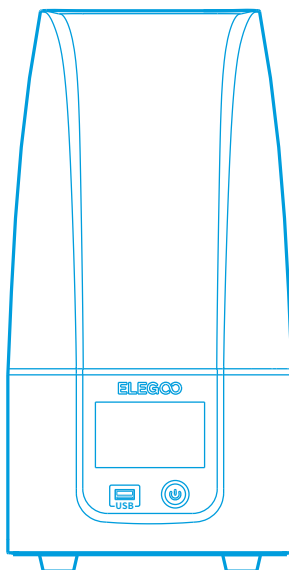


ELEGOO

● **Mars 4 Ultra
3D Printer**



User Manual

Upon receiving the product, please confirm that the device is intact and all accessories are included. If you encounter any issues during installation, operation, or maintenance, please contact the ELEGOO after-sales team for professional support through the official channels below:

1. Visit our dedicated support page: <https://www.elegoo.com/pages/contact-support>. (We recommend copying the link and opening it in your browser.)
2. Scan the QR code below for personalized, one-on-one assistance.



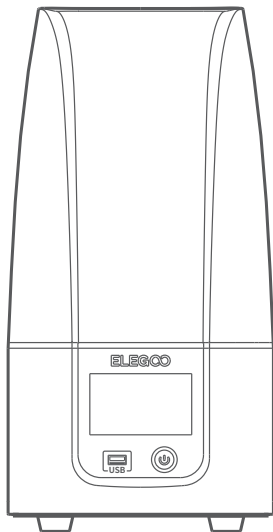
(Note: To ensure optimal performance, each ELEGOO product undergoes rigorous printing tests before shipping. You may notice minor surface scratches upon delivery; this is normal and does not affect functionality. Please use your product with confidence.)

Notice:

- Please keep the 3D printer and its accessories out of the reach of children.
- Please fill the resin tank no less than 1/3 of its volume, but do not exceed the MAX line position.
- Please place the printer in a dry environment and protect it from rain and moisture.
- If you run into an emergency during use, please turn off the power supply of the 3D printer first.
- Please use the printer indoors and avoid direct sunlight and a dusty environment.
- Please keep the original packaging box for 30 days for return/exchange (only ELEGOO original packaging boxes are accepted).
- If the printing fails, you need to clean the excess cured resin in the resin tank and change the resin, otherwise, it may cause damage to your printer.
- When operating the 3D printer, please wear a mask and gloves to avoid direct skin contact with the photopolymer resin.
- If the release film in the resin tank is whitened, scratched, or has no elasticity, the printing failure rate is high, please replace the release film in time.
- Please use 95% (or higher) ethyl alcohol or isopropyl alcohol to wash your model unless you are using water washable resin.
- Please note that the Mylar tape surrounding the screen is not completely airtight. In case of resin drips during use, it is crucial to promptly clean them to prevent resin infiltration and potential screen damage.
- To maintain the cleanliness, durability, and protective performance of the LCD screen, it is necessary to timely replace parts under the following conditions: aged or damaged tape, corrosive damage, and damaged release film.
- If you have any problems with the printer, please contact us at 3dp@elegoo.com. Please do not disassemble or modify ELEGOO 3D printers by yourself, otherwise, the warranty will expire, and damage caused by personal operating errors need to pay for repairs.

Contents

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Operation Screen Introduction	05
Leveling	11
Test Printing	14
Software Installation and Setup	15
WiFi Module Instructions	19
FAQ	21
Machine Maintenance	23
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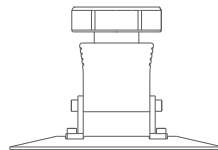
Mars 4 Ultra 3D Printer



