

Photon Mono M7

 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 receiving 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°C-40°C 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.

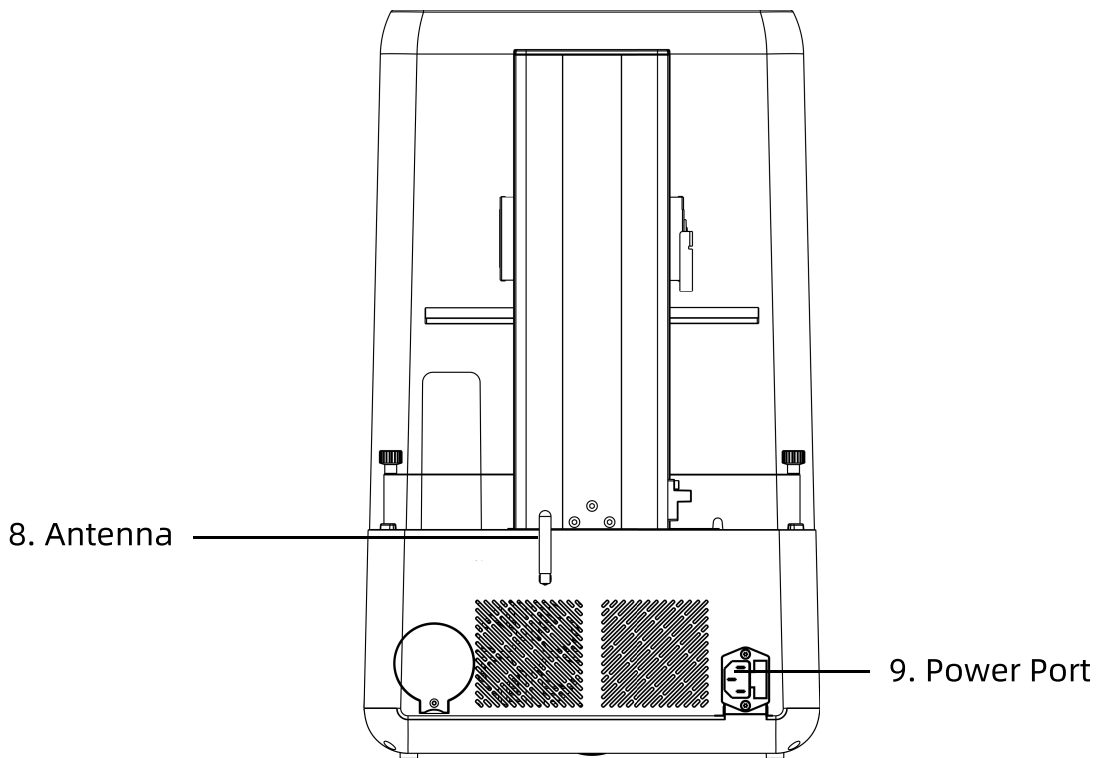
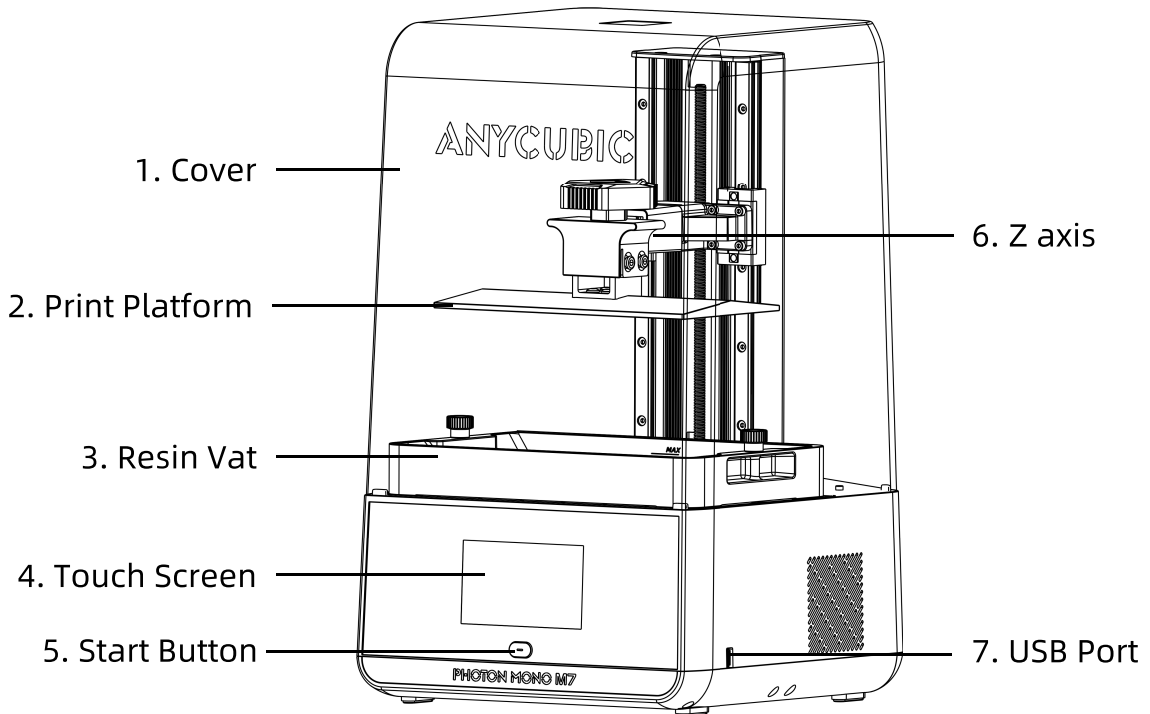


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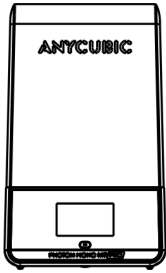
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Product Overview

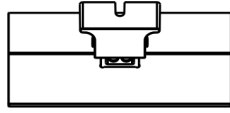
All pictures are for reference only. Please comply with the actual products.



