

**3D** Printing  
Solutions  
**EDGEMAX**  
**RAYSHAPE**  
Intelligent



# 3D Printing Solution EDGEMAX RAYSHAPE Intelligent User Guide

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**3D** Printing  
Solutions

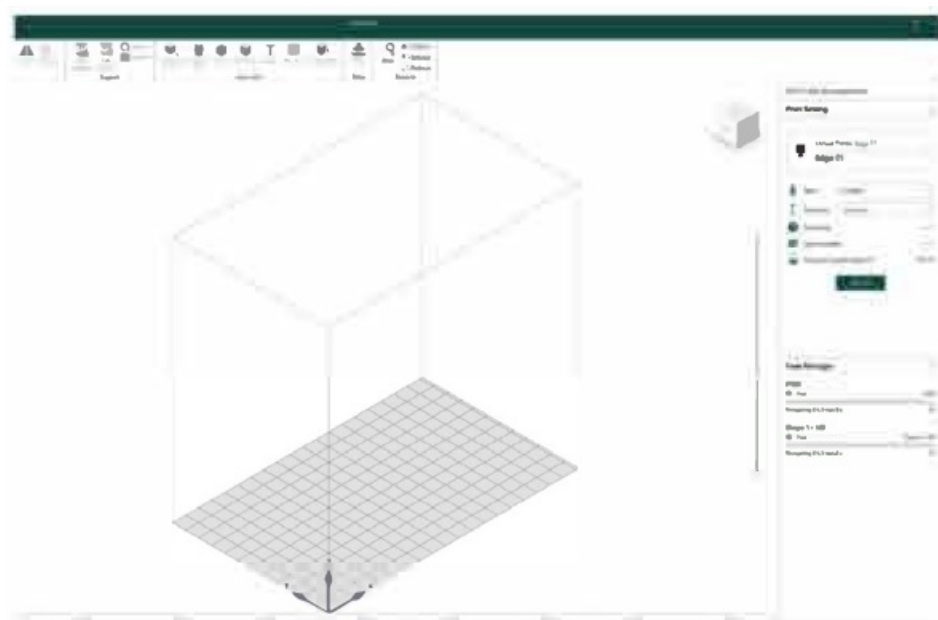
3D Printing Solution EDGEMAX RAYSHAPE Intelligent



## Printing

### Slicing File Preparation

Prepare a slicing file in ShapeWare software, and transfer it to the Printer by USB driver, Wireless, or Ethernet network.



### Printing file load

1. Select a printing task in the historical list
2. Printing tasks were delivered from ShapeWare
3. Read the printing file in the USB drive



Confirm the information of the printing task



### Check with the printing platform

1. The surface of the printing platform should be clean and free of foreign matter.
2. Make sure the printing platform is installed correctly and reliably.

After long-term usage, there may be pits or scratches on the surface of the platform which will not influence the quality of the printing. However, convex on the surface of the platform is not allowed to avoid the risk of damage to the release film.



### Check with the resin tank

- Do a visual check that whether the release film is damaged and if any foreign matter is available in the resin tank if it is an empty one.
- If there is residual resin available in the tank, use the plastic scraper to scrape the bottom of the resin tank slightly to check whether the release film is damaged, and mix the resin evenly in the meantime.



