



## Tire Pressure Monitoring System

**Model TPM-W206/TPM-W208/ TPM-W210**

### Installation Manual

#### 1. Introduction

*Tire-Safeguard* is a wireless tire pressure monitoring system. This valuable addition to your vehicle will help you drive safer. *Tire-Safeguard* automatically monitors your vehicle tires, and will immediately alert you of abnormal tire pressure and/or temperature, providing a timely warning to you in order for you to take corrective action. In addition, *Tire-Safeguard's* digital display makes tire pressure maintenance easy. You will no longer need to manually check the tires with a pressure gauge. Consequently, your tires can easily be kept in optimal operating condition. The resulting benefits are obvious: reduced uneven tire wear, reduced severe tire damages, reduced air loss related tire failures, increased tire life, improved fuel efficiency, improved vehicle braking and handling. Best of all, *Tire-Safeguard* will help you drive with enhanced vehicle safety and with less worry of flat tires and blowouts.

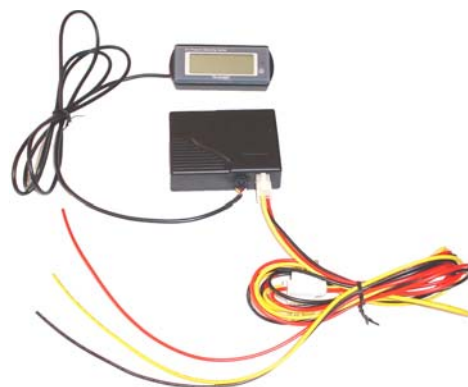
#### 2. System Installation

*Tire-Safeguard* system installation involves three steps:

1. Install the Receiver and Display inside the vehicle
2. Install the Cabled Antennas
3. Install the Sensors on the wheels

##### 2.1. Receiver and Display Installation

- a) **Display & Receiver** - Plug the Display data cord into the data jack of the Receiver, and plug the Power Cord (TPM-PC) into the power jack of the Receiver.

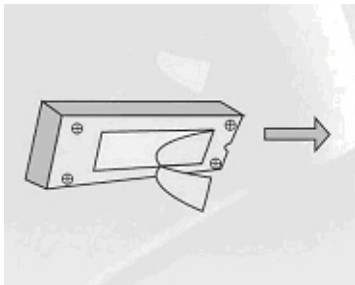


- b) **Receiver** - Place the Receiver at the desired location. Secure Receiver with 2-Sided Adhesive Strip (TPM-AS) or other user preferred means.



Display Installation Example 1

- c) **Display** - Place the Display in the desired viewing location. Secure Display with the Support Clip (see Example 1), or the 2-sided Adhesive Strip (see Example 2), or the Support Stand (see Example 3).



Display Installation Example 2



Display Installation Example 3



Display Installation Example 4

- d) **Power** - Run the Power Cord from the Receiver to an ignition switch controllable power source. Connect the red wire to +12-24 VDC. Connect the yellow wire to the switch controllable +12-24 VDC. Connect the black wire to ground.

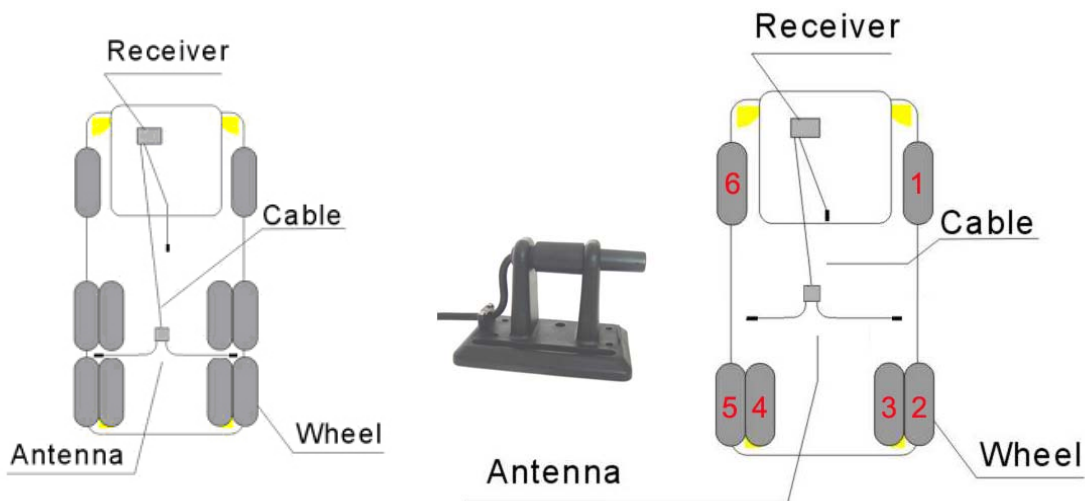
## 2.2. Antenna Installation

For vehicles with 6 or more wheels, it is necessary to equip the receiver with external antennas for optimal sensor signal reception.

Connect the cabled antennas to the receiver as shown on the right – each antenna cable can be connected to either of the two connectors.



