USER MANUAL

INDEX

Safety Warning

- Always perform automotive testing in a safe environment.
- Wear safety eye protection that meets ANSI standards.
- Keep clothing, hair, hands, tools, test equipment, etc. away from all moving or hot engine parts.
- Operate the vehicle in a well-ventilated work area, for exhaust gases are poisonous.
- Put the transmission in PARK (for automatic transmission) or NEUTRAL (for manual transmission) and make sure the parking brake is engaged.
- Put blocks in front of the drive wheels and never leave the vehicle unattended while testing.
- Be extra cautious when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.
- Keep a fire extinguisher suitable for gasoline, chemical, and electrical fires nearby.
- Do not connect or disconnect any test equipment while the ignition is on or the engine is running.
- Keep the test equipment dry, clean, free from oil, water or grease. Use a mild detergent on a clean cloth to clean the outside of the equipment as necessary.
- Do not drive the vehicle and operate the test equipment at the same time. Any distraction may cause an accident.
- Refer to the service manual for the vehicle being serviced and adhere to all diagnostic procedures and precautions. Failure to do so may result in personal injury or damage to the test equipment.
- To avoid damaging the test equipment or generating false data, make sure the vehicle battery is fully charged and the

connection to the vehicle DLC is clean and secure.

● Do not place the test equipment on the distributor of the vehicle. Strong electro-magnetic interference can damage the equipment.

1. General Introduction

The M302 scanner is the handheld model combing with the best possible coverage of OE-level to help you diagnose symptoms, codes, customer complaints easily, quickly and efficiently. This manual describes the construction and operation of the device and how it works.

1.1 Layout for M302 Diagnostic Scanner

No.	Key Name	Key Definition
1	I/M Key	Provides connection between vehicle and the scanner
2	DTC Key	Short press for selection, long press for screenshot or select all.
3	Direction Keys	Used for scrolling menu options up, down, left, or right, or for paging.
4	OK Key	Executes a selected option and generally goes to the next screen.
5	Exit Key	Exits a screen and generally returns to previous screen.
6	USB Port	Provides power to the device and setup connection for data transmission between the device and PC.

1.2 Technical Specifications

| 1	Screen Display	2.8" TFT color display
2	Operating Temperature	0 to 60°C (32 to 140 F°)
3	Storage Temperature	-20 to 70°C (-4 to 158 F°)
4	Power	8 to 18 Volts provided via vehicle battery

1.3 Standard Accessory Kits

1	Tool Box
2	Main Unit
3	OBD main cable
4	User Manual

2. Get Ready before Diagnosis

2.1. Cable Connection for On-Board Diagnosis

Make sure the M302 diagnostic scanner is well connected for vehicle diagnosis.
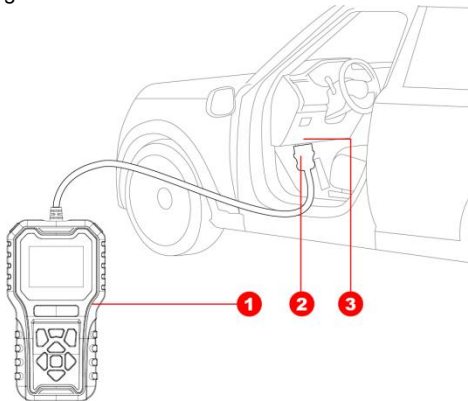
Connection:

To connect the main unit with the OBD main cable to get power supply.

No.	Description	Features and Functions
1	Main Cable	To connect the connector and the vehicle
2	Diagnostic Scanner Main Unit	To communicate with vehicle and display the diagnostic result
3	Diagnostic Socket on car	Socket location varies based on different car makes/models

The system boots up and shows the screen with the M302 diagnostic scanner Job Menu as below:
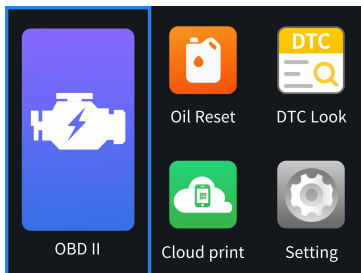
Almost all operations on the display are controlled by menu driven, which allows you to quickly locate the test procedure, or data that you need, through a of choices and questions. Detailed descriptions of the menu structures are found in the chapters for the various applications.

