

User Manual for **SONIC XL 4K**

# Thanks for Choosing Phrozen 3D Printer !

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Dear Phrozen's User,  
Glad you've joined us. For the best experience, please read through the Phrozen manual and follow the step-by-step before you start.

Feel free to contact us if you have any questions.  
Email: [support@phrozen3d.com](mailto:support@phrozen3d.com)

Multi-language manuals and related software are available on our official website at [phrozen3d.com/page/download](http://phrozen3d.com/page/download)

Facebook: [@Phrozen3DP](#)  
Twitter: [@PhrozenDLP](#)  
Instagram: [@Phrozen3DP](#)  
Youtube: [@Phrozen3DPrinter](#)



Chinese version starts from [Page 19](#) ▶▶▶

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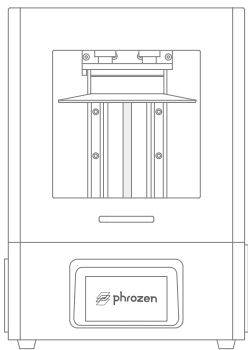
## Key Notes Before We Start !

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- ▶ Keep printer & resin away from kids and direct sunlight exposure. Also make sure to print in a cool, dry, and ventilated environment.
- ▶ Every printer is pre-calibrated. However, we still recommend that you calibrate when you use the printer for the first time.
- ▶ Before starting every print, please clean the resin vat and refill the resin to avoid potential debris and pigment separation which may effect your printer / print.
- ▶ Filling the resin in the resin vat at 1/3 height is good enough. DO NOT fill full.
- ▶ Please wear PPE (Personal Protective Equipment) like mask, goggles, and long sleeves when operating printers and resins.
- ▶ Please clean the model with 95% Alcohol, IPA, or special detergent like Phrozen Wash.
- ▶ Be careful when using scraper to remove the print from the build platform. It might cut your hand if used carelessly.
- ▶ Please DO NOT dis-assemble printer by yourself. It may cause your warranty to be expired.

# What You Have In The Box

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Sonic XL 4K



User Manual



Gloves



Scrapers



Allen Wrench



Handle



Backup Screws



WIFI Dongle



Plastic Funnel



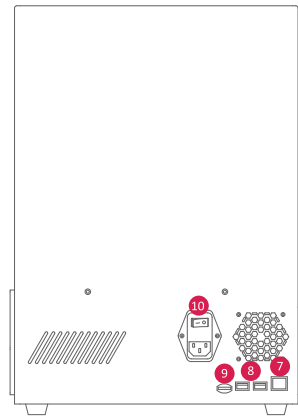
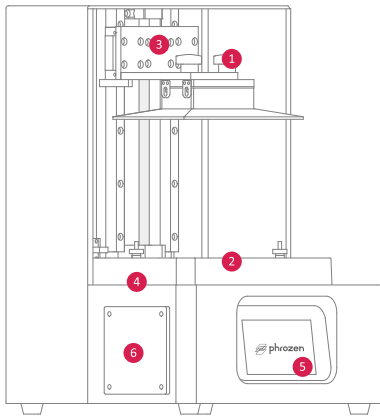
USB



AC Power Cord

# Printer Parts

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1 Build Platform    2 Resin Vat    3 Z-Axis    4 LCD    5 Touch Panel

6 Fan    7 Ethernet Port    8 USB Port    9 SD Card    10 Power Switch

# Technical Spec

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**System:** Phrozen OS  
**Operation:** 5-inch Touch Panel  
**Slicer Software:** Phrozen 3D Powered by Formware  
**Connectivity:** USB, WIFI, Ethernet

## Operation

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**Technology:** Resin 3D Printer - LCD Type  
**Light Source:** 405nm ParaLED® 3.0 Module  
**XY Resolution:** 0.050 mm  
**Layer Thickness:** 0.01 - 0.30 mm  
**Max Printing Speed:** 90 mm / hr  
**Power Requirement:** AC100-240V~50/60Hz