Lay the cables out under the vehicle body and secure to the chassis with harness in a configuration as showed below. The single antenna should be aligned with the center line of the vehicle and placed behind the steer axle from one to three feet. For 6-tire vehicle the dual antennas should be placed in front of the drive wheels from 6 inches to 2 feet. As for the 8-tire or 10-tire vehicle each one of the dual antennas should be placed near the center of the rear tire cluster on either side of the vehicle. The antenna tip should be two inches or more away from large metal object such as the chassis, and can point toward any direction.



## 2.3. Sensor Installation

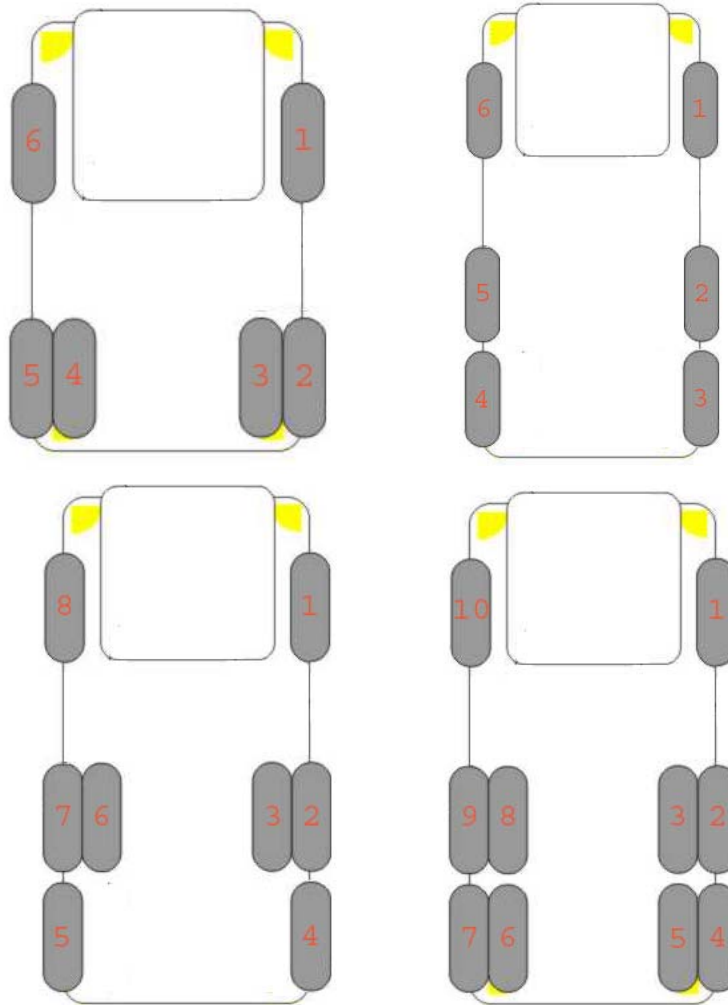
### 2.3.1 Sensor and Tire Association

Model TPM-W206 has six rim mounted sensors, while TPM-W208 and TPM-W210 has 8 or 10 sensors, respectively. Each sensor has an ID number, ranging from 1 to 6 (or to 8, or 10) and is factory preset to associate with a specific tire for correctly showing the tire location on the Display. Rim mounted

TPMS sensors are omni-directional and therefore could be mounted on a wheel in either orientation.

***For first time installation each sensor should be put on its associated tire – the system has already been setup with the proper tire location.***

The following figures show the preset sensor ID and tire association:



If the installer prefers installing the sensor without regard to the preset tire association, then the system must be retrained after installation for showing the tire pressure reading from the correct tire. Retrain procedure will be described in the Operator's Manual

### 2.3.2 Installing Sensors



- a) Dismount wheel from vehicle and remove tire from wheel.
- b) Cut mounting band to appropriate length for the wheel. Remove burrs from the cut band end.
- c) Get correct sensor for the wheel, pass band through the two mounting feet on the bottom of the sensor.
- d) Wrap the band (with sensor) around the wheel base, insert band end into the band clamp, and then use a socket wrench to advance the worm-gear until the band is slightly pressing the wheel base.
- e) Adjust band to the lowest areas of the drop center well on the wheel. Move sensor to a position next to (but not touching) the valve. Make sure both sensor feet stand on a flat surface.
- f) Using torque wrench tighten band to 30 inch pounds (4 N-m). The sensor should be pulled down tightly against the wheelbase and should not be moveable.
- g) Cut off excessive band. Mount tire on wheel, refill air, balance wheel, and mount wheel back on vehicle.

After sensor installation, drive the vehicle and observe that the display shows the pressure and temperature one tire at a time for all tires. Pressing the control button on the Display shows individual tire pressure and temperature.

You may also check out the installed sensors without driving. Turn on vehicle power and then release about 3 PSI of air from each tire. Upon detection of air loss the sensors will send out warning signals. Observe that the display shows the tire pressure and temperature; press the control button to see individual tire reading.

### 3. Operation

After installation, the system operates automatically and continuously. Refer to the Operations Manual for details.