

# Statement

- The manual is designed only for the use of the vehicle tire pressure monitoring system (TPMS), without the written approval of FCAR, any corporation or individual cannot copy and backup in any form (electronic, mechanical, photocopying, recording or other means).
- This manual is only used for professional automobile maintenance technicians. This manual offers the product operating methods only. The company accepts no responsibility for any possible consequence of the use of this manual as applied to other equipment.
- The company will not take any responsibility for the user or third parties for equipment damages, losses, costs, or expenses resulted in accidents, abuse or misuse of this product, or unauthorized modifications, repairs or alterations to this product or operation or maintenance to not comply with the instructions. This manual is based on the latest configurations and functions of product. The new description, data and illustration may change compared to those described in this manual. FCAR reserves the rights to make changes to its products without prior notice.
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- 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.
  - 2.This device must accept any interference received, including interference that may cause undesired operation

## **Registered trademark**

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## **Product operation manual**

- Please carefully read this manual before using this product.
- The manual is based on the current specifications and functions of the product. If new specifications and functions are added to the product, there will be corresponding changes in the manual. The new manual can be downloaded from the company's website. Please carefully read the "Note", "Remark" and "Introductions" of the manual to ensure that use our products properly and safely.

# Content

**CHAPTER 1 INTRODUCTION..... 4**

**GENERAL INFORMATION ..... 4**

**MAINTENANCE..... 5**

**CERTIFICATION ..... 6**

**CHAPTER 2 PRODUCT STRUCTURE ..... 7**

**2.1 HOST STRUCTURE DESCRIPTION ..... 7**

**2.2 FT-138 HOST PARAMETERS ..... 8**

**CHAPTER 3 HOST MENU INTRODUCTION ..... 9**

**3.1 TPMS CHECK (CHECK) ..... 9**

**3.2 FREQUENCY DETECTION ..... 10**

**3.3 SETTING ..... 11**

**3.4 UPDATE ..... 11**

**CHAPTER 4 TPMS ACTIVATION AND PROGRAMMING ..... 13**

**4.1 VEHICLE SELECTION ..... 13**

**4.2 SENSOR PROGRAMMING ..... 14**

**4.7 SENSOR ACTIVATION ..... 18**

**CHAPTER 5 UPDATE..... 20**

**WARRANTY CLAUSES ..... 22**

## Chapter 1 Introduction

### General Information

#### 1.1 TPMS System Review

The tire pressure monitoring system (TPMS) is a kind of electric systems and designed for the use of monitoring the air pressure in the pneumatic tyres of various kinds of vehicle models. TPMS reports the real-time tyre pressure information to the driver through the instrument, pictogram display or simple low-pressure warning lamp. TPMS can be classified into two different categories – direct (dTPMS) and indirect (iTPMS). TPMS is available in OEM (factory) and aftermarket solutions

#### 1.2 TPMS Legislation

In America, the U.S. Department of Transportation (NHTSA) released No. 138 FMVSS, which requires to install the tire pressure monitoring system with the weight rating (GVWR) below 4,536 kg (10,000 lb) for all new cars, multipurpose passenger cars, trucks and general vehicles except for two-wheeled vehicles until 2007. In the European Union, since November 1, 2012, all new passenger cars must be equipped with TPMS which has a more stringent specification as defined by the UNECE Vehicle Rules (No. 64 regulations). Since November 1, 2014, all new passenger cars sold in the EU must be equipped with TPMS. On July 13, 2010, South Korea's maritime bureau of the ministry of land and transportation announced part of the amendment on the Korean motor vehicle safety standard (KMVSS), which stipulates that "the TPMS should be installed in the passenger car and the vehicle GVW 3.5 tons or less, ... [effective] cars that are produced after January 1, 2013 are considered as new models". Japan is expected to legislate through the EU after the implementation in the EU about a year or so. Other countries that have developed TPMS include Russia, Indonesia, the Philippines, Israel, Malaysia and Turkey.

