ANYCUBIC

PHOTON MONO X 6K

◉ User Manual

PHOTON MONO X 6K

Dear customer,

Thank you for choosing ANYCUBIC products.

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

Please visit https://www.anycubic.com/pages/contact-us to contact us if you have any question. You can also gain more information such as software, videos, models from the website.

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 first if you have any issue 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 ANYCUBIC 3D printer and contact the technical support.

ANYCUBIC 3Dprinter includes moving parts that can cause injury.

It is recommended to use protection 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 temperature. Always use the ANYCUBIC 3D printer in an open and well ventilated area.

ANYCUBIC 3D printer must not be exposed to water or rain.

Operate ANYCUBIC 3D printer 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 question.

Contents

Technical Specification

Printing

System	ANYCUBIC Photon Mono X 6K
Operation	3.5-inch Color TFT Screen
Software	ANYCUBIC Photon workshop
Connectivity	USB memory stick

Specifications

Technique	LCD Shadow Masking
Light source	UV-LED (wavelength 405nm)
XY Resolution	34.4µm 5760*3600 (6K)
Z axis Accuracy	0.01mm
Suggested Layer Thickness	0.01 ~ 0.15mm
Suggested Print Speed	MAX 60mm/h
Rated power	120W

Physical Dimensions

Dimension	270mm (L) *290mm (W) 475*mm (H)
Build volume	197mm (L) *122mm (W) *245mm (H)
Materials	405nm UV-resin
Net weight	~10.75 kg

Technical Specification
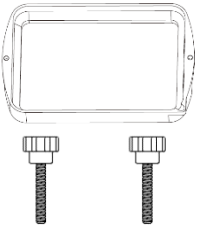
Recommended Printing Parameters
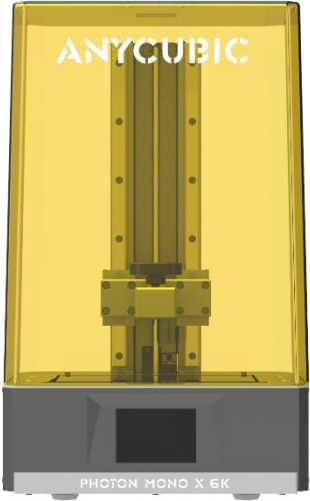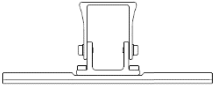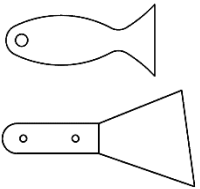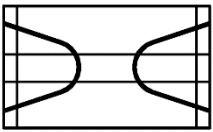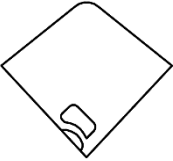
Layer Thickness   0.05 mm

Normal Exposure Time   2 s

UV power   100% (for the transparent color resin, it is 100%; for others, such as grey, black, white and skin color resin, it is 80%)

