

## **Mazda New CX-5 TPMS Pressure by Location Display**

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To ensure correct operation and service, please read these instructions before installing and operating the TPMS

## **Tire Pressure Monitoring Systems, TPMS**

Tire Pressure Monitoring Systems (TPMS) improves safety while driving. Once installed in your vehicle, the system will automatically monitor your tires in real-time for pressure and temperature. When any tire's pressure and/or temperature appear abnormal, the system will, in real-time, transmit signals to active an alarm and show a digital figure to warn the driver of a problem. The system aids safety, can extend the tire life and help reduce fuel consumption.

**Attention!** This receiver and display unit is only compatible with Mazda CX5 OE TPMS sensor. After installation, the receiver and display unit need to do the relearn process to learn TPMS signal. Then the display will show the correct tire pressure information on the display. Please refer to "Sensor Relearn Method" in the manual.

### **NOTICE**

#### **FCC Notice**

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. 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 factoring 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.

**Caution** Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## System Scope of Use and Warnings

### Tire Pressure Monitoring System, TPMS

This system is a sensing device designed to measure and display tire operation and / or activate an alert to the driver when pressure and temperature irregularities are detected. It is the responsibility of the driver to react promptly and with discretion to alerts. Abnormal tire inflation pressure should be corrected at the earliest opportunity

**Caution** The system is wireless RF product; therefore, it may not receive signal due to interference environment or incorrect operating or installation. When the system continually cannot receive signal from one of the tire sensor more than 20 minutes since the system be switched on, the system will show "E2". In this case, it may cause by a RF interference environment and driver needs to drive the vehicle to other place. If the display still cannot receive any correct signal from tire sensor, then, driver needs to find a nearby qualified tire maintain service for checking and maintain. It may cause by a tire sensor damaged or battery power consumption is low (the battery consumption will be lower than under normal using condition due to sensors need to send warning signal continually to driver). If the system continually cannot receive signal from any sensors more than 20 minutes, the system might damaged and will show "E1". Driver needs to drive to other place (there might be interference nearby) or send the system to agent for repair

## System Installation and Usage

Please follow the installation process in the manual to ensure the product is under warranty. The system is only for Mazda CX5 OE TPMS sensor. The standard tire pressure range is 20 psi~48 psi. The maximum tire pressure that the system could measure is 51 psi. Please note the system is not compatible with iron rim.

## Reacting to Alerts

When an alert or warning is received, reduce vehicle' s speed and proceed to a safe location to stop where the tire can be inspected and /or serviced.

The low-pressure alert indicates that the air pressure has dropped to a selected minimum and a high-temperature alert indicates that the temperature of the tire content has surpassed the threshold value set.

## Use of Chemicals

Temporary resealing or re-inflation products containing internal sealants or propellants in any tire assembly may adversely affect the operation of the sensor/transmitter.

**SPECIFICATIONS OF TPMS**

RECEIVER SPECIFICATIONS	
Operating Voltage	5V DC
Operating Current	< 150mA
Storage Temperature	-30°C to 75°C
Operating Temperature	-25°C to 75°C

**ACCESSORIES**

	Picture	Description	Q' ty
A		Wireless Receiver and Display Unit	1
B		Velcro for Display	3
C		3M Double-Coated Adhesive	1
D		Power Cord (with 90 degree Micro-USB; 300cm Length)	1
E		Power Connector for cigarette Lighter (USB with 2 outputs )	1
F		Windshield Holder (with Nut)	1

