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In the event this product fails to operate under normal use, during the warranty period, due to defects in materials and workmanship, FOXWELL will, at its sole option, either repair or replace the product in accordance with the terms and conditions stipulated herein.

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2 The customer shall have no coverage or benefits under this limited warranty if any of the following conditions are applicable:

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b) The Product has been damaged from external causes such as collision with an object, or from fire, flooding, sand, dirt, windstorm, lightning, earthquake or damage from exposure to weather conditions, an Act of God, or battery leakage, theft, blown fuse, improper use of any electrical source, or the product was used in combination or connection with other product, attachments, supplies or consumables not manufactured or distributed by FOXWELL.

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4 FOXWELL does not warrant uninterrupted or error-free operation of the product. If a problem develops during the limited warranty period, the consumer shall take the following step-by-step procedure:

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b) The customer shall include a return address, daytime phone number and/or fax number, complete description of the problem and original invoice specifying date of purchase and serial number.

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d) FOXWELL will repair the Product under the limited warranty within 30 days after receipt of the product. If FOXWELL cannot perform repairs covered under this limited warranty within 30 days, or after a reasonable number of attempts to repair the same defect, FOXWELL at its option, will provide a replacement product or refund the purchase price of the product less a reasonable amount for usage.

e) If the product is returned during the limited warranty period, but the problem with the product is not covered under the terms and conditions of this limited warranty, the customer will be notified and given an estimate of the charges the customer must pay to have the product repaired, with all shipping charges billed to the customer. If the estimate is refused, the product will be returned freight collect. If the product is returned after the expiration of the limited warranty period, FOXWELL' normal service policies shall apply and the customer will be responsible for all shipping charges.

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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 scanner. The safety messages presented below and throughout this user's manual are reminders to the operator to exercise extreme care when using this device. Always refer to and follow safety messages 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 scanner as described in the user's 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's 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 scanner 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.
- Don't connect or disconnect the equipment while the ignition is on or the engine is running.

Table of Contents

1 Using This Manual

We provide tool usage instructions in this manual. Below is the conventions we used in the manual.

1.1 Bold Text

Bold text is used to highlight selectable items such as buttons and menu options.

Example:

Press the **ENTER** button to select.

1.2 Symbols and Icons

1.2.1 Solid Spot

Operation tips and lists that apply to specific tool are introduced by a solid spot ●.

Example:

When **Settings** is selected, a menu that lists all available options displays. Menu options include:

- WIFI
- Language
- Unit
- Shortcuts
- Uninstall
- Display Test
- Keypad Test
- About

1.2.2 Arrow Icon

▶ An arrow icon indicates a procedure.

Example:

▶ To change menu language:
  1. Scroll with the arrow keys to highlight **Language** on the menu.
  2. Press the **ENTER** button to select.

1.2.3 Note and Important Message

Note

A NOTE provides helpful information such as additional explanations, tips, and comments.

Example:

NOTE
Test results do not necessarily indicate a faulty component or system.

Important

IMPORTANT indicates a situation which, if not avoided, may result in damage to the test equipment or vehicle.

Example:

IMPORTANT
Do not soak keypad as water might find its way into the scanner.

2 Introductions

This series of scanners from Foxwell are innovative diagnostic tools for most vehicles on the road today.

With the tool properly connected to the vehicle's data link connector (DLC), you can use the scanner to read diagnostic trouble codes and view "live" data readings from a variety of control systems. You can also save "recordings" of the data readings, and print stored information.

2.1 Scanner Descriptions

This section illustrates external features, ports and connectors of the scanner.

Figure 2-1 Front View

1 **Diagnostic Port** - provides connection between vehicle and the scanner.
2 **LCD Display** - shows menus, test results and operation tips.
3 **Function Keys / Shortcut keys** - three keys that correspond with "buttons" on some screens for executing special commands or provide quick access to most frequently used applications or functions.
4 **Direction Keys** - select an option or scroll through a screen of data or text.
5 **OK Key** - executes a selected option and generally goes to the next screen.
6 **BACK Key** - exits a screen and generally returns to previous screen.
7 **HELP Key** - displays helpful information.
8 **USB Port** - provides USB power connection between the scanner and PC/laptop.

IMPORTANT

Do not use solvents such as alcohol to clean keypad or display. Use a mild nonabrasive detergent and a soft cotton cloth.

2.2 Accessory Descriptions

This section lists the accessories that go with the scanner. If you find any of the following items missing from your package, contact your local dealer for assistance.

1 **Quick Start Guide** - provides brief introduction of how to use the scanner.
2 **User's Guide** - provides operation instructions for the usage of the scanner.
3 **Diagnostic Cable** - provides connection between the scanner and a vehicle.
4 **USB Cable** - provides connection between the scanner and a computer to update and print data.
5 **Warranty Card** - A warranty card is required if you need any repair or replacement from us.
6 **Nylon Carry Pouch** - stores the scanner and its accessories.
7 **BATTERY Clip** – connect battery clips to device to perform battery testing function.

2.3 Technical Specifications

Display: Backlit, 2.8'' TFT color display
Working Temperature: 0 to 60 ℃ (32 to 140℉)
Storage Temperature: -20 to 70℃ (-4 to 158℉)
Power Supply: 8-18V vehicle power and 3.3V USB power
Dimensions: (L*W*H**)**: 200*100*38mm
Weight: 0.6 Kg

3 Getting Started

This section describes how to provide power to the scanner, provides brief introductions of applications loaded on the scanner and display screen layout and illustrates how to input text and numbers with the scan tool.

3.1 Providing Power to Scanner

Before using the scanner, make sure to provide power to the scanner.

The unit operates on any of the following sources:

- 12-volt vehicle power
- USB connection to computer

3.1.1 Connecting to Vehicle Power

The scanner normally powers on whenever it is connected to the data link connector (DLC).

▶ To connect to vehicle power:
1. Locate the data link connector (DLC). The DLC is generally located under the dash on the driver side of the vehicle.
2. Attached the Diagnostic cable to the scanner and tighten the captive screws to ensure good connection.
3. Connect a correct adapter to the data cable according to the vehicle being serviced and plug it into the vehicle DLC.
4. Switch the ignition key to the ON position.
5. The scanner automatically boots up.

IMPORTANT
Never try to provide power for the scan tool from USB connection when the scan tool is communicating with a vehicle.

3.1.2 Connecting to Computer with USB Cable

The scan tool also receives power through the USB port when it is connected to a computer for software updates and printing of data.

▶ To connect to computer:
1. Connect the scanner to a computer with the USB cable provided.

3.2 Application Overview

When the scan tool boots up, the Home screen opens. This screen shows all applications loaded on the unit. The available vehicle applications may vary depending on software configuration.

- **History** - Displays the tested vehicle records.
- **OBDII/EOBD** - leads to OBDII screens for all 9 generic OBD system tests.
- **Update** - leads to screen for updating the scanner.
- **Diagnostic** - leads to screens for diagnostic trouble code information, live data stream, ECU information of a variety of vehicles.
- **Settings** - leads to screens for adjusting default settings to meet your own preference and view information about the scanner.
- **Data Manager** - leads to screens for access to data records.
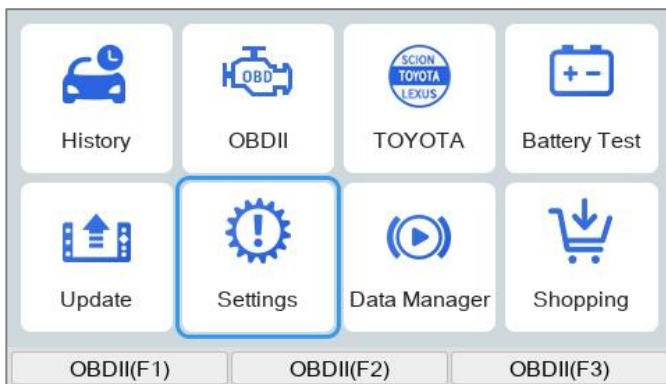- **Shopping**- leads to scan the QR code to enter our store.

