

Tire Pressure Monitoring System

USER'S MANUAL

ZHONGSHAN VICTON ELECTRONIC TECHNOLOGY CO., LTD

Preface

- Thank you for choosing TPMS from ZHONGSHAN VICTON ELECTRONIC TECHNOLOGY CO., LTD.
- To ensure correct installation, operation and service for the TPMS, please read and understand these instructions before installation and operation. Please save this manual for further reference.

➤ **FCC STATEMENT**

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.

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

- We warrant our TPMS for one year from the date of original purchase to be free from defects in materials and workmanship. During the waranty period, the product fails under normal usage, because of manufacturing defect, we will replace or repair the item. To obtain repair or replacement under the terms of warranty, please return the product to place of purchase. Proof of purchase and date of purchase are required to validate the warranty claim. We are not liable for any unit broken due to installation incorrectly , misused, self-dismantled, or any direct or consequential loss or property damage arising from any use of this product.
- Our company has the property of the manual's content, any other company or person can not copy this manual without our company's authorization.
- This manual's final explanation right belongs to ZHONGSHAN VICTON ELECTRONIC TECHNOLOGY CO., LTD.

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1. TPMS INTRODUCTION

TIRE PRESSURE MONITORING SYSTEM (TPMS) improves safety while driving. The system will automatically monitor your tires in real-time for pressure and temperature, and wirelessly transmit the signals to the receiver. When any tire's pressure and/or temperature appear abnormal, the system will, in real-time, transmit signal to activate an alarm and show a digital figure to warn the driver of the problem in the form of Sound and Light.

BENEFIT FROM INSTALLING TPMS:

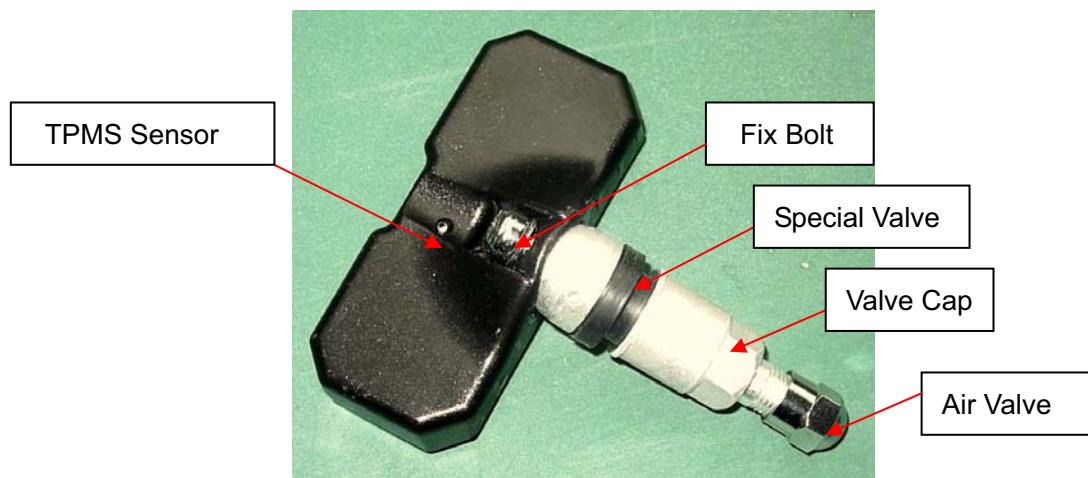
- ◆ **Protection in advance:** TPMS directly monitors the Tire's pressure and temperature. When the tire show an abnormal sign, TPMS can promptly notice the driver to do some corresponding measures to avoid accidents and ensure safety.
- ◆ **Extend the tire's life:** When tire 's pressure is 10% pressure value under standard, the tire 's lifespan will reduce 15%. TPMS can help driver to keep tire in the standard pressure, extend the tire's life.
- ◆ **Save fuel consumption :** When the tire's pressure is 30% below standard, the fuel consumption increase 15%. TPMS can help drive to keep the tire's standard pressure, cut fuel consumption.
- ◆ **Protect automobile parts:** If driving when the tire is not at the standard pressure, it will bring some abrasion to the engine chassis and suspended system. Furthermore, if the tire's pressure is not in balance, it will make the vehicle run deviate in braking, so as to increase the abrasion of suspending system.
- ◆ **Monitor the tire in real time :** TPMS can help driver control the tire condition easily at any moment in vehicle, so as to help drive to make right judgement, and ensure safety.

