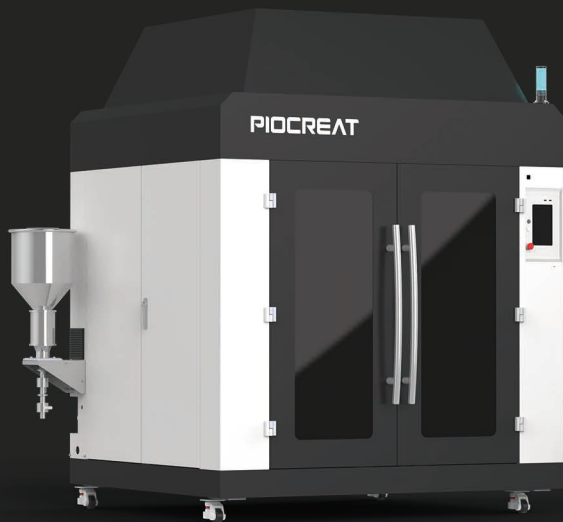




 **PIOCREAT**

G12 FGF

FGF (Fused granulate fabrication)

3D Printer User Manual

V6.2

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.

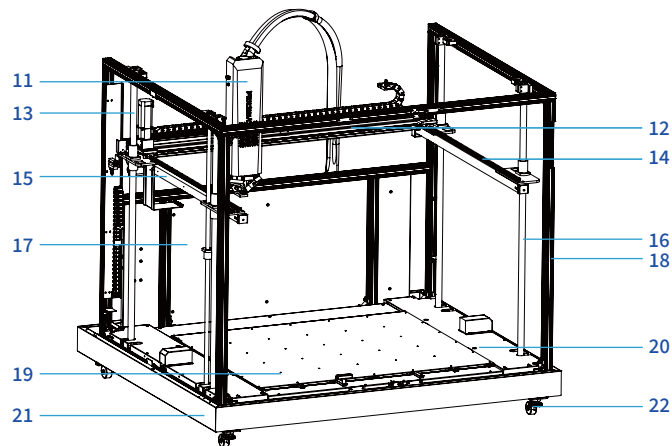
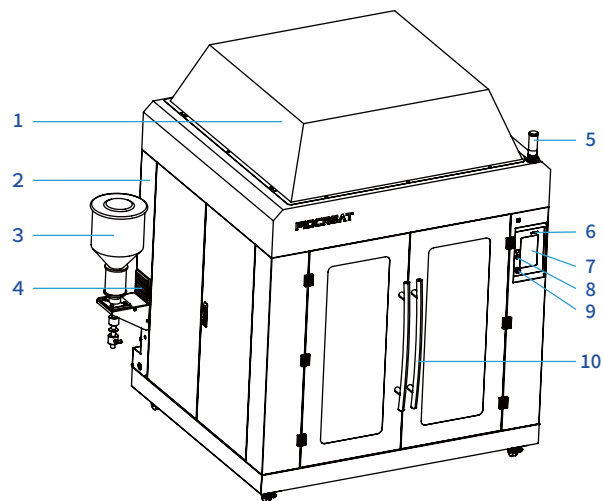
For a better experience in using our product, you can also learn how to use the printer in the following ways:
View the accompanied instructions and videos in the USB drive.

NOTES

- ① Before using the device, ensure that the power supply is properly connected to the air source. The pressure of the air source must be above 0.6MPa and the voltage of the power supply must be 220V AC.
 - ② Do not use the printer any way other than described herein in order to avoid personal injury or property damage.
 - ③ Do not place the printer near any heat source or inflammables or explosive objects. We suggest placing it in a well-ventilated, low-dust environment.
 - ④ Do not expose the printer to violent vibration or any unstable environment, as this may cause poor print quality.
 - ⑤ It is recommended to use consumables recommended by the manufacturer to avoid machine damage.
 - ⑥ Do not use any other power cable except the one supplied. Always use a grounded three-prong power outlet.
 - ⑦ Do not touch the nozzle or printing surface during operation as they may be hot. Keep hands away from machine while in use to avoid burns or personal injury.
 - ⑧ Do not wear gloves or loose clothing when operating the printer. Such cloths may become tangled in the printer's moving parts leading to burns, possible bodily injury, or printer damage.
 - ⑨ When cleaning debris from the printer hotend, always use the provided tools. Do not touch the nozzle directly when heated. This can cause personal injury.
 - ⑩ 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 of the frame, guide rails, or wheels. Use glass cleaner or isopropyl alcohol to clean the print surface before every print for consistent results.
 - ⑪ Children under 10 years of age should not use the printer without supervision.
 - ⑫ Please use PLA granular raw material for startup test. If you need to change the material during use, please empty the material residue in the barrel and extruder, then add new material to print.
- Users shall comply with related nation and region's laws, regulations and ethical codes where the equipment or produced prints by it is used, and users of our product shall not use aforesaid products to print any end-use products, objects, parts or components or any other physical prints that violate the national or regional laws, regulations and ethical codes where herein referred product and produced prints by it is located.

