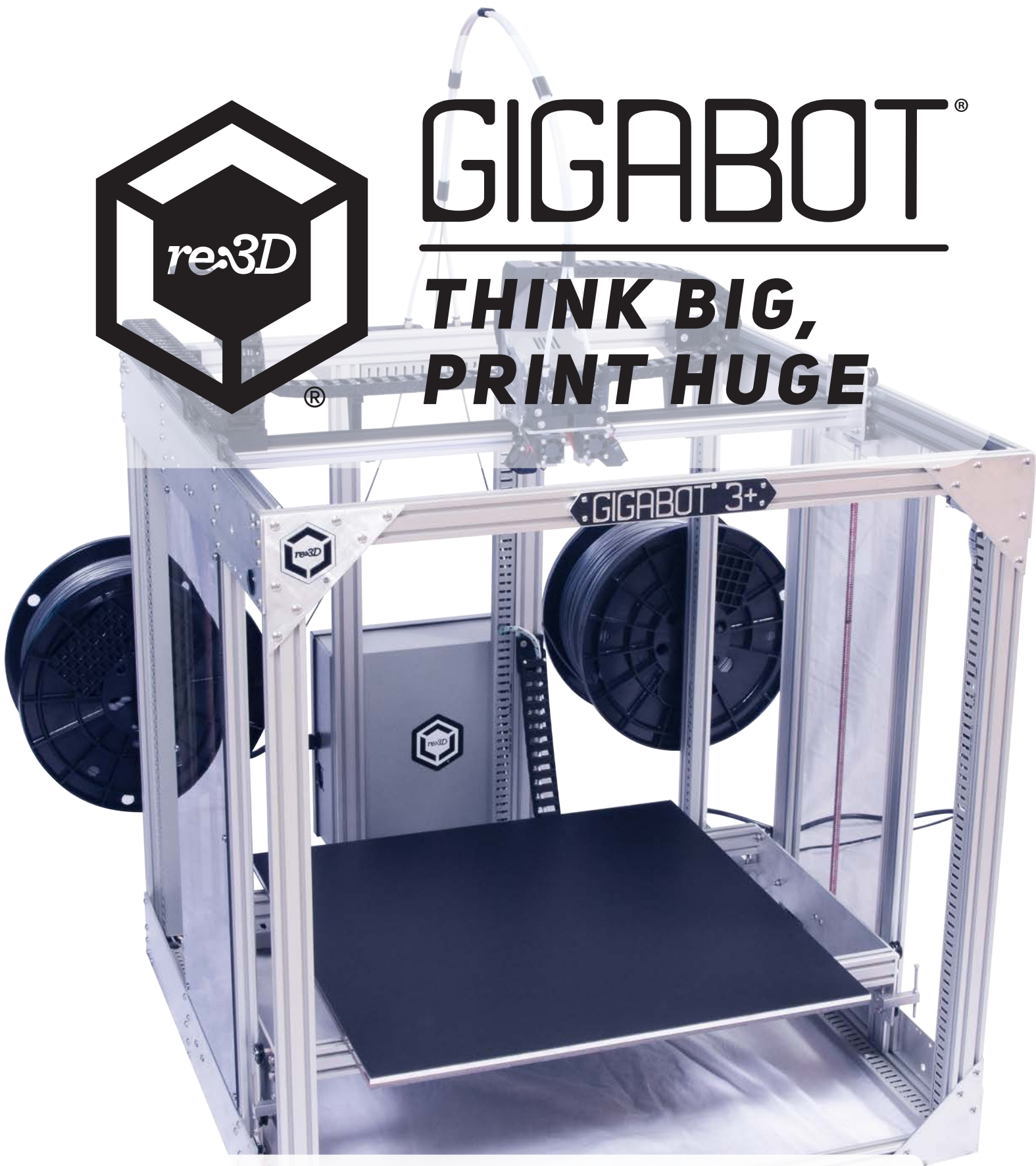




# GIGABOT<sup>®</sup>

**THINK BIG,  
PRINT HUGE**



— QUICK START GUIDE —



# ***TABLE OF CONTENTS***

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# WELCOME

---

## CONGRATULATIONS ON YOUR GIGABOT® PURCHASE. WE CAN'T WAIT TO SEE YOU PRINT HUGE!

This guide will help get your Gigabot® set up and ready to print. Should you have any questions, please reach out to [support@re3d.org](mailto:support@re3d.org).

## HELPFUL LINKS

Here are some additional links to help you along the way:

**Wiki:** <http://wiki.re3d.org>

**Community forum:** <https://re3d.zendesk.com/hc/en-us/community/topics>

**re:3D shop:** <http://shop.re3d.org/>

**Website:** <https://re3d.org/>

**Sketchfab:** <https://sketchfab.com/re3d/models>

**YouTube:** <https://www.youtube.com/user/GigaBot3D>

## FOLLOW US

Stay updated on re:3D activities! We regularly post content on the following accounts:

**Facebook:** <https://www.facebook.com/re3Dprinting/>

**Twitter:** [https://twitter.com/re\\_3D](https://twitter.com/re_3D)

**Instagram:** <https://www.instagram.com/re3dprinting/>

New users are included in our monthly newsletter, but anyone can also sign up at bottom of our main page at <https://re3d.org/>



Rev.03 December 2016



# **RECEIVING AND** **UNCRATING**



# OVERVIEW

---

If you received a fully assembled Gigabot®, follow steps A1 through A5. If you received a Gigabot® kit, follow steps A6 through A7. Follow steps A8 through A11 regardless of your Gigabot® type.

For fully assembled Gigabots, need two 9/16" wrenches or socket wrenches to remove the braces securing the Gigabot® to the base of its crate. You will also need a Phillips head screwdriver to remove the panels of the crate.

Upon delivery of the Gigabot®, whether it is fully assembled or a kit, inspect all packages for damage prior to signing for the delivery. If there is any damage, record it and report to our shipping manager within 24 hours at [tammie@re3d.org](mailto:tammie@re3d.org).

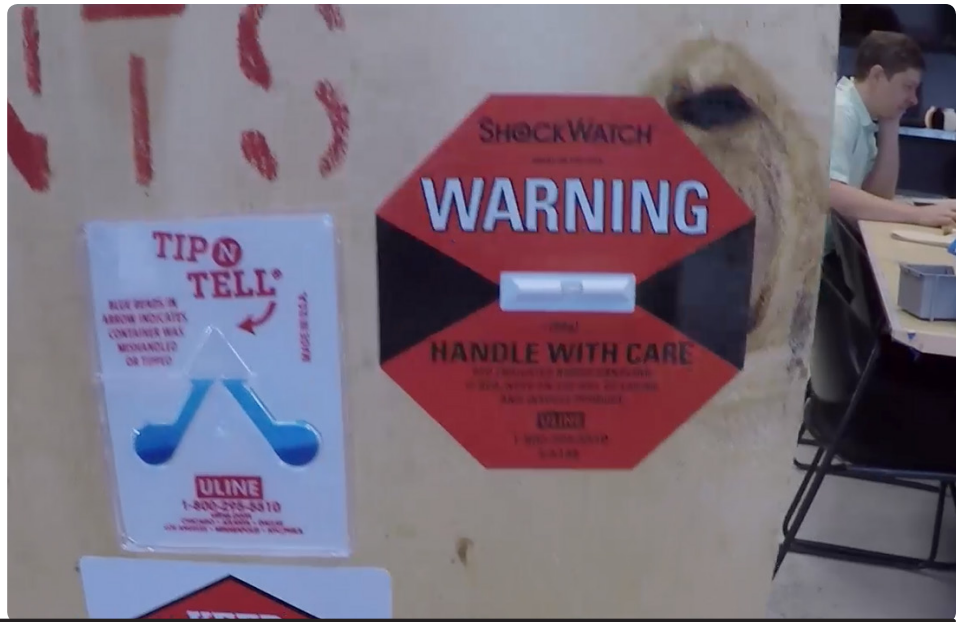
For a video demonstration of these steps, feel free to [watch our video](#) on this process on our YouTube channel at <https://www.youtube.com/user/GigaBot3D/>.

The Gigabot runs on 120V as a standard unless you specified when purchasing that it would be preferable to use 220V. In the case that you ordered a 220V machine you will have to acquire your own plug. The standard 120v version comes with a universal power cord.



## A1

Upon arrival, check the Tip n' Tell and Shockwatch indicators. Check the crate for damage. If any damage is observed, or the indicators are tripped, record and report to [tammie@re3d.org](mailto:tammie@re3d.org) within 24 hours.



