FLASHFORGE®
3D PRINTER
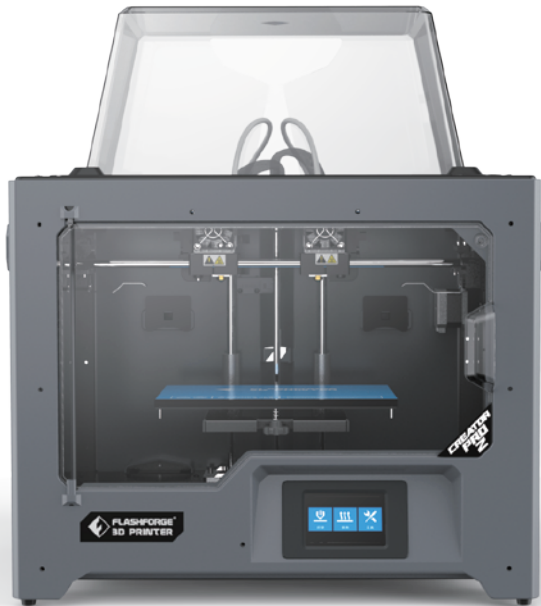
EN-A01      CREATOR PRO 2

# User Guide

This guide is only applicable to FLASHFORGE Creator Pro 2 3D printer

# CONTENT

# PREFACE

**Note：** **Each device must be tested before leaving factory. If there are some residues in extruder or some tiny scratches on the build tape, it is normal and won't affect the printing quality.**

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 Creator Pro 2 User Guide is designed for the Creator Pro 2 users to start their printing journey with FlashForge Creator Pro 2. Even if you are familiar with earlier FlashForge machines or 3D printing technology, we still recommend that please read this guide, as there is lots of important information about the Creator Pro 2 for you to get a better 3D printing experience.

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

**· Official FlashForge Website：：**
FlashForge English website：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.

# NOTICE

**Notices:** **Read all the instructions in the manual and familiarize yourself with the FlashForge Creator Pro 2 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
- Keep your work place tidy.
- Do not operate Creator Pro 2 in the presence of flammable liquids, gases or dust.
- Keep Creator Pro 2 out of children and untrained persons' reach.

### ELECTRICAL SAFETY
- Always use the Creator Pro 2 with a properly grounded outlet. Do not refit Creator Pro 2 plug.
- Do not use Creator Pro 2 in damp or wet locations. Do not expose Creator Pro 2 to burning sun.
- In case of device damage, please use the power supply provided by FlashForge.
- Avoid using the device during an thunderstorm.
- In case of uncertain accident, please unplug the power of device if you do not use it for long.

### PERSONAL SAFETY
- Do not touch the nozzle and build plate during printing.
- Do not touch the nozzle after finishing printing.
- Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.
- Do not operate the device while you are tired or under the influence of drugs, alcohol or medication.

### CAUTIONS
- Do not leave the device unattended for long.
- Do not make any modifications to the device.
- To lower the build plate before loading/unloading filament. (The distance between the nozzle and build plate should be kept for at least 50mm)
- Operate the device in a well-ventilated environment. Some filament may produce odors during the printing process.
- Never use the device for illegal activities.
- Never use the device to make any food storage vessels.
- Never use the device to make any electrical appliance.
- Never put the model into your mouth.
- Do not remove the models with force.
- Never connect the device with network cable longer than 3m.

**ENVIRONMENT REQUIREMENTS**

◆ Temperature: RT 15-30℃
◆ Moisture: 20%-70%

**PLACE REQUIREMENTS**

◆ The device must be placed in a dry and ventilated environment. The distances of the left, right and back side space should be at least 20cm, and the distance of the front side space should be at least 35cm.

**FILAMENT REQUIREMENTS**

◆ Please make sure you use the FlashForge filament or the filament from the brands accepted by FlashForge.

**FILAMENT STORAGE**

◆ All polymers degrade with time. Do not unpack until filament is needed. Filament should be stored at clean and dry conditions.

**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

3D printing refers to transforming three-dimensional models into physical objects that you can hold and touch. It is also called additive manufacturing, because the 3D model is created by "adding" layers upon layers of material until the object is fully fomed.

Fused Filament Fabrication(FFF) is the most common method of 3D printing. It is also the method that the Creator Pro 2 uses. It works by melting plastic material called filament onto a print surface in high temperature. The filament solidifies after it cool down, which happens instaneously after it is extruded from the nozzle. 3D object are formed with the filament laying down multiple layers.

## 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 making a 3D model.

**Designing From Scratch:** You can use free CAD(computer-aided design)software such as 3DTADA, AutoCAD, SolidWorks, Pro-E.

**3D Scanners:** An alternative method to making a 3D model is to scan an object. 3D scanners work by sigitizing 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 Website:** 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.
E.g: 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. FlashPrint is the slicing software used for the FlashForge Creator Pro 2.
Using FlashPrint, you can prepare .stl files to be .x3g files for printing. Then users can print files via SD card.

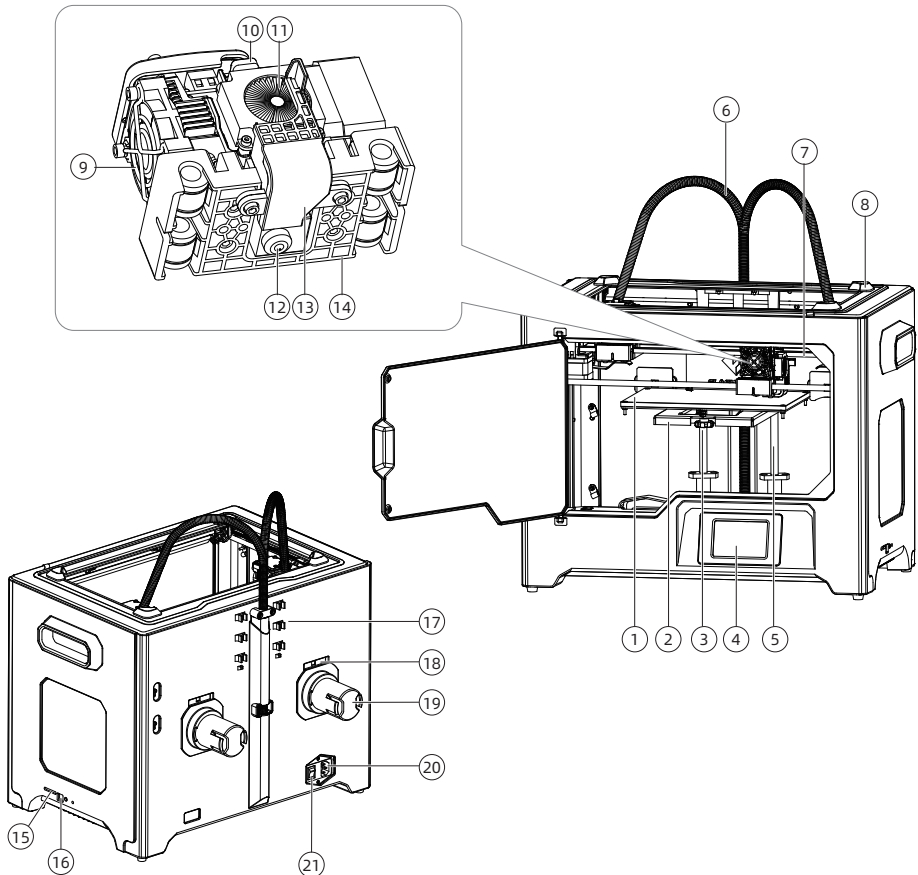### 1.1.3 Build the 3D Model

Once the output file has been transferred to your Creator Pro 2, it will start to turn the 3D model into a physical object by laying down layers of filament.

# Chapter 2: About Creator Pro 2

## 2.1 About Your Creator Pro 2

### 2.1.1 Views



| | | |
|---|---|---|
| 1. Platform | 2. Platform support | 3. Leveling nut |
| 4. LCD panel | 5. Z-axis guide rod | 6. Extruder cable bunch |
| 7. X-axis guide rod | 8. Slot | 9. Nozzle cooling fan |
| 10. Spring presser | 11. Cooling fan | 12. Nozzle |
| 13. Turbofan baffle | 14. Extruder bracket | 15. SD card slot |
| 16. USB cable input | 17. Filament guidetube buckle | 18. Spool holder slot |
| 19. Spool holder | 20. Power input | 21. Power switch |

## 2.1.2 Accessories
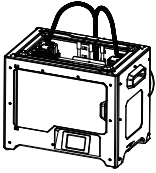
**Creator Pro 2**

**Filament**
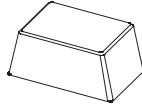
**Top cover**

**After-sales Service Card**

**Quick Start Guide**
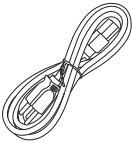
**Power Cable**

**USB Cable**
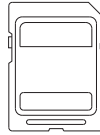
**SD Card**
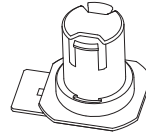
**Spool Holder**

**Build Tape**

**Screw Driver**

**Stamping Wrench**

**Allen Wrench**
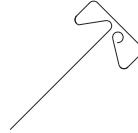
**Unclogging Pin Tool**
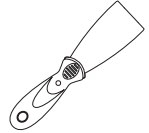
**Scraper**

**PTFE Tube**

**Filament Guide Tube**

**Grease**

**Glue Stick**
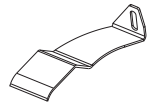
**Anti- oozing plate**
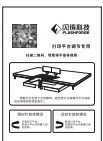
**Leveling Card**
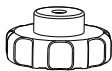
**Leveling Nut**

### 2.1.3 Terms

| | |
|---|---|
| **Build Plate** | The surface on which the Creator Pro 2 builds an object. |
| **Build Tape** | The blue tape that covers Creator Pro 2's build plate so that the object can stick to the build plate well. Please change it when the adhesion is not good. |
| **Build Volume** | The three dimensional amount of space that an object will use once it is completed. The largest build volume of Creator Pro 2 is 200*148*150mm. |
| **Leveling Nuts** | Nuts under the platform that are used for adjusting the distance between the nozzle and build plate. |
| **Extruder** | The device that draws the filament from the spool, melts it and extrudes it through a nozzle onto the build plate. |
| **Nozzle** | Also called "print head", which located at the bottom of the extruder where heated filament is squeezed out. |
| **Filament Intake** | An opening located at the top of the extruder. |
| **Filament Guide Tube** | A plastic piece that guides the filament from the filament box to the filament intake. |
| **Stamping Wrench** | A tool that used for seizing the nozzle's metal cube. |
| **Unclogging Pin Tool** | A tool that used for cleaning and unclogging the extruder. |

### 2.1.4 Product Parameters

| | |
|---|---|
| **Name** | Creator Pro 2 |
| **Number of Extruder** | 2（independent） |
| **Print Technology** | Fused Filament Fabrication(FFF) |
| **Screen** | 3.5'' Touch Screen |
| **Build Volume** | 200*148*150mm; |
| | Mirror mode:80*148*150mm; Duplicate mode:95*148*150mm |
| **Layer Resolution** | 0.1-0.4mm |
| **Build Accuracy** | ±0.2mm |
| **Print Filament** | PLA/PVA/ABS/HIPS |
| **Filament Diameter** | 1.75mm |
| **Nozzle Diameter** | 0.4mm |
| **Print Speed** | 10-100mm/s |
| **Software** | FlashPrint |
| **Support Format** | Input:3MF/STL/OBJ/FPP/BMP/PNG/JPG/JPEG  Output:GX/G |
| **AC Input** | Input:100-240VAC,47-63Hz; Power:320w |
| **Connectivity** | SD card，USB cable |
| **Internal Storage** | No |

## 2.2    Unboxing and Installation

### 2.2.1 Unboxing

The Creator Pro 2 was carefully packaged at FlashForge manufacturing facility. Please follow the unpacking steps laid out below.

**⚠ CAUTION**

1. Remove the package and take out accessories carefully. Do not use force.

2. Do not tear the yellow high temperature resistant adhesive tape around the nozzle, it has thermal insulation and high temperature resistance characteristics.



