



# IBM USB 2.0 CD-RW/DVD-ROM Combo Drive

## User's Guide





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**Note**

Before using this information and the product it supports, read Apêndice B, "Service and Support", Apêndice C, "IBM Statement of Limited Warranty - Z125-4753-07 - 11/2002", and Apêndice D, "Notices".

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## Safety

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 sikkerhetsinformasjonene (Safety Information) før du installerer dette produktet.

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

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

Перед установкой продукта прочтите инструкции по технике безопасности.

Pred inštaláciou tohto zariadenia si prečítajte Bezpečnostné predpisy.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Antes de instalar este producto lea la información de seguridad.

Läs säkerhetsinformationen innan du installerar den här produkten.

安裝本產品之前，請先閱讀「安全資訊」。



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## General safety guidelines

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

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### Service

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

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

---

### Power cords and power adapters

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

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

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

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

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

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

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

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## 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.

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## 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

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## Batteries

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

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

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

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

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

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## 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.

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## CD and DVD drive safety

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

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



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## About this book

This manual contains instructions for installing the IBM USB 2.0 CD-RW/DVD-ROM Combo Drive hardware for the three power mode configurations that the Combo Drive supports.

This manual provides installation instructions in the following languages:

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

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## Registering your option

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

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

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



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## Capítulo 1. Instalação Rápida do Combo Drive

Este capítulo contém instruções para a instalação do IBM USB 2.0 CD-RW/DVD-ROM Combo Drive.

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### Descrição do Produto

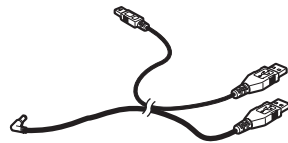
O IBM USB 2.0 CD-RW/DVD-ROM Combo Drive é uma unidade gravável alongada de DVD-ROM e CD que é conectada de forma rápida e conveniente ao seu computador IBM ThinkPad computer através de uma única conexão. A unidade é um dispositivo USB 2.0 e requer conexão com uma porta USB 2.0. Pode ser obtida uma velocidade de gravação máxima de 24x (mídia CD-R/CD-RW) e velocidades máximas de leitura de 8x (mídia de DVD) e 24x (mídia de CD).

Além deste manual, o pacote de opcionais inclui:

- IBM USB 2.0 CD-RW/DVD-ROM Combo Drive



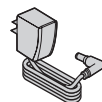
- Cabo USB padrão e conjunto de cabo de alimentação (utilizados para configuração 1 na página 1-3 e configuração 3 na página 1-5); Número de peça IBM 22P9216



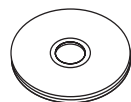
- Conjunto de cabo IBM powered USB 2.0 (utilizado para configuração 2 na página 1-4); Número de peça IBM 22P9217



- Adaptador de alimentação de energia



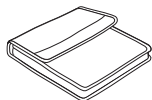
- *IBM USB 2.0 CD-RW/DVD-ROM Combo Drive Software and Guide Super CD*



- Manuais de informações sobre segurança (dois)



- Maleta para transporte



Entre em contato com o fornecedor se algum item estiver faltando ou com defeito. Certifique-se de guardar o comprovante de compra e o material de embalagem. Eles podem ser necessários para a solicitação do serviço de garantia.

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## Requisitos de Hardware e de Software

Você deve ter o seguinte hardware instalado no seu computador ThinkPad para utilizar este opcional:

- Uma porta USB 2.0 disponível

**Nota:** Uma porta USB 2.0 adicional poderá ser necessária para a configuração 3 na página 1-5.

Seu computador deve ter um dos seguintes sistemas operacionais instalados para utilizar este opcional:

- Microsoft Windows XP
- Microsoft Windows 2000 Professional (Service Pack 4 ou posterior)

**Nota:** A unidade não funcionará corretamente se o Service Pack 4 ou posterior não estiver instalado.

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## Configurações do Modo de Alimentação

Esta seção fornece instruções de instalação para as seguintes configurações:

- Configuração 1: alimentação própria (AC adapter)
- Configuração 2: alimentação por USB auxiliar
- Configuração 3: alimentação por barramento USB padrão



## Configuração 1: Configuração de Alimentação Própria (AC Adapter)

Geralmente, o Combo Drive é utilizado com configuração de alimentação própria (AC adapter).

### Requisitos

- Cabo USB padrão e conjunto do cabo de alimentação (que acompanha este opcional); Número de peça IBM 22P9216
- AC adapter (enviado com este opcional)

### Especificações

Leitura e gravação de mídia CD e apenas leitura de mídia DVD são suportados.

### Conectando o Combo Drive Utilizando a Configuração 1

Para conectar o Combo Drive ao sistema, execute o procedimento a seguir. Consulte a Figura 1-1 durante a instalação.

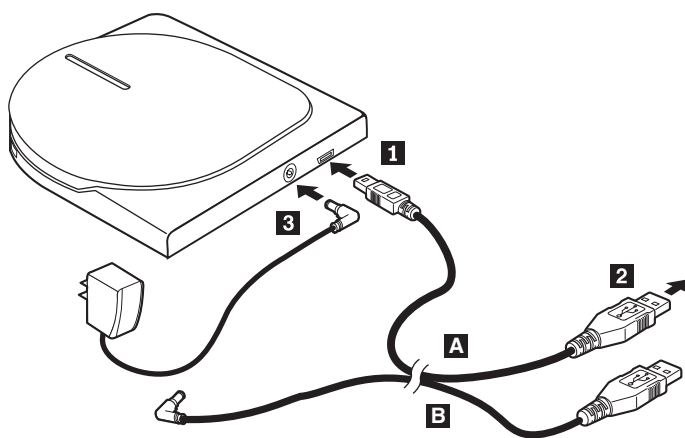


Figura 1-1. Configuração 1: Configuração de Alimentação Própria (AC Adapter)

1. Ligue o computador.
2. Utilizando o cabo USB **A**, insira o plugue do cabo **1** no conector USB da unidade.
3. Ligue o conector USB padrão **2** na porta USB do computador.
4. Conecte o AC adapter ao conector DC IN **3** no Combo Drive.

**Nota:** O cabo USB **B** não é necessário para essa configuração.

## Configuração 2: Configuração de Alimentação por USB Auxiliar

A configuração de alimentação por barramento USB auxiliar pode ser utilizada em computadores IBM ThinkPad exclusivos equipados com a porta USB 2.0 carregada pela IBM.

### Requisitos

- Conjunto de cabo IBM powered USB 2.0 (que acompanha este opcional);  
Número de peça IBM 22P9217
- Porta USB 2.0 carregada pela IBM

### Especificações

Leitura/gravação de mídia CD e apenas leitura de DVD são suportados.

### Conectando o Combo Drive Utilizando a Configuração 2

Para conectar o Combo Drive ao sistema, execute o procedimento a seguir. Consulte a Figura 1-2 durante a instalação.

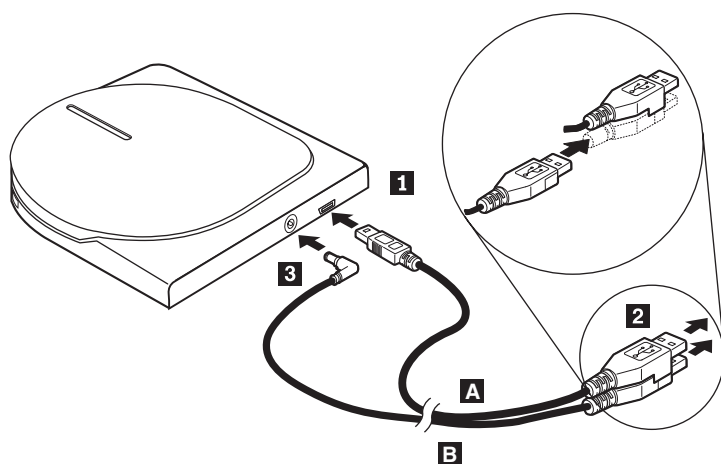


Figura 1-2. Configuração 2: Configuração de Alimentação por USB Auxiliar

1. Ligue o computador.
2. Utilizando o cabo USB **A**, insira o plugue do cabo **1** no conector USB da unidade.
3. Deslize os dois conectores **2** juntos e insira o USB empilhado e o conector de alimentação de energia auxiliar na porta USB 2.0 carregada do computador (localizada em computadores IBM ThinkPad equipados com a porta IBM powered USB 2.0).
4. Conecte a outra extremidade do cabo **B** à unidade, inserindo o plugue **3** no conector DC IN connector no Combo Drive.

## Configuração 3: Configuração de Alimentação por Barramento USB Padrão

O Combo Drive fornece um desempenho melhor com alimentação própria (configuração 1) ou alimentação auxiliar (configuração 2), no entanto, a unidade suportará todas as funções no modo de alimentação por barramento USB padrão (leitura/gravação de mídia CD-r/CD-RW e apenas leitura de mídia DVD).

**Nota:** A função leitura/gravação nesta configuração não faz parte das especificações de alimentação por USB padrão.

### Requisitos

- Cabo USB padrão e conjunto de cabo de alimentação (que acompanha este opcional); Número de peça IBM 22P9216
- Duas portas USB livres disponíveis no sistema

### Especificações

Leitura/gravação de CD e apenas leitura de mídia DVD são suportados.

### Conectando o Combo Drive Utilizando a Configuração 3

Para conectar o Combo Drive ao sistema, execute o procedimento a seguir. Consulte a Figura 1-3 durante a instalação.

