User Manual

ANYCUBIC PHOTON D2

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. **DO NOT unplug Anycubic Photon D2 when it is working.**

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 use or leave the printer in dusty environment for a long time.

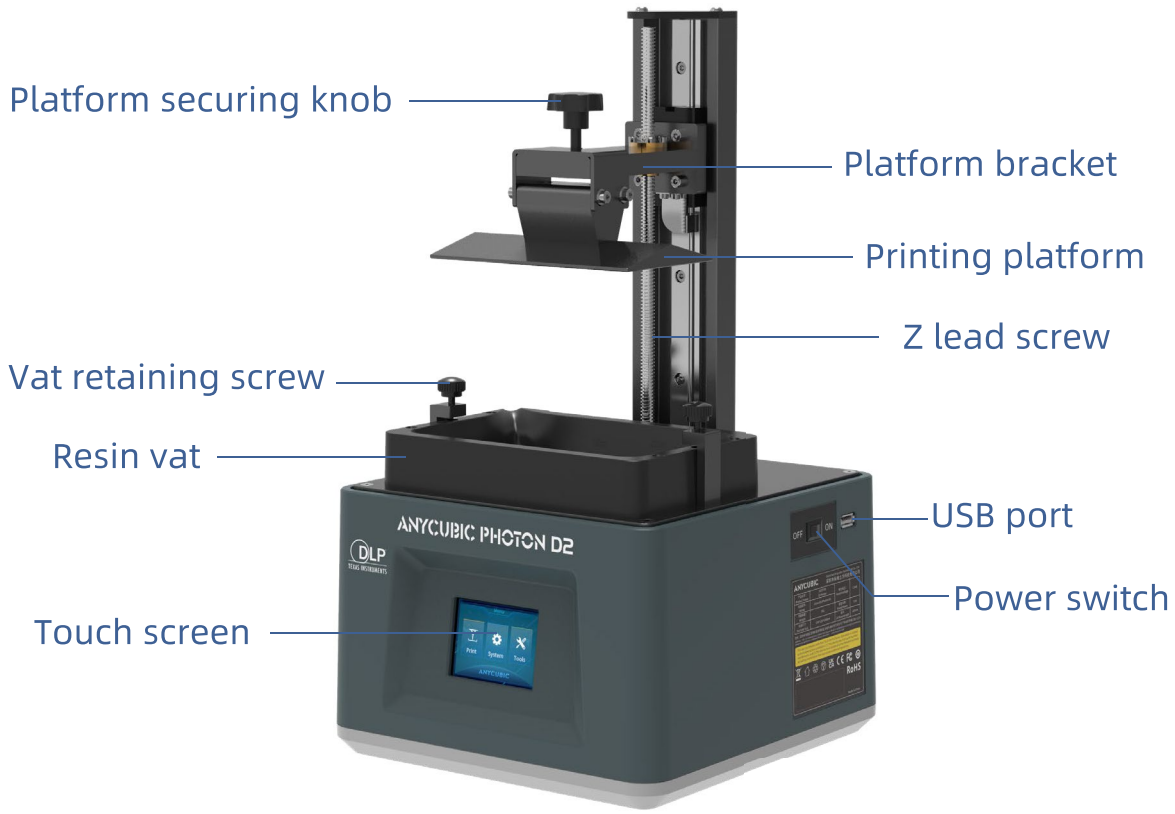
Do not expose Anycubic 3D printer to any water or rain environment.

