

# SR9 AGP 4X DVI-I Graphics Adapter

User's Guide Supplement



**Note:** Before using this information and the product it supports, be sure to read the information under "Product warranty and notices" on page 2-1.

#### First Edition (September 1999)

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# Safety: Read first



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).

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.

安装本產品之前,請先閱讀「安全資訊」。

# **Registering your option**

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

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

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

# About this book

This supplement provides the following information:

Description of the product Preparing for installation and taking antistatic precautions Installing an SR9 AGP 4X DVI-I Graphics Adapter Installing the software Software setup and adjustment Product warranty information and trademark notices

This information is translated into the following languages:

English German French Italian Spanish Brazilian Portuguese Japanese

For emission notices and help and service information, refer to the Adapter Option User's Guide.

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

# Part 1: Installation Guide

# **Product description**

The IBM SR9 AGP 4X DVI-I Graphics Adapter uses an S3 Savage 4 graphics engine to help your monitor provide superior performance with digital video and 3D graphics. The graphics adapter provides 128-bit graphics processing for 2D graphics acceleration, 32-bit rendering, and 3D texture compression. Additionally, the graphics adapter MPEG2/DVD motion compensation feature enhances full-motion video playback.

The graphics adapter contains Accelerated Graphics Port (or AGP) 4X technology, which has data transfer rates of more than 1,000MB<sup>1</sup> per second, allowing for enhanced 3D graphics performance. The graphics adapter also supports the DVI-I interface on both analog and digital monitors.

In addition to this supplement, your option package contains:

graphics adapter DVI-A 15-way dongle, blue Installation CD for SR9 AGP 4X DVI-I Adapter with S3 SAVAGE4 Xtreme Adapter Option User's Guide

# **Preparing for installation**

Before you install a graphics adapter, you must take the following precautions in order to prevent static electricity from damaging electronic parts.

Before touching any electronic parts, drain the static electricity from your body. You can do this by touching the metal frame of your computer.

Do not remove the graphics adapter from the antistatic shipping container until you are ready to install it. When you remove an adapter from your computer, place it back in its original container.

When handling the graphics adapter, hold it by its edges, and avoid touching its circuitry.

<sup>&</sup>lt;sup>1</sup> MB means approximately 1 000 000 bytes of data.

# Installing the SR9 AGP 4X DVI-I Graphics Adapter

To install the SR9 AGP 4X DVI-I Graphics Adapter:

1. Turn off all attached devices; then turn off your computer. Unplug the power cords of all attached devices and your computer. Remove the cover from your computer. For instructions on how to remove your computer's cover, refer to the documentation that comes with your computer.

For IBM computers, refer to *About Installing Options* for instructions on opening the computer cover, removing existing adapter cards, and installing adapter cards in expansion slots.

- 2. Remove any previously installed graphics adapter cards. If you have no other graphics adapter cards, but your computer system board has built-in VGA graphics capability, make sure the VGA graphics capability is disabled. For information on disabling the VGA graphics capability on your computer, see the documentation that comes with your computer.
- 3. Choose an AGP expansion slot.

**Note:** Inserting a graphics adapter into the wrong type of slot might damage your adapter, your computer, or both.

To identify the location of each type of expansion slot in your computer, refer to the documentation that comes with your computer.

**Note:** Do not insert the plastic tab next to the connector pins into the expansion slot.

- 4. Remove the expansion slot cover for the expansion slot you intend to use. Save the screw to use with the mounting bracket.
- 5. Position the graphics adapter over the expansion slot you have chosen. Push the graphics adapter in firmly and evenly until it is fully seated in the slot.

6. Using the screw from the expansion slot cover, secure the mounting bracket of the graphics adapter to the computer frame.

This graphics adapter comes with a bracket for the ATX-type computer already attached. To attach the bracket for an NLX-type computer to the graphics adapter, follow the diagram below.



