

GHOST6

USER'S MANUAL

FLYING BEAR FOR 3D PRINTER





Instructions

- 1.**After unpacking, please check the model and quantity of spare parts. If there are any missing parts, please contact us in time, and we will send you the replacement parts as soon as possible.
- 2.**Please pay attention to safety when assembling the printer or printing the model.
- 3.**Please place the machine in a ventilated, spacious and dust-free environment;
- 4.**Do not try to use the machine in a way not described in the instructions, so as to avoid personal injury and property damage.
- 5.**Do not place the printer in a highly vibrating or other unstable environment, the shaking of the machine will affect the printing quality.
- 6.**Do not touch the nozzle, hot bed and moving parts when the printer is working to prevent personal injury.
- 7.**After printing, use the residual temperature of the nozzle to clean up the filament on the nozzle in time. During cleaning, use tools and do not touch them directly. Please wait patiently for cooling before taking out the model.
- 8.**Do not wear gloves when operating the machine to avoid winding and extrusion of moving parts on person.
- 9.**Please keep the printer and printer parts out of the reach of children to avoid personal injury.
- 10.**Often do product maintenance, regularly clean the printer body with a dry cloth in case of power failure, and wipe off dust, bonded printing materials and foreign matters on the guide rail.
- 11.**If you do not use the printer for a long time, please protect the printer from rain and moisture.
- 12.**In case of emergency, please don't panic and turn off the printer directly.
- 13.**Users shall abide by the laws and regulations of the corresponding countries and regions where the equipment is used, abide by professional ethics, pay attention to foreign matters, and prohibit the use of our products or equipment for any illegal purpose. In case of any violation, our company will not be responsible for the relevant legal responsibilities.

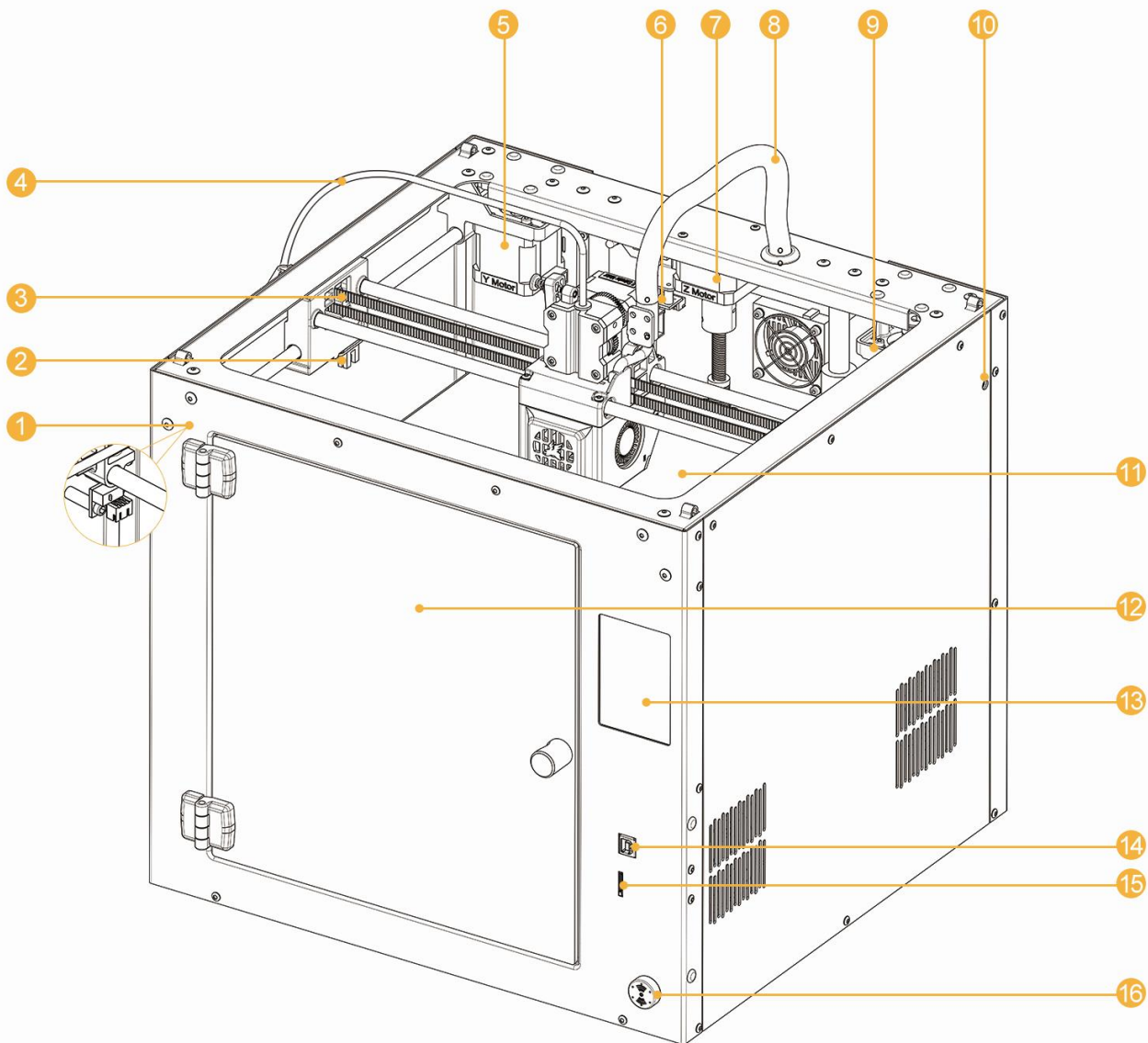


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1

Product Overview



1 Y limit switch

2 X limit switch

3 X Y Belt

4 Teflon tube

5 Y Motor

6 Z limit switch

7 Z Motor

8 Bellows

9 X Motor

10 Belt adjust A

11 Hot bed

12 Door

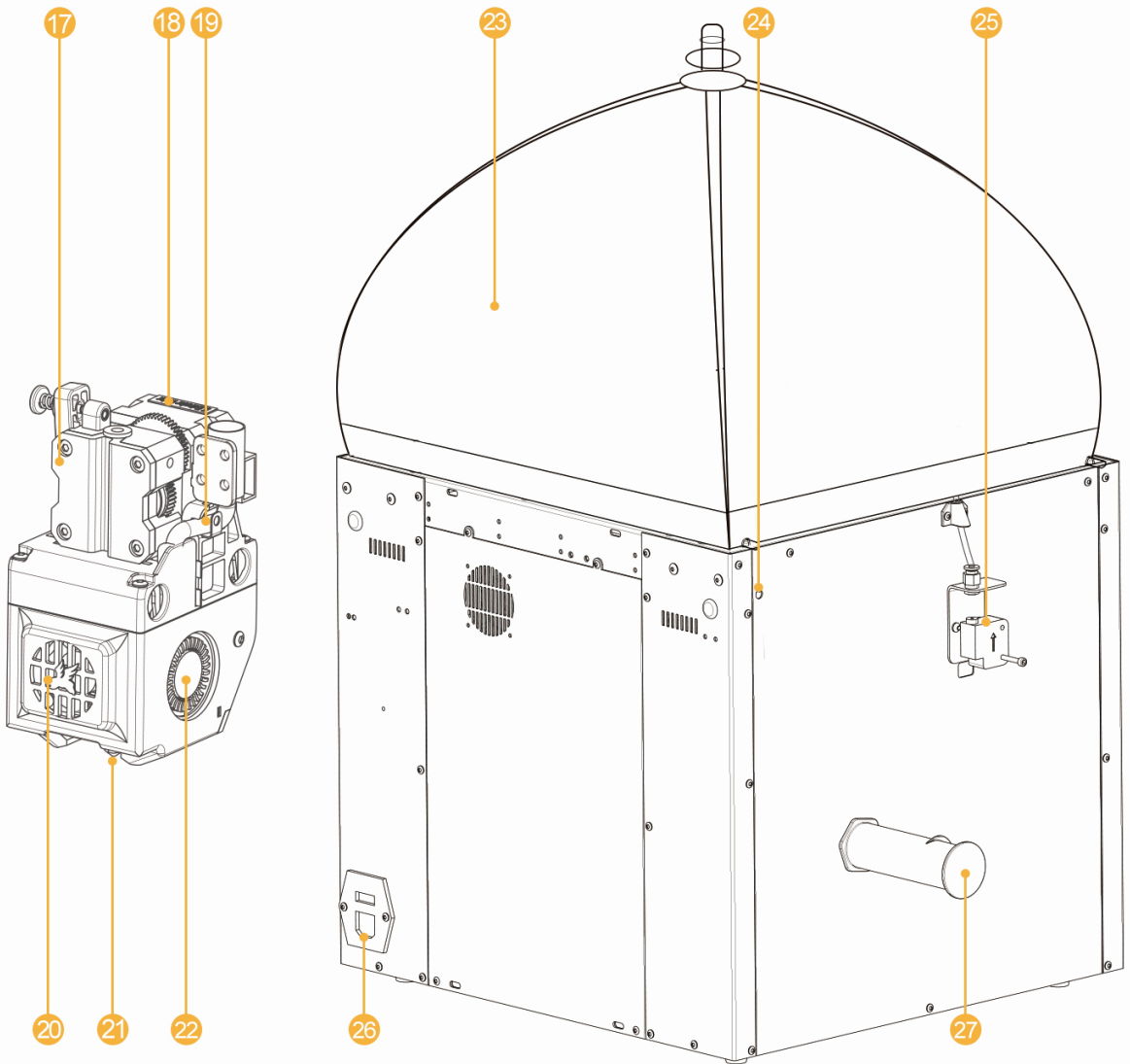
13 Touch screen

14 USB

15 TF card

16 Buzzer

Product Overview



- 17 Extruder
- 18 Extruder motor
- 19 PCB wiring harness
- 20 Radiator fan
- 21 Nozzle
- 22 Model cooling fan
- 23 Cover
- 24 Belt adjust B
- 25 Filament detection sensor
- 26 Power switch
- 27 Filament support

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Technical Specification

Product Model:

Ghost6

Forming Size:

255*210*210mm

Molding Tech:

FDM

Number Nozzle :

1

Nozzle Diameter:

Standard 0.4mm

Printing Accuracy:

0.05~0.3mm

Print Material:

1.75mmPLA

Filaments:

PLA,ABS,TPU,HIPS,Wood

Input file format:

STL、OBJ、DAE、AMF

Rated Power:

300W

Bed Temp:

≤110°C

Nozzle Temp:

≤275°C

Ambient Temp:

8°C~40°C

Resume Printing:

Yes

Printing Speed:

20~150mm/s (recommend 60mm/s)

Filament Detector:

Yes

Connection Mode:

TF Card、USB Port
(not recommended)

Slice Software:

Cura

Rated Voltage:

Input:AC 110V/220V 50/60HZ Output:DC 24V

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Packing list



1 GHOST6 1PCS



3 Extruder assembly



5 Filament detection sensor



4 Filament support



6 PLA Filament



8 Teflon tube



10 Handle



11 Magnet



9 Wire clip



14 Power cord



14 Teflon tube bracket



24 M3*6 5PCS



25 M3*8 3PCS



23 M3*3 1PCS



22 M4*4 1PCS



26 M4*8 1PCS

Packing list

Packing list



2 Cover



7 Hot end assembly



12 USB cable



13 TF card and reader



17 Diagonal pliers



15 Shovel



16 Tweezers



20 Needle



18 Tool kit



19 Tiex5



21 stylus

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Assemble 3D Printer

Assemble 3D Printer.

We have provided you with Ghost6 detailed installation video. You can search "FLYINGBEAR Ghost6 3D printer installation video." in YouTube. You can also scan the QR code to get the video.



Installation video

1.Installing door handles.

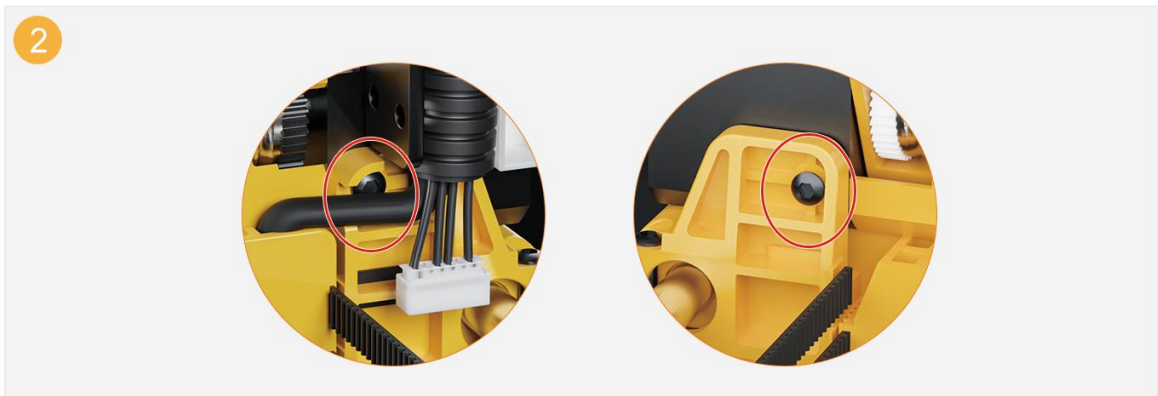
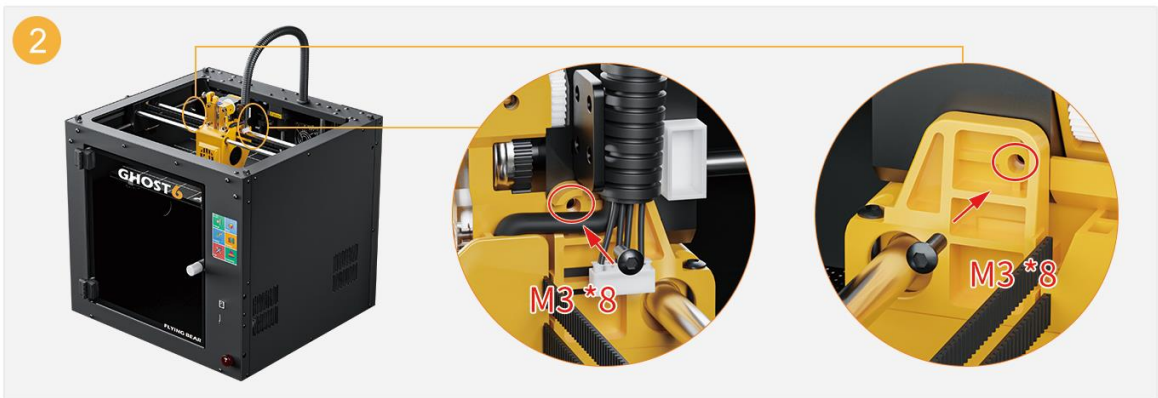
Fix magnet and handle with countersunk head screw M4X8 screw.



