

# FlashForge Hunter 3D Printer

## User Guide



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# Preface

On the completion of this User Guide, thanks all FlashForge engineers and the FlashForge 3D printer users for their unremitting efforts and sincere assistance.

The FlashForge Hunter User Guide is designed for the Hunter users to start their printing journey with FlashForge Hunter. Even if you are familiar with earlier FlashForge machines or 3D printing technology, we still recommend that you read through this guide, as there is lots of important information about the Hunter for you to get a better 3D experience.

For a better and more successful printing experience, you can refer to the following materials:

## **(1) Quick Start Guide**

Users will find the Quick Start Guide together with the printer accessories. The Quick Start Guide will help you start your print journey as soon as possible.

## **(2) Official FlashForge Website:** <http://www.FlashForge.com>

The official FlashForge website contains the up-to-date information concerning FlashForge software, firmware, device maintenance and so on. Users are also able to get the contact information from there.

## **FCC STATEMENT :**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference,
- (2) This device must accept any interference received, including interference that may cause undesired operation.

## **Warning:**

Changes or modifications not expressly approved by the party responsible for

compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

# Introduction

## Notes:

- Please read *FlashForge Hunter 3D Printer User Guide* carefully before use.
- The User Guide is written based on Windows 7 OS.
- The version of the FlashDLPrint is the latest.

The *FlashForge Hunter 3D Printer User Guide* contains the information needed for you to set up and use this device.

This User Guide includes the following parts: Preface, Introduction and After-sale service.

The Preface section includes resource acquisition channel, the overall framework of the manual, and the problems that should be paid attention to.

The introduction section contains the presentation of 3D printing technology, equipment introduction, unpacking and installation of equipment, software installation and usage.

After-sale section covers how to get the support and help.

# Notice

## Safety Notice

**! Notices:** Read all the instructions in the manual and familiarize yourself with the FlashForge Hunter User Guide before setting-up and using. Failure to comply with the warning and instructions may result in individual injury, fire, equipment damage or property damage.

PLEASE STRICTLY FOLLOW ALL THE SAFETY WARNINGS AND NOTICE BELOW ALL THE TIME.

- **Work Environment Safety**

- ① Keep your work place tidy.
- ② Do not operate Hunter in the presence of flammable liquids, gases or dust.
- ③ Hunter should be placed out of children and untrained people's reach.

- **Electricity Safety**

- ① Always use the Hunter with a properly grounded outlet. Do not refit Hunter plug.
- ② Do not use Hunter in damp or wet locations. Do not expose Hunter to burning sun.
- ③ Do not abuse the cable.
- ④ Avoid using the device during a thunderstorm.
- ⑤ In case of uncertain accident, please unplug the device if you do not use it for long.

- **Personal Safety**

- ① please don't direct touch the photopolymer resin with hands.
- ② Please put on gloves and masks during operation.
- ③ Please don't look at the light source directly.

④ Do not operate the device while you are tired or under the influence of drugs, alcohol or medication.

- **Cautions**

- ① Do not leave the device unattended for long.
- ② Do not make any modifications to the device.
- ③ Do not operate the device in bright light.
- ④ Operate the device in a well-ventilated environment.
- ⑤ Never use the device for illegal activities.
- ⑥ Never use the device to make any food storage vessels.
- ⑦ Never use the device to make any electrical appliance.
- ⑧ Never put the model into your mouth.
- ⑨ Do not remove the models with force.

- **Environment Requirements**

Temperature: RT 15-30°C

Moisture: 20%-70%

- **Photopolymer Resin Requirements**

Do not abuse the photopolymer resin. Please make sure you use the FlashForge photopolymer resin or the photopolymer resin from the brands accepted by FlashForge.

- **Photopolymer Resin Storage**

Unused photopolymer resin needs to be stored in a dark, dry, cool place, and out of the reach of children.

## Legal Notice

All the information in this document is subject to any amendment or change without the official authorization from FlashForge.

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# Chapter 1: 3D Printing Technology

Digital Light Processing (DLP) is a new method of 3D printing. It is also the method that the Hunter uses. It works by first digitally processing the image signal, and then projecting the light to the photosensitive resin vat to get a solid model according to the irradiation projection.

## 1.1 Process

3D printing involves three steps:

- 1.) Make or download a 3D model
- 2.) Slice and export the 3D model
- 3.) Build the 3D model

### 1.1.1 Make a 3D Model

Currently, there are three ways of creating a 3D model.

- **Designing From Scratch** You can use free CAD (computer-aided design) software such as 3DTADA, AutoCAD, SolidWorks, Pro-E, and our own software Happy 3D to design your own 3D model.
- **3D Scanners** An alternative method to creating a 3D model is to scan an object. 3D scanners work by digitizing a physical object, collecting its geometric data, and saving it to a file on your PC. There are also apps that can turn a mobile device into a 3D scanner.
- **From the Cloud** The most popular way of obtaining a 3D model is to download it from websites that allow users to upload 3D models that they designed.

Flashforge Cloud: [cloud.sz3dp.com](http://cloud.sz3dp.com)

E.g. [www.thingiverse.com](http://www.thingiverse.com)

### **1.1.2 Slice and Export the 3D Model**

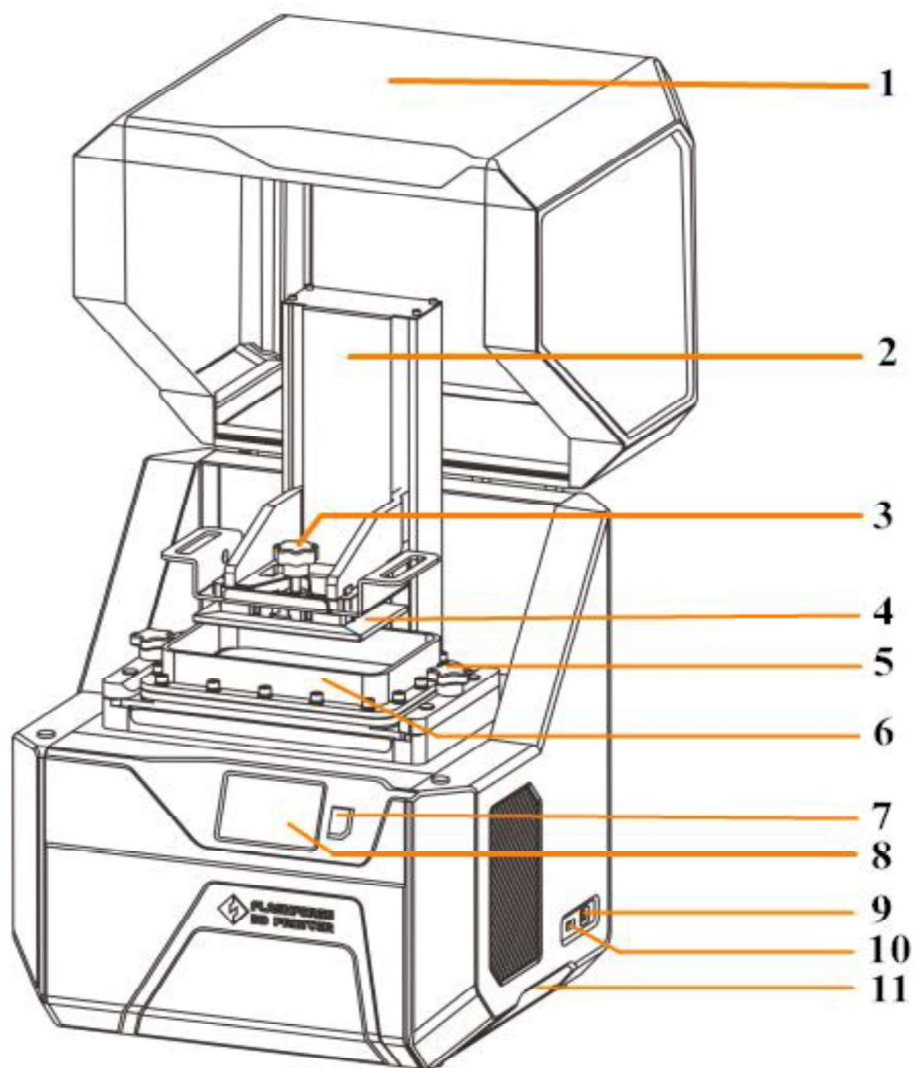
Slice software is the software that prepares 3D models for printing and turns them into instructions for the 3D printers. FlashDLPrint is the slicing software used for the FlashForge Hunter.

Using FlashDLPrint, you can prepare files to be SVGX files for printing. Then the files can be transferred to your Hunter via USB cable, USB stick or Wi-Fi.

# Chapter 2 . About Hunter

## 2.1 About Your Hunter

### 2.1.1 Main view:



1. Light Shield

2. Z-Axis

3. Platform Screw

4. Build Plate

5. Vat Film Screw

6. Resin Vat

7. Touch Screen Button

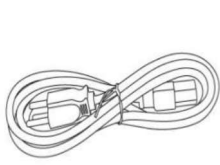
8. Touch Screen

9. USB Cable Input

10. USB Stick Input

11. Handle Slot

## 2.1.2 Accessory Box



Power Cable



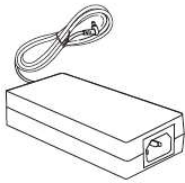
USB Cable



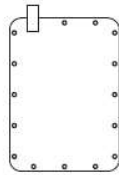
Quick Start Guide



After-sales Service Card



Power Adapter



Vat film



Gloves



Brush



Metal Scraper



Rinse Bucket



Plastic Scraper



Soft Cloth



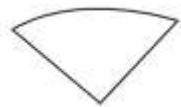
Photopolymer Resin  
(500ml)



Accessories Kits



Spare Screw Kits



Filter screen

### Accessories Kits Contents:

Hexagon Wrench (2.5mm\*1/3mm\*1/5mm\*1), Phillips Screwdriver, USB Stick, Plastic Tweezers

## Accessories Manual

### ❖ Power Cable

Used to power on the printer, detailed instruction in unpacking chapter and hardware assembly chapter of user manual.

### ❖ USB Cable

Used to connect computer to printer, then print files can be transferred and printed out, detailed instruction in unpacking or 5.2.13 print menus or 6.2 print methods of the user manual.

### ❖ Quick Start Guide

Used for first print instruction, help you finish your successful first print quickly.

### ❖ After-sales service card

Used when maintenance, please keep it well and provide it to flashforge support team when maintenance.

### ❖ Power Adapter

Used to power on the printer, detailed instruction in unpacking chapter and hardware assembly chapter of user manual.

### ❖ Vat film

Installed inside the resin vat. Vat film quality is important for printing effect, and vat film is replaceable. Detailed instruction in page 18 of the Quick Start Guide(How to change the vat film).

### ❖ Gloves

Used when doing cleaning or other processing. Detailed instruction in the Quick Start Guide.

### ❖ Brush

Used when doing already-printed model's cleaning or other after processing. Detailed instruction in the Quick Start Guide.

### ❖ Metal Scraper

Used when doing already-printed model's removing from the build plate. Detailed instruction in page 15 of the Quick Start Guide(Clean and remove the model).

! Metal Scraper is very sharp.

### ❖ Rinse Bucket

Used to clean or remove model after model is printed out correctly, detailed instruction in unpacking or 6.3 Model Processing chapter of the user manual, or in page 15 of the Quick Start Guide.

### ❖ Plastic Scraper

Used when doing already-printed model's removing from the build plate. Detailed instruction in page 15 of the Quick Start Guide(Clean and remove the model).

### ❖ Soft Cloth

Used when doing the cleaning.

### ❖ Photopolymer Resin

Used for printing, detailed instruction in unpacking and hardware assembly chapter of the user manual.

### ❖ Filter screen

To filter used resin to prevent residue from affecting next printing.

❖ **Accessories Kits**

❖ **Hexagon Wrench(2.5mm\*1/3mm\*1/4mm\*1)**

Used to tighten or untighten screws when maintenance, please refer to flashforge support team before you take maintenance steps, for printer and user good.

