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# maintenance & service guide

## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL184, XL185,  
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## Troubleshooting

This chapter covers troubleshooting and resolving common problems associated with Compaq Presario 1800XL Series Notebook Computers. The basic steps in troubleshooting include:

1. Preparing the Notebook for troubleshooting as outlined in [Preliminary Steps](#)
2. Performing the [Power-On Self Test \(POST\)](#) and observing any error messages displayed

**Note:** If the Notebook is unable to complete POST or an error message is displayed, skip to Step 3 below to try to resolve the problem.

3. Attempting the recommended solutions described later in this chapter

When following the recommended solutions provided in [POST](#) and [Diagnostic Error Codes](#), perform the steps in the order listed above. Rerun POST after each recommended action until the problem is solved, even if no error message occurs. Once the problem is solved, do not perform the remaining recommended solutions.

**Note:** If the problem is intermittent, check the Notebook several times to verify that the problem is resolved.

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### *Preliminary Steps*

Before running [POST](#), complete the following steps:

1. If a Power-on password is established, type the password and press the **Enter** key. If you do not know the password, clear the password (See [Clearing the Power-On Password](#) later in this chapter).
2. Run [Compaq Diagnostics](#).
3. Turn off the Notebook and its external devices.
4. Disconnect any external devices you do not want to test.

**Note:** Do not disconnect the printer if you want to test it or use it to log error messages.

**Important:** If the problem only occurs when an external device is connected to the computer, the problem may be related to the external device or its cable. Verify this by running [POST](#) both with and without the external device connected.

5. Install loopback plugs in the serial and parallel connectors if you would like to test these ports.
6. Ensure that the hard drive is installed in the Notebook.
7. Ensure that the battery pack is installed and the Notebook is connected to an external AC power source.


When these preliminary steps are completed, run [POST](#).

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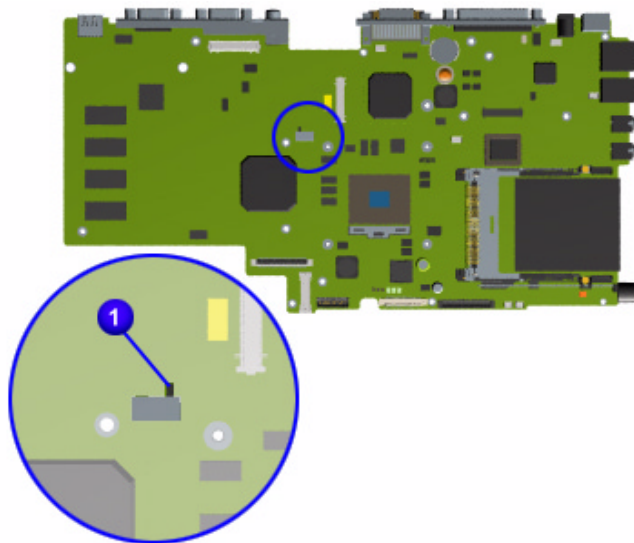
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### *Clearing the Power-On Password*

 **CAUTION:** Clearing the Power-on password also removes all setup attributes that are programmed in the CMOS.

If you do not know the Power-on password, clear it by performing the following steps:

1. Turn off the Notebook.
2. Disconnect the power cord.
3. [Remove the battery.](#)
4. [Remove the Palmrest cover.](#)
5. [Remove the keyboard.](#)
6. [Remove the Heatspreader.](#)
7. Locate the CMOS switch to the right of the CD/DVD drive on the system board.
8. Slide the switch to the right  holding it in this position for at least 15 seconds to ensure that the password is cleared.



9. Reassemble the Notebook (refer to [Removal and Replacement](#) later in this MSG).
10. Turn on the Notebook to verify that the power-on-password has been cleared. If it has not been cleared, repeat this procedure.

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### Power-On Self Test (POST)

To run POST, complete these steps:

Turn off the Notebook, then turn it on again. As soon as the Compaq logo appears press the **ESC** key to display the POST messages as they occur. Remember any POST error codes that are displayed.

If the Notebook does not beep, POST has successfully completed its test and detected no errors. The Notebook will automatically restart.

**Note:** If a bootable diskette is installed in the diskette drive, the system will boot from the diskette instead of the hard drive.

However, if POST detects errors, the Notebook will beep and/or display a text message.

**Note:** If the Notebook is not functioning well enough to complete POST, or the display is unable to show POST error messages, refer to the [solution tables](#) later in this chapter.

### POST Error Messages

A list of POST error codes and their descriptions are shown in the tables below.

