DIONEX

Installing the Dionex PeakNet® 6 System

IMPORTANT

- **Follow these installation instructions step-by-step, in the order specified. Otherwise, the PeakNet 6 system will not operate.**

- **During installation, record the requested information on a copy of the PeakNet 6 System Installation Check List.**

- **Save the completed check list in a safe location. It will provide valuable troubleshooting assistance, should a problem arise later.**

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1 • Introduction

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Using the System Installation Check List

1. Before installing the system, copy the PeakNet 6 System Installation Check List in Appendix D at the end of this manual. Reserve the original for future duplication.

2. During the installation, record the requested information on the check list. In this manual, items to be recorded are identified with a ☑.

3. When finished, file the completed list in a safe location.

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> **NOTE** **When you purchase PeakNet 6 software and a computer from Dionex, the software and computer hardware are installed at the factory. In this case, some of the steps on the check list will have been completed for you.**

1.1   PeakNet 6 System Requirements

Operating Environment

- Microsoft® Windows® 98 (2nd Edition), Windows® 2000, or Windows NT® 4.0 (Service Pack 5 or greater)

Workstation Platform

For Windows 98:

- IBM-compatible computer, Intel Pentium® 200 MHz minimum; Pentium III recommended

- 64 MB RAM minimum; 128 MB or more recommended

- Hard disk drive with a minimum of 4 GB free disk space; 10 GB or more recommended

For Windows NT:

- IBM-compatible computer, Intel Pentium II 266 MHz minimum; Pentium III recommended

- 64 MB RAM minimum; 128 MB or more recommended

- Hard disk drive with 6.4 GB of free space; 10 GB or more recommended

For Windows 2000 or systems with a PDA detector:

- IBM-compatible computer, Intel Pentium II 400 MHz minimum; Pentium III recommended

- 128 MB RAM; 256 MB or more recommended

- Hard disk drive with 10 GB of free space; 15 GB or more recommended

For 10BASE-T DX-LAN devices:

- PCI expansion slot for the DX-LAN card

For USB devices:

- If the number of USB devices in the system exceeds the number of available USB ports on the computer and/or built-in hubs in Dionex devices, install a USB-compliant, full-speed external hub

For all systems:

- Windows-compatible monitor and video adapter, 1024 x 768 with 16 bit color

- CD-ROM drive

- Mouse supported by Windows

- Printer supported by Windows (network or parallel interface supported)

- Serial port for each AS3500 Autosampler

1.2   PeakNet 6-Moduleware-BIOS Compatibility

To prevent system communication failures, PeakNet 6 must be compatible with the Moduleware and BIOS of all installed Dionex devices. Before downloading new Moduleware to a device, check the table on the following page to verify that the version number supports the PeakNet 6 release installed on your computer.

Identifying the Current Versions of Moduleware and BIOS

There are several ways to identify which versions of Moduleware and BIOS are currently installed:

- Most devices display their Moduleware and BIOS versions at power-up.

- On many devices, you can also select the **POWER-UP SCREEN** from the **DIAGNOSTIC MENU** to display the Moduleware and BIOS versions.

- On the UI20 Universal Interface, press the front panel **Status** button to display the Moduleware and BIOS versions.

- From PeakNet 6; for DX-LAN devices:

  1. Start the PeakNet 6 server and then start the Server Configuration program.

  2. Select the **Dionex LAN Card** under **Sharable Devices**.

  3. From the **Edit** menu, select the **Properties** command.

  4. Select the **Update Moduleware** tab to display the Moduleware version for all connected devices.

- From PeakNet 6; for USB devices:

  1. Start the PeakNet 6 server and then start the Server Configuration program.

  2. Under the timebase, select the USB device whose Moduleware you want to check.

  3. Select **Properties** on the **Edit** or context menu and select the **General** tab page to display the Moduleware version.

BIOS Version Required for PeakNet 6 Support

To run PeakNet 6, the BIOS version for all devices must be 30.00 or higher. Note that the ICS-90 Ion Chromatography System contains a boot block, not a BIOS. All ICS-90 boot block versions are compatible with PeakNet 6.

Device	Moduleware Version (minimum for device support)	Moduleware Version (minimum for System Wellness support*)
AD20	3.02	Not supported
AD25	1.05	1.02
AS50	1.10	1.05
CD20	3.05	3.05
CD25	1.05	1.05
CD25A	1.00	1.00
DX-120	3.03	Not supported
ED40	3.07	3.05
ED50	1.07	1.05
ED50A	1.01	1.00
EG40	2.25	2.23
GP40	3.46	3.46
GP50	3.46	3.46
GS50	1.11	1.00
IC20	3.10	3.08
IC25	1.06	1.04
IC25A	1.02	1.00
IP20	3.46	3.46
ICS-90	1.00.00	1.00.00
IP25	3.46	3.46
IS25	1.11	1.00
PDA-100	1.16	1.06
UI20	3.02	Not supported

*System Wellness Support

For System Wellness support of a device, PeakNet 6 must be able to access the device's serial number. For newer devices, the serial number is entered into device memory at the factory and then is automatically uploaded to PeakNet 6 when the device is configured in a timebase.

However, in older devices, the serial number is not entered into device memory. To upgrade one of these devices for System Wellness support, contact Dionex. In the U.S., call 1-800-346-6390 and select the Technical Support option. Outside the U.S., call the nearest Dionex office.

1.3   Installation Overview

Preliminary Steps

| Copy the System Installation Check List | *See Section D.* |

| Record the Computer Configuration on the Check List | ☑ *After each remaining step, record the requested information on the check list.* |

| Back Up Windows System Files*
 *Not required for Windows 98 | *See Appendix A.* |

Software Installation

| Install PeakNet 6 Software | *See Section 2.1.* |

Installation of USB Devices

| Connect the USB Devices | *See Section 2.2.* |

| Add Timebase(s) and USB Device(s) to the Server Configuration | *See Section 2.4.* |

Installation of DX-LAN Devices

| Install the DX-LAN Card in the Computer | *See Section 2.3.1.* |

| Connect the DX-LAN Network | *For 10BASE-T, see Section 2.3.2.*
 For BNC, see Section 2.3.3. |

| Install the DX-LAN Card Driver | *For Windows 98, see Section 2.2.*
 For Windows 2000, see Section 2.3.
 For Windows NT, see Section 2.4. |

| Add the DX-LAN Card, Timebase(s), and DX-LAN Device(s) to the Server Configuration | *See Section 2.3.7 and Section 2.4.* |

2 • PeakNet 6 System Installation

2.1   Installing PeakNet 6 Software

The SETUP.EXE file on the CD-ROM installs PeakNet 6. After presenting a series of options for your consideration, it then copies PeakNet 6 onto the hard disk. Run the Setup program from within the Windows operating environment.

> **NOTE** **In order to install PeakNet 6, the DX-LAN card, and/or USB devices, you must be logged onto Windows 2000 or Windows NT with administrator privileges. If necessary, ask the Windows 2000 or Windows NT administrator to grant you administrator privileges temporarily. Administrator privileges are not required to run PeakNet 6.**

> **NOTE** **Windows NT 4.0 does not support USB. If the computer is running Windows NT, it may be possible to connect USB devices to the PC via a LAN (local area network). Contact your network administrator for help.**

1. Make sure that the drive on which you plan to install PeakNet 6 has at least 60 MB of free disk space.

2. Insert the PeakNet 6 CD-ROM into the appropriate drive.

3. The PeakNet 6 Setup menu appears.

    If the Setup menu does not appear automatically, go to the Autorun folder on the PeakNet 6 CD-ROM and double-click **autorun.exe**.

4. Select **Launch PeakNet 6 Setup**.

5. Setup now guides you through the installation procedure; follow the on-screen instructions as they appear.

6. When prompted, select whether to add the PeakNet 6 Server Monitor program to the Startup group. If you select yes, the Server Monitor program starts automatically when the computer is started, and the program icon appears in the taskbar.

7. After running Setup, store the CD-ROM in a safe place away from heat or moisture.

☑ Record the required information on the System Installation Check List.

An electronic version of the *PeakNet 6 User's Guide* (Document No. 031630) is included on the PeakNet 6 CD-ROM. Refer to the "Installation" section in the manual for additional information, including:

- The structure of the data source created during setup

- How to update PeakNet 6 software

- Special considerations for installing and using PeakNet 6 under Windows NT

- Details about PeakNet 6 software protection

- How to set up user access control of operations

2.2   Connecting Dionex Devices via USB

Follow these instructions to install Dionex devices (detector, pump, etc.) that are equipped with a USB (Universal Serial Bus) port. These connections are made with standard USB A-B cables. The "A" connector is the flat, rectangular end of the cable. The "B" connector is the smaller, more square end of the cable.