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1. Introduction



- 1 Top sheet metal shield
- 2 Top sheet metal 1
- 3 Storage hopper
- 4 The cooling position
- 5 Three-color warning light
- 6 USB interface
- 7 Operation screen

- 8 Light switch
- 9 Emergency button
- 10 Door handle
- 11 E-axis extrusion components
- 12 X axis module
- 13 Left lift module
- 14 Y-axis module (right)

- 15 Y-axis module (left)
- 16 Right lifting module
- 17 Electric box cabinet
- 18 Aluminium frame
- 19 Hot bed platform
- 20 Platform boards
- 21 Sheet metal base
- 22 Support casters

BasicParameters

Model	G12
Printing Size	1200x1000x1000mm
Molding Tech	FGF
Nozzle Number	1
Slice Thickness	0.6~2.0mm
Nozzle Diameter	1.2~4.0mm
Precision	±0.5mm
Granular Materials	PLA/PETG/PETG+10%GF/PVC/ABS/PC/PA/HDPE/TPU/EVA PC+ABS/PA+Fiber/WPC and other composite materials
Support File Format	STL、OBJ、3MF
File Transfer	U disk/WIFI
Bed Temp	≤130°C
Nozzle Temp	≤450°C
Resume Printing	YES
Dual Z-axis	YES
Auto Leveling	YES
Language	English/Chinese/German/Spanish/French/Japanese/Italian/Portuguese
Computer Operating System	Windows/7/8/10 MAC/Linux_x64
Rated Power	7000W

Tool list



1 Metal blade
x1



2 U Disk (random color)
x1



3 Wrench
x1



4 Nozzle 1.2/1.5/2.0/3.0/4.0
x1



5 Open-end wrench
x3



6 Wrench
x2



7 Granular raw material
x1



8 Thermocouples
x1



9 3D printing platform glue
x1



10 Screwdriver
x2



11 Intake pipe
x1

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

4. Device installation



The equipment is delivered by the whole machine. After receiving the goods, please operate according to the operation video in the random file.



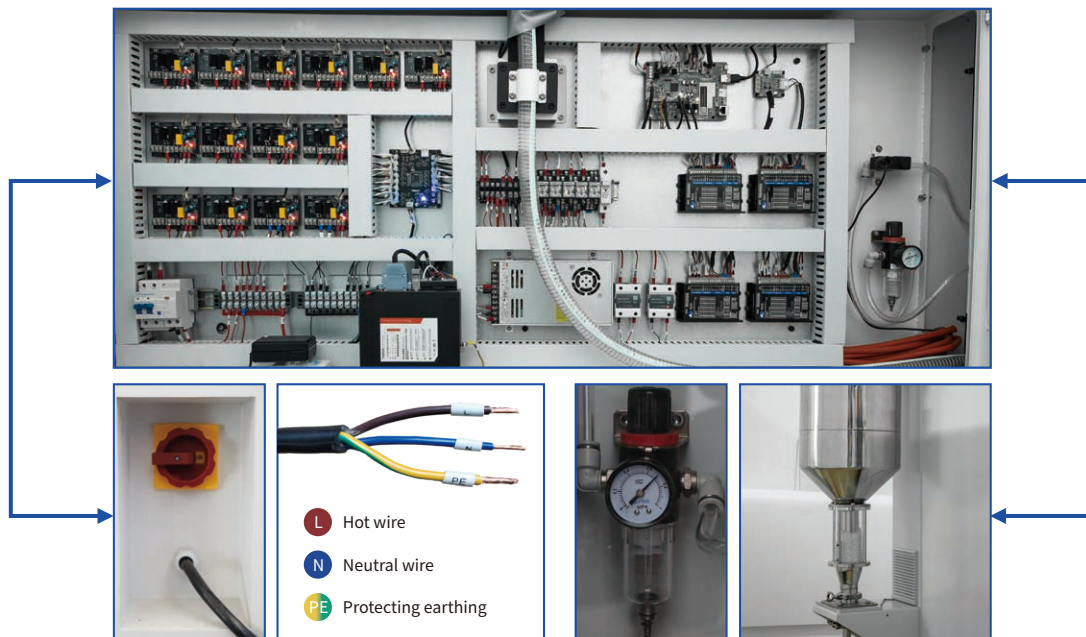
5.Circuit wiring



6. Equipment wiring

Note: Before using the equipment, please make sure to connect the electricity and the air source. The air source pressure must be above 0.6MPa, and the electrical voltage must be 220V AC.

