

Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Assignments

Removal Sequence

Product Description

Battery & Power Management

> **Parts** Catalog

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Troubleshooting

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Welcome to the Maintenance & Service Guide (MSG)



Welcome to the Maintenance and Service Guide (MSG) for Compaq Presario 1200XL Series Portable Notebooks. This online guide is designed to serve the needs of technicians whose job is to repair Compaq products.

For copyright and trademark information, refer to the *Notice* section of this MSG. To locate your unit's serial number, to see symbol conventions, or to view technician's notes, see the *Preface*. This MSG is updated periodically online as needed.

For comments or questions about the contents of this MSG, contact Compaq.

To report a technical problem, contact your Regional Support Center or IM Help Center.

For help on navigating in this guide, refer to *Using this Guide*.

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Using this Guide

To effectively use this guide, refer to the list of bookmarks at the left of the screen. These bookmarks help you navigate through the document quickly and easily. They are accessible from anywhere in the Maintenance and Service Guide (MSG).

Viewing a Chapter

Click one of the bookmarks or one of the color-coded bubbles on the Welcome page to view a chapter of this MSG.

Expanding & Hiding Topics

Click the + to expand or show the contents of a section, or click the - to hide the contents.

Opening another Chapter

Return to the Welcome page by clicking the bookmark, 1200 Series Maintenance and Service **Guide**, and then click the bookmark or color-coded bubble for another chapter.

Printing the MSG

For portable copies of this MSG, you can print single pages, multiple pages, or the entire guide. In the Acrobat Reader, click **File**, and then **Print...** for printing options.



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Before You Begin

Notice

The information in this guide is subject to change without notice.

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Maintenance and Service Guide

Compag Presario 1200 Series Notebook Computer

First Edition (July 2000) Compaq Computer Corporation

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Preface

This *Maintenance and Service Guide* is a troubleshooting guide that is used as a reference guide when servicing the Compag Presario 1200 Series Notebook Computers.

Compaq Computer Corporation reserves the right to make changes to the Compaq Presario 1200 Series Notebooks without notice.

Symbols

The following words and symbols mark special messages throughout this guide.



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



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

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

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

Technician Notes



WARNING: Only authorized technicians trained by Compaq should 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, the user should not attempt to make repaires at the component level or to make modifications to any printed circuit board. Improper repairs can create a safety hazard. Any indications of component replacement or printed circuit board modifications may void any warranty.

Serial Number

When requesting information or ordering spare parts, you should provide the Notebook serial number to Compaq. The <u>serial number location</u> is underneath the Notebook.



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Locating Additional Information

The following documentation is available to support this product:

- Compaq Presario 1200XL Series Notebook Computer documentation set
- Introducing Windows 98 Guide
- Introducing Windows 2000 Guide
- Service Training Guides
- Compag Service Advisories and Bulletins
- Compaq QuickFind
- Compaq Service Quick Reference Guide



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Product Description

Models and Features

XL2, XL201-205

Compaq Presario 1200 Series Portable Notebook Computer Models					
Feature	XL2	XL201	XL202		
Display	12.1-in HPA	12.1-in HPA	12.1-in HPA		
Processor	Cel/566(128) FCPGA	Cel/566(128) FCPGA	Cel/566(128) FCPGA		
Hard Drive	5.0 GB	5.0 GB	5.0 GB		
CD or DVD	24X CD-Rom	24X CD-Rom	24X CD-Rom		
Diskette Drive	1.44 Std. Diskette	1.44 Std. Diskette	1.44 Std. Diskette		
Modem	56K Mini PCI d/f 1, Bear*	56K Mini PCI d/f 1, Bear*	56K Mini PCI d/f 2, Seminole*		
Battery	3.8 NiMH	3.8 NiMH	3.8 NiMH		
System Memory	32 MB	32 MB	64 MB		
Feature	XL203	XL204	XL205		
Display	12.1-in HPA	13.0-in HPA	12.1-in HPA		
_					
Processor	Cel/566(128) FCPGA	Cel/566(128) FCPGA	Cel/566(128) FCPGA		
Processor Hard Drive					
	FCPGA `	FCPGA `	FCPGA		
Hard Drive	FCPGA 5.0 GB	FCPGA 5.0 GB	FCPGA 5.0 GB		
Hard Drive CD or DVD Diskette	FCPGA 5.0 GB 24X CD-Rom	FCPGA 5.0 GB 24X CD-Rom	FCPGA 5.0 GB 24X CD-Rom		
Hard Drive CD or DVD Diskette Drive	FCPGA 5.0 GB 24X CD-Rom 1.44 Std. Diskette 56K Mini PCI d/f 2	FCPGA 5.0 GB 24X CD-Rom 1.44 Std. Diskette 56K Mini PCI	FCPGA 5.0 GB 24X CD-Rom 1.44 Std. Diskette 56K Mini PCI		

^{*}See Modem Legend

Additional Models on Next Page

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XL212-223

C	Compaq Presario 1200 Series Portable Notebook Computer Models				
Feature	XL212	XL220	XL222	XL223	
Display	13.3-in TFT	13.0-in HPA	12.1-in TFT	13.3-in TFT	
Processor	PIII/650(256) FCPGA	Cel/600(128) FCPGA	Cel/566(128) FCPGA	Cel/600(128) FCPGA	
Hard Drive	5.0 GB	6.0 GB	5.0 GB	6.0 GB	
CD or DVD	24X CD-Rom	24X CD-Rom	24X CD-Rom	DVD	
Diskette Drive	1.44 Std. Diskette	1.44 Std. Diskette	1.44 Std. Diskette	1.44 Std. Diskette	
Modem	56K Mini PCI d/f 2&3*	56K Mini PCI d/f 1*	56K Mini PCI d/f 2, Seminole*	56K Mini PCI d/f 1*	
Battery	3.2 Li-ion	3.2 Li-ion	3.2 Li-ion	3.2 Li-ion	
System Memory	64 MB	64 MB	64 MB	64 MB	

^{*} Modem Legend

1) 56K Mini PCI d/f 1 = Bear/Grizzly Modem/NIC Combo = NA, CKK, LA 2) 56K Mini PCI d/f 2 = Seminole = EMEA/APD 3) 56K Mini PCI d/f 3 = Seminole 2 = All AUS/NZ

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XL3, XL301-310

Compaq Presario 1200 Series Portable Notebook Computer Models				
Feature	XL3	XL301	XL302	XL303
Display	12.1-in HPA	12.1-in HPA	12.1-in HPA	12.1-in TFT
Processor	Cel/566(128) FCPGA	Cel/600(128) FCPGA	Cel/600(128) FCPGA	Cel/600(128) FCPGA
Hard Drive	5.0 GB	5.0 GB	5.0 GB	6.0 GB or 10.0 GB
CD or DVD	24X CD-Rom	24X CD-Rom	24X CD-Rom	24X CD-Rom
Diskette Drive	1.44 Std. Diskette	1.44 Std. Diskette	1.44 Std. Diskette	1.44 Std. Diskette
Modem	56K Mini PCI d/f 1, Bear*	56K Mini PCI d/f 1*	56K Mini PCI d/f 2, Seminole*	56K Mini PCI d/f 2*
Battery	3.8 NiMH	3.8 NiMH	3.8 NiMH	3.2 Li-ion or 3.8 NiMH
System Memory	32 MB	64 MB	64 MB	64 MB
Feature	XL304	XL305	XL307	XL310
Display	13.0-in HPA	12.1-in TFT	13.3-in TFT	12.1-in TFT
Processor	Cel/600(128) FCPGA	Cel/600(128) FCPGA	Cel/600(128) FCPGA	Cel/600(128) FCPGA
Hard Drive	6.0 GB	6.0 GB	6.0 GB or 10.0 GB	6.0 GB
CD or DVD	24X CD-Rom	24X CD-Rom	8X DVD	8X DVD
Diskette Drive	1.44 Std. Diskette	1.44 Std. Diskette	1.44 Std. Diskette	1.44 Std. Diskette
Modem	56K Mini PCI d/f 1, Bear*	56K Mini PCI d/f 1&3*	56K Mini PCI d/f 2*	56K Mini PCI d/f 1*
Battery	3.8 NiMH	3.8 NiMH	3.2 Li-ion	3.2 Li-ion
System Memory	64 MB	64 MB	64 MB	64 MB

^{*}See Modem Legend

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XL311-325

С	Compaq Presario 1200 Series Portable Notebook Computer Models					
Feature	XL311	XL312	XL314			
Display	13.3-in TFT	12.1-in TFT	13.3-in TFT			
Processor	Cel/700(256) FCPGA	PIII/700(256) FCPGA	PIII/700(256) FCPGA			
Hard Drive	10.0 GB	6.0 GB	6.0 GB			
CD or DVD	8X DVD	24X CD-Rom	24X CD-Rom			
Diskette Drive	1.44 Std. Diskette	1.44 Std. Diskette	1.44 Std. Diskette			
Modem	56K Mini PCI d/f 1*	56K Mini PCI d/f 1&3*	56K Mini PCI d/f 1&3*			
Battery	3.2 Li-ion	3.2 Li-ion	3.2 Li-ion			
System Memory	64 MB	64 MB	64 MB			
Feature	XL320	XL323	XL325			
Display	12.1-in TFT	13.3-in TFT	13.3-in TFT			
Processor	Cel/633(128) FCPGA	Cel/633(128) FCPGA	PIII/650(256) FCPGA			
Hard Drive	6.0 GB	10.0 GB	6.0 GB			
CD or DVD	24X CD-Rom	8X DVD	8X DVD			
Diskette Drive	1.44 Std. Diskette	1.44 Std. Diskette	1.44 Std. Diskette			
Modem	56K Mini PCI d/f 1*	56K Mini PCI d/f 1*	56K Mini PCI d/f 1*			
Battery	3.2 Li-ion	3.8 NiMH	3.2 Li-ion			
System Memory	64 MB	64 MB	64 MB			

* Modem Legend

1) 56K Mini PCI d/f 1 = Bear/Grizzly Modem/NIC Combo = NA, CKK, LA 2) 56K Mini PCI d/f 2 = Seminole = EMEA/APD 3) 56K Mini PCI d/f 3 = Seminole 2 = All AUS/NZ

