ThinkPad

ThinkPad DVD Ultrabay Slim Burner User's Guide

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> **ATTENTION**
>
> Before installing this product, read the ThinkPad System *Safety Booklet*.

> **Note**
>
> Be sure to keep your proof of purchase, because it might be required for warranty services. See Appendix E, "Lenovo Limited Warranty," on page 23.

Contents

Safety information

Before installing this product, read the Safety Information.

مج، يجب قراءة   دات السلامة

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

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

Prije instalacije ovog produkta obavezno pročitajte Sigurnosne Upute.

Před instalací tohoto produktu si 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」。

安裝本產品之前，請先閱讀「安全資訊」。

General safety guidelines

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

Service

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

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

Power cords and power adapters

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

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

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

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

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

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

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

Extension cords and related devices

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

Plugs and outlets

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

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

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

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

Connect and disconnect the equipment from the electrical outlet carefully

Batteries

All personal computers manufactured by Lenovo contain a non-rechargeable coin cell battery to provide power to the system clock. In addition many mobile products such as notebook computers 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, AC adapters, and many accessories can generate heat when turned on and when batteries are charging. Always follow these basic precautions:

- Do not leave your computer, AC adapter, or accessories in contact with your lap or any part of your body for an extended period when the products are functioning or when the battery is charging. Your computer, AC adapter, and many accessories produce some heat during normal operation. Extended contact with the body could cause discomfort or, potentially, a skin burn.
- Do not charge the battery or operate your computer, AC adapter, or accessories near flammable materials or in explosive environments.
- Ventilation slots, fans, and 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.

Chapter 1. About the drive

This manual provides information on registering, installing, and using the ThinkPad® DVD Ultrabay™ Slim Burner, and is available on the *Software and User's Guide CD*.

The appendixes of this guide contain warranty information and legal notices.

Product description

Your drive is compatible with the DVD-Multi Recorder specification, and can record as well as read DVD-RAM, DVD-RW, and DVD-R (for General, 650 nm) media. Your drive can also record CD-R, CD-RW, and High-Speed CD-RW media, and uses buffer underrun prevention technology for reliable CD burning. Your DVD Burner can read many other formats including DVD+R, DVD+RW, DVD Video, Video CD, audio CD, multiple-session, extended architecture (XA) CDs, and Kodak Photo CDs. (Some DVD+R and DVD+RW media brands may not be compatible.) The drive is designed for installation in your Ultrabay Slim Drive Bay or Ultrabay Enhanced Drive Bay.

Media	Write speed
CD-R	24X Max.
CD-RW	16X Max.
DVD-R	8X Max.
DVD+R	8X Max.
DVD+R double Layer	4X Max.
DVD-R dual layer	4X Max.
DVD-RW	6X Max.
DVD+RW	6X Max.
DVD-RAM	5X Max.

In addition to this *Software and User's Guide CD*, your option package includes the following:
* ThinkPad DVD Ultrabay Slim Burner
* Carrying case
* *Quick Reference 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 21 for technical support information.

Software description

Your *DVD Burner 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.

- **Drag-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 DVD Burner. Drag-to-disc is installed as part of the Multimedia Center for Think Offerings.
- **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

To install the drive, your ThinkPad notebook computer must contain the following requirements:
- A ThinkPad system with an Ultrabay Slim Drive Bay or Ultrabay Enhanced Bay
- A ThinkPad X4 Ultrabase Dock or Dock II
- Microsoft® Windows® Vista™, Microsoft Windows XP, or Microsoft Windows 2000 operating system

Note: Lenovo offers limited support for computers with Microsoft Windows 95, Windows 98, or Microsoft Windows Millennium Edition (Me) desktop operating systems.

Installing the drive

Your ThinkPad computer includes a help system, Access ThinkPad, that provides drive installation instructions specific to your computer. To correctly install the drive into the Ultrabay Slim Drive Bay or Ultrabay Enhanced Bay, use the instructions given in the Access ThinkPad help system.

Locating the drive controls

The following diagram shows the location of the controls on the front of the drive.
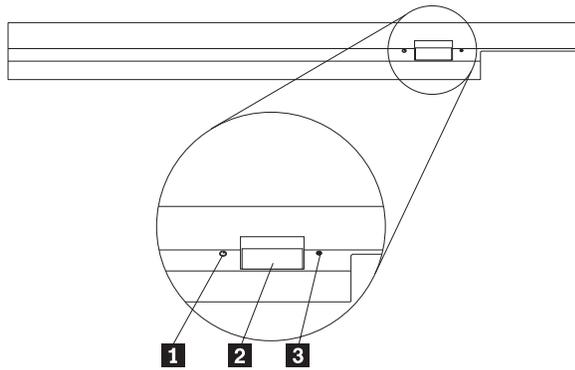
1 Power light: This light is visible when the drive is in use.

