

ANCEL

Version:V1.00.002

Statement: **ANCEL** owns the complete intellectual property rights for the software used by this product. For any reverse engineering or cracking actions against the software, ANCEL will block the use of this product and reserve the right to pursue their legal liabilities.

IC Requirement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/recepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- 1) L'appareil ne doit pas produire de brouillage;
- 2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IC WARNING

Cet équipement est conforme aux limites d'exposition aux rayonnements ISSED établies pour un environnement non contrôlé. L'utilisateur final doit suivre les instructions spécifiques pour satisfaire les normes. Cet émetteur ne doit pas être co-implanté ou fonctionner en conjonction avec toute autre antenne ou transmetteur.

Le dispositif portable est conçu pour répondre aux exigences d'exposition aux ondes radio établie par le développement énergétique DURABLE. Ces exigences un SAR limite de 1,6 W/kg en moyenne pour un gramme de tissu. La valeur SAR la 0.733W/kg plus élevée signalée en vertu de cette norme lors de la certification de produit à utiliser lorsqu'il est correctement porté sur le corps.



FCC Requirement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

FCC WARNING

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End user must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The mobile device is designed to meet the requirements for exposure to radio waves established by the Federal Communications Commission (USA). These requirements set a SAR limit of 1.6 W/kg averaged over one gram of tissue. The highest SAR value reported under this standard during product certification for use when properly worn on the body is 0.733 W/kg.

For body operation, this device has been tested and meets FCC RF exposure guidelines when used with any accessory that contains no metal and that positions a minimum of 15mm from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.



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You may contact ANCEL Tech Inc by visiting the website at www.anceltech.com, or writing to OBDSpace Tech Co., Ltd., Address: D03, Block A, No. 973 Minzhi Ave, Longhua District, Shenzhen, Guangdong, China, to request written permission to use Materials on this manual for purposes or for all other questions relating to this manual.

Safety Precautions and Warnings

To avoid personal injury, property loss, or accidental damage to the product, read all of the information in this section before using the product.

Handle equipment carefully

Do not drop, bend, or puncture the tool, or insert extra objects into or place heavy objects on the device. The vulnerable components inside may be damaged.

Do not disassemble or modify the equipment

The device is a sealed device with no user-serviceable parts inside. All internal repairs must be performed



by an authorized maintenance organization or qualified technician. Attempts to disassemble or modify the device will void the warranty.

Do not try to replace the internal battery

The internal rechargeable lithium battery must be replaced by an authorized maintenance organization or qualified technician. Contact the dealer for factory replacement.

Adapter information

Avoid immersing the device in water or placing it in a location where it may absorb moisture or other liquids. During normal use, the charging device may become hot. Please ensure that there is good ventilation while charging device.

If any of the following situation occurs, please unplug the charging device:

- The charging device is exposed to rain, liquid or in an environment with excessive overlap.
- The charging device showed physical damage.
- Cleaning the charging device.

Data and Software Protection

Do not delete unknown files or change the names of files or directories created by others, otherwise the device software may not run.

Note: Access to network resources makes the device vulnerable to computer viruses, hackers, spyware, and other malicious behaviors, and may damage the device, software, or data. To make ensure that you are using firewalls, anti-virus software and anti-spyware software to provide adequate protection for your computer and keep these software up to date.

Precautions on Using this tool

- To make sure the ignition switch should be in the OFF position when plugging and unplugging the diagnostic connector.
- Keep the connector in the storage box on the back of the main unit, when the vehicle diagnosis is finished.
- Gently press the diagnostic connector to pop up the diagnostic connector. Do not pull or use sharp objects to pry the diagnostic connector.

Precautions on Operating Vehicle's ECU

- Do not disconnect battery or any wiring cables in the vehicle when the ignition switch is on, as this could avoid damage to the sensors or the ECU.
- Do not place any magnetic objects near the ECU. Disconnect the power supply to the ECU before performing any welding operations on the vehicle.
- Use extreme caution when performing any operations near the ECU or sensors. Ground yourself when you disassemble PROM, otherwise ECU and sensors can be damaged by static electricity.
- When reconnecting the ECU harness connector, be sure it is attached firmly, otherwise electronic elements, such as ICs inside the ECU, can be damaged.

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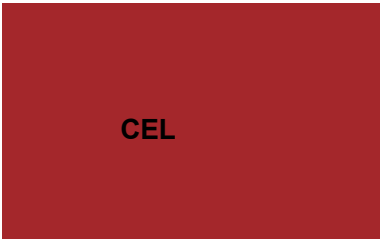
1. Quick Start Manual

1.1 Initial Use

The following settings should be made when you initially use the tool.

1.1.1 Turn on the Machine

After pressing the power button, images will be shown on the screen as follows.



1.1.2 Language Setting

Select the tool language from the languages displayed on the interface.

English	
Pehh	
tp	
Fnpia	
niims	

1.1.3 Connect Wi-Fi

The system will automatically search all available Wi-Fi networks and you can choose the Wi-Fi needed. If the chosen network is open, you can connect it directly; If the chosen network is encrypted, you must enter the correct password. Then You can connect Wi-Fi after clicking "connect".

