# TROUBLESHOOTING

## CHAPTER
# 8

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# Troubleshooting

The following are some problems that may be encountered during the installation and operation of your *C-more*® Micro panel. We have made some suggestions on what to check in order to correct the problem.

### *C-more* Micro Panel does not Power up

1. If the panel's display is blank, not responding, and the panel is powered from a 12-24 VDC power source, check the incoming DC voltage level to the adapter with a voltmeter. The DC voltage level to the adapter should be in the range of 10.2-26.4 VDC.

2. If the incoming DC voltage is zero, check any fusing that may be in the circuit. If the fuse is open, determine cause and replace.

### Display is Blank

1. If the panel's display is blank, but the panel has power, check the TxD and RxD indicators on the back side of the panel while the panel is communicating with the PLC. The LED indicators should be on or flashing at a fast rate. Indicator activity shows that the panel is communicating with the PLC.

2. If there is communication activity, but the display is still blank, there is the possibility the program in the PLC is controlling the display. Press the F1 and F5 keys simultaneously for three seconds. The panel will change to the System Setup Screen menu even if the screen is being forced to display a blank screen by the PLC program.

3. If the setup screen displays, check the PLC program. The screen will be in the off state if a 0 has been placed in the current screen tag.
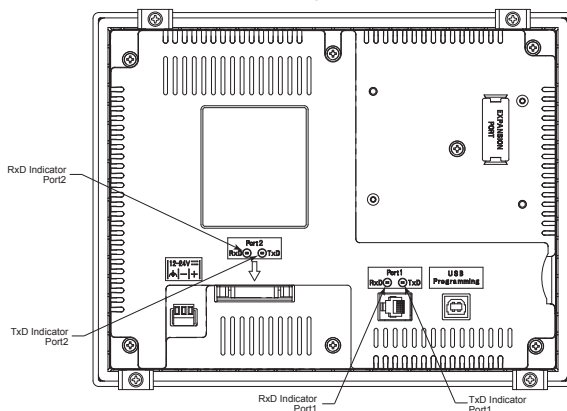
## Display is Dim

*NOTE:* When powered from a PC, EA3-T6CL will operate in Low-Power mode and the screen brightness is diminished.
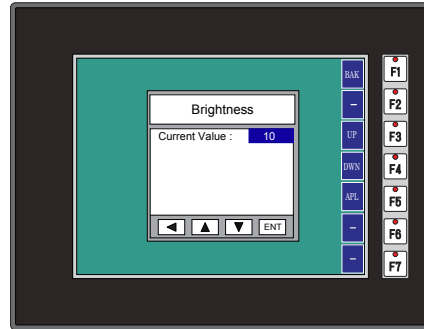
1. Press the F1 and F5 keys simultaneously for three seconds and the panel will bring up the System Setup Screen menu.

2. Select the Setting menu, and then select item 1: Brightness. The default value is 10.

3. Adjust the current value from 1 to 16 and the panel's brightness should become greater as the value moves toward 16 and it should become less as the value moves toward 1.

4. If this does not happen, then the panel may need to be replaced. See note above.

## No User Program

1. If the panel is displaying the message **"No User Program"** after it is powered up, then there is no project downloaded into the panel.

2. Using the EA-MG-PGMSW *C-more* Micro Programming Software, download your project to the panel.
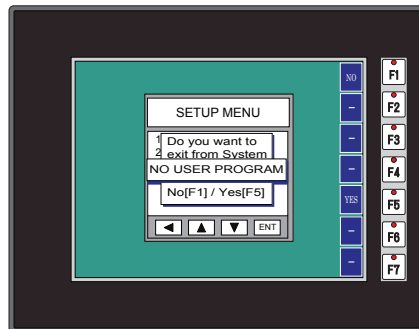
## Lost Firmware – 'Update Mode' Screen Displayed

If the *C-more* Micro panel's firmware becomes corrupted or for some reason is lost from the panel's memory, the panel will display the **Update Mode** screen as shown below. This can happen if communication between the PC and the panel is interupted during a firmware update. To resolve the problem, try the following steps in the order shown:

1.) Cycle power to the panel.

2.) If the problem persists, update the firmware to the panel using the **Update Firmware** utility under the **Panel** pull down menu in the EA-MG-PGMSW Programming Software.

3.) If the problem persists, depress function keys F1 and F5 while cycling power to the panel. The panel should come up in the **Update Mode** screen as shown below. Perform Step 2 again.

4.) If there is still a problem, call Tech Support @ 770-844-4200 in the U.S.A.