The maximum power of the whole machine can reach 7000W. The external power cord requirements: 3 cores with a diameter of 4 square meters are directly connected to the circuit breaker of the electric box.





1 Make sure the pneumatic conveyor at the bottom of the funnel and the discharge pipe are properly connected



2 The pellet material is loaded into the storage material hopper.

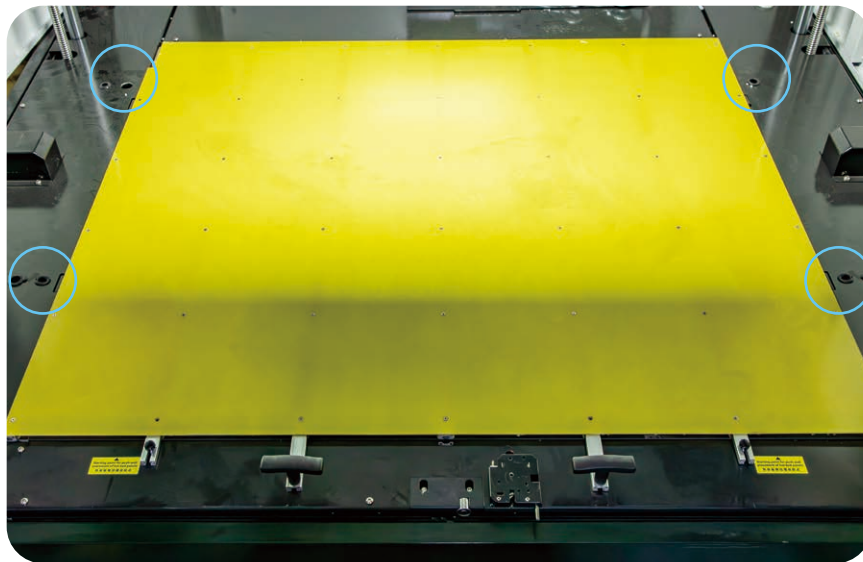


3 Fill with material and cover with hopper cover.

8. Removal of lifting rings

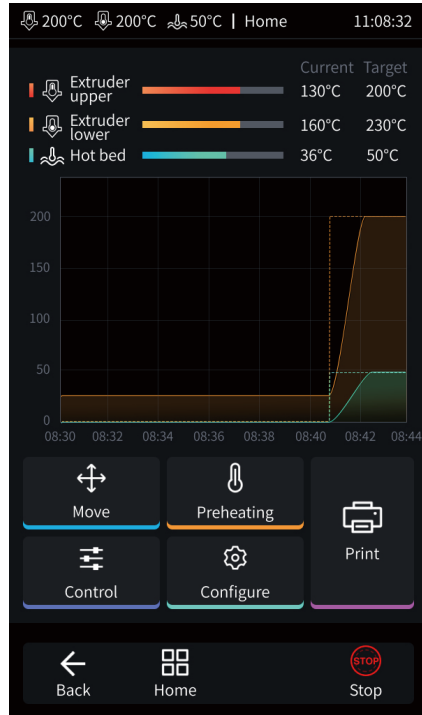


Notice: After unpacking, the four lifting rings must be removed to prevent interference and collision when the equipment is powered on.

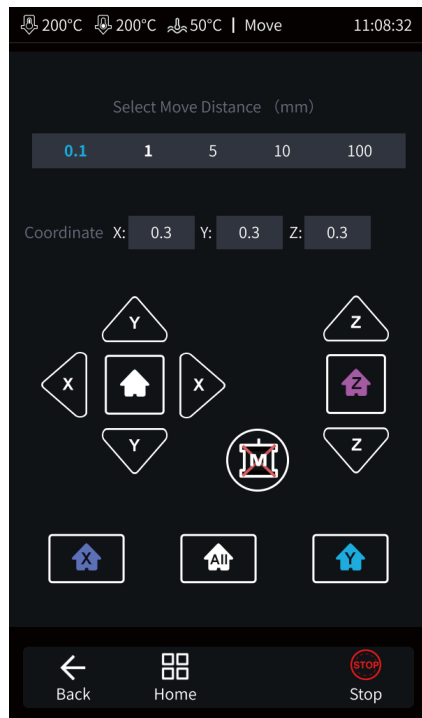


9.Interface information

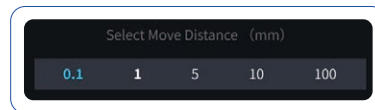
The main interface looks as follows:



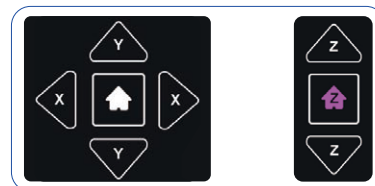
Note: The UI is for reference only, please refer to the actual UI.



