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> SUNLU AMS Heater for Bambu Lab AMS Gen 1 Instruction Manual

## SUNLU AWDE-AH-EU-N

# SUNLU AMS Heater for Bambu Lab AMS Gen 1 Instruction Manual

Model: AWDE-AH-EU-N

## 1. PRODUCT OVERVIEW

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The SUNLU AMS Heater is an upgrade kit designed for the Bambu Lab AMS (Gen 1), enabling simultaneous filament drying and 3D printing. This device ensures optimal filament conditions by rapidly heating and maintaining a controlled environment, preventing common printing issues caused by moisture.



Image 1.1: The SUNLU AMS Heater integrated with a Bambu Lab AMS Gen 1, showcasing its design and function with multiple filament spools.

## Key Features:

- **Simultaneous Printing and Drying:** Enhances your Bambu Lab AMS (Gen 1) for continuous printing while filaments are being dried, eliminating the need for separate drying phases.
- **Rapid Heating:** Achieves a drying temperature of 70 °C (158 °F) in approximately 20 minutes, ensuring quick readiness for printing.
- **Uniform 360° Heating:** A dual-airflow system distributes heat evenly across all four filament spools, preventing localized overheating and reducing filament deformation.
- **Triple Safety Protection:** Features advanced overheat protection with automatic shutdown and temperature recovery mechanisms for secure operation.
- **High Compatibility:** Supports all functions of the AMS Gen 1. Note: This product is the AMS Heater and

does not include the Automatic Material System (AMS) itself.

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Video 1.1: An official SUNLU video demonstrating the AMS Heater's simple, efficient, and automatic operation, highlighting its benefits for 3D printing.

## 2. SETUP AND INSTALLATION

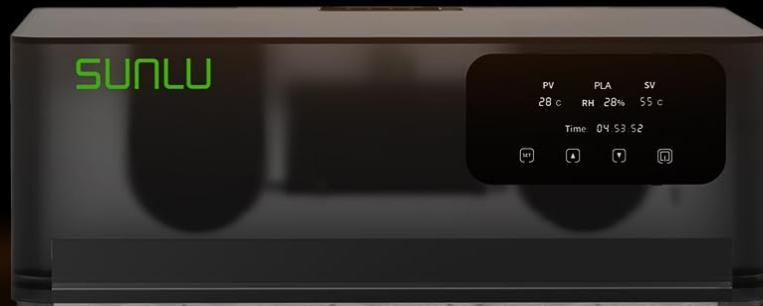
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### Package Contents:

Before beginning installation, please verify that all components are present in the package:

- 1 x AMS Heater (AMS not included)
- 4 x Hinges
- 8 x Hexagonal Screws
- 1 x Hexagonal Screwdriver
- 1 x Power Cable
- 1 x User Manual

# Packing List



AMS Heater\*1



Hinge\*4



Hexagonal Screws\*8



Power Cord\*1



User Manual\*1



Hexagonal Screwdriver\*1

Image 2.1: A visual representation of all items included in the SUNLU AMS Heater package.

## Installation Steps:

The SUNLU AMS Heater is designed for simple and non-destructive installation, requiring no special tools beyond what is provided. Follow these three steps to upgrade your Bambu Lab AMS Gen 1:

1. **Loosen:** Unscrew the four hinge screws on your original AMS top cover.
2. **Remove & Install:** Carefully remove the original AMS top cover. Mount the provided hinges onto the side pins of the AMS Heater.
3. **Tighten:** Secure the four screws to complete the installation of the AMS Heater onto your Bambu Lab AMS Gen 1.

# Easy Installation

Upgrade in Just 3 Steps

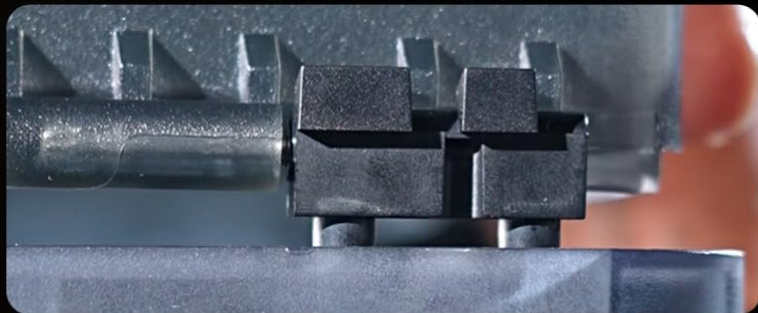
1

Loosen



2

Remove  
& Install



3

Tighten



Installing AMS Heater will not damage the AMS

Image 2.2: Step-by-step visual guide for installing the AMS Heater, showing the process of replacing the original AMS cover.

*Note: Installing the AMS Heater will not damage the original AMS unit.*

## 3. OPERATING INSTRUCTIONS

### Simultaneous Drying and Printing:

The primary advantage of the SUNLU AMS Heater is its ability to dry filament while your 3D printer is actively printing. This feature is particularly beneficial for multi-color or long-duration projects, ensuring that your filament remains in optimal condition throughout the entire printing process.



Image 3.1: The AMS Heater enabling continuous 3D printing while simultaneously drying filament, improving workflow efficiency.

### Rapid and Even Heating:

The heater quickly reaches its target temperature of 70°C (158°F) within 20 minutes. Its dual-airflow circulation system ensures that heat is distributed uniformly to all four filament spools, preventing hot spots and ensuring consistent drying.

# Fast & Even Heating



Circulation ensures uniform heat distribution, preventing local overheating.

