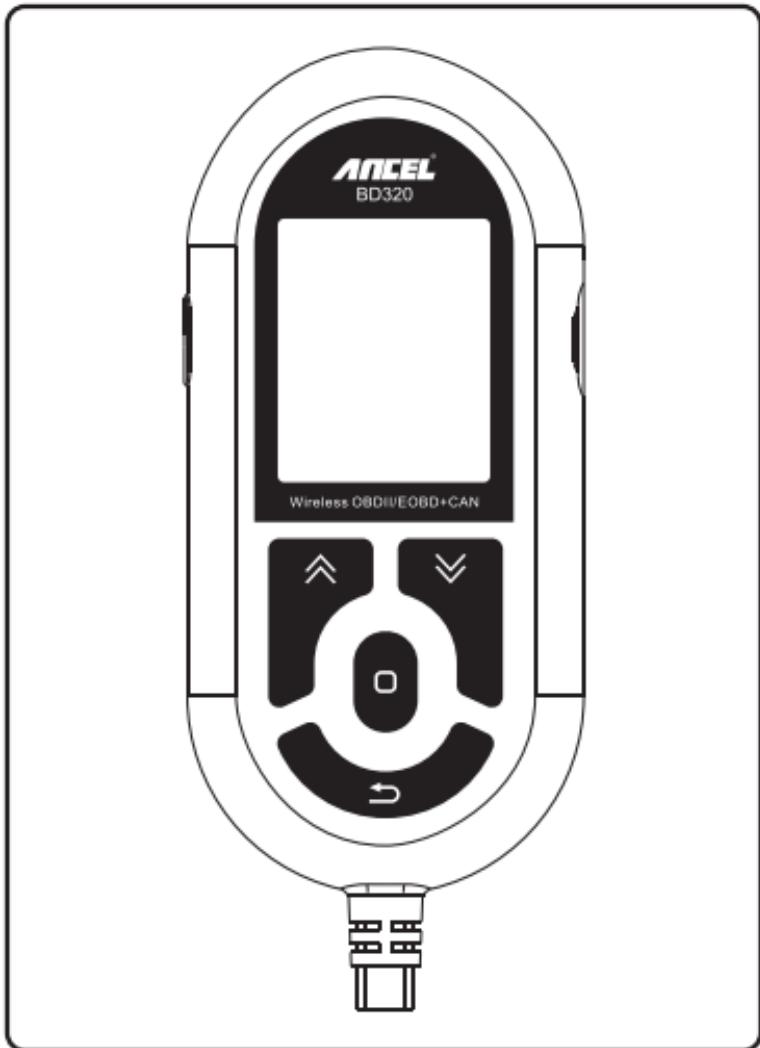


ANCEL®



BD320

USER'S MANUAL

Trademarks

ANCEL is the trademark of OBDSPACE TECHNOLOGY CO.,LTD.

All other marks are trademarks or registered trademarks of their respective holders.

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.

Table of Contents

- 1.Safety precautions
- 2.Product Profile
- 3.Product specification
- 4.Devices Description
- 5.Devices connected vehicle steps
- 6.Download APP to connect device
- 7.OBDII function + For VW function
(Set Bluetooth mode)
- 8.OBDII function + For VW function
(Set handheld mode)
- 9.Update
- 10.Warranty

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

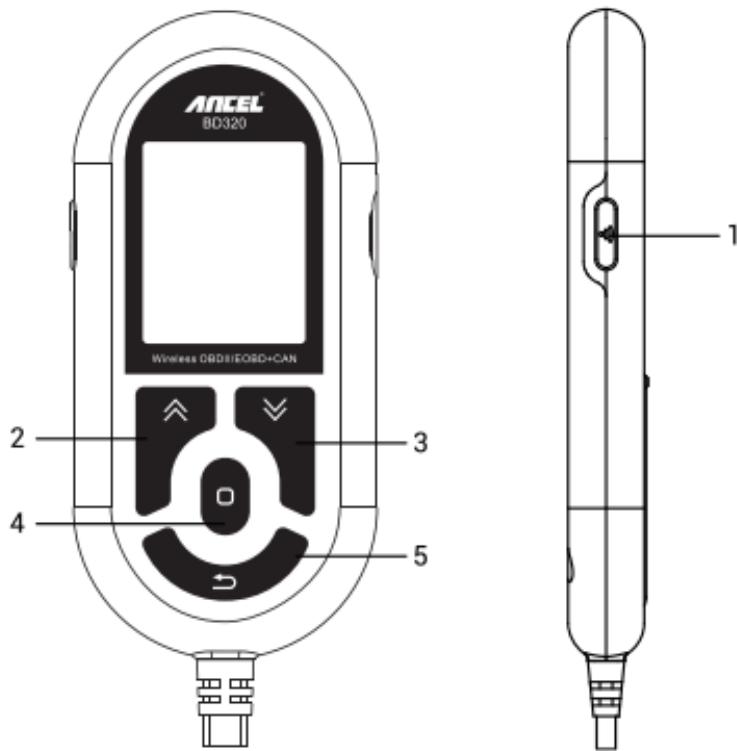
Operating current: 88mA@12V (standby sleep: 16mA)

