lenovo

ThinkCentre and Lenovo CD-RW/DVD-ROM Combination Drive (Serial ATA) User's Guide

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ThinkCentre and Lenovo CD-RW/DVD-ROM Combination Drive (Serial ATA) User's Guide **Note:** Before using this information and the product it supports, read the information under Appendix E, "Lenovo Statement of Limited Warranty," on page E-1, Appendix G, "Notices," on page G-1, and Appendix H, "Electronic emission notices," on page H-1.

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Safety information: Read first

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 pečítaje Bezpečnostné predpisy.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Antes de instalar este producto lea la información de seguridad.

Läs säkerhetsinformationen innan du installerar den här produkten.

安裝本產品之前,請先閱讀「安全資訊」。

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 Customer Support Center. Use only a 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. Lenovo 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 Customer 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.

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

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About this book

This manual contains instructions for installing and using the ThinkCentre[®] and Lenovo[™] CD-RW/DVD-ROM Combination Drive (Serial ATA). The manual is divided into the following parts:

Part 1: Installation and user's guide

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

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

Part 2: Appendixes

This section contains device-driver, problem-solving, warranty and support information, and notice information.

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

Registering your option

Thank you for purchasing this Lenovo product. Please take a few moments to register your product and provide us with information that will help Lenovo 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 following Web site:

http://www.lenovo.com/register

Lenovo 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.

Installation and user's guide

This section contains the product description, hardware and software installation instructions, and operating information for the ThinkCentre and Lenovo CD-RW/DVD-ROM Combination Drive (Serial ATA).

Product description

This product contains a unique multifunction drive that can read and write CD-R and CD-RW discs, and can also read CD-ROM, DVD-ROM, DVD-RAM, DVD-R/RW, DVD+R/RW and DVD+R/-R DL discs. This kit also includes a CD containing an Online User's Guide, DVD playback software and CD recording software for Microsoft® Windows® 2000 Professional, Microsoft Windows Millennium Edition (Me), Microsoft Windows XP Home, and Microsoft Windows XP Professional.

Your option package includes the following:

- One DVD-ROM/CD-RW Combo SATA Drive 48x/32x/48x/16x
- One package of (4) M3x5 screws
- One SATA cable
- One Laser safety manual
- · One Lenovo safety manual
- One Quick Reference Guide for CD-RW/DVD-ROM Combination Drive
- One Super CD for CD-RW/DVD-ROM Combination Drive

Contact your place of purchase if an item is missing or damaged. Be sure to retain your proof of purchase; it might be required to receive warranty service. See Appendix E, "Lenovo Statement of Limited Warranty," on page E-1 for technical support information.

Your drive can read many DVD and CD formats, including DVD Video, Video CD, and audio CD formats. It can also write most CD-RW rewritable and CD-R recordable formats, including high speed CD-R media. You must install the included DVD playback software to play DVD Videos, and you must install the included CD recording software to write CD-R and CD-RW discs. The drive also reads multi-session, extended architecture (CD-XA) discs, and Kodak Photo CD. This drive delivers data at up to 48 times the standard CD-ROM drive speed (48X) for CD-ROM and CD-R media. This drive delivers data at up to 16 times the standard DVD-ROM drive speed (16X) for DVD media. This drive can read most DVD-RAM, DVD-RW, and DVD-R media types, and is compliant with the DVD-Multi Player compatibility specification. This drive is designed for installation in a personal computer that uses Serial ATA drive architecture.

Software description

The User's Guide and Software CD contains the following software:

• Multimedia Center for Think Offerings

This software enables you to copy CDs, create audio CDs, create MP3 CDs, and author data CDs. You can also create bootable CDs and save CD images for later recording. With the Express Libeller that is included in the Multimedia Center for Think Offerings, you can print paper labels.

• Direct-to-Disc (DLA)

This software enables you to write directly to CD media using the drive letter as you would if you were writing to a diskette. With DLA, you can drag-and-drop files, create new directories, or save files from almost any application directly to your Combo drive.

UDF Reader

This software enables you to read DLA CD-RW media on other computers with CD drives.

· 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, Intergroup, and 3dLabs, do not support DVD video playback.

Installation requirements

Be sure that your computer meets the following system requirements before installing the drive:

- Minimum microprocessor:
 - Intel[®] Pentium[®] 133 MHz
 - Intel Pentium II 233 MHz for DVD playback
- Minimum RAM: 32 MB
- Windows 2000, Windows Me, Windows XP Home, or Windows XP Professional operating system
- An available half high drive bay
- An available Serial ATA connection
- 40 MB available hard drive space
- 700 MB available hard drive space for CD copy function
- Audio solution supporting 44.1 or 48 kHz sampling rate
- · Optional stereo speakers
- 2X AGP video with overlay support for DVD playback

Before you begin

Before you install the CD-RW/DVD-ROM Combination Drive, read the information in this section on handling precautions and on using the drive controls and connectors.

Handling precautions

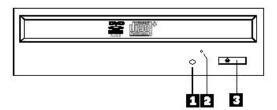
Use the following handling precautions to protect your drive:

- Keep the CD-RW/DVD-ROM Combination Drive in the antistatic bag until you are ready to install the drive. Limit your movement when installing; movement can cause static electricity buildup.
- Handle the drive with care. Dropping or jarring the drive can damage the components inside the drive housing.
- Do not force insertion of the Serial ATA or power cables.

Drive controls and connectors

The following diagrams show the location and functions of the drive controls and connectors.

Front view of the drive:



1 Busy indicator

This light comes on when the drive reads from or writes to a disc.

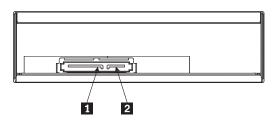
2 Emergency eject hole

This hole provides access to the eject mechanism to remove a disc from the drive.

3 Open/Close button

This button opens and closes the disc drawer when you push it.

Rear view of the drive



- 1 15pin power connector
- 2 7pin signal configuration

Installing the drive

Follow these steps to install the CD-RW/DVD-ROM Combination Drive:

Step 1. Opening the computer

- 1. Turn off the computer and all attached devices.
- 2. Unplug all power cords from the computer and all attached devices.
- 3. Lift the cover from the computer. Refer to your computer documentation for instructions on how to lift the computer cover.