Figure 3-1 Sample Home Screen

3.3 Input Dialog Box

This section illustrates how to use the scan tool to input letters and numbers, such as VIN number, channel number, test values and DTC number. Typically, you may be required to input letters or numbers when you are doing any of the following operations.

- VIN entry
- input channel number
- set adaptation value
- enter block number
- enter login code
- key matching
- look up DTCs

The scan tool provides 4 different types of keyboard to meet your specific needs. Depending on the needs of text entry, it automatically shows the most suitable keypad.

- classic QWERTY keyboard for input of texts that contain both letters and numbers
- numeric keyboard for input of numbers
- alphabet keyboard for input of letters
- hexadecimal keyboard for special functions, such as key matching, UDS coding

▶ To input text with the scan tool:

1. When you are requested to input text, press the function key **Keyboard**.
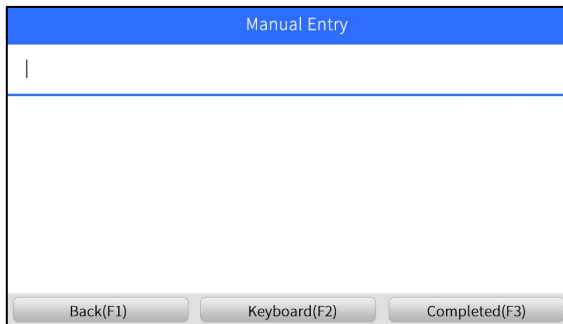
Figure 3-2 Sample Input Text Screen

2. Scroll with the arrow keys to highlight your desired letter or number and press the **ENTER** key to confirm.
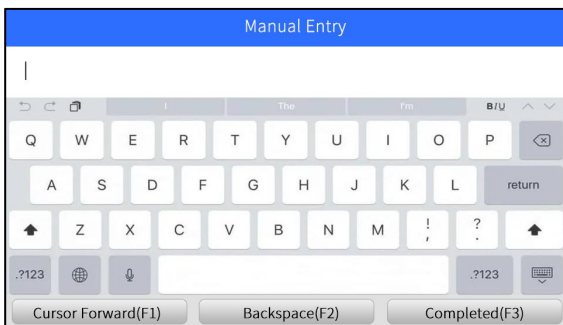

Figure 3-3 Sample Numeric Keyboard Screen

3. To delete a letter or number, use the function key **Cursor Forward t**o move the cursor to it and then press the **Backspace** button.
4. When finished the entry, press **Completed** key to continue.

4 Diagnostic Operations

This section illustrates how to use the scanner to perform tests and maintenance on a specific vehicle, such as identifying a vehicle, and selecting a system for testing.

When the vehicle application is selected, a menu with available service options displays. Menu options typically include:

- System
- Maintenance

4.1 Diagnosis

This section illustrates how to use the scanner to read and clear diagnostic trouble codes, and view "live" data readings and ECU information on controllers installed on vehicles and also save "recordings" of the data readings.

4.1.1 Vehicle Identification

The vehicle identification information presented is provided by the ECM of the vehicle being tested. Therefore, certain attributes of the test vehicle must be entered into the scan tool to ensure the data displays correctly. The vehicle identification sequence is menu driven, you simply follow the screen

prompts and make a series of choices. Each selection you make advances you to the next screen. A Back button in the upper left corner of the screen returns you to the previous screen. Exact procedures may vary somewhat by vehicle.

It typically identifies a vehicle by any of the following means:

● Manual vehicle selection

NOTE
Not all identification options listed above are applicable to all vehicles. Available options may vary by vehicle manufacturer.

4.1.1.1 Manual Vehicle Selection

Manual Vehicle Selection identifies a vehicle by making several selections according to certain VIN characters, such as model year, and engine type.

▶ To identify a vehicle by manual vehicle selection:
1. Refer to Step 1-3 of 4.1.1 Automatic VIN Acquisition.
2. On each screen that appears, select the correct option and then press the **ENTER** key. Do this until the complete vehicle information is entered and the menu of controller selection displays.

Select Vehicle
1 WN monte carlo LTZ
2 WM monte carlo LT 3.5 coupe
3 WJ monte carlo
4 WK monte carlo LT
5 WL monte carlo SS
6 WB impala LS
7 WC impala LT
8 WD impala SS

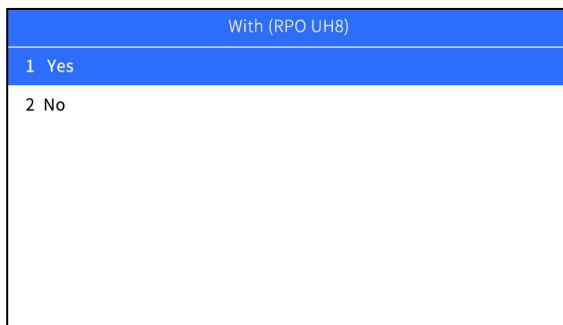| Air conditioning |
|---|
| 1   CJ3 dual zone HVAC, manual |
| 2 C67, single zone HVAC, manual |

With (RPO UH8)
1 Yes
2 No

Figure 4-1 Sample Manual Vehicle Selection Screen

4.1.2 System Selection

When you have completed the identification of a vehicle, a menu for selecting system to test displays. Menu options typically include:

- Quick Scan
- Control Modules

4.1.2.1 Quick Scan

Quick Scan performs an automatic system test to determine which control modules are installed on the vehicle and obtain diagnostic trouble codes (DTCs) overview. Depending on the number of control modules, it may take 10 minutes or longer to complete the test. However, if you have used the Models (Guide Function) to identify the vehicle, it takes much shorter time to determine the installed controllers.

▶ To perform an automatic system scan:
1. Scroll with the arrow keys to highlight **Quick Scan** from the menu and press **ENTER** to start.
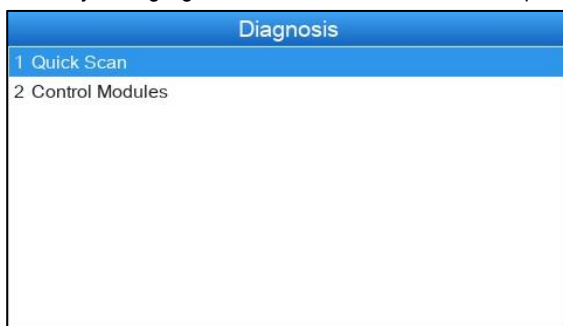
Diagnosis
1 Quick Scan
2 Control Modules

Figure 4-2 Sample Selected System Scan Screen

2. To pause the scan, press the function key corresponding with **Pause** on the screen.

Quick Scan		
		100%
1 Engine (Engine control)	Fault | 5	
2 AT (Continuously variable transmission)	Pass | No Fault	
3 Airbag (Airbag control)	Fault | 3	
4 ABS/ESP (ABS/ESP)	Scanning...	

Erase(F1)	Pause(F2)	Report(F3)

Figure 4-3 Sample Automatic System Scan Screen

3. At the end of successful automatic controller scan, a menu with a list of installed controllers together with their DTC overview displays.

Quick Scan	
1 Engine (Engine control)	Fault | 5
2 AT (Continuously variable transmission)	Pass | No Fault
3 Airbag (Airbag control)	Fault | 3
4 ABS/ESP (ABS/ESP)	Fault | 20

Erase(F1)	Pause(F2)	Report(F3)

Figure 4-4 Sample Auto Scan Screen

4. If there is diagnostic trouble code(s) detected in a control unit, press the function key corresponding with **Report** on the screen to view details of code information, and press the function key **Erase** to clear them.

