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Acclope BT90 Pro

Acclope BT90 PRO Battery Tester User Manual

Model: BT90 Pro | Brand: Acclope

1. INTRODUCTION

The Acclope BT90 PRO is a professional battery analyzer designed for comprehensive testing of 6V, 12V, and 24V battery systems. It supports a wide range of battery types including Flooded, AGM Flat Plate, AGM Spiral, GEL, EFB, and Lithium (LiFePO4). This device provides detailed analysis of battery health (SOH), state of charge (SOC), voltage, internal resistance, and performs cranking and charging system tests. Key features include real-time ambient temperature integration for accurate readings, cloud printing for shareable reports, and multilingual support for enhanced usability.

2. WHAT'S IN THE BOX

- BT90 PRO Battery Tester
- User Manual

3. SPECIFICATIONS

Feature	Specification
Brand	Acclope
Model Number	BT90 Pro
Power Source	Corded Electric (powered by battery under test)
Supported Voltage	6V, 12V, 24V
Battery Capacity Range	2-360Ah
CCA Range	30-3800 CCA
Supported Battery Types	Flooded, AGM Flat Plate, AGM Spiral, GEL, EFB, Lithium (LiFePO4)
Supported Standards	SAE, EN, IEC, CA, MCA, DIN, BCI, JIS
Measurement Types	Ammeter, LCR Meter, Multimeter, Ohmmeter, Voltage

Feature	Specification
Ambient Temperature Detection	Real-time display and algorithm adjustment
Cloud Printing	QR code for shareable reports
Dimensions (L x W x H)	3.1 x 1.1 x 5.95 inches
Item Weight	11.6 ounces (0.33 Kilograms)
Operating Temperature	Up to 80 Degrees Celsius
Certifications	CE, EMC, FCC, ISO 9001, UKCA

4. SETUP AND CONNECTION

The BT90 PRO is designed for plug-and-play operation, drawing power directly from the battery under test. It features built-in reverse polarity protection to prevent damage from incorrect connections.

4.1 Connecting the Tester

1. Ensure the vehicle is turned off.
2. Connect the red clamp to the positive (+) battery terminal.
3. Connect the black clamp to the negative (-) battery terminal.
4. The device will power on automatically.



Figure 4.1: Ensure correct connection of the clamps to the battery terminals. Red to positive, black to negative.

Incorrect connections will prevent operation and safeguard both the battery and the tester.

4.2 Initial Display

Upon startup, the device displays real-time voltage and ambient temperature. Use the arrow keys to navigate through the main menu options.

Your browser does not support the video tag.

Video 4.2: An overview of the Acclope BT90 PRO Battery Tester, demonstrating its features and initial setup. This video is provided by the seller, Acclope.

5. OPERATING INSTRUCTIONS

The BT90 PRO offers various testing modes and functions. Use the directional arrow keys to navigate and the 'OK' button to confirm selections.

5.1 Battery Test

This test assesses the overall health and charge level of the battery.

1. From the main menu, select 'Battery Test' and press 'OK'.
2. Select the appropriate vehicle model (Car, Motorcycle, Truck).
3. Select the battery type (e.g., Regular Flooded, AGM Flat Plate, GEL, Lithium).
4. Select the testing standard (e.g., CCA, IEC, EN).
5. Set the battery's rated CCA (Cold Cranking Amps) as indicated on the battery label.
6. The tester will perform the analysis and display results including State of Health (SOH), State of Charge (SOC), Measured CCA, and Voltage.



Figure 5.1.1: Step-by-step guide for conducting a battery test.

