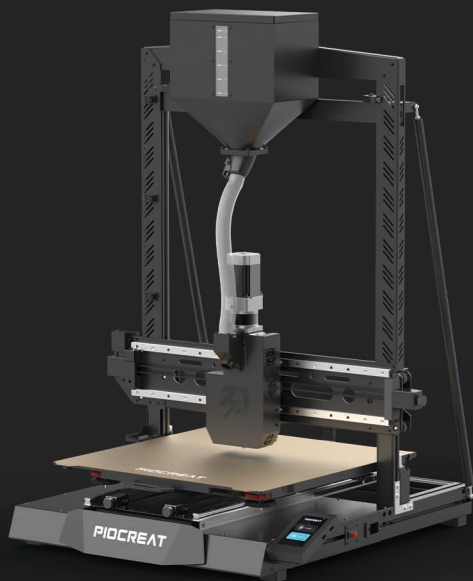




 **PIOCREAT**

G5Ultra

FGF (Fused granulate fabrication)

3D Printer User Manual

V2.2

Dear Consumers

Thank you for choosing our products. For the best experience, please read the instructions before operating the Printer. Our teams will always be ready to render you the best services. Please contact us via the phone number or e-mail address provided at the end when you encounter any problem with the Printer.

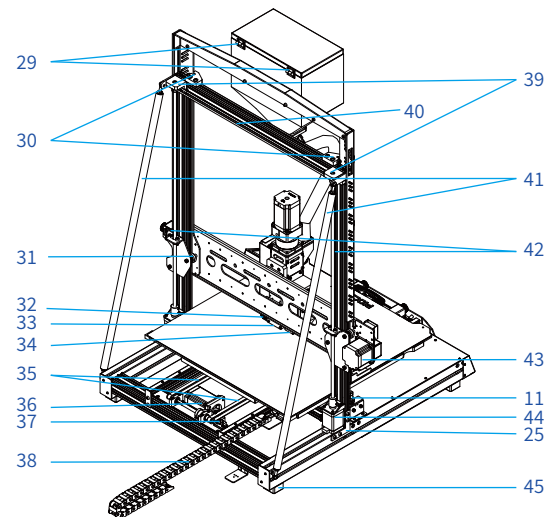
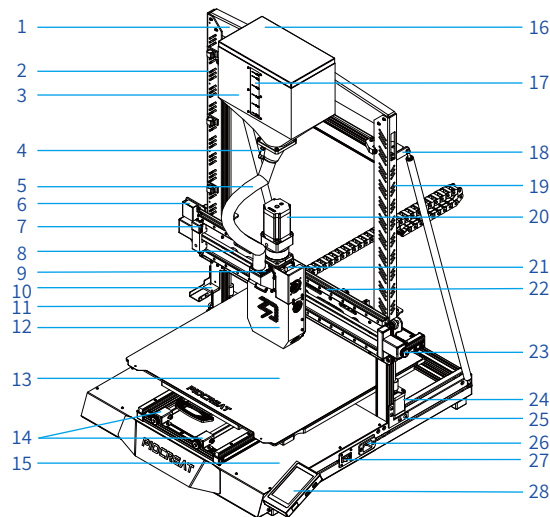
For a better experience in using our product, you can also learn how to use the printer in the following ways:
View the accompanied instructions and videos in the U disk.

Notes

- ❶ Do not use the printer any way other than described herein in order to avoid personal injury or property damage.
- ❷ Do not place the printer near any heat source or flammable or explosive objects. We suggest placing it in a well-ventilated, low-dust environment.
- ❸ Do not expose the printer to violent vibration or any unstable environment, as this may cause poor print quality.
- ❹ Please use recommended resin to in case damage of machine.
- ❺ Do not use any other power cable except the one supplied. Always use a grounded three-prong power outlet.
- ❻ Please do not open the plastic cover during usage, otherwise the printing will be interrupted.
- ❼ Do not wear cotton gloves when operating the printer. Such cloths may become tangled in the printers moving parts leading to burns, possible bodily injury, or printer damage.
- ❽ Please wait a moment after the print is finished. And please wear gloves to take out the print by tools.
- ❾ Clean the printer frequently. Always turn the power off when cleaning, and wipe with a dry cloth to remove dust, adhered printing plastics or any other material off the frame, guide rails, or wheels. Use glass cleaner or isopropyl alcohol to clean the print surface.
- ❿ Children under 10 years should not use the printer without supervision.
- ⓫ This machine is equipped with a security protection mechanism. Do not manually move the nozzle or printing platform mechanism manually while booting up, otherwise the device will automatically power off for safety.
- ⓬ Users should comply with the laws and regulations of the corresponding countries and regions where the equipment is located (used), abide by professional ethics, pay attention to safety obligations, and strictly prohibit the use of our products or equipment for any illegal purposes. PicoCreat will not be responsible for any violators' legal liability under any circumstance.

Introduction	01-01
Parameters	02-02
Parts list	03-04
Equipment installation	05-09
Circuit Wiring	10-10
Equipment wiring	11-14
Load pellet	15-15
Mobile interface operating instructions	16-16
Z-axis Offset	17-17
Level the platform	18-18
Preheat settings	19-19
Model slicing	20-22
Start Printing	23-24
Operation guide	25-25
Troubleshooting	26-26
Maintainance	27-27
After-sales service card	28-28

1. Introduction



- 1 Gantry top sheet metal
- 2 Gantry left sheet metal
- 3 Loading barre
- 4 Vibration motor components
- 5 Feeding tube
- 6 Nozzle signal terminal
- 7 X-axis limit switch
- 8 X-axis drive belt
- 9 Material break detection switch
- 10 Laser detection of in-situ boards
- 11 Z-axis homing mechanical switcEh
- 12 Screw extrusion kit
- 13 Heating platform
- 14 Y-axis belt adjustment mechanism
- 15 Motherboard power box

- 16 Loading bucket cover
- 17 Bucket visible scale window
- 18 Tie rod fixing plate
- 19 Right fixing plate
- 20 Extrusion motor
- 21 Nozzle control panel
- 22 X-axis linear guide
- 23 X-axis Belt Tension Adjustment Knob
- 24 Z-axis Moto (Z2)
- 25 L-shaped connecting piece
- 26 Power socket
- 27 Power switch
- 28 LCD Screen
- 29 Bucket Hinge
- 30 Gantry left and right sheet metal guide components

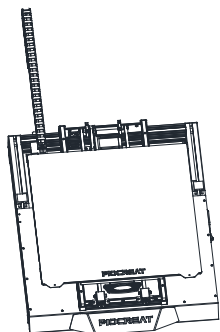
- 31 Z-axis sliding roller assembly
- 32 Ranging cooling fan
- 33 Ranging detection component
- 34 Nozzle cooling fan
- 35 Y-axis drive belt
- 36 Y-axis motor kit
- 37 Y-axis limit switch
- 38 Y-axis energy chain components
- 39 Z-axis fixed seat assembly
- 40 Z-axis timing belt
- 41 Pull rod
- 42 Z-axis T-type lifting screw
- 43 X-axis Moto
- 44 Z-axis Moto(r Z1)
- 45 Support feet

