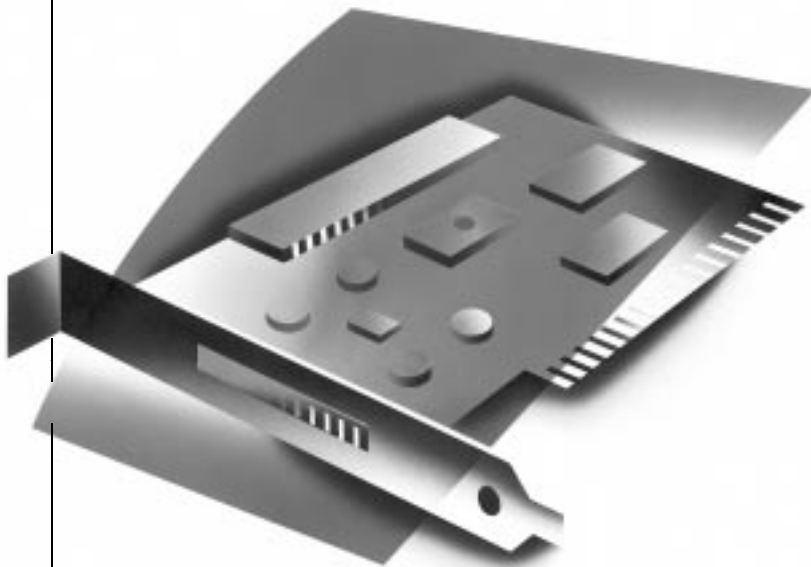




INSTALLATION GUIDE



SCSI CARD 2906

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SCSI Card 2906

Installation Guide

 **adaptec®**

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Introduction

With SCSI Card 2906, you can connect up to seven SCSI devices to any IBM-compatible computer with Bus Mastering PCI expansion slots.

This installation guide provides step-by-step instructions for

- Installing the SCSI Card 2906
- Preparing the SCSI devices
- Connecting internal SCSI devices (for example, SCSI hard disk drives)
- Connecting external SCSI devices (for example SCSI scanners, CD-Recordable drives, or backup tape drives)
- Installing the SCSI Card 2906 software

See the *SCSI Card 2906 User's Reference* included in this package for additional information on using the SCSI Card 2906.

Before You Begin

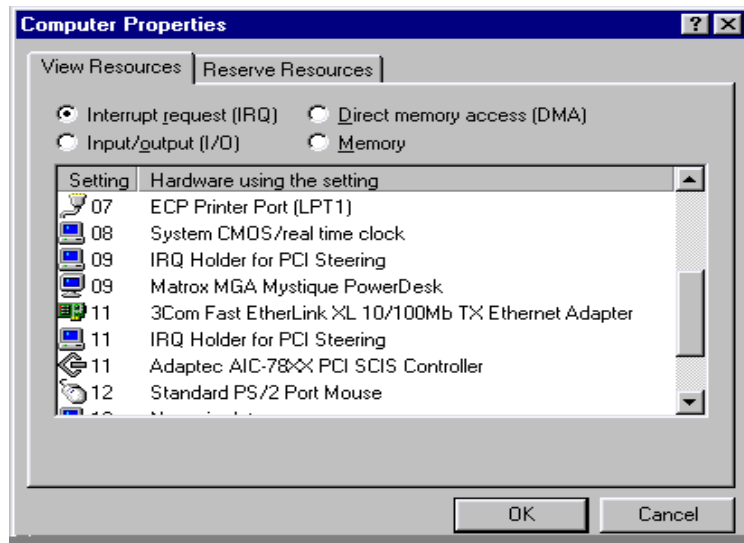
Make sure your SCSI Card 2906 package includes the following items:

- SCSI Card 2906
- Standard 50-pin Internal SCSI Cable
- Adaptec EZ-SCSI diskette for Windows[®]95/98
- Adaptec EZ-SCSI diskette for Windows[®]3.1/DOS
- SCSI Card 2906 User's Reference
- SCSI Card 2906 Install Guide

Check your computer properties for an available Interrupt Request (IRQ) setting. Follow these steps to find an available IRQ setting:

- 1 In Windows 95/98, click the **Start** button, point to **Settings**, and then click **Control Panel**.
- 2 Double-click **System**.
- 3 In the System Properties window, open **Device Manager**.

