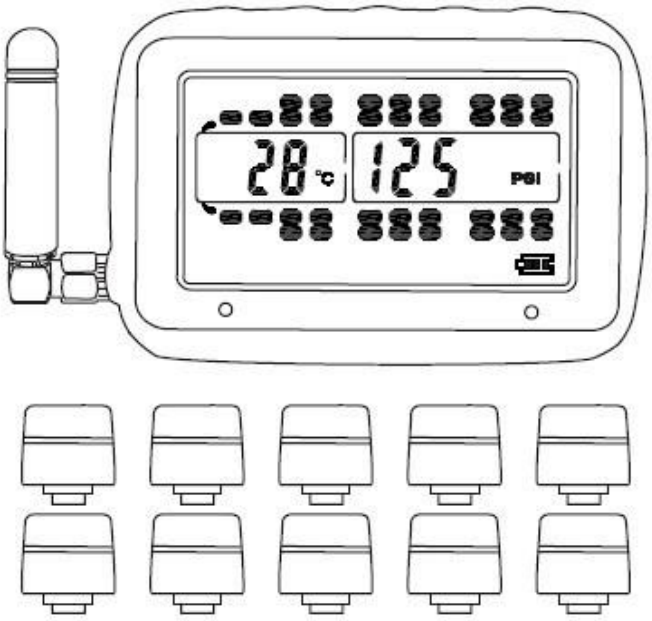
507SCE Trailer-Exchange Tire Pressure Monitoring System

Automatically Monitor Tire Pressure and Temperature for up to 36 Tires

Model No: TM50736/SCE



For Sales Information Please Contact
RoadTrucker Inc
(www.RoadTrucker.com)
8312 Sidbury Rd., Wilmington, NC 28411
(800) 507-0482 / (910) 686-4281

Manual for 507SCE Tire Pressure Monitoring System

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507 SCE Trailer-Exchange TPMS: Quick-Install Guide
Preferred Programming Method

1. First, install the monitor/display to the ignition power. Suggested placement is to the left of the steering wheel. Remove flow-thru valve caps, if necessary, and add a drop of dielectric grease to the sensors' threading.

2. **Now, you can set up the system. It is advised to complete programming before installing the tire sensors onto the tires.**

- Press and hold **CODE** for 6 seconds until all tires are on the screen. You will see either FFF FFF or an alphanumeric code on your screen. Proceed with the following steps in either case.
- **To program the sensor codes**, use + and – to navigate to the first tire you will program, if needed. Holding the sensor away from the other sensors, place the bottom of your monitor close to the sensor; press and release CODE. The right corner light will illuminate, and the monitor should automatically display the sensor ID code.
  NOTE: {If this is unsuccessful, try again, but this time place the bottom of the monitor closer to the sensor or hold it at a slightly different angle.}

- Continue by pressing – or + to navigate to the next tire/sensor you are monitoring, repeat autocoding for this next sensor, and then repeat to finish coding all remaining sensors.
- When you are finished with all tire sensors**, tap** and release the **Mode** button to return to the regular monitoring screen and to review your tire sensor layout. If changes are required, you can rescan any sensor by repeating these steps.

3. **Now, you can set your high and low PSI alarm settings:**

   - Press and hold MODE for 6-8 seconds until the monitor beeps **twice**. You should see PSI. If BAR appears, press + to select PSI. Next, tap (don't hold) MODE: you should see a C or an F. If it is C, press + to select F.
   - Then, tap mode again to set the steering axle. Use + or – to set the high setting; then tap mode, and use + or – to set the low steering axle setting.
   - Continue to tap mode and set PSI parameters for the following axles you are monitoring.
   - Then, tap mode until the temperature is displayed. It should be 158° F. If not, use + or – to change the temp to 158.
   - Press and release SET, and the monitor will beep and the settings will be saved.

4. Finally, perform a leak test by pouring soapy water over the sensors. Once you have completed the leak test, the system installation is complete. Allow 15-20 minutes for all sensors to report PSI & temperature on the monitor. Enjoy your system!

