



Tire Pressure Monitoring System **TPMS** Installation User Manual

Wireless Direct

Safe Driving with **ORO** TPMS



Model No.: W403

www.oro-technology.com

ORO TPMS-W403 User Manual

To ensure correct operations and services please read these instructions before installing and operating the TPMS

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FCC

This device complies with FCC Rules. Operation is subject to the following conditions:

- (1) Incorrect installation, improper usage or radio waves interference may cause unexpected operation of this device.
- (2) If this device does cause harmful interference to any electronic products or appliances, the user may increase the distance between the electronic product and this device or remove this device.

System Scope of Use and Warnings

■System Installation and Usage

Use of the TPMS requires that qualified personnel according to the instructions here have properly installed it. This system is suitable for use on a passenger car, SUV and 4X4 tires, with up to maximum cold inflation pressure of 600 kPa=87 psi (Gauge) or 700 kPa=101 psi (Absolute), below instruction is **Gauge** value mentioned.

■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.

Caution

The system is a wireless RF product; therefore, it may not receive a signal due to poor environmental conditions or incorrect operation or incorrect installation. When the system continuously cannot receive any signal from any tire sensor for more than 10 minutes since the system has been switch on, the display will show " E2 " and activate the RED abnormal LED light along with an alert sound. In this case, a RF interference environment may have caused it; a driver will need to drive the vehicle to a different location. If the display is still unable to receive any correct signal from tire sensor, the driver will need to find a nearby qualified tire maintenance service to check or carry out maintenance. This abnormality may be caused by a damaged tire sensor or excessive battery power consumption.

ORO-W403 Tire Pressure Monitoring Systems (TPMS), can monitor and provide tire pressure, tire temperature and car battery information in real time to help the driver control and keep the normal tire pressure in order to reduce the fuel consumption and extend the tire life, and also through the battery information, the driver can change the battery before any incident occurs and reduce the possibility of vehicle breakdown on the roads.

ORO-W403 Tire Pressure Monitoring System, includes 4 tire sensors and 1 receiver display, the TPMS can monitor the pressure/temperature by snap-in installation into the tire, and transmit the tire information to the receiver by wireless. The TPMS display will trigger an alarm when any abnormalities arise from the tire in order to prevent any possible accidents which may happen to the driver/vehicle.

W403 TPMS Specification

1. Transmitter Module Specification	
Battery Life	Up to 5~ 7 years in normally use
Power Supply	3.0 V Lithium battery
Operating Humidity	Max 95%
Storage Temperature	-40 °C to 125 °C
Operating Temperature	-30 °C to 115 °C
Transmitting Power	Max 5 dBm
Transmitting Frequency	433.92 MHz
Pressure Monitoring Range	0 ~ 87 psi (or 0~600 kPa or 0~6 bar)
Pressure Reading Accuracy	±1 psi (or ±10 kPa ; ±0.1 bar)
Temperature Monitoring Range	-30 °C to 115 °C
Temperature Reading Accuracy	±4 °C
Module Weight	31.6g ± 1g

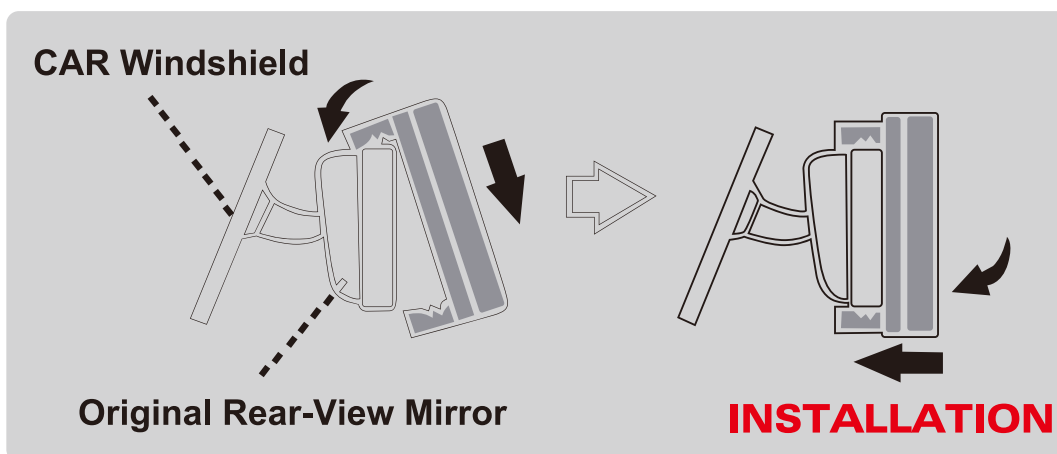
2. Rear-View Mirror Receiver Module Specification	
Power Supply	DC 9V ~ 16V
Operating Humidity	Max 95%
Operating Current	<250mA at DC 12V
Storage Temperature	-40 °C to 90 °C
Operating Temperature	-25 °C 5 to 85 °C
Pressure Display Range	0 ~ 87 psi
Temperature Display Range	-30 °C to 115 °C

Accessories	Pictures	QTY	Accessories	Picture	QTY
Display		1	Nylok Screw		4
Tire Sensor		4	Aluminum Valve		4
Cigarette Power Cable		1	Manual		1

