

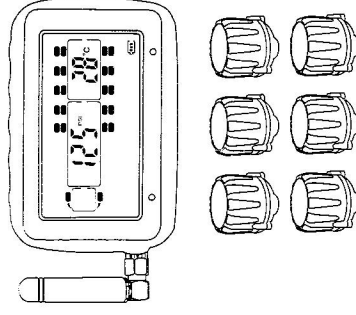
WIRELESS TIRE PRESSURE AND TEMPERATURE MONITORING SYSTEM

**Automatically Monitor Tire Pressure and
Temperature for up to 22 Tires**

Model No.: TM-507RV/SE

Instruction Manual

Thank you for purchasing this Tire Pressure Monitoring System. With minimal care and proper treatment it will provide years of reliable service. Before use, please read carefully and ensure you fully understand all cautions, warnings, instructions and product labels. Please keep this manual for future reference.



Truck System Technologies, Inc
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Suite 200
Cumming, GA 30041

SENSOR FEATURES

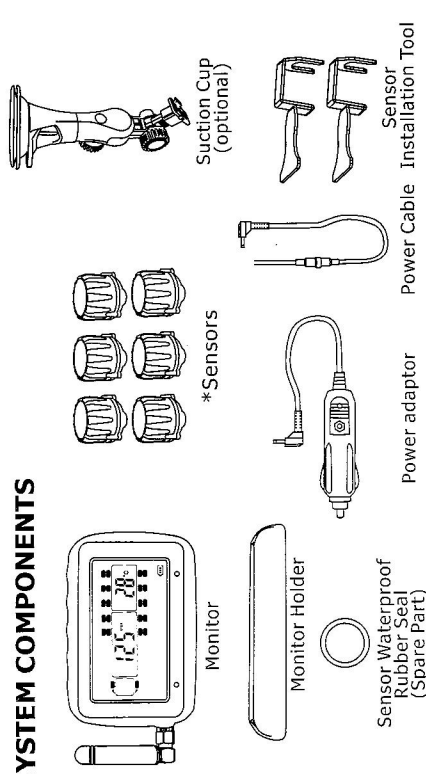
- 1). The sensors are easy to install and very reliable.
- 2). The sensor is water resistant.
- 3). Sensors transmit pressure and temperature data every 5 minutes.
- 4). The sensors conserve power by not transmitting data when there is zero pressure (For example, if you store your unit seasonally, sensor life can be prolonged by removing the sensors from the valve stems of your tires).
- 5). The battery operated sensors will last up to 1 year 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 monitor is easy to read.
- 3). The monitor contains a built in rechargeable lithium battery and an AC 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 or Kg/cm².
- 10). Temperature unit selectable: °C or °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.

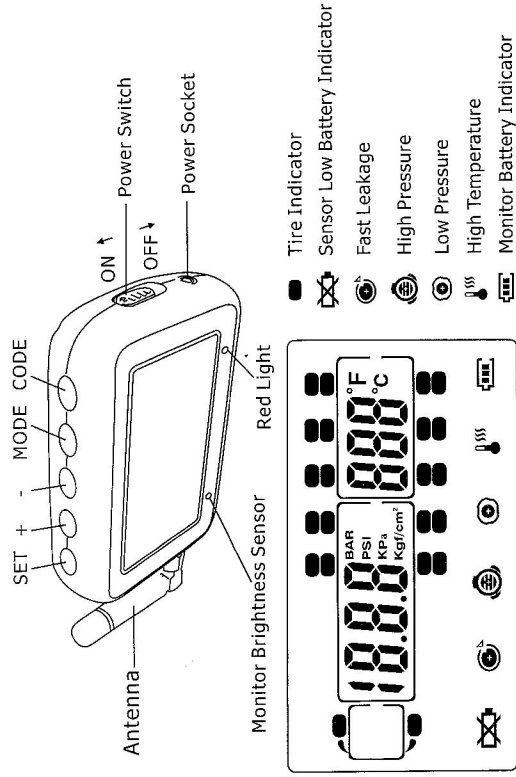
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SYSTEM COMPONENTS



