Trademarks

FOXWELL is the trademark of Shenzhen Foxwell Technology Co., Ltd.
All other marks are trademarks or registered trademarks of their respective holders.

Copyright Information

©2019 Shenzhen Foxwell Technology Co., Ltd.

All rights reserved.

Disclaimer

The information, specifications and illustrations in this manual are based on the latest information available at the time of printing.

Foxwell reserves the right to make changes at any time without notice.

Visit our website at

www.foxwelltech.us

For Technical Assistance, send us email at

support@foxwelltech.com

One-Year Limited Warranty

Subject to the conditions of this limited warranty, Shenzhen Foxwell Technology Co., Ltd (“FOXWELL”) warrants its customer that this product is free of defects in material and workmanship at the time of its original purchase for a subsequent period of one (1) year.

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. **Terms and Conditions**

1 If FOXWELL repairs or replaces the product, the repaired or replaced product shall be warranted for the remaining time of the original warranty period. No charge will be made to the customer for replacement parts or labor charges incurred by FOXWELL in repairing or replacing the defective parts.

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

a) The product has been subjected to abnormal use, abnormal conditions, improper storage, exposure to moisture or dampness, unauthorized modifications, unauthorized repair, misuse, neglect, abuse, accident, alteration, improper installation, or other acts which are not the fault of FOXWELL, including damage caused by shipping.

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.

3 The customer shall bear the cost of shipping the product to FOXWELL. And FOXWELL shall bear the cost of shipping the product back to the customer after the completion of service under this limited warranty.

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:

a) The customer shall return the product to the place of purchase for repair or replacement processing, contact your local FOXWELL distributor or visit our website www.foxwelltech.us to get further information.

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.

c) The customer will be billed for any parts or labor charges not covered by this limited warranty.

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.

5 ANY IMPLIED WARRANTY OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OR USE, SHALL BE LIMITED TO THE DURATION OF THE FOREGOING LIMITED WRITTEN WARRANTY. OTHERWISE, THE FOREGOING LIMITED WARRANTY IS THE CONSUMER’S SOLE AND EXCLUSIVE REMEDY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. FOXWELL SHALL NOT BE LIABLE FOR SPECIAL, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF ANTICIPATED BENEFITS OR PROFITS, LOSS OF SAVINGS OR REVENUE, LOSS OF DATA,

PUNITIVE DAMAGES, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, COST OF CAPITAL, COST OF ANY SUBSTITUTE EQUIPMENT OR FACILITIES, DOWNTIME, THE CLAIMS OF ANY THIRD PARTIES, INCLUDING CUSTOMERS, AND INJURY TO PROPERTY, RESULTING FROM THE PURC HASE OR USE OF THE PRODUCT OR ARISING FROM BREACH OF THE WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT, OR ANY OTHER LEGAL OR EQUITABLE THEORY, EVEN IF FOXWELL KNEW OF THE LIKELIHOOD OF SUCH DAMAGES. FOXWELL SHALL NOT BE LIABLE FOR DELAY IN RENDERING SERVICE UNDER THE LIMITED WARRANTY, OR LOSS OF USE DURING THE PERIOD THAT THE PRODUCT IS BEING REPAIRED.

6. Some states do not allow limitation of how long an implied warranty lasts, so the one-year warranty limitation may not apply to you (the Consumer). Some states do not allow the exclusion or limitation of incidental and consequential damages, so certain of the above limitations or exclusions may not apply to you (the Consumer). This limited warranty gives the Consumer specific legal rights and the Consumer may also have other rights which vary from state to state.

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.

Table of Contents

ONE-YEAR LIMITED WARRANTY **2**

SAFETY INFORMATION **4**

SAFETY MESSAGE CONVENTIONS USED 4

IMPORTANT SAFETY INSTRUCTIONS 4

1 USING THIS MANUAL **7**

1.1 Bold Text 7
1.2 Symbols and Icons 7
1.2.1 Solid Spot 7
1.2.2 Arrow Icon 7
1.2.3 Note and Important Message 7
2 INTRODUCTIONS 8
2.1 Scanner Descriptions 8
2.2 Accessory Descriptions 9
2.3 Technical Specifications 9
3 GETTING STARTED 9
3.1 Providing Power to Scanner 9
3.1.1 Connecting to Vehicle Power 9
3.1.2 Connecting to Computer with USB Cable 9
3.2 Application Overview 10
3.3 Input Dialog Box 10
4.VEHICLE IDENTIFICATION 11
4.1 Smart VIN 11
4.2 Manual Selection 13
5 DIAGNOSTIC OPERATIONS 14
5.1 Control Module Selection 14
5.1.1 Quick Scan 14
5.1.2 Control Modules 16
5.2 Diagnostic Operations 17
5.2.1 Read Codes 17
5.2.2 Clear Codes 18
5.2.3 Live Data 19
5.2.3.1 Complete Data List 19
5.2.3.2 Custom Data List 21
5.2.4 ECU Information 22
5.2.5 Active Tests 23
5.2.6 Special Functions 24
6 OBDII/EOBD OPERATIONS 25
7 SYSTEM SETUP 26
7.1 Select Language 26
7.2 Change Units 27
7.3 Configure Shortcut Keys 28
7.4 Display Test 29
7. 5 Keypad Test 30
7.6 Tool Information 30