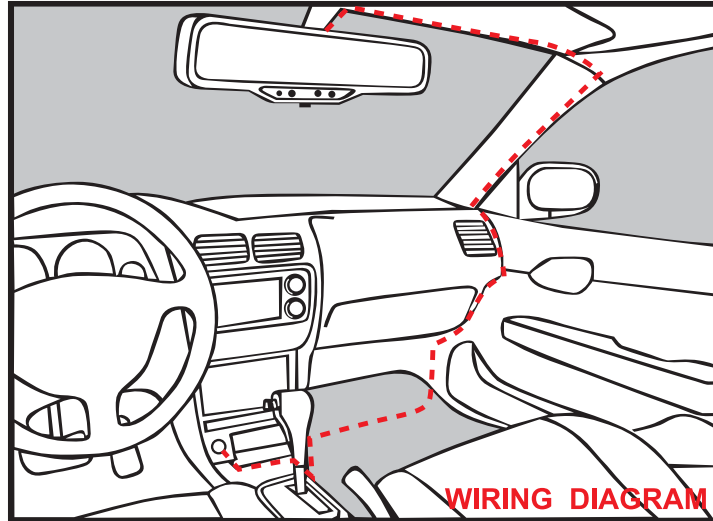
W403 TPMS Installation

1. Rear-View Mirror Installation

- a. As shown below, place the top of the back clip on your car's original rear-view mirror, and hold on the both side of the rear-view mirror to pull down, and clip the bottom clip onto your car's original rear-view mirror. Then adjust the rear view-mirror to proper position and angle for driver view.

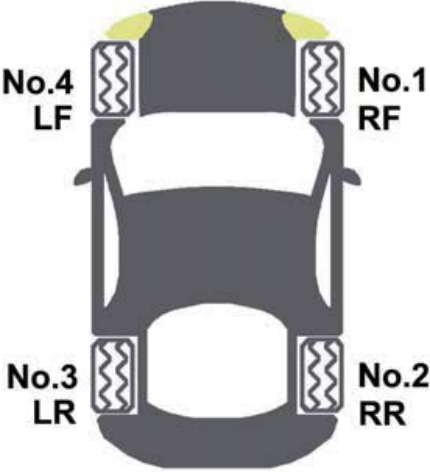





- b. As shown in the below diagram, place the power cable around the ceiling, A pillar and to the underneath of the passenger car mat. And then connect the power plug to the cigarette power, and complete the installation of the rear-view mirror receiver.



If the user wants to connect the power directly, please visit an electrical auto shop, dismantle the cigarette power plug and solder the red and green cable to the AC power, the black and white cables are for grounding.

2. Tire Sensor Installation

Steps	Operation Process	Photographs
a	<p>Take off the 4 tires and mark 1~4 for each tire position.</p> <p>No.4 = Left Front Tire ; No.1 = Right Front Tire No.3 = Left Rear Tire ; No.2 = Right Rear Tire</p> 	 
b	<p>Take off the tire and bleed the air, then, to change to the ORO-Technology TPMS valve, follow the steps:</p> <ol style="list-style-type: none"> 1. Snap in the valve from the internal edge side of the wheel. 	

2. Adjust the valve's angle, and make sure the valve is vertical to the edge of the wheel.

3. Put on the circle screw (washer) from the outside of the wheel.

4. Tighten the valve with the nylok screw from the outside of the wheel.





5. Use the alan key to tighten.



c Put the marked No. 1 tire sensor to the tire which is marked No. 1. as step as. photo and follow steps:

1. Install the tire sensor to the valve.
2. Use the nylok screw and tighten up with the tire sensor.
3. Adjust the tire sensor's angle (paste on the surface of the wheel), then tight up the nylok screw with a torque wrench and please set 5 Newton for torque wrench.



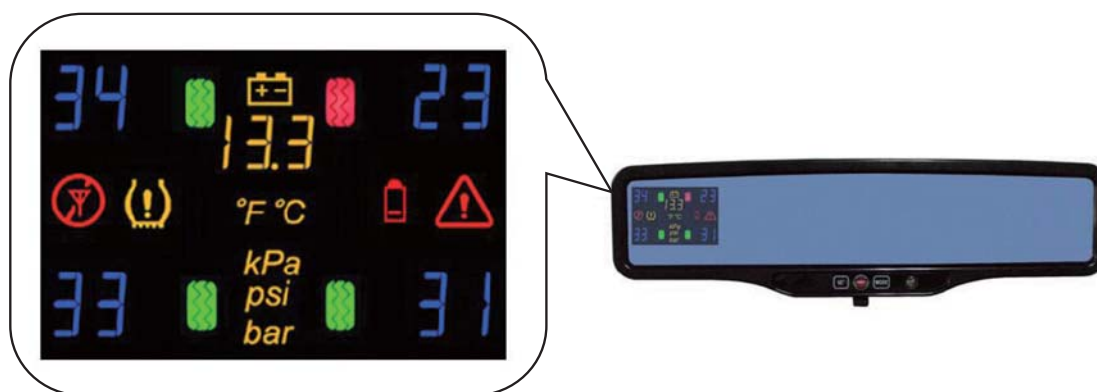
c	<p>4. Put on the valve's cap, and finish the installation.</p> <p>When there is a need to re-install the tire sensor, please use a new nylok screw in order to prevent the usage of the old ones.</p>	
d	<p>Place the No. 2 tire sensor to the tire which is marked No.2, and set up the other 2 sensors in the same manner as shown in the step "c".</p>	
e	<p>Make sure there is no other liquid or dust present around the area of the tire sensor.</p>	
f	<p>After installation, inflate the tire to the appropriate air pressure as suggested in each vehicle's user manual.</p>	
g	<p>Balance the tires with the tire balance machine.</p>	
h	<p>Place the tires back to it's corresponding position as shown in the photograph on step "a".</p>	
















Once **TPMS** is installed correctly, turn on the ignition to start monitoring the tire pressure/temperature and voltage.

WARNING: The tire sensor will transmit signal when the vehicle is over than 20km/hr and stop transmit signal when the vehicle stopped over 5 minutes, however, if the tire pressure is lower than 18 psi, the tire sensor will transmit abnormal signal continuously to the user.

