

chapter 2

TROUBLESHOOTING

Follow these basic steps when beginning the troubleshooting process:

1. Complete the preliminary steps listed in Section 2.1.
2. Run the Power-On Self-Test (POST) as described in Section 2.3.
3. Run Computer Setup as described in Section 2.5.
4. If you are unable to run POST or if the problem persists after running POST, perform the recommended actions described in the diagnostic tables in Section 2.5.

Follow these guidelines when troubleshooting:

Complete the recommended actions in the order in which they are given.

- Repeat POST after each recommended action until the problem is resolved and the error message does not return.
- When the problem is resolved, stop performing the troubleshooting steps and do not complete the remaining recommended actions.
- Refer to Chapter 5 for recommended removal and replacement procedures.
- If the problem is intermittent, check the computer several times to verify that the problem is solved.

The following table describes the troubleshooting actions:

If You Want To:	Then Run:
Check for POST error messages	POST
Perform any of the following: <ul style="list-style-type: none">■ Check the system configuration■ Set the system power management parameters■ Return the system to its original configuration■ Check system configuration of installed devices	Computer Setup

2.1 Preliminary Steps

IMPORTANT: Use AC power when running POST or Computer Setup. A low battery condition could initiate Hibernation and interrupt the test.

Before running POST, complete the following steps:

1. Obtain established passwords. If you must clear the passwords, go to Section 2.2.
2. Ensure that the battery pack is installed in the computer and the power cord is connected to the computer and plugged into an AC power source.
3. Turn on the computer.
4. If a power-on password has been established, type the password and press Enter.
5. Run Computer Setup (Section 2.5). If a Setup password has been established, type the password and press Enter.
6. Turn off the computer and all external devices.
7. Disconnect external devices that you do not want to test. If you want to use the printer to log error messages, leave it connected to the computer.

NOTE: If a problem only occurs when an external device is connected to the computer, the problem could be with the external device or its cable. Isolate the problem by running POST with and without the external device connected.

8. Use Compaq Utilities and loopback plugs in the serial and parallel connectors if you plan to test these ports.

Follow these steps to run Compaq Utilities:

- a. If you are running Compaq Utilities from the hard drive, turn on or restart the computer. Press F10 when the cursor appears in the upper-right corner of the screen. If you do not press F10 in time, restart the computer and try again.

If you are running Compaq Utilities from diskette, insert the Compaq Utilities diskette in drive A. Turn on or restart the computer.

- b. Press **Enter** to accept OK.
- c. Select Prompted Diagnostics.
- d. After “Identifying System Hardware” completes, select Interactive Testing and follow the instructions on the screen.

2.2 Clearing Passwords

1. Turn off the computer.
2. Disconnect the AC Adapter.
3. Remove all battery packs.
4. Remove the switch cover (refer to Chapter 5, Section 5.8).
5. Disconnect the Real Time Clock (RTC) battery (Section 5.9).
6. Wait five minutes.
7. Reconnect the RTC battery.
8. Replace the switch cover.
9. Reconnect the AC Adapter. Do not reinstall any battery packs yet.
10. Turn on the computer.

NOTE: Remember to set the date and time the next time the computer is turned on.

2.3 Power-On Self-Test (POST)

The Power-On Self-Test (POST) is a series of tests that run every time the computer is turned on. POST verifies that the system is configured and functioning properly.

To run POST, complete the following steps:

1. Complete the preliminary steps (Section 2.1).
2. Turn on the computer.

If POST does not detect any errors, the computer beeps once or twice to indicate that POST has run successfully. The computer boots from the hard drive or from a bootable diskette if one is installed in the diskette drive.

2.4 POST Error Messages

If the system is not functioning well enough to run POST, or if the display is not functioning well enough to show POST error messages, refer to the Troubleshooting tables in Section 2.6.

If POST detects an error, one of the following events occur:

- A message with the prefix "WARNING" appears, informing you where the error occurred. The system pauses until you press **F1** to continue.
- A message with the prefix "FATAL" appears, informing you where the error occurred. After the message, the system emits a series of beeps, then stops.

The system emits a series of beeps, then stops.

Warning messages indicate that a potential problem, such as a system configuration error, exists. When **F1** is pressed, the system should resume. You should be able to correct problems that produce WARNING messages.

If you receive one of the error messages listed below, follow the recommended action.

