TM—507RV
# Manual

Tire Pressure Monitoring System
Automatically Monitor Tire Pressure and
**Temperature for up to 22 Tires**
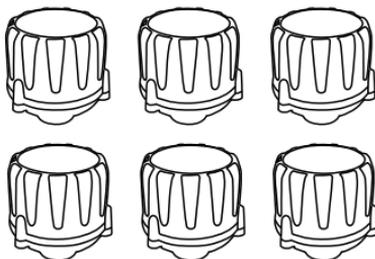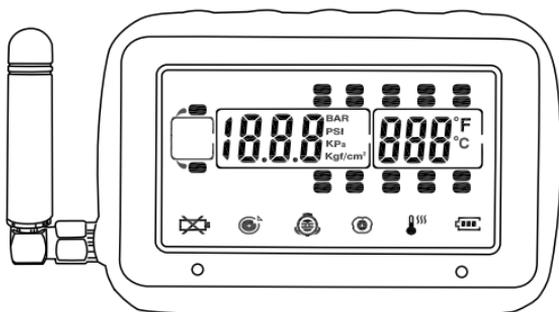
TIRE PRESSURE MONITORING SYSTEM

SYSTEM FEATURES

SENSOR FEATURES

1) The sensors are easy to install and very reliable.
2) The sensor is water resistant.
3) Sensors transmit pressure and temperature data every 5 minutes.
4) The sensors conserve power by not transmitting data when there is zero pressure (For example, if you store your unit seasonally, sensor life can be prolonged by removing the sensors from the valve stems of your tires.).
5) The battery operated sensors will last up to 2 years and the battery can be replaceable.
6) Leaks and temperature variances are detected swiftly and reliably.
7) Each sensor is individually coded for easy installation and individual settings.
8) Anti—theft design: mount with included installation tool.

MONITOR FEATURES

1) The monitor is easy to install and makes a stylish enhancement to your cab.
2) The large display is easy to read.
3) The monitor contains a built in rechargeable lithium battery and an DC adaptor which fits into any cigarette outlet.
4) Automatic activation when vehicle is in motion.
5) With automatic monitor illumination, monitor lighting is adaptable to all conditions.
6) Programmable high and low pressure alarm thresholds customizable to the specific requirements of your tires.
7) Programmable high temperature alarm thresholds customizable to the specific requirements or alert status of your tires.
8) Visual warning lights and audible alarms sound when temperature and pressure thresholds are exceeded.
9) Pressure unit selectable:PSI,BAR,Kpa,Kgf/cm^2
10) Temperature unit selectable: $^{\circ}$C, $^{\circ}$F.
11) The monitor effortlessly reads up to twenty—two (22) tires accurately and without fail.
12) The monitor can read trailers in tow, vehicles in tow, or any combination there of resulting in a maximum of twenty—two tires in one contiguous transport vessel.
13) The range is upwards of 60 linear feet from tire to monitor. Even farther with the addition of the easy to install repeater.
14) Tire pressure and temperature readings are displayed simultaneously for quick access to the data.
15) Tire pressure and temperature setting can be configured "per axle" in that the tires on each axle and be read and programmed for individual readings.

TIRE PRESSURE MONITORING SYSTEM

SYSTEM COMPONENTS

Monitor
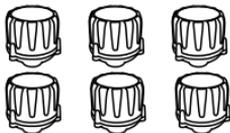
Sensors
(Quantity depends on customer requirement)

Suction Cup (option)

Monitor Holder

Water-Proof Rubber Band(Extra)
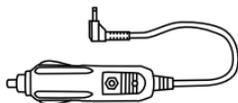
Power adapter

Sensor Installation Tool

Power Cable (Option)

