



International ISDN PC Card

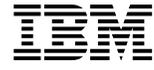
User's Guide

Note: Before using this information and the product it supports, be sure to read the information under Appendix B, “Product warranties and notices” on page B-1

First Edition (May 2000)

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About this book

This manual contains instructions for installing and using the IBM International ISDN PC Card. The manual is divided into two parts:

Part 1: Installation and user's guide

This guide contains the product description, hardware and software installation instructions, and product use and maintenance information.

Part 2: Appendixes

The appendixes contain help and service information, the product warranties, and notices.

Note: The illustrations in this manual might be slightly different from your hardware.

Part 1: Installation and user's guide

This section contains the product and software descriptions and installation guide.

Product description

The IBM® International ISDN PC Card is a passive ISDN adapter in PCMCIA (credit card type) format that works on any basic rate ISDN interface. You can use the card with one B channel at 64 Kbps or with two B channels simultaneously (multilinked) at 128 Kbps.

The adapter and the preinstalled Fritz!32 software works with Microsoft® Windows® 95, Windows 98, Windows NT®, and Windows 2000.

Along with this manual, your option package includes:

- xxxx
- xxxx
- xxxx
- *IBM International ISDN PC Card CD*

If any of these items are missing or damaged, contact your reseller.

Software description

The following table lists the file directories available on the *IBM International ISDN PC Card Drivers CD*.

Directory	Description
\PORTCAPI	Port device drivers for Windows 95, Windows 98, Windows NT, and Windows 2000
\TOOLS	Tools, fixes, and updates
\WIN2000CAPI	2.0-compliant device drivers for the IBM International ISDN PC Card for Windows 2000
\WIN95CAPI	2.0-compliant device drivers for the IBM International ISDN PC Card for Windows 95
\WIN98CAPI	2.0-compliant device drivers for the IBM International ISDN PC Card for Windows 98
\WINNTCAPI	2.0-compliant device drivers for the IBM International ISDN PC Card for Windows NT 4.0

Before you begin

Before you install your International ISDN PC Card, visit the following Web sites for helpful information on Windows 95, Windows 98, and Windows 2000:

- Windows 95 update Web site:
<http://www.microsoft.com/windows95/downloads>
- Microsoft Dial-Up Networking 1.3 Update download Web site for Windows 95:
http://www.microsoft.com/windows95/downloads/contents/wurecommended/s_wunetworking/dun13win95/license.asp
- Windows 98 update Web site:
<http://www.microsoft.com/windows98/downloads/corporate.asp>
- Windows 2000 update Web site:
<http://www.microsoft.com/windows2000/downloads>

To determine if you need to install a particular fix or update for any Microsoft Windows operating system, contact Microsoft or your computer manufacturer.

To install this PC card, you must have the following:

- The documentation for your computer
- The installation CD for your operating system

Note: If you do not have a CD ready for Windows 95 or Windows 98, you might have the CAB files for Windows 95 or Windows 98 on the hard disk drive of your computer. If you are using Windows NT or Windows 2000, you might have the I386 directory and its subdirectories of the original CDs on the hard disk drive of your computer.

Installing the device drivers in Windows 95

Before installing the device drivers for Windows 95, determine the version of Windows 95 on your computer by doing the following:

1. Click **Start**
2. Select **Settings**.
3. Click **Control Panel**
4. Double-click **System**
5. Click the **General** tab.
6. In the System window, locate the version number of your operating system.

7. Find the version number in the following table.

Note: Dates are in dd/mm/yy format

Release	Version	File dates
Windows 95 retail or OEM	400.95	11/07/95
Windows 95 retail SP1	4.00.950A	11/07/95
OEM Service Release 1	4.00.950A	11/07/95
OEM Service Release 2	4.00.1111* (4.00.950B)	24/08/96
OEM Service Release 2.1	4.03.1212-1214* (4.00.950B)	24/08/96-27/08/97
OEM Service Release 2.5	4.03.1214* (4.00.950C)	24/08/96-18/11/97

Note: If you are running the initial release of Windows 95 (Windows 95 retail or OEM), you must upgrade it to Windows 95 SP1 by downloading the Service Pack for your Windows 95 version from the Microsoft Web site at

<http://www.microsoft.com/windows/software/localize/localize.htm>

Removing PCMCIA sockets from notebook computers

PCMCIA support software such as Systemsoft CardWizard is included in the Windows 95 preloads for IBM ThinkPad® computers and some non-IBM notebook computers. You must remove the support software in order for your computer card to work in Windows 95. To remove the PCMCIA support software, do the following:

1. Click **Start**.
2. Select **Settings**.
3. Click **Control Panel**.
4. Double-click **Add/Remove Programs**.
5. Select **SystemSoft CardWorks**.
6. Click **Add/Remove**.
7. Follow the on-screen instructions.
8. Restart your computer to complete the software removal.

To remove the PCMCIA sockets, do the following:

1. Click **Start**.
2. Select **Settings**.
3. Click **Control Panel**.
4. Double-click **System**.

5. Click the **Device Manager** tab. In the Device Manager window, a yellow exclamation mark displays beside the two PCMCIA sockets.

Note: Some Windows 95 versions might show only one PCMCIA socket instead of two.

6. Select both PCMCIA sockets and click **Remove**.
7. Restart your computer. Windows 95 reinstalls the device drivers for the PCMCIA sockets.

Note: Ensure that you have both sockets removed, if applicable.

To confirm the installation of the device drivers for the PCMCIA sockets, do the following:

1. Click **Start**.
2. Select **Settings**.
3. Click **Control Panel**.
4. Double-click **System**.
5. Click the **Device Manager** tab.
6. Verify that the device drivers are listed in the displayed list.
7. Click **OK**.

To configure the PCMCIA device drivers, do the following:

1. Click **Start**.
2. Select **Settings**.
3. Click **Control Panel**.
4. Double-click **PC Card (PCMCIA)**.
5. Follow the on-screen instructions.
6. Restart your computer. The PCMCIA adapters are now installed.

Upgrading the Dial-up networking in Windows 95

In order to operate the International ISDN PC Card properly you must have Microsoft Windows 95 with Service Pack 1 (Windows 95 version 4.00.950A) or higher installed on your computer. To check if you have a Dial-Up Networking or ISDN accelerator kit installed, do the following:

1. Click **Start** → **Settings** → **Control Panel**; then double-click **Add/Remove Programs**.
2. In the Install/Uninstall window, you can check whether a newer version of the Microsoft Dial-Up Networking update is installed. Select **Dial-Up Networking Upgrade 1.2**; then click **Add/Remove** to remove the older Dial-Up Networking upgrade.
3. Restart your computer and apply the Microsoft Dial-Up Networking 1.3 Upgrade from the CD directory \TOOLS\WIN95\DUN13 and the corresponding language version that applies to your operating system.

