



VT-MODEM Connects EXOR's UniOP Display to Your PC

Abstract: This technical note provides instructional tips for interfacing to an EXOR UniOP display with SIXNET Industrial Modems (VT-MODEM-1). This interface will allow a user to program the display from a remote location using EXOR's UniOP software.

Operator interfaces are used to monitor or enter data on the plant floor. They are usually programmed directly from a computer and then mounted on-site. In addition, EXOR supports programming their display over a telephone connection. SIXNET has tested this using a pair of SIXNET Industrial Modems (VT-MODEM-1). This saves time and money because the operator can now configure the display remotely (up to thousands of miles away) without having to travel to the site.

Note 1: This interface can only be done with UniOP Designer software version 5.04 and display firmware version 4.13 or higher. EXOR currently provide both with all new products, but older products may need to be upgraded.

Note 2: EXOR displays also have a "Passthru" option which allows you to communicate with any hardware connected to the display such as a SIXTRAK Gateway or VersaTRAK RTU (see Tech Note #604). For information regarding this mode, consult your EXOR literature.

Hardware Connections

The connection between your PC and the local VT-MODEM-1 is made using the VT-CABLE-MDM (supplied by SIXNET). The connection between the remote VT-MODEM-1 and the EXOR display requires a special serial RS232 cable as follows:

EXOR Display - PC/Printer Port DB15 Female (DTE)	VT-MODEM-1 DB9 Female (DCE)
Pin 2 (RXD in)	Pin 2 (RXD out)
Pin 3 (TXD out)	Pin 3 (TXD in)
Pin 5 (GND)	Pin 5 (GND)
Pin 10 (RTS out)	Pin 7 (RTS in)
Pin 11 (CTS in)	Pin 8 (CTS out)

Modem Setup

Each modem must be configured from the PC before this interface can be completed. You can do this using Windows HyperTerminal Software. For information on how to use HyperTerminal, consult the VT-MODEM on-line help guide found on the SIXNET CD.

VT-MODEM-1 to be connected to the PC:

Connect* the modem to the PC and provide 10-30 VDC power. Run HyperTerminal and test to make sure you have communication by typing **AT <Enter>**. If communicating, you will see **OK** appear. Once you have established communication, type in the following commands followed by <Enter>.

AT&D0	Tells the modem to ignore DTR
AT&K0	Disables flow control
AT&Q0	Selects direct asynchronous operation
AT&W0	Store the current configuration as profile 0
AT&Y0	Load profile 0 on power-up
AT&V	Optional: Reads back settings for verification.

VT-MODEM-1 to be connected to the EXOR display:

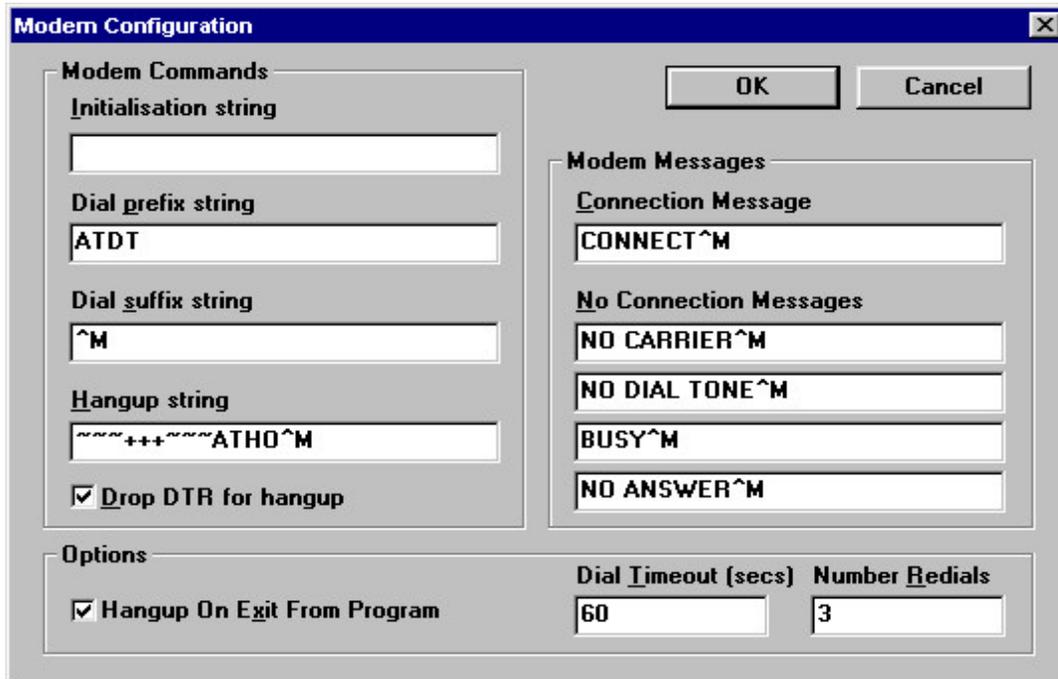
Before this modem is connected* to the display, you will need to configure it from the PC in the same manner as the local modem. Send the following commands followed by <enter> to this modem.

