

lenovo

ThinkCentre and Lenovo Super Multi-Burner Drive (Serial ATA) User's Guide

lenovo

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Note: Before using this information and the product it supports, be sure to read the information under Appendix D, "Service and Support," Appendix E, "Lenovo Statement of Limited Warranty," and Appendix F, "Notices."

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Safety

Before installing this product, read the Safety Information.

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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 produktu si prečítajte bezpečnostné informácie.

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」。

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/pc/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.

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

Chapter 1. Introduction

This chapter contains product and software descriptions and installation requirements for the ThinkCentre and Lenovo Super Multi-Burner Drive (Serial ATA).

Product description

This option package is intended for multimedia applications. The drive comes with a CD containing software for the following operating systems:

- Microsoft® Windows® 2000 Professional
- Microsoft Windows XP

Your option package contains the following:

- *User's Guide and Software CD* (contains Super Multi-Burner Drive (Serial ATA) User's Guide and Software Applications)
- Super Multi-Burner Drive
- Four mounting screws (M3 x 5-mm, slotted)
- Serial ATA Cable
- *Super Multi-Burner Drive (Serial ATA) Quick Start Guide*
- *Laser Safety Guide*

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 D, "Service and Support," on page D-1 for technical support information.

Your Super Multi-Burner Drive is compatible with the DVD Forum DVD-Multi Recorder specification, and can record as well as read DVD-RAM, DVD-RW, DVD-R (for General, 650 nm), DVD+R Double Layer, and DVD-R Dual Layer media. Your drive can also record and read the DVD+RW Alliance DVD+RW and DVD+R formats. In addition, your drive can record CD-R, CD-RW, (Standard, High-Speed, Ultra-Speed, and Ultra-Speed+) media, and uses buffer underrun prevention technology for reliable CD and DVD burning. You can burn labels directly on the disc using LightScribe CDs and DVDs. Your Super Multi-Burner Drive can read many other formats including DVD Video, Video CD, audio CD, multiple-session, extended architecture (XA) CDs, and Kodak Photo CDs. The Super Multi-Burner Drive is designed for installation in a computer that uses integrated drive electronics (SATA) architecture.

Software description

Your *Super Multi-Burner Drive (Serial ATA) User's Guide and Software CD* contains the following software:

- **Intervideo WinDVD Creator**

This software enables you to record video files to DVD-RW, DVD-R, DVD+RW, and DVD+R media that can be played in most stand-alone DVD players. You can also use this software to edit and modify your own video assets prior to recording. DVD-RAM recording is also supported.

If you have an analog, USB, or IEEE 1394 capture device installed in your computer, you can use this software to record video from a camera.

- **Direct-to-Disc (DLA)**

This software enables you to write directly to CD and DVD media using the drive letter as you would if you were writing to a diskette. You can also format DVD-RAM, DVD-RW, DVD-R, DVD-R DL, DVD+R DL, DVD+RW, and DVD+R media. With DLA, you can drag-and-drop files, create new directories, or save files from almost any application directly to your Super Multi-Burner Drive.

- **UDF reader**

This software enables you to install software for reading DVD-RAM, DVD-RW, DVD+RW, DVD-R DL, DVD+R DL, and CD-RW media on other computers with DVD drives.

- **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 use Multimedia Center for Think Offerings to write data to DVD-RAM, DVD-RW, DVD-R, DVD-R DL, DVD+RW, DVD+R DL, and DVD+R discs for use in other computers or compatible consumer electronics products. You can also create bootable CDs and save CD images for later recording. With the Express Labeller that is included in the Multimedia Center for Think Offerings, you can print paper labels or label LightScribe discs.

- **Intervideo WinDVD**

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

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

Installation requirements

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

- Minimum microprocessor: Intel® Pentium® or equivalent
For DVD authoring and playback, you must have an Intel Pentium II 266MHz microprocessor or higher and AGP 2X Video.
- Minimum RAM: 128 MB (Systems with UMA: 256 MB)
- Windows 2000 Professional or Windows XP
- An available 5.25-in. drive bay
- An available Serial ATA connection
- 70 MB available hard disk space for installation, 620 MB available hard disk space for every hour of VCD-quality MPEG-1 video, and 2 GB available hard disk space for every hour of DVD-quality MPEG-2 video
- Audio adapter supporting 44.1 or 48 kHz sampling rate
- Optional stereo speakers

Before you begin

Before you install the Super Multi-Burner Drive, read the information in the following sections.

Handling precautions

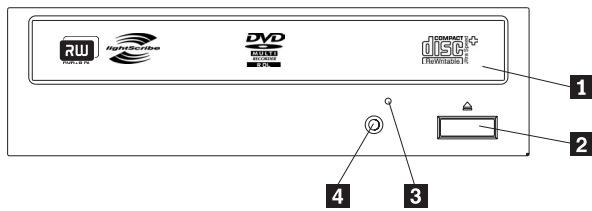
Use the following handling precautions to protect your drive:

- Keep the Super Multi-Burner Drive in the antistatic bag until you are ready to install the drive. Limit your movement when installing; movement can cause static electricity to build.
- Handle the drive with care. Dropping or jarring the drive can damage the components inside the drive.
- Do not force insertion of the SATA or power cables. Doing so might damage the connector or the drive.

Drive controls and connectors

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

Front view of the drive



1 Disc drawer

This drawer is where you load and unload a disc.

2 Open/Close button

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

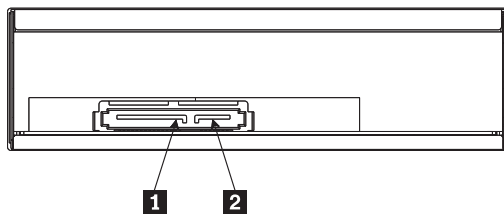
3 Emergency eject hole

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

4 Busy indicator

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

Rear view of the drive



1 15pin power connector

2 7pin signal connector

Chapter 2. Installation

This chapter contains hardware and software installation instructions and operating information for the Super Multi-Burner Drive (Serial ATA).

