

**Bluetooth Low Energy**

**Tire Pressure Monitoring System**

**User Manual**

**Model: BSE-02**

**SYSGRATION®**

# Table of Contents

<b>1. PRODUCT INTRODUCTION.....</b>	<b>3</b>
<b>2. NOTICE .....</b>	<b>3</b>
<b>3. BLE TPMS SPECIFICATION.....</b>	<b>5</b>
<b>4. BLE TPMS PACKAGE .....</b>	<b>6</b>
<b>5. BLE TPMS SENSOR INSTALLATION.....</b>	<b>6</b>
<b>6. APP DOWNLOAD AND INSTALLATION .....</b>	<b>8</b>
<b>7. SETTING &amp; ADD DEVICE .....</b>	<b>10</b>
<b>8. ALARMS AND WARNINGS .....</b>	<b>18</b>
<b>9. SYSTEM SETTING .....</b>	<b>19</b>
<b>10. EXCHANGE SETTING.....</b>	<b>20</b>
<b>11. VOICE DONGLE SETTING .....</b>	<b>22</b>
<b>12. ABOUT .....</b>	<b>24</b>
<b>13. FREQUENTLY ASKED QUESTIONS.....</b>	<b>25</b>
<b>14. WARRANTY POLICY .....</b>	<b>25</b>

# 1. Product Introduction

With the new technology product: Bluetooth Low Energy Tire Pressure Monitoring System Retrofit Kit (hereinafter referred to as BLE TPMS), the driver could get the accurate tire pressure and temperature at any time through smart phone by using this kit while driving. When the system detects abnormal status, it will alarm the driver actively, and show the abnormal data and its tire location on the BLE TPMS APP (hereinafter referred to as APP).

## 2. Notice

### Product Warning

**2.1.1 Do not operate the APP while driving. The company is exempt from all responsibilities that result from driver's carelessness and improper operation.**

**2.1.2** The system adopts the wireless transmission of signals. In some special environments, frequency interference, faulty operation or faulty installation may result in weaker signals or inability to receive signals. If the insulation adhesive sticker of the windshield contains metallic material, it will affect the signal reception. When the alarm sounds and shows abnormal data, please drive the vehicle away from the current location (there may be signal interference in the surroundings) or drive the vehicle to a tire shop to be checked.

**2.1.3** If the TPMS sensor is low on battery(if abnormal conditions exist continuously, the battery may make the TPMS sensors continuously emit signals to warn the driver, so the battery life will be shorter than expected), please go as soon as possible to a specified service station to confirm whether the TPMS sensor needs to be replaced. You will take all the risks and responsibilities if you do not change the sensor when the low battery sensor warning is displayed.

**2.1.4** Temporary resealing or re-inflation of product injected through the valve hole may adversely affect the operation of the sensor. The company is exempt from all responsibilities. Furthermore, do not place the TPMS sensor in contact with any chemicals. They might damage the sensor and prevent it from functioning properly.

**2.1.5** Please close any other APPs or web pages which are not in use when using the BLE APP. Data receiving status of the APP may be affected by the system load of the smart phone.

## **Federal Communication Commission Interference 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.

## **FCC Caution:**

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.

### **3. BLE TPMS Specification**

BLE Sensor Specification	
Operating Voltage	3V
Operating Humidity	95 % MAX
Operating Current	<15 mA at DC 3V
Storage Temperature	-40°C to 85 °C
Operating Temperature	-20°C to 85 °C
Monitored Pressure Range	Passenger: 0 to 92 psi (0 to 640 kPa) Truck: 0 to 185 psi (0 to 1280 kPa)
Monitored Temperature Range	-20 °C to 85 °C
Operating Frequency	2.4GHz
Transmission Power	4 dBm MAX
Battery Life	1 years (under normal operating condition)
Battery Capacity	130 mAh (CR1632)
Weight	9.5 g ± 0.5 g (including battery)