Axis movement method ①

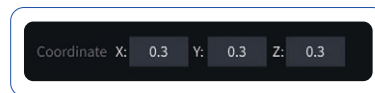


1.Select Move Distance



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

Axis movement method ②



After entering the value within the maximum printing range in the XYZ corresponding coordinate box, click the blank interface again, and the print head will move in turn according to the set coordinate value.

Axis movement method ③



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 X axis

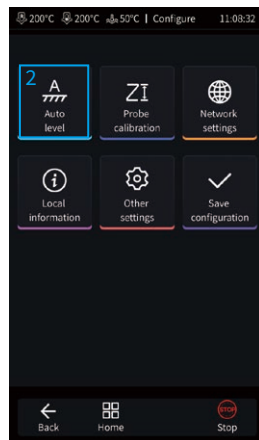


Click to zero Y axis

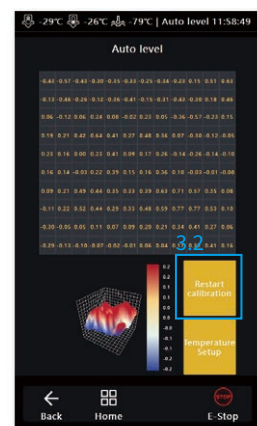
10. Level the platform

Please level the platform following the steps below, leveling data can be checked in the UI.

-> Configuration① -> Auto Leveling② -> Start calibration / Restart-calibration③



Leveling the interface for the first time



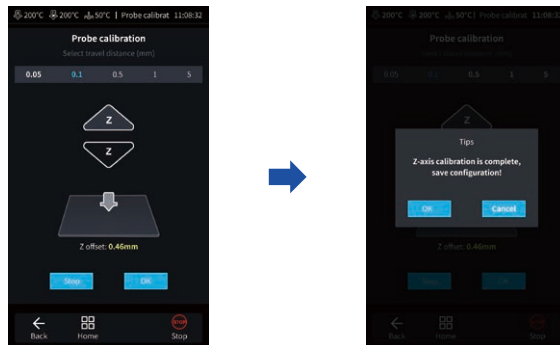
Restart calibration interface



Do not beat the feeding pipe or press the fiberglass platform in the leveling process.

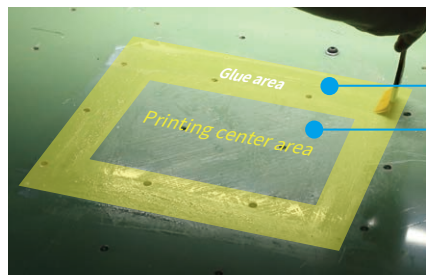
11. Probe calibration

1 After leveling is completed, adjust the Z-axis compensation value according to the adhesion between the printing consumables and the fiberglass.



2 Pour the platform glue on the fiberglass platform, and apply it evenly.

(Note: After determining the maximum range of the model, apply platform glue to the edge of the maximum range of the printed model.)



Platform Glue: Apply to the largest edge of the printed model.

No need to apply glue in the printing center area.



3D printing platform glue
x1



You can find relevant instruction videos on the USB flash drive.

12.Preheat settings

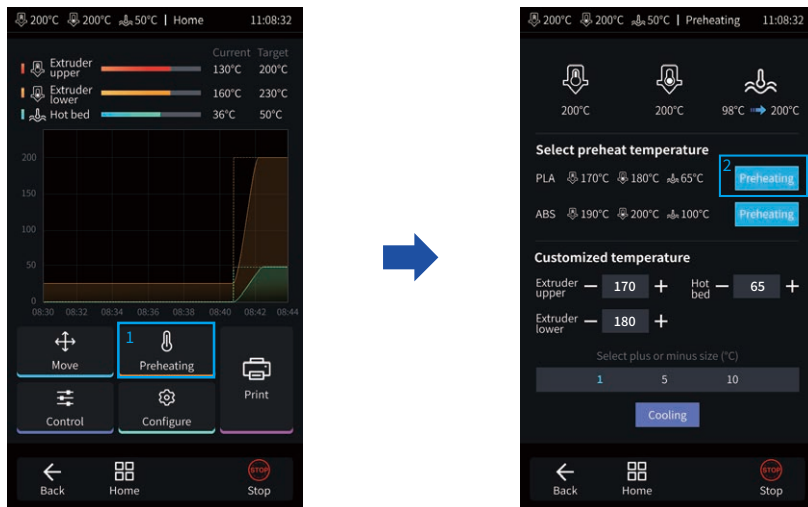
Note:

On the main interface, click **Preheating** to enter the preheating interface, default setting **PLA** or **ABS** is optional, and customized temperature of nozzle and hotbed is available.

The preheating data standard was set in factory.

The extruder upper is located on the top part of the extruder(near the motor),the extruder lower is located on the bottom part of the extruder(near the nozzle).

The temperature setting of the extruder upper and the extruder lower is different. generally, the extruder lower temperature is 10°C higher than the extruder upper.



Note: The UI is for reference only, please refer to the actual UI.

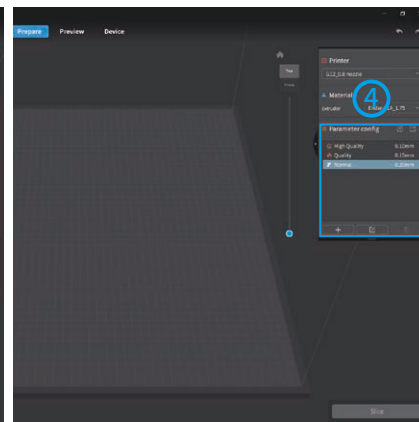
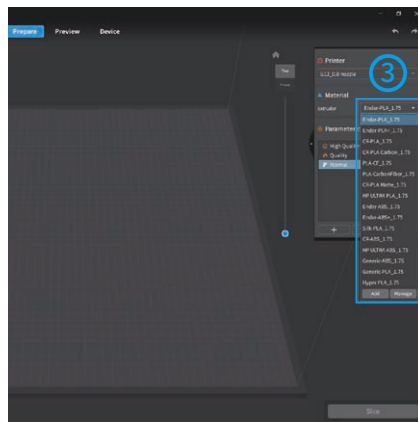
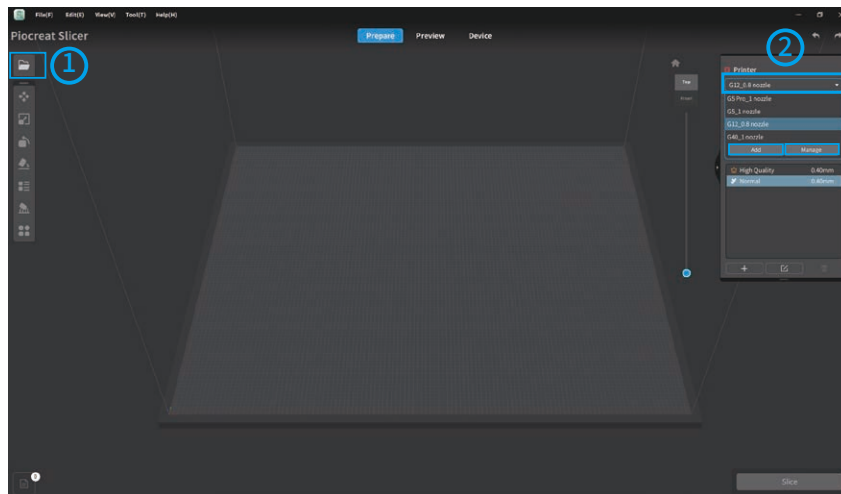
13. Model slicing

1 To import the model: click the folder icon on the upper left side of the software home page to open the file. Import model files or pictures for slice printing. The model can choose local STL/OBJ and other model files, and can also import image files to generate model files.

2 Select a printer: Prepare the homepage - drop down the printer on the right to select the model you want to use. If there is no matching model, click Add Printer to add the model. You can also edit printer parameters and customize the printer by managing the printer.

3 Select consumables: After selecting the printer, the consumables supported by this model will be displayed, pull down to select the consumables you want to use, if there are no matching consumables, click "Add Consumables" to add consumables. You can also edit consumable parameters and customize consumables by managing consumables.