102-System Board Failure	
Probable Cause	Recommended Action
DMA, timers, and so on	<a href="#">Replace the system board.</a>
162-System Options Not Set	
Probable Cause	Recommended Action
Incorrect configuration	Run Setup.
CMOS reflects an invalid configuration setting.	Run Setup.
RAM failure	1. <a href="#">Replace the memory modules.</a> 2. <a href="#">Replace the system board.</a>
Memory test data error	1. <a href="#">Replace the memory modules.</a> 2. <a href="#">Replace the system board.</a>
XX000YZZ RAM failure	<a href="#">Replace the system board.</a>

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### XX000YZZ 201-Memory Error

Probable Cause	Recommended Action
Memory failure	<ol style="list-style-type: none"> <li>1. <a href="#">Replace the memory modules.</a></li> <li>2. <a href="#">Replace the system board.</a></li> </ol>

### 301-Keyboard Error

Probable Cause	Recommended Action
Keyboard failure	<ol style="list-style-type: none"> <li>1. Ensure the keys are not depressed during POST.</li> <li>2. Reconnect the keyboard with the Notebook off.</li> <li>3. <a href="#">Replace the keyboard.</a></li> </ol>

### 304-Keyboard or System Unit Error

Probable Cause	Recommended Action
Keyboard or system board error	<ol style="list-style-type: none"> <li>1. <a href="#">Replace the keyboard.</a></li> <li>2. <a href="#">Replace the TouchPad.</a></li> <li>3. <a href="#">Replace the system board.</a></li> </ol>

### 601-Diskette Controller Error

Probable Cause	Recommended Action
Mismatch in drive type or failure in the diskette controller	<ol style="list-style-type: none"> <li>1. Run <a href="#">Checkup (TEST)</a>.</li> <li>2. <a href="#">Check or replace cables.</a></li> <li>3. <a href="#">Replace the system board.</a></li> </ol>

### 605-Diskette Drive Error

Probable Cause	Recommended Action
Mismatch in drive type	Run Setup.

### 1780-Primary Hard Drive 0 Failure

Probable Cause	Recommended Action
Disk 0 failed to respond	<ol style="list-style-type: none"> <li>1. Run <a href="#">Checkup (TEST)</a>.</li> <li>2. <a href="#">Replace the hard drive.</a></li> </ol>
Hard drive format error	<ol style="list-style-type: none"> <li>1. Run <a href="#">Checkup (TEST)</a>.</li> <li>2. <a href="#">Replace the hard drive.</a></li> </ol>

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### 1782-Hard Drive Controller

Probable Cause	Recommended Action
Hard drive controller failure	1. Run Setup. 2. <a href="#">Replace the hard drive.</a>

## Compaq Diagnostics

Compaq Diagnostics utilities come pre-installed on 1800XL Series Notebook. Run the Diagnostic utilities to view or test system information and external devices. If Compaq Diagnostics is run from a diskette, ensure that the diagnostic program is version 10.11 or later.

The Diagnostics menu includes the following utilities:

- [Checkup \(TEST\)](#)
- [View System Information \(INSPECT\)](#)
- Prepare Notebook for a Compaq Service Call (RemotePaq)

Customers are encouraged to run the Diagnostics utilities to try to solve a problem before calling for support. [Checkup \(TEST\)](#) should be run with the options for saving the device list to a file and printing or saving the error log. The [View System Information \(INSPECT\)](#) utility should also be run with the option for printing or saving the information. Customers should have these files or the printed information available when calling for support.

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### Checkup (TEST)

Checkup is included on the *Compaq Diagnostics Diskette*. Checkup determines if the various Notebook components and devices are recognized by the system and are functioning properly. You can display, print, or save the information generated by Checkup.

Follow these steps to run Checkup:

1. Plug the Notebook into an external power source. (A low-battery condition could interrupt the program.)
2. Turn on the external devices you want to test. Connect the printer if you want to print a log of error messages.
3. Insert the *Compaq Diagnostics Diskette* in the diskette drive.
4. Turn on or restart the Notebook. The Notebook boots from the diskette, and after a few seconds, the diagnostics Welcome screen is displayed.
5. Press **Enter** to continue. The Diagnostics menu is displayed.
6. Select **Computer Checkup** from the **Diagnostics** menu. The Test Option menu is displayed.
7. Select **View the Device List** from the **Test Option** menu. A list of installed Compaq devices is displayed.
8. If the list of installed devices is correct, select **OK**. The Test Option menu is displayed.

**Note:** If the list is incorrect, ensure that any new devices are installed properly and run Checkup again.

9. Select one of the following from the **Test Option** menu:
  - **Quick Check Diagnostics.** Runs a quick, general test on each device with a minimal number of prompts. If errors occur, they display when the testing is complete. You cannot print or save the error messages.
  - **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 save a log of errors.
  - **Prompted Diagnostics.** Allows maximum control over testing the devices. You can choose attended or unattended testing, decide to stop on errors, or choose to print or save a log of errors.



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10. Follow the on-screen instructions as the devices are tested. When testing is complete, the Test Option menu is displayed.
11. Exit the Test Option and Diagnostics menus.

### *View System Information (INSPECT)*

The INSPECT utility provides information about the Notebook and installed or connected devices. You can display, print, or save the information.

Follow these steps to run INSPECT from the *Compaq Diagnostics Diskette*:

1. Turn on any external devices you want to test. Connect the printer if you want to print the information.
2. Insert the *Compaq Diagnostics Diskette* in the diskette drive.
3. Turn on or restart the Notebook. The Notebook boots from the diskette, and after a few seconds, the diagnostics Welcome screen is displayed.
4. Press **Enter** to continue. The Diagnostics menu is displayed.
5. Select **View System Information (INSPECT)** from the **Diagnostics** menu.
6. Select the item you want to view from the following list:

System	Memory
ROM	Audio
Keyboard	Operating system
System ports	System files
System storage	Windows files
Graphics	

7. Follow the on-screen instructions to cycle through the screens, return to the list and choose another item, or print the information.