Step 2. Unpacking the drive

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

2. Remove the drive from the bag. If you must put the drive down, place the antistatic bag on a flat, padded surface, such as a magazine, and place the drive on the antistatic bag.

Step 3. Mounting the drive in the bay

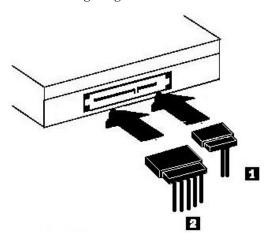
Attention: Be sure to use the mounting screws in the option package when you are driving screws directly into the drive. Using screws that are too long might damage the drive.

You can mount the CD-RW/DVD-ROM Combination Drive horizontally or vertically in the computer. If you mount the drive vertically, you must secure any discs that you place into the drive before the drive tray is closed, or the CD-RW/DVD-ROM Combination Drive will not be able to read the disc properly.

- 1. Slide the drive into the bay. Your computer might have specific required procedures for installing storage devices. For more information on storage devices, refer to the documentation that comes with your computer.
- 2. Align the drive-bay screw holes with the threaded holes in the drive housing or mounting bracket.
- 3. Thread the screws in loosely to check their position. Two screws are usually used on each side. Verify that the alignment is correct; then tighten the screws to secure the drive. Do not over tighten.

Step 4. Attaching the cables to the drive and main board

The following diagram shows where to connect the cables to the drive.



- 1. Attach a 7-pin Serial ATA data cable connector 1 to the Serial connector on the drive.
- 2. Attach a 15-pin power cable connector 2 to the power connector on the drive.
- 3. Attaching the cables to the main board.

If your computer has more than two Serial ATA connectors, use the second or third connector to connect the drive.

Please refer to your system documentation for detail hardware installation operation.

Be sure that the cables will not be pinched or crowded by the computer cover and that all other cable and power connections are secure.

Step 5. Completing the hardware installation

- 1. Be sure that the CD-RW/DVD-ROM Combination Drive is securely mounted and that the connectors are firmly attached.
- 2. Be sure that the cables do not interfere with the computer cover and that they do not block the power-supply fan blades or airflow paths.
- 3. Reinstall the computer cover.
- Reconnect all external devices.
- 5. Plug all power cords into the electrical outlets.

Step 6. Updating your computer configuration

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

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

Care and maintenance

This section includes information on taking care of your CD-RW/DVD-ROM Combination Drive and the CDs and DVDs that you use with the drive.

CD safety information

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 disc for cracks BEFORE each use
- DO NOT force discs into the computer/packaging
- DO NOT bend or flex discs

Caring for a CD or DVD

Digital discs are high-density media that must be handled with care and kept clean to ensure that they remain readable. The following precautions help to prolong the life of your discs.

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

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

Do not bend the disc.

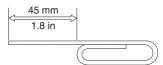
Caring for the CD-RW / DVD-ROM Combination Drive

To protect your CD-RW/DVD-ROM Combination Drive during operation, observe the following precautions:

- Do not move the drive when it is in use. Doing so might cause data error or might damage the drive or discs.
- Avoid exposing the drive to the following conditions:
 - High humidity
 - High temperature
 - Excessive dust
 - Mechanical vibration
 - Sudden shock or dropping
 - Placement on an inclined surface
 - Direct sunlight
 - Sudden temperature changes
- · 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.
- Remove any discs from the disc drawer and make sure that the drawer is closed before moving the drive unit.
- Keep the original packing materials. If you need to ship the drive unit to a different location, use the original packing materials to ensure that the drive is transported safely.

Manually ejecting a disc

In case of a power failure, and the drive will not allow the disc to eject, turn off the computer, and straighten a large paper clip to form a tool. The straightened end must extend at least 45 mm (1.8 in.). Insert the extended end into the emergency eject hole on the front of the drive (see "Front view of the drive" on page 1-3). Push the paper clip until the tray opens. Gently pull out the tray until you can remove the disc.



Installing software

All of the software for the drive is contained on the User's Guide and Software CD. The User's Guide and Software CD contains this User's Guide, Multimedia Center for Think Offerings, DLA, and Intervideo WinDVD. DLA is installed when you install the Multimedia Center for Think Offerings.

Complete the following procedure to install the software:

- 1. Insert the User's Guide and Software CD into the drive. If the CD starts automatically, skip to Step 6.
- 2. If the CD does not automatically start, click Start, and then click Run.
- 3. Type e:\launch.bat where e is the drive letter of the CD or DVD drive.
- 4. Click OK.
- 5. Select your language.

- 6. Select the software you want to install.
- 7. Follow the on-screen instructions.
- 8. After the software is installed, restart the computer.

For full drive functionality, install all software applications listed in the browser window except the UDF Reader. This programs for their computers that do not recognize UDF discs.

Note: The quick installs will overwrite any versions of the software that are already installed.

Playing audio CDs

Your computer comes equipped to play back audio CDs using Windows Media Player. In addition, you can use WinDVD or a third party audio player to play back Audio CDs. Audio CDs will autoplay when inserted. If you have Windows XP, a menu will appear that allows you to choose from the players that are installed in your system. CDs that have both audio and data will start any autoplay programs in the Data section instead of putting up a menu. To play the audio on CDs with both audio and programs, cancel the data portion, right click on the drive letter in My Computer, and select Play.

To play audio CDs on your drive, you must enable digital playback for both the drive and the player application.

Configuring the drive for digital playback

If you have Windows XP, your drive should be automatically configured for digital playback.

If you have Windows 2000, you will need to configure your system to use digital playback. Please refer to "Enabling digital audio extraction for Windows 2000" for step-by-step instructions on how to enable digital extraction.

Configuring the playback application for digital playback

Your CD playback application must also be configured for digital playback for CD audio to be heard on your system. If you want to use Windows Media Player as your playback application, follow the instructions in "Enabling digital audio extraction for Windows 2000", to enable this feature in Windows Media Player. If you have a third-party CD player application, refer to that application's documentation for details.

Using WinDVD

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 User's Guide and Software CD. Before using WinDVD, you may have to update some of your operating system components.