IMPORTANT **The USB standard limits the USB cable length to 5 meters (16 ft). If the distance between a device and the PC exceeds this limit, you can install a USB hub. Note that each device can be separated from the PC by no more than five hubs. Thus, each USB device can be located no more than 30 meters (32 yds) from the PC.**

Here is a summary of USB installation options:

• If a USB port is available on the PeakNet 6 workstation, connect the Dionex device directly to the computer (see Section 2.2.1).

• If the number of Dionex USB devices in the system exceeds the number of available USB ports on the computer, connect the additional devices to a USB hub and then connect the hub to the computer (see Section 2.2.2). There are two types of hubs:

If the system includes a Dionex device with a built-in USB hub (and if the ports provide sufficient power), connect the other USB devices to the built-in hub.

If a built-in hub is not available, you can install an external USB-compliant, full-speed hub and additional A-B cables. USB hubs and cables are available at computer supply stores.

> **NOTE   Windows NT 4.0 does not support USB. If the computer is running Windows NT, it may be possible to connect USB devices to the PC via a LAN (local area network). Contact your network administrator for help.**

2.2.1   Connecting USB Devices Directly to the PC

1. Plug the "A" connector of a USB A-B cable into a USB port on the PeakNet 6 workstation. Plug the "B" connector of the cable into the USB port on the Dionex device (see Figure 2-1).

2. Repeat Step 1 to install additional USB devices.

☑Record the required information on the System Installation Check List.

Go on to Section 2.4, "Adding Timebases and Devices to the Server Configuration."
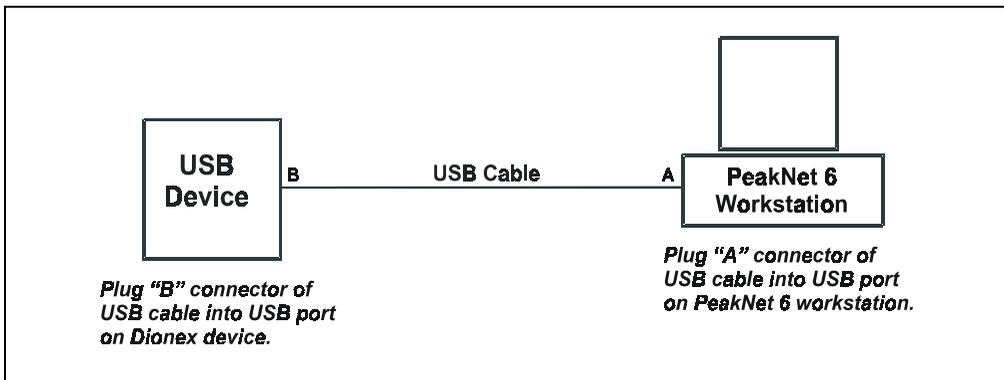
Figure 2-1. Example Connections: One USB Device Connected to the PC

2.2.2   Connecting USB Devices to a Hub

Whenever possible, connect Dionex USB devices to the built-in USB hub in a Dionex device. If a built-in hub is not available (or if the ports do not provide sufficient power), install a USB-compliant, full-speed external hub. Refer to the manual provided by the hub vendor for complete installation instructions.

IMPORTANT **The USB standard limits the USB cable length to 5 meters (16 ft). Each USB device can be separated from the PC by no more than five hubs. Thus, each USB device can be located no more than 30 meters (32 yds) from the PC.**

1. Plug the "A" connector of a USB A-B cable into a port on the USB hub. Plug the "B" connector of the cable into the USB port on the Dionex device (see Figure 2-2).

2. Repeat Step 1 for each additional USB device.

3. Plug the "A" connector of a USB A-B cable into a USB port on the computer (see Figure 2-2). Plug the "B" connector of the cable into a port on the USB hub.

☑Record the required information on the System Installation Check List.

Go on to Section 2.4, "Adding Timebases and Devices to the Server Configuration."
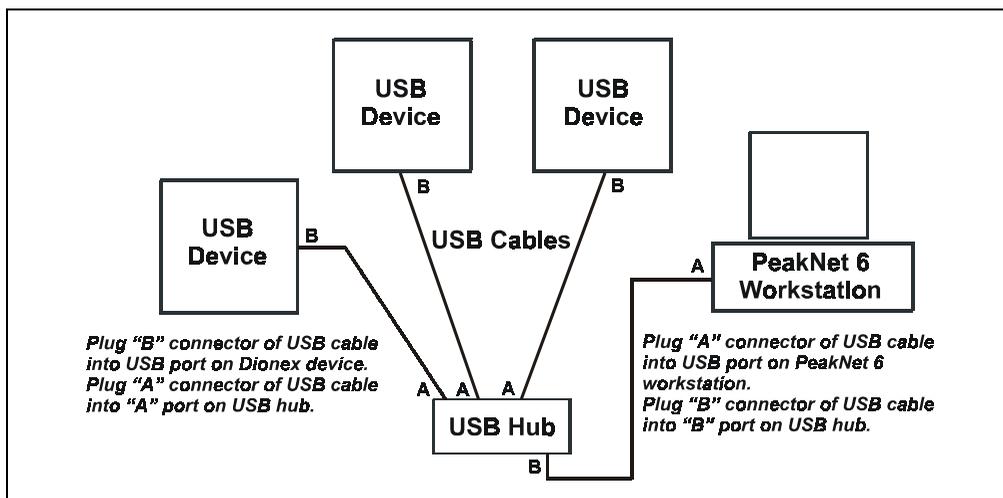
Figure 2-2. Example Connections: Three USB Devices to an External USB Hub

2.3 Connecting Dionex Devices via DX-LAN

The DX-LAN (Dionex local area network) consists of a computer running PeakNet 6 and at least one additional DX-LAN device (detector, pump, etc.). The PC, as well as each additional device, must contain a DX-LAN interface card.

2.3.1 Installing the Computer DX-LAN Card

IMPORTANT **Windows 98, Windows 2000, or Windows NT must be installed before the DX-LAN card is installed in order for the card to be set up correctly.**

IMPORTANT **To prevent electrostatic discharge from damaging the DX-LAN card's electronic components, use an electrostatic grounding strap during the installation. If one is not available, do the following: before removing the card from its anti-static bag, touch the computer's metal frame to discharge any static electricity from your body.**

1. Turn off the computer and disconnect its power cord.

2. Remove the computer cover.

3. A PCI Plug-and-Play 10BASE-T DX-LAN card (P/N 056908) is shipped with the PeakNet 6 system. Locate an empty PCI expansion slot into which the DX-LAN card will fit.

   > NOTE   If several expansion slots are empty, leave as much space as possible around each installed card to ensure adequate air circulation.

4. A metal filler bracket covers the rear panel opening for the selected expansion slot. Unscrew and remove the bracket; save the screw.

5. Carefully slide the DX-LAN card into the slot, aligning the card's metal mounting bracket with the expansion slot opening on the rear panel.

6. Align the card's bottom edge connectors with the connectors on the motherboard. Firmly push the card into the motherboard connectors until the card is fully seated. Install the screw removed in Step 4.