MONITOR COMPONENTS AND ICONS

SET   +   −   MODE CODE

Antenna

ON ↑
OFF ↓   **Power Switch**

Power Socket

Monitor Brightness Sensor   **Red Light**

	BAR	PSI	KPa	Kgf/cm²	°F	°C
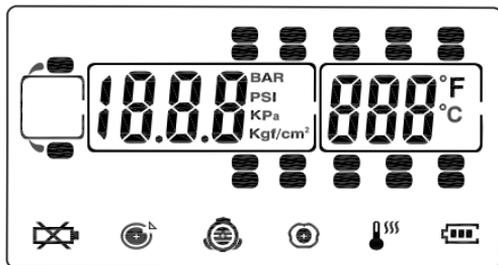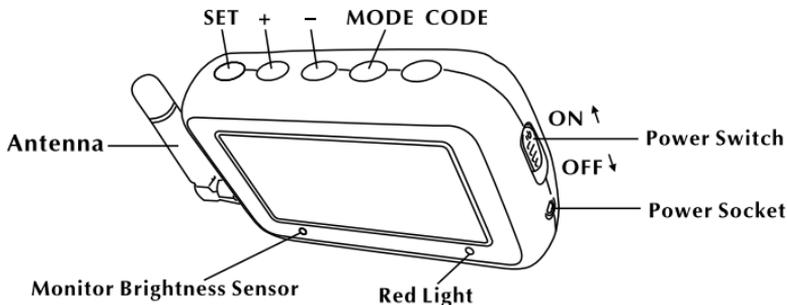
- 🛞 Tire Indicator
- 🔋 Sensor Battery Low
- 🔄 Fast Leakage
- ⬆ High Pressure
- ⬇ Low Pressure
- 🌡 High Temperature
- 🔋 Monitor Battery Indicator

Pressure Unit : BAR, PSI, Kpa, Kgf/cm²
Temperature Unit : °C, °F

TIRE PRESSURE MONITORING SYSTEM

INSTALLATION

Remove the tire valve cap and mount the corresponding sensor on the valve using the installation tool. The sensor is designed to be difficult to remove without the use of installation tool in order to avoid theft. Simply screw the installation tool clockwise.

Be sure not to over-tighten which might damage the sensor.
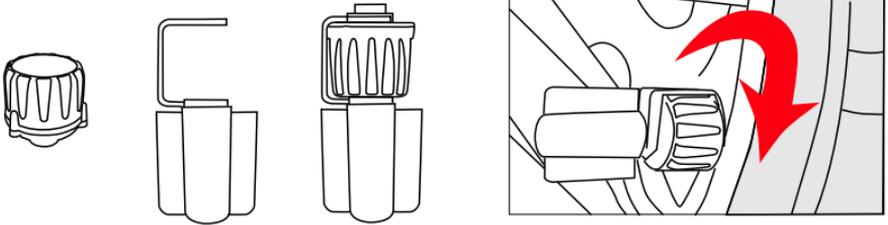
REMARKS : If you do not need the anti−theft function, take the 3 screw out of the sensor and remove the anti−theft housing. Mount the sensor on the valve directly.

MONITOR INSTALLATION

Place the monitor in the vehicle cabin where it can be easily seen. You can mount it on the dashboard using double−sided tape, or you can mount it on window using the suction cup (optional accessory). Plug the power adapter into the vehicle's cigarette lighter socket.
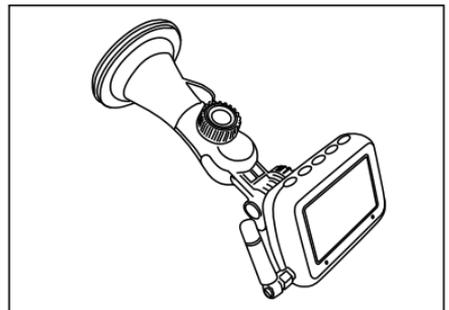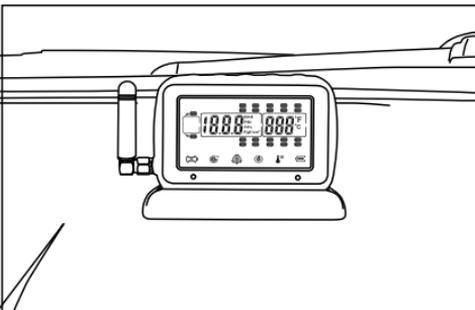
PROGRAMMING SENSOR CODE INTO THE MONITOR

We recommend user to have a label on the sensor to record the programming positions of the tires to be installed.

