# 24X MAX IDE CD-ROM Drive

*User's Guide*

OPTIONS
*by IBM*

**Note:** If you are using this product in the United States, Canada, or Puerto Rico, be sure to read the information under Appendix D, "Product Warranty" on page 3-21 before using this information and the product it supports.

*For all other countries, the warranty terms and conditions applicable in the country of purchase are available from IBM or your reseller.*

**First Edition (September 1997)**

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# *Safety: Read First*

⚠

**CAUTION:** Read the Safety Information in the Appendix, page 3-1, before installing this product.

**Bitte beachten:** Vor der Installation dieses Produkts bitte die Sicherheitsinformationen im Anhang (Seite 3-1) durchlesen.

**ATTENTION:** Lire les Consignes de Sécurité en Annexe, page 3-1, avant d'installer ce produit.

**Precaución:** Antes de instalar este producto, lea la información sobre seguridad que aparece en el apéndice, páginas 3 a 1.

**注意**：この製品をインストールする前に、付録ページ 3-1 の安全に関する表示をお読み下さい。

**ATTENZIONE:** Prima di procedere all'installazione di questo dispositivo, leggere le Informazioni sulla sicurezza nell'Appendice a

**ADVERTÊNCIA:** Leia a informação sobre segurança no Apêndice, página 3-1, antes de instalar este produto.

**OPOZORNĚNÍ:** Před instalací tohoto výrobku si přečtěte Informace o bezpečnosti v Dodatku, str. 3-1.

**BEMÆRK:** Læs sikkerhedsinformationen i tillægget, side 3-1, før du installerer dette produkt.

**LET OP:** Voordat dit produkt wordt geïnstalleerd dient de informatie over veiligheid in de bijlage op pagina 3-1 gelezen te worden.

**ATTENTION:** Avant d'installer ce produit, veuillez lire les renseignements en matière de sécurité à la page 3-1 de l'Annexe.

**VAROITUS:** Lue liitteen sivulla 3-1 olevat turvallisuusohjeet, ennen tämän laitteen asentamista.

**זהירות:** קרא את הוראות הבטיחות המופיעות בנספח, עמ' 3-1, לפני התקנת מכשיר זה.

**FIGYELMEZTETÉS:** Mielôtt beszerelné a terméket, olvassa el a függelék 3-1 oldalán található biztonsági információkat.

주의 : 본 제품을 설피하기 전에 부록의 3쪽 1항에 있는 안전 수칙을 숙독한다.

**ADVARSEL:** Les informasjonen om sikkerhet i Appendiks, side 3-1, før du installerer dette produktet.

**UWAGA:** Przed zainstalowaniem tego wyrobu należy przeczytać informację dotyczącą bezpieczeństwa w Załączniku na str. 3-1.

**CUIDADO:** Leia as Informações de Segurança no Anexo, página 3-1, antes de instalar este produto.

**小心**：請在安裝本產品之前仔細閱讀3-1頁附錄中的安全信息。

**Opozorilo:** Upoštevajte varnostna obvestila v dodatku, stran 3.-1., preden napravo instalirate.

**VARNING:** Läs säkerhetsinformationen i bilagan, sid. 3-1 innan du installerar denna produkt.

# *About This Book*

This manual contains information on the IBM 24X MAX IDE CD-ROM Drive. The manual is divided into the following parts:

**Part 1:** Abbreviated installation instructions

**Part 2:** Product description, installation, usage, and problem-solving information

**Part 3:** Safety information, technical-support information, warranty, and notices

**Note:** The illustrations in this manual might be slightly different from your hardware.

# Part 1: Quick Installation Guide

The IBM 24X MAX IDE CD-ROM Drive can read a compact disc (CD) containing approximately 680 MB[1] of information. The drive delivers data up to 24 times the standard CD-ROM speed, delivering data at up to 3600 KB[1] per second.

The CD-ROM drive is designed for installation in a personal computer that uses the integrated drive electronics (IDE) or the enhanced IDE architecture. The drive may be mounted vertically or horizontally. For more detailed installation instructions, go to "Part 2: Installation Guide" on page 2-1.

> **Caution:** Read the Safety Information in Appendix A, page 3-1, before installing this product.

In addition to this book, the option (part number 01K0058) includes:

- IBM 24X MAX IDE CD-ROM Drive
- Two audio cables
- Four mounting screws (M3 x 5 mm, slotted)
- *IBM 24X MAX IDE CD-ROM Drive Option Diskette*
- IDE cable for connecting two IDE devices
- *Laser Safety Guide for CD-ROMs*

Contact your place of purchase if an item is missing or damaged. Be sure to retain your proof of purchase. It might be required to receive warranty service. See Appendix C, "Help and Service Information" on page 3-18 for technical support information.

## *Installing the Drive*

### Step 1. Opening the Computer

1. Turn off the computer and all attached peripherals.
2. Unplug the power cords for the computer and all attached devices.
3. Open the computer.

[1] *MB equals approximately 1 000 000 bytes, and KB equals approximately 1 000 bytes.*

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## Step 2. Unpacking the Drive

1. Touch an unpainted metal surface for at least two seconds.
2. Touch the bag to an unpainted metal surface on the computer for at least two seconds.
3. Remove the drive from the bag.

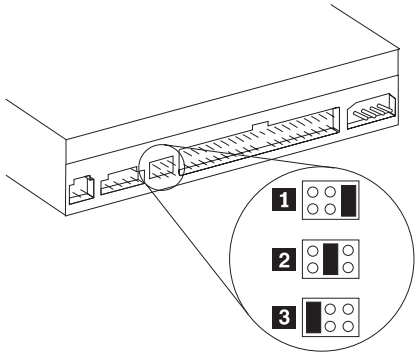
   If you must put the drive down, place the antistatic bag on a flat padded surface, such as a magazine, and place the drive on the bag with the component side facing up.

## Step 3. Selecting an IDE Port

Newer computers typically have two IDE ports. If your computer has two IDE ports, use the secondary IDE port to connect the CD-ROM drive. Typically the secondary IDE port is adjacent to the primary IDE port that connects to your hard disk drive. Based on which IDE port you use and if there is another device on the port, determine the configuration jumper setting for the drive.

- If you have two IDE ports, connect the CD-ROM drive to the secondary IDE port with the IDE cable that comes with your drive. If the CD-ROM drive is the only device on the IDE port, set the configuration jumper to the master position. If the CD-ROM drive is the second drive on the port, set the configuration jumper to the slave position.
- If you must attach the CD-ROM drive to the same IDE port as a faster device, such as a hard disk drive, configure the CD-ROM drive as the slave and the hard disk drive as the master. In some instances, the hard disk drive may require a master with slave present jumper setting when the CD-ROM is configured as a slave.
- Some non-IBM computers support the cable-select setting, where the position of the device on the cable determines whether a device is master or slave. See the documentation that comes with your computer to determine if your system supports this setting.

## Step 4. Setting the Configuration Jumper




Configure the CD-ROM drive by placing one jumper over a set of configuration pins.

- If you are configuring the drive as master, set the jumper to the master **1** device setting. (Master is the factory-shipped setting.)

If there is a second device on the IDE port, check that the device is configured as slave.

- If you are configuring the drive as slave, set the jumper to the slave **2** device setting. Check that the other device on the IDE port is configured as master (or master with slave present).
- If you are configuring the drive as cable-select, set the jumper to the cable-select **3** device setting. If there is another device on the IDE port, check that the device is also configured for cable-select.

## Step 5. Mounting the Drive in the Bay

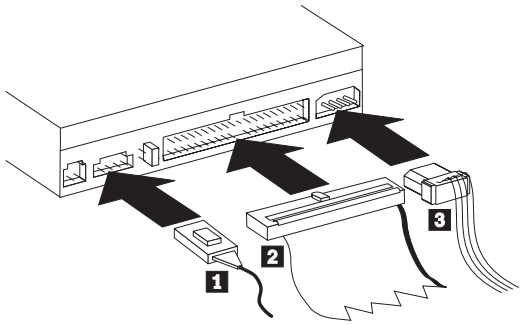
**Attention:** Be sure to use the M3 x 5 mm mounting screws in the option package when you are driving screws directly into the drive. Using screws that are too long can damage the drive.

Mount the CD-ROM drive horizontally or vertically in the computer.

1. Slide the drive into the bay.
2. Align the drive-bay screw holes with the threaded holes in the drive housing or mounting bracket. Be sure to use the M3 x 5 mm mounting screws provided with this drive. Using the wrong size screws might damage the drive.
3. Thread the screws in lightly to secure the drive in the bay. Usually two screws are used on each side. Check the alignment and tighten the screws to secure the drive. *Do not over tighten.*

## Step 6. Attaching the Cables to the Drive

1. Connect the cables to the CD-ROM drive as follows:




   a. Attach a 40-pin IDE-cable connector **2** to the IDE connector on the drive. Align the cable so that the color-coded edge is closest to the power cable connector **3** . Use the IDE cable provided with this option if there is no cable attached to the IDE port or if there is only one device connector on the IDE cable.

   b. Attach a four-pin power-cable connector **3** to the device dc-power connector.

   c. If you have a sound adapter, connect one of the audio cable connectors **1** to the device audio-out connector. Use the audio cable that has a connector that fits your sound adapter and save the other cable in case you use a different sound adapter in the future.

### Step 7. Completing the Hardware Installation

1. Be sure that the drive is securely mounted and the connectors are firmly attached.
2. Be sure the cables do not interfere with the computer cover and do not block the power-supply fan blades or air-flow paths.
3. Reinstall the computer cover.
4. Reconnect all devices and check any devices that might have become disconnected, such as the keyboard, mouse, and monitor.
5. Plug all power cords into electrical outlets.

### Step 8. Updating Your Computer Configuration.

Because you changed the hardware, the configuration-setup information screen should display when you turn on your computer. If the screen does not display, see your computer documentation for information about accessing the configuration or setup utility program.

To see the configuration information for most IBM computers, press **F1** during startup when the graphic displays in the upper right corner of the screen. When you have finished reviewing the information, save the changes and exit.

**Note:** Some older computers with one IDE port might not display the CD-ROM drive information when you review the configuration-setup information. You still can use the CD-ROM drive in this situation as long as you have properly completed the installation.

## *Installing Device Drivers*

This section contains the instructions for installing device drivers for the CD-ROM drive, based on the operating system you are using.

### Installing the Device Driver for Windows 95

In most instances, Windows 95 will auto detect the CD-ROM drive and not present any installation screens. If Windows 95 is in 32-bit mode for IDE, the drive will be recognized in BIOS and the driver install screens will be displayed.

To install a device driver in computers running Windows 95:

1. Start Windows.
2. Click on Start and enter the Settings folder.
3. Click on Control Panel.
4. Double-click on Add New Hardware.
5. Follow the onscreen instructions carefully to properly install the drive software.

## Installing the Device Driver for DOS or DOS with Windows 3.X

1. Exit Windows 3.X, or boot the system to a DOS command prompt.
2. Insert the *IBM 24X MAX IDE CD-ROM Drive Option Diskette* into drive A.
3. Type the letter of the drive, a colon and UINSTALL (such as, A:UINSTALL), then press Enter.
4. Follow the onscreen instructions.
5. At the Installation Options menu, select Install IDE CD-ROM DOS / Windows Support Software and press Enter.
6. Follow the onscreen instructions carefully to properly install the drive software.

**Note:** To resolve resource conflicts or if you need options that are not found in the UINSTALL device driver installation program, refer to the READ.ME file on the *IBM 24X MAX IDE CD-ROM Drive Option Diskette*. If you have problems installing the software, refer to the UINSTALL program help information.

## Installing the Device Driver for OS/2

**Note:** If you are using an IBM PC 350, 700, or 750 computer (Model 6576, 6577, 6586, or 6887) with Dual-Boot OS/2 Warp and DOS with Windows preinstalled, see "Installing the Device Driver for Dual-Boot OS/2 Warp and DOS" on page 1-6.

1. From the OS/2 Desktop, select the OS/2 System folder.
2. Select System Setup and Selective Install.

   The system configuration menu is displayed.
3. Select the CD-ROM Device Support option.

   - If you are using OS/2 2.1, select OK.
   - For other OS/2 versions, follow the onscreen instructions.

   You are presented a list of CD-ROM devices.
4. Select Other from the list, then select OK.
5. When the System Configuration menu is displayed again, select OK.
6. Follow the onscreen instructions.
7. Select Install from the OS/2 Setup and Installation screen.

   - The Source Directory screen is displayed.
   - If OS/2 was not preinstalled on your computer, you might need to insert your installation diskettes into the specified drive. Select Install and follow the onscreen instructions.

8. From the OS/2 Setup and Installation screen, select OK. ***Do not*** shut down and restart your system.
9. Insert the *IBM 24X MAX IDE CD-ROM Drive Option Diskette* into your diskette drive.
10. From the System Setup folder, select Device Driver Install.
11. Select Install at the OS/2 Device Driver Installation screen.
12. Select your device drivers and OK.
13. Select Exit and follow the onscreen instructions.

## Installing the Device Driver for Dual-Boot OS/2 Warp and DOS

If you are using an IBM PC 350, 700, or 750 computer (Model 6576, 6577, 6586, or 6887) with Dual-Boot OS/2 Warp and DOS with Windows preinstalled, you can use Fast Setup as follows:

1. Exit Windows 3.X, or boot your system to a DOS command prompt.
2. Insert the *IBM 24X MAX IDE CD-ROM Drive Option Diskette* into drive A.
3. Type A:CDSETUP2 and press Enter.
4. Follow the instructions on the screen.
5. Press F3 to exit from the CDSETUP2 program.
6. Remove the diskette from drive A.
7. Shut down and restart the computer.

