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USER'S GUIDE

Compaq Armada 1500 Family of Personal Computers

Third Edition (January 1998)

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Part Number 284809-003

Compaq Computer Corporation

BEFORE YOU BEGIN

This chapter provides information about documentation and online help files, customer registration information, ordering backup software, and understanding symbols and conventions used in this guide. This chapter also describes the contents of the packing box your computer came in and helps you get connected to AC power.

Finding Information

References for the computer are provided as printed materials and as online information accessible from the computer screen.

NOTE: The printed and online references that come with the computer vary by model.

Printed and Online References

In addition to this *User's Guide*, the following printed references come with your computer:

- Quick setup poster
- Options information
- Microsoft operating system guide
- *Safety & Comfort Guide*
- Warranty and service information
- *Important Modem Information*

The following Compaq online references are preinstalled on your computer:

- *Compaq Reference Guide*
- Microsoft Windows
- *Safety & Comfort Guide*

The online references installed on the computer include user's guides, application help, software utilities help, and customer support information. Many are accessible from the Compaq Information Center folder on the Start menu. Others can be accessed from the application or utility screens.



CAUTION: Most online references are available only through the Windows interface. If you delete Windows, those references will also be deleted. Therefore, Compaq recommends that you do not delete Windows software.

Accessing Online Reference Guide

To access the online *Reference Guide*, click Start, Compaq Information Center, Compaq *Reference Guide*.

Ordering Backup Software

Compaq recommends that you create a backup of the software preinstalled on the computer. Or, for an additional cost, you can order backup diskettes from Compaq for all software preinstalled on this computer.

To order backup diskettes, refer to the “Worldwide Telephone Numbers” listed in Appendix A, “Compaq Customer Support” in this guide or in the online *Reference Guide*. If an order form is included with your computer, complete the form and return it. Or call one of the numbers listed on the order form.

IMPORTANT: Before calling Compaq to place your order, find the serial number on the rear of your computer. This number is necessary for all backup diskette purchases.

Customer Registration Material

In North America, Compaq provides information in the packing box on how to register your new product.

Symbols and Conventions

- Some or all of the following format conventions are used in this guide to distinguish elements of text: Names of keys are shown in bold type as they appear on the keyboard, for example, **Ctrl**, **Backspace**, **Tab**.
- Keys that you should press at the same time are represented by the key names and the plus (+) symbol, for example, **Ctrl+Alt+Delete**.
- Commands are presented in lowercase, bold type as shown here: **install** or **a:\install**.
- When you need to type information without pressing the **Enter** key, you are directed to “type” the information.
- When you need to type information *and* press the **Enter** key, you are directed to “enter” the information.

NOTE: Text set off in this manner presents commentary, sidelights, or interesting points of information.

IMPORTANT: Text set off in this manner presents clarifying information or specific instructions.



WARNING: Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.



CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

Verifying the Packing Box Contents

Along with your computer, the packing box contains an external power cord and a battery pack preinstalled in the battery bay. Some models may also have a modem cable.



WARNING: It is in your best interest to set up a comfortable and healthful workstation. Misuse of your personal computer or failure to establish a safe and comfortable workstation could result in discomfort or serious injury. Consult your *Safety & Comfort Guide* for more information.

Guidelines for Connecting External Power



WARNING: To reduce the risk of electric shock or damage to the equipment:

- Do not disable the power cord grounding plug. The grounding plug is an important safety feature.
 - Plug the AC power cord into a grounded (earthed) outlet that is easily accessible at all times.
 - Disconnect power from the computer by unplugging the AC power cord from either the electrical outlet or the Automobile Adapter.
 - Do not place anything on power cords or cables. Arrange them so that no one may accidentally step on or trip over them. Do not pull on a cord or cable. When unplugging from the electrical outlet, grasp the cord by the plug.
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chapter 1

LOOKING AT THE COMPUTER

Your computer is equipped with convenient components and features. This chapter familiarizes you with the location and function of components on the computer.

Display and Left Side Components



Display and Left Side Components

Display and Left Side of the Computer

Ref.	Component	Function
①	Display latches	Open the computer.
②	USB Connector	Provides connection for universal serial bus (USB) peripheral devices. This connector is available on selected models.
③	Modem port	Provides integrated communications on some models and is available as an option on other models. NOTE: Modem not available in all countries.
④	PC Card eject levers	Ejects PC Cards from the slots.
⑤	PC Card slots	Accepts 32- and 16-bit credit card-sized options called PC Cards.
⑥	DualBay	Accepts the diskette drive or a second battery pack.

Right Side Components



Right Side Components

Right Side of the Computer

Ref.	Component	Function
①	Power/suspend light	Lights (solid) when the computer is turned on and plugged into AC power; blinks in Suspend; turns off when the computer is in Hibernation or turned off.
②	Battery charge light	Lights (solid) when a battery (in the battery bay or DualBay) is charging; blinks in low-battery condition; turns off when operating on battery power; turns off when fully charged. NOTE: The power/suspend light and battery charge light are off when the computer is operating on battery power.
③	Airflow vents	Allow airflow to cool the computer.
④	Battery bay	Accepts rechargeable battery pack.
⑤	Stereo speaker/headphone jack	Connects stereo speakers, headphone, or headset; when connected, disables internal speakers; requires a 3.5 mm, 3-conductor plug.

Continued

Ref.	Component	Function
⑥	Microphone-in jack	Connects an external mono microphone; when connected, disables internal microphone; requires a 3.5 mm, 2-conductor or 3-conductor plug.
⑦	Volume control	Adjusts volume of stereo speakers.
⑧	CD-ROM drive	Accepts CD-ROM disks. NOTE: CD-ROM drive included on some models and available as an option on others.
⑨	Cable lock provision	Prevents theft by allowing a cable to be connected to the computer, then secured to a fixed object.

Volume Control Buttons

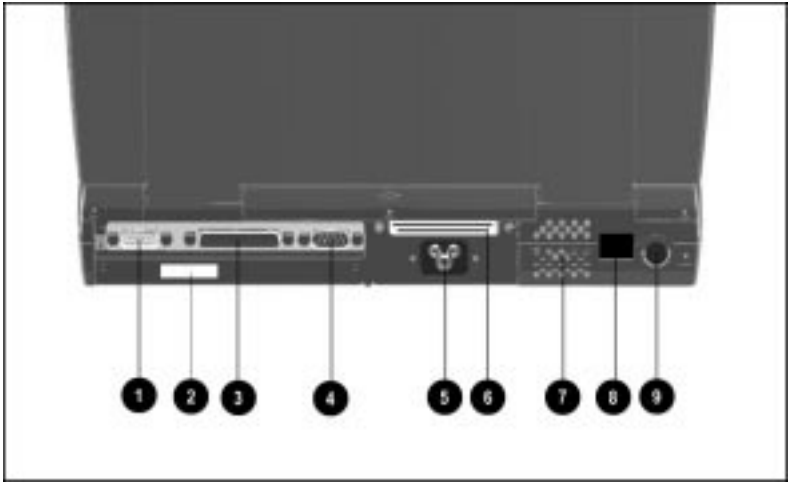
Volume level of the stereo can be changed one step at a time by pressing and releasing the volume buttons. The left button adjusts the volume down and the right button adjusts the volume up. Volume level can be changed in multiple steps by pressing and holding either button.

Pressing both buttons at the same time mutes the sound. With the audio muted, system beeps are still audible unless they've been turned off using hotkeys or the power icon.



WARNING: To reduce the risk of personal injury, adjust the volume control before putting on headphones.

Rear Components

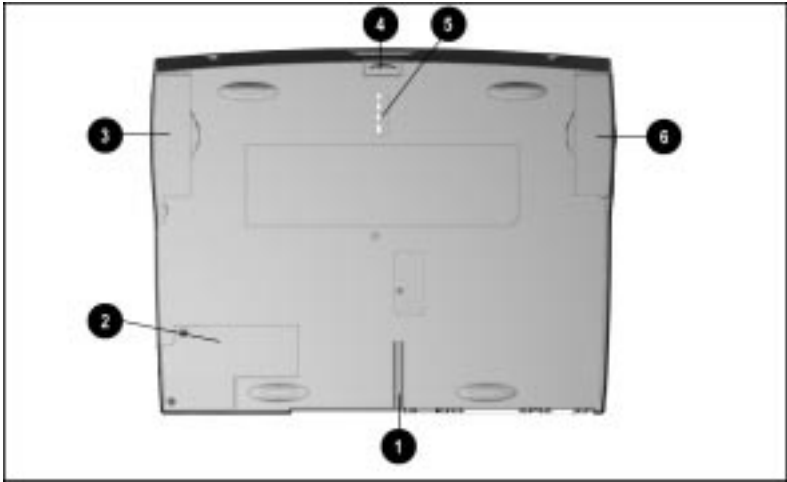


Rear Components

Rear of the Computer

Ref	Component	Function
①	Serial connector	Connects serial devices such as a mouse.
②	Serial number	Numerical identification for the computer.
③	Parallel connector	Connects parallel devices such as a printer.
④	External monitor connector	Connects an external CRT monitor.
⑤	AC power connector	Connects to external (AC) power.
⑥	Docking connector	Connects optional convenience base.
⑦	Airflow vents	Allow airflow to cool the computer.
⑧	Infrared port	Provides for wireless communication.
⑨	Keyboard/mouse connector	Connects keyboard and/or mouse.

Bottom Components

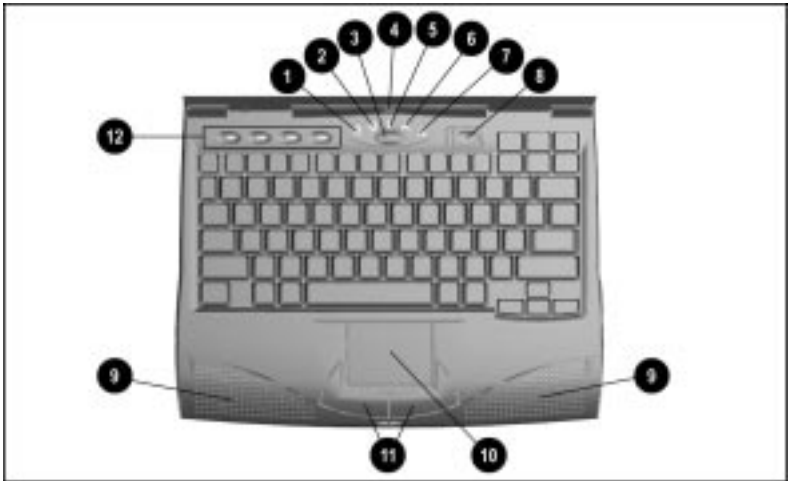


Bottom Components

Bottom of the Computer

Ref	Component	Function
①	Docking alignment guide	Promotes accurate alignment when docking the computer to a convenience base.
②	Modem compartment	Provides access to upgradable modem on some models.
③	DualBay traction grip	Allows a DualBay device to be removed easily.
④	DualBay release latch	Releases diskette drive from the DualBay.
⑤	Docking restraint latch recess	Helps to secure the computer to the convenience base.
⑥	Battery bay traction grip	Allows a battery pack to be removed easily.

Keyboard Components



Keyboard Components

Keyboard Components

Ref	Component	Function
①	Hard drive light	Turns on when the hard drive or a CD-ROM (data access only) is being accessed.
②	Diskette drive light	Turns on when a diskette drive in the DualBay is on or being accessed.
③	Suspend button	Press to initiate or exit Suspend. Press with Fn key to initiate Hibernation.
④	Built-in microphone	Internal mono microphone.
⑤	NumLock light	Turns on when the numeric keypad is active.
⑥	Caps Lock light	Turns on when the Caps Lock function is on.
⑦	Scroll Lock light	Turns on when the Scroll Lock key is on.
⑧	Power switch	Slides to turn computer on or off.
⑨	Stereo speakers	Produce high-quality stereo sound.
⑩	Touchpad	Functions as an integrated pointing device.
⑪	Left and right touchpad buttons	Function as left and right mouse buttons.
⑫	Programmable keys	Assign and launch frequently used applications and documents.

Special Function Keys



Special Function Keys

Special Function Keys

Ref	Component
①	Function keys F1-F12
②	Screen-control keys
③	Embedded numeric keypad
④	Enter key
⑤	Shift keys
⑥	Cursor keys
⑦	Ctrl keys
⑧	Alt keys
⑨	Fn key
⑩	Caps Lock key
⑪	Tab key
⑫	Esc key

Identifying Hotkeys

Hotkeys are keyboard shortcuts that enable you to access frequently used features no matter what program you are using. To control the size and location of the popup screens that contain hotkey information, access the Hotkey Popup utility by clicking Start, Settings, Control Panel. Then double-click the Display icon and click the Hotkey tab.

Hotkey Assignments and Functions

Feature	Hotkeys	Function
Switching the displays	Fn+F4	Toggles display among computer display, external monitor, and simultaneous display.
Warning beeps	Fn+F5	Controls volume for system warning beeps. To increase volume, press Fn+F5 , then the right arrow key. To decrease volume, press Fn+F5 , then the left arrow key.
Quick Lock/ QuickBlank	Fn+F6	Initiates security features, QuickLock, which disables the keyboard and mouse, and QuickBlank, which clears the screen. Enter power-on password to reactivate the keyboard, mouse, and screen.
Power Management	Fn+F7	Displays the power conservation settings in a popup window.
Battery gauge	Fn+F8	Displays the status of all installed battery packs in a popup window. Press the right or down arrow keys to select the next battery pack status to be displayed. If a battery pack is not present, it cannot be selected. See Chapter 3, "Learning About Battery Packs" for details on using the battery gauge.
Contrast control	Fn+F9	Adjusts the display contrast on passive matrix displays. To increase contrast, press Fn+F9 , then the right arrow key. To decrease contrast, press Fn+F9 , then the left arrow key.
Brightness control	Fn+F10	Adjusts the display brightness. To increase brightness, press Fn+F10 , then the right arrow key. To decrease brightness, press Fn+F10 , then the left arrow key.

