



48X-20X Internal IDE CD-ROM Drive

User's Guide

Note: Before using this information and the product it supports, read the information under Appendix D, "Product warranties and notices" on page D-1.

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About this book

This manual contains instructions for installing, configuring, and troubleshooting the IBM® 48X-20X Internal IDE CD-ROM Drive. The manual is divided into the following parts:

Part 1: Installation and user's guide

This part contains the product description and expanded installation instructions in the following languages:

- English
- French
- Spanish
- Italian
- Brazilian Portuguese
- Traditional Chinese
- Japanese

Part 2: Appendixes

The appendixes contain information about product specifications, problem solving, warranties, and help and service. It also contains the product warranties and notices.

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

Registering your option

Thank you for purchasing this IBM product. Please take a few moments to register your product and provide us with information that will help IBM to better serve you in the future. Your feedback is valuable to us in developing products and services that are important to you, as well as in developing better ways to communicate with you. Register your option on the IBM Web site at

<http://www.ibm.com/pc/register>

IBM will send you information and updates on your registered product unless you indicate on the Web site questionnaire that you do not want to receive further information.

Safety information

Before installing this product, read the Safety Information.

مج، يجب قراءة دات السلامة

Antes de instalar este produto, leia as Informações de Segurança.

在安装本产品之前，请仔细阅读 **Safety Information** (安全信息)。

Prije instalacije ovog produkta obavezno pročitajte Sigurnosne Upute.

Před instalací tohoto produktu si přečtete příručku bezpečnostních instrukcí.

Læs sikkerhedsforskrifterne, før du installerer dette produkt.

Ennen kuin asennat tämän tuotteen, lue turvaohjeet kohdasta Safety Information.

Avant d'installer ce produit, lisez les consignes de sécurité.

Vor der Installation dieses Produkts die Sicherheitshinweise lesen.

Πριν εγκαταστήσετε το προϊόν αυτό, διαβάστε τις πληροφορίες ασφάλειας (safety information).

לפני שתתקינו מוצר זה, קראו את הוראות הבטיחות.

A termék telepítése előtt olvassa el a Biztonsági előírásokat!

Prima di installare questo prodotto, leggere le Informazioni sulla Sicurezza.

製品の設置の前に、安全情報をお読みください。

본 제품을 설치하기 전에 안전 정보를 읽으십시오.

Пред да се инсталира овој продукт, прочитајте информацијата за безбедност.

Lees voordat u dit product installeert eerst de veiligheidsvoorschriften.

Les sikkerhetsinformasjonen (Safety Information) før du installerer dette produktet.

Przed zainstalowaniem tego produktu, należy zapoznać się z książką "Informacje dotyczące bezpieczeństwa" (Safety Information).

Antes de instalar este produto, leia as Informações sobre Segurança.

Перед установкой продукта прочтите инструкции по технике безопасности.

Pred inštaláciou tohto zariadenia si pečítajte Bezpečnostné predpisy.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Antes de instalar este producto lea la información de seguridad.

Läs säkerhetsinformationen innan du installerar den här produkten.

安裝本產品之前，請先閱讀「安全資訊」。

Part 1: Installation and user's guide

The IBM® 48X-20X Internal IDE CD-ROM Drive can read a compact disc (CD) containing approximately 680 MB¹ 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 device delivers data up to 48 times the standard CD-ROM speed, delivering data at up to 7200 KB² per second. The drive reads compact discs that meet the ISO-9660 and High-Sierra Group (HSG) standards. It also reads multiple-session, extended architecture (XA) discs, such as the Kodak Photo CD.

Product description

In addition to this book, the option package includes:

- 48X-20X Internal IDE CD-ROM Drive
- One "Y" audio cable, one audio cable
- Four mounting screws (M3 x 5 mm, slotted)
- One IDE cable for connecting two IDE devices
- Laser Safety Guide for CD-ROM drives

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.

You can find information on how to get help, technical support, and warranty service in "Appendix C. Help and service information" on page C-1. Before calling for technical support, refer to "Appendix B. Problem solving" on page B-1.

Before you begin

Determine whether your computer meets the minimum requirements; see "System requirements" on page 1-2 for details. Read the following information before you start your installation.

You must complete the following steps to install the drive:

1. Determine which IDE connector to use and the corresponding configuration setting.

1. MB equals approximately 1 000 000 bytes when referring to storage capacity.

2. KB equals approximately 1024 bytes when referring to data transfer speeds.

2. Place or change the configuration jumper on the drive (and possibly make changes to the configuration jumpers of other devices).

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.

System requirements

Before you begin installing the drive, be sure your computer meets the following system requirements.

- Minimum microprocessor: 80486
- Minimum RAM: 4 MB
- 5.25-inch diskette drive
- Available IDE connection
- Available internal power connection
- Available drive bay
- One of the following operating systems:
 - Microsoft[®] Windows[®] 95
 - Microsoft Windows[®] 98
 - Microsoft[®] Windows NT[®] 4.0
 - Microsoft Windows 2000 Professional
 - Microsoft Windows Millennium Edition (Me)

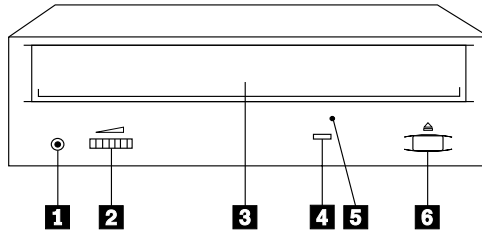
Handling instructions

To protect your device 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 device in its antistatic bag until you are ready to install the drive in your computer. Limit your movements. Movement can cause static electricity buildup.
- Do not force insertion of the power cable. Doing so might damage the connector or the drive.

Front view of the drive

Refer to the illustration to identify parts that might be referred to in the installation instructions.



1 Headphone jack. Plug headphones in here for audio output.

2 Volume control. Adjust this dial to control volume.

3 CD tray. Use the CD tray to load a CD into the drive.

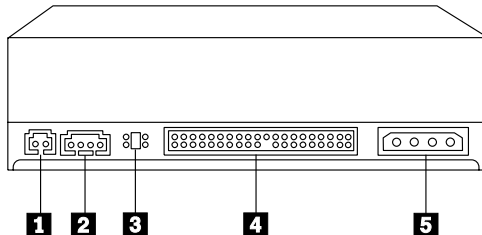
4 Busy indicator. This light comes on when the drive reads a data CD or plays an audio CD.

5 Manual-eject hole. Use this to eject the CD tray if the Eject/Load button is not operating correctly.

6 Eject/Load button. Push this button to open or close the CD tray.

Back view of the drive

Refer to the illustration to identify parts that might be referred to in the installation instructions.



1 Reserved.

2 Audio-out connector. This connector is used to connect the CD-ROM drive to an audio adapter.

3 Configuration pins. The jumper placement on these pins determines the priority of the CD-ROM drive on the IDE bus.

4 IDE connector. This is used to connect the CD-ROM drive to the IDE cable.

5 DC power connector. This is used to connect the dc power cord to the CD-ROM drive.

Installing the drive

Follow these steps to install the CD-ROM drive in your computer.

Step 1. Opening the computer

1. Turn off the computer and all attached devices.
2. Unplug the power cords for the computer and all attached devices.
3. Remove the cover from the computer.

Step 2. Unpacking the drive

1. Before opening the antistatic bag that the drive is packed in, touch it to an unpainted metal surface for at least two seconds. This will drain the static electricity from the package and your body.
2. Remove the drive from the antistatic 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 antistatic bag.

Step 3. Selecting the IDE port

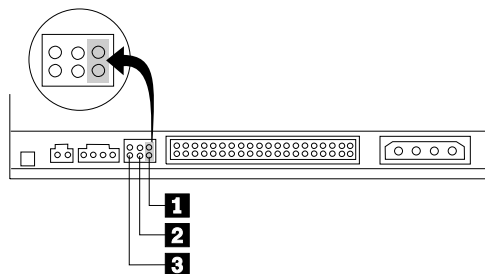
Newer computers typically have two IDE ports, each of which can support two devices. Typically, the IDE port to which your hard disk drive is connected is the primary IDE port. The other IDE port is the secondary port. The IDE port and the cable position that you select determine which configuration jumper setting that you use for the drive.

- If you have two IDE ports, connect the CD-ROM drive to the secondary IDE port on your system board or IDE adapter. If the CD-ROM drive is the only device on the secondary IDE port, use the primary configuration setting. If the CD-ROM drive is the second device on the secondary port, use the secondary configuration setting.
- If you must attach the CD-ROM drive to the primary IDE port (the same port as a hard disk drive or other fast device), use the secondary setting for the CD-ROM drive and the primary setting for the faster device. In some instances, you might need to change the hard disk drive configuration setting to master-with-secondary-present when attaching a secondary device on the same cable. For further information on setting configuration jumpers on other devices, refer to the documentation that came with your computer or with the device in question.
- Some non-IBM computers support the cable-select setting, where the position of the device on the cable determines whether a device is primary

or secondary. See the documentation that came with your computer to determine if your computer supports this setting.

Step 4. Setting the configuration jumper

The illustration shows the primary **1** setting, the secondary (or slave) **2** setting, and the cable-select **3** setting. Configure the CD-ROM drive by placing the jumper over the set of pins corresponding to the setting you chose in Step 3. See “Step 3. Selecting the IDE port” on page 1-4.



- If you are configuring the CD-ROM device as primary, set the jumper to the master **1** device setting. (This is how the drive is set when it is shipped.) If there is a second device on the IDE port, make sure that device is configured as secondary.
- If you are configuring the CD-ROM device as secondary, set the jumper to the secondary **2** device setting. Make sure that the other device on the IDE port is configured as primary (or primary-with-secondary-present).
- If you are configuring the CD-ROM device as cable-select, set the jumper to the cable-select **3** device setting. If there is another device on the IDE port, make sure that the second device is also configured for cable-select.

Step 5. Mounting the drive in the bay

Attention: Be sure to use the M3 x5 mm mounting screw in the option package. Using screws that are too long might damage the drive

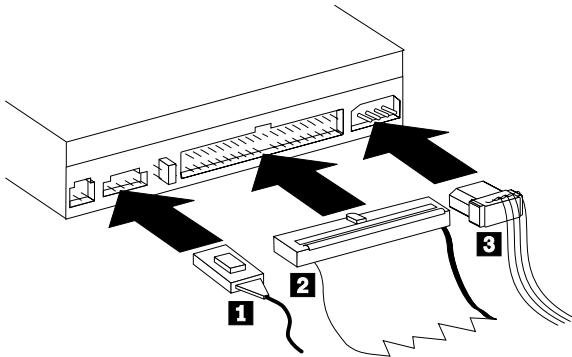
You can mount the CD-ROM drive horizontally or vertically in the computer. If you mount the drive vertically, you must secure any CDs you place into the drive before the drive tray is closed, or the CD-ROM drive will not be able to read the CD correctly. For further instructions on securing your CDs in a vertically mounted drive, go to “Loading a CD” on page 1-9.

1. Slide the drive into the bay. Your computer might have specific required procedures for installing storage devices. Refer to the documentation that came with your computer for further instructions.
2. Align the drive-bay screw holes with the threaded holes in the drive housing or mounting bracket; then thread the screws in loosely to check their positions. Usually two screws are used on each side.

3. Check to make sure the alignment is correct; then tighten the screws to secure the drive. Do not overtighten.

Step 6. Attaching the cables to the drive

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



1. If you have an audio adapter, locate the included audio cables and determine which cable best fits the CD audio-in port on your audio adapter. Connect one end of the selected audio cable to the device audio-out connector **1**, and the other end of the cable to your audio adapter CD audio-in port. Save the other cable in case you use a different audio adapter in the future.
2. 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.
3. Attach a four-pin power cable **3** to the device dc power connector.

Step 7. Completing the hardware installation

1. Be sure that the drive is securely mounted and the connectors are firmly attached.
2. Be sure that 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. Connect all power cords to electrical outlets.

Step 8. Updating your computer configuration

After you have completed the hardware installation, restart your computer. Usually, the configuration-setup information screen is displayed. If this screen is not displayed, check your computer documentation for information about accessing the configuration or setup utility program.

To see the configuration information for most IBM computers, press the F1 button during startup. 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 if you have correctly completed the installation.

Step 9. 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.

Note: User requirements vary; the device driver settings for that operating system can be customized. If your computer does not work well with the default settings given in the installation instructions in this section, refer to "Appendix A. Customizing device driver configuration settings" on page A-1 for information on customizing your device driver configuration settings.

Device driver for Windows 95, Windows 98, Windows NT, Windows 2000, and Windows Me

Windows 98 and Windows Me automatically detect the CD-ROM drive and do not present any installation screens. If the driver installation screens are displayed after your operating system starts, follow the instructions on the screen to install the device drivers. Consult the documentation that comes with your operating system for more information.

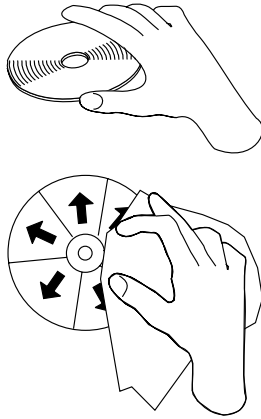
Use and care of the drive

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 might cause loss of data.



- Handle the CD by the edges or by the center hole. Do not touch the data 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.

Caring for the CD-ROM drive

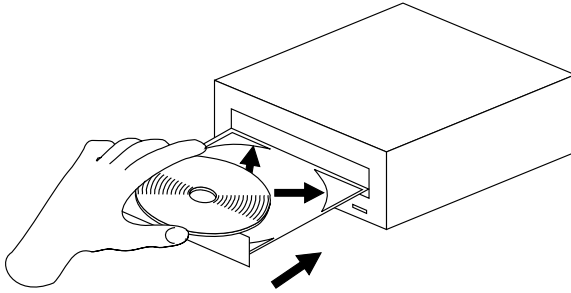
To protect your CD-ROM drive during operation, observe the following precautions.

- Remove an CD from the drive before moving the drive.
- Do not insert foreign objects into 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

Loading a CD

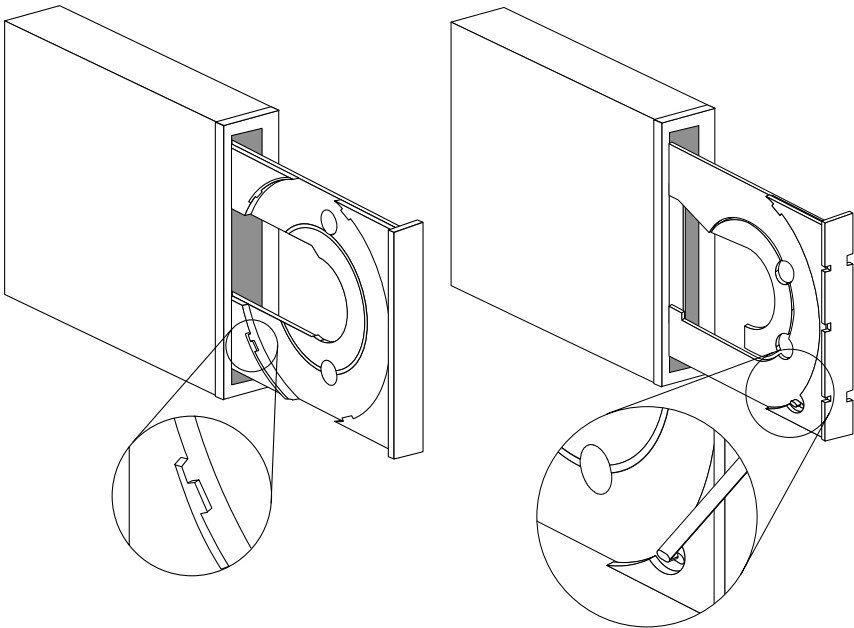
To load a CD into a horizontally mounted CD-ROM drive do the following:



1. Press the Eject/Load button. The tray slides out of the drive.
2. Insert the CD into the loading tray with the label facing up.
3. Close the loading tray by pressing 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.

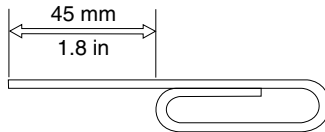
To load a CD into a vertically mounted CD-ROM drive do the following:



1. Press the Eject/Load button.
2. Look at the illustrations and compare them to your loading tray.
 - If your loading tray looks like the left illustration, insert the CD carefully so that the edges of the CD are underneath the tabs on the loading tray. These plastic tabs cover the edges of the CD and hold it in place. The tabs are attached to the tray itself and cannot be moved.
 - If your loading tray looks like the right illustration, insert the CD into the tray, and gently push the movable tab forward to hold the CD in place.
3. Close the loading 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. Straighten a large paper clip to form a tool, as shown in the illustration below. 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 1-3). Push the paper clip into the hole 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 98, Windows Me, Windows NT, and Windows 2000 applications include audio CD player programs.

For more information on using your audio playback software, see the documentation that comes with your operating system or your computer.

Windows 95, Windows 98, Windows NT 4.0, Windows 2000, or Windows Me

To use the audio utility do the following:

1. Turn on your computer and start your operating system, if you have not already done so.
2. Insert an audio CD into the CD-ROM drive.
3. The CD begins playing. If the CD does not start playing, or if you have problems with the audio, check the documentation that comes with your audio adapter or computer for problem-solving information.

Using a data CD

Data CDs can contain data files, games, or applications.

Windows 95, Windows 98, Windows NT 4.0, Windows 2000, or Windows Me

To read a data CD do the following:

1. Turn on your computer and start your operating system, if you have not already done so.

2. Insert an data CD into the CD-ROM drive. Many program CDs will automatically start at this point. If the CD does not automatically start, go on to step 3.
3. Double-click **My Computer**.
4. Verify that the CD-ROM icon is displayed.
5. Double-click the **CD-ROM** icon.
6. Verify that you can view files on the CD.

If you are unable to select the CD-ROM icon or view data, see “Appendix B. Problem solving” on page B-1 or see “Appendix C. Help and service information” on page C-1 for service information.

Chapitre 1 : Installation et utilisation

L'unité de CD-ROM interne IDE 48X-20X d'IBM est capable de lire un disque compact (CD) contenant environ 680 Mo¹ d'informations. Elle a été conçue pour s'installer dans un ordinateur personnel qui dispose de l'architecture IDE (integrated drive electronics) ou E-IDE (IDE améliorée).

Cette unité de CD-ROM lit les données à une vitesse jusqu'à 48 fois supérieure à celle d'une unité de CD-ROM standard, en transférant jusqu'à 7200 ko² par seconde. L'unité peut lire les disques compacts conformes aux standards ISO-9660 et High-Sierra Group (HSG). Elle peut également lire des disques multi-sessions à architecture étendue (XA), tels que les CD Photo Kodak.

Description du produit

Outre ce manuel, la boîte de l'option contient :

- Une unité de CD-ROM interne IDE 48X/20X
- Un câble audio en "Y", un câble audio standard
- Quatre vis de fixation (M3 x 5 mm, rainurées)
- Un câble IDE servant à raccorder deux périphériques IDE
- Un manuel relatif aux précautions d'utilisation du laser des unités de CD-ROM

Prenez contact avec votre revendeur si l'un de ces éléments manque ou est endommagé. Vous pouvez être amené à fournir la preuve d'achat. Sa présentation est habituellement nécessaire pour faire jouer la garantie.

Vous trouverez des informations sur la manière d'obtenir de l'aide, sur le support technique et sur les conditions de la garantie à l'annexe C, Help and service information, à la page C-1. Avant d'appeler le support technique, consultez l'annexe B, Problem solving, à la page B-1.

1. Un Mo correspond approximativement à 1 000 000 octets en terme de capacité de stockage.

2. Un ko représente environ 1024 octets en terme de vitesse de transfert de données.

Avant de commencer

Déterminez si votre ordinateur dispose des caractéristiques minimum requises ; consultez la section «Configuration système requise» pour plus de renseignements. Lisez les informations ci-après avant de commencer l'installation.

Vous devez accomplir les opérations suivantes pour installer l'unité :

1. Déterminez quel connecteur IDE utiliser et le paramètre de configuration correspondant.
2. Placez ou déplacez le cavalier de configuration de l'unité (et éventuellement, modifiez aussi les cavaliers de configuration d'autres périphériques).

Si vous ne comprenez pas ces opérations ou n'êtes pas certain de pouvoir effectuer toutes celles qui sont décrites, demandez à un technicien informatique qualifié d'installer l'unité de CD-ROM à votre place.

Configuration système requise

Avant de commencer l'installation de l'unité, vérifiez que votre ordinateur satisfait aux conditions système suivantes.

- Microprocesseur : 80486 minimum
- Mémoire vive : 4 Mo minimum
- Unité de disquette 5 pouces 1/4
- Connecteur IDE disponible
- Connexion d'alimentation interne disponible
- Baie d'unité disponible
- Un des systèmes d'exploitation suivants :
 - Microsoft Windows 95
 - Microsoft Windows 98
 - Microsoft Windows NT 4.0
 - Microsoft Windows 2000 Professional
 - Microsoft Windows Millennium Edition (Me)

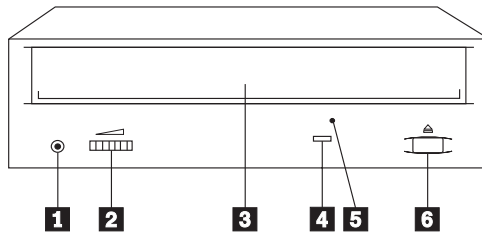
Précautions de manipulation

Afin de protéger votre périphérique lors de l'installation, observez les consignes suivantes :

- Manipulez l'unité avec précaution. Si vous heurtez ou laissez tomber l'unité, vous risquez d'endommager ses composants internes.
- Conservez l'unité dans sa pochette antistatique jusqu'à ce vous soyez prêt à l'installer dans votre ordinateur. Limitez vos mouvements. Ceux-ci peuvent provoquer l'accumulation d'électricité statique.
- Ne forcez pas en insérant le câble d'alimentation. Sinon, vous risquez d'endommager le connecteur ou l'unité.

Vue de la face avant de l'unité

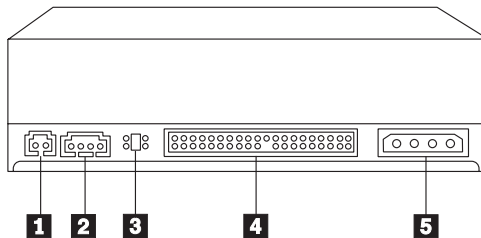
Reportez-vous à l'illustration pour identifier les éléments qui sont mentionnés dans les instructions d'installation.



- 1 Prise pour écouteurs.** Branchez vos écouteurs sur cette sortie audio.
- 2 Réglage du volume.** Tournez cette molette pour régler le volume.
- 3 Plateau du CD.** Chargez un CD dans l'unité en le plaçant sur ce plateau.
- 4 Voyant de fonctionnement.** Il s'allume lorsque l'unité lit un CD de données ou joue un CD audio.
- 5 Trou d'éjection manuelle.** Utilisez-le pour éjecter le plateau du CD si le bouton Ejection/Chargement ne fonctionne pas correctement.
- 6 Bouton Ejection/Chargement.** Appuyez sur ce bouton pour ouvrir ou fermer le plateau du CD.

