

# Getting Started Guide

## HP Workstation x4000



**Manufacturing Part Number : A8058-90001**

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## Important Warnings

If you have any doubt that you can lift the computer or display safely, do not try to move it without help.

For your safety, always connect the equipment to a grounded wall outlet. Always use a power cord with a properly grounded plug, such as the one provided with this equipment, or in compliance with your national regulations. Your workstation is disconnected from the power by removing the power cord from the power outlet. This means the workstation must be located close to a power outlet that is easily accessible.

For your safety, never remove your workstation's cover without first removing the power cord from the power outlet, and any connection to a telecommunications network. Always replace the cover on the workstation before switching it on again.

---

### WARNING

**To avoid electrical shock, do not open the power supply. There are no user-serviceable parts inside.**

**This product is a class I laser product. To avoid electrical shock and harm to your eyes by laser light, do not open the laser module. The laser module should be serviced by service personnel only.**

---

## Important Ergonomic Information

It is strongly recommended that you read the ergonomics information before using your workstation. See "Working in Comfort and Safety" on page 25.

# Getting Help

## Printed Documentation

This x4000 Getting Started Guide is the only printed documentation included with your workstation. It contains basic setup and installation information, basic troubleshooting guidance, and warranty information.

## Downloading Documentation from HP's Web Site

The HP Workstation web site ([www.hp.com/go/workstationsupport](http://www.hp.com/go/workstationsupport)) contains a wide range of free information, including downloadable documentation, service and support options, and the latest versions of drivers, utilities BIOS, and firmware.

The web accessible documentation includes the x4000 Technical Reference/Troubleshooting Guide. This guide has detailed information about your workstation, including system board switches, power consumption and acoustic noise emission test configurations, troubleshooting, and system architecture.

## Additional Web Sites

- [www.hp.com/go/workstationsupport](http://www.hp.com/go/workstationsupport) contains the latest drivers and BIOS for your workstation.
- [www.hp.com/toptools](http://www.hp.com/toptools) contains information about the PC Management software, HP TopTools.
- [www.hp.com/ergo](http://www.hp.com/ergo) contains the online version of *Working in Comfort*. This is also preloaded on the hard disk of your workstation.

## Contacting Customer Service

Refer to “HP Customer Care Center Phone Numbers” on page 43. For the most recent information, visit the HP web site [www.hp.com/go/workstationsupport](http://www.hp.com/go/workstationsupport).



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# **1**      **Setting Up And Using Your Workstation**

## Setting Up Your Workstation

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### WARNING

**If you have any doubt that you can lift the workstation and monitor safely, do not try to move them without help.**

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The following topics explain how to set up your x4000 Workstation. Some steps may not apply to your situation.

- “Prepare your Workspace” on page 10
- “Install Your Graphics Card” on page 11
- “Connect the Components” on page 11
- “Connect the Audio Accessories” on page 13
- “Connect to a Network (LAN)” on page 13
- “Load the Software Applications for Your CD-RW” on page 14
- “Connect the Power Cords” on page 14

### Prepare your Workspace

1. Unpack all of the components.
2. Place the monitor on a sturdy desk with easily accessible power outlets and enough space for the keyboard, mouse, and any other accessories.
3. Position the workstation on a sturdy desk or the floor with the rear connectors easily accessible. The workstation must be close enough to the peripherals so that the cables can be connected.

### Installation Tools

No tools are required to set up your workstation unless you are installing a graphics card. If you are installing a graphics card, you need a T-15 Torx driver and a flat-blade screwdriver.

## Install Your Graphics Card

If your workstation did not ship with a graphics card already installed, you must install the graphics card. Installation instructions are included with the graphics card.

## Connect the Components

Before connecting any cords or cables to your workstation, please read “Important Warnings” on page 7.

Figure 1-1 on page 12 shows the back panel of the workstation. When you connect the components, match the color-codes of the connectors. *The connectors are shaped to go in one way only.*

1. Connect the mouse.
2. Connect the monitor to the 15-pin display connector and tighten the attachment screws.
3. Connect the three HP Multimedia Keyboard cables:
  - The keyboard connector plugs into the purple connection.
  - The pink microphone connector plugs into the microphone jack.
  - The lime green headphone connector plugs into the output line jack. *Don't plug this connector in if you don't have speakers!*

---

### NOTE

The internal speaker is deactivated after you connect the multimedia keyboard output line jack. Therefore, if you connect the keyboard's headphone connector to the back of the workstation, you must plug speakers or headphones in to the back of the multimedia keyboard to get audio as explained in “Connect the Audio Accessories” on page 13.

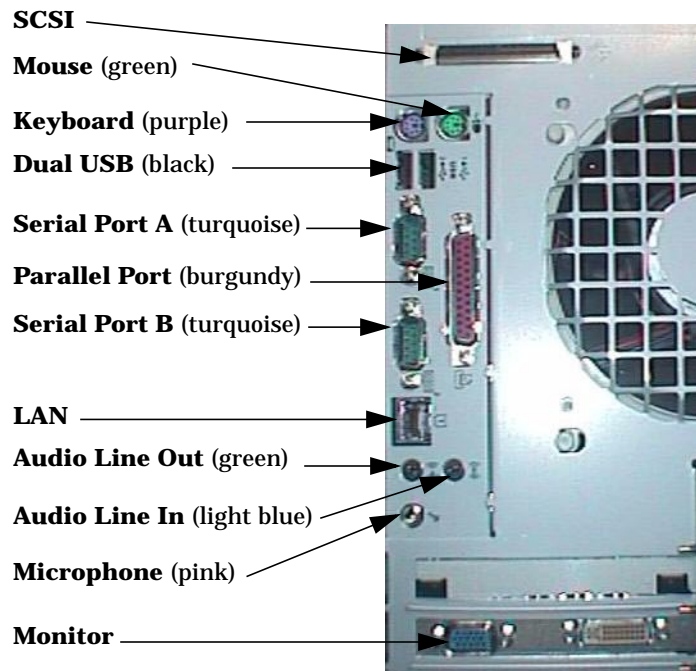
4. If you have a printer, connect your printer cable and tighten the attachment screws.
5. If you have any serial devices, connect them to serial port A or B.

---

**NOTE** Use the Universal Serial Bus (USB) connectors for USB accessories. The x4000 Workstation does not support a USB mouse or keyboard. For more details, refer to the *x4000 Technical Reference/Troubleshooting Guide* at [www.hp.com/go/workstationsupport](http://www.hp.com/go/workstationsupport).

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**Figure 1-1** Location of Rear Panel Connectors



## Connect the Audio Accessories

Connect the microphone and headphones (or amplified speakers) to the HP Multimedia keyboard as shown in Figure 1-2.

