ANYCUBIC

X2

◉ User Manual

PHOTON MONO X2

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 first 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 the technical support.

Anycubic 3D printer includes components that can cause injury.

It is recommended to use protective glasses when you sand the 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.
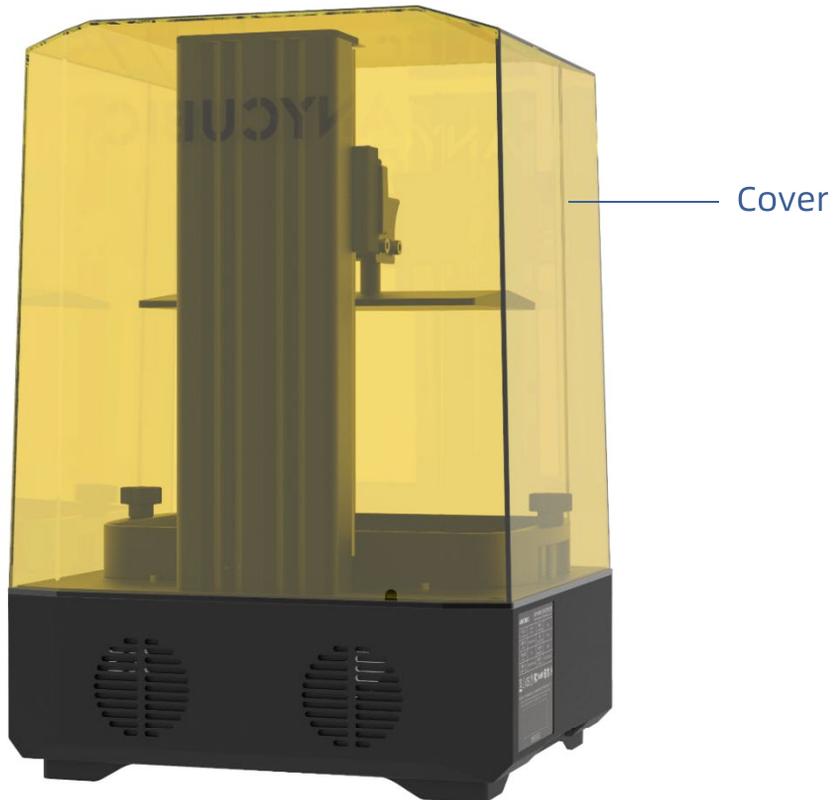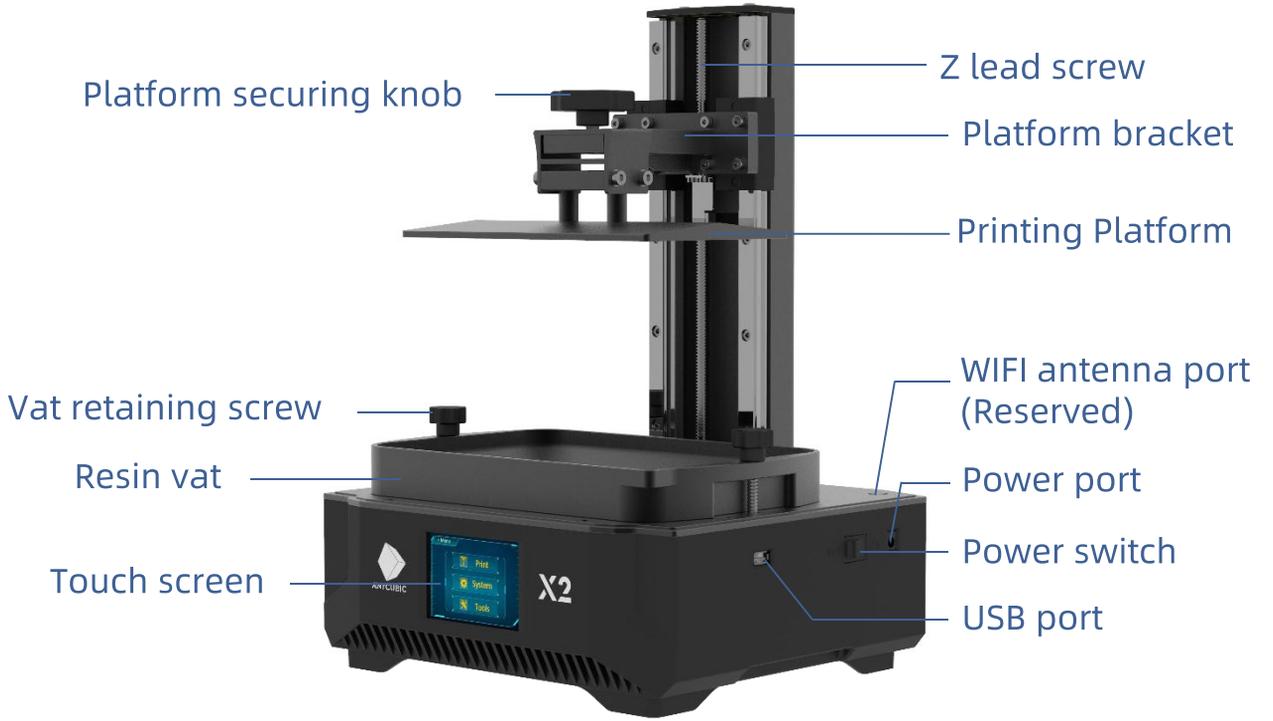
Do not disassemble Anycubic 3D printer, please contact technical support if you have any questions.
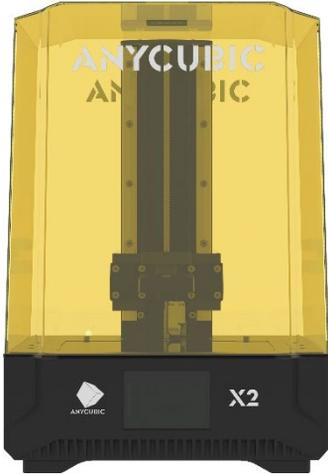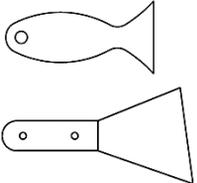
Contents

