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Go to www.tiretraker.com to View our TT-500 Installation Video

Introduction

The **TireTraker™ TT-500** is a full time wireless electronic tire pressure monitoring system (TPMS) designed to monitor and display tire pressures from 0 psi up to 232 psi, and also to monitor tire temperatures from 14°F to 185°F. It is capable of displaying current tire pressures and temperatures when parked and as you drive down the road.

The **TT-500** is a monitoring system only, and will not prevent tires from losing pressure or failing. However, low pressure is the leading cause of premature tire failure and the **TT-500** can provide early notice of potential problems and assist in maintaining proper pressures in vehicle tires.

The **TT-500** consists of two basic components: Tire Sensors (Transmitters), which screw onto the wheel valve stems, and a Monitor (Receiver) located near the vehicle operator. sensors transmit a coded RF signal and alert if pressure drops, pressure increases or temperature increases. The monitor displays each tire's pressure and temperature per tire position and will display an audible and visual alert if pressure or temperature changes.

When used properly, the **TT-500** will inform the driver of the tire pressures and temperatures on the vehicle so the operator may have the opportunity to make any necessary adjustments before a serious problem occurs. Tires and valve stems should be inspected thoroughly prior to installation of the system to ensure that they are in good condition and inflated properly. It is not uncommon to find valve stems that need replacing when installing your TPMS system. Even though metal valve stems are not required, we recommend the use of metal stems instead of rubber stems.

The **TT-500** does not prevent low tire pressure, high tire pressure or high tire temperature; it alerts when the pressures or temperatures have changed, allowing action to be taken. A damaged sensor or valve stem can cause pressure loss. Inspect your tires regularly.

The **TT-500** cannot prevent tire/wheel overload. Overloading any tire is extremely dangerous and can cause failure of any suspension component, not just tires. The only way to detect overloading is to weigh the vehicle. A vehicle should never be operated if the weight on any wheel is greater than the design specification. A correctly inflated tire can fail if overloaded.

Important System Operating Information - PLEASE READ!**MONITOR - Needs to be Powered On for System Installation**

Simply 'Press and Release the Right Side Button' momentarily to turn monitor on.
 Note - The monitor should have a minimal charge upon purchase to allow basic programming. However, it may have accidentally discharged in transportation or during shipment. Simply plug into supplied USB charger. **DO NOT** keep the monitor plugged in. Charge for a maximum of 8 hours only.

MONITOR - Location, Interference, etc.

Place the monitor in a location that is visible to the driver or copilot. The system includes a Pedestal Mounting Bracket but many customers prefer to simply use a piece of Velcro to attach the monitor. It is best to keep the monitor at least 2' from other electronic devices such as a GPS, a Wireless Thermometer, Tow Brake remote, etc. to help prevent any type of electronic interference.

MONITOR - Does Not Show PSI - Shows Kpa, BAR, etc.

At some point during Baseline programming, this reading was accidentally changed by the user. It can be reset to the original setting by following the instructions on Page 21, Customizing the Monitor Display.

SENSORS - Programming Additional Sensors at a Later Date

Once you have initially installed any sensors, you will not be able to set any Baseline Pressures for any additional sensors you wish to add UNLESS you install those sensors first. You must always install the sensors first, then return to Baseline Programming to set the baseline pressures (see Page 17).

SENSORS - O-rings, Caps & Gaskets

O-rings: Under each sensor cap is a rubber O-ring designed to form a seal. The cap should be tightened very lightly, not over-torqued so as not to tear the O-rings. Most problems occur when the cap is screwed on too tightly.

Caps: Check periodically for cracks and breakage. Caps should not be rubbing against any wheel or other surface to prevent damage.

Sensor Seals: Seals are to prevent air leakage between the valve stem and the sensor. Again, lightly tighten the sensor (do not over-torque) to the valve stem to prevent damage to this gasket.

Important System Operating Information - PLEASE READ!**SENSORS - Location**

Once sensors are programmed to a specific location, any time you remove a sensor, it should be placed back to its original position. If you do not, and are unsure of the sensor respective locations, you should reprogram the sensors following the Sensor Programming Guide (Page 15). For identification purposes, many customers mark each sensor cap, use small plastic bags, or use an empty egg carton to store the sensors. Removing the sensors from the valve stems will also help prolong the sensor battery life.

VALVE STEMS - Inspection

All vehicle valve stems should be inspected for signs of wear & tear and replaced if necessary. Valve extensions can be used with your TPMS. Although metal stems are not required, we recommend the use of metal stems instead of rubber stems. Most late model cars, light trucks and SUV's (after 2008) use high pressure rubber stems which are acceptable.

VALVE STEMS - Dill Pin (Air Release Valve) Adjustment

The sensor may not activate properly if the Dill Pin Valve (Air Release) is seated too low into the valve stem, and not allowing a good connection between the pin and the sensor. A quick way to check is to install the sensor on a different wheel. If the sensor programs at the new position, it may be a problem with the valve stem (most often on inside duals). Contact us for recommendations on Dill Pin adjustment.

VALVE STEMS - CAUTION - If You Have Aluminum Valve Stems

Most vehicles have Brass, Steel or Stainless valve stems installed. However, some late model cars, light trucks and SUV's (after 2008) may have a factory installed TPMS with Aluminum valve stems. The TT-500 sensor threads are Brass. Galvanic Corrosion can occur between the Brass and Aluminum causing the dissimilar metals to fuse and corrode. If you suspect or know that you do have Aluminum valve stems, we have included a packet of **Anti-Seize Compound** for you to apply to the valve stem threads. This product is also readily available for a few dollars at most Auto Parts stores and Hardware stores.

Note: If you are unsure, use the provided compound. It will not harm any of the components.

Important System Operating Information - PLEASE READ!**SIGNAL LOSS - 'no5 or noS' Indication and Low Battery Icon**

The system is activated by movement of the vehicle(s). When motion is stopped, the system enters a 'SLEEP' mode to preserve battery life. Initially you may notice that the last pressures and temperatures recorded remain on the monitor. You may then receive a 'no5' or 'noS' (No Sensor) signal at various sensors. Also, the 'Low Battery Icon' may flash. These are normal occurrences as the system enters the 'SLEEP' mode. When movement is initiated again, all sensors will begin to report correct pressures and temperatures within 20 minutes. If you wish to have an immediate update, utilize the 'Auto-Update' feature as described on Page 20. If signal loss continues to occur, there may be other factors causing this. Be sure you have extended the monitor antenna, the monitor is not close to any other electronic devices, and sensor batteries (CR1632) are reading at least 3.0 volts or higher. The addition of a Signal Booster may also be necessary (Page 27).

