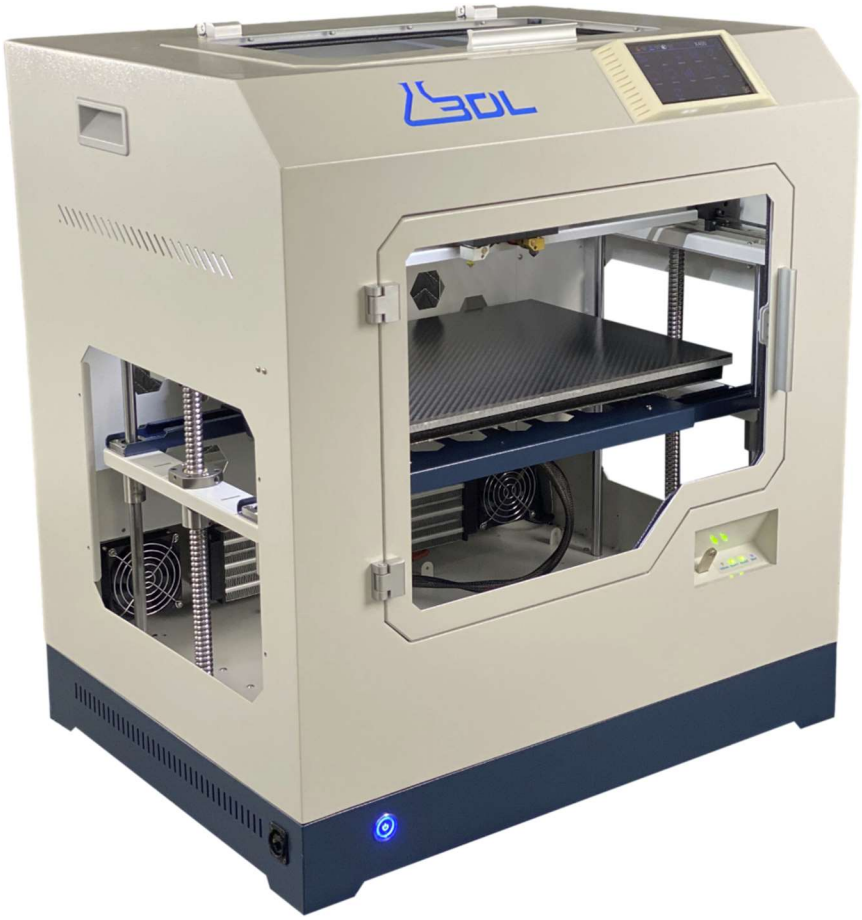
X400 QUICK START REFERENCE GUIDE

READ THIS DOCUMENT BEFORE USING YOUR 3D PRINTER



Rev. 1.05 – 6/1/2021

CONTENTS

INTRODUCTION AND HOW TO GET HELP

We'd like to thank you for purchasing the 3D Labs X400 High Temperature 3D printer. Proudly assembled and calibrated in the US, in Jacksonville Florida. The X400 is a rugged, industrial grade machine that will provide years of service and repeatability.

This guide has been assembled to help you quickly get setup and to complete your first successful print. Please reference our website at https://www.3dlabs.io/support for more complete manuals and documentation. A full manual and support videos are available there.

Your 3D Labs X400 is a machine tool. As with operating any machine tool, there is a learning curve. 3D Labs has implemented multiple features to make the machine easier to learn and use. With the proper time invested, you will learn how to properly operate your 3D printer to it's max potential and it will give you the best results.