Basic Parameters

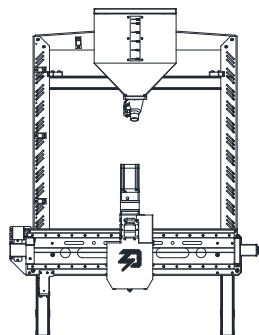
Model	G5Ultra
Printing Size	500x500x400mm
Molding Tech	FGF
Nozzle Number	Single nozzle
Slice Thickness	0.2-1.0mm
Nozzle Diameter	0.4-2.0mm (optional 3.0), standard: 0.8mm, 1.0mm, 2.0mm
X-Y axis positioning accuracy	±0.1mm
Filament	PLA\PC\ABS\PETG\PETG-GF/PP/TPU/PA-CF/ABS-CF/PC-CF and other composite materials
Slice Software	Piocreteat_Slicer/Cura/Simplify3D
File Format	STL、OBJ
File Transfer	USB/WIFI
Bed Temp	≤120°C
Max temp of nozzle upper section	≤360°C
Max temp of nozzle lower section	≤420°C
Continue printing after restoring power	YES
Continue printing after adding materials	YES
Auto Leveling	YES
Language	English/中文/Deutsch/Español/Français/Italiano/日本語/Portugal/Русский язык/Türkçe
Computer Operating System	Windows XP/7/8/10 MAC/Linux_x64
Printing Speed	0~220mm/s
Power Supply	AC100-110V&AC220-240V 50/60Hz
Nominal power	1450W

*Data provided by Creative Labs for reference only.
The maximum heating temperature during processing will vary depending on material type, print speed, and printhead diameter.

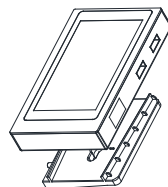
3. Package Content



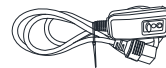
1 Base Frame ×1PCS



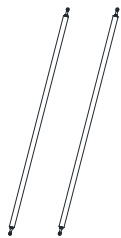
2 Gantry Frame ×1PCS



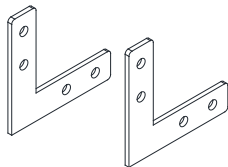
3 Display ×1PCS



4 Power Cord ×1PCS



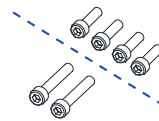
5 Pull Rods ×2PCS



6 L-shaped Connecting Piece ×2PCS



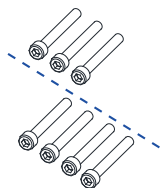
7 Material Tube+Feed Port ×1PCS



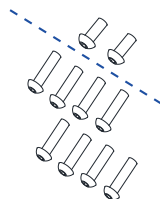
8 Screw
M3*12 ×2PCS
M3*6 ×4PCS

Tips: the above accessories are for reference only, in kind prevail!

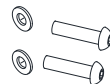
3. Package Content



- 9 Sems Screw
M4*30 ×3PCS
M5*40 ×4PCS



- 10 Hexagon Flat Round Head Screws
M5*12 ×2PCS
M5*18 ×8PCS



- 11 Hexagon Flat Round Head Screws
M5*20 ×2PCS
M5 Flat pad ×2PCS



- 12 ABS Granules for Consumables
2KG ×1PCS

Tool list



- 13 U Disk (Random Color)
x1



- 14 Wrench x1



- 15 Open-end Wrench
x4



- 16 Screw Driver x3



- 17 Metal Blade x 1



- 18 Nozzle0.8 x1
Nozzle1.0 x1
Nozzle2.0 x1



- 19 Socket Wrench x 1



- 20 Nozzle Cleaner x2



- 21 Nippers x1

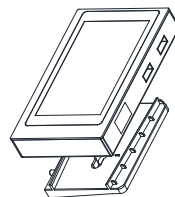
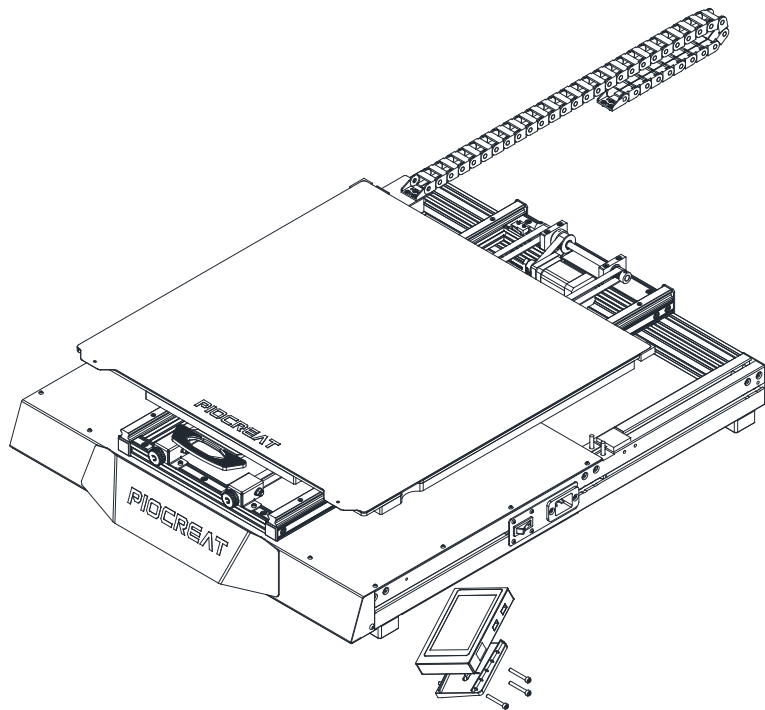


- 22 4*150 Black Rolled Strip x10

Tips: the above accessories are for reference only, in kind prevail!

4. Install the Display

- 1 Use the No. 3 Allen wrench to fix the screen bracket with 3PCS-M4*30 Allen head screws in the position as shown in the figure;
- 2 Then slide the touch screen kit into the mounting bracket hole;
- 3 After the display is installed, please connect the display cable.