### Add resin

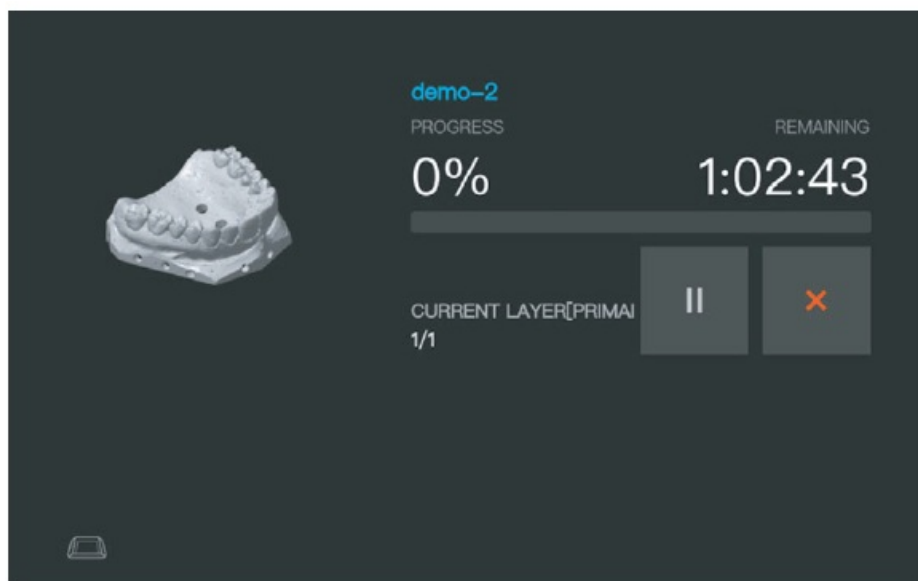
- Make a judgment on whether it is necessary to add resin according to the remaining amount in the resin tank and the consumption of the next printing task. The bottle which is containing the resin material should be shaken up and down adequately just before pouring the resin material into the resin tank.
- The liquid level of the resin should be kept between lines "min" and "max".
  - The bubble generated by shaking does not affect the print quality.
  - Contacting with resin directly may lead to skin irritation, and please wear disposable gloves in any operation which was related to resin material.

- If you eat the resin by mistake, please seek for medical care immediately.



## Print

Click the “PRINT” button to initiate the task, then wait for the completion of printing.



## Post-processing

### Preparation

- Post-processing work will lead to resin dripping, and waste liquid or waste residues would be generated accordingly also, then pollution prevention should be considered during the preparation.
- **The item should be prepared:** Disposable glove, spray bottle, brush, shovel blade, hammer, tray, and plastic box ( It is recommended to equip with ShapeWash washing unit).

### Remove the printing platform

Rotate counterclockwise to release the handle, and pull outward to remove the printing platform.



### **Clean the resin tank**

Click "Clean resin tank". After curing, please shovel the cured layer of resin along the edge of the resin tank with the plastic scraper until it is separated at the corner, then tear down the whole layer of resin with your hands by wearing the disposal gloves and discard afterward.





**Cover the resin tank with a lid if the resin material needs to be stored within the tank temporarily.**

Please take resin material out of the tank if it will be not consumed in 3 days, make sure to get it filtered before storing it in a light-proof container. It was not recommended to mix it with the original one directly.



### **Shovel printed parts**

Please use the shovel blade to shovel the printed parts off from the printing platform. Place the blade as parallel as possible to the platform to avoid scratching.

- For removing models directly placed on a printing platform without a support structure, such as 'td dental models, the rubber hammer could be used to tap the blade to remove models.
- Be sure to wear anti-cutting gloves, and the blade of the shovel should be not orientated to the body of the user during the operation.