4. Execute the DUN13xx.EXE; then follow the on-screen instructions.
Note: If your country version is not available on the CD you can install the English Dial-Up Networking update on your computer.
5. If there are no entries under Install/Uninstall referring to a Dial-Up Networking Update then click the **Windows Setup** tab.
6. Double-click **Communications**; then click to uncheck the box next to **Dial-Up Networking**.
7. Click **OK**.
Note: If you have the Microsoft ISDN 1.1 Accelerator Pack installed, a window opens informing you that you are about to remove it. Click **Yes** to confirm the removal.
8. Restart your computer and apply the Microsoft Dial-Up Networking 1.3 Upgrade from the CD directory \TOOLS\WIN95\DUN13 and the corresponding language version that applies to your operating system.
9. Execute the DUN13xx.EXE and follow the on-screen instructions.
Note: If your country version is not available on the CD you can install the English Dial-Up Networking update on your computer.

Installing the International ISDN PC Card in Windows 95

This section provides information on installing the International ISDN PC Card in Windows 95

Windows 95 Service Release 1

To install your International ISDN PC Card, do the following:

1. Turn off your computer and select a PCMCIA slot. Insert the International ISDN PC Card into this slot without any cable attached to it.
2. Turn your computer back on again. The New Hardware Found wizard detects an ISDN-CARD.
3. Insert the *IBM International ISDN PC Card Drivers* CD into your CD-ROM drive. Select **Driver from disk provided by hardware manufacturer**; then click **OK**.
4. The Install From Disk window opens. Click **Browse**; then select the CD-ROM drive letter in the Open window that contains the *IBM International ISDN PC Card Driver* CD.
5. Double-click the **Win95** directory; then click **OK**.
6. The Install From Disk window opens again. Click **OK** to confirm the installation of the device drivers.
7. The Select Device window opens. Click **OK** to install the device drivers.
8. The next window enables you to select the installation language. Confirm English by clicking **OK**; then **Continue**.
9. The next window enables you to specify the target path for the drivers. The default is IBM_ISDN. Click **Continue** to confirm this path, or type the target drive in the **Directory** entry box.

10. The next window enables you to select the appropriate D-channel protocol. Choose **NI1** or **5ESS** in the United States, or **DSS1 (Euro-ISDN)** in Europe. Click **Continue**. The next window will inform you what resources have been taken by the International ISDN PC Card.
11. Plug in the PC card cable.

You are now ready to use any CAPI 2.0 compliant software with your International ISDN PC Card.

Note: If you also use non-CAPI 2.0 compliant software, go to "Installing the CAPI Port drivers" on page 1-x.

Windows 95 Service Release 2.x

To install the International ISDN PC Card, do the following:

1. Turn off your computer and select a PCMCIA slot. Insert the International ISDN PC Card into this slot without any cable attached to it.
2. Turn your computer back on again. The New Hardware Found wizard detects an ISDN-CARD. Insert the *IBM International ISDN PC Card Drivers CD* into your CD-ROM drive.
3. The Update Device Driver Wizard opens. Click **Next**.
4. When the Update Device Driver Wizard has finished searching for the device drivers, click **Other Locations**; then **Browse**. In the Browse for Folder window, select the CD-ROM drive letter that contains the *IBM International ISDN PC Card Driver CD*.
5. Click **Win95**; then **OK**.
6. In the Select Other Location window click **OK**, then **Finish**.
7. An error message will be displayed saying, 'Please insert the disk labelled "IBM ISDN PC Card Installation Windows 95", then click OK.' Click **OK** to close this error message.
8. In the Copying Files window, click **Browse**; then select the **Win95** directory of the CD in the Open window. Click **OK**; then click **OK** again.
9. The next window enables you to select the installation language. Confirm English by clicking **OK**; then **Continue**.
10. The next window enables you to specify the target path for the drivers. The default is `IBM_ISDN`. Click **Continue** to confirm this path, or type the target drive in the **Directory** entry box.
11. The next window lets enables you to select the appropriate D-channel protocol. Select **NI1** or **5ESS** in the United States, or **DSS1 (Euro-ISDN)** in Europe. Click **Continue**.
12. The next window will inform you what resources have been taken by the IBM International ISDN PC Card. Plug in the PC card cable.

You are now ready to use any CAPI 2.0 compliant software with your ISDN International PC Card.

Note: If you also use non-CAPI 2.0 compliant software, go to "Installing the CAPI Port drivers" on page 1-x.

Installing the International ISDN PC Card in Windows 98

Note: The installation for the International ISDN PC Card is the same for both Windows 98 First Edition and Windows 98 Second Edition.

To install the International ISDN PC Card, do the following:

1. Turn off your computer and select a PCMCIA slot. Insert the International ISDN PC Card into this slot without any cable attached to it.
2. Turn your computer back on again. The New Hardware Found wizard detects an ISDN-CARD. Insert the *IBM International ISDN PC Card Drivers* CD into your CD-ROM drive.
3. The Add New Hardware Wizard opens and informs you that it is searching for the drivers for the adapter. Click **Next**.
4. Click **Next** to confirm that Windows should Search for the best driver for your device (Recommended).
5. Click to check the box next to **Specify a location**; then click **Browse**.
6. Select the CD-ROM drive letter that contains the *IBM International ISDN PC Card Drivers* CD. Click the **Win98** directory; then click **OK**.
7. Click **Next** to start the driver installation. A window opens, informing you that it is ready to install the FPCMSET.INF file for the ISDN PC Card. Click **Next**.
8. The Add New Hardware Wizard opens, informing you that it has completed the installation of the software needed for the International ISDN PC Card. Click **Finish**.
9. The next window informs you that it is ready to install the drivers in English. Click **Continue**.
10. The next window welcomes you to the installation of the IBM International ISDN PC Card. Click **Continue**.
11. The next window enables you to select the target directory. The default is C:\IBM_ISDN. You can enter into the window any other directory you like. Click **Continue**.
12. The next window enables you to select the appropriate D-channel protocol. Select **N11** or **5ESS** in the United States, or **DSS1 (Euro-ISDN)** in Europe. Click **Continue**.
13. The next window will inform you what resources have been taken by the International ISDN PC Card. Plug in the PC card cable.

