

SMARTTIRE®



SMARTIRE® FOR COMMERCIAL SYSTEMS SYSTEM GUIDE

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SMARTIRE FOR COMMERCIAL SYSTEM GUIDE

Thank-you for purchasing SmarTire for Commercial Systems – *the next generation in active tire pressure monitoring.*

SmarTire for Commercial Systems is an advanced tire pressure monitoring system specifically designed to meet the unique needs of Commercial Systems. SmarTire constantly monitors the tires of your Truck, RV and towed vehicle or trailer and warns you of a tire problem before it becomes dangerous.

SMARTIRE FOR COMMERCIAL SYSTEMS:

- Reduces accident risk caused by a tire blowout or tire fire
- Avoids the inconvenience of being stranded with a flat tire
- Maximizes fuel economy by ensuring tires are properly inflated
- Extends tire life of your RV and towed vehicle/trailer

FEATURES OF SMARTIRE FOR COMMERCIAL SYSTEMS

- In-wheel sensors constantly monitor tire pressure and temperature
- Audible and visual alerts provide instant warning when a tire problem occurs
- 3 types of alerts: Pressure Deviation Alert, Critical Low Pressure Alert, High Temperature Alert
- Monitor the tires of a towed vehicle or trailer, up to 20 total wheel positions
- CAN Based System allows TPMS information to be displayed on the CAN Bus
- Full system configuration through the CAN Bus and or RS232

FCC NOTICE

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.**

THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS B DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES. THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE IN A RESIDENTIAL INSTALLATION. THIS EQUIPMENT GENERATES, USES AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTIONS, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS. HOWEVER, THERE IS NO GUARANTEE THAT INTERFERENCE WILL NOT OCCUR IN A PARTICULAR INSTALLATION.

IF THIS EQUIPMENT DOES CAUSE HARMFUL INTERFERENCE TO RADIO OR TELEVISION RECEPTION, WHICH CAN BE DETERMINED BY TURNING THE EQUIPMENT OFF AND ON, THE USER IS ENCOURAGED TO TRY TO CORRECT THE INTERFERENCE BY ONE OR MORE OF THE FOLLOWING MEASURES:

- **REORIENT OR RELOCATE THE RECEIVING ANTENNA**
- **INCREASE THE SEPARATION BETWEEN THE EQUIPMENT AND RECEIVER.**
- **CONNECT THE EQUIPMENT INTO AN OUTLET ON A CIRCUIT DIFFERENT FROM THAT TO WHICH THE RECEIVER IS CONNECTED.**
- **CONSULT THE DEALER OR AN EXPERIENCED RADIO/TV TECHNICIAN FOR HELP**
- **CHANGES OR MODIFICATIONS TO THIS DEVICE WITHOUT THE EXPRESS APPROVAL OF SMARTIRE SYSTEMS INC. MAY VOID THE USER'S AUTHORITY TO USE THIS DEVICE.**

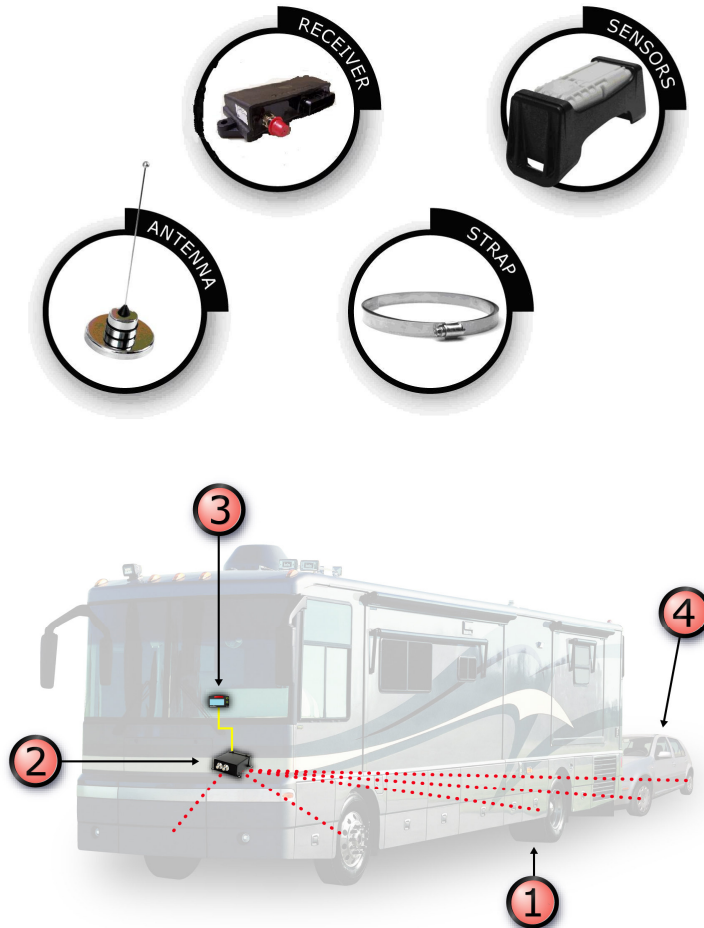
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SYSTEM OVERVIEW