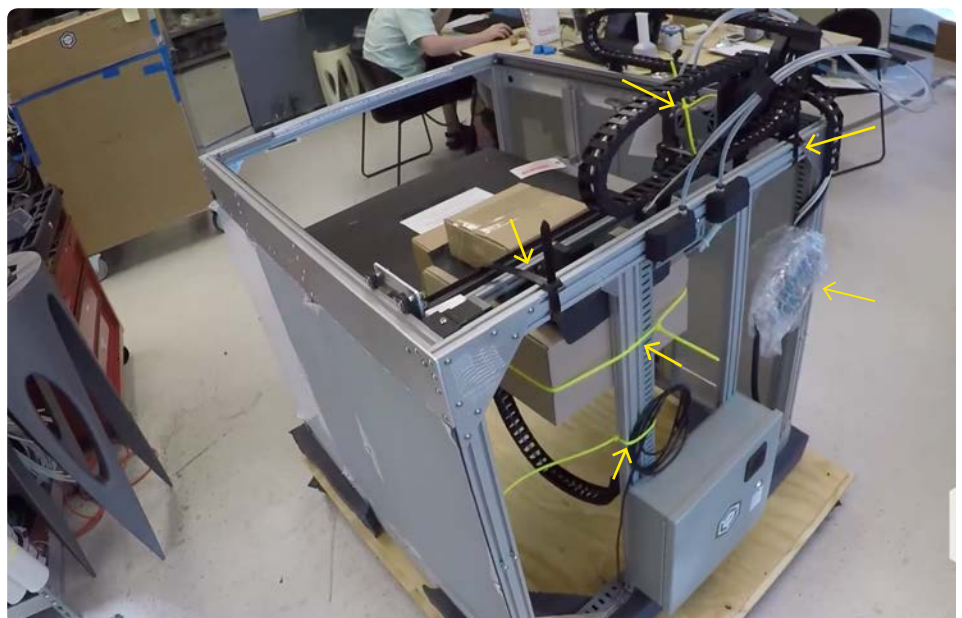
## A2

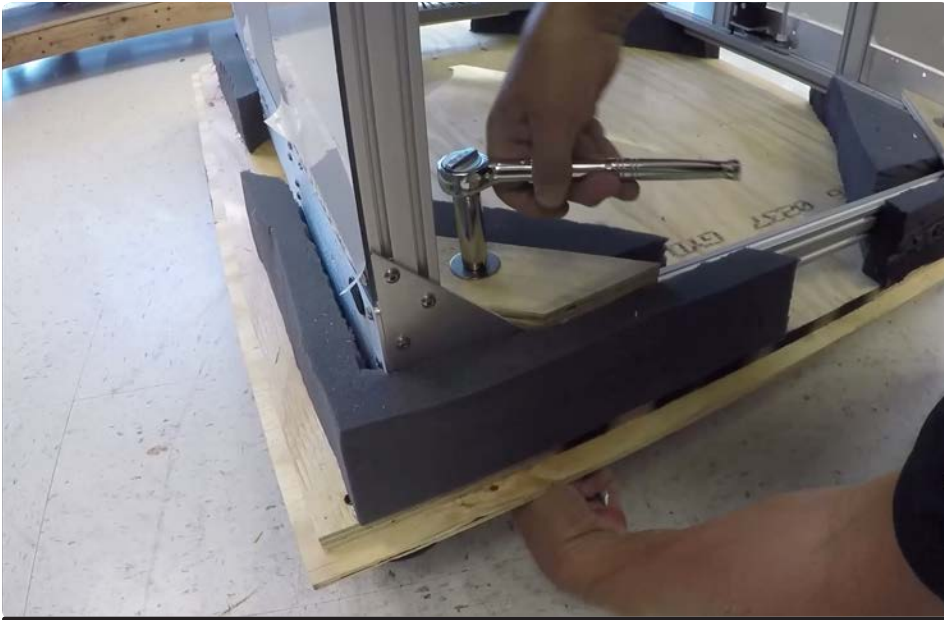
Remove the lid and all the panels, as well as the plastic wrap covering Gigabot®.



## A3

Remove all zip ties, foam blocks, bubble wrap, etc. from Gigabot®.





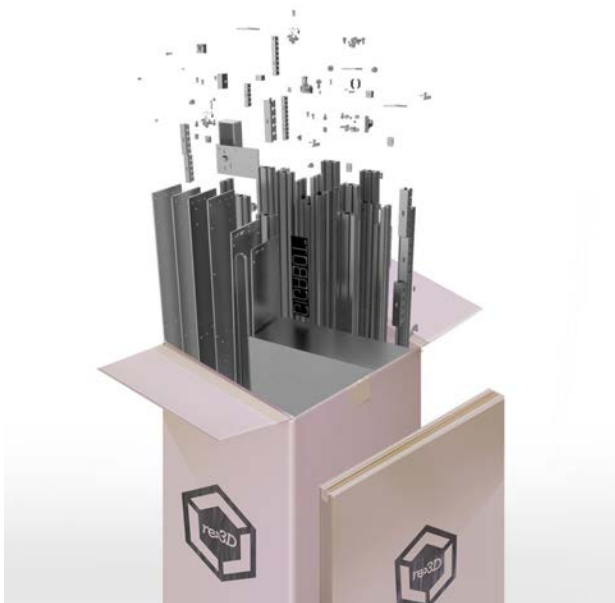
## A4

Remove all 4 wooden corner braces by using 2 9/16" wrenches.



## A5

Remove all 8 bed locks using the 8mm wrench. Note that these are both above AND below the bed frame.



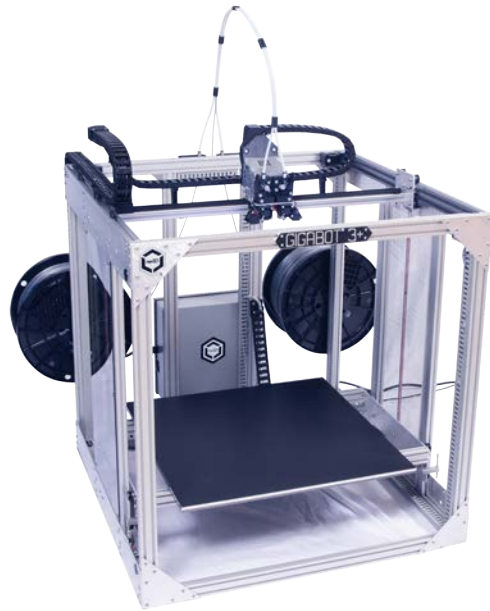
## A6

For kit customers only: Check all boxes for damages before signing off on the delivery. Record and report any damages to [tammie@re3d.org](mailto:tammie@re3d.org) within 24 hours of receiving your shipment.



## A7

Kit customers only:  
Complete the assembly of  
the Gigabot® according to  
the assembly instructions.



## A8

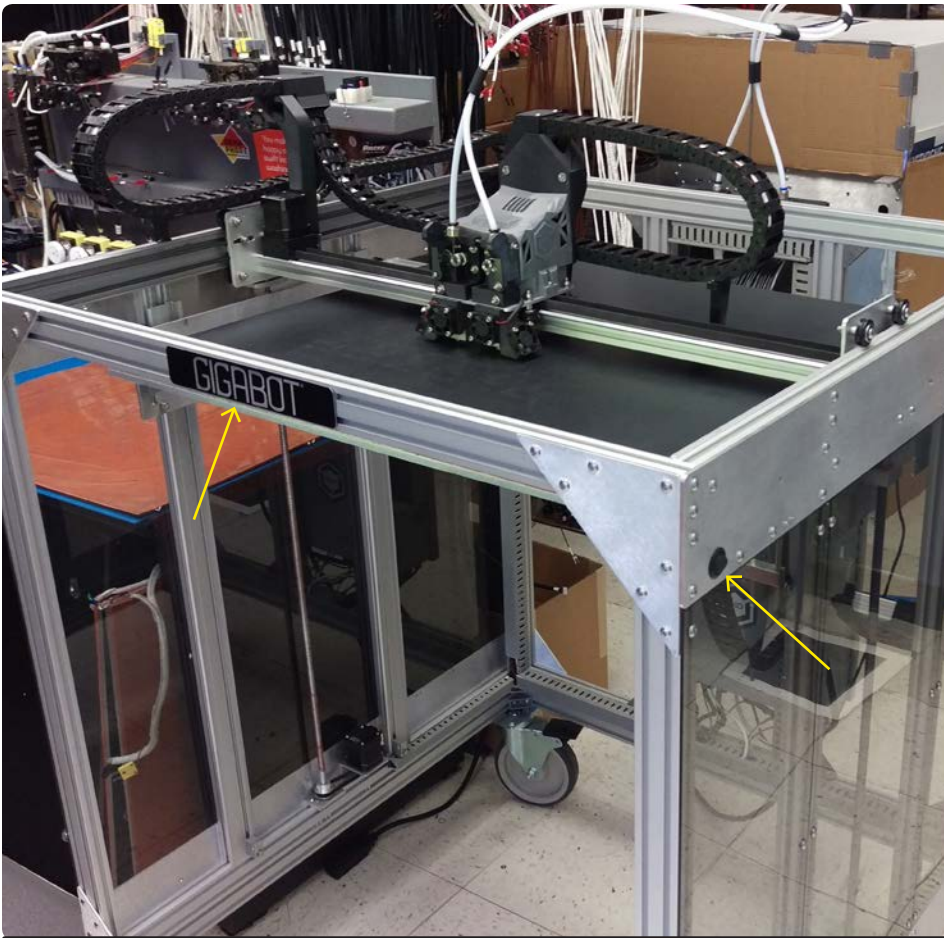
Insert the female end of  
the cord into the electrical  
box. Check that the  
connection is secure.



