MECHANICAL & NUCLEAR ENGINEERING

INNOVATION LAB

MakerBot Print User Guide

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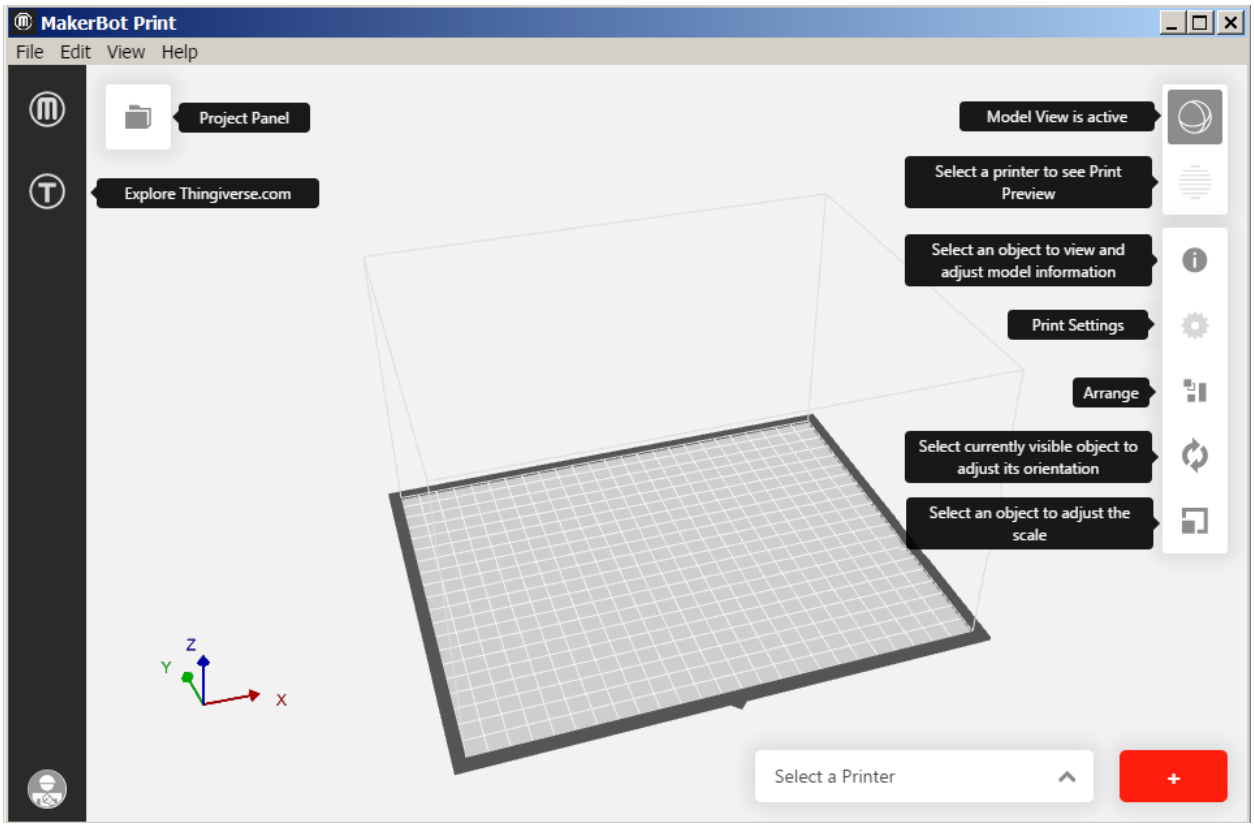
USING MAKERBOT PRINT

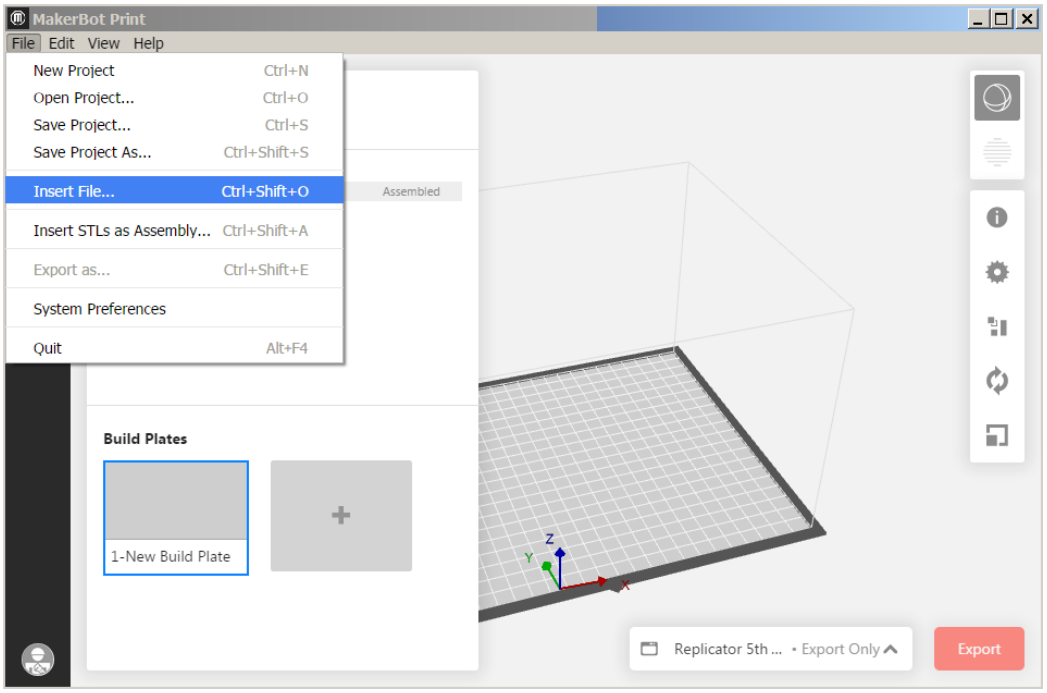
MakerBot Print allows you to View, Arrange, Orient, Scale, and Preview a sliced version of your 3D model. You can also use and work with multiple build plates to view and edit multiple 3D models.

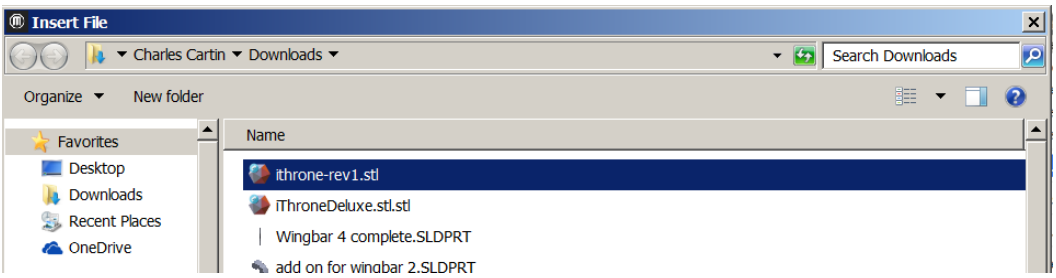


Choosing a 3D Model:

Every 3D print starts with a 3D model. If you want to print a 3D model you designed yourself, export it from your 3D modeling application in a compatible format. You can also download 3D models on Thingiverse.com.

To open an object to your local computer, open the **Project Panel**, click **Add Models**, and navigate to the location of the saved file. Select the file and click Open to import it into MakerBot Print. You can also click **File > Insert File** to import the object into MakerBot Print. Once a model has been added, it is available to be used on your build plate.


