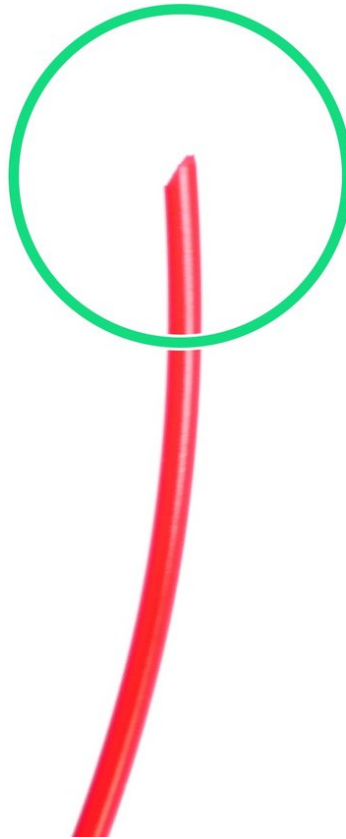


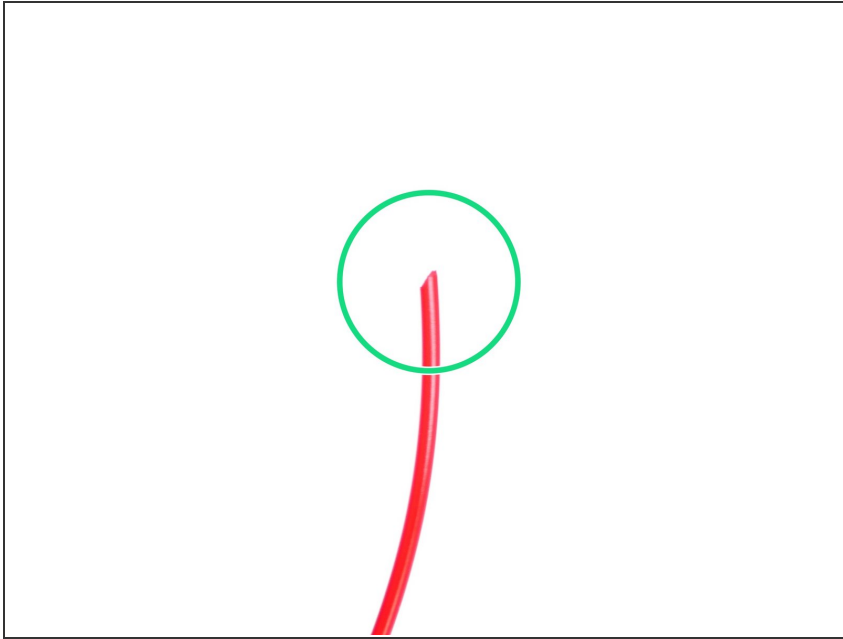
Makertech

DSE Only - Stage 10: Loading the Filament

Written By: Makertech

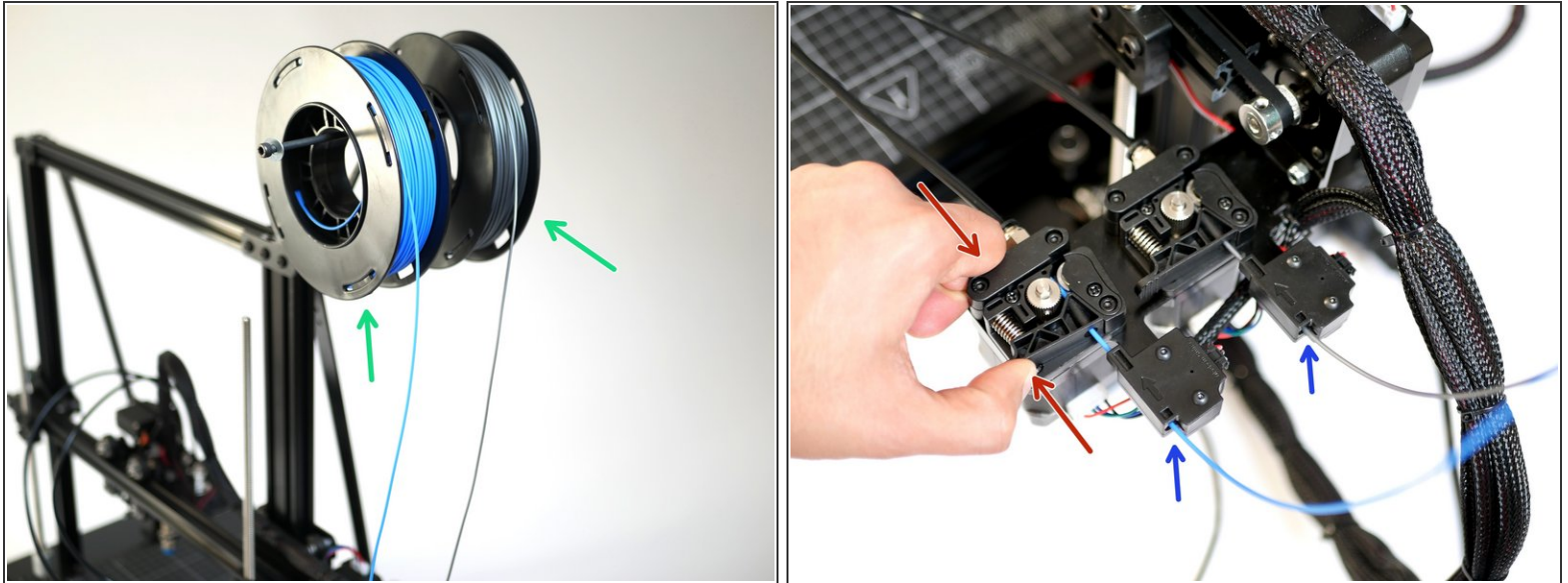


Step 1 — Preparing Filament



- Use side cutters or scissors to cut the filament at a sharp angle.
- ⓘ The Hotends both take only 1.75mm diameter filament.
- ⓘ We recommend using PLA for the first print/calibration.