Vue de la face arrière de l'unité

Reportez-vous à l'illustration pour identifier les éléments qui sont mentionnés dans les instructions d'installation.



1 Réserve.

2 Connecteur de sortie audio. Ce connecteur est utilisé pour raccorder l'unité de CD-ROM à une carte audio.

3 Broches de configuration. Le positionnement du cavalier sur ces broches détermine la priorité de l'unité de CD-ROM sur le bus IDE.

4 Connecteur IDE. Il sert à connecter l'unité de CD-ROM au câble IDE.

5 Connecteur d'alimentation. Il permet de raccorder le cordon d'alimentation à l'unité de CD-ROM.

Installation de l'unité

Effectuez les opérations suivantes pour installer l'unité de CD-ROM dans votre ordinateur.

Étape 1. Ouverture de l'ordinateur

1. Mettez l'ordinateur hors tension, ainsi que tous les périphériques qui y sont connectés.
2. Débranchez les cordons d'alimentation de l'ordinateur, ainsi que ceux de tous les périphériques connectés.
3. Retirez le carter de l'ordinateur.

Etape 2. Déballage de l'unité

1. Avant d'ouvrir la pochette antistatique dans laquelle l'unité est emballée, placez-la contre une surface en métal nu pendant au moins deux secondes. Ceci a pour effet de décharger l'électricité statique accumulée sur l'emballage et sur votre corps.
2. Retirez l'unité de la pochette antistatique. S'il vous faut poser l'unité, placez la pochette antistatique sur une surface plane (un magazine, par exemple) et placez l'unité sur la pochette antistatique.

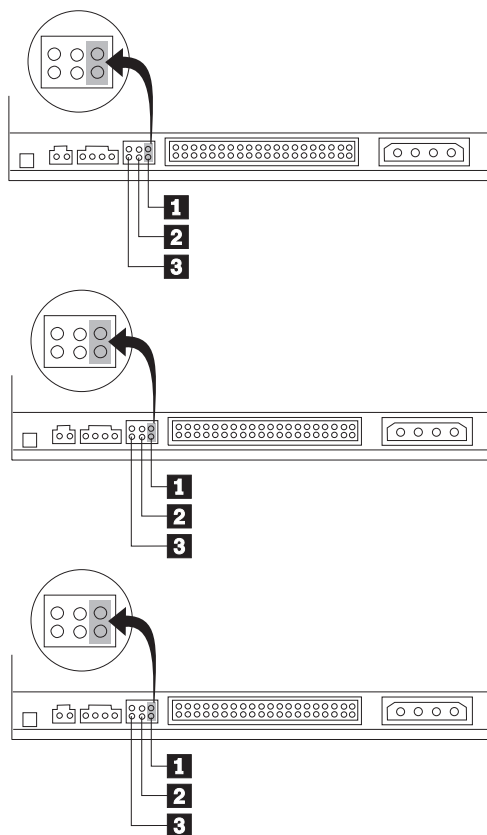
Etape 3. Sélection du port IDE

Les ordinateurs les plus récents comportent généralement deux ports IDE, chacun pouvant prendre en charge deux périphériques. Habituellement, le port IDE auquel votre unité de disque dur est connectée est le port IDE primaire. L'autre port IDE est le port secondaire. Le port IDE et le positionnement choisi pour le câble IDE déterminent la position du cavalier de configuration que vous utiliserez pour l'unité.

- Si vous avez deux ports IDE, connectez l'unité de CD-ROM au port IDE secondaire de la carte principale ou de la carte IDE. Si l'unité de CD-ROM est le seul périphérique sur le port IDE secondaire, utilisez la position primaire. Si l'unité de CD-ROM est le deuxième périphérique connecté au port secondaire, utilisez la position secondaire.
- Si vous devez connecter l'unité de CD-ROM au port IDE primaire (le même port que celui dédié à l'unité de disque dur ou à un autre périphérique rapide), utilisez la position secondaire pour l'unité de CD-ROM et la position primaire pour le périphérique plus rapide. Dans certaines circonstances, vous devrez changer le paramétrage de la configuration de l'unité de disque dur pour la placer sur maître-avec-présence-d'un-secondaire lorsque vous raccorderez un périphérique secondaire sur le même câble. Pour plus d'informations sur le paramétrage des cavaliers de configuration d'autres périphériques, reportez-vous à la documentation fournie avec votre ordinateur ou avec le périphérique concerné.
- Certains ordinateurs non IBM supportent le paramétrage sélection-câble dans lequel la position du périphérique sur le câble détermine si ce périphérique est primaire ou secondaire. Consultez la documentation fournie avec votre ordinateur pour déterminer s'il supporte ce paramétrage.

Etape 4. Positionnement du cavalier de configuration

L'illustration représente la position primaire **1**, la position secondaire (ou esclave) **2** et la position sélection-câble **3**. Configurez l'unité de CD-ROM en plaçant le cavalier sur le groupe de broches correspondant au paramétrage que vous avez choisi à l'étape 3. Voir «Etape 3. Sélection du port IDE» à la page 1-17.



- Si vous configurez l'unité de CD-ROM comme périphérique primaire, positionnez le cavalier sur la position maître **1** (c'est la position définie sur l'unité telle qu'elle est livrée). Si un deuxième périphérique est présent sur le port IDE, assurez-vous qu'il est configuré comme périphérique secondaire.
- Si vous configurez l'unité de CD-ROM comme périphérique secondaire, positionnez le cavalier sur la position secondaire **2**. Vérifiez que l'autre périphérique présent sur le port IDE est configuré comme périphérique primaire (ou comme maître-avec-présence-d'un-secondaire).
- Si vous configurez l'unité de CD-ROM en mode sélection-câble, positionnez le cavalier sur la position sélection-câble **3**. Si un autre périphérique est présent sur le port IDE, assurez-vous qu'il a aussi la configuration sélection-câble.

Etape 5. Montage de l'unité dans la baie

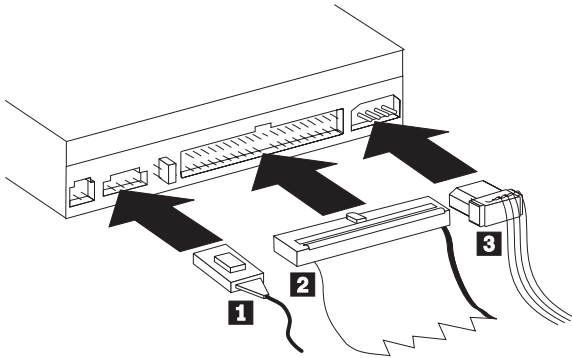
Avertissement : Vérifiez que vous utilisez bien les vis de fixation M3 x 5 mm fournies dans la boîte. L'utilisation de vis trop longues risque d'endommager l'unité.

Vous pouvez monter l'unité de CD-ROM horizontalement ou verticalement dans l'ordinateur. Si vous montez l'unité verticalement, vous devrez positionner le CD en le verrouillant dans l'unité de CD-ROM avant de fermer le plateau, sinon la lecture ne s'effectuera pas. Pour plus de détails sur la façon de placer de manière adéquate vos CD dans une unité montée verticalement, reportez-vous à «Chargement d'un CD» à la page 1-23.

1. Glissez l'unité à l'intérieur de la baie. Votre ordinateur peut nécessiter des procédures spécifiques pour l'installation de périphériques de stockage. Consultez la documentation fournie avec votre ordinateur pour plus de renseignements.
2. Alignez les trous de vis de la baie avec les trous filetés du boîtier de l'unité ou de l'étrier de fixation, puis serrez légèrement les vis afin de vérifier leurs positions. Habituellement, on utilise deux vis de chaque côté.
3. Vérifiez que l'alignement est correct, puis serrez un peu plus les vis afin d'immobiliser l'unité. Ne les serrez pas trop fort.

Etape 6. Raccordement des câbles à l'unité

Raccordez les câbles à l'unité de CD-ROM comme suit.



1. Si vous disposez d'une carte son, examinez les câbles audio fournis et déterminez celui qui s'adapte le mieux au port d'entrée CD audio de votre carte son. Raccordez l'une des extrémités du câble audio choisi au connecteur de sortie audio de l'unité **1**, et l'autre extrémité du câble au port d'entrée CD audio de votre carte son. Conservez l'autre câble au cas où vous utiliseriez une carte son différente à l'avenir.
2. Raccordez le connecteur à 40 broches du câble IDE **2** au connecteur IDE de l'unité. Alignez le câble de sorte que le bord repéré par une couleur se trouve près du connecteur du cordon d'alimentation **3**. Utilisez le câble IDE livré avec ce produit si aucun câble n'est déjà raccordé au port IDE ou s'il n'y a qu'un seul connecteur de périphérique sur le câble IDE.
3. Raccordez un câble d'alimentation à quatre broches **3** au connecteur d'alimentation du périphérique.

Etape 7. Achèvement de l'installation matérielle

1. Vérifiez que l'unité est maintenue solidement et que les connecteurs sont enfoncés correctement.
2. Vérifiez que les câbles ne gênent pas la fermeture du carter de l'ordinateur et ne bloquent pas les pales du ventilateur de l'alimentation ou les grilles d'aération.
3. Réinstallez le carter de l'ordinateur.
4. Raccordez tous les périphériques et vérifiez qu'aucun autre dispositif, tel que le clavier, la souris ou l'écran n'a été malencontreusement déconnecté.
5. Raccordez tous les cordons d'alimentation à leur prise de courant.

Etape 8. Mise à jour de la configuration de votre ordinateur

Après avoir terminé l'installation matérielle, redémarrez votre ordinateur. Généralement, l'écran de configuration apparaît. Si ce n'est pas le cas, consultez la documentation de votre ordinateur pour savoir comment accéder à l'utilitaire de configuration.

Pour examiner les informations de configuration sur la plupart des ordinateurs IBM, appuyez sur la touche F1 au moment du démarrage. Lorsque vous avez terminé, enregistrez les modifications et quittez l'utilitaire de configuration.

Remarque : Certains anciens ordinateurs ne comportant qu'un seul port IDE peuvent ne pas afficher d'informations sur l'unité de CD-ROM lorsque vous affichez les informations de configuration. Vous pouvez malgré tout utiliser l'unité de CD-ROM dans ce cas si vous avez correctement effectué son installation.

Etape 9. Installation des pilotes de périphérique

Cette section contient les instructions d'installation des pilotes de périphérique de l'unité de CD-ROM, selon le système d'exploitation que vous utilisez.

Remarque : Les besoins varient selon l'utilisateur ; les paramètres du pilote de périphérique peuvent être personnalisés en fonction du système d'exploitation employé. Si votre ordinateur ne fonctionne pas correctement avec les paramètres par défaut indiqués dans les instructions d'installation de cette section, consultez l'annexe A, Customizing device driver configuration settings, à la page A-1 pour savoir comment personnaliser les paramètres de configuration de votre pilote de périphérique.

Pilotes de périphérique pour Windows 95, Windows 98, Windows NT, Windows 2000 et Windows Me

Windows 98 et Windows Me détectent automatiquement l'unité de CD-ROM et n'affichent pas d'écran d'installation. Si l'écran d'installation des pilotes apparaît après le démarrage de votre système d'exploitation, suivez les instructions affichées à l'écran pour installer les pilotes de l'unité. Consultez la documentation fournie avec votre système d'exploitation pour plus d'informations.

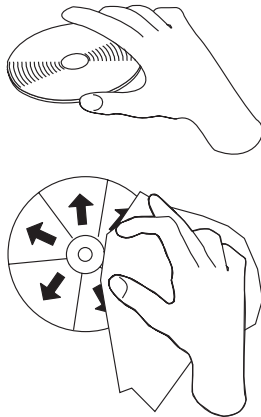
Précautions d'utilisation

Cette section comporte des renseignements sur la manière adéquate de manipuler les CD et d'utiliser votre unité de CD-ROM.

Manipulation des CD

Les CD sont des supports haute densité qui doivent être manipulés avec précaution et ne pas être salis afin de rester lisibles. Ces précautions vous permettront de prolonger la vie de vos CD.

Avertissement : Evitez de nettoyer les CD en effectuant un mouvement circulaire, ce qui risque d'entraîner une perte de données.



- Tenez les CD par le bord ou par leur trou central. Ne touchez pas la surface des CD.
- Pour retirer de la poussière ou des traces de doigts, nettoyez le CD à partir du centre en allant vers les bords avec un chiffon doux non pelucheux.
- N'écrivez pas sur la surface.
- Ne placez pas les CD sous la lumière directe du soleil.
- N'utilisez pas de produits du commerce pour nettoyer vos CD.
- Ne pliez pas les CD.

Précautions d'utilisation de l'unité de CD-ROM

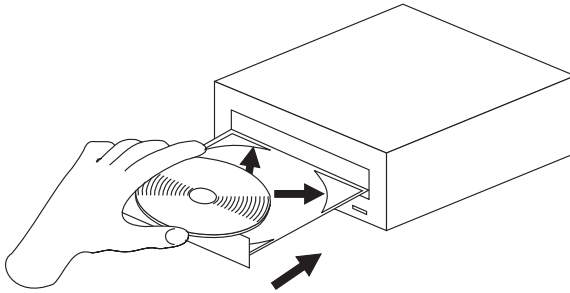
Pour protéger votre unité de CD-ROM en fonctionnement, observez les précautions suivantes.

- Retirez le CD présent dans l'unité avant de déplacer cette dernière.
- N'insérez pas d'objets étrangers dans l'unité.
- Ne retirez pas le couvercle et ne tentez pas de réparer vous-même l'unité.

- Ne faites pas fonctionner l'unité dans l'une des situations suivantes :
 - Température élevée, fort degré d'hygrométrie ou exposition directe aux rayons du soleil
 - Vibration excessive, choc violent ou surface inclinée
 - Environnement très poussiéreux

Chargement d'un CD

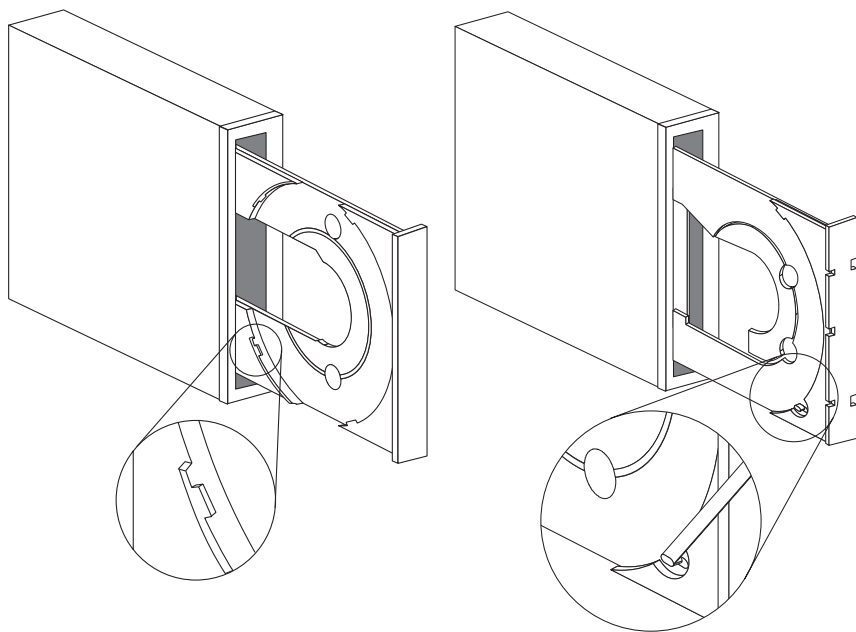
Pour charger un CD dans une unité de CD-ROM montée horizontalement, procédez comme suit :



1. Appuyez sur le bouton Ejection/Chargement. Le plateau sort de l'unité.
2. Posez le CD sur le plateau de chargement en positionnant son étiquette vers le haut.
3. Fermez le plateau de chargement en appuyant sur le bouton Ejection/Chargement, ou en repoussant doucement le plateau.

Avertissement : Ne tentez pas de forcer l'ouverture du plateau ; ne placez pas d'objets étrangers sur le plateau.

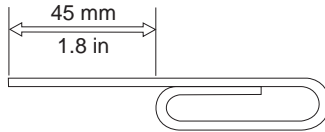
Pour charger un CD dans une unité de CD-ROM montée verticalement, procédez comme suit :



1. Appuyez sur le bouton Ejection/Chargement.
2. Examinez les illustrations et comparez-les avec votre plateau de chargement.
 - Si votre plateau de chargement ressemble à celui de l'illustration de gauche, insérez le CD avec précaution de sorte que les bords du CD soient logés sous les ergots du plateau de chargement. Ces ergots en plastique bloquent les bords du CD et le maintiennent en place. Les ergots sont fixés au plateau et ne peuvent pas être retirés.
 - Si votre plateau de chargement ressemble à celui de l'illustration de droite, insérez le CD dans le plateau et poussez doucement la languette mobile vers l'avant pour maintenir le CD en place.
3. Fermez le plateau de chargement en appuyant sur le bouton Ejection/Chargement, ou en repoussant doucement le plateau.

Ejection manuelle d'un CD

Si vous appuyez sur le bouton Ejection/Chargement et que le plateau ne sort pas, éteignez l'ordinateur. Dépliez un grand trombone, comme le montre l'illustration ci-dessous. L'extrémité dépliée doit s'étendre sur au moins 45 mm. Insérez l'extrémité dépliée dans le trou d'éjection manuelle situé sur la face avant de l'unité (voir «Vue de la face avant de l'unité» à la page 1-15). Poussez le trombone dans le trou jusqu'à ce que le plateau s'ouvre. Tirez doucement le plateau vers vous jusqu'à ce que vous puissiez retirer le CD.



Lecture d'un CD audio

Pour pouvoir lire un CD audio, vous devez disposer d'un programme de lecture de CD audio sur votre ordinateur. Parmi les applications fournies avec Windows 98, Windows Me, Windows NT et Windows 2000 se trouvent des programmes de lecture de CD audio.

Pour plus d'informations sur l'utilisation de votre logiciel de lecture de CD audio, consultez la documentation fournie avec votre système d'exploitation ou votre ordinateur.

Windows 95, Windows 98, Windows NT 4.0, Windows 2000 ou Windows Me

Pour faire fonctionner l'utilitaire audio, procédez comme suit :

1. Mettez votre ordinateur sous tension et démarrez votre système d'exploitation, si ce n'est pas déjà fait.
2. Insérez un CD audio dans l'unité de CD-ROM.
3. La lecture du CD commence. Si le CD n'est pas lu ou si vous avez des problèmes avec la reproduction audio, consultez la documentation fournie avec votre carte son ou votre ordinateur pour obtenir des informations sur la manière de remédier à ce problème.

Utilisation d'un CD de données

Les CD de données peuvent contenir des fichiers de données, des jeux ou des applications.

Windows 95, Windows 98, Windows NT 4.0, Windows 2000 ou Windows Me

Pour lire un CD de données, procédez comme suit :

1. Mettez votre ordinateur sous tension et démarrez votre système d'exploitation, si ce n'est pas déjà fait.
2. Insérez un CD de données dans l'unité de CD-ROM. De nombreux CD de logiciels démarrent automatiquement à ce moment. Si le CD ne démarre pas automatiquement, passez à l'étape 3.
3. Cliquez deux fois sur **Poste de travail**.
4. Vérifiez que l'icône du CD-ROM est affichée.
5. Cliquez deux fois sur l'icône du **CD-ROM**.
6. Vérifiez que la liste des fichiers présents sur le CD apparaît.

Si vous ne pouvez pas sélectionner l'icône du CD-ROM ou afficher les fichiers qu'il renferme, consultez l'annexe B, Problem solving, à la page B-1 ou reportez-vous à l'annexe C, Help and service information, à la page C-1 pour des informations de dépannage.

Parte 1: Instalación y guía del usuario

La unidad de CD ROM IBM® IDE interna 48X-20X puede leer un disco compacto (CD) que contenga aproximadamente 680 MB ¹. Está diseñada para su instalación en un PC que utilice la electrónica de unidades integradas (IDE) o la arquitectura IDE mejorada.

El dispositivo de CD ROM distribuye los datos a una velocidad de hasta 48 veces la de un CD ROM normal, enviando datos a hasta 7200 KB ². La unidad puede leer los discos compactos que se ajustan a los estándares ISO-9660 y High-Sierra Group (HSG). También lee discos multisesión y arquitectura ampliada (XA) como, por ejemplo, los CD de fotografías de Kodak.

Descripción del producto

Además de este manual, el paquete opcional incluye:

- Una unidad de CD ROM IDE interna 48X-20X
- Un cable de audio "Y", un cable de audio
- Cuatro tornillos de montaje (M3 x 5 mm, con ranura)
- Un cable IDE para conectar dos dispositivos IDE
- La guía de seguridad láser para las unidades de CD ROM

Póngase en contacto con el punto de venta si falta algún artículo o si está dañado. Asegúrese de guardar la prueba de compra. Es posible que la necesite para recibir el servicio de garantía.

Puede obtener información acerca de cómo obtener ayuda, soporte técnico y servicio de garantía en el "Apéndice C. Help and service information" en la página C-1. Antes de llamar al soporte técnico, consulte "Apéndice B. Resolución de problemas" en la página B-1.

Antes de empezar

Determine si el sistema satisface los requisitos mínimos; consulte el apartado "Requisitos del sistema" en la página 1-28 para obtener más detalles. Lea la información siguiente antes de empezar con la instalación.

Debe realizar los pasos siguientes para instalar la unidad:

-
1. Un MB representa aproximadamente 1 000 000 de bytes en cuanto a la capacidad de almacenamiento de la información.
 2. Un KB representa aproximadamente 1024 bytes en cuanto a la velocidad de transferencia de datos por segundo.

1. Determine el conector IDE que debe utilizar y los valores de configuración correspondientes.
2. Coloque el puente de configuración en la unidad o cámbielo (y posiblemente realice modificaciones en los puentes de configuración de los otros dispositivos).

Si no entiende estos procedimientos o no está seguro de su habilidad para realizar todos los procedimientos descritos, deje que un técnico cualificado en informática instale el CD ROM.

Requisitos del sistema

Antes de empezar a instalar la unidad, asegúrese de que el sistema satisface los requisitos siguientes.

- Microprocesador mínimo: 80486
- RAM mínima: 4 MB
- Unidad de disquetes de 5,25 pulgadas
- Conexión a IDE disponible
- Conexión a alimentación interna disponible
- Bahía de unidad disponible
- Uno de los sistemas operativos siguientes:
 - Microsoft[®] Windows[®] 95
 - Microsoft Windows[®] 98
 - Microsoft[®] Windows NT[®] 4.0
 - Microsoft Windows 2000 Professional
 - Microsoft Windows Millennium Edition (Me)

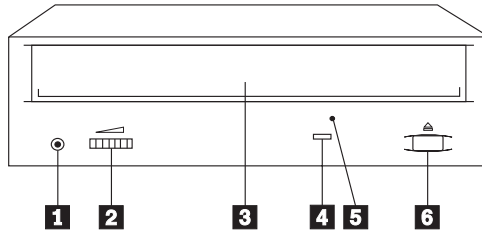
Instrucciones de manipulación

Para proteger el dispositivo durante la instalación, observe las precauciones siguientes:

- Manipule la unidad con cuidado. Si la unidad sufre golpes o caídas, los componentes del interior del alojamiento de la unidad pueden resultar dañados.
- Guarde el dispositivo en la bolsa antiestática hasta que esté preparado para instalar la unidad en el sistema. Limite sus movimientos. El movimiento puede hacer que se cree electricidad estática.
- No fuerce la inserción del cable de alimentación. Si lo hace, podría dañar el conector o la unidad.

