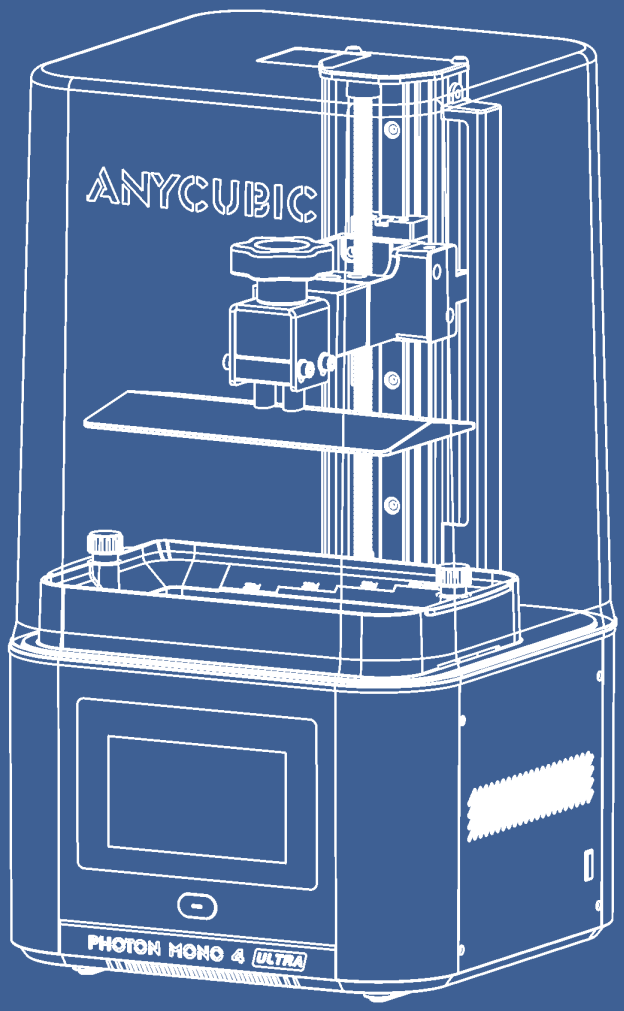
ANYCUBIC



Photon Mono 4 Ultra

User Manual

Dear customer,

Thank you for choosing Anycubic products.

Maybe you are familiar with 3D printing technology or have purchased Anycubic printers before. However, we still highly recommend you read this manual carefully, as the installation techniques and precautions can help you avoid any unnecessary damage or frustration.

Please visit https://support.anycubic.com to contact us if you have any questions. You can also learn more information from the website, such as software, videos, models.

Anycubic support center

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Team Anycubic

Safety Instructions

Always follow the safety instructions during assembly and usage, to avoid unnecessary damage to the 3D printer or individual injury.

Please contact our Customer Service if you have any issues after receving the products.

In case of emergency, please immediately cut off the power of the 3D printer and contact our technical support.

UV light is harmful to the eyes; please avoid direct contact. When operating, wear protective equipment such as anti-UV goggles and gloves.

Anycubic 3D printer includes components that can cause injury.

Be cautious when using the scraper, and make sure to orient the sharp parts of machine and tool away from people.

Keep the Anycubic 3D printer and its accessories out of the reach of children.

Vapors or fumes may be irritating at operating temperatures. Always use the Anycubic 3D printer in an open and well ventilated area.

Do not expose Anycubic 3D printer to any water or rain environment.

Use Anycubic 3D printer in an environment with a temperature of 8℃-40℃ and a humidity of 20%-50%. For optimal performance, do not exceed this range. Also, avoid direct sunlight exposure.

Do not disassemble Anycubic 3D printer, please contact technical support if you have any questions.

FCC-ID:2AXYK-MONO4ULTRA
CMIIT ID:24J44VY80436
214-240359

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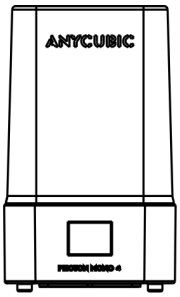
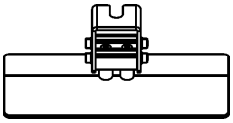
Product Overview

The pictures are for reference only. Please comply with the actual products.

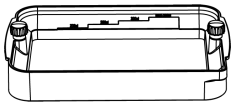
In the Box



Photon Mono 4 Ultra

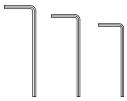


Print platform * 1

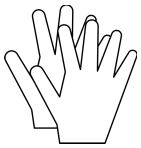


Resin vat * 1

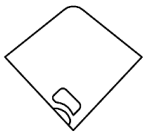
Screen protector kit



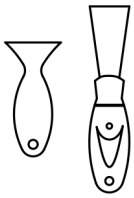
Hex key set



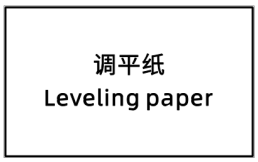
Protective equipment



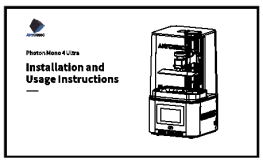
Funnels



Scraper * 2

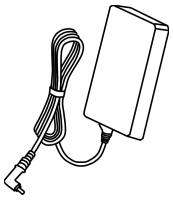


Leveling paper



Manual * 1

USB drive * 1



Power adapter

Technical Specification

Operating System

System	Photon Mono 4 Ultra
Touch Screen	4.3-inch Capacitive Screen
Software	Anycubic Photon Workshop (also compatible with other software)
Connectivity	USB Drive, WLAN

Specifications

LCD screen	7 inch 10K
Light source	COB light
XY Resolution	9024* 5120
Z axis Accuracy	0.01 mm
Suggested Layer Thickness	0.01 ~ 0.15 mm
Power Adapter Output	24V ⎓3A

Physical Dimensions

Dimension	231 mm(L) *236 mm(W) *430 mm(H)
Build volume	153.4 mm(L) *87 mm(W) *165 mm(H)
Weight	5 kg