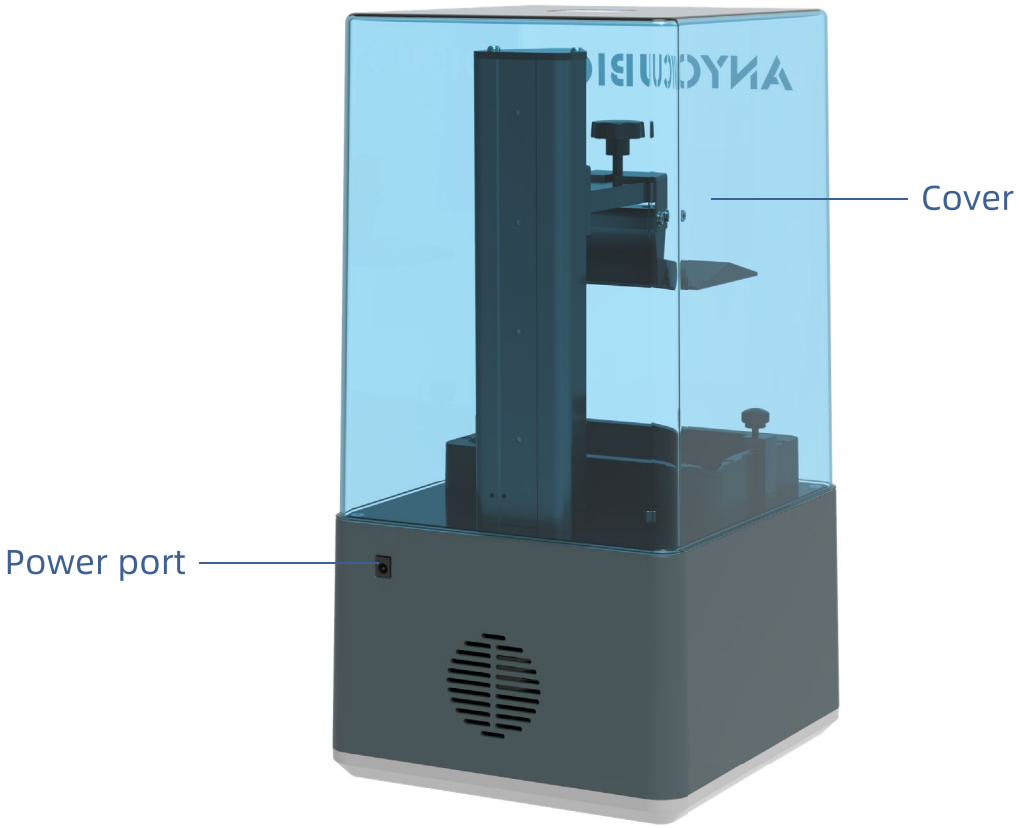
Use Anycubic 3D printer in an environment with a temperature of 8℃-40℃ and a humidity of 20%-50%. For optimal performance, do not exceed this range. Also, avoid direct sunlight exposure.

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

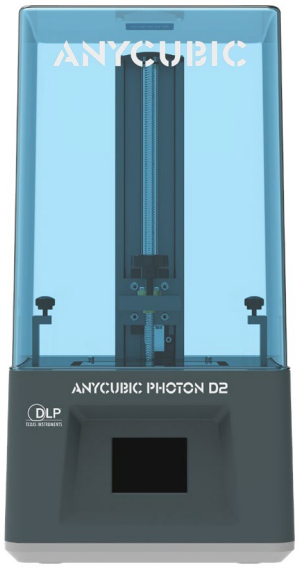
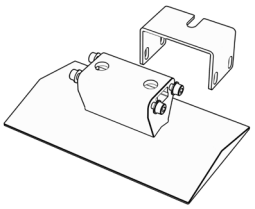
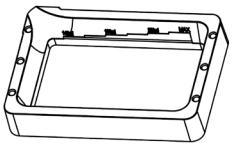
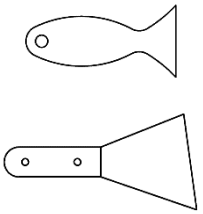
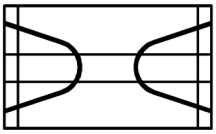
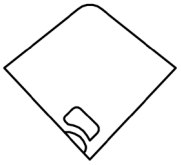
Contents

Product Overview





In the Box

			
		Print platform 1PC	Resin vat 1PC
			
Anycubic Photon D2		USB memory 1PC	Scrapers 2PCS
			
Mask 1PC	Gloves 3Pairs	Funnel 5PCS	Assembly instruction 1PC
			
Power adapter 1PC	Tool kit	Clean kit	Leveling paper 1PC

Technical Specification

Operating System

System	Anycubic Photon D2
Operation	2.8-inch Color TFT Screen
Software	Anycubic Photon Workshop
Connectivity	USB memory stick

Specifications

Technique	Digital Light Projection
Light Source	UV-LED (wavelength 405nm)
Resolution	2560*1440（2K）
XY Accuracy	51μm
Z-axis Accuracy	0.01 mm
Suggested Layer Thickness	0.01-0.15 mm
Print Speed	Max 2.5 s/layer
Rated power	15 W

