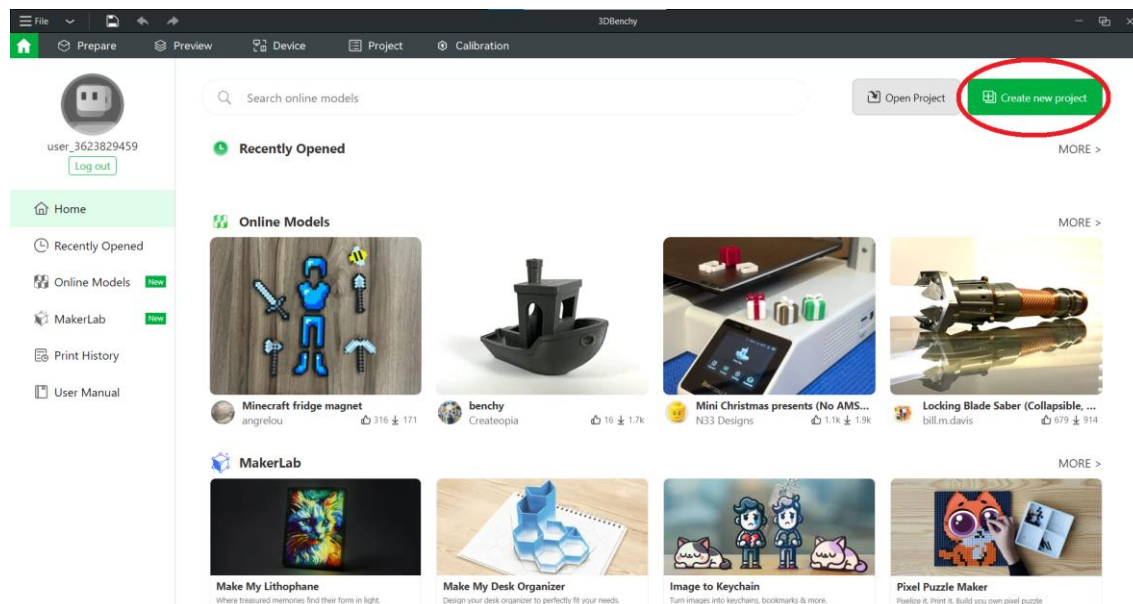


Bambu Lab Studio and Bambu Lab A1 and A1 mini Guide

The purpose of this guide is to help students use the Bambu Lab slicer “Bambu Studio” with the Bambu Lab printers “A1 mini”. Following this guide will show you how to use the slicer and will help you get better and more reliable results with the 3D printers. This guide will not guarantee any results as it is heavily dependent on the prepared 3D file. If you have any questions about the printers, slicer, or this guide, e-mail prototypassar@md.kth.se for assistance.

Getting Started

To start the preparations, make sure you have your 3D file on the computer preferably via USB, and open Bambu Studio. On the home screen select Create new project to get started.

