

# **SmarTire<sup>®</sup>** *Tire Pressure Monitoring System* **by Bendix CVS**

## SmarTire<sup>®</sup> by Bendix CVS Tire Pressure Monitoring System (TPMS) BT36 Low-Frequency (LF) Maintenance Hand Tool



**Figure 1 – SmarTire<sup>®</sup> by Bendix CVS TPMS BT36 LF Maintenance Hand Tool**

### **INTRODUCTION**


The SmarTire<sup>®</sup> by Bendix CVS Tire Pressure Monitoring System (TPMS) consists of a tire pressure sensor inside each tire that transmits Radio Frequency (RF) signals containing a unique Identification Number (ID #), actual tire pressure, temperature, and sensor battery condition to an Electronic Control Unit (ECU) attached to the vehicle's J1939 communication bus. This ECU receives and interprets the RF signal(s) from the sensor and warns the driver of an abnormal tire condition.

It is important that the ECU is programmed correctly with each sensor location on the vehicle so it can indicate to the driver which tire has the incorrect pressure and/or excessive temperature. Each time the tires are serviced or rotated, the ECU must relearn the current position of each tire pressure sensor and tire and wheel assembly.

The BT36 Low-Frequency (LF) maintenance hand tool is used to facilitate this learning process. It can also be used as an electronic pressure gauge to measure the current pressure and temperature of any tire on a vehicle equipped with Bendix TPMS sensors.

### **OPERATION**

#### **Turning on the BT36 LF Maintenance Hand Tool**

See Figure 1. Press the  button to turn on the tool. The initial splash screen will display the current software version. Please make a note of this software version before calling technical support.

#### **Using the BT36 LF Maintenance Hand Tool**

See Figure 2 for the menu displayed after the initial splash screen.



**Figure 2 – TPMS Menu**

The BT36 Low-Frequency (LF) maintenance hand tool is capable of sending two different activation signals.

- LF Initiate – Used to retrieve current pressure, temperature and battery status from a sensor.
- LF Learn – Used to learn the sensor ID # into the Tire Pressure Monitoring System (TPMS) Electronic Control Unit (ECU).

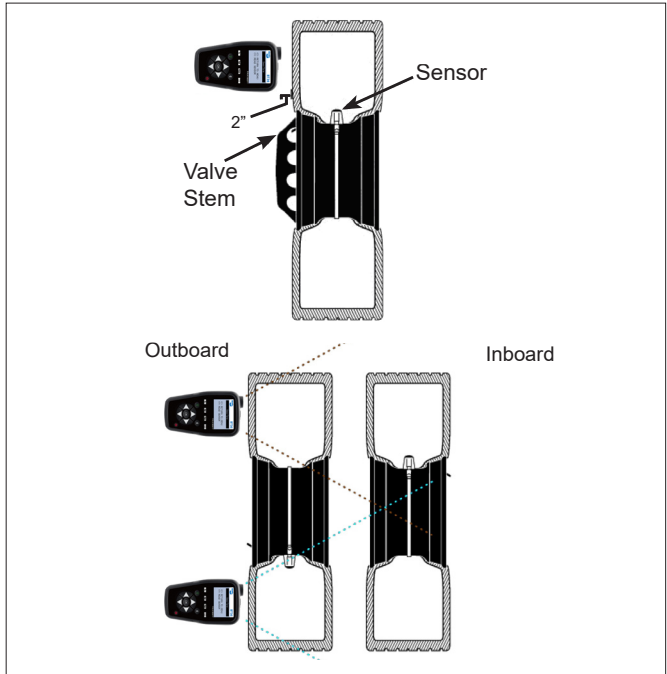
**Initiate Mode**

1. To select the LF initiate function, use the up/down arrow keys and then press OK.



**Figure 3 – Initiate Mode Menu**

2. See Figure 3 for the menu that is displayed.
3. See Figure 4. Hold the BT36 LF maintenance hand tool approximately 2 in. (5 cm) away from the tire’s surface (positioned at the center of the tire’s sidewall at the location of the valve stem). **NOTE:** Bendix sensors should be installed at the valve and their location should also be indicated by a rim-mounted label.