***Sensors Quantity depends on customer requirement, default factory presets are 6 sensors, maximum can code up to 22 sensors.**

MONITOR COMPONENTS AND ICONS



Pressure Unit : BAR, PSI, Kpa or Kg/cm², user-selectable
Temperature Unit : °C or °F, user-selectable

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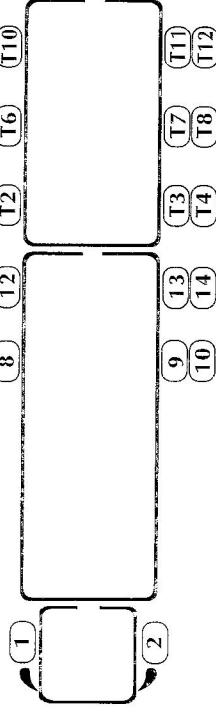
MANUAL FOR TIRE PRESSURE MONITORING SYSTEM, TPMS

PROGRAMMING SENSOR CODE INTO THE MONITOR

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

Programming sensors and record the tire positions as follows:

1st to 3rd axle marked with 10 labels(1~2, 7~14), Trailer (back vehicle) marked with 12 labels(T1~T12)

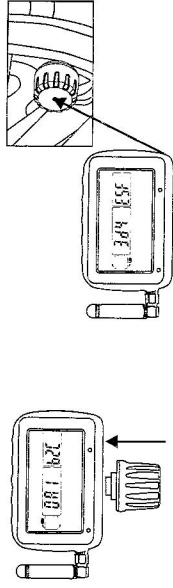


(1) AUTOMATIC CODE (LEARNING) / INITIALIZE THE CODE (RECOMMENDED)

In standby mode, press the "CODE" button for 3 seconds and release after the beep. The tire icon will flash and the relevant sensor code will be displayed. Initial code setting for all the sensors is "FFF FFF". In this mode press the "+" or "-" buttons to select the tire which needs to be coded or initialized.

Initialize Sensor Code: In this mode, pressing the "SET" button for 3 seconds will initialize the sensor code to "FFF FFF".

Automatic Code: In this mode, place the sensor close to the bottom of the monitor, press "CODE" button once, the red light will be on and the sensor will send the code to the monitor, the monitor will display the code and give a beep sound when code is received, the sensor code will be stored. If the monitor does not receive the sensor code within 6 seconds, the red light will go off and you will hear a "beep-beep" (two sounds). In such instances, press the "CODE" button again but this time put the sensor much closer to the bottom of the monitor. Press the "+" and "-" buttons to select other tires to be learned and repeat the same procedure. Pressing the "MODE" button once will return to standby mode with storing the code.



Note: Make sure the sensor being "learned" is more than 1 metre away from other sensors in order to ensure only one sensor is "learned" at a time.

MANUAL FOR TIRE PRESSURE MONITORING SYSTEM, TPMS

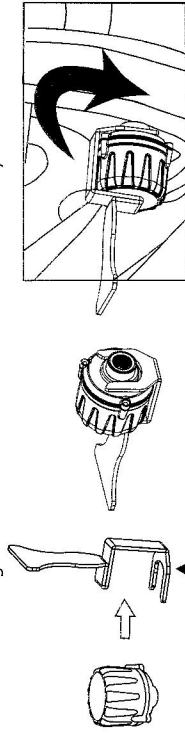
(2) INFLATE CODE LEARNING

In standby mode, press and hold the "SET" button for 6 seconds until the second beep (do not release after the first beep). The tire icon will flash and the relevant sensor code will be displayed. Initial code setting for all the sensors is "FFF FFF". In this mode press the "+" and "-" buttons to select the tire which need to be re-coded. 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 repeat the same procedure. Press the "SET" button for 3 seconds and release it after the beep the monitor will store the code which has been coded. If you do not press any buttons for 1 minute, all the code will not be stored and return to the standby mode.