❖ **Phillips Screwdriver**

Used to tighten or untighten the screws and nuts when maintenance, please refer to flashforge support team before you take maintenance steps, for printer and user good.

❖ **USB Stick**

Used to transfer print files from computer to printer, detailed instruction in unpacking and 6.2 print methods of the user manual.

❖ **Plastic Tweezers**

Used when doing already-printed model's removing from the build plate, or other processing. Detailed instruction in page 15 of the Quick Start Guide(Clean and remove the model).

❖ **Spare Screw Kits**

❖ **Hexagon Socket Head Cap Screws**

Used to fasten printer parts, please refer to quick start guide or flashforge support team before you take installation/maintenance steps, for printer and user good.

❖ **Flat Washer**

A small part installed on resin vat, please refer to page 18 of the Quick Start Guide or flashforge support team before you take installation/maintenance steps, for printer and user good.

❖ **Spring Washer**

A small part installed on resin vat, please refer to page 18 of the Quick Start Guide or flashforge support team before you take installation/maintenance steps, for printer and user good.

### 2.1.3 Terms

Build Plate	The surface on which the Hunter builds an object.
Build Volume	The three dimensional amount of space that an object will use once it is completed. The largest build volume of Hunter is 120*67.5*150mm.
Resin Vat	Which is used to store photopolymer resin.
Z-Axis Set	The device that changes the direction of Z-axis, it can control the build plate up and down.
Light Shield	The open/close cover that used for dust proof and antiglare.
Light Engine	A device that used for projecting slicing file, which ensure stable performance for long term usage.

### 2.1.4 Reference

Name	Hunter
Print Technology	Digital Light Processing(DLP)
Screen	3.5" color IPS Touch Screen
Build Volume	120*67.5*150mm
Layer Resolution	0.025-0.02mm
Print Accuracy	±0.05mm
Positioning Accuracy	1920×1080 pixel
Material	Photopolymer Resin
Build Speed	10 mm/h
Software	FlashDLPrint
Support Formats	Input: 3MF/STL/OBJ/FPP/FDP/SLC Output: SVGX
OS	Win XP/Vista/7/8/10、Mac OS、Linux
Product Dimensions	560*360*320mm
Net Weight	17.8Kg
AC Input	Input: 100V-240VAC, 47-63Hz Power: 65W
Connectivity	USB cable, USB stick, WiFi



## Chapter 3. Unpacking

This chapter will present you the whole unpacking procedure of Hunter 3D printer. **(Note: Make sure you read the whole unpacking guide.)**

1. (3-1) Put Hunter package on the clean, tidy workbench, using a knife to cut the tape from the bottom.



3-1

2. (3-2) Set the Hunter upright, lay the white foam on the floor and lift the carton.



3-2

3. (3-3) Remove the foam and accessory box from the top. You will find a **Quick Start Guide**, an **After-Sales Service Card** and a **Spare Vat Film** inside.



3-3

4.(3-4)Accessory box contains USB cable, power cable, metal scraper, plastic scraper, brush, non-woven cloth, spare screw kits, plastic tweezers, hexagon wrench (2.5mm\*1/3mm\*1/4mm\*1), Phillips screwdriver, USB stick.



3-4

5. (3-5) Tilt the Hunter to the left and remove the foam on the right. And vice versa remove the foam on the left.



3-5

6. (3-6) There is a carton box in each foam, each holds a 500ml bottle of photopolymer resin, another includes a power adapter.



3-6

7. (3-7) Remove the plastic bag, the seal is on the bottom.



3-7

8. (3-8) Remove the clear protection film.



3-8

9.(3-9) Open the cover and tear off the protection film as shown.



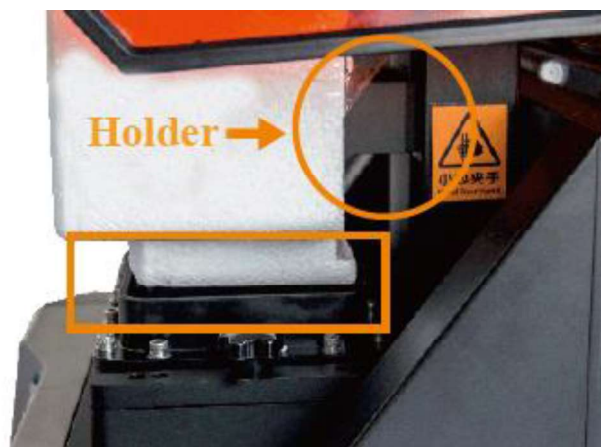
3-9

10. (3-10) Tear off the protection film on the foam.



3-10

11. (3-11) Hold the circled place with hands, then lift it up until the bottom foam is raised above the resin vat.



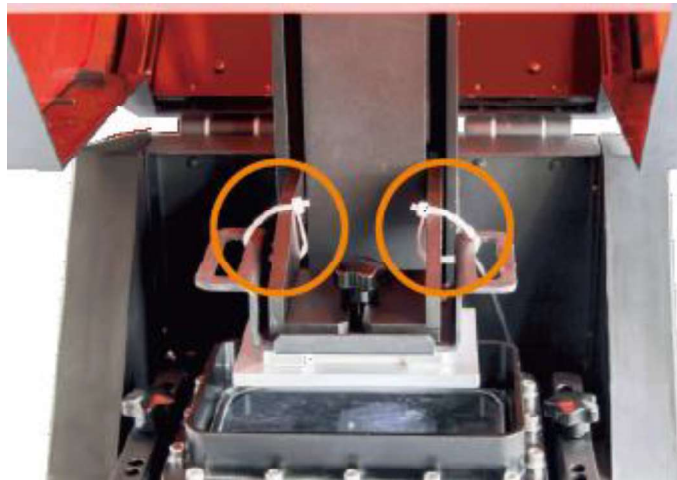
3-11

12. (3-12) Take out the foam block, there is a rinse bucket in the foam, which contains a pair of gloves.



3-12

13. (3-13) Cut the white ties that hold the Z-axis.



3-13

Now you have finished unpacking, you can see the complete Hunter 3D printer and accessories.

## Chapter 4 . Hardware Assembly

The Hunter comes pre-assembled and is almost ready-to-print (ARP). All you need to do is to plug into the electronic power and pour the photopolymer resin. It will only take between 5 to 10 minutes before you can start up the Hunter and prepare for your first 3D print!

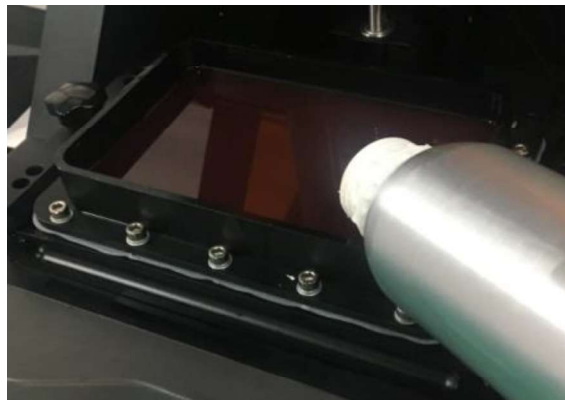
### 4.1 Pour Photopolymer Resin into Vat

(4-1) There is a 500ml bottle of photopolymer resin in each Hunter. Tear off the seal open the cap, there is a rubber plug at the mouth of the bottle. Lift the ring open and take out the rubber plug. Please put on gloves during operation.



4-1

(4-2) Pour the photopolymer resin into resin vat slowly, fill it one-third full each time. Don't go over than the maximum scale mark. Be sure not to pour too fast to avoid spilling. Before pour the resin please make sure the vat is dustless without fingerprints. Clean the vat with non-woven cloth if it is necessary.



4-3



## 4.2 Plug in Power Cable & turn on the Hunter

(4-4) Connect power cable and power adapter.



4-4

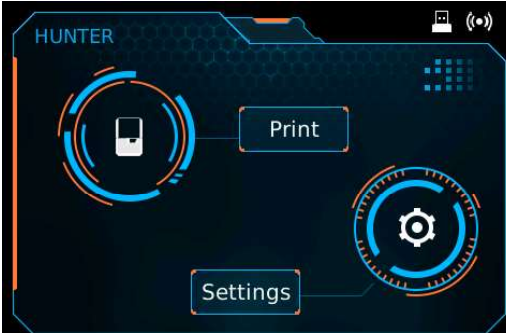
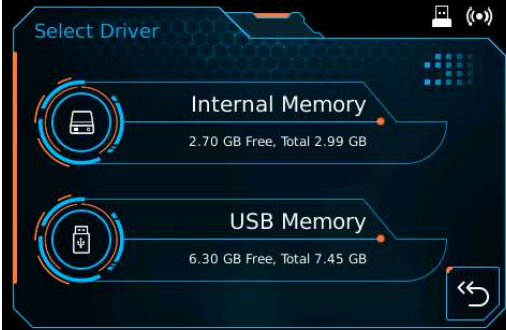
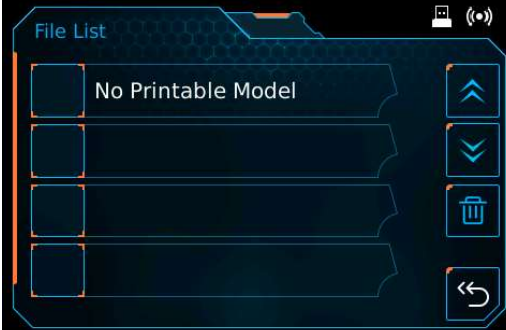
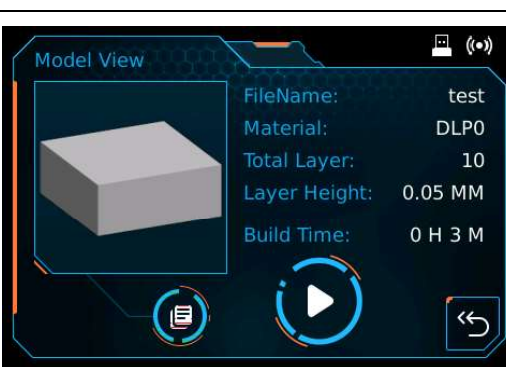
(4-5) Plug the power cable into the outlet on the back of Hunter and turn on the power switch.