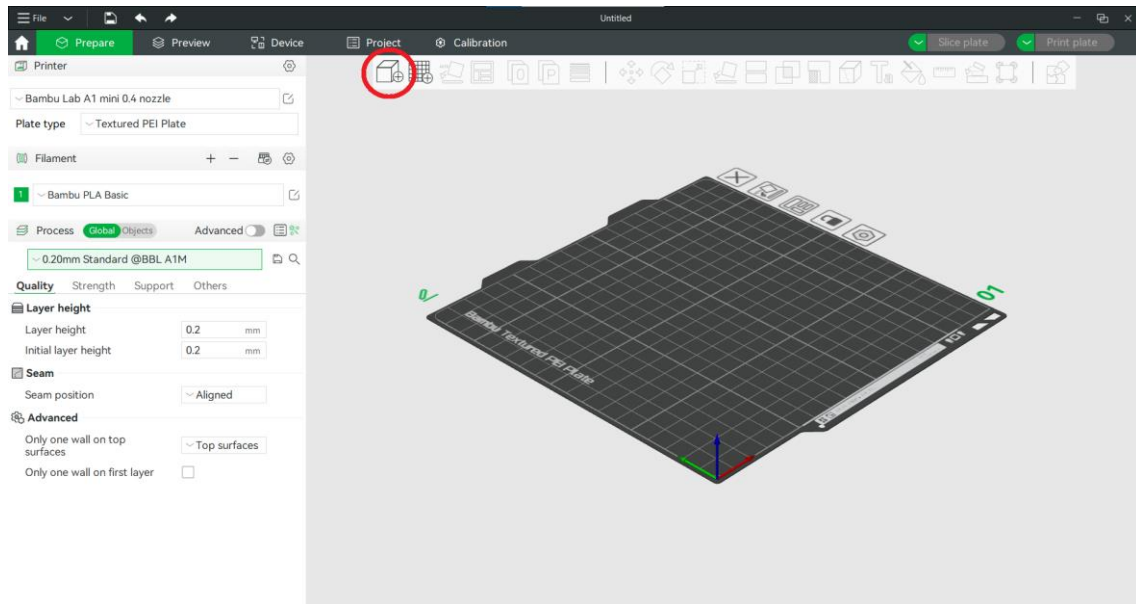


Importing Files

To import your 3D file click the “add” button and select your file from the explorer menu, or simply drag and drop your file from the desktop.

Supported 3D file formats are as follows:

- .STL (recommended)
- .3MF (recommended)
- .OBJ



- .STEP or .STP

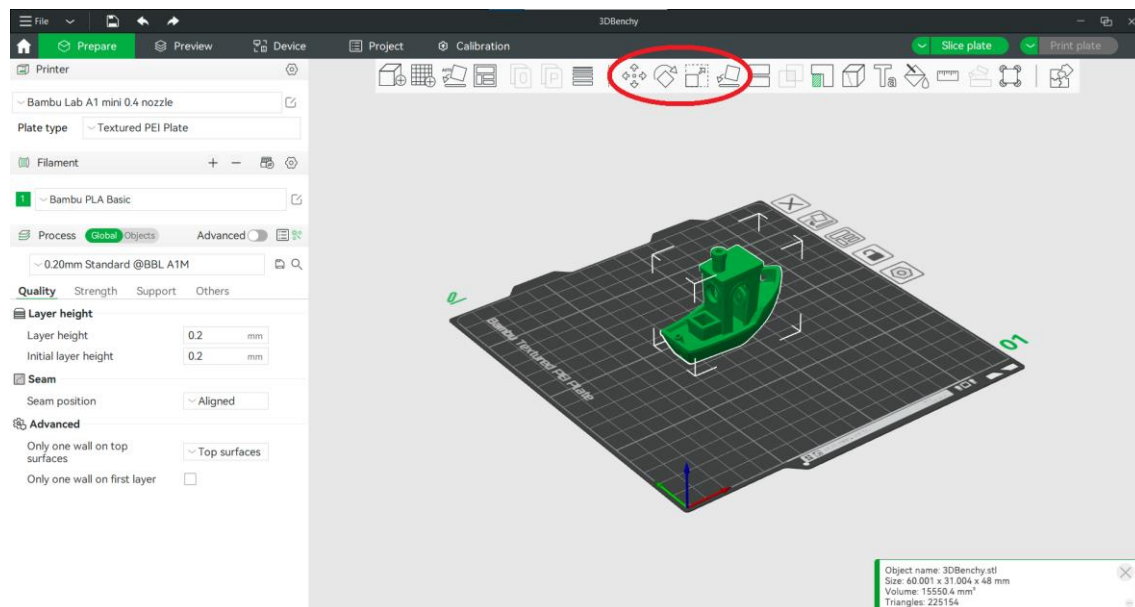
Preparing Buildplate

To prepare the build plate, click and hold the left mouse button to rotate the build plate, click and hold the right mouse button to pan the build plate, and use the scroll wheel to zoom in and out.

Continue preparing the build plate by arranging the model on the build plate by selecting the model and using the “move”, “rotate”, “scale” and “lay on face” options.

- “Move” changes the placement of the model on the buildplate by dragging the model using the mouse.
- “Rotate” rotates the model around its center of mass by grabbing one axis at a time to change the orientation.
- “Scale” increases or decreases the scale of the model by clicking and dragging the corners and edges of the model.
- “Lay On Face” allows the user to select a surface on the model to lay flat on the buildplate for quick adjustments.

Once the model has been oriented and placed in the build volume for advantageous printing move on to the next step.



