Getting Started Guide - Dual Extrusion

Once you've successfully followed the single extrusion getting started guide, click here if you have a dual extruder to get started printing in 2 colors!

Written By: Printrbot Support

🔧 TOOLS:

- Ruler (1)
- Calipers (1)

Step 1 — Complete the Regular Getting started guide!


- If you have not yet completed the Getting Started guide, head over here: Getting Started with Cura on Your Printrbot Plus

- Even if you have upgraded your Plus with a Dual Extruder Kit be sure and follow the link above.

- 📌 *If you have not already done so, **click here** for instructions on flashing your Printrboard to ensure that you have the most current firmware.*

Step 2 — Installing Dual Extrusion Configuration
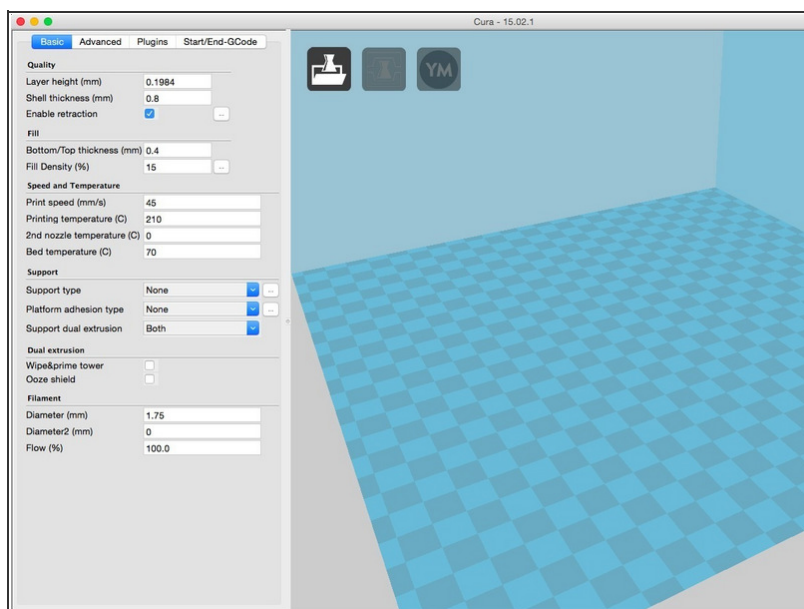
- Download: Dual Extrusion Getting Started.zip

- Unzip this folder and put it somewhere.

- Connect your Dual Head Metal Plus to Power and USB

- Open Cura!

Step 3 — Installing the Configuration File
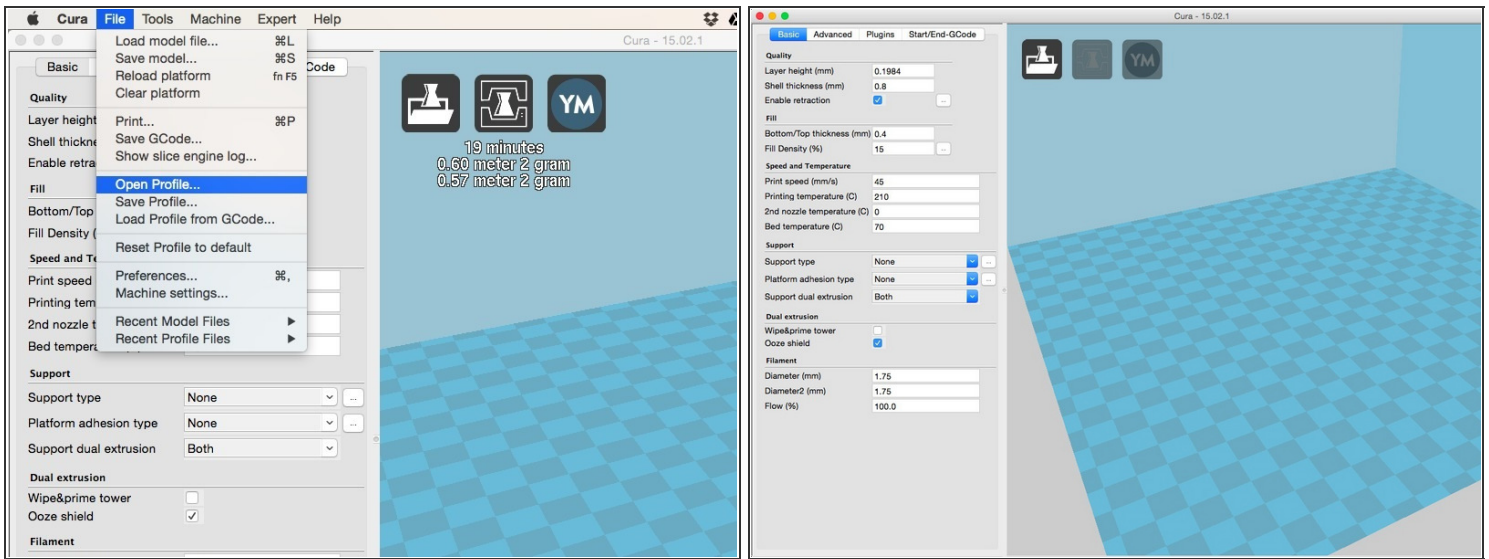
- In Cura, under File > Open Profile… navigate to the folder we just downloaded and open Getting Started Dual Extruder.ini.