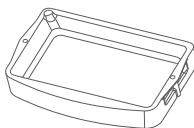
Wifi Antenna



USB Air Purifier



Build Plate



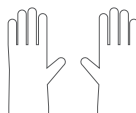
Resin Tank



U Disk



Mask



Gloves



Funnel



Backup Screws



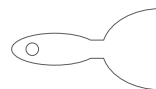
User Manual



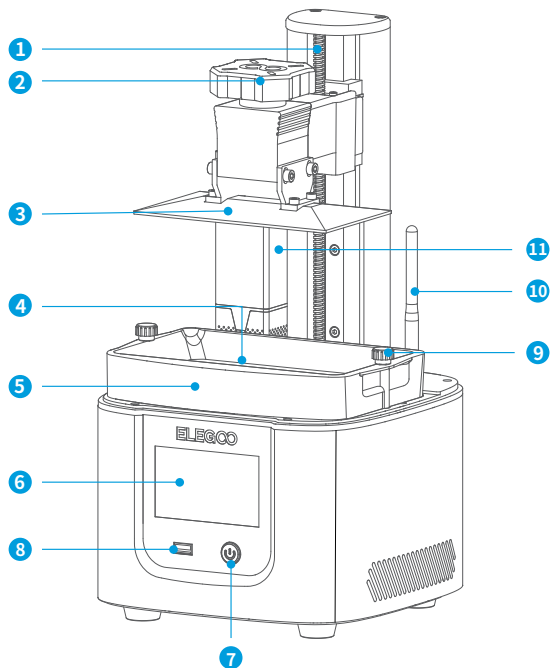
Adapter



Tool Kit



Scraper



1
Z Axis

2
Screw Knob

3
Build Plate

4
LCD Display Screen

5
Resin Tank

6
Touch Screen

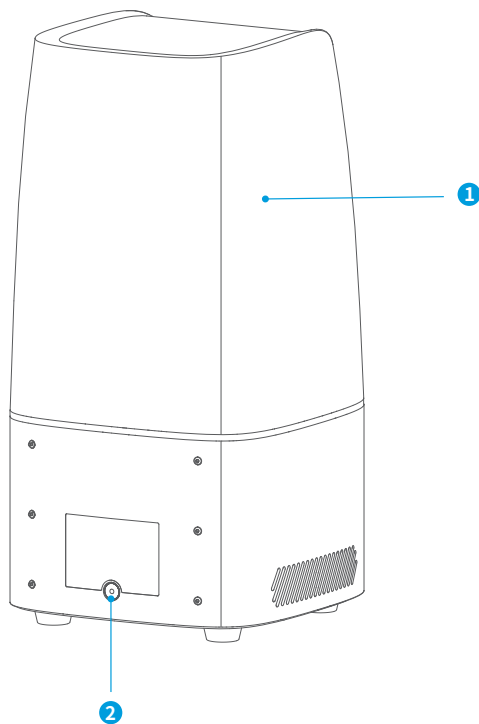
7
Switch

8
USB Interface

9
Screw Knob

10
Wifi Antenna

11
USB Air Purifier



1
Anti-UV Cover

2
DC Socket

Printing Parameter

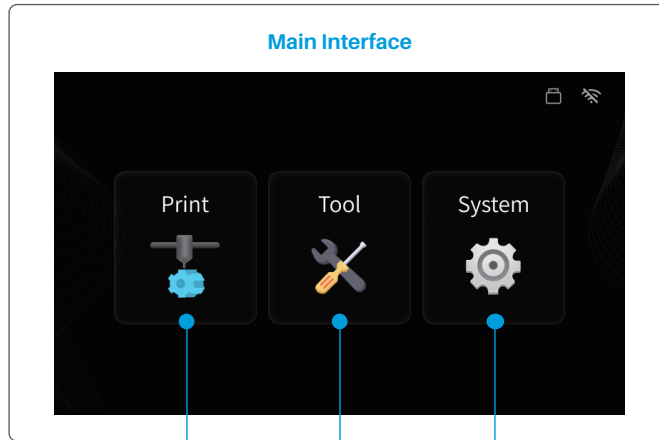
- System: EL3D-4.0
- Operation: 4.0-inch Capacitive Touch Screen
- Slicer Software: ELEGOO SateLite
- Connectivity: USB Interface & WiFi

Hardware Specification

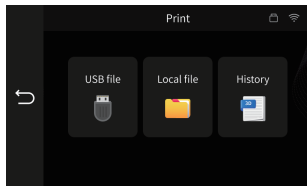
- Dimension: 227mm(L)*227mm(W)*443.5mm(H)
- Build Volume: 153.36mm (L)*77.76mm (W)*165mm (H)
- Package Size: 605mm(L)*270mm(W)*285mm(H)
- Gross Weight: 8.3KG
- Net Weight: 6.5KG

Printing Specification

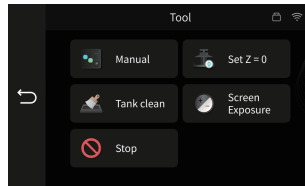
- Technology: MSLA Stereolithography
- Light Source: COB + Fresnel Collimating Lens (wavelength 405nm)
- XY Resolution: 18*18um (8520*4320)
- Z-axis Accuracy: 0.02mm
- Layer Thickness: 0.01-0.2mm
- Printing Speed: MAX 70mm/H
- Power Requirements: 100-240V 50/60 Hz 24V 3A



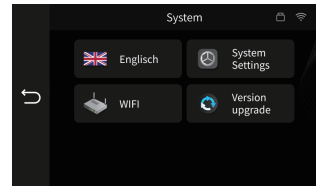
Print List



Tool List

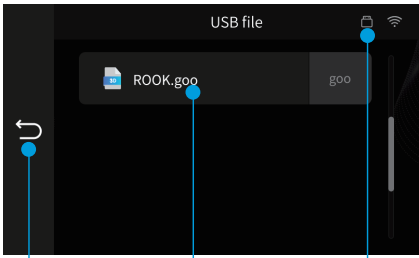


System List



Print List

USB Files

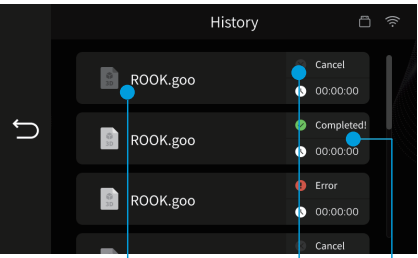


Back to the main menu

U disk file list

U disk status icon

History Record

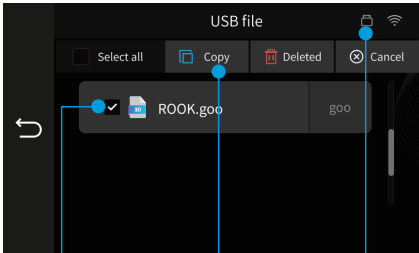


Click to enter preview, and long press to enter edit mode.