Physical Dimensions

Dimension	236 mm (L) *226 mm (W) *438 mm (H)
Build Volume	130.6 mm(L)*73.4mm(W) *165 mm (H)
Applied Materials	405nm UV-resin for DLP 3D printer
Weight	~5 kg

Recommended Printing Parameters

Basic

Resin type / Parameters	DLP Craftsman Resin				
	White	Black	Aqua Blue	Beige	Grey
Normal Exposure Time (s)	2.3	2.5	2.7	2.3	2.3
Off Time (s)	1				
Bottom Exposure Time (s)	28				
Bottom Layers	5				
Z Lift Distance (mm)	5				
Z Lift Speed (mm/s)	2				
Z Retract Speed (mm/s)	3				
Anti-alias	16				
Note	1. The bottom exposure time should be adjusted according to the size of model and the wear of printing platform's surface. 2. The surface of printing platform may be worn after long-term use. If the model do not stick to platform or the edge of model lift, please increase the bottom exposure time by 20%-50% or increase the friction of platform's surface by sanding.				

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

Advanced

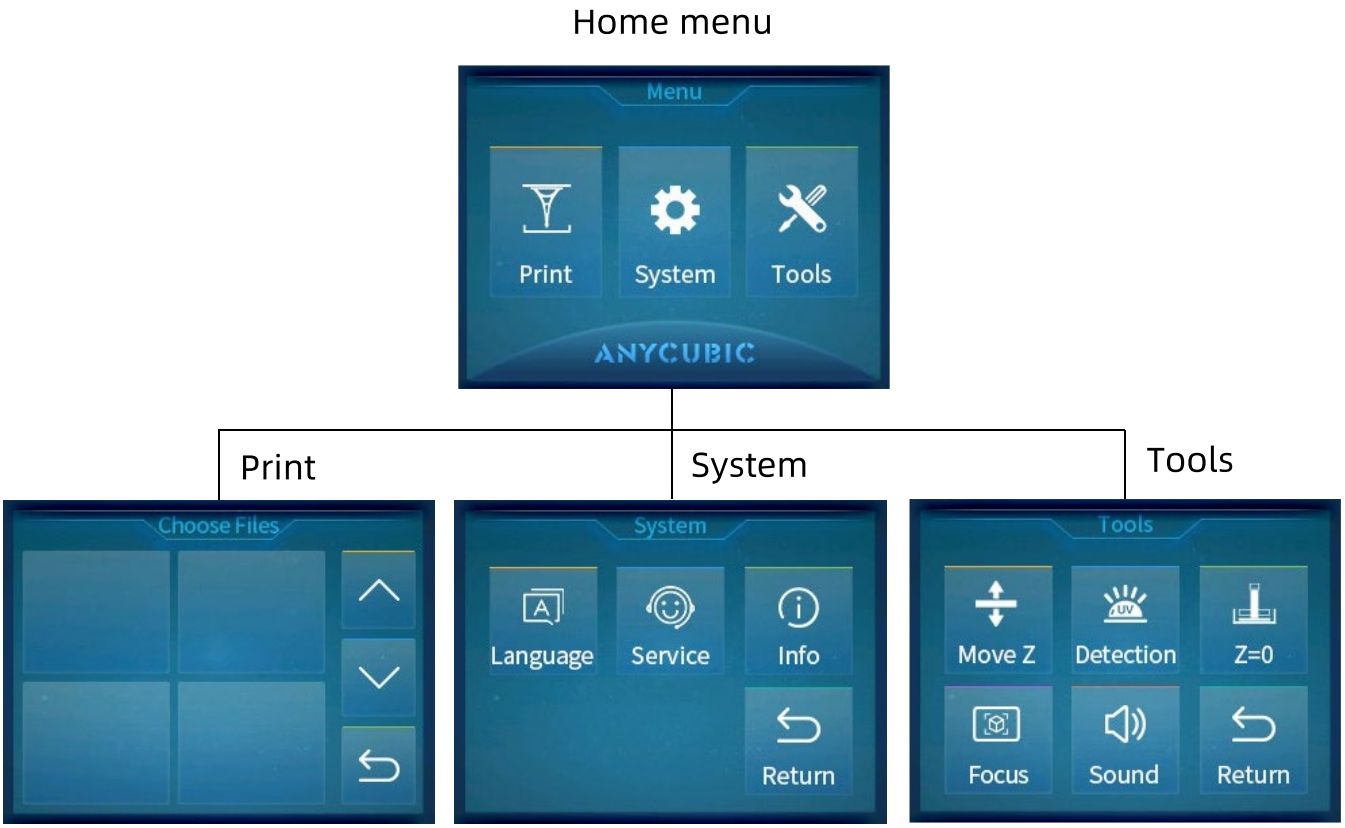
Layer Thickness (mm)	0.05
Normal Exposure Time (s)	2.3
Off Time (s)	1
Bottom Exposure Time (s)	28
Bottom Layers	5
Anti-alias	16

