

Mars 3 User Manual

ELEGOO

Thank you for purchasing ELEGOO Mars 3 3D printer.

This user manual applies to Mars 3 and Mars 3 Pro. We take Mars 3 as an example in this manual.

Please unbox and inspect the printer upon receiving it.

If you have any questions regarding the printer.

Please contact us at 3dp@elegoo.com, facebook, or Instagram.

Please read the instruction carefully before you use the printer.

Software and multiple language instructions are available to download from www.elegoo.com/download.

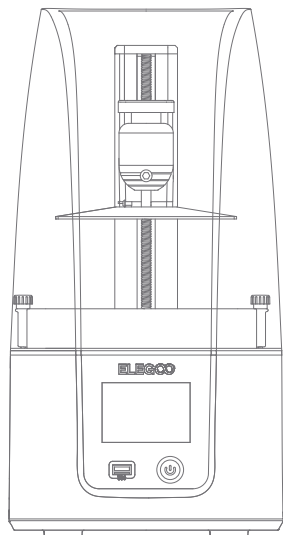
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Notice:

If you need technical support please contact us at 3dp@elegoo.com.

- Please keep the Mars 3 3D printer and its accessories out of the reach of children.
- When you use the printer for the first time, you would need to adjust it before printing ([Unbox and Test](#)).
- If the printing failed, you would have to clean the resin tank and change resin, otherwise it may cause damage to your printer.
- The capacity of the resin in the tank must not exceed the MAX line position.
- Please use 95% degree (or higher) ethyl alcohol or isopropyl alcohol to wash your model unless you are using water washable resin.
- Please use the printer indoors and avoid direct sunlight and dusty environment.
- Please keep your printer away from water or damp environment.
- Please wear a mask and gloves before using and avoid direct skin contact.
- If you want to print models with sharp edges please be careful when removing it from the build platform.

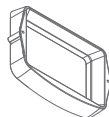
Packing List



MARS 3 3D Printer



Build Platform



Resin Tank



U Disk



Mask



Gloves



Scraper



User Manual



Funnel



Backup Screws

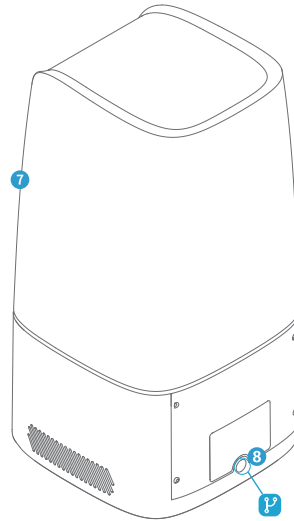
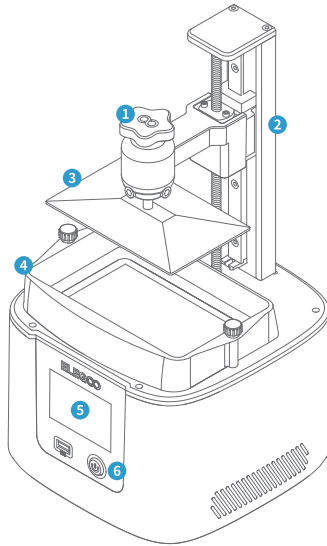


Adapter



Tool Kits

Printer Components



1 The Rotary Knob

2 Z Axis

3 Build Platform

4 Resin Tank

5 Touchscreen

6 Power Switch

7 Anti-UV Cover

8 DC Input

Mars 3 Tech Specs

System: EL3D-3.0.1

Operation: 3.5 Inch Touch Screen

Slicer Software: CHITUBOX

Connectivity: USB

Printing Parameter

Technology: UV Photocuring

Light Source: UV Integrated LED (wavelength 405nm)

XY Resolution: 0.035mm (4098*2560)

Z Axis Accuracy: 0.00125mm

Layer Thickness: 0.01-0.2mm

Printing Time: 1.5-3s per layer (30-50mm/H)