1. Open box and remove top foam piece.



2. Firmly grasp the two side handles of FlashForge Creator Pro 2. Lift it out of the carton and place it on a stable surface.
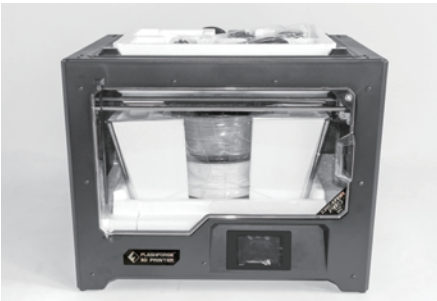


3. Remove the packing bag and then remove the tape and plastic wrap for protecting the front door.



4. The accessories shall be displayed. Let us remove the inner package and take the accessories out.

5. Take the extruder out and place the extruder carefully. Avoid the nozzle to touch the desk, which prevent the nozzle damage from scratch.
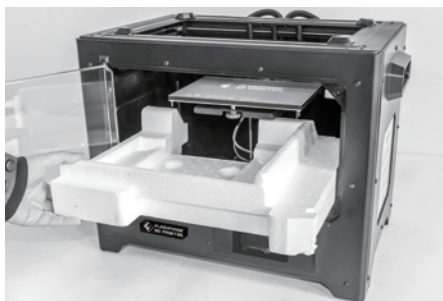
6. Take out the foam with accessories. Shear two ties on the both sides of X-axis guide rod.





7. Open the door, remove top cover of the printer and take filament out of the lid.

8. Hold both sides of the printing platform, and slowly lift the platform from the bottom to facilitate the removal of the foam box below.





9. Take out the foam on the bottom of the platform, and then slowly press the platform down by hands to the lower position for easy subsequent installation.
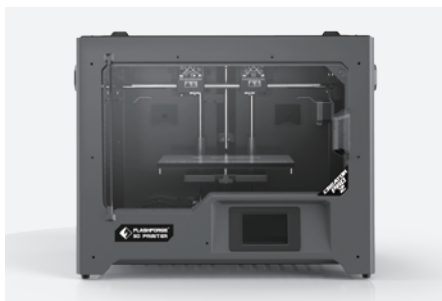
10. Unpacking is complete. It is recommended that you keep the packaging materials for later handling or storage.

## 2.2.2 Installation

### 1.Extruder Assembly

1. Lower the platform first and place the dual extruder on the extruder seat.

2. Take the M2.5 Allen Wrench from the tool bag and four M3 bolts from the accessory kit.

3. Adjust the extruder location to align the bolt holes.

4. Secure the extruder onto the extruder seat by screwing the M3 bolts in.

Bolt Hole          Bolt Hole
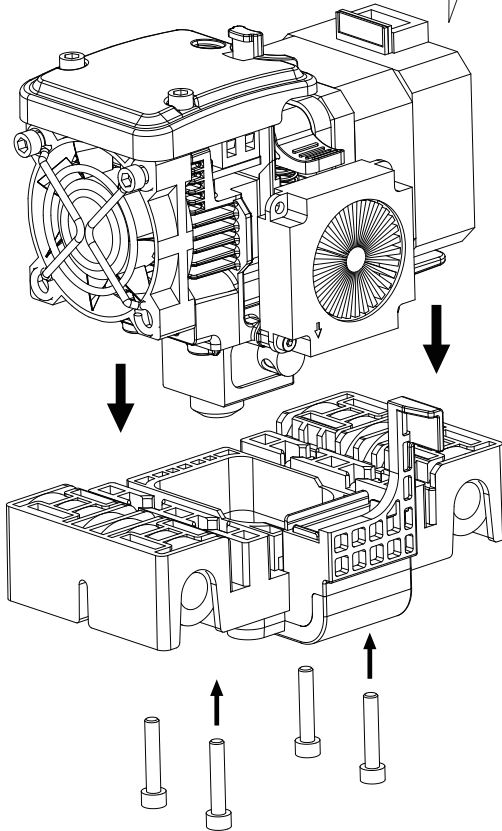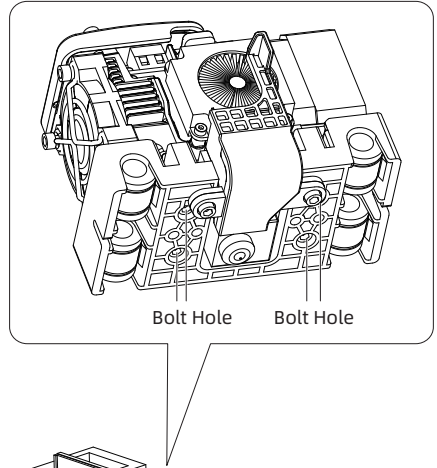
## 2.Filament Guide Tube and Filament Installation
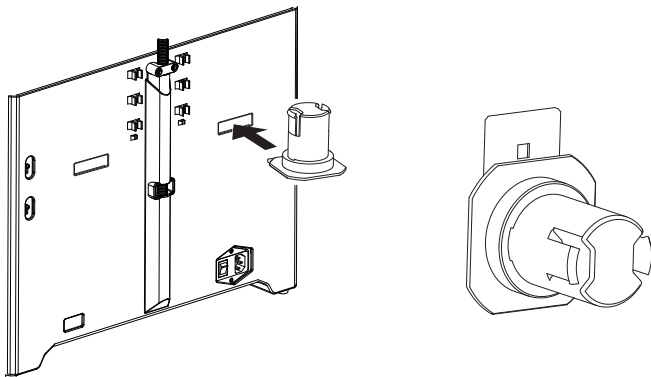


1.To install a spool holder, level it and insert the end into the corresponding opening.
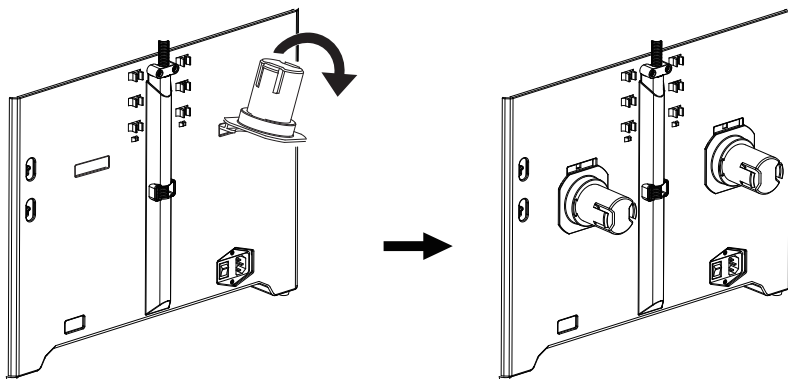


2.Turn down the spool holder to make the holder bottom cleave to the printer back.



Please refer to the next page for the right method of filament mounting.

3.Take a roll of filament, then squeeze the spool holder top and mount the filament spool to the holder.

1. The filament spool must be oriented correctly (see below).

2. After filament guide tube fixation completed, press the left spring presser of extruder, put filament vertically into the left filament intake from the other end of filament guide tube.

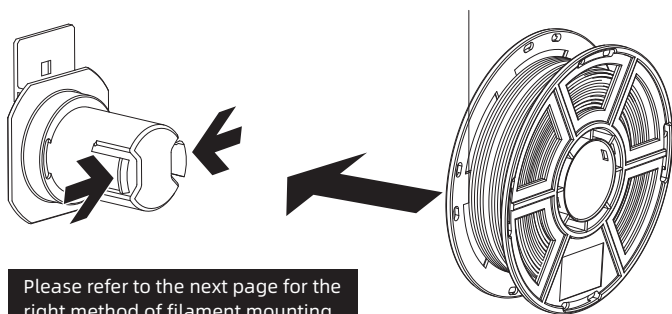Filament Guide Tube Buckle

limited seat
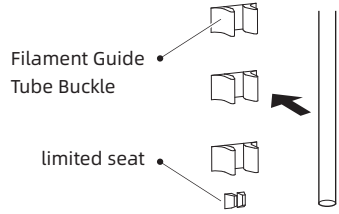
Lock the filament guide tube with R-shape buckles.
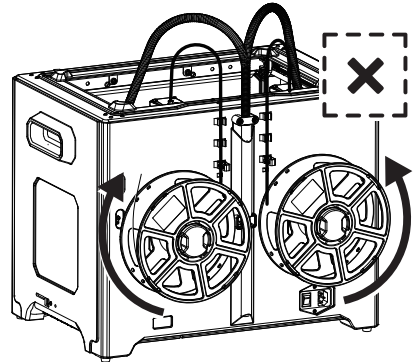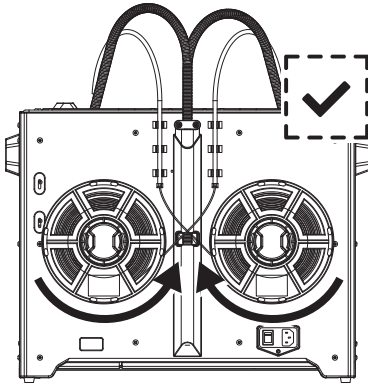


**Note: Please pay attention to extend the guide tube to the inside of the spool to prevent the filament from being entangled and being wrapped outside the spool.**

## 3.Install Top Cover
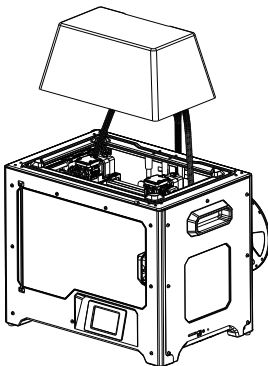


**Install top cover for printing ABS; remove the top cover for printing PLA.**

## 4.Install Anti-oozing Plate



M3x8
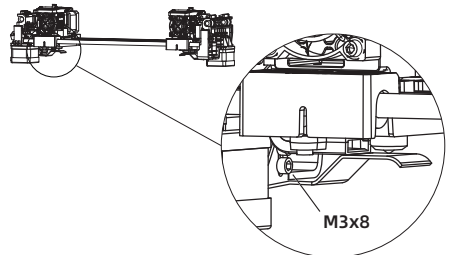
**Fixed the anti-oozing plate by two screws.**

Please make sure that the nozzle touches the anti-oozing plate properly when installed. It is OK to adjust the distance between the nozzle and plate manually. It is normal to see scratches on the surface of the plate after printing for several times.

## 2.3 The First Setting

### 2.3.1 Loading and Unloading

| | | |
|---|---|---|
| Print | Preheat | Tools |

| | | | |
|---|---|---|---|
| Filament | Level | HOME / Home | Manual |
| Setting | Status | About | |

1. Tap [Tools]-[Filament]

| L Extruder | R Extruder |
|---|---|
| Load | Load |
| Unload | Unload |

Heating...

L Extruder                    75℃ / 220℃
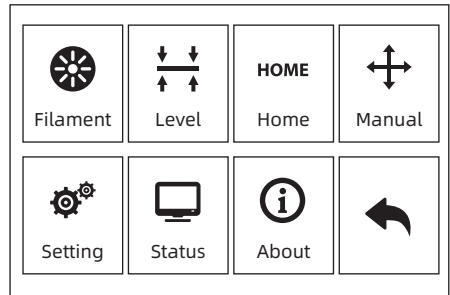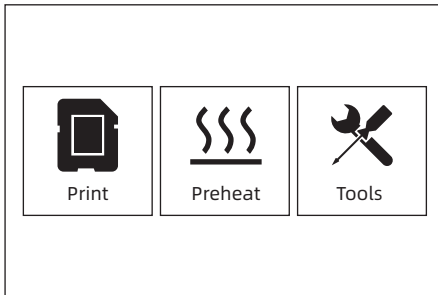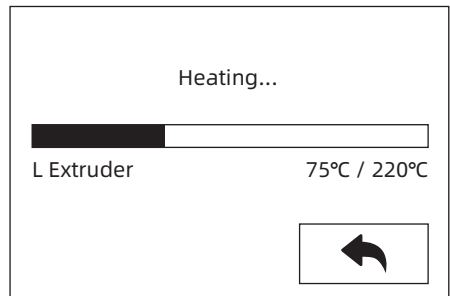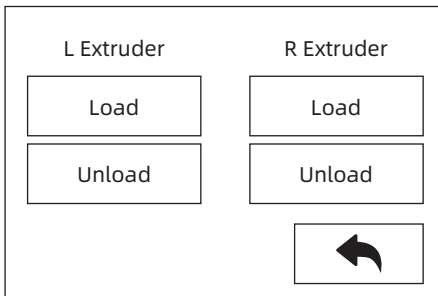
2. Tap [load], the extruder will start to heat up. After heating to the target temperature, please manually insert the filament into the filament feeding wheel. When the filament is ejected from the nozzle, it indicates that loading is completed.
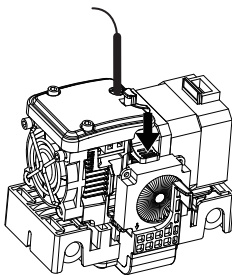
3. Tap [unload], the extruder starts to heat up. After heating to the target temperature, manually feed out a part of filament from the nozzle, then press down the spring presser, quickly pull out the filament, and complete unloading.

## 2.3.2 Leveling

Clearing the remaining materials on the nozzle first to avoid leveling fails.

| | | | |
|---|---|---|---|
| ❀ Filament | Level | **HOME** Home | Manual |
| Setting | Status | ⓘ About | |

Please wait, device is homing.