## A9

Plug in the male end of  
the cord into an outlet.





## **A10**

If you are looking at the front of your Gigabot (you should see the Gigabot nameplate) the power switch is located on the right side of your bot closer to the front. It is a small black circle switch; flip it on!



# **BED LEVEL & Z** **HOME**



# OVERVIEW

---

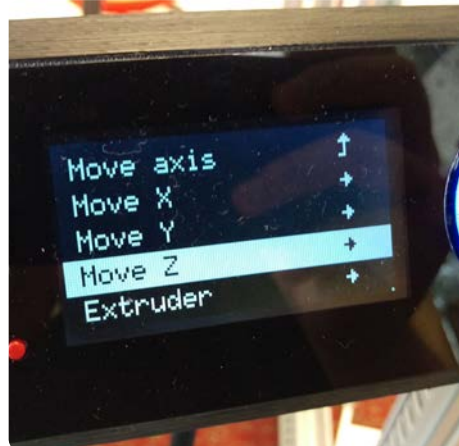
Please follow the steps outlined in this guide to level the bed of your GB3+. Note that the Gigabot® shown in these steps has blue tape as a printing surface (other Gigabots may have Print in Z, Buildtak, or something else). Regardless of what surface is on the bed, the leveling steps will remain the same.

These steps also use a business card as a feeler gauge between the nozzle and the bed. Many business cards are about 0.01” or 0.3mm thick, which allows us to set a good Z home position at the same time that we level the bed. Of course, users may opt to use real feeler gauges as well. It is also acceptable to level the bed with something like a 1-2-3 block or a piece of aluminum extrusion, but users will have to set the Z home position afterward.



## B1

Using the Viki LCD controller, move the bed down 150mm. Press the button to see the main menu, then select “Prepare,” scroll down to “Move Axis,” then “Move Z,” and finally turn the wheel clockwise until it reaches 150mm.

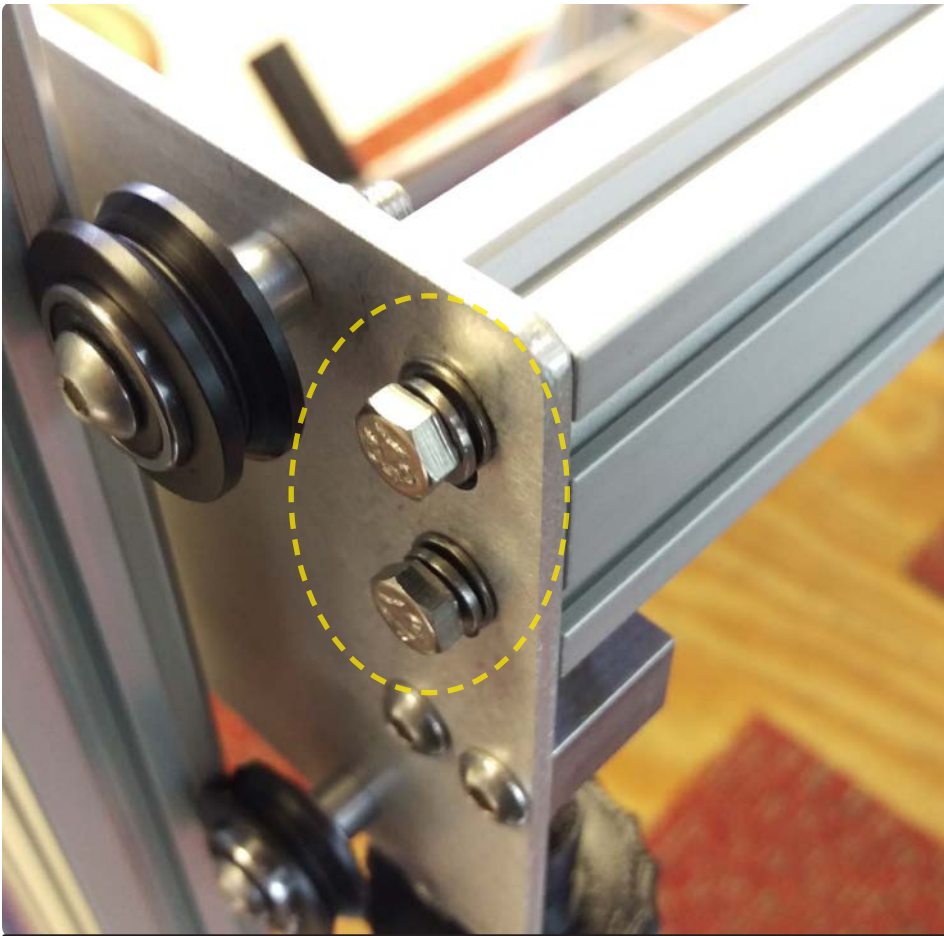


## B2

Using the 8mm combination wrench, loosen each of the 2 M5x12 hex head screws that fasten the bed side plate to the bed cross rails. There are 8 in total.

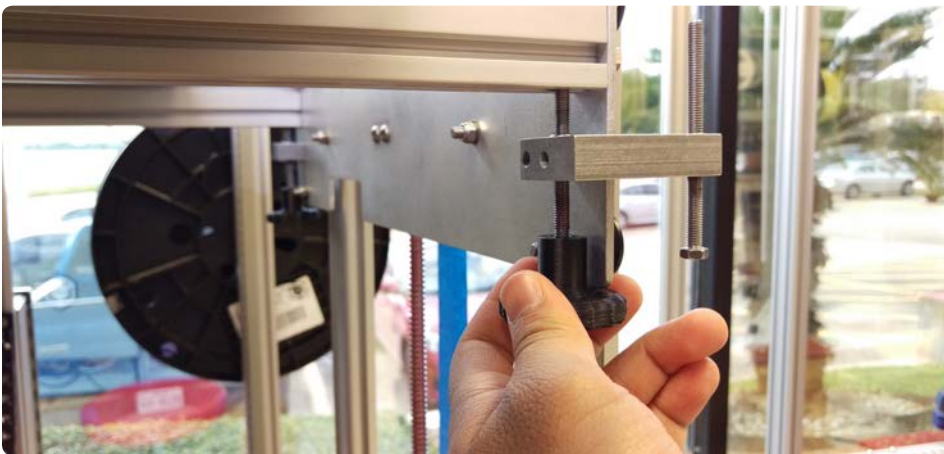






### **B3**

These need to be loose enough so that the ends of the rails can move vertically in the slots of the side plates with little to no resistance.



### **B4**

Adjust the leveling knobs until there is about a 1/8" gap (3mm) between the top of the rail and the top of the side plate at each corner. A ruler or a shim can be used to measure this distance. Similarly, users can opt to turn the leveling knob to push the rail up until it is flush with the side plate, and then lower it 4 full revolutions.



## B5

Repeat this process for all 4 corners of the bed frame.



## B6

Use the 8mm combination wrench to lower the M5x70 hex head screw on upper Z limit switch leveling block (when looking directly at the Gigabot® name plate, this is the right side leveling block). Turning clockwise when viewed from above will lower the screw. Do 2-4 full revolutions to bring the Z home position closer to the nozzle.

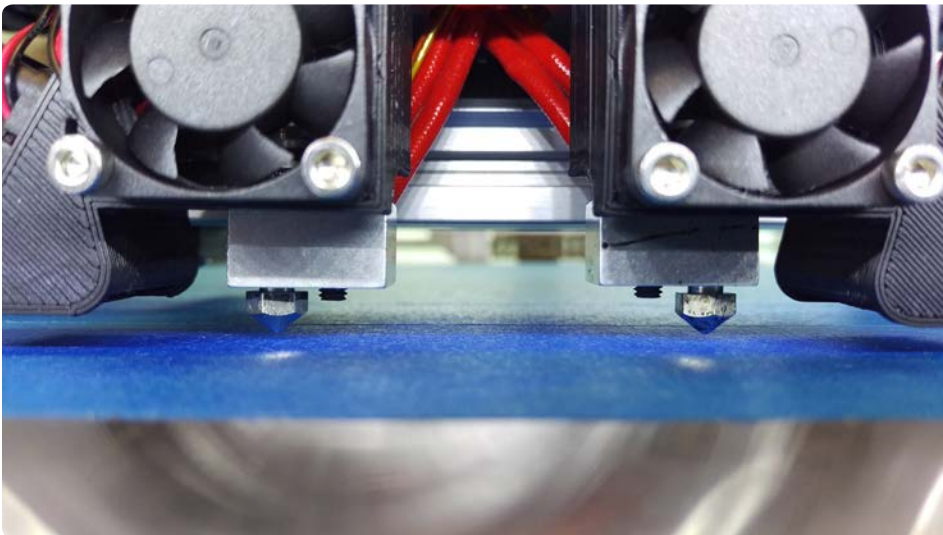






## **B7**

Using the Viki, select “Auto Home Z,” in the “Prepare” menu.