Operating system support

The following components are not present in all Microsoft Operating systems but are required to operate WinDVD: IDE DMA, Internet Explorer 5, and DirectX 8.1. This section provides instructions for updating various operating systems to enable DVD playback. See Appendix C, "Customizing the device driver configuration settings," on page C-1 for information on enabling DMA bus mastering and for locating video device drivers.

To update your operating system, select one of the following procedures:

- · Windows Server 2003, Windows Server 2000, Windows 95: You must install the latest service pack, Internet Explorer 5, and Direct.
- · Windows 98, Windows 98 Second Edition, Windows Me: You must install Direct.
- Windows 95 OSR2: You must install Internet Explorer 5 and Direct.
- Windows 2000: You must install service pack 2 or higher, and Direct.
- · Windows NT: Windows NT: You must install Service Pack 6 along with Internet Explorer 5, Direct, and a third party IDE DMA driver. This configuration is not supported due to Microsoft not providing any official Direct for Windows NT.

Note: You can check which version of Windows 95 you are using by following these steps:

- Click Start, and then click Control Panel.
- Double-click System. Read the numbers under "System."
 - V. 4.00.950B means that your version is Windows 95 OSR2.0.
 - V. 4.00.950C means that your version is Windows 95 OSR2.

Starting WinDVD

When you insert a DVD Video disc into the drive, the DVD Player software will automatically start and begin to play the video disc. Under Windows XP, you will be given a choice of which player to use from all the players installed on your system.

If the DVD disc contains both video and program content, the program content will automatically play. To view the video content of a video or program DVD disc, go to the Start menu, launch WinDVD, and click Play.

With Microsoft Windows XP, you can also play DVD Video content by using the Windows Media Player application.

Changing the DVD region code

Regionalization and Copy Protection (the DVD region code) uses the content scramble system (CSS) standard to prevent unauthorized duplication of the intellectual property rights distributed on DVDs. It was originally requested by the Motion Picture Association of America (MPAA) to address video piracy, but is applicable to any content. CSS works by inhibiting the transmission of unencrypted data without proper authorization. Playback systems must license CSS to decode the encrypted data.

The CSS specification divides the world into seven unique regions. Content designated for one region cannot be read by playback systems in another region. While CSS is used to prevent digital copies of the DVD content, another technology devised by Macrovision is used to prevent analog copies of the DVD content. The Macrovision standard is a scrambling system widely used by the movie industry to prevent unauthorized duplication of video content using commercial VCRs. DVD playback systems must support both CSS and Macrovision copy protection standards. The first time that you insert a DVD Video disc into the drive, you will be prompted to set the region. If you relocate to a different region of the world, you can use the DVD Player software to change the region code.

To change the region code, do the following:

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

Note: You can change the DVD region code only five times. After you make five region code changes, the drive can play only MPEG-2 video titles that are associated with the fifth region code that you set.

Using the Multimedia Center for Think Offerings

You can use the Multimedia Center for Think Offerings application to burn data, audio, video CDs. You can also access tools and utilities for working with rewritable media. The Multimedia Center for Think Offerings also has projects to manage disk images and create file backups.

To start the Multimedia Center for Think Offerings application in Windows XP, click Start -> All Programs -> Multimedia Center for Think Offerings -> Multimedia Center Home.

When the Multimedia Center first starts, you are taken to a Quick Links page. This page shows the four most used tasks for your convenience. To make an Audio or Data disc, select the appropriate tab and select the task you want to perform. To copy a disc, make a disc image, or burn a previously saved image, select the Copy tab. To use Direct-to-disc (DLA), select the Data tab. To erase a rewritable disc, select the Tools tab.

You can access the Data, Audio, and Copy tabs directly from the Start menu as RecordNow Copy, RecordNow Data, and RecordNow Audio by clicking Start -> All Programs -> Multimedia Center for Think Offerings -> RecordNow Projects

To make a bootable CD or DVD, begin a data project and click the bootable CD button in the upper right corner of the project window. You will be prompted to select a boot image from your hard disc or make a boot image from a floppy disc.

For detailed instructions on using the Multimedia Center, consult the on-line helps.

Copying and imaging discs

You can use the Multimedia Center for Think Offerings application to make copies and save images of your CDs and DVDs. You can also create CDs and DVDs from images that you have previously saved on your hard disk. The Multimedia Center can only save images in ISO and GI formats. ISO formats can only be used for data CDs. All other disc formats require GI images.

Saved DVD images can be as large as 9GB, and CD images as large as 730MB. Ensure that you have adequate hard disk space before proceeding.

To make a CD or DVD image, do the following:

- 1. Start the Multimedia Center for Think Offerings application.
- 2. Click the Copy page.
- 3. Click the task Save Image to Hard Disk.
- 4. The application creates a random name for you. Rename the image file.
- 5. Insert the disc that you are imaging.

Notes:

- 1. Direct-to-disc (DLA) CDs cannot be saved as image files.
- 2. Copy protected commercial DVDs cannot be imaged.

To burn a previously saved CD image, do the following:

- 1. Start the Multimedia Center for Think Offerings application.
- 2. Click the Copy page.
- 3. Click the task **Burn Image to CD** or **DVD**.
- 4. Navigate to the image that you want to burn.
- 5. Insert a blank or erasable disc.
- 6. Click the Record button.

To copy a CD, do the following:

- 1. Start the Multimedia Center for Think Offerings application.
- 2. Click the Copy page.
- 3. Click the task Copy a CD or DVD.
- 4. Select the target drive.
- 5. Click the Record button.
- 6. Insert a writable CD when prompted

Notes:

- 1. Copy protected commercial CDs cannot be copied.
- 2. Copying or imaging discs without the copyright owner's permission can result in legal penalties.

For more information on copyright law, consult your legal advisor.

Using Direct-to-Disc (DLA)

Direct-to-Disc (DLA) is provided so that you can write data directly to CD-R, and CD-RW media. CD-RW media can be written to many times, while CD-R media can only be formatted and written to once. Direct-to-Disc media uses a special format called UDF to allow the media to be written to directly by the operating system.

To format and write to CD-R or CD-RW media, do the following:

- 1. Insert a disc into the drive.
- 2. Double-click **My Computer**, and right-click the Combo Drive letter.
- 3. Click Format.
- 4. After formatting is complete, you can drag and drop files to the Combo Drive icon, or you can move files in Windows Explorer or with the command prompt.