Step 4 — Roughing the Extruder Offset
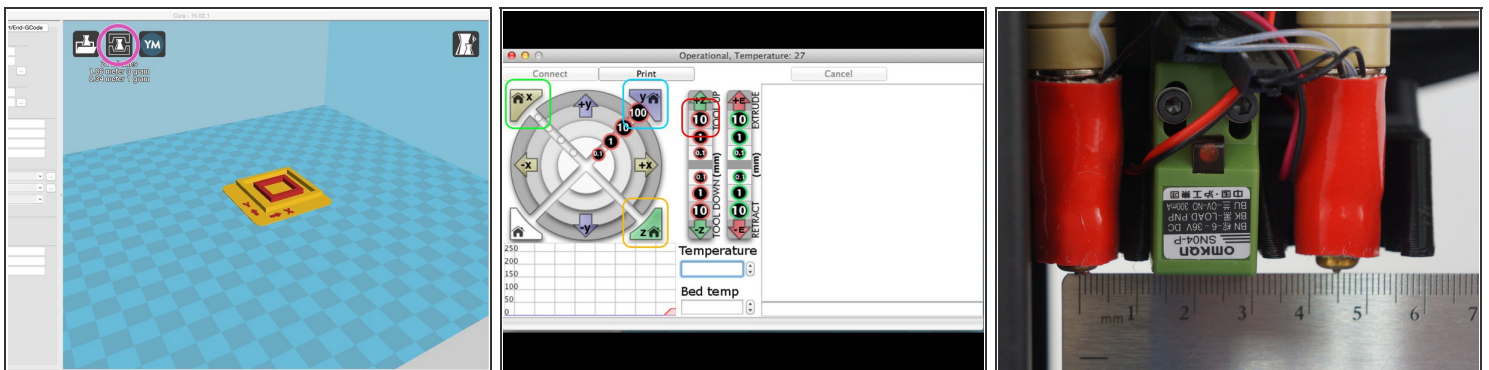
- Locate XY Calibration.amf in the folder.

- Drag and drop it onto the printbed in Cura.

- Click Print to USB (pink), Home X (green) and Y (Blue) and raise the Z-Axis up 30mm (click the button in red 3x).

- Now grab a metric ruler and measure the distance between the two tips of the hotends.