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:

- Language
- Unit
- Shortcuts
- 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

Foxwell NT510Elite Multi-system scanner is a unique tool that delivers OE-level diagnosis for all the electronic systems of different car brands. What's more important is that it supports the most commonly required service features such as Oil Light/Service reset, brake deactivation, transmission adaptations, and so on.

Available applications are BMW, Mercedes Benz, Fiat, PSA, Chrysler, Ford, GM, Honda, Nissan, Toyota and more. And the functions may vary by year and model.

2.1 Scanner Descriptions

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

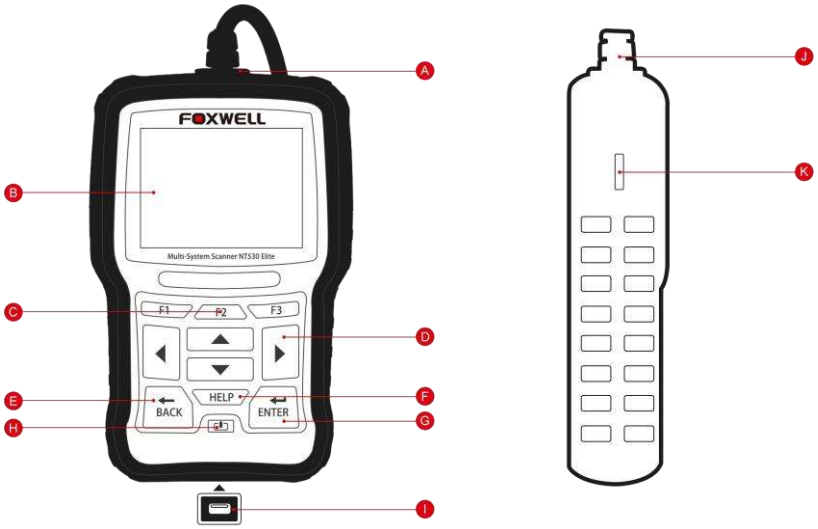


Figure 2-1 Front View

A/J **Diagnostic Cable** - provides connection between vehicle and the scanner.
B **LCD Display** - shows menus, test results and operation tips.
C **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.
D **Direction Keys** - select an option or scroll through a screen of data or text.
E **BACK Key** - exits a screen and generally returns to previous screen.
F **HELP Key** - displays helpful information.
G **ENTER Key** - executes a selected option and generally goes to the next screen. H **Power Switch** - hold for 5 seconds for emergency reboot.
I **USB Port** - provides USB power connection between the scanner and PC/laptop. K
TF Card Port - holds the TF memory card for data backup and software update.

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 **User's Guide** - provides operation instructions for the usage of the scanner.
2 **Diagnostic Cable** - provides connection between the scanner and a vehicle.
3 **USB Cable** - provides connection between the scanner and a computer to update and print data.
4 **Warranty Card** - A warranty card is required if you need any repair or replacement from us.
5 **Nylon Carry Pouch** - stores the scanner and its accessories.

2.3 Technical Specifications

Display: Backlit, 240*320 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.

Take a Toyota customized scanner for example, following applications are preloaded into the scanner:

- **Auto VIN** - leads to screens for identifying a car by automatic VIN reading.
- **OBDII/EOBD** - leads to OBDII screens for all 9 generic OBD system tests.
- **Toyota** - leads to screens for diagnostic trouble code information, live data, ECU information, active test, and special functions on vehicles sold worldwide.
- **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.
- **Update** - leads to screen for updating the scanner.

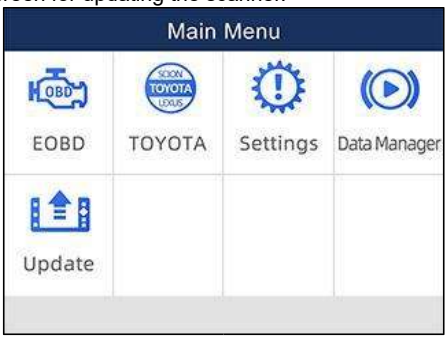


Figure 3-1 Sample Home Screen

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**.