SIGNAL LOSS - Erratic or No Pressure Readings

When sensors are installed, the rubber nipple on the sensor gasket inside the sensor stem depresses the Dill Pin Valve (Air Release Valve) releasing air into the sensor, thus allowing the sensor to read the pressure. The Dill Pin Valve simply screws into the valve stem, and can sometimes be seated in too far, or not seated in far enough. With vibration and motion, this can often cause erratic or no pressure readings. Contact us for recommendations on Dill Pin adjustment.

SIGNAL LOSS - Rapid Leak Alert When Stopping

When you park or stop your vehicle(s), the pressure in a tire(s) may drop quickly due to the rapid cooling of the tire. You may then receive a 'RAPID LEAK' alert signalling a tire is losing pressure. This may occur because as you travel down the road, tire pressures increase due to friction and heat. A quick drop in pressure as the tire(s) cools of 3+ psi in less than 2 minutes can activate this alarm. If this occurs, you will see a 'RAPID LEAKING' icon and 'LOW PRESSURE' icon (Page 22) appear at the bottom of the monitor. To check if there is an actual pressure loss, simply scroll to that tire(s) position and view the current pressure. If the pressure continues to drop, this is an indication of a problem. If the pressure remains steady, or only drops a pound or two, this is most likely caused from the rapid cooling of the tire, signalling the alert.

Important System Operating Information - PLEASE READ!**SYSTEM - Disconnected Vehicle Shows Pressures and Temperatures**

When you disconnect a tow vehicle or trailer and drive away, the last pressures and temperatures will continue to display on the monitor for these vehicles. The monitor will notify you of the missing tires after 3 hours of separation. At this point, the monitor will display 'no5 or noS'. At the same time a battery icon will flash with 'sensor' on the monitor. This is a normal occurrence. When the two systems are re-united, simply utilize the 'Auto-Update' feature (Page 20).

SYSTEM - Accuracy of TPMS and Pressure Gauges

A TPMS is a Tire Pressure Monitoring System designed to alert the operator of any changes in pressure or temperature. It is not designed to replace a quality pressure gauge which everyone should own. No TPMS and no reasonably priced tire gauge will be 100% accurate. The important factor is that they are reasonably close and relatively consistent. Many customers choose to rely on their pressure gauge to set and maintain the pressures in their tires. This is totally acceptable. What is important to understand is that the TPMS will warn you of deviations by a percentage from the Baseline Pressures. As an example, If your Baseline Pressures are set at 100 psi, and your gauge reads 102 psi, the TPMS will alert you at the same percentage drop.

SYSTEM - Updates and Alarms

The TT-500 will update the pressure and temperature readings on the monitor every 4 minutes. However, the system also performs self-diagnostics every 5 seconds to instantly warn of any deviance in tire conditions. If any tire is outside of the alarm parameters, an audible and visual alert will occur within 6 seconds.

**Note - At Any Time, If a Tire Enters the Alarm Stage,
the Alarm Will Occur Immediately.
The Monitor Does Not Need to
Update to Enter an Immediate Alarm.**

Installation and Programming - Overview

Installation can be accomplished fairly reasonably if the operator follows the Installation and Programming Instructions. If, at any time you should have questions, please contact us directly at 866-200-9773 so that we can provide you with technical assistance. Our technicians are available 7 days per week for your convenience.

Vehicle Layout

On the following page, you will see multiple layouts depending on the configuration of vehicle(s). Determine your layout (you can configure the layout any way you wish) and then complete the 'Vehicle Layout Chart' on Page 10. Enter your vehicle's Baseline Pressures on this chart in the tire locations you have selected.

Monitor - Power On

The monitor is shipped with a minimum charge to it's internal battery. Sometimes during shipment, the monitor battery becomes discharged. Simply use the supplied USB Power Cord and charge the monitor for approximately 30 minutes to allow enough charge for programming. You may also begin programming while the monitor is charging.

Antenna - For the best reception, it is recommended that you extend the antenna fully.

Sensors - Battery Installation

A CR1632 Battery is included for each sensor purchased. You must install the batteries for the system to work. Be sure to install each battery with the positive (+) side up, underneath the metal bridge. Failure to install the batteries properly could result in battery failure and/or sensor circuit board damage (page 13).

Sensor Locks

The system includes a set of locks for each sensor. Theft is usually not a problem, and the majority of customers do not use the locks. Should you desire to use these, please see Page 14.

Anti-Seize Compound

Included is a packet of Anti-Seize Compound. Apply this to your valve stems if you think you may have Aluminum Valve Stems.

Wheel Layouts - Monitor



Motor Home - 6 Wheels



Motor Home & Toad - 10 Wheels



Truck and 5th Wheel



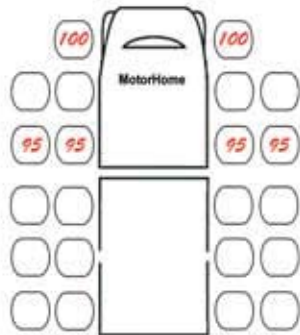
Trailer - 4 Wheels

Vehicle Diagrams - Baseline Pressures & Sensors

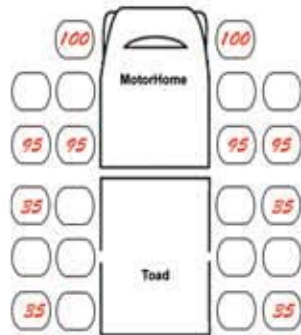
Vehicle Diagrams - Baseline Pressures & Sensors

Below are some examples of Vehicle Layouts with Baseline Pressures entered. Choose a Layout or create your own, and complete the chart on the following page. This will assist you with both Sensor Programming and Baseline Programming (Pages 15 & 17).