Off Time   0.5 s

Bottom Exposure Time   23 s

Bottom Layers   4

Z Lift Distance   8 mm

Z Lift Speed   2 mm/s
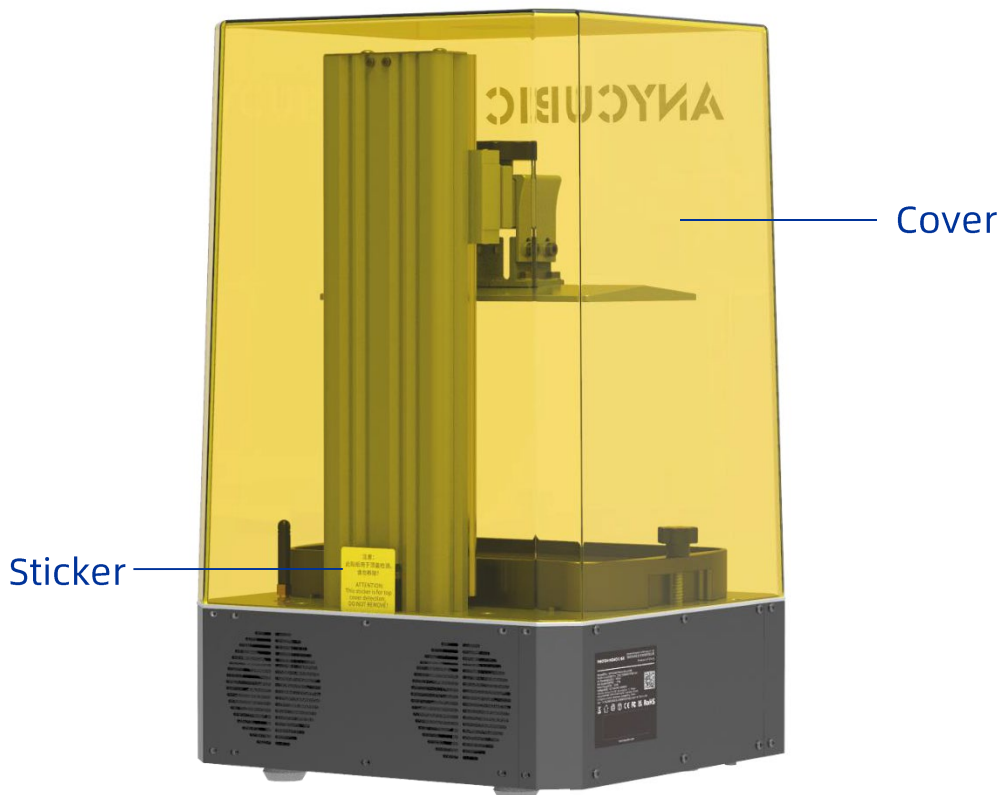
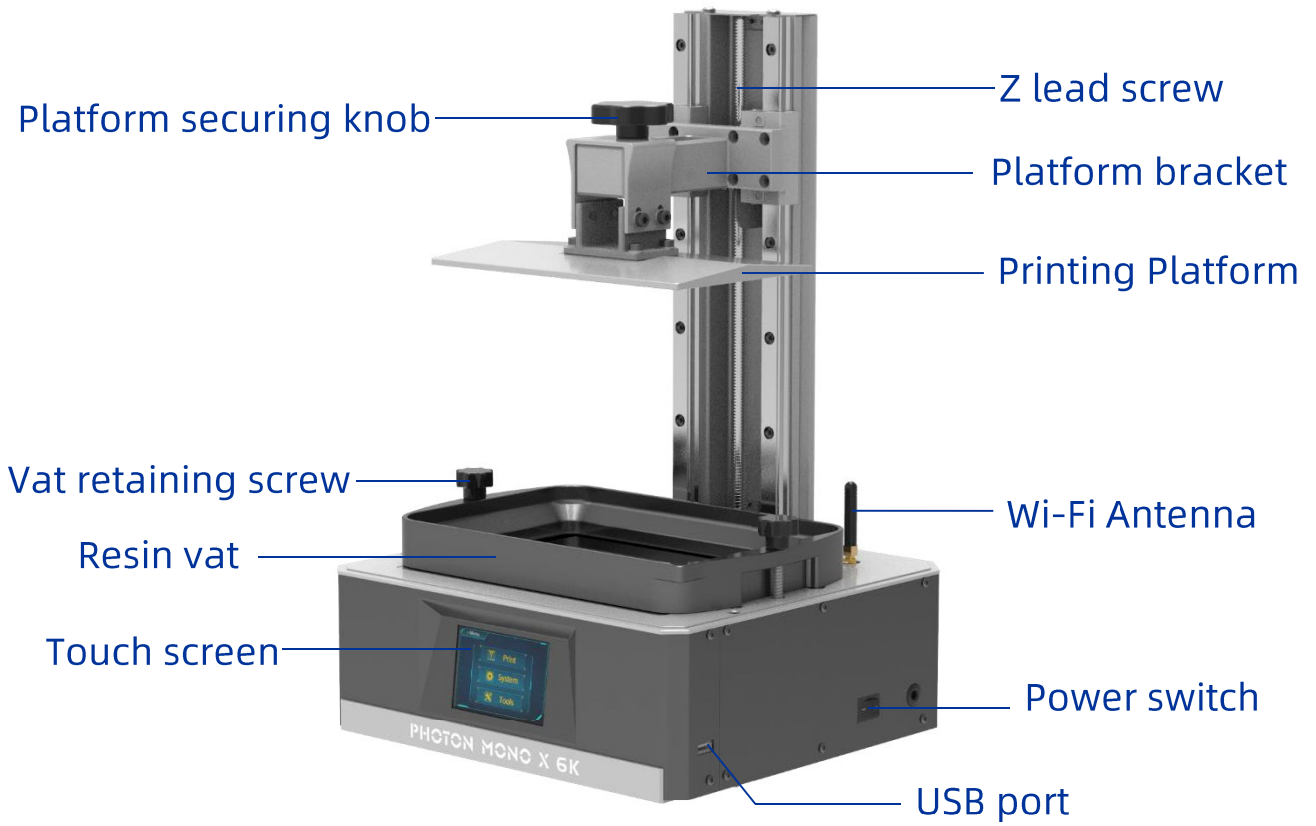Z Retract Speed   3 mm/s

Anti-alias   1

Note:

1.The recommended printing parameters above is for reference only, which is more suitable for Anycubic resin.