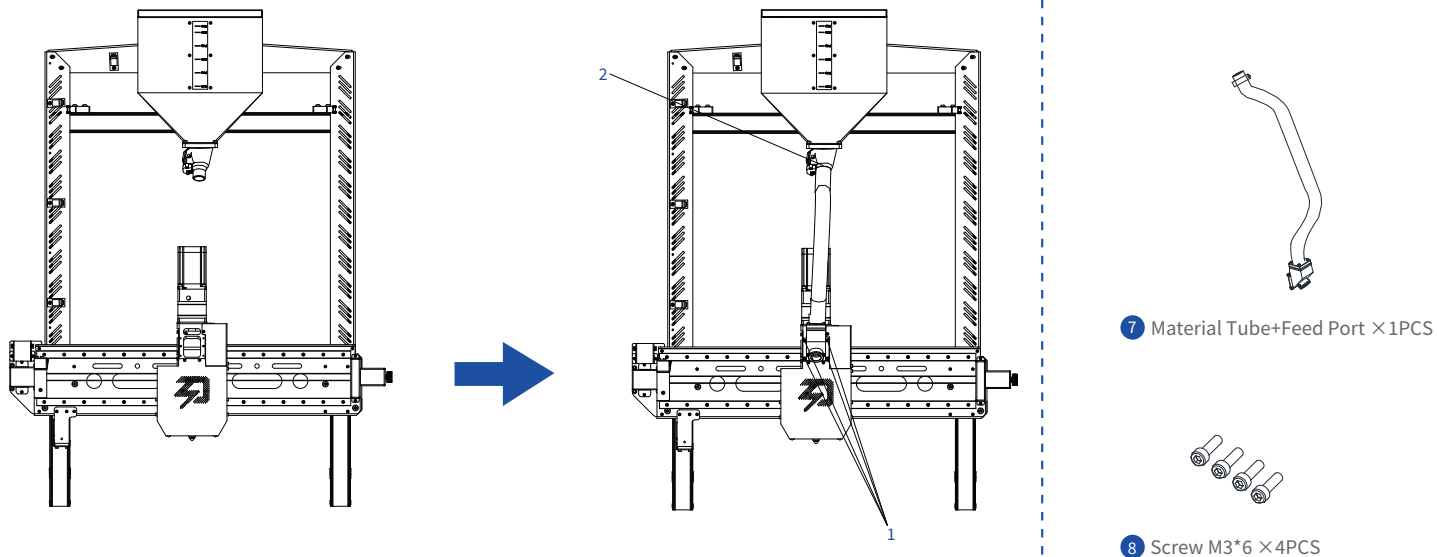
3 Display ×1



9 M4x30 Hexagon flat round head screws ×3

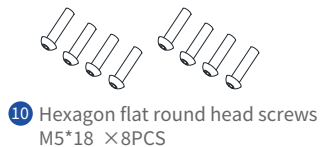
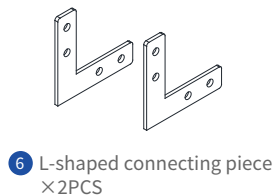
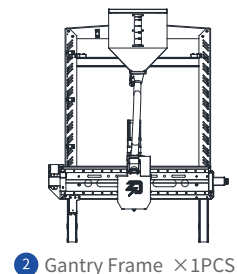
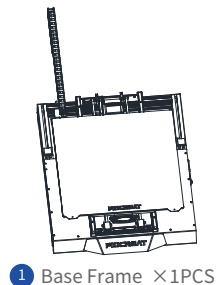
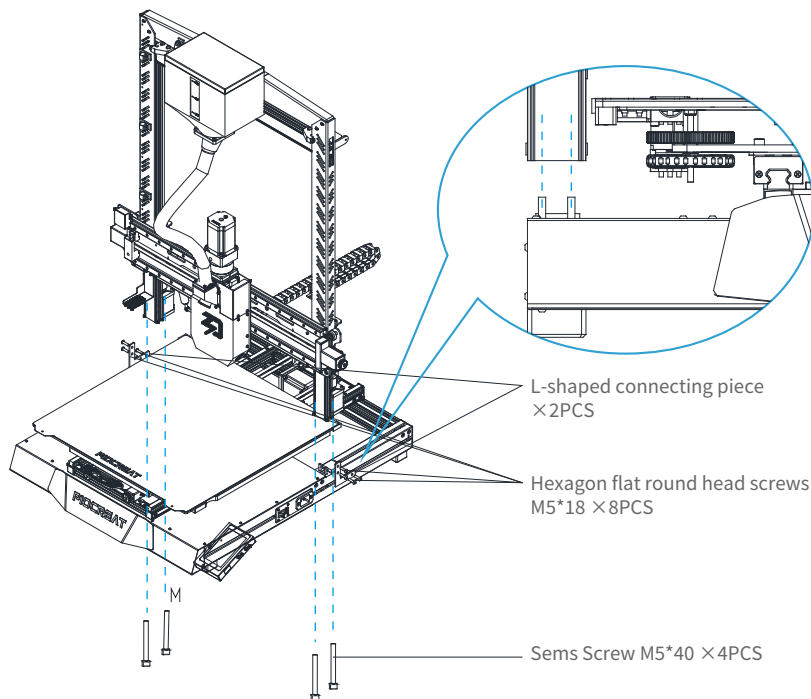
4. Install the feed tube

- 1 Take the No. 2 hexagonal wrench and use 4PCS-M3*6 hexagonal cylindrical head screws to fix the feed inlet assembly to the print head, as shown in the picture.
- 2 Take the toolkit one screwdriver to the material tube butt and then leakage hopper connector, with the throat band for twisting lock, as shown in the picture.

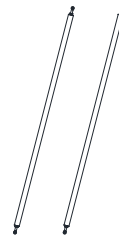
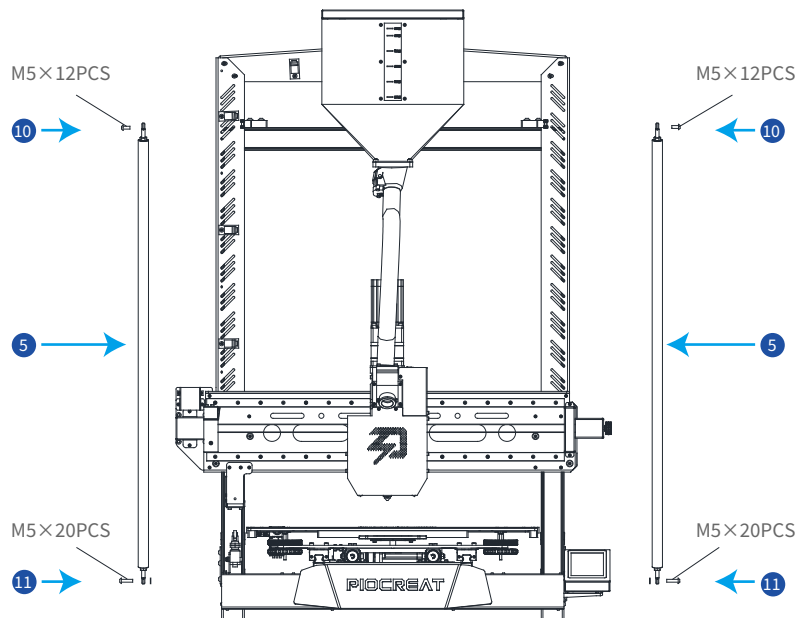


4. Install the Gantry Frame

- 1 Take gantry + base, gantry profile on the base step position, assembly and lock according to the picture by 4PCS-M5*40 combination screw.
- 2 Take 2PCS-L type connecting piece + 8PCS-M5*18 hexagonal flat round head screws and fix and lock them as shown in the picture.



4. Install the Pull Rod



5 Pull rods ×2PCS



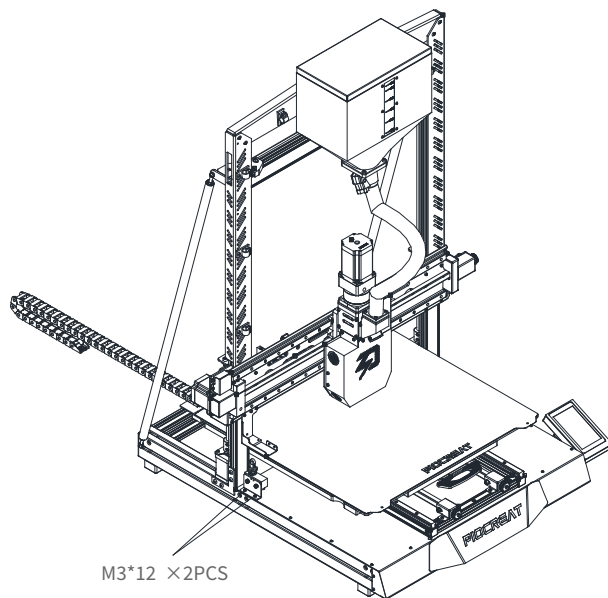
10 Hexagon flat round head screws
M5*12 ×2PCS