NOTE: Hotkeys work only on the computer keyboard and not on an external keyboard.

Using the Embedded Numeric Keypad

The embedded numeric keypad is a section of the keyboard that converts to a numeric keypad when the Num Lk function is activated. This is done by pressing **Fn** ❶ and **End/NumLk** ❸. Use this toggle key function to enable and disable the embedded numeric keypad ❷.

NOTE: When the NumLock light ❹ is on, the embedded numeric keypad is active.



Embedded Numeric Keypad

Embedded Numeric Keypad Functionality in Windows 95

With NumLock Turned On (NumLock light on)

Key	Result
Numeric keypad	Numbers
Function (Fn) (press and hold)	Lower case letters & symbols
Fn+Shift (press and hold)	Upper case letters & symbols

NOTE: Does not apply to an external numeric keypad.

Programmable Keys

The four programmable keys at the top of the keyboard allow you to quickly open a frequently used document or emulate one of the Microsoft Windows Application Logo Keys. (Refer to “Keyboard Components” in this chapter to see the location of programmable keys.)

By assigning the programmable keys to schemes, you can create multiple sets of key assignments to tailor your computer for various uses or to accommodate more than one user.

To access the Programmable Keys utility, click Start, Settings, Control Panel. Double-click the Keyboard icon and click the Programmable Keys tab.

NOTE: Programmable keys are numbered one through four, left to right.

IMPORTANT: For detailed information about programmable keys, refer to the online *Reference Guide*.

Using the Touchpad



Touchpad and Touchpad Buttons

To operate the touchpad, move your finger across the touchpad ❶ to control cursor movement. Press the bottom left ❷ and right ❸ buttons to select items, as you would use left and right mouse buttons on an external mouse.

You can single- and double-tap the touchpad to select and activate items. You can also use the buttons and touchpad to click and drag objects across the screen.

Customizing Touchpad Functions

To customize the touchpad functions, go to the mouse utility by clicking Start, Settings, Control Panel. Then double-click the mouse utility.

Cleaning the Touchpad

To clean the touchpad, follow these steps:

1. Turn off the computer.
2. Remove the battery pack(s) and disconnect the AC power cord. Wipe the touchpad gently with a clean, dry cloth.
3. To remove stubborn stains, wipe the touchpad with a damp cloth moistened with a small amount of dishwashing detergent.

chapter 2

USING POWER FEATURES

This computer has convenient features that allow you to manage power consumption and maximize battery operating time. This chapter explains power features and software.

Using the Power Switch

Slide the power switch ❷ once to turn on the computer. When the power/suspend light ❶ turns on, the computer is on. To turn off or restart the computer while working in Windows, click Shut Down on the Windows Start menu and follow the directions on the screen.

If you use the computer frequently, you do not have to turn it off. Simply initiate Suspend ❶ when you're not using it.



Suspend Button, Power Switch, Power/Suspend Light

Restarting the Computer

If you need to restart the computer, use one of these options:

- Click Start, Shut Down to access software options for shutting down or restarting the computer.
- Press **Ctrl+Alt+Delete** to shut down an unresponsive application and prevent loss of data.

NOTE: Press **Ctrl+Alt+Delete** again to restart the computer.

- Slide the power switch and press suspend at the same time to reset or restart the computer, if other options fail.

When to Turn Off the Computer or Initiate Suspend

- If you use the computer frequently, you do not have to turn it off. Simply initiate Suspend when you're not using it.
- If external power is not connected, battery packs continue to drain while the computer is in Suspend, but at a much slower rate. If you want to charge the battery packs while you're not using the computer, connect to external power. The battery packs charge whether the computer is on or off, but charge much faster when the computer is off.
- If you plan to store the computer for six months or more, turn off the computer and remove the battery packs. This reduces a battery pack's discharge rate and extends its operating life.
- To prevent total battery discharge, if you aren't using the computer for 24 hours or more, turn it off.

Using the Suspend Button

When you finish working, or if you want to pause in the middle of your applications, initiate Suspend by pressing the suspend button once. The power/suspend light will blink slowly.

When used with **Fn**, Suspend initiates Hibernation. Suspend has the following benefits:

- Puts the computer in Suspend for up to 110 hours with a fully charged battery pack, uses very little power, and saves your place in your applications. If you have an internal modem, puts the computer in Suspend for up to 80 hours.

IMPORTANT: If you plan to be away from the computer 24 hours or more, turn off the computer to prevent total battery discharge.

- Shuts down most of the major components (hard drive, processor, and display).
- When you return to your work, returns to the screen you were using before you initiated Suspend.

How Suspend Is Initiated

Suspend is initiated in one of three ways:

- Manually, at any time, by pressing the suspend button once or by clicking Suspend from the Start menu. The power/suspend light will blink slowly.
- Automatically, when a predefined timeout is reached. The Suspend timeout period is set in the Power Management utility.
- Automatically, when the computer reaches a critical low-battery condition, if Hibernation has been disabled.

NOTE: When a critical low-battery condition is reached, the computer will automatically go into Hibernation, unless the Hibernation feature has been disabled. In that case, the computer will initiate Suspend.

Results of Suspend

When Suspend is initiated, the following occurs:

- Beeps two times
NOTE: If system beeps are turned off, beeps are not audible.
- Screen blanks
- Power/suspend light blinks

Exiting Suspend

Exit Suspend by pressing the suspend button once. When you exit Suspend, the following occurs:

- Beeps twice
- Power/suspend light stops blinking and becomes steady
- Returns your information to the screen right where you left off. No information is lost.

IMPORTANT: The computer will not exit Suspend if it is in low-battery condition and it is not connected to external power. In this case, you must connect AC power. When AC power is connected, press the suspend button once to return your information to the screen.

IMPORTANT: If the computer is in Suspend, and a low-battery condition occurs, the computer automatically initiates Hibernation (unless Hibernation has been disabled), saves your information to the hard disk, and turns off the computer. When you turn the computer back on after inserting a fully charged battery pack or connecting external power, your information returns to the screen at the point where Suspend was initiated. No information is lost.

Using Hibernation

Hibernation is a safeguard condition during which all information in system memory is saved to the hard disk and power to the computer is turned off. When you turn on the computer and resume work, your information is returned to the screen exactly where you left off. No information is lost.

Hibernation has the following benefits:

- Since the computer is turned off and there is no drain on battery packs, the computer can stay in Hibernation for an unlimited time.
- You can manually save your place in any application or when making a presentation.
- Information is automatically saved when the computer reaches a critical low-battery condition (if Hibernation has not been disabled).

NOTE: Refer to Chapter 3, “Learning About Battery Packs,” for information on low battery and critical low battery conditions.

Initiating Hibernation

Hibernation is initiated in the following ways:

- Press **Fn** and the suspend button to initiate Hibernation manually. Hibernation marks your place in your applications and turns off power completely to your computer.
- System-initiated Hibernation occurs when the computer reaches a critical low-battery condition. To protect against loss of information, the computer automatically saves all information in system memory to the hard disk and then turns off. Turn on the computer to resume work.



CAUTION: If you received a “critical” low-battery warning, do not initiate Hibernation. Save all data and turn off the computer.

IMPORTANT: While using the modem with communications software (on models with an internal modem), the modem will disconnect when Hibernation is initiated or a low-battery condition occurs. After exiting Hibernation or resolving the low-battery condition, restart the communications software to restore the original modem settings.

Exiting Hibernation

To resume work after Hibernation is initiated, follow these steps:

1. If the battery pack does not have enough charge to exit Hibernation, insert a fully charged battery pack or connect to an external power source.
2. Turn on the computer by sliding the power switch. The computer exits Hibernation. Information saved to the hard disk returns to the screen at the point where Hibernation was initiated.

NOTE: To stop the restoration of information, press **Fn+Ctrl+Break**.

Power Management Utility

The Power Management utility (power icon) includes features that allow you to monitor how AC and battery power are used. It controls most computer components, including the hard drive, processor, and display.

To conserve the battery pack charge, the computer can be preset to shut down power to a component after a specified period of inactivity called a timeout. In addition to other features, Power Management allows you to preset timeouts.

To access the Power Management utility, click Start, Settings, Control Panel, then double-click the Power icon.

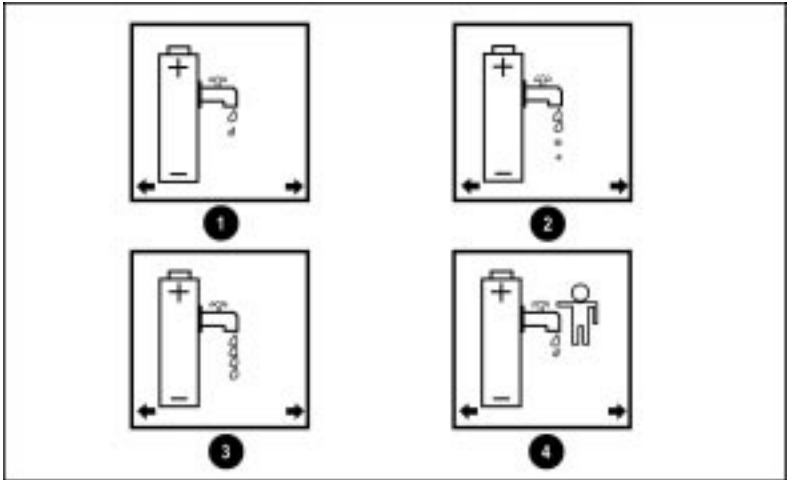
The Power icon contains several tabs that allow you to view or set power management features:

If You Want To:	Click This Tab:
Enable/disable AC Energy Saver and customize Energy Save monitor values	AC Energy Saver
Set battery conservation levels; enable/disable warning beeps; set timeouts	Battery Conservation Settings
Display the status of installed batteries	Battery Status
Select Hibernation Settings	Hibernation
Show Suspend on the Start menu or battery meter on the taskbar	Power

Battery Conservation Levels

To extend the life of the battery pack, you can customize the level of battery conservation or use one of three preset conservation levels. Medium conservation is the default setting.

You can change the default level of battery conservation by selecting the Battery Conservation tab in the power icon. This utility can also be accessed from any application by pressing hotkeys **Fn+F7** on the keyboard to display a popup window indicating the current level. Use the left or right arrow keys to select a different level.



Battery Conservation Levels

- ❶ **High Conservation:** Saves the most battery power. This level supplies the most battery life from a single charge.
- ❷ **Medium Conservation:** The default setting, Medium Conservation provides a balance between system performance and battery life.

- ③ **None (Drain):** Turns off battery conservation features so that the system runs at full speed. Hibernation is turned on when you purchase the computer. The system also initiates Hibernation automatically when it reaches a low-battery condition. *But, in the None (Drain) setting, the computer will not initiate Hibernation if it has been manually disabled.*



CAUTION: Before setting your battery conservation level to None (Drain), make sure the Hibernation feature has not been disabled.

- ④ **Custom:** Saves battery power according to your specifications by allowing you to customize timeouts and warning beeps. (See the following section for information on timeouts.)

NOTE: Each setting remains in effect until you change it.

Setting a Timeout

Use the Hibernation tab in Power Management to set timeouts. Timeouts are specified periods of system or component inactivity designed to conserve power. When a timeout period expires, battery conservation shuts down the system or the specified components to save power.

For example, the hard drive idle default timeout is two minutes. If an application does not access information on the hard disk for two minutes, the hard drive shuts down until it is accessed again.

Use timeouts in the following ways:

- Use a preset timeout provided with the medium (default) or high level of battery conservation.
- Set your own timeouts through the custom level of battery conservation so that the computer works more efficiently with your applications.

chapter 3

LEARNING ABOUT BATTERY PACKS

This computer has convenient features that allow you to manage power consumption and maximize battery operating time. This chapter describes those battery features and utilities.

Using Battery Power

The computer accommodates one or two rechargeable battery packs at one time in any combination of lithium-ion or nickel metal hydride. The battery locations are:

- Battery bay in the computer
- DualBay in the computer



WARNING: Batteries/battery packs and accumulators should not be disposed of together with general household waste. In order to forward them to recycling or proper disposal, please use the public collection system or return them to Compaq, your authorized Compaq partners or other agents.

Charging Battery Packs

The battery packs charge in the following sequence:

- The primary battery pack in the computer battery bay
- A battery pack in the computer DualBay

To charge battery packs, follow these steps:

1. Connect the power cord to the computer and plug it into an electrical outlet.
2. Turn on the computer if you want to use it while the battery packs are charging.



Battery Charge Light

NOTE: The battery charge light turns on (solid) when a battery pack (in the battery bay or DualBay) is charging; turns off when fully charged; blinks in low-battery condition.

