ANCEL BD200-BM200 Pro

ANCEL BD200 OBD2 Scanner & BM200 Pro Battery Monitor User Manual

Model: BD200-BM200 Pro

1. INTRODUCTION

This manual provides detailed instructions for the ANCEL BD200 OBD2 Scanner and the ANCEL BM200 Pro Car Battery Monitor. The ANCEL BD200 is a Bluetooth-enabled OBD2 diagnostic tool designed to read and clear engine trouble codes, monitor live data, and perform various diagnostic tests on vehicles manufactured from 1996 onwards. The ANCEL BM200 Pro is a 12V lead-acid battery monitor that wirelessly displays real-time battery voltage, power, temperature, and health, while also testing the vehicle's starting and charging systems. This combined system offers comprehensive vehicle health monitoring and diagnostic capabilities.

2. PRODUCT OVERVIEW

2.1 ANCEL BD200 OBD2 Scanner

The ANCEL BD200 is a compact OBD2 adapter that plugs into your vehicle's diagnostic port. It communicates wirelessly via Bluetooth with a dedicated app on your iOS or Android device, providing access to various diagnostic functions.

Image 2.1: ANCEL BD200 OBD2 Scanner device and its diagnostic functions displayed on a smartphone app.

2.2 ANCEL BM200 Pro Car Battery Monitor

The ANCEL BM200 Pro consists of a main unit that connects to the vehicle's 12V lead-acid battery and a wireless display unit. It uses 433MHz radio frequency transmission for stable and long-range communication, providing real-time battery status and alerts.
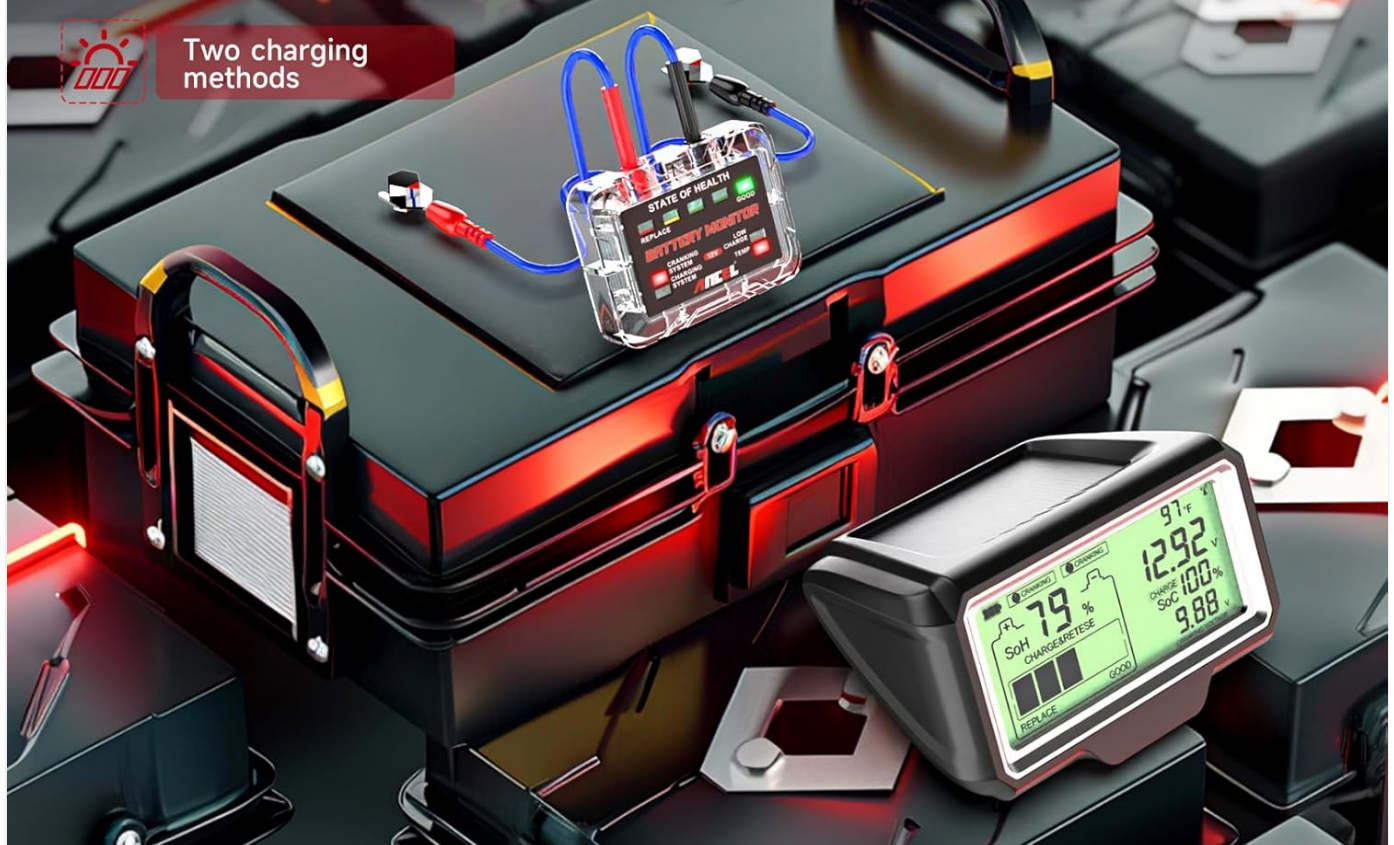
Image 2.2: ANCEL BM200 Pro Battery Monitor main unit and wireless display, highlighting its multi-test functions.

