翔鑫科技股份有份公司

Oro Technology Co., LTD

Tire Pressure Monitoring System

TR01

USER MANUAL

ORO TR01 TPMS TPMS Manual

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

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NOTICE

FCC

Federal Communications Commission (FCC) 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 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: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. 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 complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. To maintain compliance with FCC RF exposure compliance requirements, please avoid direct contact to the transmitting antenna during transmitting.

" This equipment must be installed and operated in accordance with provided instructions and the

antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance. "

TR01 Tire Pressure Monitoring System

ORO-TR01 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.

Tire Pressure Monitoring System, includes 7 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 to the tire in order to prevent any possible accidents which may happen to the driver/vehicle.

TR01 TPMS Specification

1. Tire Sensor's Specification	
Battery life	Up to 5~7 years in normally use
Battery Voltage	3.0 V
Operating Humidity	Max 95%
Storage Temperature	-30℃ to 125 ℃
Operation Temperature	-30 ℃ to 115 ℃
Operation Frequency	433.92MHz
Transmitting power	Max 5 dBm
Pressure Monitoring Range	0 ~ 13 bar (或 0 ~ 188 psi)
Pressure Reading Accuracy	±0.3 bar (or ±4 psi)
Temperature Monitoring Range	-30 ℃ to 125 ℃
Pressure Monitoring Range	±6℃
Module weight	31.6g ± 1g

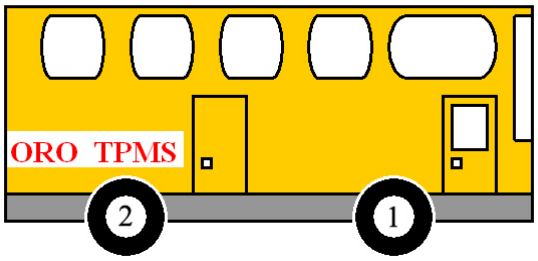
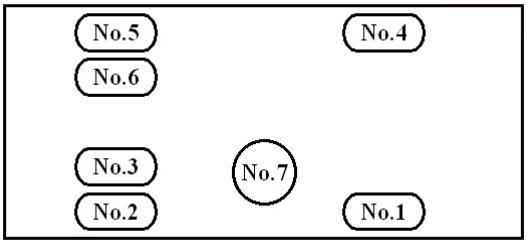
2. Receiver Specification	
Operation Voltage	DC 18V ~ 36V
Operating Humidity	Max 95%
Normal Operation Voltage	＜100mA
Storage Temperature Range	-40℃ to 90 ℃
Operation Temperature Range	-25℃ to 85 ℃
Tire Pressure Reading Range	0 ~ 13 bar
Temperature Reading Range	-30 ℃ to 115 ℃

TR01 TPMS Accessories

Accessories	Pictures	QTY	Accessories	Picture	QTY
Display		1	Transmission Cable		1
Tire Sensor		7	SMA Terminal		1
Power Cable		1	Long Antenna		1
Aluminum Valve		7	Short Antenna		1
Nylok Screw		7	Antenna Holder		2
Magnetic Holder		1	Rope		20
Manual		1			

TR01 TPMS INSTALLATION

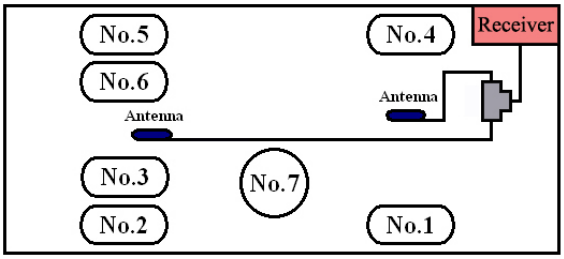
1. Tire Sensor Installation:

Step	Operation Process	Photographs
a	Take off the 7 tires and mark 1~7 for each tire position, No.7 tire is a spare tire. Each tire position is illustrated below：  	

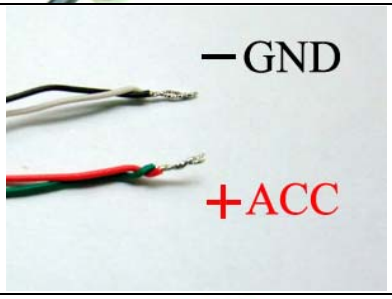
b	Take off the tire and bleed the air, then. to change to the TPG-Technology TPMS valve, follow the steps: 1. Snap in the valve from the internal edge side of the wheel. 2. Adjust the valve's angle, and make sure the valve is vertical to the edge of the wheel. 3. Tighten the valve with the nylok screw from the outside of the wheel. 4. Use the alan key to tighten.	   