2 Eject button: Press this button to eject a DVD or CD.

3 Manual eject hole: Use this emergency release to eject a DVD or CD when the Eject button does not work. For more information on manually ejecting a DVD or CD, see "Manually ejecting a disc" on page 6.

Chapter 2. Using the drive

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

Before you begin

For best results, review the following guidelines before using the drive:
- Do not move your ThinkPad computer while formatting or writing a disc as this might cause data errors. Also, minimize typing while formatting or writing to a disc, as this might also cause data errors.
- Keep the ThinkPad computer on a flat surface when writing to a disc.
- Make sure the ThinkPad computer is plugged into an ac outlet when using the drive. The disc might be damaged if the battery runs out while writing to a disc.
- Turn screensavers off. Using a screensaver might interrupt the formatting and writing process.
- Do not put your ThinkPad computer into hibernation or suspend mode while writing to a disc.

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

Caring for the drive

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

Loading a disc
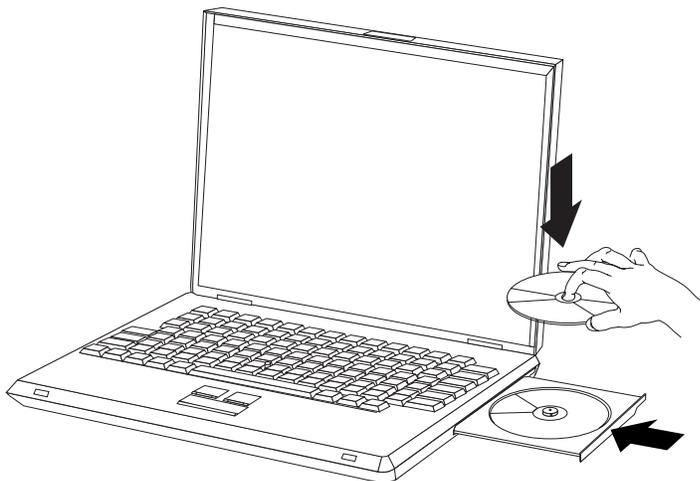
1. Press the Eject button. The tray slides out of the drive.
2. Place a disc in the tray with the label facing up.
3. Close the tray by gently pushing the tray in until it latches.

Attention: Do not use force or insert foreign objects to open the tray. If your tray does not open when you press the Eject button, see "Manually ejecting a disc" for more information.

Securing a disc in a vertically mounted drive

The drive has four retainers molded into the loading tray for vertical mounting operation. To insert a disc, place it in the lower two retainers before closing the tray. To remove a disc, open the tray and lift the disc from the two lower retainers.

Manually ejecting a disc

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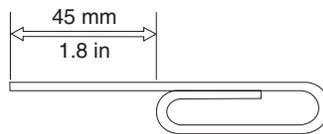

Using media

This section contains information on using media.

Handling and caring for a disc

Carefully handle and clean discs, especially writable media types such as CD-R and CD-RW discs, so that they remain readable. You can prolong the life of your discs by using these precautions:
* Always store discs in their original packaging.
* Always store discs out of direct sunlight.
* Always store discs away from direct heat sources.
* Remove discs from the computer when not in use.
* Check discs for cracks BEFORE each use.

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

Attention: Wiping a disc using a circular motion can cause data loss.
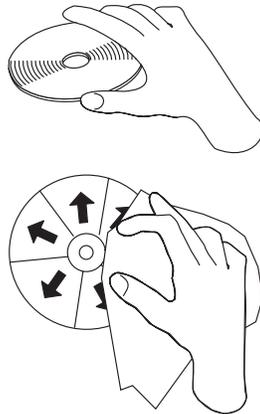
Your drive can use many different types of media. Not all media is used in the same ways. The following sections describe what you can do with the different media types.

Using DVD-RAM media

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

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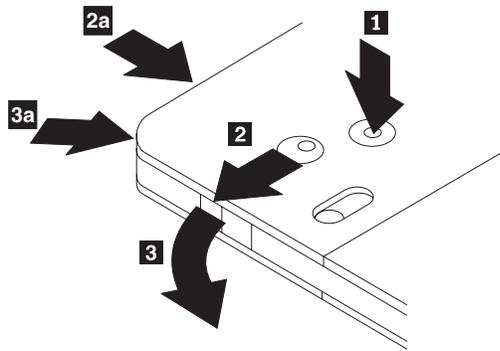
Using the tip of a ball point pen, push and break the lock pin tab **1** . To remove the disc, use a ball point pen to push down on the cartridge lid lock **2** and pull the cartridge lid out **3** . When the cartridge lid is open, the disc can be removed.