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

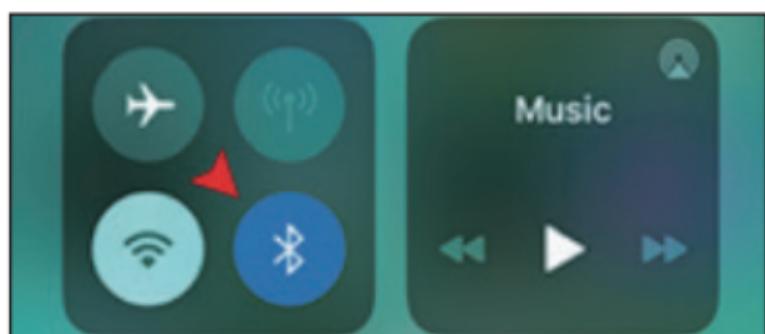
- 1) iOS can be downloaded from the APP store by searching for the keyword "ANCEL".
- 2) Android can be downloaded from Google Play by searching for the keyword "ANCEL".

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

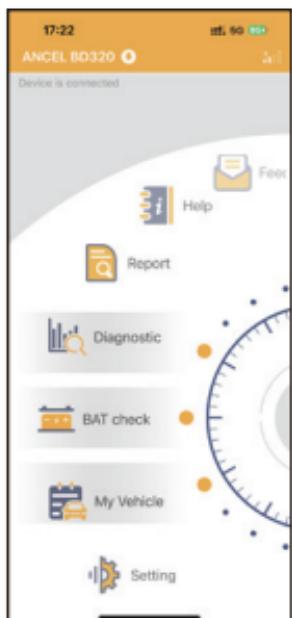
6.1 Bluetooth connection for iOS devices

1) Turn on Bluetooth on your phone.

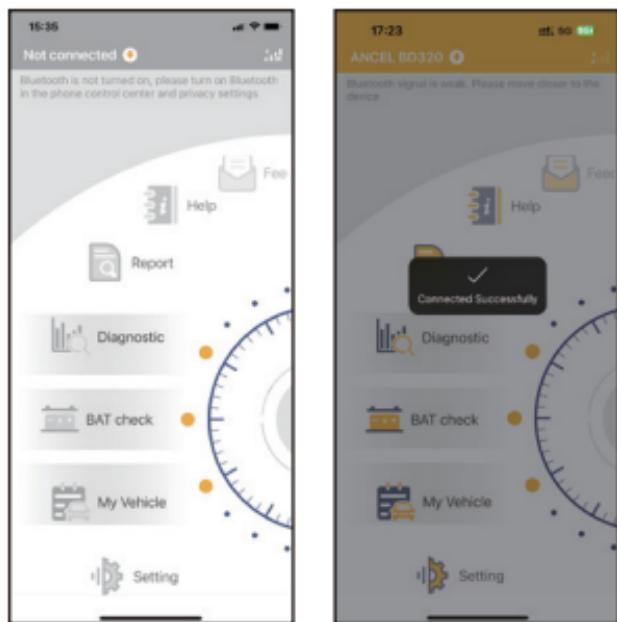
Manually turn on the Bluetooth function of the phone. For phones with iOS 13 and higher, please turn on Bluetooth in the system's privacy settings.



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

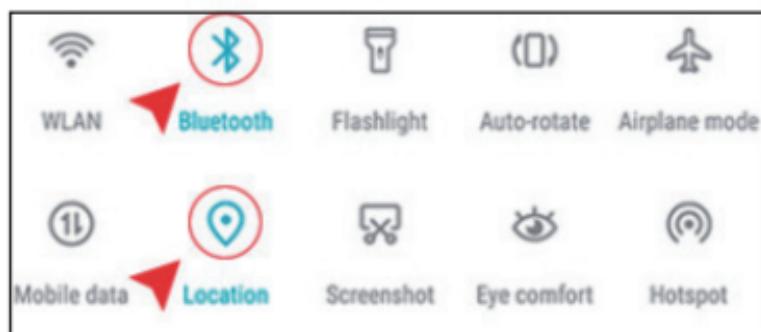


3) The APP will automatically connect to the device. During the connection process, make sure that no other phones have connected to the device. When the "Connected Successfully" message is displayed, the product can be used normally.



