

RESTORE PARAMETERS TO FACTORY DEFAULT SETTINGS

First, turn off the display, Hold the “BACK” and “SET” buttons at the same time and turn the display back on. You will hear one beep. The display will power back on and original factory parameters will be restored. Tire codes will not be erased or changed.

DISPLAY ALERTS

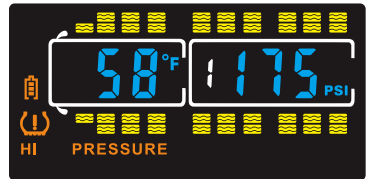
Out of Parameter Alert

The 507 sensors send the tire pressure and temperature readings to the display every five (5) minutes. If a tire is outside of the parameters that were set, the audible alarm will sound and the red LED light will immediately flash. The tire in question, pressure or temperature for that tire, and warning type will also flash. The audible alarm can be silenced for a short while by pushing any of the buttons on the front of the display. The red warning light will continue to flash until the pressure or temperature issue is resolved and brought back into your preset levels.

High Pressure Alert

(e.g. : High pressure threshold is 175 PSI)

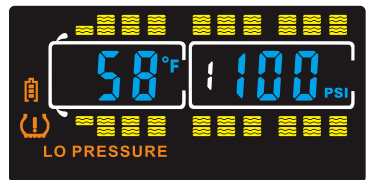
Note: <(U)> & <HI PRESSURE> displayed, the faulty tire pressure is too high, deflate the tire to the normal pressure.



Low Pressure Alert

(e.g. : Low pressure threshold is 100 PSI)

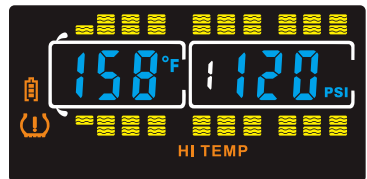
Note: <(U)> & <LO PRESSURE> displayed, the faulty tire pressure is too low, inflate the tire to the normal pressure.



High Temperature Alert

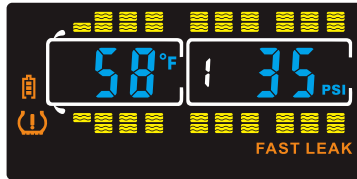
(e.g. : High temperature threshold is 158°F)

Note: <(U)> & <HI TEMP> displayed, the faulty tire temperature is too high, stop vehicle to cool down to the normal temperature.



Fast Leak Alert

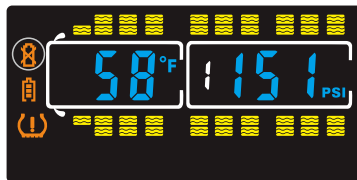
When a fast tire leak is detected, the sensor will send that data immediately to the display. The audible alarm will sound and the red LED light will immediately flash. The tire in question, pressure for that tire, and “FAST LEAK” will also flash. The audible alarm can be silenced for a short while by pushing any of the buttons on the front of the display. The red warning light will continue to flash until the pressure or temperature issue is resolved and brought back into your preset levels.



Sensor Low Battery Alert

The sensor low battery indicator will display when the CR1632 sensor battery is at the end of its life. The tire affected will flash along with the pressure and temperature read-out and the low battery symbol and (U) on the left side of the display. Replace with a new battery as soon as possible.

Note: This low battery alert will display for only a short time until the battery is exhausted. If you do not have the display on often, the indicator signal will be sent but not show on the display, since it was off. If your sensor is not reporting to the display, check the battery voltage. If it is below 2.75 volts (normally 3+ volts), you may have to change the sensor battery.



OTHER FUNCTIONS

Normal Display Scrolling

The tire icons on the display will automatically scroll/cycle through, one by one. Each tire will be displayed for approximately 5-6 seconds. You can manually cycle through

the displayed tires by pushing the (+) or (-) buttons on the display. The display will show the tire you choose for approximately 10 seconds before continuing to cycle.

Backlighting and Motion Detection

The display is equipped with a light sensor and a motion sensor. The backlight will turn on when the vehicle is in motion and there is little ambient light. If the vehicle has stopped for a while and the display is on the internal battery, the display will “go to sleep” until the vehicle resumes motion. To shut the light sensor off, press the (+) button for approximately 4 seconds.

Disconnecting and Reconnecting a Vehicle

When a towed vehicle is displayed on the screen and you want to temporarily remove it (example: leaving a trailer at a campground), momentarily press the "GO" and (-) buttons, the trailer section of the display will disappear, the sensors on the trailer will not be read. To add the trailer back onto the display, again, momentarily push the "GO" and (-) buttons and the towed vehicle will reappear.