c	Put the marked No. 1 tire sensor to the tire which is marked No. 1. as step a. photo and follow steps: 1. Install the tire sensor to the valve. 2. Use the nylok screw and tighten up with the tire sensor. (Pls. use the screwdriver which is included to the accessories bag) 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. 4. Put on the valve's cap, and finish the installation. 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.	
d	Place the No. 2 tire sensor to the tire which is marked No.2, and set up the other 5 sensors in the same manner as shown in the step C.	
e	Make sure there is no other liquid or dust present around the area of the tire sensor.	
f	After installation, inflate the tire to the appropriate air pressure as suggested in each vehicle's user manual.	
g	Balance the tires with the tire balance machine。	
h	Place the tires back to it's corresponding position as shown in the photograph on step a.	

2. Antenna Installation:

Step	Operation Process	Photographs
a	1.The head of long antenna set should pass through the antenna holder and be bundled by rope on the middle place of the real axles. The rest wires of the antenna should be bundle by rope along the chassis to below of the dashboard. 2.The head of short antenna set should pass through the antenna holder and be bundled by rope on the middle place of the front axles. The rest wires of the antenna should be bundle by rope along the chassis to below of the dashboard. 	 
b	The long and short antenna set should be connected on both left and right side of T type SMA connector.	
c	The transmission wire should be connected to the middle of T type SMA connector.	

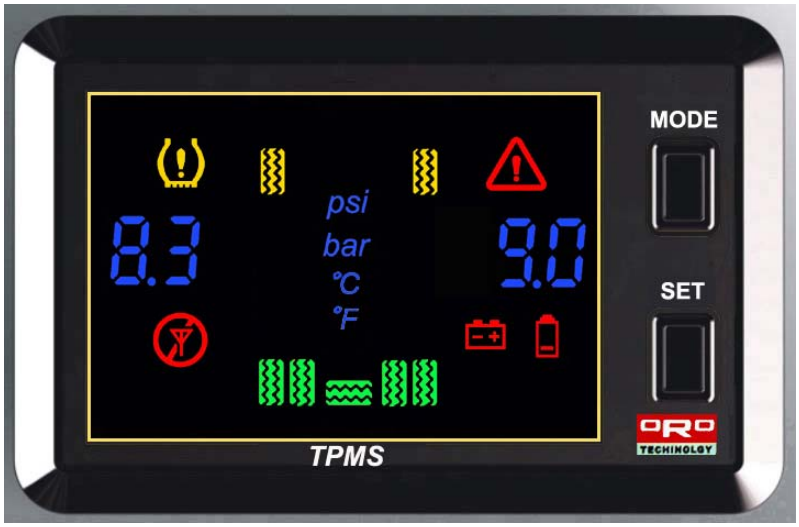
3. Display Installation:

Step	Operation Process	Photographs
a	The holder should be fixed on the suitable and visible place around pilot seat, the front side of the holder should be oriented to the driver's eye.	
b	The transmission wire head should be connected to the SMA port which is behind of the display.	
c	Connect the Red and Green wire to the ACC；Black & White wire connect to the ground.	
d	The USB power cable should be connected to the USB port which is behind of the display.	
e	Inhale the display to the holder and adjust the suitable and visible angle, then accomplished the installation.	

Turn on the car power to monitor the tire pressure, tire temperature and car battery after done the installation.

TR01 Systems Operation

1.Display Signals Description:



 : Bad Transmission Symbol

 : Battery Symbol

 : Pressure Unit。

 : Tire Deflating Symbol

 : Abnormal Tire Condition Symbol

 : Tire Pressure/Temperature Display Unit

 : Temperature Unit

 : Low Battery on Tire Sensor

 : Tire Position

 : Tire position shows yellow while shows the tire pressure by the meanwhile.

2.Display System Operation

ORO-TR01 has 4 different modes, they are Tire Pressure Display Mode, Temperature Display Mode, Pressure-Temperature rotation mode and Battery Voltage Display 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, to display pressure-temperature press it another time and to display battery mode press it another time. The system will continuously monitor the tire pressure, tire temperature, battery voltage, no matter what kind of information are being displayed and 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. Pressure Display Mode: Display of 7 tires pressure unit only.

b. Temperature Display Mode: Display of 7 tires temperature unit only.

c. Pressure-Temperature Rotation Display mode: Rotating display of tire pressure and temperature unit.

d. Battery Voltage Display Mode: Display of battery voltage unit only.

