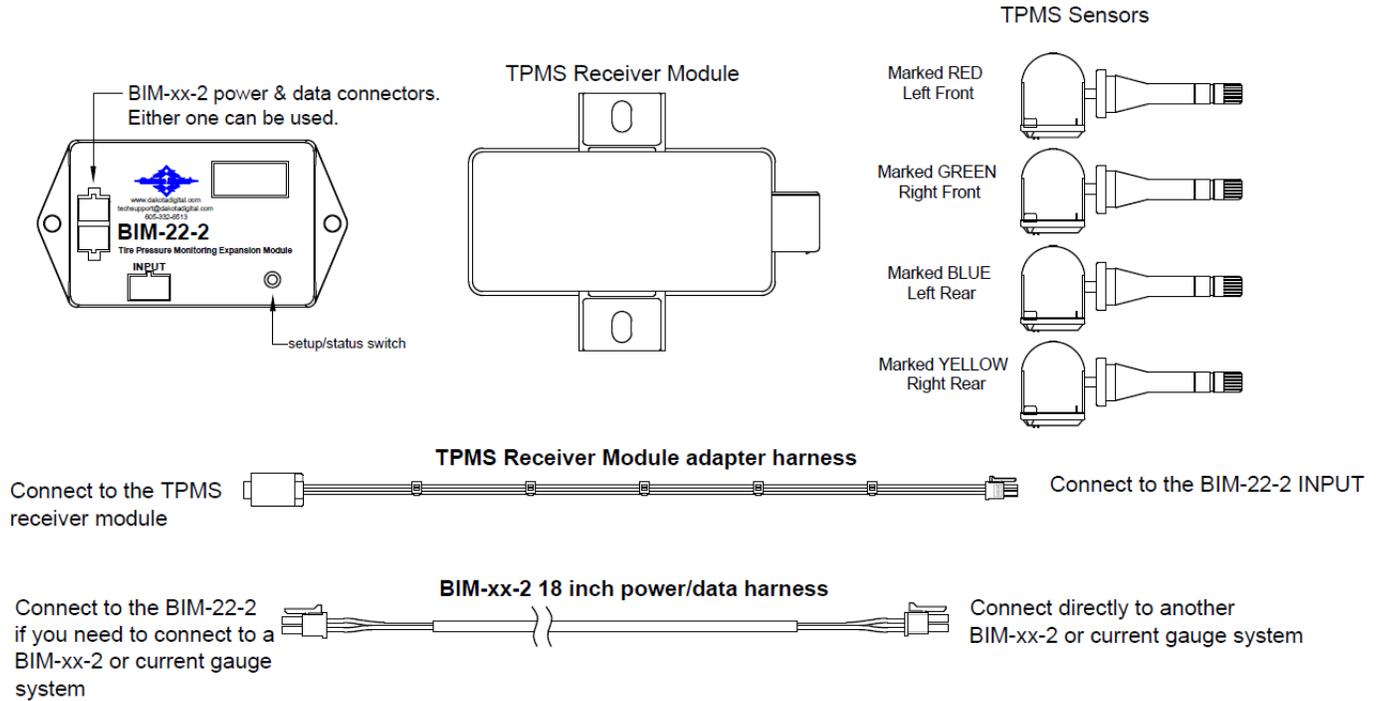




## BIM-22-2 Bus Interface Module for TPMS (Tire Pressure Monitoring System)



This Bus Interface Module (BIM) communicates with a TPMS Receiver Module which receives tire pressures and other information from four TPMS sensors installed in a vehicle's tires. There are three interface (I/O) ports on the module. Two of these can be connected to a Dakota Digital instrument system or to another BIM, allowing several units to be daisy chained together. Do not connect these I/O ports to anything other than a Dakota Digital control box or BIM. Ensure all BIM units are connected properly. On appropriate VHx, VFD3, and VFD3X systems, use the BIM-XX-1 harness (not shown). On HDX and other VHx, VFD3, and VFD3X systems, use the BIM-XX-2 harness. The interface labeled "INPUT" on the BIM-22-2 is connected to the TPMS Receiver Module using the TPMS Receiver Module adapter harness.