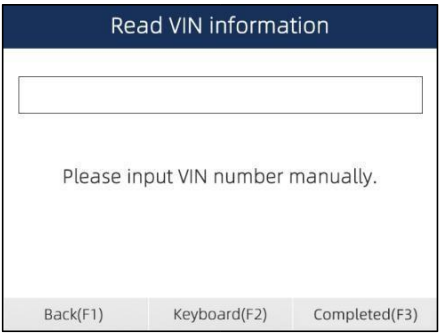


Figure 3-2 Sample Input Text Screen

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

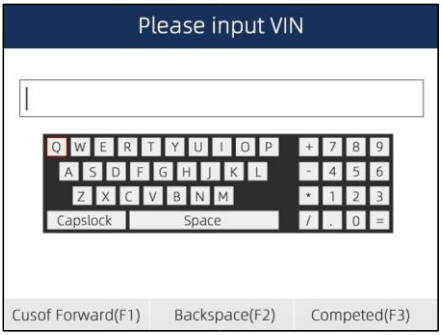


Figure 3-3 Sample Numeric Keyboard Screen

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.Vehicle Identification

This section illustrates how to use the scanner to identify the specifications of the vehicle under test.

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. Exact procedures may vary somewhat by vehicle. It typically identifies a vehicle by any of the following means:

- SmartVIN
- Manual selection

4.1 Smart VIN

Smart VIN allows to identify a vehicle by automatically reading the vehicle identification number (VIN).

▶ To identify a vehicle by SmartVIN:

1. Scroll with arrow keys to highlight the vehicle application from main menu and press **ENTER**.

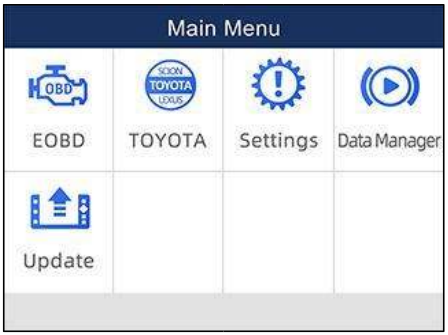


Figure 4-1 Sample Main Menu Screen

2. Select **SmartVIN** from the menu, and press the **ENTER** key.

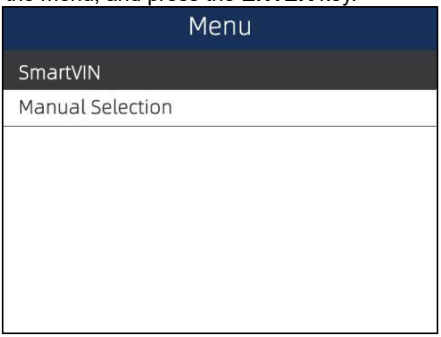


Figure 4-2 Sample VIN Reading Screen

3. The scan tool starts to communicate with the vehicle and read the Vehicle Specification or VIN Code automatically.



Figure 4-3 Sample Automatic VIN Reading Screen

4. Answer **YES** if the Vehicle Specification or VIN code is correct and a menu of controller selection displays. Answer **NO** if incorrect, and you are required to enter the correct VIN number manually.

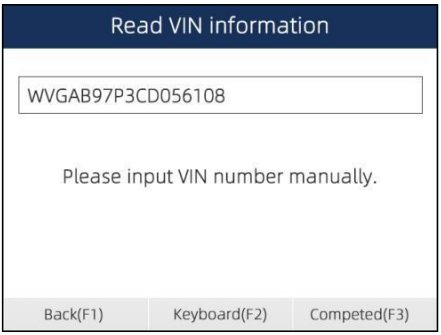


Figure 4-4 Sample Manual VIN Entry Screen

4.2 Manual Selection

Manual 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. Scroll with arrow keys to highlight the vehicle application from main menu and press **ENTER**.

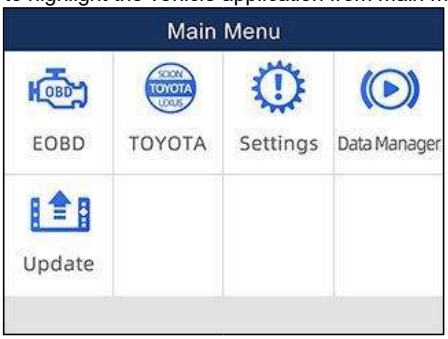


Figure 4-5 Sample Main Menu Screen

2. Select **Manual Selection** from the menu, and press the **ENTER** key.

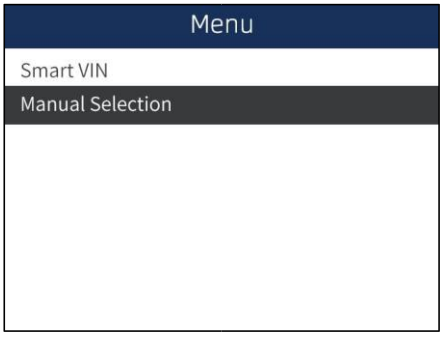


Figure 4-6 Sample Control Module Selection Screen

3. 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.

