Thank you very much for purchasing our products, we will continue to work hard to provide you with better service.

After receiving the goods, we hope that you will read the instructions patiently. The precautions and usage skills in the instructions are very important, so that you can avoid incorrect installation and use.

If you have any problems during installation and use, please contact us in time.
After-sale service:support@3dflyingbear.com

Youtube search for "FlyingBear 3D Printer" and subscribe to our channel to watch related printer installation and operation videos.

Join our Facebook group to learn and share 3D printing experience.
Facebook group"FlyingBear 3D Printer Owners"

Pay attention to our Aliexress official stores, you can learn more about new products in time.
www.aliexpress.com/store/2218051

Youtube channel

Facebook group

Aliexpress Official Store

Keep in mind when installing and using printers. Improper operation may damage printers and even cause personal injury.

After unpacking, please check the number and type of parts first. If you lack any parts, please contact us in time. We will send you a replacement by express as soon as possible.

When assembling printers or polishing models, please pay attention to safety. It is recommended to wear goggles.

The Ghost 5 3D printer uses an ambient temperature of 10-40 degrees Celsius. Humidity is 20%-40%. If used outside this range, it may bring bad printing effect.

Please put the Ghost 5 3D printer in a spacious and ventilated environment.

During the working period of 3D printer, nozzle and hot bed will produce high temperature, so it is strictly forbidden to touch by hand.After printing, nozzles and hot beds may still be in high temperature. Please wait patiently for the hot bed and nozzle to cool down and remove the model from the hot bed.

Do not touch moving parts during printing

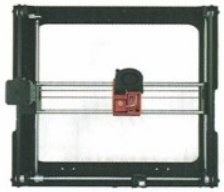
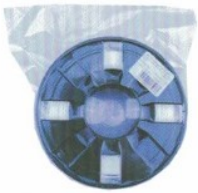
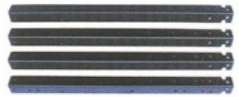
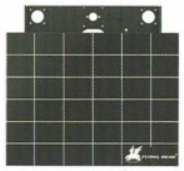
Please keep printer and printer parts out of reach of children.

If you don't use the printer for a long time, please treat the printer with rain proof and moisture proof.

If there is an emergency, don't panic, please turn off the printer voltage directly.

Contents

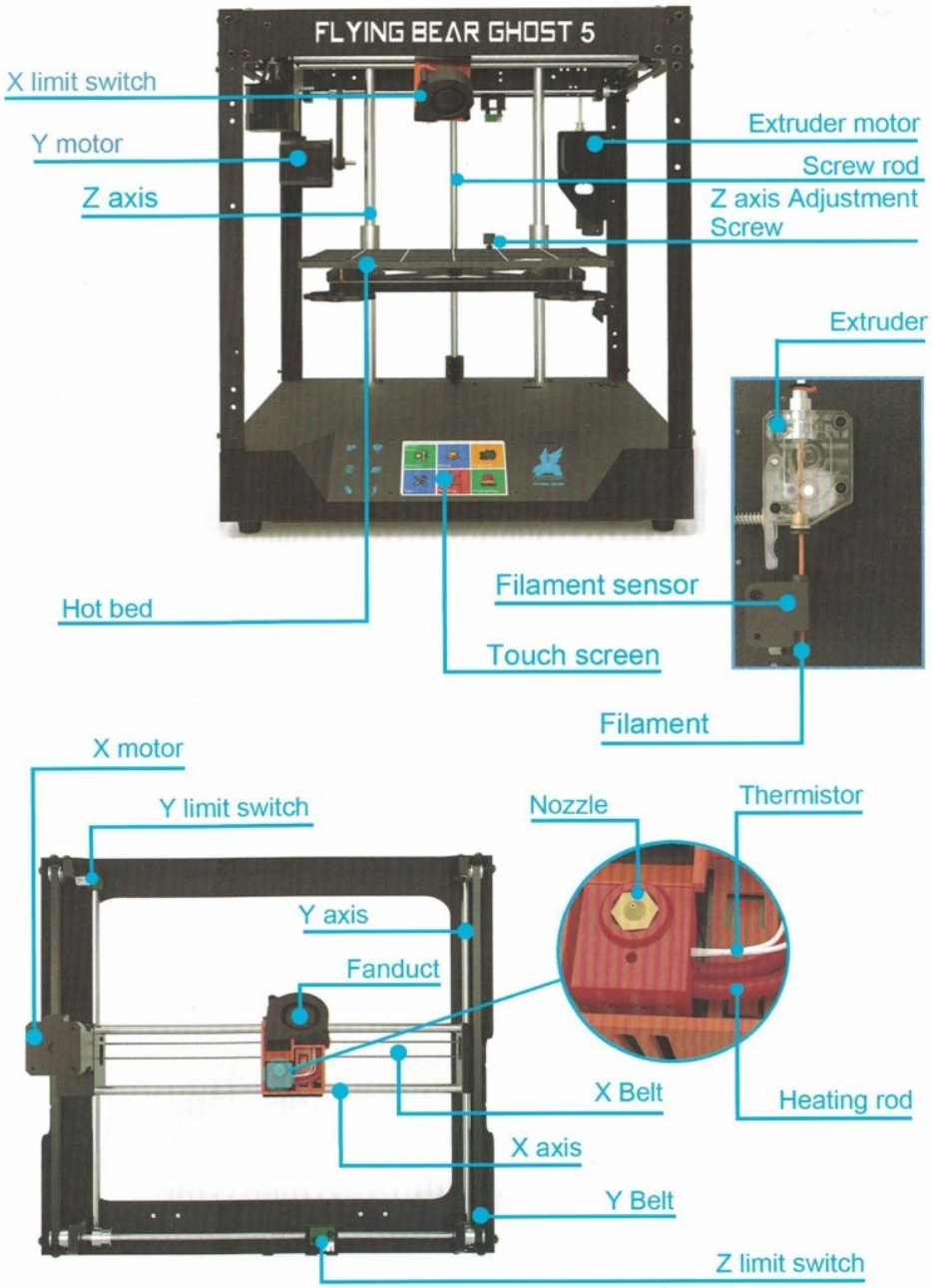
1.Packing list

		
Printer XY assembly	Printer Base Assembly	ABS side plate 2PCS
		
ABS back plate 1PCS	PLA Filament 1PCS	Step motor and Pulley 1PCS
		
Motor mounting plate 1PCS	Flange linear bearing 2PCS	Support Column 4PCS
		
Optic axis 2PCS	Screw rod 1PCS	Hot Bed Assembly 1PCS
		
Extruder assembly 1PCS	Print Head cable 1PCS	USB cable 1PCS

		 Spare part
Teflon tube 1PCS	Soft needles 1PCS	Hotend assembly 1PCS
	 Spare part	
Shovel 1PCS	Tracheal connector 1PCS	TF card 1PCS
 Spare part		
Torsion spring 3PCS	Screw nut 1PCS	Power cord 1PCS
		
Coupling 1PCS	Isolation gasket 1PCS	Tool kit 1PCS
		
Spool holder 1PCS	Cable ties 10PCS	Tweezer 1PCS

		
Pliers 1PCS	Buckle 2 PCS	White Grease 1 PCS
① 	② 	③ 
M4*10 8 PCS	M6*8 5 PCS	Shim M3 4PCS
④ 	⑤ 	⑥ 
Nut M3 3 PCS	Set screws M4 2PCS	M3*8 7 PCS
⑦ 	⑧ 	
M4*5 19PCS	M3*6 17PCS	

2.Overview of Machines



3.Machine parameters

Physical parameters

Machine dimensions:	388*337*411
Machine weight:	~13.5kg
Input voltage:	110V/220V AC, 500/60Hz
Working voltage:	24V
Power:	300W

Printing parameters

Technical Principle:	FDM(fused deposition modeling)
Printing volume:	255mm X 210mm X 200mm
Printing Accuracy:	0.05~0.3 mm
Number of nozzle:	1
Nozzle diameter:	0.4 mm
Printing speed:	20~150 mm/s(recommendation 60mm/s)
Moving speed:	120 mm/s
Filament Diameter:	1.75 mm
Filaments:	PLA,ABS,TPU,HIPS,Wood

