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Allen-Bradley

DeviceNet Communication Card

1784-PCD

Installation Instructions

Rockwell Automation

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Because of the variety of uses for the products described in this publication, those responsible for the application and use of this control equipment must satisfy themselves that all necessary steps have been taken to assure that each application and use meets all performance and safety requirements, including any applicable laws, regulations, codes and standards.

The illustrations, charts, sample programs and layout examples shown in this guide are intended solely for purposes of example. Since there are many variables and requirements associated with any particular installation, Allen-Bradley does not assume responsibility or liability (to include intellectual property liability) for actual use based upon the examples shown in this publication.

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Throughout this manual we use notes to make you aware of safety considerations:

ATTENTION



Identifies information about practices or circumstances that can lead to personal injury or death, property damage or economic loss.

Attention statements help you to:

- identify a hazard
- avoid a hazard
- recognize the consequences

IMPORTANT

Identifies information that is critical for successful application and understanding of the product.

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European Communities (EC) Directive Compliance

If this product has the CE mark it is approved for installation within the European Union and EEA regions. It has been designed and tested to meet the following directives.

EMC Directive

This product is tested to meet the Council Directive 89/336/EC Electromagnetic Compatibility (EMC) by applying the following standards, in whole or in part, documented in a technical construction file:

- EN 50081-2 EMC — Generic Emission Standard, Part 2 — Industrial Environment
- EN 50082-2 EMC — Generic Immunity Standard, Part 2 — Industrial Environment

This product is intended for use in an industrial environment.

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This product is tested to meet Council Directive 73/23/EEC Low Voltage, by applying the safety requirements of EN 61131-2 Programmable Controllers, Part 2 - Equipment Requirements and Tests. For specific information required by EN 61131-2, see the appropriate sections in this publication, as well as the Allen-Bradley publication Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1.

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Summary of Changes

This release of the 1784-PCD installation instructions contains new and updated information about Windows Me and 2000. It also contains information about the new PCD Test Utility. You will see change bars, as shown to the left of this paragraph, throughout this manual to help you quickly identify revisions.

Other information was revised extensively. For those chapters that contain all new information, or extensively revised information, you will find a change bar in the margin of the chapters.

In this Chapter or Section:	We:
Preface	made changes as noted by change bars
Chapter 2	added information pertaining to Windows Me and 2000
Chapter 3	re-wrote the chapter to include only Windows 95 16-and 32-bit driver information
Chapter 4	re-wrote the chapter to include Windows 98 and Me driver information
Chapter 5	• re-wrote the chapter to include more information about third-party plug-and-play software • extensively revised Windows NT driver installation information
Chapter 6	added a new chapter covering Windows 2000 driver information
Chapter 9	re-wrote the chapter to include instructions for running the new 1784-PCD Test Utility and diagnostics
Chapter 10	re-wrote the chapter to include more extensive troubleshooting tips for all operating systems

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About the Manual

Use this manual to install, configure, and troubleshoot the DeviceNet® PC card (PCMCIA interface), catalog number 1784-PCD. This interface enables a computer with PCMCIA slots to communicate on a DeviceNet network.

Audience

The information in this manual is intended for users who are:

- familiar with Windows 2000, Windows NT, Windows 98, Windows ME, or Windows 95
- experienced with DeviceNet configuration software and the DeviceNet network

Refer to the following table for the version of RSLinx you will need for your operating system.

Operating System:	Version of RSLinx:
Windows 95/98/Me/NT	2.00.97 or later
Windows 2000	2.2 or later with RSLinx Service Pack 2 installed **Note:** For RSLinx versions later than 2.2, no Service Pack is required for the 1784-PCD card to work.

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- Pre-Sales e-mail, RACle3net@ra.rockwell.com

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Email your questions to	racleasktheexpert@ra.rockwell.com
Internet site	www.ab.com, then select Product Support or www.ab.com/support/products/pccards.html **Note:** You can access Rockwell Automation Knowledge documents from this internet address.

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Abbreviations

Throughout this manual, we abbreviate some terms. Use the following table to become familiar with our terminology.

This abbreviation:	Means:
PCMCIA	Personal Computer Memory Card International Association
IRQ	Interrupt Request
PC	Personal Computer

Conventions

You will see the following conventions used in this document:

Convention:	Shows:
bold	text you type, items you select from a menu, or anything you click
this symbol: ⇒	the mouse movement you make to access a sub-menu selection (for example, Start ⇒Settings ⇒Control Panel)

IMPORTANT The driver and firmware versions that appear in the screen captures in this manual may differ from the versions you are using.