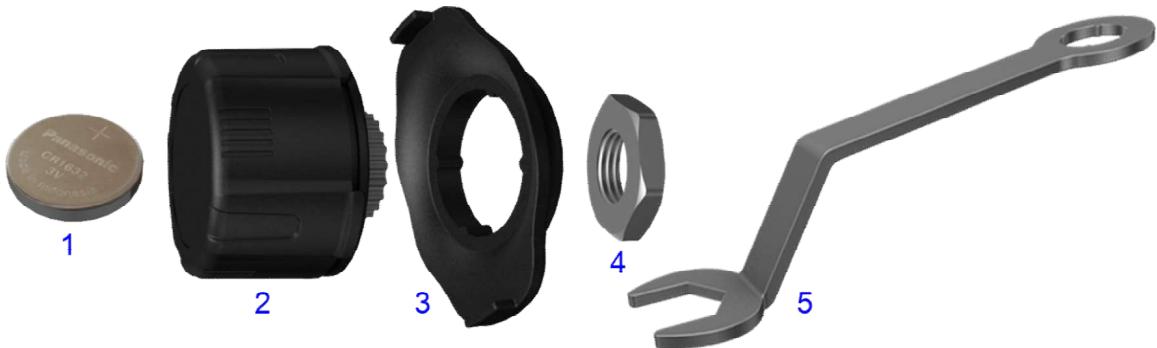
Voice Dongle Specification	
Operating Voltage	5V
Operating Humidity	95 % MAX
Operating Current	<900 mA at DC 5V
Storage Temperature	-40°C to 85 °C
Operating Temperature	-20°C to 85 °C
Sound Pressure (min.)	80dB@30cm
Operating Frequency	2.4GHz
Transmission Power	4 dBm MAX
Weight	10 ± 1 g

## 4. BLE TPMS Package

Part Name	Quantity
BLE TPMS Sensor	4 pcs
CR 1632 Battery	4 pcs
Anti-theft part	4 pcs
Lock-Nut	4 pcs
User Manual	1 pcs
Voice Dongle	1 pcs
Spanner	1 pcs