Next
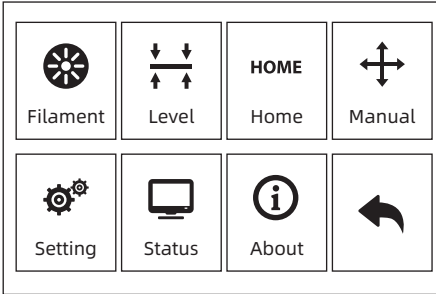
1. Tap [Tools]-[Level] to start leveling. The machine will finish homing first.
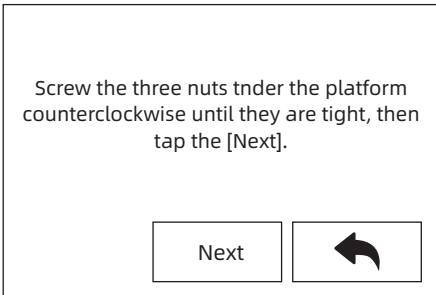
Screw the three nuts tnder the platform counterclockwise until they are tight, then tap the [Next].

Next

2. After stop movement of extruder and platform, tighten the three nuts below the platform counterclockwise (To avoid scratch build plate by extruder and it is important action)

Please adjust the front thumb screw under Platform when stop.
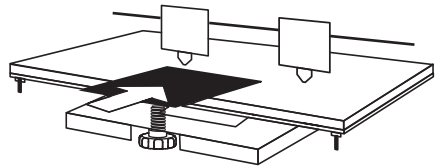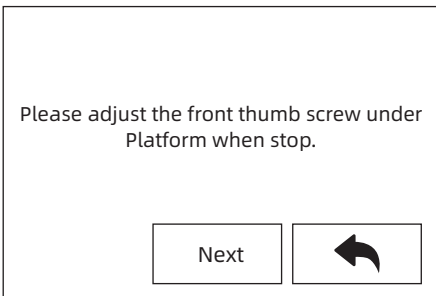
Next



3. Choose one extruder and move it to the first nut by hand. Place a paper under the extruder and tighten the nut to reduce the distance between extruder and platform. Gently move the paper and feel the fraction. If move the paper with gent fraction, it is a suitable distance between extruder and platform. Finished the first place, and repeat the same actions in the second and third nut.

**Note: the small distance between the extruder and platform causes removing printed objects hard, while big distance causes adhesion fails or wrapping.**

## 2.3.3 XYZ Axis Calibration

**Z Axis Calibration**

| | | |
|---|---|---|
| Print | Preheat | Tools |

| | | | |
|---|---|---|---|
| Filament | Level | HOME Home | Manual |
| Setting | Status | About | |
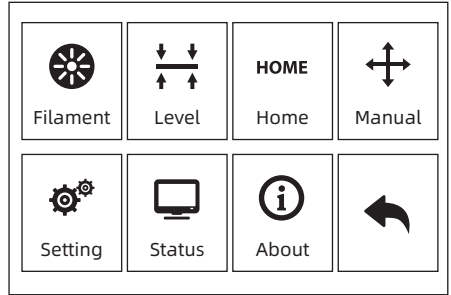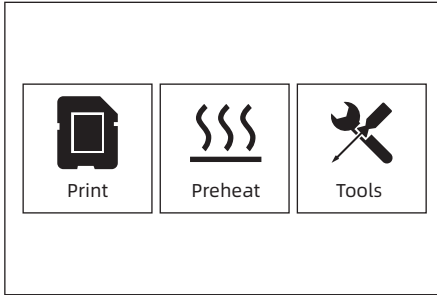
1. Tap [Tools]-[Setting]-[Z calibration]. Creator Pro 2 uses a compensation layer mechanism. Instead of manually adjusting the installation positions of the left and right nozzles, a program is used to calculate the height difference between the two nozzles.

| | | |
|---|---|---|
| X Calibration | Y Calibration | Z Calibration |
| Expert Mode | Language | FactoryReset |

### Z Calibration

Initializing moving...
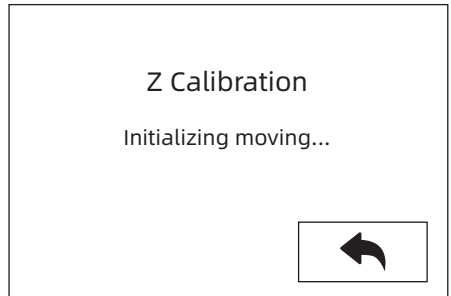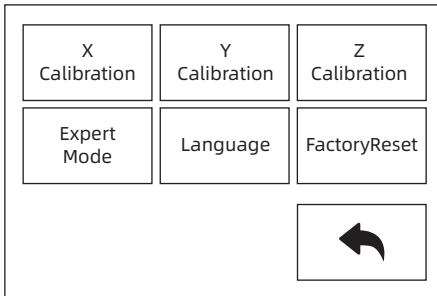
2. The extruder and platform will return to the zero position first, select any extruder to calibrate. When the temperature of the nozzle and the platform is too high, it will wait for the nozzle to cool down to 50 ° C to prevent the nozzle from scalding the build tape.

| Please tap Z- , Z+ to adjust and put the leveling card between nozzle and platform to verify a proper distance. | Z- |
|---|---|
| | Z+ |
| Z:0.08 | OK |
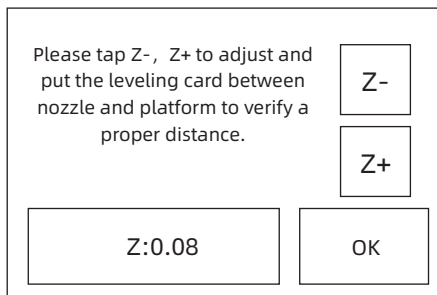
3. Follow the on-screen instructions and insert the leveling card between the nozzle and the platform, please click Z- or Z + to adjust the appropriate spacing. The adjustment range is sliding leveling paper. If you feel a little frictional resistance, it indicates that the distance between the nozzle and the platform is appropriate. When one extruder is adjusted, it will be switched to another extruder for calibration.

**Note: Do not turn the nuts under the platform during Z-axis calibration.**

## X Axis Calibration

X-axis calibration: Used to adjust the consistency of the two extruders in the X-axis direction to prevent misalignment during printing.

| X Calibration | Y Calibration | Z Calibration |
|---|---|---|
| Expert Mode | Language | FactoryReset |

**X Calibration**

L: 152/200
R: 164/200
B: 45/50
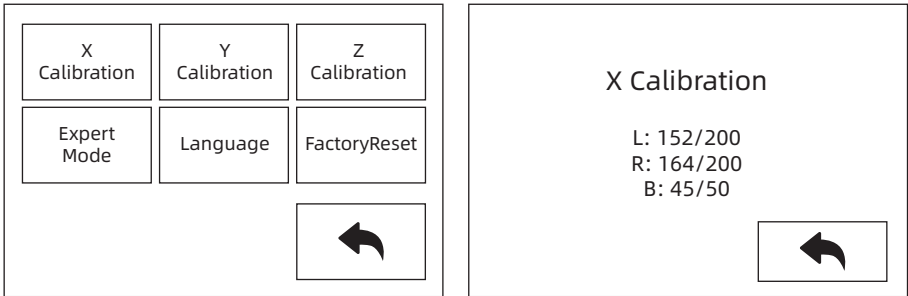
1. Tap [Setting]-[X Calibration], or continue the X-axis calibration after the Z-axis calibration is completed. After the machine initialization movement is completed, the nozzle and the platform will be heated. At this time, please ensure that the filament has been inserted into the extruder.

2. After heating, left and right extruders print a line one by one.

Please tap X-, X+ to adjust and verify make sure the lines are aligned.

| X- | 0.00 | X+ |

Verify

OK
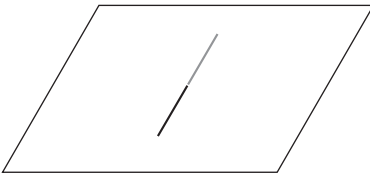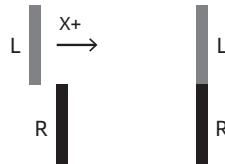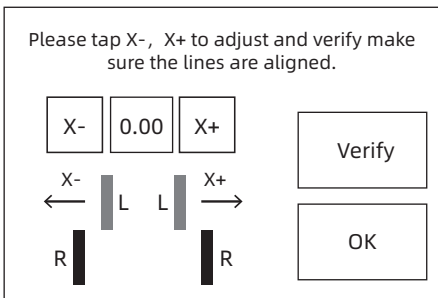
3. According to the actual printed lines, click X-, X + to adjust the bias of the extruders and remove the printed lines; tap the verify button, the left and right extruders will print the lines again to see if the lines coincide, if they coincide, it means that the X-axis calibration is completed, if they are inconsistent, continue to adjust, until it coincides.

## Y Axis Calibration

Y-axis calibration: Used to adjust the consistency of the two extruders in the Y-axis direction to prevent misalignment during printing.

| | | |
|---|---|---|
| X Calibration | Y Calibration | Z Calibration |
| Expert Mode | Language | FactoryReset |

Y Calibration

L: 152/200
R: 164/200
B: 45/50
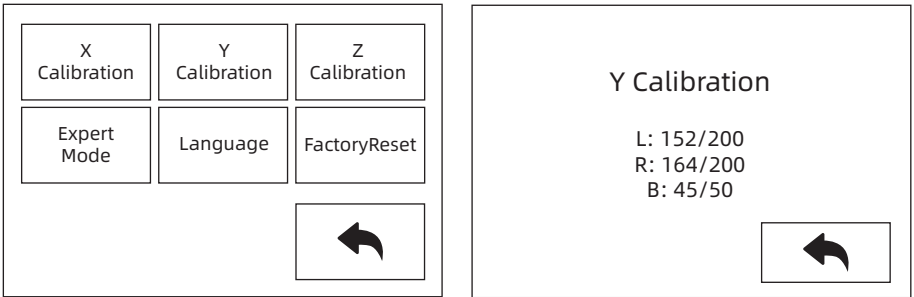
1. Tap [Setting]-[Y Calibration], or continue the Y-axis calibration after the X-axis calibration is completed. After the machine initialization movement is completed, the nozzle and the platform will be heated. At this time, please ensure that the filament has been inserted into the extruder.

2. After heating, left and right extruders print a line one by one.

Please tap Y-, Y+ to adjust and verify make sure the lines are aligned.

Y+

0.00

Y-

Verify

OK
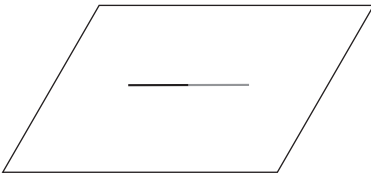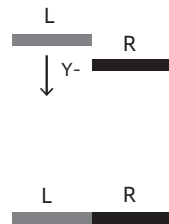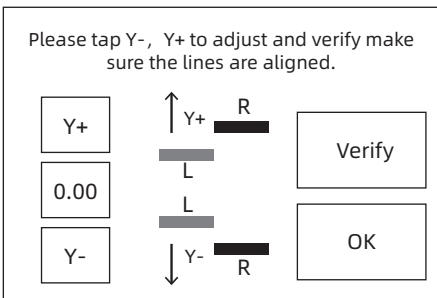
3. According to the actual printed lines, click Y-, Y + to adjust the bias of the extruders and remove the printed lines; tap the verify button, the left and right extruders will print the lines again to see if the lines coincide, if they coincide, it means that the Y-axis calibration is completed, if they are inconsistent, continue to adjust, until it coincides.

## 2.3.4 First Print

After installing, loading filament and calibrating, it start your first print.

1. Insert the SD card to the side of machine.
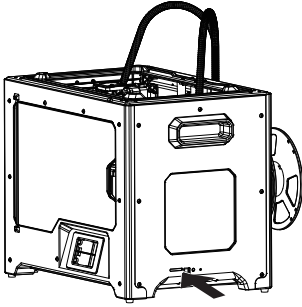
| | |
|---|---|
| Print | Preheat | Tools |

| | |
|---|---|
| 25MB 1519MB | |

| |
|---|
| Test |
| sys |
| flashforge |
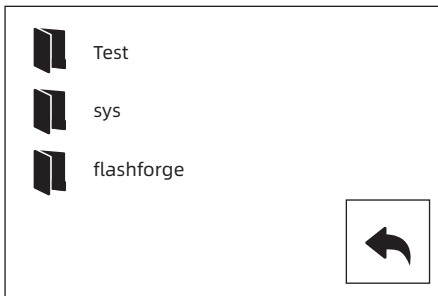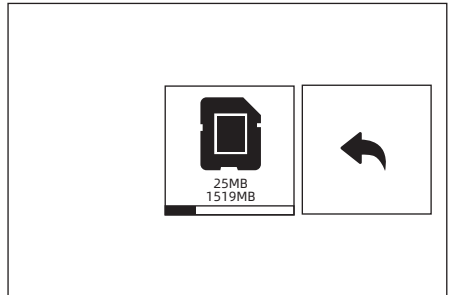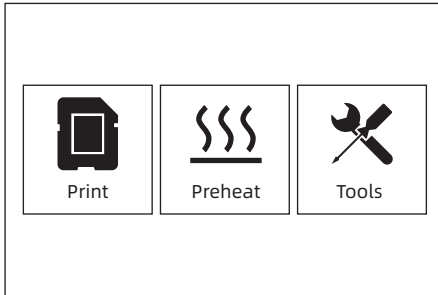
2. Tap [Print]-[SD card]; choose the test file to print.