- 7. Replace the cover on your computer.
- 8. If you have a standard analog monitor, attach the included blue dongle to the monitor connector on the graphics adapter; then plug your monitor cable into the dongle. If you have a digital or analog monitor with DVI-I connectors, plug your monitor cable directly into the blue connector on the graphics adapter. Plug the other end of the monitor cable into your monitor.

Refer to the documentation that comes with your monitor to make sure that the monitor is properly set up.

9. Plug the cables for any other attached devices into your computer. Plug the power cables for the computer, monitor, and other attached devices into a power outlet; then turn on your computer and all attached devices.

## Installing the software

This section has instructions for installing the software and device drivers for the SR9 AGP 4X DVI-I Graphics Adapter. Instructions are for installing the software with Microsoft Windows 95, Microsoft Windows 98 or Microsoft Windows NT Workstation 4.0. Refer to the section for the operating system that you use.

#### Installing the software for Windows 95

Windows 95 automatically detects the graphics adapter when it is installed, but you must also install the device drivers and utility software. To do so, follow these instructions.

- 1. After you install the graphics adapter and restart your computer, Windows 95 automatically detects the graphics adapter. If appropriate display drivers have not been previously installed, Windows 95 reports finding a PCI adapter (even if you have an AGP card). When the New Hardware Wizard opens, click **Next**.
- When prompted to choose device drivers, click to check the box next to Driver from disk provided by hardware manufacturer.
  Note: The installation messages might vary depending on which version of Windows 95 is installed on your computer. If the message you see is different than the one in these instructions, choose the message which is closest in meaning to the one used here.
- 3. Locate the installation CD included with this option. Insert the CD into your CD-ROM or DVD-ROM drive.
- 4. Click **Browse** and locate the Win95 directory on the installation CD. If prompted for a specific file, select SR9.INF.
- 5. Follow the instructions on your screen to complete the installation; then restart your computer if it does not do so automatically.

#### Installing the software for Windows 98

Windows 98 automatically detects the graphics adapter when it is installed, but you must also install the device drivers and utility software. To do so, follow these instructions.

- 1. After you install the graphics adapter and restart your computer, Windows 95 automatically detects the graphics adapter. When the New Hardware Wizard opens, click **Next**.
- 2. On the next window, click to check the box next to Search for the best driver for your device; then click **Next**.
- 3. Locate the installation CD included with this option. Insert the CD into your CD-ROM or DVD-ROM drive.
- 4. Choose CD-ROM and then click Next.
- 5. Enable the **Specify a Location** option; then click the **Browse** button and locate the Win98 directory on the installation CD.

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- 6. The Add New Hardware Wizard detects the device driver. Click Next.
- 7. Follow the instructions on your screen to complete the installation; then restart your computer if it does not do so automatically.

#### Installing the software for Windows NT Workstation

Follow these instructions to install the device drivers and utility software for Windows NT Workstation.

- After installing the graphics adapter, start up your computer in VGA mode. During the start up process, Windows NT Workstation will prompt you to choose between VGA mode and normal mode; select VGA mode.
- 2. Log in as a user who is able to change system settings.
- 3. A warning message might appear which says Invalid display settings...; click **OK** to continue.
- 4. With the right mouse button, click on the desktop; then click Properties.
- 5. Click the Settings tab; then click Display Type....
- 6. The Display Type window opens. In the Adapter Type section, click Change....
- 7. Locate the installation CD included with this option. Insert the CD into your CD-ROM or DVD-ROM drive.
- Click Have Disk...; then click Browse and locate the WinNT40 directory on the installation CD.
- 9. Click to select the SR9.INF file; then click Open.
- 10. Follow the instructions on your screen to complete the installation. When prompted to do so, restart your computer.
- 11. When your computer restarts, you will see a warning message which says Invalid display settings: A new display driver has been installed. The default resolution is being used by the system. Click OK and select a new resolution setting.
- 12. Test the new resolution setting before accepting it. If your monitor displays a blank or distorted screen, your monitor does not support the resolution setting you chose; select a different setting.
  - **Note:** If you accidently accept a resolution setting not supported by your monitor, you must restart your computer in VGA mode and select a different setting.

