

LIBODD 1005005240978526

LIBODD HT118 Digital Multimeter User Manual

Model: HT118C (1005005240978526)

1. INTRODUCTION

The LIBODD HT118 Digital Multimeter is a professional, high-precision instrument designed for accurate electrical measurements. Featuring True RMS, auto-ranging, and Non-Contact Voltage (NCV) detection, it is suitable for a wide range of applications including electronic equipment repair, circuit testing, experimental research, teaching, and general home use.

Key features include:

- Easy to use operation.
- Multifunctional measurement capabilities.
- Wide applicability across various electrical tasks.
- High measurement accuracy for reliable data.

2. SAFETY INFORMATION

WARNING: Read and understand all safety information and operating instructions in this manual before using the multimeter. Failure to do so may result in electric shock, fire, or serious injury.

- Always ensure the multimeter is set to the correct function and range before making measurements.
- Do not exceed the maximum input values for any range.
- Exercise extreme caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.
- Inspect test leads for damage before each use. Do not use if insulation is damaged or bare metal is exposed.
- Do not operate the multimeter if it appears damaged or is not operating properly.
- Always disconnect power to the circuit under test before connecting or disconnecting test leads, especially when measuring current.
- Use caution when working in wet or damp environments.
- Replace batteries promptly when the low battery indicator appears to ensure accurate readings.

3. PACKAGE CONTENTS

Verify that all items listed below are present and undamaged:

- LIBODD HT118 Digital Multimeter
- Test Leads (Red and Black)
- User Manual
- Temperature Probe (if included with specific model variant)



Figure 3.1: Contents of the HT118 package, including the multimeter, test leads, and user manual.

4. PRODUCT OVERVIEW

Familiarize yourself with the components of the HT118 Digital Multimeter:

- **LCD Display:** Shows measurement readings, units, and function indicators. Features a double-color backlight for high voltage indication (orange for >80V or >1A).
- **Function Buttons:**

- **FUNC:** Selects sub-functions within a rotary switch position (e.g., AC/DC, Diode/Continuity).
 - **HOLD:** Freezes the current reading on the display.
 - **MAX/MIN:** Displays the maximum or minimum reading recorded during a measurement session.
- **Rotary Switch:** Selects the desired measurement function (e.g., Voltage, Current, Resistance, Capacitance, Frequency, NCV, Live).
- **Input Jacks:**
 - **VΩHz:** Input for voltage, resistance, frequency, capacitance, diode, and continuity measurements.
 - **mA/μA:** Input for milliampere and microampere current measurements.
 - **10A:** Input for 10 Ampere current measurements.
 - **COM:** Common (negative) input for all measurements.
- **LED Jack Indicator Light:** A green light indicates the corresponding gear jack, helping prevent incorrect probe insertion.



LED jack indicates light

The corresponding gear jack indicates that the green light flashes, so there is no need to worry about inserting the wrong probe.



Double color backlight

Orange backlight indicates high voltage. Orange backlight with voltage greater than 80V or current greater than 1A automatically lights up.



NCV non-contact voltage detection

The buzzer sounds slowly and turns green. The buzzer sounds fast and lights red. L Weak display of AC signal



20V full-range automatic anti-burning



Battery not included (2x1.5V AA batteries)

Figure 4.1: Detailed view of the HT118's display, LED jack indicator, and NCV feature.

5. SETUP AND BATTERY INSTALLATION

The HT118 Digital Multimeter requires 2 x 1.5V AA batteries (not included) for operation.

1. Ensure the multimeter is turned OFF.
2. Locate the battery compartment cover on the back of the unit.
3. Use a screwdriver to loosen the screw(s) securing the battery cover.
4. Remove the battery cover.
5. Insert two 1.5V AA batteries, observing the correct polarity (+ and -) as indicated inside the compartment.
6. Replace the battery cover and secure it with the screw(s).

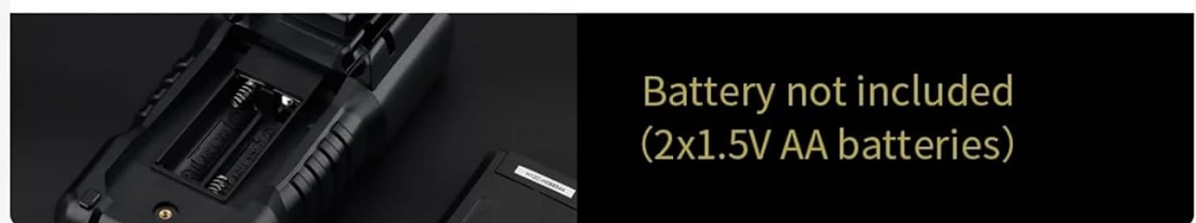


Figure 5.1: The battery compartment on the rear of the multimeter, requiring 2x1.5V AA batteries.

6. OPERATING INSTRUCTIONS

This section details how to perform common measurements with your HT118 Digital Multimeter.

6.1. Measuring DC/AC Voltage

1. Insert the red test lead into the **V Ω Hz** jack and the black test lead into the **COM** jack.
2. Turn the rotary switch to the **V~** (AC Voltage) or **V-** (DC Voltage) position. The multimeter will auto-range.
3. Connect the test leads in parallel to the circuit or component you wish to measure.
4. Read the voltage value on the LCD display.

6.2. Measuring DC/AC Current

CAUTION: Always connect the multimeter in series with the circuit when measuring current. Never connect it in parallel across a voltage source, as this will blow the fuse or damage the meter.

1. For currents up to 600mA, insert the red test lead into the **mA/ μ A** jack. For currents up to 10A, insert the red test lead into the **10A** jack. Insert the black test lead into the **COM** jack.
2. Turn the rotary switch to the **A~** (AC Current) or **A-** (DC Current) position.
3. Open the circuit where you want to measure current and connect the multimeter in series.
4. Read the current value on the LCD display.

6.3. Measuring Resistance (Ω)

1. Insert the red test lead into the **V Ω Hz** jack and the black test lead into the **COM** jack.
2. Turn the rotary switch to the **Ω** position.
3. Ensure the circuit or component is de-energized before measuring resistance.
4. Connect the test leads across the component whose resistance you want to measure.
5. Read the resistance value on the LCD display.

6.4. Measuring Capacitance (F)

1. Insert the red test lead into the **V Ω Hz** jack and the black test lead into the **COM** jack.
2. Turn the rotary switch to the **F** (Capacitance) position.
3. Ensure the capacitor is fully discharged before connecting the test leads.
4. Connect the test leads across the capacitor terminals.
5. Read the capacitance value on the LCD display.

Capacitance test



Figure 6.1: The HT118 multimeter displaying a capacitance measurement.

6.5. Non-Contact Voltage (NCV) Detection

1. Turn the rotary switch to the **NCV** position.
2. Move the top front part of the multimeter close to the conductor you suspect has AC voltage.
3. The multimeter will emit an audible beep and the NCV indicator light will flash if AC voltage is detected. The frequency of beeps and flashes increases with stronger voltage signals.



Figure 6.2: The HT118 multimeter in NCV mode, detecting voltage near an electrical outlet.



Figure 6.3: The HT118 multimeter displaying "LIVE" during live wire detection.

7. MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your multimeter.

- **Cleaning:** Wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents.
- **Battery Replacement:** Replace batteries when the low battery indicator appears on the display. Refer to Section 5 for instructions.
- **Fuse Replacement:** If the current measurement function stops working, the fuse may be blown. Refer to the specifications for the correct fuse type and rating. Fuse replacement should only be performed by qualified personnel.
- **Storage:** If the multimeter is not used for an extended period, remove the batteries to prevent leakage. Store in a cool, dry place away from direct sunlight.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
No display or dim display	Low or dead batteries. Incorrect battery polarity.	Replace batteries. Check battery orientation.
Incorrect readings	Incorrect function/range selected. Damaged test leads. External interference.	Verify rotary switch position. Inspect and replace test leads if damaged. Move away from strong electromagnetic fields.
Current measurement not working	Blown fuse.	Replace the fuse (refer to fuse specifications).
NCV not detecting voltage	Too far from source. Voltage too low.	Move closer to the conductor. Ensure voltage is within detectable range.

9. SPECIFICATIONS

Parameter	Value
Model Number	HT118C
Display Type	Digital display (6000 Counts)
DC Current Range	600 μ A/6000 μ A/60mA/600mA/6A/10A
AC Current Range	600 μ A/6000 μ A/60mA/600mA/10A
DC Voltage Range	6V/60V/600V/750V
AC Voltage Range	600mV/6V/60V/600V/1000V
Capacitance Range	10nF/100nF/1 μ F/10 μ F/100 μ F/1mF/10mF/100mF
Resistance Range	600 Ω -60M Ω
Operating Mode	Auto / Manual
Dimensions	190X88X53mm
Operating Temperature	-20 - 10000 °C
DIY Supplies	ELECTRICAL
Power Supply	2 x 1.5V AA Batteries (not included)

10. WARRANTY AND SUPPORT

Specific warranty information for the LIBODD HT118 Digital Multimeter is not provided in the available product data. Please refer to the product packaging or contact LIBODD customer support for detailed warranty terms and conditions.

For technical support or inquiries, please contact the manufacturer or your point of purchase.

