AD310 Pro

User's Manual

Trademarks

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Disclaimer:

The information, specifications and illustrations in this manual are based on the latest information available at the time of printing.
ANCEL reserves the right to make changes at any time without notice.

Safety precautions

To prevent personal injury or damage to vehicles and/or the scan tool, read this instruction manual first and observe the following safety precautions at a minimum whenever working on a vehicle:

- Always perform automotive testing in a safe environment.
- Do not attempt to operate or observe the tool while driving a vehicle. Operating or observing the tool will cause driver distraction and could cause a fatal accident.
- Operate the vehicle in a well ventilated work area: Exhaust gases are Poisonous.
- Keep the scan tool dry, clean, free from oil/water or grease.
- Use a mild detergent on a clean cloth to clean the outside of the scan tool, when necessary.
- Check the insulation layer of the battery clamps is in normal condition (no damage. Bareness or disconnection), in case of the electric shock.
- DO NOT smoke, cause sparks, or strike matches near the battery when testing.
- DO NOT remove battery clamps while testing.
- DO NOT put the tester into a highly humid, dusty environment.
- DO NOT disassemble the tester, or may cause damage.

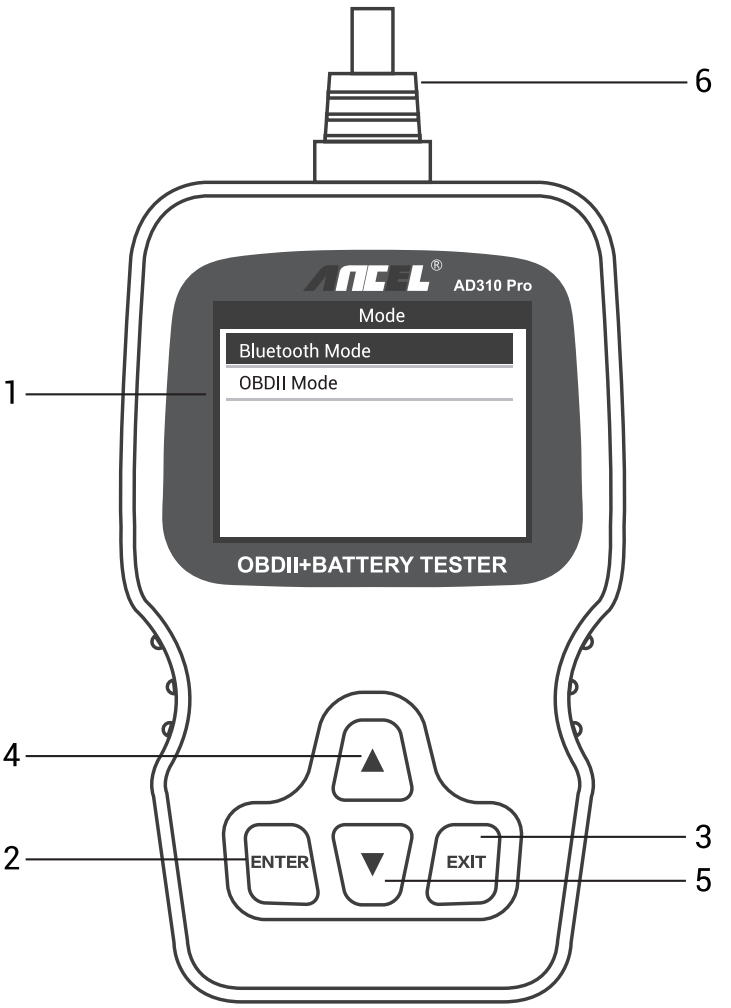
Product Profile

AD310 Pro is a new generation 3-in-1 diagnostic device that can display OBDII functions and battery test data directly on the scanner screen.
It can also display OBDII functions via Bluetooth on the screen of an Android or IOS device.

Product specification

1) Operating Voltage: DC 8-18V.
2) Operating Temperature: 0 to 60°C (32 to 140°F).
3) Storage Temperature: -20 to 70°C (-4 to 158°F).
4) External Power: 8.0 to 18.0V power provided via vehicle battery.

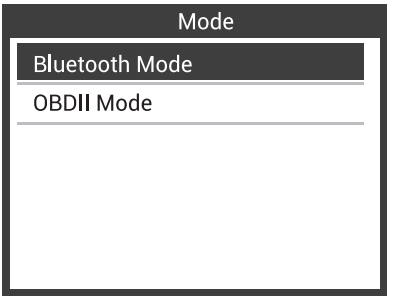
Tool Description - ANCEL AD310 Pro



1) LCD DISPLAY - Displays test results. 2.4" TFT 262K true color, 320*240 QVGA LCD display.
2) ENTER BUTTON – Confirms a selection (or action) from a menu.

3) EXIT BUTTON – Cancels a selection (or action) from a menu or returns to the menu. It is also used to exit DTC Lookup screen.
4) UP SCROLL BUTTON – Moves up through menu and submenu items in menu mode. When more than one screen of data is retrieved, moves up through the current screen to the previous screens for additional data.
5) DOWN SCROLL BUTTON – Moves down through menu and submenu items in menu mode. When more than one screen of data is retrieved, moves down through the current screen to next screens for additional data.
6) OBD II CONNECTOR – Connects the scan tool to the vehicle's Data Link Connector (DLC).

Bluetooth OBDII function (Set Bluetooth Mode)



DOWNLOAD APP

1. Scan the QR code below to download the software for Android and iOS.

ANCEL
Official Website

for Android

for iOS

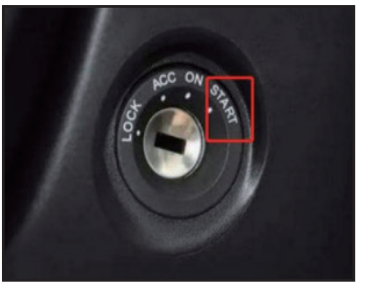
2. iOS can be downloaded from the APP store by searching for the keyword " ANCEL ".
3. Android can be downloaded from Google Play by searching for the keyword "ANCEL".

Note: This product only supports the ANCEL APP connection and is not compatible with any other APPs.

Operation instructions

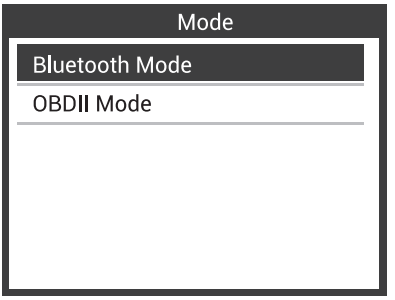
1) Find the vehicle's 16-pin Data link Connector(DLC)

2) Start the vehicle.



3) Plug the product into the vehicle's OBDII interface.

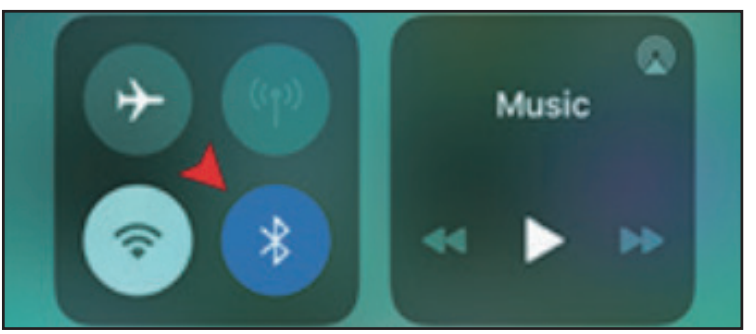
4) Press ENTER to enter mode menu. Use the UP/DOWN scroll button to select Mode from the menu.



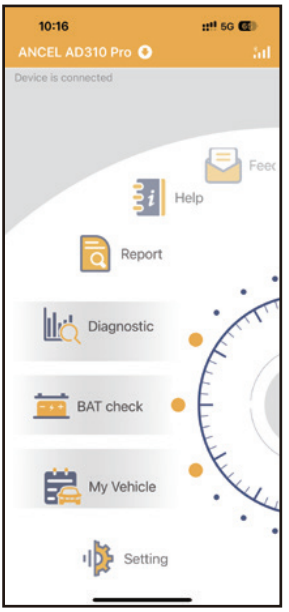
Bluetooth mode (Connect to mobile APP for diagnosis)

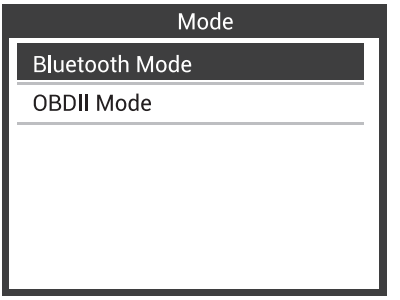
Bluetooth connection for iOS devices

1) Turn on Bluetooth on your phone.
Drag it from the bottom to the top or from the top right to the bottom of the screen to open the context menu. Tap the Bluetooth icon to turn it on. For cell phones with iOS version 13 and higher, you must also turn on Bluetooth in the system's privacy settings.