Assemble 3D Printer

2. Install extruder.

Install the extruder and fix it with M3 *8 screws from both sides, install the extruder harness and fix the bellows with tie. (tighten the M3 *8 screws before making sure the plastic parts are flat).



Assemble 3D Printer



3. Install teflon tube bracket.

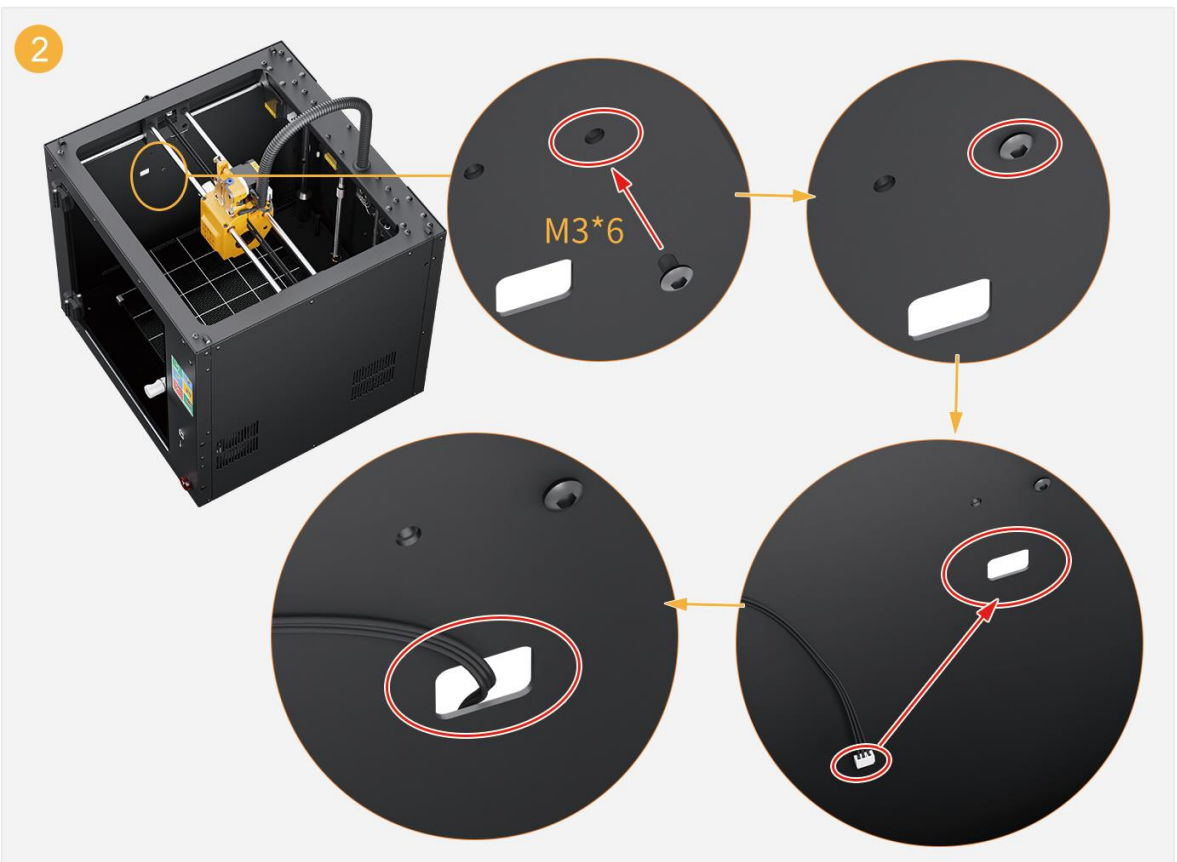
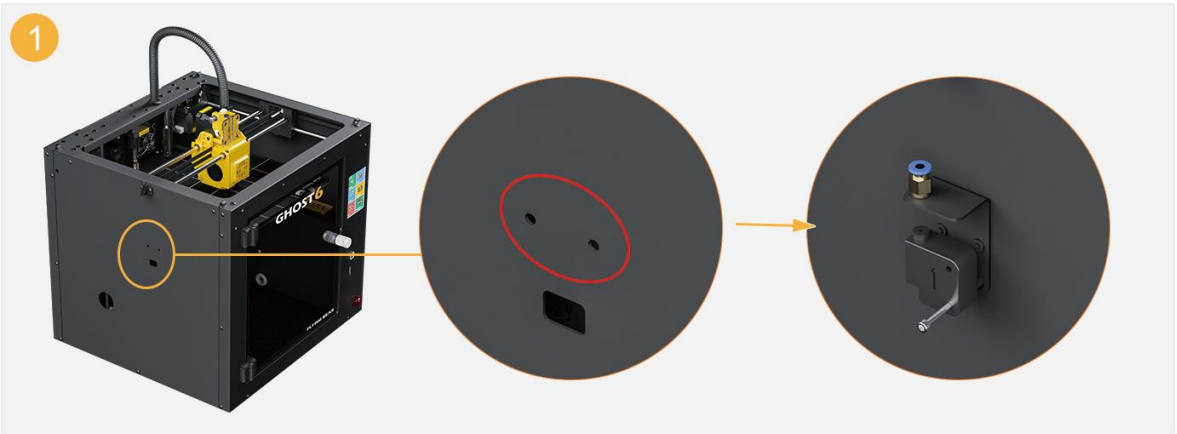
Lock the teflon tube bracket with M3 *6 screws.



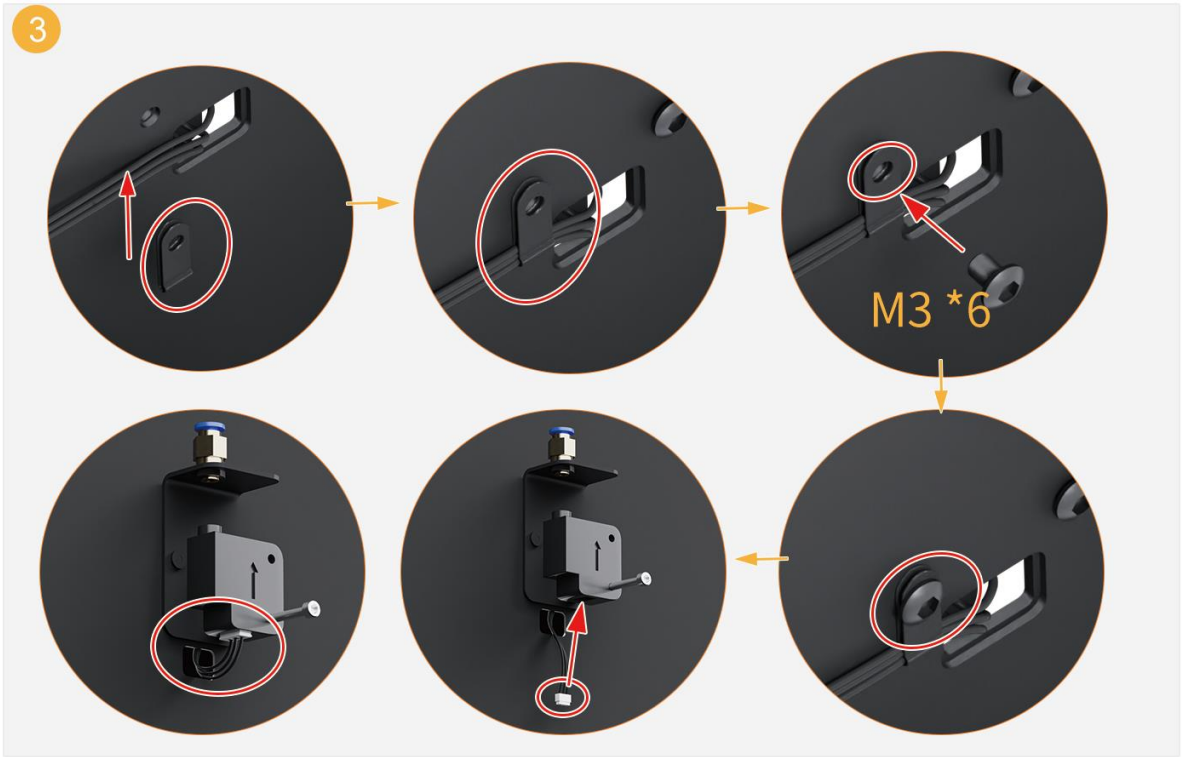
Assemble 3D Printer

4. Install the filament detection sensor.

Install the filament detection sensor in the position shown in the picture. Support the filament detection sensor with your hand, lock the right side from the inside with m3*6 screws, the wiring harness of filament detection sensor pass through the internal square hole and is connected to the filament detection sensor. place the wire clip on the left wire harness and tighten it internally with M3 *6 screws.



Assemble 3D Printer

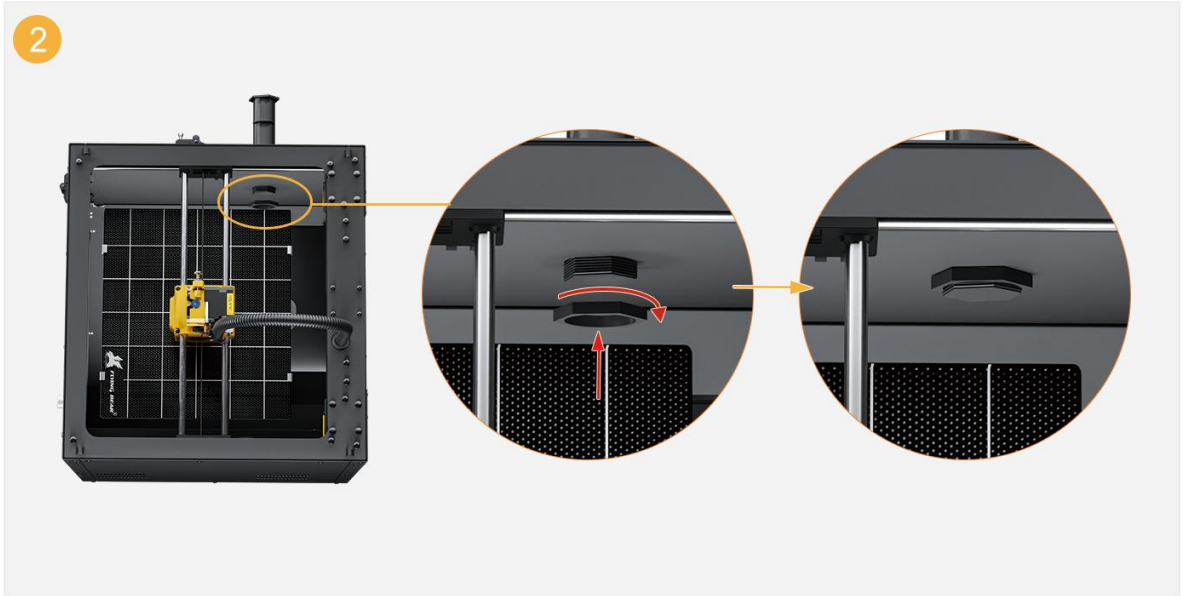


5.To install the Filament support.

Just adjust the direction of the rack according to the weight of filament. The logo upward is suitable for 1kg filament and the logo downward is suitable for 2kg filament.