3. FEATURES

- **BD200 OBD2 Scanner:**

  - Reads and clears Diagnostic Trouble Codes (DTCs).
  - Monitors live real-time gauge data (fuel pressure, engine load, etc.).
  - Displays Freeze Frame data.
  - Performs I/M Readiness checks.
  - Includes a Performance Test function.
  - Provides Vehicle Information.
  - O2 Sensor Test and EVAP System Test.
  - On-Board Monitoring Test.
  - DTC Lookup function.

- Bluetooth connectivity for iOS and Android app.

- **BM200 Pro Battery Monitor:**

  - Real-time display of 12V lead-acid battery voltage, power, temperature, and health.
  - Automatic testing of vehicle starting and charging systems.
  - 433MHz RF transmission for extended range and stability.
  - Alarm sound for abnormal temperature, low power, low voltage, and system failures.
  - Supports Battery Test, Cranking Test, Charging Test, and Voltage Test.
  - Two charging methods for the display unit: Solar and Type-C.
  - Built-in alarm function for proactive maintenance.
  - Low power consumption and automatic connection.
  - Security protection design: reverse connection, overheat, short circuit protection, built-in fuse.
  - IP67 waterproof design for the main unit.
  - Built-in shock sensor for automatic sleep and wake-up.

4. SETUP AND INSTALLATION

4.1 ANCEL BD200 OBD2 Scanner Setup

1. **Locate OBD2 Port:** Identify your vehicle's 16-pin OBD2 diagnostic port, usually located under the dashboard on the driver's side.
2. **Connect BD200:** Plug the ANCEL BD200 device firmly into the OBD2 port. The device will power on automatically.
3. **Download App:** Download the official ANCEL app from the Apple App Store (for iOS) or Google Play Store (for Android). Search for "ANCEL BD200" or "ANCEL".
4. **Pair via Bluetooth:**

   - Enable Bluetooth on your smartphone or tablet.
   - Open the ANCEL app.
   - Follow the in-app instructions to connect to the BD200 device via Bluetooth. The app will typically detect the device automatically.

Image 4.1: The ANCEL app interface on a smartphone, demonstrating various diagnostic features.

4.2 ANCEL BM200 Pro Battery Monitor Installation

Follow these steps to install the BM200 Pro battery monitor:

1. **Connect Negative Clip:** Firmly connect the black clip of the BM200 Pro main unit to the negative (-) terminal of your 12V lead-acid battery.
2. **Connect Positive Clip:** Firmly connect the red clip of the BM200 Pro main unit to the positive (+) terminal of your 12V lead-acid battery.
3. **Secure Monitor:** Stick the BM200 Pro main unit onto the battery surface using the provided double-sided tape. Ensure it is securely installed to prevent abnormal data capture.
4. **Place Display Unit:** Place the wireless display unit in front of the windshield or a convenient location within the vehicle. No additional installation is required for the display unit.

Image 4.2: Visual guide for the four-step installation process of the ANCEL BM200 Pro battery monitor.

Important Tips:

- Ensure the device is securely installed for the first time. Loose installation may cause abnormal data capture and display.
- The RF signal icon in the upper right corner of the display indicates successful connection to the monitor. If the RF symbol does not appear, try restarting the display unit.