Bottom Layers		
Step [0]	Z Lift Distance (mm)	2
	Z Lift Speed (mm/s)	1
	Z Retract Speed (mm/s)	1.5
Step [1]	Z Lift Distance (mm)	4
	Z Lift Speed (mm/s)	2
	Z Retract Speed (mm/s)	3

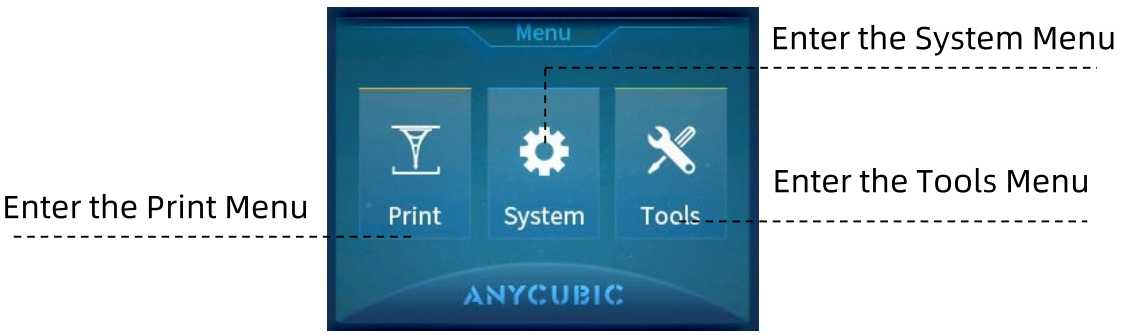
Transition Layer Count：10

Normal Layers		
Step [0]	Z Lift Distance (mm)	2
	Z Lift Speed (mm/s)	1
	Z Retract Speed (mm/s)	1.5
Step [1]	Z Lift Distance (mm)	3
	Z Lift Speed (mm/s)	2
	Z Retract Speed (mm/s)	3

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


Home menu
Menu
Print
System
Tools
ANYCUBIC
Print
System
Tools
Choose Files
System
Language
Service
Info
Return
Tools
Move Z
Detection
Z=0
Focus
Sound
Return

Home menu


Menu
Print
System
Tools
ANYCUBIC
Enter the System Menu
Enter the Tools Menu
Enter the Print Menu

Print

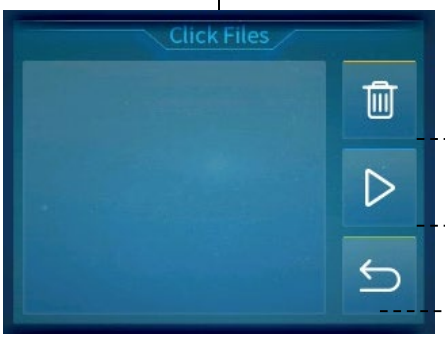
File List:

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

Product ID

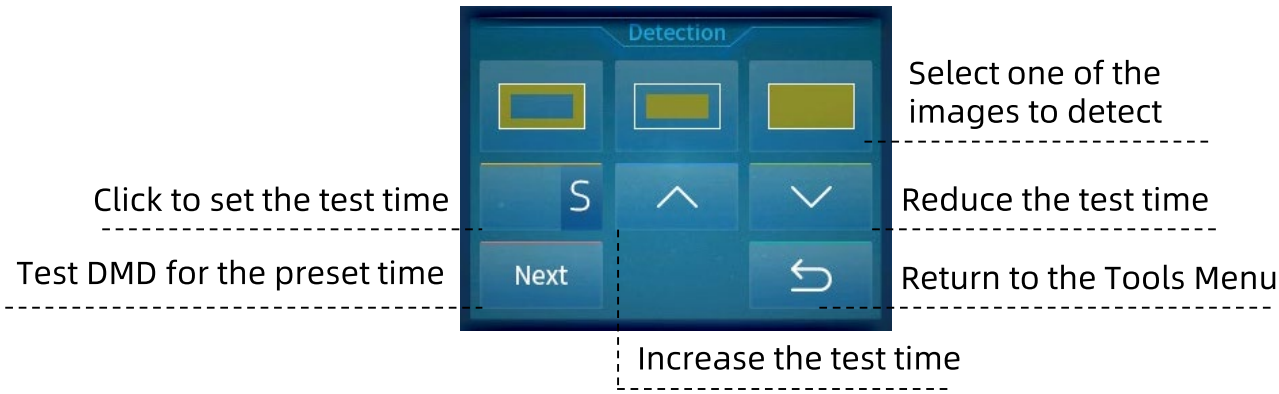
System version

Return to the System Menu

Tools

Move Z:

Detection:



Z=0: Reset the zero point

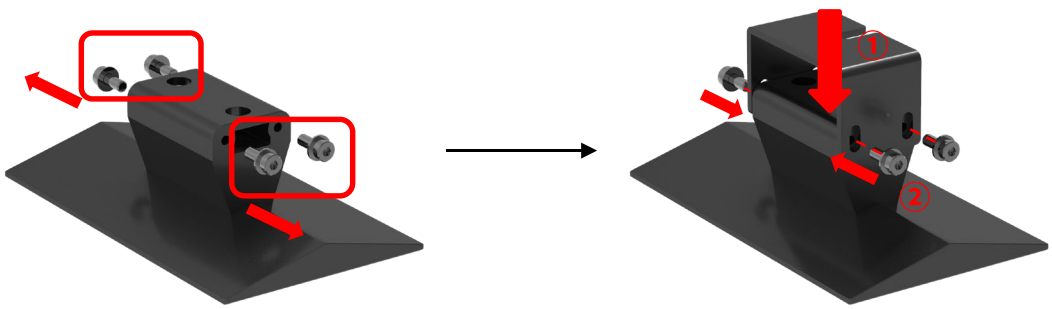
Focus：The function is for factory testing only

Horn icon: Turn on/off the screen sound

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

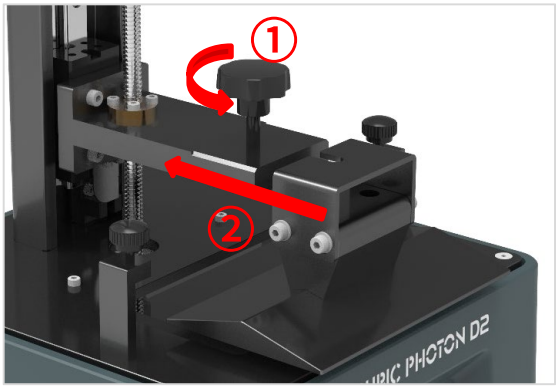
2. Raise the Z axis to a certain height to ensure that the toughened glass will not be scratched when the printing platform is installed.

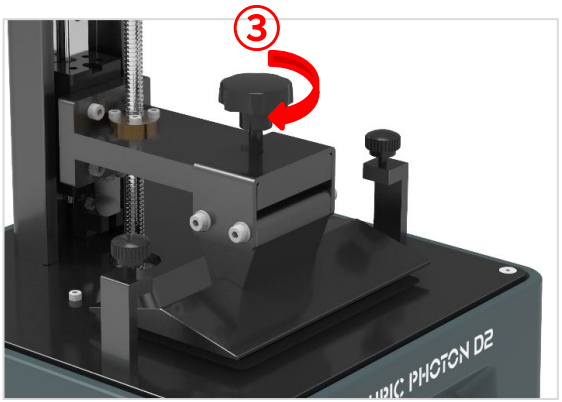
3. Remove the four screws on print platform and then install the U-shape part with screws.