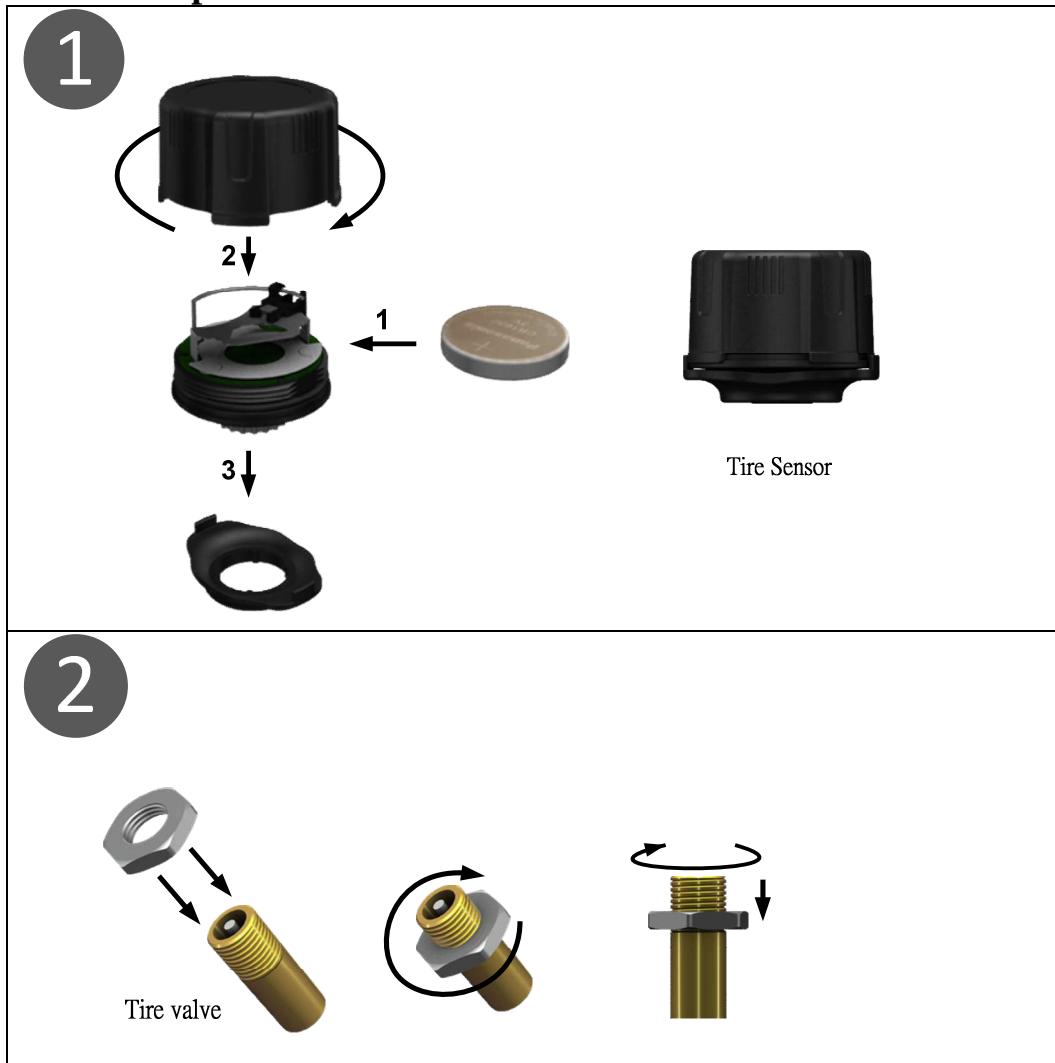
## 5. BLE TPMS Sensor Installation

### 5.1 BLE TPMS Sensor Accessories



1.Battery(CR1632) 2.Tire Sensor 3.Anti-theft part 4.Lock-Nut 5. Spanner

## 5.2 Installation Steps



3



After installation, please download the APP to your smart phone, and proceed with all settings.  
(Please check the 7 Initial Setting)

## 6. APP Download and Installation

### 6.1 Operation System Required

TPMS system supports both smartphone for Android & iOS operation system. (Bluetooth 4.0) °

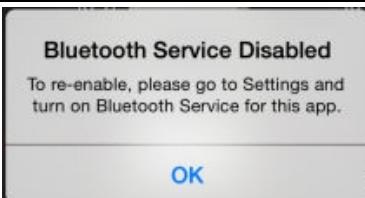
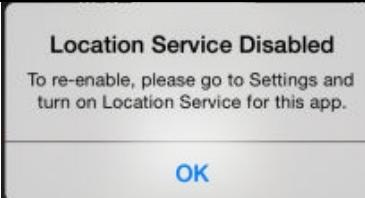
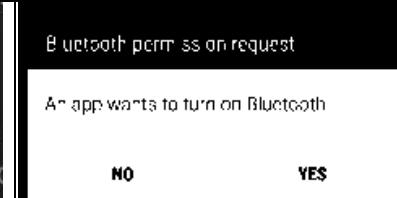
APP Download	Operation System	Compatible Smartphone
APPLE APP Store	iOS 7.1.2 or later	iPhone 4S, 5, 5S, 6, 6 Plus or later
Android Google Play Store	Standard Android 4.3 or later	Android Smart Phone

## 6.2 How to Download

Search in the Google Play Store or APPLE APP Store by keyword “BLE” or ”TPMS”, in order to find the free APP.(  )

After you install the APP, please reboot and make sure Bluetooth is enabled. Open the APP after installation is completed. A statement from the operation system will pop up, displaying “Bluetooth Service Disabled” and/or “Location Services Disabled”. Please choose “ok” to turn on the “Bluetooth” & “Location Services” function.

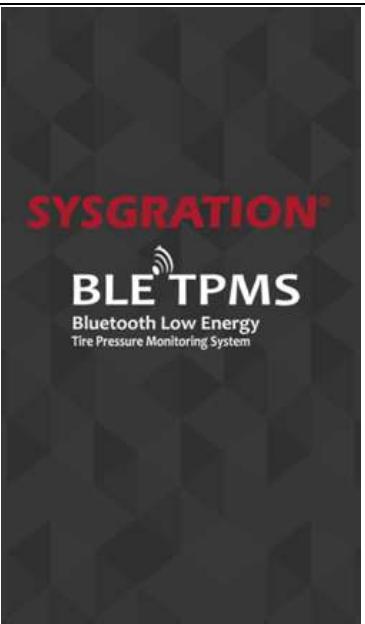
In case “Location Services” is not turned on properly, please turn it on in “Settings” (only for iOS system).

