

IBM USB 2.0 CD-RW/DVD-ROM Drive

User's Guide



IBM USB 2.0 CD-RW/DVD-ROM Drive

User's Guide

Note Before using this information and the product it supports, read Appendix B, "Service and Support," Appendix C, "IBM Statement of Limited Warranty Z125-4753-08 04/2004,", and Appendix E, "Notices."

Contents

Safety v	Before you begin
Conoral actory guidalines	Caring for the Combo Drive
General safety guidelines vii	Cleaning the drive
Service	Using the drive
Extension cords and related devices viii	Using single and double-sided DVD-RAM
Plugs and outlets viii	media
Batteries viii	Precautions for handling 7-2
Heat and product ventilation ix	Using the drive with CDs and DVDs 7-4
CD and DVD drive safety ix	Using the DVD player software
eb and by b arrye sarety.	Using the DVD function
About this book xi	Enabling driver letter access (DLA)
Registering your option xi	Installing WinDVD and viewing a DVD movie 7-5
registering your option	DVD region codes
Chapter 1. Combo Drive quick install 1-1	Starting WinDVD
	Using the CD-R and CD-RW function 7-6
Product description	Using the DVD+R, DVD+RW, DVD-R, DVD-RW,
Hardware and software requirements 1-2 dentifying the combo drive components 1-2	and DVD-RAM function (read only)
Operating Configurations	Backing up a CD
Operating Configurations	Troblem solving
Chapter 2. Cabling the Combo Drive to the ThinkPad computer 2-1	Appendix A. Product specifications A-1
•	Appendix B. Service and Support B-1
Chapter 3. Features 3-1	Online technical support
	Telephone technical support
Chapter 4. Preparing to use the	
Combo Drive 4-1	Appendix C. IBM Statement of Limited
	Warranty Z125-4753-08 04/2004 C-1
Chapter 5. Combo Drive hardware	Part 1 - General Terms
-	Part 2 - Country-unique Terms
nstallation and removal in Windows	Part 3 - Warranty Information
2000 and Windows XP 5-1	Warranty Period
Removing the Combo Drive hardware 5-1	Types of Warranty Service
Windows 2000	Worldwide telephone list
Windows XP	Worldwide telephone list
Setting the media 5-2	worldwide telephone list
	Appendix D. Guarantee supplement
Ejecting the media	Appendix D. Guarantee supplement
Ejecting the media	•
Ejecting the media	Appendix D. Guarantee supplement for Mexico D-1
Ejecting the media	Appendix D. Guarantee supplement for Mexico D-1 Appendix E. Notices E-1
Ejecting the media	Appendix D. Guarantee supplement for Mexico
Ejecting the media	Appendix D. Guarantee supplement for Mexico
Ejecting the media	Appendix D. Guarantee supplement for Mexico

© Copyright IBM Corp. 2004 iii

Safety

Before installing this product, read the Safety Information.

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 přečtěte 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 prečítaje Bezpečnostné predpisy.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Antes de instalar este producto lea la información de seguridad.

© Copyright IBM Corp. 2004

Läs säkerhetsinformationen innan du installerar den här produkten.

安裝本產品之前,請先閱讀「安全資訊」。

General safety guidelines

Always observe the following precautions to reduce the risk of injury and property damage.

Service

Do not attempt to service a product yourself unless instructed to do so by the IBM Support Center. Use only an IBM authorized service provider who is approved to repair your particular product.

Note: Some parts can be upgraded or replaced by the customer. These parts are referred to as Customer Replaceable Units, or CRUs. IBM expressly identifies CRUs as such, and provides documentation with instructions when it is appropriate for customers to replace those parts. You must closely follow all instructions when performing such replacements. Always make sure that the power is turned off and that the product is unplugged from any power source before you attempt the replacement. If you have any questions or concerns, contact the IBM Support Center.

Power cords and power adapters

Use only the power cords and power adapters supplied by the product manufacturer.

Never wrap a power cord around the power adapter or other object. Doing so can stress the cord in ways that can cause the cord to fray, crack or crimp. This can present a safety hazard.

Always route power cords so that they will not be walked on, tripped over, or pinched by objects.

Protect the cord and power adapters from liquids. For instance, do not leave your cord or power adapter near sinks, tubs, toilets, or on floors that are cleaned with liquid cleansers. Liquids can cause a short circuit, particularly if the cord or power adapter has been stressed by misuse. Liquids can also cause gradual corrosion of the power cord terminals and/or the connector terminals on the adapter which can eventually result in overheating.

Always connect power cords and signal cables in the correct order and ensure that all power cord connectors are securely and completely plugged into receptacles.

Do not use any power adapter that shows corrosion at the ac input pins and/or shows signs of overheating (such as deformed plastic) at the ac input or anywhere on the power adapter.

Do not use any power cords where the electrical contacts on either end show signs of corrosion or overheating or where the power cord appears to have been damaged in any way.

© Copyright IBM Corp. 2004 vii

Extension cords and related devices

Ensure that extension cords, surge protectors, uninterruptible power supplies, and power strips that you use are rated to handle the electrical requirements of the product. Never overload these devices. If power strips are used, the load should not exceed the power strip input rating. Consult an electrician for more information if you have questions about power loads, power requirements, and input ratings.

Plugs and outlets

If a receptacle (power outlet) that you intend to use with your computer equipment appears to be damaged or corroded, do not use the outlet until it is replaced by a qualified electrician.

Do not bend or modify the plug. If the plug is damaged, contact the manufacturer to obtain a replacement.

Some products are equipped with a three-pronged plug. This plug fits only into a grounded electrical outlet. This is a safety feature. Do not defeat this safety feature by trying to insert it into a non-grounded outlet. If you cannot insert the plug into the outlet, contact an electrician for an approved outlet adapter or to replace the outlet with one that enables this safety feature. Never overload an electrical outlet. The overall system load should not exceed 80 percent of the branch circuit rating. Consult an electrician for more information if you have questions about power loads and branch circuit ratings.

Be sure that the power outlet you are using is properly wired, easily accessible, and located close to the equipment. Do not fully extend power cords in a way that will stress the cords.

Connect and disconnect the equipment from the electrical outlet carefully

Batteries

All IBM personal computers contain a non-rechargeable coin cell battery to provide power to the system clock. In addition many mobile products such as Thinkpad notebook PCs utilize a rechargeable battery pack to provide system power when in portable mode. Batteries supplied by IBM for use with your product have been tested for compatibility and should only be replaced with IBM approved parts.

Never attempt to open or service any battery. Do not crush, puncture, or incinerate batteries or short circuit the metal contacts. Do not expose the battery to water or other liquids. Only recharge the battery pack strictly according to instructions included in the product documentation.

Battery abuse or mishandling can cause the battery to overheat, which can cause gasses or flame to "vent" from the battery pack or coin cell. If your battery is damaged, or if you notice any discharge from your battery or the buildup of foreign materials on the battery leads, stop using the battery and obtain a replacement from the battery manufacturer.

Batteries can degrade when they are left unused for long periods of time. For some rechargeable batteries (particularly Lithium Ion batteries), leaving a battery unused in a discharged state could increase the risk of a battery short circuit, which could

shorten the life of the battery and can also pose a safety hazard. Do not let rechargeable Lithium-Ion batteries completely discharge or store these batteries in a discharged state.

Heat and product ventilation

Computers generate heat when turned on and when batteries are charging. Notebook PCs can generate a significant amount of heat due to their compact size. Always follow these basic precautions:

- Do not leave the base of your computer in contact with your lap or any part of your body for an extended period when the computer is functioning or when the battery is charging. Your computer produces some heat during normal operation. Extended contact with the body could cause discomfort or, potentially, a skin burn.
- Do not operate your computer or charge the battery near flammable materials or in explosive environments.
- Ventilation slots, fans and/or heat sinks are provided with the product for safety, comfort, and reliable operation. These features might inadvertently become blocked by placing the product on a bed, sofa, carpet, or other flexible surface. Never block, cover or disable these features.

CD and DVD drive safety

CD and DVD drives spin discs at a high speed. If a CD or DVD is cracked or otherwise physically damaged, it is possible for the disc to break apart or even shatter when the CD drive is in use. To protect against possible injury due to this situation, and to reduce the risk of damage to your machine, do the following:

- · Always store CD/DVD discs in their original packaging
- Always store CD/DVD discs out of direct sunlight and away from direct heat sources
- Remove CD/DVD discs from the computer when not in use
- Do not bend or flex CD/DVD discs, or force them into the computer or their packaging
- · Check CD/DVD discs for cracks before each use. Do not use cracked or damaged discs

About this book

This manual contains instructions for installing the IBM[®] USB 2.0 CD-RW/DVD-ROM Drive hardware.

This manual provides installation instructions in the following languages:

- Brazilian Portuguese
- Czech
- English
- French
- German
- Italian
- Japanese
- · Simplified Chinese
- Slovak
- Spanish
- · Traditional Chinese
- Turkish

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.

© Copyright IBM Corp. 2004 Xi

Chapter 1. Combo Drive quick install

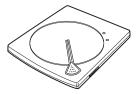
This chapter contains instructions for installing the IBM USB 2.0 CD-RW/DVD-ROM Drive, (hereafter the drive will be referred to as Combo Drive).

Product description

The IBM USB 2.0 CD-RW/DVD-ROM Drive is a slimline DVD-ROM and CD recordable drive that attaches quickly and conveniently to your IBM ThinkPad® computer through a simple connection. The drive is a USB 2.0 device and requires connection to one or two USB 2.0 ports. A maximum write speed of 8x (CD-R/CD-RW media) can be obtained. Maximum read speeds of 6x (DVD media) and 20x (CD media) can be obtained.

In addition to this manual, the option package includes:

• IBM USB 2.0 CD-RW/DVD-ROM Drive



• Standard USB cable assembly (P/N $\overline{73P4522}$ is to be used for "Read Only" operations.)



• USB 2.0 "Y" cable assembly (P/N <u>73P4517</u> is to be used for "Read/ Write" operations).