2.2. Application Icon Introduction
The Application buttons configure the M302 Diagnostic Scanner for the type of operation or activity to be performed.

Name	Pictures	Description
Oil Reset		Covering mainstream car models on the market, it can quickly perform a zero reset of reminder information after maintenance, that is, information reset
		European Includes 27 car manufacturer brands Including Mercedes-Benz,Smart, BMW, Mini, VW, Audi, Skoda, Site,

		Lamborghini,Bentley,Bugatti,Porsche,Jaguar,LandRover,Renault,Peugeot,Citroen, DS,Ferrari,Maserati,Opel,Fiat,lLancia,Romeo,Vauxhall,Saab, Volvo, etc.
		Asian Includes 15 car manufacturer brands Including Toyota, Lexus, Honda, Acura, Nissan, Infiniti, Hyundai, Kia,Mitsubishi, Mazda, Isuzu, Suzuki, Subaru, Mahindra, Proton, etc.
		American Includes 19 car manufacturer brands Including Ford,Lincoln, Mercury, Chrysler, Jeep, Dodge, GM, Buick, Chevrolet, Cadillac, Horton, Hummer, Ozmobil, Pontiac, Saturn, GMC, Daewoo, Sean, Lavon, Workhorse, etc
OBDII		All modes of OBDII test for cars after1996 and newer
		Read Code The DTCs provide valuable information about potential faults or malfunctions in various components and systems of the vehicle, such as the engine, transmission, emissions control, and more.
		Erase Code The process of clearing OBDII fault codes is typically done using a compatible scan tool or diagnostic equipment connected to the vehicle's OBDII port. Once connected, the

		tool provides an option to clear the codes.
		Freeze
		It provides valuable information to technicians during the vehicle diagnosis and repair process. The freeze frame data includes various parameters such as engine speed, vehicle speed, throttle position, coolant temperature, and intake air temperature, among others.
		I/M
		Including read/erase codes, view live data, view freeze frame data, view I/M readiness, O2 monitor test, on-board monitor test etc.
		Vehicle Info
		Can read car manufacturer information and VIN
		Data List
		This data provides a detailed snapshot of how the vehicle is operating at any given moment. The parameters included in the data stream can range from engine RPM, vehicle speed, fuel pressure, oxygen sensor readings, coolant temperature, and much more.
		Mode 6
		Mode 6 is primarily used for obtaining detailed information related to the performance and health of various vehicle components and systems. It provides data that goes beyond the standard fault codes and basic parameters.

		O2 Sensor It measures the amount of oxygen in the exhaust gases. Based on this measurement, the vehicle's computer can adjust the fuel injection to maintain the optimal air-fuel ratio for efficient combustion and to minimize emissions.
		Mode 8 Mode 8 is designed to provide additional detailed and specialized information related to the vehicle's systems and components.
DTC Look		DTC Library To provide you with the latest definition of PCBU fault codes.
Cloud Print		Cloud Print This function is very convenient when you need to view the electronic file or print it using your mobile phone.
Setting		Adjusts and views system settings, including the measurement unit for the diagnostic system, the display language for the device, sound settings.
		Language English, Portuguese,Hungarian, Russian, Polish, Italian, Traditional Chinese, Dutch, Simplified Chinese, Spanish, French, German,Turkish
		Unit To provide two options for the unit of live data: Metric Unit and Imperial Unit.

		Buzzer Sets the sound on or off.
		Log Two options for Logging On and OFF with the slide button. [Logging ON] must be set to record the live data, otherwise the client cannot send logging files.
		Self Test To provide the key test、LCD Test、LED Test、Buzzer Test options.
		Update Software Use USB Update Software via PC client

3. Use OBDII To Start a New Test

To start a new test, you need to establish the proper vehicle communication to the M302 diagnostic scanner; you need to follow the screen instructions step by step for the car testing. The operations require connecting the M302 diagnostic scanner main unit to the test vehicle through the main cable. (For details please refer to Chapter 2.1 Cable Connection for On-Board Diagnosis)

