IBM

IBM 多功能刻录机用户指南

IBM

IBM 多功能刻录机用户指南

注: 在使用本资料和其支持的产品之前,请务必阅读第 D-1 页的附录 D, 『Warranty information』和第 E-1 页的附录 E, 『Notices』下的信息。对本手册所包含的内容,IBM 公司拥有最终解释权,如有变更,恕不另行通知。

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安全: 请先阅读

Before installing this product, read the Safety Information.

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

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

Prije instalacije ovog produkta obavezno pročitajte Sigurnosne Upute.

Před instalací tohoto produktu si přečtěte příručku bezpečnostních instrukcí.

Læs sikkerhedsforskrifterne, før du installerer dette produkt.

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

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

Vor der Installation dieses Produkts die Sicherheitshinweise lesen.

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

לפני שתתקינו מוצר זה, קראו את הוראות הבטיחות.

A termék telepítése előtt olvassa el a Biztonsági előírásokat!

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

製品の設置の前に、安全情報をお読みください。

본 제품을 설치하기 전에 안전 정보를 읽으십시오.

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

Lees voordat u dit product installeert eerst de veiligheidsvoorschriften.

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

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

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

Перед установкой продукта прочтите инструкции по технике безопасности.

Pred inštaláciou tohto zariadenia si pečítaje Bezpečnostné predpisy.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Antes de instalar este producto lea la información de seguridad.

Läs säkerhetsinformationen innan du installerar den här produkten.

安裝本產品之前,請先閱讀「安全資訊」。

关于本书

本指南包含了有关"IBM"多功能刻录机"的信息并有以下几种语言版本可用:

- 英语
- 法语
- 德语
- 西班牙语
- 意大利语
- 巴西葡萄牙语
- 简体中文
- 繁体中文
- 日语

本指南分成以下几个部分:

安装与用户指南

本节包含了产品描述、安装和操作说明。

附录

本节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。

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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安装与用户指南

本节包含了 IBM 多功能刻录机的产品描述、硬件和软件的安装说明以及操作信息。

产品描述

本选件包意在供多媒体应用程序使用。该驱动器随附一张 CD,包含有用于以下操作系统的 MPEG-2 解码软件:

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

除了在 IBM Multi-Burner User's Guide and Software Disc 1 上提供的本《用户指南》以外,该选件包还包含了以下物品:

- · IBM 多功能刻录机
- 包含以下光盘的介质包:
 - 一张 4.7 千兆字节 (GB) DVD-RAM 光盘
 - 一张 4.7 GB DVD-RW 光盘
 - 一张 4.7 GB DVD-R 光盘
- IBM Multi-Burner User's Guide and Software Disc 2
- 四个安装螺钉(M3 x 5-mm, 开槽)
- 内部音频 "Y" 形电缆
- 《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。对于技术支持信息,请参阅第 D-1 页的附录 D,『Warranty information』。

该"多功能刻录机"与 DVD Forum DVD-Multi Recorder 规范兼容,并且可以刻录和读取 DVD-RAM、DVD-RW 和 DVD-R (一般使用 650 nm)介质。该驱动器也可以刻录 CD-R、CD-RW 和"高速 CD-RW"介质,并使用缓冲区欠载防护技术来进行可靠的 CD 刻录。该"多功能刻录机"可以读取许多其它格式的介质,包括 DVD Video、Video CD、音频 CD 和多段、扩展体系结构(XA)CD 以及 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。

软件描述

您的 IBM Multi-Burner User's Guide and Software Disc 1 和 Disc 2 包含以下软件:

roxio VideoWave:

此软件使您能够将视频文件刻录到 DVD-RW 或 DVD-R 介质中,这些介质可以在大多数独立的 DVD 播放机中播放。您还可以在刻录之前使用此软件来编辑和修改自己的视频资料。

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

• IBM Drive Letter Access (DLA)