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### *Diagnostic Error Codes*

Diagnostic error codes are displayed if the system recognizes a problem while running the [Compaq Diagnostics](#) program. These error codes help identify subassemblies that may be damaged or defective.

The following tables list error codes, a description of the error condition, and the action required to resolve the error condition.

**Important:** Retest the system after completing each step. If the problem is resolved, do not attempt the remaining steps.

**Note:** Some of the solutions provided in this chapter involve replacing Notebook components. Refer to the specific [Removal and Replacement](#) procedures for each component.

Select error codes by number or type:

- 101 - 114: Processor Test ([pg 10](#))
- 200 - 215: Memory Test ([pg 10](#))
- 300 - 304: Keyboard Test ([pg 11](#))
- 401 - 403: Parallel Printer Test ([pg 11](#))
- 501 - 516: Video Test ([pg 14](#))
- 600 - 699: Diskette Drive Test ([pg 12](#))
- 1101: Serial Test ([pg 12](#))
- 1701 - 1736: Hard Drive Test ([pg 13](#))
- 2402 - 2418: Video Test ([pg 15](#))
- 2419 - 2456: Video Test ([pg 16](#))
- 2458 - 2480: Video Test ([pg 16](#))
- 3206: Audio Test ([pg 17](#))
- 3301 - 6623: DVD or CD Test ([pg 17](#))
- 8601 - 8602: TouchPad Test ([pg 17](#))

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<b>Processor Test Error Codes</b>		
<b>Error Code</b>	<b>Description</b>	<b>Recommended Action</b>
101-xx	CPU test failed	<a href="#">Replace the processor</a> and retest.
102-xx	Coprocessor or Weitek Error	1. Run the Configuration and Diagnostics utilities. 2. <a href="#">Replace the processor</a> and retest.
103-xx	DMA page registers test failed	<a href="#">Replace the system board</a> and retest.
104-xx	Interrupt controller master test failed	
105-xx	Port 61 error	
106-xx	Keyboard controller self-test failed	
107-xx	CMOS RAM test failed	
108-xx	CMOS interrupt test failed	
109-xx	CMOS clock test failed	
110-xx	Programmable timer load data test failed	
113-xx	Protected mode test failed	
114-01	Speaker test failed	1. Check system configuration. 2. Verify cable connections to speakers. 3. <a href="#">Replace the system board</a> and retest.

<b>Memory Test Error Codes</b>		
<b>Error Code</b>	<b>Description</b>	<b>Recommended Action</b>
200-xx	Memory machine ID test failed	1. Flash the system ROM and retest.
202-xx	Memory system ROM checksum failed	2. <a href="#">Replace the system board</a> and retest.
203-xx	Write/Read test failed	1. <a href="#">Remove the memory module</a> and retest.
204-xx	Address test failed	2. Install a new memory module and retest.
211-xx	Random pattern test failed	
214-xx	Noise test failed	
215-xx	Random address test failed	

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### Keyboard Test Error Codes

Error Code	Description	Recommended Action
300-xx	Failed ID Test	1. Check the keyboard connection. If disconnected, turn off the Notebook and reconnect the keyboard. 2. <a href="#">Replace the keyboard</a> and retest. 3. <a href="#">Replace the system board</a> and retest.
301-xx	Failed Self-Test/Interface Test	
302-xx	Failed Individual Key Test	
304-xx	Failed Keyboard Repeat Test	

### Parallel Printer Test Error Codes

Error Code	Description	Recommended Action
401-xx	Printer failed or not connected	1. Connect the printer. 2. Check power to the printer. 3. Install loopback connector on printer port and retest. 4. Check port and IRQ configuration. 5. <a href="#">Replace the system board</a> and retest.
402-xx	Failed Port Test	
403-xx	Printer pattern test failed	

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<b>Diskette Drive Test Error Codes</b>		
<b>Error Code</b>	<b>Description</b>	<b>Recommended Action</b>
600-xx	Diskette ID drive types test failed	<ol style="list-style-type: none"> <li>1. Replace the diskette media and retest.</li> <li>2. Check and/or replace the diskette drive cables and retest.</li> <li>3. <a href="#">Replace the diskette drive</a> and retest.</li> <li>4. <a href="#">Replace the system board</a> and retest.</li> </ol>
601-xx	Diskette format failed	
602-xx	Diskette read test failed	
603-xx	Diskette write, read, compare test failed	
604-xx	Diskette random read test failed	
605-xx	Diskette ID media failed	
606-xx	Diskette speed test failed	
609-xx	Diskette reset controller test failed	
610-xx	Diskette change line test	
697-xx	Diskette type error	
698-xx	Diskette drive speed not within limits	<ol style="list-style-type: none"> <li>1. Replace diskette media and retest.</li> <li>2. Run the Configuration and Diagnostics utilities.</li> </ol>
699-xx	Diskette drive/media ID error	

