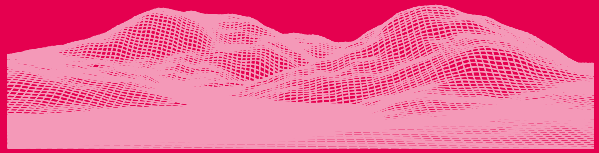
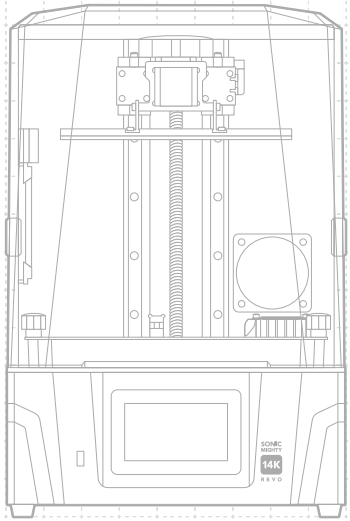
phrozen

SONIC MIGHTY 14K REVO



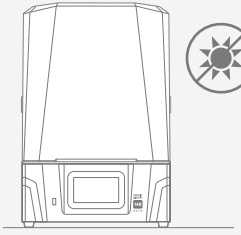
Dear User,

Thank you for joining us. Please read the Sonic Mighty Revo manual thoroughly and follow the instructions step by step to get the best printing experience.



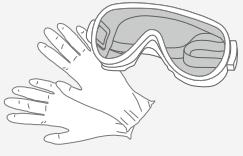
Please scan the QR code for the Sonic Mighty Revo user manual in other languages.

01 Key Notes Before Start



Stable Printing Environment

Store your 3D printer in a dry and well-ventilated environment. Place it on a flat surface and avoid direct sunlight exposure.



Protective Measures

When handling resins or prints, please wear Personal Protective Equipment such as gloves, masks, protective goggles, and long-sleeved clothes.

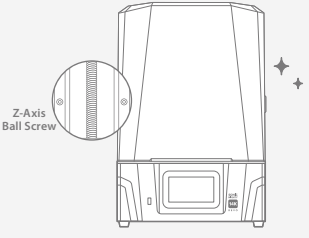
Maintenance

Clean the Z-Axis

First, wipe the ball screw with Lint Free Wipes. Then, apply a thin layer of lithium-based lubricant so that it whirls smoothly.

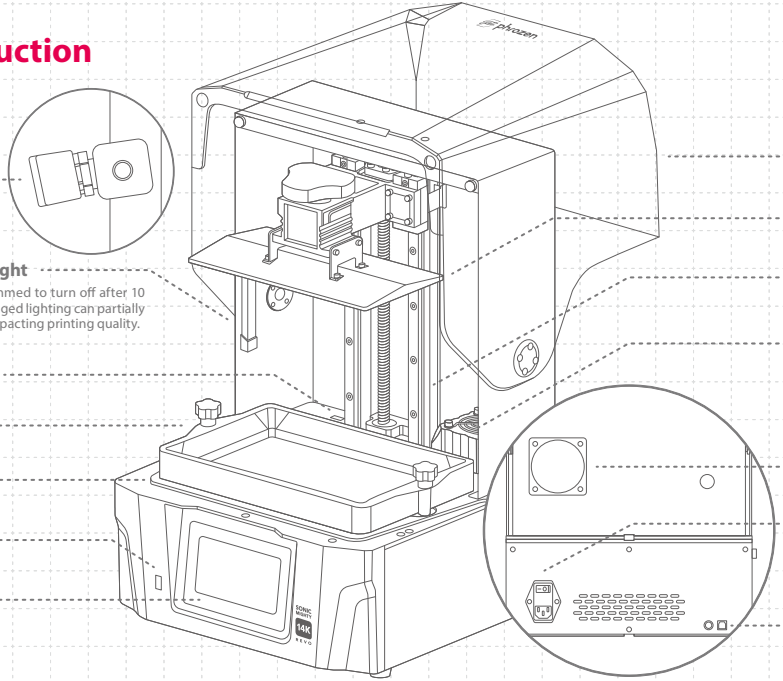
Clean the 3D Printer

Use 95% alcohol and Lint Free Wipes to carefully clean the printer, resin vat, and the build plate.



02 Introduction

Printer Parts



PART.1
Camera

PART.2
Adjustable Interior Light

* The interior light is programmed to turn off after 10 minutes of operation. Prolonged lighting can partially cure the resin, potentially impacting printing quality.