11 Hexagon flat round head screws
M5*20 ×2PCS
M5 Flat pad ×2PCS

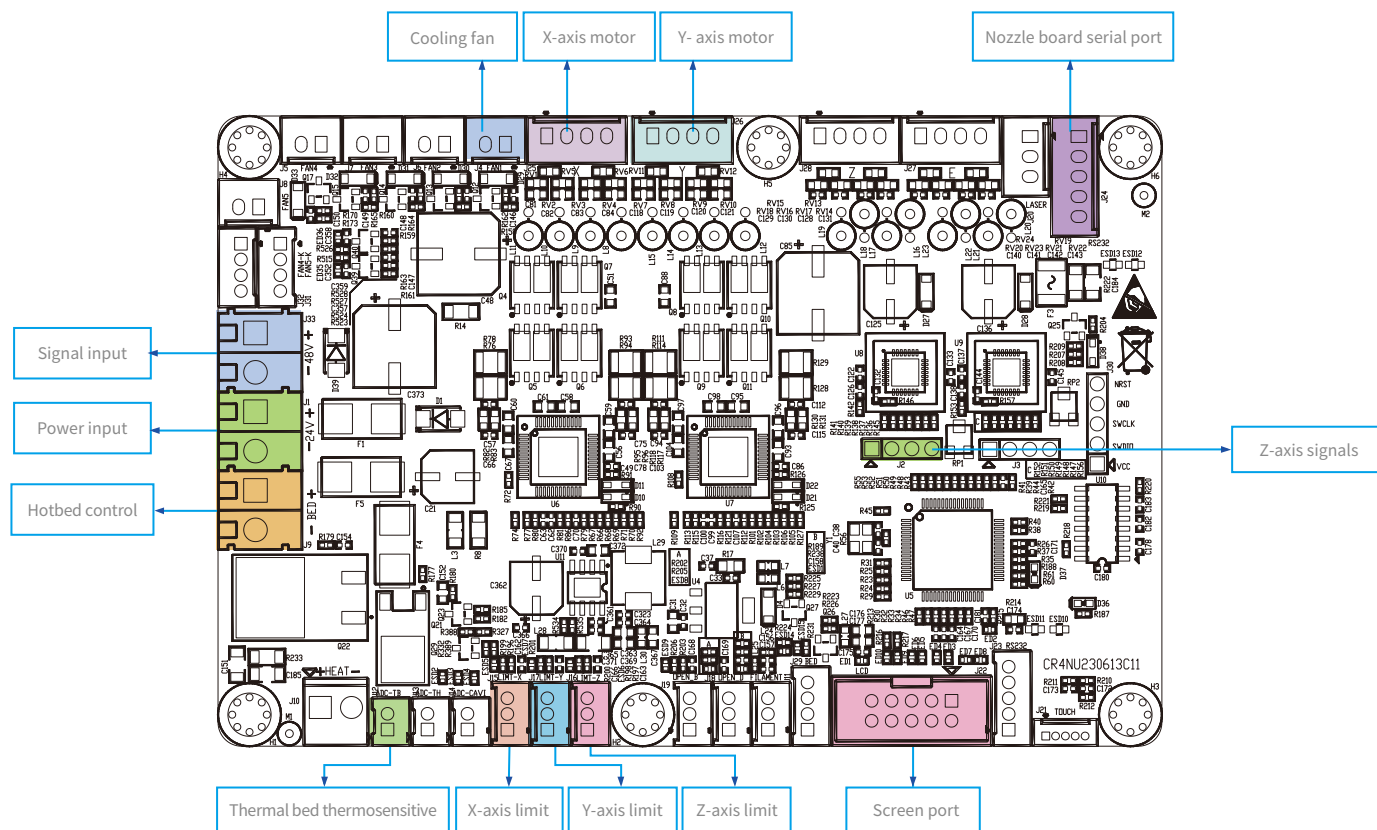
4. Z-axis homing mechanical switch

1 Take the No. 2 hexagonal wrench and use 2PCS-M3*12 hexagonal cylindrical head screws to fix the Z-axis return mechanical switch to the corresponding hole as shown in the picture above.

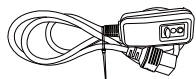


8 Screw M3*12 ×2PCS

5. Circuit Wiring



6. Equipment Wiring

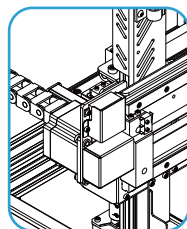


4 Power Cord ×1PCS

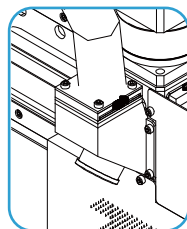


Caution

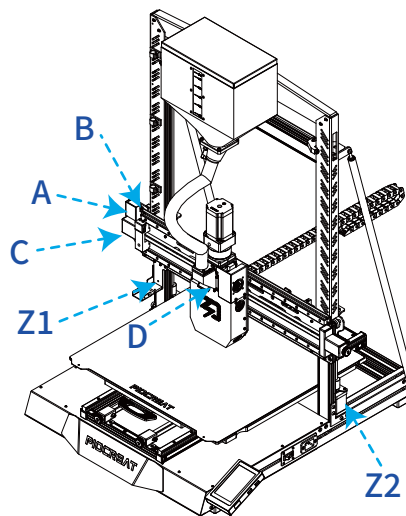
- Do not connect or disconnect the cables when the machine is powered on.



A
B
C



D

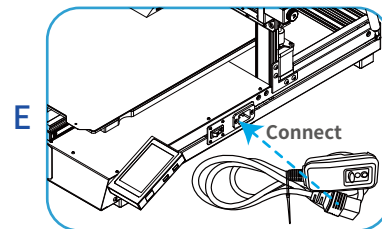


B
A
C

Z1

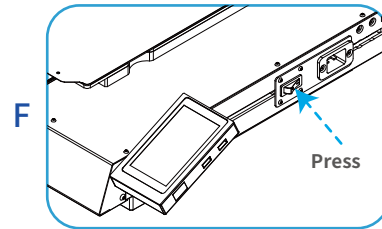
D

Z2



E

Connect



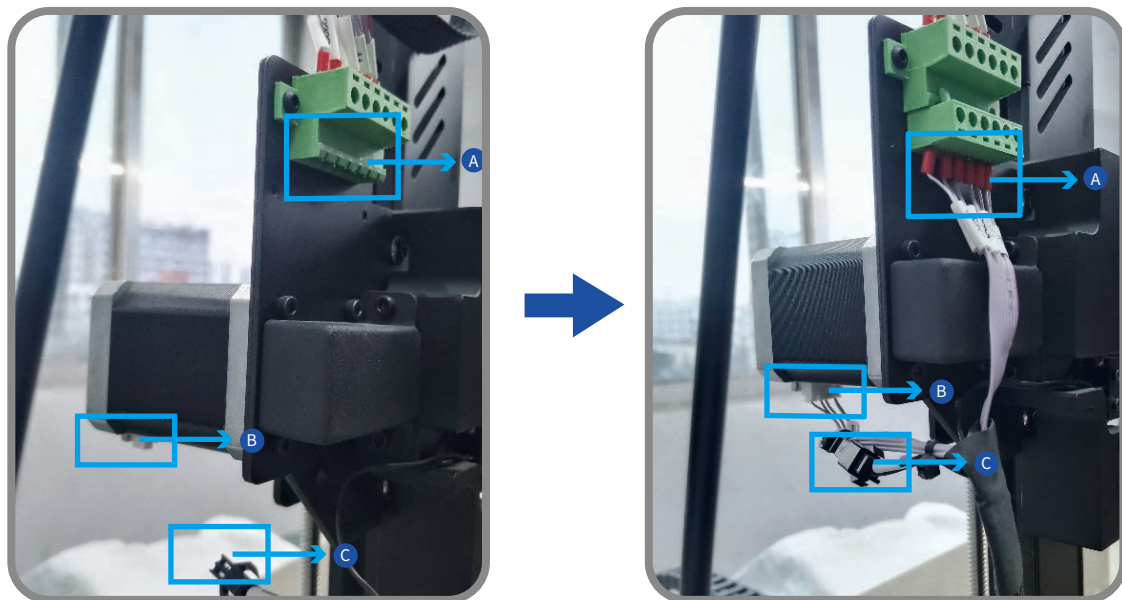
F

Press

- A. 6pin plug-in terminal block (nozzle board serial port cable + nozzle board power cable)
- B. X-axis motor
- C. X-axis limit switch
- D. Material breakage detection line port
- E. Connect it to the power cord and turn on the power
- F. Press the power button and wait the display screen to start