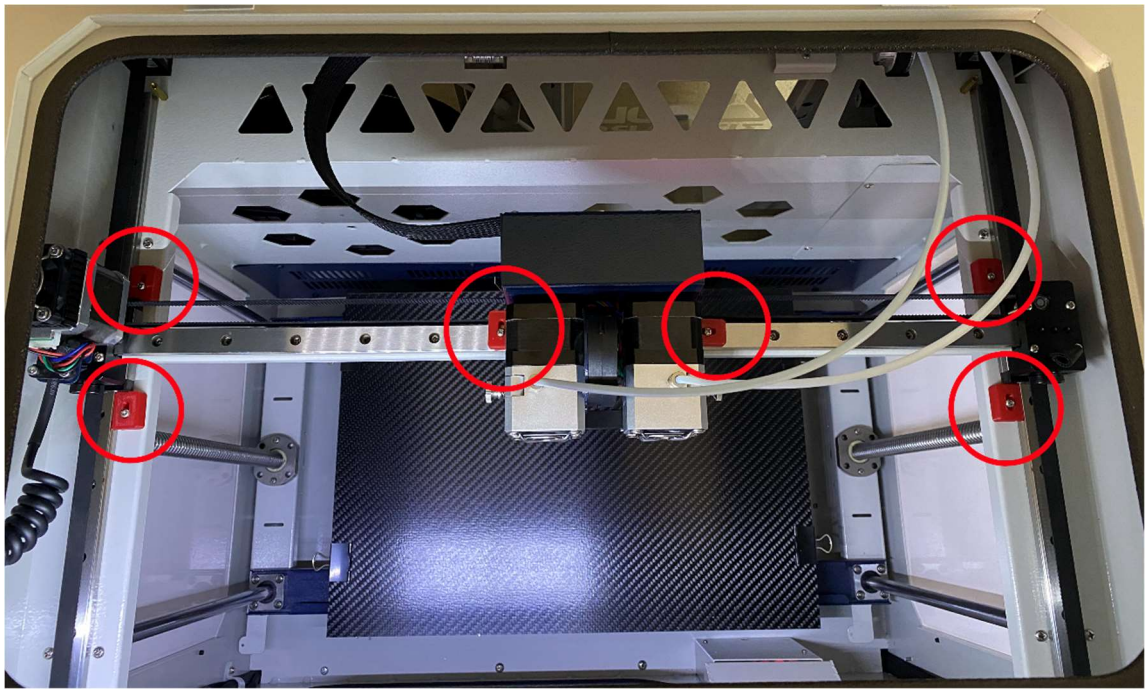
3D Labs support is here to help you flatten the learning curve. 3D Labs support can be reached by phone at (904) 201-9593, by email at support@3dlabs.io, or via support ticket at https://www.3dlabs.io/support should you have any questions.

WHAT'S INCLUDED IN YOUR KIT

1. 3D LABS X400 3D PRINTER
2. QUICK START REFERENCE GUIDE
3. TOOL BAG CONTAINING
    a. 3x Hex (allen) wrenches, 3 x wrenches
    b. Spare screws and nuts bag
    c. Spare heater cartridge and thermistor
    d. Spare low temp hotend
    e. Spare high temp hotend w/brass nozzle
    f. Spare endstop, filament runout sensor
    g. 2 x spare brass nozzles
    h. Spare spring, knurled nut, and screw for tension assembly
    i. Spare low temp fan shroud
    j. Spare BLTouch bed sensor
    k. Spare fuse
    l. Spare stepper driver
    m. USB thumb drive
    n. Tweezers, Pin for clearing nozzle clogs
    o. Phillips head screwdriver
    p. Purple glue stick
    q. Spare blower fan, Masking tape
4. 2 x 1KG rolls of ABS (or ASA)
5. High temp carbon fiber print surface
6. 12 gauge 20 amp power cable