507SE Repeater Quick Install Guide
For Trailer Exchanges & Reception

To enable Trailer-Exchange Feature for tractor/trailer applications:

Initializing the Repeater

1. First, if the tractor-trailer you are driving does not have an **assigned number,** begin by assigning it a number. This can be any 6-digit ID code with numerals between 0-9 (for example, 000 001).

2. **Now, input this trailer ID number into the monitor**:
   - First, tap MODE on the monitor**.** The trailer tires on the monitor will be flashing, and 000 000 will appear.
   - Tap CODE: the monitor will beep, and the first digit of the ID code will be blinking. Use CODE to move from digit-to-digit and + to enter each number, and enter your randomly assigned trailer ID number.
   - When finished, hold and press CODE for 3 seconds to store the ID. (If required, tap MODE to return to the regular monitoring screen.)

3. **Next, sync the repeater with the monitor:**
   - Press the SET button on the monitor for 6 seconds until the monitor **has beeped twice.**
   - Then, press the repeater button until the monitor and repeater beep.
   - The repeater has initialized, and within 10-15 minutes, all sensors should be reporting PSI and temperature readings.

To switch trailers/repeaters:

- Begin by holding and pressing the repeater button until it **beeps twice.** Then, press MODE on the monitor until the monitor beeps.
- The monitor will display a flashing tractor/trailer outline and all tire icons while syncing, which should be completed in about a minute.
- Then, the monitor will return to regular monitoring mode. Trailer-Exchange programming is then complete.

Important Note: if the monitor and the repeater alarm after initialization or exchange, this indicates a high/low pressure, fast leak, or high temperature, **and attention is required.** To silence, press any button on the monitor and the repeater button. Both units will continue to flash until the problem is corrected and power is shut on/off to reboot them.

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507SCE TPMS Alternate/Backup Programming Method

Note: we recommend using the preferred programming method on pg 2

1. First, install the monitor/display to the ignition power. Suggested placement is to the left of the steering wheel. Remove flow-thru valve caps, if necessary, and add a drop of dielectric grease to the sensors' threading.

2. **Now, you can set up the system:**

- **Very loosely** place the tire sensors onto the valve stems, just so they will stay on. Do **NOT** screw them on further; do not depress the valve cores/Schrader valves.
- Once all the sensors are on the valve stems, press SET for 9 seconds until the monitor beeps twice.
- Use + to select the first tire sensor position you are programming.
- Then, you or a partner should **immediately** finish tightening the sensor onto the valve stem; the monitor should beep and automatically pick up the sensor code.
- Please NOTE: you should tighten until the sensor is snug, secure, and seated. Do not overtighten. This can result in sensor seal damage.
- Repeat these steps to program the rest of the tire sensors.
- When you are finished with all tires, press and hold **SET** until the monitor beeps to save the settings.

3. **Now, to set your high and low PSI alarm settings**, follow the procedure listed on pg 2, step 3.

4. Finally, perform a leak test by pouring soapy water over the sensors. Once you have completed the leak test, the system installation is complete. Allow 15-20 minutes for all sensors to report PSI & temperature on the monitor. Enjoy your system!

Installation & Set-up for the 507SCE Repeater remains the same with this system programming option. Refer to page 3 for repeater installation and initialization.

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 be sure to understand all cautions, warnings, instructions, and product labels. Please keep this manual for future reference.

Monitor Features:

1) Easy to install and makes a stylish enhancement to your cab.
2) The large display is easy to read.
3) The monitor is powered by hardwires directly into the ignition.
4) Automatic activation when engine is running, whether vehicle is stationary or 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 threshold customizable to the specific requirements or alert status of your tires (without repeater).
8) Flashing LED light, audible alarm, and alert icon notifications present instantaneously when pressure or temperature exceed pre-set thresholds, or when tire pressure falls to an unacceptable level.
9) Pressure unit selectable: PSI or Bar
10) Temperature unit selectable: °C or °F
11) Effortlessly and reliably reads up to 36 tires
12) Can read trailers in tow, vehicles in tow, or any combination thereof, resulting in a maximum of 36 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 data.
15) Tire pressure and temperature settings are configured "per axle" in tractor in that the tires on each axle can be read and programmed for individual readings.