3.1. Diagnose the vehicle

When the main unit is properly connected to the vehicle, click the OBDII icon button on the M302 Diagnostic Scanner.
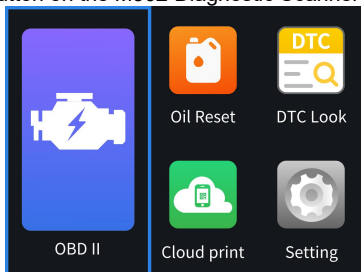
Step one is to load the OBDII software，
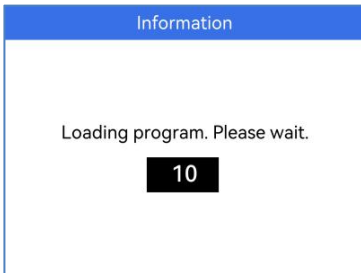
Step two is to communicate with the vehicle and inform it of the communication protocol

3.2. Function Selection

The OBDII software provides nine functions, and professional software features ensure the resolution of power system faults in your vehicle.
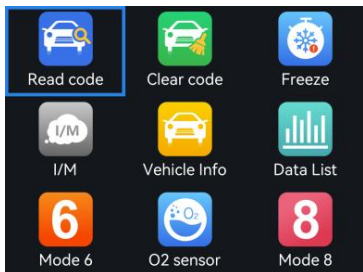
3.2.1. Read code

Step one:Select the **Read code** icon, press OK to continue, the device is communicating with the vehicle, and the following interface appears

Step two:After communication with the car is completed, the fault code reading result will be displayed.

Read Fault Code	1/4
P3002 Temporary Generic	
Lost Communication with Transmission control Module	

3.2.2.Erase code

Step one:Select the **Erase code** icon, press OK to continue,and the following prompt interface appears.

Information
Ignition on and engine stopped. DTCs and Freeze Data will be lost, Do you wish to continue?
No   Yes
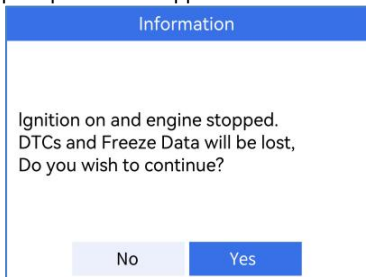
Step two:Select **Yes** and Press OK Button to continue. the device is communicating with the vehicle, and the following prompt interface appears.

Information

Erasing fault code(s)...
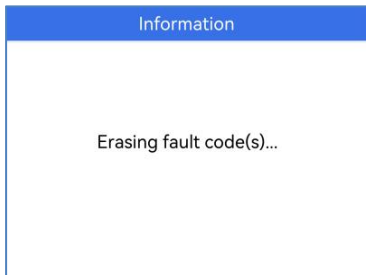
Step three:After communication with the car is completed, the Erase code function will display the following results.

Information

Erase fault code(s)command sent.

OK
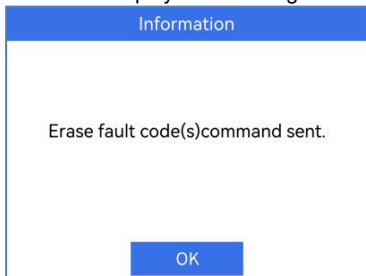
3.2.3. Freeze

Step one:Select the **Freeze** icon, press OK to continue,and the following prompt interface appears.

Information

Scanning function, please wait...
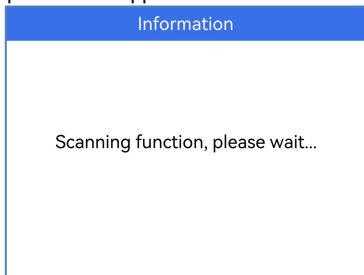
Step two:After the device is communicating with the vehicle, and the following prompt interface appears.