___ Tips: Wi-Fi must be set. Ifno Wi-Fi network is available nearby, you can enable "Portable Mobile Hotspot".

n	
Fan-	
tihm	

1.1.4 Choose Time Zone

Choose the time zone of the current location, then the system will automatically configure the time according to the time zone you chose.

America/Los_Angeles	<input checked="" type="checkbox"/>
Ara/T	
aphe	
niaciiak	
a	

1.1.5 User Agreement

Please read all the terms and conditions of the user agreement carefully. Choose "Agree all the above terms", and click the "Agree" button to complete the registration process.

Then the page will jump to the "Congratulations on your successful registration" interface.

[illegible]

1.1.6 Create an Account

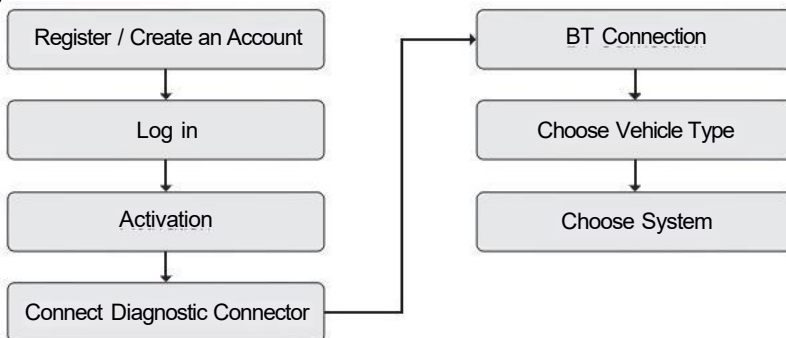
You need to register an account through your e-mail box. If you have owned other products of ANCEL series, you can directly log in by using the account available.

1.1.7 VCI Activation

Enter the connector serial number and activation code to activate and bind the diagnostic connector. If you have not activated it, you can also click "Settings" on the main interface to enter and select "Activate" to operate.

! Tips: The activation code is an 8-digit number and is pasted on the "password letter".

1.2 Diagnosis Flowchart



1.3 Function Menu

Power on the main units, the system will automatically enter into the function menu selection interface:



It mainly includes the following features:

- The main unit and diagnostic connector support Bluetooth and wired communication. Wired communication is superior to Bluetooth connection in terms of transmission rate and anti-interference.
- Supports powerful intelligent VIN recognition technology, which is convenient, fast and efficient.
- Quick Check Printing: Automatic Identification of Vehicle Information, Auto Check and Report Printing.
- Modular expansion: Support 8 optional modules: printer, work light, videoscope, battery tester, scope box, thermal imager, mouldedock, wireless TPMS tool.

It can detect faults in the electronic control systems of most high-, medium-, and low-end vehicles in Asia, Europe, the United States and China. Powerful diagnostic functions include reading fault codes, clearing fault codes, reading data streams, action tests, and special functions.

Maintenance function: matching, coding, programming of most vehicles' programable modules, and most commonly used maintenance and reset functions: Oil Reset, Elec. Throttle Adaption, IMMO Service, Injector Coding, Break-pad Reset, Steering Angle Reset, ABS Bleeding, AFS Reset, Battery Matching, A/T Learning, DPF Regeneration, EGR Adaption, TPMS Reset, Sunroof Initialization, Suspension Matching, Gear Learning, Airbag Reset, ODO Meter Reset, AdBlue Reset, A/F Reset, Coolant Bleeding, Language Change, NOx Sensor Reset, Seat Calibration, Stop/Start Reset, Transport Mode, Tyre Reset, Windows Calibration.

TPMS function: with wireless TPMS tool (optional), TPMS activation, programming and learning functions can be supported.

- Online one click to update diagnosis software, client and firmware.
- Feedback: Any abnormal of software or function during the diagnosis, just feedback to us, our professional technician will track and deal with it in time.

1.4 Charging

Follow the steps below to charge the main unit:

- Connect one end of the power cord to the USB socket of the power adapter.
- Connect the other end to the charging jack on the bottom of the main unit.
- Plug the charger power plug into a power outlet to start charging.
- When the battery status icon displays , the main unit has been charged.

When it displays , the charging process has been completed and you shall disconnect the main unit.

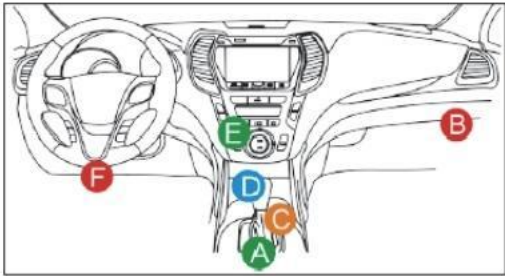
1.5 Battery

- It is normal that the main unit won't turn on when charging because the battery has not been used for a long time or it is exhausted. Please turn on the main unit again after charging the battery for a while.
- Please charge the main unit through the charger in the package. The company assumes no responsibility for damages and losses caused by charging with chargers other than those specified by the company.
- The battery can be recharged repeatedly. However, as the battery is wearable, the standby time of the device will be shortened after long-time use. Please avoid frequent repeated charging so as to extend battery life
- The battery charging time varies with temperature and battery status.
- When the battery power is low, the system will pop up a prompt reminding you to connect the charger. When the battery power is too low, the device will turn off.