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XL326-330

Compaq Pr	Compaq Presario 1200 Series Portable Notebook Computer Models					
Feature	XL326	XL327	XL330			
Display	13.0-in HPA	13.0-in HPA	12.1-in TFT			
Processor	Cel/600(128) FCPGA	Cel/633(128) FCPGA	PIII/650(256) FCPGA			
Hard Drive	6.0 GB	6.0 GB	6.0 GB			
CD or DVD	24X CD-Rom	24X CD-Rom	24X CD-Rom			
Diskette Drive	1.44 Std. Diskette	1.44 Std. Diskette	1.44 Std. Diskette			
Modem	56K Mini PCI d/f 1*	56K Mini PCI d/f 1*	56K Mini PCI d/f 1*			
Battery	3.2 Li-ion	3.2 Li-ion	3.2 Li-ion			
System Memory	128 MB	64 MB	64 MB			

* Modem Legend

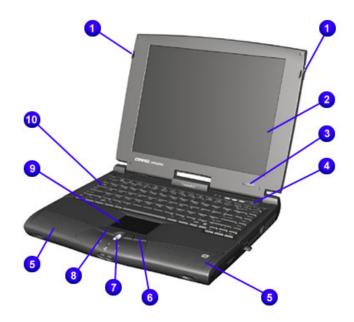
- 1) 56K Mini PCI d/f 1 = Bear/Grizzly Modem/NIC Combo = NA, CKK, LA 2) 56K Mini PCI d/f 2 = Seminole = EMEA/APD 3) 56K Mini PCI d/f 3 = Seminole 2 = All AUS/NZ



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Front of Unit



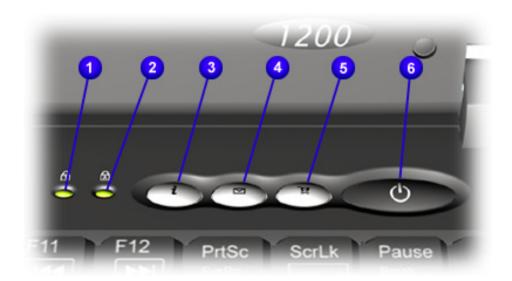
Description				
0	Display Release Latch	6	Right TouchPad Button	
0	Display	7	Scroll Button	
0	Power (On/Off) Button	8	Left TouchPad Button	
4	Lid Switch	9	TouchPad	
6	Speakers	•	Keyboard	



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Internet Zone Buttons and Lights



Description

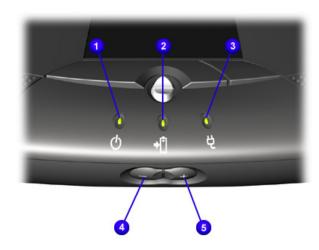
- Num Lock Light
- Caps Lock Light
- Instant Internet Access Button
- Instant E-mail Access Button
- 6 Retail Central Button
- **Power Button**



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Front Bezel Components



Description				
0	Power (On/Off) Light	4	Volume Down Button	
2	Battery Charge Light	6	Volume Up Button	
6	AC Power Light			



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Right-Side Components



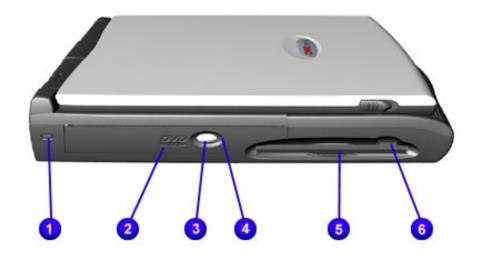
Description			
0	Battery Compartment		
0	PC Card Eject Button		
•	PC Card Slot		
4	Microphone Jack		
6	Headphone Jack		



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Left-Side Components



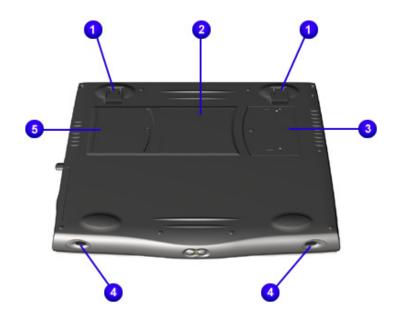
Description					
0	Security Slot CD or DVD Manual Eject Hole				
2	CD or DVD Player	6	Diskette Drive		
•	CD/DVD Eject Button	6	Diskette Drive Eject Button		



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Underneath the Unit



Description				
0	Stand Feet	4	Speaker Ports	
2	Serial and Model Number	6	Modem Compartment	
8	Memory Compartment			



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Rear Connectors



Description				
0	Modem	6	Fan Vent	
2	AC Power	6	VGA External Monitor	
0	Keyboard/Mouse Port	•	USB Ports	
4	Printer/Parallel Port			



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Specifications

Physical and Environmental

Computer	Specifications			
Dimensions	U.S.	Metric		
Height Width Depth	1.75 in 9.73 in 12.36 in	4.44 cm 24.715 cm 31.4 cm		
Weight with 12.1" HPA Display with 12.1" TFT Display with 13.0" HPA Display with 13.3" TFT Display	7.23 lb 7.32 lb 7.36 lb	3.28 kg 3.32 kg 3.34 kg 3.26 kg		
Stand-Alone (Battery Pack) Power Requirements Nominal Operating Maximum Average Peak Operating	Li-ion Enhanced & Li-ion 4.0 AHr W @ 14.8 V W @ 14.8 V W @ 14.8 V			
AC Power Requirements Operating Voltage Operating Current Operating Frequency Maximum Transient	100-240 V 1.3A/0.8A RMS 1.5A Max. (60W) 47-63 Hz Meets IEC1000-4-4 and IEC1000-4-5 1kV for 50 ns			
Temperature Operating Nonoperating	50° to 95°F -4° to 140°F	10° to 35°C -20° to 60°C		
Relative Humidity (noncondensing) Operating Nonoperating (tw = 38.7°C max)	10 to 90% 5 to 95%			

Continued

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Computer Specifications		
Dimensions	U.S.	Metric
Altitude		
Operating	0 to 10,000 ft	0 to 3.15 km
Non-Operating	0 to 30,000 ft	0 to 9.14 km
Shock		
Operating	10 G, 11 ms, half	f sine
Nonoperating	240 G, 2 ms, half	f sine
Vibration		
Operating	0.5 G	
Nonoperating	1.5 G	



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System Interrupts

IRQ	Device(s)
0	System Timer
1	Standard 101/102-Key or Microsoft Natural Keyboard
2	Programmable Interrupt Controller
6	Standard Floppy Disk Controller
7	Printer Port
8	System CMOS/Real Time Clock
9	VIA PCI Audio Controller
9	Texas Instruments PCI-1410 CardBus Controller
9	Trident CyberBlade i1 AGP (51)
10	SCI IRQ used by ACPI Bus
11	ACPI IRQ Holder for PCI IRQ Steering
11	VIA Tech 3038 PCI to USB Universal Host Controller
11	ACPI IRQ Holder for PCI IRQ Steering
11	Compaq PCI Modem Enumerator
12	Synaptics PS/2 TouchPad
13	Numeric Data Processor
14	VIA Bus Master PCI IDE Controller
14	Primary IDE Controller (Dual FIFO)
15	VIA Bus Master PCI IDE Controller
15	Secondary IDE Controller (Dual FIFO)



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System DMA

DMA	Device(s)
2	Standard Floppy Disk Controller
4	Direct Memory Access Controller

System I/O Address

I/O Address	System Function (Shipping Configuration)
0000h-000Fh	Direct Memory Access Controller
0020h-0021h	Programmable Interrupt Controller
0040h-0043h	System Timer
0060h-0060h	Standard 101/102-Key or Microsoft Natural Keyboard
0061h-0061h	System Speaker
0062h-0062h	ACPI Embedded Controller
0064h-0064h	Standard 101/102-Key or Microsoft Natural Keyboard
0066h-0066h	ACPI Embedded Controller
0070h-0075h	System CMOS/Real Time Clock
0081h-008Fh	Direct Memory Access Controller
00A0h-00A1h	Programmable Interrupt Controller
00C0h-00DFh	Direct Memory Access Controller
00F0h-00FFh	Numeric Data Processor
0170h-0177h	VIA Bus Master PCI IDE Controller
0170h-0177h	Secondary IDE Controller (Dual FIFO)
01F0h-01F7h	VIA Bus Master PCI IDE Controller
01F0h-01F7h	Primary IDE Controller (Dual FIFO)
0200h-0207h	Gameport Joystick
02F8h-02FFh	Compaq 56K V.90 HSF Mini PCI Modem
0376h-0376h	Secondary IDE Controller (Dual FIFO)
0376h-0376h	VIA Bus Master PCI IDE Controller
0378h-037Fh	Printer Port (LPT1)
03B0h-03BBh	Trident CyberBlade i1 AGP (51)



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I/O Address	System Function (Shipping Configuration)
03C0h-03DFh	Trident CyberBlade i1 AGP (51)
03E8h-03EFh	Symphony Port (COM3)
03F0h-03F5h	Standard Floppy Disk Controller
03F6h-03F6h	VIA Bus Master PCI IDE Controller
03F6h-03F6h	Primary IDE Controller (Dual FIFO)
03F7h-03F7h	Standard Floppy Disk Controller
0CF8h-0CFFh	PCI Bus
1000h-10FFh	VIA PCI Audio Controller (WDM)
1400h-141Fh	VIA Tech 3038 PCI to USB Universal Host Controller
1420h-1427h	Primary IDE Controller (Dual FIFO)
1420h-142Fh	VIA Bus Master PCI IDE Controller
1428h-142Fh	Secondary IDE Controller (Dual FIFO)
1430h-1433h	VIA PCI Audio Controller (WDM)
1434h-1437h	VIA PCI Audio Controller (WDM)
1438h-143Fh	Compaq PCI Modem Enumerator



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System Memory Catalog

Memory Address	Device(s)
00000000h-0009FFFFh	System Board Extension for ACPI BIOS
000A0000h-000AFFFFh	Trident CyberBlade i1 AGP (51)
000B0000h-000BFFFFh	Trident CyberBlade i1 AGP (51)
000C0000h-000CBFFFh	Trident CyberBlade i1 AGP (51)
000DC000h-000DFFFFh	System Board Extension for ACPI BIOS
000E0000h-000FFFFh	System Board Extension for ACPI BIOS
03800000h-03800FFFh	Texas Instruments PCI-1410 CardBus Controller
F4000000h-F400FFFFh	Compaq PCI Modem Enumerator
F4100000h-F411FFFFh	Trident CyberBlade i1 AGP (51)
F4100000h-F57FFFFh	PCI Standard PCI-to-PCI Bridge
F4120000h-F412FFFFh	Trident CyberBlade i1 AGP (51)
F4800000h-F4FFFFFh	Trident CyberBlade i1 AGP (51)
F5000000h-F57FFFFh	Trident CyberBlade i1 AGP (51)
F8000000h-FBFFFFFh	PCI Standard Host CPU Bridge
FFFE0000h-FFFFFFFh	System Board Extension for ACPI BIOS



