

HD10

User Manual

Automotive Diagnostic Tool (OBDII + Heavy Duty Scan)

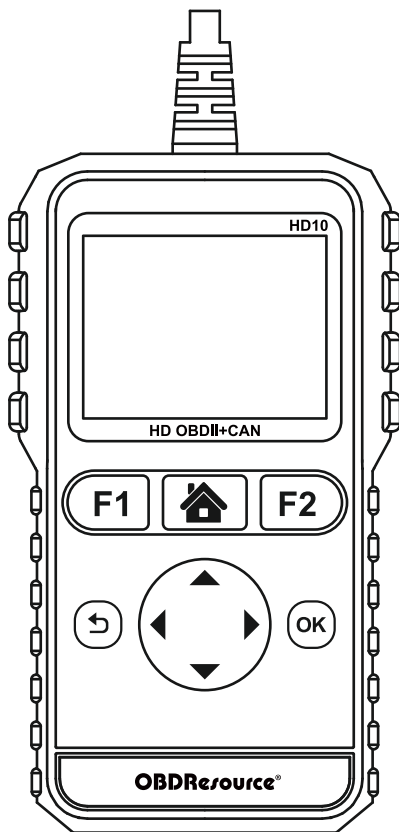


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Safety Information

For your own safety and the safety of others, and to prevent damage to the equipment and vehicles, read this manual thoroughly before operating your OBDII Diagnostic Tool. The safety messages presented below and throughout this user manual are reminders to the operator to exercise extreme care when using this device. Always refer to and follow security information and test procedures provided by vehicle manufacturer. Read, understand and follow all safety messages and instructions in this manual.

Safety Message Conventions Used

We provide safety messages to help prevent personal injury and equipment damage. Below are signal words we used to indicate the hazard level in a condition.

Danger

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury to the operator or to bystanders.

Warning

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury to the operator or to bystanders.

Caution

Indicates a potentially hazardous situation which, if not avoided, may result in moderate or minor injury to the operator or to bystanders.

Important Safety Instructions

And always use your OBDII Diagnostic Tool as described in the user manual, and follow all safety messages.

Warning

- * Do not route the test cable in a manner that would interfere with driving controls.
- * Do not exceed voltage limits between inputs specified in this user manual.
- * Always wear ANSI approved goggles to protect your eyes from propelled objects as well as hot or caustic liquids.
- * Fuel, oil vapors, hot steam, hot toxic exhaust gases, acid, refrigerant and other debris produced by a malfunction engine can cause serious injury or death. Do not use the OBDII Diagnostic Tool in areas where explosive vapor may collect, such as in below-ground pits, confined areas, or areas that are less than 18 inches (45 cm) above the floor.
- * Do not smoke, strike a match, or cause a spark near the vehicle while testing and keep all sparks, heated items and open flames away from the battery and fuel/ fuel vapors as they are highly flammable.
- * Keep a dry chemical fire extinguisher suitable for gasoline, chemical and electrical fires in work area.
- * Always be aware of rotating parts that move at high speed when an engine is running and keep a safe distance from these parts as well as other potentially moving objects to avoid serious injury.

- * Do not touch engine components that get very hot when an engine is running to avoid severe burns.
- * Block drive wheels before testing with engine running. Put the transmission in park (for automatic transmission) or neutral (for manual transmission). And never leave a running engine unattended.
- * Do not wear jewelry or loose fitting clothing when working on engine.

1. Product introduction

HD10 automobile diagnostic tool is exclusively designed for Heavy Duty OBD and OBDII/EOBD vehicles detection. It is applicable to all 12V gasoline/diesel and 24V diesel vehicles.

HD10 supports standard protocols SAEJ1939, SAE J1587/J1708, ISO15675/14320, ISO9141-2, SAE J1850.