2. TPMS COMPONENTS

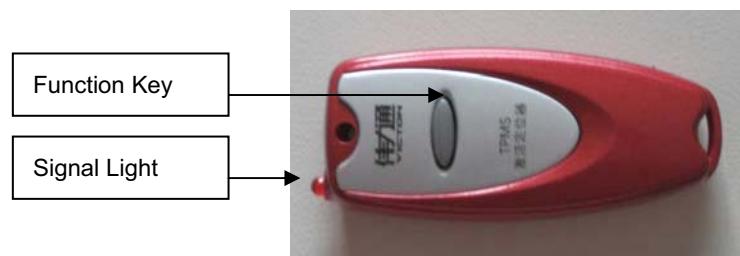
2.1 TPMS RECEIVER AND STAND FIGURE



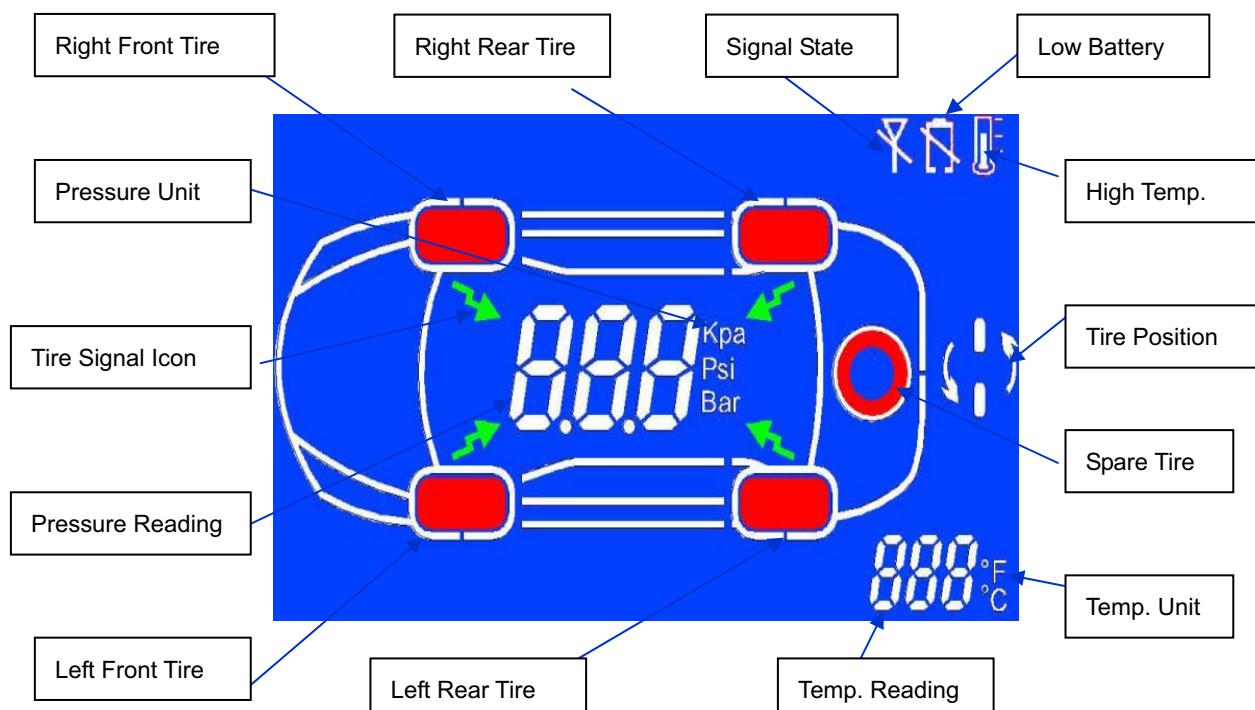
2.2 TPMS TRANSMITTER AND SENSOR



2.3 ACTIVATOR



2.4. LCD SCREEN ICONS



LCD ICON INSTRUCTION

2.4.1 TIRE DIRECTION ICON



It indicates each tire and its position, left front tire ,right front tire, right rear tire, left rear tire. If it twinkles, there is some abnormality with the corresponding tire.