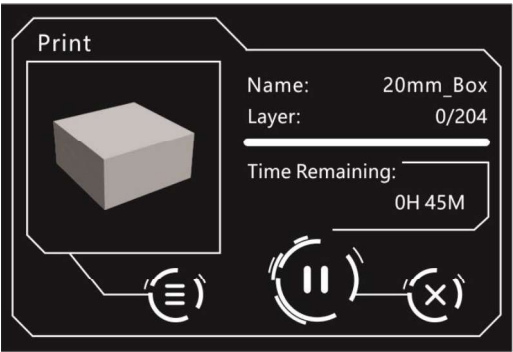
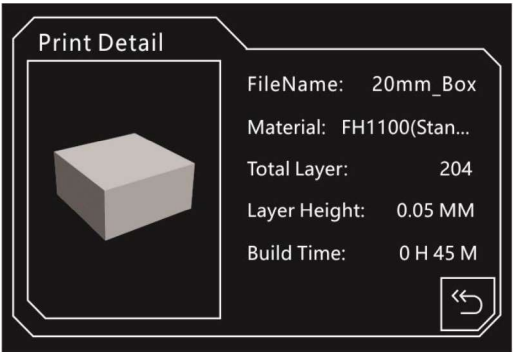
4-5

## 4.3 Screen



### 4.3.1 Print



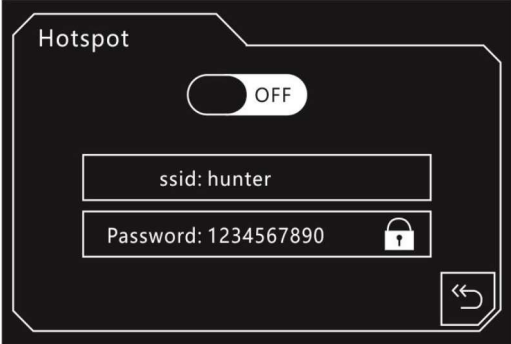

	<p><b>Print:</b> Enter into print interface;</p> <p><b>Settings:</b> Enter into setting interface.</p>
	<p><b>Internal Memory;</b></p> <p><b>USB Memory.</b></p>
	<p><b>File List:</b> It can preview models that stored in memory, tap the model to start printing;</p> <p><b>Page up;</b></p> <p><b>Page down;</b></p> <p><b>Delete model;</b></p> <p><b>Back.</b></p>
	<p><b>Model View:</b> To show the 3D preview of the model, and it shows the file name, material, total layer, layer height and build time;</p> <p><b>Copy:</b> To copy the files to the local memory card from the USB stick.</p> <p><b>Start:</b> start to print this model;</p> <p><b>Back.</b></p>

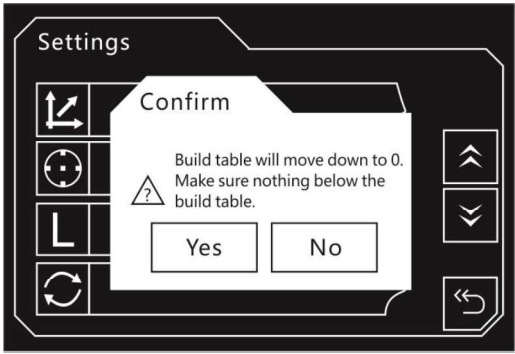
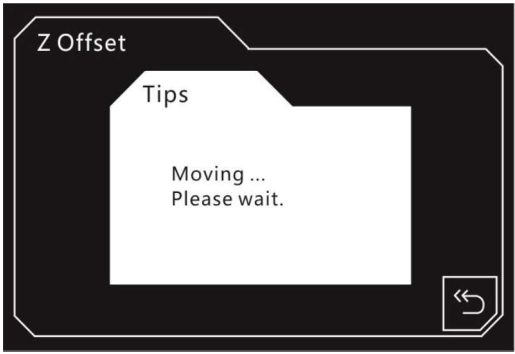
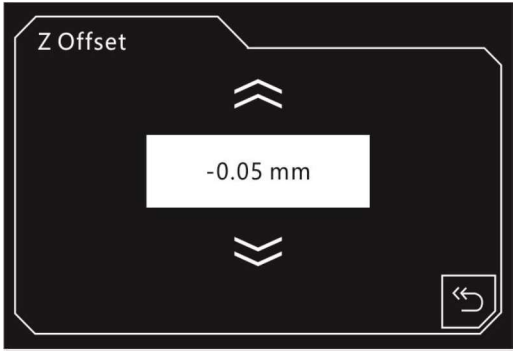
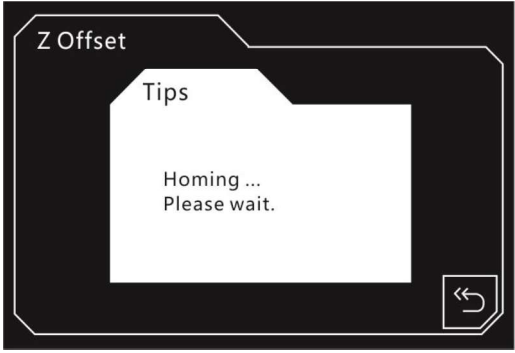


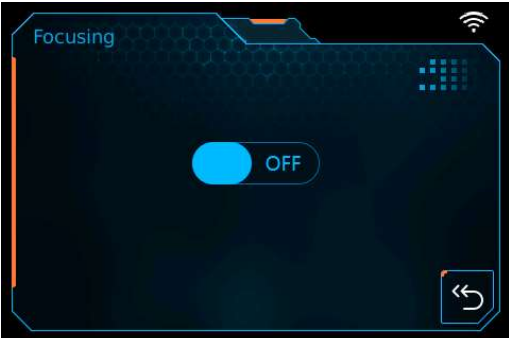
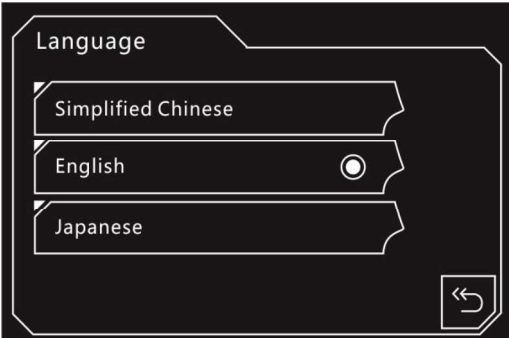
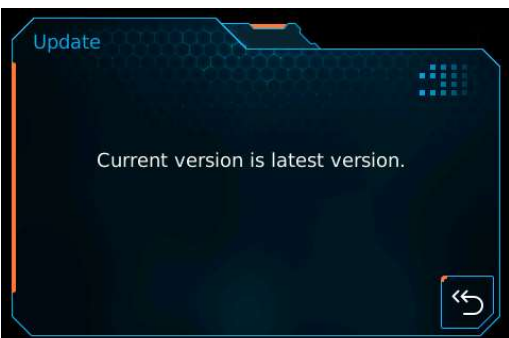
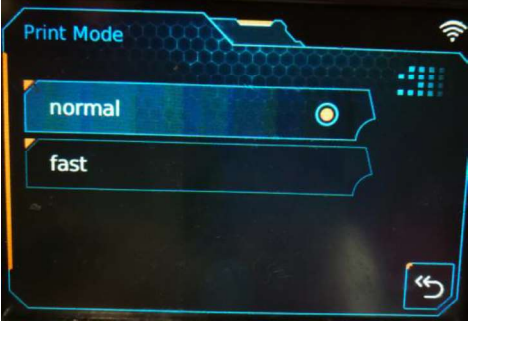
	<p><b>Print:</b></p> <p><b>Printing information:</b> To show 3D preview of the model, file name, layer and time remaining;</p> <p><b>Print Detail:</b> To enter print detail interface;</p> <p><b>Pause/Resume printing:</b> To pause/resume printing;</p> <p><b>Abort printing:</b> To stop printing.</p>
	<p><b>Print detail:</b></p> <p><b>File name;</b></p> <p><b>Material:</b> The printing material;</p> <p><b>Total layer:</b> The total layer of the model;</p> <p><b>Layer height:</b> The layer height of the model;</p> <p><b>Build time:</b> The time of printing the model;</p> <p><b>Back.</b></p>

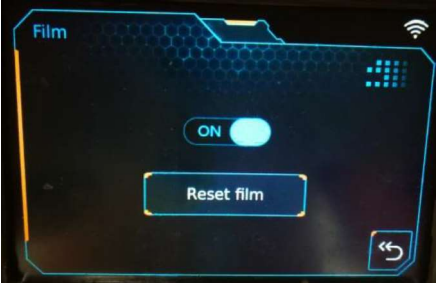
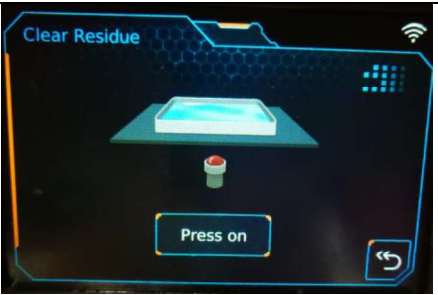

### 4.3.2 Setting

	<p><b>Settings:</b></p> <p><b>Printer Status:</b> To show printer real-time status;</p> <p><b>WLAN:</b> To turn on the WiFi;</p> <p><b>Hotspot:</b> To turn on the hotspot;</p> <p><b>Z Move:</b> To control the movement of Z-axis;</p> <p><b>Z Offset:</b> To compensate the subtle movement of z-axis within <math>\pm 1\text{mm}</math>;</p> <p><b>Focusing:</b> To adjust the focal distance;</p> <p><b>Language:</b> To set the display language;</p> <p><b>Update:</b> To update the firmware;</p> <p><b>Mode:</b> Choose print speed mode;</p> <p><b>Film:</b> Monitor FEP film lifetime;</p> <p><b>Residue:</b> Remove residue;</p> <p><b>About:</b> Information about printer;</p> <p><b>Back.</b></p>
	<p><b>Printer Status:</b></p> <p><b>UV Shield:</b> Open/Close;</p> <p><b>Temperature;</b></p> <p><b>Projector Hours:</b> To show the hours that projector has worked;</p> <p><b>Back.</b></p>

 	<p><b>Wlan:</b></p> <p><b>Wlan:</b> To open or close the wlan;</p> <p><b>Wlan list:</b> To select available WiFi signal;</p> <p><b>Password:</b> To enter the password;</p> <p><b>Finish:</b> To connect to the WiFi signal;</p> <p><b>Back.</b></p>
	<p><b>Hotspot:</b></p> <p><b>Hotspot:</b> To open or close the hotspot;</p> <p><b>SSID:</b> To enter the hotspot name;</p> <p><b>Password:</b> To enter the hotspot password;</p> <p><b>Back.</b></p>
	<p><b>Z Move:</b></p> <p><b>Move up:</b> To move the z-axis up;</p> <p><b>Move down:</b> To move the z-axis down;</p> <p><b>Homing:</b> Back to initial point;</p> <p><b>Zero:</b> Back to zero point;</p> <p><b>Back.</b></p>

   	<p><b>Z Offset:</b></p> <p>After tapping [<b>Z Offset</b>], the prompt box will pop up. Make sure there is nothing below the build table, then tap [<b>Yes</b>] and wait for the build platform moving.</p> <p><b>Move up:</b> To move the z-axis up;</p> <p><b>Move down:</b> To move the z-axis down;</p> <p><b>Back.</b></p> <p>After tapping [<b>Back</b>], the printer will start homing.</p>
--	--

	<p><b>Focusing:</b>  <b>ON/OFF:</b> To open or close the focusing.  <b>It is not suggested do this operation by users.</b>  <b>Please contact us before focusing.</b></p>
	<p><b>Language:</b>  To select the display language.</p>
	<p><b>Update:</b>  To show the update information, in network connection you will be promoted to update the firmware if there is available latest version.</p>
	<p><b>Mode:</b> Choose print speed mode.</p>

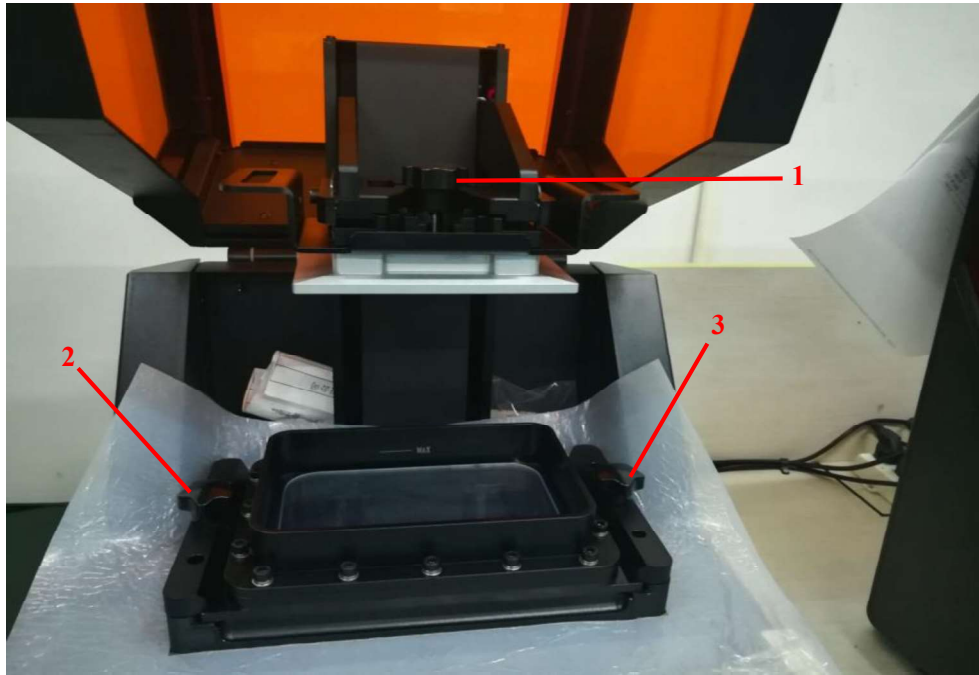
	<p><b>Film:</b> Turn on to monitor FEP film lifetime. Remind users to change the film. Please click “Reset film” after changing the FEP film.</p>
	<p><b>Residue:</b> Remove residue in resin vat.</p>
	<p><b>About:</b> It displays the basic information about the device.</p>

