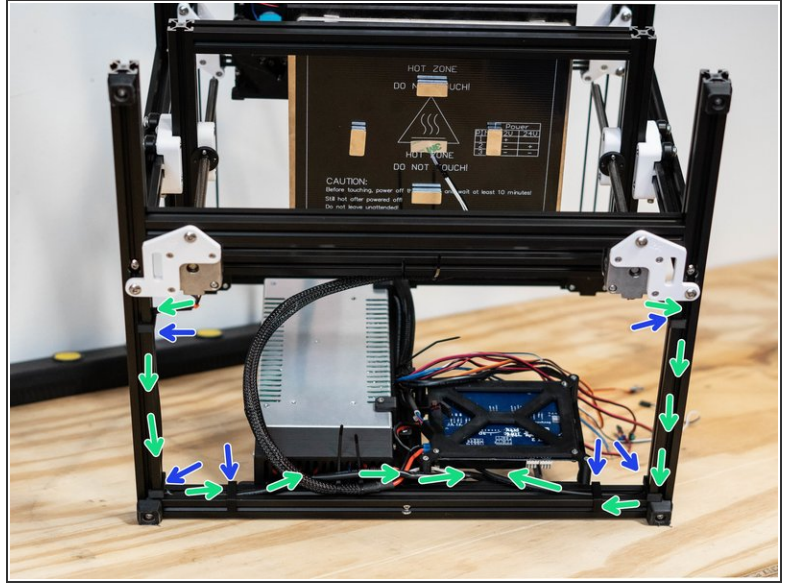
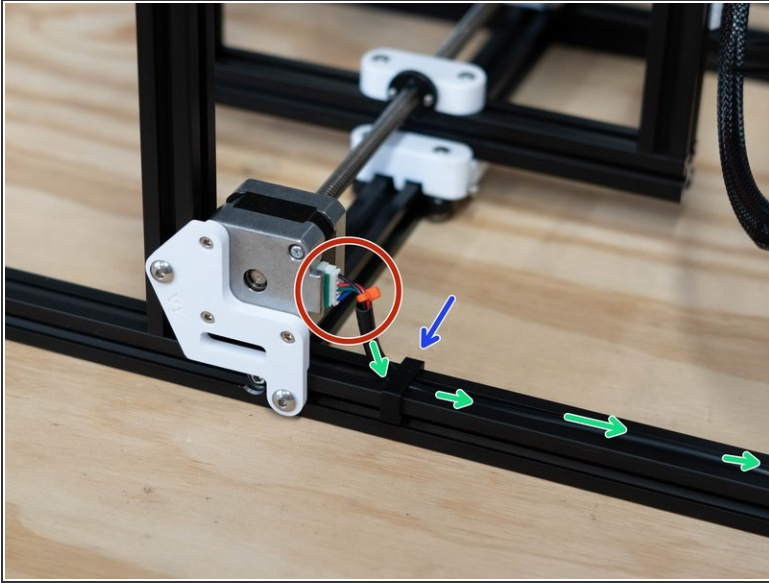
- Snap clips with zip-tie into slot
- Fasten Heated bed wire to bed frame with zip-tie
- Wired to bed frame