Report		
	Fault | 5	Engine (Engine control)
	Pass | No Fault	AT (Continuously variable transmission)
	Fault | 3	Airbag (Airbag control)
	Fault | 20	ABS/ESP (ABS/ESP)
5	Fault | 5	Engine (Engine control)
P0030	Active	HO2S heater control circuit bank 1 sensor 1

Save(F1)

Figure 4-5 Sample Display DTC Screen

5. Select the system you would like to test, and press the **ENTER** key. When the scanner has established connection with the vehicle, the Function Menu displays.

Figure 4-6 Function Menu screen

4.1.2.2 Control Module

Control Module screen displays all controllers available on the vehicles. The controllers listed on the menu do not mean that they are installed on the vehicle.

▶ To select a system for testing:

1. Scroll with the arrow keys to highlight **Control Unit** from the menu and press the **ENTER** key. A controller menu displays.

Figure 4-7 Sample Control Unit Menu Screen

2. Select the system you would like to test. When the scanner has established connection with the vehicle, the Function Menu displays.

Figure 4-8 Sample Common Menu Screen

4.1.3 Diagnostic Function Selection

After a system is selected and the scanner establishes communication with the vehicle, the Function Menu displays. The menu options may include:

- Read Codes
- Freeze Frame Data
- Clear Codes
- ECU information
- Live Data
- Custom Data
- Active test
- Advance ID
- Readiness test

NOTE

Not all function options listed above are applicable to all vehicles. Available options may vary by the year, model, and make of the test vehicle. A "The selected mode is not supported!" message displays if the option is not applicable to the vehicle under test.

4.1.3.1 Read Codes

Read Codes menu lets you read trouble codes found in the control unit.

Present/Permanent/Current codes stored in a control module are used to help identify the cause of a trouble or troubles with a vehicle. These codes have occurred a specific number of times and indicate a problem that requires repair.

Pending codes are also referred to as maturing codes that indicate intermittent faults. If the fault does not occur within a certain number of drive cycles (depending on vehicle), the code clears from memory. If a fault occurs a specific number of times, the code matures into a DTC and the MIL illuminates or blinks.

History codes are also referred to as past codes that indicate intermittent DTCs that are not currently active.

Code history is number of engine starts since the DTC(s) were first detected (to see if they are current or intermittent).

Self-diagnostic lets you manually activate system tests that check for DTCs. Usually it includes a KOEO (Key-on, engine-off) test and a KOER (key-on, engine-running) test.

▶ To read codes from a vehicle:
1. Scroll with the arrow keys to highlight **Read Codes** from Function Menu and press the **ENTER** key. A code list including code number and its description displays.

Function Menu
1 Read Codes
2 Clear Codes
3 ECU Information
4 Live Data
5 Active Test
6 Function test
7 Read configuration
8 Erase

Figure 4-9 Sample Function Menu Screen

2. Use the up and down arrow keys to scroll through data to select lines, and left and right arrow keys to scroll back and forth through different screens of data.

ECU Information		Trouble Codes		
MPR reference	8200153159	● D002	Active	Thrattle potentiometer circuit,Throttle potentiometer circuit track 1
SUPPLIER	001			
Electronic version	8200080285			
Program number	00E5	● D003	Active	Air temperature sensor circuit
Vdiag number	04			
Software version	4100	● D004	Active	Air temperature sensor circuit
Calibration number	2002			
Save(F1)		Save(F1)		Freeze Frame(F2)

Figure 4-10 Sample Code Screen

4.1.3.2 Clear Codes

Erase Codes menu lets you to clear all current and stored DTCs from a selected control module. Also it erases all temporary ECU information, including freeze frame. So make sure that the selected system are completely checked and serviced by technicians and no vital information will be lost before clearing codes.

NOTE
● To clear codes, make sure that the ignition key is switched to ON with the engine off.
● Erase Codes does not fix the problem that caused the fault! DTCs should only be erased after correcting the condition(s) that caused them.

▶ To clear codes:

1. Scroll with the arrow keys to highlight **Clear Codes** from Function Menu and press the **ENTER** key.
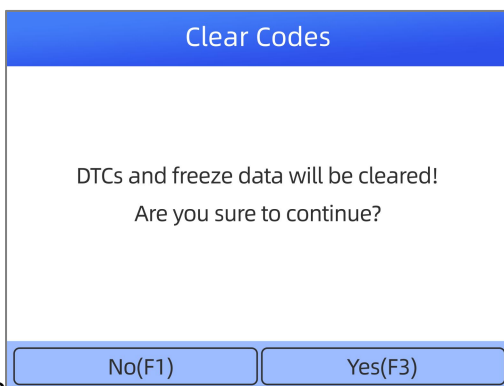
Function Menu
I Read Codes
2 Clear Codes
3 ECU Information
4 Live Data
5 Active Test
6 Function test
7 Read configuration
8 Erase

Figure 4-11 Sample Function Menu Screen

2. Follow the on-screen instructions and answer questions about the vehicle being tested to complete the procedure.

Figure 4-12 Sample Clear Codes Screen

3. Check the codes again. If any codes remain, repeat the Erase Codes steps.

Clear Codes

DTCs and freeze data will be cleared!

Are you sure to continue?

| No(F1) | Yes(F3) |

4.1.3.3 ECU Information

ECU Information screen displays the identification data of the control module under test, such as the control module identification string, the control module coding, and Work Shop Code.

▶ To read ECU information:
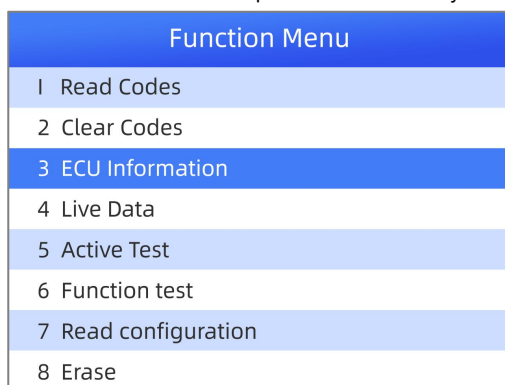1. Select **ECU Information** from the menu and press the **ENTER** key.

Function Menu

| I Read Codes |
| 2 Clear Codes |
| 3 ECU Information |
| 4 Live Data |
| 5 Active Test |
| 6 Function test |
| 7 Read configuration |
| 8 Erase |

Figure 4-13 Sample Function Menu Screen

2. A screen with detailed information of the selected control module displays.

Figure 4-14 Sample ECU Information Screen

3. Press function key **Save** to store ECU information. Or use the **BACK** key to exit.

4.1.3.4 Live Data

Live Data menu lets you view and record real time PID data from a selected vehicle electronic control module.

▶ To view live PID data:
1. Scroll with the arrow keys to highlight **Live Data** from the menu and press the **ENTER** key.

Function Menu
I Read Codes
2 Clear Codes
3 ECU Information
4 Live Data
5 Active Test
6 Function test
7 Read configuration
8 Erase

Figure 4-15 Sample Function Menu Screen

2. Press the **ENTER** key to view live data.

Live data
1 PARAMETERS
2 STATUSES
3 CUSTOM LIST

Figure 4-16 Sample Function Menu Screen

PARAMETERS		
☐ Computer supply voltage	12.3	V
☐ Atmospheric pressure	1017	mbar
☐ Manifold pressure	103	mbar
☐ Water temperature	-40	℃
☐ Air temperature	-40	℃
Pause(F1)	Graph(F2)	Save(F3)

Figure 4-17 Sample live data Information Screen

3. To record the data to memory of the scanner, use the function key **SAVE F3**, and press **Pause F1** to stop recording.
4. Press the **BACK** key to return to Function Menu.

4.1.3.5 Custom List

Custom Data List menu lets you to minimize the number of PIDs on the data list and focus on any suspicious or symptom-specific data parameters.