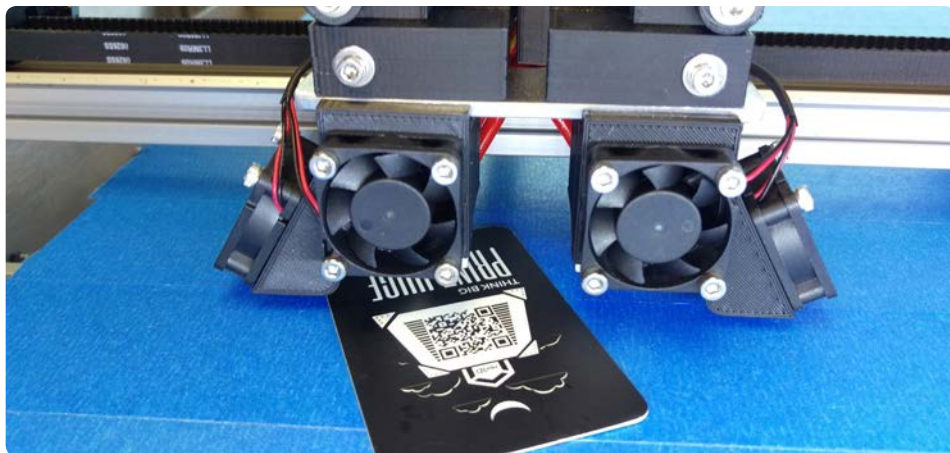
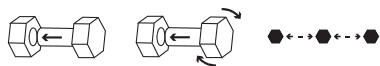


## **B8**

There should now be a widened gap between your nozzle(s) and the surface of the bed. Push the trolley to one corner of the bed, near one of the leveling knobs. If the motors are locked, they can be unlocked by navigating to the “Prepare” menu in the Viki and selecting “Disable steppers.”

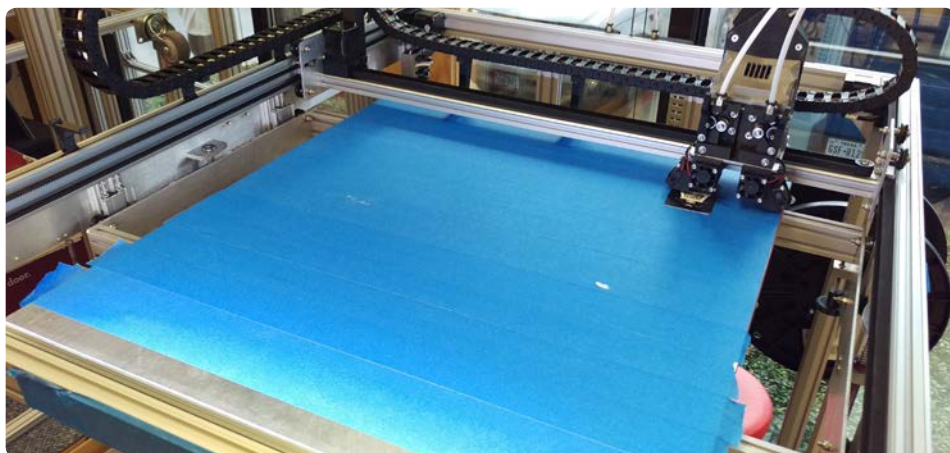
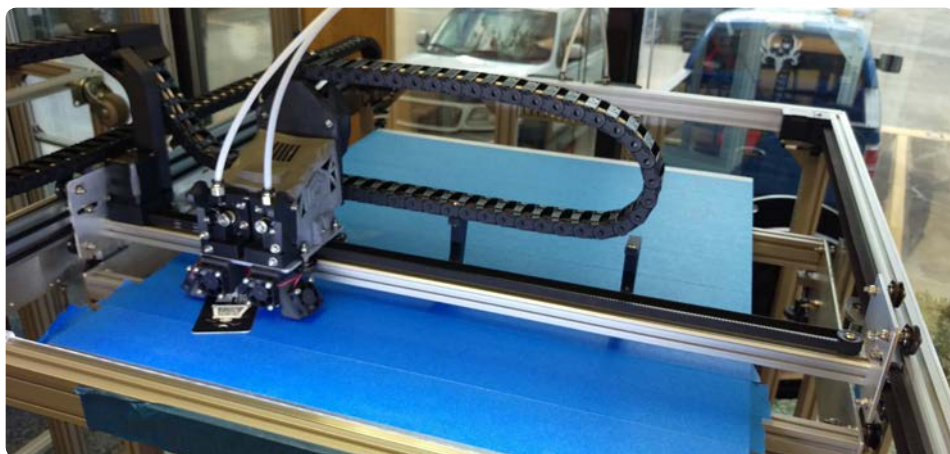
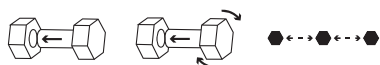
## B9

Place a business card between the nozzle and bed. When viewed from below, turning the knob clockwise will raise that corner. Turn the leveling knob to raise the bed until there is friction between the nozzle and the business card.

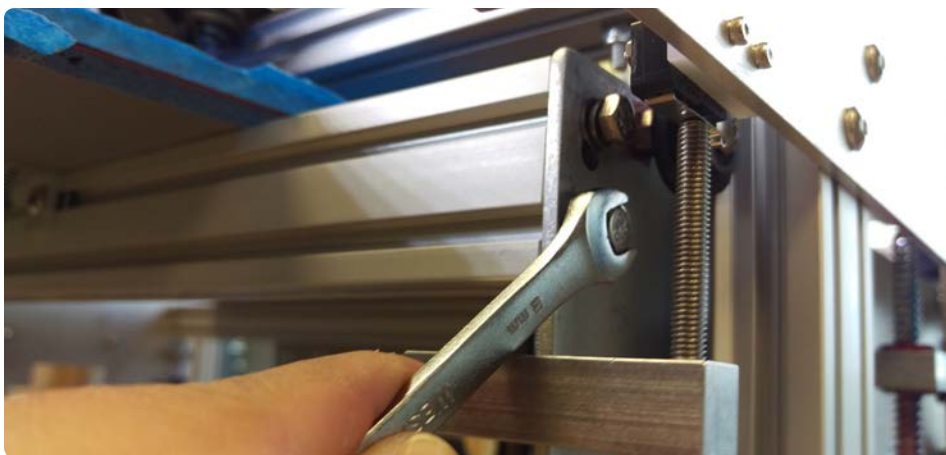


## B10

Repeat this process at all corners of the bed. Using the business card as a feeler gauge, there should be the same amount of friction between the card and the nozzle at each corner.







## **B11**

Use the 8mm combination wrench to gradually tighten the M5x12 hex head screws at each corner. Periodically use the business card again to check the level, since tightening the hardware on the rails may have caused them to move slightly. The bed cross rails should be secured and acceptably level to the nozzle after 2-3 total passes.



## **B12**

After the final tightening, the bed will be securely held in position and there will be no need to re-level unless some external factor throws it out of level. If you have any questions or concerns, please do not hesitate to contact our support at [support@re3d.org](mailto:support@re3d.org).