DTC Freeze Data	1/28
DTCFRZF	U0101
FUELSYSA	OL-Fault
FUELSYSB	---
LOAD_PCT	0.00%
ECT	126°F
SHRTFT1	0.00%

3.2.4. I / M

Step one:Select the **I / M** icon, press OK to continue,Select **[Since DTCs Cleared]** from the list as below:

Readiness Data	1/2
Since DTCs Cleared	
This Drive Cycle	

The result of displaying frozen frames is as follows

Since DTCs Cleared	1/12
MIL Status	ON
Misfire Monitor	N/A
Fuel System Mon	OK
Comp.Component	OK
Catalyst Mon	N/A
Htd Catalyst	N/A

3.2.5. Vehicle info

Step one:Select the **Vehicle info** icon, press OK to continue,

System Information	1/3
Vehicle Identification Number	
Calibration Identifications	
Calibration Verification Numbe	

Select **[Vehicle Identification Number]** from the list display result as below:

System Information
Vehicle Identification Number
GG3S400967

Select **[Calibration Identifications]** from the list display result as below:
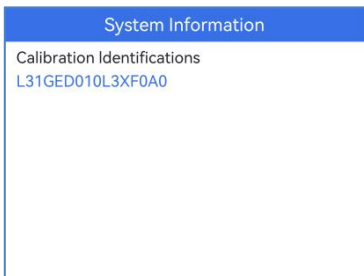
System Information
Calibration Identifications
L31GED010L3XF0A0

Select **[Calibration Verification Number]** from the list display result as below:

System Information
Calibration Verification Numbers
432DFE8C
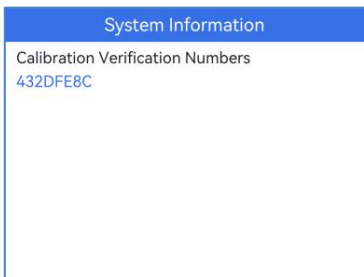
3.2.6. Data List

Step one:Select the **Data List** icon, press OK to continue.

```
┌─────────────────────────────────┐
│           Information           │
├─────────────────────────────────┤
│                                 │
│                                 │
│    Scanning function, please wait... │
│                                 │
│                                 │
│                                 │
└─────────────────────────────────┘
```
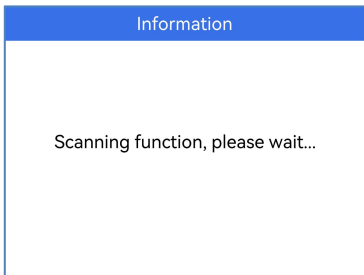
Step 2: After the device communicates with the vehicle, the following data stream result interface appears.

```
┌─────────────────────────────────┐
│       Data List          1/33   │
├─────────────────────────────────┤
│ DTC_CNT                         │
│                            2    │
├─────────────────────────────────┤
│ MIL                             │
│                          ON     │
│ FUELSYSA                        │
│                       OL-Fault  │
│ FUELSYSB                        │
│                          ---    │
│ LOAD PCT                        │
│                         0.00%   │
│ ECT                             │
│                         126°F   │
└─────────────────────────────────┘
```

3.2.7. Mode 6

Step one:Select the **Mode 6** icon, press OK to continue,
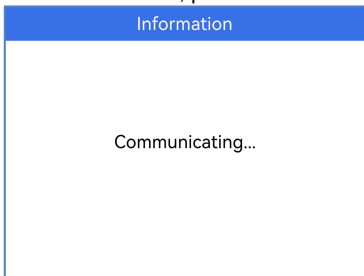
```
┌─────────────────────────────────┐
│           Information           │
├─────────────────────────────────┤
│                                 │
│                                 │
│        Communicating...         │
│                                 │
│                                 │
│                                 │
└─────────────────────────────────┘
```

Step two: After the device communicates with the vehicle, Select the first line from the list display result as below:

On Board Monitor Test	1/6
Exhaust Gas Sensor Monitor BAN	
Exhaust Gas Sensor Monitor B	
Exhaust Gas Sensor Monitor B	
Exhaust Gas Sensor Monitor B	
Exhaust Gas Sensor Monitor B	
Test $16 Data	

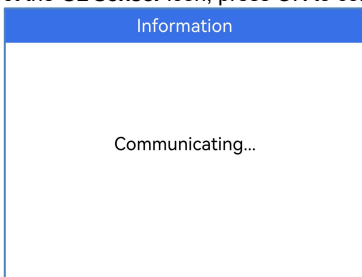Step three: Select the first line from the list display result as below:

TID$05	1/13
$01 Test	
$01 Test	
$01 Test	
$01 Test	
$01 Test	
$01 Test	

Step four: The result of presenting the selection is as follows:

On Board Monitor Test	1/6
TID:05 CID:01	2
Current Value	13599
Minimum Value	---
Maximum Value	65535
Test Result	Passed
Unit	

3.2.8. O2 Sensor

Step one: Select the **O2 Sensor** icon, press OK to continue

Information
Communicating...