6.2 Bluetooth Connection for Android devices

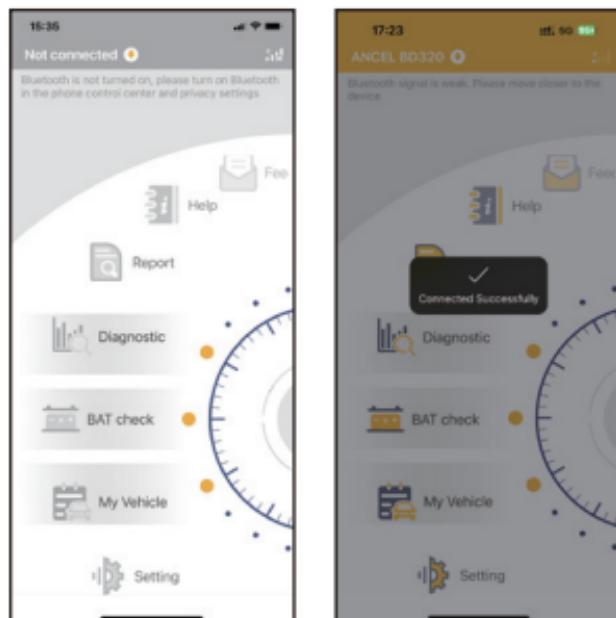
1) Manually turn on Bluetooth and the Location functions of the phone.



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



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.

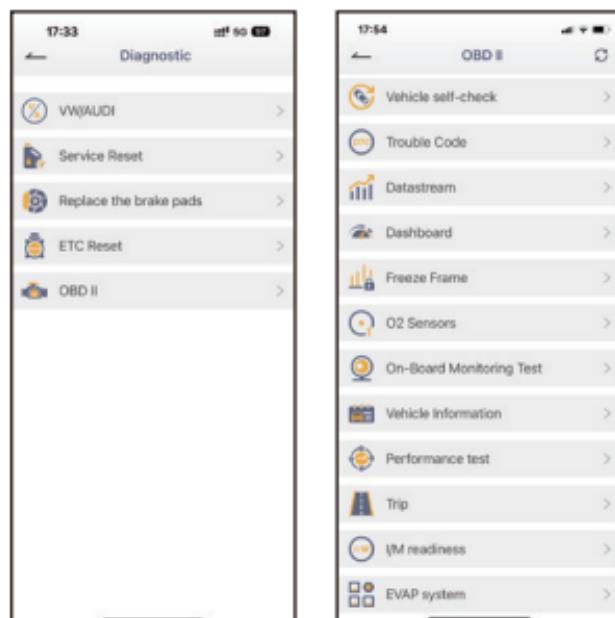


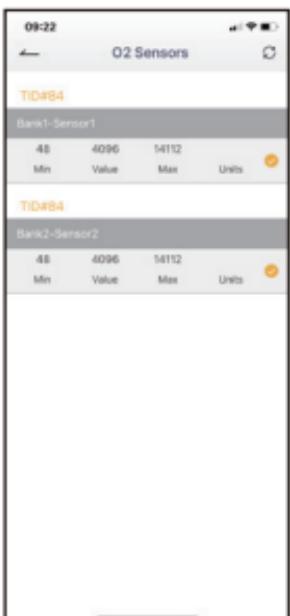
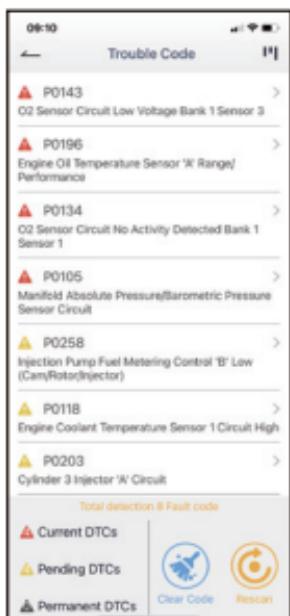
7.OBDII function + For VW function (Set Bluetooth mode)

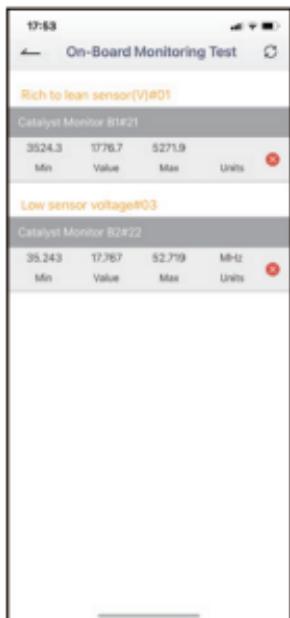
OBDII function	For VW function	
	Basic function	Special function
Trouble code (read & erase), Data stream, Freeze frame, O2 sensors, On-board monitoring test, Vehicle information, I/M readiness, EVAP system.	Information, Fault codes (read & erase), Data stream.	Service Reset, Brake pad replacement, Throttle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