1.6 VCI Connections

Connection steps as below:

- (1) Locate vehicle's DLC socket. Most of the DLC are standard OBD II diagnostic sockets (non-standard OBD II vehicle diagnostic sockets need to use the corresponding adapter).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 DLC cannot be found, refer to the vehicle's service manual for the location.
- (2) For OBDII vehicle, follow the steps mentioned below to proceed:
 - a) Plug the VCI dongle into the vehicle's DLC socket
 - b) Use the OBD II extension cable to connect the VCI dongle and DLC socket.
- (3) For non-OBDII vehicle, If the pin of the DLC is damaged or has insufficient power, please follow the either of the following methods to proceed:
 - a) Cigarette Lighter cable
 - b) Battery Clamps Cable



A	Opel, Volkswagen, Aud
B	Honda
C	Volkswagen
D	Opel, Volkswagen, Citroen
E	Changan
F	Hyundai, Daewoo, Kia, Honda, Toyota, Nissan,Mitsubishi Renault, Opel, BMW, Mercedes-Benz, Mazda, Volkswagen Audi, GM, Chrysler,Peugeot, Regal, Beijing Jeep, Citroen and most prevailing models

1.7 Printer Installation (Optional)

The printer is installed on the back of the main unit. Please follow the steps below:

- (1) Unscrew the backplane screws and remove the host backplane.
- (2) Insert the main unit card slot into one side of the printer.
- (3) Press the buckle on the side of the printer to snap on it into the host.
- (4) When the main unit is on, it will automatically identify and connect the printer.



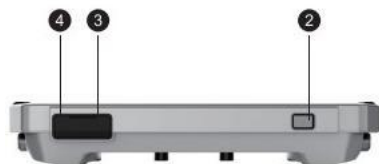
2. Introduction

2.1 Product Profile

ANCEL DS, based on the Android 10 System, is a new generation of modular high-end intelligent diagnostic equipment developed by ANCEL.

ANCEL DS adopt a unique modular design to meet various application scenarios, including diagnostic module, printer, videoscope, work light, thermal imager, scope box, moduledock and TPMS tool.



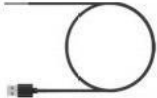

2.2 Components & Controls



- (1) **Display**
- (2) **Power Key**
Press and hold it for 3 seconds to turn it off.
Press and hold it for 8 seconds to perform forced shutdown.
Press it once to activate or turn off the device.
- (3) **Type C Charging Slot**: connect the supplied charger for charging
- (4) **USB Port**: Reserved for add-on modules and other devices with similar port.
- (5) **Rear Camera**
- (6) **Speaker**
- (7) **Backplane**: Remove the backplane of the tablet, and install function modules on the backend.
- (8) **Pin**: Used for communication between the function expansion module and the host.
- (9) **Adjustable Kickstand**: Flip out it to 180-degree angle and work comfortable at your desk, or hang it on automotive part.
- (10) **Rubber Protection Sheet**

2.3 Function Modules

ANCEL TOOL support below optional function modules, list as below:

S/N	Name	Image	Description
1	ANCEL PRINTER		Thermal printer, work with the main unit, also can work with moduledock. Quick print diagnostic reports anytime and anywhere.
2	ANCEL WORKLIGHT		High Brightness Work light, ultra-high 25000K white-light with 144 high brightness LED lights Service life is more than 10,000 hours. It works with the main unit or use independently with the dock. Application scenarios: 1.Go out to rescue at night; 2.Car eparing in dark environment
3	ANCEL Video Scope		Super long custom coil pipeline design, flexible bending with durable materials, suitable for a variety of complex environments. Multiple uses with 3 kinds of special connectors(Hook, side view mirror, magnet). Supports 720P HD image. With 6 auxiliary lights for brighter light, easily used in dark environment. Application scenarios: 1. Engine combustion chamber inspection; 2. Engine internal carbon deposit inspection; 3. Three-way catalytic inspection; 4.Air-conditioning pipeline inspection; 5. The corners of the vehicle that are not easy to detect, such as falling screws, or water leakage, cracks, and foreign objects...
4	ANCEL MODULEDOCK		Designed for the printer, work light and other modules to use independently for different work scenarios. The dock is equipped with a universal tripod connection for easy fixation. The 900mAh extra-large capacity battery can meet the requirements of long-term use and display the remaining power in real time.

5	ANCEL Therma Imager		<p>320*240 ultra-high pixel with its own thermal tracking point, which can be used for image superposition (refers to the coincidence of real image and thermal image collected by the camera, so as to achieve more accurate positioning). The thermal sensitivity reaches 0.07 °C (32.126 °F), which is more accurate.</p> <p>Higher image acquisition resolution is displayed on the high-definition display. ANCEL Thermal Imager has a large number of car diagnostic fault thermal comparison maps. Technicians can accurately locate car problems by image comparison.</p> <p>Application scenarios: 1. Cylinder misfire; 2. Generator power generation; 3. Belt and bearing aging; 4. Relay overload; 5. Three-way catalytic blockage, etc.</p>
6	ANCEL Scope Box		<p>Equipped with 4 channels 100MHz bandwidth, sampling rate reaches up to 1GS/ s. Combined with the ANCEL screen to achieve full touch control operation. Specially developed auto repair and detection special menu and HD waveform display brings more convenient for usage</p> <p>Application scenarios: The ANCEL Scopebox can accurately determine the problems of sensors, actuators control modules or lines</p>
7	ANCEL Battery Tester		<p>Detect the battery voltage, resistance service life current and other battery information.</p> <p>Integrated with ANCEL high-resolution screen and high-precision data monitoring to make the detection efficiency greatly improved.</p> <p>Application scenarios: detection of car battery health, starting system and charging system.</p>
8	Wireless TPMS G1		<p>Work with ANCEL to complete tire pressure diagnosis related functions.</p> <p>Application scenarios: 1. Read tire pressure information such as pressure, temperature, and battery status; 2 Change the sensor for programming; 3. Change the position of the tire or other abnormalities that require sensor learning.</p>