Print status

History print time

USB Files

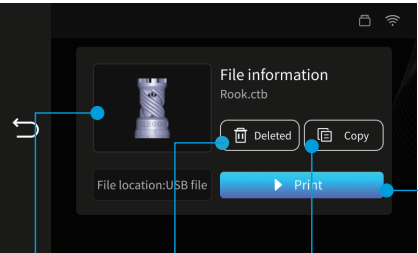


Click to enter model preview, and long press to enter edit mode

Copy the model to the local file

Insert U disk status icon

Model Preview



Model preview

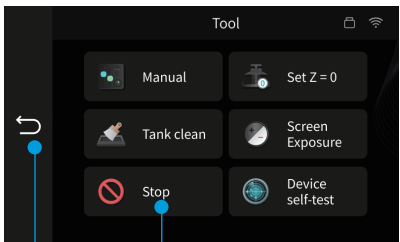
Delete the current model

Copy the model to the local file

Click to start printing

Tool List

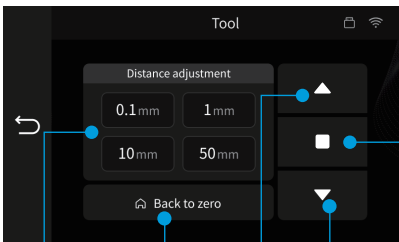
Tool



Back

Click to stop the Z-axis immediately

Manual



Select the distance of each movement of the Z-axis

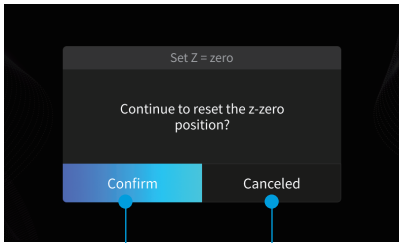
Z-axis returns to zero

Z-axis moves up

Z-axis moves down

Z-axis stops

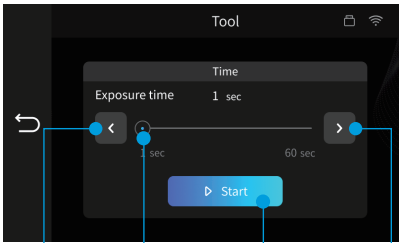
Set Z=0



Confirm to reset zero

Cancel reset zero

Resin Tank Cleaning



Reduce exposure time

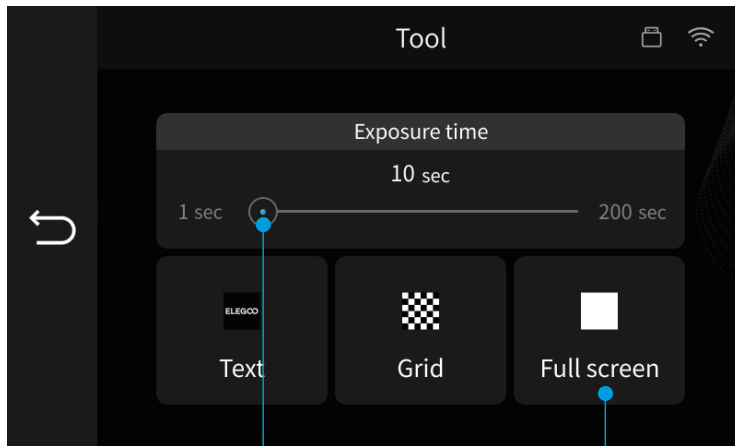
Set exposure time

Click to start exposure

Increase exposure time

Tool List

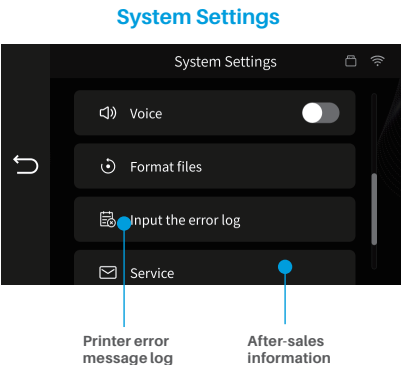
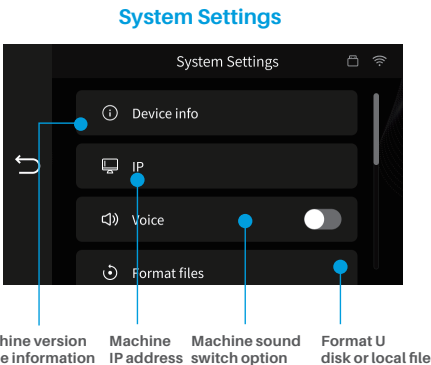
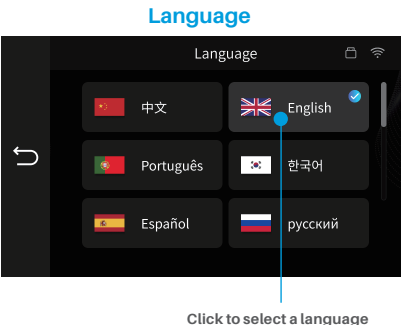
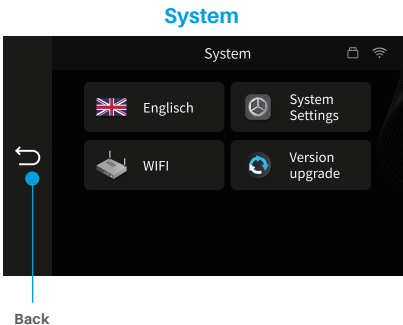
Screen Exposure