WLAN

Frequency Range	2.4 G (2.400~2.4835 GHz)
Work Mode	AP, STA, AP+STA mode

Recommended Print Parameters

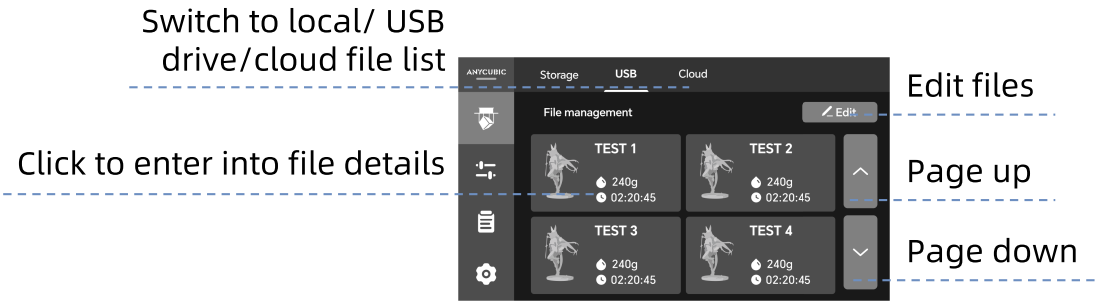
Parameters Group	① Default Resin_Normal	② Default Resin_Fast	③ High Speed Resin
Layer Thickness	0.05 mm	0.1 mm	0.1 mm
Normal Exposure Time	2.6 s	3 s	1.8 s
Off Time	1 s		
Bottom Exposure Time	30 s	30 s	15 s
Bottom Layers	5	5	4
Z Lift Distance	5 mm	5 mm	5 mm
Z Lift Speed	8 mm/s	20 mm/s	20 mm/s
Z Retract Speed	8 mm/s	20 mm/s	20 mm/s
Anti-alias	1		
Notice	1.If the print object needs high accuracy, please use **group ①** and modify the anti-alias level as 16 and the image blur as 3. 2. The **group ②③** apply to the model whose hollowed thickness is no more than 2mm. 3. The **group ②③** can significantly increase the print speed by cases test. To ensure the print success and print speed, do not modify the parameters casually. 4. The **group ②③** must work with the ACF release film this printer provided to avoid print failure. The film can be used to print 45000 layers. 5. The **group ③** only apply to Anycubic high speed resin. 6. Refer to 16-17 pages for the instructions of parameter groups.		

--The data above root in Anycubic lab, only for reference.

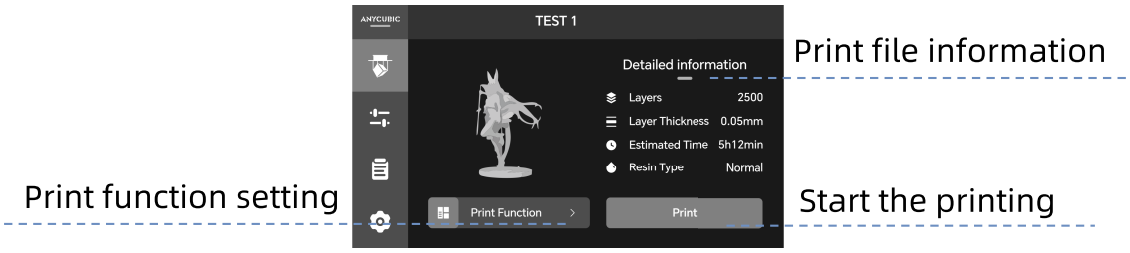
Note: The current interface is for reference only. Please refer to the latest firmware for accurate information.

Print

Print:

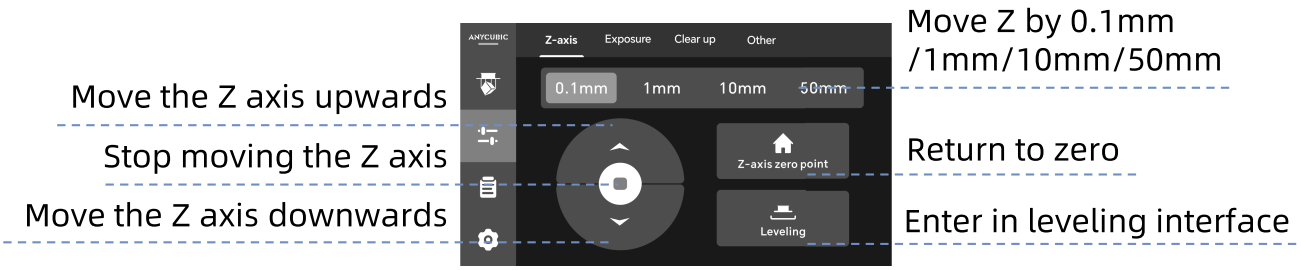


File Details:

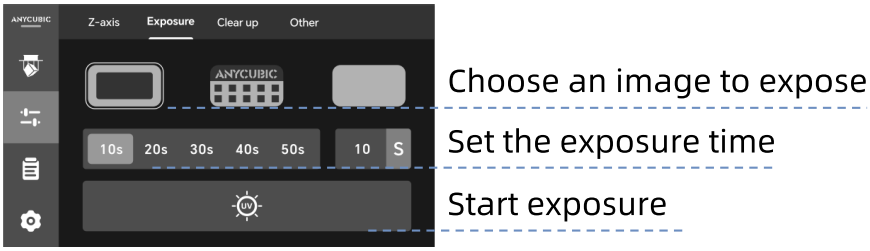


Tools

Z-axis:

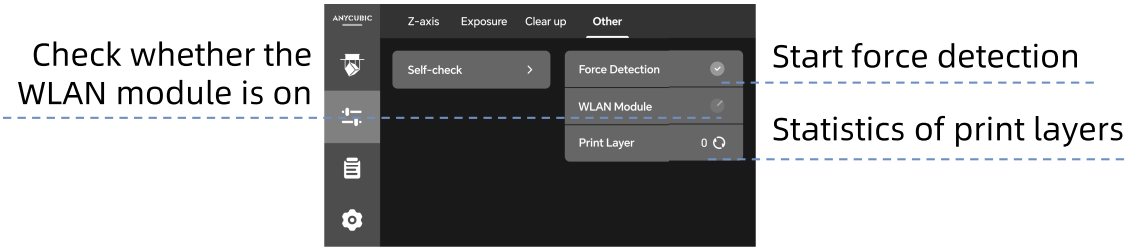


Exposure:



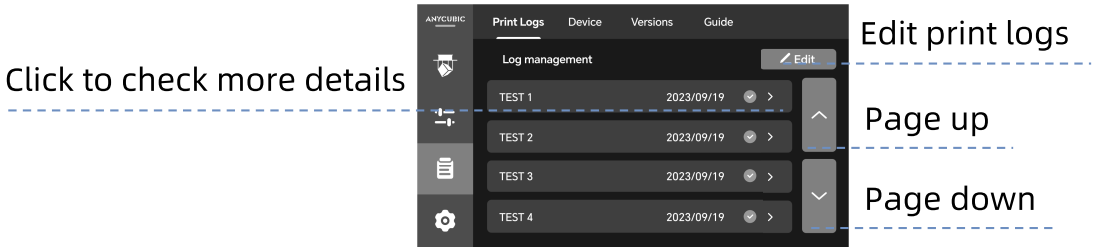
Clear up:

Other:

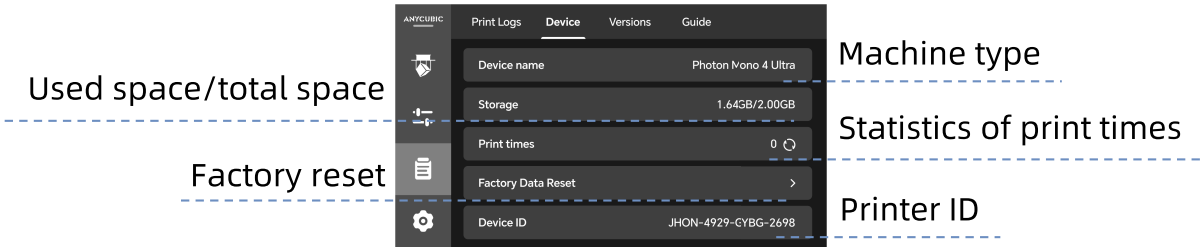


Information

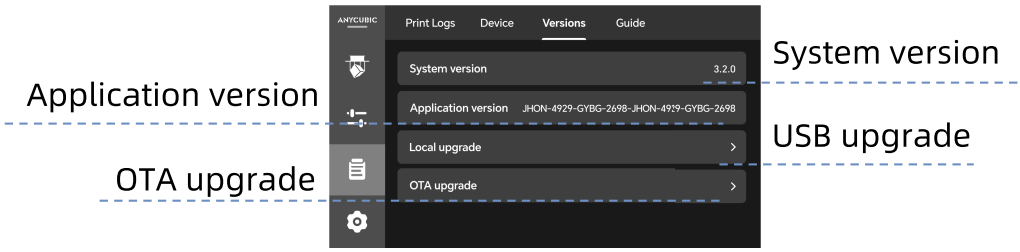
Print logs:



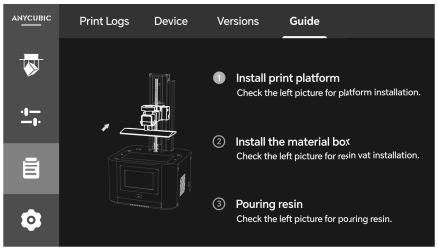
Device:



Versions:

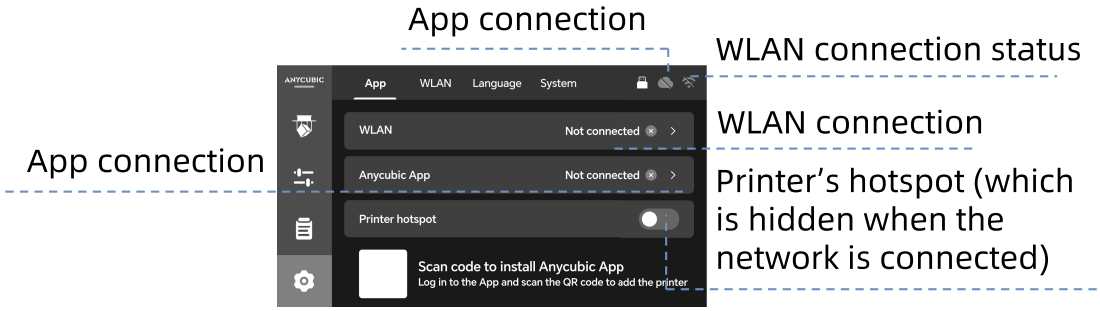


Guide:

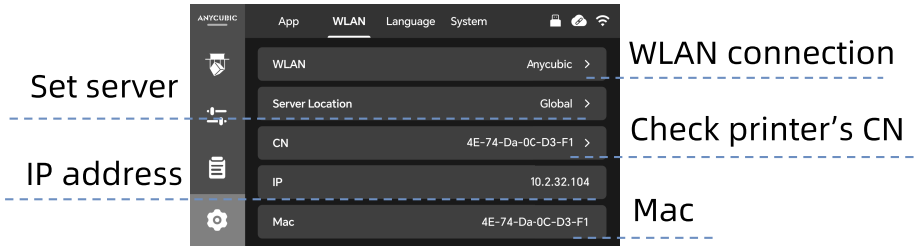


Settings

App:

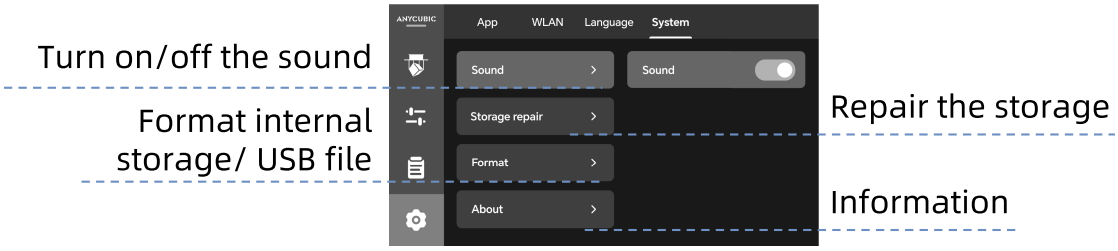


WLAN:



Language:

System:

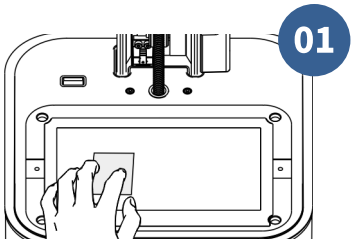


Preparations

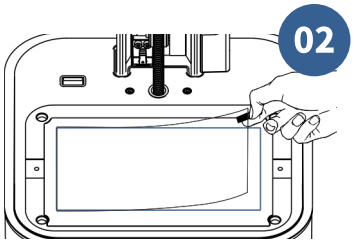
Please place the 3D printer on a stable, level workbench and operate it in an open, well ventilated area away from sunlight. Refrain from using the printer in areas with ultraviolet light sources(such as fluorescent lamps or UV disinfection lamps) to prevent poor printing results. For the first use, please follow the instruction to finish the preparations.

1. Unbox, and take out the machine and its accessories, and inspect them.

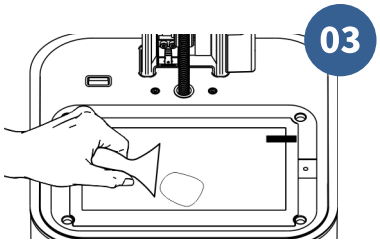
2. Install the screen protector.