2.4 Parameters

Host computer

- Operating System:Android 10.0
- Memory: 2G
- Storage:32G
- Battery: 6000mAh/7.6V
- Screen:8inches
- Camera: Rear camera 8.0MP
- Network: Wi-Fi, WLAN 802.11b/g/n
- Bluetooth: Bluetooth 5.0
- Working Temperature:32°F~ 122°F (0℃ ~5 0℃)
- Storage Temperature:-4 °F ~140 °F (-20 ℃ ~6 ,0℃))

3.Begin to Use

Diagnostic function, coverage more than 100 car brands, support intelligent diagnosis and traditional diagnosis, including OBD II full-function diagnosis, full-system diagnosis including: read fault code, clear fault code, read real-time data stream, special function, actuation test. A diagnosis report can be generated after the diagnosis.

3.1 Intelligent Diagnosis

Connect the vehicle first, click "Intelligent Diagnosis"on the main interface, the tool will start the smart diagnosis program and automatically read the vehicle VIN, as shown in below:

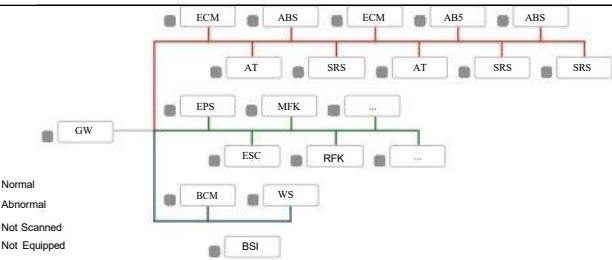


If the device failed to access the VIN information, please use "Local Diagnosis"

3.2 Local Diagnosis

In this mode, user can manually select vehicle models and systems for diagnosis

	<p>Tap to display the current (single) data stream in waveform graph. On the waveform graph page, you can do the following:</p> <p>[Min/Max]: Tap to define the maximum / minimum value. Once the value goes beyond the specified value, the system will alarm.</p> <div></div> <p>[Customize]: Tap on the right side of the screen, to define the data stream option to be viewed</p> <p>Note: Max 4 data streams can be displayed.</p> <div></div>
[Compare Sample]	<p>Tap to select the sample DS file. All the values you customized and saved in process of DS sampling will be imported into the Standard Range column for your comparison</p> <p>△Note: Before executing this function, you have to sample the values of data stream items and save it as a sample Data Stream file.</p>



Click "Report" to generate a vehicle health report.

09	
VEHICLE INFORMATION	
akssgn/Tng	Y1827
2012	
WFFPH4CD00000	45545KM
INSPECTION RESULT	
Threame 7 issuu tor whice body tyem	
1San toslan stiaak	
2.044Mke d	
inspections an normal lar Bahica body system	
1.DOA Coding	
2.080anal Inichua	
3.1990*9	
E.46M contoto	
5. 西	
6.15A0gg	
6A s	
9h Cantol Syim	
9422oPcamirDwer5	
A	
T1.0 Wgmsn Co r	
217 600	
1255 Tor Pccm Buarlat	
1.edtnei Nigrso	
500or acron Buarlat	
B 2k 4 4 e	
TZ. Fomecon Contolun!	
8.088a51	
Do B es Dwar w	
88	
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B.System Scan: automatically scan all systems of the vehicle

Select	Test	Result
FCMRUDEngroScrin		
Thuiomoti	Trranhuu	Equipped
AHfu	Lsu bakng spoon	Equipped
e	Rrt 8 em	6pp*
0Mp	TkchcaSyiem	Equipped
imnta		Equipped
H Hm 4002017 RN 1150M720364069000		
BERSV15R-HWA- Sysnn kan		

C.System Selection: manually choose the automotive electronic control system

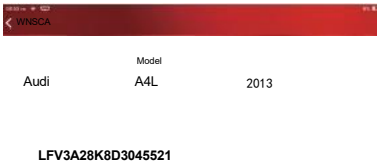
[Report]	Tap to save the value of current data stream.
[Record]	<p>To record diagnostic data, for you to replay and review. Tap "Stop" button to end reading.</p> <p>The saved file follows the naming rule: It begins with vehicle type, and then the product S/N and ends with record starting time. All diagnostic records can be replayed from User Info ->My Report</p>
[Save Sample]	<p>To sample data stream. After sampling, recording and saving the data stream,each time you review the data stream items, you will be able to call out the corresponding sample data to overwrite the current standard range.</p> <p>Tap it to start recording the sample data stream (Note: Only data stream items with measurement units will be recorded). Once the recording process is complete, tap to end recording, the system will automatically jump to the data revision screen</p> <p>Tap the Min./Max. value to change it. After modifying all desired items, tap Save to save it as a sample DS file.All DS files are stored in User Info -> Data Stream Sample</p>

e)Actuation Test

This function is used to test whether the execution components in the electronic control system can work normally

3.3 Quick Check and Printing

It adopts smart detection mode. After the vehicle is connected, the system will automatically recognize the vehicle information, automatically check the vehicle, and automatically generates a report. Automatic printing can be set so that no human intervention is needed throughout the process.