- 4 In Device Manager, double-click **Computer** at the top of the list.
- 5 In the Computer Properties window, click **Interrupt request (IRQ)** (if it is not already selected) as shown in the following sample screen:



- The Settings column lists the IRQs in use. IRQ settings range between 0 and 15. If an IRQ setting is not listed under Settings this means it is available. In the screen sample above, setting 10 is not listed and, therefore, is an available IRQ.



Note: Do not use an IRQ below IRQ 9 for a SCSI Card 2906. Do not allow the SCSI Card 2906 and another card to share the same IRQ.

- If an IRQ setting is available, you may begin this installation. If an IRQ setting is *not* available, you will not be able to install this SCSI card. See the section titled *Troubleshooting in Windows 95/98* in the *SCSI Card 2906 User's Reference* for additional information on IRQ settings.

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Determine which SCSI devices will be connected to the computer. If you want to connect more than two internal SCSI devices or one or more external SCSI devices, you will need additional cables not included in this package. These cables are described in the *SCSI Card 2906 User's Reference*.

Installing the SCSI Card 2906



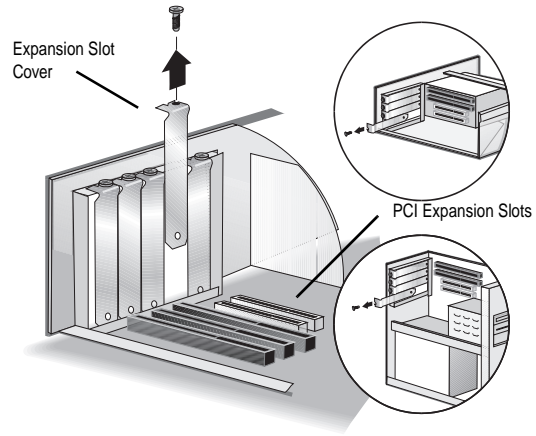
WARNING: Before you start, turn OFF power to the computer and disconnect the power cord. Then ground yourself by touching an unpainted surface of the computer case.

- 1 Remove the cover from your computer, following the manufacturer's instructions.
- 2 Find an unused PCI expansion slot (typically white or ivory) in your computer. Unscrew the expansion slot cover screw and remove the cover to provide an opening as shown in the following diagram.

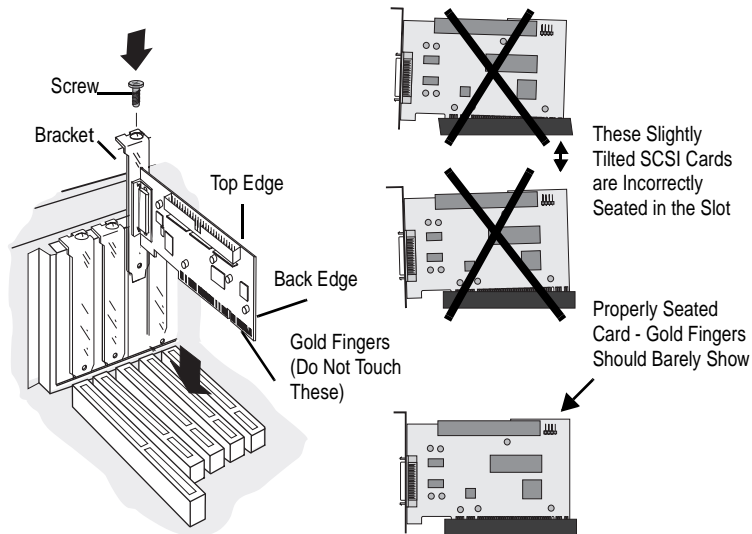


Note: If your computer is a tower model, it is easier to install the SCSI card when the tower is laid on its side. Computers may have vertical or horizontal expansion slots, as shown in the following diagram. Refer to your computer manual to locate the PCI slots.