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Display Information

12.1-in HPA & 12.1-in TFT

12.1-in HPA Display Panel		
	U.S.	Metric
Dimensions		
Height	7.97 in	20.25 cm
Width	10.82 in	27.5 cm
Display Dimensions		
Height	9.73 in	24.715 cm
Width	12.36 in	31.4 cm
Weight	2.3 lb	1.045 kg
Contrast Ratio	40:1	
Brightness	100 nits	
Total Power Consumption	1.2 to 1.5W typ (Assuming backlight current of 5.0 mA, or 100 nits luminance)	
Response Time	150 ms	
Refresh Rate	150 Hz	

12.1-in TFT Display Panel		
	U.S.	Metric
Dimensions		
Height	7.83 in	19.9 cm
Width	10.82 in	27.5 cm
Display Dimensions		
Height	9.73 in	24.715 cm
Width	12.36 in	31.4 cm
Weight	2.425 lb	1.1 kg
Contrast Ratio	100:1	
Brightness	100 nits	
Total Power Consumption	1.2 to 1.5W typ (Assuming backlight current of 5.0 mA, or 100 nits luminance)	
Response Time	50 ms	
Refresh Rate	60 Hz	



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

13.0-in HPA & 13.3-in TFT

13.0-in HPA Display Panel		
	U.S.	Metric
Dimensions		
Height	8.58 in	21.8 cm
Width	11.61 in	29.5 cm
Display Dimensions		
Height	9.73 in	24.715 cm
Width	12.36 in	31.4 cm
Weight	2.425 lb	1.1 kg
Contrast Ratio	50:1	
Brightness	100 nits	
Total Power	1.3 to 2.1W typ (Assuming backlight current of 5.0	
Consumption	mA, or 100 nits luminance)	
Response Time	150 ms	
Refresh Rate	150 Hz	

13.3-in TFT Display Panel		
	U.S.	Metric
Dimensions		
Height	7.89 in	21.5 cm
Width	10.82 in	28.4 cm
Display Dimensions		
Height	9.73 in	24.715 cm
Width	12.36 in	31.4 cm
Weight	2.3 lb	1.045 kg
Contrast Ratio	150:1	
Brightness	100 nits	
Total Power Consumption	1.2 to 1.5W typ (Assuming backlight current of 5.0 mA, or 100 nits luminance)	
Response Time	50 ms	
Refresh Rate	150 Hz	



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Memory Expansion

Memory Expansion		
System Memory	Expansion Board Memory	Total Memory
32MB	none	32MB
32MB	32MB	64MB
32MB	64MB	96MB
32MB	128MB	160MB
32MB	256MB	288MB
64MB	none	64MB
64MB	32MB	96MB
64MB	64MB	128MB
64MB	128MB	193MB
64MB	256MB	320MB



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Diskette Drive

Diskette Drive		
Capacity per Diskette (High/Low)	1.44 MB/720KB	
Diskette Size	3.5 inch	
Number of LED Indicators (Read/ Write)	0	
Number of Drives Supported	1	
Drive Rotation (rpm)	300	
Transfer Rate (Kbps)	500	
Bytes per Sector	512	
Sectors per Track (High/Low)	18/9	
Tracks per Side (High/Low)	80	
Access Times		
Track-to-Track (ms)	3	
Average (ms)	94	
Setting Time (ms)	15	
Latency Average (ms)	100	
Cylinders (High/Low)	80	
Number of Read/Write Heads	2	



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Hard Drive

Hard Drives			
Drive Type	6.0GB	12.0GB	
Capacity Per Drive	6.0GB	12.0GB	
Logical Configuration	0647	11000	
Cylinders Heads	8647 4	11968 6	
Sectors per Track Bytes per Sector	190/330 512	190/330 512	
Seek Times Typical (including settling in ms) Single Track Full Stroke	4 14 24	4 14 24	
Transfer Rate at Interface	33.3 MB/s	33.3 MB/s	



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Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

CD or **DVD** Drive

CD or DVD Drive				
	8x DVD	24x CD-ROM		
Dimensions	128 x 129 x 12.7 mm	128 x 129 x 12.7 mm		
Weight	0.29 kg	0.19 kg		
Rotational Speed - Approx.	2300 rpm	4225 rpm		
Typical Transfer Rate Sustained Data- Transfer Rate	5400 KB/s	3600 KB/s		
Access Time Average Random Access Time	140 ms	120 ms		
Spin Up Time	3.8 s	2.7 s		
Data Buffer Capacity	128 KB	128 KB		



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Battery Pack

Battery Pack			
Туре	Lithium Ion (Li-ION)		
Dimensions			
Height	0.8 in (20.3 mm)		
Length	5.7 in (145 mm)		
Width	3.1 in (78.7 mm)		
Weight	0.90 lb (408.2 g)		
Operating Lifetime	2 hr 30 min*		
Energy			
Nominal Open			
Circuit Voltage	14.4 V		
Capacity	3000 mAH		
Power	43.2 WH		
Temperature Requirements			
Operating	32° F (0 to 50° C)		
Non-Operating	-20° C to 60° C		
Charging	5° C to 45° C		



Presario 1200 Series

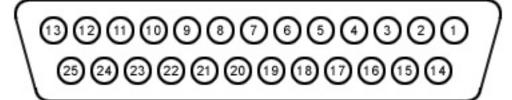
Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Pin Assignments

This appendix provides connector pin assignment tables for Compag Presario 1200 Series Portable Computers. For more information on connectors, refer to the section on Rear Connectors.

Note: The signals in all tables of this appendix are considered active high unless otherwise indicated by an asterisk (*).

Parallel Connector



Pin Assignments				
Pin	Signal	Pin	Signal	
1	Strobe*	10	Acknowledge*	
2	Data Bit 0	11	Busy	
3	Data Bit 1	12	Paper Out	
4	Data Bit 2	13	Select	
5	Data Bit 3	14	Auto Linefeed*	
6	Data Bit 4	15	Error*	
7	Data Bit 5	16	Initialize Printer*	
8	Data Bit 6	17	Select In*	
9	Data Bit 7	18-25	Signal Ground	

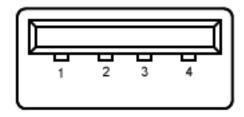
^{* =} Active low



Presario 1200 Series

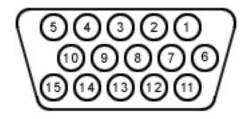
Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Universal Serial Bus (USB) Connectors



Pin Assignments				
Pin Signal Pin Signal				
1	+5V	3	Data -	
2	Data +	4	Ground	

External VGA Monitor Connector



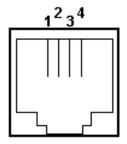
Pin Assignments				
Pin	Signal	Pin	Signal	
1	Red Analog	9	+5V	
2	Green Analog	10	Ground	
3	Blue Analog	11	Monitor Detect	
4	Not connected	12	DDC2B Data	
5	Ground	13	Horizontal Sync	
6	Ground Analog	14	Vertical Sync	
7	Ground Analog	15	DDC2B Clock	
8	Ground Analog			



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Modem Connector



Pin Assignments			
Pin	Signal		
1	Unused		
2	Tip		
3	Ring		
4	Unused		

Keyboard/Mouse Connector



Pin Assignments				
Pin	Signal	Pin	Signal	
1	Data 1	4	+5 V	
2	Data 2	5	Clock 1	
3	Ground	6	Clock 2	



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Battery and Power Management

This chapter describes power management and proper battery operating practices for Presario 1200 Series Notebooks. These practices include conservation of AC power and effective control of energy to extend the operating life of the battery. The following Power Mode sections also outline the correct methods of starting and shutting down the Notebook in various situations.

Power Modes

Presario 1200 Series Notebooks have three levels of low power: Hibernation, Standby, and Full Off.

Hibernation

Hibernation mode helps conserve battery life and protect data. The Notebook automatically enters Hibernation when the battery has little power left, or when the Notebook (operating on battery power) is in Standby mode for more than one hour. As the Notebook enters Hibernation, it automatically stores the contents of its memory to the hard drive before shutdown. When the Notebook wakes from Hibernation, it returns to its former state.

Note: When the Notebook enters or wakes from Hibernation mode, a Progress window is displayed.

To activate Hibernation mode, press the **Power** \circlearrowleft button once.

To resume from Hibernation mode, press the **Power** \circlearrowleft button once.

Standby

Standby is a low-power mode, also referred to as Sleep mode. The Notebook maintains system information and open files while in Standby mode. Selecting Standby instead of turning off the Notebook when your have finished working has two advantages: 1. It allows the Notebook to wake up faster than it would if it had been turned off; 2. It saves more power than the Active-On mode.

CAUTION: Unsaved information is lost if the Notebook is turned off prior to system wake-up, or if a power loss occurs while using the AC adapter.

To activate Standby/Sleep mode, press Fn+F4 or click Start. Select the Shut Down option, and then Standby.

To resume from Stand/Sleep mode, press any key.

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Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Full Off

Full Off mode consumes no power. The battery charges continuously if the battery is installed while the Notebook is in *Full Off* mode and if the Notebook remains plugged into external AC power.

Note: Unsaved information is lost if the Notebook is turned off without first saving the data.

To activate *Full Off* mode, complete the following steps:

- 1. Click the **Start** button on the Windows taskbar.
- 2. Click **Shut Down**, then select **Shut Down** from the options.

To resume from *Full Off* mode, press the **Power** button once.

CAUTION: The Notebook must be turned off (Full Off mode) when installing or replacing components. Follow the instructions for putting the Notebook into Full Off mode. Be sure to unplug the Notebook from the outlet, and remove the battery pack (refer to the removal procedures section: Battery Pack) before servicing any parts.



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Summary of Power Modes

The following table outlines the procedures for entering and exiting the various power modes, and the external indicators for each mode.