7. Replace the computer cover, as well as any cables you removed.

2.3.2 Connecting 10BASE-T DX-LAN Devices

Follow these instructions when installing Dionex devices (computer, detector, pump, etc.) equipped with a 10BASE-T DX-LAN RJ-45 (telephone-style) connector. Other devices on the DX-LAN network can be equipped with either 10BASE-T or BNC DX-LAN connectors. Figure 2-2 shows an example of network connections.
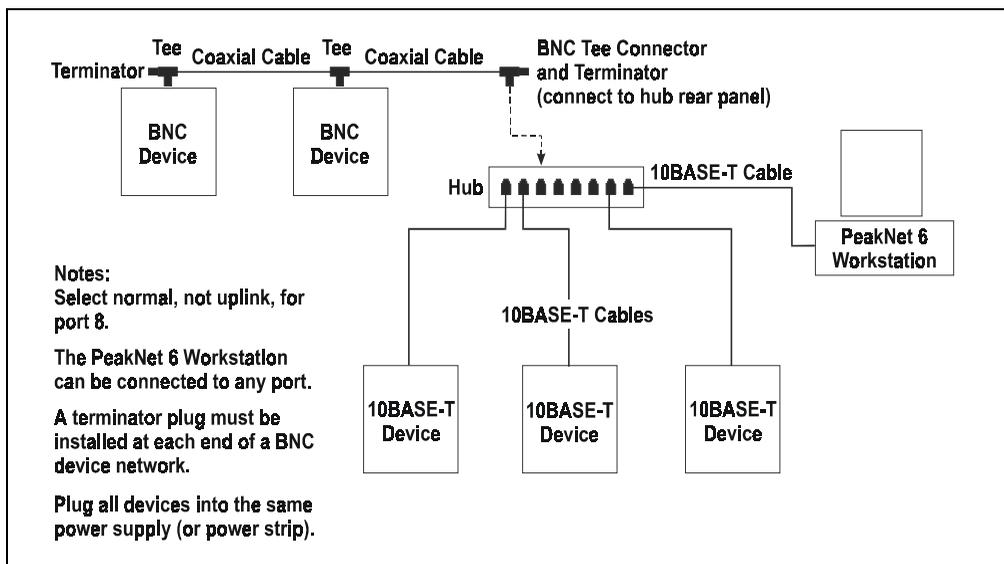
Figure 2-2. Example 10BASE-T DX-LAN Network Connections

IMPORTANT

The 10BASE-T DX-LAN cable is a Category 5 unshielded twisted-pair cable. Do not substitute a cable of an inferior grade. Failure to use the correct cable will cause a device to lose communication with the host computer.

IMPORTANT

When using 10BASE-T cabling, you must install an Ethernet hub. If you simply plug the 10BASE-T cable from a device into the connector on the computer's DX-LAN card, the connection will not work.

1. Verify that each device (computer, detector, pump, etc.) to be connected contains a DX-LAN interface card. For complete installation instructions for any Dionex device, refer to the individual product manual.

2. Plug a 10BASE-T DX-LAN cable (P/N 960279) into a 10BASE-T port on the front panel of the "combo" 10BASE-T Ethernet hub (P/N 057398). If connecting to port 8, set the Normal/Uplink push button to Normal.

3. Connect the other end of the 10BASE-T cable into the 10BASE-T DX-LAN connector on the rear panel of a 10BASE-T-equipped device (for example, the computer on which PeakNet 6 is installed).

4. Repeat Steps 2 and 3 for the remaining 10BASE-T-equipped devices.

5. If the network includes any BNC DX-LAN devices, follow the directions in Section 2.3.3 to connect the BNC DX-LAN network. Be sure to install 50 ohm terminator plugs (P/N 921034) in the BNC tee connectors at each end of the DX-LAN network (see Figure 2-2).

☑Record the required information on the System Installation Check List.

2.3.3   Connecting BNC DX-LAN Devices

Follow these instructions when one of the following conditions is true:

• All of the devices (computer, detector, pump, etc.) on the network are equipped with BNC DX-LAN connectors, *or*

• One or more devices equipped with a BNC DX-LAN connector will be connected to a 10BASE-T Ethernet hub.

Figure 2-3 shows an example of BNC DX-LAN network connections.
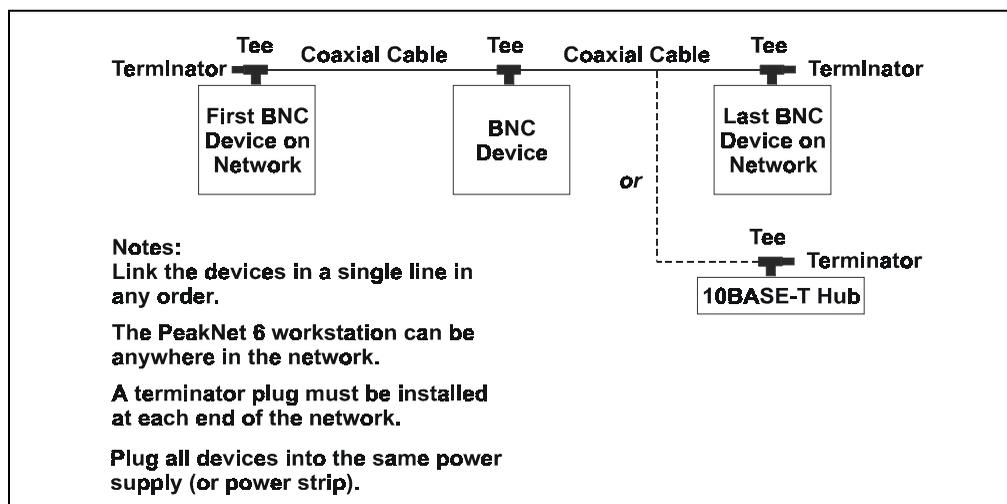
Figure 2-3. BNC DX-LAN Network Connections

1. Verify that each device (computer, pump, detector, etc.) to be connected contains a DX-LAN interface card. For complete installation instructions for any Dionex device, refer to the individual product manual.

2. Attach a BNC tee connector (P/N 921914) to the BNC connector on each device and on the BNC port on the rear panel of the "combo" 10BASE-T Ethernet hub (P/N 057398), if used.

   Note the two small locking pins protruding from either side of the BNC connector; twist the tee onto the BNC connector until the locking pins are fully engaged in the slots on the tee connector. Pull firmly on the tee connector to verify that it cannot move.

3. Connect a coaxial DX-LAN cable (3 ft, P/N 960406; 6 ft, P/N 960404; 12 ft, P/N 960405) to the first device.

   a. Slide the metal sleeve on the end of the DX-LAN cable over the BNC tee connector.

   b. Twist the metal sleeve onto the tee connector until the locking pins on the tee are fully engaged.

   c. Pull on the end of the cable to verify that it cannot move.

IMPORTANT **The coaxial DX-LAN cable is a 50 ohm coaxial impedance cable. (Fifty ohm cables are imprinted with "RG-58U.") Do not substitute an inferior cable, such as a 75 ohm television coaxial cable. Failure to use the correct cable or to lock it into place on the BNC tee connector will cause the device to lose communication with PeakNet 6.**

4. Plug the free end of the coaxial DX-LAN cable into one of the following:

   • The BNC connector on another device, *or*

   • The BNC connector on the rear panel of the "combo" 10BASE-T Ethernet hub (P/N 056910) (see Figure 2-2).

5. Repeat Steps 3 and 4 for each device to be connected.

6. Install 50 ohm terminator resistor plugs (P/N 921034) in the BNC tee connectors at each end of the BNC DX-LAN network.

IMPORTANT **A 50 ohm terminator resistor plug must be installed at each end of the BNC DX-LAN network. Before beginning operation, verify that both ends of the DX-LAN have terminator resistor plugs installed.**

☑ Record the required information on the System Installation Check List.

2.3.4   Windows 98: Installing the DX-LAN Card Driver

1. After installing the DX-LAN card in the computer and cabling the
    DX-LAN network, turn on the computer.

    When Windows 98 starts, it detects the new card and begins installing
    the driver.

2. When prompted, insert the Windows 98 CD-ROM and click **OK**.

3. When the installation is complete, restart the computer.

4. Open the Control Panel and double-click the **Network** icon.

    The Network dialog box appears.
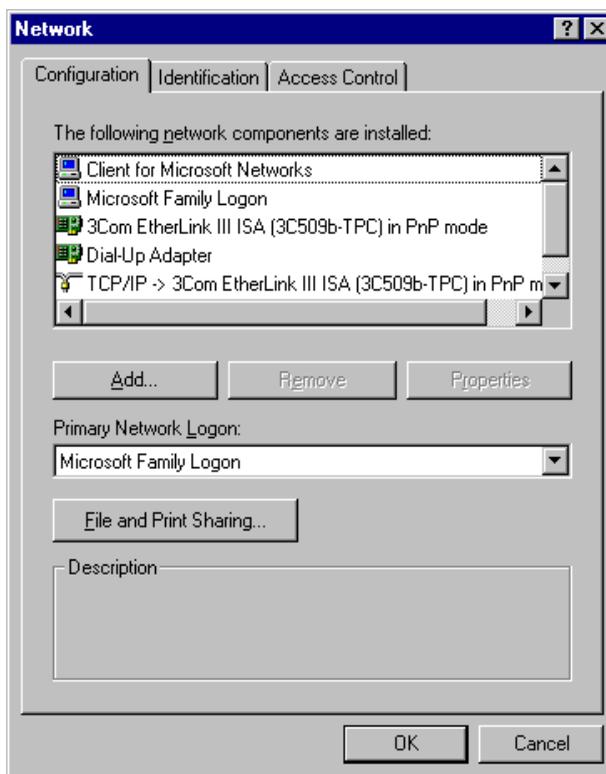
5. Select the entry for the card you installed and click **Add**.