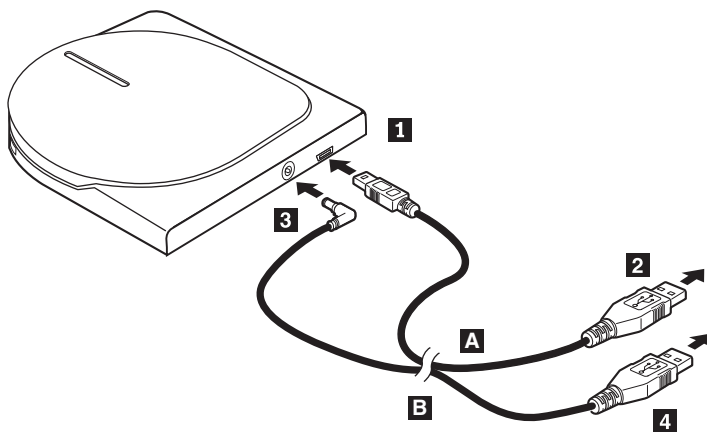


Figura 1-3. Configuração 3: Configuração de Alimentação por Barramento USB Padrão

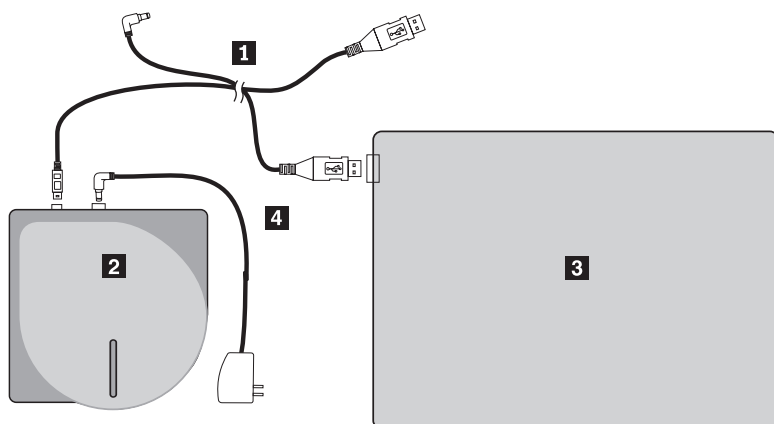
1. Ligue o computador.
2. Utilizando o cabo USB **A**, insira o plugue do cabo **1** no conector USB da unidade.
3. Ligue o conector USB padrão **2** na porta USB do computador.
4. Utilizando o cabo USB **B**, insira o plugue do cabo **3** no conector DC da unidade.
5. Ligue o conector USB padrão **4** na porta USB do computador.



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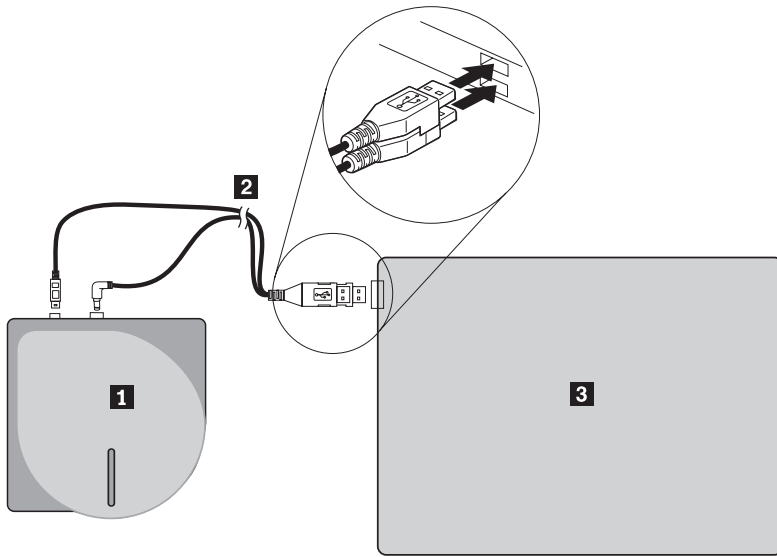
## Capítulo 2. Cabeando o Combo Drive ao Computador ThinkPad

Os diagramas a seguir podem ser úteis durante o cabeamento do Combo Drive ao computador ThinkPad. Observe que estes diagramas podem ser um pouco diferentes de seu hardware.



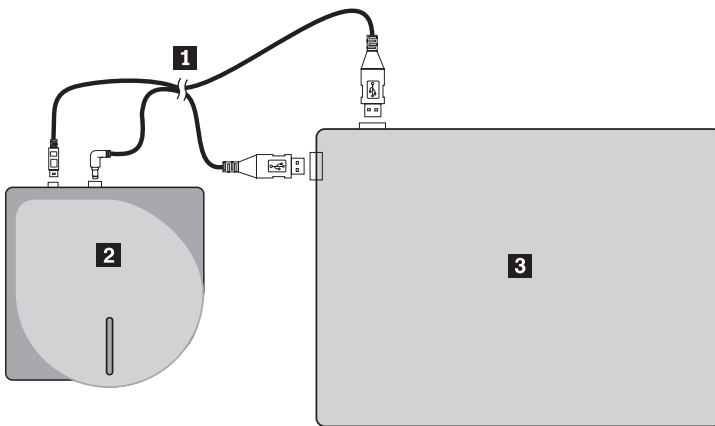
- 1** Cabo USB e montagem dos cabos de alimentação
- 2** Combo Drive
- 3** Computador ThinkPad
- 4** Adaptador de alimentação de energia

Figura 2-1. Sistemas IBM Exclusivos com Energia AC



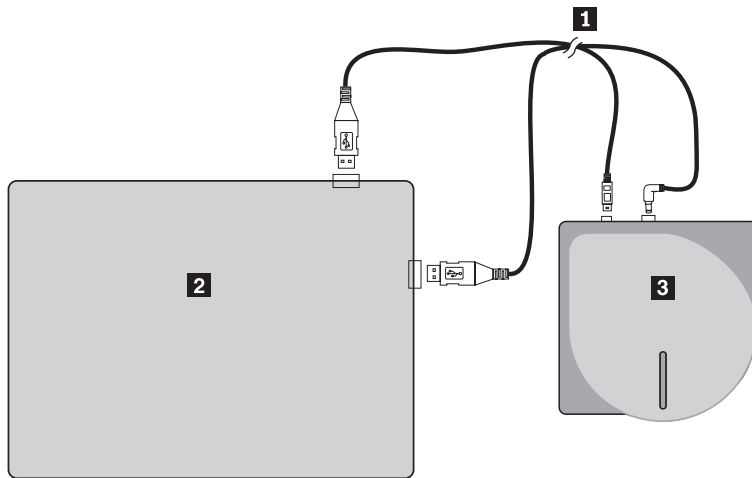
- 1** Combo Drive
- 2** Montagem dos cabos IBM powered USB 2.0
- 3** Computador ThinkPad

Figura 2-2. Sistemas IBM Exclusivos com Porta Carregada por USB Auxiliar



- 1** Cabo USB e montagem dos cabos de alimentação
- 2** Combo Drive
- 3** Computador ThinkPad

Figura 2-3. Montagem dos Cabos USB Padrão (Lado Esquerdo)



- 1** Cabo USB e montagem dos cabos de alimentação
- 2** Computador ThinkPad
- 3** Combo Drive

*Figura 2-4. Montagem dos Cabos USB Padrão (Lado Direito)*





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## Capítulo 3. Recursos

A seguinte lista contém os recursos do IBM USB 2.0 CD-RW/DVD-ROM Combo Drive:

- **Conexão fácil**

Como esse produto incorpora a interface de acordo com o USB 2.0 de alta velocidade, ele pode ser conectado ou desconectado do computador facilmente mesmo quando a energia do computador está ligada. IBM Docks e Port Replicators com energia AC são suportados. A configuração 1 deve ser utilizada ao utilizar IBM Docks ou Port Replicators.

- **Conformidade com mídia fabricada pela maioria dos fabricantes de mídia**

Esse produto ajusta-se bem a quase toda a mídia de CD e DVD fabricada pela maioria de fabricantes de mídia e a mídia gravada por ele realiza uma gravação de altíssima qualidade. Portanto, essa unidade pode ser utilizada sem maiores preocupações com problemas de compatibilidade.

- **Incorporação da função de prevenção de subexecução de buffer**

Este produto incorpora a função de prevenção de subexecução de buffer que ajuda a evitar erros de subexecução de buffer que causam falha na gravação em CD.

- **Carregamento de alta velocidade**

Esse produto possui um mecanismo de carregamento de alta velocidade que permite carregar e ejetar um disco com facilidade. A tampa superior pode ser aberta manualmente ou utilizando software que funciona com o computador.

- **Conformidade com vários padrões**

Esta unidade obedece as especificações padrão de mercado para a mídia CD-RW e CD-R. Está em conformidade com as especificações de DVD+RW, DVD+R, DVD-RAM, DVD-RW e DVD-R (somente leitura).

- **Configurações de alimentação**

Essa unidade funciona com as seguintes configurações de alimentação:

- **Configuração 1: alimentação própria com AC adapter (operação completa)**

Quando conectada à energia AC (utilize o adaptador enviado com a unidade)

- **Configuração 2: alimentação USB padrão (operação completa)**

Quando conectada a uma porta USB 2.0 carregada em sistemas IBM exclusivos. Utilize a montagem dos cabos com o conector empilhado USB especial incluído no opcional.

- **Configuração 3: alimentação por barramento USB padrão (operação completa)**

Quando conectada a duas portas USB padrão (utilize a montagem dos cabos com dois conectores USB padrão)

Este manual do usuário no CD incluído com esse opcional descreve como configurar o Combo Drive, como conectá-lo a um computador pessoal e como operá-lo. Leia também o manual de instruções do computador.

O Cd também incluir aplicativos de software para serem utilizados com o Combo Drive. Eles serão instalados automaticamente clicando neles.

Leia cuidadosamente esse manual de instruções antes do uso para que o Combo Drive seja tratado e operado adequadamente.

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## Capítulo 4. Preparando para Utilizar o Combo Drive

Antes de utilizar o Combo Drive, siga o procedimento a seguir:

1. Certifique-se de que o Combo Drive esteja conectado adequadamente ao computador ThinkPad.
2. Verifique as localizações das funções no Combo Drive (consulte as figuras a seguir).
3. Insira o *IBM USB 2.0 CD-RW/DVD-ROM Combo Drive Software and User's Guide Super CD* que foi enviado com este opcional para instalar o software de gravação do CD-R/CD-RW ou o software de leitura de DVD.
4. Dê um clique duplo no aplicativo que você deseja e siga as instruções da tela.
5. Verifique se a unidade opera normalmente e guarde a garantia fornecida em um local seguro depois de preenchê-lo.

Verifique se não há nada sobre a tampa superior ao ejetar um CD ou DVD. Quando a ejeção normal não é possível, aparece uma mensagem de erro no computador. Se ela não for executada normalmente, abra a tampa superior manualmente e feche-a firmemente depois de remover o que estiver sobre ela.