Installing the drive

Complete the following steps to install the 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 removing 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, and place the drive on the antistatic bag.

Step 3 Mounting the drive in the bay

Attention

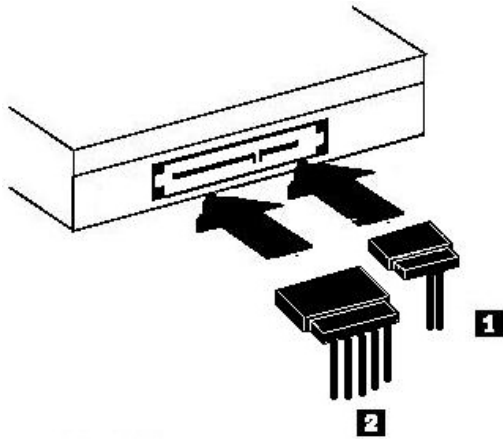
Be sure to use the M3 x 5-mm mounting screws in the option package when securing screws directly into the drive. Using screws that are too long might damage the drive.

You can mount the 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 drive will not be able to read the disc properly.

1. Slide the drive into the bay. Your computer might have 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 overtighten.

Step 4. Attaching the cables to the drive

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 **2** to the power connector on the drive.

Step 5. Completing the hardware installation

1. Ensure that the drive is securely mounted and that the connectors are firmly attached.
2. Ensure 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.
4. Reconnect all external devices.
5. Reconnect all power cords into the electrical outlets.

Chapter 3. Using the drive

This section contains information on using the Super Multi-Burner Drive (Serial ATA).

Maintaining the drive

This section includes information on taking care of your drive and the CDs and DVDs that you use with the drive.

Caring for the drive

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

- Do not move the drive when it is in use. Doing so might cause data error or damage the drive or media.
- 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.
- Do not move the drive unit without removing any discs from the disc drawer and making sure that the drawer is closed.

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.

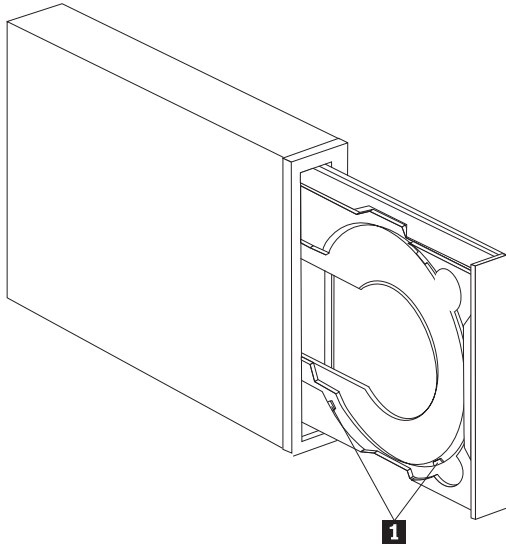
Loading a disc

Complete the following procedure to read a data disc:

1. Turn on the computer.
2. Press the **Open/Close** button on the front of the drive.
3. Insert a disc in the tray with the label facing up.
4. Close the tray by pressing the **Open/Close** button or by gently pushing in the loading tray.
Attention: Do not use force or insert foreign objects to open the loading tray.
5. Wait for the drive busy indicator to turn off; then double-click **My Computer**.
6. Double-click the CD-ROM or DVD-RAM/DVD-R/DVD-RW icon.

Securing a disc in a vertically mounted drive

To load a disc into a vertically mounted drive, do the following:



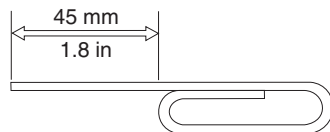
Note: The drive tray design might be different than shown (varies by manufacturer).

1. Press the **Eject/Load** button.
2. Insert the disc into the tray and make sure it is placed securely behind the vertical mounting tabs **1**.
3. Close the loading tray by pressing the **Eject/Load** button, or by gently pushing the tray in.

Note: 8 cm and "credit card CDs" cannot be used in vertically mounted drives without a special adapter.

Manually ejecting a disc

If you press the **Eject/Load** button and the tray does not slide out, turn off the computer. Straighten a large paper clip to form a tool, as shown in the illustration. The straightened end must extend at least 45 mm (1.8 in.). Insert the extended end into the manual-eject hole on the front of the drive (see "Drive controls and connectors" on page 1-3). Push the paper clip into the hole until the tray opens. Gently pull out the tray until you can remove the disc.



Using media

Your Super Multi-Burner Drive can record onto the following types of media:

- **DVD-RAM:** Write many times media that is optimized for data storage. DVD-RAM media can be read in most modern DVD-ROM drives, but cannot be read by some set-top DVD players.
- **DVD-R:** Write once media that has the best compatibility with set-top DVD players and computers. DVD-R media can be read in almost any type of DVD-ROM drive or DVD player.
- **DVD-R DL:** Write once media that has a higher capacity (8.5 GB) than ordinary DVD-R media. DVD-R DL media can be read in many DVD-ROM drives and DVD players but is not as compatible as the lower capacity DVD-R media.
- **DVD-RW:** Write many times media that can be read in most set-top DVD players and almost all computers. Some older DVD players might not be able to read this media.