## **4.4 Build Plate Leveling**

**4.4.1 Loosen the screw which is located on the right and above the build plate with a 4mm hexagon wrench. Showed in the picture below:**



**4.4.2 Manually tighten the platform screw which is located in the middle and above the build plate, manually tighten the two vat film screws which is located on the right/left of resin vat. Showed in the picture below:**



**4.4.3 Turn on the Hunter printer, Tap[Settings]—Tap[Z Move] on the touch screen(Showed in the picture below), make sure the present number on [Z Move] interface is Z:150.00MM, **Otherwise do not do the following leveling operation !** Please contact Flashforge to set this number back to Z:150.00MM in Hunter’s factory mode under the instructions of Flashforge engineers, then you can do the following leveling operation.**





**4.4.4 Tap[Zero] on the Z Move interface(Showed in the picture above),wait for build plate moving down into the resin vat and stop.**



**4.4.5 Manually press down and flatten the platform with the resin vat (Do not use too much strength or push too hard ! ), meanwhile tighten the screw which is loosened in previous step 4.4.1 with a 4mm hexagon wrench. The screw is located on the right and above the build plate, showed in the picture below:**





**4.4.6 Tap[Homing] on the Z Move interface(Showed in the picture below). Build plate leveling operation has completed !**



# Chapter 5: About Software

This chapter talks about the basic function of FlashDLPrint. For more information about advanced function, you can browse our website [www.FlashForge.com](http://www.FlashForge.com).

## 5.1 Software Installation

### 5.1.1 Software Acquisition

**Method 1:** To get the installation package from the USB stick in the toolkit.

 FlashDLPrint_1.1.0_win64.zip	2018/10/17 19:03	好压 ZIP 压缩文件	18,856 KB
 FlashDLPrint_1.1.0_win32.zip	2018/10/17 19:02	好压 ZIP 压缩文件	17,451 KB
 FlashDLPrint_1.1.0_mac.zip	2018/10/17 19:03	好压 ZIP 压缩文件	19,550 KB

**Method 2:** Open the link below to download the installation package:

<http://www.flashforge.com/support-center/flashprint-support/>

**Support---Downloads---FlashPrint---Choose the software version---Download**

### 5.1.2 Software Installation and Start-up

1. Decompress the zipped file or start the installation program, and then install the software according to the prompts.
2. Start the software with the start menu shortcut or by clicking the software icon.



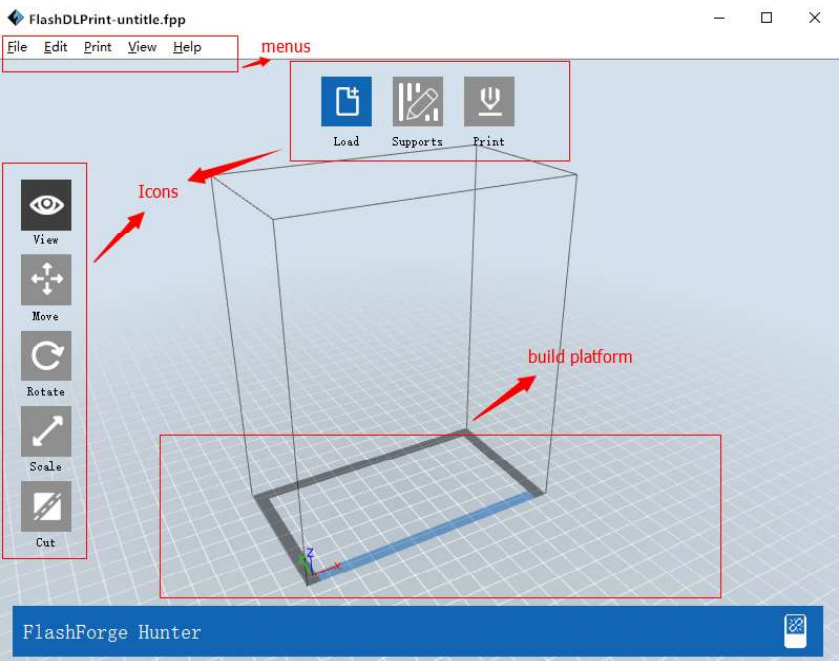
## 5.2 Exploring FlashDLPrint

### 5. 2.1 Machine Type Selection




! After starting FlashDLPrint, you need to select the target machine type first.






When you start FlashDLPrint, a dialog box will pop up. Just need to select FlashForge Hunter in the machine type list and click **[OK]**. You can also change the machine type via clicking **[Print]**--**[Machine type]**.

### 5.2.2 FlashDLPrint Menus



5-3

	Load files.
	Enter the support edit mode
	View FlashDLPrint home screen from one of six viewing angles.

	Move model around on XY-axis; shift+click to move along Z axis
	Turn and rotate your model
	Scaling the size of your object
	Cut the model into several parts
	Print it directly with your Hunter or export to your USB stick.

### 5.2.3 Loading

You can load a model file or Gcode file into your FlashDLPrint by the following six methods:

**Method 1:** Click the **Load** icon on the main interface. Then select the object file.

**Method 2:** Select the file for loading and drag the file to the main interface of the software.

**Method 3:** Click **[File]**--**[Load File]**. Then select the object file for loading.

**Method 4:** Click **[File]**--**[Examples]** to load the example files

**Method 5:** Click **[File]**--**[Recent Files]** to load the files opened recently.

**Method 6:** Select and drag the target file to the icon of FlashDLPrint.

**Note:** **.STL, .SLC,.OBJ, .3MF ,FDP and .FPP**, ways to store 3D models, are supported by FlashDLPrint for editing.

### 5.2.4 Views

#### ① Changing views

Change model views by moving, rotating, scaling.

- **Drag**

Click the [\[View\]](#) icon and then you can move the object by the following three methods:

**Method 1:** Hold down the left mouse button and drag.

**Method 2:** Hold down the mouse wheel and scroll up and down.

**Method 3:** Hold down the Shift key, hold down the right mouse button and drag.

- **Rotate**

Click the [\[View\]](#) icon and then you can rotate the object by the following two methods:

**Method 1.** Hold down the right mouse button and drag.

**Method 2.** Hold down the [Shift](#) key, hold down the left mouse button and drag.

- **Scale**

Rotate the mouse wheel to enlarge or shrink the build plate.

## ② Set View

Allow users to view the object on the build plate. Six views are under the view menu, that is, bottom view, top view, front view, back view, left view and right view.

**Method 1:** Click the the [\[View\]](#) button, there are six views in the drop- down list.

**Method 2:** Click the the [\[Look\]](#) icon on the left, click it again and a submenu will appear with six views for selecting.

## ③ Reset View

Allow users to reset views by the following two methods:

**Method 1:** Click the [\[View\]](#) menu and select [\[Home View\]](#)

**Method 2:** Click the [\[View\]](#) button on the left, click it again and you will see the viewing options, you can click [\[Reset\]](#).

## ④ Show Model Outline

Click **[View]**--**[Show Model Outline]**, it will highlight the yellow border of the object

#### ⑤ Show Steep Overhang

Click **[View]**--**[Show Steep Overhang]**. When the intersection angle between the model surface and horizontal line is within the overhang threshold value, the surface has steep overhang and it becomes red in the software. Overhang threshold value could be set as needed. The default value is 45 degree.

### 5.2.5 Move

Select the object and move the object by the following two methods:

**Method 1:** Click the **[Move]** icon on the left. Long press the left mouse button and drag to adjust the location of the model in XY direction. Long press the **Shift** key and the left mouse button, drag to adjust the location of the model in Z direction. The distance and the direction of the movement shall be displayed.

**Method 2:** Click the **[Move]** button on the left and then enter the distance value. Click **[Reset]** to reset distance values.

**Note:** Users shall click **[Center]** and **[On Platform]** after the location adjustment to ensure the model(s) be within the build area and on the build platform. If a specified position is needed, only click **[On Platform]**.

### 5.2.6 Rotate

Select the target object and rotate the object by the following two methods:

**Method 1:** Click the **[Rotate]** icon on the left and three mutually perpendicular rings appear around the object. Click one ring and rotate on the present axis, you will see the rotation angle and direction in the center of circle. In this way, you could make the model rotate on X/Y/Z axis.



**Method 2:** Click the **[Rotate]** icon on the left, and then enter into rotating angel values in X/Y/Z axes positioning. Click **[Reset]** to reset rotating angel values.

### 5.2.7 Scale

Select the target object and scale the object by the following two methods:

**Method 1:** Click the **[Scale]** icon on the left, hold down the left mouse button and scale the model. The corresponding values will display near the object.

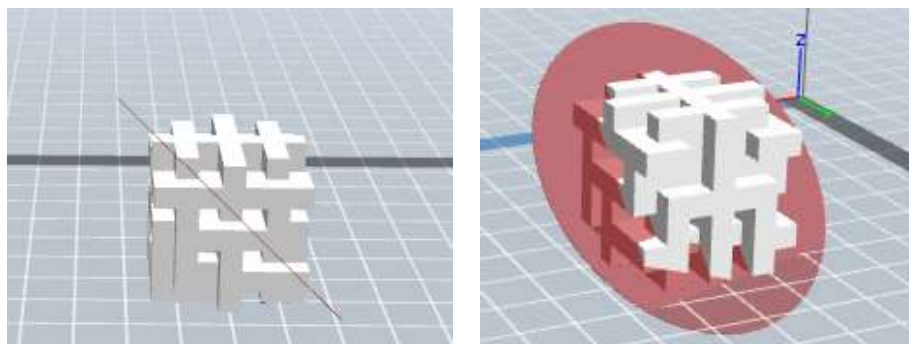
**Method 2:** Click the **[Scale]** icon on the left and then enter into scale values in X/Y/Z axes positioning. Click the **[Maximum]** button to get largest size possible for building. Click **[Reset]** to reset the size of model.

**Note:** If the **[Uniform Scaling]** radio button is clicked, it will scale the model in equal proportion when changing **value** in any positioning of the model. Otherwise it will only change the value of the corresponding positioning.

### 5.2.8 Cut

Left-click on the model to select it and double-click on the **[Cut]** icon to set the cut plane. The direction and position are available for setting.

