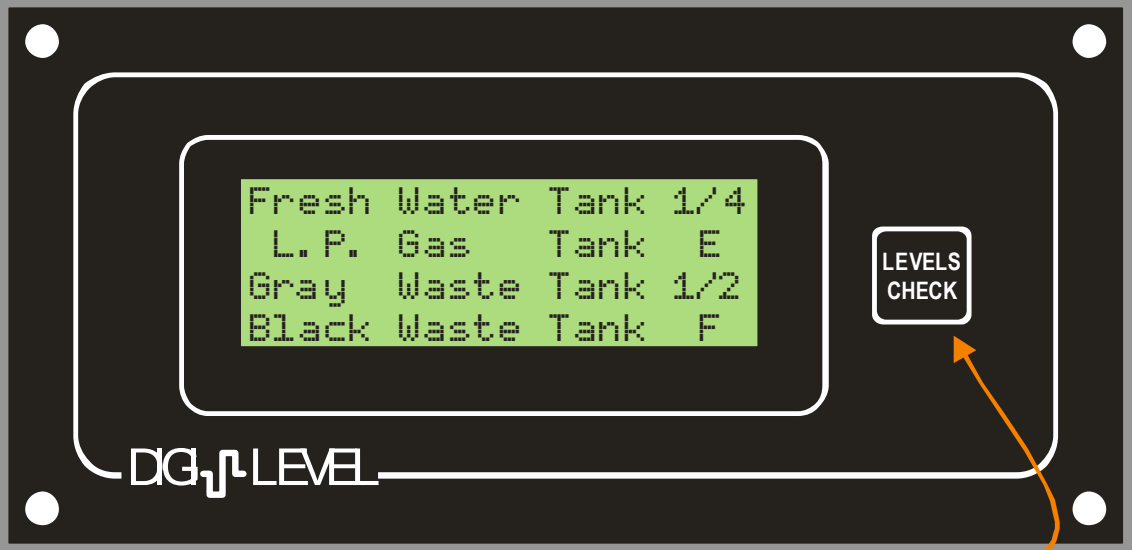
Digital Monitor Panel

PRECISION CIRCUITS INC

Part Number 00-10040-000



Pressing this button will scroll through the mutiple info screens

To conserve Battery power, after 1 minute Backlighting will go off, and display will return to this Default Screen. However, the Panel is still live.

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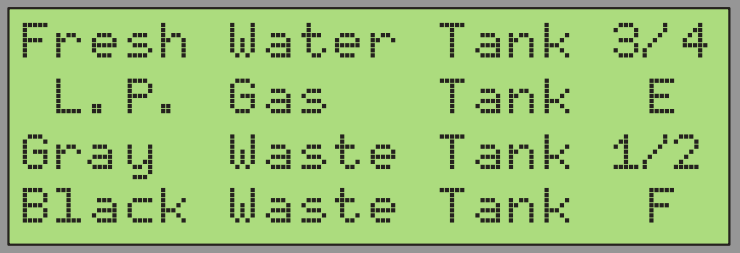
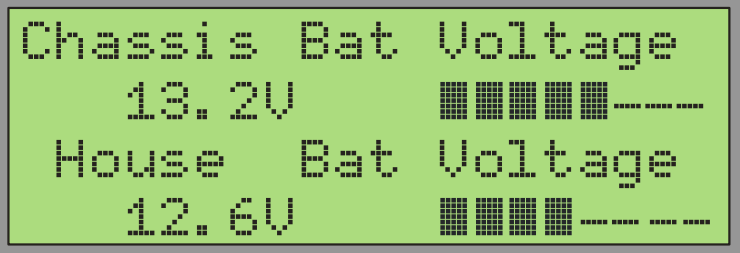


The screen will continually update every 1 second, and the level sensors are continually communicating. Should a sensor exceed normal limits, ERR will display in place of the level. Depending on your RV, the Levels will be displayed in either 1/3's or 1/4's.