2. The UV power of the machine is high. If there are solid residue in the resin vat or on the printing platform frequently, please decrease the UV power and increase the normal exposure time.

Packing List

Photon Mono X 6K	Print platform 1PC	Resin vat 1PC
	USB memory 1PC	Scrapers 2PCS
Mask 1PC	Gloves 3Pairs	Funnel 5PCS	Assembly Instruction 1PC
Power adaptor 1PC	WIFI Antenna 1PC	Leveling paper 1PC
Tool kit	Screen protector kit	

Product Overview

Platform securing knob

Z lead screw

Platform bracket

Printing Platform

Vat retaining screw

Wi-Fi Antenna

Resin vat

Touch screen

Power switch

USB port

Cover

Sticker

Menu Directory

Home menu

Print	System	Tools

Home menu

Enter the Print Menu
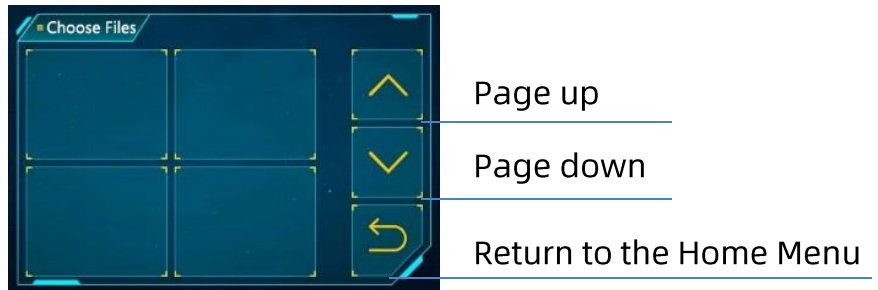
Enter the System Menu

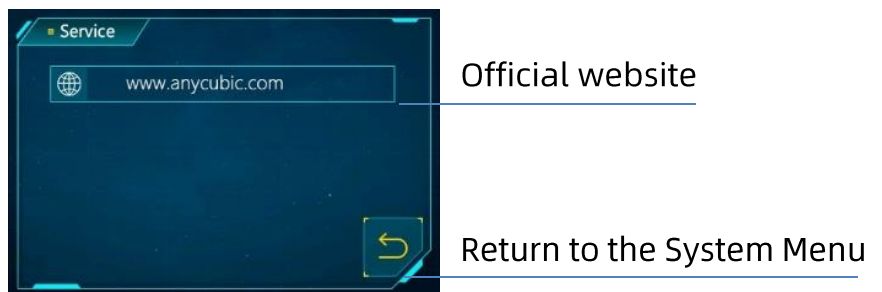Enter the Tools Menu

Menu Directory

Print

File List:

Page up

Page down

Return to the Home Menu

Click Files

Delete the current file

Click to start printing

Return to the Print Menu
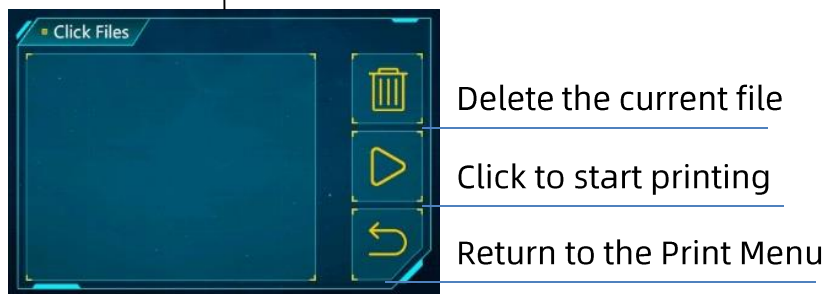
System

Language: Change language(English/Chinese)

Service:

Official website

Return to the System Menu

Information:

Product system

System version

Product ID

IP Address

Return to the System Menu
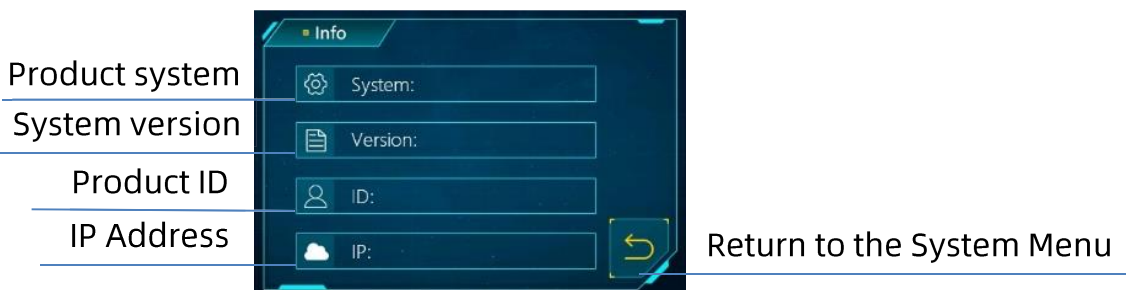
Tools

Move Z:

Move the Z axis downwards	0.1mm	1mm	10mm	Move Z by 0.1mm/1mm/10mm
Move the Z axis upwards	∧	∨	⌂	Return to Zero
Stop moving the Z axis	⊘	Z = 0	↩	Return to the Tools Menu

Reset the zero point

Detection:

Please set the exposure time of the test image.

Click to set the test time — S

Test LED and LCD for the preset time — Next

Reduce the test time

Return to the Tools Menu

Increase the test time

Exposure:

Please set the exposure time.

Click to set the exposure time — S

Expose for the preset time — Next

Select one of the images to expose

Lock icon: Enable/disable the door detection function

Horn icon: Turn on/off the screen sound

Gear icon: Enter to set the UV power
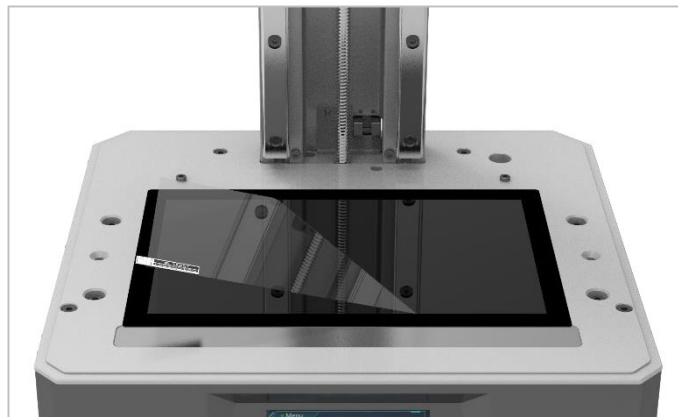
Assembly and Leveling Instructions

1. Unpack the machine and take out the accessories. Then plug in the power cord and turn on the printer.

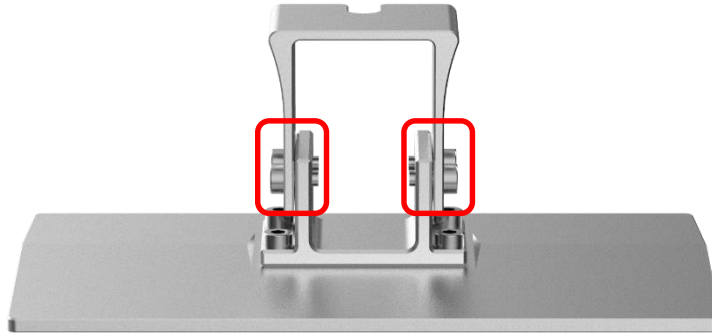2. Raise Z axis to a certain height that the curing screen will not be scratched when the printing platform is installed.

3. Tear off the protective film before leveling and printing.

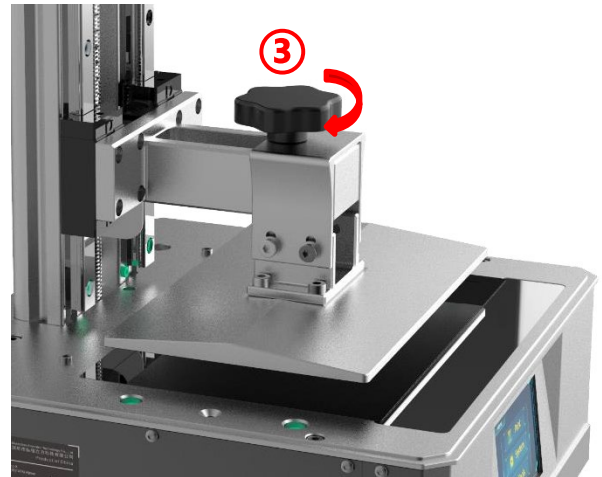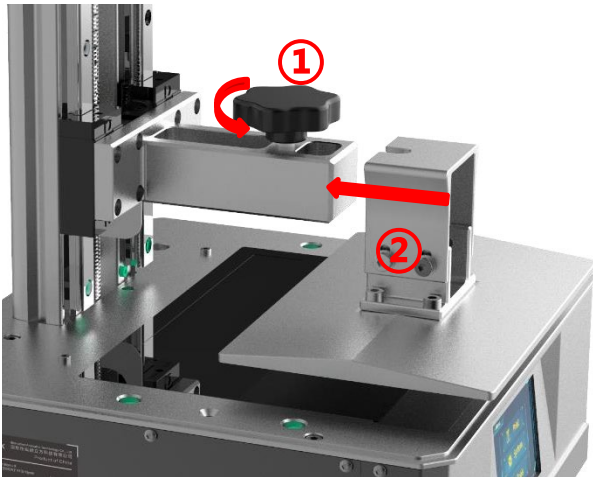4. Peel off the packing film on the printing platform, then loosen the four screws.