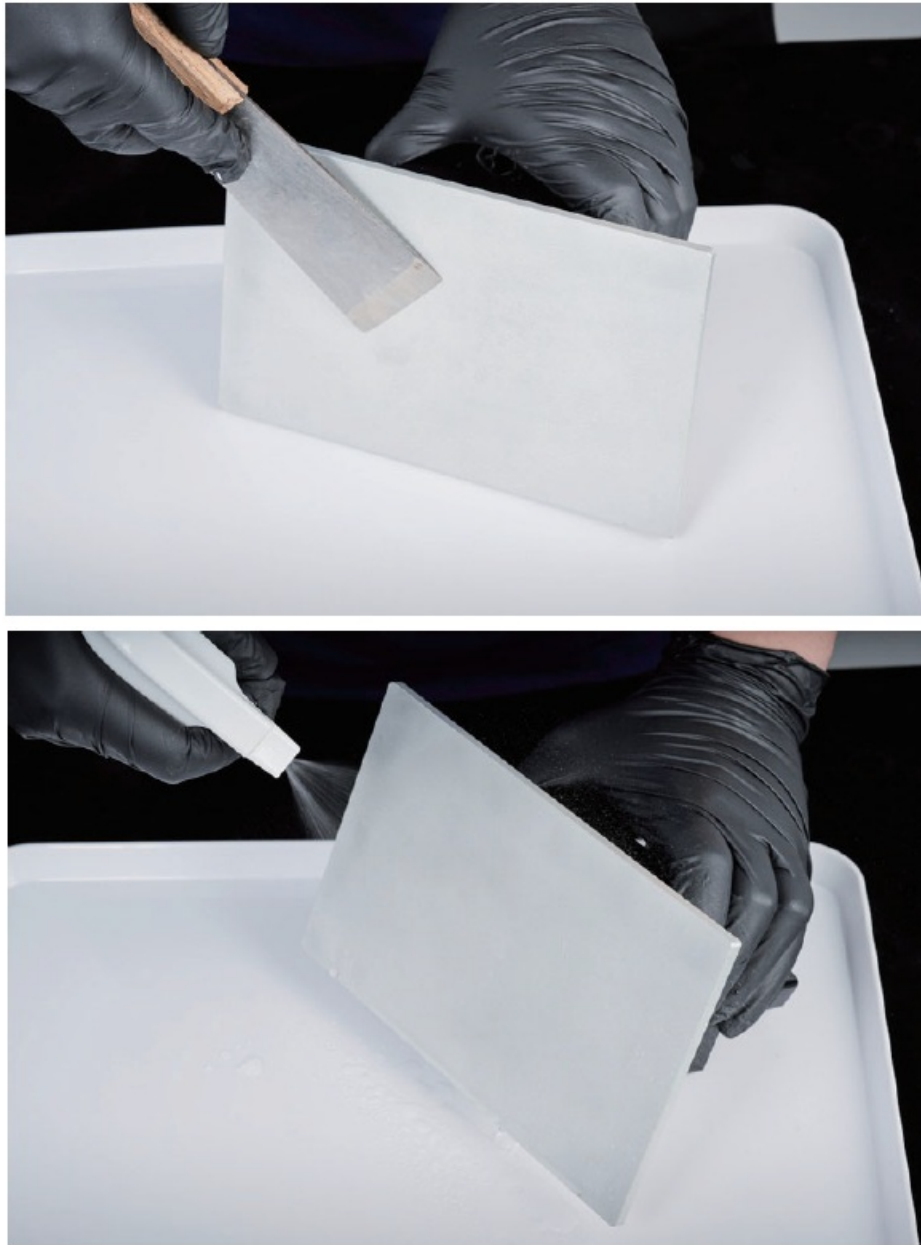
### Clean printed parts

- **Preparation:** Please fill the spray bottle with IPA or 95% alcohol.
- Brush the model in the cleaning tank for preliminary cleaning.
  - To obtain a better effect of cleaning, it is recommended to conduct ultrasonic washing with cleaning solvent twice, and 1-2 minutes was needed every time. The clean solvent should be used for the second washing.
  - After the preliminary cleaning, please spray the cleaning solvent on the model. After cleaning, the surface of the model is dry and free of sticky hands.

**Clean the printing platform**

After the printed parts are removed, use a shovel blade to clean the surface of the platform, please be aware that do not damage the platform during the operation.

- If the type of resin material will change in the next task, the printing platform shall be cleaned with cleaning solvent carefully to remove residual resin.



## Maintenance

### Clean light path

LCD 3D printer is a precision optical device, and the light path shall be kept clean to avoid a reduction in printing accuracy and quality. The optical path, which is composed of the screen and the release film, shall be cleaned regularly. Do the cleaning work with dust-free wipes, or absolute ethanol in case it is necessary.

### Clean resin tank

If you only have one resin tank, and need to change the resin material:

1. Firstly you need to empty the resin tank by pouring the current resin material into a light-proof container for temporary storage.
2. Clean the resin tank thoroughly with cleaning solvent, and then pour the new resin into it afterward.
3. At the same time, clean the printing platform with solvent carefully.

If you need to change resin material frequently, it is recommended to equip with multiple resin tanks:

1. Remove the current resin tank and place it on a clean and flat surface, such as on top of a resin tank lid or a

piece of clean A4 paper. Then cover it with a resin tank lid.