W403 TPMS System Operation

1. Display Signals Description



	Bad Transmission Signal		Battery Signal		Pressure Unit
	Tire Deflating Signal		Battery Voltage Unit		Normal Status
	Low Battery on Tire Sensor		Temperature Unit		SET Button
	Abnormal Tire Condition Signal		Tire Pressure Temperature Display Unit		MODE Button
	Abnormal Tire Pressure		Abnormal Tire Pressure		MAIN Switch

NOTE

There is an ambient light sensor on the right of the display, ORO TPMS is able to automatically adjust the brightness of the LED Display. The display will be brighter in the day and darker in the night to ensure that the user will be able to read the LED Display clearly and not be affected by external lighting.

2. Operation to Change Display Mode

ORO – W403 TPMS has 3 different modes, they are Tire Pressure Display Mode, Temperature Display Mode, and Pressure-Temperature Rotation Mode. The display will show the tire pressure mode once it is turned on, to enter the temperature mode press on the **MODE** button once and to display pressure-temperature press it another time. The system will continuously monitor the tire pressure, tire temperature, battery voltage. Regardless of what type of information is being displayed, the system will notify the driver whenever anything abnormal happens. If the user does not change from the factory default, the system will show the tire pressure display, the 3 modes of display are as follows:

- a. Tire Pressure Display Mode:** Display of 4 tires pressure and battery voltage unit only.
- b. Temperature Display Mode:** Display of 4 tires temperature and battery voltage unit only.
- c. Pressure-Temperature Rotation Display Mode:** Rotating display of tire pressure and temperature with a constant display of battery voltage.

3. Operation to Change Unit of Tire Pressure and Temperature

ORO TPMS displays 3 kinds of pressure units, bar, kPa and psi. For temperature, °C, °F are the units displayed. The factory default for pressure unit is psi, the user can change the pressure unit by pressing the **MODE** button for 3 sec., and the factory default for temperature is °C, the user can change the temperature unit by pressing **MODE** button for 3 sec.

4. LED Display ON/OFF Power Saving Setting (LED Switch On / Switch Off)

There is a main switch on the bottom of the rear-view mirror, this main switch can be used to either switch on the LED display, or switch off the LED display. When the main switch is switched on, the LED display will be displayed at all times. If switched from ON to OFF under the LED is in display status, the LED display will be OFF immediately.

When the main switch is switched off, the system will automatically switch off the LED display by the “Display AUTO-SLEEP” time you set. (For Display Auto-Sleep time setting, please refer to the instruction for Factory Default Setting chapter.) You may press the **MODE** or **SET** button to wake the LED display for quick information reading on tires whenever the LED display enters the Auto-Sleep mode. And the system will then re-enter the Auto-Sleep mode minutes after the setting you choose. In the event of tire abnormalities detected, system will wake the LED display and alarm, regardless of the Main Switch is switched ON or OFF.

5. Operation to Modify Factory Default

W403 TPMS has 5 factory default modes for users to choose from. Press the **SET** button continuously for 3 sec. to enter the set up mode from Front Tire-Std. tire pressure set up, Rear Tire-Std. tire pressure set up, Tire Temperature-Over Temperature Warning, Operation Mode and for other parameter settings, and LED Display Auto Sleep function. Please refer below for the relevant process:

NOTE

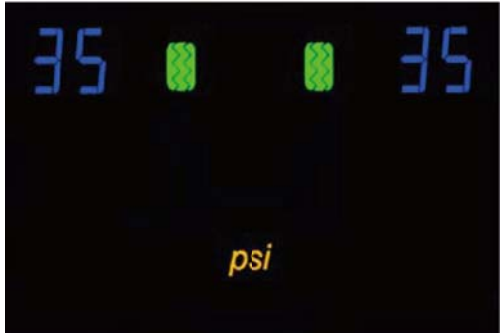
The user should change the suitable pressure unit for own vehicle before entering into the setup mode.

Front Tire-Standard Cold Tire Pressure Setting Mode


When the tire is under normal inflated condition, the pressure will increase and decrease simultaneously with the temperature, normally, there will be 1 psi (7 kPa) fluctuation when the temperature differs about 10°F (6°C), and this is normal physics phenomenon. ORO suggests that, when checking on tire pressure, it's important to keep the tire pressure under suggested specifications, the Cold & Low tire pressure setting will be recognized as a warning, however, when the pressure is higher or lower than 25% from the cold tire pressure setting value, the system will notify to the driver.

Warning:

Standard Cold Tire Pressure setting value, please check on each vehicle's user manual.

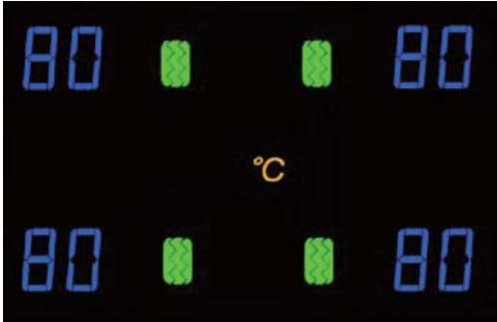
Steps	Operating Process	Photographs
a	Pressing the SET button for over 3 seconds to enter the Front Tire-Standard Cold Tire Pressure Setting Mode.	
b	The wireless receiver and display unit shows the standard cold tire pressure. The factory default value (35 psi) is shown in blue and the yellow light indicates the "psi". or pre-selected units (kPa or bar). If no modification is needed, press the SET button to enter the next setup mode. NOTE: If the pressure unit is in "kPa" the display will flash 240 and 2.4 for "bar".	
c	Pressing the MODE button once, will increase the cold tire pressure value by 1 unit; and the unit increases by 1 psi with each press of the button, when it has reached 50 psi, pressing the button again will return the system unit to 27 psi. NOTE: If the user choose kPa mode, 10 kPa will be added with each press of the button, the range for kPa is 190 kPa~350 kPa, and 1.9 bar ~ 3.5 bar for bar unit.	
d	Press the SET button to complete the Front Tire-Standard Cold Tire Pressure Setting. The system will automatically enter the Rear Tire-Standard Cold Tire Pressure Setting Mode.	