3. Operation to Change Unit of Tire Pressure and Temperature：

ORO-TR01 TPMS displays 2 kinds of pressure units, bar and psi. For temperature, ℃、℉ are the units displayed. The factory default for pressure unit is bar, the user can change the pressure unit by pressing the **MODE button** for 3 sec., and the factory default for temperature is ℃, the user can change the temperature unit by pressing **MODE button** for 3 sec.

4. Operation to Modify Factory Default:

ORO-TR01 TPMS has 4 factory default modes for users to choose from. Press the SET UP button continuously for 3 sec. to enter the set up mode from single wheel-standard cold tire pressure set up, double wheels-standard cold tire pressure set up, Tire Temperature-Over Temperature Warning, Operation Mode and for other parameter settings, 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.

Single Wheel-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 3 psi (21kPa) fluctuation when the temperature differs about 7℃ (11.6℉), 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 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, pls. check on each vehicle's user manual.

Steps	Operating Process	Photographs
a	Pressing the **SET button** for over 3 seconds to enter the Single Wheel-Standard Cold Tire Pressure Setting Mode.	

b	The wireless receiver and display unit shows the standard cold tire pressure. The factory default value (9.0 bar) is shown in blue and the blue light indicates the ”bar” or pre-selected units (psi). If no modification is needed, press the **SET button** to enter the next setup mode. NOTE: If the pressure unit is in ”psi” , the display will flash 130.	
c	Pressing the **MODE button** once, will increase the cold tire pressure value by 1 unit; and the unit increases by 0.2 bar with each press of the button, when it has reached 12 bar, pressing the button again will return the system unit to 8.0 bar. NOTE: If the user chooses ”psi” mode, 2 psi will be added with each press of the button, the range for ”psi” is 116 psi~174 psi.	
d	Press the **SET button** to complete the Single Wheel-Standard Cold Tire Pressure Setting. The system will automatically enter the Double Wheels-Standard Cold Tire Pressure Setting Mode.	

Double Wheels-Standard Cold Tire Pressure Setting Mode

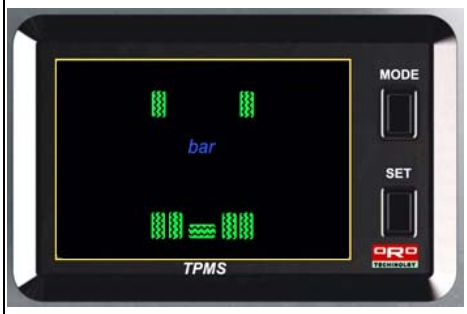
Steps	Operating Process	Photographs
a	The system will enter the Double Wheels -Standard Cold Tire Pressure Setting Mode automatically after setting up the Single Wheel -Standard Cold Tire Pressure Setting.	
b	The wireless receiver and display unit shows the standard cold tire pressure. The factory default value (9.0 bar) is shown in blue and the blue light indicates the ”bar” or pre-selected units (psi). If no modification is needed, press the **SET button** to enter the next setup mode. NOTE: If the pressure unit is in ”psi” , the display will flash 130.	
c	Pressing the **MODE button** once, will increase the cold tire pressure value by 1 unit; and the	

	unit increases by 0.2 bar with each press of the button, when it has reached 12 bar, pressing the button again will return the system unit to 8.0 bar. NOTE: If the user chooses ”psi” mode, 2 psi will be added with each press of the button, the range for ”psi” is 116 psi~174 psi.	
d	Press the **SET button** to complete the Double Wheels -Standard Cold Tire Pressure Setting. The system will automatically enter the Tire Temperature-Over Temperature Setting Mode.	

Tire Temperature-Over Temperature Setting Mode

Steps	Operating Process	Photographs
a	The system will enter the Tire Temperature-Over Temperature Setting Mode automatically after setting up the Double Wheels-Standard Cold Tire Pressure Setting.	
b	The display will show the factory default temperature limit for the tires (90°C) in blue. If no modification is needed, then press the **SET button** to enter the next set up mode. NOTE: If the unit is ℉ the number 194 will be flashing.	
c	Press the **MODE button** to change the limit for the temperature, The unit will increases by 2 ℃ with each press of the button. The range for temperature is between 70℃~110℃, the system will return back to 70℃ after reaching 110℃. NOTE: If the unit is ℉, each press of the button will add 2℉, The range for ℉ is from 158℉~230℉	
d	Push the **SET button** to complete the Tire Temperature-Over Temperature setting and the display will enter to the Power On Setting Mode.	

