

# Reviewing Your File in Makerware

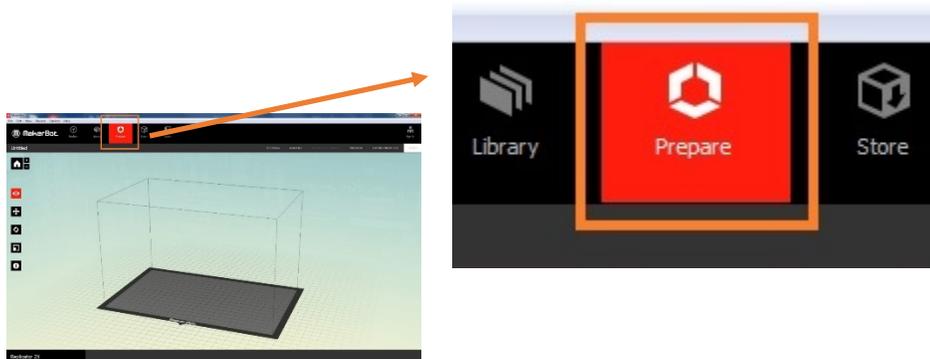
SUNY New Paltz Makerbot Innovation Center

SAB 100 9:00-5:00 M-F

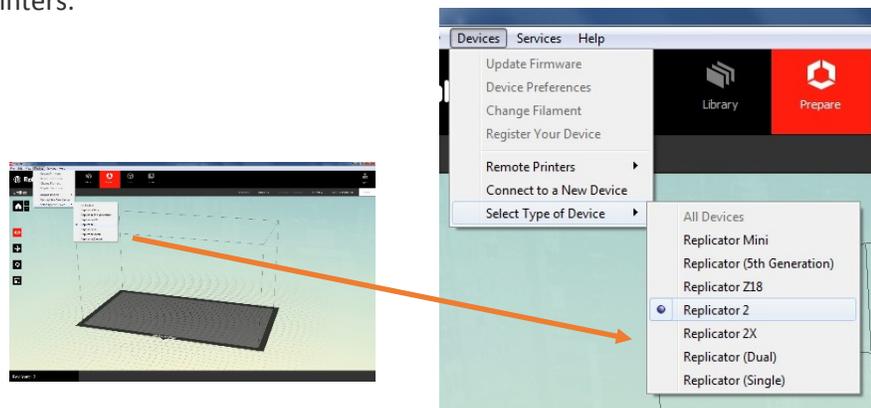
This guide is to help those submitting files to the Makerbot Innovation Center preview their builds, detect problems prior to submission, understand our machine limitations, and obtain cost estimates.

**All print submissions to the MIC must be in .stl format. .x3g files will not be accepted.**

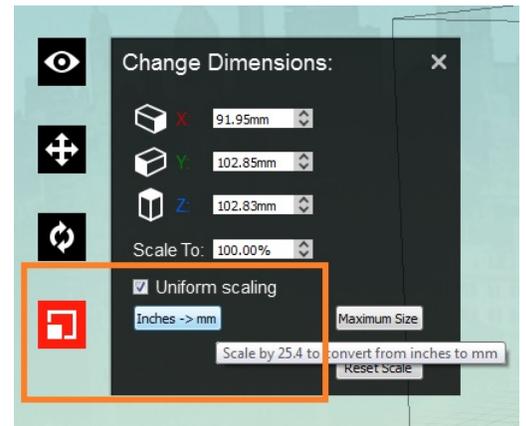
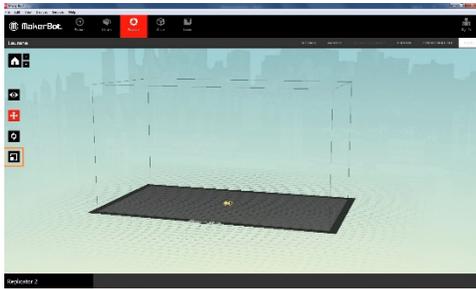
- For more info about Makerware and the slicing process:  
<https://support.makerbot.com/learn/makerbot-desktop-software>.
  - Makerware is free to download from <https://www.makerbot.com/download-print/>
1. Once the software is downloaded and open, click on the **Prepare** icon on the top of the page. You will see a printer's build platform and maximum printing space.



2. From the top left menu, go to **Devices > Select Type of Device > Replicator 2**. This will automatically update the printing dimensions and setting options available for that device. NOTE: this step is important as settings vary between printers.