## Updating Firmware

The panel firmware version must match both the programming software version and the version that the program was saved as. For example, if a version needs to be updated to take advantage of new functionality or product line additions follow these steps:

1.) Create a backup copy of the project on the PC. From the *C-more* Micro programming software, read the project from the panel and save to a desired location.

2.) Update the programming software on the PC.

3.) Cycle power to the panel.

4.) Update the firmware to the panel using the **Update Firmware** utility under the **Panel** pull down menu in the EA-MG-PGMSW Programming Software.

5.) Open the project in the updated programming software. Save the project. Transfer the project to the panel.

| Part Number | Panel Software / Firmware Version Required | Part Number | Panel Software / Firmware Version Required |
|---|---|---|---|
| EA3-S3ML-RN | 4.30 or later | EA3-T6CL | 3.6 or later |
| EA3-S3ML-R | 4.30 or later | EA3-T8CL | 3.5 or later |
| EA3-S3ML | 4.20 or later | EA3-T10CL | 3.5 or later |
| EA3-T4CL | 4.20 or later | | |

## No Communications between Panel and PC (Personal Computer)

There are three possible causes that prevent transferring the project to the *C-more* Micro panel.
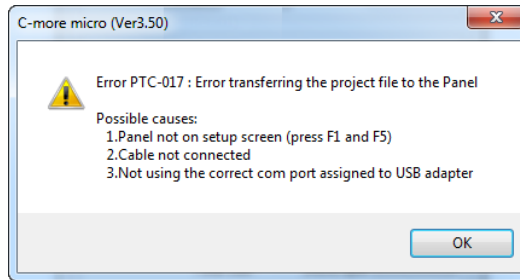


**1. Panel not on setup screen (press F1 and F5) -** Press and hold the F1 and F5 buttons simultaneously for three seconds to enter the setup screen.

**2. Cable not connected -** Double check the programming cable to make sure the panel is correctly connected to the USB port on the PC.
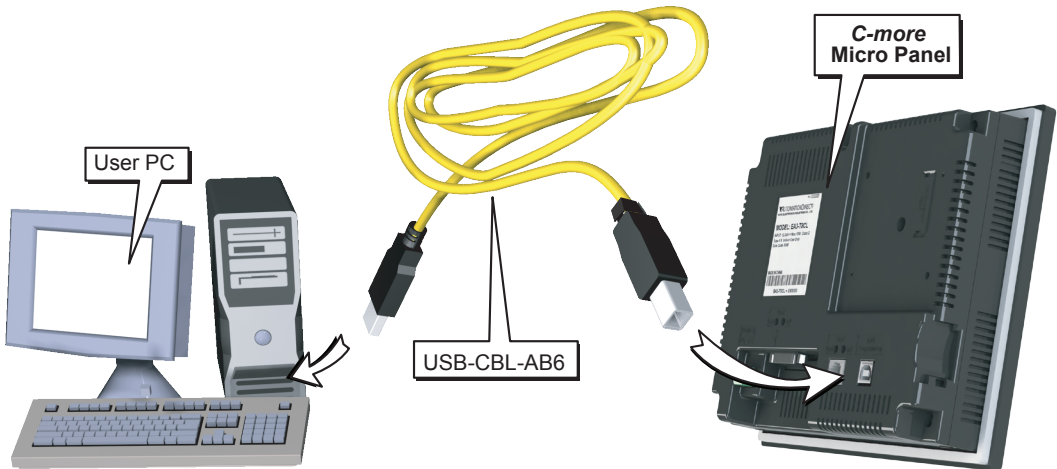


*NOTE: The USB Type B programming port has an internal USB to serial converter. When the device is properly installed and the USB programming cable connects the panel to the PC, the port will be identified as a serial communications port with an assigned COM port number.*

No communications between panel and PC continued top of next page.

## No Communications between Panel and PC (Personal Computer) (cont'd)

**NOTE:** *The USB Type B programming port has an internal USB to serial converter. When the device is properly installed and the USB programming cable connects the panel to the PC, the port will be identified as a serial communications port with an assigned COM port number.*
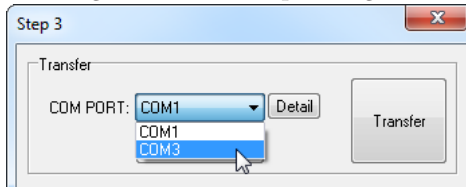
**3. Not using the correct COM port assigned to the USB connection** - If the *C-more* Micro panel is on the setup screen and the cable connection is correct, then check the PC COM port setting.

