

3D Printer Usage Guide

General Access

The 3D printers are part of the Prototyping shop and thus are managed and maintained by the shop manager. Members are granted access to the prototyping tools as part of their paid membership.

Note: the use of the terms “3d Printer”, “Machine”, and “Printer” all refer to the same entity collectively a specific 3d printer. The term “Object” or “Print” refers to the end result of a Printer operation. The acronym “CCMS” is to be considered the same as “Concord Maker Space” and is a reference to the corporate body in whole or part of its name sake.

3d Printer Access

3d Printer usage requires that you have been cleared for the specific machine. If you have been cleared on one that does not imply you are cleared to use another 3d printer.

Shop Rules related to 3d Printers

1. You must be checked out to use the printer before you can use the printer. Being checked out to use a specific printer does not clear you for use of all printers.
2. When working with the printers, be good to the other Makers and clean up after yourself. Generally put tools back where you found them. If you know they are not in the proper location when you find them, put them away in the proper location.
 - a. Printers should have their doors and covers in place when not in uses.
 - b. Printers should always have a build plate on the build platform when not in use. This is to keep new users from somehow mistakenly running a print without a build plate.
 - c. When you have completed a print, make every attempt to clean the build plate to perfection. Sometimes this is not possible. Make a solid attempt to do a good job.
Use soapy water and be sure to rinse off any soap when you are done. Use of other chemicals or sharp tools is not permitted.
 - d. The Bambu machines are for PLA only and you must use Bambu filament.
 - e. Any personal filament left in the public space maybe use used by other members. If you do not want your personal filament to be used by other members you have to store it in a personal storage space or remove it from the space altogether. The Space is not responsible for what happens to personal filament that is left in the space.
 - f. Any filament not in the AMS should be stored in a sealed plastic bag on the shelf.
The filament end must be secured at all times so it does not unwrap.
 - g. **NEVER let a loose filament end unwind on a spool. If you do not understand why, please ask in the #prototyping channel and someone will point you to good examples as to what can occur if you do not pay attention to this detail.**

3. Printers may be used for lawful purposes only. Members are not permitted to use the printers to create material that are:
 - a. Prohibited by local, state, or federal law.
 - b. Unsafe, harmful, dangerous or poses an immediate threat to the well-being of others.
 - c. Obscene or otherwise inappropriate for any audience. All prints must be G or PG rated.
 - d. In violation of another's intellectual property rights.
4. CCMS reserves the right to review all files before printing and to disallow a member from executing a model and/or producing any content at any time at the discretion of any shop manager, board or staff member.
5. CCMS is not responsible for quality of content produced on the printers.
6. A single member cannot schedule prints on more than one printer at the same time.

Material Usage

Space provided material

The Material in the shop is free to use as you see fit. Quality and quantities of specific colors are not guaranteed. We try to get quality filament. Age can be a factor in the quality of the filament. If you have a mission critical print or you are doing a "production" run where you expect to print using a lot of material, you should supply your own filament.

Member material

If you have left over filament from a project that you do not need or want, it is appreciated if you leave it for other members to use. Any material left in the prototyping room will be considered fair use by members. If you leave filament on a printer or in the room, it is likely that another member will use that material. It is up to you to remove your property from the area to ensure that it is not used by other members.

General details on setup related to filament and materials

1. Filament must be compatible with the selected printer. (see below)
2. As a rule if you find the printer with filament pre-loaded, you may want to inspect the filament feed tubes and extruders to ensure that they are not broken or in the case of the dual head, you should ensure that the head you are not using is unloaded and clean before you start your print.
3. Compatibility information for the shop printers.

Bambu X1C printers should only use material from Bambu Labs and currently only PLA material should be used. Exotic materials even from Bambu Labs such as Carbon fiber material should not be used.

Other shop filament printers: Material size and hot end requirements must be correct and understood before loading materials.

- a. X-MAX (single head changeable [a/b])
 - i. Precision: 0.05-0.4mm
 - ii. 1.75mm filament
 - iii. 250c[a] 300c[b] max hot head temp.
 - iv. 115c max bead temp
 - v. Print Speed 60-150mm
 - vi. Materials: [Head A]: (PLA,,TPU,PETG); [Head B]:(Nylon, Carbon Fiber and PC)
 - vii. If you want to use an exotic material that requires Head B, Please reach out to the shop manager for help swapping the head out. There may be constraints on some materials given current shop ventilation.
Note that : [Current shop ventilation prohibits the use of ABS]
 - viii. Print Volume: 11.8"x9.8"x11.8"(300(L)x250(W)x300(H)mm)
- b. Shop supplied materials should not be used for creating production goods that are for sale to a 3rd party or to be used as gifts. If you intend on creating something that you are selling as part of a business transaction, or giving away as a gift (perceived non personal value) you must supply your own filament.