

LCD 3D Printer

User Manual

Precautions

Please keep in mind the following precautions during assembly and use. Failure to follow these warnings may result in damage to the machine or even personal injury.

1. There is a FEP film at the bottom of the resin vat. It can't be pierced or scratched by sharp objects. Otherwise, the machine may not print properly.
2. The resin in the vat must be kept clean and free of cured resin and floc.
3. During the printing process, try to keep the top cover closed and keep the machine steady. Do not shake the machine.
4. After printing, turn off the power.
5. Please keep the equipment working on a stable surface.
6. If the power cord is damaged, the cable must be replaced by the manufacturer.
7. Do not power off the device during its operation.
8. After the model is printed, use a scraper to remove, taking care not to scratch your hand.
9. It is forbidden to print in the air (take off the resin vat or the vat without resin). If printing the air is severe, the LCD screen will be damaged.
10. After the skin touches the resin, please wash it in time.
11. If there is a model in the platform and resin vat after printing is finished, do not press reset (reset on the bottom), otherwise it will crush 2K screen.

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Technical Specification

Print Parameters:

Build Volume:215 (L) x 135 (W) x345 (H) mm

Z Resolution:10um

Print Speed:4.5-8s/layer

XY Resolution:85um

Machine Parameters:

Machine Size:325 (L) x350 (w) x666 (H) mm

Packaging Size:781 (L) x445 (w) x470 (H) mm

Software Parameters:

Printing Software:CHITUBOX

File Format:STL

Adaptive System:win7 above

Physical Parameters:

Special Consumable : general purpose UV-resin

Machine Weight:28.6KG

Light Source:UV led(405nm wavelength)

Output Voltage:24V

Rated Voltage: 100-220V

Please use our resin to test if the printer is in good condition. If there is no problem after the test, and you use another resin with the problem when printing , which means the resin has a problem, you need to replace. We found that the Anycubic resin has residue on the bottom layer, this is a resin problem, so we do not recommend the use of Anycubic resin and other high light sensitivity content of resin. Please contact us if you find any problem.

All 405 nm resin is available to use, because the high light sensitivity content of the resin, can be used in low-power light curing machine without issues, however, when you use the high-power light curing machine , there will be appeared the residue at the bottom , please pay attention to it.

Packing List

			
	Print Platform 1PCS		Resin vat 1PCS
			
YIDIMU 3D Printer 1PCS	Resin 1PCS		USB 1PCS
			
Blade 1PCS	Tweezers 1PCS	Tool 1PCS	Finger sleeve 10PCS
			
Funnel 10PCS	Dust-free towel 3PCS	Masks 1PCS	Gloves 2PCS
			
Power adaptor/Power cord 1PCS			

Product Overview

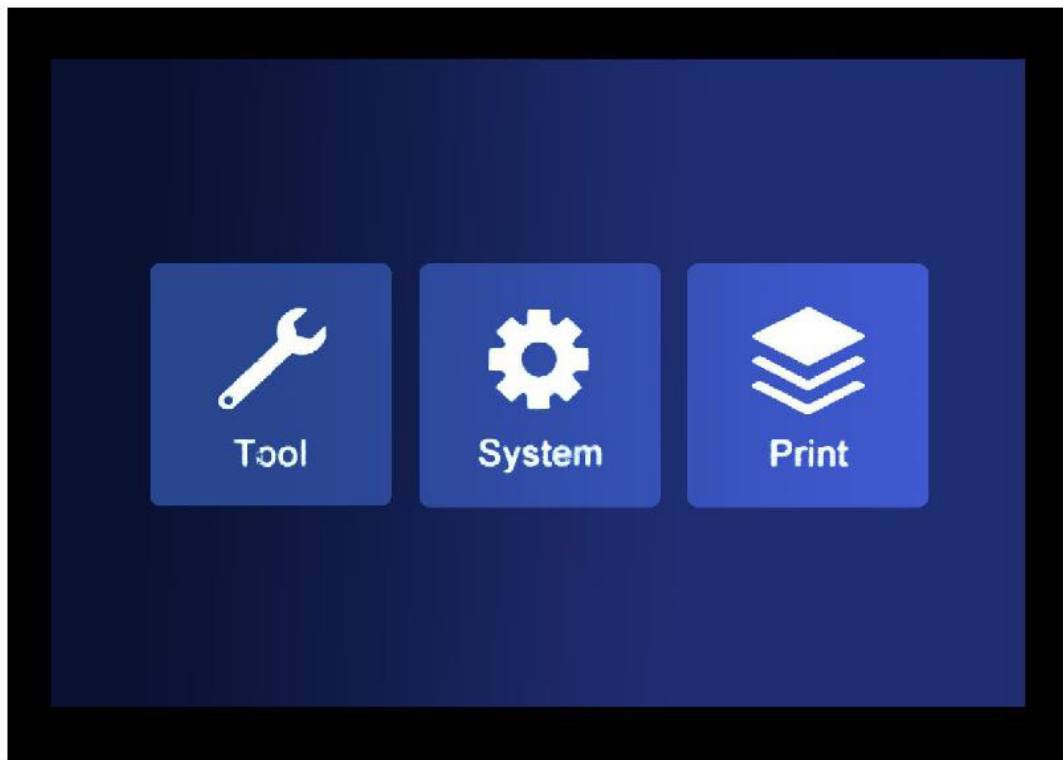


Print test

The machine must be tested before printing for the first time. The test content includes: Z-axis reset, switch light, switch between Chinese and English interface.

First plug the power cord and turn on the AC power switch, then turn on the switch diagram of the machine.

After the boot is completed, the interface is as shown.



(Operation interface)

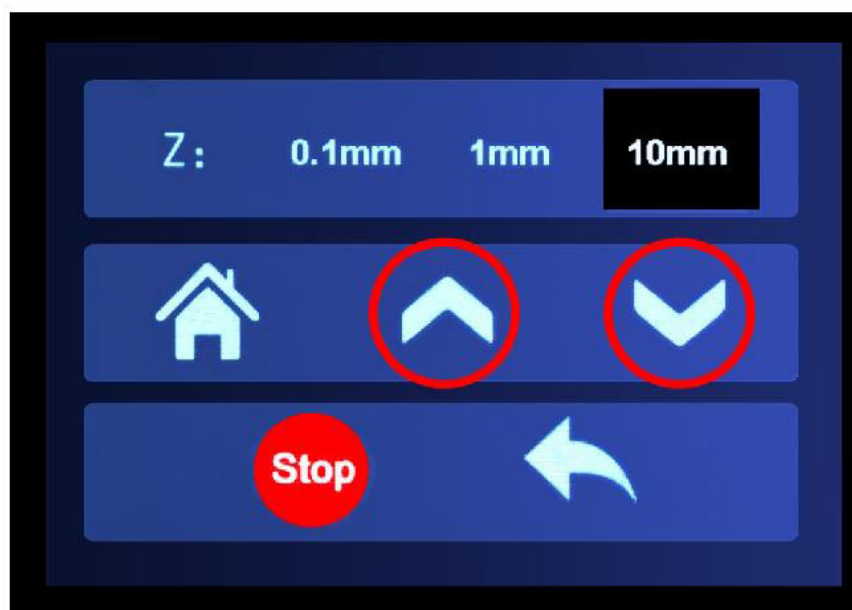
(1) Z-axis movement

After the machine is powered on, click "Tools" on the touch screen, click "Manual", click on the map to move up or down. If the machine can't move normally, turn off the power and

contact the company for help. (Do not install the tray on the machine when testing the Z-axis for the first time. If the screen is damaged due to the tray problem, it will not be repaired!)



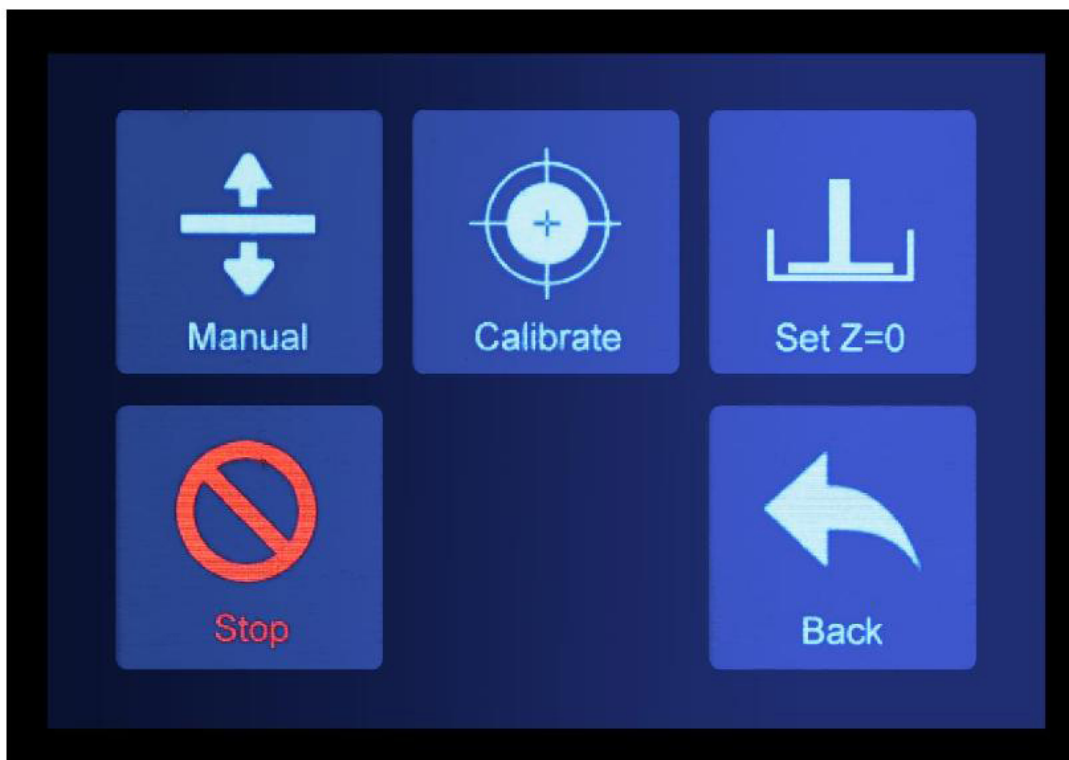
(Click manually)



(Click the up arrow or down arrow to check if the Z axis is normal.)