<b>Serial Test Error Codes</b>		
<b>Error Code</b>	<b>Description</b>	<b>Recommended Action</b>
1101-xx	Serial port test failed	<ol style="list-style-type: none"> <li>1. Check port configuration.</li> <li>2. <a href="#">Replace the system board</a> and retest.</li> </ol>

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<b>Hard Drive Test Error Codes</b>		
<b>Error Code</b>	<b>Description</b>	<b>Recommended Action</b>
1701-xx	Hard drive format test failed	<ol style="list-style-type: none"> <li>1. Run the Configuration and Diagnostics utilities and verify drive type.</li> <li>2. Verify that all secondary drives have secondary drive capability.</li> <li>3. <a href="#">Replace the hard drive</a> and retest.</li> <li>4. <a href="#">Replace the system board</a> and retest.</li> </ol>
1702-xx	Hard drive read test failed	
1703-xx	Hard drive write/read/compare test failed	
1704-xx	Hard drive random seek test failed	
1705-xx	Hard drive controller test failed	
1706-xx	Hard drive ready test failed	
1707-xx	Hard drive recalibration test failed	
1708-xx	Hard drive format bad track test failed	
1709-xx	Hard drive reset controller test failed	
1710-xx	Hard drive park head test failed	
1715-xx	Hard drive head select test failed	
1716-xx	Hard drive conditional format test failed	
1717-xx	Hard drive ECC* test failed	
1719-xx	Hard drive power mode test failed	
1724-xx	Network preparation test failed	
1736-xx	Drive monitoring test failed	

*\*ECC = Error Correction Code*

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Video Test Error Codes		
Error Code	Description	Recommended Action
501-xx	Video controller test failed	<ol style="list-style-type: none"> <li>1. Disconnect external monitor and test with the Notebook display.</li> <li>2. <a href="#">Replace the display assembly</a> and retest.</li> <li>3. <a href="#">Replace the system board</a> and retest.</li> </ol>
502-xx	Video memory test failed	
503-xx	Video attribute test failed	
504-xx	Video character set test failed	
505-xx	Video 80 x 25 mode 9 x 14 character cell test failed	
506-xx	Video 80 x 25 mode 8 x 8 character cell test failed	
507-xx	Video 40 x 25 mode test failed	
508-xx	Video 320 x 200 mode color set 0 test failed	
509-xx	Video 320 x 200 mode color set 1 test failed	
510-xx	Video 640 x 200 mode test failed	
511-xx	Video screen memory page test failed	
512-xx	Video gray scale test failed	
514-xx	Video white screen test failed	
516-xx	Video noise pattern test failed	

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### Video Test Error Codes (*Continued*)

Error Code	Description	Recommended Action
2402-xx	Video memory test failed	<ol style="list-style-type: none"><li>1. Run the Configuration and Diagnostics utilities.</li><li>2. <a href="#">Replace the display assembly</a> and retest.</li><li>3. <a href="#">Replace the system board</a> and retest.</li></ol>
2403-xx	Video attribute test failed	
2404-xx	Video character set test failed	
2405-xx	Video 80 x 25 mode 9 x 14 character cell test failed	
2406-xx	Video 80 x 25 mode 8 x 8 character cell test failed	
2408-xx	Video 320 x 200 mode color set 0 test failed	
2409-xx	Video 320 x 200 mode color set 1 test failed	
2410-xx	Video 640 x 200 mode test failed	
2411-xx	Video screen memory page test failed	
2412-xx	Video gray scale test failed	
2414-xx	Video white screen test failed	
2416-xx	Video noise pattern test failed	
2418-xx	ECG/VGC memory test failed	



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<b>Video Test Error Codes (Continued)</b>			
<b>Error Code</b>	<b>Description</b>	<b>Recommended Action</b>	
2419-xx	ECG/VGC ROM checksum test failed	<ol style="list-style-type: none"> <li>1. Run the Configuration and Diagnostics utilities.</li> <li>2. Disconnect external monitor and test with the Notebook display.</li> <li>3. <a href="#">Replace the display assembly</a> and retest.</li> <li>4. <a href="#">Replace the system board</a> and retest.</li> </ol>	
2421-xx	ECG/VGC 640 x 200 graphics mode test failed		
2422-xx	ECG/VGC 640 x 350 16 color set test failed		
2423-xx	ECG/VGC 640 x 350 64 color set test failed		
2424-xx	ECG/VGC monochrome text mode test failed		
2425-xx	ECG/VGC monochrome graphics mode test failed		
2431-xx	640 x 480 graphics test failure		
2432-xx	320 x 200 graphics (256 color mode) test failure		
2448-xx	Advanced VGA Controller test failed		
2451-xx	132-column Advanced VGA test failed		
2456-xx	Advanced VGA 256 Color test failed		
2458-xx	Advanced VGA BitBLT test failed		<a href="#">Replace the system board</a> and retest.
2468-xx	Advanced VGA DAC test failed		
2477-xx	Advanced VGA data path test failed		
2478-xx	Advanced VGA BitBLT test failed		
2480-xx	Advanced VGA LineDraw test failed		

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### Audio Test Error Codes

Error Code	Description	Recommended Action
3206-xx	Audio System Internal Error	<a href="#">Replace the system board</a> and retest.