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### WARNING

**Listening to loud sounds for prolonged periods of time may permanently damage your hearing.**

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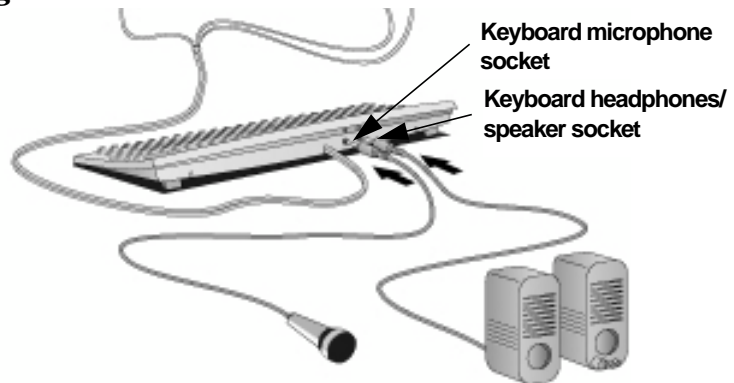
### NOTE

The internal speaker is deactivated when you use the output line jack on the rear of the workstation. If you have connected the keyboard headphones connector to this jack, you must connect speakers or headphones to the keyboard for audio output.

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**Figure 1-2**

### Connecting Audio Accessories



## Connect to a Network (LAN)

Your workstation's 10BT/100TX LAN auto-sensing interface adapter supports both 10Mbit/s and 100 Mbit/s operation.

Connect the network cable to the LAN connector shown in Figure 1-1 on page 12.

## Load the Software Applications for Your CD-RW

The CD-RW software for the CD-RW drive that is installed in your HP x4000 Workstation is not included in the pre-loaded software. You must install the applications manually from the Applications CD-ROM (provided with the workstation or as an accessory kit) before you can use the write/re-write functionality of the drive.

If you do not install these software packages, you can only use the CD-RW drive's read functionality.

## Connect the Power Cords

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### WARNING

**For your safety, always connect equipment to a grounded wall outlet. Always use a power cord with a properly grounded plug, such as the one provided with the equipment, or one in compliance with your national safety standards. You disconnect the workstation from the power by removing the power cord from the power outlet. This means the equipment must be located close to an easily accessible power outlet.**

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1. Connect the power cords to the rear of the monitor and the workstation.
2. Connect the both power cords to a grounded outlet.

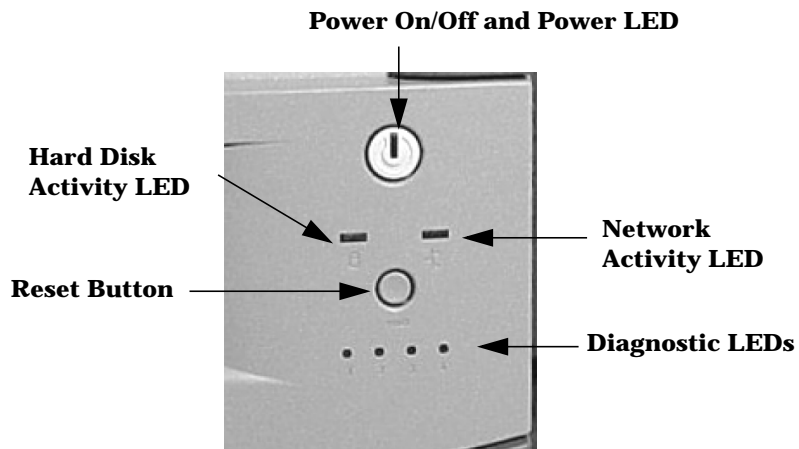
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## Using Your x4000 Workstation

### Understanding the Control Panel

The hardware control panel, located on the front of the workstation, is shown in Figure 1-3.

**Figure 1-3**      **Hardware Control Panel**



- **Power On/Off button:** Press this button to start the workstation. You can also wake the workstation from Hibernate or Stand By mode by pressing this button for less than four seconds. Press this button for more than four seconds to turn the workstation off.
- **Power LED:**
  - Solid green indicates system on.
  - Solid yellow indicates the workstation is in Stand By or Hibernate mode. See “Using Power Management” on page 24.
  - Flashing yellow, flashing red, or solid red indicates a system error. See “Understanding the Diag LEDs” on page 35.
- **Reset button:** Press this button to re-initialize all the hardware without cycling power to the system (soft boot). Avoid general use of this button because file damage may occur. Always use the operating system **Shut Down** command before resetting the machine.

- **Hard Disk Activity LED** — This light flickers when your hard disk is being accessed.
- **Network Activity LED** — This light flickers anytime the workstation is connected to the network and plugged into the power source, regardless of whether the workstation is turned on.
- **Diag LEDs** — These four LEDs can be off, green, yellow, or red. The color pattern lets you diagnose problems with your workstation. For more information, see “Understanding the Diag LEDs” on page 35.

## Starting and Shutting Down Your Workstation

Your workstation has Windows 2000 Professional or Windows XP pre-installed. It is initialized the first time you start the workstation. The software initialization process takes a few minutes. This process sets up your software to use the hardware installed in your computer (you can change the settings after the software has been initialized).

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### NOTE

Both Windows 2000 Professional and Windows XP operating systems are included on the *HP Workstation Recovery CD-ROMs* provided with your workstation. For more information, see “Performing A Full Recovery” on page 40.

---

## Starting Your Workstation for the First Time

1. Switch on the monitor.
2. Press the power button on the control panel. When you start your workstation:
  - The Power-On-Self-Test (POST) runs while the workstation's logo is displayed. To view the details of this test, press the **Esc** key. If there is an error in the POST, the error is displayed automatically.
  - The software initializes automatically after POST is complete.

---

### CAUTION

Do not turn off your workstation while the software is being initialized.

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- The software license agreement is displayed and you are given an opportunity to read “Working in Comfort” (ergonomics advice for computer users).
3. Answer the operating system setup questions:
    - Computer name. Enter a name for your workstation.
    - Administrator passwords. You are given the option to assign an Administrator password.
  4. When prompted, click **Finish** to restart the workstation. After the system restarts, you can log in for the first time.

### **Creating an Emergency Repair Disk**

It is very important to create an Emergency Repair Disk for the operating system. Use new diskettes for this purpose.

For more information on how to create these diskettes, refer to the operating system documentation.

### **Shutting Down Your Workstation**

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#### **CAUTION**

Always power off through the operating system. Do not power off using the power button or reset button except during extreme circumstances when the system will not shut down through the operating system. Using the power button or reset button to power down may cause you to lose unsaved data from open applications.

---

To shut down your workstation:

1. Exit all applications.
2. Select **Start > Shut Down**. A dialog box appears with any shut down options that are supported by your operating system.
3. Select one of the options and click **OK**. For more information on shut down options such as Stand by and Hibernate, see “Using Power Management” on page 24 or your Windows documentation.

## Using Your HP Multimedia Keyboard

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### WARNING

**Improper and prolonged use of keyboards and input devices can cause repetitive strain injury (RSI) to soft tissues in the hands and arms. If you experience discomfort or pain while using your workstation, discontinue use immediately and consult your physician as soon as possible. For more information, see “Working in Comfort and Safety” on page 25.**

---

Your HP workstation may have come with an HP Multimedia keyboard, shown in Figure 1-4 on page 19.