• IBM USB 2.0 CD-RW/DVD-ROM Drive Software and Guide Super CD



· Safety information manual



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

© Copyright IBM Corp. 2004

Hardware and software requirements

You must have the following hardware installed on your ThinkPad computer in order to use this option:

• One or two USB 2.0 ports; Two are required for "write" operations.

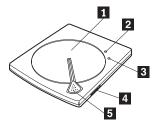
Your computer must have one of the following operating systems installed to use this option:

- Microsoft® Windows® XP
- Microsoft Windows 2000 Professional (Service Pack 4 or later)

Note: The drive will not operate correctly unless Service Pack 4 or later is installed.

Identifying the combo drive components

The following diagrams provide information on the combo drive components, including the controls and connectors. The diagrams below display the top panel, bottom panel, disc open, and using the disc for the first time illustrations.



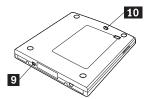
- 1 Disc cover
- 2 Power/Busy indicator
- Green: Drive's power is on.
- Slowly blinking amber: Data is being read.
- Quickly blinking amber: Media is being recognized.
- 3 Write indicator
- Amber: Data is being written.
- 4 Power switch [POWER]
- 5 Open button [OPEN]



- 6 Turntable
- 7 Lens



8 Lens protective sheet



- 9 USB Interface connector
- 10 Emergency eject lever

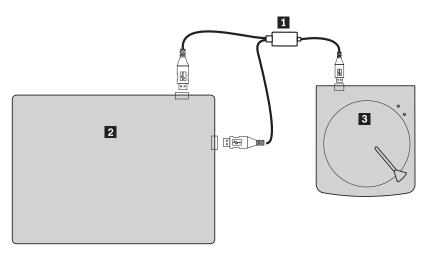
Operating Configurations

This section provides operating configurations for the Combo Drive .

- 1) For "Read Only" operations, use cable P/N 73P4522. Connect the drive to one standard USB 2.0 port on the system.
- 2) For "Read/Write" operations, use USB "Y" cable P/N 73P4517. Connect the drive to two standard USB 2.0 ports on the system.

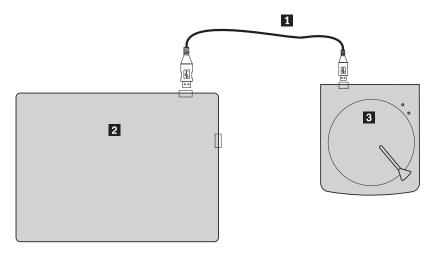
Chapter 2. Cabling the Combo Drive to the ThinkPad computer

The following diagrams may be helpful when cabling the Combo Drive to your ThinkPad computer. Please note that these diagrams might differ slightly from your hardware.



- **1** USB 2.0 "Y" cable assembly, (P/N 73P4517)
- 2 ThinkPad computer
- 3 Combo Drive

Figure 2-1. For "Read/Write" operations.



- 1 Standard USB cable assembly (P/N 73P4522)
- 2 ThinkPad computer
- 3 Combo Drive

Figure 2-2. For "Read Only" operations.

Chapter 3. Features

The following list contains features of the IBM USB 2.0 CD-RW/DVD-ROM Drive:

Easy connection

Since this product incorporates the interface conforming to the USB 2.0 High Speed, it can be connected or disconnected to or from your computer easily even when the power of the computer is on. IBM Docks and Port Replicators with AC power are supported.

Conformance to media manufactured by major media manufacturers

This product is best tuned to almost all the CD and DVD media manufactured by major media manufacturers and the media written by this product realizes a very high write quality. Therefore, this drive can be used with little concern for compatibility issues.

• Incorporation of the buffer underrun prevention function

This product incorporates the buffer underrun prevention function which helps to prevent buffer underrun errors that cause a write failure onto the CD.

Top loading

This product has a top loading mechanism that allows easy loading and ejection of a disc. The top cover can be opened manually or by using software that works with the computer.

• Conformance to multiple standards

This drive conforms with industry standard specifications for CD-RW and CD-R media. This drive is compliant with DVD+RW, DVD+R, DVD-RAM, DVD-RW, and DVD-R specifications (read only).

• No power adapter configuration

This drive Reads and/or Writes with the USB 2.0 port connections only.

This user's manual on the CD included with this option describes how to set up the Combo Drive, how to connect it to a personal computer, and how to operate it. Read the instruction manual of your computer as well.

The CD also includes software applications for use with the Combo Drive. They will automatically install by clicking on them.

Read this instruction manual carefully before use for proper handling and operations of the Combo Drive.

© Copyright IBM Corp. 2004

Chapter 4. Preparing to use the Combo Drive

Before using the Combo Drive, follow the procedure below:

- 1. Make sure the Combo Drive is properly connected to your ThinkPad computer.
- 2. Check the locations of the functions on the Combo Drive (refer to the figures below).
- 3. Insert the IBM USB 2.0 CD-RW/DVD-ROM Drive Software and User's Guide Super CD that was shipped with this option to install the CD-R/CD-RW writing software or DVD read software.
- 4. Double-click on the application you want and follow the instructions on the screen.
- 5. Check that the drive operates normally and keep the enclosed warranty in a safe place after filling it in.

Check that nothing is placed on the top cover when ejecting a CD or DVD. When normal ejection is impossible, an error message may appear on your computer. When ejection is not performed normally, open the top cover manually and close it securely after removing anything that may be on the cover.

Following are the locations of the functions on the Combo Drive:



Figure 4-1. Front view of the Combo Drive

1 Top cover 2 Eject button

The top cover must be closed to play a disc. Press this button to open the top cover.

Attention: An electrical locking mechanism is used in this drive so that an erroneous operation does not open the top cover during write. Make sure that the power is on and the drive is not in a write operation before pressing the eject button to open the top cover.

Check that nothing is placed on the top cover when ejecting. When normal ejection is impossible, an error message may appear on your computer. When ejection is not performed normally, open the top cover manually and close it securely after removing anything that may be on the cover. Set the media with the label face up on the disc tray.

3 Disc tray

4 Power Switch [POWER] Used for turning on the power.

5 Lens

The CD is placed on the lens.

© Copyright IBM Corp. 2004 4-1

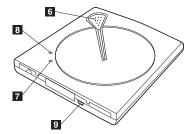


Figure 4-2. Rear view of the Combo Drive

6 Open button

7 Power/Busy indicators

Press to open the combo drive.

The green LED indicates the power status and the operation states of the drive.

• Power/Busy LED:green when powered.

• LED blinks quickly: blinks amber quickly when media is being recognized.

• LED blinks slowly: blinks amber slowly when data is being

• Write LED: amber when writing to media.

Insert the plug of the provided dedicated USB cable.

8 Write indicator

9 USB interface connector

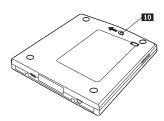


Figure 4-3. Bottom view of the Combo Drive

10 Emergency eject lever

When ejecting the media with the power off, slide the emergency eject lever to open the top cover.

Attention: Be sure the power is off when using the emergency eject lever. Use the eject button instead of the emergency eject lever except in an emergency.

Chapter 5. Combo Drive hardware installation and removal in Windows 2000 and Windows XP

Windows 2000 and Windows XP operating systems have the native drivers for the Combo Drive. Therefore, when this drive is connected, Windows will automatically install the appropriate driver and the drive will be ready to be used. You do not have to perform any special installation or removal procedures.

Attention:

- This drive will be recognized as "IBM CDRW/DVD UJDB753 USB Device" by Windows Device Manager.
- In Windows 2000 operating systems, Service Pack 4 or later *must* be installed.

Removing the Combo Drive hardware

"Hot plug" is supported for the connection between the USB cable and the computer; therefore you don't need to turn off the computer when you remove the Combo Drive. Follow the procedure below for removing the Combo Drive for Windows 2000 and Windows XP.

Attention:

Do not remove and reconnect the drive from or to the computer in rapid succession. The drive may not be recognized. Reconnect the drive approximately 20 seconds after removing.

Use the Tray icon for this procedure.

Windows 2000

- 1. Exit the program that uses the drive.
- 2. Confirm that the Write indicator of the drive is off.
- 3. Click the **Remove** icon on the tray.



4. Select removing drive. In this case, select the drive name assigned to the drive (D: in this figure).



5. The Safe to Remove Hardware confirmation window appears. Click the **OK** button.



6. Remove the plug of the USB cable from the USB terminal of the computer.

© Copyright IBM Corp. 2004 5-1

Note: The message indicated above may differ depending on the versions of your operating system. Refer to the instruction manual for your computer or operating system for details.

Windows XP

- 1. Exit the program that uses the drive.
- 2. Confirm that the Write indicator of the drive is off.
- 3. Click the **Remove** icon on the tray.

```
🍇 👺 😘 🛢 🕵 😓 👂 📭 🗞 🔽 1:53 PM
```

4. Select removing drive. In this case, select the drive name assigned to the drive (D: in this figure).



5. The Safe to Remove Hardware confirmation window appears. Click the **OK** button.



6. Remove the plug of the USB cable from the USB terminal of the computer.

Note: The message indicated above may differ depending on the versions of your operating system. Refer to the instruction manual for your computer or operating system for details.

Setting the media

- 1. Press the eject button of the drive to open the top cover.
- 2. Place the media on the tray with the label face upward. Align the center hole of the disc with the clamp at the center of the tray and fit the disc in securely by pressing the outer vicinity of the center hole.
- 3. Close the top cover gently and press the cover down until it is completely locked.
- 4. When the top cover is correctly closed, the media is recognized and made usable after the busy indicator blinks for some seconds.

Ejecting the media

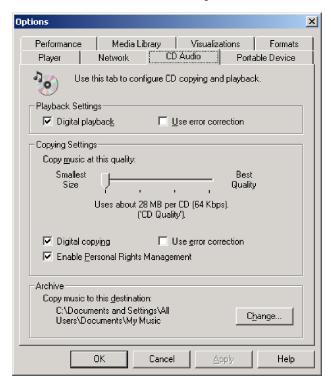
- 1. Press the eject button of the drive to automatically open the top cover.
- 2. Lift the edge of the disc carefully from the tray while pressing the upper section of the clamp.
- 3. Close the top cover gently until the cover is completely closed. Check that the cover is securely locked.