### TouchPad Interface Test Error Codes

Error Code	Description	Recommended Action
8601-xx	Mouse test failed	1. <a href="#">Replace the TouchPad</a> and retest.
8602-xx	Interface test failed	2. <a href="#">Replace the system board</a> and retest.

### DVD or CD Drive Test Error Codes

Error Code	Description	Recommended Action
3301-xx	DVD or CD drive read test failed	1. Replace the DVD or CD media and retest.
3305-xx	DVD or CD drive seek test failed	2. Verify that the speakers are connected.
6600-xx	ID test failed	3. Verify that drivers are loaded and properly installed.
6605-xx	Read test failed	4. <a href="#">Replace the CD/DVD drive</a> and retest.
6608-xx	Controller test failed	5. <a href="#">Replace the system board</a> and retest.
6623-xx	Random read test failed	

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### *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 common messages that may be displayed on the screen. The following pages contain troubleshooting information regarding:

[Audio](#)

[Battery](#)

[CD or DVD Drive](#)

[Diskette Drive](#)

[Display](#)

[Hard Drive](#)

[Hardware Installation](#)

[Memory](#)

[PC Card](#)

[Power](#)

[Printer](#)

[TouchPad](#)

[Keyboard/Numeric Keypad](#)

Carefully match the symptoms against the problem described in the tables to avoid a misdiagnosis.



**WARNING:** To avoid a potential shock hazard during troubleshooting procedures, disconnect all power sources before removing the keyboard cover or the display bezel.

### *Before Replacing Parts*

- Verify that all cables are properly connected to the parts that are to be tested.
- Run Setup after connecting external devices.
- Verify that all required device drivers are installed.
- Verify that all required changes have been made to the CONFIG.SYS file.
- Verify that all required changes have been made to the AUTOEXEC.BAT file.
- Verify that all printer drivers have been installed for each application.

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### Solving Minor Problems

Some problems and possible solutions are outlined in the following tables. If the problem appears related to a software application, check the documentation provided with the software.

#### Audio Solutions

Common audio problems and solutions are listed in the following table.

Audio		
Problem	Probable Cause	Solution
Notebook does not beep after the Power-On Self-Test (POST).	This is typical; it indicates successful completion of the Power-On Self-Test (POST).	No action is required.

#### Battery Pack/Gauge Solutions

Some causes and solutions for common battery pack problems are listed in the following table. [Power Solutions](#) later in this chapter may also be applicable to the following problems.

Battery Pack/Gauge		
Problem	Probable Cause	Solution(s)
Notebook won't turn on when battery pack is inserted and power cord is unplugged.	Battery pack is discharged.	<ul style="list-style-type: none"> <li>• Connect the Notebook to an external power source and charge the battery pack.</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• Replace the battery pack with a fully charged battery pack.</li> </ul> <p>Check the battery connectors on the system board to verify that they are evenly spaced and not bent or broken.</p>

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Battery Pack/Gauge		
Problem	Probable Cause	Solution(s)
<p>Notebook is beeping and battery icon is blinking.</p>	<p>Battery charge is low.</p>	<p>Immediately save any open file(s). Then complete one of the following steps:</p> <ul style="list-style-type: none"> <li>• Connect the Notebook to an external power source to charge the battery pack.</li> <li>• Turn off the Notebook or initiate Hibernation until you can find another power source or charge the battery pack.</li> </ul>
<p>Battery icon on the front of the unit blinks to indicate low-battery condition, but Notebook does not beep.</p>	<p>Volume is turned down too low.</p>	<p>Adjust the volume.</p>
<p>Battery icon doesn't light and battery pack won't fast charge.</p>	<p>Battery pack is already charged.</p>	<p>No action is necessary.</p>
<p></p>	<p>Battery pack was exposed to temperature extremes.</p>	<p>Allow time for the battery pack to return to room temperature.</p>
<p></p>	<p>Battery pack is at the end of its life.</p>	<p><a href="#">Replace the battery pack.</a></p>
<p>You have to set the date and time every time you turn on the Notebook.</p>	<p>RTC battery is dead.</p>	<p><a href="#">Replace the RTC battery.</a></p>
<p>Battery charge does not last as long as expected.</p>	<p>Battery is exposed to high or extremely cold temperatures.</p>	<p>Keep the battery pack within the recommended temperature range for operation or storage.</p> <ul style="list-style-type: none"> <li>• Operating Range: 50°F to 104°F (10°C to 40°C)</li> <li>• Storage Range: -4°F to 86°F (-20°C to 30°C)</li> </ul> <p>Recharge the battery pack.</p>
<p></p>	<p>Battery has partially self-discharged.</p>	<p>Recharge the battery. Discharge the battery completely and then recharge it.</p>

