Trademarks

FOXWELL is trademark of Shenzhen Foxwell Technology Co., Ltd.

All other marks are trademarks or registered trademarks of their respective holders.

Copyright Information

©2022 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 tool. 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 tool 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 tool in areas where explosive vapor may collect,

such as in below-ground pits, confined areas, or areas that are less than 18 inches (45 cm) above the floor.

- Do not smoke, strike a match, or cause a spark near the vehicle while testing and keep all sparks, heated items and open flames away from the battery and fuel / fuel vapors as they are highly flammable.
- Keep a dry chemical fire extinguisher suitable for gasoline, chemical and electrical fires in work area.
- Always be aware of rotating parts that move at high speed when an engine is running and keep a safe distance from these parts as well as other potentially moving objects to avoid serious injury.
- Do not touch engine components that get very hot when an engine is running to avoid severe burns.
- Block drive wheels before testing with engine running. Put the transmission in park (for automatic transmission) or neutral (for manual transmission). And never leave a running engine unattended.
- Do not wear jewelry or loose fitting clothing when working on engine.

Table of Contents

ONE-YEAR LIMITED WARRANTY **2**

SAFETY INFORMATION **5**

1 USING THIS MANUAL **9**

1.1 Bold Text 9
1.2 Symbols and Icons 9

2 INTRODUCTION **10**

2.1 Scanner Descriptions 10
2.2 VCI Dongle Descriptions 11
2.3 Accessories 12
2.4 Technical Specifications 13

3 GETTING STARTED **14**

3.1 Powering up the Scanner 14
3.2 Shutting Down the Scanner 14
3.3 Screen Layout of Home Screen 15

4 MY ACCOUNT **17**

4.1 Registration 17
4.2 Sign in 21
4.3 My Account 23
4.4 My Products 23
4.5 Feedback and Suggestions 23

5 UPDATE **25**

5.1 Automatic Update 25
5.2 Manual Update 25

6 VCI MANAGER **26**

7 FIRMWARE UPDATE **28**

8 VEHICLE IDENTIFICATION **29**

8.1 Vehicle Connection 29
8.2 VIN Reading 31
8.3 Manual Selection 33
8.4 Vehicle History 35

9 DIAGNOSIS **36**

9.1 Vehicle Identification 36
9.2 Diagnostic Operations 40

9.2.1 Read Codes 40
9.2.2 Clear Codes 42
9.2.3 Live Data 43
9.2.4 ECU Information 48
9.2.5 Active Tests 49
9.3 COMPLAINTS 50
10 MAINTENANCE 51
10.1 OIL RESET 51
10.2 ELECTRONIC PARKING BRAKE (EPB) SERVICE 52
10.3 BATTERY REPLACEMENT (BRT) 53
10.4 DIESEL PARTICULATE FILTER (DPF) REGENERATION 54
10.5 THROTTLE BODY ALIGNMENT (TPS/TBA) 54
10.6 STEERING ANGLE SENSOR (SAS) CALIBRATION 54
10.7 CONTINUOUS VARIABLE TRANSMISSION (CVT) 55
10.8 GEAR LEARNING 55
10.9 TIRE PRESSURE MONITORING SYSTEM PROGRAMMING 55
10.10 INJECTOR CODING 55
10.11 ABS BLEEDING 55
10.12 KEY PROGRAMMING/IMMOBILIZER 56
11 DATA MANAGER 56
11.1 IMAGE 56
11.2 PDF REPORT 59
11.3 DATA PLAYBACK 61
12 SETTINGS 63
12.1 UNITS 63
12.2 LANGUAGE 63
12.3 FONT SIZE 63
12.4 MODULE SORTING 64
12.5 SORT TILES 66
12.6 REMOTE CONTROL 66
12.7 AUTOMATIC UPDATE 66
12.8 SYSTEM SETTINGS 67
12.9 GENERAL 67
12.10 UNINSTALL VEHICLE SOFTWARE 67
12.11 CLEAR APP DATA 68
12.12 PRINT SETTINGS 68
12.13 ABOUT 70
13 REMOTE SUPPORT 71

1 Using This Manual

We provide tool usage instructions in this manual. Below are 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:

Select **Diagnostic** from the Home screen of the **NT819BT** application.

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 VIN hotkey is selected, a menu that lists all available options displays. Menu options include:

- Automatic Read
- Scan VIN
- Manual Entry

1.2.2 Arrow Icon

▶An arrow icon indicates a procedure.

Example:

▶To connect to wall plug:

1. Connect the USB charge cable to scanner and plug it to the wall socket.
2. Press the power switch of the scan tool to power it on; meanwhile the scanner tool starts charging automatically also.

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 scanner as water might find its way into the scanner.

2 Introduction

The brand new Android scan tool **NT819BT** inherits the same Foxwell advantages in car fault diagnostic tech, such as multi manufacturer coverage, service functions and accurate test data, making it the perfect tool for busy garages or workshops, who need the latest technology at unbeatable value.

2.1 Scanner Descriptions

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

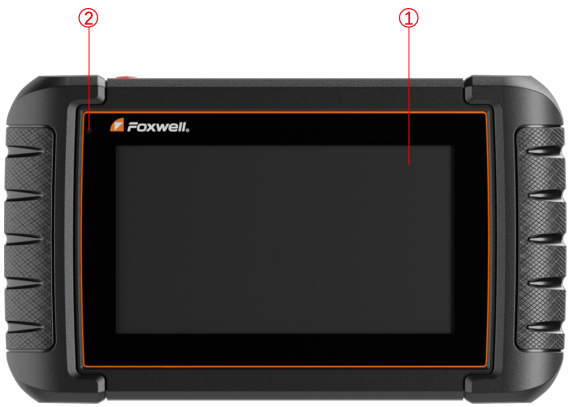

Figure 2-1 Front View

① **7” LCD IPS Capacitive Touch Screen**- shows menus, test results and operation tips.

② **Power Status Indicator** - indicates the power status of the scanner.

Figure 2-2 Top View

③ **Power Switch** - turns on the scanner, goes to sleep mode or wake up the scanner from sleep mode, press and hold for 3 seconds for emergency shutdown..

④ **USB Type-C Port** - connects to wall plug to charge the scanner and can be used for data transfer.

⑤ **USB Port** - provides a USB connection for the external storage devices, oscilloscope or video scope etc.

IMPORTANT

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

2.2 VCI Dongle Descriptions

NT819BT connects to the vehicle and get data through the VCI dongle either by Bluetooth or USB communication.

Figure 2-3 Front View of VCI dongle

1 **Running Light** – flashes during normal operation, and stays on or off when abnormal.
2 **Communication Light** – is always on when VCI connect to device via bluetooth or USB, and flashes when sending data.
3 **Power Light** - turns to red when powered on.

2.3 Accessories

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.

Table 2-1 Accessories

2.4 Technical Specifications

Item	Description
Screen	7'' diagonal, daylight readable color LCD screen; 1024*600 pixel
Operation System	Android 9.0
Processor	Quad-CORE, 1.3GHz
Memory	1GB
SSD Hard drive	32GB
Communication interface	Built-in WIFI 802.11 b/g/n Wireless LAN USB2.0 OTG/standard USB 2.0 HOST Bluetooth specification v2.1+EDR; Bluetooth 4.0 Low Energy (LE) (10-20 m)
Camera	5 megapixels rear-facing
Built-in Battery	4000mAh, Lithium-polymer battery, chargeable via 5V USB power supply
Protocols	ISO9141-2, ISO14230-2, ISO15765-4, K/L lines, Double K Line SAE-J1850 VPW,SAE-J1850PWM,CAN ISO 11898, High-speed, Middle-speed, Lows-peed and Single wire CAN, KW81, KW82,

	GM UART, UART Echo Byte Protocol, Honda Diag-H Protocol, TP2.0, TP1.6, SAE J1939, SAE J1708,Fault-Tolerant CAN, CAN FD, DOIP
Working Temperature	-10 to 70°C
Storage Temperature	-20 to 80°C
Operating Humidity	5%-95% Non-Condensing
Dimensions	205*135*30mm (L*W*H)
Weight	0.87kg (Main unit)

Table 2-2 Technical Specifications

3 Getting Started

This section describes how to power on/down the scanner, provides brief introductions of applications loaded on the scanner and display screen layout of the scan tool.