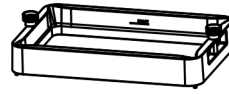
In the Box



Photon Mono M7



Print platform * 1



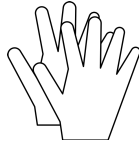
Resin vat * 1



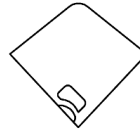
Antenna



Hex key set



Protective equipment



Funnel



Scraper * 2



Screen protector kit



Leveling paper



Manual * 1



USB drive * 1



Power cord

Operating System

System	Photon Mono M7
Touch Screen	4.3-inch Capacitive Screen
Software	Anycubic Photon Workshop (also compatible with other software)
Connectivity	USB Drive, WLAN

Specifications

LCD screen	10.1 inch 14K
Light source	COB light
XY Resolution	13312 * 5120
Z axis Accuracy	0.01 mm
Suggested Layer Thickness	0.01 ~ 0.15 mm

Physical Dimensions

Dimension	310 mm(L) *315 mm(W) *520 mm(H)
Build volume	223.64 mm(L) *126.48 mm(W) *230 mm(H)
Weight	12 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	2.2 s	2.8 s	1.4 s
Off Time	0.5 s		
Bottom Exposure Time	25 s	25 s	15 s
Bottom Layers	5	3	3
Z Lift Distance	8 mm	4 mm	4 mm
Z Lift Speed	6 mm/s	15 mm/s	15 mm/s
Z Retract Speed	6 mm/s	15 mm/s	15 mm/s
Anti-alias	1		
Notice	<p>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.</p> <p>2. The group ②③ apply to the model whose hollowed thickness is no more than 2mm.</p> <p>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.</p> <p>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.</p> <p>5. The group ③ only apply to Anycubic high speed resin.</p> <p>6. Refer to 15-16 pages for the instructions of parameter groups.</p>		

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

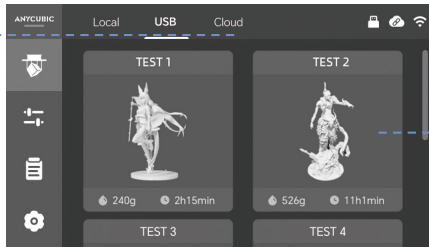
Menu Directory

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

Print

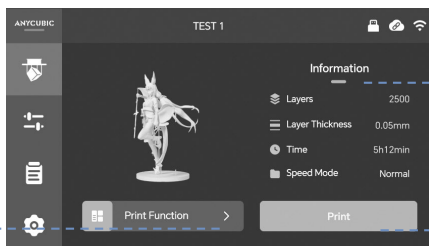
Print:

Switch to local/ USB drive/cloud file list



Click to enter into file details; long press to edit the files.

File Details:



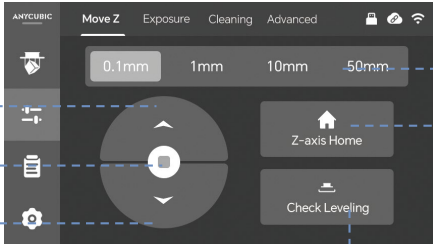
Print function setting

Print file information

Start the printing

Tools

Z-axis:



Move the Z axis upwards

Stop moving the Z axis

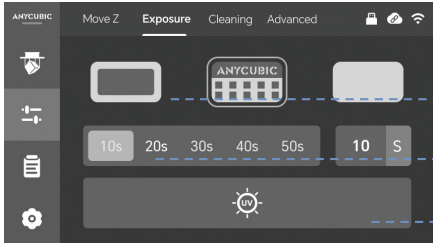
Move the Z axis downwards

Move Z by 0.1mm /1mm/10mm/50mm

Return to Zero

Move to check the effect of manual leveling (see page 26-27)

Exposure:




Choose an image to expose

Set the exposure time

Start exposure

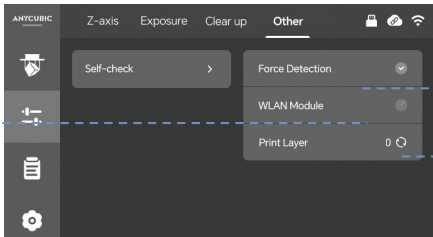
Clear up:



Set the exposure time

Start exposure

Other:



Check whether WLAN module is on

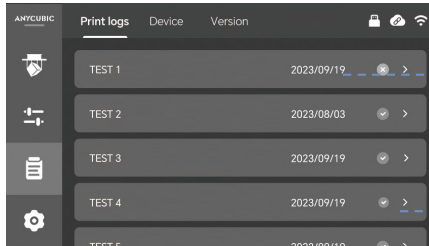
Start force detection

Statistics of print layers

Menu Directory

Information

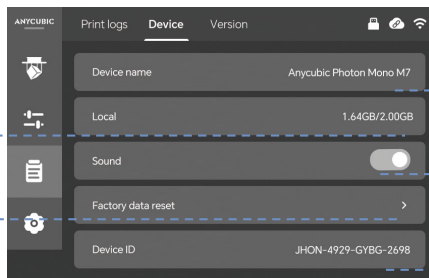
Print logs:



