

East Tester®

ET547X Portable Electronic Load User Manual



Hangzhou Zhongchuang Electron Co., Ltd

Zhejiang EastTester Measurement&Control Technology Co., Ltd

Safety Precautions

To avoid personal injury and product damage, it is essential to use this product as specified. Do not proceed to the next step until you fully understand and comply with the following warnings:

◆ **Safety grounding:** Please ensure that the grounding terminal of the power cord of this product is securely connected to the protective grounding terminal, and that the instrument is plugged into a grounded power socket.

◆ **Proper use of test lead kits:** Do not use damaged or worn-out test lead kits, as it may result in instrument damage or personal injury. When using the probe, please keep fingers behind the probe's finger guard. When wiring, please connect the common wire first and then the live test wire. When disconnecting, please remove the live test wire first.

◆ **Do not use the product if there are any malfunctions with it.** Its protective measures may have been compromised. Do not install substitute parts or make unauthorized adjustments to the product; instead, please return the product for repair or have it inspected by a professional to ensure its safety features.

◆ **Never use this product in flammable or explosive environments.**

◆ **Protection Limit.**

Within the specified protection limits, the protective circuits included in this product can prevent damage to the instrument and the danger of electric shock. For safe operation of the instrument, please adhere to the protection limits indicated on the front and back panels.

Environmental Precautions

This product complies with the labeling requirements of the WEEE Directive (2002/96/EC). The label attached to the product (please see below) indicates that this electronic/electrical equipment shall not be disposed of as household waste.



Product Category: According to Appendix 1 of the WEEE Directive, this product is classified as a product under the category of "Monitoring and Control Instruments".

Certain substances contained in this product may be detrimental to the environment or human health. To prevent the release of harmful substances into the environment or potential

harm to human beings, we suggest all users employ suitable methods to recycle this product to ensure that most materials can be effectively reused or recycled. Please contact relevant local authorities to obtain guidance on disposal or recycling procedures.

Symbols on the Product

The product may display the following symbols:



Signal Ground



Chassis Grounding



High-voltage Electricity



Guidebook

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Thank you for purchasing the ET547X series handheld DC electronic load. To ensure the maximum efficiency of your ET547X series handheld DC electronic load, please read all usage instructions carefully and keep the manual safe for reference by all users of this product.

Chapter 1 Introduction

The ET547X series handheld DC electronic load, manufactured by Zhongchuang Electron Co., Ltd., is a portable DC electronic load featuring high-performance chips, high-speed and high-precision design and offering a precision rating of 10mA and 10mV. This load features a meticulous and aesthetic structural design. With the adoption of advanced production technology, it is more cost-effective compared to similar products and can be applied to various production lines (such as switching power supplies, linear power supplies, mobile phone adapters, and various batteries), research institutions, automotive electronics, aerospace, and other industries.

I. Key Features:

The two basic operation modes, constant voltage and constant current, meet the basic requirements for testing various products.

- ◆ Significantly reduced volume and weight compared to similar products, making it easy to carry.
- ◆ Equipped with a large capacity battery, making it capable of working in special environments without external power supply.
- ◆ Supporting measurements requiring a maximum power of 150W, maximum current of 20A, and maximum voltage of 300V.
- ◆ Supporting over-temperature, over-voltage, over-current, over-power, and overheat protection.
- ◆ Equipped with a large LED display with high brightness.
- ◆ Equipped with an infinite servo and a smart fan for cooling.

- ◆ Supporting constant voltage, constant current, constant power, constant resistance, as well as dynamic and scanning functions in communication mode.

II. Additional Features:

- ◆ Cooling mode: Air cooling;
- ◆ Operating temperature: 0-40° C.
- ◆ Storage temperature: -10° C-50° C.
- ◆ Maximum humidity for indoor use: 95%

Chapter 2: Basic Usage

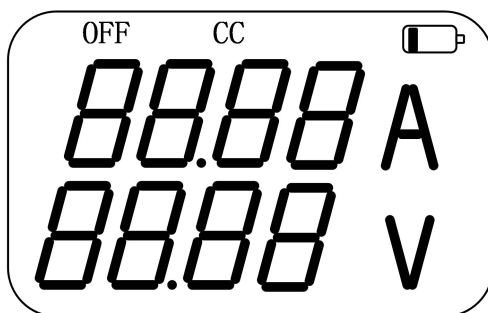
I. Basic Operating Modes

1. Constant Current Mode (CC)

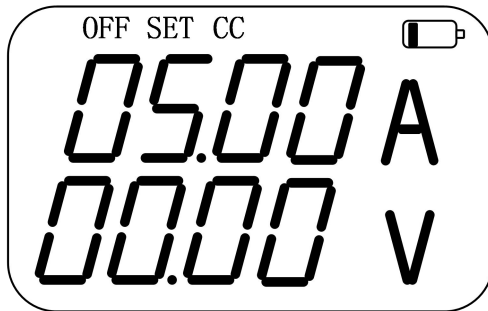
CC Mode: Within the output range, the load is pulled in accordance with the set value, with the load-pull remaining unaffected by the changes in input voltage.