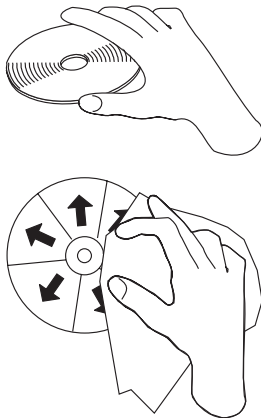
- **DVD+R:** Write once media that has good compatibility with set-top DVD players and computers. Older DVD players and computer DVD-ROM drives might not be able to read this media.
- **DVD+R DL:** Write once media that has a higher capacity (8.5 GB) than ordinary DVD+R media. DVD+R DL media can be read in most DVD-ROM drives and DVD players, as well as many consumer electronics devices.
- **DVD+RW:** Write many times media that can be read in many set-top DVD players. Older computer DVD-ROM drives and set-top players might not be able to read this media.
- **CD-R:** Write once media that can be read in most CD and DVD players.
- **CD-RW:** Write many times media that can be read in many CD and DVD players.
- **LightScribe Media:** CDs and DVDs bearing the LightScribe logo can have a disc label printed on the top surface using the Super Multi-Burner Drive.

Handling and caring for a disc

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 disc.
- Always store discs in their original packaging.
- Always store discs out of direct sunlight.
- Always store discs away from direct heat sources.
- Remove discs from the computer when not in use.
- Check discs for cracks BEFORE each use.
- Do not force discs into the computer/packaging.
- Do not bend or flex discs.
- Do not write on the surface of the disc.
- Do not use commercial cleaners to clean the disc.

IMPORTANT: Do not use discs that are cracked.

Using DVD-RAM media

DVD-RAM is a write many times medium created for long life and many overwrites. DVD-RAM media can hold any data or video format that can be written to DVD-ROM. DVD-RAM is compatible with most modern computer DVD-ROM drives but only some consumer electronic devices. Check with your device's manufacturer to see if it supports the DVD-RAM read function.

Using single and double-sided DVD-RAM media

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

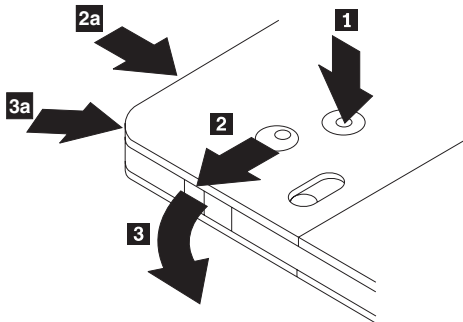
The 2.6 GB and 4.7 GB versions are single-sided. The 9.4 GB versions are double-sided. To access the data on both sides of the media, you must remove the media from the drive, turn it over, and re-insert it into the drive.

Removing the disc from the cartridge

DVD-RAM media is available in bare-disc or cartridge form. To use cartridge media in your Super Multi-Burner Drive, you must first remove the disc from the cartridge.

Note: Media in Type 1 cartridges is not removable and cannot be used in this drive. All other cartridge types (2-9) are removable and can be used in your Super Multi-Burner Drive drive.

Removing the disc from the cartridge:



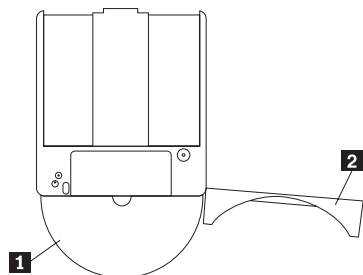
Using the tip of a ball point pen, push and break the lock pin tab **1**. To remove the disc, use a ball point pen to push down on the cartridge lid lock **2** and pull the cartridge lid out **3**. When the cartridge lid is open, the disc can be removed.

Note: The cartridge lid lock and the cartridge lid tab are located on the side of some cartridges, as shown in **2a** and **3a** above.

Attention

Do not touch the recording area of the disc when handling bare media.

Returning the disc to the cartridge







To return the disc to the cartridge, align the label side of the disc **1** with the DVD-RAM cartridge label side. Insert the disc and close the cartridge lid **2**. A clicking sound will occur when the lid closed.

Using CD-Rs and CD-RWs

The Super Multi-Burner Drive can also write to CD-R and CD-RW discs. CD-RW discs can be erased and reused many times, while CD-R discs can be written to only once. Carefully handle and clean discs, especially writable media types. Refer to “Handling and caring for a disc” on page 3-3 for information on how you can prolong the life of your discs.

Notes:

1. CD-R discs are playable on most audio CD players. CD-RW discs are playable only on some audio CD players.
2. Some consumer audio players will only play discs recorded on media labeled specifically for audio.
3. CD-R media is rated by write-speed. To achieve the maximum recording speed of your drive, media rated for 40x speed or higher is required. For best results, limit write-speed to the media speed rating. The Multimedia Center for Think Offerings software included in the option kit will allow you to limit the maximum recording speed as needed.
4. CD-RW media is also rated by write-speed. The Super Multi-Burner Drive supports writing only CD-RW discs rated at 4x or higher. The maximum write speed will be printed on the media packaging or the disc itself.
5. The following table shows the Super Multi-Burner Drive compatibility with standard, multi, high, ultra, and ultra speed+ CD-RW media:

Media rating	Write
No rating 	2x not supported
Multi-speed, 1x2x4x, 4x, 1x-4x 	Yes
High-speed, 4x-10x, 4x-12x, 8-10x 	Yes
Ultra-Speed, >16x 	Yes

Using 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 to a Windows menu 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 with both, 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.

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" on page C-2, 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" on page C-2, 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 DVD+Rs, DVD-Rs, DVD+RWs, DVD-RWs, DVD+R DLs, and DVD-R DLs

The Super Multi-Burner Drive can write to DVD+R, DVD-R, DVD+RW, DVD-RW, DVD+R DL, and DVD-R DLs discs. You can use DVD+R, DVD-R, DVD+RW, and DVD-RW discs to store data, archive files, and copy files from another DVD.

Standard DVD+R and DVD-R discs have a capacity of 4.7GB of data or video. Dual layer DVD-R and double layer DVD+R discs can hold 8.5GB of data or video.

