

Troubleshooting

Observing the LEDs on the OP-9001

The steps shown below explain how to use the built-in communication LEDs to make sure the communications of your configuration are working properly:

1. Make sure you have downloaded your system configuration to the OP-9001, and that you have downloaded the panel configurations to each respective panel.
2. Remove the jumper from the OP-9001 and make sure all of the dip switch settings on your individual panels are set to unique addresses. These addresses, of course, must be the same panel addresses you assigned during configuration.
3. Attach the cable from the PLC to the OP-9001. Attach the cabling between the OP-9001 and the multiple panels.
4. Apply power to the PLC, the OP-9001, and all of the respective panels.
5. Make sure anytime you remove or replace the OP-9001 jumper that you also power cycle the OP-9001. Power cycle means to turn the power OFF, then ON.
6. With power applied, visually inspect the LEDs located beside each connecting port of the OP-9001.
 - The LED located beside the port for the cable leading to the PLC should blink **green** when the OP-9001 is **sending** requests for data to the PLC.
 - The LED should blink **red** when the OP-9001 is **receiving** data from the PLC.
 - If the baud rate is such that the request and transfer of data are very fast (changing rapidly between the red and green states), it will appear that the LED glows **amber**.

LED for reporting direction of data flow at the PLC connecting port.



LEDs for reporting direction of data flow at the two multiple panel connecting ports.

Requesting Data from PLC But No Response

If the LED (on the top edge of the OP-9001) remains green and never makes the transition to red or amber, then you are probably experiencing a lack of response by the PLC. When your PLC and the OP-9001 are communicating correctly, the LEDs should flicker constantly (or appear to glow amber at high baud rates), with only a few pauses. If it doesn't, here's what you do to isolate and solve the problem:

1. Check your baud rate setting between the PLC and OP-9001. Make sure they are set at a rate that matches your PLC specs and configuration.
2. If the baud rate appears to be OK, check your panel configurations to make sure you have specified the correct memory allocations, and that you have not specified memory that does not exist for your PLC.

3. If you are using a PLC *Direct* or compatible PLC, make sure the PLC port is set to HEX. If you don't have the port set to HEX, the LED may indicate that everything is OK, but in fact, no communication between the OP-9001 and the PLC is taking place.
4. If the baud rate and memory allocation seem to be OK, perhaps your cable is bad. If you built your own cable, check the pinout specifications on Page 12.

OP-9001 Not Communicating Properly with the Panels

The LEDs on the bottom edge of the OP-9001 are used to troubleshoot communication between the OP-9001 and the panels. The OP-9001 should be sending requests (green) to the connected panels and receiving responses (red). When the OP-9001 and the panels are communicating correctly, the LED indicators on the OP-9001 should flicker constantly (or appear to glow amber), and the LEDs on the panels should barely flicker. The amount of flicker will depend upon how many panels you have connected to the OP-9001. Fewer panels mean less flicker. If the OP-9001 is not communicating properly, here are some things to check and correct if necessary:

1. Check the LEDs on the back of each panel. These LEDs should glow **red** when receiving requests and glow **green** when sending data to the OP-9001. If any one of the panels is not communicating, check the DIP switch on the back of the panel and make sure its setting matches the setting you indicated in your configuration. Remember also that no two panels can have the same setting.
2. If Step 2 checks out OK, then make sure the panel is set for Optimate HEX protocol.
3. If Step 3 is OK, then check your cabling.
4. Make sure that any DIP switch setting changes have been followed by a power cycle of the panel. You must turn the power OFF then ON for the new setting to take place.

Trouble Communicating with Computer During Configuration

Here are some common causes of this problem:

1. The OPEditor is a DOS program, you cannot shell out of Windows or try to run the OPEditor from Windows. Make sure you have completely exited Windows before trying to do your configuration.
2. In some rare cases, you may have a TSR or a device driver that is conflicting with the OPEditor communications. To check this, if you are using MS-DOS 6.0 or above, press the **F8** key when you see the message "**Starting MS-DOS...**" on the screen. This allows you to decide line-by-line for your CONFIG.SYS and AUTOEXEC.BAT files whether or not you want certain drivers or TSRs to be loaded. We suggest that you only load HIMEM.SYS in your CONFIG.SYS file, and you not run the AUTOEXEC.BAT file at all. After your system loads HIMEM.SYS and then you are asked if you want to run your AUTOEXEC.BAT, say "NO". You will then be given a DOS prompt. Change to your OPEditor subdirectory by typing: **CD C:\OP** or whatever alternative path and subdirectory is applicable. Once you are in your OPEditor subdirectory, type: **OPEDITOR**.