3.1 Powering up the Scanner

Before using the NT819BT applications (including updating the scanner), please make sure to provide power to the scanner.

The unit operates on any of the following sources:

- Internal Battery Pack
- External Power Supply

3.1.1 Internal Battery Pack

The tablet scanner can be powered with the internal rechargeable battery. The fully charged battery is capable of providing power for 5 hours of continuous operation.

NOTE
Please turn off the tablet to save power when not use.

3.1.2 External Power Supply

The tablet can also be powered from a wall socket using the USB charging adapter. The tablet also charges its internal battery pack through USB Type-C cable.

3.2 Shutting Down the Scanner

All vehicle communication must be terminated before shutting down the scanner. Exit the Diagnostic application before powering down.

To shut down the scanner:

1. Press and hold the Power button of the scanner for 3 seconds.
2. Click the **Power off** to shut down or **Reboot** to restart.

3.3 Screen Layout of Home Screen

After the scanner turning on, the screen show main menu of the application.

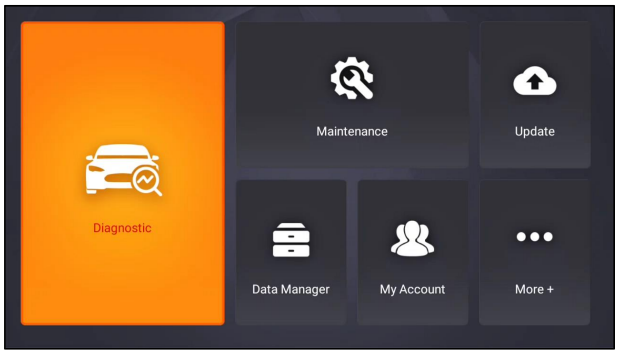

Figure 3-1 Sample Home Screen

3.3.1 Application Menu

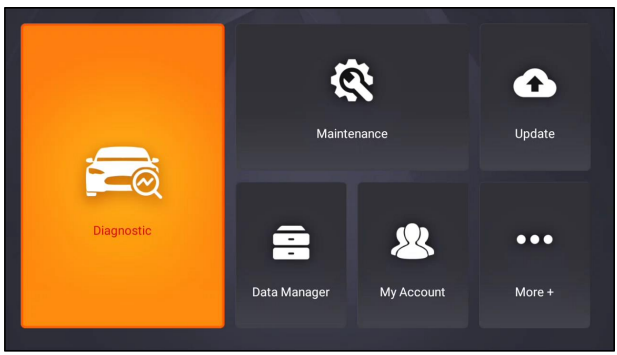

Figure 3-2 Sample Main Menu of Application

This section briefly introduces the applications that are preloaded into the scanner:

- **Diagnostic** - leads to test screens for diagnostic trouble code information, freeze frame, live data and ECU information.
- **Maintenance** - leads to screens for common used special functions like Oil light reset, EPB, BRT, and DPF etc.
- **Update** - leads to screens for Foxwell ID registration and updating the scanner.

- **Data Manager** - leads to screens for saved screenshots, pictures and test reports, and playing back live data, as well as debug logging data.
- **My Account** - displays your Foxwell ID information like registered products and personal information and allows for sending us feedbacks about the scanner.
- **Settings** - leads to screens for adjusting default settings to meet your own preference and view information about the scanner.
- **Remote Control** - leads to TeamViewer to get remote support from Foxwell team or remote vehicle diagnostic.
- **Functions** - Query the functions of model supported by the scanner.
- **Firmware Update** – VCI firmware update.
- **VCI Manager** – VCI manage (VCI binding, unbinding, rescan vehicle software).

3.3.2 Diagnostic Menu

Touch **Diagnostic** at the NT819BT application menu, and the Diagnostic menu will display. The operations of the buttons of Diagnostic menu are described in the below table.

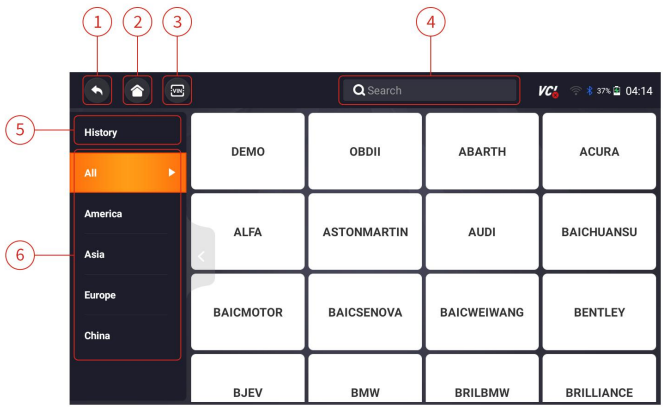

Figure 3-3 Sample Diagnostic Menu Screen

No.	Name	Description
1	Back	Back to the previous screen.
2	Home	Back to the Application Menu.
3	VIN	Shortcut for VIN reading menu, which typically includes Automatic Read, Scan VIN and Manual Entry.
4	Search	Lets you search a vehicle make quickly.
5	History	Displays the tested vehicle records.
6	Area	Displays car makes from different origins like America, Asia, Europe and Chinese.

Table 3-1 Title Bar of Diagnostic Menus

4 My Account

This section introduces user account registration, login, device activation and other information.

When **My Account** application is selected, a menu with available options displays.

My Account Menu options typically include:

- My Account
- My Products
- Feedback and Suggestions

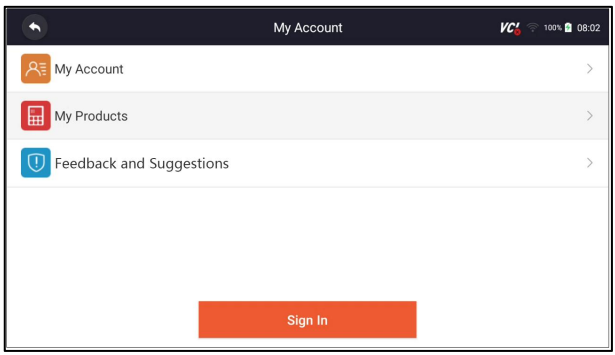

Figure 4-1 Sample My Account Screen

4.1 Registration

If you are new to FOXWELL, please register a FOXWELL ID first either by

- Registering with the built-in client;
- Or registering through our website with the URL: http://www.foxwelltech.us/register.html

4.1.1 Register with Built-in Client

You are allowed to create a Foxwell ID with the built-in client.

To register with built-in client:

1. Press **My Account** or **Update** from home screen of NT819BT diagnostic application, the user login page will show, then press **Free registration** button to register an account.

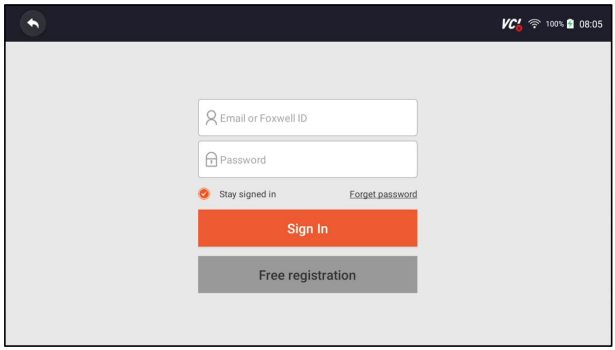

Figure 4-2 Sample Update Client Main Screen

2. Enter the User Name (use one of your existing mail addresses as user name), and press **Send Code** button for get a verification code, Foxwell will send a 4-digit verification code to the email you just entered.