For heavy duty vehicles, it covers CUMMINS, DETROIT, MAXXFORCE, CATERPILLAR, MA-CK, FREIGHTLINER, INTERNATIONAL, KENWORTH, AMERICAN LAFRANCE, AUTOCAR, JOHN DEERE, PETERBILT, PACCAR, ERF, SETRA BUS, WESTERN STAR, PIERCE, SED-DON-ATKINSON, STERLING, SISU, STEYR, etc.

HD10 supports the functions :Vehicle Information, Read Fault Code, Erase Fault Code, Read Live Data; for all system of 24V diesel vehicles: such as Engine, Turbocharger, Transmission, Shift Console, Power Output, Axle, Brake, Reducer, Cruise Control, Fuel System, Steering Controller, Suspension, Instrument Panel, Electrical System, Engine Valve Controller, Trailer, Tachograph, Battery Pack Monitor etc.

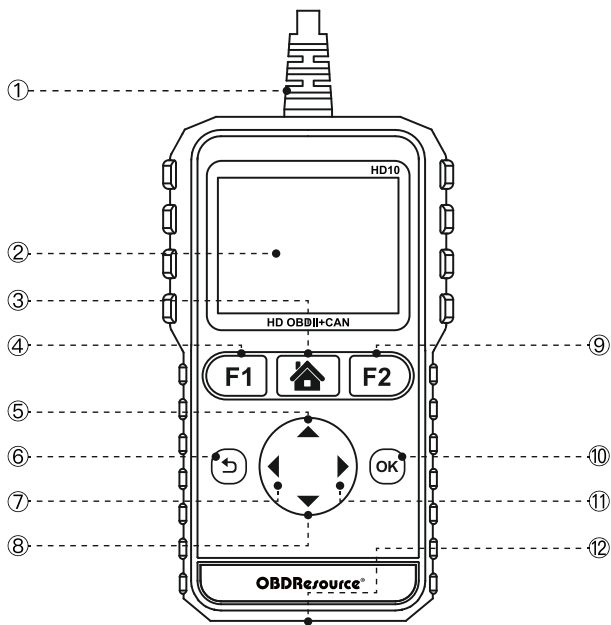
HD10 code reader is compatible with 12V engines vehicle conforming to OBDII from 1996 to now. It can check the cause of the engine fault and repair it without visiting the dealer. It can also help you easily pass the annual electronic inspection test. It covers the complete OBD diagnostic function of the engine system. The oxygen sensor test, on-board monitoring system test and component test can let you fully understand the running status of the vehicle, while the graphical and digital real-time data flow display can help you find the vehicle fault more clearly.

Note: Please refer to the menu for different products ,Here are for reference only.

2. Operation mode

2.1 Equipment display

The scanning tool is designed for ease of use. All menus and lists operate in the same way.



UP	Down	Left	Right	Back	OK	F1	Home	F2

2.2 Key description

- (1) OBDII connector -- Data link connector (DLC) that connects the scan tool to the vehicle.
- (2) Display screen -- Visual display, 320 x 240 resolution, 2.4 inch TFT true color display.
- (3) Home key -- Return to the main menu from any screen.
- (4) F1 key -- Confirm to start the updating.
- (5) Up key -- Use the up key to select between each interface to realize the incremental and page turning functions.
- (6) Return key -- Cancel the selection or cancel it, and return to the previous interface.
- (7) Left key -- Use the left key to select between each interface to realize the page turning function.
- (8) Down button -- Use the down button to select between each interface to realize the function of decrement and page turning.
- (9) F2 key -- Confirm to start the updating.
- (10) Confirm key - Confirm the selected content and enter.
- (11) Right key -- Use the right key to select between each interface to realize the page turning function.
- (12) USB interface -- Connect USB to the computer, and the removable disk will be displayed. Just copy and paste the upgrade file to the removable disk to complete the upgrade.