## Installing the Device Driver for Windows NT 3.51

1. Start Windows.
2. Click on Start and enter the Main folder.
3. Click on Control Panel.
4. Double-click on Devices.
5. Select atapi.
6. Click on Startup.
7. Click on Boot.
8. Click on OK.
9. Click on Close.
10. Close the Control Panel.
11. Shut down and restart the computer.

See the Windows NT installation guide for more information.

# Part 2: Installation Guide

## *Product Description*

The IBM 24X MAX IDE CD-ROM Drive can read a compact disc (CD) containing approximately 680 MB[8] of information. It is designed for installation in a personal computer that uses the integrated drive electronics (IDE) or the enhanced IDE architecture.

The CD-ROM drive delivers data up to 24 times the standard CD-ROM speed, delivering data at up to 3600 KB[8] per second. The drive reads compact discs meeting the ISO-9660 and High-Sierra Group (HSG) standards. It also reads multiple-session, extended architecture (XA) discs, such as the Kodak Photo CD.

In addition to this book, the option (part number 01K0058) includes:

- IBM 24X MAX IDE CD-ROM Drive
- Two audio cables
- Four mounting screws (M3 x 5 mm, slotted)
- *24X MAX IDE CD-ROM Drive Option Diskette*
- IDE cable for connecting two IDE devices
- *Laser Safety Guide for CD-ROMs*

Contact your place of purchase if an item is missing or damaged. Be sure to retain your proof of purchase. It might be required to receive warranty service.

The *IBM 24X MAX IDE CD-ROM Drive Option Diskette* includes installation and support programs, such as:

- Installation programs for DOS, Windows, and OS/2
- IDE CD-ROM device drivers
- Audio CD-player programs
- READ.ME file with additional installation information
- Diagnostic programs

You can find information on how to get help, technical support, and warranty service in Appendix C, “Help and Service Information” on page 3-18.

8 *MB equals approximately 1 000 000 bytes, and KB equals approximately 1 000 bytes.*

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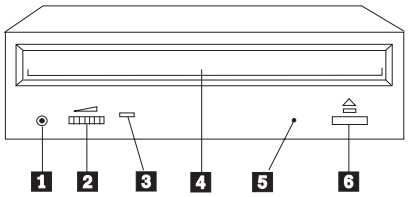
## Front View of the Drive




**1 Headphone jack**
Provides the audio output for headphones

**2 Volume control**
Controls the audio output volume

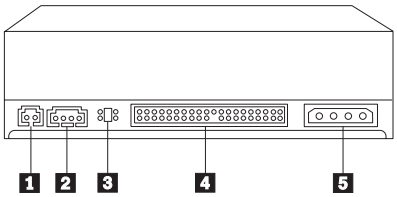
**3 Busy indicator**
Lights when the drive reads a data CD or plays an audio CD

**4 CD tray**
Loads and unloads a CD

**5 Manual-eject hole**
Provides access to the manual eject mechanism to remove a CD from the drive

**6 Eject/Load button**
Opens and closes the CD tray

## Back View of the Drive




**1 Reserved**

**2 Audio-out connector**
Connects the analog audio signals to a sound adapter

**3 Configuration pins**
Sets the drive configuration

**4 IDE connector**
Connects the CD-ROM drive to the IDE cable

**5 DC power connector**
Connects the dc power cord to the CD-ROM drive

# *Before You Begin*

Read the following information before you start your installation.

The installer of the drive will have to complete the following steps:

- Determine the IDE port and device jumper settings
- Set the jumper settings on the drive (and possible make changes to installed drives)
- Physically install the drive in a drive bay
- Configure the system
- Install a device driver

If you do not understand these procedures, or are unsure about your ability to perform all the procedures described, have a qualified computer technician install the CD-ROM drive for you, or call an IBM technical-support representative.

## Installation Requirements

Before you begin installing the drive, be sure you have everything you need, such as:

**Documentation**
You might need the documentation that comes with your computer, operating system, or IDE bus adapter if it is separate from the computer.

**Minimum Processor**

- IBM Personal Computer or compatible computer with an 80486 processor (or later version).
- 640 KB[9] RAM (random-access memory) for DOS 3.3 (or later) and 4 MB[9] RAM for Windows 3.1 (or later).
- 3.5-inch, 1.44 MB or 2.88 MB diskette drive

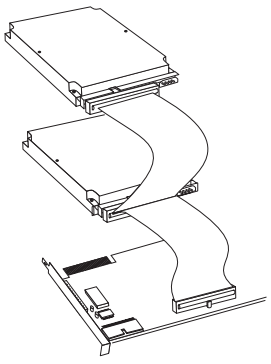
**IDE port and cable**
The CD-ROM drive requires an IDE interface to your computer.

- The IDE port is on the system board of the computer or on an IDE bus adapter. Newer computers typically have two IDE ports on the system board adjacent to one another. The primary IDE port is usually connected to your hard disk drive. (If the interface

9 *When referring to hard-disk-drive capacity, KB means approximately 1 000 bytes, MB means approximately 1 000 000 bytes; total user-accessible capacity may vary depending on operating environment.*

cable connector has 40 pins, your computer uses the IDE architecture.)

- If your computer has one IDE port, you can attach up to two devices.
- If your computer has a primary and a secondary IDE port, you can attach up to two devices to each port for a total of four devices.



For most computers, you can attach a maximum of two devices to the IDE cable.

If you have a sound adapter installed, the adapter might have an IDE connector that you can use to attach the CD-ROM drive.

- The CD-ROM drive connection requires an available connector on the IDE cable.
  - If the computer has two IDE ports, examine the cable on both ports for an available connector.
  - Examine the cable attached to the IDE port. If the IDE cable supports the attachment of only one device, you can replace the cable with the one provided with this CD-ROM drive (to provide a second IDE connector).

If you have more than one IDE port, attach hard disk drives to the cable on the primary IDE port. Attach slower devices, such as CD-ROM and tape drives, to the cable on the secondary port. Some computers come with a dual-port, high-performance IDE controller. Connecting the CD-ROM drive to the secondary IDE port provides better operating system performance.

Check the user's guide for any device that will be connected to the same port as the CD-ROM drive. Some devices, such as a high speed tape drive, must not be installed on the same port as a CD-ROM drive.

**Power connector**
To provide power to the CD-ROM drive, you need an unused 4-pin dc-power connector on the cable coming from the computer power supply. If all power cables are in use, purchase a dc Y-connector (available at most electronic stores) and split a connection to add a power connector.

**CD-ROM drive mounting**
The CD-ROM drive installs in an accessible vertical or horizontal 5.25-inch mounting bay. You might need both a flat-blade and a Phillips-head screwdriver for the installation.

**Operating system**
The installation instructions are written for the following operating systems.

- Microsoft Windows 3.0 or later (DOS 3.3 or later)
- Windows 95
- OS/2 2.1 or later (you might need the installation diskettes)

**PS/2 software**
If you are installing the CD-ROM drive in an IBM PS/2 computer, you might need current copies of the Reference Diskette and Diagnostic Diskette for your computer.

## Device Handling Precautions

To protect your CD-ROM drive during installation, observe the following precautions.

- Handle the drive with care. Dropping or jarring the drive can damage the components inside the drive housing.
- Keep the CD-ROM drive in its antistatic bag until you are ready to install the drive in your computer. Limit your movement. Movement can cause static electricity buildup.

To protect your CD-ROM drive during operation, observe the following precautions.

- Remove any CD in the drive before moving the drive.
- Do not insert foreign objects into the drive.
- Do not stack objects on the drive.
- Do not remove the drive cover or attempt to service the drive.
- Do not operate the drive under any of the following conditions:
  - High temperature, high humidity, or direct sunlight
  - Excessive vibration, sudden shock, or inclined surface
  - Excessive dust

# *Installing the Drive*

## Step 1. Opening the Computer

1. Turn off the computer and all attached peripherals.
2. Unplug the power cords for the computer and all attached devices.
3. Open the computer.

## Step 2. Unpacking the Drive

1. Touch an unpainted metal surface for at least two seconds.
2. Touch the bag to an unpainted metal surface on the computer for at least two seconds.
3. Remove the drive from the bag.

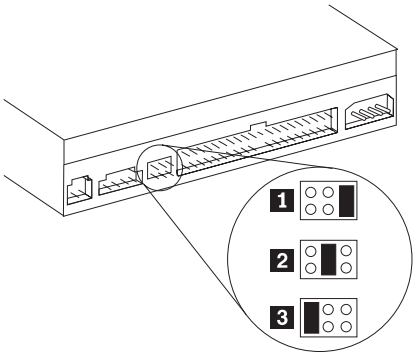
   If you must put the drive down, place the antistatic bag on a flat padded surface, such as a magazine, and place the drive on the bag with the component side facing up.

## Step 3. Selecting an IDE Port

Newer computers typically have two IDE ports. If your computer has two IDE ports, use the secondary IDE port to connect the CD-ROM drive. Typically the secondary IDE port is adjacent to the primary IDE port that connects to your hard disk drive. Based on which IDE port you use and if there is another device on the port, determine the configuration jumper setting for the drive.

- If you have two IDE ports, connect the CD-ROM drive to the secondary IDE port with the IDE cable that comes with your drive. If the CD-ROM drive is the only device on the IDE port, set the configuration jumper in the master position. If the CD-ROM drive is the second drive on the port, set the configuration jumper in the slave position.
- If you must attach the CD-ROM drive to the same IDE port as a faster device, such as a hard disk drive, configure the CD-ROM drive as the slave and the hard disk drive as the master. In some instances, the hard disk drive may require a master with slave present jumper setting when the CD-ROM is configured as a slave.
- Some non-IBM computers support the cable-select setting, where the position of the device on the cable determines whether a device is master or slave. See the documentation that comes with your computer to determine if your system supports this setting.

## Step 4. Setting the Configuration Jumper




Configure the CD-ROM drive by placing one jumper over a set of configuration pins.

- If you are configuring the drive as master, set the jumper to the master **1** device setting. (Master is the factory-shipped setting.) If there is a second device on the IDE port, check that the device is configured as slave.
- If you are configuring the drive as slave, set the jumper to the slave **2** device setting. Check that the other device on the IDE port is configured as master (or master with slave present).
- If you are configuring the drive as cable-select, set the jumper to the cable-select **3** device setting. If there is another device on the IDE port, check that the device is also configured for cable-select.

If you need assistance in setting the configuration jumpers or need additional information about the hard disk drive on the same IDE port as the CD-ROM drive, refer to "Hard Disk Drive Manufacturers" on page 3-20.

## Step 5. Mounting the Drive in the Bay

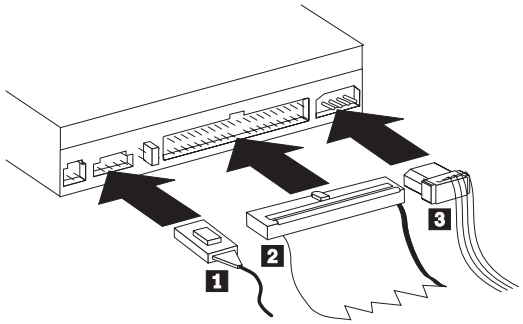
> **Attention:** Be sure to use the M3 x 5 mm mounting screws in the option package when you are driving screws directly into the drive. Using screws that are too long can damage the drive.

Mount the CD-ROM drive horizontally or vertically in the computer.

1. Slide the drive into the bay.
2. Align the drive-bay screw holes with the threaded holes in the drive housing or mounting bracket. Be sure to use the M3 x 5 mm mounting screws provided with this drive. Using the wrong size screws might damage the drive.
3. Thread the screws in lightly to secure the drive in the bay. Usually two screws are used on each side. Check the alignment and tighten the screws to secure the drive. *Do not over tighten.*

## Step 6. Attaching the Cables to the Drive

1. Connect the cables to the CD-ROM drive as follows:




   a. Attach a 40-pin IDE-cable connector **2** to the IDE connector on the drive. Align the cable so that the color-coded edge is closest to the power cable connector **3** . Use the IDE cable provided with this option if there is no cable attached to the IDE port or if there is only one device connector on the IDE cable.

   b. Attach a four-pin power-cable connector **3** to the device dc-power connector.

   c. If you have a sound adapter, connect one of the audio cable connectors **1** to the device audio-out connector. Use the audio cable that has a connector that fits your sound adapter and save the other cable in case you use a different sound adapter in the future.

## Step 7. Completing the Hardware Installation

To complete the hardware section of the CD-ROM drive installation:

1. Be sure that the drive is securely mounted and the connectors are firmly attached.
2. Be sure the cables do not interfere with the computer cover and do not block the power-supply fan blades or air-flow paths.
3. Reinstall the computer cover.
4. Reconnect all devices and check any devices that might have become disconnected, such as the keyboard, mouse, and monitor.
5. Plug all power cords into electrical outlets.

## Step 8. Updating the Configuration

Because you changed the hardware, the configuration-setup information screen should display when you turn on your computer. If the screen does not display, see your computer documentation for information about accessing the configuration or setup utility program.

To see the configuration information for most IBM computers, press **F1** during startup when the graphic displays in the upper right corner of the screen. When you have finished reviewing the information, save the changes and exit.

**Note:** Some older computers with one IDE port might not display the CD-ROM drive information when you review the configuration-setup information. You still can use the CD-ROM drive in this situation as long as you have properly completed the installation.

# *Installing Device Drivers*

This section contains the instructions for installing device drivers for the CD-ROM drive, based on the operating system you are using.