	Standby Mode	Hibernation Mode	Off Mode
Automatic Activation	15 minutes if using battery power* (preset default)	When battery is low or after 1 hour of Standby*	Standard Shutdown*: click Start on the Windows taskbar, click Shut Down , and then Shut Down from menu options.
Manual Activation	Press Fn+F4 key combination or click Start on the Windows taskbar, Shut Down, and then Standby.	Press the Power U button once.	Manual Shutdown**: Press and hold down the Power button for four seconds. OR Fn+Power (press and hold the Fn key then press the Power button).
Resume/ Exit	Press any key.	Press the Power $^{\cup}$ button once.	Press the Power $^{\circlearrowright}$ button once.
Indicators	Power light flashes and Moon cicon appears on status display.	Power light is off, screen is blank, and Power U icon does not appear on status display.	Power light is off, screen is blank, and Power U icon does not appear on status display.

^{*} The Notebook will not automatically enter Standby or Hibernation mode if using AC power.

^{**} Important: The Manual Shutdown procedure is not recommended unless the Standard Shutdown is unsuccessful.



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Power Settings

Power management modes can be initiated based on the amount of time passed since the last system activity. System activity includes keyboard strokes, mouse movement, CD/DVD playback, and modem usage.

Power Schemes

Different patterns of Notebook use determine the level of power management needed. The Power management settings can be selected using several predefined *Power Schemes*. To access these options, select **Power Management** on the Control Panel, then click the **Power Schemes** tab. The default Power Schemes are *Home/Office Desk, Portable/Laptop*, and *Always On*. Power Schemes can also be customized by changing the following options:

- System Standby: the length of inactivity before the Notebook goes into Standby mode
- Turn Off Monitor: the length of inactivity before the screen times out and goes blank
- Turn Off Hard Disks: the length of inactivity before the hard drive goes into low-power mode

Important: The setting for the Hard Disk must be less than or equal to the setting for the System. If the Notebook is on a network, Compaq recommends that System Standby be set to *Never*.

The following table shows the default settings for each Power Scheme.

Power Scheme	AC Power	Battery Power
Always On System Standby Turn OFF Monitor Turn OFF Hard Disks Hibernate	Never 20 minutes Never Never	Never 15 minutes 30 minutes Never
Portable/Laptop System Standby Turn OFF Monitor Turn OFF Hard Disks Hibernate	Never 3 hours 15 minutes Never	15 minutes Never 10 minutes 1 hour
Home/Office Desk System Standby Turn OFF Monitor Turn OFF Hard Disks Hibernate	Never 20 minutes Never Never	5 minutes 5 minutes 10 minutes 20 minutes



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Alarms

The Notebook can be set to Alarm when the battery power level is reduced or when it reaches a critically low level. The Notebook can also be set to enter a low-power mode when the battery reaches a specific power level.



CAUTION: The settings on the Alarms tab are preset for the Notebook to run at optimum efficiency. Changing any of these settings may cause the Notebook to function improperly. It is recommended that these settings be left at their default values.

Default Alarm Settings		
Setting	Low Battery	Critical Battery
Alarm power level	10%	0%
Notification	Sound	No Action
Power Mode	No Action	Hibernation
Active	Enabled	Enabled

Rebooting After a Lockup

To reboot the Notebook when the keyboard is frozen, or when the screen is locked, press and hold down the **Power** \circlearrowleft button for at least four seconds to perform a Manual Shutdown. Then restart the Notebook with a single press of the **Power** \circlearrowleft button.

If the Notebook still does not recover, shut it down by pressing the **Power** \circlearrowleft button and holding it down for four seconds. Then remove the battery and unplug the AC power for at least 30 seconds. Reinsert the battery or reconnect AC power, and press the **Power** \circlearrowleft button once to reboot.

Recovering From a Loss of Electrical Power

Loss of electrical power causes the Notebook to turn off automatically. This may cause loss of data because the Microsoft Windows operating system is not able to close all the files and programs properly.

Loss of power may be caused by one of the following:

- Interruption of electrical power service
- Accidental disconnection of the power cord



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If power surges or sags, the display and status lights may flicker, and the Notebook may automatically restart. If an improper shutdown occurs, the Microsoft Windows utility program, ScanDisk, runs automatically once power is restored. ScanDisk determines whether the improper shutdown has caused any errors on the hard disk. These errors may occur if the Microsoft Windows operating system is not able to close all files correctly before the shutdown. If no errors are found, the restart process continues. If ScanDisk does detect errors, follow the instructions on the screen to continue the restart process. Work or information that was not saved before the loss of power or shutdown may be lost.

If a power failure occurs, or if the power cord disconnects while the Notebook is turned on, turn it off until normal service is restored. The next time the Notebook is turned on, ScanDisk may run to check the hard disk for errors caused by improper shutdown.

Increasing Battery Pack Operating Time

Battery pack operating life is affected by several variables. To avoid unnecessary replacement, consider the following when determining how long a charged battery pack should last:

- Power conservation settings
- Hardware configuration
- Software applications
- Installed options
- Display brightness\\Server\projects\Compaq_Port\Portable TimesheetHard drive usage
- Changes in operating temperatures
- Type and number of installed PC cards

Note: Power consumption requirements for PC cards vary widely. Some cards drain the battery pack very rapidly.

Battery pack operating life can be increased by as much as 50 percent by controlling the energy required by the Notebook and the energy stored in the battery pack.

Minimizing the Energy Required

To minimize the energy required by the Notebook, follow these guidelines:

- Set the power conservation levels in the Power Management utility to Maximum.
- Customize the time-out value to work more efficiently with the applications. The length of battery life depends on the values selected.



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Maximizing the Energy Stored

To maximize the energy stored in the battery pack, follow these guidelines:

- Condition a Battery Pack at least every 30 days to improve overall battery performance.
- Keep a battery pack in the Notebook when using it with AC power to supply the battery pack with a constant trickle charge.
- Store the battery pack in a cool, dry place when not in use.

Conditioning a Battery Pack

CAUTION: To avoid loss of data, make sure that all information is saved before completely discharging a battery pack.

To condition a battery pack, complete the following steps:

1. Plug in the AC adapter and allow the battery to charge until the fast charge arrow on the status display disappears. The battery gauge may read 100% for a period of time before the arrow disappears.

Note: Do not unplug the AC adapter until the arrow disappears.

2. Unplug the AC adapter and allow the battery to drain until the Notebook enters Hibernation mode. The Notebook can be used normally during this process.

Note: If the AC adapter is connected while the battery is draining, the process must be repeated, beginning with Step 1.

The battery is now reconditioned. Plug in the AC adapter and begin using the Notebook.

The table below shows typical battery charging times for each model.

Battery Charge Time	
Li-ion Battery Pack	Battery Power
Computer On Line	4.75 hours
Computer Off Line	3.00 hours



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Disposing of a Used Battery Pack

In the interests of safeguarding our environment, Compaq Computer Corporation recommends that nickel metal hydride (NiMH) and lithium-ion (Li-ion) battery packs be recycled. Battery packs should be handled in accordance with country, state, province, or local regulations.

 \bigwedge

WARNING: Battery pack contains harmful components when exposed. Do not open, crush, puncture, or incinerate the battery pack. It contains no field-serviceable parts. Dispose of battery packs properly. Failure to dispose of battery packs properly may cause harm to humans, animals, and the environment.



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Troubleshooting

This section provides troubleshooting information for Compag Presario 1200XL Series Portable Notebooks. The basic steps in troubleshooting include:

- 1. Preliminary Steps.
- 2. The Power-On Self-Test (POST).
- 3. The recommended actions described in the diagnostic tables in case you are unable to run POST, or if POST displays an error message.

When following the recommended actions in the sections on *Power-On Self-Test (POST)* and Diagnostic Error Codes, perform the steps in the order listed above. Rerun POST after each recommended action until the problem is solved, or until no error message occurs. Once the problem is solved, do not continue with any remaining recommended actions.

Note: If the problem is intermittent, check your computer several times to verify that the problem is solved.



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Preliminary Steps

Before running the <u>Power-On Self-Test (POST)</u>, 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, see <u>Clearing the Power-On Password</u>.
- 2. Run Compag Diagnostics.
- 3. Turn off the computer and its external devices.
- 4. Disconnect any external devices you do not want to test. 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. Check this problem by running <u>POST</u> both with and without the external device connected.

- 5. Install loop-back plugs in the serial and parallel connectors if you want to test these ports.
- 6. Ensure that the hard drive is installed in the Notebook.
- 7. Ensure that the battery pack is inserted into the Notebook, and that it is connected to an external AC power source.

When these preliminary steps are completed, you are ready to run **POST**.



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Clearing the Power-On Password

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

If you do not know the password, clear the password by performing the following steps:

- 1. Turn off the computer.
- 2. Disconnect the power cord.
- 3. Remove the battery pack.
- 4. Remove the keyboard.
- 5. Remove the LED button bezel.
- 6. Disconnect the back-light cable from the connector on the system board.

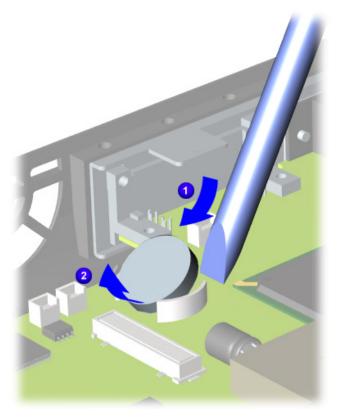
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Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

7. To clear the password, remove the RTC battery by prying it out of the socket on the system board with a <u>non-metallic</u> object. Replace the battery after at least 10 seconds. Simultaneously make contact with the two pads located at R37 on the system boarding, using a conductive piece of material such as a piece of wire or tool.



- 8. Reassemble the Notebook.
- 9. Turn on the Notebook to verify that the Power-on password has been cleared. If it has not been cleared, repeat Steps 1 through 7.



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Power-On Self-Test (POST)

To run POST, complete the following action:

Turn off the Notebook, then turn it on again. As soon as the Compaq logo appears, press **ESC** to clear the logo and display the POST messages as they occur.

If the Notebook does not beep, POST has successfully completed its test and detected no errors. POST will automatically boot up the Notebook. If a bootable diskette is installed in the diskette drive, the Notebook will boot from the diskette instead of the hard drive.

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

Note: If the system is not functioning well enough to complete POST, or the display is unable to show POST error messages, refer to the section Solving Minor Problems.

POST Messages

A list of the POST error codes and their descriptions are shown in the following tables:

102-System Board Failure

Power-On Self-Test Messages	
102-System Board Failure	
Probable Cause	Recommended Action
DMA, timers, and so on.	Replace the system board.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

162-System Options Not Set

162-System Options Not Set	
Probable Cause	Recommended Action
Incorrect configuration.	Run Computer Setup.
CMOS reflects an invalid configuration setting.	Run Computer Setup.
RAM failure.	 Replace the memory modules. Replace the system board.
Memory test data error.	 Replace the memory modules. Replace the system board.
XX000YZZ RAM failure.	Replace the system board.