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- 3** Remove the SCSI Card 2906 from its antistatic packaging. Always handle the card by its edges.
- 4** Insert the SCSI Card 2906 in the slot, pressing it down firmly so the gold fingers are seated in the slot as shown in the following diagram. Secure the SCSI card bracket with the screw you removed in Step 2.



Preparing the SCSI Devices

Setting up SCSI devices before attaching them to the SCSI card typically involves setting SCSI IDs and termination, mounting internal SCSI devices inside your computer, and connecting power cables to each SCSI device.

Setup varies for different kinds of SCSI devices. Always refer to the SCSI device's documentation for specific instructions. Below are some guidelines for setting SCSI IDs and termination on your SCSI devices.



Note: If you refer to the SCSI device's documentation for installation instructions, be sure to return to this document and continue with *Installing the SCSI Card 2906 Software* on page 14.

Check the SCSI IDs

The SCSI Card 2906 and each SCSI device you connect to it requires a unique SCSI ID number ranging from 0 to 7. The SCSI Card 2906 and each SCSI device must have a different ID number. The SCSI Card 2906 is preset to ID 7 and should not be changed. The IDs for internal SCSI devices are usually set with jumpers; external SCSI devices are usually set with a switch on the back of the SCSI device.

Terminate the Ends of the SCSI Bus

To ensure reliable communication on the SCSI bus, the SCSI device at the end of each cable, or the end of the cable itself, must have a terminator installed (or enabled). Terminators must be removed or disabled on SCSI devices that are connected between the ends of each cable. See the section titled *Terminating the SCSI Bus* in the *SCSI Card 2906 User's Reference*.

- To install internal SCSI devices, see *Connecting Internal SCSI Devices* on page 7.
- To install external SCSI devices only, replace your computer cover and skip to *Connecting External SCSI Devices* on page 11.

Connecting Internal SCSI Devices

- 1 Be sure that each internal SCSI device you are installing has a unique SCSI ID from 0 to 6. Refer to the SCSI device's documentation to determine the SCSI ID setting.

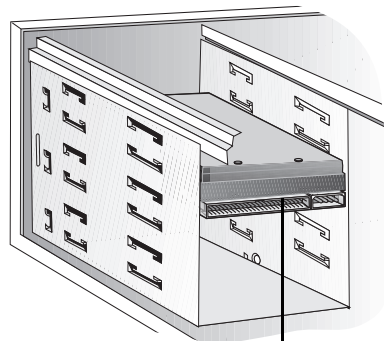
If any two SCSI devices (internal or external) you are connecting to the SCSI card have the same SCSI ID, change the SCSI ID on one SCSI device. The SCSI Card 2906 is preset to SCSI ID 7 and should not be changed. See the *SCSI Card 2906 User's Reference* for additional information on SCSI IDs.

- 2 If you are installing one internal SCSI device only, terminate that SCSI device. If you have two or more internal SCSI devices, terminate the device that will be connected at the end of the cable.

For more information on termination, refer to the SCSI device's documentation or the section titled *Terminating the SCSI Bus* in the *SCSI Card 2906 User's Reference*.

- 3 Mount each internal SCSI device in an available drive bay inside your computer as shown in the following diagram.

Refer to your computer and SCSI device documentation for instructions on installing SCSI devices inside your computer.

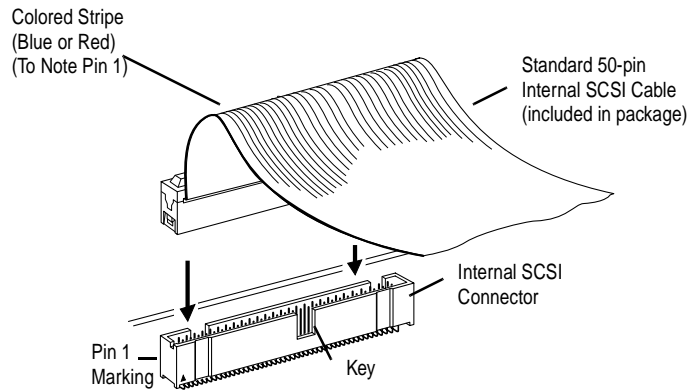


Internal SCSI Device Mounted
in Drive Bay Inside Your Computer



Note: If it is difficult to reach behind your internal SCSI devices mounted in the drive bay, try connecting the internal SCSI devices to the SCSI cable and power supply (Steps 5 - 7 below) *before* securing each SCSI device inside your computer.