Product Overview

Platform securing knob

Z lead screw

Platform bracket

Printing Platform

WIFI antenna port (Reserved)

Vat retaining screw

Resin vat

Power port

Power switch

Touch screen

USB port

X2

Cover

In the Box

	Print platform 1PC	Resin vat 1PC
Photon Mono X2	USB memory 1PC	Scrapers 2PCS
Mask 1PC	Gloves 3Pairs	Funnel 5PCS / Assembly Instruction 1PC
Power adaptor 1PC	Tool kit	Screen protector kit / Leveling paper 1PC
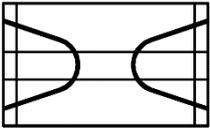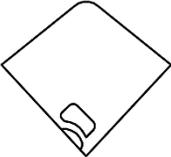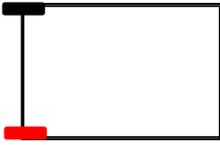
Technical Specification

Operating System

System	Photon Mono X2
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	48μm 4096*2560 (4K)
Z axis Accuracy	0.01mm
Suggested Layer Thickness	0.01 ~ 0.15mm
Suggested Print Speed	MAX 60mm/h
Rated power	100W

Physical Dimensions

Dimension	290mm(L) * 260mm(W) * 417mm(H)
Build volume	196.7mm(L) * 122.8mm(W) * 200mm(H)
Materials	405nm UV-resin
Net weight	~7 kg

Recommended Printing Parameters

Layer Thickness	0.05 mm
Normal Exposure Time	2.5 s
Off Time	0.5 s
Bottom Exposure Time	25-40 s
Bottom Layers	5
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 surface of printing platform may be worn after long-term use. It is suggested to increase the bottom exposure time appropriately to improve the print success rate.