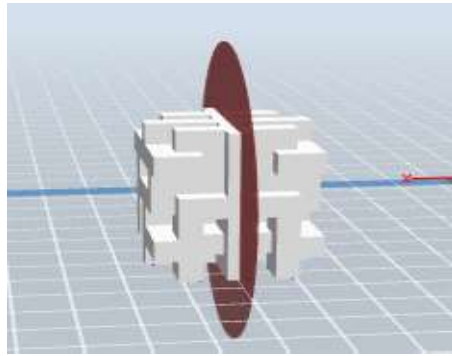
#### ① Draw with Mouse



5-4

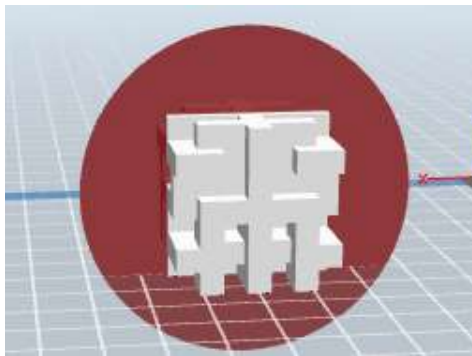
#### ② X Plane





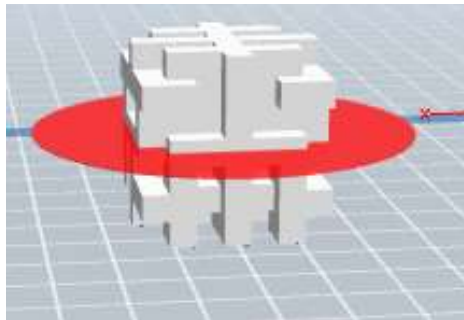
5-4

### ③Y Plane



5-5

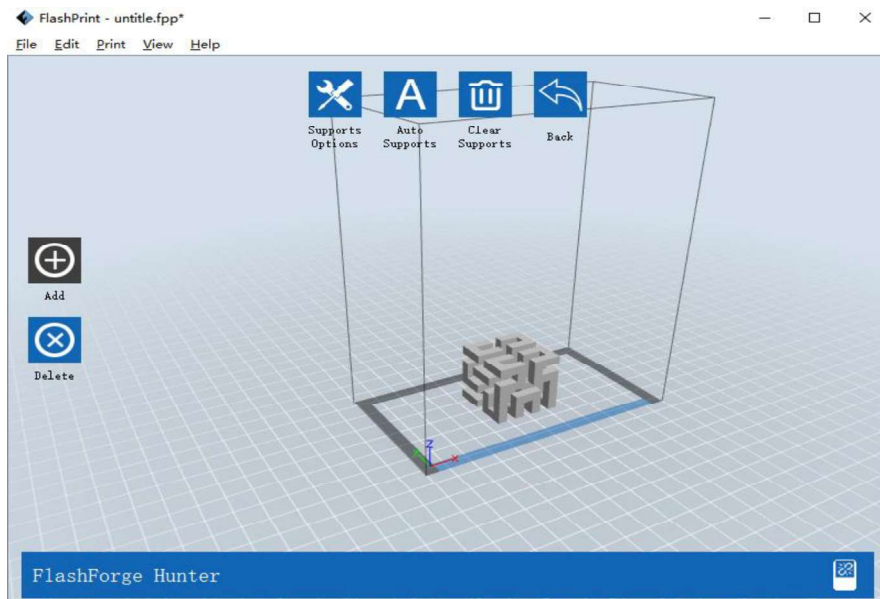
### ④Z Plane



5-6

## 5.2.9 Supports

After loading the model, click [\[Edit\]](#)--[\[Supports\]](#) or click the [Supports](#) icon directly, then you will enter the support edit mode (5-7). Click [\[Back\]](#) to exit when you finish editing.



5-7

Tap [supports options], supports options box popups, supports type is columnar only, selection profiles are general, partial frame, dental crown and bridge, you can also customize supports parameters and save as fixed profile.

A. General setting:

Overhang threshold: the default value is  $45^{\circ}$ , the highest value is  $60^{\circ}$ , the lowest value is  $30^{\circ}$ .

Post space: this highest is 10.0mm. The lowest is 1.0mm

Tip diameter: columnar tip diameter, the highest can be set to 1mm, the lowest is 0.25mm.

Raise height: when adding supports, raise model up to certain distance, the lowest height is 0. The highest is 100mm.

Cross connection: cross connection between supports to increase supports intensity.

Y-shaped connection: Y-shaped connection between supports to increase supports intensity, thus reducing inner support and save resin.

#### B. Post size setting:

Tip diameter: supports tip diameter, the smallest is 0.25mm, and the biggest is 1.00mm

Tip angle: the angles between tip slope and vertical direction, a smaller angles makes a longer tip. The small angle is 1°, the biggest angle is 60°.

Post diameter: the larger the diameter of supports the stronger it will be, the more difficult to remove.

Base diameter: the diameter of bottom post, the highest is 3mm, the lowest is 0.25mm.

Base height: the height of the support at the bottom of the bold part, the highest height is 5mm, the lowest height is 0.

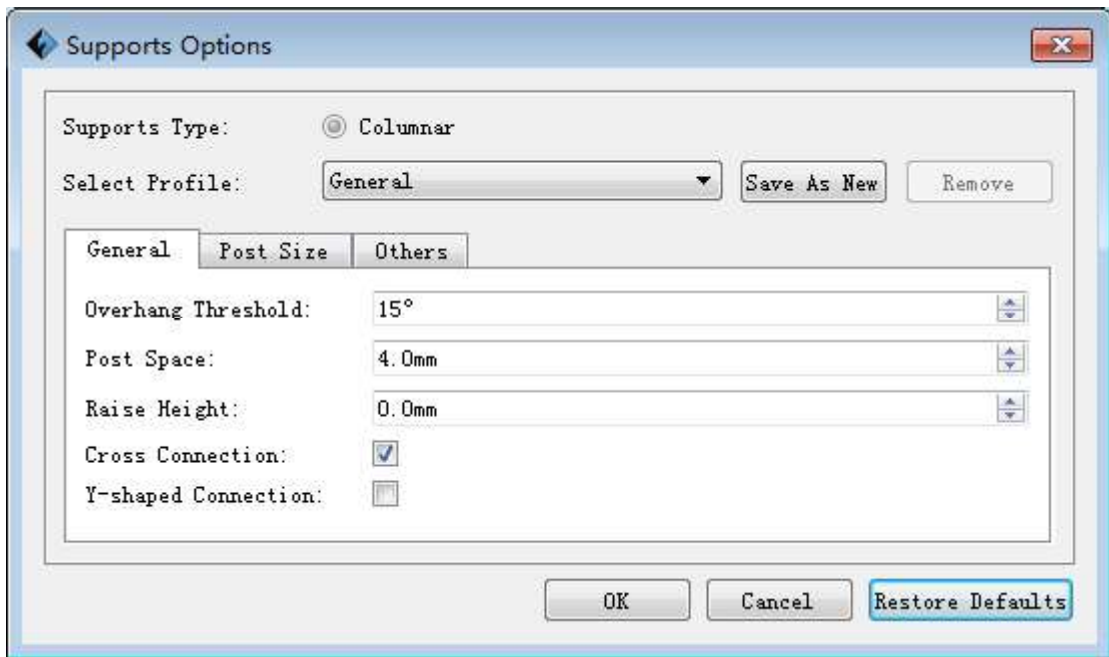
#### C. Other setting:

Enable tip ball: tip call will increase contact area between supports and models, the bigger the tip diameter is, the more solid the contacting with model will be, but more difficult to remove.

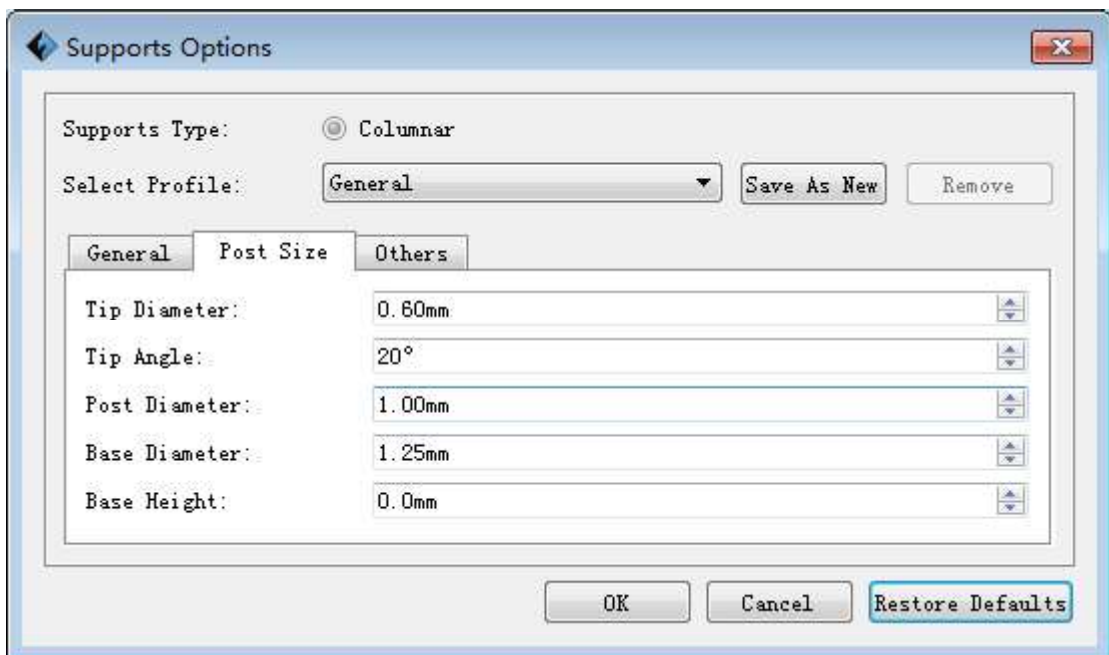
Bottom support only: generate supports at the bottom of the model only.

Bottom thickness: used to judge which part of the bottom needs generating supports. The thinnest is 0.1mm, the thickest is 150.0mm.

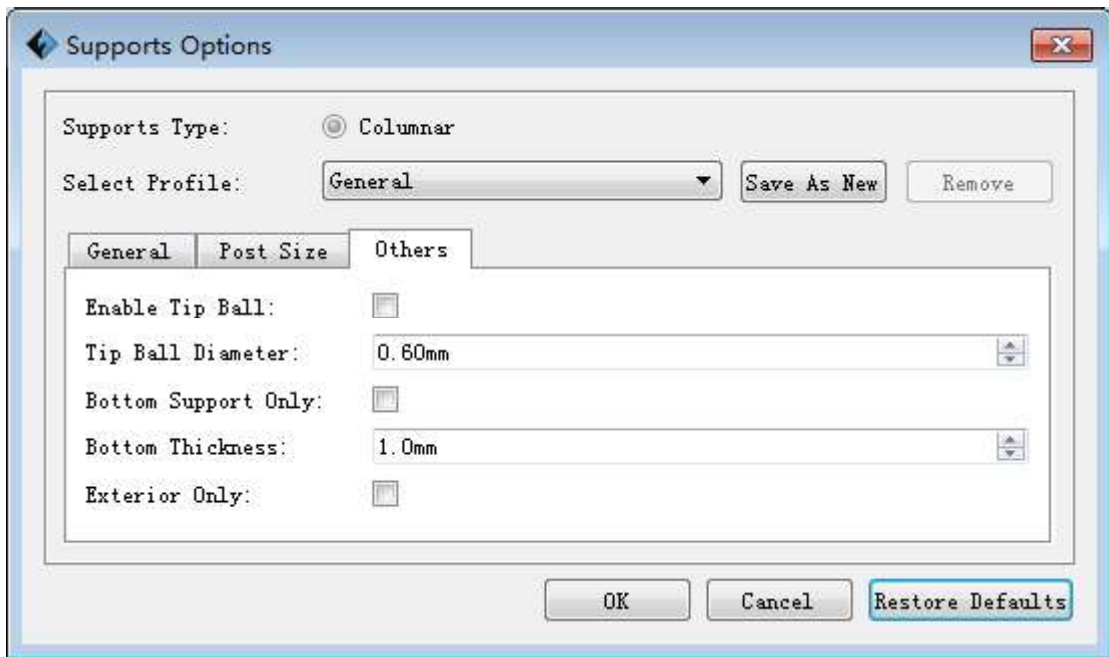
Exterior only: generate supports which can contact with build plate only.