SYSTEM COMPONENTS

HOW SMARTIRE FOR COMMERCIAL SYSTEMS FUNCTIONS



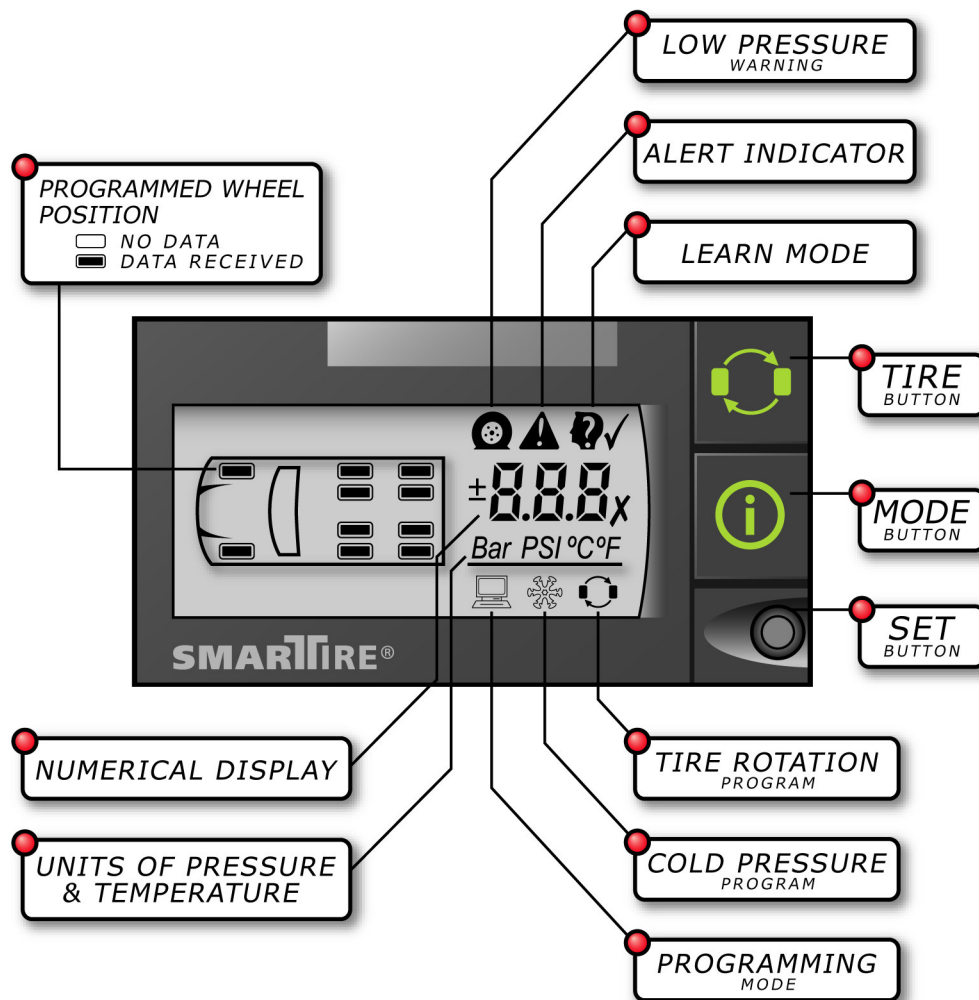
1. Tire data is sent wirelessly to the receiver by in-wheel sensor/transmitters that constantly monitor tire pressure and temperature. Sensors are uniquely labeled to identify specific wheel positions for system installation.
2. The receiver comes pre-programmed with each transmitter's unique ID number and assigned wheel position. The receiver can monitor up to 20 wheel positions and is able to handle the most complex RV, towed vehicle/trailer and tractor configurations.
3. If a problem occurs, both an audible and visual warning alerts the driver to the condition.
4. Towed vehicles or trailer tires can also be monitored. See your authorized SmarTire dealer for more information.