In this document, we refer to the DeviceNet PC card as the 1784-PCD card or the PCD card.

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About the PCD Card

What's in This Chapter?

Read this Chapter to familiarize yourself with PCMCIA technology and the PCD card.

For information on:	See page:
What is PCMCIA?	1-1
What is a PC Card?	1-1
What is the PCD card?	1-4

What is PCMCIA?

The Personal Computer Memory Card International Association (PCMCIA) developed a standard for credit-card size personal computer (PC) cards. The PCMCIA standard defines an architecture and communication method for these PC cards.

PC cards developed under Release 1.0 of the PCMCIA standard are used for data storage. PC cards developed under Release 2.0 of the PCMCIA standard can be used for both I/O and data storage.

What is a PC Card?

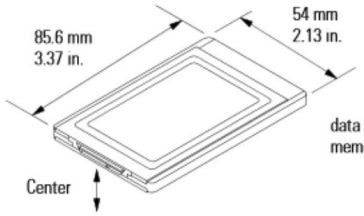
Since personal computers have become smaller, a need for smaller storage media developed. The PC card is a small form-factor adapter that can add memory, storage, and I/O capabilities to these smaller computers.

Architecture

All PC cards measure the same length and width (85.6 mm x 54 mm or 3.37 in. by 2.13 in.), but differ in thickness at the center. The thickness at the connector end along the rails is the same for all types of PC cards.

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Currently there are three types of PC cards:



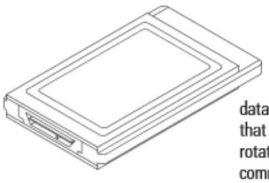
Type I
3.3 mm thick
13 in.

data storage, such as Flash memory cards



Type II
5.0 mm thick
197 in.

I/O such as modem, LAN, and host communications (the Allen-Bradley 1784-PCD, -PCMK, and -PCC cards are Type II cards)



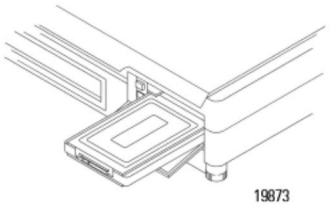
Type III
10.5 mm thick
41 in.

data storage or I/O capabilities that require more space, such as rotating media and wireless communication devices

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IMPORTANT If the PCMCIA slot in your computer is thick enough to accommodate a Type III card, then it can also accommodate a Type I or II card.

All three types of PC cards use the same 68–pin connector. The pins are in two parallel rows of 34 pins. When inserted into the PCMCIA slot on your computer, the connector mates with a single molded socket.



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Communication

The socket provides the physical connection to the PC card. The PC card then is connected to the I/O bus in your computer through a hardware interface called the adapter.

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Software interfaces defined by PCMCIA enable communications between an installed PC card and the computer. We call these software interfaces Card and Socket Services. Windows 95/98, Me, NT and 2000 have built-in card and Socket Services capabilities. Once you establish communication, the PC card identifies itself through its Card Information Structure.

Socket Services identifies how many sockets are present in your computer and detects if a PC card is inserted into one of these sockets. The PCMCIA adapter handles communication between the PC card and the sockets in your computer. Socket Services controls this adapter.

Card Services provides access to system resources (such as memory and interrupt requests) and automatically releases the system resources when you remove the PC card from a socket. Card Services also provides an interface to higher-level software if you need to load any hardware drivers.

After the PC card establishes communication with the computer, the card Information Structure provides configuration information about the PC card, such as available storage, device type, and data format to the computer.

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What is the PCD card?

The PCD card is a PCMCIA Type II form-factor card that interfaces between your computer and a DeviceNet network.

.

IMPORTANT Your computer must be PCMCIA 2.1 compliant to support the 1784-PCD card. To verify that your computer is PCMCIA 2.1 compliant, see your computer's user manual.

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Pre-installation Procedures

What's in This Chapter?

The following table describes what this Chapter contains and where to find specific information.

For information on:	See page:
Verify Your Package Contents	2-1
System Requirements	2-2
Remove Previously Installed Drivers	2-2
Determine Which Driver to Install	2-3
Locate the 1784-PCD Driver	2-3

Verify Your Package Contents

Be certain that you have these items before you discard any packing material. If an item is missing or incorrect, contact your local sales representative.