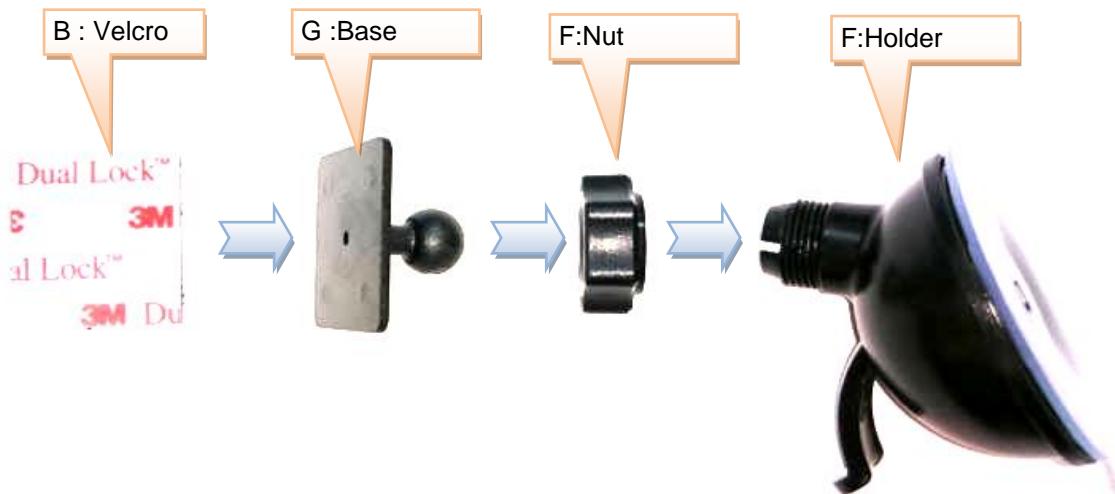
G		Base (for Display Unit)	1
H		Base (Adhesive to Windshield).	1

## DISPLAY UNIT INSTALLATION

**Attention** The display is installed in the car, and please use standard car charger to keep the product in a good condition.

1. One Velcro (B) adhere to backside of Wireless Receiver and Display Unit (A), another Velcro (B) adhere to Base (G).
2. Plug Power Cord (D) into Micro USB input of Wireless Receiver and Display Unit (A)
3. Connect Power Cord (D) to any input of Power Connector (E), another end plugs into Cigarette Lighter of the vehicle.
4. Select preferable position on windshield to fix Display (A). As the following, you may see Base (G) and Display (A) are attached by two Velcro (B).
5. Remove protection film on the Display (A).

### Option# A : Use Windshield Holder



**Installing steps:**

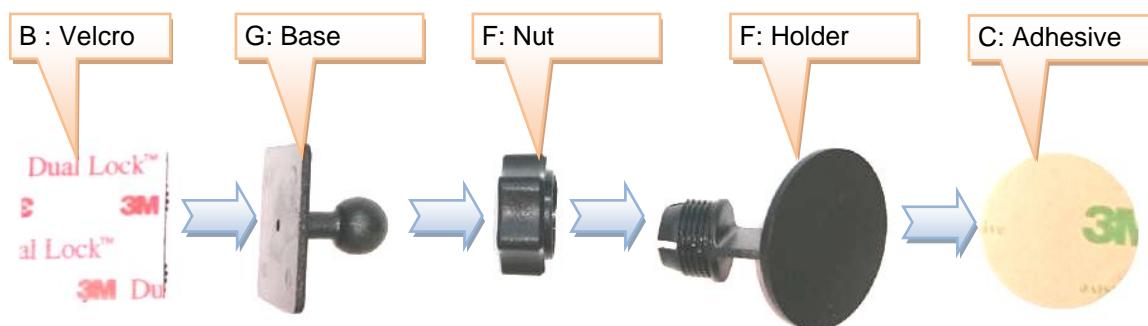
Step1: Take off white film of Velcro (B) and adhere to Base (G).

Step2: Unscrew Nut from Windshield Holder (F) and fix it on Base (G).

Step3: Attach the head of the Base (G) into the Nut (F), and screw tightly.



**Option# B: Adhesive To Windshield**



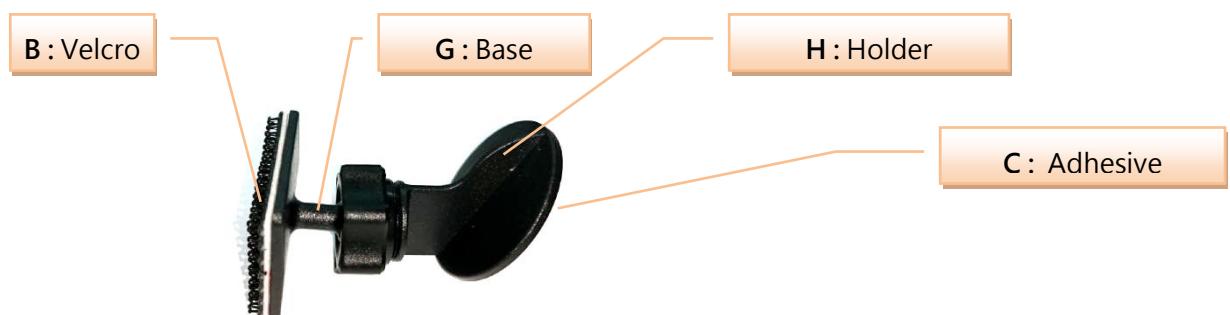
**Installing steps:**

Step1: Take off white film of Velcro (B) and adhere to Base (G).