MakerBot Print
File Edit View Help
New Project Ctrl+N
Open Project... Ctrl+O
Save Project... Ctrl+S
Save Project As... Ctrl+Shift+S
Insert File... Ctrl+Shift+O
Insert STLs as Assembly... Ctrl+Shift+A
Export as... Ctrl+Shift+E
System Preferences
Quit Alt+F4
Assembled
Build Plates
1-New Build Plate
Replicator 5th ... • Export Only
Export


Insert File
Charles Cartin Downloads
Search Downloads
Organize
New folder
Favorites
Desktop
Downloads
Recent Places
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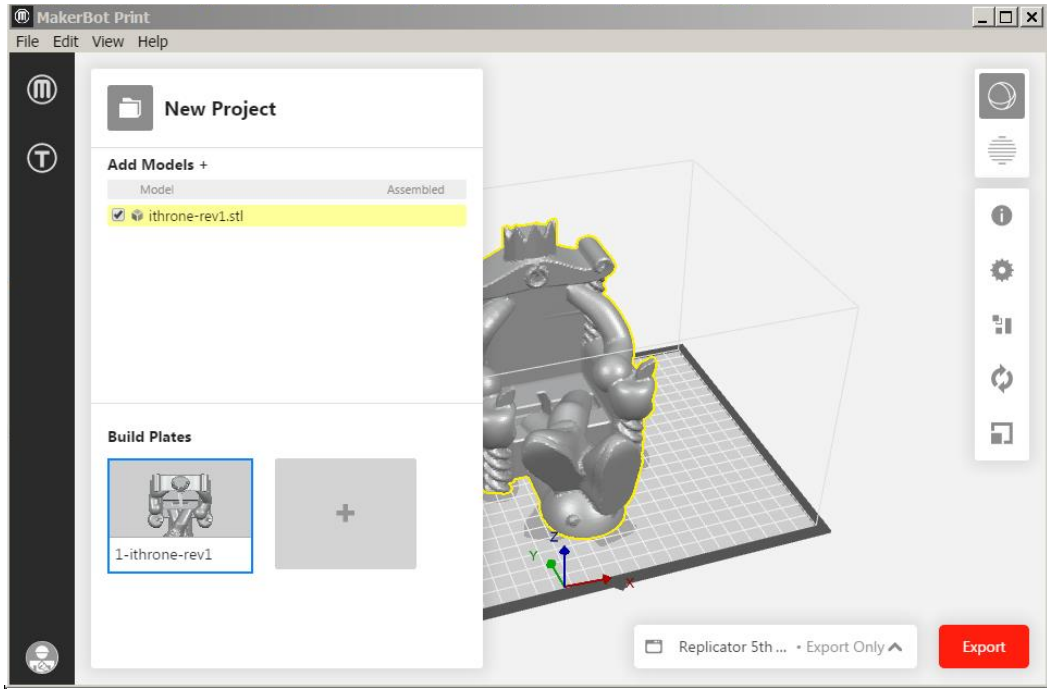
MakerBot Print
File Edit View Help
New Project
Add Models +
Model
Assembled
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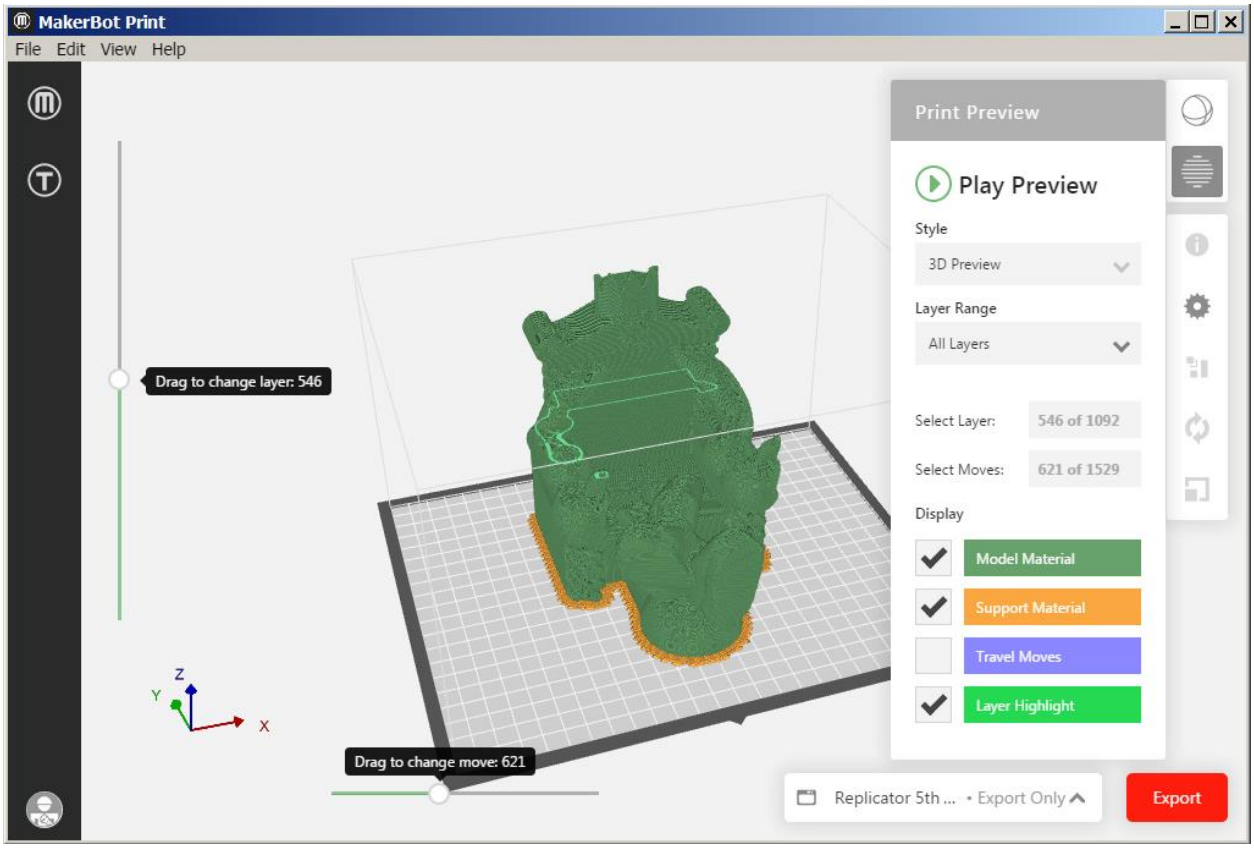
Build Plates
1-ithrone-rev1
Replicator 5th ... • Export Only
Export

Click on **Print Preview** to generate the layer-by-layer slice preview.

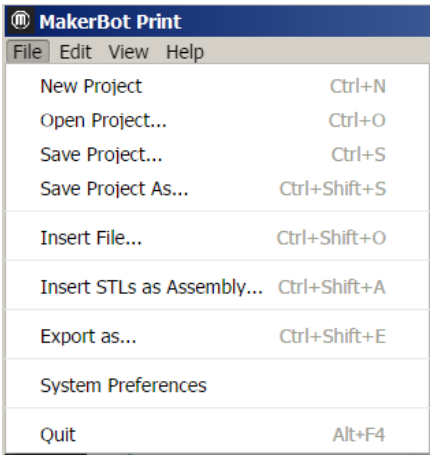
Drag the **Layer Slider** up and down to change the selected layer.

Drag the **Move Slider** left and right to change the selected tool path movement.



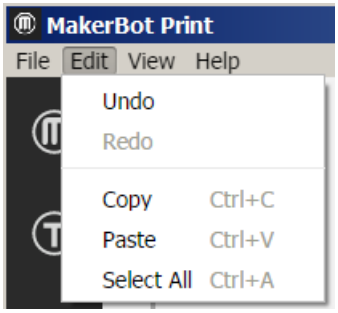
File

- Allows you to create new projects, open and save projects, insert and import files, and access system preferences.
- If you have a multi-file STL assembly, select **File > Insert STLs as Assembly**.



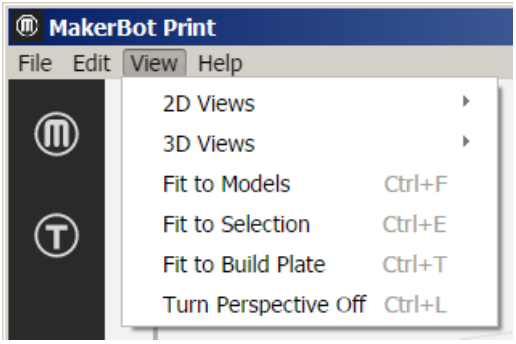
Edit

- Allows you to undo an action, redo an action, as well as, copy and paste objects.



