BambuLab 3D Printers Instruction Guide

Coburg Makerspace

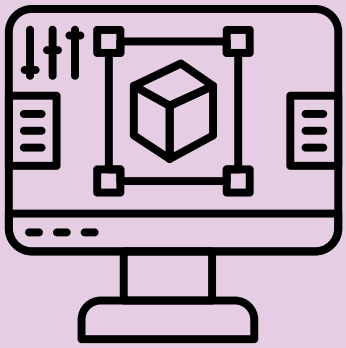
Merri-bek City Council



BambuLab X2D



Everything you need to know to start creating with our new 3D printers!



What we have:

- BambuLab printers x 2
- PLA filament in various colours
- Bambu Studio software
- Device if you need it

What to bring:

- USB stick
- Own device (or use ours)
- Ideas and vision!
- Library card

Bambu Quick Guide

Maker World

Step 1.
Choose a 3D model

For example, find and download something from makerworld.com

Step 2.
Prepare your file in Bambu Studio

You can adjust settings for size, scale, and add support or adhesion.

Bambu Studio

Dynaflow

Step 3.
Get the printer ready

Turn on the fume cabinet with the FAN button.

Step 4. Print!!

The printer will do all the work for you! Just observe for the first few minutes to make sure it's working ok.



Final step

Remove your print after the printer cools down.

For more info read the detailed instruction guide.

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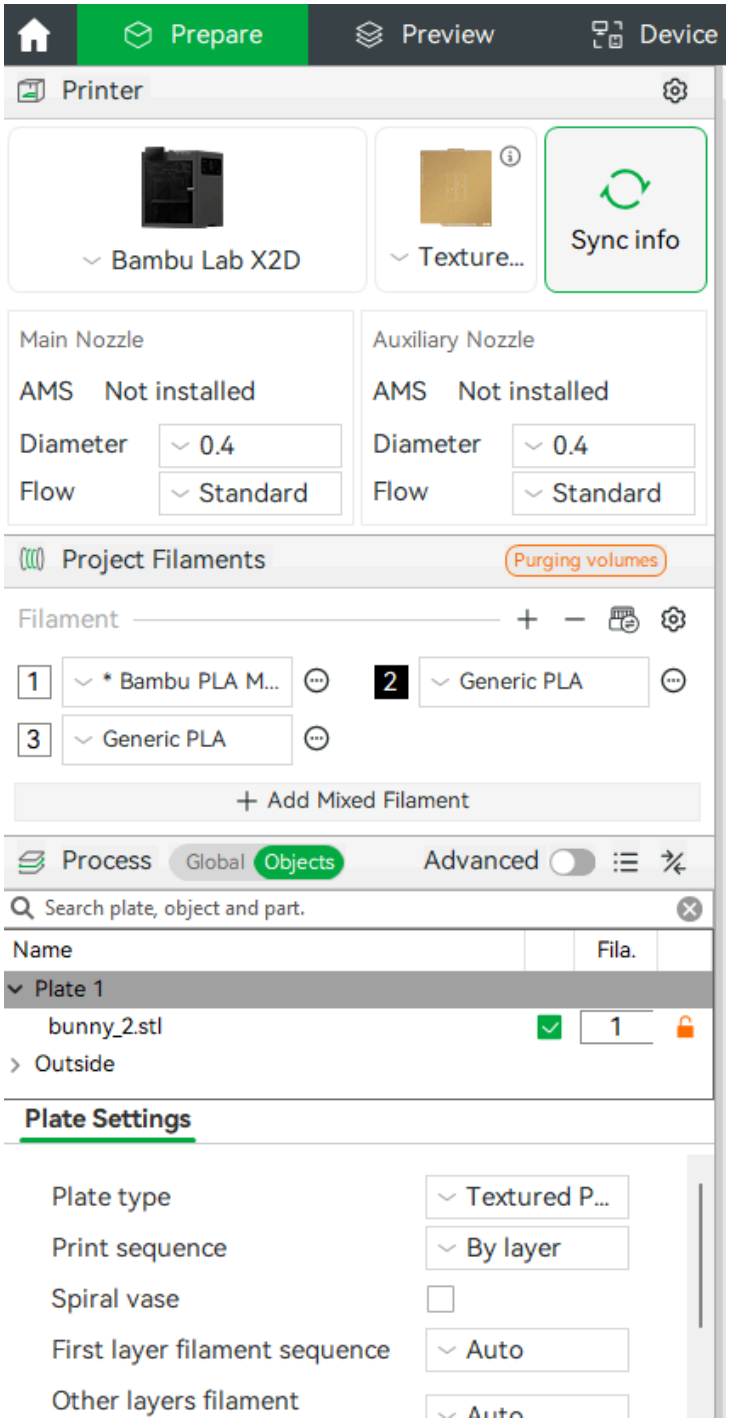
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Using Bambu Lab - settings guide



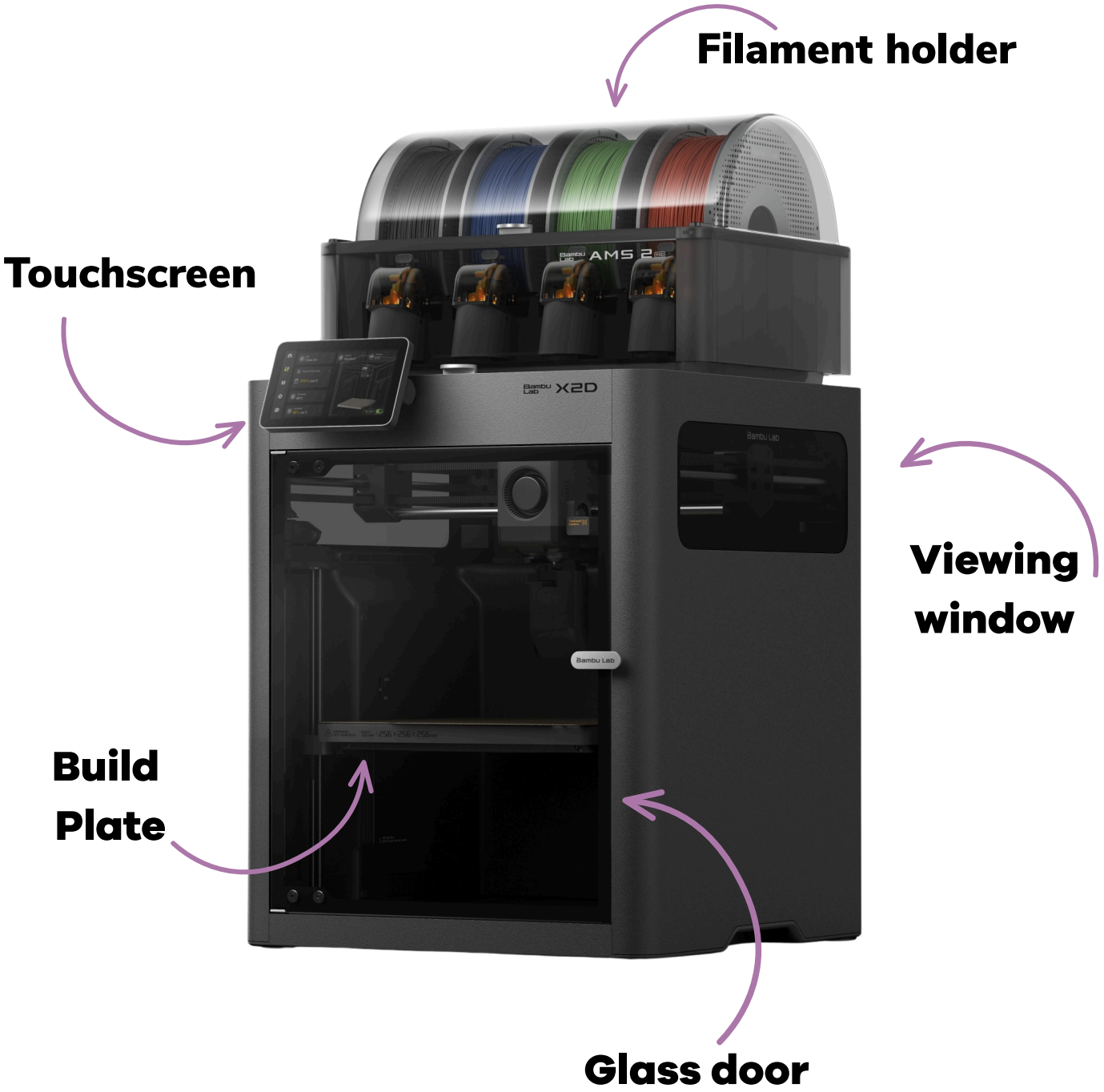
Printer Model = X2D

Plate = Textured

Nozzle diameter is 0.4

Filament is Generic PLA

What's what


Filament holder
Touchscreen
Viewing window
Build Plate
Glass door
AMS 2
X2D
Bambu Lab

How to book

Things to know:



- 3D printers are booked via our booking page.
- You need a library card to book.
- All bookings are for maximum **FOUR HOUR** blocks.
- Everything is provided for you.