The TPMS sensors transmit pressures and other information wirelessly through an RF signal. They are to be mounted inside the vehicle's tires; replacing normal valve stems. We recommend that the tires be rebalanced after TPMS sensors are installed. Do not mount the BIM-22-2 and TPMS Receiver Module in the engine compartment; they should be mounted in the interior of the vehicle. The BIM-22-2 should be installed in a location where its display and switch are accessible in the event a new TPMS sensor needs to be installed in the system (see *BIM Learn Sensors Mode*). In situations where TPMS reception is not adequate inside the interior of the vehicle, the weatherproof TPMS Receiver Module can be mounted outside on the chassis near the center of the vehicle for better reception of the RF transmission signals from the TPMS sensors.

The BIM-22-2 system provides tire pressures in PSI (pounds per square inch) for each of the vehicle's four tires to a control box. When the vehicle is first turned on, dashes will be displayed on the gauge until the sensors have activated or "woken up" from their sleeping state. The sensors wake up by driving the vehicle or if a pressure change of at least 2 PSI has taken place. This behavior of going to sleep when the vehicle is not moving vastly prolongs a sensor's battery life. After the sensors wake up, they report pressures to the TPMS Receiver Module, which in turn are reported through the BIM-22-2 to the control box.

## Sensor Locating and Setting Warning Levels

The sensors are shipped with color markings to indicate which location on the vehicle they are to be installed (LF = Red, RF = Green, LR = Blue, and RR = Yellow). However, in the event a sensor is installed in an incorrect location, or when tires are rotated, the system can be taught to “locate” the sensors without the need to move sensors to different tires. Use the locate procedure which corresponds to your system below for locating. These procedures will only function properly if all four TPMS sensors are mounted in tires on a vehicle. Sensor locate procedures for each of the following control systems are available on the Dakota Digital website for downloading and printing.

Low and high warning levels can be set individually for each tire/BIM channel. The system will warn the driver when a tire’s pressure has fallen below or exceeded these levels. On an HDX system, warnings are indicated to the user by highlighted pressure values and an audible alarm (if installed and enabled). On VFD3 and VHX systems, warnings are indicated by the pressure values blinking on and off. Follow the procedure that corresponds to your system.

### Locating sensors and setting warning levels on an HDX system:

- Enter the HDX Setup menu by pressing both setup switches at the same time. The display will show the message ENTER SETUP with a progress bar. Maintain holding the switches until the progress bar completes moving to the right and the message RELEASE appears. At this time release the switches.
- Use either gauge switch to scroll up or down until you come to the BIM selection. Press and hold either switch while the HOLD TO SET progress bar completes moving to the right and tells you to RELEASE. At this time release the switch. Use either switch to scroll up or down until you come to a BIM-22-2 selection. Press and hold either switch while the HOLD TO SET progress bar completes moving to the right and tells you to RELEASE. At this time release the switch.
- Use either gauge switch to scroll up or down until you come to the LOCATE selection. Press and hold either switch while the HOLD TO SET progress bar completes moving to the right and tells you to RELEASE. At this time release the switch. If the message FILL LOW TIRES is displayed, it is possible sensor(s) need to be woken up. Sensors wake up with a change in pressure of more than 2 PSI. Another possibility is that one or more tires do not have at least 20 PSI of pressure. Inflate all tires so that more than 20 PSI is displayed for each tire in the TIRE PSI section of the display.
- Once all sensors are awake and all tires have at least 20 PSI, the HDX system will display DEFLATE LEFT FRONT. At this time, deflate the tire located at the Left Front (driver side, front axle) of the vehicle.
- When the HDX control box has seen enough of a pressure decrease to determine the sensor’s location, an alarm will sound (if equipped with an alarm) and the system will display DEFLATE RIGHT FRONT. At this time, deflate the tire located at the Right Front (passenger side, front axle).
- When the control box has determined which sensor is at this location, an alarm will sound and the system will show DEFLATE LEFT REAR. At this time, deflate the tire located at the Left Rear (driver side, rear axle).
- When the control box has determined which sensor is at this location, an alarm will sound and the system will automatically determine the location of the Right Rear tire (passenger side, rear axle) and display FILL LOW TIRES. This is a reminder to fill all tires to their recommended levels before driving on them. Press and release the switch to exit the LOCATE menu.
- To set Low Warning or High Warning levels, press and release the switch until WARN LO or WARN HI is displayed and selected. Press and Hold switch to select.
- Press and release the switch until the desired low or high warning level is displayed. Press and hold switch to exit. BACK is displayed and selected. Press and hold switch to exit BIM Channel Setup.
- Press and release until BACK is displayed and selected. Press and hold to select this option. Press and release switch until EXIT SETUP is displayed and selected. Press and hold to exit Setup menu.

