

## ELEGOO Neptune 4 Plus

# ELEGOO Neptune 4 Plus 3D Printer Instruction Manual

Your comprehensive guide to operating and maintaining your ELEGOO Neptune 4 Plus 3D Printer.

## 1. INTRODUCTION TO THE ELEGOO NEPTUNE 4 PLUS

The ELEGOO Neptune 4 Plus is a high-performance FDM 3D printer designed for efficiency and precision. It features advanced Klipper firmware, enabling impressive printing speeds and accelerations. With a generous build volume and versatile filament compatibility, it supports a wide range of creative projects.

### Key Features:

- **Max Printing Speed:** Up to 500mm/s (default 250mm/s) with 12000mm/s<sup>2</sup> acceleration.
- **Build Volume:** 320x320x385mm (12.59"x12.59"x15.15").
- **High-Temp Nozzle:** Up to 300°C with a 60W ceramic heating element for various filaments.
- **Firmware:** Pre-installed Klipper for advanced control and precision.
- **Bed Leveling:** Advanced 121-point auto-leveling and auxiliary leveling system.
- **Extruder:** Self-developed dual-gear direct drive extruder with 5.2:1 reduction ratio.
- **Cooling:** Efficient double-sided cooling fans and model cooling blowers.
- **Connectivity:** WIFI, USB, and LAN for flexible file transfer.



Figure 1: The ELEGOO Neptune 4 Plus 3D Printer.

## 2. UNBOXING AND ASSEMBLY

Carefully unbox your ELEGOO Neptune 4 Plus and identify all components. Follow the steps below for proper assembly.

### Components Included:

- Neptune 4 Plus FDM 3D Printer (Base and Gantry Frame Kit)
- Nozzle Kit
- Filament Holder Kit
- Power Cable
- Heat-dissipation Module
- Touch Screen Kit
- Filament Breakage Detector
- Tie Rods

- Network Cable
- Filament (sample)
- U Disk, Screws, Cable Ties, Glue Stick, Wrenches/Screwdriver, Pin

### Assembly Video Guide:

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Video 1: Detailed unboxing and assembly instructions for the Neptune 4 Plus 3D Printer.

## 3. SETUP AND FIRST USE

Proper setup is crucial for successful 3D printing. Follow these steps before your first print.

### 3.1 Initial Power On and Voltage Check:

Before powering on, ensure the voltage switch on the printer's power supply matches your local voltage (115V or 230V). Incorrect voltage can damage the printer.

### 3.2 Bed Leveling:

The Neptune 4 Plus features both auxiliary and automatic bed leveling. For the first print, perform both to ensure optimal adhesion and print quality.

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Video 2: Step-by-step guide on performing bed leveling for Neptune 4 Plus/4 Max.

### 3.3 Z-axis Compensation Fine-tuning:

Fine-tuning the Z-axis compensation value is critical for achieving a perfect first layer. Adjust this setting during the initial layers of a print to ensure proper adhesion and filament extrusion.

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Video 3: Tutorial on fine-tuning the Z-axis compensation value for optimal first layer printing.

### 3.4 Filament Loading:

To load filament, first straighten the end of the filament to facilitate passage through the filament sensor and extruder. Insert the filament into the sensor, then into the extruder until it is gripped by the gears. Use the touch screen interface to initiate the loading process, heating the nozzle and extruding filament until it flows smoothly.

## 4. OPERATING YOUR PRINTER

Once set up, you can begin printing your 3D models. The Neptune 4 Plus offers high-speed and high-quality printing capabilities.

### 4.1 Printing Process:

Transfer your sliced G-code file to the printer via USB, WIFI, or LAN. Select the file from the touch screen interface and confirm to start printing. Monitor the first layer to ensure proper adhesion and adjust Z-offset if necessary.

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Video 4: General overview of ELEGOO 3D printer capabilities and print examples.

## 4.2 Print Examples:

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Video 5: Example of printing a cactus toothpick holder on the Neptune 4 Plus.

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Video 6: Example of printing stackable boxes on the Neptune 4 Plus.

## 5. MAINTENANCE

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

### 5.1 Nozzle Oozing Cleaning:

If you notice filament oozing around the nozzle, it's important to clean it to prevent print failures and damage. Ensure the nozzle is heated before cleaning to soften any hardened filament.