Rear Tire-Standard Cold Tire Pressure Setting Mode

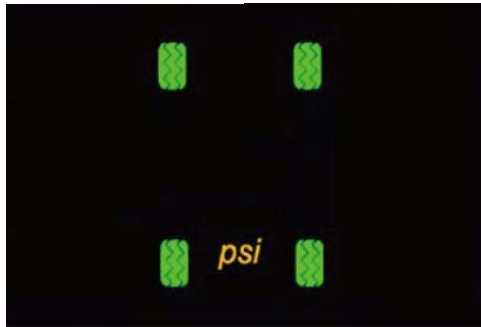
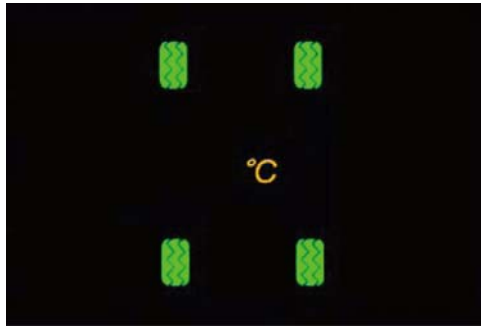

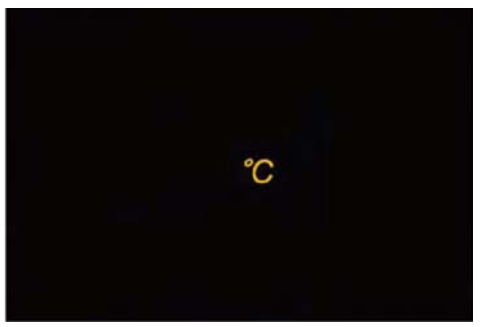
Steps	Operating Process	Photographs
a	The system will enter the Rear Tire-Standard Cold Tire Pressure Setting Mode automatically after setting up the Front Tire- Standard Cold Tire Pressure setting.	
b	The wireless receiver and display unit shows the standard cold tire pressure. The factory default value (35 psi) is shown in blue and the yellow light indicates the "psi". or pre-selected units(kPa or bar). If no modification is needed, press the SET button to enter the next setup mode. NOTE: If the pressure unit is in "kPa" the display will flash 250 and 2.5 for "bar".	

c	<p>Pressing the MODE button once, will increase the cold tire pressure value by 1 unit; and the unit increases by 1 psi with each press of the button, when it has reached 50 psi, pressing the button again will return the system unit to 27 psi.</p> <p>NOTE: If the user choose kPa mode, 10 kPa will be added with each press of the button, the range for kPa is 190 kPa~350 kPa, and 1.9 bar ~ 3.5 bar for bar unit.</p>	
d	<p>Press the SET button to complete the Rear Tire-Standard Cold Tire Pressure Setting. The system will automatically enter the Tire Temperature-Over Temperature Setting Mode.</p>	

Tire Temperature-Over Heat Setting Mode




Steps	Operating Process	Photographs
a	<p>The system will enter the Tire Temperature-Over Heat Setting Mode automatically after setting up the Rear Tire-Cold Tire Pressure Setting.</p>	
b	<p>The display will show the factory default temperature limit for the tires (80°C) in blue. If no modification is needed, then press the SET button to enter the next set up mode.</p> <p>NOTE: If the unit is °F the number 176 will be flashing.</p>	
c	<p>Press the MODE button to change the limit for the temperature, The unit will add 1°C with each press, The range for temperature is between 60°C~99°C, the system will return back to 60°C after reaching 99°C.</p> <p>NOTE: If the unit is °F, each depression will add 1°F, The range for °F is from 140°F~212°F.</p>	
d	<p>Push the SET button to complete the Tire Temperature-Over Temperature setting and the display will enter to the Power On Setting Mode.</p>	

Default Power-On Display Setting Mode


Steps	Operating Process	Photographs
a	The system will enter the Power On setting mode automatically after setting up the Tire Temperature-Over Temperature Setting.	
b	The display shown is the factory default for tire pressure value. This is “psi” in yellow. NOTE: The system may use other unit for pressure by psi, kPa or bar, depending on the region.	
c	Press the MODE button to enter the temperature display mode as the shown on the right hand side, and the unit for temperature is °C. NOTE: The system may use other unit for pressure by °C , °F , depending the system for different area of the world.	
d	Pressing the MODE button, will enter to the Tire Pressure~Temperature by rotation mode. And the battery voltage will display permanently.	 
e	Press the SET button, and the system enter the LED Display Auto-Sleep time setting mode.	

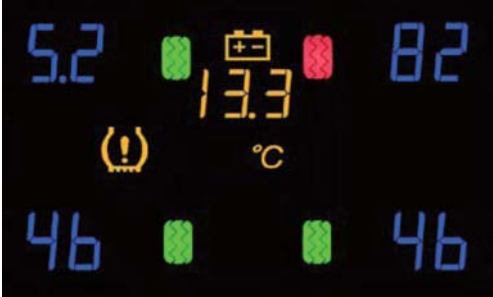



LED Display Auto-Sleep Time Setting Mode



Steps	Operating Process	Photographs
a	The system will enter the LED Display Auto-Sleep time setting mode after the Power-On setting is completed.	