A seguir, as localizações das funções no Combo Drive:

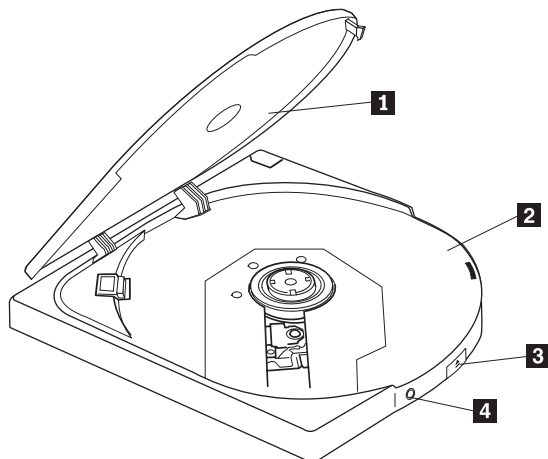


Figura 4-1. Vista Frontal do Combo Drive

- 1 Tampa superior
- 2 Bandeja de disco

A tampa superior deve ser fechada para reproduzir um disco. Coloque a mídia com o rótulo voltado para cima na bandeja de disco.

### 3 Botão de ejeção

Pressione esse botão para abrir a tampa superior.

**Atenção:** Um mecanismo de trava elétrica é utilizado nessa unidade para que uma operação errada não abra a tampa superior durante a gravação. Certifique-se de que a energia esteja ligada e que a unidade não esteja em operação de gravação antes de pressionar o botão de ejeção para abrir a tampa superior.

Se a tampa superior não puder ser aberta mesmo quando o botão de ejeção for pressionado ou se a tampa superior precisar ser aberta quando não houver fornecimento de energia a partir do AC adapter, utilize a alavanca de ejeção de emergência na parte inferior da unidade.

Verifique se não há nada sobre a tampa superior ao ejetar. Quando a ejeção normal não é possível, aparece uma mensagem de erro no computador. Se ela não for executada normalmente, abra a tampa superior manualmente e feche-a firmemente depois de remover o que estiver sobre ela.

### 4 Indicador de Energia/Ocupado

O LED verde indica o status de alimentação e os estados de operação da unidade.

- **o LED está aceso:** durante a leitura ou busca de dados
- **o LED pisca lentamente:** durante a gravação de dados
- **o LED pisca rapidamente:** durante o reconhecimento do disco
- **o LED está desligado:** quando a unidade não está sendo acessada (mesmo que esteja conectada ao sistema)

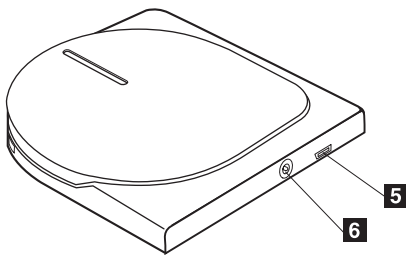


Figura 4-2. Vista Posterior do Combo Drive

5 Conector USB

6 Conector DC IN

Insira o plugue do cabo USB dedicado fornecido.

Conecte os conectores DC IN do AC adapter ou montagem dos cabos fornecidos. Essa unidade também pode ser utilizada apenas com alimentação por USB com determinados limites (consulte “Configuração 3: Configuração de Alimentação por Barramento USB Padrão” na página 1-5.)

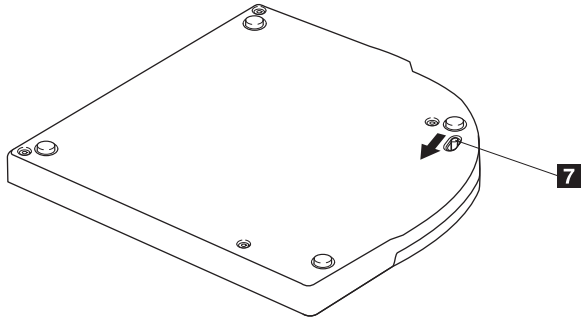


Figura 4-3. Vista Inferior do Combo Drive

**7** Alavanca de ejeção de emergência

Ao ejetar a mídia com a energia desligada, deslize a alavanca de ejeção de emergência para abrir a tampa superior.

**Atenção:** Certifique-se de que a energia esteja desligada ao utilizar a alavanca de ejeção de emergência. Utilize o botão de ejeção em vez da alavanca de ejeção de emergência, exceto em uma emergência.



---

## Capítulo 5. Instalação e Remoção do Hardware Combo Drive no Windows 2000 e Windows XP

Os sistemas operacionais Windows 2000 e Windows XP possuem os drivers originais para o Combo Drive. Portanto, quando essa unidade for conectada, o Windows instalará automaticamente o driver apropriado e a unidade estará pronta para ser utilizada. Não é necessário executar procedimentos especiais de instalação ou remoção.

**Atenção:**

- Esta unidade será reconhecida como "IBM CD-RW/DVD-ROM" pelo Gerenciador de Dispositivos do Windows.
- Nos sistemas operacionais Windows 2000, o Service Pack 4 ou posterior *deverá* ser instalado.

---

### Removendo o Hardware Combo Drive

A "Conexão automática" é suportada para a conexão entre o cabo USB e o computador; portanto, não será necessário desligar o computador ao remover o Combo Drive. Siga o procedimento a seguir para remover o Combo Drive do Windows 2000 e Windows XP.

**Atenção:**

Não remova e reconecte a unidade ao computador em sucessão rápida. A unidade pode não ser reconhecida. Reconecte-a aproximadamente 20 segundos após a remoção.

Utilize o ícone Bandeja para esse procedimento.

### Windows 2000

1. Saia do programa que utiliza a unidade.
2. Confirme se o indicador de gravação da unidade está desligado.
3. Clique no ícone **Remove** na bandeja.



4. Selecione a unidade de remoção. Nesse caso, selecione o nome da unidade atribuído à unidade (D: nesta figura).



5. A janela de confirmação Safe to Remove Hardware aparece. Clique no botão OK.



6. Remova o plugue do cabo USB do terminal USB do computador.

**Nota:** A mensagem indicada anteriormente pode ser diferente dependendo das versões do sistema operacional. Consulte o manual de instrução do computador ou do sistema operacional para obter detalhes.

## Windows XP

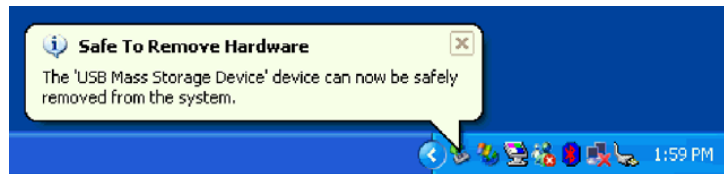
1. Saia do programa que utiliza a unidade.
2. Confirme se o indicador de gravação da unidade está desligado.
3. Clique no ícone **Remove** na bandeja.



4. Selecione a unidade de remoção. Nesse caso, selecione o nome da unidade atribuído à unidade (D: nesta figura).



5. A janela de confirmação Safe to Remove Hardware aparece. Clique no botão OK.



6. Remova o plugue do cabo USB do terminal USB do computador.

**Nota:** A mensagem indicada anteriormente pode ser diferente dependendo das versões do sistema operacional. Consulte o manual de instrução do computador ou do sistema operacional para obter detalhes.

---

## Colocando a Mídia

1. Pressione o botão de ejeção da unidade para abrir a tampa superior.
2. Coloque a mídia na bandeja com o rótulo voltado para cima. Alinhe o orifício central do disco com o grampo no centro da bandeja e ajuste o disco firmemente pressionando a parte externa do orifício central.
3. Feche a tampa superior com cuidado e pressione-a para baixo até que esteja completamente travada.
4. Quando a tampa superior estiver fechada corretamente, a mídia será reconhecida e tornar-se-á utilizável depois que o indicador de ocupado piscar durante alguns segundos.

---

## Ejetando a Mídia

1. Pressione o botão de ejeção da unidade para abrir automaticamente a tampa superior.
2. Levante a borda do disco cuidadosamente da bandeja enquanto pressiona a seção superior do grampo.
3. Feche a tampa superior com cuidado até que esteja completamente fechada. Verifique se a tampa está firmemente travada.



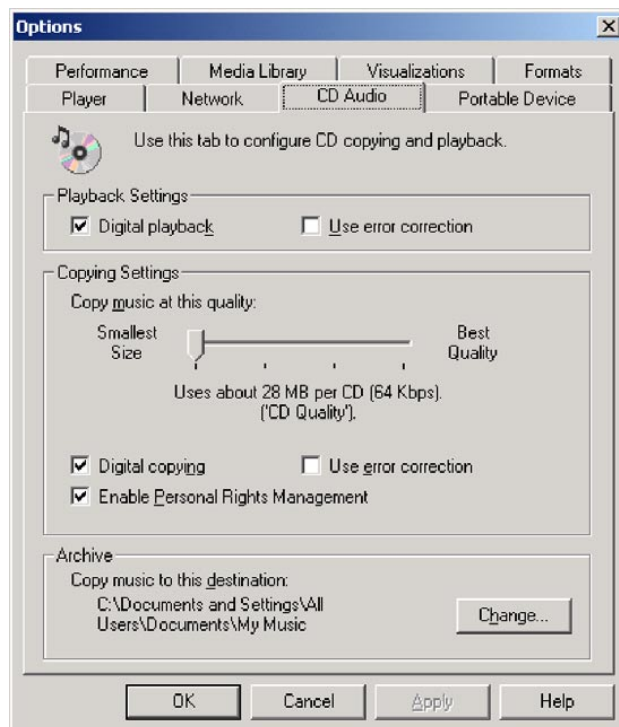
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## Reproduzindo o CD de Áudio

Utilize o Windows Media Player ou o software de reprodução de CD de áudio, como o Microsoft CD Player, para reproduzir o CD de áudio utilizando a unidade. O método de operação é diferente dependendo do software e das versões. Consulte o manual de operação do computador ou do software para obter detalhes.

