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Find the *Rockwell / Allen-Bradley 1784-PCD* at our website: *Click HERE*

Remove the Driver

You can use the uninstaller provided by Windows NT to remove the driver from your system.

1. Click St**art ⇒Settings ⇒Control Panel**.
2. Double-click the **Add/Remove Programs** icon.
3. Close the Control Panel. Doing this allows you to completely uninstall the driver without rebooting your computer.
4. Select **Allen-Bradley 1784-PCD Driver** from the Add/Remove Programs list box.
5. Click **Add/Remove**. Before files are deleted, you are prompted to confirm that you want to remove the PCD card.

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Install and Use the Driver for Windows 2000

What's in This Chapter?

This Chapter describes how to:

To:	See page:
Install the Driver	6-2
Update the 1784-PCD Plug and Play Driver	6-7
Stop and Eject the 1784-PCD Card	6-8
Show the Card Unplug/Eject Icon on the Taskbar	6-11

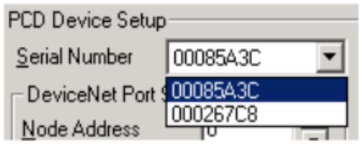
In order to follow the instructions in this Chapter, you must:

- have Windows 2000 loaded
- have the Windows 2000 driver for the PCD card
- have RSLinx version 2.2 or later with RSLinx Service Pack 2 installed

For RSLinx versions later than 2.2, no Service Pack is required for the 1784-PCD card to work.

TIP

You can have two PCD cards installed to monitor different networks or access different devices. If you install two PCD cards, each card will have a unique serial number, as shown in this excerpt from the RSLinx PCD Driver Configuration Screen.



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IMPORTANT If you are using Windows 2000, we strongly recommend that you verify that your system BIOS supports Windows 2000. If you have problems using the 1784-PCD card with a system running Windows 2000, check that you have the latest system BIOS installed. You can download BIOS updates from most computer manufacturers' websites. Contact your computer manufacturer for details.

Install the Driver

TIP



If you are upgrading your system from Windows NT to Windows 2000, keep the following in mind:

- Check that you have a Windows 2000-compatible BIOS installed. You can download BIOS updates from most computer manufacturers' websites. Contact your computer manufacturer for details.
- be sure to uninstall Windows NT PCD drivers before attempting to install Windows 2000. If you do not, and you see a wdnpcd.dll error message in RSLinx, remove the old driver by running the pcdupdt.exe utility from the root of your driver installation disk. Refer to Update the 1784-PCD Plug and Play Driver on page 6-7 for instructions for removing the old driver. If you still have problems, contact Rockwell Automation Technical Support.

1. Insert the PCD card into your computer as described in Chapter 7.

IMPORTANT Before you can install the driver for the 1784-PCD card, you must be logged in as an administrator of the machine. Being an administrator gives you permission to install or make changes to the machine software. If you try to install the driver without being an administrator, you will get error messages and the driver will not install.

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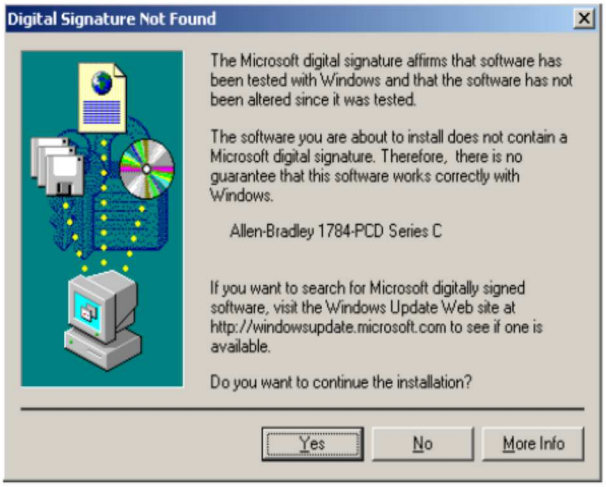
TIP

If you insert multiple PC Cards, you may hear more than one tonal notification per card. Windows 2000 detects devices during the power up process, and adjusts the device resources accordingly. This results in sounding multiple tones. When the system changes settings, for example, when removing a card, the tones will sound again for each change.

IMPORTANT

If a PCD driver is already installed, remove it by running the pcdupdt.exe utility from the root of your driver installation disk. Refer to Update the 1784-PCD Plug and Play Driver on page 6-7.

2. After you insert the PCD card, the system detects the hardware and begins to build the driver information needed to run the hardware. If you see the Digital Signature Not Found screen, click **Yes** to continue the installation.



3. Because the driver has not been loaded, Windows 2000 displays a new hardware dialog box and the following message:



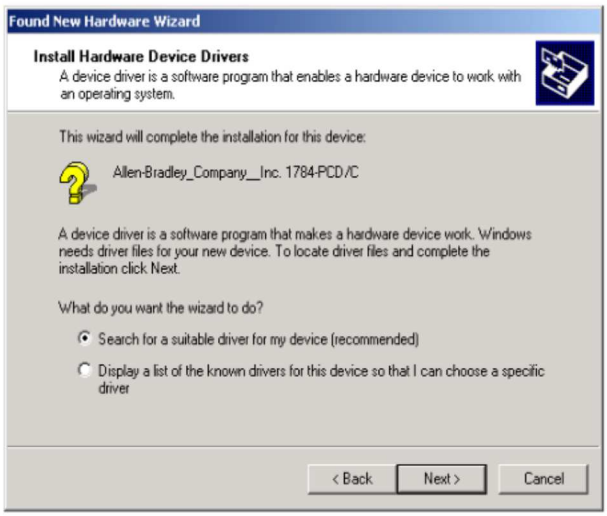
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Windows 2000 displays:



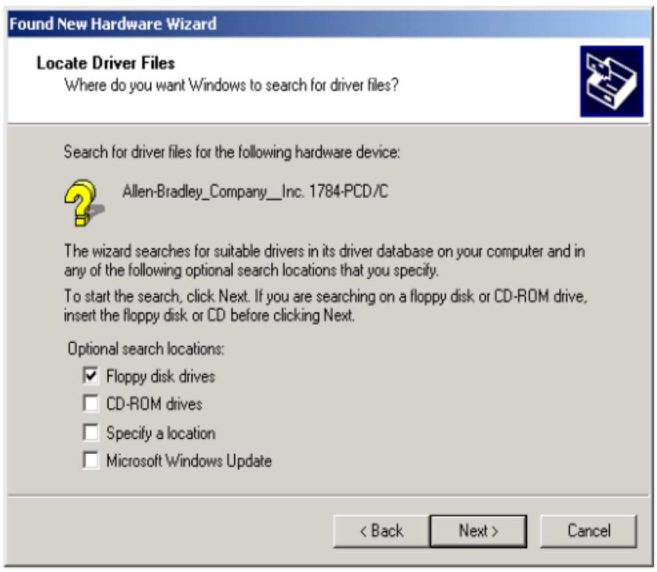
4. Click **Next**.

Windows 2000 displays:



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5. Select **Search for a suitable driver** and click **Next**.



At this point you need to select where the file is located.