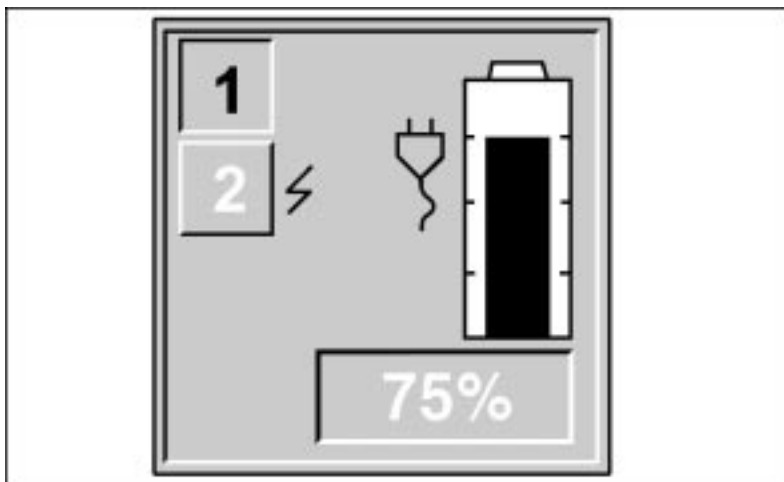
It takes several hours for a battery pack to fully charge when the computer is turned off. It takes significantly longer to charge each battery pack when the computer is being used. When the battery charge light turns off, the battery packs are fully charged.

Discharging Batteries

If two batteries are installed in the computer, battery charge is depleted beginning with the battery pack in the DualBay, then the battery pack in the battery bay.

Battery Gauge Utility

The battery gauge popup window is a hotkey utility (press **Fn+F8**) with functions similar to the Battery Status tab in the Power icon on the Control Panel.



Battery Gauge Utility

The battery gauge popup shows the status of the installed battery packs with two numbered boxes:

- Box # 1, represents the primary battery pack in the computer battery bay.
- Box # 2, represents the battery pack in the computer DualBay.

The box representing the selected battery pack is depressed and the number inside is black. The percentage of battery charge remaining for the selected battery pack is shown at the bottom of the popup. The number in the box not selected is grayed out. If a battery pack is charging, a lightning bolt symbol appears to the right of the box. If AC power is connected, the power connector is shown.

To view the status of the next battery pack, press the right or down arrow key. Press the left or up arrow key to select the previous battery pack. If a battery pack is not in a bay, the corresponding box cannot be selected.

NOTE: In this illustration, battery pack number one in the battery bay has 75% of its charge time remaining and battery number two in the DualBay is charging. AC power is connected.

NOTE: If you do not depress an arrow key for five to seven seconds, the battery gauge popup will display the average remaining capacity (percent of charge remaining) for all installed batteries combined.

Ensuring Battery Gauge Accuracy

Best results can be obtained by using batteries in a consistent manner. Follow these guidelines:

- Fully charge a battery pack before using it.
- Allow a battery to fully charge before removing external power from the computer.
- Recharge a battery pack before use if it has been out of the computer for two weeks or more.
- Allow the battery pack to discharge to the low-battery condition through normal use as often as practical. This will allow the battery gauge to recalibrate.

NOTE: The various battery gauges available on your system should be regarded as an approximate indication of remaining battery life. Use the battery until the first warning is received, even if the gauge indicates “no power.”

Calibrating the Battery Gauge

Included with your computer is a Compaq Battery Utility that improves the accuracy of your battery gauge. Follow the instructions included with the diskette to calibrate your battery gauge for Nickel Metal Hydride (NiMH) batteries. Compaq recommends that you calibrate the battery gauge every two to three months or whenever maximum accuracy is needed.

Guidelines for Using Battery Packs

If two fully charged battery packs are installed, you can remove one battery while the computer is on without affecting system operation. With one battery pack, turn off the computer or initiate Hibernation before removing a battery.

When the computer is in Suspend, you must always have a power source, either a fully charged battery pack or AC power, before removing a battery pack.

Removing the Battery from the Battery Bay

Rechargeable battery packs can be used in the computer battery bay or DualBay. To remove the battery pack from the battery bay (when only one battery pack is installed), turn off the computer or connect to AC power, and follow these steps:

1. Pull down on the battery pack release latch **1** to release the battery from the battery bay.
2. Remove the battery pack **2**.



Removing Battery From Battery Bay

Inserting a Battery into the Battery Bay

To insert a battery pack into the battery bay, slide a fully charged battery pack (label facing up and contacts facing toward the computer) into the battery bay until it snaps into place.

NOTE: See the online *Reference Guide* for details on using battery packs.

Inserting a Battery Pack into the Computer DualBay

The DualBay accommodates a diskette drive (which comes standard in the computer) or a battery pack.

To insert a battery pack into the DualBay, be sure that the label on the battery pack is facing up and the battery contacts are facing in toward the computer. Then slide the battery pack into the DualBay until it clicks into place.



Inserting a Battery Pack into the DualBay

Removing Battery Pack from the DualBay

To remove a battery pack from the DualBay, follow these steps:

1. Pull down on the battery pack release latch **1** to release the battery from the DualBay.
2. Remove the battery pack from the DualBay **2**.



Removing a Battery From the DualBay

Resolving a Low-Battery Condition

When you operate the computer on battery power and the battery charge runs low, the computer beeps (unless warning beeps have been disabled) and the battery charge light begins to blink. These signs indicate a low-battery or critical low-battery condition. Resolve these conditions with a fully charged battery pack or external power.

When a low-battery condition is reached, the computer beeps five times and the battery charge light blinks once per second. When a critical low-battery condition is reached, the battery charge light blinks twice per second.

Resolving a low-battery condition with external power

If you are near a power source, connect the power cord or the Automobile Adapter.

Resolving a low-battery condition with a fully charged battery pack

If a fully charged battery pack is available, do the following:

1. Save all work and turn off the computer by clicking Shut Down on the Windows Start menu.
2. Remove the discharged battery pack.
3. Insert a fully charged battery pack into the computer.
4. Slide the power switch to turn on the computer.

Resolving a low-battery condition when no power source is available

If no power source is available, follow these steps:

1. Save all information.
2. Exit all applications.
3. Turn off the computer by clicking Shut Down on the Windows Start menu.

Extending Battery Pack Operating Time

Battery pack operating time can be extended by following these guidelines:

- Reduce the display brightness.
- Set a shorter screen save timeout.
- Exit modem programs when they're not being used.
- Remove a PC Card when not in use.
- Select the High level of power conservation.
- Initiate Suspend or Hibernation or turn off the computer when it will not be used for several hours.
- Store the battery pack in a cool, dry place when not in use. High temperatures reduce the life of the battery pack and cause it to lose its charge more quickly.
- If you store the battery pack for less than one month, the recommended storage temperature is 32°F to 122°F (0°C to 50°C); for no more than three months, the recommended temperature is 32°F to 104°F (0°C to 40°C); for an unlimited time, the recommended temperature is 32°F to 86°F (0°C to 30°C).
- Keep a battery pack in the computer when using it with external power to supply it with a constant charge.
- When not in use, disconnect external equipment without its own power source to avoid draining the battery pack.
- Minimize the use of DOS-based applications, particularly games. These applications are a significant drain on battery life, and some will disable power management features even if set to the most advanced setting.
- Minimize the use of CD-ROM drives.

Recycling Used Batteries

Disposal of battery packs should comply with country, state, province, or local regulations. For more information about recycling requirements, see Appendix B, "Regulatory Notices."



WARNING: There is risk of fire and burns if the battery pack is not handled properly. Do not disassemble, crush, puncture, short external contacts, or dispose of in fire or water. Do not attempt to open or service the battery pack.

chapter 4

SETTING SECURITY FEATURES

The software and hardware security features installed in the computer allow you to customize security measures. The computer provides built-in security features as well as steps to secure your hardware.

Passwords Icon

If you are using Windows 95, the Passwords icon on the Control Panel allows you to protect your computer against unauthorized use. To ensure privacy and security, you can set or change passwords, disable the keyboard and pointing device, or blank the screen while you are away from your computer.

NOTE: If you are using Windows NT, set security features in F10 Computer Setup. For instructions on accessing Computer Setup, see “Establishing a Setup Password” in the online *Reference Guide*.

To get to the Passwords icon click Start, Settings, Control Panel, then double-click the Passwords icon.

Passwords Properties lets you set the following:

If you want:	Click this tab:
Initial setting of power-on password; enabling of QuickLock and QuickBlank	Computer Security



CAUTION: If you forget your power-on password, the computer must be disassembled and the memory cleared. If you forget your setup password, the password must be cleared from memory before you can reconfigure the computer. Call your Compaq authorized dealer or service provider for assistance if you forget your passwords.

Power-On Password

Power-on password is a security feature that prevents use of the computer when it is turned on until a secret word or code is entered. This prevents unauthorized access to your information.

Once you establish a power-on password, you must enter it each time you turn on the computer.

Establishing a Power-On Password

To establish your power-on password, follow these steps:

1. Click the Computer Security tab in the Passwords icon.
2. Click the Set button.
3. Enter your password twice, then click OK. You may enter up to seven alphanumeric characters for the password. The next time you restart the computer, you will be prompted to enter your power-on password.
4. Shut Down or restart the computer to allow the password to take effect. The next time you restart the computer, you will be prompted to enter your power-on password.

IMPORTANT: Type carefully, because the password does not display as you type it. The password is not case-sensitive. However, you must use the same keys each time you enter the password. For example, the numbers at the top of the keyboard are not recognized as being the same as the numbers in the embedded numeric keypad.

Entering the Power-On Password

To enter a power-on password, follow these steps:

1. Turn on the computer.
2. When the power-on password prompt (a key symbol) is displayed, type your power-on password carefully.

If you enter your password incorrectly, an incorrect password prompt (a key with an “X” over it) is displayed.

3. Try again to enter the password. After three unsuccessful attempts, you must turn the computer off and back on again before you can continue.

Deleting or Changing a Power-On Password

Once your power-on password has been established, you can change or delete the password at the password prompt. To change or delete your power-on password, follow these steps:

1. Turn on or restart the computer by clicking Shut Down from the Windows Start menu.
2. At the password prompt, type the current power-on password.
3. Type the key character for your country.

IMPORTANT: Each computer keyboard is designed to meet specific country requirements. See the following chart to determine which key character is correct for your country.

4. Type the new power-on password.
5. Type the key character for your country.
6. Type the new power-on password, and press **Enter**.

For example, if you have a Belgian keyboard, type the following to change the power-on password:

current password=new password=new password (press **Enter**)

NOTE: To delete the password without entering a new one, follow the first three steps and press **Enter**.

Use one of the following key characters when changing or deleting passwords.

Country-Specific Key Characters	
Country Keyboard	Keyboard Symbol
Belgian	=
Brazilian	;
Danish, German, Italian, Latin, American, Norwegian, Portuguese, Spanish, Swedish/Finnish, Swiss	-
French	!
French Canadian	é
Japanese, Korean, United Kingdom, United States, Taiwanese	/

Login Password

The login password is used on a Microsoft Windows NT Workstation to log into the system and prevent unauthorized users from accessing your hard drive. Windows NT can have a multiple boot menu that allows users to boot up Windows 3.1 or Windows 95 and, thus, bypass Windows NT security.

Identifying Quick Controls

The Quick Controls establish security measures on your computer when it is on, but not in use. After setting the power-on password in Passwords Properties, the following Quick Controls can be enabled or disabled on the Computer Security tab:

- **QuickLock**—Locks the keyboard and pointing device while the computer is running. It leaves your data on the screen, but prevents it from being accessed by the keyboard until a power-on password is entered.
- **QuickBlank**—Used in conjunction with QuickLock, clears the screen when the keyboard and pointing device are disabled.
- **QuickLock on Suspend**—Locks the keyboard when the computer enters Suspend.

Quick Controls establish security measures when your computer is on but not in use. After establishing the power-on password (and shutting down or restarting the computer), Quick Controls can be initiated in two ways:

1. With **Fn+F6** hotkeys, which work only on the computer keyboard.
2. With the key combination **Ctrl+Alt+L**, which works on both the computer and external keyboards.

NOTE: To exit QuickLock/QuickBlank once it has been activated, enter your power-on password.

REMOVABLE DRIVES & UPGRADES

Removable devices give the computer added functionality and flexibility in the way you work. This chapter provides guidelines for working with removable devices in the computer and upgrading the computer.

Caring for Removable Devices

Removable devices are fragile components that must be handled with care.

IMPORTANT: Before handling a drive, read the cautions that follow for proper handling and storage of removable devices.



CAUTION: To prevent damage to the computer, damage to a removable drive, or loss of information, observe these precautions:

- Before handling a drive, ensure that you are discharged of static electricity. While handling a drive, avoid touching the connector. For more information about preventing electrostatic damage, refer to Appendix B “Electrostatic Discharge” in the online *Reference Guide*.
 - Do not force a device into a bay. Excessive force may damage the connectors.
 - Before removing a diskette drive, ensure that no diskette is in the drive.
 - Handle a drive carefully; do not drop it.
 - Avoid exposing a drive to temperature extremes.
 - Avoid exposing a drive to liquids. Do not spray it with cleaners.
-

Using Removable Devices

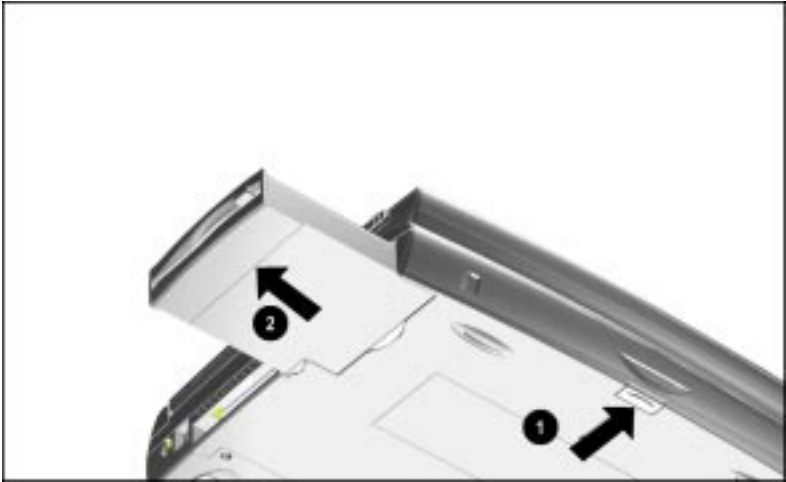
Removing a Diskette Drive from the DualBay

IMPORTANT: To prevent loss of data, remove the diskette from the drive before removing the diskette drive from the DualBay.