Power Requirements: 100-240V 50/60Hz

Printing Specification

Dimension: 8.93in (L)*8.93in (W)*17.28in (H)

22.7cm (L)*22.7cm (W)*43.85cm (H)

Build Volume: 5.64in (L)*3.52in (W)*6.89in (H)

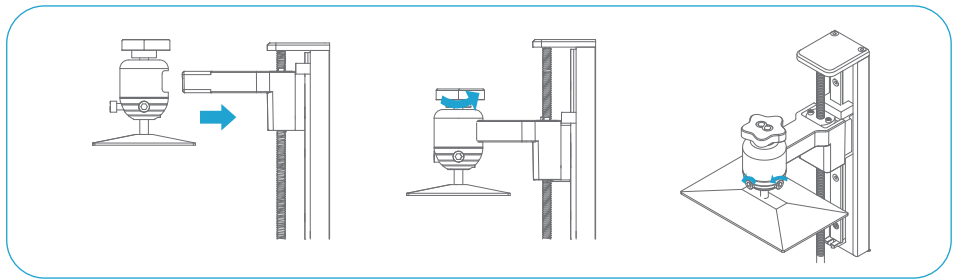
14.336cm (L)*8.96cm (W)*17.5cm (H)

Physical Parameter

Weight: 11.5 lbs (5.2kg)

Leveling

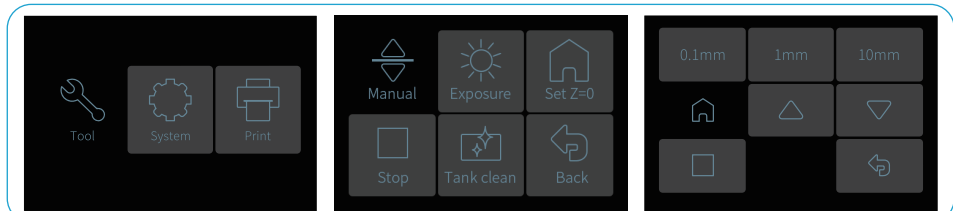
1. Take out the printer carefully and take off the plastic film.
2. Turn on the printer.
3. Please insert the build platform, fasten the rotary knob and loose the screws (see picture 1).



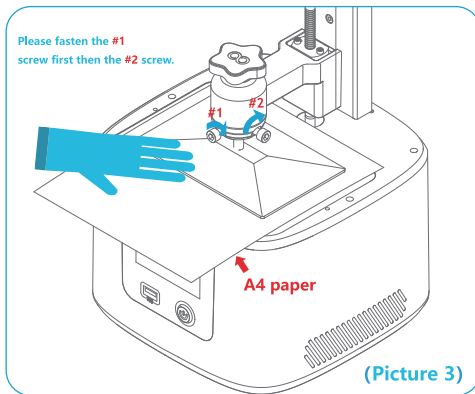
(picture 1)

4. Remove the resin tank and put an A4 paper between the build platform and 4K LCD screen and click "Move Z axis to zero" (See picture 2). When the build platform stops please use one hand to press it and make sure it's in the central position then fasten it using the Allen Wrench.

(See picture 3)



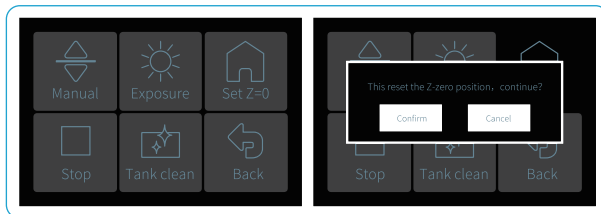
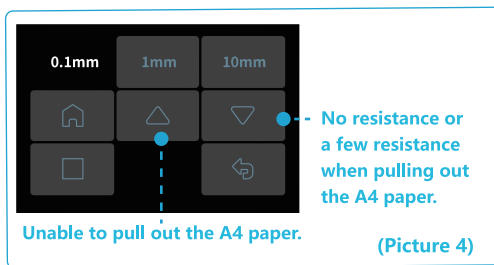
(picture 2)

