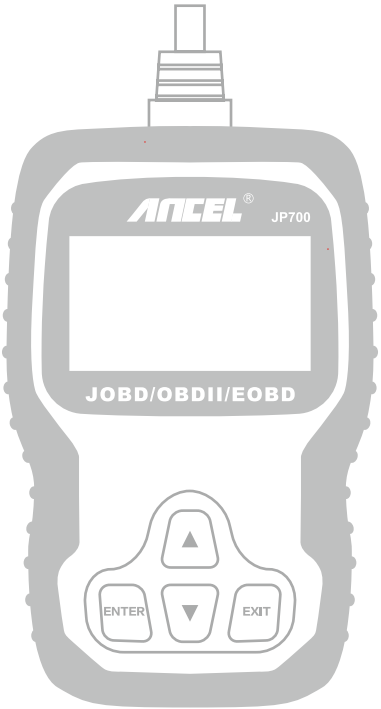
ANCEL®

JOBD/OBDII/EOBD

User's Manual



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 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.
- 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.
- 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.
- 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.

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:

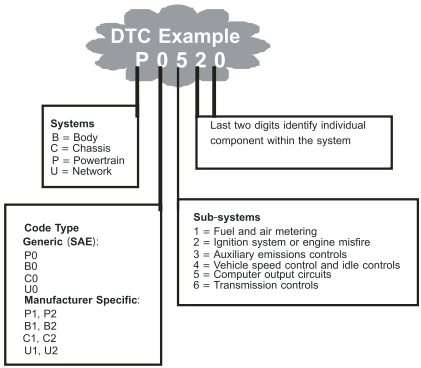
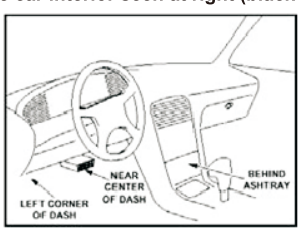


Figure 1-2: Explanation of a diagnostic trouble code.

2.3 Location of the Data Link Connector (DLC)

The DLC (Data Link Connector or Diagnostic Link Connector) is the standardized 16-cavity 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).



2.4 OBD II Readiness Monitors

Readiness Monitors are indicators used to find out if all of the emissions components have been evaluated by the OBD II system. They are running periodic tests on specific systems and components to ensure that they are performing within allowable limits.

currently, there are eleven OBD II Readiness Monitors (or I/M Monitors) defined by the U.S. Environmental Protection Agency (EPA). Not all monitors are supported by all vehicles and the exact number of monitors in any vehicle depends on the motor vehicle manufacturer's emissions control strategy.

Comtinuous Monitors – Some of the vehicle components or systems are continuously tested by the vehicle's OBD II system, while others are tested only under specific vehicle operating conditions. The continuously monitored components listed below are always ready:

1. Misfire
2. Fuel System
3. Comprehensive Components (CCM)

Once the vehicle is running, the OBD II system is continuously checking the above components, monitoring key engine sensors, watching for engine misfire, and monitoring fuel demands.

Non-Continuous Monitors – Unlike the continuous monitors, many emissions and engine system components require the vehicle to be operated under specific conditions before the monitor is ready. These monitors are termed non-continuous monitors and are listed below:

1. EGR System - exhaust Gas Recirculation for reducing greenhouse gases.
2. O2 Sensors - monitor and adjust air/fuel mixture.
3. Catalyst - reduces exhaust emissions.
4. Evaporative System - monitors the integrity of the fuel tank system.
5. O2 Sensor Heater - brings O2 sensor to correct operating temperature.
6. Secondary air - reduces exhaust emissions.
7. Heated Catalyst - brings catalyst to correct operating temperature.
8. A/C system - monitors system for freon leaks.

2.5 OBD II Monitor Readiness Status

OBD II systems must indicate whether or not the vehicle's PCM's monitoring has completed testing on each emission component. Components that have been OBD II tested will be reported as "OK". The purpose of recording readiness status is to allow inspectors to determine if the vehicle's OBDII system has tested all the emissions systems. This is handy to know before bringing vehicle to a state emissions testing facility.