The DualBay accepts a diskette drive (which comes with the computer) or a battery pack. To remove the diskette drive from the DualBay, tilt up the computer and follow these steps:

1. Pull the DualBay release latch **1** on the bottom front of the computer just beneath the touchpad buttons.
2. Grab the traction grip on the bottom of the diskette drive and pull the drive out of the DualBay **2**.

NOTE: When the diskette drive is removed from the DualBay, the DualBay door panel will swing down to cover the left side of the DualBay opening.



Removing the Diskette Drive from the DualBay

Inserting the Diskette Drive into the DualBay

To insert the diskette drive into the DualBay, slide the diskette drive (right side up and contacts toward the computer) into the DualBay until it clicks into place.

NOTE: When the diskette drive is inserted in the DualBay, push the drive into the bay and the DualBay door panel will swing up and out of the way.

Inserting a Diskette into the Diskette Drive

To insert a diskette into the diskette drive, follow these steps:

1. Hold the diskette by the edge that has the label.
2. With the label facing up, gently push the diskette, metal shutter end first, into the diskette drive until you hear it click into place.

NOTE: If the diskette is inserted correctly, it drops into position in the diskette drive and the diskette drive button pops out.



Inserting a Diskette into the Diskette Drive

Removing a Diskette from the Diskette Drive

To eject a diskette from the diskette drive, push the diskette drive button. Gently pull the diskette from the diskette drive.

Using Diskettes

The diskette drive stores (or writes) information onto a 3.5-inch diskette. You can use three diskette capacities:

- 1.44-MB high-density (HD) diskette stores approximately 250 pages of text.
- 1.2-MB high-density (HD) diskette stores approximately 200 pages of text.
- 720-Kbyte double-density (DD) diskette stores approximately 125 full pages of text.

Using the CD-ROM Drive

To insert a CD-ROM disc into a CD-ROM drive, follow these steps:

1. Push the CD-ROM release button to eject the CD-ROM tray.

NOTE: The computer must be turned on to eject the CD-ROM drive.

2. Gently place the CD-ROM disk, label facing up, in the CD-ROM tray until it is correctly seated.
3. Push in the CD-ROM tray and the disc is ready to be accessed.



Inserting a CD-ROM Disc

Upgrading the Computer

The computer has a variety of components that are upgradable, providing plenty of expandability for your system. The hard drive is upgradable. Some models are equipped with CD-ROM drive and internal modem. Other models can be upgraded to include a CD-ROM or modem.

NOTE: The internal modem is not available in all countries.

Upgrading Memory

The computer memory is upgradable and can be expanded by as much as 64 MB of memory capacity.

IMPORTANT: If you upgrade the memory, the computer increases the Hibernation file size to accommodate the additional memory. When the Hibernation file size increases, it requires more hard disk space.



WARNING: Disconnect all power to the computer before installing a memory expansion board. To do so, unplug the power cord and remove the battery packs and/or diskette drive. Failure to do so can damage the equipment and expose you to risk of electrical shock.

WARNING: To reduce the risk of personal injury from hot surfaces, allow the internal system components to cool before touching.

WARNING: To reduce the risk of electrical shock, always ensure that the modem line is disconnected from the telephone network while installing your system or when opening the equipment's enclosure.

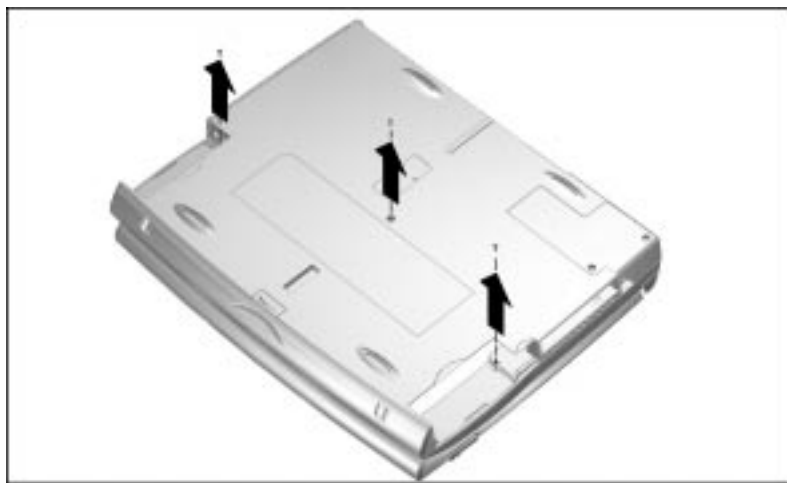


CAUTION: Electrostatic discharge can damage electronic components. Before touching the memory expansion board, be sure you are discharged of static electricity by touching a grounded metal object.

To install additional memory, follow these steps:

1. Turn off the computer and disconnect all external devices.
2. Remove the battery pack from the battery bay and the diskette drive or battery pack from the DualBay.
3. Turn the computer bottom side up and remove the three screws as shown.

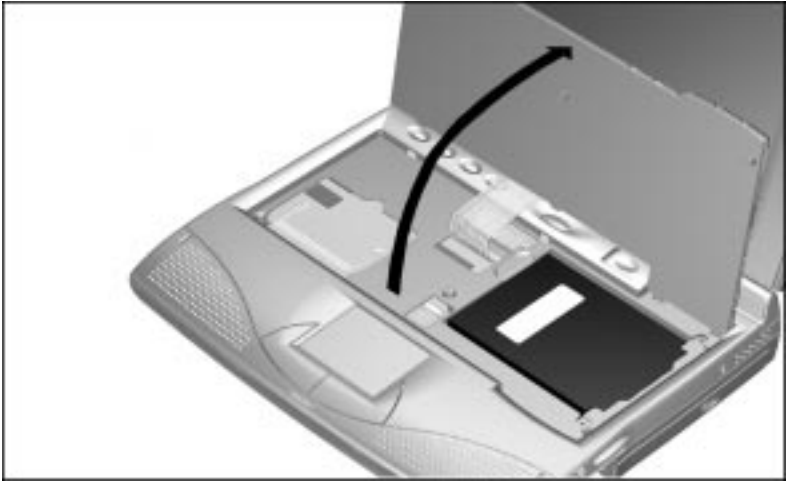
NOTE: Set the screws aside in a safe place.



Accessing the Memory Compartment

4. While holding the bottom panel, gently turn the computer top side up.
5. Lift the keyboard 90 degrees toward the display and exposing the internal components.

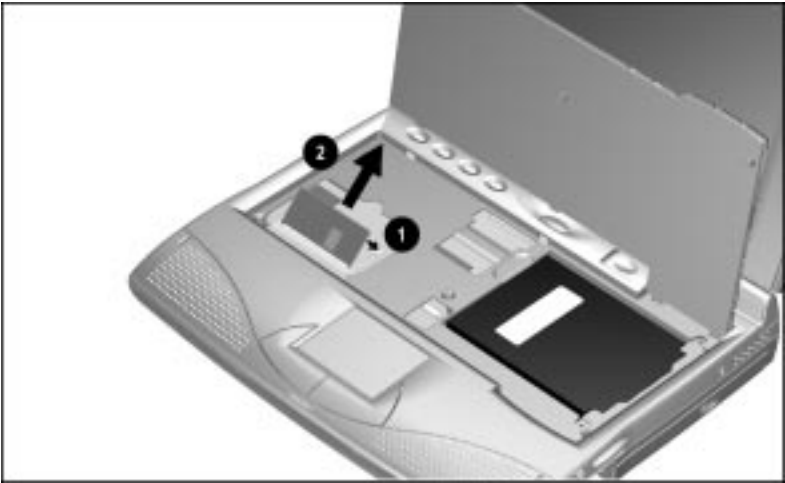
NOTE: The keyboard will remain connected by its ribbon cable. Make sure that the keyboard leans back against the display and is securely out of the way while the memory compartment is being accessed.



Removing the Keyboard

6. Remove the existing memory board by pulling the metal spring retention tabs ❶ (on each side of the memory board) away from the board to release it. The memory board will pop out.
7. Gently slide out the memory board at a 45 degree angle ❷.

IMPORTANT: To protect the connectors on the memory board, remove the board at a 45 degree angle. Do not pull the board straight up.



Removing the Memory Board

8. Insert the new memory board at a 45 degree angle and gently slide it into place until it is correctly seated.

NOTE: The memory board is keyed (notched) slightly off center to help you position it correctly.

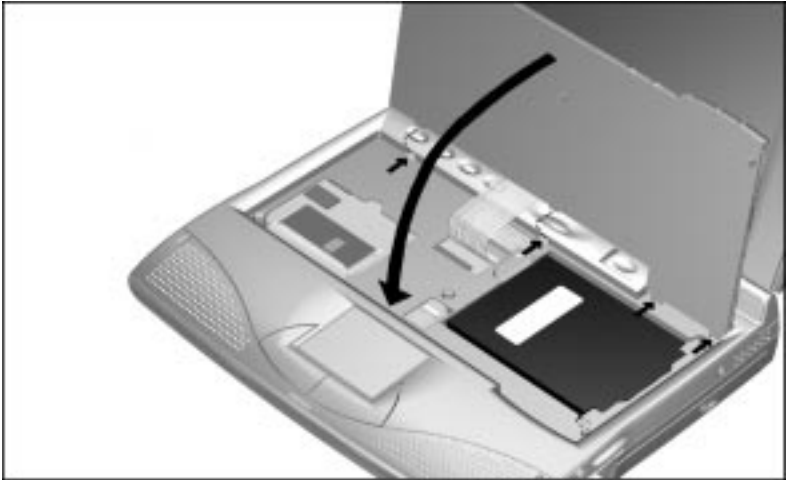
9. Rotate the memory board down until it snaps into place.



Installing the Memory Board

10. Replace the keyboard by gently positioning it back down over the internal components. Close the display.

IMPORTANT: Align the top of the keyboard with the four tabs indicated by arrows in the illustration to ensure correct positioning.



Reinstalling the Keyboard

11. Gently turn the computer back over and replace the three screws on the bottom.
12. Reconnect power to the computer and turn it on. The computer automatically recognizes the new memory and reconfigures the system.



Reinserting the Bottom Screws

CONNECTING EXTERNAL EQUIPMENT

Using the Internal Modem

IMPORTANT: An internal modem is not installed in all Compaq Armada 1500 Family computers.

The modem comes built into selected computer models and is available as an option in some countries. Contact your authorized dealer, reseller, or service provider for a complete list of modem options for your computer. The 33.6Kbps internal modem is compatible with all operating systems supported by the Compaq Armada 1500 Family computers. The 56Kbps internal modem is designed to operate with the software preinstalled in your computer. With the preinstalled drivers, the 56Kbps modem is compatible with Microsoft Windows 95 (and later) or Windows NT 4.0.

Determining Your Modem

To determine the internal modem in your computer, follow these steps:

1. Click Start, point to Settings, then Control Panel
2. Double-click the System icon.
3. Click the Device Manager tab.
4. Double-click Modem. The 33.6Kbps modem (Series 336) or 56Kbps modem (Series 560CL) will be listed.

Connecting the Modem Cable

If your computer comes with an internal modem or if you've installed an optional modem, follow these steps to connect the modem cable:

1. Connect one end of the modem cable into the RJ-11 jack on the left side of the computer.
2. Plug the opposite end of the cable into a standard telephone wall jack.



Connecting a Modem Cable



CAUTION: Wall jacks for digital PBX systems may appear like standard telephone jacks but are not compatible with analog devices such as modems. Be sure the modem cable is connected to a regular analog phone line for it to operate. Plugging the modem into a digital line will result in no dial tone and may cause permanent damage to the modem from excessive current.

Changing the Country Selection

Computer models with a 56Kbps internal modem are configured to meet operating approval in the country where you purchased your computer. If the modem is used in other countries during travel, the country selection setting for the modem needs to change to meet the telecommunications regulations for that country.

NOTE: The internal modem supports specific countries that are included in the selection list of the country selection application.

In Windows 95, to change the country selection setting, follow these steps:

1. Click Start, point to Settings, Control Panel.
2. Double-click the System icon. From the System Properties window, click the Device Manager tab.
3. Double-click the modem icon, then double-click your modem.
4. Click the Country Setting for Modem tab, then select the country from the List of Countries.
5. Click the Change Country button.
6. Click Yes to confirm your country selection, then click OK.

In Windows NT, to change the country selection setting, follow these steps:

1. Click Start, point to Settings, Control Panel.
2. Double-click the CSA Control Panel.
3. Select the country from the List of Countries.
4. Click the Change Country button.
5. Restart the computer to confirm the modem setting for the new country.

Using Communications Software

You need communications software to operate the modem. This software issues commands to the modem affecting settings such as the modem connection speed, the number of rings before answering the telephone, the delay before listening for a dial tone, or the phone number to dial.

There is a wide range of communications software available that can be used with your modem for tasks such as accessing another computer or the Internet from a remote location. Refer to the documentation that comes with the communications software. Contact your Compaq authorized dealer, reseller, or service provider for a complete list of communications software applications.