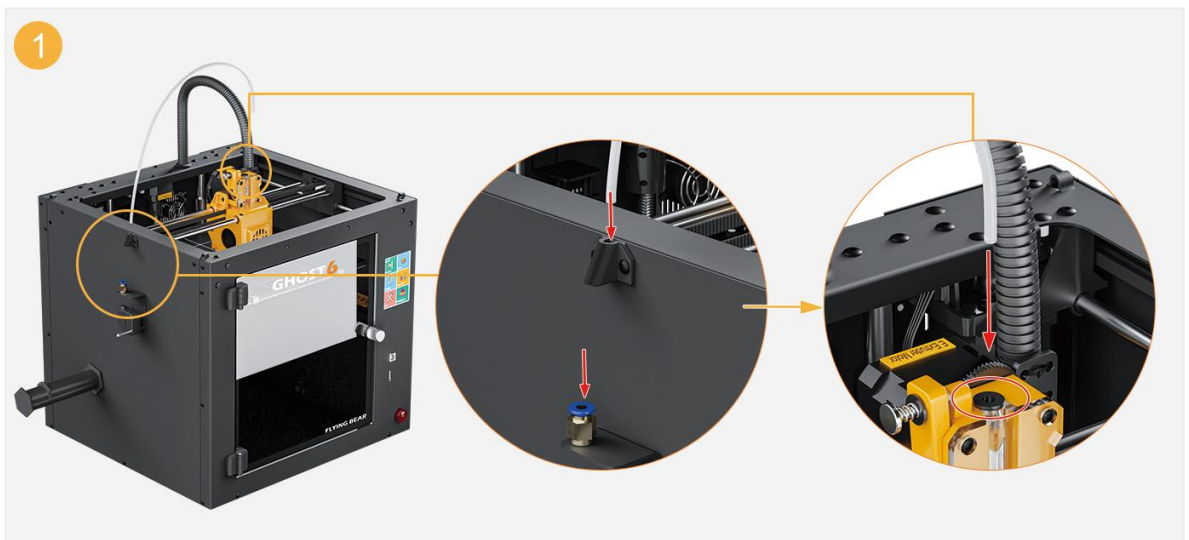


Assemble 3D Printer

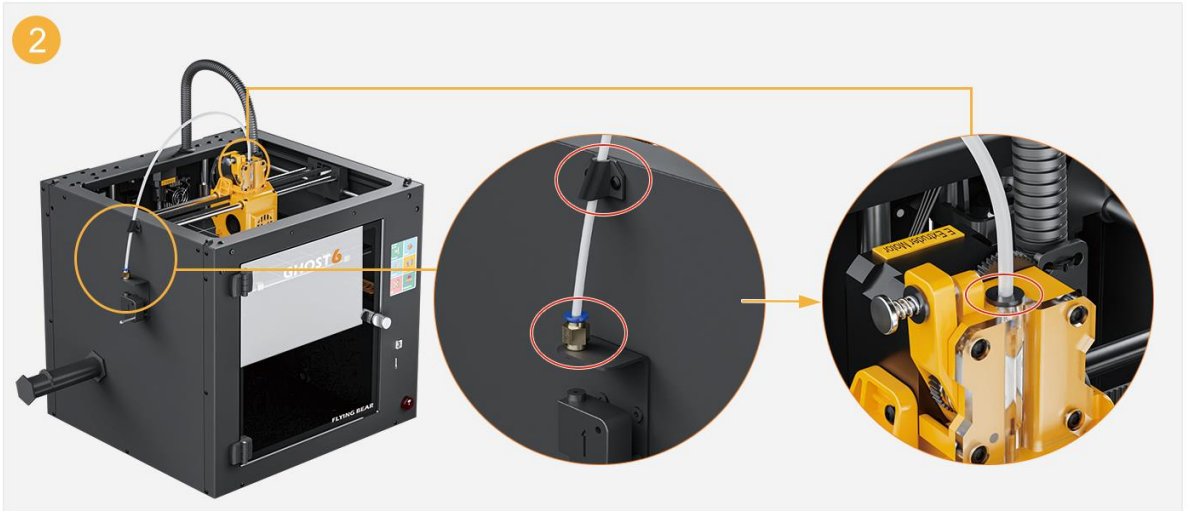


6. Install teflon tube.

Insert one end of teflon into the extruder feed port and the other end into the filament detection sensor.



Assemble 3D Printer



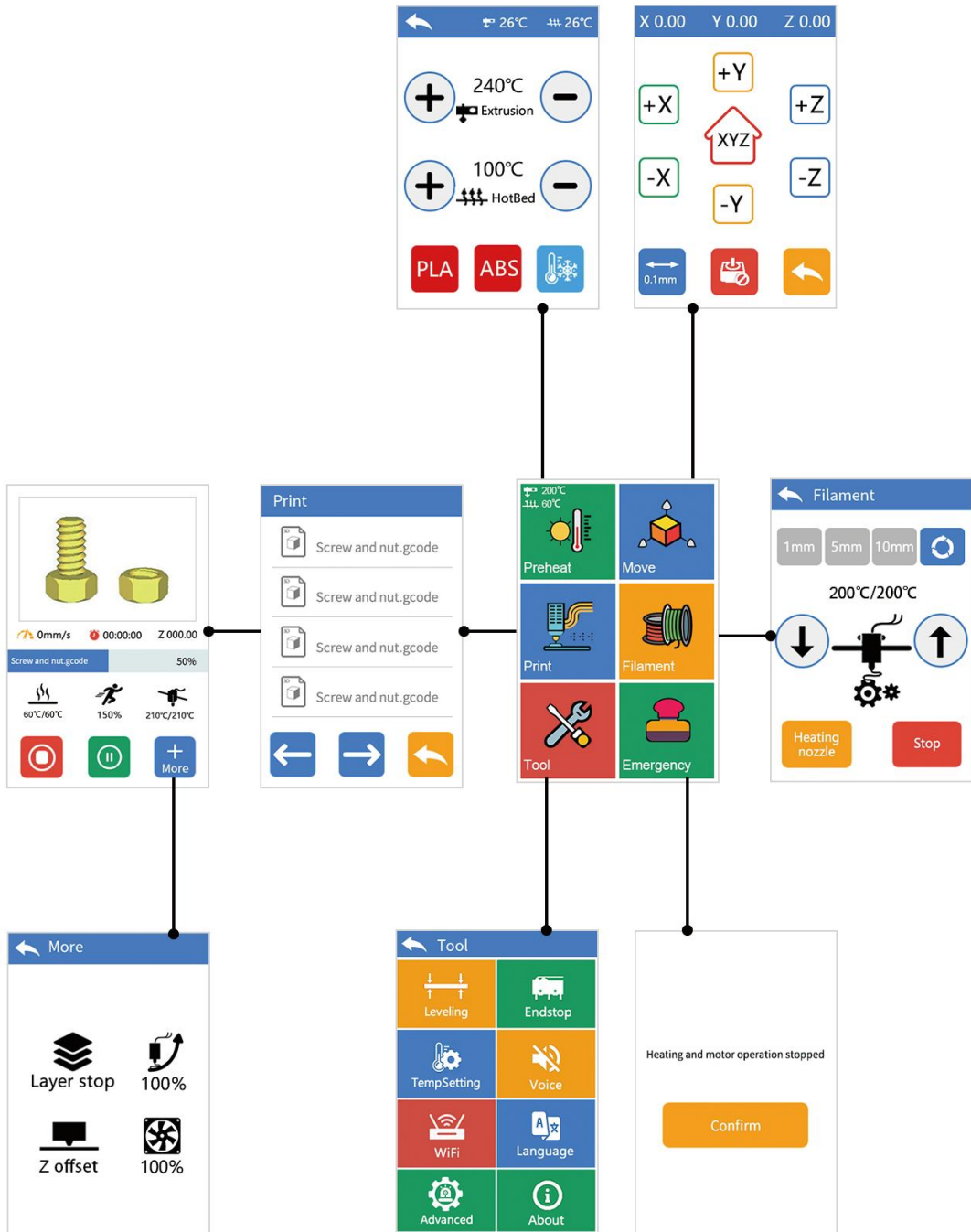
The input voltage mode can be modified on the left side of the printer base. The default input voltage is 220V. If you need to modify the input voltage. You can use tools such as screwdriver to pull the internal switch.



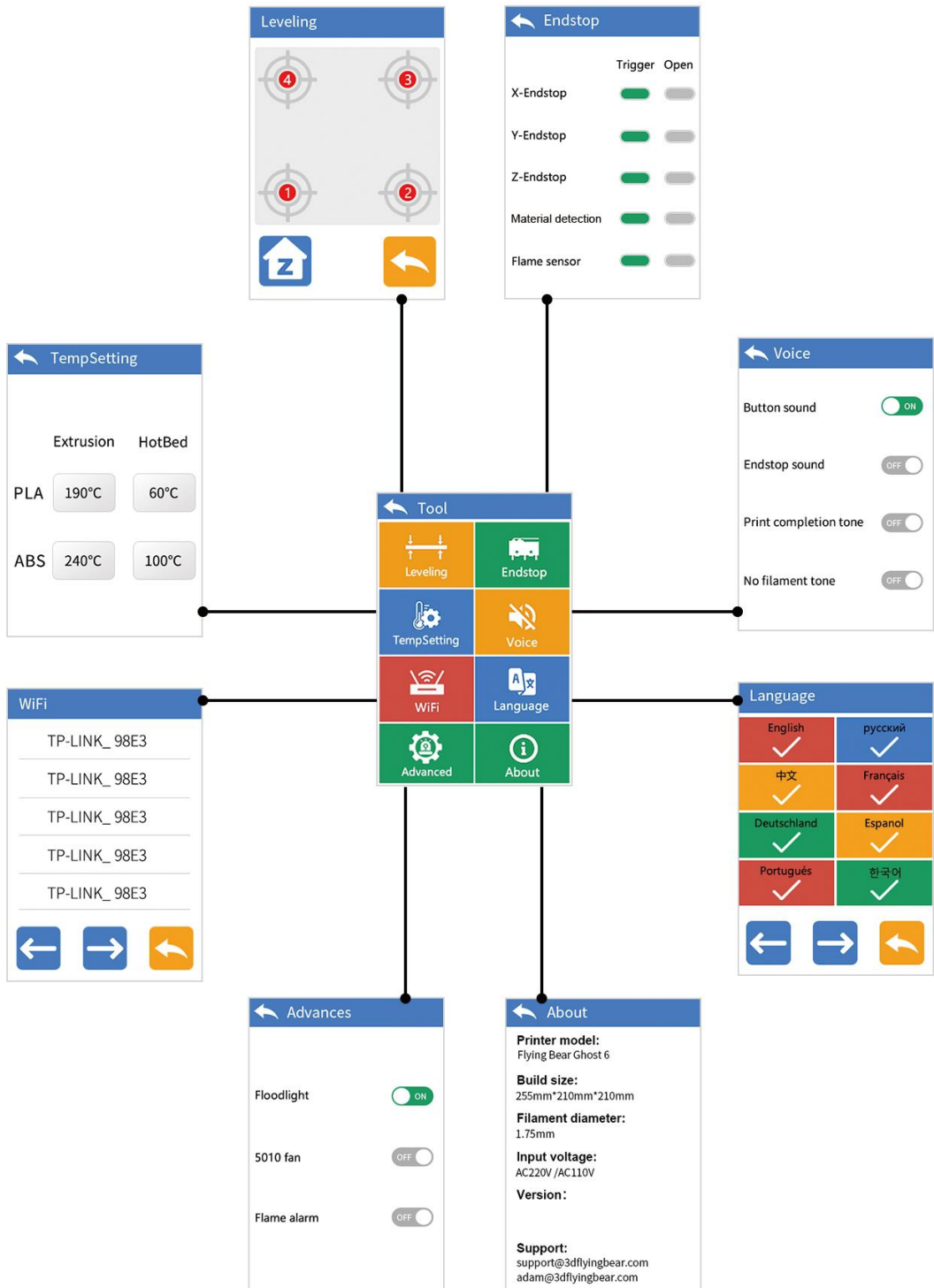
You should watch the video carefully and patiently when you encounter problems. If you can't solve the problem, please contact us in time. After-sale service: support@3dflyingbear.com.

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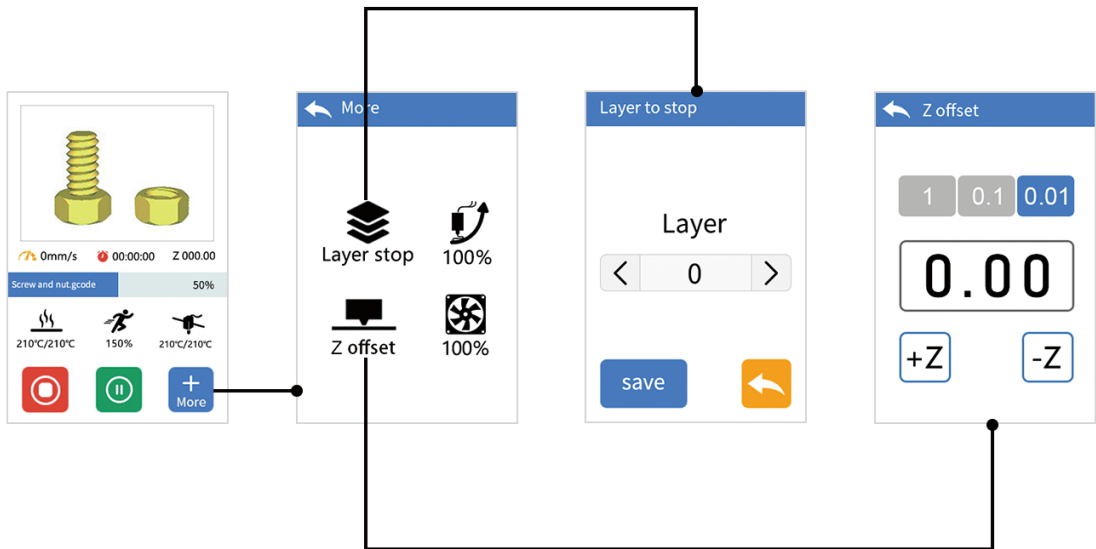
Touch screen function



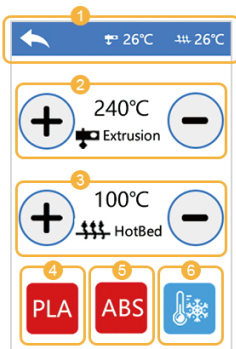
Touch screen function



Touch screen function



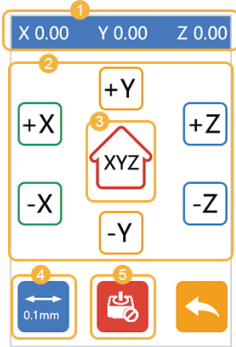
Preheat



- 1 Temperature display.
- 2 Adjust nozzle temperature.
- 3 Adjust the temperature of the hot bed.
- 4 Preheating PLA.
- 5 Preheating ABS
- 6 Stop heating nozzle and hot bed.

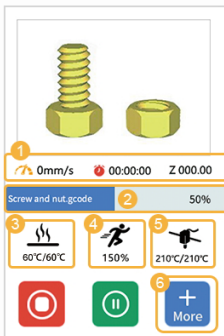
Touch screen function

Move



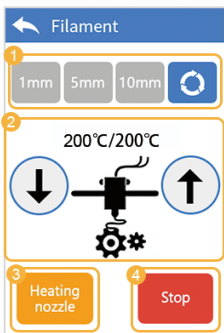
- 1 XYZ current position.
- 2 Controls the movement of XYZ axis.
- 3 XYZ returns to the origin at the same time.
- 4 Adjust the distance of each movement.
- 5 Turn off the stepper motor.

Printing



- 1 Status bar.
- 2 Print progress display.
- 3 Modify hot bed temperature.
- 4 Modify print rate.
- 5 Modify nozzle print temperature.
- 6 More functions
- 7 Set the number of layers to stop.
- 8 Modify the extrusion amount of the nozzle.
- 9 Adjust Z-axis printing height.
- 10 Modify fan rotation rate.