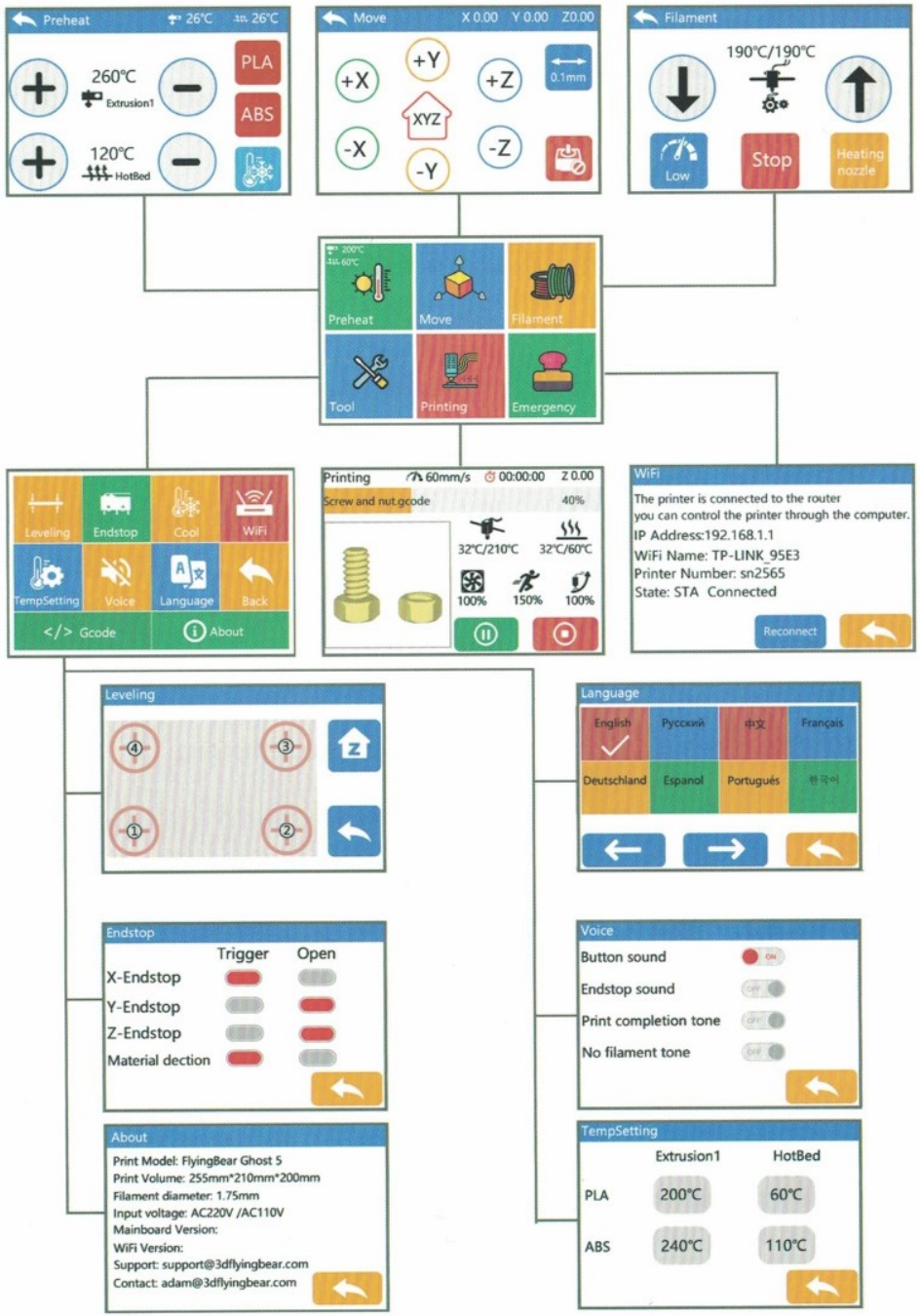
Temperature parameters

Nozzle operating temperature:	Max 260℃
Hot Bed operating Temperature:	Max 110℃
Ambient operating temperature:	8℃ ~ 40℃

Software parameters

Slice software:	Cura
Input file format:	STL , OBJ , DAE , AMF
Output file format :	Gcode
Connection mode :	WiFi, SD Card, USB port (not recommended)

4.Touch function introduction



Preheat

26℃ 26℃

PLA Preheating PLA

ABS Preheating ABS

Stop heating nozzles and hot bed

Move

+X -X Moving the X axis

-Y +Y Moving the Y axis

+Z -Z Moving the Z axis

Turn off the stepper motor

0.1mm Modify the moving distance of the nozzle

XYZ X Y Z axis goes back to its origin

Change Filament

Note: Nozzle temperature must be above 170℃ to use this function.

Filament entering nozzles

Remove filament from nozzles

Low Modify the speed at which the filament enters the nozzle

Heating nozzle Heat the nozzle to 190 degrees

Stop Stop nozzle heating

Tools

Leveling: Adjust the hot bed angle by screen guide.

① ② ③ ④ Move the nozzle to the corresponding 4 positions

Z Z axis goes back to its origin

Language: You can change the interface language.

Endstop: Monitor XYZ and filament runout limit switches for normal function.

Voice: Turn on or off sound effects.

Button sound Turn on or off touch screen button sound effects.

Endstop sound Turn on or off limit switch sound effects.

Print completion tone the print completion tone on or off

No filament tone the filament tone on or off

TempSetting: Set preheating temperature

Gcode: enter the gcode command to control the printer

Printing

Stop printing

Pause printing

Modifying the hot bed temperature.

Modify printing speed.

Modifying the nozzle temperature.

Open or close model cooling fan.

Modify the extrusion quantity of nozzles.

WiFi

Reconnect Reselect the new WiFi signal

Emergency

Stop printer stepper motor rotation

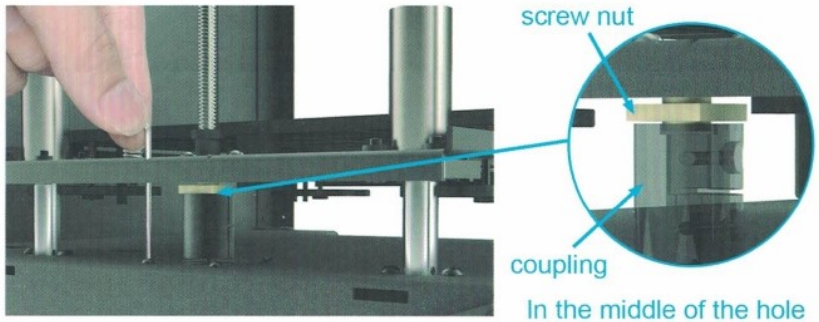
5.Assembly instructions

There are many steps to install the printer.We provide a detailed installation video.You can search "Flying bear Ghost 5 3D Printer installation video" in YouTube.You can also get installation videos by scanning QR code on your mobile phone.

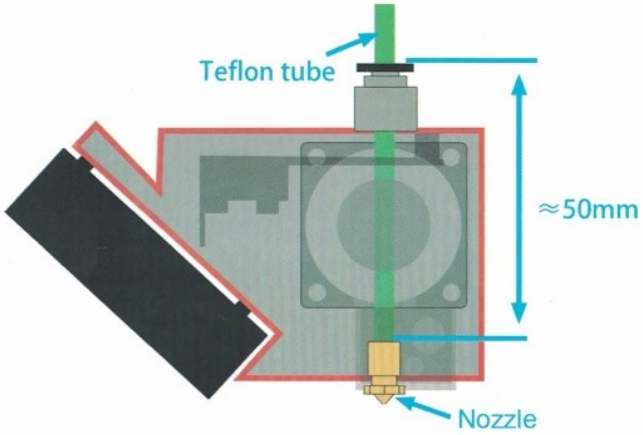
Installtion video

Important steps that are easily overlooked during installation

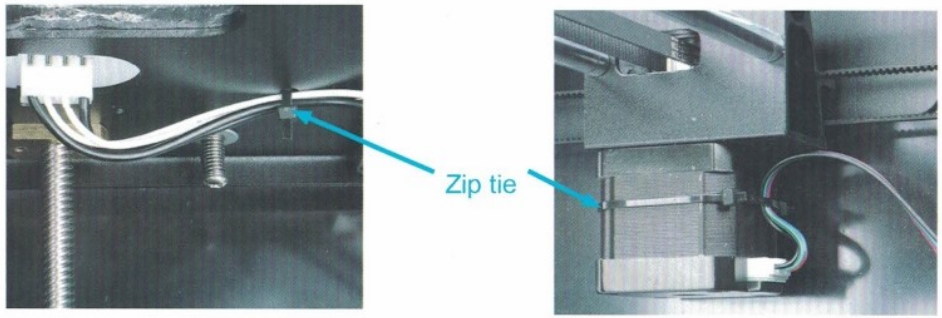
! Before installing the screw, the position of Z motor and screw nut shall be readjusted to ensure that the coupling and screw nut are concentric.



