

ANCEL FX6100, AL-PB50

ANCEL OBD2 Scanner FX6100 Bidirectional Scan Tool and AL-PB50 Automotive Circuit Tester User Manual

Comprehensive instructions for operation and maintenance.

INTRODUCTION

This manual provides detailed instructions for the ANCEL FX6100 OBD2 Bidirectional Scan Tool and the ANCEL AL-PB50 Automotive Circuit Tester. These tools are designed to assist in diagnosing vehicle issues, performing maintenance services, and testing electrical circuits. Please read this manual thoroughly before operating the devices to ensure proper use and to prevent damage.

SAFETY INFORMATION

Always observe the following safety precautions when working on a vehicle:

- Wear appropriate eye protection.
- Keep clothing, hair, hands, and tools away from moving engine parts.
- Operate the vehicle in a well-ventilated area.
- Ensure the vehicle is in park (P) or neutral (N) and the parking brake is engaged.
- Turn off the ignition before connecting or disconnecting any test equipment.
- Be aware of hot engine components and exhaust systems.
- Avoid contact with battery acid.
- Do not use the tools if they appear damaged.

PRODUCT OVERVIEW

ANCEL FX6100 OBD2 Bidirectional Scan Tool

The ANCEL FX6100 is a professional diagnostic scan tool designed for comprehensive vehicle system analysis. It features a 6.2-inch screen and runs on Android 10.0. Key capabilities include bidirectional control, full system diagnostics, and over 15 maintenance reset functions.



Image: The ANCEL FX6100 Bidirectional Scan Tool and the ANCEL AL-PB50 Automotive Circuit Tester, shown together with their accessories.

ANCEL AL-PB50 Automotive Circuit Tester

The ANCEL AL-PB50 is a 12V/24V power circuit probe tester used for quickly diagnosing electrical issues. It can send voltage and ground signals, activate components, and identify circuit polarity. It includes an auxiliary ground lead for ease of use.

MORE FUNCTIONS

Found On ANCEL PB50



Font Size—
Larger and clearer



Flashlight—Better working
in darkness



Ergonomic Design—More
comfortable



Image: Close-up view of the ANCEL AL-PB50 Circuit Tester highlighting features such as adjustable font size, built-in flashlight, and ergonomic design.

SETUP INSTRUCTIONS

Setting up the ANCEL FX6100 Scan Tool

1. **Power On:** Connect the FX6100 to the vehicle's OBD2 port. The device will power on automatically.
2. **Initial Configuration:** Follow the on-screen prompts to select language, time zone, and Wi-Fi settings.
3. **Software Update:** It is recommended to update the software to the latest version before first use. Navigate to the "Update" section on the main menu and follow the instructions.

Setting up the ANCEL AL-PB50 Circuit Tester

1. **Connect to Power:** Attach the red clamp to the positive (+) terminal of the vehicle's battery and the black clamp to the negative (-) terminal or a good chassis ground.
2. **Auxiliary Ground Lead:** For certain tests, connect the auxiliary ground lead to ensure a stable ground connection.

3. **Power Check:** Once connected, the device display will show the current voltage, indicating it is ready for use.

OPERATING INSTRUCTIONS - ANCEL FX6100 Scan Tool

Basic Navigation

The FX6100 features a touch-screen interface and physical buttons for navigation. Use the touch screen to select options or the directional pad and OK button for menu navigation.

Diagnostic Functions

From the main menu, select "Diagnose" to access vehicle diagnostic functions.

- **AutoSearch:** Automatically identifies the vehicle's VIN and retrieves vehicle information.
- **System Scan:** Performs a comprehensive scan of all available electronic control units (ECUs) for fault codes.
- **Read Codes:** Displays current, pending, and historic diagnostic trouble codes (DTCs).
- **Clear Codes:** Erases DTCs from the vehicle's memory. Ensure the underlying issue is resolved before clearing codes.
- **Live Data:** Displays real-time data parameters from various sensors and components.

Bidirectional Control (Active Tests)

The FX6100 can send commands to the vehicle's ECU to perform active tests on specific components. This helps in pinpointing faults quickly.

- **Procedure:** Navigate to the "Diagnose" section, select the vehicle, then choose "Active Test" or "Bidirectional Control." Select the component you wish to test (e.g., injectors, coolant pump, wipers, mirrors, headlights).
- **Observation:** Observe the component's response to determine its operational status.

BI-DIRECTIONAL CONTROL



► Wiper



► Mirror



► Fuel Injector



► Coolant Pump



Image: Illustration of the ANCEL FX6100 performing bidirectional control, sending commands to activate components like wipers, mirrors, fuel injectors, and coolant pumps on a vehicle.

15+ HOT MAINTENANCE SERVICES



Image: Diagram showing the ANCEL FX6100's capability to diagnose all major vehicle systems, including ABS, Airbag, Engine, TPMS, BCM, EBS, HVAC, ESP, Transmission, and Instrument cluster.