The powertrain control module (PCM) sets a monitor to "OK" after an appropriate drive cycle has been performed. The drive cycle that enables a Monitor and sets readiness codes to "OK" varies for each individual monitor. Oncce a monitor is set as "OK", it will remain in this state. A number of factors, including erasing of diagnostic trouble codes (DTCs) with a code reader or a disconnected battery, can result in Readiness Monitors being set to "INC" (incomplete). Since the three continuous monitors are constantly evaluating, they will be reported as "OK" all of the ime. As long as there are no DTCs stored in memory, the vehicle is running in accordance with the OBD II guidelines. If testing of a particular supportes non-continuous monitor has not been completed or not tested, the monitor status will be reported as "INC" (incomplete).

In order for the OBD monitor system to become ready, the vehicle should be driven under a variety of normal operating conditions. These operating conditions may include a mix of highway driving and stop and go, city type driving, and at least one overnight-off period. For specific information on getting your vehicle's OBD monitor system ready, please consult your vehicle owner's manual.

2.6 OBD II Definitions

Powertrain Control Module (PCM) – the OBD II terminology for the on-board computer that controls the engine and the drive train.

Malfunction Indicator Light (MIL) – Malfunction Indicator Light (Service Engine Soon, Check Engine) is a term used for the light on the instrument panel. It is to alert the driver and/or the repair technician that there is a problem with one or more of vehicle's systems and may cause emissions to exceed federal standards. If the MIL illuminates with a steady light, it indicates that a problem has been detected and the vehicle should be serviced as soon as possible. Under certain conditions, the dashboard light will blink or flash. This indicates a severe problem and flashing is intended to discourage vehicle operation. The vehicle onboard diagnostic system can not turn the MIL off until necessary repairs are completed or the condition no longer exists.

DTC – Diagnostic Trouble Codes (DTC) these identify which section of the emission control system has malfunctioned.

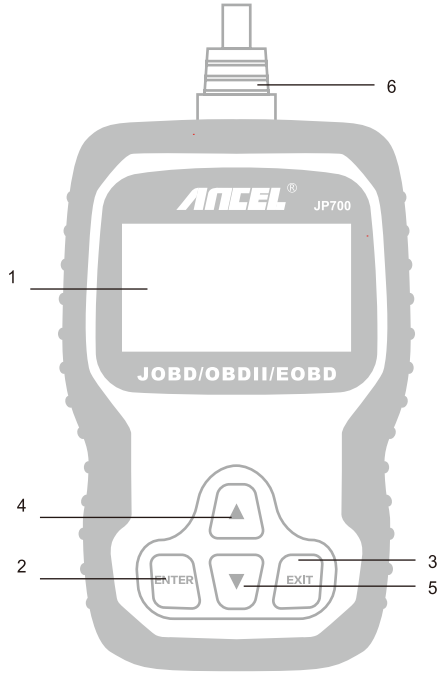
Enabling Criteria – Also termed Enabling Conditions. They are the vehicle-specific events of conditions that must occur within the engine before the various monitors will set, or run. Some monitors require the vehicle to follow a prescribed “drive cycle” routine as part of the enabling criteria. Drive cycles vary among vehicles and for each monitor in any particular vehicle.

OBD II Drive Cycle – A specific mode of vehicle operation that provides conditions required to set all the readiness monitors applicable to the vehicle to the “ready” condition. The purpose of completing an OBD II drive cycle is to force the vehicle to run its onboard diagnostics. Some form of a drive cycle needs to be performed after DTCs have been erased from the PCM’s memory or after the battery has been disconnected. Running through a vehicle’s complete drive cycle will “set” the readiness monitors so that future faults can be detected. Drive cycles vary depending on the vehicle and the monitor that needs to be reset. For vehicle specific drive cycle, consult the vehicle’s Owner’s Manual.