6. Select **Protocol** and click **Add**.

The Select Network Protocol dialog box appears.
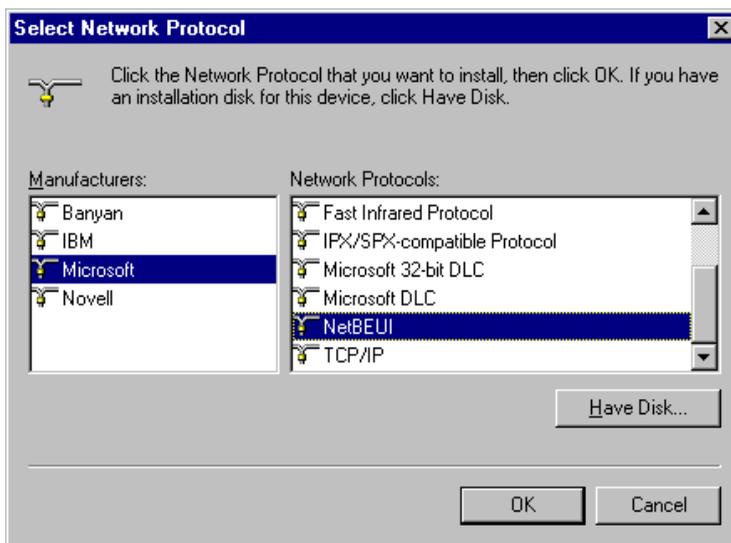
7. Select **Microsoft**.

8. Under Network Protocols, select **NetBEUI**.

9. Click **OK**.

The Network dialog box is displayed again.

10. Double-click the entry for the DX-LAN card.

The Properties dialog box for the adapter appears.

11. Select the **Bindings** tab.

12. Deselect all protocols except NetBEUI.

13. Click **OK** to close the dialog box, and then click **OK** again to close the Network dialog box.

14. Restart the computer.

☑Record the required information on the System Installation Check List.

Go on to the next section, "Run the System File Checker."

Run the System File Checker

After installing the DX-LAN card and driver, run the Windows 98 System File Checker utility to verify that the system files were not altered during the installation.

1. From the Windows **Start** menu, select **Programs** > **Accessories > System Tools** > **System Information**.

   The System Information application window appears.

2. From the **Tools** menu, select **System File Checker**.

3. Select the **Scan for altered files** option, and click the **Settings** button.

4. Select the **Check for changed files** and **Check for deleted files** check boxes.

5. Click **OK**.

6. Click the **Start** button.

7. If a changed or deleted file is detected, follow the on-screen instructions to restore the file.

After running System File Checker, go on to Section 2.4, "Adding Timebases and Devices to the Server Configuration."

2.3.5 Windows 2000: Installing the DX-LAN Card Driver

> **NOTE** **In order to install PeakNet 6 and the DX-LAN card, you must be logged onto Windows 2000 with administrator privileges. If necessary, ask the Windows 2000 administrator to grant you administrator privileges temporarily. Administrator privileges are not required to run PeakNet 6.**

1. After installing the DX-LAN card in the computer and cabling the DX-LAN network, turn on the computer.

   When Windows 2000 starts, it detects the new card and automatically installs the driver.

2. When Windows 2000 has finished starting, click the **Start** button and select **Settings > Network and Dial-up Connections**.

   The Network and Dial-up Connections dialog box appears. The contents of the dialog box vary, depending on which network cards were previously installed in the computer. In the following example, two LAN cards are installed. The first LAN connection is for the company's network. The second connection is for the DX-LAN.
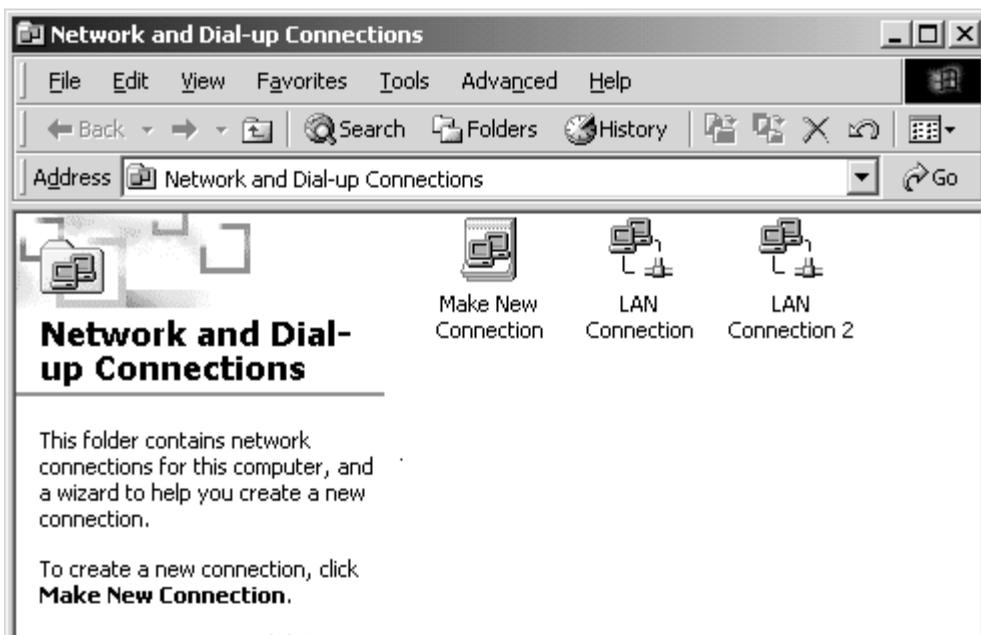
3. Double-click the icon for the DX-LAN connection (in the example above, this is LAN Connection 2). The following dialog box appears:
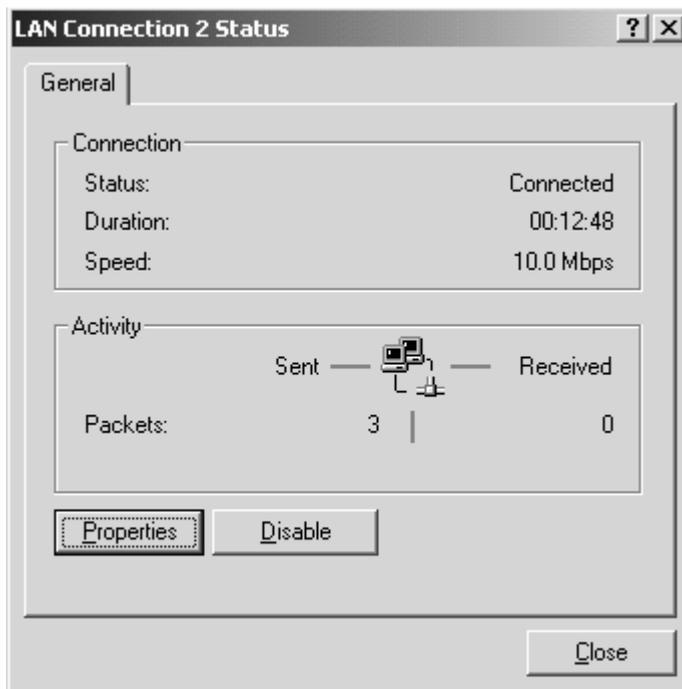
4. Click the **Properties** button.

   The DX-LAN card Properties dialog box appears.

