Tire Pressure Monitoring System

USER’S MANUAL
Preface

➢ Thank you for choosing Tire Pressure Monitoring System (TPMS).
➢ 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.
➢ 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.
➢ 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.

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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.

BENEFITS OF TPMS:

- **Protection in advance:** TPMS directly monitors the tire's pressure and temperature. When the tire shows 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%. With in-time digital display of pressure and temperature value, TPMS can help driver to keep tire the standard pressure, so as to 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 driver to keep the tire's standard pressure, cut fuel consumption.
- **Protect automobile parts:** If driving when the tire is not at the standard pressure (too high or too low), it will bring some abrasion to the engine chassis and suspended system.
- **Guarantee the normally-operating Brake System** If the tire's pressure is not in balance, it will make the vehicle run deviate in braking, so as to increase the accident risk.
- **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 decision, and ensure safety.

2. TPMS COMPONENTS

TPMS is made up of OLED receiver and transmitter.

2.1 TPMS OLED RECEIVER AND STAND FIGURE

![OLED Receiver and Stand Figure]

2.2 TPMS TRANSMITTER AND SENSOR

![Transmitter and Sensor]

2.3. HD OLED SCREEN ICONS

![Screen Icons]

2.4 Screen Icon

2.4.1 Tire Positioning
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 POSITIONING. Please check 3.4 for your reference.

2.4.2 Signal State
It will shine if the receiver can't get the signal from any sensor for over 18 minutes, which means the sensor in this tire is broken or the signal is shielded or interfered.

3. TPMS SYSTEM FUNCTION AND OPERATION

3.1 TPMS SYSTEM WARNING OPERATION

3.1.1 High or Low Pressure Alarm
When the system detects the pressure of any tire out the scale of the set-up value, the system will alarm by sound “d..d...” for 5 seconds, at the same time, the abnormal tire icon will turn to RED, like (Ⅰ), and flicker. The Receiver will display the pressure and temperature on the screen, and the display will turn into the interface as below:

Low-Pressure
For L-F Tire

(Ⅰ) Low Pressure Warning for L-F Tire

(This example is for too-low pressure.)
The system only alarm when the receiver with power, alarm when the data is beyond the alarm threshold.

3.1.2 Fast Leakage Pressure Alarm
When the system detects that there is fast leakage for any tire, the system will alarm by sound “d..d...” for 5 seconds, at the same time, the abnormal tire icon will turn to RED, like (Ⅰ), and flicker. The Receiver will display the following:

Fast Leakage
For L-F Tire

(Fast Leakage Warning for L-F Tire)

3.1.3 High Temperature Alarm

3.2 BATTERY SELF—DETECTION FUNCTION
When the system is in normal operation situation, please press the button of Adj/Enter, then the system will enter into the situation of self-detection situation:

Low Voltage
For L-F Sensor

(Low Battery Warning for L-F Tire)

Press the button of Adj/Enter, the system will return to display of normal operation and normal interface.

3.3 SYSTEM OPERATION INSTRUCTION

3.3.1 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 position the tires accordingly in 2 ways.

1. Position the tires by the Positioner, a part of the product. The procedures are as:
(1) Press the menu button of menu, until the positioning ICON( ) display on the screen. The display will show like below:

(2) Press the Enter button of Adj/Enter to select the tire to position, whose icon(“---”) will shine. The display will show as below:

(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:

(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.

2. Position the tires by deflation as the following procedures:
   The steps to position the tires are the same as the first method. The difference is not to use the positioner, but deflating the tires, so that the sensors will transmit the signal to the receiver and then position the sensors.
   (1). When the tires is under normal pressure more than 2.3 Bar, and the receiver display is in the situation of positioning, remove the nozzle cap, then deflate the tire by a needle pushing the air valve for 6 seconds. When the receiver will make the “buzzer” sound if TIRE POSITION is successful.

3.3.2 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:
(1) 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. 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, and 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
3.3.3 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 2.3Bar, 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 Adjust for more than 5 seconds; relieve it after a long sound.

4. SYSTEM INSTALLATION

4.1 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 tires and 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.

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.

4.2 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 affect 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.

5. SPECIFICATIONS OF TPMS

<table>
<thead>
<tr>
<th>5.1. Sensor and Transmitter Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery Life</td>
</tr>
<tr>
<td>Battery Type</td>
</tr>
<tr>
<td>Operating Temperature</td>
</tr>
<tr>
<td>Operating Humidity</td>
</tr>
<tr>
<td>Pressure Monitoring Range</td>
</tr>
<tr>
<td>Pressure Reading Accuracy</td>
</tr>
<tr>
<td>Temperature Monitoring Range</td>
</tr>
<tr>
<td>Temperature Reading Accuracy</td>
</tr>
</tbody>
</table>

| Size (length x width x Height) | 66x28x20 mm |
| Weight | 35±2gg |
| Operating Frequency | 433.92 MHz |

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

<table>
<thead>
<tr>
<th>5.2. Receiver Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
</tr>
<tr>
<td>Receiver Frequency</td>
</tr>
<tr>
<td>Receiver Sensitivity</td>
</tr>
<tr>
<td>Operating Voltage</td>
</tr>
<tr>
<td>Operating Current</td>
</tr>
<tr>
<td>Screen</td>
</tr>
<tr>
<td>Weight</td>
</tr>
<tr>
<td>Size (length x width x Height)</td>
</tr>
</tbody>
</table>

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 makes 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 the same as for 4 tires.
Check whether the Magnetic Field Indicator keeps shining or not, if yes, there is interference nearby. Please drive the vehicle to an environment without interference.
If the signal icon still keeps on the 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 difference can become bigger, which is normal.

7. Term forms

<table>
<thead>
<tr>
<th>Kpa</th>
<th>Pressure Unit: Thousand Pascal (Legal pressure unit in China)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psi</td>
<td>Pressure unit: Pound/Square Inch</td>
</tr>
<tr>
<td>Bar</td>
<td>Pressure Unit: Bar</td>
</tr>
<tr>
<td>The Pressure unit Conversion Formula</td>
<td>1BAR=102Kpa; 1Psi=7.03Kpa; 1Bar=14.51Psi</td>
</tr>
<tr>
<td>°C</td>
<td>Temperature Unit: Celsius Degree (°C)</td>
</tr>
<tr>
<td>°F</td>
<td>Temperature Unit: Degree Fahrenheit</td>
</tr>
<tr>
<td>The Temperature Unit Conversion Formula</td>
<td>°F=32+1.8×°C</td>
</tr>
</tbody>
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8. Packing List

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TPMS Wireless Receiver and Display Unit</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>TPMS Wireless Transmitter Sensor</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>Tire Activator (optional, user can use it in the appointed shop)</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Users’ Manual</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Warranty Card</td>
<td>1</td>
</tr>
</tbody>
</table>

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 falls 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.

<table>
<thead>
<tr>
<th>Product</th>
<th>TPMS</th>
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<tbody>
<tr>
<td>Model NO.</td>
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<table>
<thead>
<tr>
<th>Distributor</th>
<th>Purchase Date</th>
<th>Y</th>
<th>M</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distributor</td>
<td>Tel:</td>
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<td></td>
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</table>

<table>
<thead>
<tr>
<th>Period</th>
<th>One Year from Purchasing Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Customer</th>
<th>Name</th>
<th>ID No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tel:</td>
<td>House:</td>
<td>Company:</td>
</tr>
</tbody>
</table>

Note