## Printing Specification

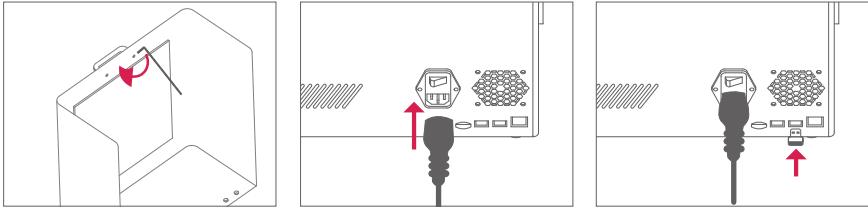
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**Printer Size:** L11.4 x W13 x H18.5 in  
**Printing Volume:** L4.7 x W7.5 x H7.9 in  
**Printer Weight:** 19.5 kg

## Hardware Specification

# Calibrate & Test

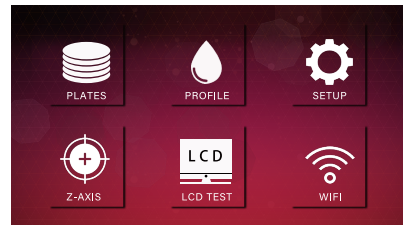
- 1 Assemble the handle on the door, plug in AC Power Cord, and WiFi Dongle.



- 2 Screw the build platform and resin vat on the printer and tighten them.



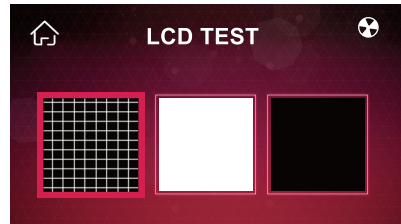
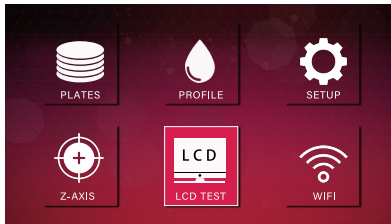
- 3 Turn on the printer. Phrozen OS will be ready in 45 secs.



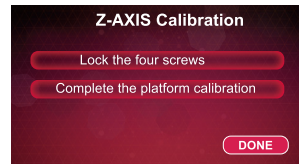
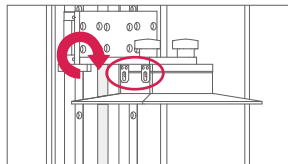
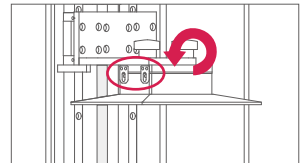
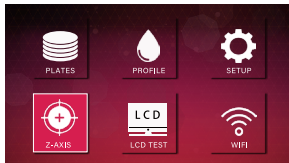


# Calibrate & Test

- Click **LCD TEST** . then choose grid pattern. If the LCD displays a complete image as shown on touch panel, that means the optical engine (LCD + LED) works perfectly.



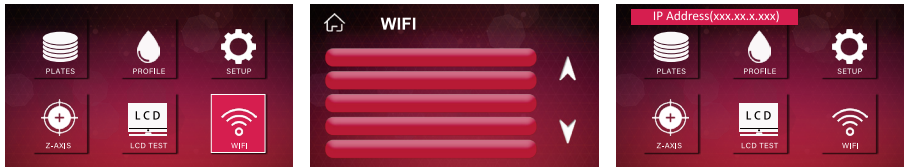
- Loosen the 4 screws on the side of the build platform with an Allen wrench.



# Connect WIFI

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- 1 Make sure your WIFI dongle is plugged in. Connect your **WIFI** by choosing it on touch panel. Your IP will show up on the main menu.