201–Memory Error

XX000YZZ 201-Memory Error		
Probable Cause	Recommended Action	
Keyboard failure.	 Ensure that no keys are pressed during POST. Reconnect the keyboard with the Notebook off. Replace the keyboard. 	

301-Keyboard Error

301-Keyboard Error	
Probable Cause	Recommended Action
Keyboard failure.	 Ensure that no keys are pressed during POST. Reconnect the keyboard with the Notebook off. Replace the keyboard.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

304-Keyboard or System Unit Error

304-Keyboard or System Unit Error	
Probable Cause	Recommended Action
Keyboard or system board error.	 Replace the keyboard. Replace the TouchPad or mouse. Replace the system board.

601-Diskette Controller Error

601-Diskette Controller Error	
Probable Cause	Recommended Action
Mismatch in drive type or failure in the diskette controller.	 Run Computer Checkup (TEST). Check or replace cables. Replace the system board.

605-Diskette Drive Error

605-Diskette Drive Error	
Probable Cause	Recommended Action
Mismatch in drive type.	Run Computer Setup.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

1780-Primary Hard Drive 0 Failure

1780-Primary Hard Drive 0 Failure	
Probable Cause	Recommended Action
Disk 0 failed to respond.	 Run Computer Checkup (TEST). Replace the hard drive.
Hard drive format error.	 Run Computer Checkup (TEST). Replace the hard drive.

1782-Hard Drive Controller

1782-Hard Drive Controller	
Probable Cause	Recommended Action
Hard drive controller failure.	 Run Computer Setup. Replace the hard drive.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Compaq Diagnostics

Compaq Diagnostics is installed on the hard drive of the Notebook. Run the Diagnostic utilities when you want to view or test system information, and if you have installed or connected devices. If you run Compaq Diagnostics from a diskette, ensure that the diagnostic program is version 10.11 or later.

The Diagnostics menu includes the following utilities:

- Computer Checkup (TEST)
- View System Information (INSPECT)
- Diagnostic Error Codes
- Troubleshooting without Diagnostics
- Before Replacing Parts
- Solving Minor Problems
- Solving Hard Drive Problems
- Solving Hardware Installation Problems
- Solving Keyboard/Numeric Keypad Problems
- Solving Memory Problems
- Solving PC Card Problems
- Solving Power Problems
- Solving Printer Problems
- Solving TouchPad/Pointing Device Problems
- Contacting Compaq Support

If you have a problem you cannot solve, run the Diagnostics utilities before calling for support. Run Computer Checkup, and select to save the device list to a file and print or save the log of errors. Run the View System Information (INSPECT) utility and select to print or save that information. Have the files or the printed information available when you call for support.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Computer Checkup (TEST)

Computer Checkup (TEST) determines whether the various computer components and devices are recognized by the system and are functioning properly. You can display, print, or save the information generated by Computer Checkup.

Follow these steps to run Computer 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 drive A.
- 4. Turn on or restart the Notebook. The Notebook starts from drive A, and the Diagnostics Welcome screen is displayed.
- 5. Press **Enter** to continue. The Diagnostics menu is displayed.
- 6. Select **Computer Checkup** on the Diagnostics menu to display a Test Option menu.
- 7. Select **View the Device List** from the Test Option menu. A list of the 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.

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



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

View System Information (INSPECT)

The View System Information (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 View System Information (INSPECT) from the Compaq Diagnostics diskette:

- 1. Turn on the external devices you want to test. Connect the printer if you want to print the information.
- 2. Insert the Compaq Diagnostics diskette in drive A.
- 3. Turn on or restart the Notebook. The Notebook starts from drive A, and 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

<u>Keyboard</u> <u>Operating system</u>

System ports
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.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Diagnostic Error Codes

Diagnostic error codes are displayed if the system recognizes a problem while running the Compaq Diagnostics program. These error codes help to identify subassemblies with possible damage or defects.

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 proceed with any remaining steps.

For the removal and replacement of a particular subassembly, see <u>Removal Sequence</u>.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Error Code Table

Error Code Type	Error Code Number
Processor Test	101 through 114 (pg 13)
Memory Test	200 through 215 (pg 14)
Keyboard Test	300 through 304 (pg 15)
Parallel Printer Test	401 through 403 (pg 15)
Video Test	501 through 516 (pg 18)
Diskette Drive Test	600 through 699 (pg 16)
Serial Test	1101 (pg 16)
Hard Drive Test	1701 through 1736 (pg 17)
Video Test	2402 through 2456 (pg 19)
Video Test	2419 through 2456 (pg 20)
Video Test	2458 through 2480 (pg 20)
Audio Test	3206 (<u>pg 21</u>)
DVD or CD Test	3301 through 6623 (<u>pg 21</u>)
TouchPad Pointing Device Test	8601 through 8602 (pg 20)

Processor Test Error Codes

Processor Test Error Codes		
Error Code	Description	Recommended Action
101-xx	CPU test failed.	Replace the processor and retest.
102-xx	Co-processor or Weitek Error.	 Run the Configuration and Diagnostics Utilities. Replace the processor board and retest.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Processor Test Error Codes		
Error Code	Description	Recommended Action
103-xx	DMA page registers test failed.	Replace the system board 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.	 Check system configuration. Check cable connections to speaker. Replace the system board and retest.

Memory Test Error Codes

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



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Keyboard Test Error Codes

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

Parallel Printer Test Error Codes

Parallel Printer Test Error Codes		
Error Code	Description	Recommended Action
401-xx	Printer failed or not connected.	1. Connect the printer.
402-xx	Port test failed.	2. Check power to the printer.3. Install the loop-back connector and
403-xx	Printer pattern test failed.	retest. 4. Check port and IRQ configuration. 5. Replace the system board and retest.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Diskette Drive Test Error Codes

Diskette Drive Test Error Codes		
Error Code	Description	Recommended Action
600-xx	Diskette ID drive types test failed.	 Replace the diskette media and retest. Check and/or replace the diskette
601-xx	Diskette format failed.	power and signal cables and retest. 3. Replace the diskette and retest.
602-xx	Diskette read test failed.	4. Replace the diskette and retest.
603-xx	Diskette write/read 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.	
699-xx	Diskette drive/media ID error.	 Replace media. Run the Configuration and Diagnostics Utilities.

Serial Test Error Codes

Serial Test Error Codes		
Error Code	Description	Recommended Action
1101-xx	Derial port test ramear	 Check port configuration. Replace the system board and retest.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Hard Drive Test Error Codes

Hard Drive Test Error Codes		
Error Code	Description	Recommended Action
1701-xx	Hard drive format test failed.	1. Run the Configuration and Diagnostics Utilities and
1702-xx	Hard drive read test failed.	verify drive type. 2. Verify that all secondary
1703-xx	Hard drive write/read test failed.	drives have secondary drive capability.
1704-xx	Hard drive random seek test failed.	3. Replace the hard drive and retest.
1705-xx	Hard drive controller test failed.	4. Replace the system board and retest.
1706-xx	Hard drive ready test failed.	
1707-xx	Hard drive re-calibration 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



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Video Test Error Codes

Video Test Error Codes		
Error Code	Description	Recommended Action
501-xx	Video controller test failed.	The following steps apply to error codes
502-xx	Video memory test failed.	501-xx through 516-xx:
503-xx	Video attribute test failed.	1. Disconnect external monitor and test with internal LCD display.
504-xx	Video character set test failed.	2. Replace the display assembly and
505-xx	Video 80 x 25 mode 9 x 14 character cell test failed.	retest. 3. Replace the system board and retest.
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.	



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Video Test Error Codes (Continued)		
Error Code	Description	Recommended Action
2402-xx	Video memory test failed.	The following steps apply to error codes
2403-xx	Video attribute test failed.	2402-xx through 2456-xx:
2404-xx	Video character set test failed.	1. Run the Configuration and Diagnostics Utilities.
2405-xx	Video 80 x 25 mode 9 x 14 character cell test failed.	Replace the display assembly and retest.
2406-xx	Video 80 x 25 mode 8 x 8 character cell test failed.	3. Replace the system board and retest.
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.	



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Video Test Error Codes (Continued)		
Error Code	Description	Recommended Action
2419-xx	ECG/VGC ROM checksum test failed.	1. Run the Configuration and Diagnostics Utilities.
2421-xx	ECG/VGC 640 x 200 graphics mode test failed.	2. Disconnect external monitor and test with internal LCD display.3. Replace the display assembly and
2422-xx	ECG/VGC 640 x 350 16 color set test failed.	retest. 4. Replace the system board and retest.
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.	

Video Test Error Codes (Continued)		
Error Code	Description	Recommended Action
2458-xx	Advanced VGA BitBLT test failed.	The following applies to error codes
2468-xx	Advanced VGA DAC test failed.	2458-xx through 2480-xx:
2477-xx	Advanced VGA data path test failed.	Replace the system board and retest.
2478-xx	Advanced VGA BitBLT test failed.	
2480-xx	Advanced VGA LineDraw test failed.	



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Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Audio Test Error Codes

Audio Test Error Codes		
Error Code	Code Description Recommended Action	
3206-xx	Audio System Internal Error.	Replace the system board and retest.

TouchPad Test Error Codes

TouchPad/Pointing Device Interface Test Error Codes			
Error Code Description Recommended		Recommended Action	
8601-xx	Mouse test failed.	1. Replace the TouchPad and retest.	
8602-xx	Interface test failed.	2. Replace the system board and retest	

DVD or CD Test Error Codes

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 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	
6605-xx	Read test failed.	properly installed.	
6608-xx	Controller test failed.	4. Replace the DVD or CD drive and	
6623-xx	Random read test failed.	retest. 5. Replace the system board and retest.	



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

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 about:

Audio Memory
Battery PC Card

CD or DVD Drive Power

Diskette Drive Printer

Display TouchPad

Hard Drive Keyboard/Numeric Keypad

Hardware Installation

Since symptoms can be similar, carefully match the symptoms of the computer malfunction against the problem description 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 cables are connected properly to the suspected defective parts.

- Run Computer 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.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Solving Minor Problems

Some minor 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.

Solving Audio Problems

Some common audio problems and solutions are listed in the following table.

Solving Audio Problems		
Problem	Probable Cause	Solution
Computer 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.