Step 14 — Plug in Bed Cables and Fasten Bed Cable to Frame



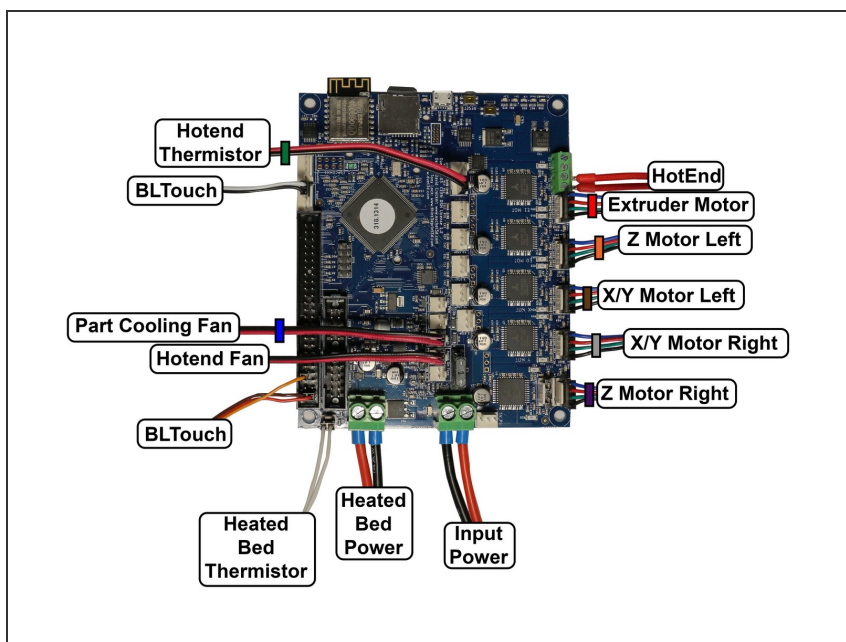
- Snap wire clip with zip-tie into slot
- Plug bed cables into board
- ⓘ Refer to wiring diagram on step 16
- Fasten bed cable with zip-ties

Step 15 — Wire Z Motors



- Plug (orange label) extension into left Z motor. Plug (purple label) extension into Right Z motor
- Z Motors wire paths
- Wire Clips

Step 16 — Plug It In



- At this point all wires have been wired up until the board. Its time to plug it all in!

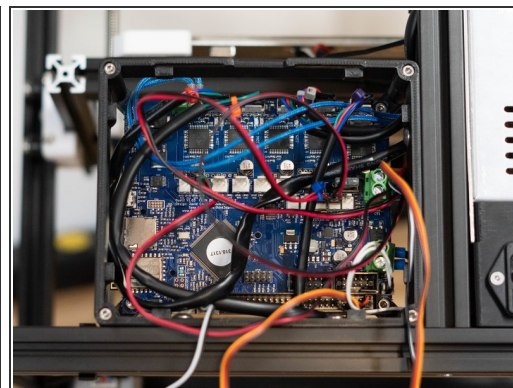
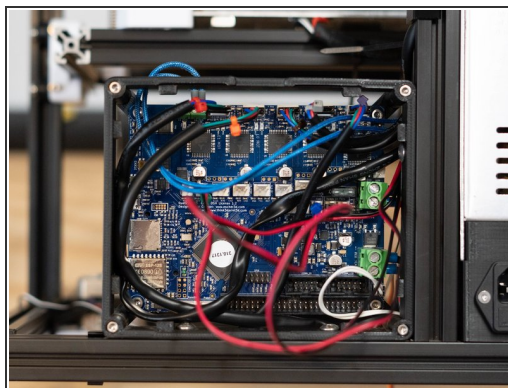
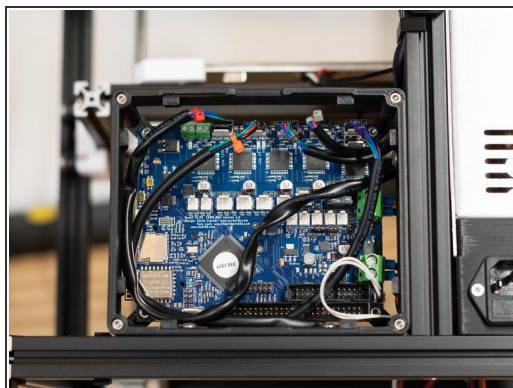
⚠ It's possible most wires can be plugged in backwards. Pay close attention to polarity

