

TROUBLESHOOTING GUIDE

Power Control Central Monitor Panel Remote Display



PRECISION CIRCUITS INC

Precision Circuits Remote Display



**Keystone RV
Company**

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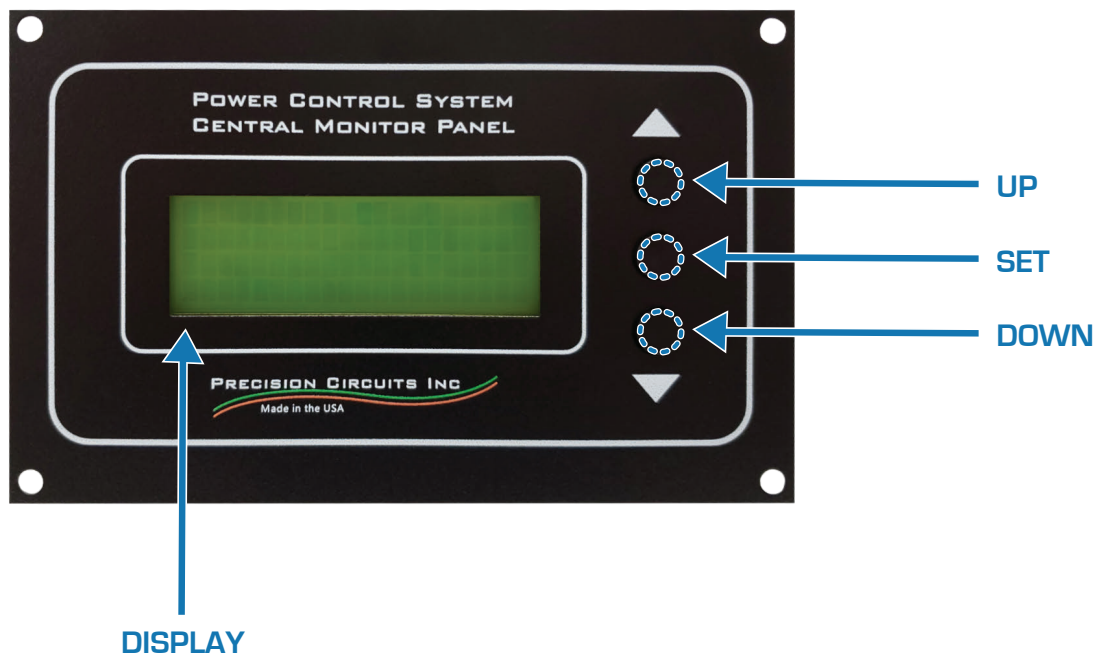


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1.1 Remote Display Controls



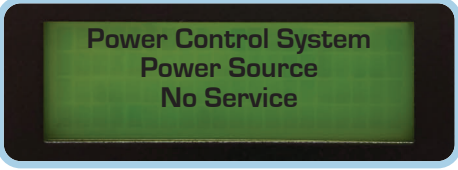
Central Monitor Panel

The PCS Monitor displays pertinent Power Control System status information.

The UP and DOWN buttons are used to step through each individual screen of information. Pressing and releasing either of the UP or DOWN button will step to either the Previous or Next Display Screen.

Once all the screens have been seen, the next press of the Button will wrap back around through all the Display Screens once again. The SET Button only functions when the Service Type screen is displayed, to Select between 30A Service and 20A Service.

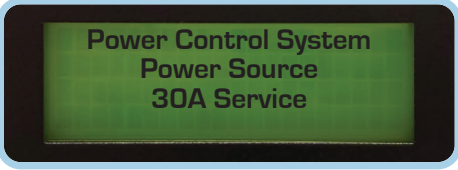
2.1 Remote Screen Displays



Power Control System
Power Source
No Service

No Service-

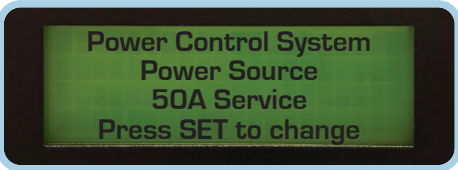
There is 12V power available, but the unit is not sensing any AC power. Check your power source and/or turn on the inverter.



Power Control System
Power Source
30A Service

30A Service-

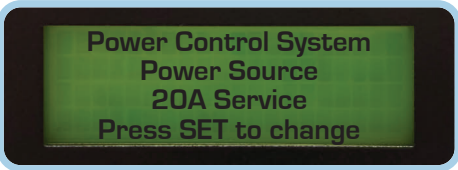
The PCS senses 0V AC between L1 and L2 and will limit power output to 30A. If you are plugged into 50A power check your supply and check that all your breakers are on inside the coach breaker box.