- 1784-PCD Communication card
- three 1784-PCD Setup disks. The one you use will depend upon your operating system. The disks are labelled:
  - 1784-PCD Installation Windows 95/98/2000/Me 32-bit Setup Disk
  - 1784-PCD Installation Windows NT 4.0 Setup Disk
  - 1784-PCD Installation Windows 95 16-bit Setup Disk
- 1784-PCD1 cable
- clear, plastic PC card carrying case
- installation manual, publication 1784-IN029C-EN-P

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System Requirements

operating system	Microsoft® Windows 95/98/Me, 2000, or NT 4.0
application software	RSNetWorx for DeviceNet software Windows 95/98/Me/NT: RSLinx 2.00.97 or later Windows 2000: RSLinx 2.2 or later with RSLinx Service Pack 2 installed **Note:** For RSLinx versions later than 2.2, no Service Pack is required for the 1784-PCD card to work. DeviceNet Manager software version 3.005 or later (16-bit driver only)
memory for computer resources	at least 8 MB
memory for card resources	4KB
IRQ	1 available IRQ
hard disk space	300K
diskette drive	one 3.5 diskette drive
PCMCIA slot	one Type II slot

Remove Previously Installed Drivers

Always remove PCD drivers you may have installed previously before you install new ones. Refer to the procedures for uninstalling the driver in the chapter specific to your operating system.

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Determine Which Driver to Install

Before you install the PCD card, you will need to determine which driver to install. Refer to the table below to help you decide.

If you are using this operating system:	And this software:	Do this:
Windows 95 (16-bit)	• DeviceNet Manager • third-party WinDNet16 • DeviceNet Monitor	Install the Windows 95 16-bit driver. Refer to Chapter 3 for more information.
Windows 95 (32-bit)	• RSNetWorx for DeviceNet • RSLinx (version 2.00.97 or later)	Install the Windows 95 32-bit driver. Refer to Chapter 3 for more information.
Windows 98/Me	• RSNetworx for DeviceNet • RSLinx (version 2.00.97 or later)	Install the Windows 95/98/Me 32-bit driver. Refer to Chapter 4 for more information.
Windows NT	• RSNetWorx for DeviceNet • RSLinx (version 2.00.97 or later)	Install the Windows NT driver. Refer to Chapter 5 for more information.
Windows 2000	• RSNetWorx for DeviceNet • RSLinx (version 2.2 or later, Service Pack 2 installed) **Note:** For RSLinx versions later than 2.2, no Service Pack is required for the 1784-PCD card to work.	Install the Windows 2000 driver. Refer to Chapter 6 for more information.

Locate the 1784-PCD Driver

There are three ways to obtain the 1784-PCD driver. The driver is located:

- on one of the following disks shipped with the card:
  - 1784-PCD Installation Windows 95/98/2000/Me 32-bit Setup Disk
  - 1784-PCD Installation Windows NT 4.0 Setup Disk
  - the 1784-PCD Installation Windows 95 16-bit Setup Disk
- on the RSLinx product CD, located in the PnPDrivers folder
- or, for the latest versions, visit www.ab.com, then select Product Support or www.ab.com/support/products/pccards.html

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Install and Use the 16- and 32-bit Drivers for Windows 95

What's in This Chapter?

This Chapter describes installation procedures for the 16- or 32-bit Windows 95 drivers. This Chapter describes how to:

For information on:	See page:
Guidelines for Using the Driver	3-2
Install the Driver	3-4
Stop the PCD Card	3-7
Remove the Driver	3-8

The instructions in this Chapter assume that you:

- have already determined which operating system you are using, and which driver you need to install
- are using Windows 95

TIP



You can have only one PCD card inserted into your computer at one time in Windows 95. If you insert more than one card, Windows 95 recognizes only the first card.

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TIP

Depending on the version of Windows 95 you are using, your screens may look slightly differen from the ones shown in this Chapter.

TIP

If you plan to use DeviceNet Manager software, DeviceNet Monitor software, or other WinDNet16 software, you must install the Windows 95 16-bit driver.

If you plan to use RSNetWorx for DeviceNet or RSLinx, you must install the Windows 95 32-bit driver.