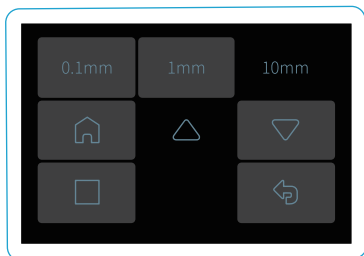


5. Since tightening the screws of the build plate it will be tighter when pulling out the A4 paper, at that time, you need to calibrate the height of the Z axis slightly again. If there is no resistance or only a few resistance when pulling out the A4 paper, click to descend the Z axis at the distance of 0.1mm. If the paper cannot be pulled out or the resistance is very high, then you should click to rise the Z axis at the distance of 0.1mm. If there is some resistance but you can still pull it out with slight efforts, then stop adjusting Z axis. (See picture 4)

6. After the above leveling is completed, set the current Z axis position as the initial height if the first layer of printing.

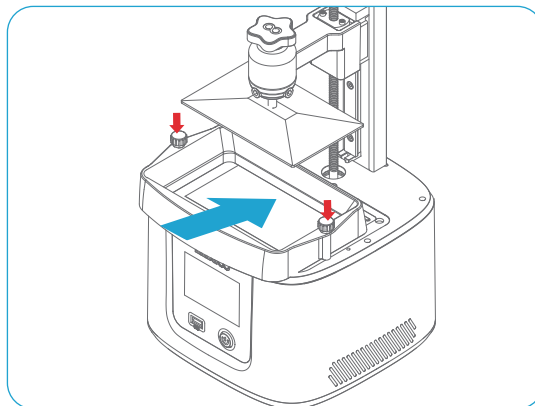
The operation is as follow: Return to the previous interface and click "Set Z=0". At this time, the screen will pop up a message as shown in the picture. Then click "Confirm" to complete. (See picture 5)



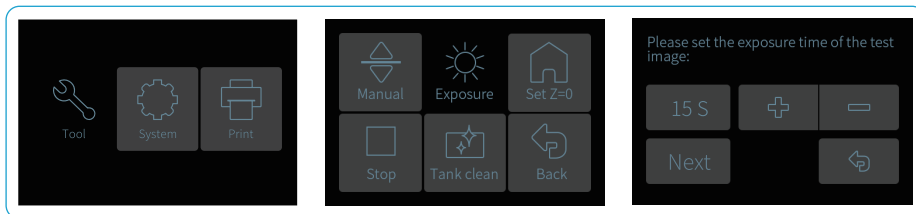


(Picture 6)

7. Press “10mm” -then press “up” for 10 times, then Z axis will go up about 100mm.(See picture 6)



Put the resin tank back and fasten the screws



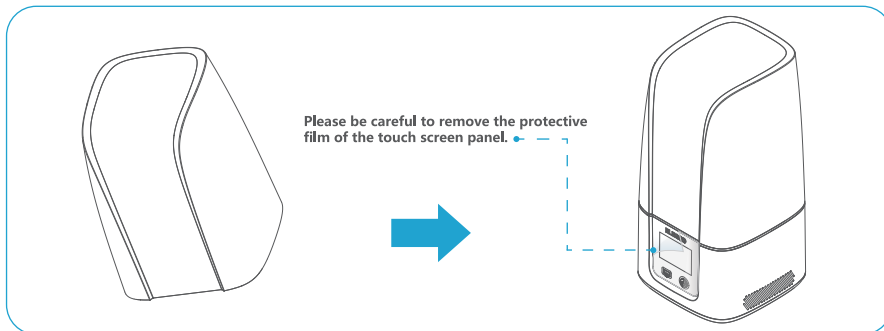
(Picture 7)