### Locating sensors and setting warning levels on a VHX system:

- Press and hold SW1 while turning the key on. The display will show SETUP. Release SW1.
- Press and release SW1 until SETUP BIM is shown. Press and hold SW1. The message display will show SCANNING followed by the number of BIM channels detected. Release SW1.
- If 0 is shown, check all connections and press and hold SW1 with SCAN shown to retry reading the modules. Otherwise, if any other number is shown, press and release SW1 until BIM SETUP is shown.
- Press and hold SW1. The message display will show CH followed by the channel ID number on one line and the label currently assigned on the second line (Example: LF TIRE).

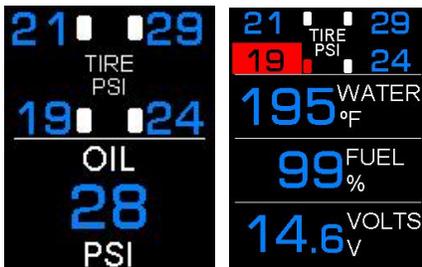
- Press and release SW1 until a channel ID number corresponding to a BIM-22-2 is shown. Press and hold SW1. The message display will show LABEL.
- Press and hold SW1. The message display will show LOW WARN SET. Release SW1. The display will highlight the Low Warning threshold of the BIM channel you have selected. If you want to change the Low Warning threshold at this time, press and release SW1 until the value desired is shown.
- To exit Low Warning setup, press and hold SW1. The message display shows HIGH WARN SET. Release SW1. The display will highlight the High Warning threshold of the BIM channel you have selected. If you want to change the High Warning threshold at this time, press and release SW1 until the value desired is shown.
- The Low and High Warning thresholds of remaining channels (tires) are changed following the steps above.
- To go to the Location procedure, Press and hold SW1. The message display will show TIRE LOCATE SKIP.
- Press and release SW1 so that BEGIN is displayed. Press and hold SW1. If the message FILL LOW TIRES is displayed, it is possible sensor(s) need to be woken up. Sensors wake up with a change in pressure of more than 2 PSI. Another possibility is that one or more tires do not have at least 20 PSI of pressure. Inflate all tires so that all of them have at least 20 PSI.
- Once all sensors are awake and all tires have at least 20 PSI, the display will show DEFLATE LEFT FRONT. At this time, deflate the tire located at the Left Front (driver side, front axle) of the vehicle. When the control box has seen enough of a pressure decrease to determine the sensor's location, display shows DEFLATE RIGHT FRONT. Deflate the tire located at the Right Front (passenger side, front axle).
- When the control box has determined which sensor is at this location display will show DEFLATE LEFT REAR. At this time, deflate the tire located at the Left Rear (driver side, rear axle).
- When the control box has determined which sensor is at this location the system will automatically determine the location of the Right Rear tire (passenger side, rear axle) and display FILL LOW TIRES. This is a reminder to fill all tires to their recommended levels before driving on them.
- Press and release SW1. The display will show DONE. Press and release SW1 to exit the LOCATE procedure. Press and release SW1 until BIM SETUP DONE is displayed. Press and hold SW1 to exit BIM setup.