- If you are using Windows 95, go to "Installing the Device Driver for Windows 95."
- If you are using DOS or DOS with Microsoft Windows 3.X, go to "Installing the Device Driver for DOS with Windows."
- If you are using OS/2, go to "Installing the Device Driver for OS/2" on page 2-10.
- If you are using an IBM PC 350, 700, or 750 computer (Model 6576, 6577, 6586, or 6887) with Dual-Boot OS/2 Warp and DOS with Windows preinstalled, go to "Using Fast Setup for Dual-Boot OS/2 Warp and Windows" on page 2-11.
- If you are using another operating system, see the documentation that comes with your computer and operating system. Then, go to "Using the Drive" on page 2-12.

## Installing the Device Driver for Windows 95

In most instances, Windows 95 will auto detect the CD-ROM drive and not present any installation screens. If Windows 95 is in 32-bit mode for IDE, the drive will be recognized in BIOS and the driver install screens will be displayed.

To install a device driver in computers running Windows 95:

1. Start Windows.
2. Click on Start and enter the Settings folder.
3. Click on Control Panel.
4. Double-click on Add New Hardware.
5. Follow the onscreen instructions carefully to properly install the drive software.

## Installing the Device Driver for DOS with Windows

1. Exit Windows 3.X, or boot the system to a DOS command prompt.
2. Insert the *IBM 24X MAX IDE CD-ROM Drive Option Diskette* into drive A.
3. Type the letter of the drive, a colon and UINSTALL (such as, A:UINSTALL), then press Enter.
4. At the Installation Options menu, select **Install IDE CD-ROM DOS / Windows Support Software** and press **Enter**.
5. Follow the instructions on the screen.

   UINSTALL will present a menu of installation options. Each of these installation options has help menus that contain more

information. Install one or more of the following options as appropriate for your computer.

- Update for SMARTDRV 4.0

  This option must be used if you are using SMARTDRV.EXE Version 4.0. Change to the directory which contains SMARTDRV.EXE and, at the command prompt, type **SMARTDRV?** to display the version number. See the READ.ME file on the *IBM 24X MAX IDE CD-ROM Drive Option Diskette* for more information about SMARTDRV.

- DOS 6.2+: Update for SMARTDRV/PhotoCD

  This option must be used if you have MS-DOS 6.2 or PC-DOS 6.3 and you want to use Kodak PhotoCD or other multisession discs on your system. See the READ.ME file on the *IBM 24X MAX IDE CD-ROM Drive Option Diskette* for more information about SMARTDRV.

- Windows 3.X: 32 Bit Disk Driver/Primary IDE Port

  This option must be used if you installed the IDE CD-ROM on the primary IDE port (or the only IDE port of single-port computer) and you use Windows.

6. Press **F3** to exit from the UINSTALL program.
7. Remove the diskette from drive A and restart the computer.

If you need additional help to resolve resource conflicts or need other installation options, refer to "DOS with Windows Software" on page 3-11 and the READ.ME file on the *IBM 24X MAX IDE CD-ROM Drive Option Diskette*.

## Installing the Device Driver for OS/2

This section contains the instructions for installing device drivers and support software for the CD-ROM drive in computers running OS/2. You must use OS/2 2.1 or later versions. You might also need your OS/2 installation diskettes.

1. From the OS/2 Desktop, select the **OS/2 System** folder.
2. Select **System Setup**; then select **Selective Install**.
3. The System Configuration menu is displayed. Select the **CD-ROM Device Support** option.
4. If you are using OS/2 2.1, select **OK**. For other OS/2 versions, follow the instructions on the screen.
5. You are presented a list of CD-ROM devices. Select **OTHER** from the list; then select **OK.**
6. When the System Configuration menu is displayed again, select **OK**. Follow the instructions on the screen.
7. Select **Install** from the OS/2 Setup and Installation screen.
8. The Source Directory screen is displayed. If OS/2 was not preinstalled on your computer, you might need to insert your installation diskettes into the specified drive. Select **Install**, and follow the instructions on the screen.
9. From the OS/2 Setup and Installation screen, select **OK**. ***Do not*** shut down and restart your system.

10. Insert the *IBM 24X MAX IDE CD-ROM Drive Option Diskette* into your diskette drive.
11. From the System Setup folder, select **Device Driver Install**.
12. At the OS/2 Device Driver Installation screen, verify source and destination and select **Install**.
13. At the Select Device Drivers screen, select your device drivers and select **OK**.
14. At the OS/2 Device Driver Installation screen, select **Exit** and follow the instructions on the screen.

If you need additional help to resolve resource conflicts or need other installation options, refer to "OS/2 Software" on page 3-16 and the READ.ME file on the *IBM 24X MAX IDE CD-ROM Drive Option Diskette*.

## Using Fast Setup for Dual-Boot OS/2 Warp and Windows

The Fast-Setup program on the *IBM 24X MAX IDE CD-ROM Drive Option Diskette* is for IBM PC 350, 700, and 750 computers (Models 6576, 6577, 6586, and 6887). If you are installing the drive in one of these computers and you have Dual-Boot OS/2 Warp and DOS with Windows preinstalled, you can use Fast Setup as follows:

1. Insert the *IBM 24X MAX IDE CD-ROM Drive Option Diskette* into drive A.
2. Open a DOS window.
3. At the DOS prompt, type **A:CDSETUP2** and press **Enter**. Follow the instructions on the screen.

   The CDSETUP2 program installs both DOS and OS/2 Warp device drivers.
4. Press **F3** to exit from the CDSETUP2 program.
5. Remove the diskette from drive A; shut down and then restart the computer.

### Installing the Device Driver for Windows NT 3.51

1. Start Windows.
2. Click on Start and enter the Main folder.
3. Click on Control Panel.
4. Double-click on Devices.
5. Select atapi.
6. Click on Startup button.
7. Click on Boot button.
8. Click on OK.
9. Click on Close.
10. Close the Control Panel.
11. Shut down and restart the computer.

See the Windows NT installation guide for more information.

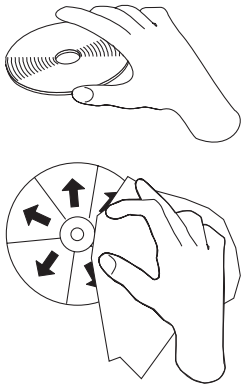
## *Using the Drive*

This section includes instructions for the proper care of CDs and the care and operation of your CD-ROM drive.

### Caring for a CD

CDs are high-density media that must be handled with care and kept clean to insure that they remain readable. These precautions will help to prolong the life of your CDs.

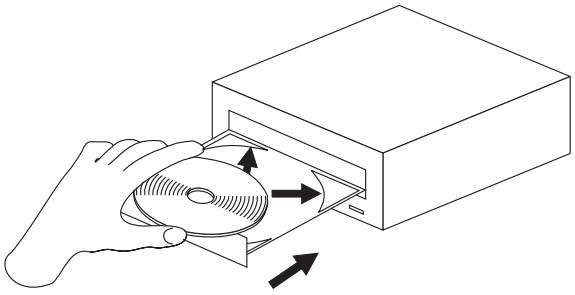
**Attention:** Wiping a CD using a circular motion can cause loss of data.



- Handle the CD by the edges or the center hole. Do not touch the surface of the CD.
- To remove dust or fingerprints, wipe the CD from the center to the edge with a soft, lint-free cloth.
- Do not write on the surface.
- Do not place the CD in direct sunlight.
- Do not use commercial cleaners to clean the CD.
- Do not bend the CD.

## Loading a CD

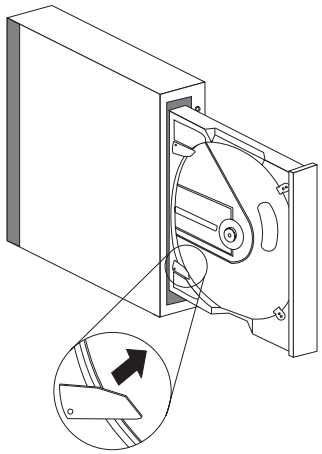
To load a CD into a drive in a horizontal bay :



1. Press the Eject/Load button. The tray slides out of the drive.
2. The tray contains four retaining tabs that hold the CD in vertically-mounted drives. They are not needed when you mount the drive horizontally. If the retaining tabs are extended, push them back before trying to place the CD in the tray.
3. Place the CD in the tray with the label facing up.
4. Close the tray by pressing the Eject/Load button, or by gently pushing the tray in.

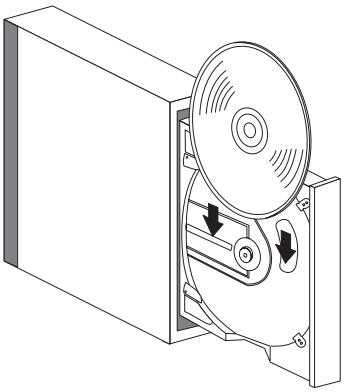
**Attention:** Do not force the tray to open; do not insert foreign objects into the CD tray.

To load a CD into a drive in a vertical bay :



1. Press the Eject/Load button. The tray slides out of the drive.

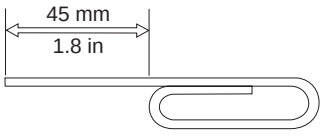
2. The tray contains four retaining tabs. Use your thumb nail or something similar to move tabs to the extended position.
3. Insert the CD, label side out, behind the extended tabs at the back of the tray.
4. Position the CD behind the front tabs.



5. Close the tray by pressing the Eject/Load button, or by gently pushing the tray in.

## Manually Ejecting a CD

If you press the Eject/Load button and the tray does not slide out, turn off the computer and straighten a large paper clip to form a tool, as shown in the illustration. The straightened end must extend at least 45 mm (1.8 in.). Insert the extended end into the manual-eject hole on the front of the drive (see “Front View of the Drive” on page 2-2). Push the paper clip until the tray opens. Gently pull out the tray until you can remove the CD.




## Playing an Audio CD

To play an audio CD, you must have an audio-CD program installed in your computer. Windows and OS/2 come with multimedia extensions that include audio-CD player programs.

The following procedures show how to use the audio-CD programs in Windows 3.X, Windows 95, and OS/2. For more information on these programs, see the documentation that comes with your operating system.

## Windows 3.X

To use the Windows audio utility:

1. Turn on the computer.
2. Load an audio CD into the CD tray.
3. Double-click on **Accessories**.
4. Double-click on **Media Player**, and then on **Device**.
5. Select **CD Audio**.

If you do not see the *Media Player* icon or the *CD Audio* icon within the Media Player folder, you must install the Windows CD Audio device driver as follows:

1. From the Program Manager select the **Main** folder.
2. Select **Control Panel**; then select **Drivers**. Select **MCI CD Audio** if it is not already installed. Follow the instructions on the screen.
   - If you select **New**, you will need your Windows 3.X diskettes.
   - If you select **Current**, continue with the instructions on the screen.

## Windows 95

To use the Windows 95 audio utility:

1. Turn on the computer.
2. Load an audio CD into the CD tray.
3. Click on **Start**.
4. Select **Programs**, **Accessories**, **Multimedia**, and then **Media Player**.
5. Click on **Media Player**.
6. Click on **Device**.
7. Select **CD Audio**.

If you do not see the *Media Player* or *CD Audio* icons within the Media Player folder, you must install the Windows CD Audio device driver as follows:

1. Select **Computer**, select **Multimedia**, select **Advanced**, select **Media Control Devices**, then select **CD Audio Devices**.
2. Check that the CD device driver is enabled. If the driver is not present or enabled, install the driver.

## OS/2 Warp

To use the OS/2 audio utility:

1. Turn on the computer.
2. Load an audio CD into the CD tray.
3. Open **Multimedia**.
4. Select and start **Compact Disc**.

## Using a Data CD

You can use a data CD to read data files, play games, or run applications. The instructions to use a data CD depend on your operating system.

### DOS

To read a data CD:

1. Turn on the computer.

   The operating system displays the following messages (drive D is the CD-ROM drive in this example):

   ```
   MSCDEX Version 2.2.3
   Copyright (c) Microsoft Corp. 1986-1993

     Drive D:=Driver IBMCD100 unit 0
   ```

2. Load a data CD into the CD tray.
3. At the DOS prompt, type **dir d:**, and press **Enter**.
4. Verify that you can view the files on the CD.

### Windows 3.X

To read a data CD:

1. Turn on the computer.
2. Load a data CD into the CD tray.
3. Double-click on **File Manager**.
4. Verify that the *CD* icon is displayed.
5. Double-click on **CD-ROM**
6. Verify that you can view files on the CD.

### Windows 95

To read a data CD:

1. Turn on the computer.
2. Load a data CD into the CD tray.
3. Click on **My Computer**.
4. Verify that the *CD* icon is displayed.
5. Click on **CD-ROM**.
6. Verify that you can view files on the CD.

### OS/2 Warp

To read a data CD:

1. Turn on the computer.
2. Load a data CD into the CD tray.
3. Double-click on **OS/2 System** and then **Drive**.
4. Verify that the *CD* icon is displayed.
5. Double-click on **CD**.
6. Verify that you can view files on the CD.

## *Solving Problems*

Computer problems can be caused by hardware, software, or user error. Using the information in this section, you might be able to solve problems yourself or gather helpful information you can pass on to a service technician. You might also need to refer to your computer, operating-system, or sound-adapter publications.

Review the following list for any problem descriptions that might fit your situation.

---

**Your computer or CD-ROM drive does not operate correctly or the busy indicator light does not come on.**

Take the following actions.