When a towing vehicle is displayed on the screen and you want to temporarily remove it (example: leaving a truck or car at a campground and using another vehicle to move the RV), momentarily press the "GO" and (+) buttons, the truck (towing) section of the display will disappear, the sensors on the towing vehicle will not be read. To add the truck (towing) section back onto the display, again, momentarily push the "GO" and (+) buttons and the towing vehicle will reappear.

Trailer Selection

Four different trailers with sensors can be programmed into the display and each can be selected to be viewed on the screen. On the Main Screen press the “GO” button to scroll through trailers you have sensors on. When selecting different trailers on the display, remember to adjust your high and low pressure alarms for each trailer you are using that has sensors coded to it.

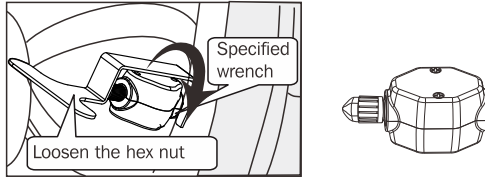
Charging the Display

The display is powered by a non-replaceable, lithium-ion battery. A battery level indicator is located on the left side of the display. When the indicator shows one bar, it is recommended you charge the display as soon as possible to avoid disruption when in use. It will take approximately four (4) hours to fully charge. Display run time is 5-7 days on a full charge.

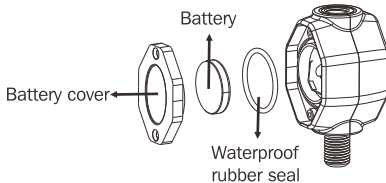
Do not keep fully charged display plugged in constantly.

REPLACING THE FLOW-THROUGH SENSOR BATTERY (CR1632)

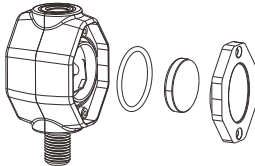
- (1) Remove the sensor from the tire valve stem.



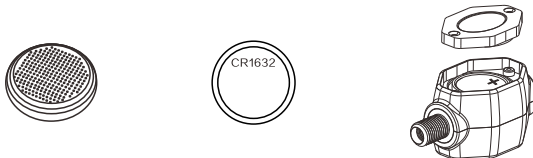
- (2) Using a jewelers Phillip's screwdriver, remove the two screws from the battery cover on the side of the sensor. The "+" side of the battery can now be seen.



- (3) Remove the CR1632 battery and check that the metal contact points in the sensor are not corroded. To clean the contact points, use a pencil eraser and lightly rub the two metal battery contacts in the sensor.

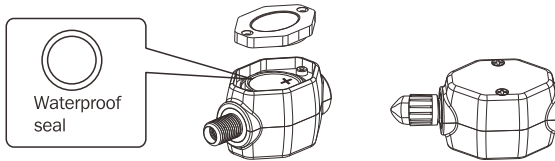


- (4) Install a new battery. Be sure the "+" (positive) side is facing out.



Note: It is recommended that you check the voltage of the new battery before installation. It should read 3+ volts when new. Do not install if the battery reads less than 3 volts.

(5) Check the “O” ring that surrounds the battery compartment. This is the waterproof seal. Replace if old or damaged.




(6) After the new battery installation replace the battery compartment cover and snugly tighten the two screws. Do not Over Tighten.

(7) Screw the sensor on to the correct tire position.

Note: Changing the battery in the sensor does NOT affect the sensor programming in the display. You will not have to reprogram the sensor into the display.

ADDITIONAL FUNCTIONS

Swap Tire Sensor Positions

- Press the “SET” button until the display beeps and then release.
- Press and release the (+) button 7 times until “TIRE ” appears. Press “SET”.
- Use the (+) or (-) buttons to select the tire sensor code you want to swap.
- Press “SET” and then select the tire you want to swap the code to using the (+) or (-) buttons.
- Press “SET” to move the sensor code to the new tire.
- Press the “BACK” button twice to get back to the Main Screen.

Set ID Truck (Three Digit ID Identifier)

- Press the “SET” button until the display beeps and then release.
- Press the (+) button 8 times until “SET ID TRUCK” appears.
- Press the “SET” button to enter that mode.
- Press “SET” again, the first digit will blink.
- Use the (+) or (-) buttons to set the first digit. Press “GO” to move to the next digit.
- Again, press the (+) or (-) buttons to select the next digit. Continue for the final (3rd) digit.
- When done, push the “SET” button to save.
- Push the “BACK” button twice to get back to the Main Screen.