SENSOR 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.

If you do not need the anti-theft function, take the screws out of the sensor and remove the anti-theft housing. Mount the inner sensor on the valve directly.

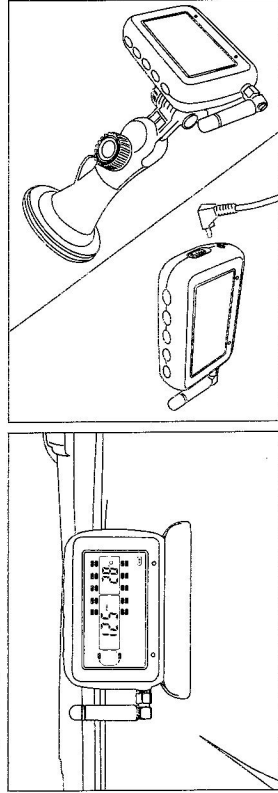


*Please keep the installation tool for future usage because you have to use it when you uninstall or reinstall the sensor.

*Be sure not to over-tighten the cabinet which might damage the sensor.

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 the windshield using the optional suction cup. Plug the power adaptor into the vehicle's cigarette lighter socket to charge the monitor fully (It must be charged more than 4 hours at the first time) or plug the power cable and connect to the vehicle power.



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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 or off the monitor manually by side power switch. The monitor will also turn off automatically if the battery is used up.

PARAMETER SETTING

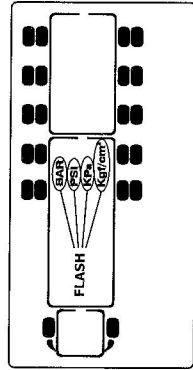
In standby mode, press the "MODE" button for 6 seconds and release it when you hear the first beep. The pressure unit will flash, press "MODE" button to select the next setting. press "+" button to get your preferred unit of measure and press "-" or " " button to change the values of high pressure, low 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:

The default factory presets are:

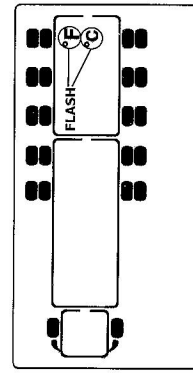
Pressure Unit: PSI
High Pressure: 175PSI (12.1 BAR)
Low Pressure: 100PSI (6.9 BAR)

Temperature Unit: °C
High Temperature: 70°C (158°F)

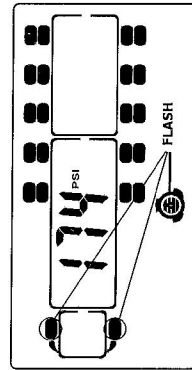
Remarks: To restore factory default settings, please turn off the monitor and then press "+" button and turn on the monitor at the same time, the red light will flash once, factory settings will be restored.



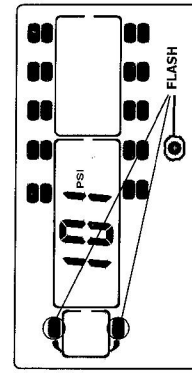
- ① Pressure Unit setting
Selected pressure unit icon flash



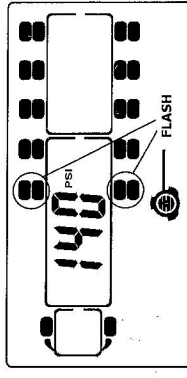
- ② Temperature Unit setting
Selected temperature unit icon flash



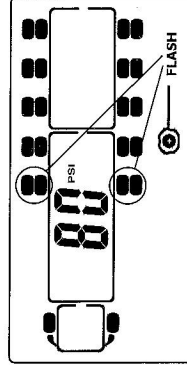
- ③ 1st axle High Pressure setting
1st axle 2 tires icon and high pressure icon flash



