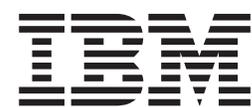


# IBM 多功能刻录机用户指南





# IBM 多功能刻录机用户指南

注: 在使用本资料及其支持的产品之前, 请务必阅读附录 D, 『Service and Support』、附录 E, 『IBM Statement of Limited Warranty - Z125-4753-07 - 11/2002』和附录 F, 『Notices』下的信息。

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## 安全: 请先阅读

在安装本产品之前, 请阅读安全信息。

مج، يجب قراءة دات السلامة

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

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

Prije instalacije ovog produkta obavezno pročitajte Sigurnosne Upute.

Před instalací tohoto produktu si přečtěte příručku bezpečnostních instrukcí.

Læs sikkerhedsforskrifterne, før du installerer dette produkt.

Ennen kuin asennat tämän tuotteen, lue turvaohjeet kohdasta Safety Information.

Avant d'installer ce produit, lisez les consignes de sécurité.

Vor der Installation dieses Produkts die Sicherheitshinweise lesen.

Πριν εγκαταστήσετε το προϊόν αυτό, διαβάστε τις πληροφορίες ασφάλειας  
(safety information).

לפני שתתקינו מוצר זה, קראו את הוראות הבטיחות.

A termék telepítése előtt olvassa el a Biztonsági előírásokat!

Prima di installare questo prodotto, leggere le Informazioni sulla Sicurezza.

製品の設置の前に、安全情報をお読みください。

본 제품을 설치하기 전에 안전 정보를 읽으십시오.

Пред да се инсталира овој продукт, прочитајте информацијата за безбедност.

Lees voordat u dit product installeert eerst de veiligheidsvoorschriften.

Les sikkerhetsinformasjonen (Safety Information) før du installerer dette produktet.

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

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

Перед установкой продукта прочтите инструкции по  
технике безопасности.

Pred inštaláciou tohto zariadenia si pečítajte 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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## 关于本书

本指南包含了有关 IBM<sup>®</sup> 多功能刻录机的信息并且在以下语言中可用:

- 巴西葡萄牙语
- 捷克斯洛伐克语
- 英语
- 法语
- 德语
- 意大利语
- 日语
- 简体中文
- 斯洛伐克语
- 西班牙语
- 繁体中文
- 土耳其语

本指南分成以下几个部分:

### 第 1 章, “简介”

本章包含了 IBM 多功能刻录机的产品和软件的描述与安装需求。

### 第 2 章, “安装”

本章包含了 IBM 多功能刻录机的硬件和软件的安装说明和操作信息。

### 附录

附录包含了有关以下内容的信息

- 产品规格
- 问题解决
- 定制设备驱动程序配置设置
- 帮助和服务
- 保证和声明

请务必保留购货凭证。可能需要它获取保修服务。

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## 注册您的产品

感谢您购买本 IBM 产品。请花点时间注册您的产品, 并向我们提供有助于 IBM 将来更好地为您服务的信息。您的反馈对于我们在开发对您相当重要的产品和服务, 以及寻找更好的方式以便与您沟通方面具有重要价值。请在以下 IBM Web 站点注册您的产品:

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

IBM 将向您发送有关您所注册产品的信息和更新材料, 除非您在 Web 站点的调查表中表明您不希望接收进一步的信息。



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## 第 1 章 简介

本章包含了 IBM 多功能刻录机的产品和软件描述与安装需求。

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### 产品描述

本选件包用于多媒体应用程序。随驱动器一起提供的 CD 包含有用于以下操作系统的软件:

- Microsoft® Windows® 2000 Professional
- Microsoft Windows Millennium Edition (Me)
- Microsoft Windows XP

选件包包含以下选件:

- 用户指南和软件 CD (包含《多功能刻录机用户指南》和软件应用程序)
- IBM 多功能刻录机驱动器
- 四个安装螺钉 (M3 x 5-mm, 开槽)
- 内部音频 “Y” 形电缆
- IDE 电缆
- 《IBM 多功能刻录机快速入门指南》
- 《激光安全指南》

如有任何物品缺少或损坏, 请与购买处联系。务必保留购货凭证; 可能需要它来接受保修服务。有关技术支持信息, 请参阅第 D-1 页的附录 D, 『Service and Support』。

“多功能刻录机”与 DVD Forum DVD-Multi Recorder 规格兼容, 并且可以刻录和读取 DVD-RAM、DVD-RW 和 DVD-R (一般使用 650 nm) 介质。驱动器同样可以刻录和读取 DVD+RW 联盟的 DVD+RW 和 DVD+R 格式。另外, 驱动器可以刻录 CD-R、CD-RW (标准、高速和超高速) 介质, 并且使用缓冲区欠载防护技术来进行可靠的 CD 刻录。“多功能刻录机”可以读取许多其它格式的介质, 包括 DVD 视频、视频 CD、音频 CD 和多段、扩展体系结构 (XA) CD 和 Kodak Photo CD。该“多功能刻录机”设计用来安装在使用集成驱动电子设备 (IDE) 或增强型 IDE (EIDE) 体系结构的计算机中。

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### 软件描述

IBM 多功能刻录机用户指南和软件 CD 包含以下软件:

- **Intervideo WinDVD Creator Plus**

该软件使您能够将视频文件刻录到 DVD-RW、DVD-R、DVD+RW 和 DVD+R 介质, 这些介质可以在大多数独立的 DVD 播放器中播放。您还可以在刻录之前使用该软件来编辑和修改自己的视频资料。同样支持 DVD-RAM 刻录。

如果在您的计算机中装有模拟或 IEEE 1394 捕捉设备, 则可以使用该软件来从摄像机中录制视频。

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

该软件使您能够像写入软盘一样, 使用盘符来直接写入 CD 和 DVD 介质。同样可以格式化 DVD-RAM、DVD-RW、DVD-R、DVD+RW 和 DVD+R 介质。通过 DLA, 您可以拖放文件、创建新目录或将文件从几乎任何应用程序直接保存到“多功能刻录机”。

- **UDF Reader**

该软件使您能够安装软件，该软件用于通过 DVD 驱动器读取其它计算机上的 DVD-RAM、DVD-RW、DVD+RW 和 CD-RW 介质。

- **IBM Record Now**

该软件使您能够复制 CD、创建音频 CD、创建 MP3 CD 和制作数据 CD。同样可以使用 RecordNow 来将数据写入 DVD-RAM、DVD-RW、DVD-R、DVD+RW 和 DVD+R 光盘以在其它计算机或兼容的消费电子产品中使用。

