

Trademarks

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

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

Copyright Information

©2023 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 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.
- Don't connect or disconnect the equipments while the ignition is on or the engine is running.

Table of Contents

ONE-YEAR LIMITED WARRANTY	2
SAFETY INFORMATION	5
SAFETY MESSAGE CONVENTIONS USED	5
IMPORTANT SAFETY INSTRUCTIONS	5
1 USING THIS MANUAL	9
1.1 BOLD TEXT	9
1.2 SYMBOLS AND ICONS	9
1.2.1 Solid Spot	9
1.2.2 Arrow Icon	9
1.2.3 Note and Important Message	9
2 INTRODUCTION	10
2.1 SCANNER DESCRIPTIONS	10
2.2 ACCESSORIES	12
2.3 TECHNICAL SPECIFICATIONS	12
3 GETTING STARTED	13
3.1 POWERING UP THE TPMS SERVICE TOOL	13
3.1.1 Internal Battery Pack	13
3.1.2 External Power Supply	14
3.2 SHUTTING DOWN THE TPMS SERVICE TOOL	14
3.3 SCREEN LAYOUT OF HOME SCREEN	14
3.3.1 Application Menu	15
4 MY ACCOUNT	16
4.1 REGISTRATION	16
4.2 SIGN IN	18
4.2.1 Product activate	18
4.3 MY ACCOUNT	20
4.4 MY PRODUCTS	20
4.5 FEEDBACK AND SUGGESTIONS	20
5 UPDATE	22
5.1 AUTOMATIC UPDATE	22
5.2 MANUAL UPDATE	22
6 VCI MANAGER	23
7 FIRMWARE UPDATE	25
8 TPMS SERVICE OPERATIONS	26

8.1 VEHICLE IDENTIFICATION	26
8.1.1 VIN READING	27
8.1.2 Manual Vehicle Selection	27
8.2 TRIGGER OPERATIONS	29
8.3 LEARN HELP	36
9 DATA MANAGER	40
9.1 IMAGE	40
9.2 PDF REPORT	41
9.2.1 How to Create a PDF Report	41
9.2.2 Review PDF Report	42
9.3 DATA PLAYBACK	43
10 SETTINGS	43
10.1 UNITS	44
10.2 LANGUAGE	44
13.3 FONT SIZE	44
10.4 MODULE SORTING	44
10.5 SORT TILES	45
10.6 REMOTE CONTROL	46
10.7 AUTOMATIC UPDATE	46
10.8 SYSTEM SETTINGS	46
10.9 GENERAL	46
10.10 UNINSTALL VEHICLE SOFTWARE	46
10.11 CLEAR APP DATA	47
10.12 PRINT SETTINGS	47
10.13 ABOUT	48
11 REMOTE SUPPORT	49
12 COVERAGE LIST	49
13 REMOTE KEY FREQUENCY MONITORING	50
14 SENSOR INFORMATION	50
15 AUXILIARY TOOLS	50

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 TS5000 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 Type-C 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 TS5000 series 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 **5.5" TFT LCD Touch Screen**- shows menus, test results and operation tips.
- ② **Power Status Indicator** - indicates the power status of the scanner.



Figure 2-2 Side 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 start or emergency shutdown. Double click to screenshot.
- ④ **USB Type-C Port** - connects to wall plug to charge the scanner and can be used for data transfer.



Figure 2-3 Back View

- ⑤ **Rear-Facing Camera** - takes pictures of VIN number, faulty parts and plates and shoots test videos.
- ⑥ **Speaker** – outputs audio.

IMPORTANT

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

2.2 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.