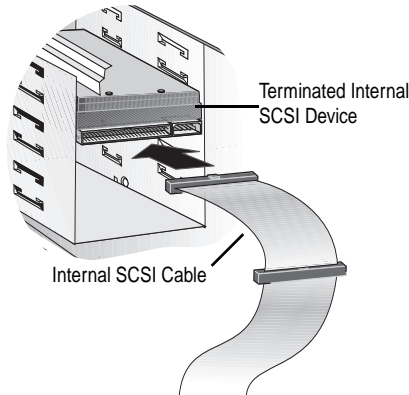
- 4 Connect one end of the internal SCSI cable to the SCSI Card 2906 internal SCSI connector as shown below.



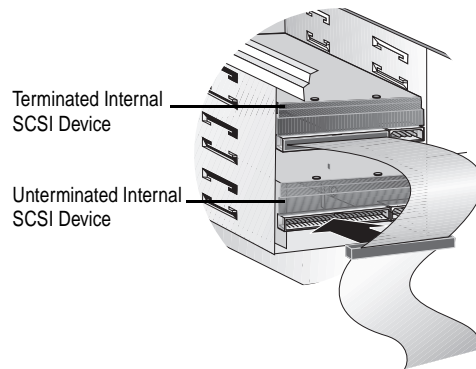
To connect more than two internal SCSI devices to the SCSI Card 2906, you will need an internal SCSI cable with enough connectors for all devices. See the *SCSI Card 2906 User's Reference* for additional information on connecting your SCSI devices and ordering cables.

- 5 Connect the other end of the cable to the last internal SCSI device as shown below (this SCSI device *must* be terminated; see Step 2 above).

Make sure Pin 1 on the cable aligns with Pin 1 of the internal SCSI device's connector. Pin 1 usually is designated by a small triangle or "1".

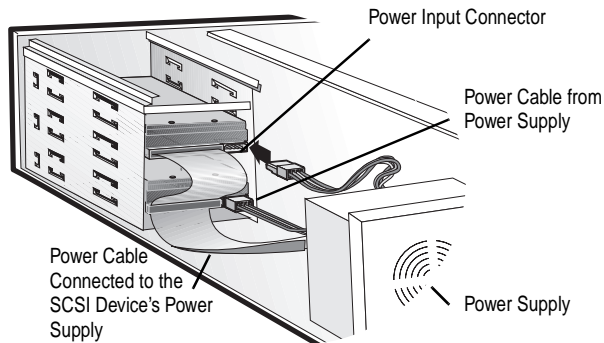


- 6 Connect the remaining connectors on the cable to any remaining internal SCSI devices as shown below (*do not* terminate these SCSI devices; see Step 2 above.)



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- 7 Connect a power cable from your computer's power supply to the power input connector on the SCSI device as shown below. Repeat this step for each additional SCSI device.



Caution: Power connectors and power cables typically are keyed with beveled edges. Use caution when you are connecting the power cable to the device.

- 8 Replace the computer cover.
- 9 If you are installing internal SCSI devices only, follow these steps:
 - Reconnect the power cables to the computer.
 - Install any software included with your SCSI device.
 - Return to this installation guide and continue with *Installing the SCSI Card 2906 Software* on page 14.

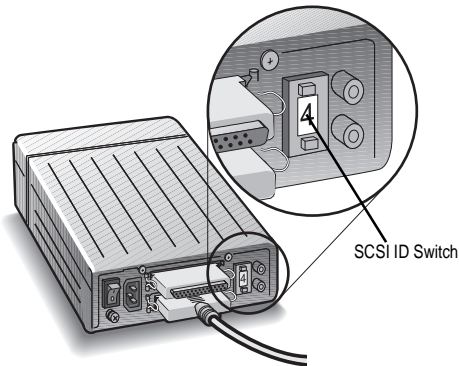
If you are installing external SCSI devices, continue with the next section.

