Anycubic Photon M3 Premium

—

▶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

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.

Be cautious when using the scraper. Never direct the scraper towards your hands.

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

Anycubic 3D printer includes components that can cause injury.

It is recommended to use protective glasses when sanding the printed models to avoid eye contact with small particles.

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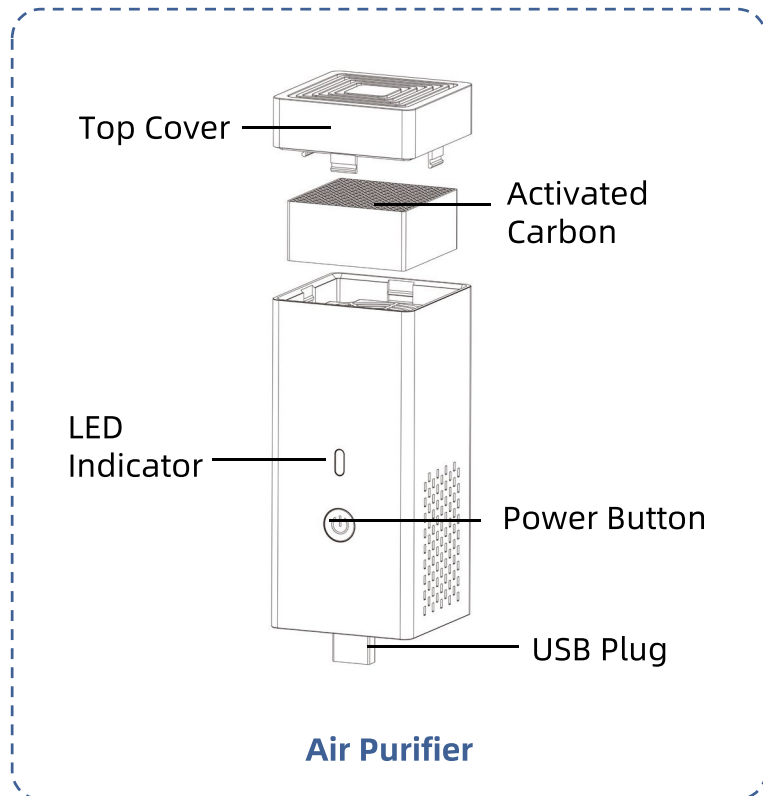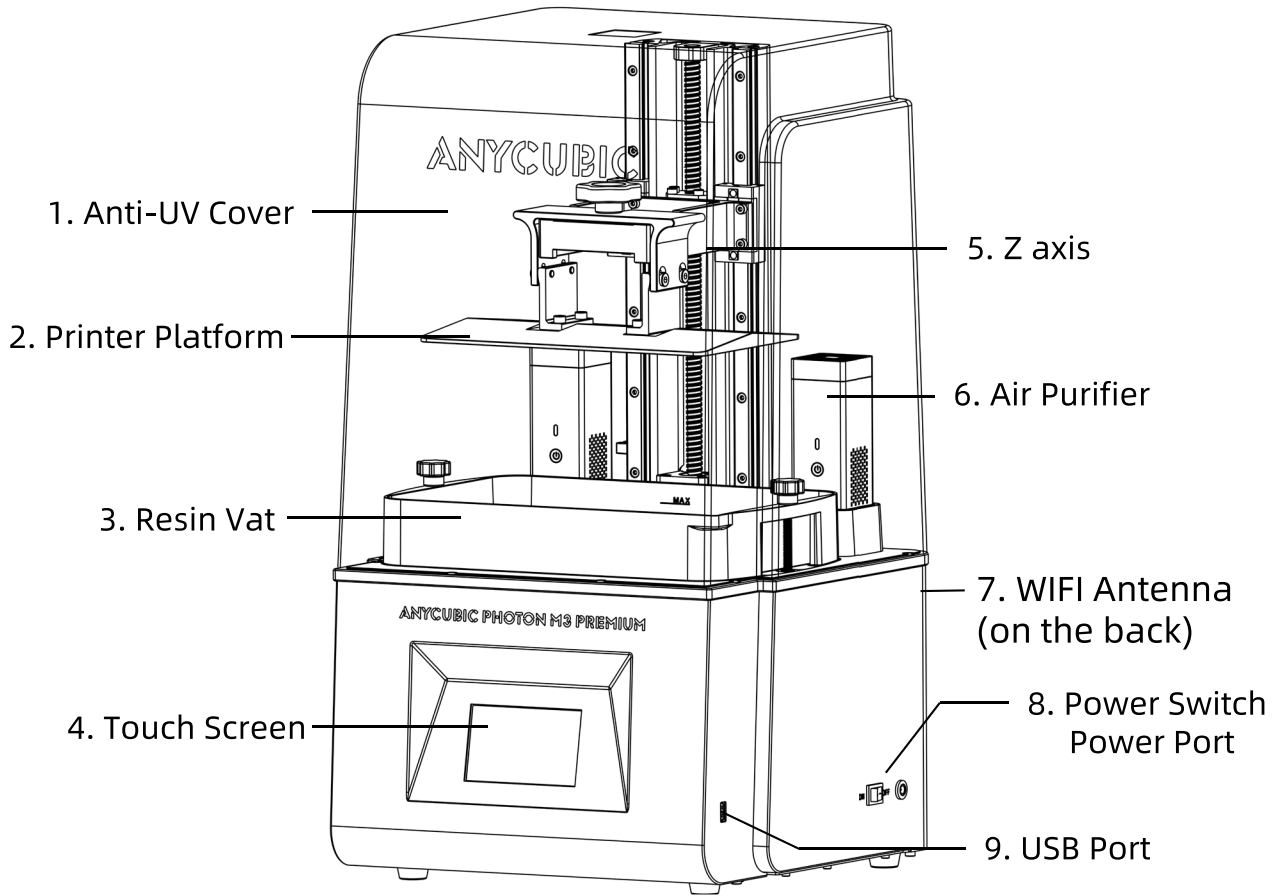
Do not disassemble Anycubic 3D printer, please contact technical support if you have any questions.
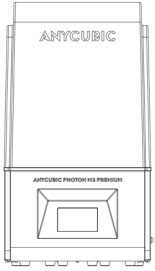
Contents