SENSOR OVERVIEW

SmarTire for Commercial Systems offers two kinds of tire pressure / temperature sensors. The Low Pressure Sensor (black) is for smaller Commercial Systems and towed vehicles. It is configured to measure tires with a cold inflation pressure up to 65 PSI. The high pressure sensor (orange) is configured for medium to large Commercial Systems with cold inflation tire pressures up to 160 PSI.

If your SmarTire for Commercial Systems includes both low pressure and high pressure sensors, the orange sensors are for the tow vehicle and the black sensors are for the towed vehicle.

FULL FUNCTION DISPLAY OVERVIEW



USING SMARTIRE FOR COMMERCIAL SYSTEMS

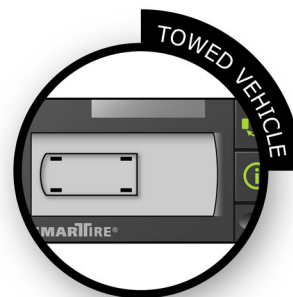
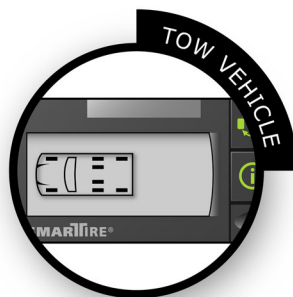
GETTING STARTED

When your vehicle is started, your SmartTire system will power up and the Full Function Display (FFD) will briefly flash all of its screen icons, and flash the alert light. The system will then go into stand-by mode, waiting for tire data from the sensors. When your vehicle is driven over 6 mph (10kph), the SmartTire will begin to receive tire data. When all of the tire icons are filled in, the SmartTire has captured data from all of the tires.



NOTE: The system will not display tire data until the vehicle has been moved. SmartTire starts to receive tire data only AFTER your vehicle is driven ABOVE 6 mph (10 kph).

When viewing tire data for an RV / tow vehicle, the programmed wheel positions are displayed in a vehicle icon. When viewing tire data for a trailer or towed vehicle, the windshield graphic disappears and the vehicle icon becomes a trailer icon. The system will alternate views between the towing and towed vehicle when operating with this configuration. The diagram below illustrates the differences between the two viewing modes.



USING THE FULL FUNCTION DISPLAY

To display tire data for a specific wheel position:

1. Press the TIRE button to scroll through each of the wheel positions.
2. Press the MODE button to scroll through the pressure, pressure deviation and temperature readings for each selected tire.

MAKING ADJUSTMENTS TO PRE-CONFIGURED SETTINGS

SmarTire for Commercial Systems is pre-configured with the default tire pressure settings as described below:

TYPE OF SYSTEM	4 WHEEL LOW PRESSURE	4 WHEEL HIGH PRESSURE	6 WHEEL HIGH PRESSURE	8 WHEEL HIGH PRESSURE	6 WHEEL HIGH PRESSURE + 4 WHEEL TOW-BEHIND	8 WHEEL HIGH PRESSURE + 4 WHEEL TOW-BEHIND		
Cold Inflation Pressure	30 PSI	80 PSI	100 PSI	100 PSI	100 PSI	30 PSI	100 PSI	30 PSI
Pressure Deviation Alert	+/- 5 PSI	+/- 10 PSI	+/- 10 PSI	+/- 10 PSI	+/- 10 PSI	+/- 10 PSI	+/- 10 PSI	+/- 10 PSI
Low Pressure Warning	25 PSI	70 PSI	90 PSI	90 PSI	90 PSI	25 PSI	90 PSI	25 PSI
High Temperature Warning	176°	176°	195°	195°	195°	195°	195°	195°

The default pressure settings can be changed for your particular vehicle. Check with your RV Owner's Manual to determine the RV manufacturer's recommended Cold Inflation Pressure settings. Check the Owner's Manual of the towed vehicle or trailer for the recommended Cold Inflation Pressures. SmarTire recommends setting the Low Pressure Warning at 10 PSI below the recommended Cold Inflation Pressure for your vehicle. SmarTire also recommends not to change the Pressure Deviation Alert settings.

To change the Cold Inflation Pressure and Low Pressure Warning settings, follow the instructions in the SmarTire Full Function Display Owner's Manual (Pg. 13-14).