#### **Locating sensors and setting warning levels on a VFD3 or VFD3X system:**

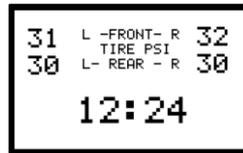
- Press and hold SW1 while turning the key on. The speed display will show SET and the message display will show SETUP. Release SW1. Press and release SW1 until BIM shows in the message display.
- Press and hold SW1. The message display will show SCAN followed by the number of BIM channels detected. Release SW1. If 0 is shown, check all connections and press and hold SW1 with SCAN shown to retry reading the modules. Otherwise, if any other number is shown, press and release SW1 until SETUP is shown.
- Press and hold SW1 until the speed display shows " – " and the message display shows SETUP.
- Release SW1. The message display will show the label assigned to the first channel found and the speed display will show "C" followed by the channel ID number. Press and release SW1 until the channel for a Tire Pressure BIM is shown. (For example, the message display will display LF TIRE).
- Press and hold SW1 until "- " shows in the speed display and WARN shows in the message display.
- Release SW1. The message display shows "L" and the current Low Warning setting. If you want to change the Low Warning threshold at this time, press and release SW1 until the value desired is shown.
- Press and hold SW1. The message display shows "H" followed by the current High Warning value. If you want to change the High Warning threshold at this time, press and release SW1 until the desired value is shown.
- If you want to change the Low or High thresholds of other channels (tires), repeat the steps above.
- Press and hold SW1. The speed display will show LOC and the message will display SKIP. Press and release SW1 until the message display shows BEGIN. Press and hold SW1. If the message FILL LO X TIRES, where X is the number of tires remaining to be filled (Example: FILL LO 2 TIRES) is displayed, it is possible sensor(s) need to be woken up. Sensors wake up with a change in pressure of more than 2 PSI. Another possibility is that one or more tires do not have at least 20 PSI in them. Inflate all tires to at least 20 PSI.
- Once all sensors are awake and all tires have at least 20 PSI, the message display will show DEFLATE LF TIRE. At this time, deflate the tire located at the Left Front (driver side, front axle) of the vehicle.
- When the system has detected enough of a pressure decrease to determine the sensor's location, the message display will show DEFLATE RF TIRE. At this time, deflate the tire located at the Right Front (passenger side, front axle).
- When the system has determined which sensor is at this location, the message display will show DEFLATE LR TIRE. At this time, deflate the tire located at the Left Rear (driver side, rear axle).

- When the system has determined which sensor is at this location, the system will automatically determine the location of the remaining Right Rear tire (passenger side, rear axle) and the message display will show FILL LO. This is a reminder to fill all tires to their recommended levels before driving on them.
- Press and release SW1. The speed display will show SET and the message display will show DONE.
- Press and hold SW1 until the speed display shows “-“. Release SW1 to exit this procedure.

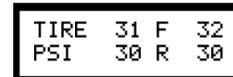
#### Typical HDX Screens



#### Typical VHX Screens



#### Typical VFD3X Screen



#### Typical VFD3 Tire PSI Screens:



Note: VFD3 systems can only display one tire's pressure at a time on the message center, so pressure readings are displayed the same as other messages and are preceded with LF, RF, LR, or RR.