此软件使您能够就像写入软盘一样,使用盘符来直接写入 CD-RW、CD-R 和 DVD-RAM、DVD-RW 以及 DVD-R 介质。您还可以格式化 DVD-RAM、DVD-RW 和 DVD-R 介质。通过 DLA,您可以拖放文件,创 建新目录或从任何应用程序将文件直接保存到"多功能刻录机"。

UDF Reader

此软件使您能够安装软件, 以通过 DVD 驱动器读取计算机上的 DVD-RAM、DVD-RW 和 CD-RW 介质。

IBM Record Now

此软件使您能够复制 CD、创建音频 CD、创建 MP3 CD 和创建数据 CD。您还可使用 RecordNow 来将数 据写人 DVD-R 和 DVD-RW 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

此软件使您能够在 DVD-RAM、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

此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。

安装要求

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 IDE 连接
- 120 MB 可用硬盘空间用于程序、1 GB 可用硬盘空间用于 DVD 制作功能
- DVD 制作功能所需要的屏幕分辨率为 1024 x 768 像素
- 音频适配器支持 44.1 或 48 kHz 采样率
- 可选立体声扬声器

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

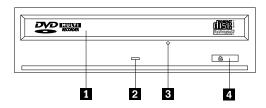
请采用以下操作预防措施来保护您的驱动器:

- 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 电缆或电源电缆。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

当驱动器从光盘读取, 写入光盘或播放光盘时, 此指示灯将亮起。

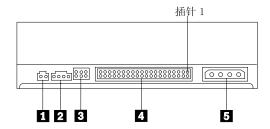
3 紧急弹出孔

该孔提供了对弹出机构的访问,以便可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

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。

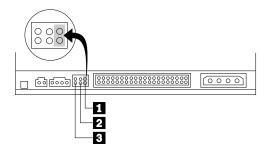
步骤 2. 打开驱动器包装

- 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。这是预设配置。
- 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。
- 一些非 IBM 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·

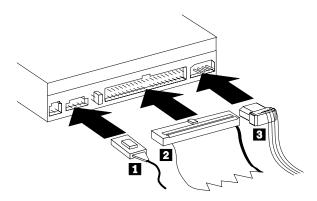
在将螺钉直接固定到驱动器中时,请务必使用选件包中的 M3 x 5-mm 安装螺钉。使用过长的螺钉可能损 坏驱动器。

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。

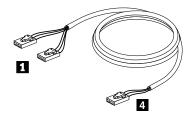
- 1. 将驱动器滑入托架中。您的计算机对于安装存储设备可能需要一些过程。有关存储设备的更多信息,请参 考随计算机提供的文档。
- 2. 将驱动器托架的螺钉孔与驱动器外壳或安装支架的螺纹孔对准。
- 3. 拧人螺钉, 先不要拧紧, 以检查其位置。通常, 每一侧使用两个螺钉。验证已正确对准; 然后拧紧螺钉以 固定驱动器。不要拧得过紧。

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 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,则可以将其余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电 缆接口 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。不要使用中间接口。

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 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、磁带机和磁盘驱动器)连接到与次要 IDE 端口相连的电缆上。

4. 将四芯电源电缆 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 User's Guide and Software Disc 中。User's Guide and Software Disc 1 包含了 本《用户指南》、IBM RecordNow、IBM Simple Backup 和 IBM DLA。User's Guide and Software Disc 2 包 含了 Intervideo WinDVD 和 roxio VideoWave。请完成以下过程来安装软件:

- 1. 决定您想要安装哪个软件。
- 2. 将 User's Guide and Software Disc 1 或 User's Guide and Software Disc 2 插入驱动器中。如果 CD 自 动启动,则请跳至步骤 6。
- 3. 如果 CD 没有自动启动,则请单击开始,然后单击运行。
- 4. 输入 e:\launch.bat, 其中 e 是 CD 或 DVD 驱动器的盘符。
- 5. 单击确定。
- 6. 选择语言。
- 7. 选择您要安装的软件。
- 8. 按屏幕上的指示信息进行操作。
- 9. 安装好该软件之后, 重新启动计算机。
- 10. 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。