Sensor Features:

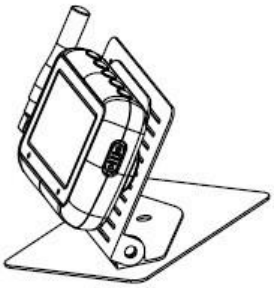
1) Easy-to-install and reliable.
2) Water-proof & submersible
3) Transmit pressure and temperature data every 2 minutes and continually monitoring to alert instantaneously to any issue.
4) Lithium-ion batteries last 5-7 years.
5) Detect leaks and temperature variances swiftly and reliably.
6) Individually coded for easy installation and individual settings.

507SCE Trailer-exchange Repeater Features (optional):

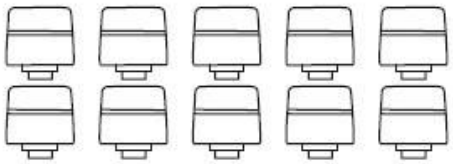
1) Ensure the stability of receiving signal from sensors when signal is weak.
2) Record the sensors' IDs, pressure and temperature limits of the wheels in trailer and trailer ID
3) Support truck and trailer exchange.
4) Data of sensors in trailer is transferable between monitor and trailer exchange repeater.
5) Visible and audible alert for high pressure, low pressure, high temperature and fast leakage.
6) Fixed value for high temperature alert (90℃)

In a fleet, one trailer is not always attached to the fixed tractor. In order to make the sensors in the trailer exchangeable to the monitors without reprogramming the sensors in the trailer, each trailer can have a trailer exchange repeater to record the sensors' IDs, high pressure alert, low pressure alert of the wheels in trailer and trailer ID.

TPMS Components:



Monitor

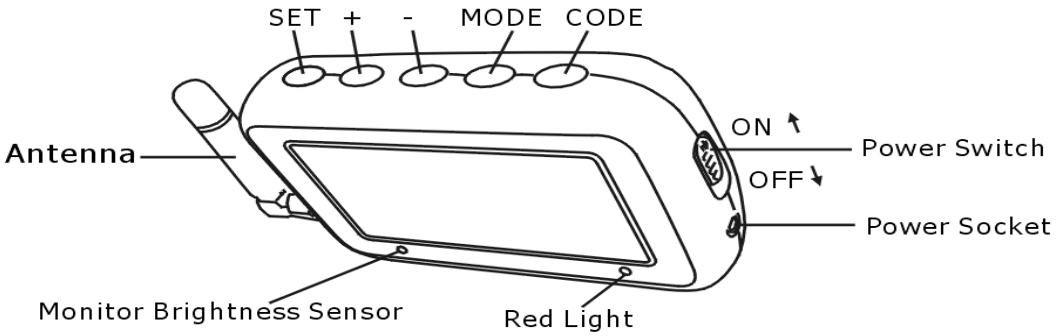


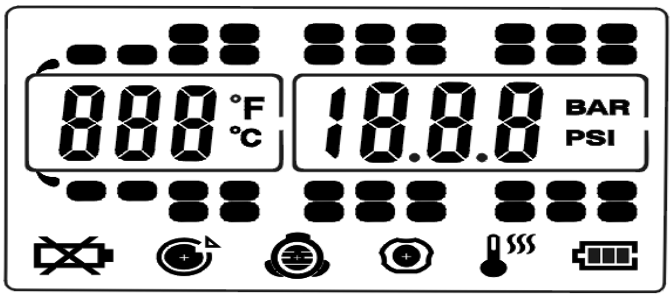
*Sensors

Traier exchange repeater

* Also includes additional air-tight, long antenna & numbered sensor-position stickers

Monitor Components & Icons:





- Tire Indicator
- Sensor Low Battery Indicator
- Fast Leakage
- High Pressure
- Low Pressure
- High Temperature
- Monitor Battery Indicator

Pressure Unit : BAR or PSI, user-selectable
Temperature Unit : °C or °F, user-selectable