Vista frontal de la unidad

Consulte la ilustración para identificar las piezas a las que las instrucciones de instalación pueden hacer referencia.



1 Conector de auriculares. Conecte los auriculares aquí para la salida de audio.

2 Control de volumen. Ajuste este botón para controlar el volumen.

3 Bandeja del CD. Utilice la bandeja del CD para cargar un CD en la unidad.

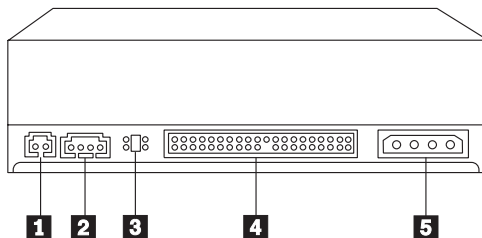
4 Indicador de Ocupado. Esta luz se enciende cuando la unidad lee un CD de datos o reproduce un CD de audio.

5 Orificio para la expulsión manual. Utilícelo para expulsar la bandeja del CD si el botón de ejecución/carga no funciona correctamente.

6 Botón de ejecución/carga. Pulse este botón para abrir o cerrar la bandeja del CD.

Vista posterior de la unidad

Consulte la ilustración para identificar las piezas a las que las instrucciones de instalación pueden hacer referencia.



1 Reservado.

2 Conector de salida de audio. Este conector se utiliza para conectar la unidad de CD ROM a un adaptador de audio.

3 Pines de configuración. La colocación del puente sobre estos pines determina la prioridad de la unidad de CD ROM en el bus IDE.

4 Conector IDE. Se utiliza para conectar la unidad de CD ROM al cable IDE.

5 Conector de corriente continua. Se utiliza para conectar el cable de corriente continua a la unidad de CD ROM.

Instalación de la unidad

Siga estos pasos para instalar la unidad de CD ROM en el sistema.

Paso 1. Apertura del sistema

1. Apague el sistema y todos los dispositivos conectados.
2. Desenchufe los cables de alimentación del sistema y de todos los dispositivos conectados.
3. Extraiga la cubierta del sistema.

Paso 2. Desembalaje de la unidad

1. Antes de abrir la bolsa antiestática en la que la unidad está embalada, acérquela a una superficie de metal sin pintar durante dos segundos como mínimo. Esto atraerá la electricidad estática del paquete y de su cuerpo.
2. Extraiga la unidad de la bolsa antiestática. Si debe colocar la unidad hacia abajo, coloque la bolsa antiestática en una superficie plana acolchada como, por ejemplo, una revista, y coloque la unidad sobre la bolsa antiestática.

Paso 3. Selección del puerto IDE

Los sistemas nuevos suelen tener dos puertos IDE, a cada uno de los cuales pueden conectarse dos dispositivos. Generalmente, el puerto IDE al que está conectada la unidad de disco duro es el puerto IDE primario. El otro puerto IDE es el puerto secundario. El puerto IDE y la posición del cable que seleccione determinarán el valor del puerto de configuración que deberá utilizar para la unidad.

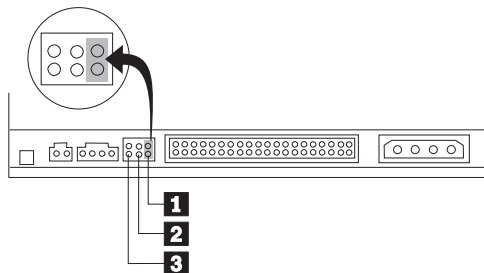
- Si tiene dos puertos IDE, conecte la unidad de CD ROM al puerto IDE secundario de la placa del sistema o del adaptador IDE. Si la unidad de CD ROM es el único dispositivo del puerto IDE secundario, utilice el valor de configuración primario. Si la unidad de CD ROM es el segundo dispositivo del puerto secundario, utilice el valor de configuración secundario.
- Si debe conectar la unidad de CD ROM al puerto IDE primario (el mismo puerto que la unidad de disco duro o algún otro dispositivo rápido), utilice el valor secundario para la unidad de CD ROM y el valor primario para el dispositivo rápido. En algunos casos, es posible que necesite cambiar el valor de configuración de la unidad de disco duro a maestro con secundario presente al conectar un dispositivo secundario al mismo cable. Para obtener

más información sobre cómo definir los puentes de configuración de otros dispositivos, consulte la documentación que acompaña al sistema o al dispositivo en cuestión.

- Algunos sistemas que no son de IBM proporcionan soporte al valor de selección de cable, donde la posición del dispositivo en el cable determina si un dispositivo es primario o secundario. Consulte la documentación que acompaña al sistema para determinar si proporciona soporte a este valor.

Paso 4. Definición del puente de configuración

La ilustración muestra el valor primario **1**, el valor secundario (o esclavo) **2** y el valor de selección de cable **3**. Configure la unidad de CD ROM colocando el puente sobre el conjunto de pins correspondientes al valor que haya seleccionado en el paso 3. Consulte el apartado "Paso 3. Selección del puerto IDE" en la página 1-30.



- Si está configurando el dispositivo de CD ROM como primario, defina el puente en el valor de dispositivo maestro **1**. (Así es como está configurada la unidad cuando se envía). Si hay un segundo dispositivo en el puerto IDE, asegúrese de que esté configurado como secundario.
- Si está configurando el dispositivo de CD ROM como secundario, defina el puente en el valor de dispositivo secundario **2**. Asegúrese de que el otro dispositivo del puerto IDE esté configurado como primario (o primario con secundario presente).
- Si está configurando el dispositivo de CD ROM como selección de cable, defina el puente en el valor de dispositivo **3** de selección de cable. Si hay otro dispositivo en el puerto IDE, asegúrese de que el dispositivo secundario también esté configurado para selección de cable.

Paso 5. Montaje de la unidad en la bahía

Atención: Asegúrese de utilizar el tornillo de montaje M3 x5 mm del paquete opcional. Si utiliza tornillos demasiados largos, la unidad podría dañarse.

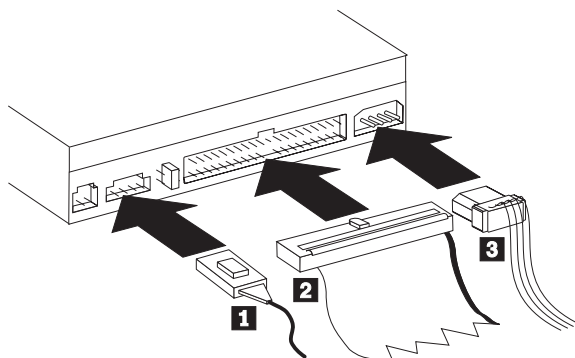
Puede montar la unidad de CD ROM horizontal o verticalmente en el sistema. Si monta la unidad verticalmente, debe fijar los CD que coloque en la unidad antes de cerrar la bandeja de la unidad ya que, si no, la unidad no podrá leer

el CD correctamente. Para obtener instrucciones acerca de cómo asegurar los CD en una unidad montada verticalmente, consulte el apartado "Carga de un CD" en la página 1-35.

1. Deslice la unidad dentro de la bahía. Es posible que el sistema necesite procedimientos específicos para instalar dispositivos de almacenamiento. Consulte la documentación que acompaña al sistema para obtener más información.
2. Alinee los orificios para los tornillos de la bahía de la unidad con los orificios perforados en el alojamiento de la unidad o en la pieza de sujeción de montaje; a continuación, pase los tornillos sin apretarlos para comprobar su posición. Normalmente se utilizan dos tornillos en cada lado.
3. Compruebe que la alineación sea correcta; a continuación, apriete los tornillos para que la unidad quede fijada. No apriete demasiado.

Paso 6. Conexión de los cables a la unidad

Conecte los cables a la unidad de CD ROM de la forma siguiente:



1. Si tiene un adaptador de audio, busque los cables de audio incluidos y determine qué cable se ajusta mejor al puerto de entrada de CD del adaptador de audio. Conecte un extremo del cable de audio seleccionado al conector de salida de audio del dispositivo **1** y el otro extremo al puerto de entrada de audio del CD del adaptador de audio. Guarde el otro cable por si utiliza un adaptador de audio distinto en el futuro.
2. Conecte un conector de cable IDE de 40 pines **2** al conector IDE de la unidad. Alinee el cable de forma que el lado con códigos de color quede más cerca del conector del cable de alimentación **3**. Utilice el cable IDE que se proporciona con esta opción si no hay ningún cable conectado al puerto IDE o si sólo hay un conector de dispositivos en el cable IDE.
3. Conecte un cable de alimentación de 4 pines **3** al conector de corriente continua del dispositivo.

Paso 7. Finalización de la instalación del hardware

1. Asegúrese de que la unidad esté montada de forma segura y de que los conectores estén conectados firmemente.
2. Asegúrese de que los cables no interfieran con la cubierta del sistema y no bloqueen las palas del ventilador de la fuente de alimentación ni las vías de entrada y salida de aire.
3. Vuelva a instalar la cubierta del sistema.
4. Conecte todos los dispositivos de nuevo y compruebe si se ha desconectado algún dispositivo como el teclado, el ratón o el monitor.
5. Conecte todos los cables de alimentación a tomas de corriente.

Paso 8. Actualización de la configuración del sistema

Una vez finalizada la instalación del hardware, vuelva a arrancar el sistema. Normalmente se visualiza la pantalla de información de configuración. Si no se visualiza esta pantalla, busque información en la documentación del sistema acerca de cómo acceder al programa de configuración.

Para ver la información de configuración de la mayor parte de sistemas IBM, pulse el botón F1 durante el arranque. Cuando haya terminado de revisar la información, guarde los cambios y salga.

Nota: Es posible que algunos sistemas más antiguos con un puerto IDE no muestren la información de la unidad de CD ROM cuando repase la información de configuración. En este caso, todavía puede utilizar la unidad de CD ROM si ha completado la instalación correctamente.

Paso 9. Instalación de los controladores de dispositivos

Este apartado contiene las instrucciones para instalar controladores de dispositivos para la unidad de CD ROM, según el sistema operativo que utilice.

Nota: Los requisitos del usuario varían; los valores de los controladores de dispositivos para el sistema operativo no pueden personalizarse. Si el sistema no funciona bien con los valores por omisión proporcionados en las instrucciones de instalación de este apartado, consulte el "Apéndice A. Personalización de los valores de configuración de los controladores de dispositivos" en la página A-1 para obtener información sobre cómo personalizar los valores de configuración de los controladores de dispositivos.

Controlador de dispositivo para Windows 95, Windows 98, Windows NT, Windows 2000 y Windows Me

Windows 98 y Windows Me detectan de forma automática la unidad de CD ROM y no muestran ninguna pantalla de instalación. Si se visualizan las pantallas de instalación después de arrancar el sistema operativo, siga las

instrucciones de la pantalla para instalar los controladores de dispositivos. Consulte la documentación que acompaña al sistema operativo para obtener más información.

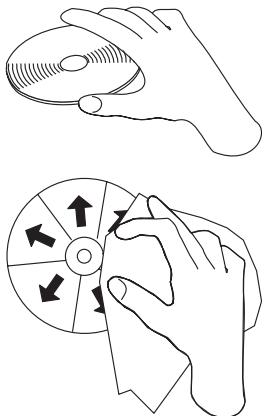
Utilización y cuidado de la unidad

Este apartado incluye instrucciones para el cuidado adecuado de los CD y del funcionamiento de la unidad de CD ROM.

Cuidado de un CD

Los CD son soportes de alta densidad que deben manipularse con cuidado y mantenerse limpios para garantizar que continúen siendo legibles. Estas precauciones le ayudarán a prolongar la vida de los CD.

Atención: Si limpia un CD utilizando un movimiento circular puede producirse una pérdida de datos.



- Aguante el CD por el borde o por el orificio central. No toque la superficie de los datos del CD.
- Para eliminar polvo o huellas, limpie el CD desde el centro hacia el borde con un trapo suave que no deje hilos.
- No escriba sobre la superficie.
- No coloque el CD bajo la luz directa del sol.
- No utilice limpiadores comerciales para limpiar el CD.
- No doble el CD.

Cuidado de la unidad de CD ROM

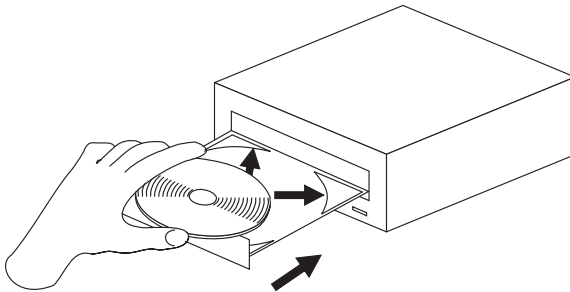
Para proteger la unidad de CD ROM durante su funcionamiento, observe las precauciones siguientes.

- Extraiga un CD de la unidad antes de moverla.

- No inserte objetos extraños en la unidad.
- No extraiga la cubierta de la unidad ni intente repararla.
- No haga funcionar la unidad en las condiciones siguientes:
 - Altas temperaturas, mucha humedad o luz directa del sol
 - Vibraciones excesivas, sacudidas súbitas o superficies inclinadas
 - Polvo excesivo

Carga de un CD

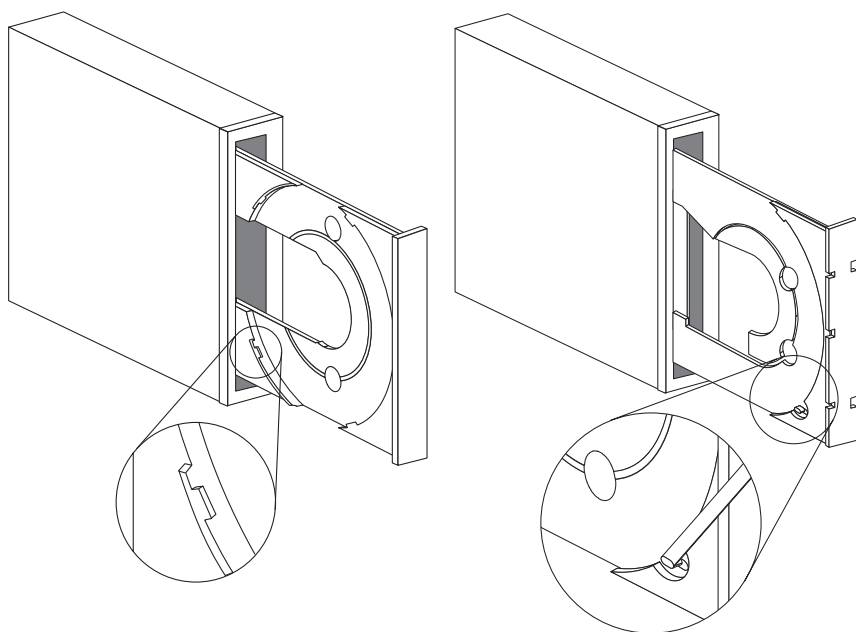
Para cargar un CD en una unidad de CD ROM montada horizontalmente, realice los pasos siguientes:



1. Pulse el botón de expulsión/carga. La bandeja se desliza fuera de la unidad.
2. Inserte el CD en la bandeja de carga con la etiqueta hacia arriba.
3. Cierre la bandeja de carga pulsando el botón de expulsión/carga o empujando la bandeja hacia dentro con suavidad.

Atención: No fuerce la bandeja para abrirla; no inserte objetos extraños en la bandeja del CD.

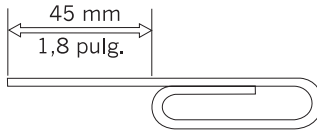
Para cargar un CD en una unidad de CD ROM montada verticalmente, realice los pasos siguientes:



1. Pulse el botón de expulsión/carga.
2. Mire las ilustraciones y compárelas con la bandeja de carga.
 - Si la bandeja de carga se parece a la ilustración de la izquierda, inserte el CD con cuidado de forma que los bordes del CD queden por debajo de las lengüetas de la bandeja de carga. Estas lengüetas de plástico recubren los bordes del CD y lo mantienen en su sitio. Las lengüetas están sujetas a la propia bandeja y no pueden moverse.
 - Si la bandeja de carga se parece a la ilustración de la derecha, inserte el CD en la bandeja y empuje la lengüeta móvil con suavidad hacia fuera para que mantenga el CD en su lugar.
3. Cierre la bandeja de carga pulsando el botón de expulsión/carga o empujando la bandeja hacia dentro con suavidad.

Expulsión de un CD manualmente

Si pulsa el botón de expulsión/carga y la bandeja no se desliza hacia fuera, apague el sistema. Enderece un clip grande para formar una herramienta, como se muestra en la ilustración siguiente. El extremo enderezado debe tener por lo menos 45 mm (1,8"). Inserte el extremo enderezado en el orificio de expulsión manual de la parte frontal de la unidad (consulte el apartado "Vista frontal de la unidad" en la página 1-29). Vaya introduciendo el clip en el orificio hasta que se abra la bandeja. Estire la bandeja hacia fuera con suavidad hasta que pueda extraer el CD.



Reproducción de un CD de audio

Para reproducir un CD de audio, debe tener instalado un programa de audio en el sistema. Entre las aplicaciones de Windows 98, Windows Me, Windows NT y Windows 2000 se incluyen programas de reproducción de CD de audio.

Para obtener más información acerca de cómo utilizar el software para la reproducción del audio, consulte la documentación que se incluye con el sistema operativo o con el sistema.

Windows 95, Windows 98, Windows NT 4.0, Windows 2000 o Windows Me

Para utilizar el programa de utilidad de audio, realice los pasos siguientes:

1. Encienda el sistema y arranque el sistema operativo si todavía no lo ha hecho.
2. Inserte un CD de audio en la unidad de CD ROM.
3. El CD se empezará a oír. Si el CD no empieza a oírse o si tiene problemas con el audio, compruebe la documentación que acompaña al adaptador de audio o al sistema para obtener información sobre la resolución de problemas.

Utilización de un CD de datos

Los CD de datos pueden contener archivos, juegos o aplicaciones.

Windows 95, Windows 98, Windows NT 4.0, Windows 2000 o Windows Me

Para leer un CD de datos, realice los pasos siguientes:

1. Encienda el sistema y arranque el sistema operativo si todavía no lo ha hecho.
2. Inserte un CD de datos en la unidad de CD ROM. Muchos CD de programas empezarán de forma automática en este momento. Si el CD no empieza automáticamente, vaya al paso 3.
3. Pulse dos veces el botón sobre **Mi PC**.
4. Verifique que se visualice el icono de CD ROM.
5. Pulse dos veces el botón sobre el icono **CD ROM**.
6. Verifique que puede ver los archivos del CD.

Si no puede seleccionar el icono de CD ROM o ver los datos, consulte el "Apéndice B. Resolución de problemas" en la página B-1 o el "Apéndice C. Help and service information" en la página C-1 para obtener información sobre cómo repararlo.

Parte 1: Guida per l'utente e all'installazione

L'unità CD-ROM con IDE interno IBM® 48X-20X è in grado di leggere un CD (compact disc) che contiene circa 680 MB¹ di informazioni. Essa è designata per l'installazione relativa ad un elaboratore che utilizza la struttura IDE (integrated drive electronics) o EIDE (enhanced IDE).

L'unità CD-ROM distribuisce i dati sino a 48 volte rispetto alla velocità del CD-ROM standard, distribuendo i dati sino a 7200 KB² al secondo. L'unità legge i CD che soddisfano gli standard ISO-9660 e HSG (High-Sierra Group). Legge anche sessioni multiple, i dischi con struttura estesa (XA), come i CD fotografici Kodak.

Descrizione del prodotto

Oltre a questo manuale, il pacchetto di opzioni include:

- Unità CD-ROM con IDE interno 48X-20X
- Un cavo audio "Y", un cavo audio
- Quattro viti di fissaggio (M3 x 5 mm)
- Un cavo IDE per la connessione di due unità IDE
- Guida relativa alla sicurezza del laser per le unità CD-ROM

Se un componente è mancante o danneggiato, contattare il punto di vendita. Conservare la ricevuta di acquisto. E' possibile usufruire della garanzia.

E' possibile rilevare le informazioni relative all'assistenza tecnica, al supporto tecnico e alla garanzia nella sezione "Appendice C. Informazioni sull'assistenza tecnica" a pagina C-1. Prima di contattare l'assistenza tecnica, consultare la sezione "Appendice B. Risoluzione dei problemi" a pagina B-1.

Prima di iniziare

Determinare se l'elaboratore soddisfa i requisiti minimi; per le informazioni dettagliate, consultare la sezione "Requisiti del sistema" a pagina 1-40. Prima di avviare l'installazione, leggere le seguenti informazioni.

E' necessario completare la seguente procedura per installare l'unità:

1. Determinare il connettore IDE da utilizzare e l'impostazione della configurazione corrispondente.

1. MB equivale circa 1 000 000 byte relativa alla capacità della memoria.

2. KB equivale circa 1024 byte relativi alle velocità di trasferimento dati.

2. Posizionare o modificare il cavallotto di configurazione dell'unità (e possibilmente apportare le modifiche ai cavallotti di configurazione di altre unità).

Se tali procedure non sono state comprese oppure l'utente non è sicuro della propria abilità nell'eseguire tutte le procedure descritte, rivolgersi ad un tecnico qualificato per installare l'unità CD-ROM.

Requisiti del sistema

Prima di installare l'unità, verificare che l'elaboratore soddisfi i seguenti requisiti del sistema.

- Microprocessore minimo: 80486
- Memoria RAM minima: 4 MB
- Unità minidisco da 5,25"
- Connessione IDE disponibile
- Connessione di alimentazione interna disponibile
- Vano dell'unità disponibile
- Uno dei seguenti sistemi operativi:
 - Microsoft[®] Windows[®] 95
 - Microsoft Windows[®] 98
 - Microsoft[®] Windows NT[®] 4.0
 - Microsoft Windows 2000 Professional
 - Microsoft Windows Me (Millennium Edition)

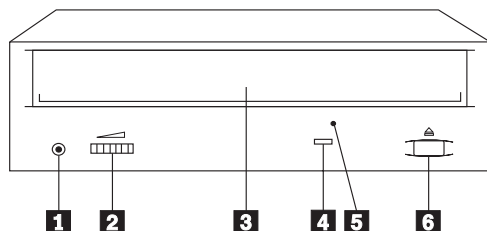
Gestione delle istruzioni

Durante l'installazione, per proteggere l'unità, osservare le seguenti precauzioni:

- Maneggiare l'unità con cura. Il trasporto o la caduta dell'unità può danneggiare i componenti interni.
- Conservare l'unità in un involucro di protezione da elettricità statica fino a quando si desidera installarla nell'elaboratore. Limitare i propri movimenti. Il movimento può generare elettricità statica.
- Non forzare l'inserimento dei cavi di alimentazione. Operando in questo modo, è possibile danneggiare il connettore o l'unità.