# 70°C

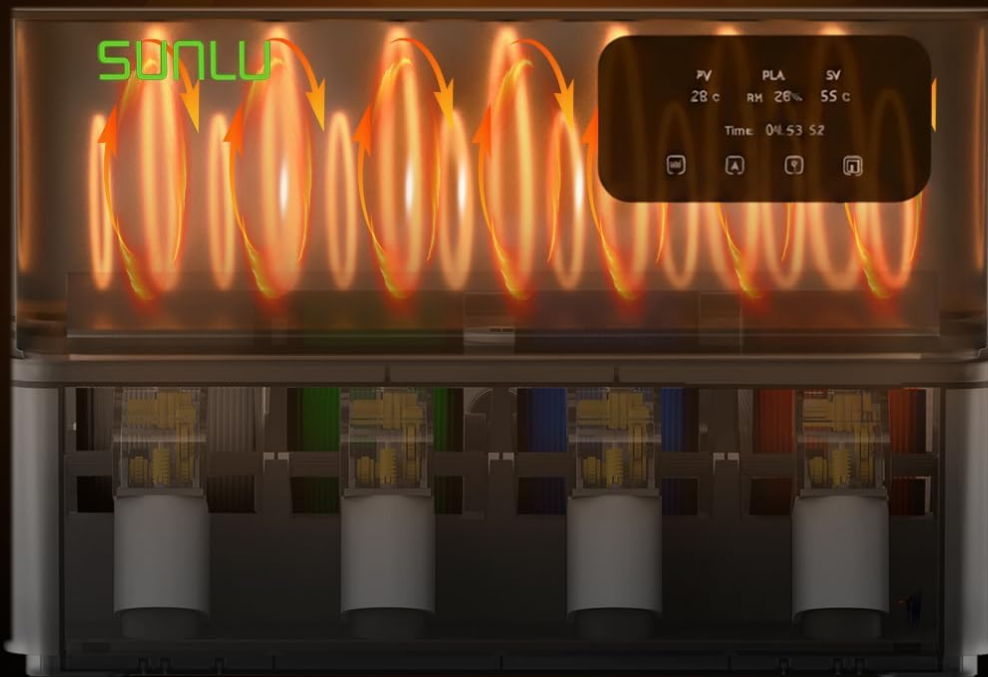


Image 3.2: An illustration of the internal heating elements and dual-airflow design, ensuring quick and uniform temperature distribution.

## Intelligent Humidity Control:

The AMS Heater features intelligent humidity control. It automatically initiates the drying process when the internal humidity exceeds 50% and pauses heating when the humidity drops below 20%, maintaining optimal conditions without constant manual intervention.



Image 3.3: The AMS Heater's display indicating automatic heating based on humidity levels, ensuring optimal filament dryness.

### Easy Operation and Presets:

The device offers a one-touch start for convenience. Its intuitive control panel allows users to select preset drying settings optimized for various 3D filament types, simplifying the drying process.

# Easy Operation

## One-Touch Start for AMS Heater



Image 3.4: The user interface of the AMS Heater, showing options for setting temperature, humidity, and selecting filament type presets.

Your browser does not support the video tag.

Video 3.1: A short video explaining the necessity of the SUNLU AMS Heater for maintaining filament quality and improving print results.

## 4. MAINTENANCE

To ensure the longevity and optimal performance of your SUNLU AMS Heater, regular maintenance is recommended:

- **Cleaning:** Periodically wipe the exterior of the unit with a soft, dry cloth. Avoid using abrasive cleaners or solvents.

- **Airflow:** Ensure that the ventilation openings are not obstructed to maintain proper airflow and heating efficiency.
- **Storage:** When not in use for extended periods, store the AMS Heater in a dry, dust-free environment.

## 5. TROUBLESHOOTING

Addressing common issues related to filament drying and print quality:

### Poor Print Quality (Clogging, Stringing, Poor Adhesion):

If you experience issues such as filament clogging, stringing, or poor layer adhesion, it is often due to wet filament. The AMS Heater is designed to mitigate these problems by ensuring your filament is properly dried.



Image 5.1: Visual comparison demonstrating the significant improvement in 3D print quality when using dried filament versus wet

filament.

## Safety Protections:

The AMS Heater is equipped with triple safety protection features to prevent malfunctions and ensure user safety:

- **Smart PTC:** Automatic shutdown if abnormal temperatures are detected.
- **Temperature Switch:** Monitors temperature and automatically controls heating to prevent overheating.
- **Software Protection:** Provides instant alerts in case of anomalies during operation.



Image 5.2: Diagram detailing the three levels of safety protection integrated into the AMS Heater for secure and reliable operation.

## 6. TECHNICAL SPECIFICATIONS

Specification	Value
Brand	SUNLU
Model Number	AWDE-AH-EU-N
Material	ABS
Color	AMS Black
Item Weight	1.7 Kilograms
Filament Diameter Compatibility	1.75 Millimeters
Heating Temperature	Up to 70°C (158°F)
Heating Time to 70°C	20 Minutes
Humidity Control	Automatic (Heats if $\geq 50\%$ RH, Stops if $\leq 20\%$ RH)

## 7. WARRANTY AND CUSTOMER SUPPORT

SUNLU products are manufactured to high-quality standards and are backed by a manufacturer's warranty. For specific warranty details, including coverage period and terms, please refer to the warranty card included in your product packaging or visit the official SUNLU website.

If you encounter any issues with your SUNLU AMS Heater or require technical assistance, please contact SUNLU customer support through their official channels. Provide your product model number (AWDE-AH-EU-N) and a

detailed description of the issue to facilitate a quicker resolution.