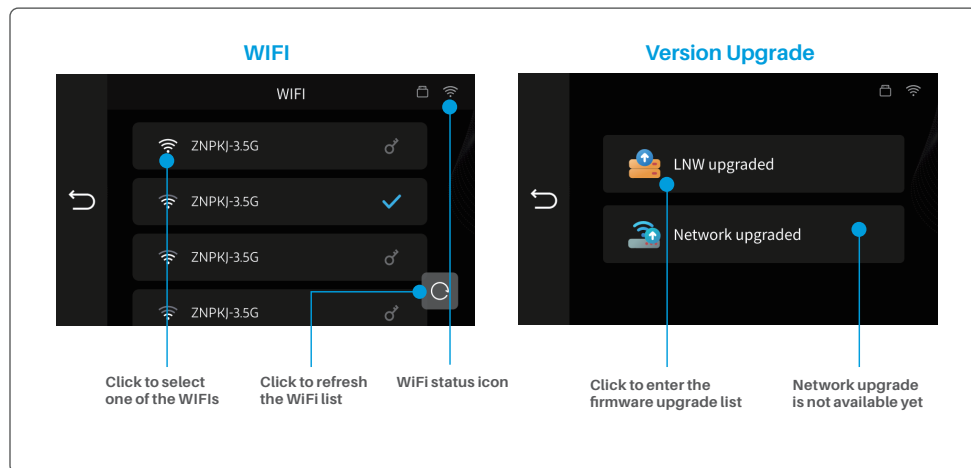
Set exposure time

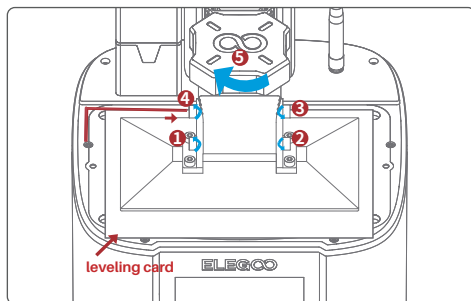
Select exposure type

System List



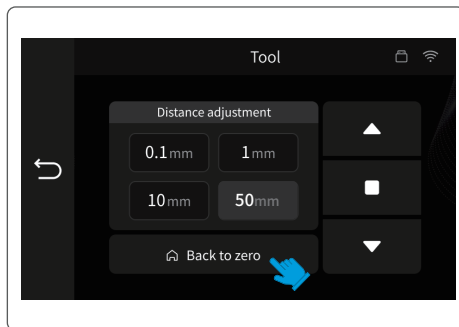
System List



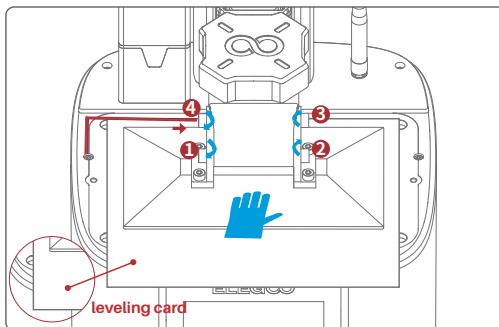


(Figure 1)

1. Remove the resin tank, lock the screw knob (5) of the build plate, and then loosen the 4 fixing screws (1 3 2 4) of the build plate until the build plate can move freely. (See Figure 1)



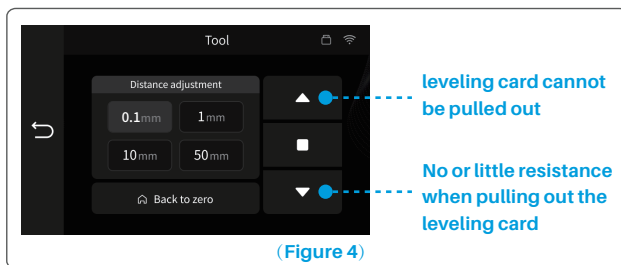
(Figure 2)



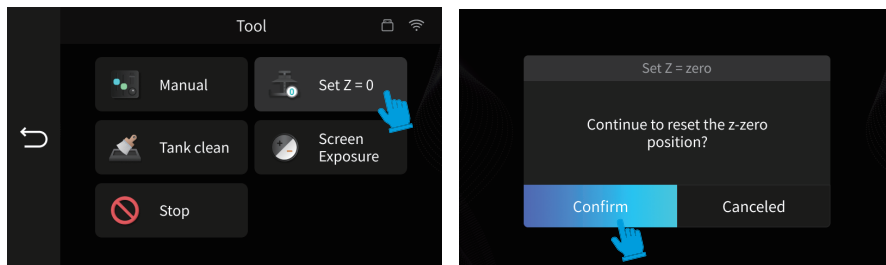
(Figure 3)