Freeze Frame Data – When an emissions related fault occurs, the OBD II system not only sets a code, but also records a snapshot of the vehicle operating parameters to help in identifying the problem. This set of values operating parameters to help in identifying the problem. This set of values is referred to as Freeze Frame Date and may include important engine is referred to as Freeze Frame Date and may include important engine parameters such as engine RPM, vehicle speed, air flow, engine load, fuel pressure, fuel trim value, engine coolant temperature, ignition timing advance, or closed loop status.

3. Using the Scan Tool

3.1 Tool Description - ANCEL JP700



1. LCD DISPLAY – Indicates test results. Backlit, 128 x 64 pixel display with contrast adjustment.

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).

3.2 Specifications

1) Display: Backlit, 128 × 64 pixel display with contrast adjustment

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 18.0 V power provided via vehicle battery

5) Dimensions:

Length	**Width**	**Height**
130 mm (5.10")	78 mm (3.00")	28 mm (1.10")

6) NW: 0.23kg (0.51lb), GW: 0.32kg (0.74lb)

3.3 Included

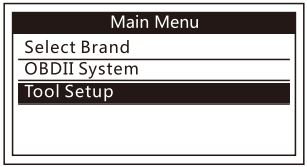
1) JP700 Scan Tool main unit

2) User's Manual

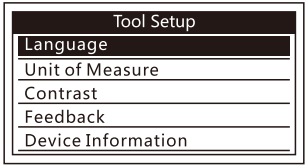
3) USB Cable

3.4 Language

1) From the Main Menu, use the UP/DOWN scroll button to select the Tool Setup and press the ENTER button.

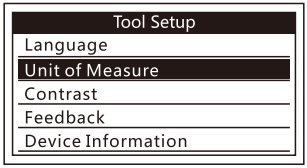


2) From the Main Menu, use the UP/DOWN scroll button to select the Language and press the ENTER button.

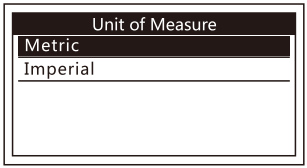


3.5 Unit of Measure

1) From the Main Menu, use the UP/DOWN scroll button to select Unit of Measure, and press ENTER.



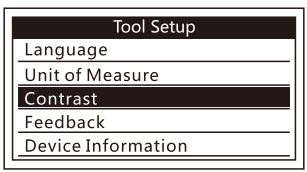
2) From the Unit of Measure menu, use the UP/DOWN scroll button to select the desired Unit of Measure.



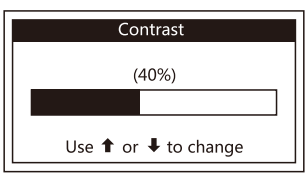
3) Press the ENTER button to save your selection and return to the previous menu.

3.6 Contrast

1) From the Tool Setup, use the UP/DOWN scroll button to select Contrast, and press ENTER.



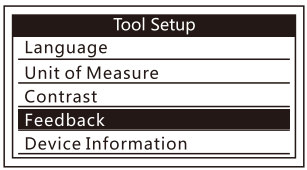
2) From the Contrast menu, use the UP/DOWN scroll button to increase or decrease contrast.



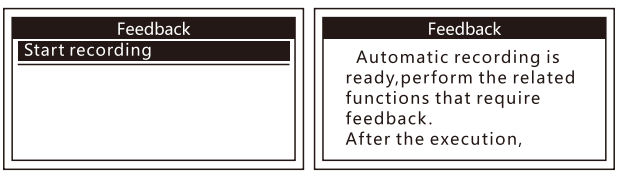
3) Press ENTER to save your settings and return to the previous menu.