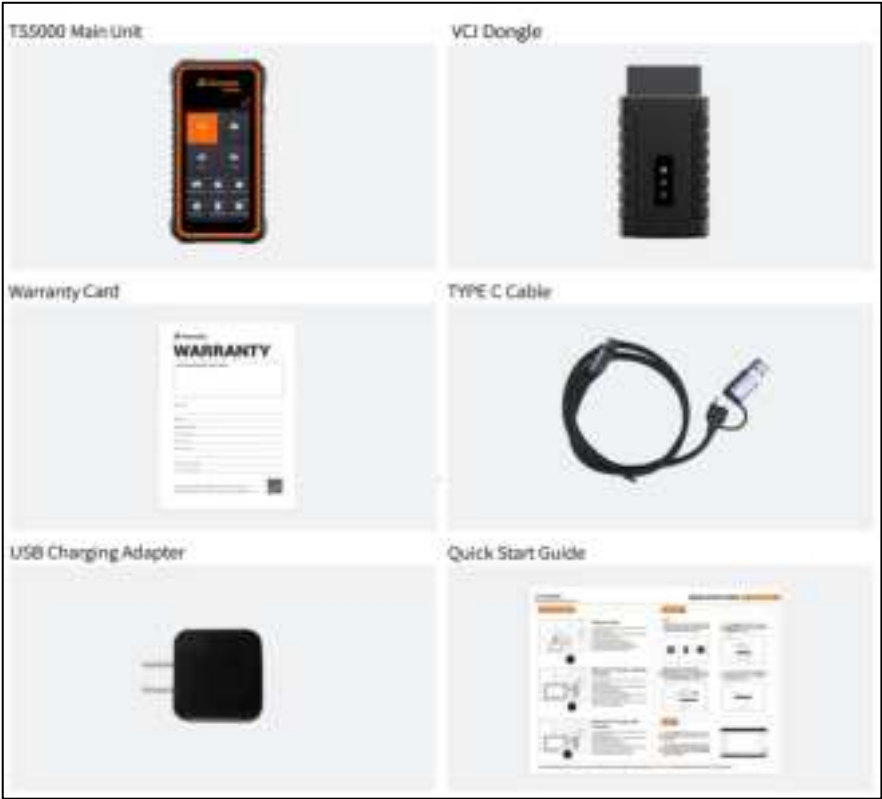


Table 2-2 Accessories

2.3 Technical Specifications

Item	Description
Screen	5.5" TFT Capacitive LCD screen; 720*1280 pixel
Operation System	Android 9.0
Processor	Quad-core, 1.3GHz
Memory	2GB

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)
Built-in Battery	5000mAh, 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, Low-speed and Single wire CAN, KW81, KW82, GM UART, UART Echo Byte Protocol, Honda Diag-H Protocol, TP2.0, TP1.6, SAE J1939, 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	195*100*25mm (L*W*H)
Weight	0.87kg (Main unit)

Table 2-3 Technical Specifications

3 Getting Started

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

3.1 Powering up the TPMS Service Tool

Before using the TS5000 applications (including updating the TPMS service tool), 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 TPMS Service Tool



To shut down the tool:

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:

- **TPMS** - leads to screens for TPMS function.
- **OE** - enters vehicle selection by selecting "sensor brand" and part number (OE number) at one time.
- **OBDII** – leads to OBDII screens for all 9 generic OBD system tests.
- **Update** - leads to screens for Foxwell ID registration and updating the scanner.
- **Vehicle History** - leads to screens for test records.
- **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.
- **VCI Manager** – VCI manage (VCI binding, unbinding, rescan vehicle software).
- **Firmware Update** – VCI firmware update.
- **Remote Control** - leads to TeamViewer to get remote support from Foxwell team or remote vehicle diagnostic.
- **Coverage List** - Query the functions of model supported by the scanner.
- **Remote key Frequency Monitoring** - to check the key frequency.
- **Sensor Information** - to check sensor information.
- **Auxiliary tools** - camera and file browser

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

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 TS5000 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

4.2 Sign in

Press **My Account** or **Update** from home screen of TS5000 diagnostic application, the user login page will show, enter your FOXWELL ID and password, and press **Sign in** button to sign in.



Figure 4-7 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 4-8 Sample Product Activation Screen


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



Figure 4-9 Sample Product Activation Submit Screen

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



Figure 4-10 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 4-11 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 4-12 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 TS5000 diagnostic application.
2. Press **Feedback and Suggestions** option to show Feedback page, there are two options--Diagnosis Feedback and General Feedback.



Figure 4-13 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 4-14 Sample Feedback Edit Screen



Figure 4-15 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 TS5000 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 TS5000 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.

NOTE

This function cannot be bound to an external VCI, but can only be bound to a built-in VCI.


-  VCI unbind & rebind:
1. Click **VCI Manager** application on the TS5000 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

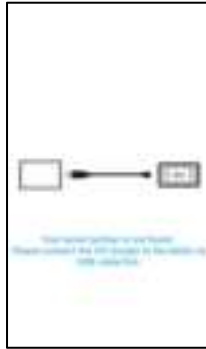


Figure 6-4 Sample Bind New VCI Successfully



Figure 6-5 Sample Rescan Vehicle Software

7 Firmware Update

This application allows you to update the firmware of TS5000.