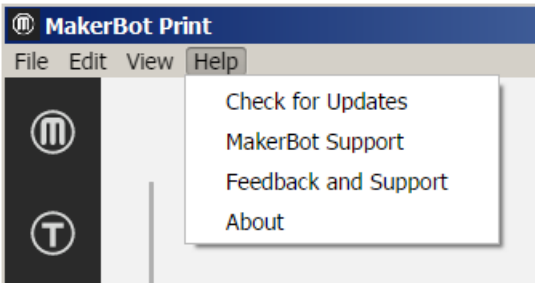
View

- Allows you to view your model from an array of 2D views, 3D views, and multiple perspectives.



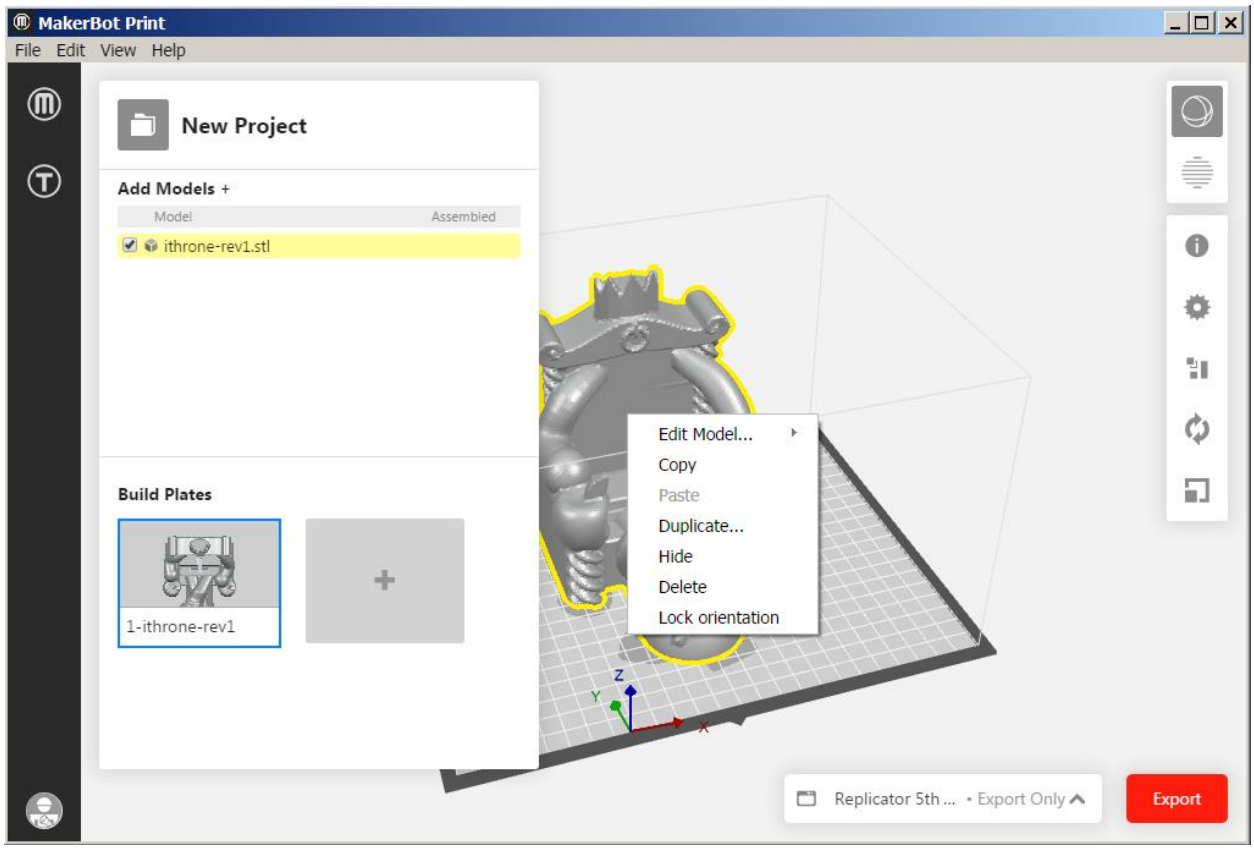
Help

- Enables Help with MakerBot Print and allows you to check for updates.



Project Panel:

- Click the Project Panel to import models into MakerBot Print.
- The heading shows the name of the project. To rename the project, select **File > Save Project As...**
- You can also create multiple build plates to manage large build projects. Under Build Plates, click the + button to insert another build plate.
- To delete a build plate, right-click the build plate preview and select Delete Build Plate. Models that were on the deleted build plate become hidden, but they are not deleted.



Model View

- Prepare and arrange your 3D models on the build plate.
- Click and hold the right mouse button and move the mouse to be able to view your model from any angle.
- Press and hold the Shift key and the right mouse button together to move the build plate in space.
- Zoom using a track pad or the scroll wheel on your mouse.

Slice Preview

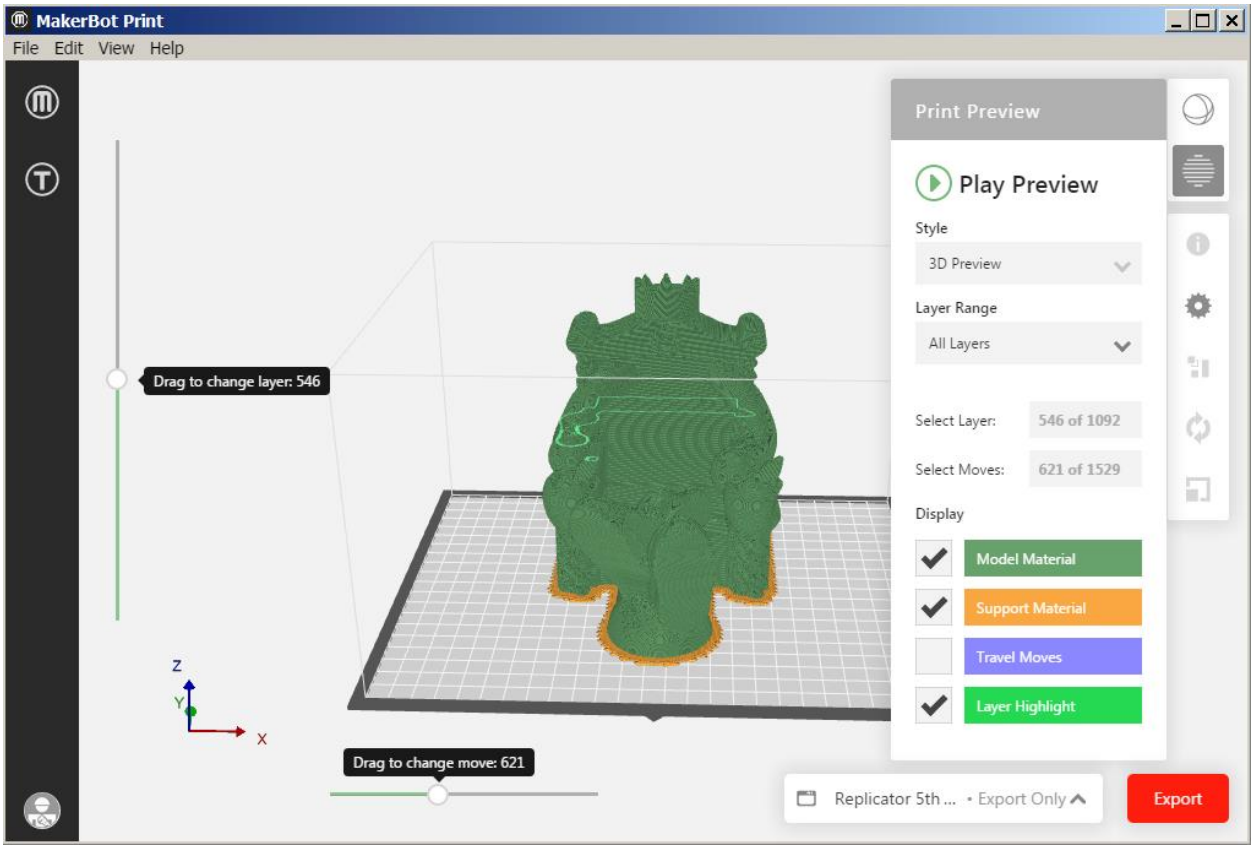
- Slices the 3D model into layers so that you can view the path the Smart Extruder+ tool will make while printing the model.
- **Play Preview** shows all the layers that make up the sliced model and animates them. Play preview shows you how your 3D model will be printed, before any printing is even done.
- **Layer Range** allows you to view sliced the model up to a certain layer. You can slice the model and view all layers, up to a certain layer, a single layer, a single layer with one layer above and a single layer with one layer below.
- **Select Layer** allows you to set which layer you would like to view up to.
- **Head Moves** the number of moves the extruder head makes in creating your 3D print.
- **Display** allows you to turn on or off certain information regarding the slice preview.

