



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

W401

**Wireless Direct**



[www.oro-technology.com](http://www.oro-technology.com)

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

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**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. "

ORO-W401 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-W401 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 happen to the tire in order to prevent any possible accidents which may happen to the driver/vehicle.

## W401 TPMS Specification

1. Transmitter Module Specification	
Battery Life	Up to 5~ 7 years in normally use
Power Supply	3.6 V Lithium battery
Operating Humidity	Max 95%
Storage Temperature	-40 °C to 125 °C
Operation Temperature	-40 °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	-40 °C to 115 °C
Temperature Reading Accuracy	±4 °C
Module Weight	31.6g ± 1g

2. Receiver Module Specification	
Power Supply	DC 9V ~ 16V
Operating Humidity	Max 95%
Operation Current	<200mA at DC 12V
Storage Temperature	-40 °C to 90 °C
Operation Temperature	-25 °C 5 to 85 °C
Pressure Display Range	0 ~ 87 psi
Temperature Display Range	-40 °C to 115 °C

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

## W401 TPMS Installation






### 1 . Display Unit Installation



- a . Firmly secure the magnetic holder in a suitable place. (Suggested place as shown in the picture)
- b . Plug in the USB cigarette power cable on the back of display.
- c . Put the display on the magnetic holder.
- d . Plug in the power cable to the cigarette lighter power connection.
- e . Keep 20cm of distance from GPS; digital TV; speed measure device or other automotive electronic devices while are installing TPMS in order to prevent any possible of interference.






If the user wants to connect the power directly, please visit an electrical auto shop, dismantle the cigar 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"> <li>1. Snap in the valve from the internal edge side of the wheel.</li> <li>2. Adjust the valve's angle, and make sure the valve is vertical to the edge of the wheel.</li> </ol>	 

	<p>3. Put on the circle screw (washer) from the outside of the wheel.</p> <p>4. Tighten the valve with the nylok screw from the outside of the wheel.</p> <p>5. Use the alan key provided to tighten.</p>	
c	<p>Put the marked No. 1 tire sensor to the tire which is marked No. 1. as step as. photo and follow steps:</p> <ol style="list-style-type: none"> <li>1. Install the tire sensor to the valve.</li> <li>2. Use the nylok screw and tighten up with the tire sensor. (Please use the screwdriver which is included to the accessories bag)</li> <li>3. Adjust the tire sensor's angle (paste on the surface of the wheel), then tight up the with the nylok screw.</li> <li>4. Put on the valve's cap, and finish the installation.</li> </ol> <p><b>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.</b></p>	












d	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".	
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".	

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



## 1. Display Signals Description



	Bad Transmission Signal		Battery Signal		Pressure Unit
	Tire Deflating Signal		Battery Voltage Unit		Normal Tire
	Low Battery on Tire Sensor		Temperature Unit		Abnormal Tire Pressure
	Abnormal Tire Condition Signal		Tire Pressure/Temperature Display Unit		

**NOTE**

There is an ambient light sensor on the top 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**

W401 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, 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:

- Pressure Display Mode: Display of 4 tires pressure and battery voltage unit only.
- Temperature Display Mode: Display of 4 tires temperature and battery voltage unit only.
- 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

W401 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. Operation to Modify Factory Default


W401 has 4 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, 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 1psi (7kPa) 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 <b>SET button</b> 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 (35psi) 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 <b>SET button</b> to enter the next setup mode. <b>NOTE:</b> If the pressure unit is in "kPa" the display will flash 250 and 2.5 for "bar".	

c	<p>Pressing the <b>MODE button</b> 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><b>NOTE:</b> If the user choose kPa mode, 10 kPa will be added with each press of the button, the range for kPa is 190kPa~350kPa, and 1.9 bar ~ 3.5 bar for bar unit.</p>	
d	<p>Press the <b>SET button</b> to complete the Front Tire-Standard Cold Tire Pressure Setting. The system will automatically enter the Rear Tire-Standard Cold Tire Pressure Setting Mode.</p>	


#### Rear Tire-Standard Cold Tire Pressure Setting Mode




Steps	Operating Process	Photographs
a	<p>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.</p>	
b	<p>The wireless receiver and display unit shows the standard cold tire pressure. The factory default value (35psi) 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 <b>SET button</b> to enter the next setup mode.</p> <p><b>NOTE:</b> If the pressure unit is in "kPa" the display will flash 250 and 2.5 for "bar".</p>	
c	<p>Pressing the <b>MODE button</b> 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><b>NOTE:</b> If the user choose kPa mode, 10 kPa will be added with each press of the button, the range for kPa is 190kPa~350kPa, and 1.9 bar ~ 3.5 bar for bar unit.</p>	
d	<p>Press the <b>SET button</b> 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 Temperature Setting Mode