6. Equipment Wiring

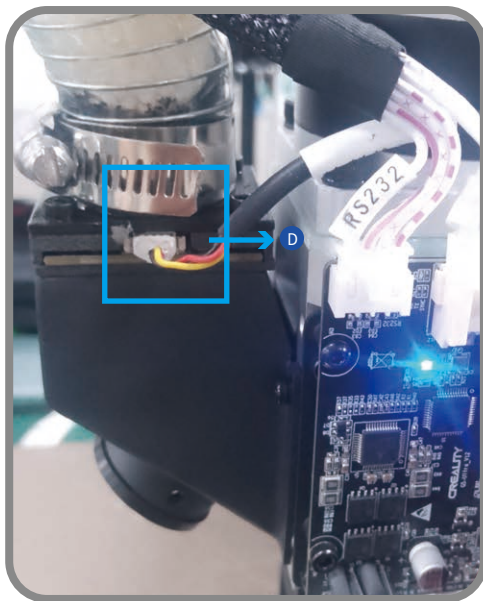
- 1 Connect the plug-in terminal block, as shown in the picture A position interface.
- 2 Connect the X-axis motor, as shown in the picture B position interface.
- 3 Connect the X-axis limit switch adapter terminal male, as shown in the picture C position interface.



● Note: Do not plug and unplug the motor cable with power on, otherwise the motor will be damaged.

6. Equipment Wiring

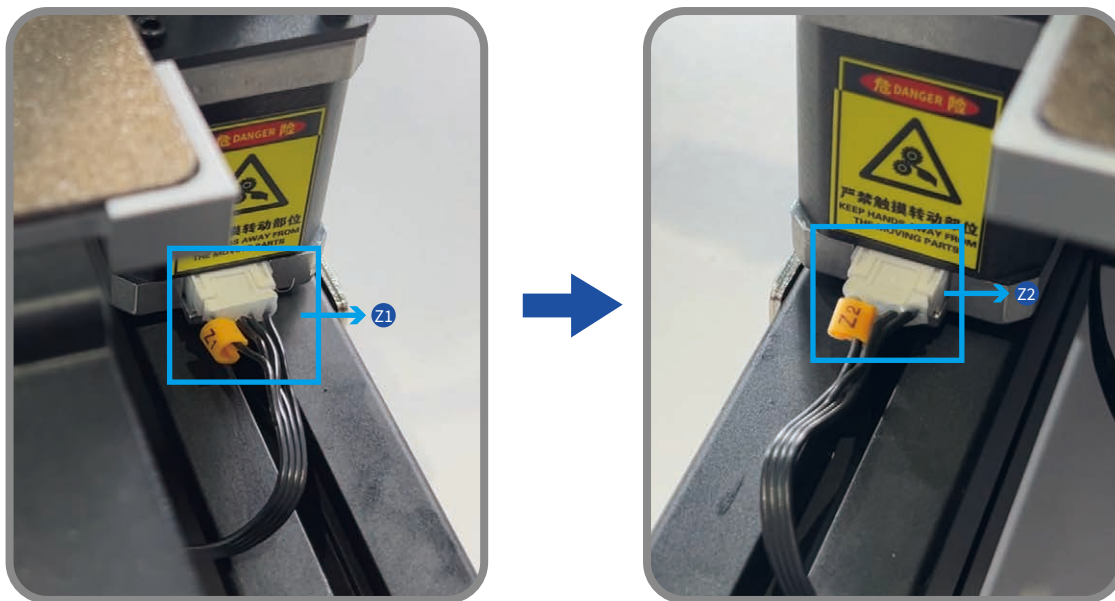
- 4 Insert the material breakage detection line terminal into the material breakage detection switch port, as shown in the picture at position D.
- 5 Plug the vibration motor wire terminal into the vibration motor port, as shown in the picture at position F.



● Note: Do not plug and unplug the motor cable with power on, otherwise the motor will be damaged.

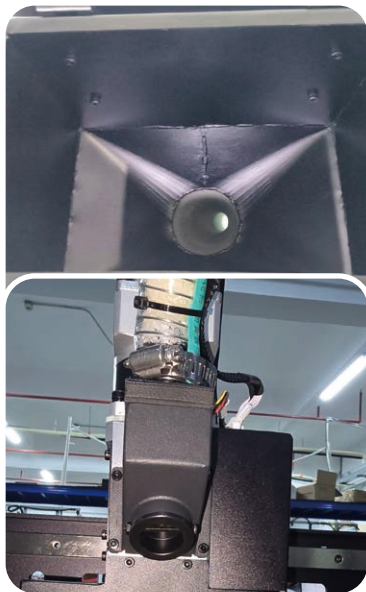
6. Equipment Wiring

6 Insert the wires marked with the Z1/Z2 motor wire numbers into the corresponding Z-axis motors.



● Note: Do not plug and unplug the motor cable with power on, otherwise the motor will be damaged.

7. Load Pellet



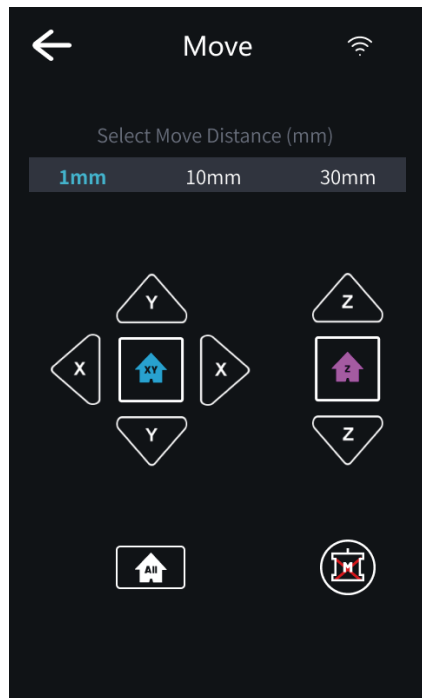
1 Check whether the feeding tube is connected properly.