2.3 Technical Parameters

No.	Name	Description
1	CPU	240MHZ
2	Display	2.8 inch
3	Resolution Ratio	320*240
4	Interface	DB15 Port, USB Port
5	Power Supply	11 - 30V
6	Storage Temperature	-30 ~ 90℃
7	Working Temperature	-10 - 70℃
8	Humidity	< 90%
9	Dimension	200 * 93 * 30mm

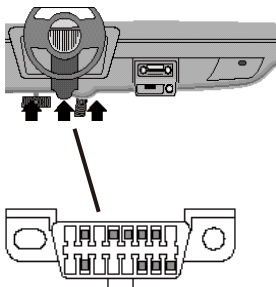
2.4 Configuration

- * Main Device
- * Main Cable
- * USB Cable
- * HD-9P adapter
- * HD-6P adapter

3. Universal reading card

3.1 Diagnostic interface position

- Find the interface location (usually under the dashboard on the driver's side or under the steering wheel).
- If the location of the data transmission interface is uncertain, it is recommended to check the vehicle manual or the automobile service center to confirm the location of the interface.



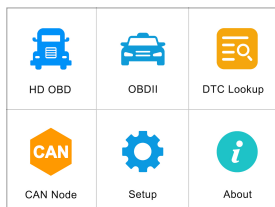
3.2 Device connection

1. Find the data connection interface under the steering wheel.
2. If necessary, open the cover plate of the data connection interface.
3. Turn the ignition switch to the power on state, but do not start the engine.
4. Insert OBDII connector into vehicle diagnostic seat.
5. The tool will attempt to identify the vehicle. If successful, the identified vehicle will be displayed. If the vehicle is not recognized, a menu will be displayed and you can select the vehicle manually.
6. Perform a quick test, select the diagnosis menu by using the up, down, left and right scroll keys, and press the OK key to enter.

4. HD OBD Function description

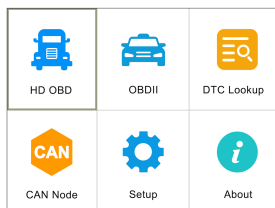
Main page:

HD OBD diagnostic, OBDII diagnostic, DTC Lookup, CAN Node, Setup, and About.



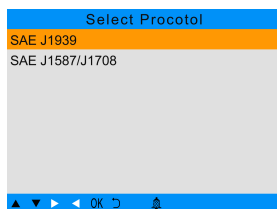
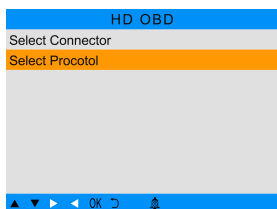
4.1 HD OBD diagnosis

Press the <▲> <▼> key to select "HD OBD" for diesel vehicle diagnosis.



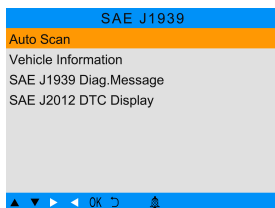
4.2 HD Diagnostic Menu

After entering the HD OBD diagnosis, press the <▲> <▼> to select the connector and protocol to enter the diagnostic menu.



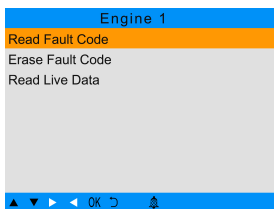
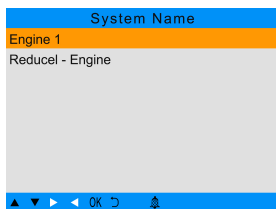
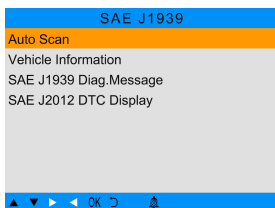
Diagnostic Menu:

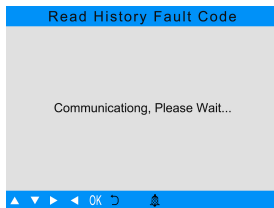
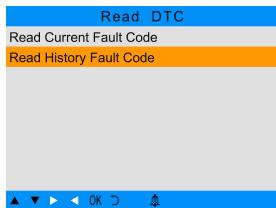
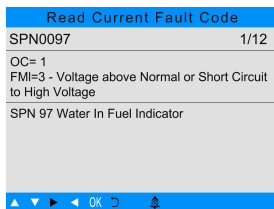
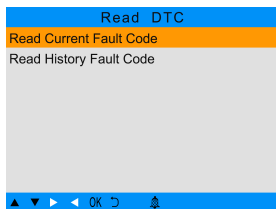
Auto Scan, Vehicle Information, SAE J1939 Diag.Message and SAE J2012 DTC Display.