The HP Multimedia keyboard includes soft keys that let you:

- Display and configure the actions assigned to keys.
- Perform one-touch shortcuts to start applications, open files, or open web sites on the Internet.
- Launch the Internet browser supplied with your system.
- Lock or suspend your workstation.
- Access HP TopTools and customer information.
- Mute or adjust the volume of the audio system.

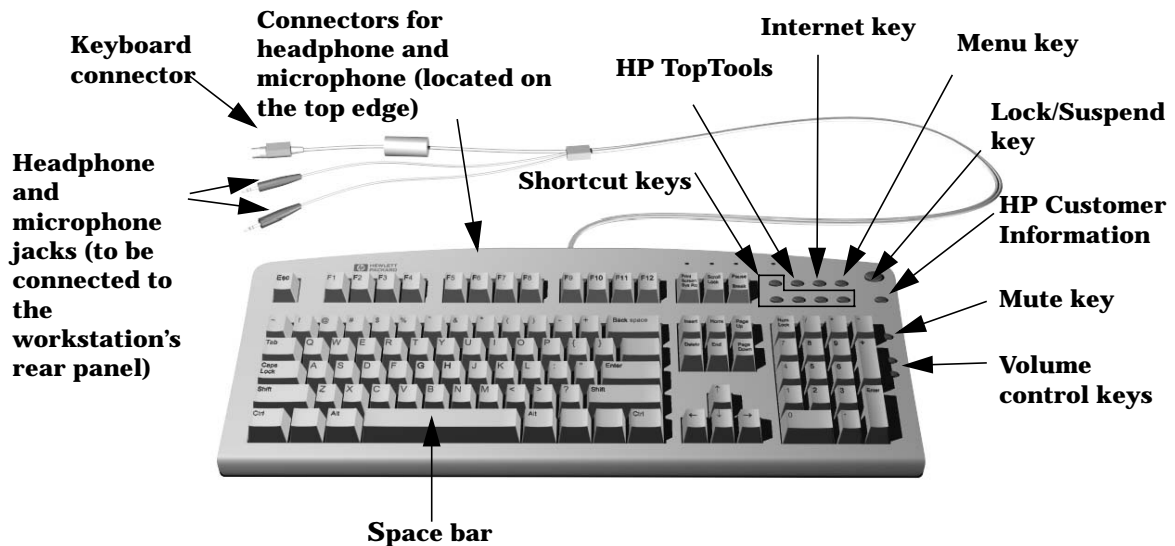
If you connect headphones (or speakers) and microphone directly to the keyboard, the headphone and microphone connectors on the keyboard must be connected to their associated rear panel jacks. For more information, see “Connect the Audio Accessories” on page 13.

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**NOTE** The internal speaker is deactivated when you use the output line jack on the rear of the workstation. If you have connected the keyboard headphones connector to this jack, you must connect speakers to the keyboard for audio output.

---

**Figure 1-4 HP Multimedia Keyboard**



- HP TopTools opens the HP TopTools PC management tool if you have this loaded on your workstation. Otherwise, this shortcut key is not programmed and can be configured by pressing the Menu key.
- Internet starts your Internet browser.
- Menu displays the current soft key assignments for the HP Multimedia keyboard. Follow the on-screen instructions to display the action assigned to an individual key or to change or assign an action to a key. Shortcut keys are provided specifically for user-defined actions.
- Lock/Suspend lets you lock the front panel or launch the screen saver. Configure the action of the Lock/Suspend key by pressing the Menu key.

- HP Customer Information accesses the HP Customer Information html page. This page provides links to the HP web site.
- Mute and Volume mutes the audio (or restores the audio if it has been previously muted) and controls the volume level.
- Shortcut starts applications, opens documents, or opens URLs on the Internet. To assign actions to Shortcut keys, press the Menu key and following the on-screen instructions.

## Viewing Your Workstation Configuration

The Summary screen gives you a summary of the current configuration of your workstation (BIOS version, CPU type, memory module size, and installed mass storage devices).

You should check the configuration of your workstation when you first use it and each time you install, remove, or upgrade accessories.

To check the configuration:

1. Shut down your workstation as described in “Shutting Down Your Workstation” on page 17.
2. Restart your workstation.
3. When the start-up logo appears on your display, press **Esc**. This takes you to the Summary Screen. The Summary Screen is displayed for only a short time.

## Configuring Your Workstation

The Setup program lets you configure your workstation. You can:

- set up the system Administrator and User passwords
- change the system boot order
- solve configuration problems

HP recommends you note any changes you make to the system setup for later reference.

## Starting the HP Setup Program

To start the Setup program:

1. Start your workstation. If your workstation is already up, restart it.

2. Press **F2** while **F2 Setup** is displayed at the bottom of the screen.

If you fail to press **F2** in time and the start-up process continues, you must allow your system to finish booting up, then restart your workstation and go through the Power-On-Self-Test (POST) again.

The opening screen of the workstation's Setup program is displayed. The Main Menu presents a list of fields, such as the installed BIOS version and the Date and Time.

A band along the top of the screen offers a list of menus. Select one of the following menus by using either the left or right arrow keys.

A band along the bottom of the screen gives instructions on using the keyboard-driven menus.

### **Main Menu**

In the Main menu, you can:

- view the BIOS version
- reset configuration data
- set the system time
- set the system date

By default, "Reset Configuration Data" is set to **No**. Resetting the configuration causes the BIOS to assign resources to all devices instead of using what is stored in memory.

### **Advanced Menu**

The Advanced menu offers a list of sub-menus that let you view or configure:

- processor speed
- advanced features of the chip set
- PCI cards
- the Advanced Graphics Port video card
- settings for the integrated:
  - floppy disk drive controller
  - IDE controller and for attached IDE devices
  - SCSI controller
  - 10/100BT network interface
  - serial (A and B) and parallel ports
  - PCI audio controller

### **Security Menu**

The Security menu offers a list of sub-menus that let you:

- change or set the System Administrator Password, User Password, or Power-on Password (refer to “Setting Passwords” on page 23)
- prevent unauthorized start-up from the floppy, CD-ROM and IDE drives
- prevent unauthorized use of the floppy drive
- prevent a Plug-and-Play operating system from changing the BIOS configuration settings
- prevent unauthorized changes to the boot sector

### **IPMI Menu**

This menu lets you choose to force the BIOS to clear the System Event log.

### **Boot Menu**

This menu lets you select the order of the devices from which you want the BIOS to attempt to start the operating system. The QuickBoot mode option allows the system to skip certain tests while booting. This decreases the time needed to start the system.

### **Power Menu**

This menu lets you enable remote power-on. You can also set the mode of operation if an AC power loss occurs.

## Setting Passwords

You can set passwords to provide different levels of protection for your workstation.