0300

VEHICLE INFORMATION	
的	T
2012	
WVGFP4C000000	43545KM
INSPECTION RESULT	
here are 2 items that vehicle code: wvm	
1.000	10.00
0.044	Make Deichd
superior on model for vehicle body rate	
D4rCwio	
2.09m	ectm
4.9	g
4.46Gg	M omorse
5.000	esy
0.06Seal4	en Pakagr
0.34	Adi ControlSym
0.2	for Partake Our Se
la.3	SeatAmest DerSe
1	ns
10.40	T i mlg2
1.5Da	Dmei Ptigr5
0.500m	Dwemin Brtrial
0.0	Radio
TP	hmgion Cntolthi
8d1	
0.0	0.0
0.0	0.0

3.4 Maintenance

ANCEL DS supports matching, coding, programming of most vehicles' programable modules, and most commonly used maintenance and reset functions, namely, Oil Reset, Elec. Throttle Adaption, IMMO Service, Injector Coding, Break-pad Reset, Steering Angle Reset, ABS Bleeding, AFS Reset, Battery Matching, A/T Learning, DPF Regeneration, EGR Adaption, TPMS Reset, Sunroof Initialization, Suspension Matching, Gear Learning, Airbag Reset, ODO Reset, AdBlue Reset, A/F Reset, Coolant Bleeding, Language Change, NOx Sensor Reset, Seat Calibration, Stop/Start Reset, Transport Mode, Tyre Reset, Windows Calibration.

3.4.1 Oil Reset

The lightening of the car maintenance light indicates that the vehicle needs maintenance. Reset the mileage or driving time to zero after the maintenance, so the maintenance light will go out and the system will start a new maintenance cycle.

3.4.2 Elec. Throttle Adaption

Elec. Throttle Adaption is to utilize the car decoder to initialize the throttle actuator so that the learning value of the ECU returns to the initial state. By doing these, the movement of the throttle (or idle motor) can be more accurately controlled, thus adjust the intake volume. Situations when throttle matching is needed:

- a) After replacing the electronic control unit, the relevant characteristics of the throttle operation have not been stored in the electronic control unit.
- b) After the electric control unit is powered off, the memory of the electric control unit's memory is lost.
- c) After replacing the throttle assembly, you need to match the throttle.

- d) After replacing or disassembling the intake port, the controlling of the idle speed by the coordination between the electronic control unit and the throttle body is affected.
- e) Although the characteristics of the idle throttle potentiometer have not changed, the intake volume has changed and the idle control characteristics have changed at the same throttle openings.

3.4.3 Steering Angle Reset

To reset the steering angle, first find the relative zero point position for the car to drive in straight line. Taking this position as reference, the ECU can calculate the accurate angle for left and right steering. After replacing the steering angle position sensor, replacing steering mechanical parts (such as steering gearbox, steering column, end tie rod, steering knuckle), performing four-wheel alignment, or recovering car body, you must reset the steering angle.

3.4.4 Battery Matching

This function enables you to perform a resetting operation on the monitoring unit of vehicle battery, in which the original low battery fault information will be cleared and battery matching will be done.

Battery matching must be performed in the following cases:

- a) Main battery is replaced. Battery matching must be performed to clear original low battery information and prevent the related control module from detecting false information. If the related control module detects false information, it will invalidate some electric auxiliary functions, such as automatic start & stop function, sunroof without one-key trigger function, power window without automatic function.
- b) Battery monitoring sensor. Battery matching is performed to re-match the control module and motoring sensor to detect battery power usage more accurately, which can avoid an error message displaying on the instrument panel.

3.4.5 ABS Bleeding

When the ABS contains air, the ABS bleeding function must be performed to bleed the brake system to restore ABS brake sensitivity. If the ABS computer, ABS pump, brake master cylinder, brake cylinder, brake line, or brake fluid is replaced, the ABS bleeding function must be performed to bleed the ABS.

3.4.6 Break-pad Reset

If the brake pad wears the brake pad sense line, the brake pad sense line sends a signal sense line to the on-board computer to replace the brake pad. After replacing the brake pad, you must reset the brake pad. Otherwise, the car alarms.

Reset must be performed in the following cases:

- a) The brake pad and brake pad wear sensor are replaced.
- b) The brake pad indicator lamp is on.
- c) The brake pad sensor circuit is short, which is recovered.
- d) The servo motor is replaced

3.4.7 DPF Regeneration

DPF regeneration is used to clear PM (Particulate Matter) from the DPF filter through continuous combustion oxidation mode (such as high temperature heating combustion, fuel additive or catalyst reduce PM ignition combustion) to stabilize the filter performance.