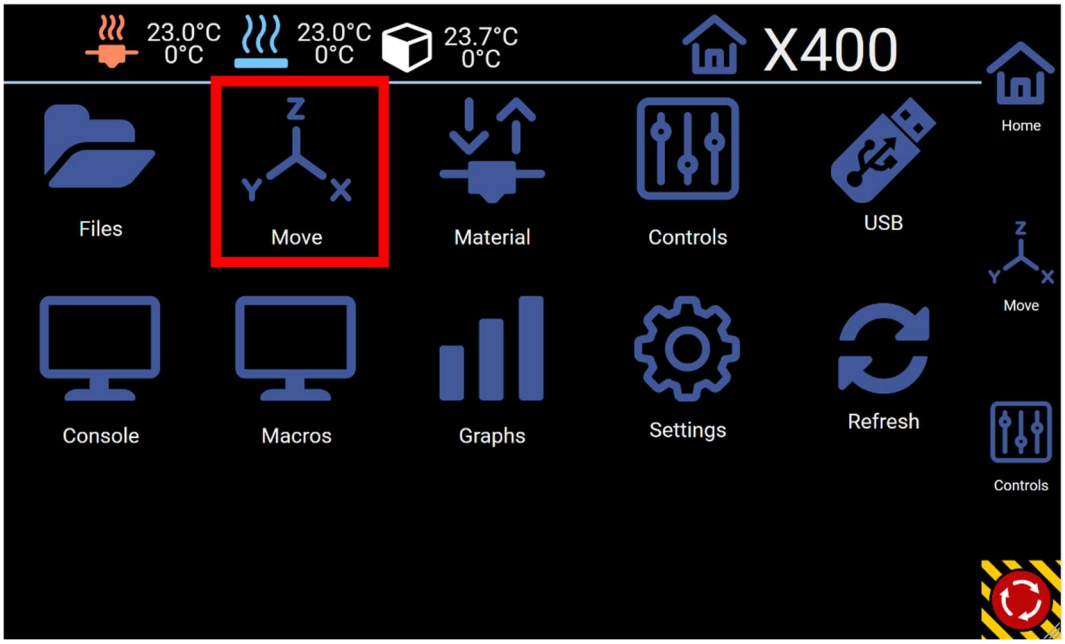
UNPACKING THE PRINTER CONTENTS

1. **Remove the RED gantry guard blocks with a Philips head screwdriver before doing anything else. Failure to do so could damage the printer. These are installed to prevent movement of the gantry during shipping.**

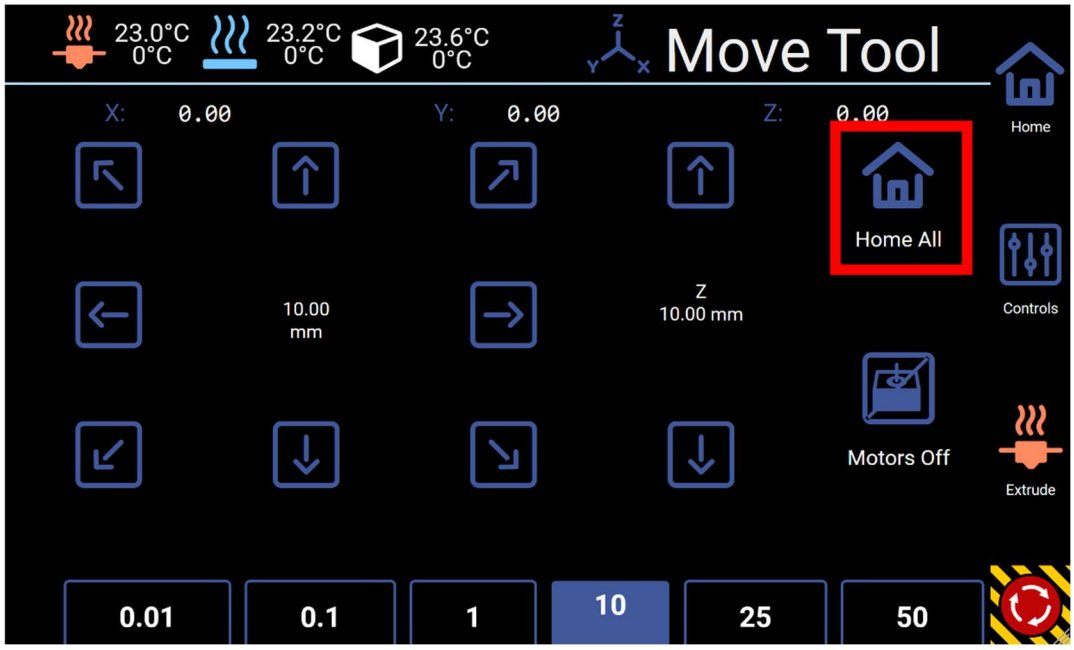


2. Plug in the printer using the supplied power cord. (Usually located on top of the print bed, zip tied to the back panel).
3. Turn on the printer.

4. Press the “**MOVE**” icon on the home screen.



5. Press the “**HOME ALL**” button. This will cause the system to home, and raise the bed so the contents underneath can be removed.