DVD+R and DVD-R discs cannot be erased but can be used with standard DVD-ROM drives and DVD players. DL discs are only compatible with newer computer DVD-ROM drives and consumer electronic devices. DVD+RW and DVD-RW discs can be erased and rewritten but can be used only with newer DVD-RW-compatible DVD-ROM drives.

DVD+R and DVD-R discs can be created as open (appendable) or closed (not appendable). Many consumer electronics devices and older DVD-ROMs can only read closed discs. The Super Multi-Burner software allows you to specify whether you want to close the disc when you create it.

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, Intervideo WinDVD and WinDVD Creator Plus. 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.

Note: For full drive functionality, install all software applications listed in the browser window except the UDF Reader. This is for other computers that do not recognize UDF files.

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

Using Intervideo WinDVD Creator

With Intervideo WinDVD Creator you can capture, edit, and record video and audio files. You can also use Intervideo WinDVD Creator to create and record DVD videos using your own video and audio files. For more detailed information on Intervideo's WinDVD Creator features, refer to the online WinDVD Creator User's Guide on the *User's Guide and Software CD*.

The main function areas within the WinDVD Creator main window are **Capture**, **Edit**, **Author**, and **Make Movie**. From these functions, you can import and edit your own video and audio files; then save them into any of the following supported formats: MPEG-1, MPEG-2, ASF, WMV, and AVI.

When you have prepared your video and audio files, by going through the **Capture** and **Edit** steps, you can then add a customized menu from within the **Author** function. You can import your own still images to use as menu backgrounds or select one of the sample images. When your movie is ready, proceed to **Make Movie** where you can select the output format and video standard used in creating your movie. Write your movie to disc or save it to the hard disk drive for writing later. If you use WinDVD Creator Plus to create a DVD image on your hard disk drive, you can select **Load Image to Burn** from the Project menu.

WinDVD Creator also offers the capability to record video directly to DVD-recordable media using **Disk Manager** without using any additional space on the hard disk drive. With Disk Manager, you can capture new video or use video files that you already have, and then finish your movie by creating a customized menu. Your movie can be created in +VR or -VR video formats. Through Disk Manager, you can edit your movie at any time, adding or deleting video segments or changing your customized menu.

Note: +/-VR formatted disks have limited compatibility in older set-top DVD players.

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

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

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

1. Click **Start**, and then click **Control Panel**.
2. Double-click **System**. Read the numbers under "System." v 4.00.950B means that your version is Windows 95 OSR2.0, or OSR2.1. 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.

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.

To change the region code, do the following:

1. Turn on your computer and start your operating system.
2. Click **Start**.
3. Select **Programs**.
4. Click **Intervideo WinDVD**.
5. Click **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**.

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.

Using Direct-to-Disc (DLA)

Direct-to-Disc (DLA) is provided so that you can write data to DVD-RAM, DVD-RW, DVD-R, DVD+RW, DVD+R, CD-R, and CD-RW media. DVD-RAM, DVD-RW, DVD+RW, and CD-RW media can be written to many times, while DVD-R, DVD+R, and CD-R media can only be formatted and written to once.

To format and write to DVD-RAM, DVD-RW, DVD-R, DVD+RW, DVD+R, 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 Super Multi-Burner Drive letter.
3. Click **Format**. Formatting a DVD can take up to 90 minutes.
4. After formatting is complete, you can drag and drop files to the Super Multi-Burner Drive icon, or you can move files in Windows Explorer.

To make CD-R and DVD-R media compatible in other computers:

1. Double-click **My Computer**, and right-click the Super Multi-Burner Drive letter.
2. Click **Make Compatible**.

To use UDF formatted DVD-RAM, DVD-RW, DVD+RW, or CD-RW media in other computers, 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.

Using the Multimedia Center for Think Offerings application

You can use the Multimedia Center for Think Offerings application to burn data, audio, video, CD and DVDs. You can also access tools and utilities for working with rewritable media. The Multimedia Center for Think Offerings application 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**.

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.
6. Click the **Record** button.

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 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 save an image of a disc, 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 Drive**.
4. The Multimedia Center generates a random name for your file. If you wish to change it, click the **Browse** button.
5. Insert the disc that you want to save.
6. Click the **Record** button.

Notes:

1. Copy protected commercial DVDs 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.

Printing labels

The Multimedia Center for Think Offerings application has a project called the Express Labeller that can be used to create paper labels or directly label LightScribe media. The Express Labeller allows you to create disc labels using built-in templates or by using your own graphics and text.

To start the Express Labeller within the Multimedia Center for Think Offerings application, click the **Tools** tab, and then click **Label Disc**.

To start Express Labeller directly from Windows XP, click **Start -> All Programs -> Multimedia Center for Think Offerings -> Express Labeller**.

Within the Express Labeller you can add text and graphics to your disc label. Once you have created your label, click **Print** to create the label on paper or LightScribe disk media.

To print the label on paper, load your printer with CD label paper, click your printer in the Printer box, click the tray where you have loaded label paper, and click the **OK** button.

To print the label on LightScribe media, insert a LightScribe disc in the Super Multi-Burner Drive with the label side down, click **LightScribe 12cm disc** as the printer, and click the **OK** button.

Appendix A. Product specifications

This appendix includes the following information:

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

Physical specifications

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

Physical specification	
Height	42 mm (1.7 in.)
Width	146 mm (5.7 in.)
Length	165 mm (6.5 in.)
Weight	800g (1.76 lb.)