DPF regeneration may be performed in the following cases:

- a) The exhaust back pressure sensor is replaced.
- b) The PM trap is removed or replaced.
- c) The fuel additive nozzle is removed or replaced.
- d) The catalytic oxidizer is removed or replaced.
- e) The DPF regeneration MIL is on and maintenance is performed.
- f) The DPF regeneration control module is replaced.

3.4.8 Gear Learning

The crankshaft position sensor learns crankshaft gear machining tolerance and saves to the computer to more accurately diagnose engine misfires. If gear learning is not performed for a car equipped with Delphi engine, the MIL turns on after the engine is started. The diagnostic device detects the DTC P1336 'gear not learned'. In this case, you must use the diagnostic device to perform gear learning for the car. After gear learning is successful, the MIL turns off. After the engine ECU, crankshaft position sensor, or crankshaft flywheel is replaced, or the DTC 'gear not learned' is present, gear learning must be performed.

3.4.9 IMMO Service

To prevent the car being used by unauthorized keys, the anti-theft key matching function must be performed so that the immobilizer control system on the car identifies and authorizes remote control keys to normally use the car. When the ignition switch key, ignition switch, combined instrument panel, ECU, BCM, or remote control battery is replaced, anti-theft key matching must be performed.

3.4.10 Injector Coding

Write injector actual code or rewrite code in the ECU to the injector code of the corresponding cylinder so as to more accurately control or correct cylinder injection quantity. After the ECU or injector is replaced, injector code of each cylinder must be confirmed or re-coded so that the cylinder can better identify injectors to accurately control fuel injection.

3.4.11 TPMS Reset

After the tire pressure ML turns on and maintenance is performed, the tire pressure resetting function must be performed to reset tire pressure and turn off the tire pressure MIL. Tire pressure resetting must be performed after maintenance is performed in the following cases: tire pressure is too low, tire leaks, tire pressure monitoring device is replaced or installed, tire is replaced, tire pressure sensor is damaged, and tire is replaced for the car with tire pressure monitoring function.

3.4.12 Suspension Matching

This function can adjust the height of the body. When replacing the body height sensor in the air suspension system, or control module or when the vehicle level is incorrect, you need to perform this function to adjust the body height sensor for level calibration.

3.4.13 AFS Reset

This feature is used to initialize the adaptive headlamp system. According to the ambient light intensity, the adaptive headlamp system may decide whether to automatically turn on the headlamps, and timely adjust the headlamp lighting angle while monitoring the vehicle speed and body posture.

3.4.14 A/T Learning

This function can complete the gearbox self-learning to improve gear shifting quality. When the gearbox is disassembled or repaired (after some of the car battery is powered off), it will lead to shift delay or impact problem. In this case, this function needs to be done so that the gearbox can automatically compensate according to the driving conditions so as to achieve more comfortable and better shift quality.

3.4.15 Sunroof Initialization

This function can set the sunroof lock off, closed when it rains, sliding / tilting sunroof memory function, temperature threshold outside the car etc.

3.4.16 EGR Adaption

This function is used to learn the EGR (Exhaust Gas Recirculation) valve after it is cleaned or replaced.

3.4.17 ODO Reset

- a) ODO reset is to copy, write, or rewrite the value of kilometers in the chip of odometer by using a car diagnostic computer and data cable, so that the odometer shows the actual mileage.
- b) Usually when the mileage is not correct due to the damaged vehicle speed sensor or odometer failure, it is necessary to do ODO reset after maintenance.

3.4.18 Airbag Reset

This function resets the airbag data to clear the airbag collision fault indicator. When the vehicle collides and the airbag deploys, the corresponding fault code of the collision data appears, the airbag indicator lights up, and the fault code cannot be cleared. Since the data inside the airbag computer is disposable, it is required that all new accessories must be replaced, but after performing this function, the data of the airbag computer can be recovered and the fault code can be cleared, the airbag light will go out, and the airbag computer can continue to use.

3.4.19 Transport Mode

In order to reduce power consumption, the following functions may be disabled, including limiting the vehicle speed, not waking up the door opening network, and disabling the remote control key, etc. At this time, the transport mode needs to be deactivated to restore the vehicle to normal.

3.4.20 A/F Reset

This function is applied to set or learn Air/Fuel ratio parameters.

3.4.21 Stop/Start Reset

This function is used to open or close the automatic start-stop function via setting the hidden function in ECU (provided that the vehicle has a hidden function and supported by hardware).

3.4.22 NOx Sensor Reset

NOx sensor is a sensor used to detect the content of nitrogen oxides (NOx) in engine exhaust. If the NOx fault is re-initialized and the NOx catalytic converter is replaced, it is necessary to reset the catalytic converter learned value stored in the engine ECU.

3.4.23 AdBlue Reset (Diesel Engine Exhaust Gas Filter)

After the diesel exhaust treatment fluid (car urea) is replaced or filled up, urea reset operation is required.

3.4.24 Seat Calibration

This function is applied to match the seats with memory function that are replaced and repaired.

3.4.25 Coolant Bleeding

Use this function to activate the electronic water pump before venting the cooling system.

3.4.26 Tyre Reset

This function is used to set the size parameters of the modified or replaced tire.

3.4.27 Windows Calibration

This feature is designed to perform door window matching to recover ECU initial memory, and recover the automatic ascending and descending function of power window.