1. Anti-UV Cover

2. Printer Platform

3. Resin Vat

4. Touch Screen

ANYCUBIC PHOTON M3 PREMIUM

5. Z axis

6. Air Purifier

7. WIFI Antenna (on the back)

8. Power Switch Power Port

9. USB Port

Top Cover

Activated Carbon
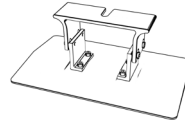
LED Indicator

Power Button

USB Plug

Air Purifier

In the Box

Anycubic Photon
M3 Premium
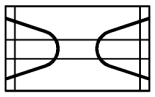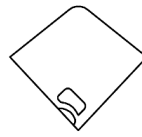
Air purifier * 2
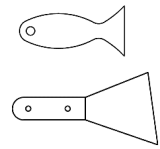
Print platform * 1

Resin vat * 1

Mask * 1

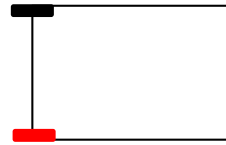Gloves* 3 pairs

Funnel*5

Scraper * 2

USB drive * 1

Manual * 1

Screen protector kit

调平纸
Leveling paper

Leveling paper * 1

Power adaptor
Power cord

WIFI antenna

Hex key set

Technical Specification
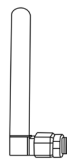
Operating System

System	Anycubic Photon M3 Premium
Touch Screen	4.3-inch Resistive Screen
Software	Anycubic Photon Workshop
Connectivity	USB Drive

Specifications

Light source	Anycubic Light Turbo 2.0
XY Resolution	28.5 μm 7680*4320 (8K)
Z axis Accuracy	0.01 mm
Suggested Layer Thickness	0.01 ~ 0.1mm
Rated power	110 W

Physical Dimensions

Dimension	328 mm(L) *350 mm(W) *626 mm(H)
Build volume	218.88 mm(L) *123.12 mm(W) *250 mm(H)
Weight	~19 kg