▶ To create a custom data list:

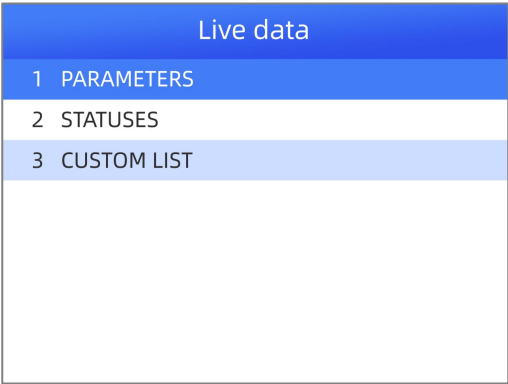1. Select **Custom List** from the menu and press the **ENTER** key.

Live data
1   PARAMETERS
2   STATUSES
3   CUSTOM LIST

Figure 4-18 Sample Function Menu Screen

2. The custom data selection screen displays. Scroll with the up and down arrow keys to highlight a line,press the ENTER key and then repeat the action to make more selections. To deselect an item,select it again and then press the ENTER key. Alternatively, use the function keys SelectAll and Deselect to select or deselect all items at once.
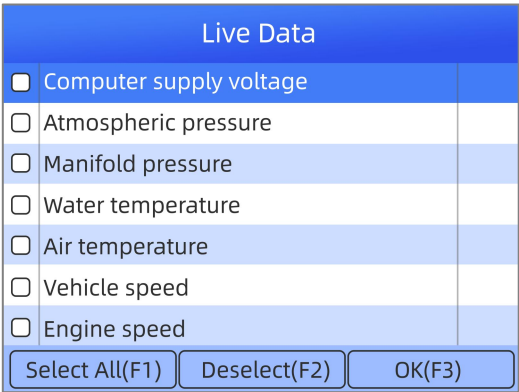
Live Data
☐ Computer supply voltage
☐ Atmospheric pressure
☐ Manifold pressure
☐ Water temperature
☐ Air temperature
☐ Vehicle speed
☐ Engine speed
Select All(F1)   Deselect(F2)   OK(F3)

Figure 4-19 Sample Custom List Selection Screen

Figure 4-20 Sample Custom List Selection Screen

3. When finished selection, use the function key **OK** to display selected items.

Figure 4-21 Sample Data stream Screen

4. Use up and down arrow key to select line. If Graph is highlighted, it indicates graphing is available for the selected line. Press the function key **Graph** to display the PID graph.
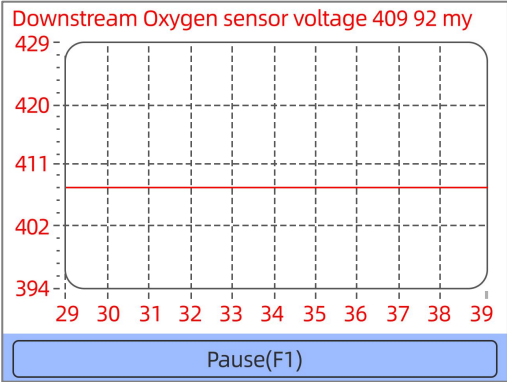

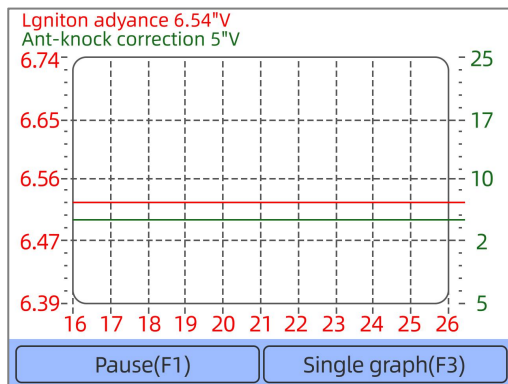Figure 4-22 Sample Data stream Screen
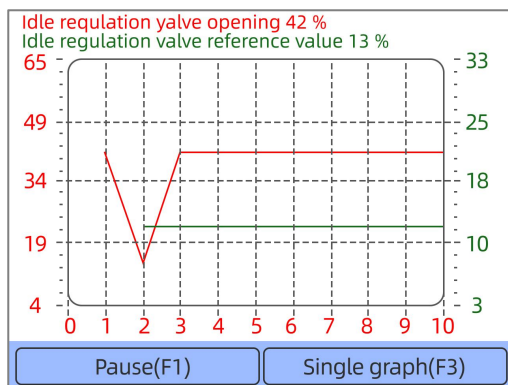
Figure 4-23 Sample Data stream Screen

Figure 4-24 Sample Data stream Screen

5. Press the **Back** key to return to the previous menu.

4.1.3.6 Active Tests

Active Tests, also known as Actuator Tests, are bi-directional diagnostic tests on vehicle systems and component. The tests let you to use the scanner temporarily activate or control a vehicle system or component, and when you exit the test, the system/component returns to normal operation.

Some tests display a command to the operator. For example, if "Press Brake Pedal" displays, the operator has to press and hold the brake pedal and then continue. The sequence, number and type of tests are dictated by the control module.

On some systems, the actuator tests cannot be restarted until the ignition key is switched off for some time. Alternatively, briefly start and run the engine, shut down, turn the ignition to the run position, then re-initiate the actuator tests.

IMPORTANT

The tests activate a component, but they do not check if the component is working correctly. Make sure the components to be tested are in good condition and correctly mounted.

NOTE

Available tests depend on the control module under test and the vehicle itself.

▶ To start a test:
1. Select **Active Test** from Function Menu and press the **ENTER** key.

Function Menu
I Read Codes
2 Clear Codes
3 ECU Information
4 Live Data
5 Active Test
6 Function test
7 Read configuration
8 Erase

Figure 4-25 Sample Function Menu Screen

2. Select the test you would like to perform and press the **ENTER** key. Follow on-screen instructions to make proper selections and operations to complete the tests.

Active test
1 ACO10 Fuel pump relay
2 AC003 Air conditioning compressor
3 AC016 Canister bleed solenoid valve
4 AC261 Upstream O2 sensor heating
5 AC262 Downstream Oxygen sensor heating
6 AC211 Fault warning light
7 AC212 Coolant temperature warning liaht

Figure 4-26 Sample Selective Screen Tests Screen

⚠ **WARNING**

- Before running any tests, always observe the safety instructions provided in this manual and the warnings provided by the vehicle manufacturer. In addition, follow any warnings and descriptions provided on the scanner screens.
- Never run the tests while the vehicle is moving.

4.1.3.7 Special Functions

Special Functions perform various component adaptations of the control module under test, allowing you to recalibrate or configure certain components after making repairs or replacement. Typical service operation screens are a series of menu driven executive commands. Follow on-screen instructions to complete the operation.

▶ To perform special tests on a vehicle:
1. Scroll with the arrow keys to highlight the special function test you want to perform from the menu and press the **ENTER** key.

Function Menu
I Read Codes
2 Clear Codes
3 ECU Information
4 Live Data
5 Active Test
6 Function test
7 Read configuration
8 Erase

Figure 4-27 Sample Function Menu Screen

2. Select an available service from the menu and press the **ENTER** key to continue.

Special function
Injector specific data
Component change routine
Engine test function
CPF service regeneration (CPF OPT)

Figure 4-28 Sample Special Function Screen

3. A group selection screen, test selection screen, several step-by-step instruction screens, or bi-directional control screen may appear. Read the screens and follow all instructions. If necessary, use the function keys to perform commands or answer any questions. If more than 3 function keys displays, use up and down arrow keys to select a command and press the **ENTER** key to confirm.
4. When completed, press the **BACK** key to return to previous screens.