- Write down this number (it should be approximately 45.00mm).
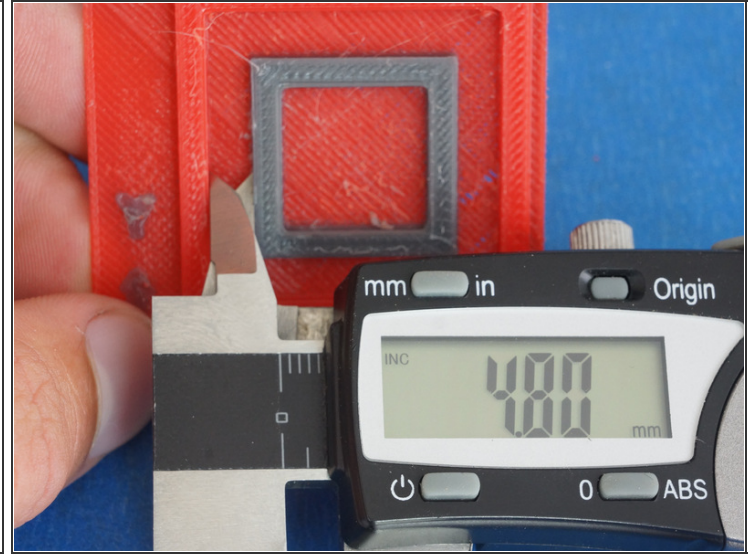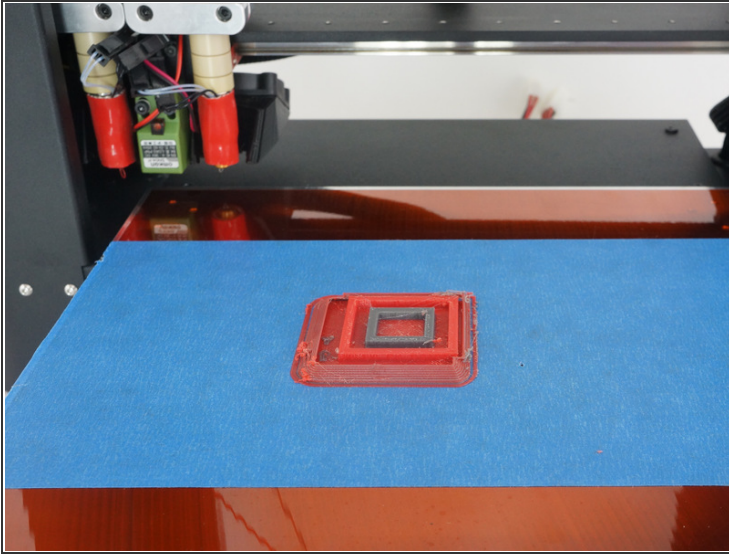
Step 5 — Roughing the Extruder Offset Pt. 2
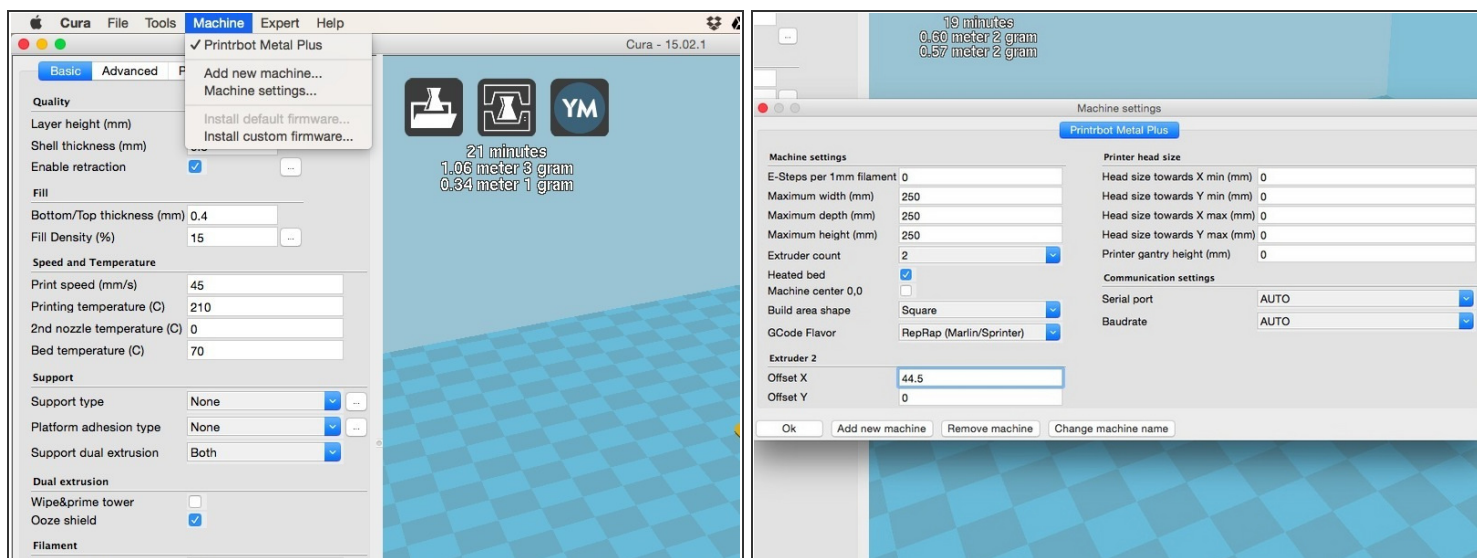
- In Cura go to Machine > Machine Settings…