Power On 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 “bar” in blue. If no modification is needed, then press the **SET button** to end the set up mode and back to the normal operation mode. NOTE: The system may use other unit for pressure by psi 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 ℃. NOTE: The system may use other unit for pressure by ℃、℉, depending the system for different area of the world.	
d	Pressing the **Mode button**, will enter to the Tire Pressure~ temperature by rotation mode.	 
e	Press the **SET button**, and the system will complete the Power On Setting Mode and back to the normal operation mode to monitoring tire pressure/temperature and battery voltage.	

TR01 System Alarm Mode Description

Mode	Warning Condition and Warning Method	Display Figure
1	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 9.0 bar, so the systems will start warning when the tire pressure > 11.3 bar or below 6.7 bar. 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 orange.	
2	Warning Situation: When the temperature is higher than set up limit. (Factory default is 90℃ and 194℉ 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 orange.	
3	Warning Situation: When the tire pressure is decreasing rapidly. (When the pressures changes more than 5 psi in 30 sec.) Warning System: The affected tire flashes orange along with the flashing tire deflating signal plus a beeping sound.	 

4	Warning Situation: When the battery voltage is below than the limit that has been set up. (Factory default for warning is 23.0V) Warning System: The battery symbol will shows red.	
5	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 orange, and the low battery symbol flashes red.	 
6	Warning Situation: When the Monitor run out of initial setting up by factory default. Warning System: The two display unit shows by E1	
7	Warning Situation: When Display unit sensor is unable to receive a signal from one of the tire sensor for more than 9 minutes Warning System: The bad transmission symbol lights up and the affected tire flashes orange with a reading of E2.	

		
8	Warning Situation: When the tire sensor experiences failure when on factory default. Warning System: The affected tire will display a reading of E3.	

NOTE: 1.The user can press the MODE button continuously for 3 sec. to stop the warning sound.

TR01 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. ORO-TR01 has provided 3 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** 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 3 and back to normal display.

Description for each set up process

Mode 1 ：Random Repositioning

The user should install the tire to their desired position before entering mode 1. When the display shows a blue “1”, this means that it is in mode 1.

Reset starting from No.1 Tire -> No.2 Tire -> No.3 Tire -> No.4 Tire -> No.5 Tire -> No.6 Tire -> No.7 Tire in order to complete the setup mode 1.

1. Set up for No.1 tire sensor:

The tire No.1 symbol will be flashing green on the display. This means the No.1 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 No.1 tire. The system will then proceed to tire No.2 sensor setup mode as shown below Fig. 2.. If there is no need to set up tire No.1 sensor, just press the SET button to skip this process.

Fig. 1 Fig. 2

2. Set up for No.2 tire sensor:

The tire No.2 symbol will be flashing green on the display. This means the No.2 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 No.2 tire. The system will then proceed to tire No.3 sensor setup mode as shown below Fig. 2.. If there is no need to set up tire No.2 sensor, just press the SET button to skip this process.

Fig. 1 Fig. 2

3. Set up for No.3 tire sensor:

The tire No.3 symbol will be flashing green on the display. This means the No.3 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 No.3 tire. The system will then proceed to tire No.4 sensor setup mode as shown below Fig. 2.. If there is no need to set up tire No.3 sensor, just press the SET button to skip this process.

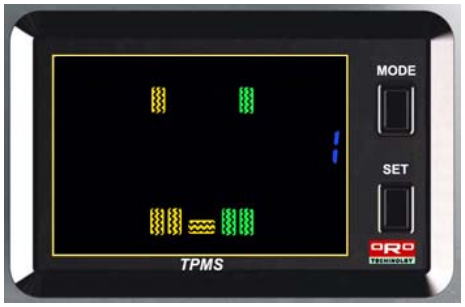


Fig. 1

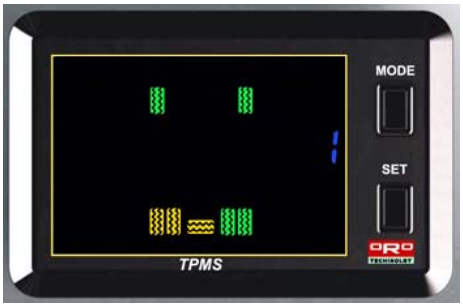


Fig. 2

4. Set up for No.4 tire sensor:

The tire No.4 symbol will be flashing green on the display. This means the No.4 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 No.4 tire. The system will then proceed to tire No.5 sensor setup mode as shown below Fig. 2.. If there is no need to set up tire No.4 sensor, just press the SET button to skip this process.