## 2.3.5 Remove Models

**Warm！ Drop the platform down first before removing the model. Please pay attention to the direction of shoveling to avoid scratches by using the scraper knife.**

**Do not damage the build plate when removing models.The scratch on the build plate may cause print fails.**

· **Model cooling**
  Print model on the build plate without glum. Only after cold down the printed objects and build plate,remove the models easily.

· **Using scraper knife**
  After cooling, the printed object is still attached to the platform, and you can use a scraper knife to remove the printed product. Keep the blade parallel to the printing platform, slightly insert from the bottom of the model and remove the model with a little force.

## 2.3.6 Remove Supports

Removing PVA supports needs post-procession. Put the PVA supports model into the water to dissolve supports.

1. **Put the printed objects into the water**
   Put the printed objects with PVA supports into the water and dissolve PVA supports. There are some methods to speed up dissolve.
· Using warm water to speed up dissolve PVA. If the main structure of printed objects is PLA, it ensures the temperature of warm water should not over 35°C to avoid printed objects shape deformation.
· Stir water. The moving water can speed up solution of PVA.
· Soak printed objects in the water about 10 mins, and remove supports by pincers. Then put the printed objects into the water and dissolve remaining PVA easily.

2. **Rinse with water**
   After the PVA support is completely dissolved, rinse the model with water to remove the remaining PVA.

3. **Dry model**
   Let the model dry completely and perform additional post-processing on the objects if necessary.

4. **Waste water treatment**
   Because PVA is biodegradable, it is easy to dispose of waste water afterwards. After disposing of the waste water, flush it with hot water for 30 seconds to remove excess PVA in the drain pipe and avoid blockage. Water can be used repeatedly to soak multiple models, but may increase the dissolution time. Therefore it is recommended to use fresh water to achieve the best effect.

## 2.3.7 Material Compatibility

**Creator Pro 2 have two independent extruders and support PLA, ABS, HIPS and PVA.**

**Combination mode:**

**PVA+PLA**          **HIPS+ABS**          **PLA+PLA**          **ABS+ABS**

**Flashforge materials is the best recommended, even Creator pro2 support open materials brands. All Flashforge materials have been tested and the best printed parameters have been used in the FlashPrint.**

PVA filament is water-soluble and has strong water absorption. The filament may soften after absorbing water, and it is easy to fail printing. Place PVA filament in a dry box when printing. PVA storage requires sealed and dry storage.

For best results, each material requires different settings.
If you use FlashPrint to slice the model, these settings will be automatically set correctly when the correct print extruder and material are selected.

**Adaptability of materials parameters**
Different filament brands have different material characteristics.So it is recommended to use the expert mode to fine-tune the parameters to ensure a good print quality.

· Thicken the first layer thickness. It is better to adhesion to platform by adding the first layer filament output.
· Set the platform temperature to 30°C, when printed small PLA model or the environment temperature is higher over 25°C.
· Set the platform temperature to 50°C, when printed big PLA model or the environment temperature is lower over 10°C.
· The open printing chamber is good for PLA printing and remove the top cover.
· The closed printing chamber is good for ABS printing and close the top cover to avoid filament cracking.
· It is advised to decrease to 40% of standard printing speed. Place PVA filament in a dry box to avoid printing fails by absorbing water in the air.

## 2.4 Touchscreen Interface Introduction

**Print Interface**





Test

sys

flashforge
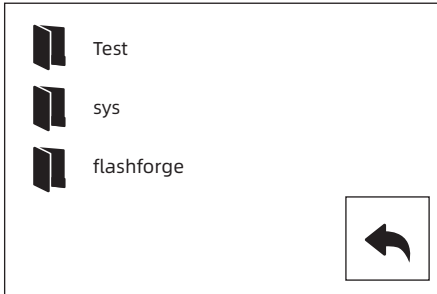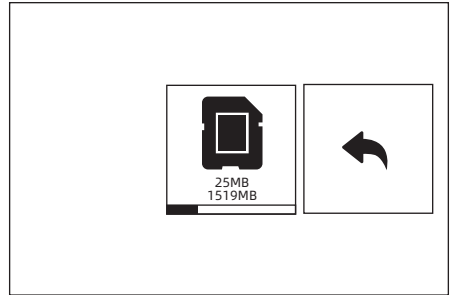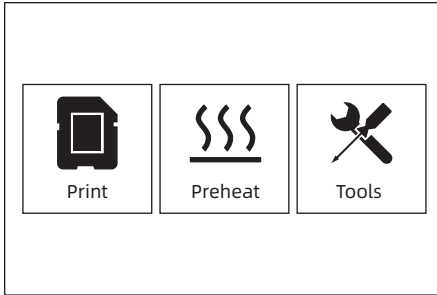


1. Insert the SD card to the side of machine;SD card must be inserted the Creator Pro 2 when printing, whether get print file form SD card  or connect with flashprint through USB cable.
   Tap [Print]-[SD card] and choose files to print.

| flashforge_test--pla | | |
|---|---|---|
| Print Time | 0 : 00 | |
| L Extruder | 24℃ / 205℃ | 0% |
| R Extruder | 24℃ / 205℃ | |
| Platform | 30℃ / 50℃ | |
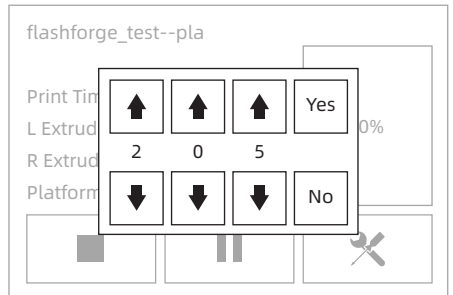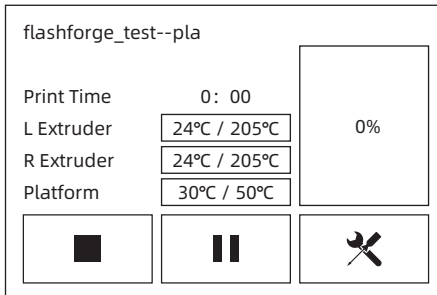
2. Tap temperature of extruder or platform on the touchscreen to modify.

| flashforge | | |
|---|---|---|
| | **Filament** | |
| Print Time | **Stop Left** | 0% |
| L Extruder | | |
| R Extruder | **Stop Right** | |
| Platform | | |
| ■ | **Cancel** | ✖ |
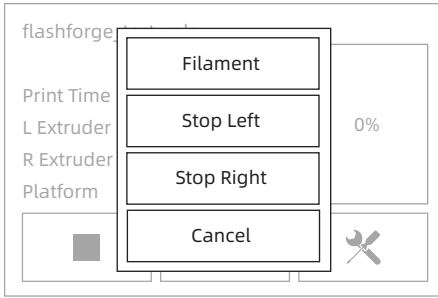
3. Tap [More] to stop print or change filament in the process of printing.

## Preheat Interface

| L Extruder | ON | 240℃ | |
|---|---|---|---|
| R Extruder | ON | 240℃ | Start |
| Platform | OFF | 120℃ | |
| | | | ← |

| L Extruder | ON | 240℃ | |
|---|---|---|---|
| | ↑ ↑ ↑ | Yes | |
| R Extruder | 2 4 0 | | Start |
| | ↓ ↓ ↓ | No | |
| Platform | | | ← |
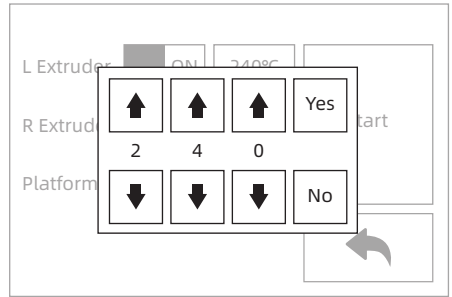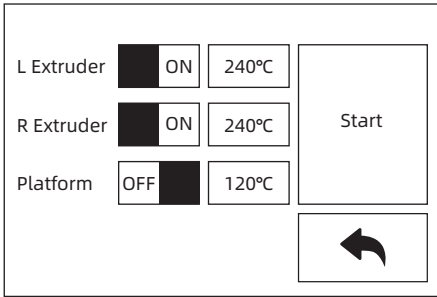
1. Tap [Preheat] to preheat the extruder or platform; Setting the targeted heat temperature by tap the touchscreen.

| ▬▬▬▬▬▬▬ | |
|---|---|
| L Extruder   240℃ / 240℃ | Stop |
| ▬▬▬▬▬▬▬ | |
| R Extruder   240℃ / 240℃ | |
| ▬▬▬▬▬▬▬ | ← |
| Platform    120℃ / 120℃ | |
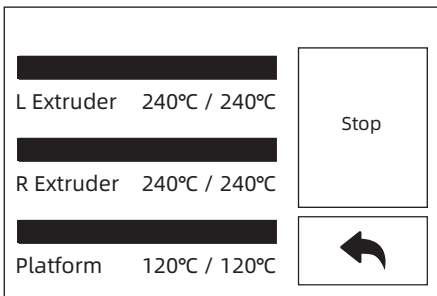
2. Tap [Stop] to stop heat; Tap back arrow to back to the superior window; When reaching the targeted heat temperature and there is no more action, the preheat will stop.

**Tools Interface**

| | | |
|---|---|---|
| Print | Preheat | Tools |

| | | | |
|---|---|---|---|
| Filament | Level | HOME / Home | Manual |
| Setting | Status | About | |
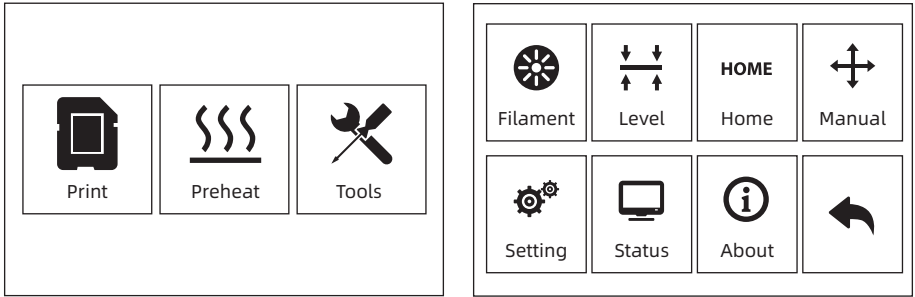
Tools interface included filament, level, Home, Manual, Setting, Status and About.

| L Extruder | R Extruder |
|---|---|
| Load | Load |
| Unload | Unload |

Heating...

