ANCEL®

USER'S MANUAL

AD530

1. Safety Precautions and Warnings

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

- Turn the ignition off first,then connect 16-pin to plug,then turn the ignition on.
- 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.
- 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 place: Exhaust gases are Poisonous.
- Put blocks in front of the drive wheels and never leave the vehicle unattended while running tests.
- Use extreme caution when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.
- Put the transmission in PARK (for automatic transmission) or NEUTRAL (for manual transmission) and make sure the parking brake is engaged.
- Keep a fire extinguisher suitable for gasoline/chemical/electrical fires nearby.
- Don't connect or disconnect any test equipment while the ignition is on or the engine is running.
- 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 needed.

2. General Information

2.1 On-Board Diagnostics (OBD) II

The first generation of On-Board Diagnostics (called OBD I) was developed by the California Air Resources Board (CARB) and implemented in 1988 to monitor some of the emission control components on vehicles. As technology evolved and the desire to improve the On-Board Diagnostic system increased, a new generation of On-Board Diagnostic system was developed. This second generation of On-Board Diagnostic regulations is called "OBD II".

The OBD II system is designed to monitor emission control systems and key engine components by performing either continuous or periodic tests of specific components and vehicle conditions. When a problem is detected, the OBD II system turns on a warning lamp (MIL) on the vehicle instrument panel to alert the driver typically by the phrase “Check Engine” or “Service Engine Soon”. The system will also store important information about the detected malfunction so that a technician can accurately find and fix the problem. Here below follow three pieces of such valuable Information:

1) Whether the Malfunction Indicator Light (MIL) is commanded 'on' or 'Off';
2) Which, if any, Diagnostic Trouble Codes (DTCs) are stored;
3) Readiness Monitor status.

2.2 Diagnostic Trouble Codes (DTCs)

OBD II Diagnostic Trouble Codes are codes that are stored by the on-board computer diagnostic system in response to a problem found in the vehicle. These codes identify a particular problem area and are intended to provide you with a guide as to where a fault might be occurring within a vehicle. OBD II Diagnostic Trouble Codes consist of a five-digit alphanumeric code. The first character, a letter, identifies which control system sets the code. The other four characters, all numbers, provide additional information on where the DTC originated and the operating conditions that caused it to be set. Below is an example to illustrate the structure of the digits:

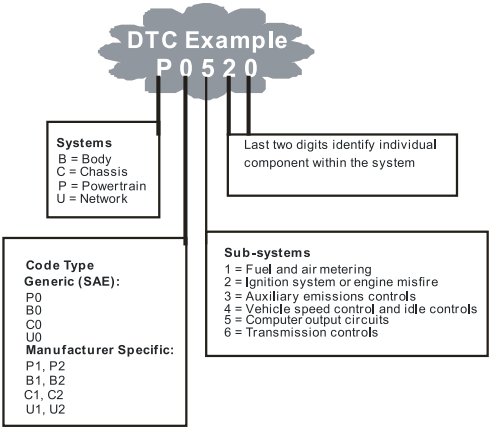
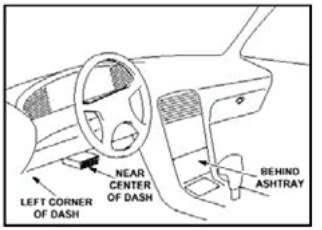


Figure 1-2: Explanation of a diagnostic trouble code.