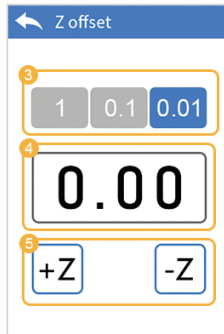
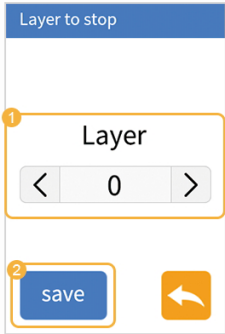
Filament



- 1 Continue Extruder feed key.
- 2 Extruder feed / discharge key and current temperature display.
- 3 Heat the nozzle to 200 degrees.
- 4 Stop nozzle heating.

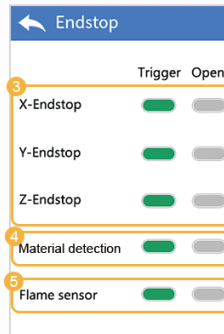
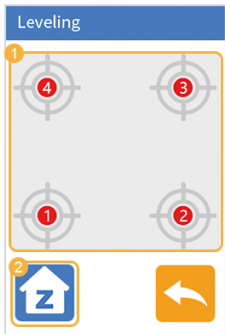
Touch screen function

Layer to stop and Z offset



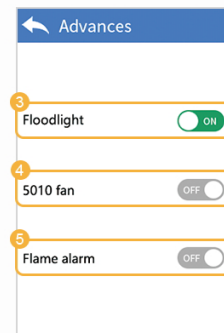
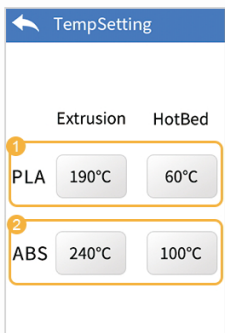
- 1 Set the number of layers to stop.
- 2 Save settings
- 3 Single offset
- 4 The total offset
- 5 Select offset direction

Leveling and Endstop



- 1 Move the nozzle to the corresponding 4 positions.
- 2 z axis goes back to its origin.
- 3 Monitor the XYZ limit switch for proper operation.
- 4 Filament detection switch
- 5 Flame Sensor switch

TempSetting and advanced



- 1 Preheating PLA
- 2 Preheating ABS
- 3 Floodlight switch
- 4 5010 fan switch
- 5 Flame alarm switch

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Hot Bed Leveling

Hot bed leveling video.

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



Hot bed leveling and first print video

step1: Press the power switch, Select "move" in the main interface, and then click "XYZ" to return all three XYZ axes of the printer to the origin.



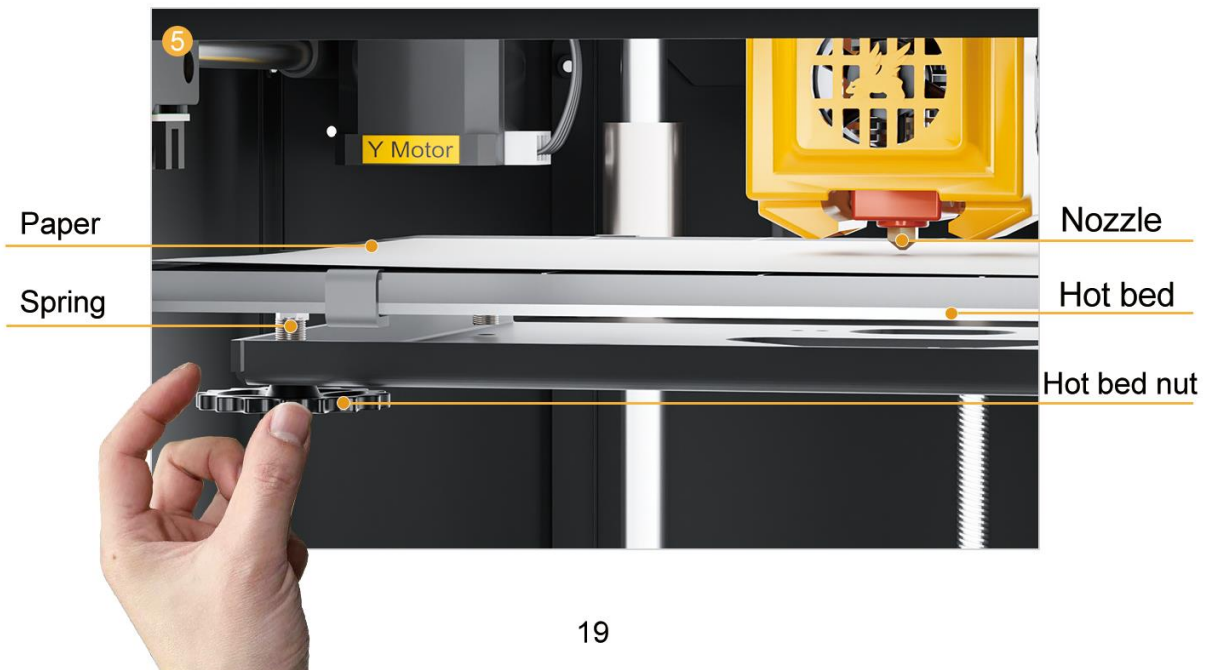
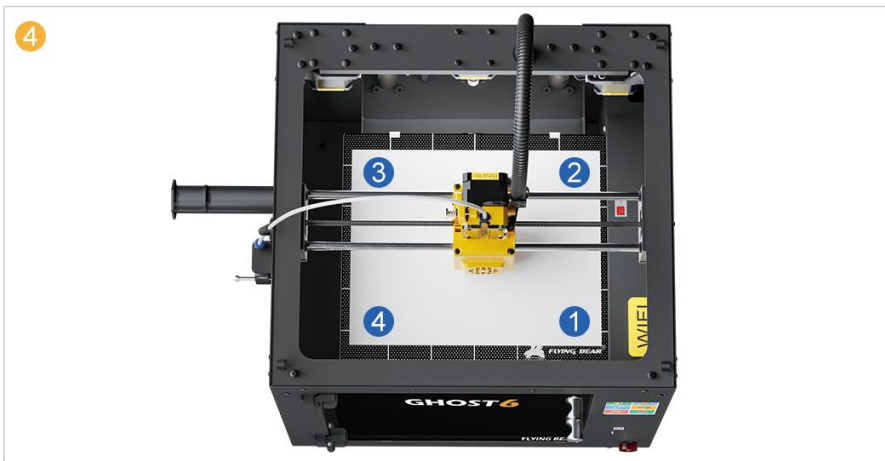
! In the leveling process, the nozzle and hot bed must be separated by paper. Do not scratch hot bed or nozzle.

step2: Click in the order shown below to open the leveling guide page.

- ① Click 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.
- ② Rotate the corresponding nut under the hot bed by hand so that the distance between the hot bed and the nozzle is the thickness of a piece of paper. (there is a resistance when pulling out the paper).

Hot Bed Leveling

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

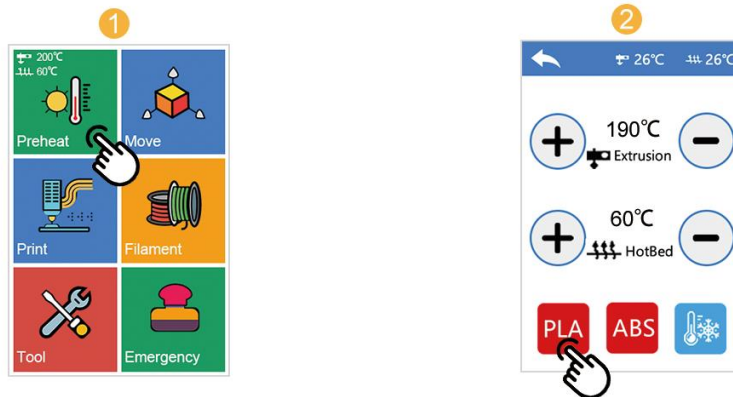


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First print

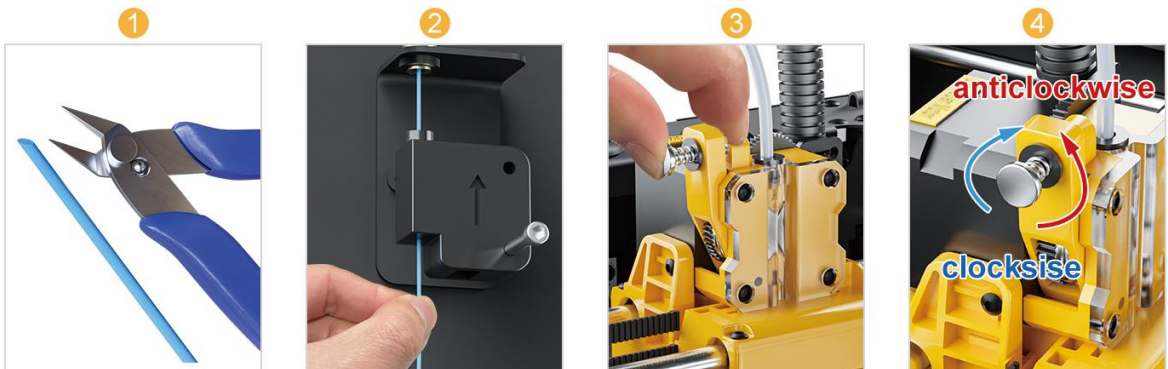
After the hot bed leveling is complete, we can start printing a model and verify that the hot bed is actually leveled. (We take printed PLA filament as an example)

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



2. Insert filament into the extruder.

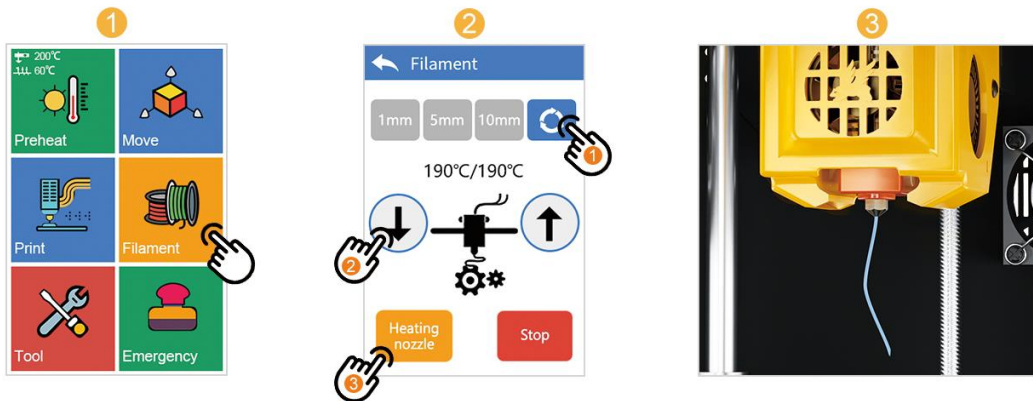
- ① The front end of trimming filament is 45°.
- ② Insert the filament into the filament detection sensor and enter the extruder through the Teflon tube.
- ③ Pry the extruder spring so that the filament can be inserted into the gear of the extruder, then through the extruder into the Teflon tube, and finally directly to the nozzle.
- ④ Rotate the knob of the extruder clockwise to compress the filament, and counterclockwise to loosen the filament. In the actual printing process, if the nozzle discharges normally, there is no need to adjust.



First print

3. After confirming that the filament enter the extruder.

After confirming that the filament enter the extruder, extrude the filament through the touch screen keys. **Note that the temperature must be above 190°C.** Click the feed arrow on the extrusion interface until the filament is extruded from the nozzle.



Note: The feed length cannot be selected in continuous feed mode. To select the feed length of the extruder, you must turn off the continuous feed button to select the feed length.

4. Install the tf card, then return to the main interface.

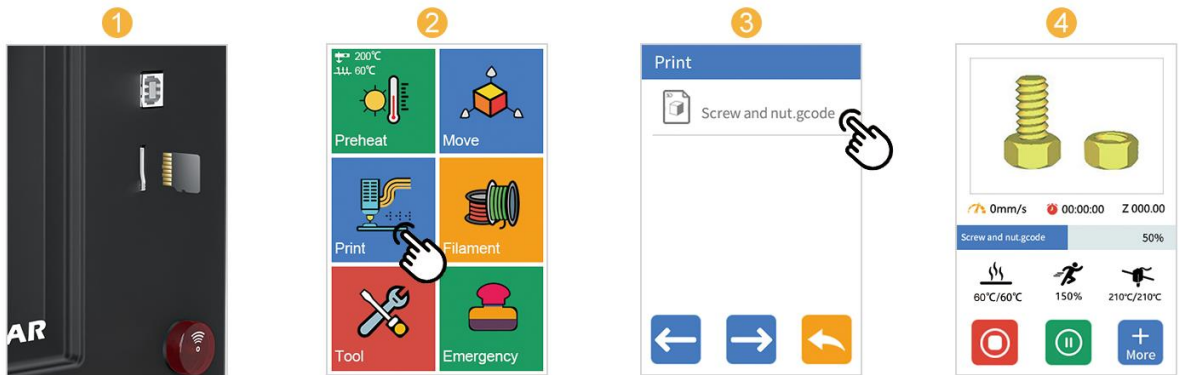
Install the tf card, then return to the main interface, and then select the model file in the printing interface. When the nozzle and hot bed are heated to the set temperature, the machine will start printing.

If there is no printed file of screws and nuts in your memory card, you can scan this QR code to download it by yourself.