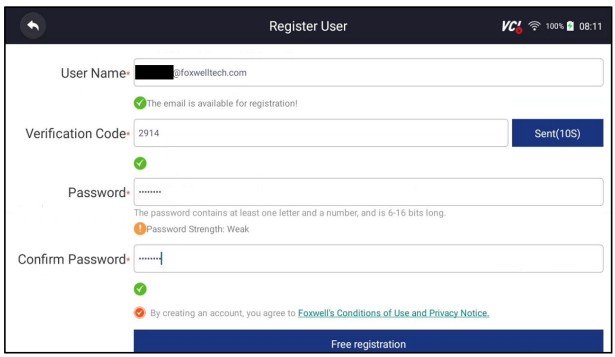

Figure 4-3 Sample ID Registration Screen

3. Get the security code in your mailbox, input the code as verification code. Then create a password and click **Free Registration** to complete.

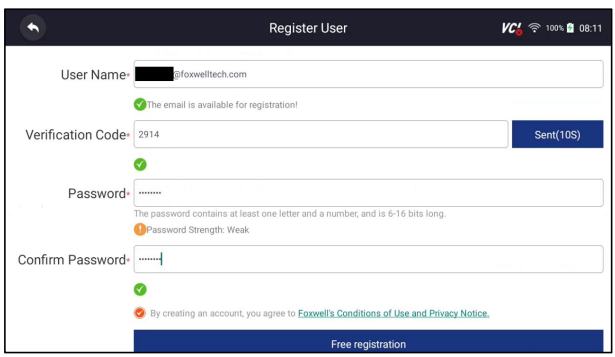

Figure 4-4 Sample ID Registration Screen

4. “The account has been created successfully” message will appear if you registered successfully.

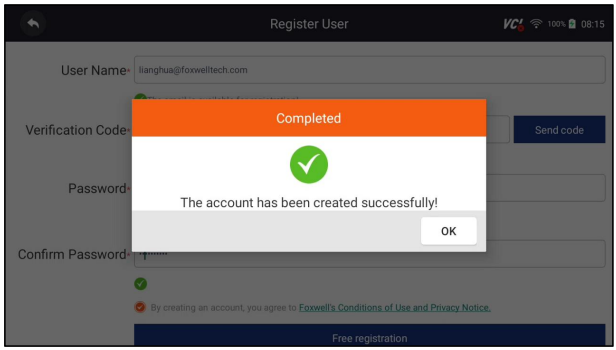

Figure 4-5 Sample Registration Done Screen

5. The serial number will show after registration. Click **Submit** to activate the product or press to back.

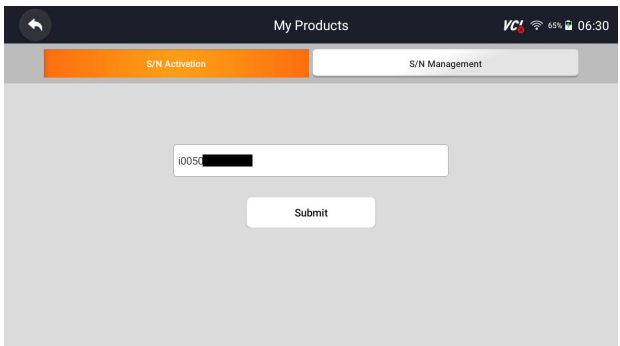

Figure 4-6 Sample Product Activation Screen

4.1.2 Register through Website

To register through our website:

1. Visit Foxwell official website www.foxwelltech.us and press **Register** icon, or go to the registration page by selecting **Support** from home page and then click **Register**.

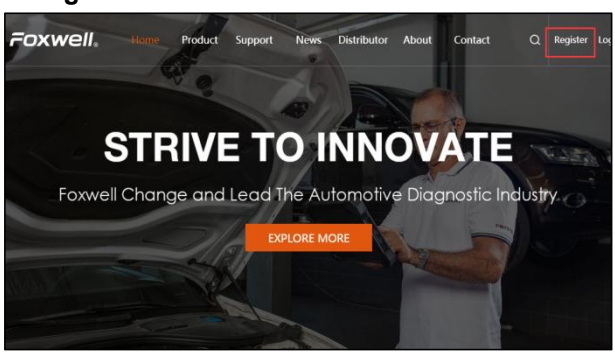

Figure 4-7 Sample Website Register Screen

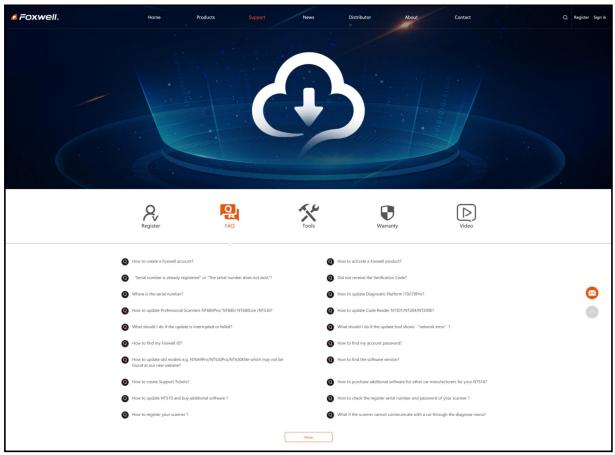

Figure4-8 Sample Website Register Screen

2. Enter one of your email addresses as your user ID and click the **Send Code** button. We will send a 4-digit verification code to the email you just entered. Find the security code in your mailbox, input the code, create a password and click Free Registration to complete.

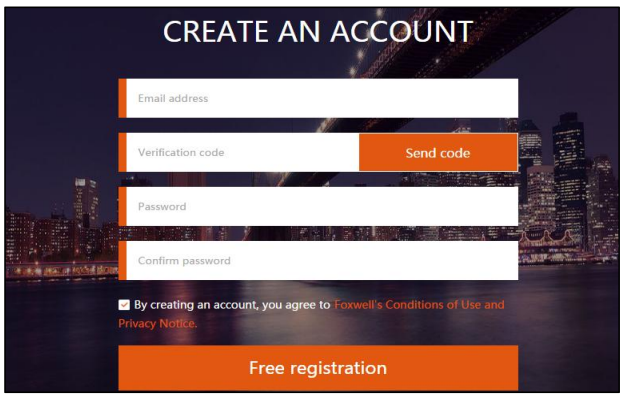

Figure 4-9 Sample Create Account Screen

3. Sign in to the **Member Center**, click **New Registration**, input the right serial number and click **Submit** to activate the product.

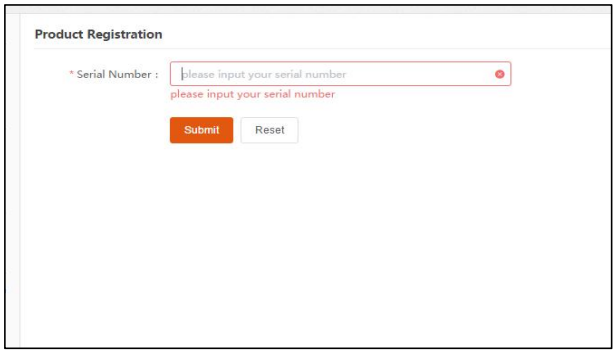

Figure 4-10 Sample Product Register Screen

4.2 Sign in

Press **My Account** or **Update** from home screen of NT819BT diagnostic application, the user login page will show, enter your FOXWELL ID and password, and press **Sign in** button to sign in.