#### 1.3 TPMS Indicator

You should learn the meaning of the TPMS indicator while diagnosing the TPMS system. When the ignition switch is off, the TPMS indicator lights up and then goes off to indicate that the system is working properly. If the indicator lights up, there will be pressure problems.

If the indicator flashes, a system problem may occur, which may range from the fault sensor to the vehicle sensor that has not yet learned the vehicle.

#### 1.4 Advantages of TPMS

Important advantages of TPMS are concluded as below:

- Fuel saving.
- Extend the tire life.
- Reduce the downtime and maintenance.
- Improve the safety.
- Environmental benefits.

### Maintenance

#### 2.1 Screen maintenance

- 1) The screen surface will absorb dust due to the static electricity, it is recommended to purchase the wiping cloth dedicated for liquid crystal display screen to clean the host screen, please gently wipe;
- 2) Do not use fingers to wipe the dust, so as not to leave any fingerprints; Do not use chemical detergent to wipe the screen;
- 3) Please do not place the product next to the electrical equipment that produces electromagnetic interference to avoid affecting the display;
- 4) Please do not expose the screen to direct sunlight or ultraviolet light for a long time so as not to affect the screen life.

#### 2.2 Precautions

- 1) Frequently switching on and off the host, sudden power off, unstable power, artificially abnormal power are prohibited;
- 2) Please unplug the product if it's not used to protect the electric components from aging due to the long time power-on;
- 3) Do not expose the product to volatile acid and alkali chemical air environment, so as not to cause corrosion of the host hardware;
- 4) Do not use dissolved chemical reagents such as banana oil, engine cleaning agent,

gasoline, etc. to wipe the host;

5) No items can be placed on the display screen to avoid the touch screen rupture or internal component damage caused by the great pressure.

## Certification

FT-138 TPMS tester has CE, FCC and Rohs certification.

FCC COMPLIANCE      FCC ID: 2AJDD-IDIAGT138

### FCC Statement

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.

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.

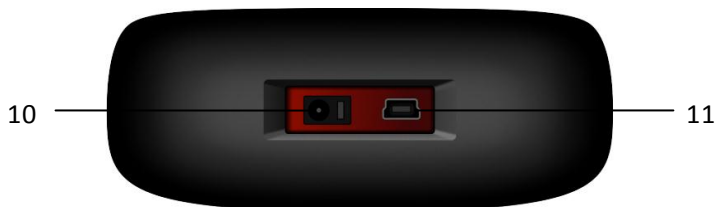
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## Chapter 2 Product Structure

### 2.1 Host structure description



Front view



Bottom view

## Host instruction

Number	Name	Number	Name
①	Display screen	⑦	Right
②	Return	⑧	Activation button
③	Left	⑨	Up
④	Down	⑩	Charging port
⑤	Host switch	⑪	USB interface
⑥	OK		

## 2.2 FT-138 Host parameters

## Host parameters

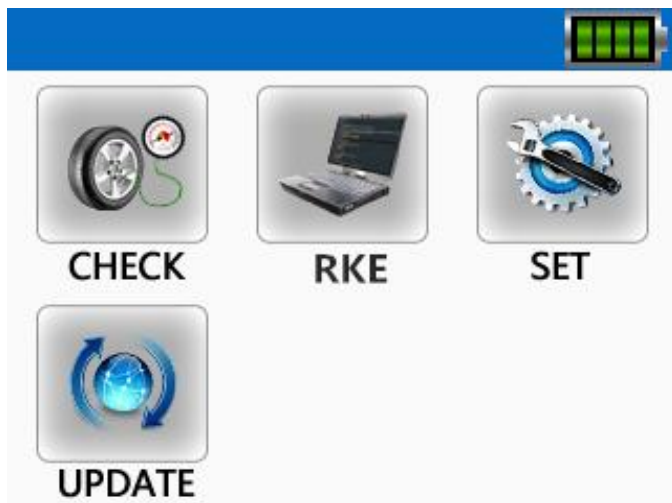
Display screen	TFT color display (320x240 resolution ratio)
Power	3.7V lithium polymer battery 3500mAh
Working temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-20°C to 70°C (-4°F to 158°F)
Size	Length 194*width 103*thickness 42 mm




## Chapter 3 Host Menu Introduction

### 3.1 TPMS check (CHECK)


- 1) Switch on the power, turn on the host and enter the main interface



- 2) Enter the [CHECK] menu for TPMS check to perform a series of programming and activations.

