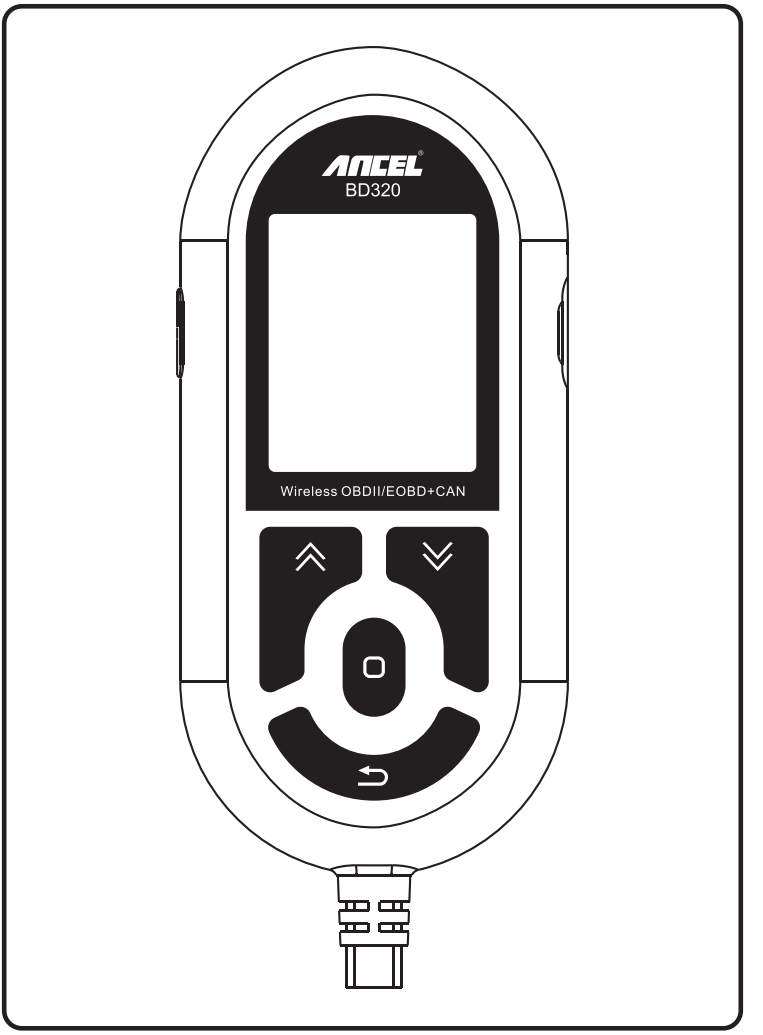
ANCEL®



BD320
USER'S MANUAL

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Disclaimer:

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

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1.Safety precautions

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

- Always perform automotive testing in a safe environment.
- Do not attempt to operate or observe the tool while driving a vehicle. Operating or observing the tool will cause driver distraction and could cause a fatal accident.
- Operate the vehicle in a well ventilated work area: Exhaust gases are Poisonous.
- Keep the scan tool dry, clean, free from oil/water or grease.
- Use a mild detergent on a clean cloth to clean the outside of the scan tool, when necessary.

2.Product Profile

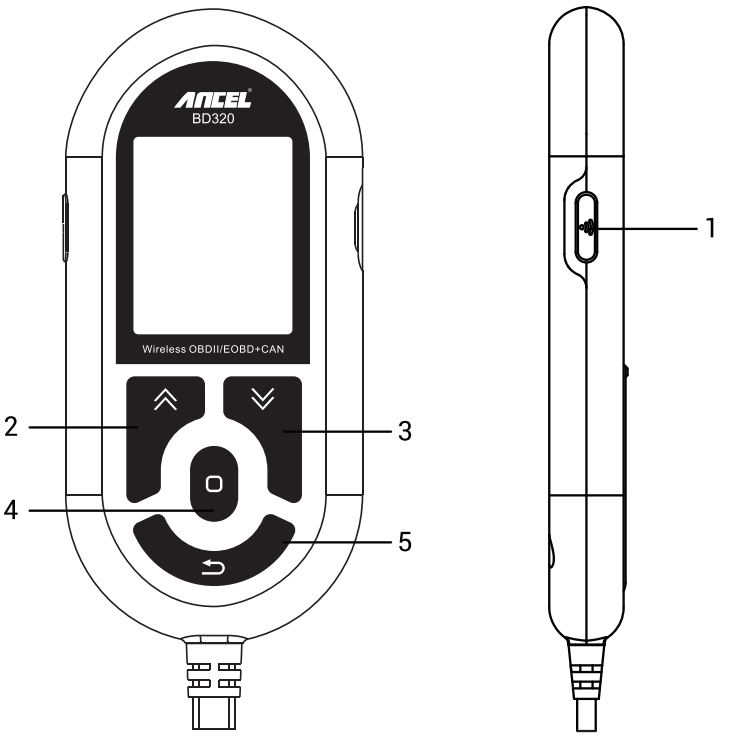
BD320 is a new generation 2-in-1 diagnostic tool that can display data directly on the scanner screen or via Bluetooth on the screen of an Android or iOS device.

3.Product specification

Display: Full 65k Color 2.0 inch TFT LCD size for main LCD
Operating Voltage: DC 8-18V
Operating Temperature: 0 to 60°C (32 to 140°F)
Storage Temperature: -20 to 70°C (-4 to 158°F)
External Power: 8.0 to 18.0V power provided via vehicle battery
Operating current: 88mA@12V (standby sleep: 16mA)
Dimensions: 130*61.5*15.6mm

4.Devices Description

It is a wireless/handheld scanner for Volkswagen + OBDII/EOBD+CAN. There are 2 operation modes:
a.Wireless Bluetooth mode
(support Android and iOS).
b.Handheld mode.



1-SWITCH BUTTON
2-UP BUTTON - Up scroll item by item in a menu.
3-DOWN BUTTON - Down scroll item by item in a menu.
4-ENTER BUTTON - Confirm a selection (or action) from a menu.
5-EXIT BUTTON - Cancel a selection (or action) from a menu or return to the previous menu.

5.Devices connected vehicle steps:

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

b. Start the vehicle.

c. Plug the product into the vehicle's OBDII interface.

d. As soon as the device is connected to the vehicle, it is in Bluetooth mode and you can download the ANCEL APP.

6.Download APP to connect device

For Bluetooth mode (Connect to mobile APP for diagnosis): Scan the QR code below to download the software for Android and iOS.

ANCEL
Official Website

for Android

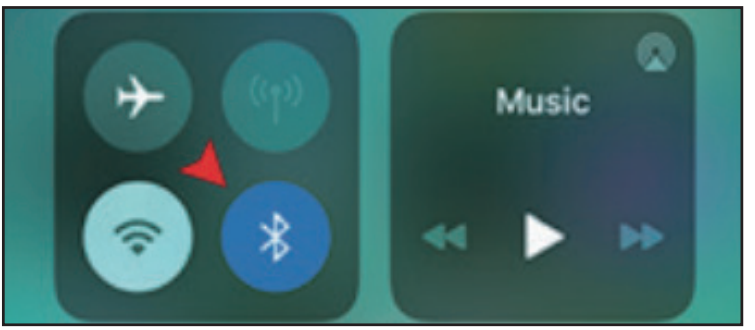
for iOS

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

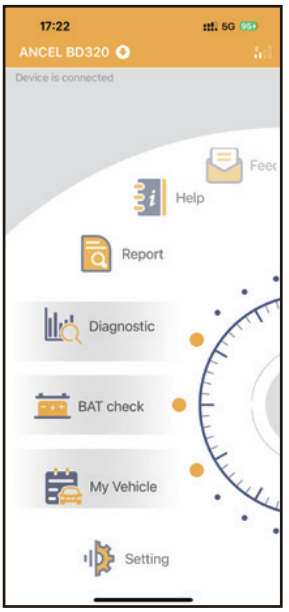
Note: This product only supports the ANCEL APP connection and is not compatible with any other APPs.