(2) Switching lamp test

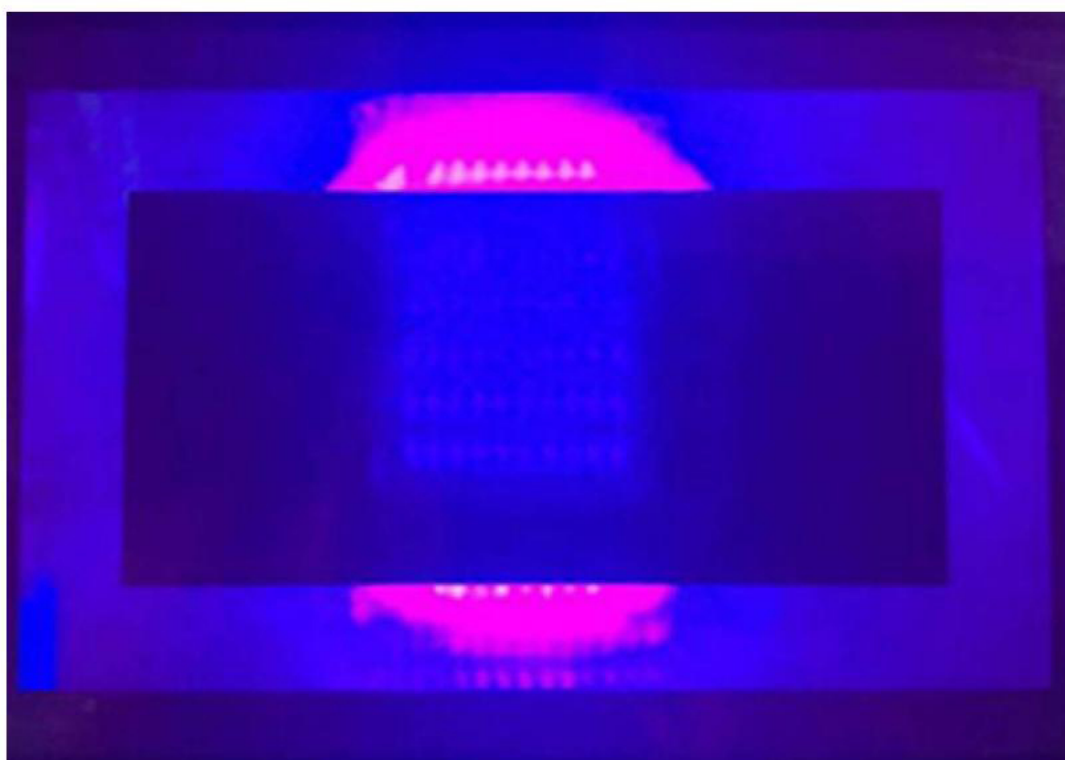
After the machine is powered on, click “Calibration” on the touch screen, and click Next to observe whether the LCD screen of the machine displays the following figure. If it cannot be displayed normally, the power should be disconnected and contact the company for assistance.



(Click correction)



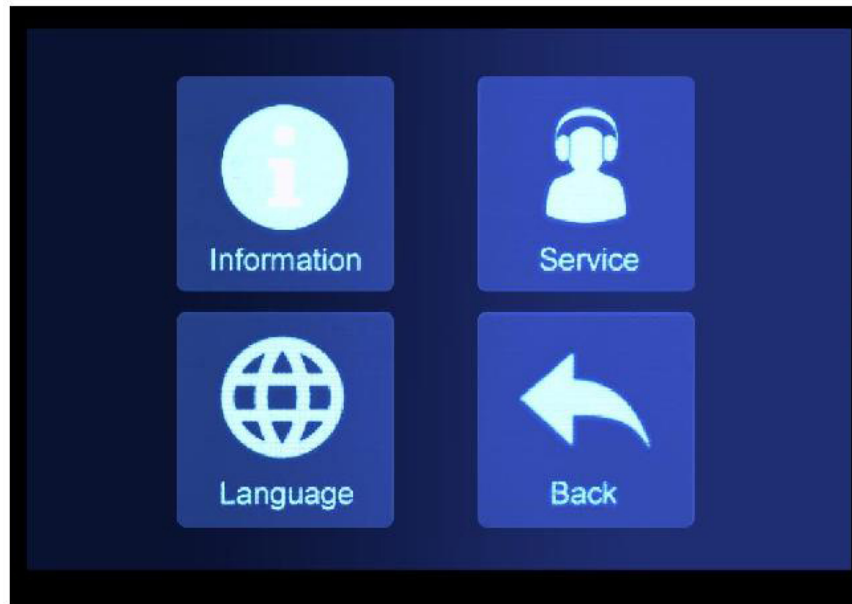
(Click the next step)



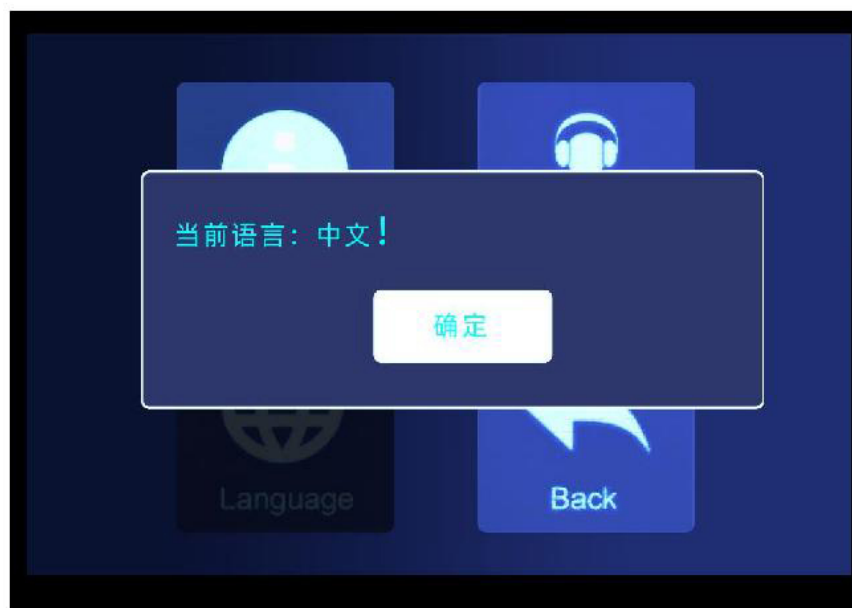
(Check whether the light is normal or not)

(3) Change the screen from Chinese to English

First click on "System" and then click on the language in the picture to switch to English (Chinese vice versa)



(Click "Language")

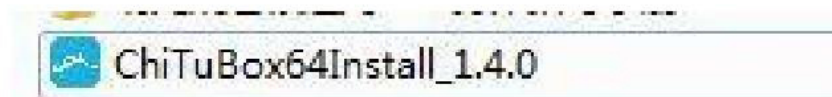


(Change Options)

Software installation and operation instructions

Install CHITUBOX slicing software

First find "ChiTuBox64Install_1.4.0" in the U disk (As follows).



Double-click to open the "ChiTuBox64Install_1.4.0" installation application, select the software display language.