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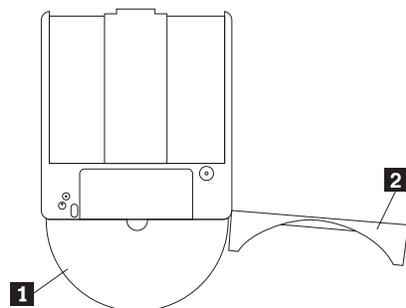
To return the disc to the cartridge, align the label side of the disc **1** with the DVD-RAM cartridge label side. Insert the disc and close the cartridge lid **2** . A clicking sound will occur when the lid closed.

Precautions for handling

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

Using 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.

Using CDs and DVDs

Complete these steps 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 or cartridge 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.

Using CD-Rs and CD-RWs

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

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

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

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

For more information on using the software, refer to "Using Drag-to-Disc (DLA)" on page 10 and "Using Multimedia Center for Think Offerings application" on page 11.

Using DVD-Rs and DVD-RWs

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

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

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

For more information on using the software, refer to the Multimedia Center for Think Offerings and DLA help information on the *Software and User's Guide Super CD*.

Installing software

After you connect the drive to the computer, you can install application software from the *User's Guide and Software CD*. Complete these steps to install application software:
1. Insert the *User's Guide and Software CD* into the drive.
2. The CD should automatically start. If it does, proceed to Step 5.
3. If the CD does not automatically start, click Start, then Run.
4. In the Run box type *e:\launch.bat* where *e* is the drive letter of the ThinkPad DVD Ultrabay Slim Burner.
5. If you get a warning from Internet Explorer about malicious scripts, right-click on the warning bar, and select **Allow Blocked Content**.
6. Select **Software** from the left-hand navigator bar.
7. Check the boxes by the software applications that you wish to install.
8. Click **Go**. The software you selected will install silently.
9. Restart the computer after the completion message.

Note: If the software fails to install silently, you can select interactive installs of individual packages from the bottom line of the installer page.

Using Intervideo WinDVD Player software

This section describes how to use and customize the Intervideo WinDVD Player. You can find current information on Intervideo WinDVD Player in the readme file on the *User's Guide and Software CD*.

Before using the software

WinDVD requires a compatible video device driver and IDE bus mastering in order to work. See Appendix A, "Customizing the device driver configuration settings," on page 13 for information on enabling DMA bus mastering and for locating video device drivers.

Using WinDVD

When you insert a DVD Video disc into the drive, the Intervideo WinDVD Player will automatically start and begin to play the video disc. If the DVD disc contains both video and program content, the program content will automatically play.

To view the video content of a video/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, complete these steps:
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**.

Using Drag-to-Disc (DLA)

Drag-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:
1. Insert a disc into the drive.
2. Double-click **My Computer**. Right-click the CD/DVD 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 CD/DVD Burner drive icon, or you can move files in Windows Explorer.

To make CD-R and DVD-R media compatible in other computers, complete these steps:
1. Double-click **My Computer**. Right-click the CD/DVD 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, complete these steps:
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. The CD will Autoplay
2. Select **Software** from the navigation menu.
3. Select the proper UDF reader for your operating system. Both 32 and 64 bit versions are included in the installer list.

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 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 Drag-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. You can also create CDs from images that you have previously saved on your hard disc. 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 CD images can be as large as 730 MB, and saved DVD images can be as large as 8.6 GB. Ensure that you have adequate hard drive disk space before proceeding.

To make a CD image, complete these steps:
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. DLA CDs cannot be saved as image files.
2. Copy protected commercial CDs cannot be imaged.

To burn a previously saved image, complete these steps:
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. Use the Browse button to navigate to the image that you want to burn.
5. Insert a blank or erasable disc.
6. Click the **Record** button.

To copy a disc, complete these steps:
1. Start the Multimedia Center for Think Offerings application.
2. Click the **Copy** page.
3. Click the task **Copy a disc**.
4. Insert the disc that you want to copy.
5. Click the **Record** button.
6. When prompted, insert the target disc.

Notes:
1. Copy protected CDs cannot be copied.
2. Copying or imaging discs without the copyright owner's permission can result in legal penalties. For more information on copyright law, consult your legal advisor.

Using 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.

Appendix A. Customizing the device driver configuration settings

Microsoft Windows Me and Windows 2000 Professional have 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 Me

To change the DMA parameter settings in Windows Me, complete these steps
 1. Click **Start**.
 2. Click **Settings**.
 3. Click **Control Panel**.
 4. Click **View all control panel options**.
 5. Double-click **System**.
 6. Click the **Device Manager** tab.
 7. Double-click **CD-ROM**.
 8. Click on the drive that you want to modify.
 9. Click the **Settings** tab.
 10. Click to select the **DMA** check box.
 11. Click **OK**.