Programming Sensor Codes Into the Monitor

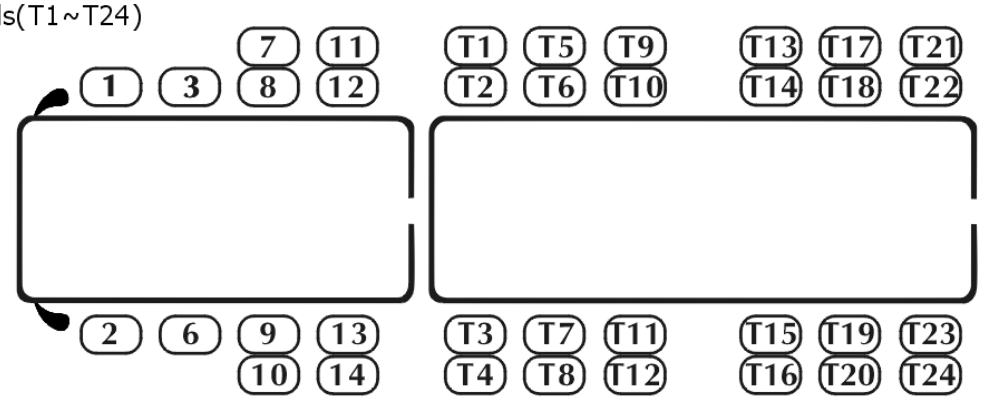
Numbers correspond to numbered stickers for each sensor/tire position.

Programming sensors and record the tire positions as follows:

1st to 3rd axle marked with 12 labels (1-14), trailer (back vehicle) marked with 24 labels(T1-T24).

Programming sensors and record the tire positions as follows:

1st to 3rd axle marked with 12 labels(1~3,6~14), Trailer (back vehicle) marked with 24 labels(T1~T24)



Sensor Automatic Code Programming

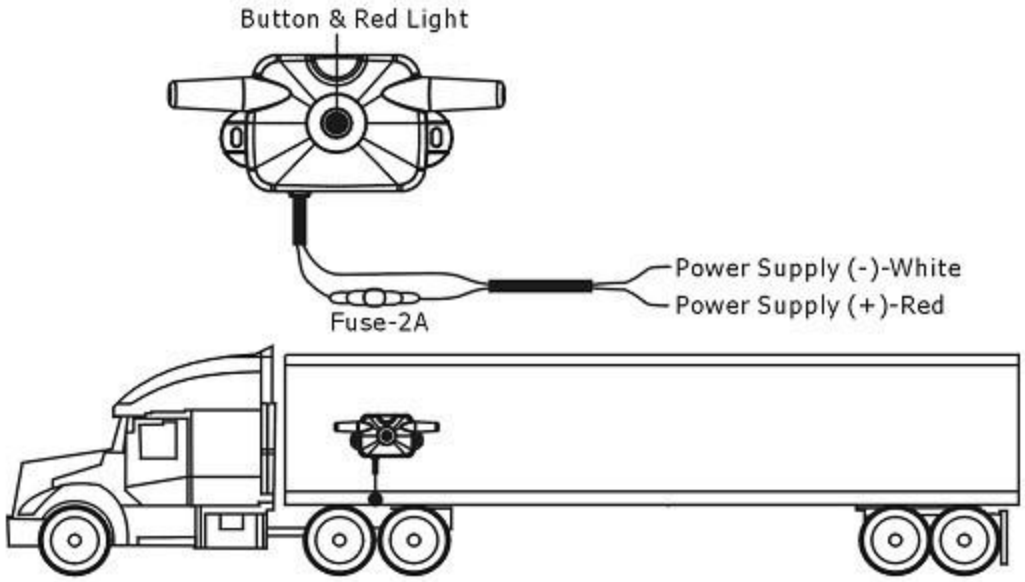
Place the sensors loosely onto the valve stems (not activating valve cores). Hold and press SET for 9 seconds until the monitor beeps twice. Tighten the first sensor onto the valve stem. The code should appear automatically. Use +/- to continue to the next sensor position to be programmed. Tighten the next sensor onto the stem. This code should appear. Repeat for all other tire positions. Hold and press SET when finished to save sensor ID codes.

** Note: each sensor must be coded within 1 minute of the previous sensor or the codes will not be stored and the monitor will return to the regular monitoring screen.

Trailer Exchange Repeater Installation (Optional)

If, due to length or interference, your monitor does not receive all of the sensors, you will need to purchase a trailer exchange repeater (optional) to increase the sensors transmitting distance.