5. Install the printing platform.

6. Place a leveling paper on the curing screen. Then click " " on touch screen. Wait for the Z axis to descend and stop automatically.

7. Use your fingers to press the platform gently, to let it fit evenly on the curing screen. Then tighten the four screws on the platform.

8. Click "Z=0" to save the zero position, and then click "Enter" on the pop-up window. Till now, the leveling process is finished. Click "Enter" again and take out the leveling paper.
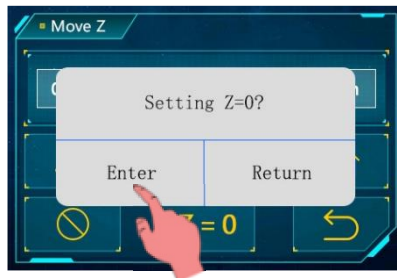
9. Testing UV light: Click "Tools"→ "Detection", set the test time and then click "Next". The curing screen should display a complete image as shown below. Otherwise, the UV light may have sort of malfunction, please contact tech support.

Click here to set the test time

10. Install the resin vat.

11. Install the Wi-Fi antenna.
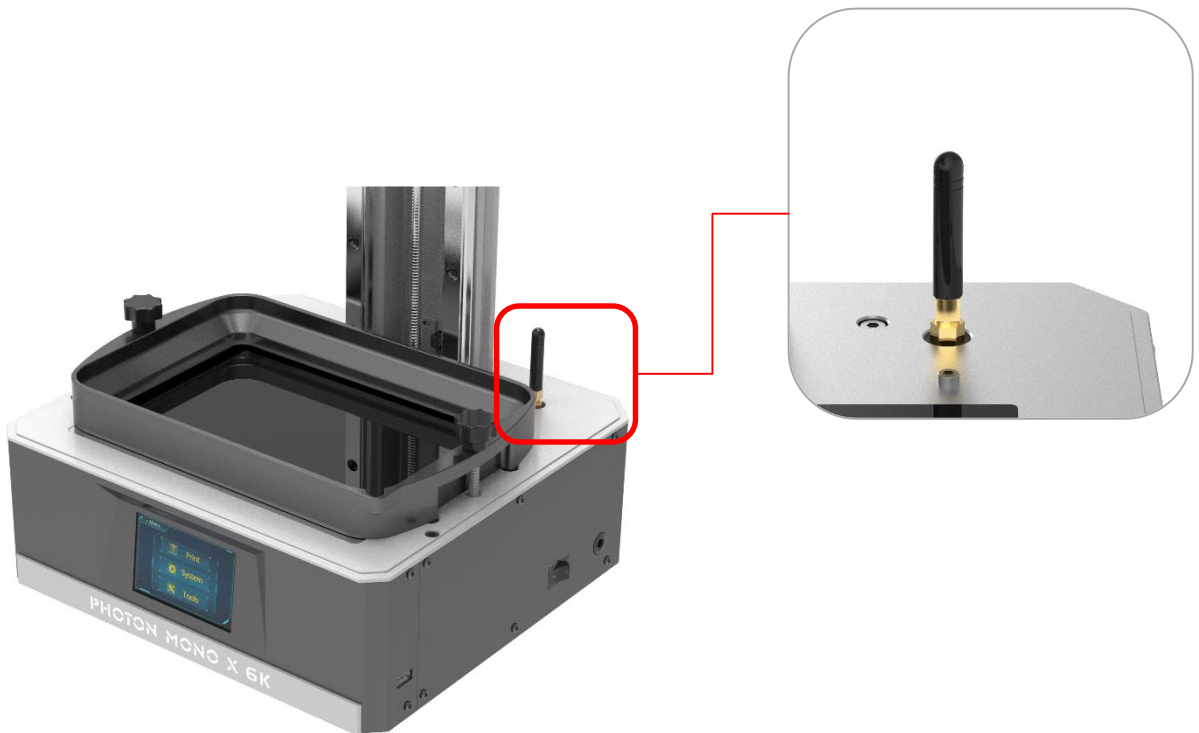
First Print Instructions

1. Print

Insert the USB memory (the test file"TEST.pwmb" has been saved in it) into the USB port. **Then wear masks and gloves (to avoid direct skin contact with resin)**, and slowly pour resin into the vat. The resin cannot exceed the vat's maximum scale.

After that, put on the cover. The sticker side should face backward. Take off the gloves, select the "TEST.pwmb" test file and start printing. (The printing time on the screen is for reference only, we make no guarantee that it is the actual printing time.)
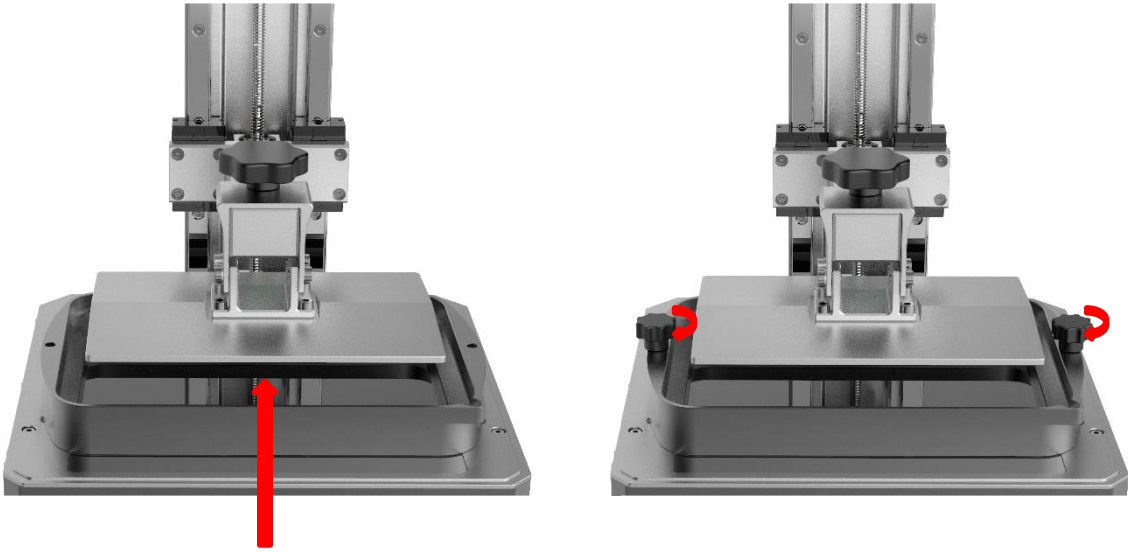
Do not exceed the maximum scale

