

PressurePro User Manual

PULSE



DISPLAY BUTTON FUNCTIONS



PRESSUREPRO DESCRIPTION

PressurePro is a wireless electronic Tire Pressure Monitoring System (TPMS) that is designed to display current tire pressures on demand, whether moving or stationary. PressurePro systems, which can be used on all pneumatic tires, consists of two basic components: Tire Sensors which screw onto the valve stems of the tires, and a Display. The Sensors read tire pressure every 7 seconds (12,343 times a day), and transmit a coded RF signal to the Display every 5 minutes assuring timely information. If an alarm level is reached, PressurePro Sensors will override the normal update and alert the Display immediately (see “Alerts” section). During an alert, the tire location flashes on the Display, the current pressure reading for that tire flashes, and an audible alert sounds.

PressurePro systems provides users with the market’s most comprehensive alert schedule, with two low pressure alerts, a high pressure alert, a high temperature alert, a fast leak alert, and a cross axle alert, all user customizable.

PressurePro is a monitoring system and will not prevent tires from losing pressure or failing, but it can provide early notice of potential problems and alert to low tire pressure situations. Because of the quirks of RF Transmissions and interference, no guarantee of signal reception can be made. PressurePro is not meant to function as a pressure gauge or low pressure indicator.



POWER

- Power Screen
- Exits all Menus



ALERT

- Quick access prioritization of alerts
- Alert/Warning Indicator Reminder Light



MENU

- Enter Main Menu
- Moves back within menus



SELECT

- Selects (and moves forward) Display functionality during programing and use






UP/DOWN ARROWS

- Navigates through screens and positions
- Scrolls through tire positions and readings in operation mode.

PRE-INSTALLATION INSTRUCTIONS

When Sensors are installed, they recognize the tire's current pressure as their BASELINE, therefore tire pressure at the time of installation is important. It is recommended to install Sensors with all tires inflated to the manufacturer's recommended pressures while the tires are "cool". Installation in the morning before vehicle movement is optimal, but not necessary. Installations can be done when tires are "warm", though doing so, without manually resetting the reference pressures, may cause false alerts. If installation is done while tires are "warm", simply reset the reference pressures using the following instructions:

MENU → VEHICLE SETTINGS → REF PRESSURES → AXLE REF PRESSURE or VEH REF PRESSURE →  Axle or Vehicle → Adjust reference pressure using  → Use  to save the new reference pressure NOTE: AXLE allows the user the ability to control reference pressures by axle; VEH allows the user the ability to control the reference pressure based on the virtual unit or vehicle

Tires and valve stems should be carefully inspected prior to installation of the system to ensure that they are in good condition. Defective valve stems must be replaced. At times, it may be necessary to clean the threads of the valve stem with a wire brush before installing a Sensor.

The valve core (the small valve inside the valve stem) must depress fully and release air for the Sensor to activate. The Sensor might not activate properly if the valve core pin is not flush with the end of the valve stem, allowing a good release of air to interface with the Sensor. It is not unusual to find valve cores installed too deep, which will cause the Sensor to not activate properly. The valve core should be centered. Check valve core by pressing the end of a thumbnail directly into the valve core to make sure it releases a "burst" of air.

NOTE – When installing Sensors on vehicles with aluminum valve stems: New autos may include factory installed TPMS Systems. New vehicles with TPMS utilize aluminum valve stems while PressurePro Sensors are made with brass threads. Brass will bond to aluminum due to the galvanic action between the different metals. When installing PressurePro Sensors to aluminum stems, carefully apply dielectric grease, an anti-seize compound, to the aluminum stem being careful to apply only to the threaded area of the valve stem. **IMPORTANT: Remove Sensors every 4 weeks to ensure that the aluminum stem and brass threads don't bond. If storing the vehicle for extended periods, remove the Sensors from the aluminum stems.**

NOTE: When using mounting options with your PULSE Display, use #8-32 machine screw. 1/4" length is recommended for most applications. **Hand tighten only.**

INITIAL SYSTEM SET-UP & CONFIGURATION

First things first! Upon initial powering of your PULSE Display, please take a minute to configure your unit's time and date and vehicle configuration, and – if you want – set your custom alert settings.