7.1 OBDII function (Bluetooth mode)

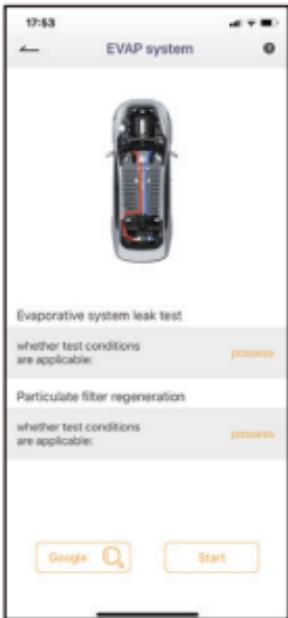
The product has the following OBDII functions: Trouble code, data stream, freeze frame, O2 sensors, on-board monitoring test, vehicle information, I/M readiness, EVAP system.





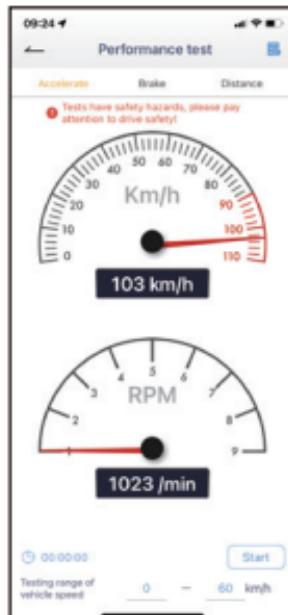
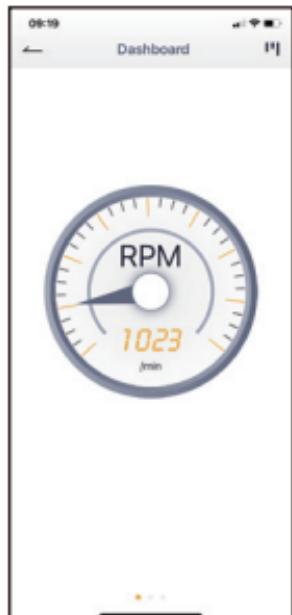
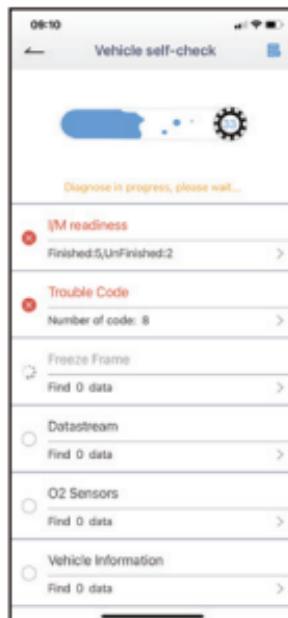
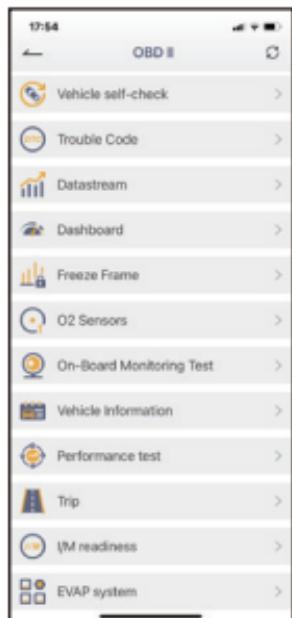


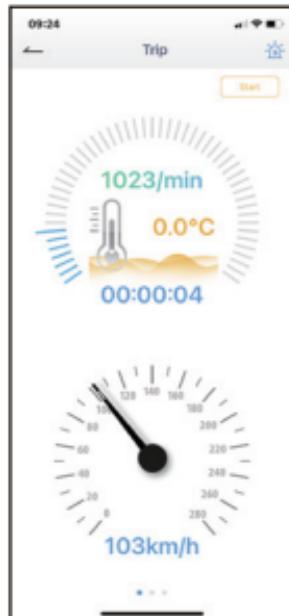
09:26 I/M readiness		
Test Item	DTC-6 ML On	
	Since DTCs Cleared	This Driving Cycle
Misfire monitoring	Don't support	Don't support
Fuel system monitoring	Don't support	Unfinished
Comprehensive component monitoring	Don't support	Finished
non-methane hydrocarbon/NMHC catalyst monitoring	Finished	Don't support
NOx aftertreatment monitoring	Unfinished	Don't support
Boost pressure system monitoring	Don't support	Finished
Exhaust gas sensor	Don't support	Don't support



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.