6. Remove the filament, foam, and tool bag from the printer.

MAKE SURE TO KEEP ALL OF THE PACKAGING FOR 30 DAYS IN CASE THE MACHINE NEEDS TO BE SENT BACK FOR REPAIR.

MOVING THE PRINTER

- Make sure to place the printer on a very sturdy table or work surface to minimize vibrations during printing.
- The rear of the printer must be accessible to load and unload filament, and for safety reasons. We recommend at least 1 foot behind the printer from any wall.
- Work surface must be a minimum of 23” x 25”.
- The X400 is a heavy machine, so the work surface should be strong enough to accommodate 150lbs at least.
- 2 people are required to lift the X400. Do not attempt to move it by yourself!
- Any bumps or shocks could throw off the leveling of the bed, gantry, or other parts in the machine, so lift and set it down carefully.

SETTING UP THE PRINTER

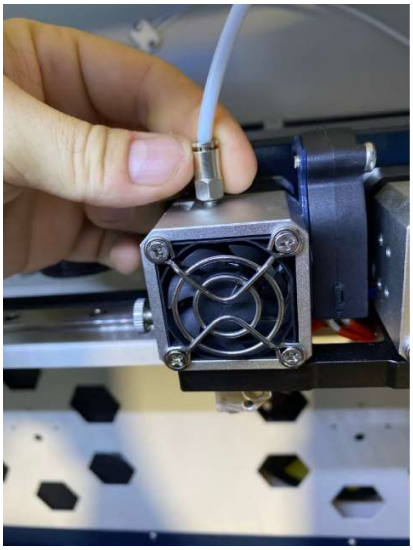
1. Remove the plastic protection film from the side, top, and front door panels.

2. Remove plastic from the touch screen.

3. Connect the ethernet cable to a network port if you want to use the advanced web interface (Highly recommended). If you don't have an ethernet plug, and require wifi, you can purchase a wifi adapter from 3D Labs to connect it to your wireless network. Wifi is not supplied by default due to ITAR, and security requirements of most businesses.
4. To obtain the IP address of the machine click **Settings**, then click **Network** on the touch screen interface.
5. Type the IP address into your web browser and press enter.
6. The default login information is: **Username**: **admin Password**: **3dlabs**
7. Please change the password after logging in via the web interface.

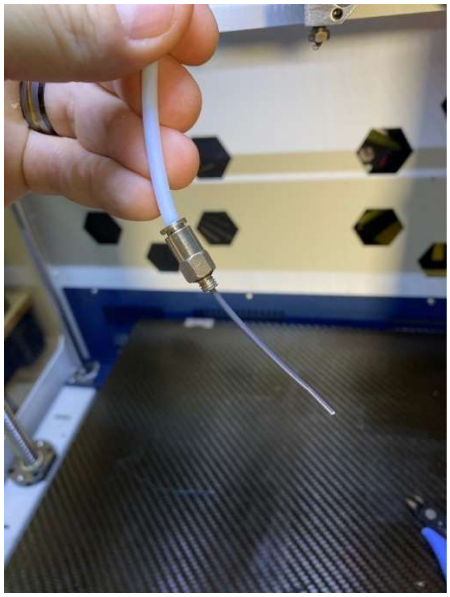
LOADING MATERIAL

1) Unscrew the ptfe tube coupling on top of the extruder head you intend to use.



2) Unscrew the tension nut so that the spring is fairly loose. **Do not loosen it so much that the nut comes off of the screw**.

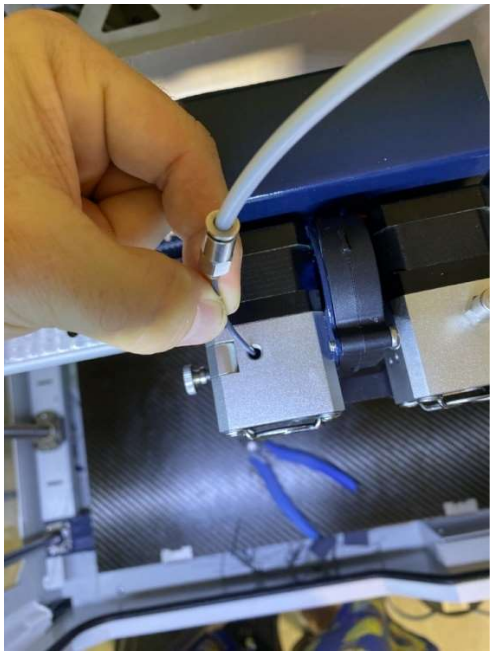
3) Open the rear door of the printer and feed the material through the tube until about 2” of filament comes out of the other end inside the printer.