4.3 Read Fault Code

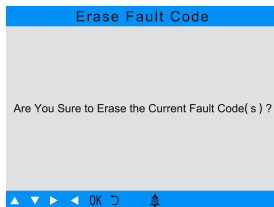
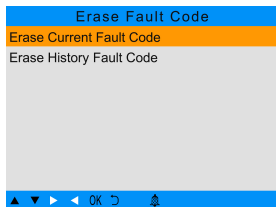
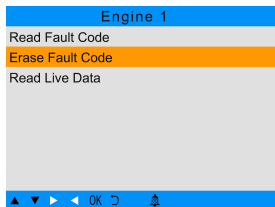
Press the <▲> <▼> key to select the Read Current Fault Code or Read History Fault Code, press "OK" key to read, if there are some codes, the screen will display the codes as below.

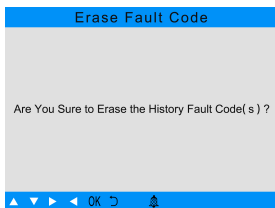
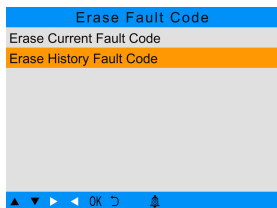




4.4 Erase Fault Code

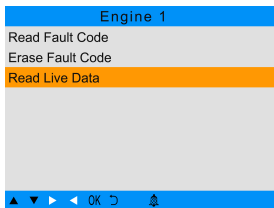
Press the <▲> <▼> key to select the erase code item and press "OK"key to erase it until the relevant diagnostic information is cleared.





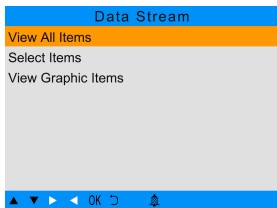
4.5 Read Live Data

Press the <▲> <▼> key to select the Read Live Data and press “OK”key to enter and to view the Live Data.



4.5.1 View All Items

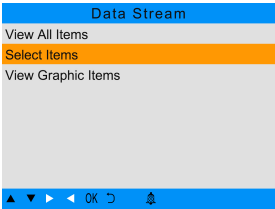
Press the <▲> <▼> key to select all data flow item and press “OK”key and view all data stream displays.



View All Items	
SPN22 Engine Extended Crankcase Blow-by Pressure	12.75KPa
SPN29 Accelerator Pedal Position2	102%
SPN52 Engine Intercooler Temperature	215°C
SPN69 Two Speed Axle Switch	Not available
1~4/56	

4.5.2 Select Items

Press the <▲> <▼> <OK> key to select the data flow item that would like to focus on checking, the screen will display the data shown below.

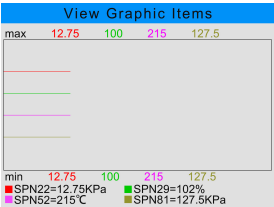
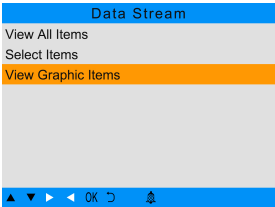


Select Items	
SPN102 Engine Turbocharger Boost Pressure	0KPa
SPN105 Engine Intake Manifold 1 Temperature	-17°C
SPN106 Engine Air Inlet Pressure	510KPa
SPN107 Engine Air Filter 1 Differential Pressure	12.75KPa

At the bottom of the screen, there is a navigation bar with icons for back, forward, OK, and a bell icon, along with a page indicator "5-8/10".