## Utility software setup and adjustment

The graphics adapter software that you installed includes the Number Nine Hawkeye utility. To open Hawkeye, double-click the Number Nine icon on the taskbar. The Hawkeye Properties Control Panel opens. The property sheets are listed below, along with a description of the settings or information available on each sheet.

#### Information

This sheet contains information about the manufacturer of the Hawkeye utility, Number Nine Visual Technology. The information includes the mailing address and Web site address for the company.

#### Monitor adjustment

On this sheet you can adjust the refresh rate setting for your monitor. Select the new refresh rate setting from the drop-down list.

#### Status

This sheet lists the software version you have, as well as listing hardware configuration information for your graphics adapter.

#### **Resolution exchange**

On this property sheet you can change the settings for your monitor resolution, the resolution for your virtual workspace, and change the number of colors displayed on your monitor screen.

Change your monitor resolution setting in the **Monitor** section of this property sheet. In the list of available resolution settings, click the setting you want. Once you choose a new setting and click **OK**, the monitor screen will blank out for a few seconds, then return at the new resolution setting.

Change the number of colors displayed on your monitor screen in the **Colors** section of this property sheet. Click to check the circle next to the color setting you want. Restart Windows to enable the new color setting.

**Note:** The number of available monitor resolutions may change depending on how many colors you want to have displayed on your monitor screen.

Change your virtual resolution setting in the **Virtual** section of this property sheet. Expanded virtual resolutions can increase the size of your Windows desktop. Display the expanded desktop area by moving your mouse cursor past the border of the area displayed on your monitor. This is also called *panning* to another section of the expanded desktop area. In the list of available resolution settings, click the setting you want. Once you choose a new setting and click **OK**, the monitor screen will blank out for a few seconds, then return at the new resolution setting.

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**Note:** The number of available virtual resolution settings depends on the amount of memory on your graphics adapter and the active monitor resolution.

Click **Apply** to save your changes and continue. Click **OK** to save your changes and close Hawkeye. Click **Cancel** to discard your changes and close Hawkeye.

#### **Chameleon Cursor**

On this property sheet you can adjust the color and size settings for your mouse cursor. There are three slider bars the **Color** section of this property sheet. To change the color of your cursor, click on each of the slider bars and move the slider up or down until you have the color adjusted the way you want it. In the **Cursor size** section of this property sheet, click on the size you want. Click **Apply** to save your changes and continue. Click **OK** to save your changes and close Hawkeye. Click **Cancel** to discard your changes and close Hawkeye.

#### **Color perfect**

On this property sheet you can adjust the appearance of colors on your monitor screen. To change the appearance of the colors, click the slider bars next to each color and move it up or down until the color appearance is the way you want it. Click **Apply** to save your changes and continue. Click **OK** to save your changes and close Hawkeye. Click **Cancel** to discard your changes and close Hawkeye.

# **Installation Guide (Translate)**

# **Product description**

The IBM SR9 AGP 4X DVI-I Graphics Adapter uses an S3 Savage 4 graphics engine to help your monitor provide superior performance with digital video and 3D graphics. The graphics adapter provides 128-bit graphics processing for 2D graphics acceleration, 32-bit rendering, and 3D texture compression. Additionally, the graphics adapter MPEG2/DVD motion compensation feature enhances full-motion video playback.

The graphics adapter contains Accelerated Graphics Port (or AGP) 4X technology, which has data transfer rates of more than 1,000MB<sup>1</sup> per second, allowing for enhanced 3D graphics performance. The graphics adapter also supports the DVI-I interface on both analog and digital monitors.