2 The pellet material is loaded into the hopper.



3 Fill with material and cover with hopper cover.



Axis movement method ①



1.Select Move Distance



2.Click on the corresponding axis to move the corresponding distance in the corresponding axis

Axis movement method ②



Click to unlock the motor
After unlocking, you can freely push the X axis and Y axis

Axis zero



Click Zero XYZ Axis
(can be used to detect the three-axis operation state at the first power-on)



Click to zero XY axis



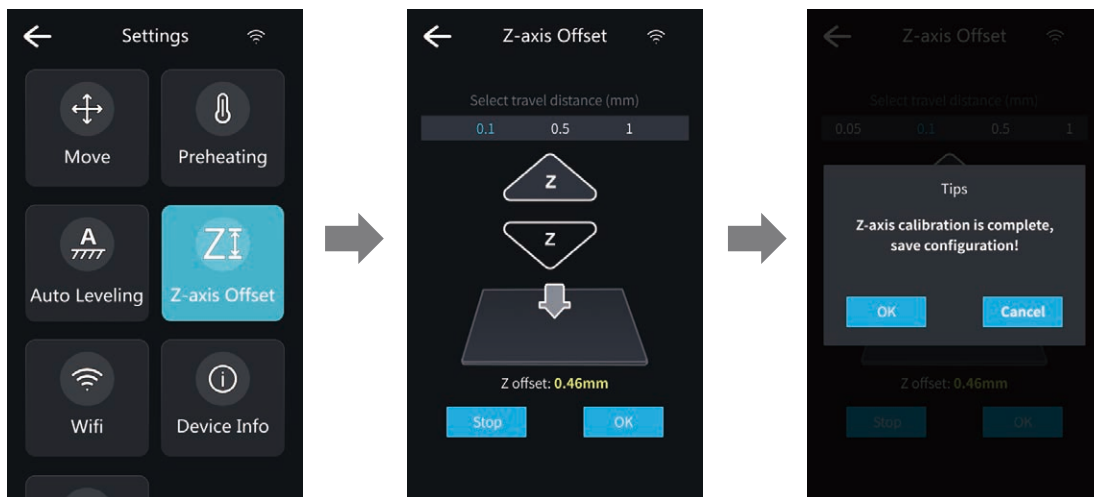
Click to zero Z axis



Note: The current interface is for reference only. Due to the continuous upgrade of functions, the actual version of the software/firmware UI shall prevail.

9. Z-axis Offset

Select **Z-axis offset**, wait for the nozzle movement to complete, select the **moving distance**, and adjust the **Z-axis compensation value** up and down so that the height from the nozzle to the platform is almost the thickness of A4 paper (0.08-0.1mm). Click **OK** to save the Z-axis compensation value when completed.

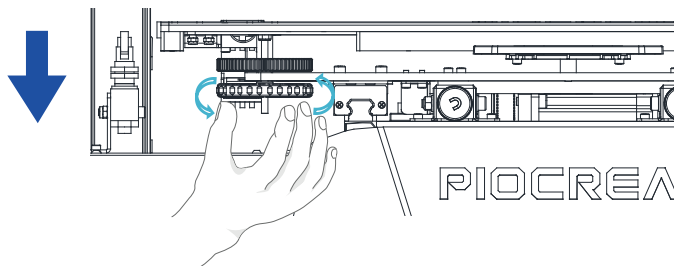
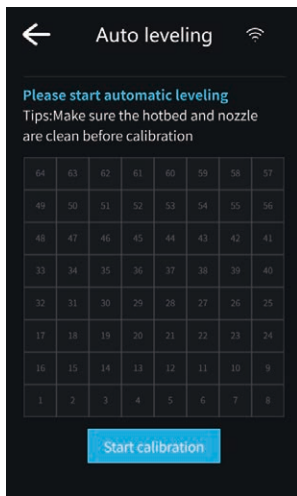
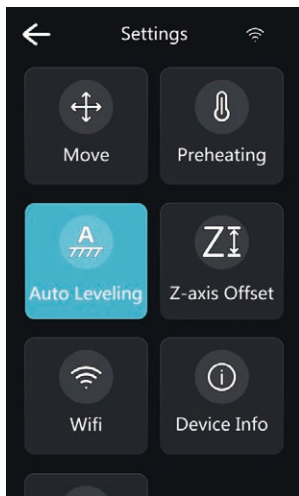


Note: The current interface is for reference only. Due to the continuous upgrade of functions, the actual version of the software/firmware UI shall prevail.

10. Level Platform

1 Select **Auto Leveling** to automatically level.

2 If the automatic leveling data differs greatly (1mm), please correct the platform by adjusting the black knob under the platform. If the data is a negative value, it should be adjusted clockwise. If it is a positive value, it should be adjusted counterclockwise. After the adjustment is completed, automatically level it again to check the flatness of the platform. If the difference is still large, repeat the above operations;



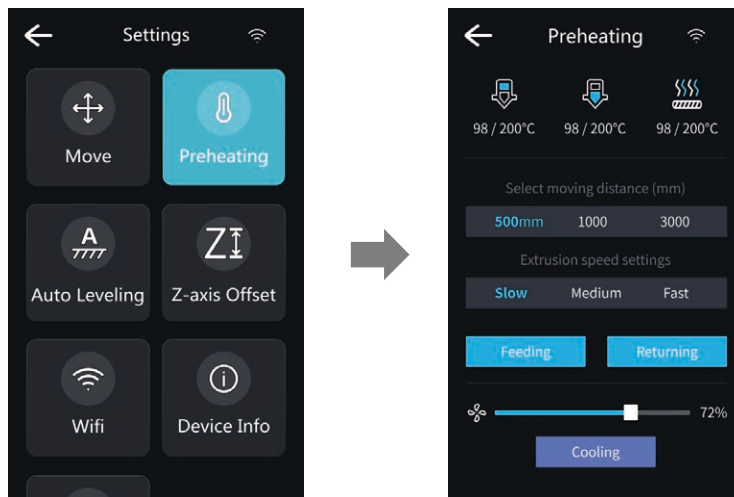
Do not beat the feeding tube or press the glass platform in the leveling process;



Note: The current interface is for reference only. Due to the continuous upgrade of functions, the actual version of the software/firmware UI shall prevail.

11. Preheat Settings

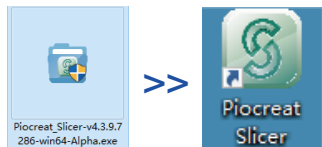
- 1 For the first printing, you need to extrude material in advance. Click Preheat and then click the nozzle preheat icon to set the corresponding preheating temperatures for the upper part of the nozzle and the lower part of the nozzle according to different materials. Wait for the nozzle to heat up to the predetermined temperature, select the extrusion distance and extrusion speed, and click Feed until the material is extruded smoothly before normal printing operations can be performed.
- 2 Click Preheat, click the platform preheat icon, set the corresponding platform preheat temperature according to different materials, and preheat the platform in advance before printing.



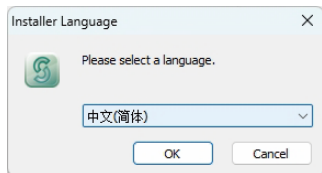
Note: The current interface is for reference only. Due to the continuous upgrade of functions, the actual version of the software/firmware UI shall prevail.

12. Download and install software and Configuration Wizard

Welcome to the Piocreat_Slicer Configuration Wizard! This configuration wizard helps you with the initial configuration; with just a few settings, you can print.



1 Download the software from official website(www.piocreat3d.com) or find the software in storage card for installation.



2 Double click to open the software.



3 ①Click **Configuration**: Select **Configuration Wizard** (open by default for first-time installation)
→②Select **3D Printers**→③Select **Materials**→④Configure **finish**.