Using the **Security** menu in the Setup program:

- The Administrator can access and change all settings in the Setup program. The User can only access and modify certain items in the Main menu.
- You can enable the Power-on Password option so that a password is required every time you start the workstation.

---

### NOTE

You must set an administrative password before you can set a user password.

---

To set up passwords:

1. Start the workstation and press **F2** when prompted to enter the Setup utility.
2. Select the **Security** menu.
3. Choose **Set Administrator Password** or **Set User Password**. When prompted, enter, then re-enter your password.
4. Select the **Exit** menu, then **Exit Saving Changes**.

## Removing Passwords

To remove a password:

1. Start the workstation and press **F2** when prompted to enter the Setup utility.
2. Select the **Security** menu.
3. Select **Clear All Passwords**.
4. Select the **Exit** menu, then **Exit Saving Changes**.

## Using Power Management

Power management lets you reduce the workstation's overall power consumption by slowing down the workstation's activity when it is idle. For more information on power consumption data, refer to the *x4000 Technical Reference* on HP's web site ([www.hp.com/go/workstationsupport](http://www.hp.com/go/workstationsupport)).

Operating systems differ in their power management capabilities. In Windows 2000, you can select from two power management modes:

- *Stand By* is a low power state where the processor is shut off, but the rest of the machine remains powered. Waking up the workstation from Stand By mode is faster than from Hibernate mode because the RAM contents do not need to be restored. However, when the workstation is in Stand By mode, it consumes more power than Hibernate mode because the memory remains powered.
- *Hibernate* (if enabled) makes the machine look and behave like it is off except that it remembers the state it was in before hibernation and can be awakened without a full operating system boot. This is because the operating system copies the RAM contents out to a special location on the hard disk before entering hibernation.

You must enable Hibernate mode through Power Options in the Control Panel before it can be a shut down option.

To wake the workstation from either mode, press the power button for less than four seconds.

To change your power management settings:

1. Select **Start > Settings > Control Panel**.
2. Double click on **Power Options**.

For more information on changing your power options, refer to your Windows 2000 or Windows XP documentation.

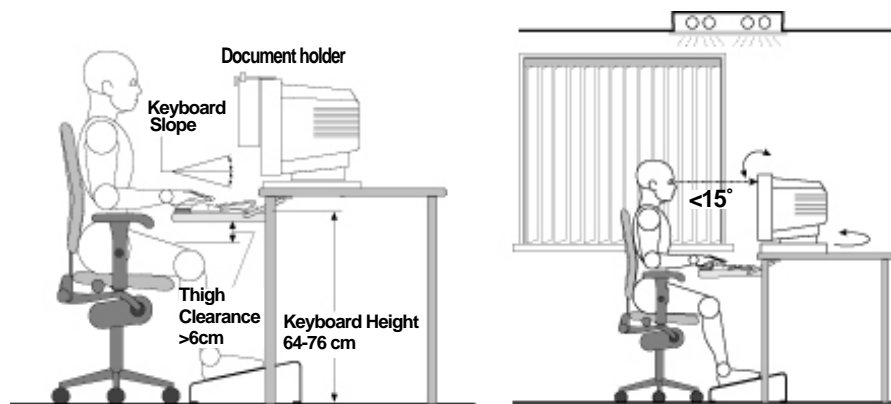


## Working in Comfort and Safety

### Preparing Your Work Environment

It is important that your work environment contributes to your comfort and productivity:

**Figure 1-5** Your Work Environment



- *Work Surface Height.* Your work surface should be height adjustable. First adjust the height of your chair so that your feet are firmly on the floor, then adjust the work surface height until your forearms are parallel to the floor when you have your fingers on the keyboard or other input devices.
- *Chair.* Your chair should provide a comfortable sitting position, including features such as a height and tilt adjustment feature, curved seat edge, a stable base (for example, five legs and castors, adjustable back support, a freely rotating swivel, and fully adjustable padded arm rests).
- *Monitor.* Place your monitor so that the top of the screen is at, or slightly below, eye level (up to 15 degrees).

- *Work Surface Arrangement.* Arrange the elements of your HP workstation system (monitor, document holder, keyboard, mouse and other input devices, and headphones and speakers) to meet your personal requirements. For example:
  - If you primarily use the keyboard, place it directly in front of you, not to the side.
  - If your work involves extensive use of a mouse or other pointing device, place that device directly in front of your left or right arm.
  - If you are using both a mouse and keyboard, place them both at the same work surface height and close together.
  - If you use a palm rest, the height should be flush with the front edge of the keyboard.
  - Also consider where you place other items, such as your telephone or notepad.

---

**WARNING**

**Various aspects of using a mouse, keyboard, and other devices may increase your risk of discomfort or injury. Optimize your comfort and safety by positioning these devices properly.**

---

## **Working Posture**

Sitting in one position for long periods can be uncomfortable. To minimize the potential risk for physical discomfort or injury, it is important that you maintain a proper posture.

- *Head.* When viewing your monitor, your head should not be tilted more than 15 degrees forward. Do not turn your head to either side.
- *Back.* While sitting at your work surface, make sure your back is supported by the chair's backrest in an erect position or angled slightly backwards.
- *Arms.* Make sure your arms and elbows are relaxed and loose, with your upper arms perpendicular to the floor or tilted downward not more than 15 degrees. Keep your forearms and hands approximately parallel with the floor with elbows bent between 70 and 115 degrees. Keep your elbows close to your sides (less than 20 degrees away from your body).

- *Hands, Wrists, Forearms.* Try to keep your hands, wrists, and forearms in a relaxed neutral position when using your mouse keyboard or other input devices. For example, while using your keyboard and mouse, rest your forearms on your desktop.
- *Legs.* Your thighs should be horizontal or angled slightly downward. Your lower legs should be near a right angle to your thighs. Make sure there is sufficient room under the work surface for your legs.
- *Feet.* If after adjusting your chair you cannot rest your feet comfortably on the floor, use a footrest, preferably one that can be adjusted in height and angle.

## Additional Ergonomic Issues

- Look away from the screen from time to time to help reduce eyestrain. Focus on distant objects briefly, and blink periodically to lubricate your eyes. Have your eyes checked on a regular basis and ensure your eyeglass prescription is suitable for working on a computer monitor.
- Remember to occasionally shift position and move your body. Keeping your body in one position for long periods is unnatural and stressful. When prolonged work is required, take frequent short breaks. As a rule of thumb, a five or ten minute break every hour is a good idea. Short frequent breaks are more beneficial than longer less frequent breaks. People who work for long periods of time without a break may be more prone to ergonomic injury.
- Changing tasks frequently helps prevent muscle stiffness. Alternate between keyboarding, reading, writing, filing, and moving around in your work environment to help you maintain a relaxed posture. Occasionally stretch the muscles in your hands, arms, shoulders, neck and back. You should stretch at least as often as you take brief task breaks — once every hour.
- Discomfort may be alleviated by using alternative ergonomic designs and accessories such as ergonomically personalized chairs, palm rests, keyboard trays, alternative input devices, prescription eyeglasses, and anti-glare screens. Seek additional information from the sources available to you, including your employer, doctor, office supply store, and the *Information Sources* listed in the online version of *Working in Comfort*, (HP\_INFO\WIC\Language\envir.html) or available on the HP web site [www.hp.com/ergo](http://www.hp.com/ergo).