Air Purifier

Rated input	5V 0.1A

1、 Basic Resin-Clear/Translucent Green

Model accuracy	Regular					High-accuracy
Layer Thickness (mm)	0.01~0.02	0.03~0.04	0.05	0.1	0.15	0.05
Normal Exposure Time (s)	1.2	1.5	2	3	4	1.5
Off Time (s)	0.5					
Bottom Exposure Time (s)	25					
Bottom Layers	2					
Anti-alias	1					
Z Lift Distance (mm)	8					
Z Lift Speed (mm/s)	6					3
Z Retract Speed (mm/s)	6					3

2、 Basic Resin-Gray, DLP Craftsman Resin

Model accuracy	Regular					High-accuracy
Layer Thickness（mm）	0.01~0.02	0.03~0.04	0.05	0.1	0.15	0.05
Normal Exposure Time（s）	1.7	2	2.5	3.5	4.5	1.7
Off Time（s）	0.5					
Bottom Exposure Time（s）	25					
Bottom Layers	2					
Anti-alias	1					
Z Lift Distance（mm）	8					
Z Lift Speed（mm/s）	6					3
Z Retract Speed（mm/s）	6					3

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

Home menu

Print	System	Tools

Print .... **System** .... **Tools**

File List

		∧
		∨
		↰

System

- 🌐 Language
- 👤 Service
- 📖 Information ↰

Tools

- 📦 Move Z   ⚙
- 📈 Status   🔊
- UV Exposure   ↰
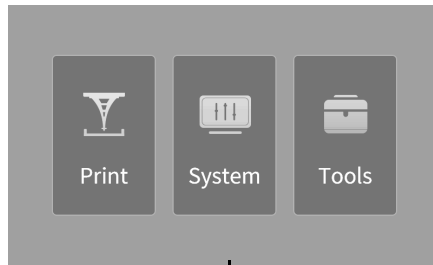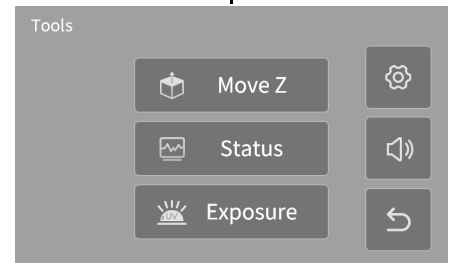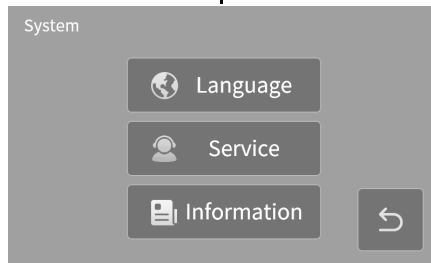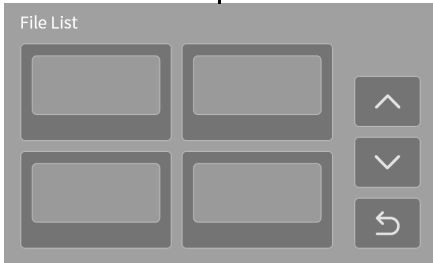
Print

File List:

File List

		∧	Page up
		∨	Page down
		↰	Return to the Home Menu

File   Click a file

File

	🗑	Delete the current file
	▶	Click to start printing
	↰	Return to the Print Menu

9

System

Language:

简体中文
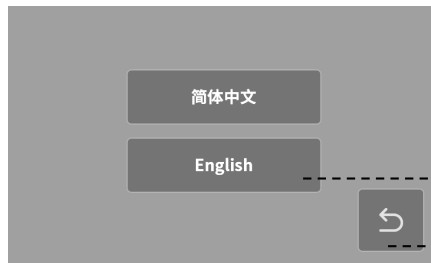
English — Click to switch to Chinese/ English

⤺ — Return to the System Menu

Service:

Service

www.anycubic.com — Official website

⤺ — Return to the System Menu

Information:

Information
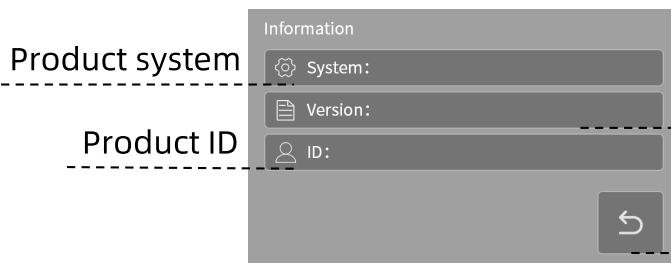
Product system — System：

Version： — System version

Product ID — ID：

⤺ — Return to the System Menu

Tools

Move Z:

Move Z

0.05mm 1mm 10mm 50mm — Move Z by 0.05mm /1mm/10mm/50mm

Move the Z axis downwards

Move the Z axis upwards — ∧ ∨ ⌂ — Return to Zero

Stop moving the Z axis — ⊘ Z=0 ⤺ — Return to the Tools Menu

Reset the zero point

Exposure :

Choose an image to expose

Click to set the time

Expose for the preset time
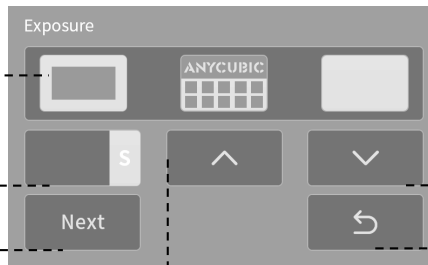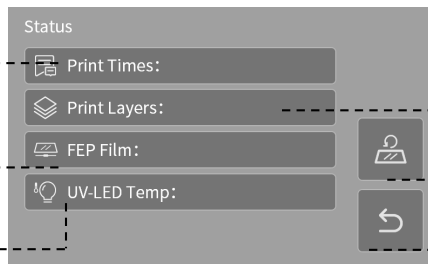
Reduce the test time

Return to the Tools Menu

Increase the test time

Exposure

ANYCUBIC

S

Next

Status:

Statistics of print times

Whether release film needs to be replaced

Temperature of the UV-LED
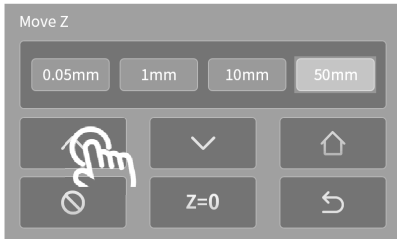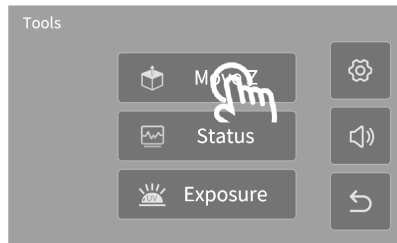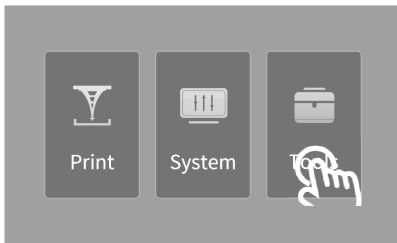
Statistics of print layers

Click to reset the status

Return to Tools Menu

Status

Print Times:

Print Layers:

FEP Film:

UV-LED Temp:

Gear icon: Enter to switch on/off air purifier
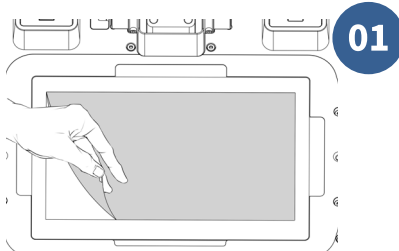
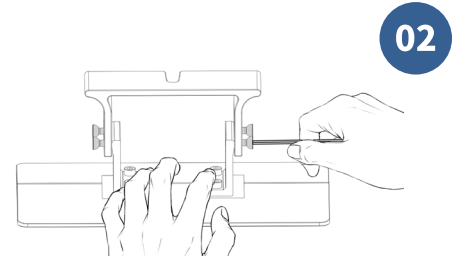**Horn icon:** Turn on/off the screen sound

1. Plug in power and turn on the machine. Raise Z axis by 50mm.

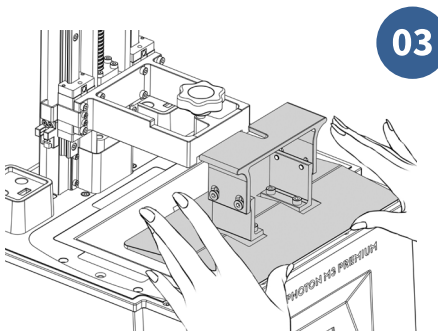2. Install print platform.