5. In the **Components checked**... list, clear all check boxes *except* the **NetBEUI Protocol** box.
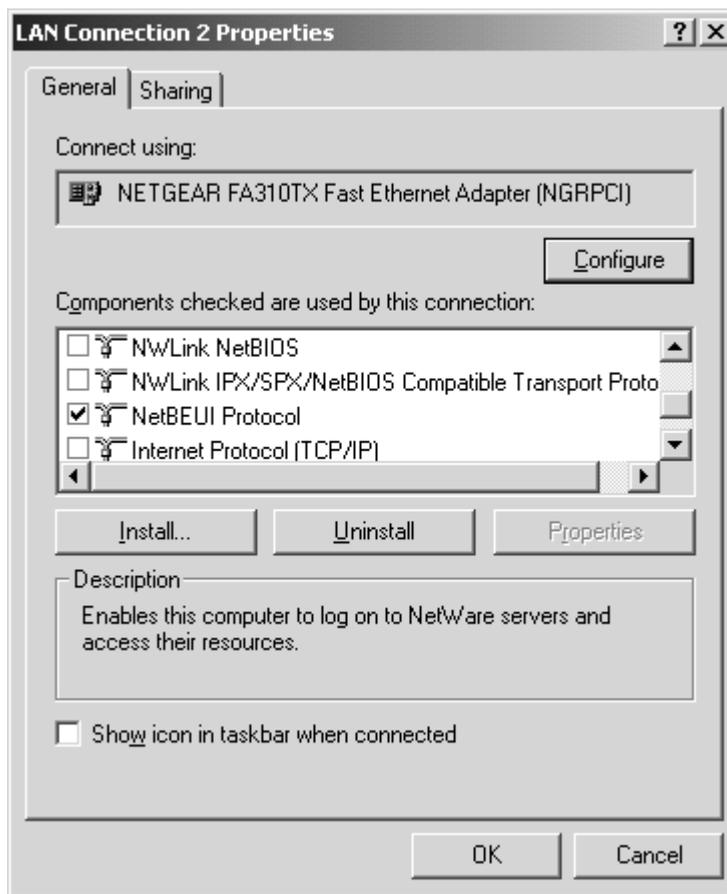
6. Click **OK** to close the dialog box.

☑ Record the required information on the System Installation Check List.

Go on to on to Section 2.4, "Adding Timebases and Devices to the Server Configuration."

2.3.6   Windows NT: Installing the DX-LAN Card Driver

> **NOTE**   **In order to install PeakNet 6 and the DX-LAN card, you must be logged onto NT with administrator privileges. If necessary, ask the Windows NT administrator to grant you administrator privileges temporarily. Administrator privileges are not required to run PeakNet 6.**

1. After installing the DX-LAN card in the computer and cabling the DX-LAN network, turn on the computer.

2. Open the Control Panel and double-click the Network icon.

    If the Network dialog box appears, go on to Step 3.

    If the Network Configuration message box appears, go to "Installing Windows NT Networking and the Plug-and-Play Driver" on page 2-20.

3. In the Network dialog box, select the **Adapters** tab.

4. Click the **Add** button.

    The Select Network Adapter dialog box appears, displaying a list of network adapters.

5. Click the **Have Disk** button.

    The Insert Disk dialog box appears.

6. The default disk drive is A. If your disk drive is B, select the B drive.

7. Dionex provides a disk with drivers in the PeakNet 6 installation kit. Insert the disk into the drive and click **OK**.

8. In the list of network adapters, select the entry for the NETGEAR FA310TX Fast Ethernet PCI Adapter and click **OK**.

9. When Windows NT has finished copying the required files, select the **Bindings** tab.
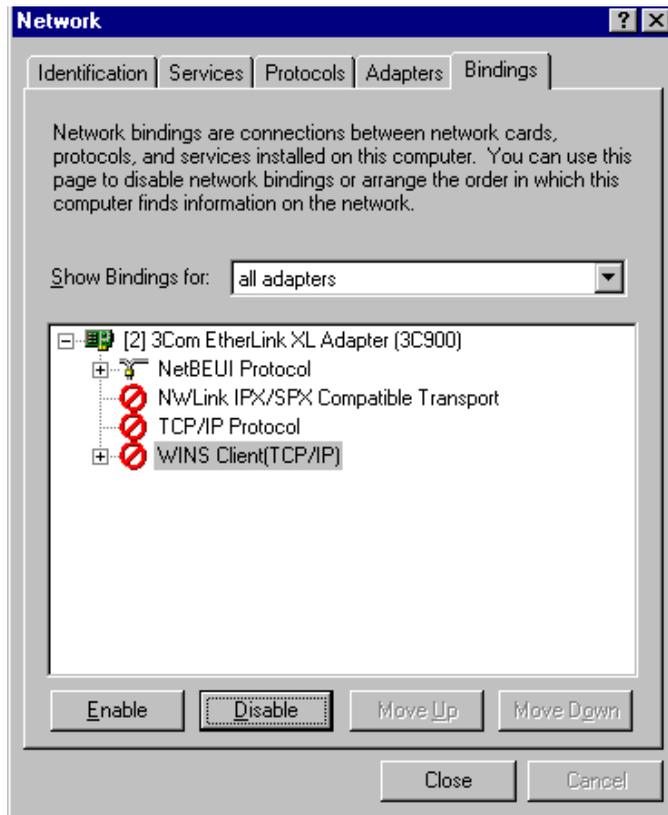
10. In the Show Bindings for box, select **All Adapters**.

11. In the list of adapters, double-click the entry for the NETGEAR FA310TX Fast Ethernet PCI Adapter to display a list of protocols for the adapter.

12. Disable all protocol entries except NetBEUI. To do so, select each entry and click the **Disable** button.

13. Click **OK** to close the dialog box.

14. When the system asks whether to restart Windows now, click **Yes**.

☑Record the required information on the System Installation Check List.

on to Section 2.4, "Adding Timebases and Devices to the Server Configuration."

Installing Windows NT Networking and the Plug-and-Play Driver

1. If Windows NT Networking has not been installed on your computer, the Network Configuration message box appears after you double-click the Network icon in the Control Panel. Click **Yes** to install Windows NT Networking now.

   The Network Setup Wizard appears.

2. Accept the default setting, **Wired to the network**, and click **Next**.

3. Click the **Select from list** button.

   The Select Network Adapter dialog box appears.

4. Click the **Have Disk** button.

   The Insert Disk dialog box appears.

5. The default disk drive is A. If your disk drive is B, select the B drive.

6. Dionex provides a disk with drivers in the PeakNet 6 installation kit. Insert the disk into the drive and click **OK**.

   The Select OEM Option dialog box appears.

7. Select the entry for the NETGEAR FA310TX Fast Ethernet PCI Adapter and click **OK**.

   The selected adapter now appears in the Networks Adapter list in the Network Setup Wizard.

8. Click **Next**.

9. The Network Protocols list appears. Select the NetBEUI protocol and deselect all others.

10. Continue following the Network Setup Wizard. Accept default settings for all the remaining steps.

11. When prompted, insert the Windows NT CD-ROM, enter the CD-ROM drive letter, and click **OK**.

12. When the dialog box appears informing you there is more than one hardware bus, accept the default settings and click **OK**.

13. Continue following the Network Setup Wizard; when finished, click **Yes** to restart the computer.

2.3.7 Adding the DX-LAN Card to the Server Configuration

1. Turn on the power to all devices (detector, pump, etc.) connected to the DX-LAN network.

2. Start the PeakNet 6 Server Monitor program by clicking **Start** from the Windows taskbar and selecting **Programs > PeakNet > Server Monitor**, or double-click the Server Monitor icon if it is on the taskbar.

3. If it is not already running, start the server by clicking the **Start** button.
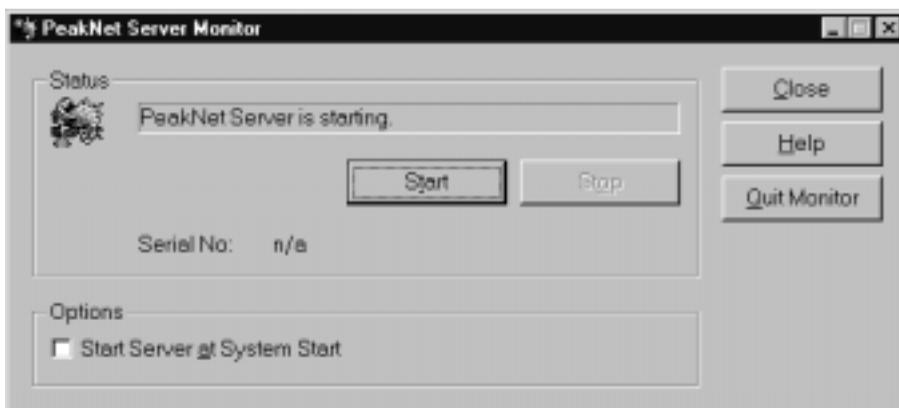
4. Click the **Close** button to close the Server Monitor program window.

   The Server Monitor icon appears on the taskbar.

