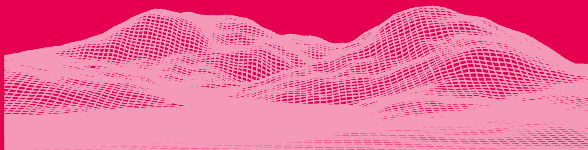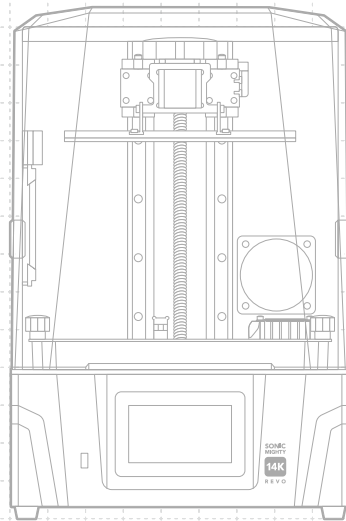phrozen

SONIC
MIGHTY

14K

R E V O

Dear User,

Thank you for joining us. Please read the Sonic Mighty 14K Revo manual thoroughly

and follow the instructions step by step to get the best printing experience.
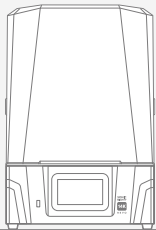
Please scan the QR code for
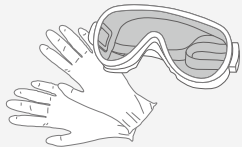the Sonic Mighty 14K Revo user manual
in other languages.

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.
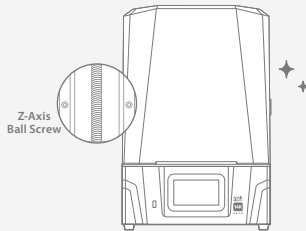
Maintenance

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 building plate.

Z-Axis
Ball Screw

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
Building 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

AC Cable Standards 1.5 m EU/US

Plastic Funnel

Metal Scraper

Plastic Scraper

Allen Wrenches Set

USB Stick

Air Purifier

Operation

System	Phrozen OS
Operation	5 inch Touch Panel
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

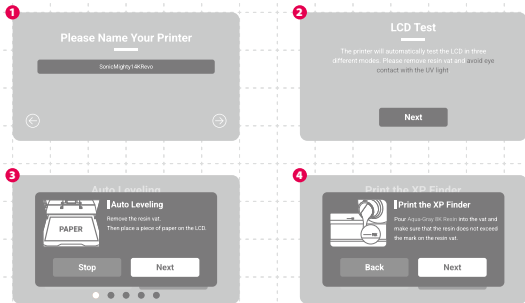## Hardware Specifications

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 have been tested in a laboratory. Certain specifications are subject to change without prior notice. For the latest update, please refer to Phrozen's official website.

03 Prepare Your 3D Printer

Guided Process for Initial Use

When turning on your 3D printer for the first time, please follow the Guided Process for Initial Use on the touch panel to complete the initial tests. Tests include the LCD test, Auto-Leveling, and first test print to ensure that your printer functions properly.

1

Please Name Your Printer

SonicMighty14KRevo

2

LCD Test

The printer will automatically test the LCD in three different modes. Please remove resin vat and avoid eye contact with the UV light.

Next

3

Auto Leveling

Remove the resin vat.
Then place a piece of paper on the LCD.

PAPER

Stop   Next

4

Print the XP Finder

Pour Aqua Gray 8K Resin into the resin vat and make sure that the resin does not exceed the mark on the resin vat.

Back   Next

* If you miss the initial use setup, please go to the " Settings " page on the left column of the touch panel and click " System Settings " > " Restore to Factory Settings " The machine will restart and display the tutorial setup.

Auto-Leveling

When activated, the building plate will automatically descend until it touches the vat film to automatically determine the Z-Axis zero position.

* If building plate, Z-rod, LCD panel, or screen protector was changed, please perform " Z-Axis Calibration " instead.

Z-Axis Calibration

Go to the " Settings " page on the left column of the touch panel and click " Hardware Testing ". Then, choose "Z-Axis Calibration" to perform the calibration.

Follow the on-screen instructions to perform Z-Axis calibration:

1 Remove the resin vat and place a piece of A4 paper on top of the LCD screen.

2 Install the building plate and secure the thumb screws tightly. Then loosen the four calibration screws on both sides of the building plate.

3 Wait for the building plate to touch the LCD screen, then tighten the four screws on both sides of the building plate diagonally.

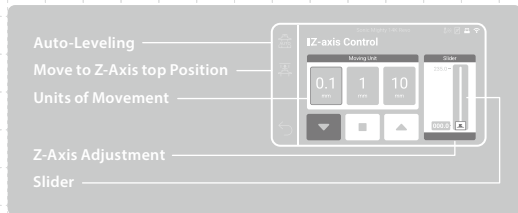**4** Click " Done " and wait for the building plate to return to its original position to complete the Z-Axis calibration.

Ⓐ Thumb Screw

Ⓑ Calibration Screws
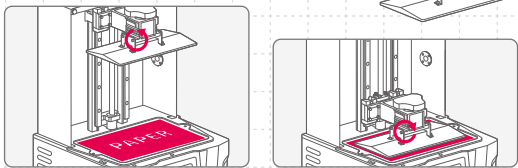
Moving the Slider on the Z-Axis
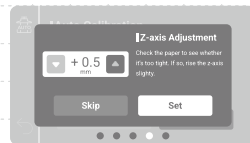
To use this function, please use Auto-Leveling every time the printer is restarted to first detect the Z-Axis zero position.

