

## Testing Serial Ports using Test Terminal (WCOM2.exe)

Have you been able to test the ports using the Test Terminal app in the Control Program group and the Loopback plug provided with the hardware? If not, I have included the directions here so that you may do so. If the testing does not complete successfully, then I recommend that you give our tech support group a call at 763-957-6000.

If you need to create a loopback plug you can download the instructions at [ftp://ftp.comtrol.com/RPort/HW\\_doc/Loopback/2000042\\_A.pdf](ftp://ftp.comtrol.com/RPort/HW_doc/Loopback/2000042_A.pdf)

Control's utilities for RocketPort products may be downloaded using this link: [ftp://ftp.comtrol.com/utilities/windows/control\\_utility/control\\_utility\\_package\\_v4.11.msi](ftp://ftp.comtrol.com/utilities/windows/control_utility/control_utility_package_v4.11.msi)

Instructions for testing Serial Ports:

Stop all applications that may be accessing the ports such as RAS, RRAS or any faxing or production software. See the appropriate manuals for instructions on stopping these services or applications. If another application is controlling the port, then Test Terminal will be unable to open the port and an error message will be shown.

Remember to restart the application once testing of the ports has been completed.

If you have downloaded and installed the utility package above, then you will find the Test Terminal and Portmon files in the Start>Programs>Control>Utility folder

Monitoring the test procedure using Port Monitor (Pmon2)

- 1.) From the 'Start button>Programs>Control>Utilities' folder select Port Monitor (Pmon2)
  - 2.) From the 'Tools' drop down menu in Port Monitor select 'Add Ports'
  - 3.) From the pop-up select the appropriate options for either
    - Ports: add specific desired ports (use the control key with mouse to select individual out of sequence ports)
    - Range: select a range of ports (use a dash for inclusive ports, commas to separate individual serial ports)
    - Driver: select the type of driver installed and all com ports for that model of product will be selected
- This will monitor the port status, modem controls' status, total bytes transmitted and received, through-put and errors detected on each port.

Testing the Control Serial Ports with Test Terminal.

- 1.) Place the Control supplied loopback plug onto the first port of the Control product
- 2.) From the 'Start button>Programs>Control>Utilities' folder select Test Terminal (WCOM2))
- 3.) From the 'File' drop down menu in Test Terminal >openport>com3 (default starting com port, yours may be different)
- 4.) From the 'Port' drop down menu select 'Send and Receive Test Data'
- 5.) You should see the alphabet scrolling across the port. If so, then the port installed properly and is operational.
- 6.) From the 'Port' drop down menu remove the check-mark on 'Send and Receive Test Data' (data should stop)
- 7.) From the 'Port' drop down menus select 'Loopback Test' (This is a pass fail test and will take a second or two to complete) This test will FAIL if the serial port is set to RS422.
- 8.) Repeat for each port that needs testing.
- 9.) Close test terminal

If both of these tests successfully complete, then the port is operational as expected.  
Restart the app.

There are, as you have seen, two tests in the Test Terminal and I will describe both.

**Send Test Data:** This is simply sending data out the transmit line to the 'Loopback' plug which has the transmit and receive pins connected thus sending the data back through the Receive line to the Test Terminal app which then displays the received data in the terminal window for that port. The send test data test is only testing the transmit and receive signal lines and nothing else. This test will work in either RS232 or RS422 modes as both modes have transmit and receive capability. A failure in this test will essentially prevent the port from working in any manner.

**Loopback Test:** This test using the Control supplied loopback is testing all of the modem control signals, RTS, DTR, CTS, DSR and CD. When a signal is made HI in one line the corresponding signal line will indicate this. The Loopback test changes the state of the lines and looks for the corresponding state change. It will then send certain commands and confirm the transmission and receipt of these commands. If it successfully recognizes all of these changes, the port passes. A failure on this test is not necessarily critical as it will depend on what is connected and how many signal lines are in use. For example, if you are using RS232 in 3 wire mode (Transmit, Receive and Ground) a failure will cause no discernible issue since the other signals are not being used. If the port is configured for use as either RS422 (or with some products RS485) this test will fail and is expected to fail since RS422 (and RS485) do not have the modem control signals that are present in RS232 that this test is designed for. This test cannot be used with the RocketModem products as there is no loopback plug for the phone port on the modem.

#### Failures:

It may be that the loopback plug you have has a bad solder connection or some other anomaly that is preventing its functionality. Here are the options available to us.

1.) You may request an RMA to send the Adapter and Interface Panel in for service.

To get an RMA number send an email to [RMA@COMTROL.COM](mailto:RMA@COMTROL.COM) describing the problem, your Control case number, the serial numbers of all pieces and your return shipping information. You will receive a reply with your RMA number and the ship to address information.

2.) Build a replacement loopback plug or test the plug you have with a VOM following the pinouts seen in the loopback hardware manual which may be downloaded from this link.

[ftp://ftp.comtrol.com/RPort/HW\\_doc/Loopback/2000042\\_A.pdf](ftp://ftp.comtrol.com/RPort/HW_doc/Loopback/2000042_A.pdf)

3.) Try running the DOS diagnostics for RocketPort adapters to see if the test fails in DOS as it does in Test Terminal to see if it is simply a failure of the Test Terminal app and that the ports are actually fully functional.

4.) Don't worry about it as long as it is not affecting your operation.