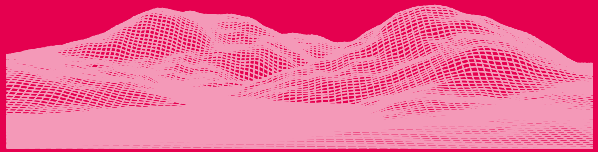
phrozen

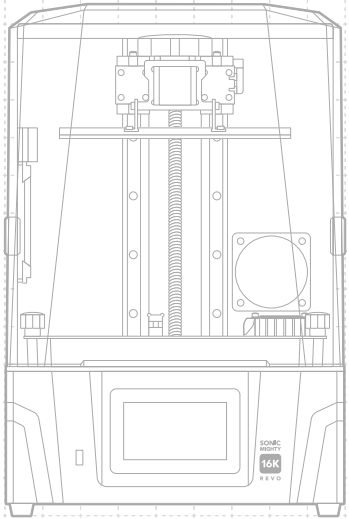
SONIC MIGHTY 16K REVO

PMN: Desktop 3D Printer
HVIN:Sonic Mighty Revo 16K LCD 3D Printer



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.

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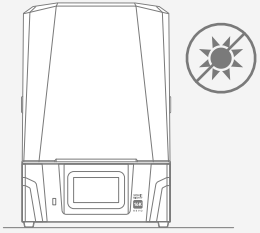
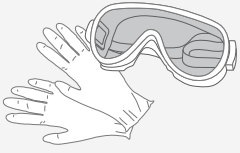
01 Key Notes Before Start



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.

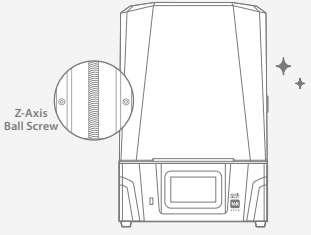
Maintenance

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.

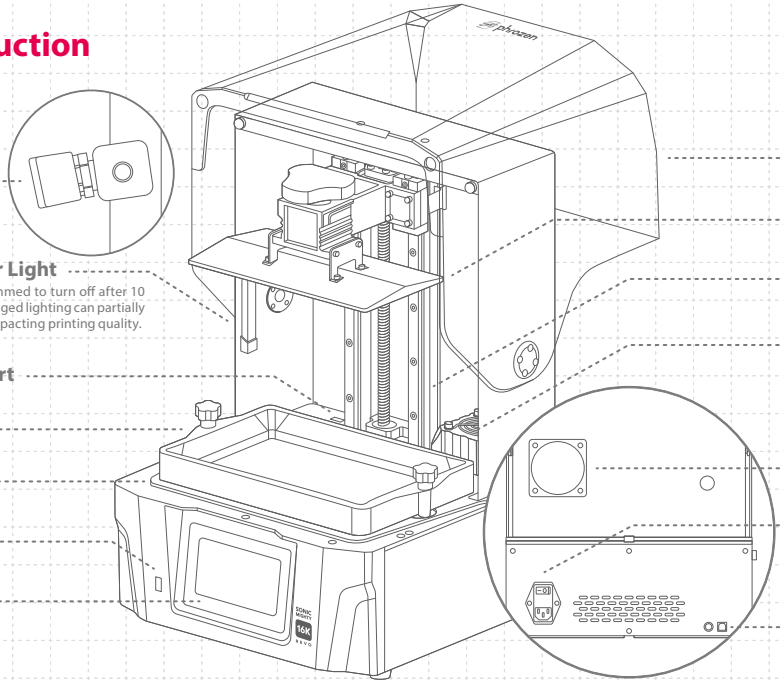
Clean the 3D Printer

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



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 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.

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 Auto Leveling
6 Test Print

1

2

3

4

5

6

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

Auto Leveling

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

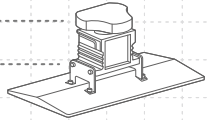
1 Remove the resin vat, install the building plate and tighten the thumb screw, and place a sheet of A4 paper on the LCD.
2 Wait for the plate to ascend to the top and descend to the bottom after triggering the actuators.
3 Follow the prompt to pull on the paper. Friction should be equal in all four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

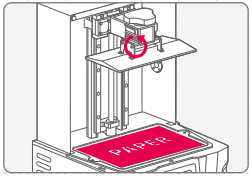
* Please perform " Z-Axis Calibration " if you have changed the building plate, the Z-axis, the LCD panel, or added an LCD screen protector.