To have better performance, please install the trailer exchange repeater outside between the front tractor and towed trailer.



Parameter Settings

In regular-monitoring mode, press the MODE button for 6-8 seconds, and release after the second beep. The pressure unit will flash;. use + to select the preferred pressure unit. Press MODE again, and C or F will appear; use + to select the preferred temperature scale. To proceed to the first and subsequent axles, press MODE. Set the high setting then the low setting for each axle by using +/-. After all parameters have been set, press SET to save. (Each step must be completed within 1 minute, or the settings will not be saved, and the monitor will return to the regular monitoring screen.)

The default factory presets are:

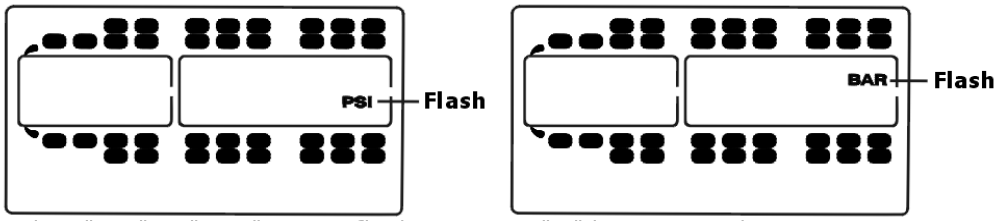
Pressure Unit: PSI
High Pressure: 175PSI (12.1 BAR)
Low Pressure: 100PSI (6.9 BAR)

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.

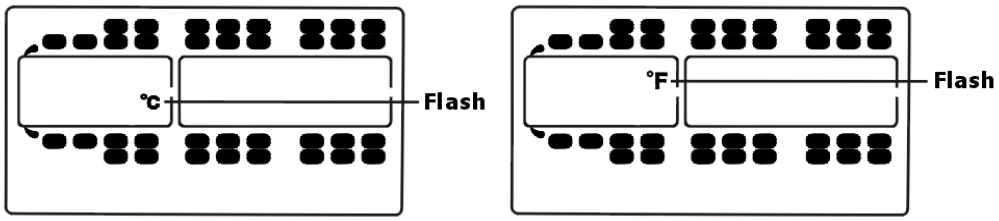
The sequence of the parameter setting is as follows:

1).Pressure Unit setting



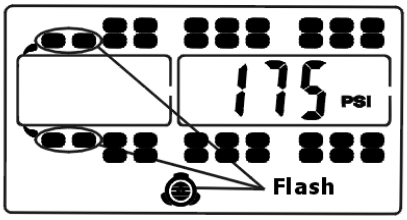
When "PSI" or "BAR" icon is flashing, Press "+" button to select pressure unit, "BAR" and "PSI" are available.

2).Temperatue Unit setting



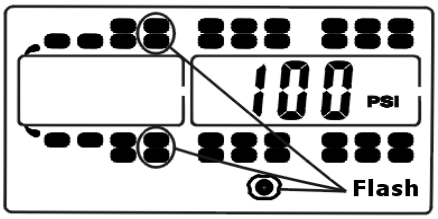
When "°F" or "°C" icon is flashing, Press "+" button to select temperature unit, "°F" and "°C"are available.

3).1st axle High Pressure setting:



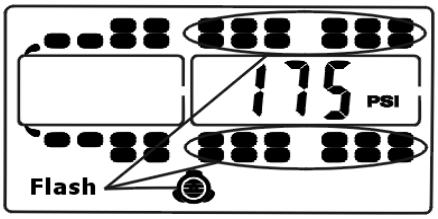
When 1st axle high pressure ( ) icon and four tires icon are flashing, Press "+" and"-" button to adjust the high pressure of flashing tires.

8). 3rd axle Low Pressure setting:



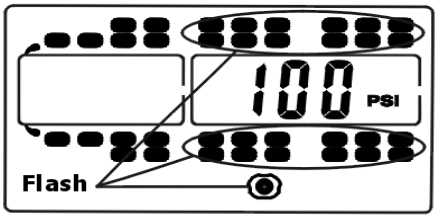
When 3rd axle low pressure （ ） icon and four tires icon are flashing, Press "+" and"-" button to adjust the low pressure of flashing tires.