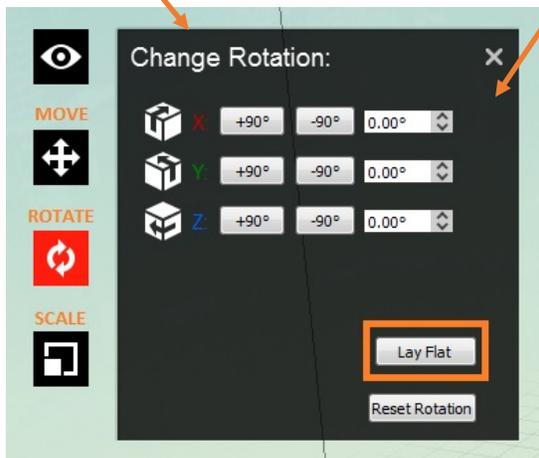
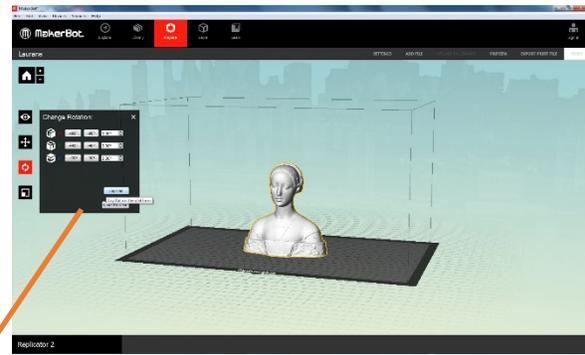
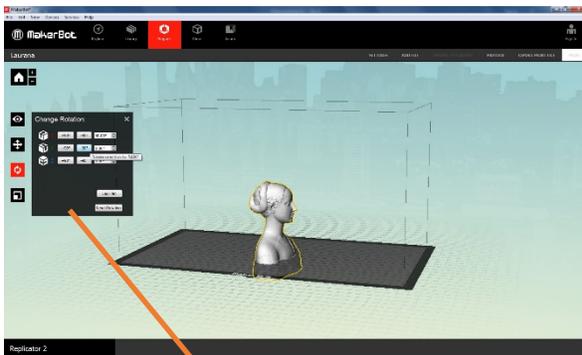


3. Next, import your file. Go to **File > Open** and browse to select your **.stl** file.
  - a. If your object was designed in inches, you may be prompted to adjust the scale of your object.



4. SCALE your object.

- a. If the object appears small (see top left), click on the **Change Dimensions** icon in the left menu and click **Inches -> mm** (see top middle & right). This should correct the issue. If you're unsure if your file is at the correct scale, check the **Change Dimensions** menu for the object's max dimensions in the X, Y, and Z axis to compare with dimensions in your design software.
- If you submit a file in cm, we will ask you to convert it to inches or millimeters.
- If the object looks unusually small after converted to mm, we will ask you to confirm the scale.
- If the object exceeds the printer's maximum build dimensions, we will ask you to re-scale.