b	<p>The LED display on the Rear-View Mirror will display a blue color “LED OFF” and an Orange color “1” number. The number “1” means that the LED Display will enter Auto-Sleep in 1 minute after system is powered on under the main switch is in OFF status. This is also the factor default setting, if no changes are preferred, press the SET button to go back to normal monitoring mode.</p>	
c	<p>By pressing the MODE button, will set the Auto-Sleep time (under Main Switch is at OFF status) to 3 minutes, as shown on the right.</p>	
d	<p>By another press on the MODE button, will set the Auto-Sleep time (under Main Switch is at OFF status) to 5 minutes, as shown on the right.</p>	
e	<p>Press the SET button to complete the LED Display Auto-Sleep time setting. The system will go back to normal monitoring status.</p>	

W403 TPMS System Alarm Mode Description

Mode	Warning Condition and Warning Method	Display Figure
a	<p>Warning Situation: When the present tire pressure > 1.25 x Cold tire std. pressure or tire pressure < 0.75 x Cold tire std. pressure, the system will start warning. (Factory Default for low tire pressure is 35 psi, so the systems will start warning when the tire pressure > 44 psi or below 26 psi.)</p> <p>Warning System: A beeping sound is heard as a warning when the abnormal tire condition signal is displayed and the abnormal tire symbol is displayed in red.</p>	

<p>b</p>	<p>Warning Situation: When the temperature is higher than preset limit. (Factory default is 80°C and 176°F) Warning System: A beeping sound is heard as a warning when the abnormal tire condition signal is displayed and the abnormal tire symbol is displayed in red.</p>	
<p>c</p>	<p>Warning Situation: When the tire pressure is decreasing rapidly. (When the pressures changes more than 2 psi in 30 sec.) Warning System: The affected tire flashes red along with the flashing tire deflating signal plus a beeping sound.</p>	
<p>d</p>	<p>Warning Situation: When the battery voltage is below than the limit that has been set up. (Factory default for warning is 11.5V) Warning System: The battery symbol shows red.</p>	
<p>e</p>	<p>Warning Situation: When the tire sensor battery level is low. (Suggest to change the sensor as soon as possible) Warning System: The abnormal tire flashes green, and the low battery symbol lights up.</p>	

f	<p>Warning Situation: When the display run out of initial setting up by factory default.</p> <p>Warning System: The four display unit shows by E1 and not lighting on four tires symbols.</p>	
d	<p>Warning Situation: When display unit sensor is unable to receive a signal from one of the tire sensor for more than 10 minutes.</p> <p>Warning Situation: The bad transmission symbol lights up and the affected tire symbol will not be lighted up with a reading of E2.</p>	

NOTE: The user can press the **MODE** button continuously for 3 sec. to stop the warning sound.

W403 TPMS Reset for Tire Changing and Rotation

Upon completion of changing or rotation of tires, the user should also reset the position of the tires on the display unit. Our TPMS has provided 7 modes where users can reset quickly and keep the tire position as it in on the display unit.

The user should ascertain that the display is plugged in, when carrying out the tire changing /rotating mode, if the power is interrupted, please follow the reset process in order to proceed successfully. The user should confirm whether the display is able to monitor all the tire information correctly, if not, please carry out the reset process.

Set Up Process for Enter the Tire Changing and Rotation

Depress the **SET** button and **MODE** button simultaneously for 3 sec., and the system will enter set up mode 1, pressing once each time will allow the user to traverse from mode 1 to mode 7 and back to normal display.

Description for Each Set Up Process

Mode 1: Front and Rear Tire Parallel Exchange

The display will show as per below figures. When the display shows a yellow "1", this means the display is now in mode 1 and the 4 red lights means the tire position are not set as shown in Fig. 1, The 4 green lights means the tire position that user wants to set up as shown in Fig. 2. Press the **SET** button continuously for 3 sec. until beep sounds which indicates the completion of the set up for mode 1. (Front and Rear Tires Exchange) then the system will back to the normal operating display.

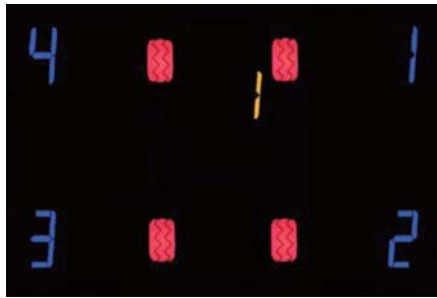


Fig. 1

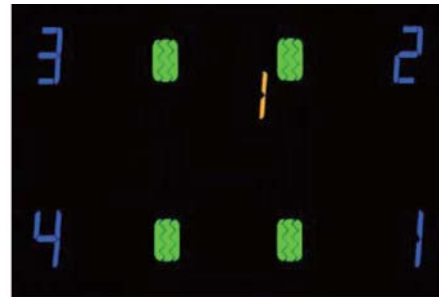


Fig. 2

Mode 2: Tire Diagonal Exchanged

The display will show as per below figures. When the display shows a yellow “2”, this means the display is now in mode 2 and the 4 red lights means the tire position are not set as shown in Fig. 1. The 4 green lights means the tire position that user wants to set up as shown in Fig. 2. Press the **SET** button continuously for 3 sec. until beep sounds which indicates the completion of the set up for mode 2. (Tire Diagonal Exchange), then the system will back to the normal operating display.