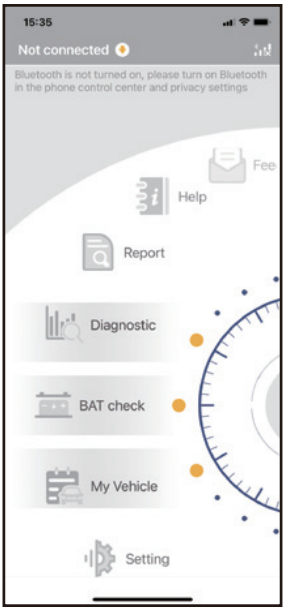


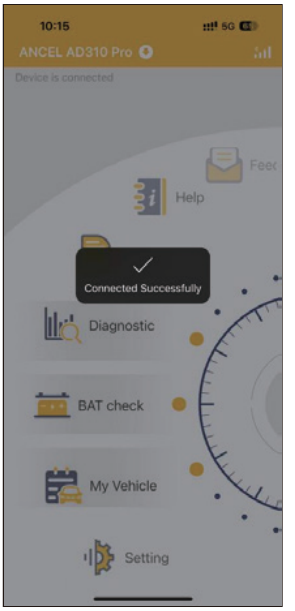
2) Open the "ANCEL" APP, and make sure that the handheld device is in the Bluetooth mode when it connects to the APP.





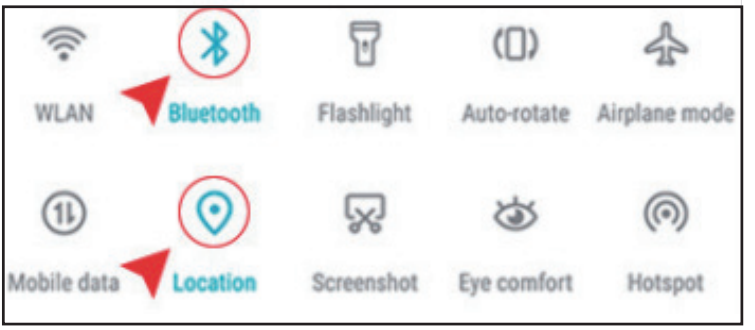
3) The APP will automatically connect to the device. During the connection process, make sure that no other phones have connected to the device. When the "Connected Successfully" message is displayed, the product can be used normally.





Bluetooth Connection for Android devices

1) Turn on Bluetooth and the Location switch on the phone.



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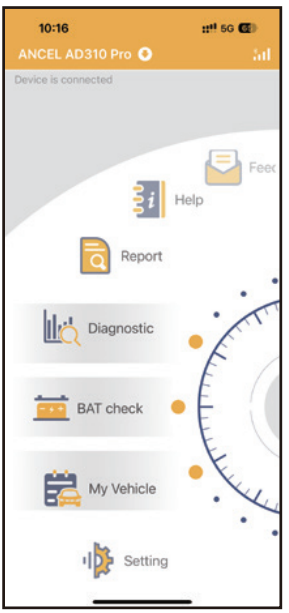

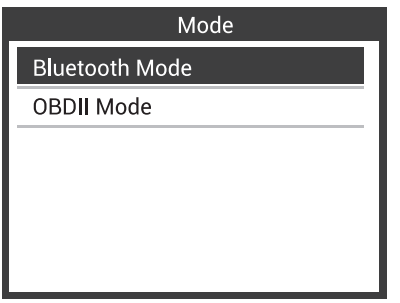

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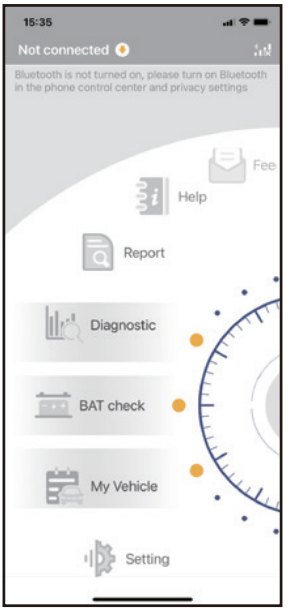
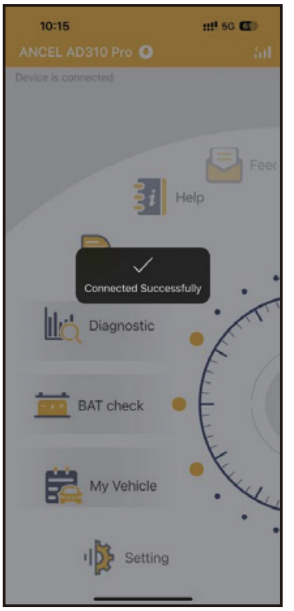
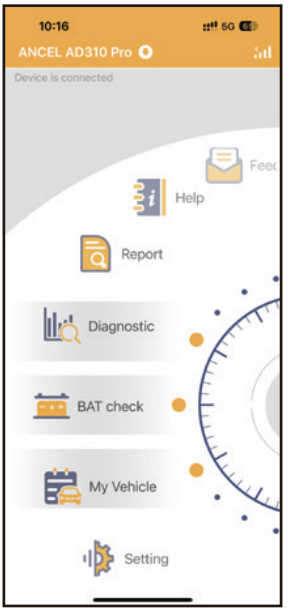
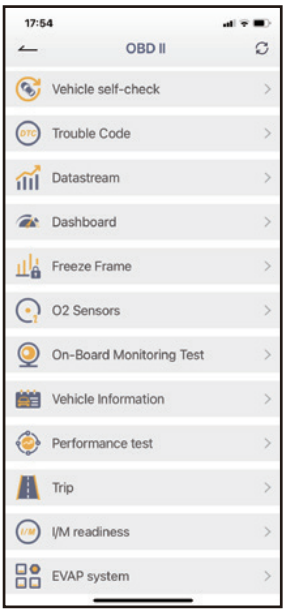




START USING YOUR DEVICE

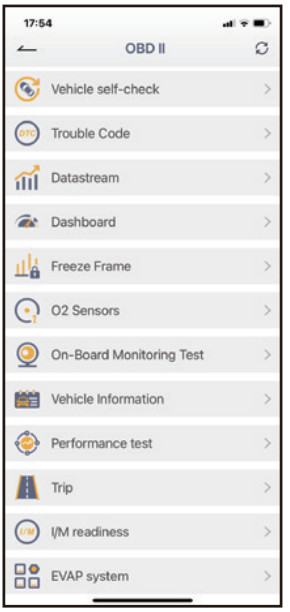
After Bluetooth connection, the diagnostic software will be launched if your vehicle supports it. You can use all functions of the device, e.g. the standard OBDII function and other functions.

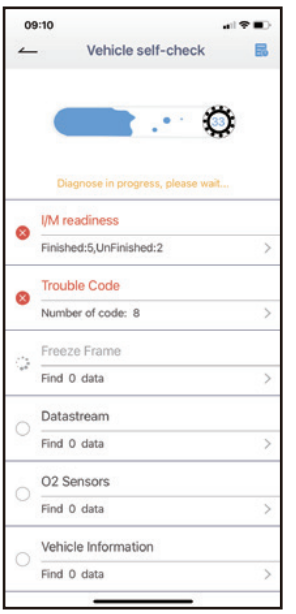




Vehicle self-check

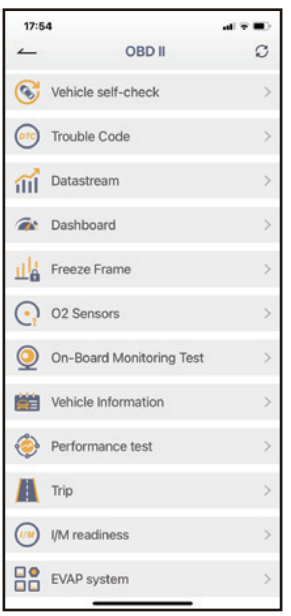
Read vehicle I/M readiness, trouble Codes, data streams and other information with one-click.