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

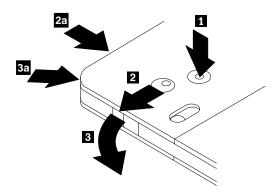
DVD-RAM 介质有单面和双面两种版本可供使用。

2.6 GB 和 4.7 GB 的版本是单面的。9.4 GB 的版本是双面的。介质两面上的数据都要存取、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,您首先必须将 光盘从盒中取出。

从盒中取出光盘



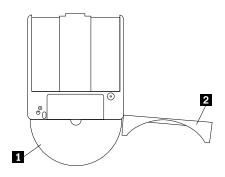
使用圆珠笔的笔尖,推动并折断锁销片 1 。要取出光盘,请使用圆珠笔在盒盖锁 2 上向下推并将盒盖 3 拔出。当盒盖打开时, 就可以取出光盘了。

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, 会发出咔嗒声。

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。

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. 将光盘或光盘盒插入托盘中,标签朝上。
- 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

该驱动器有四条挡板铸造在装入托盘中以用于垂直安装操作。

要插入光盘,请在关闭托盘前将其放置在下面两个挡板中。

要取出光盘,请打开托盘并从下面两个挡板处拿起光盘。

手动弹出光盘

如果驱动器变得无法操作并且不能弹出光盘、则请关闭计算机、并拉直大回形针以形成一个工具。拉直端必须 伸出至少 45 mm (1.8 in.) 长. 将伸出端插入驱动器前部的紧急弹出孔中(请参阅 1-3 页上的"驱动器前视 图")。推送回形针直到托盘打开。轻轻拉出托盘直到可以取出光盘。

使用 DVD 播放器软件

本节描述了如何使用和定制 DVD 播放软件。您可以在 User's Guide and Software Disc 1 上的自述文件中找 到有关 DVD 播放器软件的最新信息。

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 Video 光盘插入驱动器后, DVD 播放器软件将自动装入并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 媒体播放器"应用程序来播放 DVD Video 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 上所播送 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权,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 规范将世界分为七个独立的区域。对于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 回放系统必须支持 CSS 和 Macrovision 复制保护,这两种标准。

您首次将一张 DVD Video 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。

使用 Drive Letter Access (DLA)

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

要格式化并写人 DVD-R、CD-R、DVD-RAM、DVD-RW 或 CD-RW 介质:

- 1. 将光盘插入驱动器。
- 2. 双击我的电脑。右击"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, 您可以拖放文件到"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。

要使 CD-R 介质在其它计算机中兼容:

- 1. 双击我的电脑。右击"多功能刻录机"的盘符。
- 2. 单击使兼容。

要在其它计算机中使用 UDF 格式化的 DVD-RAM、DVD-RW 或 CD-RW 介质, UDF Reader 包含在 User's Guide and Software CD 中。要使用 UDF Reader、请按照此过程进行操作:

- 1. 将 User's Guide and Software 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\1anguage, 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: 只有那些没有对 CD-RW 或 DVD-RW 再安装一个 DLA 程序的系统需要 UDF Reader。

使用 roxio VideoWave

通过 roxio VideoWave, 您可以捕捉、编辑和录制视频和音频文件。您也可以使用自己的视频和音频文件通过 roxio VideoWave 来创建和刻录 DVD 视频。有关 roxio Videowave 功能的更多详细信息,请转至开始菜单中 的 VideoWave User's Guide。

Video Edit 窗口是 roxio VideoWave 的主窗口。在此窗口中,您可以将自己的视频和音频文件导入、编辑和转换成适当的格式。要回放 DVD 视频,视频文件必须转换成音频为 48 kHz 的 MPEG-2 文件。您可以通过 VideoWave 视频编辑窗口中的 **Produce** 按钮来做此选择。