5 OBDII/EOBD Operations

OBDII/EOBD menu lets you access all OBD service modes. According to ISO 9141-2, ISO 14230-4, and SAE J1850 standards, the OBD application is divided into several sub programs, called 'Service $xx'. Below is a list of OBD diagnostic services:

- **Service $01** - request current powertrain diagnostic data
- **Service $02** - request powertrain freeze frame data
- **Service $03** - request emission-related diagnostic trouble codes
- **Service $04** - clear/reset emission-related diagnostic information
- **Service $05** - request oxygen sensor monitoring test results
- **Service $06** - request on-board monitoring test results for specific monitored systems
- **Service $07** - request emission-related diagnostic trouble codes detected during current or

last completed driving cycle
- **Service $08** - request control of on-board system, test or component
- **Service $09** - request Vehicle Information
- **Service $0A** - permanent diagnostic trouble codes(DTCs)(cleared DTCs)

When OBDII/EOBD application is selected from Home screen, the scanner starts to detect the communication protocol automatically. Once the connection has established, a menu that lists all of the tests available on the identified vehicle displays. Menu options typically include:

- System Status
- Read Codes
- Freeze Frame Data
- Clear Codes
- Live Data
- I/M Readiness
- O2 Sensor Test
- On-board Monitor Test
- Component Test
- Vehicle Information
- Modules Present
- Code Lookup

NOTE
Not all function options listed above are applicable to all vehicles. Available options may vary by the year, model, and make of the test vehicle. A "Not supported the mode!" message displays if the option is not applicable to the vehicle under test.

6 System Setup

This section illustrates how to program the scanner to meet your specific needs.

When **Settings** is selected, a menu with available service options displays. Menu options typically include:

- WIFI
- Language
- Unit
- Uninstall
- Shortcuts
- Beep Set
- Display Test
- Keypad Test
- About

6.1 Select Language

Selecting **Language** opens a screen that allows you to choose system language. The scan tool is set to display English menus by default.

▶ To configure system language:
1. Scroll with the arrow keys to highlight **Language** from Settings menu and press **ENTER** key.
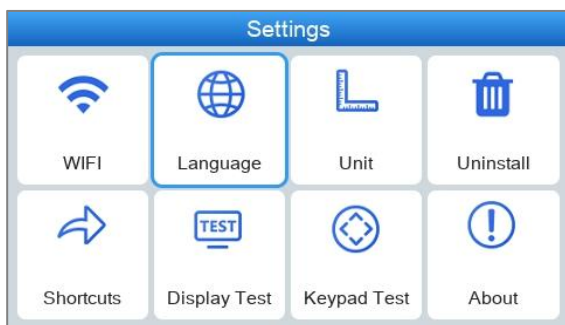
Figure 6-1 Sample Settings Screen

2. Press left and right arrow key select a language and press the **ENTER** key to confirm. Press the **Back** key to exit and return.

Figure 6-2 Sample Language Selection Screen

6.2 Change Units

Selecting **Unit** opens a dialog box that allows you to choose units of measure.

▶ To change the unit setup:

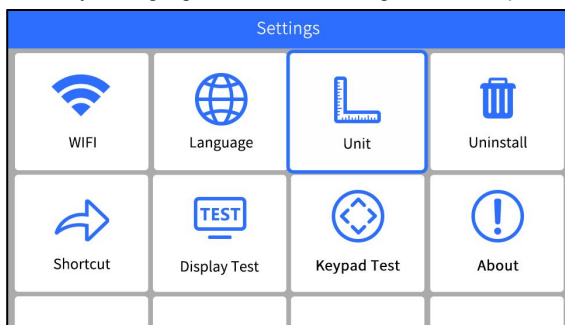1. Scroll with the arrow keys to highlight **Units** from Settings menu and press the **ENTER** key.

Figure 6-3 Sample Settings Screen

2. Press the up and down arrow key select an item and press the **ENTER** key to save and return.
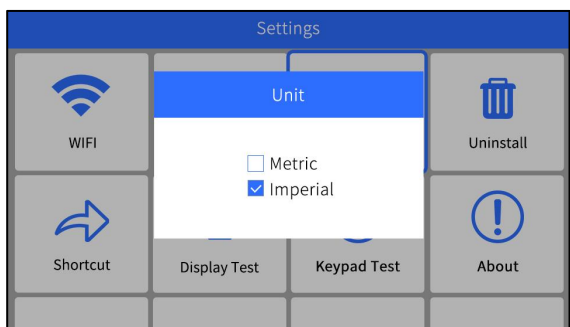
Figure 6-4 Sample Unit Selection Screen

6.3 Configure Shortcut Keys

Selecting **Shortcuts** option lets you to change the functionality of the shortcut buttons.

▶ To assign a function to a shortcut button:

1. Scroll with the arrow keys to highlight **Shortcuts** from Settings menu and press the **ENTER** key. A screen with available shortcut keys displays.
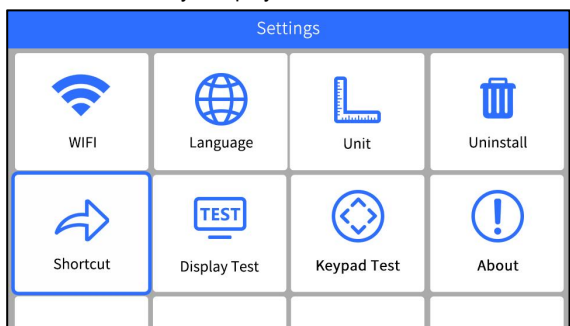

Figure 6-5 Sample Settings screen

2. Press the up and down arrow key select a shortcut key and press the **ENTER** key. A screen with a list of loaded applications displays.

Figure 6-6 Sample Shortcuts Screen

3. Scroll with the arrow keys to highlight an application and press the **ENTER** key to assign the application to the shortcut key.

Figure 6-7 Sample Shortcuts Screen

6.4 Display Test

Selecting **Display Test** option opens a screen that allows you to check the functionality of the display.

▶ To test the display:
1. Scroll with the arrow keys to highlight **Display Test** from Settings menu and press the **ENTER** key to start test. Check if there are any missing spots in the LCD screen.
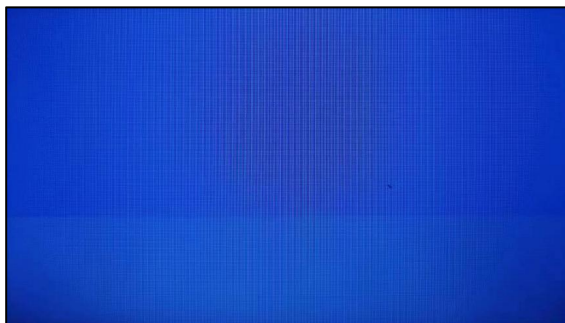

Figure 6-8 Sample LCD Test Screen

2. To quit the test, press the **Back** key.

6.5 Keypad Test

Selecting **Keypad Test** option opens a screen that allows you to check the functionality of the keypad.

▶ To test the keypad:
1. Scroll with the arrow keys to highlight **Keypad Test** from Settings menu and press **ENTER** key.
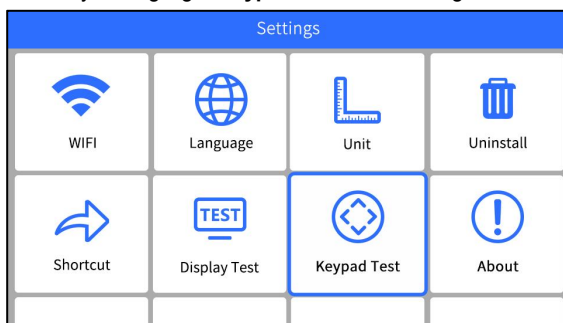
Figure 6-9 Sample Settings Screen

2. Press any key to start test. The virtue key corresponding with the key you pressed will be highlighted on the screen if it works correctly.
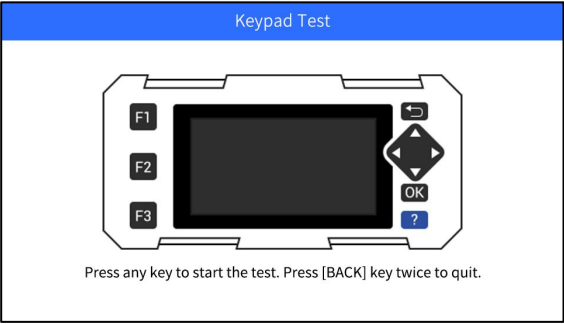

Figure 6-10 Sample Keypad Test Screen

3. To quit the test, press **Back** key twice.

6.6 Tool Information

Selecting **About** option opens a screen that shows information about your scan tool, such as serial number, which may be required for product registration.