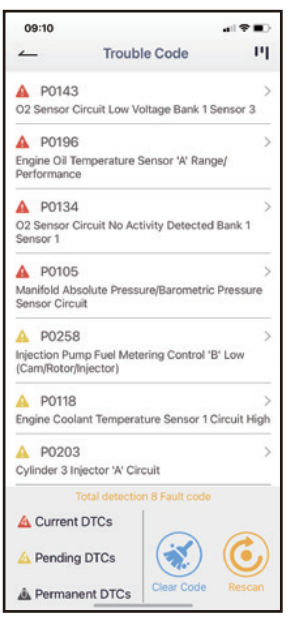




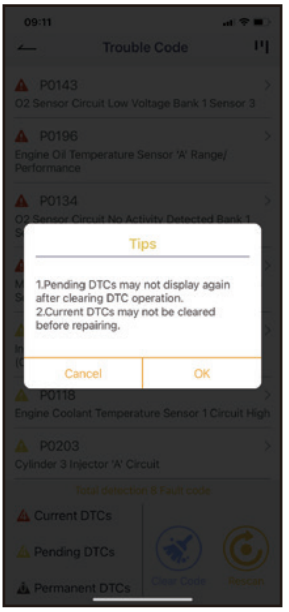
Trouble Code & Clear Code

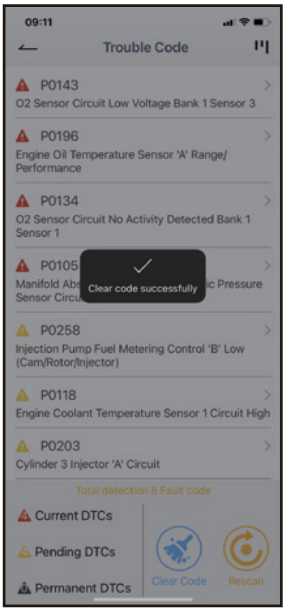
Excellent DTC explanations provide you with accurate and detailed trouble code definitions.





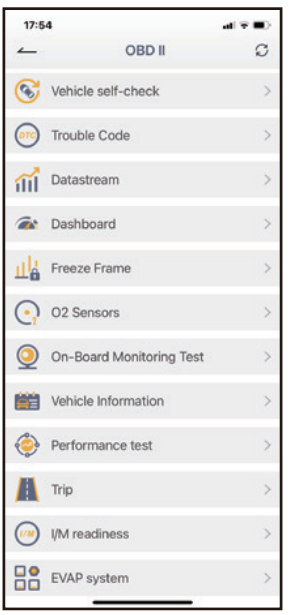
Use the Delete Code button to delete all current and saved DTCs from the control module.

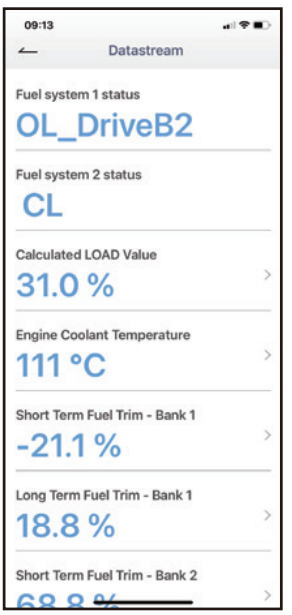


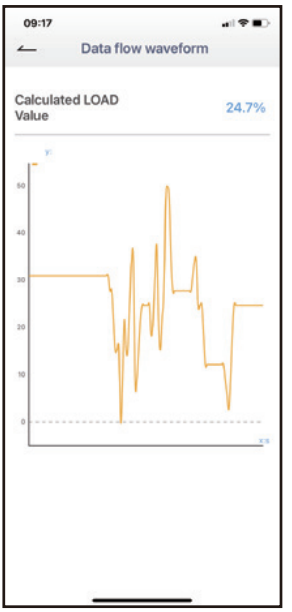


Datastream

The View Datastream function allows you to view the PID data of the vehicle's electronic control unit in real time.
When there is an arrow mark in the data flow, the data flow is displayed in the form of a diagram, if as shown:

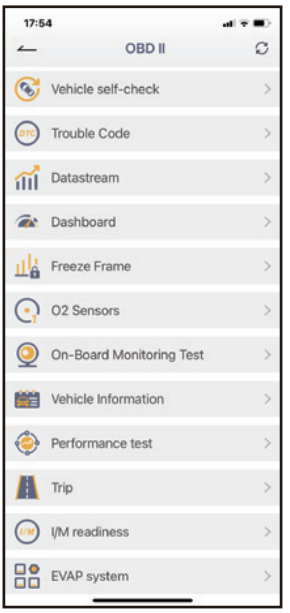


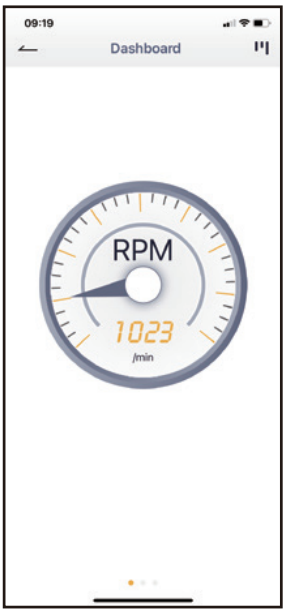


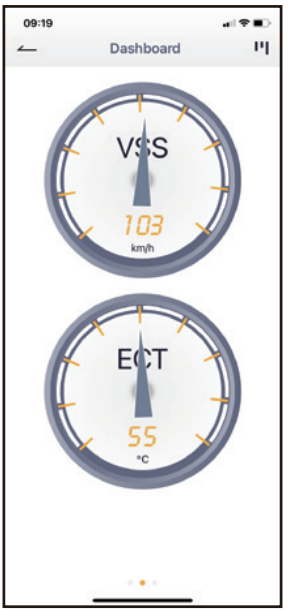


Dashboard

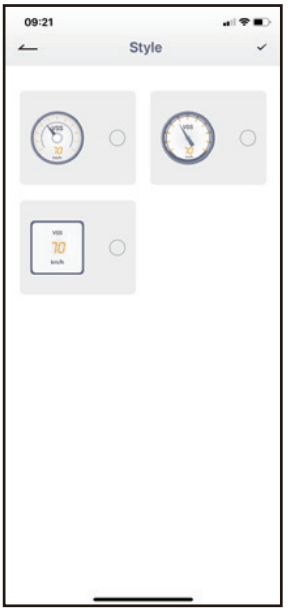
There are 3 different styles intuitive graphical display.





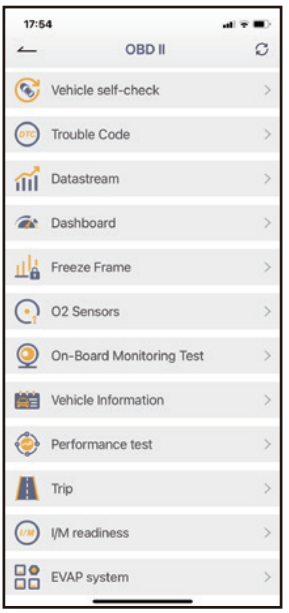


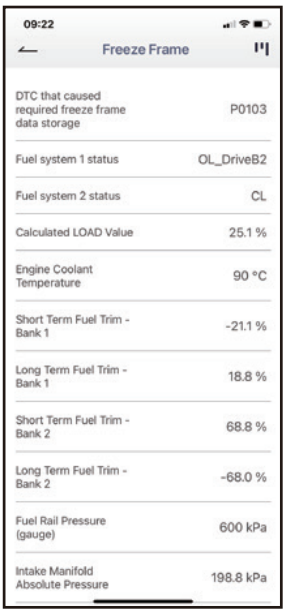
To customize your data stream:
"Add page" - "Select the graphic styles you like" - "PID" "Select the data stream you need".
Please long press on the graphic to drag it to the desired location or delete it.