iOS version		Android version
 <p><b>Bluetooth Service Disabled</b> To re-enable, please go to Settings and turn on Bluetooth Service for this app.</p> <p>OK</p>	 <p><b>Location Service Disabled</b> To re-enable, please go to Settings and turn on Location Service for this app.</p> <p>OK</p>	 <p>Bluetooth permission request An app wants to turn on Bluetooth</p> <p>NO YES</p>

## 7. Setting & Add Device

### 7.1 Introduction of Contents

Please make sure the “Bluetooth” & “Location Service” Setting functions are enabled when you start to use the APP.

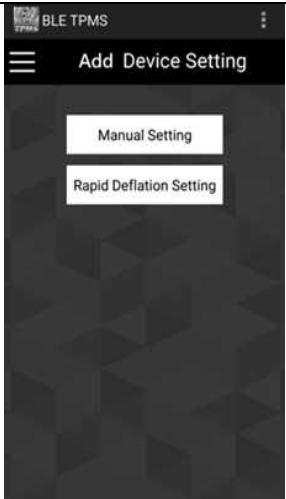
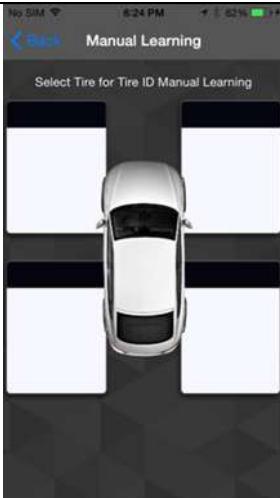
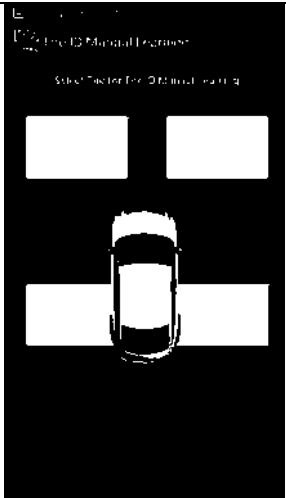
iOS version	Android version	
 The image shows the start-up screen of the SYSGRATION BLE TPMS app for iOS. It features a dark background with a geometric hexagonal pattern. In the center, the word "SYSGRATION" is written in red capital letters, followed by a registered trademark symbol. Below it, "BLE TPMS" is displayed in large white letters, with a small blue icon of three concentric arcs above the letter "E". Underneath, the text "Bluetooth Low Energy" and "Tire Pressure Monitoring System" is written in smaller white font.	 The image shows the start-up screen of the SYSGRATION BLE TPMS app for Android. It has a similar dark background with a hexagonal pattern. The "SYSGRATION" logo is in red at the top, followed by "BLE TPMS" in large white letters with the same blue icon. Below it, the text "Bluetooth Low Energy" and "Tire Pressure Monitoring System" is in smaller white font.	Start-up Page of the APP

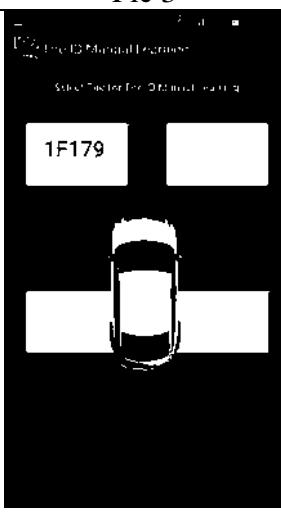
iOS version	Android version	
		<p>Main Menu:</p> <p>Driving: Displays the pressure, temperature and voice warning of the four tires. (Note 1)</p> <p>Setting: System settings.</p> <p>Add Device Setting: Enter the learning setting when using for the first time. (p.11).</p> <p>Exchange: Tire exchange setting.</p> <p>Voice Dongle: Dongle setting. (Note 2)</p> <p>About: Disclaimer &amp; Company Information.</p>

Note 1: iOS version: enter the system Settings-> BLE TPMS APP->Notifications->  
Enable notification and support background execution.