5-8

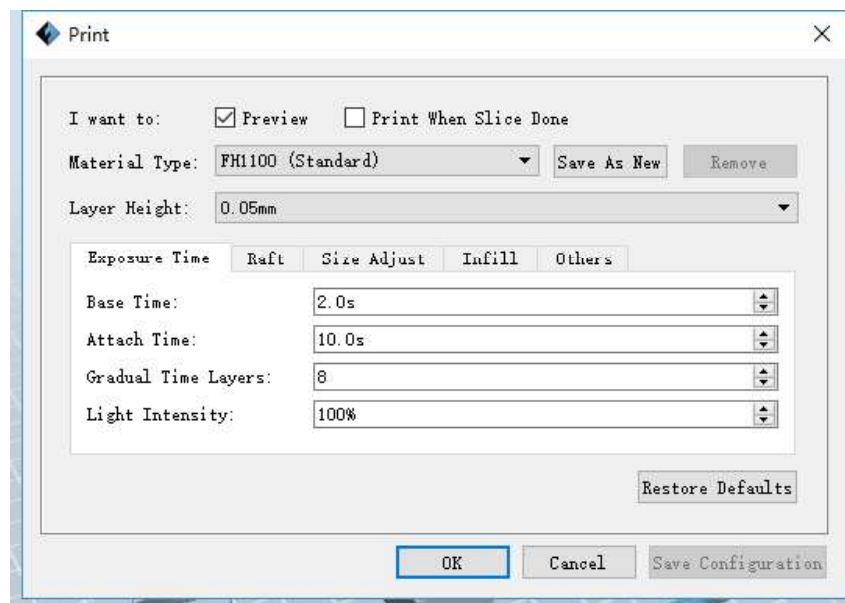


5-9



5-10

## 5.2.10 Print



5-11

- ① **Preview:** Choose to enter preview interface or not
- ② **Print when slice done:** Print or not when slice done
- ③ **Material type:** Choose according to the type of model. Users can choose “customer materials” to change parameters to apply to the third party resin.

- ④ **Save as new:** To custom the material type and remember this choice.
- ⑤ **Remove:** Clear the custom material type.
- ⑥ **Layer height:** To set the height of each layer while printing, the default value is 0.025mm, optional values are 0.05mm. Higher the value is, lower printing precision and higher speed the model has, and vice versa.

- **Exposure time**

- a. **Base Time:** To set expose time to solidify a layer of photopolymer resin.
  - b. **Attach Time:** To set the expose time that solidify the attached a layer of photopolymer resin.

- c. **Gradual Time layers**

- d. **Light Intensity:** According to the sensitivity of light to adjust the light intensity. Use FlashForge photopolymer resin need not any adjustment, default 100%.

- **Raft:** To choose whether print the raft.

- **Size adjust**

- a. **X adjust:** According to the previous printing error to adjust the x-axis size.
  - b. **Y adjust:** According to the previous printing error to adjust the x-axis size.
  - c. **Outline compensation:** According to the size error of the previously printed.

- **Infill**

- a. **Fill Density:** Fill rate.
  - b. **Shell Thickness:** To set the shell thickness value between 1mm to 10mm.
  - c. **Infill Thickness:** To set the infill thickness value between 0.5mm to 5mm.

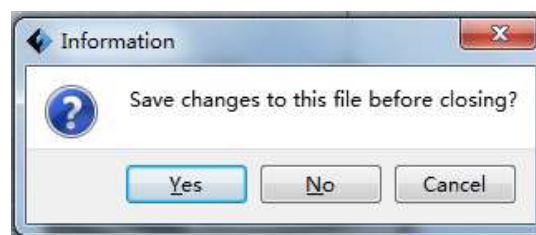
- **Others**

- To set the space between support and model.

## 5.2.11 File Menus

### ① New Project

Click **[File]--[New Project]** can build a blank project. If there is an unsaved modification on previous project, then it will inform you whether the modification needs to be saved or not. Click **[Yes]** will save the modification, while click **[No]** will abandon it. If click **[Cancel]** or close tool tip, then it will cancel the new project.



5-12

### ② Saving

After finishing the model edit and adjustment, there are two ways below to save all models in the scene.

#### Method 1:

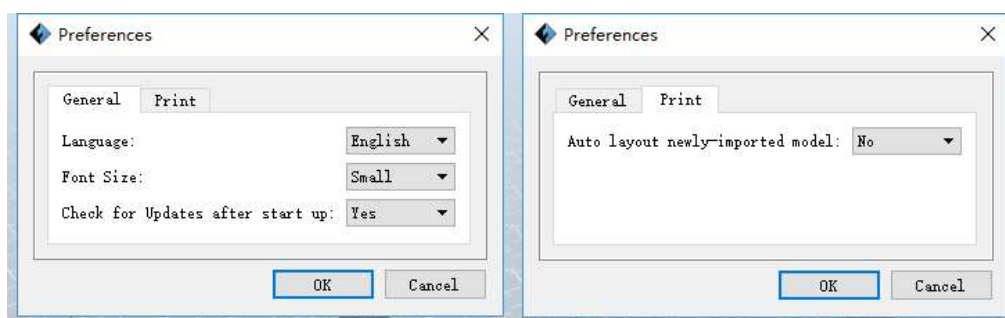
Click **[File]--[Save Project]** in the menu bar to save the file as a project file with the “.fpp” suffix, all models in the scene (include support) are independent. After reloading the files, extruder configuration information and model position will be the same as the configuration during saving.

#### Method 2:

Click on **[File]--[Save as...]** to save the model as project file .fpp or .stl and .obj. For .stl and .obj, models are integrated as one (include support part). If load it again, only the position of the model was saved, not included the printing parameters.

### ③ Preferences

Click **[File]--[Preferences]**, you can choose language and if needs detecting update when start



5-13

- **Language:** The software supports several languages, namely, Chinese (simplified Chinese and traditional Chinese), English, French, Korean, Japanese and so on.
- **Font Size:** Set the font size.
- **Check for Update after start up:** It is used to preset if it is necessary to activate the online automatic update function, if choose yes, every time when you open software, it can online detect if it is a new version software, once new version found, it will reminds users to download and install new version firmware.
- **Auto layout newly-imported model:** Set Yes or No.

## 5.2.12 Edit Menus

### ① Undo

Allows users to undo the recent edits by the following two methods:

**Method 1:** Click **[Edit]--[Undo]**.

**Method 2:** Press the shortcut **Ctrl+Z**.

### ② Redo

Allows users to redo the most recent edit you have undone to your model file by the following two methods



**Method 1:** Click **[Edit]--[Redo]**

**Method 2:** Press the shortcut **Ctrl+Y**.

### ③ Empty Undo-stack

To clean up the recorded operating steps so as to release the memory.

### ④ Select All

By the following two methods, you could select all models in the scene.(When models are too small to be seen or out of viewing scope, please click **[Center]** and **[Scale]** buttons to adjust the model.)

**Method 1:** Click **[Edit]--[Select All]**.

**Method 2:** Press the shortcut **Ctrl+A**.

### ⑤ Duplicate

Select the object and duplicate the object through the following two methods:

**Method 1:** Click **[Edit]--[Duplicate]**

**Method 2:** Press the shortcut **Ctrl+D**

### ⑥ Delete

Select the object and delete the object through the following two methods:

**Method 1:** Click **[Edit]--[Delete]**

**Method 2:** Press the shortcut **Delete**

### ⑦ Auto Layout All

Click **[Edit]--[Auto Layout All]** after loading one or more than one models, all models will be placed automatically as automatic placement rule.

### ⑧ Repair Models

Click **[Edit]--[Repair Models]** to repair models.

### ⑨ Supports

Click **[Edit]--[Supports]** to enter supports setting interface.

### ⑩ Leading Hole:

Click **[Edit]--[Leading Hole]** to add hole in the mode to let uncured resin out of

hollow model.

## 5.2.13 Print Menus

### ① Connect Machine

You can connect the Hunter with your PC via a USB cable or WiFi.

**Note:** The machine icon on the bottom right displays the connection status:

Connected



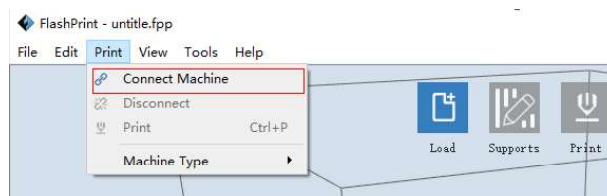
Disconnected



5-14

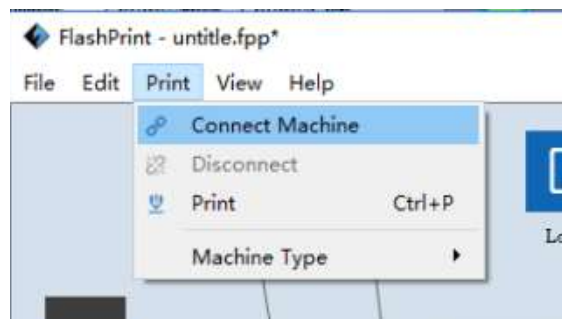
### Method 1: Connect Via USB Cable

- a. Connect your Hunter with your PC via an USB cable.
- b. Turn on your Hunter and start FlashDLPrint.
- c. Click **[Print]--[Connect Machine]**, then select USB in the **[Connection Mode]** option and select machine you want to connect in **[Select Machine]** option. If you can not find your machine, click the **[Rescan]** button to scan your machine and select it. Finally click **[Connect]** button to connect to the printer. If you still can not find your machine after rescan, it means you haven't installed the driver in the software.

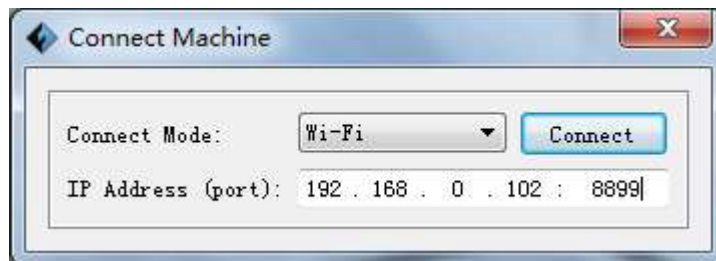


## Method 2: Connect Via WiFi

1. Turn on Hunter.
2. Turn on Wi-Fi on the Hunter. Tap **[Tools]-[Setting]-[WiFi]-[WiFi ON]**.
3. Connect Hunter with an available WiFi signal, which is also connected by your computer.
4. Click **[Print]-[Connect Machine]**, it will pop up box, then select Wi-Fi in the Connect mode. Type in **“192.168.0.102”** and **8899** in IP address, click **[Connect]**.



5-16



5-17

## ② Disconnect Hunter

Click **[Print]--[Disconnect]** to disconnect your PC and Hunter.

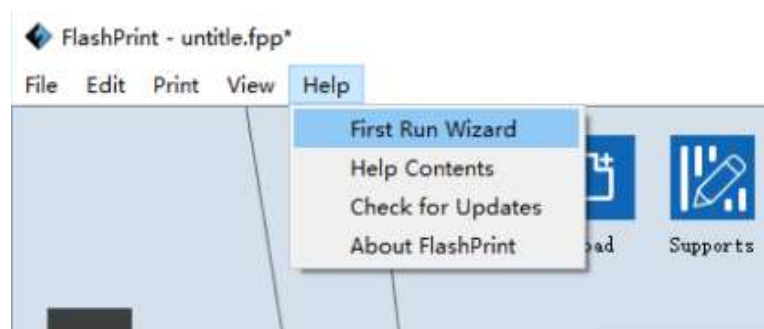
## 5.2.14 Help Menus

### ① First Run Wizard

② **Help Contents:** Click **[Help]--[Help Contents]**, you can read the help contents.

③ **Check for Updates:** Click **[Help]--[Check for Update]** to detect the available updates online.

④ **About FlashDLPrint:** Click **[Help]--[About FlashDLPrint]**, the software information box will pop up. The contents include the current software version and copyright information.



5-18

# Chapter 6: Printing

This chapter will provide a step-by-step guide on turning a 3D model into a physical reality.