You are now ready to use any CAPI 2.0 compliant software with your IBM ISDN International PC Card.

Note: If you also use non-CAPI 2.0 compliant software, go to “Installing the CAPI Port drivers” on page 1-x

Installing the International ISDN PC Card in Windows NT

Note: If you are not logged on to Windows NT as an administrator, you might not be able to perform all of the steps outlined in this section.

To install the International ISDN PC Card in Windows NT you must have Service Pack 3 or higher installed. In order to check which version of Service Pack is installed onto your Windows NT operating system, do the following:

1. Click **Start** → **Programs** → **Command Prompt**. In the Command Prompt window type 'WINVER'; then press Enter.
2. Click **OK** to close the window. Type 'EXIT' in the Command Prompt window; then press Enter.

Removing PCMCIA software

IBM preinstalls PCMCIA support software such as CardWizard from Systemsoft in their Thinkpad range of laptops. This section gives instructions on how to remove CardWizard properly from your computer. This is required to ensure proper functioning of the ISDN International PC Card.

1. Click **Start** → **Settings** → **Control Panel**; then double-click **Add/Remove Programs**.
2. Highlight **CardWizard for Windows NT**; then click **Add/Remove**.
3. In the Confirm File Deletion window, confirm the removal of CardWizard for Windows NT by clicking **Yes**.
4. In the next window, confirm that you want to have all files removed.
5. When the removal of CardWizard is complete a window opens prompting you whether you want to restart your computer. Click **No**.
6. Reapply the Service Pack for your Windows NT computer.

After the Service Pack has been reapplied, your computer will restart. You are now ready to install the International ISDN PC Card.

Installing the International ISDN PC Card

To install the International ISDN PC Card, do the following:

1. Turn off your computer and select a PCMCIA slot. Insert the International ISDN PC Card into this slot without any cable attached to it.
2. Turn your computer back on and insert the *IBM International ISDN PC Card Drivers* CD into your CD-ROM drive.
3. Double-click **My Computer**; then double-click **CD-ROM**.
4. Double-click **WINNT**; then double-click **Setup** to begin the installation.
5. The first window enables you to select the installation language. If the highlighted language is not correct, highlight the correct one and click **Continue**.

6. The next window welcomes you to the installation process of the International ISDN PC Card. Click **View Readme now** to read the latest information on the product, or click **Continue** to continue the installation of the CAPI 2.0 drivers for the International PC Card.
7. The next window lets you specify the target directory for the International ISDN PC Card. The default is C:\IBM_ISDN. Click **Continue** to confirm this directory, or enter any other drive and directory name as the target path for the drivers.
8. The next window displays what resources are available on your computer and how many adapters you have installed. Once you have set the resources, click **Continue**.
9. The next window enables you to select the appropriate D-channel protocol. Select **NI1** or **5ESS** in the United States, or **DSS1 (Euro-ISDN)** in Europe. Click **Continue**.
10. The next window shows you again the settings of the adapter. Click **Continue** to complete the installation; then plug in the PC card cable.

You are now ready to use any CAPI 2.0 compliant software with your IBM ISDN International PC Card.

Note: If you also use non-CAPI 2.0 compliant software go to “Installing the CAPI Port drivers” on page 1-x.

Installing the device drivers in Windows 2000

Note: If you are not logged on to Windows 2000 as an administrator, you might not be able to perform all of the steps outlined in this section.

To install the device drivers in Windows 2000, do the following:

1. Turn off your computer and select a PCMCIA slot. Insert the International ISDN PC Card into this slot without any cable attached to it.
2. Turn your computer back on again. The New Hardware Found Wizard detects an ISDN CARD_. Insert the *IBM International ISDN PC Card Drivers* CD into your CD-ROM drive.
3. The New Hardware Found wizard opens. Click **Next** to start the device driver installation.
4. The next window displays the message, ‘This wizard will complete the installation for this device: ISDN CARD_’. Click to select the radio button next to **Search for a suitable driver for my device (recommended)** if it is not already selected; then click **Next**.
5. The next window helps locate the drivers for the inserted adapter. By default Windows 2000 will search on the diskette and CD-ROM drives. This might lead Windows 2000 to find the wrong driver file on the CD. In order to avoid this, click to uncheck the boxes next to **Floppy disk drives** and **CD-ROM drives**.
6. Click to check the box next to **Specify a location**; then click **Next**.
7. Windows 2000 displays a window for the source of the drivers. Click **Browse**; then select the **WIN2000** folder on the CD-ROM. The previous window opens. This time the correct source drive and directory are displayed. Click **OK**.
8. The New Hardware Found Wizard informs you that it found the drivers for the IBM International ISDN PC Card. Click **Next** to begin the device driver installation.

9. The ISDN - IBM International ISDN PC Card window opens. Select **NI1** or **5ESS** in the United States, or **DSS1 (Euro-ISDN)** in Europe. Click **Next**.

Note: If you selected DSS1, you can enter an MSN (Multisubscriber Numbers). This is a unique number that will help to identify the computer in your local ISDN network when you have more than one ISDN device attached to your ISDN line.

10. The New Hardware Found Wizard informs you that the installation has been completed. Click **Finish**.
11. Plug in the PC card cable.

You are ready to use any CAPI 2.0 compliant software with your IBM ISDN International PC Card.

Note: If you also use non-CAPI 2.0 compliant software go to “Installing the CAPI Port drivers” on page 1-x.

Installing the CAPI Port drivers

If you have successfully installed the drivers for the International ISDN PC Card, you have also installed CAPI 2.0 compliant drivers. This will enable you to use CAPI 2.0 compliant software such as the Fritz!32 software included in your option package. A list of CAPI 2.0 compliant software can be found on the CAPI Web site at

<http://www.capi.org/cgi/sinfo.pl>

However, you may find that many software products are not CAPI 2.0 compliant, such as AOL 5.0 or the CompuServe 3.0 dialer. In order to use this software with the International ISDN PC Card, CAPI Port drivers have been included in your option package. These drivers install a set of virtual modems that enable you to use almost any software that relies on communicating with a modem.

Note: Before you can install the CAPI Port drivers, you must have the device drivers for the International ISDN PC Card installed.

If you have already installed the CAPI Port drivers and you have not removed them, you may not be able to reinstall the CAPI Port drivers. See “Removing the CAPI Port drivers” on page 1-xiv.