Power Control System
Power Source
50A Service
Press SET to change

50A Service-

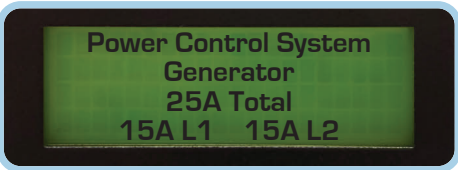
The PCS is sensing 240/208V- AC power. The PCS will limit power to 50A on leg 1 and 2, and a combined limit of 100 Amps.



Power Control System
Power Source
20A Service
Press SET to change

15A/20A Service-

The PCS senses 0V AC and the owner has pressed the center button so the output matches the power available.



Power Control System
Generator
25A Total
15A L1 15A L2

Generator (Inverter)-

The PCS has received a signal from the Super Solar Flex and is limiting combined current to 25A. 15A on L1 or 15A on L2 but not more than 25A total.

2.1 Remote Screen Displays (Continued)

Power Management:

As each appliance is shed, PCS learns the current for that specific appliance, to ensure that there will be sufficient headroom to turn the appliance back on and be under the current limit. When current exceeds the limit, the PCS will immediately shed load in the following order: water heater, A/C 3, Vacuum, A/C 2, Fireplace, A/C 1 and Microwave.

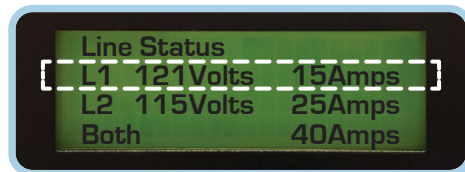
Once the total RV current has dropped, for example because the appliance has been turned off, the PCS will reverse the above procedure, returning power to appliances whose operation was not immediately critical. To ensure that Air Conditioner compressor pressure is bled, and to reduce quick cycling, there is a 2 minute delay from the time a Load has been shed, to the time power is restored.

Line Status:

PCS not only monitors total RV current but also has two built in Volt Meters, and monitors the voltage on each of the Lines.

L1 121Volts 15Amps, indicates that Line 1 has 121Volts and is presently drawing 15Amps.

!BrownOut!, if the display indicates Brown Out, the Display will hold the lowest captured voltage that may have occurred while the RV owner is away. Pressing any switch clears the display, and resumes displaying the present readings.



Example

3.1 Troubleshooting

If Incorrect Voltage Displayed-

Using pictorial below, using a Voltmeter, take three measurements from the Ground Bar to each of the three center screws labeled L1, N, L2.

- L1 to Ground should be close to 120V
- L2 to Ground should be close to 120V
- Neutral to Ground should be close to 0V

If not check to make sure all circuit breakers are on and that L1 screw terminal is wired to L1 Breaker, L2 screw terminal is wired to an L2 Breaker, and that there is a wire from N to the Neutral Bar.

Next, take a reading from L1 to L2 screw Terminal on the 9-screw terminal block. If 240V, the display should read 50A Service. If close to 0V, the display should read 30A or 20A Service.

If System displays 50A Service when plugged into 30A Service-

- 1) Make sure all Circuit Breakers are on.
- 2) Check Voltage between L1 and L2 DIRECTLY ON PCS Module, should be 0Vac.

If System Displays 30A Service when plugged into 50A Service-

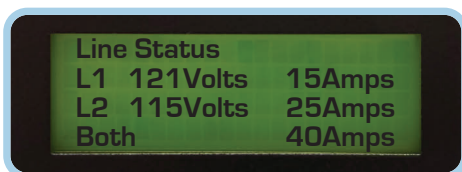
- 1) Check Voltage between L1 and L2 DIRECTLY ON PCS Module, should be 240Vac.
 - Shore Power Receptacle improperly wired.
 - L1 and L2 terminals are NOT wired to different phase breakers in the Panelboard.

If System never displays Current-

- 1) Check that Neutral wire routed through the Mini-PCS I/O Module Current Sensor.
- 2) Check Data Cable.