# **LOADING** **FILAMENT**



# OVERVIEW

---

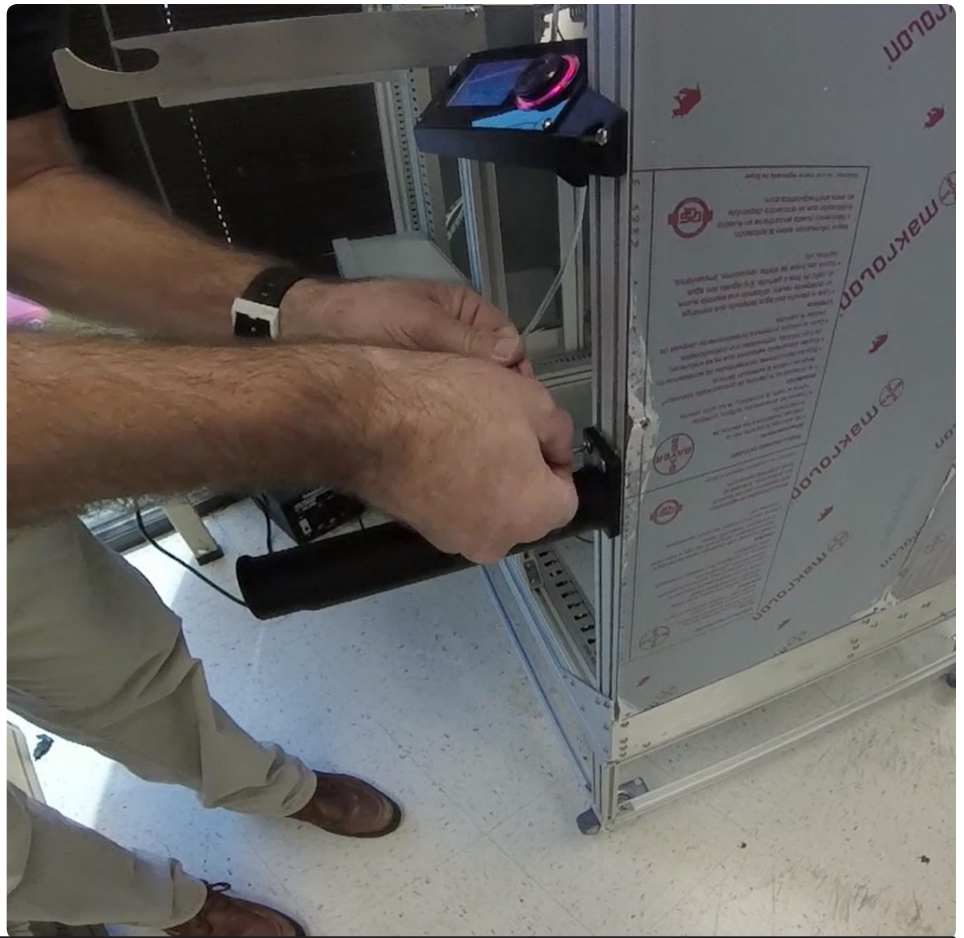
Gigabot® prints with 2.85mm diameter plastic filament. Thanks to the all-metal design of the hot ends, Gigabot users can print virtually any 3D printing filament available on the market! The following section demonstrates how to load filament to Gigabot® prior to printing.

For a video demonstration of these steps, feel free to [watch our video](https://www.youtube.com/user/GigaBot3D/) on this process on our YouTube channel at <https://www.youtube.com/user/GigaBot3D/>.

Note that "magic T-nut" is the term we use for post-assembly drop-in T-nuts. Also BHCS is an abbreviation for button head cap screw.

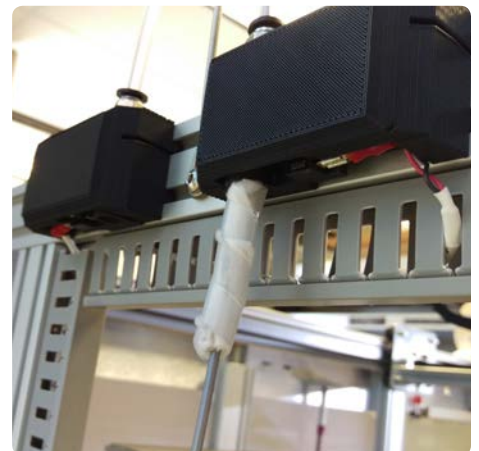
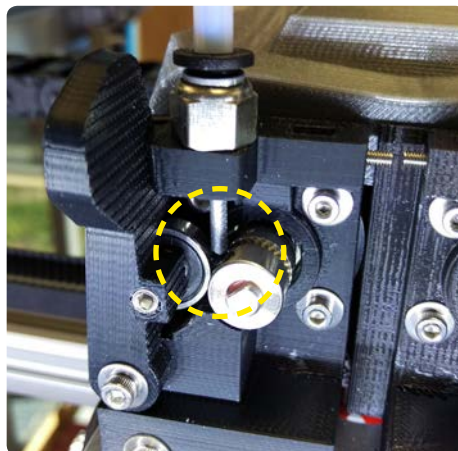
## C1

Install the spool holder(s) to the back of Gigabot® with 2 magic T-nuts and 2 M5x12 BHCS each. Use the 3mm Allen Key to fasten the hardware. Users may decide how far up or down the rail these are located.

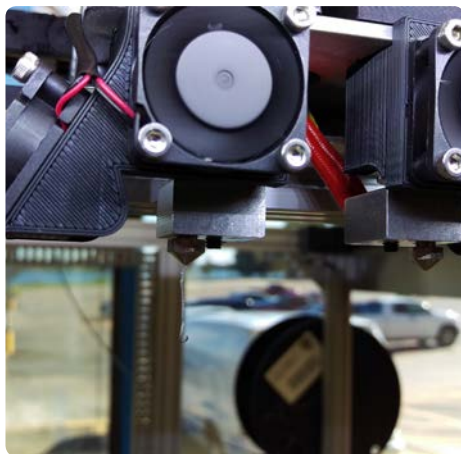
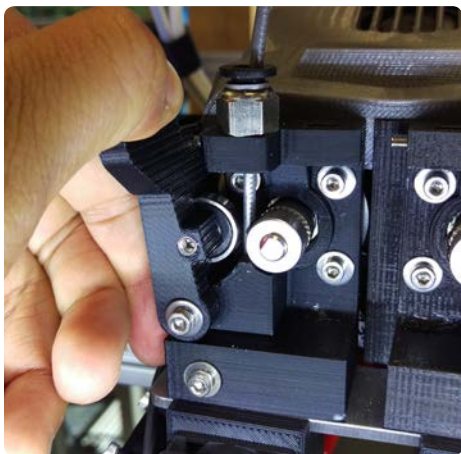
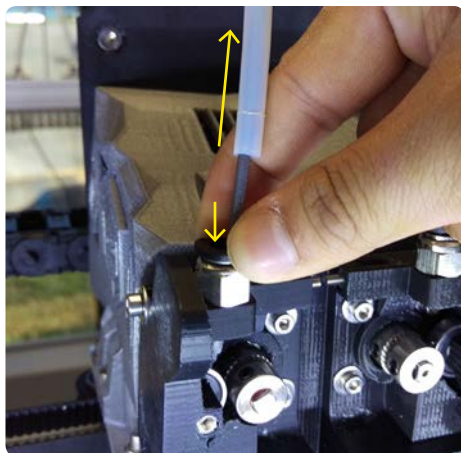


## C2

Mount the filament spool onto the spool holder. The filament should feed from below the spool and into the corresponding Filament Detection (FD) unit. Feed the filament into the FD unit and all the way to the extruder until the tip of the filament sits between the drive gear and idler bearing. Wrap the filament cleaning cloth around the filament below the FD unit and secure it using the spiralite.







### C3

To manually load the filament, set the filament temperature using the Viki controls (Prepare > Preheat PLA/ABS, or Control > Temperature > set custom temperature). Free the filament tube from the push to connect by pushing down on the collar. After heating is complete, push the extruder tensioner open and feed the filament through until it comes out of the nozzle.



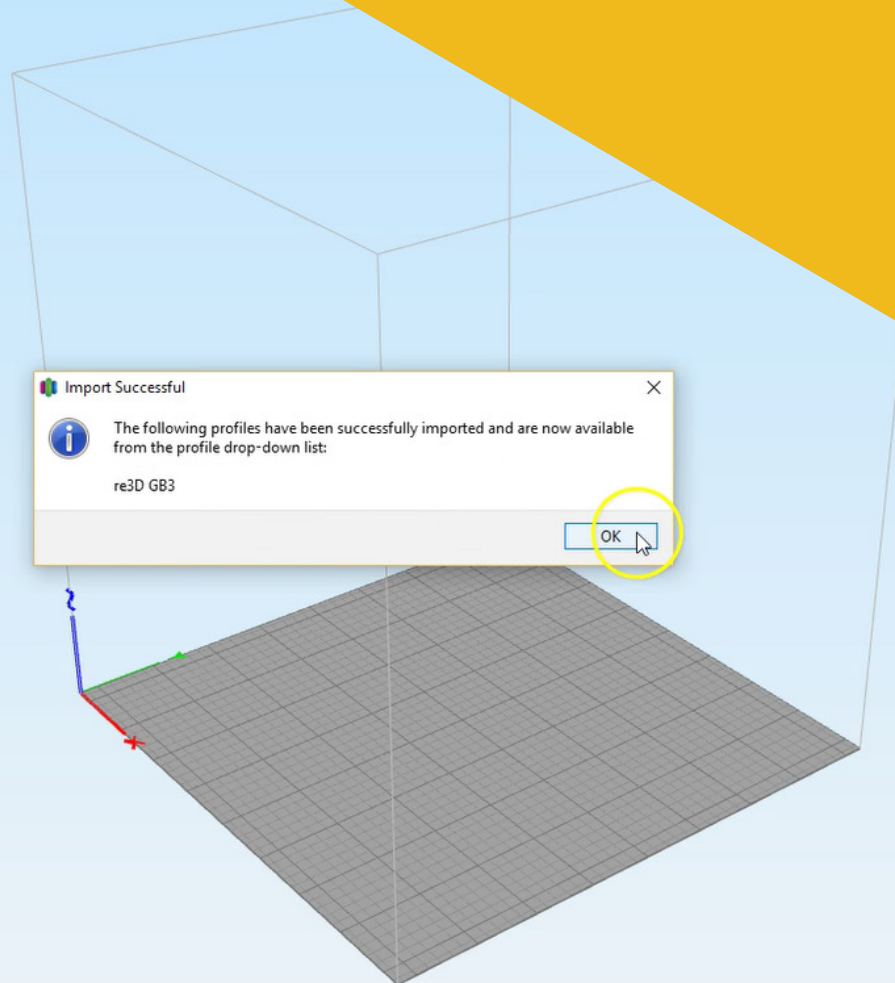
### C4

To load the filament using the Viki, navigate to Prepare > Change Filament, and follow the prompts. After the hot ends completes heating, turn the Viki wheel clockwise to extrude until the filament starts coming out of the nozzle. The filament has to sit right between the drive gear and idler bearing, or the extruder will not be able to pull the filament!