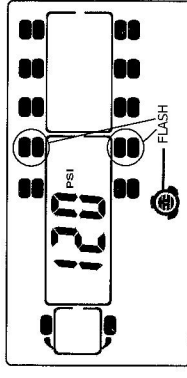
- ④ 1st axle Low Pressure setting
1st axle 2 tires icon and low pressure icon flash



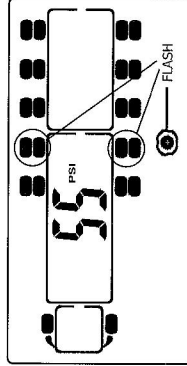
- ⑤ 2nd axle High Pressure setting
2nd axle 4 tires icon and high pressure icon flash



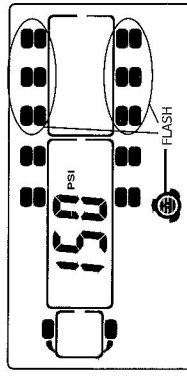
- ⑥ 2nd axle Low Pressure setting
2nd axle 4 tires icon and low pressure icon flash



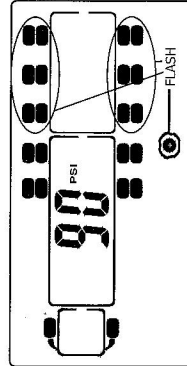
- ⑦ 3rd axle High Pressure setting
3rd axle 4 tires icon and high pressure icon flash



- ⑧ 3rd axle Low Pressure setting
3rd axle 4 tires icon and low pressure icon flash

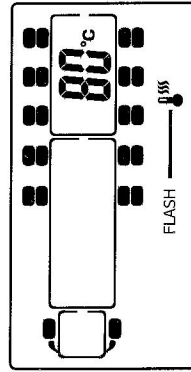


- ⑨ Back vehicle High Pressure setting
Back vehicle 12 tires icon and high pressure icon flash



- 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.



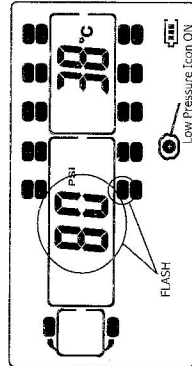
- ⑪ High Temperature setting
High temperature icon flash

HIGH PRESSURE / LOW PRESSURE / HIGH TEMPERATURE ALERT

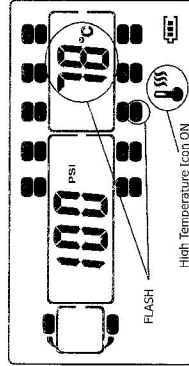
The sensors send the tire pressure and temperature readings to monitor every 5 minutes. If the reading is over or under the preset levels, an audible alarm will sound and a red alert light will flash within the monitor. The alarm can be silenced by pressing any button on the monitor. However, the red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

e.g.: The default factory presets are:

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



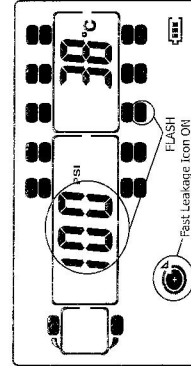
(a) High Pressure Alert e.g.: 176PSI
RED Light Flash



(b) Low Pressure Alert e.g.: 80PSI
RED Light Flash

(c) High Temperature Alert e.g.: 78°C
RED Light Flash

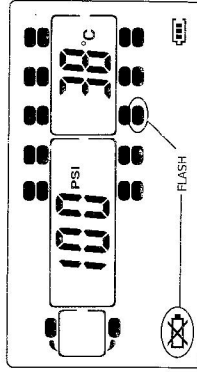
When the sensors detect a fast leak it will send this information to the monitor immediately. The corresponding tire icon and the reading flash immediately and the fast leakage icon will be turn on. There will be audible warning and red light flash. If you press any button the alarm will be silenced,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



Fast Leakage Alert e.g.: 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 the sensor has been replaced with a new battery.