- **IBM Simple Backup**

该软件使您能够在 DVD-RAM、DVD-RW、DVD-R、DVD+RW、DVD+R、CD-R 或 CD-RW 介质上创建系统文件的完整备份或增量备份，并允许您在系统崩溃时恢复计算机。

- **Intervideo WinDVD**

该软件使您能够在计算机上回放 DVD 视频或从硬盘驱动器播放视频文件。

**注：**某些图形适配器，如 FIREGL、Intergraph 和 3dLabs，不支持 DVD 视频回放。

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## 安装需求

在安装驱动器之前，请确保计算机满足以下系统需求：

- 最低微处理器要求：Intel® Pentium® 或同等产品

**注：**对于 DVD 制作和回放，您必须具有 Intel 奔腾 II 266MHz 微处理器或更高版本以及 AGP 2X 视频。

- 最低 RAM 要求：32 MB（带有 UMA 的系统：64 MB）
- Windows 2000 Professional、Windows Me 或 Windows XP
- 可用的 5.25 英寸驱动器托架
- 可用的并行 IDE 连接
- 用于安装的 70 MB 可用硬盘空间、用于每小时 VCD 质量 MPEG-1 视频的 620 MB 可用硬盘空间和用于每小时 DVD 质量 MPEG-2 视频的 2 GB 可用硬盘空间
- DVD 创作功能所要求的至少 1024 x 768 像素的屏幕分辨率
- 音频适配器支持 44.1 或 48 kHz 采样率
- 可选立体声扬声器

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## 开始之前

在安装“多功能刻录机”之前，请阅读以下各节中的信息。

## 操作预防措施

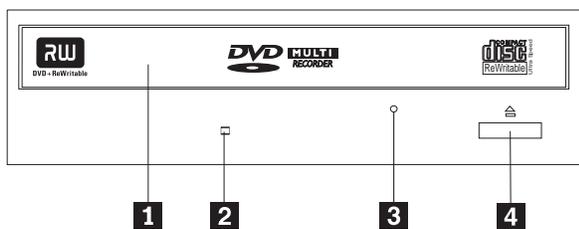
请采用以下操作预防措施来保护您的驱动器：

- 将“多功能刻录机”保存在防静电袋中直到您准备好安装该驱动器。在安装的时候请尽量少移动；移动可能使静电积累起来。
- 小心谨慎地操作驱动器。跌落或震动该驱动器可能会损坏其内部的组件。
- 不要强行插入 IDE 电缆或电源线。这样做可能损坏接口或驱动器。

## 驱动器控件和接口

下图显示了驱动器控件和接口的位置和功能。

### 驱动器的前视图



#### 1 光盘抽屉

此抽屉是装入和卸装光盘的地方。

#### 2 忙指示灯

当驱动器读取、写入或播放光盘时，此指示灯将亮起。

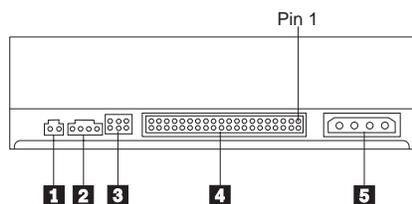
#### 3 紧急弹出孔

该孔提供了对弹出机制的访问，以便将光盘从驱动器中取出。

#### 4 打开 / 关闭按钮

按此按钮时可打开和关闭光盘抽屉。

### 驱动器的后视图



#### 1 保留

#### 2 音频输出接口

该接口将模拟音频信号传送至音频适配器。

#### 3 配置插针

这些插针用于设置驱动器配置。

#### 4 IDE 端口

此端口用于连接驱动器和 IDE 电缆。

#### 5 电源接口

该接口用于连接驱动器和电源线。

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## 第 2 章 安装

本章包含了 IBM 多功能刻录机的硬件和软件的安装说明和操作信息。

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### 安装驱动器

请完成以下步骤来安装该驱动器:

#### 步骤 1. 打开计算机

1. 关闭计算机和所有连接的设备。
2. 从计算机和所有连接的设备上拔下所有电源线。
3. 从计算机上卸下外盖。有关卸下计算机外盖的指示信息，请参考计算机文档。

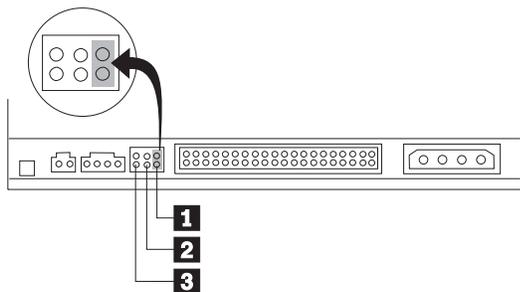
#### 步骤 2. 打开驱动器包装

1. 在打开包装驱动器的防静电袋之前，让袋子与未上漆的金属表面接触至少两秒钟。这样可排尽包装和身体上的静电。
2. 从袋子中取出驱动器。

如果必须将驱动器放下，则请将防静电袋放在垫平的表面上，再将驱动器放在防静电袋上。

#### 步骤 3. 设置配置跳线

如图所示，通过在配置插针上安插跳线，可将您的驱动器设置为主 **1**、从 **2** 或电缆选择 **3**。



请使用以下准则来确定驱动器的正确配置。

- 如果驱动器是与 IDE 电缆连接的唯一设备，则请将其配置为主设备。这是预配置。
- 如果驱动器是在 IDE 电缆上的第二个设备，则请将其配置为从设备。务必将另一个设备配置为主设备。在某些情况下，当同一电缆上的另一个设备配置为从设备时，硬盘驱动器可能需要“存在从设备之下的主设备”跳线设置。有关在其它设备上设置配置跳线的更多信息，请参考随计算机提供的文档。
- 一些计算机使用特殊的 ATA 电缆，该电缆的两根电线反接在设备接口中，使得可以通过电缆而非跳线位置来配置驱动器。请仅对配备了这些特殊电缆的计算机使用电缆选择位置。请参阅随计算机提供的文档，以确定您的 ATA 适配器是否需要将跳线置于电缆选择位置。

如果将跳线置于电缆选择位置，IDE 电缆会基于电缆上驱动器的位置自动指定主和从设置。无论该驱动器是与电缆连接的唯一设备还是第二个设备，您都必须对此布线系统使用电缆选择设置。最靠近 IDE 控制器的驱动器会自动成为主驱动器。IDE 电缆上的任何其它设备也须设置为电缆选择。