**Table 2-1
Warning Messages**

Message	Description	Recommended Action
CMOS checksum invalid, run SCU	CMOS RAM information has been corrupted.	Run Computer Setup (Section 2.5) to reinitialize CMOS-RAM.
CMOS failure, run SCU	CMOS RAM has lost power.	Run Computer Setup (Section 2.5) to reinitialize CMOS-RAM.
Diskette controller error	The diskette drive controller failed to respond to the recalibrate command.	If there is no diskette drive in the system, run Computer Setup (Section 2.5) to properly configure the CMOS-RAM to show no diskette drive present. If the problem persists, or if a diskette drive is present, complete these steps until the problems are solved: 1. Check diskette drive connections. 2. Replace diskette drive. 3. Replace system board.
Diskette track 0 failed	The diskette drive cannot read track 0 of the diskette in the drive.	Try another diskette. If the problem persists, you may need to replace the diskette drive.
Hard disk controller error	The hard drive controller failed to respond to the reset command.	Check the drive parameters. Turn off the system and check all related connections.
Keyboard controller failure	The keyboard failed the self-test command.	Replace the system board.

Continued

Table 2-1 *continued*

Message	Description	Recommended Action
Keyboard failure	The keyboard failed to respond to the RESET ID command.	Replace the keyboard. If the problem persists, replace the system board.
No interrupts from Timer 0	The periodic timer interrupt is not occurring.	Replace the system board.
ROM at xxxx (LENGTH yyyy) with nonzero checksum (zz)	An illegal adapter ROM was located at the specified address.	Check the external adapter (such as a video card) to determine if it is causing the conflict.
Time/Date corrupt - run SCU	The time and date stored in the real time clock (RTC) have been corrupted, possibly by a power loss.	<ol style="list-style-type: none">1. Run Computer Setup (Section 2.5).2. If problem persists, replace RTC battery.3. If problems persists, replace system board.
Hard disk xx failure (or error)	A failure or an error occurred when trying to access the hard drive.	<ol style="list-style-type: none">1. Run ScanDisk.2. Check disk in DOS and Windows 95.

Fatal errors emit a beep and may display a FATAL message. Fatal errors indicate severe problems, such as a hardware failure. Fatal errors do not allow the system to resume. Some of the Fatal error beep codes are listed at the end of this section.

**Table 2-2
Fatal Error Messages**

Message	Description	Beep code
CMOS RAM test failed	A walking bit test of CMOS RAM location 0E (Hex) - 3F (Hex) failed.	3
DMA controller faulty	A sequential read/write of the transfer count and transfer address registers within the primary and secondary DMA controllers failed.	4
Faulty DMA page registers	A walking bit read/write of the 16 DMA controller page registers starting at location 80 Hex failed.	0
Faulty refresh circuits	A continuous read/write test of port 61h found that bit 4 (Refresh Detect) failed to toggle within an allotted amount of time.	1
Interrupt controller failed	A sequential read/write of various Interrupt Controller registers failed.	5
ROM checksum incorrect	A checksum of the ROM BIOS does not match the byte value at F000:FFFF.	2
RAM error at location xxxx	RAM error occurred during memory test.	None
*Beep codes are defined in Table 2-3.		

**Table 2-3
Fatal Error Beep Codes**

Beep Code	Beep Sequence	Description	Recommended Action
0	S-S-S-P-S-S-L-P	The DMA page registers are faulty.	Replace system board.
1	S-S-S-P-S-L-S-P	The refresh circuitry is faulty.	
2	S-S-S-P-S-L-L-P	The ROM checksum is incorrect.	
3	S-S-S-P-L-S-S-P	The CMOS RAM test failed.	
4	S-S-S-P-L-S-L-P	The DMA controller is faulty.	
5	S-S-S-P-L-L-S-P	The interrupt controller failed.	
6	S-S-S-P-L-L-L-P	The keyboard controller failed.	
7	S-S-L-P-S-S-S-P	Graphics adapter is faulty.	
8	S-S-L-P-S-S-L-P	Internal RAM is faulty.	Replace memory board or system board if memory on system board is faulty.
NOTE: S = Short, L = Long, P = Pause			

2.5 Compaq Utilities

Compaq Utilities contain several functions that

- Determine if various computer devices are recognized by the system and are operating properly.
- Provide information about the system once it is configured.

Compaq Utilities include the following programs:

- Computer Setup
- Compaq Diagnostics

To access Compaq Utilities:

1. Turn on or restart the computer by clicking Start → Shut Down → Restart the computer.
2. Press **F10** when the blinking cursor appears in the upper-right corner of the display.
3. Select a menu option.