GIVE IT POWER!

- Find your PressurePro power cord.
- Connect the 6-Pin Molex connector to your Display.
- Connect opposite end to a 12V or 24V power source (via an accessory lighter or hard-wiring).








SET TIME AND DATE:

- Your Display will automatically take you to a screen prompting you to set your time and date and will walk you through the set-up. Use  to  the date and time settings.
- When complete, press  to leave 'Display' screen and return to the "VEHICLE SETTINGS".







CONFIGURE VEHICLES (if monitoring more than 1 unit):

- From the main "MENU",  to "VEHICLE SETTINGS" and push .
- If you have a tow vehicle, or are monitoring multiple vehicles,  "+/- Vehicles", and  through and activate the desired number of vehicles. When finished, press  to return to "VEHICLE SETTINGS".






SELECT VEHICLE ID:

- From "VEHICLE SETTINGS",  "VEHICLE ID" and  the vehicle you want to name.
- Follow the Display's prompts (using a  name vehicle). Repeat as needed for all vehicles. When finished, press  to return to "VEHICLE SETTINGS".



SET YOUR ALERTS:

- From "VEHICLE SETTINGS",  "ALERT SETTINGS",  the alert option you'd like to customize, and follow the Display's prompts to change alert settings. When finished, press  until returned to the main "MENU".

PROGRAMMING SENSORS

DO NOT PUT SENSORS ON TIRES. (You'd be amazed at the number of calls received to prompt this note.) Simply follow the simple steps below and you'll be set-up in minutes!



1. From the main "MENU", to "SENSORS" and .



2. "ADD SENSORS".



3. If monitoring more than one unit, to desired vehicle and .



4. through and the desired vehicle layout (or create a custom layout) following prompts.

Your Display will automatically populate your configuration and default to the front, left tire position for installation. To choose another position, to the desired location then press .



5. Press to install a Sensor to noted location. *Your Display will begin searching for a Sensor recently pressurized.*



6. Attach a Sensor to the noted location's valve stem, and wait for a reading to populate (this can take up to 60 seconds).



7. When a pressure populates, press to lock in the Sensor and move to next location.



Repeat steps 5-7 as needed for all desired locations. *When finished, press the power button twice to place Display in operation mode. Installation is now complete.*

DID YOU KNOW?



Your PressurePro Sensors sample your tire performance every 7 seconds? That's over 12,342 tire checks every day, moving or parked, ensuring top savings and safety.

FREQUENTLY ASKED QUESTIONS

WHAT SHOULD BE DONE IF A LOW PRESSURE ALERT IS SOUNDED? Immediately pull over and check low tire. Be sure to check valve stem for damage. If no visual leaks are spotted, perform a soap bubble test on the area to locate the leak.



CAN I STORE MY VEHICLE WITH THE DISPLAY ON? The Display draws 25mA to 100mA of power. It's possible the Display could drain the vehicle's battery over an extended period of time. If storing vehicle for more than one month it is recommended that you unplug Display and remove Sensors (see "Tips" section – "Vehicle Storage").

DOES DISPLAY NEED TO BE POWERED BY LIGHTER ACCESSORY? No. Hardwiring is actually a preferred method of powering as it reduces back feed interference. Connect the red wire to a 12 or 24-volt DC positive power source (direct wire to the battery is not required). The black wire should be connected to a ground or chassis. When direct wiring, it is important to install a 2 AMP in-line, fast blow fuse to protect the Display from voltage spikes. **DISPLAYS DAMAGED DUE TO HIGH VOLTAGE OR HIGH CURRENT ARE NOT COVERED BY WARRANTY.**

CAN DISPLAY BE USED INDEPENDENTLY ON FRONT OR BACK VEHICLE? Yes. MENU → VEHICLE SETTINGS → +/- VEHICLES →  to desired Vehicles → Turn "ON"/"OFF" (Using the  button). *Note: Vehicle Layout settings, programmed sensors, and reference pressures are saved when a vehicle is turned "OFF"

WHAT HAPPENS WHEN I REMOVE A SENSOR TO INFLATE A TIRE? Display will show "00" reading. After 15 minutes, the Display shows 3 question marks (???)

