ANCEL AD510

ANCEL AD510 OBD2 Scanner User Manual

ENHANCED VEHICLE CODE READER & DIAGNOSTIC SCAN TOOL

1. Introduction

The ANCEL AD510 is an advanced OBD2 scanner designed to help vehicle owners and technicians diagnose engine-related issues, read and clear fault codes, and monitor various vehicle systems. This device provides comprehensive diagnostic functions, including I/M readiness status, live data stream, O2 sensor test, EVAP system test, and on-board monitoring. It also features a battery voltage check to assess the health of your car's battery. This manual provides detailed instructions for the proper use and maintenance of your AD510 scanner.

2. Safety Information

Always observe safety precautions when working on a vehicle. Improper use can lead to injury or damage to the vehicle or the scanner.

- Always perform automotive testing in a safe environment.
- Wear safety eye protection that meets ANSI standards.
- Keep clothing, hair, hands, tools, test equipment, etc., away from all moving or hot engine parts.
- Operate the vehicle in a well-ventilated work area; exhaust gases are poisonous.
- Put blocks in front of the drive wheels and never leave the vehicle unattended while running tests.
- Be extremely cautious when working around the ignition coil, distributor cap, ignition wires, and spark plugs. These components create hazardous voltages when the engine is running.
- Ensure the vehicle is in PARK (for automatic transmission) or NEUTRAL (for manual transmission) and the parking brake is engaged.
- Keep a fire extinguisher suitable for gasoline/chemical/electrical fires nearby.

3. Product Overview

The ANCEL AD510 is designed for ease of use with a clear display and intuitive controls.

Image: ANCEL AD510 OBD2 Scanner with its main menu displayed, showing various diagnostic and utility options.

Key Components:

- **LCD Display:** 2.8-inch color screen for displaying diagnostic data and menu options.
- **OBD II Connector:** Standard 16-pin connector for connecting to the vehicle's Data Link Connector (DLC).
- **Keypad:** Navigation buttons (Up, Down, Left, Right), ENTER, ESC, and I/M Readiness hotkey for easy operation.
- **LED Indicators:** Red, Yellow, and Green LEDs provide quick visual status of emission monitor readiness.
- **USB Port:** For connecting to a computer for software updates and data printing.

4. Setup

The ANCEL AD510 is a plug-and-play device that requires no batteries for operation as it draws power directly from the vehicle's OBD II port.

Initial Setup:

1. Locate the vehicle's 16-pin Data Link Connector (DLC). This is usually located under the dashboard on the driver's side.
2. Turn the vehicle's ignition to the OFF position.
3. Firmly plug the AD510's OBD II connector into the vehicle's DLC.
4. Turn the vehicle's ignition to the ON position (engine off or running, depending on the test). The scanner will automatically power on and display the main menu.

5. Operating Instructions

Main Menu Navigation:

Use the directional arrows on the keypad to navigate through the menu options. Press the **ENTER** button to select an option, and the **ESC** button to return to the previous screen.

Diagnostic Functions:

- **Read Codes:** Retrieves generic (P0, P2, P3, and U0) and manufacturer-specific (P1, P3, and U1) codes from the vehicle's computer.
- **Erase Codes:** Clears diagnostic trouble codes (DTCs) from the vehicle's memory and turns off the Check Engine Light (MIL).
- **I/M Readiness:** Checks the readiness of the emission monitoring systems. The green, yellow, and red LEDs provide a quick visual indication of readiness status.
- **Live Data:** Displays real-time data parameters from the vehicle's sensors in text and graphical formats.
- **Freeze Frame:** Shows a snapshot of the vehicle's operating conditions at the time a fault code was set.
- **O2 Sensor Test:** Retrieves O2 sensor monitor test results for the most recently completed tests from the vehicle's on-board computer.
- **On-Board Monitor Test (Mode 6):** Retrieves test results for emission-related powertrain components and systems that are not continuously monitored.
- **EVAP System Test (Mode 8):** Initiates a test of the evaporative emission control system.
- **Vehicle Information (VIN, CIN, CVN):** Retrieves the Vehicle Identification Number, Calibration ID, and Calibration Verification Number.

Battery Check (BAT Check):

Select 'BAT Check' from the main menu to monitor the real-time battery voltage. This function helps assess the battery's health and indicates if it needs replacement or charging.

DTC Lookup:

Access the built-in DTC lookup library to find definitions for generic and manufacturer-specific diagnostic trouble codes. Simply enter the code, and the scanner will display its definition.

Print Data:

Connect the scanner to a computer via the USB cable and use the ANCEL update tool software to print stored diagnostic reports.

6. Maintenance

To ensure the longevity and optimal performance of your ANCEL AD510 scanner, follow these maintenance guidelines:

- **Cleaning:** Use a soft, damp cloth with mild detergent to clean the exterior of the scanner. Do not use abrasive cleaners or solvents.
- **Storage:** Store the scanner in a dry, clean environment, away from extreme temperatures, humidity, and direct sunlight.
- **Cable Care:** Avoid bending or twisting the OBD II cable excessively. Always grasp the connector when plugging or unplugging it from the vehicle's DLC.
- **Software Updates:** Regularly check the ANCEL official website for software updates. Updating the software ensures compatibility with newer vehicles and provides the latest diagnostic features and bug fixes.

7. Troubleshooting

If you encounter issues with your ANCEL AD510, refer to the table below for common problems and their solutions.

Problem	Possible Cause	Solution
Scanner does not power on.	Loose connection; Vehicle's DLC has no power; Blown fuse in vehicle.	Ensure the OBD II cable is securely connected. Check the vehicle's fuse box for a blown fuse related to the OBD II port. Test the scanner on another vehicle.
Link error with vehicle.	Ignition is off; Scanner not compatible with vehicle protocol; Faulty connection.	Turn ignition to ON. Verify vehicle is OBD II compliant (1996 or newer for US vehicles). Check cable connection. Try another vehicle.
Codes do not clear.	Ignition is off; Faulty control module; Permanent DTCs.	Ensure ignition is ON. Some codes are 'permanent' and will only clear after the underlying issue is fixed and the vehicle's monitors run.
Software update fails.	Incorrect update procedure; Corrupted download; USB connection issue.	Follow the update instructions precisely from the ANCEL website. Ensure a stable internet connection. Try a different USB port or cable.

8. Specifications

Feature	Detail

Feature	Detail
Model	AD510 (Manufacturer Part Number: FX1000)
Display	2.8-inch Color LCD
Operating Voltage	9-18V DC (from vehicle OBD II port)
Supported Protocols	KWP2000, ISO9141, J1850 VPW, J1850 PWM, CAN
Operating Temperature	0°C to 60°C (32°F to 140°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Dimensions	27 x 19.3 x 3.8 cm
Weight	703 grams
Supported Languages	English, Spanish, German, French, Italian, Dutch, Portuguese, Russian
PC Operating System for Updates	Windows 7/8/10

9. Warranty and Support

The ANCEL AD510 comes with a manufacturer's warranty. Please refer to the product packaging or the official ANCEL website for specific warranty terms and conditions.

For technical support, software updates, or any inquiries, please visit the official ANCEL website or contact their customer service. Lifetime free software updates are provided for this device to ensure optimal performance and access to the latest features.

Official ANCEL Website: www.anceltech.com