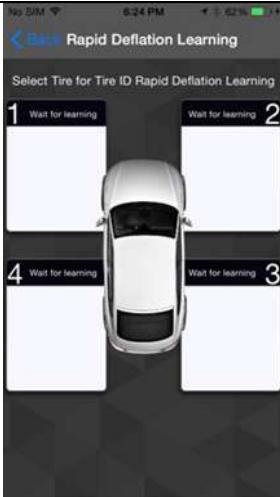
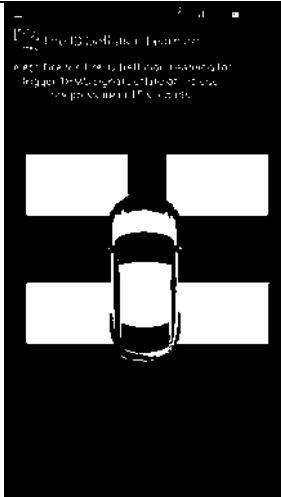
Note 2: Voice Dongle and TPMS Sensor have been paired. If adjustments are made  
in “System Setting” and “Exchange”, please change the settings in “Dongle”.

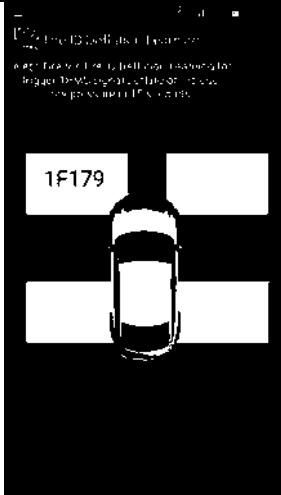
## 7.2 New Device Setting

iOS version	Android version	
 Pic 1	 Pic 1	<p>New Device Setting Manual Learning: 1. Select Manual Learning. (Pic 1)</p>
 Pic 2	 Pic 2	

iOS version	Android version	
 Pic 3	 Pic 3	2. Choose tire 1 and key in the five-character sensor ID (Please refer to last page: ID sticker), which might include “0-9”, “A-F”, or ”a-f”, when a blank space pops up. (Pic 3)
 Pic 4	 Pic 4	3. Manual Learning completed. (Pic 4) Using the same method, set up the ID learning for tire 2(RF), tire 3(RR) and tire 4(LR) in sequence.

## 7.3 Rapid Deflation Setting

iOS version	Android version	
 Pic 1	 Pic 1	<p>Rapid Deflation Setting :</p> <ol style="list-style-type: none"> <li>Select Rapid Deflation Setting. (Pic 1)</li> </ol>
 Pic 2	 Pic 2	<ol style="list-style-type: none"> <li>Choose tire 1 (LF) and deflate the tire pressure. The APP will look for the deflation signal, showing new ID number on the dialogue display. You can press "OK" to finish this step or press "Cancel". It takes 120 seconds to perform this step. (Please ask a qualified tire shop to install the product) (Pic 2)</li> </ol>

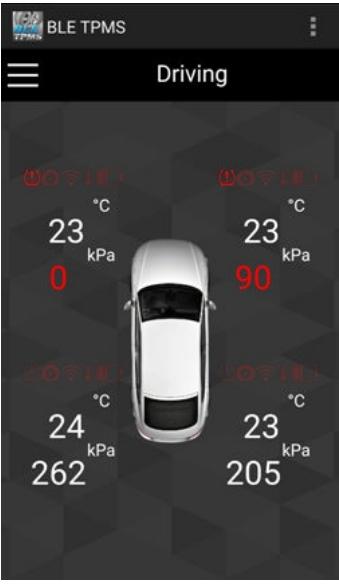
iOS version	Android version	
 Pic 3	 Pic 3	<p>3. Rapid Deflation completed. (Pic 3) Using the same method, set up the ID learning for tire 2(RF), tire 3(RR) and tire 4(LR) in sequence.</p>