RED Light Flash

OTHER FUNCTIONS

Normal Scrolling Display

During normal use, the monitor scrolls through the displayed tires one by one, displaying each tire for 5 seconds. If the monitor do not receive the sensor data for more than one hour, the corresponding tire will not have reading and there will be a beep sound. 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.


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 monitor 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 monitor 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 towed vehicle

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 towed vehicle tires will temporarily be removed from the monitor. Pressing "MODE" and "-" buttons again will redisplay your towed vehicle.

Charging the Monitor

There is a rechargeable lithium-ion battery inside the monitor and there is a battery level meter on the monitor, when the icon shows , you need to charge the battery immediately. It will take 4 hours to charge fully.

REPLACING THE SENSOR BATTERY

When the low battery icon  and corresponding tire icon flash, please replace the tire sensor's battery. It is recommended to use a CR1632 battery which can operate at -40°C to +80°C. You can buy replacement batteries from your dealer.

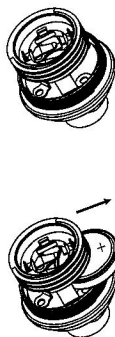
1. Use the supplied installation tool to remove the sensor screw and remove the anti-theft housing.



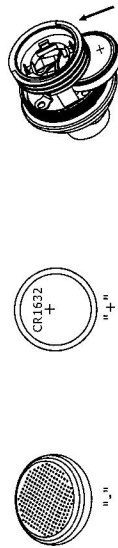
3. Use the installation tool to hold the inner sensor and take the cabinet out.



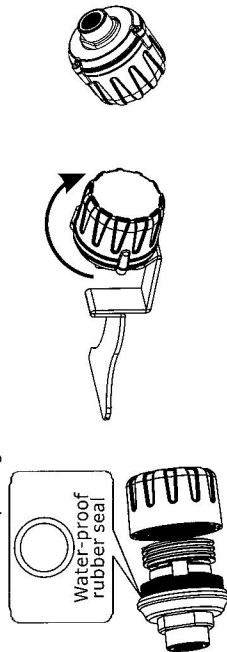
4. Take the battery out.



5. Replace with the new battery CR1632, positive (+) should be facing upwards.



6. Make sure the water-proof rubber seal is in the right original position. Mount the cabinet to the sensor by using the installation tool. Reinstall the anti-theft housing.



SENSOR SPECIFICATIONS

Operation Temperature	-40°C ~ 80°C
Storage Temperature	-40°C ~ 85°C
Pressure Range	0 ~ 13 bar, 0 ~ 188 psi
Pressure Accuracy	± 1.5 psi(± 0.1 bar)
Temperature Accuracy	± 3°C
Transmission Power	< 10dBm
Transmission Frequency	433.92MHz
Battery Life	1 year (CR1632 -40°C~80°C)
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	DC 8 ~ 30V
Frequency	433.92MHz
Size	88mm Length x 60mm Width x 24mm Height
Weight	125g

ATTENTION

This system can effectively monitor air pressure and temperature within the tire, but it cannot prevent traffic accidents. Use of this system requires the end-user to ensure that the vehicle is in a road-worthy condition before use, including verifying the condition and pressure of the vehicle's tires. This system is designed as a safety tool to help drivers understand when their tires are approaching an unsafe condition. Improper driving habits or careless driving can cause tire damage, and this system can not warn for all such conditions encountered whilst driving that may result in tire failure. This system is not a substitute for regular tire inspection and any necessary maintenance, but is designed only as an aid to monitoring tires. Unsafe driving, poor road conditions, other drivers', tire load restrictions, overloading of a vehicle and tire manufacturer specifications are all salient factors in the longevity and safety of any tire. As such, the driver of any vehicle equipped with this system is strongly advised to educate themselves with the specific peak operating requirements of their vehicle's tires as specified by the tire manufacturer, and to ensure this system is correctly configured to respond to those requirements.