If you are unsure which COM port the *C-more* Micro programming cable is connected to, click on the **Device Manager** button. This will open Windows ® **Device Manager**.

In the **Device Manager** window, view the active ports by clicking the + button beside the Ports (COM & LPT) menu item. The *C-more* Micro panel uses a USB driver called *C-more Micro*.
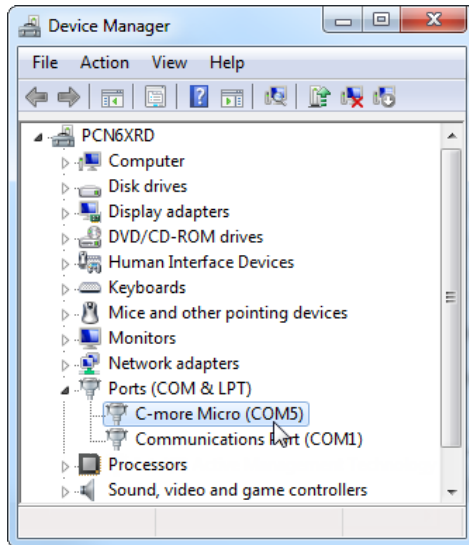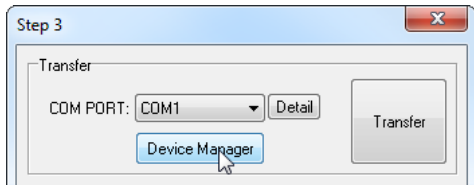
COM4 is the USB port used in this example. If you cannot find the *C-more* Micro Comm Port under Ports (COM & LPT) in **Device Manager**, the USB driver may not be correctly installed or the driver has a problem. Follow these steps to re-install the driver:

**1.** Uninstall the *C-more* Micro programming software.

**2.** Unplug the cable between the PC and the *C-more* Micro panel.

**3.** Re-install the *C-more* Micro programming software. Make sure the install USB driver checkbox is selected.

**4.** If you have selected the correct COM port and the error still occurs, try connecting the programming cable to a different USB port on the PC and try again.

**5.** If the problem persists, call Technical Support at (770) 844-4200, available from 9:00 A.M. to 6:00 P.M. Eastern Time.

## No Communications between Panel and PLC

The *C-more* Micro panel communicates with a designated PLC or controlling device through the panel's RS-232 / RS-485 / RS-422 communications port (Port1 or Port2).

1. Check the Txd and Rxd status indicators on the back of the panel. The indicator LED's should be on or flashing at a fast rate. If there is activity on the LED indicators, then the panel and PLC are communicating.

*NOTE: For communications to be present between the panel and PLC, the panel must contain a project requesting data from the PLC.*
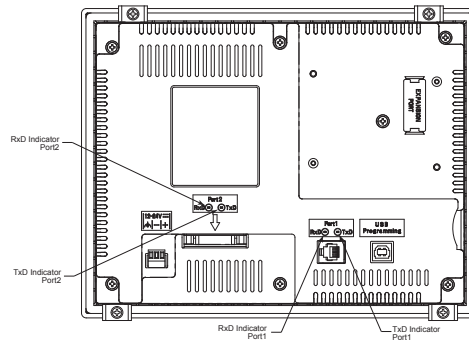


If there is no activity on one or both TxD and RxD LED status indicators, then it should be suspected that either:

1. The communication settings are incorrect - Open Panel Manager in the *C-more* Micro programming software and verify that the correct panel Comm. Port is selected. Verify that the correct PLC protocol is selected and properly configured.
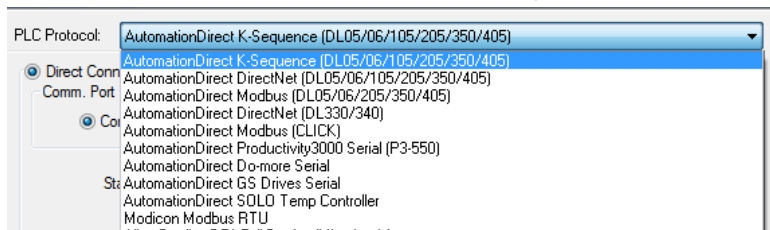


2. The cable is bad and needs to be replaced - Try a proven cable.

3. Test panel serial port. See **Chapter 5, Serial Port - Loop Back Test**. If possible switch the panel with a panel that is communicating properly.