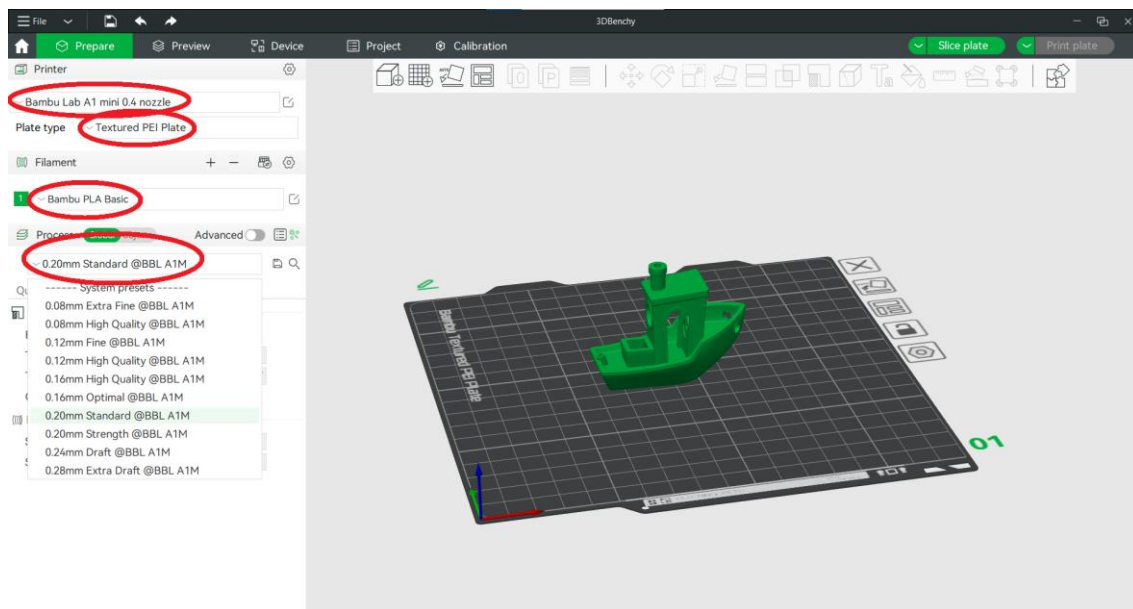
Slicing

To begin slicing and choosing printer settings, make sure to correct the configuration for the printer.

Always choose:

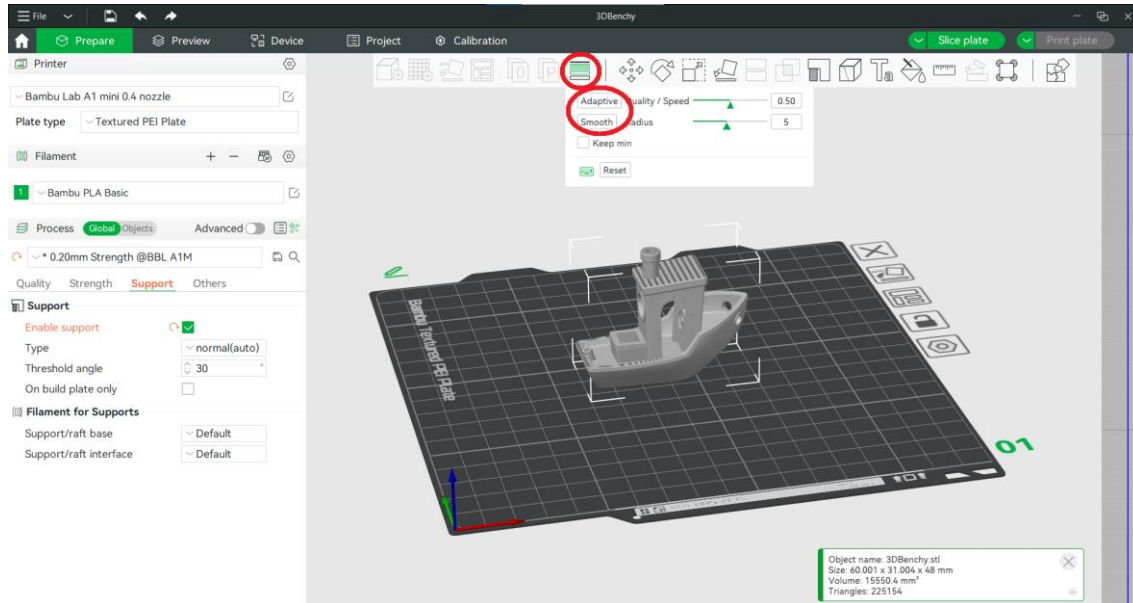
- Bambu Lab A1 mini 0.4 nozzle
- Textured PEI Plate
- Bambu PLA Basic

To select slicing settings, select one of the preset slicing profiles from the dropdown menu. Different profiles have different characteristics, and choosing different settings will result in different results. Recommended profiles are "Standard," "Strength," or "Draft."