Windows XP can read UDF written media without assistance, but some legacy operating systems cannot. Two different functions solve this problem of using UDF media with other computers. Make Compatible works for CD-R and the UDF Reader is provided for CD-RW.

To make CD-R media compatible with other computers:

- 1. Double-click My Computer, and right-click the Combo Drive letter.
- 2. Click Make Compatible.

To use UDF formatted CD-RW media in other computers that do not have Windows XP, a UDF reader is included on the User's Guide and Software CD. To use the UDF reader, follow this procedure:

- 1. Insert the User's Guide and Software 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:\UDF\language where e is the drive letter of the CD or DVD drive, and language is your language.
- 5. Click OK.
- 6. Double-click **SETUP.EXE** and follow the on-screen instructions.

Notes:

- 1. The UDF reader is only needed on systems that do not have another DLA program installed.
- 2. If the "use with DLA" menu item is not selected in Windows XP, Windows XP CD recording will be used.

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 ThinkCentre and Lenovo CD-RW/DVD-ROM Combination Drive (Serial ATA) are listed in the following table.

Physical specification		
Height	42.5 mm (1.67 in.)	
Width	149 mm (5.87 in.)	
Length	184 mm (7.24 in.)	
Weight	700 g (1.54 lb.)	

Power requirements

The following table lists the power specifications by voltage level for the ThinkCentre and Lenovo CD-RW/DVD-ROM Combination Drive (Serial ATA). The power specifications are measured at the drive power connector and are nominal values.

Power specifications	Voltage	Avg	Max
At voltage (Hold Track State)	5V dc	700 mA	1.3A (Max)
At voltage (Hold Track State)	12V dc	650 mA	1.3A (Max)

^{1.} Product-description data represents Lenovo'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.

Environmental requirements

Specification	Operational	Nonoperational
Temperture (noncondensing)	+5° C to +45° C	-40° C to +60° C
Relative humidity (noncondensing)	10% to 80%	5% to 90%

Sustained Transfer Rate

Media	Sustained data transfer rates
DVD-R/RW, +R/RW	4.45 to 10.8 MB/s (3.3x-8x CAV)
DVD-RAM	2.7 to 6.75 MB/s (2.0x-5.0x)
DVD-R D/L, + R D/L	4.45 to 10.8 MB/s (3.3x-8x CAV)
CD-ROM	3.0 to 7.2 MB/s (20x-48x CAV)
CD-R	3.0 to 7.2 MB/s (20x-48x CAV)
CD-RW	2.7 to 6.0 MB/s (18x-40x CAV)

Average access times:

	Random Access	Full Access
CD (R/RW/ROM):	100 ms (Typ)	160 ms (Typ)
DVD (Single Layer)	120 ms (Typ)	200 ms (Typ)

Read Speed	CD-DA (Audio Play)	CAV 16X (Max)
	Stamped CD-DA (DAE)	CAV 48X (Max)
	Stamped CD-ROM	CAV 48X (Max)
	Mixed CD (Data, Audio)	
	Video-CD	CAV 16X (Max)
	DVD-Video Play	Single: CAV 8X (Max)
	CD-R/RW	CAV 40X (Max)
	DVD + RW, DVD + R	CAV 6X (Max)
	DVD-RAM	ZCAV 4X (Max)
	DVD +R9	CAV 4X
	Pause (CD/DVD)	CAV 16X - CAV40X / CAV
Write Speed	CD-Recordable	7,200 KB/sec.
	CD-Rewriteable (Write Speed)	4,800 KB/sec.

Appendix B. Problem solving

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

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

• Your computer or CD-RW/DVD-ROM Combination Drive does not operate correctly, or the busy indicator light does not come on.

Take the following actions:

- 1. Check that the disc is loaded with the label side up.
- 2. Check that all devices are properly connected to the computer and to the electrical outlet.
- 3. Turn off the computer, unplug the cables for your computer and all attached devices, and remove the computer cover.
- 4. Check that all power and Serial ATA cables are securely attached. Disconnect the Serial ATA cable and check for bent or misaligned pins. If you do not find any problems, reconnect the interface cable. Replace the computer cover, and reattach all cables and power cords. Turn on the computer, restart the operating system, and attempt to open the loading tray by pressing the Open/Close button. If the tray fails to open and the Busy indicator does not light, turn off the computer and try using another 15 PIN power cable.
- 5. Check the CD-RW/DVD-ROM Combination Drive and any other device on the Serial ATA cable for the proper settings.
- You cannot access the CD-RW/DVD-ROM Combination Drive, or the DVD-ROM (CD-ROM) icon is not displayed.

When the CD-RW/DVD-ROM Combination Drive is properly installed, a DVD-ROM or CD-ROM icon is displayed in the My Computer window. Double-click **My Computer.** If a CD-ROM icon is not displayed in the window that opens, verify that the drive has been properly installed. Verify that the configuration jumper is set properly. Restart your computer. If a drive icon is still not displayed, continue with the following steps:

- 1. Click Start, click Settings, and then click Control Panel.
- 2. Click System.
- 3. Click the **Device Manager** tab.
- 4. Double-click View Devices by Type.
- 5. Select **IDE ATA/ATAPI controllers** from the list displayed in the Device Manager window. Verify that there are no conflicts with the controller. The device status indicates whether the controller is working properly.
- Select CD-ROM from the list that is displayed in the Device Manager window. Verify that a CD-ROM device is present in the list and that no conflicts exist. The device status indicates whether the device is working properly.
- 7. Click OK.
- 8. Close all windows and restart the computer.

If the device icon is still not displayed, check the cable connections and device-jumper settings, and resolve any conflicts that might exist.

• The CD-RW/DVD-ROM Combination Drive is not recognized by the operating system, or the drive performs erratically.

Some computers have Compatible and High Performance modes for mass storage devices. Normally, the CD-RW/DVD-ROM Combination Drive functions better under the High Performance mode. However, if your drive is not functioning properly in that mode, you might need to use the Compatible mode. Use the following procedure to check the configuration-setup information for your computer.

- 1. Access your system configuration utility program. Pressing F1 at system startup does this on most Lenovo computers.
- 2. Select Advanced/IDE Configuration.
- 3. Scroll down to the SATA#1 Configuration section.