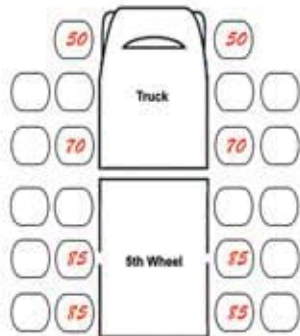
Your Vehicle(s) - Enter Your Baseline Pressures Here



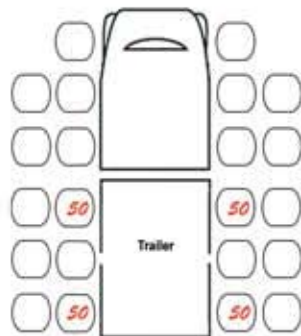
Motor Home - 6 Wheels



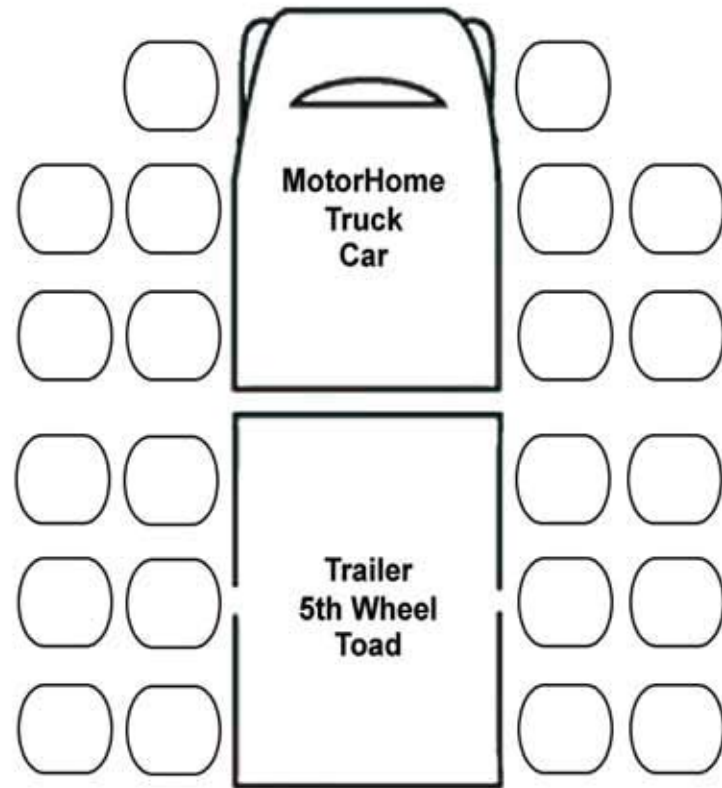
Motor Home & Toad - 10 Wheels



Truck & 5th Wheel - 8 Wheels



Trailer - 4 Wheels



Components and General Overview

The **TT-500** TPMS consists of a wireless Monitor/Receiver that will display tire pressures from 0 psi up to 232 psi, and also to monitor tire temperatures from 14°F to 185°F. A sensor with an interior transmitter is programmed into the monitor and then attached to each wheel's valve stem in sequence. Once sensors are programmed to each wheel position, the Baseline Pressures (usually that is the recommended cold tire pressure) are then programmed into the monitor for each respective tire.

Various levels of warnings are issued for pressure changes, both under and over, high temperatures and low battery status.

The Monitor/Receiver comes pre-charged so you can begin programming the system immediately. It can at times become discharged during shipment. If so, simply plug it in for 30 minutes using the supplied power cord. You can also begin programming while the monitor is connected to the power source.

The monitor is initially programmed to measure tire pressure in 'psi' and temperature in Fahrenheit (°F). However, the **TT-500** can be modified to suit your preferences (see page 21).

TT-500 Monitor



Monitor Power On/Off and Low Battery

Power On:

Press & Release the Top Side Button for 1-2 sec. to turn on monitor. The unit will now begin to receive information from all sensors once the sensors are programmed. **Antenna** - For the best reception, it is recommended the antenna be fully extended.

Note: The monitor should have a minimum charge During shipment, the battery may become discharged. Use the supplied USB Power Cord and charge the monitor for approximately 30 minutes to allow enough charge for programming. You may begin programming with the monitor plugged in.

Power Off - Should Be Done Every Night:

After 15 minutes of no activity, the **monitor** will enter 'Sleep Mode'. It is not Fully Off. We recommend that you turn **monitor** off completely. To turn off, **Press & Hold the Top Right Button** for 5-6 seconds continuously (do not release).

Monitor Battery Indicator:

The monitor has a built-in Lithium-Ion rechargeable battery, which under normal circumstances may function for up to 30 days before requiring a recharge. The level of charge is displayed in the center of the screen. We recommend that you recharge the unit when only one bar is remaining. To recharge, simply use the supplied 12/24V USB car charger. A full charge will take approximately 6-8 hours.

Power Cord - Fuse:

If the 'GREEN' light is not illuminated on the power cord, unscrew power cord tip and check fuse. Replace with 2 amp fuse if necessary.



DO NOT leave Monitor plugged in at all times. Charge for a maximum of 12 hours and then disconnect from power source



Do not leave Monitor plugged in for more than 12 continuous hours.

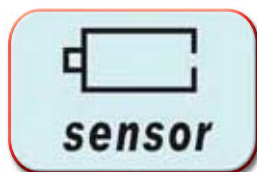
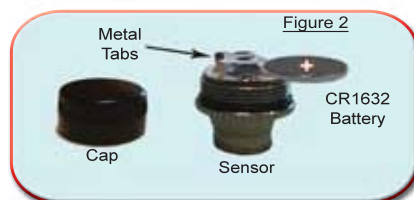
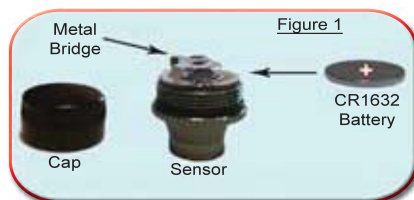
Battery Installation - Sensors

Each tire sensor is powered by a **CR1632** Lithium Battery. We have found that these batteries are usually available at most discount Pharmacies and battery stores. If you have difficulty obtaining these, they can be purchased directly from TireTraker™.

The **CR1632** batteries should be installed prior to mounting any sensors on the vehicle(s) wheels. Under normal use, the CR1632 batteries will usually last approximately 1 year.

Installing The Batteries

1. Remove the black cap on the sensor by unscrewing the cap (counter-clockwise).
3. Slide the battery **UNDER** the metal bridge, with the positive (+) side up. The battery can only slide in from one side.
4. Continue sliding the battery in until it rests against the 2 metal tabs that are pointing down on the opposite side of the bridge.
5. Replace the black cap by screwing the cap on (clockwise).
6. Cap should be hand tight only - **DO NOT** use force to tighten cover.