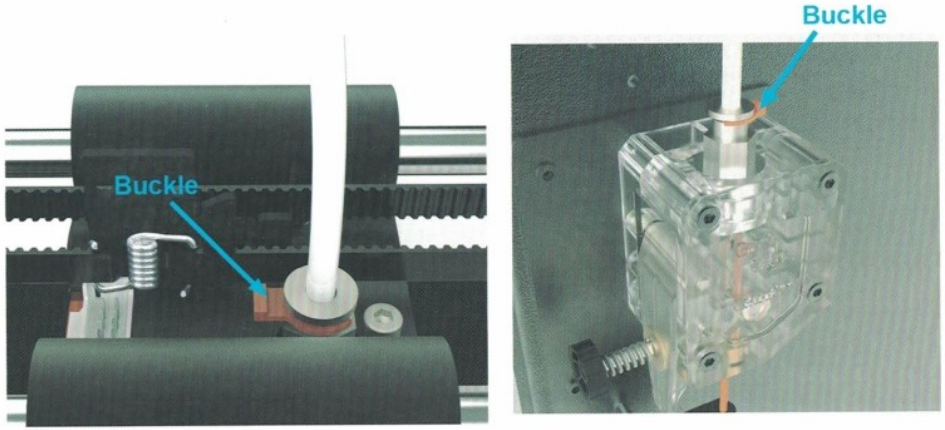
When installing Teflon, Teflon tube must be inserted at the bottom of the nozzle.The insertion depth of Teflon tube is about 50 mm. If the Teflontube is not inserted into the bottom of the nozzle, it will easily lead to the blockage of the nozzle and the extruder can not rotate properly.



Wires for hot bed and X motor must be fixed with zip tie to avoid loosening of joints during printing.



In order to keep the Teflon tube from loosening. The zip tie band must been installed on the tracheal joint. Please do not cut the zip tie band. Only when the Teflon is replaced can the zip tie be cut short.
After cutting the zip tie, pressing the plastic ring of the joint, the Teflon tube can be pulled out.



The input voltage mode can be modified on the left side of the printer base. The default input voltage is 220V. If you need to modify the input voltage. You can use tools such as screw to pull the internal switch.

Customers should watch the video carefully and patiently when they encounter problems. If they can't solve the problem, please contact us in time.

After-sale service: support@3dflyingbear.com

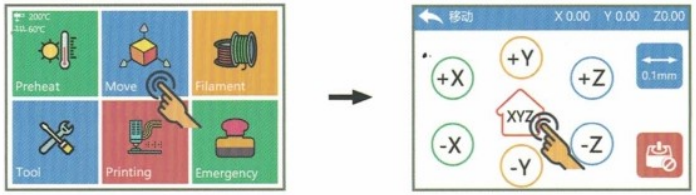
6. Hot Bed Leveling

After the printer is installed, make sure that all the wires are connected without problems. You can turn on the printer and follow the steps below to level the printer. You can also scan the QR code to watch the hot bed leveling video tutorial.

Hot bed leveling video

Step 1: The first time you turn on the printer, you need to select the language and printer type.

Step 2: Select“XYZ” to make the printer nozzle go to the origin.



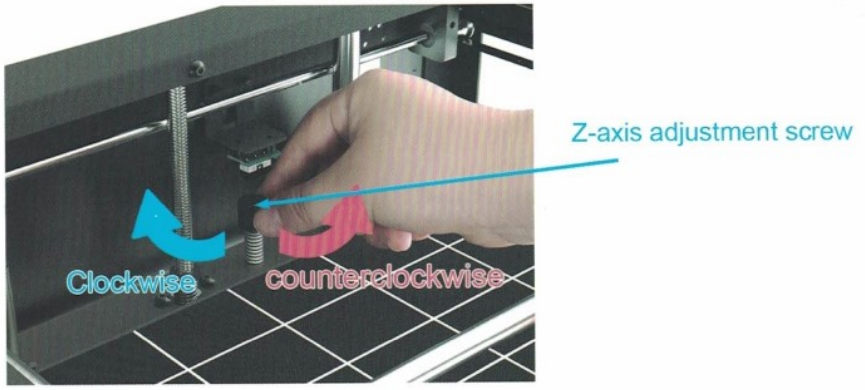
Step 3: After the nozzle returns to the origin, observe the distance between the nozzle and the hot bed,Adjust the distance between them to 2mm by z-axis adjustment screw

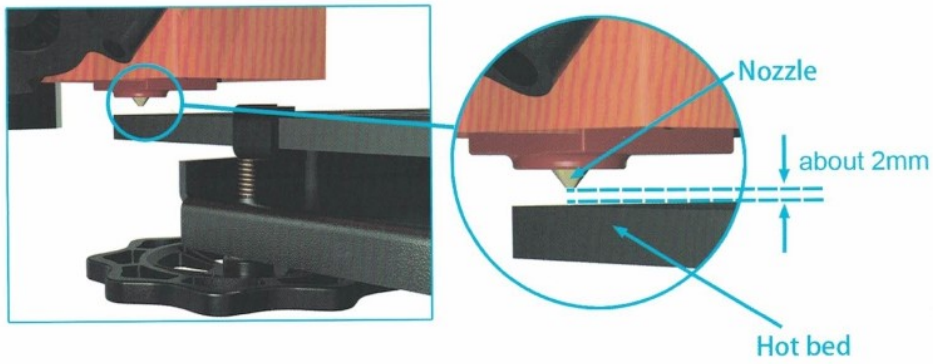
①If the distance between the nozzle and the hot bed is too far, turn the z-axis adjustment screw clockwise.If they are too close, turn the z-axis adjustment screw counterclockwise.

②Then click "XYZ" again to return to the origin and continue to observe the

distance between the hot bed and the nozzle.

③Repeat the above steps until the distance between the hot bed and the nozzle is about 2 mm.





Step 4: When the distance between the hot bed and the nozzle is about 2 mm, the hot bed spring is used to fine tune the distance between the nozzle and the hot bed.

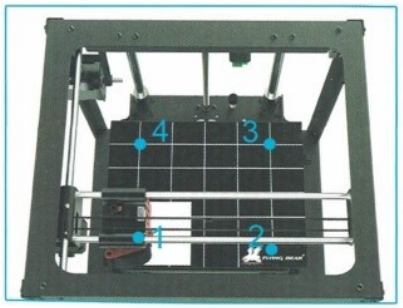
⚠In the leveling process, the nozzle and hot bed must be separated by paper. Do not scratch hot bed or nozzle.

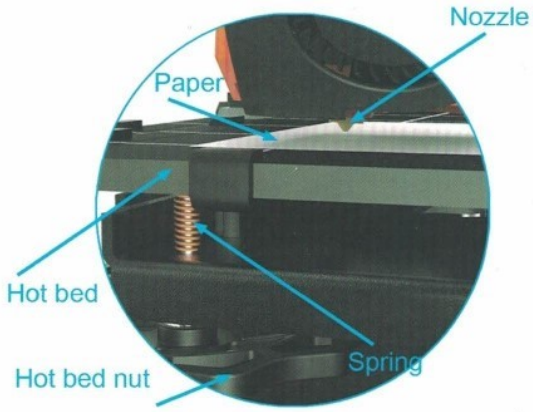
①Click in the order shown below to open the leveling guide page.