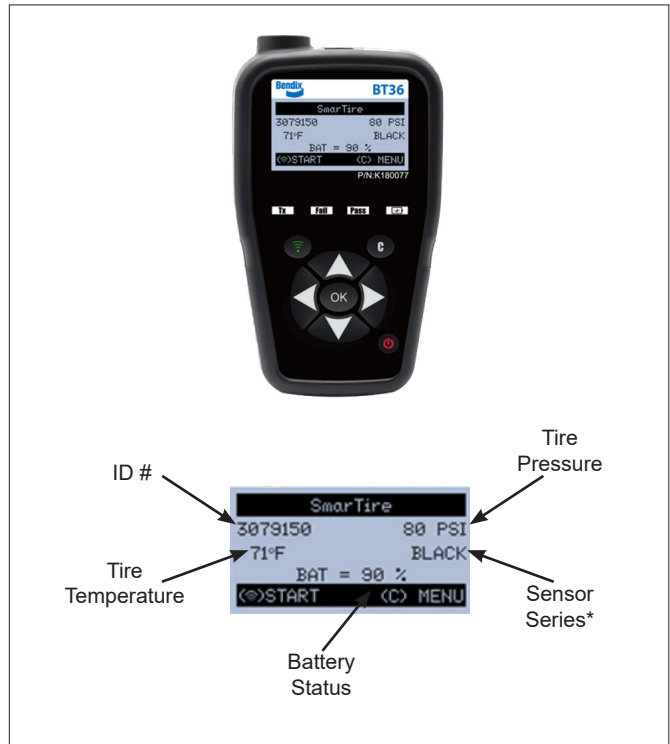
**Figure 4 – Sensor Installation Guidelines**

4. See Figure 5. Press and release the button. While the progress bar is displayed, continue to hold the BT36 LF maintenance hand tool in position. This can take up to 10 seconds to complete.



**Figure 5 – Trigger Processing**

5. See Figure 6. When the LF activation sequence is complete, the tool will beep and then will display the current tire pressure, temperature, and battery status.





**Figure 6 – Sensor Installation Guidelines**

**NOTE:** Gold Series sensors will not always return the battery status. If you do not see the battery status, initiate the sensor again. It may be necessary to initiate the sensor several times before this information is returned.

6. Press and release the button to activate another sensor, or press the button to return to the main menu.

## Learn Mode

1. To select the “LF learn function,” use the up/down arrow keys and then press OK.
2. Follow the instructions above for the “LF initiate function” to activate the Tire Pressure Monitoring System (TPMS) sensor.
3. Depending on the sensor series, different screens will be displayed. **NOTE:** For Black Series sensors, the same information shown above will be displayed. For Gold Series sensors, only the sensor ID # is displayed.
4. Press and release the  button to activate another sensor, or press the  button to return to the main menu.

## Changing the Settings

From the main menu, use the up/down arrow keys to select “options” and then press OK. See Figure 7 for the settings menu displays.

- The “LF POWER” option is used to adjust the strength of the activation signal. **NOTE:** It is recommended to use the factory default setting. Adjusting the signal too high or too low may impair the sensor reception.
- The “UNITS” option is used to select between Metric and Imperial units.
- The “BUZZER” option allows you to enable or disable the internal buzzer.
- The “CONTRAST” option allows you to adjust the contrast of the LCD screen.
- The “AUTO OFF” option changes the length of time before the tool turns off when not in use.



Figure 7 – Settings Menu

## Check the Battery Level


See Figure 8. Press and hold the  button to display the tool’s current battery charge level.



Figure 8 – Battery Level

## Charging the BT36 LF Maintenance Hand Tool


See Figure 9. When the BT36 Low-Frequency (LF) maintenance hand tool’s battery level is low, use the supplied wall charger and USB cable to charge the tool by plugging it into the USB cable on the back of the BT36 LF maintenance hand tool.



Figure 9 – Charging Port

## Updating the BT36 LF Maintenance Hand Tool

The software in the BT36 LF maintenance hand tool may occasionally be updated to add more features. To update the BT36 LF maintenance hand tool to the latest software, perform the following steps:

1. Install and run the WebVT software that came on the CD with the BT36 hand tool.
2. Plug the BT36 LF maintenance hand tool into a USB port of your computer using supplied the USB cable.
3. Turn the device on by pressing the  button.
4. If a software update is available, a screen will appear indicating “Update Device.” Follow the on-screen instructions to update the software.