Selecting Computer Setup or Compaq Diagnostics for Windows

The computer features two system management utilities:

- Computer Setup is a system information and configuration utility that can be used even when your operating system is not working or will not load. It includes custom settings that are not available in Windows.

To configure a device in Windows NT 4.0, you must use Computer Setup.

- Compaq Diagnostics for Windows is a system information and diagnostic utility that is used within the Windows operating system. Use Compaq Diagnostics for Windows to test system components and to display system information whenever possible.

To configure a device in Windows 95 or 98 use the operating system itself. Windows 95 and 98 can be used to add and remove programs, and provide Wizards to ensure proper device drivers are installed. Diagnostics for Windows is NOT a configuration tool and might only test devices that are properly configured by the operating system.

NOTE: It is not necessary to configure a device connected to a USB connector on the computer or an optional docking base.

Using Computer Setup

All information and settings in Computer Setup are accessed from the File, Security, or Advanced menus.

NOTE: Your settings in Computer Setup are not affected by updating the system ROM.

To view information or change a setting in Computer Setup:

1. Turn on or restart the computer. When the blinking cursor appears in the upper-right corner of the screen, press **F10**.
 - To change the language, press **F2**.
 - To view navigation information, press **F1**.
 - To return to the Computer Setup menu from anywhere in Computer Setup, press **Esc**.
2. Select the File, Security, or Advanced menu.
3. To close Computer Setup and restart the computer
 - Select File → Ignore Changes and Exit, then press **Enter**.
 - or
 - Select File → Save Changes and Exit, then press **Enter**.
4. To confirm your choice, press **F10**.

File Menu

Begin here	To do this
System information	<ul style="list-style-type: none">■ View identification information about the computer, docking base, and battery packs.■ View specification information about the processor, memory and cache size, and ROM date and family.
Save to floppy	Save system configuration to a diskette.
Restore from floppy	Restore system configuration from a diskette. (The diskette contains your personal configuration, so you should restore from the diskette before using the Quick Restore CD-ROM.)
Restore defaults	Replace configuration settings in Computer Setup with factory default settings. (Identification information is retained.)
Ignore changes and exit	Cancel changes entered during the current Computer Setup session, then exit and restart the computer.
Save changes and exit	Save changes, then exit and restart the computer.

Security Menu

Begin here	To do this
Setup password	Enter, change, or delete a setup password.
Power-on password	Enter, change, or delete a power-on password.
Password options	Enable/disable: <ul style="list-style-type: none">■ QuickLock/QuickBlank.■ Lock keyboard and pointing stick or touchpad at startup. (These features can be enabled only when a power-on password is set.)
DriveLock passwords	Enter, change, or delete a DriveLock password.
Device security	Enable/disable <ul style="list-style-type: none">■ Ports or diskette drives.■ Diskette write.■ CD-ROM or diskette startup. NOTE: Settings for a DVD-ROM can be entered in the CD-ROM field.
System IDs	Enter identification numbers for the computer, a docking base, and battery packs.

Advanced Menu

Begin here	To do this
Language (or press F2)	Change the Computer Setup language.
Boot Options	<p>Enable/disable</p> <ul style="list-style-type: none">■ QuickBoot, which starts the computer more quickly by eliminating some startup tests. (If you suspect a memory failure and want to test memory automatically during startup, you may want to disable QuickBoot.) <p>MultiBoot, which enables you to set a startup sequence that can include any drives in the system.</p>
Device Options	<ul style="list-style-type: none">■ Enable/disable the embedded numeric keypad at startup.■ Enable/disable multiple standard pointing devices at startup. When this feature is disabled, only one pointing device is activated at startup.■ Enable/disable USB legacy support for one USB mouse and one USB keyboard. (When USB legacy support is enabled, the keyboard and mouse work without a loaded USB driver.)■ Set an optional external monitor or overhead projector connected to a video card in a docking base as the primary device. (When the computer display is set as secondary, the computer must be shut down before undocking.)■ Set video-out mode to NTSC (default), NTSC-J, PAL, or PAL-M. <p>Change the parallel port mode to or from EPP, standard, bidirectional, or ECP.</p>

Using Compaq Diagnostics for Windows

1. Access Compaq Diagnostics for Windows by selecting Start→Settings→Control Panel→Compaq Diagnostics.
2. To select a category, choose one of two methods:
 - Select the Categories menu, then select a category from the drop-down list.
 - Select a category icon on the toolbar.
3. To run diagnostic tests:
 - a) Select the Test tab.
 - b) In the scroll box, select the category or device you want to test.
 - c) Select the Quick, Complete, or Custom test type.
 - d) Select the Interactive or Unattended test mode.
 - e) Select the Begin Testing button.
 - f) View test information by selecting a report from the Status, Log, or Error tab.
4. To print the information or save it to a drive, select the File menu, then select Print or Save As.
5. To exit, select the File menu→Exit.