#### Special Operating Modes:

The BIM-22-2 has special operating modes that can be used for configuration or for reporting information on its display for trouble-shooting purposes. These modes can be selected using the following steps:

- Hold the switch on the BIM while turning the key on. The BIM display will show the characters **CF9** while the TPMS Receiver Module configuration is being checked and automatically configured when needed. After it is configured, the BIM display will show the current revision code while the switch is being held.  
Example: **221**
- Release the switch. The display will show the characters **-OP** to indicate you have entered the Special Operating Modes menu.
- Press and release the switch to cycle through the available modes. **OP1** through **OP7** are displayed as you repeatedly press and release the switch.
- The *Special Operating Modes* are as follows:

**OP1 Auto ID Setup.** To select, press and hold until **ACH** is displayed. This mode auto selects BIM channels for each sensor. Upon releasing the switch, the BIM display will begin sequencing a bar across the display **- - -** while it auto detects channel IDs. After it is complete, the BIM will display the ID of the first auto-selected channel (example: **C11**). Turn the key off then back on to have the system start up with this configuration.

**OP2 BIM Learn Sensors Mode.** To select, press and hold until **Lrn** is displayed. This mode is used for learning new TPMS sensors in the event one or more is damaged. For more information concerning this mode, refer to the section *BIM Learn Sensors Mode*.

**OP3 BIM Locate Sensors Mode.** To select, press and hold until **Loc** is displayed. This mode is used for locating sensors before installing the instrument system. For more information concerning this mode, refer to the section *BIM Locate Sensors Mode*.

**OP4 Display Pressures Mode.** To select, press and hold until **PrE** is displayed. This mode continuously displays each sensor's location followed by its pressure. This will continue until the next key off/on cycle.

Example: LF 30 RF 29 Lr 31 rr 32

**OP5 Display Sensor IDs Mode:** To select, press and hold until **IdS** is displayed. This mode continuously displays each sensor's location followed by its sensor ID. This is an 8 digit alphanumeric number corresponding to the number located next to the label "ASIC" on the sensor itself. It is used by the TPMS Receiver Module to identify sensors. This display will continue until the next key off/on cycle. See the example below:

LF 45 IF 91 32 RF 45 31 d8 EF  
Lr 45 27 77 F7 rr 45 26 d2 27

**OP6 Display Battery Status Mode:** To select, press and hold until **bAt** is displayed. This mode continuously displays each sensor's location followed by its battery status. This will continue until the next key off/on cycle.

- - Is displayed if the sensor is inactive or missing.  
- 1 - Is displayed if the sensor's battery is OK.  
- 0 - Is displayed if the sensor's battery is low.

Under normal driving conditions, a low battery means you have approximately 2 months of battery life left.

Example: LF - RF -0- Lr -1- rr -1-

**OP7 Display Temperature Mode.** To select, press and hold until **tPc** is displayed. This mode continuously displays each sensor's location followed by its temperature in degrees Celsius. This will continue until the next key off/on cycle.

Example: LF 23 RF 24 Lr 22 rr 23

### BIM Learn Sensors Mode:

Dakota Digital takes care of the initial configuration of the BIM-22-2 and associated TPMS Receiver Module and TPMS sensors so you should not have to go through this process. However, in the event a sensor is damaged during installation in a tire, upon tire replacement or if its battery has depleted, the module can be taught to detect and "learn" new sensors. Make sure there are no other TPMS sensors similar to those provided with the BIM-22-2 in the surrounding area as the system could receive from them and have adverse effects on this procedure. This includes any sensors you are replacing. These replaced sensors need to be removed from the area so that the system determines they are *missing* and are to be replaced by your *new* sensors. This mode will only function properly if all four TPMS sensors (including the new one(s)) are mounted in tires. If you want useful audible notification during this process (HDX only), enable the sound and increase its volume. For example, HDX: in the Setup->SW, Sound->Volume). Be sure to exit setup as alarms are not enabled while in the HDX setup menu. Follow the procedure below to configure the BIM-22-2 to detect and replace with new sensor(s):