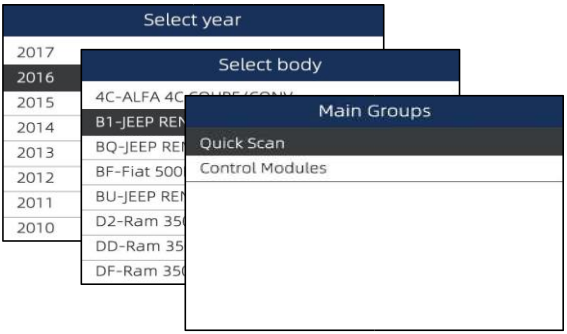


Figure 4-7 Sample Manual Vehicle Selection Screen

5 Diagnostic Operations

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 a variety of vehicles and also save “recordings” of the data readings.

5.1 Control Module Selection

When you completed the identification of vehicle, you have to identify the control modules installed in the vehicle. There are two ways to identify the controllers installed in a car:

- Quick Scan
- Control Modules

5.1.1 Quick Scan

Quick Scan performs an automatic system test to determine which control modules are installed on the vehicle and provides diagnostic trouble codes (DTCs) overview. Depending on the number of control modules, it may take 10 minutes or longer to complete the test. To perform an automatic system scan:

1. Scroll with the arrow keys to highlight **Quick Scan** from the menu and press **ENTER** to start.

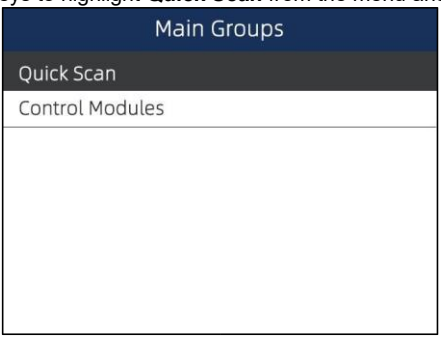


Figure 5-1 Sample Main Group Screen

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

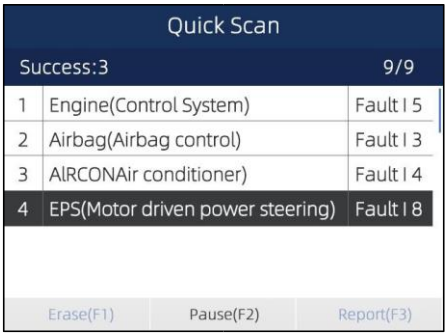


Figure 5-2 Sample Quick Scan Screen

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

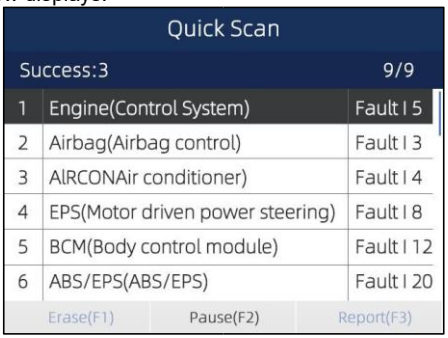


Figure 5-3 Sample Quick Scan Screen

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. Or press the function key **Erase** to clear them.

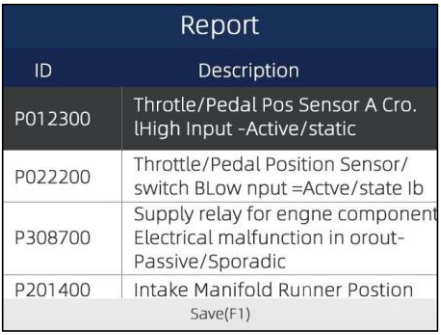


Figure 5-4 Sample DTC Screen

5. Press function key F1 to save the trouble code information.
6. 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.

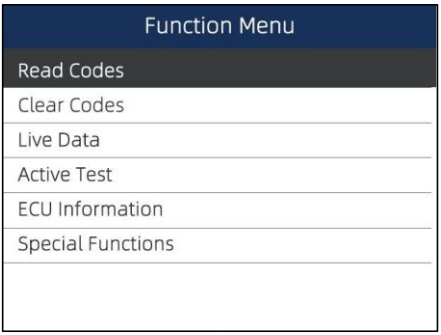


Figure 5-5 Function Menu screen

5.1.2 Control Modules

Control Modules 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 Modules** from the menu and press the **ENTER** key. A controller menu displays.

