



MDR220A Wireless V.90 Modem

User's Manual
Version 1.0



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FCC Notice

Warning: This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) This device must accept any interference received, including interference that may cause undesired operation.

RF Exposure/Installation Instructions

Warning: To satisfy FCC RF exposure requirements for mobile transmitting devices, this equipment must be professionally installed such that the end user is prevented from replacing the antenna with a nonapproved antenna. The end user should also be prevented from being within 20cm of the antenna during normal use with the exception of hands, feet and ankles.

Caution: Any change or modification not expressly approved by Black Box could void the user's authority to operate the equipment.

The preceding statement must be included as a CAUTION statement in manuals for OEM products to alert users on FCC RF Exposure compliance.

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1 Overview

The MDR220A & MDR221A products provide a wireless point-to-point connection between a RS232 device and a 56K data/fax modem.

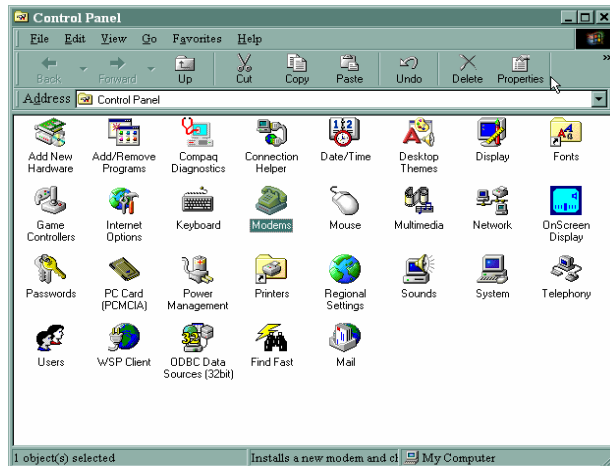
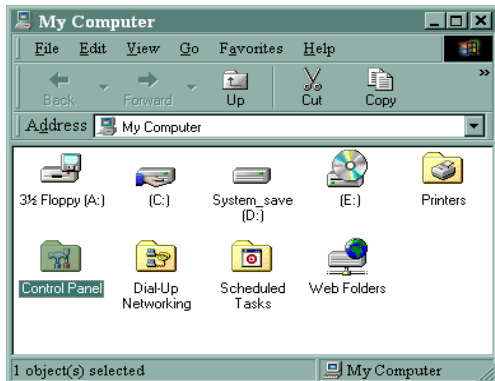
1.1 MDR220A & MDR221A Definitions

- 1) **Pwr**: Red LED indicates power is connected to the unit.
- 2) **Link**: Green LED indicates the units are in range of one another.
- 3) **Rx**: Red LED indicates a unit is receiving data.
- 4) **Tx**: Green LED indicates a unit is sending data.

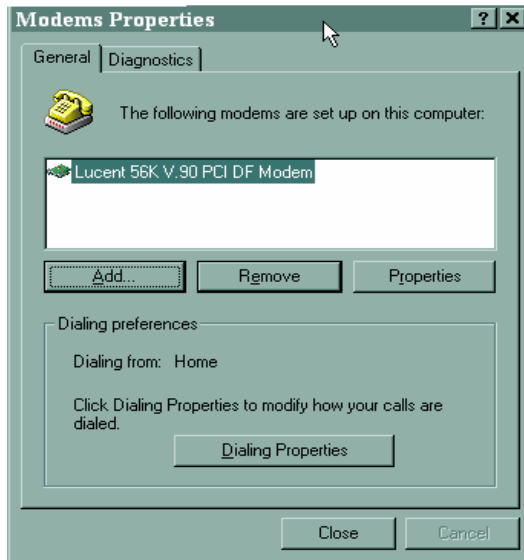
2 Windows Modem Setup & Configuration

When connecting the MDR221A to a computer running Windows 95, 98, Me, 2000, or NT, the correct modem driver must be installed and properly configured. Please follow the steps and diagrams below to complete the setup and configuration.