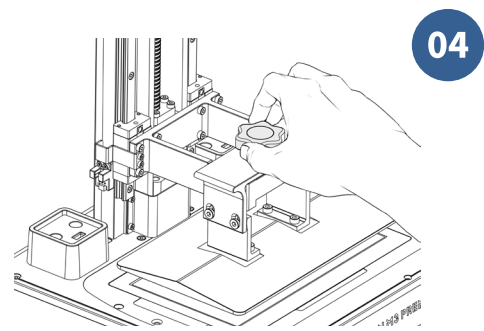**01** Remove the protective film

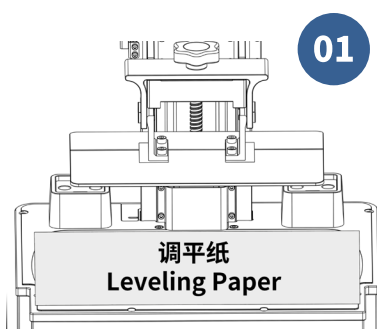
02 Loosen the four screws on the platform

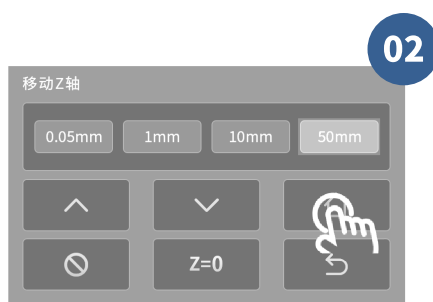**03** Push the platform onto the platform carrier
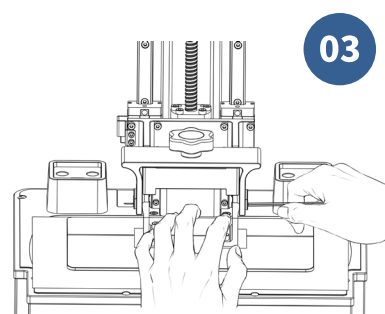

04 Tighten the knob

4. Leveling.

01

调平纸
Leveling Paper

Place the leveling paper on
the curing screen

02

移动Z轴

| 0.05mm | 1mm | 10mm | 50mm |

∧ ∨

⊘ Z=0 ↩

Click "HOME"

03

Press the platform gently,
tighten the four screws

5. Set the zero position.

Move Z

| 0.05mm | 1mm | 10mm | 50mm |

∧ ∨ ⌂

⊘ Z=0 ↩

Move Z

0.05m ...0mm

Setting it as zero position?
The platform will be raised later.

Enter   Return

⊘ Z=0 ↩

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

01

Tools

📦 Move Z   ⚙

📈 Status   🔊

☀ Exposure   ↩

02

Exposure

ANYCUBIC

10 S ∧ ∨

Next   ↩

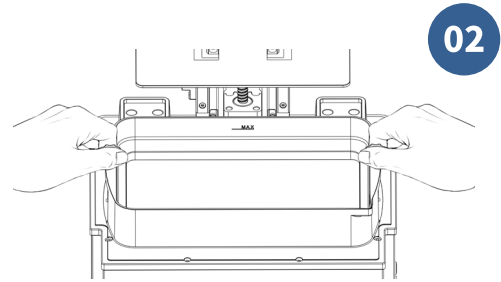**03**

Exposure

ANYCUBIC

10 S ∧ ∨

Next   ↩

04
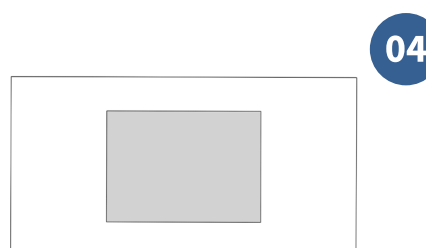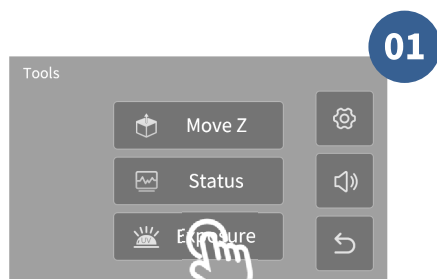
The white part is
exposure area