Set ID Trailer (Three Digit ID Identifier)

- Press the “SET” button until the display beeps and then release.
- Press the (+) button 9 times until “SET ID TRAILER” appears.
- Press the “SET” button to enter that mode.
- Press the “GO” button to select the trailer (1-4) to set the ID.
- Press “SET” again, the first digit will blink.
- Press “GO” to go to the first digit on the trailer section on the screen.
- Use the (+) or (-) button to set the 1st digit. Press “GO” to select the next digit. Continue for the final (3rd) digit.
- Press “SET” to save the 3 digit code. To select the next trailer, press the “GO” button.
- When done, press the “SET” button to save.
- Push the “BACK” button twice to get back to the Main Screen.

TROUBLESHOOTING TIPS

- Label all of your sensors with the provided stickers first so you will know which sensor goes in which tire position.
- If a sensor is not allowing air to pass through it, or if the sensor is not reading, or reading a lower pressure, try unscrewing the valve core in the valve stem a half a turn. This may allow more air to get to and through the sensor. CAUTION...Do not stand in front of the valve stem when performing this procedure with a valve core tool!
- It may take up to 15 minutes for the sensor data to appear on the display the first time you set up the system. Leave the display on until all sensor data appears. After the sensor data is received the first time, subsequent system use should only take minutes to acquire the sensor information.
- Do not over tighten the sensors on the valve stems. Make sure they are snug and be sure to tighten the hex lock nut to the bottom of the sensor.
- When done programming the Parameters into the display, remember to quickly push the “SET” button to save the Parameters. Push the “BACK” button twice to go back to the Main Screen.
- If your tire pressure is under 100 PSI, you will have to program the Low-Pressure alarm first and then program the High-Pressure alarm. The high pressure cannot go lower than the low-pressure setting, which defaults to 100 PSI.
- When the display is on and reading, you can press the (+) or (-) buttons to quickly scroll through the tires on your display. The automatic scrolling function will resume after 10 seconds when no buttons are pushed.
- If your display is plugged into a constant power source, the sliding power switch on the side will not function. To turn the display off, unplug the power supply and the switch will now operate.
- To extend the life of the sensor battery, remove the sensor from the valve stem. The internal pressure switch will shut the battery off. Note that, even though the battery is off, it will still degrade with time.
- If your sensor is not transmitting data to the display, try recoding the sensor to the same tire position. See Automatic Code Learning (Option #1) on page 4.

COMMON QUESTIONS

- **What do I do if my sensor is not reading?**

- 1) Check the CR1632 battery in the sensor. If you have a voltmeter, be sure the battery is reading over 3 volts. If not, replace with a new battery. We recommend testing a new battery as well to be sure it is above the 3-volt minimum parameter.
- 2) Unscrew the sensor off the valve stem and then reinstall it. The sensors are pressure sensitive and will reset once reinstalled.
- 3) If it still does not read, try placing a working sensor from another tire on that valve stem. Keep in mind, the sensor you just moved will continue to read in its original tire position on the display. If that sensor does not read normally, you may have a valve stem problem. Try unscrewing the valve core as described above. If the switched sensor reads normally, it may be a sensor issue.
- 4) If your sensor is not transmitting data to the display, try recoding the sensor to the same tire position. See Automatic Code Learning (Option #1) on page 4.

- **Why does my display sometimes “drop” sensor data from a tire position?**

- 1) If you have a vehicle(s) that exceeds 34' in length, you may need a repeater to amplify the sensor signals from the tires to the display. This issue is not limited to the rear tires on a vehicle. An RV with a metal shell also needs a repeater.
- 2) Be aware that an indoor/outdoor thermometer with an external temperature sensor may interfere with the TPMS. Temporarily remove all the batteries in the display AND exterior sensor and see if the problem is corrected. A thermometer with a higher frequency (915 MHZ) may be required. Atomic clocks can also cause interference with the sensors.

- **Why does my display sometimes alarm while I am sitting still in the evening?**

As night approaches and outdoor temperatures decrease, your tire pressures may drop below the parameters you have set, thus causing an out of spec alarm.

When temperatures drop, turn your display off overnight. As the air temperature rises the next day or as you start driving, the tires will also heat up and come back into your parameters. You can also add air to your tires to bring them back into the parameters you set up.

- **Why can't I set a lower pressure than 100 PSI for the High Pressure alarm?**

The high-pressure alarm cannot go lower than the low-pressure alarm setting. If your tire pressure settings are below 100 PSI, you must first set the low-pressure alarm settings and then set the axles' high-pressure settings. When done, be sure to press and release the "SET" button to save all the parameter settings.