Low Battery Warning

When a sensor battery is low on power, an outline of a battery with 'sensor' will appear on the monitor. The tire position will also flash and the monitor will 'beep' for 10 seconds. Replace battery as indicated above.

Note - It is common to see this warning when the vehicle(s) motion is stopped. This is normal because the system has entered the 'SLEEP' mode. When using the 'Auto-Update' feature (Page 20), the system will return to normal.

Sensor Locks - Theft Deterrent Devices

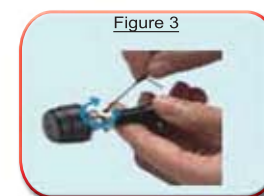
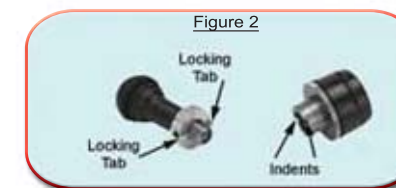
The **TT-500** system includes sensor locks (theft deterrent devices) designed to be installed with each of the sensors.

These sensor locks are designed to be Theft Deterrent devices only. It is your option whether you wish to use or install the sensor locks.

A small Hex Key is used to secure the sensors locks to the valve stem. For your convenience, we have included this Hex Key to aid in installing the sensor locks. Please store in a convenient location for future use.

Installing the Sensor Locks

1. Be sure all set screws are inserted into the black locking ring.
2. Slide the locking ring over the valve stem insuring that the two (2) locking tabs on the ring are facing outward.
3. Screw the sensor on the valve stem. Be sure it is only hand tightened.
4. Slide the locking ring up to the bottom of the sensor and align the two (2) locking tabs with the two (2) indents on the bottom of the sensor.
5. Tighten the 3 set screws with the supplied Hex Key.
6. To remove the sensors, simply reverse the procedure.



The Sensor Locks are not required for operation of the system. In our experience, most customers do not use the Locks, and theft has not been a major problem.

Programming and Installation - Sensors

With a **CR1632** Battery installed in each sensor, we can now begin Sensor Programming. The simplest method of sensor installation is to carry the **TT-500** monitor with you as you walk around the vehicle(s), installing each sensor to each valve stem.

Each sensor has its own unique Electronic ID Signature, and once installed on each tire, will memorize the installed position in reference to the monitor. Even with the monitor and sensors removed, the locations will remain in memory on the monitor.

Once sensors are programmed to a specific location, any time you remove a sensor, it should be placed back to its original position. If you do not, and are unsure of the sensor's respective locations, you will need to follow these directions to reprogram the sensors. For identification purposes, many customers mark each sensor cap, use small plastic bags, or use an empty egg carton to store the sensors. Removing the sensors from the valves will also help prolong the sensor battery (CR1632) life.

Programming and Installing the Sensors

1. Turn monitor on - **Press & Hold Top Right Button** for 5 seconds until screen illuminates.
2. Once on, **Press and Hold the Left & Right Buttons** simultaneously for 5 seconds, the monitor will "Beep", and then release buttons. You will see 'program sensor' on the front vehicle, all 22 tires will appear, the Red Led light will be on at the top, and the Driver's Front Left Tire will be flashing (**Figure 1**).
3. Following the Sensor Layout Chart, if you are installing a sensor at this position, attach to the valve stem now. Within 10 seconds, The **RED** Led will turn **Green**, the flashing tire will stop flashing and the current PSI for that tire will display at the top (**Figure 2**).
4. To move to another tire position or skip a tire position, **Press Right Button** individually and stop at desired tire. That position will now be flashing - The flashing indicates the tire you are currently on. Follow Step 3 to install additional sensors (**Figure 3**).
5. If you continue to scroll through all the positions, you will note that a RED Led indicates that no sensor is programmed at that position. A GREEN Led indicates that there is a sensor programmed at that position.
5. Once all sensors are installed, you **MUST EXIT** the program. **Press and Hold the Left & Right Buttons** simultaneously for approximately 5-6 seconds. monitor will revert to monitor mode and 'program sensor' will disappear on the display (**Figure 4**).

Note: After installation of the sensors, the RED Led will be 'Flashing'. This is normal and will stop after Baseline Programming.

Programming and Installation - Sensors (continued)

Figure 1



Figure 2



Figure 3



Figure 4



Programming - Baseline Pressures

The TT-500 allows the operator to program the baseline pressure into the monitor, which is the Recommended Cold Tire Pressure that each tire should be inflated to. The best way to determine the proper cold pressure is to have your vehicle(s) weighed, then determine the proper pressure by using your Tire Manufacturer's recommendations. You may also use your vehicle(s) weight placard or the psi rating on the tires.

The TT-500 cannot prevent tire/wheel overload. Overloading any tire is extremely dangerous and can cause failure of any suspension component, not just tires. The only way to detect overloading is to weigh the vehicle. A vehicle should never be operated if the weight on any wheel is greater than the design specification. A correctly inflated tire can fail if overloaded.

A **Low Pressure Alarm** will alert when any tire's pressure initially drops by 15% psi below that tire's baseline pressure setting which you entered.

A **High Pressure Alarm** will alert when any tire's pressure rises by 25% psi above that tire's baseline pressure setting which you entered.

These percentages cannot be changed. However, by changing the baseline pressure settings, you can adjust the alarm to alert quicker. Example: Baseline is set at 100 psi - alert will occur at 85 psi (15% below baseline). By changing the baseline setting to 110 psi, an alert will occur at 93.5 psi (now only a 6.5 psi loss from your normal 100 psi pressure).

Programming the Baseline Pressures

1. **Press and Hold the Center Button** for 5 seconds. You will see 'program baseline' on the display, the first tire you have installed will display and the default psi of 116 will be visible on the top (**Figure 1**).
2. **Press the Left Button** to decrease the pressure setting (**Figure 2**). **Press the Right Button** to increase the pressure setting (**Figure 3**). Holding the buttons will cause the pressures to scroll faster (just like an Alarm Clock).
3. Once at the desired pressure, press the **Center Button** once to scroll to next position.
4. Repeat Steps 2 & 3 above for remaining tires.
5. Once all baseline pressures are programmed, you **MUST EXIT** the program. **Press and Hold the Center Button** for 5 seconds.. Monitor will 'Beep" and revert to monitor mode and 'program baseline' will disappear on the display (**Figure 4**).
6. There should now be no LED light illuminated.