Vista anteriore dell'unità

Per individuare le parti che potrebbero fare riferimento alle istruzioni sull'installazione, consultare l'illustrazione.



1 Connettore per cuffie. Per l'emissione audio, collegare le cuffie in questo punto.

2 Controllo del volume. Regolare questa finestra per il controllo di volume.

3 Vassoio CD. Utilizzare il vassoio del CD per caricare un CD nell'unità.

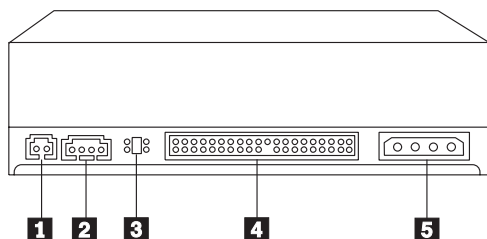
4 Indicatore di segnale occupato. Questo indicatore si accende quando l'unità legge un CD di dati o riproduce un CD audio.

5 Foro di espulsione manuale. Utilizzare tale foro per espellere il vassoio del CD nel caso in cui il pulsante di caricamento/espulsione non funziona correttamente.

6 Pulsante di caricamento/espulsione. Premere tale pulsante per aprire o chiudere il vassoio del CD.

Vista posteriore dell'unità

Per individuare le parti che potrebbero fare riferimento alle istruzioni sull'installazione, consultare l'illustrazione.



1 Riservato.

2 Connettore di emissione audio. Questo connettore viene utilizzato per collegare l'unità CD-ROM ad un adattatore audio.

3 Piedini di configurazione. La posizione del cavallotto su questi piedini determina la priorità dell'unità CD-ROM sul bus IDE.

4 Connettore IDE. Questo connettore viene utilizzato per collegare l'unità CD-ROM al cavo IDE.

5 Connettore di alimentazione DC. Tale connettore viene utilizzato per collegare il cavo di alimentazione dc all'unità CD-ROM.

Installazione dell'unità

Per installare l'unità CD-ROM, seguire tale procedura.

Passo 1. Apertura dell'elaboratore

1. Spegner l'elaboratore e tutte le unità collegate.
2. Scollegare i cavi di alimentazione dell'elaboratore e di tutte le periferiche collegate.
3. Rimuovere il coperchio dall'elaboratore.

Passo 2. Disimballaggio dell'unità

1. Prima di aprire l'imballo antistatico in cui è contenuta l'unità, metterlo in contatto con una superficie metallica per almeno due secondi. In questo modo, si riduce l'elettricità statica presente nell'involucro di protezione e nel proprio corpo.
2. Rimuovere l'unità dall'imballo di protezione da elettricità statica. Se è necessario poggiare l'unità, posizionare l'imballo antistatico su una superficie piana, come una rivista e posizionare l'unità sull'imballo antistatico.

Passo 3. Selezionare la porta IDE

Di solito, gli elaboratori nuovi dispongono di due porte IDE, ognuna delle quali è in grado di supportare due unità. Di solito, la porta IDE su cui viene collegata l'unità disco fisso è la porta IDE primaria. L'altra porta IDE è la porta secondaria. La porta IDE e la posizione del cavo selezionata determinano l'impostazione del cavallotto di configurazione utilizzata per l'unità.

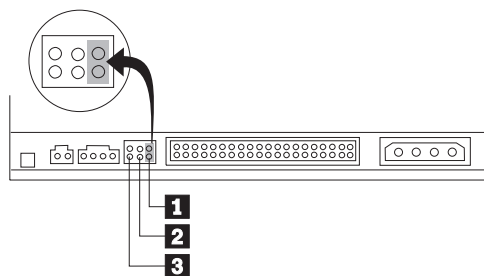
- Se si dispone di due porte IDE, collegare l'unità CD-ROM alla porta IDE secondaria della scheda di sistema o dell'adattatore IDE. Se l'unità CD-ROM è l'unica unità della porta IDE secondaria, utilizzare l'impostazione di configurazione primaria. Se l'unità CD-ROM è la seconda unità della porta secondaria, utilizzare l'impostazione di configurazione secondaria.
- Se è necessario collegare l'unità CD-ROM alla porta IDE primaria (la stessa porta dell'unità disco fisso o di un'altra unità veloce), utilizzare l'impostazione secondaria per l'unità CD-ROM e l'impostazione primaria per l'unità più veloce. In alcuni esempi, potrebbe essere necessario modificare

l'impostazione di configurazione dell'unità disco fisso come impostazione secondaria insieme a quella principale, quando viene collegata un'unità secondaria sullo stesso cavo. Per ulteriori informazioni sull'impostazione dei cavallotti di configurazione su altre unità, consultare la documentazione fornita con l'elaboratore oppure con l'unità in uso.

- Alcuni elaboratori non IBM supportano l'impostazione di selezione del cavo, dove la posizione dell'unità del cavo determina se un'unità è primaria o secondaria. Per determinare se l'elaboratore supporta tale impostazione, consultare la documentazione fornita con l'elaboratore.

Passo 4. Impostazione del cavallotto di configurazione

La figura illustra l'impostazione **1** primaria, l'impostazione **2** secondaria e l'impostazione **3** di selezione del cavo. Configurare l'unità CD-ROM posizionando il cavallotto sulla serie di piedini corrispondenti all'impostazione selezionata nel Passo 3. Consultare la sezione "Passo 3. Selezionare la porta IDE" a pagina 1-42.



- Se si configura l'unità CD-ROM come primaria, impostare il cavallotto come impostazione dell'unità **1** primaria. Questa modalità è il modo in cui viene impostata l'unità quando viene fornita. Se è presente una seconda unità sulla porta IDE, verificare che l'unità sia configurata come secondaria.
- Se si configura l'unità CD-ROM come secondaria, impostare il cavallotto come impostazione dell'unità **2** secondaria. Verificare che l'altra unità della porta IDE sia configurata come primaria (oppure impostazione secondaria insieme a quella primaria).
- Se si configura l'unità CD-ROM come selezione del cavo, impostare il cavallotto come impostazione dell'unità **3** di selezione del cavo. Se è presente un'altra unità sulla porta IDE, verificare che la seconda unità sia configurata come selezione del cavo.

Passo 5. Fissaggio dell'unità nel vano

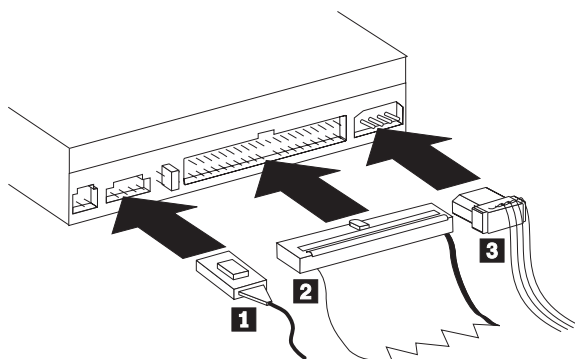
Avvertenza: Utilizzare la vite di fissaggio da M3 x5 mm fornita nel pacchetto di opzione. L'utilizzo delle viti troppo lunghe potrebbe danneggiare l'unità

E' possibile fissare l'unità CD-ROM orizzontalmente o verticalmente. Se si fissa l'unità verticalmente, è necessario collegare i CD, inseriti nell'unità, prima di chiudere il vassoio dell'unità o l'unità CD-ROM non riesce a leggere il CD correttamente. Per ulteriori istruzioni sul fissaggio dei CD in un'unità fissata verticalmente, consultare la sezione "Caricamento di un CD" a pagina 1-48.

1. Far scorrere l'unità nel vano. L'elaboratore potrebbe disporre di specifiche procedure richieste per l'installazione delle unità di memoria. Per ulteriori istruzioni, consultare la documentazione fornita con l'elaboratore.
2. Allineare i fori delle viti tra il vano e l'unità con i fori filettati del supporto di fissaggio o dell'alloggiamento dell'unità; quindi inserire le viti per verificare le relative posizioni. Di solito, due viti vengono utilizzate su ciascun lato.
3. Verificare che l'allineamento sia corretto; quindi serrare le viti per fissare l'unità. Non serrare eccessivamente.

Passo 6. Collegamento dei cavi all'unità

Collegare i cavi all'unità CD-ROM come segue.



1. Se si dispone di un adattatore audio, individuare i cavi audio inclusi e determinare il cavo che si adatta in modo migliore alla porta di immissione audio CD dell'adattatore audio. Collegare un'estremità del cavo audio selezionato al connettore di emissione audio dell'unità **1** e l'altra estremità del cavo alla porta di immissione audio CD dell'adattatore audio. Conservare l'altro cavo nel caso in cui viene utilizzato un adattatore audio diverso in futuro.
2. Collegare un connettore di cavo IDE a 40 piedini **2** al connettore IDE sull'unità. Allineare il cavo in modo tale che il margine colorato sia più vicino al connettore del cavo di alimentazione **3**. Utilizzare il cavo IDE fornito con questa opzione se non è presente alcun cavo collegato alla porta IDE oppure se è presente solo un connettore dell'unità sul cavo IDE dell'elaboratore.

3. Collegare un cavo di alimentazione a quattro piedini **3** al connettore di alimentazione dc dell'unità.

Passo 7. Completamento dell'installazione dell'hardware

1. Verificare che l'unità sia fissata correttamente e che i connettori siano collegati correttamente.
2. Verificare che i cavi no intralcino il coperchio dell'elaboratore e che non blocchino la ventola dell'alimentatore o il canale del flusso d'aria.
3. Reinstallare il coperchio dell'elaboratore.
4. Ricollegare tutte le unità e verificare qualsiasi unità che potrebbe essere scollegata, come la tastiera, il mouse ed il video.
5. Collegare tutti i cavi di alimentazione alle prese elettriche.

Passo 8. Aggiornamento della configurazione dell'elaboratore

Una volta terminata l'installazione dell'hardware, riavviare l'elaboratore. Di solito, vengono visualizzate le informazioni relative all'impostazione e alla configurazione. Se tale pannello non viene visualizzato, per le informazioni relative all'accesso del programma per l'impostazione o per la configurazione, consultare la documentazione dell'elaboratore.

Per visualizzare le informazioni di configurazione relative alla maggior parte degli elaboratori IBM, premere il pulsante F1 durante l'avvio. Una volta terminata la visualizzazione delle informazioni, salvare le modifiche apportate ed uscire.

Nota: E' possibile che alcuni elaboratori vecchi, dotati di una porta IDE, non visualizzino le informazioni relative all'unità CD-ROM, quando vengono visualizzate di nuovo le informazioni di impostazione e di configurazione. Se l'installazione è stata completata correttamente è anche possibile utilizzare l'unità CD-ROM.

Passo 9. Installazione dei driver di periferica

Questa sezione contiene le istruzioni relative all'installazione dei driver di periferica dell'unità CD-ROM, in base al sistema operativo in uso.

Nota: I requisiti dell'utente variano; è possibile personalizzare le impostazioni dei driver di periferica del sistema operativo in uso. Se l'elaboratore non funziona con le impostazioni predefinite, fornite dalle istruzioni sull'installazione in questa sezione, consultare la sezione "Appendice A. Personalizzazione delle impostazioni di configurazione dei driver di periferica" a pagina A-1 per le informazioni sulla personalizzazione delle impostazioni di configurazione dei driver di periferica.

Driver di periferica per Windows 95, Windows 98, Windows NT, Windows 2000 e Windows Me

I sistemi operativi Windows 98 e Windows Me rilevano automaticamente l'unità CD-ROM e non visualizzano alcun pannello di installazione. Se i pannelli di installazione del driver vengono visualizzati dopo l'avvio del sistema operativo, seguire le istruzioni visualizzate per installare i driver di periferica. Per ulteriori informazioni, consultare la documentazione fornita con il sistema operativo in uso.

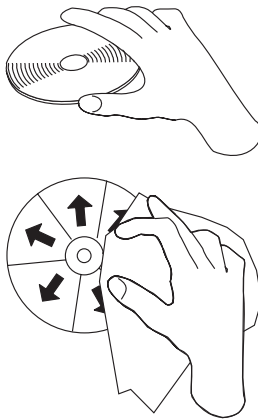
Utilizzo e manutenzione dell'unità

Questa sezione comprende le istruzioni relative alla manutenzione corretta dei CD e al funzionamento dell'unità CD-ROM.

Manutenzione di un CD

I CD sono strumenti a densità elevata che devono essere gestiti con cura e pulizia appropriata in modo da essere leggibili. Tali precauzioni consentono di prolungare la durata dei CD.

Avvertenza: Non passare il panno sulla superficie del CD facendo dei movimenti circolari perché ciò potrebbe danneggiare i dati in modo irreversibile.



- Afferrare il CD per le estremità o per il foro centrale. Non toccare la superficie dei dati del CD.
- Per rimuovere la polvere o le impronte, passare un panno morbido e pulito dall'interno verso l'esterno del CD.
- Non scrivere sulla superficie.
- Non collocare il CD alla luce diretta del sole.
- Per pulire il CD, non utilizzare prodotti per la pulizia.
- Non curvare il CD.

Manutenzione dell'unità CD-ROM

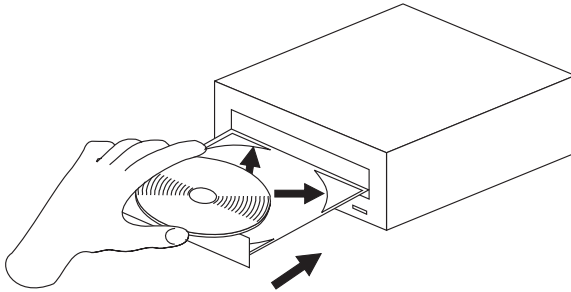
Durante il funzionamento, per proteggere l'unità CD-ROM osservare le seguenti precauzioni:

- Rimuovere un CD dall'unità prima di spostare l'unità.
- Non inserire oggetti esterni nell'unità.
- Non rimuovere il coperchio dell'unità o tentare di effettuare assistenza sull'unità.

- Non utilizzare l'unità nelle seguenti condizioni:
 - Temperatura elevata, umidità elevata o luce diretta del sole
 - Vibrazioni eccessive, urti improvvisi o superficie inclinata
 - Polvere eccessiva

Caricamento di un CD

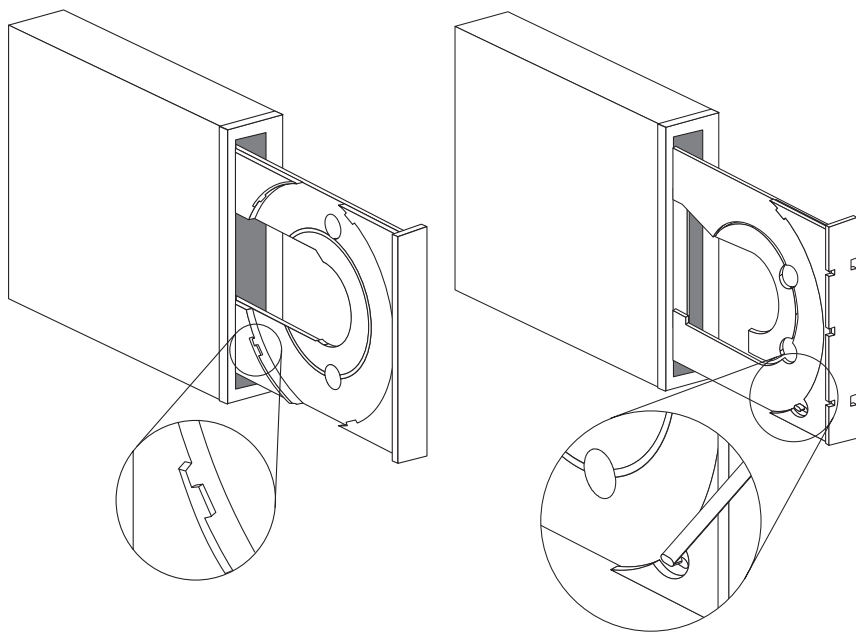
Per caricare un CD in un'unità CD-ROM fissata orizzontalmente, procedere nel modo seguente:



1. Premere il pulsante di espulsione/caricamento. Il vassoio viene estratto dall'unità.
2. Inserire il CD nel vassoio di caricamento con l'etichetta rivolta verso l'alto.
3. Chiudere il vassoio di caricamento premendo il pulsante di espulsione/caricamento oppure esercitando una leggera pressione sul vassoio verso l'interno dell'unità.

Avvertenza: Non estrarre con forza il vassoio; non inserire oggetti esterni nel vassoio del CD.

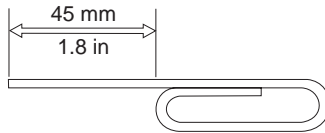
Per caricare un CD in un'unità CD-ROM fissata verticalmente, procedere nel modo seguente:



1. Premere il pulsante di espulsione/caricamento.
2. Consultare le illustrazioni e confrontarle con il vassoio di caricamento in uso.
 - Se il vassoio di caricamento è simile all'illustrazione a sinistra, inserire il CD con attenzione, in modo che i bordi del CD siano posizionati al di sotto della linguetta del vassoio di caricamento. Queste linguette di plastica coprono i bordi del CD e lo posizionano correttamente. Le linguette sono collegate al vassoio e non è possibile spostarle.
 - Se il vassoio di caricamento è simile all'illustrazione a destra, inserire il CD nel vassoio ed premere leggermente sulla linguetta in avanti per posizionare il CD correttamente.
3. Chiudere il vassoio di caricamento premendo il pulsante di espulsione/caricamento oppure esercitando una leggera pressione sul vassoio verso l'interno dell'unità.

Espulsione manuale di un CD

Se viene premuto il pulsante di espulsione/caricamento ed il vassoio non viene estratto, spegnere l'elaboratore. Raddrizzare la graffetta per la carta per formare uno strumento, come riportato nella figura seguente. L'estremità di una graffetta deve essere di almeno 45 mm. Inserire l'estremità estesa nel foro di espulsione manuale, posto sulla parte anteriore dell'unità (consultare la sezione "Vista anteriore dell'unità" a pagina 1-41). Premere la graffetta per la carta nel foro fino a quando viene aperto il vassoio. Estrarre il vassoio delicatamente fino a quando è possibile rimuovere il CD.



Riproduzione di un CD audio

Per riprodurre un CD audio, è necessario disporre di un programma audio CD installato sull'elaboratore. Le applicazioni di Windows 98, Windows Me, Windows NT e Windows 2000 comprendono i programmi di riproduzione di CD audio.

Per ulteriori informazioni sull'utilizzo del software di riproduzione audio, consultare la documentazione fornita con il sistema operativo o con l'elaboratore.

Windows 95, Windows 98, Windows NT 4.0, Windows 2000 o Windows Me

Per utilizzare il programma di utilità audio, procedere nel modo seguente:

1. Accendere l'elaboratore ed avviare il sistema operativo.
2. Inserire un CD audio nell'unità CD-ROM.
3. La riproduzione del CD inizia. Se il CD non avvia la riproduzione oppure se si verificano problemi con l'audio, per le informazioni sulla risoluzione dei problemi, consultare la documentazione fornita con l'adattatore audio o l'elaboratore.

Utilizzo di un CD dati

E' possibile che i CD dati contengano i file di dati, giochi o applicazioni.

Windows 95, Windows 98, Windows NT 4.0, Windows 2000 o Windows Me

Per leggere un CD dati, procedere nel modo seguente:

1. Accendere l'elaboratore ed avviare il sistema operativo.
2. Inserire un CD dati nell'unità CD-ROM. Diversi CD di programma vengono avviati automaticamente. Se il CD non viene avviato automaticamente, andare al passo 3.
3. Fare doppio clic su **Risorse del computer**.
4. Verificare che sia visualizzata l'icona CD-ROM.
5. Fare doppio clic sull'icona **CD-ROM**.
6. Verificare che sia possibile visualizzare i file sul CD.

Se non si è in grado di selezionare l'icona CD-ROM oppure visualizzare i dati, per le informazioni sull'assistenza tecnica, consultare la sezione "Appendice B. Risoluzione dei problemi" a pagina B-1 o "Appendice C. Informazioni sull'assistenza tecnica" a pagina C-1.

Parte 1: Instalação e Guia do Usuário

A Unidade de Disco de CD-ROM IDE Interna IBM® 48X-20X pode ler um disco compacto (CD) contendo aproximadamente 680 MB¹ de informações. Ela foi projetada para ser instalada em um computador pessoal que utiliza a arquitetura IDE (Integrated Drive Electronics) ou EIDE (Enhanced Integrated Drive Electronics) avançada.

O dispositivo de CD-ROM fornece dados até 48 vezes a velocidade do CD-ROM padrão, fornecendo dados em até 7200 KB² por segundo. A unidade lê discos compactos que atendem aos padrões ISO-9660 e High-Sierra Group (HSG). Ela também lê discos de múltiplas sessões de arquitetura estendida (XA), como o Kodak Photo CD.

Descrição do Produto

Além deste manual, o pacote de opcionais inclui:

- Unidade de Disco de CD-ROM IDE Interna 48X-20X
- U cabo de áudio “Y” e um cabo de áudio
- Quatro parafusos de montagem (M3 x 5 mm, para slot)
- Um cabo IDE para a conexão de dois dispositivos IDE
- Guia de Segurança do Laser para unidades de CD-ROM

Entre em contato com o fornecedor se algum item estiver faltando ou danificado. Certifique-se de guardar o comprovante de compra. Ele pode ser necessário para a solicitação do serviço de garantia.

Você pode localizar mais informações sobre como obter auxílio, suporte técnico e serviço de garantia no “Apêndice C. Informações de Auxílio e Serviços” na página C-1. Antes de ligar para o suporte técnico, consulte o “Apêndice B. Resolução de Problemas” na página B-1.

Antes de Começar

Determine se o computador atende aos requisitos mínimos; consulte “Requisitos do Sistema” na página 1-54 para obter detalhes. Leia as seguintes informações antes de começar a instalação.

-
1. MB equivale aproximadamente a 1 000 000 bytes quando refere-se à capacidade de armazenamento
 2. KB equivale aproximadamente a 1024 bytes quando refere-se a velocidades de transferência de dados

Você deve concluir as seguintes etapas para instalar a unidade:

1. Determine qual conector IDE utilizará e a definição de configuração correspondente.
2. Posicione o jumper de configuração na unidade ou altere-o (e possivelmente faça alterações nos jumpers de configuração de outros dispositivos).

Se não entender esses procedimentos ou não tiver certeza sobre sua habilidade em executar todos os procedimentos descritos, peça a um técnico de computador qualificado que instale sua unidade de CD-ROM.

Requisitos do Sistema

Antes de começar a instalar a unidade, assegure-se de que o computador atenda aos seguintes requisitos do sistema.