Factory Default Settings

**Table 2-4
Initialization**

Enable POST Memory Test	Checked (enabled)
Keyboard Num Lock	Unchecked (Off)
Hard drive boot sequence	
1	Hard drive in the computer MultiBay
2	Hard drive in the computer hard drive bay
Boot display	Auto
Language	Language of country

**Table 2-5
Ports**

Serial port	3F8, IRQ4
Infrared port	2F8, IRQ9
Parallel port	378, IRQ7
Ethernet port	300, IRQ11

**Table 2-6
Power**

Low Battery Warning Beep	Checked (enabled)
External Energy Saving Monitor Connected	Unchecked (not connected)
Power Management	
Enabled	While operating on battery power
Conservation Level	High
Level Definition	
High	Suspend Time: 3 minutes Hibernation Timeout: Immediate Drive Timeout: 1 minute Screen Timeout: 1 minute
Medium	Suspend Time: 5 minutes Hibernation Timeout: 1 hour Drive Timeout: 2 minutes Screen Timeout: 3 minutes
Custom	Allows the desired times to be customized. Default settings are: Suspend Time: disabled Hibernation Timeout: low battery Drive Timeout: always on Screen Timeout: always on

**Table 2-7
Security**

Enable QuickLock/QuickBlank	Unchecked (Disabled)
Enable Power-on Password	Unchecked (Disabled)
Disable Serial/Infrared Ports	Unchecked (Enabled)
Disable Parallel Port	Unchecked (Enabled)
Disable PC Card Slots	Unchecked (Enabled)
Setup Password	Password blank
Power-on Password	Password blank
Diskette Drives	
Disable Diskette Drives	Unchecked (Enabled)
Disable Diskette Boot	Unchecked (Enabled)

2.6 Troubleshooting Without Diagnostics

This section provides information about how to identify and correct some common hardware, memory, and software problems. It also explains several types of messages that may be displayed on the screen.

Since symptoms can appear to be similar, carefully match the symptoms of the computer malfunction against the problem description in the Troubleshooting tables to avoid a misdiagnosis.

Before Replacing Parts

When troubleshooting a problem, check the following items for possible solutions before replacing parts:

- Verify that cables are connected properly to the suspected defective parts.
- Verify that all required device drivers are installed.
- Verify that all printer drivers have been installed for each application.

Obtaining Update Information with Info Messenger

Compaq Info Messenger allows you to set a customized search of the Compaq Web site. By registering for this utility, you can stay up to date with software and hardware information specific to your system.

- Verify that cables are connected properly to the suspected defective parts.
- Select the Categories menu, then select a category from the drop-down list.
- To register, follow the instructions on the Info Messenger page. When your registration is complete, you can
 - Implement your customized search whenever you prefer from the Info Messenger page.
 - Set Info Messenger to send you the information by email as it becomes available.

Info Messenger will also inform you if there are updates to the system ROM for your computer.

Table 2-8
Solving Audio Problems

Problem	Possible Cause	Solution
Computer does not beep after the Power-On Self-Test (POST).	System beeps have been turned down.	Use the Fn+F5 hotkeys to turn up the system volume.
Internal speaker does not produce sound when an external audio source is connected to the stereo line-in jack.	Volume may be turned off or set too low.	<ul style="list-style-type: none"> ■ Adjust the overall volume with the Fn+F5 hotkeys. ■ Adjust the overall volume by pressing the Fn+F5 hotkeys. ■ Adjust the sliding mixer controls by double-clicking the speaker icon on the Windows taskbar.
	Line input may not be connected properly.	Check line input connection.
	Headphones or speakers are connected to the stereo speaker/headphone jack, which disables the internal speakers.	Disconnect the headphones or speakers to enable the internal speakers.
External microphone does not work.	Volume may be muted	Uncheck the mute box in the volume properties.
	You are using the wrong type of microphone or microphone plug for the computer.	Check to see if you are using a monophonic electret condenser microphone with a 3.5-mm plug.
	The microphone may not be connected properly.	Ensure that the microphone plug is properly connected to the mono microphone jack.