If System displays Current Reads 99-

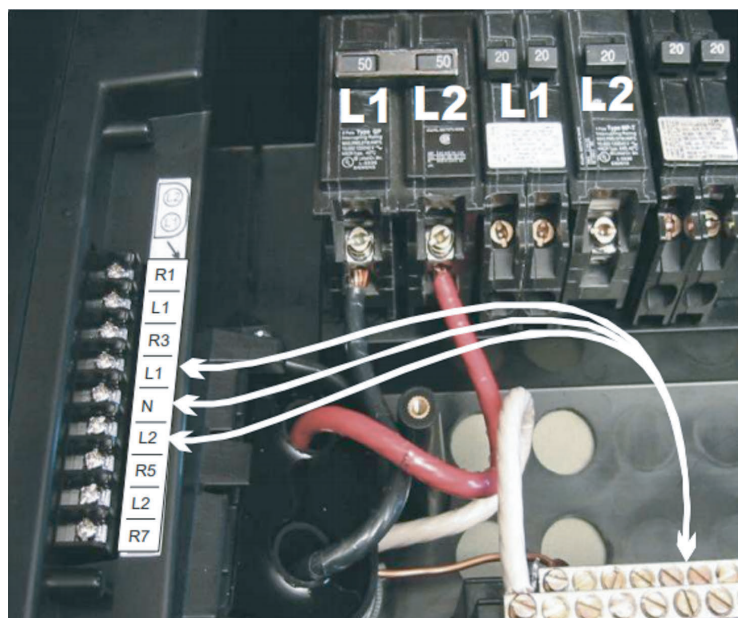
Probably hit by lightning.



Example 1



Example 2



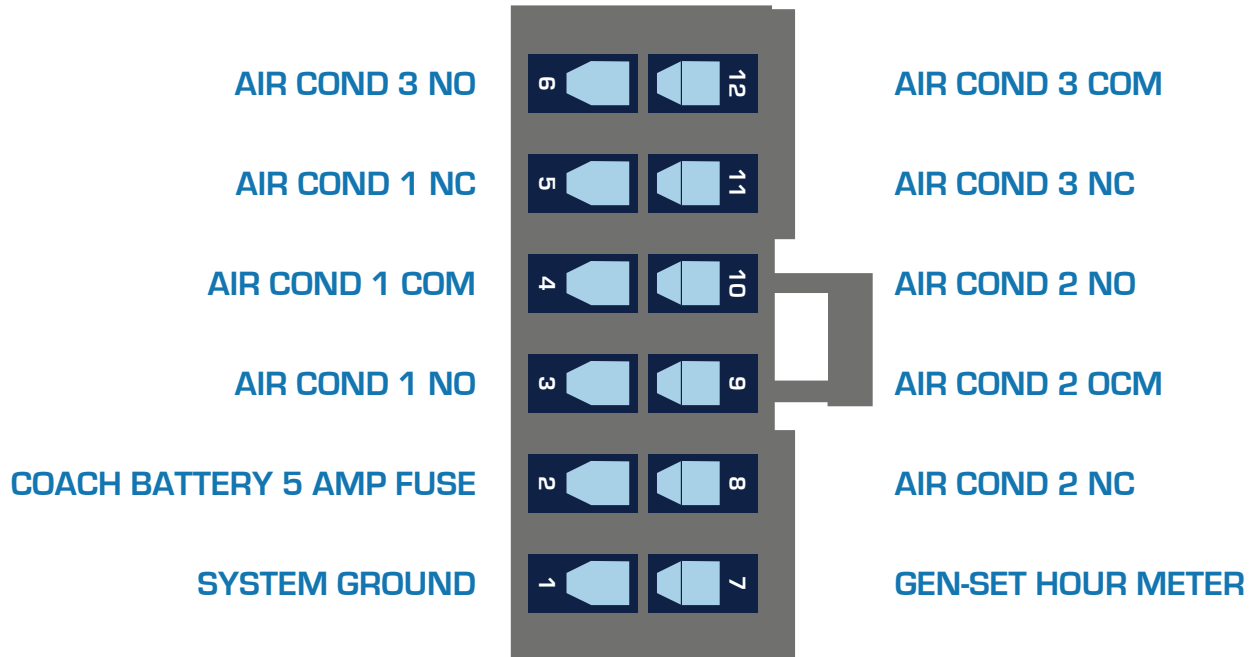
3.1 Troubleshooting Continued

If System does not recognize when the Generator/Inverter is ON-

1) Check for 12Vdc on Pin 7 of 12 Pin connector located at the rear of the Panelboard (Gen-Set Hour Meter).

If Air Conditioner compressors not working. Check RV wiring-

- 1) Unplug 12 Pin Low Voltage connector at Rear of the Panelboard.
- If compressor is wired to NO pins, compressor should be working.
 - If wired to NC pins, short the NC and COM wires to operate the compressor.



View of connector is from contact insertion side