5. OPERATING INSTRUCTIONS

5.1 Using the ANCEL BD200 OBD2 Scanner

Once connected and paired with the app, the BD200 offers various diagnostic functions:

- **Read Codes:** Retrieves Diagnostic Trouble Codes (DTCs) from the vehicle's engine control unit (ECU).
- **Clear Codes:** Erases DTCs and turns off the Check Engine Light after repairs are made.
- **Live Data Stream:** Displays real-time data parameters from the vehicle's sensors, such as engine RPM, vehicle speed, coolant temperature, fuel pressure, and more. This data can be viewed in numerical or graphical format.
- **I/M Readiness:** Checks the status of emission-related monitors to determine if the vehicle is ready for an emissions test.
- **Freeze Frame Data:** Captures a snapshot of vehicle operating conditions at the moment a fault code is set.
- **Performance Test:** Measures vehicle acceleration and braking performance, displaying results in the app's dashboard.
- **Battery Voltage Check:** Monitors the vehicle's battery voltage in real-time via the OBD2 port.
- **DTC Lookup:** Provides definitions for generic and manufacturer-specific trouble codes.
- **Vehicle Information:** Retrieves vehicle identification number (VIN), calibration ID (CALID), and calibration verification number (CVN).
- **O2 Sensors Test:** Retrieves O2 sensor monitoring test results.
- **EVAP System Test:** Initiates a test of the evaporative emission system.
- **On-Board Monitoring Test:** Retrieves results for on-board diagnostic monitoring tests of specific components/systems.

PERFORMANCE TEST

Displays the duration of the test and the changes in speed and RPM In the dashboard.

Image 5.1: The ANCEL app showing the Performance Test interface with acceleration and brake data.
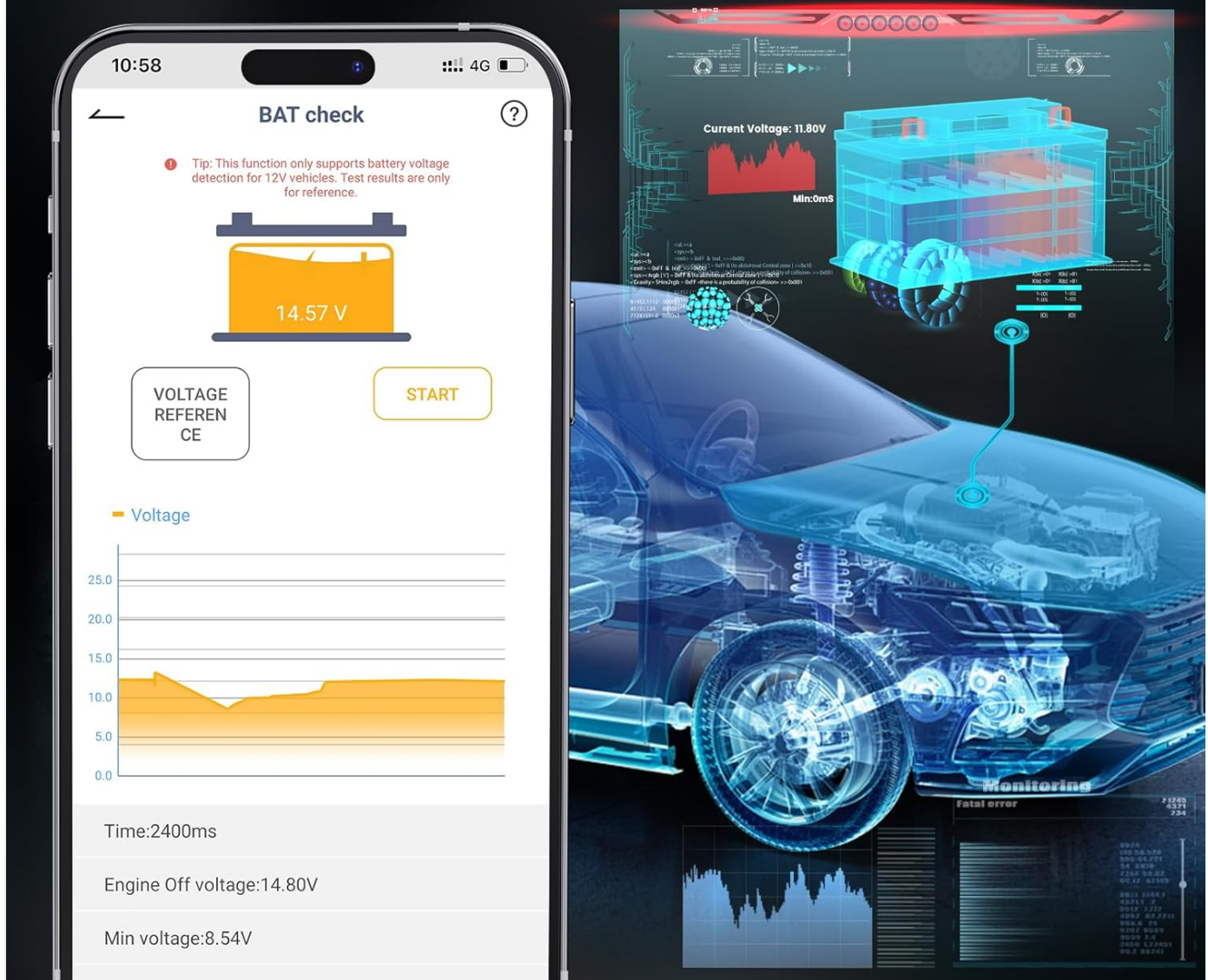
Image 5.2: The ANCEL app's BAT Check function, showing a graphical display of real-time battery voltage.