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graphics adapter DVI-A 15-way dongle, blue Installation CD for SR9 AGP 4X DVI-I Adapter with S3 SAVAGE4 Xtreme Adapter Option User's Guide

# **Preparing for installation**

Before you install a graphics accelerator adapter, you must take the following precautions in order to prevent static electricity from damaging electronic parts.

Before touching any electronic parts, drain the static electricity from your body. You can do this by touching the metal frame of your computer.

Do not remove the graphics adapter from the antistatic shipping container until you are ready to install it. When you remove the graphics adapter from your computer, place it back in its container.

When handling the graphics adapter, hold it by its edges, and avoid touching its circuitry.

# Installing the SR9 AGP 4X DVI-I Graphics Adapter

To install the SR9 AGP 4X DVI-I Graphics Adapter:

1. Turn off all attached devices; then turn off your computer. Unplug the power cords of all attached devices and your computer. Remove the cover from your computer. For instructions on how to remove your computer's cover, refer to the documentation that comes with your computer.

For IBM computers, refer to *About Installing Options* for instructions on opening the computer cover, removing existing adapter cards, and installing adapter cards in expansion slots.

- 2. Remove any previously installed graphics adapter cards. If you have no other graphics adapter cards, but your computer system board has built-in VGA graphics capability, make sure the VGA graphics capability is disabled. For information on disabling the VGA graphics capability on your computer, see the documentation that comes with your computer.
- 3. Choose an AGP expansion slot.

**Note:** Inserting a graphics adapter into the wrong type of slot might damage your adapter, your computer, or both.

To identify the location of each type of expansion slot in your computer, refer to the documentation that comes with your computer.

**Note:** Do not insert the plastic tab next to the connector pins into the expansion slot.

- 4. Remove the expansion slot cover for the expansion slot you intend to use. Save the screw to use with the mounting bracket.
- 5. Position the graphics adapter over the expansion slot you have chosen. Push the graphics adapter in firmly and evenly until it is fully seated in the slot.

6. Using the screw from the expansion slot cover, secure the mounting bracket of the graphics adapter to the computer frame.

This graphics adapter comes with a bracket for the ATX-type computer already attached. To attach the bracket for an NLX-type computer to the graphics adapter, follow the diagram below.



- 7. Replace the cover on your computer.
- 8. If you have a standard analog monitor, attach the included blue dongle to the monitor connector on the graphics adapter; then plug your monitor cable into the dongle. If you have a digital or analog monitor with DVI-I connectors, plug your monitor cable directly into the blue connector on the graphics adapter. Plug the other end of the monitor cable into your monitor.

Refer to the documentation that comes with your monitor to make sure that the monitor is properly set up.

9. Plug the cables for any other attached devices into your computer. Plug the power cables for the computer, monitor, and other attached devices into a power outlet; then turn on your computer and all attached devices.

## Installing the software

This section has instructions for installing the software and device drivers for the SR9 AGP 4X DVI-I Graphics Adapter. Instructions are for installing the software with Microsoft Windows 95, Microsoft Windows 98 or Microsoft Windows NT Workstation 4.0. Refer to the section for the operating system that you use.

#### Installing the software for Windows 95

Windows 95 automatically detects the graphics adapter when it is installed, but you must also install the device drivers and utility software. To do so, follow these instructions.

- 1. After you install the graphics adapter and restart your computer, Windows 95 automatically detects the graphics adapter. If appropriate display drivers have not been previously installed, Windows 95 reports finding a PCI adapter (even if you have an AGP card). When the New Hardware Wizard opens, click **Next**.
- When prompted to choose device drivers, click to check the box next to Driver from disk provided by hardware manufacturer.
  Note: The installation messages might vary depending on which version of Windows 95 is installed on your computer. If the message you see is different than the one in these instructions, choose the message which is closest in meaning to the one used here.
- Locate the installation CD included with this option. Insert the CD into your CD-ROM or DVD-ROM drive.
- 4. Click **Browse** and locate the Win95 directory on the installation CD. If prompted for a specific file, select SR9.INF.
- 5. Follow the instructions on your screen to complete the installation; then restart your computer if it does not do so automatically.