-  To update the firmware:
 1. Click the **Update** application on the TS5000 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.



Figure 7-1 Sample Firmware Update Screen

6. “VCI firmware successfully message” will appear if update successfully.



Figure 7-2 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 TPMS Service Operations

The TPMS application is used to check the TPMS sensor conditions, program the Foxwell sensor T10, perform the TPMS Relearn procedure and basic TPMS diagnostic functions.

8.1 Vehicle Identification

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

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

- VIN Reading

- Manual Selection

8.1.1 VIN Reading

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



-  To identify a vehicle by VIN:
1. Select **TPMS** from home screen of the TS5000 application.
 2. Click  button and scan the VIN number on the nameplate of the car.



Figure 8-1 Sample Vehicle Selection Screen



Figure 8-2 Sample Smart VIN Screen

3. If the Vehicle Specification or VIN code is correct, press the **OK** to continue. If incorrect, please enter a valid VIN number manually.

8.1.2 Manual Vehicle Selection

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


-  To identify a vehicle by manual vehicle selection:
1. Select **TPMS** from home screen of the TS5000 application.
 2. Choose Brand-Model--Model year according to the car information.



Figure 8-3 Sample Manual Vehicle Selection Screen

3. Click **Enter** button to get the TPMS function page.

8.1.3 TPMS Service Screen Layout

The TPMS service typically include three functions:

Trigger/ Programming/Diagnosis/ Learn Help



Figure 8-4 Sample TPMS Service Screen Layout

8.2 Trigger Operations

The sensor trigger function allows activating of TPMS sensor to view sensor data such as sensor ID, tire pressure, tire temperature, sensor battery, sensor position, and sensor frequency.



-  To Trigger TPMS sensor
1. Tap **Trigger** Tab.
 2. Tap the desired wheel position on the vehicle thumbnail. Hold the Display Tablet with the  symbol (in the top right corner) close to the tire sidewall near the valve stem, and then press the Trigger button. The Display Tablet will send low frequency signal to trigger the sensor.
 3. The sensor data of the selected wheel will display on the table of the screen once the sensor is successfully activated and decoded.




Figure 8-5 Sample Trigger TPMS Screen

NOTE:

The Display Tablet will perform TPMS check in a sequence of FL (front left), FR (front right), RR (rear right), RL (rear left) and SP (spare, if any).

4. Wheel with a feedback icon, red or green vertical rectangle, indicates sensor trigger has been finished. Refer to Table 11-1 for details.

Icon	Result	Description
 (green)	Sensor activated successful	TPMS sensor is successfully activated and decoded. The table on the right side of the screen displays the sensor information.


 (red)	Sensor activated failed	<p>If the search period expires and no sensor is activated or decoded, the sensor may be mounted incorrectly or cannot function. The table on the right side of the screen displays “Failed”.</p> <p>If as sensor with a duplicate ID has been read, the screen displays a message “Sensor ID duplicated”.</p> <p>In the case, repeat the test procedure.</p>
--	----------------------------	---

Table 11-1 Possible results for triggering

8.2 Programming Operations

The programming function is used to program the sensor data to the Foxwell sensor T10 and replace the faulty sensor (poor battery life or malfunction). The TS5000 is easy to use with a proven efficiency and guaranteed accurate results.

There are four options available when programming Foxwell sensor T10 using the Display Tablet: Manual Create, Clone by Activation, Automatic Create (1-16), Clone by OBD.




Figure 8-6 Sample Programming Function Screen

Main Section

Column 1 – displays wheel positions

Column 2 – displays programming IDs

Column 3  – displays the retrieved sensor IDs by activation

Column 3  – displays the retrieved sensor IDs by OBD

NOTE:

Programming function will only work with Foxwell sensor T10. Currently, there are two models available: Clamp-in Sensor and Snap-in Sensor, both with two types, one with 433MHz frequency, and one with 315MHz frequency.

The Clamp-in Sensor is taken as an example in this manual. Please choose the proper Foxwell T10 sensor when programming.

8.2.1 Manual Create

This function allows you to manually enter sensor IDs. You can enter a random ID or the original sensor ID.

NOTE:

Do not enter the same ID for different sensors.


-  To manual create
1. Tap the **Programming** tab.
 2. Select the specific wheel on the screen.
 3. Tap **Manual Create** button.
 4. Enter the characters in the prompted screen. Tap OK to finish and save the sensor ID, or Cancel to exit.