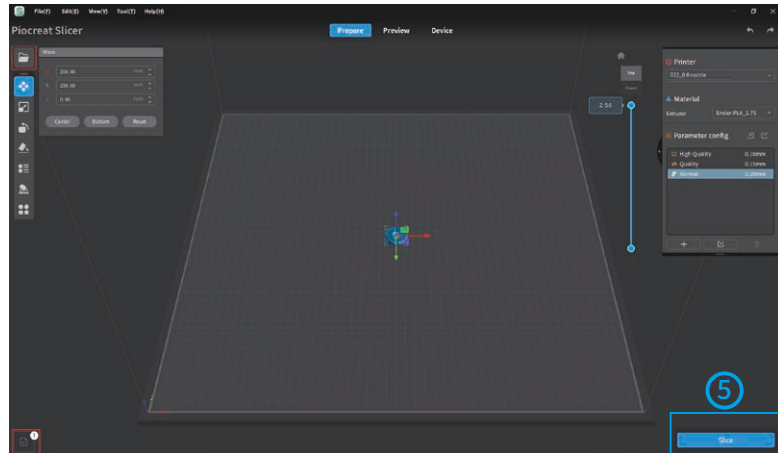
4 Select configuration: After selecting the consumable, the configuration file will display the default parameter configuration under the consumable, here you can choose a default configuration, or create a custom parameter configuration.



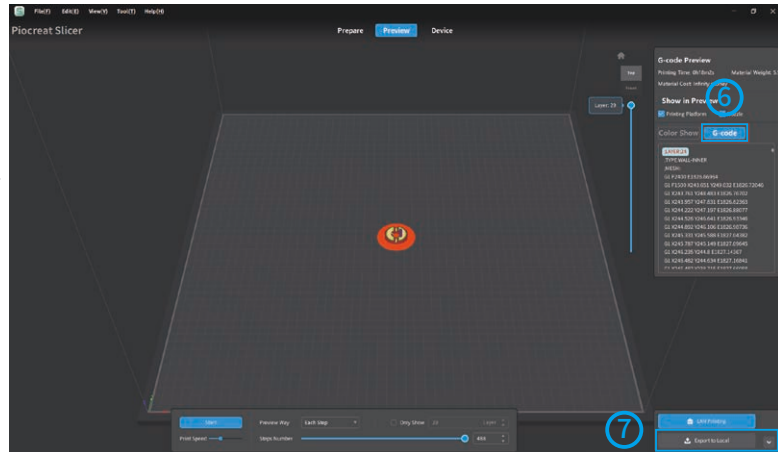
13. Model slicing

5 Start slicing: After the above steps, you can click "Start Slicing" on the software page to perform slicing operations.

Note: The current slicing operation is for all models of the entire printing platform, not a single model, and the model should not exceed the boundary of the printing platform.



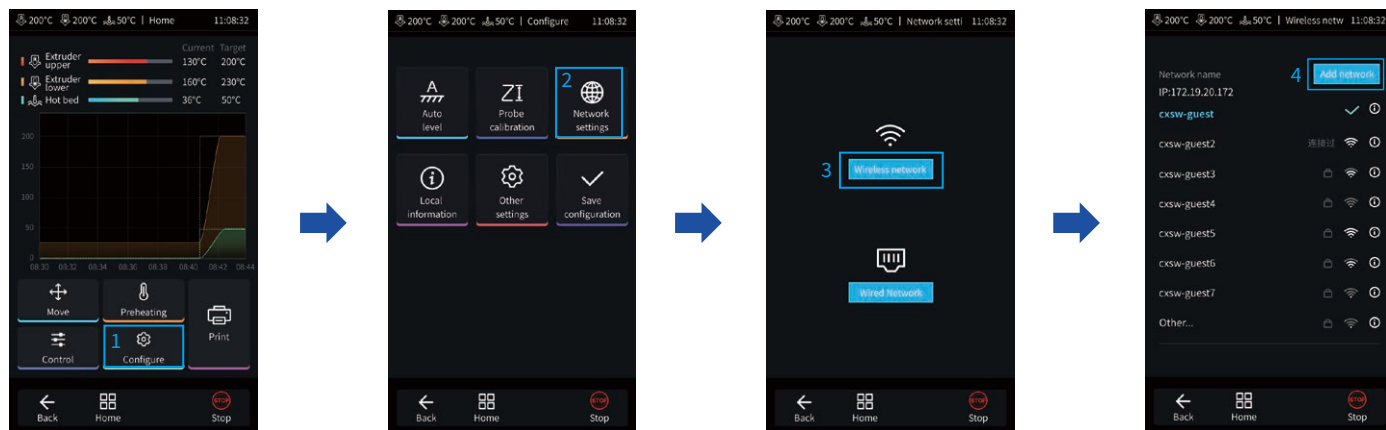
6 Slicing preview: After slicing is completed, enter the G-code preview page, where you can see the G-code preview report, preview mode setting, display mode setting, animation printing simulation preview and other operations.