Refer to the documentation that comes with your computer for additional details on selecting IDE performance modes.

The disc cannot be read.

Take the following actions:

- 1. The disc might be dirty; clean it as described in "Caring for a CD or DVD" on page 1-5.
- 2. The disc might be defective; try another disc.
- 3. The disc is not ISO-9660, High Sierra Group (HSG), or Universal Disc Format (UDF) compatible. Check with your place of purchase.

• There is no sound from the disc.

- 1. Check that you are not using a data CD.
- 2. Adjust the audio-adapter volume control. See the documentation that comes with your audio adapter and audio-CD player program.
- **3**. Enable digital audio as in Appendix D, "Enabling Digital Audio Extraction," on page D-1.

Unable to Create Overlay Window message appears when you use WinDVD with Windows 2000.

- 1. Your video device driver needs an update to enable overlay support. Contact the manufacturer of your video adapter or your computer for updates. Some device drivers are provided on the *ThinkCentre CD-RW/DVD-ROM Software and User's Guide CD*.
- 2. The resolution of your screen might be too high. Try setting the resolution to $800 \times 600 \times 16$ bpp at 60 Hz.

DVD movies do not start automatically when inserted into the CD-RW/DVD-ROM Combination Drive.

DVDs that contain both programs and DVD Video content will autoplay the program content. To view the video content, start WinDVD manually.

- Video appears to be choppy or is dropping frames.
 - 1. Ensure that DMA is enabled on for your computer hard disk drive controller.
 - 2. The resolution of your screen might be too high. Try setting the resolution to $800 \times 600 \times 16$ bpp at 60 Hz.
 - 3. If your computer microprocessor has less power than a Pentium II 450 microprocessor, some jerkiness is normal on certain DVDs.

Appendix C. Customizing the device-driver configuration settings

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

Enabling DMA for Windows 2000

To change the DMA parameter setting for Windows 2000, do the following:

- 1. Click Start --> Settings --> Control Panel.
- 2. Double-click System.
- 3. Click the Hardware tab.
- 4. Click Device Manager.
- 5. Click the IDE ATA/ATAPI controller to open up the tree.
- 6. Double-click the device that corresponds to your CD-ROM port. It is either **Primary IDE** or **Secondary IDE**.
- 7. Click the **Advanced Settings** tab.
- 8. Click the Transfer Mode menu and select DMA if available.
- 9. Click OK.
- 10. Click **Close** to close the System Properties window. A message is displayed, informing you that the system settings have changed.
- 11. Click **OK** to restart the computer.

Enabling DMA for Windows XP

To change the DMA parameter setting from the Windows XP desktop, do the following:

- 1. Click Start --> Control Panel.
- 2. Click Switch to classic view.
- 3. Double-click System.
- 4. Click the **Hardware** tab.
- 5. Click the **Device Manager** button.
- 6. Click on the IDE ATA/ATAPI controller to expand the tree.
- 7. Double-click on the controller that corresponds to where your CD-RW is located (**Primary IDE** or **Secondary IDE**).
- 8. Click on the **Advanced Settings** tab.
- 9. Select the appropriate **Transfer Mode** pull-down that corresponds to the CD-RW location, (**Device 0** for Master, **Device 1** for Slave).
- 10. Select **DMA** if it is available.
- 11. Click OK.

Appendix D. Enabling Digital Audio Extraction

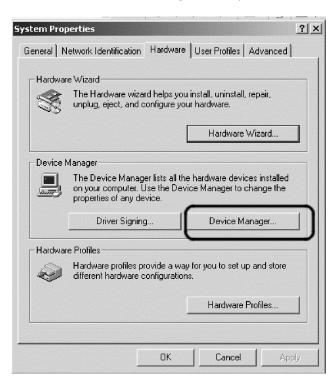
Your system must be properly configured to play back digital audio from this drive. There are two settings that must be configured. One setting is in the device properties, and a second setting is in Windows Media Player.

To set the device properties, use the following procedure:

1. Right -click on My Computer, and select Properties.



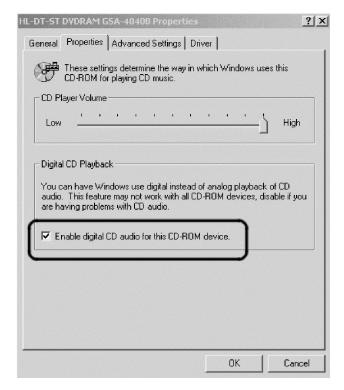
2. Select Device Manager from the Hardware Tab. In Windows Me the Hardware tab shows the Device Manager directly without clicking the button.



3. In the Device Manager, click on the + for DVD/CD-ROM drives, right click on your drive, and select Properties.

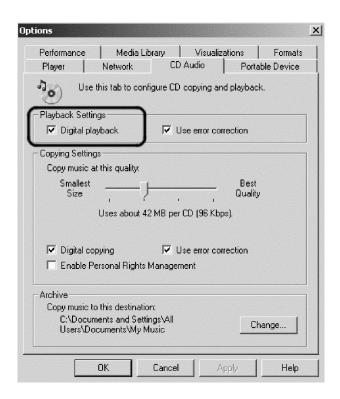


4. Select the Properties tab and check the Enable Digital Audio checkbox.



To enable Digital Audio Playback in Windows Media Player, take the following steps:

- a. Open Windows Media Player.
- b. Select **Tools** → **Options...** from the Media Player menu
- c. Select the CD Audio tab and check the Digital Playback box



Appendix E. Lenovo Statement of Limited Warranty

LSOLW-00 05/2005

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 Lenovo Group Limited or one of its subsidiaries (called "Lenovo") in this Statement of Limited Warranty apply only to Machines you purchase for your use, and not for resale. The term "Machine" means a Lenovo machine, its options, features, conversions, upgrades or peripheral products, 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

Lenovo warrants that each Machine 1) is free from defects in materials and workmanship and 2) conforms to Lenovo'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 Lenovo or your reseller informs you otherwise. Unless Lenovo 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, accident, modification, unsuitable physical or operating environment, or improper maintenance by you;
- failure caused by a product for which Lenovo is not responsible; and
- any non-Lenovo products, including those that Lenovo may procure and provide with or integrate into a Lenovo Machine at your request.