- The resin should be taken away from the resin tank and filtered just before storing it in a light-proof container if it will not be consumed in 3 days. Do not mix it with the original resin directly.

2. Clean the printing platform with cleaning solvent carefully in the meantime.

### Maintenance work in case the printing part falls off during printing

In case of such problems as part falling off (the printing part falls off from the printing platform) and delamination (the layers of the part fall off or separate from each other) during the printing process, please make sure to drain all the remaining resin out of the resin tank and clean away the residue in the tank, get the resin filtered just before pour it back.

### Replacement of air filter

- According to the defined replacement interval of the built-in air filter which was located in the printing chamber, it will remind you to replace the filter element automatically.
- When replacing, remove the filter element box cover, take out the old air filter element, install the new filter element, and replace the box cover.

### Troubleshooting

No.	Description	Reason	Solution
1	The device cannot start up normally	The socket does not have normal power supply.	Check whether the socket is working normally.
		The cable is not plugged in or becomes loose.	Re-plug the cable and confirm the connection is reliable.
		The power switch is not turned on.	Turn on the power switch and confirm that the light is on.
		Electrical fault	Contact the re-seller / distributor or after-sales department.
2	Part falling off.	The bottom of part is not flat.	Check whether the profile of the first layer is completed and the case that the area of first layer is too small should be avoided.
		The printing platform is not leveled and zeroed in place.	Do the leveling check under the guidance of after-sales personnel. Increase the value of initial position if necessary. When leveling the building platform, don't crush the screen.
		The ambient temperature is too low.	Place the printer in an air-conditioned room to ensure that the ambient temperature is between 25-30 °C .
		There is foreign matter in the tank.	Pour out the resin in the tank, clean the resin tank with clean alcohol/ IPA, and confirm the removal of the foreign matter.
		Light path pollution	Check and clean the light path, and confirm that the bottom of the resin tank and the LCD screen are clean and bright.
		Resin and slicing package do not match.	The resin is inconsistent with the resin selected during slicing. Please confirm whether it matches.
3	The bottom of part is peeling off.	The support is not added properly.	Check the structure of the support and add enough support accordingly.
		Unreasonable design of part	The structure such as cupping and large cross-section should be avoided.
4	The surface of the part is coarse.	Unreasonable design of part	The structure such as cupping and large cross-section should be avoided.
		Resin and slicing package do not match.	The resin is inconsistent with the resin selected during slicing. Please confirm whether it matches.
		The tank is seriously damaged.	Pour out the resin in the tank, check the quality of the tank, and if it is seriously damaged, contact the dealer and purchase a new tank.
		Light path pollution	Check and clean the light path, and confirm that the bottom of the resin tank and the LCD screen are clean and bright.

5	The part is difficult to be shoveled from the build plate or is easily broken when being shoveled off.	Unreasonable design of part	Shell the part for printing, with a thickness of not less than 2.5mm.
		The shovel blade becomes blunt.	Replace it with a new shovel blade.
6	Abnormal interruption during printing.	Power off	Check the main power supply of the site.
		The part has a problem.	Check whether there is a problem with the interrupted layer, e.g. a blank outline.
		Other abnormalities	Export the log of the printer and send it to the after-sales department.
7	The support in some area of the part is broken.	The support is not added in place.	Check the structure of the support and add enough support accordingly.
		The support is too thin.	Increase the diameter of the support bar.
		The tank below the area is damaged.	Replace the release film or resin tank with a new one.
		The ambient temperature is too low.	Place the device in an air-conditioned room to ensure that the ambient temperature is between 25-30 °C .
8	Part of the printed part is missing.	Insufficient resin in the tank.	Add enough resin and print it again.
		Light path pollution	Check and clean the light path, and confirm that the bottom of the resin tank and the LCD screen are clean and bright.
		The tank is damaged.	Drain the resin out of the tank, check the resin tank and replace with a new one if it is damaged.
		The part is designed or supported unreasonably.	Re-design the part and add support properly.
		There is foreign matter in the tank.	Pour out the resin in the tank, clean the resin tank with clean IPA/ alcohol, and confirm the removal of the foreign matter.