Solving Battery Pack/Gauge Problems

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

Solving Battery Pack/Gauge Problems		
Problem	Probable Cause	Solution(s)
Computer won't turn on when battery pack is inserted and power cord is unplugged.	Battery pack is discharged.	 Connect the computer to an external power source and charge the battery pack. OR Replace the battery pack with a fully charged battery pack.
		Check the battery connectors on the system board to verify that they are evenly spaced and are not bent or broken.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

	Solving Battery Pack/Gauge	Problems
Problem	Probable Cause	Solution(s)
Notebook is beeping and battery icon is blinking.	Battery charge is low.	 Immediately save any open file(s). Then complete one of the following: Connect the Notebook to an external power source to charge the battery pack. Turn off the Notebook or initiate Hibernation until you can find another power source or charge the battery pack.
Battery icon on the front of the unit blinks to indicate low battery condition, but computer does not beep.	Volume is turned down too low.	Adjust the volume.
Battery icon doesn't light and battery pack won't fast charge.	Battery pack is already charged.	No action is necessary.
	Battery pack was exposed to temperature extremes.	Allow time for the battery pack to return to room temperature.
	Battery pack is at end of its life.	Replace the battery pack.
You have to set the date and time every time you turn on the Notebook.	RTC battery is dead.	Replace the RTC battery.
Battery charge does not last as long as expected.	Battery is being exposed to high temperatures or extremely cold temperatures.	Keep the battery pack within the recommended temperature range for operation or storage. • Operating Range: 50°F to 104°F (10°C to 40°C) • Storage Range: -4°F to 86°F (-20°C to 30°C) Recharge the battery pack.
	Battery has partially self- discharged.	Recharge the battery. Discharge the battery completely and then recharge it.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

	Solving Battery Pack/Gauge	Problems
Problem	Probable Cause	Solution(s)
	Power management is disabled.	Set a power management level in Computer 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 Computer 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 the battery pack 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 to reduce the discharge rate.
	Battery pack is being exposed to high temperatures or extremely cold temperatures.	Keep the battery pack within the recommended temperature range for operation or storage. • Operating Range: 50°F to 104°F (10°C to 40°C) • Storage Range: -4°F to 86°F (-20°C to 30°C) Recharge the battery pack.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Solving CD and DVD Drive Problems

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

Solving CD or DVD Drive Problems			
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 CD label side up in the tray, then close the tray.	
	CD is CD Plus or Pregap/Track 0 type.	Cannot read these types of CDs in 24X. Remove the CD.	

Solving Diskette Drive Problems

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

	Solving Diskette Drive Problems		
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 Computer Checkup from the Compaq Diagnostics diskette.	
	Diskette is not formatted.	Format the diskette. At the system prompt, enter: FORMAT A:	
Diskette drive cannot read a diskette.	Diskette drive cannot read a diskette.	Use the type of diskette required by the drive.	
	Diskette has a bad sector.	Copy files to hard drive or another diskette. Reformat bad floppy.	
	Drive error has occurred.	Run Computer Checkup from the Compaq Diagnostics diskette.	



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

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

Solving Display Problems

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

You can perform a monitor self-test on an external VGA color or monochrome monitor by disconnecting the monitor from the Notebook, then 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.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

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.

	Solving Display Problems		
Problem	Probable Cause	Solution(s)	
Screen is dim.	Brightness Control (if available) is not set properly.	Adjust the Brightness of the display by pressing Fn+F7 or Fn+F8 .	
	Computer screen is in direct light.	Tilt display or move computer.	
Screen is blank.	Screen save was initiated by Power Management 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.	
Display is blank and the Suspend icon is flashing.	System is in Suspend mode.	Press any key or touch the TouchPad.	
Internal display is blank and the screen on an external monitor displays information.	Display function was switched to the external monitor.	Press Fn+F3 to switch between LCD or CRT.	
Internal display flashes or has garbled characters when Notebook is connected to external monitor.	Using 1024 x 768 or higher resolution on external monitor and toggling back to internal 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 back-light or display cable connections	Replace the display assembly.	
	Defective inverter board.	Replace the display assembly.	
	Defective display cable.	Replace the display assembly.	
	Defective display panel.	Replace the display assembly.	
	Defective system board.	Replace the system board.	



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Solving Display Problems				
Problem	Probable Cause	Solution(s)		
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.	Replace the system board.		
Back-light (brightness) cannot be adjusted with Fn+F7 or Fn+F8.	Improper display cable connections.	 Re-seat the display cable to the system board. Replace the display assembly. 		
(Continued)	Defective inverter board.	Replace the display assembly.		
	Defective display cable.	Replace the display assembly.		
	Defective system board.	Replace the system board.		

^{**}This problem indicates that the back-light or its power circuitry has failed. If the back-light 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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Solving Display Problems Continued				
Problem	Probable Cause	Solution(s)		
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).	Improper display cable connections.	Re-seat the display cable to the following until the problem is solved: 1. System board 2. Display assembly		
	Defective display cable.	Replace the display assembly.		
	Defective inverter board.	Replace the display assembly.		
	Defective system board.	Replace the system board.		
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 display panel.	Replace the display assembly.		

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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Solving Hard Drive Problems

Some common 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 at all times in case of errors or failures.

Solving Hard Drive Problems				
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 Computer Checkup.		
Hard drive does not work.	Hard drive is not seated properly.	Turn off and unplug the Notebook, remove the battery pack, and remove and then reinstall the hard drive.		

Solving Hardware Installation Problems

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

Solving Hardware Installation Problems				
Problem	Probable Cause	Solution(s)		
A new device is not recognized as part of the computer 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 computer system.		
	Device is not seated properly.	Turn off the Notebook and reinsert the device.		



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Solving Keyboard/Numeric Keypad Problems

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

Solving Keyboard/Numeric Keypad Problems			
Problem	Probable Cause	Solution(s)	
Embedded numeric keypad on notebook keyboard is disabled.	Num Lock function is not enabled.	Press the Shift+NumLk keys to enable the Num Lock function and embedded numeric keypad. The Num Lock light on the notebook turns on.	
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.	

Solving Memory Problems

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

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



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Solving PC Card Problems

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

Solving PC Card Problems			
Problem	Probable Cause	Solution(s)	
When turned on, the Notebook does not beep when a PC Card is inserted.	Card is not inserted properly.	Ensure that the card is inserted in the correct orientation.	
	PC Card beeps are disabled.	Double-click the PC Card icon on the Control Panel, click the Global Settings tab, the enable PC Card sound effects.	
	Speaker is turned off or volume is turned down.	Press Volume buttons to turn the speaker on, then increase the volume.	
	PC Card drivers are not installed.	Double-click the Add New Hardware icon on 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 PC Card 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 correct orientation.	
	Telephone cord is not plugged in all the way.	Check and secure telephone connection.	
	Necessary drivers are not installed (turned on).	Install drivers.	
PC Card modem or fax card does not work.	You are trying to access the card using the wrong COM port.	See <u>Specifications</u> to verify COM port.	



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Solving PC Card Problems			
Problem	Probable Cause	Solution(s)	
	The card conflicts with a serial device.	See <u>Specifications</u> to verify address.	
	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 card does not work.	SRAM and flash memory cards require the memory card driver to be loaded (turned on). Flash memory cards require the Microsoft FlashFile System to be loaded. Hard drives on flash mass- storage cards require the PC Card ATA driver to be loaded.	Install driver.	
	You are trying to access the hard drive card using the wrong drive letter.	Double-click My Computer 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 PC Card platforms.	



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Solving Power Problems

Also see Solving Battery Pack/Gauge Problems in this section.

Solving Power Problems			
Problem	Probable Cause	Solution(s)	
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 board is defective.	Replace the system board.	
	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 initiated Hibernation after a preset time-out.	Turn on the Notebook.	



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Solving Printer Problems

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. Also refer to the printing section of your application documentation.

Solving Printer Problems			
Problem	Probable Cause	Solution(s)	
Printer will not turn on.	The signal cable may not be connected properly, or the printer is unplugged.	Ensure 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 off-line.	Turn the printer on and set it to online.	
	The device drivers for the application are not installed.	Refer to the printer documentation to install the correct printer driver.	
	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.	
	Paper tray is empty.	Fill the paper tray with paper and set the printer to online.	
Printer prints garbled information.	Correct printer drivers are not installed.	Refer to the printer documentation to install the correct printer driver.	
	Cable is not connected properly.	Ensure that the printer signal cable is properly connected to the Notebook.	
	Cable is defective.	Replace the printer cable and retest.	



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Solving TouchPad/Pointing Device Problems

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

Solving TouchPad/Pointing Device Problems			
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 <i>AUTOEXEC.BAT</i> file or <i>CONFIG.SYS</i> 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.	
TouchPad or mouse do not work even though the device is enabled in Windows.	Mouse is not enabled.	Type MOUSE at the system prompt to activate the mouse device driver. Add a line in the AUTOEXEC.BAT file to activate the mouse driver automatically each time the computer is turned on or restarted.	
	Cable is not properly seated in TouchPad board.	Re-seat cable.	
	Defective TouchPad board.	Replace the TouchPad board.	
	Defective system board.	Replace system board.	
	Device driver is not correctly installed in Windows.	Install the appropriate device driver in Windows.	
Cursor skips or moves abnormally when using the TouchPad.	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

Obtain the following information before contacting Compaq Reseller Support:

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

Shipping Preparation

To ship 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.
- Turn off the Notebook and external devices.
- 3. Disconnect the external devices from their power sources, then from the Notebook.

Important: Ensure 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.



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Removal Sequence

This chapter describes the removal and replacement process for the Presario 1200XL Series Notebook.

Electrostatic Discharge

When removing or replacing parts, be careful to discharge static electricity before touching the internal Notebook components. A sudden discharge of static electricity from a finger or other conductor can destroy static-sensitive devices or microcircuitry. Often the spark is neither felt nor heard, but damage occurs. An electronic device that has been exposed to electrostatic discharge (ESD) may not seem to be affected and work perfectly throughout a normal cycle. Although it may function normally for a period of time, it may have been degraded in the internal layers, reducing its life expectancy.

Networks built into many integrated circuits provide some protection, but in many cases, the discharge contains enough power to alter device parameters or melt silicon junctions.

Generating Static

The table below shows the amount of static electricity generated during common activities associated with servicing computers.