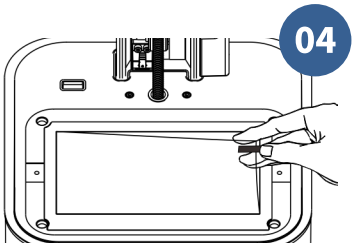
Peel off the protective film
Clean the LCD screen



Peel off the film ①, then align the LCD screen to stick the screen protector

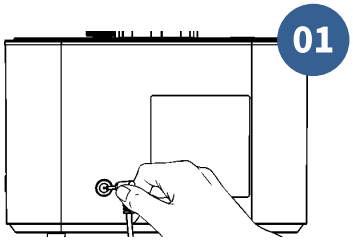


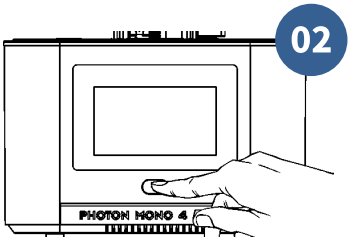
Squeeze out the air bubbles



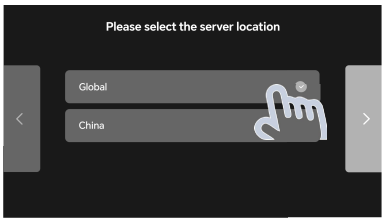
Peel off the film ②

3. Connect to the power adapter and click start button to turn on the printer. To power off, hold down the start button for 2 seconds.

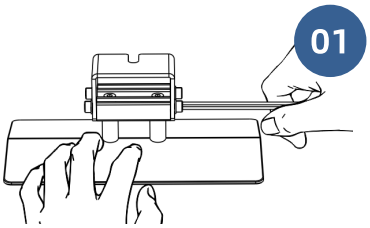




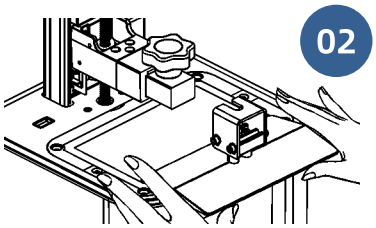
4. Set the system language and choose server location. Users in mainland Chinese please select "China", users in other countries and regions please select "Global".



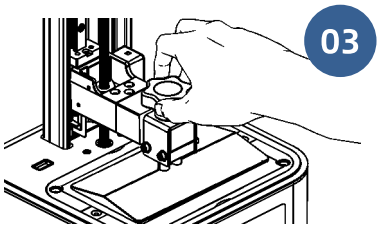
5. Install the print platform.



Loosen the four screws on the print platform

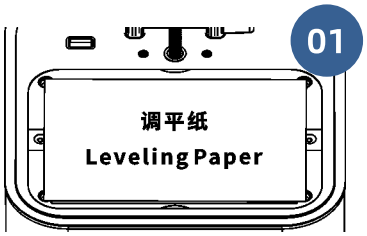


Push the platform onto the platform carrier

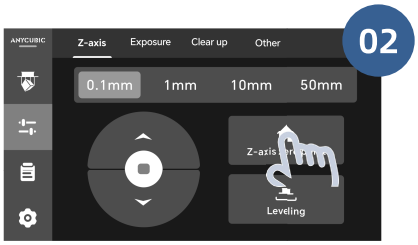


Tighten the knob

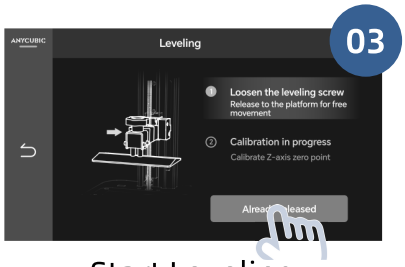
6. Leveling.



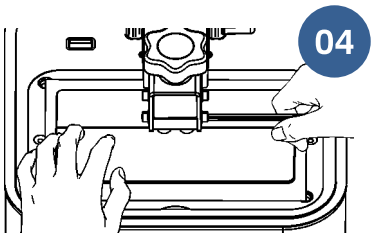
Place the leveling paper on the LCD screen



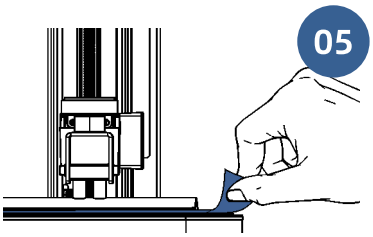
Click Leveling button



Start Leveling

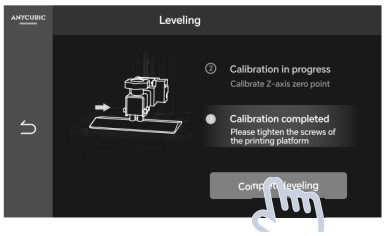


Press the platform gently, tighten the four screws

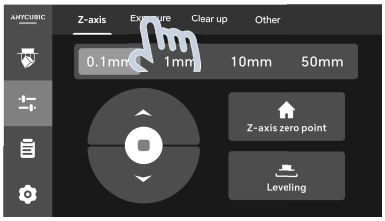


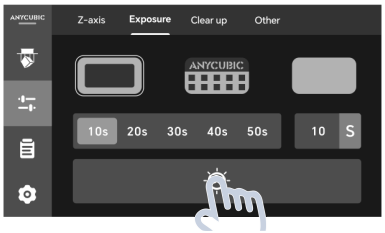
When pulling the leveling paper, there is a significant resistance or it cannot be pulled out

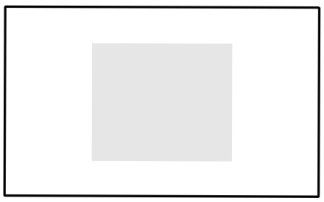
7. Set the zero position.



