3D PRINTING: CHANGE FILAMENT

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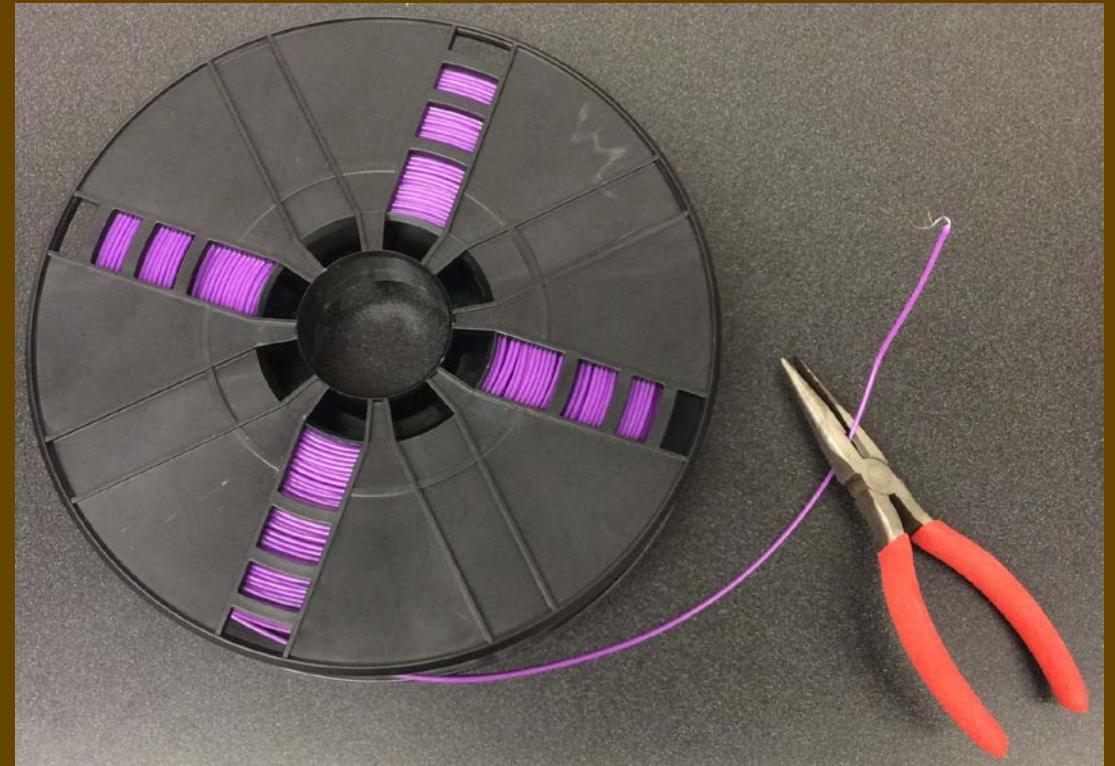## MAKERBOT REPLICATOR 5TH GENERATION

CHOOSE YOUR FILAMENT

- Ask FFPLTC Staff for the Makerspace keys
- The brass key opens the credenza under the MakerBot Replicator
- Choose a colour from the spools of PLA filament on the top shelf

PREPARE THE FILAMENT

- Remove the spool of PLA filament from the plastic bag
- Cut the filament low enough to remove the ridges left from the extruder
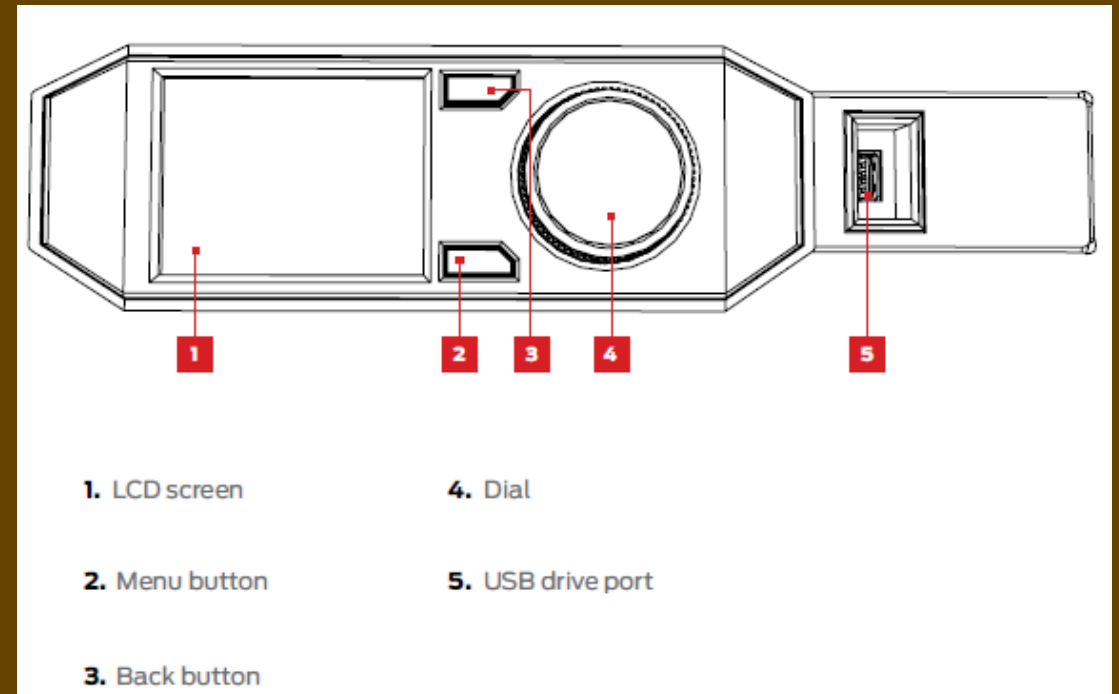- This provides a clean edge for the extruder to load