8. Test the lights by pressing “Tool” -“ Exposure” -“ Next” (See picture 7).

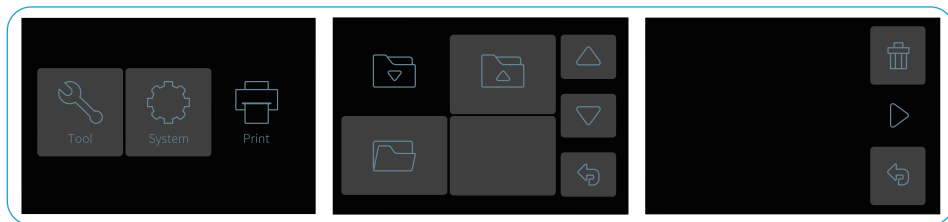
If the 4K screen can display a complete “ELEGOO TECHNOLOGY www.elegoo.com” then the UV lights work perfectly.

Print Test

1 Model Printing (Cover the machine with the anti-UV cover.)



Please put on a face mask and gloves first (to avoid direct contact with the skin), then slowly add resin to the max line of the tank and the resin should not exceed the max line, cover it with an anti-UV cover to protect it from UV light and make sure the printer is level and does not wobble, plug the USB into the printer, select the model file "Rock.ctb" and start printing.

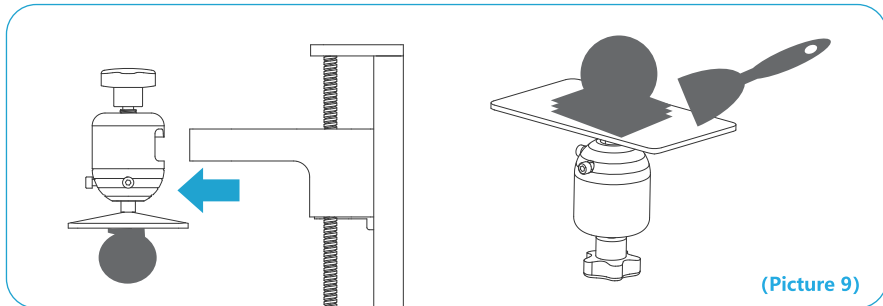


(Picture 8)

If you find that there is not enough resin to complete the model during printing, you can press the "Pause" button and add more resin to the tank and then press "Print" to continue printing.

2 Wash Your Print and Clean the Tank

Once printing is completed please wait until the resin on the build platform doesn't drop anymore. Loosen the rotary knob and remove the build platform. Use a scraper to remove the model and wash it with 95% degree (or higher) ethyl alcohol if you are using standard resin or ABS-like resin. (See picture 9)



1 Install ChiTu Box

ELEGOO ChiTu Box is saved in the U Disk. Choose the right version and install it on your computer or you can download the latest version from www.elegoo.com/download if you prefer.

2 How To Use ChiTu Box

After installation completed, run ChiTu software, click File-Open File, then open your own 3D model files (.stl type) or you can download some samples from our website www.elegoo.com. You can control and change the visual angle, size and position of the model by left-clicking the model and use options on the left menu.

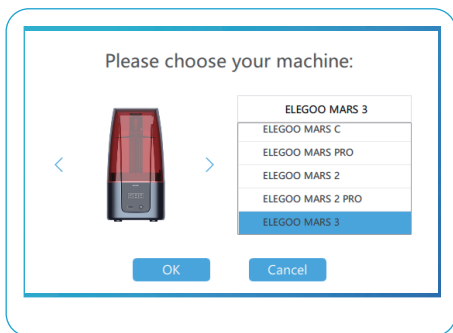
ELEGOO ChiTu Box

Other operations:

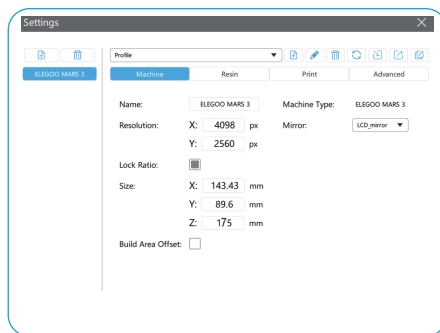
- 1) Long press the left click and drag the model to the position you want.
- 2) Scroll the mouse wheel to zoom in or zoom out the model.
- 3) Long press the right click to see different perspectives of the model.