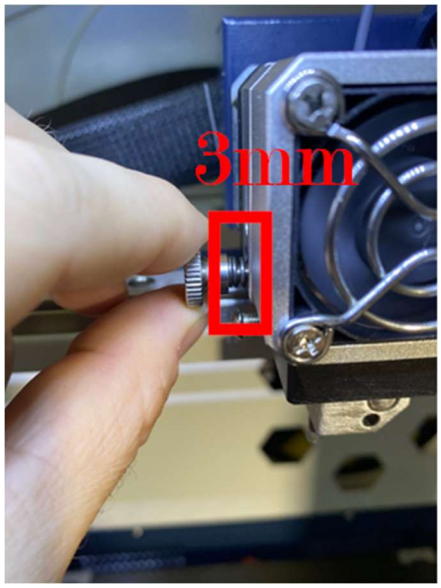
4) Carefully hang the spool onto the mount and close the door.

5) Cut the tip of the filament at a 45-degree angle with flush cutters and insert it into the hole on top of the extruder head where you removed the coupling.

6) Press down firmly on the filament and insert it about 1” (you may have to press it in a couple of times) into the hole.

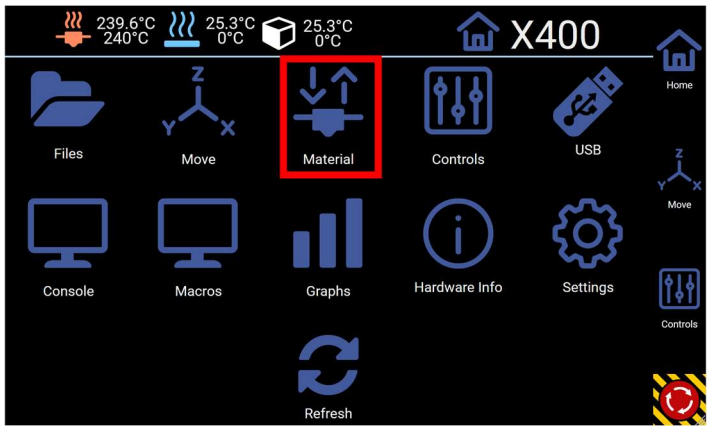


7) Retighten the tension screw on the left a fair amount so that the spring is semi tight. **It does not have to be super tight**. Typically, an 1/8-inch (3mm) gap is a good place. Tug on the filament lightly and you should feel some resistance. This is normal, it means that the extruder is gripping the filament, which is what we want.



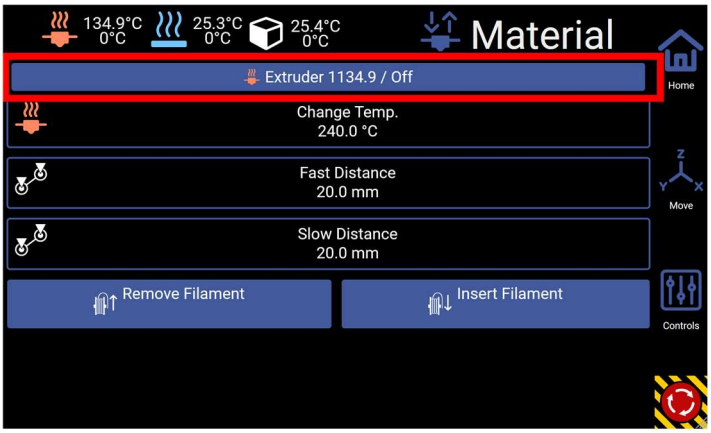
8)

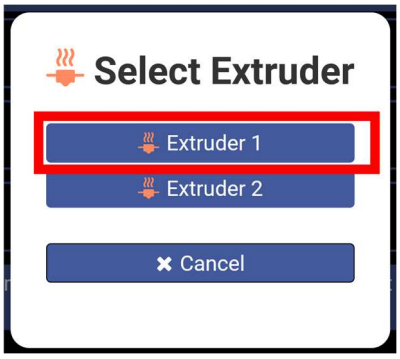
Press the “Material” button on the touch screen interface.