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<b>Battery Pack/Gauge</b>		
<b>Problem</b>	<b>Probable Cause</b>	<b>Solution(s)</b>
Battery charge does not last as long as expected.	Power management is disabled.	Set a power management level in Setup.
	An external device or PC Card is draining the battery.	Turn off or disconnect external devices when not in use.
Battery pack is warm to the touch after charging.	Normal warming has occurred due to charging.	No action is required.
Battery pack operating time is far less than the documented average operating time.	Power management is turned off or disabled.	Enable power management in Setup and in Windows Power Properties.
	An external device or PC Card is draining the battery.	Turn off or disconnect external devices when not in use.
	Battery pack has partially self-discharged.	Condition the battery pack by fully charging, fully discharging, then fully recharging it. To maintain the charge, leave battery packs in the Notebook when it is connected to external power. If the Notebook is disconnected from external power for more than two weeks, remove battery packs from the Notebook to reduce the discharge rate.
	Battery pack is exposed to high or extremely cold temperatures.	Keep the battery pack within the recommended temperature range for operation or storage. <ul style="list-style-type: none"> <li>• Operating Range: 50°F to 104°F (10°C to 40°C)</li> <li>• Storage Range: -4°F to 86°F (-20°C to 30°C)</li> </ul> Recharge the battery pack.

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### CD and DVD Drive Solutions

Some causes and solutions for CD and DVD drive problems are listed in the following table.

CD or DVD Drive		
Problem	Probable Cause	Solution(s)
CD or DVD drive cannot read a Compact Disc or Digital Versatile Disc.	Disc is upside down or is improperly inserted in the CD or DVD drive.	Open the loading tray, lay the compact disc in it (label side up), then close the tray.
	CD is CD Plus or Pregap/Track 0 type.	Cannot read these types CDs in 24x. Remove the CD.

### Diskette Drive Solutions

Some causes and solutions for diskette drive problems are listed in the following table.

Diskette Drive		
Problem	Probable Cause	Solution(s)
Diskette drive cannot write to a diskette.	Diskette is write-protected.	Disable the diskette's 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 another diskette.
	Drive error has occurred.	Run Checkup from the Compaq Diagnostics diskette.
Diskette drive cannot read a diskette.	Diskette is not formatted.	Format the diskette. At the system prompt, enter <b>FORMAT A:</b>
	The 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 bad diskette.
	Drive error has occurred.	Run Checkup from the Compaq Diagnostics diskette.

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Diskette Drive		
Problem	Probable Cause	Solution(s)
Diskette drive cannot read a diskette.	Diskette is not formatted.	Format the diskette. At the system prompt, enter <b>FORMAT A:</b>
Cannot boot from diskette.	Bootable diskette is not in the diskette drive.	Put the bootable diskette in the diskette drive.
	Diskette Boot has incorrect setting in Setup.	Run Setup and set diskette as first to boot.

### Display Solutions

This section lists some causes and solutions for common Notebook display and external monitor problems.

You can perform a monitor self-test on an external VGA color or monochrome monitor by completing the following steps:

1. Turn off the monitor.
2. Turn off the Notebook.
3. Disconnect the monitor signal cable from the Notebook.
4. Turn on the monitor and allow it to warm up for one minute.

The display should be white. A narrow black border may also appear on the left and right sides of the display. Either of these displays indicates that the monitor is working properly.

Display		
Problem	Probable Cause	Solution(s)
Screen is dim.	Brightness control (if applicable) is not set properly.	Adjust the brightness of the display by using <b>Fn+F7</b> or <b>Fn+F8</b> .
Screen is blank.	The Notebook display is in direct light.	Tilt display or move Notebook.
	Screen save was initiated by Power Properties due to lack of user activity.	Press any key or touch the TouchPad.
	Display has overheated.	If the Notebook is in direct sunlight, move it and allow it to cool off.



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Display		
Problem	Probable Cause	Solution(s)
Display is blank and the Standby icon is flashing.	System is in Standby mode.	Press any key or touch the TouchPad.
Notebook display is blank and the screen on an external monitor displays information.	Display function was switched to the external monitor.	Press <b>Fn+F3</b> to switch between the external monitor and the Notebook display (you may have to press more than once).
Notebook display flashes or has garbled characters when Notebook is connected to external monitor.	The external monitor is set for 1024 x 768 or higher resolution and view is toggled back to the Notebook display, which supports up to 800 x 600.	Restart the Notebook.
The light tubes on the edge of the display panel do not light up at all and the Power-On Self-Test (POST) completes when the unit is powered up.**	Improper backlight or display cable connections.	1. Check the display cable connections and retest. 2. <a href="#">Replace the display assembly.</a>
	Defective inverter board.	<a href="#">Replace the display assembly.</a>
	Defective display cable.	<a href="#">Replace the display assembly.</a>
	Defective display panel.	<a href="#">Replace the display assembly.</a>
	Defective system board.	<a href="#">Replace the system board.</a>
The light tubes on the edge of the display panel do not light up at all and Power-On Self-Test (POST) does not complete when the unit is powered up.**	Defective system board.	<a href="#">Replace the system board.</a>

*\*\*This problem indicates that the backlight or its power circuitry has failed. If the backlight is not functioning, the POST result cannot be observed. Connect the unit to an external monitor before powering up the unit. If an external monitor is not available verify that POST is complete by opening and closing the display, listening for the single or double beep, and watching for the icons to turn on at the front of the Notebook.*