当已准备好并保存了您的视频和音频文件后,请单击 VideoWave 视频编辑窗口左边的 **DVD** 按钮以启动 DVD 制作应用程序。要使用该制作应用程序,请使用 **Import** 将您的视频放进库中;然后按要播放的顺序来拖放它们。您也可以导入静止的图像来用作菜单背景以及导入音频剪辑来与菜单和视频一起使用。

您可以按窗口顶部的菜单或视频的时间线所播放的顺序来拖放内容。选择一个菜单, 使您能够拖动按钮到菜单上。

当创建了您的 DVD 视频后,请单击制作应用程序中 **DVD** 图标来将该视频刻录到硬盘驱动器、DVD-R、DVD-RW 或 DVD-RAM 介质上。如果在硬盘驱动器中创建了回放窗口,则您以后可以使用拖放方法将其复制到 DVD-RAM、DVD-RW 或 DVD-R 介质中。直接刻录到 DVD-R 介质中的 DVD 视频可以在几乎任何 DVD 播放器或计算机中回放。刻录在 DVD-RAM 或 DVD-RW 介质上的 DVD 视频可以在 DVD-RAM 驱动器、DVD-Multi Player ROM 驱动器和某些 DVD 视频播放器中回放。

如果使用 VideoWave 在您的硬盘上创建 DVD 视频回放窗口,则可以使用 RecordNow 来将文件刻录在 DVD-R 上,可以在大多数 DVD 播放器和带有 DVD-ROM 驱动器的计算机中播放此 DVD-R。

维护驱动器

本节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。

保养 CD 或 DVD

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。
- 要除去灰尘或指纹,请用柔软、不起毛的布从中心向边缘擦拭光盘。
- 不要在光盘表面书写。
- 不要将光盘置于直接日照下。
- 不要使用工业用清洗剂来清洁光盘。
- 不要弯曲光盘。

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。

附录 A. 产品规格

本附录包含以下信息:

- 物理规格
- 电源要求
- 环境要求
- 读速度
- 写速度

物理规格

该驱动器的物理规格1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	185 mm (7.3 in.)	
重量	830 g (1.8 lb.)	

电源要求

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	1000 mA	1.8 A

环境要求

规格	运行时	非运行时
温度(非冷凝)	+5° C 至 +45° C	-20° C 至 +60° C
	(+41° F 至 +113° F)	(-4° 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为比较的用途;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)	4.1 - 10X 恒定角速度 (CAV))
DVD-ROM (双层)	3.3 - 8X CAV
DVD-R (4.7 GB)	3.3 - 8X CAV
DVD-RW (4.7 GB)	3.3 - 8X CAV
DVD-RAM (4.7/9.4 GB)	2X 区域恒定线速度(ZCLV)
DVD-RAM (2.6 GB)	1X ZCLV
CD-ROM	14 - 32X CAV
CD-R	14 - 32X CAV
CD-RW	10 - 24X CAV
CD-DA (DAE)	6.7 - 16X CAV