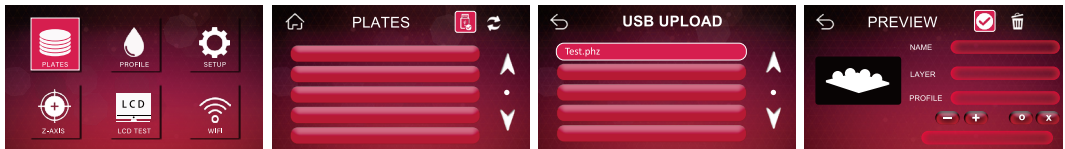
- 2 Connect your laptop to same WIFI. Type the IP address into your browser. (Better use Google Chrome). Then you connect to the printer.



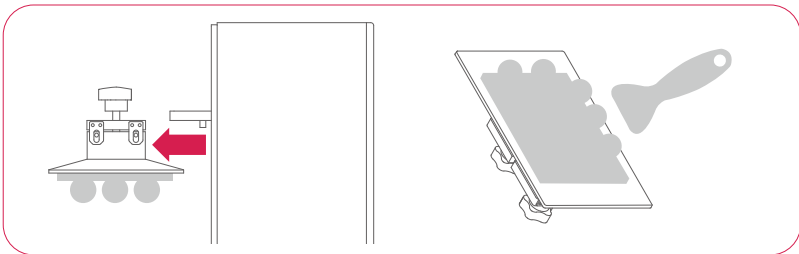
- 3 Webpage interface:  
In **PLATE** page, you can upload your sliced 3D file and select the resin profile.  
In **PROFILE** page, you can create or modify your printing parameters.  
In **WIFI** page, you can change your connection to WIFI.

# Test Printing (by USB)

- 1 Shake the resin for 1 minute and pour it into the vat to fill 1/3 of the vat.
- 2 Plug USB (with sliced 3D file) into the printer.
- 3 Go to **PLATES**, select **USB** icon, and load the sliced 3D files in the USB through touch panel and click **V (PRINT)** button.
- 4 Once the printing process starts, close the metal case and wait until the process finishes.

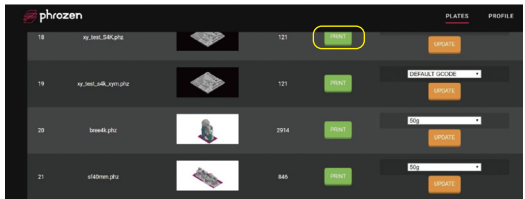
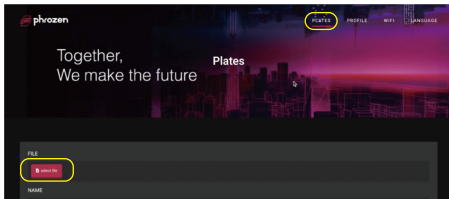


- 5 Once the process is complete, wait until there is no resin dripping from the build platform once completed.
- 6 Then use a scraper CAREFULLY to remove the print.

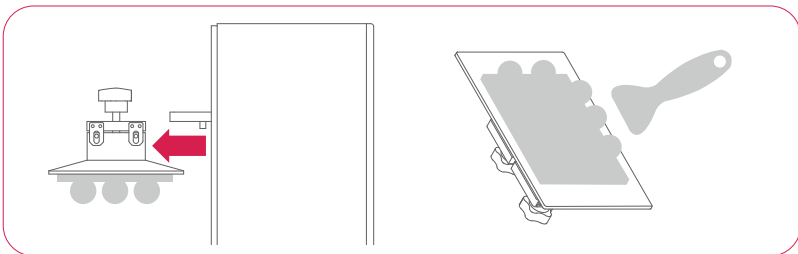


# Test Printing (by WIFI)

- 1 Shake the resin for 1 minute and pour it into the vat to fill 1/3 of the vat.
- 2 Connect printer by web browser. Go to **PLATES**, select and upload the sliced 3D files you would like and click **Print**.
- 3 Once the printing process starts, close the metal case and wait until the process finishes.



- 4 Once the print is complete, wait until there's no resin dripping.
- 5 Use a scraper CAREFULLY to remove the print.