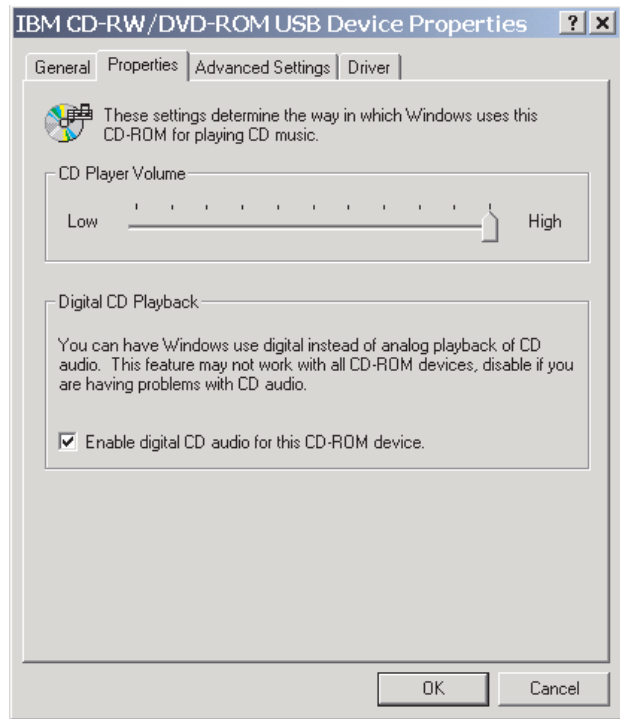
### Windows 2000

No Windows Media Player, você localizará a caixa de opções Digital Playback quando clicar na guia CD Audio na janela Options, conforme mostrado na figura a seguir.



Além disso, você encontrará a caixa de opções Enable Digital Music CD com este Combo Drive na propriedade Combo Drive no Gerenciador de Dispositivos, como mostrado na figura a seguir. Quando não houver item de definição para a

reprodução digital no software do player, tente a definição anterior.

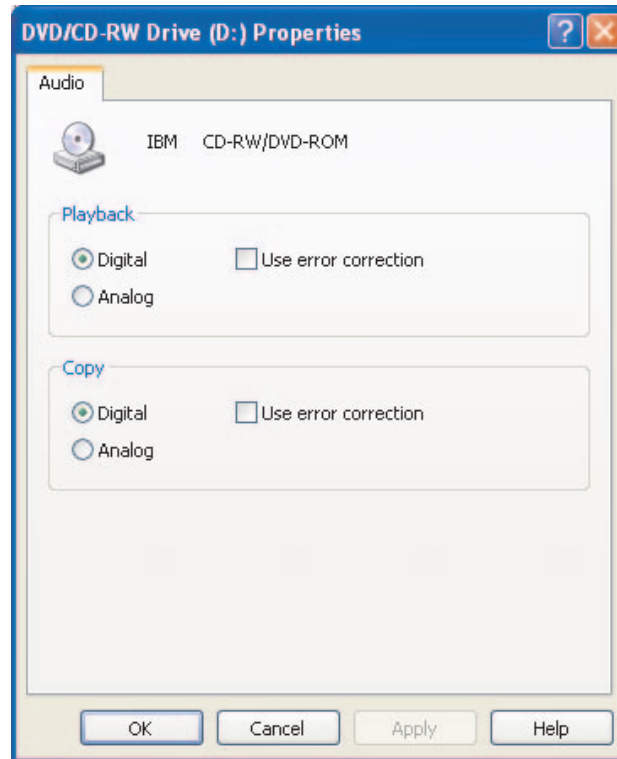


**Nota:** As janelas indicadas anteriormente podem ser diferentes dependendo das versões do sistema operacional. Consulte o manual de instrução do computador ou do sistema operacional para obter detalhes.

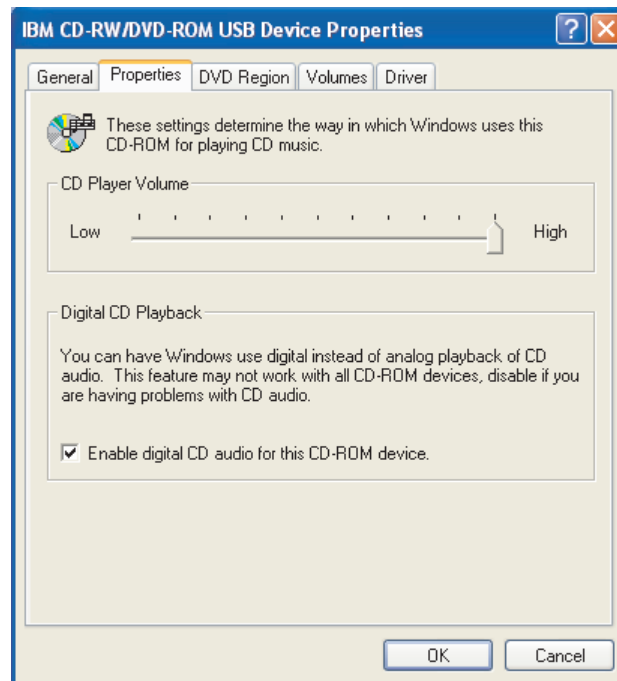
## Windows XP

No Windows Media Player, você localizará a caixa de opções Digital Playback quando clicar na guia CD Audio na janela Properties, conforme mostrado na figura

a seguir.



Além disso, você encontrará a caixa de opções Enable Digital Music CD com este Combo Drive na propriedade Combo Drive no Gerenciador de Dispositivos, como mostrado na figura a seguir. Quando não houver item de definição para a reprodução digital no software do player, tente a definição anterior.



**Nota:** As janelas indicadas anteriormente podem ser diferentes dependendo das versões do sistema operacional. Consulte o manual de instrução do computador ou do sistema operacional para obter detalhes.

---

## Capítulo 6. Software do Aplicativo

O *IBM USB 2.0 CD-RW/DVD-ROM Combo Drive Software and User's Guide Super CD* contém os softwares a seguir:

- **IBM DLA (Drive Letter Access)**

Este software permite gravar diretamente para a mídia CD-RW utilizando apenas a letra da unidade, como se estivesse gravando em um disquete. Todos os tipos de formato de disco podem ser formatados pelo DLA. Com o DLA, é possível arrastar e soltar os arquivos, criar novos diretórios ou salvar arquivos de qualquer aplicativo diretamente no Combo Drive.

- **Leitora de UDF**

Esse software permite a instalação de software para leitura de mídia de DVD-RAM, DVD-RW e CD-RW em computadores com unidades de DVD. Ele também permite que você leia discos criados em DLA em sistemas sem o DLA instalado.

- **IBM RecordNow**

O IBM RecordNow é um software de masterização de disco que permite que você crie sua própria música ou discos de dados a partir de arquivos do seu computador ou de outro disco de mídia, como CDs ou DVDs. Os discos de música criados com o IBM RecordNow tocarão em qualquer aparelho de CD, de casa, do carro ou do computador. O IBM RecordNow também facilita a criação de discos de dados que podem ser lidos em qualquer leitora apropriada de CD ou DVD.

**Nota:** Alguns aparelhos de DVD não conseguem ler mídia CD-R. Consulte a documentação que acompanha sua unidade para obter informações sobre o tipo de mídia suportada.

O IBM RecordNow guia você, etapa por etapa, por todo o processo de gravação com Assistentes simples e uma intuitiva interface com o usuário.

Utilizando o IBM RecordNow você pode criar:

- Cópias exatas de discos existentes - O recurso Exact Copy faz uma duplicata do disco mestre, transferindo o layout do disco original para o CD-R ou CD-RW.
- Discos de dados arquivados na sua unidade de disco rígido – O recurso Make a Data Disc é utilizado para armazenar dados eletrônicos, tais como arquivos e aplicativos que residem na unidade de disco rígido do seu computador. Diferentes dos discos de música, os discos de dados são utilizados para armazenar arquivos que são legíveis somente em um computador e não podem ser reproduzidos no som de sua casa ou do carro — mesmo que o disco tenha arquivos de áudio.
- Compilações musicais de arquivos WAV, MP3 ou WMA ou a partir de discos de música existentes – O recurso Make a Music Disc cria discos de música personalizados a partir de arquivos da sua unidade de disco rígido ou de discos de música existentes. O recurso CD music database pode marcar automaticamente seus arquivos com informações de monitoramento para ajudá-lo a organizar sua coleção.

**Nota:** Consulte a Ajuda On-Line do IBM RecordNow para obter informações adicionais sobre Como Fazer uma Cópia Exata, Criar um Disco de Dados ou Criar um Disco de Áudio com o IBM RecordNow.

Para iniciar o RecordNow, conclua o seguinte procedimento:

1. Clique em **Iniciar**.
2. Clique em **Programas**.
3. Clique em **IBM RecordNow**.
4. Clique em **RecordNow** para a abrir a janela do software de gravação principal.

- **Intervideo WinDVD**

Esse software permite reproduzir vídeos em DVD no computador ou reproduzir arquivos de vídeo a partir da unidade de disco rígido.

**Nota:** Algumas placas de vídeo, como FIREGL e Intergraph e 3dLabs, não suportam a reprodução de vídeo em DVD.

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## Capítulo 7. Utilizando o Combo Drive

Esta seção fornece informações sobre como identificar, carregar e cuidar dos DVDs e CDs, e como cuidar do Combo Drive.

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### Antes de Começar

Para obter melhores resultados, releia as seguintes instruções antes de utilizar a unidade:

- Não mova o computador ThinkPad ao formatar ou gravar um disco porque isso pode causar erro de dados. Além disso, diminua a digitação durante a formatação ou gravação em um disco, pois isso também pode causar erros de dados.
- Mantenha o computador ThinkPad sobre uma superfície plana durante a gravação de um disco.
- Desative os protetores de tela. O uso de um protetor de tela pode interromper o processo de formatação e gravação.
- Não coloque o computador ThinkPad no modo de hibernação ou suspensão durante a gravação em um disco.

**Nota:** Os resultados de leitura e gravação da unidade dependem da qualidade e das características da mídia de DVD ou CD utilizada.