Programming - Baseline Pressures (continued)

Figure 1



Figure 2



Figure 3



Figure 4



Checking Pressures and Temperatures

The TT-500 is activated by movement of the vehicle(s). When motion is stopped, the system enters a 'SLEEP' mode to preserve battery life. Initially you may notice that the last pressures and temperatures recorded remain on the monitor. You may then receive a 'noS' or 'no5' (No Sensor) signal at various sensors. Also, the 'Low Battery Icon' may flash. These are normal occurrences as the system enters the 'SLEEP' mode. When movement is initiated again, all sensors will begin to report correct pressures and temperatures within 20 minutes. If you wish to have an immediate update, utilize the 'Auto-Update' feature as described on Page 20. If signal loss continues to occur, there may be other factors causing this. Be sure you have extended the monitor antenna, the monitor is not close to any other electronic devices, and sensor batteries (CR1632) are reading at least 3.0 volts. The addition of a Signal Booster may also be needed (Page 27).

Checking Pressures and Temperatures

1. In monitoring mode, **Press either Right or Left Button (Figure 1)**. The tire position you are looking at will be flashing within the tire circle. The tire's current 'psi' will be shown.
2. **Press Right or Left Button** again and that same tire's temperature will now be shown on the monitor (**Figure 2**).
2. **Press Right or Left Button** again to scroll to subsequent tires.

Figure 1



Figure 2



Auto-Update Mode

This feature can only be utilized once all of the sensors have been installed and all programming is completed. It cannot be used if you are in any of the programming screens - it can only be used in the 'monitor' mode.

When using this feature, all current pressures will revert to 0 psi and all temperatures will revert to 32° F.

The monitor will then begin to update to the current pressures and temperatures for all tires. This update process can take up to 15 minutes for all current readings to display. Note: If any tire enters into an alarm before the display has updated, that tire(s) will immediately go into the alert mode. The display does not have to update before this alert will occur.

Use the **Auto-Update** feature when;

1. You first power on the monitor.
2. You receive 'noS' or 'no5' on any tire.
3. To update after monitor has entered 'Sleep' mode.
4. After changing any tire's baseline settings.
5. If you do think any tire has not updated to its current pressure or temperature.

Auto-Update Mode

1. **Press & Hold the Center & Right Buttons** simultaneously for 3-5 seconds.
2. Monitor will 'Beep' twice and all current pressures will revert to 0 psi and all temperatures will revert to 32° F.
3. Updated pressures and temperatures will appear in random order. This should occur within 15 minutes.
4. This feature will not work if the monitor battery is too low and requires a charge.



Auto-Update Mode

Auto-Scroll Feature

To check the pressures and temperatures on each tire, you can either Press the Left or Right Button to manually scroll through each tire, or you can select the **Auto-Scroll Feature**.

The **Auto-Scroll Feature** will automatically scroll through each tire's pressure and temperature once. This is convenient especially when driving and allows the operator to visually check the tires without having to Press the Left or Right Button to see each tire.

Follow the instructions below to use the **Auto-Scroll Feature**.

1. In Monitor mode, **Press the Center Button** once lightly and then release (**Figure 1**).
2. The Monitor will now begin scrolling through each tire, displaying pressure in the tire for 3 seconds, then displaying temperature in the tire for 2 seconds. It will then scroll to the next tire and repeat the procedure (**Figure 2**).
3. Once the last tire is displayed, the Monitor will stop scrolling.
4. If at any time during the **Auto-Scroll** you wish to cancel the procedure, simply press any button lightly and scrolling will stop.
5. **Press the Center Button** once lightly to repeat this procedure at any time.

Figure 1



Figure 2



Disconnect / Reconnect Feature

The **Disconnect / Reconnect Feature** allows you to disconnect the front or rear vehicle display on the monitor. This is helpful if you wish to monitor only one of the vehicles after disconnecting the other vehicle.

Disconnect Rear Vehicle - Figure 1

1. In Monitor mode, **Press and Hold the Left and Center Buttons** for 4 seconds, then release.
2. Only the Front Vehicle will be displayed and you will now be only monitoring Front Vehicle tires.

Disconnect Front Vehicle - Figure 2

3. Once the Rear Vehicle is disconnected, you will now repeat the same procedure to disconnect the Front Vehicle.
4. **Press and Hold the Left and Center Buttons** again for 4 seconds, then release.
5. Only the Rear Vehicle will be displayed and you will now be only monitoring Front Vehicle tires.

Back to Both Vehicle Display Mode

6. Once the Front Vehicle is disconnected, you will now repeat the same procedure to return to Both Vehicle Display.
7. **Press and Hold the Left and Center Buttons** again for 4 seconds, then release.
8. Now both Vehicles will be displayed and you will now be monitoring Both Vehicle tires.

Figure 1



Figure 2



Units of Measure - Customizing the Monitor (psi, bar, °F, °C, etc.)

The monitor is initially programmed to measure pressure in 'psi' and temperature in Fahrenheit (°F). If you live in an area where other units of measure are used, you can reprogram the monitor to change to these units of measure. Or, if you have inadvertently reprogrammed these units, follow the instructions below.

1. **Press and Hold the Center Button** for 5 seconds. You will see 'program baseline' on the display (Figure 1).
2. **Press & Release Center Button** to scroll through each tire (Figure 1).
3. After the last tire, **Press & Release Center Button** once again. The 'psi' icon will begin to flash.
4. **Press the Right Button** to scroll through units of pressure and stop when you are at desired unit (Figure 2).
5. **Press & Release Center Button** once to go to (°F), which will be flashing.
6. **Press the Right Button** once to go to (°C), which will be flashing.
7. **Press the Center Button** to confirm choice (Figure 3).
8. You **MUST EXIT** the program now. **Press and Hold the Center Button** for 5 seconds until the 'program baseline' disappears on the display (Figure 3).

Figure 1

Figure 2

Figure 3



Alarm Modes - Rapid & Quick Pressure Loss

The TT-500 monitors tire pressures and temperatures in real time. There are multiple levels of alerts which vary in style and intensity depending on the severity of the abnormality.

Should an alert sound, it is recommended that you safely move your vehicle to the side of the road away from traffic. Please be cautious at all times.

~ To Turn Off Audible Alarm, Press Right or Left Button ~

Rapid Air Pressure Loss Alert - Figure 1

Pressure drops by 3+ psi in less than 2 minutes off of Current Operating Pressure, NOT Baseline

Alert Description:

1. Audible 'Beep' repeatedly 15 times.
2. White LCD screen flashes & Red LED flashes.
3. Tire position flashes with current psi.
4. 'Rapid Leaking' icon appears in lower left corner.
5. Center 'Pressure' icon flashes.