# Post Processing

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- 1 Use 95% alcohol, IPA, or detergent like Phrozen Wash to clean your print. An Ultra-sonic cleaner is recommended for cleaning hollowed parts.
- 2 Post-cure your print by UV lamp. Curing time depends on the intensity and wavelength of your lamp. Prints can be cured within 15 minutes in average by Phrozen Cure .

▶ Post-Processing



[youtu.be/0gker8J-9FM](https://youtu.be/0gker8J-9FM)

▶ Youtube channel



<https://reurl.cc/0z5G8b>

## SAFETY GUIDE

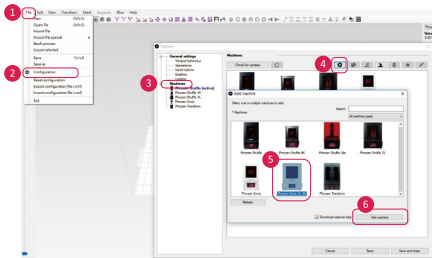
- 1 Keep resin away from direct sunlight exposure.
- 2 DO NOT dump resin casually. Care for it completely and then treat it as general plastic waste.
- 3 Wear PPE(Personal Protective Equipment) like goggles, gloves...etc.
- 4 Resin is not allowed to be swallowed or have contact with eyes and skins directly.
- 5 Stop using UV resin if it causes allergies.

# Prepare Your File

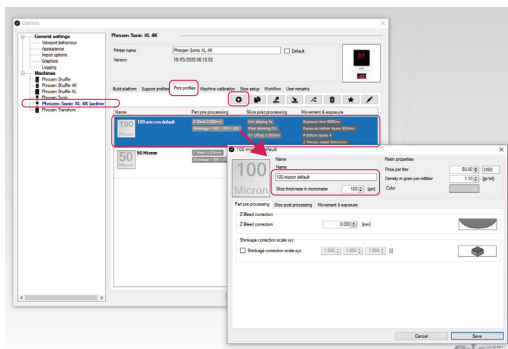
## 1 Download and Install Phrozen 3D

## 2 Find Phrozen 3D Setting

- When open the software, go to **File** → **Configuration** → **Machines** → **+** → select **Phrozen Sonic XL 4K** as your default printer → Click **ADD Machine**.



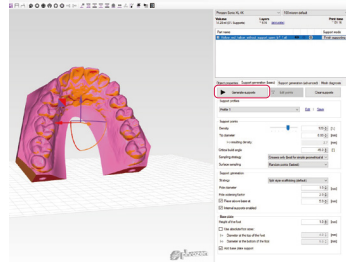
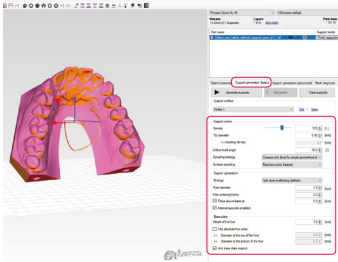
- Choose your printer and setup the layer height you want to slice.



### 3 Building Support

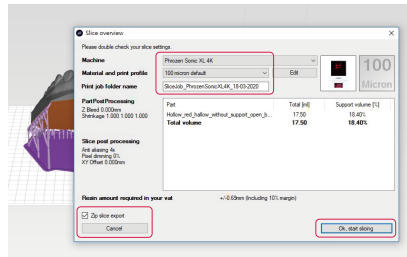
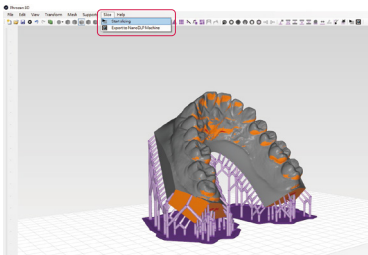
- Set the following parameters when building support.
- **Density:** > 80% is good to start with.
- **Support Tip Diameter:** 0.8 - 1.2 mm is good for standard models.
- **Base:** Better to make it larger than the model.

Press START to build the supports automatically.