Freeze Frame

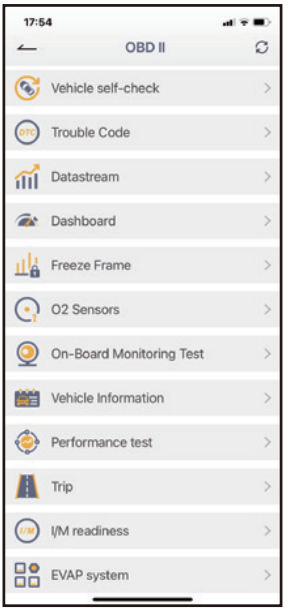
The Freeze Frame menu displays freeze frame data, a snapshot of critical vehicle operating conditions automatically recorded by the on-board computer at the time of the DTC record. This is a good function to determine the cause of the fault.

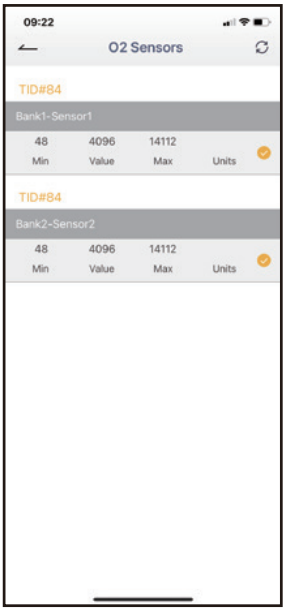




O2 Sensors

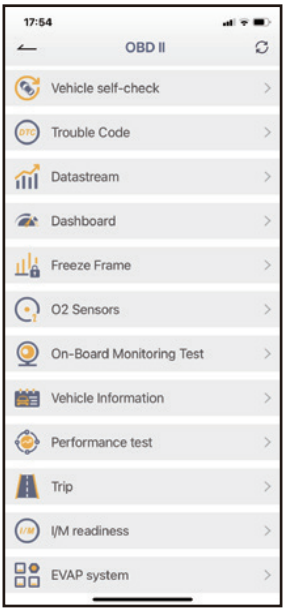
Regulations from OBD II require certain vehicles to monitor and test oxygen (O2) sensors to isolate fuel and emissions related faults. The O2 Monitor Test function allows you to view the results of the O2 sensor monitoring tests.

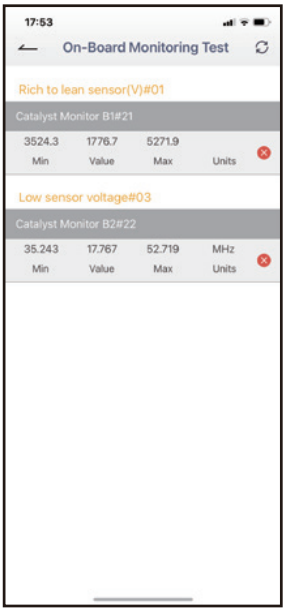




On-Board Monitoring Test

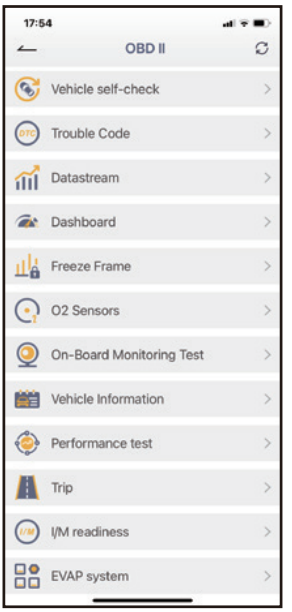
This function allows you to read the results of the on-board diagnostic monitoring. Test for specific components/systems.

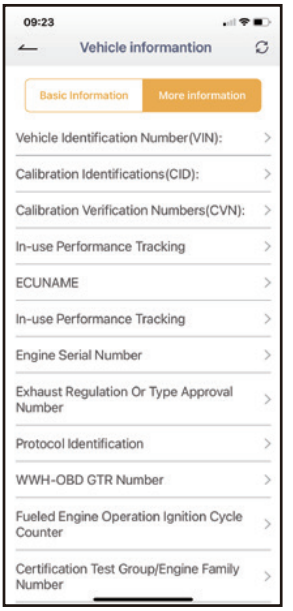




Vehicle information

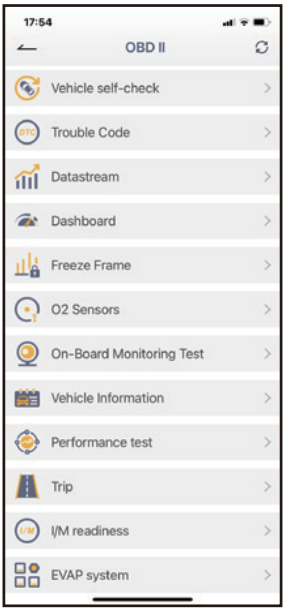
Vehicle information allows retrieval of the vehicle number VIN, calibration number ID (s) which identifies the software version of the vehicle control module(s), calibration check numbers (CVN(s)), and in-service performance tracking for OBD compliant vehicles model year 2000 and later. CVNs are calculated values mandated by OBD II. They are reported to verify that emissions-related calibrations have been changed. Multiple CVNs can be reported for a control module. It can take several minutes to calculate the CVN. Performance tracking in operation tracks the performance of the key standby monitors.

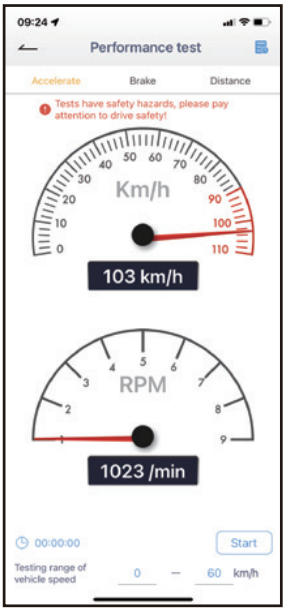




Performance Test

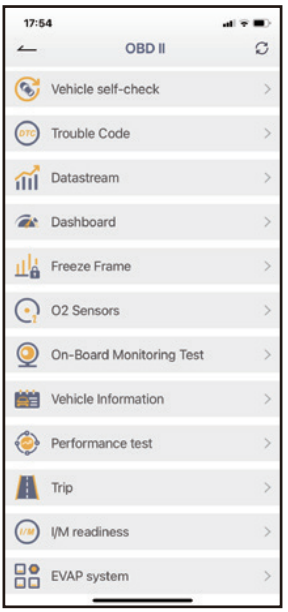
Check the health of your vehicle such as acceleration, braking and distance.

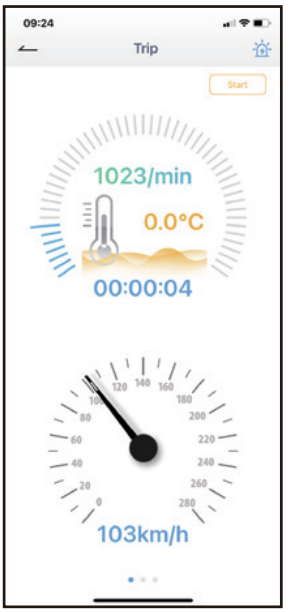


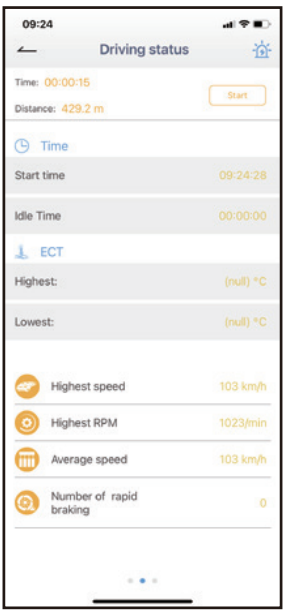


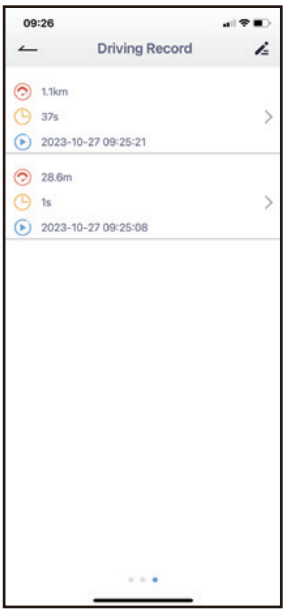
Trip

Exclusive trip analysis with time, distance, start time, travel time, maximum speed, maximum speed RPM, average speed, highest and lowest coolant temperature, number of over speeds and number of quick braking. You can also record, save, print and share the trips for your own analysis or with your mechanic.