Select the **Model Material** checkbox to turn on or off viewing the rendering of your 3D model.

Select the **Support Material** checkbox to view the support structures that may be part of your 3D model.

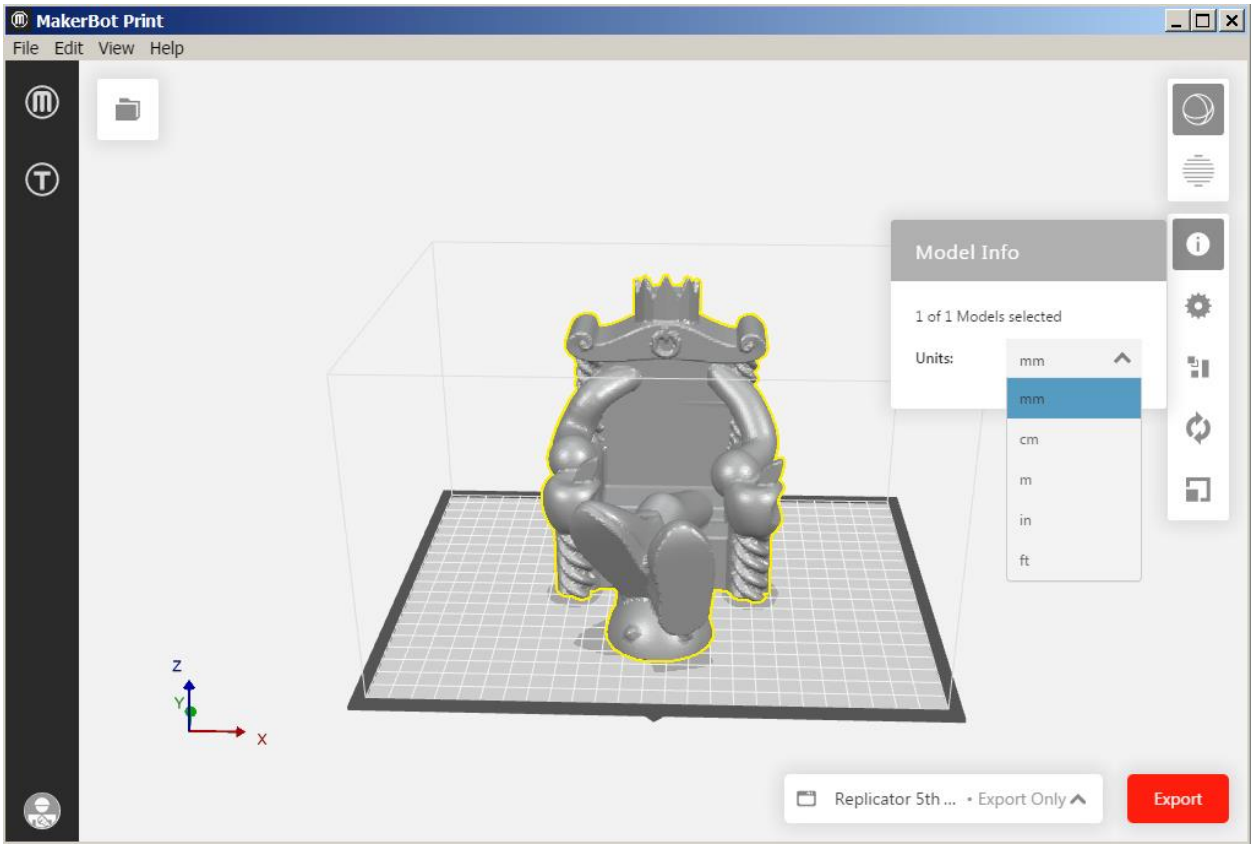
Select the Head Moves checkbox to view the travel moves from a project. Travel moves are parts of the extruder path where the Replicator+ extruder moves without extruding any plastic.

Select the **Layer Highlight** checkbox to highlight the selected layer.



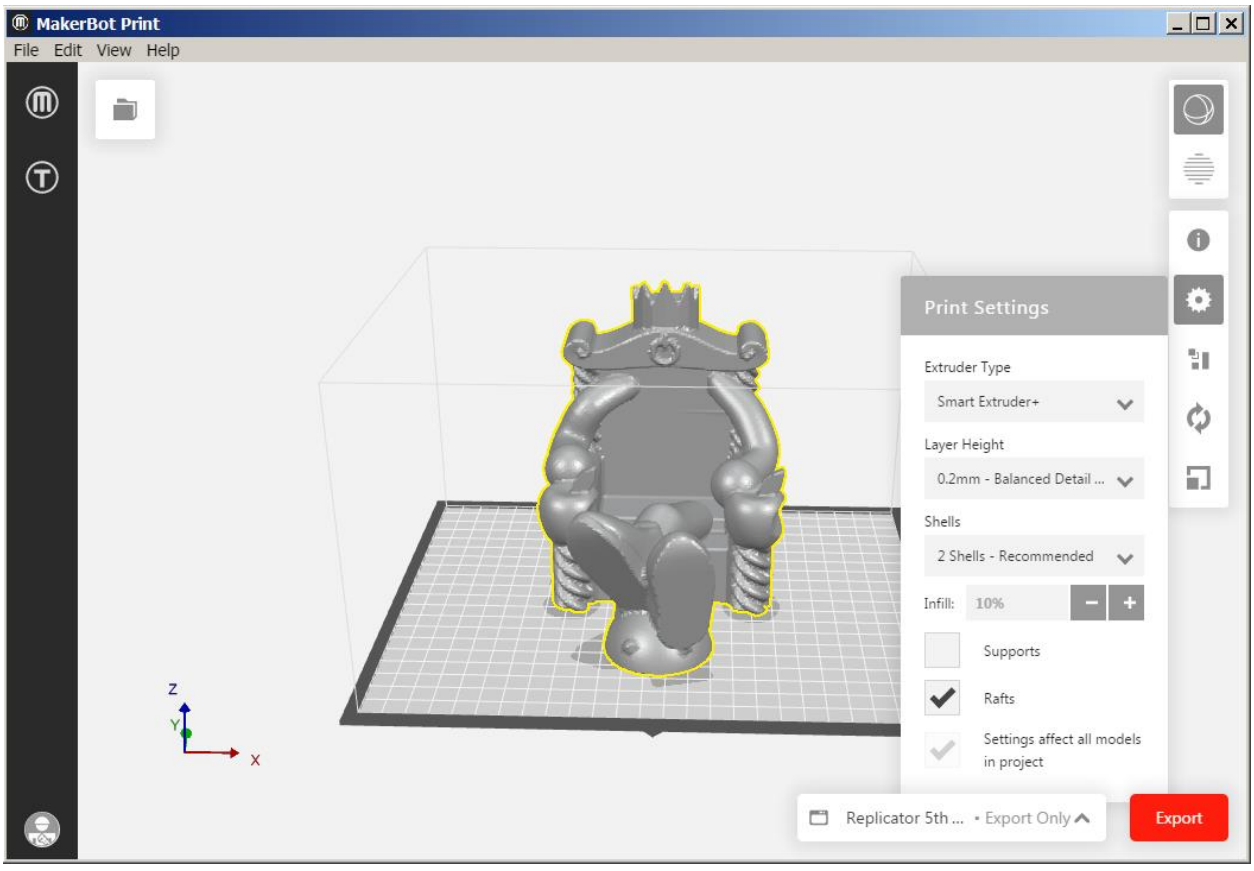
Model Info:

- Allows you to change the units that your 3D model is measured in. You can cycle between mm, cm, m, in, and ft.