Connecting External SCSI Devices

- 1 Be sure that each external SCSI device you are installing has a unique SCSI ID from 0 to 6. Refer to the SCSI device's documentation to determine the SCSI ID setting.

If any two SCSI devices (external or internal) you are connecting to the SCSI Card 2906 have the same SCSI ID, change the SCSI ID on one SCSI device. The SCSI Card 2906 is preset to SCSI ID 7 and should not be changed.

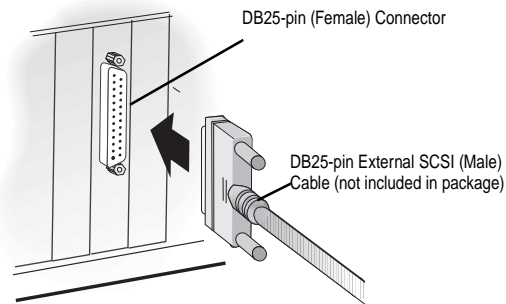
For most external SCSI devices, the SCSI ID is set with a switch on the back of the SCSI device as shown below. See the *SCSI Card 2906 User's Reference* for additional information on SCSI IDs.



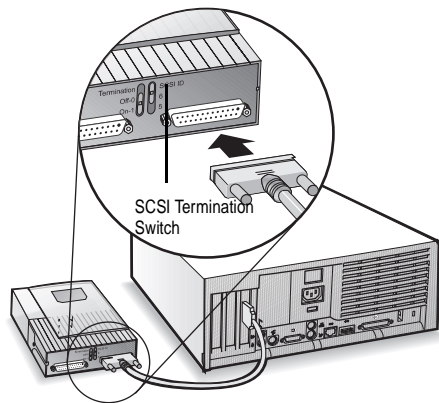
- 2 Connect one end of the external SCSI cable to the SCSI Card 2906 external SCSI connector as shown in the following diagram. Secure the cable to the connector on the SCSI Card 2906 by tightening the thumb screws on the cable connector.

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For each external SCSI device you install, you need a high-quality external SCSI cable. See the *SCSI Card 2906 User's Reference* for additional information on connecting your SCSI devices and ordering cables.



- 3 Connect the other end of the cable to a SCSI connector on the back of the external SCSI device as shown below. If you are installing only one external SCSI device, terminate the device.

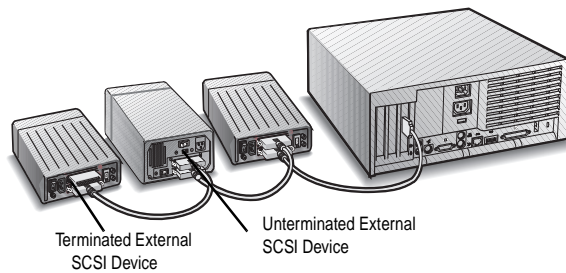


Termination usually is controlled by installing or removing a SCSI terminator. On some SCSI devices, you use a switch or button on the back of the SCSI device. Refer to the SCSI device's documentation to determine how to enable or disable termination. See the *SCSI Card 2906 User's Reference* for additional information on termination.

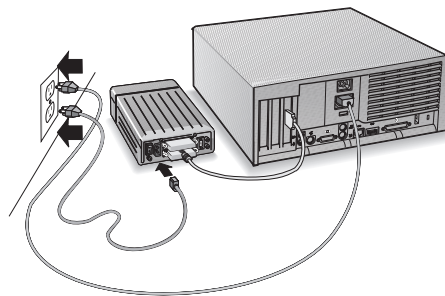


Note: If you are connecting external SCSI devices, use *SCSISelect*[®] to set the Maximum Synchronous transfer rate to 5 MBytes/sec. The DB-25 connector is not rated for higher speeds. Refer to the section titled *Configuring the SCSI Card 2906 with SCSISelect* in the *SCSI Card 2906 User's Reference*.

- 4 Connect the other external SCSI devices by connecting each SCSI device to the previous one until all SCSI devices are connected as shown below. Terminate only the SCSI device at the end of the chain.



- 5 Connect all power cables to the external SCSI devices and computer as shown below.



- 6 Turn ON all external SCSI devices and wait for them to come to a ready state before turning on the computer.