Step two: After the device communicates with the vehicle, Select the first line from the list display result as below:

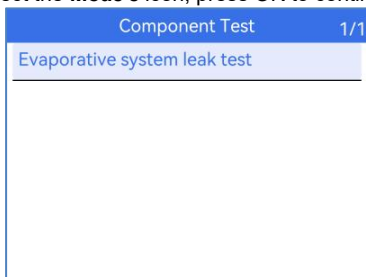| 02 Monitor Test	1/2
Oxygen Sensor Bank 1 - Sensor 1	
Oxygen Sensor Bank 1 - Sensor	
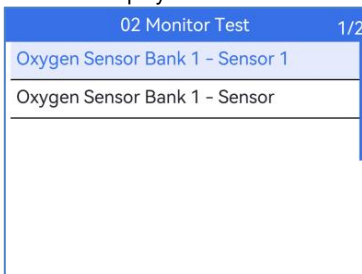
Step three: The result of presenting the selection is as follows:

On Monitor Test	1/5
Current walue	0.445
Minimum Value	0.000
Minimum Value	0.000
Test Result	Passed
Unit	V

3.2.9. Mode 8

Step one: Select the **Mode 8** icon, press OK to continue

Component Test	1/1
Evaporative system leak test	

Step two: After the device communicates with the vehicle, Select the first line from the list display result as below:

Evaporative system leak test

Passed

OK
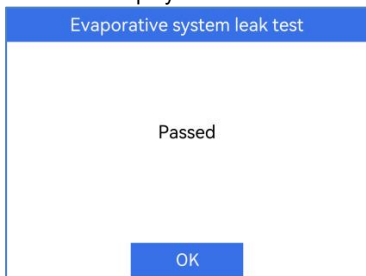
4. Oil Reset

The Oil Reset function is very powerful, covering 61 car manufacturers on the market and continuously updated. Its measurable range includes vehicles on the market that support automatic or manual zeroing modes. If you cannot determine which mode the vehicle belongs to when using it for the first time, you can try to find the vehicle from these two modes.

The following will take 2020 Ford models as an example
The vehicle will be identified in a few seconds, and once the matching is successful, the system will guide you the diagnostics screen directly.

Select **[America]** from the list as below:

Oil Reset	2/3
Europe	
America	
Asia	

Select **[FORD]** as below:

Oil Reset	1/19
Ford	
Lincoln	
Mercury	
Chrysler	
Jeep	
dodge	

Select **[BX726]** from the list as below:

BX726

Bronco Sport

C-MAX

Cougar

Courier

Crown Victoria

Select **[2020]** from the list as below:

2020

Display instructions on how to perform manual zeroing steps and methods from the list as below:

Oil change indicator light reset
(12.3-inch instrument display
screen).
1. Press the steering wheel menu
button to enter the information
display main menu.
2. Select Settings.

OK

5. Software Update

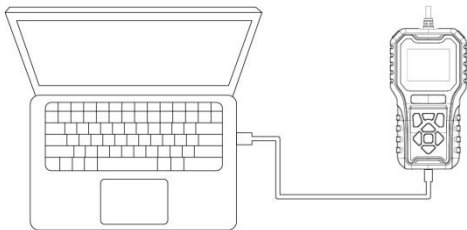Providing USB mode ways for update:

5.1. Update via USB

Providing the USB update procedures for software as below.

