Bambu Lab P1S

Bambu Lab P1S 3D Printer User Manual

Model: P1S

1. Introduction

Welcome to the user manual for your new Bambu Lab P1S 3D Printer. The P1S is a high-performance 3D printer designed for reliability and ease of use, featuring a fully enclosed body that enhances printing performance for advanced filaments. It is engineered for high-temperature printing and offers rapid print speeds without compromising quality.
This manual provides essential information for setting up, operating, maintaining, and troubleshooting your P1S printer to ensure optimal performance and longevity.

Figure 1: Front view of the Bambu Lab P1S 3D Printer.

2. Setup

2.1 Unboxing and Placement

Carefully remove the printer from its packaging. Ensure all protective materials and shipping restraints are removed. Place the printer on a stable, level surface with adequate space around it for ventilation and operation. The printer dimensions are approximately 38.9 x 45.8 x 38.9 cm.

Figure 2: Exploded view showing the internal components and enclosure of the P1S.

2.2 Power Connection

Connect the power cable to the printer and then to a suitable electrical outlet. The Bambu Lab P1S supports a wide voltage range (Bivolt: 100-240 VCA, 50/60 Hz), making it adaptable to various regions.

2.3 Initial Calibration

The P1S is designed for immediate use. Upon first power-on, the printer will automatically perform essential calibrations, including automatic bed leveling and vibration compensation. Allow the printer to complete these processes before proceeding.

Figure 3: Close-up of the P1S control panel displaying operational status.

2.4 Filament Loading

Load your chosen filament (e.g., PLA, PETG, TPU, ABS, ASA) into the designated filament holder and feed it into the extruder according to the on-screen instructions. The printer supports 1.75 mm diameter filament.

3. Operating Instructions

3.1 Basic Printing Process

1. **Prepare your 3D model:** Use compatible slicing software (e.g., Bambu Studio) on your computer (Windows, macOS, Linux) or mobile device (Android, iOS) to prepare your 3D model for printing.
2. **Send to printer:** Transfer the sliced G-code file to the P1S via Wi-Fi or other supported methods.
3. **Start printing:** Select the file on the printer's interface and initiate the print. The printer will automatically heat the hotend (up to 300 °C) and the build plate (up to 100 °C).

4. **Monitor progress:** Monitor the print progress via the printer's display or connected software.

3.2 Multi-color Printing (Optional)

For multi-color printing capabilities, the Bambu Lab P1S can be optionally paired with the AMS (Automatic Material System). This allows for printing with up to 16 colors when stacking four AMS units, significantly expanding creative possibilities.

3.3 Speed and Quality

The P1S boasts an impressive maximum extruder speed of 500 mm/s and acceleration of 20 m/s². Its advanced control algorithms, including vibration compensation and pressure advance, ensure high-quality prints even at these rapid speeds.

Figure 4: The Bambu Lab P1S 3D Printer ready for operation in a typical workspace.

4. Maintenance

4.1 Build Plate Cleaning

Regularly clean the textured PEI build plate with isopropyl alcohol to ensure optimal adhesion and print quality. Avoid abrasive cleaners that could damage the surface.

4.2 Nozzle and Hotend Care

Periodically inspect the stainless steel nozzle for wear or clogs. Refer to the Bambu Lab support resources for detailed instructions on hotend and nozzle replacement or cleaning procedures.

4.3 General Upkeep

Keep the printer's interior and exterior clean from dust and filament debris. Ensure all moving parts are free from obstructions. Do not attempt to lubricate components unless specifically instructed by Bambu Lab documentation.

5. Troubleshooting

5.1 Common Printing Issues

- **Poor First Layer Adhesion:**
  Ensure the build plate is clean and free of oils. Re-run bed leveling calibration. Adjust Z-offset if necessary.
- **Filament Clogging:**
  Check for tangled filament on the spool. Verify hotend temperature is appropriate for the filament type. Perform a cold pull or hotend cleaning if a clog is suspected.
- **Layer Shifting:**
  Inspect belts for proper tension. Ensure the printer is on a stable surface. Reduce print speed if printing very fast or with complex geometries.
- **Print Quality Issues (e.g., stringing, blobs):**
  Adjust retraction settings in your slicing software. Ensure filament is dry. Calibrate flow rate for your specific filament.

For more detailed troubleshooting guides and solutions, please visit the official Bambu Lab support website.

6. Specifications

Feature	Detail
Build Volume (L×P×A)	256 x 256 x 256 mm
Nozzle Material	Stainless Steel (0.4 mm included)
Hotend Type	All-Metal
Max Hotend Temperature	300 °C
Filament Diameter	1.75 mm
Supported Filaments	PLA, PETG, TPU, PVA, PET, ABS, ASA
Build Plate Surface	Bambu Textured PEI Plate (included)
Max Build Plate Temperature	100 °C
Max Extruder Speed	500 mm/s
Max Extruder Acceleration	20 m/s²

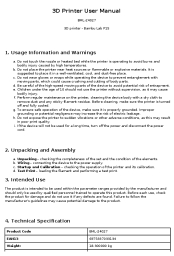
Feature	Detail
Physical Dimensions (P1S)	389 x 389 x 458 mm³
Net Weight	12.95 kg
Electrical Requirements	100-240 VCA, 50/60 Hz (1000 W @ 220 V, 350 W @ 110 V)
Operating System Compatibility	Windows, macOS, Linux, Android, iOS
Material	Plastic and Glass

7. Warranty and Support

For warranty information, technical support, and service inquiries, please refer to the official Bambu Lab website or contact their customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.
Online Resources: Visit the Bambu Lab official website for FAQs, firmware updates, and community forums.

Related Documents - P1S

	Bambu Lab P1S 3D Printer Quick Start Guide A concise guide to setting up and operating the Bambu Lab P1S 3D printer, covering component identification, assembly, printer binding, and first print instructions.
	Bambu Lab P1S-Combo 3D Printer Quick Start Guide A comprehensive quick start guide for the Bambu Lab P1S-Combo 3D printer, covering unboxing, assembly, setup, and first print instructions.
	Bambu Lab P1S-Combo 3D Printer Quick Start Guide A comprehensive quick start guide for the Bambu Lab P1S-Combo 3D Printer, covering unboxing, assembly, setup, and first print instructions.
	Bambu Lab P1S 3D Printer Quick Start Guide A comprehensive quick start guide for the Bambu Lab P1S 3D printer, covering setup, component identification, software usage, and initial printing.

	[Bambu Lab P1S-Combo 3D Printer Quick Start Guide] A comprehensive quick start guide for the Bambu Lab P1S-Combo 3D Printer, covering assembly, setup, and first print instructions.
	[Bambu Lab P1S 3D Printer User Manual] User manual for the Bambu Lab P1S 3D printer, covering usage information, warnings, unpacking, assembly, intended use, technical specifications, and contact information.