L Extruder 75℃ / 220℃
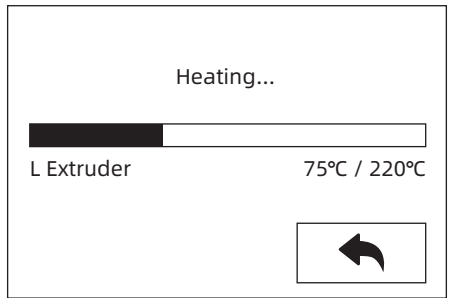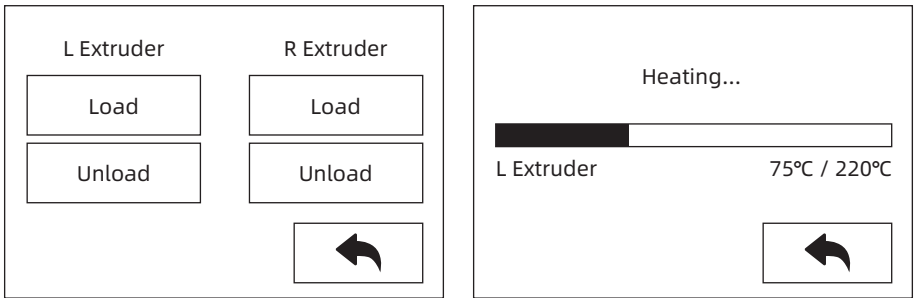
**[Filament]**
Filament load and unload setting.

| | | | |
|---|---|---|---|
| Filament | Level | HOME / Home | Manual |
| Setting | Status | About | |

Please wait, device is homing.
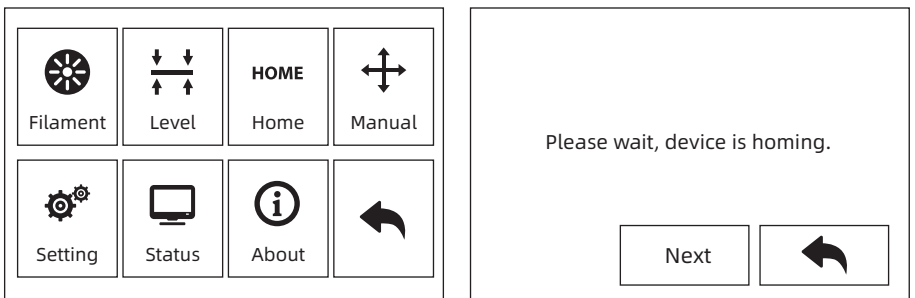
Next

**[Level]**
Adjust platform flatness by manual leveling.

```
┌─────────────────────────────────────┐
│                                     │
│  Screw the three nuts tnder the     │
│  platform counterclockwise until    │
│  they are tight, then tap the       │
│  [Next].                            │
│                                     │
│        ┌──────────┐  ┌──────────┐   │
│        │   Next   │  │    ◀     │   │
│        └──────────┘  └──────────┘   │
└─────────────────────────────────────┘
```

After stop movement of extruder and platform, tighten the three nuts below the platform counterclockwise (To avoid scratch build plate by extruder and it is important action)

```
┌─────────────────────────────────┐  ┌─────────────────────────────────┐
│                                 │  │                                 │
│                                 │  │                                 │
│  Please adjust the front thumb  │  │                                 │
│  screw under Platform when      │  │    Level Adjustment Finished!   │
│  stop.                          │  │                                 │
│                                 │  │                                 │
│     ┌────────┐  ┌────────┐      │  │     ┌────────┐  ┌────────┐      │
│     │  Next  │  │   ◀    │      │  │     │ Finish │  │   ◀    │      │
│     └────────┘  └────────┘      │  │     └────────┘  └────────┘      │
└─────────────────────────────────┘  └─────────────────────────────────┘
```

Choose one extruder and move it to the first nut by hand. Place a paper under the extruder and tighten the nut to reduce the distance between extruder and platform. Gently move the paper and feel the fraction. If move the paper with gent fraction, it is a suitable distance between extruder and platform. Finished the first place, and repeat the same actions in the second and third nut.

```
┌─────────────────────────────────┐  ┌─────────────────────────────────┐
│                                 │  │                                 │
│                                 │  │                                 │
│                                 │  │                                 │
│     Homing! Please wait...      │  │      Homing Finished.           │
│                                 │  │                                 │
│     ┌────────┐  ┌────────┐      │  │     ┌────────┐  ┌────────┐      │
│     │  Yes   │  │ Cancel │      │  │     │  Yes   │  │ Cancel │      │
│     └────────┘  └────────┘      │  │     └────────┘  └────────┘      │
└─────────────────────────────────┘  └─────────────────────────────────┘
```

**[Home]**
Tap [Home] and machine come back to the zero of movement.

**[Manual]**
Tap the touchscreen to control XYZ axis movement.



**[Setting]**
Setting interface included X calibration, Y calibration, Z calibration, Expert mode, Language and FactoryReset.
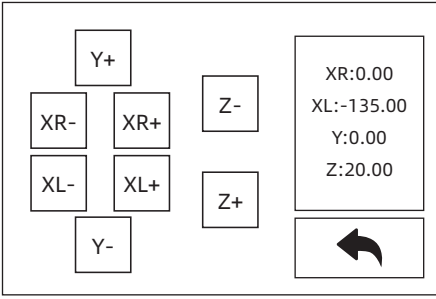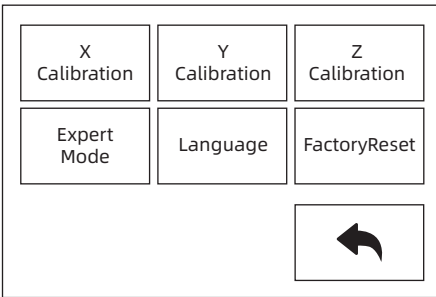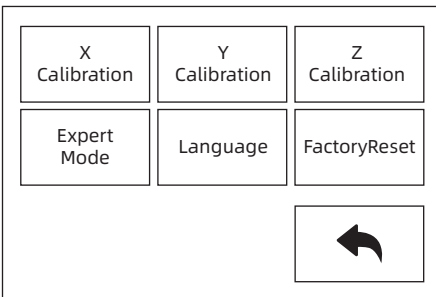


**[X calibration], [Y calibration], [Z calibration]**
Learn more on chapter 2.3.3.

```
Manual fine calibration

This assistant is for advanced users only.
After a printer calibration. Fine-tune the
calibration offsets of X or Y axis if needed.

        Next        ←
```

**[Expert Mode]**
Simplified calibration for experienced users in the expert mode. According to the
deviation value of the model printed by two extruders on the same axis, the users adjust
the place of exrtuder on the X or Y axis.

```
Manual fine calibration

X-  0.00  X+      X-  L        L
                      ↓Y-   R
Y-  0.00  Y+   R              R

        OK        ←
```
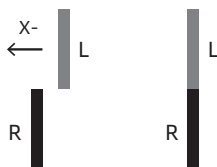
When the left extruder prints to the right on the X axis，tap X- ; When the left extruder
prints to the left on the X axis，tap X+.
When the right extruder prints to the left on the Y axis，tap Y- ; When the right extruder
prints to the right on the X axis，tap Y+.

```
简体中文                    Français
English                     Spanish        ↑
繁體中文
日本語             ↓
Deutsch
한국어            ←                         ←
```

**[Language]**
Support Chinese, English, Japanese, Germany, French and Spanish.

| X Calibration | Y Calibration | Z Calibration |
|---|---|---|
| Expert Mode | Language | FactoryReset |

**Operation Confirm**

Reset the default value of factory?

| Yes | No |
|---|---|
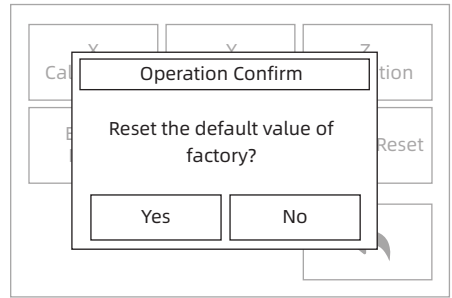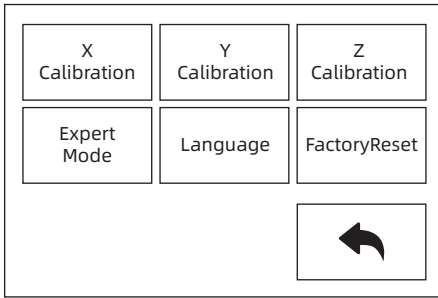
**[FactoryReset]**
After tapping, all settings will be restored to the factory settings.

L Extruder: 159℃
R Extruder: 135℃
Platform: 45℃

XR:138.24
XL:-138.24
Y:-77.50
Z:31.00
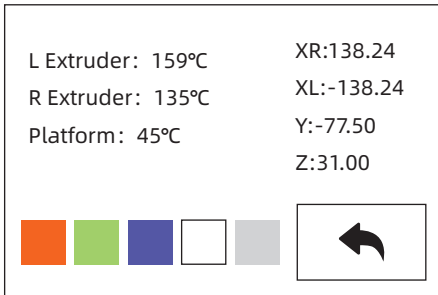
**[Status]**
Extruder and platform temperature, and XYZ axis coordinates show in the status. Click on the lamp status bar, the ambient light in the cavity of the device will change according to the settings.

Machine Name: My 3D Printer
Machine Type: Flashforge Creator Pro 2
Firmware Version: V1.2 20200420
Print Volume: 200x148x150
Usage counter: 58hours
Tool Count: 2
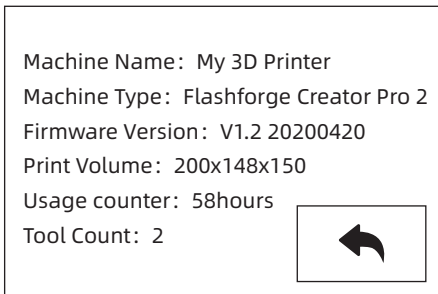
**[About]**
The basic information of the device is displayed. The details of the information are subject to the actual display of the device.
You can view the device firmware version number; print volume size; cumulative printing time, etc.

**Note: Please offer series number to the after-sales engineers, when you applied for after-sales service.**

**[Firmware Upgrade]**

Method 1:
Insert the SD card to the computer and build a folder called sys. Copy the firmware files into the sys folder. Then insert the SD Card to the machine. Start the machine and upgrade the firmware. After finishing the firmware, delete the sys folder.

Method 2:
Upgrade the firmware with FlashPrint via USB cable.

# Chapter 3: Slicing Software

**Using slicing software FlashPrint to process .stl File and .obj File to .g file, which can be printed by Creator Pro 2.**

## 3.1    Installation

### 3.1.1 How to get FlashPrint?

There are two ways to get FlashPrint software:

**Method 1:**  To get the installation package from the SD card in the accessory kit.

**Method 2:**  Visit website www.flashforge.com, and download the latest venison in Download Center.

### 3.1.2 How to start-up?

Decompress the zipped file or start the installation program, and then install the software according to the direction.
Start the software with the start menu shortcut by left double clicking.

## 3.2    Exploring FlashPrint

**Note：Creator Pro 2 support printing by FlashPrint with USB cable.**

### 3.2.1 Machine Type Selection

**Attention! After starting FlashPrint, you need to select the targeted machine type first.**

When you start FlashPrint, a dialog box will pop up. Just need to select FlashForge Creator Pro in the machine type list and click [OK]. You can also change the machine type via clicking [Print]--[Machine type]. Showed the picture below:
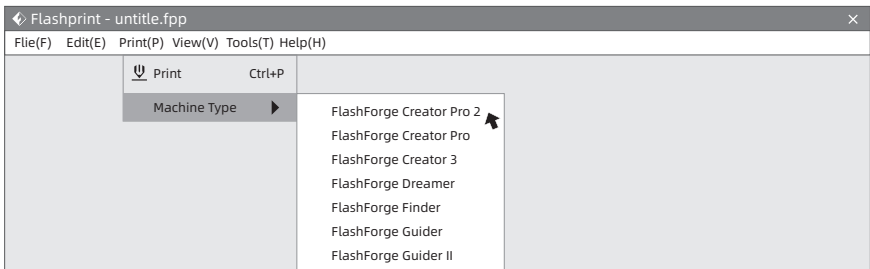
## 3.2.2 FlashPrint Introduction
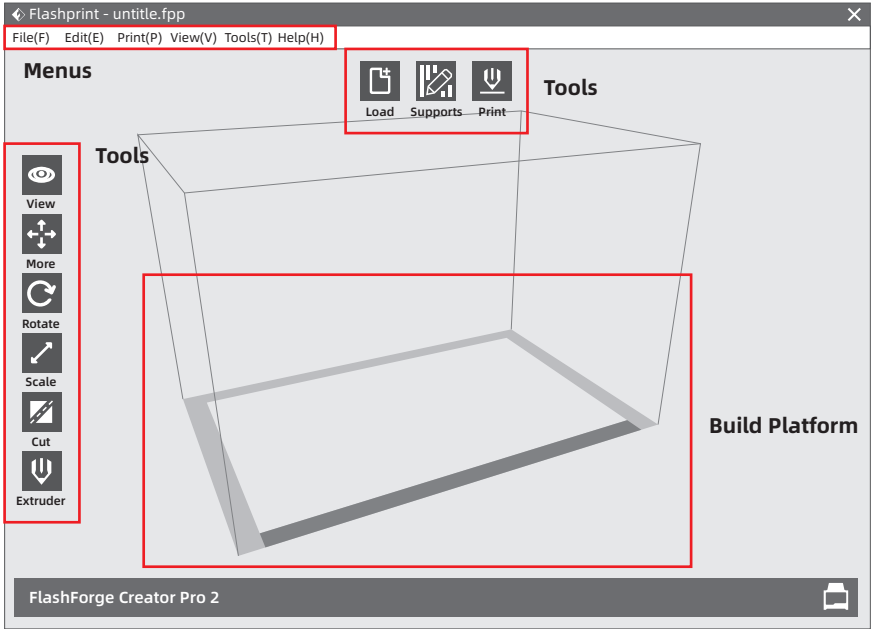


| | | |
|---|---|---|
|  | **Load:**<br>Only load one file once |  |
|  | **Print:**<br>Print it directly with your Creator Pro or export to your USB Stick | |
|  | **Move:**<br>Move model around on XY- axis; shift+click to move along Z axis | |
|  | **Rotate:**<br>Turn and rotate your model | |
|  | **Cut:**<br>Cut model into several parts | |

**Support:**
Enter into the support edit mode

**View:**
View FlashPrint home screen from one of six viewing angles

**Scale:**
Scale the size of your object

**Extruder:**
Chose left or right extruder before setting parameter

## 3.2.3 Load

**You can load a model file or Gcode file into your FlashPrint 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.
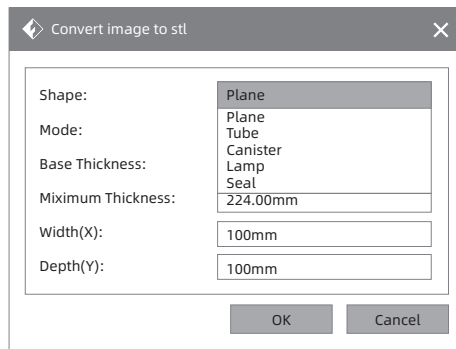Method 6: Select and click-drag the target file to the icon of FlashPrint.