IMPORTANT

If you have a previously installed PCD driver on your PC, you must remove it from your computer before installing the current driver. Refer to Remove the Driver on page 3-8.

Guidelines for Using the Driver

Follow these guidelines for using the driver:

- Do not simultaneously load 16- and 32-bit drivers

IMPORTANT

Although you can alternate between using the 16-bit and the 32-bit driver in your application, do not load both the 16-bit and 32-bit drivers simultaneously. Windows 95 operating systems allow only one driver per card type. You must remove one driver before you install the other.

- Do not use the Update Driver option in the Windows 95 Device Manager:

  Instead, remove any existing drivers, then load the new drivers as described in this Chapter. For information on how to remove the drivers, refer to page 3-8.

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- When changing the series of the PCD card in Windows 95:

  If you change the series of the PCD card, when the PC recognizes the new PCD card for the first time, Windows reports that it has found new hardware and may prompt you to insert the appropriate setup disk. If prompted, insert the setup disk with the driver for your application. Be certain to install the same type of driver (16- or 32-bit) for both cards. You will need to reboot your PC after you install the card.



These drivers will work with the series A, B, and C PCD cards. The series A, B, and C PCD cards use the same setup disks.

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Install the Driver

1. Some earlier versions of the driver do not appear in the Add/Remove Programs utility on the Windows Control Panel and can only be removed by running the pcdupdt.exe program. To verify that an earlier version of the driver is not installed, run the pcdupdt.exe program from the root of the 1784-PCD Installation Windows 95/98/Me 32-bit Setup 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. Insert one of the following disks into your floppy disk drive:
   - the disk labelled 1784-PCD Installation Windows 95/98/Me 32-bit Setup Disk
   - the disk labelled 1784-PCD Installation Windows 95 16-bit Setup Disk

3. Insert the PCD card into your system as described in Chapter 7.

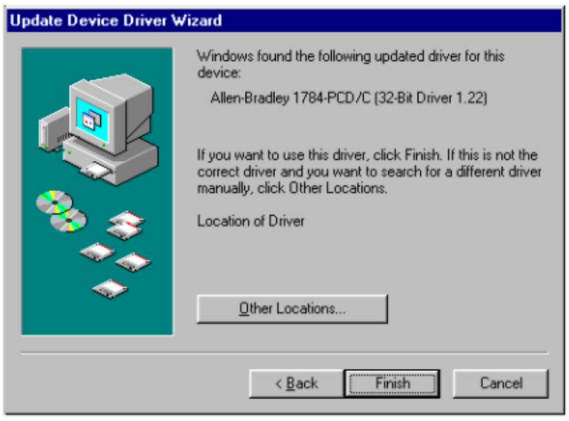
   After you insert the card, the system will detect it and begin to build the driver information needed to run it. To do this, the system must locate the driver for the card, so it prompts you to specify where to find the driver.

4. Click Next. You see the following dialog box:



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5. Click Next. You see a dialog box similar to this one:

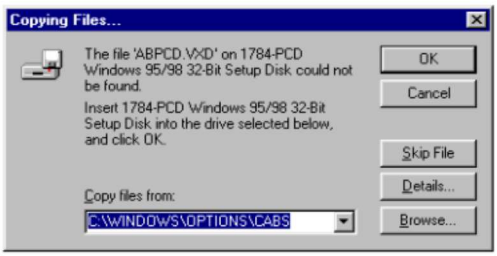


TIP

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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6. Click Finish. The system begins to load the driver, then prompts you with the following dialog box:.



TIP

If you see this dialog box, specify the drive letter for your disk drive (usually a:) in the Copy files from... pulldown (see the screen capture shown above). Press Enter or click OK.

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

7. For the 32-bit driver, run the PCD Test Utility to verify the installation. Refer to Chapter 9 of this manual.

8. For the 16-bit driver, follow these instructions to verify the installation:
   a. Start DeviceNet Manager Software.
   b. Select Utilities ⇒Set Up Online Communications.
   c. Select PCD Interface version 2.2 or Later.
   d. Click Ok.
   e. Click Test Card.
   f. Click Ok.

If:	Then:
you do not see the message: All Tests Passed	refer to Chapter 10. If your are still having problems, contact Rockwell Automation Technical Support.
your computer is not connected to a DeviceNet network	you see the following message on the bottom of the DeviceNet Manager window: 1784-PCD is not connected to a network or there is no network power

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Stop the PCD Card

Before you remove the PCD card from its socket, you should stop the card, which also stops the driver. There are two methods for stopping the card.