7. Install the resin vat.

01
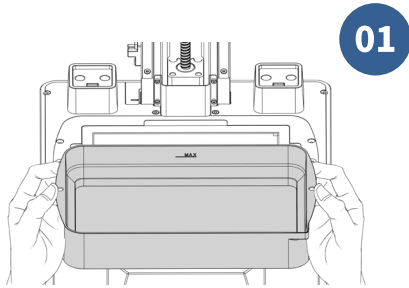
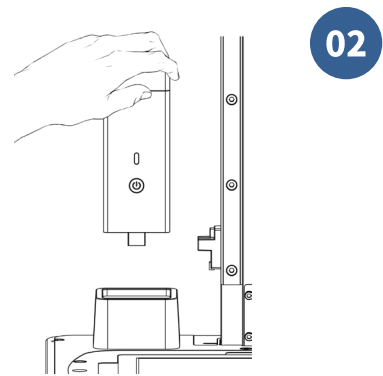Push in the resin vat

02

Tighten two knobs

8. Install two air purifiers.

01

Open the top cover and then remove the protective package

02

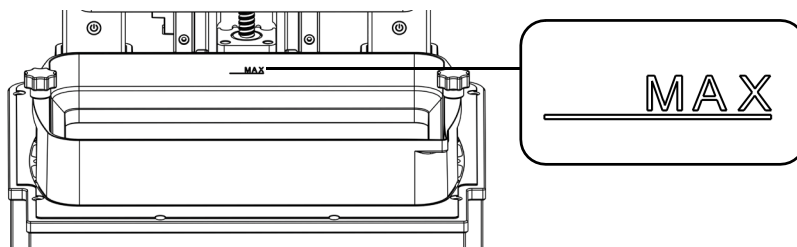Insert the air purifier onto the base

*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.
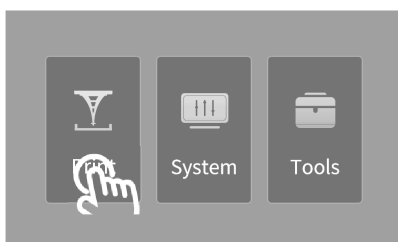
1. Make sure you wear masks and gloves (to avoid direct skin contact with resin), slowly pour resin into the vat with **resin level not exceeding the vat's maximum scale**.

2. Press the power button of air purifier to turn it on. The green light indicates that it is well-operating.
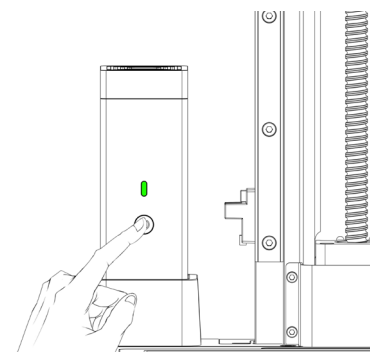
3. Put on the anti-UV cover. Then, insert the USB drive and print the test file.

Notes：

① It's recommended that use the USB drive we provide. Otherwise, please use a USB drive whose memory size **does not exceed 8G** and ensure that it's formatted to **FAT/FAT 32**.

② The print files should be placed at the root directory of USB drive to avoid read errors.

Finishing

- 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. It may need post-curing to achieve better hardness by being exposed directly to sunlight or a UV-curing machine.
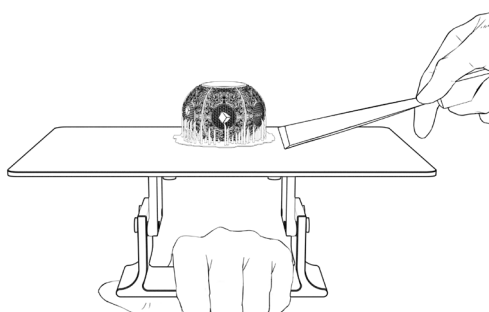
- After printing, there might be some cured resin left in the vat. Please clean the vat timely, and filter the remaining resin by a funnel. Otherwise, it may cause damage to the release film or LCD screen. If you do not use the resin now, it is recommended to store it in an airtight container away from light.