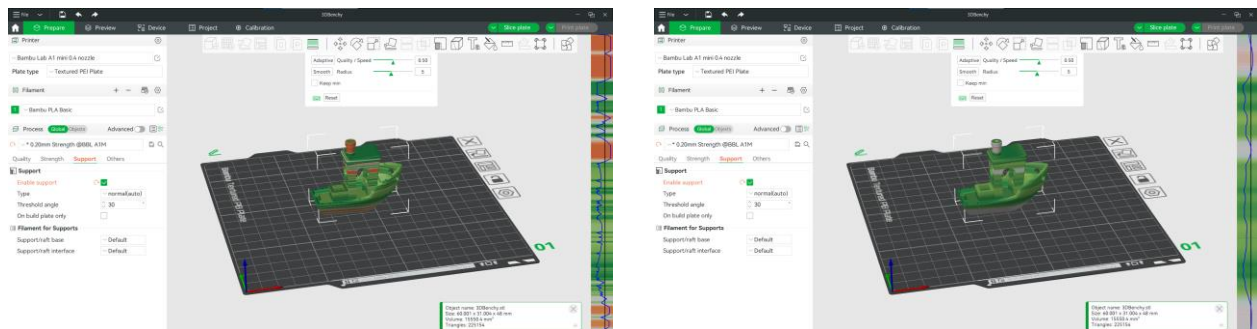


Last updated 2025-03-05

If your model requires a finer resolution than standard we recommend you use the “Variable Layer Height” setting. Clicking on “Adaptive” will change the layer height of each layer to create both a faster print and higher resolution depending on what each layer looks like. Clicking on “Smooth” will then even the layers out for a more natural transition.



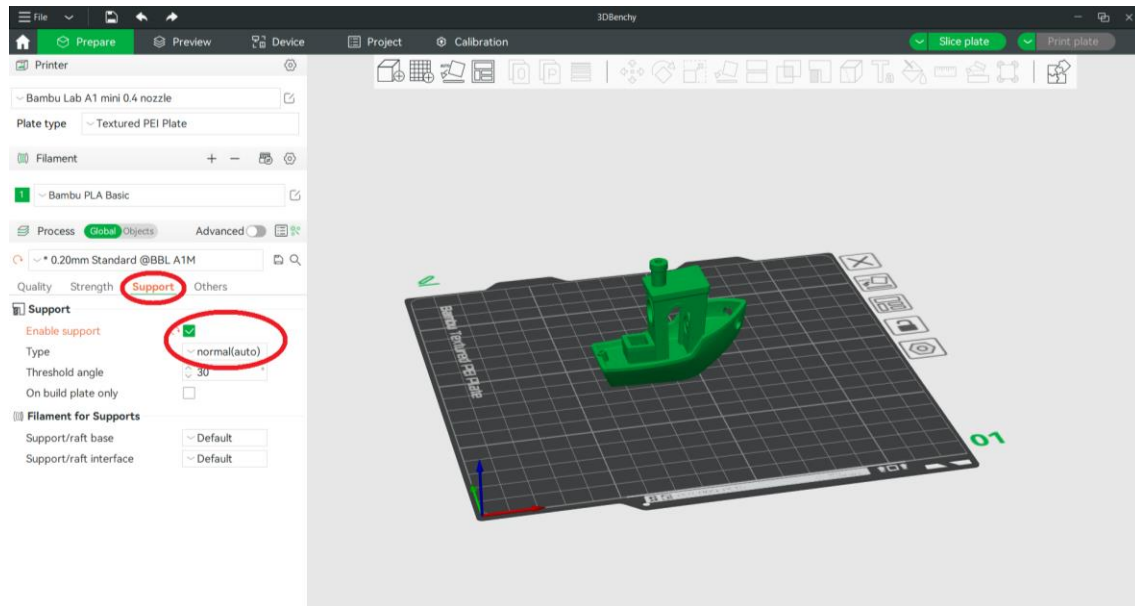
The pictures below show the adaptive layer height before and after smoothing where the axis on the right shows the difference(blue) from the norm(black).