- Follow the steps in the section *Special Operating Modes* to get to the **OP2** - *BIM Learn Sensors Mode*. Once in this mode, the BIM will start displaying **Lrn** and **0-0** alternately. The digit on the left indicates the number of *missing* sensors detected and the digit on the right indicates the number of *new* sensors detected.
- In this mode, it takes approximately 2 minutes for the TPMS Receiver Module to detect missing sensors. During this time, the sensors in all four vehicle tires can be "woken up" by inflating or deflating the tires with a change in pressure of more than 2 PSI. The alarm will briefly sound whenever a *missing* sensor or *new* sensor is detected. The order in which you inflate/deflate the tires is not important in this mode. Note that the number of *missing* sensors may increase to "4" until the sensors are woken up. Once the sensors are woken up and detected, the correct value of *missing* sensors will be displayed.
- When the sensors have been woken up and the system has detected *missing* sensors, the BIM will alternately display **Lrn** and **1-1**, **2-2**, **3-3**, or **4-4** (depending on the number of sensors being replaced). The HDX alarm will briefly sound indicating the number of *missing* sensors and/or *new* sensors has changed telling you to move on to the next tire.

- Once you are satisfied that the number of *missing* sensors and *new* sensors agrees with your installation, press and hold the switch on the BIM-22-2 until the characters **rPL** are displayed.
- If the switch is pressed and the *missing/new* sensors display is **0-0** or if there is not a match (Example: **2-3**), the characters **err** then **-03** will be briefly displayed. This is an error message indicating you do not have a *missing* sensors / *new* sensors match. If the switch is pressed and released and there is a match, the BIM will store the *new* sensors and momentarily display **rPL** followed by **-1-** (or the number of sensors being replaced). The mode then exits and normal operation is resumed.

### BIM Locate Sensors Mode:

Locating sensor positions on the vehicle can be done via a Dakota Digital instrument system or it can be done on the BIM-22-2 before the instruments are installed. The procedure below explains how to do this using the BIM-22-2. The sensors are shipped marked with colors indicating which tire on the vehicle they are to be mounted (LF = Red, RF = Green, LR = Blue, and RR = Yellow). However, in the event a tire is installed in an incorrect location or when tires are rotated, the module can be taught to “locate” the sensors. This mode will only function correctly if all four TPMS Sensors are mounted in tires and on a vehicle. If you want useful audible notification during this process (in HDX systems only), enable the sound and increase its volume in the gauge cluster. This setting is located in the Setup>SW, Sound>Volume. Be sure to exit setup as alarms are not enabled when in the HDX Setup menu. Follow the procedure below to use the BIM-22-2 to locate the sensors:

- Follow the steps in the section *Special Operating Modes* to get to the **0P3** *BIM Locate Sensors Mode*.
- Once in this mode, the BIM needs to determine the initial pressures of the tires before going through the locate process. It will start by displaying **PrE** and **-4-** alternately to show the number of tires whose initial pressures still need to be determined. Each tire’s pressure has to change more than 2 PSI to wake up its sensor. This locate procedure requires the tires’ initial pressures be more than 10 PSI. The displayed number of sensors will decrease until all four tires’ initial pressures have been determined and **-0-** will momentarily be displayed. If connected to an instrument system with a buzzer, a momentary alarm will sound each time the number decreases.
- After all four sensors have been awakened and initial pressures are determined in the previous step, the characters **L0L** and **LF** will alternately be displayed to indicate it is time to locate the Left Front sensor. At this time, deflate the tire positioned at the Left Front of the vehicle at least 2 PSI or until the characters **L0L** and **rF** are displayed. The alarm will momentarily sound (if enabled) when this happens.
- Follow the same procedure for the Right Front tire of the vehicle until **L0L** and **LR** are displayed and the alarm sounds.
- Follow the same procedure for the Left Rear tire of the vehicle. Once this sensor’s location is determined, the Right Rear sensor’s location will automatically be determined. **L0L** and **rr** are momentarily displayed then **End** and **L0L** will be displayed until the BIM switch is pressed, which puts the BIM in normal operation.

### Troubleshooting quick tips:

While the BIM is operating, the dot in the upper left corner of the display will indicate the status. On steady indicates it is powered up but not receiving any bus activity. Flashing indicates it is communicating on the bus. To see the channel and sensor status on the BIM display, press and hold the switch. The display will cycle through three screens.