- Under Extruder 2 change the X-Offset to the number we wrote down in the previous step. Click Ok.

Step 6 — Testing the Offset
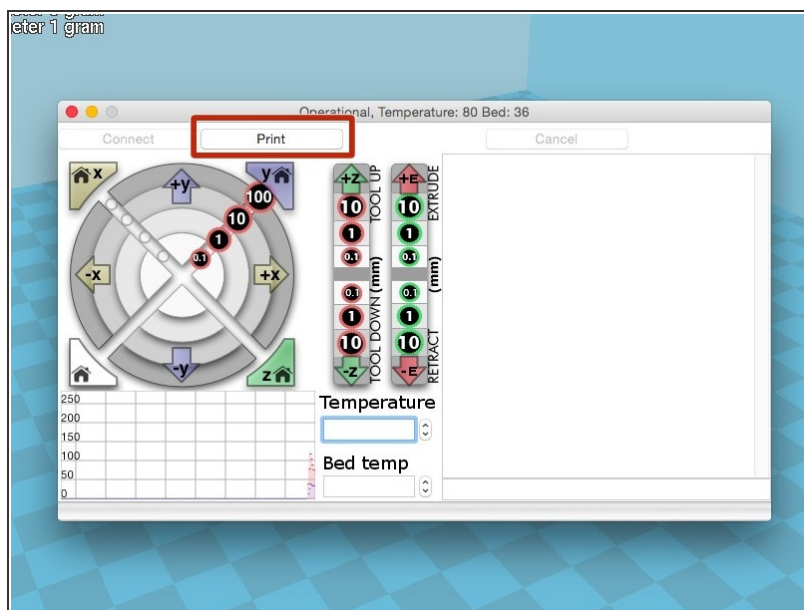
- Click Print to USB, then load two distinctly colored filaments into both extruders and hit Print (red).

Step 7 — Evaluating Offset

- Do not panic if this print looks horrific. Remember we are still dialing in the calibration.

- Peel away the excess material from the print, this is the printer forming a shield, meaning it is not part of the actual print. This is formed by the printer to protect the part from ooze that may form on the tip of the extruder not in use.

- Using calipers measure the distance between the inner Square and outer Square on the Left in the X direction (see picture).