9). Back vehicle High Pressure setting:



When back vehicle high pressure （ ） icon and twenty-four tires icon are flashing, Press "+" and "-" button to adjust the high pressure of flashing tires.

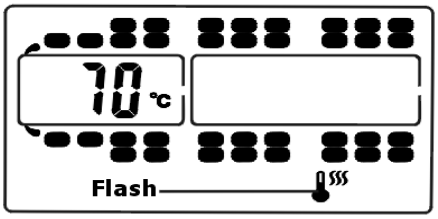
10). Back vehicle Low Pressure setting:



When back vehicle low pressure （ ） icon and twenty-four tires icon are flashing, Press "+" and "-" button to adjust the low pressure of flashing tires.

NOTE: High pressure and low pressure value for axle 1,axle 2 and axle 3 and back vehicle tires are adjusted separately.

11). High Temperature setting:



When high temperature （ ） icon is flashing, Press "+" and "-" button to adjust the high temperature of all tires.

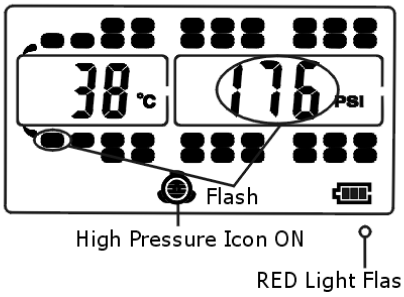
High Pressure/Low Pressure/High Temperature Alerts

The sensors send the tire pressure and temperature readings to the monitor every 2 minutes, while also continually monitoring all data. If the readings are over/under the alert levels, an audible alarm will instantaneously sound and a red light will flash on the monitor. The alarm can be silenced by pressing and releasing any button; however, the red light will continue to flash until the temperature or pressure is restored to acceptable levels.

The default factory settings are:

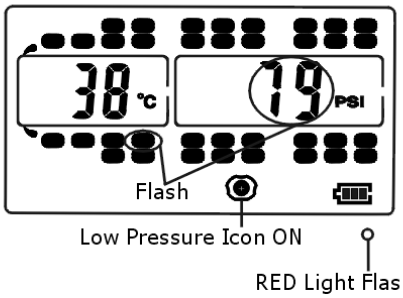
a. High Pressure Alert: 175PSI (12.1 BAR)
b. Low Pressure Alert: 100PSI (6.9 BAR)
c. High Temperature Alert: 70°C (158°F)

a). High Pressure Alert: e.g.: 175PSI



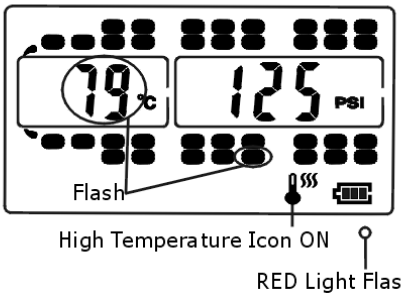
The corresponding tire icon and pressure reading will flash, and the high pressure icon will be shown on the monitor. It's highly recommended to deflate the incorrect tires to acceptable ranges before driving.

b). Low Pressure Alert: e.g.: 80PSI



The corresponding tire icon and pressure reading will flash, and the low pressure icon will be shown on the monitor. It's highly recommended to inflate the incorrect tires to acceptable range before driving.

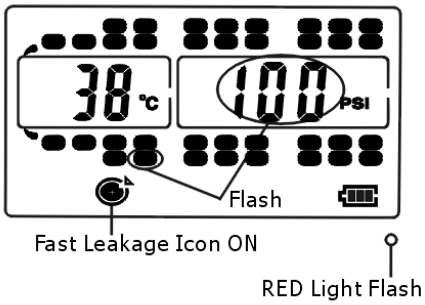
c). High Temperature Alert: e.g.: 78°C



The corresponding tire icon and temperature reading will flash, and the high temperature icon will be shown on the monitor. It's highly recommended to make tire temperature to acceptable range before driving.