Power requirements

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

Operation	Half Height Current (mA)	
	5V Average	12V Average
Idle (Hold track state)	600	500
Write (Active)	1300	1000
Read (Active)	1300	1000
Seek (Access)	700	700
Label Printing	700	300

Environmental requirements

Specification	Operational	Nonoperational
Temperature	+5° C to +45° C	-30° C to +60° C
Relative humidity (noncondensing)	10% to 80%	10% to 90%

Read speeds

Media	Read Speed
DVD-ROM (single layer)	6.88 - 22.16 MB/s (16X CAV)

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.

DVD-ROM (dual layer)	4.58 - 11.08 MB/s (8X CAV)
DVD-R (4.7 GB)	9.28 - 22.16 MB/s (16X CAV)
DVD+R (4.7 GB)	9.28 - 22.16 MB/s (16X CAV)
DVD+R (8.5 GB double layer)	4.58 - 11.08 MB/s (8X CAV)
DVD-R (8.5 GB dual layer)	4.58 - 11.08 MB/s (8X CAV)
DVD-RW (4.7 GB)	4.58 - 11.0 MB/s (8X CAV)
DVD+RW (4.7 GB)	4.58 - 11.0 MB/s (8X CAV)
DVD-RAM (Ver. 2.0 & Higher)	4.15 - 6.925 MB/s (5X CAV)
CD-ROM	2.55 - 6.0 MB/s (40X CAV)
CD-R	2.55 - 6.0 MB/s (40X CAV)
CD-RW	2.55 - 6.0 MB/s (40X CAV)
CD-DA(DAE)	2.55 - 6.0 MB/s (40X CAV)

Write speeds

Media	Write speeds
DVD-R	8.91 - 22.16 MB/s (16X CAV)
DVD+R	8.91 - 22.16 MB/s (16X CAV)
DVD-R (8.5 GB dual layer)	5.54 MB/s (4X ZCLV)
DVD+R (8.5 GB double layer)	11.08 MB/s (8X ZCLV)
DVD-RW (6X)	8.31 MB/s (6X ZCLV)
DVD+RW (8X)	11.08 MB/s (8X ZCLV)
DVD-RAM (Ver. 2.0 & Higher)	4.15 - 6.925 MB/s (5X PAV)
CD-R (40X)	2.55 - 6.00 MB/s (40X CLV)
CD-RW (Ultra-Speed or Ultra-Speed+)	2.4 - 3.6 MB/s (32X ZCLV)

LightScribe support

The LightScribe function creates professional machine-inscribed CD labels, which eliminates the need for hand-written stick-on paper labels. See Chapter 3, "Printing labels" on page 3-10, for more information.

Note: 1X DVD = 1.385 MB/s; 1 MB/s = 10⁶ bytes per second
 1X CD = 150 KB/s; 1 KB/s = 2¹⁰ bytes per second
 1 MB = 2²⁰ bytes; 1 KB = 2¹⁰ bytes

Appendix B. Problem solving

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

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

- **Your computer or drive does not operate correctly, or the busy indicator light does not turn on.**

Take the following actions:

1. Check that the disc is label side up in the drive.
 2. Check that all devices are properly connected to the computer and to an 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 SATA cables are securely attached. Disconnect the SATA cable and check it for bent or misaligned pins. If you do not find any, reconnect the cable.
 5. Replace the computer cover, and reattach all cables and power cords. Turn on the computer, restart the operating system, and press 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 dc power cable.
- **You cannot access the drive, or the DVD-RAM (CD-ROM) icon is not displayed.**

When the drive is properly installed a DVD-RAM or CD-ROM icon is displayed in the My Computer window. Double-click **My Computer**. If a CD-ROM icon is not present in the window that opens, verify that the drive has been properly installed. Restart your computer. If a drive icon is still not found, continue with the following steps:

1. Click **Start**.
2. Select **Settings**.
3. Select **Control Panel**.
4. Click **System**.
5. Click the **Device Manager** tab.
6. Double-click **View Devices by Type**.
7. 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.
8. Select **DVD/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.
9. Click **OK**.
10. Close all windows and restart the computer.

If the device icon is still not present, check cable connections and resolve any conflicts that might exist.

- **The 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 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 configuration utility program.
2. Select **Devices**.
3. Scroll down to the **Mass Storage Devices** 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 “Handling and caring for a disc” on page 3-3.
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.

- **DVD+R DL and DVD-R DL media cannot be read in other computers after burning.**

Take the following actions:

1. Check with your manufacturer to be sure that the drive can read DVD+R DL and DVD-R DL media.
2. Follow this procedure to enable IMAPI for Windows XP:
 - a. Double-click **My Computer**.
 - b. Right Click on the DVD reader drive, and select **Properties**.
 - c. Click **Recording**.
 - d. Mark the **Enable CD Recording on this drive** checkbox.
 - e. Click **Apply**.
3. Try installing the UDF reader in the other computer.

- **There is no sound from the disc.**

1. Check that you are not using a data CD.
2. Adjust the audio-adaptor volume control. See the documentation that comes with your audio adapter and audio-CD player program.
3. Enable digital audio extraction. For more information, see “Enabling digital audio extraction for Windows 2000” on page C-2

- **You receive an error message.**

Take the following actions for these common error messages:

- CDR-103

The disc in the Super Multi-Burner Drive is not High Sierra, ISO 9660, or UDF format. The Super Multi-Burner Drive does not support the media.

- CDR-101

A “not ready reading the drive” situation occurs when you try to access the Super Multi-Burner Drive before the drive is ready. The busy indicator lights when you attempt to access the drive after loading a disc into the loading tray. Wait until the busy indicator is no longer lit before attempting to access the drive.

- **The Super Multi-Burner Drive does not operate and will not allow the disc to eject.**

You will need to manually eject the disc. Refer to “Manually ejecting a disc” on page 3-2.