4. The serial port on the PLC is defective.

*NOTE: Electrical noise, pulse generating wiring and/or improper grounding can also cause problems with communications. Refer to the Electrical Noise Problems section in this chapter for additional help if electrical noise is suspected. Selecting a lower communication rate in Panel Manager may help the panel resist noise..*

## Panel & PLC Error Codes

The **C-more** Micro panel includes built-in PLC communication protocol diagnostics that monitor the exchange of data between the panel and the PLC. The diagnostics look for the proper exchange of data, correct handshaking signals, addressing errors, incorrect data bytes, wrong packet format, etc. The diagnostics also monitor and display any of the errors that the designated PLC generates if there is a problem with the PLC's communications. The PLC generated errors are interpreted by the **C-more** Micro programming software and are displayed across the top of the panel's display embedded as a hexadecimal value in error code P499.

If a **C-more** Micro communication error does occur, the error message will be displayed in the upper left of the panel's display screen along with the error code number. The error code with error message will blink off and on.

**NOTE:** *See Appendix A: Panel & PLC Error Code Tables for a complete list of all error codes.*

## *C-more* Micro Panel Runtime Errors

The *C-more* Micro panel includes built-in diagnostics that check for proper operation of the panel when it is running a project that has been transferred to its memory. Faults detected while the panel is running will produce a "Runtime" error. These errors are displayed in a popup window in the center of the panel's display.

### Troubleshooting a Panel Runtime Error:

Follow these steps to troubleshoot a panel runtime error.

1. Check the panel cable connections.

2. Cycle power at the panel.

3. Resend the project.

4. If the error still occurs, reset the panel back to factory default. Refer to Chapter 5 for details.

*NOTE: User memory is cleared when factory defaults are reset. Use the **C-more** Micro programming software to read the program from the panel and save a backup copy.*

## Panel Errors

If more than one panel error occurs, each error message will display sequentially for three seconds with a two second delay between each message.

When only one panel error is active, that message will display continuously until it is no longer active.

| Micro Panel Errors | | |
|---|---|---|
| **Error Code** | **Error Message** | **Possible Solutions** |
| R001 | PC software tool Timeout | Check cables and connections.<br>Cycle power at the panel.<br>See Chapter 8 for Electrical Noise Problems. |
| R002 | CRC Error occurred during project transfer from PC. | Check the area for sources of noise: electrical motors, transformers, etc.<br>Check for proper grounding<br>Resend the project. |
| R003 | Project Check Sum Error. Resend Project file to Panel. | Cycle power.<br>Resend the project. |
| R004 | Protocol Module Check Sum Error. Resend Project File to Panel | |
| R005 | Panel Check Sum Error. Panel Info (Not Project) will be initialized. | From the Setup Menu screen, reset panel options. |
| R006 | SW Ver. Mismatch. Use software Ver.xx.xx. | Update to current version programming software and panel firmware. |
| R102 | External power fail. Reconnect USB cable. | The panel was powered in High Power mode (24 VDC power supply.) The 24 VDC power has been lost and the panel is now running on USB bus power. Either re-establish the 24 VDC power connection or remove all power connections and then reconnect the USB cable for the panel to run in Low-Power mode via the USB connection. Low power mode is not available on EA3 series panels. |

## Reset to Factory Default

Factory default values can be reset by pressing F2 and F4 while cycling power to the panel.

The Factory Default values are:

- Brightness value of 10
- The internal audible beeper enabled
- Forced touch panel calibration
- User program cleared from memory
- Hourglass icon delay of 350 ms.
- Horizontal orientation

*NOTE: User memory is cleared when factory defaults are reset. Use the **C-more** Micro programming software to read the program from the panel and save a backup copy.*

## Electrical Noise Problems

Most noise problems result from improper grounding of the system. A good earth ground can be the single most effective way to correct noise problems. If a ground is not available, install a ground rod as close to the system as possible. Ensure all ground wires are single point grounds and are not daisy chained from one device to another. Ground metal enclosures around the system. A loose wire can act as a large antenna, introducing noise into the system. Therefore, tighten all connections in your system. Loose ground wires are more susceptible to noise than the other wires in your system. Review **Chapter 4: Installation & Wiring** if you have questions regarding how to ground the touch panel.

Electrical noise can enter the system through the power source for the touch panel. Installing a properly wired isolation transformer (neutral grounded) for all AC sources can help the problem, but only if wired correctly. DC sources should be well-grounded good quality supplies.

Never run communication cables or low-voltage power wiring close to high voltage wiring or pulse generating wiring that controls such devices as solenoids, servos, VFDs, etc.

Selecting a lower communication rate in Panel Manager may help the panel better handle noise.