Windows 95 and Windows 98

Note: It is highly recommended that you install the Microsoft Dial-Up Networking Update 1.3 onto your Windows 95 computer before you install the CAPI port drivers. See “Installing the device drivers in Windows 95” on page 1-ii.

To install the CAPI Port drivers in Windows 95 or Windows 98, do the following:

1. Insert the *IBM International ISDN PC Card Drivers* CD into your CD-ROM drive.
2. Double-click **My Computer**.
3. Open **Port** → **Win95** → **English**; then double-click **Setup** to begin the CAPI Port driver installation.

4. If you do not plan to install other modem emulator software for CAPI 2.0 drivers, leave all of the boxes checked.
5. Click **OK** to confirm the installation of the drivers. Once the installation is complete, you will be prompted to restart your computer.

After your computer is restarted, the Device Manager of Windows 95 or Windows 98 will display the following list of modems.

- ISDN - ISDN [X.75]
- ISDN Analog Modem [V.32bis]
- ISDN Custom Config
- ISDN FAX [G3]
- ISDN Internet [PPP over ISDN]
- ISDN Mailbox [X.75]
- ISDN RAS [PPP over ISDN]
- ISDN SoftCompression X.75-V.42bis
- ThinkPad Data Fax Modem

Note: Every modem in the list, except the ThinkPad Data Fax Modem, is an emulated modem for the CAPI 2.0 interface provided by the CAPI Port drivers.

You are now ready to use non-CAPI 2.0 compliant software with the International ISDN PC Card.

Windows NT

Note: If you are not logged on to Windows NT as an administrator, you might not be able to perform all of the steps outlined in this section.

In order to install the CAPI Port drivers in Windows NT you must have the Remote Access Service installed. To verify if you have Remote Access Service installed, double-click **My Computer** → **Dial-Up Networking**. If Remote Access Service is not installed, see “Remote Access Service is not installed”. If Remote Access Service is installed see “Remote Access Service is installed” on page 1-xii.

Remote Access Service is not installed

To install Remote Access Service, do the following:

1. Click **Install**.
2. You will be prompted to enter the location of the Windows NT source file directory (for example, the I386 directory of the original Windows NT installation CD). Enter the path to the directory in the Copy files from field; then click **OK**. The installation process starts to install services and files, such as the Windows Workstation service and the Windows Server service.
3. The Remote Access Setup window opens, informing you that no RAS capable device is installed, and that you can now launch the Modem Installer to do so. Click **Yes**.
4. The Install New Modem window opens. During this installation a temporary modem will be installed. Click to check the box next to **Don't detect my modem; I will select it from a list**; then click **Next**.

5. Once Windows NT has completed building the modem list, two windows open: Manufacturers and Models. In the Manufacturers column select (**Standard Modem Types**). In the Models column select **Dial-Up Networking Serial Cable between 2 PCs**. Click **Next**.
6. The next window enables you to choose the serial port (COM port) for the modem. Click to select the radio button next to **Selected ports**, if it is not already selected. Highlight any serial port in the window below.
7. Click **Next**; then click **Finish**.
8. The Add RAS Device window opens and informs you which modem will be installed. Click **OK**.
9. In the Remote Access Setup window, click **Continue**.
10. You will be informed that no protocol has been installed. Click **OK**.
11. In the next window, click to select the box next to **TCP/IP**; then click **OK**.
12. In the Remote Access Setup window, click **Continue**.
13. Once Windows NT is finished with the installation of the Remote Access Service, you will be prompted to restart your computer. Click **Do Not Restart**.
14. Reapply the current service pack.

Remote Access Service is installed

If Remote Access Service is installed, you might experience the following:

- If a window opens prompting you for location information, select your country from the drop-down list; then enter your current area code in the **What area (or city) code are you in now?** input field. Click **Close**.
- If you are informed that the phonebook is empty, click **OK**. If the New Phonebook Entry Wizard opens, click **Cancel**. Dial-Up Networking has been properly installed in your computer.
- If the Dial-Up Networking window opens with a phonebook entry, click **Close**. Dial-Up Networking has been properly installed in your computer.

Installing the CAPI Port drivers

When Remote Access Service has been installed, you are ready to install the CAPI Port drivers. To install the CAPI Port drivers in Windows NT, do the following:

1. Insert the *International ISDN PC Card Drivers CD* into your CD-ROM drive.
2. Double-click **My Computer**. Open **Port** → **Wnt** → **English**; then double-click **Setup** to begin the CAPI Port driver installation.
3. If you do not plan to install other modem emulator software for CAPI 2.0 drivers, leave all of the boxes checked.
4. Click **OK** to confirm the installation of the drivers. Once the installation is complete, you will be prompted to restart your computer. When your computer is restarted you must reconfigure the Remote Access Service so you can use Windows NT Dial-Up Networking to connect over ISDN to an Internet Service Provider.
5. Click **Start** → **Settings** → **Control Panel**.
6. Double-click **Network**; then click the **Services** tab.

7. Click **Remote Access Service** → **Properties**.
8. The Remote Access Setup window opens. Click **Add**.
9. When you see a device starting with ISDN click **OK**. Repeat this procedure until you do not have any ISDN device to be added.
10. In the Remote Access Setup window, click **Continue**.
11. In the Network window, click **Close**.
12. Windows NT will complete the Remote Access Service configuration. When prompted to restart the computer click **Yes**.

Windows 2000

To install the CAPI Port drivers in Windows 2000, do the following:

1. Insert the *International ISDN PC Card Drivers CD* into your CD-ROM drive.
2. Double-click **My Computer**. Open **Port** → **Win95** → **English**; then double-click **Setup** to begin the CAPI Port driver installation.
3. If you do not plan to install other modem emulator software for CAPI 2.0 drivers, leave all of the boxes checked.
4. Click **OK** to confirm the installation of the drivers. Once the installation is complete, you will be prompted to restart your computer.

Installing the NDIS CAPI-WAN drivers

NDIS CAPI-WAN drivers are included in your option package. It is optional to install them. This section gives instructions on how to install these drivers in Windows 95, Windows 98, and Windows NT. NDIS CAPI-WAN drivers are preinstalled in Windows 2000.