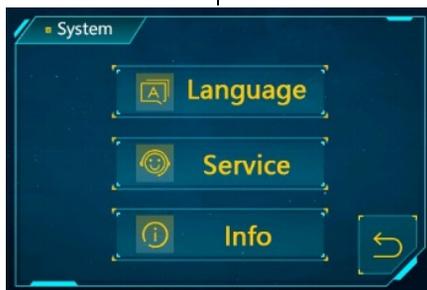**The data above root in Anycubic lab, only for reference.**

Home menu

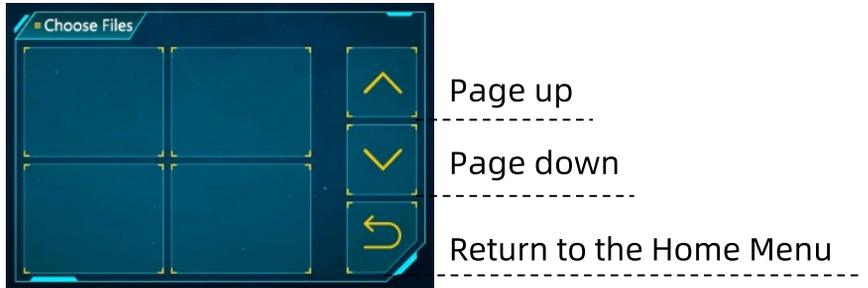| Print | System | Tools |

Home menu

Enter the Print Menu

Enter the System Menu

Enter the Tools Menu
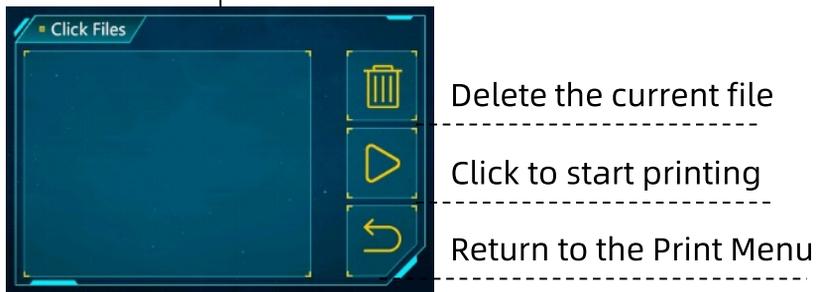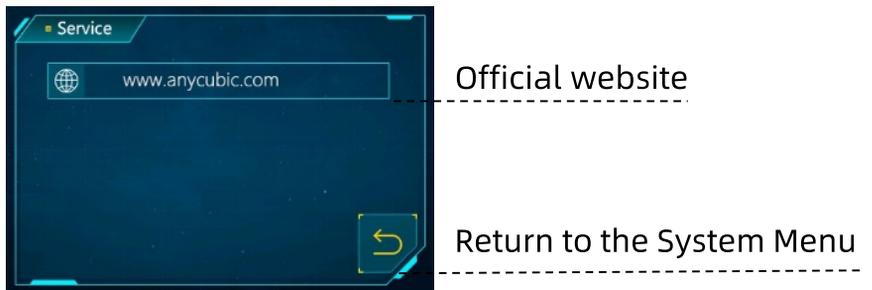
Print

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
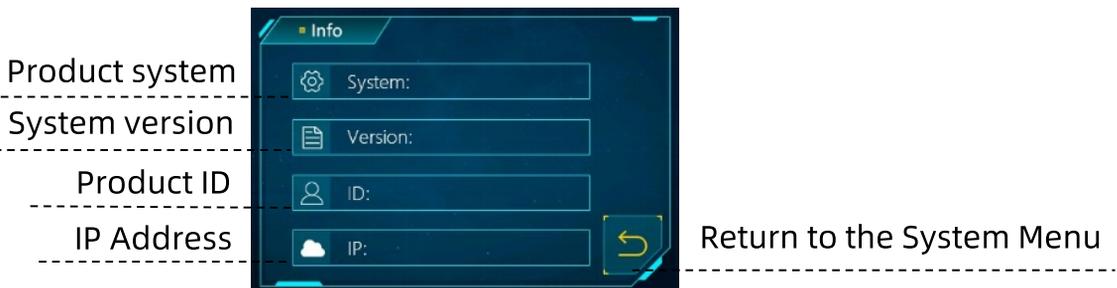
Tools