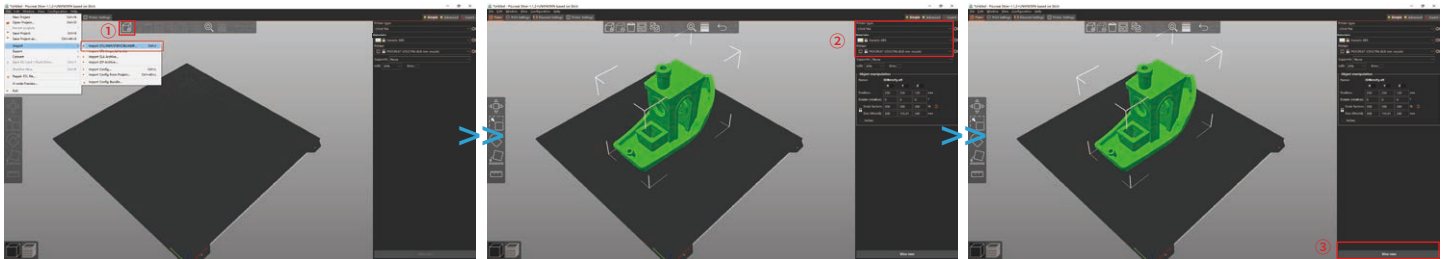


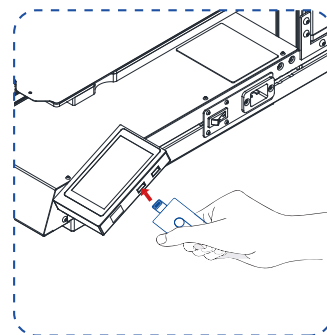
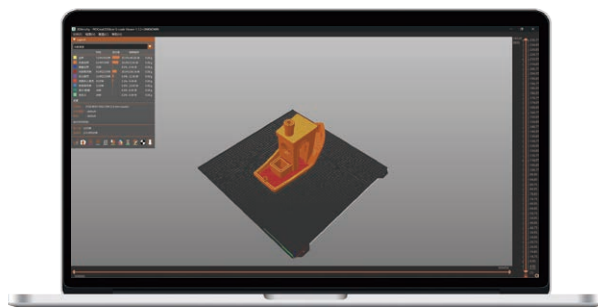
Note: The current interface is for reference only. Due to the continuous upgrade of functions, the actual version of the software/firmware UI shall prevail.

12. Model Slicing



1 ① Import model → 2 Select the 3D Printer type, select the Material, select the Printer → 3 Click Slice now.





2 Generate G-Code File (.gcode), and save the gcode file to U disk.

3 Insert the U disk



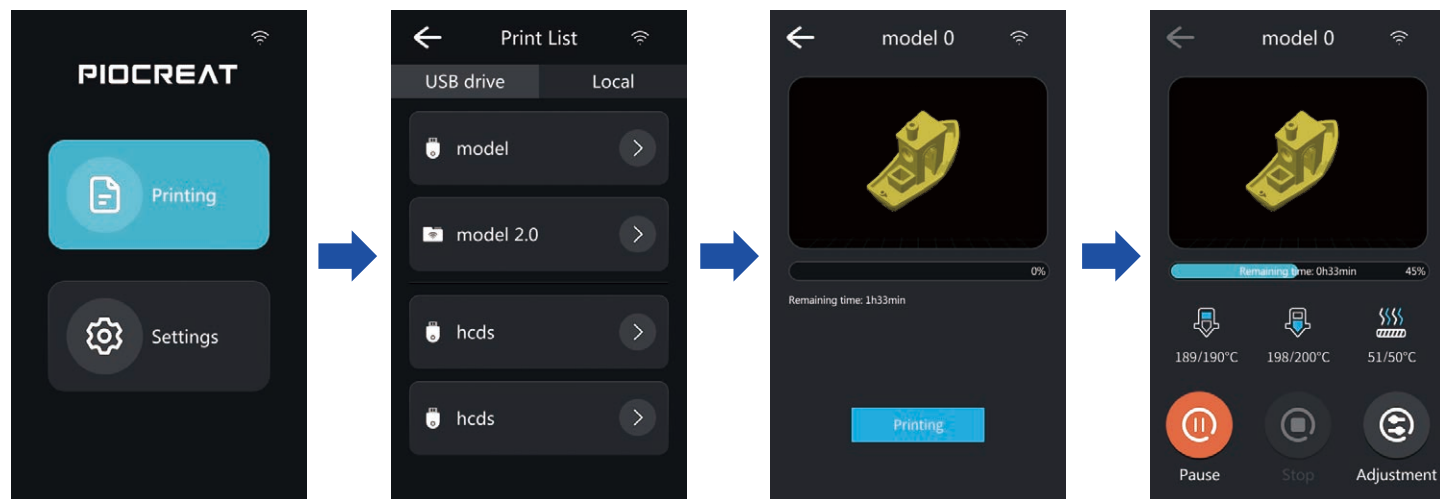
The file name supports both Chinese and English, numbers, and common symbols (the length of the file name is limited to 20 characters).



Notes: For details on the software instructions, please refer to the slicing software manual in the U disk.

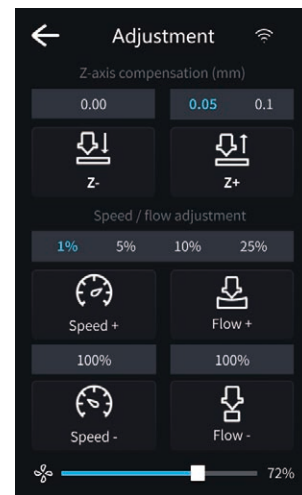
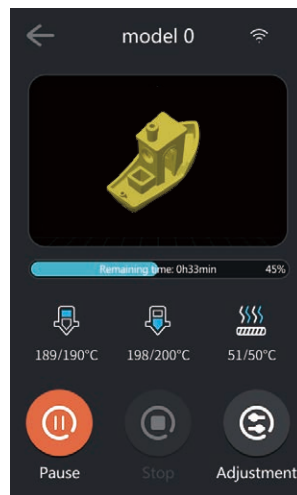
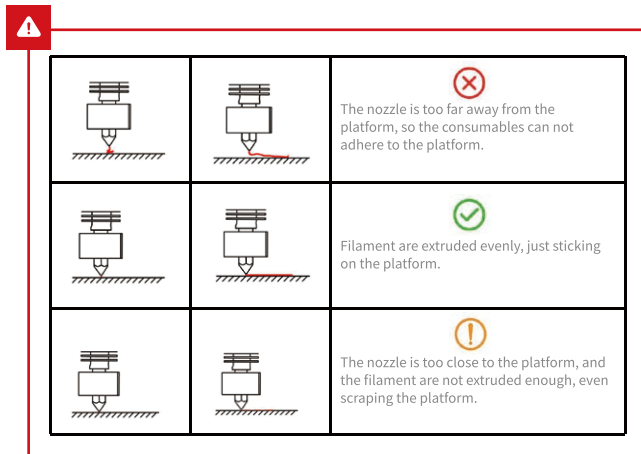
13. Start Printing

After selecting a file to start printing, you can adjust printing related parameters in real time.

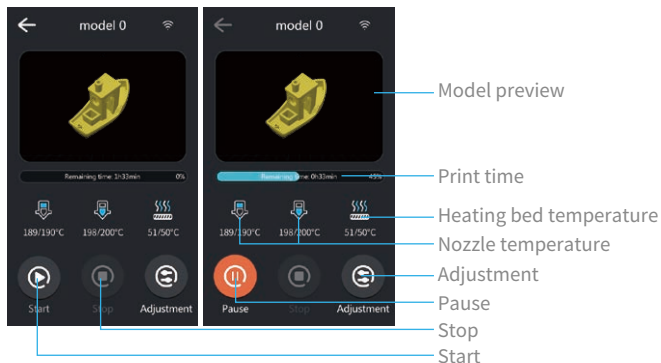


13. Start Printing

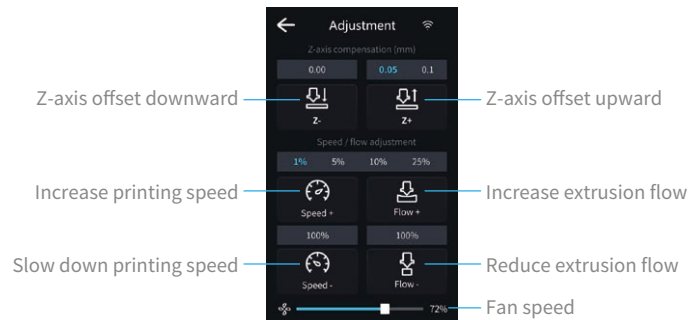
After starting printing, you can observe the printing status and adjust printing related parameters in real time.