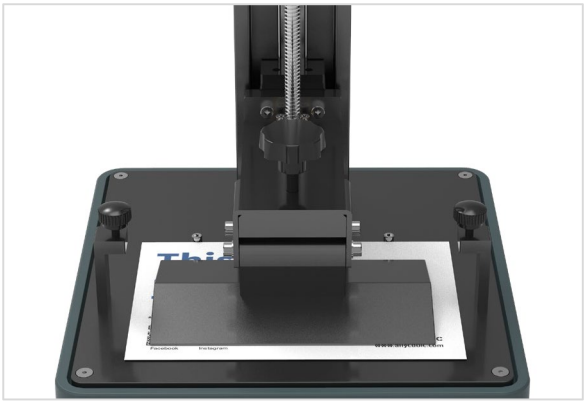
NOTE: Let the screws loose in this moment.

4. Install the printing platform.



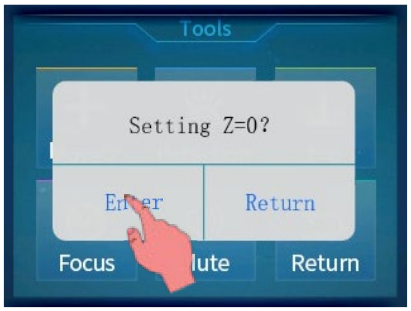


5. Place the leveling paper upon the toughened glass. Then click “ ” on the touch screen. Wait for the Z axis to descend and stop automatically.

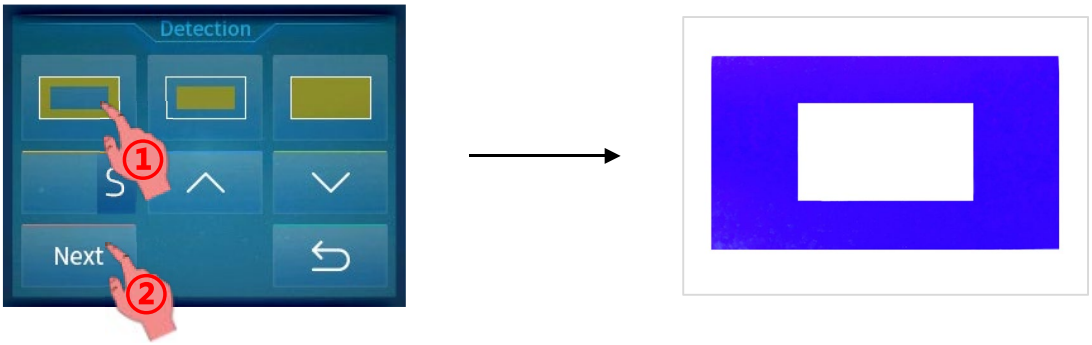


6. Use your fingers to press the platform to let it fit evenly on the toughened glass. Then tighten the four screws on the platform.

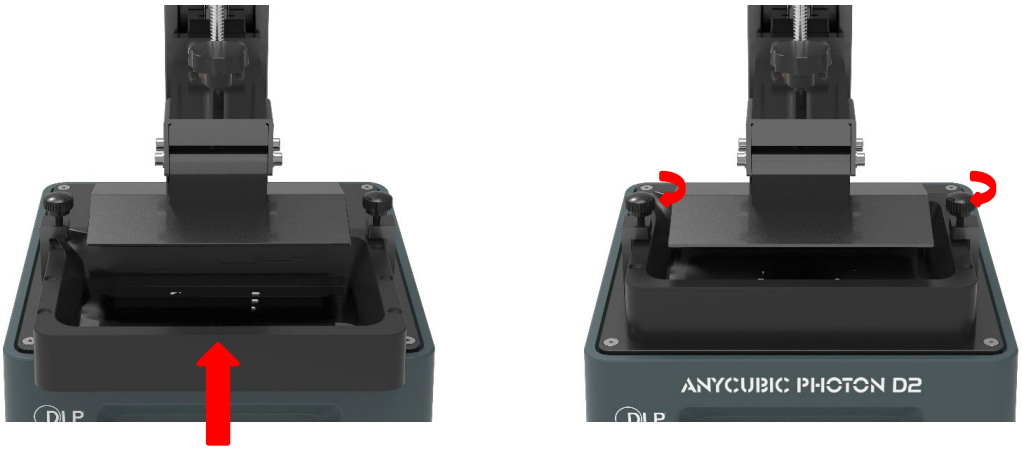
7. Return to “Tools” and click “Z=0” to save the zero position, and then click “Enter” on the pop-up window. Till now, the leveling process is finished. Click “Enter” again and take out the leveling paper.