Last updated 2025-03-05

Support

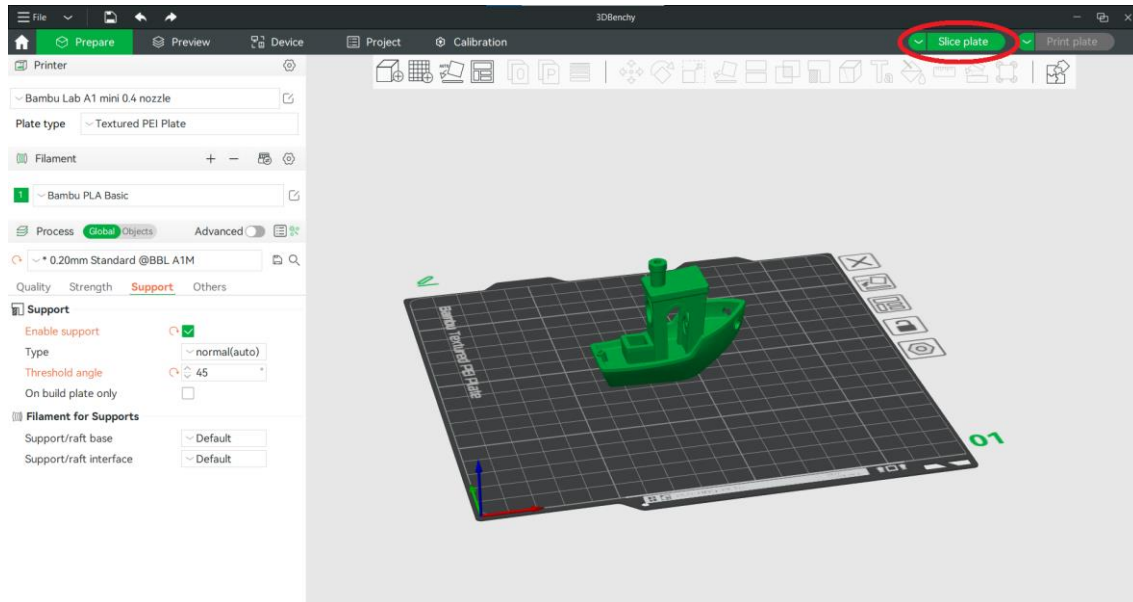
No changes to the settings should be required other than support. If your model requires a support structure to be printed select the support tab under the slicing settings and choose to enable support. Choose either “Normal(auto)” or “Tree(auto)” for either tree or normal support structure.



