



NT680Plus
ALL-SYSTEM & ALL-MAKE
SCANNER WITH SPECIAL FUNCTIONS
(WiFi VERSION)

User's Guide



Shenzhen Foxwell Technology Co., Ltd.

Add: 5/F, Yangchen Building, No.14, Lane 3, Liuxian 2nd Road 71st Zone,
Baoan District, Shenzhen, China, 518106.

TEL: +86-755-26697229

FAX: +86-755-26897226

Email: support@foxwelltech.com

Http:// www.foxwelltech.us

Shenzhen Foxwell Technology Co., Ltd.

© 2024 Foxwell Tech. All Rights Reserved

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

©2024 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 PURCHASE 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	7
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 AUTO VIN	12
4.1.1 Automatic VIN Acquisition	12
4.1.2 Manual VIN Entry	13
4.2 MANUAL VEHICLE SELECTION	14
4.2.1 Smart VIN	15
4.2.2 Manual Selection	16
5 DIAGNOSTIC OPERATIONS	17
5.1 CONTROL MODULE SELECTION	18
5.1.1 Quick Scan	18
5.1.2 Control Modules	19
5.2 DIAGNOSTIC OPERATIONS	20
5.2.1 ECU Information	20
5.2.2 Read Codes	21
5.2.3 Clear Codes	23
5.2.4 Live Data	23
MAINTENANCE	27

6 MAINTENANCE	28
6.1 OIL SERVICE RESET	29
6.2 ELECTRONIC PARKING BRAKE	29
6.3 BATTERY REPLACEMENT (BRT)	30
6.4 DIESEL PARTICULATE FILTER (DPF) REGENERATION	30
6.5 THROTTLE BODY ALIGNMENT (TPS/TBA)	30
6.6 STEERING ANGLE SENSOR (SAS) CALIBRATION	30
6.7 CONTINUOUS VARIABLE TRANSMISSION (CVT)	31
6.8 GEAR LEARNING	31
6.9 TIRE PRESSURE MONITORING SYSTEM PROGRAMMING	31
6.10 ODOMETER	31
6.11 INJECTOR CODING	31
7 OBDII/EOBD OPERATIONS	31
8 SYSTEM SETUP	32
8.1 SELECT LANGUAGE	32
8.2 CHANGE UNITS	33
8.3 CONFIGURE SHORTCUT KEYS	33
8.4 DISPLAY TEST	34
8.5 KEYPAD TEST	35
8.6 TOOL INFORMATION	36
9 UPDATE	37
10 UNINSTALL	38
11 REGISTER	39
11.1 CREATE A FOXWELL ID	39
11.1.1 Register Through Website	39
11.1.2 Register by Scanning QR Code	42
11.2 REGISTER YOUR SCANNER	43
11.2.1 Register Product Through Website	43
11.2.2 Register Product by Scanning QR Code	44

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
- Install
- 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.

7

NT680Plus Series User's Manual_English_V1.01

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.

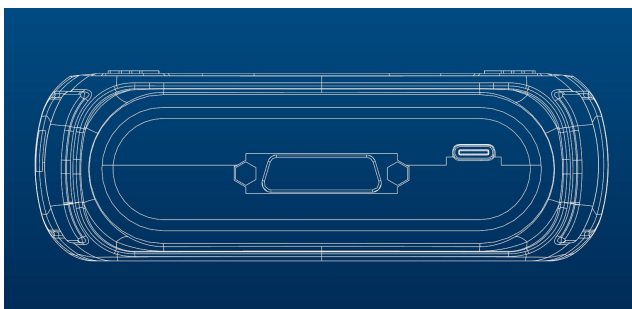


Figure 2-1 Front View

- 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 **ENTER 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 **Power Switch** - press and hold for 5 seconds for emergency reboots.
- 9 **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 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 **Blower Molding Case** - stores the scanner and its accessories.

2.3 Technical Specifications

Display: Backlit, 4.3" TFT color display

Working Temperature: 0 to 60 °C (32 to 140°F)

Storage Temperature: -20 to 70°C (-4 to 158°F)

Power Supply: 8-18V vehicle power and 3.3V USB power

Dimensions: (L*W*H): 200*130*40mm

Weight: 1.8 Kgs

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 data printing.

-  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.

- **Auto VIN** - leads to screens for identifying a car by VIN reading.
- **OBDII/EOBD** - leads to OBDII screens for all 9 generic OBD system tests.
- **Diagnostic** - leads to screens for diagnostic trouble code information, live data stream, ECU information of a variety of vehicles.
- **Maintenance** - leads to screens of tests of the most frequently required service features.
- **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.