写速度

介质	写速度
DVD-R (一般使用, 650 nm)	2X CLV
DVD-RW (V1.1)	1X CLV
DVD-RAM (V2.1, 4.7/9.4 GB)	2X ZCLV
CD-R	12X CLV
CD-RW	8X CLV

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。您也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. 检查所有电源电缆和 IDE 电缆均已安全连接。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 4 芯直流电源电缆。
- 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电缆。请参阅第 1-5 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 1-4 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,请卸下此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,保留中间接口(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 1-4 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"模式下将发挥更佳功能。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硬件是否兼容。创建具有最少系统文件 CONFIG.SYS 和 AUTOEXEC.BAT 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磁盘驱动器。
- 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)还在磁盘驱动器中。
- 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。
- 7. 将一张数据 CD 装入刻录机的装入托盘; 然后等待直到"忙"指示灯不亮。
- 8. 通过输入 dir x: 来试着读取该光盘, 其中 x 是 "多功能刻录机" 在 MSCDEX 消息之后所分配到的 盘符。
 - 如果计算机能够读取该光盘,则由 CONFIG.SYS 或 AUTOXEC.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. 断开除了"多功能刻录机"以外所有 IDE 设备的 IDE 和电源电缆连接。
- 11. 将"多功能刻录机"配置为主设备并将它连接到主 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. 将系统软盘插入磁盘驱动器并将一张数据光盘插入"多功能刻录机"。
- 14. 重新启动计算机。
- 15. 通过输入 dir C: 来试着读取该光盘(因为"多功能刻录机"是连接到 IDE 端口的唯一设备, 所以它的盘符是 C。)

- 如果计算机能够读取该光盘,则刻录机很可能与某一设备存在冲突。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 刻录机可能有缺陷。请转至第 D-1 页的附录 D, 『Warranty information』。

• 不能读光盘。

请采取以下操作:

- 1. 光盘可能已弄脏; 请如第 1-10 页的 《 保养 CD 或 DVD 』 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 协商。

• 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制钮。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"多功能刻录机"就绪之前尝试访问该驱动器,则将会发生"没有准备好读取驱动器"的情况。 在将光盘装人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。

您可能不得不单独为该"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, 『Warranty information』。

• "多功能刻录机"无法运行并不允许光盘弹出。

关闭计算机并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 端插入该驱动器前部的紧急弹出孔(请参阅 1-3 页上的"驱动器前视图")。推送回形针直到托盘打开。轻 轻拉出托盘直到可以取出光盘。

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 参数将提高计算机的性能,它使计算机的 DMA 控制器来处理从 CD 到内存的数据传输,释放计算机的微处理器来执行更多重要的任务。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。

对 Windows Me 启用 DMA

要在 Windows Me 中更改 DMA 参数, 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. 单击开始。
- 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 控制器以扩展树。
- 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. 单击确定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。

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 控制器以扩展树。
- 8. 双击与该"多功能刻录机"所在的控制器相对应的设备(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)相应的适当的传送模式下拉菜
- 11. 选择 DMA (若可用)。
- 12. 单击确定。

附录 D. Warranty information

This section contains the warranty period for your product, information about obtaining warranty service and support, and the IBM Statement of Limited Warranty.

Warranty period

Contact your place of purchase for warranty service information. Some IBM Machines are eligible for on-site warranty service depending on the country or region where service is performed.

Machine - IBM Multi-Burner

Warranty period - One year

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.

Warranty information on the World Wide Web

The IBM Machine Warranties Web site at http://www.ibm.com/servers/support/machine_warranties/ contains a worldwide overview of the IBM Limited Warranty for IBM Machines, a glossary of terms used in the Statement of Limited Warranty, Frequently Asked Questions (FAQ), and links to Product Support Web pages. The IBM Statement of Limited Warranty is available from this Web site in 29 languages in Portable Document Format (PDF).

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.

Telephone technical support

Installation and configuration support through the IBM HelpCenter® 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

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- · 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.

Support 24 hours a day, 7 days a week	
Canada (Toronto only)	416-383-3344
Canada (all other)	1-800-565-3344
U.S.A. and Puerto Rico	1-800-772-2227
All other countries and regions	Go to http://www.ibm.com/pc/support/, and click Support Phone List .

IBM Statement of Limited Warranty Z125-4753-06 8/2000

Part 1 - General Terms

This Statement of Limited Warranty includes Part 1 - General Terms and Part 2 - Country-unique Terms. 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, from IBM or your reseller. 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. Unless IBM specifies otherwise, the following warranties apply only in the country where you acquire the Machine. Nothing in this Statement of Limited Warranty affects any statutory rights of consumers that cannot be waived or limited by contract. If you have any questions, contact IBM or your reseller.