MAINTAINING SMARTIRE FOR COMMERCIAL SYSTEMS

Please refer to your “Full Function Display Owner’s Manual” for full instructions regarding post-installation operating instructions.

TIRE ROTATION

4 Wheel System: Refer to Page 19 in the FFD Manual

4+ Wheel System: Refer to Page 22 in the FFD Manual

For more updated installation information, please contact your authorized SmarTire dealer, or go to SmarTire’s website at www.smartire.com.

NOTICE REGARDING TOWED VEHICLES OR TRAILERS

If you are using the SmarTire system in conjunction with a towed vehicle or trailer, the following information is important to note.

When you unhitch the towed vehicle or trailer and begin driving the towing vehicle, the SmarTire system may pick up a stray transmission from the towed vehicle or trailer. If this occurs, the SmarTire receiver will display an “E1” alert within 20 minutes. If this happens, simply turn the system off (by turning the ignition to off) and then back on to clear the alert.

The next time you hook up the towed vehicle or trailer, the SmarTire system will receive the towed vehicle or trailers data transmissions and reset itself to monitor all tires.

NOTICE REGARDING ADDITIONAL ANTENNA REQUIREMENT

One 20’ antenna is included in the 6-Wheel SmarTire for Recreational Vehicles Kit. This antenna is suitable for vehicles less than 25 feet long. An additional 40’ antenna (part number 101.1040) is required for 6-wheel vehicles longer than 25 feet. Please see the Sensor & Antenna Location Diagram in the Installation Guide for the correct antenna mounting locations.

SYSTEM SCOPE OF USE & WARNINGS

This tire monitoring system does not in any way replace the need for regular maintenance of the tire pressures and tire conditions.

SYSTEM INSTALLATION AND USAGE

Warrant of the SmarTire system requires that it has been properly installed and programmed by qualified personnel according to SmarTire Systems Inc. documentation. This includes the Owner's Manual and any supplementary installation instructions included with system components.

USE OF CHEMICALS

Temporary resealing or re-inflation products containing internal sealers or propellants in any tire/wheel assembly may adversely affect the operation of the Sensor/Transmitters and void warrantee.

REACTING TO ALERTS

When an alert or warning condition is detected, reduce vehicle speed to an appropriate safe level and proceed to a safe stopping location or facility where the tire can be inspected and serviced. The low pressure alert or warning indicates that the air pressure has dropped to a selected minimum.

REPLACEMENT PARTS

PART NUMBER	DESCRIPTION
200.0153	Receiver (no cable)
061.4001	Remote Full Function Display (FFD) (with FFD cable)
101.1112	High Pressure Axle Kit (includes two high pressure transmitters and two straps)
061.1002	Low Pressure Axle Kit (includes two low pressure transmitters and two straps)
101.1020	Antenna Kit, 20'
101.1040	Antenna Kit, 40'
101.1060	Antenna Kit, 60'
Contact SmarTire Dealer for Parts Pricing	

SPECIFICATIONS

	<i>Receiver</i>	<i>Full Function Display</i>	<i>High Pressure Transmitter (with cradle)</i>	<i>Low Pressure Transmitter</i>
Input Supply	11-30 v DC			
Power Consumption	Normal = 480 mW, Max = 1.90 W			
Weight	16.0 oz (454 g)	1.55 oz (44 g)	1.89 oz (58.7 g)	1.5 oz (43 g)
Dimensions	5.0 x 2.8 x 1.5 in.	2.8 x 1.7 x .75 in. (71 x 43 x 19 mm)	3.58 x 1.65 x 1.34 in. (91 x 42 x 34 mm)	2.68" x 1.08" x 0.91" (84 x 25 x 22 mm)
Operating Temperature	-40 °F to 185 °F (-40 °C to 85 °C)	-20 °F to 185 °F (-29 °C to 85 °C)	-40 °F to 257 °F (-40 °C to 125 °C)	-40 °F to 257 °F (-40 °C to 125 °C)
Pressure Accuracy			+/- 4.35 PSI (0.3 BAR)	+/- 1.5 PSI (0.1 BAR)
Maximum Cold Inflation Pressure			160 PSI (11.03 BAR)	65 PSI (4.5 BAR)
Maximum Operating Pressure			188 PSI (13.0 BAR)	78 PSI (5.4 BAR)
Battery Life			7 years at 50,000 miles/yr (80,500 km/yr) - approx.	5 years at 30,000 miles/yr (48,000 km/yr) - approx.