②Click on the first point, the nozzle will move to the corresponding position, and then the gap between the nozzle and the hot bed will be adjusted by the spring.

③Rotate the corresponding nut under the hot bed by hand so that the distance between the hot bed and the nozzle case is the thickness of a piece of paper (there is a drag resistance when pumping the paper).

④Do the same for the remaining 3 points. Keep the hot bed and nozzle at a distance of 1 sheet of paper.

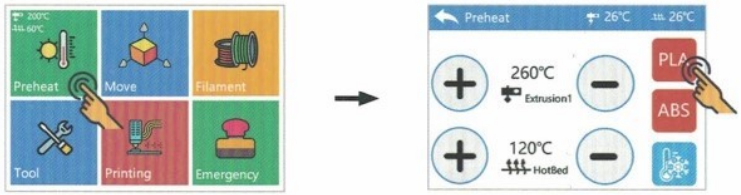




7. First print test

After the hot bed leveling is complete, we can start printing a model and verify that the hot bed is actually leveled.(We take printed PLA materials as an example)

Step 1: Preheat the nozzle.If your filament is PLA, click PLA.



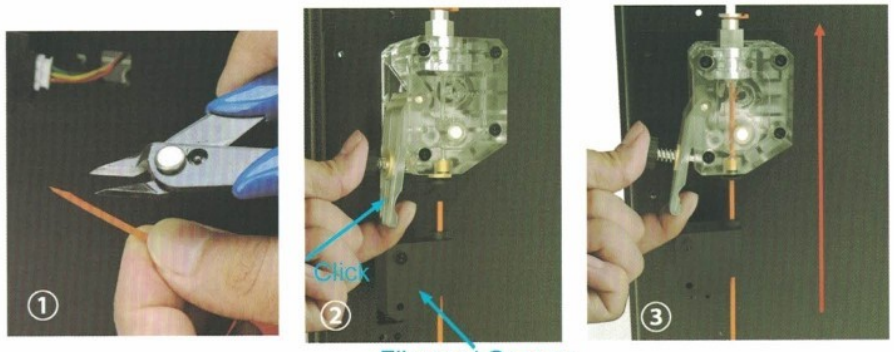
Step 2: Insert filament into the extruder

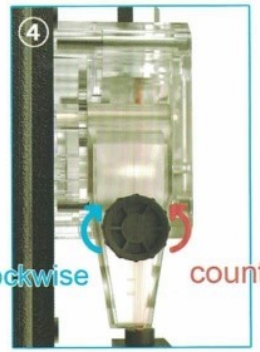
①Repair the front end of filament with incision.

②Insert the filament into the filament sensor

③Pry the extruder spring so that the filament can be inserted into the gear of the extruder, then through the extruder into the Teflon tube, and finally directly to the nozzle.

④Rotate the extruder knob clockwise to compress the filament and counterclockwise to loosen the consumables. During the actual printing process, there is no need to adjust if the nozzle discharges normally.



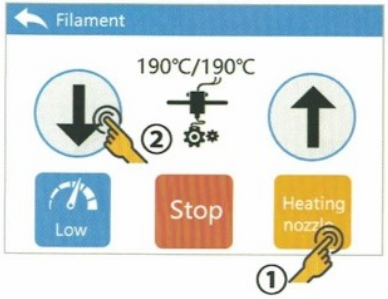


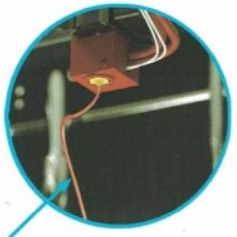
Step 3: Extrude filament through touch screen

The extruder motor will rotate only when the temperature of the nozzle reaches above 190 degrees.

①Select extruder speed

②Take you into the feed, you can click on multiple times, click on the extruder to run 50mm until the filament are squeezed out of the nozzle.





Filament flow out of the nozzle

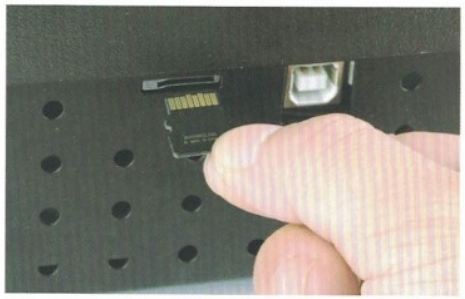
Step 4: After the filament are loaded, scan the QR code to download the screw and nut.gcode file. Then put it in the sd card. (The printer can only recognize .gcode format files)

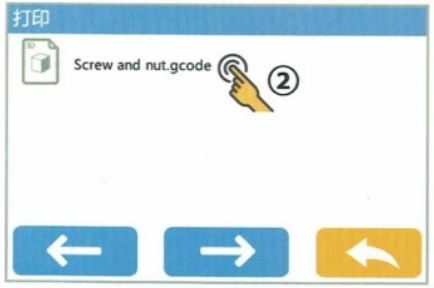
Nut and screw.gcode

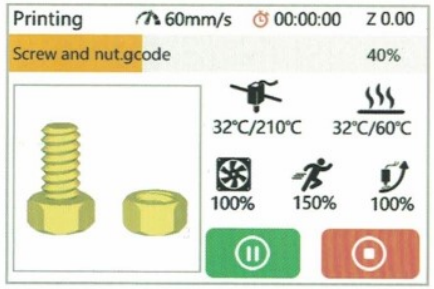
①Insert the sd card and select "print"

②Select screw and nut.gcode

③When the nozzle and hot bed are heated to the specified temperature, the printer will start printing.





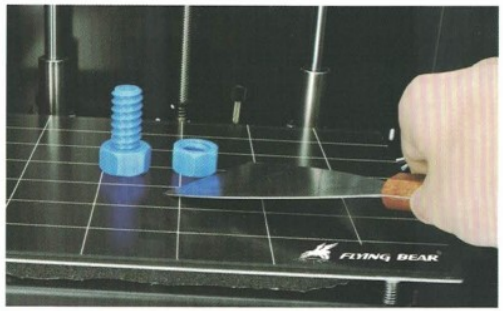


Step 5: After printing is complete,wait for a period of time the nozzle and hot bed will cool down slowly. Only after cooling can the model be removed

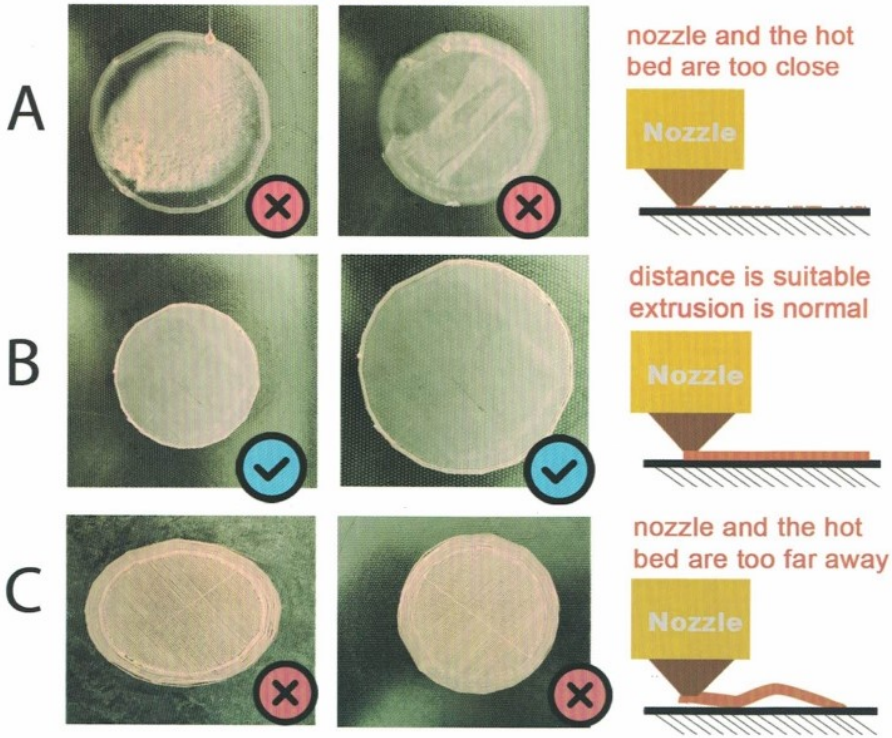
①In the process of removing the model, be careful not to hurt your hand.