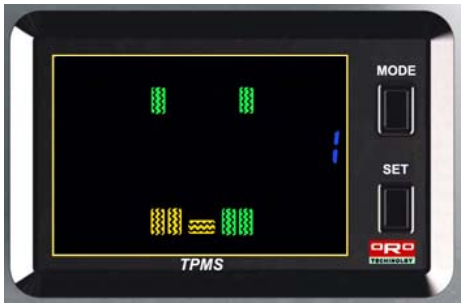


Fig. 1

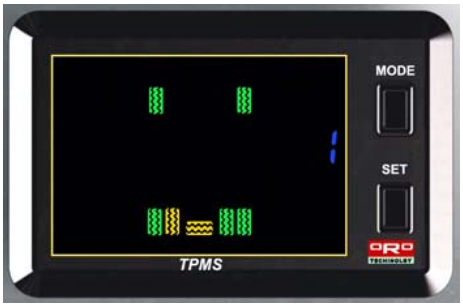


Fig. 2

5. Set up for No.5 tire sensor:

The tire No.5 symbol will be flashing green on the display. This means the No.5 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 No.5 tire. The system will then proceed to tire No.6 sensor setup mode as shown below Fig. 2.. If there is no need to set up tire No.5 sensor, just press the SET button to skip this process.

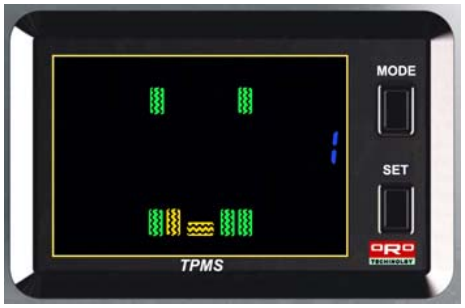


Fig. 1

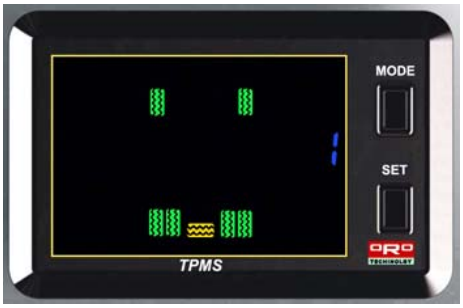
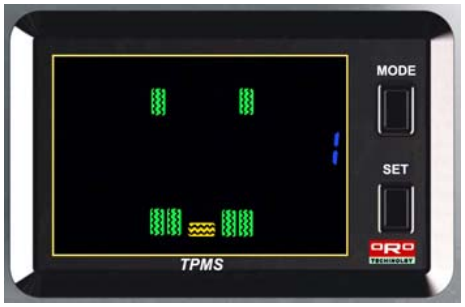


Fig. 2

6. Set up for No.6 tire sensor:

The tire No.6 symbol will be flashing green on the display. This means the No.6 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 No.6 tire. The system will then proceed to tire No.7 sensor setup mode as shown below Fig. 2.. If there is no need to set up tire No.6 sensor, just press the SET button to skip this process.



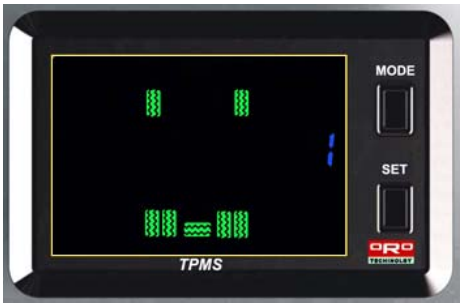


Fig. 1 Fig. 2

7. Set up for No.7 tire sensor:

The tire No.7 symbol will be flashing green on the display. This means the No.7 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 No.7 tire. The system will then proceed back to the normal display mode. If there is no need to set up the No.7 tire sensor, just press the SET button to skip this process. The system will then proceed back to the normal display mode, without any changes.

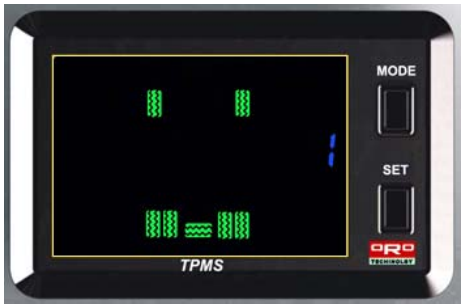


Fig. 1

Mode 2 ：Single Sensor Replacing

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 be succeed on set up or make the system operate normally.

The monitor will display No. 2 in blue which means the system is in Mode 2.

Choose a sensor to be replaced starting from No.1 Tire -> No.2 Tire -> No.3 Tire -> No.4 Tire -> No.5 Tire -> No.6 Tire -> No.7 Tire to complete the setup mode 2 and back to the normal operating

mode.