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

Lenovo 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

Warranty service may be provided by Lenovo, IBM, your reseller if authorized to perform warranty service, or an authorized warranty service provider. Each of them is referred to as a "Service Provider."

If the Machine does not function as warranted during the warranty period, contact a Service Provider. If you do not register the Machine with Lenovo, you may be required to present proof of purchase as evidence of your entitlement to warranty service.

What Lenovo Will Do to Correct Problems

When you contact a Service Provider for service, you must follow the problem determination and resolution procedures that we specify. An initial diagnosis of your problem can be made either by a technician over the telephone or electronically by access to a support 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 software updates from a support web site or from other electronic media, and following the instructions that your Service Provider provides. Software updates may include basic input/output system code (called "BIOS"), utility programs, device drivers, and other software updates.

If your problem can be resolved with a Customer Replaceable Unit ("CRU") (e.g., keyboard, mouse, speaker, memory, hard disk drive), your Service Provider 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 software updates, or with a CRU, your Service Provider, 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 your Service Provider is unable to do either, you may return the Machine to your place of purchase and your money will be refunded.

As part of the warranty service, your Service Provider may also 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 your Service Provider replaces becomes Lenovo's 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 your Service Provider 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 your Service Provider service a Machine that you do not own; and
- 3. where applicable, before service is provided:
 - a. follow the service request procedures that your Service Provider provides;
 - b. backup or secure all programs, data, and funds contained in the Machine;
 - c. provide your Service Provider with sufficient, free, and safe access to your facilities to permit Lenovo to fulfill its obligations.
- 4. (a) ensure all information about identified or identifiable individuals (Personal Data) is deleted from the Machine (to the extent technically possible), (b) allow your Service Provider or a supplier to process on your behalf any remaining Personal Data as your Service Provider considers necessary to fulfill its obligations under this Statement of Limited Warranty (which may include shipping the Machine for such processing to other service locations around the world), and (c) ensure that such processing complies with any laws applicable to such Personal Data.

Limitation of Liability

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

Neither Lenovo nor your Service Provider are responsible for any of your confidential, proprietary or personal information contained in a Machine which you return 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 Lenovo's part or other liability, you are entitled to recover damages from Lenovo. In each such instance, regardless of the basis on which you are entitled to claim damages from Lenovo (including fundamental breach, negligence, misrepresentation, or other contract or tort claim), except for any liability that cannot be waived or limited by applicable laws, Lenovo is liable for no more than

- 1. damages for bodily injury (including death) and damage to real property and tangible personal property for which Lenovo is legally liable; and
- 2. the amount of any other actual direct damages, up to the charges for the Machine that is subject of the claim.

This limit also applies to Lenovo's suppliers, resellers and your Service Provider. It is the maximum for which Lenovo, its suppliers, resellers, and your Service Provider are collectively responsible.

UNDER NO CIRCUMSTANCES IS LENOVO, ITS SUPPLIERS, RESELLERS OR SERVICE PROVIDERS 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.

Governing Law

Both you and Lenovo 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 Lenovo'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 Statement of Limited Warranty 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.

ECUADOR

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 Lenovo'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 service 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 Lenovo'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 Lenovo is in breach of a condition or warranty implied by the Trade Practices Act 1974 or other similar legislation, Lenovo'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 Lenovo's negligence; and

2. as to any other actual damage arising in any situation involving nonperformance by Lenovo 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.

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 Lenovo 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 Lenovo or a Lenovo 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 a Service Provider, provided the Machine has been announced and made available by Lenovo 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 a Service Provider, provided the Machine has been announced and made available by Lenovo in the country in which you wish to obtain service..

If you purchase a Machine in a Middle Eastern or African country, you may obtain warranty service for that Machine from a Service Provider within the country of purchase, provided the Machine has been announced and made available by Lenovo in that country. Warranty service in Africa is available within 50 kilometers of a Service Provider. You are responsible for transportation costs for Machines located outside 50 kilometers of a 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. Lenovo 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 service in EU countries, see the telephone listing in Part 3 - Warranty Information. You may contact IBM service 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. Lenovo'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 Lenovo is at fault) or of such cause, for a maximum amount equal to the charges you paid for the Machine. The above limitation shall not apply to damages for bodily injuries (including
 - death) and damages to real property and tangible personal property for which Lenovo is legally liable.
- 2. UNDER NO CIRCUMSTANCES IS LENOVO, ITS SUPPLIERS, RESELLERS OR SERVICE PROVIDERS 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. Lenovo'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 Lenovo is at fault), for a maximum amount equal to the charges you paid for the Machine that has caused the damages.
 - The above limitation shall not apply to damages for bodily injuries (including death) and damages to real property and tangible personal property for which Lenovo is legally liable.
- 2. UNDER NO CIRCUMSTANCES IS LENOVO, ITS SUPPLIERS, RESELLERS OR SERVICE PROVIDERS 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 a Lenovo 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 your Service Provider is unable to repair a Lenovo 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 Lenovo Will Do to Correct Problems: The following is added to this section: During the warranty period, Lenovo will reimburse you for the transportation charges for the delivery of the failing Machine to IBM Service.

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 Lenovo with fraud or gross negligence and for express warranty.

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

Lenovo'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, Lenovo's liability will be limited to the total amount you paid for the Machine that is the subject of the claim.

Applicability of suppliers, resellers, and Service Providers (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 Lenovo, Lenovo 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 a Lenovo 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 your Service Provider is unable to repair a Lenovo 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 Lenovo Will Do to Correct Problems: The following is added to this section: During the warranty period, transportation for delivery of the failing Machine to Lenovo or IBM service will be at Lenovo'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 Lenovo with fraud or gross negligence and for express warranty.

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

Lenovo'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 Lenovo in connection with, or in relation to, the subject matter of this Statement of Limited Warranty in respect of which Lenovo 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 Lenovo.

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

- 1. Lenovo will accept unlimited liability for death or personal injury caused by the negligence of Lenovo.
- 2. Subject always to the Items for Which Lenovo is Not Liable below, Lenovo will accept unlimited liability for physical damage to your tangible property resulting from the negligence of Lenovo.
- 3. Except as provided in items 1 and 2 above, Lenovo's entire liability for actual damages for any one Default will not in any event exceed 125% of the amount you paid for the Machine directly relating to the Default.