Programming sensors and record thetire positions as follows:
(1st to 3rd axle markedwith 1~14 labels, Trailer (backvehicle) marked with T1~T12 labels)

```
        7   11   T1   T5   T9
        8   12   T2   T6   T10
  1

  2

        9   13   T3   T7   T11
       10   14   T4   T8   T12
```
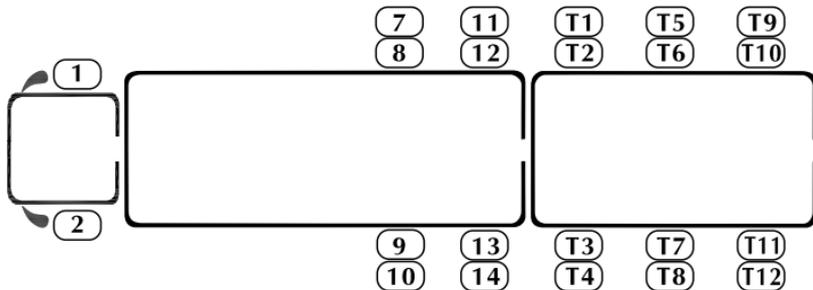
(1) AUTOMATIC CODE LEARNING / DELETE CODE

In standby mode, press the "CODE" button for 3 seconds and release after the beep. Then, the tire flash and relevant sensor code will be displayed. Initial setting for all the sensor code is "FFF FFF", In this mode, press the "+" and "−" button to select the tire which need to be learned or deleted.

Delete sensor code : Press the "SET" button for 3 seconds will delete the sensor code.

Automatic Code Learning : Place the sensor close to the bottom of the monitor, press "CODE" button once, RED light will be on and the sensor will send the sensor code to the monitor. The monitor will display the sensor code and give a beep sound after receiving the sensor code. The sensor code will be stored. If the monitor do not receive the sensor code within 6 seconds, the RED light will be off and it will give " beep− beep" two sounds. If so, press the "CODE" button again but this time you may put the sensor much closer to the bottom of the monitor. Press the "+" or "−" button to select other tires to be learned and do the same operations. Press the "MODE" button once will return to standby mode.

Note: Make sure the sensor oflearning code and other sensorsmust keep a distance of more than 1 meterin order to avoid misuse of the code learnt.

(2) INFLATE CODE LEARNING

In standby mode, press the "SET" button for 3 seconds and release it after the beep. This will enter it into the inflate code learning mode. In this mode press the "+" and "−" buttons to select the tire which need to be learned. Mount the sensor to the valve, the sensor will send the ID code to the monitor and the monitor will display the ID code. Select the other tires and do the same operations. Press the "SET" button for 3 seconds and release it after the beep will store the code learning. If you do not press any buttons for 1 minute, all the learning will not be stored and return to the standby mode.

TIRE PRESSURE MONITORING SYSTEM

TURNING THE MONITOR ON OR OFF MANUALLY

The user can turn off the monitor when you park the vehicle for a long period. You can turn on/off the monitor manually by side power switch. The monitor will turn off automatically if the battery used up.

PARAMETER SETTING

In standby mode, press the "MODE" button for 6 seconds and release it when you hear the first beep. The pressure unit will flash , press "MODE" button to select the next setting. press "+" button to get your preferred unit of measure and press "+" or "–" button to change the values of high pressure / low pressure and high temperature. After all the user adjustable parameters have been set, press the "SET" button to save. Please find the sequence of the parameter setting as the diagram below:

Note : factory default setting :

High Pressure: 175PSI (12.1 BAR)   Low Pressure 100PSI (6.9 BAR)
Pressure Unit: PSI   High Temperature: 70°C (158°F)
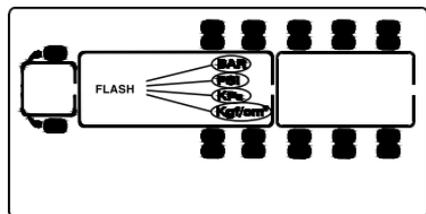

① **Pressure Unit setting**
   Selected pressure unit icon flash
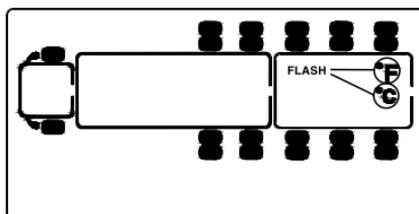
② **Temperature Unit setting**
   Selected temperature unit icon flash
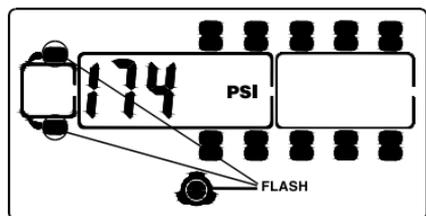