▶ To view information of your scan tool:

1. Scroll with the arrow keys to highlight **About** from Settings menu and press the **ENTER** key.

Figure 6-11 Sample Settings Screen

2. A screen with detailed information of the scanner displays.

3. Press the **Back** key to exit.

7 Battery Test Operations

This section describes how to use the tester to perform tests on car batteries and charging systems. The menu-driven display will guide you step by step through the test process.

7.1 Connecting The Tester

The tester powers on automatically when it is correctly connected to the battery. The preferred test position is at the battery terminals. If the battery is not accessible, you may test at the jumper post; however, the power measurement may be lower than the actual value.

To connect the tester:
1. Clean the battery posts or side terminals.
2. Connect the red clamp to the positive (+) terminal and the black clamp to the negative (-) terminal.
3. Rock the clamps back and forth to make sure the clamps are firmly connected. In case the connection is poor, a "CHECK CONNECTION" message displays.
4. When the tester is correctly connected, it boots up automatically and show the voltage of the battery.

5. Press the **MENU** button to go to the Main Menu.

Figure 7-1 Sample Battery Detection Module Screen

NOTE

Do not connect the tester to a voltage source greater than 30VDC; otherwise you may damage the tester.

NOTE

If you are testing inside a vehicle, make sure all accessory loads are cut off, the key is not in the ON position and the doors are closed.

7.2 Battery Test

Battery Test menu lets you analyze the battery healthy status to calculate the actual cold cranking capability of the battery and the aging status. It lets you check 6V,12V or 24V charging system to make sure the output voltage of the generator is normal, the rectifier diode works correctly and the charging current is normal.

Note: Before using the battery detection function, please connect the red clip to the positive terminal (+) of the battery and the black clip to the negative terminal (-).

To start a battery test:
1. Scroll with the **UP** or **DOWN** button to highlight **Battery Test** from Main Menu and press the **ENTER** key.

Figure 7-2 Sample Battery Detection Module Screen

2. Scroll with the **UP** or **DOWN** button to highlight **IN VEHICLE** or **OUT OF VEHICLE** from BATTERY LOCATION menu and press **ENTER** to select the battery location.

Figure 7-3 Sample Select Battery Location Screen

3. Scroll with the **UP** or **DOWN** button to select the battery type from **BATTERY TYPE** menu and press **ENTER** to confirm.

Figure 7-4 Sample Select Battery Type Screen

4. Scroll with the **UP** or **DOWN** button to select the battery standard from **BATTERY STANDARD** menu and press **ENTER** to confirm. Not all rating systems are available for each application.

You may find the battery type and battery rating label on every battery.

Global Rating Systems

No.	Standard	Description	Testing Range
1	CCA	Cold Cranking Amps, as specified by SAE. The most common rating for cranking batteries at 0°F (-18°C)	100-3000
2	CA	Cranking Amps standard. The effective starting current value at 0°C (32°F).	100-3000
3	MCA	Marine Cranking Amps standard. The effective starting current value at 0°C (32°F).	100-3000
4	JIS	Japanese Industry Standard, shown on a battery as a combination of numbers and	26A17--245H52

		letters	
5	DIN	Deutsche Industrie-Norm	100-1800
6	IEC	International Electrotechnical Commission	100-1800
7	EN	Europa-Norm	100-3000
8	SAE	Society of Automotive Engineers	100-3000

5. Use button to change measure range till you enter the correct range of your battery. Press **ENTER** to start the test. （ **UP** or **DOWN** button modification value is **±5** ， **Left** or **right** button modification value is **±50** ）

Figure 7-6 Sample Select Battery Standard Screen

If your battery belongs to CCA system, just select the right CCA number and press **ENTER** to start the test.

6. If the device detects uncertainty about the temperature and whether it is charging or not,please manually select **YES** or **NO.**
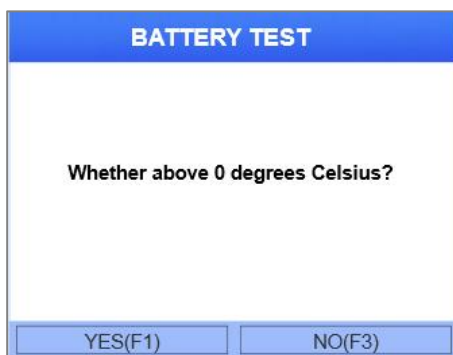

Figure 7-7 Sample Query Screen

Figure 7-8 Sample Query Screen

7. View test results on the screen. Depending on battery status, one of the following test results may display.

Figure 7-9 Sample Battery Test Screen

No.	Test Results	Interpretation
1	GOOD BATTERY	The battery is in good condition.
2	GOOD-RECHARGE	The battery is in good condition but low current. Fully charge the battery and return it to service.
3	CHARGE & RETEST	Fully charge the battery and retest. Failure to fully charge the battery before testing may result in inaccurate results. If you still get CHARGE & RETEST message after you fully charge the battery, replace it.
4	REPLACE BATTERY	The battery is almost dead or the connection between the battery and battery cable is poor. Replace the battery and retest; or disconnect the battery cables and retest the battery using the out-of-vehicle test before replacing it.
5	BAD CELL-REPLACE	The battery may be damaged such as broken cell or short circuit. Replace the battery and retest.
6	24 VOLT SYSTEM	The battery is 24V.

8. Press the **BACK** button to return to Main Menu.

NOTE

The tester keeps the results of last test only. When you start a new test, the last results are overwritten.

7.3 Cranking Test

NOTE

Before starting the test, inspect the alternator drive belt. A belt that is glazed or worn, or lacks the proper tension, will prevent the engine from achieving the rpm levels needed for the test.

▶ To start cranking test:

1. Press the **ENTER** button for cranking test.
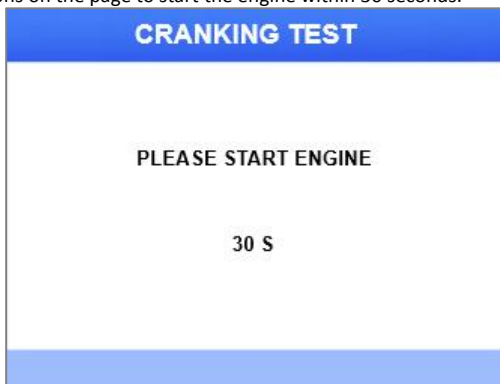2. Follow the instructions on the page to start the engine within 30 seconds.

Figure 7-10 Sample Instruction Screen

3. If the device isn't sure the engine has started after 30 seconds of testing, manually select "STARTED" or "NO STARTED".

Figure 7-11 Sample Query Screen

4. The tester displays the decision on the starter system, cranking voltage, and cranking time in milliseconds.

CRANKING TEST	
RESULT	CRANKING SKIPPED
VOLTS	10.47V
TIME	4.00S
PRESS [ENTER] TO CONTINUE	

Figure 7-12 Sample Cranking Test Screen

No.	Test Results	Interpretation
1	CRANKING NORMAL	The starter voltage is normal and the battery is fully charged.
2	LOW VOLTAGE	The starter voltage is low and the battery is fully charged.
3	CHARGE BATTERY	The starter voltage is low and the battery is discharged. Fully charge the battery and repeat the starter system test.
4	REPLACE BATTERY	Battery must be replaced before the starting system can be tested.
5	NO START	No vehicle start detected.
6	CRANKING SKIPPED	A start was not detected.