PREPARE THE 3D PRINTER

- Before filament can be changed, the 3D Printer needs to be prepped

- Using the two handles, slide the acrylic door to the side and place it on the floor in from of the printer

REPLICATOR CONTROLS

- The LCD Screen is controlled by the dial

- Turn the dial to scroll through available options

- Press the dial to make a selection

- Press the back button to go back, or cancel

- Press the menu button to view additional options

1. LCD screen   4. Dial

2. Menu button   5. USB drive port
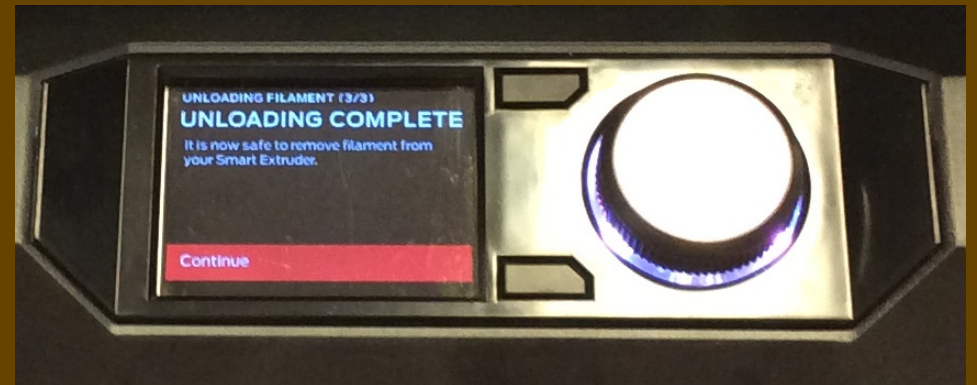
3. Back button

UNLOADING FILAMENT

UNLOADING FILAMENT

- Use the dial on the control panel to select "Filament"

- Select "Unload Filament" by pressing the dial again
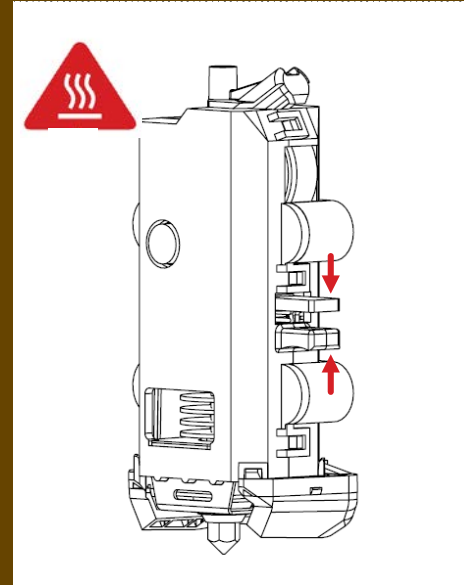
UNLOADING FILAMENT

- The extruder will heat in order to remove the filament that is in use

- The screen will display "UNLOADING COMPLETE" when the filament is ready to be removed

UNLOADING FILAMENT

- Pinch the tabs on the right-hand side of the extruder to release the filament

- Pull the filament upward, out of the extruder while pinching tabs

- Ensure you are pulling the coloured filament and not the white guide tube surrounding the filament

UNLOADING FILAMENT

- Hold onto the guide tube

- Turn the spool to wind back any extra filament

- Remove the spool from the blue spool holder

- You may have to push the bottom of the blue spool holder to the right for larger spools