9)

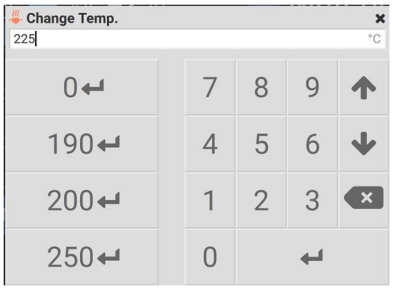
Click the Extruder button and select the extruder to load filament into. In our case we’ll be loading ABS or ASA that came with the printer, so choose “Extruder 1” or “Left”. (Note: this button may be called “**Material**” on some models)





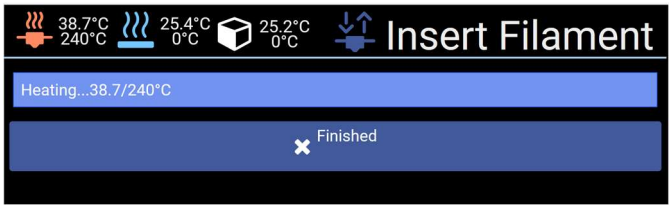
10)

Set the temperature to 225C to use the ABS or ASA that you received with the printer.



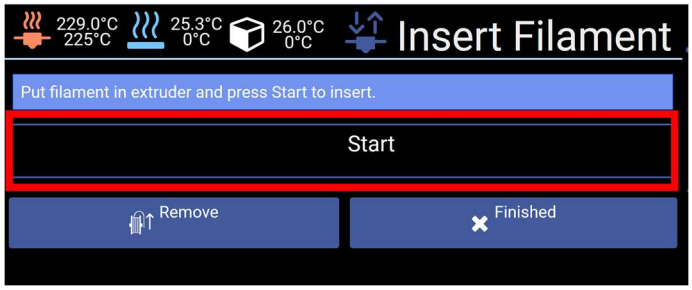
11)

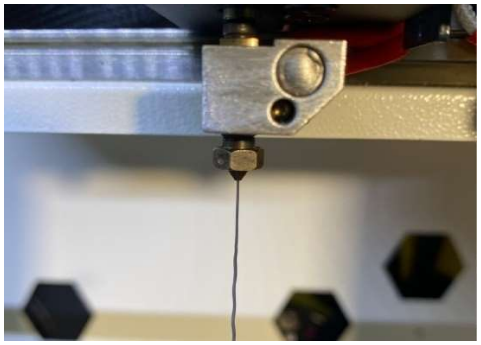
Click the “Insert filament” button and wait for the nozzle to heat up.



12)

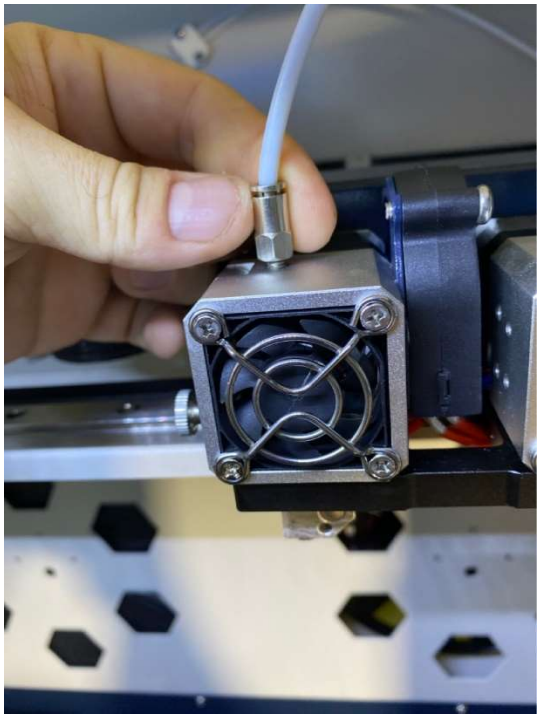
Once heated, the “START” button will light up. Press it and the filament will begin loading.