8. Detection: Raise printing platform until the toughened glass can be observed completely. Enter in “Tools”→“Detection”. Select a image and set the test time, then click “Next”. It should display a complete image as what you select.



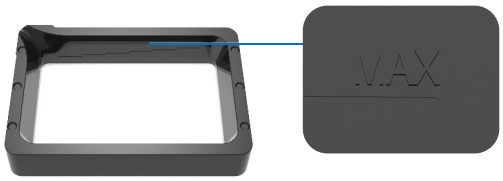
9. Install the resin vat.



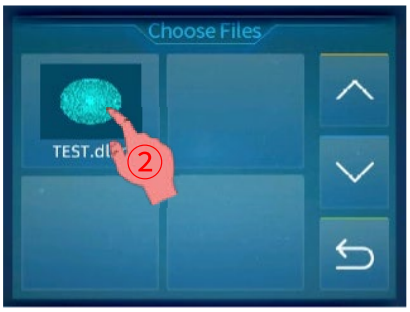
1. Print

***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,



Do not exceed the maximum scale on the vat



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

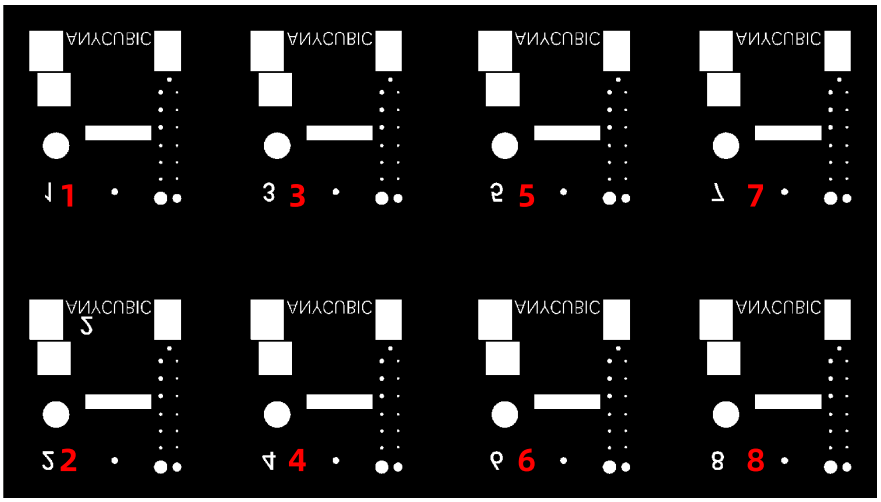
2. Handling models and residues

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.

“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.

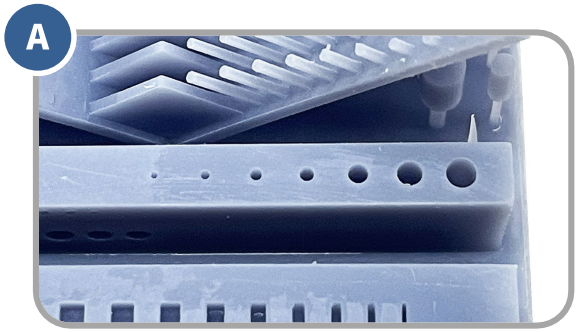
1. Import the R_E_R_F file which is saved on USB drive into the slicing software. There are eight models in the file. The exposure time for model 1 is equal to "normal exposure time (s)" of the file, and the exposure time for other models will be increased by an increment of **0.27 s**.



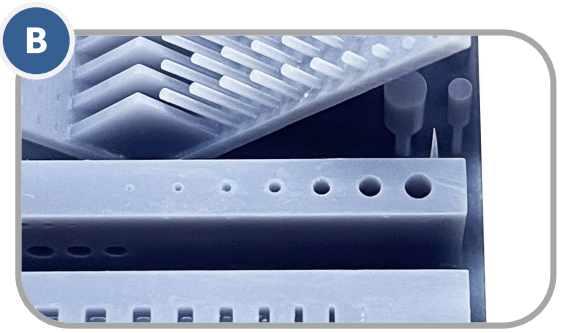
The numbers on the models indicate their order