Sticker
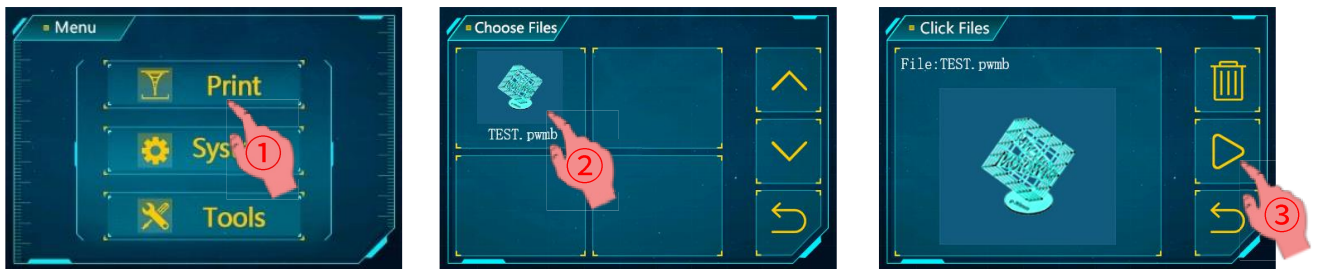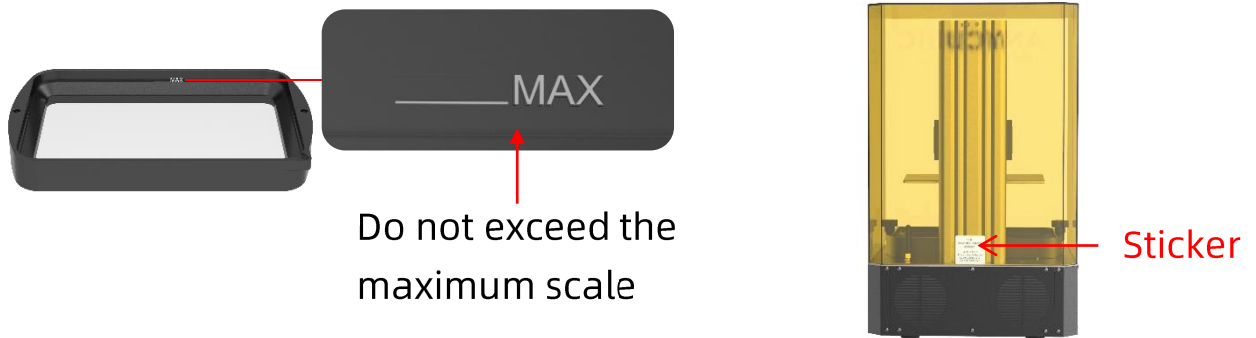
If you think the resin is insufficient to finish an ongoing print (or you want to change the resin), you can click "Pause", the platform will rise, and you can slowly add (or change) the resin. After that, click "Start" to resume.
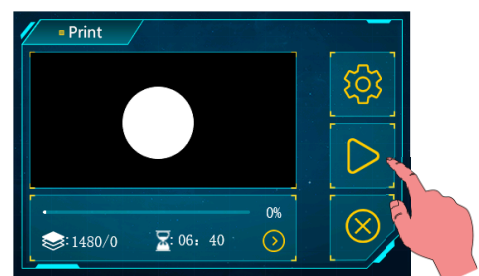
click to pause   click to start

First Print Instructions

2. Door detection function

Door detection function is disabled by default. If this function is enabled, the printer can detect whether the cover is on or not. Printing will pause when the cover is removed, and will continue when the cover is put back.

Click the lock icon on "Tools" interface to enable/disable this function.

After click, the lock icon is locked and the function is enabled.
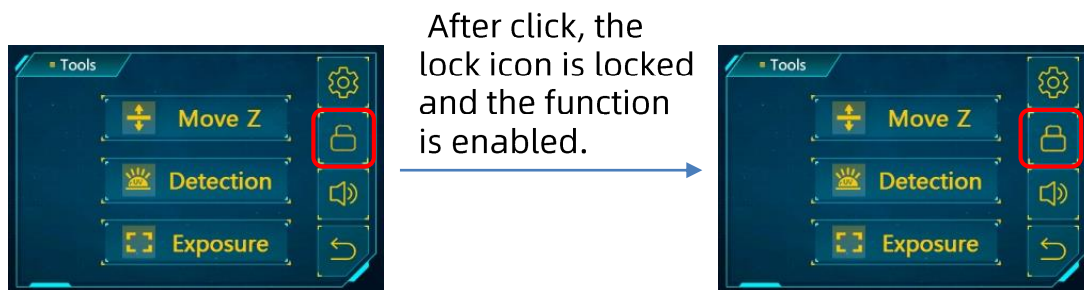
3. Set UV power

There are two ways to set UV power.