- Microprocessador mínimo: 80486
- Quantidade mínima de RAM: 4 MB
- Unidade de disquete de 5,25 pol.
- Conexão IDE disponível
- Conexão de alimentação interna disponível
- Compartimento de unidade disponível
- Um dos seguintes sistemas operacionais:
 - Microsoft[®] Windows[®] 95
 - Microsoft Windows[®] 98
 - Microsoft[®] Windows NT[®] 4.0
 - Microsoft Windows 2000 Professional
 - Microsoft Windows Millennium Edition (Me)

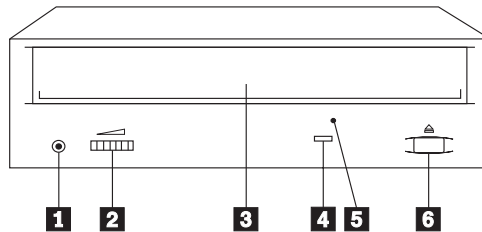
Instruções de Manuseio

Para proteger o dispositivo durante a instalação, observe as seguintes precauções:

- Manuseie a unidade com cuidado. Soltar ou balançar a unidade poderá fazer com que os componentes dentro do invólucro da unidade sejam danificados.
- Mantenha o dispositivo em sua bolsa antiestática até o momento de instalação da unidade no computador. Limite seus movimentos. Eles podem causar acúmulo de eletricidade estática.
- Não force a inserção do cabo de alimentação. Isso pode danificar o conector ou a unidade.

Vista Frontal da Unidade

Consulte a ilustração para identificar as partes que podem ser mencionadas nas instruções de instalação.



1 Tomada do fone de ouvido. Conecte os fones de ouvido nessa tomada para a saída de áudio.

2 Controle de volume. Ajuste esse indicador para controlar o volume.

3 Bandeja de CD. Utilize a bandeja de CD para carregar um CD na unidade.

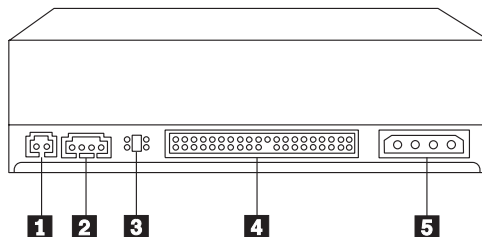
4 Indicador de ocupado. Essa luz acende quando a unidade lê um CD de dados ou reproduz um CD de áudio.

5 Orifício de ejeção manual. Utilize-o para ejetar a bandeja de CD se o botão Ejetar/Carregar não estiver operando corretamente.

6 Botão Ejetar/Carregar. Pressione esse botão para abrir ou fechar a bandeja de CD.

Vista Posterior da Unidade

Consulte a ilustração para identificar as partes que podem ser mencionadas nas instruções de instalação.



1 Reservado.

2 Conector de saída de áudio. Esse conector é utilizado para conectar a unidade de CD-ROM a uma placa de áudio.

3 Pinos de configuração. O posicionamento dos jumpers nesses pinos determina a prioridade da unidade de CD-ROM no barramento IDE.

4 Conector IDE. Esse conector é utilizado para conectar a unidade de CD-ROM ao cabo IDE.

5 Conector de alimentação CC. Esse conector é utilizado para conectar o cabo de alimentação CC à unidade de CD-ROM.

Instalando a Unidade

Siga estas etapas para instalar a unidade de CD-ROM no computador.

Etapa 1. Abrindo o Computador

1. Desligue o computador e todos os dispositivos conectados.
2. Desconecte os cabos de alimentação do computador e de todos os dispositivos conectados.
3. Remova a tampa do computador.

Etapa 2. Desembalando a Unidade

1. Antes de abrir a bolsa antiestática na qual a unidade vem embalada, encoste a bolsa em uma superfície de metal não-pintada por pelo menos dois segundos. Isso drenará a eletricidade estática da embalagem e de seu corpo.
2. Retire a unidade da bolsa. Se você precisar retirar a unidade da bolsa, ponha a bolsa antiestática sobre uma superfície plana e revestida, como uma revista, e coloque a unidade sobre a bolsa antiestática.

Etapa 3. Selecionando a Porta IDE

Os computadores mais novos têm geralmente duas portas IDE e cada uma pode suportar dois dispositivos. Em geral, a porta IDE à qual a unidade de disco rígido está conectada é a porta IDE primária. A outra porta IDE é a porta secundária. A porta IDE e a posição do cabo selecionada determinam qual posicionamento do jumper de configuração é utilizado para a unidade.

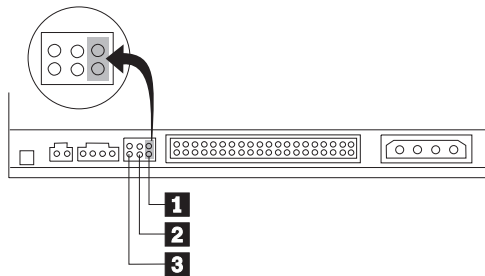
- Se houver duas portas IDE, conecte a unidade de CD-ROM à porta IDE secundária na placa de sistema ou na placa IDE. Se a unidade de CD-ROM for o único dispositivo na porta IDE secundária, utilize a definição de configuração primária. Se a unidade de CD-ROM for o segundo dispositivo na porta secundária, utilize a definição de configuração secundária.
- Se você precisar conectar a unidade de CD-ROM à porta IDE primária (a mesma porta da unidade de disco rígido ou de outro dispositivo veloz), utilize a definição secundária para a unidade de CD-ROM e a definição primária para o dispositivo mais veloz. Em alguns casos, pode ser necessário alterar a definição de configuração da unidade de disco rígido para mestre

com secundário presente, ao conectar um dispositivo secundário no mesmo cabo. Para obter mais informações sobre o posicionamento dos jumpers de configuração em outros dispositivos, consulte a documentação que acompanha o computador ou o dispositivo em questão.

- Alguns computadores não-IBM suportam a definição seleção de cabo, na qual a posição do dispositivo no cabo determina se um dispositivo é primário ou secundário. Consulte a documentação que acompanha o computador para determinar se ele suporta essa definição.

Etapa 4. Definindo o Jumper de Configuração

A ilustração mostra a definição «1» primária, a definição «2» secundária (ou escravo) e a definição «3» seleção de cabo. Configure a unidade de CD-ROM, colocando o jumper sobre o conjunto de pinos correspondentes à definição escolhida na Etapa 3. Consulte a “ Etapa3. Seleccionando a Porta IDE” na página 1-4.



- Se estiver configurando a unidade de CD-ROM como primária, defina o jumper para o dispositivo **1** mestre. (Essa é a forma como a unidade é vem definida.) Se houver um segundo dispositivo na porta IDE, certifique-se de ele esteja configurado como secundário.
- Se estiver configurando a unidade de CD-ROM como secundária, defina o jumper para o dispositivo **2** secundário. Certifique-se de que o outro dispositivo na porta IDE esteja configurado como primário (ou primário com secundário presente).
- Se estiver configurando a unidade de CD-ROM como seleção de cabo, defina o jumper para o dispositivo **3** seleção de cabo. Se houver outro dispositivo na porta IDE, certifique-se de que o dispositivo secundário também esteja configurado para seleção de cabo.

Etapa 5. Montando a Unidade no Compartimento

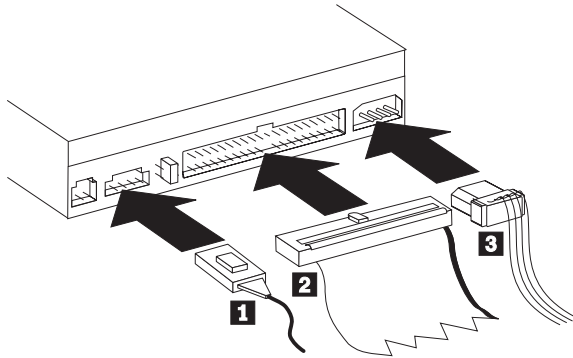
Aviso: Assegure-se de utilizar o parafuso de montagem M3 x 5 mm incluído no pacote de opcionais. O uso de parafusos muito longos pode danificar a unidade.

Você pode montar a unidade de CD-ROM no computador na posição horizontal ou vertical. Se montá-la na posição vertical, será necessário prender os CDs que forem colocados na unidade antes de a bandeja da unidade ser fechada ou a unidade de CD-ROM não poderá ler o CD corretamente. Para obter mais instruções sobre como prender os CDs em uma unidade montada na posição vertical, vá para “Carregando um CD” na página 1-62.

1. Deslize a unidade para dentro do compartimento. O computador poderá ter procedimentos específicos requeridos para instalação de dispositivos de armazenamento. Consulte a documentação que acompanha o computador para obter instruções adicionais.
2. Alinhe os orifícios de parafusos do compartimento de unidade com os orifícios alinhados no invólucro da unidade ou no suporte de montagem; então rosqueie levemente os parafusos para verificar suas posições. Normalmente, são utilizados dois parafusos de cada lado.
3. Verifique se o alinhamento está correto; em seguida, aperte os parafusos para prender a unidade. Não os aperte em excesso.

Etapa 6. Conectando os Cabos à Unidade

Conecte os cabos à unidade de CD-ROM, conforme segue.



1. Se você tiver uma placa de áudio, localize os cabos de áudio incluídos e determine qual cabo se encaixa melhor na porta de entrada de áudio do CD na placa de áudio. Conecte uma extremidade do cabo de áudio selecionado ao conector de saída de áudio do dispositivo **1** e a outra extremidade à porta de entrada de áudio do CD da placa de áudio. Guarde o outro cabo caso utilize uma placa de áudio diferente no futuro.
2. Conecte um conector de cabo IDE de 40 pinos **2** ao conector IDE da unidade. Alinhe o cabo de maneira que a borda codificada por cor fique mais próxima ao conector do cabo de alimentação **3**. Utilize o cabo IDE fornecido com este opcional, se não houver nenhum cabo conectado à porta IDE ou se houver apenas um conector de dispositivo no cabo IDE.
3. Conecte um cabo de alimentação de quatro pinos **3** ao conector de alimentação CC do dispositivo.

Etapa 7. Concluindo a Instalação do Hardware

1. Assegure-se de que a unidade esteja montada firmemente e de que os conectores também estejam conectados firmemente.
2. Assegure-se de que os cabos não interfiram na tampa do computador nem bloqueiem o caminho das lâminas do ventilador da fonte de alimentação ou o caminho do fluxo de ar.
3. Instale novamente a tampa do computador.
4. Reconecte todos os dispositivos e verifique todos aqueles que possam ter ficado desconectados, como teclado, mouse e monitor.
5. Conecte todos os cabos de alimentação às tomadas elétricas.

Step 8. Atualizando a Configuração do Computador

Depois de ter concluído a instalação do hardware, reinicie o computador. Normalmente, a tela de informações de configuração/instalação é exibida. Se

isso não ocorrer, verifique a documentação do computador para obter informações sobre como acessar o programa utilitário de configuração ou instalação.

Para ver as informações de configuração da maioria dos computadores IBM, pressione o botão F1 durante a inicialização. Quando terminar de rever as informações, salve as alterações e saia.

Nota: Alguns computadores mais antigos com uma porta IDE podem não exibir as informações da unidade de CD-ROM, durante a revisão das informações de configuração/instalação. Ainda é possível utilizar a unidade de CD-ROM nessa situação, se você tiver concluído corretamente a instalação.

Etapa 9. Instalando Drivers de Dispositivo

Esta seção contém as instruções de instalação de drivers de dispositivo para a unidade de CD-ROM, com base no sistema operacional que você está utilizando.

Nota: Os requisitos do usuário variam; as definições do driver de dispositivo para o sistema operacional podem ser personalizadas. Se o computador não funcionar bem com as definições padrão fornecidas nas instruções de instalação nesta seção, consulte o “Apêndice A. Personalizando Definições de Configuração do Driver de Dispositivo” na página A-1 para obter informações sobre como personalizar as definições de configuração do driver de dispositivo.

Driver de Dispositivo para Windows 95, Windows 98, Windows NT, Windows 2000 e Windows Me

O Windows 98 e o Windows Me detectam automaticamente a unidade de CD-ROM e não apresentam nenhuma tela de instalação. Se as telas de instalação do driver forem exibidas após o início do sistema operacional, siga as instruções na tela para instalar os drivers de dispositivo. Consulte a documentação que acompanha o sistema operacional para obter mais informações.

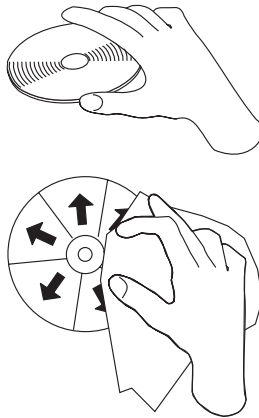
Utilização e Cuidados com a Unidade

Esta seção inclui instruções sobre o cuidado adequado com os CDs e sobre o cuidado e a operação da unidade de CD-ROM.

Cuidando de um CD

CDs são mídias de alta densidade que devem ser manuseadas com cuidado e mantidas limpas para garantir que permaneçam legíveis. As seguintes precauções ajudam a prolongar a vida útil dos CDs.

Aviso: Limpar um CD com um movimento circular pode causar perda de dados.



- Segure o CD nas bordas ou no orifício central. Não toque em sua superfície de dados.
- Para remover poeira ou digitais, limpe o CD do centro para a borda com um pano macio e sem fiapos.
- Não escreva na superfície.
- Não exponha o CD à luz direta do sol.
- Não utilize produtos de limpeza comerciais para limpar o CD.
- Não entorte o CD.

Cuidados com a Unidade de CD-ROM

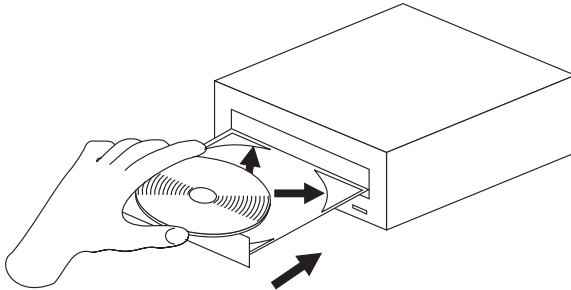
Para proteger a unidade de CD-ROM durante a operação, observe as precauções a seguir:

- Remova um CD da unidade antes de mover a unidade.
- Não insira objetos estranhos na unidade.
- Não remova a tampa da unidade ou tente fazer reparos nela.
- Não opere a unidade sob quaisquer uma das seguintes condições:

- Temperatura alta, umidade alta ou luz direta do sol
- Vibração excessiva, choque repentino ou superfície inclinada
- Poeira excessiva

Carregando um CD

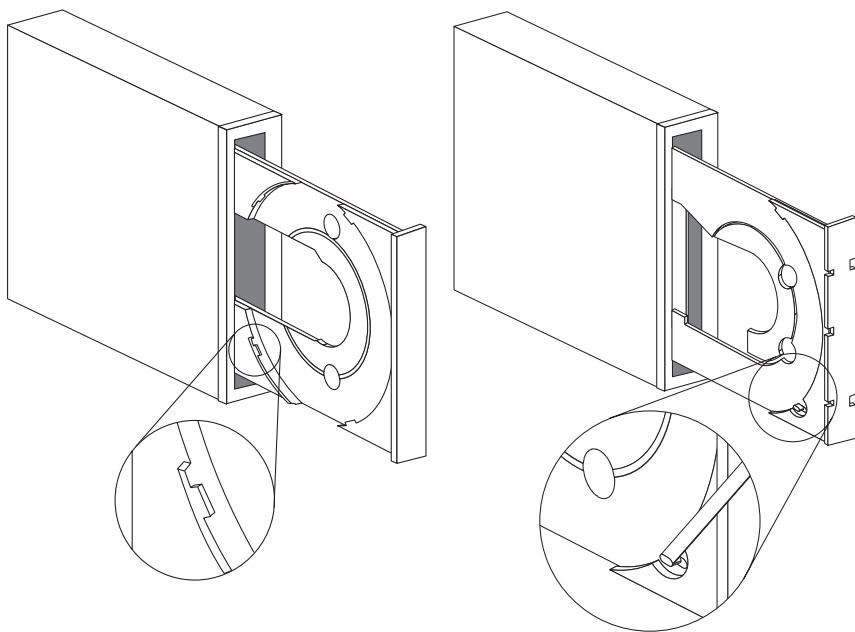
Para carregar um CD em uma unidade de CD-ROM montada na posição horizontal, faça o seguinte:



1. Pressione o botão Ejetar/Carregar. A bandeja desliza para fora da unidade.
2. Insira o CD na bandeja de carregamento com a etiqueta voltada para cima.
3. Feche a bandeja de carregamento pressionando o botão Ejetar/Carregar ou empurrando cuidadosamente a bandeja para dentro.

Aviso: Não force a bandeja a abrir; não insira objetos estranhos na bandeja de CD.

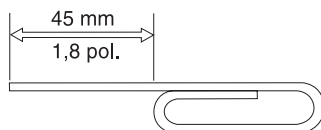
Para carregar um CD em uma unidade de CD-ROM montada na posição vertical, faça o seguinte:



1. Pressione o botão Ejetar/Carregar.
2. Veja as ilustrações e compare-as com a sua bandeja de carregamento.
 - Se ela for parecida com a ilustração esquerda, insira o CD cuidadosamente de forma que suas bordas fiquem sob as presilhas na bandeja de carregamento. Essas presilhas de plástico cobrem as bordas do CD e o mantêm no local. Elas estão conectadas à própria bandeja e não podem ser movidas.
 - Se ela for parecida com a ilustração direita, insira o CD na bandeja e empurre cuidadosamente a presilha móvel para frente a fim de manter o CD no local.
3. Feche a bandeja de carregamento pressionando o botão Ejetar/Carregar ou empurrando cuidadosamente a bandeja para dentro.

Ejetando Manualmente um CD

Se você pressionar o botão Ejetar/Carregar e a bandeja não deslizar para fora, desligue o computador. Endireite um clipe de papel grande para formar uma ferramenta, conforme mostrado na ilustração a seguir. A extremidade do clipe aberto deve estender-se a pelo menos 45 mm (1,8 pol). Insira a extremidade estendida no orifício de ejeção na parte frontal da unidade (consulte "Vista Frontal da Unidade" na página 1-55). Empurre o clipe de papel no orifício até que a bandeja seja aberta. Puxe cuidadosamente a bandeja para fora até que o CD possa ser removido.



Reproduzindo um CD de Áudio

Para reproduzir um CD de áudio, é necessário que um programa de CD de áudio esteja instalado no computador. Os aplicativos Windows 98, Windows Me, Windows NT e Windows 2000 incluem programas de reprodução de CD de áudio.

Para obter mais informações sobre o uso do software de reprodução de áudio, consulte a documentação que acompanha o sistema operacional ou o computador.

Windows 95, Windows 98, Windows NT 4.0, Windows 2000 ou Windows Me

Para utilizar o utilitário de áudio, faça o seguinte:

1. Ligue o computador e inicie o sistema operacional, se ainda não o tiver feito.
2. Insira o CD de áudio na unidade de CD-ROM.
3. O CD começa a tocar. Se isso não ocorrer ou se você tiver problemas com o áudio, verifique a documentação que acompanha a placa de áudio ou o computador para obter informações sobre soluções de problemas.

Utilizando um CD de Dados

CDs de dados contêm arquivos de dados, jogos ou aplicativos.

Windows 95, Windows 98, Windows NT 4.0, Windows 2000 ou Windows Me

Para ler um CD de dados, faça o seguinte:

1. Ligue o computador e inicie o sistema operacional, se ainda não o tiver feito.
2. Insira o CD de dados na unidade de CD-ROM. Muitos CDs de programas iniciarão automaticamente nesse ponto. Se isso não ocorrer, vá para a etapa 3.
3. Dê um clique duplo em **Meu Computador**.
4. Verifique se o ícone de CD-ROM é exibido.
5. Dê um clique duplo no ícone **CD-ROM**.
6. Verifique se você pode exibir os arquivos no CD.

Se não puder selecionar o ícone de CD-ROM ou exibir dados, consulte o “Apêndice B. Resolução de Problemas” na página B-1 ou o “Apêndice C. Informações de Auxílio e Serviços” na página C-1 para obter informações sobre serviço.