Refer to the online Compaq *Reference Guide* for information on modem defaults, AT command set, dial modifiers, and result codes

Setting Up the Communications Software

The internal 56Kbps modem provides data and fax communications support for Windows 95 or Windows NT 4.0 applications that use a modem. The modem also supports analog speakerphone functionality that is accessible to TAPI-compliant Windows 95 applications. If prompted by the application to select a modem port, select the Compaq Armada 1500 internal modem as your preferred modem device. If this selection is not available, you will need to select COM2 as the communications port associated with the modem, then choose a Hayes compatible generic modem.

NOTE: By default, the modem will automatically attempt to connect at the highest speed it supports.

Wireless Infrared Communications

The infrared port uses an invisible beam of infrared light to communicate with other infrared-equipped devices, such as printers or other computers. Infrared drivers and software have been preinstalled on your computer. To access infrared software, click Start, Settings, Control Panel, then double-click the Infrared icon and follow the instructions on the screen.

NOTE: Operating system support for infrared communication is currently available with Microsoft Windows 95. Microsoft Windows NT Workstations do not offer support for infrared activity. Therefore, this feature is inoperable under Windows NT.

Establishing a Wireless Infrared Link

Before you establish a wireless infrared communications link, follow these guidelines:

- Be sure the infrared ports on both devices are turned on and facing each other at a distance no greater than one meter (3.3 feet).
- Avoid moving the infrared ports during data transmission.
- Avoid interference from remote control units (such as wireless headphones or audio devices) by pointing them away from the infrared ports.

- Avoid direct sunlight, fluorescent light, or flashing incandescent light close to the infrared ports.
- Keep the path between the infrared ports free of objects; this can interfere with data transmission.
- Do not point one port more than 30 degrees away from the other port.

USING PC CARDS

The computer is equipped with a versatile feature that allows you to connect credit card-sized options called PC Cards (PCMCIA). They include portable external devices, such as modem, MPEG, hard drives, or network PC Cards.

Types of PC Cards

PC Cards are credit-card sized options that expand the capability of the computer by giving you the freedom to add and remove cards when you want to perform various tasks. And, because they're small and lightweight, PC Cards are mobile.

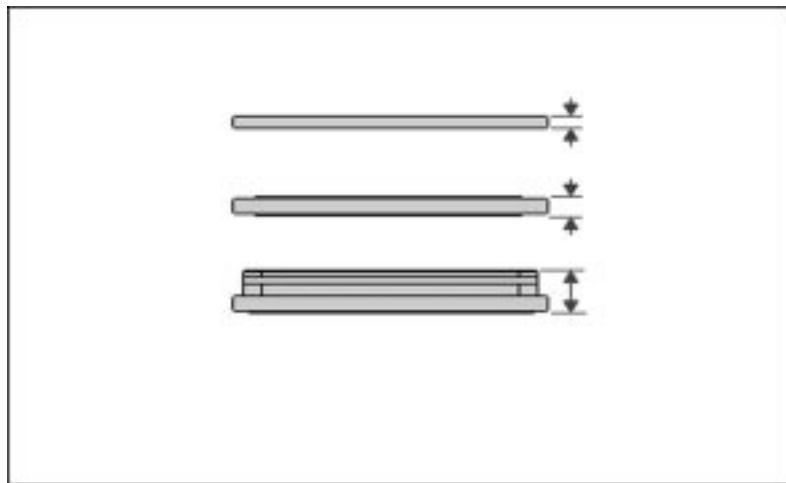
PC Cards come in different sizes: Type I, Type II, and Type III. They all have 68-pin connectors. And they're all about the same length and width as a credit card, but vary in thickness.

Type I cards, usually memory cards, are the thinnest: 3.3 mm. Type II cards, such as modem and network cards, are 5.0 mm thick. And Type III PC Cards, typically hard drives and CardBus Cards, are the thickest at 10.5 mm.

The PC Card slots on the left side of the computer can accommodate (at the same time) two Type I, two Type II, or one Type III PC Cards.

IMPORTANT: The PC Card slots on the computer are CardBus slots that support 16- and 32-bit PC Cards. They support the newer generation of 32-bit (CardBus) PC Cards designed to take advantage of audio, video, multifunction and high-speed LAN capabilities.

On the computer, a Type III PC Card works only in the bottom slot. Zoomed Video (ZV) cards also work only in the bottom slot. Telephony features of PC Card modems work only in the top slot.



From the Top: Type I, Type II, and Type III PC Cards

The First Time a PC Card Is Inserted

Each PC Card slot is covered by a PC Card slot protector. These protectors prevent dust or other foreign materials from damaging the slots. Before using a PC Card in the PC Card slots, remove the slot protectors by following these steps:

1. Pull out the eject lever that corresponds to the top slot and open it out 90 degrees. (See “Removing a PC Card” in this chapter for more on using the eject lever.)
2. Press the eject lever to eject the PC Card slot protector inserted in that slot.
3. Grasp the edges of the PC Card slot protector and slide it out of the slot.
4. Repeat steps 1-3 for the bottom PC Card slot.

NOTE: Compaq recommends using slot protectors when PC Cards are not inserted because they prevent dust and other foreign materials from getting inside PC Card slots.

Inserting a PC Card

To insert a PC Card, follow these steps:

1. With the 68-pin connector facing in and the label facing up, insert the PC Card into the PC Card slot.
2. Gently push the card into the slot until it is seated.

NOTE: When the PC Card is inserted, the PC Card eject lever pops out.



CAUTION: Forcing a PC Card into the slot can damage the slot.

3. Pull out the eject lever slightly and rotate it back down to position it flush with computer.



Inserting a PC Card

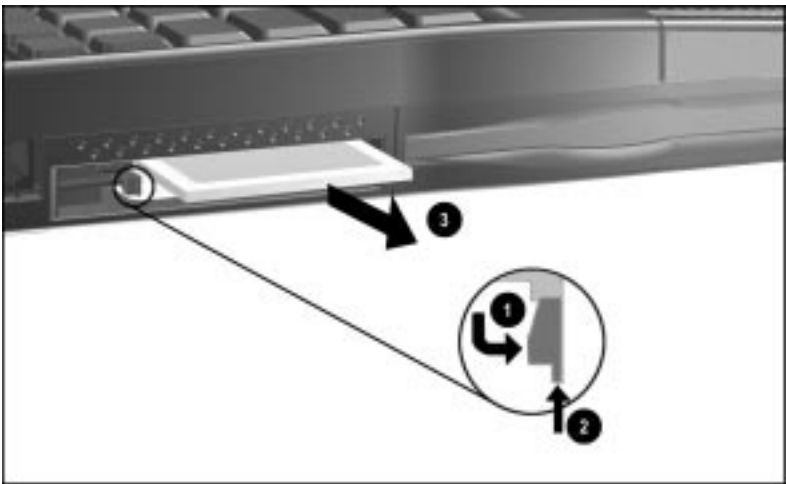
Removing a PC Card

To stop a PC Card and remove it, follow these steps:

1. Click the PC Card icon on the taskbar. A list of PC Cards inserted in the computer appears.
2. Click the PC Card that you want to remove.

IMPORTANT: Always stop a LAN, ATA, or SCSI PC Card before removing it.

3. When the message appears that it is safe to remove the card, pull out the PC Card eject lever ❶ that corresponds to the PC Card slot and open it out as shown.
4. Push the eject lever in ❷ to eject a PC Card.
5. Grasp the card and remove it ❸. The computer beeps twice to indicate card removal.



Removing a PC Card

PC Card Software

Windows 95 automatically configures plug and play cards. For online PC Card information and help, click Start, Help, Index. Then type PC Card and double-click a PC Card topic. Or click Help, Contents, Troubleshooting, Problem.

PC Card Solution Logo

Before buying a PC Card to use on your Compaq computer, view the Compaq PC Card Solutions List on the World Wide Web at <http://www.compaq.com>. This list is updated quarterly with the industry's leading PC Cards compatible with most Compaq computers.

Also, when buying a non-Compaq PC Card, look for the Compaq PC Card Solution Logo on packaging and advertising. This logo symbolizes PC Card compatibility with most Compaq computers.



PC Card Solution Logo

Video Features

You can enjoy Zoomed Video (ZV) capability in the bottom PC Card slot. ZV capability means faster, smoother decompression and playback of large video files.

You can also take advantage of MPEG capability. MPEG PC Cards import movies, stills, and other commonly used video files into your computer.

NOTE: If you are using Windows NT and have questions regarding a specific PC Card, refer to the Compaq PC Card Solutions list or consult the PC Card vendor for information regarding support available for that card.

MAINTENANCE AND TRAVEL GUIDELINES

This chapter provides recommended guidelines for taking care of your computer. These guidelines, aimed at ensuring computer longevity and reducing the risk of damage, including routine care, travel guidelines, and shipping guidelines.

Routine Care

You can keep the computer in good condition and working properly by following these guidelines:

- Operate the computer with a battery pack installed, even when you're using external power. This supplies the battery with a constant trickle charge and ensures a fully charged battery pack the next time you turn on the computer.
- Keep the computer away from excessive moisture and temperature extremes. Do not expose the computer to liquids or precipitation.
- Remove the battery pack from the computer if the computer will not be used for an extended period (more than two weeks). Store the battery pack in a cool, dry place when it is not in use.
- To prevent possible damage to the display, do not place anything on top of the computer when it is closed. Store the computer in a slipcase. Do not store any other items inside the case on top of the computer.



CAUTION: The protective slipcase available for your computer is provided for carrying convenience only and does not provide shock and vibration protection for the computer.

- Occasionally wipe the exterior of the computer and the screen with a soft, damp cloth moistened only with water.
- Avoid exposing the computer to direct sunlight or strong ultraviolet light for extended periods of time. Also avoid scratching the surface of the screen and banging it against hard objects.



CAUTION: To reduce the risk of electrical shock or damage to the internal components, do not spray liquid directly on the computer screen or allow excess liquid to drip down inside the computer. Using soap or other cleaning products on the screen may discolor the finish and damage the screen.

Travel Guidelines

For safety and convenience when traveling, follow these guidelines:

- Safeguard your data before you leave on a trip by backing it up onto diskettes, tape media, or another computer.
- Take an extra backup copy of the data with you.
- Remove the diskette from the diskette drive.
- Disconnect the AC power cord from the computer. Take the AC power cord or an extra fully charged battery pack with you.
- Disconnect external equipment, including cables, from the computer.
- Hand-carry the computer in a protective case. Do not check it with your luggage.
- Do not close objects between the keyboard and display.

IMPORTANT: There are three types of airport security devices: X-ray machines (the device you set your bags on), magnetic detectors (the device you walk through), and security magnetic wands (the hand-held device used by security personnel). You can send your computer and diskettes through airport X-ray machines. However, Compaq recommends that you do not send your computer and diskettes through airport magnetic detectors or expose them to security magnetic wands.

- Check with the airline if you plan to use the computer on the plane. In-flight computer use is at the discretion of the airline.

Before traveling internationally with the computer:

- Check local customs regulations.
- Purchase a power cord from a Compaq authorized dealer, reseller, or service provider in the country where you will be using the computer. These power cords are designed to meet the voltage and frequency requirements of each country.



WARNING: To reduce the risk of electrical shock, fire, or damage to the equipment, do not use the converter kits sold for appliances to power the computer.

- Make sure you have the correct modem and cable for the country you'll be visiting. Telephone line standards and modem protocols differ from country to country.

Shipping Guidelines

Should you need to ship the computer, follow these guidelines:

- Safeguard your data before shipping by backing it up onto diskettes or tape media. Be sure that diskettes or tapes are not exposed to electrical or magnetic impulses while stored or in transit.
- Remove the diskette from the diskette drive.
- Remove all PC Cards from the PC Card slots.
- Turn off the computer and external devices.
- Close the computer.
- Disconnect external equipment from the computer.
- Pack the computer and external devices in their original packing boxes or similar packaging with sufficient packing material to protect them.

chapter 9

DIAGNOSTICS AND TECHNICAL SUPPORT

Compaq setup and diagnostic utilities described in this chapter allow you to view and change system configurations and diagnose system problems. This chapter describes Computer Setup and Compaq Diagnostics and helps you prepare for a call to Compaq technical support.

Compaq Utilities

Both Computer Setup and Compaq Diagnostics are located in Compaq Utilities and help you communicate computer problems effectively with authorized Compaq dealers or service providers. Computer Setup gives you an overview of the computer's hardware configuration. This utility also allows you to set custom features, such as security options, power conservation levels, and startup preferences. Diagnostics helps diagnose and troubleshoot computer problems prior to calling technical support.

Accessing Computer Setup and Diagnostics

If you are using Microsoft Windows 95, your computer automatically recognizes and configures the system for new devices. But, if you have a configuration problem, or want to view or reset configuration settings, you can use Computer Setup.

To access Computer Setup (or Diagnostics) on the Compaq Utilities menu, follow these steps:

1. Restart the computer by clicking Shut Down on the Windows Start menu. (Or turn on power.)
2. Press **F10** as soon as the cursor appears in the upper-right corner of the screen.

IMPORTANT: The cursor is displayed on the screen for about two seconds. If you do not press **F10** during this time, you must restart the computer and try again.

Computer Setup Options

Computer Setup provides two ways to view the computer's configuration: by type or by connection. The default setting is to view devices by type. Devices accessible by type, include:

- **System features:** security, power, boot management
- **Communication:** port, modem, other communication devices
- **Storage:** storage-related devices such as hard drive or diskette drive
- **Input devices:** keyboard, mouse, or other input devices
- **Network:** network adapter or other network-related devices
- **Audio:** sound properties and audio device settings
- **Video:** monitor timeouts and video device resources

Compaq Diagnostics

Compaq Diagnostics utilities are preinstalled on the hard drive and accessed in the **F10** utility. You can also view most of the same information in Compaq Diagnostics for Windows in the Control Panel. To set these features, go to **F10**.