2.4.2 TIRE SIGNAL ICON



When this signal icon near any tire icon shines, the screen displays this tire's current pressure and temperature.

2.4.3 SIGNAL STATE ICON



It will shine if the receiver can't get the signal from any sensor for over 15 minutes, which means the sensor in this tire is broken or the signal is shielded or interfered.

2.4.4 SENSOR IN LOW BATTERY ICON



If the sensor is working at lower voltage, this icon will shine. Suggest you to change the sensor.

2.4.5 HIGH TEMPERATURE ALARM ICON



If the sensor is working in high temperature, this icon will shine and give alarm.

2.4.6 TIRE POSITION



When this icon shines, you can activate the sensor one by one so as the receiver can get the ID of each sensor, which is TIRE POSITION. Please check for your reference

3. SYSTEM INSTALLATION

3.1 RECEIVER INSTALLATION

- (1) Push the receiver into the stand.
- (2) Stick the Bottom of Stand onto the dry and clear place in front of driver at an appropriate position, where there is no metal or plating metal in 5cm around to avoid interference of receiving signal.
- (3) Adjust the high and low angle of leader receiver, in order to be suitable for observation with the choose angle.
- (4) Connect the wires on end with 12V/DC electrical source on the automobile. the red for positive, the white for negative.
- (5) After set up the display, please take off the protection film from the panel of display.

NOTICE:

- (1) The installation position should be suitable for observation and hidden.
And it should not effect the visual field when driving.
- (2) Avoid sunshine directly , it may affect observation
- (3) In order to make sure the correct installation, installed by the professional people at the automobile maintenance store which equipped with the facilities of tires-disassembly and a tire dynamic balance machine.

3.2 TRANSMITTER AND SENSOR INSTALLATION

- (1) Use a jack to raise the vehicle and place jack stands underneath the vehicle for safety. (Refer to vehicle 's manual for full service advice. Seek the assistance of a qualified mechanic if necessary)
- (2) Take off the tires and deflate the air. Then take off the air valve of the tire from the wheel. This part of the process will normally require the service of a tire fitting service or mechanic
- (3) Disassembly the fixed bolt from the TPMS sensor by screwdriver, remove the special valve and cap from the sensor.
- (4) Take the tires apart from the automobile and separate the outer tire, dismantle the original air valve of the wheel rim . Then set up the new TPMS special valve in the wheel rim. Screw its special cap closely to make sure the valve fix well in the wheel. (Refer to Photo 1)
- (5) Fix the sensor in the special valve with the fixed bolt. Adjust the transmitter sensor angle so that the transmitter fits tightly on the wheel and then tighten the screw for the transmitter's sensor so that it is fixed on the wheel. Clean inside the tire to prevent the tire from damaging the transmitter sensor. (Refer to Photo 2)
- (6) Inflate the tiresand do balance for the tire
 - a. Balance tires using a balance machine
 - b. A lead tire weight may need to be added for balancing.
 - c. Balance until the tire balance shows balance as “OK”

Note: It is important that the wheels are balanced after the fitting of the TPMS sensors in order to ensure the safe operation of the tire when refitted to the vehicle.

- (7) Set up the other three tires in the same manner.



Photo 1



Photo 2

Notice:

1. The Installation of sensor should be processed by professional mechanic or technician in order to make sure install correctly.
2. The products should be installed in the Automobile Maintenance Store which equipped with the facilities of dismantling tires and balancing tires.
3. Please take care the sensor carefully not to damage the sensors.