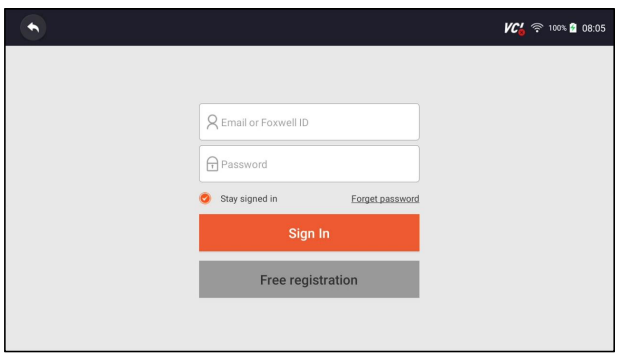

Figure 4-11 Sample Sign in Screen

4.2.1 Product activate

If you are logging in for the first time, it will prompt and guide you to activate the current device while sign in successfully.

▶ To activate product

1. Press **OK** button to activate product and press **Cancel** to back.

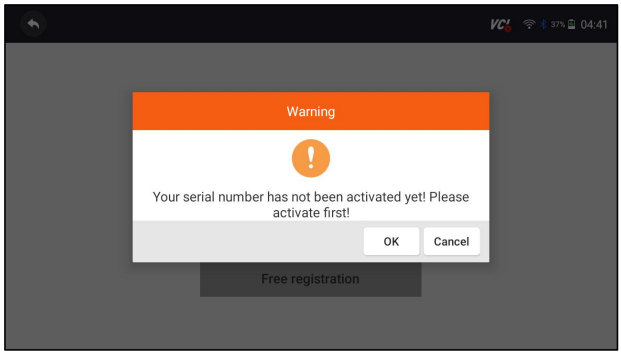

Figure 4-12 Sample Product Activation Screen

2.Click Submit to continue the activation and press to give up activation.

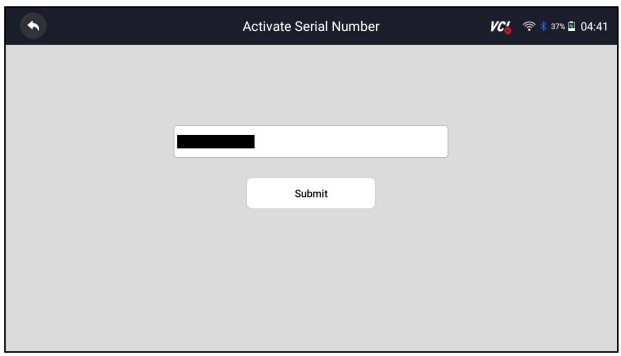

Figure 4-13 Sample Product Activation Submit Screen

3. “Product is activated successfully” message will appear if activate successfully.

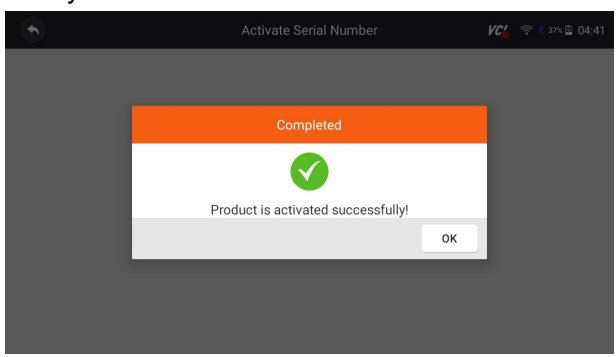

Figure 4-14 Sample activate success Screen

4.3 My Account

My Account option allows you to check and modify or complete your account information including user name, e-mail, telephone, address and so on.

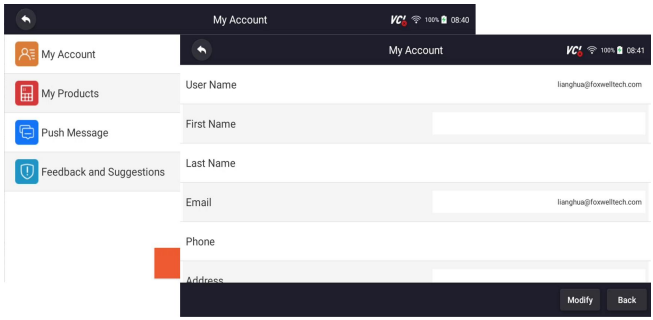

Figure 4-15 Sample My Account Screen

4.4 My Products

This option let you activate a new product and manage activated products including serial number and expiration date.

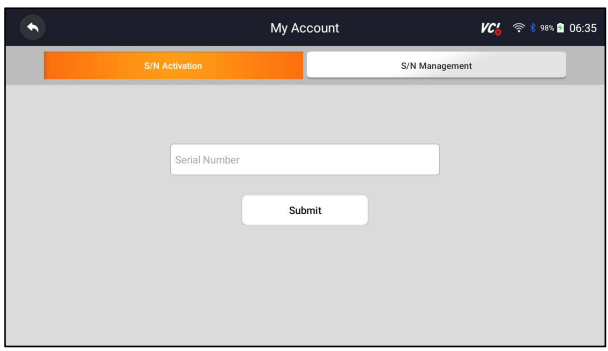

Figure 4-16 My Product Screen

4.5 Feedback and Suggestions

This option allows you to log on your e-mail and send feedback and suggestions about Foxwell products.

To send feedback and suggestions about Foxwell products:

1. Press **My Account** from home screen of the NT819BT diagnostic application.
2. Press **Feedback and Suggestions** option to show Feedback page, there are two options--Diagnosis Feedback and General Feedback.

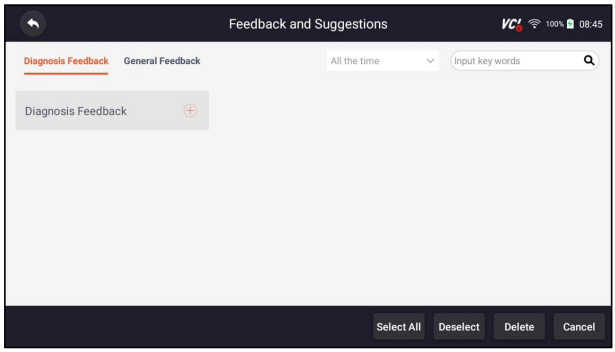

Figure 4-17 Sample feedback record Screen

3. Select **Diagnosis Feedback** or **General Feedback** for creating a feedback. Select the type of error and some necessary content and problem description or attachments. Press **Save** button to save the feedback. Or press Email button to send if you have an email account.

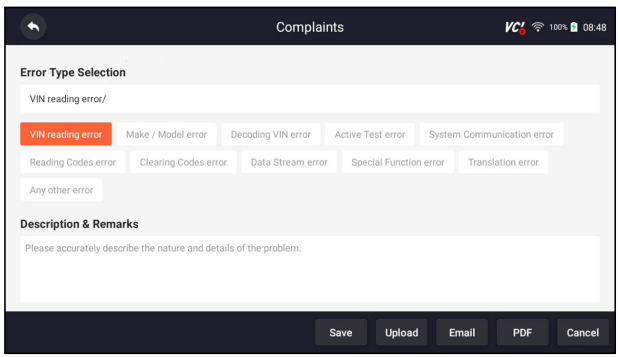

Figure 4-18 Sample Feedback Edit Screen

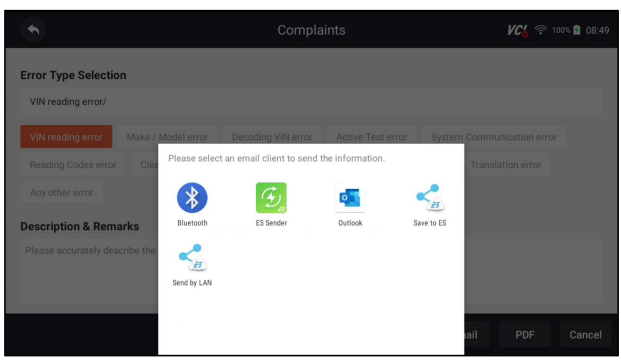

Figure 4-19 Sample Email Select Screen

5 Update

The scanner can be updated to keep you stay current with the latest development of diagnosis. This section illustrates how to register and update your scan tool. You can register both on Foxwell website or by the built-in update client.