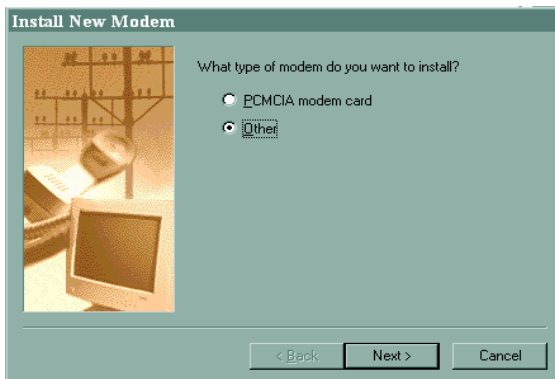
- 1) Double-click on **My Computer** on the desktop, double-click on **Control Panel**, double-click **Modems** to display the **Modems Properties** window.



- 2) If the **Standard 56000 bps K56Flex Modem** is not installed, click **Add...** to install a new modem.



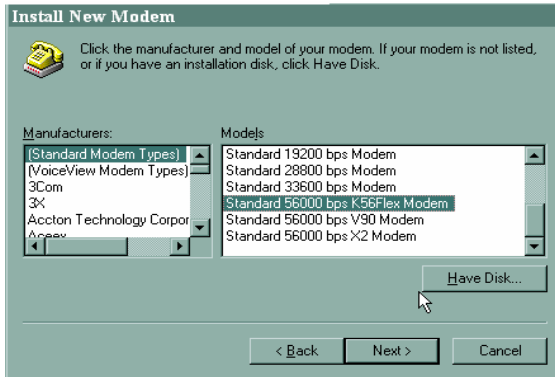
- 3) Select **Other** when asked what type of modem you want to install, then click on **Next>**.



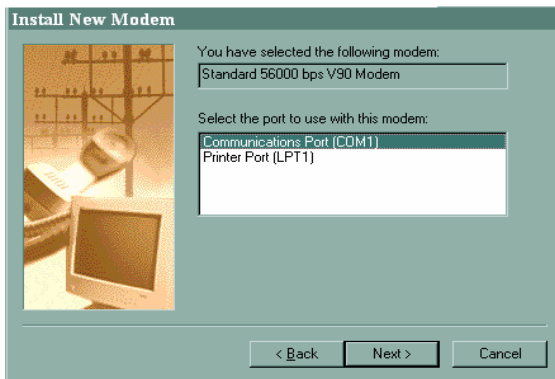
- 4) Select **“Don’t detect my modem; I will select it from a list”**. Then select **Next>**.



- 5) Select “**(Standard Modem Types)**” from the Manufacturers list, then select “**Standard 56000 bps K56Flex Modem**” from the Models list. Click **Next>** to continue.



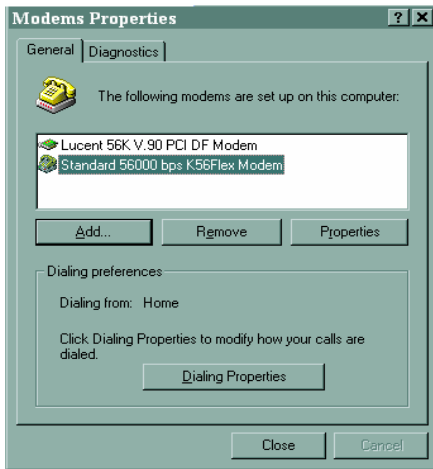
- 6) Select the port to use with the modem and click **Next>** to continue.



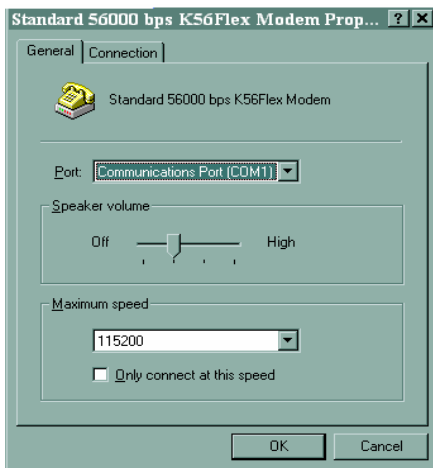
- 7) Wait while Windows installs the modem. Click **Finish** to complete the installation of the new modem and to return to the **Modems Properties** window.