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Table 2-8 *continued*

Problem	Possible Cause	Solution
External microphone does not work (continued).	Sound source not selected.	Ensure that microphone is selected as the recording source in Control Panel → Multimedia and that the recording level is adjusted.
External microphone does not work (continued).	Audio settings are not set correctly.	Check the game program's audio settings.
	Volume control on the computer is turned down.	Adjust the computer volume with the Fn+F5 hotkeys.
No sound from headphones	Volume or mixing controls set incorrectly.	<ul style="list-style-type: none"> ■ Adjust the overall volume with the Fn+F5 hotkeys. ■ Use the mixing features available by double-clicking the speaker icon on the Windows taskbar.
	Sound source not selected.	Verify that the sound source is selected in Control Panel → Multimedia.
	The headphones are connected to the wrong jack.	Check the connection.
Volume too low or too loud	Volume or mixing controls set incorrectly.	<ul style="list-style-type: none"> ■ Adjust the overall volume with the Fn+F5 hotkeys. ■ Check the mixing features available by double-clicking the speaker icon on the Windows taskbar.

Table 2-9
Solving Battery/Battery Gauge Problems

Problem	Possible Cause	Solution
Computer is beeping and battery power light is blinking	Battery pack charge is low.	<ul style="list-style-type: none"> ■ Charge the battery pack by connecting to an external power source. ■ Replace the battery pack with another fully charged battery. ■ Initiate Hibernation or turn the computer off until AC power or a fully charged battery is available.
Computer battery charge light blinks to indicate low battery condition, but computer does not beep.	Volume turned down too low.	Turn up the volume using the Fn+F5 hotkeys.
Battery pack will not charge.	Battery pack was exposed to temperature extremes.	Allow time for the battery pack to return to room temperature.
	Battery pack is already charged.	No action required.
	Battery pack has exceeded its useful life cycle.	Use a different battery pack.
Computer shut down and memory was lost when replacing the battery pack.	Hibernation was not initiated before removing the battery pack.	Work is lost.
Battery charge does not last very long.	Battery is exposed to higher temperatures.	Put the computer in a cooler place and recharge the battery pack.

Continued

Table 2-9 *continued*

Problem	Possible Cause	Solution
Battery charge does not last very long (continued).	Battery is exposed to extremely cold temperatures.	Put the computer in a warmer place and recharge the battery pack. NOTE: The recommended operating temperature range for the battery is from 10°C to 40°C (50°F to 104°F). The recommended storage temperature range for the battery is from 0°C to 30°C (32°F to 86°F).
	Battery conservation is disabled or set to drain.	Reset the battery conservation level.
	An external device is draining the battery.	Turn off or remove any external device or PC Cards when not in use.
	Battery gauge may be inaccurate and require recalibration.	Recalibrate the gauge.
Date and time must be set every time computer is turned on.	The real time clock (RTC) battery has reached the end of its useful life.	Replace the RTC battery (refer to Section 5.9).
Battery gauge seems inaccurate.	The battery pack may need calibration.	Recalibrate the battery.
	The battery pack has reached the end of its useful life.	Replace the battery pack.
Battery pack is warm after charging.	Warming occurs during charging.	No action required.

Table 2-10
Solving Compact Disc and DVD-ROM Problems

Problem	Possible Cause	Solution
Drive cannot read a disc	Disc is not properly seated in the drive.	Open the loading tray, insert the disc, then close the tray.
	Disc is loaded in the loading tray upside down.	Open the loading tray, turn over the disc (label facing up), then close the tray.
	Disc has a scratch on its surface.	Insert a different disc.
CD-ROM drive or DVD-ROM drive is not detected by the computer.	Drive is not connected properly.	If you are running a version of Windows that was preinstalled by Compaq, remove the drive from the MultiBay and reinsert it.
		If you are running a version of Windows that was not preinstalled by Compaq, turn off the computer. Then remove the drive from the MultiBay and reinsert it.

Table 2-11
Solving Diskette Drive/SuperDisk LS-120 Drive Problems

Problem	Possible Cause	Solution
Drive cannot write to a diskette.	Diskette is not formatted.	Format the diskette.
	Diskette is write-protected.	Use another diskette that is not write-protected or disable the write-protect feature.
	Writing to the wrong drive.	Check the drive letter in your path statement.
	Not enough space is left on the diskette.	Save the information to another diskette.
	Drive is disabled.	Enable the proper drive through Device Manager.
	Disable diskette write ability is turned on.	Run Computer Setup (Section 2.5). Select the Storage icon. Make sure Disable diskette write ability is not checked.
System cannot start up from diskette or SuperDisk LS-120 drive.	A bootable diskette is not in the drive.	Verify that a diskette with the necessary system files is in the drive.
	Diskette bootability is disabled in Computer Setup.	Enable diskette bootability in Computer Setup, Security menu.