Print history,
Long press to edit

Click to check more details

Device:



Used space/total space

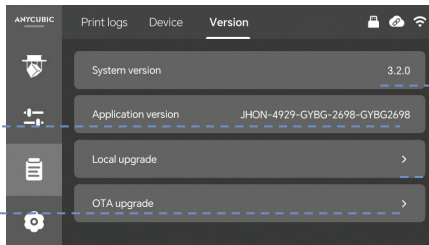
Machine type

Factory reset

Turn on/off the screen sound

Printer ID

Version:



Application version

System version

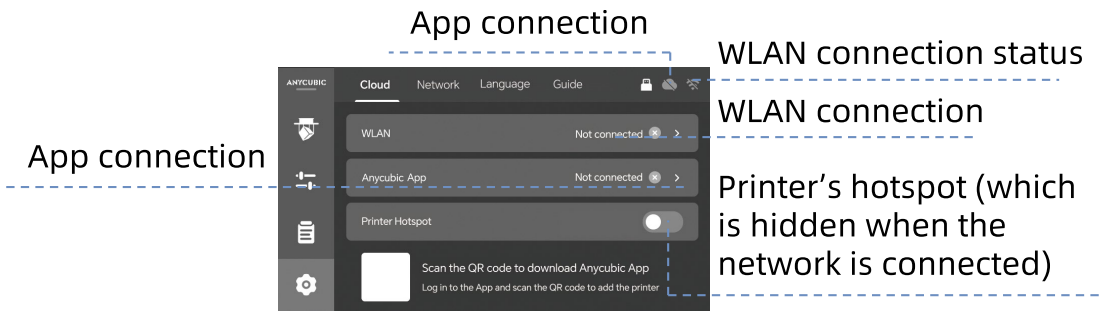
OTA upgrade

USB upgrade

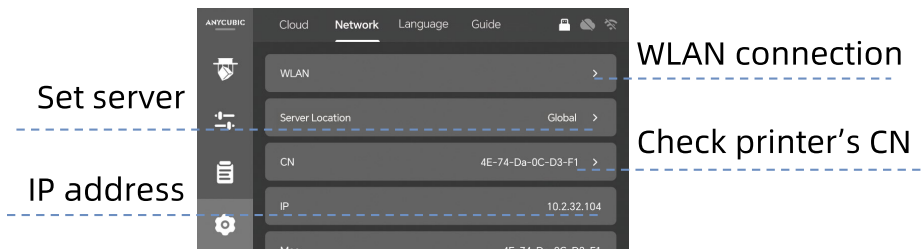
Menu Directory

Settings

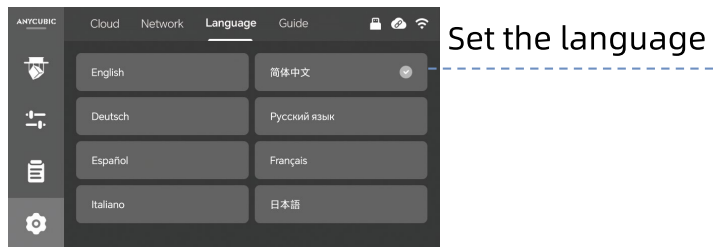
Cloud:



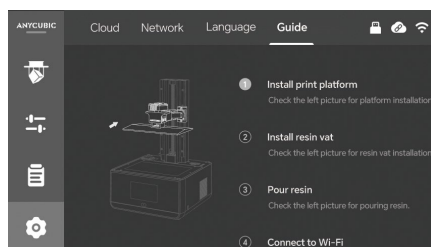
Network:



Language:



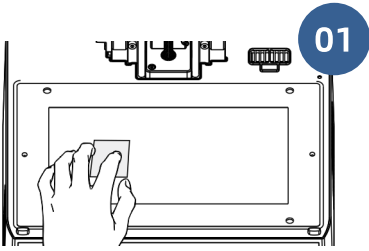
Guide:



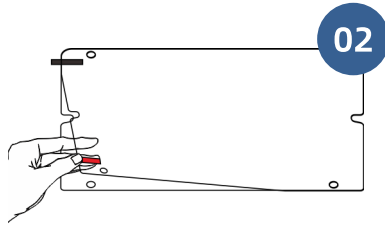
Preparations

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

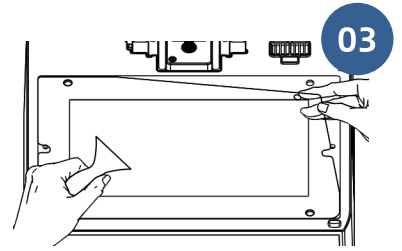
2. Install the screen protector.



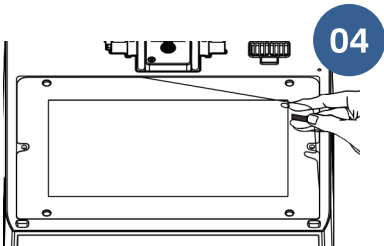
Peel off the protective film
Clean the LCD screen



Peel off the film ①

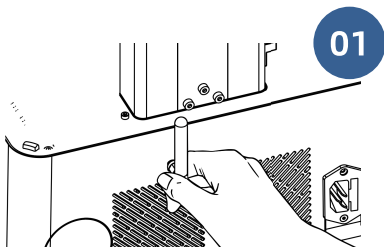


Align the locating holes
Squeeze out the air bubbles

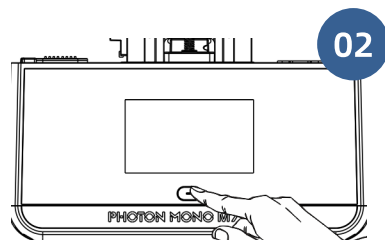
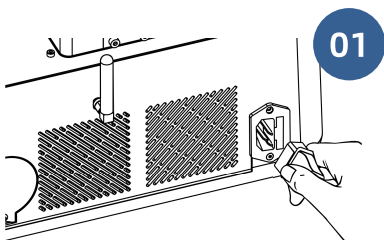


