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ANYCUBIC Photon Mono 4

ANYCUBIC Photon Mono 4 LCD 3D Printer User Manual

Model: Photon Mono 4 | Brand: ANYCUBIC

1. INTRODUCTION

The ANYCUBIC Photon Mono 4 is a high-precision LCD 3D printer designed for detailed resin printing. It features a 10K mono LCD screen, an upgraded LighTurbo Matrix light source, and a re-engineered printing platform to ensure stable and efficient printing results. This manual provides essential information for setting up, operating, maintaining, and troubleshooting your printer.

Key Features

- **7-inch 10K HD Mono LCD:** Equipped with a 9024x5120 resolution screen and 17x17um XY axes pixel for exceptional detail and dynamic richness.
- **LighTurbo Matrix Light Source:** Delivers stable, balanced, and uniform lighting to eliminate layer lines and rasterization, enhancing print efficiency with single-layer exposure times as low as 1.5s.
- **Large Printing Volume:** Offers a print space of 153.4 mm x 87 mm x 165 mm (6.04" x 3.42" x 6.49"), suitable for various projects.
- **Laser-Engraved Platform 2.0:** Provides optimal adhesion to mitigate model lifting and warping, ensuring stable printing and easy model removal.
- **Resume Printing Function:** Allows printing to resume automatically after a power outage, reducing resin waste and saving time.