   NOTE Clicking the Quit Monitor button, quits (exits) the Server Monitor program, but it does not stop the server. To stop the server, click the Stop button.

5. Start the Server Configuration program by clicking **Start** on the Windows taskbar and selecting **Programs > PeakNet > Server Configuration**.

6. If necessary, click the + character beside the server name to show the items under the server.

7. Select the **Sharable Device** item and select **Add Shared Device** from the Edit menu, or right-click and select from the pop-up menu.

8. Select **Dionex LAN Card** from the list and click **OK**.
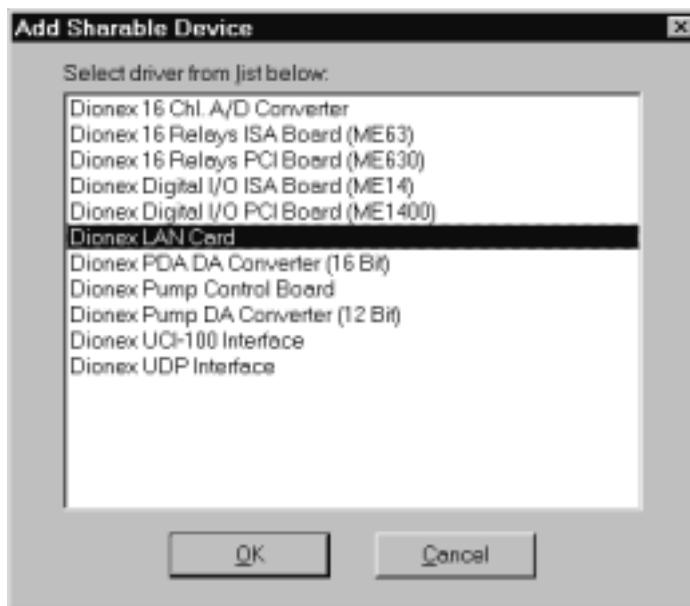
The Dionex LAN card properties dialog box appears, displaying the name of the DX-LAN card and all other network cards installed in the

computer. The example below shows the DX-LAN PCI Plug-and-Play card for 10BASE-T and one additional network adapter.
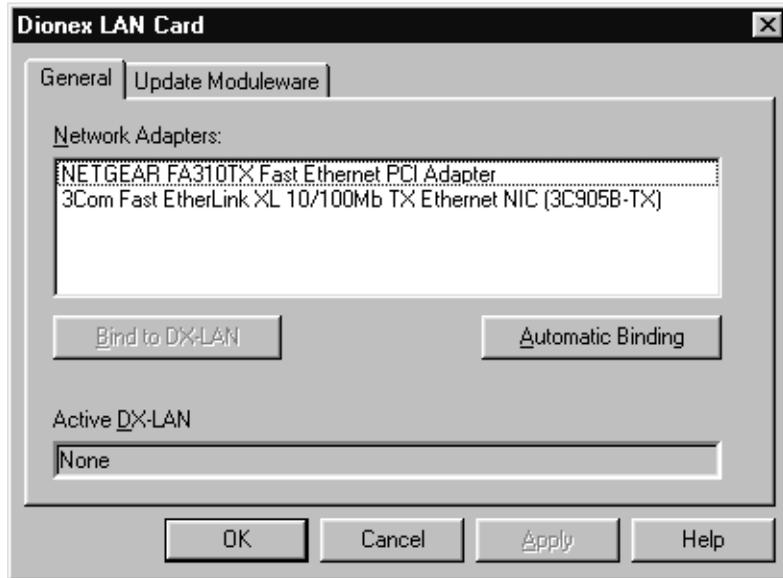
There are two methods for binding to the DX-LAN card: automatic and manual.

Automatic Binding

Click the **Automatic Binding** button (do not first select an adapter in the Network Adapters list) to have PeakNet 6 search for the DX-LAN card. When the DX-LAN card is found, PeakNet 6 binds to it and then establishes communication with the DX-LAN device(s) installed on the network.

During automatic binding, PeakNet 6 sends commands to all installed network adapters until it finds the DX-LAN card. It is possible for this process to affect communication with the network(s) associated with the other network adapter(s). A message warning you of this appears when you click the **Automatic Binding** button.

For most adapters, the commands sent from PeakNet 6 do not cause a problem and you can click **Yes** to continue. However, if you do not want PeakNet 6 to communicate with other adapters, click the **No** button and use the manual binding procedure instead.

Manual Binding

Select the DX-LAN card in the Network Adapters list and click the
Bind to DX-LAN button.

PeakNet 6 binds to the DX-LAN card and then establishes
communication with the DX-LAN device(s) installed on the network.

During manual binding, PeakNet 6 only sends commands to the
adapter selected in the list.

NOTE **Once the DX-LAN card is successfully bound (either
automatically or manually), PeakNet 6 never sends
commands to another network adapter.**

When binding is complete, the **Active DX-LAN** box displays the
name of the DX-LAN PCI Plug-and-Play card.
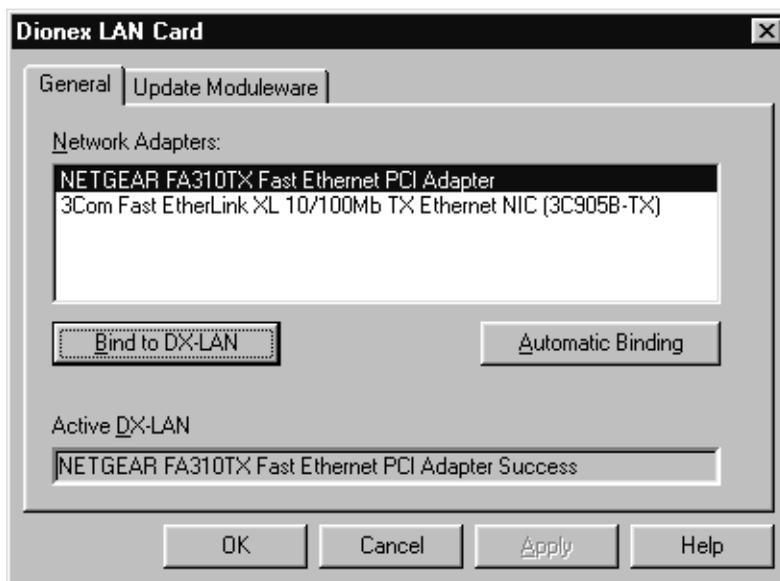
9. Click **OK** to close the Dionex LAN Card dialog box.

☑Record the required information on the System Installation Check List.

You can now add a timebase to the server configuration and add the DX-LAN
devices to the timebase.

2.4 Adding Timebases and Devices to the Server Configuration

This section briefly describes how to add a timebase to the server configuration and how to add devices to the timebase. For detailed information, see the PeakNet 6 online Help topic, "How to...: Actions in the Server Configuration Program."

1. In the Server Configuration program, right-click the server name and select **Add Timebase**.
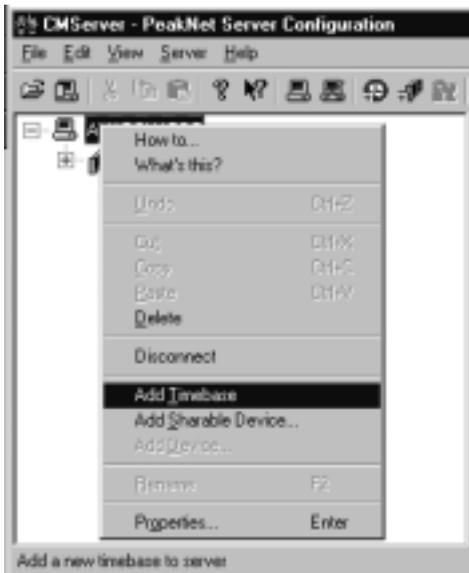
2. Enter a name for the timebase, or accept the default name.

3. Right-click the timebase and select **Add Device**.

4. Select the device to be included in this timebase.

5. For USB devices only: Select the Device Serial Number. **Note:** Refer to the operator's manual for the device for the location of the serial number.

6. For DX-LAN devices only: Select the DX-LAN Device ID number. **Note:** Devices display their DX-LAN ID numbers when their power is turned on.