③ **1st axle High Pressure setting**
   1st axle 2 tires icon and high pressure icon flash
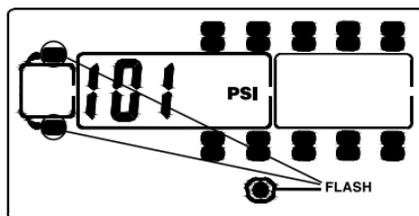
④ **1st axle Low Pressure setting**
   1st axle 2 tires icon and low pressure icon flash

# TIRE PRESSURE MONITORING SYSTEM
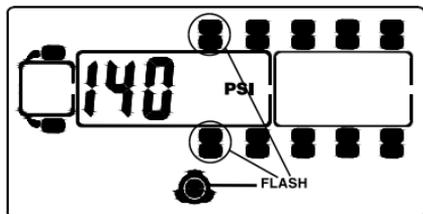
⑤ **2nd axle High Pressure setting**
2nd axle 4 tires icon and high pressure icon flash
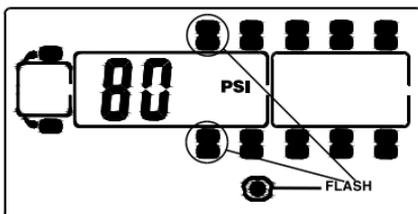
⑥ **2nd axle Low Pressure setting**
2nd axle 4 tires icon and low pressure icon flash
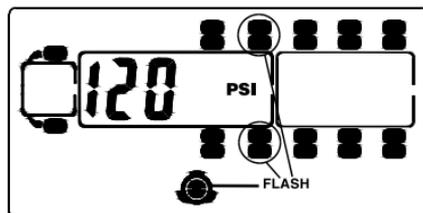
⑦ **3rd axle High Pressure setting**
3rd axle 4 tires icon and high pressure icon flash
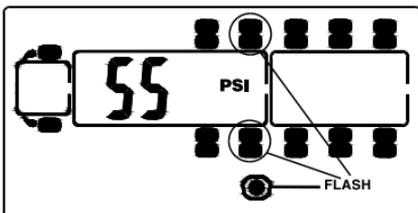
⑧ **3rd axle Low Pressure setting**
3rd axle 4 tires icon and low pressure icon flash
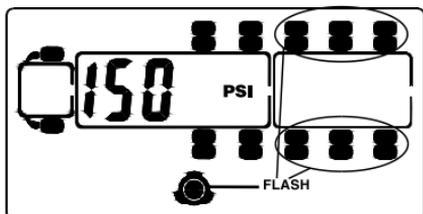
⑨ **Back vehicle High Pressure setting**
Back vehicle 12 tires icon and high pressure icon flash
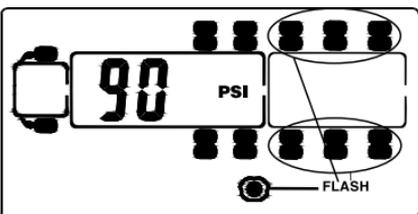
⑩ **Back vehicle Low Pressure setting**
Back vehicle 12 tires icon and low pressure icon flash

NOTE: High pressure and low pressure value for Axle 1, Axle 2 and Axle 3 and towed vehicle tires are adjusted separately.
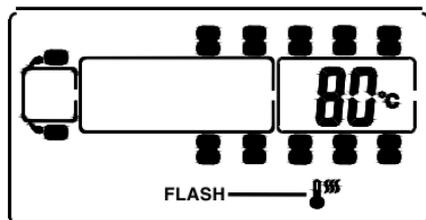
⑪ **High Temperature setting**
High temperature icon flash

TIRE PRESSURE MONITORING SYSTEM

## HIGH PRESSURE / LOW PRESSURE / HIGH TEMPERATURE ALERT

Sensors detect tire pressure and temperature readings every 6 seconds and send the latest reading every 5 minutes. If the reading is over or under the preset levels, an audible alarm will sound and a red alert light will flash within the monitor. The alarm can be silenced by pressing any button on the monitor, however, the RED light will continue to flash until the temperature or pressure is restored to your acceptable ranges.