1. Check that the CD is loaded with the label side up.
2. Check that all devices are properly connected to the computer and the power outlet.
3. Turn off the computer, unplug the cables from the power outlets for your computer and all attached devices, and remove the computer cover.
4. Check that all power and IDE cables are securely attached. Disconnect the IDE cable and check for bent or misaligned pins. If you do not find any problems, reconnect the interface cable. Restart the system and attempt to open the CD tray by pressing the Eject/Load button. If the tray fails to open and the busy indicator light does not display, turn off the computer and try another 4-pin dc power connector.
5. Check that the color-coded edge on the IDE cable aligns with pin 1 on the IDE port and is closest to the power connector on the CD-ROM drive. See “Step 6. Attaching the Cables to the Drive” on page 2-8.
6. Check that the IDE cable is connected to the proper IDE port connection. See “Installation Requirements” on page 2-3 for more information.
7. Check the CD-ROM drive and any other device on the IDE cable for the proper settings. See “Step 3. Selecting an IDE Port” on page 2-6 for more information.
8. If the middle connector on the IDE cable is attached to the IDE port on the system board, remove the connector and reattach the cable. If there is only one device on the IDE port, attach the connector at one end of the cable to the IDE port and the connector at the other end to the device, leaving the middle connector (if there is one) open.

   If there are two devices on the IDE port, attach the connector at one end of the cable to the IDE port. If there is a hard disk drive, attach it to the connector at the other end of the cable and attach the CD-ROM drive to the middle connector.

---

**You cannot access the CD-ROM (DOS and Windows 3.X) or the CD-ROM icon (Windows) does not display.**

Your CD-ROM device driver might not be loaded or cannot be found.

Before checking the CONFIG.SYS and AUTOEXEC.BAT files, make a backup copy of these files in a convenient directory.

1. At the DOS prompt:
   a. Type **copy CONFIG.SYS CONFIG.IBM**, and press **Enter**.
   b. Type **copy AUTOEXEC.BAT AUTOEXEC.IBM**, and press **Enter**.
2. Use a text editor such as E or Edit. At the DOS prompt, type **E (or your editor name) CONFIG.SYS**; press **Enter**.
3. Insert the following line at the top of the CONFIG.SYS file to allow for more than five drive letters, if needed.

   ```
   lastdrive=z
   ```

4. Check for the line that refers to the device driver.

   ```
   DEVICEHIGH=C:\IBMIDECD.SYS /D:IBMCD100
   ```

   If this line is not present, add it.
5. Save the file and exit the CONFIG.SYS file.
6. Type **E (or your editor name) AUTOEXEC.BAT**, press **Enter**.
7. Check for the line that refers to the device driver.

   ```
   LH C:\MSCDEX /D:IBMCD100 /M:10
   ```

   If this line is not present, add it.
8. If the Windows screen automatically displays when you start your computer, check that the line

   ```
   LH C:\MSCDEX /D:IBMCD100 /M:10
   ```

   comes before the line that starts Windows (*WIN*). If not, move the MSCDEX statement above this line in the file.
9. Save the file and exit the AUTOEXEC.BAT file.
10. Check that the device drivers are on the hard disk and in the correct directory.

    C:\IBMIDECD.SYS
    C:\MSCDEX

    If the drivers are not present, reinstall them. See the READ.ME file on the *IBM 24X MAX IDE CD-ROM Drive Option Diskette* for more information.

---

**You cannot access the CD-ROM or the CD-ROM icon does not display (Windows 95).**

A CD-ROM icon will be found in My Computer. If a CD-ROM icon is not present, ensure that the drive has been properly installed. Check that the jumper setting is set properly. See “Step 4. Setting the Configuration Jumper” on page 2-7. Restart your system. If a drive icon is not found, continue with the following steps:

1. Click on Start and enter the Settings folder.
2. Click on Control Panel.
3. Click on System.
4. Click on the Device Manager tab.
5. Select View Devices by Type.

a. Select Hard Disk Controllers. Ensure that no conflicts exist with the controller. The device status should indicate that the controller is working properly.

b. Select CD-ROM from the Device Manager list. A CD-ROM device should be present, and no conflicts should exist. The device status should indicate that the device is working properly.

6. Click on OK.
7. Shut down and restart the computer.

If the device icon is not present, check cable connections, device jumper settings, and resolve any conflicts that may exist.

---

**You cannot access the CD-ROM or the CD-ROM icon does not display (OS/2).**

Your CD-ROM device driver might not be loaded or cannot be found. Before checking the CONFIG.SYS file, make a backup copy of this file in a convenient directory.

1. At the DOS prompt:

   a. Type **copy CONFIG.SYS CONFIG.IBM**, and press **Enter**.

   b. Type **copy AUTOEXEC.BAT AUTOEXEC.IBM**, and press **Enter**.

2. Use a text editor such as EPM or E from the OS/2 prompt. The following instructions use the EPM editor. Type **EPM CONFIG.SYS**, and press **Enter**.
3. Check for the lines that refer to the device driver.

```
DEVICE=C:\OS2\BOOT\OS2CDROM.DMD /Q
IFS=C:\OS2\BOOT\CDFS.IFS /Q
DEVICE=C:\OS2\MDOS\VCDROM.SYS
BASEDEV=IBMIDECD.FLT
```

   If these lines are not present, add them.

4. Save any changes and exit the CONFIG.SYS file.
5. Check that the device drivers are on the hard disk drive and in the correct directory.

```
C:\OS2\BOOT\OS2CDROM.DMD
C:\OS2\BOOT\CDFS.IFS
```

   If the drivers are not present, reinstall them. See the READ.ME file on the *IBM 24X MAX IDE CD-ROM Drive Option Diskette* for more information.

---

**The CD-ROM is not recognized by the operating system or the drive is erratic.**

Some computers, such as IBM PS/ValuePoint models 6472, 6482, 6484, 6492, and 6494, have a *compatible* and a *high performance* mode for mass storage devices. The CD-ROM drive functions better when this mode is set to compatible with these computers. (Use the *high performance* mode unless your computer has a problem; then use the *compatible* mode.)

Check the configuration-setup information for your computer.

1. Access your configuration utility program.

2. Select **Devices**.
3. Scroll down to the **Mass Storage Devices** section.
4. **Mass Storage Devices** contains the entries **Primary IDE Mode** and **Secondary IDE Mode**. These entries are used to set the performance mode of each IDE port. Set the mode to **Compatible** for the port on which you installed your CD-ROM drive.

Other IBM and non-IBM computers might have similar settings. Check to see if your BIOS or configuration-setup utility provides for *compatible* and *high performance* modes for IDE performance. For these computers, use the *compatible* mode for slower IDE devices, such as this CD-ROM drive. Refer to the documentation that comes with your computer for additional details on selecting IDE performance modes. Many older computers will not have a selection of IDE performance modes.

---

**The computer does not recognize the CD-ROM drive after the device drivers are loaded.**

Check for incompatibilities among the CD-ROM device driver and other device drivers or other hardware in your computer. Create a System Diskette with minimum CONFIG.SYS and AUTOEXEC.BAT system files.

1. Before creating special CONFIG.SYS and AUTOEXEC.BAT files, make a backup copy of these files in a convenient directory, (if you have not already done so).

   Type **copy CONFIG.SYS CONFIG.IBM** and press **Enter**.

   Type **copy AUTOEXEC.BAT AUTOEXEC.IBM** and press **Enter**.

2. Create a System Diskette and copy the device drivers onto it. For DOS and Microsoft Windows 3.X:

   a. Insert a blank diskette into drive A.

   b. At the DOS prompt, type **format a: /s** and press **Enter**. The **/s** parameter creates the System Diskette. Follow the instructions on the screen.

   c. When the format process completes, copy the C:\IBMIDECD.SYS and C:\MSCDEX files from the hard disk to the System Diskette.

   d. Using a text editor, create a minimum CONFIG.SYS system file on the System Diskette to support only a CD-ROM drive. The following procedure uses the E text editor to create the CONFIG.SYS file from the A prompt.

      1) Type **e config.sys** and press **Enter**.
      2) In the editor, type **lastdrive=z** and press **Enter**.
      3) Type **device=a:\ibmidecd.sys /d:ibmcd100** and press **Enter**.
      4) Save the CONFIG.SYS file and exit the editor.

   e. Create a System Diskette to support only a CD-ROM drive. The following procedure uses the E text editor to create the AUTOEXEC.BAT file from the A prompt.

      1) Type **e autoexec.bat** and press **Enter**.

2) Type **a:\mscdex /d:ibmcd100 /m:10** and press **Enter**.

3) Save the AUTOEXEC.BAT file and exit the editor.

3. Turn off the computer and check that the System Diskette is in the diskette drive.
4. Restart the computer (the computer will start up from the System Diskette).
5. Observe the startup messages and check that the device driver, IBMIDECD.SYS, loads. When MSCDEX loads, observe the drive letter that the computer assigns to the CD-ROM drive.
6. Load a data CD into the CD tray; then wait until the busy indicator is not lit.
7. Attempt to read the CD by typing **dir x:** where *x* is the CD-ROM drive assigned after the MSCDEX message.
   - If the computer is able to read the CD, a conflict probably exists among the device drivers loaded in either the CONFIG.SYS or AUTOEXEC.BAT files. You need to resolve this device conflict. You might have to set some configuration parameters for your installation; refer to Appendix B, "Device Driver Configuration Settings" on page 3-11 for more information.
   - If you are unable to access the CD, you might have a hardware problem. If you are unable to read the CD or a drive letter is not assigned by MSCDEX, go to the next step.
8. Turn off the computer, unplug the cables from the power outlets for your computer and all attached devices, and remove the computer cover.
9. Disconnect the IDE and power cable for all IDE devices except the CD-ROM drive.
10. Configure the CD-ROM drive as a master and connect it to the last IDE connector on the primary IDE port.
11. Reinstall the computer cover. Reconnect the keyboard; plug the power cords into electrical outlets.
12. Place the System Diskette in the diskette drive and a data CD in the CD-ROM drive.
13. Restart the computer.
14. Attempt to read the CD by typing **dir C:**. (The CD-ROM drive is drive C because it is the only device connected to the IDE port.)
    - If the computer is able to read the CD, a conflict probably exists with one of the devices that was installed on your computer. You need to resolve this device driver conflict. Check the configuration jumper settings for the other devices or refer to your device documentation. To contact your hard disk drive manufacturer, see "Hard Disk Drive Manufacturers" on page 3-20 for more information.
    - If you are unable to access the CD, you might have a hardware problem. If the CD-ROM drive still does not read the data CD, the CD-ROM drive might be defective. Go to Appendix C, "Help and Service Information" on page 3-18.

**The CD cannot be read.**

Consider the following actions.

- The CD might be dirty; clean it as described in “Caring for a CD” on page 2-12.
- The CD might be defective; try another CD.
- The CD is not ISO-9660 or High Sierra Group (HSG) compatible. Check with your place of purchase.

**There is no sound from the CD.**

Consider the following actions.

- Check that you are using an audio CD and not a data CD.
- Adjust the volume control on the drive. See “Front View of the Drive” on page 2-2 if headphones are connected to the front of the drive.
- Adjust the sound-adapter volume control. See the documentation that comes with your sound adapter and audio-CD player program.
- Turn off the computer, unplug the cables from the power outlets for your computer and all attached devices, and remove the computer cover. Check that the audio-signal cable connects the CD-ROM drive with the sound adapter.

**You receive a common error message.**

These are actions for some common error messages.

- **CDR-103**

  The CD in the CD-ROM drive is not a High Sierra or ISO 9660 format. The CD-ROM drive does not support this format.

- **CDR-101**

  The "not ready reading the drive" situation occurs if you try to access the CD-ROM drive before the drive is ready. The busy indicator comes on when you attempt to access the drive after loading a CD into the CD tray. Wait until the busy indicator is no longer lit before attempting to access the drive.

**The connectors on the audio cables provided do not fit the connector on your sound adapter.**

Some sound adapters might require a special cable. See the documentation that comes with your sound adapter.

You might have to separately purchase an audio cable for the CD-ROM drive. The audio-out connector on the CD-ROM drive requires a MPC-2 compliant Molex 70066-G connector. (Refer to “Back View of the Drive” on page 2-2 to locate the audio connector.) If you are using an IBM computer or IBM sound adapter, refer to Appendix C, “Help and Service Information” on page 3-18 for assistance.

## Diagnostics

To help you solve CD-ROM drive problems, the *IBM 24X MAX IDE CD-ROM Drive Option Diskette* contains a general purpose diagnostic program. You must successfully load the CD-ROM drive device drivers before starting the diagnostics. The program can be run only from a real DOS prompt. You cannot run the diagnostic program in a DOS session under OS/2, or in DOS under Windows or Windows 95.

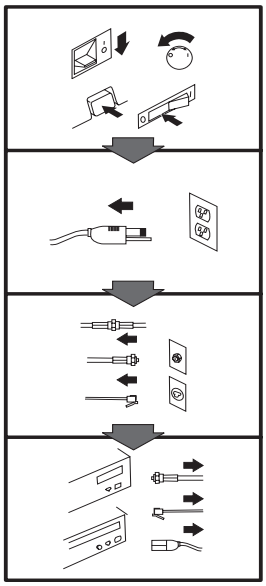
To start the diagnostic program, go to the DOS prompt and change to drive A. Then insert the *IBM 24X MAX IDE CD-ROM Drive Option Diskette*, type **CDDIAG** and press **Enter**.

## Additional Help

The READ.ME file on the *IBM 24X MAX IDE CD-ROM Drive Option Diskette* includes troubleshooting hints. If you follow these instructions and still have a problem, go to Appendix C, “Help and Service Information” on page 3-18.