WHAT IS THE "REMINDER" ALERT? After an alert has been acknowledged with a button press, the amber TPMS Alert/Warning Quick Indicator Light will remain solid as a reminder of the alarm/warning condition.

HOW DO I DELETE SENSORS? MENU → SENSORS → DELETE SENSORS →  to desired vehicle A-E (if applicable) →  to desired tire location → Confirm deletion.

CAN I USE A SEALANT OR EQUALIZER POWDER IN THE TIRE WITH PRESSUREPRO? If using a sealant or powder, PressurePro recommends the use of a filtered valve stem (or filtered core) to reduce the chance of the Sensor becoming clogged.

TIRE PRESSURES INCREASE WHILE DRIVING – DO I NEED TO DO ANYTHING? While driving, it is normal for tires to increase pressure and temperature.

DO I NEED TO REBALANCE MY TIRES WHEN USING A SENSOR? The 2/3 ounce Sensors, on large tires (RV/Truck), seldom necessitate a tire be rebalanced. Smaller tires may require a ½ ounce stick-on weight opposite the Sensor, or rebalancing.

WHAT SHOULD I DO IF A SENSOR IS LOST OR DAMAGED? Contact your Dealer or Distributor to order a new Sensor.

WHEN DO MY SENSORS TRANSMIT?


1. Within 60 seconds of screwing Sensor onto the valve stem.
2. Every 5 minutes while updating, under normal conditions.
3. During an Alarm Condition.
4. When a Sensor is removed from its valve stem.

IF I UNPLUG OR LOSE POWER, MUST I REPROGRAM DISPLAY? No. Settings are always retained unless physically deleted. Display shows 3 question marks (???) until Sensors send a new updated reading within the normal 5 minute reporting period.

DURING INSTALLATION, NO SIGNAL WAS RECEIVED FROM THE SENSOR. Higher radio frequency (RF) transmissions propagate mostly via straight lines and along line-of-sight pathways. PressurePro Sensors are required to accomplish a daunting task – transmit from a vehicle's tires to the Display. If a Sensor fails to give a pressure reading, slightly move the Display, remove the sensor for 20 seconds, and reattach sensor.

AFTER INSTALLATION, PRESSURE READINGS DROP ON DISPLAY – ACTUAL TIRE PRESSURE REMAINS CORRECT. The probable cause is poor interaction between the Sensor and valve core. Unscrew the Sensor and again hand-tighten the Sensor. (Be sure the Sensor and valve stem are not cross-threaded.) If condition still persists, contact your Distributor/Dealer.

POWER CORD & FUSE / WHY DOESN'T MY DISPLAY TURN ON? If your Display does not power, make sure the cord is properly connected. Check the fuse located in the cigarette lighter end of the cord by unscrewing the silver ring (at the silver tip) of the plug. Remove the bolt centered in the cigarette lighter end. Replace if necessary with a 2 amp in-line, fast blow fuse.

HOW DO I CHANGE BETWEEN MEASUREMENT UNITS? The PressurePro Display can show pressure and temperature values in imperial or metric units. The TPMS+ Display shows the measurement unit to the right of all readings. To adjust the measurement unit follow these instructions: MENU → DISPLAY → MEASUREMENT UNITS → PRESSURE or TEMPERATURE →  desired unit of measurement

WHAT HAPPENS DURING A BLOWOUT? During a blowout (or situation with complete loss of pressure) the Display will signal at a 25% loss in pressure and read "00". There may be instances, such as in a catastrophic blowout, when a Sensor or stem is blown off the tire, the vehicle moves out of signal range and no signal (alert) is received.

HOW DO I SET OR CHANGE MY PASSWORD ON MY DISPLAY? The PULSE gives you password protection abilities to eliminate accidental or intentional tampering with settings. To set or change your password: MENU > DISPLAY > ADVANCED > PASSWORD > Toggle ON/OFF > "0000" is the factory password > CHANGE PASSWORD > Scroll through your new password > LOG OUT to activate password.