Playing back the audio CD

Use Windows Media Player or audio CD playback software such as Microsoft CD Player for playing back the audio CD using the drive. The operation method differs depending on the software and versions. Refer to the operation manual of your computer or software for details.

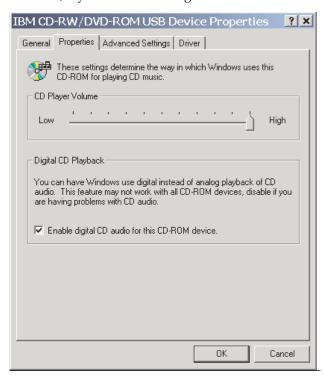
Windows 2000

In Windows Media Player, you will find Digital Playback check box when you click the CD Audio tab in the Options window, as shown in the following figure.



In addition, you will find the Enable Digital Music CD with this Combo Drive check box on the Combo Drive property on Device Manager, as shown in the figure below. When there is no setting item for the digital playback in your player

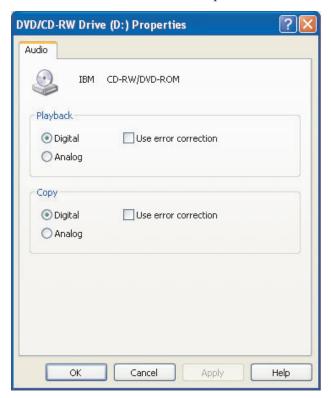
software, try the above setting.



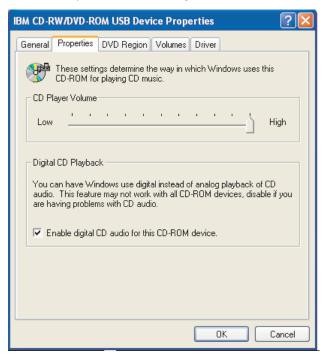
Note: The windows above may differ depending on the versions of your operating system. Refer to the instruction manual for your computer or operating system for details.

Windows XP

In Windows Media Player, you will find Digital Playback check box when you click the CD Audio tab in the Properties window, as shown in the following figure.



In addition, you will find the Enable Digital Music CD with this Combo Drive check box on the Combo Drive property on Device Manager, as shown in the figure below. When there is no setting item for the digital playback in your player software, try the above setting.



Note: The windows above may differ depending on the versions of your operating system. Refer to the instruction manual for your computer or operating system for details.

Chapter 6. Application software

Your IBM USB 2.0 CD-RW/DVD-ROM Drive Software and User's Guide Super CD contains the following software:

• IBM Drive Letter Access (DLA)

This software enables you to write directly to CD-RW media only using the drive letter like you would if you were writing to a diskette. All disc format types can be formatted by DLA. With DLA, you can drag-and-drop files, create new directories, or save files from any application directly to your Combo Drive.

UDF reader

This software enables you to install software for reading DVD-RAM, DVD-RW, and CD-RW media on computers with DVD drives. It also allows you to read DLA-created discs on systems without DLA installed.

IBM RecordNow

IBM RecordNow is disc mastering software that allows you to create your own music or data discs from files on your computer, or from other disc media such as CDs or DVDs. Music discs created with IBM RecordNow will play on any CD player, whether it's at home, in your car, or through your computer's CD-ROM. IBM RecordNow also makes it easy to create data discs that can be read on any appropriate CD or DVD disc reader.

Note: Some DVD players cannot read CD-R media. Refer to the documentation that accompanied your drive for information on supported media.

IBM RecordNow guides you, step-by-step, through the recording process with simple Wizards and an intuitive user-interface.

Using IBM RecordNow you can create:

- Exact copies of existing discs The Exact Copy feature makes a duplicate of your master disc, transferring the disc layout of the original disc to your CD-R or CD-RW.
- Discs of archived data from your hard drive The Make a Data Disc feature is used to store electronic data, such as the files and applications that reside on your computer's hard drive. Unlike music discs, data discs are used to store files that are readable only by a computer, and cannot be played on your home or car stereo—even if audio files are on the disc.
- Music compilations from WAV, MP3, or WMA files, or from existing music discs – The Make a Music Disc feature creates custom music discs from files on your hard drive or your existing music discs. The CD music database feature can automatically tag your files with track information to help you sort through your collection.

Note: Please reference the IBM RecordNow On-line Help, for more information on how to Make an Exact copy, Create a Data Disc, or to Create an Audio disc with IBM RecordNow.

To start RecordNow, complete the following procedure:

- 1. Click Start.
- 2. Click Programs.
- 3. Click IBM RecordNow.
- 4. Click **RecordNow** to open the main recording software window.

© Copyright IBM Corp. 2004 6-1

• Intervideo WinDVD

This software enables you to play back DVD videos on your computer or to play video files from your hard disk drive.

Note: Some graphics adapters such as the FIREGL, Intergraph, and 3dLabs, do not support DVD video playback.

Chapter 7. Using the Combo Drive

This section provides information on how to handle, load, and care for DVDs and CDs and how to care for your Combo Drive.

Before you begin

For best results, review the following guidelines before using the drive:

- Do not move your ThinkPad computer while formatting or writing a disc as this
 might cause data errors. Also, minimize typing while formatting or writing to a
 disc, as this might also cause data errors.
- Keep the ThinkPad computer on a flat surface when writing to a disc.
- Turn screensavers off. Using a screensaver might interrupt the formatting and writing process.
- Do not put your ThinkPad computer into hibernation or suspend mode while writing to a disc.

Note: The read and write results of the drive depend upon the quality and characteristics of the DVD or CD media used.

Handling and caring for a disc

Carefully handle and clean discs, especially writable media types such as CD-R and CD-RW discs, so that they remain readable. You can prolong the life of your discs by using the following precautions:

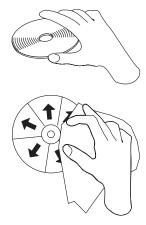
- Always store discs in their original packaging.
- · Always store discs out of direct sunlight.
- Always store discs away from direct heat sources.
- Remove discs from the computer when not in use.
- Check discs for cracks BEFORE each use.

IMPORTANT: Do not use discs that are cracked.

- Do not force discs into the computer or packaging.
- · Do not bend or flex discs.
- Do not use commercial cleaners to clean discs.
- · Do not write on the surface of discs.
- Handle discs by the edges or the center hole.
- · Do not touch the surface of discs.
- To remove dust or fingerprints, wipe discs from the center to the edge with a soft, lint-free cloth.

Attention: Wiping a disc using a circular motion can cause data loss.

© Copyright IBM Corp. 2004 7-1



Caring for the Combo Drive

To protect your drive during operation, observe the following precautions:

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

Cleaning the drive

Wipe off soil on the drive using a soft cloth. If soil is persistent, use a cloth dampened with a diluted neutral detergent after squeezing all the water out. If liquid is allowed into the drive, it may cause a serious malfunction, an electric shock or a fire.

Do not apply solvents such as benzene or thinner. Chemical cleaners for home or industrial use may damage the coating of the drive.

Using the drive

This section contains information on using the Combo Drive.

Using single and double-sided DVD-RAM media

DVD-RAM media is available in single-sided and double-sided versions.

The 2.6 GB and 4.7 GB versions are single-sided. The 9.4 GB version is double-sided. To access the data on both sides of the media, you must remove the media from the drive, turn it over, and re-insert it into the drive.

Precautions for handling

Be careful when handling the removed disc. Debris, dust particles, fingerprints, smears, or scratches may impair recording and playback of the media. To clean dust or other debris, use a CD Cleaning Kit. Use a soft, dry cloth to clean the disc. Do not use solvents to clean the disc surface. When labeling a disc, write only on the printed label side or the cartridge using a soft felt-tip marker. Keep out of direct sunlight, high temperatures, and humidity. Do not attach labels to either side of the disc.

Using the drive with CDs and DVDs

Complete the following procedure to read a data disc:

- 1. Turn on the computer.
- 2. Press the Eject button on the top of the drive.
- 3. Insert a disc in the tray with the label facing up.
- 4. Close the drive by gently closing the top cover.
- 5. Wait for the drive busy indicator to stop blinking and turn off.
- 6. Double-click the CD-ROM or DVD-RAM/DVD-R/DVD-RW icon.

Using the DVD player software

This section describes how to use and customize the DVD Player software. You can find current information on DVD Player software in the readme file on the IBM USB 2.0 CD-RW/DVD-ROM Drive Software and User's Guide Super CD.

Using the DVD function

To use the DVD function, you need to install WinDVD (the DVD movie player program).

Enabling driver letter access (DLA)

Drive Letter Access (DLA) is provided so that you can write data to CD-RW media. CD-RW media can be written to many times.

To format and write to CD-RW media:

- 1. Insert a disc into the drive.
- 2. Double-click My Computer. Right-click the drive letter for the USB 2.0 Combo Drive.
- 3. Click Format. Formatting time will vary depending on the format process you use (quick or full).
- 4. After formatting is complete, you can drag and drop files to the USB 2.0 Combo Drive icon, or you can move files in Windows Explorer.

To use UDF formatted CD-RW media in other computers, a UDF reader is included on the IBM USB 2.0 CD-RW/DVD-ROM Drive Software and User's Guide *Super CD.* To use the UDF reader, follow this procedure:

- 1. Insert the IBM USB 2.0 CD-RW/DVD-ROM Drive Software and User's Guide Super CD into the CD or DVD drive of the computer you want to use the UDF formatted discs with.
- 2. Click Start.
- 3. Click Run.
- 4. Type e:\UDFREADR\language where e is the drive letter of the USB 2.0 Combo Drive, and language is your language.
- Click OK.
- 6. Double-click **SETUP.EXE** and follow the on-screen instructions.

Note: The UDF reader is only needed on systems that do not have another DLA program for CD-RW installed.

Installing WinDVD and viewing a DVD movie

To install WinDVD, go to the "Software" section of the IBM USB 2.0 CD-RW/DVD-ROM Drive Software and User's Guide Super CD.

After you install the Combo Drive and WinDVD software, you can view a DVD movie. But first you need to set the DVD region code for your DVD content.

DVD region codes

DVD region codes help protect the contents of a DVD. The world is divided into six regions and specific content can be viewed only in the appropriate region. For example, content for Region 1 can be viewed only in the U.S. and Canada. WinDVD is also region-specific.

