

Wanptek TPS3010

Wanptek DC Power Supply 30V 10A User Manual

Model: TPS3010 | Brand: Wanptek

1. INTRODUCTION

Thank you for choosing the Wanptek DC Power Supply. This bench power supply is designed to provide a stable and adjustable DC voltage and current output, making it ideal for various electronic testing, repair, and development applications. It features precise encoder knobs for accurate adjustments, an output enable/disable button, and integrated USB and Type-C quick-charge interfaces for added convenience. This manual provides detailed instructions for safe operation, setup, and maintenance of your device.

2. SAFETY INFORMATION

Please read all safety warnings and instructions carefully before operating the device to prevent injury or damage. Keep this manual for future reference.

- **Power Input Voltage Selection:** Before connecting the power supply to the AC mains, ensure the voltage selector switch (located near the power cord input on the rear panel) is set to match your local AC voltage (115V or 230V). Incorrect setting can lead to damage to the unit or connected devices.
- **Over Current Protection (OCP):** The power supply features an OCP alarm function. In the event of a short circuit or overcurrent condition in the connected load, the unit will automatically stop output and sound a beeping alarm to protect both the power supply and the load.
- **Ventilation:** Ensure adequate ventilation around the unit. Do not block the cooling fan or vents.
- **Environment:** Operate the device in a dry, well-ventilated area, away from direct sunlight, high temperatures, humidity, and corrosive gases.
- **Grounding:** Always connect the power supply to a properly grounded outlet.
- **Output Connection:** Ensure output leads are connected correctly (positive to positive, negative to negative) before enabling output.

3. PACKAGE CONTENTS

Verify that all items are present in the package:



Figure 3.1: Package Contents

- Wanptek DC Power Supply Unit x 1
- Output Line (Test Leads) x 1 set
- Power Cord x 1
- User Manual x 1

4. PRODUCT FEATURES AND COMPONENTS

Familiarize yourself with the various parts and functions of your Wanptek DC Power Supply.



Figure 4.1: Product Details - Front and Rear Panels

Front Panel Overview:

- **Output Voltage Display:** Shows the current output voltage (V).
- **Output Current Display:** Shows the current output current (A).
- **Power Output Display:** Shows the calculated output power (W).
- **CV Indicator:** Constant Voltage mode indicator.
- **CC Indicator:** Constant Current mode indicator.
- **OCP Indicator:** Over Current Protection active indicator.
- **Output Indicator:** Indicates when the output is enabled.
- **Type-C Fast Charging Port:** For charging compatible devices.
- **USB Fast Charging Port:** For charging compatible devices.
- **Adjust and Control Knob (Encoder Knob):** Used to adjust voltage and current values. Press to switch digit position.
- **V/A Switching Button:** Press to switch between voltage and current adjustment modes.
- **OCP Button:** Activates/deactivates Over Current Protection.
- **Power Switch:** Turns the unit on/off.
- **OUT Button (Output Switch):** Enables or disables the main DC output.
- **Output Positive Terminal (+):** Red terminal for positive output connection.
- **Output Negative Terminal (-):** Black terminal for negative output connection.
- **Ground Terminal Output:** Green terminal for chassis ground connection.

Rear Panel Overview:

- **Cooling Fan:** Provides active cooling for the internal components.
- **AC Power Input Socket:** For connecting the power cord.
- **Fuse Box:** Contains the replaceable fuse.
- **Voltage Selector Switch (115V/230V):** Must be set according to your local mains voltage.

Key Features:



Figure 4.2: Encoder Adjustment Knob and V/A Switching Button

Precise Encoder Knob: Unlike traditional adjustment knobs, the precision encoder knob allows for direct and precise setting of voltage and current values. Press the V/A button to switch between adjusting voltage and current. Press the knob itself to switch the digital position (e.g., from tens to units digit). Rotate the knob to increase or decrease the selected digit.

Output Enable/Disable Button

The output button can prevent us from forgetting to turn off the output when adjusting the voltage or current and causing load damage



Figure 4.3: Output Enable/Disable Button

Output Enable/Disable Button (OUT): This button allows you to turn the DC output on or off independently of the power supply's main power switch. This feature prevents accidental damage to connected loads when adjusting voltage or current settings, as you can set values before enabling output.

Short Circuit Alarm

When a short circuit (overcurrent) occurs in the load device, the power supply will automatically stop output and issue a buzzer alarm and OCP character prompt.



Figure 4.4: Short Circuit Alarm (OCP)

Short Circuit Alarm (OCP): When a short circuit or overcurrent condition occurs in the load device, the power supply will automatically stop output, sound a buzzer alarm, and display an