Using Test Terminal to test RS485 serial ports

You will need a STRAIGHT through cable connected between the two ports in question.

Use wcom2 as the test application. (Included in PortVision DX or download here: http://downloads.com/utilities/windows/comtrol_utility/Comtrol_Utility_Package_V4.11.msi)

This can get a little tricky.

Open wcom with the two ports in question. This sample uses com40 and com41:

| Open Ports | | 2 |
|----------------------------------|-----------|----------|
| Select Ports | | OK |
| COM38 COM39 | <u>^</u> | Cancel |
| COM40 COM41 | - | Settings |
| COM42 COM43 | | |
| COM44 COM45 COM46 COM47 | ~ | |
| C Select Range | | |
| | | |
| For example: 3-15,21,45 | ,51-56,74 | |

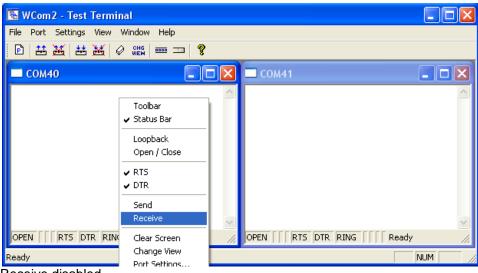
| 🔚 WCom2 - Test Terminal | |
|---|------------------------------------|
| <u>File Port S</u> ettings <u>V</u> iew <u>W</u> indow <u>H</u> elp | |
| 🖻 🗮 😹 📇 😹 🖉 🕮 🚥 🎞 🤗 | |
| 🗖 сом40 | Сом41 |
| 2 | |
| | |
| | |
| | |
| | |
| | |
| 8 | |
| OPEN RTS DTR RING Receiving | OPEN [[RTS DTR RING] [Receiving |
| Ready | NUM |

Note both ports showing Receiving on the status bar

Right click in both com windows and remove the checkmark for Receiving

| 陆 WCom2 - Test Terminal | | | |
|-------------------------------------|-------|-----------------------------|------------|
| File Port Settings View Window Help | | | |
| 🖻 🗮 💥 🖽 💥 🖉 🕮 🚥 🎞 🦓 | | | |
| Сом40 | СОМ41 | | |
| | | Toolbar 🗸 Status Bar | |
| | | Loopback Open / Close | |
| | | ✓ RTS ✓ DTR | |
| | | Send V Receive | |
| OPEN TR RING Receiving | | Clear Screen Change View | eceiving 🏑 |
| Ready | | Port Settings | NUM |

Here the 'Receive' is shown as enabled with a checkmark on it.



Receive disabled

Both com ports will now show Ready on the status bar

| 🔀 WCom2 - Test Terminal | |
|---|----|
| <u>F</u> ile <u>P</u> ort <u>S</u> ettings <u>V</u> iew <u>W</u> indow <u>H</u> elp | |
| D # ₩ # ₩ Ø # == ⊐ ? | |
| COM40 | |
| | ~ |
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| | |
| | |
| | ~ |
| OPEN RTS DTR RING Ready // OPEN RTS DTR RING Ready | 1. |
| Ready | |

Right click in ONE window and select the Receive option from the pop up. Right click the OPPOSITE window and click Send

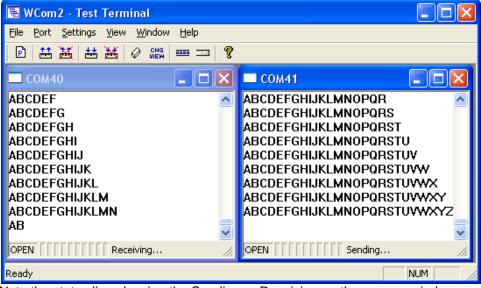
| 陆 WCom2 - Test Terminal | |
|---|--|
| <u>File P</u> ort <u>S</u> ettings <u>V</u> iew <u>W</u> indow <u>H</u> elp | |
| 🖻 🖽 😹 🖶 😹 🖉 🏭 🚥 🎞 💡 | |
| Сом40 | 🗖 СОМ41 📃 🗖 🗙 |
| | ABCDEFGHIJKLM ABCDEFGHIJKLMN0 ABCDEFGHIJKLMN0P ABCDEFGHIJKLMN0PQ ABCDEFGHIJKLMN0PQR ABCDEFGHIJKLMN0PQRST ABCDEFGHIJKLMN0PQRSTU ABCDEFGHIJ |
| OPEN [[[[[[]]] Sending | OPEN [[[[[[[[Receiving |
| Ready | NUM |

In this case, com40 is sending data and com41 is receiving the data which is visually confirmed by the data scrolling across the com41 window.

If you do not see the data being received it MAY be necessary to also disable the RTS and DTR Option from the right-click pop-up menu in each com port.

Right-click and remove the checkmark on the **Sending** com port. Right-click and remove the checkmark on the **Receiving** com port. Now again, neither com port is sending or receiving but shows ready on the status bar.

Reverse the sending/receiving windows one at a time. Set the Receiving option first, then in the opposite window select the Sending option.



Note the status line showing the Sending or Receiving on the reverse windows. Data will now be seen scrolling in the com40 window. Com41 will be static as it is not receiving data but is transmitting data.

RS485 2 wire mode is a half duplex protocol. It is not able to send and reseive at the same time.