Peel off the film ②

3. Install the antenna.

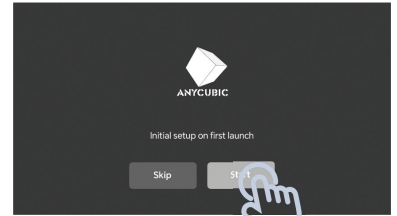
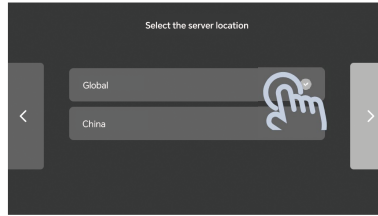


4. Then, connect to the power cord and press the start button to turn on the printer. To power off, hold down the start button for 2s.

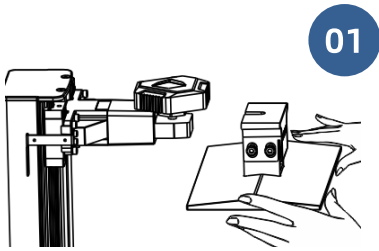


Preparations

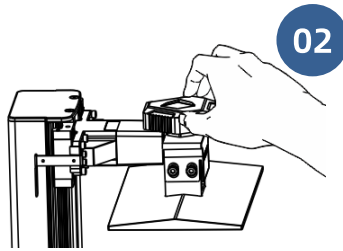
5. Set the system language and choose server location. Users in mainland Chinese should select "China", users in other countries and regions should select "Global". Then, complete the on-screen setup steps.



6. Install the print platform.

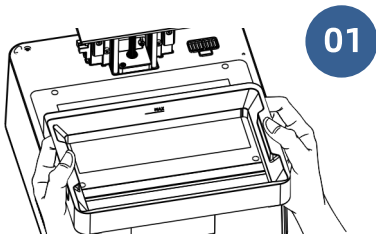


Push the platform onto the platform carrier

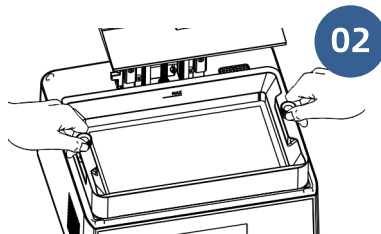


Tighten the knob

7. Install the resin vat.



Put resin vat with its feet stuck in locating holes



Tighten the two knobs

USB

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.



Choose the parameter group according to the personal requirement

① Default Resin_Normal

Apply to the Anycubic resin with normal printing speed. 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

Apply to the Anycubic resin with fast printing speed. The layer thickness is 0.1mm. Optimizing the Z-axis motion control increases the print speed.

③ High Speed Resin

Only apply to the Anycubic high speed resin with the fastest printing speed. The layer thickness is 0.1mm. Optimizing the Z-axis motion control increases the print speed.

Notice for parameter group②③:

1. The parameters apply to the model whose hollowed thickness is no more than 2mm.
2. The parameters must work with the ACF release film this printer provided to avoid print failure. The film can be used to print 45000 layers.

3. Save the sliced file to USB drive.

4. Then, insert the USB drive to the printer.

USB drive:

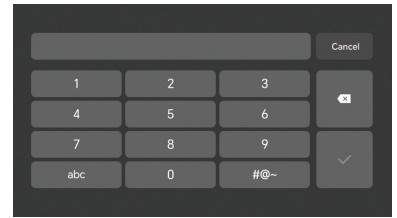
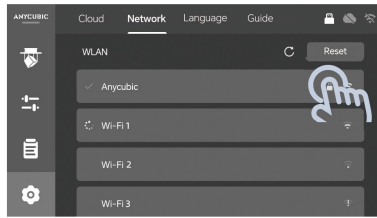
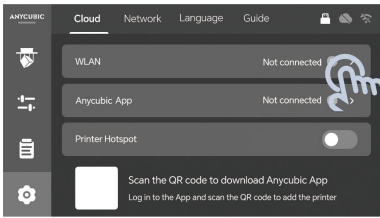
1. It is recommended that use the USB drive we provide. If you are using your own USB drive, please ensure that it is formatted to **FAT/FAT 32** and has a memory size of less than **64G**.
2. To ensure proper file reading, please put print files in the root directory of USB drive.

File Upload

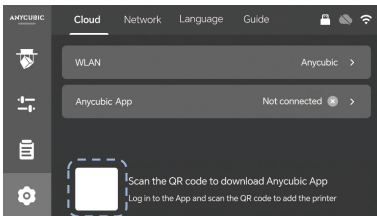
Cloud

Please connect the printer to Anycubic App first for remote uploading and monitoring.