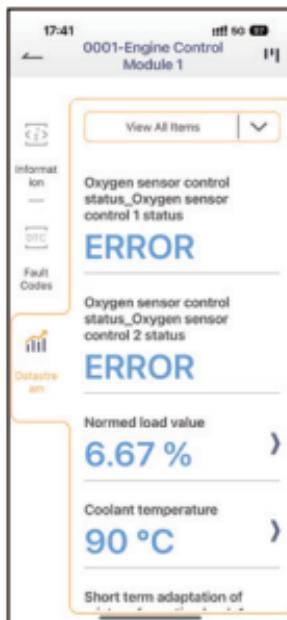
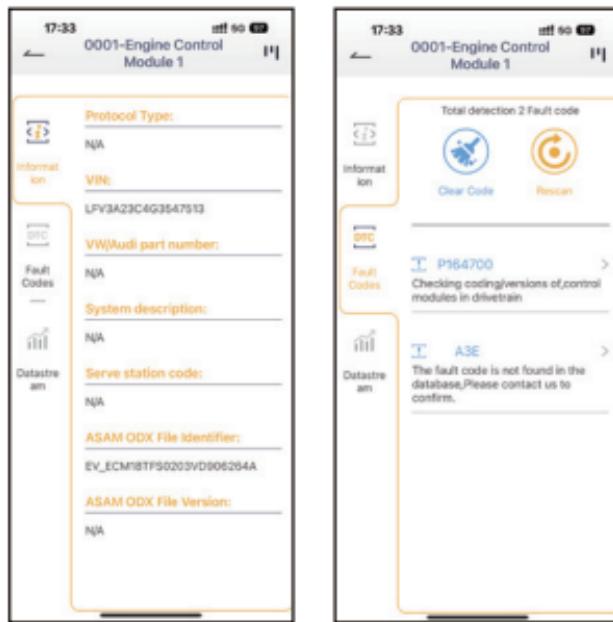




7.2 For VW function (Bluetooth mode)

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.

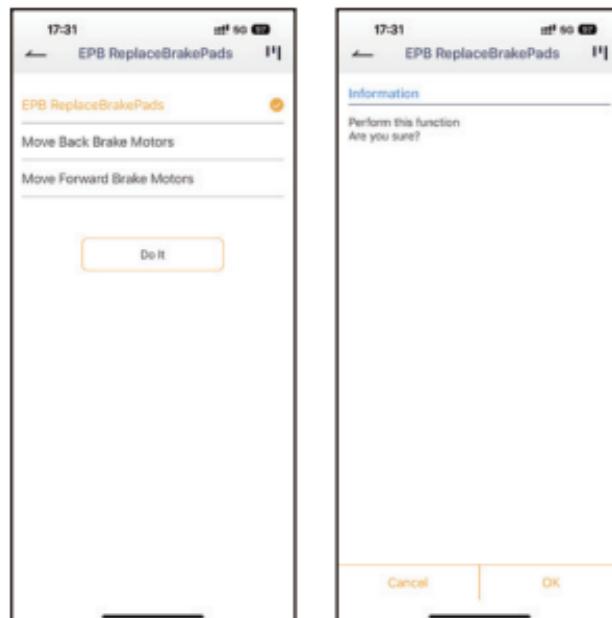
(2) The vehicle is parked on a level surface.

(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.

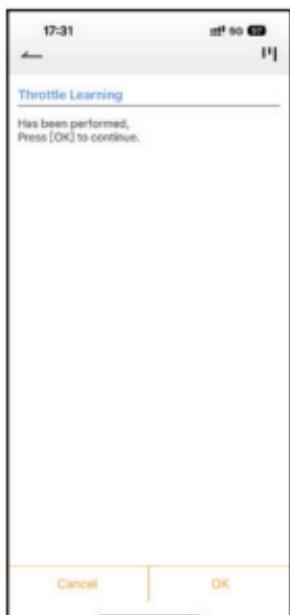




c. Throttle Learning (ETC Reset)

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)