14. Operation guide



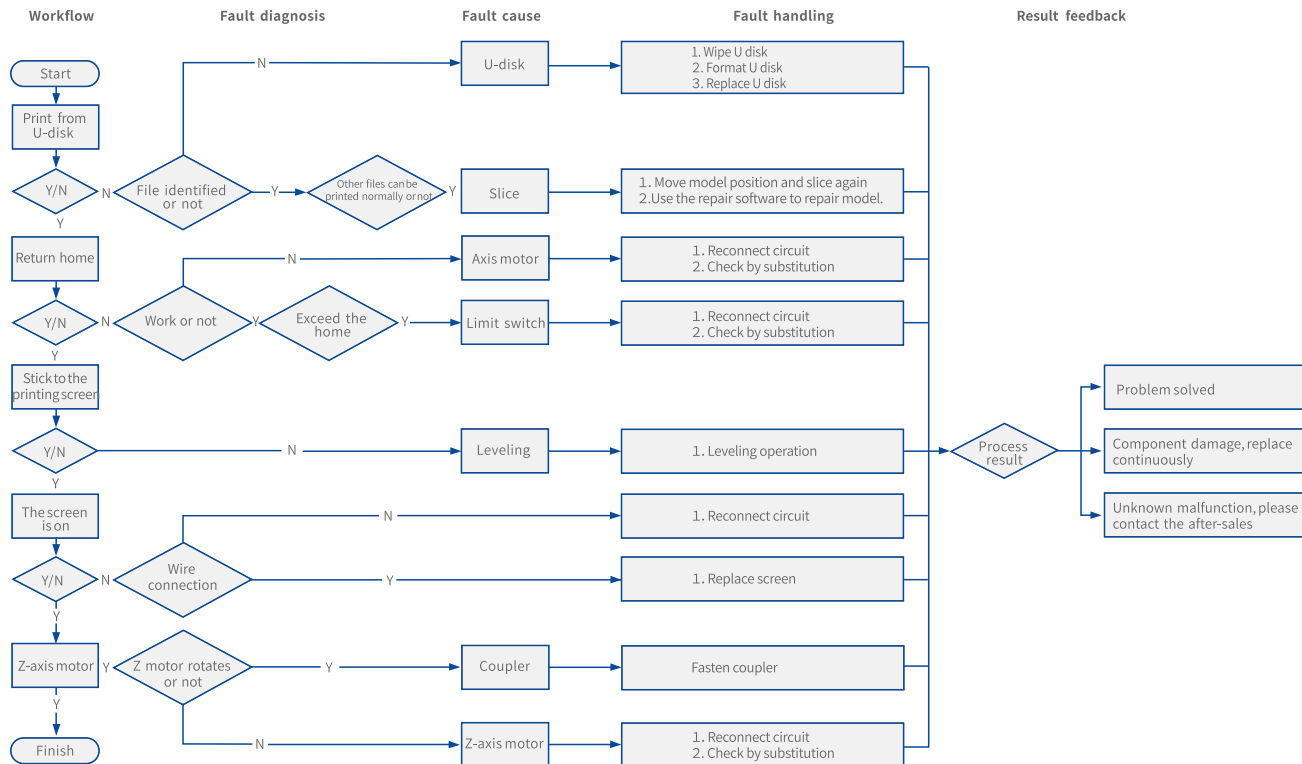
Print interface



Setting interface

* Note: The interface is for reference only

	Nozzle upper section temperature		Start		Adjustment		Z-axis offset upward		Z-axis offset downward
	Nozzle lower section temperature		Pause		Fan speed		Increase printing speed		Slow down printing speed
	Heating bed temperature		Stop				Increase extrusion flow		Reduce extrusion flow



16.Maintainance

Linear slide maintenance: When the machine is in use for about 3 months, the linear slide block needs to be supplemented with lubricating grease once. The grease can be injected into the slider with the aid of a grease gun from the grease nipple attached to the slider. Lubricating grease is suitable for occasions where the speed does not exceed 60m/min and there is no requirement for cooling. It is recommended that customers use lubricating oil with an oil viscosity of about 32-150cst to lubricate the linear slides;

Screw maintenance: When the machine is in use for about 3 months, the screw needs to be supplemented with lubricating grease once. You can use ordinary brushes or tools that can lift grease. The lubricating grease is suitable for occasions where the speed does not exceed 60m/min and there is no requirement for cooling. It is recommended that customers use lithium soap grease with a dropping point not lower than 258°C.





Scan the code to know more

Warranty Policy ←

- 1-year Limited Warranty since the date of product purchase.
- No Warranty for the Toolbox (Metal Blade, U disk, Wrench, Nozzle and Granular Consumable, etc).

What Is Covered? ←

Any defects in material, workmanship of product will be covered until you provide any relating documents and information, including but not limited to:

- User of the product are in the country of purchase
- Defective product is a PIOCREAT product
- Proof of Purchase

What Is Not Covered? ←

PIOCREAT does not guarantee the service as a result of:

1. The proof of purchase being altered or made illegible.
2. The product label or serial number on the product being altered or made illegible.
3. Normal wear of accessories or consumables for use as release film.
4. Malfunction or damage caused by personal retrofitting, or improper installation and usage.
5. Malfunction or damage caused by use in non-recommended working environments.
6. Malfunction or damage caused by overuse (overload) or wrong maintenance (damp, mildew, etc.)
7. Malfunction or damage caused by Force Majeure (fire hazard, earthquake, lightning and floods, etc.)
8. Malfunction or damage caused by the use of other brand parts or consumable.

Technical Support ←

Please enjoy our technical support of the whole lifetime (Except technical problem beyond product itself) after purchase the product while product documents as user manual attached in U disk for instruction.

Please provide product Serial Number when apply for technical support.

Kindly Notification ←

Please read the user manual and warranty card carefully before the use. For any service, Please priorly contact local seller or contact us via **Email: after@piocreat3d.com** for support. See www.piocreat3d.com / for specific warranty information about your product and procedures to act on a warranty claim.

WARRANTY

Before returning the product and filling in a warranty, please contact after-sale person for going through after-sale formality. And attach this warranty card along with the returned machine.

Repair ☐

Change ☐

Return ☐

Name: _____ Telephone: _____

Address: _____

Serial Number: _____ Order Number: _____

Channel: Platform ☐ Offline ☐

Date of purchase Day _____ Mon. _____ Year _____

Malfunction And Damage Depiction Or Return And Change Reasons\ Suggestions:

Repair Records:



Note: Client need filling in basic infor. and return reasons. Repair records shall retain for technicians.

Notes



Due to the differences between different machine models, the physical objects and the final images can differ. The final explanation rights shall be reserved by **Shenzhen PioCreat 3d Technology Co., Ltd.**



Shenzhen PioCreat 3d Technology Co., Ltd.

Add: 3rd Floor, Building 1, No. 156 Huawang Road, Langkou Community, Dalang Street, Longhua District, Shenzhen, China, 518109

Tel: +86 0755-2103 9743

Official Website: www.piocreat3d.com

Pre-sale e-mail: info@piocreat3d.com

Technical support: after@piocreat3d.com

Scan To Learn More