Items for Which Lenovo is Not Liable

Save with respect to any liability referred to in item 1 above, under no

circumstances is Lenovo, its suppliers, resellers or Service Providers liable for any of the following, even if Lenovo 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:*

Lenovo's entire liability to you for actual damages arising in all situations involving nonperformance by Lenovo 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 Lenovo.

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 Lenovo in connection with, or in relation to, the subject matter of this Statement of Limited Warranty in respect of which Lenovo 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 Lenovo.

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

- 1. Lenovo will accept unlimited liability for:
 - a. death or personal injury caused by the negligence of Lenovo; 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. Lenovo will accept unlimited liability, subject always to the Items for Which Lenovo is Not Liable below, for physical damage to your tangible property resulting from the negligence of Lenovo.
- 3. Lenovo'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 125% of the total purchase price payable or the charges for the Machine directly relating to the Default.

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

Items for Which Lenovo is Not Liable

Save with respect to any liability referred to in item 1 above, under no circumstances is Lenovo or any of its suppliers, resellers or Service Providers liable for any of the following, even if Lenovo 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 Lenovo 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 Lenovo provides warranty service during the first year of the warranty period.

Machine Type	Country or Region of Purchase	Warranty Period	Type of Warranty Service
ThinkCentre and Lenovo CD-RW/DVD-ROM Combination Drive (Serial ATA)	Worldwide	1 year	7

Types of Warranty Service

If required, your Service Provider will provide repair or exchange service depending on the type of warranty service specified for your Machine in the above table and as described below. 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 your Service Provider's normal service area, contact your local Service Provider representative or your reseller for country and location specific information.

1. Customer Replaceable Unit ("CRU") Service

Lenovo will ship CRUs to you for you to install, Tier 1 CRUs are easy to install whereas Tier 2 CRUs require some technical skill and tools. CRU information and replacement instructions are shipped with your Machine and are available from Lenovo at any time on your request. You may request that a Service Provider install CRUs, at no additional charge, under the type of warranty service designated for your Machine. Lenovo specifies in the materials shipped with a replacement CRU whether a defective CRU must be returned. 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 Lenovo does not receive the defective CRU within 30 days of your receipt of the replacement.

2. On-site Service

Your Service Provider 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 Lenovo Machine. The area must be clean, well lit and suitable for the purpose. For some Machines, certain repairs may require sending the Machine to a designated service center.

3. Courier or Depot Service *

You will disconnect the failing Machine for collection arranged by your Service Provider. A shipping container will be provided to you 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, the service center will arrange the return delivery of the Machine to your location. You are responsible for its installation and verification.

Customer Carry-In or Mail-In Service

You will deliver or mail as your Service Provider specifies (prepaid unless specified otherwise) the failing Machine suitably packaged to a designated location. After the Machine has been repaired or exchanged, it will be made available for your collection or, for Mail-in Service, the Machine will be returned to you at Lenovo's expense, unless your Service Provider 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

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

To obtain warranty service contact a Service Provider. 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 most current phone numbers, go to http://www.lenovo.com/think/support and click Support phone list.

Country or Region	Telephone Number		
Africa	Africa: +44 (0)1475-555-055 South Africa: +27-11-3028888 and 0800110756 Central Africa: Contact your Lenovo service provider		
Argentina	0800-288-5366 (Spanish)		
Australia	131-426 (English)		
Austria	Up and running support: 01-24592-5901 Warranty service and support: 01-211-454-610 (German)		
Belgium	Up and running support: 02-210-9820 (Dutch) Up and running support: 02-210-9800 (French) Warranty service and support: 02-225-3611 (Dutch, French)		
Bolivia	0800-0189 (Spanish)		

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

Country or Region	Telephone Number		
Brazil	Sao Paulo region: (11) 3889-8986 Toll free outside Sao Paulo region: 0800-701-4815 (Brazilian Portuguese)		
Canada	1-800-565-3344 (English, French) In Toronto only call: 416-383-3344		
Chile	1230-020-1103 (Toll-free) (Spanish)		
China	800-810-1818 (Mandarin)		
China (Hong Kong S.A.R.)	Home PC: 852-2825-7799 Commercial PC: 852-8205-0333 ThinkPad and WorkPad: 852-2825-6580 (Cantonese, English, Mandarin)		
Colombia	01-800-952-0466 (Spanish)		
Costa Rica	0800-011-1029 (Spanish)		
Croatia	0800-0426		
Cyprus	+357-22-841100		
Czech Republic	+420-2-7213-1316		
Denmark	Up and running support: 4520-8200 Warranty service and support: 7010-5150 (Danish)		
Dominican Republic	(Toll-free) 1-866-434-2080 (Spanish)		
Ecuador	1-800-426911 (Spanish)		
El Salvador	800-6264 (Spanish)		
Estonia	+386-61-1796-699		
Finland	Up and running support: 09-459-6960 Warranty service and support: +358-800-1-4260 (Finnish)		
France	Up and running support: 0238-557-450 Warranty service and support (hardware): 0810-631-213 Warranty service and support (software): 0810-631-020 (French)		
Germany	Up and running support: 07032-15-49201 Warranty service and support: 01805-25-35-58 (German)		
Greece	+30-210-680-1700		
Guatemala	1800-624-0051 (Spanish)		
Honduras	Tegucigalpa: 232-4222 San Pedro Sula: 552-2234 (Spanish)		
Hungary	+36-1-382-5720		
India	1600-44-6666 Alternate Toll Free: +91-80-2678-8940 (English)		
Indonesia	800-140-3555 +62-21-251-2955 (English, Bahasa Indonesian)		
Ireland	Up and running support: 01-815-9202 Warranty service and support: 01-881-1444 (English)		