Method 1



1. Right-click the PC card icon in the Windows taskbar.
2. Select Adjust PC Card Properties.
3. On the list of PC cards that appears, click on the 1784-PCD card you want to stop.
4. Click Stop.
5. When you see the message that tells you that you may safely remove this device, click OK.

Method 2



1. Left-click the PC card icon in the Windows taskbar.
2. On the list of PC cards that appears, click on the 1784-PCD card you want to stop.
3. When you see the message that tells you that you may safely remove this device, click OK.

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Remove the Driver

You can use the uninstaller provided by Windows 95 to remove the driver from your system.

1. Stop the PCD card as directed above.
2. Click Start ⇒Settings ⇒Control Panel.
3. Double-click the Add/Remove Programs icon.
4. Select Allen-Bradley 1784-PCD.
5. Click Add/Remove. Click Next.
6. Before files are deleted, you are prompted to confirm that you want to remove the PCD card.

TIP



As an alternative, you can remove the driver by running the pcdupdt.exe program from the root of the 1784-PCD Installation Windows 95/98/Me 32-bit Setup 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.

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Install and Use the 32-bit Driver for Windows 98/Me

What's in This Chapter?

This Chapter describes installation procedures for the 32-bit Windows 95/98/Me driver. This Chapter describes how to:

For information on:	See page:
Guidelines for Using the Driver	4-2
Install the Driver in Windows 98	4-3
Install the Driver in Windows Me	4-7
Stop the PCD Card	4-9
Remove the Driver	4-10

TIP



16-bit drivers may work on some Windows 98/Me computers. However, Rockwell Automation does not support this configuration.

TIP



You can have only one PCD card inserted into your computer at one time in Windows 98/Me. If you insert more than one card, Windows 98/Me recognizes only the first card.

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The instructions in this Chapter assume that you:

- have already determined which operating system you are using, and which driver you need to install
- are using Windows 98 or Me
- are using RSNetWorx or RSLinx software. RSLinx software must be at version 2.00.97.30 or later.

IMPORTANT Always remove PCD drivers you may have installed previously before you install new ones. Refer to Remove the Driver on page 4-10.

Guidelines for Using the Driver

Follow these guidelines for using the driver:

- Do not use the Update Driver option in the Windows 95/98/Me Device Manager:

  Instead, remove any existing drivers, then load the new drivers as described in this Chapter. For information on how to remove the drivers, refer to page 4-10.

- When changing the series of the PCD card in Windows 98/Me:

  If you replace the series A or B PCD card with a series C PCD card or vice versa, the first time the PC recognizes the new PCD card, Windows reports that it has found new hardware and may prompt you to insert the appropriate setup disk. If prompted, insert the setup disk with the driver for your application. You will need to reboot your PC after you install the card.

TIP The series A, B, and C PCD cards use the same setup disks.



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Install the Driver in Windows 98

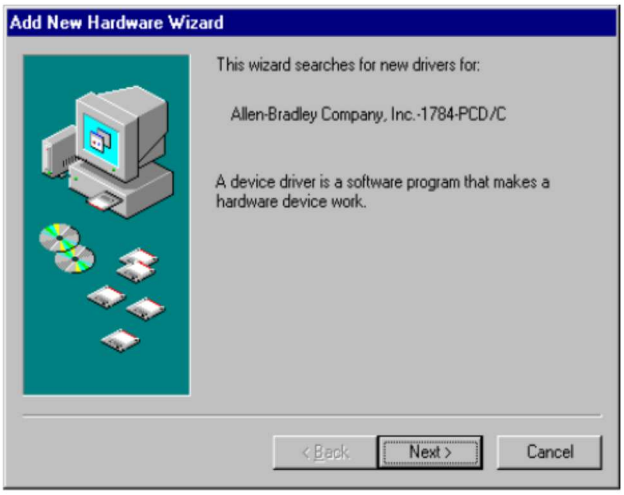
1. Insert the 1784-PCD Installation Windows 95/98/2000/Me 32-bit Setup Disk into your floppy disk drive.

   a. Some earlier versions of the driver do not appear in the Add/Remove Programs utility on the Windows Control Panel and can only be removed by running the pcdupdt.exe program. To verify that an earlier version of the driver is not installed, run the pcdupdt.exe program from the root of the 1784-PCD Installation Windows 95/98/2000/Me 32-bit Setup Disk.