DATA LOGGING CAPABILITIES

PULSE comes standard with market leading data logging capabilities. If your Display is powered, it is saving data sent from your Sensors. Data Logging allows a complete history of your tire performance to be downloaded from the Display. Your PULSE Display allows transfer of the complete data log by way of a microSD. Data logs will export in .xml format, and works with many programs. PressurePro suggests using Excel.

Export Instructions: MENU → VEHICLE SETTINGS → LOGGING → EXPORT LOG.

Features and benefits of the data logging function

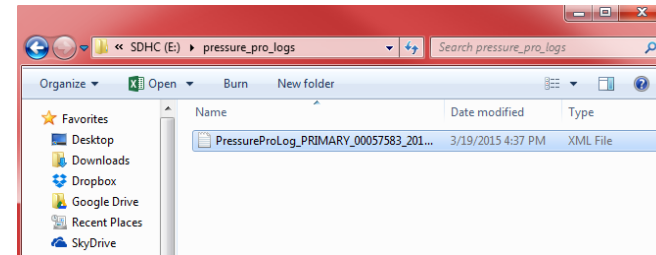
- Time stamped data
- Set logging interval from 1 to 99 minutes
- Can log up to 45 days of data for most configurations and logging intervals
- Displays data for each tire/sensor separately
- Summary report to view all system alerts during current logging period
- Data provided per each logging event
 1. Reference pressure (which alerts are based upon)
 2. Pressure for each tire
 3. Tire temperature
 4. Signal strength from each position
 5. All alerts

What you can infer from the data

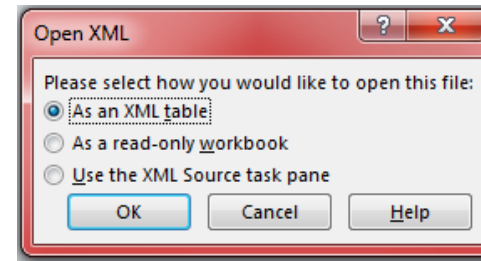
1. When vehicle starts moving.
2. When vehicle comes to stop for long periods of time (>15 minutes).
3. Dangerous operating conditions. Temperature is displayed at all times, specifically when the tire temperature has reached the danger zone of 100°C (>200°F). Tire rubber compounds begin to break down at these temperatures.
4. When a vehicle is in remote areas with little around them.
5. If proper cold pressures are being maintained.
6. When sensors are removed from tire and for how long.
7. When tire began to lose air, when it alarmed and how long it ran in an alert condition.
8. When data logger was turned off. (Optionally Password Controlled.)
9. Validation of driver statements.

DATA LOGGING IMPORT

1. Access the “Computer” menu and open the SD card folder.
2. Open “pressure_pro_logs” and locate files contained in the exported date.
3. Select the data log file you wish to open



4. Open as an XML table and click “OK” to allow Excel to create a schema



5. Your Excel should open with filterable tabs, allowing you to organize and process your TPMS+ Data.




uid	model	sa	age	ambrf	layout	ssn	axle	tire	ref	pres	temp	rf	alert_type
TRUCK50	APM4V							1	1	60	60	28	149 X
TRUCK50								2	1	65	65	28	22
TRUCK50								2	2	65	65	28	27
TRUCK50								1	4	60	60	28	20
TRUCK50								2	3	65	65	28	27
TRUCK50								2	4	65	65	28	28
TRUCK50								1	1	60	60	92	28 sens_high_temp
TRUCK50	APM4V							1	1	60	60	44	26
TRUCK50								2	1	65	64	28	25
TRUCK50								2	2	65	65	28	25
TRUCK50								1	4	60	61	28	29
TRUCK50								2	3	65	66	28	21
TRUCK50								2	4	65	65	28	25
TRUCK50	APM4V							1	1	60	60	44	18
TRUCK50								2	1	65	65	28	18
TRUCK50								2	2	65	65	28	19
TRUCK50								1	4	60	61	28	26
TRUCK50								2	3	65	67	28	17
TRUCK50								2	4	65	65	28	27
TRUCK50	APM4VU	0x33	0	97	2000400								

TIPS





VEHICLE STORAGE: If storing your vehicle for extended periods, remove the Sensors. Mark each Sensor's location so it can be replaced on the same tire location from where it was removed (eliminating the need for reprogramming), or use a sectional storage device (similar to a tackle box divider system). When putting the system back on, power up Display first, next screw Sensors onto their original wheel locations. Pressure readings will show on Display (can take up to 1 minute for new readings to report). PressurePro system is now active.