Enabling DMA for Windows 2000 Professional

To change the parameter settings for Windows 2000 Professional, complete these steps
 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 CD/DVD Burner 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, complete these steps
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 CD/DVD Burner 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 CD/DVD Burner location, (**Device 0** for Master, **Device 1** for Slave).
11. Select **DMA** if it is available.
12. Click **OK**.

Enabling digital audio extraction

Your system must be properly configured to play back digital audio from this drive. There are two setting 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, complete these steps:
1. Right-click on **My Computer**, and select **Properties**.
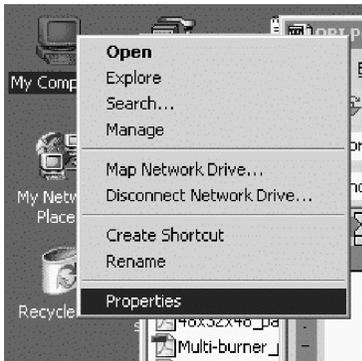
2. Select **Device Manager** from the **Hardware** tab. In Windows Me, the **Hardware** tab shows the Device Manager directly without clicking the button, as shown in the figure below.
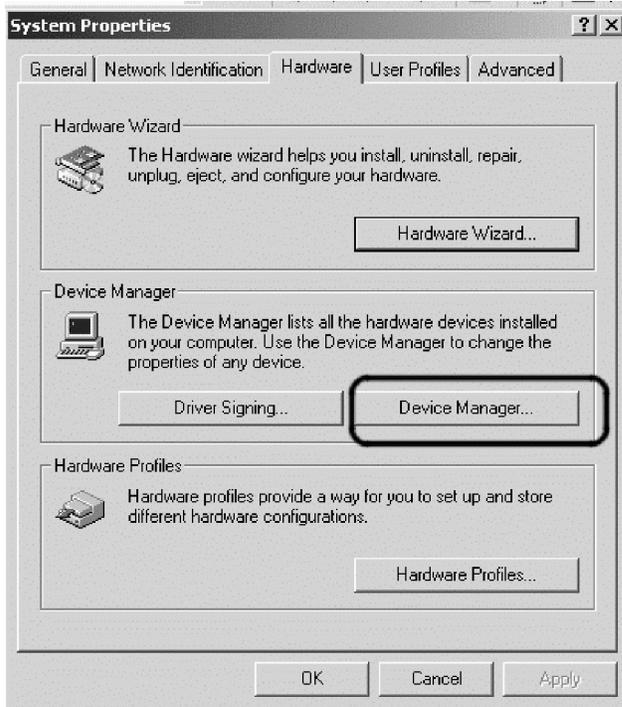
3. In the **Device Manager** tab, open the '+' for DVD/CD-ROM drives, right-click on your drive, and select **Properties**.

4. Select the **Properties** tab and check the Enable Digital Audio checkbox, as shown in the figure below.
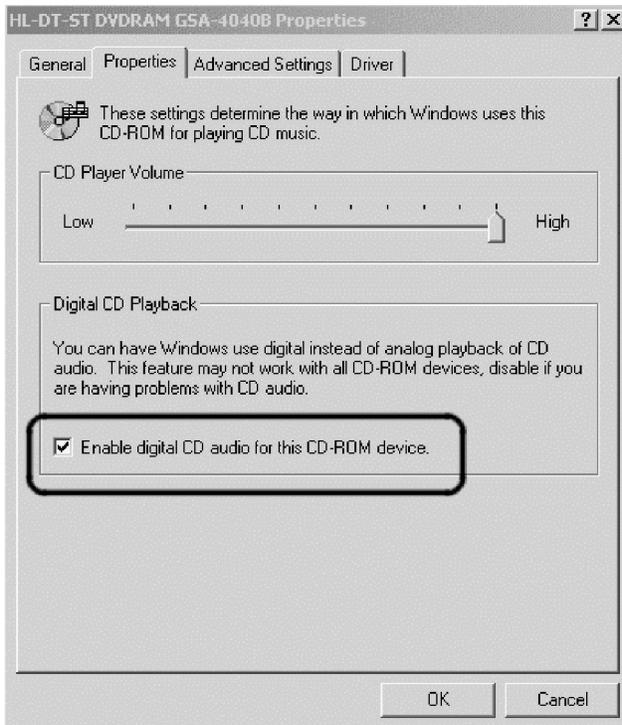
To enable Digital Audio Playback in Windows Media Player, complete these steps:
1. Open Windows Media Player.
2. Select **Tools→Options...** from the Media Player menu.
3. Select the **CD Audio** tab and check the Digital Playback box, as shown in the figure below.
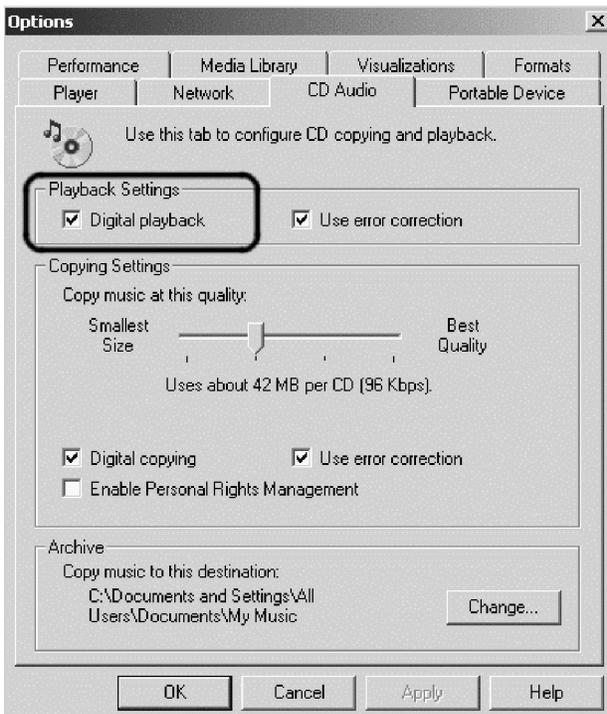
Appendix B. Troubleshooting