The IBM Warranty for Machines: IBM warrants that each Machine 1) is free from defects in materials and workmanship and 2) conforms to IBM's Official Published Specifications ([Specifications]). The warranty period for a Machine is a specified, fixed period commencing on its Date of Installation. The date on your sales receipt is the Date of Installation unless IBM or your reseller informs you otherwise.

If a Machine does not function as warranted during the warranty period, and IBM or your reseller are unable to either 1) make it do so or 2) replace it with one that is at least functionally equivalent, you may return it to your place of purchase and your money will be refunded.

Extent of Warranty: The warranty does not cover the repair or exchange of a Machine resulting from misuse, accident, modification, unsuitable physical or operating environment, improper maintenance by you, or failure caused by a product for which IBM is not responsible. The warranty is voided by removal or alteration of Machine or parts identification labels.

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. THESE WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM JURISDICTION TO JURISDICTION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF EXPRESS OR IMPLIED WARRANTIES. SO THE ABOVE EXCLUSION OR LIMITATION MAY NOT APPLY TO YOU. IN THAT EVENT, SUCH WARRANTIES ARE LIMITED IN DURATION TO THE WARRANTY PERIOD. NO WARRANTIES APPLY AFTER THAT PERIOD.

Items Not Covered by Warranty: 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 I how-to I questions and those regarding Machine set-up and installation, will be provided WITHOUT WARRANTIES OF ANY KIND.

Warranty Service: To obtain warranty service for a Machine, contact IBM or your reseller. If you do not register your Machine with IBM, you may be required to present proof of purchase.

During the warranty period, IBM or your reseller, if approved by IBM to provide warranty service, provides without charge certain types of repair and exchange service to keep Machines in, or restore them to, conformance with their Specifications. IBM or your reseller will inform you of the available types of service for a Machine based on its country of installation. At its discretion, IBM or your reseller will 1) either repair or exchange the failing Machine and 2) provide the service either at your location or a service center. IBM or your reseller will also manage and install selected engineering changes that apply to the Machine.

Some parts of IBM Machines are designated as Customer Replaceable Units (called 『CRUs』), e.g., keyboards, memory, or hard disk drives. IBM ships CRUs to you for replacement by you. You must return all defective CRUs to IBM within 30 days of your receipt of the replacement CRU. You are responsible for downloading designated Machine Code and Licensed Internal Code updates from an IBM Internet Web site or from other electronic media, and following the instructions that IBM provides.

When 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. 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.

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 problem determination, problem analysis, and service request procedures that IBM or your reseller provides;
 - b. secure all programs, data, and funds contained in a Machine;
 - c. provide IBM or your reseller with sufficient, free, and safe access to your facilities to permit them to fulfill their obligations; and
 - d. inform IBM or your reseller of changes in a Machine's location.

IBM is responsible for loss of, or damage to, your Machine 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 is responsible for any of your confidential, proprietary or personal information contained in a Machine which you return to IBM or your reseller for any reason. You should remove all such information from the Machine prior to its return.

Limitation of Liability: 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.

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 LIABLE FOR ANY OF THE FOLLOWING: 1) THIRD-PARTY CLAIMS AGAINST YOU FOR DAMAGES (OTHER THAN THOSE UNDER THE FIRST ITEM LISTED ABOVE); 2) LOSS OF, OR DAMAGE TO, YOUR RECORDS OR DATA; OR 3) SPECIAL, INCIDENTAL, OR INDIRECT DAMAGES OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES, LOST PROFITS OR LOST SAVINGS, EVEN IF IBM, ITS SUPPLIERS OR YOUR RESELLER IS INFORMED OF THEIR POSSIBILITY. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

Governing Law

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 Agreement, without regard to conflict of law principles.

Part 2 - Country-unique Terms

AMERICAS

BRAZIL

Governing Law: The following is added after the first sentence: Any litigation arising from this Agreement will be settled exclusively by the court of Rio de Janeiro.