2. Place a leveling card between the build plate and the LCD screen, then click "Move Z axis to zero" (See Picture 2). After the printer stops moving, press the top of the build plate with one hand, and lock the 4 fixing screws (1 3 2 4) with the other hand. (See Figure 3)

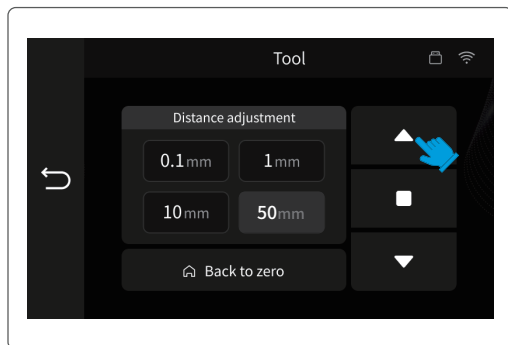
3. Pull the leveling card. If you find there is a slight resistance during this process, you can go directly to step 5. (Note: If there is no resistance when pulling out the leveling card, please click the Z-axis "down" button (in steps of 0.1mm) until there is a slight resistance to pull the leveling card. If there is too much resistance or the leveling card cannot move, please click the Z-axis "up" button (in steps of 0.1mm) until there is slight resistance to pull the leveling card.) (See Figure 4)



4. After completing the above operations, back to the previous menu, and click "Set Z=0", then a confirmation pop-up window will appear in the interface, click "Confirm" to complete the setting. At this time, the current Z-axis position is reset to the new initial height of the first printing layer. (See Figure 5)

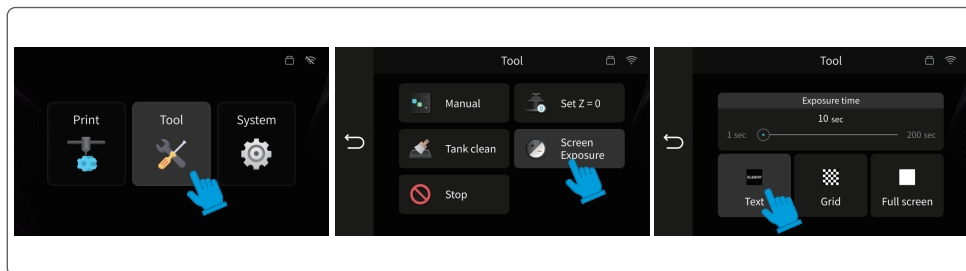


(Figure 5)



5. Click back to the "Manual" page, and click the Z-axis "up" button to raise the Z-axis by a certain distance. (about 100mm) (See Figure 6)

(Figure 6)

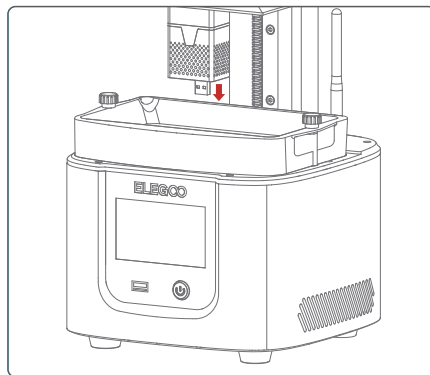


(Figure 7)

6. Take away the leveling card, and click the "Tool" - "Exposure" - "Text" buttons to test the LCD screen and LED light source. If the LCD can display "ELEGOO TECHNOLOGY www.elegoo.com", then the 3D printer works perfectly. At this time, the leveling is completed, install the resin tank and ready for printing. (See Figure 7)

1. Model Printing

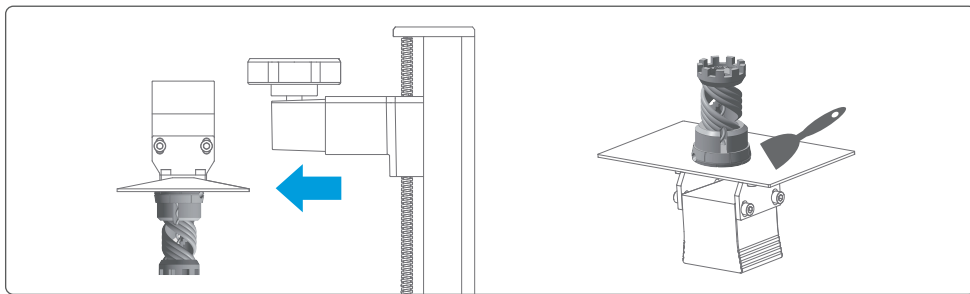
Plug the USB air purifier into the USB port (See Figure 8), then slowly add resin to the resin tank (do not exceed the MAX line height). Cover the printer and then insert the U disk into the printer and select the pre-sliced test model for printing.



(Figure 8)

2. Model Processing

After the printing is completed, wait until the resin on the build plate stops dripping, then loosen the screw knob of the build plate to remove it, and remove the model with a scraper. You can use ELEGOO's cleaning and curing machine to post-process the model. (See Figure 9)



(Figure 9)

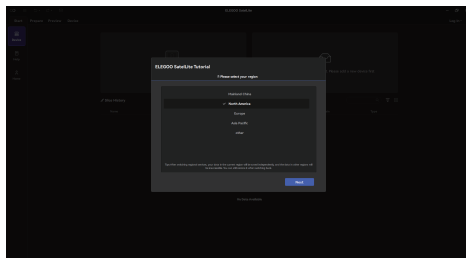
You can use the ELEGOO SatelLite installation package on the USB drive for the printer.