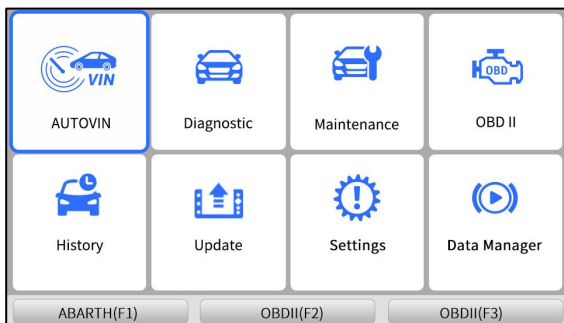


Figure 3-1 Sample Home Screen

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**.

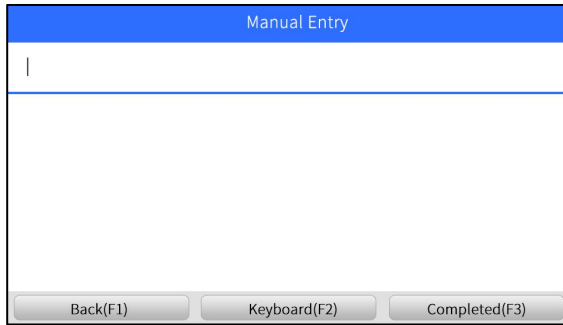


Figure 3-2 Sample Input Text Screen

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

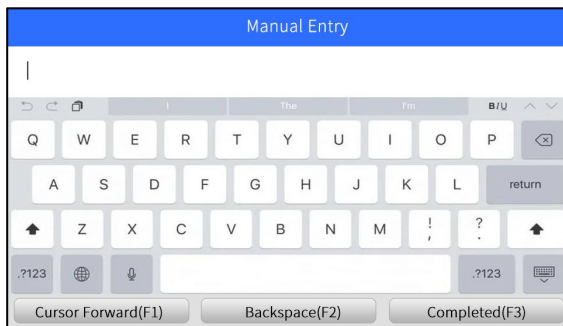


Figure 3-3 Sample Numeric Keyboard Screen

3. To delete a letter or number, use the function key **Cursor Forward** to 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:

- Automatic VIN reading
- Manual VIN entry
- Manual vehicle selection

NOTE

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

4.1 Auto VIN

- Auto VIN** is a shortcut for VIN reading menu which typically includes following options:
- Automatic VIN acquisition
 - Manual input VIN

4.1.1 Automatic VIN Acquisition

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

- ▶ To identify a vehicle automatic VIN reading:
1. Scroll with the arrow keys to highlight **Auto VIN** from the main menu and press the **ENTER** key.

