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**CLASS™**

# **BASIC OPERATION and TROUBLESHOOTING**

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## CLASS 3 - Basic Operation and Troubleshooting

### Notes:

1. All references to "P1-x" refer to the Vehicle Interface Harness connector to the CLASS™ controller mating connector J1, where 'x' is the pin location designator. (See Figure 6 or Table 2)
2. "System Voltage" refers to the operating voltage of the bus (typically +24V)
3. Measurements are with respect to P1-24 (CLASS™ Ground):

### Process:

1. Make sure that the exit doors are CLOSED, and the doorway is CLEAR of any people or objects.
2. Turn on CLASS™ (usually by turning on the bus RUN switch and CLASS On/Off switch). Verify that the SYSTEM LED turns Red initially and then begins flashing Orange. If the SYSTEM LED does not turn on:  
Verify that the CLASS™ controller is receiving power (System Voltage) at P1-18 (*Pwr*). If power is not found at P1-18, verify that the On/Off switch is ON, verify the connection to the On/Off Switch, and verify the bus RUN switch is ON.
3. Unlock the exit door. (The Green Light should be ON.)
4. Verify that the SEND lights for LPS and RPS are ON.
5. If the SEND light is not ON:
  - a. Verify that the CLASS™ controller is receiving power (System Voltage) at P1-7 (*ENA*) [or GND at P1-8 (*/ENA*)].
    - i. If power is not found at P1-8 (*ENA*), check that Green Light is ON, and verify the connection to the appropriate limit switch.
    - ii. Verify that there is System Voltage at P1-5 (*DNC*) [or GND at P1-6 (*/DNC*)] from the Fully Closed Switch
6. If the SEND light is on, place an object in the beam area of the LEFT panel sensor, as follows:
  - a. Make sure that the object is oriented so as to reflect sound back to the sensor.
  - b. Make sure the object is at least 10" from the face of the sensor.
  - c. Make sure the object is no more than 40" from the face of the sensor.
  - d. If necessary, move the object slowly up or down to make sure it is not in a "dead zone"
7. Verify that the LPS orange light is ON when the object is in the sensor's beam area.

8. If the LPS orange light is not ON:
  - a. Verify that the sensor is transmitting ultrasound pulses by lightly placing a finger on the white circle at the face of the sensor. A slight vibration should be felt when the sensor is transmitting. (This vibration is not at the frequency of the ultrasound pulse; it is the repetitive “trigger” pulse, which occurs every 20-25 milliseconds when the sensor is transmitting.)
  - b. If no vibration can be felt, verify that the sensor is correctly plugged into the controller and in the correct location. (See Figure 2)
9. If the LPS orange light goes ON, the door should have opened.  
If not:
  - a. Verify the door is physically unlocked and capable of opening
  - b. Verify that P1-13 (*OPEN*) is connected to the bus PLC at the appropriate input (usually the “touchbar” input) and is at System Voltage (referenced to Bus/PLC Ground) when the LPS orange light is ON.
10. Repeat steps 6-9 for the RIGHT sensor and RIGHT orange light.
11. Once the door is fully open, repeat steps 7-9 for the MSU and MSU orange light. The door must remain fully open while verifying the MSU. If necessary, block the door open and ensure that the fully open switch remains activated. Verify System Voltage is at P1-1 (*DFO*) [or GND is at P1-2 (*DFO*)]
12. If the MSU orange light is not ON:
  - a. In addition to the actions to step 8a and 8b, verify that the Fully Open switch is activated and the Fully Closed switch is deactivated.