# Part 3: Appendixes

## *Appendix A. Safety Information*



### *To Disconnect:*

⚠ **Danger:**

Electrical current from power, telephone, and communication cables is hazardous. To avoid shock hazard, disconnect cables as shown before opening the computer covers to install this product. The power cord must be used with a properly grounded outlet.

- Turn Everything OFF.
- First, remove power cord from outlet. (In the U.K., by law, the power cord must be disconnected after the telephone line cable.)
- Remove signal cables from receptacles.
- Remove all cables from devices.

### *Vor dem Entfernen der Anschlüsse:*

⚠ **Vorsicht:**

Befolgen Sie die folgenden Schritte, um gesundheitliche Schäden durch stromführende Telefon- und Verbindungskabel auszuschließen. Um eine Berührungsspannung zu vermeiden, Kabel vor dem Öffnen der Computerabdeckungen bei der Installation dieses Produktes, wie abgebildet, herausziehen. Das Netzkabel darf nur an eine ordnungsgemäß geerdete Steckdose angeschlossen werden.

- Schalten Sie alle Geräte AUS.
- Ziehen Sie zuerst das Netzkabel aus der Steckdose.
- Entfernen Sie die Signalkabel von den Anschlußbuchsen.
- Entfernen Sie alle Kabel von den Geräten.

### *Précautions de déconnexion*

⚠ **Danger:**

Le courant électrique des câbles électriques, téléphoniques et de communication est dangereux. Pour éviter tout risque d'électrocution, déconnectez les câbles comme indiqué avant d'ouvrir les capots de l'ordinateur pour installer ce produit. Il convient d'utiliser le câble d'alimentation avec une prise correctement raccordée à la terre.

- Eteignez tous les appareils.
- Débranchez tout d'abord le câble d'alimentation de la prise de courant. (Au Royaume-Uni, la législation exige que le câble d'alimentation soit débranché après le câble téléphonique).
- Débranchez les câbles de signalisation des prises femelles.
- Débranchez l'ensemble des câbles des périphériques.

### *Para desconectarse*

⚠ **Peligro:**

La corriente eléctrica procedente de cables de alimentación, teléfono y comunicaciones es peligrosa. Para evitar descargas eléctricas, desconecte los cables tal y como se muestra y abra las cubiertas del ordenador antes de instalar este producto. El cable de alimentación debe utilizarse con una toma debidamente conectada a tierra.

- Desconecte todo.
- En primer lugar, retire el cable de alimentación de la toma.(En el Reino Unido, la legislación determina que el cable de alimentación se desconecte después del cable de línea telefónica.)
- Retire los cables de señal de los receptáculos correspondientes.
- Retire todos los cables de los dispositivos.

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取外し時：

⚠危険：
電源、電話及び通信ケーブルからの電流は危険なものです。電気ショックの危険を避けるために、この製品をインストールするためにコンピューターのカバーを取外す前に、次の順序でケーブルを取外してください。

- すべての電源を切ってください。
- 始めにコンセントから電源コードを取外してください。
- コネクターから通信ケーブルを取外してください。
- 装置から全てのケーブルを取外してください。

## *Per scollegare:*

⚠ **Pericolo:**

La corrente elettrica che attraversa i cavi di alimentazione, i cavi telefonici e i cavi per le comunicazioni è pericolosa. Per evitare il rischio di scosse elettriche, prima di procedere all'apertura del coperchio dell'elaboratore per installare il dispositivo, scollegare i cavi nel modo qui indicato. Il cavo di alimentazione deve essere inserito in una presa elettrica collegata correttamente a terra.

- Spegnere tutto (posizione OFF).
- Innanzitutto, scollegare il cavo di alimentazione dalla presa. (nel Regno Unito, per disposizione di legge, è obbligatorio scollegare il cavo di alimentazione dopo aver scollegato il cavo telefonico).
- Scollegare i cavi di segnale dai connettori.
- Scollegare tutti i cavi dai dispositivi.

## *Para desligar*

⚠ **Perigo:**

A corrente elétrica da unidade de alimentação, do telefone e dos cabos de comunicação é perigosa. Para evitar o risco de choques elétricos, desligue os cabos de acordo com as instruções relativas à instalação antes de abrir as tampas do computador para instalar este produto. O cabo de alimentação deve ser usado numa tomada devidamente ligada à terra.

- Desligue tudo
- Primeiro remova o cabo de alimentação da tomada. (De acordo com as leis do Reino Unido, o cabo de alimentação deve ser desligado depois do cabo da linha telefônica.)
- Remova os cabos de sinal dos receptáculos.
- Remova todos os cabos dos dispositivos.

## *Odpojení:*

⚠ **Výstraha:**

Elektrický proud ze sit'ových, telefonnich a komunikačních kabelů je nebezpečný. Abyste při instalaci tohoto výrobku předešli úrazu elektrickým proudem, před otevřením krytů počítače odpojte kabely dle obrázku. Sit'ový kabel musí být použit s řádně uzemněnou zásuvkou.

- Vypněte všechna připojená zařízení.
- Najdříve odpojte sit'ový kabel ze zásuvky. (Ve Spojeném království musí být podle zákona sit'ový kabel odpojen až po odpojení telefonní přípojky).
- Odpojte signálové kabely.
- Odpojte všechny kabely perifernich zařízení.

## *Læs følgende inden frakobling:*

⚠ **Fare:**

Elektrisk strøm fra strømførende kabler og telefon- og kommunikationskabler er farlig. For at undgå elektrisk stød skal du sørge for at koble kablerne fra som vist, før du åbner computerens dæksler for at installere dette produkt. Den strømførende ledning skal tilsluttes en javdet stikkantakt.

- SLUK for alt.
- Fjern først den strømførende ledning fra stikkantateten. (I Storbritannien skal den strømførende ledning frakobles efter telefonkablet iflg. lov).
- Fjern signalkabler fra kontakter.
- Fjern alle kabler fra enheder.

### *Ontkoppelen*

⚠ **Gevaarlijk:**

Elektrische stroom afkomstig uit netsnoeren, telefoonkabels en communicatiekabels kan gevaarlijk zijn. Als u dit produkt wilt installeren, moet u, ter voorkoming van elektrische schokken, voordat u de computer openmaakt de kabels, zoals afgebeeld, ontkoppelen. Sluit het netsnoer altijd aan op een geaard stopcontact.

- Zet alles UIT.
- Haal eerst de stekker uit het stopcontact. (In het Verenigd Koninkrijk bent u wettelijk verplicht eerst de telefoonkabel en pas dan het netsnoer los te maken.)
- Haal de signaalkabels uit de ingangen.
- Verwijder alle kabels van de apparaten.

### *Pour déconnecter*

⚠ **Danger:**

Le courant électrique des câbles électriques, téléphoniques et de communication est dangereux. Pour éviter tout risque d'électrocution lors de l'installation de ce produit, déconnectez les câbles tel que montré avant d'ouvrir les couvercles de l'ordinateur. Utilisez le câble d'alimentation avec une prise correctement raccordée à la terre.

- Éteignez tous les appareils.
- Débranchez d'abord le câble d'alimentation de la prise de courant. (Au Royaume-Uni, la réglementation exige que le câble d'alimentation soit débranché après le câble téléphonique.)
- Débranchez les câbles de transmission du signal des prises femelles.
- Débranchez tous les câbles des appareils.

### *Irrota laite seuraavasti:*

⚠ **Vaara:**

Virta-, puhelin- ja tietoliikennejohdoissa liikkuva sähkövirta on vaarallista. Voit tätä laitetta asentaessasi välttää sähköiskut irrottamalla johtimet esitetyllä tavalla ennen tietokoneen kansien avaamista. Virtajohto on liitettävä oikein maadoitettuun pistorasiaan.

- Katkaise kaikista laitteista virta.
- Irrota virtajohto pistorasiasta. (Yhdistyneiden Kuningaskuntien lain mukaan virtajohto on irrotettava ennen puhelinjohdon irrottamista.)
- Irrota signaalikaapelit vastakkeista.
- Irrota kaikki johdot laitteista.

### כדי לנתק:

⚠ **סכנה:**

זרם חשמלי מכבלי כח, טלפון ותקשורת מהווה סכנה. כדי למנוע התחשמלות, נתק את הכבלים לפי האיור לפני פתיחת מארז המחשב לשם התקנת מכשיר זה. את כבל החשמל יש לחבר לשקע מוארק כראוי.

- כבה את כל המפסקים.
- נתק תחילה את כבל החשמל מהשקע (בבריטניה החוק דורש לנתק את כבל החשמל אחרי כבל הטלפון).
- נתק את כבלי האותות משקעיהם.
- נתק את כל הכבלים מההתקנים השונים.

### *Szétcsatlakoztatás*

⚠ **Balesetveszély:**

A hálózati, telefon és kommunikációs kábelben levő elektromos áram veszélyes. Az áramütés veszélyének elhárítása érdekében, a termék beszerelésekor, a számítógép burkolatának felnyitása előtt húzza ki a vezetékeket. A hálózati vezetéknek megfelelően földeltnek kell lennie.

- Kapcsoljon mindent KI.
- Először a hálózati vezetéket húzza ki az aljzatból. (Az Egyesült Királyságban előírás, hogy a hálózati vezetéket a telefonvezeték után kell szétosatlakoztatni.)
- Húzza ki a jel-kábelt az aljzatából.
- Húzza ki az összes vezetéket a berendezésekből.

**차단하려면 :**

**⚠위험 :**

전원, 전화, 통신 케이블에서 나오는 전류는 유해하다. 쇼크 위험을 없애려면 본 제품 설치를 위해 컴퓨터 뚜껑을 열기 전에 케이블을 차단한다. 전원 코드는 제대로 접지된 콘덴사와 사용돼야 한다.

- 모든 전원을 차단한다.
- 우선 콘덴사에서 전원 코드를 뺀다. (영국에서는 법으로, 전화선을 뺀 다음 전원 코드를 차단해야 한다.)
- 수신기로 부터 신축 케이블을 뺀다.
- 컴퓨터 장치에서 모든 케이블을 뺀다.

***Frakobling***

**⚠ Fare:**

Elektrisk strøm fra strøm -, telefon - og kommunikasjonskabler er farlig. For å unngå fare for støt, må du koble fra kabler, som vist, før du åpner datamaskindeksler for å installere dette produktet. Strømledningen må kun brukes i jordede stikkontakter.

- Slå alt AV.
- Trekk først ut strømledningen fra stikkontakten. (I Storbritannia sier loven at strømledningen må kobles fra etter telefonledningen.)
- Trekk ut signalkablene fra kontaktene.
- Trekk ut alle kablene fra enhetene.

***Aby rozłączyć:***

**⚠ Ostrzeżenie:**

Prąd elektryczny obecny w kablach zasilania, telefonicznych lub komunikacyjnych jest niebezpieczny. Aby uniknąć niebezpieczeństwa porażenia, przed otwarciem pokrywy komputera w celu zainstalowania tego wyrobu, należy odłączyć kable, jak to zostało pokazane. Musi być użyty przewód zasilania elektrycznego z odpowiednim uziemieniem.

- Wyłącz wszystko (położenie OFF).
- W pierwszej kolejnoci odłącz przewód zasilania elektrycznego z gniazdka. (W Wielkiej Brytanii prawo nakazuje, by przewód zasilania został odłączony po kablu linii telefonicznej).
- Wyłącz kable sygnałowe z gniazdek.
- Wyłącz wszystkie kable z urządzeń.

***Para desligar:***

**⚠ Perigo:**

A corrente eléctrica da unidade de alimentação, do telefone e dos cabos de comunicação é perigosa. Para evitar o risco de choques eléctricos, desligue o cabo de acordo com as indicações antes de abrir a caixa do computador para instalar este produto. O cabo de alimentação deve ser utilizado numa tomada devidamente ligada à terra.

- Desligue tudo.
- Primeiro, retire o cabo de alimentação da tomada.(De acordo com as leis do Reino Unido, o cabo de alimentação deve ser desligado depois do cabo da linha telefónica.)
- Retire os cabos de sinal das tomadas.
- Retire todos os cabos dos dispositivos.

***斷開步驟 :***

**⚠危險 :**

動力電纜、電話電纜和通信電纜上的電流是危險的。爲避免電擊危險，在打開電腦機蓋安裝本產品之前斷開電纜，如圖所示。動力電纜必須妥善接地。

- 關掉一切電源。
- 首先將動力電纜從輸出端取下。(根據英國法律規定，動力電纜必須在電話電纜之後斷開。)
- 從插座上取下信號電纜。
- 從裝置上取下所有電纜。

### *Izključenje:*

⚠ **Nevarnost:**

Struja iz električnega, telefonskega ali komunikacijskega voda je nevarna. V namenu, da se izognete šoku, izključite vode, kot kaže slika, preden dvignete računalniške pokrove, da bi napravo instalirali. Strujni vod je treba uporabljati s primerno ozemljitvijo.

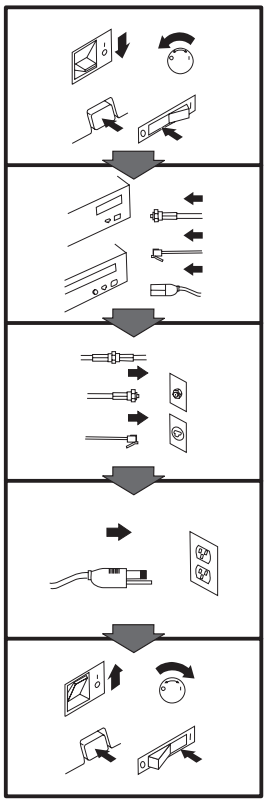
- Izključite vse (na “OFF”).
- Najprej odstranite strujni vod iz izhodnega vtikališča. (V Veliki Britaniji je po zakonu treba strujni vod izključiti po telefonskem vodu).
- Odstranite signalne vode iz sprejemnikov.
- Odstranite vse vode iz naprav.