Step 2 — Filament Loading




- Place a spool of filament onto both of the spool holders.
 - ☑ It goes without saying, but it's recommended to use two different colours.
- Feed the filament from the spools into the extruder's.
- Push down on the extruder arm with one hand and feed the filament through with the other until you get all the way to the bottom of the Hotend.

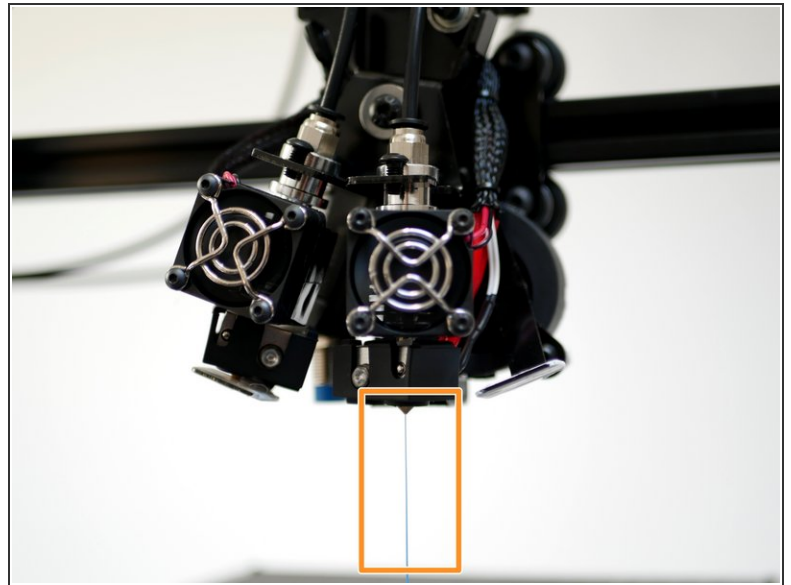
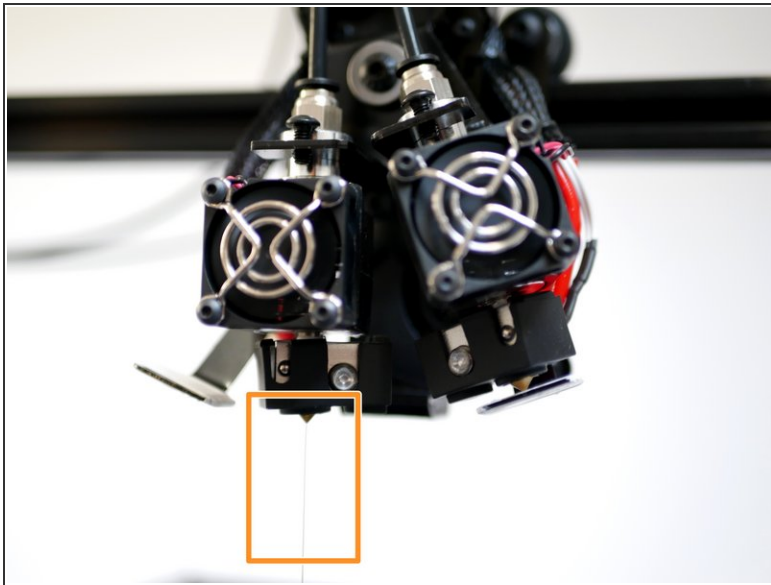
Step 3 — Heating Hotends



 Before powering up either Hotend make sure that the black PTFE tubing is pushed all the way down the Hotend, it should go into the Hotend by 6CM. Double check, as running filament through the Hotend with the PTFE tube not all the way down will ruin the Hotend.

 Heat up both Hotends to 200 Degrees C.

Step 4 — Filament Extrusion



i Begin extruding filament.

- You should have a smooth and continuous flow of plastic coming out of both Hotend nozzles.

! The extruded plastic will be hot!

↻ **NOTE:** When powering down from a hot Hotend, power the hotend down first and let it cool to at least 100C before completely powering off - as this prevents the heat from rising up the hotend with the absence of the fan cooling it.

↻ If you are not getting any filament extruded check the extruder motor is turning in the correct direction (anti-clockwise) to feed the filament. See next step if your extruder is turning in the wrong direction.

Step 5 — Invert Extruder Motor Direction



- If an extruder from the previous step moves in the wrong direction power off your printer and disconnect the touchscreen.
- In the arduino IDE go to the "configuration.h" tab.
- Scroll down to line 863. (Go to File -> Preferences and check "Display line numbers")
 - `#define INVERT_E0_DIR false`
 - Replace *false* with *true* to change the motors direction. E0 is Hotend #1 and E1 is Hotend #2.
- Re-upload the firmware.
- Once uploaded, connect back the touch screen and power up the printer from the mains again.
- Continue from previous step.