Figure 1



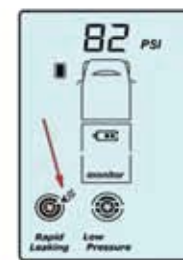
Quick Air Pressure Loss Alert - Figure 2

Pressure drops by 6+ psi in 2-10 minutes off of Current Operating Pressure, NOT Baseline

Alert Description:

1. Intermittent audible 'Beep Beep'.
2. White LCD screen flashes & Red LED flashes.
3. Tire position flashes with current psi.
4. 'Leaking' icon appears in lower left corner.
5. Center 'Pressure' icon flashes.

Figure 2



Alarm Modes - High Temperature & High Pressure

High Temperature Alert - Stage 1

Internal Temperature reaches 167° F

Alert Description - Figure 1:

1. Intermittent 'Beep'.
2. **Red** LED flashes.
3. Tire position flashes with current temperature.
4. 'Temp' Icon flashes in lower right corner.



High Temperature Alert - Stage 2

Internal Temperature reaches 185° F

Alert Description - Figure 2:

1. Constant 'Beep Beep'.
2. **Red** LED flashes.
3. Tire position flashes with current temperature.
4. 'Temp' Icon flashes in lower right corner.



High Air Pressure Alert

Psi increases by 25% over Baseline Setting

Alert Description - Figure 3:

1. Intermittent 'Beep Beep'.
2. **Red** LED flashes.
3. Tire position flashes with current psi.
4. 'Pressure' Icon flashes - shows pressure expanding.



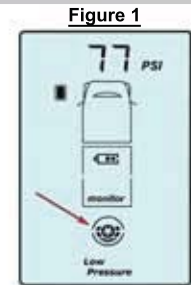
Alarm Modes - Slow Pressure Loss

Slow Air Pressure Loss Alert - Stage 1

Psi decreases by 15% under Baseline Setting

Alert Description - Figure 1:

1. Intermittent 'Beep' every 15 sec. for 5 minutes..
2. **Red** LED flashes.
3. Tire position flashes with current psi.
4. 'Pressure' Icon flashes and shows 75% full.



Slow Air Pressure Loss Alert - Stage 2

Psi decreases by 25% under Baseline Setting

Alert Description - Figure 2:

1. Intermittent 'Beep' every 15 sec. for 5 minutes..
2. **Red** LED flashes.
3. Tire position flashes with current psi..
4. 'Pressure' Icon flashes and shows 50% full.

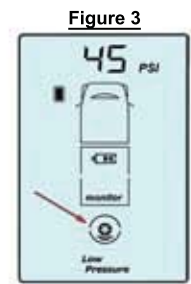


Slow Air Pressure Loss Alert - Stage 3

Psi decreases by 50% under Baseline Setting

Alert Description - Figure 3:

1. Intermittent 'Beep' every 15 sec. for 5 minutes..
2. **Red** LED flashes.
3. Tire position flashes with current psi..
4. 'Pressure' Icon flashes and shows Empty.



Sensors - Deleting & Reprogramming

A 'Full Sensor Delete' (as shown below) will delete all of the current sensors from the program. Do this if you mixed up all of the transmitters, are changing vehicle configurations, or simply want to start over again.

An 'Individual Sensor Delete' (as shown on next page) will delete only the sensor(s) you select. Do this if you need delete only a few sensors or if you want to change a sensor position. A 'Full Sensor Delete' or an 'Individual Sensor Delete' will not affect the baseline pressure settings. Those settings will remain the same.

Full Sensor Delete - All Sensors

1. **Press and Hold the Left & Right Buttons** until monitor 'beeps' and 'program sensor' appears on the display (Figure 1).
2. **Press & Hold the Center & Right Buttons** simultaneously for 3-5 seconds. Monitor will 'Beep' twice and all sensors will then be deleted (Figure 2).
3. Once complete, you **MUST EXIT** the program. **Press and Hold the Left & Right Buttons** simultaneously for approximately 5-6 seconds. Monitor will revert to monitor mode and 'program sensor' will disappear on the display (Figure 3).

Figure 1

Figure 2

Figure 3



Sensors - Deleting & Reprogramming (continued)

Individual Sensor Delete - One or More Sensors

1. **Press and Hold the Left & Right Buttons** for 5 seconds until monitor 'beeps' and 'program sensor' appears on the display. You will now see all 22 tire positions on the display (Figure 4).
2. **Press Right Button** until desired tire position to delete is flashing with a Green LED light at the top. A Green LED light indicates that there is a sensor programmed at that location. A Red LED light indicates that there is no sensor programmed at that location. To delete, the Green LED must turn to Red (Figure 5).
3. **Press & Hold Center Button** until only '--psi' is displayed and LED turns Red.
4. If replacing a sensor at this location, install it now. LED will turn GREEN and current psi will be displayed within 10 seconds. If sensor does not program, remove for 10 and try again (Figure 6).
5. Repeat Step 3 & 4 to delete and reprogram any additional sensors.
6. Once complete, you **MUST EXIT** the program. **Press and Hold the Left & Right Buttons** simultaneously for approximately 5-6 seconds. Monitor will revert to monitor mode and 'program sensor' will disappear on the display (Figure 3 on Page 25).

Figure 4

Figure 5

Figure 6



Signal Booster Antenna

The TT-500 has an option of adding an **Signal Booster Antenna** should signal loss occur. Because we are dealing with invisible radio waves, we can never guarantee that a **Signal Booster Antenna** will or will not be needed.

Although the TT-500 systems have been tested and are designed to work well over long distances, there are occasions where a vehicle or other outside sources may emit electronic interference causing the loss of RF Signal from the Sensors/Transmitters. The pressures and temperatures may not update, or you may see a 'no5' or 'noS' on the display.

Loss of signal can also occur due to increased distances from tires to the monitor, extreme cold conditions, construction of vehicles, engine type & location, other electronics nearby on dash, # of slide-outs, etc. Most metal skinned RV's and Trailers require the addition of a **Signal Booster Antenna**.

No additional programming is required once a **Signal Booster Antenna** is installed. The **Signal Booster Antenna** is designed to automatically receive the signals from all the sensors and transmit this information to the monitor.



TT-100 - As shown above, requires wiring to a 12/24 volt DC power source.

Motorhomes - Booster is usually installed in the rear bedroom closet.