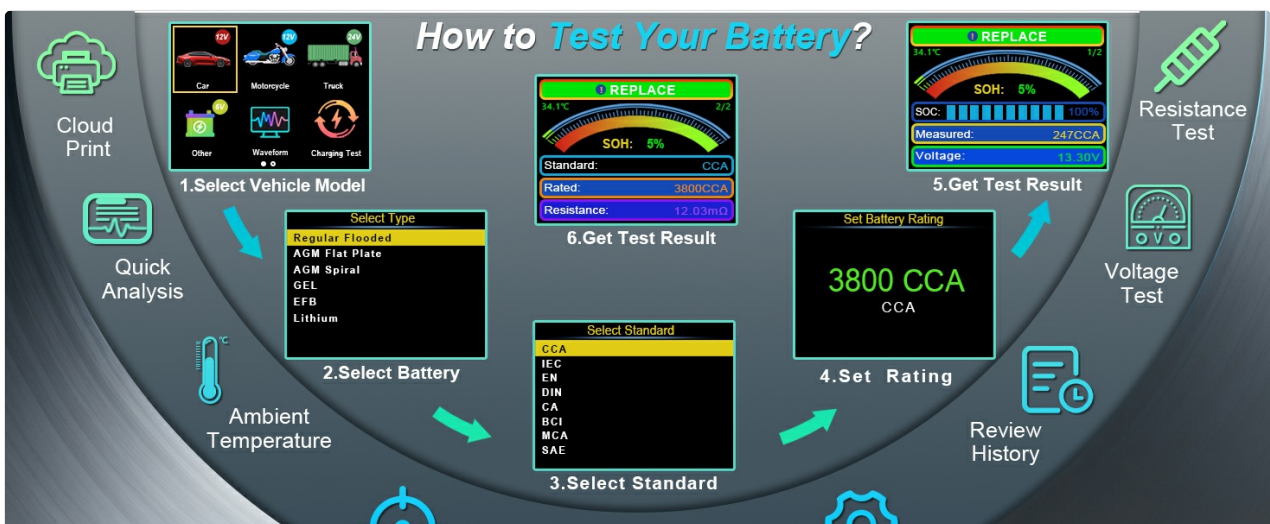


Figure 5.1.2: Example of battery test results and health status indications.

5.2 Cranking Test

This test evaluates the starting performance of the battery.

1. Ensure the vehicle is turned off and wait for at least 15 minutes.
2. Connect the clips correctly to the battery's positive and negative terminals.
3. Press the 'OK' button to enter the cranking test mode.

4. One person operates the BT90 PRO while another starts the engine. The device will detect the cranking performance in real-time.
5. View the test results, including cranking voltage and cranking time, and take action based on the prompts.



Figure 5.2: Instructions for performing a cranking test.

5.3 Charging Test

This test checks the performance of the vehicle's charging system, including the alternator output voltage and charging status.

1. Start the engine and ensure the vehicle is idling.
2. Connect the clips correctly to the battery's positive and negative terminals.
3. Press the 'OK' button to enter the charging test mode.
4. One person operates the BT90 PRO while another increases the engine speed to 2500 RPM and maintains it for 10 seconds.
5. The device will detect the performance of the charging system, including the alternator output voltage and charging status.



Figure 5.3: Instructions for performing a charging test.

5.4 Cloud Print Reports

Generate shareable and traceable reports of your battery tests.

1. After completing a test, select 'Cloud Print' from the menu.

2. A QR code will be displayed on the screen.
3. Scan the QR code with your smartphone to view, save, or print the detailed test report online.