## 步骤 4. 将驱动器安装在托架中

### 注意

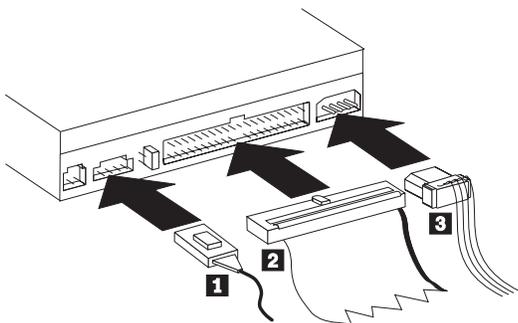
在将螺钉直接固定到驱动器中时，请务必使用选件包中的 M3 x 5-mm 安装螺钉。使用过长的螺钉可能损坏驱动器。

您可以将驱动器水平或垂直地安装在计算机中。如果垂直安装驱动器，则必须在关闭驱动器托盘之前固定好放入驱动器的任何光盘，否则驱动器将无法正确读取光盘。

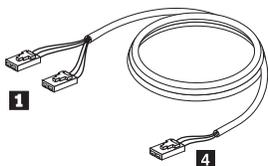
1. 将驱动器滑入托架中。您的计算机对于安装存储设备可能需要一些过程。有关存储设备的更多信息，请参考随计算机提供的文档。
2. 将驱动器托架的螺钉孔与驱动器外壳或安装支架的螺纹孔对准。
3. 拧入螺钉，先不要拧紧，以检查其位置。通常，每一侧使用两个螺钉。验证已正确对准；然后拧紧螺钉以固定驱动器。不要拧得过紧。

## 步骤 5. 将电缆连接到驱动器

下图显示了电缆连接到驱动器的位置。



以下是随您的选件包一起提供的内部音频电缆的插图。



**注：**某些计算机的接口较小，与随附的内部音频电缆不兼容。如果您的计算机具有这种接口，则可能需要购买新的音频电缆。

1. 将随附的内部音频电缆的单接头端 **4** 连接到计算机系统板上相应的接口。
2. 将随附的内部音频电缆的双接头端 **1** 的一个接头端连接到驱动器上的音频输出接口。如果您的计算机中有另一个光学驱动器，则可以将另外的那个双接头端连接到驱动器。
3. 将 40 针 IDE 电缆接口 **2** 连接到驱动器的 IDE 接口中。调整电缆，使有颜色编码的一侧最靠近电源线接口 **3**。如果没有电缆连接到 IDE 端口或计算机 IDE 电缆上只有一个设备接口，则请使用随此选件提供的 IDE 电缆。IDE 电缆最多可有三个接口。当要在 IDE 电缆上仅连接一个设备时，为获得最佳信号质量，请将此电缆的一端连接到 IDE 端口，并将电缆的另一端连接到设备上。不要使用中接口。

如果要将两个设备连接到 IDE 电缆上，请将电缆的一端连接到 IDE 端口，并将主设备和从设备连接到另一端的其余接口。许多计算机具有两根电缆，用于连接至多四个 ATA 设备。为获得最佳性能，请将快速设

备（硬盘驱动器）连接到与主要 IDE 端口相连的电缆上，再将该驱动器或其它速度较慢的设备（CD-ROM 驱动器、磁带机和软盘驱动器）连接到与次要 IDE 端口相连的电缆上。

4. 将四芯电源线 **3** 连接到驱动器上的电源接口。

确保电缆不会受到计算机外盖的挤压，且所有其它电缆和电源连接都是安全可靠的。

## 步骤 6. 完成硬件安装

1. 确保驱动器妥善安装并且各接口已牢固连接。
2. 确保电缆不妨碍计算机外盖，并且未阻塞电源风扇叶片或气流通路。
3. 重新安装计算机外盖。
4. 重新连接所有外接设备。
5. 将所有电源线重新连接到电源插座。

## 步骤 7. 安装软件

该驱动器的所有软件都包含在用户指南和软件 CD 上。用户指南和软件 CD 包含本用户指南、IBM RecordNow、IBM Simple Backup、IBM DLA、Intervideo WinDVD 和 WinDVD Creator Plus。请完成以下过程来安装软件：

1. 将用户指南和软件 CD 插入驱动器。如果 CD 自动启动，则请跳至步骤 6。
2. 如果 CD 没有自动启动，则请单击**开始**，然后单击**运行**。
3. 输入 `e:\launch.bat`，其中 `e` 是 CD 或 DVD 驱动器的盘符。
4. 单击**确定**。
5. 选择语言。
6. 选择您要安装的软件。
7. 按屏幕上的指示信息进行操作。
8. 安装好该软件之后，重新启动计算机。
9. 对每个软件应用程序重复以上过程。

**注：**为了使该驱动器完全发挥作用，请安装在浏览器窗口中列出的所有软件应用程序。

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## 使用驱动器

本节包含了有关使用“多功能刻录机”的信息。

### 使用可刻录介质

“多功能刻录机”可以在以下类型的介质上刻录：

- **DVD-RAM:** 优化数据存储的多次写介质。DVD-RAM 介质可以在大多数现代 DVD-ROM 驱动器中读取，但是不能由一些置顶 DVD 播放器来读取。
- **DVD-R:** 与置顶 DVD 播放器和计算机有最佳兼容性的一次性写介质。DVD-R 介质可以在几乎任何类型的 DVD-ROM 驱动器或 DVD 播放器中读取。
- **DVD-RW:** 可以在大多数置顶 DVD 播放器和几乎所有计算机中读取的多次写介质。一些老式的 DVD 播放器可能无法读取该介质。
- **DVD+R:** 与置顶 DVD 播放器和计算机有良好兼容性的一次性写介质。老式的 DVD 播放器和计算机 DVD-ROM 驱动器可能无法读取该介质。
- **DVD+RW:** 可以在许多置顶 DVD 播放器中读取的多次写介质。老式的计算机 DVD-ROM 驱动器和置顶播放器可能无法读取该介质。
- **CD-R:** 可以在大多数 CD 和 DVD 播放器中读取的一次性写介质。
- **CD-RW:** 可以在许多 CD 和 DVD 播放器中读取的多次写介质。