FLASH   High Pressure Icon ON
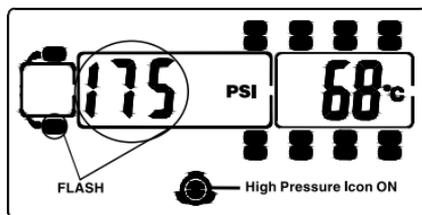
(a)High Pressure Alert e.g.175PSI

RED Light Flash

FLASH   Low Pressure Icon ON
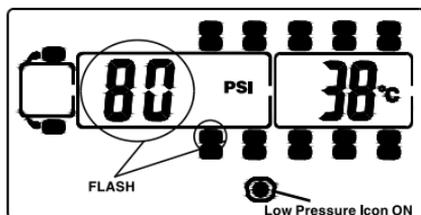
(b)Low Pressure Alert e.g. 80PSI

RED Light Flash

FLASH

High Temperature Icon ON
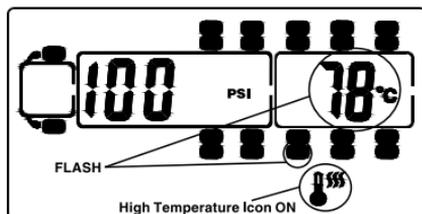
(c)High Temperature Alert e.g. 78°C

RED Light Flash

FAST LEAKAGE ALERT

When the sensors detect a fast leak it will send this information to the monitor immediately. The corresponding tire icon and the reading flash immediately and the fast leakage icon will be turn on. There will be audible warning and RED light flash. If you press any button the alarm will silence, however, the RED light will continue to flash until the problem is corrected.

FLASH

Fast Leakage Icon ON
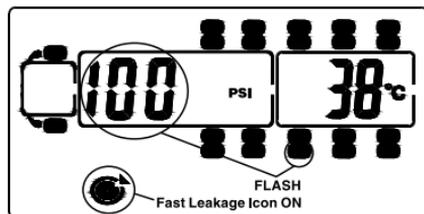
Fast Leakage Alert 100PSI

RED Light Flash

## SENSOR LOW BATTERY ALERT

When sensor detects low battery it will send alert to the monitor immediately. The relevant tire and low battery icon will flash immediately. There will also be an audible warning and the RED light flash. The alarm can be silenced by pressing any button on the monitor. However, the low battery icon and RED light will continue to flash until you replace a new battery.
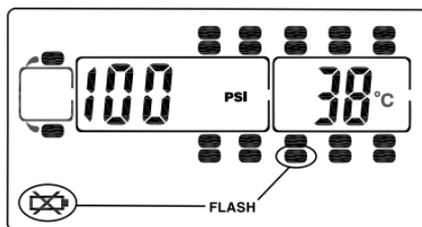
FLASH

RED Light Flash

OTHER FUNCTIONS

Normal Scrolling Display

During normal use, the display scrolls through the displayed tires, one by one, displaying each tire for 5 seconds. You can manually scroll through the displayed tires one by one by pressing the "+" button. When you manually select a tire to display, the monitor will stay on that tire for 10 seconds. If the monitor didn't receive the relevant sensor readings, the relevant tire icon on the monitor will flash immediately and there will also be an audible to remind that the tire's sensor don't send out the readings.

Backlighting

The monitor is equipped with a light sensor and a motion sensor, the backlight will only turn on when it detects that your vehicle is in motion and it is dark enough to need the backlight. If the monitor is operating on the internal battery, the display will "go to sleep" to conserve the battery if the motion sensor detects that you have stopped for a time, an example would be for fuel. The motion sensor will wake it up to display the tire data once you are back under way. The backlight can be turned on manually by pressing any button. It can be turned off by pressing the "+" button for 3 seconds.

Disconnect / Connect towedvehicle

When the towed vehicle is not connected to the towing vehicle, you can press "MODE" and "–" buttons at the same time for 3 seconds, the rear vehicle tires will temporarily be removed from the display. Pressing "MODE" and "–" button again will re–display your towed vehicle.

Charging Feature of the Monitor

There is a rechargeable lithium–ion battery inside the monitor , when fully charged the monitor has a battery life of 60 hours. For example , if you drive 4 hours per day, the receiver can be used for 8 days without connecting the power cord. There is a battery level meter on the display ,when the icon shows 🔋 , you need to charge the battery immediately. It will take 4 hours to charge fully.