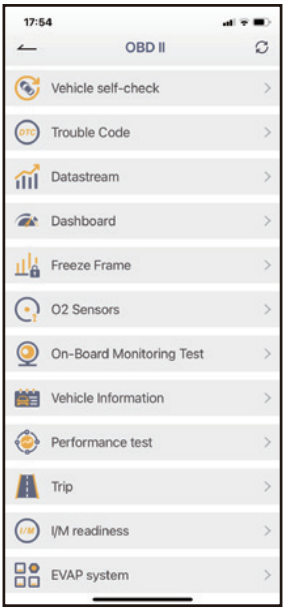


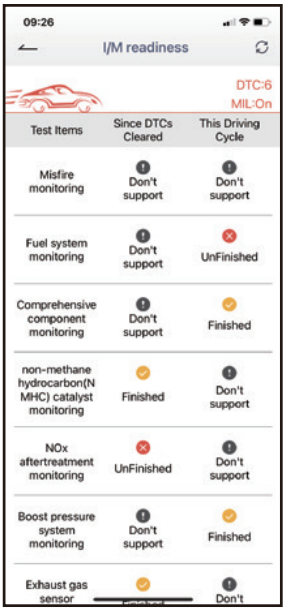




I/M Readiness

I/M Readiness option allow you to view a snapshot of the operations for the exhaust system on OBDII/EOBD vehicles.





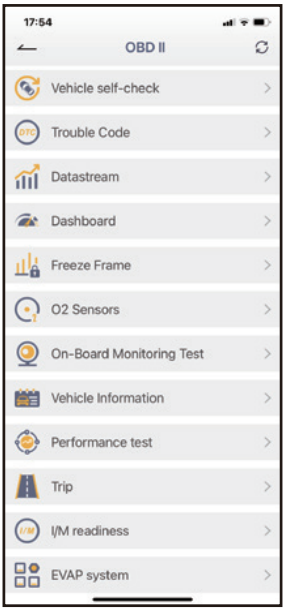
Component Test (EVAP Test)

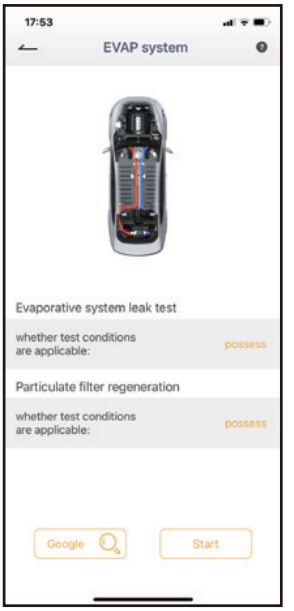
The OBD2 system monitors the fuel system for fuel vapor leakage to ensure that no hydrocarbons (HC) leak into the atmosphere. EVAP monitor does two things:

1. Ensure that the gasoline vapor is sent to the intake pipe at the right time, and mixed with the air to enter the engine for combustion.
2. Prevent fuel vapor in the fuel pipe from leaking into the atmosphere and polluting the environment.

EVAP test function: The external diagnostic device can't control the fuel evaporation control (EVAP) of the OBD system, and the diagnostic device only displays its status and test results.

If the car supports this function, it will display as below:





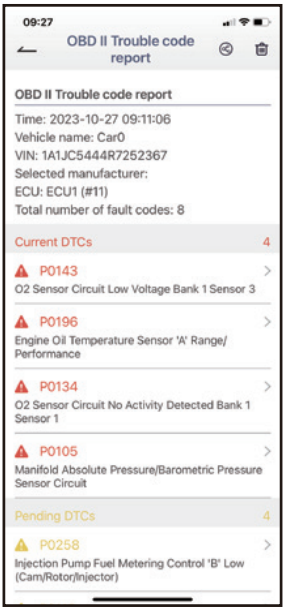
Note: Regarding the On-Board Monitor Test and Component Test (EVAP Test) functions these two functions are subject to the current test. Some vehicles support these two functions and the product software displays these two functions, while other vehicles do not support them and the product software does not display them.

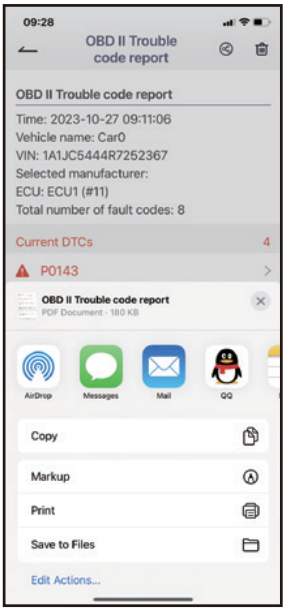
Battery Check

Graphically display battery voltage in real time to retrieve and analyze a more accurate battery life trend and monitor health status.

Report

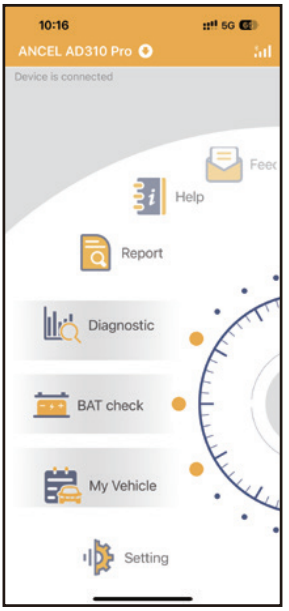
You can export diagnostic reports and share them on social media.



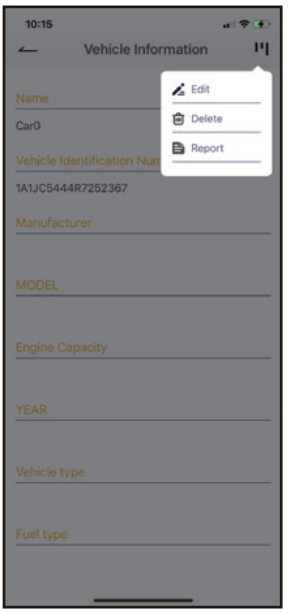


My Vehicle

You can select or delete the information about your vehicle. Conditions for newly added vehicles:
1. If the VIN code of the newly added vehicle can be read, the vehicle can be added.
2. If the VIN code of the newly added vehicle cannot be read, an input box will appear when the device communicates with the vehicle, and you need to add the newly added vehicle information manually.
3. If the user has only one vehicle and wants to add multiple vehicles: APP is not allowed.

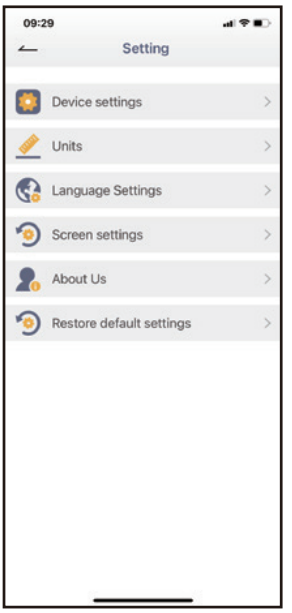

10:16
5G
ANCEL AD310 Pro
Device is connected
Help
Report
Diagnostic
BAT check
My Vehicle
Setting


09:28
Vehicle Information
Name
Car0
Vehicle Identification Number
1A1JC5444R7252367
Manufacturer
MODEL
Engine Capacity
YEAR
Vehicle type
Fuel type


10:15
Vehicle Information
Edit
Delete
Report
Name
Car0
1A1JC5444R7252367
Manufacturer
MODEL
Engine Capacity
YEAR
Vehicle type
Fuel type

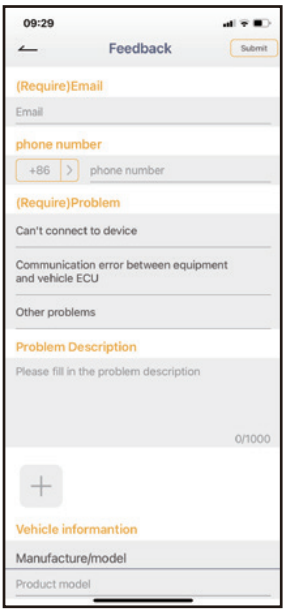
Setting

Device settings / Units / Language Settings / Screen settings / About Us / Restore default settings.