Before printing, click "Tools"→ " " . Then click "UV power" in the Set up interface to set UV power.

Besides, in the process of printing, you can click " " in Print interface, and page down to find "UV power". Then click it to set the UV power.

4. Handling models and residues

After printing, unscrew and remove the platform when resin stop dropping from the platform. The model can be removed by scraper. The removed model should be washed with ethanol 95vol% concentration. The printed model may need post curing to achieve better hardness by direct **sunlight** or UV-curing box.

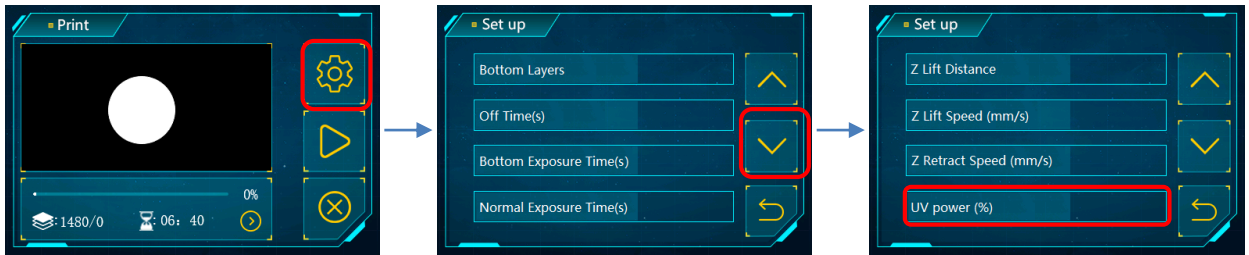
Funnel

【**IMPORTANT**】 Inevitably, in case of incomplete curing or failed prints, there might be some cured resin left in the vat. It is suggested to filter the resin by a funnel and then store the liquid in a sealed container. The residues left on the platform or in the vat can be wiped off with paper towel.