3.4.28 Language Change

This function is used to change the system language of the vehicle central control panel.

3.5 TPMS Diagnostics

ANCEL DS can work with wireless tire pressure diagnostic tool (optional accessory) to achieve the features of TPMS activation, programming and learning.

- a) Activation: to activate the sensor's ID, wheel pressure, sensor frequency, tire temperature and battery status.



- b) Programming: to program sensor data to a blank ANCEL sensor, so as to replace a sensor that is in low battery and does not function properly. There are three sensor programming methods available: automatic, manual, and via activation replication.

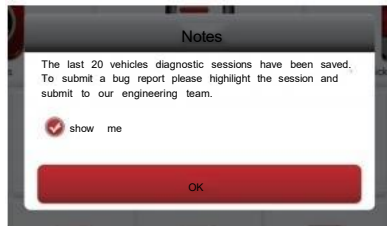


- c) Learning: to write the sensor ID into the vehicle ECU for sensor identification.



3.6 Diagnostic Feedback

If you encounter an unresolved problem or diagnostic software bug during diagnosis, you can revert the most recent 20 test records to ANCEL Team. When we receive your feedback, we will analyze and troubleshoot it in a timely manner, to improve the quality of our products and user experience. Tap Diagnostic Feedback, the below pop-up message will appear:



Tap OK to enter the vehicle diagnostic feedback selection screen. There are three options:

Diagnostic Feedback: to show the list of all tested vehicle models

History: Tap to view all diagnostic feedback reverted and the processing progress.

Offline List: Tap to display all diagnostic feedback logs which have not been submitted successfully due to network failure. Once the tablet gets a stable network signal, it will be uploaded to the server automatically. In Diagnostic Feedback page, tap the diagnostic record of certain vehicle model or special function to next step.

Tap Choose File to open the target folder and choose the desired diagnostic logs. Choose the failure type and fill with the detailed failure description in the text box, and leave your telephone or email address. After inputting, tap Upload Logs to revert feedback to us.

We will follow up your feedback as soon as we receive your diagnostic feedback, please keep an eye on the progress and results of your diagnostic feedback in Diagnostic Feedback History.

3.7 Repair Info

3.7.1 Fault Code Enquiry

You can enquire the definition of OBD fault codes.

3.7.2 Vehicle Coverage Enquiry

You can enter the vehicle brand, model, year and other information to enquire the support functions and diagnostic system.

3.7.3 Learning Course

You can view the operation playback of the special functions of each brand model, to help users study the operation of the special functions online without connecting the vehicle.

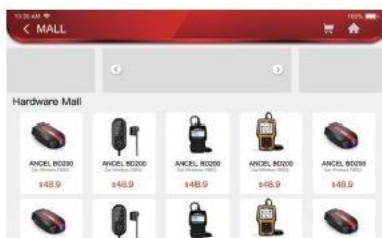
3.8 ANCELFile

It is used to record and establish the file of the diagnosed vehicles. The file is created based on the vehicle VIN and check time, including all VIN-related data such as diagnostic reports, data stream records and pictures.



3.9 ANCELStore

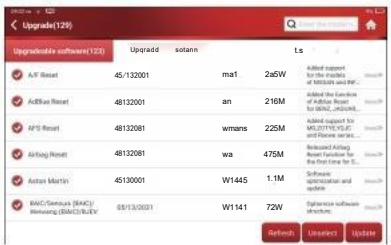
ANCELStore, released by ANCEL TECH, in which you can download all diagnostic software and purchase hardware products. In the store, vehicle diagnostic and maintenance software can be bought. Each diagnostic software has a detailed function introduction. All hardware products can also be purchased online.



4. Software Update

4.1 Upgrade all Software

In order to let you enjoy better functions and upgrade services, we recommend you make software upgrades irregular. When there is a newer software version, the system will remind you to upgrade. Click "Software Upgrade" to enter the upgrade center. There are two function tabs on the upgrade page:



Upgradeable software: A list of software that can be upgraded to newer versions.

Upgraded software: a list of software that has been downloaded.

Note: During the upgrade, please keep normal network connection. Upgrade many software may take a few minutes, please wait.

If you need to cancel certain software, please enter setting -> diagnostic software clear -> remove software to operate.

5. Set Up

5.1 VCI

If several VCI connectors are registered on this ANCEL DS, this option allows you to choose one from those.

5.2 Activate VCI

This item lets you activate a new VCI connectors or get help. Input the Serial Number and Activation Code, and then tap "Activate" to activate it.

Serial Number

Activation Code

Activate

Once the VCI connector activated, the serial number of it will be displayed in the list.

5.3 Fix VCI firmware/system

Used to repair the VCI firmware. During the repair, please don't power off or switch interfaces.

5.4 Data Stream Sample

This feature allows you to manage the recorded data stream sample files.

5.5 My Order

Used to manage order details.

5.6 Profile

Used to set and manage personal information.

5.7 Change Password

This item allows you to modify your login password.

5.8 Wi-Fi Settings

Set up Wi-Fi networks that can be connected.

5.9 Diagnostic Software Clear

This option can clear some cache files and free up the storage space.

5.10 Business Information

Add the information of the workshop, to which the scanner belongs, and it will be displayed to the customers in the diagnostic report.