3 ChiTu Box Setting

3.1 Click “Parameter Settings” and choose ELEGOO Mars 3 as your default printer. (See picture 10)



(Picture 10)



(Picture 10)

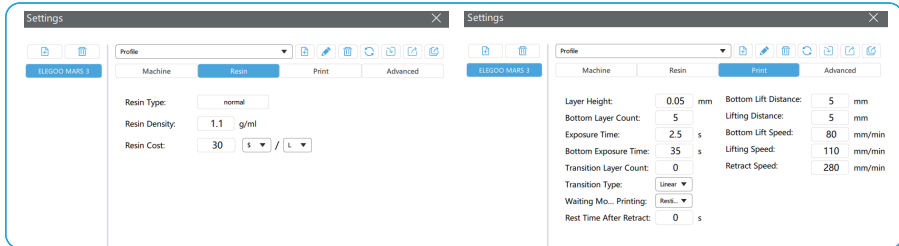
3.2 Build Volume

The below are the default parameters and you don't need to change them. If the model is bigger than printer build volume you would need to change its size with ratio locked. (See picture 10)

3.3 Resin Parameter (See picture 11)

Resin Density: 1.1g/ml

Resin Cost: You can input the cost of resin and after slicing you will see how much it costs for your model.



(Picture 11)

3.4 Parameters (See picture 11)

Layer Height: The recommended height is 0.05mm but you can set it from 0.01-0.2mm. The higher you set, the longer time it will take for exposure of each layer.

Layer Count: Set as 3-6 layers.

Exposure Time: Can be set as 1.5-3s depending on the height of the layer and the complexity of the model, the thicker the setting is, the more the bottom will stick to the build platform.

Bottom Exposure Time: Can be set as 20-40s, the longer the setting is, the more the bottom will stick to the build platform.

Transition Layer: Default parameter and does not need to be changed.

Transition Type: The default parameter is linear and does not need to be changed.

Waiting Mode Of Printing Process: Default parameter is static and does not need to be changed.

The quiescent time after retract: Default parameter is 0 and does not need to be changed.

Bottom Lift Distance: When printing the bottom layers, it is recommended to set the lifting distance of the build plate to 3-5mm.

Lifting Distance: When printing the normal layers, it is recommended to set the lifting distance of the build plate to 3-5mm.

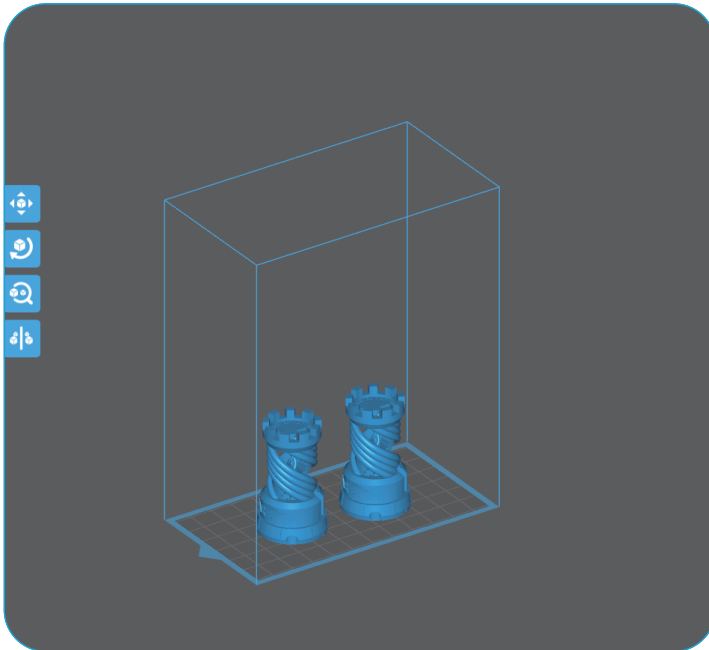
Bottom Lift Speed: When printing the bottom layers, it is recommended to set the lifting speed of the build plate to 80mm/min.