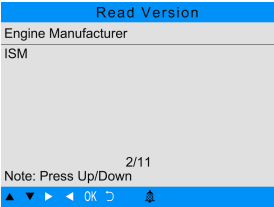
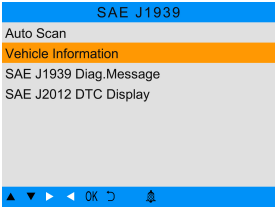
4.5.3 Graphic display

Press the <▲> <▼> and <OK> key to select the data flow items, after 4 data items selected, it will display the graphic data shown below.



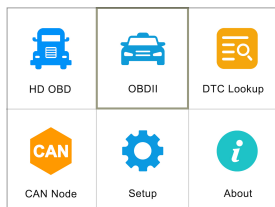
4.6 View vehicle information

Press the <▲> <▼> key to select the items of viewing vehicle information and press the "OK" key to enter to view the required vehicles information.



5. OBDII Function description

Press the < ▲ > < ▼ > key to select " OBDII diagnosis " for diagnosis.



5.1 Diagnostic menu

After entering the OBDII diagnosis, select "OK" to enter the next step and check the following functions.

Monitor Status	
MIL Status	OFF
DTCs in this ECU	0
Readiness Completed	3
Readiness Not Completed	2
Readiness Not Supported	5
DataStream Supported	17
Ignition	Spark
Protocol Type	PWM

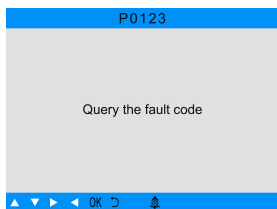
Diagnostic Menu	
Read Codes	
Erase Codes	
I/M Readiness	
Data stream	
Freeze Frame	
O2 sensor Test	
On-Board Monitoring	
Evap system(mode\$8)	

5.2 Read code

Press the < ▲ > < ▼ > key to select the read code item and press the "OK" key to read. If there are some codes, the screen will display the codes shown below.

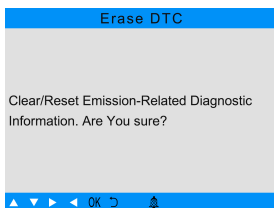
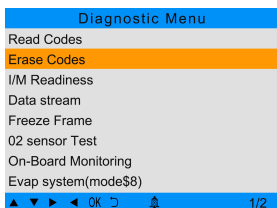
Diagnostic Menu	
Read Codes	
Erase Codes	
I/M Readiness	
Data stream	
Freeze Frame	
O2 sensor Test	
On-Board Monitoring	
Evap system(mode\$8)	

Read Codes	
Curent DTCs (\$03)	
Pending DTCs (\$07)	
Permanent DTCs (\$0A)	



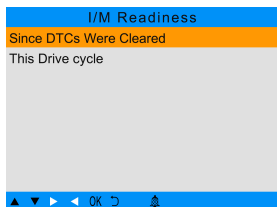
5.3 Clear code

Press the < ▲ > < ▼ > key to select the clear code item and press the "OK" key to clear it until the relevant diagnostic information is cleared.



5.4 I/M Readiness

Press the < ▲ > < ▼ > key to select the I/M readiness test item and press the "OK" key to enter and check the vehicle OBDII monitor status.



I/M Readiness	
Misfire Monitor	OK
Fuel System Monitor	OK
Comprehensive Component Monitnp	OK
Catalyst Monitor	N/A
Heated Catalyst Monitor	N/A
Evaporative system Monitor	N/A
Secondary Air system Monitor	N/A
Oxygen Sensor monitor	INC
Oxygen Sensor heater Monitor	INC
EGR and/or VVT system Monitor	N/A

Remarks:

- * To check the I/M ready status, make sure that the ignition key is turned on with the engine off.
- * Not all monitors are supported by all vehicles.