Table 2-12
Solving Hard Drive Problems

Problem	Possible Cause	Solution
Accessing information on the hard drive is much slower than usual.	Hard drive entered low power state due to timeout and is now exiting from it.	Wait for the system to restore the previously saved data to its state prior to initiating a low power state.
	Hard drive is fragmented/not optimized or has errors.	Run ScanDisk and Disk Defragmenter.
Hard drive does not work.	Hard drive is not seated properly.	Turn off and unplug the computer, remove the hard drive, and reinsert the hard drive.
Errors occur after starting from an additional hard drive.	Additional hard drive has not been specially prepared with necessary software.	Boot from the original hard drive or a specially prepared hard drive.
System does not recognize a hard drive.	The drive is not seated properly.	Remove, then reinsert the drive.
	The drive is damaged.	Try using the hard drive in another bay to verify that the problem is with the drive. Run ScanDisk on the drive.
	The drive was inserted while system was on or in Suspend or Hibernation.	Shut down the computer before inserting or removing a hard drive.
DriveLock settings cannot be accessed in Computer Setup.	The DriveLock settings are accessible only when you enter Computer Setup by turning on (not restarting) the computer.	Completely turn off the computer. Turn the computer back on, then run Computer Setup (Section 2.5) by pressing F10 when the blinking cursor light appears upper-right on the

screen.

Table 2-13
Solving Infrared Problems

Problem	Possible Cause	Solution
Cannot communicate with another computer.	The appropriate software is not running on both computers.	Install the appropriate software on the second device, start the second device, and start the program on both computers.
	The other computer does not have an IrDA-compliant infrared port. Your Compaq computer uses the IrDA communications protocol.	Communication between infrared devices must use the same communications protocol. Check the manufacturer's instructions for connecting with infrared devices or try connecting with a device you know to be IrDA-compliant.
	The pathway between the infrared ports is obstructed, one port is more than 30 degrees (plus or minus 15 degrees off the center line) from the other, or the ports are more than one meter apart.	Remove the obstruction, align the infrared ports to within 30 degrees, and position computers within 1.5 feet (about 0.5 meter) of each other.
	There is an interrupt request (IRQ) conflict.	Check for IRQ conflicts in the Device Manager. If two devices have the same IRQ address, reassign one of the devices.
	There is a baud rate conflict.	Select the same baud rate for both computers.
	There is a conflict with the # bits.	Select the same # bits setting for both computers.
	There is a stop byte conflict.	Select the same stop byte for both computers.
	There is a parity conflict.	Select the same parity setting for both computers.

Continued

Table 2-13 *continued*

Problem	Possible Cause	Solution
Cannot transmit data.	Direct sunlight, fluorescent light, or flashing incandescent light is close to the infrared connections.	Remove the interfering light source(s).
	There is interference from other wireless devices.	Keep remote control units such as wireless headphones and other audio devices away from the infrared connections.
	There is a physical obstruction in the way.	Do not place objects that will interfere with a line-of-sight data transmission between the two units.
	One of the units was moved during data transmission.	Do not move either unit during data transmission.
	The orientation of the units is wrong.	Adjust the devices so that they point directly at each other.
	The distance between the units is too great.	Verify that devices are not more than 1.5 feet (0.5 meter) apart.
Infrared port doesn't work.	Direct sunlight, fluorescent light, or flashing incandescent light is close to the infrared connections.	Remove the interfering light source(s).
	There is interference from other wireless devices.	Keep remote control units such as wireless headphones and other audio devices away from the infrared connections.
	IR has been disabled.	Run IR configuration utility in Control Panel.

Table 2-14
Solving Keyboard Problems

Problem	Possible Cause	Solution
Screen is blank and keyboard is working.	A screen timeout has been initiated.	Press any key to refresh the screen.
	QuickLock/QuickBlank has been initiated.	To enable the keyboard and return your information to the screen, enter your power-on password.
	LCD has been disabled.	Press Fn+F4 to cycle from external monitor to internal LCD.
Embedded numeric keypad on computer keyboard is disabled.	Num Lock function is not turned on.	Press Fn+Num Lk to enable the Num Lock function and embedded numeric keypad.

