Makertech

Stage 01: Driver and Motor Cable

Written By: Makertech

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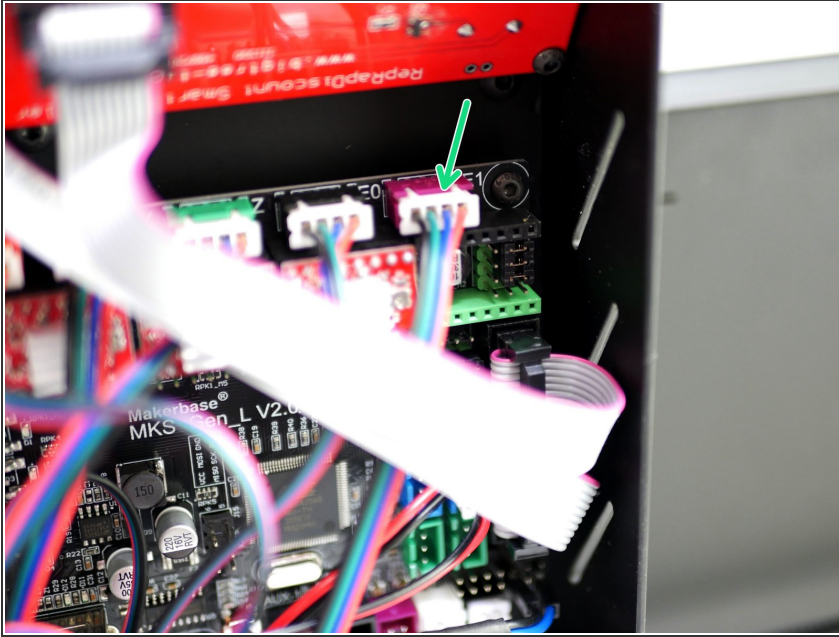
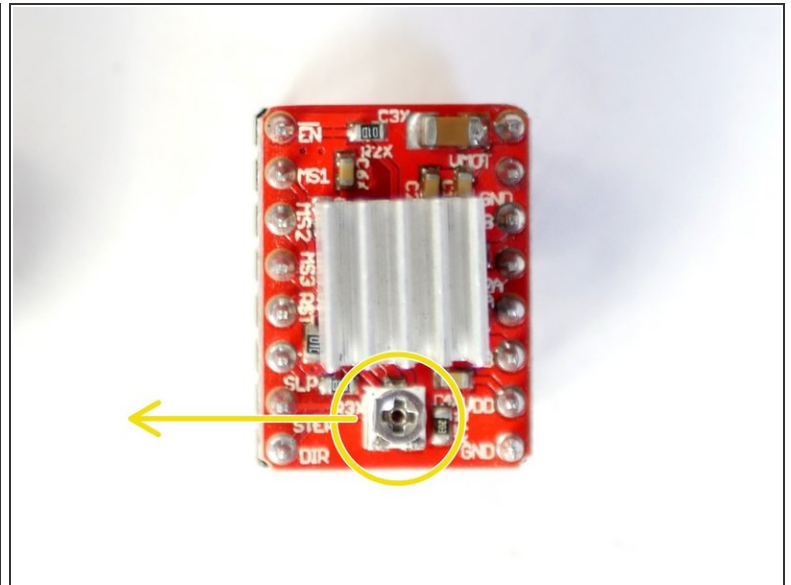© 2022