Vat spout

Funnel
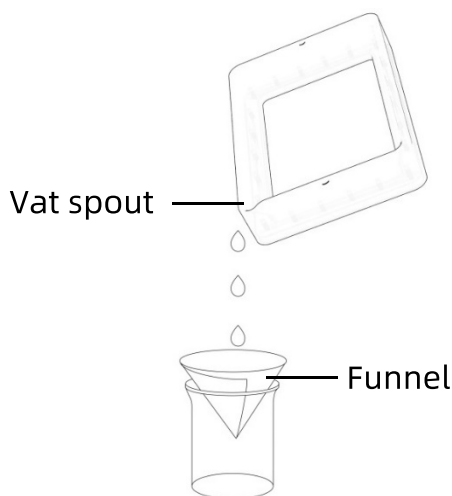
Anycubic Photon M3 Premium will be added to Anycubic Cloud in 2023 February. The WIFI unit and antenna had already been equipped for the printer, and through firmware upgrades, you can use functions such as **remote control** and **print task monitoring**. The antenna is key to the function, please keep it properly.

"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**.
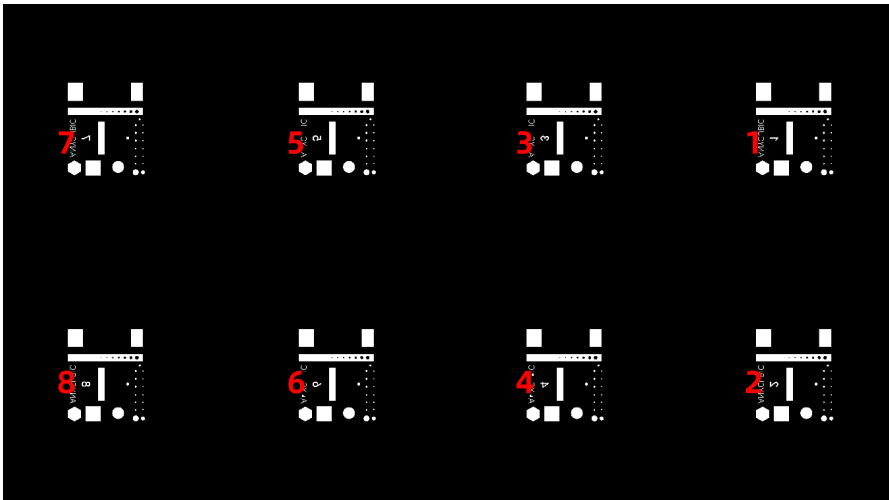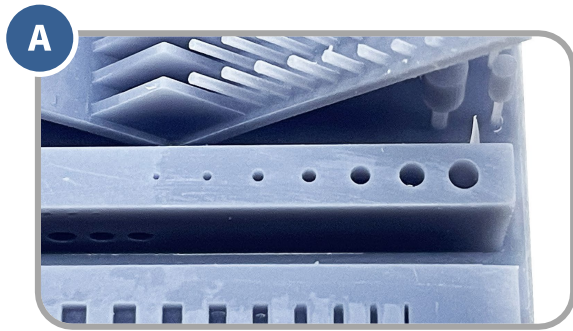

The numbers on the models indicate their order

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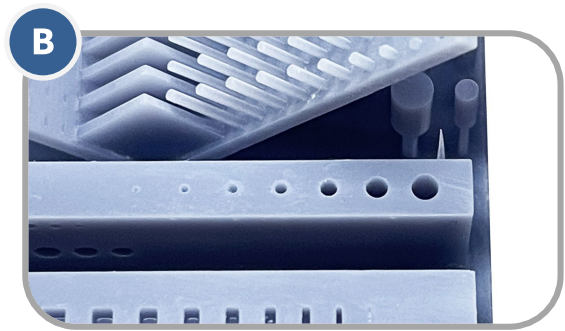
For example, when normal exposure time is set to 1.5 s, the exposure time for Model No.1-8 is: 1.5 / 1.75 / 2 / 2.25 / 2.5 / 2.75 / 3 / 3.25 s.