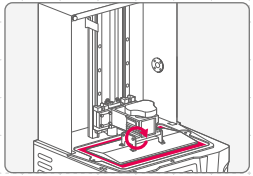
Z-Axis Calibration

On the left side of the menu, find " Tools " > " Z-Axis Control " > tap " Auto Leveling " in the upper left corner > choose " Z-Axis Calibration ". Follow the instructions on the screen to perform " 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 building plate and tighten the thumb screw. At the same time, loosen the four calibration screws at the side of the plate.
4. Wait for the plate to descend to the bottom, and tighten the four screws diagonally while pressing gently on the 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 plate to ascend to the top again to finish the calibration process.

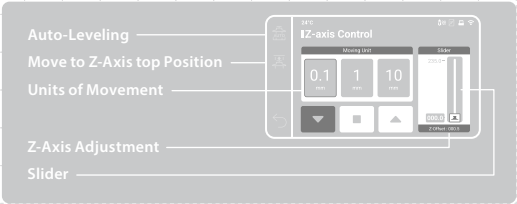






Z-Slider

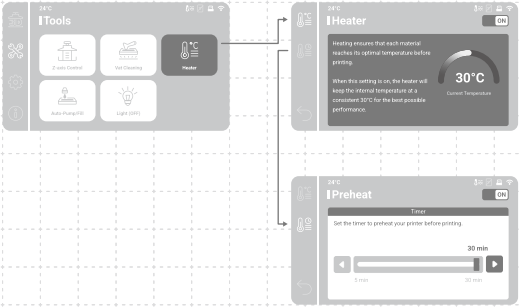
To use this function, make sure to " Move Z-Axis to Top " whenever the printer is restarted to register the top point.



Preheat

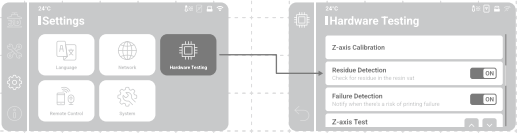
Enabling this feature will activate the heater for a set amount of time after selecting the print file. Printing at a stable and ideal temperature will increase the printing quality.

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



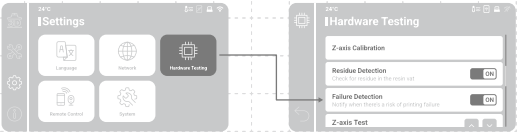
Residue Detection

Enabling this feature the printer will monitor for any solid residue between the resin vat and the building 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 building 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

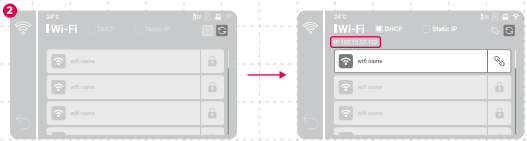
Resin Parameters

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.

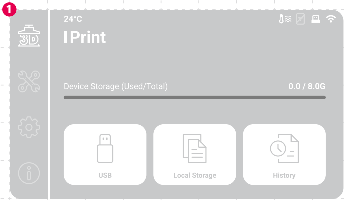


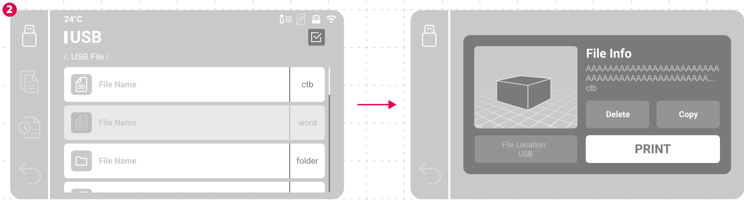
06 File Transfer

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, plug it into the printer.
2. In " Printing " > choose " USB " > find your desired file > tap " Print " .

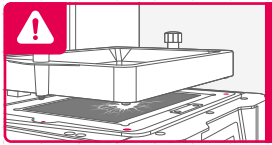




07 First Test Print

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.

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 222-XXXXXX

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

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

IC Warning

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). 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.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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;

(2) L' appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d' en compromettre le fonctionnement.

ISED Radio Frequency Exposure Statement:

This equipment complies with ISED exposure limits set forth for an uncontrolled environment. This equipment shall be installed and operated with minimum distance 20cm between the radiator & body.

Déclaration d'ISDE sur l'exposition aux radiofréquences :

Cet équipement est conforme aux limites d'exposition d'ISDE établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à une distance minimale de 20cm entre le radiateur et le corps.

Operation of this device is restricted to indoor use only. (5150-5250MHz)

Le fonctionnement de cet appareil est limité à une utilisation en intérieur uniquement. (5150-5250MHz)

The underlying product code enables the device to automatically stop transmitting when there is no information to transmit or when there is a malfunction.

The use of a private network that allows only authenticated users to download software，Confirm that a third party cannot reprogram the device.

MIC Warning:

The band 5150-5250MHz indoor use only.