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 **0.27 s.**

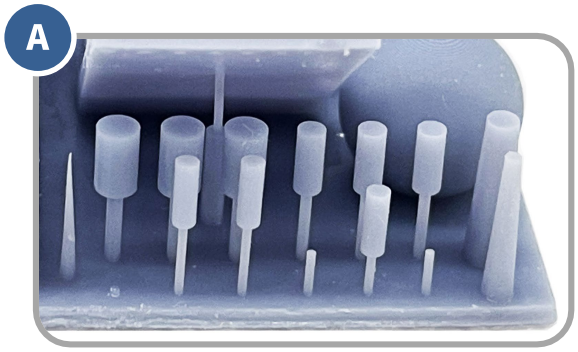
3. After printing, remove and clean the models. Compare the print effect of models and choose the model’s exposure time that meets your needs as the print parameter. Take a comparison of model A&B as an example.



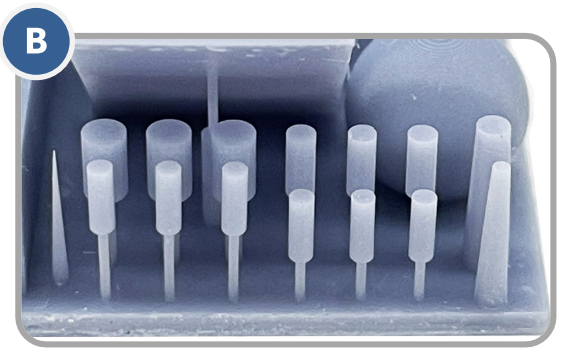
More holes



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”.

1. FAQ

(1) Model do not stick to platform

- Bottom exposure time is insufficient. Please increase the 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 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.

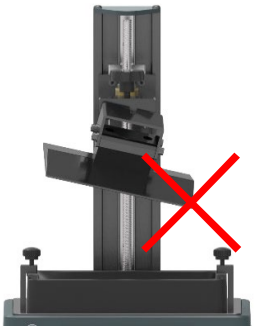
(4) Floccules left in resin vat or attached to models

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

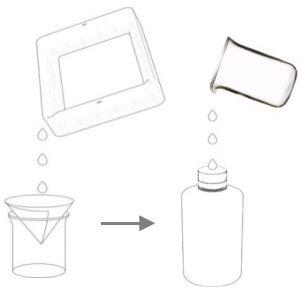
2. Machine maintenance

(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.**

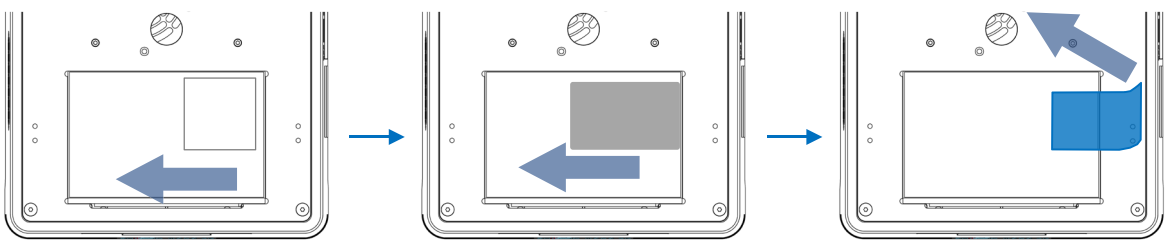


(3) Be careful when you remove the platform. Do not let it fall to damage the machine.



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

(5) That fingerprint, dust or other stain on the glass may affect the detail of model, please clean the glass with clean kit.



alcohol prep pad　　dry wipe　　dust-absorber

(6) After printing, please clean the platform with paper towels or wash it with alcohol.

(7) When the printer is stained with resin:

- If platform securing knob or vat retaining screw is stained with resin, please clean it timely to avoid the loose of screw. Otherwise, it may cause print failure or even damage to the printer.
- If toughened glass is stained with resin, please clean up with paper towels or alcohol.
- If resin infiltrates into the sealant that it cannot be cleaned, please expose the printer to sunlight until the resin is cured. Resin infiltration into the printer may cause malfunction.

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

(9) After use, turn off the machine first. Do not unplug the machine when it is working to avoid the damage of DMD.

(10) Do not use or place machine in the dusty environment for a long time to avoid the pollution of optical path.

(11) The machine should be moved carefully to avoid collision or severe vibration.

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.