5th Wheels - Booster is usually installed in front bedroom area.

Trailers - Booster is usually installed in front area of trailer.

FAQ's - Frequently Asked Questions

Does the Monitor need to be continuously powered by a 12 Volt plug?

The monitor should have a minimal charge upon purchase. This will allow for basic programming. However, the monitor may have accidentally discharged in transportation or during shipment. Simply plug into a 12/24V supply to charge. **DO NOT** keep the monitor plugged in, and **DO NOT** permanently wire the monitor directly to a power source. Keeping the monitor on a continuous charge will shorten the monitor battery life. After initial programming, you should charge the monitor for a maximum of 8 hours only. Monitor will operate for approximately 20-30 days before needing a recharge.

What is the Sleep Mode?

After no motion for 15 minutes, the system enters 'Sleep Mode', saving system power. When system 'awakes', the last shown readings will be displayed. Once motion begins, the system will update with current readings. If you wish to have an immediate update, use the '**Auto-Update**' feature (see Page 20).

What causes a 'no5' or 'noS' - No Signal Warning' and is an Signal Booster needed?

A 'no5' or 'noS' - No Signal Alert can be caused from low batteries, excessive distances between sensors and monitor, electronic interference, etc. As with all RF products, signal loss can occur and the addition of an Signal Booster may be needed. Note - While parked, it is common to receive a 'noS - No Signal Alert' and a low battery indication because the sensors have entered the 'Sleep' mode. If this should occur, we suggest trying an '**Auto-Update**' (see Page 20).

Why is temperature monitoring important?

Low pressure is the most common cause of tire problems. However, temperature monitoring can sometimes detect overheating and internal wheel problems, such as bearing failure and brake sticking problems.

What should I do if an alarm is indicated?

If possible, move the vehicle to the side of the road immediately. Determine the cause of the alarm. Professional assistance may be required.

Are metal valve stems required?

Metal stems are not required. However, most valve stem failures occur due to rubber valve stems, and we recommend metal stems in place of rubber stems.

FAQ's - Continued on Next Page

FAQ's - Frequently Asked Questions (continued)

Is it OK to use valve extensions?

If using valve extensions, insure quality stems are installed. We believe it is safer to add extensions to enable the installation of a TPMS than to operate without.

What happens when I disconnect my Toad or Trailer?

When disconnected, the monitor will continue to display the vehicle's last monitored pressure and temperature reading. When the vehicle is reconnected and moving, the pressure and temperature readings will update with current information within 20 minutes. If you wish to have a quicker update, use the 'Auto-Update' feature (Page 20).

What if I have Aluminum Valve Stems?

Most vehicles have Brass, Steel or Stainless valve stems installed. However, some late model cars, light trucks and SUV's (after 2008) may have a factory installed TPMS with Aluminum valve stems. The **TT-500** sensor threads are Brass. Galvanic Corrosion can occur between the Brass and Aluminum causing the dissimilar metals to fuse and corrode. If you suspect or know that you do have Aluminum valve stems, we have included a packet of **Anti-Seize Compound** for you to apply to the valve stem threads. This product is also readily available for a few dollars at most Auto Parts stores and Hardware stores. Note: If you are unsure, use the provided compound. It will not harm any of the components.

What if I need new O-rings, Caps or Gaskets?

O-rings: Under each sensor cap is a rubber O-ring designed to form a seal. The cap should be tightened very lightly, not over-torqued so as not to tear the O-rings. Most problems occur when the cap is screwed on too tightly. Contact us for replacements.

Caps: Check periodically for cracks and breakage. Caps should not be rubbing against any wheel or other surface to prevent damage. Contact us for replacements.

Sensor Seals: Seals are to prevent air leakage between the valve stem and the sensor. Again, lightly tighten the sensor (do not over-torque) to the valve stem to prevent damage to this gasket. Contact us for replacements.

Will the Monitor store the settings if turned off for an extended time?

The monitor will store the 'Baseline Pressure Settings' and 'Sensor Location Information'. No reprogramming is necessary.

FAQ's - Frequently Asked Questions (continued)

Why does my manual gauge show different pressures than the TT-500?

A TPMS is designed to alert the operator of changes in pressure or temperature. It is not designed to replace a quality pressure gauge. No TPMS and no reasonably priced tire gauge is 100% accurate. It is important that they are reasonably close and relatively consistent. Many customers choose to rely on their pressure gauge to set and maintain the pressures in their tires, which is totally acceptable. It is important to understand that the TPMS will warn you of deviations by a percentage from the Baseline Pressures.

What if I need to change the Baseline Pressure Setting for any tires?

Enter the 'Baseline Pressure Setting' mode (Page 17), and adjust the pressures for the tires desired. The monitor will update to the new settings in about 20 minutes. or use the 'Auto-Update' feature (Page 20).

What if I need to change or add a Sensor?

Once the sensors are programmed to their initial position, you must first delete the sensor(s) from its original position (Page 25), and reprogram to a new position. Be sure to adjust the 'Baseline Pressure Settings' if necessary.

What happens when I remove Sensors to inflate or check tire pressures?

When you remove a sensor and adjust the pressure, the monitor will update and display the new pressure reading once the sensor has been reinstalled.

Where can I buy replacement CR1632 sensor batteries?

We have found that the best prices and availability are at the discount Pharmacy stores (Walgreen's, Rite-Aid, etc). You can also order directly from us at www.tiretraker.com.

What if I remove the Sensors while my vehicle is in storage?

Once setup, the sensors are programmed to each respective tire location. Once removed, it is recommended that the sensors be marked with some type of identification so you will know the position to reinstall. An empty egg carton is a convenient storage item.

What if I add additional Sensors to my system at a later date?

After initially installing any sensors, you will not be able to set any Baseline Pressures for any additional sensors you wish to add **UNLESS** you install those sensors first. You must always install the sensors first, then return to Baseline Programming to set Baselines.