3.7 Feedback

Choose “Setup” option after tool connected to car, then select Feedback :

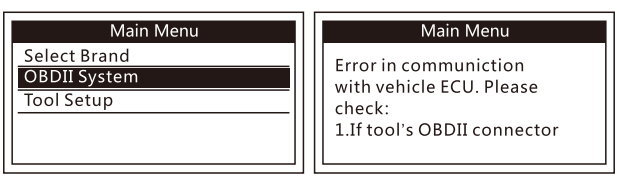


Choose [Strat recording] and it displays as follow :

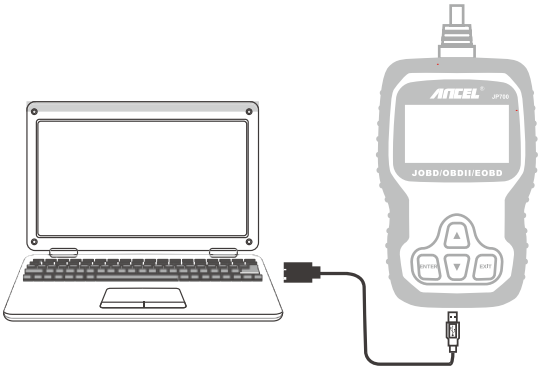


Press EXIT to exit to the Tool setup.

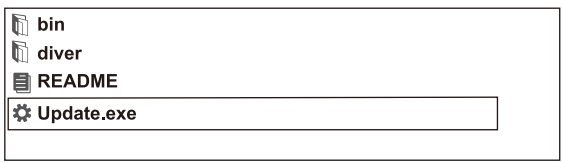
For example: Choose “OBDII” option, test your car for getting car’s information.



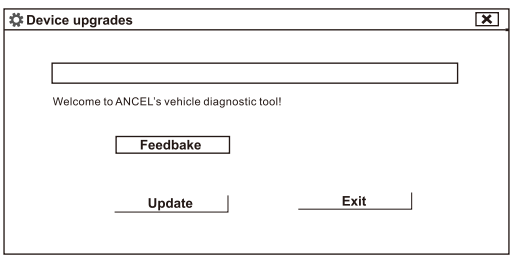
Remark: keep tool connect with car in above steps.



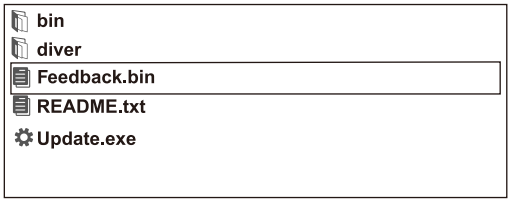
Connect tool with computer, Open the upgrade files ,choose “Update”.



Click “Feedback”

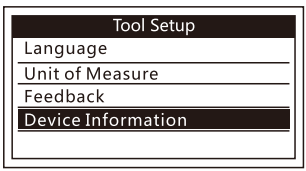


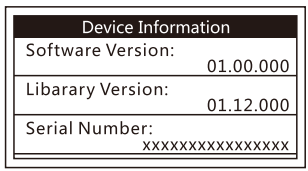
Choose the note file, send me the Feedback.bin text to support@anceltech.com



Remark: In the above steps, keep the tool connected to the computer.

3.8 Device Information





4. Select Brand

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

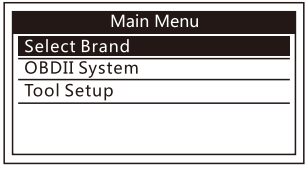
1) Turn the igniton off.

2) Locate the vehicle's 16-pin Data Link Connectior(DLC).

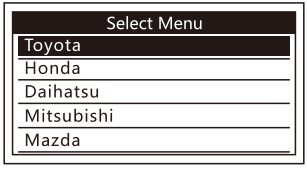
3) Plug the scan tool cable connector into the vehicle's DLC.

4) Turn the ignttion on. Engine can be off or running.

5) Press **ENTER** to enter Main Menu. Use the **UP/DOWN** scroll to select [**Select Brand**] from the menu.



Please select your brand:



As the JP700 support Vehicle cases as below:

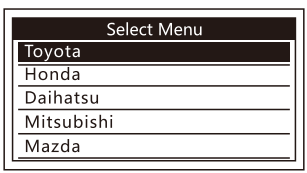
OBDII&EOBD Work on all after 1996 OBDII compliant US, European an Asian Vehicles.