TIRE PRESSURE MONITORING SYSTEM

REPLACE SENSOR BATTERY

When the low battery icon ⚡ and corresponding tire icon flash，please replace the tire sensor battery. It is recommended to use the CR1632 battery which can operate at −40℃ ~ +80℃.You can buy the battery from your dealer.

1.Use installation tool to remove the sensor.
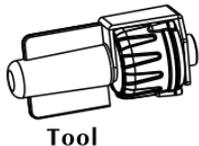
Tool

2.Use φ2 cross screw driver to take out the sensor screw and remove the antitheft housing.

Housing　　**Sensor**　**Cover and screw**
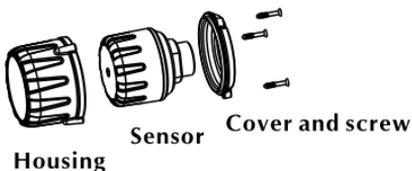
3.Use the installation tool to hold the sensor and use hand to take the cabinet out.

4.Take the battery out.
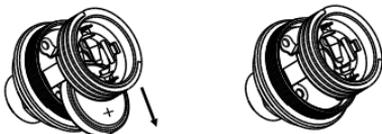
5.Replace the new battery CR1632, (+)upward.

"−"
CR1632 Lithium Battery

"+"
CR1632 Lithium Battery

6.The water−proof rubber band is on the right original position. Mount back the cabinet to the sensor by using the installation tool.Install back the antitheft housing.

Water−proof rubber band
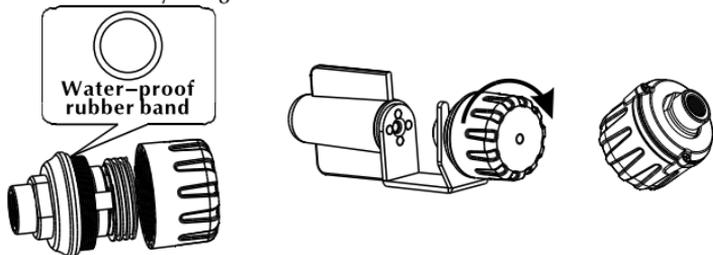
TIRE PRESSURE MONITORING SYSTEM

SENSOR SPECIFICATIONS

Operation Temperature	−40˚C – 80℃
Storage Temperature	−40˚C – 85˚C
Pressure Range	0−13 bar, 0−188 psi
Pressure Sensitivity	±0.1BAR/1.5PSI
Temperature Sensitivity	± 3˚C
Fast Leakage Alert	>0.4 bar or 6 psi within 12 seconds
Transmission Power	<10dBm
Transmission Frequency	433.92MHz
Battery Life	2 years (CR1632 −40℃−80℃)
Size	diameter 24mm height 21mm (without antitheft housing) diameter 27mm height 23mm (with antitheft housing)
Weight	11.5g (without antitheft housing) 15.4g (with antitheft housing)

MONITOR SPECIFICATIONS

Operation Temperature	−20˚C – 80˚C
Storage Temperature	−30˚C – 85˚C
Charger Input Voltage	8~30V
Operation Frequency	433.92MHz
Size	88mm Length x 60mm Width x 24mm Height
Weight (With Rechargeable Lithium Battery)	125g

TIRE PRESSURE MONITORING SYSTEM

ATTENTION:

- This system can effectively monitor air pressure and temperature inside the tire, but it cannot prevent traffic accidents. With the assistance of this system, the user should ensure the vehicle is in proper operating condition before travel including verifying tires condition before travel. This system is used a safety tool to help drivers understand when their tires are approaching a unsafe condition. It is understood improper driving habits or careless driving cannot prevent tire damage, and this system can not warn for all conditions encountered while driving that cause tire failure.

- This system is not a substitute for regular tire inspections and as needed maintenance. This system is a reporting device intended to aid the operator in consistently monitoring tires. It is understood that unsafe driving, road conditions, other drivers, tire load restrictions, overloading, and tire manufacturer specifications are all salient factors in the longevity and safety of any tire. As such, the operator is strongly advised to educate oneself as to the specific peak operating needs of their tires as recommended by the tire manufacturer and program your system to respond to those requirements.