Select Vehicle


ACURA	ASTON MARTIN
AUDI	BENTLEY
BMW	BUICK
CADILLAC	CHEVROLET
CHEVROLET	DODGE
FIAT	FORD
GMC	HONDA
HUMMER	HYUNDAI

[  ]=Next Page
1/3

### 3.2 Frequency detection

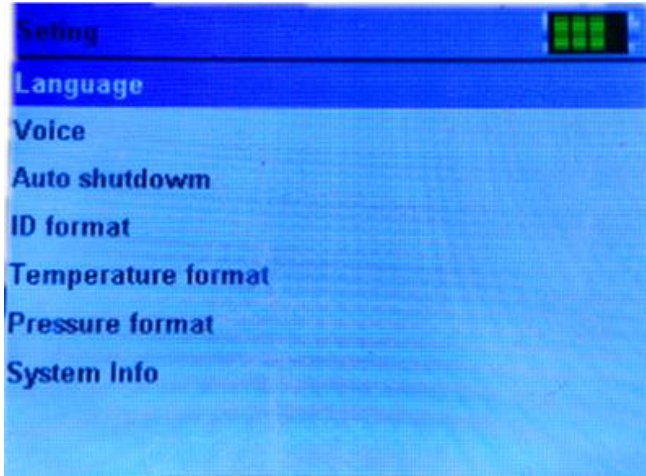
Click [RKE] to enter, you can detect whether there is wireless data transmission at frequencies of 315M and 433M.

Note: The blue progress bar represents the signal strength



### 3.3 Setting

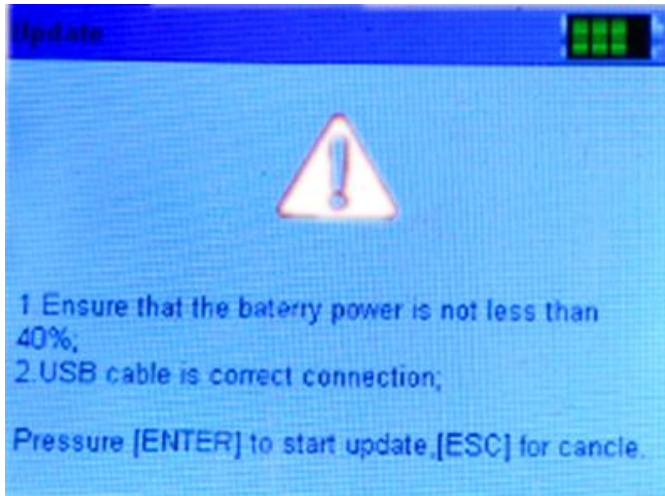
Click [SET] to enter the settings, you can set the host language, voice, automatic shutdown time, ID display format, temperature display format, pressure format and system information.



- **Language:** Set the machine language
- **Voice:** Select On or Off to turn on or turn off the button tone
- **Auto shutdown:** Select the automatic shutdown time in minutes
- **ID format:** Select the ID display format, HEX is hexadecimal; Decimal is decimal
- **Temperature format:** Celsius and Fahrenheit can be selected as the temperature unit
- **Pressure format:** Kpa, Bar and Psi can be selected as the pressure unit
- **System Info:** Display some system parameter information. Such as software version, model version and so on