1. Installing ELEGOO SatelLite

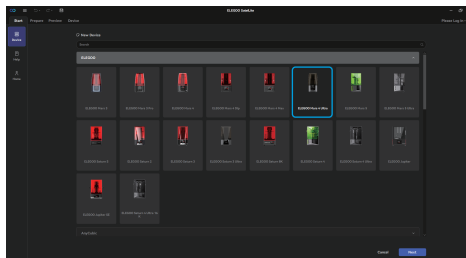
Select the appropriate slicer version from the USB drive or download it from the website (www.elegoo.com) and install it on your computer. When using the software for the first time, you need to select your language and region. If you want to switch regions, please restore the factory settings. After switching regional services, your data in the current region will be saved independently, and the data from other regions will not be accessible. You can still restore it after switching back. (See Figure 10)

2. How to use ELEGOO SatelLite

After installation is complete, run ELEGOO SatelLite. Select ELEGOO Mars 4 Ultra as your default printer, and tap "Next" to enter the printer slice settings page. (See Figure 11)



(Figure 10)



(Figure 11)

3. ELEGOO SatelLite Settings

3.1 Device Configuration Parameters

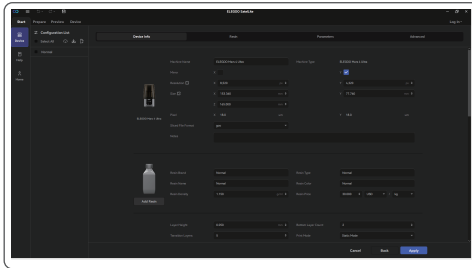
The default parameters do not need to be changed (see Figure 12). X indicates the maximum print size in the X-axis direction, and so on.

3.2 Resin Parameters

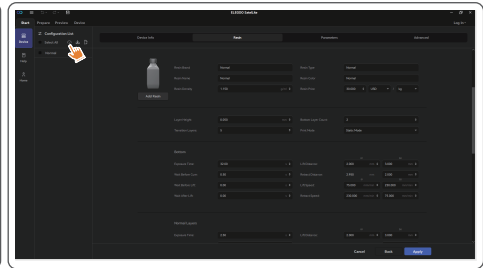
Resin Presets: In the upper-left Configuration List, Click  to open the Official Resin Library (see Figure 13). Choose your resin, then click "Load Selected" to automatically apply its preset parameters (see Figure 14). Presets

Resin Density: 1.15 g/ml

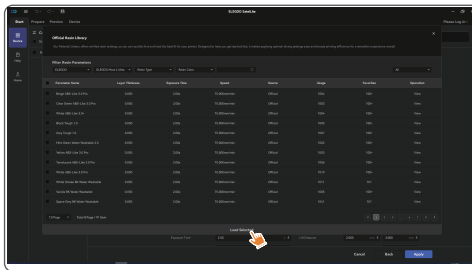
Resin Cost: You can input the real price of the resin you purchased, and the slicing software can estimate the resin costs for each model you print.



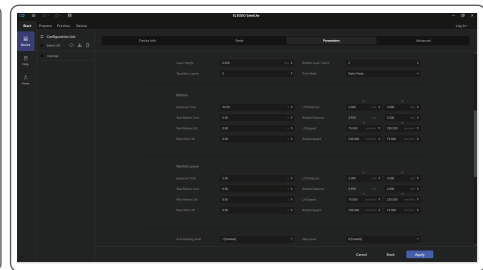
(Figure 12)



(Figure 13)



(Figure 14)



(Figure 15)

3.3 Parameters (See Figure 15)

Layer Height: The recommended height for each layer is 0.05 mm. However, you can set it between 0.01 mm and 0.2 mm. The higher the layer height you set, the longer the exposure time required for each layer.

Bottom Layer Count: Set the number of initial print layers. If the bottom layer count is n , the exposure time for the first n layers is the bottom layer exposure time. The default setting is 2 layers.

Transition Layers: The transition layers makes the bonding between the layers tighter. Except for the exposure time, other parameters of the transition layer are consistent with those of the normal layer.

Print Mode: The software presets three different print modes. Select a print mode according to the model and speed. The "Static Mode" is selected by default.

Bottom Layer Exposure Time: Set the bottom layer exposure time. Properly increasing the bottom layer exposure time helps to increase the bonding strength between the printed model and the build plate. The default setting is 32s.

Normal Layer Exposure Time: The exposure time of a normal print layer is set to 2.5s by default. The higher the print layer height is set, the longer the required time.

Wait Before Cure: The time interval between the start of coming to rest of the build plate after moving to the printing surface and the start of exposure. The default value is 0.5s.

Wait Before Lift: The time interval between the end of print exposure and the start of moving away from the exposure surface by the build plate. The default value is 0s.

Wait After Lift: The time difference between the start of coming to rest of the build plate after lift and the start of retraction. The default value is 0s.

Lift Distance: During the printing process, the distance that the build plate leaves the printing surface each time is set to 2+3 mm by default.