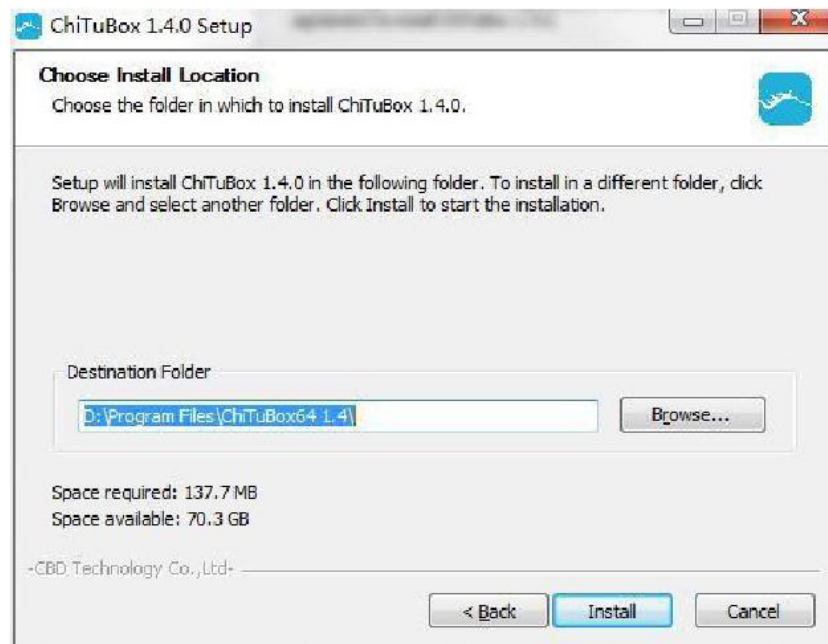
Click "ok" and Click the next step.



Click “I Agree”.

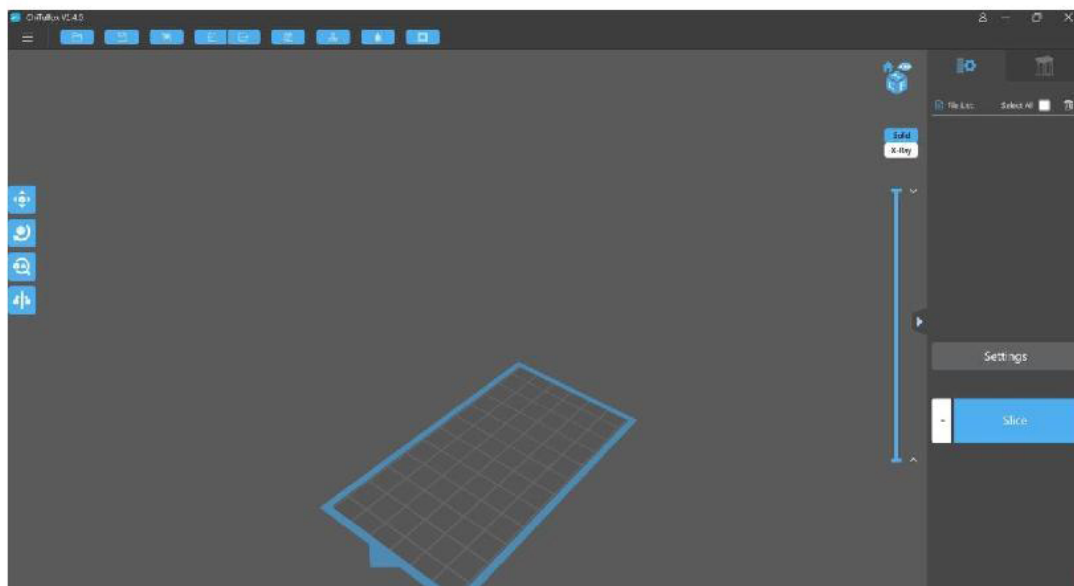


Select software installation location.




Installation is complete, choose whether to run the software immediately.

Interface introduction




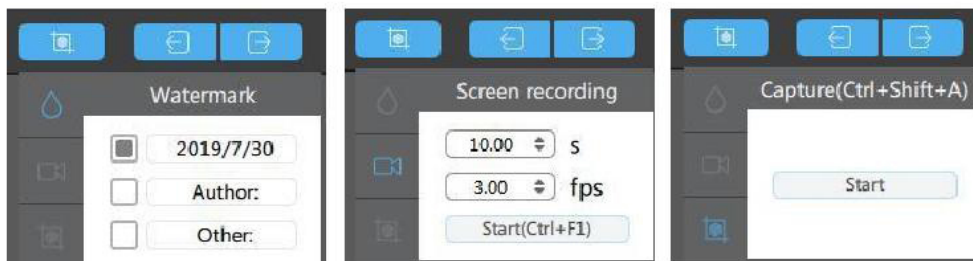


(Menu Bar)

1.2.1  Open file: open the file you need to operate.

1.2.2  Save file: store the operation file that has been performed.

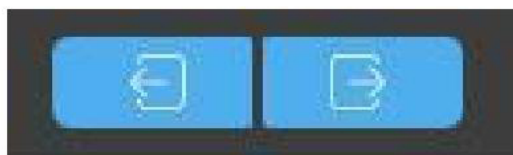
1.2.3  Screenshot/recording: watermarking the screen, screen recording, screen capture



(1) Watermark: Check the date on the watermark (real time date), author & other (the gear can be edited).

(2) Screen recording: You can set the time (/s), frame rate (/fps), and then click Start.

(3) Screen capture: Click the "Start" button to start the screenshot.



Restore & Redo

(Remove forward, cancel later)



Clone and copy the current model

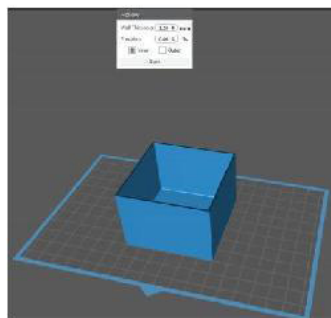
(click once to copy a model on the current platform)



Automatic layout:
centered, X side, Y side placed on the platform.



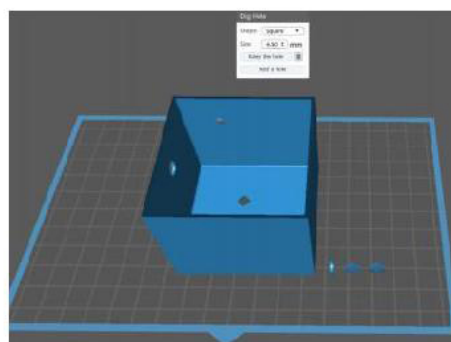
Hollow:
Internal hollow or external hollow, wall thickness and accuracy



required.

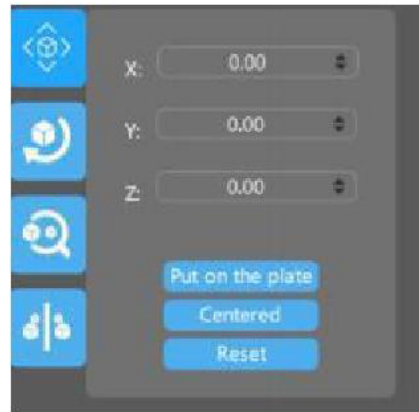


Digging holes:
need to set the shape and size, whether to keep the hole, add a hole.



Model editing

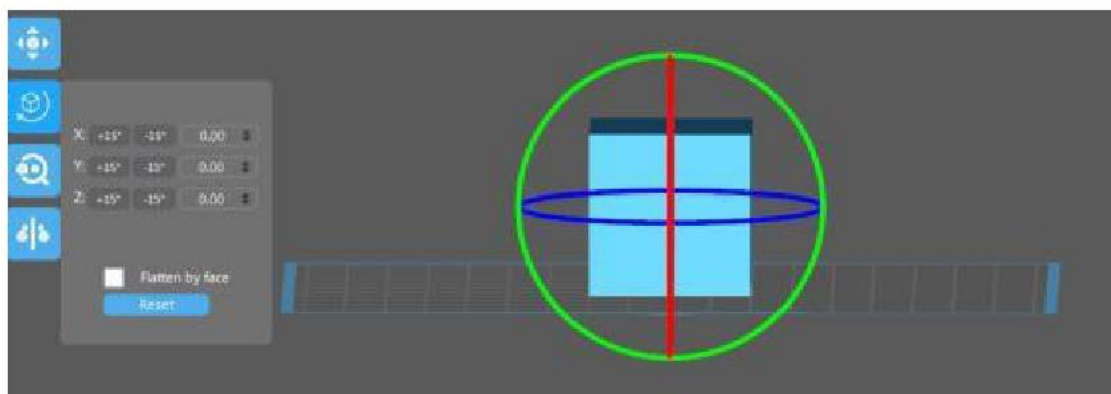
Moving model



(1) Move on the X, Y, and Z axes: directly place the cursor in the number box and scroll the mouse.

You can place the model directly on the backplane, center it, and reset it.

Rotation model



(1) Rotate on the X, Y, and Z axes respectively:

Click once to rotate 15° in the positive direction of X/Y/Z;

Click once to rotate 15° in the negative direction of X/Y/Z;

The cursor scrolls the mouse over the number box and rotates every $+5^\circ$ / -5° .

(2) Place the cursor directly on the color bar on the model and hold down the left mouse button to move (red-X, green-y, blue-Z)

Zoom model



Scale on the X, Y, and Z axes respectively:

(1) The cursor can be zoomed by scrolling the mouse over the number box.