You can verify the region code of the content by looking at the region code symbol on the back of the content packaging.

Region code	Region
1	U.S., Canada
2	Europe, Middle East, South Africa, Japan
3	Southeast Asia, Taiwan, Korea
4	Latin America, Australia, New Zealand
5	Former Soviet Union, North Africa, India
6	People's Republic of China

Start WinDVD by inserting the DVD into the drive. The region code is automatically set and you can view the movie. This is the initial setting.

After the region code has been set, if you insert a DVD with a different region code, you are prompted to change the region code. You can change the region code from your initial setting up to four times.

After the region code has been changed from its initial setting four times, it is fixed and can no longer be changed. Thereafter, you can play DVD content only from that region.

To display the region code status, click the WinDVD Properties button on the WinDVD user interface. The **General** tab contains this information.

To change the region code, do the following:

- 1. Turn on your computer and start your operating system.
- 2. Click Start.
- 3. Select **Programs**.
- 4. Click Intervideo WinDVD.
- 5. Click the **Properties** icon to open the **Properties** window.
- 6. Click the **General Properties** tab.
- 7. Insert a single region DVD of the new region.
- 8. Select the correct region code for your country.
- 9. Click OK.

Starting WinDVD

To start WinDVD, complete the following procedure:

- 1. Click Start.
- 2. Click Programs.
- 3. Click InterVideo WinDVD.
- 4. Click **InterVideo WinDVD** to open the DVD movie player window. For more information on how to play the DVD movie player, refer to the WinDVD help information on the *IBM USB 2.0 CD-RW/DVD-ROM Drive Software and User's Guide Super CD*. If you want to watch a DVD movie on your TV, refer to the online information provided with your computer.

Notes:

- 1. Your computer has been configured to provide the highest quality audio and video playback obtainable with the available system resources. You can alter the default settings by changing the video resolution setting within the Control Panel. Some systems do not have enough resources to provide full-quality audio and video playback at all resolution settings. If you experience poor playback performance, adjust the resolution to a lower setting.
- 2. Audio or video streams are decoded by software. The audio and video subsystems need to be fully functional and enabled.

Using the CD-R and CD-RW function

The Combo Drive can write to both CD-R and CD-RW discs. CD-R discs cannot be erased, but can be used with standard CD-ROM drives and CD players.

You can use CD-R discs to record audio tracks, store data, archive files, and copy files from another CD.

CD-RW discs can be erased and rewritten, but can be used only with newer MR-and CD-RW-compatible CD-ROM and DVD-ROM drives. You can use CD-RW discs to back up, store, and update files or to copy files from another CD.

Notes:

- 1. CD-R discs are playable on audio CD players. CD-RW discs are not playable on most audio CD players.
- 2. The software included with this drive does **not** enable the drive CD-recording capabilities with DOS, Windows 3.x, or IBM OS/2[®] operating systems.

For more information on using the software, refer to the IBM RecordNow and IBM DLA help information on the IBM USB 2.0 CD-RW/DVD-ROM Drive Software and User's Guide Super CD.

Using the DVD+R, DVD+RW, DVD-R, DVD-RW, and DVD-RAM function (read only)

The Combo Drive can read DVD+R, DVD+RW, DVD-R, DVD-RW, and DVD-RAM discs.

Backing up a CD

To copy a commercial CD you must own the copyright or obtain permission from the copyright owner. If you do not own the copyright or do not obtain permission from the copyright owner, you might be violating copyright law and might be subject to payment of damages or other remedies. For more information on copyright law, consult your legal advisor.

Problem solving

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

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

You cannot create a multi session disc.

Be sure that there is enough space left on the disc for another session. Writing a session requires lead-in and lead-out space (about 15 MB) in addition to the data that is recorded.

You cannot successfully write to a CD-R or CD-RW disc.

Take the following actions:

- 1. Verify that the process is not being interrupted by a screen saver, an antivirus program, an Internet or e-mail program, or other software. Disable the functions that might interrupt the write operation.
- 2. Verify that the hard disk has been defragmented.
- 3. Consult the hard disk drive manufacturer or vendor if an older hard disk drive is conducting a thermal recalibration during a write operation.
- 4. Replace the disc if it is bad or scratched.
- 5. Disable the Windows Auto Insert Notify function on your CD-ROM and CD-RW drives.

You cannot eject a disc.

Take the following actions after ensuring that the drive is not in the process of writing to a disc:

- 1. Eject the disc through software.
- 2. Use the Eject button.
- 3. Turn off the computer. Wait 45 seconds; then turn on the computer and try using the Eject button again.
- 4. If other methods do not work, use the emergency eject lever. For more information, see Chapter 4, "Preparing to use the Combo Drive," on page 4-1.

You cannot read from the CD disc after successfully writing to it.

Take the following actions:

- 1. If you can read the CD disc in another CD player or you can see previous sessions, the directory information might be damaged on the volume, making it unreadable. To get ideas for troubleshooting, check the documentation that comes with the software.
- 2. You might have a damaged CD-R or CD-RW disc. Try a new disc or another brand of CD disc.
- 3. If you can read from a CD-RW disc in the writing drive, but not in another MR drive, be sure that a UDF Reader program is installed in the computer.
- 4. Avoid writing at the slower 1X speed unless required by your computer.

Appendix A. Product specifications

This appendix includes the following information:

- Physical specifications
- Power requirements
- Environmental requirements
- Read speeds
- Write speeds

Physical specifications:

The physical specifications¹ of the drive are listed in the following table.

Physical specification	
Height	18.5 mm (0.73 in.)
Width	130 mm (5.12 in.)
Length	157 mm (6.18 in.)
Weight	305 g (0.67 lb.)

Power requirements:

The following table lists the power specifications by voltage level for the drive. The power specifications are measured at the drive power connector and are nominal values.

Power specifications	Voltage	Average	Maximum
USB Standard Bus Power	5V dc	800 mA	1.5 A

Environmental requirements:

Specification	Operational	Nonoperational
Temperature (noncondensing)	+5° C to +40° C	-20° C to +55° C
	(+41° F to +104° F)	(-4° F to +131° F)
Relative humidity (noncondensing)	20% to 80%	15% to 85%

© Copyright IBM Corp. 2004 A-1

^{1.} Product-description data represents IBM's design objectives and is provided for comparative purposes; actual results might vary based on a variety of factors. This product data does not constitute a warranty. Data is subject to change without notice.

Read speeds:

Media	All power modes
DVD-ROM (single layer)	6X Max.
DVD-ROM (dual layer)	6X Max.
DVD-R (4.7 GB)	4X Max.
DVD-RW (4.7 GB)	4X Max.
DVD-video	4X Max.
DVD-RAM (4.7/9.4 GB)	2X Max.
DVD-RAM (2.6 GB)	1X Max.
DVD+R	4X Max.
DVD+RW	4X Max.
CD-ROM	20X Max.
CD-R	20x Max.
CD-RW	20X Max.
CD-DA (DAE)	20X Max.

Write speeds:

Media	All power modes
CD-R	8X Max.
CD-RW	8X Max.

Appendix B. Service and Support

The following information describes the technical support that is available for your product, during the warranty period or throughout the life of the product. Refer to your IBM Statement of Limited Warranty for a full explanation of IBM warranty terms.

Online technical support

Online technical support is available during the life of your product through the Personal Computing Support Web site at 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 IBM Support Center 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. If the number for your country or region is not listed, contact your IBM reseller or IBM marketing representative. Response time may vary depending on the number and nature of the calls received.

Phone numbers are subject to change without notice. For the latest phone number list, go to http://www.ibm.com/pc/support and click **Support Phone List**.

© Copyright IBM Corp. 2004

Country or Region	Telephone Number	Country or Region	Telephone Number
Africa	Telephone Number +44 (0) 1475 555 055	Japan	Telephone Number Desktop: 0120-887-870 Overseas calls: 81-46-266-1084 ThinkPad: 0120-887-874 Overseas calls: 81-46-266-1084 IntelliStation and xSeries: 81-46-266-1358 PC Software: 0120-558-695 Overseas calls: 81-44-200-8666
Argentina	0800-666-0011	Luxembourg	298-977-5063
Australia	131-426	Malaysia	(60) 3-7727-7800
Austria	01-24592-5901	Mexico	001-866-434-2080
Bolivia	0800-0189	Middle East	+44 (0) 1475 555 055
Belgium	Dutch: 02-210 9820	Netherlands	020-514 5770
	French: 02-210 9800		
Brazil	55-11-3889-8986	New Zealand	0800-446-149
Canada	English: 1-800-565-3344 French: 1-800-565-3344 In Toronto: 416-383-3344	Nicaragua	255-6658
Chile	800-224-488	Norway	66 81 11 00
China	800-810-1818	Panama	206-6047
China (Hong Kong and S.A.R.)	Home PC: 852-2825-7799 Commercial PC: 852-8205-0333	Peru	0-800-50-866
Colombia	980-912-3021	Philippines	(63) 2-995-2225
Costa Rica	284-3911	Portugal	21-892-7147
Denmark	45 20 82 00	Russia	095-940-2000
Dominican Republic	or 566-4755 or 566-5161 ext. 8201 Toll Free within the Dominican Republic: 1-200-1929	Singapore	(65) 1-800-840-9911
Ecuador	1-800-426911 (option #4)	Spain	91-714-7983

Country or Region	Telephone Number	Country or Region	Telephone Number
El Salvador	250-5696	Sweden	08-477 4420
Finland	09-459 69 60	Switzerland	058-333-0900
France	02 38 55 74 50	Taiwan	886-2-8723-9799
Germany	07032-1549 201	Thailand	(66) 2-273-4000
Guatemala	335-8490	Turkey	00-800-446-32-041
Honduras	Tegucigalpa & Sand Pedro Sula: 232-4222 San Pedro Sula: 552-2234	United Kingdom	0-1475-555 055
India	1600-44-6666	United States	1-800-IBM-SERV (1-800-426-7378)
Indonesia	(62) 21-523-8535	Uruguay	000-411-005-6649
Ireland	01-815-9202	Venezuela	0-800-100-2011
Italy	02-7031-6101	Vietnam	Ho Chi Minh: (84) 8-829-5160 Hanoi: (84) 4-843-6675

Appendix C. IBM Statement of Limited Warranty Z125-4753-08 04/2004

Part 1 - General Terms

This Statement of Limited Warranty includes Part 1 - General Terms, Part 2 - Country-unique Terms, and Part 3 - Warranty Information. The terms of Part 2 replace or modify those of Part 1. The warranties provided by IBM in this Statement of Limited Warranty apply only to Machines you purchase for your use, and not for resale. 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. Nothing in this Statement of Limited Warranty affects any statutory rights of consumers that cannot be waived or limited by contract.