### *Urkoppling*

⚠ **Fara:**

Ström från el-, tele- och kommunikationskablar måste behandlas med försiktighet. För att undvika att få en elektrisk stöt måste du innan du öppnar höljet på datorn koppla ur kablarna enligt beskrivningen nedan. Strömkabeln måste alltid användas i ett jordat uttag.

- Stäng av allting.
- Ta först ur strömkabeln från strömuttaget. (I Storbritannien måste enligt lag strömkabeln tas ur efter telefonkabeln.)
- Ta bort signalkablarna från uttagen.
- Ta bort alla kablarna från enheterna.



### *To Connect:*

**⚠ Danger:**

Electrical current from power, telephone, and communication cables is hazardous. To avoid shock hazard, connect cables as shown after closing the computer covers. The power cord must be used with a properly grounded outlet.

- Turn everything OFF.
- Attach all cables to devices. (In the U.K., by law, the telephone cable must be connected after the power cord.)
- Attach signal cables to receptacles.
- Attach power cord to outlet.
- Turn device ON.

### *Vor dem Anschließen:*

**⚠ Vorsicht:**

Befolgen Sie die folgenden Schritte, um gesundheitliche Schäden durch stromführende Telefon- und Verbindungskabel auszuschließen. Um eine Berührungsspannung zu vermeiden, Kabel nach dem Schließen der Computerabdeckungen, wie abgebildet, anschließen. Das Netzkabel darf nur an eine ordnungsgemäß geerdete Steckdose angeschlossen werden.

- Schalten Sie alle Geräte AUS.
- Schließen Sie alle Kabel an die Geräte an.
- Schließen Sie die Signalkabel an die dafür vorgesehenen Anschlußbuchsen an.
- Verbinden Sie das Netzkabel mit der Steckdose.
- Schalten Sie das Gerät EIN.

### *Avant de vous connecter*

**⚠ Danger:**

Le courant électrique des câbles électriques, téléphoniques et de communication est dangereux. Pour éviter tout risque d'électrocution, connectez les câbles comme indiqué après avoir replacé les capots de l'ordinateur. Il convient d'utiliser le câble d'alimentation avec une prise correctement raccordée à la terre.

- Mettez tous les appareils hors tension.
- Raccordez l'ensemble des câbles aux périphériques. (Au Royaume-Uni, la législation exige que le câble téléphonique soit branché après le câble d'alimentation).
- Raccordez les câbles de signalisation aux prises femelles.
- Raccordez le câble d'alimentation à la prise de courant.
- Mettez les appareils sous tension.

### *Para conectarse*

**⚠ Peligro:**

La corriente eléctrica procedente de cables de alimentación, teléfono y comunicaciones es peligrosa. Para evitar descargas eléctricas, conecte los cables tal y como se muestra después de cerrar las cubiertas del ordenador. El cable de alimentación debe utilizarse con una toma debidamente conectada a tierra.

- Desconecte todo.
- Conecte todos los cables a los dispositivos. (En el Reino Unido, la legislación determina que el cable de teléfono se conecte después del cable de alimentación.)
- Conecte los cables de señal de los receptáculos correspondientes.
- Conecte el cable de alimentación a una toma.
- Active el dispositivo.

接続時：

⚠ 危険：

電源、電話及び通信ケーブルからの電流は危険なものです。電気ショックの危険を避けるために、コンピューターのカバーを取り付け後に、次の順序でケーブルを接続してください。

- すべての電源を切ってください。
- すべてのケーブルを装置に接続してください。
- コネクターに通信ケーブルを接続してください。
- コンセントに電源コードを接続してください。
- 装置の電源を入れてください。

## *Per collegare:*

⚠ **Pericolo**

La corrente elettrica che attraversa i cavi di alimentazione, i cavi telefonici e i cavi per le comunicazioni è pericolosa. Per evitare il rischio di scosse elettriche, collegare i cavi nel modo qui indicato solo dopo aver richiuso l'elaboratore con il coperchio. Il cavo di alimentazione deve essere inserito in una presa elettrica collegata correttamente a terra.

- Spegnere tutto (posizione OFF).
- Collegare tutti i cavi ai dispositivi. (nel Regno Unito, per disposizione di legge, è obbligatorio collegare il cavo telefonico dopo aver collegato il cavo di alimentazione).
- Collegare i cavi di segnale agli appositi connettori.
- Collegare il cavo di alimentazione a una presa elettrica
- Accendere la periferica (posizione ON)

## *Para ligar:*

⚠ **Perigo:**

A corrente elétrica da unidade de alimentação, do telefone e dos cabos de comunicação é perigosa. Para evitar o risco de choques elétricos, ligue os cabos de acordo com as instruções relativas à instalação depois de fechar as tampas do computador. O cabo de alimentação deve ser usado numa tomada devidamente ligada à terra.

- Desligue tudo
- Ligue os cabos aos dispositivos. (De acordo com as leis do Reino Unido, o cabo de alimentação deve ser desligado depois do cabo da linha telefônica.)
- Ligue os cabos de sinal aos receptáculos.
- Ligue o cabo de alimentação à tomada.
- Ligue o dispositivo.

## *Připojení:*

⚠ **Výstraha:**

Elektrický proud ze sit'ových, telefonních a komunikačních kabelů je nebezpečný. Abyste předešli úrazu elektrickým proudem, kabely dle obrázku připojte až po uzavření krytů počítače. Sit'ový kabel musí být použit s řádně uzemněnou zásuvkou.

- Vypněte všechna zařízení.
- Připojte všechny kabely periferních zařízení. (Ve Spojeném království musí být podle zákona telefonní přípojka připojena až po přípojení sit'ového kabelu).
- Připojte signálové kabely.
- Připojte sit'ový kabel do zásuvky.
- Zapněte přístroj.

## *Læs følgende inden tilkobling:*

⚠ **Fare:**

Elektrisk strøm fra strømførende kabler og telefon- og kommunikationskabler er farlig. For at undgå elektrisk stød skal du sørge for at koble kablerne til som vist, før du lukker computerens dæksler igen. Den strømførende ledning skal tilsluttes en javdet stikkantakt.

- SLUK for alt.
- Tilslut alle kabler til enheder. (I Storbritannien skal telefonkablet tilsluttes efter den strømførende ledning iflg. lov).
- Tilslut signalkabler til kontakter.
- Tilslut den strømførende ledning til stikkontakten.
- TÆND for enheden.

### *Aansluiten*

⚠ **Gevaarlijk:**

Elektrische stroom afkomstig uit netsnoeren, telefoonkabels en communicatiekabels kan gevaarlijk zijn. Ter voorkoming van elektrische schokken, moet u nadat de computer dichtgemaakt is de kabels, zoals afgebeeld, aansluiten. Sluit het netsnoer altijd aan op een geaard stopcontact.

- Zet alles UIT.
- Bevestig de snoeren aan de apparaten. (In het Verenigd Koninkrijk bent u wettelijk verplicht eerst het netsnoer en pas dan de telefoonkabel aan te sluiten.)
- Bevestig de signaalkabels in de juiste ingangen.
- Steek de stekker van het netsnoer in het stopcontact.
- Zet het apparaat AAN.

### *Pour connecter*

⚠ **Danger:**

Le courant électrique des câbles électriques, téléphoniques et de communication est dangereux. Pour éviter tout risque d'électrocution, connectez les câbles tel que montré après avoir fermé les couvercles de l'ordinateur. Utilisez le câble d'alimentation avec une prise correctement raccordée à la terre.

- Mettez tous les appareils hors tension.
- Raccordez tous les câbles aux appareils. (Au Royaume-Uni, la réglementation exige que le câble téléphonique soit branché après le câble d'alimentation.)
- Raccordez les câbles de transmission du signal aux prises femelles.
- Raccordez le câble d'alimentation à la prise de courant.
- Mettez l'appareil sous tension.

### *Kytke seuraavasti:*

⚠ **Vaara:**

Virta-, puhelin- ja tietoliikennejohdoissa liikkuva sähkövirta on vaarallista. Voit välttää sähköiskut liittämällä johdot esitetyllä tavalla, sen jälkeen kun olet sulkenut tietokoneen kannet. Virtajohto on liitettävä oikein maadoitettuun pistorasiaan.

- Katkaise kaikista laitteista virta.
- Liitä kaikki johdot laitteisiin. (Yhdistyneiden Kuningaskuntien lain mukaan virtajohto on liitettävä ennen puhelinjohdon irrottamista.)
- Liitä signaalikaapelit vastakkeisiin.
- Liitä virtajohto pistorasiaan.
- Kytke laitteeseen virta.

### כדי לחבר:

⚠ **סכנה:**

זרם חשמלי מכבלי כח, טלפון ותקשורת מהווה סכנה. כדי למנוע התחשמלות, חבר את הכבלים לפי האיור אחרי סגירת מארז המחשב. את כבל החשמל יש לחבר לשקע מוארק כראוי.

- כבה את כל המפסקים.
- חבר את כל הכבלים להתקנים (בבריטניה החוק דורש לחבר את כבל הטלפון אחרי כבל החשמל).
- חבר את כבלי האותות לשקעיהם.
- חבר את כבל החשמל לשקע.
- הדלק את המכשיר.

### *Csatlakoztatás:*

⚠ **Balesetveszély:**

A hálózati, telefon és kommunikációs kábelben levő elektromos áram veszélyes. Az áramütés veszélyének elhárítása érdekében csak a számítógép burkolatának bezárása után csatlakcztassa a vezetékeket. A hálózati vezetéknek megfelelően földeltnek kell lennie.

- Kapcsoljon mindent KI.
- Csatlakoztassa a vezetékeket a berendezésekhez. (Az Egyesült Királyságban előírás, hogy a telefonvezetéket a hálózati vezeték után kell csatlakoztatni.)
- Csatlakoztassa a jelkábelt az aljzatába.
- Csatlakoztassa a hálózati vezetéket az aljzatába.
- Kapcsolja BE a készüléket.

**연결하려면 :**

**⚠위험 :**

전원, 전화, 통신 케이블에서 나오는 전류는 유해하다. 쇼크 위험을 없애려면 본 제품 설치를 위해 컴퓨터 뚜껑을 닫은 후에 케이블을 연결한다. 전원 코드는 제대로 접지된 콘덴사와 사용돼야 한다.

- 모든 전원을 차단한다.
- 장치에 모든 케이블을 연결한다. (영국에서는 법으로, 전화선을 먼저 연결한 다음 전원코드를 연결해야 한다.)
- 수신기에 신호 케이블을 연결한다.
- 콘덴사에 전원 코드를 연결한다.
- 컴퓨터 장치를 켠다.

***Tilkobling***

**⚠ Fare:**

Elektrisk strøm fra strøm -, telefon - og kommunikasjonskabler er farlig. For å unngå fare for støt, må du koble til kabler, som vist, etter at datamaskindekslene er lukket. Strømledningen må kun brukes i jordede stikkontakter.

- Slå alt AV.
- Koble alle kablene til enhetene. (I Storbritannia sier loven at telefonledningen må kobles til etter strømledningen.)
- Sett signalkablene i kontaktene.
- Sett strømledningen i stikkontakten.
- Slå apparatet PÅ.

***Aby podłączyć:***

**⚠ Ostrzeżenie:**

Prąd elektryczny obecny w kablach zasilania, telefonicznych lub komunikacyjnych jest niebezpieczny. Aby uniknąć niebezpieczeństwa porażenia, po zamknięciu pokryw komputera podłącz kable jak to zostało pokazane. Musi być użyty przewód zasilania elektrycznego z odpowiednim uziemieniem.

- Wyłącz wszystko (położenie OFF)
- Podłącz wszystkie kable do urządzeń (W Wielkiej Brytanii prawo nakazyje by kabel linii telefonicznej zostać podłączony po przewodzie zasilania).
- Podłącz kable sygnałowe do gniazdek.
- Podłącz przewód zasilania do gniazdka.
- Włącz urządzenie. (Położenie ON).

***Para ligar:***

**⚠ Perigo:**

A corrente eléctrica da unidade de alimentação, do telefone e dos cabos de comunicação é perigosa. Para evitar o risco de choques eléctricos, ligue os cabos de acordo com as indicações antes de fechar a caixa do computador. O cabo de alimentação deve ser utilizado numa tomada devidamente ligada à terra.

- Desligue tudo.
- Ligue os cabos aos dispositivos. (De acordo com as leis do Reino Unido, o cabo do telefone deve ser ligado depois do cabo de alimentação.)
- Ligue os cabos de sinal as tomadas.
- Ligue o cabo de alimentação à tomada.
- Ligue o dispositivo.

***連接步驟：***

**⚠危險：**

動力電纜、電話電纜和通信電纜上的電流是危險的。爲避免電擊危險，在蓋上電腦機蓋之後連接電纜，如圖所示。動力電纜必須妥善接地。

- 關掉一切電源。
- 將所有電纜連接於裝置。（根據英國法律規定，電話電纜必須在動力電纜之前連接。）
- 將信號電纜連接於插座。
- 將動力電纜連接於輸出端。
- 打開裝置電源。

### *Vključenje:*

⚠ **Nevarnost:**

Struja iz električnih, telefonskih in komunikacijskih vodov je nevarna. Da se izognete šoku, vključite vode, kot kaže slika, po tem, ko ste zaprli računalniške pokrove. Strujni vod je treba uporabljati s primerno ozemljitvijo.