## **Recycling your Workstation**

HP has a strong commitment towards environmental conservation. Your workstation has been designed to respect the environment as much as possible.

HP can take an old workstation back for recycling when it reaches the end of its useful life through the product take-back program. Collected equipment is sent to one of HP's recycling facilities. As many parts as possible are reused and the rest are recycled. Special care is taken with batteries and other potentially toxic substances.

For details about HP's product take-back program, contact your dealer or your nearest HP Sales Office.

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# **2 Troubleshooting**

## Overview

This chapter contains basic information in the following sections to help you get your workstation up and running in the unlikely event that you experience a problem:

- “Solving Hardware Problems” on page 31
- “Understanding the Diag LEDs” on page 35
- “Using e-DiagTools for Hardware Problems” on page 37
- “Performing A Full Recovery” on page 40
- “HP x4000 Technical Characteristics” on page 42
- “HP Customer Care Center Phone Numbers” on page 43

For more detailed help, refer to the *x4000 Technical Reference Guide* located on the HP web site ([www.hp.com/workstations/support](http://www.hp.com/workstations/support)).

If you still have problems, run HP e-DiagTools (see “Using e-DiagTools for Hardware Problems” on page 37) and contact Customer Support.

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## Solving Hardware Problems

### Workstation Does Not Start Properly

#### Display is Blank

If your display is blank after you turn on your workstation, check that:

- The workstation and monitor are turned on. (The power lights should be illuminated.)
- Both the workstation and monitor power cords are firmly connected and plugged in. See “Connect the Power Cords” on page 14 for information on connecting the power cord.
- The outlet power is functioning.
- The monitor is firmly connected to the graphics card connection and the graphics card is firmly seated on the system board. (Reseating the graphics card requires opening the workstation.)
- The monitor’s contrast and brightness settings are set correctly.

#### A POST Error Message is Displayed

The Power-on-Self-Test (POST) can detect both an error and a change to the configuration. In either case, a code and short description is displayed. Depending on the message, one or more choices are displayed:

- Press **F1** to ignore the message and continue.
- Press **F2** to run the Setup program and correct a system configuration error.
- Press **Enter** to see more details about the message. After viewing these details, you are returned to the original POST display screen.

#### Keyboard Doesn’t Work

If your keyboard does not work as expected:

- Ensure that all the keyboard cables are firmly connected. See “Connect the Components” on page 11 for information on connecting the keyboard.

- Ensure the keyboard is connected to the keyboard connector rather than the mouse connector on the rear panel of the workstation.
- Ensure you are using a PS2 keyboard rather than a USB keyboard.
- Replace the keyboard with a known working unit to ensure the keyboard itself is not defective.

## Monitor Doesn't Work

If the display is blank, refer to “Display is Blank” on page 31.

If the display works properly during the Power-on-Self-Test (POST), but goes blank when Windows starts, the display settings in the operating system may not be compatible with your monitor. To correct this, restart your workstation in VGA mode:

- Windows 2000 or Windows XP: When prompted, press **F8** and start the workstation in VGA mode.

After the workstation is up and running, change the display settings in the control panel (**Start > Settings > Control Panel**). Refer to your operating system documentation for more information.

## Mouse Doesn't Work

If your mouse does not work as expected:

- Ensure that the mouse cable is firmly connected. See “Connect the Components” on page 11.
- Ensure that the mouse is connected to the mouse connector rather than the keyboard connector on the rear panel of your workstation.
- Ensure you are using the correct driver. The driver for the HP enhanced mouse is provided with all Windows preloaded systems as well as on the *HP Workstation Recovery CD-ROMs*. However, drivers are constantly being updated. You can download the latest driver from the HP web site ([www.hp.com/go/workstationsupport](http://www.hp.com/go/workstationsupport)).
- Clean the mouse ball with a dry, lint-free cloth if the cursor moves sporadically.
- Replace the mouse with a known working unit to ensure the mouse itself is not defective.



## Audio Doesn't Work

The internal speaker is deactivated when you use the output line jack on the rear of the workstation. If you have connected the multimedia keyboard's audio out (green) connector to this jack, you must connect speakers or headphones to the multimedia keyboard for audio output. If you don't have speakers or headphones, disconnect the keyboard's audio out connector from the back of the workstation to enable the internal speaker.

## CD-RW Doesn't Work

If you can read a CD in your CD-RW, but you can't write to a CD, you may be missing the CD-RW application software.

If you have a CD-RW in your workstation, you must install the software that came with the drive before you can write to the device as described in "Load the Software Applications for Your CD-RW" on page 14.

The CD-ROM and DVD drivers were pre-loaded in your workstation at the factory, the two CD-RW applications were not.

## Forget Your Password?

### Clearing the User Password

If you forgot your User password and remember the Administrator password, you can clear the User password through the setup menu.

To clear the User password:

1. Start the Setup Program as described in "Starting the HP Setup Program" on page 20.
2. Enter the Administrator password when prompted.
3. Navigate to the Security menu.
4. Select **Clear all Passwords**.
5. Enter and confirm a new User password if needed.
6. Press **ESC** to leave the Security menu.
7. Select **Exit Saving Changes** to save your changes.

## Clearing the Administrator Password

To clear the Administrator password:

1. Turn off the workstation and remove the cover. For instructions on how to remove the workstation's cover, see the *HP x4000 Technical Reference* on the Web at: <http://www.hp.com/go/workstationsupport>
2. Set switch 1 on the system board switch block to **ON**.
3. Replace the workstation cover.
4. Turn on the workstation and press **ESC** when prompted to see the summary page.
5. When a message appears indicating that the passwords have been cleared, turn off the workstation and remove the cover.
6. Set switch 1 on the system board block back to **OFF**.
7. Replace the workstation cover.
8. If you want to set new passwords, follow the instructions given in "Setting Passwords" on page 23.

---

## Understanding the Diag LEDs

The Diag LEDs on the front panel of the workstation can help you identify specific problems with your workstation:

- During system start up, all four LEDs are green.
- If no problems are detected during start up, all four LEDs turn off.
- If a problem is detected, one or more of the LEDs changes color.

If an error is detected (one or more of the LEDs changes color), see Table 2-1 on page 36 for brief list of combinations that you may see when you initially set up your system. For a complete list and more detailed instructions, refer to the *x4000 Technical Reference Guide* at [www.hp.com/go/workstationsupport](http://www.hp.com/go/workstationsupport).

The LED patterns are defined by:

- R = Red
- Y = Yellow
- G = Green
- I = Off

Unless the LED pattern indicates that the BIOS is in recovery mode (YRII), or that BIOS recovery is complete (GRII), you should:

1. Flash the system BIOS and firmware. For complete instructions and the latest BIOS and firmware versions, go to [www.hp.com/go/workstationsupport](http://www.hp.com/go/workstationsupport).
2. Attempt the solutions given in Table 2-1 on page 36.