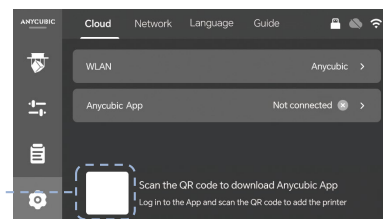
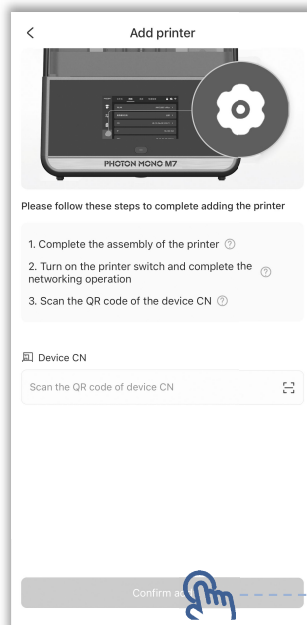
1. Connect to the network.



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



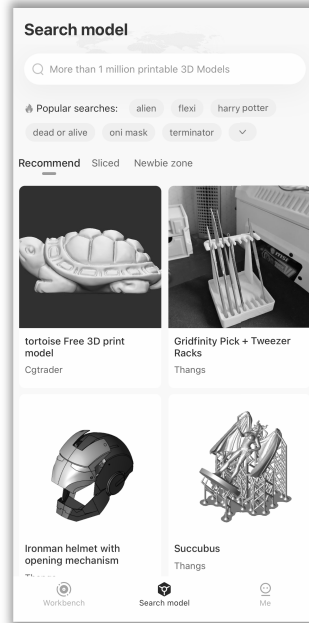
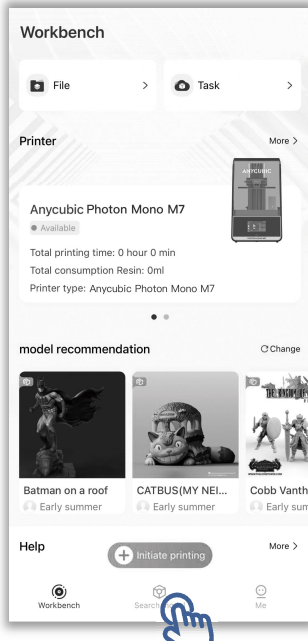
3. Add a printer in Anycubic App.



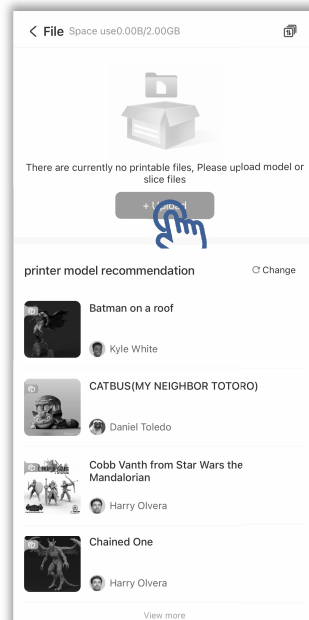
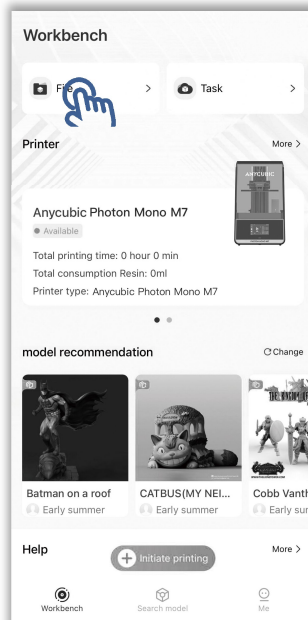
Scan the QR code to add printer

4. Search model or upload the model files.

- Search model



- Upload the model files

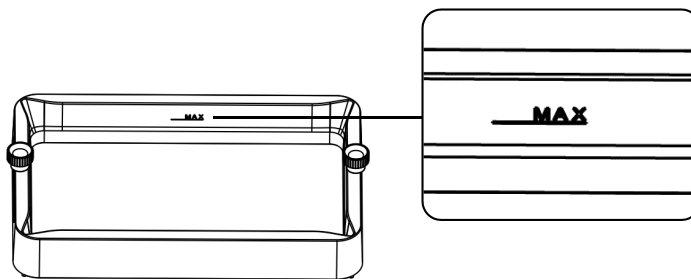


Resin Preparations

*The release film on the resin vat is consumable. Please pay attention to the status of release film on the touch screen and replace the film timely.

Please check the release film carefully before and after every printing. If the film is broken, replace it immediately to avoid further damage to the machine.

1. Make sure to wear a mask and gloves (to avoid direct skin contact with the resin), slowly pour resin into the vat, and make sure it is within the vat's maximum scale.

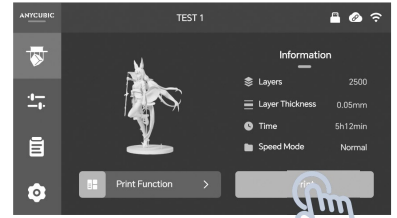
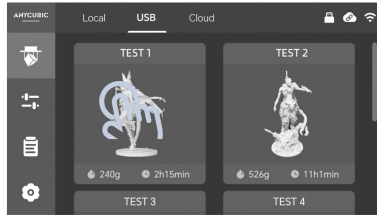
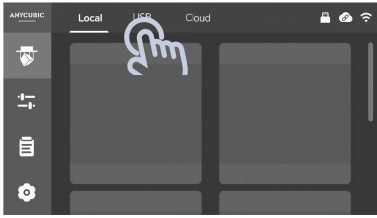