- Channel Status – The display will show the letter **C** followed by the channel ID for the first sensor. **ChE** is displayed to indicate Channel Error or a bus ID conflict on one of the channels.

Examples:

**C3**      **C11**      **ChE**

- Active Sensors - The display will show a “-“ at the locations a sensor is active and awake. The center segment will be on regardless of which sensors are active and awake. Examples:

All active: **- - -**      LF inactive or missing: **- - -**

- Pressures - The display will show “-“ in each sensor’s location along with the sensor’s pressure. Dashes will be displayed if the sensor is not awake.

Examples:

LF: **-33**      RF: **-32**      LR: **30-**      RR: **29-**      LF inactive: **- - -**

## Troubleshooting guide:

Problem	Possible cause(s)	Possible Solution(s)
Sensor(s) do not show on gauge readout.  BIM will not light up at all.	PWR terminal does not have power.  GND terminal does not have a good ground.	Connect to a location that has power.  Connect to a different ground location.  Return for service. (see instructions).
Sensor does not show on gauge readout.  BIM has a steady dot lit.  <b>ChE</b> is displayed for Channel Status (Troubleshooting Quick tips).	Interface harness is not connected.  Interface harness is loose.  Another BIM is set to the same channel ID.  <b>ChE</b> indicates a bus ID conflict.	Connect the supplied data harness between the BIM unit and the gauge control box.  Make sure both ends of the cable are seated in securely.  Test that module works when connected to control box alone.  Use the Auto ID Setup (Special Operating Mode "OP I") to change IDs.
Gauge lights up, but does not read pressures.  One or more sensors reads <b>--</b> on Tire PSI screen.	Sensors have not woken up.  Voltage or wiring problem in the vehicle wiring harness.	Drive vehicle until sensors wake up and tire pressure is displayed.  Change the associated tire's pressure by inflating or deflating with a pressure change of more than 2 PSI.  Check wiring harness for loose or damaged wires.
One or more sensors reads <b>--</b> on Tire PSI screen after extended period of driving time even though tire does have pressure.	TPMS Receiver Module is not receiving from the TPMS sensors  Sensor needs to be "learned"  If a sensor functioned previously but now it never wakes up, it is possible its battery has depleted.	Try moving the TPMS Receiver Module to a location outside the vehicle to see if it receives from the TPMS sensors.  If a sensor needs to be "learned", follow <b>QP2</b> <i>BIM Learn Sensors Mode</i> in the section <i>Special Operating Modes</i> to relearn the sensor(s).  Follow <b>QPE</b> - <i>Display Battery Status Mode</i> in the section <i>Special Operating Modes</i> to determine the sensor's battery status.  If sensor is still not detected, order replacement sensor(s) (see instructions).
Gauge repeatedly displays <b>--</b> then <b>EE</b> on all 4 Tire PSI locations.  BIM repeatedly displays <b>Err</b> then <b>-01</b> .	This error is a result of the TPMS Receiver Module not being detected by the BIM-22-2 on power up.  TPMS Receiver Module is not connected to the BIM.  TPMS Receiver Module is damaged.	Connect Input on BIM to TPMS Receiver Module (see wiring diagram).  Inspect and reconnect wires and power up again.  Return TPMS Receiver Module for service. (see instructions).
BIM repeatedly displays <b>Err</b> then <b>-02</b> .	This error message occurs when the BIM-22-2 does not receive vehicle speed from a control box or a BIM-01-2.  If this is displayed when the control box gauge is not in the SETUP menu, the BIM to control box interface harness is not connected or it is loose or faulty.	Note that this BIM display message will occur on VHX, VFD3, and VFD3X systems during the locate procedure because those systems do not send the vehicle speed while in the SETUP menu. This is normal and no solution is necessary.  Inspect and reconnect interface harness.  Replace TPMS Receiver Module interface harness.
Gauge displays "FILL LOW TIRES" during locate procedure	One or more TPMS sensors need to be woken up.  One or more tires do not have more than 20 PSI in them.	Inflate all tires with a 2 PSI change in pressure to wake up all sensors.  Inflate all tires until all of them contain more than 20 PSI.
Number of missing sensors is not correct during the BIM Learn procedure.	System could be receiving from one or more of the sensors being replaced.	Remove the sensor(s) being replaced from the area of the vehicle.
Audio alarm (HDX only) is not heard during: Gauge LOCATE procedure or BIM Learn procedure or BIM Locate procedure	Alarm is not connected to the gauge cluster.  Gauge cluster is in SETUP menu.	Ensure alarm harness is connected to gauge cluster.  Exit the SETUP menu.
Tire pressure values do not agree with the location indicated on the instrument's TIRE PSI screen.	Sensors were installed in wrong location.  Locate procedure was not followed after a tire rotation.	Follow the gauge system's locate procedure or the BIM locate procedure.
Valve stem is damaged but sensor is OK.	Valve stem damaged during installation or during operation.	Order replacement valve stem(s) (see instructions).