   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. Insert the PCD card into your system as described in Chapter 7. Windows 98 displays this screen.



3. Click Next.

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4. You see this screen:



5. Click Next. You see this screen:



6. Select one of the following:

- Floppy disk drives if you are going to use the 1784-PCD Installation Windows 95/98/2000/Me 32-bit Setup Disk that ships with the 1784-PCD card
- CD-ROM drive if you are going to get the file from the RSLinx CD-ROM

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- Specify a location if you downloaded the driver file from www.ab.com/support.

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 98/Me will search for the appropriate driver.
CD-ROM drives	insert the RSLinx CD into the drive and click **Next**. Windows 98/Me will search for the appropriate driver.
Specify a location	use this selection if you have downloaded the driver from www.ab.com/support. You will be prompted for the location path of the driver.

7. You see this screen:



TIP

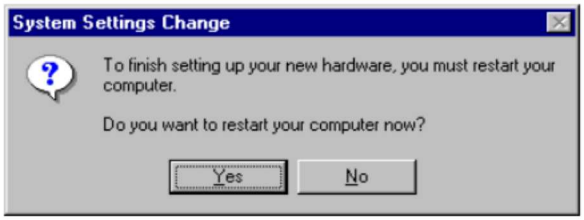
You may see a message indicating that no driver was found. If you do get this message, type the path where the driver is located (on the disk, or on your hard drive, if you downloaded it). If Windows is still unable to find the driver, reboot your PC.

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8. Click Next. You see this screen:



9. Click Finish. You see this screen:



10. Click Yes to reboot your computer.

11. Run the PCD Test Utility to verify the installation. Refer to Chapter 9 of this manual.

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Install the Driver in Windows Me

1. Insert the 1784-PCD Installation Windows 95/98/2000/Me 32-bit Setup Disk into your floppy disk drive.

   a. Some earlier versions of the driver do not appear in the Add/Remove Programs utility on the Windows Control Panel and can only be removed by running the pcdupdt.exe program. To verify that an earlier version of the driver is not installed, run the pcdupdt.exe program from the root of the 1784-PCD Installation Windows 95/98/2000/Me 32-bit Setup Disk.

   b. Browse to `x:\pcdupdt.exe` where x: is your floppy disk drive letter.

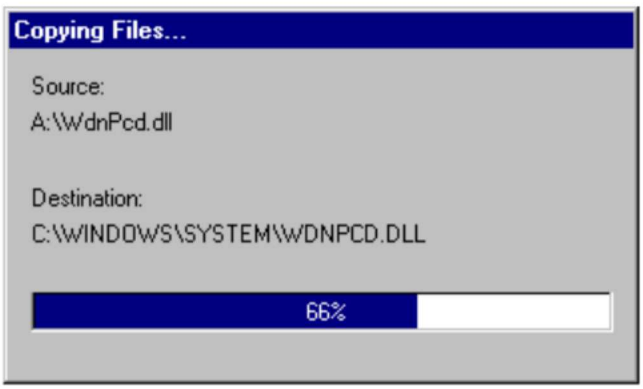
   c. Double-click on the pcdupdt.exe file to run it.

2. Insert the PCD card into your system as described in Chapter 7. Windows Me displays this screen:



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3. Click Next. You see this screen:



4. When the files finish copying, you see this screen:



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5. Click Finish. You see this screen:



6. Click Yes to reboot your computer.

7. Run the PCD Test Utility to verify the installation. Refer to Chapter 9 of this manual.

Stop the PCD Card

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

Method 1

1. Right-click the PC card icon in the Windows taskbar.



2. Select Adjust PC Card Properties.

3. On the list of PC cards that appears, click on the 1784-PCD card you want to stop.

4. Click Stop.

5. When you see the message that tells you that you may safely remove this device, click OK.

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Method 2



1. Left-click the PC card icon in the Windows taskbar.
2. On the list of PC cards that appears, click on the 1784-PCD card you want to stop.
3. When you see the message that tells you that you may safely remove this device, click OK.