FEEDBACK

You can send us feedback if you have problems using it. To do so, fill out and submit the feedback form.

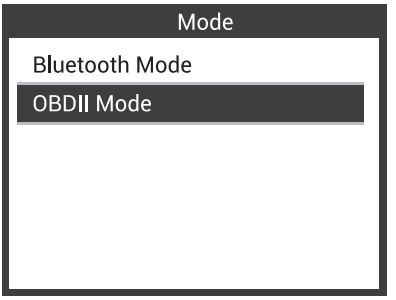


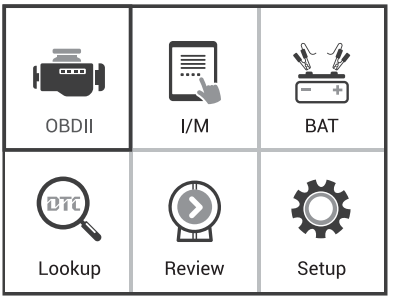
BAT function + OBDII function (Set OBDII Mode)

OBDII function

Plug the product into the vehicle's OBDII interface.

Press ENTER to enter mode menu. Use the UP/DOWN scroll button to select Mode from the menu.

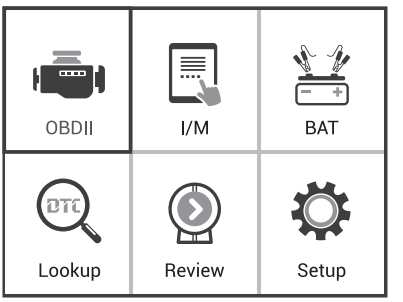


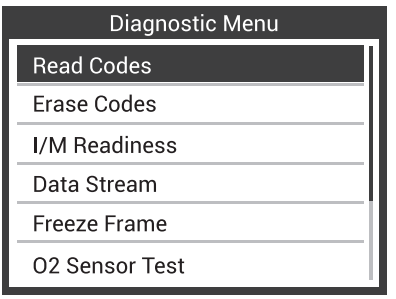


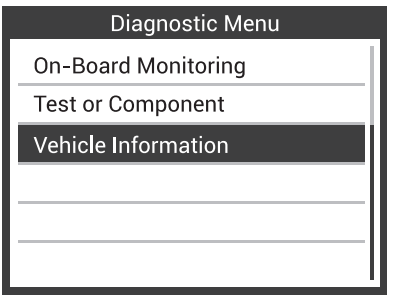
Main menu introduction

OBDII function

The error in the engine's exhaust system shown in the illustration can be diagnosed via the OBDII menu, other system errors are not supported.
Tips: The handheld OBDII function is the same as the handheld APP OBDII function, only the display is different.

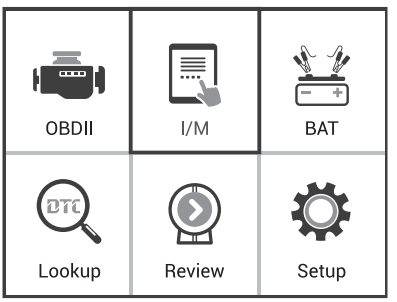


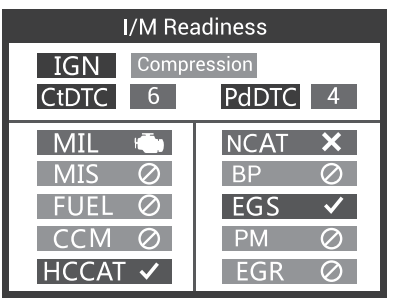




I/M function

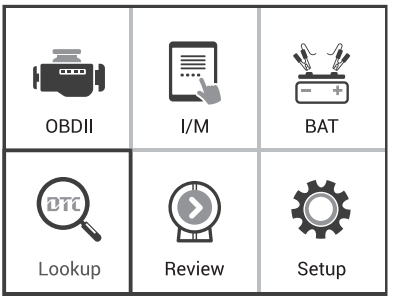
This is one of the functions of OBDII.

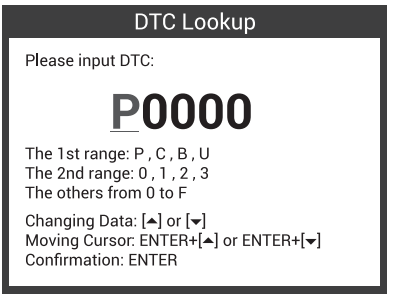


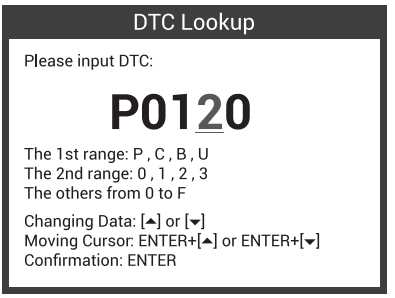


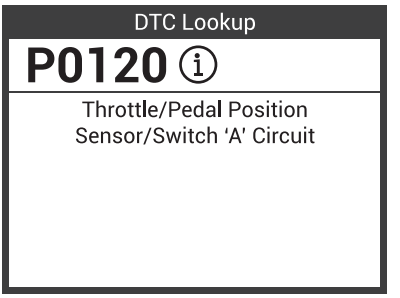
Lookup

The DTC Lookup function allows you to search for definitions of codes stored in the integrated code library.



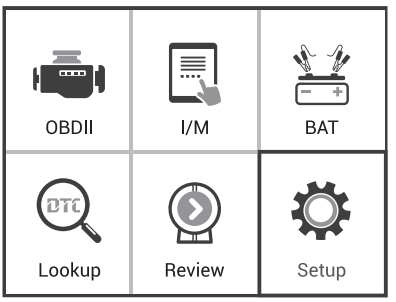


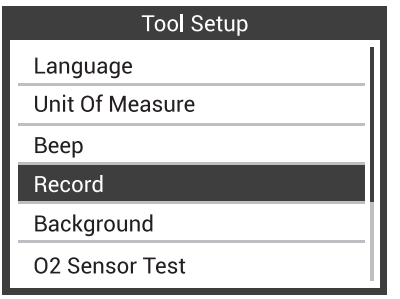


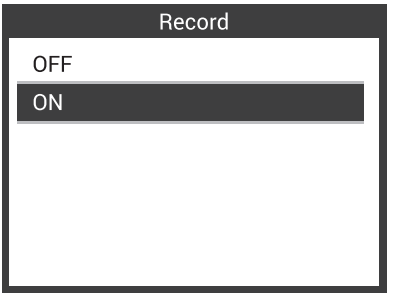


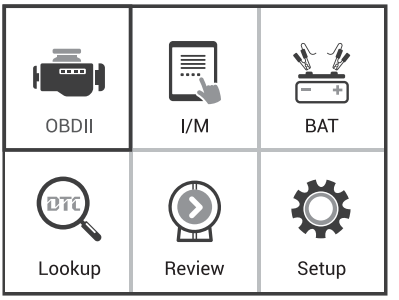
Review

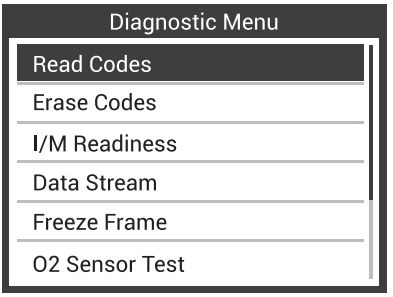
This function allows you to review the recorded DTCs.
If the vehicle has engine faults codes, turn on the record and return the menu, select the code reading function in OBDII to read the fault code, and finally you can view the recorded fault code in the review menu.