How to book

SCAN HERE

- Use the QR code or go to bit.ly/coburgmakerspace
- Choose the equipment you would like to use.
- Choose an available date and time.
- Enter your name, e-mail and library card number.
- Once submitted, you can book another item.

Safety and Induction

Safety Factors

- The printers get hot! The printer head/nozzle can reach 200°C+ and the print base is also heated.
- BambuLab printers have a door, keep it closed while the printer is in action.
- Let the printer cool down before reaching inside to take your print! The screen will tell you when it's ready.
- If anything stops working, don't try to fix it yourself. Turn the 3D printer off and let staff know.



Induction

- Everyone who uses the Makerspace needs to do a safety induction.
- The induction explains what equipment we have, and any safety aspects for you to be aware of.
- It is not meant to teach or show you how to use equipment.
- Any staff member can do the induction with you at your first booking.

Fume Cabinet

The fume cabinet must be on to use the 3D printers. Power to the printers only works when the cabinet is switched on!

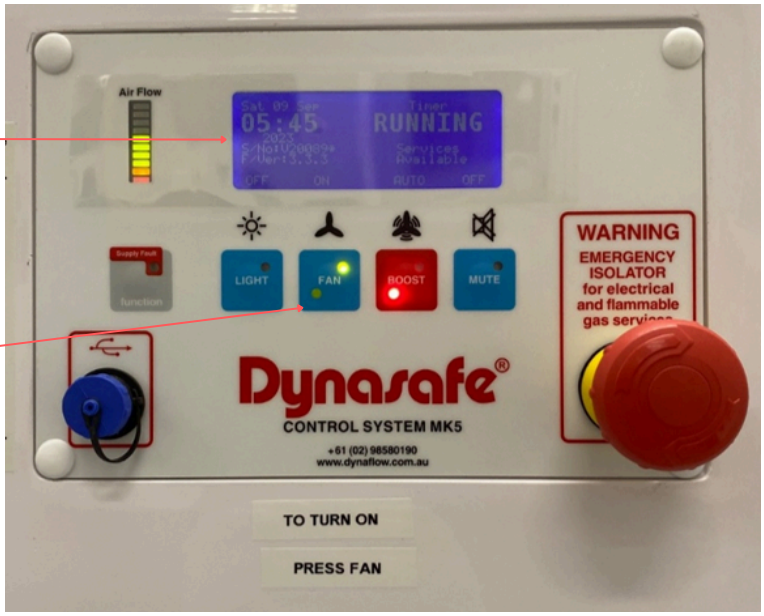
- Press the **FAN button** to turn the fume cabinet **ON**. The start up process takes around 30 seconds.
- Power points will start after this time.
- The fume cabinet must stay on while printing.
- The glass window needs to be ***at least half way down*** or it will beep to remind you.

Screen

Will show you how long left to start up and power down.

Fan

This is the on/off button. The cabinet takes a few minutes to warm up.



To turn the fume cabinet **OFF**, press the same FAN button.

Printer Screen

Home Screen



When you turn the printer on, this is what you see.

1. These are the five different tabs you will use..
2. Select internal models or USB files.
3. Quick access to nozzle and extruder settings.
4. Quick access to the filament page.
5. Quick access to network settings.
6. Access to the help page.

Printer Screen

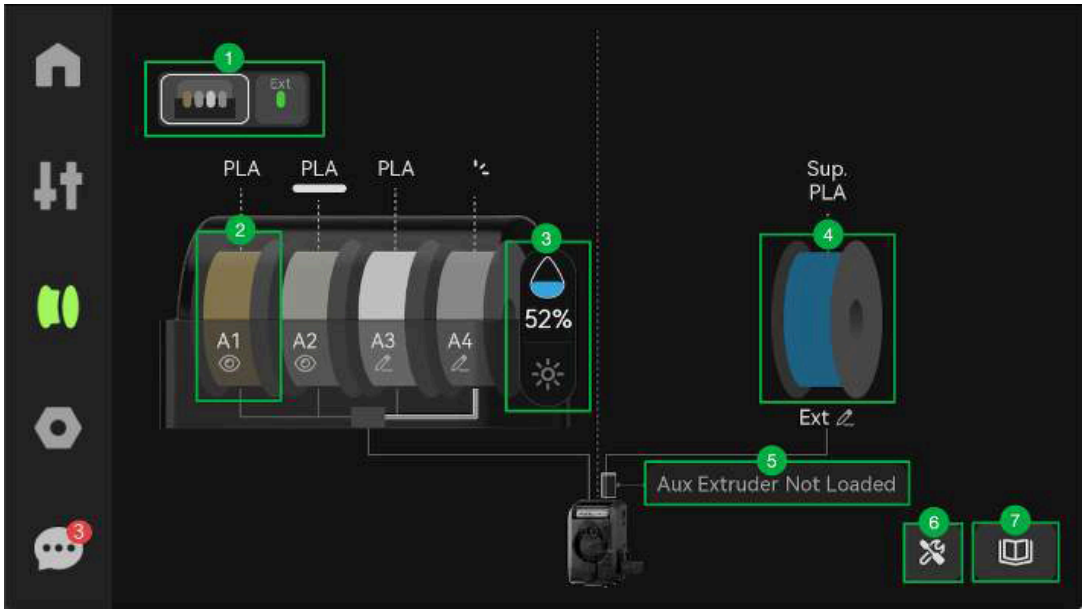
Controls Screen

These are technical settings for temperature, and speed. You will not need to adjust any of these settings.



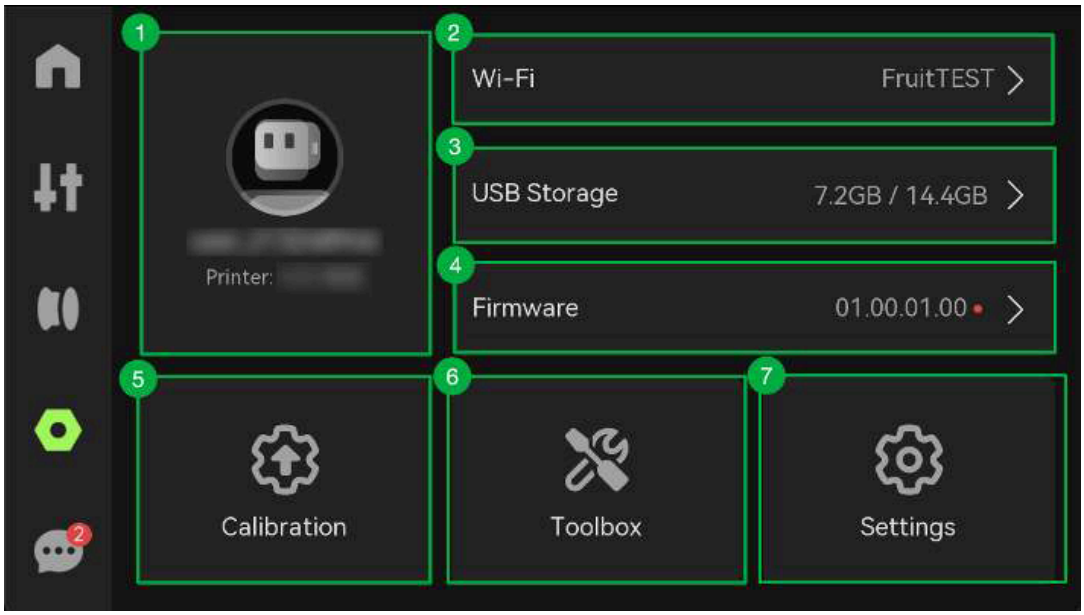
Filament

The filaments will be loaded and set for you.