②The model must be removed after the hot bed is cooled. Because the glass coating will lose its stickiness after cooling in the hot bed, it is easier to take the mould.

③Pick up a small opening with a shovel, and then turn it all up with a shovel.



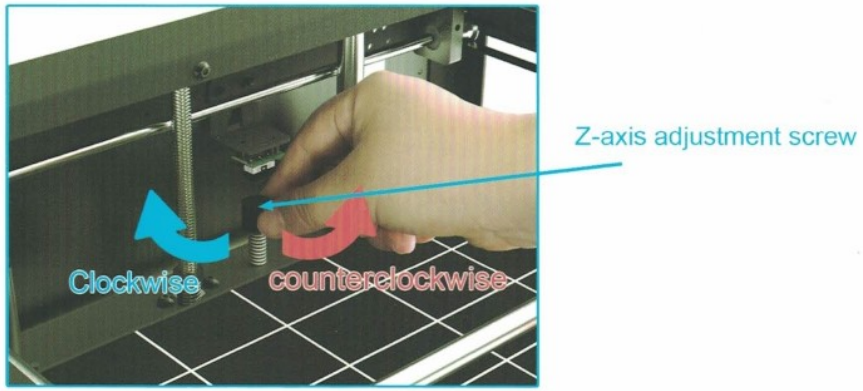
Important Tip:If the first layer does not print well and the print fails, follow the steps below.



①If the first layer prints as shown in Figure B, the distance between the hot bed and the nozzle is correct, you can print with confidence.

②If the first layer prints as shown in Figure A, indicating that the hot bed and nozzle are too far apart, you need to turn the hot bed adjustment nut clockwise. Only need to rotate 90 degrees at a time, then the printer returns to the origin to restart printing.You need to repeat the operation multiple times to find the most suitable distance.

③If the first layer prints as shown in Figure C, indicating that the hot bed is too close to the nozzle, you need to turn the hot bed adjustment nut counterclockwise. Only need to rotate 90 degrees at a time, then the printer returns to the origin to restart printing. You need to repeat the operation multiple times to find the most suitable distance.



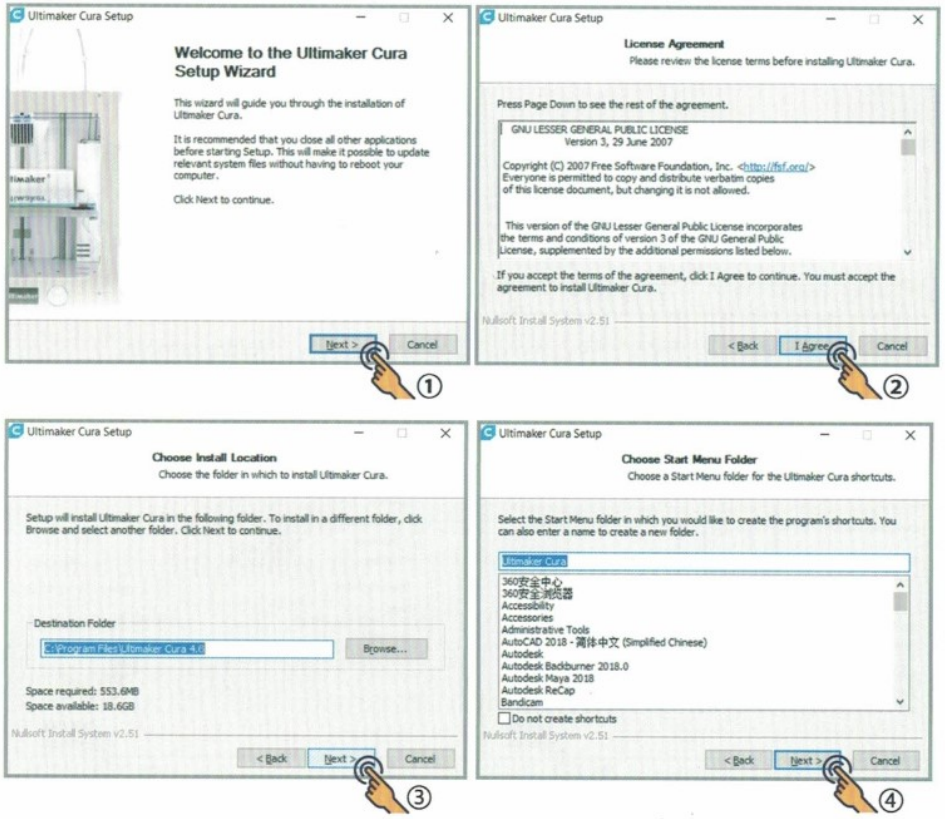
8. Install slicing software

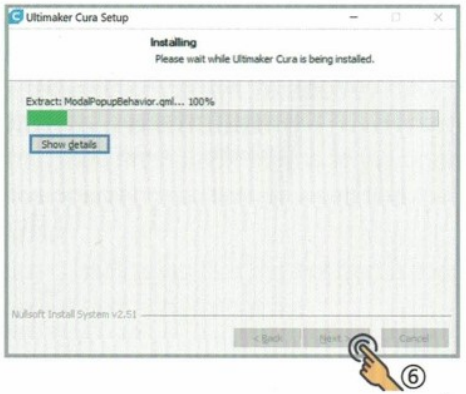
If you want to print out your favorite model, it's very important to learn the slicing software. You can install and set up the slicing software in the following steps, or you can scan the QR code to view the slicing software installation and setup video.

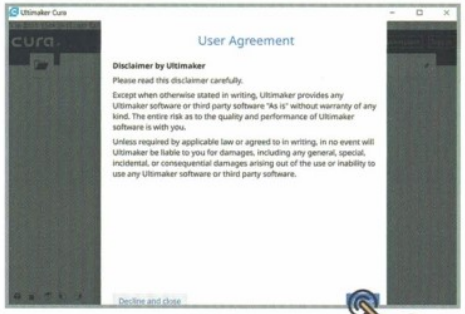
Slice software setup video

Step 1:Download the slicing software first, and download the latest Cura software from this website.
Website:https://ultimaker.com/software/ultimaker-cura

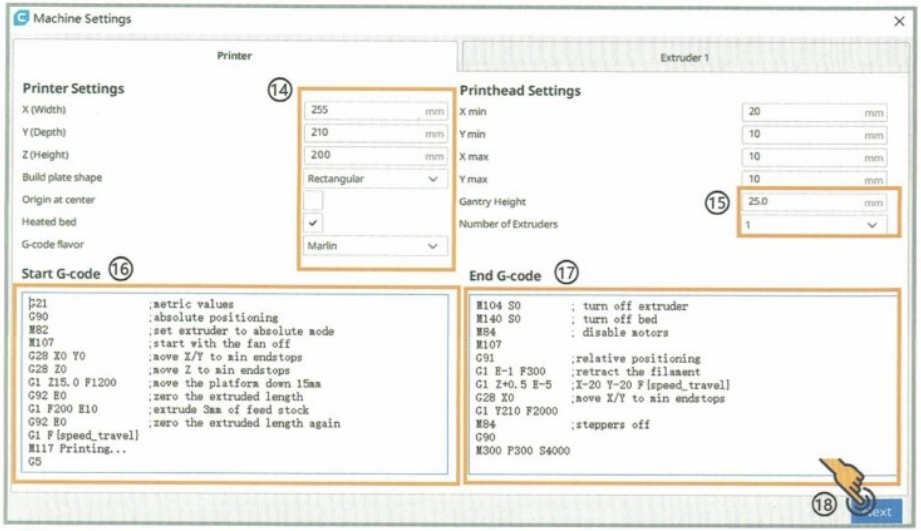
Step 2: Follow the steps below to complete the installation of the slicing software.