第 1 部份：安裝及使用手冊

IBM® 48X-20X 內接式 IDE 光碟機可以讀取包含約 680 MB。在設計上，這部光碟機可安裝於使用 Integrated Drive Electronics (IDE) 或 Enhanced IDE (EIDE) 介面架構的個人電腦。

此光碟機裝置的資料讀取速度可達一般標準光碟機 48 倍速，資料傳送量可達每秒 7200 KB。本光碟機可以讀取符合 ISO-9660 及 High-Sierra Group (HSG) 標準格式的光碟片。也可以讀取使用多階段作業、延伸式架構 (XA) 作業方式，例如，Kodak Photo CD，所燒錄而成的光碟片。

產品說明

除了本手冊之外，本產品還包含了下列套件：

- 48X-20X 內接式 IDE 光碟機
- 一條“Y”形音訊線及一條音訊連接線
- 四顆安裝螺絲 (M3 x 5 mm, 含插槽)
- 一條連接兩個 IDE 裝置的 IDE 接線
- 光碟機的雷射安全手冊

物品若有遺漏或損壞，請和原經銷商連絡。請務必保留您的購買證明。當您要求售後服務時，有可能會請您提供相關的購買證明文件。

第C-1頁的『附錄C. Help and service information』文件中提供您有關如何取得協助、技術支援服務以及保證服務等資訊。在您申請技術支援服務之前，請先參照第B-1頁的『附錄B. Problem solving』乙節中的相關內容。

準備工作

若要確定您的電腦是否符合最低的需求；請參閱 第1-68頁的『系統需求』乙節中的詳細資訊。在您開始安裝之前，請先讀取下列資訊。

安裝本光碟機，您必須完成下列的安裝步驟：

1. 決定要使用那一個 IDE 連接器以及對應的配置設定為何。
2. 安置或變更光碟機上的配置跳接器 (並視情況改變其它相關裝置的配置跳接器)。

如果您不瞭解上述的程序，或是不確定您是否能自行完成所有的程序，請洽詢合格的技術人員協助您安裝光碟機。

-
1. 資料量的光碟片 (CD)。1 MB 約等於 1,000,000 位元組的資訊儲存量
 2. 其中，1 KB 約等於 1024 位元組的資料儲存量

系統需求

在安裝光碟機之前，請先確定您的電腦符合下列系統需求：

- 微處理器最低需求： 80486
- RAM 最低需求： 4 MB
- 5.25 吋軟式磁碟機
- 存在有可用的 IDE 連線位置
- 存在有可用的電源接線
- 存在有可用的磁碟機機槽
- 電腦應已安裝有下列其中一種作業系統：
 - Microsoft[®] Windows[®] 95
 - Microsoft Windows[®] 98
 - Microsoft Windows NT[®] 4.0
 - Microsoft Windows 2000 Professional
 - Microsoft Windows Millennium Edition (Me)

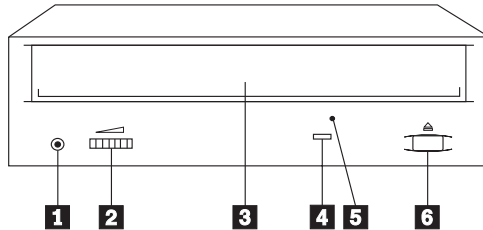
搬運及處理的注意事項

在安裝期間，爲了要保護您的裝置，請務必遵守下列預防措施：

- 小心移動或搬運光碟機。掉落或搖動光碟機可能會損壞光碟機槽中的元件。
- 請將光碟機保存於防靜電的包裝袋中，一直到您要安裝時才取出。在取出光碟機時，應放慢您的動作。任意移動光碟機容易導致靜電的產生。
- 電源線接頭具有方向性，所以不可強行插入電源線。強行插入電源線的接頭，可能會傷及接頭或光碟機。

光碟機正面

請參閱下列圖例以識別各部份的元件，以便稍後可以順利參照安裝說明中的各項指示。



1 耳機插孔。 此處為音訊的輸出，請在此處插入耳機。

2 音量控制。 調整此處的刻度，即可控制音量。

3 CD 托盤。 使用 CD 托盤可將 CD 載入光硬機中。

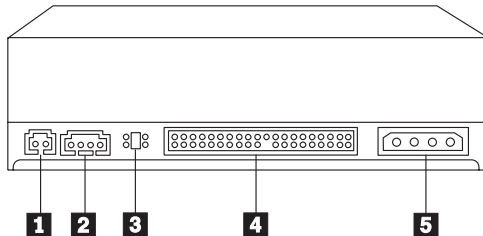
4 忙碌指示燈。 這個指示燈亮起時，表示硬機正在讀取資料光碟，或是正在播放音訊光碟。

5 手動退片孔。 如果光碟機的退出/載入按鈕無法正常工作時，請使用此手動退片孔退出光碟片。

6 退出/載入按鈕。 按一下這個按鈕即可開啓或關閉光碟托盤。

光碟的後視圖

請參閱下列圖例以識別各部份的元件，以便稍後可以順利參照安裝說明中的各項指示。



1 保留。

2 音訊輸出接頭。 這個接頭會連接光碟機與音效配接卡。

3 配置接腳。 在接腳上使用跳接器可以組合出各種的配置，決定光碟機在IDE 匯流排上的優先順序。

4 IDE 連接器。 這個連接器可將光碟機連接至 IDE 接線。

5 DC 電源連接器。 這個連接器是用來連接光碟機的 DC 電源線。

安裝光碟機

請遵循下列步驟將光碟機安裝至您的電腦中。

步驟 1. 打開電腦

1. 關閉電腦及其所有附屬裝置的電源。
2. 拆除電腦及所有附屬裝置的電源線。
3. 移除電腦的外殼。

步驟 2. 拆封光碟機的包裝

1. 在打開包裝光碟機的防靜電袋之前，請先在未上漆的金屬表面接觸至少二秒鐘。此舉可以釋放存在於包裝上以及您身上的靜電。
2. 從防靜電袋中取出光碟機。如果您必須放下光碟機，請先將防靜電袋放置在鋪平（例如雜誌）的表面上，然後再將光碟機放置在防靜電袋上。

步驟 3. 選取 IDE 連接埠

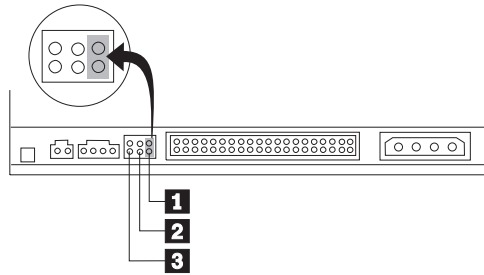
通常，在較新型的電腦中會有兩個 IDE 連接埠，每一個連接埠可以支援兩部磁碟機。一般而言，電腦中的硬碟機會連接至主要的 IDE 連接埠。而另一個 IDE 連接埠即為次要的 IDE 連接埠。您所選用的 IDE 連接埠和接線的位置，必須與配置跳接器的設定搭配才能使用裝置正常運作。

- 如果您的電腦中有兩個 IDE 連接埠，請將光碟機連接至主機板或 IDE 配接卡上的次要 IDE 連接埠。如果在次要的 IDE 連接埠上只連接光碟機一項裝置，請將接腳設定為使用主要配置。而如果光碟機為次要連接埠上的第二項裝置，則須將接腳設定為次要配置的設定。
- 如果您必須將光碟機連接至主要的 IDE 連接埠（即與硬碟機或其它速度較快的裝置共用同一個連接埠時），則應設定光碟機使用次要的連接埠，而讓速度較快的裝置使用主要的連接埠。在某些情況下，如果使用同一條接線串接次要性的裝置時，必須將硬碟機的設定調為「主要且存在有次要裝置」（master-with-secondary-present）。有關這些裝置上跳接器設定的資訊，請參閱隨附於電腦或其它硬體裝置的文件說明。
- 某些非 IBM 系列的電腦可以支援「線選取設定」的功能，可以直接以裝置連接於接線上的位置來決定該裝置為主要或次要的裝置。如果您的電腦具備支援線選取設定的功能，請參閱隨附於您電腦中的相關文件。

步驟 4. 配置跳接器的設定

該圖例顯示了主要 **1** 的設定、次要（或稱附屬）**2** 的設定，以及接線選取 **3** 的設定。將跳接器依照您在步驟 3 中所選取的設定安置於相對應的接腳上，即可配

置光碟機。相關資訊，請參閱 第1-70 頁的『步驟 3. 選取 IDE 連接埠』乙節的內容。



- 如果您要將光碟機裝置配置成主要的裝置使用，請將跳接器設定為主要 **1** 的裝置設定。(您的光碟機在廠交貨時，就已經幫您做成此一設定)。如果在 IDE 連接埠上存在有第二個裝置，請確定該裝置必須配置為次要的裝置。
- 如果您要將光碟機裝置配置成次要的裝置使用，請將跳接器設定為次要 **2** 的裝置設定。請檢查並確定另一個存在於同一個 IDE 連接埠上的裝置，必須配置成爲主要的裝置，或是設定爲「主要且存在有次要裝置」(primary-with-secondary-present) 的設定。
- 如果您要將光碟機裝置配置成接線選取的裝置使用，請將跳接器設定為接線選取 **3** 的裝置設定。如果該 IDE 連接埠上同時還存在有其它裝置，請檢查確定該裝置也必須設定爲使用接線選取。

步驟 5. 將光碟機安裝至磁碟機槽中

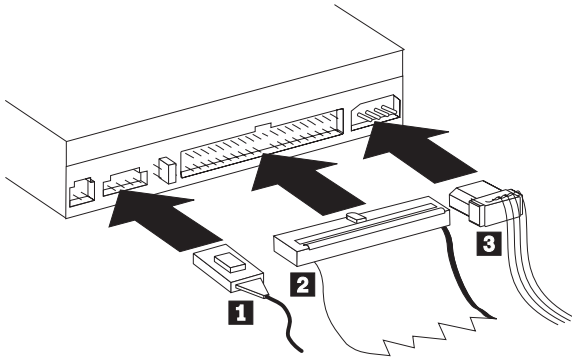
警告： 請務必使用隨附於包裝中的 M3 x5 mm 安裝螺絲。使用太長的螺絲可能會損壞光碟機。

您可以將光碟機以水平或直立的方式安裝於您的電腦中。如果您以直立的方式安裝光碟機，則在關閉光碟機的托盤之前，必須先固定好光碟，否則會導致電腦無法正確讀取光碟內的資料。有關於直立安裝的光碟機中固定光碟的說明，請參閱 第1-75頁的『載入光碟』的內容。

1. 將光碟機推入機槽中。在您的電腦安裝儲存裝置時可能需要特殊的程序。請參照隨附於您電腦中的相關文件。
2. 將磁碟機機槽上的螺絲孔對準磁碟機槽或裝載托架上的螺紋孔；然後先輕輕緊上螺絲，並確認其位置無誤。通常，每側會使用兩個螺絲固定。
3. 檢查並確定螺絲孔已對齊；然後再上緊螺絲以固定光碟機。螺絲不可以拴得太緊。

步驟 6. 連接光碟的接線

請遵循下列方式配接光碟機的接線。



1. 如果您的電腦中有音效配接卡，請選擇音效配接卡上可以搭配光碟音訊接收連接埠的音訊線。將音訊線的一端連接接到音效輸出的接頭 **1** 上，而將另一端連接至音效配接卡上的光碟音訊接收連接埠上。請妥為收藏其它的接線，以便將來更換音效配接卡後可以搭配使用。
2. 將 40 針的 IDE 接線接頭 **2** 連接到光碟機上的 IDE 接頭上。對準接線，使不同顏色的邊緣最接近電源線接頭 **3**。如果電腦中的 IDE 連接埠並沒有接線，或者是 IDE 的接線上只有一個裝置的接頭，則請使用隨附於本選用設備中的 IDE 接線。
3. 將 4-針的電源線 **3** 連接至 DC 電源接頭上。

步驟 7. 完成硬體的安裝作業

1. 請確認光碟機已經裝妥，而且所有的接頭均已穩固連接。
2. 請確定接線不會妨礙回裝電腦的外殼，也不會擋住電源供應器風扇的葉片或散熱的通風路徑。
3. 重新裝回電腦外殼。
4. 重新連接所有的外部裝置，並檢查是否有裝置尚未完成接線；檢查項目如鍵盤、滑鼠及監視器等等。
5. 將所有外部裝置的電源線插到電源插座上。

步驟 8. 更新電腦的配置

在您完成硬體的安裝作業之後，請重新啓動您的電腦。通常，會顯示配置設置的畫面。如果並未顯示此畫面，請查閱電腦的說明文件，以取得有關配置或安裝公用程式的相關資訊。

若要查閱大多數 IBM 電腦的配置資訊，請在啓動期間按下 F1 按鈕。當您檢視完相關的設定資訊之後，請儲存變更然後結束檢視。

註: 對某些只有一個 IDE 連接埠的舊型電腦而言，當您在檢視配置設置資訊時，可能會找不到有關光碟機的相關資訊。即使是在這種情況下，只要您的安裝程序正確無誤，您仍然可以使用光碟機。

步驟 9. 安裝光碟機的裝置驅動程式

本節依照您所使用的作業系統，分別討論安裝光碟機裝置驅動程式的作業與方式。

註: 隨著使用者的需求不同；使用者可以依照所使用的作業系統自訂裝置驅動程式的設定值。如果您的電腦依照本節中安裝說明的預設設定值而仍無法正常運作，則請參照 第A-1頁的『附錄A. Customizing device driver configuration settings』 乙節中有關自訂裝置驅動程式配置設定值的相關資訊。

Windows 95、Windows 98、Windows NT、Windows 2000 及 Windows Me 的裝置驅動程式

Windows 98 和 Windows Me 會自動偵測光碟機而且不會顯示任何安裝的畫面。如果在您啓動作業系統之後，顯示驅動程式的安裝畫面，請依照畫面上的指示安裝所需的裝置驅動程式。相關資訊，請參閱隨附於作業系統的說明文件。

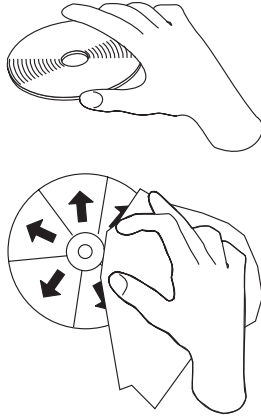
光碟機的使用與保養

本章節提供您有關光碟與光碟機使用與保養的說明。

光碟的保養

由於光碟為一高密度的媒體，所以需要小心保管以確保其中所含資訊的可讀性。下列注意事項可以延長光碟的使用壽命。

警告： 以圓形方向擦拭光碟可能會造成其中的資料流失。



- 以手拿取光碟的邊緣或中央的小孔。不要接觸光碟含有資料的表面。
- 清除灰塵或指紋時，請以柔軟無纖維的布由光碟的中央向邊緣擦拭。
- 不可以在表面上寫字。
- 並可以讓光碟直接暴曬於日光下。
- 不可以使用清潔劑清洗光碟。
- 不可以任意彎曲光碟。

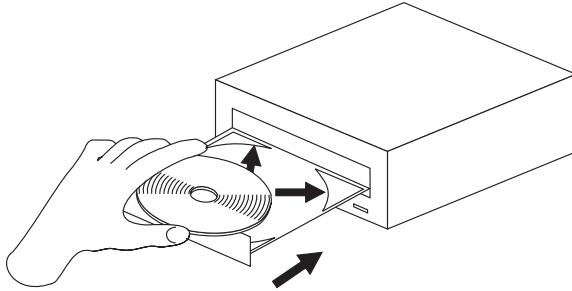
光碟機的保養

若要保護運作中的光碟機，請遵循下列預防措施：

- 在移動光碟機之前，應先取出其中的光碟。
- 不要將其他物件插入光碟機中
- 不要自行拆卸光碟機的外殼，也不要嘗試自行維修光碟機
- 請避免在下列不良的環境中使用光碟機：
 - 高溫、高濕度或有日光直射的環境中
 - 經常性振動、突發性震動或傾斜的表面上
 - 過多灰塵

載入光碟

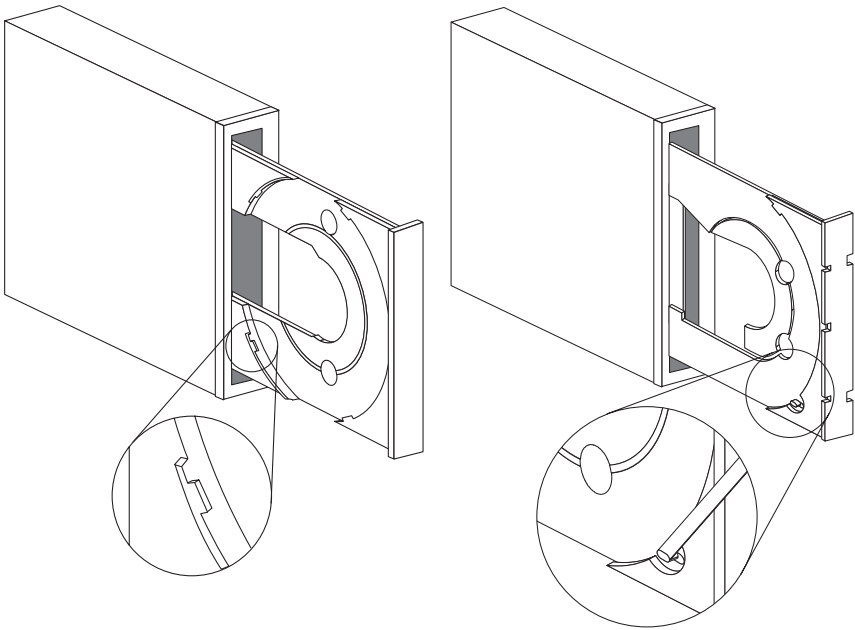
若要將光碟載入水平安裝的光碟機，請執行下列步驟：



1. 按一下「退出/載入」按鈕。光碟機的托盤會自動滑出。
2. 將光碟有標籤一面朝上，輕輕置入托盤中。
3. 按一下「退出/載入」按鈕或是將托盤向內輕輕推入，即可關閉光碟托盤。

警告： 不可以強力將托盤拉出；並不可以將異物插入光碟托盤中。

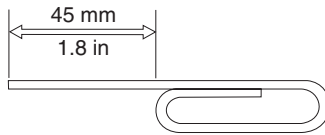
若要將光碟載入垂直安裝的光碟機，請執行下列步驟：



1. 按一下「退出/載入」按鈕。
2. 請查看圖例並比較您光碟機載入托盤的形式。
 - 如果您的光碟機托盤看起來像是左側圖例中的托盤，請小心地插入光碟，讓光碟的邊緣位於載入托盤卡栓的下方。這些塑膠的卡栓會卡住光碟的邊緣，以保持光碟位於正確的位置上。這些卡栓是附著於托盤上，而且是無法將其取出的。
 - 如果您的托盤看起來像是右側的圖例，請將光碟插入托盤中，然後輕輕地將可移動的卡栓向前推出，即可將光碟固定在正確的位置上。
3. 按一下「退出/載入」按鈕或是將托盤向內輕輕推入，即可關閉托盤。

手動退出光碟

如果您按下「退出/載入」按鈕，但托盤無法退出時，請先關閉電腦。如下圖所示，將一根別針拉直做成一個工具。拉直端的長度至少需有 45 公釐（1.8 英吋）。將伸直的一端插入光碟機前面板上的手動退片孔（請參閱 第1-69頁的『光碟機正面』乙節內容）。將別針向前推入，直到托盤開啓為止。小心地將托盤拉出，然後取出您的光碟。



播放音訊光碟

若要播放音訊光碟，您的電腦中必須已經安裝有音訊 CD 的播放程式。Windows 98、Windows Me、Windows NT 及 Windows 2000 的附屬應用程式中即已經包含有音訊光碟的播放程式。

有關如何使用音訊播放軟體的相關資訊，請參閱隨附於您作業系統或電腦的相關文件。

Windows 95、Windows 98、Windows NT 4.0、Windows 2000 或 Windows Me

若要使用音訊公用程式，請執行下列步驟：

1. 首先，請開啓電腦並啓動您的作業系統。
2. 將音訊光碟插入光碟機中。
3. 光碟會自動開始光碟。如果光碟並未自動播放，或是音訊方面出了問題，請檢查隨附於音效配接卡或電腦中的文件，以取得解決問題的相關資訊。

使用資料光碟

資料光碟中可能會儲存有資料檔案、遊戲或應用程式等資料。

Windows 95、Windows 98、Windows NT 4.0、Windows 2000 或 Windows Me

若要讀取資料光碟，請執行下列步驟：

1. 首先，請開啓電腦並啓動您的作業系統。
2. 將資料光碟插入光碟機中。此時，大部份的程式光碟會自動啓動。如果光碟中的程式並未自動啓動，請進行步驟 3。
3. 連按兩下我的電腦。
4. 驗證是否有顯示 CD-ROM 的圖示。
5. 連按兩下 **CD-ROM** 圖示。

6. 檢查並確認您可以檢視光碟上的檔案。

如果您無法選取 CD-ROM 圖示或是檢視光碟中的資料，請參閱 第B-1頁的『附錄 B. Problem solving』或 第C-1頁的『附錄C. Help and service information』等文件章節的內容以尋求技術支援服務的相關資訊。

パート 1: インストールおよびユーザーズ・ガイド

IBM®内蔵型 48 倍速 CD-ROM ドライブ (IDE) は、約 680 MB¹ のコンパクト・ディスク (CD) を読み取ることができます。本製品は、Integrated Drive Electronics (IDE) アーキテクチャーまたは拡張 IDE アーキテクチャーを使用するパーソナル・コンピュータに取り付ける設計になっています。

CD-ROM 装置は、標準 CD-ROM 速度の最高 48 倍 (最高 7200 KB² / 秒) でデータを転送します。本ドライブは、ISO-9660 と High-Sierra Group (HSG) 標準を満たすコンパクト・ディスクを読み取ります。この他、マルチセッション、拡張アーキテクチャー (XA) ディスク (Kodak フォト CD など) も読み取ります。

製品説明

本書の他に、本オプション・パッケージには次の品目が含まれています。

- 内蔵型 48 倍速 CD-ROM ドライブ (IDE)
- “Y” オーディオ・ケーブル 1 本、オーディオ・ケーブル 1 本
- 取り付け用ねじ 4 本 (M3 x 5 mm、溝付き)
- 2 台の IDE デバイス接続用 IDE ケーブル 1 本
- CD-ROM ドライブに関するレーザーの安全上の手引き

品目が不足、損傷している場合には、お買上げの販売店にご連絡ください。領収書またはクレジットの控えは必ず保管しておいてください。保証サービスを受けるために提示を求められる場合があります。

ヘルプ、技術サポート、および保証サービスを入手する方法は、C-1 ページの『Appendix C. Help and service information』に記載されています。技術サポートに電話する前に、B-1 ページの『Appendix B. Problem solving』を参照してください。

始める前に

お使いのコンピュータが最小要件を満たしているか判別してください。詳細については、1-80ページの『システム要件』を参照してください。取り付けを始める前に次の情報をお読みください。

本ドライブを取り付けるには、次のステップを実施してください。

1. 使用する IDE コネクタと、対応する構成設定値を決定します。

1. MB は、記憶域の容量を示す場合、約 1 000 000 バイトに相当します。

2. KB は、データ転送速度を示す場合、約 1024 バイトに相当します。

2. 本ドライブ上で構成ジャンパーを取り付けるか、交換します (場合によっては、他のデバイスの構成ジャンパーを変更します)。

上記の手順がよく理解できない場合、または説明した手順をすべて実行できるかどうかかわからない場合は、専門のコンピューター技術者に CD-ROM ドライブの取り付けを代わって実行してもらってください。

システム要件

本ドライブの取り付けを開始する前に、お使いのコンピューターが次のシステム要件に合っているか確認してください。

- マイクロプロセッサ: 80486 以上
- RAM: 4 MB 以上
- 5.25 インチのディスケット・ドライブ
- IDE 接続が使用可能であること
- 内部電源接続が使用可能であること
- ドライブ・ベイが使用可能であること
- 次のオペレーティング・システムのうちの 1 つ
 - Microsoft® Windows® 95
 - Microsoft Windows® 98
 - Microsoft Windows NT® 4.0
 - Microsoft Windows 2000 Professional
 - Microsoft Windows Millennium Edition (Me)

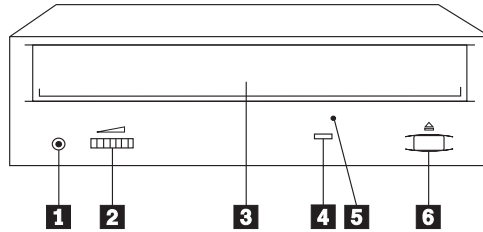
取り扱い上の説明

取り付け中に本デバイスを保護するため、次の注意事項を守ってください。

- 本ドライブは慎重に取り扱ってください。本ドライブを落としたり、衝撃を与えると、ドライブ・ハウジング内部の構成部品を損傷するおそれがあります。
- 本デバイスは、コンピューターへの取り付け準備が完了するまで、帯電防止袋に入れたままにしておいてください。取り付け時の動作は最小限に抑えます。動くことによって、静電気が蓄積される可能性があります。
- 電源ケーブルを無理に挿入しないでください。コネクタや本ドライブを損傷する場合があります。

本ドライブの正面図

この図を参照して、取り付け説明に出てくる各部を確認しておいてください。



1 ヘッドホン・ジャック。オーディオ出力を行うには、ヘッドホンをここに差し込んでください。

2 ボリューム・コントロール。このダイヤルは、ボリュームを調節するのに使用します。

3 CD トレイ。CD トレイは、CD をドライブにセットするのに使用します。

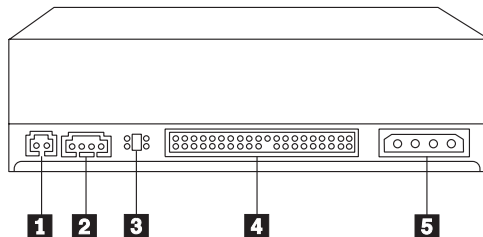
4 使用中インディケーター。このライトは、本ドライブがデータ CD を読み取ったり、オーディオ CD を再生するとオンになります。