**Note: 3D models can be stored as .STL, .OBJ, and .FPP file and support editing by FlashPrint.**

**Extended：How to create Rilievo?**

Load a png, jpg, jpeg, bmp picture file into the FlashPrint. And the following dialogue box will pop up. The setting box includes settings for shape, mode, maximum thickness, base thickness, bottom thickness, width, height, top diameter and bottom diameter.

| Convert image to stl | ✕ |
|---|---|
| Shape: | **Plane** |
| Mode: | Plane / Tube / Canister / Lamp / Seal |
| Base Thickness: | |
| Miximum Thickness: | 224.00mm |
| Width(X): | 100mm |
| Depth(Y): | 100mm |
| | OK    Cancel |

**Shape:** including plane, tube, canister, seal and lamp.
**Mode:** including "darker is higher" and "lighter is higher".
**Maximum thickness:** Z value of the model.
**Base thickness:** The minimum raft thickness and the default value is 0.5mm.
**Width:** X value of the model.
**Depth:** Y value of the model.
**Bottom thickness:** For tube, canister and lamp to set up bottom thickness.
**Top diameter:** For tube, canister and lamp to set up the top diameter.
**Bottom diameter:** For tube, canister and lamp to set up the bottom diameter.

Plane
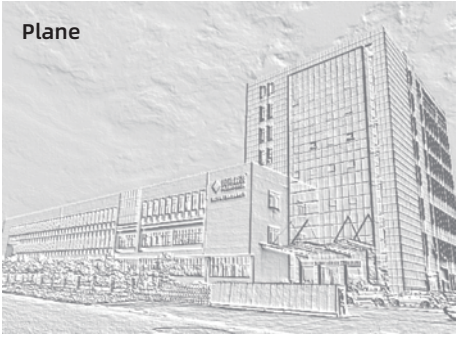


Tube / Canister
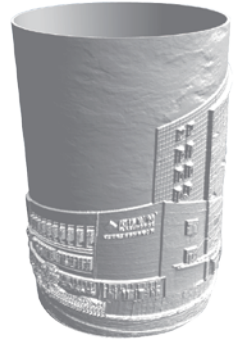


Lamp
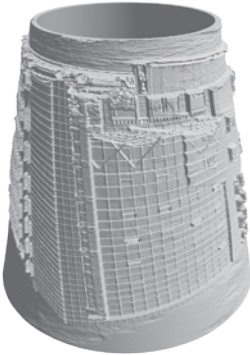


Seal
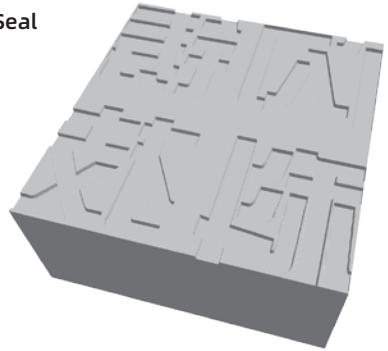
## 3.2.4 View 

### 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**
Scroll 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 [View] icon on the left, click it again and a sub-menu 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.

## 3.2.5 Move

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

Method 1: Click the [Move] icon on the left, hold down the left mouse button and drag it to adjust the location of the model in XY direction. Hold down the Shift key, hold down the left mouse button and drag it to adjust the location of the model in Z direction. The distance and the direction of the movement will be displayed.
Method 2: Click the [Move] button on the left and then enter the distance value to move the model. You can also 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].**

## 3.2.6 Rotate

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

Method 1: lick 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.

## 3.2.7 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.**

# 3.2.8 Cut

Click on the model to select it and click on the Cut icon to set the cut plane. The direction and position are available for setting. There are two options that draw with mouse or cut by XYZ direction. Input the number on the position setting to cut the specified place of model.

### 1.Draw with mouse

FlashPrint creates the cut plane automatically by draw the cut line with mouse. Rotate the view to check the cut plane.

**Cut line**

**Cut plane view**
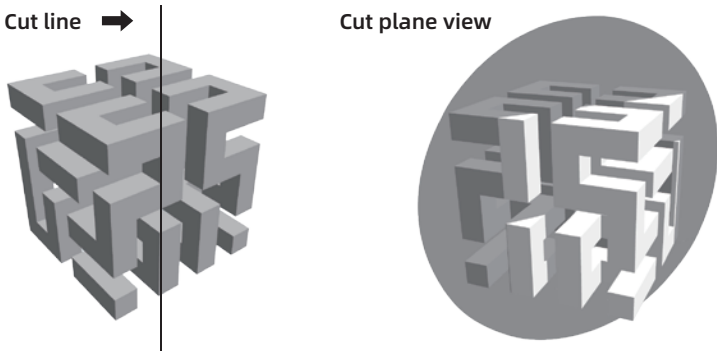
**2.X Plane**
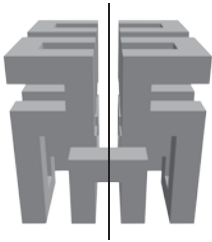
**3.Y Plane**

**4.Z Plane**
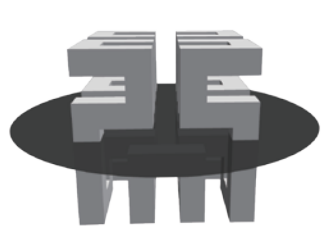
# 3.2.9 Extruder

There are left and right extruders. Choose the model first and click extruder icon, then the extruder setting menu will pop up. It is necessary to choose left or right extruder before printing.

# 3.2.10 Support

After loading the model, click [Edit]--[Supports] or click the Supports icon directly, then you will enter the support edit mode (as shown in the picture below).
Click [Back] to exit when you finish editing.



### 1.Support Options

Click the Support Options, an option box will appear, supports options include "Tree-like" and "Linear", when choose "Treelike", click [OK], then it will generate treelike structure; when choose "Linear", click [OK], then it will generate linear structure.
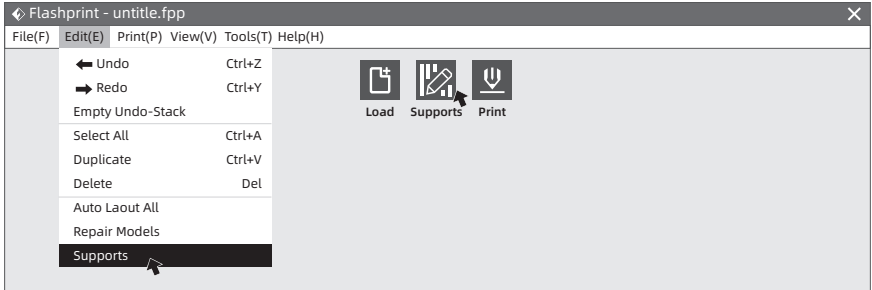
**Treelike Supports:** You can set up treelike specifications such as overhang thresh, post diameter, base diameter and base height.
**Linear Supports:** You can set up linear specifications such as overhang thresh and pillar size.

If it is a model with supports, when you choose one of the supports options, the software will judge whether existing supports need to be deleted or not on the basis of the type of existing support, and will pop up the corresponding prompt to let you make the choice.
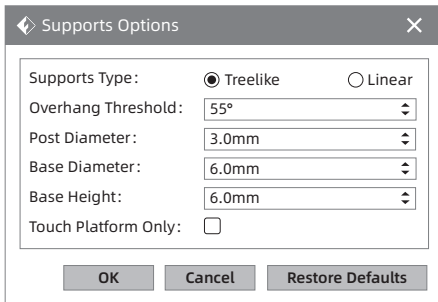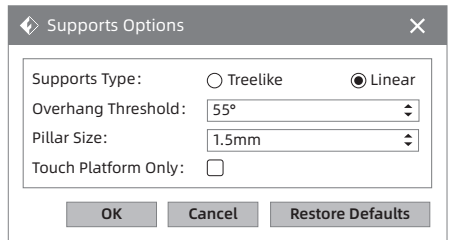


### 2.Auto Supports

Click the [Auto Supports] button, the software will judge the position where supports are needed and generate corresponding treelike or linear supports. If it is a model with supports, the existing supports will be deleted and new supports will create.

### 3.Add Supports

Supports will be added once clicking the [Add] button ⊕ . Move the cursor to the position where supports needed, left-click to choose the starting point of supports, hold down the left mouse button and drag the mouse the supports preview will show up(if support surface doesn't need support or the support column angle is too large, the support review will be highlighted ). Loosen the left mouse button, if support column doesn't meet with model, then support will be generated on origin and terminal point (the highlighted preview support won't create support structure )

### 4.Delete Supports

Supports will be deleted once clicking the [Delete] button ⊗ . Move the cursor to the supports needed deleting, current supports and its subnode support will be highlighted, click the left mouse button to delete these highlighted support.

### 5.Clear Supports

Click [Clear Supports] 🗑 , all supports will be deleted. The operation can be repealed via clicking [Undo] or pressing the shortcut key Ctrl+Z.

# 3.2.11 Print ⨄

Click print icon and print setting will pop up. Click [OK] after setting all parameters, then choose the right files format and place, and click [Save].
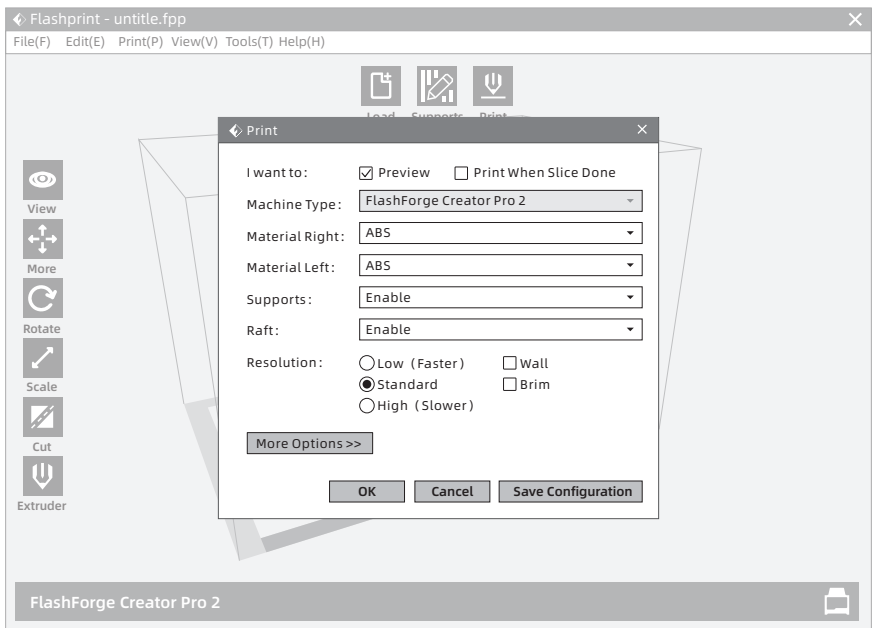
| | |
|---|---|
| **Preview:** | entering preview interface or not. If check the option, entering the preview interface automatically after slicing finished. Sliding model layer number slider on the left of interface up and down to show the model layer. The estimated model print time and filament showed on the top right corner. Click [Print] to connect machine; Click [Back] to back the main interface. |
| **Materials:** | ABS/PLA. |
| **Supports:** | When printing suspended structure models, support is necessary. Click [Supports] to create support part for the printing. |
| **Raft:** | This function will help the model to stick well on the platform. |
| **Wall:** | During dual color printing, this function will help to clear the leaking filament of another extruder. |
| **Brim:** | Expand the outline of model's bottom layers, which helps anchor the edges of the model to the plate to avoid warping or printing fails. |
| **Resolution:** | You have three resolution solutions (with default setting) to choose from, high resolution is corresponding with slow printing speed, opposite for the low resolution. For PLA printing, an extra solution "Hyper" is available. |
| **More options:** | Click [More options] to set for layer, shell, infill, speed and temperature. Different resolution solution is corresponding to different defaults, click [Restore Defaults] to back to default setting. |

**More Options >>**

| Layer Height | Shells | Infill | Speed | Temperature | Others |
|---|---|---|---|---|---|
| Layer Heighe: | | | 0.18mm | | |
| First Layer Height: | | | 0.27mm | | |

**Restore Defaults**

**Layer Height**

**Layer Height:** Layer thickness of the printing model. With a smaller value, the surface of the model will be smoother.