# **SOFTWARE** **SETUP**

Help





# OVERVIEW

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Simplify3D is our preferred slicing and printer hosting program. Not only does it lead the market in parameter customization and features like customizable support generation, but Simplify3D best handles the large print jobs that Gigabot® users make on a daily basis. The factory file functionality also enables us to better support and troubleshoot with customers. We recommend this for any user looking for a robust and reliable software workflow.

Current installations of Simplify3D will not have the most updated printing profiles for Gigabot®, so the following steps discuss how to import a new profile. For a quick video demonstration of these steps, feel free to [watch our video](#) on this process on our YouTube channel at <https://www.youtube.com/user/GigaBot3D/>.

## D1

Our newest profiles are readily available on our Wiki page at [wiki.re3d.org](http://wiki.re3d.org). Navigate to the "Software Installation" page and download the Simplify3D profile for your printer. Note that each profile is specific to a certain Gigabot® model (GB3, GB3 XL, etc.).

Installing and using software: X

wiki.re3d.org/index.php?title=Installing\_and\_using\_software\_with\_Gigabot#Simplify3D

**Simplify3D** [edit]

- Click here to purchase: [Simplify3D](#)

**More Resources** [edit]

<http://www.simplify3d.com/support/>

<https://www.youtube.com/channel/UCQP0KuWKndRvTbLVYVWZxNqQ>


Helpful tutorials: <http://www.simplify3d.com/support/tutorials/>

**Gigabot configuration** [edit]

After installing Simplify3D -

- Click one of the following links:
  - [File:Re3D GB3.fff](#)
  - [File:Re3D GB3-XL.fff](#)
  - [File:Re3D GB2.fff](#)
  - [File:Re3D GB2-XL.fff](#)
- In the new window right click on the link at the top of the page and choose "save link as"
- This will download the file to your computer.
- Open Simplify3D.
- Go to File -> Import .fff Profile
- Choose the updated .fff configuration file for your machine

Three steps to choosing your settings:



## D2

In Simplify3D, import the profile you just downloaded. It will afterwards be available as an option in the process settings of each printing process. Again, feel free to [watch our video](#) on these steps if needed.

Simplify3D (Licensed to Matthew Fiedler)

File Edit View Mesh Repair Tools Add-Ins Account Help

New... Ctrl+N

Open Factory File... Ctrl+O

Save Factory File... Ctrl+S

Save Factory File As... Ctrl+Shift+S

Recent Factory Files

Import FFF profile

Export FFF profile

Import Models Ctrl+I

Export Models

Recent Models

Preview G-Code File...

Exit

Import Remove

Center and Arrange

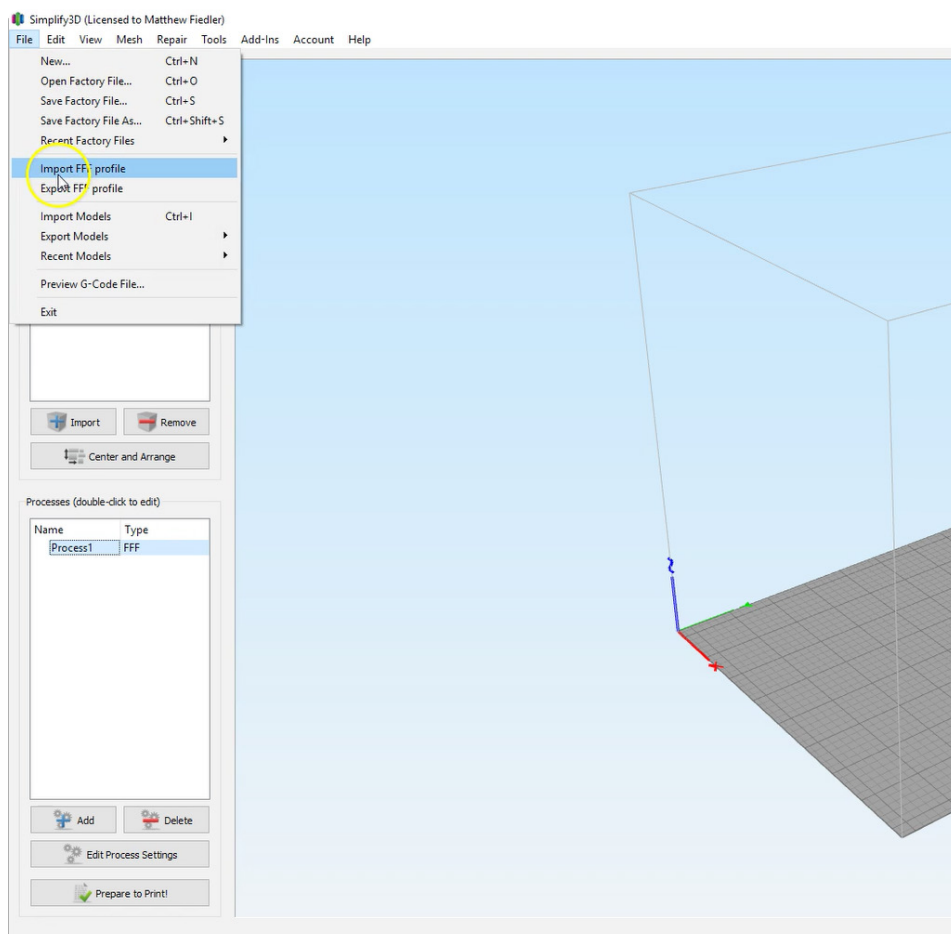
Processes (double-click to edit)