CAUTIONS: (1) Know the general condition of tires before moving the vehicle. Running on deflated tires can ruin a tire. (2) The 2/3 oz. Sensor, on a typical RV or large truck, *normally* will not require the tire be rebalanced. Smaller tires may require rebalancing. (3) It is important to make sure valve stems are in good condition.


REMOTE ANTENNA FOR UNIQUE APPLICATIONS: Due to the unique features of RF signals and the construction and interference from electronics on some vehicles, an Optional Antenna Kit or Echo Repeater may be needed. Contact your Dealer/Distributor.


RESETTING BASELINE PRESSURE: MENU → VEHICLE SETTINGS → REF PRESSURES → AXLE REF PRESSURE or VEH REF PRESSURE →  Axle or Vehicle → Adjust reference pressure using  → Use the  button to save the new reference pressure. *NOTE: AXLE allows the user the ability to control reference pressures by axle, VEH allows the user the ability to control the reference pressure based on the virtual unit or vehicle



ALERT SETTINGS

*Note: All alert settings are vehicle specific settings. You will need to  the vehicle after 'ing the parameter to be adjusted.  to the vehicle you wish to adjust and .

LOW and HIGH PRESSURE: MENU → VEHICLE SETTINGS → ALERT SETTINGS → LOW PRESSURE or HIGH PRESSURE → Use  to adjust percentage of reference pressure for alarm triggering → Use the  button to save the new alarm setting. *NOTE: Low Pressure has two alarm settings. The extremely low pressure (adjustable) & slightly low pressure (calculated at 5/8ths of the extreme; toggled on/off). LOW & HIGH PRESSURE alarms are factory set at 25%, with slightly low pressure toggled on.

ACROSS AXLE %: MENU → VEHICLE SETTINGS → ALERT SETTINGS → ACROSS AXLE % → Use  to adjust the percentage deviation per axle allowable. *NOTE: Across Axle % is factory set at 20%.

HIGH TEMPERATURE: MENU → VEHICLE SETTINGS → ALERT SETTINGS → HIGH TEMPERATURE → Use  to adjust the High Temperature Alert. *NOTE: High Temperature alarm is factory set to 200°F.

LEAK DETECTION: MENU → VEHICLE SETTINGS → ALET SETTINGS → LEAK DETECTION → Use  to adjust the percentage deviation → Use  to adjust the time limit for deviation. *NOTE: Leak Detection is factory set as OFF.

SPECIFICATIONS

SENSOR

Transmit Range	Approx. 300 feet (Line-of-Sight) +
Operating Frequency	433.92 MHz FM
Operating Temperature Range	-40°C / -40F to +150°C / 302F
Weight	.66 oz. (18 grams)
Dimensions	1.01" H x 1.11" Dia.
Batteries	Internal, sealed unit
Pressure Range	8 to 299 PSI/55 to 1999 kPa/1 to 20.3 BAR
Sensor Low Voltage Shutdown	2.2 Volts
Accuracy	+/- 3% range up to 120 PSI +/- 5% from 120 PSI up

DISPLAY

Power Requirements	12 or 24 VDC; draws 50 mA in standby.
Dimensions	4.5" W x 3.0" H x 1.0" D
Mounting screw size	#8-32 machine thread 1/4" internal length. Hand tighten only
Tire Positions	1 to 80 tire positions
Pressure Alert Levels/Options	Alerts are completely customizable. For convenience, your Display comes factory set at the following levels. <ol style="list-style-type: none">Low Pressure = 15% and 25% lossHigh Pressure = 25% increaseCross Axle Alert = 20% variationFast Leak Alert = OFF
Temp. Alert Levels/Options	200°F (User Configurable)
Built in Advanced Capabilities	RS232, J1939 & USB data feeds Data logging and download

US Letter Patent # 6,453,737 (Other Patents Pending)

PressurePro systems comply with Part 15, Class B of the FCC Rules.

