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LIBODD SZ01

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Model: SZ01

INTRODUCTION

This manual provides detailed instructions for the safe and effective operation of your LIBODD SZ01 Smart Digital Multimeter. Please read this manual thoroughly before use and retain it for future reference. This device is a battery-driven, auto-ranging digital multimeter with True RMS capabilities, designed for high-precision electrical maintenance.

Safety Information

Always adhere to safety precautions when using electrical testing equipment. Failure to do so may result in injury or damage to the device. Ensure the device is in good working condition before each use. Do not exceed the maximum input values specified for each function.

PACKAGE CONTENTS

Verify that all items listed below are present in your package:

- Multimeter Unit (SZ01)
- Test Leads (Red and Black)
- Instruction Manual
- Packing Box

Note: The SZ01 model does not include a temperature line.

PRODUCT OVERVIEW

The LIBODD SZ01 Smart Digital Multimeter features a clear LCD display and intuitive controls for various electrical measurements.



Figure 1: LIBODD SZ01 Smart Digital Multimeter, showing the device, test leads, and packaging. The multimeter has an orange casing and a large digital display.

Key Components

- **LCD Display:** 6000 counts display with backlight for clear readings.
- **Function Buttons:** Power, HOLD, NCV, H/* (Backlight), SEL.
- **Input Jacks:** COM (Common), INPUT (Voltage, Resistance, Diode, Capacitance, Frequency), 10A (Current).
- **NCV Sensor:** Located at the top for non-contact voltage detection.
- **Test Leads:** Red and black leads for connecting to circuits.



Figure 2: Side and front view of the LIBODD SZ01 Multimeter, illustrating its dimensions: approximately 4.93 inches (125.4 mm) in length, 2.63 inches (66.9 mm) in width, and 1.05 inches (26.6 mm) in thickness.

SETUP

Battery Installation

The multimeter requires batteries for operation. To install or replace batteries:

1. Ensure the multimeter is powered off and disconnect all test leads.
2. Locate the battery compartment cover on the back of the device.
3. Use a screwdriver to open the battery compartment.
4. Insert new batteries, observing correct polarity (+ and -).
5. Securely close the battery compartment cover.

Connecting Test Leads

For most measurements, connect the black test lead to the **COM** jack and the red test lead to the **INPUT** jack. For current measurements (mA/A), connect the red test lead to the **10A** or **mA/A** jack as appropriate for the expected current range.

OPERATING INSTRUCTIONS

The SZ01 multimeter features auto-ranging for most functions, simplifying operation. Press the power button () to turn the device on or off.

Function Selection

Press the **SEL** button to cycle through different measurement modes within a function group (e.g., AC Voltage, DC Voltage, Resistance, Diode, Continuity).

Common Measurements

- **DC/AC Voltage Measurement:**

Connect test leads to the circuit in parallel. Select the appropriate voltage mode (DC V or AC V) using the **SEL** button. The display will show the voltage reading.

- **DC/AC Current Measurement:**

Caution: Always connect the multimeter in series with the circuit when measuring current. Ensure the circuit is de-energized before connecting. Connect the black lead to **COM** and the red lead to the **10A** or **mA/A** jack. Select the appropriate current mode (DC A or AC A). Apply power to the circuit and read the current.

- **Resistance Measurement:**

Ensure the circuit or component is de-energized. Connect test leads across the component. Select the resistance mode (Ω). The display will show the resistance value.

- **Continuity Test:**

Ensure the circuit is de-energized. Select the continuity mode (often combined with resistance or diode). Touch the test leads to the points to be tested. A beep indicates continuity (low resistance).

- **Diode Test:**

Ensure the component is de-energized. Select the diode test mode ($\rightarrow|•$). Connect the red lead to the anode and the black lead to the cathode. The display will show the forward voltage drop.

- **Capacitance Measurement:**

Ensure the capacitor is fully discharged before testing. Connect test leads across the capacitor. Select the capacitance mode. The display will show the capacitance value.

- **Frequency Measurement:**

Connect test leads to the signal source. Select the frequency mode (Hz). The display will show the frequency.

- **Non-Contact Voltage (NCV) Detection:**

Press the **NCV** button. Hold the top of the multimeter near an AC voltage source. The device will indicate the presence of AC voltage through visual and/or audible alerts. The strip lights on the sides of the screen will change synchronously with the intensity of the electric field.

Special Functions

- **Data Hold:** Press the **HOLD** button to freeze the current reading on the display. Press again to release.

- **Backlight:** Press the **H/*** button to turn the LCD backlight on or off for improved visibility in low-light conditions.

- **Automatic Shutdown:** The multimeter will automatically power off after a period of inactivity to

conserve battery life.

MAINTENANCE

Cleaning

Wipe the device with a damp cloth and mild detergent. Do not use abrasive cleaners or solvents. Ensure the device is dry before storage or use.

Storage

When not in use for extended periods, remove the batteries to prevent leakage. Store the multimeter in a cool, dry place, away from direct sunlight and extreme temperatures.

Battery Replacement

Replace batteries when the low battery indicator appears on the display. Refer to the "Battery Installation" section for instructions.

TROUBLESHOOTING

- **No Display/Power:**

Check battery installation and ensure batteries are not depleted. Replace if necessary.

- **Incorrect Readings:**

Ensure test leads are correctly connected to the appropriate jacks. Verify the correct function mode is selected. Check for damaged test leads.

- **"OL" or Overload Indication:**

This indicates the measured value exceeds the selected range. The auto-ranging feature should handle most situations, but ensure you are not attempting to measure values far beyond the device's capabilities.

- **No NCV Response:**

Ensure the NCV function is activated. The sensor needs to be in close proximity to an AC voltage source.

SPECIFICATIONS (MODEL SZ01)

Measurement Function	Range
DC Current	600.0mA / 10A
AC Current	600.0mA / 10A
DC Voltage	600.0mV / 6.000V / 60.00V / 600.0V
AC Voltage	600.0mV / 6.000V / 60.00V / 600.0V
Resistance	600.0Ω / 6.000KΩ / 60.00KΩ / 600.0KΩ / 6.000MΩ / 60.00MΩ
Capacitance	9.999nF / 99.99nF / 999.9nF / 9.999uF / 99.99uF / 999.9uF / 9.999mF / 99.99mF
Diode Test	1V
Line On-Off Test (Continuity)	Yes
NCV (Non-Contact Voltage)	Yes
Frequency	100Hz / 1000Hz
Backlight	Yes
Display Counts	6000 Counts
Item Weight	10 Grams
Dimensions	Approx. 125.4mm x 66.9mm x 26.6mm (4.93 x 2.63 x 1.05 inches)

Note: Specifications are subject to change without prior notice. Actual parameters are subject to product measurement.

WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the contact information provided with your purchase or visit the official LIBODD website. Keep your purchase receipt as proof of purchase.