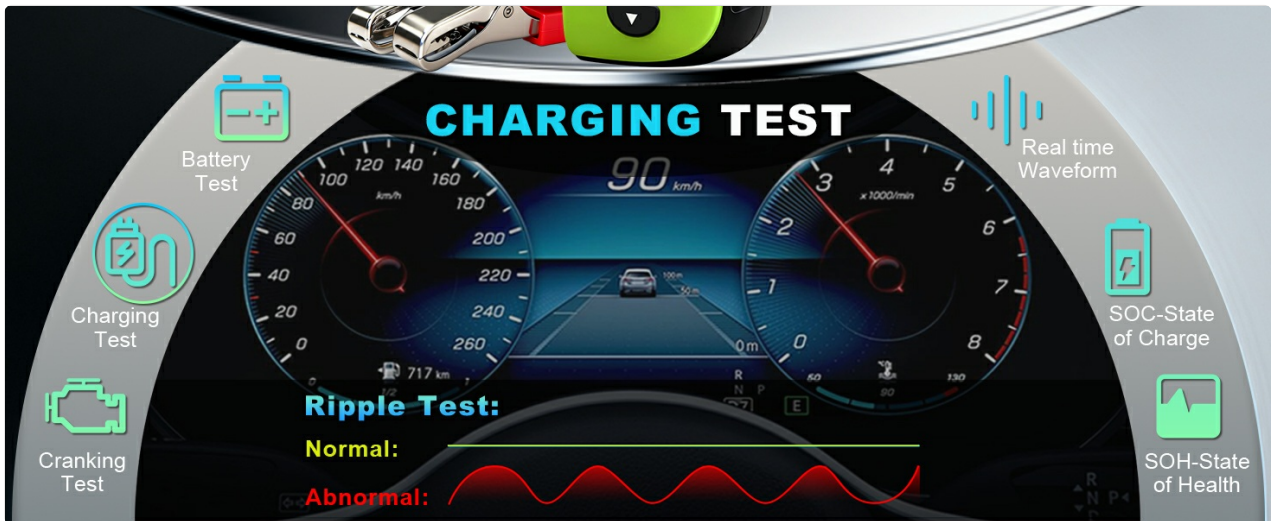


Figure 5.4: How to use the cloud printing function for test reports. [View Sample Report](#)

5.5 Ambient Temperature Detection

The device is equipped with a built-in temperature detection feature, enabling users to monitor the temperature of the battery's working environment in real time. This temperature data is fused with algorithms to inform CCA/IR logic, correcting cold/hot bias for more accurate results.

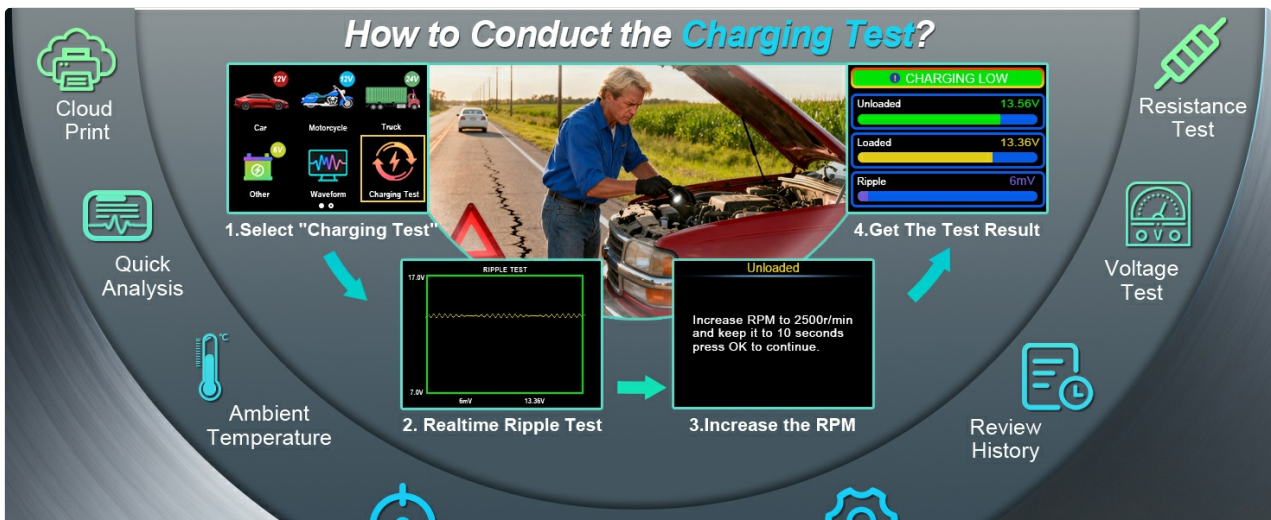


Figure 5.5: Real-time ambient temperature monitoring for accurate testing.

5.6 Quick Analysis

This feature is useful for diagnosing batteries in unknown conditions, allowing users to quickly assess if the battery meets vehicle performance requirements. It provides a quick 'Good/Recharge/Replace' verdict in seconds while retaining raw values and trends for technician depth.