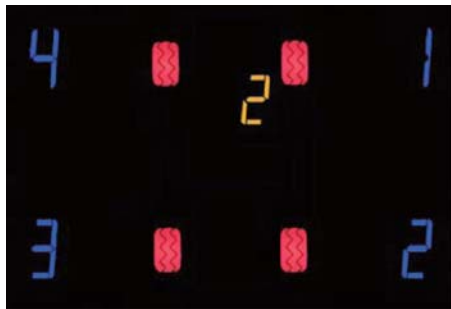


Fig. 1

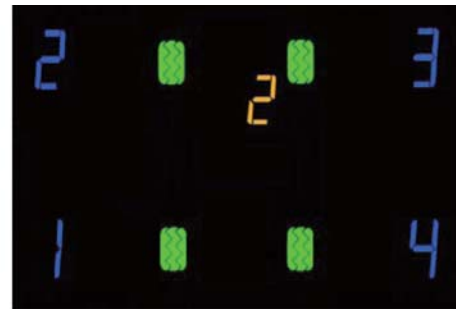


Fig. 2

Mode 3 : Front Tire Diagonal Exchange, Rear Tire Parallel Exchange to Front

The display will show as per below figures, When the display shows a yellow “3”, this means the display is now in mode 3 and the 4 red lights means the tire position are not set as shown in Fig. 1. The 4 green lights means the tire position that user wants to set up as shown in Fig. 2. Press the **SET** button continuously for 3 sec. until beep sounds which indicates the completion of the set up for mode 3. (Front Tire Diagonal Exchange, Rear Tire Parallel Exchange to Front), then the system will back to the normal operating display.



Fig. 1



Fig. 2

Mode 4: Right Side and Left Side Tire Parallel Exchange

The display will show as per below figures, When the display shows a yellow “4”, this means the display is now in mode 4 and the 4 red lights means the tire position are not set as shown in Fig. 1. The 4 green lights means the tire position that user wants to set up as shown in Fig. 2. Press the **SET** button continuously for 3 sec. until beep sounds which indicates the completion of the set up for mode 4. (Right Side and Left Side Tire Parallel Exchange), then the system will back to the normal operating display.



Fig. 1

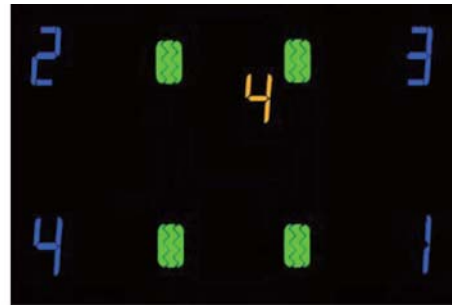


Fig. 2

Mode 5: Right Side and Left Side Tire Parallel Exchange

The display will show as per below figures, When the display shows a yellow “5”, this means the display is now in mode 5 and the 4 red lights means the tire position are not set as shown in Fig. 1. The 4 green lights means the tire position that user wants to set up as shown in Fig. 2. Press the **SET** button continuously for 3 sec. until beep sounds which indicates the completion of the set up for mode 5. (Right Side and Left Side Tire Parallel Exchange), then the system will back to the normal operating display.



Fig. 1



Fig. 2

Mode 6: Random Repositioning

The user should install the tire to their desired position before entering mode 6. When the display shows a yellow “6”, this means that it is now in mode 6.

Reset starting from Right Front Tire -> Right Rear Tire -> Left Rear Tire -> Left Front Tire in order to complete the set up mode 6.

1. Set Up for Right Front (RF) Tire Sensor

The RF tire symbol will be flashing green with a blue “1” on the display. This means the RF tire is ready for the set up as per below, Fig. 1, in the meantime, the user should deflate the tire pressure rapidly over 0.3 bar/30 kPa or 4 psi within 15 sec. until there is a beep sound, which means the user has completed the set up for RF tire. The system will then proceed to RR tire sensor set up mode as shown below Fig. 2. If there is no need to set up the RF tire sensor, just press the **SET** button to skip this process.

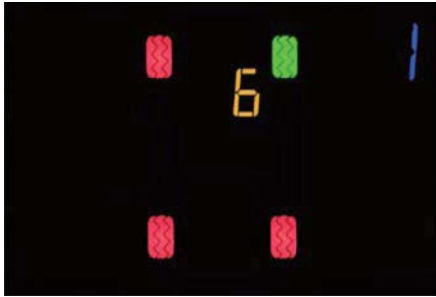


Fig. 1

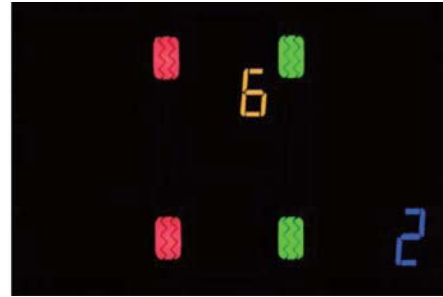


Fig. 2

2. Set up for Right Rear (RR) Tire Sensor

The RR tire symbol will be flashing green with a blue “2” on the display. This means the RR tire is ready for the set up as per below, Fig. 1, in the meantime, the user should deflate the tire pressure rapidly over 0.3 bar/30 kPa or 4 psi within 15 sec. until there is a beep sound, which means the user has completed the set up for RR tire. The system will then proceed to LR tire sensor set up mode as shown below Fig. 2. If there is no need to set up the RR tire sensor, just press the **SET** button to skip this process.

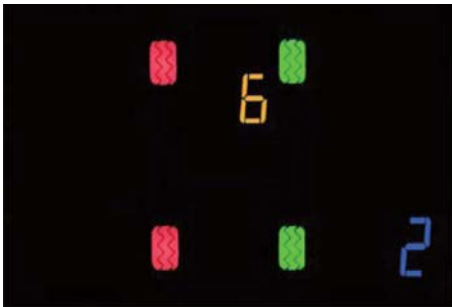


Fig. 1

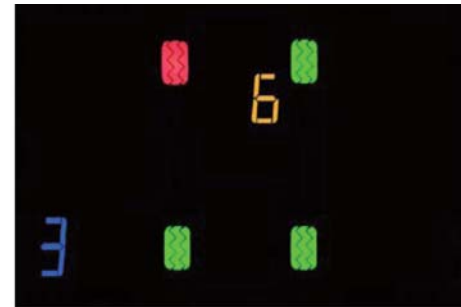


Fig. 2

3. Set Up for Left Rear (LR) Tire Sensor

The LR tire symbol will be flashing green with a blue “3” on the display. This means the LR tire is ready for the set up as per below, Fig. 1, in the meantime, the user should deflate the tire pressure rapidly over 0.3 bar/30 kPa or 4 psi within 15 sec. until there is a beep sound, which means the user has completed the set up for LR tire. The system will then proceed to LF tire sensor set up mode as shown below Fig. 2. If there is no need to set up the LR tire sensor, just press the **SET** button to skip this process.