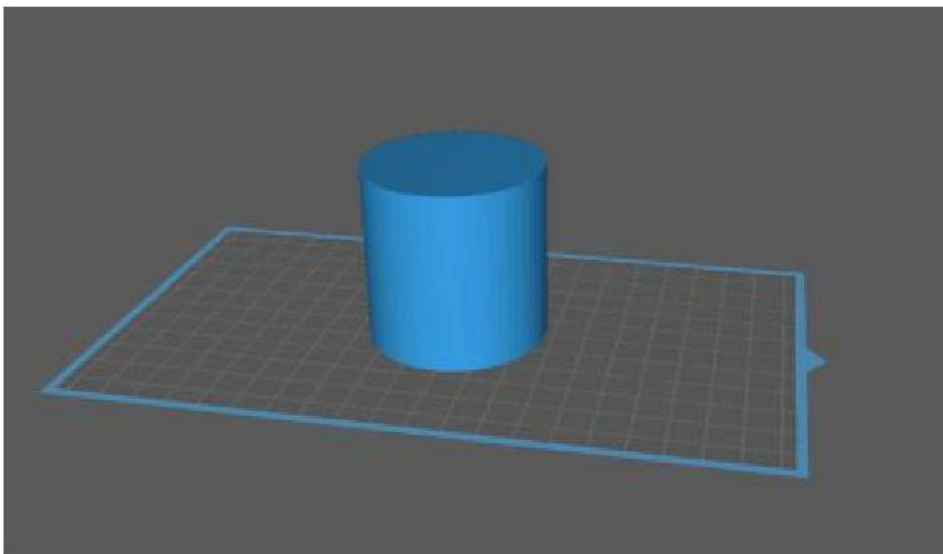
(2) When the scale is locked, no matter which axis is placed on the scale, the other two axes will become larger and smaller according to the scale.

(3) Reset: clear the previous zoom operation, re-scale

Model image



- (1) X mirror: mirror the current model with the X axis as the axis of symmetry
- Y mirror: mirror the current model with the y-axis as the axis of symmetry
- (2) Z mirror: mirror the current model with the Z axis as the axis of symmetry



Mouse operation (operation in Chinese layout)

Left click: Click on the model to select the model to operate, click on the platform or blank space Left button long press

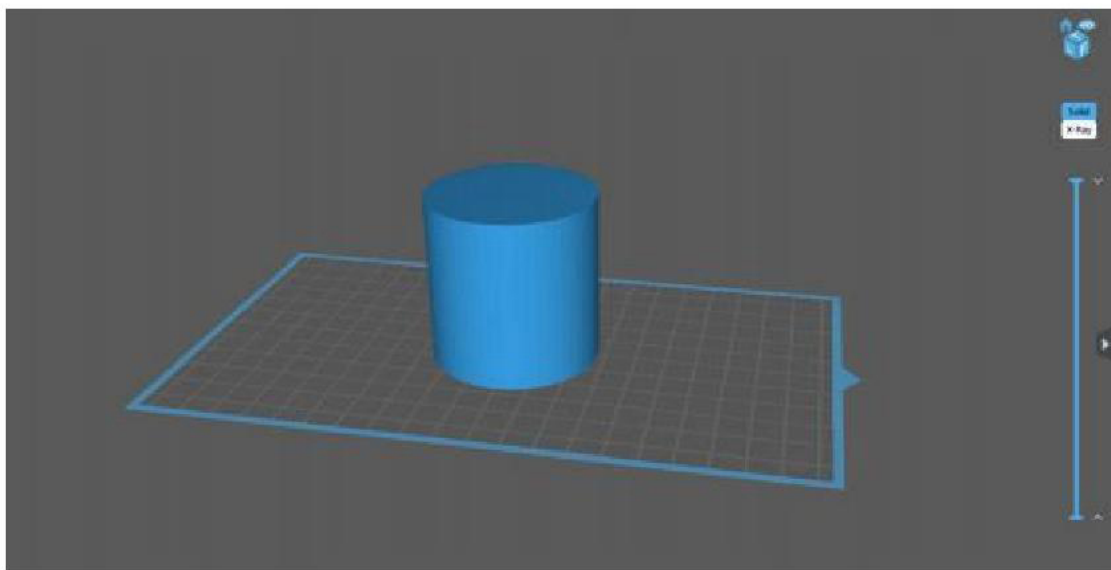
Left-click and long-press model to move the model on the current horizontal plane

(2) Left-click on the platform or blank space to drag the platform and model in all directions.

Right click and hold: right click to rotate the platform

Mouse scroll wheel: scales the entire platform and model

Scenes



Drag the scene: long press the left mouse button

Rotate the scene: long press the right mouse button

Zoom scene: scroll mouse wheel



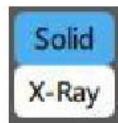
Front view: Click to make the scene and model right front view facing the user



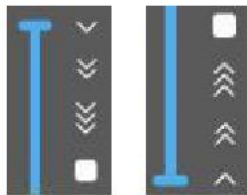
Front view angle/ perspective view: for the current model can be forward view, perspective view switch



Top view / left view / front view: T - top view; L - left view; F - front view



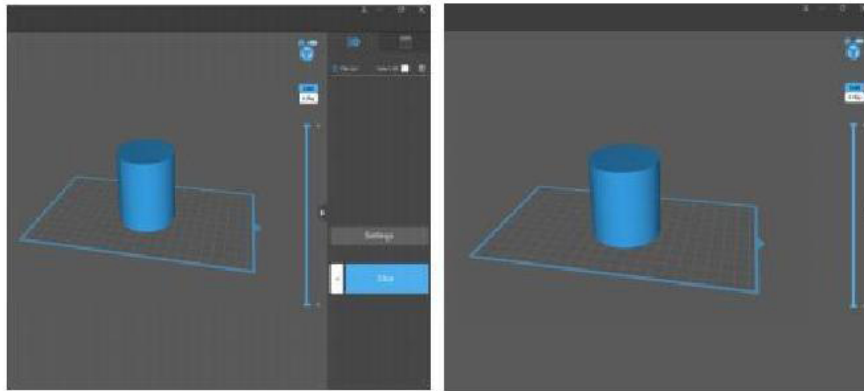
Entity/Pivot: Click to have the model switch between entity and perspective



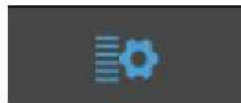
Model strip: The model is subjected to real-time cross-sectional viewing in proportion to the entire model; the upper and lower right sides have one-, two-, and three-speed progress sections to play and pause.



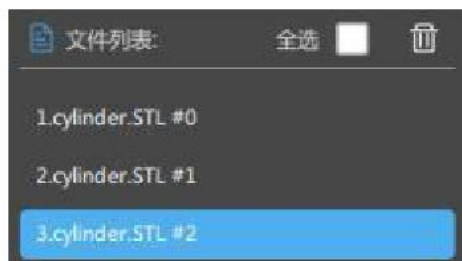
Expand/Hide: Click to expand and hide the content on the right to make the scene more empty.



Simple Setting



File list: All models on the platform will be arranged in the file list, which can be edited or deleted by the full selection/single selection model.



Slice Setting

Settings ✕

Default

Machine

Resin

Print

Infill

Gcode

Advanced

Name:

Resolution: X: px
Y: px

Lock Ratio: ☐

Size: X: mm
Y: mm
Z: mm

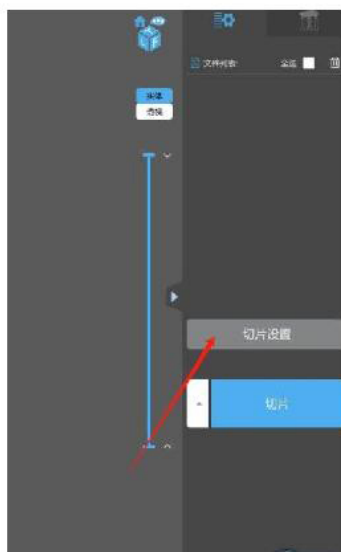
Machine Type:

Mirror:

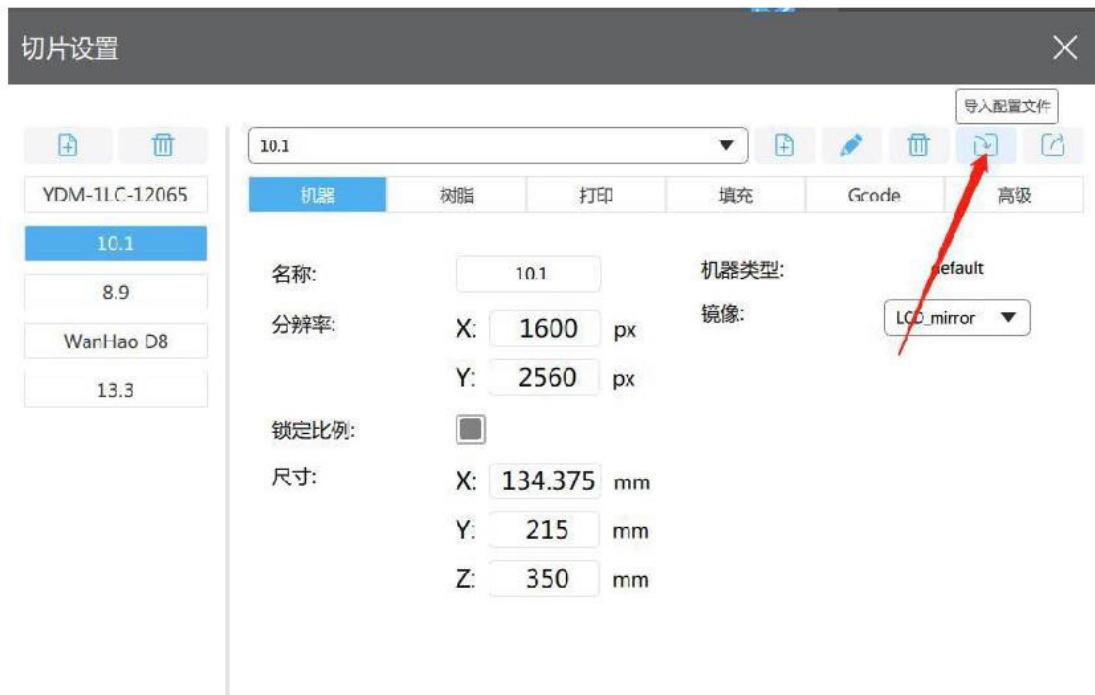
<Import>: Import the saved machine configuration parameters (the cfg file also contains support parameters);

Special attention: There is already a set configuration parameter file in the U disk. You do not need to set any parameters for direct import, you can directly print the model!!!The guide to import:

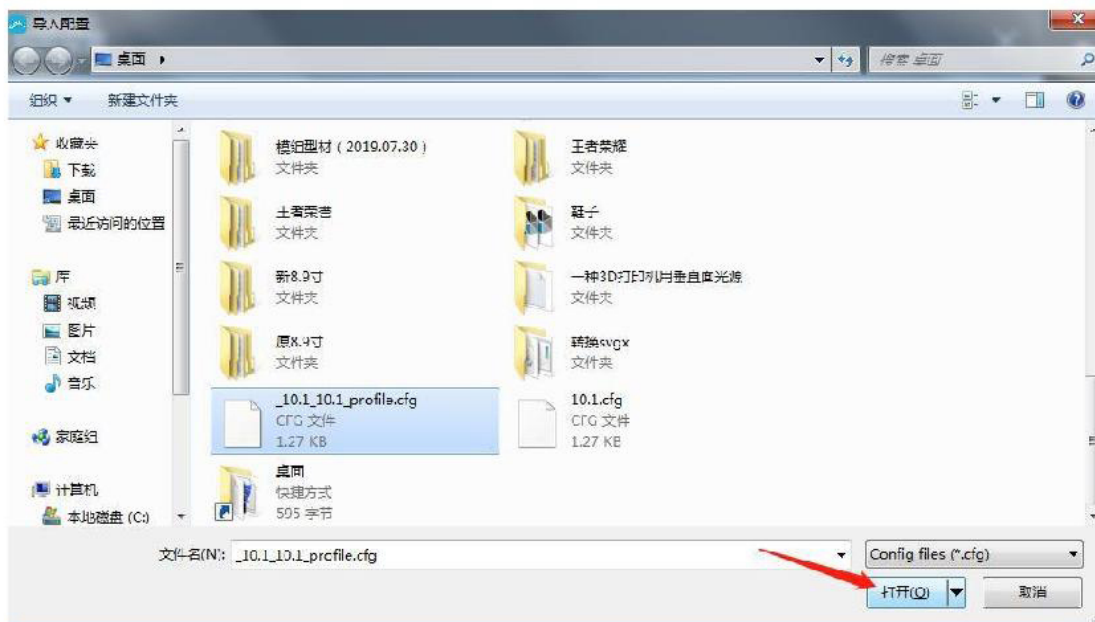
(1) Click on the slice settings



(2) Click to import the configuration file



(3) Select the configuration file in the USB drive and click Open.



(Configuration parameter file)

<export>: Export the configured machine parameters (the cfg file also contains the support parameters); **(The following parameters can be understood, do not need to follow the parameters set in the figure),**

(1) Machine

Settings ×

+

✖

5.5

+

✖

10.1

+

✖

9654

+

✖

8.9

+

✖

13.3

+

✖

Default *1

+

✖

Default *2

10.1*1

+

✏

✖

↶

↷

Machine

Resin

Print

Infill

Gcode

Advanced

Name:

10.1

Machine Type:

default

Resolution:

X:

1600

px

Y:

2560

px

Mirror:

Normal

Lock Ratio:

☐

Size:

X:

134.375

mm

Y:

215

mm

Z:

350

mm

<name>: The name of the machine, which can be directly entered into the text for custom naming;

<resolution>: the resolution of the projector or LCD screen, this parameter directly affects the dimensional accuracy of the print;

<lock ratio>:

Under normal circumstances, the ratio of the molding size XY = the resolution ratio, that is, the locking ratio;

In some cases, such as DLP projectors, the XY dimensions may vary slightly due to accuracy or machine design, or may be filled in with the actual projection size without maintaining the scale;

<size>: The maximum forming size of the machine.

(2) Resin

Settings

Default

Machine

Resin

Print

Infill

Code

Advanced

Resin Type:

normal

Resin Density:

1.1

g/ml

Resin Cost:

30

\$/L

Import...

Export...

<Resin type>: Different resin types have different parameters, and some resin and corresponding parameters recommended by the company have been integrated;

<Resin density>: the density of the resin used to calculate the quality;

<resin price>: the cost of the resin used to calculate the cost;

(3) Print

切片设置

10.1

10.1

8.9

WanHan DB

13.3

机器

树脂

打印

填充

Code

高级

层厚:

0.05

mm

底层拾刀距离:

7

mm

底层数:

5

拾刀距离:

7

mm

曝光时间:

7.5

s

底层拾刀速度:

65

mm/min

底层曝光时间:

80

s

拾刀速度:

65

mm/min

灯灭延迟:

0

s

回程速度:

150

mm/min

底层灯灭延迟:

0

s

<layer thickness>: the thickness of each layer of the model is generally 0.025/0.05/0.1mm

<Number of bottom layers>: The number of layers to be cured at the bottom of the model. In order to better adhere to the platform, the parameters of the bottom layer need to be separately set.

Generally set to 5, the specific values are calculated as follows:

Number of bottom layers = base thickness / layer thickness; base thickness is generally set to 0.25, layer thickness is generally set to 0.05

<Exposure time>: Exposure time of the normal layer, When printing a small area and requiring high assembly accuracy, it is generally set to 4.5-6.5s. When printing a large area and a lot of details, the model is generally set to 7.5-9s.

<Bottom exposure time>: The exposure time of several layers at the bottom, the general time will be longer than the normal layer exposure time, and the resin can be cured as much as possible to ensure sticking to the molding platform. Generally set to 75 to 85s, the longer the time, the more sticky the bottom is.

<Light out delay>: Calculated from the end of the previous exposure, the final light-off time = maximum (the total time of the Z-axis up and down movement, the configured light-off delay)

This generally does not need to be set, by default value 0

For example, the Z-axis moves up and down for a period of 6 seconds.

If the "lighting off delay" is set to 10 seconds, the final extinguishing time is 10 seconds.

If the "extinction delay" is set to 1 second, the final off time is 6 seconds.

<Underlighting delay>: The delay time of the bottom layer is calculated as above.

<Bottom lift distance>: The distance the molding platform lifts when printing the bottom layers

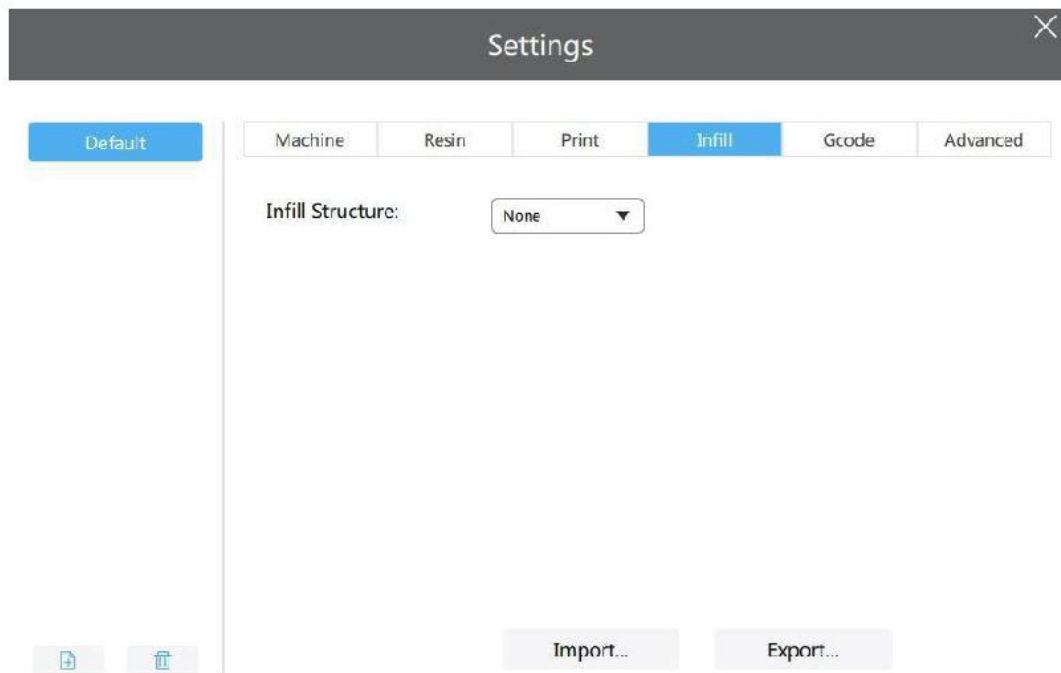
<lifting distance>: the distance the forming platform lifts when printing in the normal layer