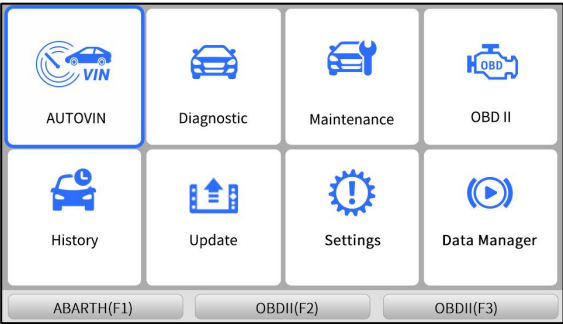


Figure 4-1 Sample Main Menu Screen

2. Select **Automatic VIN Acquisition** from the menu, and press the **ENTER** key.

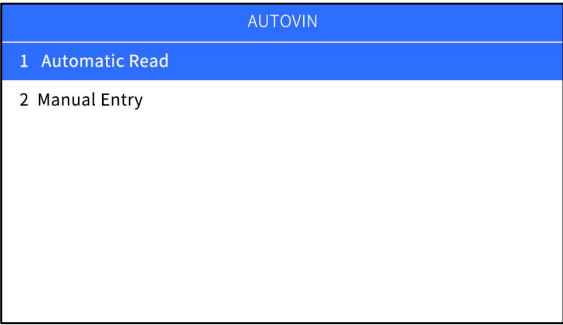


Figure 4-2 Sample VIN Reading Screen

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

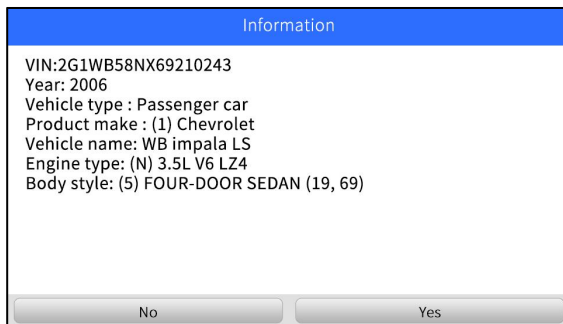


Figure 4-3 Sample Automatic VIN Reading Screen

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

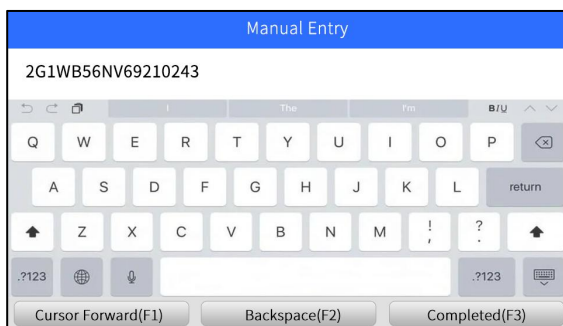


Figure 4-4 Sample Manual VIN Entry Screen

5. If it takes too long to get the VIN code, press **Cancel** to stop and input the VIN manually. Or if failed to identify the VIN, please input the VIN manually or click **Cancel** to quit.

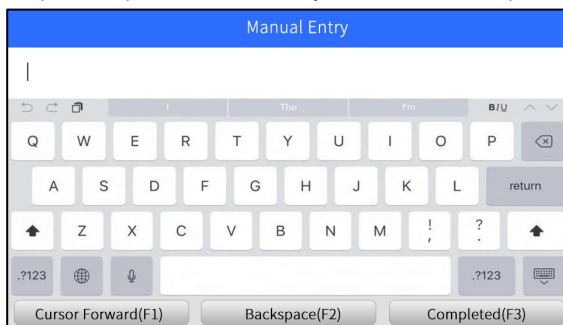


Figure 4-5 Sample Manual Entry Screen

4.1.2 Manual VIN Entry

Manual VIN Entry identifies a vehicle by manually inputting a 17-digit VIN code.

- ▶ To identify a vehicle by manual VIN entry:
 1. Scroll with the arrow keys to highlight **Auto VIN** from the main menu and press the **ENTER** key.

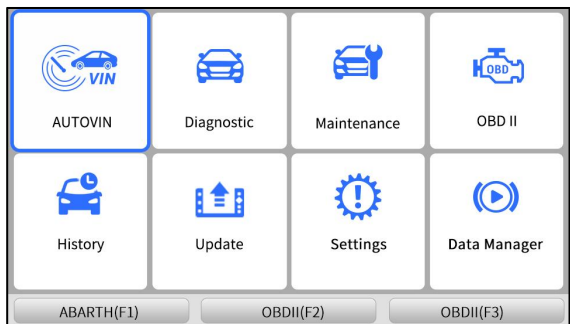


Figure 4-6 Sample Main Menu Screen

2. Select **Manually input VIN** from the menu, and press the **ENTER** key.

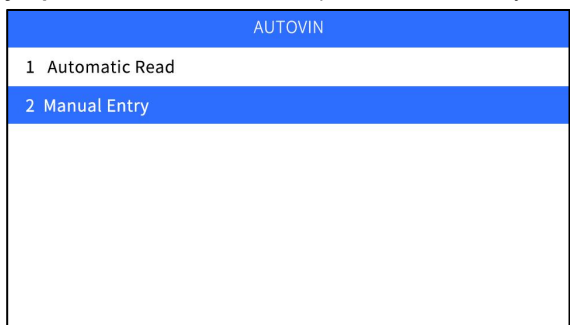


Figure 4-7 Sample VIN Reading Screen

3. Press the function key **Keyboard** and a virtual keyboard opens for VIN entry.

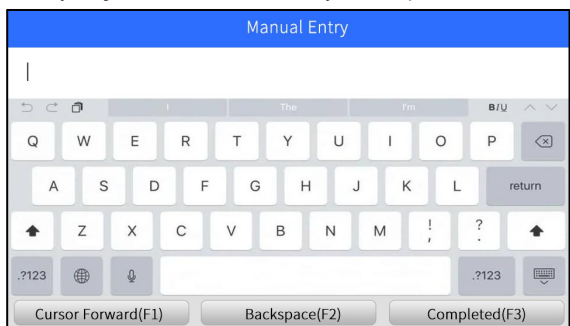


Figure 4-8 Sample Manual VIN Entry Screen

4. Input a valid VIN code and use the function key **Completed** to confirm. The scan tool starts to identify the vehicle.

4.2 Manual Vehicle Selection

Select vehicle brand you are to test, and two ways of getting to the diagnostic operations are available.

- SmartVIN
- Manual Selection