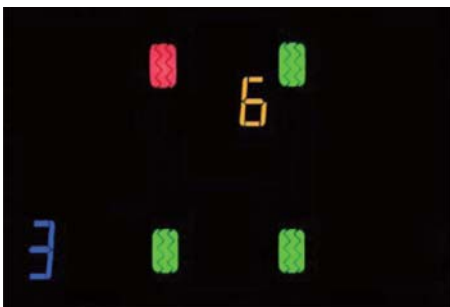


Fig. 1



Fig. 2

4. Set Up for Left Front (LF) Tire sensor

The LF tire symbol will be flashing green with a blue “4” on the display. This means the LF tire is ready for the set up as per below, Fig. 1, in the meantime, the user should deflate the tire pressure rapidly over 0.3 bar/30 kPa or 4 psi within 15 sec. until there is a beep sound, which means the user has completed the set up for LF tire. The system will then proceed back to the normal display mode. If there is no need to set up the LF tire sensor, just press the **SET** button to skip this process. The system will then proceed back to normal display mode, without any changes.

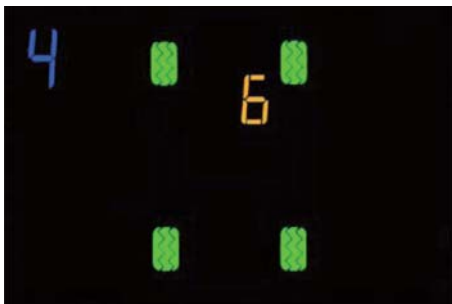


Fig. 1

Mode 7: Single Sensor Replaced

The user should confirm whether the all sensors are manufactured by ORO before carrying out any changes or replacement, if not, the user will not be able to succeed on set up or make the system operate normally.

The monitor will display No.7 in yellow which means the system is in mode 7. Choose a sensor to be replaced starting from Right Front Tire -> Right Rear Tire -> Left Rear Tire -> Left Front Tire to complete the set up mode 7 and back to the normal operating mode.

1. Set Up for Right Front (RF) Tire Sensor

The RF tire symbol will be flashing green with a blue "1" on the display. This means the RF tire is ready for the set up as per below, Fig. 1, in the meantime, the user should deflate the tire pressure rapidly over 0.3 bar/30 kPa or 4 psi within 15 sec. until there is a beep sound, which means the user has completed the set up for RF tire. The system will then proceed back to the normal display mode. If there is no need to set up the RF tire sensor, just press the **SET** button to skip this process. The system will then proceed to RR tire sensor set up mode as shown below Fig. 2.

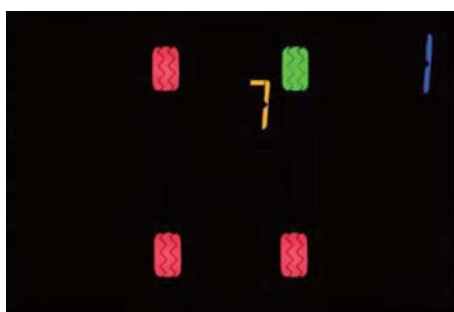


Fig. 1



Fig. 2

2. Set Up for Right Rear (RR) Tire Sensor

The RR tire symbol will be flashing green with a blue "2" on the display. This means the RR tire is ready for the set up as per below, Fig. 1, in the meantime, the user should deflate the tire pressure rapidly over 0.3 bar/30 kPa or 4 psi within 15 sec. until there is a beep sound, which means the user has completed the set up for RR tire. The system will then proceed back to the normal display mode. If there is no need to set up the RR tire sensor, just press the **SET** button to skip this process. The system will then proceed to LR tire sensor set up mode as shown below Fig. 2.

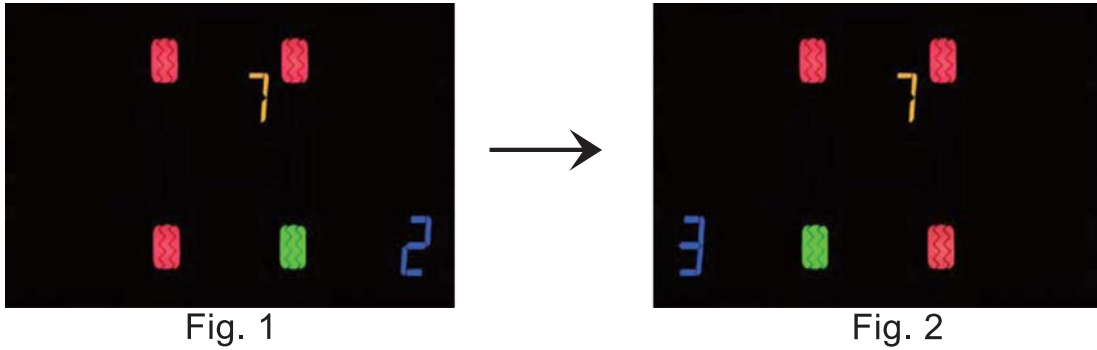


Fig. 1

Fig. 2

3. Set Up for Left Rear (LR) Tire Sensor

The LR tire symbol will be flashing green with a blue “3” on the display. This means the LR tire is ready for the set up as per below, Fig. 1, in the meantime, the user should deflate the tire pressure rapidly over 0.3 bar/30 kPa or 4 psi within 15 sec. until there is a beep sound, which means the user has completed the set up for LR tire. The system will then proceed back to the normal display mode. If there is no need to set up the LR tire sensor, just press the **SET** button to skip this process. The system will then proceed to LF tire sensor set up mode as shown below Fig. 2.