What this Warranty Covers

IBM warrants that each Machine 1) is free from defects in materials and workmanship and 2) conforms to IBM's Official Published Specifications ("Specifications") which are available on request. The warranty period for the Machine starts on the original Date of Installation and is specified in Part 3 - Warranty Information. The date on your invoice or sales receipt is the Date of Installation unless IBM or your reseller informs you otherwise. 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. Unless IBM specifies otherwise, these warranties apply only in the country or region in which you purchased the Machine.

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. SOME STATES OR JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF EXPRESS OR IMPLIED WARRANTIES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU. IN THAT EVENT, SUCH WARRANTIES ARE LIMITED IN DURATION TO THE WARRANTY PERIOD. NO WARRANTIES APPLY AFTER THAT PERIOD. SOME STATES OR JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

What this Warranty Does not Cover

This warranty does not cover the following:

- any software programs, whether pre-loaded or shipped with the Machine, or installed subsequently;
- failure resulting from misuse (including but not limited to use of any Machine capacity or capability, other than that authorized by IBM in writing), accident, modification, unsuitable physical or operating environment, or improper maintenance by you;
- failure caused by a product for which IBM is not responsible; and
- any non-IBM products, including those that IBM may procure and provide with or integrate into an IBM Machine at your request.

The warranty is voided by removal or alteration of identification labels on the Machine or its parts.

© Copyright IBM Corp. 2004 C-1

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

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

How to Obtain Warranty Service

If the Machine does not function as warranted during the warranty period, contact IBM or your reseller to obtain warranty service. If you do not register the Machine with IBM, you may be required to present proof of purchase as evidence of your entitlement to warranty service.

What IBM Will Do to Correct Problems

When you contact IBM for service, you must follow the problem determination and resolution procedures that IBM specifies. An initial diagnosis of your problem can be made either by a technician over the telephone or electronically by access to an IBM website.

The type of warranty service applicable to your Machine is specified in Part 3 -Warranty Information.

You are responsible for downloading and installing designated Machine Code (microcode, basic input/output system code (called "BIOS"), utility programs, device drivers, and diagnostics delivered with an IBM Machine) and other software updates from an IBM Internet Web site or from other electronic media, and following the instructions that IBM provides.

If your problem can be resolved with a Customer Replaceable Unit ("CRU") (e.g., keyboard, mouse, speaker, memory, hard disk drive), IBM will ship the CRU to you for you to install.

If the Machine does not function as warranted during the warranty period and your problem cannot be resolved over the telephone or electronically, through your application of Machine Code or software updates, or with a CRU, IBM or your reseller, if approved by IBM to provide warranty service, will either, at its discretion, 1) repair it to make it function as warranted, or 2) replace it with one that is at least functionally equivalent. If IBM is unable to do either, you may return the Machine to your place of purchase and your money will be refunded.

IBM or your reseller will also manage and install selected engineering changes that apply to the Machine.

Exchange of a Machine or Part

When the 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.

Your Additional Responsibilities

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 service request procedures that IBM or your reseller provides;
 - b. backup or secure all programs, data, and funds contained in the Machine;
 - c. provide IBM or your reseller with sufficient, free, and safe access to your facilities to permit IBM to fulfill its obligations; and
 - d. inform IBM or your reseller of changes in the Machine's location.
- 4. (a) ensure all information about identified or identifiable individuals (Personal Data) is deleted from the Machine (to the extent technically possible), (b) allow IBM, your reseller or an IBM supplier to process on your behalf any remaining Personal Data as IBM or your reseller considers necessary to fulfill its obligations under this Statement of Limited Warranty (which may include shipping the Machine for such processing to other IBM service locations around the world), and (c) ensure that such processing complies with any laws applicable to such Personal Data.

Limitation of Liability

IBM is responsible for loss of, or damage to, your Machine only 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 are responsible for any of your confidential, proprietary or personal information contained in a Machine which you return to IBM for any reason. You should remove all such information from the Machine prior to its return.

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), except for any liability that cannot be waived or limited by applicable laws, IBM is liable for no more than

- 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 charges (if recurring, 12 months' charges apply) for the Machine that is subject of the claim. For purposes of this item, the term "Machine" includes Machine Code and Licensed Internal Code ("LIC").

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, ITS SUPPLIERS OR RESELLERS LIABLE FOR ANY OF THE FOLLOWING EVEN IF INFORMED OF THEIR POSSIBILITY: 1) THIRD PARTY CLAIMS AGAINST YOU FOR DAMAGES (OTHER THAN THOSE UNDER THE FIRST ITEM LISTED ABOVE); 2) LOSS OF, OR DAMAGE TO, DATA; 3) SPECIAL, INCIDENTAL, OR INDIRECT DAMAGES OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; OR 4) LOST PROFITS, BUSINESS REVENUE, GOODWILL OR ANTICIPATED SAVINGS. SOME STATES OR JURISDICTIONS DO NOT ALLOW THE **EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL** DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. SOME STATES OR JURISDICTIONS DO NOT ALLOW

LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

Governing Law

Both you and IBM consent to the application of the laws of the country in which you acquired the Machine to govern, interpret, and enforce all of your and IBM's rights, duties, and obligations arising from, or relating in any manner to, the subject matter of this Statement of Limited Warranty, without regard to conflict of law principles.

THESE WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE OR JURISDICTION TO JURISDICTION.

Jurisdiction

All of our rights, duties, and obligations are subject to the courts of the country in which you acquired the Machine.

Part 2 - Country-unique Terms

AMERICAS

ARGENTINA

Jurisdiction: *The following is added after the first sentence:*

Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the Ordinary Commercial Court of the city of Buenos Aires.

BOLIVIA

Jurisdiction: *The following is added after the first sentence:*

Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the courts of the city of La Paz.

BRAZIL

Jurisdiction: The following is added after the first sentence:

Any litigation arising from this Agreement will be settled exclusively by the court of Rio de Janeiro, RJ.

CHILE

Jurisdiction: *The following is added after the first sentence:*

Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the Civil Courts of Justice of Santiago.

COLOMBIA

Jurisdiction: The following is added after the first sentence:

Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the Judges of the Republic of Colombia.

EQUADOR

Jurisdiction: The following is added after the first sentence:

Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the Judges of Quito.

MEXICO

Jurisdiction: *The following is added after the first sentence:*

Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the Federal Courts of Mexico City, Federal District.

PARAGUAY

Jurisdiction: The following is added after the first sentence:

Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the courts of the city of Asuncion.

PERU

Jurisdiction: The following is added after the first sentence:

Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the Judges and Tribunals of the Judicial District of Lima, Cercado.

Limitation of Liability: The following is added at the end of this section:In accordance with Article 1328 of the Peruvian Civil Code the limitations and exclusions specified in this section will not apply to damages caused by IBM's willful misconduct ("dolo") or gross negligence ("culpa inexcusable").

URUGUAY

Jurisdiction: *The following is added after the first sentence:*

Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the City of Montevideo Court's Jurisdiction.

VENEZUELA

Jurisdiction: *The following is added after the first sentence:*

Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the Courts of the Metropolitan Area Of the City of Caracas.

NORTH AMERICA

How to Obtain Warranty Service: *The following is added to this Section:* To obtain warranty service from IBM in Canada or the United States, call 1-800-IBM-SERV (426-7378).

CANADA

Limitation of Liability: *The following replaces item 1 of this section:*

1. damages for bodily injury (including death) or physical harm to real property and tangible personal property caused by IBM's negligence; and

Governing Law: The following replaces "laws of the country in which you acquired the *Machine" in the first sentence:*

laws in the Province of Ontario.

UNITED STATES

Governing Law: The following replaces "laws of the country in which you acquired the *Machine" in the first sentence:* laws of the State of New York.

ASIA PACIFIC

AUSTRALIA

What this Warranty Covers: *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 similar legislation and are only limited

to the extent permitted by the applicable legislation.

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 or other similar legislation, 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.

Governing Law: The following replaces "laws of the country in which you acquired the *Machine"* in the first sentence: laws of the State or Territory.

CAMBODIA AND LAOS

Governing Law: The following replaces "laws of the country in which you acquired the Machine" in the first sentence: laws of the State of New York, United States of America.

CAMBODIA, INDONESIA, AND LAOS

Arbitration: *The following is added under this heading:*

Disputes arising out of or in connection with this Statement of Limited Warranty shall be finally settled by arbitration which shall be held in Singapore in accordance with the Arbitration Rules of Singapore International Arbitration Center ("SIAC Rules") then in effect. The arbitration award shall be final and binding for the parties without appeal and shall be in writing and set forth the findings of fact and the conclusions of law.

The number of arbitrators shall be three, with each side to the dispute being entitled to appoint one arbitrator. The two arbitrators appointed by the parties shall appoint a third arbitrator who shall act as chairman of the proceedings. Vacancies in the post of chairman shall be filled by the president of the SIAC. Other vacancies shall be filled by the respective nominating party. Proceedings shall continue from the stage they were at when the vacancy occurred.

If one of the parties refuses or otherwise fails to appoint an arbitrator within 30 days of the date the other party appoints its, the first appointed arbitrator shall be the sole arbitrator, provided that the arbitrator was validly and properly appointed.

All proceedings shall be conducted, including all documents presented in such proceedings, in the English language. The English language version of this Statement of Limited Warranty prevails over any other language version.

HONG KONG S.A.R. OF CHINA AND MACAU S.A.R. OF CHINA

Governing Law: The following replaces "laws of the country in which you acquired the Machine" in the first sentence:

laws of Hong Kong Special Administrative Region of China.