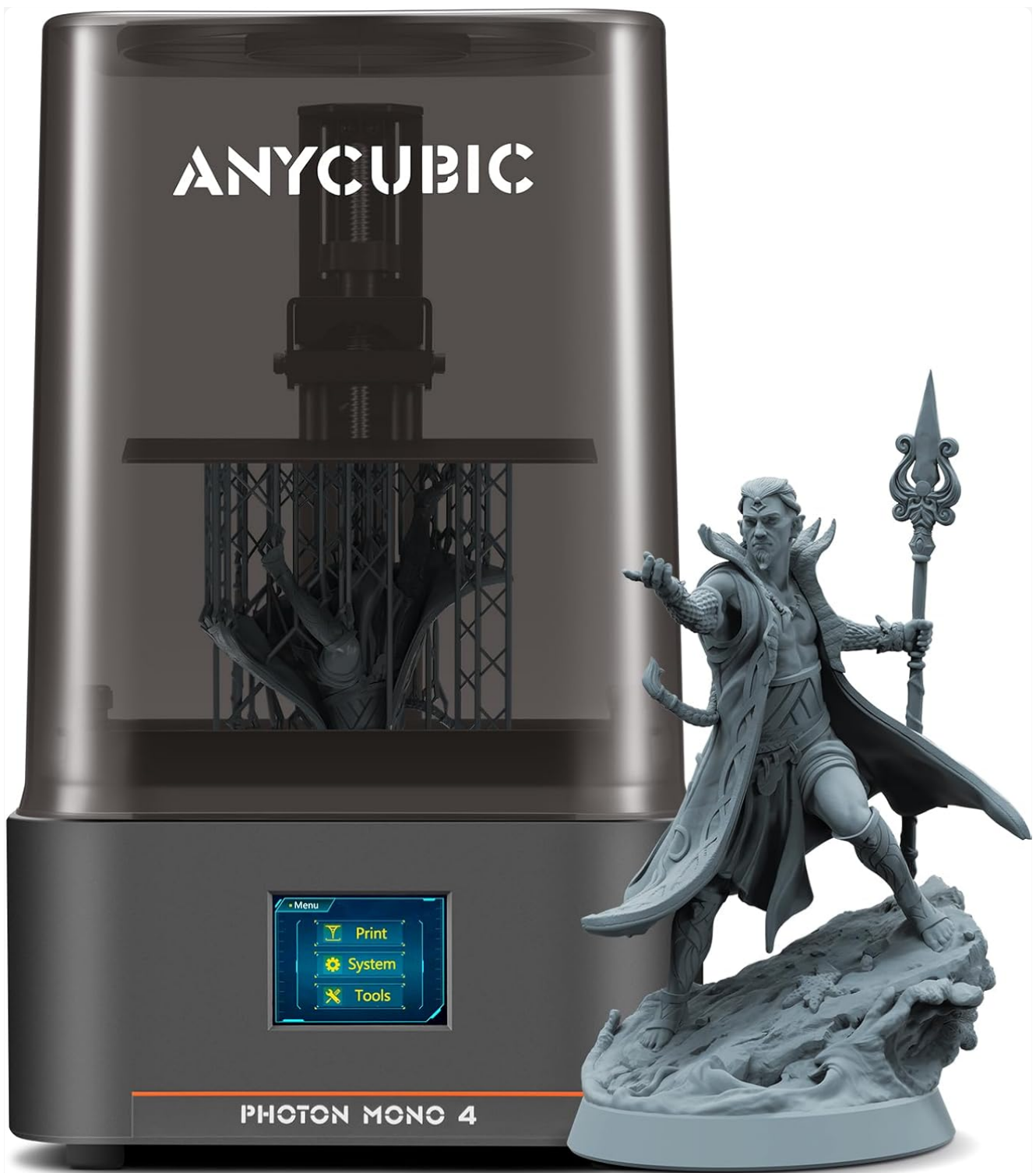


Figure 1.1: The ANYCUBIC Photon Mono 4 LCD 3D Printer, showcasing its compact design and a detailed miniature figure printed with the device.

2. WHAT'S IN THE BOX

Upon unboxing your ANYCUBIC Photon Mono 4, please ensure all the following components are present:

- 3D Printer Unit

Note: Additional accessories such as resin, gloves, and tools may be included or sold separately. Refer to your packaging for a complete list of included items.

3. SETUP GUIDE

Follow these steps to set up your ANYCUBIC Photon Mono 4 for its first print.

3.1 Initial Inspection and Placement

1. Carefully remove the printer from its packaging.
2. Place the printer on a stable, level surface away from direct sunlight and sources of heat. Ensure adequate ventilation.
3. Inspect the printer for any visible damage that may have occurred during shipping.

3.2 Build Plate Leveling

The printer is pre-calibrated and tested before shipment. However, it is recommended to perform a quick leveling check before your first print.

1. Power on the printer.
2. Navigate to the 'Tools' menu on the touchscreen.
3. Select 'Move Z' and then 'Z=0' to home the build plate.
4. Loosen the screws on the build plate.
5. Place a sheet of A4 paper on the LCD screen.
6. Gently press down on the build plate to ensure it is flat against the paper.
7. Tighten the screws on the build plate.
8. Raise the build plate slightly and remove the paper.

3.3 Adding Resin

Ensure you are wearing appropriate personal protective equipment (PPE), such as gloves and a respirator, when handling resin.

1. Carefully pour the resin into the resin vat, ensuring it does not exceed the maximum fill line.
2. Replace the UV-blocking cover securely.

Video 3.1: An overview of the Anycubic Photon Mono 4 printer, demonstrating its features and basic operation. This video is provided by the official seller.

4. OPERATING INSTRUCTIONS

This section details the process of preparing and initiating a print job on your Photon Mono 4.

4.1 Preparing Your Model with Anycubic Photon Workshop

The Anycubic Photon Workshop is the recommended software for preparing your 3D models for printing. It offers features like automated support generation, customizable support optimization, and smooth layer transitions.

1. Import your 3D model (e.g., .STL, .OBJ) into the Anycubic Photon Workshop software.
2. Orient and scale your model as desired.
3. Generate supports for your model to ensure successful printing, especially for overhangs.
4. Slice the model, which converts it into layers (pm4n format) that the printer can understand. Ensure correct resin exposure settings are applied. The Photon Mono 4 boasts single-layer exposure times as low as 1.5 seconds.
5. Save the sliced file to a USB drive.

Anycubic Photon Workshop



Fully Automated
Support Generation



Customizable
Support Optimization



Smooth Layer
Transitions

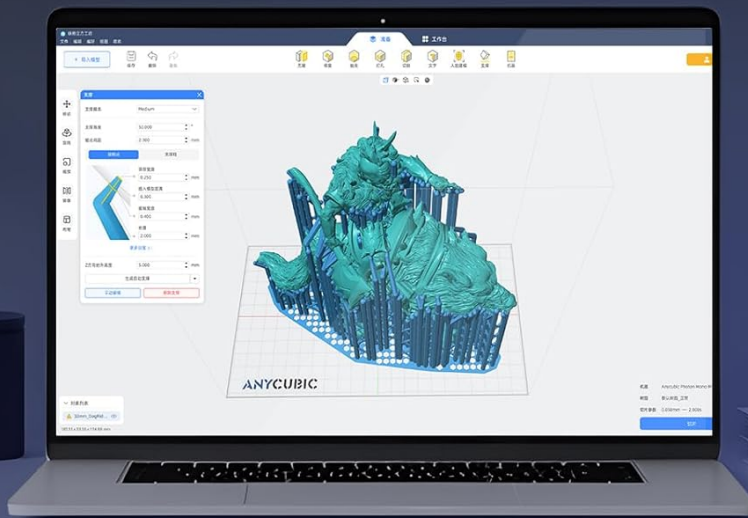


Figure 4.1: The Anycubic Photon Workshop software interface, demonstrating its use for preparing 3D models for printing on the Photon Mono 4.