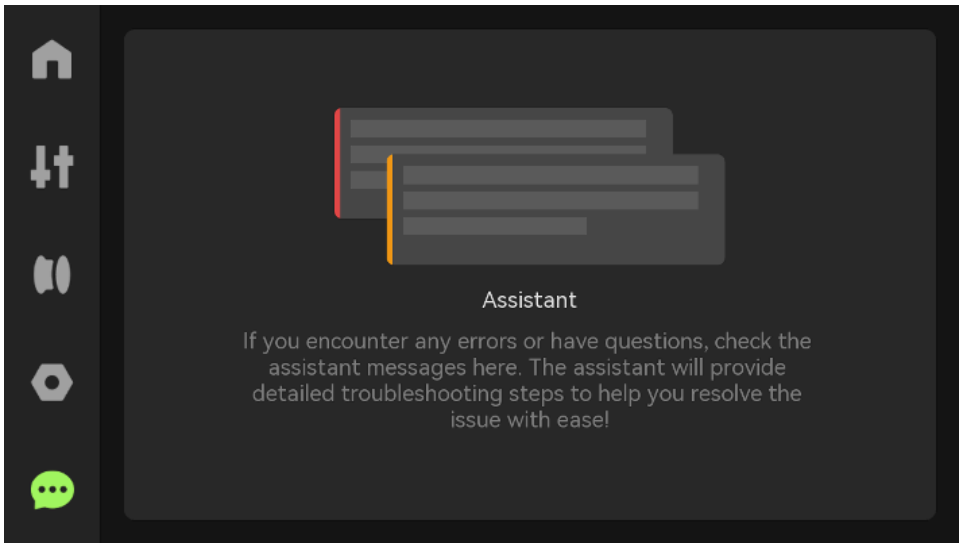
Printer Screen

General Settings



1. Log in and view your account.
2. Wi-Fi network
3. USB Storage.
4. Firmware - any updates will show here.
5. Printer auto-calibration.
6. Maintenance functions.
7. Other basic settings.

Message Assistant



Finding a 3D Model

There are several ways you can find and use a 3D Model to print.

① Pre-saved demo models



If you just want to see how the printer works and do a quick print, there are some models pre-saved on the printer.

② Browse for a model

Find one someone already made.

Download a model from **Makerworld.com**
Or browse in Bambu Studio Online Models.

Maker World

③ Create your own model

Create your own model.

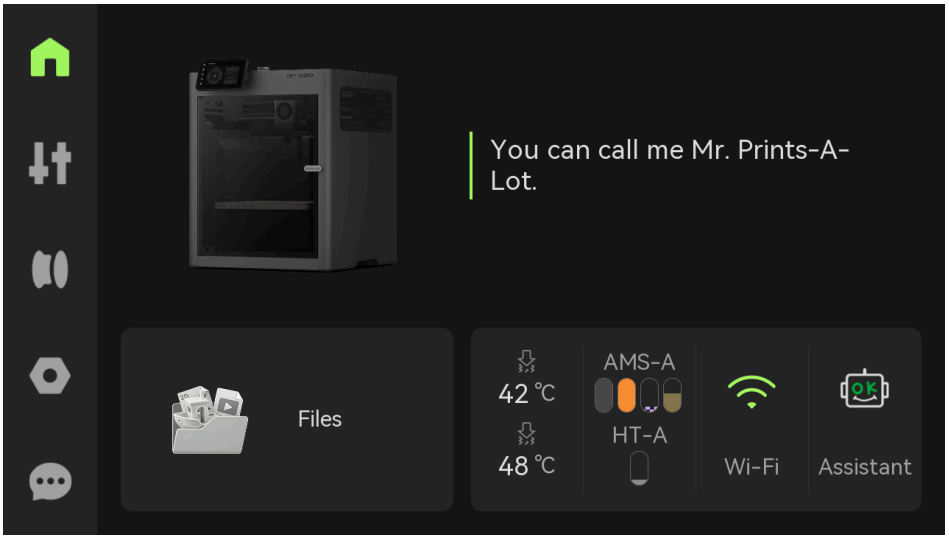
There is free software for this such as Tinkercad,
or you can use Bambu Studio.

Things to remember:

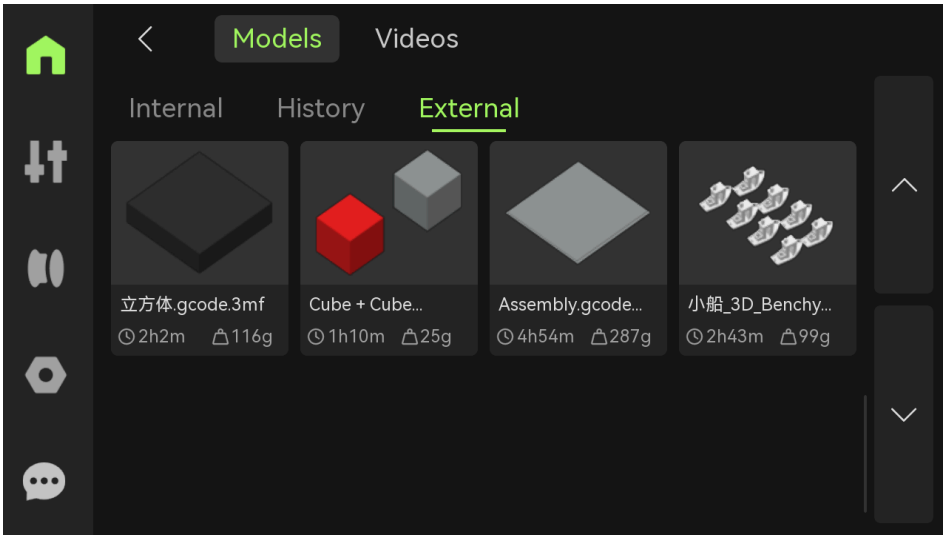
- Printer model - BambuLab **X2D**
- File type - should be an **.3mf or .stl file**

Demo models

The printer includes some print-ready files for common models, ready to print from the screen!



Tap Files to view models and videos.



Models include Internal, History, and External.

- Internal: model files cached locally on the printer
- History: list of models in the printer's cache
- External: model files cached on the printer's USB drive

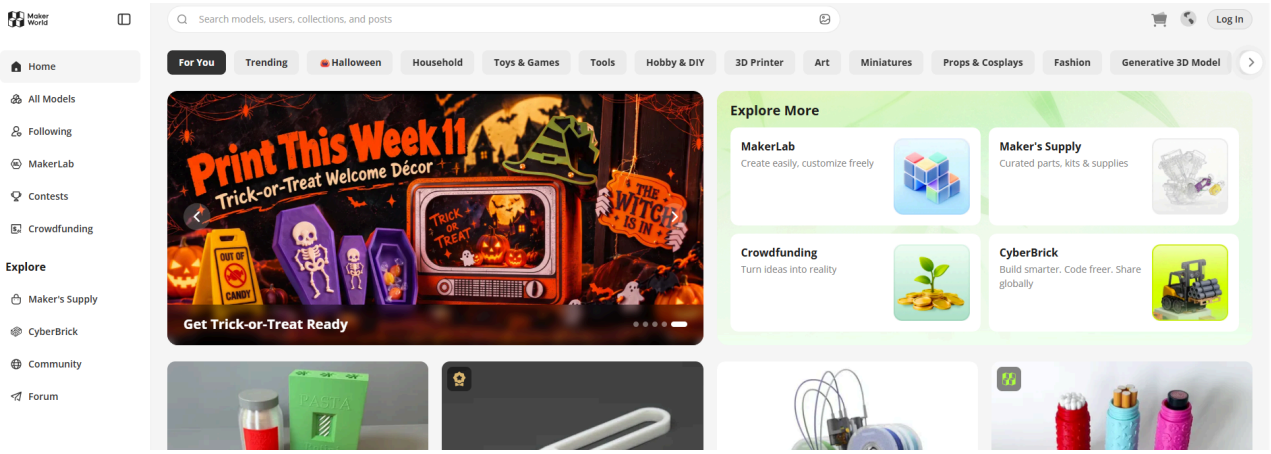
Select one and the printer will start the process for you.

Makerworld

A great website to explore things others have already made. You can download them and open in Bambu Studio.

Maker World

http://makerworld.com/en



Search for something in the search bar at the top.

Browse and choose a model.

Open directly in Bambu Studio (if you have it installed) or download it.

Bambu Studio - FAQ

What is it for?
Bambu Studio is the software used to prepare the files for 3D printing.

Download and try at home
Go to bambulab.com/download

Is it free?
Yes! You do need to sign up/create an account though.

Download and try at home
Go to bambulab.com/download

Can I use the mobile version?
No, we have disabled the capability to connect to the printer via the app as it is shared equipment.

What if I don't have a laptop?
The makerspace has a dedicated Mac computer, or a Windows laptop you can access.