2.3 Location of the Data Link Connector (DLC)

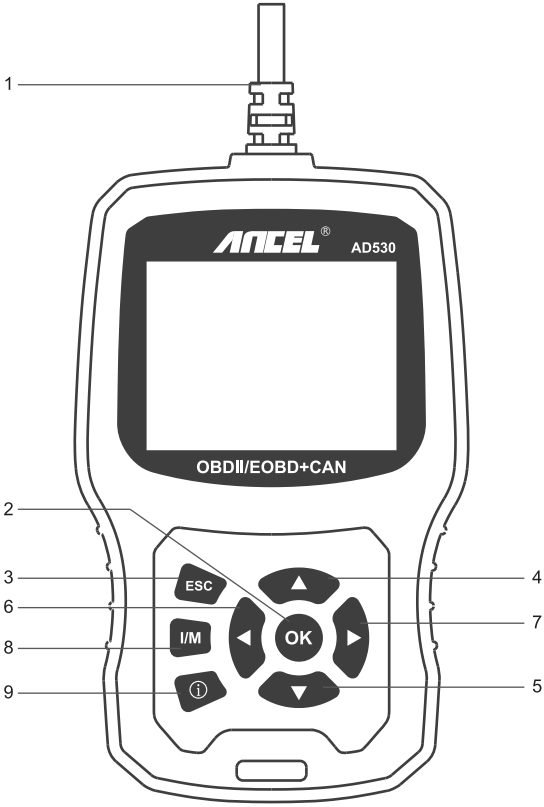
The DLC (Data Link Connector or Diagnostic Link Connector) is the standardized 16-pin connector where diagnostic scan tools interface with the vehicle's on-board computer. The DLC is usually located 12 inches from the center of the instrument panel (dash), under or around the driver's side for most vehicles. If the Data Link Connector is not located under the dashboard, a label should be there revealing its location. For some Asian and European vehicles, the DLC is located behind the ashtray and the ashtray must be removed to access the connector. If the DLC cannot be found, refer to the vehicle's service manual for the location.

Figure 1-3: The DLC connector (left) can be found in the area of the car interior seen at right (black arrow).



3. Using the Scan Tool

3.1 Tool Description - ANCEL AD530



1. OBDII Connector- Connect the tool to the vehicle's Data Link Connector(DLC).

2. OK BUTTON- Confirm a selection (or action) from a menu.

3. ESC BUTTON- Cancel a selection (or action) from a menu or returns to the menu.

4. UP BUTTON - Moves up through menu and submenu items in menu mode.

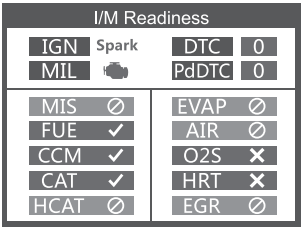
5.DOWN BUTTON- Moves down through menu and submenu items in menu mode.

6. LEFT BUTTON- When looking up datastream, if the datastream display more than one screen, or turn page up or down when more than one page is displayed.

7. RIGHT BUTTON- When looking up datastream, if the datastream display more than one screen, or turn page up or down when more than one page is displayed.

8. "I/M" BUTTON- Quick State Emissions readiness check and drive cycle verification.

9. HELP BUTTON- Provides help information ,Press the help button will obtain more the fault code explanation.



Remarks:

MIL Yellow- Dashboard MIL ON

MIL Gray-Dashboard MIL OFF

⊘ -not support

✓ -complete

✕ -not complete

3.2 Specifications

1) Display: 2.8" TFT 262K true color

2) Operating Temperature: 0 to 50℃ (32 to 140 F°)

3) Storage Temperature: -20 to 70℃ (-4 to 158 F°)

4) External Power: 8 to 36 V power provided via vehicle battery

5) Dimensions: 155.30 x 97.60 x 31.80 mm

6) Weight: 0.45kg

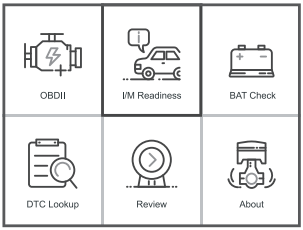
3.3 Accessories Included

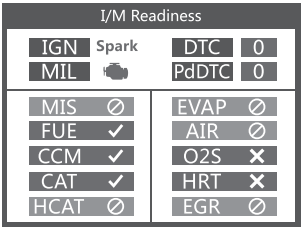
1) User's Manual – Instructions on tool operations.

2) USB cable - Used to upgrade the scan tool.

3.4 I/M

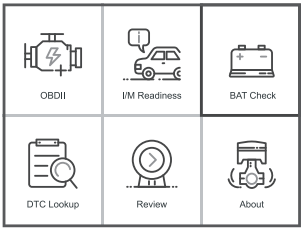
A snapshot of the emission systems operations for all OBD II vehicles - i.e., misfire monitor, evap systems monitor and more. Choose [I/M] and it displays as follow:



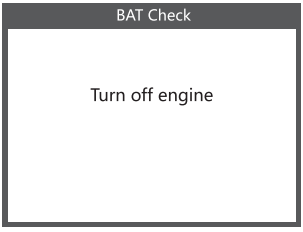


3.5 BAT Check

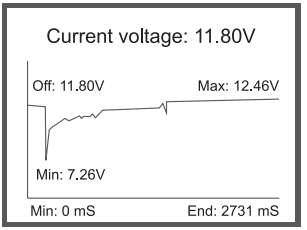
The function is used to read real time battery voltage. From the Main Menu, use the left / right scroll button to select the BAT menu and press the OK button. the screen will display the interface as shown below:



Please turn off the engine.