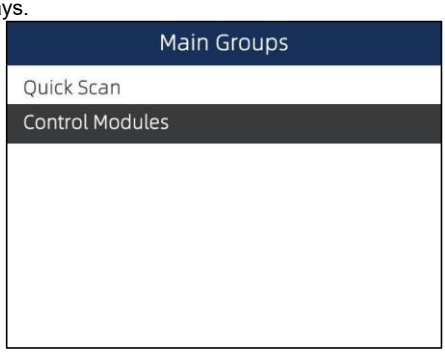


Figure 5-6 Sample Control Module Menu Screen

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

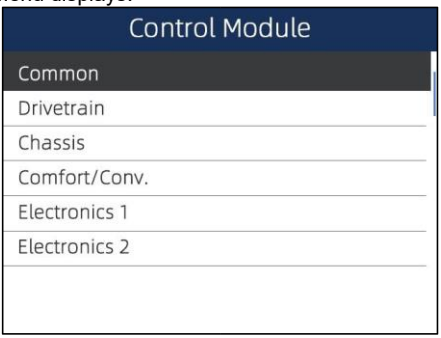


Figure 5-7 Sample Control Module Menu Screen

5.2 Diagnostic Operations

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

- Read Codes
- Clear Codes
- Live Data
- Active Test
- ECU Information
- Special Functions

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.

5.2.1 Read Codes

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

Typical code status include:

- Present/Permanent/Current Codes
- Pending Codes
- History Codes

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.

▶ 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.

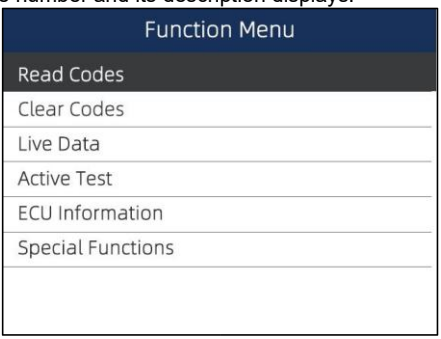


Figure 5-8 Sample Function Menu Screen

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.

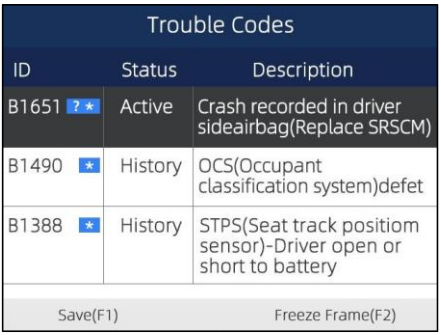


Figure 5-9 Sample Code Screen

3. Press function key **Save** to store DTC information. Press function key **Freeze Frame** to view freeze data.



Figure 5-10 Freeze Data screen

Freeze Frame Data: a snapshot of critical vehicle operating conditions automatically recorded by the on-board computer at the time of the DTC set. It is a good function to help determine what caused the fault.

4. Use left and right arrow keys to scroll back and forth through different screens of data.
5. Press function key **Save** to store freeze frame information. Or use the **BACK** key to exit.

5.2.2 Clear Codes

Clear 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 is 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.
- Clear 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.

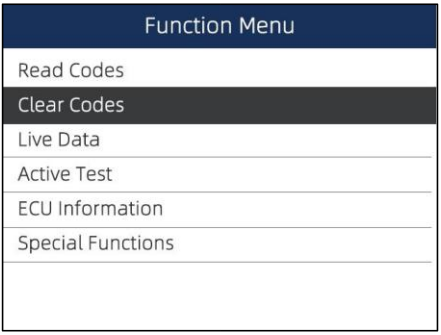


Figure 5-11 Sample Function Menu Screen

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

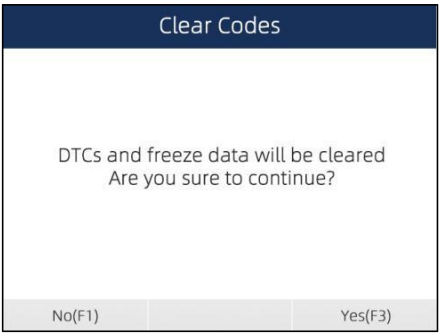


Figure 5-12 Sample Clear Codes Screen

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

5.2.3 Live Data

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

Menu options typically include:

- Complete List
- Custom List

5.2.3.1 Complete Data List

Complete List menu lets you view all live PID data from a selected system.