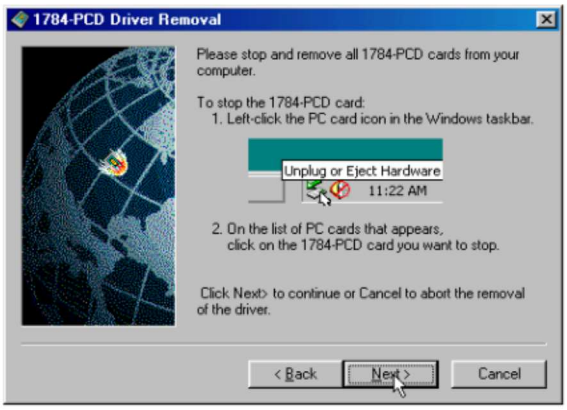
Remove the Driver

You can use the uninstaller provided by Windows 98/Me to remove the driver from your system.

1. Stop the PCD card as directed above.
2. Click Start ⇒Settings ⇒Control Panel.
3. Double-click the Add/Remove Programs icon.
4. Select Allen-Bradley 1784-PCD.
5. Click Next.

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6. Click Add/Remove. If you have not already stopped the card, you see a screen similar to the one below.



7. Before files are deleted, you are prompted to confirm that you want to remove the PCD card.

TIP

As an alternative, you can run the pcdupdt.exe file from the root of the 32-bit driver disk to remove the driver.

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.

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Notes:

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Install and Use the Driver for Windows NT

What's in This Chapter?

This Chapter describes how to:

To:	See page:
Use Third-party Windows NT Plug-and-play Software	5-2
Install the Driver	5-4
Test the PCD Card	5-7
Remove the Driver	5-8

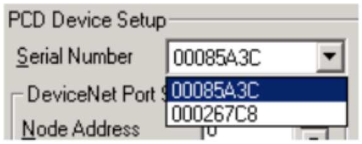
The instructions in this Chapter assume that you:

- have already determined which operating system you are using, and which driver you need to install
- are using Windows NT
- are using RSNetworx for DeviceNet software with RSLinx 2.00.97.30 or later

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TIP

With certain third-party plug-and-play software packages, two PCD cards can be used at the same time. To determine if your system will support two PCD cards, install two cards and configure the PCD driver in RSLinx (select Communications ⇒Configure Drivers). If your system supports two cards, you will see two serial numbers as shown in this excerpt from the RSLinx PCD Driver Configuration Screen.



Native NT (with no third-party plug-and-play software installed) supports one PCD card at a time.

Do You Have Any of the Following Third-Party Plug-and-Play PC Card Controller Software?

If:	Then:
you do have third-party plug-and-play card controller software	 a PC card icon (circled in this illustration) will appear on the Windows task bar
you do not have third-party plug-and-play card controller software	go to page 5-4 and continue with the driver installation.

TIP

To find the version of your third-party plug-and-play software, you can usually do the following:

1. Double-click the PC card icon.
2. When a dialog box appears, click Help ⇒About.

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TIP



Whenever you upgrade third-party plug-and-play software, you must also upgrade all associated power management and docking service software, if loaded, to the same version to which you have upgraded the plug-and-play software.

SystemSoft's CardWizard

If you have SystemSoft's CardWizard plug-and-play software, you must upgrade it to version 4.0 or later. In addition, you will be able to use the A-B 1784-PCD card Control Panel to assign memory and interrupt resources for the card.

IMPORTANT

You cannot use a series A 1784-PCD card with SystemSoft's CardWizard. Attempting to use the series A card may cause your computer to lock up. If your computer locks up, remove the series A card from your computer and reboot it.

IMPORTANT

You cannot configure and use 2 PCD cards at the same time with SystemSoft's CardWizard.

For more information on obtaining the CardWizard upgrade for use with the 1784-PCD card, contact SystemSoft:

- Internet: www.systemsoft.com
- Phone: 1.800.796.0088 or 508.651.0088 (ask for sales)

Phoenix/Softex's Card Executive

If you have Phoenix/Softex's Card Executive plug-and-play software, you must upgrade to version 2.21 or later.

Do not use the Allen-Bradley 1784-PCD card icon in the Control Panel to assign memory and interrupt resources. The Phoenix/Softex PC card controller software assigns these resources for you automatically.

For more information, contact Phoenix/Softex:

- Internet: www.softexinc.com
- Phone: 512.452.8836
- Fax: 512.795.8702

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Unicore/Touchstone Software's CardWare

If you have Unicore/Touchstone Software's CardWare, you must upgrade to version 2.11 or later.