6.1 Bluetooth connection for iOS devices

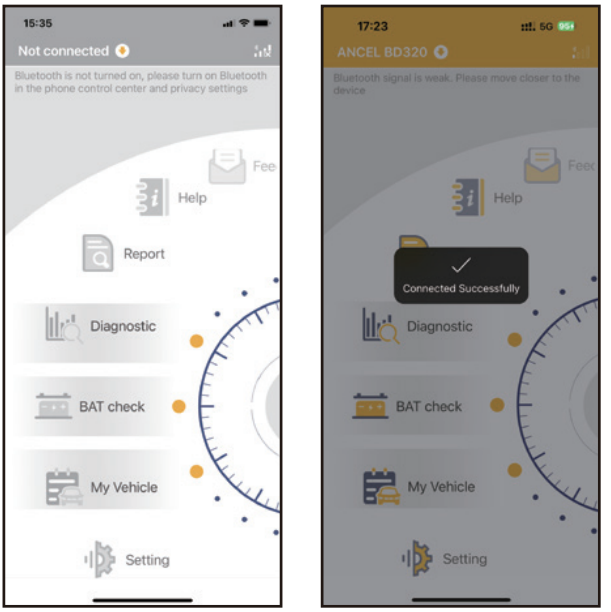
1) Turn on Bluetooth on your phone.
Manually turn on the Bluetooth function of the phone. For phones with iOS 13 and higher, please turn on Bluetooth in the system's privacy settings.



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

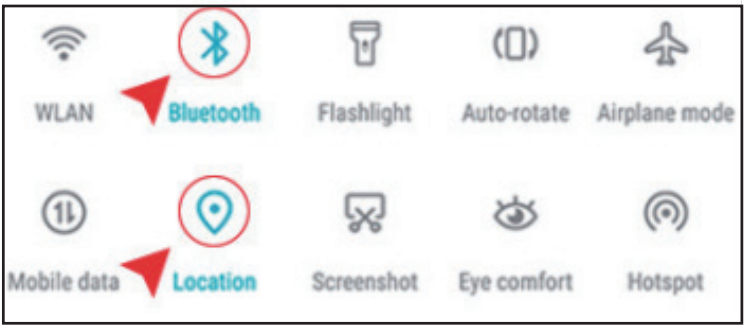


3) The APP will automatically connect to the device. During the connection process, make sure that no other phones have connected to the device. When the "Connected Successfully" message is displayed, the product can be used normally.

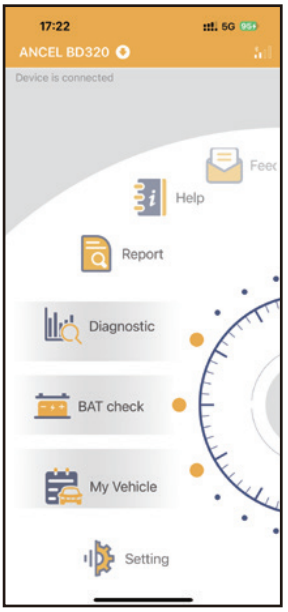


6.2 Bluetooth Connection for Android devices

1) Manually turn on Bluetooth and the Location functions of the phone.



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



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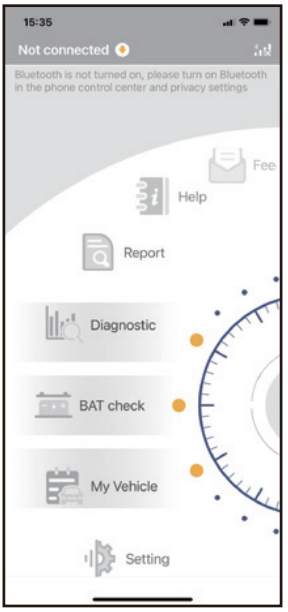
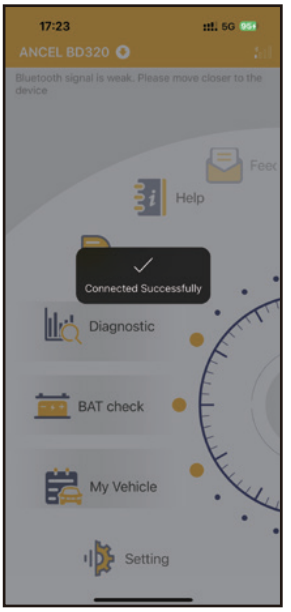


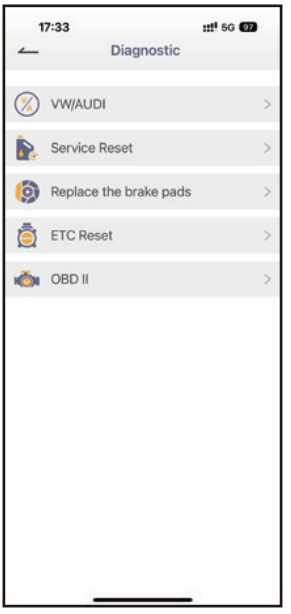


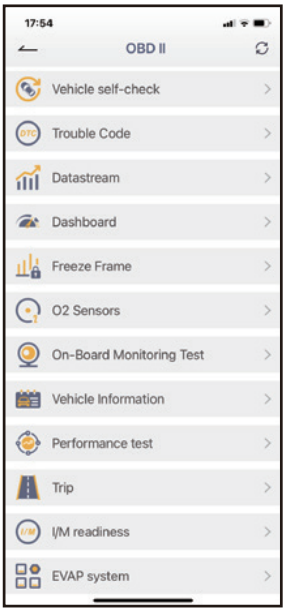
7.OBDII function + For VW function (Set Bluetooth mode)

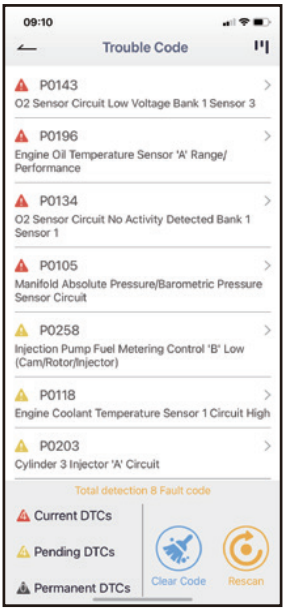
OBDII function	For VW function	
	Basic function	Special function
Trouble code (read & erase), Data stream, Freeze frame, O2 sensors, On-board monitoring test, Vehicle information, I/M readiness, EVAP system.	Information, Fault codes (read & erase), Data stream.	Service Reset, Brake pad replacement, Throttle Learning (ETC Reset).

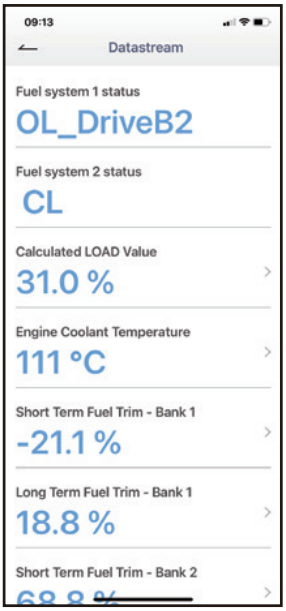
7.1 OBDII function (Bluetooth mode)

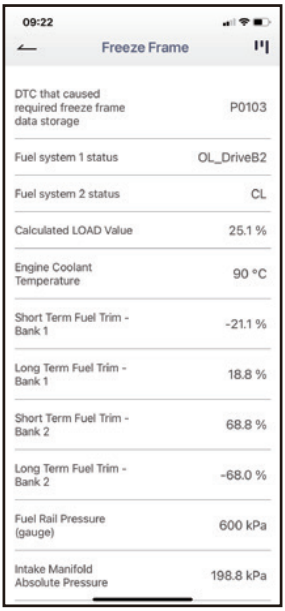
The product has the following OBDII functions: Trouble code, data stream, freeze frame, O2 sensors, on-board monitoring test, vehicle information, I/M readiness, EVAP system.