⚠ Incorrect input power or heated bed polarity can ruin board. Red - positive Black-negative

i BLTouch wires are plugged into the 1st row and 4th with two open pins between

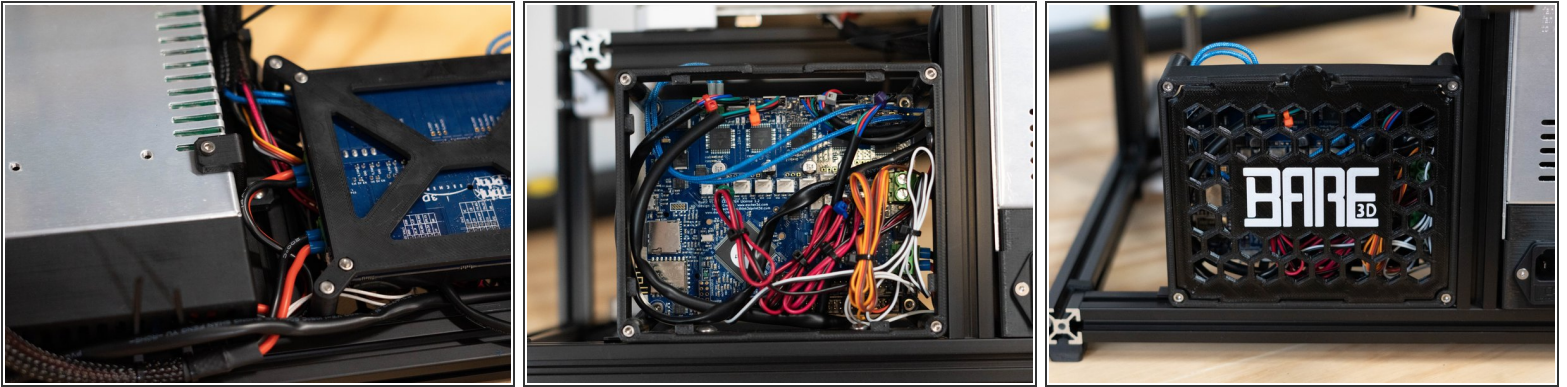
⚠ Rotate board diagram


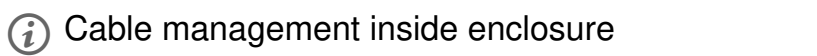

Step 17 — Example of how I wire



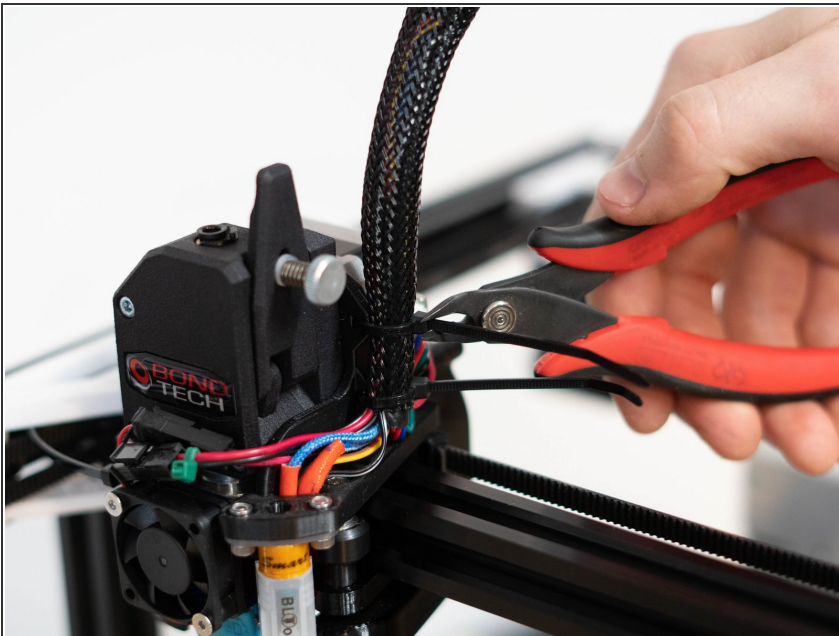
- i** I like to start with the motor wires
- i** Followed by the fans thermistor and heater cartridge
- i** And last the BLTouch


Step 18 — Example of wired board



-  Back view of wires feeding into Duetwifi enclosure
-  Cable management inside enclosure
-  Finished wiring with cover snapped into place

Step 19 — Trim Zip-Tie Tails



 Be careful of cutting wires accidentally