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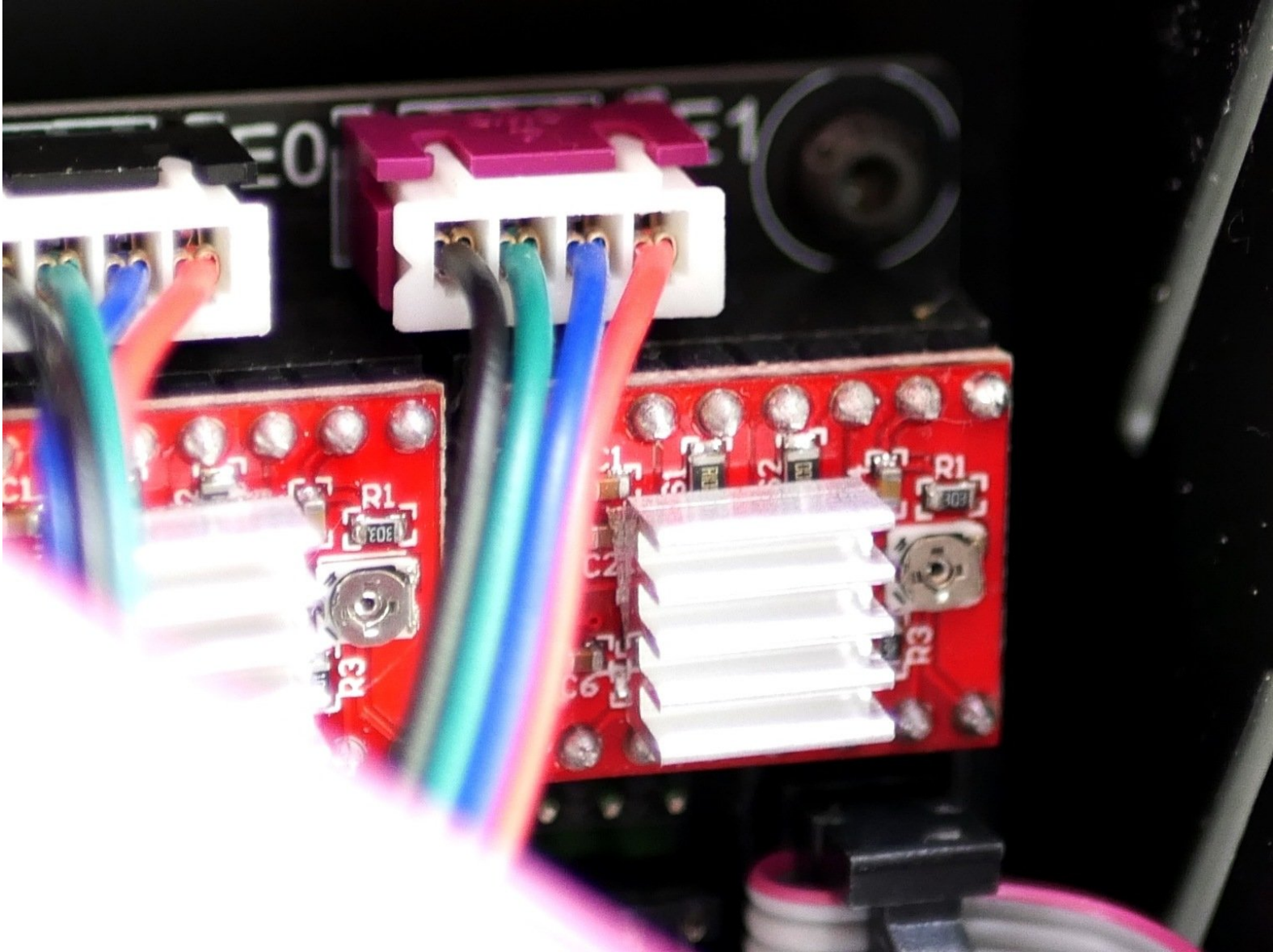
🔧 TOOLS:

- Small flat head screw driver (1)

Step 1 — Extruder Motor Cable

- Plug the second extruder cable into position on the control board.

- 📌 This cable came with the Axis printer and should already have been installed during the main build.