2. Put on the cover.

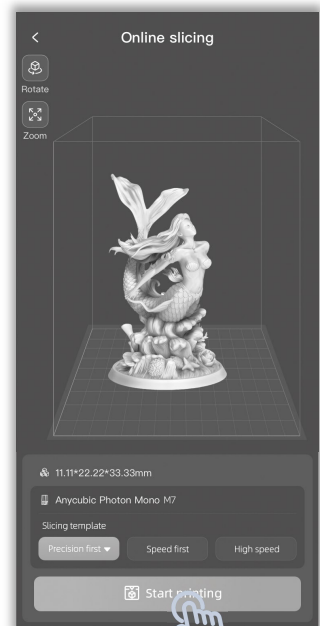
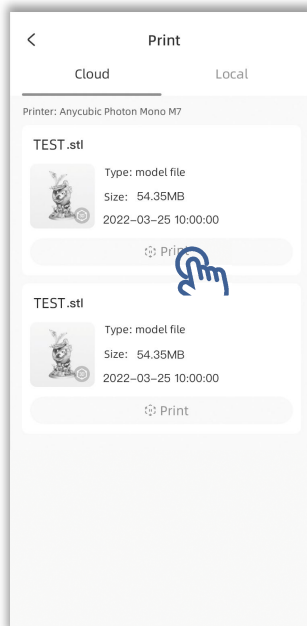
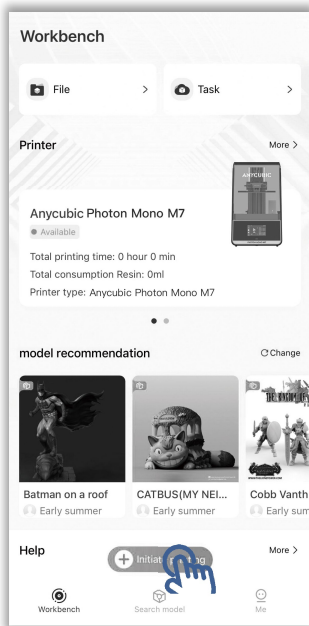
Print Test

Print File

Print USB drive file

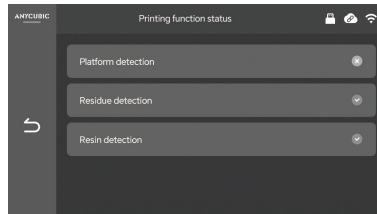


Remote print



Before printing

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.



Platform Detection

Before printing, check whether the print platform is installed.

Residue Detection

Before printing, check if there are the solid residues* in the resin vat. If residues are detected, please clean the vat and check again.

*solid residue: height \geq 3mm, cross section \geq 9mm²

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.

If it prompts that the resin volume is not enough, please add resin and then check it again.

In 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

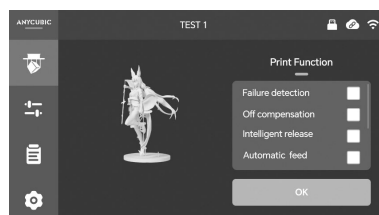
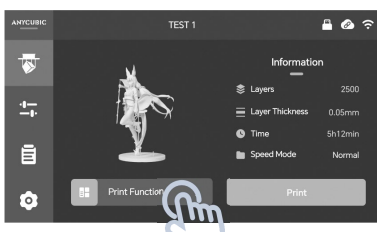
It checks whether the model sticks to the print platform.

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. It is suggested to enable off compensation to improve the success rate of printing. The function is enabled by default.

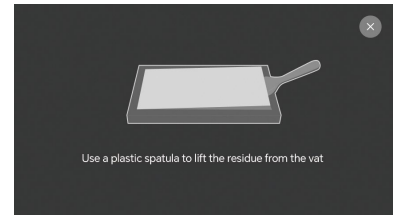
Intelligent release: The function can improve the printing success rate by optimizing algorithm. Enabling intelligent release while printing with the default resin_normal parameter group can also increase printing speed. The function is disabled by default.

Before printing, the functions can be enabled/disabled in the print function interface.



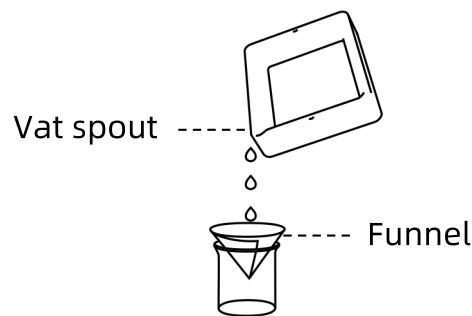
After Printing

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. After cleaning and drying, proceed with post-curing and any other necessary post processing of the model.
2. When the printing fails, resin may be cured partially in the vat. Please set to Vat Cleaning and remove the residue. Otherwise, it may cause damage to the release film or LCD screen.