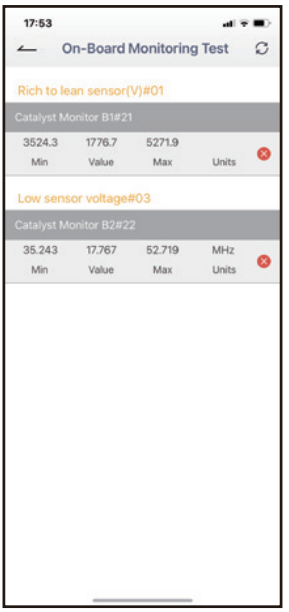


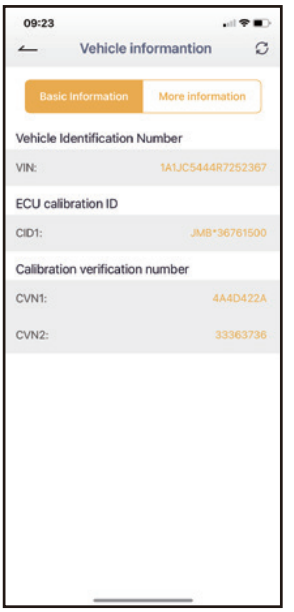

09:10
Trouble Code
P0143
O2 Sensor Circuit Low Voltage Bank 1 Sensor 3
P0196
Engine Oil Temperature Sensor 'A' Range/ Performance
P0134
O2 Sensor Circuit No Activity Detected Bank 1 Sensor 1
P0105
Manifold Absolute Pressure/Barometric Pressure Sensor Circuit
P0258
Injection Pump Fuel Metering Control 'B' Low (Cam/Rotor/Injector)
P0118
Engine Coolant Temperature Sensor 1 Circuit High
P0203
Cylinder 3 Injector 'A' Circuit
Total detection 8 Fault code
Current DTCs
Pending DTCs
Permanent DTCs
Clear Code
Rescan

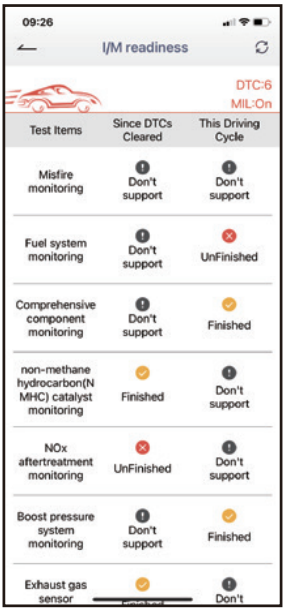

09:13
Datastream
Fuel system 1 status
OL_DriveB2
Fuel system 2 status
CL
Calculated LOAD Value
31.0 %
Engine Coolant Temperature
111 °C
Short Term Fuel Trim - Bank 1
-21.1 %
Long Term Fuel Trim - Bank 1
18.8 %
Short Term Fuel Trim - Bank 2

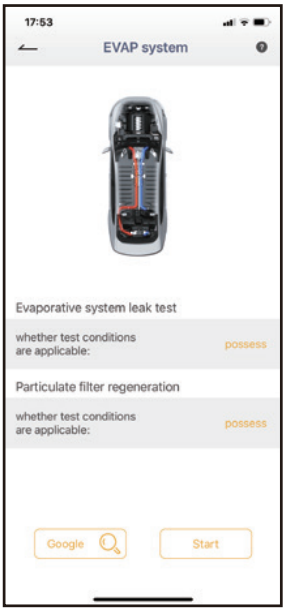

09:22
Freeze Frame
DTC that caused required freeze frame data storage
P0103
Fuel system 1 status
OL_DriveB2
Fuel system 2 status
CL
Calculated LOAD Value
25.1 %
Engine Coolant Temperature
90 °C
Short Term Fuel Trim - Bank 1
-21.1 %
Long Term Fuel Trim - Bank 1
18.8 %
Short Term Fuel Trim - Bank 2
68.8 %
Long Term Fuel Trim - Bank 2
-68.0 %
Fuel Rail Pressure (gauge)
600 kPa
Intake Manifold Absolute Pressure
198.8 kPa

09:22
O2 Sensors
TID#84
Bank1-Sensor1
48
Min
4096
Value
14112
Max
Units
TID#84
Bank2-Sensor2
48
Min
4096
Value
14112
Max
Units



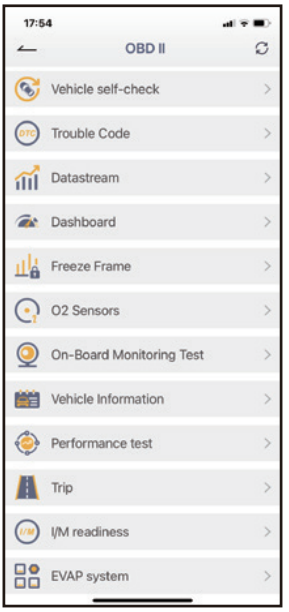


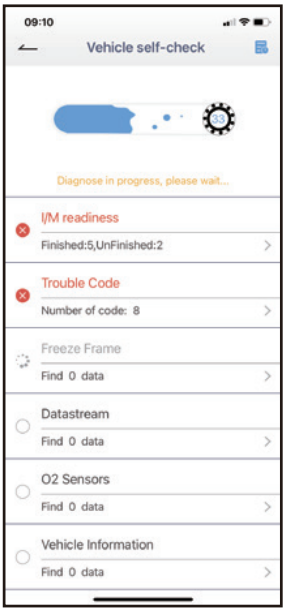


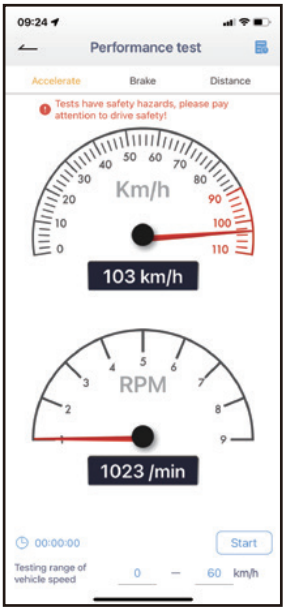


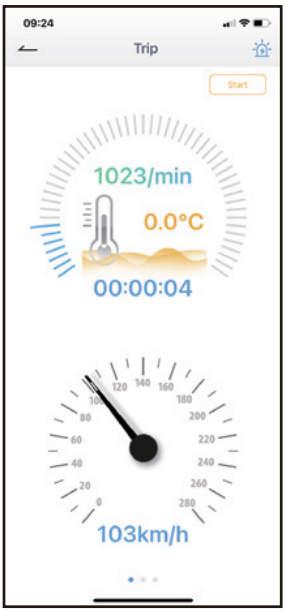
Note: Regarding the On-Board Monitor Test and EVAP Test (Component Test) functions these two functions are subject to the current test. If the tested vehicle supports these two functions, the product software will display, otherwise they will not be displayed.

The product has the following additional functions: Vehicle self-check and dashboard, performance test, trip functions.