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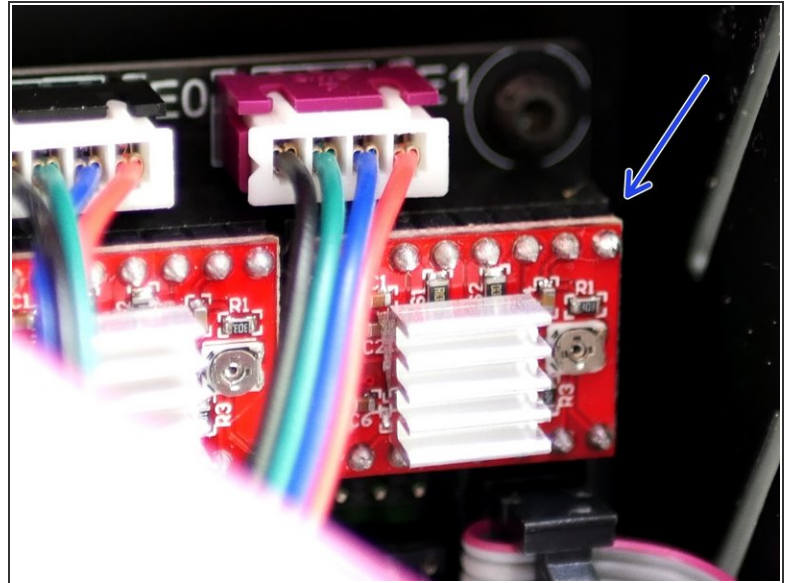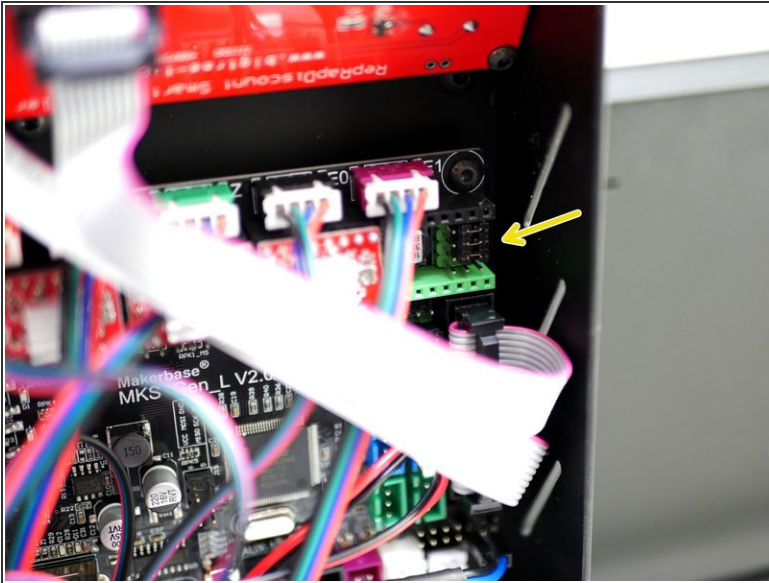
Step 2 — A4988 Driver

📌 If you have a TMC2208 Driver skip to step 4.

⚠️ The stepper drivers are the most delicate part of the Axis 3d printer and it is why we've also included a spare. Before opening, make sure that you are grounded (touch a large metal object) to avoid any chance of static damage.
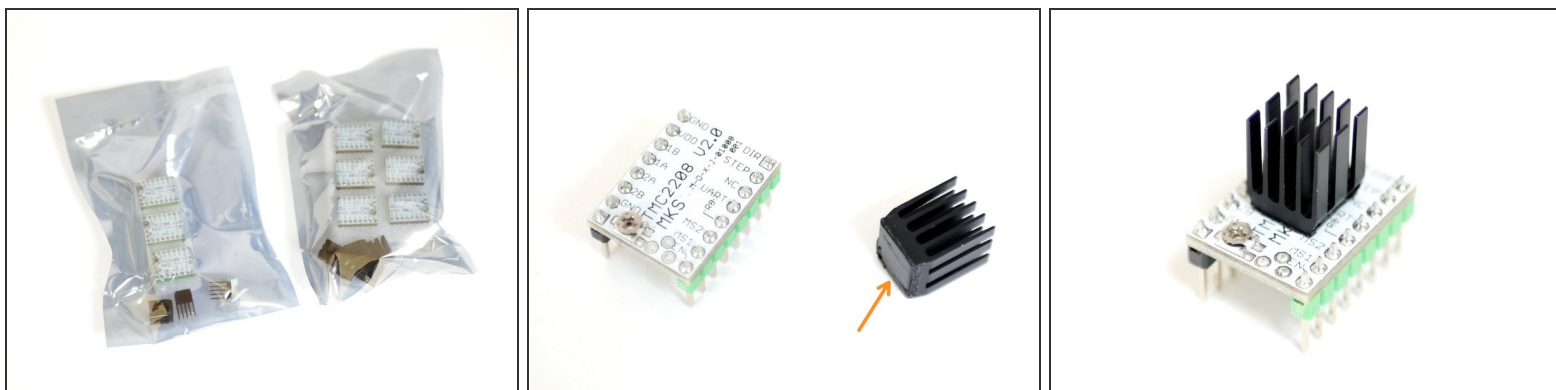
● Prepare the A4988 Stepper Driver by removing it from its packaging and sticking the heat-sink to the black chip.

　📌 Make sure that the heat-sink is not touching any of the pins. Orient the fins of the heat-sink as shown.

● Adjust the trimpot so that flat side is pointing left as shown in the second photo.

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Step 3 — Installing the A4988 Driver

- Check also that you have three jumpers installed like shown.

- Install the stepper driver onto the control board in the position shown.

⚠ Make sure that the driver is orientated with its trim-pot pointing away from the power terminals. Plugging it in the wrong way round will destroy it.