Windows 95 or Windows 98

To install the NDIS CAPI-WAN drivers in Windows 95 or Windows 98, do the following:

1. Insert the *International ISDN PC Card Drivers CD* into your CD-ROM drive.
2. Click **Start** → **Settings** → **Control Panel**; then double-click **Network**.
3. In the Configuration window, click **Add**.
4. In the Select Network Component Type window click **Adapter**; then **Add**.
5. In the Select Network Adapters window, click **Have Disk**.
6. In the Install From Disk window, click **Browse**.
7. In the Open window, select **CD-ROM** from the Drives drop-down list.
8. Select **\win95\ndiswan**; then click **OK**.
9. The Install From Disk window opens. Click **OK**.
10. The Select Network adapters window opens. Click **OK**.
11. The Network window opens. Click **OK**.

12. The ISDN configuration begins. Click **Next**; then click **Next** again.
13. The next window will ask you for two phone numbers and the corresponding SPID. This is only required for the USA and Canada. When you have entered these numbers, click **Next**; then click **Finish**.

Windows NT

To install the NDIS CAPI-WAN drivers in Windows NT, do the following:

1. Insert the *International ISDN PC Card Drivers CD* into your CD-ROM drive.
2. Click **Start** → **Settings** → **Control Panel**; then double-click **Network**.
3. Click the **Adapters** tab; then click **Add**.
4. In the Select Network Adapter window, click **Have Disk**. In the Insert Disk window, enter the correct path to the NT NDIS CAPI-WAN drivers.
5. Click **OK**.
6. In the Select OEM Option window, click **OK**.
Note: In the NDIS WAN CAPI Driver Properties window, European users can enter an MSN (Multisubscriber Numbers). This is a unique number that will help to identify the computer in your local ISDN network when you have more than one ISDN device attached to your ISDN line. In the United States and Canada, leave the fields blank and click **OK**.
7. The next window will inform you that the installation is complete. Click **OK**.
8. The Remote Access Setup will start. Click **Add**; then **OK**.
9. Click **Add** again; then **OK**.
10. Click **Continue**; then **Close**.
11. After Windows NT has completed the configuration of the changed network settings you will be prompted to restart your computer. Click **Yes**. The installation of the NDIS CAPI-WAN drivers is completed.

Removing the CAPI Port drivers

It may be necessary for you to remove the CAPI Port drivers.

Windows 95, Windows 98, and Windows NT

To remove the CAPI Port drivers in Windows 95, Windows 98, and Windows NT, do the following:

1. Click **Start** → **Settings** → **Control Panel**; then double-click **Add/Remove Programs**.
2. In the Install/Uninstall window, click **ISDN CAPI Port**; then click **Add/Remove**.
3. Confirm that you want to restart your computer by clicking **Yes**.

Windows 2000

To remove the CAPI Port drivers in Windows 2000, do the following:

1. Click **Start** → **Settings** → **Control Panel**; then double-click **Add/Remove Programs**.
2. Highlight **Change or Remove Programs** if it is not already.
3. In the Currently installed programs window, click **ISDN CAPI Port**.
4. Click **Change/Remove**.
5. Restart your computer.

Configuring your International ISDN PC Card

This section gives instructions on how to change the D-channel protocol and how to diagnose the adapter.

Note: There are no diagnostics tools available for Windows 2000.

If you travel to another country outside of Europe you might be required to change your D-channel protocol. The International ISDN PC Card supports the following D-channel protocols:

- N11
- 5ESS
- DSS1 Euro-ISDN)

N11 and 5ESS are North American D-channel protocol, and DSS1 (Euro-ISDN) is used in Europe, Australia and New Zealand.

Note: If you travel from Europe to the USA, Canada, Australia, or New Zealand, you are not able to use the International ISDN adapter directly. In order to use this adapter in these countries you must purchase an NT1, which converts the U interface used in these countries to the European S/T interface.

Changing the D-channel protocol in Windows 95, Windows 98, or Windows NT

To change the D-channel protocol in Windows 95, Windows 98, or Windows NT, do the following:

1. Click **Start** → **Programs** → **IBM ISDN PC Card** → **IBM ISDN PC Card Setup** to start the configuration tool.
Note: In Windows NT, the first window enables you to change the resources of the adapter (IRQ - interrupt, and I/O address). Either change the resources or click **Continue**. The next window enables you to select the D-channel protocol.
2. Select the desired D-channel protocol; then click **Continue**.
3. The next window informs you about the adapter configuration. Click **Continue**.
4. Restart your computer to activate the selected D-channel protocol.

Changing the D-channel protocol in Windows 2000

To change the D-channel protocol in Windows 2000, do the following:

1. Click **Start** → **Settings** → **Control Panel**; then double-click **System**.
2. Click **Device Manager**.
3. Click the plus sign next to **Network adapters**; then right-click **International ISDN PC Card**.
4. In the pop-up menu, click **Properties**.
5. In the International ISDN PC Card Properties window, click the **ISDN** tab; then select the desired D-channel protocol.
6. Click **OK**; then restart your computer.

Running diagnostics in Windows 95, Windows 98, and Windows NT

To run diagnostics in Windows 95, Windows 98, or Windows NT, do the following:

1. Click **Start** → **Programs** → **IBM ISDN PC Card** → **IBM ISDN PC Card Test**.
2. You will be informed that after testing the CAPI will no longer be available and that you have to restart your computer. Click **Yes** to run diagnostics.
3. When diagnostics has finished, click **OK**.
4. The next window informs you that the CAPI is no longer available. Click **OK**.
5. Click **Yes** to confirm that you want to restart your computer. This will reactivate the CAPI drivers.

Setting up Internet access

This section gives instructions on how to use one B channel at 64 Kbps or both B channels at 128 Kbps to access the Internet.

Note: The International ISDN PC Card is an ISDN base rate adapter. This means that you only can use two ISDN B channels as a maximum.

Windows 95 and Windows 98

You can create an Internet connection in Windows 95 or Windows 98 using one or both B channels

Creating an Internet connection using one B channel

To create a connection using one B channel, do the following:

1. Double-click **My Computer** → **Dial-Up Networking**.
2. In the welcome window, click **Next**.
3. In the Make New Connection window, enter the name of your connection.
4. Select **ISDN Internet (PPP over ISDN)** as your device; then click **Next**.
5. In the next window, enter the area code and phone number for your internet server. If necessary, change the country code.
6. Click **Next**. Enter a user name and password. You can now dial in to the server.

Creating an Internet connection using both B channels (multilinking)

To create an Internet connection using both B channels, do the following:

1. Create a new Dial-Up Networking connection as described in “Creating an Internet connection using one B channel” on page 1-xvi.
2. When you are prompted to dial, click **Cancel**.
3. In the Dial-Up Networking window right-click the new entry.
4. Click **Properties** from the pop-up menu.
5. Click the **Multilink** tab, click **Use additional devices**; then click **Add**.
6. In the Edit Extra Device window, select **ISDN RAS (PPP over ISDN)** from the drop-down list; then click **OK**.
7. Click **OK** again to save the settings. You are now ready to connect to the Internet with multilinked ISDN lines.