## 使用单面和双面 DVD-RAM 介质

DVD-RAM 介质有单面和双面两种版本可供使用。

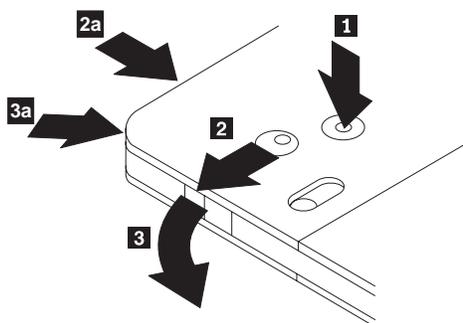
2.6 GB 和 4.7 GB 的版本是单面的。9.4 GB 的版本是双面的。要存取介质两面上的数据，您必须从驱动器中取出该介质，将其翻过来，再重新插入到驱动器中。

### 从盒中取出光盘

DVD-RAM 介质有裸光盘式或盒式两种形式可供使用。要在“多功能刻录机”中使用盒式介质，您首先必须从盒中取出光盘。

注：在类型 1 盒中的介质不可移动，并且不能在该驱动器中使用。所有其它的盒类型（2-9）是可移动的并且可以在“多功能刻录机”驱动器中使用。

### 从盒中取出光盘



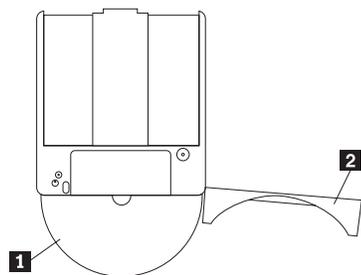
使用圆珠笔的笔尖，推动并折断锁销片 **1**。要取出光盘，请使用圆珠笔在盒盖锁 **2** 上向下推并将盒盖 **3** 拔出。当盒盖打开时，就可以取出光盘了。

注：盒盖锁和盒盖片位于某些光盘盒的侧面，如上图 **2a** 和 **3a** 所示。

#### 注意

当操作裸露的介质时，请不要接触光盘的刻录区域。

### 将光盘放回盒中



要将光盘放回盒中，请把光盘的标签面 **1** 与 DVD-RAM 盒的标签面对齐。插入光盘并关闭盒盖 **2**。当盖子关闭时，会发出咔嚓声。

## 对于操作的预防措施

当操作取出的光盘时要小心。碎屑、灰尘颗粒、指纹、涂抹或刮花可能损害介质的刻录和回放。要清除灰尘或其它碎屑，请使用“CD 清洁工具包”。使用柔软的干布来清洁光盘。不要使用溶剂来清洁光盘表面。当给光盘标号时，只能写在印刷的标签面上或使用软性的标签笔在光盘盒上书写。避免直接阳光照射、高温和潮湿。不要在光盘的任何一面附加标签。

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## 对 CD 和 DVD 使用该驱动器

完成以下过程来读取数据光盘：

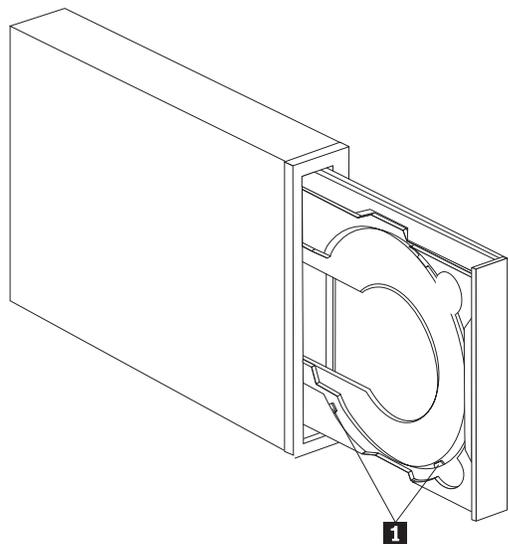
1. 打开计算机。
2. 按驱动器前部的打开 / 关闭按钮。
3. 将光盘插入托盘中，标签向上。
4. 通过按打开 / 关闭按钮或轻轻推送装入托盘来关闭托盘。

**警告：** 不要强行打开托盘或插入异物来打开装入托盘。

5. 等待驱动器忙指示灯关闭；然后双击我的电脑。
6. 双击 CD-ROM 或 DVD-RAM/DVD-R/DVD-RW 图标。

## 在垂直安装的驱动器中固定光盘

要将 CD 装入垂直安装的 CD-RW 中，请执行以下操作：



**注：** 驱动器 CD 托盘的设计可能与显示的不一樣（由供应商的不同而不同）。

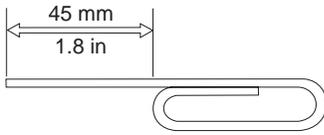
1. 按弹出 / 装入按钮。
2. 将 CD 插入托盘，确保将光盘安全地放置在垂直安装卡口 **1** 的后面。
3. 通过按弹出 / 装入按钮或者将托盘轻轻推入来关闭装入托盘。

**注：** 在垂直安装的驱动器中，没有特殊的适配器就不能使用 8 cm 和“信用卡 CD”。

## 手动弹出光盘

如果您按弹出 / 装入按钮并且托盘没有滑出，则关闭计算机。如插图中所显示的那样，将一个大回形针拉直来形成一个工具。拉直端必须伸出至少 45 mm (1.8 in.) 长。将伸出的一端插入驱动器前面的手工弹出孔（请参

阅第 1-3 页的『驱动器控件和接口』)。将回形针推到孔中直到托盘打开。轻轻地拉出托盘直到您可以取出 CD。



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## 使用 DVD 播放器软件

本节描述了如何使用和定制 DVD 播放器软件。您可以在*用户指南和软件 CD* 上的自述文件中找到关于 DVD 播放器软件的当前信息。

### 在使用软件之前

WinDVD 需要兼容的视频设备驱动程序和 IDE 总线控制才能工作。有关启用 DMA 总线控制和找到视频设备驱动程序的信息，请参阅第 C-1 页的附录 C，『定制设备驱动程序配置设置』。

## 使用 DVD 播放器

在您将 DVD 视频光盘插入驱动器后，DVD 播放器软件将自动启动并且开始播放该视频光盘。如果 DVD 光盘既包含视频内容又有程序内容，则程序内容将自动播放。

要查看视频 / 程序 DVD 光盘的视频内容，请转至**开始**菜单，启动 **WinDVD**，并单击**播放**。

在 Microsoft Windows XP 中，您也可以通过使用 Windows Media Player 应用程序来播放 DVD 视频内容。

## 更改 DVD 区域代码

“区域化和复制保护”（DVD 区域代码）使用内容扰乱系统（CSS）标准来防止未经授权复制 DVD 上所分发的知识产权。它最初是“美国电影协会”（MPAA）请求用来声明视频私有，但是现在适用于任何内容。CSS 通过禁止没有正确授权的未加密的数据传送来发挥作用。回放系统必须发放许可证给 CSS 来解码加密的数据。