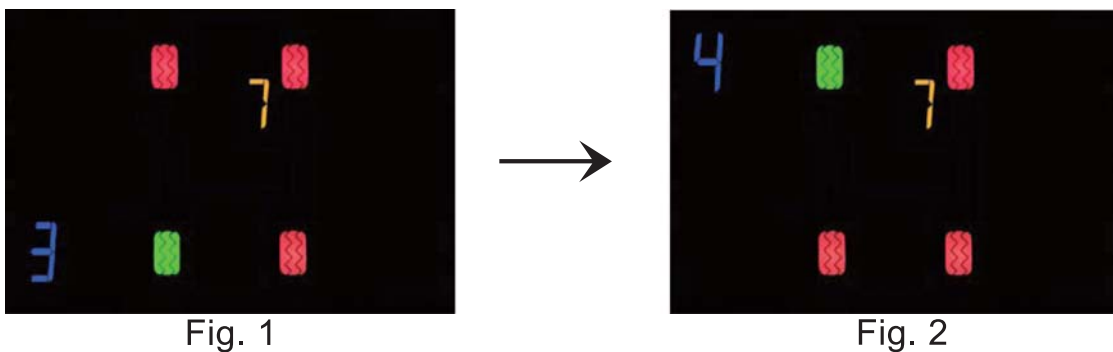


Fig. 1

Fig. 2

4. Set Up for Left Front (LF) Tire Sensor

The LF tire symbol will be flashing green with a blue “4” on the display. This means the LF tire is ready for the set up as per below, Fig. 1, in the meantime, the user should deflate the tire pressure rapidly over 0.3 bar/30 kPa or 4 psi within 15 sec. until there is a beep sound, which means the user has completed the set up for LF tire. The system will then proceed back to the normal display mode. If there is no need to set up the LF tire sensor, just press the **SET** button to skip this process. The system will then proceed back to normal display mode, without any changes.



Fig. 1

We warrant our products for 18 months 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. In the event where proof of purchase is unable to be determined, the warranty will be just 20 months. For example: (2011/1, the warranty period is until 2012/9) The following situations are out of warranty policy even the product are remain in the warranty duration

1. Broken or damage on appearance of the product.
2. The barcode label is not clear or torn.
3. The user did not follow the user manual instructions on installation, incorrect installation, or improper storage, which made the system fail or damaged.
4. The system has been installed by non-authorized distributor or technician from ORO.
5. When the user is not using the original manufacturer's accessories (eg: Cigarette Power Cable) thus causing the system to fail, this is NOT included in ORO warranty policy.
6. Any natural catastrophe/bad installation or any re-modelling process without authorization by the manufacturer or any un-natural installation are NOT included in ORO warranty policy.
7. Consumables which should be replaced on time.

Caution

The range of warranty are not including the "Aluminum Valves" and "Nylok screws", the user should change the "Aluminum Valves" and "Nylok screws" when is changing the tire sensor.

Attention

Any user self repairing or modifying the system included the device are NOT protected under the warranty policy.

Any other question which related to the warranty policy, please feel free to contact with your nearest authorized distributor or contact directly to us by: service@oro-technology.com

Other related TPMS latest and updated news, please visit: www.oro-technology.com

ORO Technology thank you for using ORO TPMS and wish you have a safe drive always.

Appendix

bar	Tire pressure unit, 1 bar = 0.1N/ mm ²
psi	Tire pressure unit, 1 psi = 0.0689 bar.
kPa	Tire pressure unit, 1 kPa = 0.01 bar
°C	Temperature unit, Centigrade = (Fahrenheit-32) x 5/9
°F	Fahrenheit

Failure Phenomenon	Possible Cause	Troubleshooting Steps
1. No Response after connecting to the power.	1. Plug between the display and power cable may be loosed.	Re-plug correctly between display and USB port.
	2. Faulty power cable.	Request for an exchange from the distributor and return the failure cable to the distributor.
	3. Faulty fuse inside the display device.	After the distributor got back the broken-down display be repaired, should reset the ID using Mode 6.
2. Abnormal display number or light.	Failure on the display.	After the distributor got back the broken-down display be repaired, should reset the ID using Mode 6.
3. Display not receiving any signal from the 4 sensors but shows E2 after connecting the power.	1. Wrong ID setting on 4 tires.	Reset the ID using Mode 6.
	2. Failure on the receiver circuit of the display.	After the distributor got back the broken-down display be repaired, should reset the ID using Mode 6.
4. Display is not receiving any signal on 2 or more 3 tires from the sensor but shows E2 with it's position after connect the power.	1. Incorrect ID setting on the tire.	Reset the ID using Mode 6.
	2. Failure on the tire sensor.	Request for a new sensor from the distributor and reset the system using Mode 6 in order to change the ID, return the failed display to the manufacturer.
5. No response on the MODE and SET button.	Faulty display.	After the distributor got back the broken-down display be repaired, should reset the ID using Mode 7.
6. Pressure (or Temperature) shows in wrong number and position.	1. Tire on the wrong position.	Ask the Tire Shop to place the tires in the correct position.
	2. Wrong ID setting on 4 tires.	Reset the ID using Mode 6.
7. No sound on the display.	Faulty display.	After the distributor got back the broken-down display be repaired, should reset the ID using Mode 6.



Warranty Card

Model No.	<input type="checkbox"/> W403A <input type="checkbox"/> W403B	Serial No.	
Purchase Date	/ / (Year/Month/Date)		
Dealers Stamp			

Customer information

Name		Telephone	
Address			

Maintenance Record

Date	Fault Conditions	Content	Signature