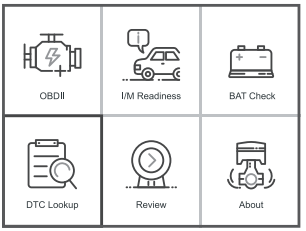
When press [OK] button and Start detection, it's display interface:

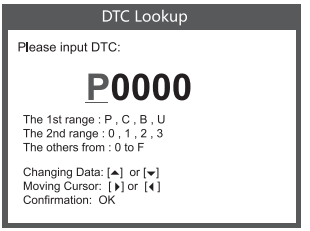


3.6 DTC Lookup

The DTC Lookup function is used to search for definitions of Code stored in the built-in Code library.

1) From the Main Menu, use the LEFT /DOWN scroll button to select the Code Lookup and press the OK button.





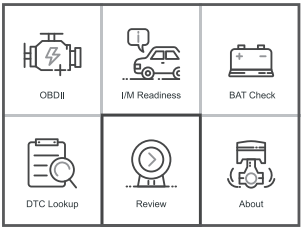
For manufacturer specific codes , you'll need to select a vehicle make on an additional screen to look for DTC definitions.

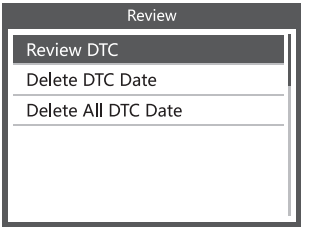
If definition could not be found (SAE or Manufacturer Specific), the scan tool displays "DTC definition not found! Please refer to vehicle service"manual !"

2) To exit to the Main Menu, press the ESC button.

3.7 Review

This function is used to review the recorded DTC. Select Review in the Main Menu and press OK and the screen will display the interface as shown below:

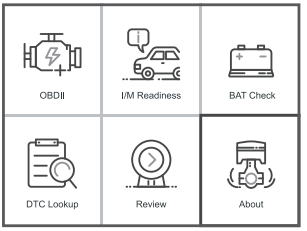


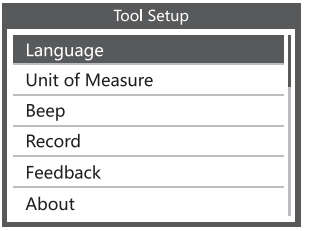


3.8 Tool Setup

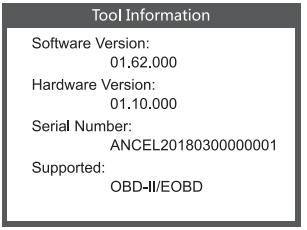
The scan tool allows you to make the following adjustments and settings:

1) Select Language: Selects the desired language.
2) Unit of Measure: Set measure to English or Metric.
3) Beep Set: Turns ON/OFF beep.
4) Record: ON/OFF the Record.
5) Feedback.
6) About: Product information.



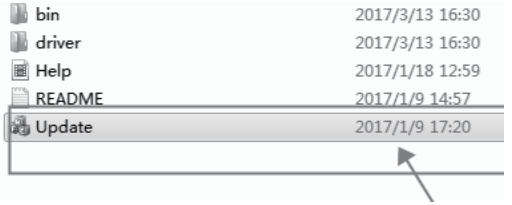


Choose [About] and it displays as follow:

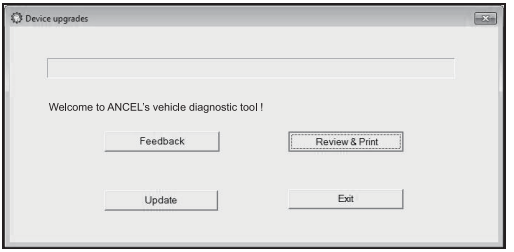


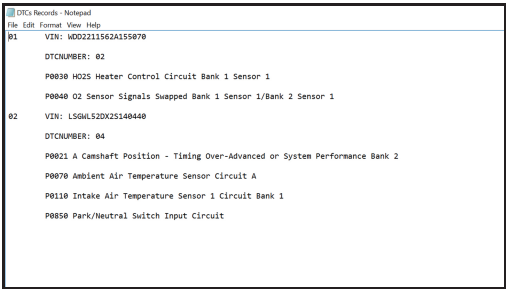
3.9 Review&Print diagnostic reports

1. Download upgrade file from ANCEL website.
2. The device is connected with computer through USB cable.
3. Open the “update” application.