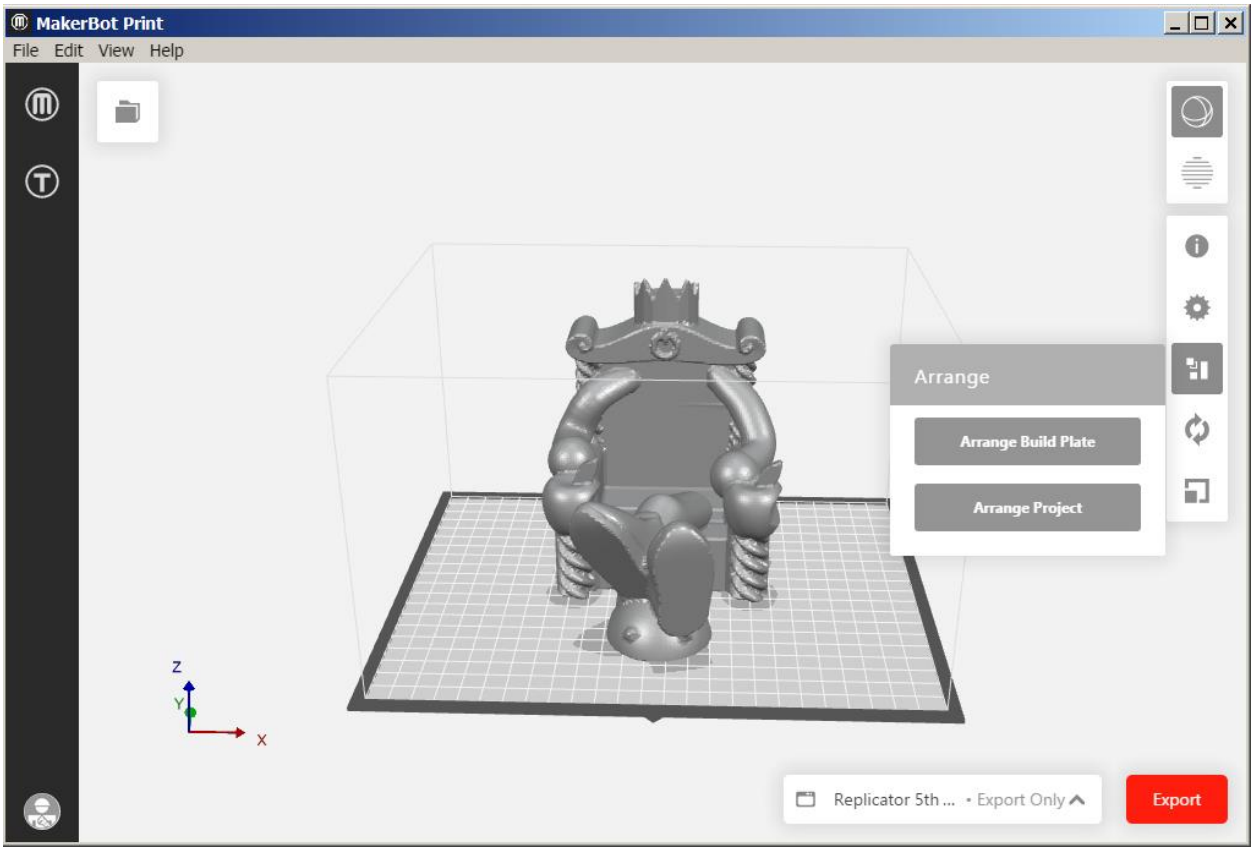
Print Settings:

- Select **Extruder Type** to choose which type of extruder you are using.
- Select **Layer Height** to set the thickness of your printed object's individual layers. A lower layer height will result in a smoother surface. An object with a higher layer height will print faster.
- Select **Shells** to set the number of outlines the extruder prints on each layer before printing the infill. More shells make an object stronger and heavier and increase print times.
- Adjust the **Infill** percentage to set the density of your printed object's internal support structure. A higher percentage will result in a heavier, stronger object.
- Select the **Supports** checkbox to have your model print with support structures. MakerBot Print will automatically generate supports for any overhanging sections of your object. Supports will be easily removable once you remove your finished object from the build plate.
- Select the **Rafts** checkbox to have your 3D object printed on a raft. The raft acts as a base for your object and any support structures, and ensures that everything adheres well to the build plate. The raft will be easily removable once you remove your finished object from the build plate.



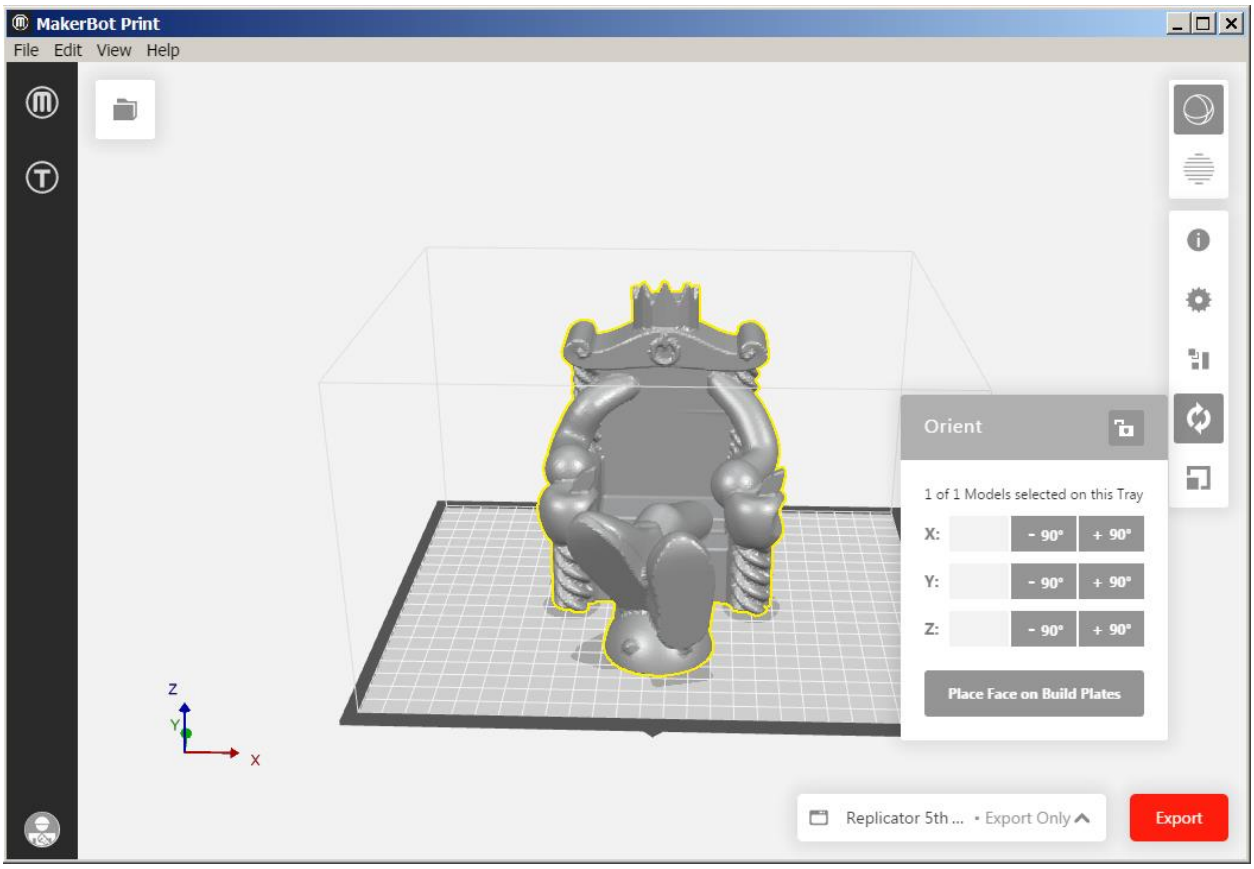
Arrange:

- If there are multiple objects on the build plate, select the **Arrange Build Plate** to move the objects to the most optimal placement on the build plate.
- If there are multiple objects on the build plate and all of the objects can't fit on the original build plate, select **Arrange project** to arrange the objects to the most optimal placement on the build plate. Objects that can't be arranged on the original build plate will be moved to another build plate and arranged optimally as well.
- Use the right-click menu to copy, paste, hide, or delete your model from the build plate.



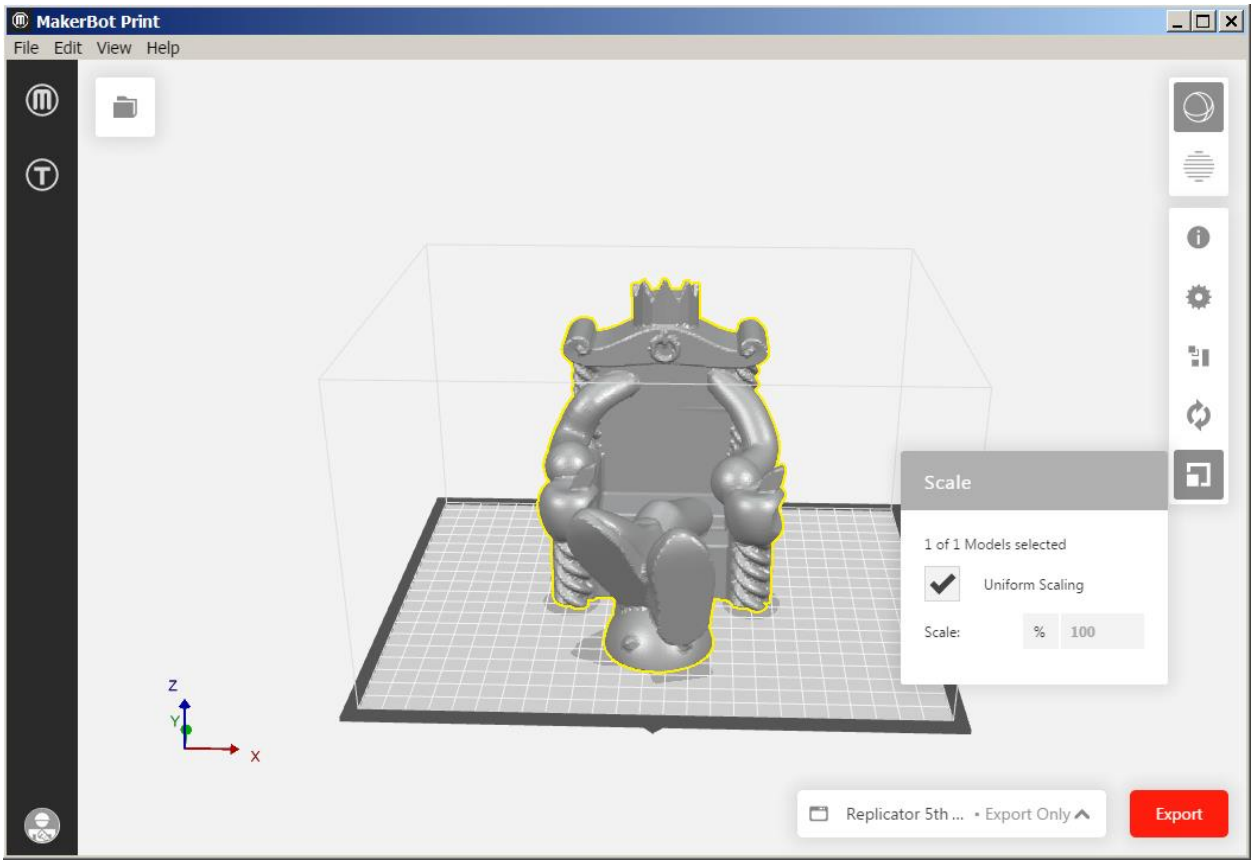
Adjust Orientation:

- Select **Place Face on Build Plates** to lay your model flat on the build plate
- Rotate your model by 90 degrees or by a specific number of degrees along the x-, y-, or z-axis.



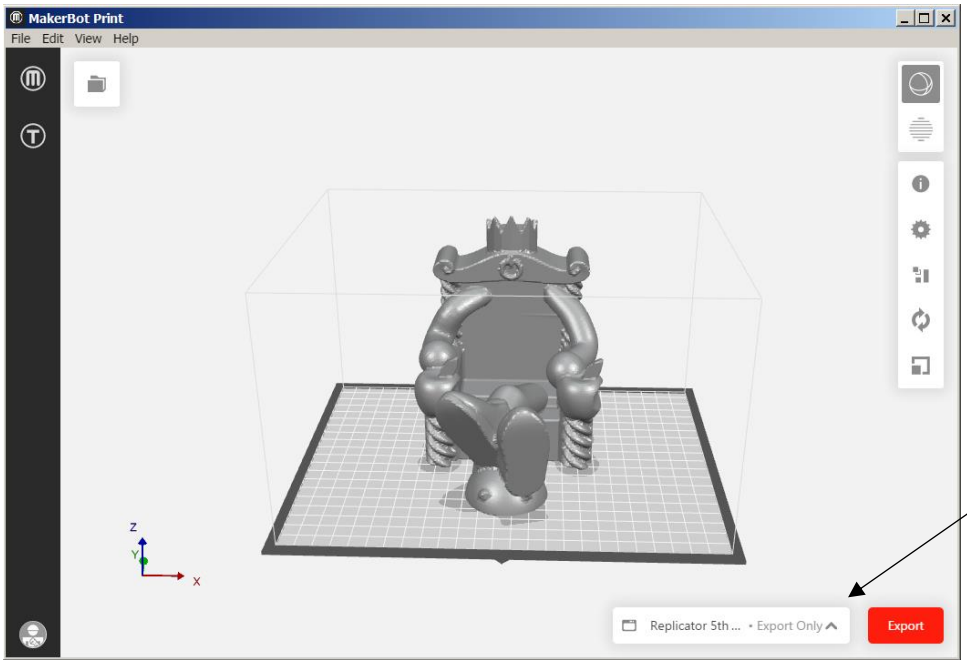
Adjust Scale:

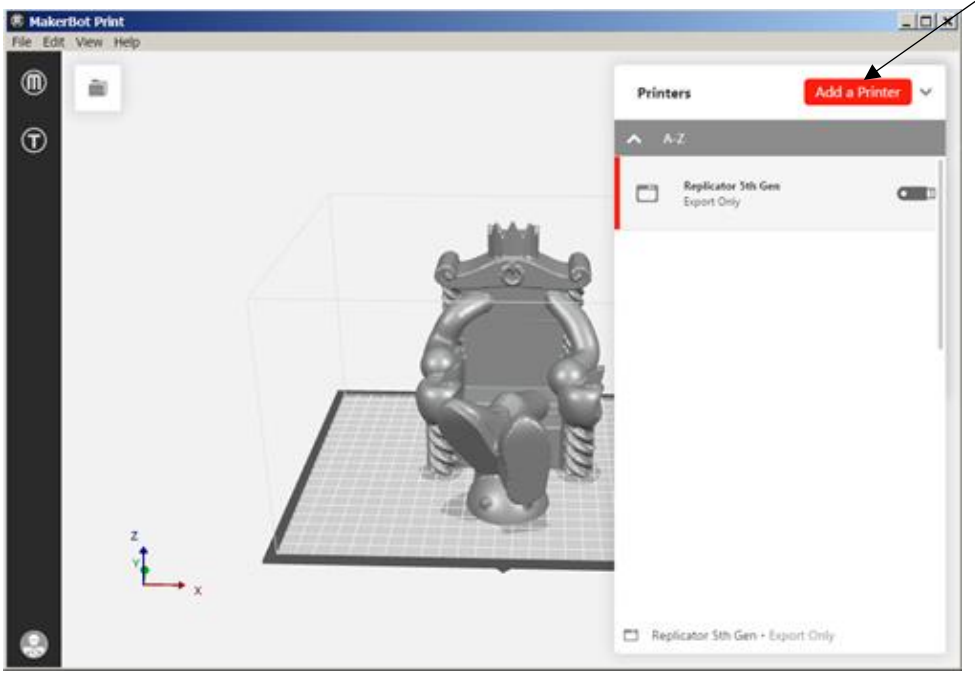
- Select **Uniform Scaling** to adjust the scale of your model equally along the x-, y-, or z-axis. Enter the percentage of how much you want your model scaled.
- De-select **Uniform Scaling** to scale the model by a specific amount along the x-, y-, or z-axis.

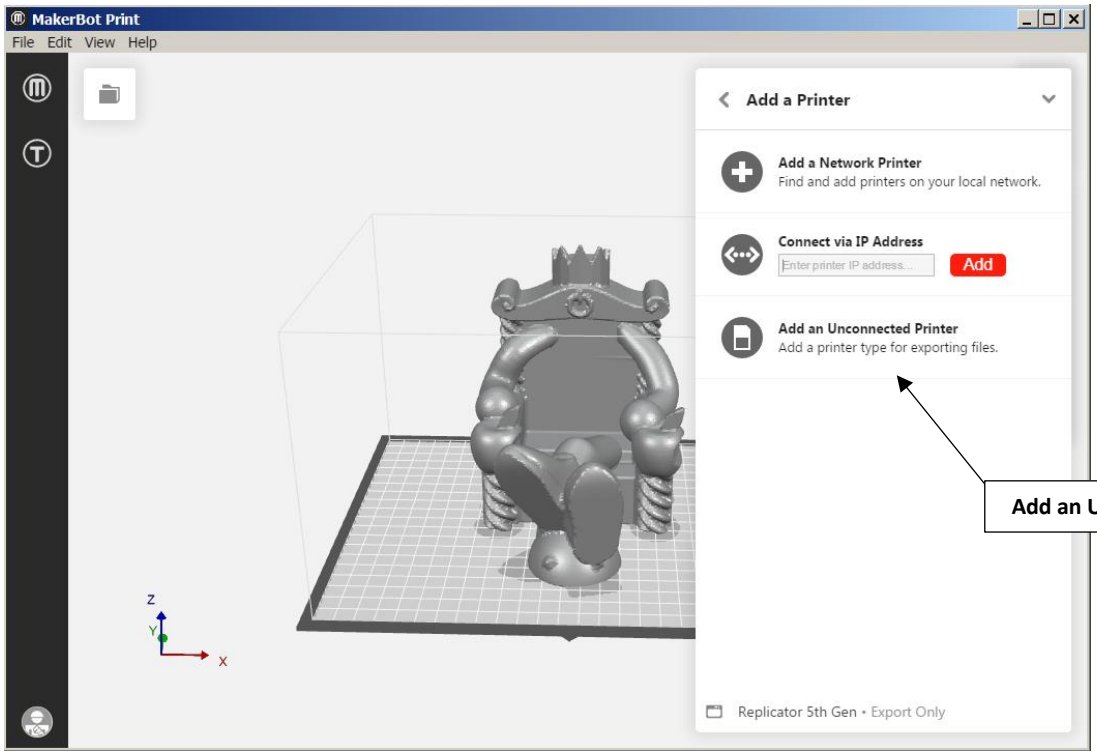


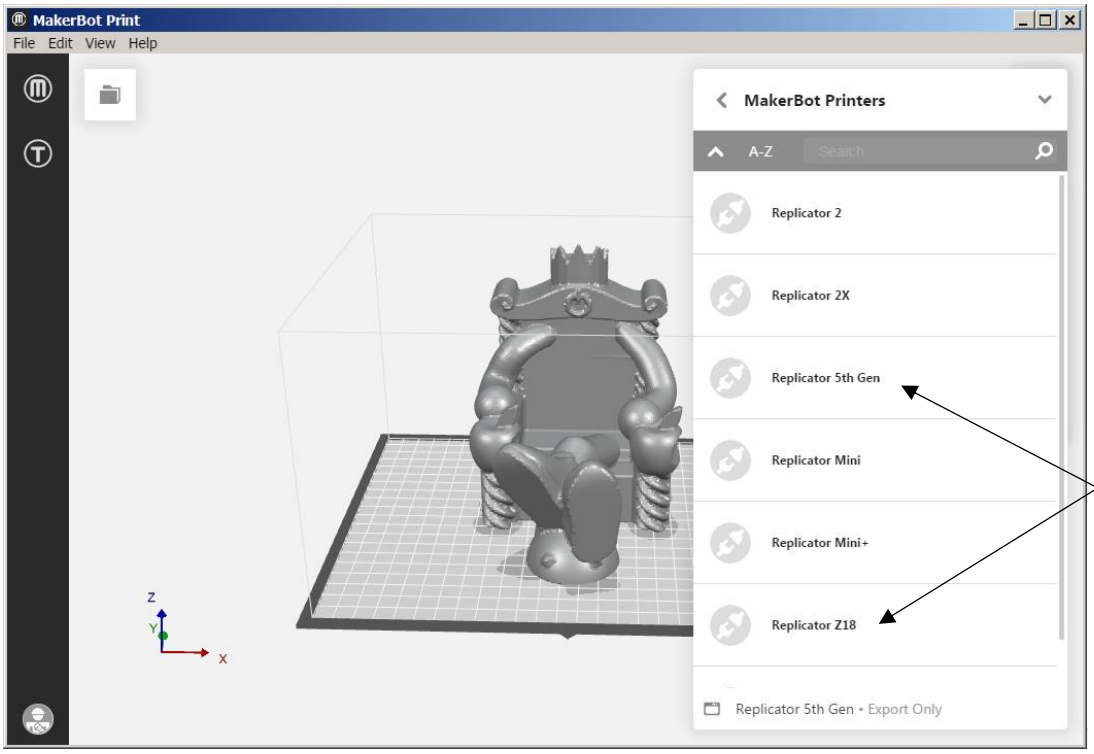
Printer Panel

- Select the 3D printer to be used with your project.
- Select the printer drop-down and Add a Printer > **Add an Unconnected Printer** for exporting files.
- Once finished editing your 3D model, select **Export** to export your model into a sliced file or **Print** to print your file if it MakerBot Print is connected to a printer.