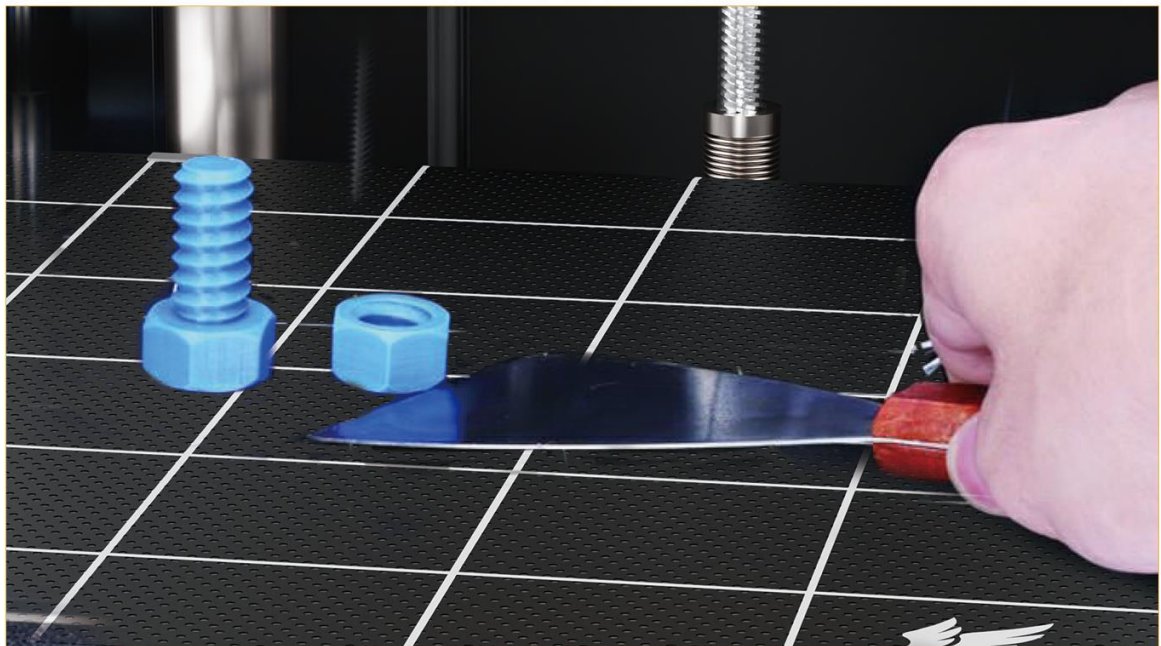
Screw and nut.gcode

First print



After printing, hot bed will cool down slowly. Only after cooling can the model be removed.

- ① In the process of removing the model, be careful not to hurt your hand.
- ② The 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 model.
- ③ First raise a small hole with a shovel, and then shovel the whole model with a shovel.



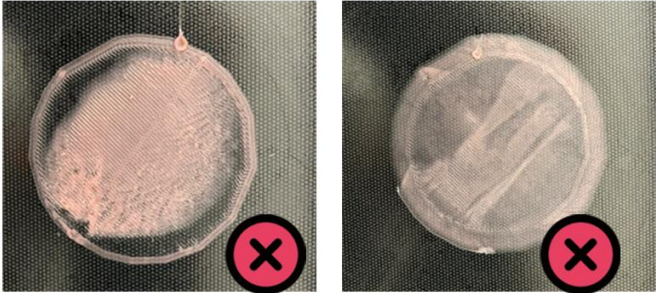
First print



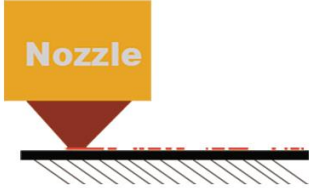
Important Tip:

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

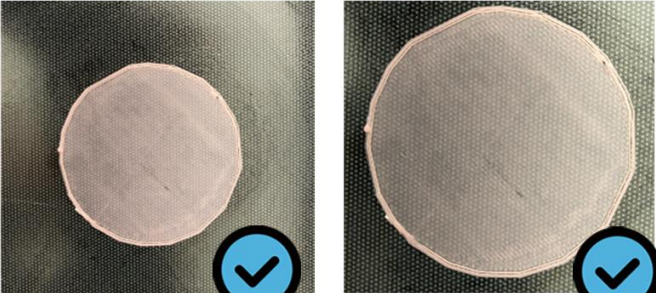
A



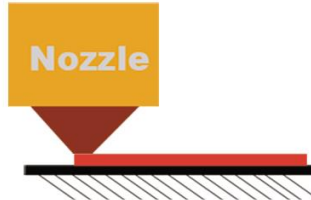
nozzle and the hot bed are too close



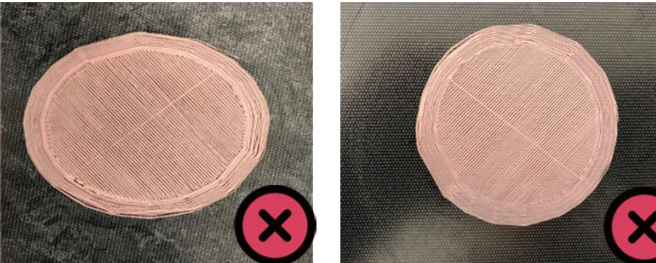
B



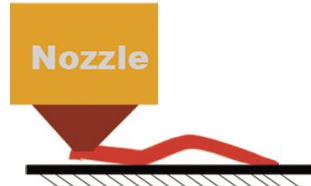
distance is suitable
extrusion is normal



C



nozzle and the hot bed are too far away



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

② If A or C occurs, the Z compensation parameter can be adjusted during the printing process, Z+ is away from the nozzle, Z - is close to the nozzle.



8

Software installation

scan the QR code to download the G-code file of the screw and nut model.

After the filament are loaded, scan the QR code to download the G-code file of the screw and nut model, and then store it in the storage card.

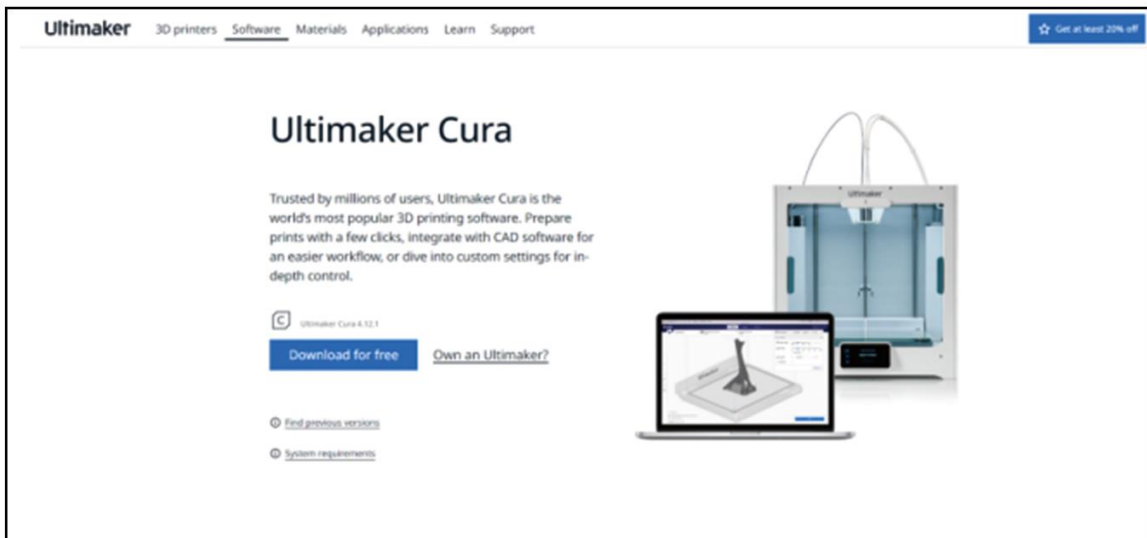


Slicing software installation video

1.Download the latest slicing software first.

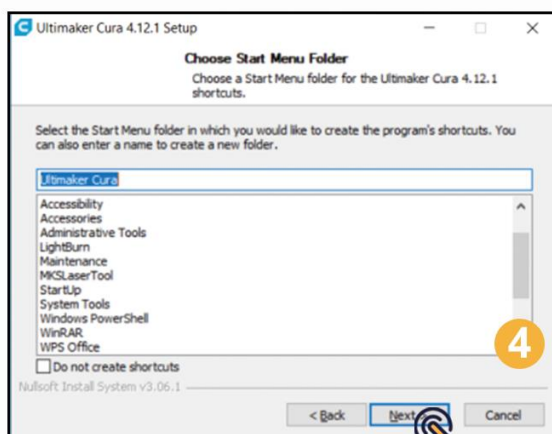
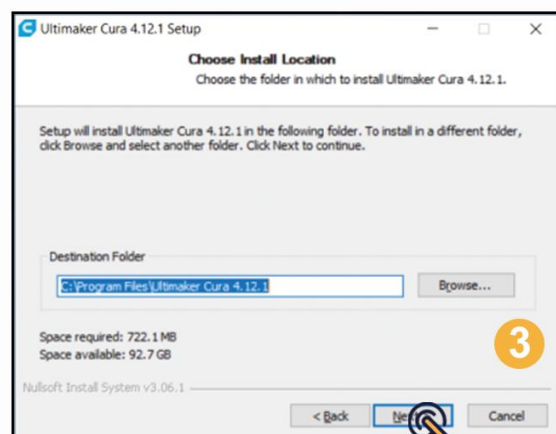
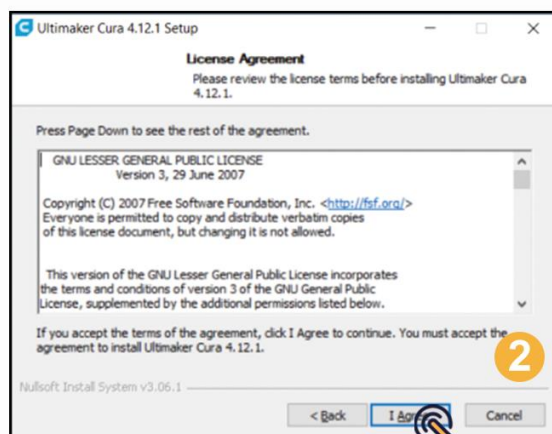
Software download website

<https://ultimaker.com/software/ultimaker-cura>

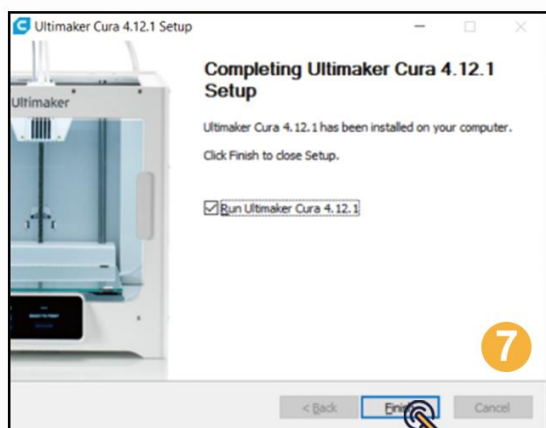
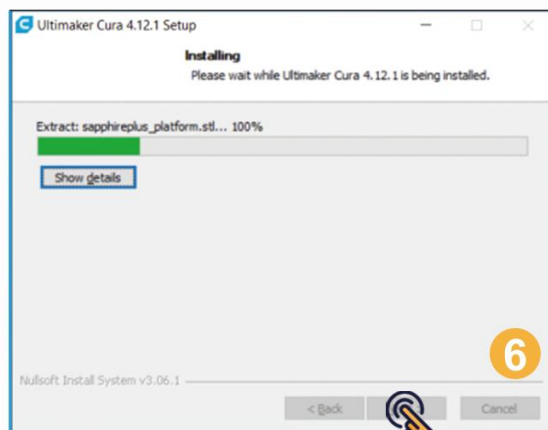
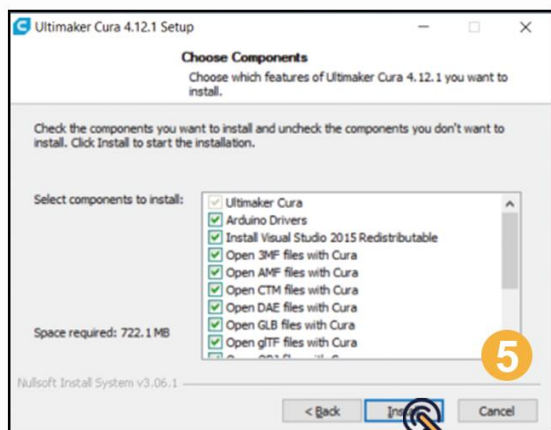


2.Follow these steps to complete the slicing software installation.