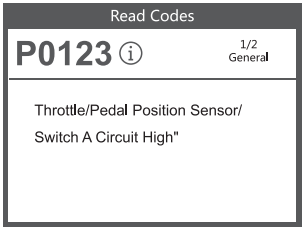
4. Click ”Review&Print” and automatically generate diagnostic reports.



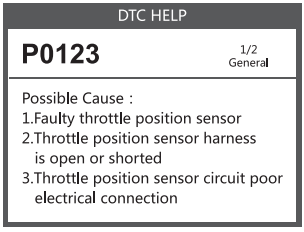


3.10 Help Function

1.When the device read the fault codes, the screen will display the codes as shown below:



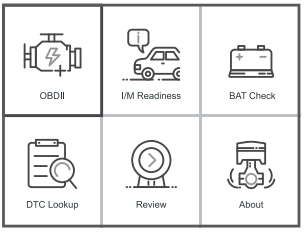
2. if users view the help icon picture in the menu, please press the help function key , it can read more about the codes information, and why this fault codes occurred. the screen will display the help information as shown below:

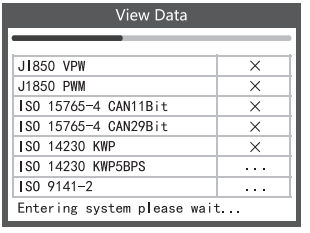


4. OBD II Diagnostics

CAUTION: Don't connect or disconnect any test equipment with ignition on or engine running.

1) Turn the ignition off.
2) Locate the vehicle's 16-pin Data Link Connector (DLC).
3) Plug the scan tool cable connector into the vehicle's DLC.
4) Turn the ignition on. Engine can be off or running.
5) Press OK to enter Main Menu . UP /DOWN button to select Diagnostics from the menu.





6) Press OK to confirm.

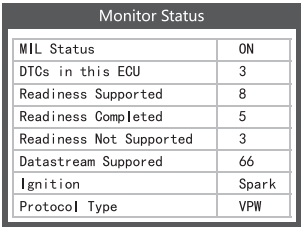
If "LINKING ERROR!" message shows on the display.

- Verify that the ignition is ON;
- Check if the scan tool's OBD II connector is securely connected to the vehicle's DLC;
- Turn the ignition 'off' and wait for about 10 seconds. Turn the ignition back to 'on' and repeat the procedure from step 5.

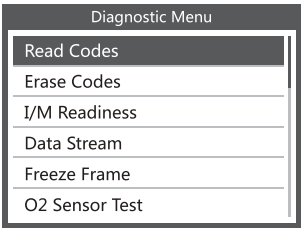
4.1 Diagnostic Menu

- stored emission-related codes is hard codes which illuminate malfunction indicator lamp(MIL).
- pending codes is current codes or historical codes which will not illuminate malfunction indicator(MIL).

1) Select OBDII in Main Menu and press OK, shown as follow :

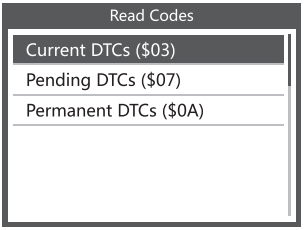


2) Press OK to the Diagnostic Menu, screen will display as follow :

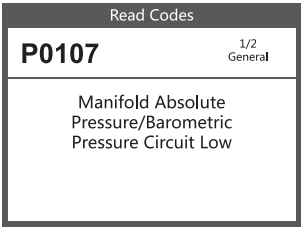


4.2 Read Codes

1) Select Read Codes and press OK in Diagnostic Menu. If there are some codes, the screen will display the codes as shown below:



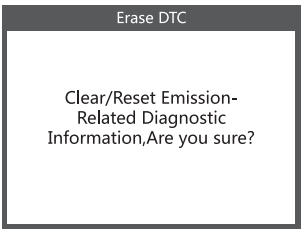
2) According to the above figure to select different item by pressing UP or DOWN and press OK to confirm.