**First Layer Height:** This is the first layer of the model, which will affect the sticking performance between the model and platform. Maximum is 0.4mm, and usually the default is OK.

| **Shells** | Contains the outside shell value, capping layer value (under vase mode, top solid layer setting is invalid.) |
|---|---|
| | **Perimeter Shells:** Maximum is 10. |
| | **Top Solid Layers:** Maximum is 30, minimum is 1. |
| | **Bottom Solid Layers:** Maximum is 30, minimum is 1. |
| **Infill** | **Fill Density:** Fill rate. |
| | **Fill Pattern:** The pattern of filling shape which effects printing duration time. |
| | **Combine Infill:** You can select the layers for combining according to the layer thickness. The combined thickness should not exceed 0.4mm. "Every N layers" is for all the infills while "Every N inner layers" is only for inner infills, which generally can save print time. |
| **Speed** | **Print Speed:** The moving speed of the extruder. Generally, the lower speed is, the better print you will get. For PLA printing, 80 is recommended. |
| | **Travel Speed:** Control the moving speed of the extruder under non- printing Status during work. For PLA printing, 100 is recommended. |
| | **Note: Modify parameters settings to get better prints as different models need different parameters.** |
| **Temperature** | **Extruder Temperature:** Recommended extruder temperature is 220°C. Note: Different temperatures have subtle influences in prints. Please adjust the temperature according to the condition in order to get a good print. |
| | **Platform Temperature:** To set the temperature of Platform. |
| **Others** | **Cooling Fan Control:** Set up the time to turn on the cooling fan. You can pre-set the height and make the cooling fan begin to work at the point. |

## 3.2.12 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, and then click [No] will abandon it. If click [Cancel] or close tool tip, then it will cancel the new project.
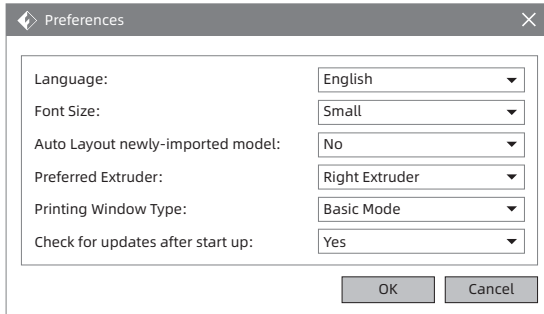
### 2.Saving

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. If 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 .boj, 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 font size and if needs detecting update when start.

| Preferences | × |
| --- | --- |
| Language: | English ▼ |
| Font Size: | Small ▼ |
| Auto Layout newly-imported model: | No ▼ |
| Preferred Extruder: | Right Extruder ▼ |
| Printing Window Type: | Basic Mode ▼ |
| Check for updates after start up: | Yes ▼ |
| | OK    Cancel |

#### Preference

Basic mode and expert mode. Under the expert mode, there are more available parameters.

#### Check for update after start up

Choose [Yes] and automatically detect update version every time when starting the software. If there is a new version, the user is prompted to updated.

## 3.2.13 Edit Menu

### 1.Undo

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

Method 1： Click [Edit]-[Undo].
Method 2： Press the shortcut key 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 key 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.

**Note:  choose the functions of on the center or scale to get the best model position view.**

### 5.Duplicate

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

Method 1： Click [Edit]-[Duplicate].
Method 2： Press the shortcut key Ctrl+V.

### 6.Delete

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

Method 1： Click [Edit]-[Delete].
Method 2： Press the shortcut key 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.
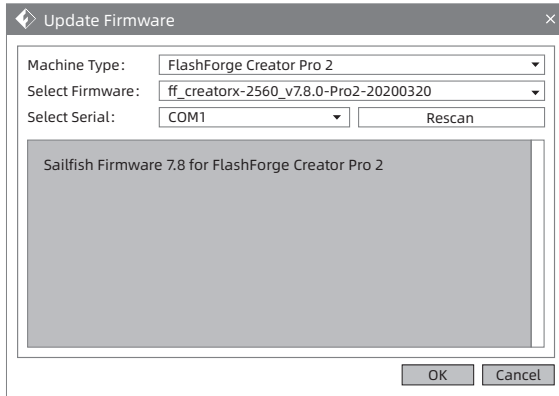
### 8.Repair Models

Repair the wrong files.

### 9.Supports

Learn more on chapter 3.2.10.

## 3.2.14 Tools

### Update Firmware

Open the FlashPrint (Now your computer and Creator Pro 2 are connecting with each other by USB cable). click [Tools] and [Update Firmware], then click [OK] and a dialog box will pop up. Click [Yes] to start firmware update.

| Update Firmware | ✕ |
|---|---|
| Machine Type: | FlashForge Creator Pro 2 ▼ |
| Select Firmware: | ff_creatorx-2560_v7.8.0-Pro2-20200320 ▼ |
| Select Serial: | COM1 ▼ | Rescan |

Sailfish Firmware 7.8 for FlashForge Creator Pro 2

OK   Cancel

## 3.2.15 Help Menus

### 1.First Run Wizard

It introduce the basic functions briefly.

### 2.Help Contents.

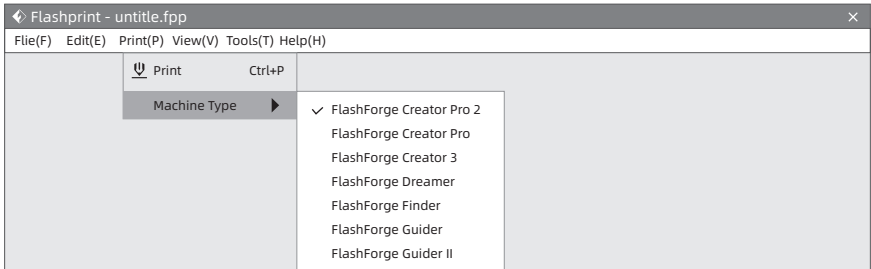Click [Help]-[Help Contents], you can read the help contents.

### 3.Check for Updates

Click [Help]-[Check for Updates] to detect the available updates online.
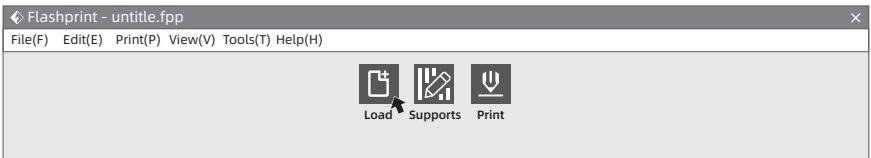
### 4.About FlashPrint

Click [Help]-[About FlashPrint], the software information box will pop up. The contents include the current software version and copyright information.
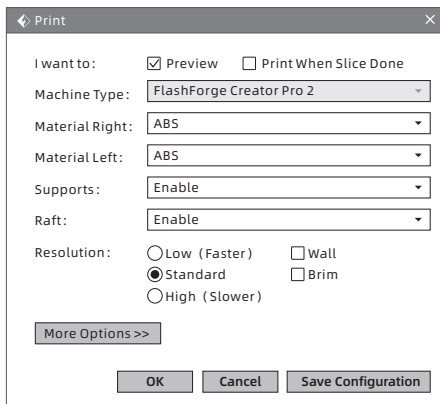
## 3.3 How to create .g file?

**By default, the left extruder is used as a supporting material extruder, and the right extruder is a printing extruder. When printing a monochrome model, if the user does not set it, the right extruder is automatically used as the printing extruder.**

| ◆ Flashprint - untitle.fpp | × |
|---|---|

Flie(F)　Edit(E)　Print(P)　View(V)　Tools(T)　Help(H)

    ⊍ Print　　　　　Ctrl+P

    Machine Type　▶　　✓ FlashForge Creator Pro 2
                  FlashForge Creator Pro
                  FlashForge Creator 3
                  FlashForge Dreamer
                  FlashForge Finder
                  FlashForge Guider
                  FlashForge Guider II

1.Click [Print]-[Machine Type] to select FlashForge Creator Pro 2.

| ◆ Flashprint - untitle.fpp | × |
|---|---|

File(F)　Edit(E)　Print(P)　View(V)　Tools(T)　Help(H)

                Load　Supports　Print

2.Click the [Load] icon to load a .stl model file and the object will display on the build area.

| ◆ Print | × |
|---|---|

I want to:　　　☑ Preview　　☐ Print When Slice Done

Machine Type:　FlashForge Creator Pro 2　▾

Material Right:　ABS　▾

Material Left:　ABS　▾

Supports:　　　Enable　▾

Raft:　　　　　Enable　▾

Resolution:　　○ Low（Faster）　　☐ Wall
　　　　　　　　◉ Standard　　　　☐ Brim
　　　　　　　　○ High（Slower）

More Options >>

OK　　Cancel　　Save Configuration

**Preview:** Check the function recommend.
**Machine Type:** FlashForge Creator Pro 2.
**Materials:** Choose the targeted materials.
**Supports:** You are suggested to select [Enable].
**Raft:** You are suggested to select [Enable].
**Resolution:** You are suggested to select [Standard].
**More Options:** You are suggested to keep them default.

**Note: default parameter setting is good for first users.**

3.Click [Print] and enter the setting window. Click [Ok] and save the .g file to SD card. Insert the SD card to the machine and start to print.

## 3.4    Function Introduction

### Expert Mode

1.Click [File] on the menu and choose [Preferences]. Choose the expert mode on the pop window and click [OK].
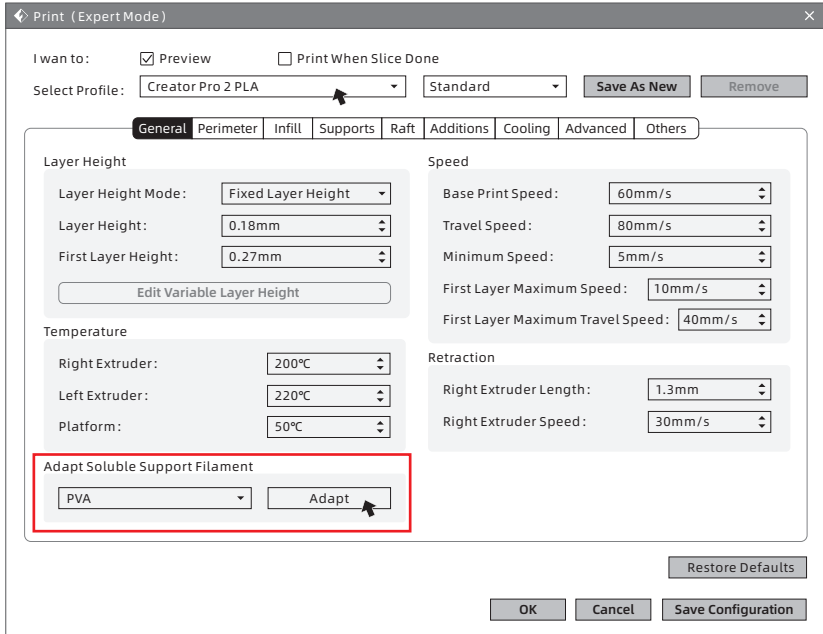


2.Click [Print] icon on the FlashPrint interface and parameter setting window appears. Choose materials, like Creator Pro 2 PLA; When print water soluble supports, click [General]-[Adapt Soluble Support Filament]-[PVA]-[Adapt], and click [Save Configuration].