5.11 Customer Management

Manage information of all customers, who did vehicle diagnostic on this equipment and display in turn.

5.12 Photo Album

This module saves the screenshots.

5.13 Screen Recorder

This module saves the screen recordings.

5.14 Settings

This option makes settings including Units, Language, Clear Cache, Mode Switch, Restore Factory

Settings, and Log Out.

5.15 Hotkey Setting

Including: Wi-Fi, Bluetooth, screen recording, screenshot, screen flip, brightness and sound.

**6.FAQ**

Q: Can I use the same type of charger to charge the tablet?

A: No, please use original charger. Our company is not responsible for any damage and economic loss caused by using charger, which is not provided by ANCEL.

Q: How to save power?

A: Please turn off the screen while the equipment isn't used, set a shorter standby time, and decrease the brightness of the screen.

Q: The tablet cannot be turned on after charging

Passible reasons	Solution
The equipment has not been used for a long time, and the battery loss	Charge it for more than 2 hours before turning it on
Problem of Charger	If there is a quality problem, please contact the dealer or after-sales service of ANCEL.

Q: Why can't make register?

Passible reasons	Solution
The equipment isn't connected	Please make sure the network is connected
Notes that your email has been registered.	Use another email for register or log in with the username registered by the email (If you forget the username, you can retrieve it by email)
The email didn't receive the verification code during the registration	Check if the email is correct and get the verification code again

Q: Why can't log in?

Passible reasons	Solution
The equipment isn't connected	Please make sure the network is connected
The user name or password is incorrect	Check the user name and password Contact ANCEL after-sales service or regional sales to retrieve the user name and password
Server problem	Server maintenance, please try again later

Q: Why can't activate the equipment?

Passible reasons	Solution
The equipment isn't connected	Make sure the network is connected
The serial number and activation code are inputted wrong	Check the serial number and activation code and make sure they are correct (Serial number 12 digits, activation code 8 digits).
The activation code is invalid	Contact ANCEL after-sales service or regional sales
Notes that the configuration is empty	Contact ANCEL after-sales service or regional sales

Q: Notes: the equipment is not activated during update software ?

Passible reasons	Solution
The VCI connector may not be activated during registration	Use the serial number and activation code to activate the connector Steps are as follows: Click [Settings]->[Activate VCI] Enter the correct serial number and activation code in the interface, and click [Activate].

Q: Software upgrade failed.

Passible reasons	Solution
The equipment is not connected to the Internet	Check its network connection
The user name or password is wrong The equipment has not enough memory	Check the user name and password Uninstall irrelevant applications and delete uncommonly used vehicle software (enter setting -> diagnostic software clear -> remove software to operate)
Server problem	Server maintenance, please try again later

Q: There is no power in the VCI dongle after connecting to the vehicle's DLC port.

Passible reasons	Solution
Poor contact of vehicle's DLC port	Plug out the VCI dongle, and then plug it in again
Too low voltage of the vehicle battery	<ul style="list-style-type: none"> • Recharge the vehicle battery. • Replace the vehicle battery if it is damaged
Damage of the VCI dongle	Contact ANCEL after-sales service to get support

Q: The tablet cannot establish a connection with the VCI dongle.

Passible reasons	Solution
Poor contact of the VCI dongle	Plug out the VCI dongle, and then plug it in again <ul style="list-style-type: none"> • Perform the VCI Bluetooth pairing again
The firmware is damaged	Enter the settings and tap "Fix Connector Firmware/System" to fix the firmware

Q: How about non-standard OBDII VCI connector

A: There is a several non-standard adapters in the box, Follow the instructions to connect.

Q: Communication error with vehicle ECU?

A: Please confirm:

Whether the VCI is correctly connected and whether the vehicle ignition switch is ON.

If all are normal, send vehicle production year, model and VIN number by Feedback feature.

Q: Failed to enter into vehicle ECU system?

A: Please confirm:

Whether the vehicle is equipped with the system, whether the VCI is correctly connected, and whether the vehicle ignition switch is ON.

Q: What to do if the connector is missing

A: Contact ANCEL after-sales service or regional sales.

Q: The downloaded diagnostic software is inconsistent with the serial number

A: There are several connectors registered under the equipment account, and the serial number of right connector has not been selected.

Enter the settings-[VCI] and select the right serial number of connector. Delete the software with problems, then enter the upgrade center to download the diagnostic software again.

Warranty Terms

This warranty applies only to users and distributors who purchase ANCEL products through normal procedures. Within one year from the date of delivery, ANCEL warrants its electronic products for damages caused by defects in materials or workmanship. Damages to the equipment or components because of abuse, unauthorized modification, use for non-designed purposes, operation in a manner not specified in the instructions, etc. are not covered by this warranty. The compensation for dashboard damage caused by the defect of this equipment is limited to repair or replacement. ANCEL does not bear any indirect and incidental losses. ANCEL will judge the nature of the equipment damage according to its prescribed inspection methods. No agents, employees or business representatives of ANCEL are authorized to make any confirmation, notice or promise related to ANCEL products.

OBDSPACE Tech Co., Ltd

Service Line: 0755-81751202

Customer Service Email: support@anceltech.com

Official Website: www.anceltech.com

Products tutorial, videos, Q&A and coverage list are available on ANCEL official website.