There are two types of I/M Readiness tests:

- * Since DTCs Cleared -- shows status of the monitors since the DTCs were last cleared.
- * This Drive Cycle -- shows status of monitors since the start of the current drive cycle.

Abbreviations Explanation of IM Readiness:

No.	Abbreviation	Name	No.	Abbreviation	Name
1	MIL	Malfunction Indicator Lamp (MIL) Status	8	IGN	Ignition Key
2	DTC	Data Link Connector	9	PdDTC	Pending DTC
3	MIS	Misfire Monitoring	10	EVAP	Evaporative System Monitor
4	FUE	Fuel System Monitor	11	AIR	Air Conditioning Refrigerant Monitor
5	CCM	Comprehensive Components Monitor	12	O2S	Oxygen Sensor Monitor
6	CAT	Catalyst Monitor	13	HTR	Heated catalyst monitor
7	HCAT	Heated Catalyst Monitor	14	EGR	Exhaust Gas Recirculation System Monitor

When the monitor's status is:

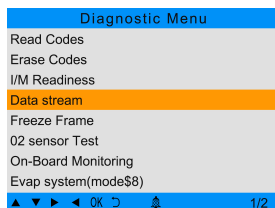
OK — vehicle was driven enough to complete the monitor.

INC (Incomplete) — vehicle was not driven enough to complete the monitor.

N/A (Not Applicable) — vehicle does not support that monitor.

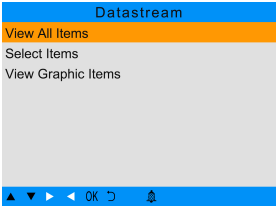
5.5 Data stream

Press the <▲> <▼> key to select the Data stream and press "OK" key to enter and to view the Live Data.



5.5.1 View All Items

Press the <▲> <▼> key to select all data flow item and press “OK”key and view all data stream displays.

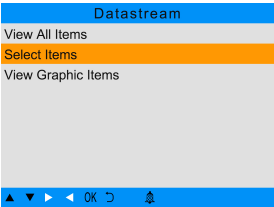


All Datastream	
Fuel System 1 status	OL
Fuel System 2 status	---
Calculated LOAD Value	0.0%
Engine Coolant Temperature	100°F
Short Term Fuel Trim- Bank 1	99.2%

▲ ▼ ▶ ◀ OK ↻ 🔔 1/3

5.5.2 Select Items

Press the <▲> <▼> <OK> key to select the data flow item that would like to focus on checking, the screen will display the data shown below.

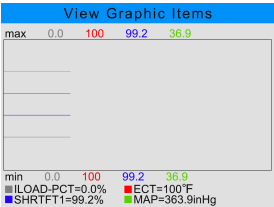
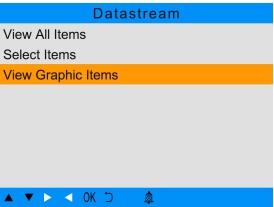


Select Datastream	
[]	Fuel System 1 status
[]	Fuel System 2 status
[]	Calculated LOAD Value
[]	Engine Coolant Temperature
[]	Short Term Fuel Trim - Bank 1

▲ ▼ ▶ ◀ OK ↻ 🔔 1/3

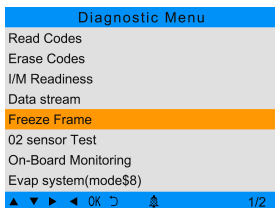
5.5.3 Graphic display

Press the <▲> <▼> and <OK> key to select the data flow items, after 4 data items selected, it will display the graphic data shown below.



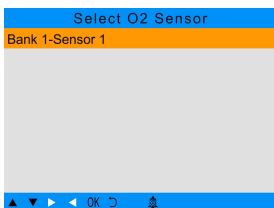
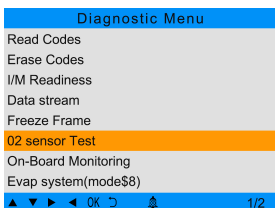
5.6 Freeze Frame

Press the < ▲ > < ▼ > key to select the read frozen frame data item and press the "OK" key to enter, and check the vehicle conditions recorded by the on-board computer.



