Odyssey

Manufactured by **Dakota Digital**

ODYR-22-1 & SLX-22-1
TIRE AIR PRESSURE GAUGE

Features:
- 4 tires displayed at one time.
- Provides both pressure and temperature readings.
- Can read 4 vehicle tires and 2 or 4 trailer tires.
- A warning feature that flashes the gauge readout when outside operating limits.
- An output for an external warning light or buzzer.
- User adjustable warning points.
- Individual settings for vehicle and trailer pressure and temperature.
- Microprocessor stabilized readings.
- Automatic Night dimming.
- High Visibility, full character VFD display.

The tire air pressure gauge will read the pressure and temperature of the air in your tires. The sensors used mount inside the tire, attached to the tire rim. They use wireless transmitter technology to send the information to the under-dash receiver. The senders transmit information when the vehicle is traveling over 6 mph. For 15 minutes after the vehicle stops the sensors will be in a "gauge-fill" mode and will transmit if the tire pressure changes more than 3 psi. The sensors can measure pressures from 0-78 psi and temperature from 0-255 F.

Operation:

The gauge needs only the PWR and GND terminals connected to light up. When the DIM terminal has 12 volts, it will dim the display for night viewing. The two black cables next to the terminal strip connect to the receiver module. They plug into the mating connectors on the back of the receiver module.

The display will show readings of --- until the sensor begins transmitting. This will happen once the vehicle is driven above 6 mph.

The display will flash and the warning output will be set whenever one of the tires pressure or temperature is out of the warning set limits.

Using external warning indicators:

The WRN terminal provides a ground trigger whenever any of the senders are outside the set limits. Low current indicators (less than 1/4 A) can be activated directly by connecting their power wire to 12 volts and connecting their ground wire to the WRN terminal.

For higher current buzzers or lights, a relay will need to be used to switch the indicator on. Dakota Digital's RLY-1 30A relay may be used for this. One of the coil wires should be connected to 12 volts and the other coil wire connected to the WRN terminal. When the gauge is outside its limits, the relay will turn on. The relay contact wires can be used to switch the higher current.

> WARNING! - CONNECTING A HIGH CURRENT INDICATOR DIRECTLY TO THE WARNING OUTPUT WILL DAMAGE THE UNIT.

Setting the warning limits:

      The low pressure and high temperature warning limits can be set to different values, also the main vehicle tires can be set differently than the trailer tires. The push button switch on the front of the display is used for setting the warning limit. The procedure for setting the warning limit is as follows:

1. Hold the switch while you turn the key on. The display should light up and show "SETUP" "MODE".
2. Release the switch. The display should show "SETUP" "DONE".
3. Press and release the switch to toggle through the following menus:
   "WARN" "SET"; "SENDR" "LEARN"; "TOWED" "LEARN"; and "SETUP" "DONE"
   - "SETUP" "DONE"
     Press and hold the switch to exit the setup routine.
     If the DIM terminal is powered with this menu displayed, all settings will be returned to their factory defaults.
   - "WARN" "SET"
     Press and hold the switch to change the warning points.
   - "SENDR" "LEARN"
     Press and hold the switch to program the tire sender locations or rotate tires.
   - "TOWED" "LEARN"
     Press and hold the switch to program or clear trailer sender locations.

WARN SET menu

1. After selecting the WARN SET menu, the display will show "xxx LOW" "PSI" where xxx is the current low tire pressure setting.
2. Each time the switch is momentarily pressed the value will change. Press and hold the switch to save this setting and go on.
3. The display will next show "TEMP" and then "F" or "C". This is the current temperature unit setting, Fahrenheit or Celsius.
4. Press and release the switch to change the unit, press and hold the switch to save the setting and go on.
5. The display will next show "xxx HIGH" "TEMP" where xxx is the current high temperature warning point.
6. Each time the switch is momentarily pressed the value will change. Press and hold the switch to save this setting and go on.
7. The display will next show " xx TOWED" "PSI" where xx is the current trailer low tire pressure setting.
8. Each time the switch is momentarily pressed the value will change. Press and hold the switch to save this setting and go on.
9. The display will next show "xxx TOWED" "TEMP" where xx is the current trailer high temperature warning point.
10. The display will not go back to the "SETUP" "DONE" menu screen.

Programming Tire Sensors:

The system can learn 4 vehicle tires and 2 or 4 trailer tires. The push button switch on the front of the display is used for setting the warning limit. The procedure for setting the warning limit is as follows:

4. Hold the switch while you turn the key on. The display should light up and show "SETUP" "MODE".
5. Release the switch. The display should show "SETUP" "DONE".
6. Press and release the switch to toggle through the following menus:
    "WARN" "SET"; "SENDR" "LEARN"; "TOWED" "LEARN"; and "SETUP" "DONE"
    - "SETUP" "DONE"
      Press and hold the switch to exit the setup routine.
    - "WARN" "SET"
      Press and hold the switch to change the warning points.
    - "SENDR" "LEARN"
      Press and hold the switch to program the tire sender locations or rotate tires.
    - "TOWED" "LEARN"
      Press and hold the switch to program or clear trailer sender locations.