7. Specify properties for the device.

8. Repeat Steps 3 through 5 for any additional devices to be included in the timebase. An example timebase is shown below.
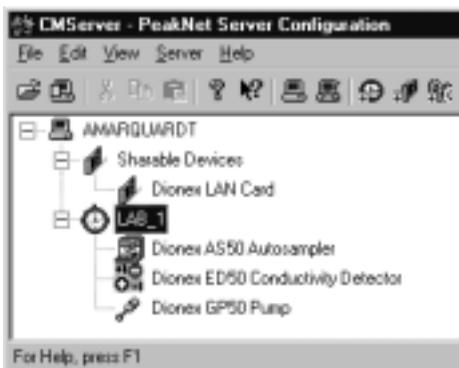
9. Repeat Steps 1 through 6 for any additional timebases.

☑ Record the required information on the System Installation Check List.

A • Backup of Windows System Files

Before installing PeakNet 6 and the DX-LAN card, it is important to back up your Windows system files. If an accident occurs during installation, you may need to restore these files. Follow the instructions in Section A.1 for Windows 2000 or Section A.2 for Windows NT.

> **NOTE** **For Windows 98, a system file check is performed after installing the card and PeakNet 6 (see Section 2.3.5).**

A.1   Windows 2000: Creating the Emergency Repair Disk

The Windows 2000 backup tools include an option to create an Emergency Repair Disk for repairing and restarting Windows if it is damaged.

1. Click **Start** on the Windows taskbar, and then select **Programs > Accessories > System Tools > Backup**.

2. Select the Emergency Repair Disk icon from the Backup dialog box.

    The following dialog box appears.

3. Check the "Also backup the registry..." check box and then insert a formatted floppy disk into drive A and click **OK**.

    The information needed by the Windows 2000 Setup program to repair Windows 2000 is saved to the floppy disk. Store the disk in a safe place. If it

is ever necessary to repair the Windows registry, see Appendix C for instructions.

☑ Record the required information on the System Installation Check List.

A.2   Windows NT: Creating the Emergency Repair Disk

Windows NT includes an application called RDISK that saves important Windows system files to an Emergency Repair disk.

1. Go to the WinNT\System32 directory on your computer.

2. Double-click the RDISK.EXE program file. This screen is displayed:
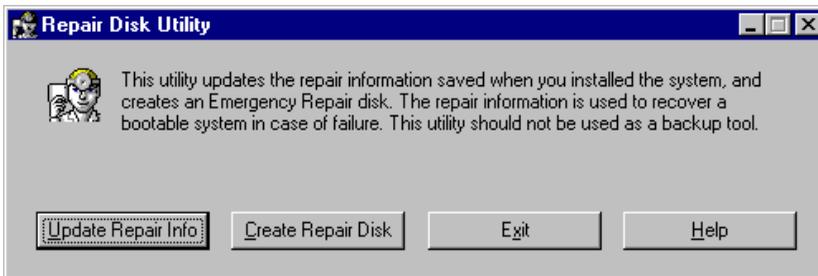
3. Click the **Create Repair Disk** button to display the following dialog box:
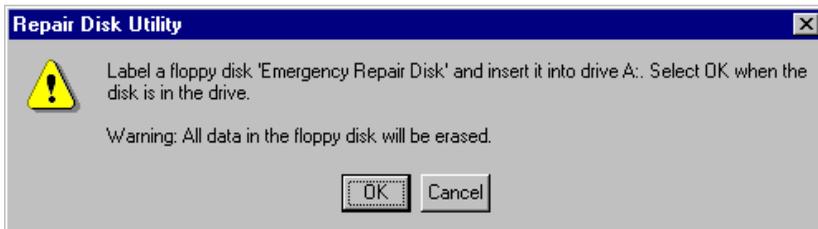
4. Insert a formatted floppy disk into drive A and click **OK**. The information needed by the Windows NT Setup program to repair Windows NT is saved to the floppy disk. Store the disk in a safe place. If it is ever necessary to repair the Windows registry, see Appendix A for instructions.

☑ Record the required information on the System Installation Check List.

B • Setting Up the AS3500 Autosampler

B.1 Connecting the AS3500 to a Computer COM Port

1. Locate the AS3500-to-PeakNet cable assembly (P/N 045789) provided in the autosampler Ship Kit.

2. Insert the end of the cable assembly with the 9-pin jack into one of the computer COM ports.

3. Plug the free end of the cable into the telephone-style connector labeled COMM on the rear panel of the AS3500.

B.2 SpectraNet Mode Selection

The AS3500 autosampler must be in SpectraNet mode when operating with PeakNet 6. Select the SpectraNet mode as follows:

1. Turn on the AS3500 power switch. The autosampler will begin running self-diagnostics and displaying their status on the instrument control panel. When the diagnostics are completed, the autosampler Status screen is displayed.

2. Push the MENU button on the Status screen, and then use the arrow keys to select OPTIONS.

3. Press ENTER to display a screen showing two choices: Ready Participation and Configuration. Use the arrow keys to select Configuration.

4. Press ENTER to display the Configuration scroll screen, and then use the down arrow to scroll to MODE. Use the plus (+) or minus (-) buttons to select the SpectraNet option. Press ENTER.

B.3 Input and Output Polarity Settings

1. For the Input Polarity menu option, set

   Pump Ready Active = HI

   Inj Hold Active = LO

2. For the Output Polarity menu option,

   Set all to LO.

IMPORTANT **If Inj Hold Active is set to HI, data acquisition cannot be started.**

C • Troubleshooting Communication Problems

C.1 DX-LAN Devices

Problem: When you add the DX-LAN card to the server configuration (see Section 2.3.7), an active DX-LAN card does not appear in the DX-LAN Card Properties dialog box. This indicates that PeakNet 6 is not able to recognize the card; therefore, it cannot establish communication with DX-LAN devices in the system.

Causes/Solutions:

- **The DX-LAN device(s) are not powered up.**

  Turn on the power to the device(s) and follow the procedure in "Manual Binding" on page 2-21 to bind the DX-LAN protocol to the card and establish communication with the devices.

- **The Dionex Plug-and-Play card was installed in the computer before Windows 98 was installed.**

  1. Open the Windows Control Panel and double-click the **System** icon.

  2. Select the **Device Manager** tab.

      A device is listed as an unknown Ethernet card (i.e., a question mark icon precedes the card name).

  3. Delete this unknown Ethernet card listing.

  4. Reboot the computer.

  5. When Windows starts, it detects the card. Follow the device driver installation instructions in Section 2.3.4. When finished, install PeakNet 6 software.

- **PeakNet 6 was installed before the Plug-and-Play card was installed.**

    If you did not save the Windows registry information (see Appendix A), contact Dionex for assistance. If you did save the registry information, follow the steps below to correct the problem.

    For Windows 2000:

    1. Click **Start**, and then click **Shut Down**.

    2. Click **Restart**, and click **OK**.

    3. When the message **Please select the operating system to start** appears, press **F8**.

    4. Use the arrow keys to select **Last Known Good Configuration**, and press **ENTER**.

        NOTE NUM LOCK must be off to use the arrow keys on the numeric keypad.

    5. Use the arrow keys to select an operating system, and press **ENTER**.

    6. Restart Windows, and then follow the instructions in Section 2.3.5 for installing the device driver.

    For Windows NT:

    1. Insert the Windows NT CD-ROM into the CD-ROM drive.

    2. When the Microsoft Windows NT title page is displayed, click the **Windows NT Setup** button.

    3. The Windows NT 4.0 Upgrade/Installation dialog box appears. Click the **Options** button.

    4. Uncheck the **Create Local Source** option, and then click **OK** and **Continue**.

    5. When the installation program finishes copying files, exit Windows NT and restart the computer.

    6. When prompted to either completely reinstall Windows NT or repair it, select **Repair** and insert the Emergency Repair disk (see Section A.2) to repair the registry.

    7. Follow the instructions in Section 2.3.6 for installing the device driver.

- **The same model of network card was installed before the Dionex Plug-and-Play card was installed.**

  For the DX-LAN to function correctly, the IPX/SPX-compatible protocol must not bind to the Dionex Plug-and-Play card. However, if the Plug-and-Play card is installed in a computer that already contains a similar card, it is difficult to determine from which card the IPX/SPX binding should be removed. Follow the steps below to correct the problem.

  1. In the Control Panel, open the Network applet.

  2. Highlight the first entry for the NETGEAR 310TX Fast Ethernet PCI Adapter (the DX-LAN Plug-and-Play card). Now, click the **Remove** button.

  3. One at a time, remove all other entries for the NETGEAR FA310TX Fast Ethernet PCI Adapter. When you finish, exit Windows and turn off the computer.