Expert mode support choosing soluble materials, click it and set retraction for left extruder. If adjust retraction or not, which depends on the materials feature. Setting retraction can reduce drawings.
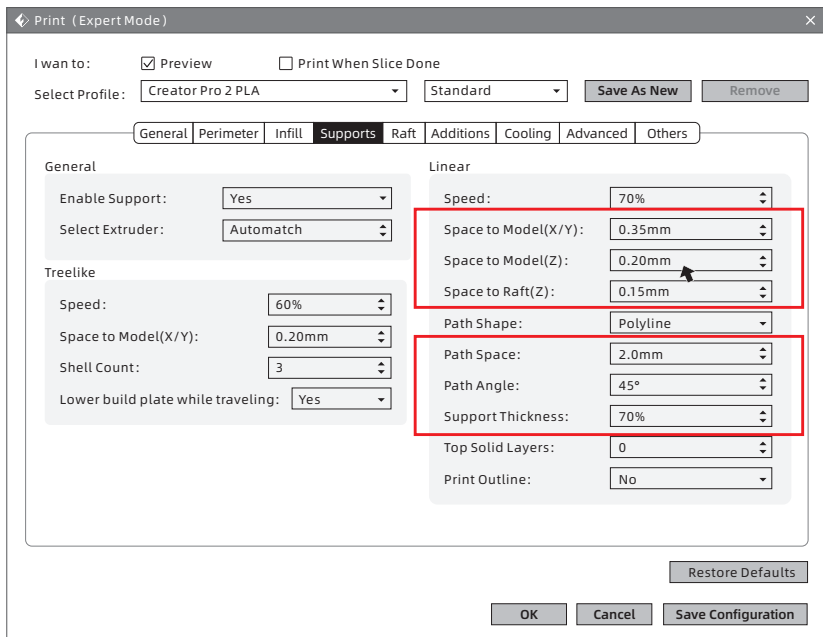
The space between supports and model and support density can adjust in [supports] setting.
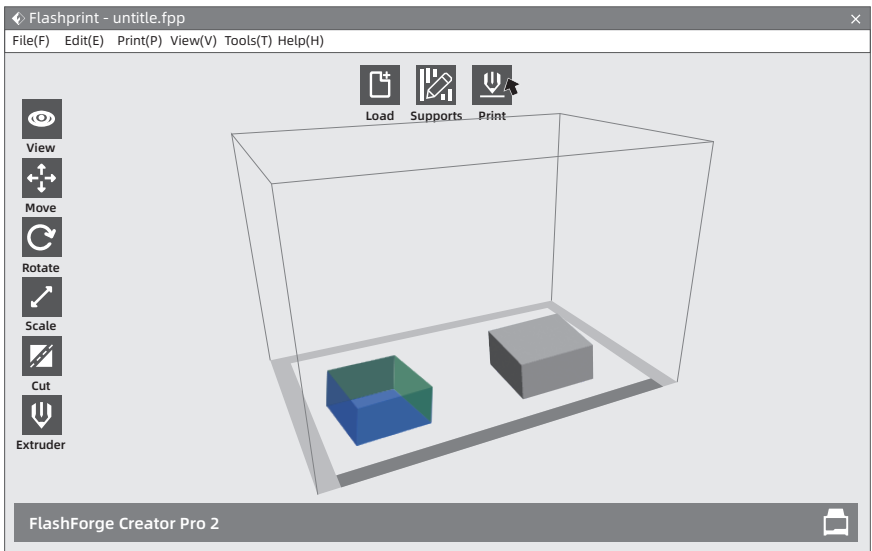
## Mirror / Duplicate Functions

Print two same models, choose duplicate mode; print two mirror models, choose mirror mode. Under mirror or duplicate modes, two extruders print models simultaneously.
**Note：the X-axis size of model should less than 80mm with mirror or duplicate mode.**
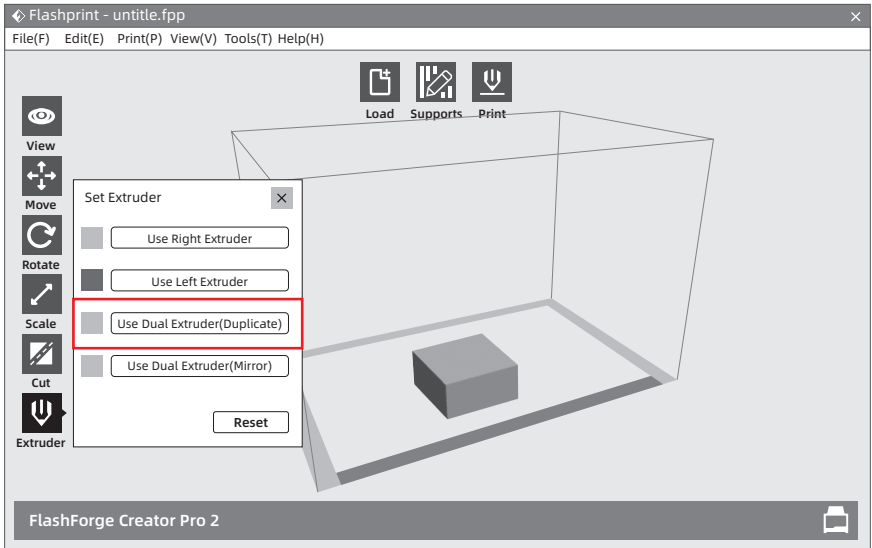


1.Choose model and click [Extruder] to start extruder setting.
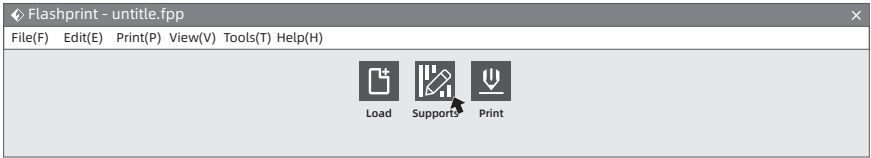


2.After the mirror or duplicate models appears on the build area, click [Print].
**Note：Because of height difference between two extruders under the mirror mode, compensation layer may be print. So adding raft is suggested in the mrrior mode.**

## Add Supports

Adding supports for suspended structure model to ensure print success.
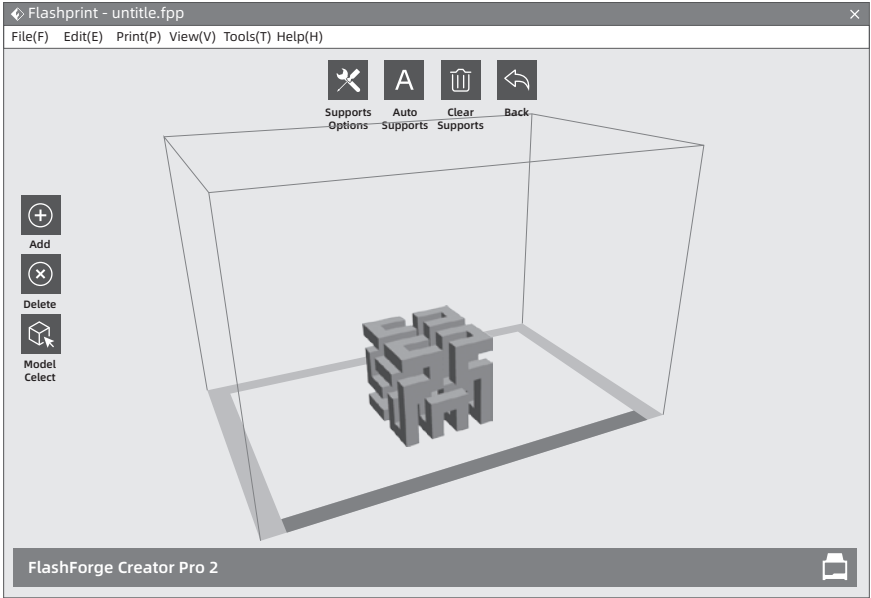




1.Click [Supports] icon and start support setting. Auto support setting is available. Click [Delete] on the left and support delete supports by manual.
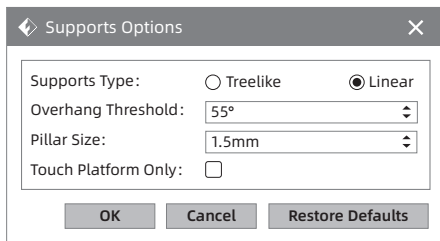




2.Click [Support Options] to choose tree-support or linear-support. Overhang thresholds means the angle of the model suspended, if it is greater than this angle, the support will be generated.
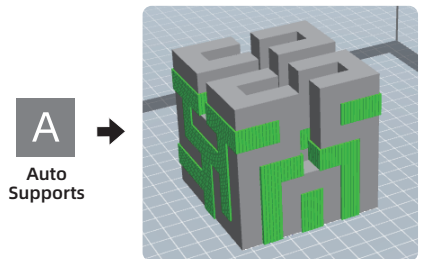
3.Click [Auto Supports] and supports create autocratically.

## Dimensional Adjustments

When dimensional deviation appears, click [Other] and open dimensional adjustment functions. Positive value adjustments becomes larger size, and negative value adjustments becomes smaller size; Z axis height adjusts by percentage.
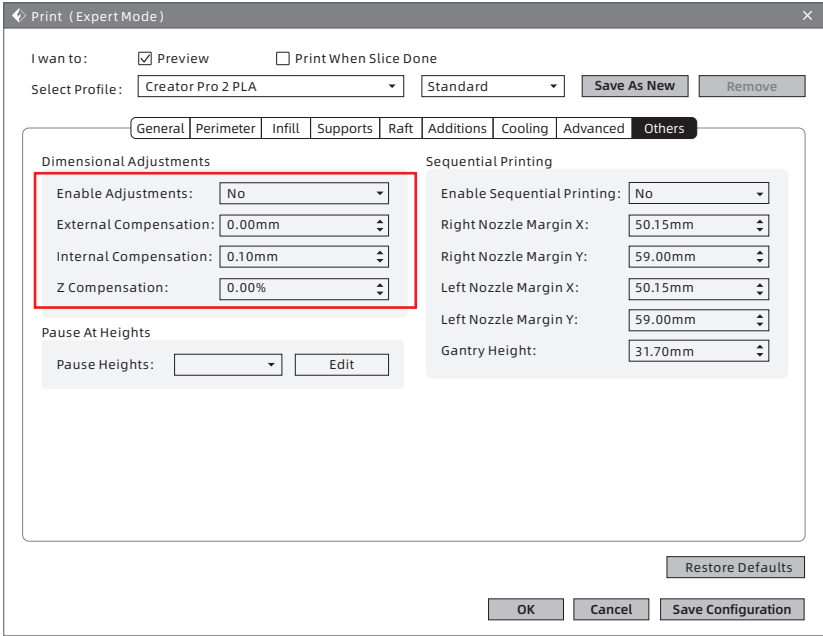
# Chapter 4: Maintenance

| Problem | Cause | Corrective Action |
| --- | --- | --- |
| Extruder head building off center. | The device has lost track of extruder's exact location and is failing to build. | Send the extruder to the home position will recalibrate Creator Pro 2. Cancel your object, clear build plate,send the extruder to the home position, and restart the object. |
| PLA is not extruding or sticking to the build tape properly. | This can be caused by the platform not being leveling with the extruder head. | Leveling the platform will align the extruder head and ensure a better object quality. Cancel your object, clear build platform, level the build platform, and restart the object. |
| Creator Pro 2 froze before my object started. | Creator Pro 2 may have received contradictory commands. | Turn power switch off, wait 30 seconds, and turn power switch on. |
| Spaghetti mess at end of build. | A layer of your object did not stick properly, model was saved with minimal surface area contacting the build platform, or object was built floating above the build platform with no support selected. Z axis offset may not be correct and the extruder tip is not properly spaced with the build platform. | Use the preview feature in your slicing software to see the first layer height and position. Build with supports when necessary. Contact customer service on how to calibrate the Z axis Offset. |
| No filament coming out. | Clogged extruder. Filament not properly loaded. | Contact customer service. Try running the filament change again to ensure the extruder gears have properly caught the lament. |
| Extruder will not home. | Limit switch wire failure | Contact customer service. |
| Stringy or fraying plastic layers on steep overhangs. | Object overhangs are too far apart or too steep (Less than 45 degree angle). | Build with supports. |

# Chapter 5:  Support and Service

FlashForge team is on standby and ready to help you with any challenges you may have with your Creator Pro 2. 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 working 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.

**Note: Nozzle is a fragile part, which is not covered by warranty. Because of changing different filament the extruder maybe blockaded. It's not owing to quality issue, and outside the scope of 400 hours life. If users encounter this problem, please contact our after-sale department and finish clean work according to their instruction.**

**E-mail: flashforge@flashforge.zohodesk.com / support@flashforge.zohodesk.com**
**ADD: No. 518, Xianyuan Road, Jinhua, Zhejiang**

**Note:Please provide serial number at the back of the printer before contacting After-sales service.**

S/N: FFAD******

## FCC Warning

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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.**

## Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

**Scan QR to Get More After-Sales Support**

You Tube

**Twitter**

**Facebook**

**Official Website**