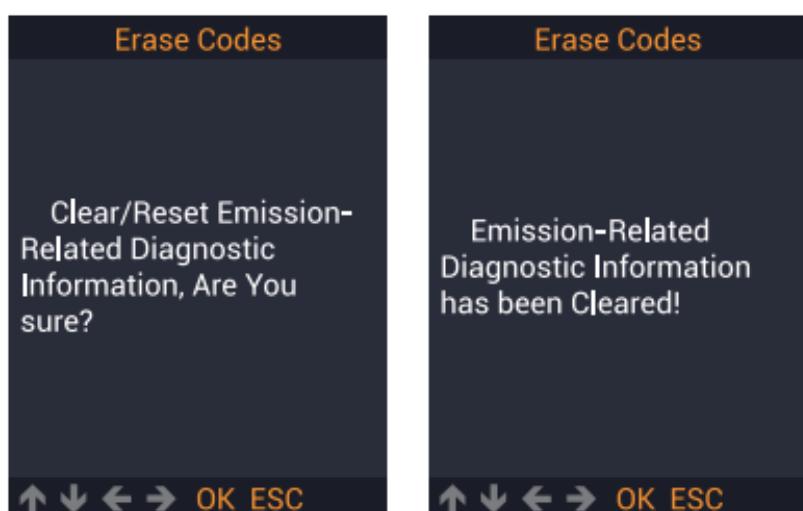
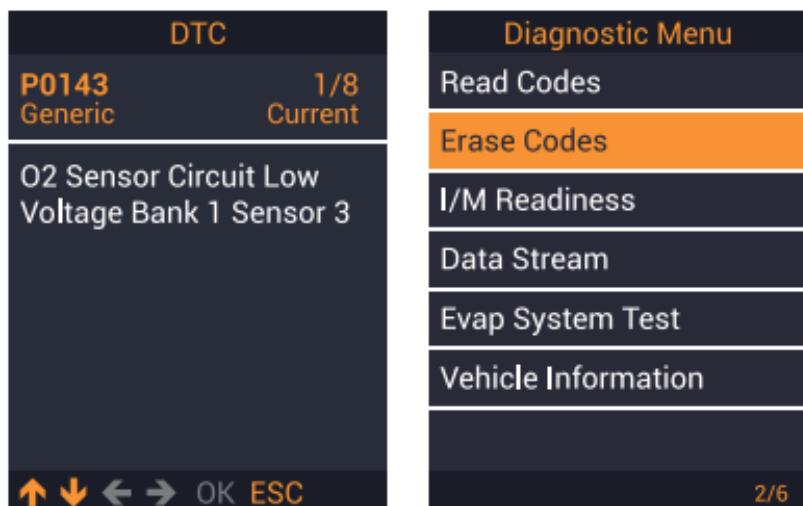
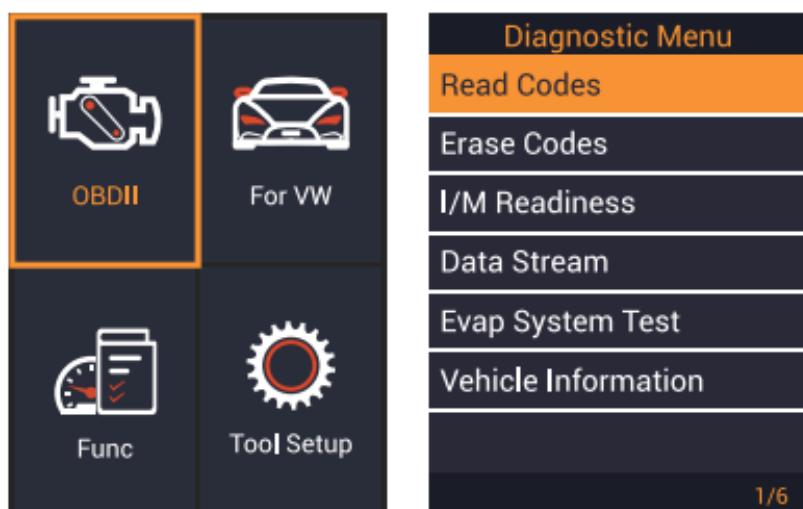
- Plug the product into the vehicle's OBDII interface.



- 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 leak test not supported	
↑ ↓ ← → OK ESC	

Diagnostic Menu		Vehicle Information	
Read Codes		Vehicle Identification Number(VIN): 1A1JC5444R7252367	
Erase Codes		Calibration Identifications (CID): CID1:JMB*36761500	
I/M Readiness		Calibration Verification Numbers(CVN): CVN1:4A4D422A	
Data Stream		CVN2:33363736	
Evap System Test			
Vehicle Information			
6/6		↑ ↓ ← → 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.

		Vehicle Selection
OBDII	For VW	All Other Vehicles
		Only for Crafter(LT3)
		1/2
Func	Tool Setup	