Products using RF signals are subject to interference causing a loss of signal. Reception depends on the environment and conditions present at the time of use. PressurePro is a device meant for displaying tire pressures and has been designed to be as reliable as possible with the use of RF transmissions. There is no guarantee of signal reception. 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. PressurePro is a device meant for displaying tire pressures.

LIMITED WARRANTY

ONE YEAR LIMITED WARRANTY: Subject to the limitations and exclusions set forth in this Limited Warranty, PressurePro is warranted by Advantage PressurePro, LLC (hereinafter "APP") against defects in material or workmanship that result in a product failure during the one-year period following the date of purchase. This Limited Warranty applies only to claims made by the original end user (hereinafter "you") and cannot be assigned, transferred or conveyed to any subsequent users.

EXCLUSIONS FROM COVERAGE: This Warranty does not apply to any claims arising from misuse, abuse, unauthorized repair or alteration, circumstances where PressurePro is improperly installed or improperly wired contrary to PressurePro product instructions; or damage or defect attributable to fire or other casualty, including, without limitation, acts of God or exposure to abrasive or corrosive materials or pollutants, or attributable to collision or other accidents involving vehicles upon which the PressurePro is installed. Removal or alteration of labels voids product Warranty. Only PressurePro accessories may be used with PressurePro products. The use of other accessories with PressurePro product is prohibited and can damage the PressurePro product. Warranty problems caused by use of accessories not supplied by APP will not be covered under the warranty.

LIMITATIONS: APP expressly limits the applicability of the implied warranty of merchantability and the implied warranty of fitness for a particular purpose to the one-year warranty period as provided herein. Some states don't allow limitations on how long an implied warranty lasts, so the above limitation may not apply.

To the extent permitted by state law, the remedy of repair or replacement discussed below is the sole remedy available to the end user under this Limited Warranty. **THIS LIMITED WARRANTY SPECIFICALLY EXCLUDES ALL INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.** To the extent permitted by state law, APP's liability for PressurePro will not exceed the purchase price paid for the product.

NOTICE: This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

EXCLUSIVE AGREEMENT: To the extent permitted by state law, this One Year Limited Warranty is a complete and exclusive statement of the warranties, which apply to the PressurePro; there are no express or implied warranties beyond those expressly stated above. No employee, agent, dealer or other person is authorized to give any warranties on behalf of the APP, except as authorized in writing.

STATUTE OF LIMITATIONS: To the extent permitted by state law, in purchasing the PressurePro you agree that any action for breach of contract or warranty must be commenced within one year after the cause of action has accrued.

PROCEDURE: In the event that a product failure covered by this warranty occurs while this warranty is in effect, APP will, at its option, either: (a) repair the defective unit; (b) replace the defective unit with a new unit; or (c) replace the defective unit with a refurbished unit. APP will ship your repaired, new, or refurbished unit to you without charge for parts, service, or any other cost (except shipping and handling) incurred by APP or its representatives in connection with the performance of this warranty. Failed units covered under this warranty must be sent by you to APP with shipping prepaid by you. You are responsible for all costs incurred in the removal, reinstallation, and shipping of the unit. A copy of the sales slip received by you at the point of purchase of the unit must accompany the returned unit. Call APP for Warranty Return Authorization.



CORPORATE OFFICES:

ADVANTAGE PRESSUREPRO, LLC
205 W. WALL STREET; HARRISONVILLE, MO 64701
TEL: 816-887-3505 FAX: 816-887-3705
www.pressurepro.us

FOR ORDERING OR TECHNICAL ASSISTANCE, CONTACT YOUR DEALER.

WARRANTY AUTHORIZATION:

FOR RETURN AUTHORIZATION ON WARRANTY ISSUES
CALL PRESSUREPRO TOLL FREE AT: 800-959-3505

To activate your Warranty, visit www.pressurepro.us and click on the "Register Your Product" box (located on the homepage under Quick Links). Customers must retain their original purchase receipt as a copy will be required for warranty or service work on your PressurePro product.



Developed and Manufactured in the USA