Step2: Unscrew Nut from Windshield Holder (F) and fix it on Base (G).

Step3: Attach the head of the Base (G) into the Nut (F), and screw tightly.

Step4: Use any side of 3M double-coated Adhesive (C) to Windshield Holder (F), another side is adhesive to windshield.



## System Operation

This receiver and display unit is only compatible with the Mazda CX5 OE TPMS sensor. After installation, the receiver and display unit needs to do the relearn process to learn TPMS signal. Then the display will show the correct tire pressure information on display. Once the ignition is turned on, and the vehicle is in driving mode, the receiver and display will show the real-time tire pressure and temperature individually.

## Sensor Relearn Method

When you first install the receiver and display unit, you will need to do the relearn process to learn TPMS signal. After the relearn process, the receiver and display will record the sensor's ID inside. When tire rotation, please do the relearn process again to make sure sensor ID is properly recorded.

The receiver and display receive wireless signal from sensors. The receiver and display could reset through the below process to ensure the tire position and tire pressure is correctly corresponded.

There are two methods for relearn process:

### Mode 1: Four Tire ID Learn

When you are replacing 4 sensors or your tire pressure position is in disorder, use this relearn method. Following the relearn process in the order of FR (front right) - RR (rear right) - RL (rear left) - FL (front left).

### Mode 2: Single Tire ID Learn

When you are replacing only one sensor, you could this method to do the ID relearn.

- No.1 → Front Right Tire
- No.2 → Rear Right Tire
- No.3 → Rear Left Tire
- No.4 → Front Left Tire



#### **Warning**

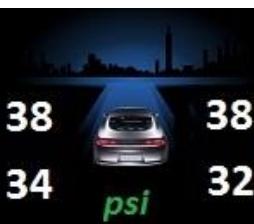
- 1. Do not turn off the vehicles power during this process. Doing so will immediately interrupt the repositioning setup process. The ignition can either be in the on or start position.**

**2. After repositioning, check the display is detecting all tire pressures correctly. If the system cannot work normally, please reset it and follow the instructions again (At this time, enter Mode 2 to use single sensor replaced).**

### Mode 1: Four Sensors Replaced

Step	Operation process	Photograph
1	The tire shop will check the tire for abrasion and rotate tires into the appropriate position.	
2	Press both the set key and function key simultaneously for 5 seconds. The display will flash red, and a "beep" sound will be heard. You can release the buttons the system will have entered into mode 1	<b>【Function】 Key</b> <b>【Set】 Key</b>
3	<p>3-1 It will take about two seconds after entering mode 1, and the display will show "1".</p> <p>3-2 When Tire No.1 needs to be reconfigured, deflate Tire No.1 once below 27 psi (tire low pressure default), and wait for the receiver to receive the signal. When tire No. 1 receives the signal, you will hear alarm "beep". Then, start inflate the tire No.1, it will keep on "beep" till Tire No. 1 is completely inflated to normal pressure.</p> <p>3-3 After finishing all the steps above, the numbers will show "1" and turn to "2" automatically.</p> <p><b>Attention</b> When you deflate tire, the Mazda OE sensor will transmit the signal in about one minute.</p>	   
4	Repeat the 3-2 step above for tire No.2, No.3 and No.4. System will be back to monitoring condition automatically, and receiver start to receive signals of tire pressure & tire temperature.	

## Mode 2 : Single Sensor Replaced

Step	Operating Process	Photograph
1	Take off the broken sensor and replace it with a new sensor.	
2	Press both the set key and function key simultaneously for 5 seconds. The display will flash red, and a "beep" sound will be heard. You can release the buttons, and the system will have entered into mode 1. Continue to repress the function key for four times, and then the system will switch into mode 2.	<b>【Function】 Key</b> <b>【Set】 Key</b>
3	<p>3-1 It will take about 2 seconds after entering mode 2, the display will show "2"</p> <p>3-2 Press set key to choose tire which new sensor installed, LED will show Tire No.1 / 2 / 3 / 4.</p> <p>3-3 When Tire No.1 (RF Tire) needs to be replaced, deflate tire No.1 below 27 psi (tire low pressure default value) and wait for the receiver to receive the signal. When Tire No. 1 receives the signal, you will hear "beep" . Then, start inflate tire No.1, it will keep on "beep" till Tire No. 1 is completely inflated to normal pressure.</p> <p><b>Attention</b> When you deflate tire, the Mazda OE sensor will transmit the signal in about one minute.</p>	  
4	After completing all the steps above, System will be back to monitoring condition automatically.	