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

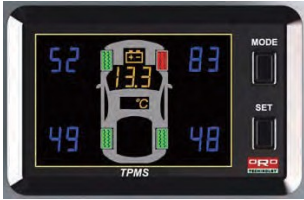
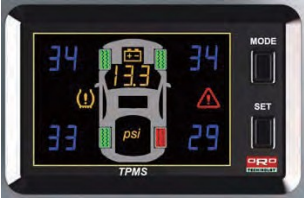

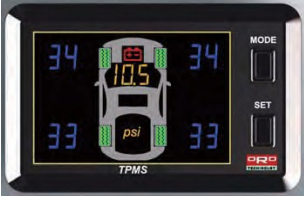
### Power On Setting Mode


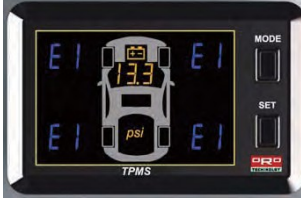
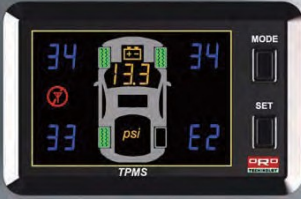
Steps	Operating Process	Photographs
a	The system will enter the Power On setting mode automatically after setting up the Tire Temperature-Over Temperature Setting.	
b	The display shown is the factory default for tire pressure value. This is "psi" in yellow.  <b>NOTE: The system may use other unit for pressure by psi, kPa or bar, depending on the region.</b>	

c	<p>Press the <b>MODE button</b> to enter the temperature display mode as the shown on the right hand side, and the unit for temperature is °C.</p> <p><b>NOTE:</b> The system may use other unit for pressure by °C, °F , depending the system for different area of the world.</p>	
d	<p>Pressing the <b>MODE button</b>, will enter to the Tire Pressure~ temperature by rotation mode. And the battery voltage will display permanently.</p>	 
e	<p>Press the <b>SET button</b>, 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.</p>	

## W401 System Alarm Mode Description

Mode	Warning Condition and Warning Method	Display Figure
a	<p>Warning Situation: When the present tire pressure &gt; 1.25 x Cold tire std. pressure or tire pressure &lt; 0.75 x Cold tire std. pressure, the system will start warning.</p> <p><b>(Factory Default for low tire pressure is 35psi, so the systems will start warning when the tire pressure &gt; 44psi or below 26psi.</b></p>	

	<p><b>Warning System:</b> 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>	
b	<p><b>Warning Situation:</b> When the temperature is higher than set up limit. (Factory default is 80°C and 176°F)</p> <p><b>Warning System:</b> 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>The TPMS display shows a temperature warning. The central display shows '133 °C'. The tire pressure values are 52 (top-left), 83 (top-right), 49 (bottom-left), and 48 (bottom-right). A red battery symbol is visible at the top of the tire icon.</p>
c	<p><b>Warning Situation:</b> When the tire pressure is decreasing rapidly. (When the pressures changes more than 2psi in 30 sec.)</p> <p><b>Warning System:</b> The affected tire flashes red along with the flashing tire deflating signal plus a beeping sound.</p>	 <p>The TPMS display shows a rapid pressure decrease warning. The central display shows '133 psi'. The tire pressure values are 34 (top-left), 34 (top-right), 33 (bottom-left), and 29 (bottom-right). A red battery symbol is visible at the top of the tire icon, and a red triangle warning symbol is on the right side.</p>  <p>The TPMS display shows a rapid pressure decrease warning. The central display shows '133 psi'. The tire pressure values are 34 (top-left), 34 (top-right), 33 (bottom-left), and 29 (bottom-right). A red battery symbol is visible at the top of the tire icon, and a red triangle warning symbol is on the right side.</p>
d	<p><b>Warning Situation:</b> When the battery voltage is below than the limit that has been set up. (Factory default for warning is 11.5V)</p> <p><b>Warning System:</b> The battery symbol shows red.</p>	 <p>The TPMS display shows a battery voltage warning. The central display shows '10.5'. The tire pressure values are 34 (top-left), 34 (top-right), 33 (bottom-left), and 33 (bottom-right). A red battery symbol is visible at the top of the tire icon.</p>

e	<p><b>Warning Situation:</b> When the tire sensor battery level is low. (Suggest to change the sensor as soon as possible.)</p> <p><b>Warning System:</b> The abnormal tire flashes green, and the low battery symbol lights up.</p>	
f	<p><b>Warning Situation:</b> When the Monitor run out of initial setting up by factory default.</p> <p><b>Warning System:</b> The four display unit shows by E1 and not lighting on four tires symbols.</p>	
g	<p><b>Warning Situation:</b> When Display unit sensor is unable to receive a signal from one of the tire sensor for more than 10 minutes.</p> <p><b>Warning System:</b> 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.