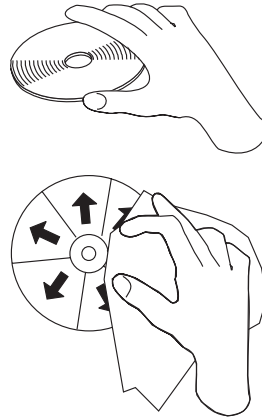
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### Manuseando e Cuidando de um Disco

Manuseie e limpe os discos com cuidado, especialmente tipos de mídia graváveis, como discos de CD-R e CD-RW, para que eles permaneçam legíveis. Você pode prolongar a vida útil dos discos tomando as seguintes precauções:

- Sempre guarde os discos em seus pacotes originais.
- Nunca exponha os discos à luz solar direta.
- Sempre mantenha os discos longe de fontes diretas de calor.
- Remova os discos do computador quando não estiverem em uso.
- Verifique se há danos nos discos ANTES de cada uso.  
**IMPORTANTE:** Não utilize discos com defeitos.
- Não force os discos no computador ou pacote.
- Não dobre ou entorte os discos flexíveis.
- Não utilize produtos de limpeza comerciais para limpar os discos.
- Não escreva na superfície dos discos.
- Segure os discos pelas bordas ou pelo orifício central.
- Não toque na superfície dos discos.
- Para remover poeira ou marcas de dedos, limpe os discos do centro para a borda com um pano macio e sem fiapos.

**Atenção:** Limpar um disco fazendo movimentos circulares pode causar perda de dados.



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## Cuidando do Combo Drive

Para proteger a unidade durante a operação, tome as seguintes precauções:

- Remova o disco da unidade antes de movê-la.
- Não insira objetos estranhos na unidade.
- Não empilhe objetos na unidade.
- Não remova a tampa da unidade ou tente fazer reparos.
- Não opere a unidade sob quaisquer uma das seguintes condições:
  - Temperatura alta, umidade alta ou luz direta do sol
  - Vibração excessiva, choque repentino ou superfície inclinada
  - Poeira excessiva

---

## Limpendo a Unidade

Limpe manchas da unidade com um pano macio. Se a mancha for persistente, utilize um pano umedecido com detergente neutro diluído depois de torcê-lo para retirar toda a água. O derramamento de líquido na unidade poderá causar um malfuncionamento grave, um choque elétrico ou incêndio. Ao limpar com líquido, certifique-se de remover o AC adapter fornecido da tomada depois de desconectar a unidade do computador.

Não aplique solventes como benzina ou thinner. Os produtos de limpeza químicos para uso doméstico ou industrial podem danificar o revestimento da unidade.

---

## Utilizando a Unidade

Esta seção contém informações sobre como utilizar o Combo Drive.

### Utilizando Mídia de DVD-RAM de Face Simples e Dupla Face

A mídia de DVD-RAM está disponível nas versões de face simples e dupla face.

As versões de 2,6 GB e 4,7 GB estão disponíveis em face simples. A versão de 9,4 GB está disponível em dupla face. Para acessar os dados nos dois lados da mídia, você deve remover a mídia da unidade, virá-la e inseri-la na unidade.



## Precauções de Manuseio

Tenha cuidado ao manusear o disco removido. Detritos, partículas de poeira, marcas de dedo, manchas ou riscos podem danificar a gravação e a reprodução da mídia. Para tirar o pó ou outros detritos, utilize um Kit de Limpeza de CD. Utilize um pano macio e seco para limpar o disco. Não utilize solventes para limpar a superfície do disco. Ao identificar um disco, escreva apenas no lado etiquetado ou no cartucho, utilizando um marcador de texto com ponta macia. Não exponha o disco à luz direta do sol, temperaturas altas e umidades. Não cole etiquetas em nenhum dos lados do disco.

---

## Utilizando a Unidade com CDs e DVDs

Complete o seguinte procedimento para ler um disco de dados:

1. Ligue o computador.
2. Pressione o botão de ejeção na parte superior da unidade.
3. Insira um disco na bandeja com o rótulo voltado para cima.
4. Feche a unidade fechando com cuidado a tampa superior.
5. Aguarde até que o indicador de ocupado da unidade pare de piscar e desligue.
6. Dê um clique duplo no ícone CD-ROM ou DVD-RAM/DVD-R/DVD-RW.

---

## Utilizando o Software DVD Player

Esta seção descreve como utilizar e personalizar o software DVD Player. Você pode localizar informações atuais sobre o software DVD Player no arquivo *Leia-me no IBM USB 2.0 CD-RW/DVD-ROM Combo Drive Software and User's Guide Super CD*.

---

## Utilizando a Função de DVD

Para utilizar a função de DVD, é necessário instalar o WinDVD (o programa de reprodução de filmes em DVD).

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## Ativando o DLA (Driver Letter Access)

O DLA (Drive Letter Access) é fornecido para que você possa gravar dados em mídia CD-RW. A mídia CD-RW pode ser gravada várias vezes.

Para formatar e gravar em mídia CD-RW:

1. Insira um disco na unidade.
2. Dê um clique duplo em **Meu Computador**. Clique com o botão direito do mouse na letra da unidade USB 2.0 Combo Drive.
3. Clique em **Formatar**. O tempo de formatação irá variar, dependendo do processo de formatação que você utilizar (rápida ou completa).
4. Após a conclusão da formatação, você pode arrastar e soltar arquivos para o ícone USB 2.0 Combo Drive ou pode mover arquivos no Windows Explorer.

Para utilizar a mídia CD-RW no formato UDF em outros computadores, uma leitora UDF foi incluída no *IBM USB 2.0 CD-RW/DVD-ROM Combo Drive Software and User's Guide Super CD*. Para utilizá-la, siga este procedimento:

1. Insira o *IBM USB 2.0 CD-RW/DVD-ROM Combo Drive Software and User's Guide Super CD* na unidade de CD ou DVD do computador que deseja utilizar os discos no formato UDF.
2. Clique em **Iniciar**.

3. Clique em **Executar**.
4. Digite `e:\UDF\language` em que *e* é a letra da unidade do USB 2.0 Combo Drive e idioma é o seu idioma.
5. Clique em **OK**.
6. Dê um clique duplo em **SETUP.EXE** e siga as instruções na tela.

**Nota:** A leitora UDF é necessária somente em sistemas que não possuem outro programa DLA para CD-RW instalado.

---

## Instalando o WinDVD e Exibindo um Filme em DVD

Para instalar o WinDVD, vá para a seção "Software" do *IBM USB 2.0 CD-RW/DVD-ROM Combo Drive Software and User's Guide Super CD*.

Após instalar o software do Combo Drive e WinDVD, você pode visualizar um filme em DVD. Mas primeiro você precisa definir o código de região do DVD de acordo com o conteúdo do DVD.

### Códigos de Região do DVD

Os códigos de região dos DVDs protegem seu conteúdo. O mundo é dividido em seis regiões e determinado conteúdo só pode ser exibido na região adequada. Por exemplo, o conteúdo da Região 1 só pode ser exibido nos EUA e Canadá. O WinDVD também é de região específica.

Verifique o código da região do conteúdo olhando no símbolo do código de região, na parte de trás da embalagem do conteúdo.

Código de região	Região
1	EUA e Canadá
2	Europa, Oriente Médio, África do Sul e Japão
3	Sudeste da Ásia, Taiwan, Coreia
4	América Latina, Austrália, Nova Zelândia
5	Antiga União Soviética, África do Norte, Índia
6	República Popular da China

Inicie o WinDVD inserindo o DVD na unidade. O código de região é automaticamente definido e você pode exibir o filme. Essa é a definição inicial.

Depois que o código de região tiver sido definido, se você inserir um DVD com um código de região diferente, a alteração será solicitada. O código de região da definição inicial pode ser alterado até quatro vezes.

Após o código ser alterado de sua definição inicial por quatro vezes, ele ficará fixo e não poderá mais ser alterado. Depois disso, você só poderá reproduzir o conteúdo do DVD nessa região.

Para exibir o status de código de região, clique no botão **WinDVD Properties** na interface com o usuário do WinDVD. A guia **General** contém essas informações.

Para alterar o código de região, proceda da seguinte maneira:

1. Ligue o computador e inicie o sistema operacional.

2. Clique em **Iniciar**.
3. Selecione **Programas**.
4. Clique em **Intervideo WinDVD**.
5. Clique no ícone **Propriedades** para abrir a janela **Propriedades**.
6. Clique na guia **Propriedades Gerais**.
7. Insira uma única região do DVD da nova região.
8. Selecione o código de região correto para seu país.
9. Clique em **OK**.

---

## Iniciando o WinDVD

Para iniciar o WinDVD, conclua o seguinte procedimento:

1. Clique em **Iniciar**.
2. Clique em **Programas**.
3. Clique em **InterVideo WinDVD**.
4. Clique em **InterVideo WinDVD** para abrir a janela de reprodução de filmes em DVD.

Para obter informações adicionais sobre como executar a reprodução de filmes em DVD, consulte as informações de ajuda do WinDVD no *IBM USB 2.0 CD-RW/DVD-ROM Combo Drive Software and User's Guide Super CD*. Se quiser assistir a um filme em DVD na televisão, consulte a informações on-line fornecidas com o computador.

### Notas:

1. O computador foi configurado para fornecer reprodução de áudio e vídeo da mais alta qualidade obtida com os recursos de sistema disponíveis. Você pode alterar as definições padrão alterando a definição de resolução de vídeo dentro do Painel de Controle. Alguns sistemas não possuem recursos suficientes para fornecer reprodução de áudio e vídeo com qualidade total em todas as definições de resolução. Se o desempenho da reprodução for de má qualidade, ajuste a resolução para uma definição mais baixa.
2. As correntes de áudio ou vídeo são decodificadas por software. Os subsistemas de áudio e vídeo precisam estar totalmente funcionais e ativados.

---

## Utilizando a Função de CD-R e CD-RW

O Combo Drive pode gravar nos discos CD-R e CD-RW. Os discos de CD-R não podem ser apagados, mas podem ser utilizados com unidades de CD-ROM padrão e CD players.

Você pode utilizar discos de CD-R para gravar trilhas de áudio, armazenar dados, arquivar arquivos e copiar arquivos de um outro CD.

Os discos de CD-RW podem ser apagados e regravados, mas podem ser utilizados apenas com unidades de DVD-ROM e de CD-ROM compatíveis com CD-RW e MR mais novas. Você pode utilizar discos de CD-RW para fazer backup, armazenar e atualizar arquivos ou copiar arquivos de um outro CD.

### Notas:

1. Os discos de CD-R são reproduzíveis em CD players de áudio. Os discos de CD-RW não são reproduzidos na maioria dos CD players de áudio.