## 7.4 QR Code Setting

iOS version	Android version	
 Pic 1	 Pic 1	<p>QR Code Setting :</p> <ol style="list-style-type: none"> <li>Select QR Code Setting. (Pic 1)</li> </ol>
 Pic 2	 Pic 2	<ol style="list-style-type: none"> <li>Choose tire 1 (LF)</li> </ol> <p>The APP will scan qr code, showing new ID number on the dialogue display. You can press “Clear ID” or “Stop scan” or “Save ”button. (Please ask a qualified tire shop to install the product) (Pic 2)</p>

iOS version	Android version	
 <p>Pic 3</p>	 <p>Pic 3</p>	<p>3. QR Code completed. (Pic 3)</p> <p>Using the same method, set up the ID learning for tire 2(RF), tire 3(RR) and tire 4(LR) in sequence.</p>

## 8. Alarms and Warnings

iOS version	Android version	
		<p><b>System Warning :</b></p> <p>When abnormal tire system status occurs, the value of the corresponding tire turns red, and it alarms with a sound and warning symbol. The warning symbols on each tire display, from the left to the right, are: tire pressure warning, rapid deflation, no signal, tire temperature warning and low battery power of sensor. If you do not want to hear the sound from the voice dongle and the APP, please exit the APP and mute the voice dongle.</p>

### 1. Warning of high tire pressure or low tire pressure

Tire pressure is higher than maximum tire pressure value or lower than minimum tire pressure value on the APP.

### 2. Warning of rapid deflation of tire pressure

Any tire pressure that decreases rapidly.

### 3. No signal

The phone can not receive any signal: red symbolizes

### 4. Warning of high tire temperature

Tire temperature is higher than temperature maximum value on the APP.

### 5. Low battery power warning of TPMS sensor

Battery power of TPMS sensor is low.

## 9. System Setting

iOS version	Android version	
		<p><b>System Setting:</b>          Unlock the system setting by clicking on the “lock” icon on the upper-right side of the main display.          Change settings on “front wheel” and “rear wheel” then press the “Save” button to save the settings. You can press “Default Value” to reset all settings. (Note 1)          Pressure Unit: Bar, kPa, psi; 3 different pressure units.          Temperature Unit: °C, °F; 2 different temperature units.          Warning Audio Setting: Default, piano 1, piano 2, piano 3, bird, fantasy, impromptu          Mail TPMS Data: Send log data. (Note 2)          Click the lock icon again to complete the setting.</p>

Note 1: For the standard tire pressure value, please refer to the placard located at the side of the driver's seat.

Default Value: Maximum tire pressure: psi= 43; kPa= 300; Bar= 3.0

Minimum Tire pressure: psi= 26; kPa : 180; Bar= 1.8

Maximum Temperature: °C= 80; °F= 176

Note 2: Mail TPMS data:

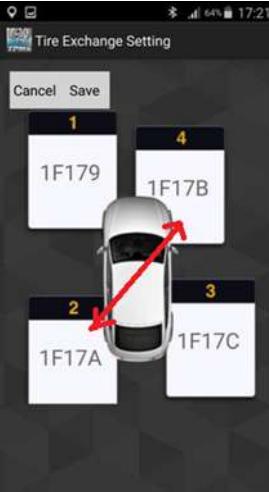
iOS version: iPhone Setting->BLE TPMS App->GROUP FOR MAIL>Record Data Enabled

iOS version supports only the system E-mail and does not support other downloaded E-mail Apps. (eg: Gmail)

Android version: Select Info Setting to fill in e-mail address.

## 10. Exchange Setting

iOS version	Android version	
 Pic 1	 Pic 1	<p>Tire Exchange Setting:</p> <ol style="list-style-type: none"> <li>Unlock the system setting by clicking on the “lock” icon on upper-right side of the main display.</li> </ol>
 Pic 2	 Pic 2	<ol style="list-style-type: none"> <li>Tire positions are displayed in sequence (1, 2, 3, and 4), meaning left-front, right-front, right-rear and left-rear with ID.</li> </ol>

iOS version	Android version	
		Drag the dialogue display of the tire to the desired location for all desired exchanged tires, then press the “Save” icon. It will display the new tire positions in sequence (1, 2, 3, and 4).
		iOS version: Click the “lock” icon once again to complete the settings. Android version: Click “exit” and then click on the “lock” icon again to complete the settings.