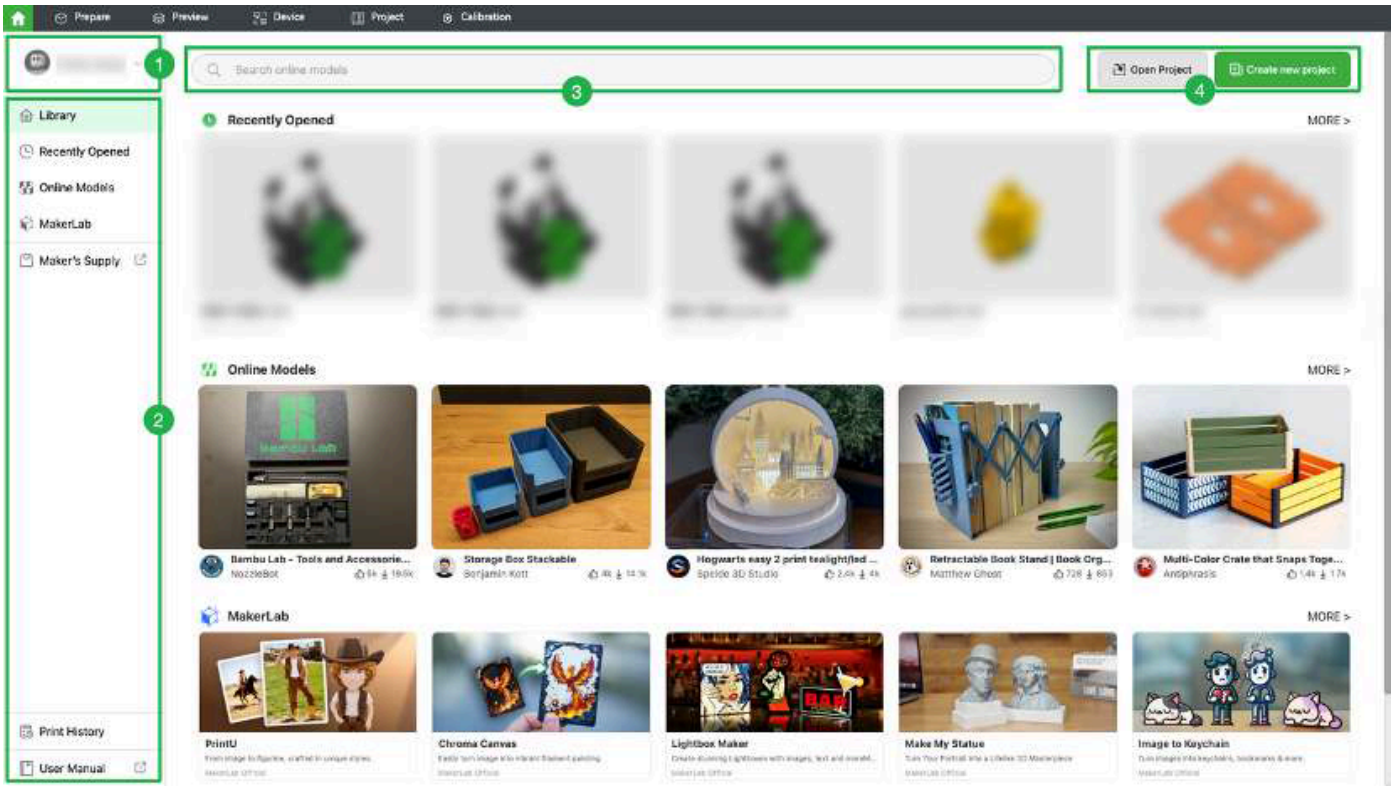
Things to remember:

- Printer model - BambuLab **X2D**
- File type - should be an **.3mf or .stl file**
- Material - **Generic PLA**

Bambu Studio

Homepage

From the homepage you have several ways to begin working with a 3D printing design.

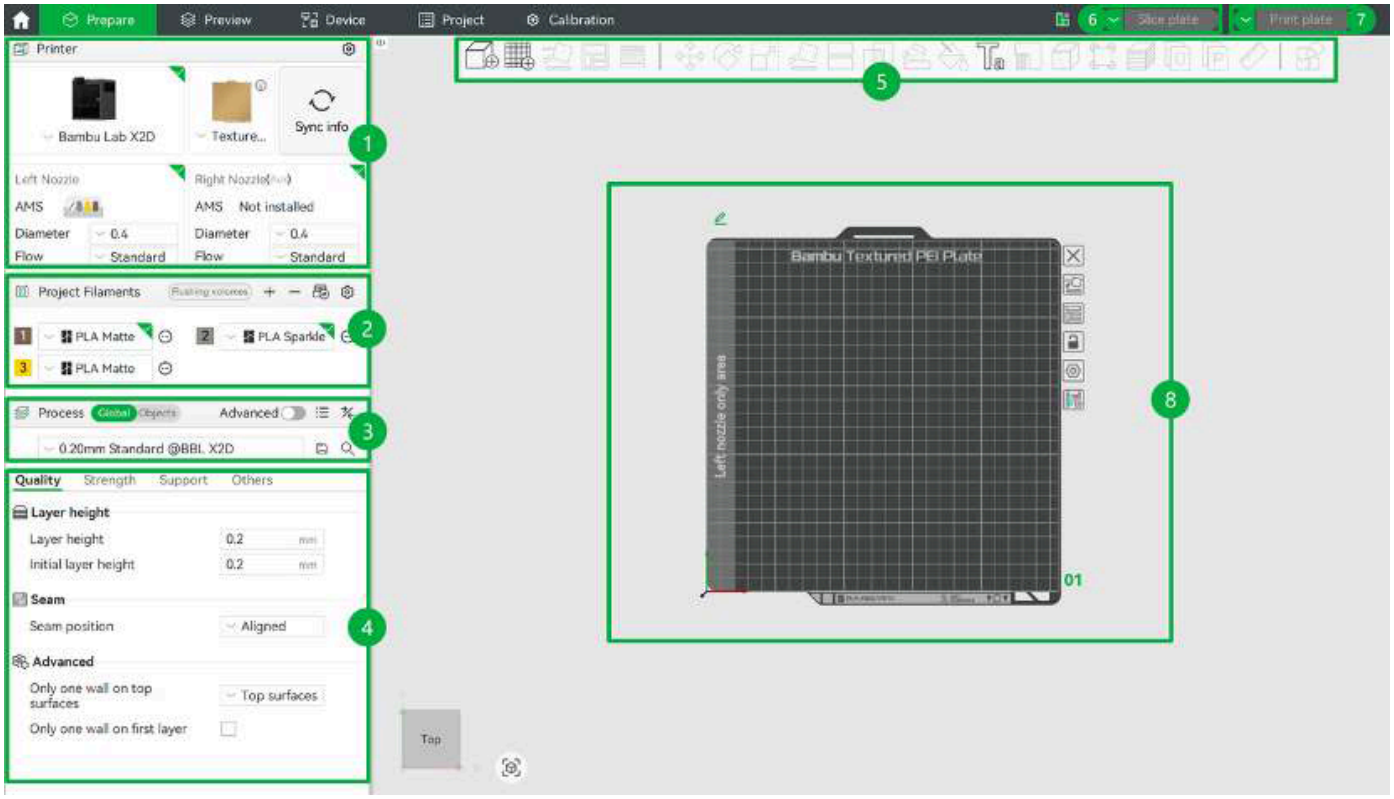


1. Your account information.
2. Menu / navigation.
3. Search bar. This searches online models from MakerWorld.
4. Project options. Open an existing project or start a new one.

Bambu Studio

Prepare

The prepare page is used to adjust models, set print parameters, slice models and save print files.