5 非常用取り出し穴。イジェクト/セット・ボタンが正しく作動していない場合に、CD トレイをイジェクトするのに使用します。

6 イジェクト/セット・ボタン。このボタンを押して、CD トレイを開いたり、閉じたりします。

本ドライブの背面図

この図を参照して、取り付け説明に出てくる各部を確認しておいてください。



1 予約済み。

2 オーディオ出力コネクタ。このコネクタは、CD-ROM ドライブをオーディオ・アダプターに接続するのに使用されます。

3 構成ピン。これらのピン上のジャンパーの配置により、IDE バスでの CD-ROM ドライブの優先順位が決まります。

4 IDE コネクタ。本 CD-ROM ドライブを IDE ケーブルに接続します。

5 DC 電源コネクタ。DC 電源コードを本 CD-ROM ドライブに接続します。

本ドライブの取り付け

本 CD-ROM ドライブをコンピューターに取り付ける手順は、次のとおりです。

ステップ 1. コンピューターを開く

1. コンピューターと接続デバイスをすべてオフにします。
2. コンピューターとすべての接続デバイスの電源コードのプラグを外します。
3. コンピューターのカバーを取り外します。

ステップ 2. ドライブを梱包から取り出す

1. 本ドライブが入れている帯電防止袋を開ける前に、その袋を、塗装されていない金属面に少なくとも 2 秒間触れさせます。これによって、そのパッケージと人体から静電気が除去されます。
2. 本ドライブを帯電防止袋から取り出します。本ドライブを置かなければならない場合、平らで柔らかな面の上（雑誌の上など）に帯電防止袋を敷き、その帯電防止袋の上に本ドライブを置きます。

ステップ 3. IDE ポートを選択する

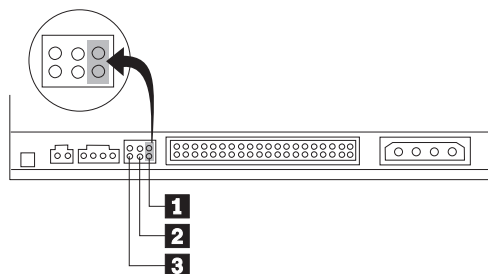
新しいタイプのコンピューターの場合、通常 2 つの IDE ポートがあり、各ポートが 2 台のデバイスをサポートします。一般に、1 つの IDE ポートがプライマリー IDE ポートとしてハード・ディスクに接続し、もう一方の IDE ポートがセカンダリー・ポートとなります。選択した IDE ポートとケーブル位置によって、本ドライブで使用する構成ジャンパーが決まります。

- IDE ポートが 2 つある場合、本 CD-ROM ドライブを、システム・ボードか IDE アダプター上のセカンダリー IDE ポートに接続します。本 CD-ROM ドライブがセカンダリー IDE ポート上の唯一のデバイスである場合、マスターに設定します。本 CD-ROM ドライブがセカンダリー・ポート上の 2 台目のデバイスである場合は、スレーブに設定します。
- 本 CD-ROM ドライブをプライマリー IDE ポート（ハード・ディスクまたは他の高速デバイスと同じポート）に接続しなければならない場合は、本 CD-ROM ドライブをスレーブに設定し、より高速のデバイスをマスターに設定します。場合によっては、同じケーブル上でスレーブ・デバイスを接続するときにハード・ディスクの構成設定値を「スレーブが存在するマスター」に変更しなければならないことがあります。他のデバイス上での構成ジャンパーの設定の詳細については、お使いのコンピューターか該当のデバイスに付属の資料を参照してください。

- 一部の IBM 以外のコンピューターでは、ケーブル選択の設定値がサポートされているものもあります。これらのコンピューターでは、ケーブル上のデバイスの位置によって、そのデバイスがマスターかスレーブかが決まります。お使いのコンピューターがこの設定値をサポートするかどうか確認するには、お使いのコンピューターに付属の資料を参照してください。

ステップ 4. 構成ジャンパーを設定する

図では、マスター **1** 設定値、スレーブ **2** 設定値、およびケーブル選択 **3** 設定値を示しています。本 CD-ROM ドライブを構成するには、ステップ 3 で選択した設定値に対応するピンのセットの上にジャンパーを置きます。1-82ページの『ステップ 3. IDE ポートを選択する』を参照してください。



- 本 CD-ROM デバイスをマスターとして構成する場合、ジャンパーをマスター **1** に設定します。(本ドライブは、出荷時にこの設定になっています。) IDE ポート上に 2 台目のデバイスがある場合は、そのデバイスがスレーブとして構成されているか確認します。
- 本 CD-ROM デバイスをスレーブとして構成する場合、ジャンパーをスレーブ **2** に設定します。IDE ポート上のもう一方のデバイスがマスター (またはスレーブが存在するマスター) として構成されているか確認します。
- 本 CD-ROM デバイスをケーブル選択として構成する場合、ジャンパーをケーブル選択 **3** に設定します。IDE ポート上に別のデバイスがある場合は、2 台目のデバイスもケーブル選択用に構成されているか確認してください。

ステップ 5. 本ドライブをベイに取り付ける

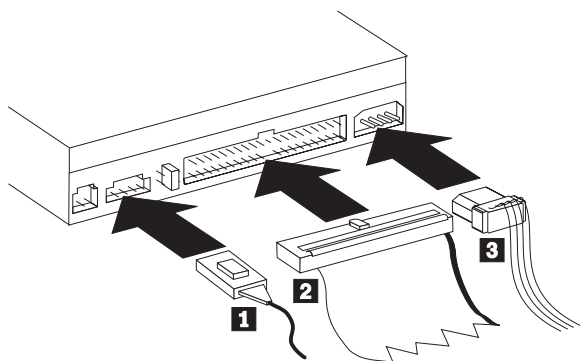
考慮事項: 必ず、オプション・パッケージの M3 x 5 mm 取り付け用ねじをご使用ください。使用するねじが長過ぎると、本ドライブを損傷するおそれがあります。

本 CD-ROM ドライブは、コンピューター内に縦、横、どちらの向きにも取り付けられます。本ドライブを縦に取り付ける場合、ドライブ・トレイを閉じる前に、本ドライブに入れた CD を固定する必要があります。そうしないと、本 CD-ROM ドライブがその CD を正しく読み取れなくなります。縦に取り付けたドライブ内で CD を固定する方法について詳しくは、1-87ページの『CD のセット』に進んでください。

1. 本ドライブをベイの中に挿入します。お使いのコンピューターによっては、記憶装置を取り付けるのに特別な手順が要求される場合があります。さらに詳しい指示については、お使いのコンピューターに付属の資料を参照してください。
2. ドライブ・ベイのねじ穴を、ドライブ・ハウジングまたは取り付け金具内のねじ山付きの穴と位置をそろえます。その後、ねじを緩く通してみ、その位置をチェックします。通常、それぞれの側に 2 本のねじを使用します。
3. 位置合わせが正しいか確認してから、ねじを締めて本ドライブを固定します。きつく締め過ぎないようにしてください。

ステップ 6. ケーブルを本ドライブに接続する

次のようにして、ケーブルを本 CD-ROM ドライブに接続します。



1. オーディオ・アダプターがある場合、パッケージに含まれているオーディオ・ケーブルを見つけて、どのケーブルが、オーディオ・アダプター上の CD オーディオ入力ポートに最も適合するかを判断します。選択したオーディオ・ケーブルの一方の端をデバイス・オーディオ出力コネクタ **1** に接続し、ケーブルの他方の端をオーディオ・アダプターの CD オーディオ入力ポートに接続します。将来、異なるオーディオ・アダプターを使用する場合のために、もう 1 本のケーブルはとっておいてください。
2. 40 ピン IDE ケーブル・コネクタ **2** を、本ドライブ上の IDE コネクタに接続します。ケーブルを、色分けされた側が電源ケーブル・コネクタ **3** に最も近くなるように位置合わせします。IDE ポートにケーブルが接続されていない場合、または IDE ケーブル上にデバイス・コネクタが 1 つしかない場合、このオプションと一緒に提供された IDE ケーブルを使用します。
3. 4 ピン電源ケーブル **3** を、デバイスの DC 電源コネクタに接続します。

ステップ 7. ハードウェアの取り付けを完了する

1. 本ドライブがしっかりと取り付けられ、コネクタが正しく接続されているか確認します。

2. ケーブルがコンピューターのカバーの邪魔になっていたり、電源機構のファンの羽根や通風経路を妨害していないか確かめます。
3. コンピューター・カバーを元通り取り付けます。
4. デバイスをすべて再接続し、キーボード、マウス、モニターなど、取り外した可能性のあるデバイスをチェックします。
5. 電源コードをすべて電源コンセントに接続します。

ステップ 8. コンピューターの構成を更新する

ハードウェアの取り付けを完了したら、コンピューターを再始動します。通常、構成セットアップ情報画面が表示されます。この画面が表示されない場合は、お使いのコンピューターの資料を参照して、構成またはセットアップ・ユーティリティ・プログラムへのアクセス方法を確認してください。

ほとんどの IBM コンピューターでは構成情報を表示するには、始動時に F1 を押します。この情報の更新を確認し、変更を保管して終了します。

注: IDE ポートが 1 つしかないタイプのコンピューターの中には、構成セットアップ情報を表示するときに、CD-ROM ドライブ情報を表示しないものがあります。このような状況でも、取り付けが正しく完了している限り、本 CD-ROM ドライブを使用できます。

ステップ 9. デバイス・ドライバーをインストールする

このセクションでは、使用しているオペレーティング・システムに基づいて、本 CD-ROM ドライブ用のデバイス・ドライバーのインストール方法について説明します。

注: ユーザーによって、要件が異なります。このオペレーティング・システムのデバイス・ドライバー設定値はカスタマイズできます。このセクションのインストール説明で示したデフォルトの設定値では、お使いのコンピューターがうまく機能しない場合、デバイス・ドライバーの構成設定値のカスタマイズについての情報は、A-1 ページの『Appendix A. Customizing device driver configuration settings』を参照してください。

Windows 95、Windows 98、Windows NT、Windows 2000、および Windows Me 用のデバイス・ドライバー

Windows 98 および Windows Me は、CD-ROM ドライブを自動的に検出し、インストール画面を表示しません。オペレーティング・システムが開始された後にインストール画面が表示されたら、画面の指示に従い、デバイス・ドライバーをインストールしてください。詳しくは、お使いのオペレーティング・システムに付属の資料を参照してください。

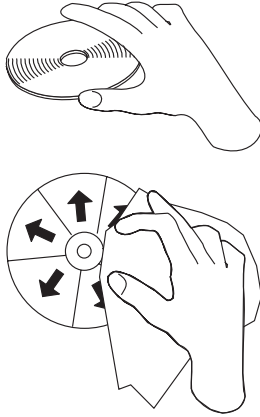
ドライブの使用と手入れ

このセクションには、CD の正しい手入れおよび本 CD-ROM ドライブの手入れおよび操作についての指示が記載されています。

CD の手入れ

CD は高密度メディアです。読み取り可能な状態に保つために、慎重に取り扱い、常にきれいにしておく必要があります。お使いの CD の寿命を延ばすために、次の注意事項を守ってください。

考慮事項: CD を円周方向にふくとデータが失われるおそれがあります。



- CD は、縁または中央の穴を持って取り扱ってください。CD のデータ面には触れないでください。
- ほこりまたは指紋を取り除くには、柔らかく、けばのない布で CD を中央から縁に向かってふいてください。
- 表面に記入しないでください。
- CD を直射日光にあてないでください。
- 市販のクリーナーを使用して CD をクリーニングしないでください。
- CD を曲げないでください。

CD-ROM ドライブの手入れ

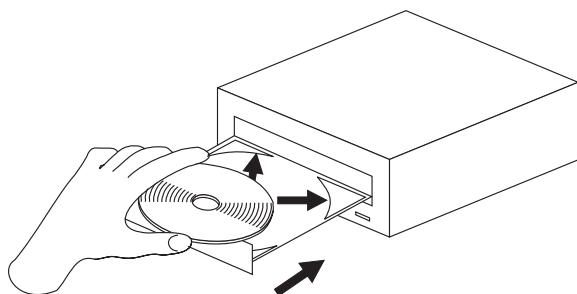
動作中の CD-ROM ドライブを保護するために、以下の注意事項を守ってください。

- ドライブを移動する前に、CD をドライブから取り出してください。
- ドライブに異物を挿入しないでください。
- ドライブ・カバーを取り外したり、ドライブを保守しようとししないでください。
- 次のどの条件のもとでもドライブを稼動しないでください。

- 高温、高湿度、または直射日光
- 過度の振動、急激な衝撃、または傾いた面
- 過度のほこり

CD のセット

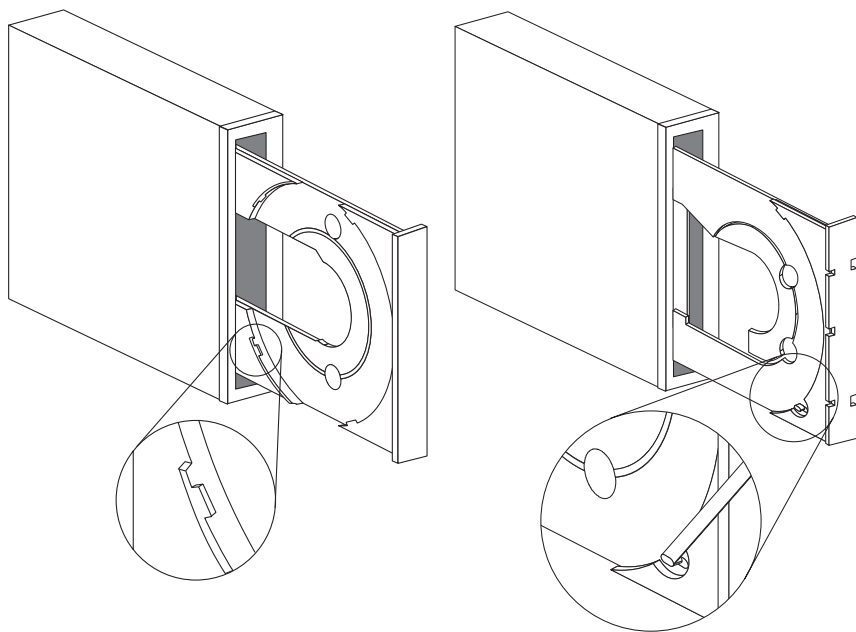
横に取り付けられた CD-ROM ドライブに CD をセットするには、次のようにしてください。



1. イジェクト/セット・ボタンを押します。トレイがドライブからスライドして出てきます。
2. CD を CD トレイにラベルを上に向けて挿入します。
3. イジェクト/セット・ボタンを押すか、トレイをそっと押し入れて、CD トレイを閉じます。

考慮事項: トレイを無理に開こうとしないでください。CD トレイに異物を挿入しないでください。

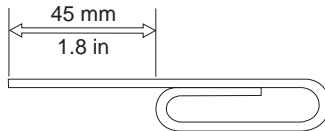
縦に取り付けられた CD-ROM ドライブに CD をセットするには、次のようにしてください。



1. イジェクト/セット・ボタンを押します。
2. 図を見て、お使いの CD トレイと比較してください。
 - お使いの CD トレイが左の図に似ている場合は、CD の縁が CD トレイ上のタブの内側になるように CD を慎重に挿入します。これらのプラスチックのタブは CD の縁を覆い、所定の位置に保持します。タブはトレイ自体に取り付けられており、移動することはできません。
 - お使いの CD トレイが右の図に似ている場合は、CD をトレイに挿入し、移動可能なタブを前方にそっと押して CD を所定の位置に保持します。
3. イジェクト/セット・ボタンを押すか、トレイをそっと押し入れて、CD トレイを閉じます。

CD を手動で取り出す

イジェクト/セット・ボタンを押して、トレイがスライドして出てこない場合は、コンピューターの電源を切ってください。大型のクリップをまっすぐに伸ばして、下図に示すようなツールにします。まっすぐに伸ばした端は、少なくとも 45 mm は伸びている必要があります。伸ばした端をドライブの前面にある非常用取り出し穴に挿入します (1-81 ページの『本ドライブの正面図』を参照してください)。トレイが開くまで、クリップを穴に押し入れます。CD を取り出せるようになるまで、トレイを そっと引き出します。



オーディオ CD の再生

オーディオ CD を再生するには、お使いのコンピューターにオーディオ CD プログラムをインストールしておく必要があります。Windows 98、Windows Me、Windows NT、および Windows 2000 アプリケーションには、オーディオ CD プレイヤー・プログラムが組み込まれています。

オーディオ再生ソフトウェアの使用法については、お使いのオペレーティング・システムまたはコンピューターに付属の資料を参照してください。

Windows 95、Windows 98、Windows NT 4.0、Windows 2000、または Windows Me

オーディオ・ユーティリティを使用するには、次のようにします。

1. コンピューターの電源をまだオンにしていない場合は、ここでオンにし、オペレーティング・システムを始動します。
2. オーディオ CD を CD-ROM ドライブに挿入します。
3. CD の再生が開始します。CD が再生を開始しないか、オーディオに問題がある場合は、お使いのオーディオ・アダプターまたはコンピューターに付属の資料をチェックして、問題解決情報を調べます。

データ CD の使用

データ CD は、データ・ファイル、ゲーム、またはアプリケーションを収録することができます。

Windows 95、Windows 98、Windows NT 4.0、Windows 2000、または Windows Me

データ CD を読み取るには、次のようにします。

1. コンピューターの電源をまだオンにしていない場合は、ここでオンにし、オペレーティング・システムを始動します。
2. データ CD を CD-ROM ドライブに挿入します。多くのプログラム CD は、この時点で自動的に開始されます。CD が自動的に開始されない場合は、ステップ 3 に進みます。
3. 「マイ コンピュータ」をダブルクリックします。
4. 「CD-ROM」アイコンが表示されることを確認します。
5. 「CD-ROM」アイコンをダブルクリックします。
6. CD 上のファイルを表示できることを確認します。

「CD-ROM」アイコンを選択するか、データを表示することができない場合は、B-1 ページの『Appendix B. Problem solving』を参照するか、C-1 ページの『Appendix C. Help and service information』でサービス情報を参照します。

Appendix A. Customizing device driver configuration settings

This section contains information about how to customize and configure device drivers.

Changing the Windows 98 and Windows Me device-driver settings

Windows 98 and Windows Me have two device-driver configuration parameters: Auto Insert Notify and DMA. These are ordinarily setup automatically by Windows. If you need to set them up, the following procedures will help.

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

The DMA parameter improves computer performance by having the computer DMA controller handle moving data from the CD to memory, freeing the computer microprocessor to perform more important tasks. For example, activating DMA might make movies and games run more smoothly because the microprocessor will have more time to perform video tasks.

To change these parameter settings from Windows 98 or Windows Me, do the following steps. (This also pertains to setting Auto Insert Notification for Windows NT 4.0.)

1. Click **Start-->Settings-->Control Panel**.
2. Double-click **System**.
3. Click the **Device Manager** tab; double-click **CD-ROM**; select the CD-ROM driver listed; then click the **Properties** button.
4. Click the **Settings** tab.
5. Under Options, click the box next to either **Auto Insert Notification** or **DMA**.
6. Click **OK**.

Changing the Windows 2000 desktop device driver

To change the Windows 2000 desktop device driver, follow these steps:

1. Click **Start-->Settings-->Control Panel**.
2. Double-click **System**.
3. Click the **Hardware** tab.
4. Click the **Device Manager** button.

5. Click the **IDE ATA/ATAPI controller** to open the tree.
6. Double-click the device that corresponds to the port of your CD-ROM. It will either be Primary IDE or Secondary IDE.
7. Click the **Advanced Settings** tab.
8. Select the **Transfer Mode** pull-down and select **DMA if available**.
9. Click **OK**.
10. Click **Close** to close the System Properties window. A message displays, informing you that the system settings have changed.

Appendix B. Problem solving

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 audio-adaptor publications.

Problem descriptions

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. Make sure that the CD is inserted with the label side up or facing out if the drive is installed vertically.
2. Make sure that all devices are properly connected to the computer and the electrical outlet.
3. Turn off the computer, unplug the cables from the electrical outlets for your computer and all attached devices, and remove the computer cover.
4. Make sure 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 cable. Replace the computer cover, and reattach all cables and power cords. Turn on the computer 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 replacing the 4-pin dc power cable.
5. Make sure that the color-coded edge on the IDE cable aligns with pin 1 on the IDE port and is closest to the power cable on the CD-ROM drive. See "Step 6. Attaching the cables to the drive" on page 1-6.
6. Make sure that the IDE cable is connected to the correct IDE port connection. See "Step 3. Selecting the IDE port" on page 1-4 for more information.
7. Check the CD-ROM drive and any other device on the IDE cable for the proper jumper configuration settings. See "Step 4. Setting the configuration jumper" on page 1-5 for more information.
8. Check to see if the middle connector on the IDE cable is attached to the IDE port on the system board. If it is, remove the connector and reattach the cable correctly. The middle port is used only if you are connecting two devices to the IDE port. If there are two devices on the IDE port, attach the

connector at one end of the cable to the IDE port. Attach the CD-ROM drive or any other slower device to the middle connector, and attach the other end connector to your hard disk drive or other device. If you are connecting only one device to an IDE port, attach one end of the cable to the IDE port and the other end connector to the device; leave the middle connector open.

You cannot access the CD-ROM drive, or the CD-ROM icon does not display (Windows 95, Windows 98, Windows NT 4.0, Windows 2000, or Windows Me)

When the CD-ROM drive is installed, a CD-ROM icon appears in the **My Computer** window.

To verify that the icon is there do the following:

1. Double-click **My Computer**.
2. Look for an icon for the CD-ROM drive.

If a CD-ROM icon is not present in the window that displays:

1. Make sure that the drive has been properly installed.
2. Make sure that the configuration jumper is set properly. See "Step 4. Setting the configuration jumper" on page 1-5.
3. Restart your computer.

If the device icon is still not present, check cable connections and configuration jumper settings on other devices, and resolve any conflicts that might exist.

If a drive icon is still not found after you try the above procedures, continue with the following steps.

If you are using **Windows 95, Windows 98, or Windows Me** follow these instructions:

1. Click **Start-->Settings-->Control Panel**.
2. Double click **System**.
3. Click the **Device Manager** tab.
4. At the top of the box, click **View Devices by Type**.
5. Double-click **Hard Disk Controller** to list the available controllers. Make sure that there are no conflicts with the controller by doing the following:
 - a. Click to select a controller from the list.
 - b. Click the **Properties** button.
 - c. On the **General** tab, under Device Status, there is a statement that indicates whether that controller is working properly. Click **OK** to return to the **Device Manager** tab in the System Properties window.