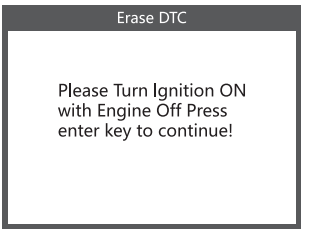


3) After viewing all the codes, you can press ESC to return to the previous menu.

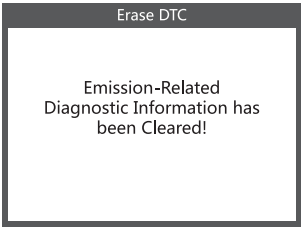
4.3 Erase Codes

1) Select Erase Codes, the screen will display the interface as shown below. Press OK to erase DTC's, and the screen will display the interface as shown below:





2) According to the above figure to press OK and the screen will display the interface as shown on the next page:

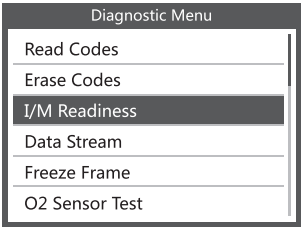


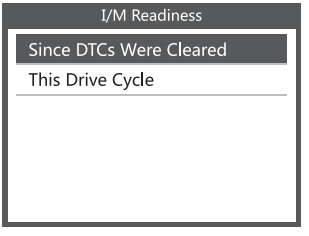
Notes:

- Before performing this function, make sure to retrieve and record the trouble codes.
- After clearing, you should retrieve trouble codes once more or turn ignition on and retrieve codes again. If there are still some trouble codes in the system, please troubleshoot the codes using a factory diagnosis guide, then clear the codes and recheck.

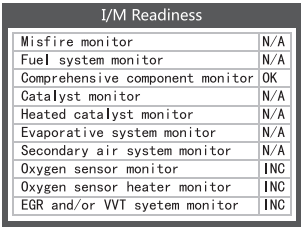
4.4 I/M Readiness

Select I/M Readiness and press OK, the screen will display the interface as shown below:





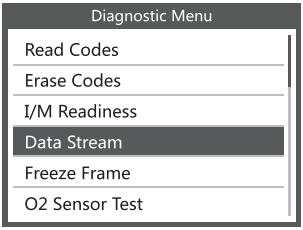
I/M readiness is to test Misfire / Fuel system / Comprehensive component, You can use UP or DOWN button to select and press OK shown as follow :

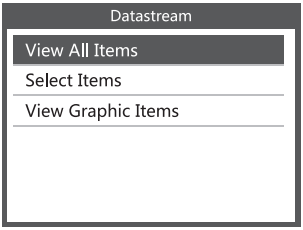


N/A means not available on this vehicle, INC means incomplete or not ready, OK means Completed or Monitor Ok.

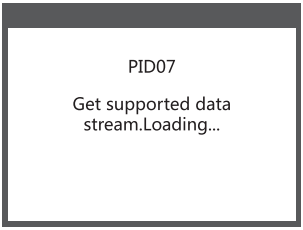
4.5 Data Stream

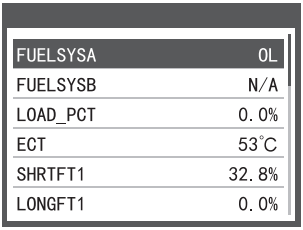
Press UP or DOWN button to select Data Stream in Main Menu interface and then press OK button to confirm, the screen will display the interface as shown below:



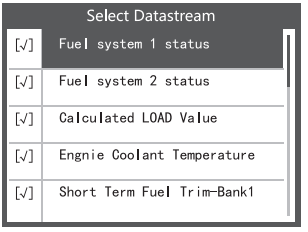


Select [View All Items] and press OK button, the screen will display the interface as shown below:

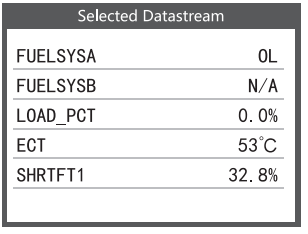




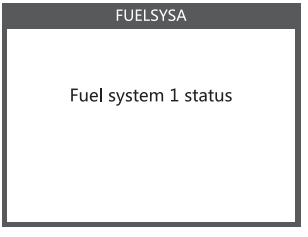
Choose [select items] and press OK button. After that, press OK button again, shown as follow:



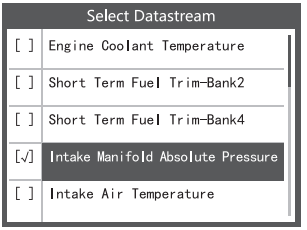
After selected items and press ESC, the screen will display as follow:



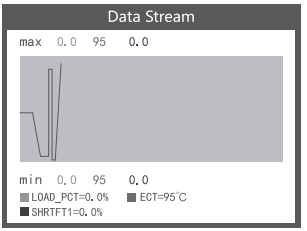
If you want to know means of the abbreviation data, you can press the OK Button, the screen will display the interface as shown below:



Press OK to select [View Graphic Items] in Data stream menu, after selected items, the screen will display the interface as shown below:



Press ESC to return to display :



Max lines is 3.

Press ESC to return to previous menu.

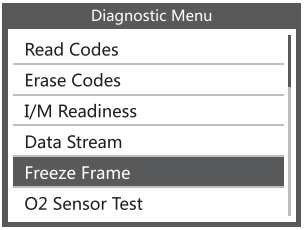
You can view all data stream items or select a certain item of live data with a graph.

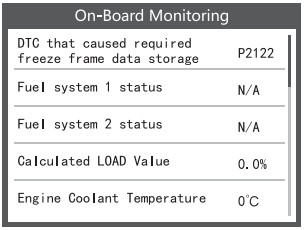
4.6 View Freeze Frame

When an emission-related fault occurs, a snapshot of current vehicle parameter are recorded by the ECU.

Note: if DTCs were erased, Freeze Data may not be stored in vehicle.

Select Freeze Frame in main menu interface, the screen will display the interface as shown below:





You can use UP/ DOWN button to view the data. Press ESC to return to Diagnostic Menu.

4.7 O2 sensor test

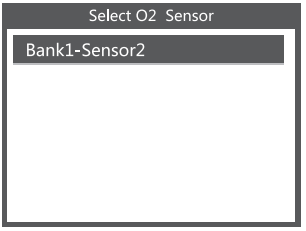
OBD II regulations set by the SAE require that relevant vehicles monitor and test the oxygen (O 2) sensors to identify problems related to fuel efficiency and vehicle emissions. These tests are not on-demand tests and they are done automatically when engine operating conditions are within specified limits. These test results are saved in the on-board computer's memory.

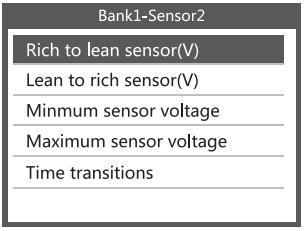
The O2 Sensor Test function allows retrieval and viewing of O2 sensor monitor test results for the most recently performed tests from the vehicle's on-board computer.

The O2 Sensor Test function is not supported by vehicles which communicate using a controller area network (CAN). For O2 Sensor Test results of CAN-equipped vehicles, see chapter "On-Board Mon. Test".

Select O2 Sensor Test in Diagnostic menu and press OK and the Screen will display as shown below.

Press OK button, the screen will display as shown below (Data will be different everytime) :

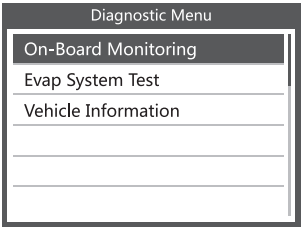


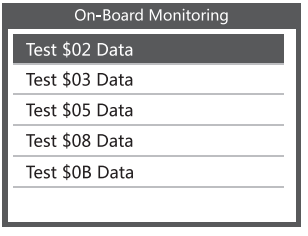


4.8 On-board monitor test

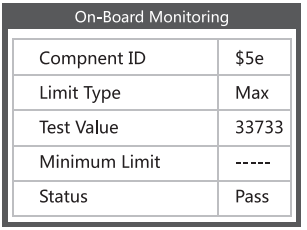
This function can be utilized to read the results of on-board diagnostic monitoring . Tests for specific components/systems.