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

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

You cannot create a multi-session disc.

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

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

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

You cannot eject a CD or DVD disc.

Complete these steps after ensuring that the drive is not in the process of writing to a disc:
1. Eject the CD through software.
2. Use the Eject button.
3. Turn off the computer. Wait 45 seconds; then turn on the computer and try using the Eject button again.
4. If other methods do not work, use the manual-eject hole. Refer to the instructions in "Manually ejecting a disc" on page 6.

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

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

You suspended your system and DVD playback will not resume.

This is normal with some device drivers. Playback will continue after you exit and restart WinDVD.

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

Complete these steps:
1. Your video device driver needs an update to enable overlay support. Contact the manufacturer of your video adapter or your computer for updates.
2. The resolution of your screen might be too high. Try setting the resolution to 800 x 600 x 16 bpp at 60 Hz.

DVD movies do not start automatically when inserted into the drive.

Complete these steps:
1. Under Windows 2000, DVDs that contain both programs and DVD Video content will autoplay the program content. To view the video content, start WinDVD manually.
2. Under Windows XP or Windows Vista, you have chosen to always start data discs in file only mode. Refer to the Windows online manual for information on restoring program defaults.

Video appears to be choppy or is dropping frames.

Complete these steps:
1. Ensure that DMA is enabled on for your computer hard disk drive controller.
2. The resolution of your screen might be too high. Try setting the resolution to 800 x 600 x 16 bpp at 60 Hz.
3. If your computer microprocessor has less power than a Pentium II 450 microprocessor, some jerkiness is normal on certain DVDs.

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

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

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

Complete these steps:
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.
3. Turn off the computer.

Appendix C. Product specifications

This appendix includes the following information:
- Physical specifications
- Power requirements
- Environmental requirements
- Read speeds
- Write speeds

Physical specifications

The physical specifications[1] of the drive are listed in the following table.

Physical specification	
Height	9.5 mm (0.4 in.)
Width	128 mm (5 in.)
Length	129 mm (5.09 in.)
Weight	155 g (0.38 lb)

Power requirements

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

Power specifications	Voltage	Average	Maximum
At voltage	DC 5V	1100 mA	1800 mA

Environmental requirements

Specification	Operational	Non-operational
Temperature (non-condensing)	+5° C to +50° C (+41° F to +122° F)	-20° C to +60° C (-4° F to +140° F)
Relative humidity (non-condensing)	10% to 80%	5% to 90%

Read speeds

Media	Read Speed
CD-R	24X Max.
CD-RW	24X Max.
High Speed CD-RW	24X Max.
Ultra Speed CD-RW	24X Max.
DVD-R	8X Max.
DVD+R	8X Max.

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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-R Dual layer	6X Max.
DVD+R Double layer	6X Max.
DVD-RW	8X Max.
DVD+RW	8X Max.
DVD-RAM	5X Max.

Write speeds

Media	Write speed
CD-R	24X Max.
CD-RW	16X Max.
DVD-R	8X Max.
DVD+R	8X Max.
DVD-R Dual layer	4X Max.
DVD+R Double layer	4X Max.
DVD-RW	6X Max.
DVD+RW	6X Max.
DVD-RAM	5X Max.

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 your product. Refer to the Lenovo Limited Warranty for a full explanation of Lenovo warranty terms.