Retract Distance: During printing, the retract distance of the build plate should not be changed without sufficient reason.

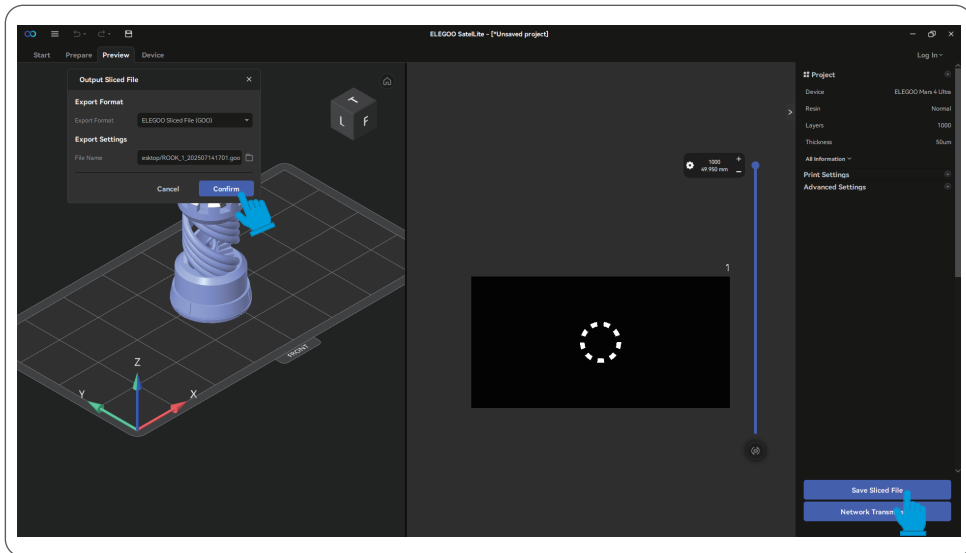
Lift Speed: During printing, the default speed of the build plate moving away from the printing surface is 75+230 mm/min.

Retract Speed: During printing, the movement speed of the build plate when it approaches the printing surface is set to 230+75 mm/min by default.

Note: The printing parameter examples listed in this manual are for reference only. In actual applications, please contact the official after-sales support for parameter confirmation based on factors such as the device model and resin (including type and color) used.

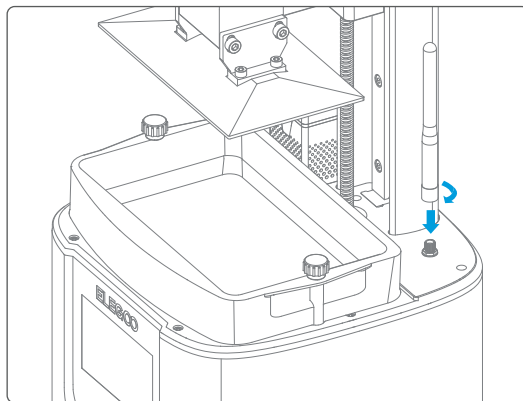
4. Saving the model

After setting all parameters, tap "Slice". When slicing is complete, tap "Save Sliced File" to export the sliced file and copy it to a USB drive. Then, insert the USB drive into your printer and start printing. (See Figure 16)



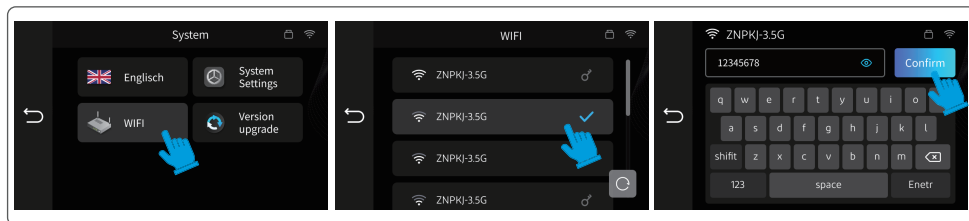
(Figure 16)

1. First, make sure the WiFi antenna is connected. Connect the WiFi antenna by screwing it clockwise to the right port of the machine to connect to the network. (See Figure 17)



(Figure 17)

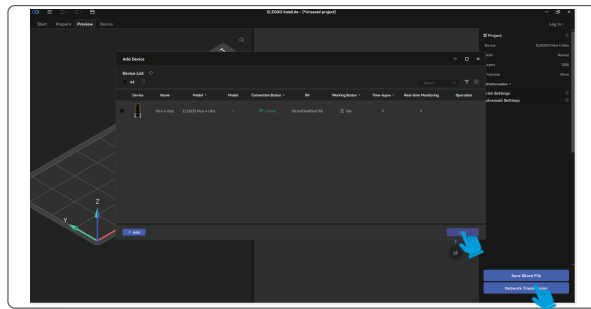
Once the WiFi antenna is installed, click "Settings" - "WiFi" to enable WiFi connection, the machine will automatically search for available networks. Select the WiFi you want to connect to, enter the password, and click "Confirm" to connect to WiFi. (See Figure 18)



(Figure 18)

2. Then make sure that the computer with the slicing software installed is connected to the same WiFi as the printer. After the model is sliced, click the "Network Transmission" and the software will automatically search for the printer, select the printer by the printer name and IP address, click "Send" and the sliced file will be automatically transferred to the printer, and you can start printing once the transfer is completed.