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<b>Display (Continued)</b>		
<b>Problem</b>	<b>Probable Cause</b>	<b>Solution(s)</b>
Backlight (brightness) cannot be adjusted with Fn+F7 or Fn+F8.	Improper display cable connections.	1. Reseat the display cable to the system board. 2. <a href="#">Replace the display assembly.</a>
	Defective inverter board.	<a href="#">Replace the display assembly.</a>
	Defective display cable.	<a href="#">Replace the display assembly.</a>
This display panel has a continuous pattern across it (e.g., "jailbars" pattern), has a single color on it, or has garbled graphics across the entire panel. This failure is for patterns across the entire panel (not just on one section).	Defective system board.	<a href="#">Replace the system board.</a>
	Improper display cable connections.	Reseat the display cable to the following until the problem is solved: 1. System board 2. Display assembly
	Defective display cable.	<a href="#">Replace the display assembly.</a>
A single line, small group of lines, or block appears on the display panel. This failure occurs in only a section of the display panel.	Defective inverter board.	<a href="#">Replace the display assembly.</a>
	Defective system board.	<a href="#">Replace the system board.</a>
	Defective display panel.	<a href="#">Replace the display assembly.</a>

**Note:** When you perform a "self-test" on an external VGA color or monochrome monitor, the screen should be white. A narrow black border may also appear on the left and right sides of the display. Either of these displays indicates that the monitor is working properly.


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### Hard Drive Solutions

Some causes and solutions for hard drive problems are listed in the following table.

 **CAUTION:** To prevent loss of information, maintain an up-to-date backup of your hard drive in case of errors or failures.

Hard Drive		
Problem	Probable Cause	Solution(s)
Reading hard drive takes an unusually long time after restarting the Notebook.	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 <a href="#">Checkup (TEST)</a> .
Hard drive does not work.	Hard drive is not seated properly.	Turn off and unplug the Notebook, <a href="#">remove the battery pack</a> , and <a href="#">remove and then reinstall the hard drive</a> .

### Hardware Installation Solutions

The possible cause and some solutions for a hardware installation problem are listed in the following table.

Hardware Installation		
Problem	Probable Cause	Solution(s)
A new device is not recognized as part of the system.	Cable(s) 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.	Turn off the Notebook, turn on the external device, then turn on the Notebook to integrate the device with the system.
	Device is not seated properly.	Turn off the Notebook and reinsert the device.

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### Keyboard/Numeric Keypad Solutions

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

<b>Keyboard/Numeric Keypad</b>		
<b>Problem</b>	<b>Probable Cause</b>	<b>Solution(s)</b>
Embedded numeric keypad on Notebook keyboard is disabled.	Num Lock function is not enabled.	Press the <b>Shift+NumLk</b> keys to enable the Num Lock function and embedded numeric keypad. The Num Lock icon appears on the status display.
Embedded numeric keypad is disabled and Num Lock function is on.	External numeric keypad is connected to the Notebook.	Disconnect the external numeric keypad from the Notebook.

### Memory Solutions

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

<b>Memory</b>		
<b>Problem</b>	<b>Probable Cause</b>	<b>Solution(s)</b>
Memory count during Power-On Self-Test (POST) is incorrect.	Optional memory expansion card is installed incorrectly, is incompatible with the Notebook, or is defective.	Ensure that the optional memory expansion card is installed correctly, and then restart the Notebook.
"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. If necessary, install additional memory.
	Too many TSR (terminate-and-stay-resident) applications are running.	Remove from memory any TSR applications you do not need.

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### PC Card Solutions

The following table lists some causes and solutions for PC Card problems.

PC Card		
Problem	Probable Cause	Solution(s)
When turned on, the Notebook does not beep when a PC Card is inserted.	Card is not inserted properly.	Make sure that the card is inserted properly.
	PC Card beeps are disabled.	Double-click the <b>PC Card</b> icon in Control Panel, click the <b>Global Settings</b> tab, and enable <b>PC Card sound effects</b> .
	Speaker is turned off or volume is turned down.	Press <b>Volume</b> buttons to turn the speaker on and then increase the volume.
PC Card modem, fax, or network card does not work.	PC Card drivers are not installed.	Double-click the <b>Add New Hardware</b> icon in the Control Panel for installation instructions. If PC Card or drivers are not compatible with Windows, install drivers and use the PC Card in MS-DOS mode.
	Card or card driver is not supported.	Contact a Compaq authorized Service Provider for a list of PC Cards tested successfully in Compaq platforms.
PC Card modem, fax, or network card does not work.	Card is not fully inserted into the slot or is not inserted properly.	Ensure that the card is inserted in the slot in the correct orientation.
	Telephone cord is not plugged in all the way.	Check and secure telephone connection.
PC Card modem or fax card does not work.	Necessary drivers are not installed (enabled).	Install drivers.
	You are trying to access the card using the wrong COM port.	See the <a href="#">Specifications</a> chapter to verify the correct COM port.
	The card conflicts with a serial device.	See the <a href="#">Specifications</a> chapter to verify the correct address.