Registering your option

Register to receive product service and support updates, as well as free and discounted computer accessories and content.

Go to http://www.lenovo.com/register

Online technical support

Online technical support is available during the lifetime of a product at http://www.lenovo.com/support.

Product replacement assistance or exchange of defective components also is available during the warranty period. A Lenovo technical support representative can help you determine the best alternative. In addition, if your Lenovo option is installed into a Lenovo computer, the option takes on the warranty of the computer in which it is installed. For many Lenovo computers, this can entitle the Lenovo option for warranty service up to three years.

Telephone technical support

Installation and configuration support through the Customer Support Center will be available until 90 days after the option has been withdrawn from marketing. After that time, the support is cancelled, or made available for a fee, at Lenovo's discretion. Additional support is also available for a nominal fee.

Before contacting a Lenovo technical support representative, please have the following information as possible: option name and number, proof of purchase, computer manufacturer, model, serial number and manual, the exact wording of any error message, description of the problem, and the hardware and software configuration information for your system.

Your technical support representative might want to walk you through the problem while you are at your computer during the call.

For a list of Service and Support phone numbers, visit http://www.lenovo.com/support/phone.

Appendix E. Lenovo Limited Warranty

L505-0010-00 09/2006

This Lenovo Limited Warranty applies only to Lenovo hardware products you purchased for your own use and not for resale. This warranty may sometimes be referred to as the ″Statement of Limited Warranty″ (SOLW) in other documents from Lenovo.

What this Warranty Covers

Lenovo warrants that each hardware product is free from defects in materials and workmanship under normal use during the warranty period. The warranty period for the product starts on the original date of purchase specified on your invoice unless Lenovo informs you otherwise in writing. The warranty period and type of warranty service that apply to your product are designated below under the section titled ″**Warranty Information.**″

THIS WARRANTY IS YOUR EXCLUSIVE WARRANTY AND REPLACES 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 APPLY ONLY TO THE EXTENT REQUIRED BY LAW AND 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 ON DURATION MAY NOT APPLY TO YOU.

How to Obtain Warranty Service

If the product does not function as warranted during the warranty period, you may obtain warranty service by contacting Lenovo or an approved service provider. Each of them is referred to as a ″Service Provider.″ A list of Service Providers and their telephone numbers is available at www.lenovo.com/support/phone.

Warranty service may not be available in all locations and may differ from location to location. Charges may apply outside a Service Provider's normal service area. Contact a local Service Provider for location-specific information.

What Your Service Provider Will Do to Correct Problems

When you contact a Service Provider, you must follow the problem determination and resolution procedures specified.

Your Service Provider will attempt to diagnose and resolve your problem over the telephone or through remote assistance. Your Service Provider may direct you to download and install designated software updates.

Some problems can be resolved with a replacement part that you install yourself (such as keyboard, mouse, speaker, memory, hard disk drive, or port replicator), called a ″Customer Replaceable Unit″ or ″CRU.″ If so, your Service Provider will ship the CRU to you for you to install.

If your problem cannot be resolved over the telephone or remotely, through your application of software updates, or with a CRU, your Service Provider will arrange for service under the type of warranty service designated for the product under the section titled ″**Warranty Information**.″

If your Service Provider determines that it is unable to repair your product, your Service Provider will replace it with one that is at least functionally equivalent.

If your Service Provider determines that it is unable to either repair or replace your product, your sole remedy is to return the product to your place of purchase or to Lenovo and your purchase price will be refunded.

Exchange of a Product or Part

When the warranty service involves the exchange of a product or part, the item your Service Provider replaces becomes Lenovo's property and the replacement becomes yours. All removed items must be 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 status of the replaced item.

Before your Service Provider exchanges a product or part, you agree to:
1. remove all features, parts, options, alterations, and attachments not under warranty service;
2. ensure that the product is free of any legal obligations or restrictions that prevent its exchange; and
3. obtain authorization from the owner to have your Service Provider service a product that you do not own.

Your Additional Responsibilities

Where applicable, before service is provided, you agree to:
1. follow the service request procedures that your Service Provider specifies;
2. backup or secure all programs and data contained in the product;
3. provide your Service Provider with all system keys or passwords and sufficient, free, and safe access to your facilities to permit the terms of this warranty to be fulfilled; and
4. ensure that all information about identified or identifiable individuals (″Personal Data″) is deleted from the product or that, with respect to any remaining Personal Data you did not delete, you are in compliance with all applicable laws.