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### NOTE

If your LED pattern does not appear in Table 2-1 on page 36, your problem could still stem from corrupted BIOS or firmware. Always flash the BIOS and firmware before attempting other solutions.

If you still have a problem after flashing the BIOS and firmware and following the suggested solutions in Table 2-1 on page 36, refer to the *HP x4000 Workstation Technical Reference* at [www.hp.com/go/workstationsupport](http://www.hp.com/go/workstationsupport) or contact customer support.

**Table 2-1                      Diag LED Patterns (R = Red, Y = Yellow, G = Green, I = Off)**

<b>Pattern</b>	<b>Error</b>	<b>Suggested Solutions</b>
RRYY	Fatal internal processor error (#IERR).	Restart. If it's a random event and not due to hardware, it should not recur.
RYYI	No memory detected.	Insert or reseal the RIMMs. Reseat the memory expander card.
RYYY	Corrupted memory.	Reseat the memory expander card. Reseat the RIMMs.
YRII	BIOS is in crisis recovery mode.	Wait until the BIOS recovery operation is complete (indicated by LED pattern GRII). Follow the solution steps for the GRII pattern.
YYRI	3.3v circuitry error.	Reseat I/O cards.
GRII	BIOS recovery complete.	If you have set system switch 2 on the system board to On, turn it Off and reboot the system.
GYRI	1.8V power circuitry error.	Reseat the memory expander card.
GGRY	Battery voltage error. Battery may be at the end of its life.	Reseat the battery. Replace the battery.
IYRY	12V power circuitry error.	Reseat the I/O cards.
IYRG	2.5 RDRAM power circuitry error.	Reseat the memory expander card. If the memory expander card has a separate voltage regulator module, reseal the module.

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## Using e-DiagTools for Hardware Problems

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### NOTE

Run e-DiagTools before contacting HP for warranty service. e-DiagTools gives you information your support agent needs.

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Use e-DiagTools to diagnose hardware-related problems on your HP workstation. If any of the Diag LEDs on the front panel of your workstation are on, go to “Understanding the Diag LEDs” on page 35 before attempting to use e-DiagTools.

For more information about this utility, refer to the *HP x4000 Workstation Technical Reference*, available at [www.hp.com/go/workstationsupport](http://www.hp.com/go/workstationsupport).

HP e-DiagTools is pre-installed on your hard disk drive. Your hard disk includes a hardware diagnostic partition containing HP e-DiagTools hardware diagnostic utilities. Do NOT delete this partition.

The *HP Workstation Recovery CD-ROMs* that came with your workstation also contain a copy of e-DiagTools in case you are unable to start this utility from your hard disk drive.

### Starting e-DiagTools from the Hard Drive’s Utility Partition (Recommended Method)

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### NOTE

This method only works if the diagnostics partition on your hard disk drive is intact.

- 
1. Start or restart your workstation.
  2. Press function key **F10** when you see the message “Press F10 to enter HP Utility Partition or any other key to proceed.”
  3. Select the option to run e-DiagTools hardware diagnostics.

## Starting e-DiagTools from the CD-ROM

Use this method if for any reason you are unable to start this utility from the hard disk drive partition.

1. Insert the CD-ROM in the CD-ROM drive.
2. Restart the workstation. The workstation should boot from the CD-ROM rather than the hard drive.
3. Select the option to run the hardware diagnostics.

---

### NOTE

If you are unable to boot from your CD-ROM drive, restart your workstation and press **F12** to change the system boot order. You can also change the boot order from the Setup utility (see “Configuring Your Workstation” on page 20). Check the Boot device settings to ensure that your workstation can boot from the CD-ROM.

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## HP Recovery CD-ROM

The HP Recovery CDs enable you to restore your computer to its original factory configuration, and reinstall drivers or other factory-supplied software components. The drivers and software utilities, including documentation and navigational aids, help you to recover the pre-loaded software. There are two CDs, a HP Workstation Recovery CD and a HP Workstations Drivers and Diagnostics CD.

### What Functions Are Available?

The HP Recovery CD provides the following function:

- Install Windows 2000 or Windows XP:  
To recover your HP workstation to its original state as provided by HP.

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#### WARNING

**Using the HP Recovery CD will permanently erase the current contents of your hard disk. You should always backup your data and personal files before using the Recovery CD.**

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### Before Performing A Recovery

Before performing a recovery, upgrade or downgrade, you should make a checklist for each type of function. You will need the Administrator password to make any changes to the *Setup* program. Make a note of any changes.

- The workstation model must match the HP Workstation Recovery CD-ROM and HP Workstations Drivers and Diagnostics CD-ROM (the HP Workstation Recovery CD-ROM is locked to a specific workstation model). Note that both CDs are required for recovery.
- Backup all data files and, if necessary, software applications.
- Upgrading to the latest BIOS version before performing a recovery is recommended.

- *Setup* program settings: Clear any BIOS-level passwords. In the Security menu, set all Hardware Protection items to “Enabled” or “Unlocked” (if applicable). Check also that Booting from the CD-ROM is enabled; in the Boot menu, the CD-ROM drive is configured to boot before the hard disk drive in the Boot Device Priority List.
- Ensure that you have the Certificate of Authenticity from Microsoft available. (This is a label on the cover of your workstation).

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**NOTE**

If you have a model with Windows NT 4.0, it will not install with 4GB of memory. You must remove 4 RIMMS from slot pairs 3 and 4 (see the memory loading label on the chassis cover). After Windows NT 4.0 is loaded, you can re-install this memory

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## Performing A Full Recovery

Depending on the hardware configuration, a full system recovery should take from 30 minutes to 2 hours.

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**WARNING**

**Remember, this procedure will erase everything from the hard disk drive (primary partition, if defined). Ensure that *all* data files and software applications have been saved.**

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1. Shutdown the operating system and switch off your workstation.
2. Remove any non-standard components that were added after you received the workstation to restore it to its original factory configuration.
3. Insert the recovery CD-ROM into the CD-ROM drive and start the workstation.
4. Press the **F8** key and select the CD-ROM to boot first.
5. The computer will boot from the CD-ROM and display a DOS-style menu. Make the appropriate selection from the menu to recover your HP workstation to its original state as delivered by HP.
6. Removed the Recovery CD from the drive, when prompted.



7. Insert the HP Workstations Drivers and Diagnostics CD into your CD-ROM drive.
8. Press **Y** to continue
9. Remove the HP Workstations Drivers and Diagnostics CD when prompted and restart the workstation. The install process continues.

## HP x4000 Technical Characteristics

**NOTE**

Operating temperature and humidity ranges may vary depending on the mass storage devices installed. High humidity levels can cause improper operation of disk drives. Low humidity ranges can aggravate static electricity problems and cause excessive wear of the disk surface.