Remove resin sheet
by plastic scraper

3. Please pour out the remaining resin through a spout of the vat, and filter it by a funnel.

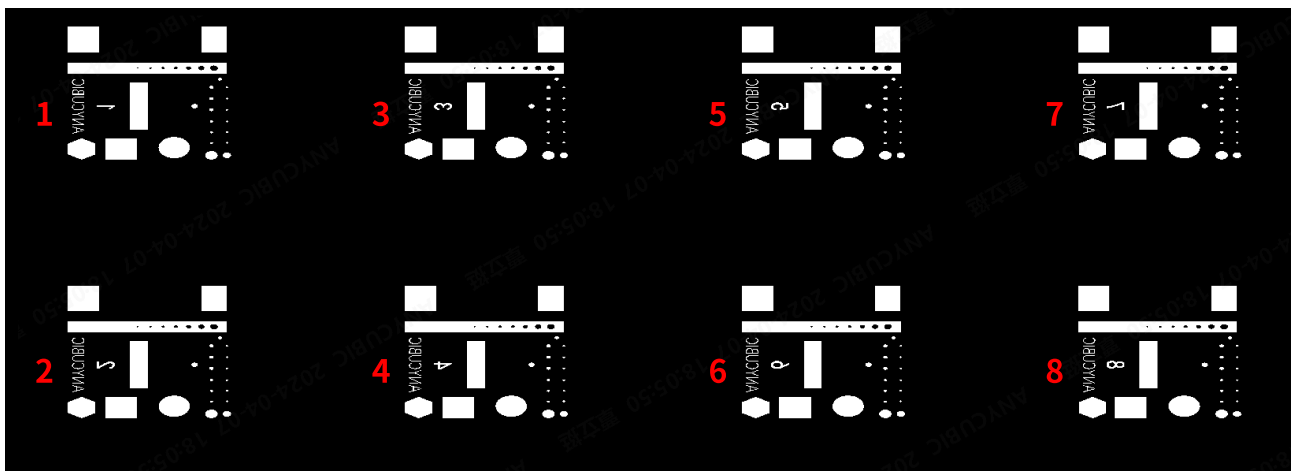


Resin Exposure Range Finder

“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:



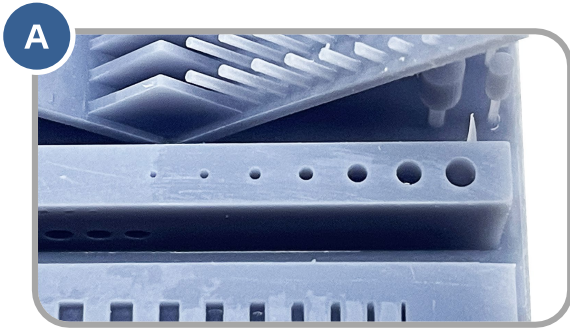
The numbers on the models indicate the order

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**.

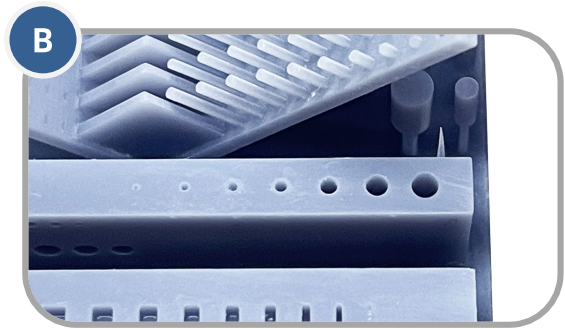
For example, when normal exposure time is set to 1.5 s, the exposure time for Model No.1-8 is: 1.5 / 1.75 / 2 / 2.25 / 2.5 / 2.75 / 3 / 3.25 s.

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.

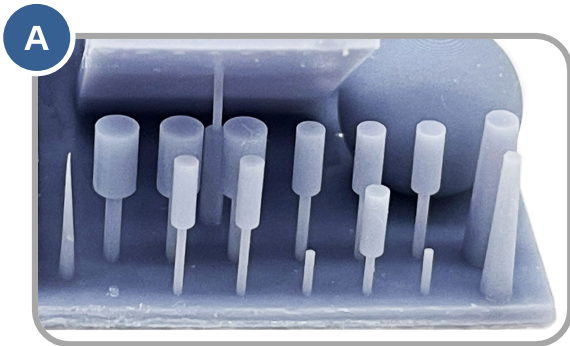
Resin Exposure Range Finder



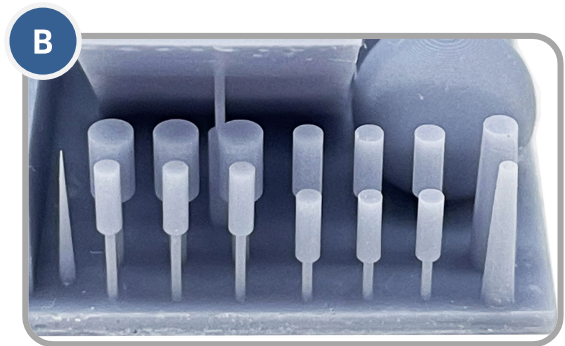
More holes



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" .

Leveling

The printer has been designed requiring no leveling for the first use. However, please re-level the printer in the following scenarios:

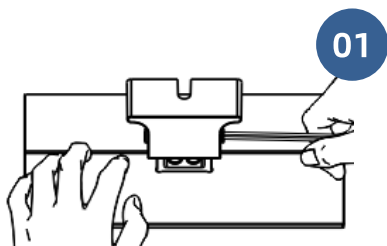
- The print platform has been fallen to the ground.
- Changing new print platform or LCD screen.
- The printed object sticks to the resin vat instead of the print platform.



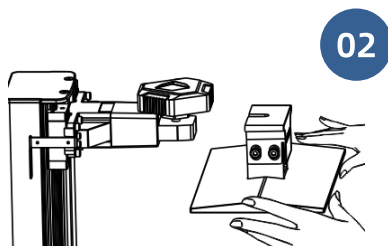
Scan the QR code for the leveling tutorial

Please follow the steps below to install and re-level.

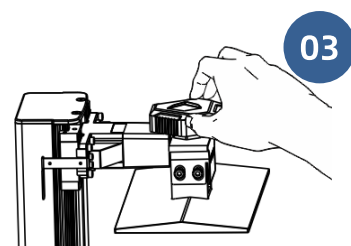
1. Install the print platform.