If you are using a Microsoft Windows NT Workstation, you can access Windows NT Diagnostics by clicking Start, Programs, Administrative tools, then Windows NT Diagnostics.

Use these features if you have a problem you can't resolve, and print out the results before calling Customer Support. The results of these programs will help your technical support representative understand and troubleshoot your problem.

Diagnostics includes the following utilities:

- Computer Checkup (TEST)
- View System Information (INSPECT)
- Prepare Computer for a Compaq Service Call (RemotePaq)

The Diagnostics utility should be used in the following instances:

- To change factory default settings and to set or change the system configuration, which is sometimes necessary when you add or remove optional equipment.
- When a system configuration error is detected during the Power-On Self-Test (POST).
- To determine information about the operating environment of the system.

Accessing Diagnostics Through F10

To access Diagnostics, follow these steps:

1. Restart the computer by clicking Shut Down from the Windows Start menu. (Or turn on the computer.)
2. Press **F10** as soon as the cursor appears in the upper-right corner of the screen.

IMPORTANT: The cursor is displayed on the screen for about two seconds. If you do not press **F10** during this time, you must restart the computer and try again.

3. The Compaq Utilities menu will appear immediately after the computer has been turned on and the Power-On Self-Test (POST) has been completed. Because this menu is accessed before the operating system takes effect, it is available to all computer users, no matter which operating system they typically use (for example, MS-DOS and Windows NT).

Accessing Diagnostics in Windows

In Windows 95, you can also view configuration and diagnostics information from the desktop using the Compaq Diagnostics utility. Access Compaq Diagnostics from Windows by following these steps:

1. Click Start
2. Click Settings
3. Click Control Panel
4. Double-click the Compaq Diagnostics icon

Running Computer Checkup (TEST)

Computer Checkup (TEST) is a utility that determines if the various computer devices are recognized by the system and functioning properly. Running Computer Checkup is optional, but advisable, after installing or connecting a new device

You can display, print, or save the information generated by Computer Checkup. This information allows the service provider to reproduce the same environment on another computer for testing.

To run Computer Checkup, follow these steps:

1. Connect the AC power and use it with the computer during these procedures. (A low-battery condition could initiate Hibernation and interrupt the program.)
2. Turn on only the external devices that you want to test. Connect the printer if you want to use it to log error messages.
3. Turn on or restart the computer by pressing Shut Down on the Windows Start menu.
4. As soon as the cursor is displayed in the upper-right corner of the screen, press **F10**.

IMPORTANT: The cursor is displayed on the screen for about two seconds. If you do not press **F10** during this time, you must restart the computer and try again.

5. If prompted, select a language. The Compaq Utilities menu is displayed.
6. Select Computer Checkup (TEST). A test option menu is displayed.
7. Select the View Device List option. A list of the installed Compaq devices is displayed.
8. Verify that Computer Checkup correctly detected the devices installed.

NOTE: Devices from other manufacturers may not be detected or may be reported inaccurately.

- a. If the list is correct, select OK. The test option menu is displayed again. Go to step 9.
 - b. If the list is incorrect, ensure that any new devices are installed properly. If you do not find an installation problem, call your Compaq authorized service provider.
9. Select one of the following from the test option menu:
 - a. **Quick Check Diagnostics**
Runs a quick, general test on each device with a minimal number of prompts. If errors occur, they are displayed when the testing is complete.
 - b. **Automatic Diagnostics**
Runs unattended, maximum testing of each device with minimal prompts. You can choose how many times to run the tests, to stop on errors, or to print or file a log of errors.
 - c. **Prompted Diagnostics**
Allows maximum control over the device testing process. You can choose attended or unattended testing, decide to stop on errors, or choose to print or file a log of errors.
 10. Follow the instructions on the screen as the devices are tested. When the testing is complete, the test option menu is displayed again.

NOTE: When you run Computer Checkup, record any error message numbers and have them available when you contact your Compaq authorized reseller or service provider for assistance.

11. Exit to the Compaq Utilities menu.

Running View System Information (INSPECT Utility)

The View System Information (INSPECT) utility provides information about the system once it has been configured. This utility provides the following information about the system operating environment:

- Contents of the operating system startup files
- Current memory configuration
- ROM versions
- Type of processor
- Diskette and hard drives
- Active printer and communications interfaces
- Modem
- Graphics/Video
- Windows *WIN.INI* file
- Windows *SYSTEM.INI* file

You can display, print, or save the information. Your Compaq authorized reseller or service provider may ask you to run this utility to assist in analyzing the system. This information allows the service provider to reproduce the same environment on another computer for testing. It is recommended that you run View System Information and have the printed results available before placing a call to Compaq Customer Support.

NOTE: This utility is not available from Windows. It must be accessed from the Compaq Utilities menu. However, in Windows, the Compaq Diagnostics utility allows you to view this information about the computer. To run Compaq Diagnostics for Windows, click Start, Settings, Control Panel, then double-click the Compaq Diagnostics icon.

To run View System Information (INSPECT), follow these steps:

1. Turn on or restart the computer by sliding the power switch.
2. Press **F10** as soon as the cursor is displayed in the upper-right corner of the screen.

IMPORTANT: The cursor is displayed on the screen for about two seconds. If you do not press **F10** during this time, you must restart the computer and try again.

4. If prompted, select the desired language. The Compaq Utilities menu is displayed.
5. Select View System Information (INSPECT).
6. Print the results of INSPECT and use this information to help your Compaq service provider troubleshoot your system.

Preparing for a Technical Support Call

If you cannot solve a problem using the troubleshooting tips in Chapter 10, you may need to call technical support. To contact Compaq Customer Support, see the “Worldwide Telephone Numbers” in Appendix A in this guide.

To receive the fastest possible solution when you call, follow the instructions in this chapter to run Compaq Diagnostics and have the following information available when you call:

- The model name of your computer
- Serial number on the back of the computer
- Purchase date on invoice
- Conditions under which the problem occurred
- Error messages that occurred
- Hardware configuration
- Type of printer connected
- Hardware and software you are using

- Your Windows 95 product identification number (PIN).
To locate the PIN number, click Start, Settings, Control Panel, then double-click the System icon, then click the General tab. Your PIN number is below your name.
- The printed error message log from Computer Checkup (TEST), or a list of the devices and error messages received
- Contents of View System Information (INSPECT), as well as the *CONFIG.SYS* and *AUTOEXEC.BAT* files

Preparing the Computer for RemotePaq Support

This utility is only available in certain geographical areas and requires a modem. It allows your Compaq service provider to automatically run Diagnostics on your computer.

If requested to run RemotePaq by your Compaq service provider, follow these steps:

1. Turn on or restart the computer by sliding the power switch.
2. Press **F10** as soon as the cursor appears in the upper-right corner of the screen.

Select Prepare Computer for a Compaq Service Call and follow the instructions on the screen and from your Compaq service provider.

chapter 10

TROUBLESHOOTING

This chapter provides information on how to identify and correct some common hardware, memory, and software problems. It also explains several types of common messages that can be displayed on the screen. Troubleshooting information is provided on the following pages for:

- Battery
- Diskettes/diskette drive
- Hard drive
- Hardware installation
- Keyboard/numeric keypad
- Memory
- Modem
- Monitor
- PC Cards
- Pointing device
- Power
- Printer
- Display screen
- Software
- Sound

Checklist

If you encounter some minor problem with your computer or software application, go through the following checklist for possible solutions before running the diagnostic utilities:

- Is the computer connected to an external power source, or does it have a fully charged battery pack installed?
- Is the computer turned on and the power/suspend light on?
- Are all cables connected properly and securely?
- Have you installed printer drivers for each application?
- Did the diskette drive contain a nonbootable diskette when you turned on the computer?

If correcting the items on this checklist does not solve the problem, you may wish to run the Computer Checkup utility. Refer to Chapter 9, “Diagnostics and Technical Support,” for more information.

Interpreting Messages on the Screen

Many times a message or prompt is displayed on the screen. However, a message does not necessarily mean that an error condition exists. It may be nothing more than an information message about what the computer is doing or a prompt reminding you to enter information or press a key. The following list shows typical examples of information messages:

- A number indicating the amount of memory in the computer might be displayed.
- Exit this utility.

This message prompts you to exit a utility by following the additional instructions on the screen.

- A:> or A:

This prompt indicates that you are working from drive A.

- C:> or C:

This prompt indicates that you are working from a hard drive.

Solving Minor Problems

While the computer is configured just for you, problems you encounter while working may not be unique. Eliminating the typical problems described in this section may save you time and money. If you have a problem with the computer, consider the causes and possible solutions outlined in the following tables.

If the problem appears related to a software application, also check the documentation provided with the software. You may discover something you can resolve easily yourself. If the condition persists, contact your Compaq authorized service provider or Compaq Customer Support.

Solving Battery Problems

Some common causes and solutions for battery problems are listed in the following table. The “Solving Power Problems” section in this chapter also may be helpful.

Battery Problems and Solutions		
Problem	Possible Cause	Solution
Computer won't turn on when battery pack(s) are inserted and AC power is unplugged.	Battery pack(s) are discharged.	Connect the computer to an external power source and charge the battery pack(s).
Computer beeped and battery light is blinking.	Battery charge is low or computer has entered a low-battery condition.	Save any open files and do one of the following: <ul style="list-style-type: none">■ Connect the computer to an external power source, then charge the battery pack(s).■ Initiate Hibernation (press Fn+ suspend button) to halt the battery drain until you can find another power source or charge the battery pack(s).

Continued

Battery Problems and Solutions *Continued*

Problem	Possible Cause	Solution
Battery charge light blinks for low-battery condition, but computer didn't beep.	Low-battery beeps are turned off.	Click Start, Settings, Control Panel; double-click the Power icon, then click the Battery Conservation tab and enable low-battery warning beeps.
	Speaker volume is turned down or off.	Press Fn+F5 and the right arrow key to increase volume.
Battery charge light doesn't turn on.	Battery packs are already charged.	No action is necessary.
Battery pack won't fast charge.	Battery pack(s) were exposed to temperature extremes.	Allow time for the battery pack(s) to return to room temperature.
	Battery pack(s) are at the end of their life.	Replace the battery pack(s).
	Battery pack(s) are already fully charged.	Use the battery pack(s) without charging.
Every time the computer is turned on, the date and time have to be set.	Real-time clock battery is at the end of its life.	Call your Compaq authorized service provider to replace the real-time clock battery.

Continued

Battery Problems and Solutions *Continued*

Problem	Possible Cause	Solution
Battery charge doesn't last as long as expected.	Battery pack(s) are being exposed to high temperatures.	Keep computer at a cooler temperature and recharge battery pack(s).
	Battery pack(s) are being exposed to low temperatures.	Put computer in a warmer place and recharge battery pack(s).
	Battery pack(s) have partially self-discharged.	Recharge the battery pack(s).
	Power Management is disabled or set to "None."	Press Fn+F7 to set a new Power Management level.
	An external device (such as a PC Card) is draining the battery.	Turn off or remove the external device when it is not in use.
Battery packs are warm to the touch after charging.	Warming occurs due to charging.	No action is required.

NOTE: Store the battery pack in a cool, dry place when not in use. High temperatures reduce the life of the battery pack and cause it to lose its charge more quickly. If you are storing the battery for less than one month, the recommended storage temperature is 32°F to 122°F (0°C to 50°C); for no more than three months, the recommended temperature is 32°F to 104°F (0°C to 40°C); for an unlimited time, the recommended temperature is 32°F to 86°F (0°C to 30°C).

See Appendix C, "Specifications" in the online *Reference Guide* for recommended operating temperature, humidity, and altitude for the computer.

Solving Diskette/Diskette Drive Problems

Some common causes and solutions for diskette/diskette drive problems are listed in the following table:

Diskette/Diskette Drive Problems and Solutions		
Problem	Possible Cause	Solution
Diskette drive cannot write to a diskette.	Diskette is write-protected.	Disable the write-protect feature or use a diskette that is not write-protected.
	Computer is writing to the wrong drive.	Check the drive letter in the path statement.
	Not enough space is left on the diskette.	Use a diskette with a larger capacity.
	Diskette drive has been disabled.	Enable diskette drive through the Device Manager in the Systems icon on the Control Panel or through F10 setup.
	Diskette is not formatted.	Format the diskette.
Diskette drive cannot read a diskette.	Wrong type of diskette is being used.	Use the type of diskette required by the drive.
	Diskette has a bad sector.	Copy files to hard drive or another diskette. Reformat the bad diskette.
	Diskette drive has been disabled.	Enable diskette drive via the Device Manager tab in the Systems icon on the Control Panel or through F10 setup.
	Diskette is not formatted.	Format the diskette.

Solving Hard Drive Problems

Some common causes and solutions for hard drive problems are listed in the following table. Chapter 9, “Diagnostics and Technical Support,” also may help you solve hard drive problems.



CAUTION: Remove or install the hard drive only when the computer is off, unplugged, and the battery pack is removed. Do not remove or install a hard drive while the computer is on, in Suspend, or in Hibernation.