4.2 Starting a Print

1. Insert the USB drive containing your sliced file into the printer's USB port.
2. On the printer's touchscreen, navigate to the 'Print' menu.
3. Select your desired file from the list.
4. Confirm the print job to begin printing. The printer will automatically lower the build plate and start the exposure process.

4.3 Resume Printing Function

The Photon Mono 4 is equipped with a resume printing function. In the event of a sudden power outage, the printer will automatically prompt you to resume the print once power is restored, minimizing material waste and saving time.

Resume Printing Function

Printing can be resumed when power is restored, reducing waste of resin and time.



Figure 4.2: The Photon Mono 4's touchscreen displaying the 'Resume last print?' option, highlighting its power-loss recovery feature.

Video 4.1: A short video showcasing the texture and quality achievable with ANYCUBIC 14K Texture Resin, relevant for understanding material properties during printing. This video is provided by the official seller.

5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your 3D printer.

5.1 Cleaning the Resin Vat and Build Plate

1. After each print, carefully remove the build plate and clean off any excess resin using isopropyl alcohol (IPA) and a soft cloth.
2. If changing resin colors or if resin has been in the vat for an extended period, clean the resin vat. Pour unused resin back into its bottle using a filter funnel.
3. Clean the inside of the vat with IPA and a soft cloth. Be careful not to scratch the FEP film at the bottom of the vat.

5.2 Cleaning the LCD Screen

1. Regularly inspect the LCD screen for any cured resin spills or dust.
2. Gently wipe the screen with a soft, lint-free cloth dampened with IPA. Avoid excessive pressure.

5.3 General Care

1. Keep the printer covered when not in use to prevent dust accumulation.
2. Store resin in a cool, dark place, away from direct UV light.

6. TROUBLESHOOTING

This section addresses common issues you might encounter during operation.

6.1 Print Adhesion Issues

- **Model Not Sticking to Build Plate:** Ensure the build plate is properly leveled. Increase bottom exposure time in your slicing software. Check the ambient temperature; resin prints best in warmer environments.
- **Model Sticking Too Strongly:** Decrease bottom exposure time. Ensure the build plate is not overly compressed during leveling. The laser-engraved platform is designed to provide optimal adhesion while allowing for easy removal.

6.2 Failed Prints

- **Partial Prints/Missing Layers:** Check for debris in the resin vat or on the LCD screen. Ensure the resin is well-mixed. Verify that supports are adequate for the model.
- **Warping/Deformation:** Ensure proper support placement and density. Consider increasing normal exposure time slightly.

6.3 Printer Not Responding

- **Touchscreen Unresponsive:** Restart the printer. If the issue persists, contact customer support.
- **USB Drive Not Recognized:** Ensure the USB drive is formatted correctly (FAT32) and contains only compatible files. Try a different USB drive.

7. TECHNICAL SPECIFICATIONS

Feature	Specification
Model Number	Photon Mono 4
Product Dimensions	20 x 10 x 15 inches (50.8 x 25.4 x 38.1 cm)
Item Weight	11.22 pounds (5.1 Kilograms)
Printing Size (LWH)	153.4 mm x 87 mm x 165 mm (6.04" x 3.42" x 6.49")
LCD Screen	7-inch 10K Mono LCD
Resolution	9024 x 5120 pixels
XY Axes Pixel	17 x 17 μ m
Light Source	Anycubic LightTurbo Matrix

Feature	Specification
Material	ABS, Aluminum, Polycarbonate
Manufacturer	ANYCUBIC
Country of Origin	China

8. WARRANTY AND SUPPORT

All ANYCUBIC LCD resin printers are entitled to a one-year warranty. The LCD screen warranty is extended to 6 months. FEP films and tools are excluded from the warranty.

ANYCUBIC provides lifetime technical support for its products. If you have any questions or require assistance with your printer, please feel free to contact ANYCUBIC customer service. They aim to reply within 24 hours on weekdays.

For further assistance, visit the official ANYCUBIC website or contact their support team directly.