Name	Type
Process1	FFF

Add Delete

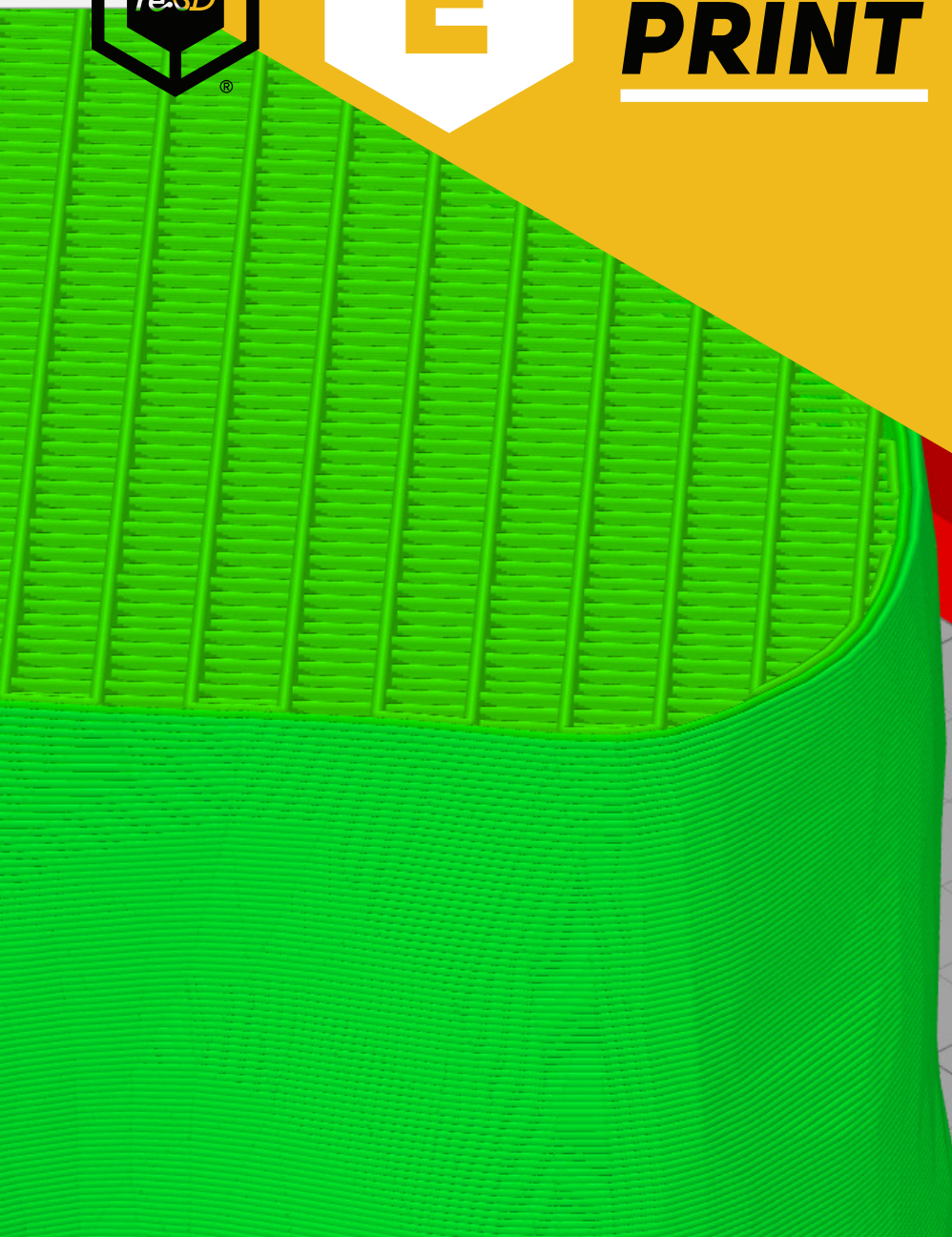
Edit Process Settings

Prepare to Print!





# ***PREPARING A PRINT***



# OVERVIEW

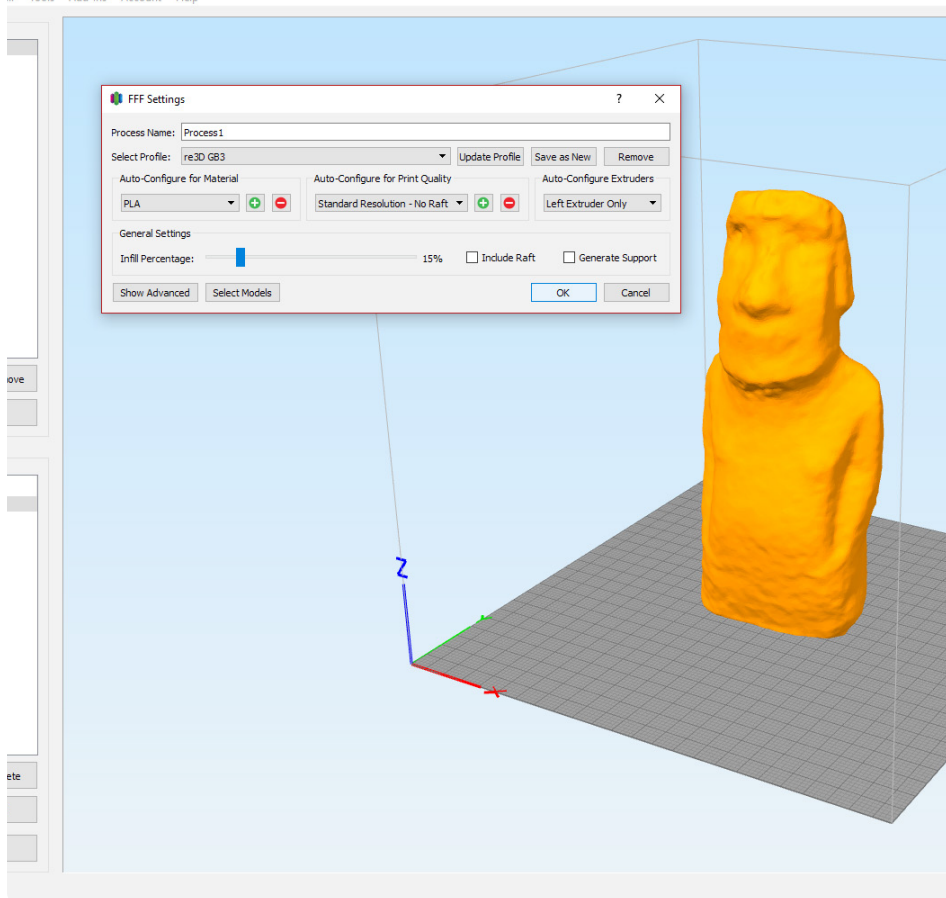
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This section goes step-by-step into creating .gcode from which Gigabot® will print parts. For users that have used open source slicing programs, there will be a noticeable difference in slicing times between Simplify3D and open source programs in that Simplify3D slices objects much faster--especially when it comes to large objects or multiple objects.

The general steps for preparing .gcode will be the same for Simplify3D as they would be for other slicing programs, if users choose not to use it.

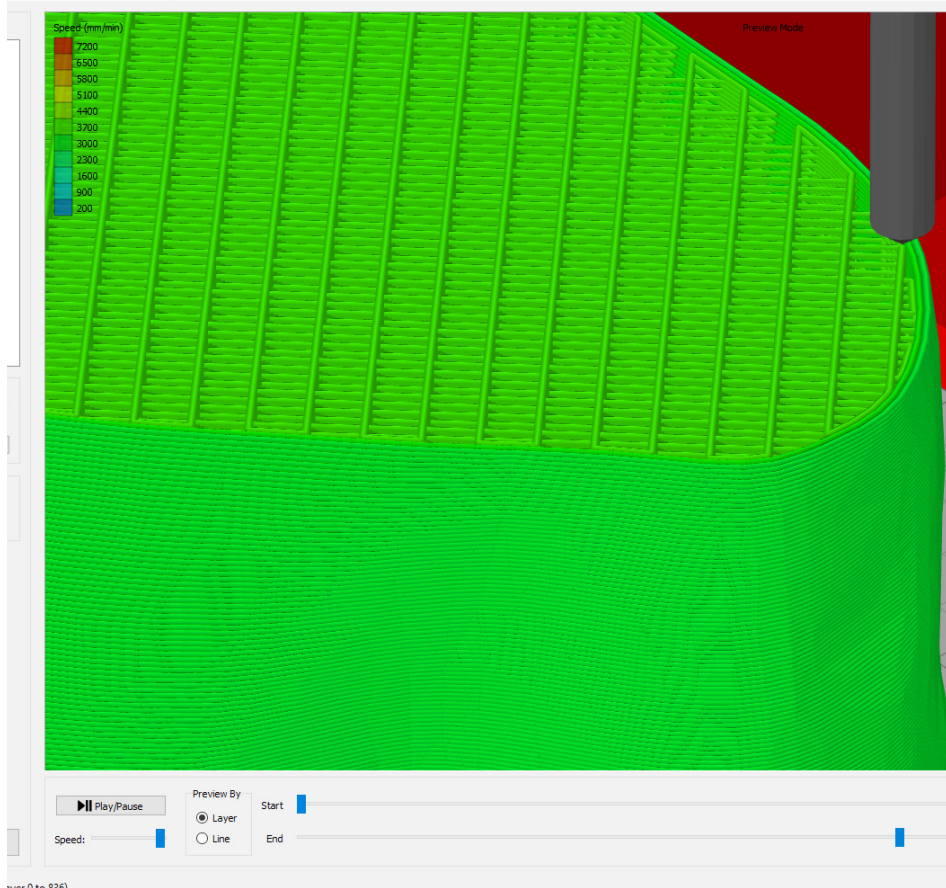
For a quick video demonstration of these steps, feel free to [watch our video](#) on this process on our YouTube channel at <https://www.youtube.com/user/GigaBot3D/>.





## E1

Import your .STL file into Simplify3D. Orient the part as desired in the workspace. In the process settings, configure your profile, material, resolution, extruder, etc. When you are satisfied, click the "Prepare to Print" button.