Note: In Europe it is not necessary to specify an additional phone number for the second B channel. If you leave this field blank then the given number for the ISDN Internet (PPP over ISDN) will be used for dialing with the ISDN RAS (PPP over ISDN).

Windows NT

You can create an Internet connection in Windows NT using one or both B channels

Creating an Internet connection using one B channel

To create a connection using one B channel, do the following:

1. Double-click **My Computer** → **Dial-Up Networking**.
2. The New Phonebook Entry Wizard opens and prompts you for a name of the new phonebook entry. Type in any name you like.
3. In the Server window, select **I am calling the Internet**.
4. In the Modem or Adapter window, select **ISDN Internet (PPP over ISDN)**.
5. In the next window, enter the phone number you wish to dial; then click **Finish**.

Creating an Internet connection using both B channels (multilinking)

To create a connection using both B channels, do the following:

1. Create a new Dial-Up Networking connection as described in “Creating an Internet connection using one B channel” on page 1-xvii.
Attention: Do not select **Multilink all ISDN lines**. This might result in improper functioning or configuration.
2. Once the new connection is complete, click **More**.
3. Select **Edit entry and modem properties** from the drop-down list.
4. In the Basic section of the Edit Phonebook Entry window, select **Multiple Links** from the Dial Using drop-down list.
5. Click **Configure**.

6. Click to check the box next to **ISDN RAS (PPP over ISDN)**; then click **OK**.
7. Click **OK** again. You are now ready to connect to the Internet with multilinked ISDN lines.

Windows 2000

You can create an Internet connection in Windows 2000 using one or both B Channels

Creating an Internet connection using one B channel

To create a connection using one B channel, do the following:

1. Double-click **Start** → **Settings** → **Dial-Up Networking**. The Network Connection Wizard opens.
2. Click **Dial-up to private network**; then click **Next**.
3. In the device list, click to deselect the box next to **All available ISDN lines multilinked**.
4. Click to select the box next to **Modem - ISDN Internet (PPP over ISDN)**; then click **Next**.
5. In the next window, enter the phone number you wish to dial and click **Next**. Once the setup is finished, you are ready to connect to your Internet Service Provider.

Note: If you select Dial-up to the Internet during the setup process, you will be automatically connected to the Microsoft Network (MSN). If you wish to choose Microsoft as your Internet Service Provider, select this menu item.

Creating an Internet connection using both B channels (multilinking)

To create a connection using both B channels, do the following:

1. Create a Internet connection as described in “Creating an Internet connection using one B channel”. Do not connect to your Internet Service Provider.
2. Click **Settings**.
3. In the Internet Properties window, click the **Connections** tab.
4. In Dial-up settings, click the connection you want to use for multilinking.
5. Click **Settings**.
6. In Dial-Up settings, click **Properties**.
7. In the General window, click to select the box next to **ISDN RAS (PPP over ISDN)**.
8. Click to select the box next to **All devices call the same numbers**.
9. Click **OK**; then click **OK** again. You are now ready to connect to the Internet with multilinked ISDN lines.

Removing the International ISDN PC Card

The International ISDN PC Card can be removed from your computer in the following three steps:

1. Removing the NDIS CAPI-WAN driver if installed
2. Removing the CAPI Port drivers if installed
3. Removing the CAPI 2.0 compliant drivers

Windows 95 and Windows 98

To remove the PC Card from Windows 95 or Windows 98, do the following:

1. Leave the International ISDN PC Card in the PCMCIA slot. Disconnect the card from the ISDN socket.
2. Click **Start** → **Settings** → **Control Panel**; then double-click **Network**.
3. In the configuration window, select **NDIS CAPI-WAN Driver**.
4. Click **Remove**; then **OK**.
5. Click **Yes** to restart your computer.
6. After your computer has restarted, open the Control Panel again.
7. Double-click **Add/Remove Programs**.
8. In the Install/Uninstall window, click **ISDN CAPI Port**; then click **Add/Remove**.
9. Once the CAPI Port drivers are removed, click **Yes** to restart your computer.
10. After your computer has restarted, open the Control Panel again.
11. Double-click **Add/Remove Programs**.
12. In the Install/Uninstall window, click **International ISDN PC Card**.
13. In the Remove International ISDN PC Card window, click **Continue**.
14. Once the removal is complete click **OK**.
15. When prompted to restart the computer click **No**.
16. Turn off your computer; then remove the International ISDN PC Card from the PCMCIA slot.

Windows NT

To remove the PC Card from Windows NT, do the following:

1. Leave the International ISDN PC Card in the PCMCIA slot. Disconnect the card from the ISDN socket.
2. Click **Start** → **Settings** → **Control Panel**; then double-click **Network**.
3. Click the **Adapters** tab; then click **NDIS CAPI-WAN Driver**.
4. Click **Remove**; then click **Yes**.
5. Click **Close**. Once Windows NT has completed updating the network configuration, you must restart your computer.
6. After your computer has restarted open the Control Panel again.
7. Double-click **Add/Remove Programs**.
8. In the Install/Uninstall window, click **ISDN CAPI Port**; then click **Add/Remove**.
9. Once the CAPI Port drivers are removed, click **Yes** to confirm that you want to restart your computer.
10. After your computer has restarted, open the Control Panel again.

11. Double-click **Add/Remove Programs**.
12. In the Install/Uninstall window, click **International ISDN PC Card**.
13. In the Remove International ISDN PC Card window, click **Continue**.
14. Once the removal is complete, click **OK**.
15. When prompted to restart your computer, click **No**.
16. Shut down your computer; then remove the International ISDN PC Card from the PCMCIA slot.

Windows 2000

To remove the PC Card from Windows 2000, do the following:

1. Leave the International ISDN PC Card in the PCMCIA slot. Disconnect the card from the ISDN socket.
2. Click **Start** → **Settings** → **Control Panel**; then double-click **Add/Remove Programs**.
3. Highlight **Change or Remove Programs** if it is not already.
4. In the Currently installed programs window, click **ISDN CAPI Port**.
5. Click **Change/Remove**.
6. Restart your computer.
7. Once the computer is restarted open the Control Panel again.
8. Double-click **Add/Remove Hardware**.
9. The Add/Remove Hardware Wizard opens. Click **Next**.
10. In the Choose a Hardware Task window, click **Uninstall/Unplug a device**; then click **Next**.
11. In the Removal Task window, click **Uninstall a device**; then click **Next**.
12. In the device list, click **International ISDN PC Card**; then click **Next**.
13. In the Uninstall a device window, confirm that you want to have the International ISDN PC Card removed.
14. Click **Next**.
15. Click **Finish**; then shut down your computer.
16. Remove the International ISDN PC Card from the PCMCIA slot.