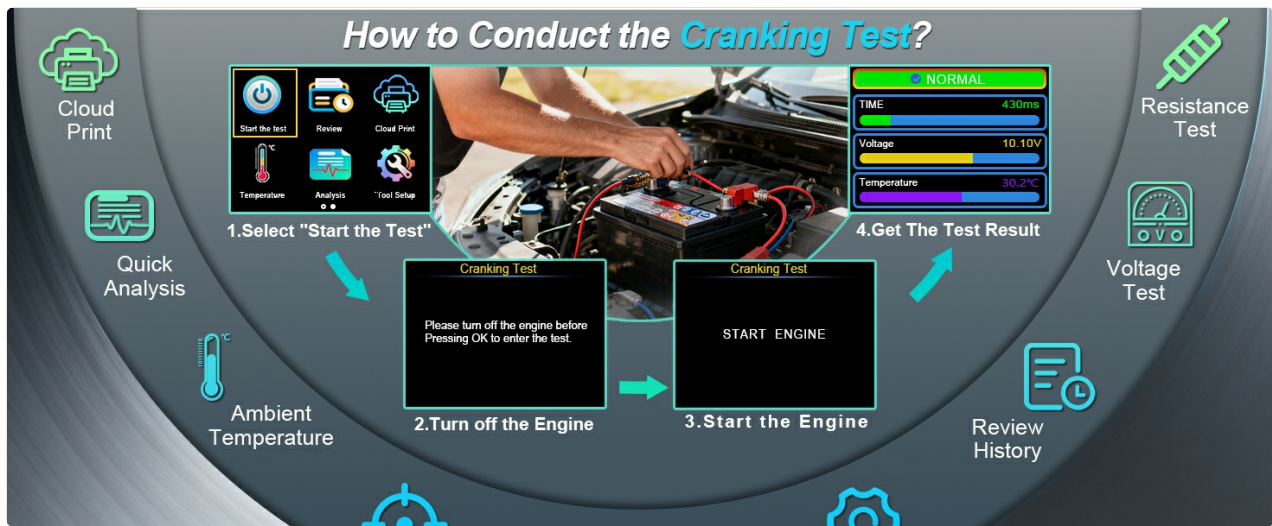


Figure 5.6: Quick analysis provides immediate battery status assessment.

5.7 Multilingual Support

The BT90 PRO supports 11 built-in languages. To change the language:

1. From the main menu, select 'Tool Setup'.
2. Select 'Language'.
3. Choose your desired language from the list and press 'OK' to confirm.



Figure 5.7: Language selection options for the device interface.

6. MAINTENANCE

To ensure the longevity and accuracy of your Acclope BT90 PRO, follow these maintenance guidelines:

- **Cleaning:** Wipe the device with a soft, dry cloth after each use. Avoid using abrasive cleaners or solvents.
- **Storage:** Store the tester in a cool, dry place away from direct sunlight and extreme temperatures.
- **Firmware Updates:** The device is firmware upgradable. Check the manufacturer's website periodically for updates to ensure optimal performance and access to new features or battery algorithms.
- **Cable Care:** Inspect the cables and clamps regularly for any signs of wear or damage. Replace if necessary to maintain safe and accurate operation.

7. TROUBLESHOOTING

If you encounter issues with your BT90 PRO, refer to the following common troubleshooting steps:

- **Device Not Powering On:** Ensure the battery under test has sufficient charge (minimum 5V operating voltage). Check that the clamps are securely connected to the correct battery terminals (red to positive, black to negative).
- **Inaccurate Readings:** Verify that the battery type and CCA rating entered into the device match the battery's specifications. Ensure the battery terminals are clean and free of corrosion for a good connection. Allow the tester and battery to acclimate to the same ambient temperature before testing for reliable results.
- **"REPLACE" Indication:** If the device consistently indicates "REPLACE" after a full test, the battery may be at the end of its service life. Consider replacing the battery.

- **Connection Errors:** The device has reverse-polarity protection. If connected incorrectly, it will not operate. Recheck clamp connections.
- **Cloud Print Issues:** Ensure your smartphone has internet access and can scan QR codes. Verify the link generated is correct.

8. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please refer to the official Acclope website or contact their customer service directly. Keep your purchase receipt as proof of purchase for warranty claims.