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Video 7: Instructions on how to clean nozzle oozing on your ELEGOO Neptune 4 series printer.

### 5.2 Belt Tension Adjustment:

Loose belts can lead to layer shifting and poor print quality. Regularly check and adjust the tension of the X and Y-axis belts using the provided knobs until they have proper elasticity.

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Video 8: This video demonstrates how to adjust the eccentric nuts and belt tension if the printing platform or belts are loose.

## 6. TROUBLESHOOTING

This section addresses common issues you might encounter during operation.

### 6.1 First Layer Adhesion Issues:

- **Nozzle too far from bed:** Adjust Z-axis compensation downwards (refer to Video 3).
- **Nozzle too close to bed:** Adjust Z-axis compensation upwards (refer to Video 3).
- **Uneven bed:** Re-level the bed using both auxiliary and automatic leveling (refer to Video 2).

### 6.2 Print Quality Issues:

- **Layer Shifting:** Check and tighten X and Y-axis belts (refer to Video 8). Ensure the printer is on a stable surface.
- **Clogging/Under-extrusion:** Clean the nozzle (refer to Video 7). Check filament path for obstructions.
- **Over-extrusion:** Adjust flow rate in your slicer software.

## 7. SPECIFICATIONS

Feature	Specification
Product Dimensions	20.35 x 20.98 x 25.11 inches
Item Weight	36.8 pounds
Build Volume	320x320x385mm (12.59"x12.59"x15.15")
Max Printing Speed	500mm/s (default 250mm/s)
Max Nozzle Temperature	300°C
Hotbed Power/Temperature	320W, 100°C
Firmware Type	Klipper
Bed Leveling	121 points auto leveling and auxiliary leveling
Filament Compatibility	PLA, ABS, TPU, PETG, Nylon, etc.
File Transfer Method	WIFI, USB, LAN
Material	Metal
Color	White



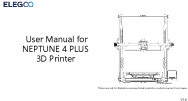



## 8. SAFETY INFORMATION

Always operate the 3D printer in a well-ventilated area. Keep hands clear of moving parts during operation. Do not touch the hot nozzle or heated bed during or immediately after printing. Ensure the correct voltage is selected before powering on the device. Keep children and pets away from the printer during operation.

## 9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official ELEGOO website or contact ELEGOO customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.

Related Documents - Neptune 4 Plus

	<p><a href="#">ELEGOO Neptune 4 Pro 3D Printer: Features and Specifications</a></p> <p>Explore the ELEGOO Neptune 4 Pro, a high-speed FDM 3D printer featuring a 300°C hotend, Klipper mainboard, auto-leveling, and a 4.3-inch touchscreen. Discover its specifications and advanced capabilities for efficient 3D printing.</p>
	<p><a href="#">ELEGOO NEPTUNE 3 3D Printer User Manual</a></p> <p>Comprehensive guide for the ELEGOO NEPTUNE 3 3D Printer, covering installation, operation, software setup, troubleshooting, and technical specifications. Learn how to set up and use your 3D printer effectively.</p>
	<p><a href="#">ELEGOO NEPTUNE 4 PLUS 3D Printer User Manual</a></p> <p>Comprehensive user manual for the ELEGOO NEPTUNE 4 PLUS 3D Printer, detailing setup, operation, troubleshooting, software, and network features. Includes specifications and diagrams.</p>
	<p><a href="#">ELEGOO Neptune 4 Max 3D Printer User Manual</a></p> <p>Comprehensive user manual for the ELEGOO Neptune 4 Max 3D printer, detailing setup, operation, troubleshooting, software, and technical specifications for optimal printing.</p>
	<p><a href="#">ELEGOO Neptune 4 Pro 3D Printer User Manual</a></p> <p>Comprehensive user manual for the ELEGOO Neptune 4 Pro 3D Printer, covering machine parameters, installation, operation, troubleshooting, and software setup.</p>
	<p><a href="#">ELEGOO Neptune 4 Plus 3D Printer User Manual</a></p> <p>Comprehensive user manual for the ELEGOO Neptune 4 Plus 3D printer, covering installation, operation, software setup, troubleshooting, and technical specifications.</p>