Select On-board Monitoring in Diagnostic Menu and press OK and the screen will display as shown below (Data will be different everytime):





You can use UP or DOWN button to select an item and press OK, the screen will display as shown below (Data will be different everytime):

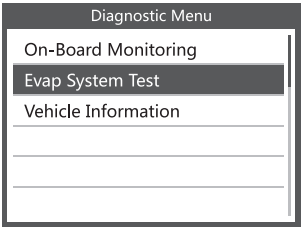


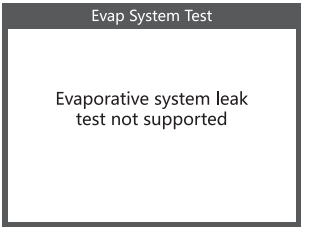
Press ESC to return to Diagnostic Menu.

4.9 EVAP System Test

The EVAP test function lets you initiate a leak test for the vehicle's EVAP system. The device does not perform the leak test, but signals to vehicle's on-board Computer to initiate the test. Before using the system test function, refer To The vehicle's service repair manual to determine the procedures necessary to stop the test.

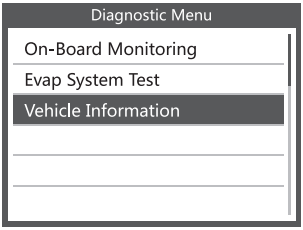
Select EVAP System Test and press OK, the screen will display the relative information about EVAP system. Some vehicle manufacturers do not allow External devices to control vehicle system. If the car supports this function, it will display as below:

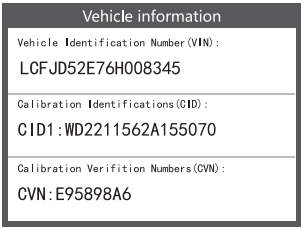




4.10 Vehicle Info

Select [Vehicle Info] and press OK, the screen will display the information, such as VIN (Vehicle identification Number), CID (Calibration ID) and CVN (Calibration verification number), as shown below (different cars will shown different data) :

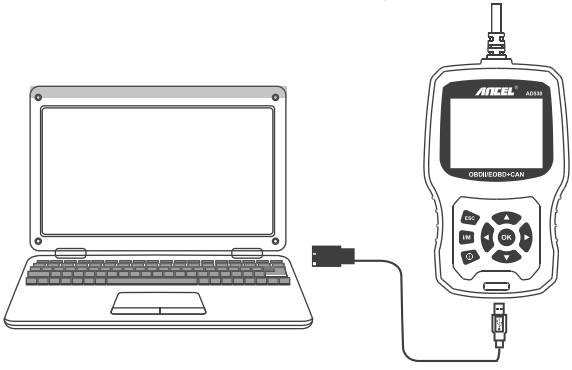




Press ESC to return to Diagnostic Menu.

5. Update

The device is connected with computer through USB cable.



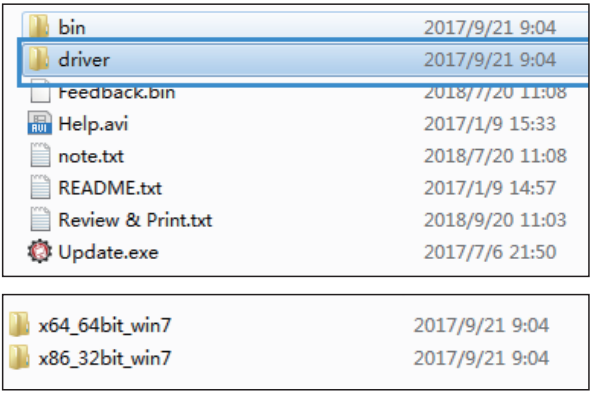
1) When upgrade the device software, it only supports window 7/8/10 system.

2) It can be updated directly on Window8 and window10 system.

3) When the computer is window7 system, the device's software driver is installed on the computer.

The 64-bit operating system select "X64_64bit_win7" files

The 32-bit operating system select "X86_32bit_win7" files

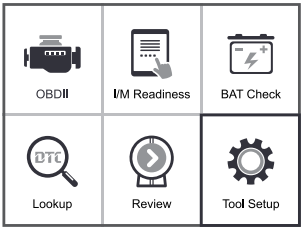


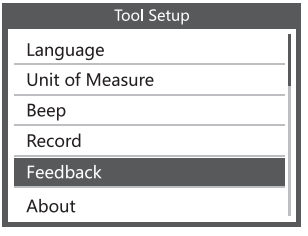
Note: the detail operation method, please view the [Help.avi] file.