7 G-code printing/export: After the model slicing is completed, the generated G-code can be exported to the local.

14. Network settings

WiFi or wired network connectivity is available by clicking **Configure**①->**Network Settings**② in the UI;
After connecting, enter IP in PC to control G12 remotely.



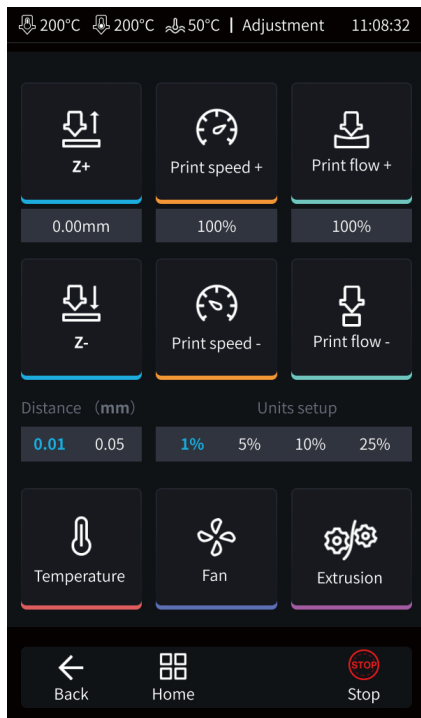
Note: The UI is for reference only, please refer to the actual UI.

15. Start printing

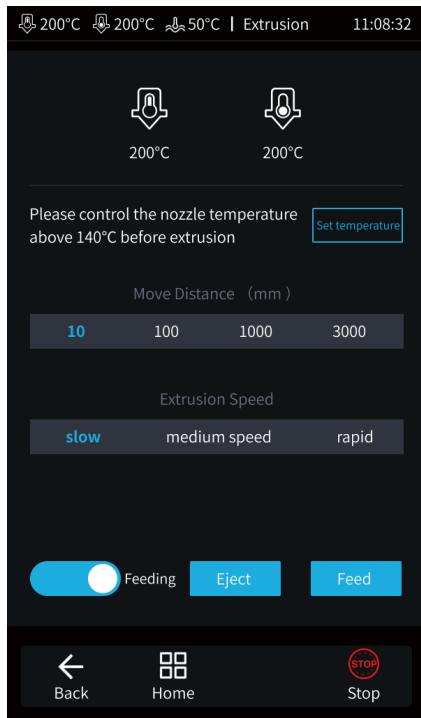


Note: The UI is for reference only, please refer to the actual UI.

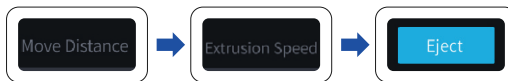
16. Print interface-adjustment introduction



 Z+	Adjustable accordingly Distance offset up Z-axis	 Z-	Adjustable accordingly Distance of Z axis downward offset	 Temperature	Adjustment during printing Temperature of upper and lower ends of nozzle and hot bed
 Print speed +	According to the actual printing situation Speed up printing	 Print speed -	According to the actual printing situation Slow down printing speed	 Fan	Adjustment during printing Spray cooling fan power
 Print flow +	According to the actual printing situation Increase extrusion flow	 Print flow -	According to the actual printing situation Reduce extrusion flow	 Extrusion	Pause follow-up Extrude to ensure tube filling

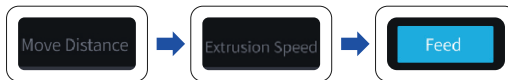


Eject



Select **Move Distance** → select **Extrusion Speed** → click **Eject**, that is, manual withdrawal operation, the material will be retracted to the barrel.

Feed

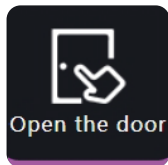
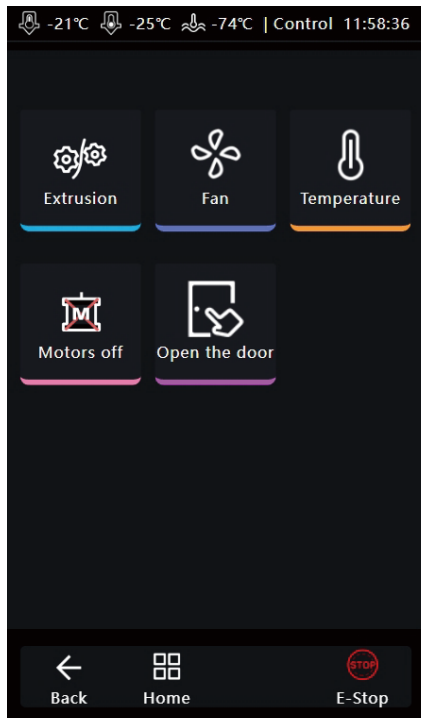


Select **Move Distance** → select **Extrusion Speed** → click **Feed**, that is, manual withdrawal operation, the material will be retracted to the barrel.