NOTE

Before registration and updating, please make sure your network works correctly and the tablet is fully charged or connect to external power supply.

5.1 Automatic Update

When the automatic update is enabled, an update symbol is displayed in the upper right corner if any software version is released.

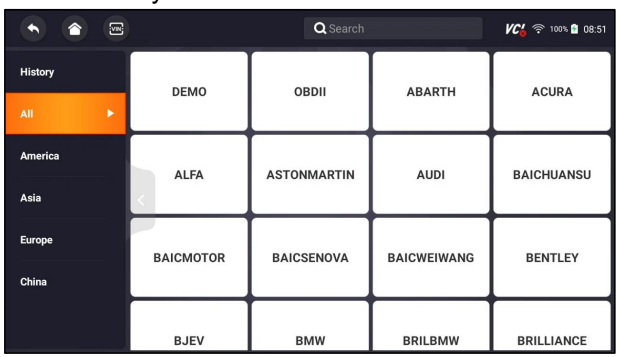

Figure 5-1 Sample Automatic Update Screen

To automatic update or refer to 13.7 Automatic Update:

1. Press **Settings** from home screen of the NT819BT diagnostic application.
2. Select **Automatic Update**, then set automatic update notice enable.

5.2 Manual Update

To update the diagnostic application:

1. Press **Update** of NT819BT diagnostic application, and the update client starts up automatically.
2. The available updates display. Click the check box(s) in front of the software you wish to update and then click the **Update** button to download.
3. When all the items are updated, an “Update Done” message displays.

NOTE

Please make sure your network works correctly and the tablet is fully charged or connect to external power supply.

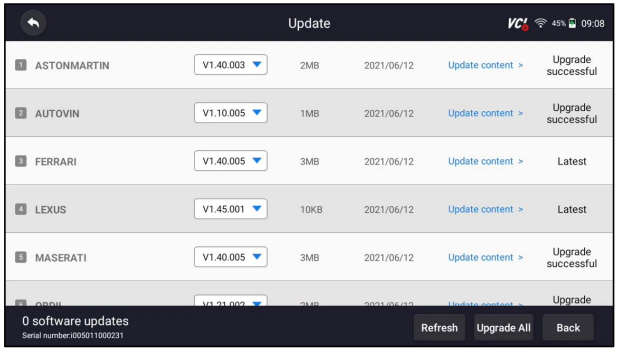

Figure 5-2 Sample Update Screen

6 VCI Manager

VCI Manager is used to unbind and bind the built-in VCI. When the built-in VCI needs to be replaced, you need to use this function to unbind the old VCI and re-bind the replaced built-in VCI.

Even if the VCI is not replaced, the existing VCI device will be automatically unbound when unbinding, and then the existing VCI will be automatically bound, and the software of all vehicles in the device will be rescanned and refreshed, and finally the APP will be restarted.

VCI unbind & rebind：

1. Click **VCI Manager** application on the NT819BT home screen.
2. After clicking Unbind a VCI dongle, it will display whether to unbind the current VCI. When clicking OK, it will execute unbind, rebind, and refresh the vehicle.

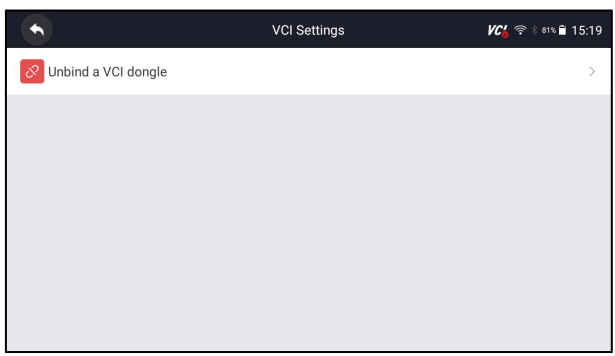

Figure 6-1 Sample Unbind a VCI dongle

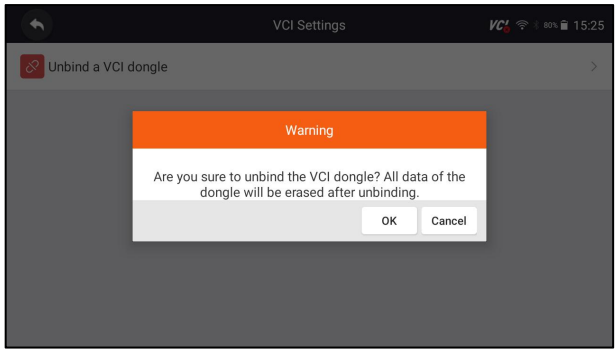

Figure 6-2 Sample Unbinding Confirmation Prompt

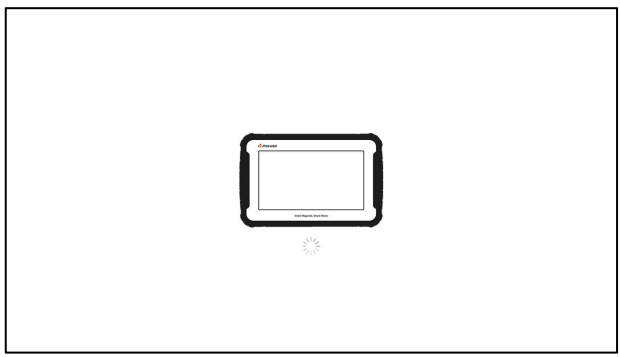

Figure 6-3 Sample Unbinding Current VCI

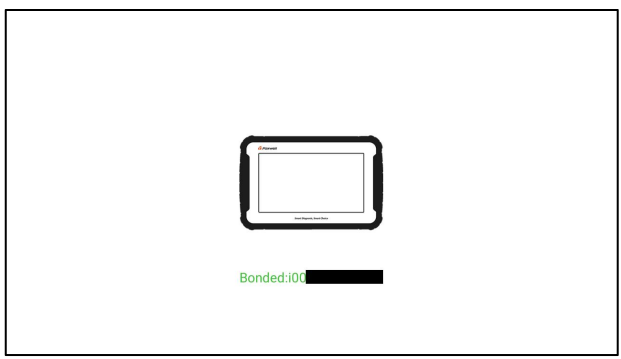

Figure 6-4 Sample Bind New VCI Successfully

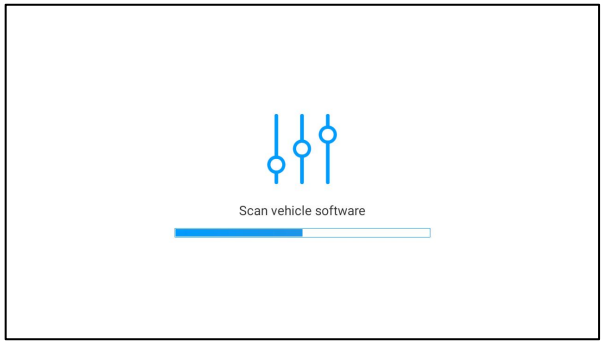

Figure 6-5 Sample Rescan Vehicle Software

7 Firmware Update

This application allows you to update the firmware of NT819BT.