⑫Printer name fill in “Flying Bear Ghost 5”

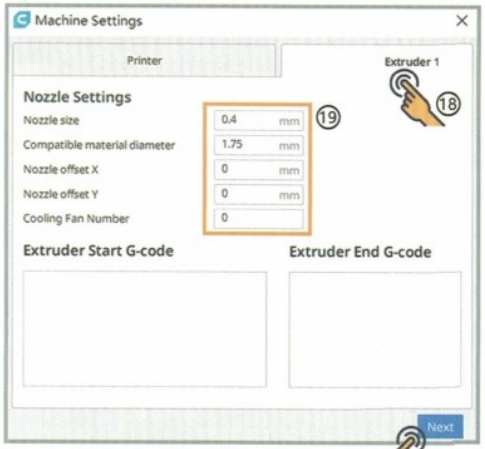


⑯Fill in the Start G-code

G21
G90
M82
M107
G28 X0 Y0
G28 Z0
G1 Z15.0 F1200
G92 E0
G1 F200 E10
G92 E0
G1 F7200
M117 Printing
G5

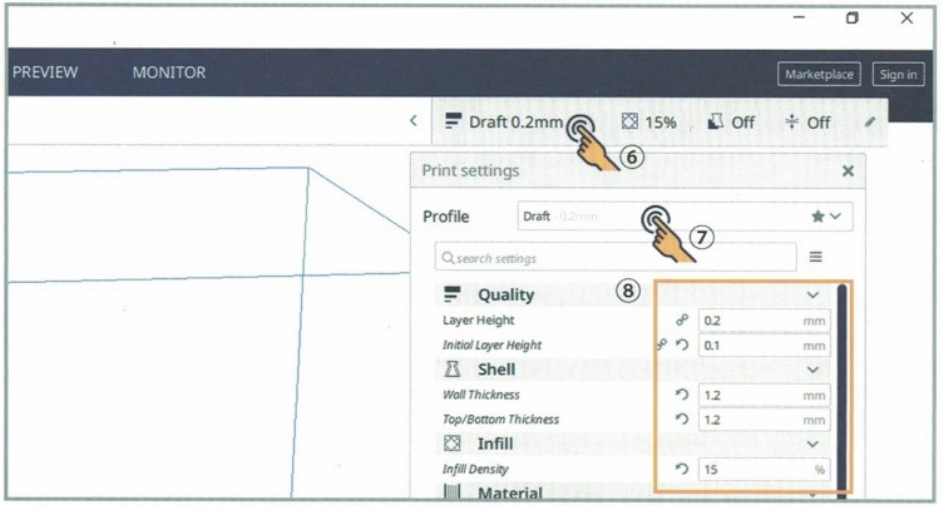
⑰Fill in the End G-code

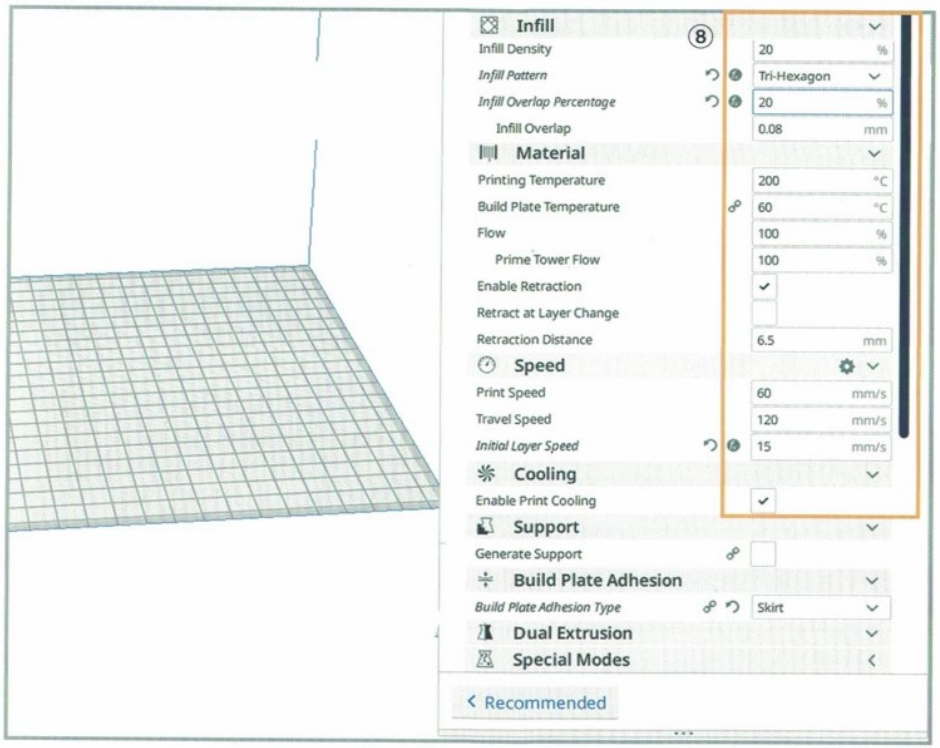
M104 S0
M140 S0
M84
M107
G91
G1 E-1 F300
G1 Z+0.5 E-5
G28 X0
G1 Y210 F2000
M84
G90
M300 P300 S4000



Step 3: After installation, open software and set slicing parameters

Select Filament " PLA " (We take printed PLA materials as an example)





Introduction to Cura parameters

Layer Height:The print thickness of each layer determines the shutdown parameters for print quality. Generally set between 0.1-0.3

Infill Density:The interior of the model is generally hollow, saving materials and improving the printing success rate. Generally, it is set at about 20%.

Printing Temperature:Set the print temperature of the nozzle. PLA is generally set to 190-220 ° C. ABS is generally set to 230-240 ° C.

Build Plate Temperature:Set the temperature of the hot bed. The PLA is generally set to 40-60 °C. The ABS is generally set to 80-110 °C..

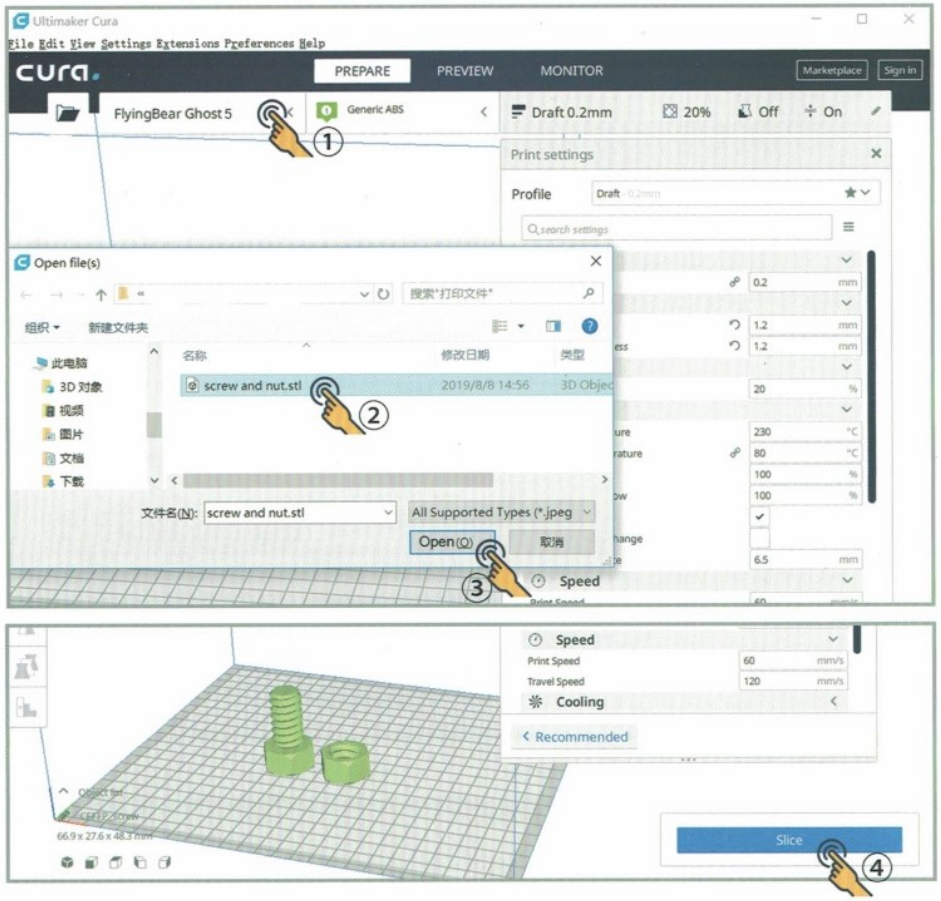
Step 4: After the parameter settings are complete, we can open a stl file and then slice it into a Gcode file. This process is called slicing.Please scan the QR code first to download screw and nut.stl

①Open the stl file through the slicing software.

