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BTMETER BT-570T-APP

BTMETER BT-570T-APP Clamp Multimeter User Manual

Comprehensive Guide for Operation and Maintenance

1. Introduction

The BTMETER BT-570T-APP is a versatile AC/DC 1000A Clamp Multimeter designed for accurate electrical measurements. It features 4000 counts digital display, data logging capabilities, and Bluetooth connectivity for remote monitoring via a smartphone or tablet application. This manual provides detailed instructions for the safe and effective use of your device.

Key functionalities include measuring AC/DC current, AC/DC voltage, resistance, capacitance, frequency, temperature, and continuity. It is suitable for various applications including HVAC, household electrical work, and commercial troubleshooting.

2. Safety Information

Always adhere to the following safety precautions to prevent personal injury or damage to the meter:

- Do not exceed the maximum input limits for any measurement range.
- Exercise extreme caution when working with live circuits.
- Ensure the meter is set to the correct function and range before making measurements.
- Inspect test leads for damage before each use. Replace if insulation is compromised.
- Do not operate the meter if it appears damaged or is not functioning properly.
- Adhere to IEC 61010-1, CAT IV 600V, CAT III 1000V safety standards.
- When measuring current, ensure only the LIVE conductor is clamped for accurate readings. Clamping both hot and neutral conductors will result in a zero reading.

3. Product Overview

The BTMETER BT-570T-APP is designed for ease of use and durability. Familiarize yourself with its components:

Figure 3.1: Key Components of the BT-570T-APP

AC/DC Clamp: For non-contact current measurement. Jaw caliber size is 1.77 inches (45mm).

Trigger: Opens and closes the clamp jaw.

Function Dial: Selects measurement modes (Voltage, Current, Resistance, etc.).

Backlit LCD Display: Shows measurement readings clearly, even in low light.

Input Jacks: For connecting test leads and temperature probe.

Buttons: HOLD, SELECT RANGE, REL/Duty, Max/Min/Average.

Figure 3.2: Product Contents and Bluetooth Connectivity

The package includes the BT-570T-APP clamp multimeter, test leads, a thermocouple probe, and a carrying case for convenient storage and transport.

4. Setup

4.1 Battery Installation

The meter requires batteries for operation. Open the battery compartment on the back of the device, insert the batteries according to the polarity indicators, and secure the cover.

4.2 App Installation and Bluetooth Connection

The BT-570T-APP supports remote control and data logging via a mobile application. Follow these steps to connect:

1. Download the "Intelligent Clamp Meter" app from the App Store (iOS) or Google Play (Android).
2. Ensure Bluetooth is enabled on your smartphone or tablet.
3. Turn on the BT-570T-APP multimeter.

4. Open the app on your device. It should automatically detect and connect to the multimeter.
5. Once connected, you can view measurements, graph data, and save readings in Excel or TXT format.

Figure 4.1: App Download and Bluetooth Pairing

5. Operating Instructions

5.1 AC/DC Current Measurement (Clamp)

To measure AC or DC current up to 1000A:

1. Turn the function dial to the "400A" or "1000A" AC/DC current range.
2. Press the SELECT button to toggle between AC and DC current if necessary.
3. Open the clamp jaw using the trigger.
4. Enclose only one conductor (e.g., the live wire) within the clamp. Do not clamp multiple wires as this will result in inaccurate readings.
5. Read the current value on the LCD display.

Figure 5.1: Measuring AC/DC Current with the Clamp

5.2 Voltage Measurement (AC/DC)

To measure AC or DC voltage up to 1000V:

1. Insert the red test lead into the VΩHzT+ jack and the black test lead into the COM jack.
2. Turn the function dial to the "V~" (AC Voltage) or "V-" (DC Voltage) range.
3. Connect the test leads in parallel to the circuit or component under test.
4. Read the voltage value on the LCD display.

5.3 Resistance Measurement

To measure resistance up to 60M ohms:

1. Insert the red test lead into the VΩHzT+ jack and the black test lead into the COM jack.
2. Turn the function dial to the "Ω" (Resistance) range.
3. Ensure the circuit is de-energized before connecting the test leads across the component.

4. Read the resistance value on the LCD display.

5.4 Capacitance Measurement

To measure capacitance up to 200µF:

1. Insert the red test lead into the VΩHzT+ jack and the black test lead into the COM jack.
2. Turn the function dial to the "CAP" (Capacitance) range.
3. Discharge the capacitor completely before connecting the test leads.
4. Connect the test leads across the capacitor terminals.
5. Read the capacitance value on the LCD display.

5.5 Frequency Measurement

To measure frequency up to 9.999MHz:

1. Insert the red test lead into the VΩHzT+ jack and the black test lead into the COM jack.
2. Turn the function dial to the "Hz" (Frequency) range.
3. Connect the test leads to the signal source.
4. Read the frequency value on the LCD display.

5.6 Temperature Measurement

To measure temperature from -4°F to 1832°F (-20°C to 1000°C):

1. Insert the thermocouple probe into the T+ and COM jacks, observing polarity.
2. Turn the function dial to the "°C/°F" (Temperature) range.
3. Press the SELECT button to switch between Celsius and Fahrenheit.
4. Place the tip of the thermocouple probe on or in the object whose temperature is to be measured.
5. Read the temperature value on the LCD display.

Figure 5.2: Temperature Measurement

5.7 Continuity Test

To test for circuit continuity:

1. Insert the red test lead into the VΩHzT+ jack and the black test lead into the COM jack.
2. Turn the function dial to the "Diode/Continuity" range.
3. Connect the test leads across the circuit or component.
4. The buzzer will sound if the resistance is less than 50Ω, indicating continuity.