1. No.1 tire sensor replacing:

The tire No.1 symbol will be flashing green on the display. This means the No.1 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 No.1 tire replacing. The system will then proceed back to the normal display mode. If there is no need to set up tire No.1 sensor, just press the **SET button** to skip this process. The system will then proceed to tire No.2 sensor replacing setup mode as shows on below Fig. 2.

Fig. 1

Fig. 2

2. No.2 tire sensor replacing:

The tire No.2 symbol will be flashing green on the display. This means the No.2 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 No.2 tire replacing. The system will then proceed back to the normal display mode. If there is no need to set up tire No.2 sensor, just press the **SET button** to skip this process. The system will then proceed to tire No.3 sensor replacing setup mode as shows on below Fig. 2.

Fig. 1

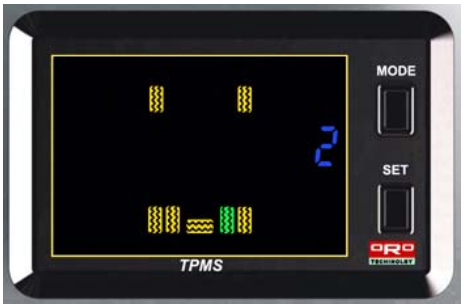


Fig. 2

3. No.3 tire sensor replacing:

The tire No.3 symbol will be flashing green on the display. This means the No.3 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 No.3 tire replacing. The system will then proceed back to the normal display mode. If there is no need to set up tire No.3 sensor, just press the **SET button** to skip this process. The system will then proceed to tire No.4 sensor replacing setup mode as shows on below Fig. 2.

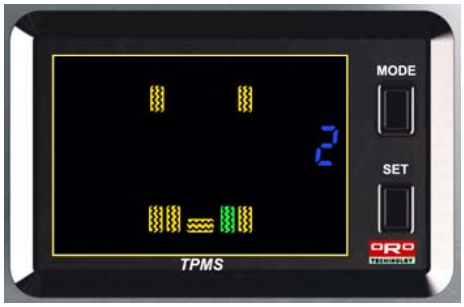


Fig. 1

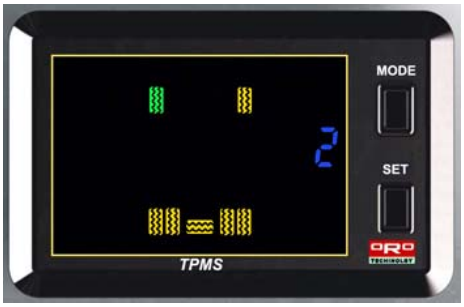


Fig. 2

4. No.4 tire sensor replacing:

The tire No.4 symbol will be flashing green on the display. This means the No.4 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 No.4 tire replacing. The system will then proceed back to the normal display mode. If there is no need to set up tire No.4 sensor, just press the **SET button** to skip this process. The system will then proceed to tire No.5 sensor replacing setup mode as shows on below Fig. 2.

Fig. 1

Fig. 2

5. No.5 tire sensor replacing:

The tire No.5 symbol will be flashing green on the display. This means the No.5 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 No.5 tire replacing. The system will then proceed back to the normal display mode. If there is no need to set up tire No.5 sensor, just press the **SET button** to skip this process. The system will then proceed to tire No.6 sensor replacing setup mode as shows on below Fig. 2.

Fig. 1

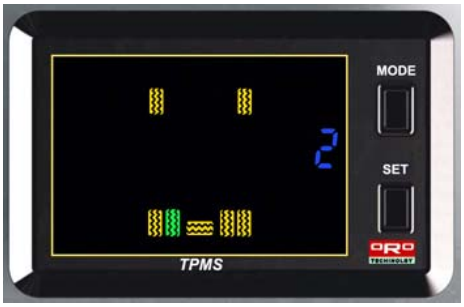


Fig. 2

6. No.6 tire sensor replacing:

The tire No.6 symbol will be flashing green on the display. This means the No.6 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 No.6 tire replacing. The system will then proceed back to the normal display mode. If there is no need to set up tire No.6 sensor, just press the **SET button** to skip this process. The system will then proceed to tire No.7 sensor replacing setup mode as shows on below Fig. 2.

Fig. 1

Fig. 2

7. No.7 tire sensor replacing:

The tire No.7 symbol will be flashing green on the display. This means the No.7 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 No.7 tire replacing. The system will then proceed back to the normal display mode. If there is no need to set up tire No.7 sensor, just press the **SET button** to skip this process. The system will then proceed back to the normal display mode, without any changes.