  4. Remove all FA310TX cards, *except* the Dionex card, from the computer.

  5. Turn on the computer. Follow the instructions in Section 2.3.4 (Windows 98), Section 2.3.5 (Windows 2000), or Section 2.3.6 (for Windows NT) to set up the card with the Control Panel.

  6. Follow the instructions in Section 2.3.7 to add the card to the PeakNet 6 server configuration. The card should now appear in the Active DX-LAN Card list.

  7. Exit Windows and turn off the computer.

  8. Reinstall the other FA310TX card(s) in the computer and reconnect the network cables.

  9. Turn on the computer and install the driver for the other FA310TX cards. The connection to the network will be re-established.

Problem: The server intermittently loses communication with DX-LAN devices.

Causes/Solutions:

• **A DX-LAN cable(s) is the wrong type.**

When making BNC DX-LAN connections, use 50 ohm coaxial impedance cables (imprinted with "RG-58U").

When making 10BASE-T DX-LAN connections, use Category 5 unshielded twisted-pair cables.

• **10BASE-T hub connections are incorrect or the hub power is off.**

Make sure each device, including the computer, is connected to a hub port with a Category 5 unshielded twisted-pair cable. Make sure the connections are not loose.

If a device is connected to Port 8, make sure the Normal/Uplink push button is set to Normal.

Make sure the power to the hub is turned on.

• **A BNC tee connector(s) is incorrectly installed.**

Check every device on the DX-LAN network as follows:

a. Make sure a BNC tee connector is attached to the BNC connector on the rear panel of the device. Check that the locking pins on the BNC connector are fully engaged in the slots on the tee connector. Finally, pull on the tee connector to verify that it cannot move.

b. Next, check each DX-LAN cable to verify that the locking pins on the BNC tee connector are fully engaged in the slots in the cable's metal sleeve. Pull on each cable to verify that it cannot move.

• **A terminator plug(s) is missing.**

Make sure a 50 ohm terminator plug (P/N 921034) is installed in the BNC tee connector at each end of the DX-LAN network.

• **Devices are not connected to the same ground.**

Dionex strongly recommends connecting all DX-LAN devices in the system to the same power supply or power strip.

- **The same model of network card was installed before the Dionex Plug-and-Play card was installed.**

  For the DX-LAN to function correctly, the IPX/SPX-compatible protocol must not bind to the Dionex Plug-and-Play card. However, if the Plug-and-Play card is installed in a computer which already contains a similar card, it is difficult to determine from which card the IPX/SPX binding should be removed. Follow the steps below to correct the problem.

  1. In the Control Panel, double-click the Network icon.

  2. Highlight the first entry for the NETGEAR FA310TX Fast Ethernet PCI Adapter (the DX-LAN Plug-and-Play card). Now, click the **Remove** button.

  3. One at a time, remove all other entries for the NETGEAR FA310TX Fast Ethernet PCI Adapter. When you finish, exit Windows and turn off the computer.

  4. Remove all FA310TX cards, *except* the Dionex card, from the computer.

  5. Turn on the computer. Follow the instructions in Section 2.3.4 (Windows 98), Section 2.3.5 (Windows 2000), or Section 2.3.6 (for Windows NT) to set up the card with the Control Panel.

  6. Follow the instructions in Section 2.3.7 to add the card to the PeakNet 6 server configuration. The card should now appear in the Active DX-LAN Card list.

  7. Exit Windows and turn off the computer.

  8. Reinstall the other FA310TX card(s) into the computer and reconnect the network cables.

  9. Turn on the computer and install the driver for the other FA310TX cards. The connection to the network will be re-established.

C.2 USB Devices

Problem: When the computer is turned on, a Windows message box appears asking for a USB configuration file (**cmwdmusb.inf**).

Causes/Solutions:

- **Before PeakNet 6 was installed, a USB device was connected to the computer and the power to the device was turned on.**

  Dionex strongly recommends installing PeakNet 6 *before* connecting any USB devices to the computer. When the software is installed first, the USB driver information is automatically loaded.

  Use one of the methods below to resolve the problem.

  - Click the **Cancel** button in the Windows message box. Turn off the power to the USB device and unplug the USB cable from the computer. Then, install PeakNet 6, reconnect the USB cable, and turn on the power to the device. Windows will now automatically recognize the USB device.

  - Leave the Windows message box open and insert the PeakNet 6 CD-ROM into the CD-ROM drive. Click the **Browse** button in the message dialog box. The c**mwdmusb.inf** file is located in the **Drivers** folder on the CD.

D • PeakNet 6 System Installation Check List

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1. Computer Setup

a. Hardware Configuration

Brand _____   Model _____   Serial No._____

CPU Type _____   CPU Speed _____ MHz / GHz RAM Size _____ MB

Hard Drive Free Space: Before Install _____   After Install_____

Other Devices

❏   Printer Brand _____ Model _____

❏   Sound Card Type   _____

❏   Modem Type _____

❏   Non-Dionex LAN Card Type _____

Other _____

Computer hardware configuration verified by

_____

(signature and date)

b. Computer Operating System

Windows 98 / 2000 / NT   Version _____   Service Pack Version _____

Computer operating system verified by

_____

(signature and date)   **Go to Section 2**

---

2. Backup of Windows System Files

2.2 Windows 2000: Create Emergency Repair Disk

Repair Disk created by

_____

(signature and date)   **Go to Section 3**

2.3 Windows NT: Create Emergency Repair Disk

Repair Disk created by

_____

(signature and date)   **Go to Section 3**

---

3. PeakNet 6 Software Installation

PeakNet 6 Release (version and build numbers) _____

PeakNet 6 Software Protection Key Code _____

You copied all Moduleware files from the Moduleware CD-ROM to the hard drive (optional):

❏ Yes   Moduleware Release _____   Module BIOS Version(s)_____

❏ No

PeakNet 6 software installation verified by

_____

(signature and date)   **Go to Section 4 (USB device)**

                                        Go to Section 5 (DX-LAN device)

---

4. USB Device Installation

❏ Installer logged in with administrator privileges (Windows 2000 or Windows NT)

❏ Each USB-equipped device connected to computer (or USB hub) via USB cable

❏ USB hub connected to computer via USB cable

USB cable installation verified by

_____

(signature and date)   **Go to Section 7**

---

5. DX-LAN Device Installation

DX-LAN Card Installation

❏ PCI Plug-and-Play card (P/N 056908) installed

10BASE-T DX-LAN Cable Connections

❏ Each 10BASE-T DX-LAN-equipped device connected to Ethernet hub via 10BASE-T cable

❏ Ethernet hub connected to computer via 10BASE-T cable

BNC DX-LAN Cable Connections

❏ "RG-58U" printed on side of each cable

❏ Both ends of network have terminators

❏ Each DX-LAN device connected via BNC tee connector

❏ All connections secure (locking pin on connector is fully engaged)

Computer DX-LAN card and cable installation verified by

_____

(signature and date)   **Go to Section 6**

---

6. DX-LAN Card Driver Installation

DX-LAN card driver version on driver disk label _____

❏ Installer logged in with administrator privileges (Windows 2000 or Windows NT)

❏ DX-LAN card driver installed

❏ All protocol bindings *except* NetBEUI removed from DX-LAN card

Computer DX-LAN card driver installation verified by

_____

(signature and date)   **Go to Section 7**

---

7. PeakNet 6 Server Configuration

❏ Power to all devices turned on before starting the server

❏ DX-LAN card added to server configuration as a Shared Device and binding to the DX-LAN protocol occurred, if necessary

❏ Timebase(s) added to the server

❏ All USB devices added to the timebase(s) and the correct device serial number assigned to each device

❏ All DX-LAN devices added to the timebase(s) and the correct DX-LAN device ID assigned to each device

PeakNet 6 server configuration verified by

_____

(signature and date)   **Go to Section 8**

---

8. Dionex Devices Installed (Indicate Moduleware Versions)

AD20 _____	ED40 _____	IC25 _____
AD25 _____	ED50 _____	IC25A _____
AS3500 _____	ED50A _____	ICS-90 _____
AS50 _____	EG40 _____	IP20 _____
CD20 _____	GP40 _____	IP25 _____
CD25 _____	GP50 _____	IS25 _____
CD25A _____	GS50 _____	PDA-100 _____
DX-120 _____	IC20 _____	UI20_____

Dionex Device Installation verified by

_____

(signature and date)   **Done**