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Step 4 — TMC2208 Driver

⚠ The stepper drivers are the most delicate part of the Axis 3d printer and it is why we've also included a spare. Before opening, make sure that you are grounded (touch a large metal object) to avoid any chance of static damage.

ⓘ The TMC2208 upgrade comes with either 3 or 6 drivers. If you have three you can use two on the x/y axes and keep one as spare, if you have 6 you can use them on the X/Y/Z/E1 (and E2 for dual extrusion) and have one spare.

● Prepare the TMC2208 stepper drivers by removing them from their packaging and sticking the heat-sink to the top.

📌 Make sure that the heat-sink is not touching any of the pins. Orient the fins of the heat-sink as shown.

Step 5 — Installing the TMC2208 Drivers
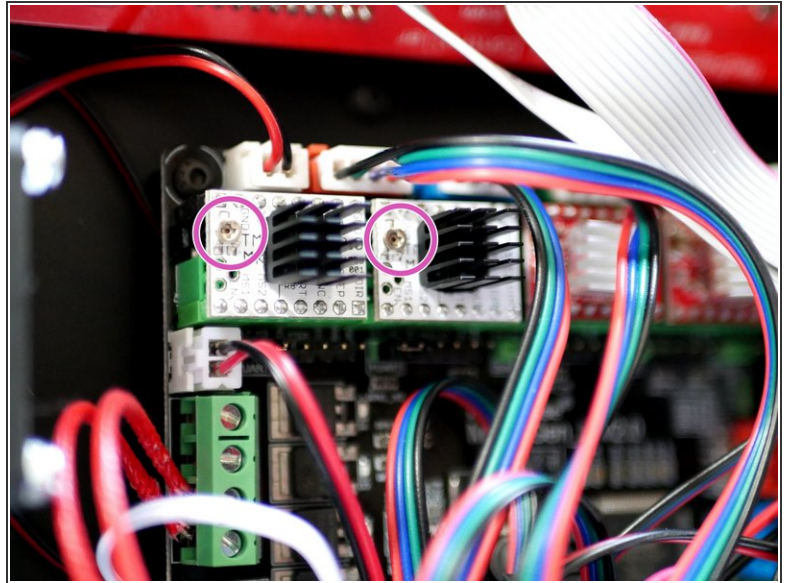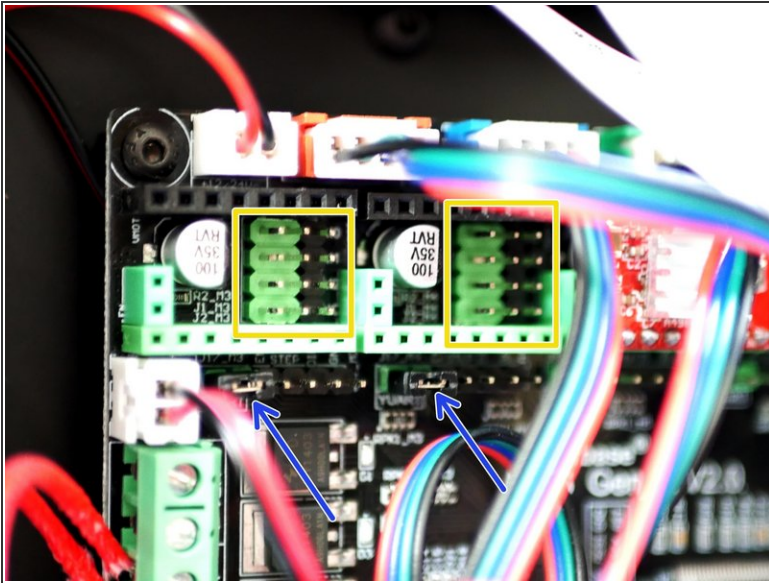
- 📌 The photos shown these drivers being installed on the X/Y axes, the process for installing on the E2 position is identical.

- 🟡 To install the TMC2208 drivers you will need to make sure that there are no jumpers plugged in at the stepper driver locations on the control board.

- 🔵 You will however need to make sure that there is one jumper placed on the UART pins for each axis you have a TMC2208 installed.

- 🟣 Plug the TMC2208 driver into the positions shown, make sure that the trim-pot is pointing towards the power terminals, installing the driver the wrong way round will destroy it.

- 📌 Note, the trim-pot doesn't need adjusting as these drivers allow us to control the current via the firmware.

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