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; and
- 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 Limited Warranty, the charge paid by you for the individual Machine that is the subject of the claim. For purposes of this item, the term "Machine" includes Machine Code and Licensed Internal Code ("LIC").

Arbitration: The following is added under this heading

Disputes arising out of or in connection with this Statement of Limited Warranty shall be finally settled by arbitration which shall be held in Bangalore, India in accordance with the laws of India then in effect. The arbitration award shall be final and binding for the parties without appeal and shall be in writing and set forth the findings of fact and the conclusions of law.

The number of arbitrators shall be three, with each side to the dispute being entitled to appoint one arbitrator. The two arbitrators appointed by the parties shall appoint a third arbitrator who shall act as chairman of the proceedings. Vacancies in the post of chairman shall be filled by the president of the Bar Council of India. Other vacancies shall be filled by the respective nominating party. Proceedings shall continue from the stage they were at when the vacancy occurred.

If one of the parties refuses or otherwise fails to appoint an arbitrator within 30 days of the date the other party appoints its, the first appointed arbitrator shall be the sole arbitrator, provided that the arbitrator was validly and properly appointed.

All proceedings shall be conducted, including all documents presented in such proceedings, in the English language. The English language version of this Statement of Limited Warranty prevails over any other language version.

JAPAN

Governing Law: The following sentence is added to this Section:

Any doubts concerning this Statement of Limited Warranty will be initially resolved between us in good faith and in accordance with the principle of mutual trust.

MALAYSIA

Limitation of Liability: The word "SPECIAL" in item 3 of the fifth paragraph is deleted.

NEW ZEALAND

What this Warranty Covers: *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.

PEOPLE'S REPUBLIC OF CHINA (PRC)

Governing Law: The following replaces "laws of the country in which you acquired the Machine" in the first sentence:

laws of the State of New York, United States of America (except when local law requires otherwise).

PHILIPPINES

Limitation of Liability: *Item 3 in the fifth paragraph is replaced by the following:*

SPECIAL (INCLUDING NOMINAL AND EXEMPLARY DAMAGES), MORAL, INCIDENTAL, OR INDIRECT DAMAGES FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; OR

Arbitration: The following is added: under this heading

Disputes arising out of or in connection with this Statement of Limited Warranty shall be finally settled by arbitration which shall be held in Metro Manila, Philippines in accordance with the laws of the Philippines then in effect. The arbitration award shall be final and binding for the parties without appeal and shall be in writing and set forth the findings of fact and the conclusions of law.

The number of arbitrators shall be three, with each side to the dispute being entitled to appoint one arbitrator. The two arbitrators appointed by the parties shall appoint a third arbitrator who shall act as chairman of the proceedings. Vacancies in the post of chairman shall be filled by the president of the Philippine Dispute Resolution Center, Inc.. Other vacancies shall be filled by the respective nominating party. Proceedings shall continue from the stage they were at when the vacancy occurred.

If one of the parties refuses or otherwise fails to appoint an arbitrator within 30 days of the date the other party appoints its, the first appointed arbitrator shall be the sole arbitrator, provided that the arbitrator was validly and properly appointed.

All proceedings shall be conducted, including all documents presented in such proceedings, in the English language. The English language version of this Statement of Limited Warranty prevails over any other language version.

SINGAPORE

Limitation of Liability: The words "SPECIAL" and "ECONOMIC" in item 3 in the fifth paragraph are deleted.

EUROPE, MIDDLE EAST, AFRICA (EMEA)

THE FOLLOWING TERMS APPLY TO ALL EMEA COUNTRIES:

The terms of this Statement of Limited Warranty apply to Machines purchased from IBM or an IBM reseller.

How to Obtain Warranty Service:

Add the following paragraph in Western Europe (Andorra, Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Portugal, San Marino, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, Vatican State, and any country subsequently added to the European *Union, as from the date of accession):*

The warranty for Machines acquired in Western Europe shall be valid and applicable in all Western Europe countries provided the Machines have been announced and made available in such countries.

If you purchase a Machine in one of the Western European countries, as defined above, 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, provided the Machine has been announced and made available by IBM in the country in which you wish to obtain service.

If you purchased a Personal Computer Machine in Albania, Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Hungary, Kazakhstan, Kyrgyzstan, 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.

If you purchase a Machine in a Middle Eastern or African country, you may obtain warranty service for that Machine from the IBM entity within the country of purchase, if that IBM entity provides warranty service in that country, or from an IBM reseller, approved by IBM to perform warranty service on that Machine in that country. Warranty service in Africa is available within 50 kilometers of an IBM approved service provider. You are responsible for transportation costs for Machines located outside 50 kilometers of an IBM approved service provider.

Governing Law:

The phrase "the laws of the country in which you acquired the Machine" is replaced by:

1) "the laws of Austria" in Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, Bulgaria, Croatia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, FYR Macedonia, Moldova, Poland, Romania, Russia, Slovakia, Slovenia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan, and FR Yugoslavia; 2) "the laws of France" in Algeria, Benin, Burkina Faso, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo Republic, Djibouti, Democratic Republic of Congo, Equatorial Guinea, French Guiana, French Polynesia, Gabon, Gambia, Guinea, Guinea-Bissau, Ivory Coast, Lebanon, Madagascar, Mali, Mauritania, Mauritius, Mayotte, Morocco, New Caledonia, Niger, Reunion, Senegal, Seychelles, Togo, Tunisia, Vanuatu, and Wallis & Futuna; 3) "the laws of Finland" in Estonia, Latvia, and Lithuania; 4) "the laws of England" in Angola, Bahrain, Botswana, Burundi, Egypt, Eritrea, Ethiopia, Ghana, Jordan, Kenya, Kuwait, Liberia, Malawi, Malta, Mozambique, Nigeria, Oman, Pakistan, Qatar, Rwanda, Sao Tome, Saudi Arabia, Sierra Leone, Somalia, Tanzania, Uganda, United Arab Emirates, the United Kingdom, West Bank/Gaza, Yemen, Zambia, and Zimbabwe; and 5) "the laws of South Africa" in South Africa, Namibia, Lesotho and Swaziland.

Jurisdiction: The following exceptions are added to this section:

1) In Austria the choice of jurisdiction for all disputes arising out of this Statement of Limited Warranty and relating thereto, including its existence, will be the competent court of law in Vienna, Austria (Inner-City); 2) in Angola, Bahrain, Botswana, Burundi, Egypt, Eritrea, Ethiopia, Ghana, Jordan, Kenya, Kuwait, Liberia, Malawi, Malta, Mozambique, Nigeria, Oman, Pakistan, Qatar, Rwanda, Sao Tome, Saudi Arabia, Sierra Leone, Somalia, Tanzania, Uganda, United Arab Emirates, West Bank/Gaza, Yemen, Zambia, and Zimbabwe all disputes arising out of this Statement of Limited Warranty or related to its execution, including summary proceedings, will be submitted to the exclusive jurisdiction of the English courts; 3) in Belgium and Luxembourg, all disputes arising out of this Statement of Limited Warranty or related to its interpretation or its execution, the law, and the courts of the capital city, of the country of your registered office and/or commercial site location only are competent; 4) in France, Algeria, Benin, Burkina Faso, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo Republic, Djibouti, Democratic Republic of Congo, Equatorial Guinea, French Guiana, French Polynesia, Gabon, Gambia, Guinea, Guinea-Bissau, Ivory Coast, Lebanon, Madagascar, Mali, Mauritania, Mauritius, Mayotte, Morocco, New Caledonia, Niger, Reunion, Senegal, Seychelles, Togo, Tunisia, Vanuatu, and

Wallis & Futuna all disputes arising out of this Statement of Limited Warranty or related to its violation or execution, including summary proceedings, will be settled exclusively by the Commercial Court of Paris; 5) in Russia, all disputes arising out of or in relation to the interpretation, the violation, the termination, the nullity of the execution of this Statement of Limited Warranty shall be settled by Arbitration Court of Moscow; 6) in South Africa, Namibia, Lesotho and Swaziland, both of us agree to submit all disputes relating to this Statement of Limited Warranty to the jurisdiction of the High Court in Johannesburg; 7) in Turkey all disputes arising out of or in connection with this Statement of Limited Warranty shall be resolved by the Istanbul Central (Sultanahmet) Courts and Execution Directorates of Istanbul, the Republic of Turkey; 8) in each of the following specified countries, any legal claim arising out of this Statement of Limited Warranty will be brought before, and settled exclusively by, the competent court of a) Athens for Greece, b) Tel Aviv-Jaffa for Israel, c) Milan for Italy, d) Lisbon for Portugal, and e) Madrid for Spain; and 9) in the United Kingdom, both of us agree to submit all disputes relating to this Statement of Limited Warranty to the jurisdiction of the English courts.

Arbitration: *The following is added under this heading:*

In Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, Bulgaria, Croatia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, FYR Macedonia, Moldova, Poland, Romania, Russia, Slovakia, Slovenia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan, and FR Yugoslavia all disputes arising out of this Statement of Limited Warranty or related to its violation, termination or nullity will be finally settled under the Rules of Arbitration and Conciliation of the International Arbitral Center of the Federal Economic Chamber in Vienna (Vienna Rules) by three arbitrators appointed in accordance with these rules. The arbitration will be held in Vienna, Austria, and the official language of the proceedings will be English. The decision of the arbitrators will be final and binding upon both parties. Therefore, pursuant to paragraph 598 (2) of the Austrian Code of Civil Procedure, the parties expressly waive the application of paragraph 595 (1) figure 7 of the Code. IBM may, however, institute proceedings in a competent court in the country of installation.

In Estonia, Latvia and Lithuania all disputes arising in connection with this Statement of Limited Warranty will be finally settled in arbitration that will be held in Helsinki, Finland in accordance with the arbitration laws of Finland then in effect. Each party will appoint one arbitrator. The arbitrators will then jointly appoint the chairman. If arbitrators cannot agree on the chairman, then the Central Chamber of Commerce in Helsinki will appoint the chairman.

EUROPEAN UNION (EU)

THE FOLLOWING TERMS APPLY TO ALL EU COUNTRIES:

The warranty for Machines acquired in EU countries is valid and applicable in all EU countries provided the Machines have been announced and made available in such countries.