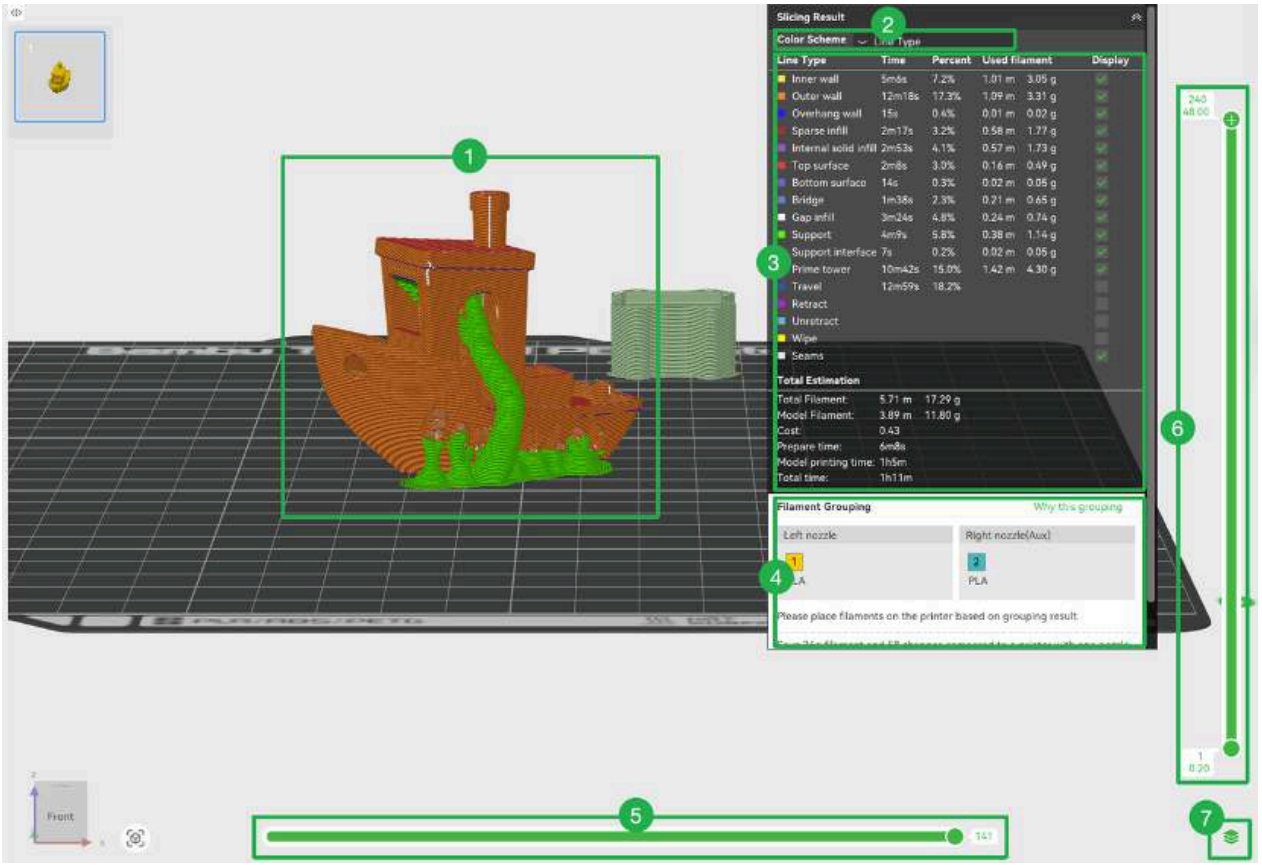


1. Printer settings.
2. Filament settings.
3. Process presets. For custom parameters.
4. Print parameter details. Models downloaded from MakerWorld come with parameters preset and prefilled.
5. Top toolbar. Editing options for your model.
6. Slice button. This is the final step before saving your print.
7. Print or export files. You will export your file to save on a USB.

Bambu Studio

Preview

The preview page is used to view the results of slicing and how the model will look on the plate.



Not all of these settings are necessary for basic printing!

1. Model Preview
2. Colour scheme.
3. Details. Detailed info for each part of the model, not necessary to know for basic printing.
4. Filament. Which colour is in which nozzle.
5. Progress bar. You can drag it to see how the model will be built.
6. Layer details. Drag to see the slicing layer by layer.
7. Display mode. Switch between viewing all layers or a single layer.

Bambu Studio:

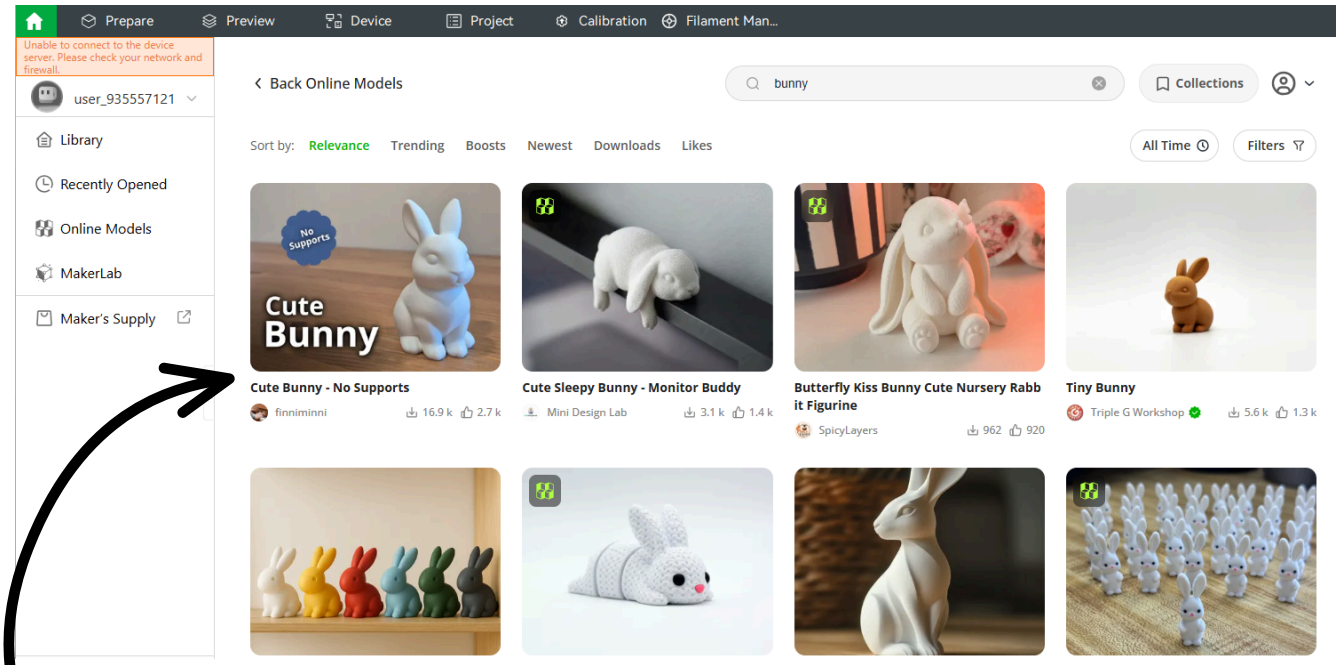
Step by Step

Let’s go through the whole process together.

We’re going to print a bunny!

1. We will start in Bambu Studio.
2. On the left menu go to ‘Online Models’.
3. In the search bar type ‘bunny’.

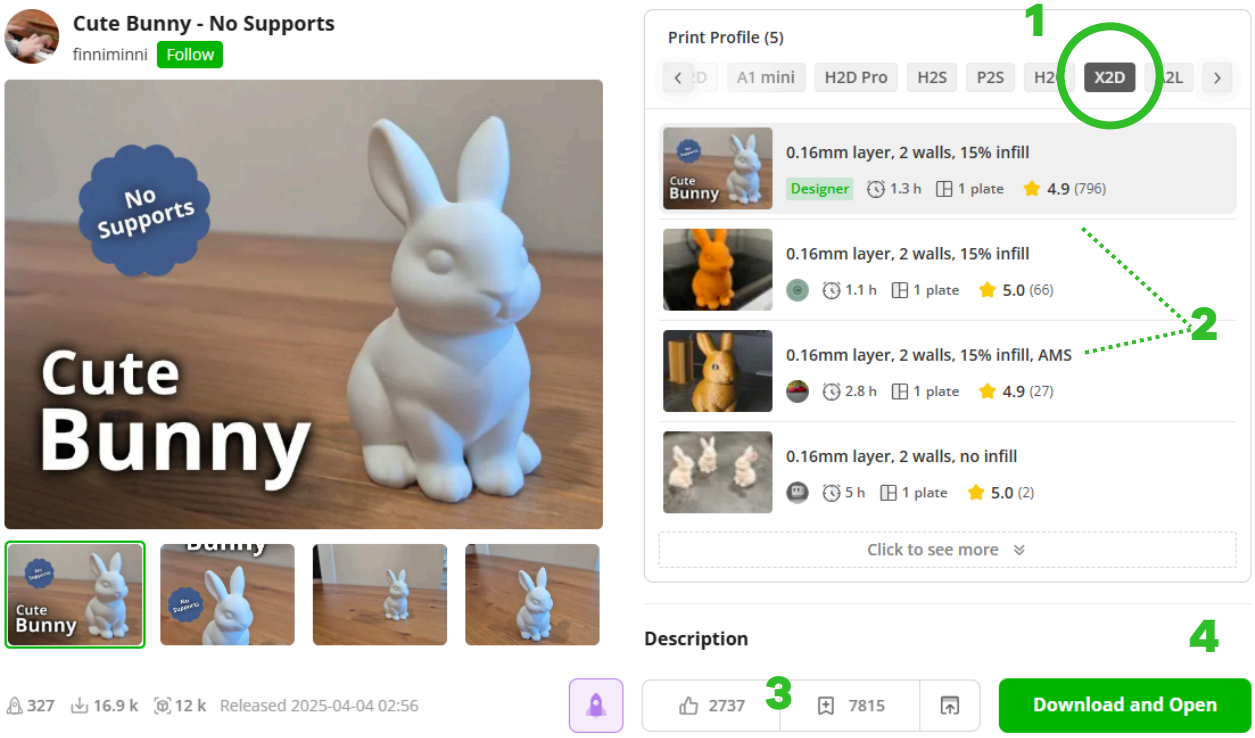
My results look like this:



I’m going to choose the ‘Cute Bunny’ in the top left corner.