To view live PID data:

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

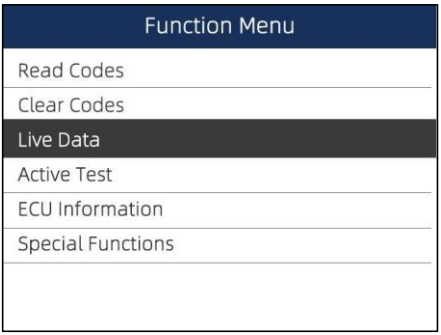


Figure 5-13 Sample Function Menu Screen

2. Select the **Complete List** from the menu and press the **ENTER** key to display the data screen.

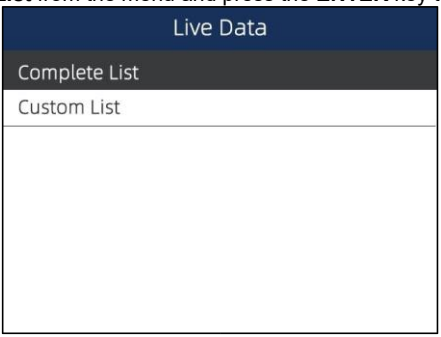


Figure 5-14 Sample Live Data Menu Screen

3. Scroll with the up and down arrow keys to highlight a line, and left and right arrow keys to scroll back and forth through different screens of data. Press function key **Pause** to suspend collecting data from the vehicle and use the **Start** key to resume collecting data. To record data to memory of the scanner, use the function key **SAVE**, and press **Stop Saving** to stop recording at any time.

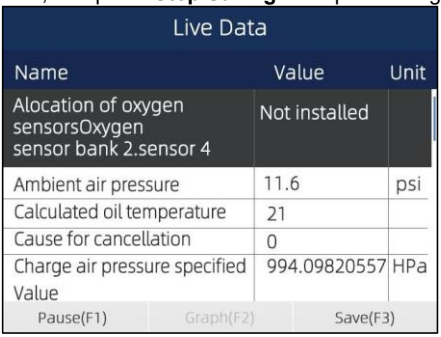


Figure 5-15 Sample Live Data Screen

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.

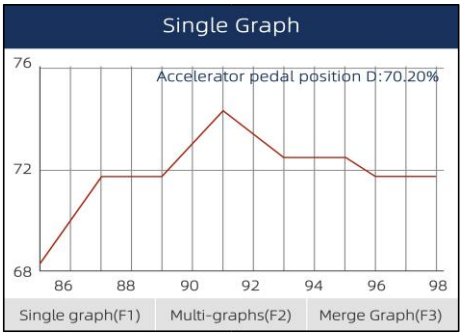


Figure 5-16 Sample PID Graph Screen

5. Press the function key **Multi-graphs** to display two PID graphs in one screen. Press **Single graph** to view one plot.

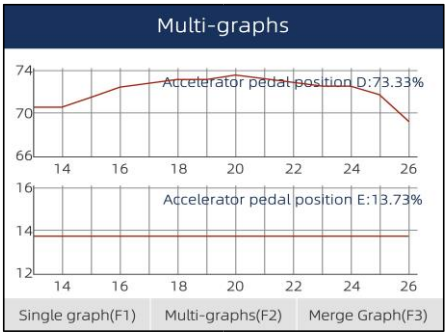


Figure 5-17 Sample Two PID Graph Screen

6. Press the function key **Merge Graph** to display two PID plots in one coordinate to check how they affect each other.

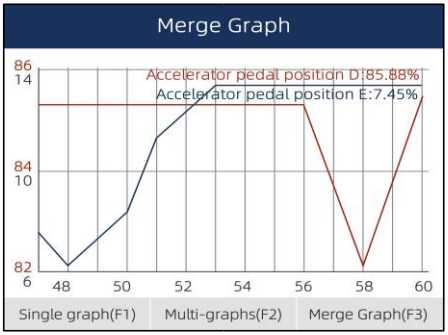


Figure 5-18 Sample Merge Graph Screen

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

5.2.3.2 Custom List

Custom 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.

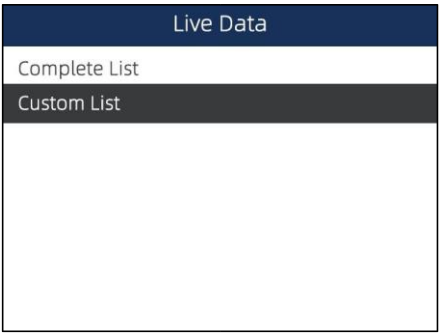


Figure 5-19 Sample Live Data Menu Screen

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 **Select All** and **Deselect** to select or deselect all items at once.



Figure 5-20 Sample Custom List Selection Screen

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

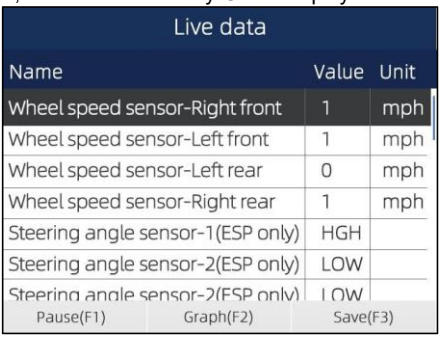


Figure 5-21 Sample Live Data Screen

5.2.4 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.