PART.3
Air Purifier USB Port

PART.4
Resin Vat

PART.5
LCD Screen

PART.6
USB Port

PART.7
Touch Panel

PART.8
Lift-Up Lid

PART.9
Build Plate

PART.10
Z-Axis

PART.11
Heater

PART.12
Exhaust Vent

PART.13
Power Switch
Power Socket

PART.14
Pump & Fill Port
Factory Repair Port

The Toolbox

Warranty Card

PIXUP Card

Chitubox Pro Gift Card


Gloves


Power Cable 1.5 m


Plastic Funnel


Metal Scraper


Plastic Scraper


Allen Wrenches Set


USB


Air Purifier

Operation

System	Phrozen OS
Touch Panel	5-inch
Slicer Software	CHITUBOX V1.9.6 and above (Or others)
Connectivity	USB | Wi-Fi
Built-in Memory	8.0 GB

Printing Specifications

Technology	Resin 3D Printer - LCD Type
Light Source	Linear Projection LED Module
XY Resolution	16.8 x 24.8 μm
Layer Thickness	0.01 - 0.30 mm
Avg. Printing Speed	450 layers / hr
Compatible File Format	.ctb / .prz
Power Requirement	100-240V AC ： 50-60Hz

Hardware Specifications

Printer Size	35.3 x 34.5 x 51.7 cm
Printing Volume	22.3 x 12.6 x 23.5 cm
Printer Weight	18 kg

* All specifications were tested in a laboratory and are subject to change without prior notice. For the latest update, please refer to Phrozen's official website.
* The included power cord set packaged with the main unit cannot be used with electrical equipment other than the specified device.
* Avoid interference with the operation of nearby radar systems.
* High-gain directional antennas should only be used in fixed point-to-point systems.

03 Prepare Your 3D Printer

Initial Setup

Please follow the instructions on the screen to set up your printer and ensure its functionality :

1. Language selection
2. Printer Naming
3. Wi-Fi Connection
4. LCD Tests
5. Smart Leveling
6. Test Print

* If you have missed the initial setup, go to the gear icon "Setting" > "System" > find "Initial Setup" to revisit the tutorial.

Smart Leveling

On the left side of the menu, find "Tools" > "Z-Axis Control" > and tap "Smart Leveling" in the upper left corner.
Follow the instructions on the screen to perform "Smart Leveling" :

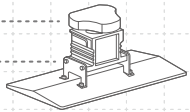
1. Remove the resin vat, install the build plate and tighten the thumb screw, and place a sheet of A4 paper on the LCD.
2. Wait for the build plate to ascend to the top and descend to the bottom after triggering the actuators.
3. Follow the prompt to pull on the paper. Friction should be equal in all four corners. You can adjust accordingly using the Z-Offset if the paper is too loose or too tight.
4. Tap "Next" to finish the Smart Leveling.

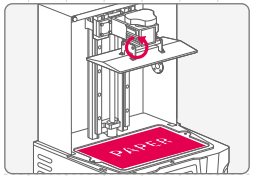
* Please perform "Manual Z-Axis Calibration" if you have changed the build plate, the Z-axis, the LCD panel, or added an LCD screen protector.

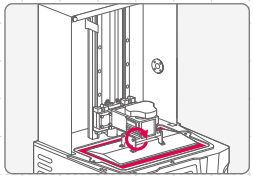
Manual Z-Axis Calibration

On the left side of the menu, find "Tools" > "Z-Axis Control" > tap "Smart Leveling" in the upper left corner > choose "Manual Z-Axis Calibration".
Follow the instructions on the screen to perform "Manual Z-Axis Calibration".

1. Remove the resin vat and place a sheet of A4 paper on the LCD.
2. Wait for the Z-axis to ascend to the top.
3. Install the build plate and tighten the thumb screw. At the same time, loosen the four calibration screws at the side of the build plate.
4. Wait for the build plate to descend to the bottom, and tighten the four screws diagonally while pressing gently on the build plate.
5. The friction should be equal in all four corners when pulling. Use the Z-Offset to adjust if the paper is too tight or too loose.
6. Tap "Next" and wait for the build plate to ascend to the top again to finish the calibration process.

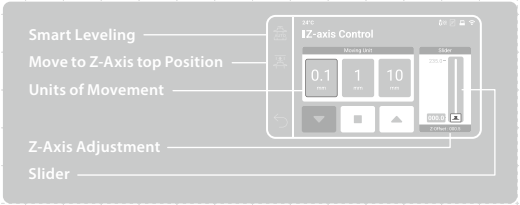






Z-Slider

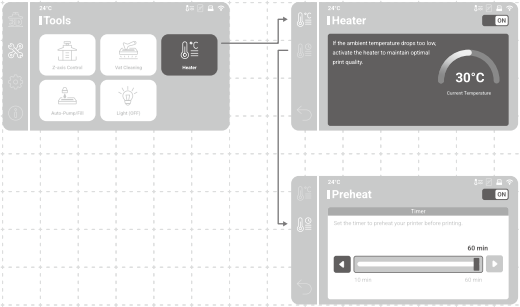
To use this function, make sure to "Move Z-Axis to Top" whenever the printer is restarted to register the top point.