Bambu Studio:

Step by Step



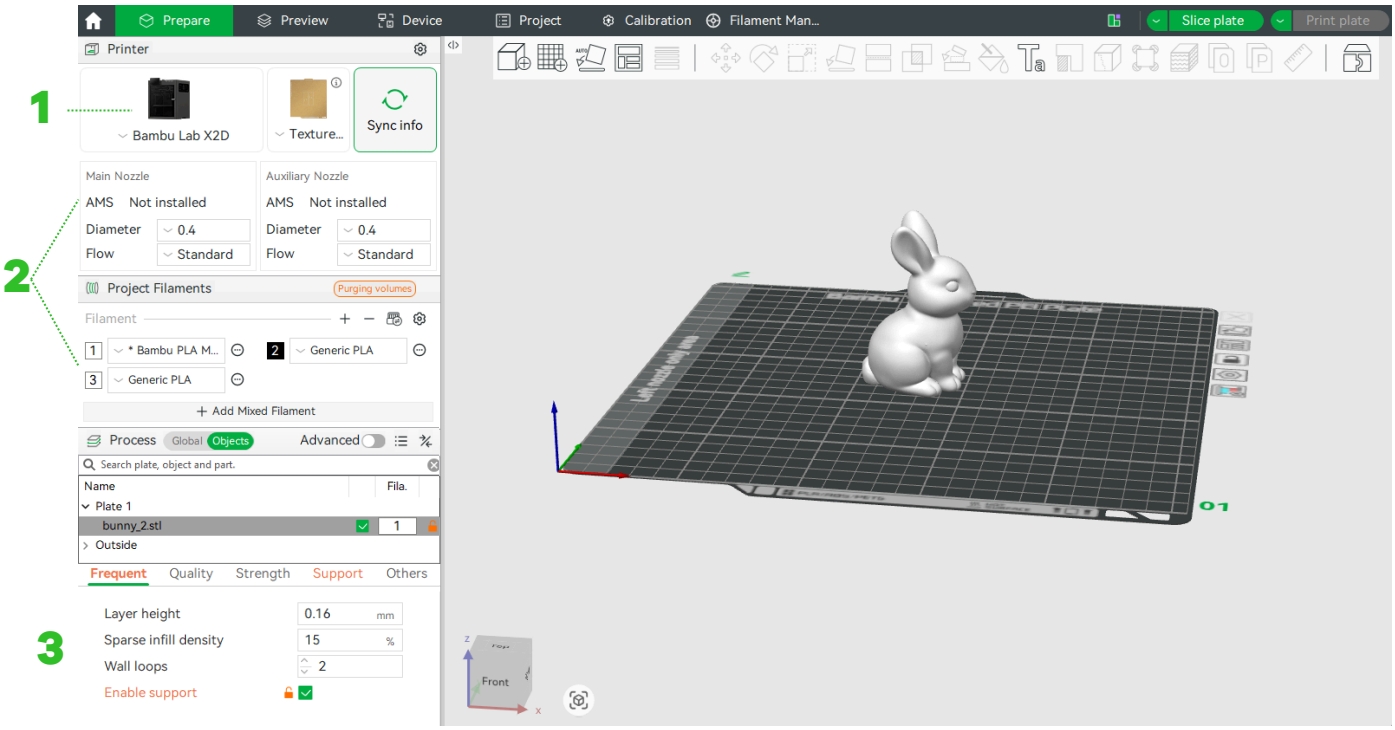
When you choose a model, it will pop up with some more information.
There are more photos of what the model looks like.

If you choose to print this model, **note the following**:

1. Choose the correct printer (*ours are X2D*)
2. There are slightly different versions, choose the one you want.
3. Here you can see how many people have 'liked' this design, an indication of how many people have made it.
4. When ready, click 'Download and Open'.

Bambu Studio:

Step by Step



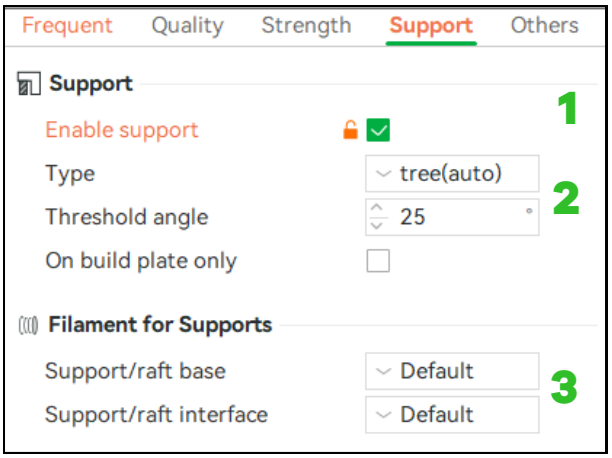
This is what the screen looks like when you open a model.
Let's look at the left hand menus first.

1. Make sure the correct printer model is selected.
2. This section tells you which material is on the printer. We only ever use 0.4mm nozzles and PLA filament.
3. Some frequently used settings for your object.
   Models downloaded from BambuLab or MakerWorld come with inbuilt settings you don't need to change.

See detailed manual for more information on changing these.

Bambu Studio:
Support settings

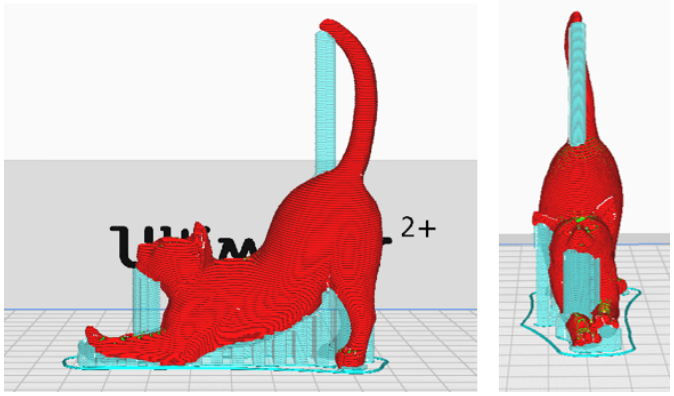
Does your model have any overhang?
You will need to tick the box for support.
The printer works by building layers on top of each other - it can't print into thin air!



1. Tick Enable support (or don't!)
2. Choose which type of support. Usually 'normal' or 'tree'.
3. The machine will choose the default filament for building the supports.

Support types

There are two different types of support structures that you can choose.
Here is an example of "Normal" supports.



The red shows the main part of the model, and the blue areas are the supports.

Supports are printed thinner than the rest of your model, and just snap off when you're done!

Bambu Studio:
Toolbar



The top toolbar has multiple functions you can use.
Here are the most important ones.

(First select the object then...)

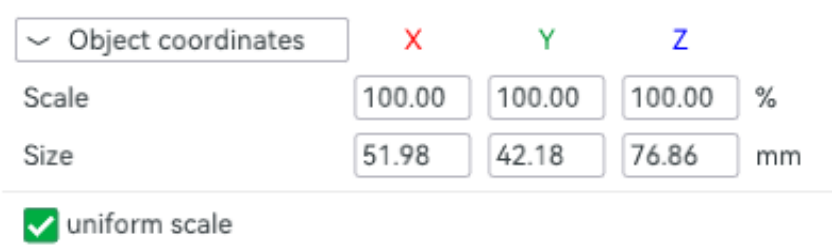
1. **Auto Orient**. Automatically adjust the orientation of all objects in the project to improve printability.

2. **Auto Arrange**. Automatically arrange all objects in the current project to avoid overlap.

3. **Move**. You can move the object by clicking and dragging it. Or you can use this function to position it by coordinates.

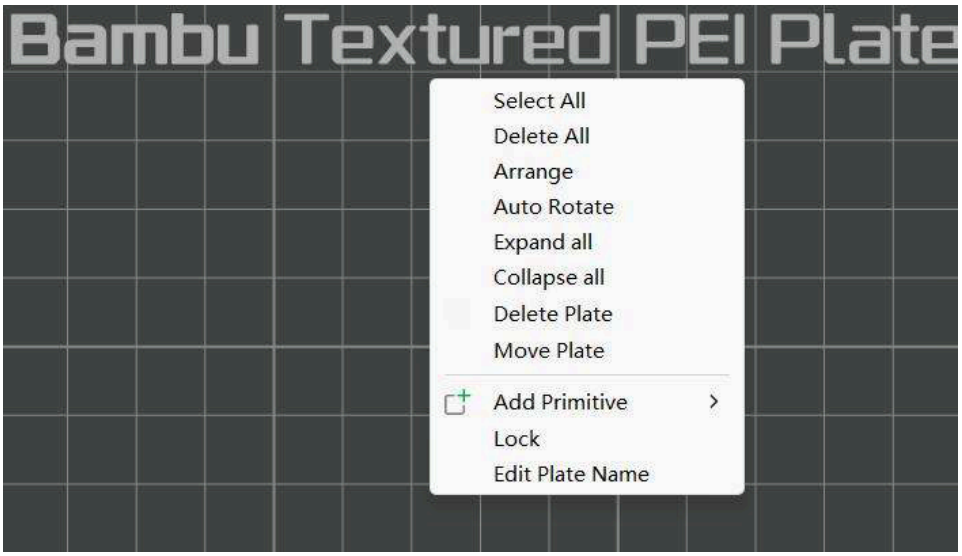
4. **Rotate**. Manually adjust the object's orientation. This might be helpful if you need to print something on its side or upside-down.