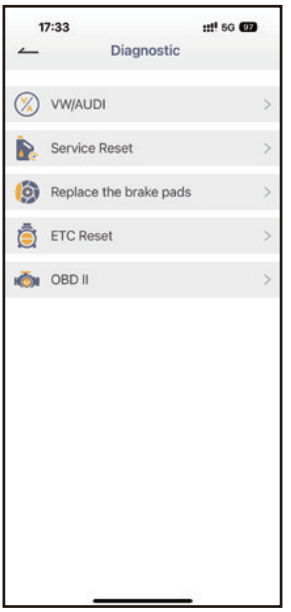


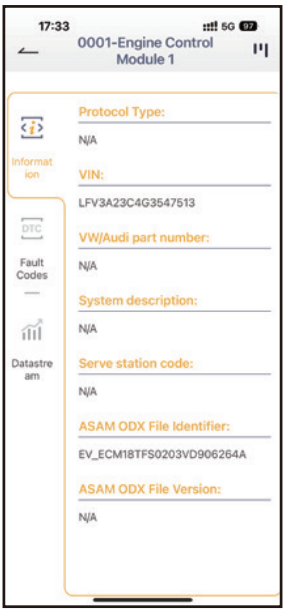


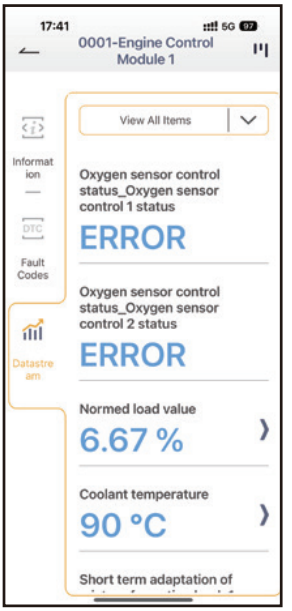


7.2 For VW function (Bluetooth mode)

7.2.1 Basic functions: Information and fault codes, data stream.



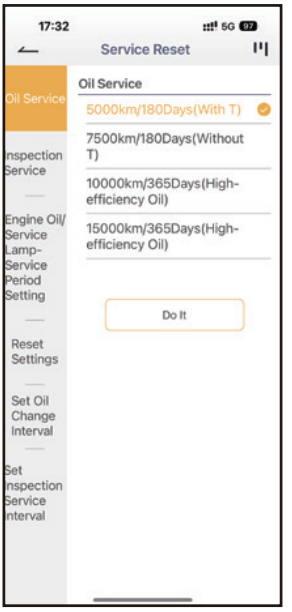


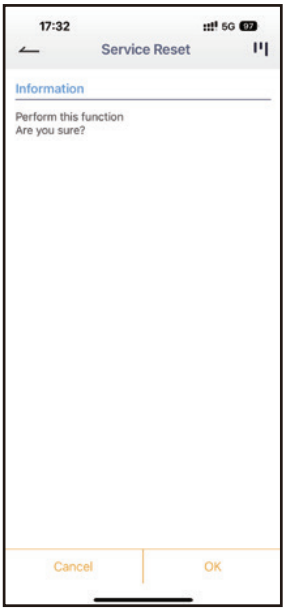


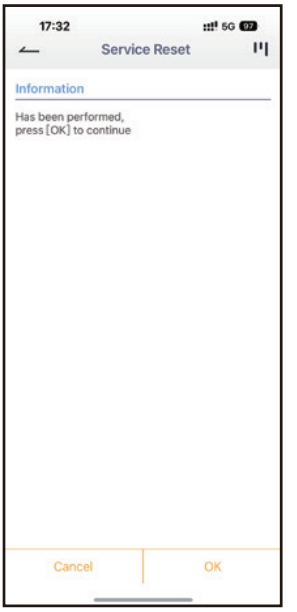
7.2.2 Special function: Service Reset and Brake pad replacement, Throttle Learning (ETC Reset).

a. Service Reset
The following conditions need to be met before maintenance:
(1) Turn off the engine and light up the instrument.
(2) If the vehicle was manufactured after 2019 (including 2019), please open the hood.

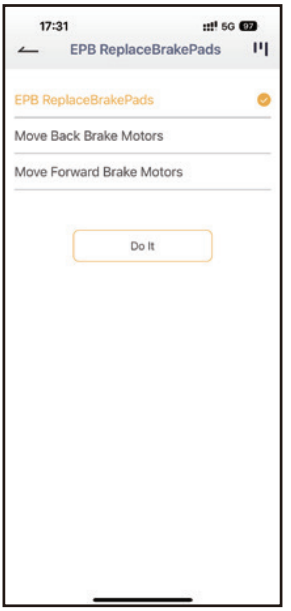
(3) Look at the instrument to indicate whether the maintenance is oil change or maintenance inspection, and select the corresponding item to reset.

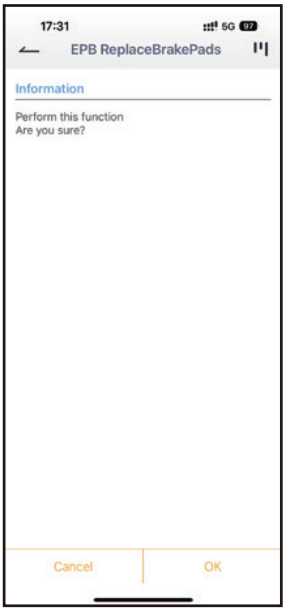




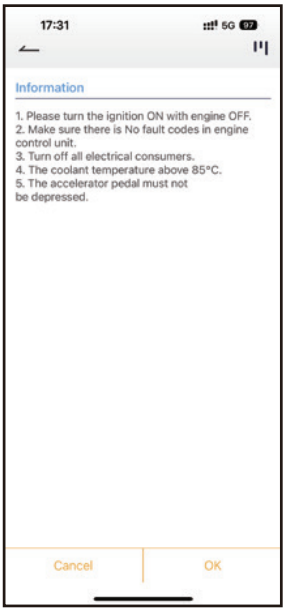


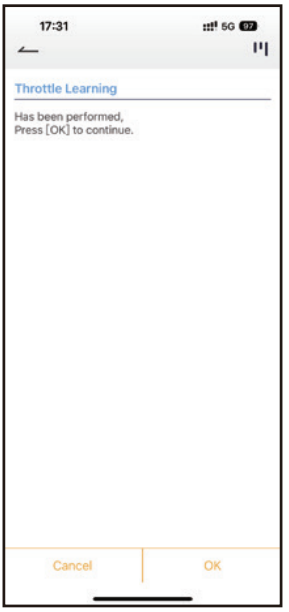
b. Brake pad replacement
The following conditions need to be met before brake pad replacement:
(1) Vehicles with electronic handbrakes support brake pad reset.
Note: If the vehicle is replaced with a mechanical handbrake or mechanical footbrake, the brake pads do not need to perform the brake pad replacement function and can be directly disassembled and replaced.
(2) The vehicle is parked on a level surface.
(3) Set the gear to P (manual gear to N).
(4) Release the electronic handbrake and do not step on the brake peda.
(5) Turn on the instrument or start the vehicle (note that when the instrument is on, please turn off the key and pull out the device after clicking to retract to avoid battery loss caused by the car being powered on for a long time).
(6) If the vehicle was manufactured after 2019 (including 2019), please open the hood.

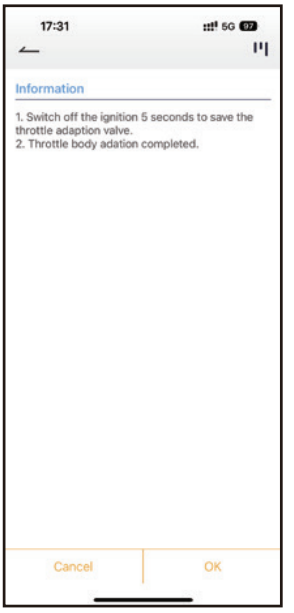




c. Throttle Learning (ETC Reset)
The following conditions need to be met before throttle learning:
(1) The vehicle coolant temperature is around 85°C (normal engine operating water temperature).
(2) Turn off the engine and light up the instrument.
(3) Turn off all electrical appliances (air conditioner, radio, central control screen, interior lighting, headlights, etc.).
(4) Do not depress the accelerator pedal.
(5) If the vehicle was manufactured after 2019 (including 2019), please open the hood.







Note: The special features of each model are different, please according to the actual operation.