Lifting Speed: When printing the normal layers, it is recommended to set the lifting speed of the build plate to 110mm/min.

Retract Speed: When printing the bottom layers, it is recommended to set the retract speed of the build plate to 280mm/min.

4 Save Model

After setting up all the parameters, click “slice” and once it’s done, click “export sliced files to U Disk or SD Card” then plug the U disk to your printer, start printing. (See picture 12)



(Picture 12)

FAQ

1. Model doesn't stick to the build platform

Bottom layer exposure time is too short, please set the exposure time longer.

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

Leveling is not well set and it will cause first layer too thick or one side is very thick and the other side is very thin.

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 platform or resin tank is not fastened.

3. Mars 3 can't work

We offer a full one-year warranty on the printer and 6-month warranty for the screen.

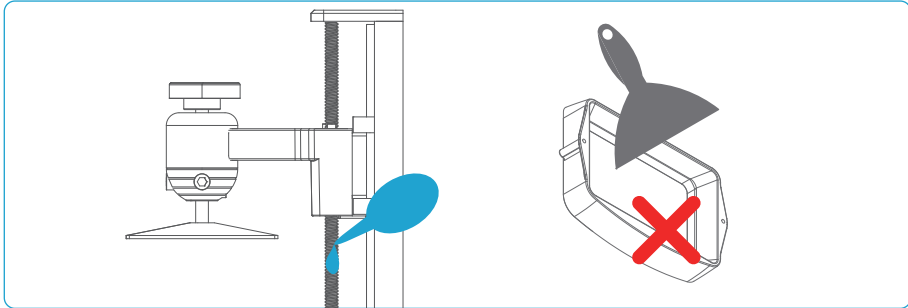
If your printer doesn't work please contact us at 3dp@elegoo.com and as to better help and solve problems for you please add your order ID in your email.

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 platform may cause damage to the 4K screen when you're printing next time. As to the left resin on the platform and tank, you can clean and wipe them up using tissues.

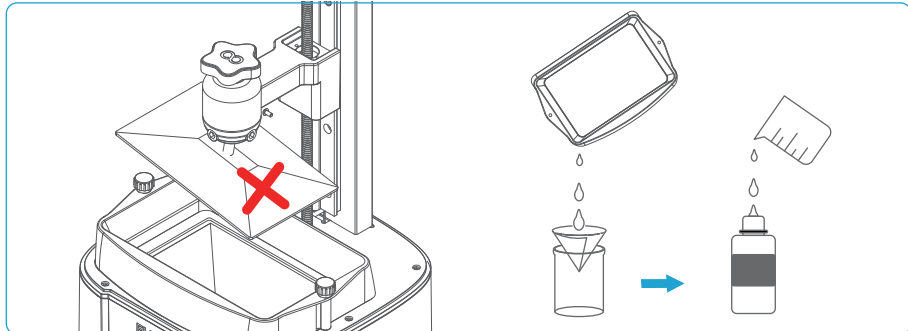
5 Maintenance

- 1.If Z axis keeps making friction noises, please adds some lubricant to it.
- 2.Please do not use sharp or pointy objects to scrape the release liner film in case of damages.

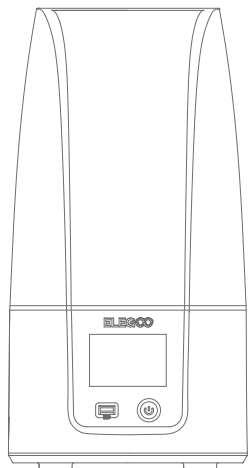


- 3.Be careful when you remove the build platform in case you may damage the 4K LCD screen.
- 4.Remember to pour the rest of the resin from the tank back into the resin bottle and seal it well if you don' t use the printer in the next 48 hours.

And if there are any residues please use a filter to filter them out.



- 5.Please clean up the build platform by using tissues or ethyl alcohol once you complete printing.
- 6.Please clean up the resin tank before changing another colors of resin.



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