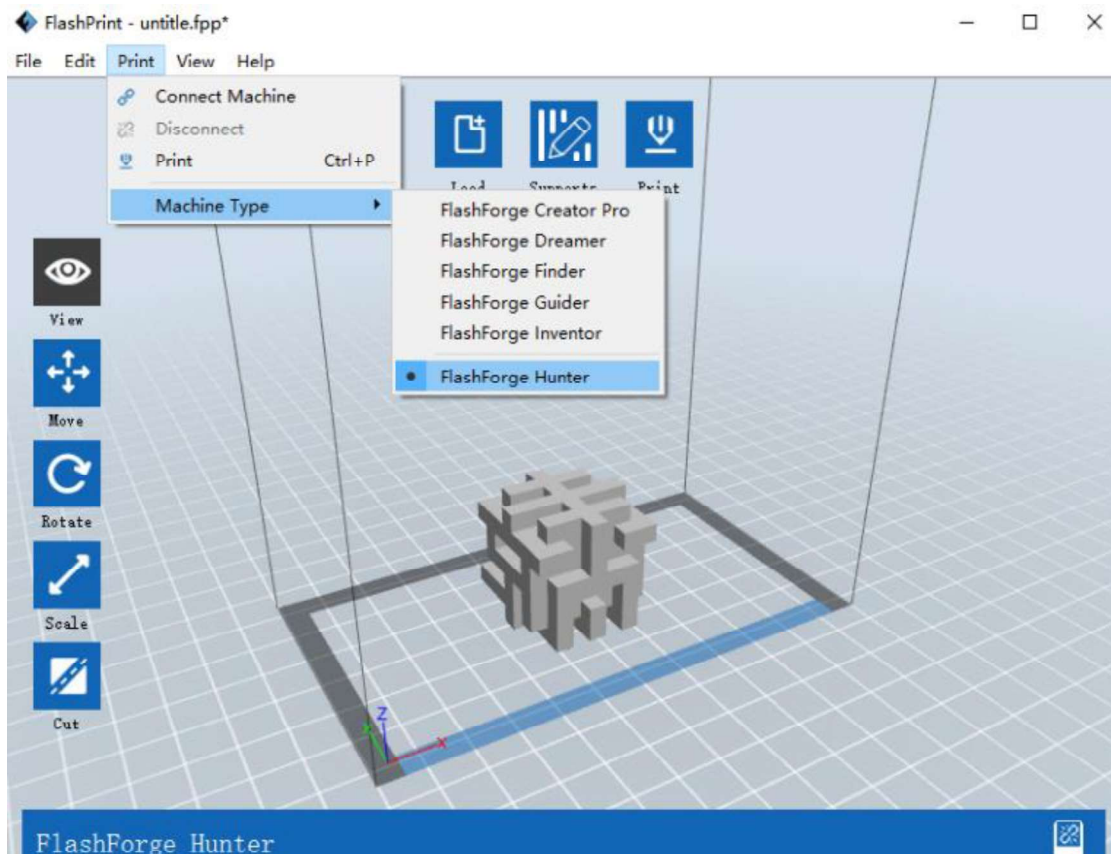
## 6.1 Generate Gcode File

Double-click [\[FlashDLPrint\]](#) icon to open FlashDLPrint software.



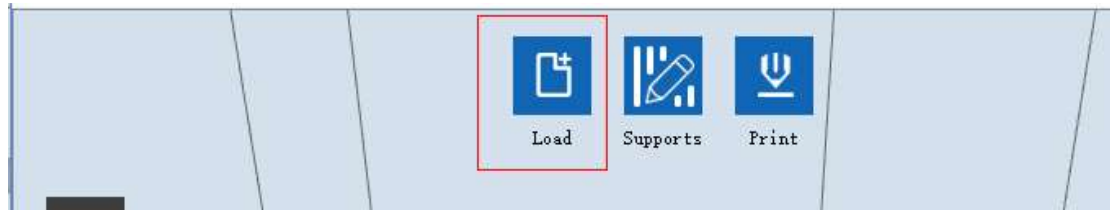
6-1

(6-2) Click [\[Print\]](#)-[\[Machine Type\]](#) and select **FlashForge Hunter**



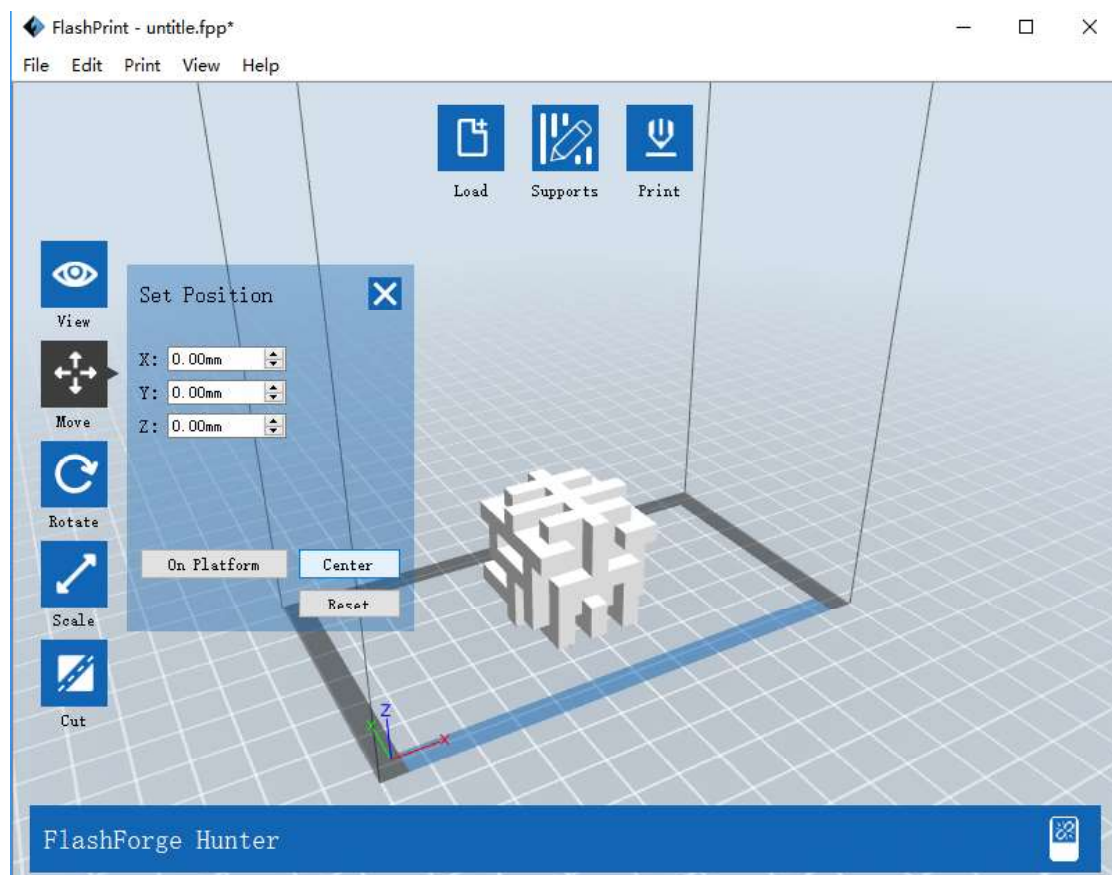
6-2

(6-3) Click [\[Load\]](#) icon, select .stl 3D files shown as follow:



6-3

(6-4) Click **[Edit]-[Surface to platform]**, select on surface to contact the model and double click. After finished click **[back]** button, double click **[Move]** icon, then click **[on platform]-[Center]** icon.

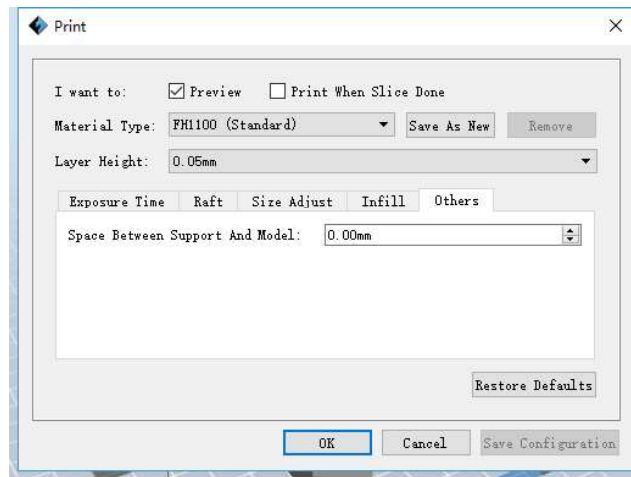


6-4

**Note:** If the model is in the correct position, there is no need to do this step.

(6-5) Click **[Print]** icon to set the printing parameters. The default parameters is

shown below.



6-5

## 6.2 Methods of printing

### Printing from USB

1. Connect Hunter to the computer with the USB cable.
2. Turn on the Hunter.
3. Select **[Print]** from menu bar, then select **[Connect]**.
4. Click on **[Rescan]**, then **[Connect]**.
5. Now the printer is connected with FlashDLPrint.
6. Click **[Print]** icon, and a printing options screen will appear.
7. Save the file at any location, and the object will start slicing.
8. After slicing the object, it will automatically upload the gcode to the Hunter.

### Printing from USB stick

1. Click **[Print]**, and a printing options screen will show up.
3. Click **[OK]**, and save the gcode file in the USB stick.
4. FlashDLPrint will begin slicing the 3D model.
5. After slicing the object, take the USB stick from the computer. Insert it into the USB stick slot on the Hunter.

6. Tap **[Print]** and then tap the middle **USB stick** icon.
7. A list of file(s) will show up, press the file that you would like to print, then tap **[Yes]**.
8. The printer will now enter preheating phase and will start printing once it finishes preheating.

### Printing via Wi-Fi

After the printer and computer have connected WiFi (Please refer to 5.2.13 ), load the Gcode file in FlashDLPrint, then tap **[Print]** icon to start printing.

**Notice:** Please close the cover in the process of printing. After update Hunter firmware 1.1.2, hunter will support light engine protect function, which will extend light engine's the usable life. Please follow the steps below to turn off the power: first turn off the touch screen button, and then turn off power button in the back of Hunter.

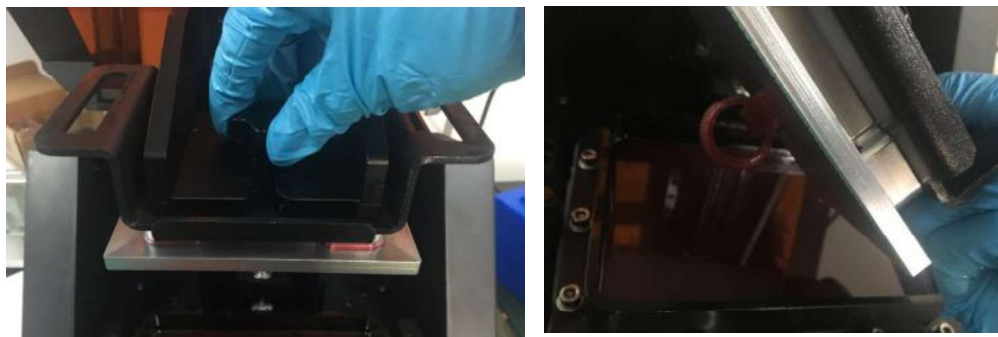
## 6.3 Model Processing

(6-6)After finish printing, please put on gloves and open the light shield, hold the build plate and unscrew the platform screw, take out the build plate from horizontal direction carefully.