## 11. Voice Dongle Setting

iOS version	Android version	
 Pic 1	 Pic 1	<p><b>Voice Dongle Setting:</b>            Recommend for 5V/2A car USB power charger adapter for voice dongle.</p>
 Pic 2	 Pic 2	<ol style="list-style-type: none"> <li>Press the red voice dongle button for 1.5 seconds. When you hear “beep,” you will go into the Bluetooth pairing mode (LED : flicker of Red and Blue light ). (Pic 2)</li> </ol>

iOS version	Android version	
  Pic 3	 Pic 3	<p>2. Enter menu -&gt;click "Dongle" function -&gt;click "TPMS_Dongle_sn" (random serial number), "TPMS_Dongle_sn Connected" will be shown in blue color. (Pic 3)</p>
 Pic 4	 Pic 4	<p>3. iOS version: The APP will automatically download the settings when you hear "Setup completed." You can start using after "Voice dongle Setting OK" is displayed. Android version: Please click write. The APP will automatically download the settings when you hear "Setup completed." When "Dongle Setting OK" is displayed, you can start using.          Double click: Tire Status Report.          Mute/ Un-Mute: Press the red button to mute. Press the red button again or wait 10 minutes for the mute function to cancel automatically.</p>

## 12. About

iOS version	Android version	
		<p><b>About:</b> “Product Information” is displayed. It describes the definition of “Warning Symbol” and shows the link to the “Company Website”. You can press the link to go to the company’s website.</p>

## **13. Frequently Asked Questions**

1. After inserting the sensor ID number into the APP, the dialogue display remains without a value.  
A: TPMS sensor only transmits data when the sensor is on a car that is going over 20 km per hour, is started after parked for over ten minutes, or the tire pressure difference at the moment is 30 kPa. During other times, data will not be transmitted in order to save power. You can check if the TPMS sensor is working normally through tire pressure increase or deflation.
2. Smart phone has completed the installation of the APP, the sensor ID settings are done, and the car is being driven, but no data is shown.  
A: Please restart the start phone and check if Bluetooth was turned off.
3. There is no alarm sound or voice warning for abnormality of tires.  
A: Please check if the start phone has gone in silent mode or if the volume has been turned to lowest.
4. There is alarm sound for tire abnormality but no voice warning.  
A: Some Android smart phones do not support voice services. Please contact the smart phone manufacturers.

## **14. Warranty Policy**

Thank you for buying this product and giving us support. From the date of purchase, we provide a one-year warranty for the product, protecting the client's interest by providing product quality assurance. During the warranty period, under normal operation and in the event of a faulty product, the company is willing to repair the faulty product or have it replaced, enabling you to get the guarantee and demonstrating the company's responsible attitude toward products. But the product warranty must meet the following conditions :

1. Defective products need to be provided to local dealer to confirm purchase date and cause of defect.
2. Products must be operated correctly, as indicated in the user manual.
3. Product has not been disassembled by yourself.
4. The main cause of product failure is due to manufacture issues.

**Disclaimer:**

This product is only to be used as precautionary warning and provides to user as a convenient secondary safety equipment. Please follow the standard installation procedures or ask a qualified tire shop to install the product. If the tire has been damaged or traffic accident resulting from improper driving behavior occurs, the company will not be responsible for any civil or criminal liabilities.

Other relevant latest information of SYSGRATION TPMS is available at our website (<http://www.sysgration.com/>) and our Facebook Page (<http://www.facebook.com/sysgration>) for latest information.

# SYSGRATION®

BLE TPMS  
MODEL: SBT-20

## WARRANTY CERTIFICATE

### SERIAL NUMBERS

LF		RF	
LR		RR	

### Sensor's ID stickers:

LF	ID stickers here	RF	ID stickers here
LR	ID stickers here	RR	ID stickers here

WARRANTY PERIOD:

One (1) Year

PURCHASE DATE:

Y. M. D.

DISTRIBUTOR STAMP:



<http://www.sysgration.com/>