Fig. 1

Mode 3 ：Spare Tire Sensor Rotation

The monitor will display No. 3 in blue which means the system is in Mode 3.

Choose a tire to be replaced with spare tire starting from No.1 Tire -> No.2 Tire -> No.3 Tire -> No.4 Tire -> No.5 Tire -> No.6 Tire -> No.7 Tire to complete the setup mode 3 and back to the normal operating mode.

1. Spare tire and No.1 tire rotation:

The No.1 and No.7 tire symbol will be flashing green on the display. This means the No.1 tire is ready for the set up as per below, Fig. 1, in the meantime, the user should press the **SET button** continuously for 3 sec. until there is a beep sound, which means the user has completed the set up for No.1 tire rotation. The system will then proceed back to the normal display mode. If there is no need to set up the No.1 tire sensor, just press the **SET button** to skip this process. The system will then proceed to the No.2 tire sensor rotation setup mode as shows on below Fig. 2.

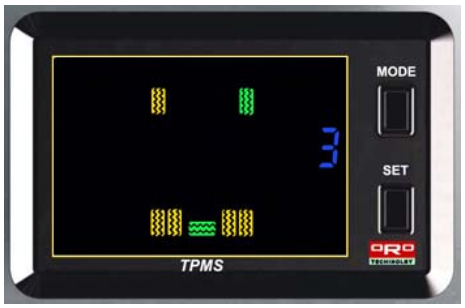


Fig. 1

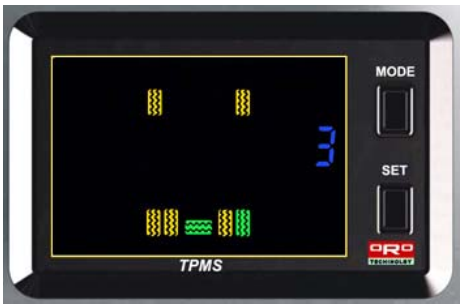


Fig. 2

2. Spare tire and No.2 tire exchange:

The No.2 and No.7 tire symbol will be flashing green on the display. This means the No.2 tire is ready for the set up as per below, Fig. 1, in the meantime, the user should press the **SET button** continuously for 3 sec. until there is a beep sound, which means the user has completed the set up for No.2 tire rotation. The system will then proceed back to the normal display mode. If there is no need to set up the No.2 tire sensor, just press the **SET button** to skip this process. The system will then proceed to the No.3 tire sensor rotation setup mode as shows on below Fig. 2.

Fig. 1

Fig. 2

3. Spare tire and No.3 tire exchange:

The No.3 and No.7 tire symbol will be flashing green on the display. This means the No.3 tire is ready for the set up as per below, Fig. 1, in the meantime, the user should press the **SET button** continuously for 3 sec. until there is a beep sound, which means the user has completed the set up for No.3 tire rotation. The system will then proceed back to the normal display mode. If there is no need to set up the No.3 tire sensor, just press the **SET button** to skip this process. The system will then proceed to the No.4 tire sensor rotation setup mode as shows on below Fig. 2.

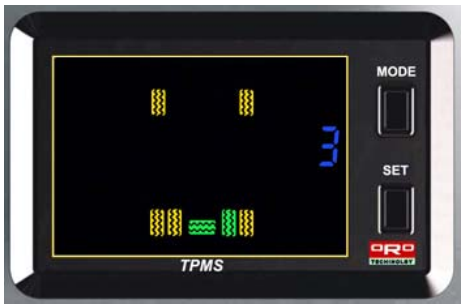


Fig. 1

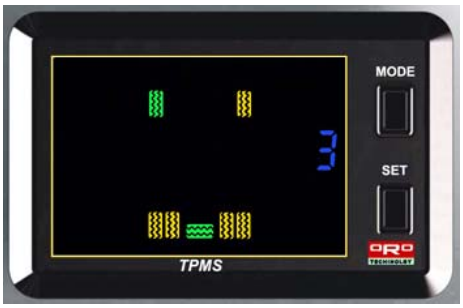


Fig. 2

4. Spare tire and No.4 tire exchange:

The No.4 and No.7 tire symbol will be flashing green on the display. This means the No.4 tire is ready for the set up as per below, Fig. 1, in the meantime, the user should press the **SET button** continuously for 3 sec. until there is a beep sound, which means the user has completed the set up for No.4 tire rotation. The system will then proceed back to the normal display mode. If there is no need to set up the No.4 tire sensor, just press the **SET button** to skip this process. The system will then proceed to the No.5 tire sensor rotation setup mode as shows on below Fig. 2.