## Warranty

### 1. Warranty period

RAYSHAPE 3D printers are provided with 12 months of warranty and lifetime maintenance services.

### 2. Preconditions

- The equipment failure is not caused by human reasons or force majeure.
- A valid proof of purchase.

### 3. Scope

- Appearance parts such as door panels and equipment cases shall be deemed to be free of quality problems upon sign-off and are not included in the list of warranty components.
- Consumables (including resin tanks, release films, etc.), please unpack and inspect the goods at the signing site; upon sign-off, it shall be deemed to be free of quality problems, and the warranty request is not accepted.
- LCD screen is consumable with a warranty period of 3 months.

### 4. Service

For warranty service requests that comply with the warranty conditions, the supplier should bear the cost for spare parts, repair, and transportation as well.

### 5. Non-warranty circumstances

- Equipment failure caused by human reasons or force majeure;
- Failure to provide valid proof of purchase;
- The performance and reliability of the equipment depend on many factors, and the supplier could promise that the best printing performance and reliability would be obtained if the supplier's official consumables and supporting software were used and the instructions of the equipment's user manual were complied with strictly during usage; Such warranty requests, which was caused by the application of 3rd party software and consumables, would not be accepted by the supplier.

### 6. Warranty services

Supplier would offer maintenance service to the request which does not comply with the warranty condition or out of the warranty period, but the cost related to spare parts and transportation should be undertaken by the requester accordingly.

## 7. Service response

The supplier will provide online technical support to the requester within 4 hours in the period of 09:00-17:00 on working days.

## Technical Support

1. If you need help during the use of RAYSHAPE products, please contact the direct seller of the products directly.
2. Before you initiate a technical support request via email or telephone, we recommend that you make the following preparations in advance:

- **Device SN**

The product SN can help us know more details about your device and order quickly. The device SN is located on the nameplate of the body.

- **Running the log file of the device**

Enter the menu: TOOLS- CON FIG AND LOG FILESEXPORT THE LOG-Export, and export the running log file of the device, which will be saved in the root directory of the USB disk.

- **Photos and videos**

Some faults are difficult to describe and judge, and in this case, providing photos or videos is the most effective way to explain the problem.

### Please provide photos or videos under the following circumstances:

1. Parts are damaged or fall off;
2. You know the cause of the failure, but do not know the name of the relevant accessories involved in the failure;
3. The abnormal operating state of the device is complicated to describe;
4. Problems in printing quality.

## Contact

### For more information:

- **Sales Inquiries**

- [sales.os@rayshape3d.com](mailto:sales.os@rayshape3d.com)
- +86 400 0983 356

- **Comments and suggestions:** [feedback@rayshape3d.com](mailto:feedback@rayshape3d.com).

Your feedback is greatly appreciated, and your comments and suggestions will be sent to our sales, R&D, and technical support departments to help us provide better products and services.

## Warranty Card

This warranty card, along with the valid invoice, will be guaranteed for one year after the purchase.

For the warranty details, please refer to the product user manual.

Reseller Name : \_\_\_\_\_ Invoice NO. : \_\_\_\_\_ Purchase Date : \_\_\_\_\_

Product Model : \_\_\_\_\_ Serial Number : \_\_\_\_\_ Dealer's Seal : \_\_\_\_\_

\* This is the basic proof of the warranty. Please fill in it carefully and hand it over to the customer for safekeeping

Customer Name : \_\_\_\_\_ Contact : \_\_\_\_\_ Phone Number : \_\_\_\_\_

Address : \_\_\_\_\_ Service Evaluation : ☐ Excellent ☐ Good ☐ Normal ☐ Bad

Customer Signature : \_\_\_\_\_

## FCC STATEMENT

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference, and
  2. this device must accept any interference received, including interference that may cause undesired operation.
- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.


## NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, under Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used under the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with a minimum 20cm distance between the radiator and your body: Use only the supplied antenna.

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References

- [User Manual](#)

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