Feeding



Click **Feeding**, You can manually feed the barrel, default blowing 15 s after the automatic closure.



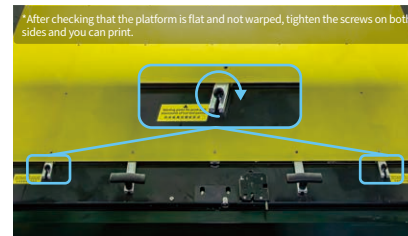
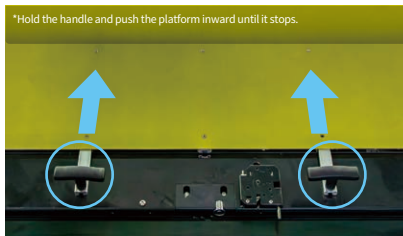
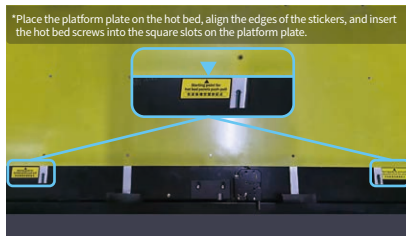
The front door cannot be opened during the printing process. If you want to open the front door, you have to wait until the model is finished printing and click the electric lock button on the homepage to unlock the door.



Note: If printing fails or the door needs to be opened urgently, you can directly press the emergency stop button and the door lock will be opened. (The machine must be turned on within 10 hours after the emergency stop button is triggered, otherwise the electric ock switch will burn out)

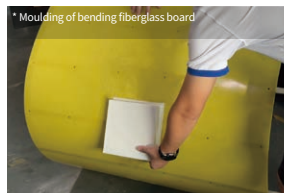
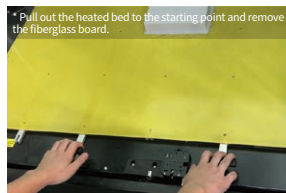
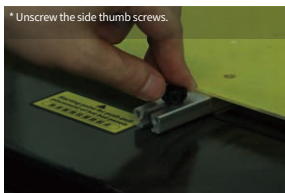
19. Model printing and disassembly

1 After the model starts printing, lock the screws around the model to secure the fiberglass plate platform.



Note: Before locking the platform board, check if there is any warping in each part. If there is any warping, pull the hot bed out to the starting point of the hot bed board for push-pull placement. Press the warped parts flat, ensure all screws at the bottom of the platform board are positioned in the square grooves, then push the platform board back in, and tighten the hand screws on both sides.

2 After the model printing is completed, it can be removed directly using a scraper. Alternatively, you can unscrew the hand-tightened screws on both sides of the fiberglass board, then slide the heated bed to the starting position and lift it smoothly to remove the entire fiberglass board. Then, by bending the fiberglass board, the model can be quickly removed. If the model is large, it is recommended that two people cooperate: one person bends the fiberglass board while the other supports the model and the opposite end of the fiberglass board to assist in the removal to avoid damaging the model.



You can find relevant instruction videos on the USB flash drive.

Error type: Emergency stop error

Error tips: Hardware emergency stop has been triggered!!! To restore the system, please release the emergency stop button first, then reboot

Error type: Servo Error

Error tips: Please check the error message prompted by the alarm driver, investigate the cause of the error and resolve it. Restoring the device requires a power failure and restart

Error type: Temperature loss error

Error tips: The temperature is out of the normal range. Please check whether the heater and thermistor wiring are normal. Restart after confirming that they are normal

Error type: Not connected error

Error tips 1: The mainboard communication is abnormal, please check the wiring to confirm it is normal and restart

Error tips 2: The hot bed board communication is abnormal, please check the wiring to confirm it is normal and restart



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](mailto:after@piocreat3d.com) for support.

See www.piocreat3d.com / for specific warranty information about your product and procedures to act on a warranty claim.

Notes

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

Notes



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 _____



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

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

Repair Records:



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.



Scan To Learn More

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

After-sales e-mail: after@piocreat3d.com