Figure 8-7 Sample ID Input Screen

5. Place the proper Foxwell sensor T10 near the top right of the Display Tablet to start programming.



Figure 8-8 Sample Manual Create Function Screen

If multiple sensors were detected, will pop up message to remind remove the excess sensors.



Figure 8-9 Sample Manual Create Function Screen

8.2.2 Clone by Activation

This function allows user to bypass OBD II and automatically write in the retrieved original sensor data to the Foxwell sensor T10. It is used after the original sensor is triggered.

To perform Clone by Activation, user needs active the installed sensor firstly, if succeed, the sensor ID will display.



Figure 8-10 Sample Clone by Activation Function Screen


Then put the Foxwell T10 sensor that need to be programmed close to the device 0-20cm and sensors that not need to be programmed beyond 100cm.



Figure 8-11 Sample Clone by Activation Function Screen

8.2.3 Automatic Create (1-16)

This function is designed to program the Foxwell sensor T10 by applying random IDs created according to the test vehicle, when it is unable to obtain the original sensor ID.

-  To Automatic Create
1. Tap **Programming** tab.
 2. Select the specific wheel on the screen.
 3. Tap the **Automatic Create** functional button on the screen.
 4. Place the proper Foxwell sensor T10 near the top right of the Display Tablet to write the new created sensor ID into the Foxwell sensor T10.

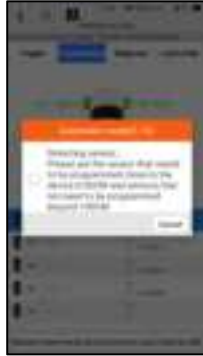


Figure 8-12 Sample Automatic Create Function Screen

After programming is finished, the new programmed Sensor ID will display on Column 2 of the table.

8.2.4 Copy by OBD

This function allows users to write the saved sensor information into Foxwell sensor T10 after performing Copy by OBD function, the sensor ID will appear on the table in Programming screen. Select the specific wheel on the screen, and then tap Copy by OBD button.





Figure 8-13 Sample Copy by OBD Function Screen

Place the proper Foxwell sensor T10 near the top right of the Display Tablet, and tap OK to start programming the saved sensor information to the Foxwell T10. The programmed sensor ID will appear on Column 2 of the table.

8.3 Learn Help

This function introduces the relevant information of the sensor, such as manufacturer, sensor frequency, OE number, learning type, learning method and learning steps etc. The OEM sensor information and specification, and relearn procedure for each vehicle will display on the right side of the screen. The Learning method of TPMS mainly includes:

OBD relearn, Automatic relearn, Static relearn, Clone Sensor.




Figure 8-14 Sample Learn Help Screen

8.3.1 OBD Relearn



Figure 8-15 Sample OBD Learn Help Screen

-  To perform OBD Relearn
1. Install the tire pressure sensor correctly.
 2. Inflate all the tires to the rated value in the nameplate(usually on the door or door frame).
 3. Using the TPMS tool, activate each sensor.
 4. Turn on the ignition on (to ON/RUN/START).
 5. Connect the TPMS tool to the OBDII interface, and use OBD relearn function to write the sensor ID.
 6. Keep the ignition switch on (ON/RUN/START) and reactivate each sensor in turn.
 7. Turn off and then turn on the ignition on.
 8. Drive the vehicle at a speed of not less than 30 km/h for at least 10 minutes, to ensure that the tire pressure system works normally (the tire pressure light is off).


NOTE:

Different models have different OBD relearn methods. Please read the relearn procedure carefully before performing the relearn function.

8.3.2 Automatic Relearn



Figure 8-16 Sample Automatic Relearn Help Screen

-  To perform Automatic Relearn
1. Install the tire pressure sensor correctly.
 2. Park for at least 15 minutes.
 3. Inflate all the tires to the rated value in the nameplate(usually on the door or door frame).
 4. Turn on the ignition on (to ON/RUN/START).
 5. Operate the instrument panel to let the vehicle enter the automatic relearn mode (if need).
 6. Drive the vehicle at a speed of 30-100 km/h for at least 15 minutes, to ensure that the tire pressure system works normally (the tire pressure light is off).


NOTE:

Different models have different Automatic relearn methods. Please read the relearn procedure carefully before performing the relearn function.