②Click on the slice and save the file to the sd card.

③Refer to the steps on page 13 to start printing.

screw and nut.stl



9. Wifi printing introduction

In addition to printing with an SD card, you can also print using WiFi. Before using the WiFi function, you must first install the cura plugin. You can follow the steps below to install the plugin. You can also scan the QR code to view the WiFi printing video tutorial.

WiFi printing video

Step 1:Follow the steps below to connect the printer to the router,

① -- ② Open the wifi list, wait for a while, choose your own router signal

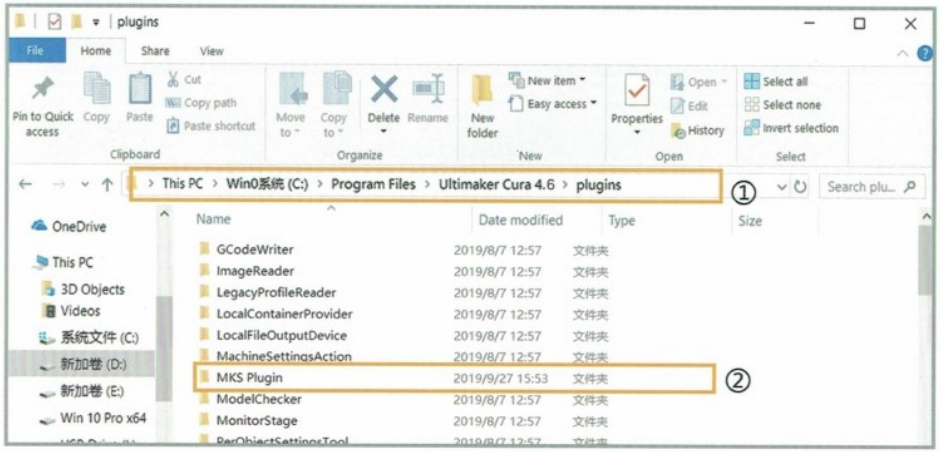
③ -- ④ Enter the password to get the IP address

Step 2:Scan the QR code to download the plugin"FlyingBearIntegration".

①Then open the Cura installation folder "plugins". (Find the folder according to the location you installed).

②Put the folder "FlyingBearIntegration" in the folder "plugins".

MKS Plugin

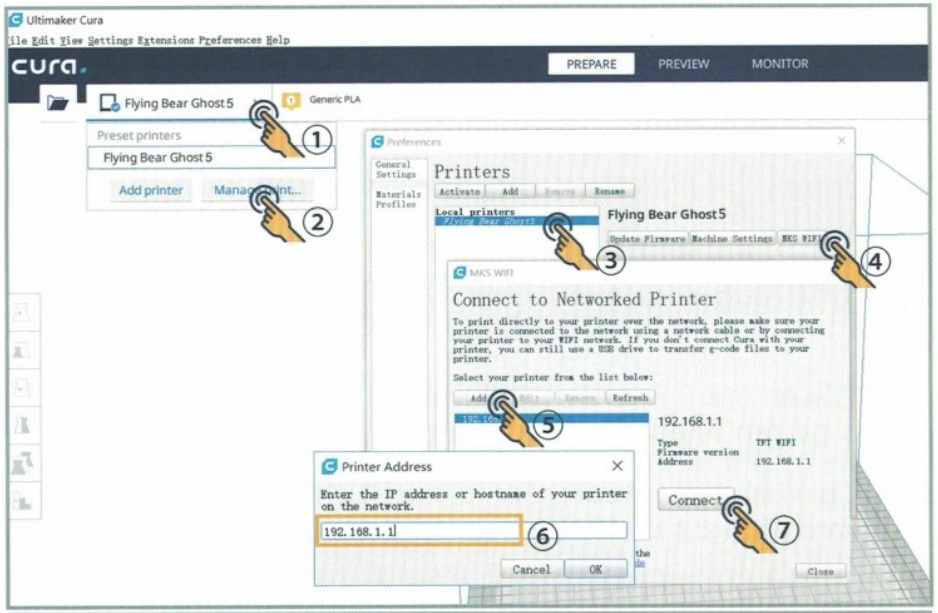


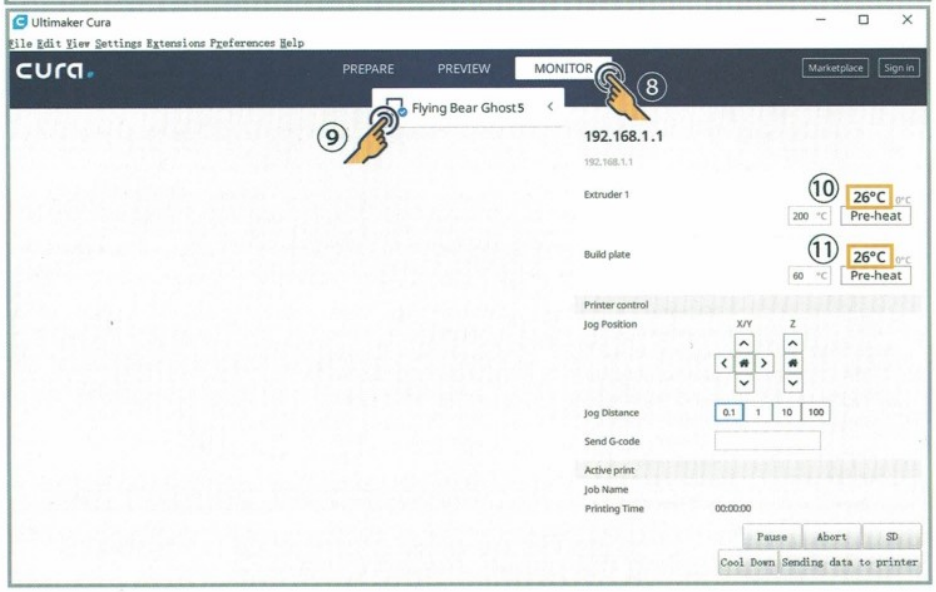
Step 3: After installing the plugin, restart Cura.

① -- ⑤After the plugin installation is complete, restart the slicing software, then open MKS WiFi

⑥ -- ⑦Enter the IP address displayed on the touch screen of the printer

⑧ -- ⑪Then open the WiFi control page, if the connection is successful, the temperature of the nozzle and hot bed will be displayed on the page





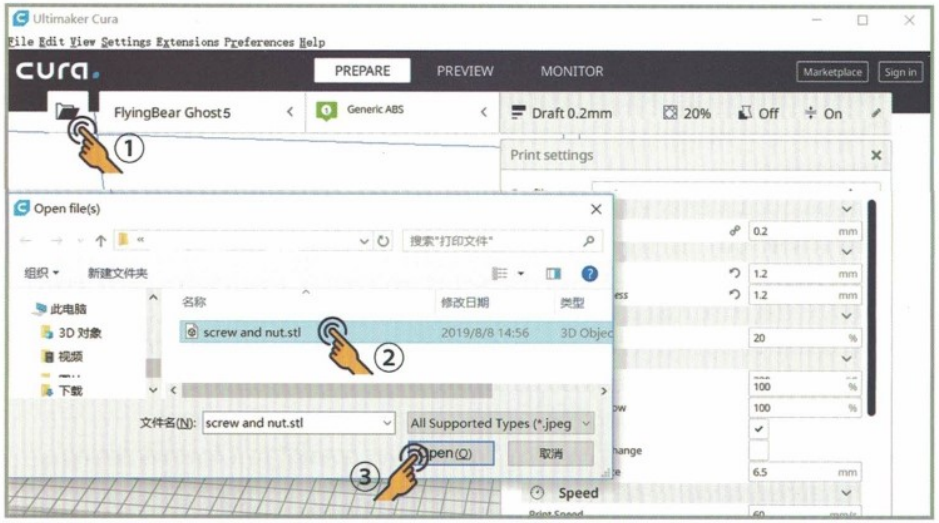
Step 4:Download the stl file, you can scan the QR code to download "screw and nut.stl"

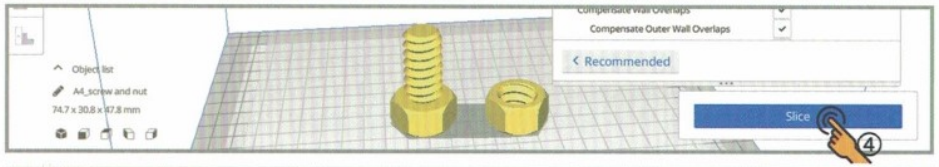
① -- ④Scan the QR code to download the stl file, then open the file with the slice software and click on the slice.