Electrostatic Voltage			
Event	Relative Humidity		
Event	10%	40%	50%
Walking across carpet	35,000V	15,000V	7,500V
Walking across vinyl floor	12,000V	5,000V	3,000V
Motion of bench worker	6,000V	800V	400V
Removing DIPS from plastic tubes	2,000V	700V	400V
Removing DIPS from vinyl trays	11,500V	4,000V	2,000V
Removing DIPS from styrofoam	14,500V	5,000V	3,500V
Removing bubble pack from PCBs	26,000V	20,000V	7,000V
Packing PCBs in foam-lined box	21,000V	11,000V	5,000V

CAUTION: As little as 700 Volts can degrade Notebook components. Be sure to ground yourself before touching the Notebook or its subassemblies.

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Tool and Software Requirements

The following items are required to service the Notebook:

- Torx T-9 screwdriver
- 5mm nut drivers (for screwlocks and standoffs)
- Small standard screwdriver
- Small Phillips screwdriver
- Diagnostics software

Screws

The screws used in the Notebook are not interchangeable. If an incorrect screw is used during the reassembly process, it can damage the unit. Compaq strongly recommends that all screws removed during disassembly be kept with the part that was removed, then returned to their proper locations.

Important: As each subassembly is removed from the Notebook, place it away from the work area to prevent damage.

Note: Compaq Presario 1200XL Series Portable Notebooks have several screws of various sizes that are **not** interchangeable. Care must be taken during reassembly to ensure that the correct screws are used in their correct location. During removal keep respective screws with their associated subassembly.

Connectors and Plastic Parts

Plastic parts can be damaged by the use of excessive force during disassembly and reassembly. When handling plastic parts, use care. Apply pressure only at the points designated in the instructions. Most of the connectors in these Notebooks are *ZIF Connectors*.



Presario 1200 Series

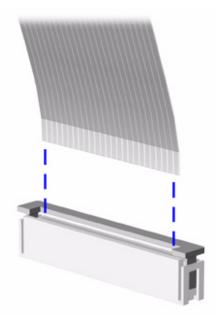
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ZIF Connector

The 1200XL Series Notebooks use zero insertion force (ZIF) connectors on the system board.

CAUTION: A ZIF connector and its attached cable can be easily damaged. Handle only the connector slide when removing or replacing a cable. Never pull or twist on the cable while it is connected.

To remove a cable from a ZIF connector, lift both corners of the ZIF connector and slide the cable out simultaneously with constant light force.





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Cables

Most cables used throughout the unit are ribbon cables.

Cables must be handled with extreme care to avoid damage. Use the following precautions when handling cables to avoid damage to the cable and Notebook:

- Always handle cables by their connectors.
- In all cases, avoid bending, twisting, pulling, or tearing cables.
- Apply only the minimum force required to seat or unseat cables from their connectors.
- Place the cables in such a manner that they cannot be caught or snagged by parts being removed or replaced.
- Handle flex cables with extreme care; they can tear easily.

CAUTION: When servicing these Notebooks, ensure that cables are placed in their proper location during the reassembly process. Improper cable placement can cause severe damage to the unit.

The following illustrations show the proper placement for each cable:

- Diskette Drive Ribbon Cable
- Speaker Assembly Cable
- Keyboard Ribbon Cable
- Hard Drive Ribbon Cable



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Diskette Drive Ribbon Cable

The ribbon cable position for the diskette drive is shown below.



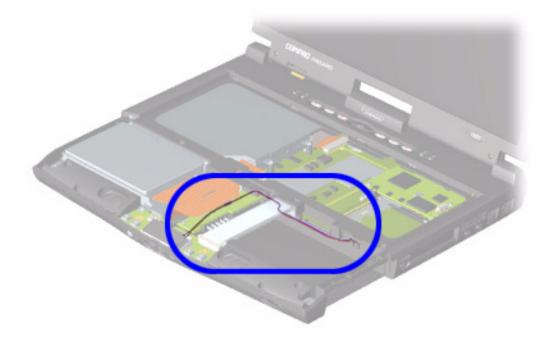


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Speaker Assembly Cable

The cable position for the speaker assembly is shown below. The cable is routed under the battery charger board and under the edge of the system board.





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Keyboard Ribbon Cable

The ribbon cable position for the keyboard is shown below.





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Hard Drive Ribbon Cable

The ribbon cable position for the hard drive is shown below.





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Preparing for Disassembly

Before beginning the removal or replacement of any Notebook components, complete the following steps:

- 1. Disconnect AC power and any external devices.
- 2. Remove the battery pack (pg 10).
- 3. Remove any PC Cards.

Important: The battery pack should be removed before performing any internal maintenance on the Notebook.



WARNING: The Battery Pack contains harmful components when exposed. Do not open, crush, puncture, or incinerate the battery pack. It contains no field-serviceable parts. Dispose of battery packs properly. Failure to dispose of battery packs correctly may cause harm to humans, animals, and the environment.



CAUTION: Metal objects can damage the battery pack as well as the battery contacts in the battery compartment. To prevent damage, do not allow metal objects to touch the battery contacts. Place only the battery pack for the Compaq Presario 1200XL Series Portable Notebooks into the battery compartment. Do not force the battery pack into the bay if insertion does not occur easily. Do not open a battery pack; opening causes damage to the pack, making it unuseable.

Note: Compaq Presario 1200XL Series Portable Notebooks have several screws of various sizes that are **not** interchangeable. Care must be taken during reassembly to ensure that the correct screws are used in their correct location. During removal keep respective screws with their associated subassembly.

Important: As each component is removed from the Notebook, place the screws and its associates away from the work area to prevent damage.



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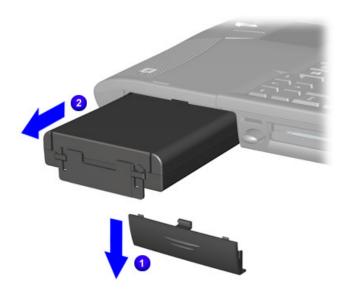
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Removal Procedures

Battery Pack

To remove the battery pack, complete the following steps:

- 1. Slide 1 the battery compartment door down and remove it from the chassis.
- 2. Pull 2 the battery from the chassis by the tab located on the end of the battery pack.



To replace the battery, reverse these procedures.

Important: The battery pack should be removed before performing any internal maintenance on the Notebook.



WARNING: Metal objects can damage the battery pack as well as the battery contacts in the battery compartment. To prevent damage, do not allow metal objects to touch the battery contacts. Place only the battery pack for Compaq Presario 1200XL Series Portable Notebooks into the battery compartment. Do not force the battery pack into the bay if insertion does not occur easily.



CAUTION: Do not crush, puncture, or incinerate the battery pack. Do not open a battery pack; this action damages the pack, makes it unusable, and exposes potentially harmful battery components. No field-serviceable parts are located inside the battery pack.



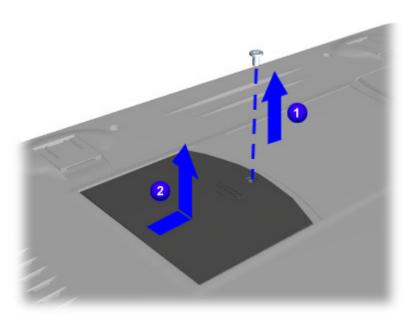
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Modem

To remove the modem, complete the following steps:

- 1. Prepare the Notebook for disassembly (pq 9).
- 2. Close the display, turn Notebook upside down and locate the modem compartment (left side when the front of the Notebook is toward you).
- 3. Remove one screw 1 from the modem door, 2 slide the door forward and then lift to remove it.

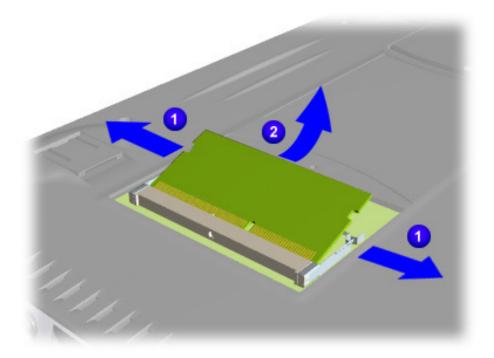




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4. Pull 1 the two side latches to release the modem and 2 lift the modem from the system board connector.



To replace the modem board, reverse these procedures.



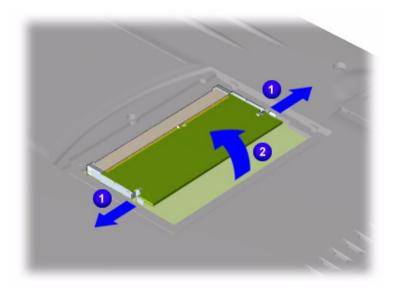
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Memory Module

To remove the memory module, complete the following steps:

- 1. Prepare the Notebook for disassembly (pq 9).
- 2. Close the display and turn the Notebook upside down.
- 3. Remove the screw from the memory compartment.
- 4. With the front of the Notebook facing you, slide the door to the left and lift.
- 5. Pull 1 the side levers to release the memory module and lift 2 it off the connector on the system board.



To replace the memory module, reverse these procedures.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

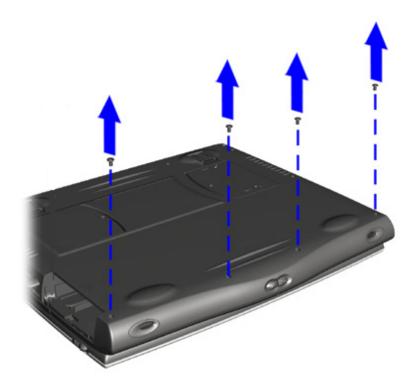
Palmrest Cover with TouchPad

Note: Compaq Presario 1200XL Series Portable Notebooks have several screws of various sizes that are **not** interchangeable. Care must be taken during reassembly to ensure that the correct screws are used in their correct location. During removal keep respective screws with their associated subassembly.

Note: components of the Notebook.

To remove the Palmrest cover with TouchPad, complete the following steps:

- 1. Prepare the Notebook for disassembly (pg 9).
- 2. Close the display and turn the Notebook upside down.
- 3. Remove five screws from underneath the Notebook.