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.
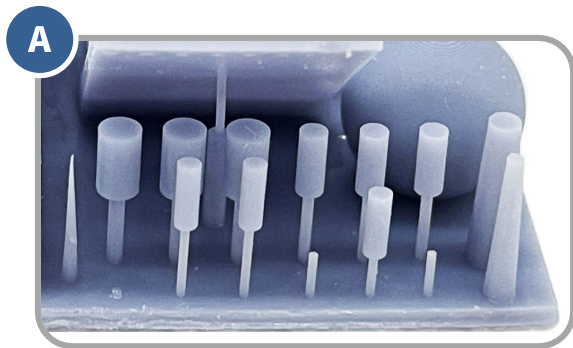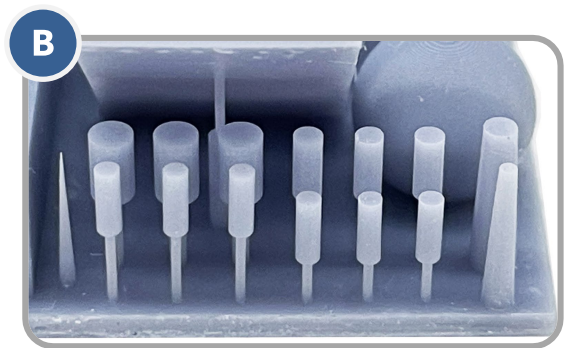
More holes

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".

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.
- Bad leveling.

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.

Layer shift

- Add supports.
- Reduce the lift speed.

## Floccules left in resin vat or attached to models

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

Resin vat maintenance

- **Remove the cured resin from release film:** Set full-screen exposure for 20s and then remove the cured resin sheet to protect the film. Do not use sharp objects to scrape off the residues on FEP film.
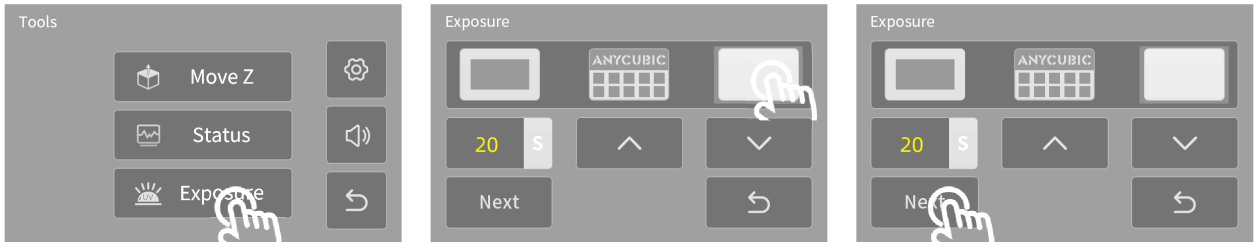
- **Release film replacement:** The statistics of print times and print layers are shown in Status interface. Please check them and replace release film timely to avoid print failure or even the damage to printer.
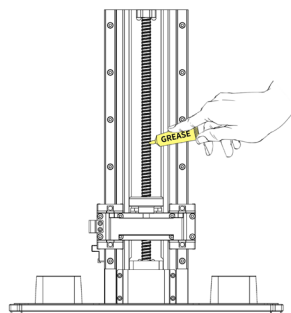

<div style="display:flex">
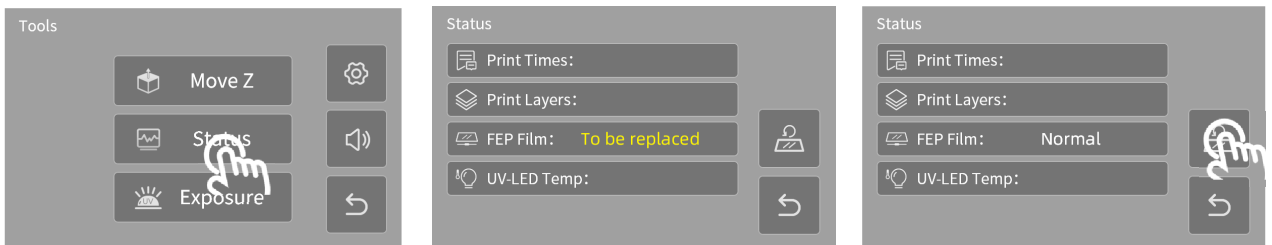
Replace release film
at this time

Click reset button
after replacement

</div>

- If you do not use the resin for over two days, store it in an airtight container away from light.

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 the resin cured on screen protector, please replace it immediately to protect LCD screen.

• **Clean the body of printer:** Clean the body of the printer with alcohol.

Air Purifier

It is recommended to replace the activated carbon every 3-6 months for optimal performance.

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.