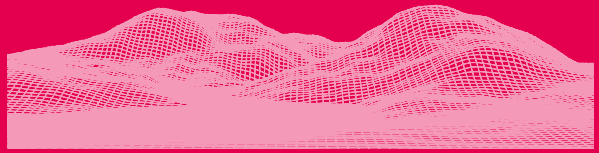
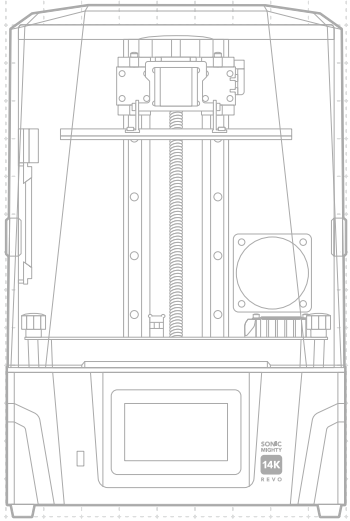
phrozen

SONIC MIGHTY 14K REVO



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 03

02 Introduction 04

03 Preparing Your 3D Printer 06

- Guided Process for Initial Use 06
- Auto-Leveling 06
- Z-Axis Calibration 06
- Moving the Slider on the Z-Axis 07
- Z-Axis Adjustment 07
- Special Features 08
  - Heater 08
  - Residue Detection 08
  - Failure Detection 08

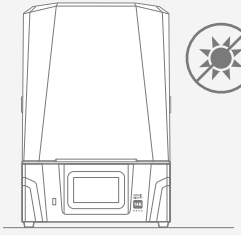
04 Preparing Your Print File 08

05 File Import & Network Connection 09

06 First Test Print 10

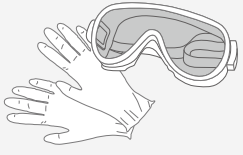
07 Remote Control App - Phrozen GO 10

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.

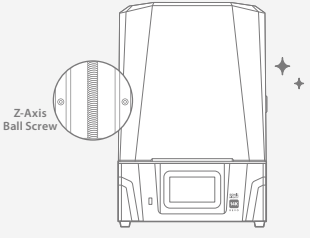
Maintenance

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.

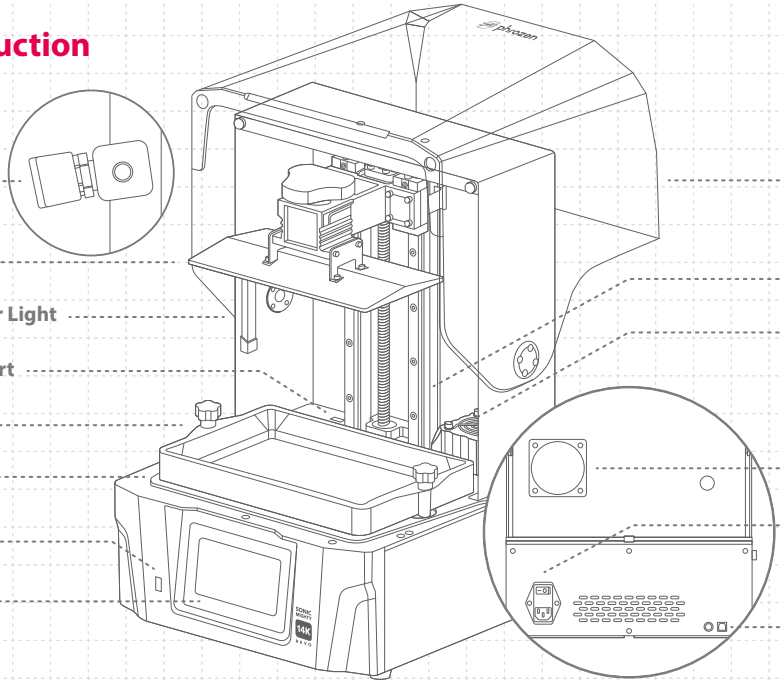
Clean the 3D Printer

Use sanitizing alcohol and Lint Free Wipes to carefully clean the printer, the resin vat, and the building plate.