## SYSTEM ALARM

The alarm system will start, if tire pressure is too low, and if tire temperature is too high, the alarm system will start too, and tire pressure will show on display. If high tire temperature and low tire pressure situation happen at the same time, the system will show low tire pressure at first and then show tire temperature, both of tire pressure and temperature will show on the screen for six seconds by turns.

The alarm will keep making sound till turning off alarm system or solving abnormal situation, and below the manual will explain operation process.

## SETUP METHOD

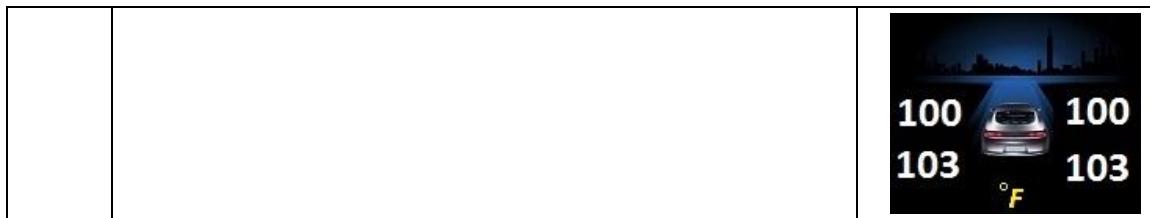


The driver can follow the steps to adjust the system of pre-loaded values

**【Notice】** : The system has been pre-set with alert figures. If the driver wants to change the figure, then follow the professional tire technician's instruction.

**Choosing preferred Pressure Units and Temperature Units**

Step	Operation process	Photograph
1	<p>By pressing the function key, it will switch among displaying the pressure unit, displaying the temperature unit, and displaying both pressure unit and temperature unit by turns. The operator can choose which one to set up first.</p> <p>The system will remain the screen when it shows it more than 10 seconds; the screen will remain the same after system starts over.</p>	<p>38      38 34      32 <i>psi</i></p> <p>25      25 26      26 <i>°C</i></p> <p>38      38 34      32 <i>psi</i></p>
2	If the pressure unit is chosen. Press the function key for 3 seconds, it will switch to kPa, psi, bar in turn. Once the preferred unit is chosen release the function key.	<p>38      38 34      32 <i>psi</i></p> <p>2.6      2.6 2.6      2.6 <i>bar</i></p> <p>210      210 210      210 <i>kPa</i></p>
3	If the temperature unit is chosen. Press the function key for 3 seconds, and it will switch to °C and °F in turn. Once the preferred unit is chosen release the function key.	<p>25      25 26      26 <i>°C</i></p>



**Standard Front/Rear Tire Pressure Setting**

Step	Operation process	Photograph
1	Pressing the set key for over 3 seconds can change to the front tire standard pressure set up mode.	<b>【Set】 Key</b>
2	The wireless receiver and display unit will show the preset front tire standard pressure default (34 psi / 230 kPa / 2.3 bar).	
3	By pressing the function key once, the psi value will add 1 unit; and the unit value will return to 20 psi when it has reached 48 psi. (the kPa value will add 10 units; and the unit value will return to 140 kPa when it has reached 330kPa / the bar value will add 0.1 units; and the unit value will return to 1.4bar when it has reached 3.3 bar) The system will use this setting as the standard value for low tire pressure monitoring, which means when the tire has deflated to a pressure value lower than this setting, the system will automatically start to warn the driver.	<b>【Function】 Key</b>
4	As for the preset standard value 34psi / 230kpa for tire pressure monitoring. High tire pressure monitoring which means when tire pressure has reached 51psi or 1.5 times of the original standard value (the initial preset value is 345kPa or 3.5 bar). For low tire pressure monitoring which means when tire pressure has reached 27psi or 0.8 times of the original standard value (the initial present value is 184 kPa or 1.8bar).	