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UNLOADING FILAMENT

- Insert the spool into a plastic spool bag
- Seal the bag and put it back onto the shelves
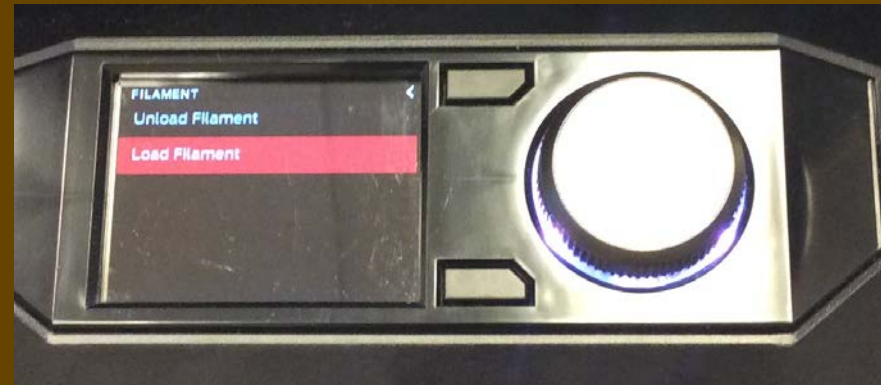
LOADING FILAMENT

LOADING FILAMENT

- Hold the filament spool so the top of the spool unwinds away from you

- Place the spool onto the blue spool holder

- Push filament through the guide hole of blue spool holder until the free end emerges

- Continue to push the filament through the clear plastic guide tube until the free end emerges
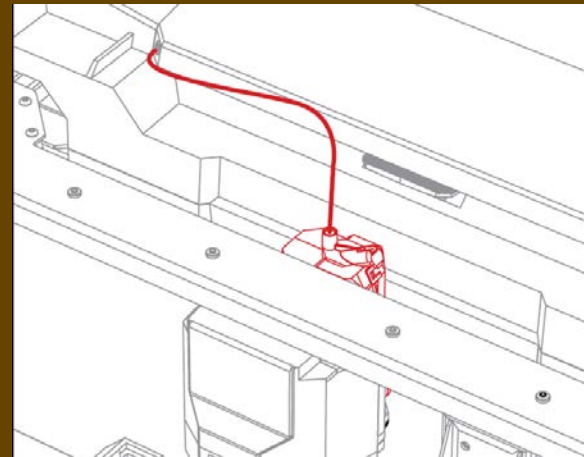
LOADING FILAMENT

- ○ Press the dial to select "Filament"

- ○ Press the dial to select "Load Filament"

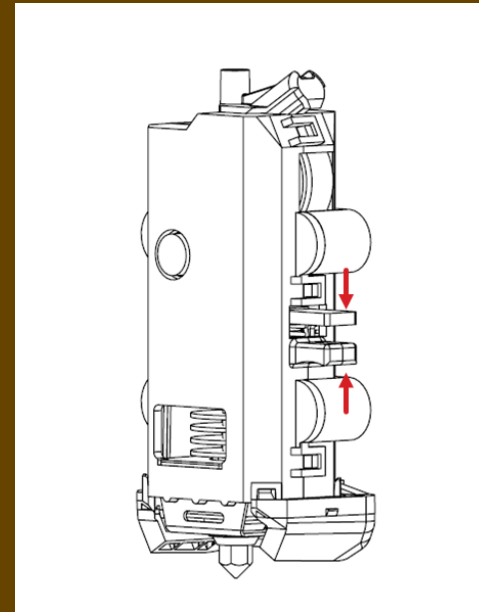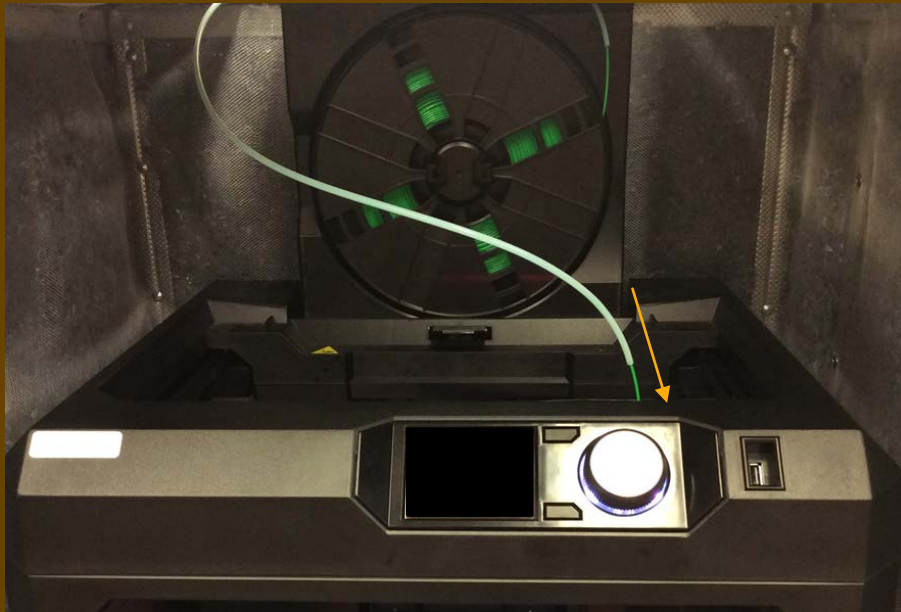- ○ Wait for the extruder to finish heating