Janpanese Market car by Brand:

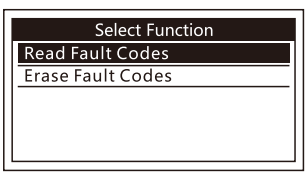
Toyota	most used car on 16-PIN compatible.
Nissan	most used car on 16-PIN compatible.
Honda	all 16 pins used. Including light. If a connector located in the Passenger seat.
Mazda	all 16 pins used car. CAN compatible vehicles since 2003.
Mitsubishi	most used car on 16-PIN compatible.
Daihatsu	most used car on 16-PIN compatible.
Subaru	most used car on 16-PIN compatible.
Suzuki	most used car on 16-PIN compatible.

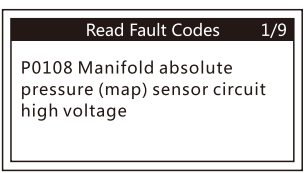
4.1 Read Fault Codes

Press ENTER can enter select car Reading and Erasing Fault code function.



Select Read Fault Codes press ENTER:



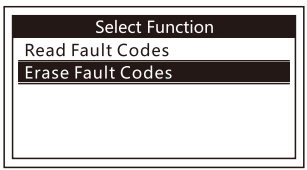


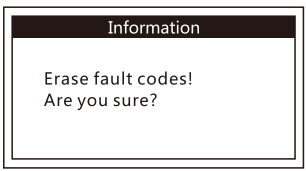
4.2 Erase Fault Codes

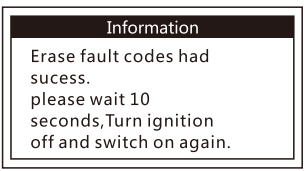
Notes:

- This function is performed with key on engine off . Do not start the engine.
- 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 is still some trouble codes for hard troubles, please find the reason caused the trouble code firstly, and then solve the problem. Now, the trouble codes can be erased.

1) Use the UP/DOWN scroll buttons to select Erase Fault Codes from Select Function and press ENTER.



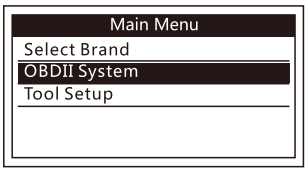


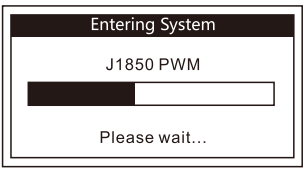


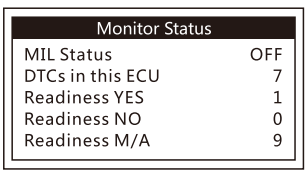
2) Use the EXIT buttons return Select Function.

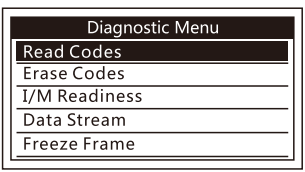
5. OBDII System

1) Use the UP/DOWN scroll button to select OBDII System from the menu.





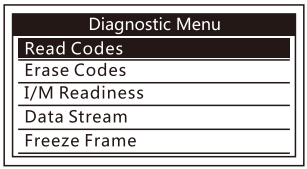




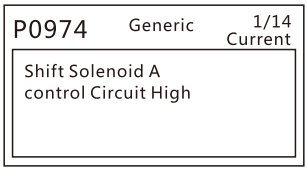
5.1 Read Codes

- Stored codes are also known as "hard codes" or "permanent codes". These codes cause the control module to illuminate the malfunction indicator lamp (MIL) when an emission-related fault occurs.
- Pending Codes are also referred to as "maturing codes" or "continuous monitor codes". They indicate problems that the control module has detected during the current or last driving cycle, but are not considered serious, yet. Pending Codes will not turn on the malfunction indicator serious, yet. Pending Codes will not turn on the malfunction indicator up cycles, the code clears from memory.

1) Use the UP/DOWN scroll button to select Read Codes from the Diagnostic Menu and press ENTER.