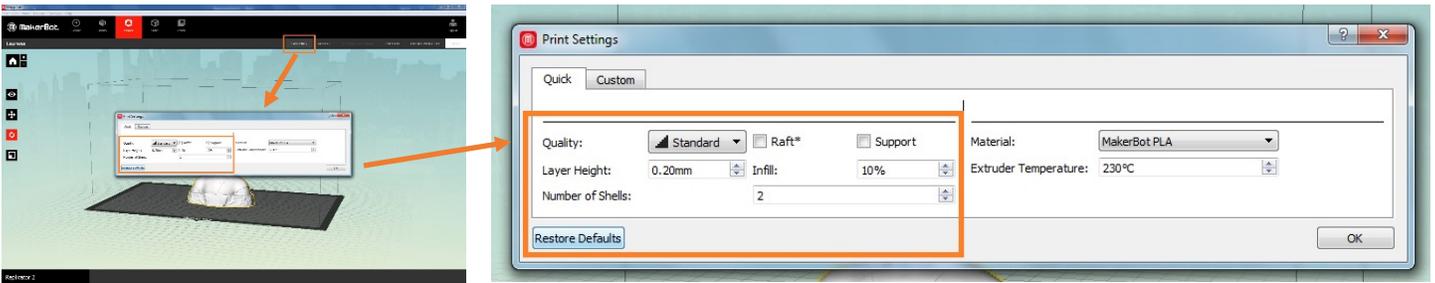


5. PLACE your object. Use the icons on the left to move, rotate, or scale your object (see above & left).

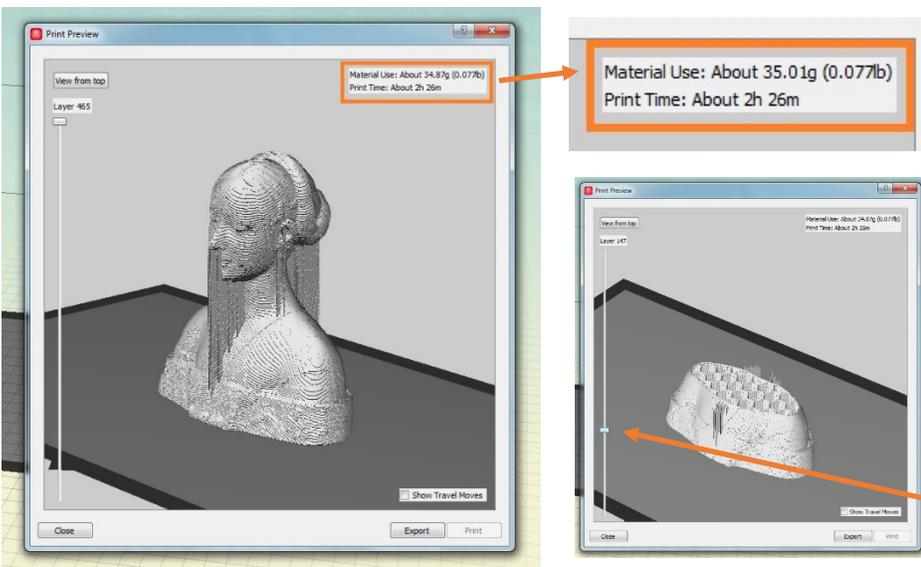
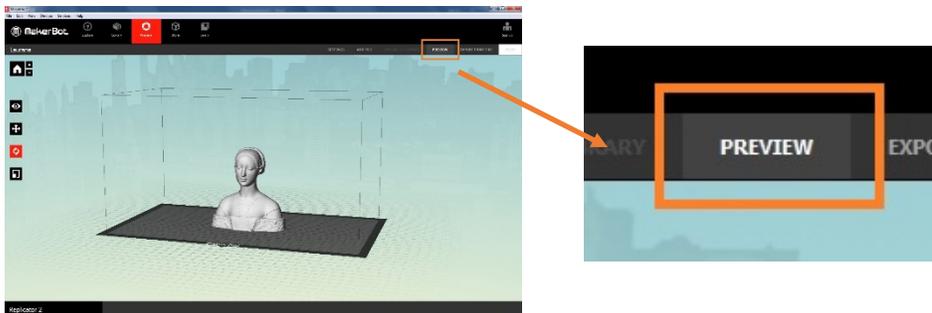
- a. Use the **Lay Flat** button to snap your object to the build plate.

\*Remember, this is to give you an **estimate** of the scale, material used, and time to print, so don't worry about adjustments too much. The intern processing your file will be sure to adjust the orientation to make printing as economical and successful as possible.\*

6. PRINT SETTINGS can be adjusted by clicking on the **Settings** button in the top right menu (see below). This is where you can adjust the infill %, number of shells, add rafts and supports, etc. **10% infill and 2 shells are the default standard settings of Makerware and the MIC, and will be applied to your build unless you specify otherwise.**



7. To PREVIEW and get a cost estimate, click on the **Preview** button to test and get estimates for your print. This could take a few minutes.



a. At the top right corner of the preview window (see left) you will see an estimation of material used and print time. This is what we use to generate your quote.

b. Costs of printing are subject to change so please contact the center for current rates.

c. **If this estimate exceeds 8 hours or 750g of material, we will request that you divide your object into parts to be printed separately.**

d. You can use the slide bar on the left to view individual layers and where supports will be added if selected (see above right).

8. Is it time to submit the file or troubleshoot?

- a. If your object appears as you intended in the preview you can submit your **.stl** file (**NOT .x3g**) to the Makerbot Innovation Center.
  - For details on print submissions, go to [newpaltz.edu/3d/mic](http://newpaltz.edu/3d/mic) and look for **How to 3D Print**
- b. If your object appears dark with no details, disappears, or has added or missing parts, there are some design issues that must be resolved.
  - These issues are corrected by bringing the object back into the software used to create it and fixing them there.
  - For details on fixing errors, go to [newpaltz.edu/3d/mic](http://newpaltz.edu/3d/mic) and look for **Troubleshooting File Errors**
  - **Although we check each file before giving you a cost estimate, we are not responsible for failed builds due to these errors.**

We Will Not Print
Weapons
Files containing errors (naked edges, non-manifolds, reversed normal, etc.)
Files that exceed 750 g or 8 hrs build time.
Parts that fail to print when attempted more than three times.
*We reserve the right to reject files*

9. Additional Resources:

- For more on Makerware:

<https://support.makerbot.com/learn/makerbot-desktop-software/using-makerbot-desktop>

- For more info about the MIC:

[www.newpaltz.edu/3D](http://www.newpaltz.edu/3D)