E, 1/3, 2/3, F, or ERR; or
E, 1/4, 1/2, 3/4, F, or ERR.



The Chassis and House Battery Voltages will display in both Digital and Analog (bar graph) format. The Analog range is 10.0V-15.0V; with bar graph meter increments of 0.125Volts. The screen will continually update every 1 second.

Below are some guides to determine Battery Charge State.
Over 13.0V, the Battery is being charged.
If no appliances, lights, Inverter, etc are on, a Battery at rest voltage will approximate Battery Charge State
range from 11.8V (0% charge) - 12.8 (100%)

Digital Monitor Panel

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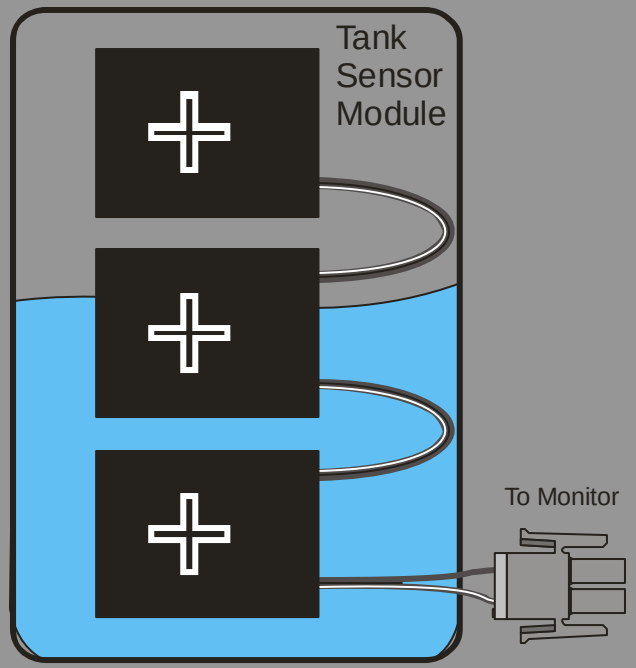
Part Number 00-10023-000



The Tank Sensor features field effect technology, a non-invasive method. Each Sensor array contains three sensors which glue externally to the polymer tank wall with high-grade long life adhesive, at the position and level that the water is to be sensed, thus eliminating the need for calibration. Each Sensor emits an electric field into the tank. When the water level passes by the Sensor, it detects a change in its electric field.

To conserve Battery power, after 1 minute Backlighting will go off, and display will return to this Default Screen. However, the Panel is still live.