Country or Region	Telephone Number		
Israel	+972-3-531-3900 (Hebrew)		
	+972-3-531-3900 (English)		
	8:30AM - 5:00PM Sunday - Thursday (Local time)		
Italy	Up and running support: 02-7031-6101 Warranty service and support: +39-800-820094 (Italian)		
Japan	Desktop: Toll free: 0120-887-870 For International: +81-46-266-4724		
	ThinkPad: Toll free: 0120-887-874 For International: +81-46-266-4724		
	Both of the above 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.		
	PC Software: 0120-558-695 Overseas calls: +81-44-200-8666 (Japanese)		
Korea	1588-5801 (Korean)		
Latvia	+386-61-1796-699		
Lithuania	+386-61-1796-699		
Luxembourg	+352-298-977-5063 (French)		
Malaysia	1800-88-8558 (English, Bahasa Melayu)		
Malta	+356-23-4175		
Mexico	01-800-123-1632 (Spanish)		
Middle East	+44 (0)1475-555-055		
Netherlands	+31-20-514-5770 (Dutch)		
New Zealand	0800-446-149 (English)		
Nicaragua	001-800-220-1830 (Spanish)		
Norway	Up and running support: 6681-1100 Warranty service and support: 8152-1550 (Norwegian)		
Panama	206-6047 (Spanish)		
Peru	0-800-00-966 (Spanish)		
Philippines	1800-1888-1426 +63-2-995-8420 (English, Philipino)		
Poland	+48-22-878-6999		
Portugal	+351-21-892-7147 (Portuguese)		
Romania	+4-021-224-4015		
Russian Federation	+7-095-940-2000 (Russian)		
Singapore	1800-3172-888 (English, Bahasa Melayu)		

Country or Region	Telephone Number		
Slovakia	+421-2-4954-1217		
Slovenia	+386-1-4796-699		
Spain	91-714-7983 91-397-6503 (Spanish)		
Sri Lanka	+94-11-2448-442 (English)		
Sweden	Up and running support: 08-477-4420 Warranty service and support: 077-117-1040 (Swedish)		
Switzerland	Up and running support: 058-333-0900 Warranty service and support: 0800-55-54-54 (German, French, Italian)		
Taiwan	886-2-8723-9799 (Mandarin)		
Thailand	1-800-299-229 (Thai)		
Turkey	00800-4463-2041 (Turkish)		
United Kingdom	Up and running support: 01475-555-055 Warranty service and support (hardware): 08705-500-900 Warranty service and support (software): 08457-151-516 (English)		
United States	1-800-426-7378 (English)		
Uruguay	000-411-005-6649 (Spanish)		
Venezuela	0-800-100-5722 (Spanish)		
Vietnam	For northern area and Hanoi: 84-4-8436675 For southern area and Ho Chi Minh City: 84-8-829-5160 (English, Vietnamese)		

Guarantee supplement for Mexico

This supplement is considered part of Lenovo'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. Lenovo 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 Customer 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: Lenovo 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

Appendix F. 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 Lenovo Statement of Limited Warranty for a full explanation of Lenovo 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.lenovo.com/think/support.

During the warranty period, assistance for replacement or exchange of defective components is available. In addition, if your option is installed in a ThinkPad or ThinkCentre 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 Customer Support Center will be withdrawn or made available for a fee, at Lenovo'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, 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 a list of Service and Support phone numbers, see "Worldwide telephone list" on page E-16. Phone numbers are subject to change without notice. For the most current phone numbers, go to http://www.lenovo.com/think/support and click **Support phone list**. If the number for your country or region is not listed, contact your reseller or Lenovo marketing representative.

Appendix G. Notices

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

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

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.

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Appendix H. Electronic emission notices

The following information refers to the ThinkCentre and Lenovo CD-RW/DVD-ROM Combination Drive (Serial ATA).

Federal Communications Commission (FCC) Emission Notice

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 authorized dealer or service representative for help.

Lenovo 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.

Industry Canada Class B emission compliance statement

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

Avis de conformité à la réglementation d'Industrie Canada

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

EU-EMC Directive (89/336/EEC) as amended by Directive 93/86/EEC EN 55022 class B Statement of Compliance

Deutschsprachiger EU Hinweis:

Hinweis für Geräte der Klasse B EU-Richtlinie zur Elektromagnetischen Verträglichkeit Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 89/336/EWG zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten.

und hält die Grenzwerte der EN 55022 Klasse B ein.

Um dieses sicherzustellen, sind die Geräte wie in den Handbüchern beschrieben zu installieren und zu betreiben. Des Weiteren dürfen auch nur von der Lenovo empfohlene Kabel angeschlossen werden. Lenovo übernimmt keine Verantwortung für die Einhaltung der Schutzanforderungen, wenn das Produkt ohne Zustimmung der Lenovo verändert bzw. wenn Erweiterungskomponenten von Fremdherstellern ohne Empfehlung der Lenovo gesteckt/eingebaut werden.

Deutschland: Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Geräten Dieses Produkt entspricht dem "Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG)". Dies ist die Umsetzung der EU-Richtlinie 89/336/EWG in der Bundesrepublik Deutschland.

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) vom 18. September 1998 (bzw. der EMC EG Richtlinie 89/336) für Geräte der Klasse B Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen.

Verantwortlich für die Konformitätserklärung nach Paragraf 5 des EMVG ist die Lenovo (Deutschland) GmbH, Pascalstr. 100, D-70569 Stuttgart. Informationen in Hinsicht EMVG Paragraf 4 Abs. (1) 4:

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

European Union - Compliance to the Electromagnetic Compatibility 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. Lenovo cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of option cards from other manufacturers.

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.

Avis de conformité à la directive de l'Union Européenne

Le présent produit satisfait aux exigences de protection énoncées dans la directive 89/336/CEE du Conseil concernant le rapprochement des législations des Etats membres relatives à la compatibilité électromagnétique. Lenovo décline toute responsabilité en cas de non-respect de cette directive résultant d'une modification non recommandée du produit, y compris l'ajout de cartes en option non Lenovo.

Ce produit respecte les limites des caractéristiques d'immunité des appareils de traitement de l'information définies par la classe B de la norme européenne EN 55022 (CISPR 22). La conformité aux spécifications de la classe B offre une garantie acceptable contre les perturbations avec les appareils de communication agréés, dans les zones résidentielles.

Unión Europea - Normativa EMC

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.

Lenovo 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 Lenovo.

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.

Unione Europea - Directiva EMC (Conformidad électromagnética)

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.

Lenovo 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 Lenovo.

Le prove effettuate sul presente prodotto hanno accertato che esso rientra nei limiti stabiliti per 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.

Korea Class B Compliance

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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

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