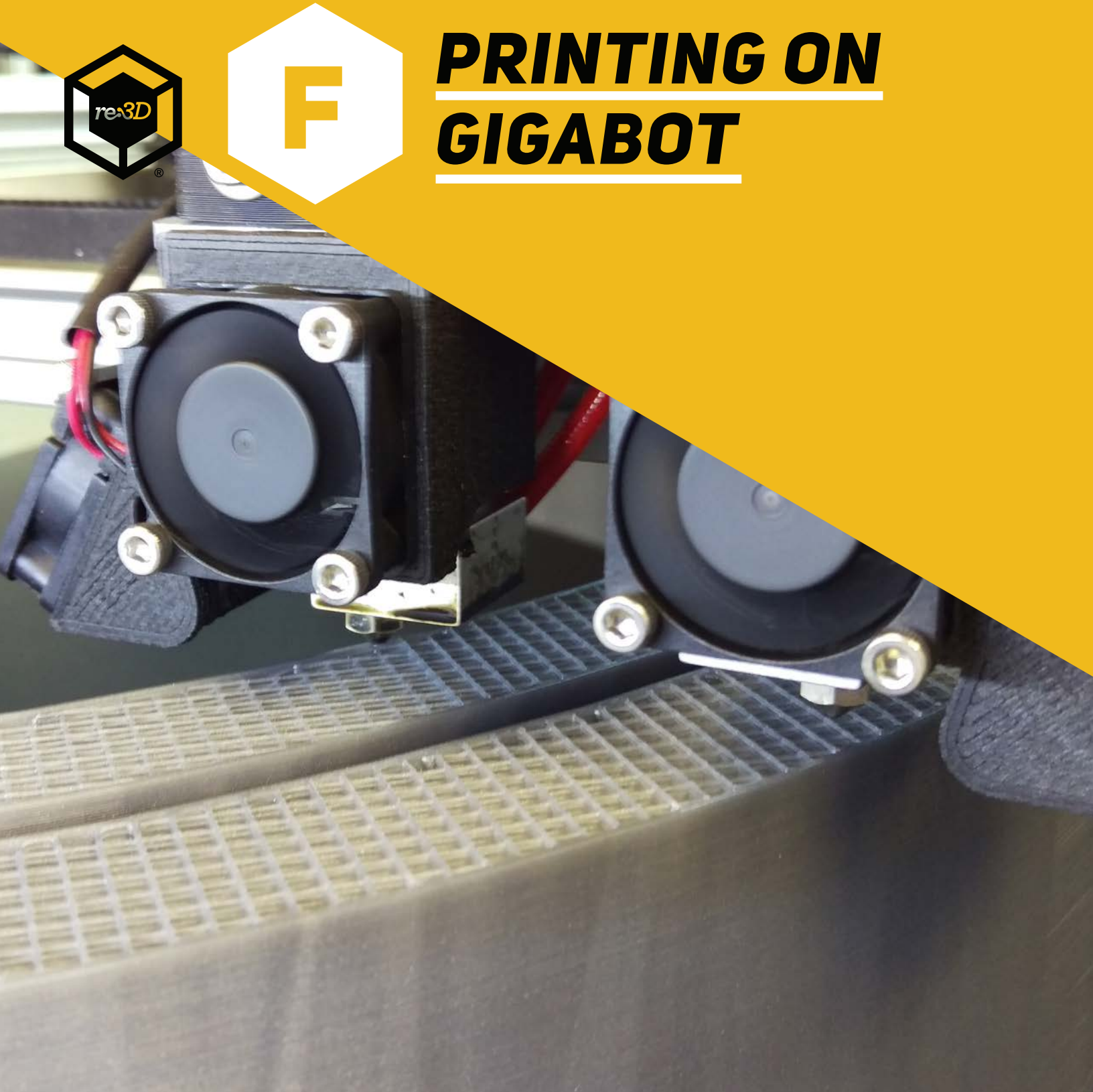
## E2

Use the Preview Mode to analyze the .gcode for potential printing errors. There are also useful approximations Simplify3D can generate such as print time and material usage. Once satisfied, export the .gcode to a microSD card for printing, or print directly via USB. If needed, feel free to [watch our video](#) on this process.





# **PRINTING ON** **GIGABOT**



# OVERVIEW

---

This is it--you're ready to print! There are two ways to make Gigabot® print; via USB or using a microSD card in the Viki LCD controller. Typically, we recommend printing via the microSD card. It's the most reliable method because there is no need to connect to a computer and the USB cable is more susceptible to electrical interference, which can disturb the serial communication to Gigabot®.

For a quick video demonstration of these steps, feel free to [watch our video](#) on this process on our YouTube channel at <https://www.youtube.com/user/GigaBot3D/>.

Note that before each print starts, Gigabot® will heat the bed and nozzle(s) and then home each axis. If you followed along with our video demonstrations, your test print should be done in about 45 minutes to 1 hour. Regardless of what you chose for your first print, be sure to share them in the "Show and Tell" section of our forum, at <https://re3d.zendesk.com/hc/en-us/community/topics/200275793-Show-Tell>.

For more information, feel free to consult any of the sources below. Congratulations, and happy printing!

**Wiki:** <http://wiki.re3d.org>

**Community forum:** <https://re3d.zendesk.com/hc/en-us/community/topics>

**re:3D shop:** <http://shop.re3d.org/>

**Website:** <https://re3d.org/>

**Sketchfab:** <https://sketchfab.com/re3d/models>

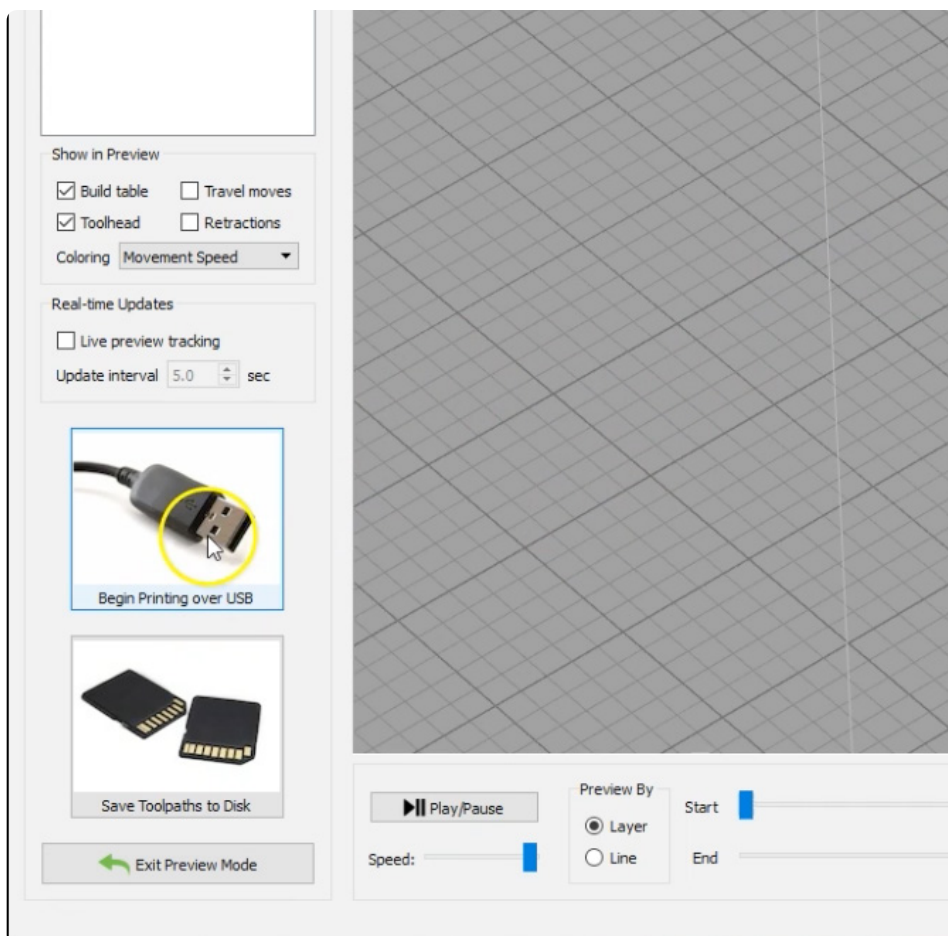
**YouTube:** <https://www.youtube.com/user/GigaBot3D>

Should you have any questions, please reach out to [support@re3d.org](mailto:support@re3d.org).

The LED light strip can get hot during operation of the Gigabot®. Avoid touching this while the printer is on.

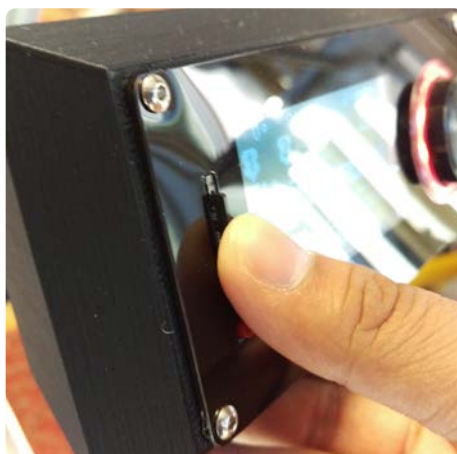
## F1

Following the previous section, it is possible to print directly from Simplify3D (or another program like Pronterface) by connecting your computer to Gigabot® via USB and clicking on "Begin Printing over USB" in Preview Mode. The print will start, and you may monitor the progress via the Machine Control Panel.



## F2

Similarly, you may save .gcode to a microSD card and insert it into the Viki. Select "Init. SD card" or "Change SD card" and then navigate to "Print from SD." Select the .gcode file you just saved and Gigabot® will immediately begin to print.



## This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.







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