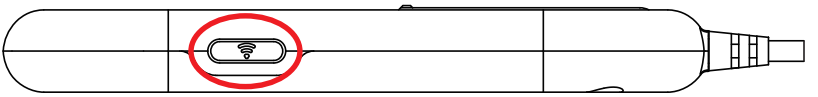
8.OBDII function + For VW function (Set handheld mode)

OBDII function	For VW function	
	Basic function	Special function
Read Codes, Erase Codes , I/M Readiness, Data Stream, EVAP System Test, Vehicle Information.	Information, Read & erase codes.	No

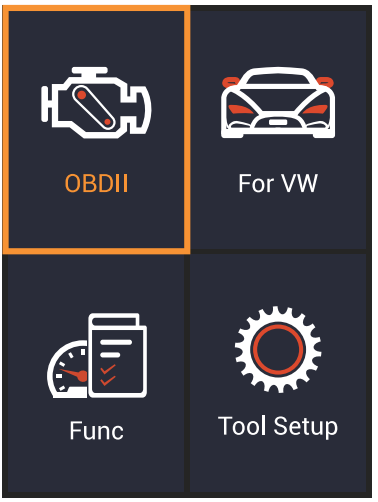
8.1 OBDII function (handheld mode)

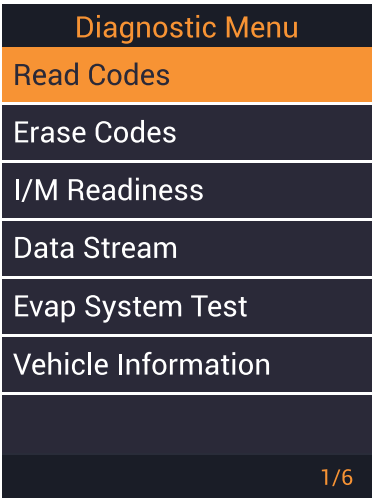
a. Plug the product into the vehicle's OBDII interface.

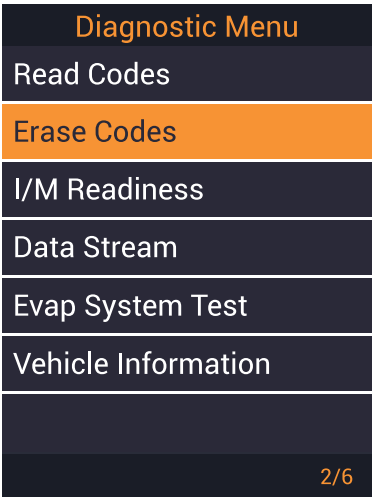
b. Press Bluetooth wake up button to enter handheld mode menu.

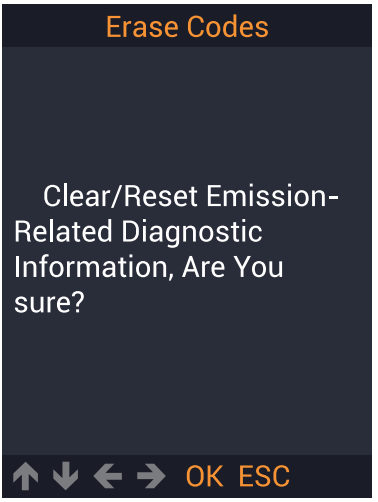


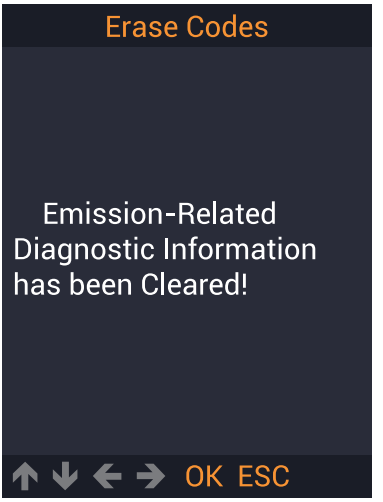
The following is the six functions of OBDII, as shown in the figure:

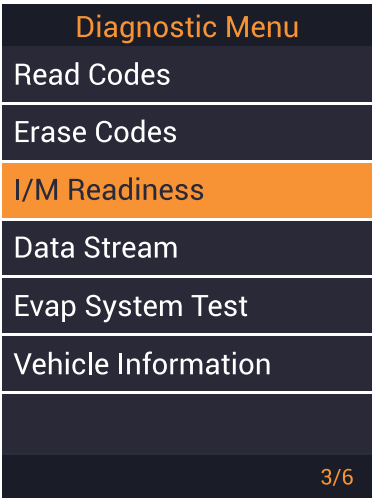


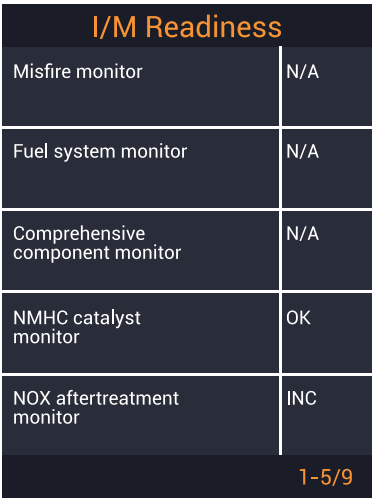


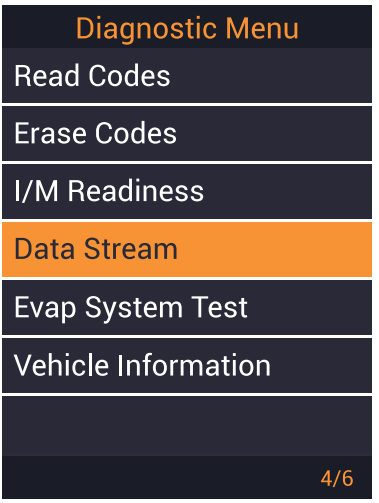


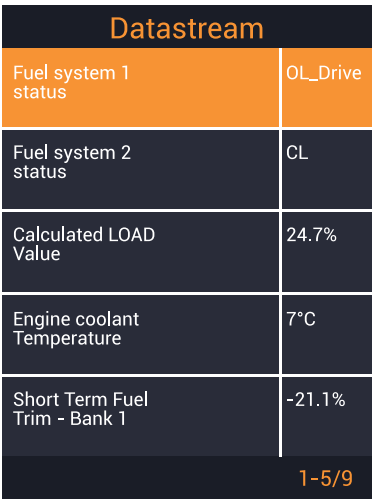


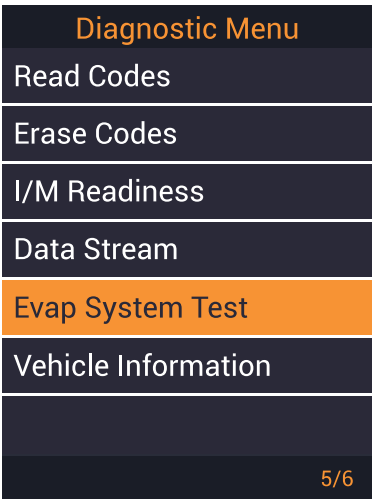


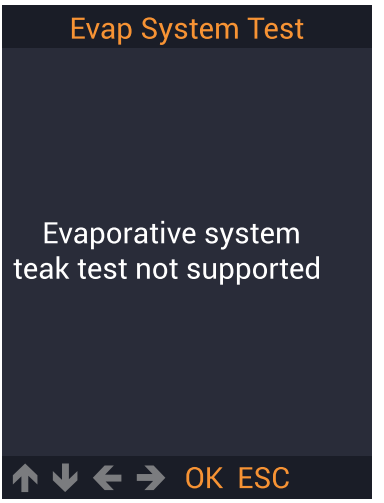

Diagnostic Menu
Read Codes
Erase Codes
I/M Readiness
Data Stream
Evap System Test
Vehicle Information
3/6