- Izključite vse (na “OFF”).
- Priključite vse vode na naprave. (V Veliki Britaniji je po zakonu treba telefonski vod vključiti po strujnem vodu).
- Priključite signalne vode sprejemnikom.
- Priključite električni vod izhodnemu vtikališču.
- Vključite napravo (na “ON”).

### *Anslutning*

⚠ **Fara:**

Ström från el-, tele- och kommunikationskablar måste behandlas med försiktighet. För att undvika att få en elektrisk stöt måste du sedan du stängt höljet på datorn ansluta kablarna enligt beskrivningen nedan. Strömkabeln måste alltid användas i ett jordat uttag.

- Stäng av allting.
- Anslut alla kablarna till enheterna. (I Storbritannien måste enligt lag telefonkabeln anslutas efter strömkabeln.)
- Anslut signalkablarna till uttagen.
- Anslut strömkabeln till strömuttaget.
- Slå på enheten.

# *Appendix B. Device Driver Configuration Settings*

This section contains installation option information for DOS with Windows, OS/2, and Windows 95. Use the online help during the installation and refer to the READ.ME file on the *IBM 24X MAX IDE CD-ROM Drive Option Diskette* for additional information.

## DOS with Windows Software

User requirements vary, and you might need to customize the setup which UINSTALL has installed on your computer. This section provides information and describes parameters that you might need to change or add for your installation.

### Device Driver (IBMIDECD.SYS)

Most computers will function adequately with the default settings for this file. However, there are some parameters that can be changed if necessary. This section explains the function of each parameter. Use a text editor to modify the appropriate line in your CONFIG.SYS file. For the IBMIDECD.SYS device driver, the line in CONFIG.SYS is in the following format:

```
DEVICE=[drive:][path ]IBMIDECD.SYS /D:device name
   [/P:xxx,yy] [/A:n] [/U:n] [/L:xx] [/T:n] [/I:n]
```

(Do not truncate the actual device driver entry. Place the complete DEVICE=.. on one line in the CONFIG.SYS file.)

```
[drive:][path]IBMIDECD.SYS
```

Specifies the location (drive and directory) and name of the device driver file.

Use the following options to configure the device driver.

**/D:device name**

Specifies the device name of the CD-ROM drive. This must be identical to the device name specified in the MSCDEX.EXE parameters, for example:

```
DEVICE=C:\IBMIDECD.SYS /D:IBMCD100
```

**/P:xxx,yy**

Specifies the address and interrupt level of the port to which the IDE CD-ROM drive is connected.

The device driver automatically checks the industry standard primary IDE port (address 1F0, interrupt 14) and secondary IDE port (address 170, interrupt 15). The */P* parameter is not needed if your CD-ROM drive is on either of these ports. However, if your computer (or IDE adapter) uses different IDE port addresses or interrupts, you must use this option. Refer to the instructions that come with your computer or IDE adapter to understand how your computer or adapter is configured.

xxx is the base address of the IDE port.

1F0 for the primary IDE port (Port 1)
170 for the secondary IDE port (Port 2)

yy is the interrupt (IRQ) level.

14 for the primary IDE port (Port 1)

15 or 10 for the secondary IDE port (Port 2)

As an example, when four drives have been connected, the syntax in the CONFIG.SYS file would be:

```
DEVICE=C:IBMIDECD.SYS /D:IBMCD100 /P:1F0,14
   /P:170,15 /P:1E0,12 /P:160,10
```

(Do not truncate the actual device driver entry. Place the complete DEVICE=.. on one line in the CONFIG.SYS file.)

**/A:n**

Specifies the audio play mode. For a stereo CD, /A:0 or /A:1 is acceptable. For a monaural CD (left or right channel only), /A:1 will play the monaural audio signal from both the right and left channels. The default is n=0.

**/U:n**

Initialize with the tray locked or unlocked. /U:0 is *unlock*. /U:1 is *lock*. The default is n=0. This command might be used if you wish to secure your CD in the drive.

**/L:xx**

Specifies the message language where *xx* designates the language.

| | |
|---|---|
| **US** | English (default, does not need to be specified) |
| **GR** | German |
| **FR** | French |
| **SP** | Spanish |
| **IT** | Italian |
| **JP** | Japanese |

**/T:n**

Initializes with time delays built into the IDE read loop. Use this parameter only in computers that do not support the IOCHRDY signal on the IDE bus, and that read from the IDE port faster than the CD-ROM can provide data. This is a very uncommon situation and normally is not required in most computers.

*n* is a relative timing parameter that depends on processor speed. The larger the value of n, the slower the drive will transfer data. Valid values for n are 0 through 99. The default for n is 0, and the /T parameter is not required.

**/I:n**

Enables interrupt sharing. If n=1, interrupt sharing is enabled. If n=0, interrupt sharing is disabled. The default value is *0*. Enable this parameter when the IDE interrupt must be shared with another device. For example, a PS/2 9577 computer with IDE could share interrupt 14 with the IBM SCSI Adapter /A.

## Microsoft CD-ROM Extensions

Microsoft CD-ROM Extensions (MSCDEX.EXE) is an executable program that works in conjunction with the device driver (IBMIDECD.SYS) to allow your computer to access CDs as if they were DOS-formatted disks. MSCDEX is specifically designed to work with DOS and Windows.

UINSTALL automatically adds an MSCDEX statement to your AUTOEXEC.BAT file. You can modify the default MSCDEX parameters to customize your installation. This section explains the

function of each parameter. A text editor can be used to modify the MSCDEX statement in your AUTOEXEC.BAT file.

The following is the syntax of the MSCDEX.EXE entry in AUTOEXEC.BAT where specifies the location (drive and directory) of the MSCDEX.EXE file. *[drive:][path]MSCDEX.EXE*.

```
[drive:] [path]MSCDEX.EXE /D:device name [/M:n] [/E][/V]
   [/L:drive letter][/K][/S]
```

(Do not truncate the actual device driver entry. Place the complete line on one line in the AUTOEXEC.BAT file.)

Use the following options to configure the device driver.

**/D:device name**

Specifies the name of the CD-ROM drive (eight characters maximum). This must be identical to the device name specified in the device driver in the CONFIG.SYS file. For example:

```
C:\MSCDEX.EXE /D:IBMCD100
```

You might support multiple CD-ROM drives (of different types) by installing each of their drivers (naming them different names) and placing a /D:*device name* in the MSCDEX line for each drive. For example, if you wanted to support an IBM IDE CD-ROM drive and an IBM SCSI CD-ROM drive, your CONFIG.SYS file could have these statements:

```
DEVICE=C:\IBMIDECD.SYS /D:IDE_CD
DEVICE=C:\IBMCDROM.SYS /D:SCSI_CD
```

and your AUTOEXEC.BAT file would have this statement:

```
C:\MSCDEX /D:IDE_CD /D:SCSI_CD
```

**/M:nn**

Specifies the number of sector buffers for temporary storage of the most recent CD data. For example, to specify 12 sector buffers you would use:

```
C:\MSCDEX.EXE /D:IBMCD100 /M:12
```

UINSTALL will set this value to 10. The default value for MSCDEX with no /M parameter is 4.

The greater this value, the better the CD-ROM drive will perform. However, each buffer uses about 2 KB of memory, and specifying too many buffers might slow down your computer or interfere with other programs that have large memory-usage requirements. Using expanded memory (see the /E option in this section) or loading MSCDEX.EXE into high memory (refer to your DOS user manual or memory manager user manual) might allow you to specify a larger number of buffers to enhance CD-ROM performance without adversely affecting programs that have large memory-usage requirements.

**/E**

Instructs the computer to use expanded memory, if available. For example:

```
C:\MSCDEX.EXE /D:IBMCD100 /E
```

Note that you must first load an expanded memory device driver before using this option. If no expanded-memory device driver is loaded, the following error message appears:

```
Expanded Memory not present or not usable.
```

**/V**

Instructs the computer to display a summary of RAM allocation and expanded memory usage at startup time.

**/L:drive letter**

Specifies the drive letter to be assigned to the first CD-ROM drive. Do not assign a letter already used by an existing drive or your computer will be unable to access the CD-ROM drive. For example, you might use:

```
C:\MSCDEX.EXE /D:IBMCD100 /L:F
```

Normally, the CD-ROM drive is assigned to the next available drive letter after the devices such as diskette drives and hard disk drives. Therefore, you use this option only if you wish to assign a drive letter beyond the last letter previously allocated by DOS.

**/K**

Instructs MSCDEX.EXE to use Kanji (Japanese) file structures, if present, rather than the default alphanumeric file structures.

**/S**

Instructs MSCDEX.EXE to allow sharing of CD-ROM drives on networked computers.

## Conserving DOS Conventional Memory

If the CD-ROM support software is loaded in DOS conventional memory (below 640 KB RAM), there might be insufficient memory to run some DOS applications. The UINSTALL program attempts to load the IDE CD-ROM device driver and MSCDEX into upper memory, when possible, to avoid this problem.

See the following topics in your DOS User's Guide for more information on techniques to conserve conventional memory:

- DOS=UMB, DOS=HIGH,UMB (CONFIG.SYS entry)

  This loads DOS high and enables the use of upper memory. This is essential to effectively load MSCDEX and the IDE CD-ROM device driver in upper memory.

- HIMEM.SYS (CONFIG.SYS entry)

  This is a device driver that manages extended memory (RAM memory above 1 MB). Windows automatically loads this device driver.

- EMM386.EXE (CONFIG.SYS entry)

  This is a device driver that allows the extended memory made available by HIMEM.SYS to be used as expanded memory. The MSCDEX /E parameter might be used in conjunction with this device driver to move the cache allocated by MSCDEX into this memory, thus freeing some conventional memory.

- MEM /C /P (use from DOS prompt)

This is a useful DOS utility that will display the current memory allocation in your computer to help you understand where device drivers and programs are located. To display the MEM parameters available, at the DOS prompt type **mem/?**

## Enhancing Performance

Following are two ways to enhance CD-ROM performance on your computer:

1. Allocate more MSCDEX cache (see /M parameter for MSCDEX).
2. Allow SMARTDRV to cache CD-ROM accesses.

   The installation option "DOS 6.2+ - Update for SMARTDRV/PhotoCD" disables the cache CD-ROM data function. Multi-session CDs are not compatible with the SMARTDRV caching method. If you do not plan to use PhotoCD or multiple-session CDs, you might re-enable caching by removing the /U parameter from the SMARTDRV line in your AUTOEXEC.BAT or CONFIG.SYS file. This might improve the performance of some CD-ROM applications. You must have SMARTDRV 5.0 or higher to cache CD-ROM data.

## Networking

If you are using the IDE CD-ROM drive in a DOS Network server you must make the following changes:

1. Add the /S parameter to the MSCDEX line in the AUTOEXEC.BAT file.
2. Check that the MSCDEX line is located after the line that loads the network services (NET START for IBM PC LAN program).
3. Do one of the following, depending on your operating system:
   - If you are using DOS 3.3, be sure you have PC Local Area Network (LAN) Program Corrective Service Diskette level IP00755 or later installed.
   - If you are using DOS 4.0, be sure you have DOS Corrective Service Diskette level UR 29015 or higher installed. (The computer cannot be configured as an Extended Services Domain Controller for the IBM PC LAN Program.)
   - Contact your IBM reseller for more information about the PC LAN Program Corrective Service Diskette or the DOS Corrective Service Diskette.

## OS/2 Software

User requirements vary, and you might need to customize the setup which DDINSTAL has installed on your computer. This section provides information and describes parameters that you might need to change or add for your installation.

### Device Manager Driver

OS/2 uses the OS2CDROM.DMD device driver

```
DEVICE=OS2CDROM.DMD [Options]
```

to control all CD-ROM devices. The following options are available:

**/V** Instructs the computer to display the installation details.

**/Q** Suppresses messages during initialization.

### Device Driver Filter

OS/2 uses the device driver filter IBMIDECD.FLT for ATAPI (IDE) CD-ROM drives.

```
BASEDEV=IBMIDECD.FLT [Options]
```

The following option is available:

**/V** Instructs the computer to display installation details.

### Installable File System Driver

The file system driver for OS/2 is CDFS.IFS. The following options are available:

**/C:n** Indicates how many 64 KB RAM segments will be used for the sector cache. The default is two 64 KB RAM segments.

**/M:n** Indicates the maximum number of file sectors to be read at a time. The default is eight sectors.

**/K** Uses Kanji supplementary volume descriptor.

**/Q** Suppresses messages during initialization.

### IDE Adapter Device Driver

The following IDE device drivers are available:

```
BASEDEV=IBM1S506.ADD    (for ISA computers)
BASEDEV=IBM2IDE.ADD     (for Micro Channel computers)
```

This device driver controls IDE hard disk drives and IDE CD-ROM drives. From the OS/2 command prompt, type **help IBM1S506** to see the optional parameters that are available for ISA computers. From the OS/2 command prompt, type **help IBM2IDE** to see the optional parameters that are available for Micro Channel computers.

Special parameters are required if your computer has an IDE controller that does not use a standard interrupt. Check the /A and /IRQ parameters in the OS/2 help utility.

## Windows 95 Software

Windows 95 has two device driver configuration parameters: Auto Insert Notify and DMA.

### Auto Insert Notify

The Auto Insert Notify parameter enables the system to start audio CD software as soon as a CD is inserted into the CD-ROM drive.

### DMA

The DMA parameter improves system performance by having the system DMA controller take responsibility for moving data from the CD to memory, freeing the system CPU to perform more important tasks. For example, activating DMA will make movies and games run more smoothly because the CPU will have more time to concentrate on video.