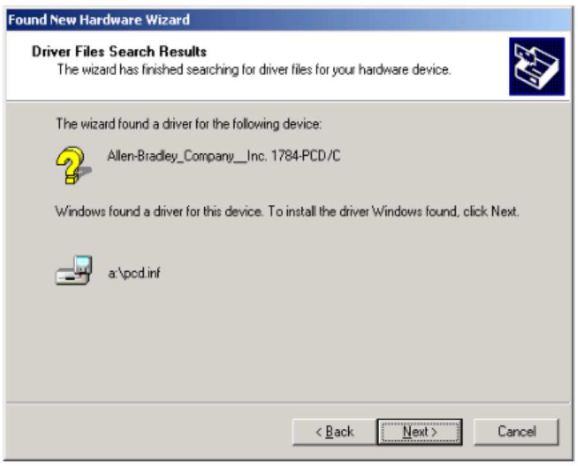
6. Select one of the following:

- **Floppy disk drives** if you are going to use the floppy disk that ships with the 1784-PCD card
- **CD-ROM drives** if you are going to get the file from the RSLinx CD-ROM, Version 2.2 Service Pack 2 or later.
- **Specify a location** if you downloaded the driver file from www.ab.com/support/products/pccards.html.

If you select:	Then:
Floppy disk drives	insert the 1784-PCD Installation Windows 95/98/2000/Me 32-bit Setup Disk into the drive and click **Next**. Windows 2000 will search for the appropriate driver.
CD-ROM drives	insert the RSLinx CD into the drive and click **Next**. Windows 2000 will search for the appropriate driver.
Specify a location	use this selection if you have downloaded the driver from www.ab.com/support/products/pccards.html. You will be prompted for the location path of the driver.

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7. Click **Next**.



TIP

You may see a message indicating that no driver was found. If you do get this message, type the path where the driver is located (on the disk, or on your hard drive, if you downloaded it). If Windows is still unable to find the driver, reboot your PC.

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8. Once Windows 2000 installs the driver, the following displays.



9. Click **Finish**.

   You may be prompted to restart you computer for the driver to take effect.

10. Run the 1784-PCD Test Utility to verify the installation. Refer to Chapter 9 of this manual.

Update the 1784-PCD Plug and Play Driver

Perform these steps to update the driver to a newer version:

1. Run the pcdupdt.exe utility from the root of your driver installation disk.

   a. Place the 1784-PCD Installation Windows 95/98/2000/Me 32-bit Setup Disk into your computer's floppy disk drive.
   b. Browse to **x:\pcdupdt.exe** where x: is your floppy disk drive letter.
   c. Double-click on the pcdupdt.exe file to run it.

2. Refer to Install the Driver on page 6-2 to continue installing the driver.

3. Run the 1784-PCD Test Utility to verify the installation. Refer to Chapter 9 of this manual.

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Stop and Eject the 1784-PCD Card

Before you remove the PCD card from its socket, you should stop the card, which also stops the driver.

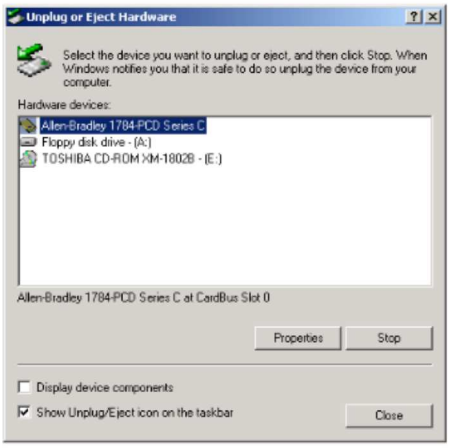
1. Double-click on the **card unplug/eject icon** on your task bar.



TIP

If you don't have the icon on your taskbar, go to page 6-11 to activate the icon.

2. Click on the PCD card you want to stop from the list of cards.



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3. Click **Stop**. You see this screen:

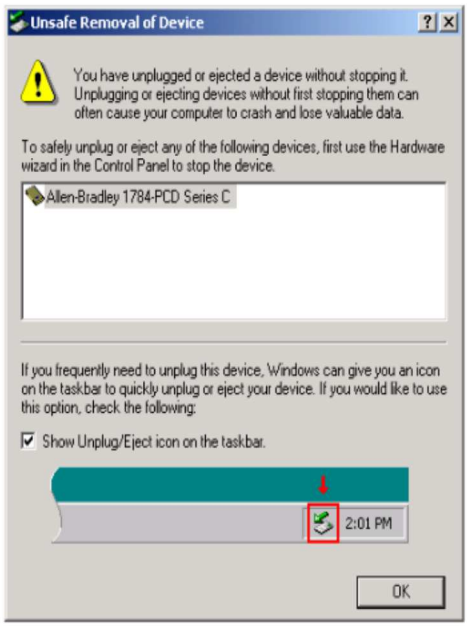


4. Click **OK**.
5. When you see the window that states you may safely remove this device, click **OK**.
6. Remove the card.

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Unsafe Removal of Card

If you do not stop the communication to your card before you remove a card from your computer, Windows 2000 displays:



To stop the card, refer to Stop and Eject the 1784-PCD Card on page 6-8.

IMPORTANT Use the Unplug/eject icon on the taskbar to insure you do not damage your card.

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Show the Card Unplug/Eject Icon on the Taskbar

If you frequently need to eject the PCD card, be sure to check the **Show Unplug/Eject icon on the taskbar** box in the **Completing the Add/Remove Hardware** wizard page. You can check the box the first time you install the card. The next time you want to unplug or eject the device, you can use the icon on the taskbar instead of the Add/Remove Hardware wizard.

1. Double-click **My Computer** on your desktop.
2. Double-click **Control Panel**.
3. Double-click **Add/Remove Hardware**.
4. Click **Next**.
5. Check **Uninstall/Unplug a device** and click **Next**.
6. Check **Unplug/Eject a device** and click **Next**.
7. Select the **1784-PCD card** and click Next.
8. Confirm the device and click **Next**.
9. Check **Show Unplug/Eject icon** on the taskbar.
10. Click **Finish**.
11. Remove your card.

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Notes:

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Insert and Remove the 1784-PCD Card

What's in This Chapter?

Read this Chapter to understand how to insert and remove the card from your laptop computer.

To:	See page:
Insert the PCD Card	7-1
Remove the PCD Card	7-3

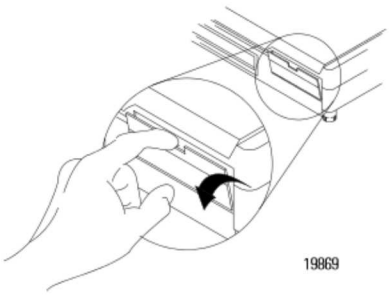
Insert the PCD Card

IMPORTANT If you are using Windows 95/98/Me or 2000, you can insert or remove the 1784-PCD card from a powered computer. Be sure to stop the card first. Refer to the Chapter for each operating system for the procedure for stopping the card.

If you are using Windows NT, shut down the computer before inserting or removing the card.

TIP The following diagrams show a PCMCIA 2.1 compliant system. If you are using another computer, your installation may be slightly different.

