Technical Note

Communication Verification – RS232

(01/10/2007)

PURPOSE

Verify that communication is established for the following products programming option (488.2 compliant, SCPI *only*): DCS - M9C & DCS – M130, DLM – M9E & DLM-M9G & DLM – M130, DHP - M9D, P series, SG, CW, SW, TW

BACKGROUND

Failure to fully establish and verify communications is the most frequent cause of a power supply appearing to function improperly. If you are able to establish communications as outlined in this document, the supply is working properly. Once you've fully established communications, the supply is ready to communicate using your software. National Instruments (NI) has created drivers specifically for selected Elgar Electronics Corporation (EEC) products, and as a convenience, EEC provides these drivers and in some cases links to the NI webpage from the EEC website.

Please note these drivers are specific to the type of remote interface hardware, such as GPIB or serial or Ethernet. Be sure to download the correct driver for the type of communication hardware being used.

Please refer to the software provider for instructions and further installation and application assistance.

RS232 SETUP AND COMMUNICATION VERIFICATION

1) With your power supply powered off, locate the RS-232 port on your power supply, typically located on the rear panel (refer to your programming manual, available at http://www.elgar.com/ under support).

2) Connect your RS-232 communication cable from the RS-232 port on your power supply to a USB port on your computer. Some supplies require the communications cable to be built. Refer to your supplies programming manual for RS-232 communications cable requirements.

3) Power up your power supply.

4) Prepare to configure **HyperTerminal** to establish RS-232 communications, by first finding your communications port number (COM#):

   a) In MS Windows go to:
   Start/ Control Panel/ System.

   b) In the System Properties window:
   click the **Hardware** tab.

   c) In the System Properties Hardware page:
   click the **Device Manager** button, as shown in the following illustration:

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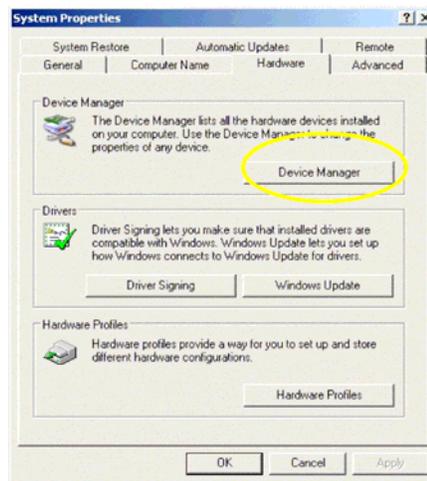
d) In the Device Manager window:
   locate and expand **Ports (COM & LPT)** to see your serial port number,
   shown as "**COM4**" in the following illustration.
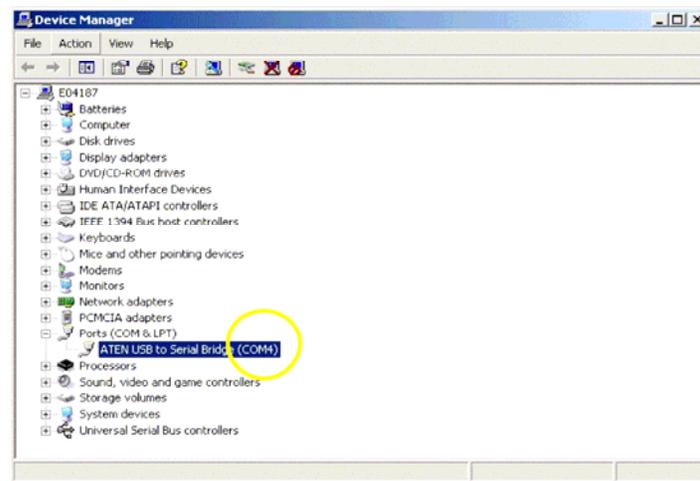
e) Record your COM port number, to be used to set up HyperTerminal.

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5) Set up HyperTerminal:

  a) In MS Windows go to:
      Start/ All Programs/ Accessories/ Communications/ HyperTerminal

  b) In the Connections Description window:
      give your setup a descriptive name, such as "dlm600" and click OK.
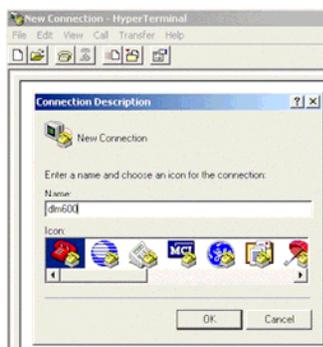
  c) Click OK and you will now see the properties window for the setup
   with the descriptive name you gave it.