- **A direct-to-disc media occurred and you cannot eject the disc or shut down the computer.**

Take the following actions:

1. Wait a few minutes until the drive light flashes and goes out, then try again.
2. Emergency eject the disc. Open **Task Manager** and end the task, DLAWCRTL.EXE. Then shut down.

- **Your Super Multi-Burner Drive showed up in My Computer until you added additional software, but is no longer in My Computer**

1. Uninstall all CD recording related software, including Windows Media Player.

2. Delete the registry value found at HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E965-E325-11CE-BFC1-08002BE10318} name "LowerFilters" and reboot the system.
3. Reinstall all CD related software, starting with Media Player 9.

Appendix C. Customizing the device driver configuration settings

Microsoft Windows 2000 Professional has two device-driver configuration parameters: Auto Insert Notify and DMA.

The Auto Insert Notify parameter enables the computer to start playing or accessing the disc automatically after being inserted in the drive. The DMA parameter improves the computer performance by having the computer DMA controller handle data transfers from the CD to memory, freeing the computer's microprocessor to perform more important tasks. For example, activating DMA might make movies and games run more smoothly because the microprocessor is allocating more processing time to video.

Enabling DMA for Windows 2000 Professional

To change the parameter settings for Windows 2000 Professional, do the following:

1. Click **Start**.
2. Click **Settings**.
3. Click **Control Panel**.
4. Double-click **System**.
5. Click the **Hardware** tab.
6. Click the **Device Manager** button.
7. Click the **IDE ATA/ATAPI** controller to expand the tree.
8. Click the device that corresponds to the controller where your Super Multi-Burner Drive is located (**Primary IDE** or **Secondary IDE**).
9. Click the **Advanced Settings** tab.
10. Select the **Transfer Mode** pull-down menu and select **DMA** if available.
11. Click **OK**.
12. Click **Close** to close the **System Properties** window. A message is displayed informing you that the system settings have changed.
13. Click **OK** to restart your computer.

Enabling DMA for Windows XP

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

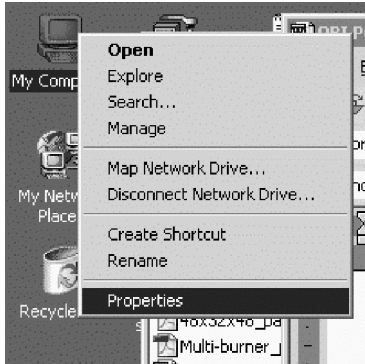
1. Click **Start**.
2. Click **Control Panel**.
3. Click **Switch to classic view**.
4. Double-click **System**.
5. Click the **Hardware** tab.
6. Click the **Device Manager** button.
7. Click the **IDE ATA/ATAPI** controller to expand the tree.
8. Double-click on the controller where your Super Multi-Burner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

Enabling digital audio extraction for Windows 2000

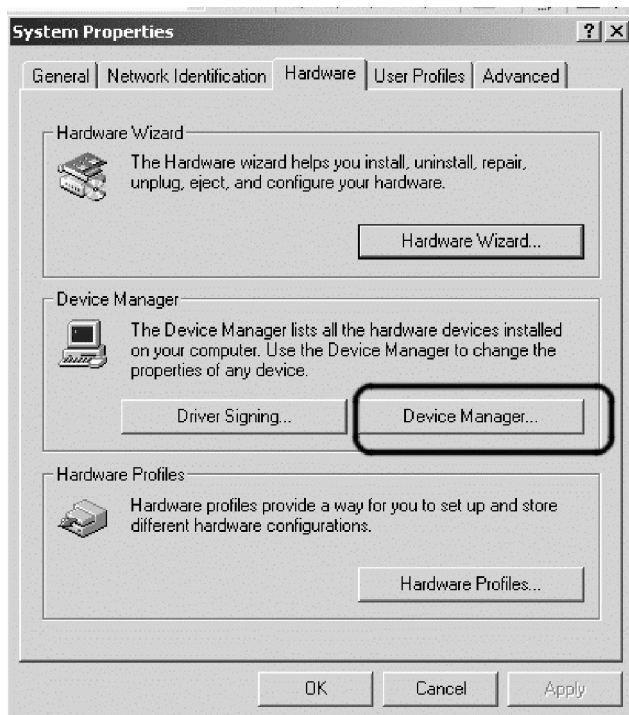
Your system must be properly configured to play back digital audio from this drive. There are two settings that must be configured. One setting is in the device properties, and a second setting is in Windows Media Player.

To set the device properties, perform the following procedure:

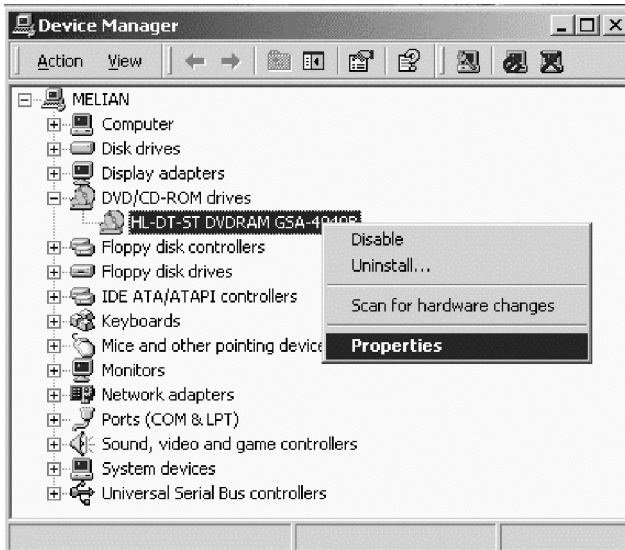
1. Right click on **My Computer**, and then click **Properties**. The System Properties window opens.