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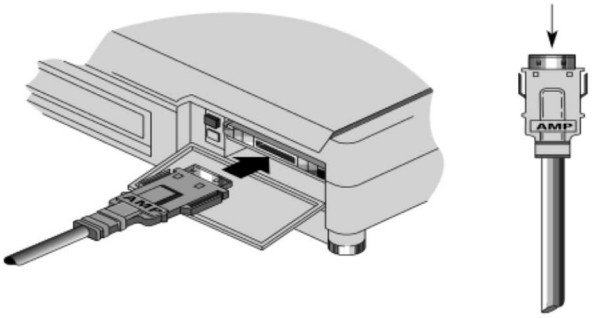


1. Open the door to the PCMCIA slot. Some slots do not have doors.

IMPORTANT If you have more than one slot in your computer, you can insert the 1784-PCD card into any empty slot. Check your computer's documentation for the slot numbers. You can use the other available slots for other PC cards such as network or modem cards.

2. Grasp the card by the edges with the logo facing upward and the 68-pin connector facing into the PCMCIA slot.

3. Insert the card into the PCMCIA slot and slide the card in until it is firmly seated in the connector. Some computers have an ejector button that pops out when the card is seated in the connector.



If the computer is configured properly, your sound/speaker is enabled, and you installed the 1784-PCD card successfully, you hear multiple tones when you insert a card or boot the computer.

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Multiple Tones

If you insert multiple PC cards, you may hear more than one tonal notification per card. Windows 95/98/Me, and 2000 detect devices during the power-up process, and adjust the device resources accordingly. This results in sounding multiple tones. When the system changes settings, for example, when a card is removed, the tones will sound again for each change.

IMPORTANT Do not remove the card under power on a Windows NT system.

Remove the PCD Card

IMPORTANT Before removing the PCD card, you must first stop communication to it, which also stops the card. Refer to the appropriate Chapter for your operating system for procedures for stopping the card.

On most computers, you press the release button and remove the card from the slot. If this is not applicable to your computer, follow the instructions specified in its user manual.

You hear multiple tones for each card that you remove, if your system is configured properly. These tones indicate the card is now disabled.

IMPORTANT You should stop any software communicating with the card before removing the PCD card. If you do not do this, the stray processes may affect the system's performance, potentially halting the system.

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Notes:

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Connect the Card to the DeviceNet Network

This Chapter describes how to connect the PCD card to a Devicenet network. These instructions assume that you have installed:

- your application software
- the card (Chapter 7)
- the 1784-PCD drivers (Chapters 3 through 6) and restarted Windows

TIP

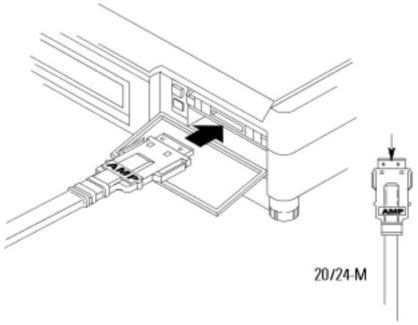
If you need additional information about connecting cables, see the DeviceNet Cable Planning and Installation Manual, publication DN-6.7.2.

The following diagrams show a PCMCIA-2.1-compliant system. If you are using another system, your installation may appear slightly different.

IMPORTANT

Be sure that your PCD driver is configured to the same baud rate as your network. If the baud rates are different, operation of devices on the network could be affected.

To connect the cable to the card:



1. Attach the smaller end of the 1784-PCD1 cable to the 1784-PCD card.

   The silver side should face upward as you connect the cable to the 1784-PCD card.

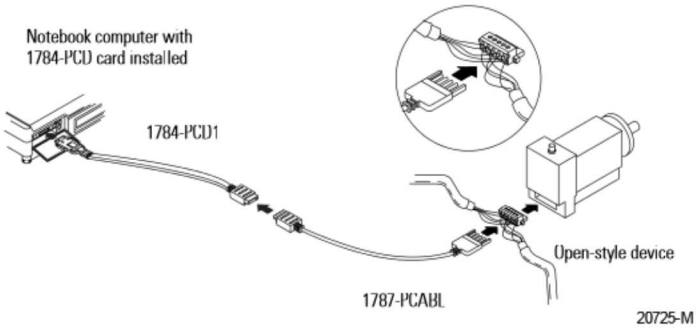
2. Attach the other end of the 1784-PCD1 cable to the DeviceNet network.

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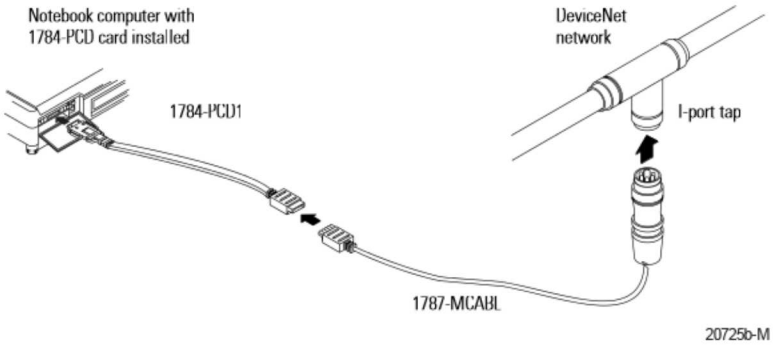
Connect the card to the network in any of the following ways:

Connect to the network using a:	Catalog or part no.:	See this portion of the figure below:
5-pin probe cable	1787-PCABL	1
sealed mini-male cable	1787-MCABL	2
linear plug	1787-PLUG10R	3
optional 1787-OPCAB	1787-OPCAB/A	4

1 1784-PCD1 to 1787-PCABL to DeviceNet network

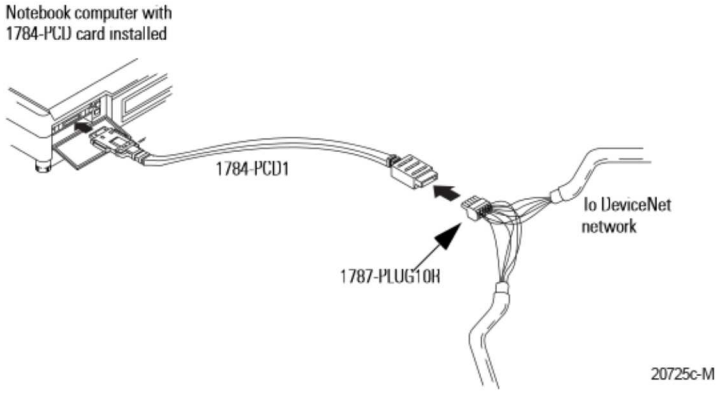


2 1784-PCD1 to 1787-MCABL to DeviceNet network

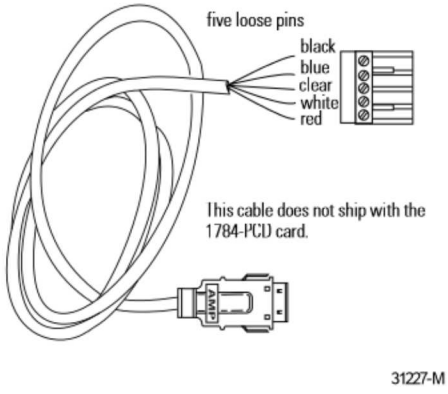


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3 1784-PCD1 to 5-pin linear plug to DeviceNet network



4 1784-PCD to 1787-OPCAB/A



3. Verify that you can go online with the card and your application software. If you have difficulty establishing communication, check your cable connections and refer to the documentation for your application software. Refer to Chapter 9 for information on testing the cable with the PCD Test Utility.