8. Choose an exposure image to test after the platform stops moving.

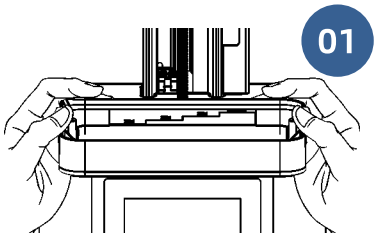




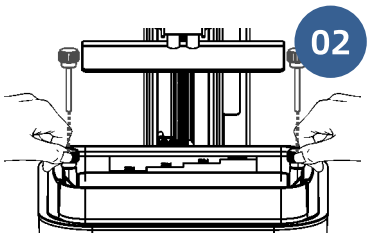


The white part is the exposure area

9. Install the resin vat.



Put resin vat with its feet stuck in locating holes

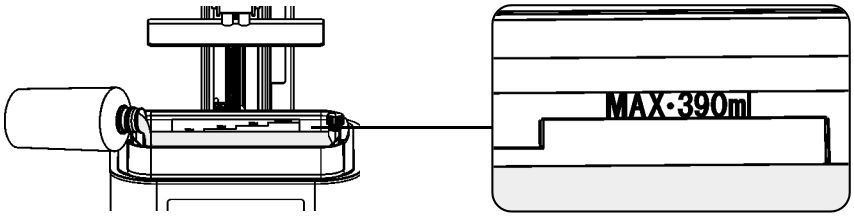


Tighten the two knobs

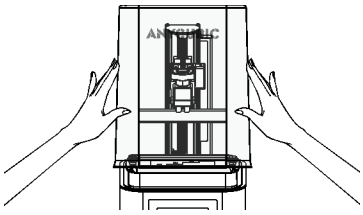
It is suggested to wear gloves and a mask for subsequent operations, as the contact with resin or smell of the resin may cause your discomfort.

10. Check the release film. If the film is broken, replace it immediately to avoid further damage to the 3D printer.

11. Slowly pour the resin into the vat and make sure the resin is within the vat's maximum scale.



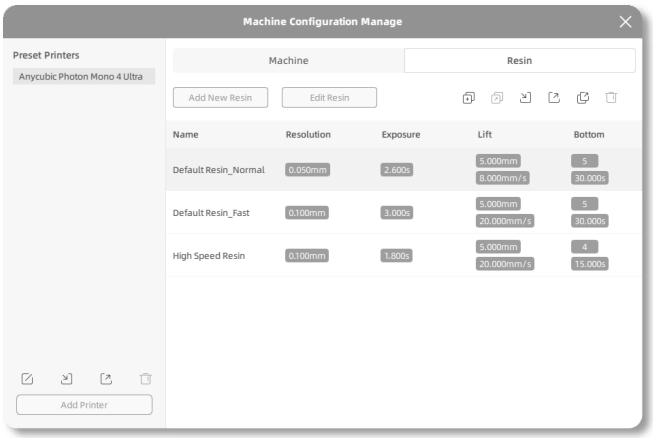
12. Put on the cover.



Start printing on 3D printer

1. Use Anycubic Photon Workshop software to process the 3D model file. The installer and instructions is saved in the USB drive.

2. When you set the parameters in Anycubic Photon Workshop, there are three groups of parameter which can be apply to the print with different needs. The included USB drive also provides normal, fast and high speed mode slice files that can be used for print test. You can choose a file to print according to your personal requirements.



Choose the parameter group according to the personal requirement

① Default Resin_Normal: print at normal speed

- Apply to all Anycubic resin.
- If the print object needs high accuracy, please modify the anti-alias level as 16 and the image blur as 3.

② Default Resin_Fast: print relatively fast through optimizing the Z-axis motion control

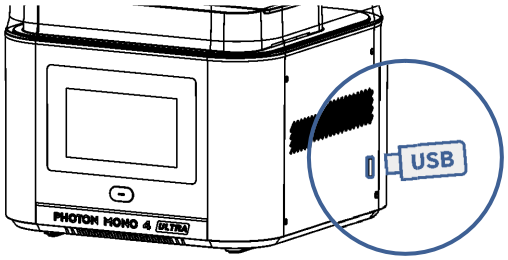
- Apply to all Anycubic resin.
- The layer thickness is 0.1mm.
- Apply to the model whose hollowed thickness is no more than 2mm.
- The ACF release film is necessary to avoid print failure. It can be used to print 45000 layers.

③ High Speed Resin: print at high speed through optimizing the Z-axis motion control

- Only apply to the Anycubic high speed resin.
- The layer thickness is 0.1mm.
- Apply to the model whose hollowed thickness is no more than 2mm.
- The ACF release film is necessary to avoid print failure. It can be used to print 45000 layers.

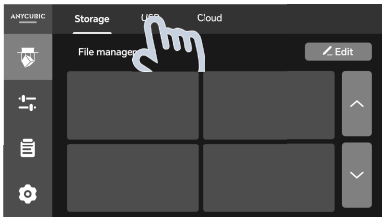
3. Save the sliced file to USB drive.

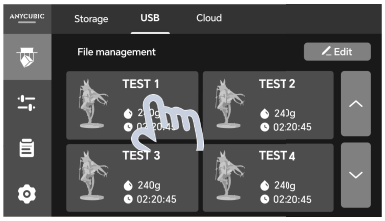
4. Insert the USB drive to the printer.

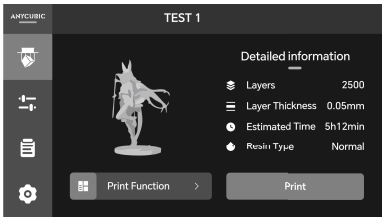


USB drive:
1. It is recommended that use the USB drive we provide. If you are using your own USB drive, please ensure that it is formatted to **FAT/FAT 32** and has a memory size of less than **64G**.
2. To ensure proper file reading, please put print files in the root directory of USB drive.

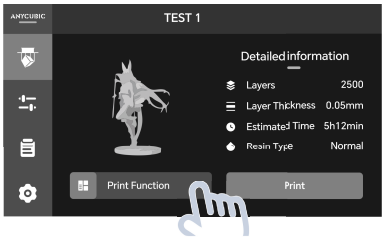
5. Then, choose a file to print.

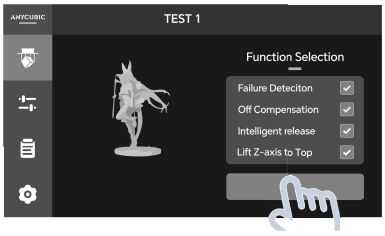


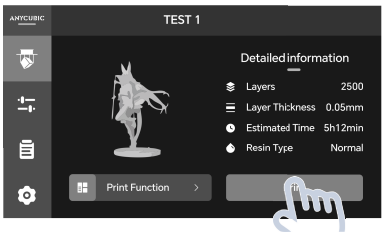




6. Set the print functions(optional). When the setting is finished, start the printing.







-Failure detection: During printing, the printer automatically monitors the conditions which may cause print failure to avoid wasting resin or damaging to the printer. When the printer detects an abnormal condition, it will pause the print job automatically and pop up the error report. Please check the sliced file and the model according to the report. The failure detection is enabled by default.

Bottom non-stick detection
It checks whether the model sticks to the print platform.
When the printer detects that the model does not stick the platform, please check the bottom exposure time of the sliced file.

-Off compensation: When the exposure area is large during printing, due to the surface tension and the resin characteristic, there may be problems such as delay of Z-axis or delay of resin reflowing, resulting print failure. The function is enabled by default.

