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## phrozen Mighty Revo 14K

# phrozen Sonic Mighty 14K LCD Resin 3D Printer Instruction Manual

Model: MITY14K000NA

Brand: phrozen

## INTRODUCTION

Welcome to the instruction manual for your new phrozen Sonic Mighty 14K LCD Resin 3D Printer. This guide provides essential information for setting up, operating, maintaining, and troubleshooting your device to ensure optimal performance and longevity. The Sonic Mighty 14K is designed for high-detail resin 3D printing, featuring a 10.1" monochrome LCD with 16.8\*24.8µm XY resolution and an 8.8\*5.0\*9.3 inch printing volume, ideal for models, miniatures, and action figures.



Figure 1: Phrozen Sonic Mighty 14K LCD Resin 3D Printer with a sample print.

## SETUP

### Unboxing and Initial Setup

Carefully remove all components from the packaging. The Phrozen Sonic Mighty 14K comes largely pre-assembled, minimizing setup time. Ensure all packing materials are removed from inside and outside the printer.

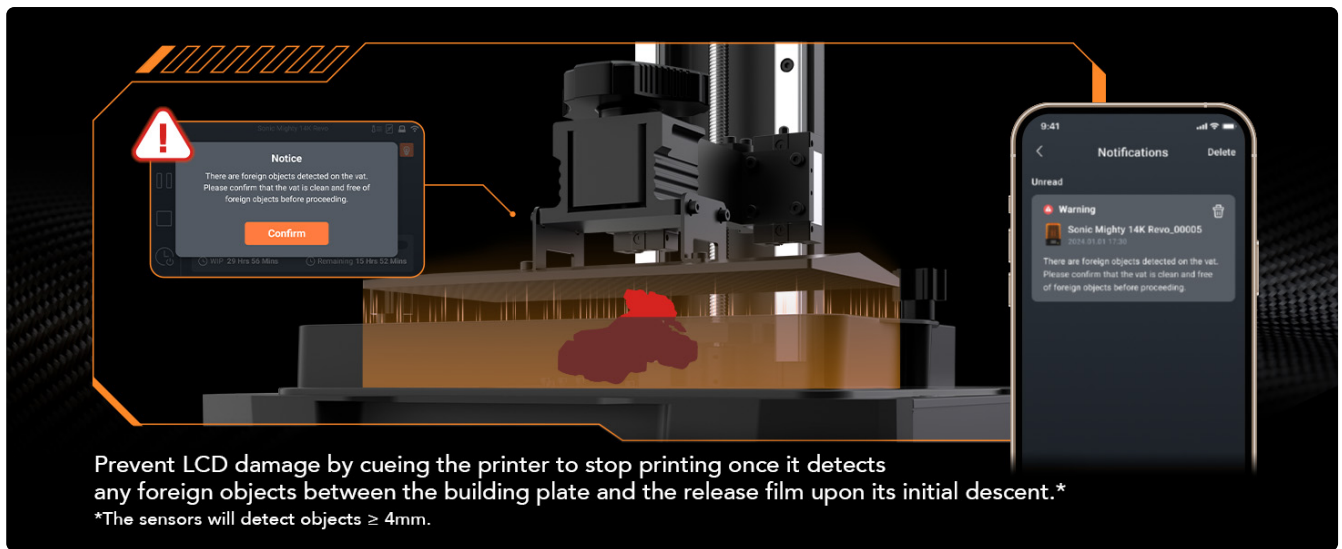


Figure 2: Phrozen Sonic Mighty Revo highlighting smart features.

The printer features enhanced airflow, a built-in heater, and auto-leveling capabilities for a streamlined user experience.



Figure 3: Performance enhancement features of the printer.

## Z-Axis Calibration

Accurate Z-axis calibration is crucial for successful prints. Follow these steps:

1. Navigate to the Z-Axis Control menu on the printer's touchscreen.
2. Select the Z-Axis Calibration option.
3. Remove the resin vat from the printer.
4. Place a sheet of A4 paper on the LCD screen.
5. Tap 'Next' on the screen to initiate the Z-axis descent. The build plate will slowly move down until it makes contact with the LCD.
6. Once the build plate is in contact with the paper, gently hold the build plate down and tighten the four calibration screws on the side of the building plate using the H3 hex key. **Caution:** Over-loosening these screws may cause the plate to fall and damage the LCD.
7. After tightening, pull on all four corners of the paper to ensure equal tension and friction. If the paper can be pulled away completely or is unmovable, adjust the Z-offset using the interface until proper tension and friction are retained.
8. Tap 'Next' to confirm the calibration. The build plate will ascend to the top, completing the calibration process.

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Video 1: Detailed guide on calibrating the Z-Axis for the Phrozen Mighty Revo 3D Printer.

## OPERATING

### Resin Loading

Ensure the resin vat is clean and properly installed. Gently shake your resin bottle before pouring. Slowly pour the resin into the vat, being careful not to overfill. The vat has a maximum fill line indicator.

### Starting a Print

Once your model is sliced and saved to a USB drive, insert the USB drive into the printer's front USB port. On the touchscreen, navigate to the 'Print' menu, select your file, and tap 'Print' to begin. The printer will automatically start the printing process.