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Notes:

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Run the 1784-PCD Test Utility and Access Diagnostics

Before You Begin

The 1784-PCD Test Utility lets you verify and troubleshoot the installation of your 1784-PCD card on Windows 95/98/Me/2000 and NT platforms. Follow the procedure in this Chapter to run the test utility and access diagnostics.

IMPORTANT This utility does not work with the Windows 95 16-bit driver.

Use the PCD_Test.exe program to test the card and driver. The program is in the PCD_TEST directory on any of the following floppy disks:

- 1784-PCD Installation Windows 95/98/2000/Me 32-Bit Setup Disk
- 1784-PCD Installation Windows NT 4.0 Setup Disk

TIP Copy the PCD_Test program to your hard drive for easy access. The batch file A:\PCD_TEST\CopyPCD_Test2HardDrive.bat will copy the A:\PCD_Test\ directory to your hard drive as C:\PCD_Test\.

To:	See page:
Run the PCD Test Utility	9-2
Access Diagnostics	9-6

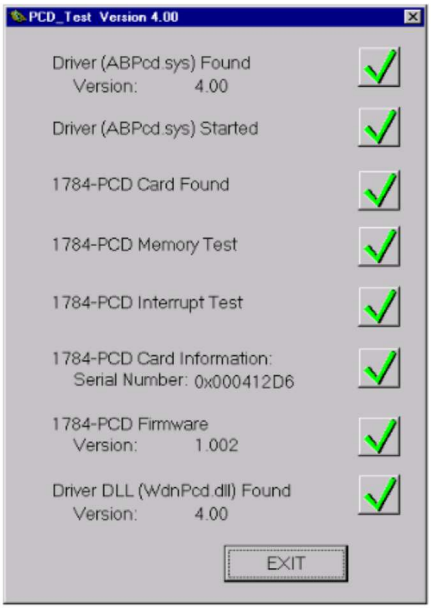
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Run the PCD Test Utility

1. Navigate to the location of the PCD Test Utility, for example, A:\PCD_TEST\pcd_test.exe.

2. Double-click on the **pcd_test.exe** file to start the PCD Test Utility.

   The 1784-PCD Installation Test Utility automatically looks for your card and begins the tests. As the tests are completed, a green check mark appears, showing that the particular test was successful. If there is an error, you will see a red X and an explanation.



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If you:	Follow the directions specified in a failure message you may receive, or:
do not see all green check marks or you do not see the message stating that the 1784-PCD completed all tests successfully	• In Windows NT, adjust system resources. Refer to Change Memory and Interrupt Resources on page 10-8. • In Windows 95/98/Me and 2000, go to Device Manager and adjust resources. Refer to Chapter 10 for details. If you are unable to adjust resources, contact Rockwell Automation Technical Support. • In Windows 2000, check with your computer manufacturer to ensure you have a Windows 2000 BIOS installed. In most cases, you can download the system BIOS from your computer manufacturer's website.
are still getting an error	• Review the Chapter for your operating system. • Refer to Chapter 10 for troubleshooting information. • Follow the instructions again. If you are still having problems, contact your Rockwell Automation service representative for assistance. • Refer to the Preface of this manual for information on Rockwell Automation Support.

3. Once the tests are finished and successful, you see a screen asking if you want to test the PCD cable.

If you:	Then:
want to test the cable	go to step a, below
do not want to test the cable	click **No**

TIP



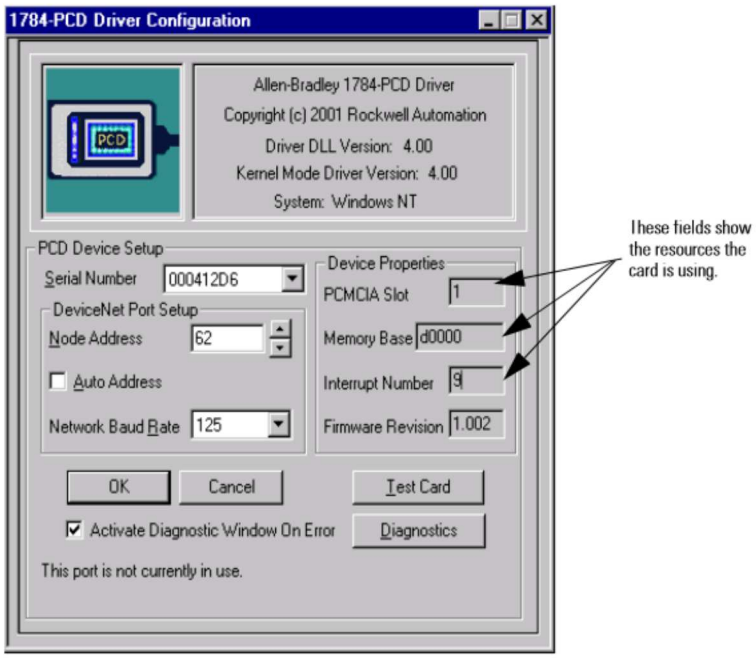
To see the resources assigned to the card, click **Yes** when prompted whether you want to test the cable, even if you do not intend to perform a cable test.

a. Attach the cable to the network access port as described in Chapter 8.

b. Click **Yes**.

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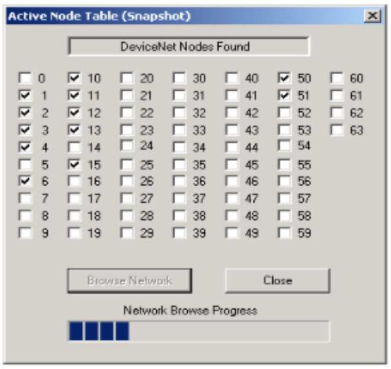
c. When you click **Yes**, you see the PCD Configuration screen.



d. Click **OK** to run the test.

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If you are properly connected to your network, the test utility will browse your network to find active nodes. You will see a node table with the active nodes checked:



TIP

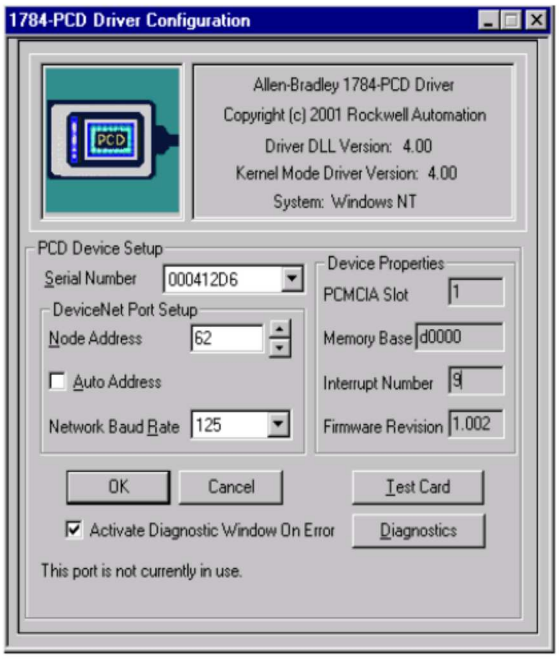
If you get an error message telling you the 1784-PCD card does not appear to be connected to a network, check or replace your network cabling.

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Access Diagnostics

Whenever you configure the PCD card, you will see the 1784-PCD Driver Configuration screen.