Auto-Leveling

Move to Z-Axis top Position

Units of Movement

Z-Axis Adjustment

Slider

Z-axis Control

Moving Unit

0.1 | 1 | 10
mm

Slider

Z-Axis Adjustment

Adjust your Z-Axis zero position when printing resin with high viscosity, or to optimize printing flat objects directly on the build plate.

1 Once Auto-Leveling and Z-Axis Calibration are completed, you'll automatically get directed to adjust your Z-Axis.

2 Adjust the Z-Axis zero position based on your printing needs.

3 Once you get to the position you need, choose " Set " to complete the Z-Axis adjustment process.

Z-axis Adjustment

Check the paper to see whether it's too tight. If so, rise the z-axis slightly.

+ 0.5 mm

Skip | Set

Tips : Rebooting the firmware will reset the Z-Axis adjustment settings. Please repeat the Z-Axis Adjustment setting before each print.
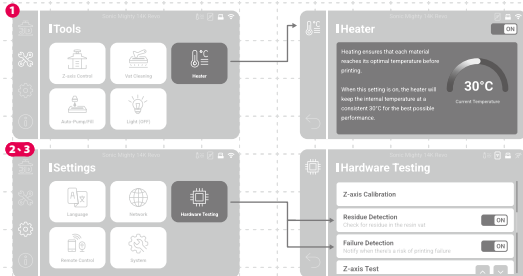
Special Features

- **Heater**
  When enabled, the heater will maintain the internal temperature at 30°C to ensure stable printing results.
- **Residue Detection**
  When enabled, the printer will stop printing once it detects any foreign objects between the building plate and the vat film upon the first layer of printing.
- **Failure Detection**
  When enabled, the machine will detect any possible abnormalities during printing and notify you whether to stop or continue the print.

04 Prepare Your Print File

The Sonic Mighty 14K 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 building plate.
2. Choose the " Sonic Mighty 14K 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 File Import and Network Connection

Sonic Mighty 14K Revo can import files either via USB or network connection. The printer is also equipped with 8.0 GB built-in memory to save transferred files in the printer.

Import Files via USB

1   Save the .CTB or .PRZ file to your USB, and plug the USB into the printer.
2   On the " Print " menu on your touch panel, click " USB " > select the file you want to print > " Print ".
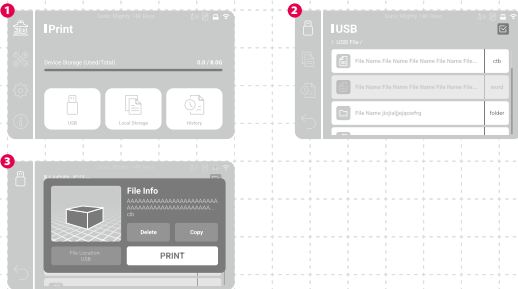
Wi-Fi Network Connection

1   In the " Settings " menu, click " Network Settings " to connect the printer to the Wi-Fi in your area.
2   After the connection is successful, your printer's IP address will be displayed on the printer's touch panel.
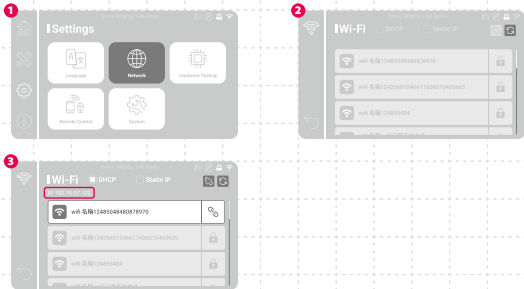
06 First Test Print

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

1 Tighten the screws on your resin vat and building plate. Make sure the building 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 building 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.
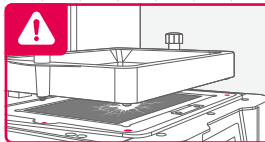
NOTICE: When installing the resin vat, please align the screws at the bottom of the resin vat with the platform grooves to avoid damage caused by the screws scratching the LCD panel.
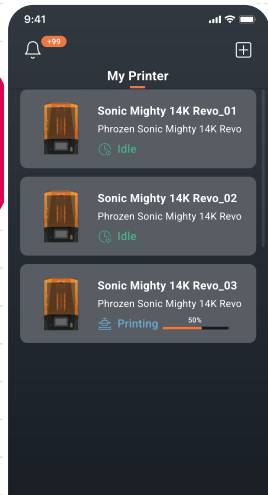
07 Remote Control App - Phrozen GO

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

9:41

+99

My Printer

Sonic Mighty 14K Revo_01
Phrozen Sonic Mighty 14K Revo
Idle

Sonic Mighty 14K Revo_02
Phrozen Sonic Mighty 14K Revo
Idle

Sonic Mighty 14K Revo_03
Phrozen Sonic Mighty 14K Revo
Printing   50%

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 14K 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.

Contact us !

Congratulations!

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

Please follow Phrozen's social media accounts
and subscribe to our YouTube channel to learn
more about printing tips and share information
with the community.

Facebook

Facebook Group

YouTube

Instagram