SENDER LEARN menu

1. After selecting the SENDR LEARN menu, the display will show "L F" "LEARN". L F is left front, L R is left rear, R F is right front, R R is right rear.
2. Press and release the switch to select which corner to program or clear. Press and hold the switch when the desired corner is displayed.
3. The display will change to "x x" "READY" where "x x" is the currently selected corner. Press and hold the switch to clear the stored setting or activate the sender for the desired corner. The sender can be activated by vigorously shaking the sensor when it is not installed in a rim or by letting some air out of the tire to activate it. (If the sensors are mounted in the tires this will need to be done within 15 minutes after the vehicle has been driven so the senders are in their gauge fill mode.) After the sensor has been activated, the display will show "x x" "DONE", now press and release the button to store and move on to the next sensor.
4. These steps can be repeated for all four tires. You should wait 90 seconds between programming each tire to make sure that previous sender has quit transmitting.

TOWED LEARN menu

1. After selecting the TOWED LEARN menu, the display will show to same selections as the SENDER LEARN menu, but the tire information will be saved in the trailer area.
2. If you only have are using two trailer tires, just program the right rear and left rear.

Wiring:

PWR   -   connect to 12 volt accessory power.
GND   -   connect to a good ground point in the vehicle.
DIM   -   connect to the tail light circuit.
WRN   -   can connect to the negative side of a relay, light, or buzzer.

CABLES   -   plug in to the mating connectors on the black receiver module.

DISPLAY CONNECTOR   -   plug into mating harness to round gauge.

Sensors:

The sensors have been pre-programmed to the following locations:

Sensor color	wheel location
Green	Right front
Red	Left front
Blue	Right rear
Yellow	Left rear.

They can be reprogrammed to any location to allow for tire rotation.

Mount the sensors in the tire rim according to the supplied mounting instructions and pictures.

Mounting:

      The gauge requires a round hole 2-1/16" in diameter. It should be inserted into the opening from the front and the U-clamp will be installed from the back. Tighten the two nuts on the U-clamp so that the gauge is secure. Gauge depth to the back of the case is 1". Gauge depth including the mounting studs is 1-7/8".

      The controller can be mounted to wood, metal, or plastic using screws with the four mounting holes, double sided tape, or hook and loop fasteners.

Troubleshooting guide.

Problem	Possible cause	Solution
Gauge will not light up	PWR terminal does not have power.	Connect to a location that has power.
	GND terminal is not getting a good ground.	Connect ground to a different location.
	Display harness is unplugged.	Seat connectors in tightly at both ends.
	Gauge is damaged.	Return gauge for repair. (see instructions)
Gauge lights up, but displays "--".	Vehicle is not moving.	Vehicle must be going > 6 MPH before sensors begin transmitting.
	Sensors are not programmed in correctly.	See "Programming Tire Sensors" in the first part of this manual.
	Receiver cable is unplugged.	Check that both receiver cables are plugged in securely.
	Gauge is damaged.	Return gauge for repair. (contact factory)
Gauge lights up, but does not read correctly.	Loose connection on power wire.	Reconnect wire going to PWR terminal.
	Poor sender ground.	Make sure sender case is getting a solid ground.
	Poor ground connection.	Move ground to different location
	Incorrect sender type.	Make sure sender has been replaced with the correct type (SEN-03-1 or -5).
	Gauge is set for the wrong sender type.	Reset the sender type.
Gauge flashes constantly.	Warning limits are not set properly.	Reset warning limits.
	Tire has improper air pressure.	Check air level.
External warning indicator does not work.	Indicator not connected properly.	Check indicator wiring connections.
	Indicator does not work.	Repair or replace indicator.
	Gauge output has been damaged.	Return gauge for repair. (see instructions)
Gauge will not dim.	DIM terminal is not connected correctly.	Check wiring connections.
	Gauge is damaged.	Return gauge for repair. (contact factory)
Gauge remains dim at all times.	DIM terminal is getting power all of the time.	Connect DIM terminal to location that only has power when the headlights are on.
	Battery is very low.	Recharge or replace vehicle battery.
	Gauge is damaged.	Return gauge for repair. (contact factory)

Technical specifications

Minimum operating voltage	-	7 volts
Maximum operating voltage	-	18 volts
	(operating at or near maximum rating for an extended time can damage unit)	
Maximum pressure reading	-	78 psi
Gauge Resolution	-	1 psi
Pressure Accuracy	-	2 psi
Temperature Accuracy	-	2 F (3 C)
Typical current draw (@ 13.8V)	-	0.25 A

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.

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