Use of Personal Information

If you obtain service under this warranty, Lenovo will store, use, and process information about your warranty issue and your contact information, including name, phone numbers, address, and e-mail address. Lenovo will use this information to perform service under this warranty and to improve our business relationship with you, such as to conduct internal reviews of the efficiency of the warranty service we provide to you. We may contact you to inquire about your satisfaction regarding our warranty service or to notify you about any product recalls or safety issues. In accomplishing these purposes, we may transfer your information to any country where we do business and may provide it to entities acting on our behalf. We also may disclose it where required by law or legal authorities to do so.

What this Warranty Does not Cover

This warranty does not cover the following:
- uninterrupted or error-free operation of a product;
- loss of, or damage to, your data;
- any software programs, whether provided with the product or installed subsequently;
- failure or damage resulting from misuse, accident, modification, unsuitable physical or operating environment, natural disasters, power surges, or improper maintenance by you;

- any third party products, including those that Lenovo may procure and provide with or integrate into the Lenovo product at your request; and
- any technical or other support, such as assistance with "how-to" questions and those regarding product set-up and installation.

This warranty is voided by removal or alteration of identification labels on the product or its parts.

Limitation of Liability

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

Neither Lenovo nor your Service Provider is responsible for any of your data including confidential, proprietary, or personal data contained in a product. You should remove and/or backup all such information from the product prior to its service or return.

Circumstances may arise where, because of a default on Lenovo's part or other liability, you may be 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 and to the extent that liability cannot be waived or limited by applicable laws, Lenovo is liable for no more than the amount of actual direct damages suffered by you, up to the amount you paid for the product. This limit does not apply to damages for bodily injury (including death) and damage to real property and tangible personal property for which Lenovo is required by law to be liable.

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; 2) LOSS OF, OR DAMAGE TO, YOUR DATA; OR 3) SPECIAL, INCIDENTAL, OR INDIRECT DAMAGES OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES, INCLUDING 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.

Dispute Resolution

If you acquired the product in **Cambodia, Indonesia, Philippines, Vietnam or Sri Lanka**, disputes arising out of or in connection with this warranty shall be finally settled by arbitration held in Singapore and this warranty shall be governed, construed and enforced in accordance with the laws of Singapore, without regard to conflict of laws. If you acquired the product in **India**, disputes arising out of or in connection with this warranty shall be finally settled by arbitration held in Bangalore, India. Arbitration in Singapore shall be held in accordance with the Arbitration Rules of Singapore International Arbitration Center ("SIAC Rules") then in effect. Arbitration in India shall be held 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. All arbitration proceedings shall be conducted, including all documents presented in such proceedings, in the English language, and the English language version of this warranty prevails over any other language version in such proceedings.

Other Rights

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS AND YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE OR JURISDISCTION TO JURISDICTION. YOU ALSO MAY HAVE OTHER RIGHTS UNDER APPLICABLE LAW OR WRITTEN AGREEMENT WITH LENOVO. NOTHING IN THIS WARRANTY AFFECTS STATUTORY RIGHTS, INCLUDING RIGHTS OF CONSUMERS UNDER NATIONAL LEGISLATION GOVERNING THE SALE OF CONSUMER GOODS THAT CANNOT BE WAIVED OR LIMITED BY CONTRACT.

<u>European Economic Area (EEA)</u>

Customers in the EEA may contact Lenovo at the following address: Lenovo Warranty & Service Quality Dept., PO Box 19547, Inverkip Road, Greenock, Scotland PA16 9WX. Service under this warranty for Lenovo hardware products purchased in EEA countries may be obtained in any EEA country in which the product has been announced and made available by Lenovo.

This Lenovo Limited Warranty is available in other languages at www.lenovo.com/warranty.

Warranty information

Product or Machine Type	Country or Region of Purchase	Warranty Period	Type of Warranty Service
ThinkPad DVD Ultrabay Slim Burner	Worldwide	1 year	1, 4

If required, your Service Provider will provide repair or exchange service depending on the type of warranty service specified for your product and the available service. Scheduling of service will depend upon the time of your call, parts availability, and other factors.

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 (or a longer period as required by law).

<u>Types of Warranty Service</u>

1. Customer Replaceable Unit (″CRU″) Service

Under CRU Service, your Service Provider will ship CRUs to you for you to install. Most CRUs are easy to install whereas others may require some technical skill and tools. CRU information and replacement instructions are shipped with your product and are available from Lenovo at any time upon request. You may request that a Service Provider install some CRUs under one of the other types of warranty service designated for your product. Installation of external CRUs (such as mice, keyboards, or monitors) is your responsibility. Lenovo specifies in the materials shipped with a replacement CRU whether the defective CRU must be returned. When return is required, 1) return instructions, a prepaid return shipping label, and a container are included with the replacement CRU, and 2) you may be charged for the replacement CRU if your Service Provider does not receive the defective CRU within thirty (30) days of your receipt of the replacement.