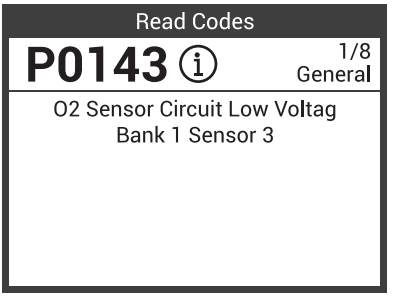


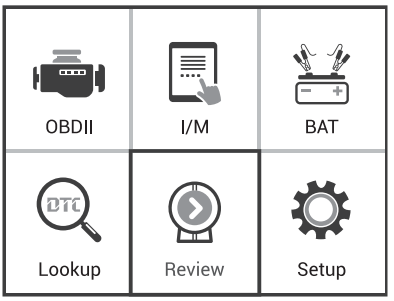


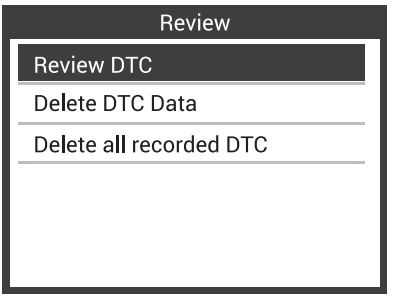

Record
OFF
ON

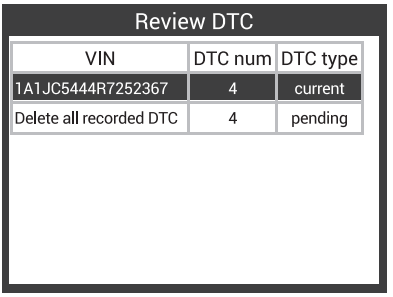

OBDII
I/M
BAT
Lookup
Review
Setup


Diagnostic Menu
Read Codes
Erase Codes
I/M Readiness
Data Stream
Freeze Frame
O2 Sensor Test


Read Codes
P0143
1/8
General
O2 Sensor Circuit Low Voltag
Bank 1 Sensor 3

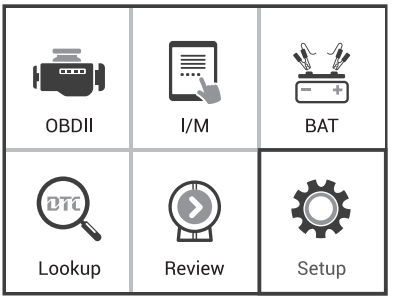

OBDII
I/M
BAT
Lookup
Review
Setup

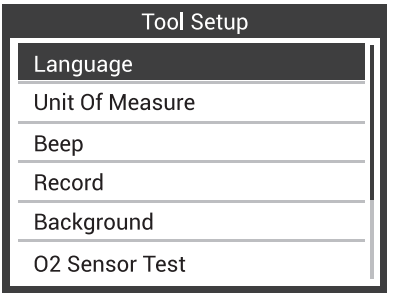

Review
Review DTC
Delete DTC Data
Delete all recorded DTC

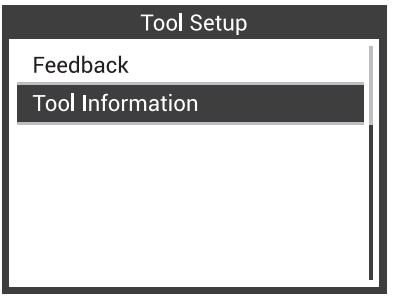

Review DTC
VIN
DTC num
DTC type
1A1JC5444R7252367
4
current
Delete all recorded DTC
4
pending

Setup

Language / Unit of measure / Beep / Record / Background / Sleep immediately / Feedback / Tool Information menu.
If we encounter problems, we can switch on the feedback function to report data.



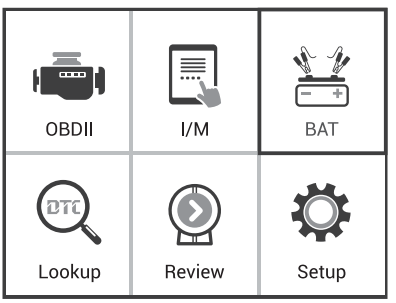


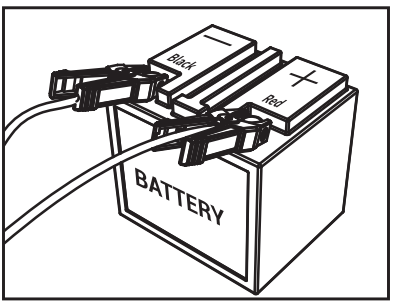


BAT function

Preparations before the Test

If you are testing in the vehicle, make sure all accessory loads are off, the key is not in the ignition, and the doors are closed.
Connecting the Tester
1) Connect the red clamp to the positive (+) terminal and the black clamp to the negative (-) terminal.





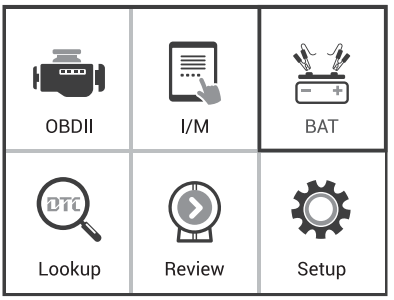
2) For a proper connection, rock the clamps back and forth. The tester requires that both sides of each clamp be firmly connected before testing.

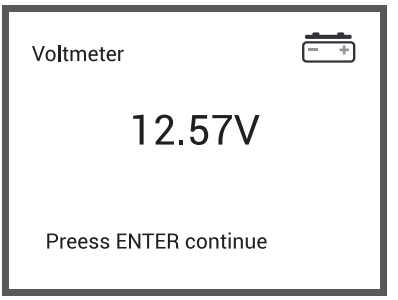
Before Test

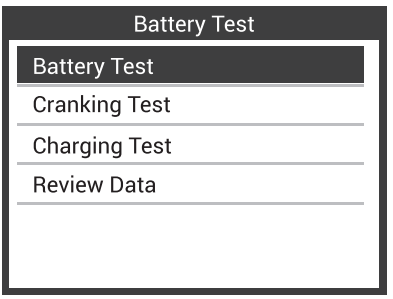
The engine and all other accessory loads must be OFF during test in order to have accurate results. Turn on the vehicle headlamps for 2~3 minutes until the battery voltage drops back to normal value if the battery is just fully charged.

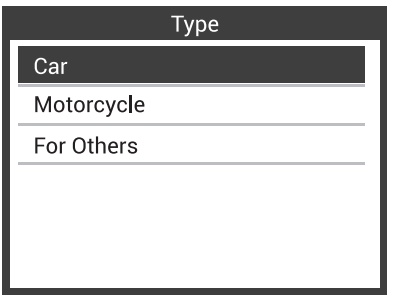
Battery Test

From the main menu, use the navigation keys LEAF / RIGHT to select the menu BAT and press the key ENTER. The screen will display the interface shown below:







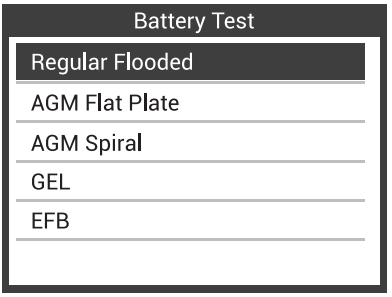


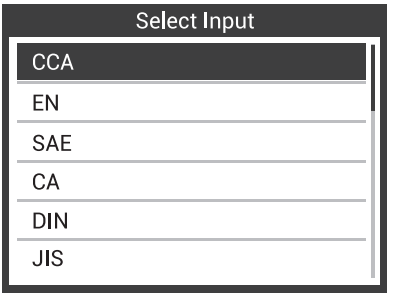
It tests each battery according to the selected actual system standard and rating marked on the battery, to get the accurate results.