How to Obtain Warranty Service: *The following is added to this section:*

To obtain warranty service from IBM in EU countries, see the telephone listing in Part 3 - Warranty Information.

You may contact IBM at the following address:

IBM Warranty & Service Quality Dept.

PO Box 30

Spango Valley

Greenock

Scotland PA16 0AH

CONSUMERS

Consumers have legal rights under applicable national legislation governing the sale of consumer goods. Such rights are not affected by the warranties provided in this Statement of Limited Warranty.

AUSTRIA, DENMARK, FINLAND, GREECE, ITALY, NETHERLANDS, NORWAY, PORTUGAL, SPAIN, SWEDEN AND SWITZERLAND

Limitation of Liability: The following replaces the terms of this section in its entirety: Except as otherwise provided by mandatory law:

- 1. IBM's liability for any damages and losses that may arise as a consequence of the fulfillment of its obligations under or in connection with this Statement of Limited Warranty or due to any other cause related to this Statement of Limited Warranty is limited to the compensation of only those damages and losses proved and actually arising as an immediate and direct consequence of the non-fulfillment of such obligations (if IBM is at fault) or of such cause, for a maximum amount equal to the charges you paid for the Machine. For purposes of this item, the term "Machine" includes Machine Code and Licensed Internal Code ("LIC").
 - The above limitation shall not apply to damages for bodily injuries (including death) and damages to real property and tangible personal property for which IBM is legally liable.
- 2. UNDER NO CIRCUMSTANCES IS IBM, ITS SUPPLIERS OR RESELLERS LIABLE FOR ANY OF THE FOLLOWING, EVEN IF INFORMED OF THEIR POSSIBILITY: 1) LOSS OF, OR DAMAGE TO, DATA; 2) INCIDENTAL OR INDIRECT DAMAGES, OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; 3) LOST PROFITS, EVEN IF THEY ARISE AS AN IMMEDIATE CONSEQUENCE OF THE EVENT THAT GENERATED THE DAMAGES; OR 4) LOSS OF BUSINESS, REVENUE, GOODWILL, OR ANTICIPATED SAVINGS.

FRANCE AND BELGIUM

Limitation of Liability: The following replaces the terms of this section in its entirety: Except as otherwise provided by mandatory law:

- 1. IBM's liability for any damages and losses that may arise as a consequence of the fulfillment of its obligations under or in connection with this Statement of Limited Warranty is limited to the compensation of only those damages and losses proved and actually arising as an immediate and direct consequence of the non-fulfillment of such obligations (if IBM is at fault), for a maximum amount equal to the charges you paid for the Machine that has caused the damages. For purposes of this item, the term "Machine" includes Machine Code and Licensed Internal Code ("LIC").
 - The above limitation shall not apply to damages for bodily injuries (including death) and damages to real property and tangible personal property for which IBM is legally liable.
- 2. UNDER NO CIRCUMSTANCES IS IBM, ITS SUPPLIERS OR RESELLERS LIABLE FOR ANY OF THE FOLLOWING, EVEN IF INFORMED OF THEIR POSSIBILITY: 1) LOSS OF, OR DAMAGE TO, DATA; 2) INCIDENTAL OR INDIRECT DAMAGES, OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; 3) LOST PROFITS, EVEN IF THEY ARISE AS AN IMMEDIATE CONSEQUENCE OF THE EVENT THAT GENERATED THE DAMAGES; OR 4) LOSS OF BUSINESS, REVENUE, GOODWILL, OR ANTICIPATED SAVINGS.

THE FOLLOWING TERMS APPLY TO THE COUNTRY SPECIFIED:

AUSTRIA

The provisions of this Statement of Limited Warranty replace any applicable statutory warranties.

What this Warranty Covers: *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 limitation period for consumers in action for breach of warranty is the statutory period as a minimum. In case IBM or your reseller is 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.

The second paragraph does not apply.

What IBM Will Do to Correct Problems: The following is added to this section: During the warranty period, IBM will reimburse you for the transportation charges for the delivery of the failing Machine to IBM.

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

The following sentence is added to the end of item 2:

IBM's liability under this item is limited to the violation of essential contractual terms in cases of ordinary negligence.

EGYPT

Limitation of Liability: *The following replaces item 2 in this section:* 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. For purposes of this item, the term "Machine" includes Machine Code and Licensed Internal Code ("LIC").

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

What this Warranty Covers: 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 twelve months. In case IBM or your reseller is 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.

The second paragraph does not apply.

What IBM Will Do to Correct Problems: 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.

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

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

HUNGARY

Limitation of Liability: The following is added at the end of this section: The limitation and exclusion specified herein shall not apply to liability for a breach of contract damaging life, physical well-being, or health that has been caused intentionally, by gross negligence, or by a criminal act.

The parties accept the limitations of liability as valid provisions and state that the Section 314.(2) of the Hungarian Civil Code applies as the acquisition price as well as other advantages arising out of the present Statement of Limited Warranty balance this limitation of liability.

IRELAND

What this Warranty Covers: 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 the terms of section in its entirety: For the purposes of this section, a "Default" means any act, statement, omission, or negligence on the part of IBM in connection with, or in relation to, the subject matter of this Statement of Limited Warranty in respect of which IBM is legally liable to you, whether in contract or tort. A number of Defaults which together result in, or contribute to, substantially the same loss or damage will be treated as one Default occurring on the date of occurrence of the last such Default.

Circumstances may arise where, because of a Default, you are entitled to recover damages from IBM.

This section sets out the extent of IBM's liability and your sole remedy.

- 1. IBM will accept unlimited liability for death or personal injury caused by the negligence of IBM
- 2. Subject always to the **Items for Which IBM is Not Liable** below, IBM will accept unlimited liability for physical damage to your tangible property resulting from the negligence of IBM.

3. Except as provided in items 1 and 2 above, IBM's entire liability for actual damages for any one Default will not in any event exceed the greater of 1) EUR 125,000, or 2) 125% of the amount you paid for the Machine directly relating to the Default.

Items for Which IBM is Not Liable

Save with respect to any liability referred to in item 1 above, under no circumstances is IBM, its suppliers or resellers liable for any of the following, even if IBM or they were informed of the possibility of such losses:

- 1. loss of, or damage to, data;
- 2. special, indirect, or consequential loss; or
- 3. loss of profits, business, revenue, goodwill, or anticipated savings.

SLOVAKIA

Limitation of Liability: *The following is added to the end of the last paragraph:* The limitations apply to the extent they are not prohibited under §§ 373-386 of the Slovak Commercial Code.

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.

UNITED KINGDOM

Limitation of Liability: *The following replaces the terms of this section is in its entirety:* For the purposes of this section, a "Default" means any act, statement, omission, or negligence on the part of IBM in connection with, or in relation to, the subject matter of this Statement of Limited Warranty in respect of which IBM is legally liable to you, whether in contract or tort. A number of Defaults which together result in, or contribute to, substantially the same loss or damage will be treated as one Default.

Circumstances may arise where, because of a Default, you are entitled to recover damages from IBM.

This section sets out the extent of IBM's liability and your sole remedy.

- 1. IBM will accept unlimited liability for:
 - a. death or personal injury caused by the negligence of IBM; and
 - b. any breach of its obligations implied by Section 12 of the Sale of Goods Act 1979 or Section 2 of the Supply of Goods and Services Act 1982, or any statutory modification or re-enactment of either such Section.
- 2. IBM will accept unlimited liability, subject always to the Items for Which IBM is Not Liable below, for physical damage to your tangible property resulting from the negligence of IBM.
- 3. IBM's entire liability for actual damages for any one Default will not in any event, except as provided in items 1 and 2 above, exceed the greater of 1) Pounds Sterling 75,000, or 2) 125% of the total purchase price payable or the charges for the Machine directly relating to the Default.

These limits also apply to IBM's suppliers and resellers. They state the maximum for which IBM and such suppliers and resellers are collectively responsible.

Items for Which IBM is Not Liable

Save with respect to any liability referred to in item 1 above, under no circumstances is IBM or any of its suppliers or resellers liable for any of the following, even if IBM or they were informed of the possibility of such losses:

- 1. loss of, or damage to, data;
- 2. special, indirect, or consequential loss; or
- 3. loss of profits, business, revenue, goodwill, or anticipated savings.

Part 3 - Warranty Information

This Part 3 provides information regarding the warranty applicable to your Machine, including the warranty period and type of warranty service IBM provides.

Warranty Period

The warranty period may vary by country or region and is specified in the table below. NOTE: "Region" means either Hong Kong or Macau Special Administrative Region of China.

A warranty period of 1 year on parts and 1 year on labor means that IBM provides warranty service without charge for parts and labor during the one year of the warranty period.

IBM USB 2.0 CD-RW/DVD-ROM Drive

Country or Region of Purchase	Warranty Period	Type of Warranty Service
Worldwide	1 year	7

Types of Warranty Service

If required, IBM provides repair or exchange service depending on the type of warranty service specified for your Machine in the above table and as described below. Warranty service may be provided by your reseller if approved by IBM to perform warranty service. Scheduling of service will depend upon the time of your call and is subject to parts availability. Service levels are response time objectives and are not guaranteed. The specified level of warranty service may not be available in all worldwide locations, additional charges may apply outside IBM's normal service area, contact your local IBM representative or your reseller for country and location specific information.

1. Customer Replaceable Unit ("CRU") Service

IBM provides replacement CRUs to you for you to install. CRU information and replacement instructions are shipped with your Machine and are available from IBM at any time on your request. Installation of Tier 1 CRUs is your responsibility. If IBM installs a Tier 1 CRU at your request, you will be charged for the installation. You may install a Tier 2 CRU yourself or request IBM to install it, at no additional charge, under the type of warranty service designated for your Machine. IBM specifies in the materials shipped with a replacement CRU whether a defective CRU must be returned to IBM. When return is required, 1) return instructions and a container are shipped with the replacement CRU, and 2) you may be charged for the replacement CRU if IBM does not receive the defective CRU within 30 days of your receipt of the replacement.