-Intelligent release: The function can improve the printing success rate by optimizing algorithm. Enabling intelligent release while printing with the default resin_normal parameter group can also increase printing speed. The function is disabled by default.

-Lift Z-axis to top: When the printing is completed, the printing platform will lift to the top.

7. Before printing, the printer checks the hardware condition, resin volume and residue before each print job. When there is an error, the printer will pop up the error QR code. Please scan the code and follow the guide.

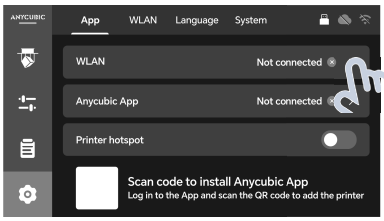
-Residue Detection: Before printing, check if there are the solid residues (height ≥ 3 mm, cross section ≥ 9 mm^2) in the resin vat. If residues are detected, please clean the vat and check again.

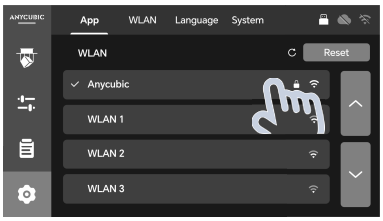
-Resin Detection: Before printing, check whether the resin in the vat is sufficient to finish the print job. Usually, the required volume is a little more than the volume estimated by the slice software.

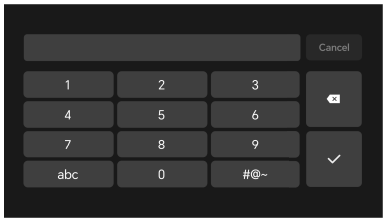
Start printing on Anycubic App

Please connect the printer to Anycubic App first for remote control.

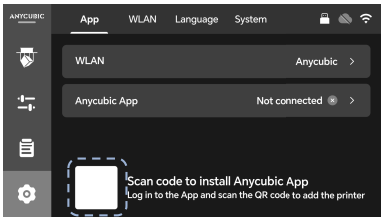
1. Connect to the network.



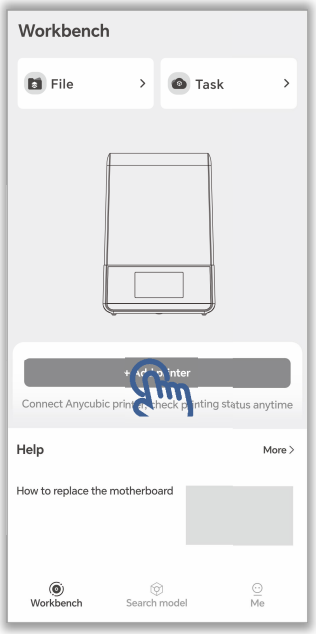


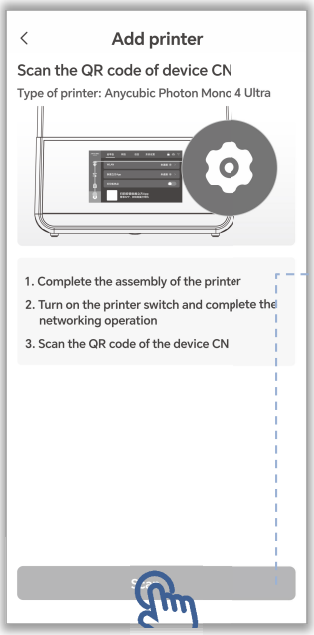


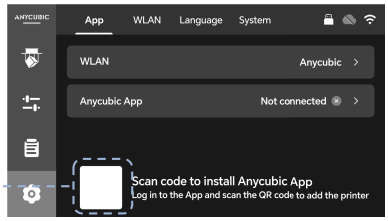
2. Please search "Anycubic" in App Store or Goolge Play, or scan the QR code on the printer, to download Anycubic App. Then, sign up and sign in.



3. Add a printer on Anycubic App.

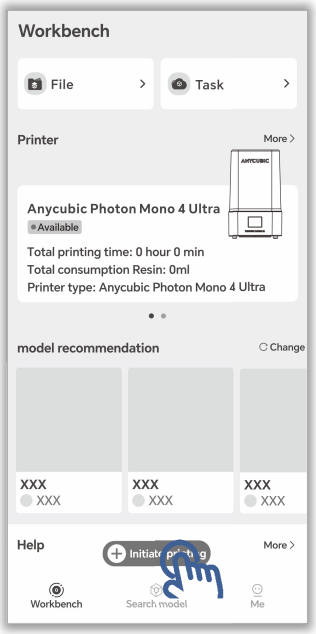


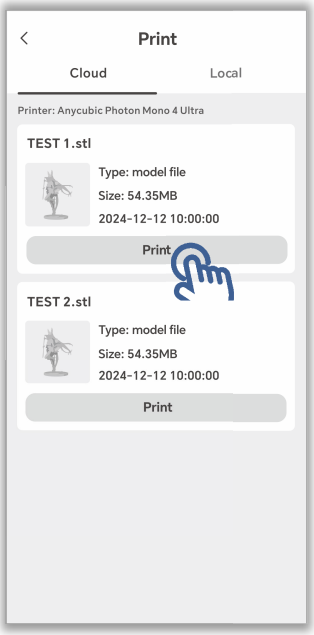


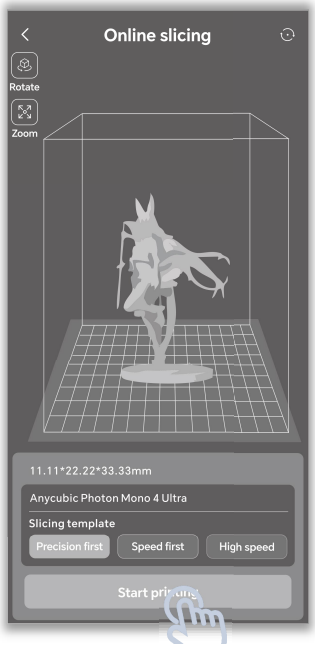


Scan the QR code to add printer

4. Start print on the Anycubic App.







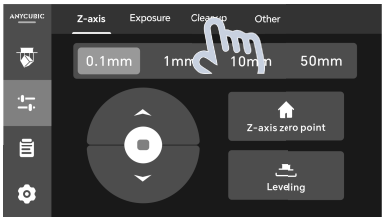
Start printing on Anycubic Photon Workshop

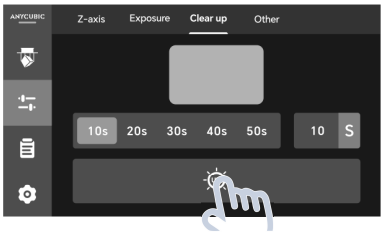
Run the installer in the USB drive to install Anycubic Photon Workshop slicing software. Then, log in and bind your printer for starting printing on the software. For details, refer to the instructions of Anycubic Photon Workshop in the USB drive.