### 4 Slice and Save the Model

- Click slice and start the slicing. Please export it as a ZIP file. Then you can upload the sliced file by USB or WIFI to the printer.



# Safely Shutdown Your Printer

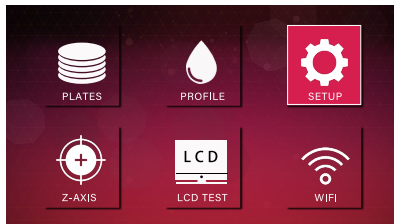
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Phrozen OS is built-in to the SD card and loaded onto the printer. Shutting down the printer properly will protect the Phrozen OS from system corruption.

## 1 Safety Shutdown Process

Go to **SETUP** page. Click **SHUTDOWN**.

When the touch screen shows the turn off image, turn off the power on the printer.



## 2 If your printer cannot be restarted...

Please reflash the SD card with the default firmware.

You can find firmware either in the USB that comes with the printer or watch instructional videos on Phrozen's YouTube channel.



# Maintenance

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## ① How to Replace FEP & LCD

- Check our Youtube Channel for more details.

## ② How to Maintain Z-axis

- General lubricant could be applied on the Z-axis screw to make it move fluently.

## ③ Clean the Vat with Proper Tool

- To protect release film, use plastic spreader to clean the vat instead of sharp scraper.

## ④ Remove Build Platform with Care

- The Build Platform will damage the LCD screen if it bumps against it.

## ⑤ Storage of Resins

- Filter the resin and make sure there is no residue. Keep the resin in opaque & sealed bottles without sunlight exposure.

## ⑥ Cleaning the Printer

- Clean the printer, build platform, and resin vat with alcohol and tissues directly.

# FAQ

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## ① **My Sonic XL 4K will not Function**

- Phrozen offers a full one-year warranty on the 3D printer, excluding consumables like LCD, vat, and FEP film.
- If your printer doesn't work, please contact us through [support@phrozen3d.com](mailto:support@phrozen3d.com)
- If you buy the Sonic XL 4K from our distributor, please contact them for claim of warranty.
- Order ID is required if you need to claim a warranty.

## ② **Model Is Not Able To Stick To the Build Platform**

- Re-do Z-axis calibration or increase the cure time in the base layer.
- Roughen the build plate surface by sanding it.

## ③ **Model Is Falling Down In Vat, but Supports / Base Stick To Build Platform**

- Check whether the curing time is in proper range.
- Check the support setup - increasing support density & tip diameter may help.

## ④ **Something Is Missing on My Finished Print**

- Check whether the curing time is in proper range.
- Check whether there is debris between the resin vat and LCD.
- Check if there are dead pixels on LCD.

## ⑤ **My Printer Is Hanging During The Booting**

- Re-insert the SD card and restart the system.
- If you restart 5 times and cannot boot up, please contact us through [support@phrozen3d.com](mailto:support@phrozen3d.com) to get firmware to reflash the SD card.

# Congratulations !

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You have finished your first run of the printing. Hope you have a great experience with the Phrozen Sonic XL 4K.

Now it's the beginning of your 3D printing journey. Here are 3 tips for you.

- 1 Follow Phrozen Facebook Page for latest news & updates.
- 2 Join **Phrozen 3D Printer Group** to discuss with other users.
- 3 When you have questions, feel free to contact us by emailing [support@phrozen3d.com](mailto:support@phrozen3d.com) or send private message to Phrozen Facebook Page. ([facebook.com/messages/t/Phrozen3DP](https://facebook.com/messages/t/Phrozen3DP))

 Send private message to  
Phrozen Facebook Page.



Facebook: [@Phrozen3DP](https://www.facebook.com/Phrozen3DP)

Twitter: [@PhrozenDLP](https://twitter.com/PhrozenDLP)

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Youtube: [@Phrozen3DPrinter](https://www.youtube.com/Phrozen3DPrinter)





Email Support



Message Support



Discussion Group