6. Feedback

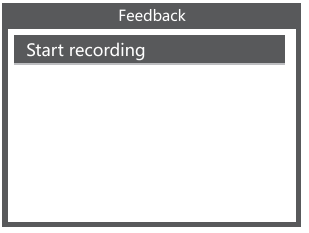
1.When the [OBDII] function shows connected error with vehicle, please using the feedback function.

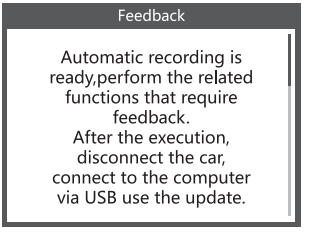
Choose [Feedback] and it displays as follow:





Choose [Start recording] to open record function and it displays as follow:





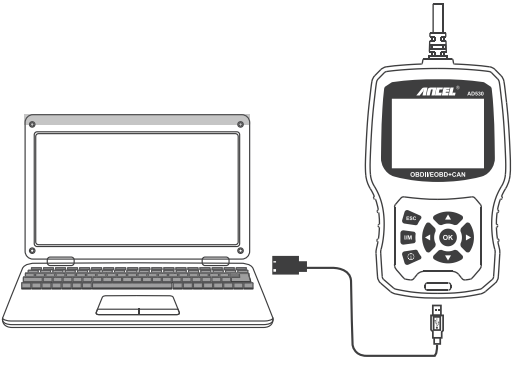
Next : Press ESC Button and return to the main menu.

Choose [OBDII] menu to detecting again and it will record the data.

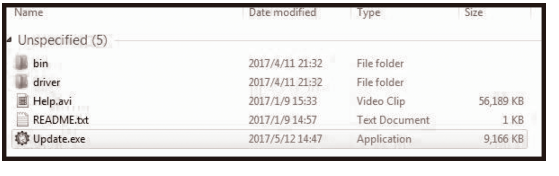
2. Transfer data to your computer and generate feedback file.

Download upgrade file on the computer from ANCEL website.

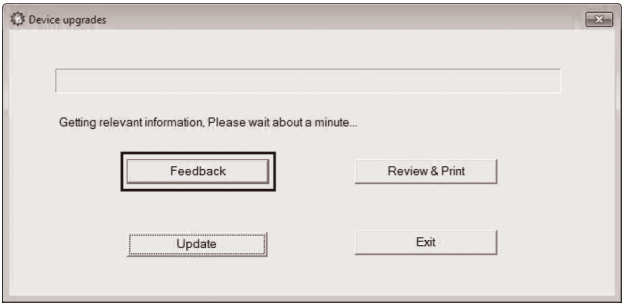
The device is connected with computer through USB cable.

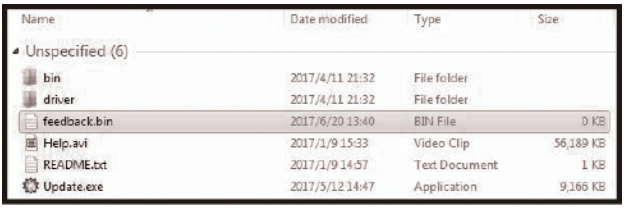


Choose “Update” file and it displays as follow:



Click “Feedback” and it displays as follow:





Please send the feedback.bin file to support@anceltech.com.

7. Warranty and Service

7.1 Limited One Year Warranty

THIS WARRANTY IS EXPRESSLY LIMITED TO PERSONS WHO PURCHASE ANCEL AD530 PRODUCTS FOR PURPOSES OF RESALE OR USE IN THE ORDINARY COURSE OF THE BUYER'S BUSINESS.

ANCEL AD530 code reader is warranted against defects in materials and workmanship for one year (12 months) from the date of delivery to the user.

This warranty does not cover any part that has been abused, altered, used for a purpose other than for which it was intended, or used in a manner inconsistent with instructions regarding use. The exclusive remedy for any automotive meter found to be defective is repair or replacement, and ANCEL AD530 shall not be liable for any consequential or incidental damages.

7.2 Service Procedures

If you have any questions, please contact your local store distributor.

If it becomes necessary to return the scan tool for repair, contact your local distributor for more information.

OBDSPACE TECHNOLOGY CO.,LTD

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