### Monitoring Prints with Phrozen Go App

The Phrozen Sonic Mighty 14K can be monitored remotely using the Phrozen Go App. This allows you to check print progress, receive notifications, and even stop prints from your smartphone.



# Keep It Under Control, Even on the GO

Monitor your print on the go or stop printing upon the earliest detection of failure, all from the palm of your hand.



Figure 4: Monitor your print status and receive notifications via the Phrozen Go App.

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Video 2: Overview of the Phrozen Sonic Mighty Revo 14K LCD Resin 3D Printer's features, including app connectivity and smart detection.

## MAINTENANCE

### General Cleaning

Regular cleaning is essential for maintaining print quality and extending the life of your printer. After each print, carefully remove any cured resin from the build plate and the resin vat using the provided plastic scraper. Clean the build plate with isopropyl alcohol (IPA).

### LCD and FEP Film Care

The LCD screen and FEP film are critical components. Avoid touching the LCD screen directly with your hands. When cleaning, use a soft, lint-free cloth and IPA. Be extremely careful not to scratch or puncture the FEP film in the resin vat, as this can lead to resin leaks and damage to the LCD.

## TROUBLESHOOTING

### Print Adhesion Issues

If prints are not adhering to the build plate, ensure the build plate is properly calibrated (refer to Z-Axis Calibration section). Lightly sanding the build plate surface with fine-grit sandpaper can improve adhesion. Also, ensure the resin temperature is within the recommended range (typically 20-30°C).

### Smart Residue and Failure Detection

The Sonic Mighty 14K is equipped with smart detection systems to prevent print failures and damage. The printer can detect foreign objects between the build plate and the release film, stopping the print to prevent LCD damage. It also notifies you of potential failures by detecting abnormalities in peeling force during printing.

## SPECIFICATIONS

Feature	Detail
Brand	phrozen
Model	Mighty Revo 14K
Item Model Number	MITY14K000NA
Product Dimensions	13.9 x 13.6 x 20 inches
Item Weight	39.7 pounds
XY Resolution	16.8 x 24.8µm
Printing Volume	8.8 x 5.0 x 9.3 inches
Material	Metal
Compatible Devices	Smartphone (for app monitoring)



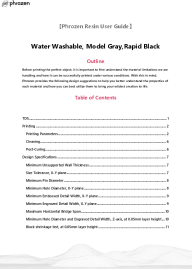

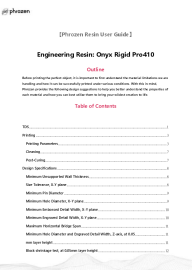
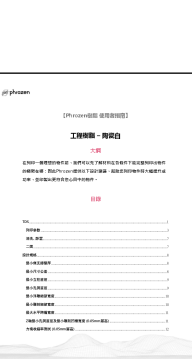
### Key Features

- **Next-Gen 14K Resolution:** Upgraded monochrome LCD for ultra-fine detail.
- **Optimized for Large-Scale Miniatures:** Print multiple high-detail components with consistent exposure.
- **Revo Series Innovations:** Enhanced airflow, quick calibration, and streamlined leveling.
- **Versatile Resin Compatibility:** Supports a wide range of 405nm UV resins.
- **Eco & User Considerate:** Designed for power efficiency and ease of maintenance.

## WARRANTY AND SUPPORT

Your phrozen Sonic Mighty 14K LCD Resin 3D Printer comes with a standard manufacturer's warranty. For detailed warranty information, please refer to the documentation included with your product or visit the official phrozen website. For technical support, troubleshooting assistance, or inquiries regarding parts and service, please contact phrozen customer support through their official channels.

### Related Documents - Mighty Revo 14K

	<a href="#">Sonic Mighty 14K Revo -</a> Phrozen Sonic Mighty 14K Revo 3D
	<a href="#">Phrozen Sonic Mighty 14K Revo User Manual - Setup, Operation, and Maintenance</a> Comprehensive user manual for the Phrozen Sonic Mighty 14K Revo resin 3D printer. Covers setup, calibration, file preparation, printing, maintenance, and troubleshooting.
	<a href="#">Phrozen Water Washable Resin User Guide: Model Gray, Rapid Black - Printing Parameters &amp; Specifications</a> Detailed user guide for Phrozen Water Washable Resin (Model Gray, Rapid Black). Includes Technical Data Sheet (TDS), comprehensive printing parameters for various Phrozen Sonic and Mighty series 3D printers, cleaning and post-curing instructions, and critical design specifications for optimal print results.
	<a href="#">Phrozen Sonic Mighty 14K Revo User Manual: Setup, Operation, and Maintenance</a> Comprehensive user manual for the Phrozen Sonic Mighty 14K Revo 3D printer, covering setup, calibration, printing, special features, file preparation, network connectivity, and after-sales service.
	<a href="#">Phrozen Onyx Rigid Pro410 Engineering Resin User Guide and Specifications</a> Comprehensive user guide for Phrozen Onyx Rigid Pro410 Engineering Resin, detailing technical data, printing parameters for various Phrozen 3D printers, and essential design specifications for optimal print results.
	<a href="#">Phrozen Engineering Resin - Ceramic White: User Guide and Technical Data</a> Comprehensive user guide and technical data sheet for Phrozen Engineering Resin - Ceramic White. Details material properties, printing parameters for various Phrozen 3D printers, post-processing instructions, and design specifications.