LOADING FILAMENT

- When the extruder has finished heating, it will instruct you to insert filament into the extruder

- Gently push the filament down until you feel the extruder begin to pull the filament. You may need to wiggle as you push.

- Do NOT touch the extruder, it will burn you!

Tip: Loading Filament

- If you are loading the MakerBot with filament and cannot get the MakerBot to extrude your new colour, try pinching the black tabs on the right side of the extruder that you pressed to remove the filament.
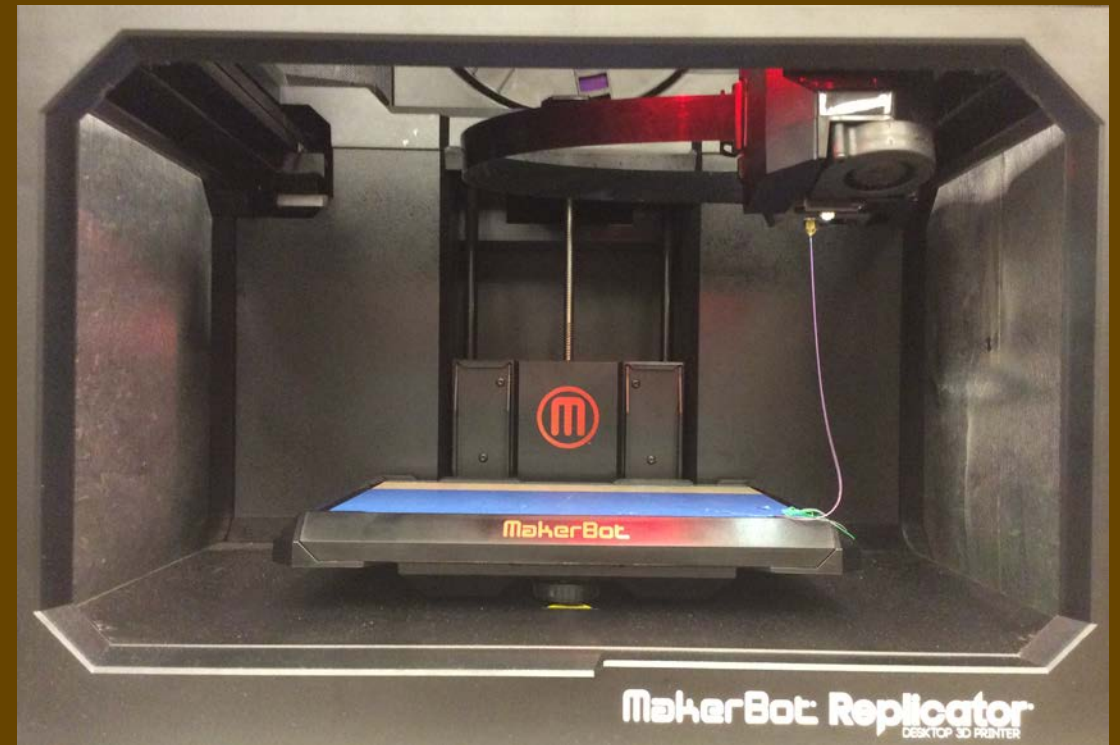
LOADING FILAMENT

- Ensure the guide tube is also inserted into the extruder

- This will prevent kinks in the filament, and will help prevent clogs from happening

LOADING FILAMENT

- Press the control panel dial to stop extrusion when you see plastic emerging from the extruder nozzle

- Wait for the plastic to cool, then pull it away

- NEVER touch the nozzle, it will be hot!

- Firmly hold the top of the filament drawer open and depress the latch, then slide the filament drawer down gently

WANT TO LEARN MORE?

- PLA Filament Video:
  - https://www.youtube.com/watch?v=ZqjJCCCHoH4
- How to fix filament clogs:
  - https://www.youtube.com/watch?v=zhF6HrGeH4U