2. O software que acompanha esta unidade **não** ativa as capacidades de gravação da unidade de CD com os sistemas operacionais DOS, Windows 3.x ou IBM OS/2®.

Para obter informações adicionais sobre como utilizar o software, consulte as informações de ajuda do IBM RecordNow e IBM DLA no *IBM USB 2.0 CD-RW/DVD-ROM Combo Drive Software and User's Guide Super CD*.

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## Utilizando a Função DVD+R, DVD+RW, DVD-R, DVD-RW e DVD-RAM (Somente Leitura)

O Combo Drive pode ler discos DVD+R, DVD+RW, DVD-R, DVD-RW e DVD-RAM.

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## Fazendo Backup de um CD

Para copiar um CD comercial, você deve possuir o copyright ou obter permissão do proprietário do copyright. Se você não possui os direitos autorais ou não obteve a permissão do proprietário dos direitos autorais, você pode estar violando a lei de direitos autorais e pode estar sujeito ao pagamento de danos ou outros reparos. Para obter informações adicionais sobre a lei de copyright, consulte um consultor legal.

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## Resolução de Problemas

Problemas no computador podem ser causados por erros no hardware, no software ou por erro do usuário. As informações nesta seção podem ser úteis para ajudá-lo a resolver problemas ou a reunir informações úteis que podem ser passadas a um técnico de serviço. Talvez seja necessário consultar também as publicações do computador, do sistema operacional e da placa de som.

Releia a lista a seguir para obter descrições dos problemas que podem ocorrer com você.

**Não é possível criar um disco de multissessão.**

Certifique-se de que haja espaço suficiente no disco para uma outra sessão. Gravar uma sessão requer espaço de entrada e de saída (aproximadamente 15 MB), além de dados que serão gravados.

**Não é possível gravar com êxito em um disco de CD-R ou CD-RW.**

Execute as seguintes ações:

1. Verifique se o processo não está sendo interrompido por um protetor de tela, por um programa de antivírus, de Internet ou de e-mail ou por outro software. Desative as funções que possam estar interrompendo a operação de gravação.
2. Verifique se o disco rígido foi desfragmentado.
3. Consulte o fabricante ou o fornecedor da unidade de disco rígido se uma unidade de disco rígido mais antiga estiver conduzindo recalibração térmica durante a operação de gravação.
4. Substitua o disco se ele estiver danificado ou riscado.
5. Desative a função Notificação de Inserção Automática do Windows nas unidades de CD-ROM e CD-RW.

### **Não é possível ejetar um disco.**

Execute as seguintes ações, após assegurar-se de que a unidade não esteja em processo de gravação em um disco:

1. Ejete o disco por meio do software.
2. Utilize o botão de Ejeção.
3. Desligue o computador. Aguarde 45 segundos; em seguida, ligue o computador e tente utilizar o botão de Ejeção novamente.
4. Se outros métodos não funcionarem, utilize a alavanca de ejeção de emergência. Para obter informações adicionais, consulte o Capítulo 4, "Preparando para Utilizar o Combo Drive", na página 4-1.

### **Não é possível ler o CD após gravá-lo com êxito.**

Execute as seguintes ações:

1. Se você consegue ler o CD em outro CD player ou se você pode ver as seções anteriores, as informações do diretório podem estar danificadas no volume, o que os torna ilegíveis. Para obter idéias sobre detecção de problemas, verifique a documentação que acompanha o software.
2. Você pode ter um disco de CD-R ou CD-RW danificado. Tente um novo disco ou outra marca de CD.
3. Se você consegue ler um disco de CD-RW na unidade de gravação, mas não em uma outra unidade MR, certifique-se de que um programa da Leitora UDF esteja instalado no computador.
4. Evite gravar em uma velocidade 1X mais lenta, a menos que requerido pelo computador.



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## Apêndice A. Especificações Sobre o Produto

Este apêndice inclui as seguintes informações:

- Especificações físicas
- Requisitos de energia
- Requisitos ambientais
- Velocidades de leitura
- Velocidades de gravação

### Especificações Físicas

As especificações físicas<sup>1</sup> da unidade estão relacionadas na tabela seguinte.

Especificação Física	
Altura	15 mm (0,6 pol.)
Largura	135,5 mm (5,33 pol.)
Comprimento	139,5 mm (5,49 pol.)
Peso	250 g (0,55 lb)

### Requisitos de Energia

A tabela a seguir relaciona as especificações de energia pelo nível de voltagem da unidade. As especificações de energia são medidas no conector de alimentação da unidade e são valores nominais.

Especificações de energia	Voltagem	Média	Máximo
Alimentação AC/Aux	7,5V - 18V dc	750 mA	1,5 A
Alimentação por Barramento USB Padrão	5 V CC	800 mA	1,5 A

### Requisitos Ambientais

Especificação	Operacional	Não operacional
Temperatura (sem condensação)	+5° C a +40° C (+41° F a +104° F)	-20° C a +60° C (-4° F a +140° F)
Umidade relativa (sem condensação)	8% a 80%	5% a 95%

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1. Os dados de descrição do produto representam os objetivos de design da IBM e são fornecidos para fins de comparação; os resultados reais podem variar de acordo com a variedade de fatores. Os dados do produto não constituem uma garantia. Os dados estão sujeitos a alterações sem aviso prévio.

### Velocidades de Leitura

Mídia	Todos os modos de alimentação
DVD-ROM (camada única)	Máx. 8X
DVD-ROM (camada dupla)	Máx. 4X
DVD-R (4,7 GB)	Máx. 4X
DVD-RW (4,7 GB)	Máx. 4X
DVD-vídeo	Máx. 4X
DVD-RAM (4,7/9,4 GB)	Máx. 2X
DVD-RAM (2,6 GB)	Máx. 1X
DVD+R	Máx. 4X
DVD+RW	Máx. 4X
CD-ROM	Máx. 24X
CD-R	Máx. 24x
CD-RW	Máx. 24X
CD-DA (DAE)	4X

### Velocidades de Gravação

Mídia	Todos os modos de alimentação
CD-R	Máx. 24X
CD-RW	Máx. 24X



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## Apêndice B. Service and Support

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

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### Online technical support

Online technical support is available during the life of your product through the Personal Computing Support Web site at:

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

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

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### Telephone technical support

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

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

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

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

For the support telephone number and support hours by country, refer to the following table. If the number for your country or region is not listed, contact your IBM reseller or IBM marketing representative. Response time may vary depending on the number and nature of the calls received.

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

Country or Region	Telephone Number	Country or Region	Telephone Number
Argentina	0800-666-0011	Malaysia	03-7727-7800
Australia	1300-130-426	Mexico	001-866-434-2080

Country or Region	Telephone Number	Country or Region	Telephone Number
Austria	01-24592-5901	Netherlands	020-514-5770
Belgium	Dutch 02-210-9820 French 02-210-9800	New Zealand	0800-446-149
Bolivia	0800-0189	Norway	66 81 11 00
Brazil	55-11-3889-8986	Peru	0-800-50-866
Canada	1-800-565-3344 Toronto 416-383-3344	Philippines	632-995-2225
Chile	800-224-488	Portugal	21-791 51 47
China (PRC)	800-810-1818	Russia	095-940-2000
China (Hong Kong S.A.R.)	852-2825-7799	Singapore	1800-840-9911
Columbia	980-912-3021	Spain	91-662 49 16
Denmark	45 20 82 00	Sweden	08-477 4420
Ecuador	1-800-426911 (option #4)	Switzerland	058-333-09-00
Finland	09-459 69 60	Taiwan	886-2-2725-9799
France	02 38 55 74 50	Thailand	66-2-273-4000
Germany	07032-1549 201	Turkey	00-800-446-32-041
Indonesia	021-523-8535	United Kingdom	0-1475-555 055
Ireland	01-815-9202	United States	1-800-426-7378
Italy	02-7031-6101	Uruguay	000-411-005-6649
Japan	Consumer customers 0120-887-870  Business customers 0120-887-874	Venezuela	0-800-100-2011
Luxembourg	298-977 5063	Vietnam	848-8295-160

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## Apêndice C. IBM Statement of Limited Warranty - Z125-4753-07 - 11/2002

### Part 1 - General Terms

*This Statement of Limited Warranty includes Part 1 - General Terms, Part 2 - Country-unique Terms, and Part 3 - Warranty Information. The terms of Part 2 replace or modify those of Part 1. The warranties provided by IBM in this Statement of Limited Warranty apply only to Machines you purchase for your use, and not for resale. The term "Machine" means an IBM machine, its features, conversions, upgrades, elements, or accessories, or any combination of them. The term "Machine" does not include any software programs, whether pre-loaded with the Machine, installed subsequently or otherwise. Nothing in this Statement of Limited Warranty affects any statutory rights of consumers that cannot be waived or limited by contract.*

### What this Warranty Covers

IBM warrants that each Machine 1) is free from defects in materials and workmanship and 2) conforms to IBM's Official Published Specifications ("Specifications") which are available on request. The warranty period for the Machine starts on the original Date of Installation and is specified in Part 3 - Warranty Information. The date on your invoice or sales receipt is the Date of Installation unless IBM or your reseller informs you otherwise. Many features, conversions, or upgrades involve the removal of parts and their return to IBM. A part that replaces a removed part will assume the warranty service status of the removed part. Unless IBM specifies otherwise, these warranties apply only in the country or region in which you purchased the Machine.

**THESE WARRANTIES ARE YOUR EXCLUSIVE WARRANTIES AND REPLACE ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SOME STATES OR JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF EXPRESS OR IMPLIED WARRANTIES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU. IN THAT EVENT, SUCH WARRANTIES ARE LIMITED IN DURATION TO THE WARRANTY PERIOD. NO WARRANTIES APPLY AFTER THAT PERIOD. SOME STATES OR JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.**

### What this Warranty Does not Cover

This warranty does not cover the following:

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

- any non-IBM products, including those that IBM may procure and provide with or integrate into an IBM Machine at your request.

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

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

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

### **How to Obtain Warranty Service**

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

### **What IBM Will Do to Correct Problems**

When you call for service, you must follow the problem determination and resolution procedures that IBM specifies. A technician will attempt to make an initial diagnosis of your problem and help you resolve it over the telephone.