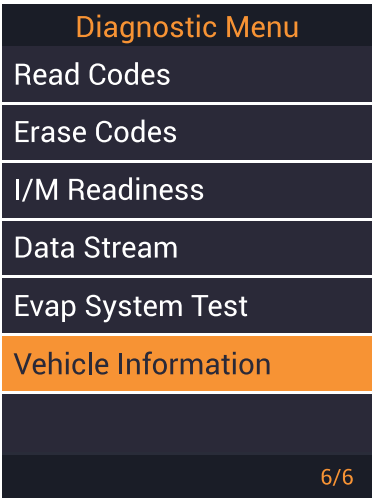

I/M Readiness
Misfire monitor
N/A
Fuel system monitor
N/A
Comprehensive component monitor
N/A
NMHC catalyst monitor
OK
NOX aftertreatment monitor
INC
1-5/9

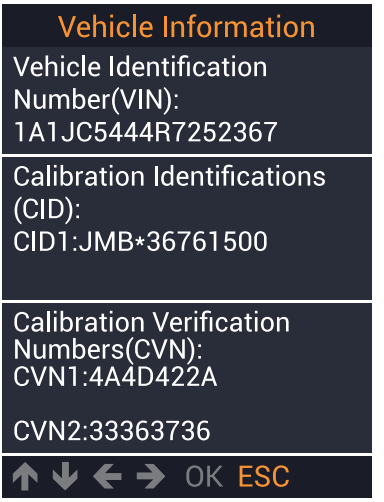

Diagnostic Menu
Read Codes
Erase Codes
I/M Readiness
Data Stream
Evap System Test
Vehicle Information
4/6


Datastream
Fuel system 1 status
OL_Drive
Fuel system 2 status
CL
Calculated LOAD Value
24.7%
Engine coolant Temperature
7°C
Short Term Fuel Trim - Bank 1
-21.1%
1-5/9


Diagnostic Menu
Read Codes
Erase Codes
I/M Readiness
Data Stream
Evap System Test
Vehicle Information
5/6

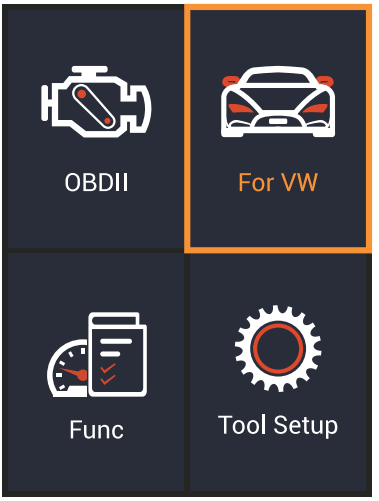

Evap System Test
Evaporative system teak test not supported
OK ESC

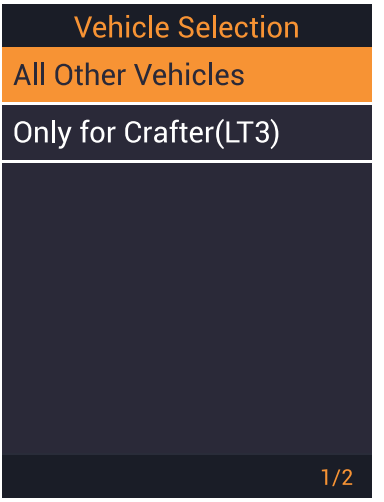


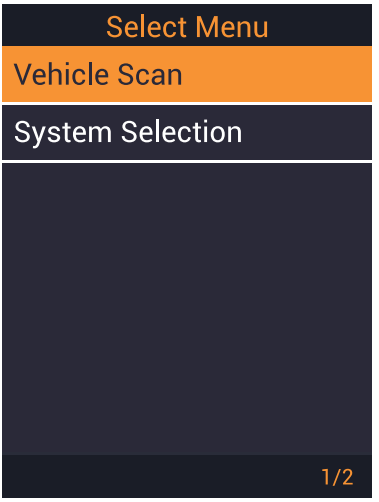


8.2 For VW function (handheld mode)

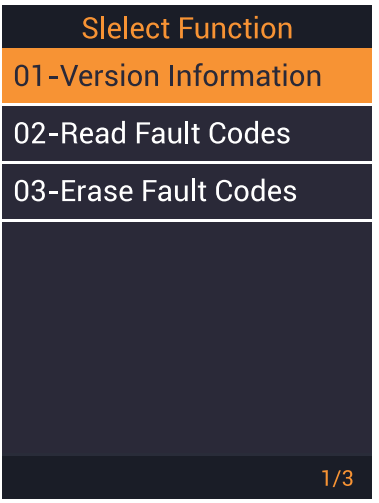
The menu supports the VW vehicle protocol and can support the following three basic functions: Version information, Read fault codes and Erase fault codes.

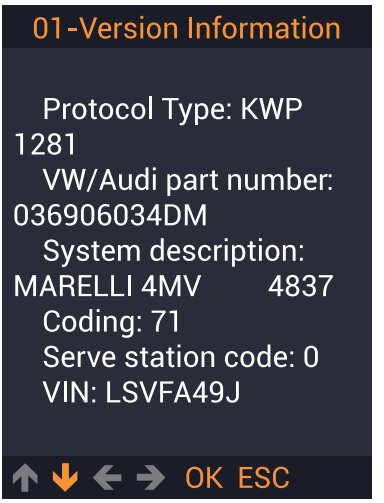


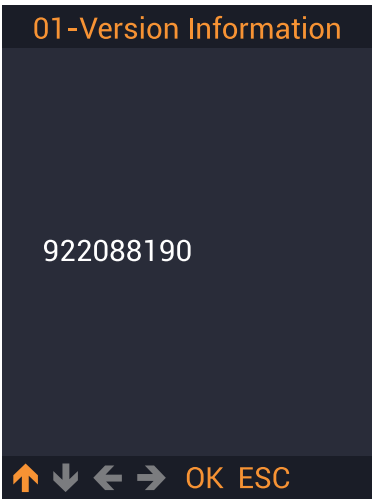


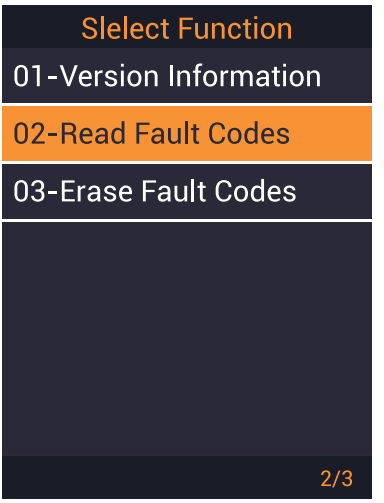

Select Menu
Vehicle Scan
System Selection
1/2

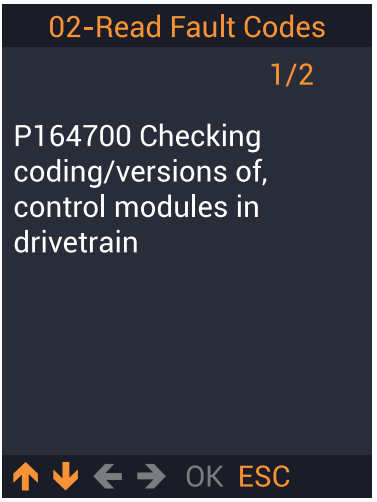
Select System
Clear DTCs For Ve...
001-Engine Control M
10
2/2

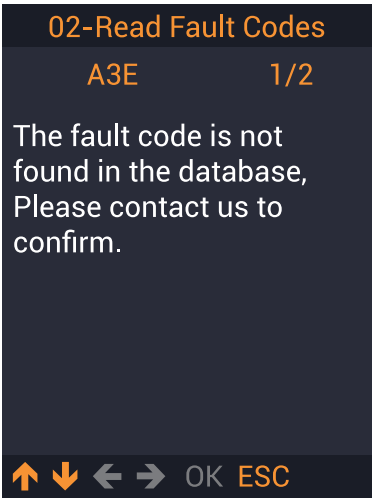

Slelect Function
01-Version Information
02-Read Fault Codes
03-Erase Fault Codes
1/3