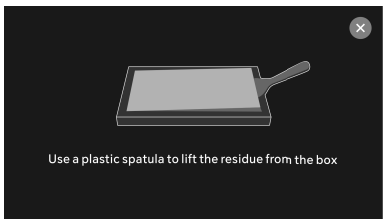
Resin Recycling

1. After printing, remove the platform when resin stop dropping from the platform. Remove the model by metal scraper and then wash it with 95% alcohol or other detergent. Then, dry and post-cure the model.

2. Enable the vat cleaning function when the resin is partially cured to avoid the damage to the LCD screen and the printer.

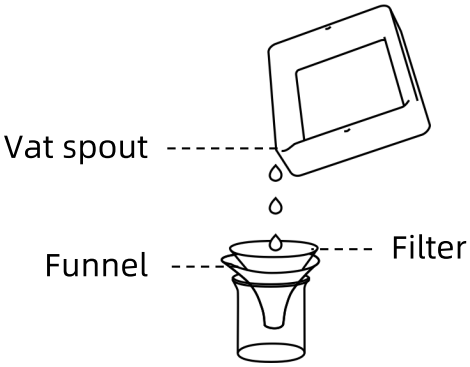






Remove resin sheet by plastic scraper

3. If there is any remaining resin, please pour it out through a vat spout and recycle it with a filter and a funnel. The model file of funnel is saved in the included USB drive, please print the model according to your personal requirements.

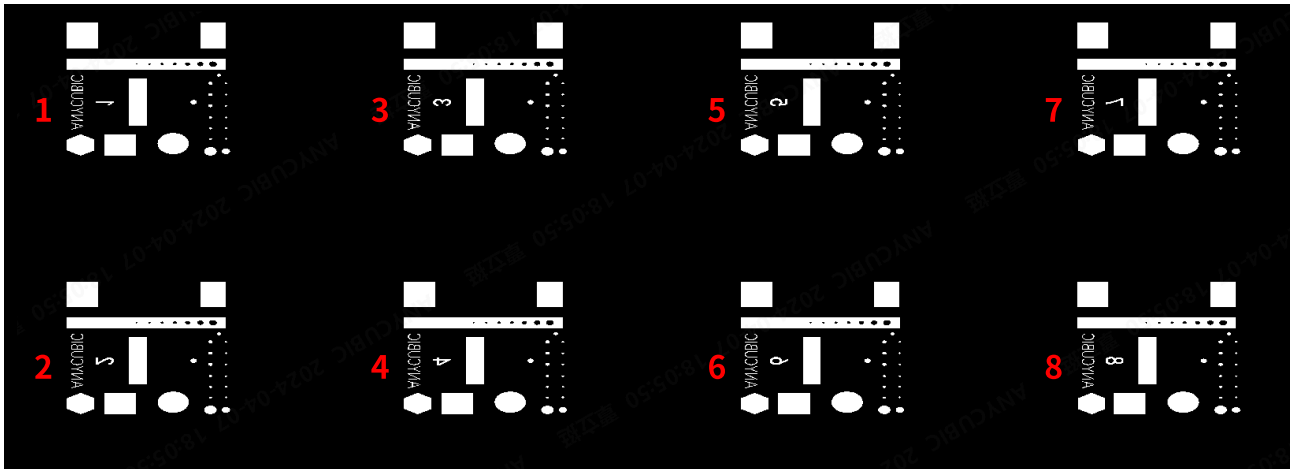


4. If you do not use the 3D printer for a long time, please clean the resin vat timely and store the resin in an airtight container away from light.

“R_E_R_F” is an abbreviation for “Resin Exposure Range Finder” . This function is used to find out the optimal exposure parameters for different resins.

1. Import the R_E_R_F file which is saved on USB drive into the slicing software. There are eight models in the file. The exposure time for model 1 is equal to "normal exposure time (s)" of the file, and the exposure time for other models will be increased by an increment of **0.25 s**.

For example:

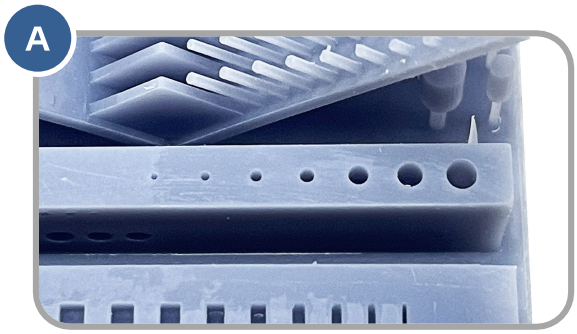


The numbers on the models indicate the order

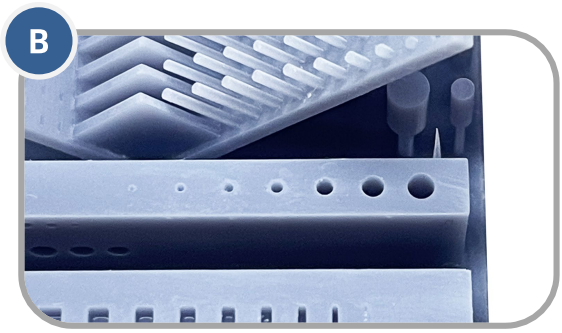
2. According to the personal requirement, adjust the exposure time of the models by modifying "normal exposure time (s)“ of the file. When exposure time for Model No. 1 is changed, the exposure time for other models will be increased by an increment of **0.25 s.**

For example, when normal exposure time is set to 1.5 s, the exposure time for Model No.1-8 is: 1.5 / 1.75 / 2 / 2.25 / 2.5 / 2.75 / 3 / 3.25 s.

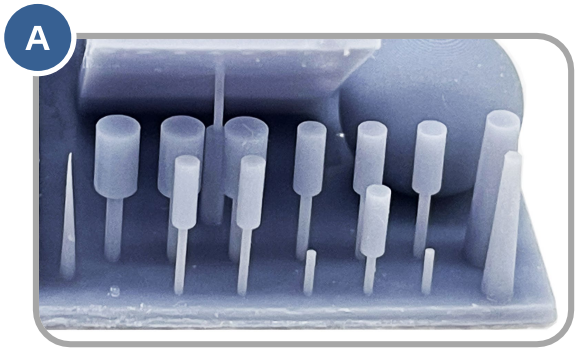
3. After printing, remove and clean the models. Compare the print effect of models and choose the model’s exposure time that meets your needs as the print parameter. Take a comparison of model A&B as an example.