13) Once you see the filament come out, that means the material has been successfully loaded.
   a) If you don’t see any filament come out, press the “Extrude” button twice.
   b) If you still don’t see any coming out, try tightening the tension adjuster a little bit tighter, and it should begin feeding.

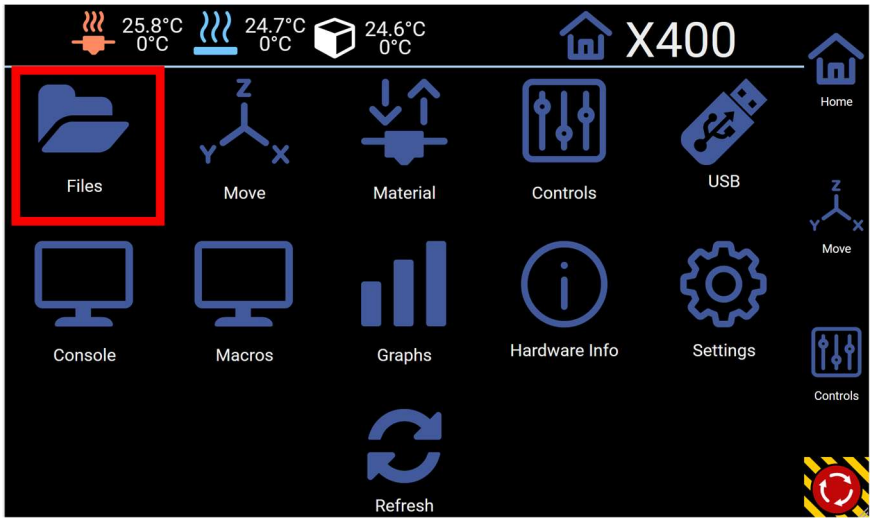
14) Click the **FINISHED** button. **Now firmly screw down the coupling on top of the extruder to secure it into place. Failure to do so could result in uneven extrusion during the print.**



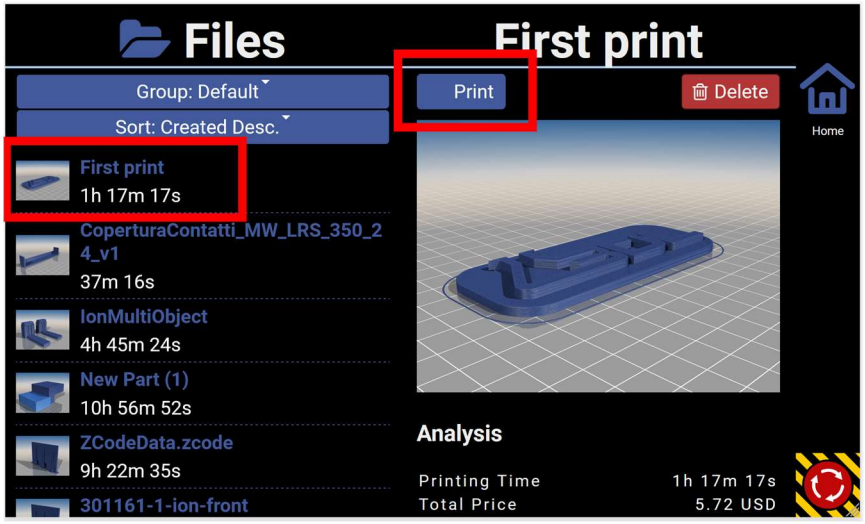
STARTING YOUR FIRST 3D PRINT

There are 2 included files you can print on the X400 by default. We recommend using the file called “first print”, as it prints within an hour. These files are sliced for ABS/ASA material, so do not attempt to print them with your own PLA material. Only use the material that came with the printer.