5	Press the set key to complete the front tire pressure warning value setup mode. The system will automatically enter the rear tire pressure set up mode.	<b>【Set】 Key</b>
6	Set up rear tire standard pressure value by using the same steps 1~5 from front tire pressure warning value set up mode. .	

### Tire Over Temperature Warning

Step	Operating process	Photograph
1	After the setting operation of standard tire pressure, the systems will automatically entry the setting mode of high tire temperature.	
2	The display unit will show tire over temperature warning setup value (the factory default value is 80°C/ 176°F) for the tires.	
3	Press the function key to change the high temperature figure. The high temperature figure set up range is from 60°C to 100°C ( the °F value will add 1 unit; and the unit value will return to 140 °F when it has reached 212 °F), the driver can continually push the function key to adjust the appropriate high temperature figure. When the tire temperature exceeds this setting, the system will generate the warning signals.	<b>【Function】 Key</b>
4	Press the set key to complete the high temperature setting operation.	<b>【Set】 Key</b>

**Alarm Instruction**

Type	Warning Description	Photograph
1	The tire pressure of RF Tire (22 psi) is below tire pressure default (27 psi), and it will active an alarm with "Beep sound" (along with Orange light on) to warn the driver, press set key to turn off the alarm (buy Orange light still on till the pressure back to normal condition).	
2	The tire pressure of LF Tire (52 psi) is above tire pressure default (51 psi), and it will active an alarm with "Beep sound" (along with Orange light on) to warn the driver, press set key to turn off the alarm (buy Orange light still on till the pressure back to normal condition).	
3	The tire temperature of LR Tire (82 °C) is above tire temperature default (80 °C), and it will active an alarm with "Beep sound" (along with Orange light on) to warn the driver, press set key to turn off the alarm (buy Orange light till on till the pressure back to normal condition).	
4	The battery voltage of Sensor is under battery voltage default, which the battery check icon will illuminate.	
5	When it lasts 20 minutes above that wireless receiver couldn't receive one of the signal from wireless transmitter sensor, the display will show E2. E1 indicates all wireless transmitter sensors not receivable.	

**Note** When display unit shows E1 or E2, place any wireless devices (cell phone, etc) further away from display unit or locate a qualified tire service center to correct the issue

**APPENDIX 1**

kPa	Pressure reading in Kilo Pasca
psi	Pressure reading in pound per square inch
bar	Pressure reading in bar
°C	Temperature reading in degrees Celsius
°F	Temperature reading in degrees Fahrenheit
Inflating Pressure environment	Recommended inflation pressure of a tire at ambient temperature of 25°C / 77 °F by vehicle manufacturers
Low Pressure Alert	Visual and audible warning, this is activated when the tire's pressure goes below the preset level. Initial low pressure alert is 27 psi.
High Pressure Alert	Visual and audible warning, this is activated when the tire's pressure goes higher than the present level. Initial High pressure alert is 51 psi.
High Temperature Alert	Visual and audible warning, this is activated when the tire's temperature goes higher than the present level. Initial High temperature alert is 80°C.
Display / Receiver Module	The electronic module mounted inside the vehicle that alerts the driver of any tire irregularities.

**APPENDIX 2**

kPa , psi, bar Conversion Table								
kPa	psi	bar	kPa	psi	bar	kPa	psi	bar
10	1	0.1	210	30	2.1	410	59	4.1
20	3	0.2	220	32	2.2	420	61	4.2
30	4	0.3	230	33	2.3	430	62	4.3
40	6	0.4	240	35	2.4	440	64	4.4
50	7	0.5	250	36	2.5	450	65	4.5
60	9	0.6	260	38	2.6	460	67	4.6
70	10	0.7	270	39	2.7	470	68	4.7
80	12	0.8	280	41	2.8	480	70	4.8
90	13	0.9	290	42	2.9	490	71	4.9
100	15	1	300	44	3.0	500	73	5
110	16	1.1	310	45	3.1	510	74	5.1
120	17	1.2	320	46	3.2	520	75	5.2
130	19	1.3	330	48	3.3	530	77	5.3
140	20	1.4	340	49	3.4	540	78	5.4
150	22	1.5	350	51	3.5	550	80	5.5
160	23	1.6	360	52	3.6	560	81	5.6
170	25	1.7	370	54	3.7	570	83	5.7
180	26	1.8	380	55	3.8	580	84	5.8
190	28	1.9	390	57	3.9	590	86	5.9
200	29	2	400	58	4.0	600	87	6