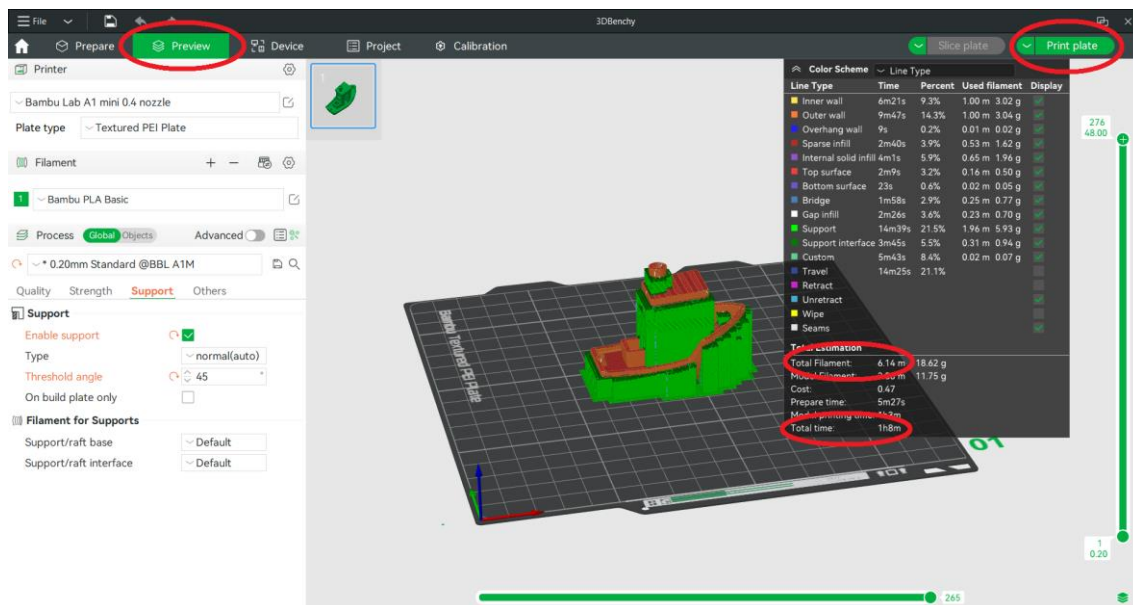
Last updated 2025-03-05

Printing

Once you are satisfied with the slicing settings click on “Slice plate” to move on.

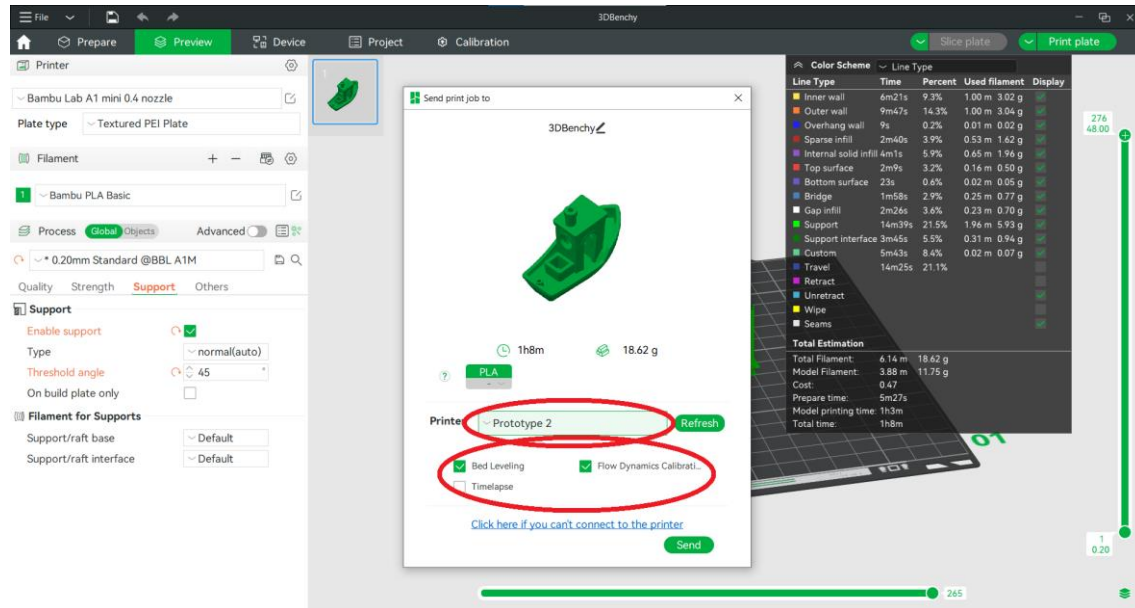


Once the model has been sliced you are sent to the Preview page where you can view the sliced model including any added support. Once you have confirmed that the model will print properly that the Total Filament is enough on the machine's spool and that the Total time is fast enough click on “Print plate” to move on.



Last updated 2025-03-05

Before sending the files to the printer over wifi make sure that you **remove all plastic** from the previous print from the print bed! To send the files to the 3D printer, select an available A1 or A1 mini device that is not in use from the dropdown menu. Always enable “Bed Leveling” and “Flow Dynamics Calibration”. Finally, click on “Send” to send the files over wifi to your printer and it will automatically start. The starting procedure may take a few minutes before the printer gets to work.



Finally, your print is complete! Remove your part from the plate by lifting the metal sheet by the edge and lightly bend it to release the part. Make sure you remove every remaining piece of plastic from the surface before you place it back in the printer.

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For the curious engineer, we have provided a playlist and a video to get a better understanding of how to use all the features of the printers