- **What conditions cause the display to alarm?**

The display will alarm for the following reasons:

- 1) A rapid leak ("FAST LEAK" at bottom of screen).
- 2) A low sensor battery (upper left battery icon flashes).
- 3) An overheating tire, increasing the temperature ("HIGH TEMP" at bottom of screen).
- 4) A high or low-pressure reading (be sure your parameters are set correctly).

In every instance, the tire Pressure and Temperature numbers will also flash when the tire with the problem blinks.

- **How do I remove my trailer from the display screen when I am not using it?**

To electronically disconnect the trailer tire icons from the screen:

- 1) Momentarily press the "GO" and (-) buttons.
- 2) The trailer section on the display will disappear.
- 3) To electronically reconnect the trailer section, momentarily press the "GO" and (-) buttons again.

- **How do I remove my towing vehicle from the display screen when it is parked?**

To electronically disconnect the towing vehicle tire icons from the screen:

- 1) Momentarily press and hold the “GO” and (+) buttons.
- 2) The towing vehicle section on the display will disappear.
- 3) To electronically reconnect the towing vehicle section, momentarily press the “GO” and (+) buttons again.

- **How do I remove an unwanted tire icon from the display?**

- 1) To delete a single sensor code:
- 2) Press the “SET” button until it beeps (approx. 3 seconds). Push the (+) button and scroll through the parameters until “LEARN ID” appears. Press and release the “SET” button. Use the (+) or (-) buttons to scroll to the tire you wish to remove. Press the “SET” button to select that tire. It will start flashing. Press the “BACK” button for 3 seconds. You will hear 3 beeps. The code will change to “FFF FFF” which will be flashing. Press “SET” once. The flashing will stop and the ID code will be deleted. To cancel the function, press the “BACK” button.

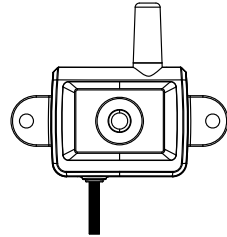
Note: To delete all of the tire codes when in the “LEARN ID” mode: Press and hold the “BACK” button until you hear 6 beeps. “DEL ALL” will appear on the screen. Press “SET” once. You will hear one beep. “FFF FFF” will appear. ALL ID codes are deleted. To cancel the function, press the “BACK” button.

REPEATER

The repeater is used to strengthen/amplify the sensor signal forward to the display. A repeater is packaged with this system.

Wire the repeater into a 12V source that will be constant while driving. The red light on the repeater will illuminate when operational. When working properly, the repeater's light will be steady at times and will occasionally blink. The unit is waterproof and can be mounted inside or outside.

There is no set-up needed for the repeater.



Repeater

NOTES:

SPECIFICATIONS

Sensor specifications

Temperature Operating Range	-40°F - 176°F / -40°C - 80°C
Storage Temperature Range	-40°F - 185°F / -40°C - 85°C
Pressure Range	0-196 PSI / 0-13.5 BAR
Pressure Accuracy Range	+ / -3 PSI / + / - 0.2 BAR (with a digital gauge)
Temperature Accuracy Range	+ / -3°F
Transmission Power	<10 dBm
Transmission Frequency	433.92 MHz
Approximate Battery Life	1-1.5 years
Physical Sensor Size - Flow-through	2.2" (L) x 1" (W) X 0.9" (H) 52 (L) X 26 (W) X 23.5 (H) mm
Sensor Weight - Flow - through	0.77 oz. / 22 grams

Display specifications

Temperature Operating Range	-4°F - 176°F / -20°C - 80°C
Storage Temperature Range	-22°F - 185°F / -30°C - 85°C
Charger Input Voltage	5V - 24V DC
Frequency	433.92 MHz
Size	4.6" (L) x 2.99" (W) X 1.06" (D) 117(L) X 76 (W) X 27 (D) mm
Weight	4.4 oz. / 125 grams

This system is designed to monitor air pressure and temperature within the tire. It is only for added safety and not meant to replace regular tire maintenance and exercise of reasonable care when operating a motor vehicle. The system cannot prevent accidents nor will be responsible for damage or injury due to (a) improper use, (b) failure to follow the product instructions or to perform any preventative maintenance, (c) unauthorized repair or modifications, (d) use of products beyond their useful life, or (e) external causes such as accidents, abuse, or other actions or events beyond 's reasonable control.

Notes:

Sensor FCC ID: VMK-ST

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.