Operating Procedure:

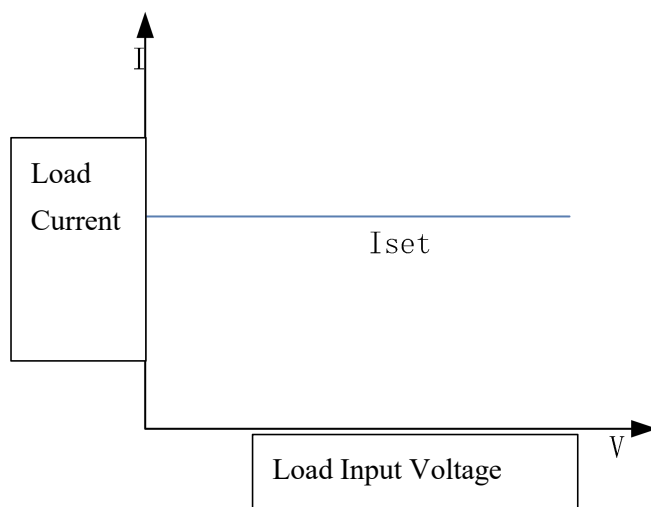
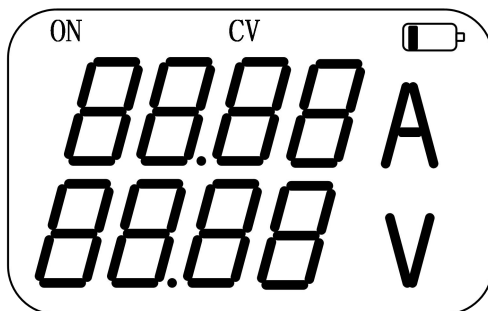
1. Press the CC button on the keyboard to display the CC mode at the top of the screen, as shown below:



2. Press the SET button to enter the SET mode. Use the left and right arrow buttons to select digits, and adjust the numerical value with the knob, as shown below:



3. Press the on/off button to turn on and display the ON state on the screen, as shown below.

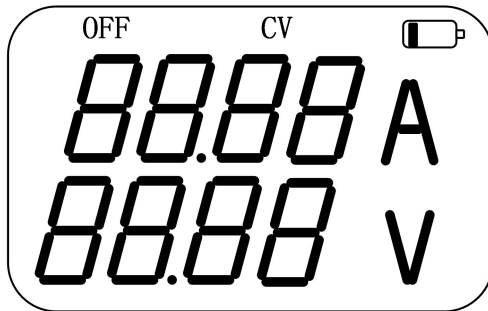


2. Constant Voltage Mode (CV)

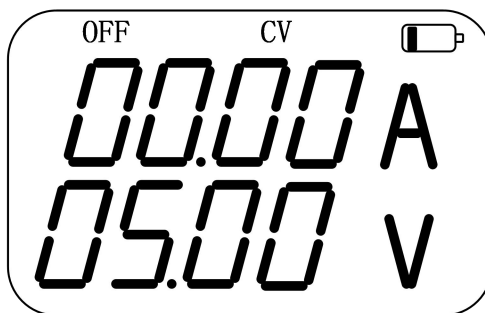
CV Mode: Within the output range, the load is pulled in accordance with the set voltage value to maintain the voltage constant at the set value.

Operating Procedure:

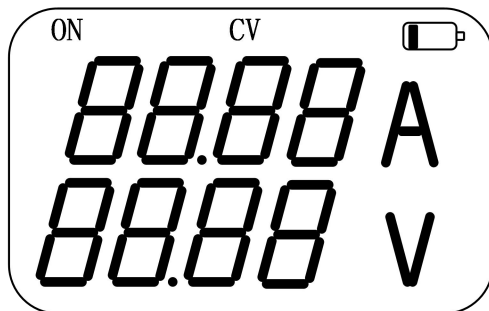
1. Press the CV button on the keyboard to display the CV mode at the top of the screen, as shown below:

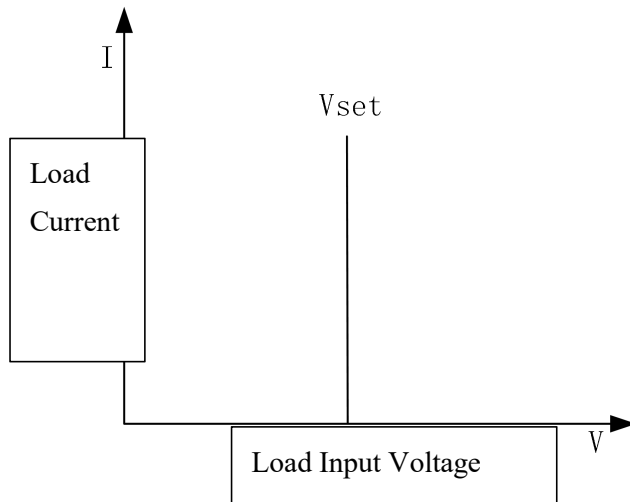


2. Press the SET button to enter the SET mode. Use the left and right arrow buttons to select digits, and adjust the numerical value with the knob, as shown below:



3. Press the on/off button to turn on and display the ON state on the screen, as shown below.





II. Over Current and Over Voltage

The load provides over-current, over-voltage, and over-power protection.

- ◆ Over-current Protection: When the input current exceeds the set maximum current, the load will activate over-current protection, leading to automatic shutdown, and the screen will display "OC."
- ◆ Over-voltage Protection: When the input voltage exceeds the set maximum voltage, the load will activate over-voltage protection, leading to automatic shutdown, and the screen will display "OV."
- ◆ Over-temperature Protection: When the temperature of the internal power device of the load exceeds 80° C, the load will activate over-temperature protection, leading to automatic shutdown, and the screen will display "OT."
- ◆ Over-power Protection: When the power consumption of the load exceeds the set maximum power, the load will activate over-power protection, leading to automatic shutdown, and the screen will display "OP."

III. Smart Fan

- ◆ The ET55 fan can automatically detect the ambient temperature, calculate the rotational speed, and ensure a constant temperature inside the chassis to mitigate the impact of large temperature differences.

IV. Handheld Load Communication Protocol

- ◆ Please refer to the handheld load protocol document for more information about the handheld load protocol.