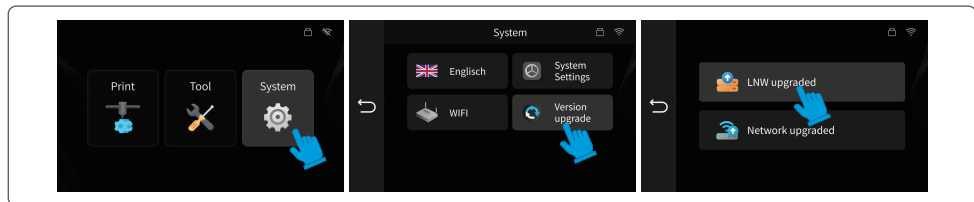
(See Figure 19)



(Figure 19)

3. Firmware Upgrade

(1) For the local upgrade, download the firmware file to the U disk in advance. After the printer is inserted into the U disk, click "System" and then click "Version Upgrade" to select "LNW Upgrade". The firmware version that can be upgraded will be displayed on the page. Click on the firmware to upgrade. (See Figure 20)



(2) Network upgrade is not available yet, please stay tuned.

(Figure 20)

1. Model doesn't stick to the build plate

Bottom layer exposure time is too short, please add more time.

Model bottom has very small contact with the build plate and please add more bottom layers.

2. Model layer breakage

Printer is shaking during printing.

Release liner film is very loose due to long-time usage and need to be changed.

Build plate or resin tank is not fastened.

3. Abnormal Screen Exposure

If your printer doesn't work please contact us at 3dp@elegoo.com.

and as to better help and solve problems for you, please add your order ID in your email.

4. Printing failure

If the model was not completely printed or failed, there might be some residues left in the resin, which can be filtered out using a funnel when you save the rest resin back into its sealed bottle.

If you don't filter out the residues the build plate may cause damage to the LCD screen when you're printing next time.

As to the residual resin on the build plate and tank, you can clean and wipe them up using tissues.

5. Why do I receive an error message for residue detection when starting a print

First, check if the resin tank and build plate are properly secured. Then, try printing again. Avoid touching or causing vibrations to the machine during the self-check process before printing to prevent sensor calibration issues. If the error persists, clean the resin tank or filter the resin for any tiny foreign objects.

6. Why do I get resin insufficient or exceeding maximum volume error when starting a print

At the beginning of the print, the mechanical sensor detects the remaining resin in the tank. To ensure smooth printing, the resin level must be above one-third of the tank volume. Additionally, the resin level should not exceed the MAX line to prevent leakage. If the required resin amount for the model exceeds the current resin level in the tank, a pop-up message will prompt for resin refilling. If you encounter abnormal errors, recalibrate the device through the self-check process. Remember not to touch or vibrate the machine during self-check to avoid affecting sensor calibration.

7. How to adjust the printing speed

The release speed of the printer is fixed, with two modes available: fast and slow. However, regardless of the mode, the first 50 layers are always printed at a slower speed to ensure a higher success rate. The actual printing speed per layer also depends on the settings of the slicing parameters, such as layer thickness, exposure time, and wait time. Changing these parameters will alter the actual printing speed.

8. What should I do if resin leaks into the machine

Due to the nature of tilted release motion, it is not possible to achieve a completely sealed printing area. To address this, we have implemented several protective measures. When the sensor detects resin exceeding the MAX line, the print will stop, and a pop-up window will appear as a warning. There is a groove design below the build plate, where a small amount of leaked resin can flow into without affecting the machine. However, if a significant amount of resin spills occur, please disconnect the power promptly and open the front panel of the machine for cleaning.

- Please do not use sharp or pointy tools to scrape the resin tank to avoid damaging the release liner film.
- Please clean up the resin tank before changing the resin to another color.
- Before and after printing, clean the build plate with paper towels or alcohol to ensure that there are no bumps or burrs on the build plate.
- Before each printing, daily check the exterior of the machine and all mechanical parts for any obvious damage, defects, or abnormalities.
- Try to keep the printing environment at 25-30 degrees Celsius when printing, and ventilate the printing room as much as possible to facilitate heat dissipation of the machine and resin odor volatilization.
- If the Z-axis keeps making friction noise, please add some lubricant to the lead screw. Please check and apply lubricant grease at least every 2-3 months, and increase the frequency of application as the printing frequency increases.
- If you don't use the printer in the next 48 hours, please pour the remaining resin from the resin tank back into the resin bottle and seal it well. If there is any residue, please use a filter to filter it out.
- The release film is a wearing part, please replace it regularly according to the machine prompts to ensure the success rate of printing.
- Please be careful when removing the printing platform to prevent damaging the LCD screen. Do a good job of daily screen cleaning, and unplug the machine in time after printing. If there is a screen exposure problem or service life has seriously affected the print quality, please replace the screen in time.

● ELEGOO printers are covered by a warranty starting from the date of receipt. The warranty periods for different components may vary. For detailed information, please visit our official website at <https://www.elegoo.com/pages/refund-policy>.

● The free warranty does NOT include problems caused by self-disassembly and improper use, and wear and tear of the machine housing, etc.

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