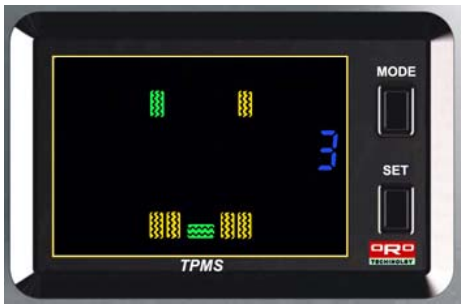


Fig. 1

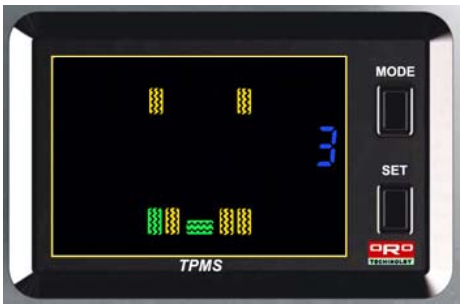


Fig. 2

5. Spare tire and No.5 tire exchange:

The No.5 and No.7 tire symbol will be flashing green on the display. This means the No.5 tire is ready for the set up as per below, Fig. 1, in the meantime, the user should press the **SET button** continuously for 3 sec. until there is a beep sound, which means the user has completed the set up for No.5 tire rotation. The system will then proceed back to the normal display mode. If there is no need to set up the No.5 tire sensor, just press the **SET button** to skip this process. The system will then proceed to the No.6 tire sensor rotation setup mode as shows on below Fig. 2..

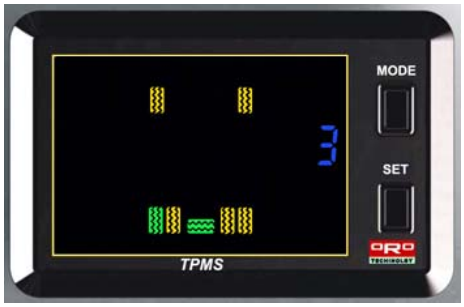


Fig. 1

Fig. 2

6. Spare tire and No.6 tire exchange:

The No.6 and No.7 tire symbol will be flashing green on the display. This means the No.6 tire is ready for the set up as per below, Fig. 1, in the meantime, the user should press the **SET button** continuously for 3 sec. until there is a beep sound, which means the user has completed the set up for No.6 tire rotation. The system will then proceed back to the normal display mode. If there is no need to set up the No.6 tire sensor, just press the **SET button** to skip this process. The system will then proceed back to the normal display mode, without any changes.

Fig. 1

ORO 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. In the event where proof of purchase is unable to be determined, the warranty will be just 14 months. For example: (2010/1, the warranty period is until 2011/3)

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: Power code) thus causing the system to fail, this is NOT included 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 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 sales@oro-technology.com

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

ORO Technology thanks for your using ORO TPMS and wish you have a safely drive always.

Annexes

bar	Tire pressure unit, 1 bar=0.1N/mm^2
psi	Tire pressure unit, 1 psi=0.0689 bar.
kPa	Tire pressure unit, 1kPa=0.01 bar
℃	Temperature unit, Centigrade = (Fahrenheit-32)x5/9
℉	Fahrenheit

TR01 Failure - Self Eliminate Manual

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.	Request for a new display from the distributor and re set the system using Mode 1 in order to change the ID, return the failed display to the manufacturer.
2. Abnormal display number or light.	Failure on the Display.	Request for a new display from the distributor and re set the system using Mode 1 in order to change the ID, return the failed display to the manufacturer.
3. Display not receiving any signal from the sensor but shows E2 after connecting the power	Failure on the receiver layout of the Display.	Request for a new display from the distributor and re set the system using Mode 1 in order to change the ID, return the failed display to the manufacturer.
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.	Request for a new display from the distributor and re set the system using Mode 2 in order to change the ID, return the failed display to the manufacturer.
	2. Failure on the tire sensor	Request for a new sensor from the distributor and re set the system using Mode 2 in order to change the ID, return the failed display to the manufacturer.
5. No response on the MODE and SET button.	Faulty display.	Request for a new display from the distributor and re set the system using Mode 1 in order to change the ID, return the failed display to the manufacturer.
6. Pressure (or Temperature) shows	1. Tire on the wrong position.	Ask the Tire Shop to place the tires in the correct position.

in wrong number and position	2. Wrong ID setting on 4 tires.	Reset the ID using Mode 1.
7. No sound on the display.	Faulty display.	Request for a new display from the distributor and re set the system using Mode 1 in order to change the ID, return the failed display to the manufacturer.