#### Installing the software for Windows 98

Windows 98 automatically detects the graphics adapter when it is installed, but you must also install the device drivers and utility software. To do so, follow these instructions.

- 1. After you install the graphics adapter and restart your computer, Windows 95 automatically detects the graphics adapter. When the New Hardware Wizard opens, click **Next**.
- 2. On the next window, click to check the box next to Search for the best driver for your device; then click **Next**.
- 3. Locate the installation CD included with this option. Insert the CD into your CD-ROM or DVD-ROM drive.
- 4. Choose CD-ROM and then click Next.
- 5. Enable the **Specify a Location** option; then click the **Browse** button and locate the Win98 directory on the installation CD.

- 6. The Add New Hardware Wizard detects the device driver. Click Next.
- 7. Follow the instructions on your screen to complete the installation; then restart your computer if it does not do so automatically.

#### Installing the software for Windows NT Workstation

Follow these instructions to install the device drivers and utility software for Windows NT Workstation.

- 1. After installing the graphics adapter, start up your computer in VGA mode. During the start up process, Windows NT Workstation will prompt you to choose between VGA mode and normal mode; select VGA mode.
- 2. Log in as a user who is able to change system settings.
- 3. A warning message might appear which says Invalid display settings...; click **OK** to continue.
- 4. With the right mouse button, click on the desktop; then click Properties.
- 5. Click the Settings tab; then click Display Type....
- 6. The Display Type window opens. In the Adapter Type section, click Change....
- 7. Locate the installation CD included with this option. Insert the CD into your CD-ROM or DVD-ROM drive.
- 8. Click **Have Disk...**; then click Browse and locate the WinNT40 directory on the installation CD.
- 9. Click to select the SR9.INF file; then click Open.
- 10. Follow the instructions on your screen to complete the installation. When prompted to do so, restart your computer.
- 11. When your computer restarts, you will see a warning message which says Invalid display settings: A new display driver has been installed. The default resolution is being used by the system. Click OK and select a new resolution setting.
- 12. Test the new resolution setting before accepting it. If your monitor displays a blank or distorted screen, your monitor does not support the resolution setting you chose; select a different setting.
  - **Note:** If you accidently accept a resolution setting not supported by your monitor, you must restart your computer in VGA mode and select a different setting.

# Utility software setup and adjustment

The graphics adapter software that you installed includes the Number Nine Hawkeye utility. To open Hawkeye, double-click the Number Nine icon on the taskbar. The Hawkeye Properties Control Panel opens. The property sheets are listed below, along with a description of the settings or information available on each sheet.

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#### Status

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#### **Resolution exchange**

On this property sheet you can change the settings for your monitor resolution, the resolution for your virtual workspace, and change the number of colors displayed on your monitor screen.

Change your monitor resolution setting in the **Monitor** section of this property sheet. In the list of available resolution settings, click the setting you want. Once you choose a new setting and click **OK**, the monitor screen will blank out for a few seconds, then return at the new resolution setting.

Change the number of colors displayed on your monitor screen in the **Colors** section of this property sheet. Click to check the circle next to the color setting you want. Restart Windows to enable the new color setting.

**Note:** The number of available monitor resolutions may change depending on how many colors you want to have displayed on your monitor screen.

Change your virtual resolution setting in the **Virtual** section of this property sheet. Expanded virtual resolutions can increase the size of your Windows desktop. Display the expanded desktop area by moving your mouse cursor past the border of the area displayed on your monitor. This is also called *panning* to another section of the expanded desktop area. In the list of available resolution settings, click the setting you want. Once you choose a new setting and click **OK**, the monitor screen will blank out for a few seconds, then return at the new resolution setting.

**Note:** The number of available virtual resolution settings depends on the amount of memory on your graphics adapter and the active monitor resolution.