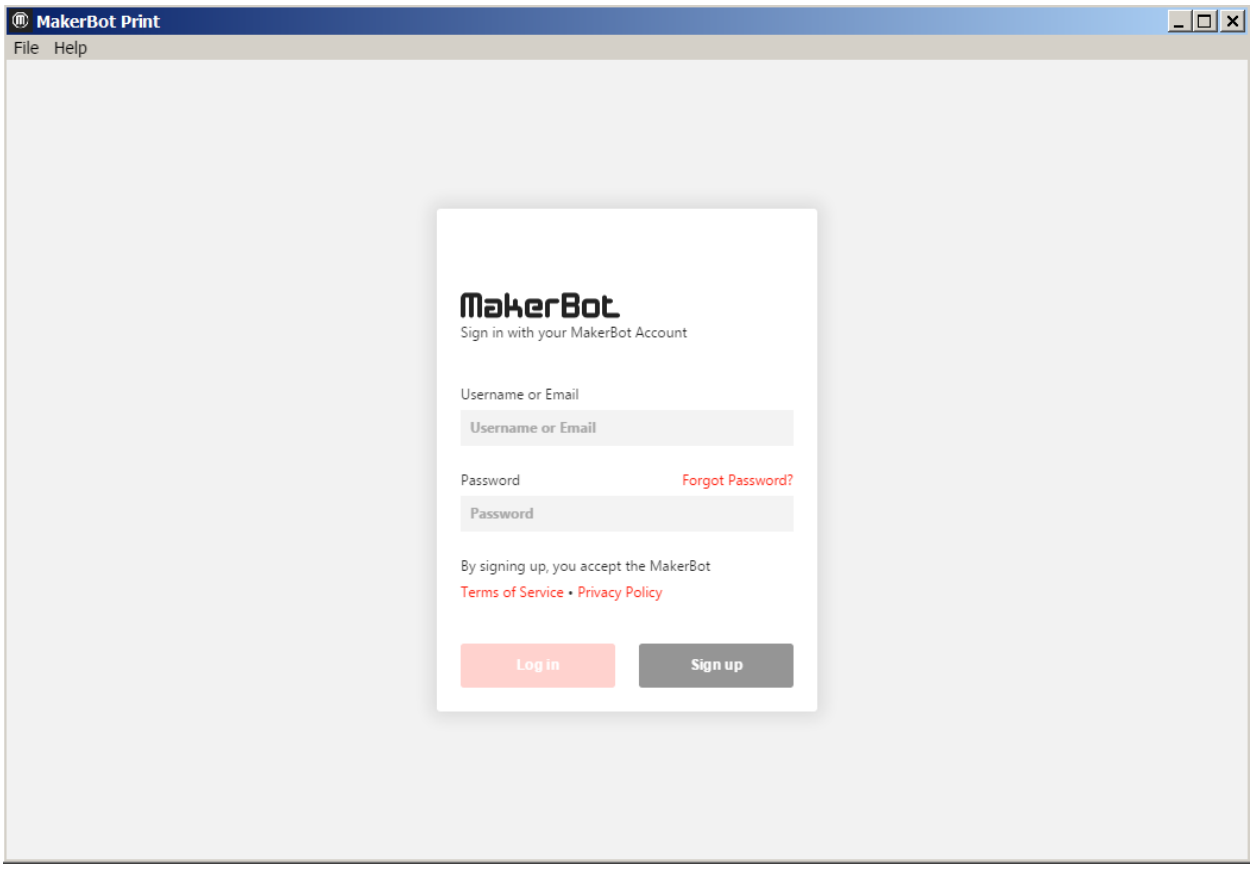



MakerBot Print
File Edit View Help
Add a Printer
Add a Network Printer
Find and add printers on your local network.
Connect via IP Address
Enter printer IP address...
Add
Add an Unconnected Printer
Add a printer type for exporting files.
Replicator 5th Gen • Export Only
Add an Unconnected Printer


MakerBot Print
File Edit View Help
MakerBot Printers
A-Z
Search
Replicator 2
Replicator 2X
Replicator 5th Gen
Replicator Mini
Replicator Mini+
Replicator Z18
Replicator 5th Gen • Export Only
Select the appropriate Printer

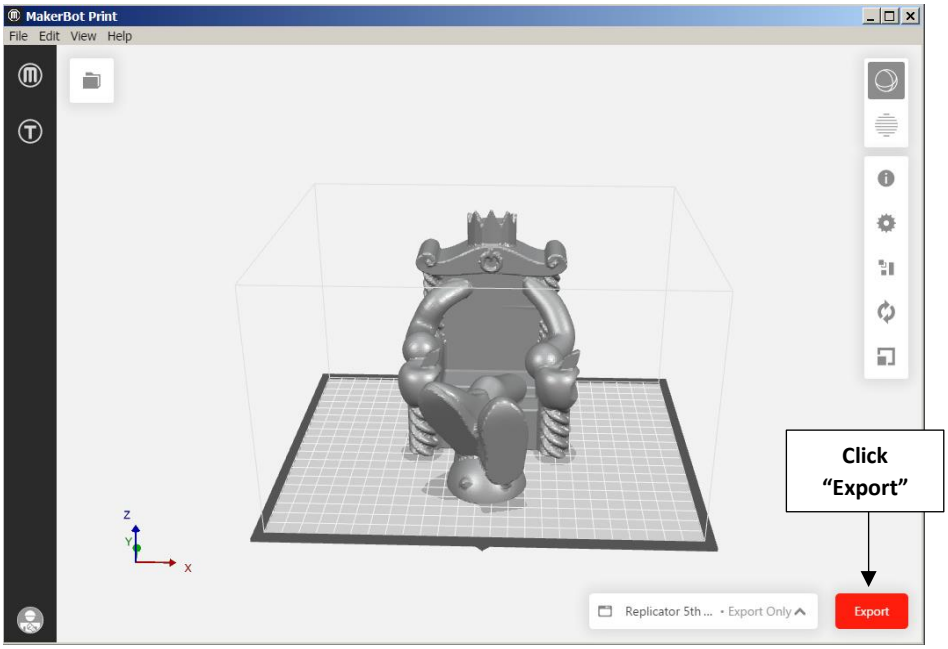
Login Account:

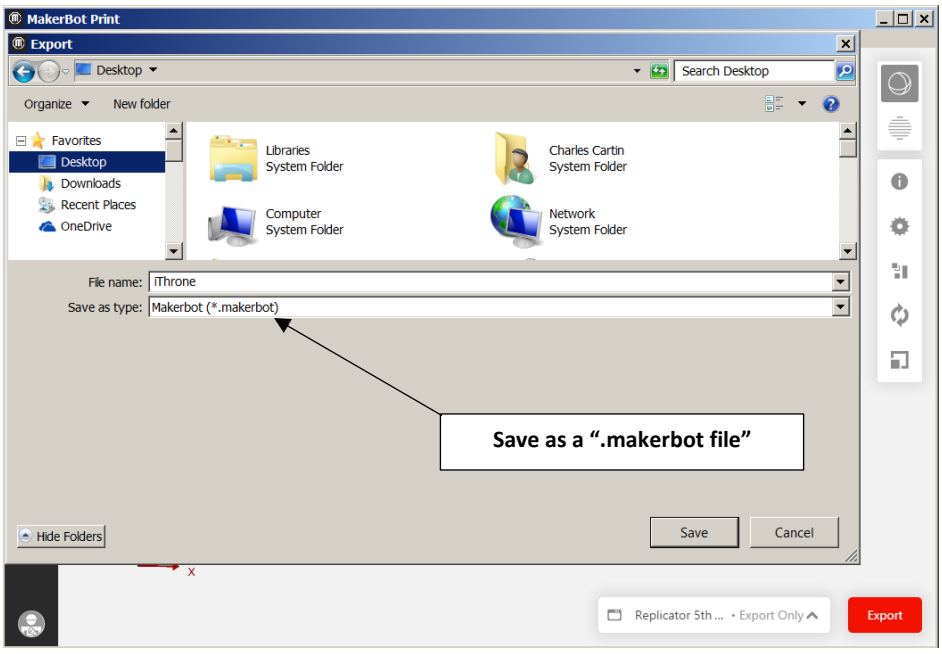
- Create a MakerBot account at the following website – https://www.makerbot.com/
- Log into the MakerBot Print Software utilizing the MakerBot account created.



Export:

- Export your 3D model to a .makerbot file.





Print:

- The print option is only available when MakerBot Print is connected directly to a 3D printer.
- Submit all MakerBot prints through the https://vcumne.innovationcenter.makerbot.com/ website. Make sure to upload all files associated with the build (i.e. .stl, .obj, .thing, .print, .makerbot)