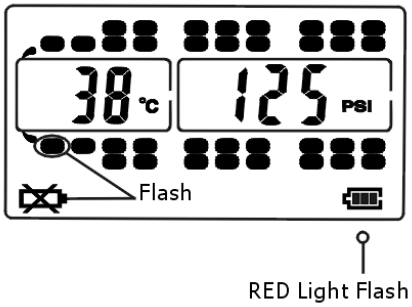
FAST LEAKAGE ALERT

Fast leakage Alert: e.g.: 100PSI



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 shown on the monitor. 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.

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.

Other Functions & Alert Information

Slow Beep Alert & Normal Scrolling Mode

During normal use, the monitor scrolls through the displayed tires one by one, displaying each tire for 5 seconds. Following the loss of a sensor's signal, the corresponding tire on the monitor will not have a reading, and the monitor will slowly, regularly beep. There is no way to silence this alert. It is advised to install a repeater to avoid loss of signal.

Delete Tire Position/Sensor From Monitor

In regular, monitoring mode, hold and press Code for 6 seconds until the monitor beeps. Use +/- to select the tire position you need to delete; it will be blinking when selected. Tap and release the Code button, and immediately hold and press the Set button until the monitor beeps, then release. The code should change back to FFF FFF. If successful, tap and release Mode to return to the regular monitoring screen, and the tire should be deleted. Repeat if needed.

Monitor Power

The monitor is hardwired and cannot be turned on/off manually and/or while the engine is running.

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 monitor and that it is dark enough to need the backlight. The backlighting 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, pressing MODE and − simultaneously for 3 seconds will temporarily remove the towed vehicle tires from the monitor. Pressing MODE and - again will redisplay the towed vehicle.

High Pressure, Low Pressure & Fast Leakage Alerts

Sensors send pressure data to the trailer-exchange repeater / monitor every 2 minutes. Even so, if the data is over or under the range set, an audible alarm will sound and a red light will flash instantaneously. The alarm can be silenced by pressing the button on the trailer exchange repeater and any button on the monitor; however, the red light on either apparatus will continue to flash until the pressure is restored to within the range set.

High Temperature Alert

The trailer-exchanger has a fixed temperature alert @ 90° C. Sensors send the temperature data to the trailer exchanger every 2 minutes. Even so, if the data rises above 90° C, an audible alarm will sound and a red light will flash instantaneously. As with the PSI alerts, the alarm can be silenced by pressing the button on the trailer exchange repeater and any button on the monitor; however, the red light on either apparatus will continue to flash until the pressure is restored to within the range set.

Trailer-Exchange Repeater Functions:

Initializing the trailer-exchange repeater:

Step 1) Input Trailer ID: The trailer ID can be any 6-digit ID code with numerals 0-9. Assign trailer ID. To enter, tap MODE, and then tap CODE to select the first digit. Use + to enter first digit (if needed), and press CODE to move through the next digits to finish imputing the ID. Press CODE for 3 seconds to save.

Step 2) Send data from monitor to trailer-exchange repeater: Press SET for 6 seconds; the monitor will beep twice. Press repeater button until monitor and repeater beep. Initialization is complete.

Exchanging Trailers/Trailer-Exchange repeaters:

To send data from monitor to new repeater: press and hold the repeater button until it beeps twice, then tap MODE. The repeater will flash, and the monitor will display the trailer ID code for 10 seconds. Within 1-2 minutes, the monitor will have returned to the regular monitoring screen & the repeater will beep and shut off. (There is no light or sound from the repeater during normal function).

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	5 years
Size	diameter 25 mm, height 22 mm
Weight	42.5 grams

Monitor Specifications

Operation Temperature	-20°C – 80°C
Storage Temperature	-30°C – 85°C
Charger Input Voltage	DC 8 – 30V
Transmission Power	<18dBm
Frequency	433.92MHz
Size	88mm Length X 60 mm Width X 24 mm height
Weight	125 grams (without mounting bracket)

Trailer Exchange Repeater Specifications

Operation Temperature	-20°C – 80°C
Storage Temperature	-30°C – 85°C
Working Voltage	12 – 24V
Transmission Power	<18dBm
Frequency	433.92MHz
Size	91 mm length X 38 mm Width X 15 mm Height
Weight	42 grams

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 ecountered 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.