2. On-site Service

Under On-Site Service, your Service Provider will either repair or exchange the product at your location. You must provide a suitable working area to allow disassembly and reassembly of the Lenovo product. For some products, certain repairs may require your Service Provider to send the product to a designated service center.

3. Courier or Depot Service

Under Courier or Depot Service, your product will be repaired or exchanged at a designated service center, with shipping arranged by your Service Provider. You are responsible for disconnecting the product. A shipping container will be provided to you for you to return your product to a designated service center. A courier will pick up your product and deliver it to the designated service center. Following its repair or exchange, the service center will arrange the return delivery of the product to you.

4. Customer Carry-In or Mail-In Service

Under Customer Carry-In or Mail-In Service, your product will be repaired or exchanged at a designated service center, with delivery or shipping arranged by you. You are responsible to deliver or mail, as your Service Provider specifies, (prepaid unless specified otherwise) the product suitably packaged to a designated location. After the product has been repaired or exchanged, it will be made available for your collection. Failure to collect the product may result in your Service Provider disposing of the product as it sees fit. For Mail-in Service, the product will be returned to you at Lenovo's expense, unless your Service Provider specifies otherwise.

Guarantee supplement for Mexico

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

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

Recycling information

Lenovo encourages owners of information technology (IT) equipment to responsibly recycle their equipment when it is no longer needed. Lenovo offers a variety of programs and services to assist equipment owners in recycling their IT products. Information on product recycling offerings can be found on Lenovo's Internet site at http://www.pc.ibm.com/ww/lenovo/about/environment/.

環境配慮に関して

本機器またはモニターの回収リサイクルについて

企業のお客様が、本機器が使用済みとなり廃棄される場合は、資源有効
利用促進法の規定により、産業廃棄物として、地域を管轄する県知事あ
るいは、政令市長の許可を持った産業廃棄物処理業者に適正処理を委託
する必要があります。また、弊社では資源有効利用促進法に基づき使用
済みパソコンの回収および再利用・再資源化を行う「PC 回収リサイク
ル・サービス」を提供しています。詳細は、
http://www.ibm.com/jp/pc/service/recycle/pcrecycle/ をご参照ください。

また、同法により、家庭で使用済みとなったパソコンのメーカー等に
よる回収再資源化が 2003 年 10 月 1 日よりスタートしました。詳細は、
http://www.ibm.com/jp/pc/service/recycle/pcrecycle/ をご参照ください。

重金属を含む内部部品の廃棄処理について

本機器のプリント基板等には微量の重金属（鉛など）が使用されてい
ます。使用後は適切な処理を行うため、上記「本機器またはモニターの
回収リサイクルについて」に従って廃棄してください。

Trademarks

The following terms are trademarks of Lenovo in the United States, other countries, or both:
    Lenovo
    ThinkPad
    Ultrabay

IBM is a trademark of International Business Machines Corporation in the United States, other countries, or both and is used under license.

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

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

Appendix G. Electronic emission notices

The following information refers to the ThinkPad DVD Ultrabay Slim Burner.

Federal Communications Commission (FCC) Declaration of Conformity

ThinkPad DVD Ultrabay Slim Burner - (41N5643)

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
1009 Think Place - Building One
Morrisville, NC 27650
Phone Number: 919-294-5900

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 ElektromagnetischenVerträglichkeit 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 legislatura de los Estados Miembros sobre compatibilidad electromagnética se refiere.

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

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

Unione Europea - Directiva EMC (Conformidad électromagnética)

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

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

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

Korea Class B Compliance

이 기기는 가정용으로 전자파 적합등록을 한 기기로서

주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.

Japan VCCI Class B Compliance

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

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

高調波電流規格　JIS C 61000-3-2 適合品

Lenovo product service information for Taiwan

台 灣　Lenovo　產 品 服 務 資 訊 如 下 :
荷蘭商思惟個人電腦產品股份有限公司台灣分公司
台北市信義區信義路五段七號十九樓之一
服務電話: 0800-000-700

Appendix H. China ROHS

Lenovo 电脑选件	有毒有害物质或元素						China ROHS 标识
	铅 （Pb）	汞 （Hg）	镉 （Cd）	六价铬 （Cr(VI)）	多溴联苯 （PBB）	多溴二苯醚 （PBDE ）	
光驱	X	O	O	O	O	O	
O：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/ T 11363 -2006 标准规定的限量要求以下。 X：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/ T 11363- 2006 标准规定的限量要求。 对于销往欧盟的产品，标有"X"的项目均符合欧盟指令 2002 /95/EC 豁免条款。 在中华人民共和国境内销售的电子信息产品上将 印有"环保使用期" (E PuP) 符号。圆圈中的数字代 表产品的正常环保使用年限。							

ThinkPad.

Part Number: 41N5647

Printed in USA