This screen lets you access diagnostics by clicking the **Diagnostics** button. To cause the Diagnostics window to appear automatically when a system problem occurs, check the **Activate Diagnostic Window on Error** checkbox.

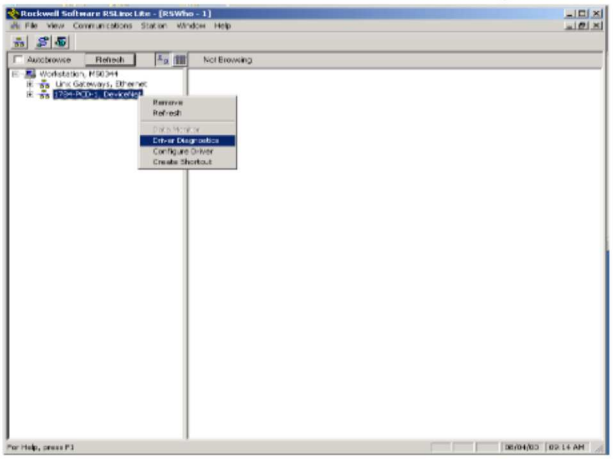


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You can also access diagnostics in RSLinx with the following procedure:

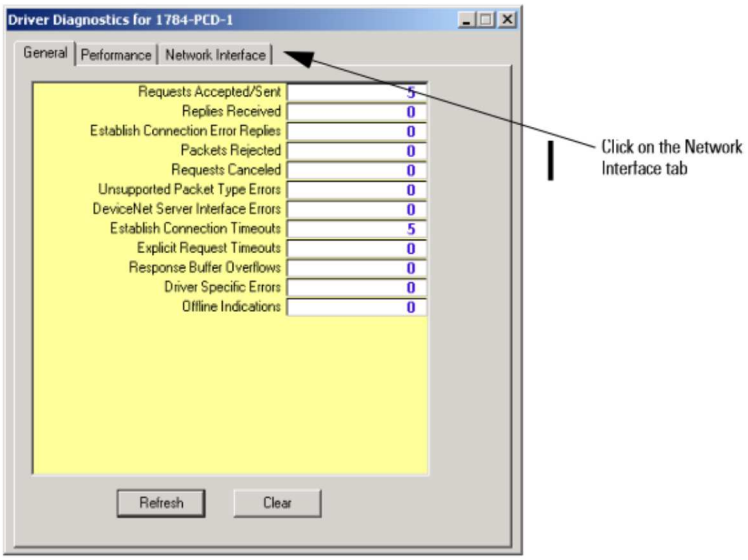
1. Click on the 1784-PCD entry to highlight it.

2. Right-click your mouse button and select **Driver Diagnostics**.



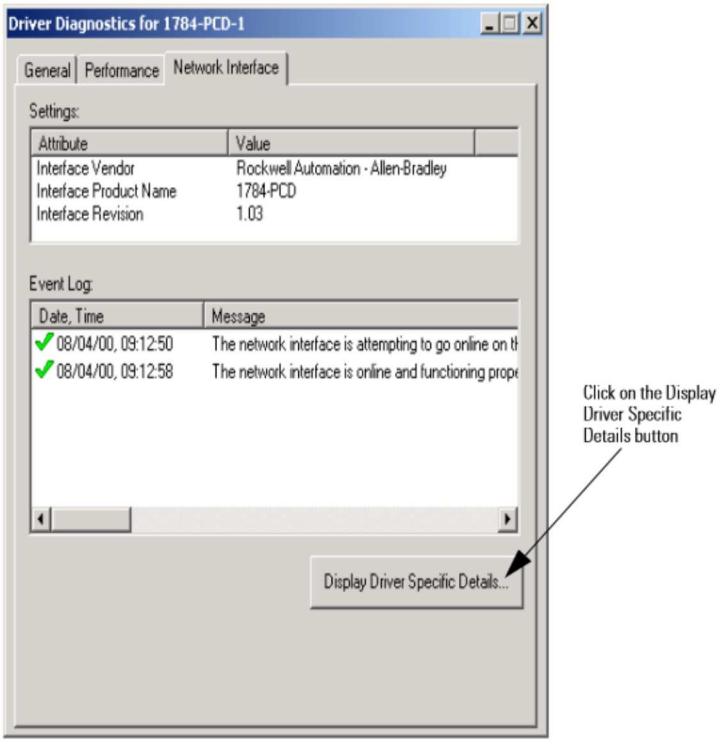
An RSLinx PCD Driver Diagnostics window will appear. To activate the PCD Detailed Diagnostic window:

3. Select the Network Interface tab.



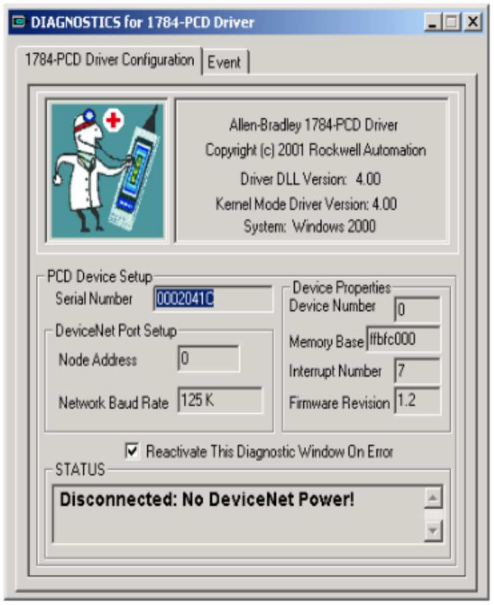
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4. Click on the Display Driver Specific Details button at the bottom of the window.



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5. You see a Diagnostics window similar to the one shown below.



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Notes:

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Troubleshoot the Card

Occasionally, you may need to modify your system to help the PCD card to function properly. Use the tips and suggestions that follow to help you set up the PCD card and driver(s) successfully.

TIP



The first step in troubleshooting is running the PCD Test Utility and viewing diagnostics. Refer to Chapter 9 for more information on running the utility and viewing diagnostics.

For information on:	See page:
General Troubleshooting Guidelines	10-1
Troubleshooting on Windows 95/98/Me	10-2
Troubleshooting on Windows NT	10-7
Troubleshooting on Windows 2000	10-10

General Troubleshooting Guidelines

The following guidelines apply to all operating systems, unless specified otherwise.

Avoid Network Errors by Specifying a Unique Node Address and the Correct Baud Rate

To avoid network errors, be certain to configure the PCD card with a unique node address and the correct baud rate for the DeviceNet network to which you are connecting.

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Understand What Hearing Multiple Tones Means

If you insert multiple PC cards, you may hear more than one tonal notification per card. Windows detects devices during power-up, and adjusts the device resources accordingly. This results in multiple tones sounding. When the system changes settings, for example, when you remove a card, the tones sound again for each change.

Use the PCD Test Utility

You can use the PCD Test Utility to test card operation and show system diagnostics when a problem occurs. Refer to Chapter 9 for instructions for running the PCD Test Utility and viewing system diagnostics.

IMPORTANT The PCD_Test.exe utility will not work with the Windows 95 16-bit driver.