Table 2-15
Solving Modem Problems

Problem	Possible Cause	Solution
Modem loses connection.	The cable connection from the phone line to the modem is loose.	Check to make sure the telephone cable is properly connected.
	Call Waiting has not been disabled.	<p>Disable Call Waiting:</p> <ol style="list-style-type: none"> 1. Select Start → Setting → Control Panel → select Modems. 2. From the General tab of the Modems Properties page, select Dialing Properties. <p>From the My Locations tab of the Dialing Properties page, check the box labeled This location has call waiting. Select *70, 70#, or 1170 from the drop-down list to disable call waiting.</p>
	There is noise or excessive traffic on the phone line.	Try connecting at a later time.
Modem not responding	Modem is not set up correctly in system BIOS.	Check the computer BIOS setup. If it requires specific settings for modems, be sure that they have been enabled.

Continued

Table 2-15 *continued*

Problem	Possible Cause	Solution
Modem does not dial correctly.	Telephone number is not entered correctly in the modem's dialing software.	<ul style="list-style-type: none">■ Make sure the telephone number you dialed is correct if you are using the dialing directory or the terminal mode.■ Dial 1 if using dialing long distance.■ The other line could be busy or not answering.■ Make sure call waiting is disabled.■ The modem may not recognize an international dial tone. Try the ATX3DT command and the telephone number.
Characters are garbled/transfer rates are slow.	There is noise in the telephone line.	<ul style="list-style-type: none">■ Check your telephone and modem cable connections. If they are a little loose, they can cause noise on the line.■ Check with your local telephone company for a phone line filter.

Continued

Table 2-15 *continued*

Problem	Possible Cause	Solution
Phone line noise causing a disconnection.	Hang-up Delay S Register (S10) set too low.	<p>Change S10 default to 150.</p> <p>To set S10=150:</p> <ol style="list-style-type: none">1. Select Start → Programs → Accessories → HyperTerminal, then go to Command Mode.2. Type ATS10=150 and press Enter. <p>This command causes the modem to take longer to disconnect even if there is noise on the line.</p>
No dial tone	Phone service is not connected to the telephone wall jack.	<p>Verify that service from the local phone company by following these steps:</p> <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.

Continued

Table 2-15 *continued*

Problem	Possible Cause	Solution
No dial tone (continued)	The modem is not responding to commands from the computer keyboard.	<p>Verify the modem and computer are connected:</p> <ol style="list-style-type: none"> 1. Select Start → Programs → Accessories → HyperTerminal, then go to Terminal Mode. 2. Type AT and press the Enter key. 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. 3. Type ATDT and listen for dial tone. 4. Type ATH0 to hang up.
Modem does not connect at highest speed.	Line conditions in your area or in the area you are calling may not support the highest connect speeds.	<p>Have your telephone line checked by your local telephone service provider.</p> <p>Try dialing an alternate telephone number for the service you are using.</p>
	Another device on your telephone line may be causing interference.	Hang up an extension telephone and disconnect any other devices that may be using the same telephone line, then redial.

Continued

Table 2-15 *continued*

Problem	Possible Cause	Solution
Modem does not connect at highest speed (continued).	The service or site called does not support 56K or supports an incompatible 56K implementation.	An internal modem supports K56flex. To find an Internet service provider (ISP) that supports K56flex, go to the Compaq Web site at www.compaq.com .
	There is noise on the telephone line.	The 56K protocol of an internal modem will fall back to lower speeds if the telephone line is too noisy for a high-speed connection. Try using another telephone line. Change the Hang-up Delay S Register: 1. Select Start→ Programs → Accessories → HyperTerminal. 2. Go to Command Mode, type ATS10=150, then press Enter . NOTE: This command causes the modem to take longer to disconnect even if there is no noise on the line.
	The telephone line does not support 56K implementation.	The 56K protocol requires that the telephone line contain no more than one analog-to-digital conversion. Try connecting from an alternate site.

Table 2-16
Solving PC Card Problems

Problem	Possible Cause	Solution
Computer does not beep when a PC Card is inserted.	PC Card is not inserted properly.	Try reinserting the card. Ensure that the PC Card is inserted in the correct orientation. Insert the card gently to prevent damage to the pins.
	Speakers are turned off or volume is turned down.	Adjust the volume control on the computer.
	PC Card or card driver is not PCMCIA compliant.	Check the list of PC Cards tested successfully in Compaq PC Card platforms.
Computer beeps only once when a PC Card is inserted.	The computer beeps once to indicate that a PC Card is recognized but not properly configured.	Before a new PC Card can be used, it may be necessary to perform an initial setup procedure. Follow the PC Card manufacturer's instructions for formatting a hard drive card or installing PC Card-specific drivers for a network card.
Network PC Card does not work.	Necessary drivers are not installed (turned on).	Refer to the instructions that came with the PC Card or contact the vendor for information on installing the correct drivers.
	PC Card is not fully inserted or is upside down.	Ensure the PC Card is inserted correctly.