- *[(5mm) - (Your Measurement)] + (Current X Offset) = New X Offset*

- (i) For example: If your measurement is 4.8mm and your current offset is 44.5mm. Your new offset will be 44.7mm.
  - (5mm - 4.8mm) + 44.5mm = 44.7mm

Step 8 — Setting New Offset
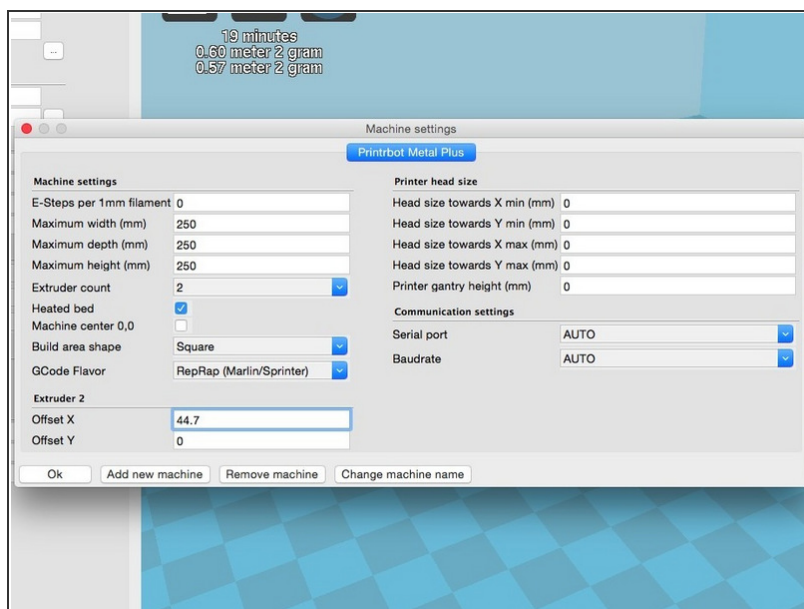
- Now we will go back to Machine > Machine Settings… > Extruder 2 and change the X-Offset to the New X Offset. Click ok.

- Now Print the part again, and repeat steps 7&8 until the distance between the inner square and outer square is 5mm then continue to step 9.

Step 9 — Verifying Calibration
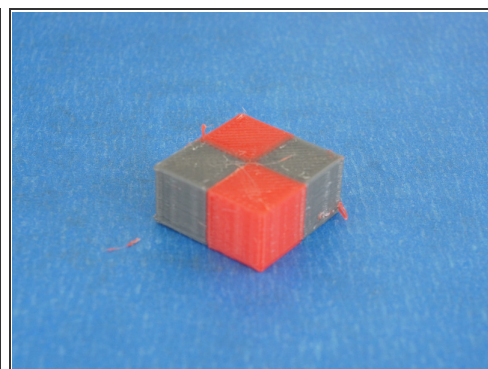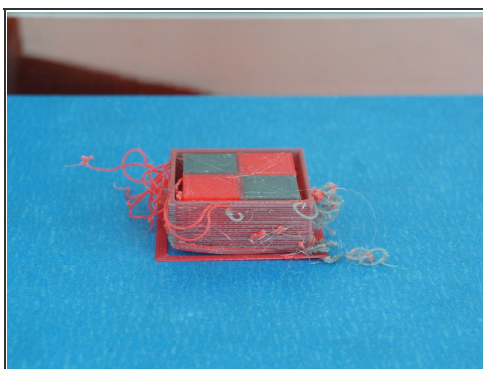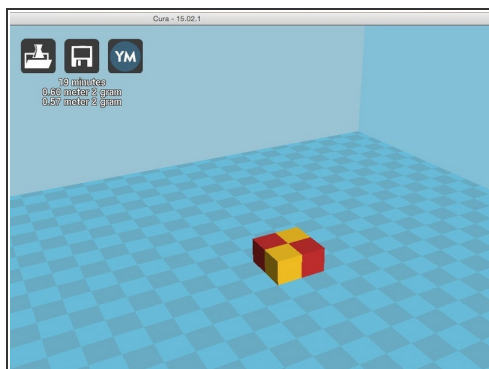
- Locate Dual Calibration Test.amf

- Drag and drop this onto the print bed in Cura.

- Click Print to USB and hit Print.

- Once the print finishes, check to see that all of the walls are flat. If not got back to Step 7.

Step 10 — Finished!

- Congratulations! Your done! Now go print some cool stuff!

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