5. **Scale**. Make the object smaller or larger. You can do that by percentage, or make the object specific dimensions.



6. **Lay on face**. This setting is helpful to make sure it is flat on the plate. First choose the tool, then choose the face you want to lay down.

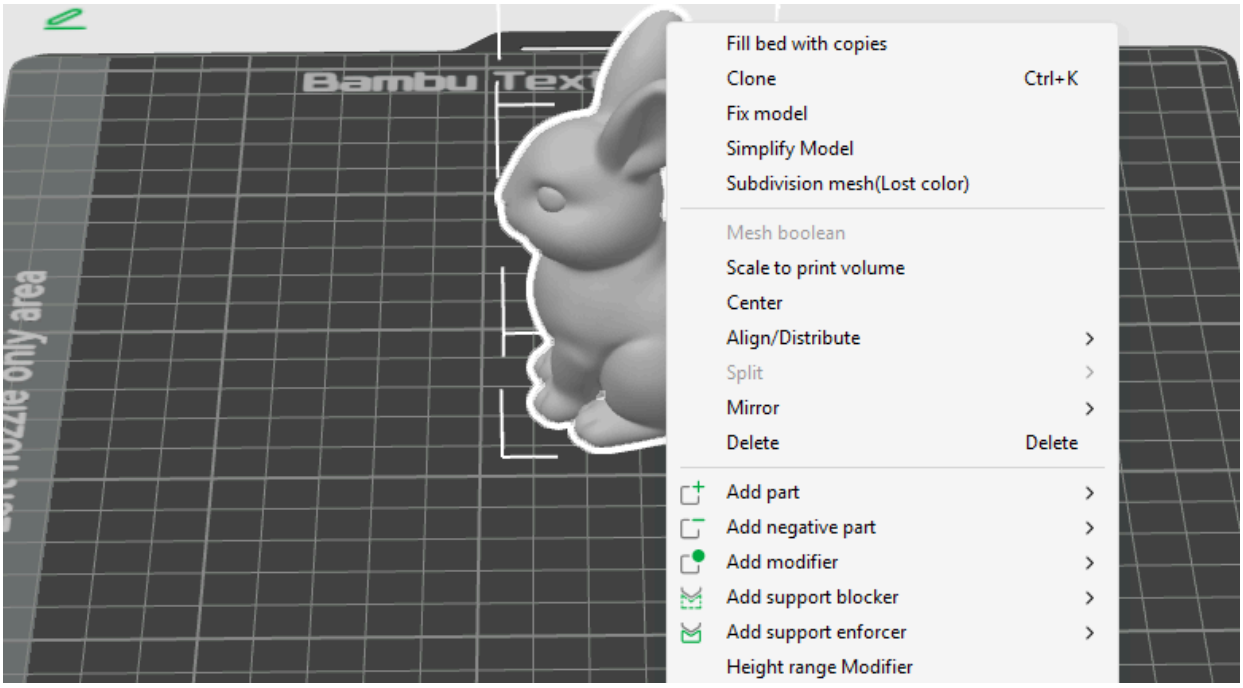
Bambu Studio:
Right-Click Menu



Right-Click on the *Plate*:

- **Select All**: Select all objects on the current plate.
- **Delete All**: Delete all objects on the current plate.
- **Arrange / Auto Rotate**: Automatically adjust the position and orientation of all objects on the plate.
- **Delete Plate**: Delete the current plate.
- **Lock**: Locks the plate. When locked, the Arrange and Auto Orient tools are unavailable.
- **Edit Plate Name**: Change the name of the current plate.

Bambu Studio:
Right-Click Menu



Right-Click on the *Object*:

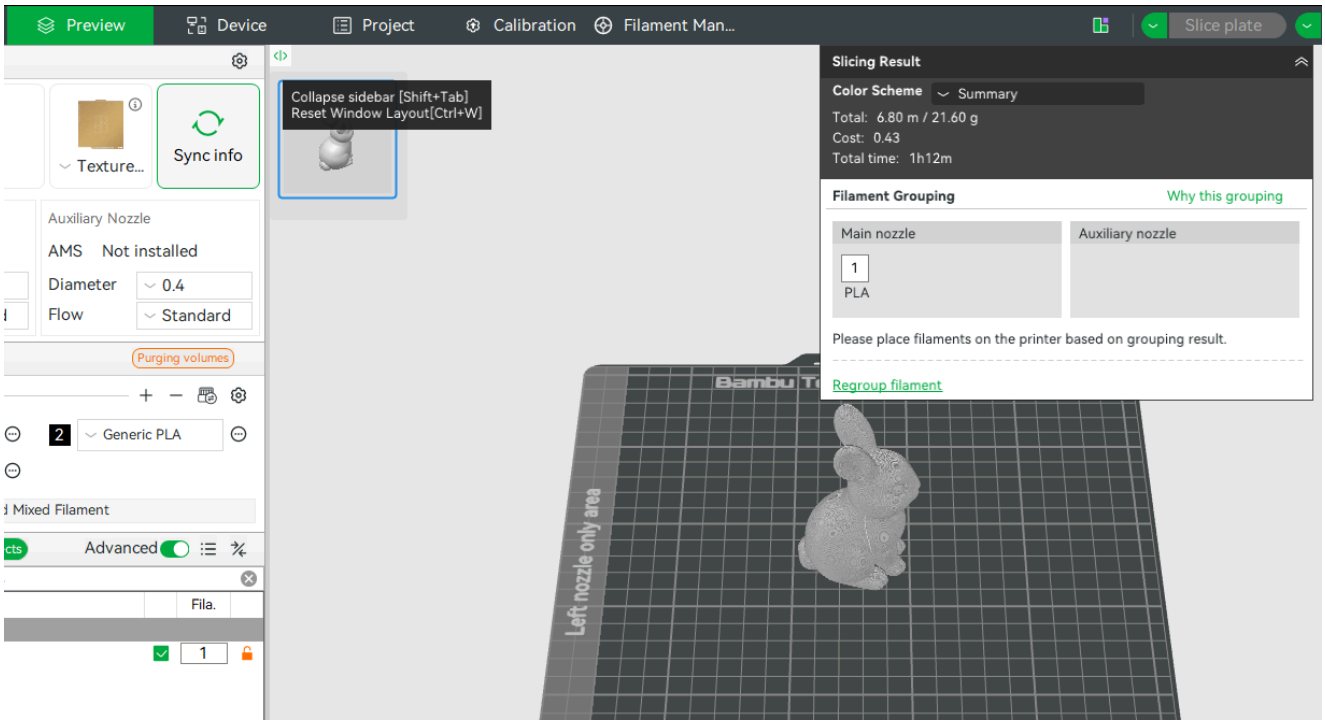
- **Fill bed with copies**: Automatically clone the selected object to fill the current plate.
- **Clone**: Select the number of copies and automatically arrange them on the current plate.

- **Center**: Move the selected object to the center of the current plate.
- **Mirror**: Mirror the object along the X / Y / Z axis.

Bambu Studio:
Slicing

Once you have adjusted all settings, you are ready to ‘Slice’ your model into the layers for printig.
Click 

in the top right corner. The screen will then switch to Preview.



<u>Slicing Result Summary</u>

- **Total (filament):** measured in grams
- **Cost:** ignore this, all filament is free in the library!