Move Z:

Move the Z axis downwards		Move Z by 0.1mm/1mm/10mm
Move the Z axis upwards		Return to Zero
Stop moving the Z axis		Return to the Tools Menu
	Reset the zero point	

Detection:

Click to set the test time		Reduce the test time
Test LED and LCD for the preset time		Return to the Tools Menu
	Increase the test time	

Exposure:

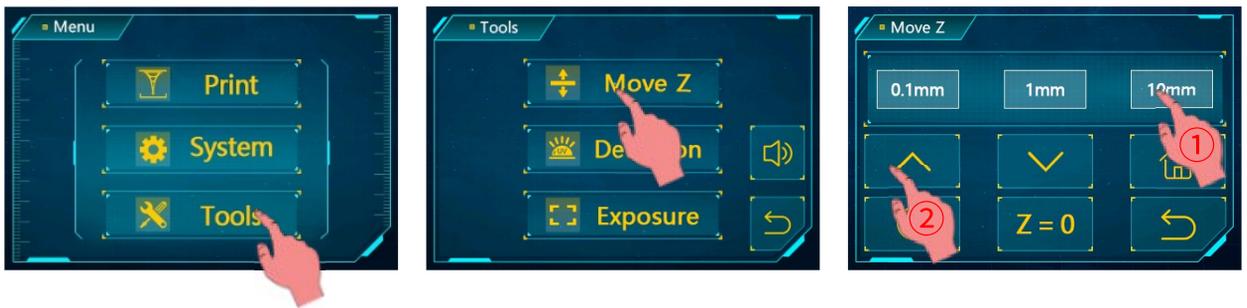|		
Click to set the exposure time		Select one of the images to expose
Expose for the preset time		Return to the Tools Menu

Horn icon: Turn on/off the screen sound
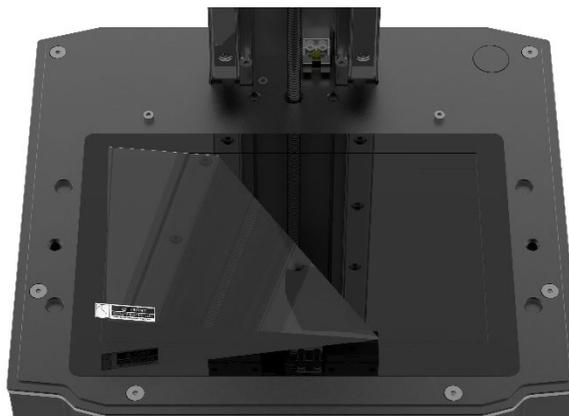
Assembly and Leveling Instructions

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 LCD screen will not be scratched when the printing platform is installed.
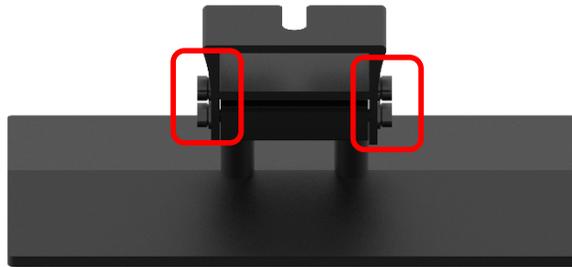