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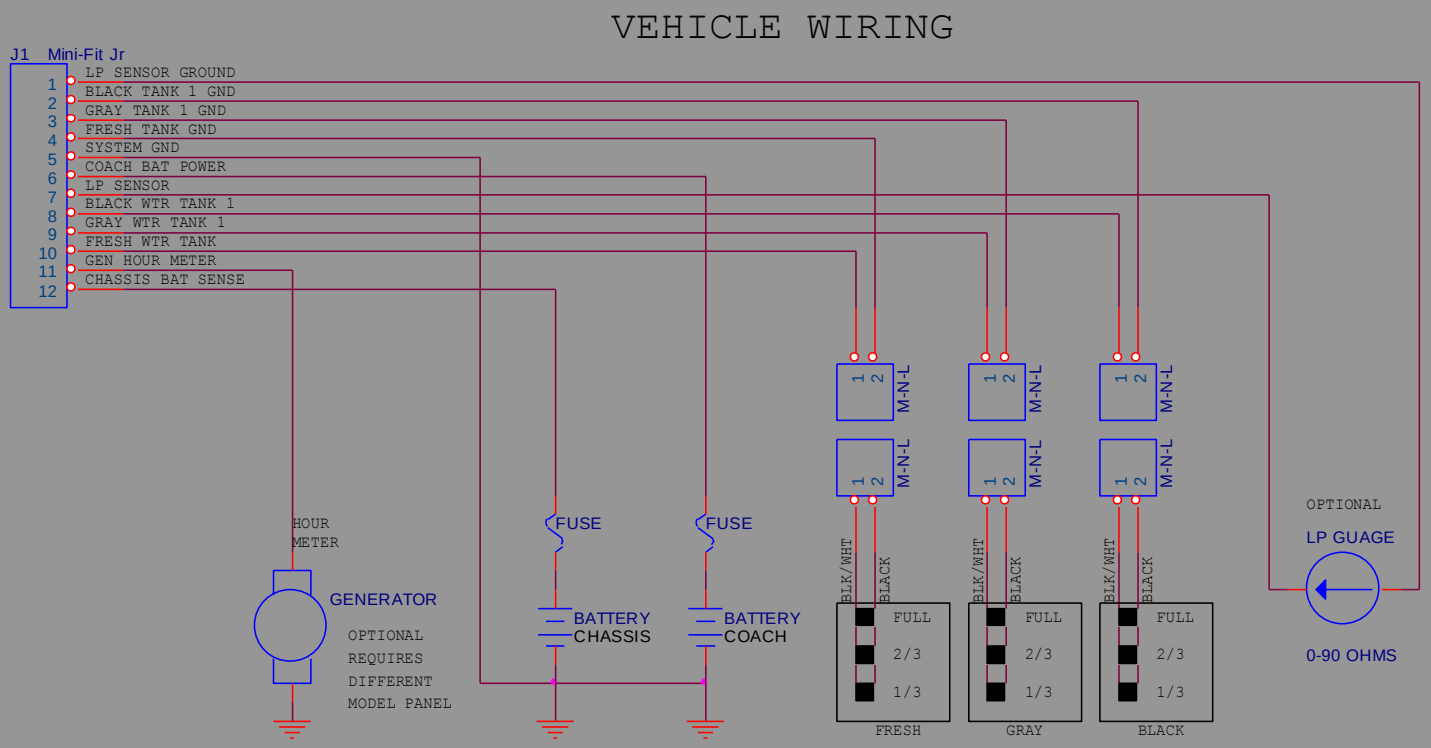
Trouble Shooting

- If Monitor Panel is completely non-operational, Check to make sure there is between +11Volts and +15Volts between pins 5 and 6.



Trouble Shooting Battery Voltmeters

- Place Voltmeter between pins 5 and 6 of the connector. Voltage should be close to House Bat Voltage.
- Place Voltmeter between pins 5 and 12 of the connector. Voltage should be close to Chassis Bat Voltage.

Digital Monitor Panel

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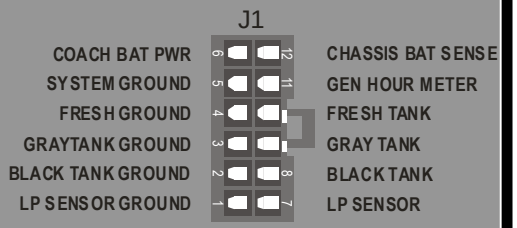
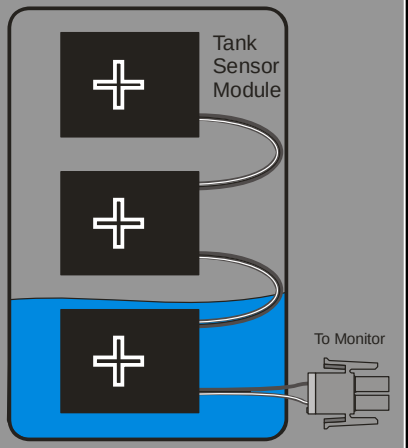
Trouble Shooting Water Level Sensors

There are 3 Tanks on the RV. Each one has a pair of wires going to the J1 connector. When the Tank Level Button is pressed, and the Display is showing the levels of the Tanks, each one of the 3 pairs of wires should measure +5V. For example for the Fresh Water Tank there should be +5V from pin 4 Ground to pin 10 Signal.