5. Press **BACK** button to return to the main menu.

NOTE

For an in-vehicle System test, the display alternates between the test results and the message. Press **ENTER** for charging test.

7.4 Charging Test

▶ To start cranking test:
1. Follow the on-screen prompts to Rev the engine.

CHARGING TEST

INCREASE SPEED TO 2000-3000 RPM
HOLD FOR 5 SECONDS,
THEN PRESS ENTER TO CONTINUE

PRESS [ENTER] TO CONTINUE

Figure 7-13 Sample Instruction Screen

2.Turn on high beams headlights and the blower fan.

CHARGING TEST

TURN HIGH BEAMS AND BLOWER
MOTOR ON IDLE ENGINE PRESS
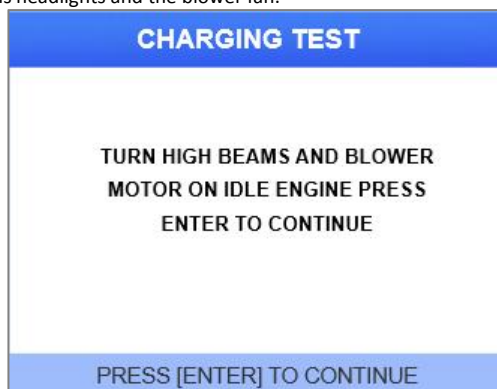ENTER TO CONTINUE

PRESS [ENTER] TO CONTINUE

Figure 7-14 Sample Instruction Screen

3.Rev engine with loads on.
4.Idle engine and turn off loads.
5.The Charging System decision is displayed at the end of the procedure.

CHARGING TEST

RESULT	NO PROBLEMS
NO LOAD	14.23V
LOADED	13.28V
RIPPLE PEAK	0.32mV

PRESS [ENTER] TO CONTINUE

Figure 7-15 Sample Charging Test Screen

No.	Test Results	Interpretation
1	NO PROBLEMS	System is showing normal output from the alternator.
2	NO OUTPUT	No alternator output detected. Check all connections to and from the alternator, especially the connection to the battery. If the connection is loose or heavily corroded, clean or replace the cable and retest. If the belts and connections are in good working condition, replace the alternator. (Older vehicles use external voltage regulators, which may require only replacement of the voltage regulator.)
3	LOW OUTPUT	Alternator not providing sufficient to power the system's electrical loads and charge the battery. Check the belts to ensure the alternator is rotating with the engine running. Replace broken or slipping belts and retest. Check the connections from the alternator to the battery. If the connection is loose or heavily corroded, clean or reparable the cable and retest.
4	HIGH OUTPUT	Alternator voltage output exceeds the normal limits. Make sure there are no loose connections and the ground connection is normal. If there are no connection problems, replace the regulator. Most alternators have a built-in regulator that requires replacing the alternator. In older vehicles that use external voltage regulators, you may need to replace only the voltage regulator.
5	EXCESSIVE RIPPLE	Excessive AC ripple detected. One or more diodes in the alternator are not functioning or there is stator damage.
6	CHARGE BATTERY	The starter voltage is low and the battery is discharged. Fully charge the battery and repeat the starter system test.
7	REPLACE BATTERY	Battery must be replaced before the starting system can be tested.

7.5 System Test

The battery in vehicle can be continuously tested the Battery Test, the Cranking Test and the Charging Test in the "System Test". After the Battery Test, you can press ENTER to perform the Cranking Test, and after the Cranking Test, you can press ENTER to perform the Charging Test.

BATTERY TEST	
RESULT	REPLACE BATTERY
VOLTS	12.31V
MEASURED	18CCA
SOH	4%
RES.	100.0MΩ
RATING	500CCA
SOC	44%
PRESS [ENTER] TO CONTINUE	

Figure 7-16 Sample Result Screen

▶ To View Three Reports.:

　　1. After the end of the Charging Test, you can view the three reports by pressing "Left" or "Right".

7.6 Viewing Test Results

View menu lets you view test results.

▶ To view the test results:

1. Scroll with the **UP** or **DOWN** button to highlight **View** from Main Menu and press the **ENTER** key.
2. Review the test results on the screen. Use the **LEFT** or **RIGHT** button to scroll back and forth through Battery Result, Cranking Result and Charging Result to view.

CRANKING TEST	
RESULT	CRANKING SKIPPED
VOLTS	10.47V
TIME	4.00S
PRESS [ENTER] TO CONTINUE	

CHARGING TEST	
RESULT	NO PROBLEMS
NO LOAD	14.23V
LOADED	13.28V
RIPPLE PEAK	0.32mV
PRESS [ENTER] TO CONTINUE	

Figure 7-17 Sample Result Screen

7.7 Read Voltage

Read Voltage menu lets you Read Voltage results.

▶ To Read Voltage results:

1.Click the VOLT button at the top of the page and the voltage value will be displayed.

Figure 7-18 Sample Voltage Screen

8 Update

▶ To update scanner, you need the following tools:

- The scan tool
- Available WIFI service
- power supply with USB ports or diagnostic cable

NOTE
Before updating, please make sure your network works correctly.
Before updating, please make sure you have already created a Foxwell ID.
Before updating, please make sure your scanner is turned on.

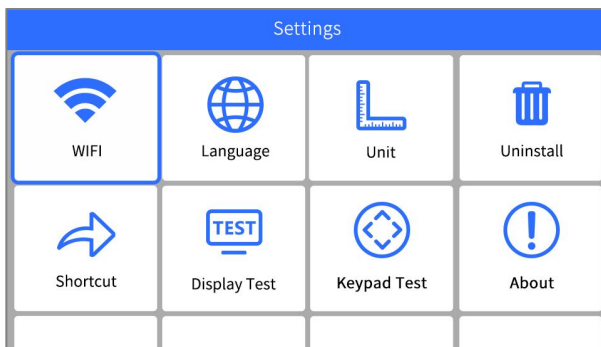1. Enter **Update** and select an avaliable WIFI to connect.

Figure 8-1 Sample WIFI Screen

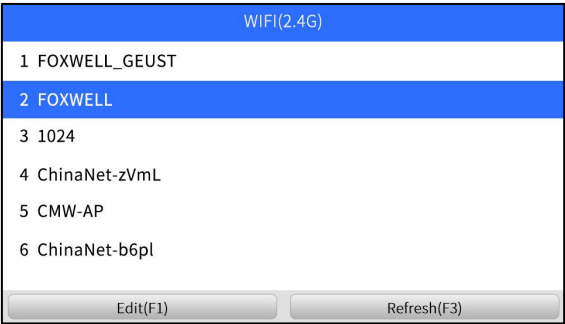| WIFI(2.4G)	
1 FOXWELL_GEUST	
2 FOXWELL	
3 1024	
4 ChinaNet-zVmL	
5 CMW-AP	
6 ChinaNet-b6pl	
Edit(F1)	Refresh(F3)

Figure 8-2 Sample WIFI Selection Screen

2.In the **Update**, click the check box(es) in front of the software(s) you wish to update and then click the **Update Selec**t button to download.

Update			
☑ LEXUS	V2.66.006	20.59KB	Ready
☑ SCINO	V2.66.006	20.70KB	Ready
☑ TOYOTA	V2.66.006	32.41MB	Ready
☐ APP	V2.06.026	2.99MB	Ready
☐ FOX200	V1.06.026	123.43KB	Ready
☐ Common Text Library	V1.36.001	96.10KB	Ready
Select All(F1)		Update(F3)	

Figure 9-3 Sample Upgrade Check Screen

3.When all the items are updated, an **"All software downloads are successfully installed!"** message displays.
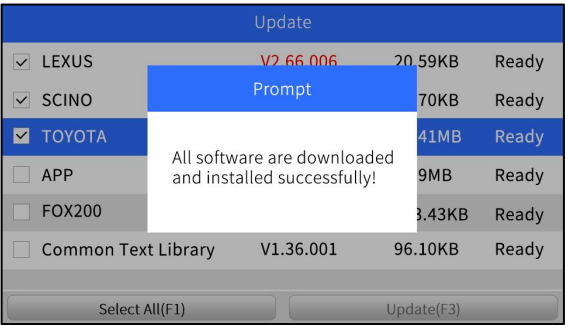
Update			
☑ LEXUS	V2.66.006	20.59KB	Ready
☑ SCINO	Prompt	70KB	Ready
☑ TOYOTA		41MB	Ready
☐ APP	All software are downloaded and installed successfully!	9MB	Ready
☐ FOX200		3.43KB	Ready
☐ Common Text Library	V1.36.001	96.10KB	Ready
Select All(F1)		Update(F3)	

Figure 8-4 Sample Update Completed Screen

9 Uninstall

This option allows you to uninstall the vehicle software installed in the scanner.