Loosen the four leveling screws

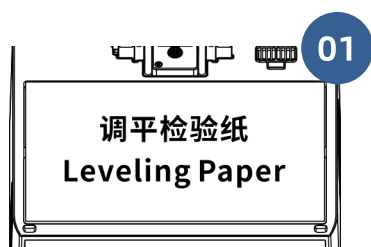


Push the platform onto the platform carrier

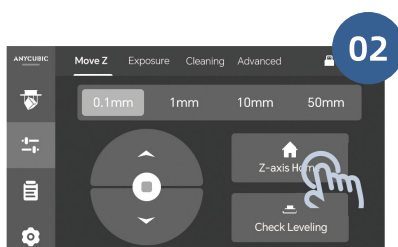


Tighten the knob

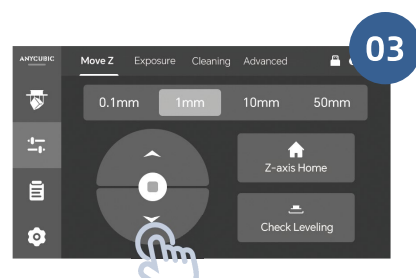
2. Leveling.



Place the leveling paper (included) on the LCD screen

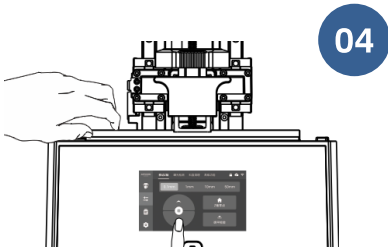


Click "Z-axis Home"

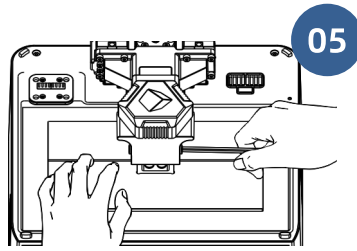


Lower Z axis by 1mm

Maintenance

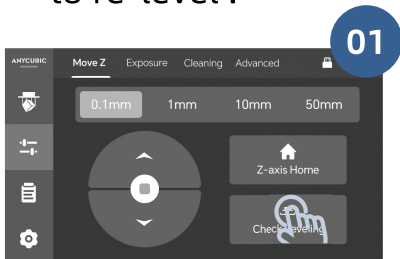


If the print platform shakes with light press, lower Z axis by **0.1mm** each time

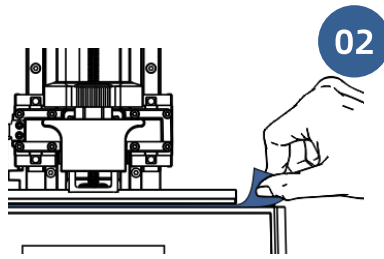


Lower until there is resistance when pulling out the leveling paper, hold the platform and tighten the four screws

3. Check whether the leveling is successful. If it does not match the result shown below, please loosen the four leveling screws and follow the step2 to re-level .



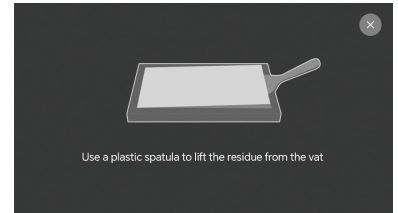
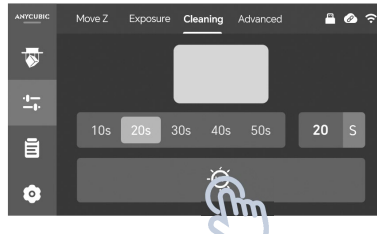
Click "Check Leveling"



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

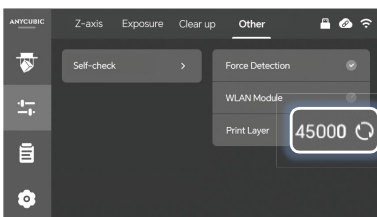
Resin Vat Maintenance

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

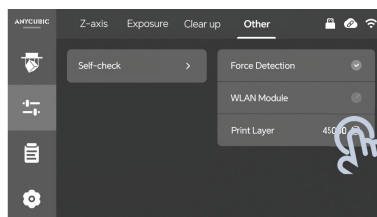


Remove resin sheet
by plastic scraper

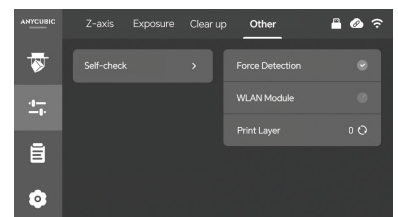
- **Release film replacement:** The statistics of print layers are shown in Home menu. Please check them and replace release film timely to avoid print failure or even the damage to printer.



Need to replace
release film



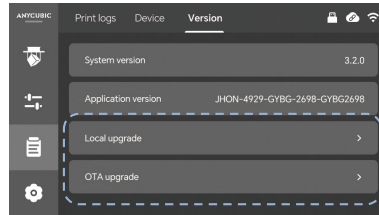
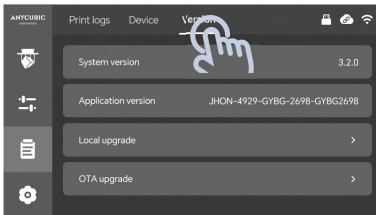
Click reset button
after replacement



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

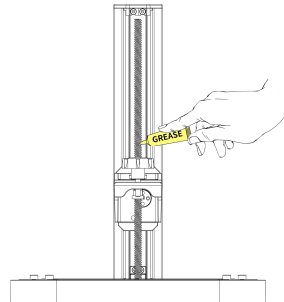
Firmware Upgrade

- **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.



Z-axis Maintenance

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



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.