

Appendix B

Troubleshooting the OP-609

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Troubleshooting the OP-609 Panel

Troubleshooting

In this section, we explain how to isolate potential problems which may occur while using the OP-609. If you are unable to troubleshoot and correct your problem using these procedures, please contact our technical product support team between the hours of 9:00 AM and 6:00 PM (EST) Monday through Friday. Call **1-800-633-0405** or fax **(770) 889-7876**.

We have organized the troubleshooting section into two categories:

- Panel configuration problems
- Panel and PLC communications failures

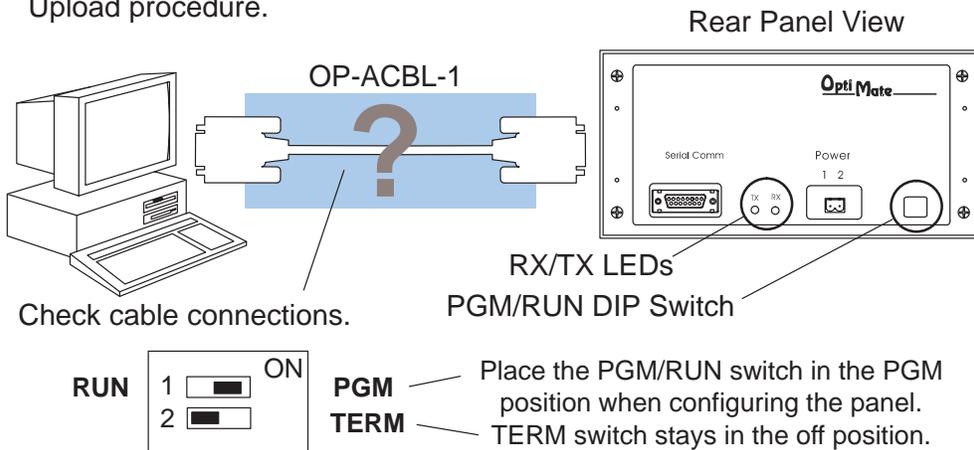
Panel Configuration Problems

We explained in previous sections that the OP-WINEDIT configuration software is used to create OP-panel applications and to download and upload your OP-panel programs. If you are online with the panel and communications fails, the following error message is displayed:

“Could not communicate with panel” (OP-WINEDIT)

If this occurs, check the following in the order given:

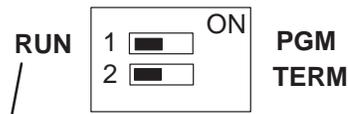
1. Check the rear panel RX/TX LEDs while attempting the Upload or Download operation. Both LEDs should be giving slow alternating flash signals, indicating the PC and OP-panel are connected. If *only* the TX (transmitter) LED is flashing, or if the TX/RX LEDs are *not* alternating between flashes, check that the OP-panel is set to the configuration mode by setting the RUN/PGM DIP switch to the PGM position. Remember to cycle the power.
2. Check to make sure the configuration cable (**OP-ACBL-1**) is properly connected. For cable details, refer to the Appendix A, Connecting the Configuration Cable OP-ACBL-1 section.
3. Make sure the correct communications port is selected with the software, such as COM1, COM2, COM3, COM4. If **DirectSOFT** is open, close it down while you are configuring the panel.
4. Check the 24VDC power source and connections.
5. After checking the above items, repeat the online panel Download or Upload procedure.



Panel to PLC Communications Problems

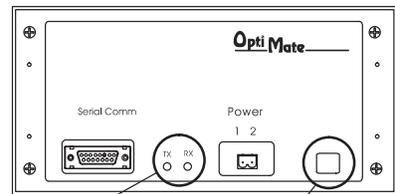
If you experience communications difficulties between the OP-panel and PLC for a period of twelve seconds, all lamps and inset LEDs will flash rapidly.

1. Observe the TX and RX LEDs on the rear of the panel. Both LEDs should be a steady flash or glow (depending on baud rate). If not, check and make sure you are using the proper communications cable and that it is securely connected.
2. Examine the RUN/PGM DIP switch to make sure it is placed in the RUN position to load and run the ladder program. You must cycle OP-panel power for address switch changes to take effect.



Place the PGM/RUN switch in the RUN position when running the program.

Rear Panel View



RX/TX LEDs

RUN/PGM DIP Switch

3. Examine the communications information for the proper PLC type, protocol type, baud rate, parity, stop bit, address number. Use the user manual for the PLC product you are using to determine the proper settings.
4. If you are using an OP cable, verify cable pinout. For RS422 connections use a Belden 9729 or equivalent cable.
5. Check 24VDC power source and connections.



Direct LOGIC PLCs : If you are using the secondary communications port such as **Direct LOGIC PLC port 2**, ensure the communications port address and protocol setting match.

| PLC Model | Port/Baud Rates | Parity | Stop Bit |
|---------------|-----------------|-----------------------------------|----------|
| DL105/230/240 | Top | 9600 | Odd |
| | Bottom | Bottom (DL240 only) 9600/19.2k | Odd/None |
| DL250 | Top | 9600 | Odd/None |
| | Bottom | 9600/19.2K | 1 |
| DL330 | DCU only | 4800/9600/19.2k | Odd/None |
| DL340 | Bottom & Top | 4800/9600/19.2k | Odd/None |
| DL350 | Top | 9600 | Odd |
| | Bottom | 4800/9600/19.2K | 1 |
| DL430/440 | Top | Top 9600 | Odd |
| | Bottom | 9600/19.2k | Odd/None |
| DL450 | DB15 | 9600 | Odd |
| | DB25 | 9600/19.2k | Odd/None |
| | RJ12 | 9600/19.2k | Odd/None |

Allen-Bradley Panel to PLC Communications Problems

For Allen-Bradley, you may connect to Channel 0 (bottom serial port), using DF1 in full duplex mode. Additionally, the Allen-Bradley software allows the bottom port to a unique PLC address. The Allen-Bradley software default is PLC address one. You must ensure the OP-panel configuration address matches the PLC address you have assigned. The Allen-Bradley port only communicates using either 4800 or 9600 baud. No other baud rates are supported between the OP-panel and Allen-Bradley PLC. For example, on Allen-Bradley PLC's the serial port baud rate defaults to 1200 baud and must be changed. The baud rate for channel 0 must be set to 4800 or 9600 baud to match the OP-WINEDIT configuration. Also the base memory area must be expanded to include the full range of registers such as N7:0 through N7:7.



OTHER PLCs : Regardless of which PLC brand you are implementing, the communications parameters should be reviewed and properly configured. Please check the appropriate manual for your PLC product to ensure proper communications port and panel type settings.