### Programming Sensor ID Numbers in a TPMS ECU

Occasionally, it is required to update the ID # in a SmarTire® by Bendix CVS Tire Pressure Monitoring System (TPMS) Electronic Control Unit (ECU) due to sensor replacement or tire rotation. The BT36 Low-Frequency (LF) maintenance hand tool is used to facilitate this re-learning of sensor ID #s along with the Bendix® ACom® PRO™ diagnostic software. To update a sensor ID #, perform the following steps:

1. Launch the ACom PRO software.
2. Use the “connect” button to connect to the vehicle data bus.
3. Once all ECUs on the truck are found, click the “bi-directional” button.
4. Select “Bendix TPMS ECU” from the left pane, and then select “TPMS Configuration” from the right pane. Press the “start” button.
5. Select a tire to change its sensor ID # by clicking its tire icon.
6. Press the “Learn Using Hand Tool” button to place the ECU into learn mode.
7. Use the LF Learn Mode procedure above to activate the sensor for the corresponding tire location.
8. After successful activation, the new sensor ID # should be displayed on the ACom PRO configuration screen and the learn operation is now completed.

<b>SPECIFICATIONS</b>	
<b>Battery Type</b>	Rechargeable Ni-MH (Nickel Metal Hydride)
<b>Battery Life</b>	Approximately 400 activations per full charge
<b>Dimensions (Maximum L, W, D)</b>	6.5 in. x 3.7 in. x 1.5 in. (16.5 cm x 9.5 cm x 3.8 cm)
<b>Case Material</b>	High-Impact Anti-Lock Braking System (ABS)
<b>Response Frequency</b>	433.92 MHz
<b>Low Battery Indication</b>	LCD bar graph display
<b>Weight</b>	Approximately 2 lbs
<b>Temperature</b>	Operating: -4° F to 131° F (-20° C to +55° C) Storage: -40° F to 140° F (-40° C to +60° C)
<b>Operating Altitude</b>	Up to 6,560 ft (2,000 m)

### **One-year limited warranty**

The manufacturer warrants this product to the original user against defective material or workmanship for a period of one (1) year from the date of purchase. The manufacturer reserves the right to determine whether the part or parts failed because of defective material, workmanship, or other causes. Failures caused by accident, alteration, or misuse are not covered by this warranty. The manufacturer, at its discretion, will repair or replace the product covered under this warranty free of charge.

Repairs or replacements of products covered under this warranty are warranted for the remainder of the original warranty period. The manufacturer or its authorized service representatives must perform all warranty repairs. Any repair to the product by unauthorized service representatives voids this warranty. The rights under this warranty are limited to the original user and may not be transferred to subsequent owners.

The warranty is in lieu of all other warranties, expressed or implied, including warranties of merchantability and fitness for a particular purpose. Some states do not allow the exclusion or limitations of incidental or consequential damages, so the above limitations may not apply to you.

### **How to Obtain Warranty Support**

Before submitting a warranty claim, we recommend you contact technical support for assistance by calling 1-888-621-8767. Valid warranty claims are generally processed through the point of purchase during the first thirty (30) days after purchase; however, this period of time may vary depending on where you purchased your product.

A Return Material Authorization (RMA) number will be issued by technical support based on the warranty claim requirements. Please check with the standard representative or the retailer where you purchased your product for details.

Warranty claims that cannot be processed through the point of purchase and any other product related questions should be addressed directly to ATEQ Tire Pressure Monitoring System (TPMS) Tools LC. The address and customer service contact information for ATEQ can be found on the web at [www.ateq-tpms.com/en-us/home/contact-support](http://www.ateq-tpms.com/en-us/home/contact-support).

Note: Tools requiring service or warranty repair must be accompanied by an RMA number on the shipping container for proper handling.

### **Limitation of Liability**

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### **Duration of Implied Warranties**

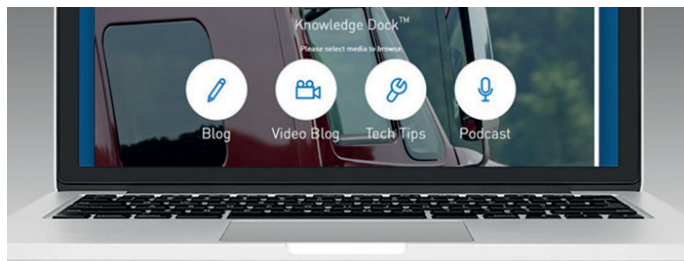
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### **No Other Warranties**

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