To update the firmware:

1. Click the **Update** application on the NT819BT home screen.
2. Check and download the firmware package.
3. After the download is completed, it will automatically jump to the **Firmware Update** function module.
4. Check the battery level to ensure that the battery level should be greater than 20%.
5. It will start update automatically if there is an update available. If update failed, please follow the on-screen instructions to troubleshoot and repeat the update.
6. “VCI firmware successfully message” will appear if update successfully.

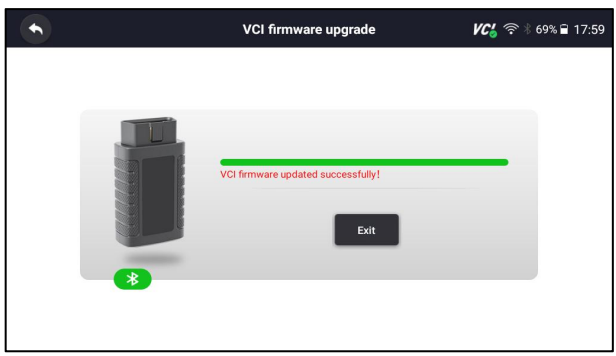

Figure 7-1 Sample Firmware Update Successfully Screen

NOTE
If there is a firmware update available, the update file will be downloaded and saved automatically when you try to update the diagnostic software. And you will be prompted to upgrade the firmware.

8 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. 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:

- VIN Reading
- Manual Selection

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

8.1 Vehicle Connection

To establish communication with NT819BT:

1. Power up the tablet.
2. Connect the VCI dongle to the vehicle's DLC for both communication and power source. The working range for Bluetooth communication is about 10-20m, providing easy connection to vehicles in any location throughout the shop.

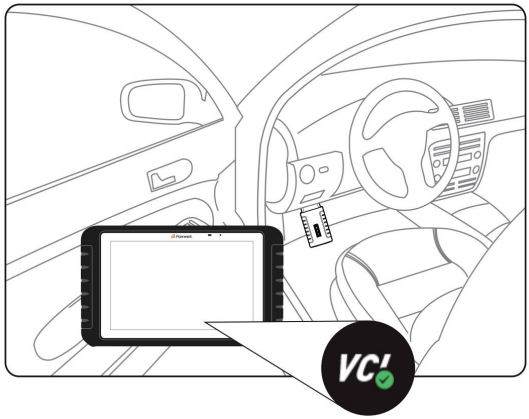

Figure 8-1 Sample Communication Screen.

3. The VCI dongle will connect to the tablet automatically.

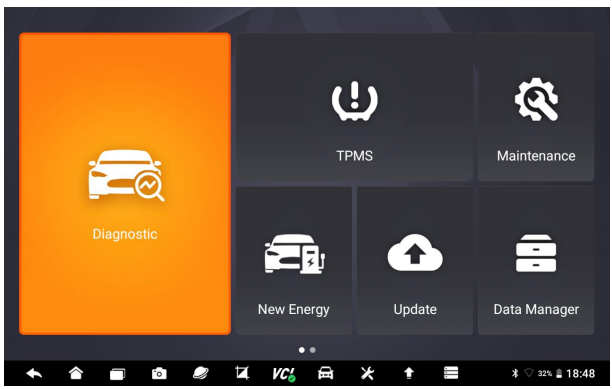

Figure 8-2 Sample VCI Manager Screen

4. Check if the VCI button at the toolbar turns to green. If yes, it means it's ready to start diagnosis.

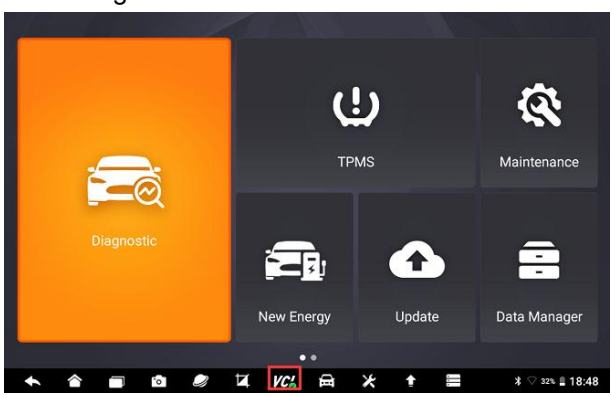

Figure 8-3 Sample VCI Indicator Status Screen

NOTE

If the VCI Indicator isn't green, it indicates that the signal strength of the transmitter is too weak to be detected. In this case, try to get closer to the device, or check the connection of VCI dongle, and remove all possible objects that cause signal interference

8.2 VIN Reading

VIN button on the title bar is a shortcut for VIN reading menu, which includes **Automatic Read**, **Manual Entry**, eliminating the need for navigating through complicated car identification process.

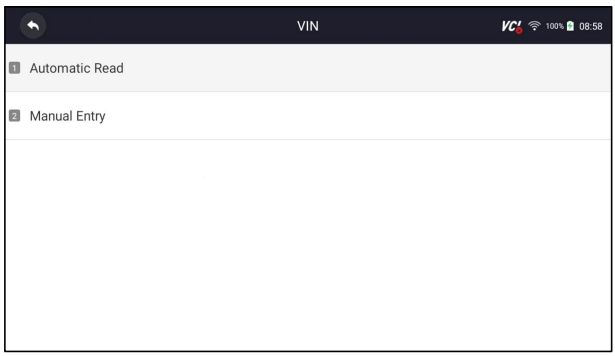

Figure 8-4 Sample VIN Hotkey Screen

8.2.1 Automatic Read

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

To identify a vehicle by Automatic Read:

1. Select **Diagnostic** from home screen of the NT819BT application.
2. Click **VIN** and choose **Automatic Read** from the option list.
3. When the scan tool builds connection with the vehicle, the VIN number displays. If the Vehicle Specification or VIN code is correct, press the **OK** to continue.

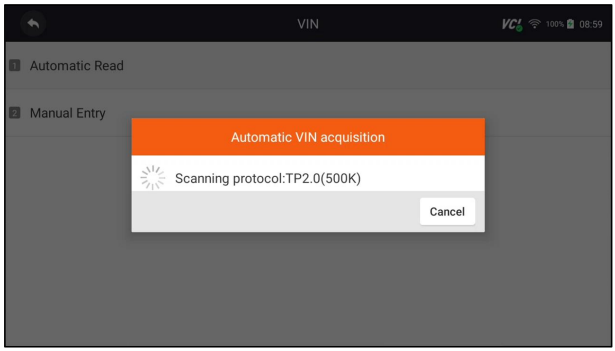

Figure 8-5 Sample Automatic Read Screen

4. 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.

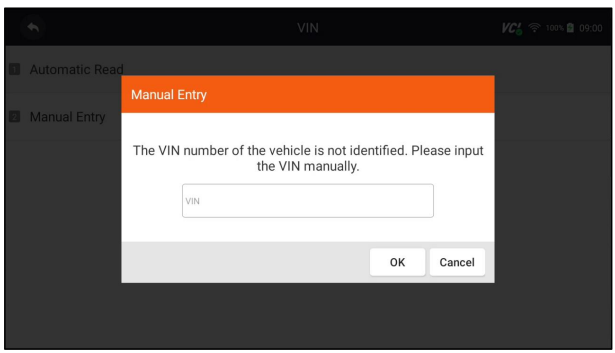

Figure 8-6 Sample Manual Entry Screen

8.2.2 Manual Entry

Manual Entry allows to identify a vehicle by inputting VIN manually.