Shorting the two pins together will display ERR on the screen. Shorting the two wires at the tank will test those wires.



Each Sensor on the Tank will send a signal to the Monitor Panel when it senses water. In the picture to the right, the bottom sensor pad should be sending a signal. Placing a piece of sheet metal next to either of the top two sensors should change the display from 1/3 to 2/3. In this way each individual sensor pad can be tested. Sometimes just touching each sensor with your finger will mimic presence of water. So with the tank empty, placing your finger on any one sensor will change the display from empty to 1/3. Placing a finger on two sensors will display 2/3.

Trouble Shooting LP Tank.

An open connection to the LP Tank Sensor will produce an ERR display.

With the connector removed from the Panel, place an ohm meter between pins 1 and 7 of the connector. The LP sensor should measure approximately 0 ohms when empty and 90 ohms when full.

With the connector plugged in, place a Voltmeter between pins 1 and 7 of the connector. The voltage reading should be 0 volts when empty and 2.25 volts when full.

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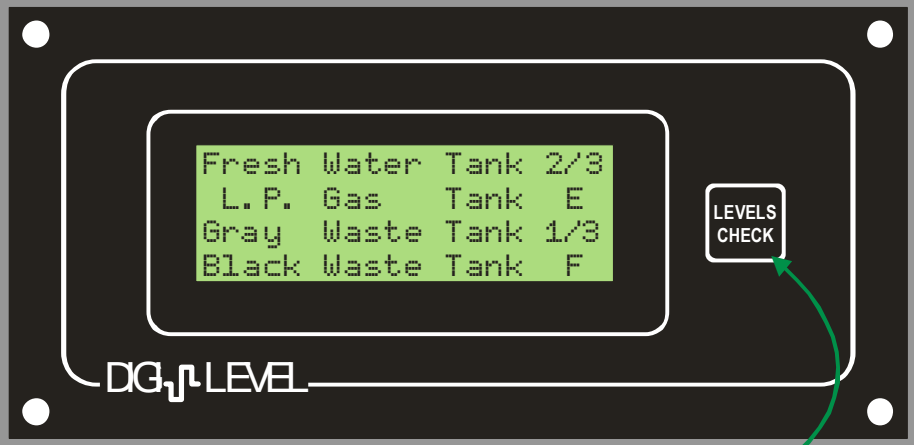
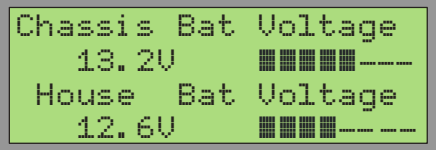
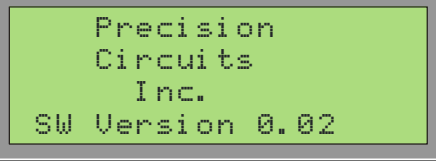
- The Digital Monitor Panel has two automatic learn features and it will learn:
- 1. If the Water and Waste Tanks have 1/3 or 1/4 increment sensors.
- 2. If LP Sensor exists.
- Each feature above is learned independently, even for the individual Tanks.
- Once a feature is learned, it is stored in non-volatile memory, and remembered even if Battery Power is removed from the Panel.
- The Digital Monitor Panel has many safe guards to prevent improperly learning a feature. Should the Panel learn something incorrectly, an option exists on the Panel to reset the original factory default, so that the Panel can re-learn the proper features.







To Reset the Panel to Default

1. Touch LEVELS CHECK as many times as needed to get to the above screen.
2. Press ***And Hold*** LEVELS CHECK button for approximately 6 seconds. The screen to the left appears right away, but continue holding the button.
3. Once Factory Mode screen appears, (shown to the left), release LEVELS CHECK, and quickly press and release again.
4. If done properly, screen to the left should appear. Factory Default settings have been reset and Panel is going through Power-up screen. If not, go back to step #1.