Troubleshooting on Windows 95/98/Me

Understand What a Missing PC Card (PCMCIA) Icon Means

If you find that there is no PC card (PCMCIA) icon in the Control Panel, this indicates that there is a problem with the PCMCIA socket hardware that prevents Windows from locating the card. Contact your computer manufacturer for help in solving this problem.

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Enable the PC Card Icon in the Taskbar

The PC card icon in the taskbar informs you about the status of your PC card and lets you stop any processing before you remove or change PC cards. Follow this procedure to configure your system to display this icon within the taskbar:

1. Select **Start ⇒Settings ⇒Control Panel**.
2. Double-click on the PC card (PCMCIA) icon.
3. When the PC Card Properties dialog box appears, click on **Show control on taskbar**. You see:



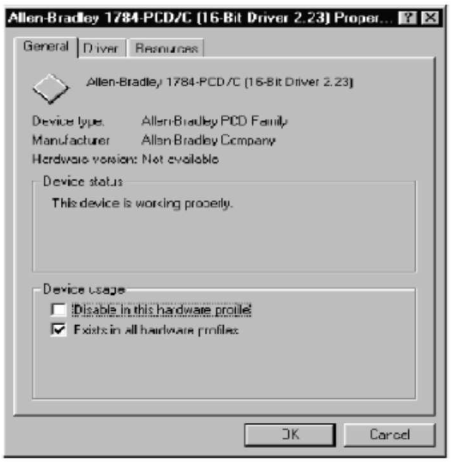
4. Click **OK**. The PC card icon appears in the taskbar.

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If the Driver Does Not Work

Use the following procedure to resolve other driver issues.

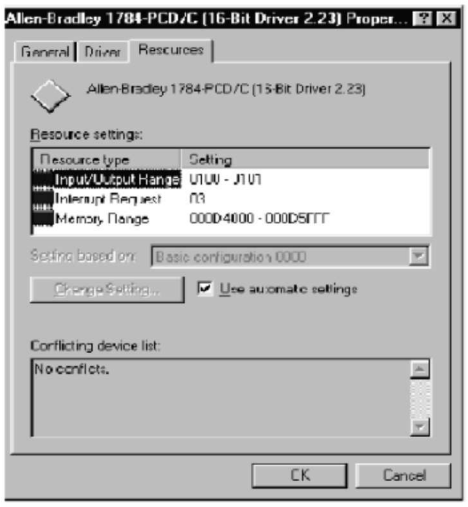
1. Access the Device Manager by right-clicking on **My Computer** and selecting **Properties**.
2. Select the **Device Manager** tab.
3. Scroll through the device list until you see the **Allen-Bradley PCD family** entry.
4. Double-click on the + sign to the left of this entry to expand it.
5. Click on **Allen-Bradley 1784-PCD card** to select it.
6. Click the **Properties** button.



If code 10 (conflicting memory resources) or another conflict is reported in the Device Status box, continue with the following steps.

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7. In the Properties dialog box, click on the **Resources** tab.



8. Do the following:
   - check for conflicts listed in the Conflicting Device list
   - verify that you have assigned resources to the PCD card. You should have, at minimum, an interrupt and memory range assigned.

TIP

Be aware that:

- series A 1784-PCD cards do not use an Input/Output range
- you may have to disable a device to make an interrupt available

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9. If there are no conflicts, continue with step 10 below. If there are conflicts, you may need to alter the settings of the conflicting devices to get the PCD card to work properly. First try unchecking the **Use Automatic Settings** box and then changing the memory or interrupt resources.



To find free memory and interrupt resources on Windows 95/98/Me systems, in the Device Manager window, right-click on **Computer** and select **Properties**. You see the Computer Properties screen, which shows you the resources in use.

To change the resources:

a. Click on the resource you want to change.
b. Click the **Change Setting** button.
c. Change the memory or interrupt resources to a free memory or interrupt resource.



Depending on your Windows 98 operating system, unchecking the **Use Automatic Settings** box may not be successful. Contact Rockwell Automation Technical Support for more information.

10. Select **My Computer ⇒Properties ⇒Device Manager**.

11. Scroll through the list until you see the PCMCIA sockets entry.

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12. Double-click on **PCMCIA sockets** to expand it.

13. Click on the PCMCIA controller used by your system.

14. Click on **Properties**. Verify that the socket controller is enabled in the hardware profile you are using.

If:	Then:
you get this message: This device is not present, not working properly, or does not have all drivers installed, code 10	• click on the **Resources** tab and check the Conflicting Device list for possible hardware conflicts • verify that the **Use automatic settings** option is enabled You may have a general PCMCIA problem. Contact your computer manufacturer for assistance.
you do not get this message	This device is working properly.

Troubleshooting on Windows NT

Understand What a Missing PC Card (PCMCIA) Icon Means

If you find that there is no PC card (PCMCIA) icon in the Control Panel, this indicates that there is a problem with the PCMCIA socket hardware that prevents Windows from locating the card. Contact your computer manufacturer for help in solving this problem.

TIP



When using Unicore/Touchstone Software's Cardware or Phoenix/Softex's Card Executive third-party plug-and-play software on Windows NT, use the plug-and-play software's PC card configuration tool on the Windows Control Panel for information about the PC (PCMCIA) cards. Do not rely on the PC card (PCMCIA) icon on the Windows control panel.

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Change Memory and Interrupt Resources

If you experience difficulty in configuring the PCD card, you should change the memory and interrupt resources.

If You Are using:	Change Resources by:
pure NT (no third-party plug-and-play software)	using the PCD card configuration tool on the Windows Control Panel
SystemSoft's CardWizard third-party plug-and-play software	using the PCD card configuration tool on the Windows Control Panel
Unicore/Touchstone Software's CardWare third-party plug-and-play software	contacting Rockwell Automation Technical Support for assistance
Phoenix/Softex's Card Executive third-party plug-and-play software	contacting Rockwell Automation Technical Support for assistance

To find the available resources in your system,

Select **Start ⇒Programs ⇒Administrative Tools ⇒Windows NT Diagnostics**. If no interrupts are available, you may need to disable another device.

IMPORTANT Windows NT diagnostics may not show all interrupts that are in use. If you continue to have problems, try another IRQ. Recommended IRQ values are 7, 9, 10, 11, 12, and 15.

IMPORTANT After you change these resources, you must reboot your PC for the changes to take effect.

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If you are using pure NT (no third-party plug-and-play software) or SystemSoft's CardWizard, follow this procedure to assign available resources with the PCD card configuration tool.

1. Select **Start ⇒Settings ⇒Control Panel**. Double-click the **Allen-Bradley 1784-PCD icon**. You see the Allen-Bradley 1784-PCD Configurator screen. You can use this screen to assign available resources.



2. To find available resources in your system, do the following:
   a. Select **Start ⇒Programs ⇒ Administrative Tools ⇒Windows NT Diagnostics**.
   b. Click on the **Resources** tab.
   c. Look for an interrupt number that is not listed.
   d. Enter it in the 1784-PCD Configurator screen.
   e. In the Windows NT Diagnostics tool, click on the **Memory** tab to see which addresses the system is using (not available).

IMPORTANT Be aware that Windows NT protects its memory as well as its interrupts and may not list all the resources it is using. We suggest that you select a memory address in the range from 000D0000 to 000DFFFF.

   f. Enter the memory address in the 1784-PCD Configurator screen.