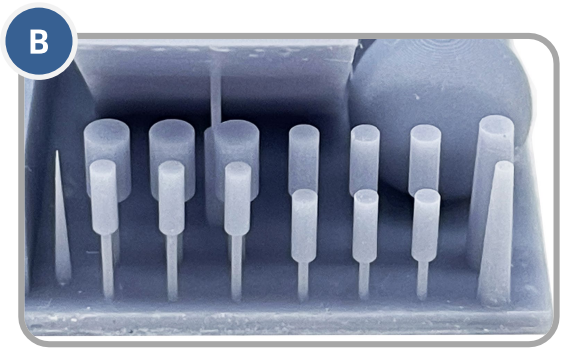
More holes



Less holes



Less cylinder



More cylinder

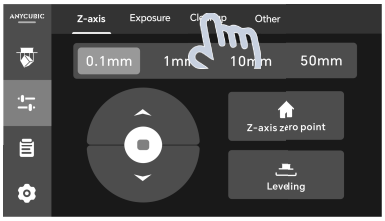
- Model A has more holes and fewer cylinder. If you print by the parameter of model A, more details of model can be printed with high risk of failure.
- Model B has fewer holes and more cylinder. If you print by the parameter of model B, model may be printed successfully yet with some details lost.

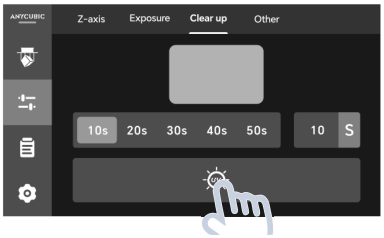
In addition, you can compare the bridges, needles or other parts to choose a proper model and find the parameter. If none of them can be chose, adjusting the "normal exposure time (s) " is suggested.

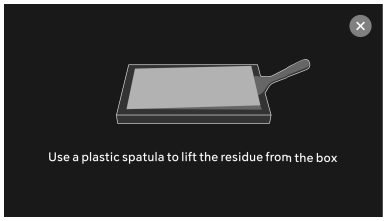
Notice: DO NOT change the file name of "R_E_R_F" , because Anycubic 3D printer can only recognize THIS file name to run this function. Also, do not name other file as "R_E_R_F" .

Resin Vat Maintenance

- **Remove the cured resin from release film:** Set Cleaning and then remove the cured resin sheet to protect the film. Do not use sharp objects to scrape off the residues from the film.

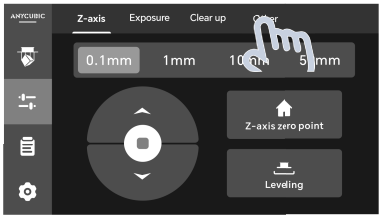


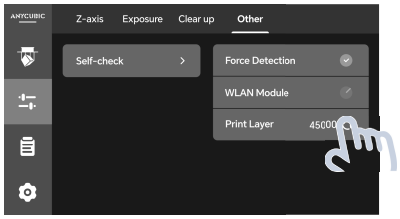


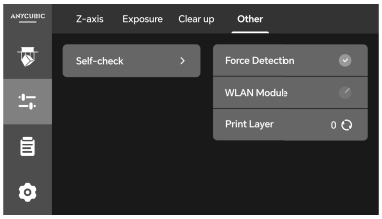


Remove resin sheet
by plastic scraper

- **Release film replacement:** The statistics of print layers are shown in Other → Self-check. Please check them and replace release film timely to avoid print failure or even the damage to printer.





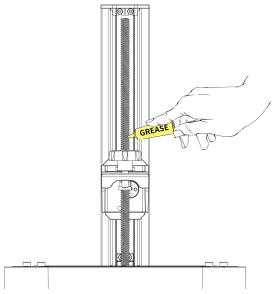


Click reset button
after replacement

- If you do not use the resin for over 48H, store it in an airtight container away from light.
- If resin is stained on the resin vat, wipe it off timely.

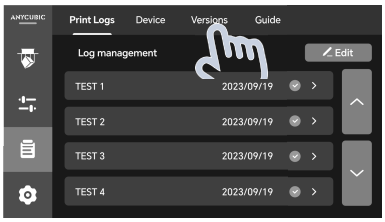
Z-axis Maintenance

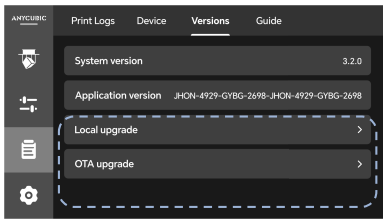
If Z axis makes a noisy sound, please apply lubricant to Z lead screw.



Firmware Upgrade

- **USB upgrade:** Visit the official website to download the firmware and save it onto a USB drive that doesn't have any other version of firmware. Then, insert the USB drive to printer to upgrade.
- **OTA upgrade:** If the network is connected, directly upgrade by OTA.





Cleaning

- **Clean the print platform:** Clean platform with alcohol and paper towel.
- **Protect LCD screen:** If there is resin being cured on the screen protector, please replace the protector immediately.
- **Clean the body of printer:** Clean the body of the printer with alcohol.

Complete the initial trouble shooting steps by referring to the following proposed solutions, or contact our technical support for additional assistance.

Print

1. Model do not stick to platform

- Bottom exposure time is insufficient. Please increase the exposure time.
- Contact area between the model and platform is small. Please add a raft.

2. Layer separation or splitting

- The machine is not stable during printing.
- The release film is not tight enough or needs a replacement.
- The printing platform or resin vat is not tightened.
- The lift speed is too fast.
- The model is hollowed without punching.

3. Layer shift

- Add supports.
- Reduce the lift speed.

4. Floccules left in resin vat or attached to models

- The exposure time is too long. Reduce the normal exposure time and bottom exposure time.

Complete the initial trouble shooting steps by referring to the following proposed solutions, or contact our technical support for additional assistance.

Cloud connection

1. WLAN connection is failed

- WLAN name or password is wrong. Please reset the network and reconnect.
- The WLAN network is unavailable. Join an available network. Then, reset the network and reconnect.

2. Fail to add printer in App

- Check “Server Location” . Users in mainland Chinese please select "China", users in other countries and regions please select "Global".

Thank you for purchasing Anycubic products! Under normal usage and service, the products have a warranty period of up to one year. Please visit Anycubic support center(support.anycubic.com/en) to report any issues with Anycubic products. Our professional after-sale service team would respond within 24 hours and solve the issues.