8.3.3 Static Relearn



Figure 8-17 Sample Automatic Relearn Help Screen

-  To perform Static Relearn
1. Install the tire pressure sensor correctly.
 2. Inflate all the tires to the rated value in the nameplate(usually on the door or door frame).
 3. Turn on the ignition switch (turn to ON/RUN/START).
 4. Operate the instrument panel to let the vehicle enter the static relearn mode(if need) . Usually the horn will beep twice and the left light will be on.
 5. Complete the learning process according to the device or multimedia display screen. If successful, the horn will beep once.
 6. Drive the vehicle for at least 15 minutes, to ensure that the tire pressure system works normally (the tire pressure light is off).

NOTE:

Different models have different static relearn methods. Please read the relearn procedure carefully before performing the relearn function.

8.4.4 Clone Sensor

Use one of the following method to copy according to the actual situation.

1. Copy by activation
2. Copy by manually input the sensor IDs. (notice the data format is decimal or hexadecimal)



Figure 8-18 Sample Automatic Relearn Help Screen

9 Data Manager

Data Manager menu let you review stored screenshots and test reports, playback recorded live data and other saved files.

Typical menu options include:

- Image
- PDF
- Data Playback
- Data Record
- Report



Figure 9-1 Sample Data Manager Screen

9.1 Image

Image option leads to screens for review of stored screenshots. In case a failure of TS5000 application or the Android system occurs, please just take a screenshot and send it to our team to help with the troubleshooting.


1. If want to save data of current screen, press  after sliding down the notice bar to take a screenshot.
2. Press **Data Manager** from home screen of TS5000 diagnostic application, select **Image** from Data Manager.
3. To delete a picture, tap button **Delete** and answer **OK** to delete. Press **Print** to print the pictures and press **Rename** to change the picture name.
4. Long press one of the pictures to edit all pictures like **Rename** or **Delete**.



Figure 9-2 Sample All Pictures Edit Screen

9.2 PDF Report

PDF option leads to screens for review of the vehicle test reports. You just need to press the PDF icon on the test screen, add a description and press **OK** button to save.

9.2.1 How to Create a PDF Report


-  To create a PDF report:
1. Press **Data Manager** from home screen of TS5000 diagnostic application.
 2. Press Report from Data Manager.
 3. Press any reports saved.



Figure 9-3 Sample of Reports Screen

4. Press **Save** to save changes. Press **PDF** to create PDF file.




Figure 9-4 Sample of Report edit Screen

5. If press **PDF**, the PDF review screen will be displayed. Press **Print** to print the report or press **Email** to share the report.



Figure 9-5 Sample of Report edit Screen

9.2.2 Review PDF Report

-  To review the PDF reports:
1. Press **Data Manager** from home screen of TS5000 diagnostic application.
 2. Press **PDF** and all available PDF files will be displayed.


3. Long press the screen to edit all PDF files like **Rename** or **Delete** the files.

9.3 Data Playback

The **Data Playback** option leads to screens for review of recorded live data. Playing back a recording is just like using the scan tool on a live vehicle. It let you review live data in text, graph and graph merging formats. Playback speed and direction (forward or reverse) can also be controlled.



To review recorded live data:

1. Press **Data Manager** from home screen of TS5000 diagnostic application.
2. Press **Data Playback** and all available records display.
3. Press any records to view the details.
4. To view parameter graphs, press the **Graph** tab. And to merge the graphs, press the tab **Merge Graph** or press the tab **Multi Graph** to view multiple plots.
5. To move forward or reverse back of the playing, just drag the progress bar forward or reverse. Press the  button to stop.
6. Long press the record to **Rename** or **Delete** the records.

10 Settings


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

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

- Unit
- Language
- Font Size
- Module Sorting
- Sort Tiles
- Remote control
- TPMS Sales Region Change
- System Settings
- General
- Uninstall Vehicle Software
- Clear app data
- Print Settings
- About


10.1 Units

Selecting **Unit** opens a dialog box that allows you to choose between Imperial customary or metric units of measure.

-  To change the unit setup:
 1. Press **Settings** from home screen of the TS5000 diagnostic application.
 2. Press **Unit** and available unit system display.
 3. Select a unit system.


10.2 Language

Select **Language** opens a screen that allows you to choose system language.

-  To configure system language:
 1. Press **Settings** from home screen of the TS5000 diagnostic application and select **Language**. Then all available language options display.
 2. Select your preferred language to change.

13.3 Font Size

This option allows you to change the font size of application.