3. Click **OK** twice.

4. Reboot the computer.

IMPORTANT You must restart Windows NT in order for your PCD card to work with your software application.

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TIP

Since Windows NT may be using a resource and may not report it in Windows NT diagnostics, always run the PCD Test Utility after configuring resources.

If the driver will not start or cannot find a card, try reconfiguring the resources.

- If the IRQ test fails, try another IRQ.
- If the memory test fails, try another memory range.

You can also access diagnostics in RSLinx. Refer to Chapter 9 for information on accessing diagnostics.

Troubleshooting on Windows 2000

Check for Incompatible BIOS

In Windows 2000, check with your computer manufacturer to ensure you have a Windows 2000-compatible BIOS installed. In most cases, you can download the system BIOS from your computer manufacturer's website.

If the Driver Does Not Work in Windows 2000

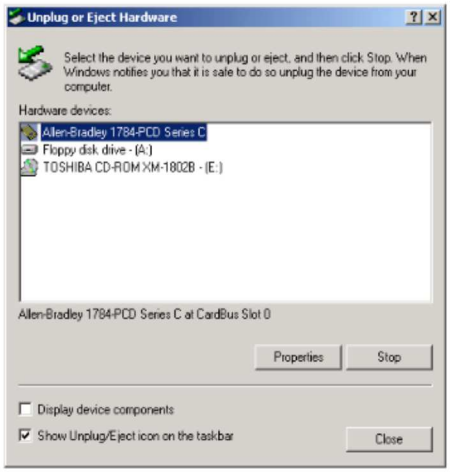
To access Hardware Properties and verify that the 1784-PCD card is OK, follow the steps below.

1. Double click on the **Unplug/eject hardware** icon  in the taskbar.

TIP

If you don't have the icon on your task bar, refer to Show the Card Unplug/Eject Icon on the Taskbar on page 6-11.

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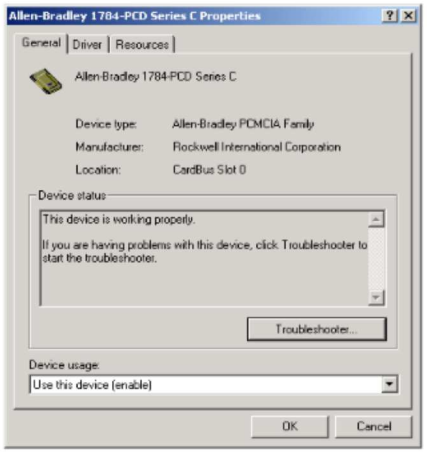


2. Select the card.

3. Click **Properties**.

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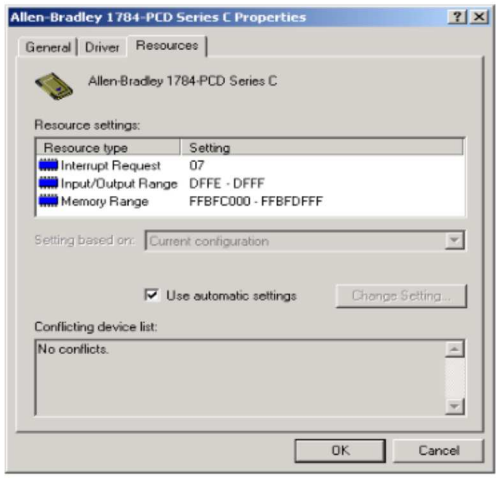
4. Click the **General** tab.



If:	Then:
the device status displays this message: This device is not present, not working properly, or does not have all drivers installed.	• click on the **Resources** tab and check the Conflicting Device list for possible hardware conflicts • try disabling the **Automatic Settings** option. Go to Step 5, below.

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5. Click on the **Resources** tab.



TIP

The majority of the time, we recommend that you use the automatic settings. The card will assign an interrupt (memory location) for you. An interrupt must be assigned to the 1784-PCD card. Verify that there is an interrupt assigned and no resource conflicts display in the Conflicting Device list.

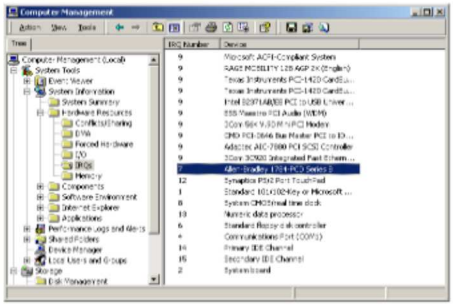
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6. In the unlikely event that you have a resource conflict, you may need to assign a specific interrupt to free the resource for another device.

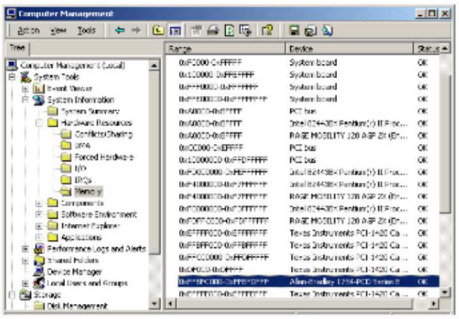
TIP

On Windows 2000 systems, you can find free memory and interrupt resources with this procedure:

1. Right-click on **My Computer** and select **Manage**.
2. Click the + sign to the left of **System Tools** to expand it.
3. Click the + sign to the left of **System Information** to expand it.
4. Click the + sign to the left of **Hardware Resources** to expand it.
5. Click on the **IRQs** folder in the left window. You see the interrupts in use.



6. Click on the **Memory** folder in the left window. You see the memory resources in use.



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7. To manually assign an interrupt:
   a. Deselect the **Use automatic settings** box.
   b. Click on **Interrupt Request**.
   c. Click **Change Setting...** and select an interrupt location.

TIP



You may need to disable another device, such as an unused serial or parallel port to make an interrupt available for the PCD card.

8. In some cases, a device other than the 1784-PCD card may be determined to use the interrupt that the PCD card wants. If this happens, let the other device have the interrupt and assign the 1784-PCD card another interrupt location.

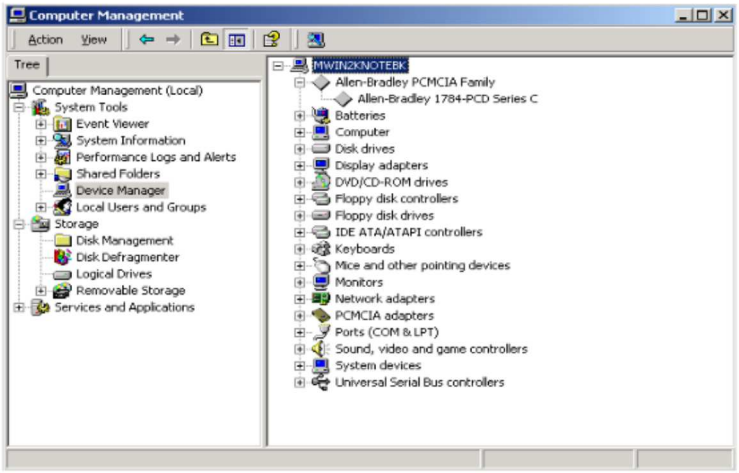
Use the Hardware Properties Screen to Verify Your Card is Working Properly

To verify that your card is working properly:

1. Right click **My Computer**.
2. Select **Manage**.

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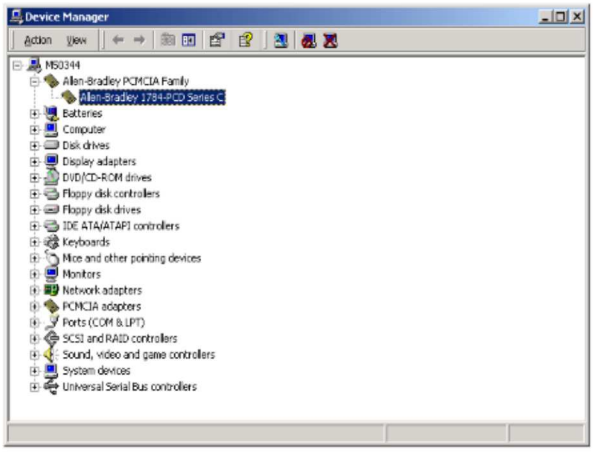
3. On the Computer Management screen that appears, select **Device Manager.**



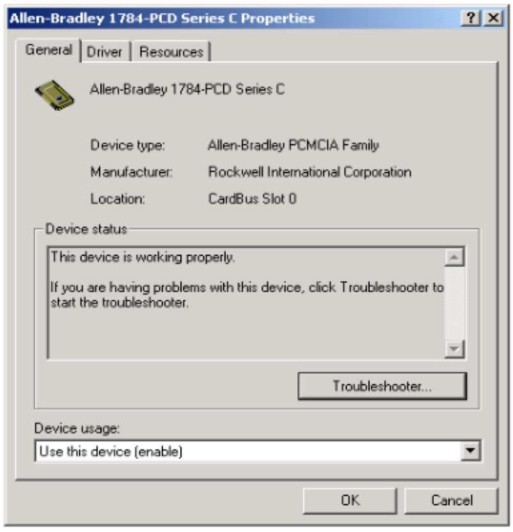
TIP Alternately, you can access Device Manager by selecting **My Computer ⇒Properties ⇒Hardware ⇒Device Manager**.

4. Click on the + next to Allen-Bradley PCMCIA Family to display the available Allen-Bradley cards.

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5. Double-click on **1784-PCD**. You see this screen.



6. Check the Device Status field. You should see a message indicating the device is working properly.

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Notes:

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Specifications

1784-PCD Communication Card (Series C)

PCMCIA Type	Type II form-factor network adapter card	
PCMCIA Standard	Compliant to PCMCIA Standard, release 2.1	
Card and Socket Services Standard	Compliant to PCMCIA Card and Socket Services Standard, revision 2.1 or greater	
Power Requirements	**PC** 5V @ 210 mA maximum[1]	**DeviceNet Network RATED:** 24V dc [2] 25 V dc maximum 10 mA minimum
Environmental Conditions	**Operating [3]**	**Non-operating**
Slot Temperature	0-50° C (32-122° F)	-40-85° C (-40-185° F)
Humidity	5-95% without condensation	5-95% without condensation
Vibration	0-70 Hz constant.012" displacement 70-500 Hz, constant 2 G acceleration	N/A
Shock	30 G peak/11 ms	50 G peak/11 ms
Agency Certification (when product or packaging is marked)	• UL Recognized Component - Industrial Control Equipment • CE marked for all applicable directives	

1784-PCD1 Cable

Total length of cable	34.9 cm (13.75 in.)
Pin Assignments	See Figure A.1 on page A-2.

[1] From host computer, which must be UL Listed Information Technology Equipment or UL Listed Industrial Control Equipment.

[2] Power supplied to the DeviceNet terminals of this equipment must be Class 2 as defined in NFPA-70 National Electrical Code.

[3] The operating parameters describe the environment within the PCMCIA slot. Refer to the documentation for your computer for environmental requirements. The 1784-PCD card should not exceed those specifications.

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Figure A.1 1747-PCD1 Cable pin assignment

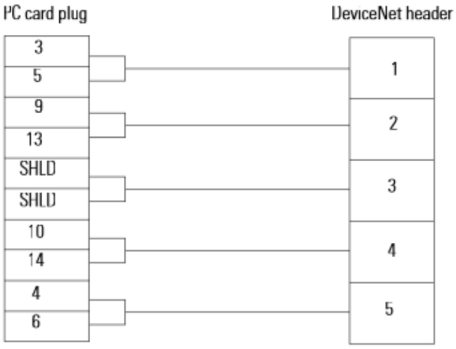
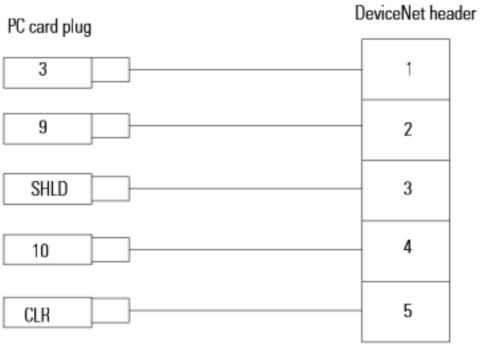


Figure A.2 1787-OPCAB cable pin assignment



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adapter

The hardware that connects the computer bus to the 68-pin PC card sockets in the PCMCIA slot. *See also* socket.

application programming interface (API)

The set of services that an operating system makes available to programs that run under it.

binary file

A file consisting of a sequence of 8-bit data or executable code, as distinguished from files consisting of human-readable ASCII text.

Card Identification Structure

A PC card that complies with the PCMCIA standard. Card Information Structure (CIS) contains configuration information about the PC card and communicates it to the computer.

Card Services

The software interface that coordinates traffic among the computer and the PC cards, sockets, and system resources. *See also* Socket Services.

dual-port memory

Memory that can be viewed from two different hosts. This memory allows the PCD card and a host computer to communicate. The memory range marked as dual-port memory is a common, shared memory area.

enabler

Software used to control PC cards. There are three types of enablers: generic (which can control many different types of cards), specific (which is designed for a specific manufacturer's PC card), and point enabler (which is designed for a specific manufacturer's PC card but does not require Card and Socket Services).

MS-DOS mode

Used in reference to a Windows machine when Windows is shut down to access MS-DOS only. This removes the plug-and-play sytem from a notebook's memory and eliminates any conflict between virtual file managers, virtual display drivers, and other virtual hardware drivers with any other DOS-only software packages.

PC card

Credit-card size, 68-pin add-in cards that were designed to meet PCMCIA standards.

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socket

The 68-pin physical connection in the PCMCIA slot in your computer that connects to the 68-pins on the PC card.

Socket Services

The software interface that manipulates the PC cards, sockets, and adapters. *See also* PC cards, sockets, adapters.

type

Refers to the physical size of the PC card. There are three types of cards that have the same length and width (54 mm x 85.6 mm). The cards differ in thickness in the center, but have identical thickness at the connector end and long the rails. This lets you use all three types in the same PCMCIA slot, if the slot is thick enough in the center.

Type I

A 3.3 mm thick PC card that is used for memory enhancements, such as Flash memory cards. *See also* PC card.

Type II

A 5 mm thick PC card that is used for I/O features such as modem, LAN, and host communications. *See also* PC card.

Type III

A 10.5 mm thick PC card that is used for memory enhancements or I/O capabilities that require more space, such as rotating media and wireless communication devices. *See also* PC card.

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