▶ To uninstall a vehicle software:
  1. Enter **Settings** application on home screen.

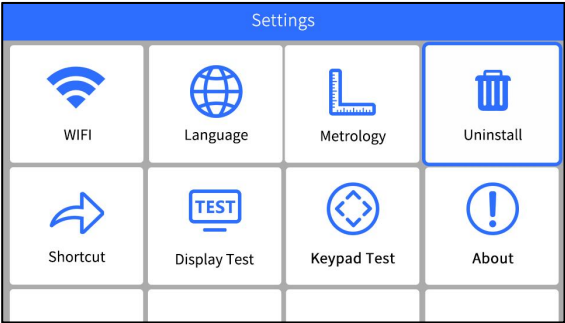| Settings			
🛜 WIFI	🌐 Language	📐 Metrology	🗑 Uninstall
↪ Shortcut	TEST Display Test	◇ Keypad Test	⚠ About

Figure 9-1 Sample Uninstall Vehicle Software Screen

2. Select the Uninstall Vehicle Software option on the option list.

3. Choose the vehicle software you want to delete or choose **Select All** to **Uninstall**.
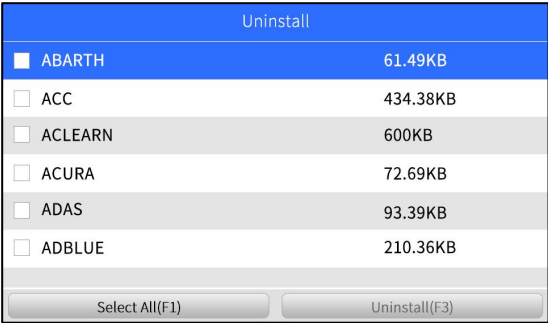
Uninstall	
☑ ABARTH	61.49KB
☐ ACC	434.38KB
☐ ACLEARN	600KB
☐ ACURA	72.69KB
☐ ADAS	93.39KB
☐ ADBLUE	210.36KB
Select All(F1)	Uninstall(F3)

Figure 9-2 Sample Uninstall Vehicle Software Screen

10 Shopping

This option allows you to shopping the extra vehicle softwares .To shopping a vehicle software:

10.1 Choose one vehicle for free.

  1. After registered and activated the serial number, Please enter into **Shopping.**
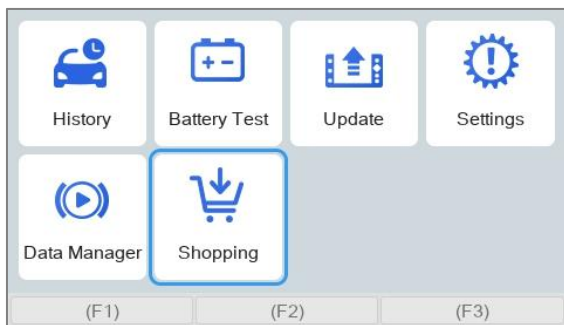
Figure 10-1 Sample Enter Into Shopping Screen

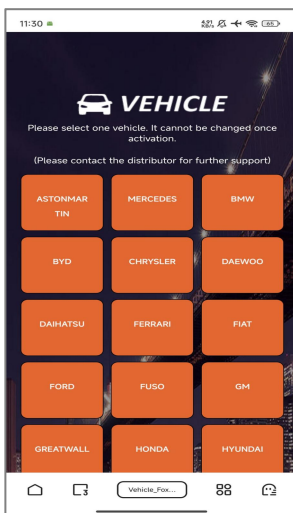2. Please choose one vehicle for free.

Figure 10-2 Sample choose free vehicle software Screen

10.2 Shopping the extra softwares.

1. After choose one free vehicle software,you will skip to this shopping web page for you to choose the extra vehicle softwares.
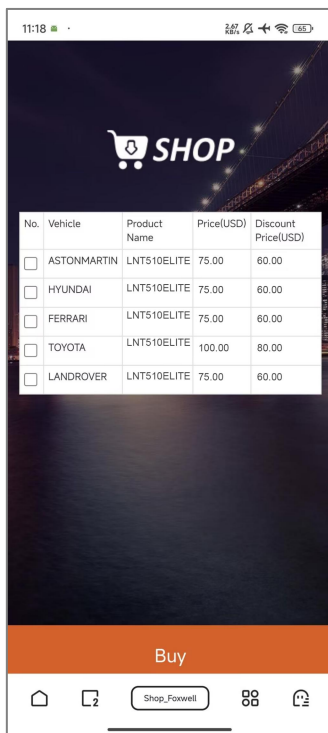
No.	Vehicle	Product Name	Price(USD)	Discount Price(USD)
☐	ASTONMARTIN	LNT510ELITE	75.00	60.00
☐	HYUNDAI	LNT510ELITE	75.00	60.00
☐	FERRARI	LNT510ELITE	75.00	60.00
☐	TOYOTA	LNT510ELITE	100.00	80.00
☐	LANDROVER	LNT510ELITE	75.00	60.00

Figure 10-3 Sample choose the extra vehicle software Screen

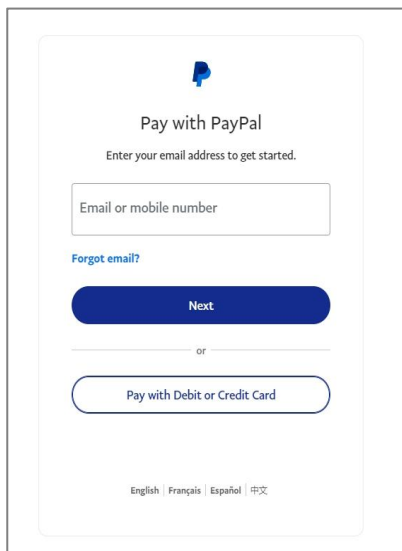2. After choose the vehicle you want to purchase,please pay by Paypal.

Figure 10-4 Sample Pay by Paypal Screen

FCC Warnning:

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 againstharmful interference in a residential installation. This equipment generates, uses and can radiateradio frequency energy and, if not installed and used in accordance with the instructions, maycause harmful interference to radio communications. However, there is no guarantee thatinterference will not occur in a particular installation. If this equipment does cause harmfulinterference to radio or television reception, which can be determined by turning the equipmentoff and on, the user is encouraged to try to correct the interference by one or more of thefollowing 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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

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

(1)This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 0cm between the radiator and your body.

ISED Statement

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

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

-   French:Cet appareil contient des émetteurs/récepteurs exempts de licence qui sont conformes aux CNR exempts de licence d'Innovation, Sciences et Développement économique Canada. Le fonctionnement est soumis aux deux conditions suivantes :

(1) Cet appareil ne doit pas causer d'interférences.

(2) Cet appareil doit accepter toute interférence, y compris les interférences susceptibles de provoquer un fonctionnement indésirable de l'appareil.

This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance 0cm between the radiator & your body.

Cet équipement est conforme Canada limites d'exposition aux radiations dans un environnement non contrôlé.

Cet équipement doit être installé et utilisé avec une distance minimale de 0 cm entre le radiateur et votre corps.