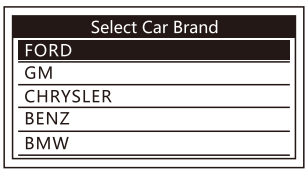


2) View DTCs and their definitions on screen.



3) If more than one DTC is found, use the UP/DOWN scroll button, as necessary, until all the codes have been viewed.

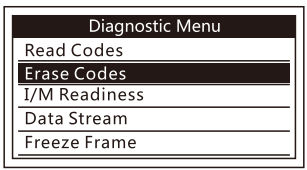
If retrieved DTCs contain any manufacturer specific or enhanced codes, a "Manufacturer specific codes are found! Press any key to select vehicle make!" message comes up prompting you to select vehicle manufacturer to view DTC definitions. Use the UP/DOWN scroll button to select manufacturer and then press ENTER to confirm.



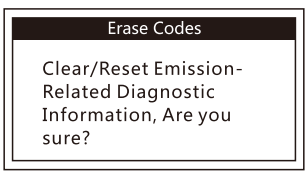
If the manufacturer for your vehicle is not listed, use the UP/DOWN scroll button to select "Other" and press ENTER.

5.2 Erase Codes

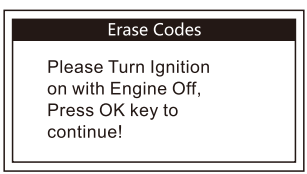
1) Use the UP/DOWN scroll buttons to select Erase Codes from the Diagnostic Menu and press ENTER.



2) A warning message comes up asking for your confirmation.



3) Press ENTER to confirm.



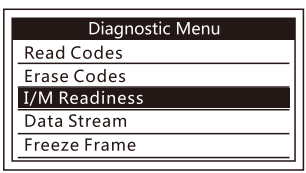
5.3 I/M Readiness

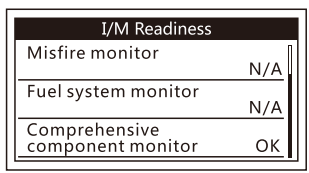
I/M refers to Inspection and Maintenance, that is legislated by the Government to meet federal clean-air standards. I/M Readiness indicates whether or not the varous emissions-related systems on the vehicle are operating properly and are ready for Inspection and Maintenance testing.

The purpose of the I/M Readiness Monitor Status is to indicate which of the vehicle's Monitors have run and completed their diagnosis and testing (as described in 2.5), and which ones have not yet run and completed testing and diagnosis of their designated sections of the vehicle's emissions system.

The I/M Readiness Monitor Status function also can be used (after repair of a fault has been performed) to confirm that the repair has been performed correctly, and/or to check for Monitor Run Status.

Select [I/M Readiness Test] and Press ENTER, the screen will display the interface as shown below:

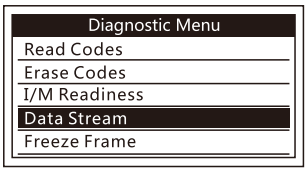


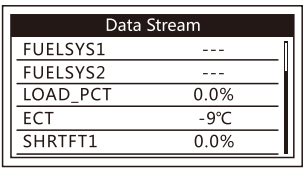


Press EXIT return to the Diagnostic Menu.

5.4 Data Stream

1) Select [Data Stream] and Press ENTER, the screen will display the interface as shown below:

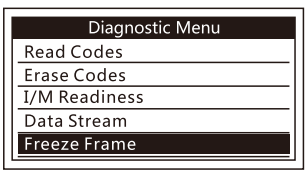


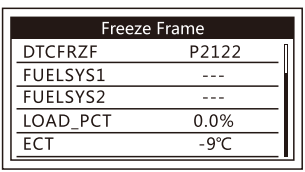


2) Press EXIT to return to Diagnostic Menu.