°C / °F Conversion Table					
°C	°F	°C	°F	°C	°F
-40	-40	20	68	80	176
-30	-22	30	86	90	194
-20	-4	40	104	100	212
-10	14	50	122	110	230
0	32	60	140	120	248
10	50	70	158	125	257

## **WARRANTY POLICY**

We warrant our products for one year (365 days) from the date of original purchase to be free from defects in materials and workmanship. If, during this period, the product fails under normal usage, because of a manufacturing defect, we will replace or repair the item. To obtain repair or replacement under the terms of this warranty, please return the product to the place of purchase. Proof of purchase and date of purchase are required to validate the warranty claim.

**Warranty including "Wireless Display Unit and Power Connection cable" , not including other accessories.**

**Warning**

This receiver and display unit only receive the signals from Mazda OE sensors.

## **TROUBLESHOOTING GUIDE**

### **1. The receiver shows no sign or any information after its power is turned on.**

1.The power cord connector is not fully contacted with the receiver

Solution: Remove the power cord and plug it into the outlet again until it is contacted completely.

2.The power cord failed

Solution: Change a new power cord

3. The battery is run out of power

Solution : If the battery voltage is always lower than 9V every time you start the engine, it is recommended that the car should be brought to the service center for inspection.

4. The digits shown on the display panel become incomplete, or the light indicators become abnormal.

Solution : Send the defected receiver display back to agent for repair and reconfigure its ID using the Tire Switching Mode (Mode IV).

5. The fuse is blown in display

Solution : Send the defected receiver display back to agent for repair and reconfigure its ID using the Tire Switching Mode (Mode IV).

### **2. The buttons have no response.**

1. The inner circuits of the receiver failed

Solution : Ask your distributor to have your receiver replaced, reconfigure its ID using the Tire Switching Mode (Mode I), and send the defected receiver back to manufacturer for repair.

### **3. The receiver cannot receive signal from one or some certain tires (but not all of them) after its power is turned on the numeric values representing the locations of those tires displayed on the screen become “E2” .**

1. There is interference from other electronic device in the vehicle

Solution : Remove other electronic device in the vehicle to determine if TPMS is interfered by those removed devices.

2. The IDs of those tires do not set up correctly

Solution : Ask your installation supplier to reconfigure the IDs of those tires by using the Single Sensor Replaced (Mode II).

3. The transmitter of those tires failed.

Solution : Ask your distributor to have those transmitters replaced, reconfigure the IDs of those tires by using the Single Sensor Replaced (Mode II), and then send the defected transmitter back to manufacturer for repair.

**4. The receiver cannot receive signal from any of the four tires after its power is turned on the numeric values representing tire locations displayed on the screen all become “E1” .**

- |   |
|---|
| 1. There is interference from other electronic device in the vehicle. |
|---|

Solution : Remove other electronic device in the vehicle to determine if TPMS is interfered by those removed devices.

- |  |
|--|
| 2. The inner circuits of the display panel failed. |
|--|

Solution : Ask your distributor to have your receiver replaced, reconfigure its ID using the Single Sensor Replaced (Mode II), and send the defected receiver back to manufacturer for repair.

**5. The buzzer has no sound output.**

- |   |
|---|
| 1. The inner circuits of the receiver failed. |
|---|

Solution : Ask your distributor to have your receiver replaced, reconfigure its ID using the Single Sensor Replaced (Mode II), and send the defected receiver back to manufacturer for repair.

**6. The pressure (or temperature) values show the wrong tire locations**

- |   |
|---|
| 1. The IDs of the four tires are not configures correctly |
|---|

Solution : Ask your installation supplier to reconfigure the IDs of the tires by using the Tire Switching Mode (Mode I or Mode II).

- |   |
|---|
| 2. After rotating the tires, it cannot reconfigure the IDs from sensors |
|---|

Solution : Ask your installation supplier to reconfigure the IDs of the tires by using the Tire Switching Mode (Mode I or Mode II).

Thank you for your purchase and enjoy your TPMS!

Manufacturer:

**Orange Electronic Co., LTD**

[www.orange-electronic.com](http://www.orange-electronic.com)

5F, No.29, Keya Rd, Central Taiwan Science Park, Taichung 42881, Taiwan

Phone: +886-4-2560-2766

Email: [service@orange-electronic.com](mailto:service@orange-electronic.com)