### 3.4 Update

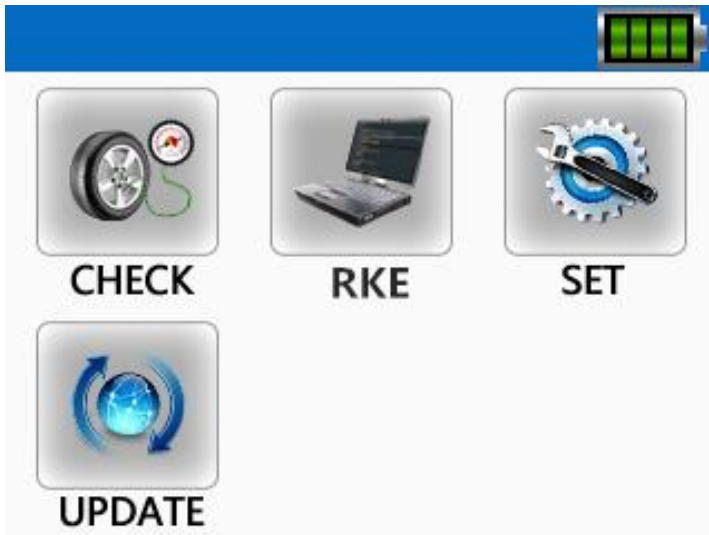
Click [UPDATE] to start updating according to tips




## Chapter 4 TPMS Activation and Programming

### 4.1 Vehicle selection


- 1) Select [CHECK] to enter the model selection interface



- 2) Select the desired vehicle model by clicking the arrow on the host

Select Vehicle


ACURA	ASTON MARTIN
AUDI	BENTLEY
BMW	BUICK
CADILLAC	CHEVROLET
CHEVROLET	DODGE
FIAT	FORD
GMC	HONDA
HUMMER	HYUNDAI

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1/3

## 4.2 Sensor programming

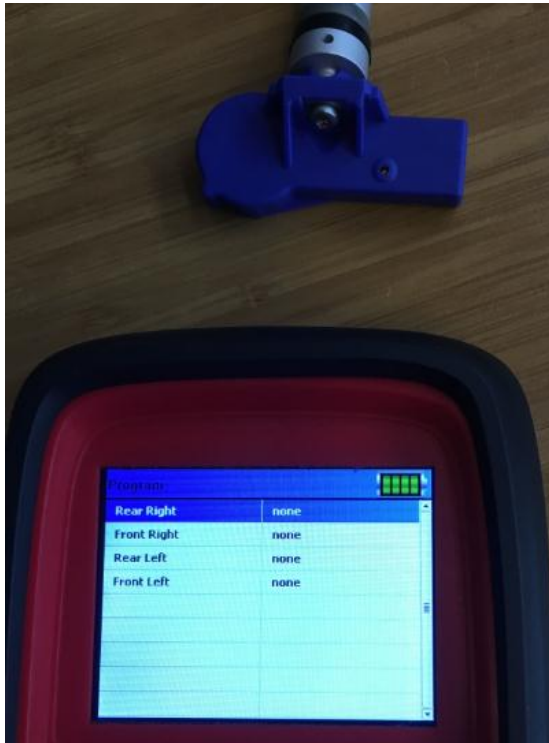
- 1) Press "OK" to enter the TPMS activation and programming interface after the vehicle model is selected

Note: The sensor at the top of the FT-138 machine is the alignment sensor during the activation and programming



- Click on the host arrow to select the programming picture and click [OK] to enter the sensor programming menu

Note: If the interface displays none, a default ID will be written while programming





- 3) Select the wheel, the top of FT-138 is aimed at the sensor, click [OK] to program the sensor



- 4) After being programmed successfully, the sensor data will be displayed, click the return key to exit



#### 4.7 Sensor activation

- 1) Select the corresponding wheel in the programming and activation interface, use FT-138 to aim at the sensor position of this wheel, click [OK] or the activation key to activate the sensor. You can check the written sensor ID in the programming menu after the sensor is activated