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d) In the **Connect using** box:
    select the **COM#** that you recorded from the Device Manager
    window and click the **Configure** button.
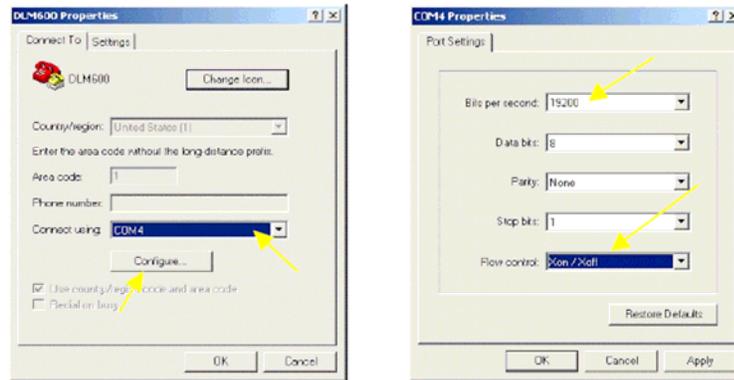
e) In the COM# Properties window:
    i) set the "Bits per second" rate to **19200**
    ii) set "Flow control" to **Xon/Xoff**
    iii) verify that "Data bits" is set to **8**
    iv) verify that "Parity" is set to **NONE**
    v) verify that "Stop bits" is set to **1**
    vi) click OK.

f) Go to **Settings** tab and click on the **ASCII Setup** button.

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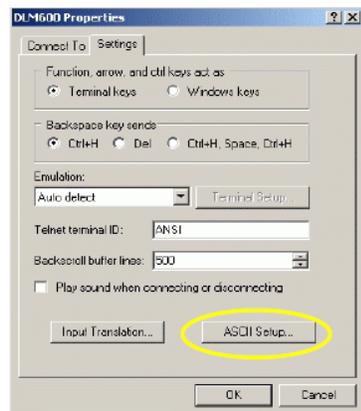
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g) In the ASCII Setup window:
  i) in the ASCII Sending section, make sure that "Send line ends with line feeds" is *NOT* selected (If it is selected, you may have communications issues such as only one response).
  ii) in the ASCII Receiving section, check the two boxes, "Append line feeds to incoming line ends" and "Echo typed characters locally."
  iii) click OK.
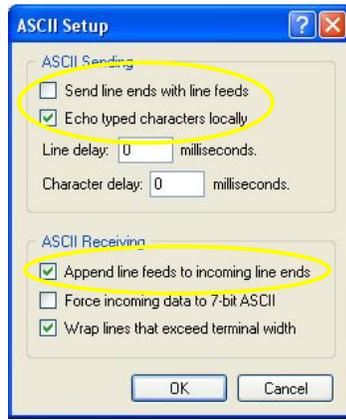
6) Check communication by verifying that the "connected" button in hyper terminal is active. With your power supply powered on, in your HyperTerminal window:

a) type SCPI command: ***idn?** and press Return.
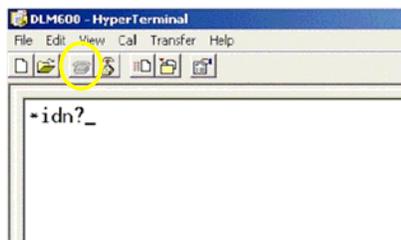
The supply model information ID string, similar to the example shown below, should appear indicating the supply communication is operational.

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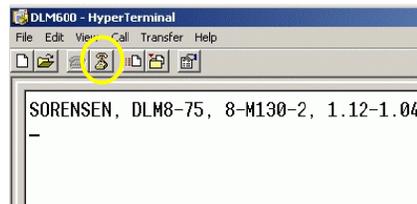
7) If you do not get the desired response, as in the preceding illustration, verify the following:

    a. Cycle power on the supply and allow the unit to reboot; press the "disconnect" button in HyperTerminal, then press the "connect" button . Redo Step 6.

    b. Verify HyperTerminal is set to the proper COM#. See Step 4a through 4e and Steps 5d and 5e. Redo Step 6.

    c. Verify HyperTerminal settings, Steps 5f and 5g. Redo step 6.

    d. Verify the communication cable is wired per the programming manual specifications. Redo Step 6.

    e. If these steps do not resolve the communications issues, please contact the factory for assistance.

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