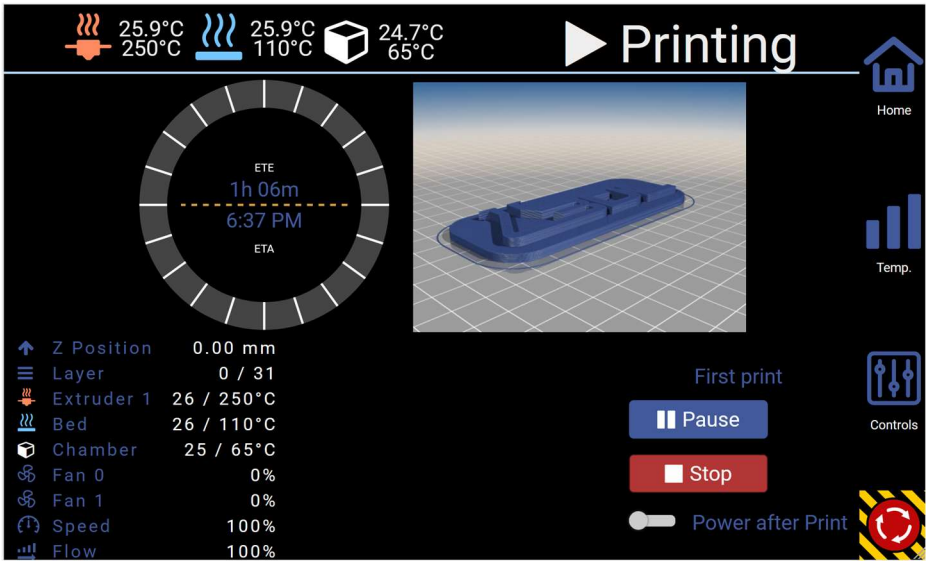
1) Use the purple glue stick to apply a cross hatch pattern to the center of the print bed. Try to evenly cover an area of about 6” x 6”.
2) 1-2 layers of glue is all that is needed. Do not apply more.
3) Click the “Files” button



4) Select the “First Print” file and click **Print**



5) The printer will begin preheating, then proceed with the print

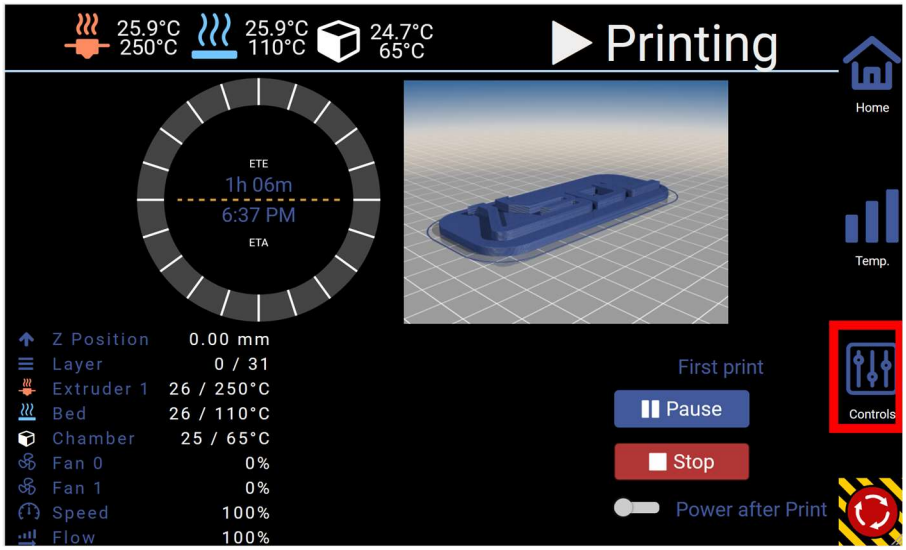


TROUBLESHOOTING

1) Your bed and nozzle gap have been calibrated from the factory. But if you see that the first layer of the print is smashing down, or not sticking to the bed, this may mean that the distance between the nozzle and bed is either too far away, or too close.

   You can adjust the distance of the nozzle from the bed in real time to get a perfect first layer.

2) Click "**Controls**" on the print screen



3) Click **Babystep** and use the up and down arrows to adjust the nozzle gap. **START WITH THE SMALLEST INCREMENTS AT FIRST. THERE MAY ALSO BE A DELAY IN THE ADJUSTMENT, SO BE PATIENT.**