Software installation



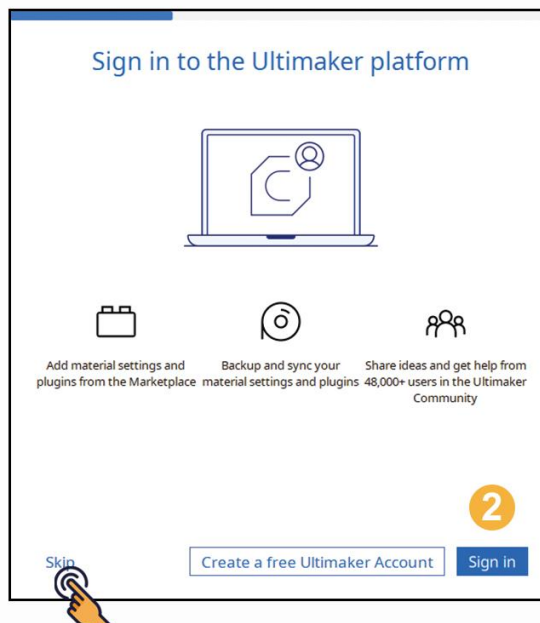
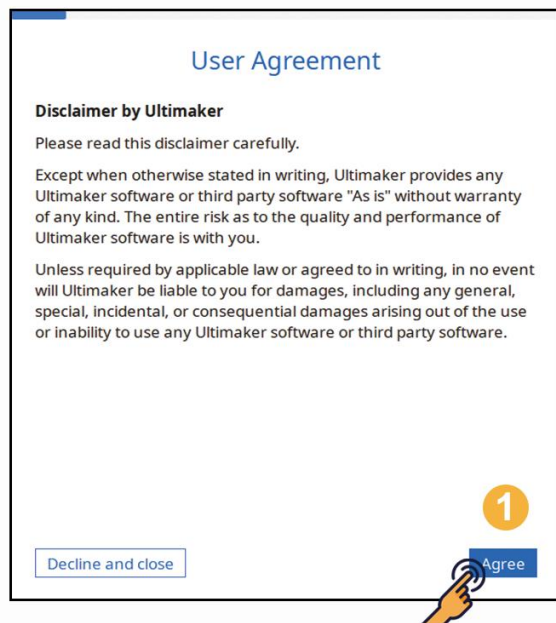
Software installation



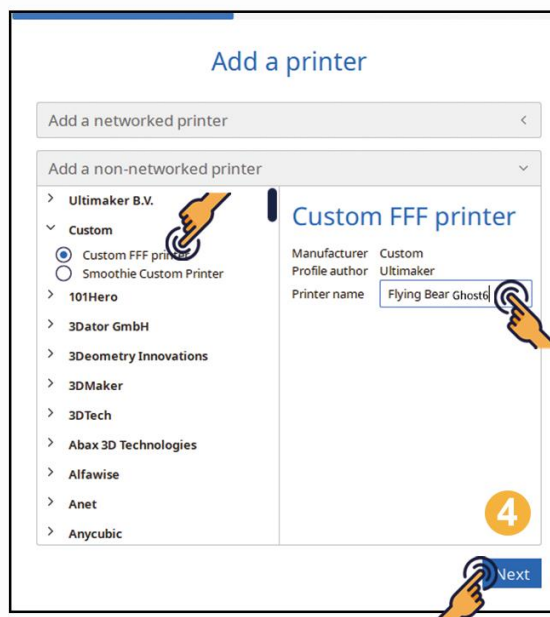
Software installation

3. Add printer

After the software is installed, you need to add the printer according to the following steps.



After the introduction of the software solution, you will see the following setting interface. Please add and set the printer according to the following steps.



Software installation

This sets the G-code code for the printer.

Machine Settings
Flying Bear Ghost6

Printer

Printer Settings

X (Width) 255.0 mm
Y (Depth) 210.0 mm
Z (Height) 210.0 mm
Build plate shape Rectangular
Origin at center
Heated bed
Heated build volume
G-code flavor Marlin

Start G-code

```
G21 ;metric values
G90 ;absolute positioning
M82 ;set extruder to absolute mode
M107 ;start with the fan off
G28 X0 Y0 ;move X/Y to min endstops
G28 Z0 ;move z to min endstops
G1 Z3.0 F1500.0 ;2 moves up 3mm
G92 X0 Y0 ;zero the X/Y length
G92 E0 ;zero the extruded length
G1 Z3.0 F1500.0 ;2 moves up 3mm
G1 X10.3 Y20.0 Z0.28 F3000.0 ;extrusion preview before formal printing
G1 X10.3 Y170.0 Z0.28 F1500.0 E20
G1 X10.0 Y170.0 Z0.28 F3000.0
G1 X10.0 Y30.0 Z0.28 F1500.0 E40
G1 F5000
M117 Printing
G5
```

Extruder 1

Printhead Settings

X min -20 mm
Y min -10 mm
X max 10 mm
Y max 10 mm
Gantry Height 210.0 mm
Number of Extruders 1
Apply Extruder offsets to GCode

End G-code

```
M104 S0 ;turn off extruder
M140 S0 ;turn off the hot bed
M84 ;disable motors
M107
G91 ;relative positioning
G1 E-1 F300 ;retract the filament
G1 Z+0.5 E-5
G28 ;move X/Y to min endstops
M84 ;steppers off
G90
M300 P300 S4000
```

01 02 5

Fill in the Start G-code

```
G21
G90
M82
M107
G28 X0 Y0s
G28 Z0
G1 Z3.0 F3000
G92 E0
G1 X20 Y20.0 Z0.28 F3000.0
G1 X20 Y170.0 Z0.28 F1500.0 E12
G1 X20.3 Y20.0 Z0.28 F1500.0 E18
G92 E0
G1 Z1.0 F3000
M117 Printing
G5
```

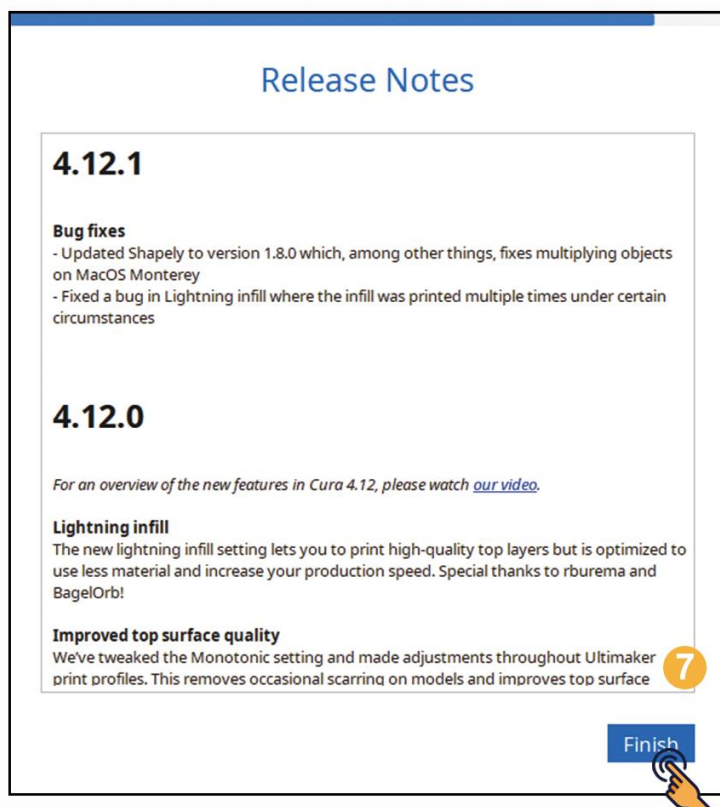
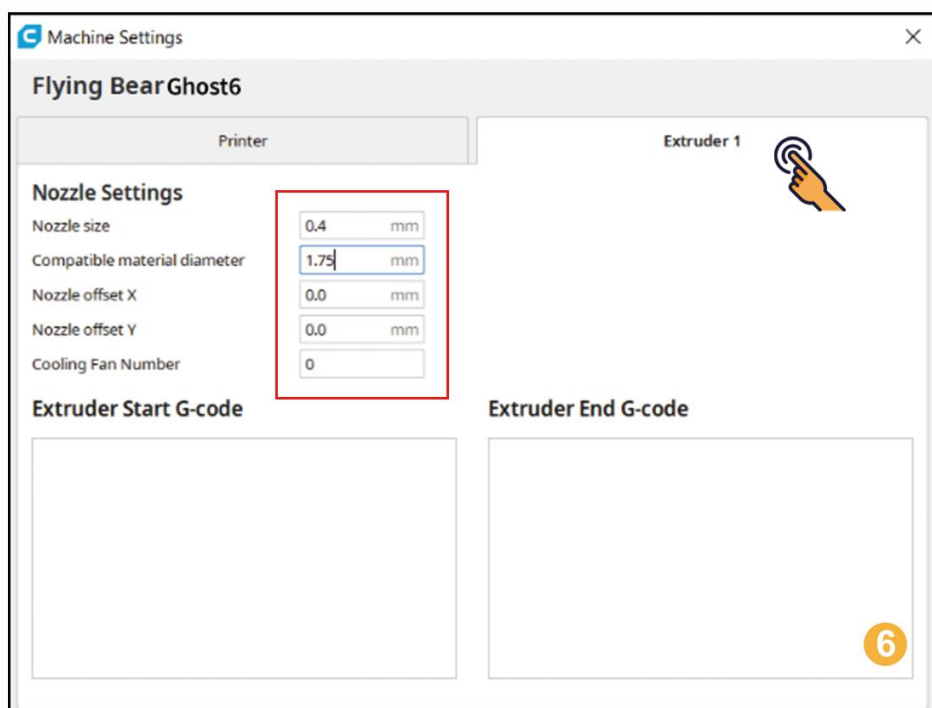
01

Fill in the End G-code

```
M104 S0
M140 S0
M84
M107
G91
G1 E-1 F300
G1 Z+0.5 E-5
G28 X0 Y0
M84
G90
M300 P300 S4000
```

02

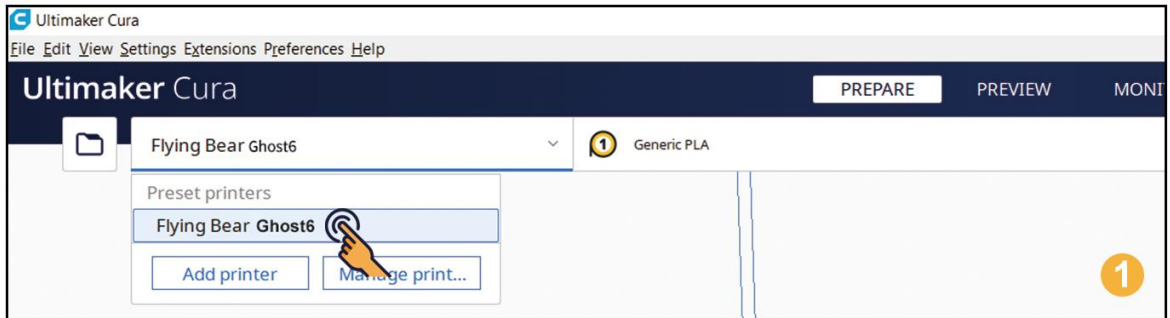
Software installation



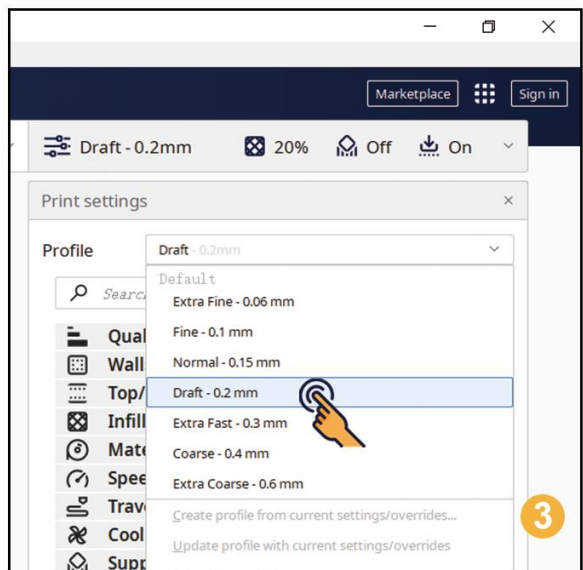
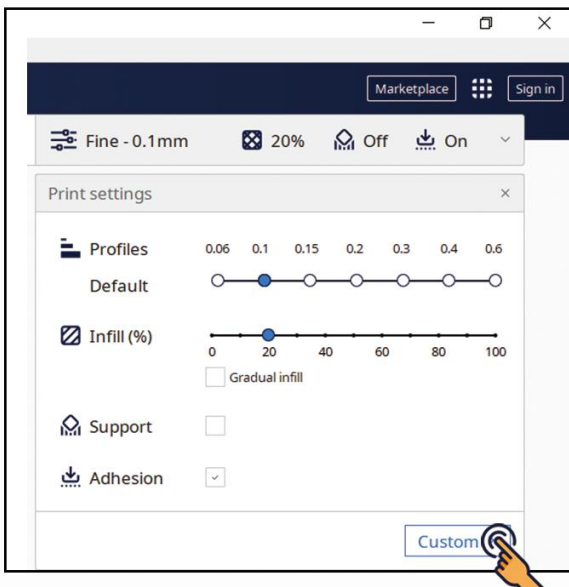
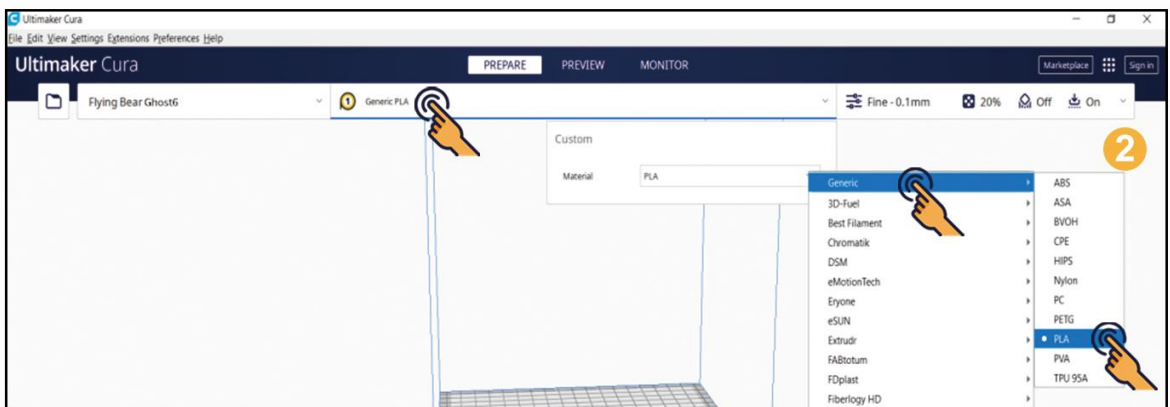
Software installation

4. Set print parameters

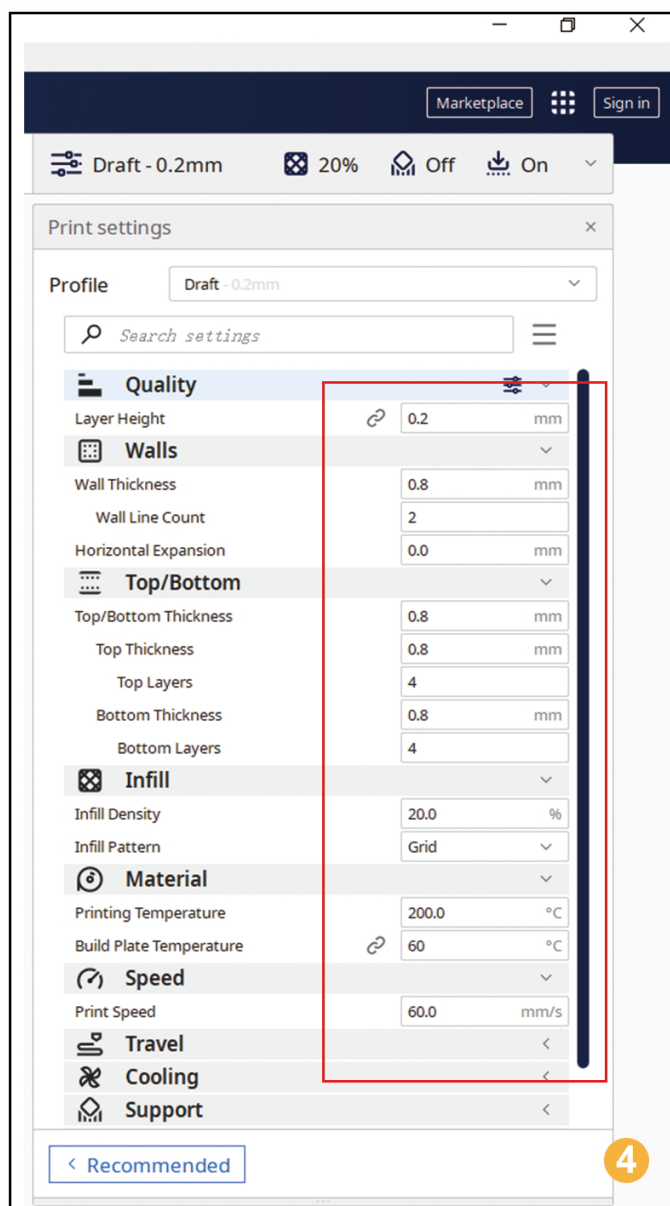
After adding the machine, we need to set the slice parameters.