Before each prints, please ensure there is no solid residues in the vat or on the platform, otherwise the FEP film may be crushed and broken during printing.

Slicing Software Overview

3D printer reads sliced file and prints models. It is necessary to convert 3D files (stl./obj.) into sliced files for machine to recognize. Software that realize the process is called slicing software, for example, Photon Workshop.

Photon Workshop can be used to export sliced file. You should select **Photon Mono X 6K** as machine type first, then manipulate the model and set the parameters. Lastly, export the sliced file (**.pwmb**).

The instruction of Photon Workshop has been saved in the USB memory, it is recommended that read it carefully if it is the first time for you to use Photon Workshop.

FAQ and Machine Maintenance

1. FAQ

(1) Model do not stick to platform

➢ Bottom exposure time is insufficient, increase the exposure time.
➢ Contact area between the model and platform is small, please add raft.
➢ Bad leveling.

(2) Layer separation or splitting

➢ The machine is not stable during printing.
➢ FEP film in the vat is not tight enough or it need a change for new one.
➢ The printing platform or resin vat is not tightened.
➢ The lift speed is too fast.
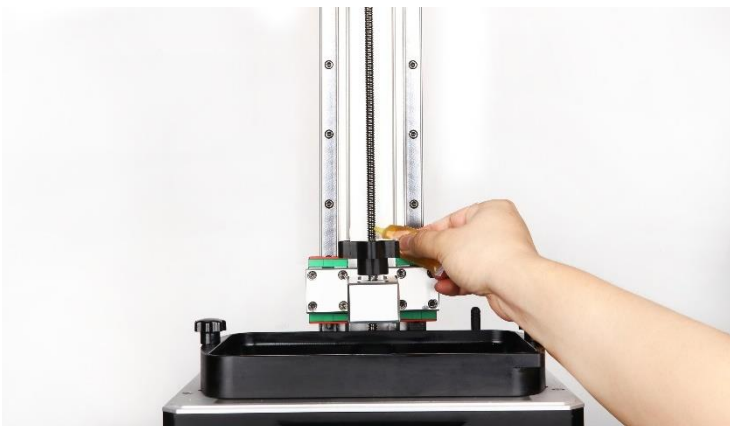➢ The printing object is hollowed without punching.

(3) Layer shift

➢ Add supports.
➢ Reduce the lift speed.

(4) Floccules left in resin vat

➢ The exposure time is too long. Reduce the normal exposure time and bottom exposure time.
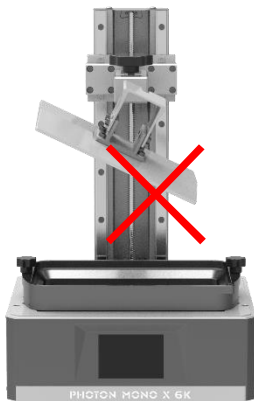
2. Machine maintenance

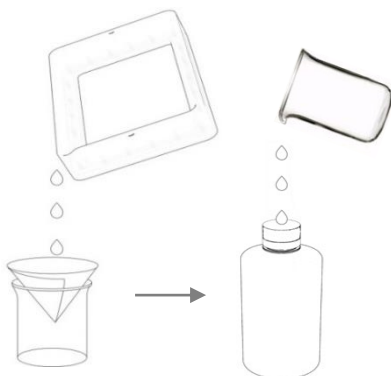(1) If Z axis make noisy sound, please apply lubricant to Z lead screw.

(2) Clean off the residues cured on FEP film when the printing fail: 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.

(3) Be careful when remove the platform, do not let it fall to damage the machine.

(4) Do not left resin in resin vat for over two days when it is unused. Please filter and store the resin properly.

(5) After printing, please clean up the platform **(wipe with paper towels or wash with alcohol),** and ensure no residue left **(filter the residue with funnel).**

(6) If the body of printer is stained with resin, use alcohol to clean.

(7) Please clean the resin vat first before you change resin.

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