**Attention: Please put on gloves during operation,**

**Carefully pour the used photopolymer resin into a clean bottle, it can be recycled.**

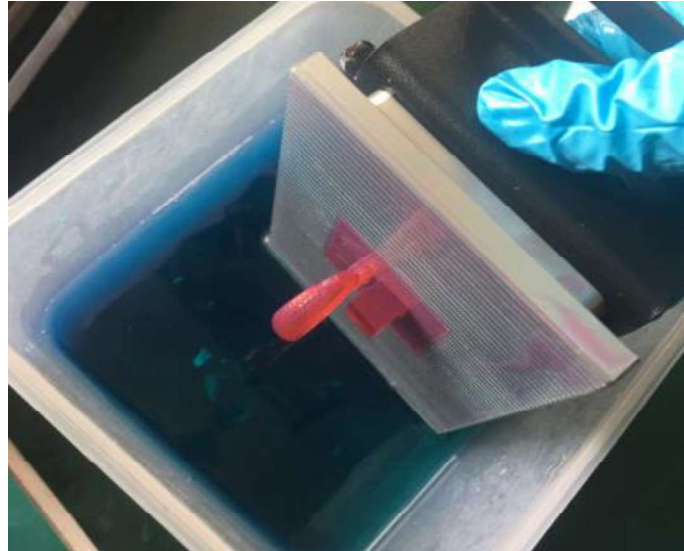
**Photopolymer resin needs to be stored in a dark, dry and cool place.**



6-6



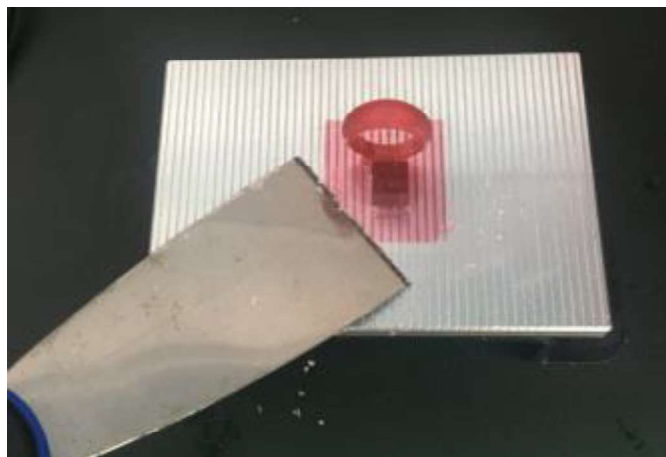
(6-7) Pour the anhydrous alcohol into rinse bucket halfway, immerse the build plate and model into rinse bucket and rinse it with brush.



6-7

After finished washing, put the platform on the workbench and remove the model with metal scraper, shown as follow.

**Attention: As the metal scraper is sharp, please remove the model with care.**



6-8

**Notice: Do not pour used resin back to the photopolymer resin bottle.**

**Do not pour used resin into domestic sewage.**

## 6.4 Update Firmware

### Method 1: Update from USB stick

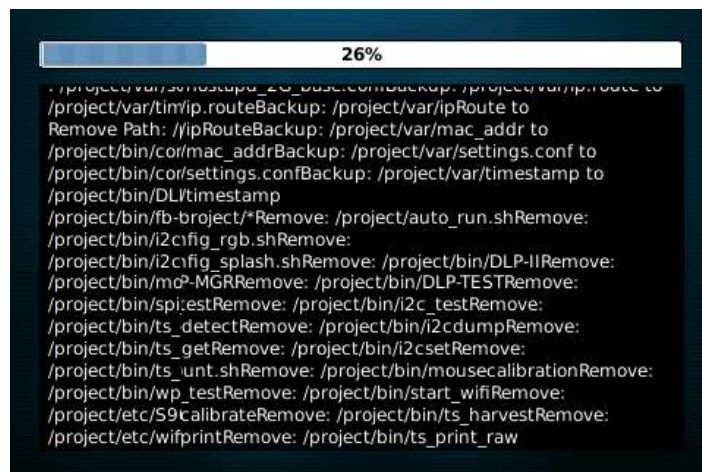
1. Insert the USB stick into the USB stick slot on the computer.
2. Empty the USB stick by either deleting or moving all the files in the USB stick.
3. Create a folder with the name dlp-ii under the USB stick's root directory.
4. Copy the three updating files to dlp-ii folder in the USB stick.

The three files are: dlp-ii-version-date.tar.gz、usb\_updater、version , please contact and acquire them from FlashForge or your reseller.



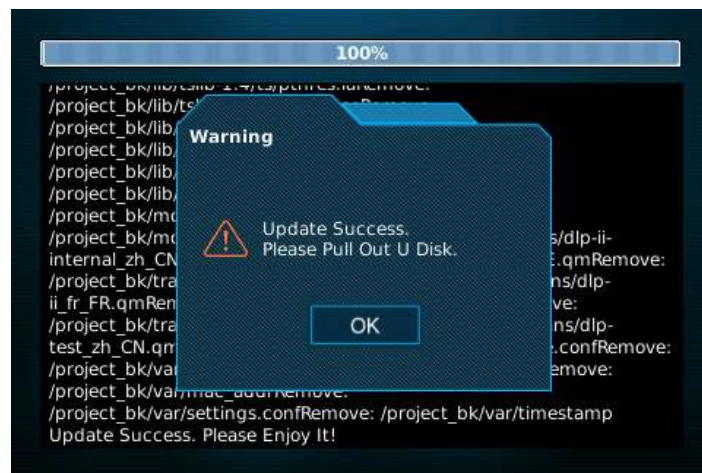
5. Flip the power switch on the back of printer to OFF position, insert the USB stick (prepared above) into the USB stick slot on Hunter.

Flip the power switch on the back of printer to ON position, turn on the Hunter printer by pressing the black button on the right of printer's touch screen, automatic updating interface will show on touch screen.(**Make sure power is not turned off during this step!** )



6. After update success, pull out the USB stick, Tap **[OK]**, Hunter printer will reboot automatically (**Make sure power is not turned off during this step!**), firmware

updating is completed. Please delete the three updating files from the USB stick on computer, to prevent interference with other functions of the USB stick.



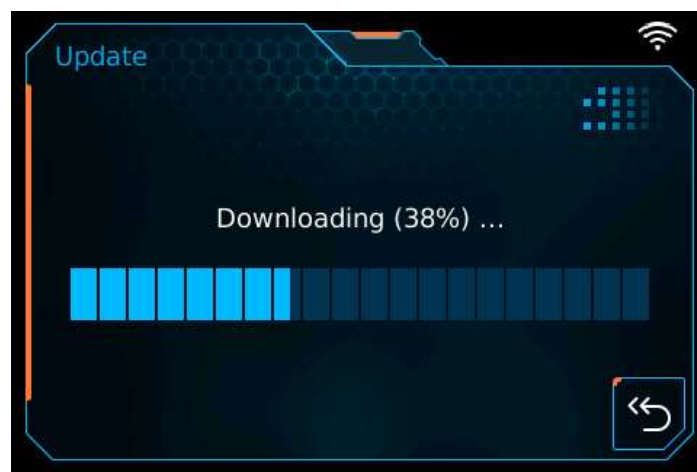
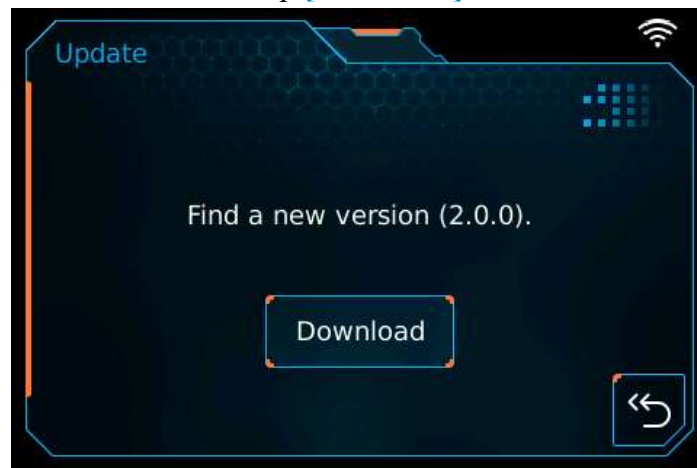
## Method 2: Update via Internet

**Make sure power is not turned off during updating !**

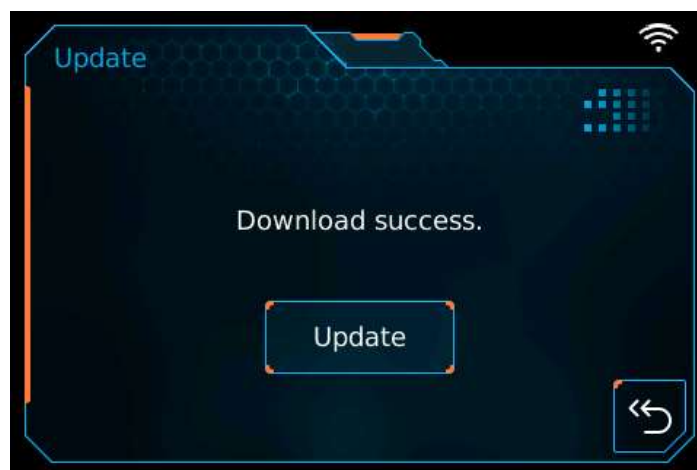
1. Connect the Hunter printer to Internet via WiFi connection.
2. Tap **[Settings]** and then tap **[Update]** on the touch screen.

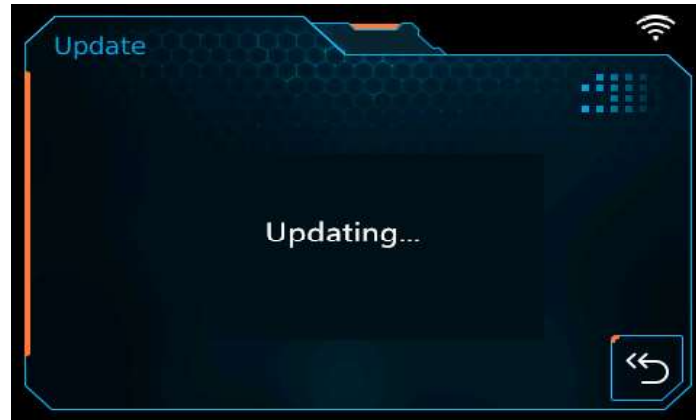


3. Find a new version firmware, Tap [\[Download\]](#)



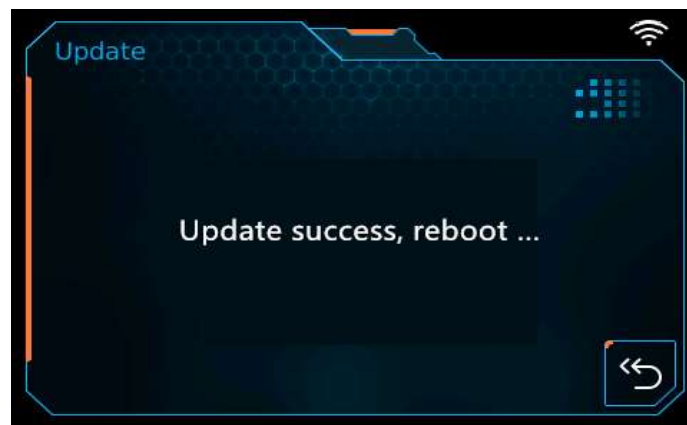
4. After download success, Tap [\[Update\]](#)





5. Hunter printer will update automatically. When “Update success, reboot...” notice showed on printer’s touch screen, Hunter printer will reboot automatically and complete the firmware updating.

**(Make sure power is not turned off during this step ! )**



## NOTICE!

When reboot the printer for the first time after successful updating with either method above, FLASHFORGE 3D PRINTER symbol will show for twice, then printer will enter the normal start-up interface. **(Make sure power is not turned off during this step! Or printer may not start up due to updating failure.)**

## Chapter 7: Supports and Service

FlashForge team is on standby and ready to help you overcome any challenges you may have with your Hunter. If the issues or questions are not covered in this User Guide, you can seek for solutions on our official website or contact us via telephone.

There are solutions and instructions to common issues that can be found in our knowledge base. Have a look first as most basic questions are answered there.

<http://www.flashforge.com>

The FlashForge support team can be reached by e-mail or phone between the hours of 8:00 a.m. to 5:00 p.m. PST Monday through Saturday. In case you contact us during off-duty time, your inquiry will be answered the following business day.

Tel: **0086-0579-82273989**

Email: **support@ff3dp.com**

ADD: **No. 518, Xianyuan Road, Jinhua, Zhejiang**

**\*When contacting support, please have your serial number ready.**

**The serial number is a bar code on the back of your Hunter**