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PC Card		
Problem	Probable Cause	Solution(s)
PC Card modem or fax card does not work.	The card is not supported.	Use supported cards only.
Modem network PC Card does not work.	Network driver is not installed or is not set up properly.	Install driver.
	Telephone cord is not properly connected.	Verify telephone connection.
Memory or storage PC Card does not work.	SRAM and flash memory cards require the memory card driver (loaded and enabled). Flash memory cards require the Microsoft FlashFile System. Hard drives on flash mass storage cards require the PC Card ATA driver.	Install driver(s).
	You are trying to access the hard drive card using the wrong drive letter.	Double-click <b>My Computer</b> to verify the drive letter assigned to the card.
	The card is not supported.	Contact a Compaq authorized Service Provider for a list of PC Cards tested successfully in Compaq platforms.

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### Power Solutions

Some causes and solutions for power problems are listed in the following table. See also [Battery Pack/Gauge Solutions](#) in this chapter.

<b>Power</b>		
<b>Problem</b>	<b>Probable Cause</b>	<b>Solution(s)</b>
Notebook will not turn on and the battery pack is not inserted.	Notebook is not connected to a power source.	Insert battery or connect an external power source.
	Power cords to the external power source are unplugged.	Ensure that power cords connecting the Notebook and the external power source are plugged in properly.
	Power adapter is defective.	Replace AC Adapter and restart.
Notebook turned off while it was left unattended and the Power icon is off.	System initiated Hibernation after a preset timeout.	Turn on the Notebook.
	System initiated Hibernation due to a critical low-battery condition.	Replace the battery pack with a fully charged battery pack, or connect the Notebook to an external power source. Then turn on the Notebook.
	System board is defective.	<a href="#">Replace the system board.</a>

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### Printer Solutions

If you experience problems printing, run a printer self-test. Refer to the documentation provided with the printer for instructions. If the self-test fails, the problem is associated with the printer, not the Notebook. To diagnose other printing problems, refer to the printing section of the application documentation.

Printer		
Problem	Probable Cause	Solution(s)
Printer will not turn on.	The signal cable may not be connected properly, or the printer is unplugged.	Make sure that the signal cable is properly connected and that the power cord is connected to the electrical outlet.
Printer will not print.	Printer is not turned on or is offline.	Turn the printer on and set it to online.
	Paper tray is empty.	Fill the paper tray with paper and set the printer to online.
	The device drivers for the application are not installed.	Refer to the printer documentation to install the correct printer driver.
Printer prints garbled information.	Printer is set up for a network, but is not connected to the network.	Connect the printer to the network.
	Printer cable is too long, unshielded, or defective.	Replace the cable.
	Correct printer drivers are not installed.	Refer to the printer documentation to install the correct printer driver.
	Cable is not connected properly.	Make sure that the printer signal cable is properly connected to the Notebook.
	Cable is defective.	Replace the printer cable and retest.



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## TouchPad/Pointing Device Solutions

The following table lists some causes and solutions for TouchPad/pointing device problems.

TouchPad/Pointing Device		
Problem	Probable Cause	Solution(s)
TouchPad or mouse does not work.	Incorrect or no device driver is installed.	Install the device driver and add to the AUTOEXEC.BAT file or CONFIG.SYS file.
	The device driver is not installed in Windows.	Install the TouchPad/mouse driver in Windows.
External mouse does not work.	Mouse is not securely connected or is connected to an incorrect external connector.	Ensure that the mouse is securely connected to the appropriate external connector.
	Mouse is not enabled.	Enter <b>mouse</b> at the system prompt to activate the mouse device driver. Add a line in the AUTOEXEC.BAT file to automatically activate the mouse driver each time the computer is turned on or restarted.
TouchPad or mouse does not work even though the device is enabled in Windows.	Cable is not properly seated on TouchPad board.	Reseat cable.
	Defective TouchPad board.	<a href="#">Replace the TouchPad board.</a>
	Defective system board.	<a href="#">Replace system board.</a>
Cursor skips or moves abnormally when using the TouchPad.	Device driver is not correctly installed in Windows.	Install the appropriate device driver in Windows.
	The TouchPad needs to be cleaned.	Clean the TouchPad with a cloth dampened with alcohol or an ammonia-based glass cleaner. Wipe up liquid with a dry cloth.

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### *Contacting Compaq Support*

Customers should provide the following information when contacting Compaq Reseller Support:

- Product name
- Product serial number
- Purchase date
- Conditions under which the problem occurred
- Any error messages that have occurred
- Hardware configuration
- Type of printer connected
- Hardware/software installed
- Printed result of [Checkup \(TEST\)](#)
- Printed copies of CONFIG.SYS and AUTOEXEC.BAT files, if possible.

### **Shipping Preparation**

Before shipping the Notebook, complete the following steps:

1. Back up the critical hard drive files. Ensure that backup tapes/diskettes are not exposed to electrical or magnetic fields while stored or in transit.
2. Turn off the Notebook and all external devices.
3. Disconnect the external devices from their power sources, then from the Notebook.

**Important:** Make sure that there is no diskette in the diskette drive and that there are no PC cards in the PC slots.

4. Close the display and all exterior doors of the Notebook.
5. Pack the Notebook with sufficient packing material to protect it. Use the original packing box or similar packaging.