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- 7 Turn ON the computer to boot it.
- 8 Install any software included with your SCSI device.
- 9 Continue with *Installing the SCSI Card 2906 Software*.

Installing the SCSI Card 2906 Software

To install the SCSI Card 2906 software (software driver), go to the section below for the operating system (for example, Windows 95/98) installed on your computer. If the operating system is not yet installed, install it now. Refer to your operating system documentation for instructions.



Note: If you have installed a new SCSI hard drive, you will need to partition and format the drive with the ES-SCSI[®] AFDISK before you can use your hard drive. Refer to your hard drive documentation for instructions.

Computers with Windows 95/98

- 1 Turn ON all external SCSI devices and then the computer. Allow Windows 95/98 to load. Win 95/98 automatically will detect the SCSI Card 2906.
- 2 When Windows prompts you for a driver, insert the Adaptec EZ-SCSI diskette for Windows 95/98 and Windows NT into the floppy disk drive or insert your Windows 95/98 CD-ROM into the CD-ROM drive. Follow the instructions that appear on-screen.
- 3 If prompted, restart your computer to finish setting up your new hardware.
- 4 Click the **Start** button, point to **Settings**, and then click **Control Panel**.
- 5 Double-click the **System** icon, and then click the **Device Manager** tab.
- 6 Double-click the **SCSI Controller** icon. The driver for the SCSI Card 2906 is listed as the "Adaptec AIC-7850 PCI SCSI Controller."



Note: If the driver is not listed or is not loading properly, see the *Troubleshooting* section of the *SCSI Card 2906 User's Reference*.

Computers with Windows® NT 4.0

- 1 Start Windows NT 4.0
- 2 Click the **Start** button, point to **Settings**, and then double-click **Control Panel**.
- 3 Double-click **SCSI Adapters**.
- 4 In the SCSI Adapters window, click the **Drivers** tab.
- 5 In the Drivers tab, click **Add**.
- 6 In the Install Driver window, click **Have Disk**.
- 7 Insert the Adaptec EZ-SCSI diskette for Windows 95/98 and Windows NT into the floppy disk drive.
- 8 In the Install from Disk window, type a:\winnt\4_0 and then click **OK**.
- 9 Click **Adaptec AIC-7850 PCI SCSI Controller Driver** from the list.



Note: If an Adaptec AIC78xx driver is already installed, you will be prompted for the current or new driver installation. Click **New**.

- 10 Restart your computer.

Computer with Windows 3.1/DOS

- 1 Turn on all external SCSI devices and then the computer.
- 2 Start Windows 3.1 on your computer and wait for the start-up process to finish.
- 3 Insert the Adaptec EZ-SCSI diskette for DOS and Windows 3.1 into the floppy disk drive.

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- 4 Select **File/Run** from the Program Manager menu.
- 5 When the Run dialog box appears, type a:\setup if you are using the A drive, or b:\setup if you are using the B drive. Then click **OK**.
- 6 Follow the instructions that appear on-screen.

Computers with DOS 6.x or Above

- 1 Turn on all external SCSI devices and then the computer.
- 2 Insert the Adaptec EZ-SCSI diskette for DOS and Windows 3.1 into the floppy disk drive.
- 3 At the DOS prompt, type a:\dosinst if you are using the A drive, or b:\dosinst if you are using the B drive. Then press **Enter**.
- 4 Follow the instructions that appear on-screen.

Congratulations!

You have finished installing SCSI Card 2906.

Federal Communications Commission Radio Frequency Interference Statement

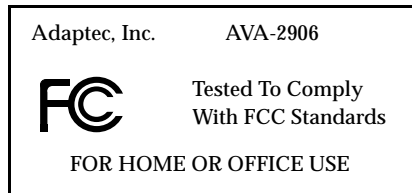
WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. However, if this equipment does cause interference to radio or television equipment reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Use a shielded and properly grounded I/O cable and power cable to ensure compliance of this unit to the specified limits of the rules.

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



Canadian Compliance Statement

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

SCSI Card 2906

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Printed in Singapore
Stock No.: 512169-00, Rev.A MPO 11/98

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STOCK NO.: 512169-00, Rev. A MPO 11/98