Maintenance Services (Reset Functions)

The FX6100 offers over 15 lifetime free maintenance reset functions. Access these from the "Maintenance" section on the main menu.

- **Oil Reset:** Resets the oil life monitoring system after an oil change.
- **Battery Matching:** Registers a new battery with the vehicle's battery management system.
- **TPMS Reset:** Resets the Tire Pressure Monitoring System after tire rotation or sensor replacement.
- **Brake Pad Reset:** Resets the electronic parking brake (EPB) system after brake pad replacement.
- **Steering Angle Calibration:** Calibrates the steering angle sensor.
- **ABS Bleeding:** Performs automated bleeding procedures for the anti-lock braking system.
- **DPF Regeneration:** Initiates forced Diesel Particulate Filter regeneration.
- **Other Services:** Includes NOx Sensor Reset, Air/Fuel Ratio Reset, Gear Learning, AdBlue Reset, EGR Adaption, Electronics Throttle Adaption, Injector Coding, and Gearbox Learning.

Important: Ensure the software is updated before using reset functions for optimal performance.

EASY TO **DIAGNOSE ALL SYSTEMS**



Image: Visual representation of the 15+ maintenance services offered by the ANCEL FX6100, including Oil Reset, Battery Matching, Brake-pad Reset, Steering Angle Reset, TPMS Reset, and DPF Regeneration.

Software Updates

Regular software updates ensure compatibility with new vehicle models and provide enhanced features. Connect the FX6100 to a Wi-Fi network and navigate to the "Update" section on the main menu to check for and install available updates.

OPERATING INSTRUCTIONS - ANCEL AL-PB50 CIRCUIT TESTER

Basic Operation

Once connected to the vehicle's battery, the AL-PB50 displays the current voltage. The probe tip can be used to test circuits.

- **Voltage/Ground Signals:** Touch the probe tip to a circuit point. The display will show the voltage, and the LED indicator will light up (red for positive, green for negative).
- **Continuity Test:** Use the auxiliary ground lead to test for continuity between two points.

LOCATE CIRCUIT ISSUES

Simple & Effective Tool



Image: The ANCEL AL-PB50 Circuit Tester being used in an engine bay to locate various circuit issues such as fog lights failure, horn not responding, headlights out, and ignition issues.

Component Activation

The AL-PB50 can activate components by supplying a positive or negative signal. This is useful for testing components directly.

- **Procedure:** Connect the probe to the component's power or ground wire. Press the appropriate button on the tester to send a positive or negative signal.
- **Examples:** Activate car lights, motors, windshield wipers, radiator fans, etc., to verify their functionality.

Polarity Identification

The AL-PB50 quickly identifies the polarity of a circuit. A red light indicates a positive circuit, and a green light indicates a negative circuit.

IDENTIFY POLARITY & OVERLOAD



Image: The ANCEL AL-PB50 Circuit Tester demonstrating polarity identification, showing a red light for a positive circuit and a green light for a negative circuit.

Overload Protection

The AL-PB50 features built-in overload protection. If an overload is detected, a buzzer warning will sound, and the device will temporarily cut power to prevent damage.

MAINTENANCE

- **Cleaning:** Wipe the devices with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the tools in a dry, clean environment, away from extreme temperatures and direct sunlight.
- **Cable Care:** Inspect cables and connectors regularly for signs of wear or damage. Replace if necessary.
- **Software Updates (FX6100):** Regularly check for and install software updates to ensure optimal performance and compatibility.

TROUBLESHOOTING

ANCEL FX6100 Scan Tool

- **Device does not power on:**
 - Ensure the OBD2 cable is securely connected to the vehicle's OBD2 port.
 - Verify the vehicle's battery has sufficient charge.
- **Communication error with vehicle:**
 - Check if the vehicle's ignition is on.
 - Ensure the OBD2 connector is clean and free of debris.
 - Try connecting to a different vehicle to rule out a device issue.
- **Software update fails:**
 - Ensure a stable Wi-Fi connection.
 - Check for sufficient storage space on the device.
 - Restart the device and try again.

ANCEL AL-PB50 Circuit Tester

- **No power display:**
 - Ensure the red and black clamps are securely connected to the vehicle's battery terminals.
 - Verify the vehicle's battery has power.
- **Overload warning constantly triggers:**
 - The circuit being tested may draw too much current. Do not exceed the tester's specified current limits.
 - Ensure the probe tip is not shorting across terminals.
- **Incorrect polarity reading:**
 - Ensure the probe tip is making good contact with the circuit.
 - Verify the auxiliary ground lead (if used) is properly connected.

SPECIFICATIONS

ANCEL FX6100 OBD2 Scan Tool

- **Operating System:** Android 10.0
- **Screen Size:** 6.2 inches
- **Connectivity:** OBD2, Wi-Fi
- **Functions:** Bidirectional Control, Full System Diagnostics, 15+ Reset Services
- **Updates:** Lifetime Free Updates

ANCEL AL-PB50 Automotive Circuit Tester

- **Operating Voltage:** 12V - 24V DC
- **Functions:** Voltage/Ground Signal Testing, Component Activation, Polarity Identification, Continuity Test

- **Protection:** Overload Protection
- **Features:** Built-in Flashlight, Ergonomic Design

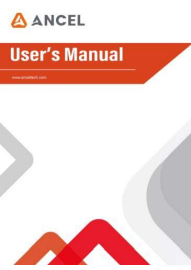


Note: Specifications are subject to change without prior notice. Refer to the product packaging or official ANCEL website for the most current information.



WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact ANCEL customer support through their official website or the contact details provided with your product packaging. Keep your purchase receipt as proof of purchase for warranty claims.

Official ANCEL Website: www.anceltech.com

Related Documents - FX6100, AL-PB50

 <p>ANCEL User's Manual</p>	<p>ANCEL V5 & V5 BT User's Manual: Comprehensive Automotive Diagnostic Tool Guide</p> <p>This user manual provides detailed instructions for the ANCEL V5 and V5 BT automotive diagnostic tools. It covers product overview, specifications, interface descriptions, software functions including diagnosis, hot functions, DTC query, data management, feedback, settings, product activation, cleaning, maintenance, and warranty information.</p>
<p>ANCEL AD410 Usage/Upgrade/Feedback Issues</p>	<p>ANCEL AD410 Usage, Upgrade, and Feedback Issues Troubleshooting Guide</p> <p>A comprehensive guide detailing common issues encountered with the ANCEL AD410 automotive diagnostic scanner, covering usage, software upgrades, and feedback data handling, with solutions and troubleshooting steps.</p>
 <p>ANCEL Vehicle Circuit Probe</p>	<p>ANCEL PB100 Vehicle Circuit Probe User Manual and Diagnostic Guide</p> <p>Comprehensive user manual and guide for the ANCEL PB100 Vehicle Circuit Probe, detailing its features, specifications, safety precautions, and operating instructions for automotive electrical system diagnostics.</p>
 <p>ANCEL Vehicle Circuit Probe</p>	<p>ANCEL PB100 Vehicle Circuit Probe User Manual</p> <p>Comprehensive user manual for the ANCEL PB100 Automotive Power Circuit Probe Tester. Learn about safety, specifications, tool description, operating instructions, testing procedures, and warranty information for this 12V/24V car electrical diagnostic tool.</p>

	<p>Ancel AD410 OBD2 Scan Tool User Manual</p> <p>Comprehensive user manual for the Ancel AD410, an OBD2 scan tool and code reader. Learn how to diagnose vehicle issues, read and clear trouble codes, view live data, and understand I/M readiness status.</p>
	<p>ANCEL DS700 Diagnostic Tool User Manual Features, Setup, and Maintenance</p> <p>Comprehensive user manual for the ANCEL DS700 Diagnostic Tool. Learn about its features, setup, VCI activation, maintenance functions, software updates, and troubleshooting.</p>

Documents - ANCEL – FX6100, AL-PB50



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TEST REPORT FCC PART 15.247

Report Reference No.:	CTL2503202194-WF01M1
Original Report No.:	CTL2503202194-WF01
Complied by: (position-printed name-signature)	Heqin Guo (File administrator)
Tested by: (position-printed name-signature)	Yaping Jin (Test Engineer)
Approved by: (position-printed name-signature)	Ivan Xie (Manager)
Product Name:	Vehicle fault tester
Model/Type reference:	FX6000
List Model(s):	FX6100,DS400 Lite, DS410 Lite, DS420 Lite, DS430 Lite, DS440 Lite, DS450 Lite
Trade Mark:	None
FCC ID:	2ASCF7FX600
Applicant's name:	OBDSPACE TECHNOLOGY CO.,LTD
Address of applicant:	Room 1201, Building A, No.373, MinZu Avenue LongHua district, Shenzhen City, China
Test Firm:	Shenzhen CTL Testing Technology Co., Ltd.
Address of Test Firm:	Floor 1/A, Bashe Technology Park, No.3011, Shathei Road, Nanshan District, Shenzhen, China 518055
Test specification:	
Standard:	FCC Part 15.247: Operation within the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz
TRF Originator:	Shenzhen CTL Testing Technology Co., Ltd.
Master TDF:	Dated 2011-01
Date of receipt of test item:	Jul. 28, 2025
Date of Test Date:	Jul. 28, 2025 - Jul. 30, 2025
Date of issue:	Jul. 31, 2025
Result:	Pass
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[pdf] Test Report

Measurement Report Kent Test ReportOBDSPACE TECHNOLOGY CO LTD FX6X00 Vehicle fault tester

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Shenzhen CTL Testing Technology Co., Ltd. Tel: 86-755-89486194 E-mail: ctl-
lab.com TEST REPORT ... del/Type reference.....: FX6000 List Model s

.....: **FX6100**,DS400 Lite, DS410 Lite, DS420 Lite, DS430 Lite,
DS440 Lite, DS450 Lite Trade Mark.....

lang:en score:14 filesize: 2.06 M page_count: 32 document date: 2025-08-05