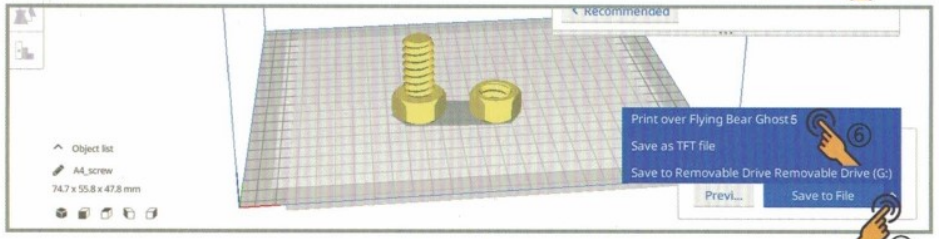
screw and nut.stl

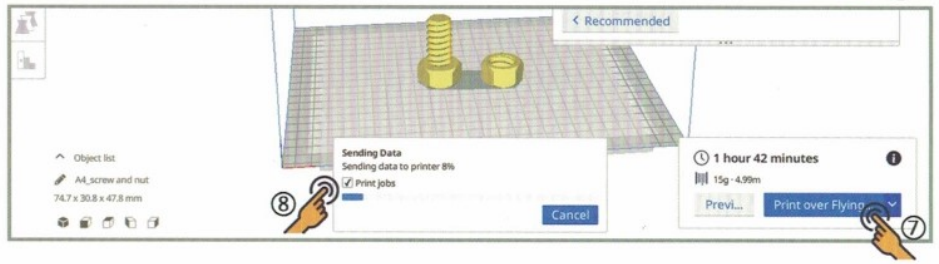
⑤ -- ⑥ After the slicing is complete, select “print over Flying Bear Ghost 5 ” to upload the file to the printer. If “print jobs” is checked during the upload process, the printer will automatically start printing after the upload is completed.

⑦ -- ⑧If the file name exceeds 20 characters, the WiFi transmission will fail. If you encounter this problem, shorten the file name.









10. Troubleshooting

1. SD card cannot be identified, or file can not be displayed

①The format of the SD card is not correct. It must be gcode format.
②The SD card may be damaged during transportation, change a new SD card.
③Restart the printer

2.The printer can't go back to its origin, or X/Y/Z is noisy during operation.

①There may be a bad contact of the XY motor wires. Please re-plug the connection.
②If noise occurs after long use, lubricating oil is needed for optical axis and screw rod.

3.Filaments and hot beds do not stick during printing.

①The distance between hot bed and nozzle is too far. The adjusting screw can be properly rotated clockwise.as shown in fig.1
②Build platform is not level.Please refer to page 7 for adjustment.
③Printing speed is too fast, reduce "initial layer speed" to 15 when slicing.
④If the appearance of the model is particularly complex, some solid glue can be applied on the hot bed properly.

4.The nozzle is clog during printing

①Heating the nozzle, then using a soft needle to clean the nozzle.
as shown in fig.2
②The nozzle temperature is too low to increase the temperature (PLA ≤ 230 ℃)
③Teflon tube not inserted into the bottom of nozzle.Please refer to page 10 for adjustment.
④Please check whether the rotating fan of the print head is normal.
⑤If this happens after a long time of printing, it may be that the motor of the extruder is overheated, which can reduce the printing speed.
⑥If the above methods can not solve the problem, you can replace the print head. Scan the QR code of Figure 4 to watch the video of the nozzle replacement.

5.Extruder motor slips, makes an abnormal sound, grinding Filament.as shown in fig.3

①The nozzle temperature is too low to increase the temperature (PLA ≤ 230 ℃)
②Printing speed is too fast. Please reduce the printing speed.
③Check for a nozzle clog. Please refer to Item 4 for treatment.

6.Layer Shifting

①Printing speed is too fast. Please reduce the printing speed.
②Model deformation, warping, impacting the nozzle.Please refer to item 4 for adjustment.
③There may be a bad contact of the XY motor wires. Please re-plug the connection.

7.Touch screen click no response

①Check if the screen cable is loose and you need to open the printer base.
②Check the screen surface for damage. If you have any problems, please contact us .

8.Sudden termination during printing

①There is an error in the Gcode file in the sd card. Re-slice.
②SD card has quality problems, replace the new SD card.

9.Introduction to the printer error message.

①Err1: (Hotbed MAXTEMPE)
if the hot bed exceeds the maximum temperature limit, check if the thermal interface is short-circuited.

②Err2: (Nozzle MAXTEMP)
Nozzle exceeds maximum temperature limit. Check if the thermal interface is short-circuited.

③Err3: (Hotbed MINTEMP)
The hot bed exceeds the minimum temperature limit,please check if the thermal interface is disabled.

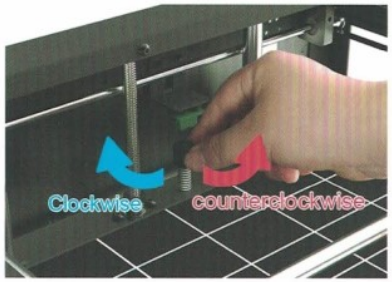
④Err4: (Nozzle MINTEMP)
The nozzle exceeds the minimum temperature limit, please check if the thermal interface is disconnected.

⑤Err5: (Nozzle heating failure)
The nozzle did not heat up and the nozzle did not reach the set temperature differences over a set time.

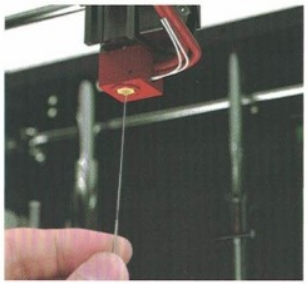
⑥Err6: (Hotbed heating failure)
The heating of the hot layer failed, and the hot layer reached the set temperature differences over a set time.

⑦Err7: (Thermal Runaway)

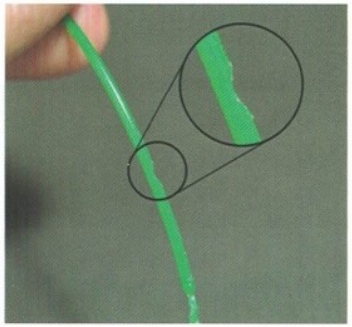
The temperature is out of control, the current temperature is lower or higher than the set temperature



(Figure 1)



(Figure 2)



(Figure 3)

(Figure 4)

11. After-sales service policy

Thank you for purchasing our products. if you have any questions please email us support@3dflyingbear.com. We will answer in within 24 hours.

After-sales service time begins after the buyer receives the product. You need to provide valid proof of purchase before you get the after-sales service, and the buyer needs to provide videos and pictures of printer failure.

1.Maintenance service

Components	Warranty Period
Print head (nozzles, heating rod, thermistors, etc.)	Three months
Hot bed, motor driver	6 months
Motherboard,touch screen	1 year
Other main parts (bearings, motor and other mechanical parts)	2 years

2.Part excluded from this warranty

Tools, Tracheal connector , Teflon pipes, shovel, pliers, TF card, filament, soft needles are not covered by the warranty.

Overhaul circuit diagram(Принципиальная электрическая схема)