<Bottom lift speed>: The speed at which the forming platform is lifted when printing the bottom layers

<lifting speed>: the speed at which the forming platform is lifted when printing in the normal layer

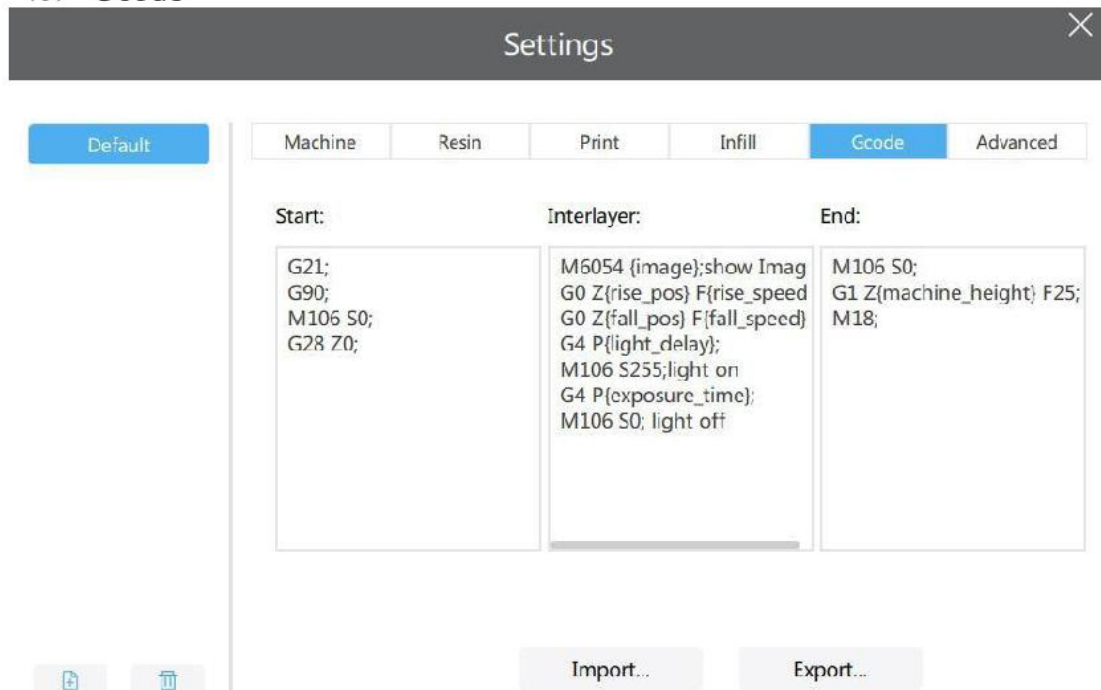
<Return speed>: the speed at which the forming platform descends

(4) Fill



<fill structure>: selection of fill type inside the model, such as mesh structure, etc.

(5) Gcode



<Start>: Preprocessing command executed at the beginning of printing (customizable)

<Interlayer>: Print processing commands executed at each layer in progress (customizable)

{image} The name of the resulting exposure image

{raise_pos} corresponds to the raised position, which is an absolute coordinate value, value = exposure position + lift height

{raise_speed} is the lifting speed, the lifting speed = the bottom lifting speed or the lifting speed

{fall_pos} corresponds to the lowered position, is an absolute coordinate, value = exposure position

{fall_speed} is the descent speed, the descent speed = the bottom descent speed or the descent speed

{exposure_time} corresponds to the underlying exposure time or exposure time in ms

<End>: Processing command executed at the end of printing (customizable)

{machine_height} corresponds to the height of the machine size
(Can understand, no effect on printing)

(6) Advanced

Settings

Default Machine Resin Print Infill Gcode **Advanced**

Bottom Light PWM: 255

Light PWM: 255

Anti-aliasing: ☒

Anti-aliasing Level: 8 ▼

Import... Export...

<Bottom Light Intensity PWM>: The intensity of the light source when printing the bottom layer (some printers support this command)

<Light intensity PWM>: The intensity of the light source when printing in the normal layer (some printers support this command)

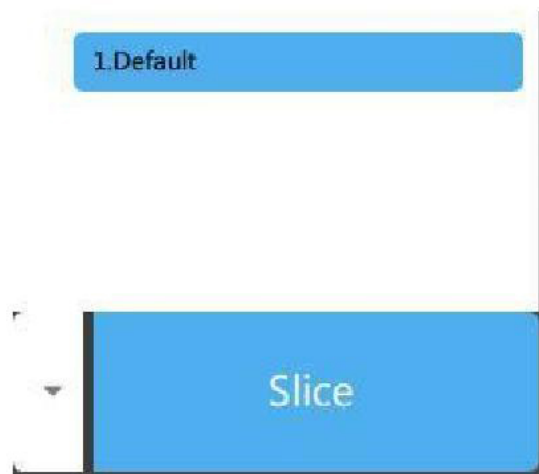
<Anti-aliasing>: Anti-aliasing of sliced images, reducing surface texture and improving the surface roughness of the model.

As follows: Anti-aliasing is not turned on, ☐
Anti-aliasing is turned on ☒

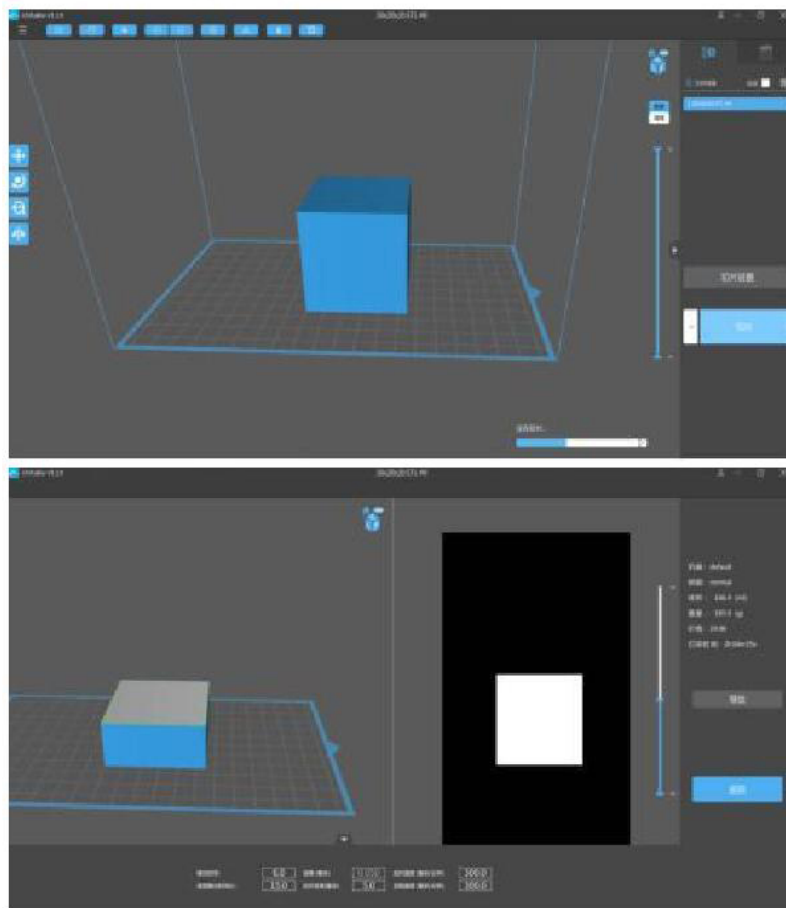


Slice

Slice: Click on the slice to start the model slice processing (select the corresponding parameters for slicing)



Slice preview: Support cross-section and solid model preview at the same time (automatically jump to slice preview after clicking slice)



Support setting



Z-axis lift height (default is 5mm), customizable

Support Setting (Refresh the data,  fold  Expand )


(1) Select the size of the support, which is available in fine, medium and thick.

(2) Top: Set the top of the support, there are default values, users can change according to their own preferences.

(3) Middle: Set the middle of the support, there are default values, users can change according to their own preferences.

(4) Bottom: Set the bottom of the support, there are default values, users can change according to their own preferences.

(5) Bottom line: Set the bottom line, there are default values, users can change according to their own preferences.