## Technical specifications

Minimum operating voltage	-	9 volts
Maximum operating voltage	-	18 volts (operating at or near maximum rating for an extended time can damage unit)
Typical current draw (@ 13.8V)	-	< 0.10 A for BIM-22-2 and associated TPMS Receiver Module.
Maximum pressure reading	-	99 psi
Gauge Resolution	-	1 psi
Low / High Warning Level range	-	5 – 99 psi
Default Low Warning	-	25 psi
Default High Warning	-	35 psi
Number of BIM ID numbers used	-	4 (one for each sensor)
Default BIM ID numbers	-	3 - 6

**Control Box Compatibility** - The following versions of software (or newer) are required to function with the BIM-22-2:

HDX Control Box: <i>HX02</i>	HDX Gauge Cluster: Any	VFD3 Control Box: <i>SE4B</i>
VHX Control Box: <i>VX10</i>	VHX Gauge Cluster: #####.010 (Example: VJ90.010)	VFD3X Control Box: <i>SE5A</i>

## SERVICE AND REPAIR

DAKOTA DIGITAL offers complete service and repair of its product line. In addition, technical consultation is available to help you work through any questions or problems you may be having installing one of our products. Please read through the Troubleshooting Guide. There, you will find the solution to most problems.

**Should you ever need to send the unit back for repairs, please call our technical support line, (605) 332-6513, to request a Return Merchandise Authorization number.** Package the product in a good quality box along with plenty of packing material. Ship the product by UPS or insured Parcel Post. Be sure to include the RMA number on the package, and include a complete description of the problem with RMA number, your full name and address (street address preferred), and a telephone number where you can be reached during the day. Any returns for warranty work must include a copy of the dated sales receipt from your place of purchase. Send no money. We will bill you after repair.

### Dakota Digital 24 Month Warranty

DAKOTA DIGITAL warrants to the ORIGINAL PURCHASER of this product that should it, under normal use and condition, be proven defective in material or workmanship within 24 MONTHS FROM THE DATE OF PURCHASE, such defect(s) will be repaired or replaced at Dakota Digital's option.

This warranty does not cover nor extend to damage to the vehicle's systems, and does not cover removal or reinstallation of the product. This Warranty does not apply to any product or part thereof which in the opinion of the Company has been damaged through alteration, improper installation, mishandling, misuse, neglect, or accident.

This Warranty is in lieu of all other expressed warranties or liabilities. Any implied warranties, including any implied warranty of merchantability, shall be limited to the duration of this written warranty. Any action for breach of any warranty hereunder, including any implied warranty of merchantability, must be brought within a period of 24 months from date of original purchase. No person or representative is authorized to assume, for Dakota Digital, any liability other than expressed herein in connection with the sale of this product.

**⚠WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)



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