Preheat

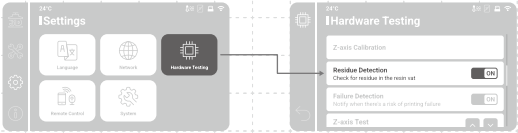
Enabling this feature will activate the heater for a set amount of time after selecting the print file.

* Printing will start after the chosen preheat time is completed.



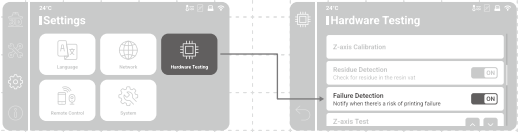
Residue Detection

Enabling this feature the printer will monitor for any solid residue between the resin vat and the build plate when first descending. Printing will be terminated when such residue is detected.



Failure Detection

Enabling this feature the printer will monitor the release status of cured resin during printing. A warning message will appear on the screen when consecutive releasing errors are detected.



04 Prepare Your Print File

The Sonic Mighty Revo supports both .CTB and .PRZ file formats.
Use slicer software to turn .STL and .OBJ files into .CTB or .PRZ files.

Convert .STL / .OBJ File to .CTB / .PRZ File

1. Import .STL or .OBJ files into the slicer software. and add supports to your models to secure them to the build plate.
2. Choose the "Sonic Mighty Revo" printer in the slicer. Set the resin parameters according to your resin and slice.
3. After the slicing is completed, save it as a .CTB or .PRZ file and the file are ready to be printed.

Test Files for Your First Print

1. The USB included in the tool box contains both .STL and .CTB files of two test models: "Phrozen_test" and "Phrozen_XP_Finder".
2. You can directly print the .CTB files in the USB with Aqua-Gray 8K Resin. If you are printing with other resins, slice the .STL files with the compatible parameter settings required for your resin.

Slicer Software

Supports Tutorial

Resin Parameters

Learn and Download
Phrozen_XP_Finder

05 Internet Connection

Wi-Fi Network Connection

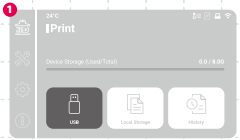
1. In "Settings" , find "Network" to connect your printer to a Wi-Fi network.
2. Once the connection is established, the printer's IP address will display on top of the interface.

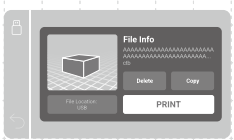
06 File Transfer

You can use a USB drive to import files to your Sonic Mighty Revo and utilize the 8 GB internal storage space to store print files.

File Transfer via USB

1. After storing the .CTB or .PRZ files into the USB, and plug it into the printer.
2. In "Print" > choose "USB" > find your desired file > tap "Print".

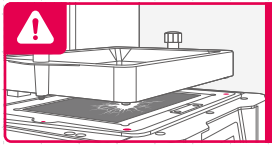




07 First Test Print

After conducting the Manual Z-Axis Calibration or Smart Leveling, and LCD test, you can now perform your first test print.

1. Tighten the screws on your resin vat and build plate. Make sure the build plate and resin vat are clean from any debris.
2. Shake the resin bottle for 1 minute. Pour the resin into the vat without exceeding the maximum mark.
3. Insert the USB, find the test file named "Phrozen_XP_Finder_Mighty14KRevo_AQ8K.ctb" and start printing it with Aqua-Gray 8K resin.
4. While printing, please keep the lid closed to prevent light exposure that may affect your prints.
5. Once printing is complete, carefully remove the build plate and use a metal scraper to carefully remove your print.
6. Use a 95% sanitizing alcohol or Washing Station to clean your printed models. After it's fully dry, post-cure your models with a Curing Station.



NOTICE: When installing the resin vat, please align the screws at the bottom of the resin vat with the platform grooves to avoid damage caused by the screws scratching the LCD panel.

08 Remote Control App - Phrozen GO

Phrozen GO is a mobile application designed for Phrozen printer users, so you can always check on your Phrozen 3D printers wherever you are.

Please scan the QR Code to access the Phrozen GO tutorial.

Phrozen GO
User Manual

Android

iOS

After-Sales Service & Warranty

- Phrozen offers a one-year warranty for all parts, excluding consumable components such as the LCD screen and PFA (nFEP) vat film.
- Sonic Mighty Revo LCD screen is covered under a 3-month warranty. Please note that this warranty does not cover any damages caused by human factors.
- If you encounter any difficulties, please scan the QR code to contact us.

R 210-231512 CCAJ24LPADW0T6

Phrozen Help Center

Congratulations!

You have just completed your first run.
We hope you've had a great experience!

Please follow Phrozen's social media accounts to learn more about printing tips and share your printing experience with the community.

Facebook

Facebook Group

Instagram

Phrozen
Official Website

YouTube