NORTH AMERICA

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

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

UNITED STATES

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

ASIA PACIFIC

AUSTRALIA

The IBM Warranty for Machines: 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 I laws of the country in which you acquired the Machine I in the first sentence: laws of the State or Territory.

CAMBODIA, LAOS, AND VIETNAM

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

The following is added to this Section: Disputes and differences arising out of or in connection with this Agreement shall be finally settled by arbitration which shall be held in Singapore in accordance with the rules of the International Chamber of Commerce (ICC). The arbitrator or arbitrators designated in conformity with those rules shall have the power to rule on their own competence and on the validity of the Agreement to submit to arbitration. The arbitration award shall be final and binding for the parties without appeal and the arbitral award shall be in writing and set forth the findings of fact and the conclusions of law.

All proceedings shall be conducted, including all documents presented in such proceedings, in the English language. 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 before proceeding upon the reference. The third arbitrator shall act as chairman of the proceedings. Vacancies in the post of chairman shall be filled by the president of the ICC. 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.

The English language version of this Agreement prevails over any other language version.

HONG KONG AND MACAU

Governing Law: The following replaces I laws of the country in which you acquired the Machine I in the first sentence: laws of Hong Kong Special Administrative Region.

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;
- 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, IBM's liability will be limited to the charge paid by you for the individual Machine that is the subject of the claim.

JAPAN

Governing Law: The following sentence is added to this Section: Any doubts concerning this Agreement will be initially resolved between us in good faith and in accordance with the principle of mutual trust.

NEW ZEALAND

The IBM Warranty for Machines: 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

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 this Section: Both you and IBM consent to the application of the laws of the State of New York (except when local law requires otherwise) to govern, interpret, and enforce all your and IBM's rights, duties, and obligations arising from, or relating in any manner to, the subject matter of this Agreement, without regard to conflict of law principles.

Any disputes arising from or in connection with this Agreement will first be resolved by friendly negotiations, failing which either of us has the right to submit the dispute to the China International Economic and Trade Arbitration Commission in Beijing, the PRC, for arbitration in accordance with its arbitration rules in force at the time. The arbitration tribunal will consist of three arbitrators. The language to be used therein will be English and Chinese. An arbitral award will be final and binding on all the parties, and will be enforceable under the Convention on the Recognition and Enforcement of Foreign Arbitral Awards (1958).

The arbitration fee will be borne by the losing party unless otherwise determined by the arbitral award.

During the course of arbitration, this Agreement will continue to be performed except for the part which the parties are disputing and which is undergoing arbitration.

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.

Warranty Service: If you purchase an IBM Machine in Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland or United Kingdom, 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 an IBM Personal Computer Machine in Albania, Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Hungary, Kazakhstan, Kirghizia, 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 an IBM 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 authorized service provider. You are responsible for transportation costs for Machines located outside 50 kilometers of an IBM authorized service provider.

Governing Law: The applicable laws that govern, interpret and enforce rights, duties, and obligations of each of us arising from, or relating in any manner to, the subject matter of this Statement, without regard to conflict of laws principles, as well as Country-unique terms and competent court for this Statement are those of the country in which the warranty service is being provided, except that in 1) Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Hungary, Former Yugoslav Republic of Macedonia, Romania, Slovakia, Slovenia, Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan, the laws of Austria apply; 2) Estonia, Latvia, and Lithuania, the laws of Finland apply; 3) Algeria, Benin, Burkina Faso, Cameroon, Cape Verde, Central African Republic, Chad, Congo, Djibouti, Democratic Republic of Congo, Equatorial Guinea, France, Gabon, Gambia, Guinea, Guinea-Bissau, Ivory Coast, Lebanon, Mali, Mauritania, Morocco, Niger, Senegal, Togo, and Tunisia, this Agreement will be construed and the legal relations between the parties will be determined in accordance with the French laws and all disputes arising out of this Agreement or related to its violation or execution, including summary proceedings, will be settled exclusively by the Commercial Court of Paris; 4) 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, United Kingdom, West Bank/Gaza, Yemen, Zambia, and Zimbabwe, this Agreement will be governed by English Law and disputes relating to it will be submitted to the exclusive jurisdiction of the English courts; and 5) in Greece, Israel, Italy, Portugal, and Spain any legal claim arising out of this Statement will be brought before, and finally settled by, the competent court of Athens, Tel Aviv, Milan, Lisbon, and Madrid, respectively.