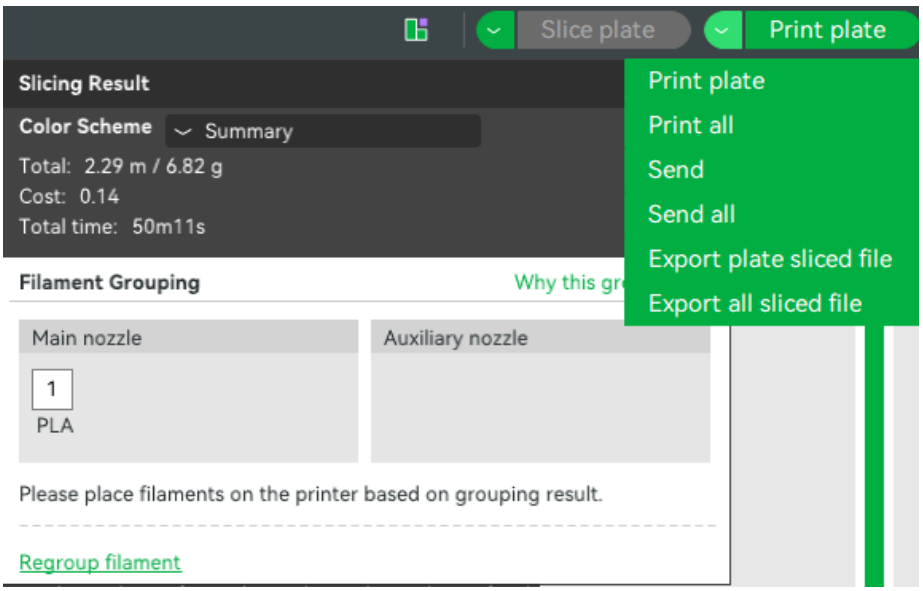
- **Total time: This is the most important piece of information, as it will tell you how long the model will take to print.**

Bambu Studio:
Export your model

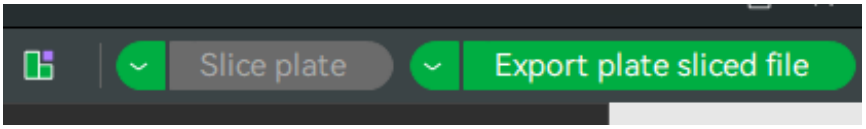
The final step is to save your model so it is ready for the printer.

You will need a USB stick (we also have some provided).

In the top right corner select the arrow next to Print plate. Then select ‘Export plate sliced file’.



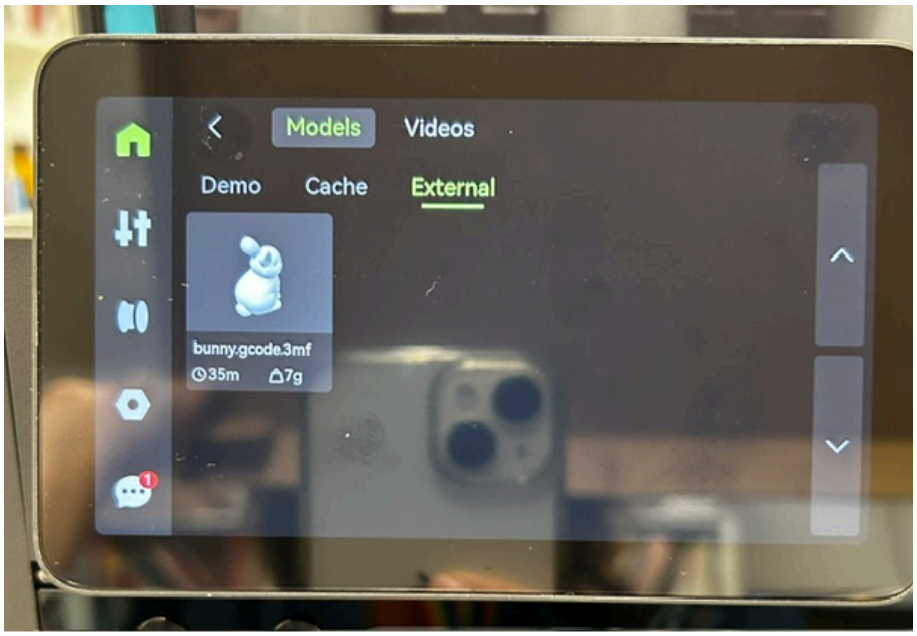
Then you can click on the big green button to export and save your file.



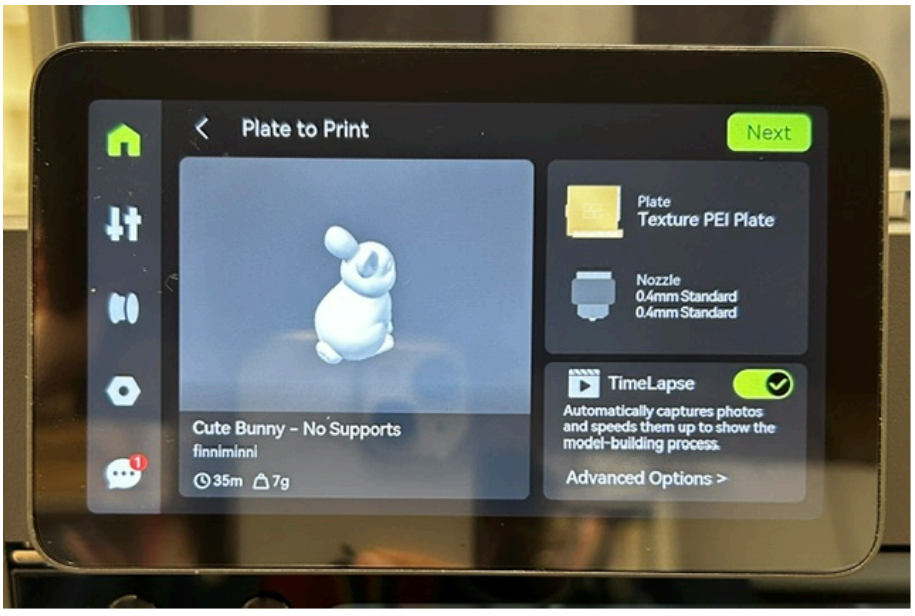
Save onto a USB stick with a name you will recognise.

Print

You're finally ready to print!
From the Home screen select Files > External
You will see a list of what is saved on your USB.



Choose your file (Bunny) and then select Next.



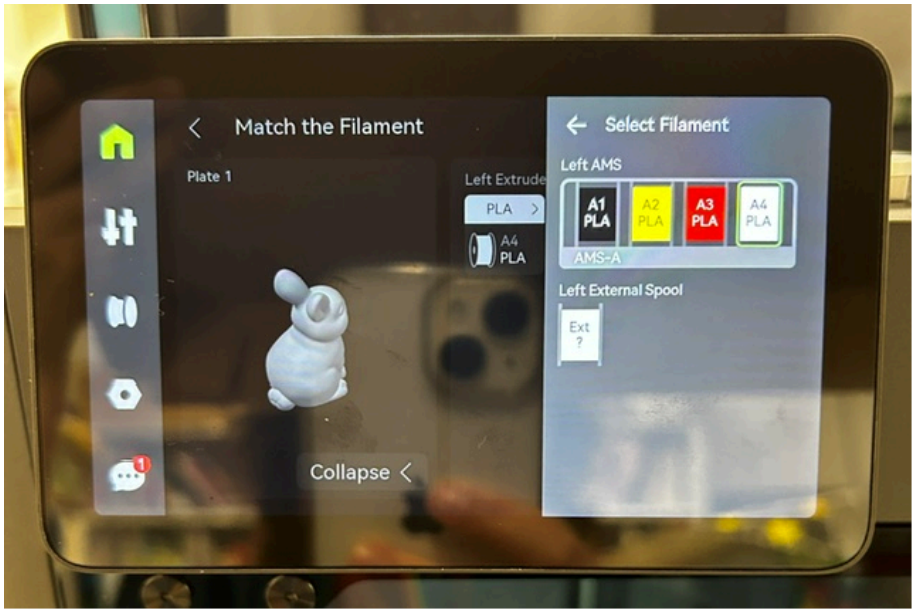
Print:

Choose material

You need to choose which filament colour you'd like!
The Bambu X2D has four colour choices depending on which filament is connected at the time.



Select the PLA button. Then choose which colour (see below).



Finally, select Print!

Print:

While it's printing

Once the printer starts working on your model, it will keep you updated on progress and show you some other info.
Usually it will calibrate the printer first to make sure everything is aligned and runs smoothly.



1. Progress bar shows you how far through the print you are, and how much time is remaining.

2. The top right section shows the temperature of the nozzle(s), print bed and chamber.
   You can see the nozzle reaches 220 degrees!



3. At the bottom are the options to pause or stop.

Retrieve your print

The printer will cool down when it’s finished and let you know when it’s OK to open the door.



The mat on the print bed is textured and flexible so it should be easy to get your model out.

If you’re having difficulty removing it, see staff.

Printing multiple colours

If you are printing something with multiple colours, for example this very cute panda!, you need to choose the filament colour for each part.



The second colour needs to be on the external reel to the right.

Scan the QR code for detailed information on changing the filament reel/colour. Or see staff for more info.

Recap on settings

Printer Model = **Bambu Lab X2D**

Material = **Generic PLA**

Nozzle = **0.4mm**

File type = Start with an **.stl or .obj** to work with in BambuStudio
Then export a **.3mf or .gcode** to print

Save file on a USB stick.

There's lots more to learn!
For more detailed information, scan below.

Bambu Studio
Detailed Guide

Bambu Lab X2D
Detailed Guide