To identify a vehicle by Manual Entry:

1. Select **Diagnostic** from home screen of the NT819BT application.
2. Click **VIN** and choose **Manual Entry** from the option list.
3. Press Keyboard button to input a valid VIN code and press **OK** to continue.

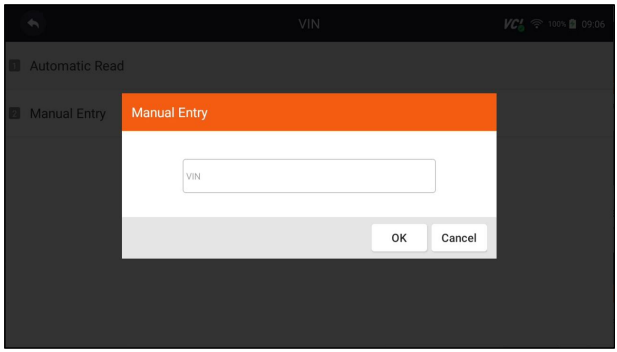

Figure 8-7 Sample Manual Entry Screen

8.3 Manual Selection

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

- Smart VIN
- Manual Selection

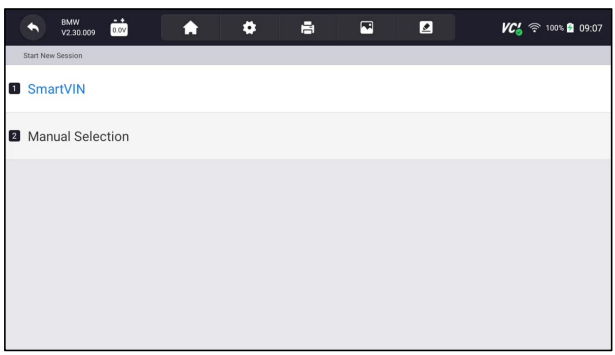

Figure 8-8 Sample Vehicle Entry Screen

8.3.1 Smart VIN

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

To identify a vehicle by Smart VIN:

1. Select **Diagnostic** from home screen of the NT819BT application.
2. A screen with vehicle manufacturers displays. Select the area where the vehicle manufacturer from. A menu of all vehicle manufacturers displays. Or tap the **Search** box to search the car you are to test.

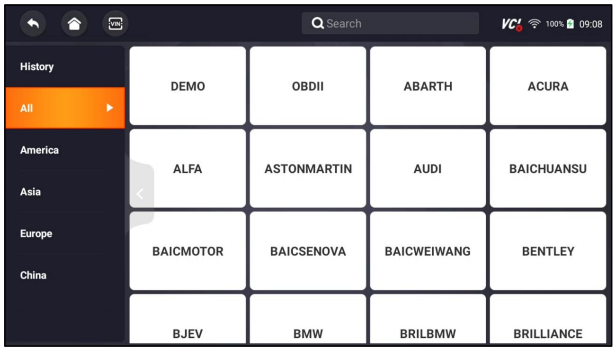

Figure 8-9 Sample Vehicle Selection Screen

3. Choose **SmartVIN** option to start reading the VIN automatically.

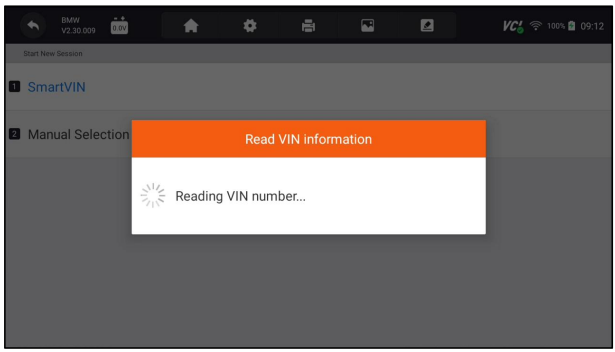

Figure 8-10 Sample Smart VIN Screen

4. After the scan tool builds connection to the vehicle, the VIN number displays. If the Vehicle Specification or VIN code is correct, press the **OK** to continue. If incorrect, please enter a valid VIN number manually.

8.3.2 Manual Vehicle 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. Select **Diagnostic** from home screen of the NT819BT application.
2. A screen with vehicle manufacturers displays. Select the area where the vehicle manufacturer is from. A menu of all vehicle manufacturers displays. Or tap the **Search** box to search the car you are to test.
3. Choose **Manual Selection** option from the list.
4. On each screen that appears, select the correct option until the complete vehicle information is entered and the menu of controller selection displays.

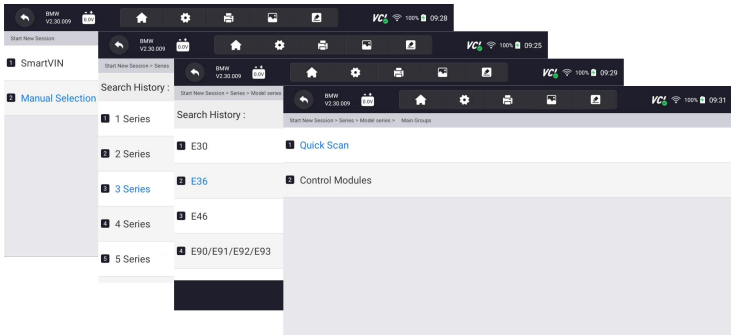

Figure 8-11 Sample Manual Vehicle Selection Screen

8.4 Vehicle History

Vehicle History keeps records of tested vehicles and allows restarting the diagnosis of a vehicle without the need to do vehicle identification again.

To identify a vehicle by Vehicle History:

1. Select **Diagnostic** from home screen of the NT819BT application.
2. Select **History** button at the top of the diagnostic page and the diagnostic records will display.

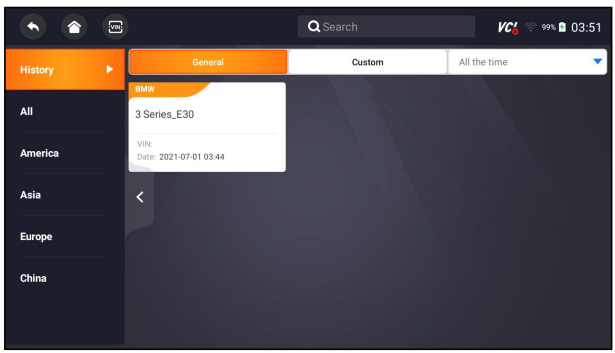

Figure 8-12 Sample History Record Screen

3. Choose the vehicle model you want to test from the list.
4. Click the Diagnostic button at the bottom bar to go to vehicle test page.

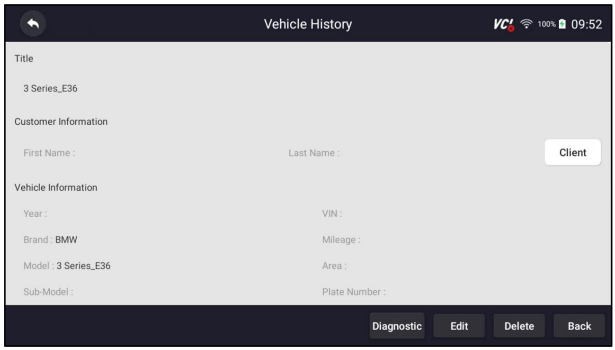

Figure 8-13 Sample History Record Screen

9 Diagnosis

This section illustrates how to use the scanner to read and clear diagnostic trouble codes, view live data readings and ECU information on controllers installed, perform special functions such as actuation and coding, and perform vehicle services and maintenance on Asia, European, China and USA vehicle brands.