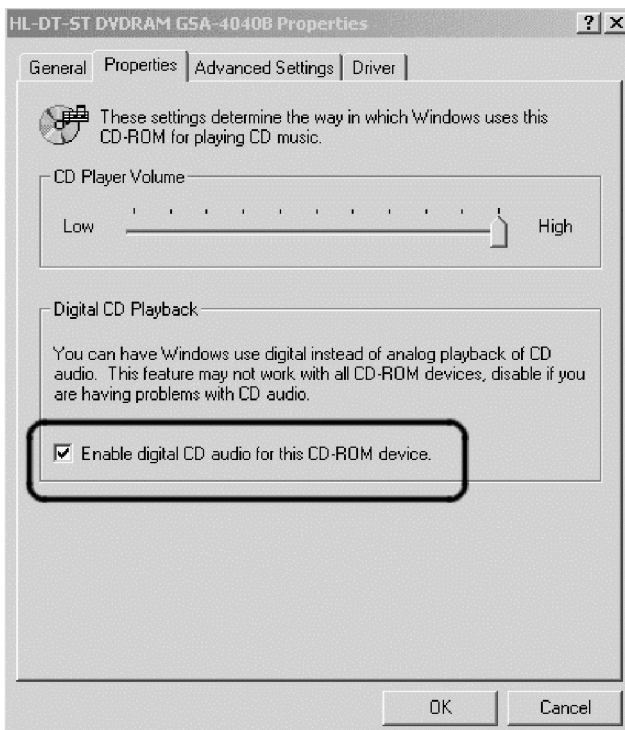
2. In the System Properties window, click the **Hardware** tab, and then click the **Device Manager** button.



3. In the **Device Manager** window, click the "+" next to DVD/CD-ROM drives to display the submenu, right click your submenu drive, and click **Properties**.

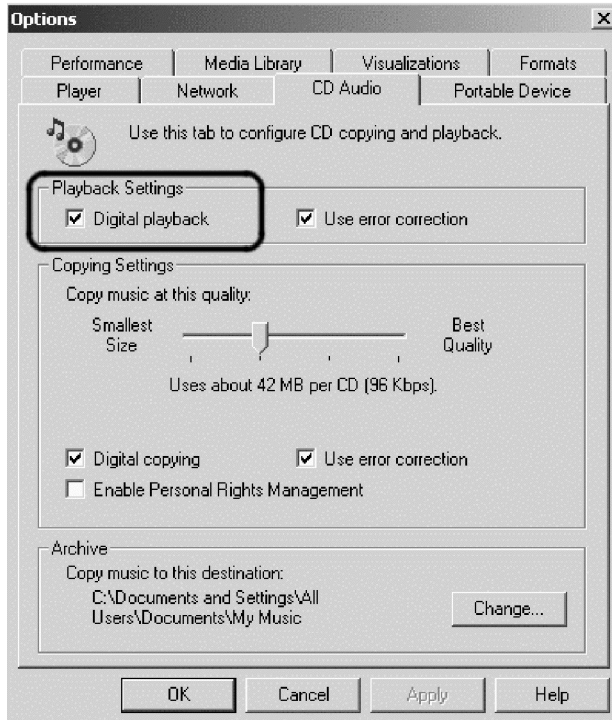


4. Click the **Properties** tab, and mark the Enable digital CD audio checkbox, as shown in the figure below.



To enable Digital Audio Playback in Windows Media Player, perform the following procedure:

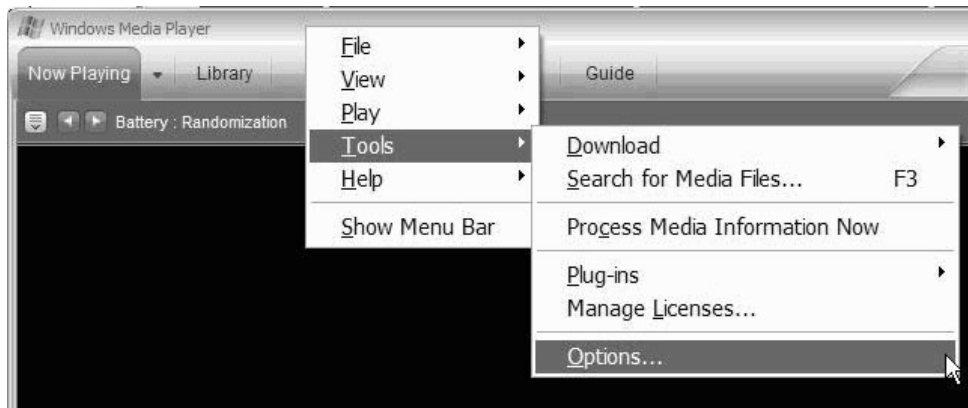
1. Open Windows Media Player.
2. In the menu bar, click **Tools** -> **Options**.
3. Click the **CD Audio** tab, and mark the **Digital playback** checkbox, as shown in the figure below.



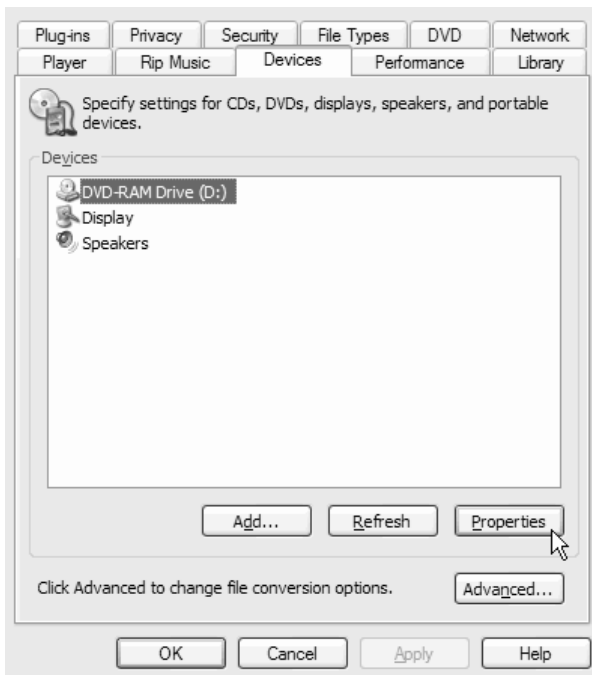
Enabling digital audio extraction for Windows XP