The Tools directory and the Fritz!32 CD

This section contains information on the Tools directory and the *Fritz!32* CD included in your option package.

The Tools directory

The Tools directory on the *International ISDN PC Card Drivers* CD contains fixes, updates, and tools.

Note: The fixes, updates, and tools in this directory are supplied by IBM “as is”. IBM cannot held be responsible if your computer is damaged by applying these fixes, updates, or tools. IBM does not grant any support for these fixes, updates, or tools.

WIN95

The WIN95 directory contains a sub directory called DUNUPD, which contains updates for the Microsoft Dial-Up Networking. The MSDUN13 directory contains the Microsoft Dial-Up Networking 1.3 Update in English (EN), French (FR), German (DE), Italian (IT), and Spanish (SP).

The VPNUD directory contains an update for the Virtual Private Network. This fix is only available in English.

The Y2K directory contains a Year 2000 update for the Dial-Up Networking. This fix is only available in English.

Install the updates in the following order:

- DUN 1.3
- VPN update
- Y2K update

For more information on these fixes, contact the Microsoft help desk, or go to the Microsoft Web site at

<http://www.microsoft.com/windows95/downloads/>

WIN98

The WIN98 contains updates and fixes for Windows 98 First and Second Edition.

The FEDUNUP directory contains Dial-up networking updates for Windows 98 First Edition. The 40BIT directory contains a 40-bit encryption update for the Windows 98 Dial-up Networking. The VPNUD directory contains an update for the Virtual Private Network of the Dial-Up Networking. All fixes are only available in English.

The SEDUNUP directory contains a 128 bit encryption update for the Windows 98 Second Edition Dial-Up Networking. This update is only available in English.

The SESNR directory contains a fix for Windows 98 Second Edition in conjunction with a shutdown and restart problem of Windows 98. This fix is available in English (US), French (FR), German (DE), Italian (IT), and Spanish (ES).

For more information on these fixes, contact the Microsoft help desk, or go to the Microsoft Web site at

<http://www.microsoft.com/windows95/downloads/>

Lotus

The Lotus directory contains CAPI 2.0 compliant interfaces for Lotus Notes 4.60, Lotus Notes 4.65A, Lotus Notes 5.0, and Lotus Notes 5.01. For additional information, go to the Lotus Web site at

<http://www.lotus.com/>

and search for CAPI.

CFOS

The CFOS directory contains drivers for creating modem emulations with any CAPI 2.0 compliant device. cFos works like the CAPI Port drivers.

This directory contains the following versions:

- WINV302A: Version 3.02a for Windows 3.1x, Windows 95, and Windows 98
- NTV300: Version 3.0 for Windows NT and Windows 2000
- OS2V300: Version 3.0 for OS/2 3.0 and higher

For additional information go to the cFos Web site at

<http://www.cfos.com>

IWATCH

The IWATCH directory contains the ISDN Watch tool. This tool only works in conjunction with CAPI 2.0 compliant devices. It enables you to see whether one or both B channels are in use, shows you how much money you have spent on your ISDN connection, and more. To install this tool, run the SETUP.EXE program in this directory.

The Fritz!32 CD

The *Fritz!32* CD contains a collection of useful software that runs on Windows 95, Windows 98, Windows NT, and Windows 2000. The CD includes applications for data transfer, sending faxes, a virtual ISDN desktop telephone (phone which requires a sound card and a microphone), and a telephone answering machine.

Note: Ensure that when you install this software package in your computer that you do not install the CAPI Port drivers. You should have them installed when you install the International ISDN PC Card.

Appendix A. Help and service information

This section contains information on how to obtain online and telephone technical support.

Technical support

Technical support is available during the life of your product. Assistance can be obtained through the Personal Computing Support Web site and the IBM Automated Fax System. 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.

Technical support	
IBM Personal Computing Support Web Site	http://www.ibm.com/pc/support
IBM Automated Fax System	1-800-426-3395 1-800-465-3299 (in Canada)

Marketing, installation, and configuration support through the 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.

Telephone technical support

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

1. Option name
2. Option number
3. Proof of purchase
4. Computer manufacturer, model, serial number (if IBM), and manual
5. Exact wording of the error message (if any)
6. Description of the problem
7. 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 or to the enclosed technical support insert. If the number is not provided, 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)	1-416-333-3344
Canada (all others)	1-800-565-3344
U.S.A. / Puerto Rico	1-800-772-2227

Appendix B. Product warranties and notices

The following section provides product warranty information and legal notices.

Warranty Statements

The warranty statements consist of two parts: Part 1 and Part 2. Part 1 varies by country. Part 2 is the same for both statements. Be sure to read both the Part 1 that applies to your country and Part 2.

- **United States, Puerto Rico, and Canada (Z125-4753-05 11/97)** “IBM Statement of Limited Warranty for United States, Puerto Rico, and Canada (Part 1 - General Terms)”
- **Worldwide except Canada, Puerto Rico, Turkey, and United States (Z125-5697-01 11/97)** “IBM Statement of Warranty Worldwide except Canada, Puerto Rico, Turkey, United States (Part 1 - General Terms)” on page B-4
- **Worldwide Country-Unique Terms** “Part 2 - Worldwide Country-Unique Terms” on page B-6

IBM Statement of Limited Warranty for United States, Puerto Rico, and Canada (Part 1 - General Terms)

This Statement of Warranty includes Part 1 - General Terms and Part 2 - Country-unique Terms. The terms of Part 2 may replace or modify those of Part 1. The warranties provided by IBM in this Statement of 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 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

Machine - IBM International ISDN PC Card

Warranty period* - One Year

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

IBM warrants that each Machine 1) is free from defects in materials and workmanship and 2) conforms to IBM's Official Published 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.

During the warranty period IBM or your reseller, if approved by IBM to provide warranty service, will provide repair and exchange service for the Machine, without charge, under the type of service designated for the Machine and will manage and install engineering changes that apply to the Machine.

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. The replacement may not be new, but will be in good working order.