6. Check to see if there is a conflict between devices by doing the following:
 - a. In the System Properties window, double-click **CD-ROM** to list the available devices, and click to select one from the list.
 - b. Click the **Properties** button.
 - c. Under Device Status, there is a statement indicating whether the CD-ROM device is working properly. If there is a conflict and one or both of the devices are nonworking, refer to "Appendix C. Help and service information" on page C-1.
7. Click **OK** in the System Properties window.
8. Shut down and restart the computer.

If you are using **Windows NT 4.0**, follow these instructions:

1. Click **Start --> Settings --> Control Panel**.
2. Double-click **SCSI Adapters**.
3. Click the **Device** tab.
4. Check to see that neither controller has conflicts by doing the following:
 - a. Click to select a controller.
 - b. Click **Properties**.
 - c. Click the **Card Info** tab; under the Device Status section, there is a statement indicating whether the controller is working properly.
 - d. Click **OK** to return to the SCSI Adapter window.
 - e. Click to select another controller.
 - f. Click the **Card Info** tab; under the Device Status section, check the statement to see whether the controller is working properly.
 - g. If you have more than two SCSI controllers, use the above steps to check the device status of the other controller(s).
 - h. If you discover a conflict and one or more of the controllers is not working, refer to "Appendix C. Help and service information" on page C-1.

If you are using **Windows 2000**, follow these steps:

1. Click **Start --> Settings --> Control Panel**.
2. Click **System**.
3. Click **Hardware** tab.
4. Click the **Device Manager** button.
5. Double-click **Hard Disk Controllers** to list the available controllers. Look for yellow circles with an exclamation point to indicate any conflicts. If conflicts occur, see Appendixes B or C for further instruction.

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

Some computers, such as IBM PS/ValuePoint models 6472, 6482, 6484, 6492, and 6494, have a *compatible* mode and a *high performance* mode for mass storage devices. Normally, the CD-ROM drive functions better under *high performance* mode.

However, if your drive is not functioning properly in that mode, you might need to use *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. If the CD-ROM drive still does not read the data CD, the CD-ROM drive might be defective.

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 1-8.
- 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.

The CD does not play sound.

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 1-3 if headphones are connected to the front of the drive.

- Adjust the audio-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 electrical outlets for your computer and all attached devices, and remove the computer cover. Check that the audio-signal cable connects the CD-ROM with the audio adapter.

You receive a common error message.

These are some common error messages and actions to take when they are displayed.

- **CDR-101**

The Not ready reading the drivesituation occurs if you try to access the CD-ROM drive before the drive is ready. The Busy indicator light comes on when you attempt to access the drive after loading a CD into the CD tray. Wait until the Busy indicator light turns off before attempting to access the drive.

- **CDR-103**

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

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

Some audio adapters might require special cables. See the documentation that comes with your audio adapter.

You might have to purchase separately 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. (See "Back view of the drive" on page 1-3 to locate the audio connector.) If you are using an IBM computer or IBM audio adapter, refer to "Appendix C. Help and service information" on page C-1 for assistance.

The front headphone jack does not work (Windows 98, Windows 2000, and Windows Me).

If the front headphone jack does not work, do the following steps:

1. Right-click on **My Computer**.
2. Select **Properties**.
3. Select the **Device Manager** tab.
4. Open the tree to CD-ROM.
5. Double-click on the device or select it and press the **Properties** button.
6. Select the **Properties** tab.
7. Uncheck the "Enable Digital audio for this CD-ROM device" box.

Appendix C. Help and service information

This section contains information on how to obtain online and telephone technical support.

Online technical support

Online technical support is available during the life of your product. Online assistance can be obtained through the Personal Computing Support Web site.

<i>Online technical support</i>	
IBM Personal Computing Support Web site	http://www.ibm.com/pc/support

During the warranty period, assistance for replacement or exchange of defective components is available. In addition, if your IBM option is installed in an IBM computer, you might be entitled to service at your location. Your technical support representative can help you determine the best alternative.

Telephone technical support

Installation and configuration support through the HelpCenter will be withdrawn or made available for a fee, at IBM's discretion, 90 days after the option has been withdrawn from marketing. Additional support offerings, including step-by-step installation assistance, are available for a nominal fee.

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

- Option name
- Option number
- Proof of purchase
- Computer manufacturer, model, serial number (if IBM), and manual
- Exact wording of the error message (if any)
- Description of the problem
- Hardware and software configuration information for your system

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

For the support telephone number and support hours by country, refer to the following table or to the enclosed technical support insert. Support phone numbers are also available by clicking **HelpCenter phone list** on the IBM support Web page at

<http://www.ibm.com/pc/support>

If the number is not provided, contact your IBM reseller or IBM marketing representative. Response time may vary depending on the number and nature of the calls received.

<i>Support 24 hours a day, 7 days a week</i>	
Canada (Toronto only)	416-383-3344
Canada (all other)	1-800-565-3344
U.S.A. and Puerto Rico	1-800-772-2227

Appendix D. Product warranties and notices

Warranty Statements

The warranty statements consist of two parts: Part 1 and Part 2. Part 1 varies by country. Part 2 is the same for both statements. Be sure to read both the Part 1 that applies to your country and Part 2.

- **United States, Puerto Rico, and Canada (Z125-4753-05 11/97)** (see “IBM Statement of Limited Warranty for United States, Puerto Rico, and Canada (Part 1 - General Terms)”)
- **Worldwide except Canada, Puerto Rico, Turkey, and United States (Z125-5697-01 11/97)** (see “IBM Statement of Warranty Worldwide except Canada, Puerto Rico, Turkey, United States (Part 1 - General Terms)” on page D-5)
- **Worldwide Country-Unique Terms** (see “Part 2 - Worldwide Country-Unique Terms” on page D-8)

IBM Statement of Limited Warranty for United States, Puerto Rico, and Canada (Part 1 - General Terms)

This Statement of Warranty includes Part 1 - General Terms and Part 2 - Country-unique Terms. The terms of Part 2 may replace or modify those of Part 1. The warranties provided by IBM in this Statement of Warranty apply only to Machines you 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. The term "Machine" does not include any software programs, whether pre-loaded with the Machine, installed subsequently or otherwise. Unless IBM specifies otherwise, the following warranties apply only in the country where you acquire the Machine. Nothing in this Statement of Warranty affects any statutory rights of consumers that cannot be waived or limited by contract. If you have any questions, contact IBM or your reseller.

Machine - 48X-20X CD-ROM Drive

Warranty period* - One (1) year

** Contact your place of purchase for warranty service information. Some IBM Machines are eligible for on-site warranty service depending on the country where service is performed.*

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 sales receipt is the Date of Installation, unless IBM or your reseller informs you otherwise.

During the warranty period IBM or your reseller, if approved by IBM to provide warranty service, will provide repair and exchange service for the Machine, without charge, under the type of service designated for the Machine and will manage and install engineering changes that apply to the Machine.

If a Machine does not function as warranted during the warranty period, and IBM or your reseller are unable to either 1) make it do so or 2) replace it with one that is at least functionally equivalent, you may return it to your place of purchase and your money will be refunded. The replacement may not be new, but will be in good working order.

Extent of Warranty

The warranty does not cover the repair or exchange of a Machine resulting from misuse, accident, modification, unsuitable physical or operating environment, improper maintenance by you, or failure caused by a product for which IBM is not responsible. The warranty is voided by removal or alteration of Machine or parts identification labels.

THESE WARRANTIES ARE YOUR EXCLUSIVE WARRANTIES AND REPLACE ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THESE WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM JURISDICTION TO JURISDICTION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF EXPRESS OR IMPLIED WARRANTIES, SO THE ABOVE EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU. IN THAT EVENT, SUCH WARRANTIES ARE LIMITED IN DURATION TO THE WARRANTY PERIOD. NO WARRANTIES APPLY AFTER THAT PERIOD.

Items Not Covered by Warranty

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

Unless specified otherwise, IBM provides non-IBM machines **WITHOUT WARRANTIES OF ANY KIND.**

Any technical or other support provided for a Machine under warranty, such as assistance via telephone with "how-to" questions and those regarding Machine set-up and installation, will be provided **WITHOUT WARRANTIES OF ANY KIND.**

Warranty Service

To obtain warranty service for the Machine, contact your reseller or IBM. In the United States, call IBM at 1-800-772-2227. In Canada, call IBM at 1-800-565-3344. (In Toronto, call 416-383-3344.) You may be required to present proof of purchase.

IBM or your reseller provides certain types of repair and exchange service, either at your location or at a service center, to keep Machines in, or restore them to, conformance with their Specifications. IBM or your reseller will inform you of the available types of service for a Machine based on its country of installation. IBM may repair the failing Machine or exchange it at its discretion.

When warranty 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.

Any feature, conversion, or upgrade IBM or your reseller services must be installed on a Machine which is 1) for certain Machines, the designated, serial-numbered Machine and 2) at an engineering-change level compatible with the feature, conversion, or upgrade. Many features, conversions, or upgrades involve the removal of parts and their return to IBM. A part that replaces a removed part will assume the warranty service status of the removed part.

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

1. ensure that the Machine is free of any legal obligations or restrictions that prevent its exchange;
2. obtain authorization from the owner to have IBM or your reseller service a Machine that you do not own; and
3. where applicable, before service is provided
 - a. follow the problem determination, problem analysis, and service request procedures that IBM or your reseller provides,
 - b. secure all programs, data, and funds contained in a Machine,
 - c. provide IBM or your reseller with sufficient, free, and safe access to your facilities to permit them to fulfill their obligations, and
 - d. 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.

Neither IBM nor your reseller is responsible for any of your confidential, proprietary or personal information contained in a Machine which you return to IBM or your reseller for any reason. You should remove all such information from the Machine prior to its return.

Production Status

Each IBM 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 appropriate warranty terms apply.

Limitation of Liability

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 for no more than

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, up to the greater of U.S. \$100,000 (or equivalent in local currency) or the charges (if recurring, 12 months' charges apply) for the Machine that is the subject of the claim.

This limit also applies to IBM's suppliers and your reseller. It is the maximum for which IBM, its suppliers, and your reseller are collectively responsible.

UNDER NO CIRCUMSTANCES IS IBM LIABLE FOR ANY OF THE FOLLOWING: 1) THIRD-PARTY CLAIMS AGAINST YOU FOR 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, ITS SUPPLIERS 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 LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

IBM Statement of Warranty Worldwide except Canada, Puerto Rico, Turkey, United States (Part 1 - General Terms)

This Statement of Warranty includes Part 1 - General Terms and Part 2 - Country-unique Terms. The terms of Part 2 may replace or modify those of Part 1. The warranties provided by IBM in this Statement of Warranty apply only to Machines you 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. The term "Machine" does not include any software programs, whether pre-loaded with the Machine, installed subsequently or otherwise. Unless IBM specifies otherwise, the following warranties apply only in the country where you acquire the Machine. Nothing in this Statement of Warranty affects any statutory rights of consumers that cannot be waived or limited by contract. If you have any questions, contact IBM or your reseller.

Machine - 48X-20X CD-ROM Drive

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During the warranty period IBM or your reseller, if approved by IBM to provide warranty service, will provide repair and exchange service for the Machine, without charge, under the type of service designated for the Machine and will manage and install engineering changes that apply to the Machine.

If a Machine does not function as warranted during the warranty period, and IBM or your reseller are unable to either 1) make it do so or 2) replace it with one that is at least functionally equivalent, you may return it to your place of purchase and your money will be refunded. The replacement may not be new, but will be in good working order.

Extent of Warranty

The warranty does not cover the repair or exchange of a Machine resulting from misuse, accident, modification, unsuitable physical or operating environment, improper maintenance by you, or failure caused by a product for

which IBM is not responsible. The warranty is voided by removal or alteration of Machine or parts identification labels.

THESE WARRANTIES ARE YOUR EXCLUSIVE WARRANTIES AND REPLACE ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THESE WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM JURISDICTION TO JURISDICTION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF EXPRESS OR IMPLIED WARRANTIES, SO THE ABOVE EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU. IN THAT EVENT, SUCH WARRANTIES ARE LIMITED IN DURATION TO THE WARRANTY PERIOD. NO WARRANTIES APPLY AFTER THAT PERIOD.

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Warranty Service

To obtain warranty service for the Machine, contact your reseller or IBM. You may be required to present proof of purchase.

IBM or your reseller provides certain types of repair and exchange service, either at your location or at a service center, to keep Machines in, or restore them to, conformance with their Specifications. IBM or your reseller will inform you of the available types of service for a Machine based on its country of installation. IBM may repair the failing Machine or exchange it at its discretion.

When warranty 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.

Any feature, conversion, or upgrade IBM or your reseller services must be installed on a Machine which is 1) for certain Machines, the designated, serial-numbered Machine and 2) at an engineering-change level compatible with the feature, conversion, or upgrade. Many features, conversions, or upgrades involve the removal of parts and their return to IBM. A part that replaces a removed part will assume the warranty service status of the removed part.

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

1. ensure that the Machine is free of any legal obligations or restrictions that prevent its exchange;
2. obtain authorization from the owner to have IBM or your reseller service a Machine that you do not own; and
3. where applicable, before service is provided
 - a. follow the problem determination, problem analysis, and service request procedures that IBM or your reseller provides,
 - b. secure all programs, data, and funds contained in a Machine,
 - c. provide IBM or your reseller with sufficient, free, and safe access to your facilities to permit them to fulfill their obligations, and
 - d. 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.

Neither IBM nor your reseller is responsible for any of your confidential, proprietary or personal information contained in a Machine which you return to IBM or your reseller for any reason. You should remove all such information from the Machine prior to its return.

Production Status

Each IBM 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 appropriate warranty terms apply.

Limitation of Liability

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 for no more than

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, up to the greater of U.S. \$100,000 (or equivalent in local currency) or the charges (if recurring, 12 months' charges apply) for the Machine that is the subject of the claim.

This limit also applies to IBM's suppliers and your reseller. It is the maximum for which IBM, its suppliers, and your reseller are collectively responsible.

UNDER NO CIRCUMSTANCES IS IBM LIABLE FOR ANY OF THE FOLLOWING: 1) THIRD-PARTY CLAIMS AGAINST YOU FOR 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, ITS SUPPLIERS 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 LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

Part 2 - Worldwide Country-Unique Terms

ASIA PACIFIC

AUSTRALIA: The IBM Warranty for Machines: The following paragraph is added to this Section: The warranties specified in this Section are in addition to any rights you may have under the Trade Practices Act 1974 or other legislation and are only limited to the extent permitted by the applicable legislation.

Extent of Warranty: The following replaces the first and second sentences of this Section: The warranty does not cover the repair or exchange of a Machine resulting from misuse, accident, modification, unsuitable physical or operating environment, operation in other than the Specified Operating Environment, improper maintenance by you, or failure caused by a product for which IBM is not responsible.

Limitation of Liability: The following is added to this Section: Where IBM is in breach of a condition or warranty implied by the Trade Practices Act 1974, IBM's liability is limited to the repair or replacement of the goods or the supply of equivalent goods. Where that condition or warranty relates to right to sell, quiet possession or clear title, or the goods are of a kind ordinarily

acquired for personal, domestic or household use or consumption, then none of the limitations in this paragraph apply.

PEOPLE'S REPUBLIC OF CHINA: Governing Law: The following is added to this Statement: The laws of the State of New York govern this Statement.

INDIA: Limitation of Liability: The following replaces items 1 and 2 of this Section:

1. liability for bodily injury (including death) or damage to real property and tangible personal property will be limited to that caused by IBM's negligence;
2. as to any other actual damage arising in any situation involving nonperformance by IBM pursuant to, or in any way related to the subject of this Statement of Warranty, IBM's liability will be limited to the charge paid by you for the individual Machine that is the subject of the claim.

NEW ZEALAND: The IBM Warranty for Machines: The following paragraph is added to this Section: The warranties specified in this Section are in addition to any rights you may have under the Consumer Guarantees Act 1993 or other legislation which cannot be excluded or limited. The Consumer Guarantees Act 1993 will not apply in respect of any goods which IBM provides, if you require the goods for the purposes of a business as defined in that Act.

Limitation of Liability: The following is added to this Section: Where Machines are not acquired for the purposes of a business as defined in the Consumer Guarantees Act 1993, the limitations in this Section are subject to the limitations in that Act.

EUROPE, MIDDLE EAST, AFRICA (EMEA)

The following terms apply to all EMEA countries.

The terms of this Statement of Warranty apply to Machines purchased from an IBM reseller. If you purchased this Machine from IBM, the terms and conditions of the applicable IBM agreement prevail over this warranty statement.

Warranty Service

If you purchased an IBM Machine in Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland or United Kingdom, you may obtain warranty service for that Machine in any of those countries from either (1) an IBM reseller approved to perform warranty service or (2) from IBM.

If you purchased an IBM Personal Computer Machine in Albania, Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Hungary, Kazakhstan, Kirghizia, Federal Republic of Yugoslavia, Former Yugoslav Republic of Macedonia (FYROM), Moldova, Poland, Romania, Russia, Slovak Republic, Slovenia, or Ukraine, you may obtain warranty service for that Machine in any of those countries from either (1) an IBM reseller approved to perform warranty service or (2) from IBM.

The applicable laws, Country-unique terms and competent court for this Statement are those of the country in which the warranty service is being provided. However, the laws of Austria govern this Statement if the warranty service is provided in Albania, Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Federal Republic of Yugoslavia, Georgia, Hungary, Kazakhstan, Kirghizia, Former Yugoslav Republic of Macedonia (FYROM), Moldova, Poland, Romania, Russia, Slovak Republic, Slovenia, and Ukraine.

The following terms apply to the country specified:

EGYPT: Limitation of Liability: The following replaces item 2 in this Section: 2. as to any other actual direct damages, IBM's liability will be limited to the total amount you paid for the Machine that is the subject of the claim.

Applicability of suppliers and resellers (unchanged).

FRANCE: Limitation of Liability: The following replaces the second sentence of the first paragraph of this Section: In such instances, regardless of the basis on which you are entitled to claim damages from IBM, IBM is liable for no more than: (items 1 and 2 unchanged).

GERMANY: The IBM Warranty for Machines: The following replaces the first sentence of the first paragraph of this Section: The warranty for an IBM Machine covers the functionality of the Machine for its normal use and the Machine's conformity to its Specifications.

The following paragraphs are added to this Section: The minimum warranty period for Machines is six months.

In case IBM or your reseller are unable to repair an IBM Machine, you can alternatively ask for a partial refund as far as justified by the reduced value of the unrepaired Machine or ask for a cancellation of the respective agreement for such Machine and get your money refunded.

Extent of Warranty: The second paragraph does not apply.

Warranty Service: The following is added to this Section: During the warranty period, transportation for delivery of the failing Machine to IBM will be at IBM's expense.

Production Status: The following paragraph replaces this Section: Each Machine is newly manufactured. It may incorporate in addition to new parts, re-used parts as well.

Limitation of Liability: The following is added to this Section: The limitations and exclusions specified in the Statement of Warranty will not apply to damages caused by IBM with fraud or gross negligence and for express warranty.

In item 2, replace "U.S. \$100,000" with "EUR 500,000."

The following sentence is added to the end of the first paragraph of item 2: IBM's liability under this item is limited to the violation of essential contractual terms in cases of ordinary negligence.

IRELAND: Extent of Warranty: The following is added to this Section: Except as expressly provided in these terms and conditions, all statutory conditions, including all warranties implied, but without prejudice to the generality of the foregoing all warranties implied by the Sale of Goods Act 1893 or the Sale of Goods and Supply of Services Act 1980 are hereby excluded.

Limitation of Liability: The following replaces items one and two of the first paragraph of this Section: 1. death or personal injury or physical damage to your real property solely caused by IBM's negligence; and 2. the amount of any other actual direct damages, up to the greater of EUR 500,000 or 125 percent of the charges (if recurring, the 12 months' charges apply) for the Machine that is the subject of the claim or which otherwise gives rise to the claim.

Applicability of suppliers and resellers (unchanged).

The following paragraph is added at the end of this Section: IBM's entire liability and your sole remedy, whether in contract or in tort, in respect of any default shall be limited to damages.

ITALY: Limitation of Liability: The following replaces the second sentence in the first paragraph: In each such instance unless otherwise provided by mandatory law, IBM is liable for no more than: (item 1 unchanged) 2) as to any other actual damage arising in all situations involving non-performance by IBM pursuant to, or in any way related to the subject matter of this Statement of Warranty, IBM's liability, will be limited to the total amount you paid for the Machine that is the subject of the claim.

Applicability of suppliers and resellers (unchanged).

The following replaces the second paragraph of this Section: Unless otherwise provided by mandatory law, IBM and your reseller are not liable for any of the following: (items 1 and 2 unchanged) 3) indirect damages, even if IBM or your reseller is informed of their possibility.

SOUTH AFRICA, NAMIBIA, BOTSWANA, LESOTHO AND SWAZILAND:

Limitation of Liability: The following is added to this Section: IBM's entire liability to you for actual damages arising in all situations involving nonperformance by IBM in respect of the subject matter of this Statement of Warranty will be limited to the charge paid by you for the individual Machine that is the subject of your claim from IBM.

TURKIYE: Production Status: The following replaces this Section: IBM fulfills customer orders for IBM Machines as newly manufactured in accordance with IBM's production standards.

UNITED KINGDOM: Limitation of Liability: The following replaces items 1 and 2 of the first paragraph of this Section:

1. death or personal injury or physical damage to your real property solely caused by IBM's negligence;
2. the amount of any other actual direct damages or loss, up to the greater of Pounds Sterling 150,000 or 125 percent of the charges (if recurring, the 12 months' charges apply) for the Machine that is the subject of the claim or which otherwise gives rise to the claim.

The following item is added to this paragraph: 3. breach of IBM's obligations implied by Section 12 of the Sale of Goods Act 1979 or Section 2 of the Supply of Goods and Services Act 1982.

Applicability of suppliers and resellers (unchanged).

The following is added to the end of this Section: IBM's entire liability and your sole remedy, whether in contract or in tort, in respect of any default will be limited to damages.

NORTH AMERICA

CANADA: Warranty Service: The following is added to this section: To obtain warranty service from IBM, call **1-800-565-3344**. In Toronto, call **416-383-3344**.

UNITED STATES OF AMERICA: Warranty Service: The following is added to this section: To obtain warranty service from IBM, call **1-800-772-2227**.

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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
New Orchard Road
Armonk, NY 10504
Telephone: 1-919-543-2193



Tested To Comply
With FCC Standards

FOR HOME OR OFFICE USE

Industry Canada Class B emission compliance statement

This Class B digital apparatus complies with Canadian ICES-003.

Avis de conformité a la réglementation d'Industrie Canada

Cet appareil numérique de classe B est conforme à la norme NMB-003 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 electromagnética)

Este producto satisface los requisitos de protección del Consejo de la UE, Directiva 89/336/CEE en lo que a la legislación 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 Europea - 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 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.

Korean B급 규격 증명서

이 장치는 옥내용으로 보증되었으며 모든 환경에서 사용할 수 있습니다.

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