CSS 规范将全球分为七个独立的区域。对一个区域指定的内容无法在另一个区域通过回放系统来读取。在使用 CSS 来防止 DVD 内容的数字复制的同时，另一项由 Macrovision 设计的技术则用来防止 DVD 内容的模拟复制。Macrovision 标准是一种扰乱系统，电影业界广泛地使用它来防止未经授权使用商业 VCR 复制视频内容。DVD 回放系统必须同时支持 CSS 和 Macrovision 复制保护标准。

您首次将一张 DVD 视频光盘插入驱动器时，将会提示设置区域。如果重新定位到世界的另一个区域，则您可以使用 DVD 播放器软件来更改区域代码。

**注：**您只能更改 DVD 区域代码五次。在做了五次区域代码更改后，该驱动器只能播放与您所设置的第五个区域代码关联的 MPEG-2 视频字幕。

要更改区域代码，请执行以下操作：

1. 打开计算机并启动操作系统。
2. 单击**开始**。
3. 选择**程序**。
4. 单击 **Intervideo WinDVD**。
5. 单击 **Intervideo WinDVD**。
6. 单击**属性**图标以打开“属性”窗口。
7. 单击**常规属性**选项卡。

8. 插入一张新区域的单区域 DVD。
9. 选择您国家或地区的正确的区域代码。
10. 单击**确定**。

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## 使用 Drive Letter Access (DLA)

提供的 Drive Letter Access (DLA) 使您可以将数据写入 DVD-RAM、DVD-RW、DVD-R、DVD+RW、DVD+R、CD-R 和 CD-RW 介质。DVD-RAM、DVD-RW、DVD+RW 和 CD-RW 介质可以写入多次，而 DVD-R、DVD+R 和 CD-R 介质只能进行格式化并且写入一次。

格式化并且写入 DVD-RAM、DVD-RW、DVD-R、DVD+RW、DVD+R、CD-R 或 CD-RW 介质:

1. 将光盘插入驱动器。
2. 双击**我的电脑**。右键单击“多功能刻录机”的盘符。
3. 单击**格式化**。格式化一张 DVD 可能最多花费 90 分钟。
4. 格式化完成后，您可以将文件拖放到“多功能刻录机”驱动器图标，或可以在“Windows 资源管理器”中移动文件。

使 CD-R 和 DVD-R 介质在其它计算机中兼容:

1. 双击**我的电脑**。右键单击“多功能刻录机”的盘符。
2. 单击**使兼容**。

在其它计算机中使用 UDF 格式化的 DVD-RAM、DVD-RW、DVD+RW 或 CD-RW 介质 (UDF Reader 包含在**用户指南和软件 CD**上)。要使用 UDF Reader，请按照此过程进行操作:

1. 将**用户指南和软件 CD** 插入您要在其中使用 UDF 格式光盘的计算机的 CD 或 DVD 驱动器。
2. 单击**开始**。
3. 单击**运行**。
4. 输入 `e:\UDF\language`，其中 *e* 是该 CD 或 DVD 驱动器的盘符，而 *language* 则是您的语言。
5. 单击**确定**。
6. 双击 **SETUP.EXE** 并按屏幕上的指示信息进行操作。

**注:** 只有那些没有再安装一个 DLA 程序的系统需要 UDF Reader。

**注:** 无法追加 DVD+R 介质。

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## 使用 RecordNow 软件

RecordNow 允许您刻录音频 CD、数据 CD 并且复制现有 CD。在 RecordNow 帮助中包含关于使用 RecordNow 的详细信息。可以通过按 RecordNow 菜单中的 F1 来访问 RecordNow 帮助。

要启动 Windows Me 或 Windows 2000 中的 RecordNow，请选择**开始**→**程序**→**IBM RecordNow**。

要启动 Windows XP 中的 RecordNow，请选择**开始**→**所有程序**→**RecordNow**。

一旦启动 RecordNow，请选择以下三个过程之一:

- **Make an exact copy:** 选择该选项来备份您自己的 CD 或制作您以前创建的 CD 的副本。在选择该选项后，RecordNow 将提示您插入要复制的光盘，然后将提示您何时插入空白光盘。
- **Make a music disc:** 选择该选项来创建音频 CD。第二个屏幕将询问您是否希望从硬盘上的 MP3 和 Wave 文件或者从其它音频 CD 制作音频 CD。也可以选择制作用于 MP3 播放器的光盘，那就是一张可以在独立的 MP3 播放器中播放的特别格式化的数据光盘。

- **Make a data disc:** 选择该选项来创建包含来自硬盘的数据文件的光盘。RecordNow 将询问您是否希望为 DLA 格式化光盘或制作用于和其它人享的数据光盘。RecordNow 将提示您插入空白光盘。然后出现一个屏幕，该屏幕使您能够在硬盘上拖放文件或者浏览以查找文件。
- 一旦启动 RecordNow，您同样可以执行特殊的操作：
  - 单击 **Favorites** 按钮将允许您装入以前保存的音频、数据、MP3 或 CD 映象以烧录新的副本。
  - 将 ISO 或 GI CD 映象拖到数据 CD 的文件框中将会直接把映象文件刻录到 CD 上。
  - 要通过 RecordNow 制作 CD 的 ISO 映象，请选择 **Copy a CD** 并且将刻录文件的目标记录器设置为硬盘。

**注:** 要限制 RecordNow 中的刻录速度，请选择 **Options**，并且在 Advanced 选项卡窗口中，从标题名为“Limit the Maximum recorder speed”的下拉框中选取速度。

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## 使用 Intervideo WinDVD Creator Plus

通过 Intervideo WinDVD Creator Plus，您可以捕获、编辑和刻录视频和音频文件。同样可以使用自己的视频和音频文件通过 Intervideo WinDVD Creator Plus 创建和刻录 DVD 视频。有关 Intervideo's WinDVD Creator Plus 功能的更多详细信息，请参考用户指南和软件 CD 上的联机《WinDVD Creator Plus 用户指南》。

在 WinDVD Creator Plus 主窗口中的主功能区域是 **Capture**、**Edit**、**Author** 和 **Make Movie**。您可以从这些功能导入和编辑自己的视频和音频文件；然后将它们保存到以下任一受支持的格式中：MPEG-1、MPEG-2、ASF、WMV 和 AVI。