AT&D0	Tells the modem to ignore DTR
AT%C0	Turns off data compression
AT&K0	Disables flow control
AT&Q0	Selects direct asynchronous operation
AT&S0=1	Auto-answer on one ring
AT&W	Store the current configuration as profile 0
AT&Y	Load profile 0 on power-up
AT&V	Optional: Reads back settings for verification.

* **Note:** You must cycle power (remove power and reapply power) to the modem each time you disconnect and reconnect the communication cable.

Dial-up Information

After you have connected* the local modem to the PC and the remote modem to the display, use the UniOP software to communicate remotely to your display. The screen below shows the settings we used in our test.

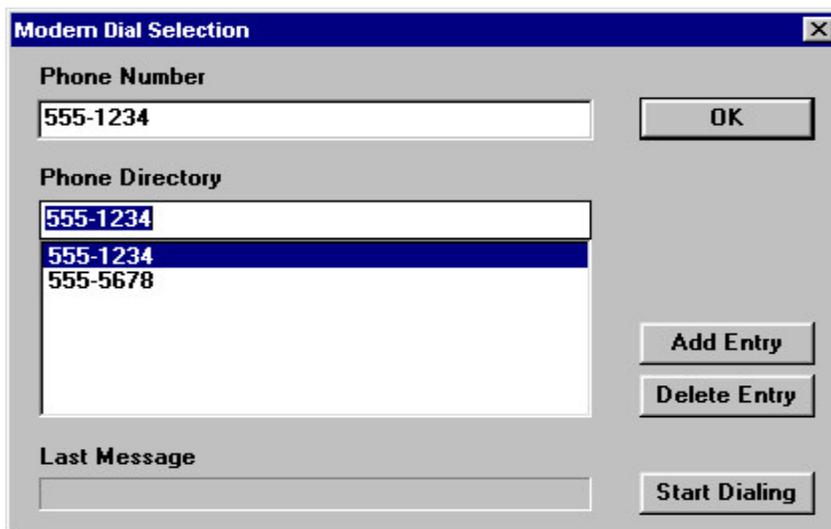


The **Modem Configuration** dialog box is shown with the following settings:

- Modem Commands:**
 - Initialisation string: (empty)
 - Dial prefix string: ATDT
 - Dial suffix string: ^M
 - Hangup string: ~~~+++~*~*~*ATHO^M
 - Drop DTR for hangup
- Modem Messages:**
 - Connection Message: CONNECT^M
 - No Connection Messages:
 - NO CARRIER^M
 - NO DIAL TONE^M
 - BUSY^M
 - NO ANSWER^M
- Options:**
 - Hangup On Exit From Program
 - Dial Timeout (secs): 60
 - Number Redials: 3

Buttons: OK, Cancel

Enter the phone number of the remote modem/display(s) in the screen below. To make your connection just select the number of the desired modem/display and click on Start Dialing. Once the connection is made you can run the UniOP software as usual.



The **Modem Dial Selection** dialog box is shown with the following settings:

- Phone Number: 555-1234
- Phone Directory:
 - 555-1234 (highlighted)
 - 555-1234
 - 555-5678
- Last Message: (empty)

Buttons: OK, Add Entry, Delete Entry, Start Dialing