3. Tear off the protective film before leveling and printing.
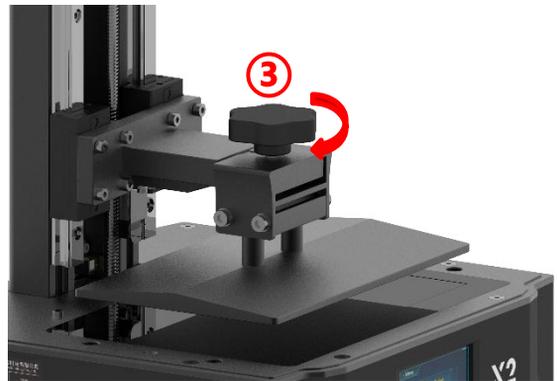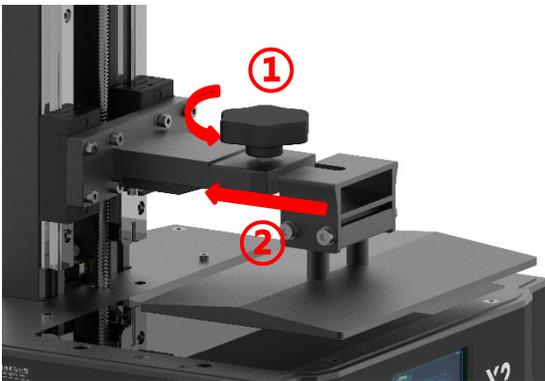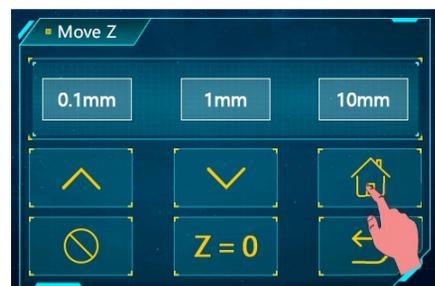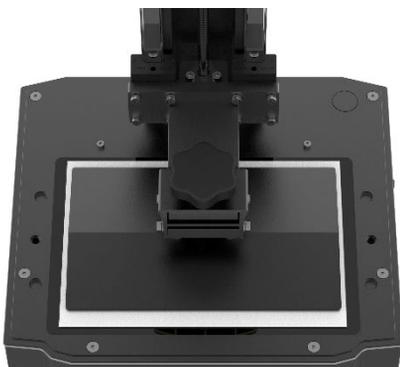
4. Loosen the four screws on the platform.

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.
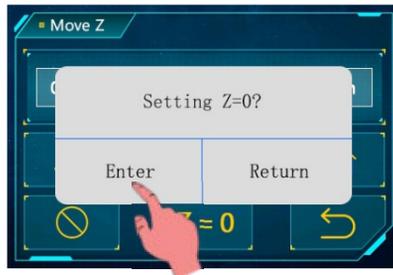
9. Detection: Raise printing platform until the curing screen can be observed completely. Return to Tools menu and click "Detection". Set the test time and then click "Next". The curing screen should display a complete image as shown below.

Click here to set the test time

10. Install the resin vat.

1. Print

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

Make sure you wear masks and gloves (to avoid direct skin contact with resin), and slowly pour resin into the vat with the resin level not exceeding the vat's maximum scale. Then, put on the anti-UV cover. Insert the USB drive and print the test file. The print time is for reference only,

_____MAX

Do not exceed the
maximum scale

Notes：
① It is recommended that use the USB drive we provided. Otherwise, please use the USB drive whose memory size **does not exceed 8G** and ensure that it is formatted to **FAT/FAT 32**.
② The print files should be placed at the root directory of USB drive to avoid read error.

If it is necessary, click "Pause" to pause the printing and wait for platform rising up. Then click "Start" to resume printing.


click to pause   click to start

2. Handling models and residues

After printing, remove the platform when resin stop dropping from the platform. Remove the model by metal scrapper and then wash it with 95% alcohol or other detergent. It may need post-curing to achieve better hardness by being exposed to sunlight or a UV-curing machine.

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. If you do not use the resin now, it is recommended to store it in an airtight container away from light.