当您已经准备好您的视频和音频文件后，通过执行 **Capture** 和 **Edit** 的步骤，然后可以从 **Author** 功能中添加定制的菜单。可以导入您自己的静态图像来用作菜单背景或选择样本图像之一。当电影就绪后，继续 **Make Movie**，该处可以选择用于创建电影的输出格式和视频标准。将您的电影写入光盘或将它保存到硬盘驱动器以便以后写入。如果使用 WinDVD Creator Plus 在硬盘驱动器上创建 DVD 映象，则可以从 Project 菜单选择 **Load Image to Burn**。

WinDVD Creator Plus 同样提供使用 **Disk Manager** 而无需使用硬盘驱动器上的任何附加空间来将视频直接刻录到可刻录 DVD 介质的能力。通过 Disk Manager，可以捕获新的视频或使用已有的视频文件，然后通过创建定制菜单完成电影。可以 +VR 或 -VR 视频格式创建电影。通过 Disk Manager，可以在任何时候编辑电影、添加或删除视频段或者更改定制的菜单。

**注:** 在老式的置顶 DVD 播放器中，+/-VR 格式化磁盘具有限制的兼容性。

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## 维护驱动器

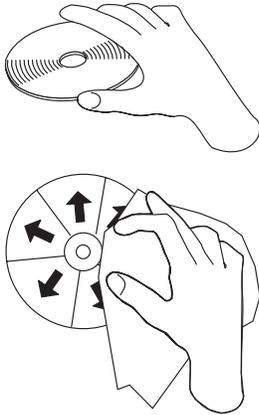
本节包含有关保养您的驱动器和与该驱动器一起使用的 CD 和 DVD 的信息。

## 处理和保养光盘

数字光盘是高密介质，必须谨慎操作并保持清洁，以确保它们保持可读。以下预防措施有助于延长光盘寿命。

**注意:**

以圆周运行擦拭光盘可能损坏光盘并导致数据丢失。



- 握住光盘边缘或中心孔来操作光盘。
- 不要触摸光盘表面。
- 始终将光盘贮藏在它们的原始软件包中。
- 始终将光盘贮藏在阳光直射的范围外。
- 始终将光盘贮藏在远离直接热源的地方。
- 不使用光盘时，请将其从计算机取出。
- 使用每张光盘前，请检查是否有裂纹。
- 请勿将光盘强行插入计算机 / 软件包。
- 请勿弯曲光盘。
- 不要在光盘表面书写。
- 不要使用工业用清洗剂来清洁光盘。

**要点:** 请勿使用有裂纹的光盘。

## 保养驱动器

要在操作过程中保护您的驱动器，请遵守以下预防措施进行操作：

- 当驱动器在使用时不要移动它。这样做可能导致数据错误，或损坏驱动器或介质。
- 避免使驱动器暴露在以下条件下：
  - 高湿度
  - 高温
  - 过多灰尘
  - 机械振动
  - 意外震动或跌落
  - 置于倾斜表面上
  - 直接日照
  - 意外的温度变化
- 不要将异物插入驱动器中。
- 不要将物品堆叠在驱动器上。
- 不要卸下驱动器外盖或试图维修驱动器。
- 在移动驱动器部件之前，从光盘抽屉中取出任何光盘，并确保抽屉已关闭。

保存原始包装材料。如果需要将驱动器部件装运到另一位置，则请使用原始包装材料以确保驱动器安全运送。

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## 附录 A. 产品规格

本附录包含以下信息：

- 物理规格
- 电源需求
- 环境需求
- 读速度
- 写速度

### 物理规格

该驱动器的物理规格<sup>1</sup>已列出在以下表格中。

物理规格	
高度	42 mm (1.7 in.)
宽度	148 mm (5.8 in.)
长度	190 mm (7.5 in.)
重量	920 g (2.0 lb.)

### 电源需求

以下表格按驱动器的电压级别列出了各电源规格。这些电源规格在驱动器的电源接口处测得，并且都是额定值。

电源规格	电压	平均值	最大值
电压为	5V dc	800 mA	1.5 A
电压为	12V dc	600 mA	1.8 A

### 环境需求

规格	运行时	非运行时
温度	+5° C 至 +45° C (+41° F 至 +113° F)	-30° C 至 +60° C (-22° F 至 140° F)
相对湿度 (非冷凝)	15% 到 85%	10% 到 90%

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1. 产品描述数据代表 IBM 的设计目标并提供用于比较的用途；实际结果可能基于各种因素而有所变化。本产品数据不构成保证。数据更改，恕不通知。

## 读速度

介质	读速度
DVD-ROM (单层)	6.9 - 16.2 MB/s (12X max.)
DVD-ROM (双层)	4.6 - 11.0 MB/s (8X max.)
DVD-R (4.7 GB)	4.6 - 11.0 MB/s (8X max.)
DVD+R (4.7 GB)	4.6 - 11.0 MB/s (8X max.)
DVD-RW (4.7 GB)	4.6 - 11.0 MB/s (8X max.)
DVD+RW (4.7 GB)	4.6 - 11.0 MB/s (8X max.)
DVD-RAM (V2.1, 4.7/9.4 GB, 3X 介质)	4.2 MB/s (3X ZCLV)
DVD-RAM (V1.0, 2.6 GB 介质)	2.8 MB/s (2X ZCLV)
CD-ROM	2.1 - 4.8 MB/s (32X max.)
CD-R	2.1 - 4.8 MB/s (32X max.)
CD-RW	1.5 - 3.6 MB/s (24X max.)
CD-DA (DAE)	1.5 - 3.6 MB/s (24X max.)