Select Menu
Vehicle Scan
System Selection

1/2

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

2/2

Select 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

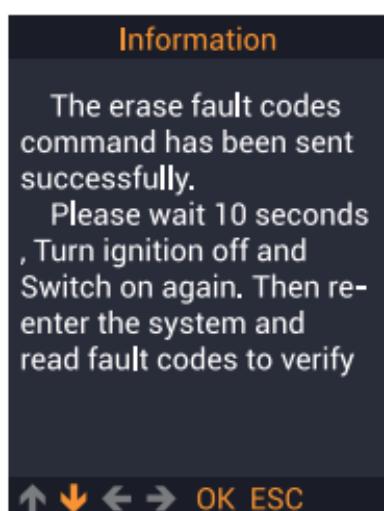
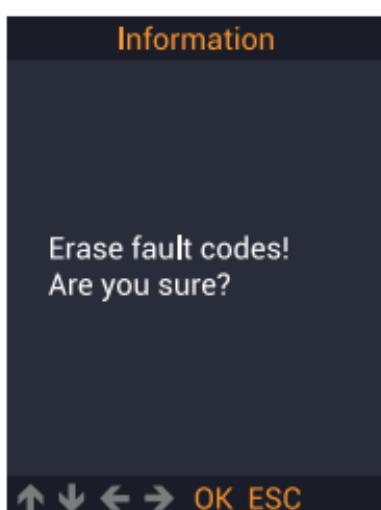
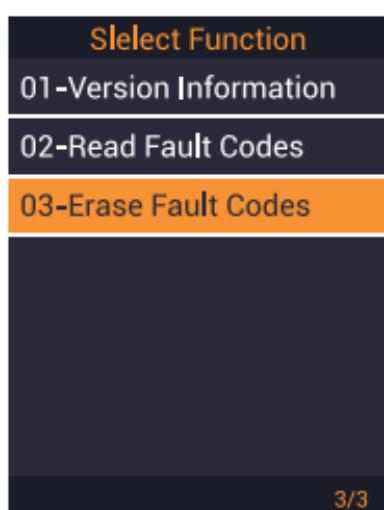
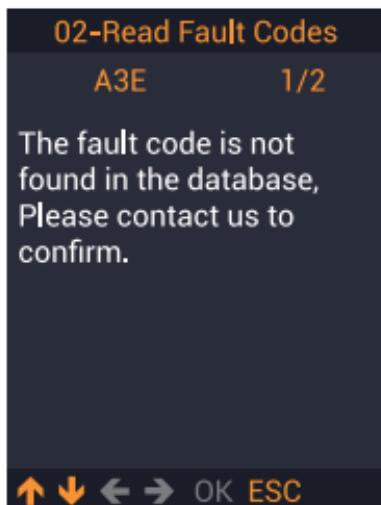
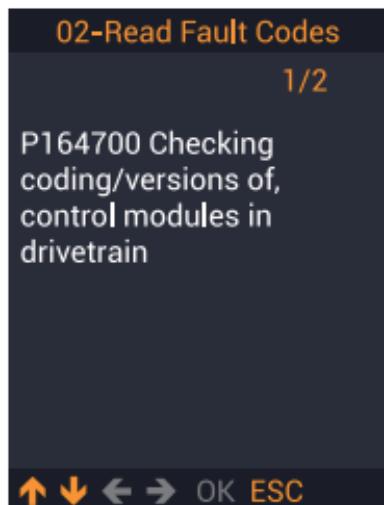
↑ ↓ ← → OK ESC

01-Version Information
922088190

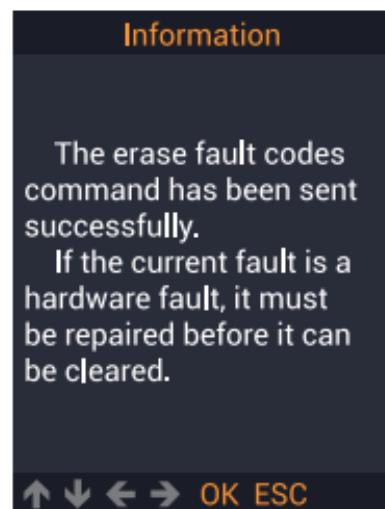
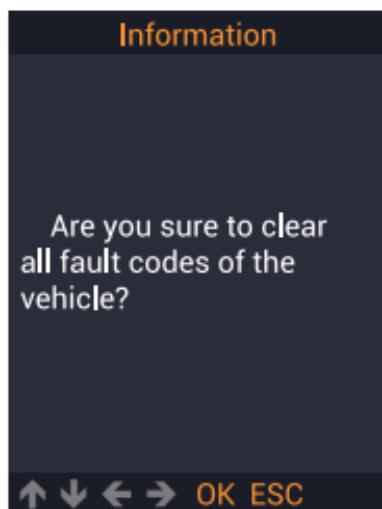
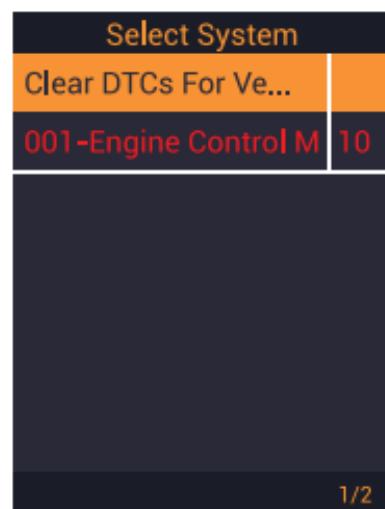
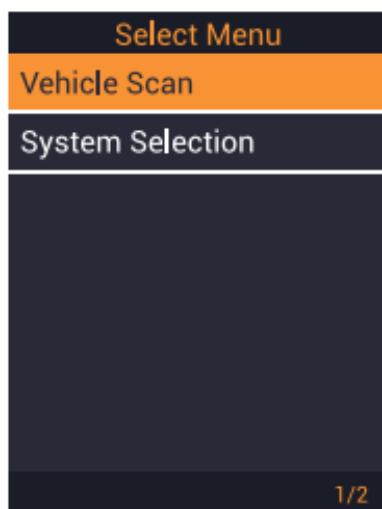
↑ ↓ ← → OK ESC