Login the website www.elm327.com and download the upgrade client
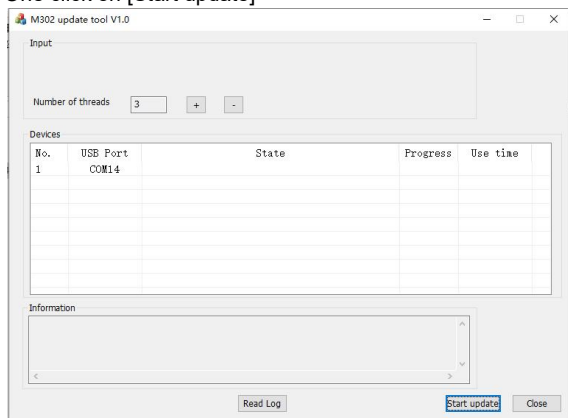
● Connect the main unit to PC with the USB cable.
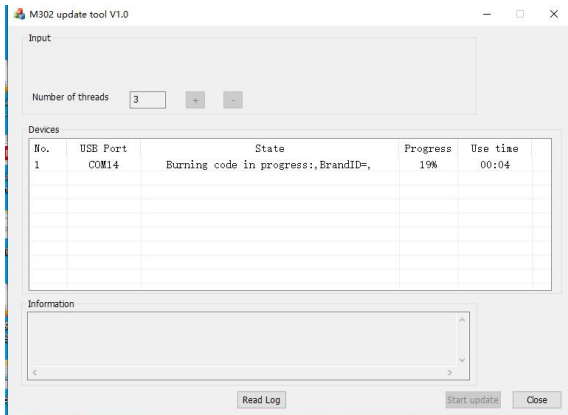

● The device will reboot and access the USB mode

● Double click the icon of Update Tool Client.

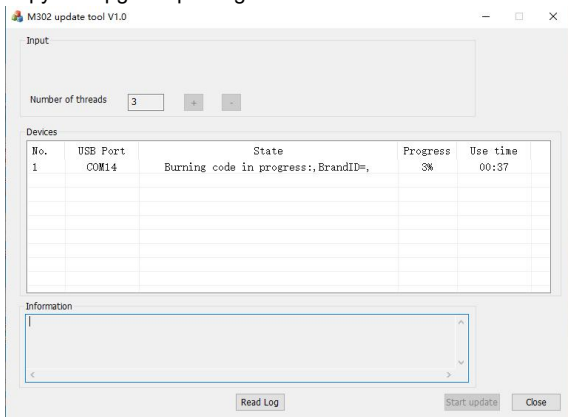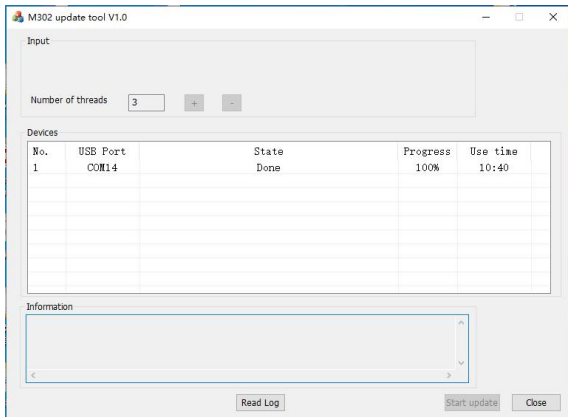| 名称	修改日期	类型	大小
UpdateFile.cy	2024/8/1 11:13	CY 文件	69,545 KB
UpdateTool.exe	2024/7/31 14:24	应用程序	3,488 KB

- One click on [Start update]

- The software will link to the server and download the upgrade packagee.

- Copy the upgrade package to the device

- Software upgrade completed and USB unplugged.

6. Troubleshooting

Why the vehicle linking error?

Follow the steps if the scanner fails to communicate with the ECU.

1– Verify the ignition is ON.

2– Check cable or connector securely connected to the vehicle DLC.

3– Turn the ignition off and wait for about 10 seconds and turn the ignition back to ON and continue the testing.

4– Verify the control module is not defective.

Why the device doesn't power up?

If the auto scanner won't power up or operate correctly in any other way, follow the steps to check the connections:

1– Check the connector properly inserted to the socket seat.

2– Check the DLC pins bent or broken.

3– Clean the DLC pins if necessary.

Why the devices have no permission to update?

Please contact the local distributor to get authorization.

When the display does not work properly:

Make sure the machine has been registered online.

Make sure the system software and diagnostic application software are properly updated.

Check all cables, connections, and indicators to see if the signal is being received.