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

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

If your problem can be resolved with a Customer Replaceable Unit ("CRU") (e.g., keyboard, mouse, speaker, memory, hard disk drive and other easily replaceable parts), IBM will ship these parts to you for replacement by you.

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

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

### **Exchange of a Machine or Part**

When the warranty service involves the exchange of a Machine or part, the item IBM or your reseller replaces becomes its property and the replacement becomes yours. You represent that all removed items are genuine and unaltered. The replacement may not be new, but will be in good working order and at least

functionally equivalent to the item replaced. The replacement assumes the warranty service status of the replaced item.

### **Your Additional Responsibilities**

Before IBM or your reseller exchanges a Machine or part, you agree to remove all features, parts, options, alterations, and attachments not under warranty service.

You also agree to:

1. ensure that the Machine is free of any legal obligations or restrictions that prevent its exchange;
2. obtain authorization from the owner to have IBM or your reseller service a Machine that you do not own; and
3. where applicable, before service is provided:
  - a. follow the service request procedures that IBM or your reseller provides;
  - b. backup or secure all programs, data, and funds contained in the Machine;
  - c. IBM or your reseller with sufficient, free, and safe access to your facilities to permit IBM to fulfill its obligations; and
  - d. inform IBM or your reseller of changes in the Machine's location.
4. (a) ensure all information about identified or identifiable individuals (Personal Data) is deleted from the Machine (to the extent technically possible), (b) allow IBM, your reseller or an IBM supplier to process on your behalf any remaining Personal Data as IBM or your reseller considers necessary to fulfill its obligations under this Statement of Limited Warranty (which may include shipping the Machine for such processing to other IBM service locations around the world), and (c) ensure that such processing complies with any laws applicable to such Personal Data.

### **Limitation of Liability**

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

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

Circumstances may arise where, because of a default on IBM's part or other liability, you are entitled to recover damages from IBM. In each such instance, regardless of the basis on which you are entitled to claim damages from IBM (including fundamental breach, negligence, misrepresentation, or other contract or tort claim), except for any liability that cannot be waived or limited by applicable laws, IBM is liable for no more than

1. damages for bodily injury (including death) and damage to real property and tangible personal property; and
2. the amount of any other actual direct damages, up to the charges (if recurring, 12 months' charges apply) for the Machine that is subject of the claim. For purposes of this item, the term "Machine" includes Machine Code and Licensed Internal Code ("LIC").

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

**UNDER NO CIRCUMSTANCES IS IBM, ITS SUPPLIERS OR RESELLERS LIABLE FOR ANY OF THE FOLLOWING EVEN IF INFORMED OF THEIR POSSIBILITY: 1) THIRD PARTY CLAIMS AGAINST YOU FOR DAMAGES (OTHER THAN THOSE UNDER THE FIRST ITEM LISTED ABOVE); 2) LOSS OF, OR DAMAGE TO, DATA; 3) SPECIAL, INCIDENTAL, OR INDIRECT DAMAGES OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; OR 4) LOST PROFITS, BUSINESS REVENUE, GOODWILL OR ANTICIPATED SAVINGS. SOME STATES OR JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. SOME STATES OR JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.**

### Governing Law

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

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

### Jurisdiction

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

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## **Part 2 - Country-unique Terms**

### AMERICAS

#### ARGENTINA

**Governing Law:** *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.

#### BRAZIL

**Governing Law:** *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.

#### Peru

**Limitation of Liability:** *The following is added at the end of this section:*

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

#### NORTH AMERICA

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

#### CANADA

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

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

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

#### UNITED STATES

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

#### ASIA PACIFIC

#### AUSTRALIA

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

**Limitation of Liability:** *The following is added to this Section:*  
Where IBM is in breach of a condition or warranty implied by the Trade Practices Act 1974 or other similar legislation, IBM's liability is limited to the repair or replacement of the goods or the supply of equivalent goods. Where that condition or warranty relates to right to sell, quiet possession or clear title, or the goods are of a kind ordinarily acquired for personal, domestic or household use or consumption, then none of the limitations in this paragraph apply.

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

#### CAMBODIA, LAOS, AND VIETNAM

**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, LAOS, AND VIETNAM



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

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

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

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

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

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

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

laws of Hong Kong Special Administrative Region of China.

#### **INDIA**

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

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

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

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

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



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

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

## JAPAN

**Governing Law:** *The following sentence is added to this section:*

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

## MALAYSIA

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

## NEW ZEALAND

**What this Warranty Covers:** *The following paragraph is added to this section:*

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

**Limitation of Liability:** *The following is added to this section:*

Where Machines are not acquired for the purposes of a business as defined in the Consumer Guarantees Act 1993, the limitations in this section are subject to the limitations in that Act.

## PEOPLE'S REPUBLIC OF CHINA (PRC)

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

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

## PHILIPPINES

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

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

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

Disputes arising out of or in connection with this Statement of Limited Warranty shall be finally settled by arbitration which shall be held in Metro Manila, Philippines in accordance with the laws of the Philippines then in effect. The

arbitration award shall be final and binding for the parties without appeal and shall be in writing and set forth the findings of fact and the conclusions of law.

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

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

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

## **SINGAPORE**

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

## **EUROPE, MIDDLE EAST, AFRICA (EMEA)**

### ***THE FOLLOWING TERMS APPLY TO ALL EMEA COUNTRIES:***

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

**How to Obtain Warranty Service:** If you purchase a Machine in Austria, Belgium, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Monaco, Netherlands, Norway, Portugal, Spain, San Marino, Sweden, Switzerland, United Kingdom or Vatican State, you may obtain warranty service for that Machine in any of those countries from either (1) an IBM reseller approved to perform warranty service or (2) from IBM, provided the Machine has been announced and made available by IBM in the country in which you wish to obtain service. If you purchased a Personal Computer Machine in Albania, Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Federal Republic of Yugoslavia, Former Yugoslav Republic of Macedonia (FYROM), Moldova, Poland, Romania, Russia, Slovak Republic, Slovenia, or Ukraine, you may obtain warranty service for that Machine in any of those countries from either (1) an IBM reseller approved to perform warranty service or (2) from IBM.

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

*Add the following paragraph in **Western Europe** (Austria, Belgium, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Monaco, Netherlands, Norway, Portugal, Spain, San Marino, Sweden, Switzerland, United Kingdom, Vatican State):*

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.

**Governing Law:**

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

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

**Jurisdiction:** *The following exceptions are added to this section:*

1) In **Austria** the choice of jurisdiction for all disputes arising out of this Statement of Limited Warranty and relating thereto, including its existence, will be the competent court of law in Vienna, Austria (Inner-City); 2) in **Angola, Bahrain, Botswana, Burundi, Egypt, Eritrea, Ethiopia, Ghana, Jordan, Kenya, Kuwait, Liberia, Malawi, Malta, Mozambique, Nigeria, Oman, Pakistan, Qatar, Rwanda, Sao Tome, Saudi Arabia, Sierra Leone, Somalia, Tanzania, Uganda, United Arab Emirates, West Bank/Gaza, Yemen, Zambia, and Zimbabwe** all disputes arising out of this Statement of Limited Warranty or related to its execution, including summary proceedings, will be submitted to the exclusive jurisdiction of the English courts; 3) in **Belgium and Luxembourg**, all disputes arising out of this Statement of Limited Warranty or related to its interpretation or its execution, the law, and the courts of the capital city, of the country of your registered office and/or commercial site location only are competent; 4) in **France, Algeria, Benin, Burkina Faso, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo Republic, Djibouti, Democratic Republic of Congo, Equatorial Guinea, French Guiana, French Polynesia, Gabon, Gambia, Guinea, Guinea-Bissau, Ivory Coast, Lebanon, Madagascar, Mali, Mauritania, Mauritius, Mayotte, Morocco, New Caledonia, Niger, Reunion, Senegal, Seychelles, Togo, Tunisia, Vanuatu, and Wallis & Futuna** all disputes arising out of this Statement of Limited Warranty or related to its violation or execution, including summary proceedings, will be settled exclusively by the Commercial Court of Paris; 5) in **Russia**, all disputes arising out of or in relation to the interpretation, the violation, the termination, the

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

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

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

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

#### **EUROPEAN UNION (EU)**

##### ***THE FOLLOWING TERMS APPLY TO ALL EU COUNTRIES:***

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.

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

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

You may contact IBM at the following address:

IBM Warranty & Service Quality Dept.

PO Box 30

Spango Valley

Greenock

Scotland PA 16 OAH

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

**Limitation of Liability:** *The following replaces the terms of this section in its entirety:*

Except as otherwise provided by mandatory law:

1. IBM's liability for any damages and losses that may arise as a consequence of the fulfillment of its obligations under or in connection with this Statement of Limited Warranty or due to any other cause related to this Statement of Limited Warranty is limited to the compensation of only those damages and losses proved and actually arising as an immediate and direct consequence of the non-fulfillment of such obligations (if IBM is at fault) or of such cause, for a maximum amount equal to the charges you paid for the Machine. For purposes of this item, the term "Machine" includes Machine Code and Licensed Internal Code ("LIC").

The above limitation shall not apply to damages for bodily injuries (including death) and damages to real property and tangible personal property for which IBM is legally liable.

2. **UNDER NO CIRCUMSTANCES IS IBM, ITS SUPPLIERS OR RESELLERS LIABLE FOR ANY OF THE FOLLOWING, EVEN IF INFORMED OF THEIR POSSIBILITY: 1) LOSS OF, OR DAMAGE TO, DATA; 2) INCIDENTAL OR INDIRECT DAMAGES, OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; 3) LOST PROFITS, EVEN IF THEY ARISE AS AN IMMEDIATE CONSEQUENCE OF THE EVENT THAT GENERATED THE DAMAGES; OR 4) LOSS OF BUSINESS, REVENUE, GOODWILL, OR ANTICIPATED SAVINGS.**

**FRANCE AND BELGIUM**

**Limitation of Liability:** *The following replaces the terms of this section in its entirety:*

Except as otherwise provided by mandatory law:

1. IBM's liability for any damages and losses that may arise as a consequence of the fulfillment of its obligations under or in connection with this Statement of Limited Warranty is limited to the compensation of only those damages and losses proved and actually arising as an immediate and direct consequence of the non-fulfillment of such obligations (if IBM is at fault), for a maximum amount equal to the charges you paid for the Machine that has caused the damages. For purposes of this item, the term "Machine" includes Machine Code and Licensed Internal Code ("LIC").