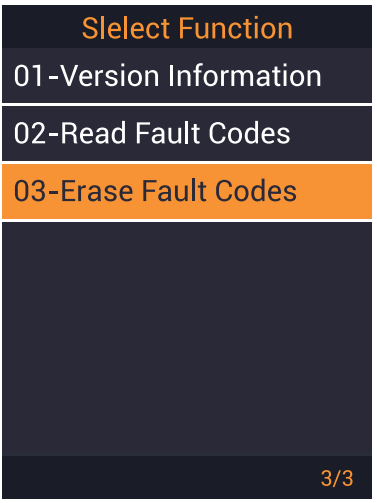

01-Version Information
Protocol Type: KWP 1281
VW/Audi part number: 036906034DM
System description: MARELLI 4MV 4837
Coding: 71
Serve station code: 0
VIN: LSVFA49J
OK ESC

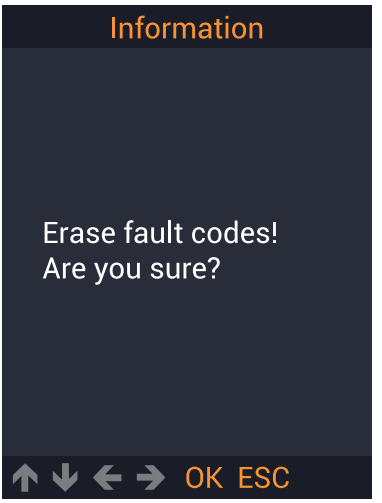

01-Version Information
922088190
OK ESC

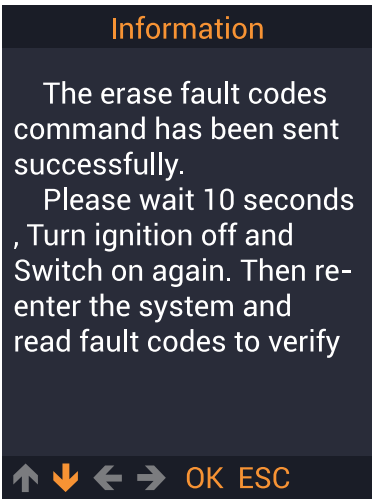

Slelect Function
01-Version Information
02-Read Fault Codes
03-Erase Fault Codes
2/3


02-Read Fault Codes
1/2
P164700 Checking coding/versions of, control modules in drivetrain
OK ESC

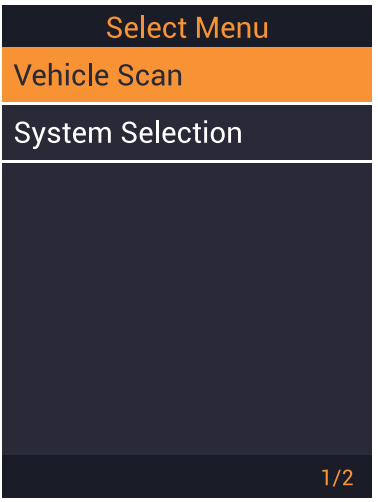

02-Read Fault Codes
A3E
1/2
The fault code is not found in the database, Please contact us to confirm.
OK ESC

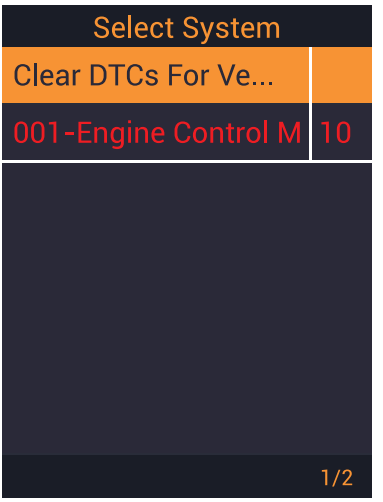

Slelect Function
01-Version Information
02-Read Fault Codes
03-Erase Fault Codes
3/3

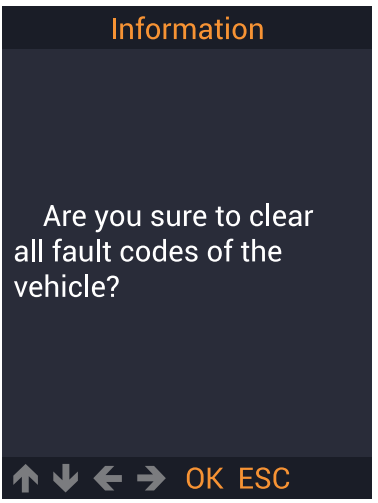

Information
Erase fault codes!
Are you sure?
OK ESC

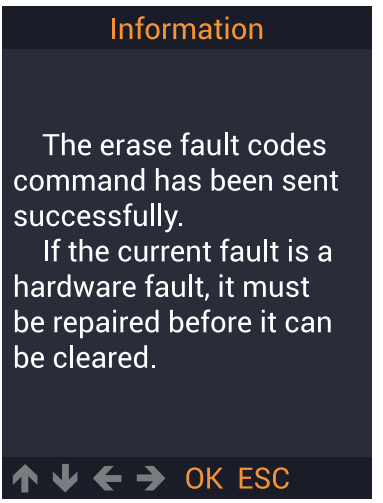

Information
The erase fault codes command has been sent successfully.
Please wait 10 seconds , Turn ignition off and Switch on again. Then re-enter the system and read fault codes to verify
OK ESC

The [vehicle scan] menu supports deleting the error code with one click. Deleting the code does not require access to the system.

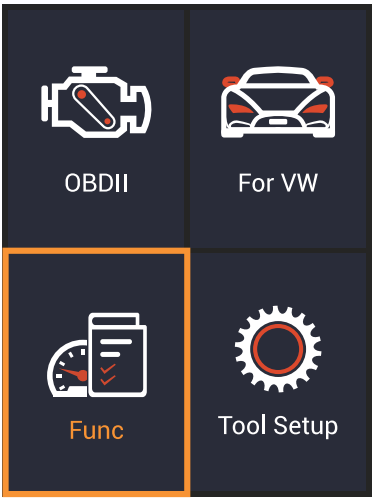


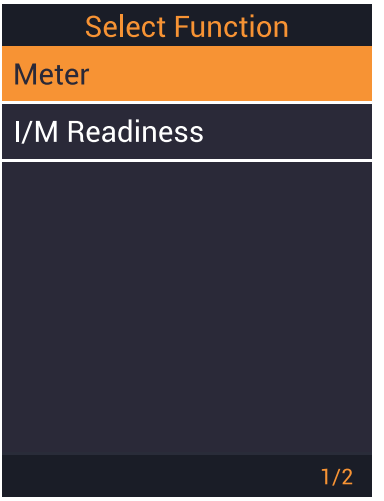


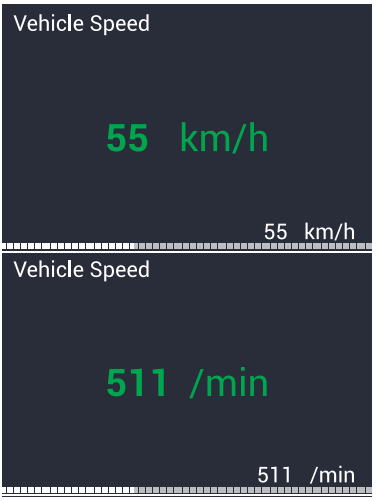




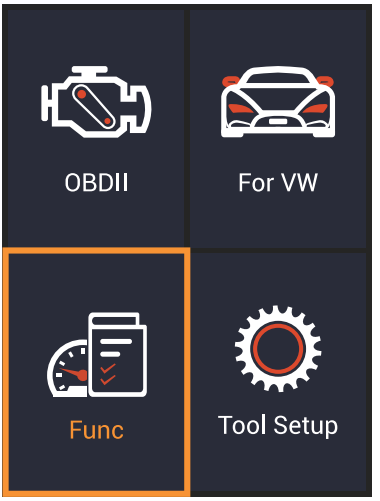
The [Func] menu supports two functions: Meter and I/M Readiness of OBDII function.
Meter reads the main data stream of the engine system, as shown in the figure:

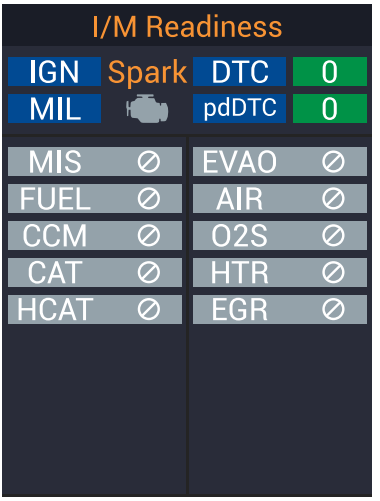




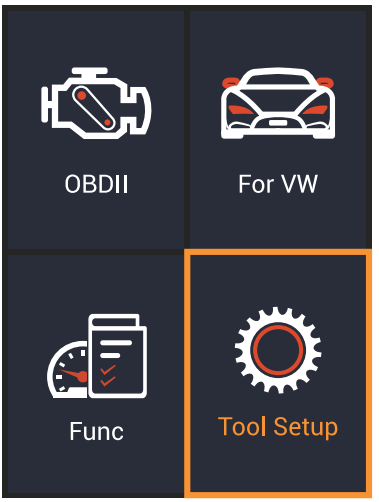


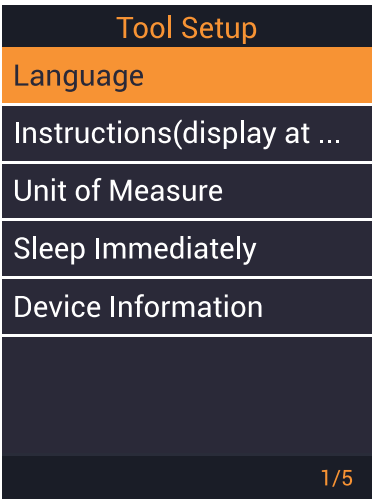
I/M Readiness function, as shown in the figure:

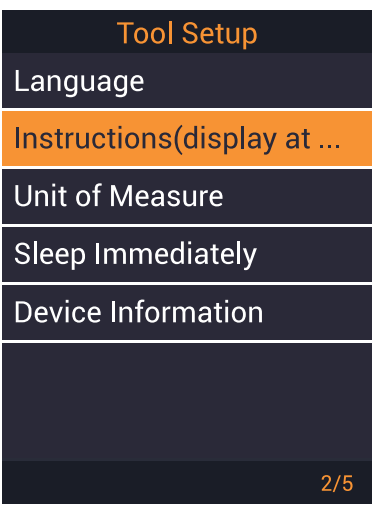


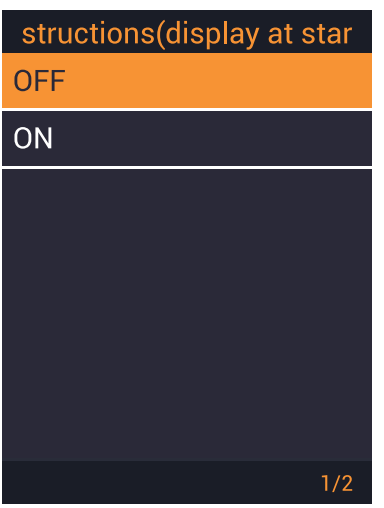


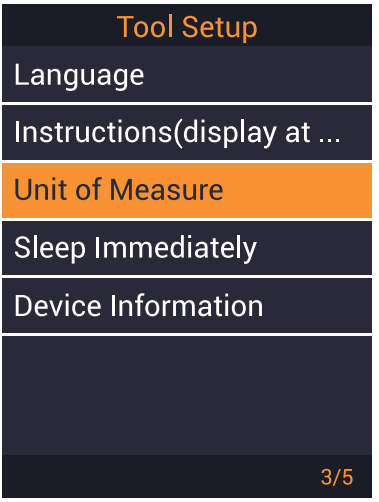
[Tool Setup]:
Setup menu have the functions: Language, Instructions (display at startup), unit of measure, sleep immediately, device Information menu.

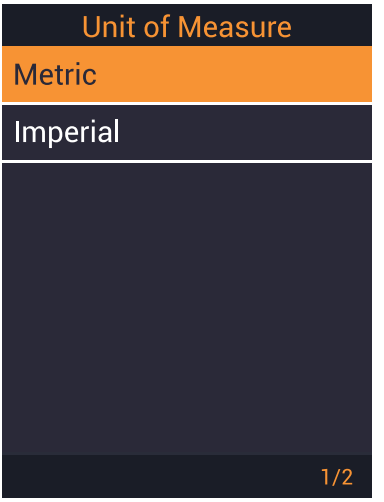


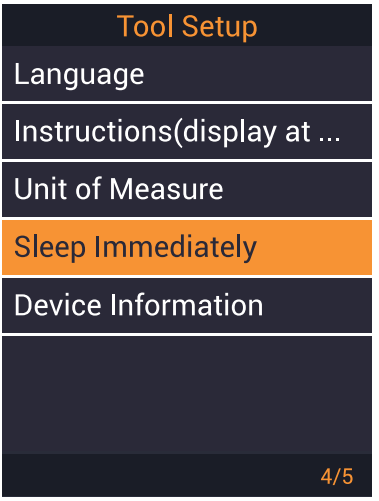


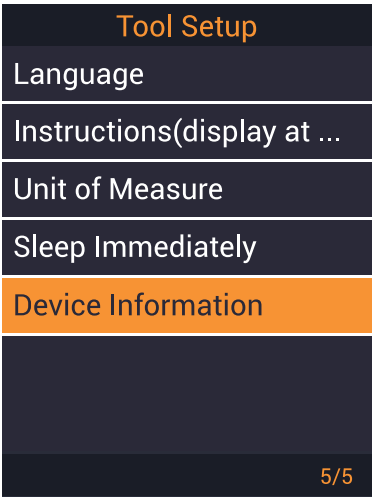


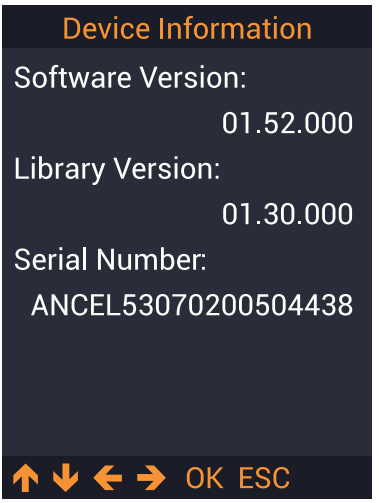



Tool Setup
Language
Instructions(display at ...
Unit of Measure
Sleep Immediately
Device Information
3/5


Unit of Measure
Metric
Imperial
1/2


Tool Setup
Language
Instructions(display at ...
Unit of Measure
Sleep Immediately
Device Information
4/5


Tool Setup
Language
Instructions(display at ...
Unit of Measure
Sleep Immediately
Device Information
5/5


Device Information
Software Version:
01.52.000
Library Version:
01.30.000
Serial Number:
ANCEL53070200504438
OK ESC

9.Update

1) Download the update software on website: www.anceltech.com and unzip the file.
2) Connect the device to the computer with a USB cable.
3) Software updates only support Windows systems: 7/8/10/11. Under the Windows 7, the driver needs to be installed first. Under the Windows 8/10/11, no driver is required and the upgrade software can be run directly.

Note: Windows XP and MacBook series computers are not supported.

10.Warranty

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

Federal Communications Commission (FCC) Statement.

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

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

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

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

•Reorient or relocate the receiving antenna.

•Increase the separation between the equipment and receiver.

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

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

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

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

RF exposure statement:

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