Hard Drive Problems and Solutions

Problem	Possible Cause	Solution
Reading the hard drive takes an unusually long time after restarting the computer.	System entered Hibernation due to low-battery condition and is now exiting from it.	Give the system time to restore the previously saved data to its exact state before Hibernation.
Hard drive error occurs.	Hard drive has bad sectors or has failed.	Run ScanDisk utility; check the box “Automatically fix.” Contact your Compaq authorized service provider.
Newly installed hard drive does not work.	Hard drive is not seated properly.	Turn off and unplug the computer. Remove the battery pack. Remove and reinstall the hard drive.
	Hard drive was removed and replaced while computer was on, in Suspend, or in Hibernation.	Turn off the computer; then turn it on again. Before removing the hard drive, make sure computer is off, unplugged, and the battery pack is removed.



CAUTION: You should maintain an up-to-date backup of your hard drive at all times in case of errors or failures.

Solving Hardware Installation Problems

Some common causes and solutions for hardware installation problems are listed in the following table.

Hardware Installation Problems and Solutions		
Problem	Possible Cause	Solution
New device is not recognized as part of the computer system.	Suspend was not initiated before device was connected.	Initiate Suspend, connect the device, and then exit Suspend.
	The system did not automatically configure the new device.	Check the documentation that came with the new device to determine if any device drivers are necessary. If so, install the correct device drivers. To view the status, change drivers, or change the configuration, go to the Device Manager tab in the Systems icon on the Control Panel. Click the plus sign next to the type of hardware, then double-click the hardware to view the device configuration.
	Cables of new external device are loose or power cables are unplugged.	Ensure that all cables are properly and securely connected.
	Power switch of new external device is not turned on.	Place the computer in Suspend by pressing the suspend button. Turn on the new external device. Press the suspend button again to exit Suspend. This enables the system to recognize the device.
	Device is not seated properly.	Turn off the computer and reinsert the device.

Solving Keyboard and Embedded Numeric Keypad Problems

Some common causes and solutions for keyboard and embedded numeric keypad problems are listed in the following table.

Solving Keyboard and Numeric Keypad Problems		
Problem	Probable Cause	Solution
Embedded numeric keypad on the computer keyboard is disabled.	NumLk function is not turned on.	Press Fn+End/NumLk to enable the NumLk function and embedded numeric keypad. NumLock light will turn on.
External keyboard does not work.	Keyboard may not be securely connected or may be connected to the wrong external connector.	Ensure that the external keyboard is securely connected to the external keyboard connector.
Keyboard and pointing device are locked.	You initiated QuickLock.	Enter your power-on password to exit QuickLock. NOTE: If NumLock is on (the embedded numeric keypad is active), hold down the Fn key while typing to enter a non-numeric password; pressing Fn temporarily toggles NumLk off. Press Fn+Shift to type any uppercase characters.

Solving Memory Problems

Some common causes and solutions for memory problems are listed in the following table.

Memory Problems and Solutions		
Problem	Possible Cause	Solution
Memory count during Power-On Self-Test (POST) is incorrect.	Optional memory expansion boards are installed incorrectly.	Ensure that the memory expansion boards have been installed correctly.
"Out of Memory" message is displayed on the screen, or insufficient memory error occurs during operation.	System ran out of memory for the application.	Check the application documentation for memory requirements and add more memory if needed.
	Too many terminate-and-stay resident (TSR) applications are running at the same time.	Disable any TSR applications you do not need.

Solving Modem Problems

Some common causes and solutions for hardware installation problems are listed in the following table.

Modem Problems and Solutions		
Problem	Possible Cause	Solution
Modem loses connection	The connection from the phone line to the modem is loose.	Disconnect then reconnect the phone cable. Reestablish connection.
	Call Waiting has not been disabled.	To disable Call Waiting: <ol style="list-style-type: none">1. Click Start, Control Panel, double-click Modems.2. From the General tab of the Modems Properties page, click Dialing Properties.3. From the My Location tab of the Dialing Properties page, check the box labeled "This location has call waiting." Then select *70, 70#, or 1170 from the drop-down list to disable call waiting for your dialing area.
	Hibernation was initiated or a low-battery condition occurred.	Restart the communications software to restore the original modem settings after exiting Hibernation or resolving the low-battery condition.
Garbled or missing characters, or slow data transfer speed	Noisy phone line	Check with your local telephone company for a phone line filter. Check your telephone and modem cable connections. If they are slightly loose, this can cause noise on the line.

Continued

Modem Problems and Solutions *Continued*

Problem	Possible Cause	Solution
No dial tone	Phone service is not connected to the telephone wall jack.	Verify service from the local phone company by the following steps: <ol style="list-style-type: none">1. Unplug the telephone cable from the telephone wall jack.2. Connect a telephone to the jack, pick up the handset, and listen for a dial tone. If there is a dial tone, reconnect the modem to the telephone wall jack with the telephone cable and make sure all connections are secure.3. If there is still no dial tone, contact your local phone company or building manager.
	Phone is connected to a digital PBX jack.	Plugging the modem into a digital line will result in no dial tone and may cause permanent damage to the modem from excessive current. Reconnect the modem cable to an analog phone jack, then reestablish connection
	The modem is not responding to commands from the computer keyboard.	Verify the modem and computer are connected: <ol style="list-style-type: none">1. Click Start, Programs, Accessories, HyperTerminal.2. Go to Terminal Mode, then type AT and press the Enter key.3. If the modem displays OK, the modem and computer are working together. If the modem displays ERROR, or does not respond, restart the computer and repeat step 1.4. Type ATDT and listen for a dial tone.5. Type ATHO to hang up.

Continued

Modem Problems and Solutions *Continued*

Problem	Possible Cause	Solution
Unable to connect the internal modem at speeds above 33.6Kpbs	The modem in your computer only supports up to 33.6Kbps.	Refer to "Determining Your Modem" in Chapter 6 to see which modem type is installed. Contact your authorized Compaq dealer, reseller, or service provider about modem options available for your computer.
	The site called does not support 56K or supports an incompatible 56K implementation	The internal 56Kbps modem supports K56Flex. Information about ISPs (Internet service providers) that supports K56Flex may be found on the portable web site at www.compaq.com . This site also contains information about updates that may be available for the 56K code in your modem.
	The phone line used does not support 56K implementation.	The 56K protocol requires that the phone line used must not contain more than one analog-to-digital conversion. Try connecting from an alternate site.
	The phone line used is noisy.	The 56K protocol will fall back to lower speeds if the phone line is too noisy for a high-speed connection. Try switching to another phone line.

Continued

Modem Problems and Solutions *Continued*

Problem	Possible Cause	Solution
	Modem settings may be incorrectly configured for 56K connections in your country.	More than one variant of K56Flex is supported. For example, if you are in Hong Kong, there are two variants for K56Flex supported. The modem will default to the most prevalent one. If you are unable to make any connection above 33.6Kbps, you may need to change to the alternate type. To do this, visit the portable web site at www.compaq.com . for instructions. The web site will also include updates that may be available for the 56K code in your modem..

Running the External Monitor Self-Test

You can perform a “self-test” on an external VGA color or monochrome monitor by disconnecting the monitor from the computer. To do so, complete the following steps:

1. Turn off the monitor.
2. Turn off the computer.
3. Disconnect the monitor signal cable from the computer.
4. Turn on the monitor and allow it to warm up for one minute.
5. The screen should be white. A narrow black border may also appear on the left and right sides of the monitor screen. Either condition indicates that the monitor is working properly.

Solving PC Card Problems

Some common causes and solutions for PC Card problems are listed in the following table.

PC Card Problems and Solutions		
Problem	Possible Cause	Solution
The computer does not beep when a PC Card is inserted.	Card is not inserted properly.	Ensure the card is inserted correctly. Remove and reinsert the card. Insert the card gently to avoid damaging the pins.
	Card or card driver is not compatible with your computer.	Refer to the documentation that came with your PC Card. Contact your Compaq authorized dealer, reseller, or service provider for a list of PC Cards supported by Compaq. See Chapter 7, "Using PC Cards," to see the Compaq PC Card logo designed for Compaq-supported cards.
PC Card does not work.	Card is not fully inserted into the slot or is not inserted properly.	Ensure the card is inserted in the correct orientation, or remove and reinsert.
Fax/modem PC Card does not work.	You are trying to access the card using the wrong COM port.	Right click My Computer on the Windows desktop. Left click Properties, then Device Manager, and double-click Port Settings to view the COM port settings.
	Telephone cord is not plugged in all the way.	Check and secure telephone cord connection.
Network PC Card does not work.	Network driver is not set up properly or resources are not available for this configuration.	Refer to the documentation that came with your network PC Card. Refer to the online Compaq "Reference Guide."
Storage memory card does not work.	Card is not compatible.	Contact Compaq Customer Support or a Compaq authorized service provider for a list of PC Cards tested successfully in Compaq computers. Look for the Compaq PC Card Solution Logo on PC Cards.

Solving Pointing Device Problems

Some common causes and solutions for trackball and mouse problems are listed in the following table.

Pointing Device Problems and Solutions		
Problem	Possible Cause	Solution
External serial or PS/2 mouse does not work	The computer was not shut down before connecting the device.	Shut down the computer. Connect the device. Reboot.
	Incorrect or no device driver is installed.	To view the pointing device driver, access the Start menu via the keyboard by pressing Ctrl+Esc . Use the arrow keys to get to Settings, then Control Panel, and press Enter . Use arrow keys to select the System icon and press Enter . Use the arrow keys to access Device Manager. Use the Tab key to get to the computer icon and the arrow keys to select the mouse. Press the right arrow to access the hardware. Tab to the Properties button and press the Space bar. Use the right arrow to get to the Driver tab and follow the instructions on the screen.
	Device not connected properly.	Click Shut Down on the Start menu to turn off the computer. Disconnect the mouse or other pointing device, then reconnect the device and slide the power switch again to reboot.

continued

Pointing Device Problems and Solutions *Continued*

Problem	Possible Cause	Solution
Device driver is loaded but pointing device doesn't work.	Wrong pointing device is selected.	To select the right pointing device, access the Start menu via the keyboard by pressing Ctrl+Esc . Use the arrow keys to get to Settings, then Control Panel, and press Enter . Use arrow keys to select the Mouse utility. Double-click the icon and follow the directions on the screen.
Cursor skips or moves abnormally when using a pointing device.	Connectors are loose or device drivers are missing.	Check device connections, device drivers and reboot the computer.

Solving Power Problems

Some common causes and solutions for power problems are listed in the following table. The “Solving Battery Problems” section in this chapter also may be helpful.

Power Problems and Solutions		
Problem	Possible Cause	Solution
Computer won't turn on when battery packs are not inserted.	Computer is not connected to a power source.	Insert battery pack(s) or connect to AC power, Automobile Adapter, or convenience base.
	Cables to the external power source are unplugged.	Ensure that cables connecting computer and external power source are plugged in properly.
Computer won't turn on when plugged in and battery packs are inserted.	Battery pack(s) may be defective.	Remove battery pack(s), insert another battery pack, and turn on computer again.
Computer beeped and battery charge indicator is blinking.	Computer has entered a low-battery condition.	Immediately save any open files. Then do one of the following: <ul style="list-style-type: none">■ Connect the computer to an external power source to charge the battery pack(s).■ Initiate Hibernation to completely halt the drain on the battery until you can charge the battery pack(s) or find another power source.
Computer turned off while it was left unattended and power indicator is off.	System initiated Hibernation due to a low-battery condition.	Replace the battery pack(s) with fully charged batteries or connect the computer to an external power source. Then turn on the computer.
	System initiated Hibernation due to user's power specifications.	Click the Hibernation tab on the Power icon to adjust settings.

Solving Printer Problems

Some common causes and solutions for printer problems are listed in the following table.

Printer Problems and Solutions		
Problem	Possible Cause	Solution
Printer won't turn on.	The cables may not be connected properly, or the printer is unplugged.	Ensure that the cables are properly connected and that the AC power cable is connected to the electrical outlet.
Printer won't print.	Printing device is not selected.	Select the printer in Windows Printer Setup.
	Printer is not turned on.	Turn on the printer.
	Printer is not online.	Set the printer to online.
	Printer driver for your application is not installed.	Double-click the Printers icon on the Control Panel on the Start menu. Double-click Add Printer and follow the instructions on the screen.
	Printer that is set up for a network is not connected to the network.	Connect the printer to the network.
	Printer cable is too long, unshielded, or defective.	Replace the cable.
Printer is offline.	Paper tray is empty.	Fill the paper tray with paper. Set the printer to online.
Printer prints garbled information.	Correct printer driver is not installed.	Double-click the Printers icon on the Control Panel on the Start menu. Follow the instructions on the screen.
	Cable is not connected properly.	Ensure that the printer cable is connected properly to the computer or expansion base.

If you experience problems printing, run a printer self-test. Refer to the documentation provided with your printer for instructions. If the self-test fails, it is a printer-specific problem. The printing section of your application software documentation may also be helpful.

Solving Display Screen Problems

Some common causes and solutions for display screen problems are listed in the following table.

Display Screen Problems and Solutions

Problem	Possible Cause	Solution
Characters are dim.	Brightness/Contrast controls not properly set.	Press hotkeys Fn+F10 to adjust brightness. On models with a passive matrix display, you can also press Fn+F9 to adjust contrast.
	Computer screen is in direct light.	Tilt display or move computer.
Screen is blank.	You may have a screen blanking utility installed.	Press any key and/or enter your password.
	Brightness/contrast needs adjusting.	Use the hotkeys to adjust the brightness/contrast. NOTE: On models with color TFT displays, contrast is not applicable.
	Screen has overheated.	If computer is in direct sunlight, move it and allow it to cool off.
Screen is blank and the power/suspend indicator is blinking.	System is in Suspend.	Press the suspend button to exit Suspend.
	System is in Suspend and QuickLock/QuickBlank has initiated.	Exit Suspend and enter your power-on password.