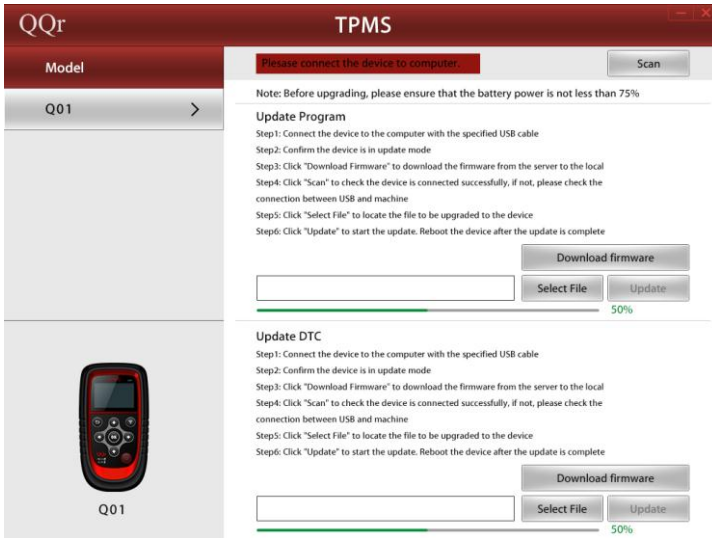
**AUDI A3 2006-2013**

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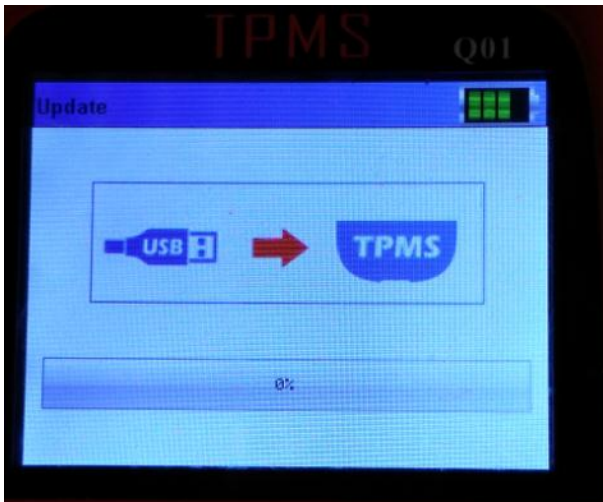
Pressue [OK] to program sensor

## Chapter 5 Update

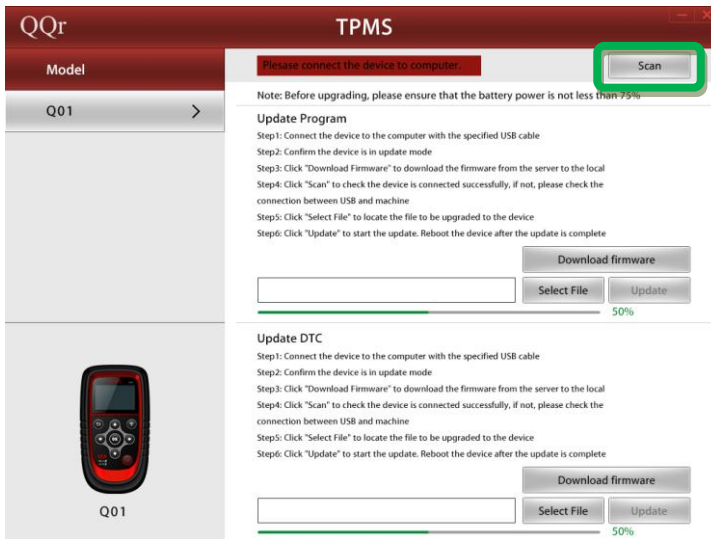
- 1) There are program updates and database updates for FT-138. Entering the PC terminal upgrade interface is preferred