Digital audio extraction is enabled on the Super Multi-Burner Drive automatically under Windows XP. You may need to configure Windows Media Player to play audio back digitally. Follow this procedure to configure Windows Media Player:

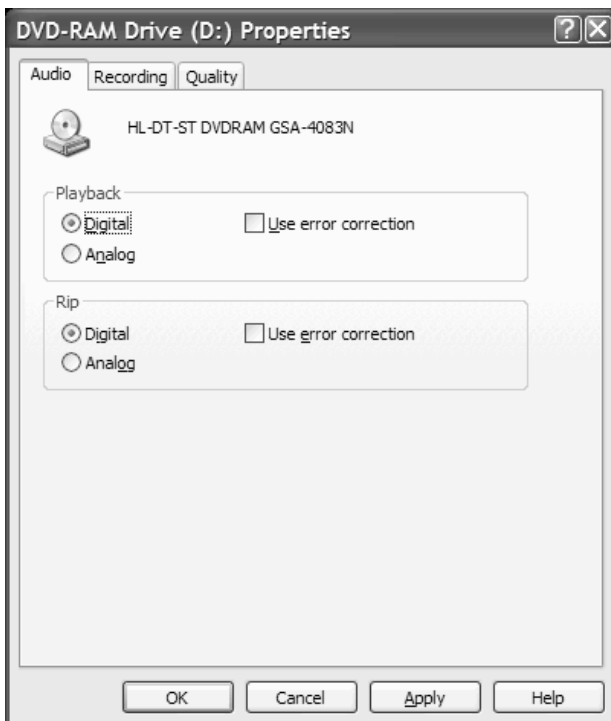
1. To open Windows Media Player, click **Start** -> **All Programs** -> **Accessories** -> **Entertainment** -> **Windows Media Player**.
2. Right click on the Media Player window to bring up the menu.
3. On the menu bar, click **Tools** -> **Options**.



4. Click the **Devices** tab. The Super Multi-Burner Drive displays as a DVD-RAM drive.



5. Click **DVD-RAM Drive**, and then click the **Properties** button.
6. Under **Playback and Rip**, click the radio buttons labeled **Digital**.



7. Click **Apply** to save your settings, and then click **OK**.

Appendix D. 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/support>.

During the warranty period, assistance for replacement or exchange of defective components is available. In addition, if your option is installed in a Lenovo 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-14. Phone numbers are subject to change without notice. For the most current phone numbers, go to <http://www.lenovo.com/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 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; and
 - 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 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 Super Multi-Burner 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.

4. 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 above).

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

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

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

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

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/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	0800-666-0011 (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)
Brazil	Sao Paulo region: (11) 3889-8986 Toll free outside Sao Paulo region: 0800-7014-815 (Brazilian Portuguese)
Canada	1-800-565-3344 (English, French) In Toronto only call: 416-383-3344
Chile	800-224-488 (Spanish)
China	800-810-1818 (Mandarin)

Country or Region	Telephone Number
China (Hong Kong S.A.R.)	Home PC: 852-2825-7799 Commercial PC: 852-8205-0333 ThinkPad and WorkPad: 852-2825-6580 (Cantonese, English, Putonghua)
Colombia	1-800-912-3021 (Spanish)
Costa Rica	284-3911 (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	566-4755 566-5161 ext. 8201 Toll Free within the Dominican Republic: 1-200-1929 (Spanish)
Ecuador	1-800-426911 (Spanish)
El Salvador	250-5696 (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	335-8490 (Spanish)
Honduras	Tegucigalpa & San Pedro Sula: 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)
Israel	+972-3-531-3900 (Hebrew) +972-3-531-3900 (English) 8:30AM - 5:00PM Sunday - Thursday (Local time)

Country or Region	Telephone Number
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	001-866-434-2080 (Spanish)
Middle East	+44 (0)1475-555-055
Netherlands	+31-20-514-5770 (Dutch)
New Zealand	0800-446-149 (English)
Nicaragua	255-6658 (Spanish)
Norway	Up and running support: 6681-1100 Warranty service and support: 8152-1550 (Norwegian)
Panama	206-6047 (Spanish)
Peru	0-800-50-866 (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)
Slovakia	+421-2-4954-1217
Slovenia	+386-1-4796-699

Country or Region	Telephone Number
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	0-800-100-2011 (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.lenovo.com/mx/es/servicios>

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. 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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Research Triangle Park, NC 27709
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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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The following terms are trademarks of Lenovo in the United States, other countries, or both:

- Lenovo
- ThinkCentre
- ThinkPad

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Intel is a trademark of Intel Corporation in the United States, other countries, or both.

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

Appendix G. Electronic emissions notices

The following information refers to the ThinkCentre and Lenovo Super Multi-Burner Drive (Serial ATA).

Federal Communications Commission (FCC) Declaration of Conformity

ThinkCentre and Lenovo Super Multi-Burner Drive (Serial ATA) - (Option Part Number - 41N620)

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.

Responsible party:

Lenovo (United States) Incorporated
One Manhattanville Road
Purchase, New York 10577
Telephone: (919) 254-0532



Tested To Comply
With FCC Standards

FOR HOME OR OFFICE USE

Industry Canada Class B emission compliance statement

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

Avis de conformité 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 B.)

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 legislación 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 electromagnética)

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 della 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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