## 写速度

介质	写速度
DVD-R (常规 V2.0, 650 nm, 4X 介质)	5.5 MB/s (4X CLV)
DVD+R (4X 介质)	5.5 MB/s (4X CLV)
DVD-RW (V1.1)	2.8 MB/s (2X CLV)
DVD+RW	3.3 MB/s (2.4X CLV)
DVD-RAM (V2.1, 4.7/9.4 GB, 3X 介质, 验证关闭)	4.2 MB/s (3X ZCLV)
CD-R (24X 介质)	1.8 - 3.6 MB/s (24X ZCLV)
CD-RW (超高速介质)	1.8 - 2.4 MB/s (16X ZCLV)

注: 1X DVD = 1.385 MB/s; 1 MB/s =  $10^6$  字节 / 秒

1X CD = 150 KB/s; 1 KB/s =  $2^{10}$  字节 / 秒

1 MB =  $2^{20}$  字节; 1 KB =  $2^{10}$  字节

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## 附录 B. 问题解决

计算机问题可能是由于硬件、软件或人为的错误而引起。使用本节中的信息，您也许可以自己解决问题或收集有用的信息以发送给服务技术人员。您可能需要参考该计算机、操作系统或声卡的文档。

请检查以下列表，以获取可能修正您所碰到情况的任何问题描述。

- **您的计算机或驱动器没有正确运行，或忙指示灯没有亮起。**

请采取以下操作：

1. 检查在驱动器中的光盘是否标签朝上。
2. 检查所有的设备是否正确连接到计算机和电源插座。
3. 关闭计算机，拔下计算机和所有连接设备的电缆，并卸下计算机外盖。
4. 检查所有电源线和 IDE 电缆均已牢固连接。断开 IDE 电缆连接并检查其是否弯曲或插针未对齐。如果没有发现任何问题，则请重新连接该电缆。
5. 将计算机外盖装回原处，并重新连接所有电缆和电源线。打开计算机，重新启动操作系统，再按**打开 / 关闭**按钮。如果托盘未能打开并且忙指示灯没有亮起，则请关闭计算机并尝试使用另一个 4 芯直流电源线。
6. 检查该 IDE 电缆上的颜色编码边缘是否对准了 IDE 端口上的插针 1，并且最靠近该驱动器上的电源线。请参阅第 2-2 页的『步骤 5. 将电缆连接到驱动器』。
7. 检查该 IDE 电缆上的此驱动器和任何其它驱动器的设置是否正确。请参阅第 2-1 页的『步骤 3. 设置配置跳线』。
8. 请执行以下操作：
  - 如果 IDE 电缆的中间接口与系统板上的 IDE 端口连接，请卸下该接口并重新连接该电缆。
  - 如果 IDE 端口上只有一个设备，请将该电缆一端的接口连接到 IDE 端口，同时另一端的接口连接到设备上，保留中接口（如果有一个）开路。
  - 如果 IDE 端口上有两个设备，请将电缆一端的接口连接到 IDE 端口上。如果接有硬盘驱动器，则请将该硬盘连接到电缆的另外一端，再将该驱动器连接到中间的接口。

- **您无法访问该驱动器，或未显示 DVD-RAM (CD-ROM) 图标。**

当正确安装了驱动器后，DVD-RAM 或 CD-ROM 图标将显示在“我的电脑”窗口中。双击**我的电脑**。如果 CD-ROM 图标没有出现在打开的窗口，则请验证该驱动器是否已正确地安装。验证配置跳线设置是否正确。请参阅第 2-1 页的『步骤 3. 设置配置跳线』。重新启动计算机。如果仍然没有找到驱动器图标，则请继续以下步骤：

1. 单击**开始**。
2. 选择**设置**。
3. 选择**控制面板**。
4. 单击**系统**。
5. 单击**设备管理器**选项卡。
6. 双击**按类型查看设备**。
7. 从“设备管理器”窗口显示的列表中选择**硬盘控制器**。验证与控制器不存在冲突。设备状态指示控制器是否在正确工作。

8. 从“设备管理器”窗口显示的列表中选择 **CD-ROM**。验证列表中存在 CD-ROM 设备且没有冲突。设备状态指示设备是否在正确工作。
9. 单击**确定**。
10. 关闭所有窗口并重新启动计算机。

如果该设备图标仍然没有出现，则请检查电缆连接和设备跳线设置，并解决任何可能存在的冲突。

- **操作系统没有识别该驱动器，或该驱动器性能不稳定。**

某些计算机具有用于大容量存储设备的“兼容”和“高性能”方式。正常情况下，该驱动器在“高性能”方式下会更好运行。但是，如果驱动器在该方式下不能正确运行，则可能需要使用“兼容”方式。

请使用以下过程来检查计算机的配置设置信息。

1. 访问您的配置实用程序。
2. 选择 **Devices**。
3. 向下滚动至 **Mass Storage Devices** 区域。

有关选择 IDE 性能方式的附加详细信息，请参考随计算机提供的文档。

- **在装入设备驱动程序之后计算机没有识别该驱动器。**

检查“多功能刻录机”的设备驱动程序和计算机中的其它设备驱动程序或其它硬件是否不兼容。创建至少具有 CONFIG.SYS 和 AUTOEXEC.BAT 系统文件的系统软盘。

1. 在创建特殊的 CONFIG.SYS 和 AUTOEXEC.BAT 文件之前，请在方便的目录中建立这些文件的备份副本。在 DOS 提示符下，请执行以下操作：
  - a. 输入 copy CONFIG.SYS CONFIG.IBM 并按 Enter 键。
  - b. 输入 copy AUTOEXEC.BAT AUTOEXEC.IBM 并按 Enter 键。
2. 将一张空白、已格式化的软盘插入软盘驱动器。
3. 将 CONFIG.SYS 和 AUTOEXEC.BAT 文件复制到软盘上。
4. 关闭计算机并确保该系统软盘（您所创建的软盘）还在软盘驱动器中。
5. 重新启动计算机（计算机将从该系统软盘启动）。
6. 观察启动消息并确保装入了设备驱动程序 IBMIDECD.SYS。当装入 MSCDEX 时，观察计算机分配给“多功能刻录机”的盘符。
  - 如果计算机能够读取该光盘，则由 CONFIG.SYS 或 AUTOEXEC.BAT 文件所装入的各种设备驱动程序中很可能存在冲突。您需要解决此设备冲突。有关解决设备冲突的更多信息，请参考随计算机提供的文档。
  - 如果无法访问该光盘，则您可能有硬件问题。如果无法读取该光盘或 MSCDEX 没有分配盘符，则请转至下一步。
9. 关闭计算机，从计算机和所有连接设备的电源插座上拔下电缆，并卸下计算机外盖。
10. 断开除“多功能刻录机”以外所有 IDE 设备的 IDE 电缆和电源线的连接。
11. 将“多功能刻录机”配置为主设备并将它连接到主要 IDE 端口上的最后一个 IDE 接口。
12. 重新安装计算机外盖。重新连接键盘；将电源线插入电源插座。
13. 将系统软盘插入软盘驱动器并将数据光盘插入“多功能刻录机”。
14. 重新启动计算机。
15. 试图通过输入 dir C:（因为“多功能刻录机”是连接到 IDE 端口的唯一设备，所以它的驱动器是 C）来读取光盘。