When you turn off your workstation with the power button on the front panel, the power consumption falls below 10W, but is not zero. To reach zero power consumption when the computer is off, either unplug the workstation from the power outlet or use a power strip with a switch.

**Table 2-2** x4000 Technical Characteristics

Weight	Minimum configuration: 40.20 lb. (18.24 kg) Maximum configuration: 45.40 lb. (20.60 kg)
Dimensions	Width: 8.22 in. (20.90 cm) Height: 19.02 in. (48.30 cm) Depth: 18.62 in. (47.3 cm)
Footprint	153.06 in. (988.57 cm)
Power Supply	
Input voltage	90 - 250 VAC
Input frequency	50/60 Hz
Typical input power	365 W
Max avg input power	500 W
Maximum output power	465 W
Storage Humidity	90% (relative, non-condensing)
Operating Humidity	15 to 80% (relative, non-condensing)
Storage Temperature	-40o C (-40o F) to 70o C (158o F)
Operating Temperature	5o C (41o F) to 35o C (95o F)
Altitude	Operating: 0 to 10,000 ft. (3100 m) Non-operating: 0 to 15,000 ft. (4500 m)

## **HP Customer Care Center Phone Numbers**

HP Customer Care Centers can help you solve issues related to HP products and, if necessary, initiate appropriate service procedures. In the U.S.A, telephone support is available 24 hours a day, 7 days a week. In other locations, it is available during normal office hours. Here is the URL for HP Customer Care Center Phone Numbers:

**[http://www.hp.com/workstations/support/collaborate/call\\_centers.html](http://www.hp.com/workstations/support/collaborate/call_centers.html)**

Troubleshooting

## HP Customer Care Center Phone Numbers

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# **A**      **Warranty and Regulatory Information**

**Declaration of Conformity  
according to ISO/IEC Guide 22 and EN 45014**

**Manufacturer:** Hewlett-Packard Company  
3404 East Harmony Rd.  
Fort Collins, CO 80528  
USA

**Declares that the:**

**Product Name:** HP Workstation  
**Model Numbers:** A6068A  
**Base Product Numbers:** A1280A  
**Product Options:** all

**conforms to the following specifications:**

**Safety** IEC 950:1991+A1+A2+A3+A4/EN 60950:1992+A1+A2+A3+A4  
IEC 60825-1:1993/EN60825-1:1994+A11 Class 1 for LEDs  
USA 21CFR Subpart J – for FC Laser module  
China GB4943-1995  
Russia GOST R 50377-92

**EMC** CISPR 22: 1997 / EN 55022: 1998 Class A  
CISPR 24: 1997 / EN 55024: 1998  
IEC 1000-3-2:1994 / EN 61000-3-2:1998  
US FCC Part 15, Class A  
Australia/New Zealand AS/NZS 2064:1997, AS/NZS 3548:1995  
China GB9254-1999  
Japan VCCI Class A  
Russia GOST R 29216-94  
Taiwan CNS13438:1997 Class A

**and is certified by:** UL Listed to UL1950, 2nd edition, File E146385  
cUL Listed to CSA 22.2 No. 950-M93  
T\_V Certified to EN60950 2nd edition with A1+A2+A3+A4  
HP Fort Collins CCQD HTC

**supplementary information:**

The product herewith complies with the requirements of the following Directives and carries the CE marking accordingly:

- the EMC directive 89/336/EEC and 92/31/EEC and 93/68/EEC
- the Low Voltage Directive 73/23/EEC and 93/68/EEC

This product was tested in a typical Hewlett-Packard workstation configuration.

Original signed by: Ruth Lutes, Site Quality Manager

For Compliance Information ONLY, contact:

European Contact: Your local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH,  
Department HQ-TRE Standards Europe, Herrenberger Strasse 130 Boeblingen (FAX: +49-7031-14-3143)  
Americas Contact: Hewlett-Packard, Fort Collins Site Quality Manager, Mail Stop 64, 3404 E. Harmony Road,  
Fort Collins, CO 80528, U.S.A.

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## Regulatory Information

### Federal Communications Commission (FCC) Radio Frequency Interference Statement (for USA only)

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#### NOTE

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules and the Canadian Department of Communications. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

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Hewlett-Packard's FCC Compliance Tests were conducted with HP-supported peripheral devices and HP shielded cables, such as those you receive with your system. Changes or modifications not expressly approved by Hewlett-Packard could void the user's authority to operate the equipment.

#### Notice for Canada

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.  
Cet appareil numérique de la Class A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

#### Safety Warning for the USA and Canada

If the power cord is not supplied with the computer, select the proper power cord according to your local national electric code.

USA: use a UL listed type SVT detachable power cord.

Canada: use a CSA certified detachable power cord.

For your safety, never remove the PC's cover without first removing the power cord and any connection to a telecommunication network. Always replace the cover before switching on again.

Si le cordon secteur n'est pas livré avec votre ordinateur, utiliser un cordon secteur en accord avec votre code électrique national.

USA: utiliser un cordon secteur "UL listed," de type SVT.

Canada: utiliser un cordon secteur certifié CSA.

Pour votre sécurité, ne jamais retirer le capot de l'ordinateur sans avoir préalablement débranché le cordon secteur et toute connexion à un réseau de télécommunication. N'oubliez pas de replacer le capot avant de rebrancher le cordon secteur.

#### **Notice for the Netherlands**

Bij dit apparaat zijn batterijen geleverd. Wanneer deze leeg zijn, moet U ze niet weggoien maar inleveren als KCA.

#### **Notice for Germany**

Wenn die Batterie nicht korrekt eingebaut wird, besteht Explosionsgefahr. Zu ihrer eigenen Sicherheit sollten Sie nicht versuchen, die Batterie wiederaufzuladen, zu zerlegen oder die alte Batterie zu verbrennen. Tauschen Sie die Batterie nur gegen den gleichen oder ähnlichen Typ aus, der vom Hersteller empfohlen wird. Bei der in diesem PC integrierten Batterie handelt es sich um eine Lithium-Batterie, die keine Schwermetalle enthält. Batterien und Akkumulatoren gehören nicht in den Hausmüll. Sie werden vom Hersteller, Händler oder deren Beauftragten kostenlos zurückgenommen, um sie einer Verwertung bzw. Entsorgung zuzuführen.

#### **Noise Declaration for Germany**

Lärmangabe nach Maschinenlärmmverordnung - 3 GSGV (Deutschland)  
LpA < 70 db am Arbeitsplatz normaler Betrieb nach EN27779: 11.92.

#### **Notice for Japan (Class A)**

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この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

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**Notice for Korea**

**시용시 안내문 (A급 기기)**

이 기기는 업무용으로 전자파장애감정을 받은 기기이오니, 만약 잘못 구입하셨을 때에는 구입한 곳에서 비입무용으로 교환하시기 바랍니다.