THE FOLLOWING TERMS APPLY TO THE COUNTRY SPECIFIED:

AUSTRIA AND GERMANY

The IBM Warranty for Machines: 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 six 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.

Extent of Warranty: The second paragraph does not apply.

Warranty Service: 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.

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).

IRELAND

Extent of Warranty: 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 items one and two of the first paragraph of this Section: 1. death or personal injury or physical damage to your real property solely caused by IBM's negligence; and 2. the amount of any other actual direct damages, up to 125 percent of the charges (if recurring, the 12 months' charges apply) for the Machine that is the subject of the claim or which otherwise gives rise to the claim.

Applicability of suppliers and resellers (unchanged).

The following paragraph is added at the end of this Section: IBM's entire liability and your sole remedy, whether in contract or in tort, in respect of any default shall be limited to damages.

ITALY

Limitation of Liability: The following replaces the second sentence in the first paragraph: In each such instance unless otherwise provided by mandatory law, IBM is liable for no more than: 1. (unchanged) 2. as to any other actual damage arising in all situations involving nonperformance by IBM pursuant to, or in any way related to the subject matter of this Statement of Warranty, IBM's liability, will be limited to the total amount you paid for the Machine that is the subject of the claim. Applicability of suppliers and resellers (unchanged).

The following replaces the third paragraph of this Section: Unless otherwise provided by mandatory law, IBM and your reseller are not liable for any of the following: (items 1 and 2 unchanged) 3) indirect damages, even if IBM or your reseller is informed of their possibility.

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 items 1 and 2 of the first paragraph of this Section:

- 1. death or personal injury or physical damage to your real property solely caused by IBM's negligence;
- 2. the amount of any other actual direct damages or loss, up to 125 percent of the charges (if recurring, the 12 months' charges apply) for the Machine that is the subject of the claim or which otherwise gives rise to the claim;

The following item is added to this paragraph: 3. breach of IBM's obligations implied by Section 12 of the Sale of Goods Act 1979 or Section 2 of the Supply of Goods and Services Act 1982.

Applicability of suppliers and resellers (unchanged).

The following is added to the end of this Section: IBM's entire liability and your sole remedy, whether in contract or in tort, in respect of any default shall be limited to damages.

附录 E. Notices

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Electronic emissions notices

IBM Multi-Burner

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:

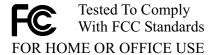
- · Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an IBM authorized dealer or service representative for help.

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



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)

Zulassungbescheinigunglaut 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 Übereinstimmungmit 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 50082-1 und EN 55022 Klasse B.

EN 50082-1 Hinweis:

Wird dieses Gerät in einer industriellen Umgebung betrieben (wie in EN 50082-2 festgetlegt), dann kann es dabei eventuell gestört werden. In solch einem FA11 ist der Abstand bzw. die Abschirmungzu der industriellen Störquelle zu vergröβern. I

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 89/366/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 électromagnética)

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 le apparecchiature di informatica Classe B ai sensi del Norma Europea EN 55022. I limiti delle apparecchiature della Classe B sono stati stabiliti al fine di fornire ragionevole protezione da interferenze mediante dispositivi di comunicazione in concessione in ambienti residenziali tipici.

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

高調波ガイドライン適合品

IBM

部件号: 22P6972

中国印刷

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