- 如果计算机能够读取该光盘，则刻录机很可能与安装在您计算机上的某一设备存在冲突。您需要解决此设备驱动程序冲突。检查其它设备的配置跳线设置或参考我们的设备文档。
- 如果无法访问该光盘，则您可能有硬件问题。如果“多功能刻录机”仍然无法读取数据光盘，则该“多功能刻录机”可能有缺陷。请转至第 D-1 页的附录 D, 『Service and Support』。

- **不能读光盘。**

请采取以下操作:

1. 光盘可能已弄脏; 请如第 2-8 页的『处理和保养光盘』所述清洁光盘。
2. 光盘可能损坏; 请尝试使用另一张光盘。
3. 光盘不是 ISO-9660、High Sierra Group (HSG) 或 Universal Disc Format (UDF) 兼容的。请与购买处核实。

- **光盘不发声。**

1. 检查是否在使用数据 CD。
2. 调整音频适配器音量控件。请参阅随音频适配器和音频 CD 播放器程序提供的文档。
3. 关闭计算机, 从计算机和所有连接设备的电源插座上拔下电缆, 并卸下计算机外盖。确保用音频信号电缆将“多功能刻录机”和声卡连接起来。

- **您接收到一条错误消息。**

对于这些普通错误消息请采取以下操作:

- CDR-103

“多功能刻录机”中的光盘不是 High Sierra、ISO 9660 或 UDF 格式。  
“多功能刻录机”不支持该介质。

- CDR-101

当您在驱动器就绪之前尝试访问“多功能刻录机”时, 将会出现“没有准备好读取驱动器”的情况。在将光盘装入刻录机的装入托盘后, 当您试图访问该驱动器时忙指示灯将会亮起。在试图访问驱动器之前请等待直到忙指示灯不再亮着。

- **提供的音频电缆上的接口不适合音频适配器上的接口。**

某些音频适配器可能需要一根特殊的电缆。请参阅随音频适配器提供的文档。

您可能必须单独为该“多功能刻录机”购买音频电缆。如果在使用 IBM 计算机或 IBM 音频适配器, 请参考第 D-1 页的附录 D, 『Service and Support』。

- **“多功能刻录机”无法操作并且不允许光盘弹出。**

将需要手动弹出光盘。请参考第 2-5 页的『手动弹出光盘』。

- **在“我的电脑”中显示“多功能刻录机”直到添加附加软件, 但是不再显示于“我的电脑”中。**

1. 卸载所有和 CD 刻录相关的软件, 包含 Windows Media Player。
2. 删除在  
HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E965-E325-11CE-BFC1-08002BE10318}  
中发现的名称为“LowerFilters”的注册表值并且重新引导系统。
3. 重新安装所有和 CD 相关的软件, 包含 Media Player 9。



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## 附录 C. 定制设备驱动程序配置设置

Microsoft Windows Me 和 Windows 2000 Professional 有两个设备驱动程序配置参数：“自动插入通知”和 DMA。

“自动插入通知”参数使计算机能在光盘插入驱动器后自动开始播放或访问光盘。DMA 参数通过使计算机的 DMA 控制器处理从 CD 到内存的数据传输，释放计算机的微处理器以执行更多重要的任务来提高计算机的性能。例如，激活 DMA 可能使电影和游戏运行更平滑，因为微处理器将对视频分配更长的处理时间。

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### 对 Windows Me 启用 DMA

要在 Windows Me 中更改 DMA 参数设置，请执行以下操作：

1. 单击开始
2. 单击设置
3. 单击控制面板。
4. 单击查看所有控制面板选项。
5. 双击系统。
6. 单击设备管理器选项卡。
7. 双击 **CD-ROM**。
8. 单击要修改的驱动器。
9. 单击设置选项卡。
10. 单击以选择 **DMA** 复选框。
11. 单击确定。

---

### 为 Windows 2000 Professional 启用 DMA

要更改 Windows 2000 Professional 的参数设置，请执行以下操作：

1. 单击开始
2. 单击设置。
3. 单击控制面板。
4. 双击系统。
5. 单击硬件选项卡。
6. 单击设备管理器按钮。
7. 单击 **IDE ATA/ATAPI** 控制器以展开树。
8. 单击与该“多功能刻录机”所在的控制器相对应的设备（**Primary IDE** 或 **Secondary IDE**）。
9. 单击高级设置选项卡。
10. 选择传送模式下拉菜单并选择 **DMA**（若可用）。
11. 单击确定。
12. 单击关闭以关闭系统特性窗口。显示一条消息，通知您系统设置已更改。
13. 单击确定以重新启动计算机。

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## 对 Windows XP 启用 DMA

要从 Windows XP 桌面更改 DMA 参数设置，请执行以下操作：

1. 单击**开始**
2. 单击**控制面板**。
3. 单击**切换到经典视图**。
4. 双击**系统**。
5. 单击**硬件选项卡**。
6. 单击**设备管理器按钮**。
7. 单击 **IDE ATA/ATAPI 控制器**以展开树。
8. 双击该“多功能刻录机”所在的控制器（**主要 IDE 或次要 IDE**）。
9. 单击**高级设置选项卡**。
10. 选择与该“多功能刻录机”的位置（**设备 0 为主设备，设备 1 为从设备**）相应的**传送模式**下拉菜单。
11. 选择 **DMA**（若可用）。
12. 单击**确定**。

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## 附录 D. Service and Support

The following information describes the technical support that is available for your product, during the warranty period or throughout the life of the product. Refer to your 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 [www-3.ibm.com/pc/support/site.wss/](http://www-3.ibm.com/pc/support/site.wss/).

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 HelpCenter<sup>®</sup> 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 [www-3.ibm.com/pc/support/site.wss/](http://www-3.ibm.com/pc/support/site.wss/) 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

Country or Region	Telephone Number	Country or Region	Telephone Number
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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## 附录 E. 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.

**Hot 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 Multi-Burner Plus

Country or Region of Purchase	Warranty Period	Type of Warranty Service
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 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 [www-3.ibm.com/pc/support/site.wss/](http://www-3.ibm.com/pc/support/site.wss/) 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

1. This type of service is called ThinkPad<sup>®</sup> EasyServ or EasyServ in some countries.

<b>Country or Region</b>	<b>Telephone Number</b>	<b>Country or Region</b>	<b>Telephone Number</b>
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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## 附录 F. Notices

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## Electronic emissions notices

IBM Multi-Burner Plus

### 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 conformité a la réglementation d'Industrie Canada

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

### Deutsche EMV-Direktive (electromagnetische Verträglichkeit)

Zulassungsbesecheinigung 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 legislación 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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