Click **Apply** to save your changes and continue. Click **OK** to save your changes and close Hawkeye. Click **Cancel** to discard your changes and close Hawkeye.

#### **Chameleon Cursor**

On this property sheet you can adjust the color and size settings for your mouse cursor. There are three slider bars the **Color** section of this property sheet. To change the color of your cursor, click on each of the slider bars and move the slider up or down until you have the color adjusted the way you want it. In the **Cursor size** section of this property sheet, click on the size you want. Click **Apply** to save your changes and continue. Click **OK** to save your changes and close Hawkeye.

#### **Color perfect**

On this property sheet you can adjust the appearance of colors on your monitor screen. To change the appearance of the colors, click the slider bars next to each color and move it up or down until the color appearance is the way you want it. Click **Apply** to save your changes and continue. Click **OK** to save your changes and close Hawkeye. Click **Cancel** to discard your changes and close Hawkeye.

#### **Product registration**

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

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

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

#### Product service and warranty information

For technical support, support hours, and warranty terms and conditions, see the enclosed inserts, or contact your IBM reseller or IBM marketing representative.

## **Part 2: Appendixes**

## Product warranty and notices

The following warranty information applies to products purchased in the United States, Canada, and Puerto Rico. For warranty terms and conditions for products purchased in other countries, see the enclosed Warranty insert, or contact your IBM reseller or IBM marketing representative.

International Business Machines Corporation

Armonk, New York, 10504

#### **Statement of Limited Warranty**

The warranties provided by IBM in this Statement of Limited Warranty apply only to Machines you originally 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. Unless IBM specifies otherwise, the following warranties apply only in the country where you acquire the Machine. If you have any questions, contact IBM or your reseller.

Machine: SR9 AGP 4X DVI-I Graphics Adapter

Warranty Period\*: One Year

\*Contact your place of purchase for warranty service information.

#### **Production Status**

Each 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 warranty terms apply.

#### 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 receipt is the Date of Installation, unless IBM or your reseller informs you otherwise.

During the warranty period IBM or your reseller, if authorized by IBM, will provide warranty service under the type of service designated for the Machine and will manage and install engineering changes that apply to the Machine.

For IBM or your reseller to provide warranty service for a feature, conversion, or upgrade, IBM or your reseller may require that the Machine on which it is installed be 1) for certain Machines, the designated, serial-numbered Machine and 2) at an engineering-change level compatible with the feature, conversion, or upgrade. Many of these transactions involve the removal of parts and their return to IBM. You represent that all removed parts are genuine and unaltered. A part that replaces a removed part will assume the warranty service status of the replaced part.

If a Machine does not function as warranted during the warranty period, IBM or your reseller will repair it or replace it with one that is at least functionally equivalent, without charge. The replacement may not be new, but will be in good working order. If IBM or your reseller is

unable to repair or replace the Machine, you may return it to your place of purchase and your money will be refunded.

If you transfer a Machine to another user, warranty service is available to that user for the remainder of the warranty period. You should give your proof of purchase and this Statement to that user. However, for Machines which have a life-time warranty, this warranty is not transferable.

#### Warranty Service

To obtain warranty service for the Machine, you should contact your reseller or call IBM. In the United States, call IBM at **1-800-772-2227**. In Canada, call IBM at **1-800-565-3344**. You may be required to present proof of purchase.

IBM or your reseller will provide certain types of repair and exchange service, either at your location or at IBM's or your reseller's service center, to restore a Machine to good working order.

When a type of 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. 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 ensure that the Machine is free of any legal obligations or restrictions that prevent its exchange.

#### You agree to:

- 1. obtain authorization from the owner to have IBM or your reseller service a Machine that you do not own; and
- 2. where applicable, before service is provided
  - a. follow the problem determination, problem analysis, and service request procedures that IBM or your reseller provide,
  - b. secure all programs, data, and funds contained in a Machine, and
  - c. 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.

#### **Extent of Warranty**

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

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