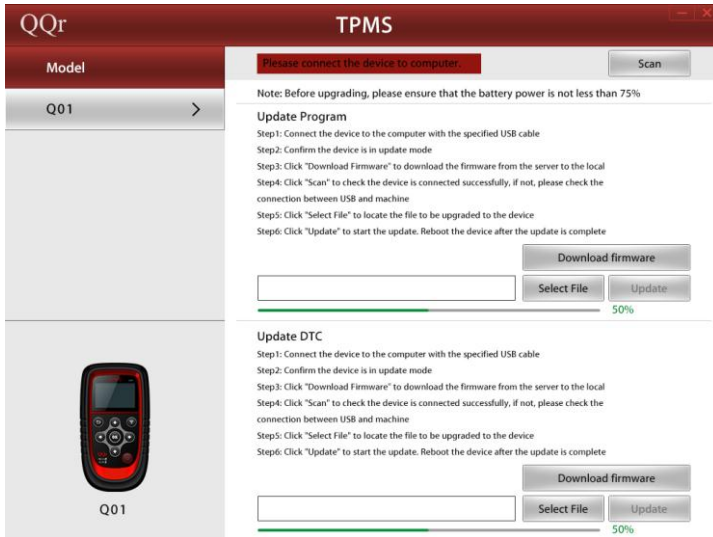
- 2) Connect FT-138 and the PC computer terminal with the specified USB cable, click the update icon on FT-138, press OK to confirm the device is in the update mode



- 3) Click “Scan”, the PC update software will scan and check whether the FT-138 is connected to the device successfully



- 4) Click “Download Firmware” to automatically update the firmware (or database) from the server to the device or click “Select File” manually to locate the file which needs to be updated to the device and click “Update” to start updating



## Warranty Clauses

Dear users,

Welcome to choose FT-138 products. In order to use our product better, we warmly suggest you maintain your products well, and operate the products in accordance with User Manual whenever you use it. If your operating method is pursuant to this requirement, long-term quality service will be provided by your products.

1. After you are sure that the following terms and conditions are met and you have fulfilled your real information through the machine activation or user registration, you can enjoy the maintenance service provided by FCAR if there are defects related to materials or workmanship on your products;

2. Please ensure that you have carefully read the warranty clauses of this product, otherwise, the registered complete information is deemed to you have accepted and agreed to the terms of this warranty;
  
3. Your product must be purchased from our product dealer. You have to bear the maintenance cost for your product if you buy the product through non-normal channels;
  
4. The following objects of the product is out of the warranty range: User Manual, items that are easy to wear and tear such as inner and outer package box;
  
5. After the date of purchase (according to the valid purchase certificate and valid warranty card of this product), if the products suffer performance failure caused by non-artificial factors, you can choose our maintenance services or replace the product in same model within one month. You can enjoy one year free warranty service for the main unit, main test line, connector and power adapter;
  
6. Free warranty service is unavailable if the products are in any case as follows:
  - 1) Failure, defect or flaw that is not caused by the quality of the products: including your operation is not according to the manual, improper operation of the product, crash, fall, disassembly by yourself, connection to improper accessories, damage owing to crash because of improper transport or storage, the erosion and corrosion that caused by infiltration of liquid or food;
  
  - 2) Natural wear and tear of products: Including but not limited to cover, keypad, touch screen and accessories etc.

3) Product serial number of main unit and warranty serial number do not match, and product quality inspection tag or bar code is removed, altered or damaged;

4) Maintenance and modification without the approval of FCAR.

7. In case the product quality problem or failure occurs during the warranty period, you can take the following measures:

1) Perform self-check according to the product help information, if there is no hardware quality problem, please try to update the program of the product;

2) After you get the valid response of FCAR, you have to post your products to the address designated by FCAR for repairing and maintenance, otherwise, you will not get timely repairing and maintenance. You will be responsible for the loss of your products.

8. In the process of product warranty, you should bear relevant cost arising before posting your products to the places designated by FCAR: including costs for package, transportation, delivery and insurance, etc.

9. The free warranty service you are entitled to in accordance with the terms of this warranty is the only measure for the loss of the product due to product defect during the warranty period, FCAR shall not be liable for your direct or indirect loss;

10. All product warranty information, product features and specification changes will be posted on the latest promotional materials and web site without further notice.