5. 5 Freeze Frame

Select [Freeze Frame], the screen will display the interface as shown below:

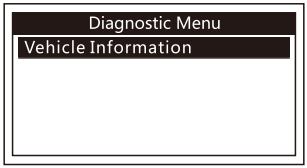


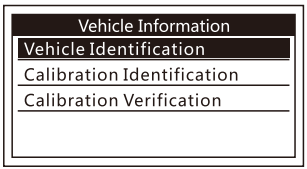


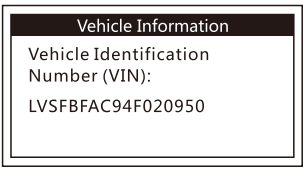
Use the UP/DOWN scroll button for more PIDs. Press EXIT to return to Diagnostic Menu.

5. 6 Vehicle Information

Select [Vehicle Information] and press [ENTER], the screen will display the formation such as VIN (Vehicle indentification Number), CID (Calibration ID) and CVN (Calibration verify number).





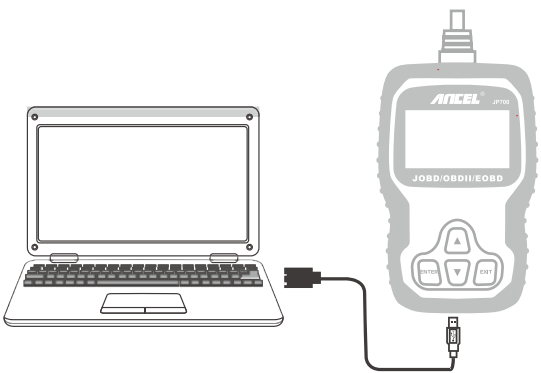


Press EXIT to return to Diagnostic Menu.

6. Update

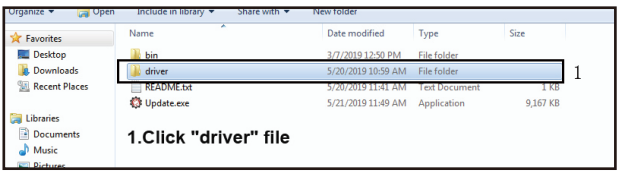
1. Download update software

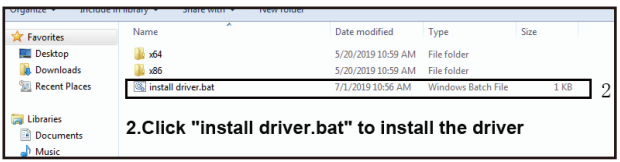
2. Connect the devise with computer through USB cable.

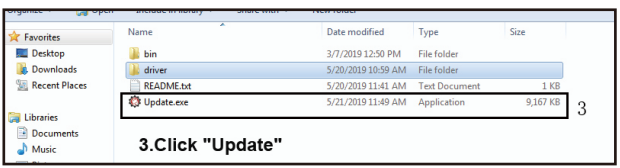


3. The update software is only supported by 7/8/10.

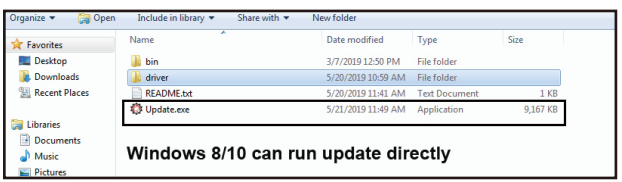
* Click "install driver.bat" in the driver files to install the driver, if computer system is Windows 7







* Windows 8/10 can run update software directly.



7. Warranty and Service

7.1 Limited One Year Warranty

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

OBDSPACE electronic product is warranted against defects in materials and workmanship for one year (12 months) from 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 OBDSPACE shall not be liable for any consequential or incidental damages.

Final determination of defects shall be made by OBDSPACE in accordance with procedures established by OBDSPACE. No agent, employee, or representative of OBDSPACE has any authority to bind OBDSPACE to any affirmation, representation, or warranty concerning OBDSPACE automotive meters, except as stated herein.

7.1 Service Procedures

If you have any questions, please contact your local store, distributor or visit our website at www.anceltech.com .

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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support@anceltech.com
www.anceltech.com

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