9.1 Vehicle Identification

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

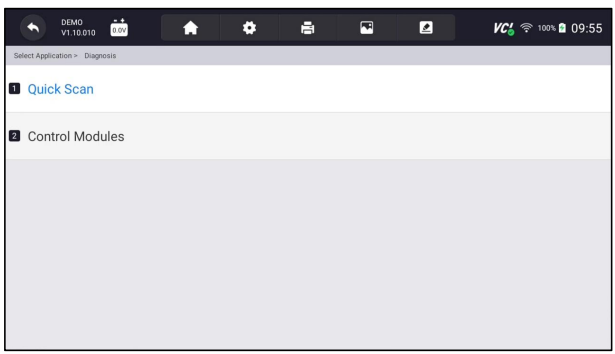

Figure 9-1 Sample Diagnosis Screen

NOTE

Not all identify options listed above are applicable to all vehicles. Available options may vary by the year, model, and make of the test vehicle.

9.1.1 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 a few minutes to complete the test.

To perform an automatic system scan:

1. Press **Quick Scan** option to start.
2. To pause the scan, press the **Pause** button on the screen.

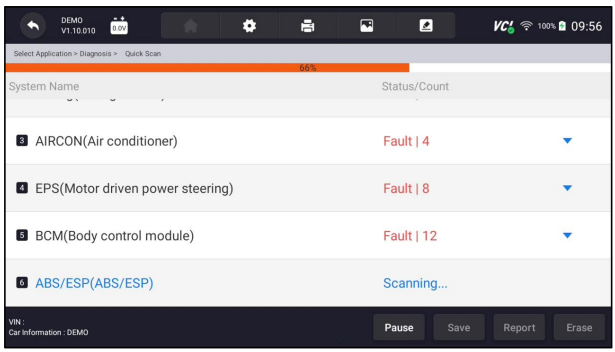

Figure 9-2 Sample Quick Scan Screen

3. At the end of successful automatic controller scan, a menu with a list of **DTC** displays and click ▼ button to the right to view DTC descriptions.

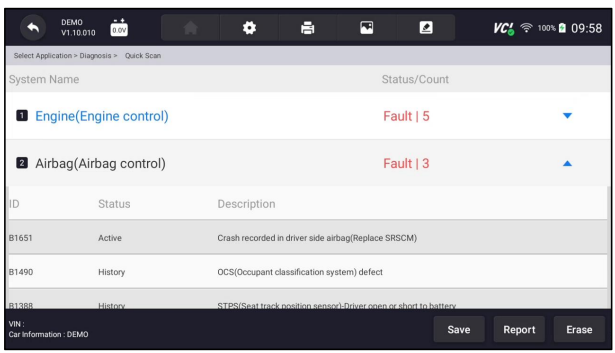

Figure 9-3 Sample Quick Scan Complete Screen

4. Press **Report** to create an overview of installed control units and their system status, or press **Save** to save the report. Press **Erase** to clear the information.

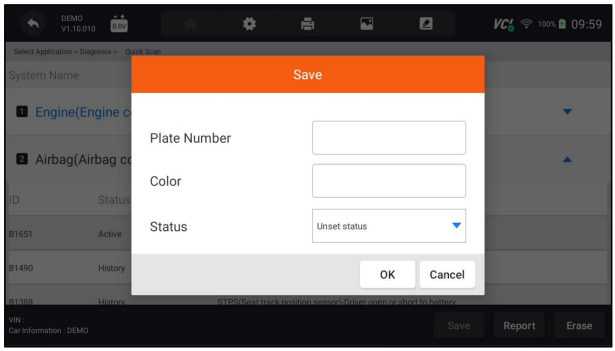

Figure 9-4 Sample DTC Save Screen

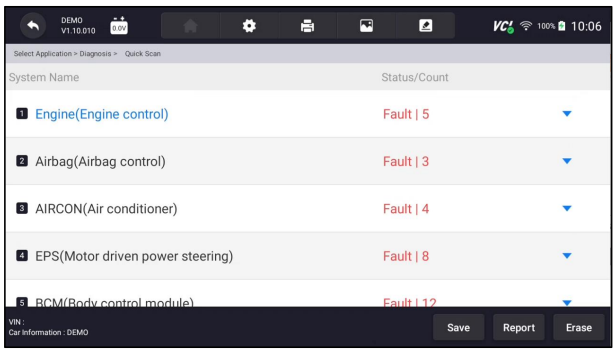

Figure 9-5 Sample Report Screen

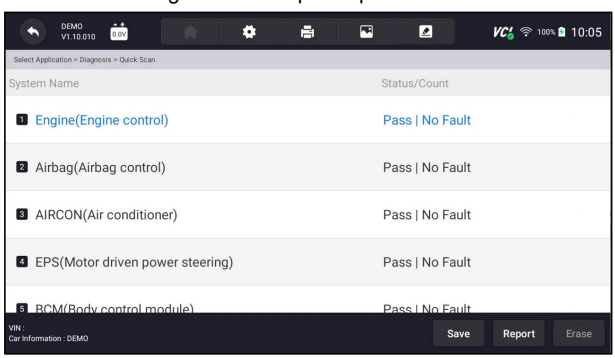

Figure 9-6 Sample Erase Screen

5. When running auto scanning, you can press **Pause** and select the system you would like to test. When the scanner has established connection with the vehicle, the Function Menu displays.

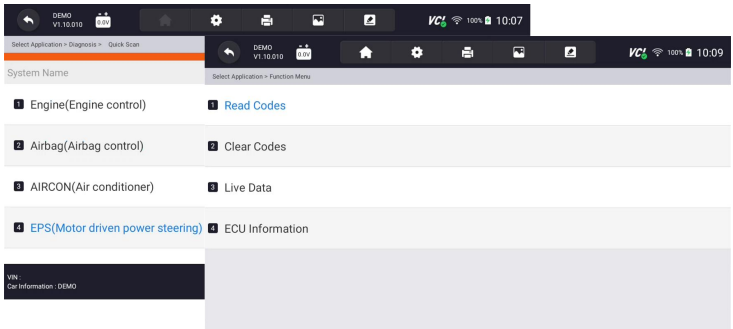

Figure 9-7 Sample System's Function Menu Screen

9.1.2 Control Modules

Control Modules displays all controllers available of the vehicle manufacturer. The controllers listed on the menu do not mean that they are installed on the vehicle. It is useful for technicians who are familiar with the vehicle specifications.

To select a system to test:

1. Press **Control Modules** from the menu and a controller menu displays.

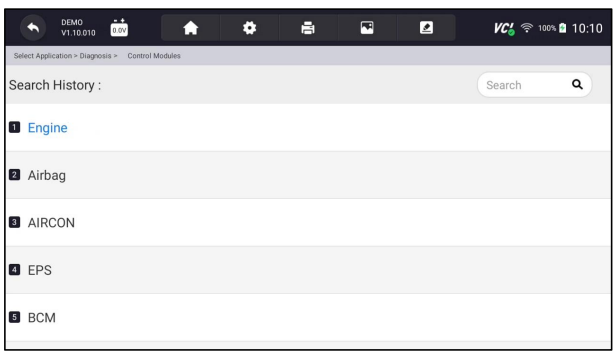

Figure 9-8 Sample Control Modules Screen

2. Select a system to test. When the scanner has established connection with the vehicle, the **Function Menu** displays.

Figure 9-9 Sample Function Menu Screen

9.2 Diagnostic Operations

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

- Read Codes
- Clear Codes
- Live Data
- ECU Information

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.

9.2.1 Read Codes

Read Codes menu lets you read trouble codes found in the control unit. There are 4 types of code status:

- Present/Permanent/Current
- Pending
- History

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 DTC(s) were first detected (to see if they are current or intermittent).