Continued

Display Screen Problems and Solutions *Continued*

Problem	Possible Cause	Solution
Screen is blank, the power/suspend indicator is blinking, and the battery charge indicator is blinking.	System has entered a low-battery condition.	<p>If available, immediately connect the computer to an external power source or replace the battery pack.</p> <hr/> <p>If another power source is not immediately available and Hibernation is disabled, attempt to exit Suspend and save any open files. However, the computer may not have enough power to do this.</p> <hr/> <p>If Hibernation has not been disabled, you can let the computer initiate Hibernation. Do not interfere with the hibernation process. Once the computer has turned off, replace the battery pack or connect the computer to another power source. Then turn the computer back on.</p>
Computer screen is blank and the screen on an external monitor displays information.	External monitor was turned on before the computer was turned on.	Press the Fn+F4 hotkeys to display information on the computer display; press the hotkeys again to display information simultaneously.
Screen is blank and keyboard is locked.	QuickLock and QuickBlank were initiated.	Type your power-on password to unlock the keyboard and pointing device and return information to the screen.
Computer screen and external monitor won't display information simultaneously.	External monitor was connected after the computer was turned on.	<p>Turn the computer off and reconnect the external monitor. Turn the external monitor on, then turn the computer on.</p> <p>Press the Fn+F4 hotkeys to toggle through the three display options.</p>

NOTE: If you are using an external monitor and simultaneously displaying an image on the computer display and the external monitor, the image on the external monitor may not fill the screen.

Solving Software Problems

Most software application or installation problems occur because of one or more of the following conditions:

- Application was not installed correctly.
- Memory was not allocated correctly.
- Conflict exists between applications.

Software Problems and Solutions

Problem	Probable Cause	Solution
Insufficient memory to run application.	System ran out of memory for the application.	Check the application documentation for memory requirements. Install additional memory.

Solving Sound Problems

Some common causes and solutions for sound problems are listed in the following table.

Sound Problems and Solutions

Problem	Possible Cause	Solution
Computer beeps after you turn it on.	This is normal; it indicates successful completion of the POST.	No action is required.
Computer does not beep after the Power-On Self-Test (POST).	System beeps are turned down.	Use the volume control on the keyboard (or Fn+F5 hotkeys and the arrow keys) to turn up the volume.

Servicing the Computer

To get help from Compaq Customer Support or to find a Compaq authorized reseller or service provider location, call one of the numbers in the “Worldwide Telephone Numbers” in Appendix A. Your Compaq authorized reseller or service provider is available to answer your questions, install optional equipment, and service your computer.

If you take the computer in for service, remember to provide the power-on password or, if possible, disable the password in Passwords Properties prior to delivery to the service provider. Refer to the online Compaq *Reference Guide* for additional information.

appendix A

COMPAQ CUSTOMER SUPPORT

Worldwide Telephone Numbers

Locate your geographical area from the following table and use one of the telephone numbers for Compaq assistance.

General Information Numbers—Product information, technical assistance, and the location of your nearest Compaq authorized dealer, reseller, or service provider.

Technical Support Numbers—Hardware technical support in analyzing system configuration and diagnostic problems or troubleshooting.

Customer Support Numbers—Information on service and support programs including warranty, product catalogs, and white papers.

PaqFax Numbers—Automatic facsimile response system for technical and product specific information that is transmitted to any fax machine. PaqFax is available 24 hours a day.

NOTE: Telephone numbers are subject to change without notice.

Worldwide Telephone Numbers		
Location	Country Code	Telephone Number
Argentina		
General Information	+54	-1-796-1616
Technical Support	+54	-1-796-1717

Continued

Worldwide Telephone Numbers *Continued*

Location	Country Code	Telephone Number
Australia		
General Information		61-2-9911-1999
Technical Support		61-2-9911-1955
PaqFax		61-2-9911-1982
Austria		
General Information		0222/8 78-16 16
Technical Support		0222/8 78-16-16
Ordering Backup Software	+31	-55-38-43-39
Belgium		
General Information	+32	-2-716-95-11
Compaq Care Center	+32	-2-716-96-96
Compaq Care Center Fax	+32	-2-716-95-85
General Fax	+32	-2-725-22-13
FaxPaq	+32	-2-716-96-99
QuickLine	+32	-2-716-95-92
Ordering Backup Software	+32	-2-716-96-78
Ordering Backup Software Fax	+32	-2-716-96-79
Brazil		
General Information		55-11-246-7866
Canada		
General Information		1-905-707-1715
Technical Support		1-800-OKCOMPAQ (1-800-652-6672)
Customer Support		1-800-263-5868
Ordering Backup Software		1-800-952-7689
Battery Pack Recycling		1-800-263-5868
Caribbean		
General Information		011-713-514-4220
Technical Support		011-713-518-2200
Chile		
General Information		56-2-274-1911
Technical Support		56-2-274-3007

Continued

Worldwide Telephone Numbers *Continued*

Location	Country Code	Telephone Number
China		
General Information		861-58313399
Technical Support		861-68346721
Colombia		
General Information		57-1-312-0201
Technical Support		57-1-345-0266
Czech Republic		
General Information	+42	-2-232-8772
Technical Support	+42	-2-232-8772
Denmark		
General Information	+45	-45-90-45-90
Technical Support	+45	-45-90-45-45
Finland		
General Information	+358	-0-615-599
Technical Support		9800-206-720
QuickLine (BBS)	+358	-0-6155 9870
France		
General Information	+33	-1-41-33-41-33
Technical Support	+33	-1-41-33-44-55
Germany		
		(0,12 DM/2 sec. or 3,60 DM/min.)
Menu Selection		0190/88 80 80
Notebook Hotline		0190/88 80 82
		(0,48 DM/min.)
QuickLine		0180/5 21 21 18
FaxPaq		0180/5 21 21 19
Hong Kong		
General Information		852-28681382
Technical Support		852-90116633
PaqFax		852-28671648
Hungary		
General Information	+36	-1-201-8776
Technical Support	+36	-1-201-8776

Continued

Worldwide Telephone Numbers *Continued*

Location	Country Code	Telephone Number
India		
General Information		91-80-559-6023
PaqFax		91-80-559-8989
BBS		91-80-559-8900
Italy		
General Information	+39	-2-57-59-03-00
Technical Support	+39	-2-57-59-03-00
Japan		
General Information		0120-101-589
Technical Support		0120-101-589
Windows 95 Support		0120-505-589
Ordering Backup Software		0120-250-589
FaxStation		81-3-5402-0991
Korea		
General Information		82-2-3470-07001
Technical Support		82-2-523-3575 82-082-902-77774
Malaysia		
General Information		603-717-1188
Technical Support		603-718-1636
Mexico		
General Information		525-229-7900
Technical Support		525-229-7910
PaqFax		525-229-7920
Netherlands		
General Information		0182-565805
Customer Support		06-91681616 (Dfl. 0.75/min)
Fax		06-8991116 (Dfl. 0.40/min)
QuickLine Bulletin Board		0182-572366

Continued

Worldwide Telephone Numbers *Continued*

Location	Country Code	Telephone Number
New Zealand		
General Information		64-9-307-3969
Norway		
General Information	+47	-22-07-20-00
Technical Support	+47	-22-07-20-20
Poland		
General Information	+48	-2-630-3535
Technical Support	+48	-2-630-3535
Portugal		
General Information	+351	-1-4120132
Technical Support	+351	-1-4120132
Singapore		
General Information		65-753-6688
Customer Support Center		65-750-3030
PaqFax		65-750-4514
South Africa		
General Information		27-11-728-6999
Technical Support		27-11-728-6999
Spain		
General Information	+34	-1-640-1500
Technical Support	+34	-1-640-1302
Sweden		
General Information	+46	-8-703-5240
Technical Support	+46	-8-703-5240
PaqFax (håmtfax)	+46	-8-703-5225
QuickLine (BBS)	+46	-8-703-5220
Switzerland		
Technical Support		157/64-00
QuickLine Bulletin Board		01/8 38-24 21
Ordering Backup Software		155/62-06
PaqFax		01/8 38-22 38

Continued

Worldwide Telephone Numbers *Continued*

Location	Country Code	Telephone Number
Taiwan		
General Information		886-2-7351000
Technical Support		886-2-3761170
BBS		886-2-3761175
<hr/>		
Thailand		
General Information		62-2-679-6222
<hr/>		
United Arab Emirates (Dubai)		
General Information	+97	14 -818100
<hr/>		
United Kingdom		
General Information		0990-134456
FaxPaq		0181-332-3550
QuickLine Bulletin Board		0181-332-9499
<hr/>		
United States		
General Information		1-800-345-1518
Technical Support		1-800-OKCOMPAQ (1-800-652-6672)
Customer Support		1-800-345-1518
PaqFax		1-800-345-1518, Option 1
Download Facility (modem access only)		1-713-518-1418
Ordering Backup Software		1-800-952-7689
Battery Pack Recycling		1-800-524-9859
<hr/>		
Venezuela		
General Information		58-2-953-6944

appendix **B**

REGULATORY NOTICES

Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Compaq Computer Corporation may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

European Notice

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms:

- EN55022 (CISPR 22)—Radio Frequency Interference
- EN55082-1 (IEC801-2, IEC801-3, IEC801-4)—Electromagnetic Immunity
- EN60950 (IEC950)—Product Safety
- EN61000-3-2 (IEC1000-3-2) - Power Line Harmonics

Canadian Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Avis Canadien

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Japanese Notice

本装置は、第二種情報装置（住宅地域またはその隣接した地域において使用されるべき情報装置）で住宅地域での電波障害防止を目的とした情報処理装置等電波障害自主規制協議会（VCCI）基準に適合しております。

しかし、本装置をラジオ、テレビジョン受信機に、近接してご使用になると、受信障害の原因となることがあります。本書の説明にしたがって正しい取り扱いをしてください。

Airline Travel Notice

Use of electronic equipment aboard commercial aircraft is at the discretion of the airline.

Energy Star Compliance

As an Energy Star Partner, Compaq Computer Corporation has determined that this product meets the Energy Star guidelines for energy efficiency. The Energy Star Computers Program was created by the EPA to promote energy efficiency and reduce air pollution through more energy-efficient equipment in homes, offices, and factories. Compaq products achieve this by reducing the power consumption when not being used. Using the power-saving features will reduce energy use and maximize battery life.

Battery Notice



WARNING: Your computer is provided with a lithium battery powered Real-Time Clock circuit. There is a danger of explosion and risk of personal injury if the battery is incorrectly replaced or mistreated. Do not attempt to recharge the battery, disassemble it, or immerse it in water or dispose of it in fire. Replacement is to be done by Authorized COMPAQ Service Provider using the COMPAQ spare designated for this product.

For more information about Real-Time Clock battery replacement, or proper disposal, contact your Compaq authorized reseller or your Compaq authorized service provider.



WARNING: Your computer contains a lithium-ion or nickel metal hydride battery pack. There is a risk of fire and burns if the battery pack is handled improperly. Do not disassemble, crush, puncture, short external contacts, dispose of in water or fire. Do not expose to temperatures higher than 60°C. Replace only with the Compaq Spare designated for this product.



In North America, dispose of nickel metal hydride or lithium-ion batteries by taking advantage of the Compaq battery recycling program. You will be provided with a postage-paid battery pack mailer preaddressed to a reclamation facility where the metals are recycled. Call the telephone number listed for your location in Appendix A for more information.

Batteries/battery packs and accumulators should not be disposed of together with the general household waste. In order to forward them to recycling or proper disposal, please use the public collection system or return them to Compaq, your authorized Compaq Partners, or their agents.

Regulatory Agency Identification Numbers

The following Compaq-approved options have been evaluated for use with your computer. These Compaq approved options can be identified by their assigned series numbers that are listed below. To ensure continued reliable and safe operation of your computer, only these options should be used.

System	Series Number
■ Notebook CPUs	2920
Options	Series Numbers
■ 56Kbps Internal Modem	NC1000
■ 33.6Kbps Internal Modem	201/201A
■ Lithium Ion Battery Pack	2921A
■ Convenience Bases	2925
■ Extended life NiMH Battery Pack	2921
■ External Battery Charger	2923
■ Automobile Adapter	2874

Laser Safety

All Compaq systems equipped with Laser Products comply with appropriate safety standard including IEC 825. With specific regard to the laser, the equipment complies with laser product performance standards set by government agencies as a Class 1 laser product. It does not emit hazardous light; the beam is totally enclosed during all modes of customer operation and maintenance.

CDRH Regulations

The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration implemented regulations for laser products on August 2, 1976. These regulations apply to laser products manufactured from August 1, 1976. Compliance is mandatory for products marketed in the United States.



WARNING: Use of controls or adjustments or performance of procedures other than those specified herein or in the laser product's installation guide may result in hazardous radiation exposure.



This system is classified as a **CLASS 1 LASER PRODUCT**. This label may be located on the outside of your system. A similar label also appears on the internal laser product installed in your system.

LASER INFO

Laser Type:	Semiconductor GaAIAs
Wave Length:	780 +/- 35 nm
Divergence Angle:	53.5 Degree +/- 1.5 Degree
Output Power:	Less than 0.2mW or $10,869 \text{ W}\cdot\text{m}^{-2}\cdot\text{sr}^{-1}$
Polarization:	Circular
Numerical Aperture:	0.45 +/- 0.04

Only authorized technicians trained by Compaq should attempt to repair this equipment. All troubleshooting and repair procedures are detailed to allow only subassembly/module level repair. Because of the complexity of the individual boards and subassemblies, no one should attempt to make repairs at the component level or to make modifications to any printed wiring board. Improper repairs can create a safety hazard.

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