Select Function
01-Version Information
02-Read Fault Codes
03-Erase Fault Codes

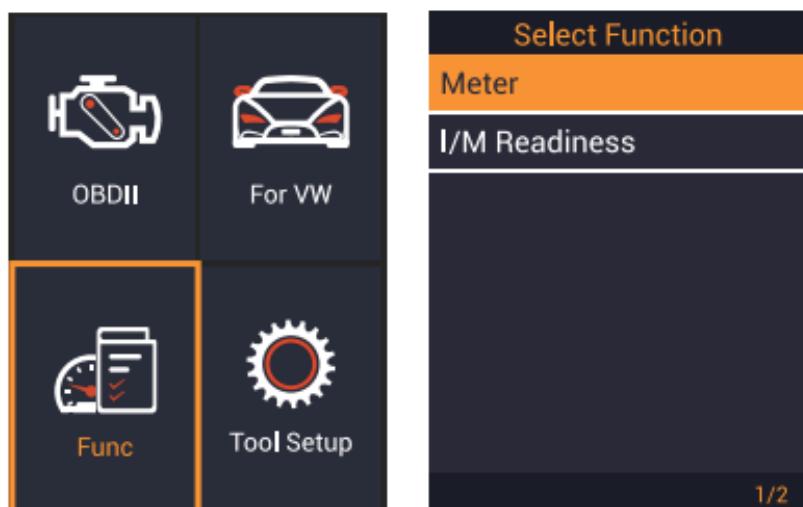
2/3



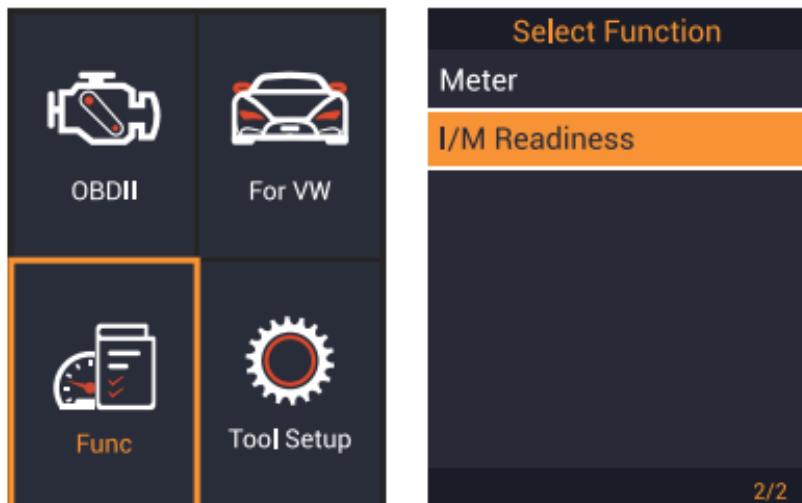
The [vehicle scan] menu supports deleting the error code with one click. Deleting the code does not require access to the system.



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:



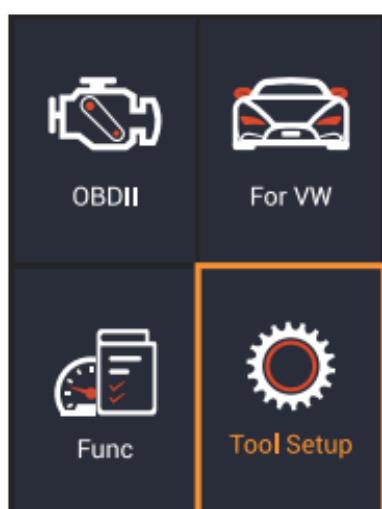
I/M Readiness function, as shown in the figure:



I/M Readiness					
IGN	Spark	DTC	0		
MIL		pdDTC	0		
MIS	0	EVAO	0		
FUEL	0	AIR	0		
CCM	0	O2S	0		
CAT	0	HTR	0		
HCAT	0	EGR	0		

[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
1/5

Language
English
Deutsch
Español
Français
Italiano
Portuguës
Suomalainen
1/8

Language
Nederlands
8/8

Tool Setup
Language
Instructions(display at star ...)
Unit of Measure
Sleep Immediately
Device Information
2/5

Instructions(display at star ...)
OFF
ON
1/2

Tool Setup	Unit of Measure
Language	Metric
Instructions(display at ...)	Imperial
Unit of Measure	
Sleep Immediately	
Device Information	
3/5	1/2

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