To change these parameter settings from the Windows 95 desktop:

1. Click on **Start** from the main screen.
2. Select **Settings**; click on **Control Panel**.
3. From the Control Panel, double-click on **System**.
4. Select **Device Manager**; double-click on CD-ROM and then click on **Properties**.
5. Select **Settings**
6. Click on **Auto Insert Notification** or **DMA**.
7. Click on **OK**.

# *Appendix C. Help and Service Information*

Before calling IBM technical support, try to solve the problem yourself by using the information in "Solving Problems" on page 2-17. If you are unable to solve the problem yourself, this section contains information on how to reach your IBM technical support representative.

## Step 1. Preparing for the Call

To assist the technical-support representative, have as much of the following information available as possible:

1. Computer manufacturer and model
2. Option name: IBM 24X MAX IDE CD-ROM Drive
3. Option number: 01K0058
4. Proof of purchase
5. Exact wording of the error message (if any)
6. Description of the problem
7. Operating system and version
8. Installed devices and adapters
9. Hardware and software configuration information for your system

If possible, be at your computer. Your technical support representative might want to talk you through the problem during the call.

## Step 2. Placing the Call to IBM

Technical support is available during the warranty period to answer any questions about your new IBM option. (Certain charges may apply.) Response time will vary depending on the number and nature of calls received. Marketing, installation, and configuration support will be withdrawn from the PC Company HelpCenter 90 days after the option has been withdrawn from marketing.

If you call 90 days after the date of withdrawal or after your warranty has expired, you might be charged a fee. Additional support is available through the IBM PC Company Automated fax system, the PC Company Web page, the PC Company Electronic Bulletin Board System, and HelpWare offerings.

For the support telephone number and support hours by country, refer to the following table or to the enclosed technical support insert. If number is not provided, contact your IBM reseller or IBM marketing representative.

| ***Support 24 hours a day, 7 days a week (excluding certain holidays)*** | |
|---|---|
| Canada | 1-800-565-3344 |
| U.S.A. and Puerto Rico | 1-800-772-2227 |
| ***Additional Support Resources*** | |
| PC Company Web Page | www.us.pc.ibm.com |
| PC Company BBS | 1-919-517-0001 |
| PC Company Automated Fax System | 1-800-426-3395 |

## Computer and BIOS Manufacturers

Use the following table for computer manufacturer information. For manufacturers not in the table, contact your IBM reseller.

| | |
|---|---|
| AST | 1-800-727-1278 |
| Compaq | 1-800-652-6672 |
| Dell | 1-800-624-9896 |
| Digital | 1-800-354-9000 |
| Gateway 2000 | 1-800-846-2301 |
| HP | 1-208-323-4663 |
| IBM | 1-800-772-2227 |
| NEC | 1-800-388-8888 |
| Packard Bell | 1-800-733-4411 |

Use the following table for BIOS manufacturer information. For manufacturers not in the table, contact your IBM reseller.

| | |
|---|---|
| AMI | 1-770-246-8645 |
| Award | 1-415-968-4433 |
| Micro Firmware (Phoenix systems only) | 1-405-321-8333 |
| MR BIOS | 1-508-686-6468 |
| Phoenix | 1-617-551-4000 |

## Hard Disk Drive Manufacturers

Use the following table for disk manufacturer information, as needed. For manufacturers not in the table, contact your IBM reseller.

| Manufacturer | Telephone | BBS | Fax | Internet Address |
|---|---|---|---|---|
| IBM Corporation (U.S.A.) | 1-800-772-2227 | 1-919-517-0001 | 1-800-426-3395 | http://www.pc.ibm.com<br>http://www.ibm.com |
| Maxtor Corporation (U.S.A.) | 1-800-2MAXTOR | 1-303-678-2222 (2400 baud) | 1-800-2MAXTOR<br>1-303-678-2260 | http://www.maxtor.com |
| Quantum Peripherals (U.S.A.) | 1-800-826-8022 | 1-408-894-3214 | 1-800-434-7532 | http://www.quantum.com |
| Seagate Technology, Inc. | 1-800-SEAGATE | 1-408-434-1080 | 1-800-SEAGATE<br>1-408-456-4496 | http://www.seagate.com |
| Western Digital Corporation (U.S.A.) | 1-714-932-4900<br>1-507-286-7900 | 1-714-753-1234 | 714-932-4900<br>1-507-286-7900 | http://www.wdc.com |

# *Appendix D. Product Warranty*

The following warranty information applies to products purchased in the United States, Canada, and Puerto Rico. For warranty terms and conditions for products purchased in other countries, see the enclosed Warranty insert, or contact your IBM reseller or IBM marketing representative.

International Business Machines Corporation Armonk, New York, 10504

**Statement of Limited Warranty**

*The warranties provided by IBM in this Statement of Limited Warranty apply only to Machines you originally purchase for your use, and not for resale, from IBM or your reseller. The term "Machine" means an IBM machine, its features, conversions, upgrades, elements, or accessories, or any combination of them. Unless IBM specifies otherwise, the following warranties apply only in the country where you acquire the Machine. If you have any questions, contact IBM or your reseller.*

**Machine:** IBM 24X MAX IDE CD-ROM Drive (P/N: 01K0058)

**Warranty Period*:** One Year

**Contact your place of purchase for warranty service information.*

### Production Status

Each Machine is manufactured from new parts, or new and used parts. In some cases, the Machine may not be new and may have been previously installed. Regardless of the Machine's production status, IBM's warranty terms apply.

### The IBM Warranty for Machines

IBM warrants that each Machine 1) is free from defects in materials and workmanship and 2) conforms to IBM's Official Published Specifications. The warranty period for a Machine is a specified, fixed period commencing on its Date of Installation. The date on your receipt is the Date of Installation, unless IBM or your reseller informs you otherwise.

During the warranty period IBM or your reseller, if authorized by IBM, will provide warranty service under the type of service designated for the Machine and will manage and install engineering changes that apply to the Machine.

For IBM or your reseller to provide warranty service for a feature, conversion, or upgrade, IBM or your reseller may require that the Machine on which it is installed be 1) for certain Machines, the designated, serial-numbered Machine and 2) at an engineering-change level compatible with the feature, conversion, or upgrade. Many of these transactions involve the removal of parts and their return to IBM. You represent that all removed parts are genuine and unaltered. A part that replaces a removed part will assume the warranty service status of the replaced part.

If a Machine does not function as warranted during the warranty period, IBM or your reseller will repair it or replace it with one that is at least functionally equivalent, without charge. The replacement may not be new, but will be in good working order. If IBM or your reseller is unable to repair or replace the Machine, you may return it to your place of purchase and your money will be refunded.

If you transfer a Machine to another user, warranty service is available to that user for the remainder of the warranty period. You should give your proof of purchase and this Statement to that user. However, for Machines which have a life-time warranty, this warranty is not transferable.

### Warranty Service

To obtain warranty service for the Machine, you should contact your reseller or call IBM. In the United States, call IBM at **1-800-772-2227**. In Canada, call IBM at **1-800-565-3344**. You may be required to present proof of purchase.

IBM or your reseller will provide certain types of repair and exchange service, either at your location or at IBM's or your reseller's service center, to restore a Machine to good working order.

When a type of service involves the exchange of a Machine or part, the item IBM or your reseller replaces becomes its property and the replacement becomes yours. You represent that all removed items are genuine and unaltered. The replacement may not be new, but will be in good working order and at least functionally equivalent to the item replaced. The replacement assumes the warranty service status of the replaced item. Before IBM or your reseller exchanges a Machine or part, you agree to remove all features, parts, options, alterations, and attachments not under warranty service. You also agree to ensure that the Machine is free of any legal obligations or restrictions that prevent its exchange.

You agree to:

1. obtain authorization from the owner to have IBM or your reseller service a Machine that you do not own; and
2. where applicable, before service is provided —
   a. follow the problem determination, problem analysis, and service request procedures that IBM or your reseller provide,
   b. secure all programs, data, and funds contained in a Machine, and
   c. inform IBM or your reseller of changes in a Machine's location.

IBM is responsible for loss of, or damage to, your Machine while it is 1) in IBM's possession or 2) in transit in those cases where IBM is responsible for the transportation charges.

**Extent of Warranty**
IBM does not warrant uninterrupted or error-free operation of a Machine.

The warranties may be voided by misuse, accident, modification, unsuitable physical or operating environment, improper maintenance by you, removal or alteration of Machine or parts identification labels, or failure caused by a product for which IBM is not responsible.

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Circumstances may arise where, because of a default on IBM's part or other liability you are entitled to recover damages from IBM. In each such instance, regardless of the basis on which you are entitled to claim damages from IBM (including fundamental breach, negligence, misrepresentation, or other contract or tort claim), IBM is liable only for:

1. damages for bodily injury (including death) and damage to real property and tangible personal property; and
2. the amount of any other actual direct damages or loss, up to the greater of U.S. $100,000 or the charges (if recurring, 12 months' charges apply) for the Machine that is the subject of the claim.

UNDER NO CIRCUMSTANCES IS IBM LIABLE FOR ANY OF THE FOLLOWING: 1) THIRD-PARTY CLAIMS AGAINST YOU FOR LOSSES OR DAMAGES (OTHER THAN THOSE UNDER THE FIRST ITEM LISTED ABOVE); 2) LOSS OF, OR DAMAGE TO, YOUR RECORDS OR DATA; OR 3) SPECIAL, INCIDENTAL, OR INDIRECT DAMAGES OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS OR SAVINGS), EVEN IF IBM OR YOUR RESELLER IS INFORMED OF THEIR POSSIBILITY. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU.

# *Appendix E. Notices*

## Notices

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## Electronic Emission Notices

IBM 24X MAX IDE CD-ROM Drive (P/N: 01K0058)

## Federal Communications Commission (FCC) Statement

**Note:** 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 instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television 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 the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an IBM authorized dealer or service representative for help.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Proper cables and connectors are available from IBM authorized dealers. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

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.

Responsible Party:

International Business Machines Corporation
Old Orchard Road
Armonk, NY 10504
Telephone: 1-919-543-2193

## Industry Canada Class B Emission Compliance Statement

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

## Avis de conformité à la réglementation d'Industrie Canada

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

### Deutsche EMV-Direktive (electromagnetische Verträglichkeit)

Dieses Gerät ist berechtigt in Übereinstimmung mit dem deutschen EMVG vom 9.Nov.92 das EG-Konformitätszeichen zu führen.

Der Aussteller der Konformitätserklärung ist die IBM UK, Greenock.

Dieses Gerät erfüllt die Bedingungen der EN 55022 Klasse B.

## European Union - Emission Directive

This product is in conformity with the protection requirements of EU Council Directive 89/366/ECC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

IBM can not accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

This product has been tested and found to comply with the limits for Class B Information Technology Equipment according to CISPR 22 / European Standard EN 55022. The limits for Class B equipment were derived for typical residential environments to provide reasonable protection against interference with licensed communication devices.

### Union Européenne - Directive Conformité électromagnétique

Ce produit est conforme aux exigences de protection de la Directive 89/336/EEC du Conseil de l'UE sur le rapprochement des lois des États membres en matière de compatibilité électromagnétique.

IBM ne peut accepter aucune responsabilité pour le manquement aux exigences de protection résultant d'une modification non recommandée du produit, y compris l'installation de cartes autres que les cartes IBM.

Ce produit a été testé et il satisfait les conditions de l'équipement informatique de Classe B en vertu de CISPR22 / Standard européen EN 55022. Les conditions pour l'équipement de Classe B ont été définies en fonction d'un contexte résidentiel ordinaire afin de fournir une protection raisonnable contre l'interférence d'appareils de communication autorisés.

### Unione Europea - Directiva EMC (Conformidad électromagnética)

Este producto satisface los requisitos de protección del Consejo de la UE, Directiva 89/336/CEE en lo que a la legislatura de los Estados Miembros sobre compatibilidad electromagnética se refiere.

IBM no puede aceptar responsabilidad alguna si este producto deja de satisfacer dichos requisitos de protección como resultado de una modificación no recomendada del producto, incluyendo el ajuste de tarjetas de opción que no sean IBM.

Este producto ha sido probado y satisface los límites para Equipos Informáticos Clase B de conformidad con el Estándar CISPR22 y el Estándar Europeo EN 55022. Los límites para los equipos de Clase B se han establecido para entornos residenciales típicos a fin de proporcionar una protección razonable contra las interferencias con dispositivos de comunicación licenciados.

### Union Eurpea - Normativa EMC

Questo prodotto è conforme alle normative di protezione ai sensi della Direttiva del Consiglio dell'Unione Europea 89/336/CEE sull'armonizzazione legislativa degli stati membri in materia di compatibilità elettromagnetica.

IBM non accetta responsabilità alcuna per la mancata conformità alle normative di protezione dovuta a modifiche non consigliate al prodotto, compresa l'installazione di schede e componenti di marca diversa da IBM.

Le prove effettuate sul presente prodotto hanno accertato che esso rientra nei limiti stabiliti per le le apparecchiature di informatica Classe B ai sensi del CISPR 22 / Norma Europea EN 55022. I limiti delle apparecchiature della Classe B sono stati stabiliti al fine di fornire ragionevole protezione da interferenze mediante dispositivi di comunicazione in concessione in ambienti residenziali tipici.

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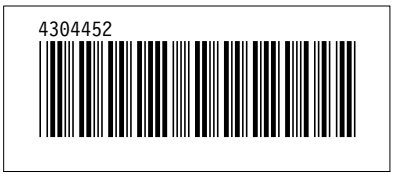
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