5.2 Using the ANCEL BM200 Pro Battery Monitor

Once installed, the BM200 Pro display unit will automatically begin monitoring your battery and vehicle systems.

- **Real-time Monitoring:** The display unit shows current battery voltage, power percentage, temperature, and overall battery health.
- **Starting System Test:** When the engine starts, the device automatically tests the cranking system, displays the cranking voltage, and indicates if the starting is abnormal.
- **Charging System Test:** After the car starts, it monitors the charging system, displays the charging percentage, and assesses the alternator's working condition.
- **Alarm Function:** The wireless display will emit an alarm sound and visual alerts for:
  - Low voltage
  - Low battery power
  - High temperature

- Abnormal cranking
  - Abnormal charging

- **Charging the Display Unit:** The display unit can be charged via its integrated solar panel or a Type-C USB cable (5V charger).

- **Automatic Sleep/Wake:** The display unit enters sleep mode after a few minutes of inactivity to save power and wakes up automatically upon sensing vibration (e.g., when the car moves).

Image 5.3: The BM200 Pro's built-in alarm function, indicating alerts for abnormal data such as low voltage or high temperature.

Image 5.4: The BM200 Pro display unit on a dashboard, illustrating its solar and Type-C charging capabilities.

6. MAINTENANCE

- **Cleaning:** Wipe the devices with a soft, dry cloth. Avoid using abrasive cleaners or solvents.
- **Storage:** When not in use for extended periods, store the devices in a cool, dry place away from direct sunlight.
- **Battery Care (BM200 Pro):** Ensure the display unit is regularly charged via solar or Type-C to maintain its internal battery.
- **Firmware Updates (BD200):** Check the ANCEL app periodically for any available firmware updates for the BD200 device to ensure optimal performance and compatibility.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
BD200: Device does not power on.	Not properly connected to OBD2 port; vehicle ignition off.	Ensure BD200 is firmly plugged into the OBD2 port. Turn the vehicle ignition to the ON position (engine off).
BD200: Cannot connect to app via Bluetooth.	Bluetooth not enabled; app not open; device not detected.	Ensure Bluetooth is enabled on your phone. Close and reopen the ANCEL app. Restart the BD200 by unplugging and replugging it. Check app permissions.
BM200 Pro: Display unit shows no signal (RF symbol missing).	Main unit not connected; out of range; interference.	Verify the main unit is correctly connected to the battery. Ensure the display unit is within 30-70 feet of the main unit. Restart the display unit.
BM200 Pro: Inaccurate battery readings.	Loose connection; incorrect battery type.	Check that the clips are firmly attached to the battery terminals. Ensure the battery is a 12V lead-acid type.
BM200 Pro: Display unit not charging.	Insufficient light for solar; Type-C cable/charger issue.	Ensure the solar panel is exposed to direct sunlight. Try a different Type-C cable and 5V charger.

8. SPECIFICATIONS

Feature	Detail
Product Model	BD200-BM200 Pro
Brand	ANCEL
BD200 Connectivity	Bluetooth (iOS & Android App)
BM200 Pro Battery Type	12V Lead-Acid Batteries
BM200 Pro Transmission	433MHz Radio Frequency
BM200 Pro Display Charging	Solar, Type-C (5V)
BM200 Pro Protection	Reverse connection, Overheat, Short circuit, Built-in fuse
BM200 Pro Waterproof Rating	IP67 (main unit)
Power Source	Battery Powered
Measurement Type	Voltmeter

9. WARRANTY AND SUPPORT

ANCEL products are designed for reliability and performance. For warranty information, technical support, or service inquiries, please refer to the official ANCEL website or contact ANCEL customer support directly. Keep your purchase receipt for warranty claims.

For further assistance, visit the ANCEL Store on Amazon.