3.3 TIRE POSITIONING

In a TPMS system, each sensor has its only ID Number. In order to monitor each tire accurately, We should use the Activator to activate each sensor so that the receiver can get the corresponding ID of each sensor, which is TIRE POSITIONING. After installation of receiver and sensors, and exchanging the tires, we should go through the following procedure to position the tires:

- (1) Press the menu button of **menu**, until the positioning ICON() display on the screen.
- (2) Press the Enter button of **Adj/Enter** to select the tire to position, whose icon() will shine.
- (3) Please aim the tire Activator at the gas hole of the selected tire (Two ways, refer to photo3 and photo 4), and then press the red key of Activator for at least 5 seconds as follows:



Photo 3



Photo 4

- (4) The receiver will make the “buzzer” sound if TIRE POSITION is successful. And the screen will display the real-time pressure and temperature. If not successful, please change the direction of the Activator until unsuccessful.
- (5) Press the Enter button of **Adj/Enter** again to select the next tire, repeat the 2.3.4 procedures above to fix other tires. The sequence of tire positioning is : Left Front Tire---Right Front Tire---Right Rear Tire—Left Rear Tire.
- (6) After positioning all four tires, press the Enter button of **Adj/Enter** to return to the normal state.

Notice: When you select the Left Front Tire Icon, you should activate the sensor in the Left Front Tire, the same for others.

4. TPMS SYSTEM OPERATION

4.1 NORMAL OPERATION

Once installed the system will automatically monitor the pressure and temperature of tires when power is applied. The screen will display the data one by one in every 5 seconds. The Tire Signal Icon ()shines when its data displays.

Notice: If you want to check the data of some tire, you can press the Enter button of **Adj/Enter** until the () shines.

The system will store the data when power off. When power on, the receiver will display the data before power off, while the system will auto-self-check then update the pressure and temperature on the receiver.

The receiver has a switch to control and sound and light alarming. When the switch on left side, the sound and light will be off. While on right side, they are on.

4.2 SYSTEM ALARM

When the system detects any abnormal pressure or temperature from tires, the system will alarm by sound “d..d...” for 5 seconds, at the same time, the abnormal tire icon will turn to RED, and flicker. The Receiver will display the pressure and temperature on the screen.

The alarm sound will stop after 5 seconds, but the Tire icon () of the abnormal tire will keep flickering until the abnormality is solved and relieved.

4.3 DEFAULT SETTING FROM FACTORY

The system has been pre-set with alarming figures from the factory. For the Pressure unit, the threshold for left and right front tires is 233 Kpa, while left and right rear tires 254 Kpa. For the temperature unit, the threshold for high temperature is 75 °C.

The system will alarm when the real-time data compare the default setting as following :

- (1) The tire pressure is 25% less than the threshold setting – LOW PRESSURE ALARMING
- (2) The tire pressure is 30% more than the threshold setting – HIGH PRESSURE ALARMING
- (3) The tire temperature is higher than the threshold setting – HIGH TEMPERATURE ALARMING

Notice: The system will restore the default setting when pressing the Enter button of **Adj/Enter** for more than 5 seconds, relieve it after a long sound.

4.4 SET UP THE THRESHOLD FOR SYSTEM ALARM

Please check the vehicle's manual for the tire pressure standard. If it is more than 20 Kpa's difference between the standard and the default setting. Please re-set up the threshold for system alarm to make the accuracy of alarming.

The procedures for re-setting up are as follows:

4.4.1 TEMPERATURE UNIT

- (1) Press **Menu** for twice, enter into Temperature Setting Mode: The signal  and icon °F display on the screen.
- (2) If you prefer °F, press **Adj/Enter** to set up the threshold from 158°F to 176°F.
- (3) If you prefer °C, press **Menu** for the third time, then press **Adj/Enter** to set up the threshold from 70°C to 80°C.
- (4) After setting up the threshold for temperature, please press **Menu** to exit the temperature setting and enter into pressure setting.

4.4.2 PRESSURE UNIT

- (1) Press **Menu** to select the preferred pressure unit (Kpa, Psi, Bar)
- (2) Then press **Adj/Enter** to enter into the setting of the threshold for the left and right front tires, whose icon  shine . Re-press **Adj/Enter** to set up the value for the pressure.
- (3) Press **Menu** to enter into setting up the threshold for left and right rear tires, then press **Adj/Enter** to set up the threshold for them.
- (4) After setting up the threshold for pressure, please press **Menu** to exit the pressure setting and enter into normal operation.