The above limitation shall not apply to damages for bodily injuries (including death) and damages to real property and tangible personal property for which IBM is legally liable.

2. **UNDER NO CIRCUMSTANCES IS IBM, ITS SUPPLIERS OR RESELLERS LIABLE FOR ANY OF THE FOLLOWING, EVEN IF INFORMED OF THEIR POSSIBILITY: 1) LOSS OF, OR DAMAGE TO, DATA; 2) INCIDENTAL OR INDIRECT DAMAGES, OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; 3) LOST PROFITS, EVEN IF THEY ARISE AS AN IMMEDIATE**

CONSEQUENCE OF THE EVENT THAT GENERATED THE DAMAGES;  
OR 4) LOSS OF BUSINESS, REVENUE, GOODWILL, OR ANTICIPATED  
SAVINGS.

THE FOLLOWING TERMS APPLY TO THE COUNTRY SPECIFIED:

#### AUSTRIA

**What this Warranty Covers:** *The following replaces the first sentence of the first paragraph of this section:*

The warranty for an IBM Machine covers the functionality of the Machine for its normal use and the Machine's conformity to its Specifications.

*The following paragraphs are added to this Section:*

The minimum warranty period for Machines is 12 months from the date of delivery. . The limitation period for consumers in action for breach of warranty is the statutory period as a minimum. In case IBM or your reseller is unable to repair an IBM Machine, you can alternatively ask for a partial refund as far as justified by the reduced value of the unrepaired Machine or ask for a cancellation of the respective agreement for such Machine and get your money refunded.

*The second paragraph does not apply.*

**What IBM Will Do to Correct Problems:** *The following is added to this section:*

During the warranty period, transportation for delivery of the failing Machine to IBM will be at IBM's expense.

**Limitation of Liability:** *The following paragraph is added to this section:*

The limitations and exclusions specified in the Statement of Limited Warranty will not apply to damages caused by IBM with fraud or gross negligence and for express warranty.

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

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

#### EGYPT

**Limitation of Liability:** *The following replaces item 2 in this section:*

as to any other actual direct damages, IBM's liability will be limited to the total amount you paid for the Machine that is the subject of the claim. For purposes of this item, the term "Machine" includes Machine Code and Licensed Internal Code (LIC).

*Applicability of suppliers and resellers (unchanged).*

#### FRANCE

**Limitation of Liability:** *The following replaces the second sentence of the first paragraph of this section:*

In such instances, regardless of the basis on which you are entitled to claim damages from IBM, IBM is liable for no more than: *(items 1 and 2 unchanged).*



## GERMANY

**What this Warranty Covers:** *The following replaces the first sentence of the first paragraph of this section:*

The warranty for an IBM Machine covers the functionality of the Machine for its normal use and the Machine's conformity to its Specifications.

*The following paragraphs are added to this section:*

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

*The second paragraph does not apply.*

**What IBM Will Do to Correct Problems:** *The following is added to this section:*

During the warranty period, transportation for delivery of the failing Machine to IBM will be at IBM's expense.

**Limitation of Liability:** *The following paragraph is added to this section:*

The limitations and exclusions specified in the Statement of Limited Warranty will not apply to damages caused by IBM with fraud or gross negligence and for express warranty.

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

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

## HUNGARY

**Limitation of Liability:** *The following is added at the end of this section:*

The limitation and exclusion specified herein shall not apply to liability for a breach of contract damaging life, physical well-being, or health that has been caused intentionally, by gross negligence, or by a criminal act.

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

## IRELAND

**What this Warranty Covers:** *The following is added to this section:*

Except as expressly provided in these terms and conditions, all statutory conditions, including all warranties implied, but without prejudice to the generality of the foregoing all warranties implied by the Sale of Goods Act 1893 or the Sale of Goods and Supply of Services Act 1980 are hereby excluded.

**Limitation of Liability:** *The following replaces the terms of this section in its entirety:*

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

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

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

1. IBM will accept unlimited liability for death or personal injury caused by the negligence of IBM.
2. Subject always to the Items for Which IBM is Not Liable below, IBM will accept unlimited liability for physical damage to your tangible property resulting from the negligence of IBM.
3. Except as provided in items 1 and 2 above, IBM's entire liability for actual damages for any one Default will not in any event exceed the greater of 1) EUR 125,000, or 2) 125% of the amount you paid for the Machine directly relating to the Default.

#### **Items for Which IBM is Not Liable**

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

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

#### **SLOVAKIA**

**Limitation of Liability:** *The following is added to the end of the last paragraph:*

The limitations apply to the extent they are not prohibited under §§ 373-386 of the Slovak Commercial Code.

#### **SOUTH AFRICA, NAMIBIA, BOTSWANA, LESOTHO AND SWAZILAND**

**Limitation of Liability:** *The following is added to this section:*

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

#### **UNITED KINGDOM**

**Limitation of Liability:** *The following replaces the terms of this section in its entirety:*

For the purposes of this section, a "Default" means any act, statement, omission, or negligence on the part of IBM in connection with, or in relation to, the subject matter of this Statement of Limited Warranty in respect of which IBM is legally



liable to you, whether in contract or tort. A number of Defaults which together result in, or contribute to, substantially the same loss or damage will be treated as one Default.

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

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

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

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

#### **Items for Which IBM is Not Liable**

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

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

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## **Part 3 - Warranty Information**

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

#### **Warranty Period**

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

#### **IBM USB 2.0 CD-RW/DVD-ROM Combo Drive**

<b>Country or Region of Purchase</b>	<b>Warranty Period</b>	<b>Type of Warranty Service</b>
Worldwide	1 year	1, 4

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

### **Types of Warranty Service**

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

#### **1. Customer Replaceable Unit ("CRU") Service**

IBM will ship CRU parts to you for your replacement. If IBM instructs you to return the replaced CRU, you are responsible for returning it to IBM in accordance with IBM's instructions. If you do not return the defective CRU, if IBM so instructs, within 30 days of your receipt of the replacement CRU, IBM may charge you for the replacement.

#### **2. On-site Service**

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

#### **3. Courier or Depot Service<sup>1</sup>**

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

#### **4. Customer Carry-In or Mail-In Service**

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

The IBM Machine Warranty worldwide web site at [http://www.ibm.com/servers/support/machine\\_warranties/](http://www.ibm.com/servers/support/machine_warranties/) provides a worldwide overview of IBM's Limited Warranty for Machines, a Glossary of IBM

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

definitions, Frequently Asked Questions (FAQs) and Support by Product (Machine) with links to Product Support pages. **The IBM Statement of Limited Warranty is also available on this site in 29 languages.**

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

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

Country or Region	Telephone Number	Country or Region	Telephone Number
Argentina	0800-666-0011	Malaysia	03-7727-7800
Australia	1300-130-426	Mexico	001-866-434-2080
Austria	01-24592-5901	Netherlands	020-514-5770
Belgium	Dutch 02-210-9820 French 02-210-9800	New Zealand	0800-446-149
Bolivia	0800-0189	Norway	66 81 11 00
Brazil	55-11-3889-8986	Peru	0-800-50-866
Canada	1-800-565-3344 Toronto 416-383-3344	Philippines	632-995-2225
Chile	800-224-488	Portugal	21-791 51 47
China (PRC)	800-810-1818	Russia	095-940-2000
China (Hong Kong S.A.R.)	852-2825-7799	Singapore	1800-840-9911
Columbia	980-912-3021	Spain	91-662 49 16
Denmark	45 20 82 00	Sweden	08-477 4420
Ecuador	1-800-426911 (option #4)	Switzerland	058-333-09-00
Finland	09-459 69 60	Taiwan	886-2-2725-9799
France	02 38 55 74 50	Thailand	66-2-273-4000
Germany	07032-1549 201	Turkey	00-800-446-32-041
Indonesia	021-523-8535	United Kingdom	0-1475-555 055
Ireland	01-815-9202	United States	1-800-426-7378
Italy	02-7031-6101	Uruguay	000-411-005-6649
Japan	Consumer customers 0120-887-870  Business customers 0120-887-874	Venezuela	0-800-100-2011
Luxembourg	298-977 5063	Vietnam	848-8295-160



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## Apêndice D. Notices

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

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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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## Trademarks

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IBM logo  
OS/2  
ThinkPad

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

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

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## Electronic emission notices

IBM USB 2.0 CD-RW/DVD-ROM Combo Drive

### Federal Communications Commission (FCC) statement


**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Proper cables and connectors are available from IBM authorized dealers. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Responsible party:  
International Business Machines Corporation  
New Orchard Road  
Armonk, NY 10504  
Telephone: 1-919-543-2193

 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 conformite a la reglementation d'Industrie Canada**

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

### **Deutsche EMV-Direktive (electromagnetische Verträglichkeit)**

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

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

IBM Deutschland Informationssysteme GmbH, 70548 Stuttgart.

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

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

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

Anmerkung:

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

### **European Union - emission directive**

This product is in conformity with the protection requirements of EU Council Directive 89/336/ECC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

IBM can not accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

This product has been tested and found to comply with the limits for Class B Information Technology Equipment according to European Standard EN 55022. The limits for Class B equipment were derived for typical residential environments to provide reasonable protection against interference with licensed communication devices.

#### **Union Européenne - Directive Conformité électromagnétique**

Ce produit est conforme aux exigences de protection de la Directive 89/336/EEC du Conseil de l'UE sur le rapprochement des lois des États membres en matière de compatibilité électromagnétique.

IBM ne peut accepter aucune responsabilité pour le manquement aux exigences de protection résultant d'une modification non recommandée du produit, y compris l'installation de cartes autres que les cartes IBM.

Ce produit a été testé et il satisfait les conditions de l'équipement informatique de Classe B en vertu de Standard européen EN 55022. Les conditions pour l'équipement de Classe B ont été définies en fonction d'un contexte résidentiel ordinaire afin de fournir une protection raisonnable contre l'interférence d'appareils de communication autorisés.

#### **Unione Europea - Directiva EMC (Conformidad electromagnética)**

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

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

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

#### **Union Europea - Normativa EMC**

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

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

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

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