**Notice for Taiwan**

**警告使用者：**  
這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

## HP Hardware Warranty

**Important:** This is your hardware product warranty statement. Please, read it carefully.

Warranty terms may be different in your country. If so, your Authorized HP Dealer or Hewlett-Packard Sales and Service Office can give you details.

HP products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use.

HP products external to the system processor unit — such as external storage subsystems, displays, printers, and other peripherals — are covered by the applicable warranties for those products; HP software is covered by the HP Software Product Limited Warranty

**FOR CONSUMER TRANSACTIONS IN AUSTRALIA AND NEW ZEALAND: THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.**

### Three Year Limited Hardware Warranty

Hewlett-Packard (HP) warrants this hardware product against defects in materials and workmanship for a period of three years from receipt by the original end-user purchaser.

The three year warranty includes on-site service during the first year of use (free parts and labor), and parts service provided by an HP Service Center or a participating Authorized HP Computer Dealer Repair Center, during the second and third years of use.

If HP receives notice of above defined defects during the warranty period, HP will either, at its option, repair or replace products, which prove to be defective.

Should HP be unable to repair or replace the product within a reasonable amount of time, the customer's alternate exclusive remedy shall be a refund of the purchase price upon return of the product.

The system processor unit, keyboard, mouse, and Hewlett-Packard accessories inside the system processor unit — such as video adapters, mass storage devices, and interface controllers — are covered by this warranty.

This warranty is extended worldwide under certain conditions (please check with your local HP office) to products purchased from HP or an Authorized HP Computer Dealer which are reshipped by the original purchaser either for use by the original purchaser or provided as an incidental part of systems integrated by the original purchaser. When available in the country of use, service is provided in the same manner as if the product was purchased in that country and can only be provided in countries where the product is designed to operate. If the product is not normally sold by HP in the country of use, it must be returned to the country of purchase for service. Response time for on-site service, and parts delivery turn-around time for parts service, are subject to changes from standard conditions based upon non-local parts availability.

## **Limitation of Warranty**

The above warranty shall not apply to defects resulting from: misuse; unauthorized modification; operation or storage outside the environmental specifications for the product; in-transit damage; improper maintenance; or defects resulting from use of non-HP software, accessories, media, supplies, consumables, or such items not designed for use with the product.

Reloading the bundled or pre-loaded software on your workstation is not covered by the HP warranty.

HP MAKES NO OTHER EXPRESS WARRANTY, WHETHER WRITTEN OR ORAL, WITH RESPECT TO THIS PRODUCT. ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS IS LIMITED TO THE THREE-YEAR DURATION OF THIS WRITTEN WARRANTY. SOME STATES OR PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

This warranty gives you specific legal rights, and you may also have other rights, which vary, from state to state, or province to province.

## **Limitation of Liability and Remedies**

THE REMEDIES PROVIDED ABOVE ARE THE CUSTOMER'S SOLE AND EXCLUSIVE REMEDIES. IN NO EVENT SHALL HP BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER BASED ON WARRANTY, CONTRACT, TORT, OR ANY OTHER LEGAL THEORY.

The foregoing limitation of liability shall not apply in the event that any HP product sold hereunder is determined by a court of competent jurisdiction to be defective and to have directly caused bodily injury, death, or property damage; provided, that in no event shall HP's liability for property damage exceed the greater of \$50,000 or the purchase price of the specific product that caused such damage.

Some states or provinces do not allow the exclusion or limitation of incidental or consequential damages — including lost profit — so the above limitation or exclusion may not apply to you.

## **Obtaining On-Site Warranty Service**

To obtain on-site warranty service, the customer must contact an HP Sales and Service Office (in the US, call the HP Customer Support Center at (970) 635-1000) or a participating Authorized HP Computer Dealer Repair Center. The customer must be prepared to supply proof of the purchase date.

The system processor unit, keyboard, mouse, and Hewlett-Packard accessories inside the system processor unit — such as video adapters, mass storage devices, and interface controllers — are covered by this warranty.

During the on-site warranty period, customer-replaceable components may be serviced through expedited part shipment. In this event, HP will prepay shipping charges, duty, and taxes; provide telephone assistance on replacement of the component when necessary; and pay shipping charges, duty, and taxes for any part that HP asks to be returned.

On-site visits caused by non-Hewlett-Packard products — whether internal or external to the system processor unit — are subject to standard per-incident travel and labor charges.

On-site service for this product is restricted or unavailable in certain locations. In HP Excluded Travel Areas — areas where geographical obstacles, undeveloped roads, or unsuitable public transportation prohibit routine travel — service is provided on a negotiated basis at extra charge.

Response time for HP on-site service in an HP Service Travel Area is normally next business day (excluding HP holidays) for HP Travel Zones 1-3 (generally 100 miles or 160 km from the HP office). Response time is second business day for Zones 4 and 5 (200 miles, 320 km); third business day for Zone 6 (300 miles, 480 km); and negotiated beyond Zone 6. Worldwide Customer Support Travel information is available from any HP Sales and Service Office.

Travel restrictions and response time for dealer or distributor service are defined by the participating dealer or distributor.

Service contracts which provide after-hour or weekend coverage, faster response time, or service in an Excluded Travel Area are often available from HP, an authorized dealer, or authorized distributor at additional charge.

## **Customer Responsibilities**

The customer may be required to run HP-supplied diagnostic programs before an on-site visit or replacement part will be dispatched.

The customer must verify that the latest version of the BIOS is installed on the product. The customer may be asked to install the latest version of the BIOS before an HP Sales and Service Center Representative or HP Authorized Support Provider representative is dispatched to the customer's site.

Product upgrades, such as new revisions of drivers or BIOS, are not eligible for on-site services under warranty. These revisions are available for you to download at the recommendation of HP or your reseller support representative. If you need professional services to assist you with the upgrades, contact your reseller or HP.

The customer is responsible for the security of its proprietary and confidential information and for maintaining a procedure external to the products for reconstruction of lost or altered files, data, or programs.

The customer must provide: access to the product; adequate working space and facilities within a reasonable distance of the product; access to and use of all information and facilities determined necessary by HP to service the product; and operating supplies and consumables such as the customer would use during normal operation.

A representative of the customer must be present at all times. The customer must state if the product is being used in an environment which poses a potential health hazard to repair personnel; HP or the servicing dealer may require that the product be maintained by customer personnel under direct HP or dealer supervision.

### **Obtaining Parts Warranty Service**

When parts warranty service applies, the customer may be required to run HP-supplied diagnostic programs before a replacement part will be dispatched. The customer must be prepared to supply proof of purchase.

The customer shall return some defective parts upon HP demand. In that case, HP will prepay shipping charges for parts returned to the HP parts service center.

### **HP Telephone Support Services**

HP free telephone support for your workstation is available during the first year from date of purchase. This service will also provide technical assistance with the basic configuration and setup of your HP Workstation and for the bundled or pre-loaded operating system.

HP does NOT provide telephone support for workstations configured as network servers. We recommend HP NetServers for your network server requirements.

(Rev. 17/03/98)

## HP Software Limited Warranty

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