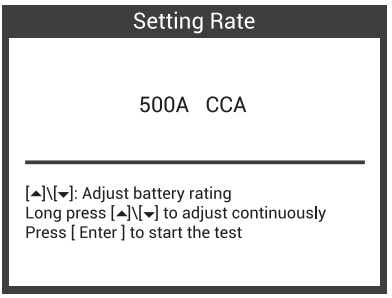
Standard	Description	Range
CCA	Cold Cranking Amps, as specified by SAE. The most common rating for cranking batteries at 0°F (-17.8°C).	100-2000
DIN	Deutsche Industrie-Norm.	100-1400
JIS	Japanese Industrial Standard, shown on a battery as a combination of numbers and letters.	26A17-N200Z

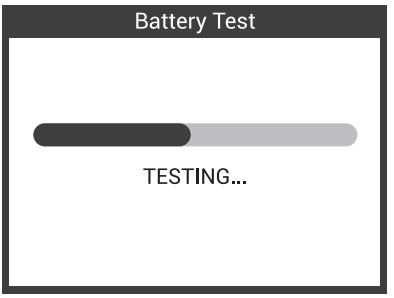
EN	Europa-Norm.	100-2000
IEC	International Electrotechnical Commission.	100-1400
SAE	Society of Automotive Engineers Standard.	100-2000
MCA	Marine Cranking Amps standard, effective starting current value at 0°C.	100-2000
BCI	Battery Council International standard.	100-2000
CA	Cranking Amps standard, effective starting current value at 0 °C.	100-2000
GB	China National Standard.	30-220Ah

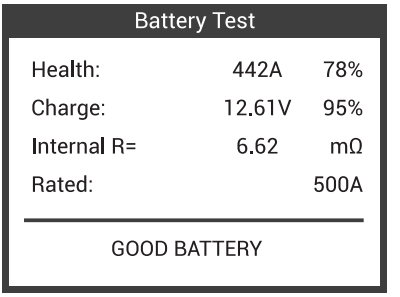
Battery Type: Scroll to and select Regular Flooded, AGM Flat Plate or AGM Spiral, if applicable.









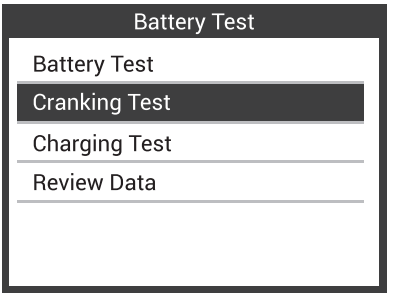


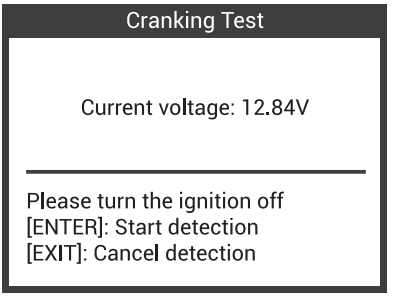
Battery Test Results

Decision	Interpretation
GOOD BATTERY	Return the battery to use.
GOOD-RECHARGE	Fully charge the battery and return it to use.
CHARGE&RETEST	Fully charge the battery and retest. Failure to fully charge the battery before retesting may cause inaccurate result. If CHARGE&RETEST appears again after you fully charge the battery, replace the battery.
REPLACE BATTERY	Replace the battery and retest. A REPLACE BATTERY result may also mean a poor connection between the battery cables and the battery. After disconnecting the battery cables, retest the battery using the out-of-vehicle test before replacing it.
BAD CELL-REPLACE	Replace the battery and retest.

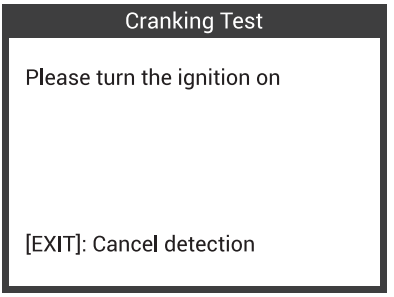
Crank test

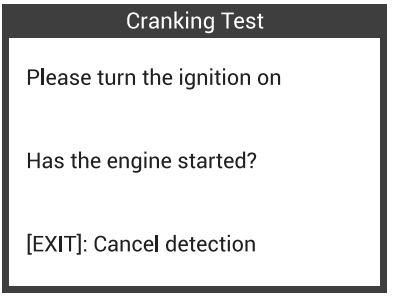
With this function you can read the battery voltage in real time.

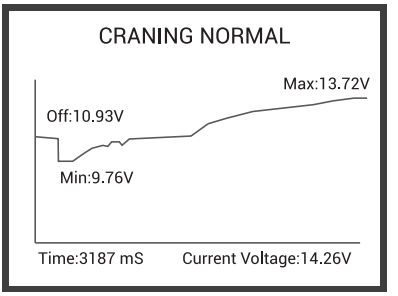




If you press [ENTER] and start detection, the interface will be displayed:

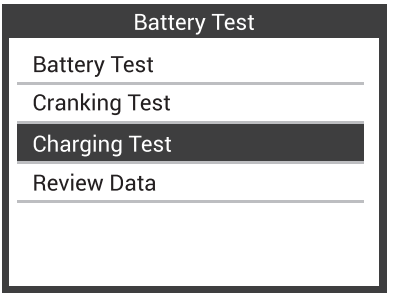


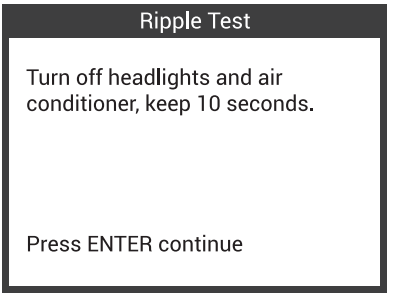


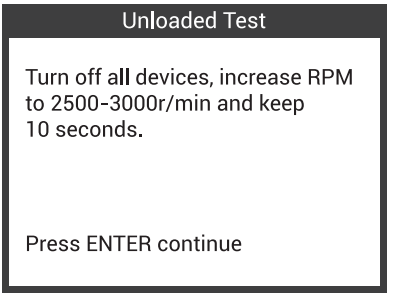


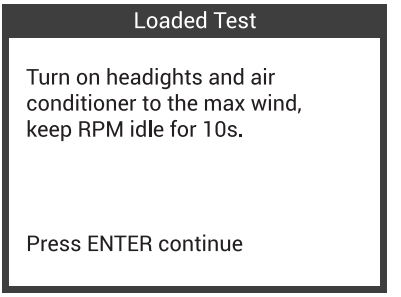
Charge test

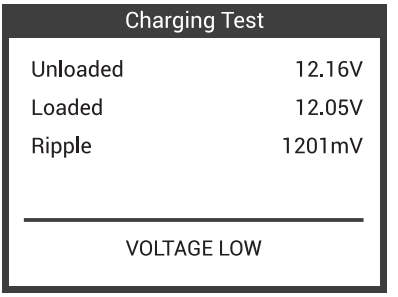
Press charge test and it will display:





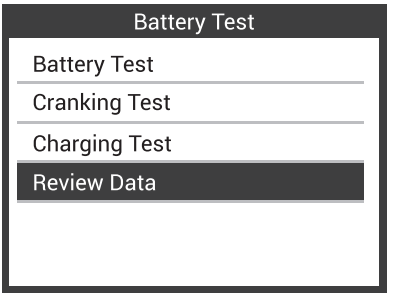


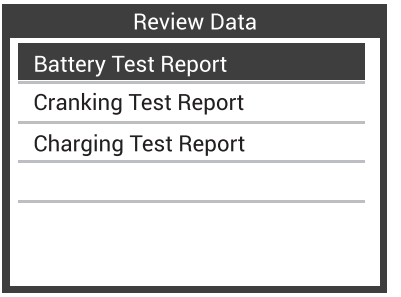


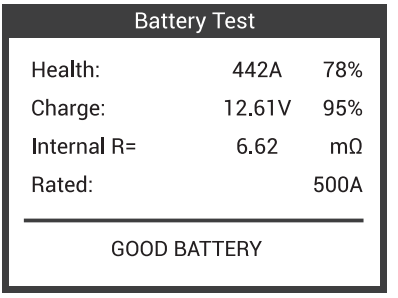


Review Data

When you press Check data, the data of the last battery test is displayed as follows:







Update

1) Download the update software and unzip the file.
2) Connect the device to the computer using a USB cable.
3) The update software is only supported by 7/8/10/11. In Windows 7, you need to install the driver, in Windows 8/10/11, you can run the update software directly.

Note:
Windows XP and Apple computers do not support upgrades.

Warranty

1) This warranty is limited to the person who purchases ANCEL products.
2) ANCEL products are warranted against defects in materials and workmanship for a period of one year (12 months) from the date of shipment to the user.

Federal Communications Commission (FCC) Statement.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide Reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

•Reorient or relocate the receiving antenna.

•Increase the separation between the equipment and receiver.

•Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

•Consult the dealer or an experienced radio/TV technician for help.

Warning: Changes or modifications made to this device not expressly approved by **OBDSPACE TECHNOLOGY Co., LTD** may void the FCC authorization to operate this device.

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

RF exposure statement:

This device complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. The device is installed and operated without restriction.