Continued

Table 2-16 *continued*

Problem	Possible Cause	Solution
Network PC Card does not work (continued).	Network PC Card or driver is not PCMCIA compliant.	Check the list of PC Cards tested successfully in Compaq PC Card platforms.
Storage PC Card does not work.	SRAM and flash memory PC Cards require the memory card driver to be loaded.	Memory cards can only be accessed using DOS real mode drivers.
	You are trying to access the storage PC Card using the wrong drive letter.	If you are running Windows 95, change the drive letter assignment in Device Manager If you are running Windows NT 4.0, change the drive letter assignment through the Control Panel.
	The PC Card is not formatted.	For memory cards, run MCFORMAT in MS-DOS Mode to format the PC Card. For ATA cards, run ATAINIT, then run MCFORMAT in MS-DOS Mode to format the PC Card.
	The card is not supported.	Check the list of PC Cards tested successfully in Compaq PC Card platforms.
	Storage cards, such as SRAM, do not work in the expansion base.	Use the storage card in the computer.

Table 2-17
Solving Power Problems

Problem	Possible Cause	Solution
Computer will not turn on.	Battery is discharged and computer is not connected to a power source.	<ul style="list-style-type: none"> ■ Charge the battery pack. ■ Replace the battery pack. ■ Connect the computer to an external power source.
	Battery is discharged and cables to the external power source are unplugged.	Ensure that cables connecting the computer and the external power source are plugged in properly.
Computer turned off while it was left unattended.	Computer initiated because of a critical low battery condition.	<ul style="list-style-type: none"> ■ Charge the battery pack. ■ Replace the battery pack. ■ Connect the computer to an external power source.
	The computer initiated Hibernation after a user-defined timeout expired.	Turn on the computer.

Table 2-18
Solving Screen Problems

Problem	Possible Cause	Solution
Characters on computer display are dim.	Computer is in direct light.	Move the computer or adjust the screen.
	The brightness control is not set properly.	Adjust the brightness control by pressing the Fn+F10 hotkeys.
	You may have a screen saver or screen blanking utility installed.	Press any key to refresh the screen.
	Screen timeout was initiated.	Press any key to light the screen.
	System initiated Suspend after a user-defined timeout expired.	Press the suspend button to exit Suspend.
	Computer initiated a low battery Suspend or Hibernation.	<ul style="list-style-type: none"> ■ Replace the battery pack and exit Suspend or Hibernation. ■ Connect the computer to an external power source and exit Suspend or Hibernation.

Continued

Table 2-18 *continued*

Problem	Possible Cause	Solution
Characters on computer display are dim (continued).	Power Management, which controls Suspend and Hibernation, is disabled and the battery pack has discharged.	<ul style="list-style-type: none">■ Replace the battery pack and turn on the computer.■ Connect the computer to an external power source and turn on the computer.
Computer screen is blank and external monitor displays information.	Display was switched to the external monitor.	Press Fn+F4 to display information on the computer screen; press Fn+F4 again to display information simultaneously on both screens.
	Display switch is stuck.	Tap the switch.
Fn+F4 hotkey combination does not switch between internal and external displays.	CRT or other display device is not connected properly.	Check your connections to ensure that an external device is connected properly.

Table 2-19
Solving USB Problems

Problem	Possible Cause	Solution
External device connected to a USB connector does not work.	The operating system limits external devices connected by USB to two tiers which can include no more than two hubs on the first tier and no more than one keyboard and one pointing device on the first or second tier.	Reduce the number of connected external USB devices to no more than two hubs on the first tier, and no more than one keyboard and one pointing device on the first or second tier.
External device connected to USB connector does not work during startup (before Windows 95 loads).	During startup, only two tiers are supported by the USB port. These tiers can include no more than two hubs on the first tier and no more than one keyboard and one pointing device on the first or second tier.	Use the external device only after Windows 95 or Windows 98 has loaded. Reduce the number of connected external USB devices to no more than two hubs on the first tier, and no more than one keyboard and one pointing device on the first or second tier.
External devices in lower tiers do not work.	An unpowered hub is connected to another unpowered hub.	Use only powered hubs. Make sure that all unpowered hubs are immediately preceded by powered hubs in the USB chain.