2. On-site Service

IBM or your reseller will either repair or exchange the failing Machine at your location and verify its operation. You must provide suitable working area to allow disassembly and reassembly of the IBM Machine. The area must be clean, well lit and suitable for the purpose. For some Machines, certain repairs may require sending the Machine to an IBM service center.

3. Courier or Depot Service *

You will disconnect the failing Machine for collection arranged by IBM. IBM will provide you with a shipping container for you to return your Machine to a designated service center. A courier will pick up your Machine and deliver it to the designated service center. Following its repair or exchange, IBM will arrange the return delivery of the Machine to your location. You are responsible for its installation and verification.

4. Customer Carry-In or Mail-In Service

You will deliver or mail as IBM specifies (prepaid unless IBM specifies otherwise) the failing Machine suitably packaged to a location IBM designates. After IBM has repaired or exchanged the Machine, IBM will make it available for your collection or, for Mail-in Service, IBM will return it to you at IBM's expense, unless IBM specifies otherwise. You are responsible for the subsequent installation and verification of the Machine.

5. CRU and On-site Service

This type of Warranty Service is a combination of Type 1 and Type 2 (see above).

6. CRU and Courier or Depot Service

This type of Warranty Service is a combination of Type 1 and Type 3 (see

7. CRU and Customer Carry-In or Mail-In Service

This type of Warranty Service is a combination of Type 1 and Type 4 (see above).

When a 5, 6 or 7 type of warranty service is listed, IBM will determine which type of warranty service is appropriate for the repair.

The IBM Machine Warranty worldwide web site at http://www.ibm.com/servers/support/machine_warranties/ provides a worldwide overview of IBM's Limited Warranty for Machines, a Glossary of IBM definitions, Frequently Asked Questions (FAQs) and Support by Product (Machine) with links to Product Support pages. The IBM Statement of Limited Warranty is also available on this site in 29 languages.

To obtain warranty service contact IBM or your IBM reseller. In Canada or the United States, call 1-800-IBM-SERV (426-7378). In other countries, see the telephone numbers below.

Worldwide telephone list

Phone numbers are subject to change without notice. For the warranty service contact telephone number in a country not yet reflected in the list below, contact IBM in that country or visit http://www.ibm.com/pc/support/ and click Support **Phone List** for a current telephone listing.

^{*} This type of service is called ThinkPad EasyServ or EasyServ in some countries.

Country or Region	Telephone Number	Country or Region	Telephone Number
Africa	+44 (0) 1475 555 055	Japan	Desktop: 0120-887-870 • Overseas calls:
			81-46-266-1084
			ThinkPad: 0120-887-874
			• Overseas calls: 81-46-266-1084
			IntelliStation and xSeries: 81-46-266-1358
			PC Software: 0120-558-695
			• Overseas calls: 81-44-200-8666
Argentina	0800-666-0011	Luxembourg	298-977-5063
Australia	131-426	Malaysia	(60) 3-7727-7800
Austria	01-24592-5901	Mexico	001-866-434-2080
Bolivia	0800-0189	Middle East	+44 (0) 1475 555 055
Belgium	Dutch: 02-210 9820	Netherlands	020-514 5770
	French: 02-210 9800		
Brazil	55-11-3889-8986	New Zealand	0800-446-149
Canada	English: 1-800-565-3344	Nicaragua	255-6658
	French: 1-800-565-3344		
	In Toronto: 416-383-3344		
Chile	800-224-488	Norway	66 81 11 00
China	800-810-1818	Panama	206-6047
China (Hong Kong and S.A.R.)	Home PC: 852-2825-7799	Peru	0-800-50-866
	Commercial PC: 852-8205-0333		
Colombia	980-912-3021	Philippines	(63) 2-995-2225
Costa Rica	284-3911	Portugal	21-892-7147
Denmark	45 20 82 00	Russia	095-940-2000
Dominican Republic	566-4755	Singapore	(65) 1-800-840-9911
	or 566-5161 ext. 8201		
	Toll Free within the Dominican Republic: 1-200-1929		
Ecuador	1-800-426911 (option #4)	Spain	91-714-7983

Country or Region	Telephone Number	Country or Region	Telephone Number
El Salvador	250-5696	Sweden	08-477 4420
Finland	09-459 69 60	Switzerland	058-333-0900
France	02 38 55 74 50	Taiwan	886-2-8723-9799
Germany	07032-1549 201	Thailand	(66) 2-273-4000
Guatemala	335-8490	Turkey	00-800-446-32-041
Honduras	Tegucigalpa & Sand Pedro Sula: 232-4222 San Pedro Sula: 552-2234	United Kingdom	0-1475-555 055
India	1600-44-6666	United States	1-800-IBM-SERV (1-800-426-7378)
Indonesia	(62) 21-523-8535	Uruguay	000-411-005-6649
Ireland	01-815-9202	Venezuela	0-800-100-2011
Italy	02-7031-6101	Vietnam	Ho Chi Minh: (84) 8-829-5160 Hanoi: (84) 4-843-6675

Note: * The numbers will be answered with a Japanese language voice prompt. For telephone support in English, please wait for the Japanese voice prompt to end, and an operator will answer. Please ask for "English support please," and your call will be transferred to an English speaking operator.

Appendix D. Guarantee supplement for Mexico

This supplement is considered part of IBM's Statement of Limited Warranty and shall be effective solely and exclusively for products distributed and commercialized within Territory of the Mexican United States. In the event of a conflict, the terms of this supplement shall apply.

All software programs pre-loaded in the equipment shall only have a thirty- (30) day guarantee for installation defects from the date of purchase. IBM is not responsible for the information in such software programs and/or any additional software programs installed by you or installed after purchase of the product.

Services not chargeable to the guarantee shall be charged to the final user, prior an authorization.

In the event that warranty repair is required please call the IBM Support Center at 001-866-434-2080, where you will be directed to the nearest Authorized Service Center. Should no Authorized Service Center exist in your city, location or within 70 kilometers of your city or location, the guarantee includes any reasonable delivery charges related to the transportation of the product to our nearest Authorized Service Center. Please call the nearest Authorized Service Center to obtain the necessary approvals or information concerning the shipment of the product and the shipment address.

To obtain a list of Authorized Service Centers, please visit: http://www.pc.ibm.com/la/centros_de_servicio/servicio_mexico/servicio_mexico.html

Manufactured by: SCI Systems de México, S.A. de C.V. Av. De la Solidaridad Iberoamericana No. 7020 Col. Club de Golf Atlas El Salto, Jalisco, México C.P. 45680, Tel. 01-800-3676900

Marketing by:
IBM de México, Comercialización y
Servicios, S. A. de C. V.
Alfonso Nápoles Gándara No 3111
Parque Corporativo de Peña Blanca
Delegación Álvaro Obregón
México, D.F., México
C.P. 01210,
Tel. 01-800-00-325-00

© Copyright IBM Corp. 2004 D-1

Appendix E. Notices

IBM may not offer the products, services, or features discussed in this document in all countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing IBM Corporation North Castle Drive Armonk, NY 10504-1785 U.S.A.

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

The products described in this document are not intended for use in implantation or other life support applications where malfunction may result in injury or death to persons. The information contained in this document does not affect or change IBM product specifications or warranties. Nothing in this document shall operate as an express or implied license or indemnity under the intellectual property rights of IBM or third parties. All information contained in this document was obtained in specific environments and is presented as an illustration. The result obtained in other operating environments may vary.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Any references in this publication to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product, and use of those Web sites is at your own risk.

Any performance data contained herein was determined in a controlled environment. Therefore, the result obtained in other operating environments may

© Copyright IBM Corp. 2004 E-1

vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Trademarks

The following terms are trademarks of International Business Machines Corporation in the United States, other countries, or both:

IBM IBM logo OS/2 ThinkPad

Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both.

Other company, product, or service names may be trademarks or service marks of others.

Electronic emission notices

IBM USB 2.0 CD-RW/DVD-ROM Drive

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:

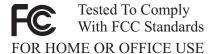
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an IBM authorized dealer or service representative for help.

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



Industry Canada Class B emission compliance statement

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

Avis de conformite a la reglementation d'Industrie Canada

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Deutsche EMV-Direktive (electromagnetische Verträglichkeit)

Zulassungbescheinigunglaut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) vom 30. August 1995 (bzw. der EMC EG Richtlinie 89/336):

Dieses Gerät ist berechtigt in Übereinstimmungmit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen. Verantwortlich für die Konformitätserklärung nach Paragraph 5 des EMVG ist die:

IBM Deutschland Informationssysteme GmbH, 70548 Stuttgart.

Informationen in Hinsicht EMVG Paragraph 3 Abs. (2) 2:

Das Gerät erfüllt die Schutzanforderungen nach EN 55024:1998 und EN 55022:1998 Klasse

EN 55022 Hinweis:

"Wird dieses Gerät in einer industriellen Umgebung betrieben (wie in EN 55022:B festgetlegt), dann kann es dabei eventuell gestört werden. In solch einem FA11 ist der Abstand bzw. die Abschirmungzu der industriellen Störquelle zu vergrößern."

Anmerkung:

Um die Einhaltung des EMVG sicherzustellen sind die Geräte, wie in den IBM Handbüchern angegeben, zu installieren und zu betreiben.

European Union - emission directive

This product is in conformity with the protection requirements of EU Council Directive 89/336/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 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 Standard européen EN 55022. Les conditions pour l'équipement de Classe B ont été définies en fonction d'un contexte résidentiel ordinaire afin de fournir une protection raisonnable contre l'interférence d'appareils de communication autorisés.

Unione Europea - Directiva EMC (Conformidad électromagnética)

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

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

Este producto ha sido probado y satisface los límites para Equipos Informáticos Clase B de conformidad con el Estándar 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 le apparecchiature di informatica Classe B ai sensi del 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.

이 기기는 가정용으로 전자파 적합등록을 한 기기로서 주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.

この装置は、情報処理装置等電波障害自主規制協議会(VCCI)の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。 取扱説明書に従って正しい取り扱いをして下さい。

Japanese statement of compliance for products less than or equal to 20 A per phase

高調波ガイドライン適合品

IBM.

Part Number: 73P4518

Printed in USA

(1P) P/N: 73P4518