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.

Unless specified otherwise, IBM provides non-IBM machines **WITHOUT WARRANTIES OF ANY KIND.**

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, will be provided **WITHOUT WARRANTIES OF ANY KIND.**

Warranty Service

To obtain warranty service for the Machine, contact your reseller or IBM. In the United States, call IBM at 1-800-565-3344. In Canada, call IBM at 1-800-565-3344. You may be required to present proof of purchase.

IBM or your reseller provides certain types of repair and exchange service, either at your location or at a service center, 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. IBM may repair the failing Machine or exchange it at its discretion.

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.

Any feature, conversion, or upgrade IBM or your reseller services must be installed on a Machine which is 1) for certain Machines, the designated, serial-numbered Machine and

2) at an engineering-change level compatible with the feature, conversion, or upgrade. 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.

Production Status

Each IBM Machine is manufactured from new parts, or new and used parts. In some cases, the Machine may not be new and may have been previously installed. Regardless of the Machine's production status, IBM's appropriate warranty terms apply.

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), 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 greater of U.S. \$100,000 (or equivalent in local currency) or the charges (if recurring, 12 months' charges apply) for the Machine that is the subject of the claim.

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 (INCLUDING LOST PROFITS OR 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.

IBM Statement of Warranty Worldwide except Canada, Puerto Rico, Turkey, United States (Part 1 - General Terms)

This Statement of Warranty includes Part 1 - General Terms and Part 2 - Country-unique Terms. The terms of Part 2 may replace or modify those of Part 1. The warranties provided by IBM in this Statement of 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 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.

<p>Machine - IBM International ISDN PC Card</p> <p>Warranty period* - One Year</p> <p><i>* Contact your place of purchase for warranty service information. Some IBM Machines are eligible for on-site warranty service depending on the country where service is performed.</i></p>
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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. 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.

During the warranty period IBM or your reseller, if approved by IBM to provide warranty service, will provide repair and exchange service for the Machine, without charge, under the type of service designated for the Machine and will manage and install engineering changes that apply to the Machine.

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. The replacement may not be new, but will be in good working order.

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.

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Warranty Service

To obtain warranty service for the Machine, contact your reseller or IBM. You may be required to present proof of purchase.

IBM or your reseller provides certain types of repair and exchange service, either at your location or at a service center, 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. IBM may repair the failing Machine or exchange it at its discretion.

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.

Any feature, conversion, or upgrade IBM or your reseller services must be installed on a Machine which is 1) for certain Machines, the designated, serial-numbered Machine and 2) at an engineering-change level compatible with the feature, conversion, or upgrade. 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.

Production Status

Each IBM Machine is manufactured from new parts, or new and used parts. In some cases, the Machine may not be new and may have been previously installed. Regardless of the Machine's production status, IBM's appropriate warranty terms apply.

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), 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 greater of U.S. \$100,000 (or equivalent in local currency) or the charges (if recurring, 12 months' charges apply) for the Machine that is the subject of the claim.

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 (INCLUDING LOST PROFITS OR 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.

Part 2 - Worldwide Country-Unique Terms

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 legislation and are only limited to the extent permitted by the applicable legislation.

Extent of Warranty: The following replaces the first and second sentences of this Section:

The warranty does not cover the repair or exchange of a Machine resulting from misuse, accident, modification, unsuitable physical or operating environment, operation in other than the Specified Operating Environment, improper maintenance by you, or failure caused by a product for which IBM is not responsible.

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, 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.

PEOPLE'S REPUBLIC OF CHINA: Governing Law: The following is added to this Statement:

The laws of the State of New York govern this Statement.

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

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 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.

EUROPE, MIDDLE EAST, AFRICA (EMEA)

The following terms apply to all EMEA countries.

The terms of this Statement of Warranty apply to Machines purchased from an IBM reseller. If you purchased this Machine from IBM, the terms and conditions of the applicable IBM agreement prevail over this warranty statement.

Warranty Service

If you purchased 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 purchased 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.

The applicable laws, Country-unique terms and competent court for this Statement are those of the country in which the warranty service is being provided. However, the laws of Austria govern this Statement if the warranty service is provided in Albania, Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Federal Republic of Yugoslavia, Georgia, Hungary, Kazakhstan, Kirghizia, Former Yugoslav Republic of Macedonia (FYROM), Moldova, Poland, Romania, Russia, Slovak Republic, Slovenia, and Ukraine.

The following terms apply to the country specified:

EGYPT: Limitation of Liability: The following replaces item 2 in this Section:
2. 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.

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: 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 are 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.

Production Status: The following paragraph replaces this Section:
Each Machine is newly manufactured. It may incorporate in addition to new parts, re-used parts as well.

Limitation of Liability: The following is added to this Section:
The limitations and exclusions specified in the Statement of Warranty will not apply to damages caused by IBM with fraud or gross negligence and for express warranty.

In item 2, replace "U.S. \$100,000" with "1.000.000 DEM."

The following sentence is added to the end of the first paragraph of item 2:
IBM's liability under this item is limited to the violation of essential contractual terms in cases of ordinary negligence.

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 the greater of Irish Pounds 75,000 or 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: (item 1 unchanged) 2) as to any other actual damage arising in all situations involving non-performance 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 second 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 non-performance 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.

TURKIYE: Production Status: The following replaces this Section:
IBM fulfills customer orders for IBM Machines as newly manufactured in accordance with IBM's production standards.

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 the greater of Pounds Sterling 150,000 or 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 will be limited to damages.

NORTH AMERICA

CANADA: Warranty Service: The following is added to this section:

To obtain warranty service from IBM, call **1-800-565-3344**. In Toronto, call **416-383-3344**.

UNITED STATES OF AMERICA: Warranty Service: The following is added to this section:

To obtain warranty service from IBM, call **1-800-772-2227**.

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Hinweise

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Electronic emission notices

10/100 Ethernet Adapter

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 à la réglementation d'Industrie Canada

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

Deutsche EMV-Direktive (electromagnetische Verträglichkeit)

Dieses Gerät ist berechtigt in Übereinstimmung mit dem deutschen EMVG vom 9.Nov.92 das EG-Konformitätszeichen zu führen.

Der Aussteller der Konformitätserklärung ist die IBM UK, Greenock.

Dieses Gerät erfüllt die Bedingungen der EN 55022 Klasse B.

European Union EMC Directive conformance statement

This product is in conformity with the protection requirements of EU Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a nonrecommended 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 CISPR 22/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 CISPR22 / 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.

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