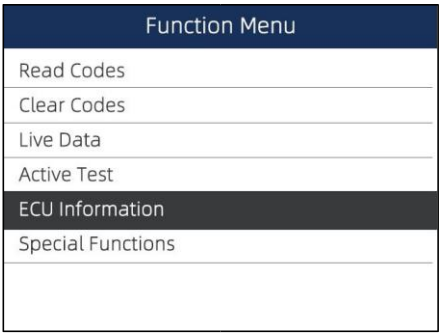


Figure 5-22 Sample Function Menu Screen

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

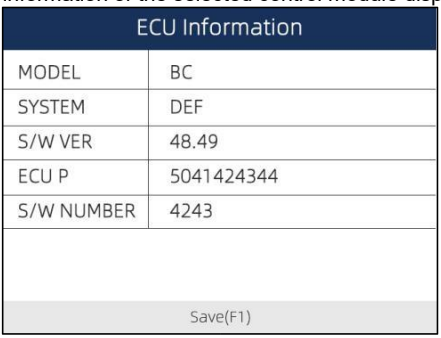


Figure 5-23 Sample ECU Information Screen

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

5.2.5 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 Tests** from Function Menu and press the **ENTER** key.

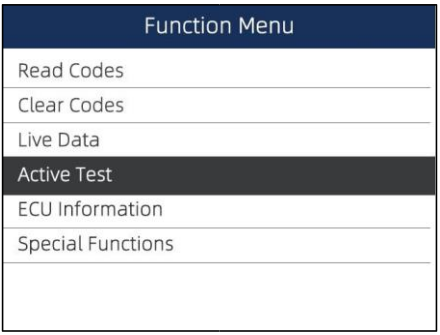


Figure 5-24 Sample Function Menu Screen

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.

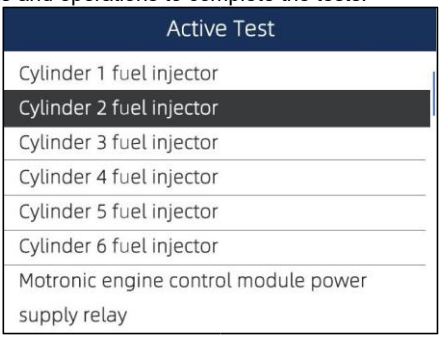


Figure 5-25 Sample Active Tests Selection Screen

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.

5.2.6 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 fromthe menu and press the **ENTER** key.

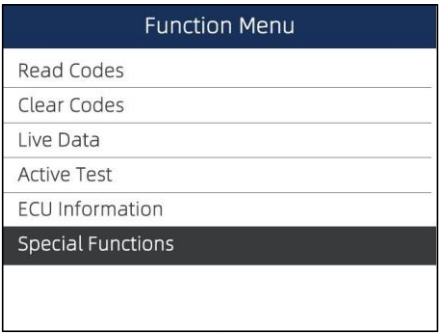


Figure 5-26 Sample Function Menu Screen

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

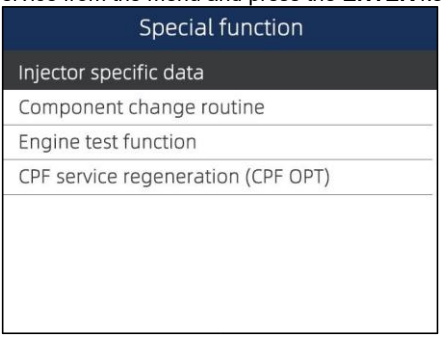


Figure 5-27 Sample Special Function Screen

3. A group selection screen, test selection screen, several step-by-step instruction screens, or bidirectional 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.

6 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 monitoredsystems
- **Service $07** - request emission-related diagnostic trouble codes detected during currentor last completed driving cycle
- **Service $08** - request control of on-board system, test or component
- **Service $09** - request Vehicle Information

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.

7 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:

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

7.1 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.

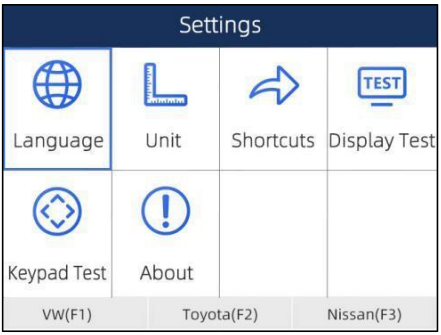


Figure 7-1 Sample Settings Screen

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 7-2 Sample Language Selection Screen

7.2 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.