Automatic support (Refresh the data, 

fold  Expand ) :

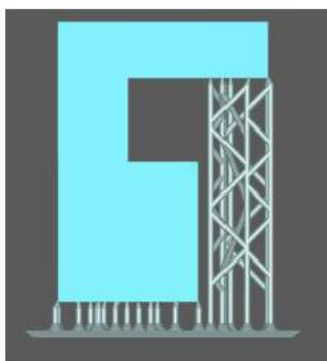
The data of the auto-support is set and has default values, which can be changed according to your own preferences.

 +Platform

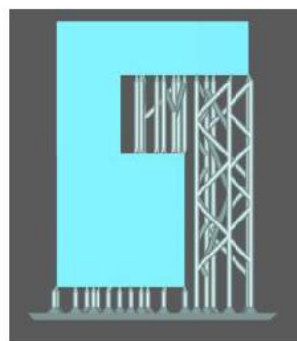
(1) Automatically add support to the model (no support is generated on the model, as shown below)

 +All

(2) Automatically add support to the model (support is also generated on the model, as shown below)



(Platform Support)



(Full Support)

Adding Support: Manually add support anywhere on the model

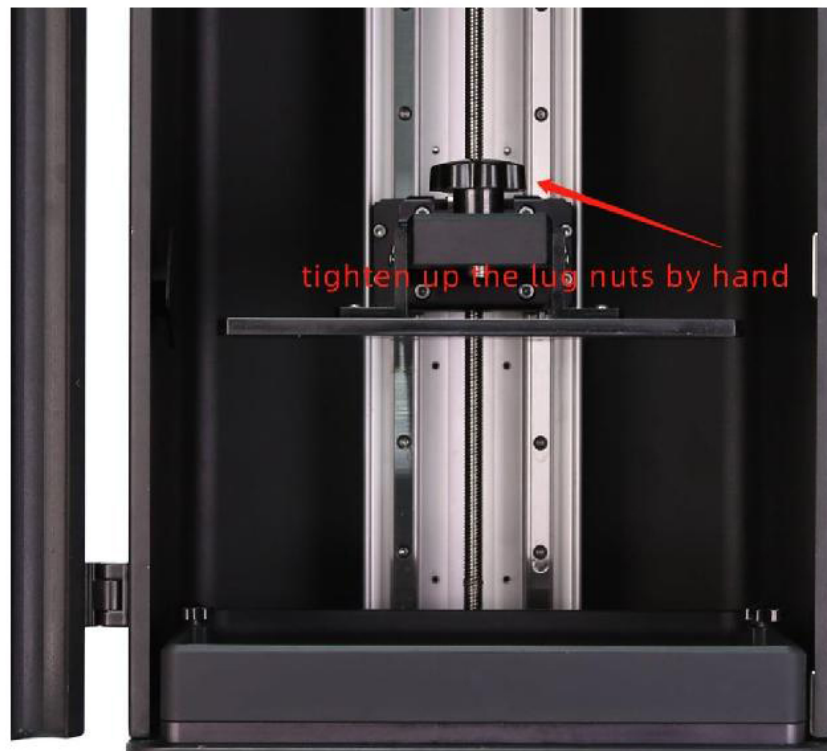
Deleting Support: Manually delete existing support anywhere on the model

Edit Support: Manually edit existing support anywhere on the model

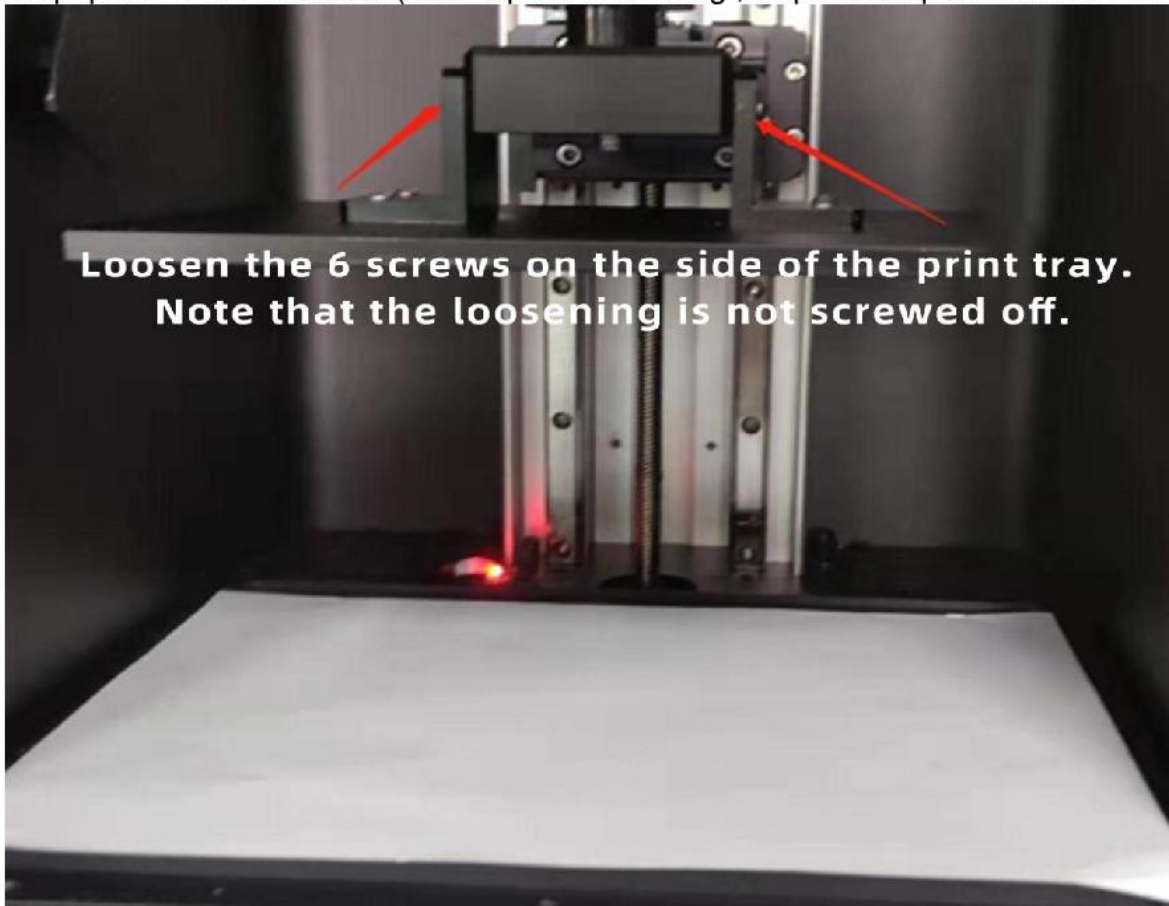
Remove all: remove all existing support

Assembling the printer and its leveling instructions **(Note that the machine has been leveled before leaving the factory, no need to level, only need to re-level when there is unevenness in the printing process)**

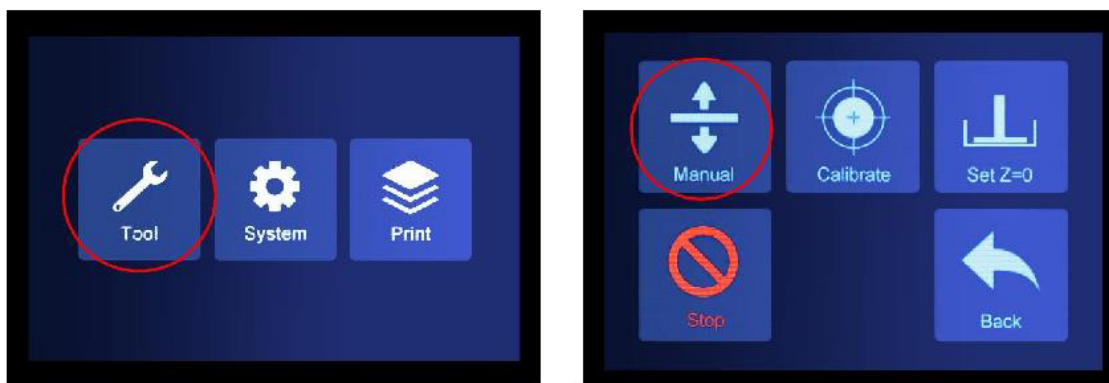
- (1) Check the appearance of the outer box of the 3D printer for scratches, bumps, etc. Check the corners of the box for any deformation or cracking.
- (2) Open the box and take out the machine and accessories. Check and keep the 2K screen and the platform clean and free of debris.
- (3) Open the door, loosen the hand screw, insert the print tray into the bottom and tighten the hand nut