02 Introduction

Printer Parts



PART.1
Camera

PART.2
Building Plate

PART.3
Adjustable Interior Light

PART.4
Air Purifier USB Port

PART.5
Resin Vat

PART.6
LCD Screen

PART.7
USB Port

PART.8
Touch Panel

PART.9
Lift-Up Lid

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	200 layers / hr
Compatible File Format	.CTB / .PRZ
Power Requirement	AC100-240V ； 50-60Hz

Hardware Specifications

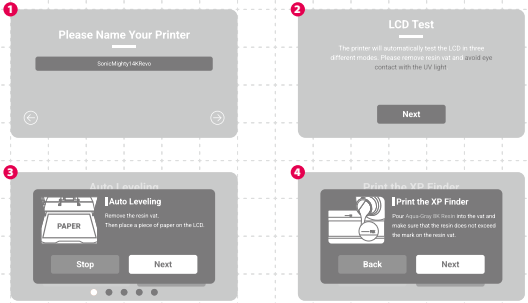
Printer Size	35.3 x 34.5 x 51.7 cm
Printing Volume	22.3 x 12.6 x 23.5 cm
Printer Weight	18 kg

* 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.



* 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

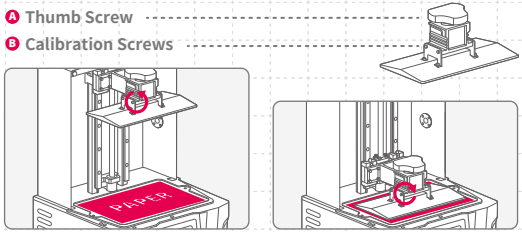
When activated, the building plate will automatically descend until it touches the vat film to automatically determine the Z-Axis zero position.

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

Z-Axis Calibration

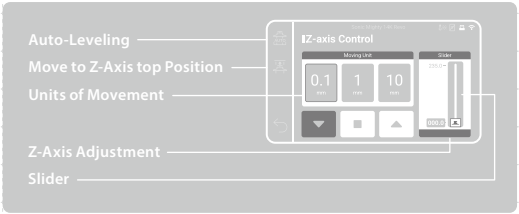
Go to the " Settings " page on the left column of the touch panel and click " Hardware Testing ". Then, choose "Z-Axis Calibration" to perform the calibration.
Follow the on-screen instructions to perform Z-Axis calibration:

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.



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.



Z-Axis Adjustment

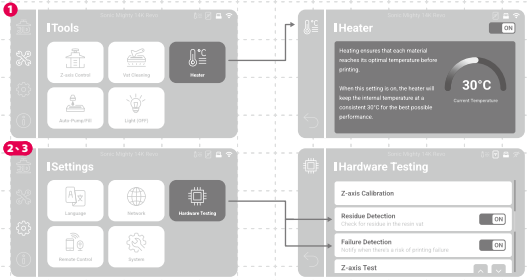
Adjust your Z-Axis zero position when printing resin with high viscosity, or to optimize printing flat objects directly on the build plate.

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.

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 toolbox 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.

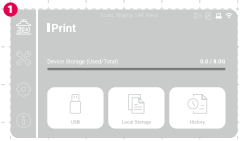
Slicer Software | Supports Tutorial | Resin Parameters | Learn and Download Phrozen_XP_Finder

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.

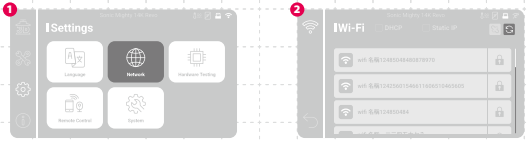
Import Files via USB

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

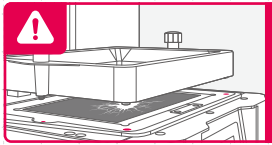
1. In the " Settings " menu, click " Network Settings " to connect the printer to the Wi-Fi in your area.
2. After the connection is successful, your printer's IP address will be displayed on the printer's touch panel.



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 monitor your Phrozen 3D printers wherever you are. Please scan the QR Code to access the Phrozen GO tutorial.

Phrozen GO User Manual

Android **iOS**

FCC Warning

15.19 Labeling requirements.
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.
15.21 Information to user.
Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
15.105 Information to the user.
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to 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 in accordance with 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 receiver.
-Connect the equipment into 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.

FCC RF Radiation Exposure Statement:

1.This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

2.This equipment complies with RF radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

IC Warning

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:
(1)This device may not cause interference;
(2)This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:
(1)l'appareil ne doit pas produire de brouillage, et
(2)l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The information listed above provides the user with information needed to make him or her aware of a RF exposure, and what to do to assure that this radio operates within the FCC exposure limits of this radio.

The device complies with RF specifications when the device used at 5mm from the body.Third-party belt-clips, holsters, and similar accessories used by this device should not contain any metallic components. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided. Use only the supplied or an approved antenna.

The band 5150-5250MHz indoor use only.

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