-  To change font size:
 1. Press **Settings** from home screen of the TS5000 diagnostic application, and then select **Font Size**.
 2. Select your preferred font size, then press **Confirm** to change, or press **Back** to give up.

10.4 Module Sorting

This option allows you to modify the display order of other modules except the diagnostic module in the home screen of TS5000 diagnostic application.



-  To change module sorting:
 1. Press **Settings** from home screen of the TS5000 diagnostic application, and then select **Module Sorting**.




Figure 10-1 Sample Before the modification,
the Update Module is displayed behind the Maintenance module



Figure 10-2 Sample Before the modification,
the Update Module is displayed behind the Maintenance module

2. Long press the icon  on the right side of the module that needs to be modified for about 2 seconds, and then drag it up and down. The final position of the module is the same as the display order of the home screen.

3. Click  to display whether to apply the current settings interface, click OK to apply the current changes, click Cancel to discard the current changes.

10.5 Sort Tiles


This option allows you to change the sort for Brand of vehicles. There are two sorting methods available by alphabet or by frequency of use.

 To change sort

1. Press **Settings** from home screen of the TS5000 diagnostic application, and select **Sort Tiles**.
2. Select your preferred sort order.

10.6 Remote control

This option allows you to select a tool of remote control. There are two remote tools available TeamViewer QuickSupport or AnyDesk.

-  To change remote control
 1. Press **Settings** from home screen of the TS5000 diagnostic application, then select **Remote control**.
 2. Select your preferred tool.

10.7 Automatic Update

This option allows you to enable/disable automatic update notice. If it is enabled, an orange update mark will show on the upper right of the diagnostic software icon whenever there is a new version available.

10.8 System Settings


This option provides you a direct access to the Android system settings, like sound, display, system security and etc. Refer to Android documentation for more information.

10.9 General

This option lets you to turn on/off the prompt when saving a file or login & registration when started the scanner.

10.10 Uninstall Vehicle Software

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

-  To uninstall a vehicle software:
 1. Tap **Settings** application on home screen of TS5000.
 2. Tap the **Uninstall Vehicle Software** option on the option list.
 3. Choose the vehicle software you want to delete or choose **Select All**.

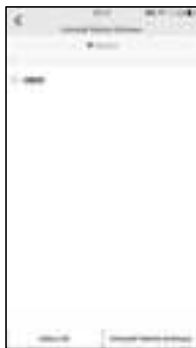


Figure 10-7 Sample Uninstall Vehicle Software Screen

4. Press **Back** to quit or and press **OK** to uninstall.

10.11 Clear app data

Generally, after the application running for a period of time, some cache data will be generated. As time goes by, the cached data will become larger and larger, which will affect the operation of the device. This option allow you to clear the cache data of the app.

10.12 Print Settings

This option allows you to print any data or information anywhere and anytime either via PC network or Wi-Fi.



To setup the printer connection:

1. Tap the **Settings** application on home screen of TS5000.
2. Tap the **Printing Settings** option on the option list.




Figure 10-9 Sample Print Settings Screen

3. Tap **Print Plugin Manager** and turn on the Mopria Print Service, then TS5000 will search for available printers automatically.



Figure 10-10 Sample Print Service Manager Screen

4. Select Mopria Print Service.
5. Choose the right printer.
6. Select a available printer, then press **PRINT TEST PAGE** button at the right-bottom.
7. Choose the file or report you want to print and press the print icon . Click on the red marked part to select an available printer. Click the blue marked part to make more settings for the printer, such as paper size, number of copies, etc.

NOTE

1. Please make sure the printer and the TS5000 in the same Wi-Fi or Network when printing.
 2. If Mopria Print Service driver can't workable for your printer, please download the driver to work for your printer on Print Service Manager.
-

10.13 About

Selecting **About** option opens a screen that shows information about the TS5000, such as serial number, hardware and software version and etc.



To view information of your scan tool:

1. Press **About** from home screen of the TS5000 diagnostic application.
2. A screen with detailed information of the scanner displays.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction



Figure 12-1 Sample Coverage list Screen

13 Remote key frequency monitoring

This section illustrates how to check RF Remote Keyless Entry (key FOB) with the trigger tool. The TS7000 tests 315MHz and 433MHz key fobs only, and checks only for a signal present.

14 Sensor information

This section helps to check own sensor information.



Figure 14-1 Sample Sensor information Screen

15 Auxiliary tools

More auxiliary tools can be found like camera and file browser.