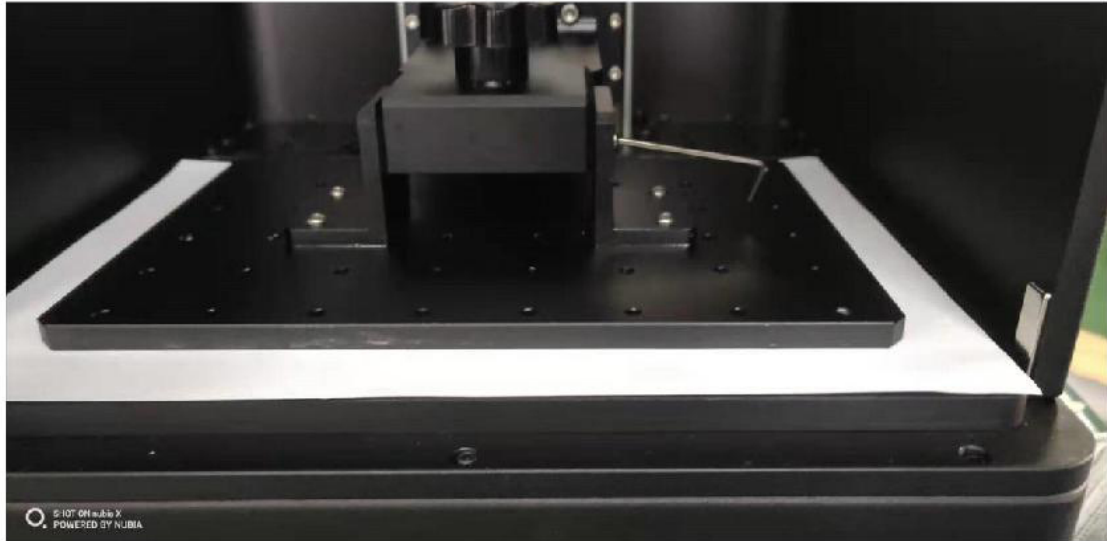
(4) Loosen the six fastening screws on both sides of the print tray and put a piece of A4 paper on the 2K screen (this step is the leveling , skip this step for the first time)



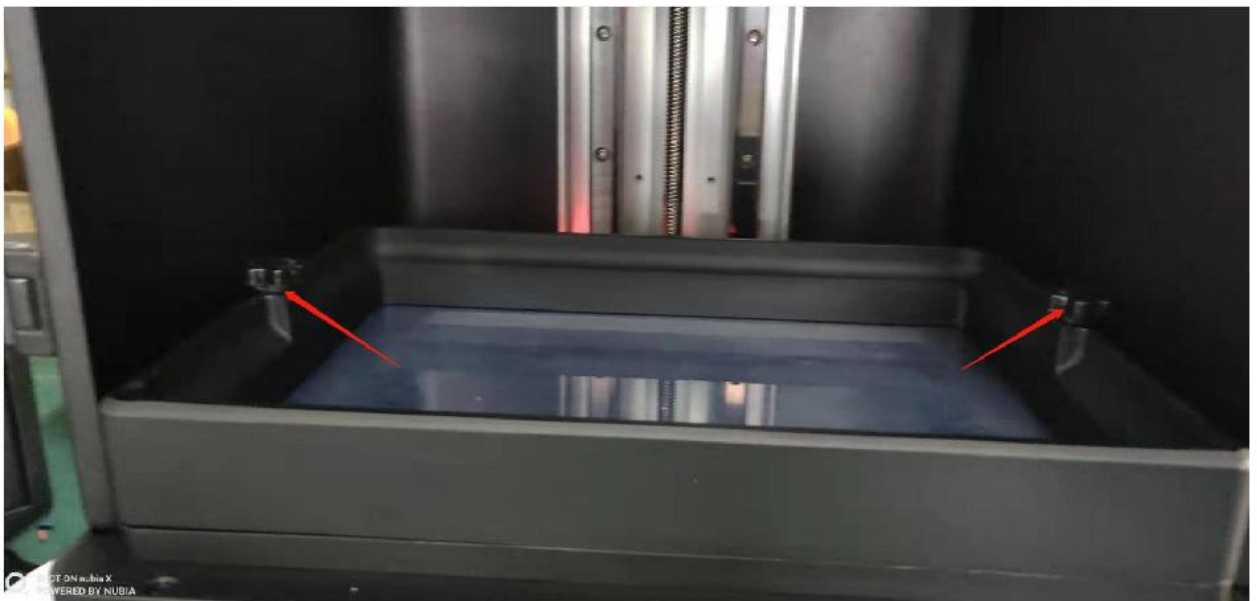
(5) Click the tool "Manual" on the screen to return to the origin (this step is the leveling step, the first print can skip this step)



(6) After the standby device is returned to the original position, gently press the print tray with one hand to firmly hold the tray with the 2K screen to ensure that the current position of the printing platform does not move. The other hand locks the screw and gently tightens the two sides. Two screws, then gradually tighten the remaining four screws. **(Note that the middle two screws need only be lightly tightened, and the other four screws can be tightened step by step. It cannot be screwed up at once. This step is the leveling step. You can skip this step for the first print)**



(7) Install the trough, place the trough on the 2K screen and gently push it to the bottom, then tighten it with two hand screws in the accessory box and gently tighten it without tightening with brute force.



Printing process and post-processing instructions

(1) Preparation before printing (including machine testing, model slicing).

(2) After the model is sliced, save it to the USB flash drive, and then insert the USB flash drive into the USB port of the machine.

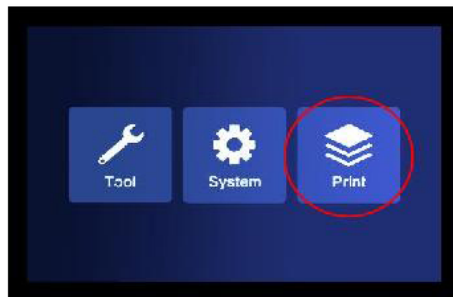


(1) Add 1/4-1/3 resin to the trough.

Note

(After the resin is added, please cover the resin bottle cap in time to place the resin deterioration and air pollution.)

(2) Printing operation



(Click Print)



(Check the model you want to print)



(Print interface)



(Print layer sectional view)

(5) Close the printer door



Note:

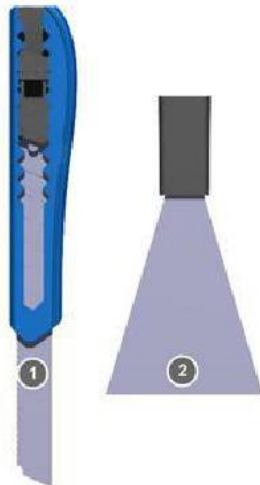
- 1. Be sure to cover the cover during printing to avoid air pollution and other damage.**
- 2. Protect the machine from working out of reach of children.**

(6) When printing is completed, open the door

(7) Take out the tray

01. Loosen the tray bracket fastening screw
02. Pull out the tray
03. Turn over the desktop

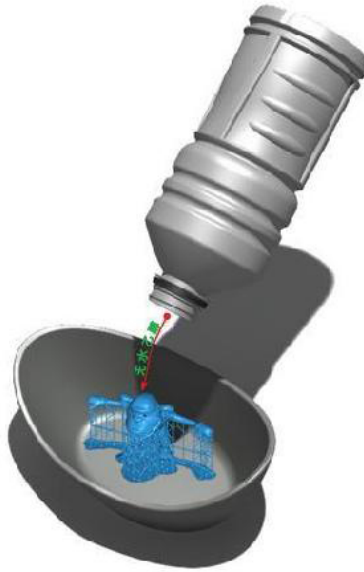
(8) Shovel the model



(Note: The accessories come standard with a blade. If you need a utility knife, please buy it yourself.)

(9)Clean the model

Put the model into the configured alcohol box and pour the pure amount of absolute ethanol into the box for 3-5 minutes.



(10)Drying model

Dry the model surface with a hair dryer (no blower)

(11)curing model

The model is placed in a 405-wavelength UV curing chamber for 3-5 minutes to achieve the best results on the surface of the model (not available, you can go to the official website of YIDIMU)

Note: In the case of incomplete printing or printing failure, the resin in the trough may have some solid residue. It is recommended to filter the resin of the trough with a filter after each printing, and wipe the residue with a dust-free cloth. Clean, prevent the next print residue will crush the 2K screen,)

Machine maintenance

(1) The power must be cut off during maintenance;

(2) Wiping the resin tank and the printing platform with a dust-free cloth;

(3) The resin should be placed in a shaded place and stored in a shade;

(4) If the equipment is not used for a long time, please place the equipment in a dry and ventilated environment.

(5) When replacing different types or colors of resin, wipe the resin in the trough. If the tank is cleaned with alcohol, wipe the alcohol in the trough.

Quality assurance and after-sales service

Quality Assurance:

Behind every product is the commitment of EDIM Smart, and our rigorous parts processing standards and assembly inspection processes ensure that each product is a qualified, high quality product.

after-sale warranty:

1. Since the goods are received within 7 days, due to the problems caused by the quality of the products, we will

bear the return shipping costs for your free replacement or repair.

2. Since the goods are received within 90 days, due to the problems caused by the quality of the products, we will replace or repair them for free.

3. Man-made damage is not covered by the warranty.

4. Our company does not recommend the use of other brand consumables. For the best printing results, please use our company's special consumables. Maintenance and repairs caused by the use of non-consumer consumables are not covered by the company warranty.

5, release film, LCD is a consumable item is not covered by the warranty, the release film is generally replaced once every 15 days, frequently used for 5-7 days to replace, the LCD screen life is generally one to two months.