Do not use the Allen-Bradley 1784-PCD card icon in the Control Panel to assign memory and interrupt resources. The Unicore/Touchstone Software PC card controller assigns these resources for you automatically.

For more information, contact Touchstone or Unicore:

- Touchstone: Internet: www.touchstonesoftware.com
- Unicore: Internet: www.unicore.com/products

Install the Driver

To install the driver, do the following:

1. To verify that an earlier version of the driver is not installed, click Start ⇒Settings ⇒Control Panel. Double-click the Add/Remove Programs icon. Click the Install/Uninstall tab. Scroll down the list to ensure the driver is not listed.

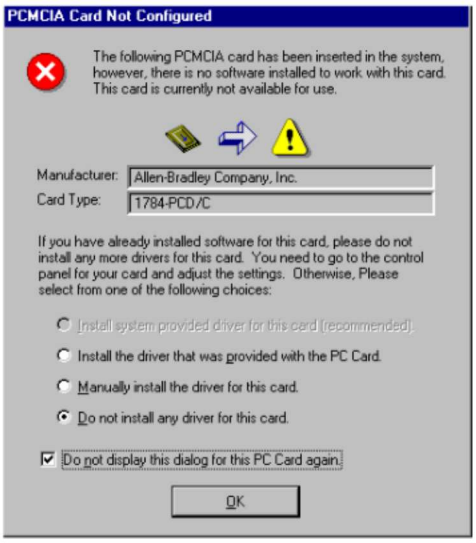
If:	Then:
the driver is installed	remove it. Refer to Remove the Driver on page 5-8.
the driver is not installed	click **OK** or **Cancel**.

2. Shut down the PC.
3. Insert the PCD card into your computer as described in Chapter 7.
4. Start Windows NT.

If:	Then:
you have third-party plug-and-play card controller software	refer to the bulleted list following this table
you do not have third-party plug-and-play card controller software	go to step 5 on page 5-6

- If you have Phoenix/Softex's Card Executive on your system, you may see the following message:

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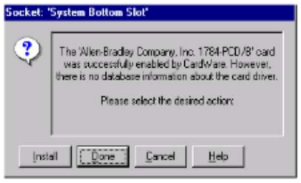
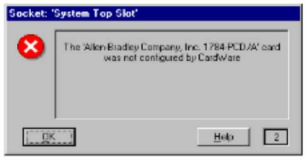
If you get this message, do the following:

a. Choose the Do not install any driver for this card radio button.
b. Check the Do not display this dialog for the PC card again checkbox.
c. Press Enter or click Ok. You still need to install the driver. Go on to step 5.

- If you have SystemSoft's CardWizard, you may see a screen that tells you the PCMCIA card is not configured. Click Exit and continue with step 5.
- If you have Unicore/Touchstone Software's CardWare, you may see a screen similar to one of the following screens at any time during the installation.

TIP Different versions of Unicore/Touchstone Software's CardWare show the screens at different times.

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If you see this screen:	Do this:
	Click **Done**. If you do not, you will see this screen every time you reboot your pc.
	Click **OK**.
	Click **No**.

5. Insert the 1784-PCD Installation Windows NT 4.0 Setup Disk into the floppy disk drive.

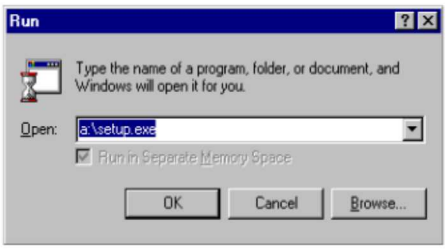
6. Access the Run window by selecting Start ⇒Run.

7. In the Run dialog box, type the path

   a:\setup.exe

   Substitute for a:\ the drive letter of your floppy disk, (for example, b:\).

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8. Click OK.

   The InstallShield Wizard starts up. You see a progress bar advance as the installation progresses.

9. Click Next.

10. At the Setup Complete screen, click the Yes I want to restart my computer now radio button.

11. Click Finish.

IMPORTANT If CardWare displays a message saying the driver could not be started, you may have a resource conflict. Refer to Chapter 10 for troubleshooting information.

Test the PCD Card

To test the PCD card, refer to Chapter 9 of this manual.

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Remove the Driver

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

1. Click Start ⇒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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