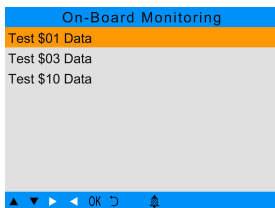
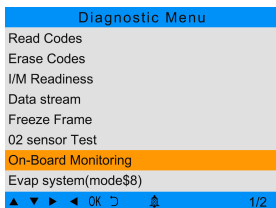
5.7 O2 sensor Test

Press the < ▲ > < ▼ > key to select the oxygen sensor test item and press the "OK" key to access, obtain and view the test results of the latest oxygen sensor test from the on-board diagnostic computer. The oxygen sensor test is not an on-demand test.



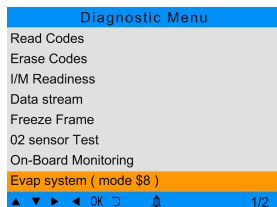
5.8 On-Board Monitoring

Press the < ▲ > < ▼ > key to select the on-board Monitoring item and press "OK" to enter and view the Monitoring.



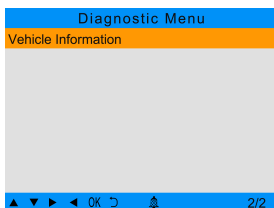
5.9 Mode 8

Press the < ▲ > < ▼ > key to select mode 8 and press the "OK" key to enter to view specific components or system on-board monitoring.



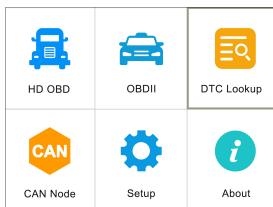
5.10 Vehicle Information

Press the < ▲ > < ▼ > key to select the item of viewing vehicle information and press the "OK" key to enter to view the required vehicle information.

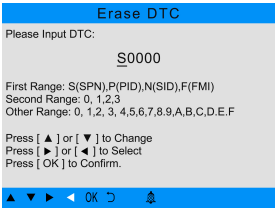
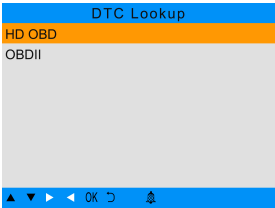


6. DTC lookup

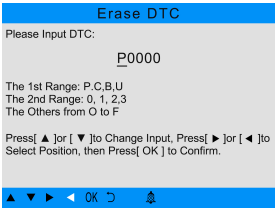
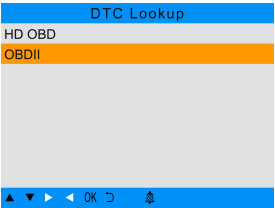
Press the < ▲ > < ▼ > key to select the fault code query item and press the OK key.



Press < ▲ > < ▼ > key to select the HD OBD, select good press "OK" key to enter, and then enter your fault code to see the corresponding solution.

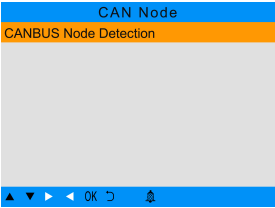
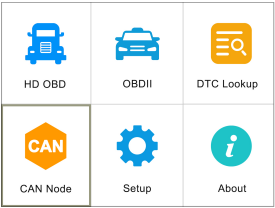


Press < ▲ > < ▼ > key to select the OBDII, select good press "OK" key to enter, and then enter your fault code to see the corresponding solution.



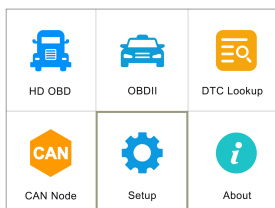
7. CAN Node

Press the < ▲ > < ▼ > key to select the CAN Node query item and press the OK key.