## W401 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. W401 has provided 6 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 6 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 sounds beep which means has accomplished 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 Exchange**

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 sounds beep which means has accomplished 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 sounds beep which means has accomplished 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.

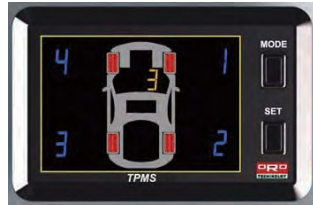


Fig. 1

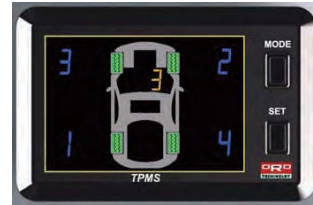


Fig. 2

**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 sounds beep which means has accomplished the set up for mode 4. (Right Side and Left Side Tire Parallel Exchange), then the system will back to the normal operating display.

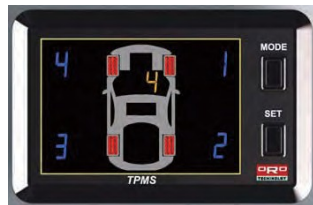


Fig. 1

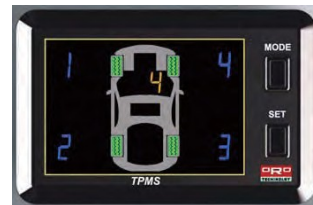


Fig. 2

**Mode 5: Random Repositioning**

The user should install the tire to their desired position before entering mode 5. When the display shows a yellow “5”, this means that it is now in mode 5. Reset starting from Right Front Tire -> Right Rear Tire -> Left Rear Tire -> Left Front Tire in order to complete the set up mode 5.

### 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 0.3bar/30kPa 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 0.3bar/30kPa 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.

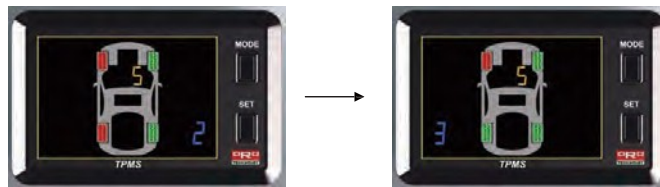


Fig. 1

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 0.3bar/30kPa 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 0.3bar/30kPa 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.

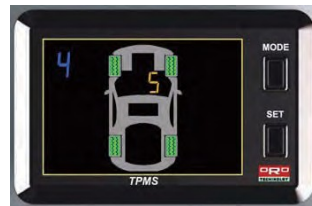


Fig 1

#### Mode 6: 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.6 in yellow which means the system is in mode 6.

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 6 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 0.3bar/30kPa 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 0.3bar/30kPa 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. Sep Up for Light 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 0.3bar/30kPa 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 Light 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 0.3bar/30kPa 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.

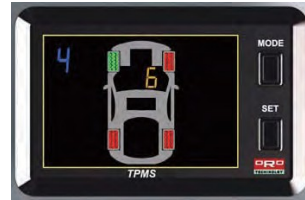


Fig 1

## ORO Warranty Policy

We warrant our products for 18months 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: (2010/1, the warranty period is until 2011/9) 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: 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](mailto:sales@oro-technology.com)

Others related ORO TPMS latest and updated news, please go search: [www.oro-technology.com](http://www.oro-technology.com)

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

## Appendix

bar	Tire pressure unit, 1 bar = 0.1N/ mm <sup>2</sup>
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

## ORO W401 Failure - Troubleshooting

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 5.
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 5.

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 5.
	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 5.
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 5.
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 5.
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 5.



# Warranty Card

Model No.	DW401A <input type="checkbox"/> W401B	Serial No.	
Purchase Date	Year/Month/Date)		
Dealers Stamp			

Customer information

IT home

Name  
Address

Maintenance

Date	Fault Conditions	Content	Signature