General filament selection - PLA (we take PLA filament printing as an example).



Software installation



Cura parameter introduction

Layer height: the printing thickness of each layer is the key parameter to determine the printing quality. It is usually set between 0.1-0.3.

Filling density: the interior of the model is generally hollow. In order to save materials, improve printing quality and printing success rate, it is generally set to about 20%.

Print temperature: sets the print temperature of the nozzle. PLA is generally set at 190-220 °C and ABS is generally set at 230-240 °C.

Hot bed temperature: set the hot bed temperature. PLA is generally set at 40-60 °C and ABS is generally set at 80-110°C.

Software installation

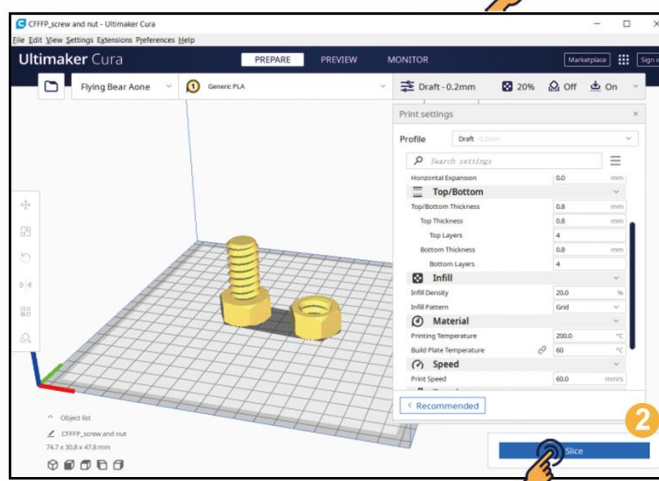
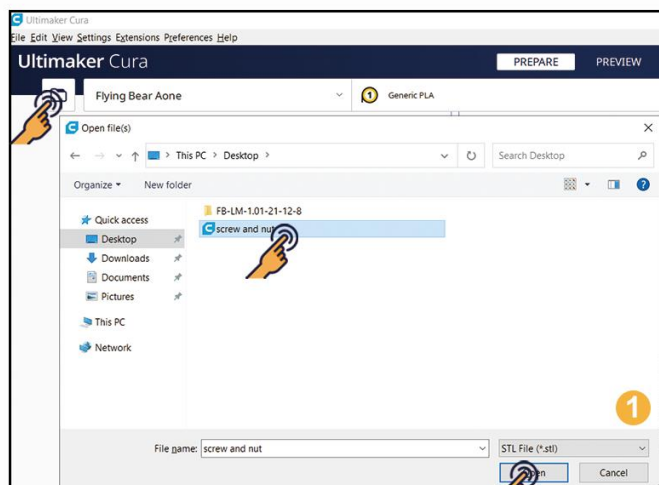
4. Model slice

After parameter setting, open the prepared STL file and slice it into gcode file. This process is slicing.



Screw and nut.stl

- ① Open STL file through slicing software.
- ② Slice and save the file to TF card.
- ③ Refer to the first printing instructions and follow the steps to start printing.



9

Wifi printing introduction

scan the QR code to download the G-code file of the screw and nut model.

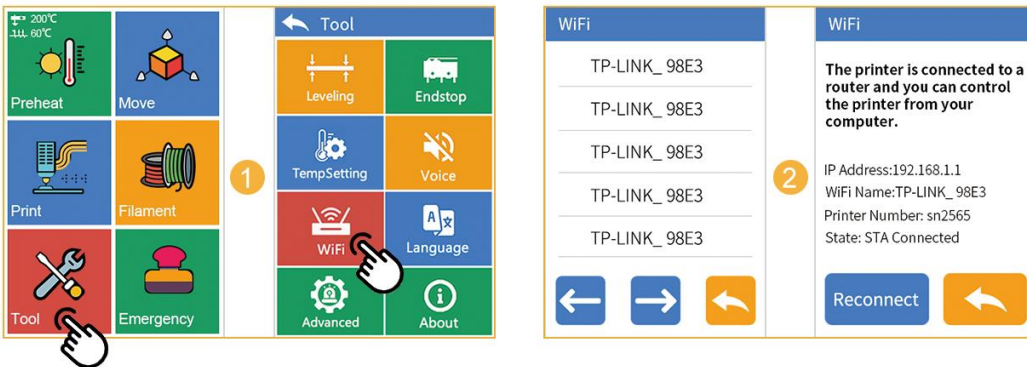
In addition to printing with an TF card, you can also use WiFi. Before using WiFi function, you must install the cura plugin first. You can follow the steps below to install the plugin. You can also scan the QR code to view the WiFi printing video tutorial.



WiFi printing video

1. Follow the steps below to connect the printer to the router.

- ① Open the wifi list, wait for a while, choose your own router signal.
- ② Enter the password to get the IP address.



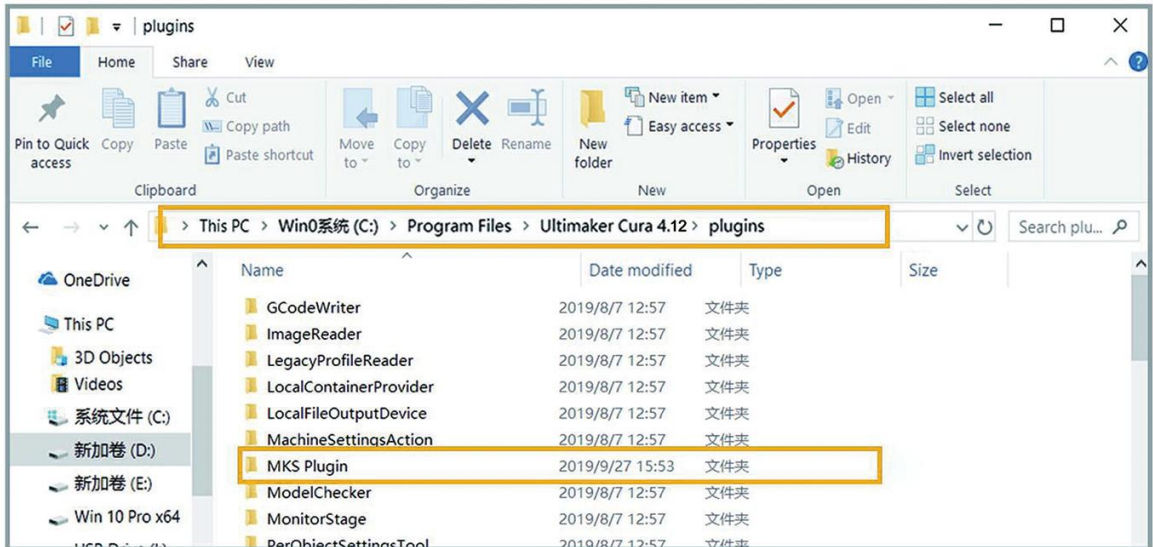
2. Scan the QR code to download the plugin "FlyingBearIntegration".

- ① Then open the Cura installation folder "plugins". (Find the folder according to the location you installed).
- ② Put the folder "FlyingBearIntegration" in the folder "plugins".



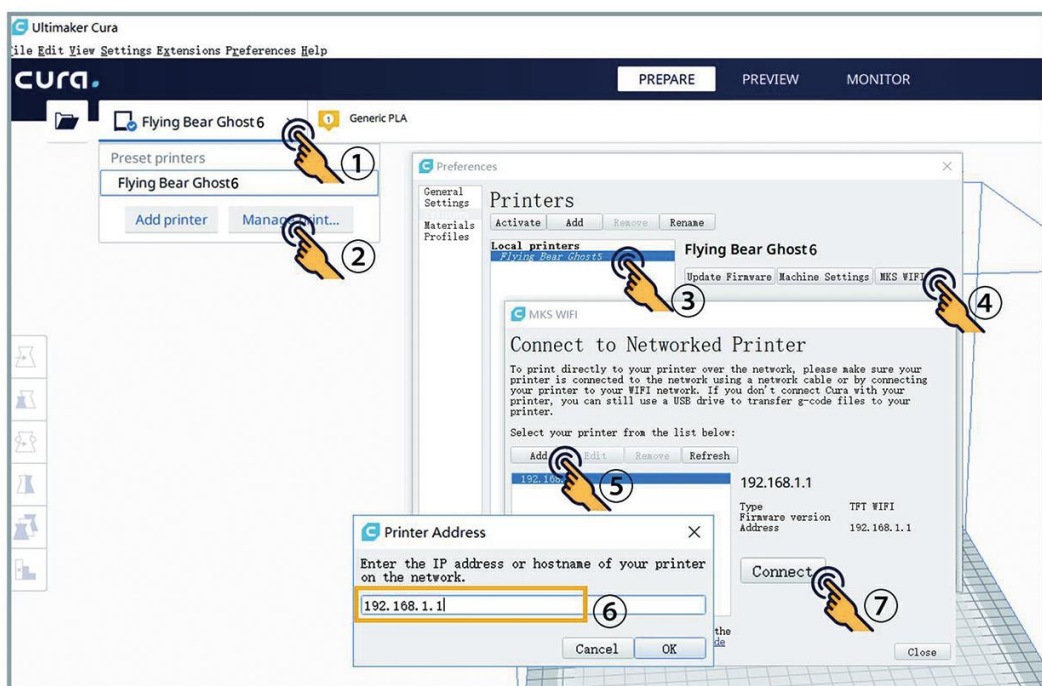
MKS Plugin

Wifi printing introduction

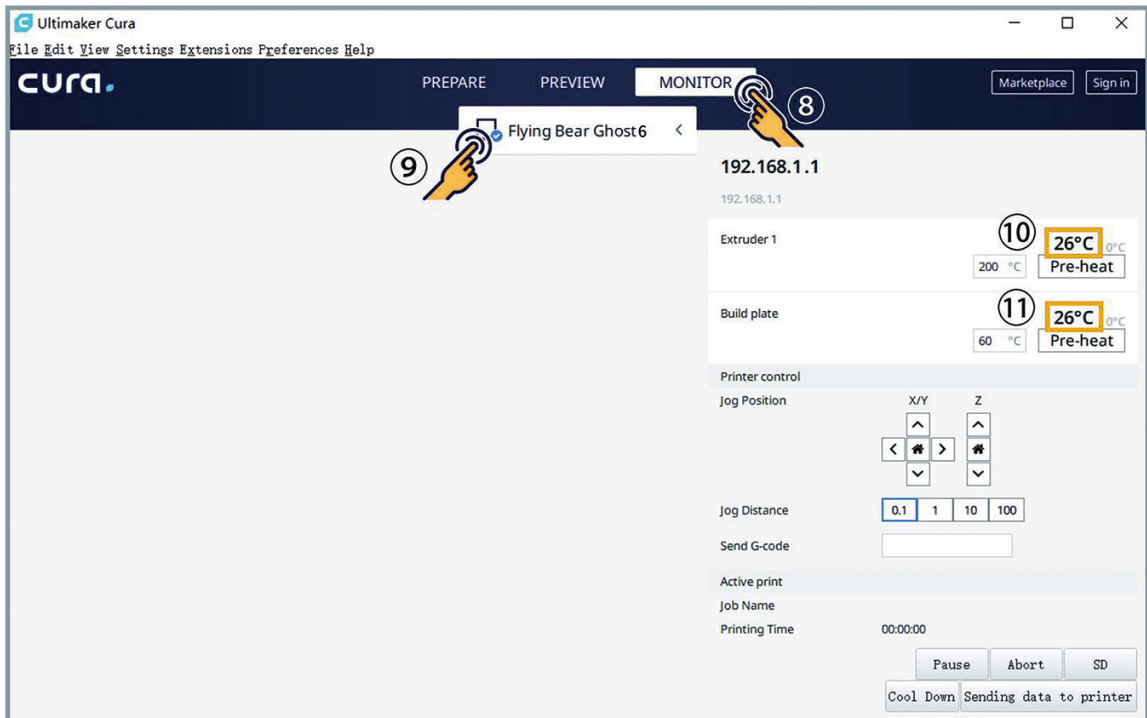


3. After installing the plugin, restart Cura.

- ①/⑤ After the plugin installation is complete, restart the slicing software, then open MKS WiFi.
- ⑥/⑦ Enter the IP address displayed on the touch screen of the printer.
- ⑧/⑩ Then open the WiFi control page, if the connection is successful, the temperature of the nozzle and hot bed will be displayed on the page.