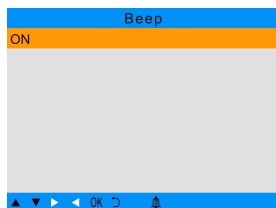
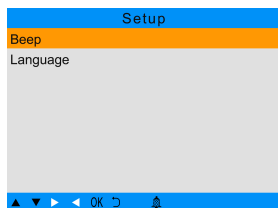
8. Setup

Press the < ▲ > < ▼ > key to select the Setup and press the OK key to enter.



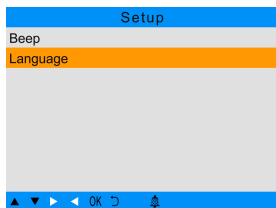
8.1 Buzzer

Press the < ▲ > < ▼ > key to enter the buzzer item, select the open/close item and press the "OK" key to confirm.



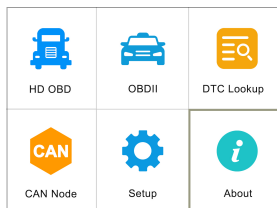
8.2 Language

Press < ▲ > < ▼ > key to select the language option, press the "OK" key to select the required language, and then press the "OK" key to confirm.



9. About

Press the < ▲ > < ▼ > key to select About item, and press the OK key to view the system information.



OBDII Common Problems

1. What is the scope of application?

Applicable to vehicles with OBDII agreement after 2000 (OBDII standard is mainly related to vehicle year, generally imported joint-venture vehicles after 2000, domestic vehicles after 2008 OBDII support) Support all OBDII communication protocols, such as: CAN,J1850PWM, ISO9141 and KWP2000, etc.

2. How to remove the vehicle with a fault code?

1. If the indicator is off and there is a fault code, update the software and OBD in time.
2. If the fault code is still detected after the update, please keep the vehicle running and go to the 4S shop to check whether there is really a fault code. If there is a fault code, it will be cleared.
3. If the fault code is cleared and diagnosed again, there is a fault code, then your car may really have a fault, it is recommended to repair it quickly.
4. If there is no fault code detected by the 4S shop, please consult them whether they can upgrade to the latest version of ECU system. Meanwhile, you can rest assured that the upgraded ECU system provided by the official will not damage the vehicle, but only improve the vehicle performance.

3. What can I do if the OBD fails to communicate or connect?

1. Check whether the OBD port of the vehicle is dusty and clean it up before connecting it.
2. For early low-equipped vehicles, the on-board ECU system may not contain the emission monitoring function, please upgrade the system at the 4s shop.

4. What can I do if there are more than two unfinished items in the ready state?

1. Pay attention to maintenance at ordinary times. If the car is in good condition, please fully exercise the recheck after the sensor reaches the best state.
2. If the car is not maintained and the car is in poor condition, it is recommended to clean the assembly.
3. If the vehicle has been driving for a long time and the number of kilometers is long, there is a power loss phenomenon, it is recommended to install the road. Carburizer, for electronic components Perform the upgrade.
4. If methods 1, 2 and 3 fail to solve this problem, it is necessary to upgrade the ECU to the new version at the 4S store.

5. The OBD information of some vehicles cannot be queried at the detection station, but all OBD information can be read in the 4S shop.

The 4S shop is the original agreement of the car factory, so it must be able to read its own model information, so that the 4S shop can quickly diagnose the vehicle condition through OBD data for maintenance. The diagnostic instrument of the detection unit is designed according to the national standard. If the vehicle fails to read it, it may be that the ECU system does not meet the requirements of the national standard to design the open query interface protocol. At the same time, the system reading mode of each ECU manufacturer is not uniform.

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Name		Email	
Purchase Date		Contact Number	
Address		Product Name	
Order Number			
Repair Records	Date	Cause of failure and solution	

Warranty Statement:

If there is any quality problem of the product that needs to be repaired, please send this warranty card together with the purchased product back to our company to provide aftersales service.

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