Funnel
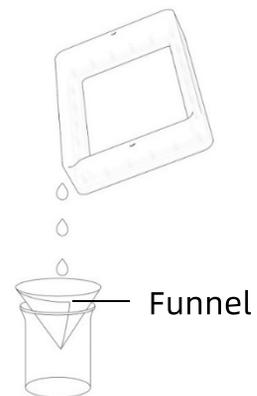
Resin Exposure Range Finder

"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**.
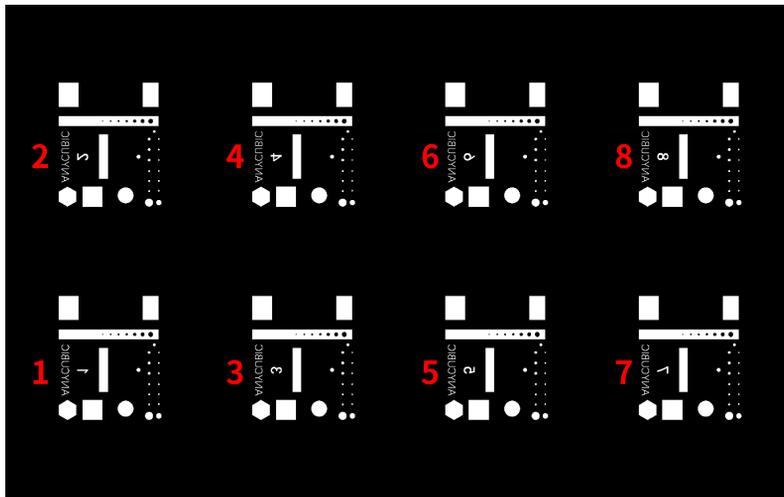
The numbers on the models indicate their order

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.

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.
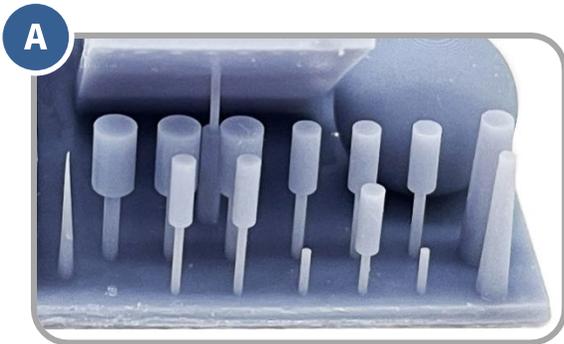
Resin Exposure Range Finder

More holes
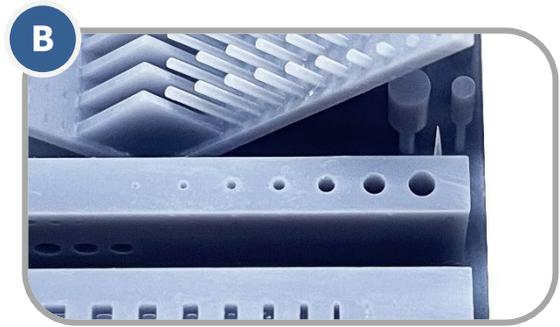
Less holes

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".

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.
- ➢ The printer must rest on workbench stably.

(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.
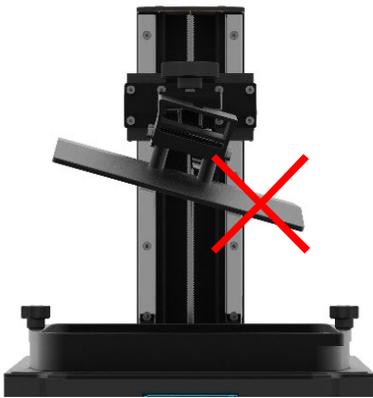
2. Machine maintenance

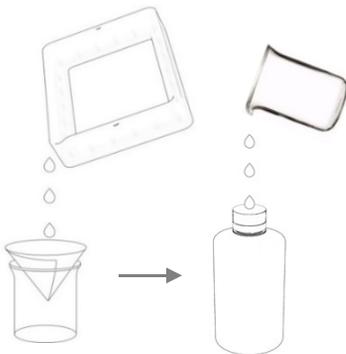(1) If Z axis make noisy sound, please apply lubricant to Z lead screw.

(2) 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.**

(3) Be careful when you 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. If platform securing knob or vat retaining screw is stained with resin, please clean it timely to avoid loose of screw. Otherwise, it may cause print failure or even damage to the printer.

(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 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.