Technical Specifications

Sensor/Transmitter

| | |
|-------------------------------|--------------------|
| Dimensions (W x H x D) | 0.8" x 0.8" x 0.9" |
| Weight | 0.5 oz |
| Battery Voltage | 3 Volt DC (CR1632) |
| Battery Life | 1 Year |
| Standby Current | 500 nA |
| Working Current | 6 mA |
| Pressure Range | 0 psi to 232 psi |
| Pressure Precision | +/- 2.7% |
| Temperature Range | -4° F to 185° F |
| Temperature Precision | +/- 6° F |
| Signal Transmitting Frequency | 433.92 MHz |
| Operating Distance | Up to 65' |

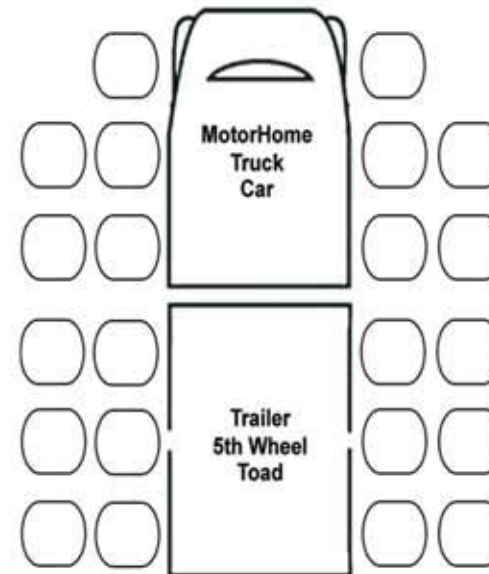
Monitor/Receiver

| | |
|-----------------------------------|-----------------------|
| Dimensions (W x H x D) | 2.44" x 3.94" x 0.69" |
| Battery Life (avg. 4 hrs per day) | Up to 30 days |
| Standby Current | 0.1 mA |
| Working Current | 15 mA |
| Working Voltage | 3 Volt DC |
| Working Temperature | -4° F to 140° F |
| Signal Receiving Frequency | 433.92 MHz |
| Power Cord - Input Voltage | 12/24 VDC |
| Power Cord - Output Amperage | 1.0 Amp |
| Power Cord - Internal Fuse | 3.0 Amps |

The TT-500 is a device for displaying tire pressures and temperatures, and displaying an alert for changing conditions. As with all devices that use RF signals, the signal can be interrupted. The TT-500 has been designed to work optimally to overcome interference that can block signals. As with all RF devices, NO SIGNAL GUARANTEE can be made. The addition of the optional Signal Booster may be required.

Product Components

| <u>Name</u> | <u>Quantity</u> |
|--|-----------------|
| Sensor | 4- 22 pieces |
| Monitor | 1 each |
| Mounting Bracket | 1 each |
| 12/24V Micro USB Charge (2 amp fuse in tip) | 1 each |
| Anti-Theft Locking Collars with Allen Wrench | 1 set |
| CR1632 Lithium Battery | 4- 22 pieces |
| User Manual | 1 Book |



Monitor Schematic

Warranty**LIMITED LIFETIME WARRANTY**

Subject to the limitations and exclusions set forth in this Limited Lifetime Warranty, the **TireTraker™ TT-500** system is warranted against defects in materials or workmanship that result in a product failure under normal use during the warranty period following the date of purchase by the original end-user. This Limited Lifetime Warranty applies only to claims made by the original purchaser of the system and cannot be assigned, transferred or conveyed to any subsequent users. The exclusive remedy for any product determined by **TireTraker™ TPMS** to be defective within such period shall, at the sole option of **TireTraker™ TPMS**, be the repair or replacement of such defective product. No other remedy shall be available.

EXCLUSIONS FROM COVERAGE

This Limited Lifetime Warranty does not apply to any claims arising from misuse, abuse, unauthorized repair or alteration, circumstances where the **TireTraker™ TT-500** system is improperly installed contrary to the **TireTraker™ TT-500** system instructions. It also does not apply to damage of defect attributable to fire or other casualty, including, without limitation, acts of God, exposure to abrasive or corrosive materials or pollutants, failure or improper wiring of the power source, whether 12 volt or battery, failure to use the supplied Power Cord, submersion of sensors in water, or attributable to collision or other accidents upon which the **TireTraker™ TT-500** system is installed. This warranty specifically excludes the Pedestal Mounting Bracket, Sensor Batteries, Sensor O-rings and Sensor Gaskets.

LIMITATIONS

This Limited Lifetime Warranty is expressly in lieu of all other express or implied warranties, including without limitation, the implied warranty of merchantability and the implied warranty of fitness for a particular purpose, and all other obligations or liabilities on the part of **TireTraker™ TPMS**. This Limited Lifetime Warranty specifically excludes all incidental, special or consequential damages. In no event, and for no cause whatsoever, shall **TireTraker™ TPMS** have any liability to any party in excess of the original purchase price of the product. Your dated sales receipt will act as proof of warranty coverage, and the warranty will expire at the conclusion of the warranty period.

Warranty (continued)**EXCLUSIVE AGREEMENT**

This Limited Lifetime Warranty is a complete and exclusive statement of the warranties which apply to the **TireTraker™ TT-500** system. There are no express or implied warranties beyond those expressly stated above. No employee, agent, dealer or other person is authorized to give or change any warranties on behalf of **TireTraker™ TPMS**, except as authorized in writing.

STATUTE OF LIMITATIONS

In purchasing the **TireTraker™ TT-500** system, you agree that any action for breach of contract or warranty must be commenced within the specified warranty period.

PROCEDURE

Products determined by **TireTraker™ TPMS** to be defective within the terms of this Limited Lifetime Warranty should be returned to **TireTraker™ TPMS**, transportation prepaid. Contact **TireTraker™ TPMS** for a Return Merchandise Authorization (RMA). No unauthorized returns shall be accepted without a completed RMA. Sender is responsible for all costs incurred in the removal or reinstallation and shipping of the returned product. A copy of the original sales receipt from the point of purchase must accompany the returned product.

APPLICABLE LAW

The internal laws of the State of Texas, USA shall govern this Limited Lifetime Warranty, and the exclusive venue for any dispute in connection with the purchase or use of the product shall be the state and federal courts of general jurisdiction located in the State of Texas, USA.

For Warranty Return Authorization, Contact;
TireTraker™ TPMS
866-200-9773
info@tiretraker.com

Please register your system at www.tiretraker.com
to confirm Warranty coverage.

Notes:

Thank You For Your Purchase!

You have made the right decision in purchasing the TireTraker™ TT-500, The most advanced TPMS on the market today.

Backed by a company that has been in business since 2004 with a proven track record and outstanding customer service.

We have technicians available 7 days per week should you have questions or need assistance.

And once again, we are leaders in the industry offering an unprecedented

Lifetime Warranty*

*TT-500 TPMS Only

Go to www.tiretraker.com to View our TT-500 Installation Video