



# 3D Printer Guide

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## Overview

3D printing is available at three Burlington Public Library branches: Central, Alton, and New Appleby (as of September 2025). These general instructions support your staff-assisted use of these 3D printers.

More information about BPL's [Maker Services](#) is available on our website.

## 3D Printer Safety Brief

Safety is always our top priority at the library. We ask you to follow the directions provided by our staff when using the tools, technology, equipment, and space.

There are potential hazards with 3D printer use:

- Opening the door and touching the extruder nozzle or heated bed before the equipment has been able to properly cool down.
- Moving print head, print bed, and other moving parts.

## 3D Printing Preparation

3D printing files need to be in .stl file format.

- .OBJ and .3MF formats will also work; however, .STL is the most common and ideal to use.

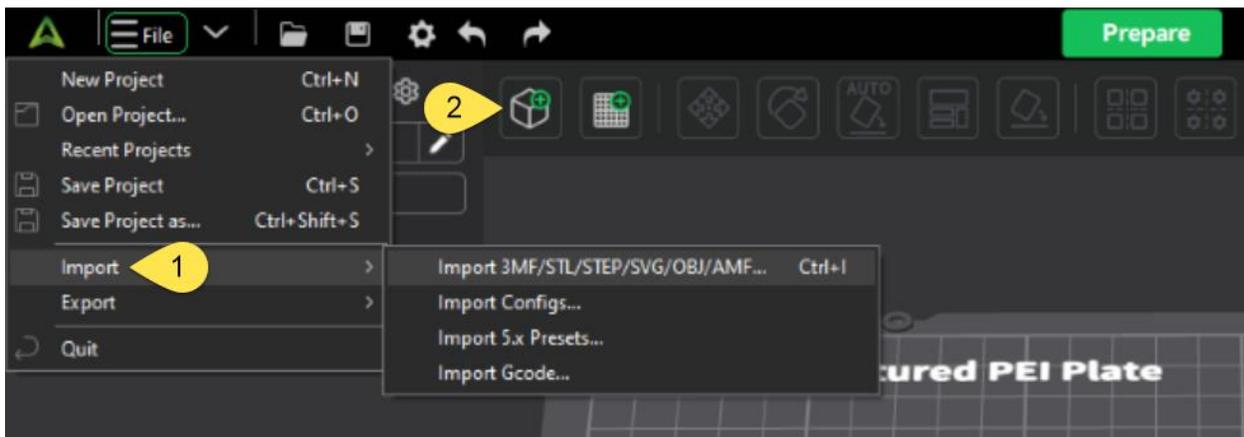
In Creality Slicer, first make sure you are in the correct view by selecting the Prepare tab in the top menu.



Next, files can be prepared in two ways

1. Select the Import option on the File menu; or,
2. Select the Add icon in the main menu.

And then select the file you want to print.



## Model Adjustments

Once you have loaded a file, select the model and use the adjustment tools in the top menu (3), if required.



## Useful Adjustments Options

- Move: Is used to move the object on the build plate. Can be used to arrange multiple parts or shift where the object will print.
- Auto Orient: Will attempt to place the model on the plate in the best orientation.

- **Arrange All:** If you have multiple objects (not advised), this will arrange them on the plate.
- **Rotate:** Consider how the object is placed on the build plate: what supports will be needed and what physical demands might be placed on the printed object when deciding on orientation. The general best practice is to place the largest flat surface of your model down on to the build plate.
- **Lay on Face:** Choose a face on the model to go on the plate. Good for getting either the largest flat face or the best orientation for printing.
- **Scale:** The size the object will print at. Is the object to be printed at its default scale. Will it be upscaled or downscaled? What effect does this have on functional and aesthetic properties of the print?

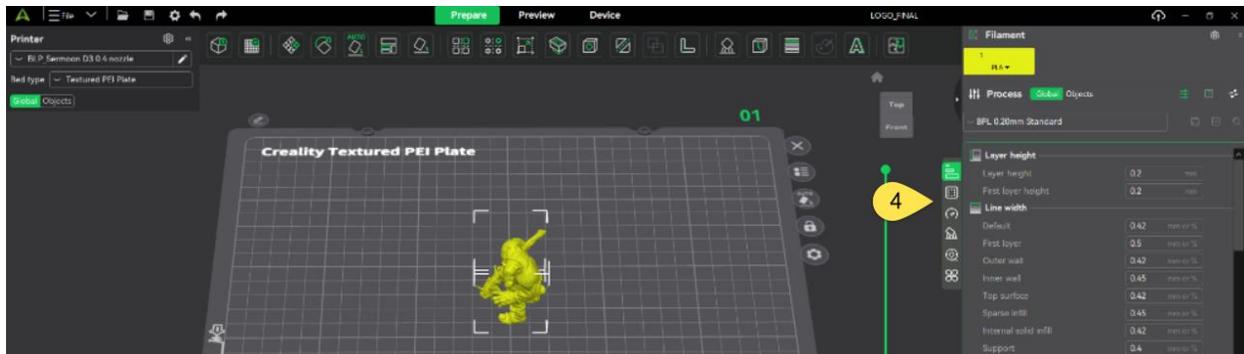
Adjustment options that are not recommended: Split to Objects, Split to Parts, Hollowing.

## Printer Settings

The Sermoon D3 has been setup with some basic pre-sets for different printing situations. There is a choice of four printing pre-sets at BPL.

- **BPL 0.16mm High Quality:** Thinner layers for higher detail and smoother prints. Will be slower and more expensive.
- **BPL 0.20mm Standard:** Generic print settings for most prints.
- **BPL 0.30mm Fast:** Light infill, thicker layers for prints that just need to be good enough or as a test.
- **BPL 0.3 mm Standard:** Designed for objects that will be used mechanically or with screws, bolts etc.

More specific settings can be adjusted at the discretion of BPL staff. Settings that might be adjusted include quality for layer height, infill percentage, and support settings. Each printer icon (4) opens a menu of detailed settings.



## Running a Print Job

Before starting your 3D print job, we recommend you take the following actions.

1. Confirm the printer settings for your project.
2. Use the **Slice Plate** button on the bottom right of the screen to determine approximately how long the project will take. Please note that estimated print time may not match the actual print time.
3. Ask staff to confirm the estimated cost. Staff will provide a Project Intake Form.
4. Fill out a Project Intake Form including your name, contact information, and any relevant project details, and give to staff.
5. **Preview** layers to check for issues and see how your object will be printed. The slider on the right will allow you to view the print layer by layer. Make changes to the settings as necessary.
6. Once confirmed, **Export the plate sliced file** right below the Slice Plate button. Save the file onto a USB key.
7. Once the file is on a USB key, take the USB and your completed Project Intake Form to library staff so that the print job can be added to the queue.

## Completing a Print Job

Print jobs may take up to eight hours to finish and may be waiting in line behind other print jobs. You don't have to be in the library while your project is printing.

Please make sure you give your completed Project Intake Form to library staff, so they can contact you when your 3D print project is ready for you to pick up at the branch. You can pay in cash, or by debit or credit.

Projects that have been left for longer than three weeks are considered abandoned and may be recycled/disposed.

## Questions?

If you have questions about using the equipment, please talk to branch staff or email us at [makerspace@bpl.on.ca](mailto:makerspace@bpl.on.ca).

Central MakerSpace: [905.639.3611](tel:905.639.3611) extension 1302

Alton Branch: [905.634.3686](tel:905.634.3686)

New Appleby Branch: [905.639.6373](tel:905.639.6373)



- Date:
- Amended Dates: July 23, 2025
- Associated Documents: