HT HT64

HT Instruments HT64 TRMS CATIV Datalogger Graphic DMM User Manual

Model: HT64 | Brand: HT

1. INTRODUCTION

The HT64 is a professional True RMS (TRMS) Digital Multimeter (DMM) designed for precise and reliable measurements in various electrical applications. It features a graphic display, datalogging capabilities, and is rated for CAT IV 600V and CAT III 1000V environments, ensuring high safety standards. This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your HT64 multimeter.

2. PACKAGE CONTENTS

Upon unpacking, please verify that all the following items are included in your package:

- HT64 Unit
- Charging Dock
- Probe Kit 4324-2
- Soft Carry Case
- User Manual (this document)
- Batteries (1 Lithium Ion battery included)
- ISO Calibration Report
- T10 Adapter for Temperature Probe
- TK101 Temperature Probe
- BAT64 Rechargeable Battery

3. PRODUCT OVERVIEW

The HT64 multimeter is engineered for demanding users, offering a comprehensive range of features for accurate electrical measurements. Its ergonomic design ensures ease of use, while the high-resolution display provides clear readings. Key features include:

- True RMS (TRMS) measurement capability
- CAT IV 600V and CAT III 1000V safety ratings
- Autorange function for simplified operation
- Backlit graphic display for enhanced visibility
- Datalogging functionality
- Measures Voltage (AC/DC), Current (AC/DC), Resistance, Capacitance, Frequency, and Temperature
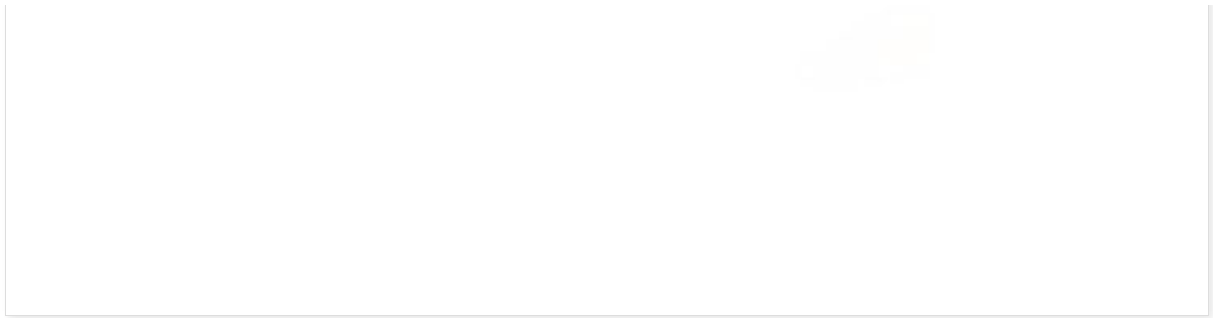
Figure 1: Front view of the HT64 Digital Multimeter. The device features an orange casing with a black central panel. The large graphic display shows "264.8 V~Hz" and "60.0 Hz". Below the display are four function buttons (F1, F2, F3, F4) and four navigation buttons (GRAPH, MODE, MENU, MAX). A large rotary dial is centrally located, surrounded by various measurement settings such as 10A, mA, µA, V~Hz, mV~, Hz%, Ω, CAP, Temp, and OFF/CHG. Input jacks are visible at the bottom for 10A, 800mA, and COM connections, along with a VHz% / CAP / Temp input.

4. SETUP

4.1. Battery Installation and Charging

The HT64 multimeter comes with a rechargeable Lithium Ion battery. Before first use, ensure the battery is fully charged using the provided charging dock.

1. Locate the battery compartment on the rear of the device.
2. Insert the BAT64 rechargeable battery, ensuring correct polarity.
3. Close the battery compartment securely.
4. Connect the HT64 to the charging dock and plug the dock into a power source. The display will indicate charging status.

4.2. Initial Power-On

To power on the device, rotate the central dial from the "OFF/CHG" position to any desired measurement function (e.g., V~Hz). The display will illuminate.

5. OPERATING INSTRUCTIONS

5.1. Rotary Dial Functions

The large central rotary dial is used to select the primary measurement function. Each position corresponds to a specific type of measurement:

- **OFF/CHG:** Powers off the device and enables charging.
- **V~Hz:** Measures AC Voltage and Frequency.
- **V-:** Measures DC Voltage.
- **mV~:** Measures AC Millivoltage.
- **Hz%:** Measures Frequency and Duty Cycle.
- **Ω CAP Temp:** Measures Resistance, Capacitance, and Temperature.
- **µA Hz%:** Measures Microamperes (AC/DC) and Frequency/Duty Cycle.
- **mA Hz%:** Measures Milliamperes (AC/DC) and Frequency/Duty Cycle.
- **10A Hz%:** Measures Amperes (AC/DC) up to 10A and Frequency/Duty Cycle.

5.2. Front Panel Buttons

The HT64 features several buttons for advanced functions and navigation:

- **F1, F2, F3, F4:** Context-sensitive function keys, their purpose changes based on the selected mode and is indicated on the display.

- **GRAPH:** Activates the graphing function for visualizing measurement trends.
- **MODE:** Toggles between different sub-functions within a rotary dial setting (e.g., AC/DC, Resistance/Capacitance/Temperature).
- **MENU:** Accesses the main menu for settings and configurations.
- **MAX:** Displays the maximum recorded value during a measurement session.
- **RANGE:** Toggles between auto-ranging and manual ranging modes.
- **HOLD REL:**
    - **HOLD:** Freezes the current display reading.
    - **REL (Relative):** Measures the difference between the current reading and a stored reference value.

5.3. Input Terminals

Connect test leads to the appropriate input terminals based on the measurement type:

- **COM:** Common terminal for all measurements.
- **VHz% / CAP / Temp:** Input for Voltage, Frequency, Resistance, Capacitance, and Temperature measurements.
- **mA / µA:** Input for Milliamperes and Microamperes measurements (Max 800mA).
- **10A:** Input for Amperes measurements up to 10A.

Safety Warning: Always ensure test leads are connected to the correct terminals for the selected measurement function to prevent damage to the meter or personal injury. Observe the CAT IV 600V and CAT III 1000V ratings.

6. MAINTENANCE

6.1. Cleaning

To maintain the accuracy and longevity of your HT64, keep it clean. Use a soft, damp cloth with mild detergent to wipe the casing. Do not use abrasive cleaners or solvents. Ensure the device is powered off and disconnected from any circuits before cleaning.

6.2. Battery Care

To maximize battery life, charge the battery regularly. If the device will not be used for an extended period, it is recommended to fully charge the battery and store the device in a cool, dry place. Avoid extreme temperatures.

6.3. Fuse Replacement

The HT64 is fused for protection. If the current measurement function stops working, the fuse may need replacement. Refer to the detailed service manual for fuse specifications and replacement procedures. Fuse replacement should only be performed by qualified personnel.

7. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your HT64 multimeter.

Problem	Possible Cause	Solution
Device does not power on.	Low or depleted battery. Incorrect battery installation.	Charge the battery using the charging dock. Ensure the battery is correctly inserted.

Problem	Possible Cause	Solution
No reading or "OL" (Overload) displayed.	Incorrect function selected. Test leads not properly connected. Measurement exceeds range. Blown fuse (for current measurements).	Verify the rotary dial is set to the correct function. Ensure test leads are securely connected. Select a higher range if available or check fuse for current measurements.
Inaccurate readings.	Poor test lead connection. Environmental interference. Device needs calibration.	Check test lead connections. Move away from strong electromagnetic fields. Contact HT Instruments for calibration services.

8. SPECIFICATIONS

Detailed technical specifications for the HT64 Digital Multimeter:

Feature	Specification
Model Number	HT64
Product Dimensions (L x W x H)	7.87 x 3.15 x 1.97 inches
Item Weight	2.34 Pounds
Batteries	1 Lithium Ion battery (included)
Safety Rating	CAT IV 600V, CAT III 1000V
Measurement Type	True RMS (TRMS)
Display	Graphic, Backlit
Power Source	Battery Powered
Color	Orange

9. WARRANTY AND SUPPORT

The HT64 Digital Multimeter comes with a **1-year manufacturer warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use.

For technical support, warranty claims, or service inquiries, please contact HT Instruments customer service. Refer to the contact information provided in your product packaging or visit the official HT Instruments website.