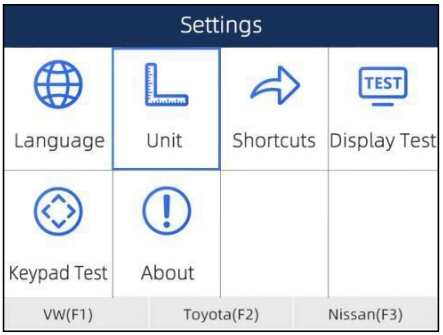


Figure 7-3 Sample Settings Screen

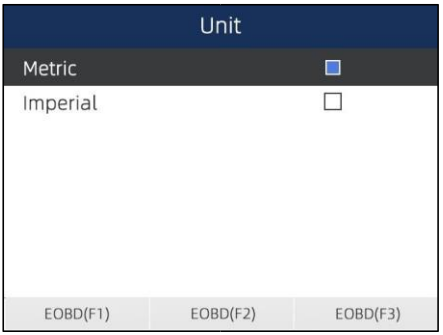


Figure 7-4 Sample Unit Selection Screen

2. Press the up and down arrow key select an item and press the **ENTER** key to save and return.

7.3 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.

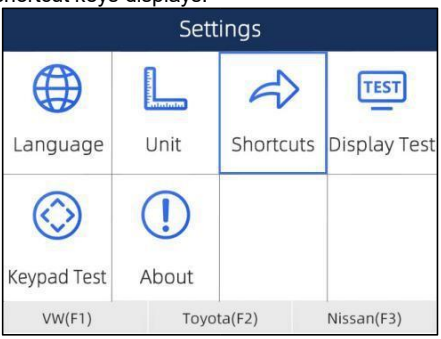


Figure 7-5 Sample Settings screen

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.

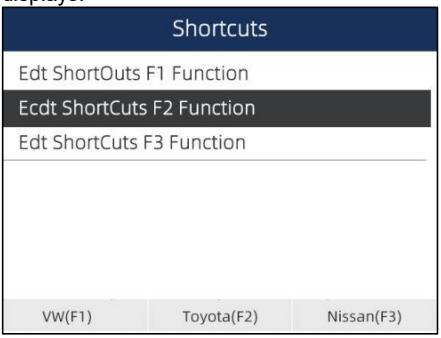


Figure 7-6 Sample Shortcuts Screen

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



Figure 7-7 Sample Shortcuts Screen

7.4 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.

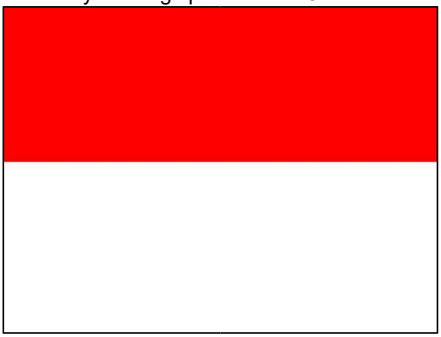


Figure 7-8 Sample LCD Test Screen

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

7. 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.

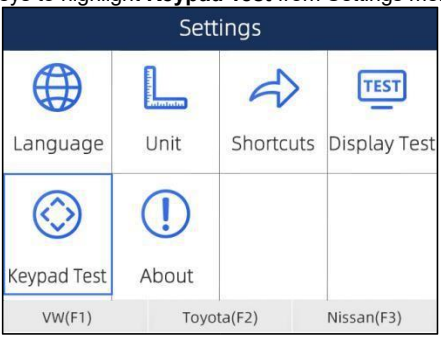


Figure 7-9 Sample Settings Screen

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.

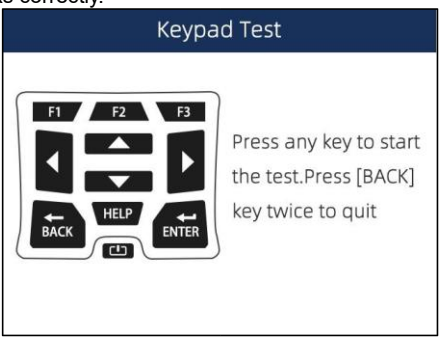


Figure 7-10 Sample Keypad Test Screen

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

7.6 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.

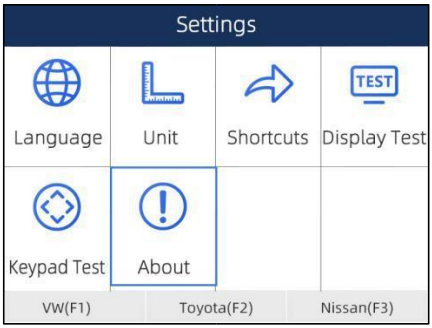


Figure 7-11 Sample Settings Screen

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



Figure 7-12 Sample Tool Information Screen

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