4.5 CHANGE TIRE

According to the maintenance guide, rotation is necessary to prolong the life of tires. After exchanging the tires, please operate the TIRE POSITION according to 3.3.

5. SPECIFICATIONS OF TPMS

| 5.1. Sensor and Transmitter Specifications | |
|--|-------------------------------------|
| Battery Life | more than 7 years, nominal** |
| Battery Type | build-in sub-lithium effect battery |
| Operating Temperature | -40°C ~ +125°C |
| Operating Humidity | 100% |
| Pressure Monitoring Range | 0-450 Kpa |
| Pressure Reading Accuracy | ±8 Kpa |
| Temperature Monitoring Range | -40°C ~ +120°C |
| Temperature Reading Accuracy | ±3°C |
| Size (length × width × Height) | 66×28×20 mm |
| Weight | 35g |
| Operating Frequency | 433.92 MHz |

** The battery 's use life is depend on the different use situation

5.2. Receiver Specifications

| | |
|--------------------------------|----------------------------|
| Operating Voltage | 12V DC |
| Operating Current | |
| Operating Temperature | -20°C ~ +80°C |
| Screen | High Definition LCD Screen |
| Weight | 90 g |
| Size (length × width × Height) | 96×60×19 mm |

6. COMMON MALFUNCTION AND HANDLING

6.1 There is no display on the receiver

Check the connection of the positive and negative pole to the 12V DC power supply: disconnection or connection not well.

6.2 Receiver Screen Lighting off

Check the switch on the top left side make sure it is switched on (On the right side)

6.3 The pressure and temperature is in normal range, but tire icon keeps twinkling

The alarming threshold setting is inconsequence, please re-set up the correct value according to 4.4.

6.4 The signal icon displays on the screen for a long time, and no date displays.

Check whether the Magnetic Field Indicator keep shining or not, if yes, there is interference neaby. Please drive the vehicle to an environment with interference. If still no data display, please change the sensor in the corresponding tire.

6.5 There is temperature difference (1-2 °C) between the tires after a long time of parking

The difference on the tire surface friction and use time will cause the temperature difference between tires. During driving, the the difference can become bigger, which is normal.

7. Term forms

| | |
|--|---|
| Kpa | pressure unit: thousand Pascal (China legal pressure unit) |
| Psi | Pressure unit: pound/square inch |
| Bar | Pressure unit: Bar |
| The Pressure unit Conversion formula | 1BAR≈102Kpa; 1Psi ≈7.03Kpa; 1Bar ≈14.51Psi |
| °C | temperature Unit: Celsius degree (°C) |
| °F | temperature Unit: degree Fahrenheit |
| The temperature unit Conversion formula | $^{\circ}\text{F} = 32 + 1.8 \times ^{\circ}\text{C}$ |

8. Packing List

| Item | Description | Quantity |
|------|--|----------|
| 1 | TPMS Wireless Receiver and Display Unit | 1 |
| 2 | Stand for Display | 1 |
| 3 | TPMS Wireless Transmitter Sensor | 4 |
| 4 | Tire Activator (optional, user can use it in the appointed shop) | 1 |
| 5 | Users' Manual | 1 |
| 6 | Warranty Card | 1 |

9. WARRANTY POLICY AND WARRANTY CARD

We warrant our TPMS for one year from the date of original purchase to be free from defects in materials and workmanship. During the warranty period, the product fails under normal usage, because of manufacturing defect, we will replace or repair the item. To obtain repair or replacement under the terms of warranty, please return the product to place of purchase. Proof of purchase and date of purchase are required to validate the warranty claim. We are not liable for any unit broken due to installation incorrectly, misused, self-dismantled, or any direct or consequential loss or property damage arising from any use of this product.

WARRANTY CARD

| | | | |
|-------------|-------------------------------|--------|-----------------|
| Product | Victon TPMS | | |
| Model NO. | | | |
| Distributor | Purchase Date | | Y M D |
| | Distributor | | |
| | Tel: | | |
| Note | | | |
| Period | One Year from Purchasing Date | | |
| Customer | Name | | ID No. |
| | Address | | |
| | Tel: | House: | Company: |
| Note | | | |