Figure 5.3: Auditory Continuity Test

5.8 Data Logging and Bluetooth Features

The BT-570T-APP offers advanced data logging capabilities via its mobile application:

- **Remote Monitoring:** View real-time measurements on your phone or tablet from a distance.
- **Trend Chart:** The app automatically graphs measurement trends over time.
- **Data Export:** Export logged data in Excel (.xlsx) or TXT (.txt) formats for analysis.
- **Data Hold:** Press the "HOLD" button to freeze the current reading on the display.
- **REL (Relative Measurement):** Press "REL" to zero out the current reading, useful for measuring changes relative to a reference point.
- **Max/Min/Average:** Record the maximum, minimum, and average values during a measurement session.

Figure 5.4: Remote Control and Data Download via App

6. Maintenance

- **Cleaning:** Wipe the meter with a dry, clean cloth. Do not use abrasive cleaners or solvents.
- **Battery Replacement:** Replace batteries when the low battery indicator appears on the display. Ensure proper polarity.
- **Storage:** If storing for extended periods, remove the batteries to prevent leakage. Store in a cool, dry place away from direct sunlight.
- **Calibration:** For professional use, periodic calibration by a qualified technician is recommended to maintain accuracy.

7. Troubleshooting

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
Meter does not power on.	Dead or incorrectly installed batteries.	Replace batteries, ensuring correct polarity.
Inaccurate current reading (e.g., zero reading).	Clamping multiple conductors (hot and neutral).	Ensure only a single live conductor is clamped.
Bluetooth connection fails.	Bluetooth disabled on phone/tablet; app issue; meter too far.	Ensure Bluetooth is on, restart app/meter, move closer, check app permissions.
Data not saving/exporting from app.	App bug; insufficient storage; incorrect save location.	Ensure app is updated. Check phone storage. Refer to app's help section for data export paths. Some users report issues with iOS data saving, try Android if available.
Display shows "OL" (Overload).	Measurement exceeds the selected range.	Select a higher range or ensure the input is within the meter's capabilities.

8. Specifications

Parameter	Value
Model Number	BT-570T-APP
AC/DC Current Range	400A / 1000A (100mA / 1A resolution)
AC/DC Voltage Range	Up to 1000V
Resistance Range	Up to 60MΩ
Capacitance Range	Up to 200µF
Frequency Range	Up to 9.999MHz
Temperature Range	-4°F to 1832°F (-20°C to 1000°C)
Display Counts	4000 Counts
Jaw Caliber Size	1.77 inches (45mm)
Safety Rating	IEC 61010-1, CAT IV 600V, CAT III 1000V, Class 2, Double insulation
Power Source	Battery Powered
Item Weight	11.68 ounces
Package Dimensions	10.2 x 5 x 2.28 inches

9. Warranty and Support

BTMETER provides a 12-month quality warranty for the BT-570T-APP Clamp Multimeter. Life-time technical support is also available.

For technical assistance, warranty claims, or any inquiries, please contact BTMETER customer support through their

official website or the contact information provided with your purchase.

Optional protection plans are available for extended coverage:

- 3-Year Protection Plan
- 4-Year Protection Plan
- Complete Protect Plan (monthly billing)

Please refer to the specific terms and conditions of these protection plans for full details.

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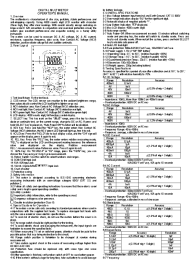
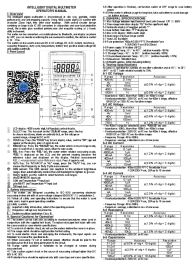
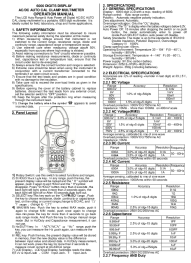
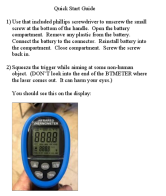
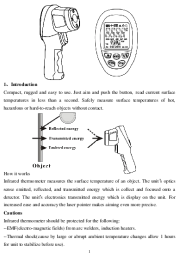
Related Documents - BT-570T-APP

	Digital Multimeter Operator's Manual - BTMETER BT-39K Operator's manual for the BTMETER BT-39K Digital Multimeter, detailing its features, specifications, operating instructions, safety precautions, and maintenance.
	Intelligent Digital Multimeter Operator's Manual - BTMETER BT-90EPD Comprehensive operator's manual for the BTMETER BT-90EPD Intelligent Digital Multimeter. Covers detailed specifications, safety guidelines, operating instructions for measuring voltage, current, resistance, capacitance, frequency, duty cycle, temperature, and battery testing. Features include a 4000-count LCD, auto/manual ranging, auto backlight, and Bluetooth connectivity for mobile app data logging and analysis.
	6000 Digits Clamp Multimeter Operation Manual Operation manual for the 6000 Digits AC/DC Auto Cal Clamp Multimeter, detailing safety information, specifications, measuring instructions, and maintenance.
	BTMETER BT-570CAPP Bluetooth Connection Guide Step-by-step instructions for connecting the BTMETER BT-570CAPP clamp meter to your smartphone via Bluetooth.

	[BTMETER BT-1500 Quick Start Guide] A quick start guide for the BTMETER BT-1500 infrared thermometer, covering battery installation, basic operation, and display interpretation.
	[BTMETER BT-1500 Non-Contact Infrared Thermometer User Manual] User manual for the BTMETER BT-1500 non-contact infrared thermometer, covering its introduction, how it works, safety warnings, quick start guide, maintenance procedures, and detailed specifications.