Wifi printing introduction



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



screw and nut.stl

- ①/④ Scan the QR code to download the stl file, then open the file with the slice software and click on the slice.
- ⑤/⑥ After the slicing is complete, select "print over Flying Bear Ghost 6" 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.
- ⑦/⑧ If the file name exceeds 20 characters, the WiFi transmission will fail. If you encounter this problem, shorten the file name.

Wifi printing introduction

1. Click the 'Open' icon in the top toolbar.

2. Select the file 'screw and nut.stl' in the 'Open file(s)' dialog.

3. Click the 'Open' button in the dialog.

4. Click the 'Slice' button in the software interface.

5. Click the 'Save to File' button in the 'Print over Flying Bear Ghost5' dialog.

6. Click the 'Print over Flying Bear Ghost5' button in the 'Print over Flying Bear Ghost5' dialog.

7. Click the 'Print over Flying' button in the 'Print over Flying Bear Ghost5' dialog.

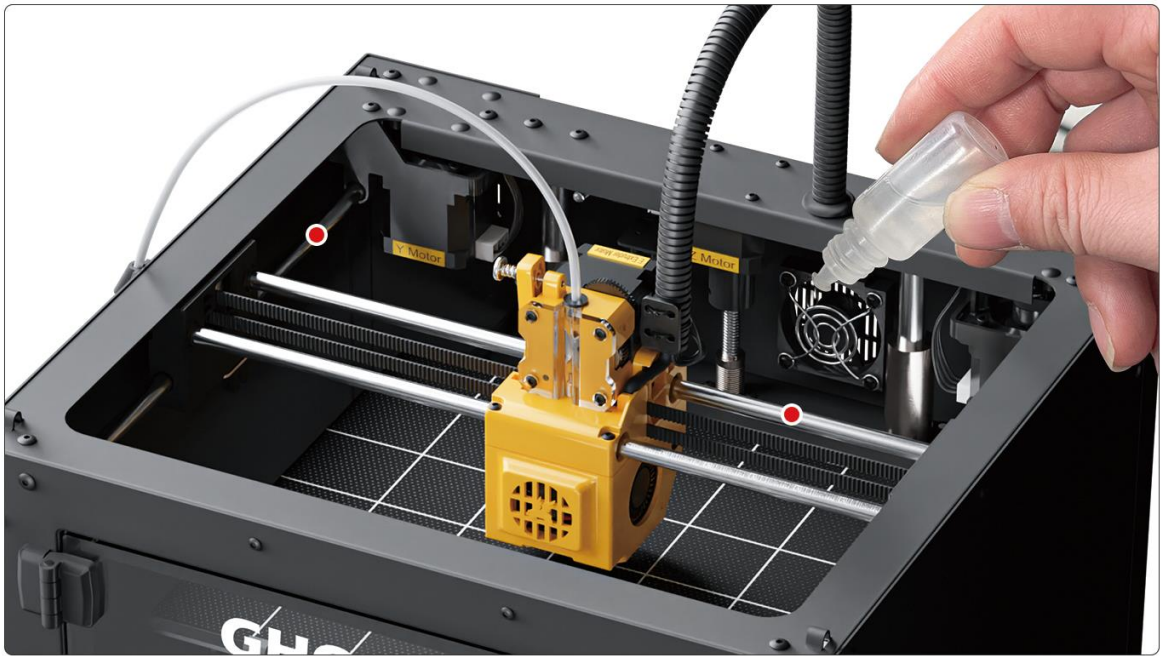
8. Click the 'Cancel' button in the 'Sending Data' dialog.

10

Equipment maintenance

The equipment needs regular maintenance.

Equipment maintenance linear guides and T-shaped screws need regular maintenance. After 2 to 6 months of continuous use, if there is abnormal noise or movement is not smooth, you need to add grease or lubricant.





1 The TF card cannot recognize or display the file?

- ① The format of TF card is incorrect. The file must be in gcode format.
- ② The TF card may be damaged during transportation. Please replace it with a new TF card.
- ③ Restart the print.

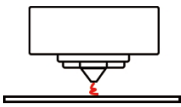
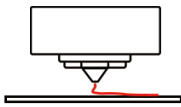

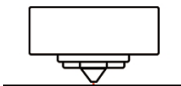
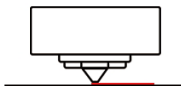

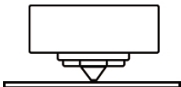
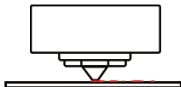

2 The printer cannot return to the origin, or X / Y / Z makes noise during the return to the origin?

- ① The motor wiring may be in poor contact. Please pull it out and insert it again.
- ② In case of noise caused by long-term use, lubricate the guide rail and screw rod.

3 When printing, the filament do not stick to the hot bed?

- ① If the distance between the hot bed and the nozzle is too far, turn the hot bed adjusting nut clockwise on the unbonded side.
- ② The whole hot bed is not leveled. Please refer to page 18-19 for specific operation.
- ③ Printing speed is too fast, please reduce the "initial layer speed" to 60 when slicing.
- ④ If the appearance of the model is particularly complex, some solid glue can be properly applied on the hot bed.

Trouble-shooting

clause 3		
		 <p>The nozzle is too far away from the platform, so the filament can not adhere to the platform.</p>
		 <p>Filament are extruded evenly, just sticking on the platform.</p>
		 <p>The nozzle is too close to the platform, and the filament are not extruded enough, even scraping the platform.</p>

4 Nozzle blockage during printing?

- ① Heat the nozzle and clean the nozzle with a through needle.
- ② If the nozzle temperature is too low, increase the nozzle temperature (PLA ≤ 230 °C).
- ③ The Teflon pipe is not inserted to the bottom.
- ④ Please check whether the print head fan rotates normally.
- ⑤ If this happens after printing for a long time, the motor of the extruder may overheat, reducing the printing speed.
- ⑥ If the above method can not solve the problem, you can replace the nozzle, scan the QR code on the Page 41 and watch the video of replacing the nozzle.

Trouble-shooting

5 The hot bed / nozzle temperature on the touch screen is displayed as a negative value?

- ① Poor contact of thermistor wire of hot bed / nozzle.
- ② The thermistor wire of hot bed / nozzle is broken.

6 How to solve the problem after the machine is turned on?

1. When the screen appears "Err: MAXTEMP PRINTER HALTED Please Reset".

- ① The thermistor of the hot bed is short circuit or the thermistor of the heating block is short circuit.

2. When the screen appears "Err: MINTEMP PRINTER HALTED Please Reset".

- ① The hot bed thermistor is disconnected. At this time, the hot bed temperature on the display screen is negative. It will not alarm when it is not heated, but will alarm immediately when it is heated.

3. When the screen appears "Heating Failed PRINTER HALTED Please Reset".

- ① The thermistor of the heating block is disconnected. At this time, the temperature on the display screen is negative, and no alarm will be given when it is not heated.
- ② The thermistor in the heating block falls off, and the display screen shows the temperature at room temperature. There is no alarm when there is no heating state.
- ③ When the heating tube of the heating block is disconnected, the temperature on the display screen is displayed as room temperature without alarm in the non-heating state.
- ④ When the hot bed heating part is disconnected, the temperature on the display screen is room temperature, and there is no alarm when there is no heating state.

Note: the interval between heating start and machine alarm is about 60s.

4. A black screen appears when the machine is turned on.

- ① The fan or heating tube is short-circuited.

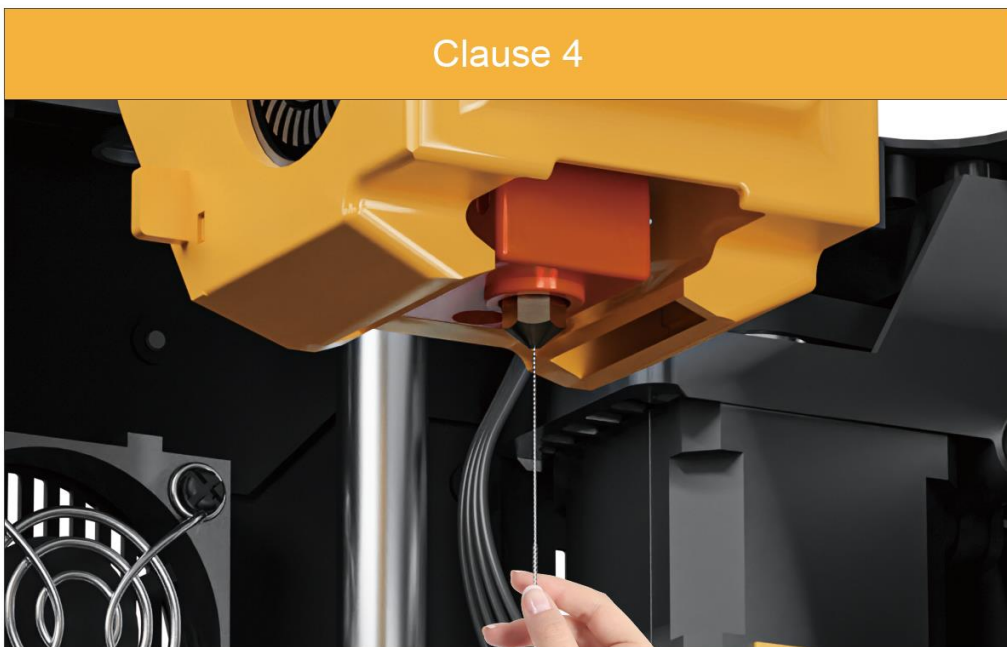
5. When the screen appears "THERMAL RUNAWAY PRINTER HALTED Please Reset".

- ① Generally, the temperature fluctuation is large, or the heating rod, thermal contact is not good, fell out.

Trouble-shooting

7 The extruder motor slips and makes an abnormal sound, grinding filament, Please look at page 38-40.

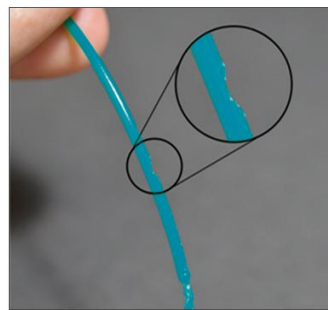
- ① If the nozzle temperature is too low, increase the nozzle temperature (PLA ≤ 230 °C).
- ② The printing speed is too fast. Please reduce the printing speed.
- ③ Check whether the nozzle is blocked, refer to Clause 4.



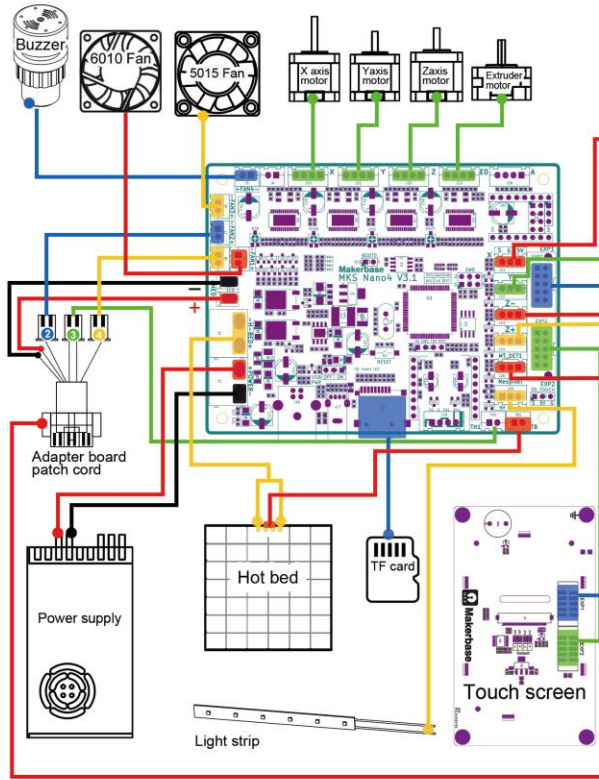
Clause 4



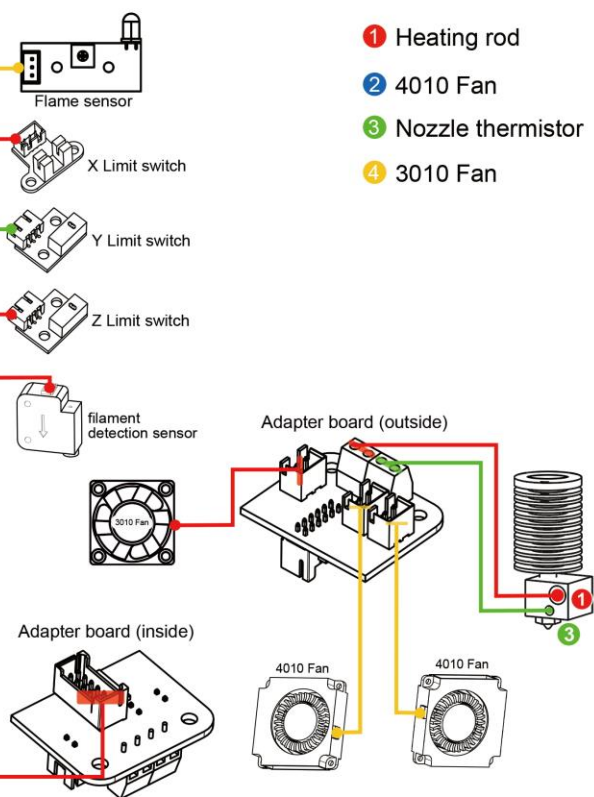
Replacing nozzles tutorial



Clause 7



- 1 Heating rod
- 2 4010 Fan
- 3 Nozzle thermistor
- 4 3010 Fan





Youtube channel



Facebook group



Official website



Contact us