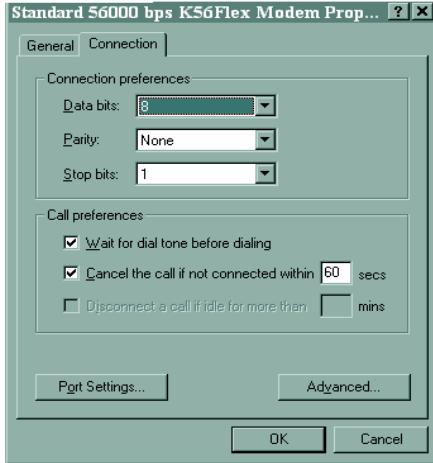
- 8) You are now ready to configure the new modem. Select “**Standard 56000 bps K56Flex Modem**” and then click **Properties**.



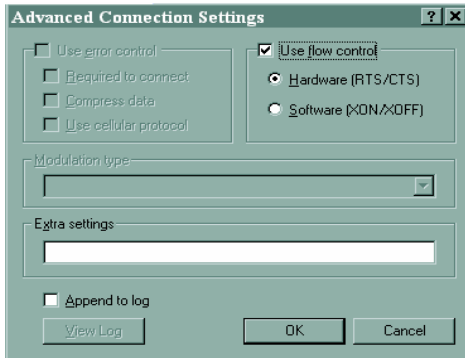
- 9) On the **General** tab, select the port that is connected to the MDR221A unit. Select **115200** for the Maximum speed. Do not select “**Only connect at this speed**”, as this will not allow communications from the MDR221A unit to the MDR220A unit. The selected Baud Rate must match the MDR221A’s Baud Rate setting.



- 10) Click the **Connection** tab. Select **8** Data bits, **None** for Parity, **1** for Stop bits. Select **“Wait for dial tone before dialing”**. Selecting **“Cancel the call if not connected within xx secs”** is optional.



- 11) Click **Advanced...** to continue. Select **“Use flow control”** and then select **“Hardware (RTS/CTS)”**. Click **OK** to return to the **Standard 56000 bps K56Flex Modem Properties** window. Click **OK** to return to the **Modems Properties** window. Click **Close** to complete the configuration.



3 Auto-Answer Feature

This feature enables the MDR220A unit to answer an incoming call over the phone line. In order to enable this feature, the HyperTerminal program must be opened. HyperTerminal is launched by clicking on the Start icon in Windows and selecting Programs. From the Programs list select Accessories, Communications, then HyperTerminal. Once in HyperTerminal, you must type a name for the connection and click OK. Next to the Connect Using field, select the proper COM Port. Make sure the Baud Rate setting is equal to the MDR221A's Baud Rate setting, Data Bits equals 8, Parity equals None, Stop Bits Equals 1, and Flow Control equals Hardware. Apply the settings and HyperTerminal is ready to send commands.

MDR220A configuration: Broadcast, Modem Control and RTS should be enabled.
MDR221A should be configured with default values and Auto Destination enabled.

Make sure Auto-Answer is enabled on the MDR220A: (Refer to RC56D ATCRM.PDF for the AT Commands)

- 1) Enable Auto-Answer on the MDR220A
 - a. Connect the MDR221A to a computer and start HyperTerminal.
 - b. Type the characters ATSO = n command, where n = the number of rings to Auto-Answer.

This command sets the S0 parameter to a value other than zero to enable Auto-Answer. S0 sets the number of rings required before the modem automatically answers a call. Setting this parameter to zero disables auto-answer mode.

- 2) Enable DTR On
 - a. Send the AT&D0 command
- 3) Save the Auto-Answer configuration to a modem Profile, 0 or 1.
 - a. Send the AT&Wn command, where n = Profile number.

The MDR220A is now ready to answer a phone call automatically.

Connect to the ConnexModem using a computer or another telecom Host. Once connected, multiple ConnexLink units can communicate with the ConnexModem.

4 Connecting To A Non-PC Device

When using MDR220A to connect a non-PC device to a phone line, it is important that the MDR221A unit is configured properly. The MDR221A unit must match the serial settings of the non-PC host device.

To configure the MDR221A unit, refer to the MDR221A User's Manual located on the Black Box CD.

5 Troubleshooting

Free technical support 24 hours a day, 7 days a week.
Call 724-746-5500 or fax 724-746-0746.

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