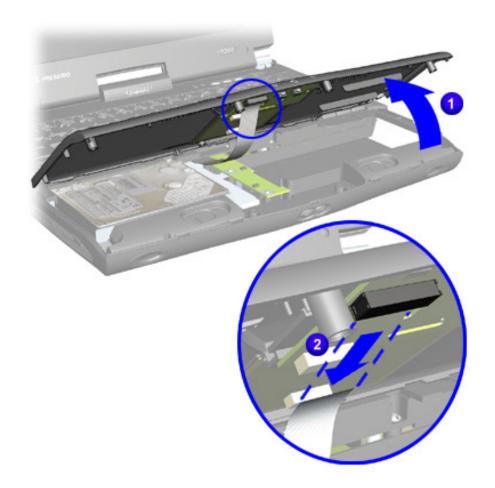




Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

- 4. Turn the Notebook right side up.
- 5. Pull the display release latches and open the display assembly.
- 6. Lift up 1 the front end of the Palmrest cover, 2 disconnect the flex cable from the underside of the Palmrest LED and Volume Control board.
- 7. Lift the cover off the unit.



To replace the Palmrest cover with TouchPad, reverse these procedures.



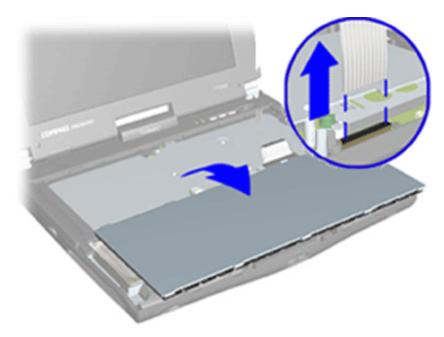
Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Keyboard

To remove the keyboard, complete the following steps:

- 1. Prepare the Notebook for disassembly (pg 9).
- 2. Remove the Palmrest cover with TouchPad (pg 14).
- 3. Gently lift up the front of the keyboard, slide it forward, and then turn the keyboard over allowing it to rest where the Palmrest cover normally sits.
- 4. Disconnect the flex cable from the <u>ZIF Connector</u> on the system board and remove the keyboard.



To replace the keyboard, reverse these procedures.

When replacing the keyboard, the <u>Keyboard Ribbon Cable</u> should fold behind the <u>ZIF Connector</u> rather than underneath the keyboard.



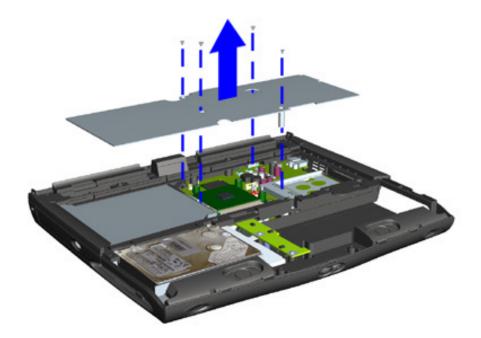
Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Heatspreader

To remove the Heatspreader, complete the following steps:

- 1. Prepare the Notebook for disassembly (pg 9).
- 2. Remove the Palmrest cover with TouchPad (pg 14).
- 3. Remove the keyboard (pg 16).
- 4. Remove four screws from the Heatspreader and lift out of the chassis.



To replace the Heatspreader, reverse these procedures.

Note: If the thermal pads on the Heatspreader are missing or damaged, a new Heatspreader should be installed.

Important: Before installing the new Heatspreader, remove the plastic covering from the thermal pads.



To prevent damage, do not use excessive force when replacing the screws.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Internet Zone Cover

(Status Panel Assembly)

Note: Illustrations may show parts removed that are not part of this procedure. It is necessary to remove only the parts listed in the written procedure.

To remove the Internet Zone cover, complete the following steps:

- 1. Prepare the Notebook for disassembly (pg 9).
- 2. Remove the Palmrest Cover with TouchPad (pg 14).
- 3. Remove the Keyboard (pg 16).
- 4. Open the display, squeeze the sides of the display hinge covers and slide them off the hinges.





Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

5. Close the Display, turn the unit upside down, and then remove two screws that secure the Internet Zone cover to the chassis located in the back of the Notebook.





Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

6. Remove the two innermost screws from the display hinges that secure the status panel to the chassis.

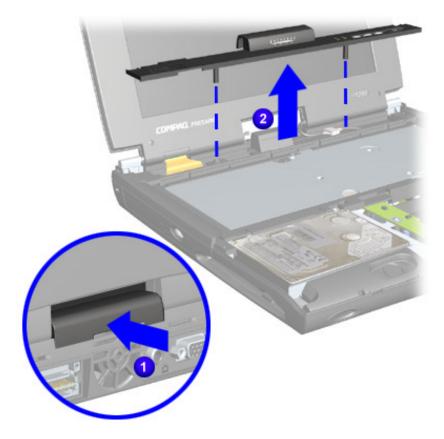




Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

- 7. Turn the unit right side up and open the display.
- 8. Lift 1 up one corner of the Internet Zone cover and push forward from the back (center piece) to release the snaps on the Internet Zone cover.
- 9. Remove 2 Internet Zone cover from the chassis.



To replace the status panel assembly, reverse these procedures.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

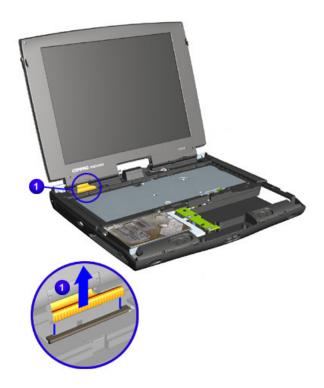
LVDS Board

(Available only on models with a TFT display panel)

Note: Illustrations may show parts removed that are not part of this procedure. It is necessary to remove only the parts listed in the written procedure.

To remove the internet button board, complete the following steps:

- 1. Prepare the Notebook for disassembly (pg 9).
- 2. Remove the Internet Zone cover (pq 18).
- 3. Carefully disconnect the display flex cable 1.

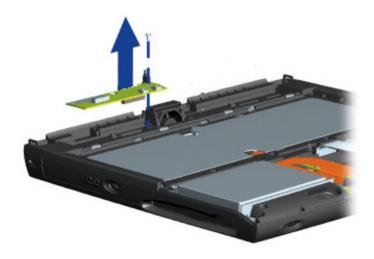




Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

4. Remove one screw securing the LVDS button board and remove it from the chassis.



To replace the LVDS button board, reverse these procedures.



Presario 1200 Series

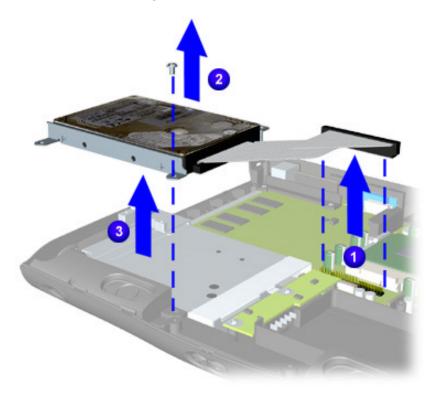
Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Hard Drive

Note: Illustrations may show parts removed that are not part of this procedure. It is necessary to remove only the parts listed in the written procedure.

To remove the hard drive, complete the following steps:

- 1. Prepare the unit for disassembly (pg 9).
- 2. Remove the Palmrest cover with TouchPad (pg 14).
- 3. Remove the four screws from the hard drive mounting bracket.
- 4. Disconnect the hard drive ribbon cable.
- 5. Lift out the hard drive with mounting brackets attached.



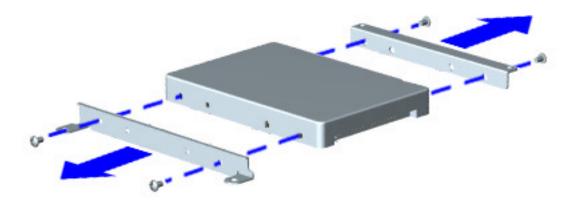


Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Hard Drive Mounting Brackets

To remove the hard drive mounting brackets, remove two screws from each side of the hard drive.



To replace the hard drive and mounting brackets, reverse these procedures.



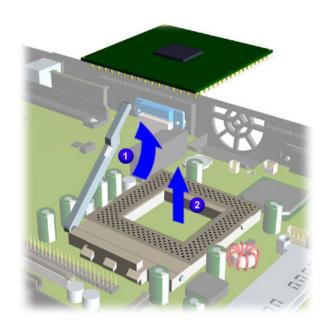
Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Processor

To remove the processor, complete the following steps:

- 1. Prepare the Notebook for disassembly (pq 9).
- 2. Remove the Palmrest cover with TouchPad (pg 14).
- 3. Remove the keyboard (pg 16).
- 4. Remove the Heatspreader (pg 17).
- 5. Lift the lever to release the processor, and lift the processor off the system board connector.





Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

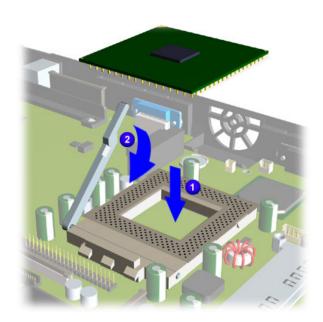
Processor (Replacing)

To replace the processor, perform the following:

1. Fully align the processor pins with the system board connector.

Note: When replacing the processor, verify that the number one pin (the gold triangle) is properly aligned with the number one pin on the system board connector.

- 2. Press down carefully on the processor directly over the connectors to seat the processor on the system board.
- 3. Lower the lever to lock the processor in place.
- 4. Reassemble the remaining components by reversing their removal procedures.





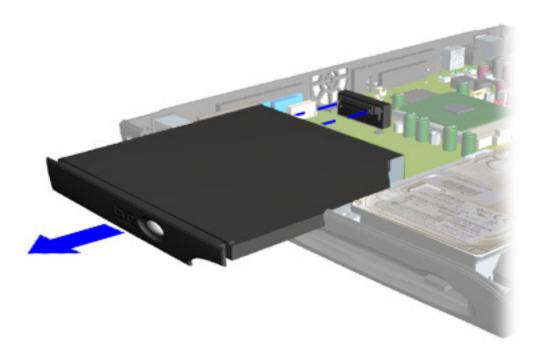
Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

CD/DVD Drive

To remove the CD/DVD Drive, complete the following steps:

- 1. Prepare the Notebook for disassembly (pg 9).
- 2. Remove the Palmrest cover with TouchPad (pg 14).
- 3. Remove the keyboard (pg 16).
- 4. Remove the Heatspreader (pg 17).
- 5. Turn the Notebook upside down and remove the two screws securing the CD/DVD drive to the chassis.
- 6. Turn the Notebook over (right side up) and push the CD/DVD drive forward from the back of the drive to slide it out of the chassis.



To replace the CD/DVD drive, reverse these procedures.



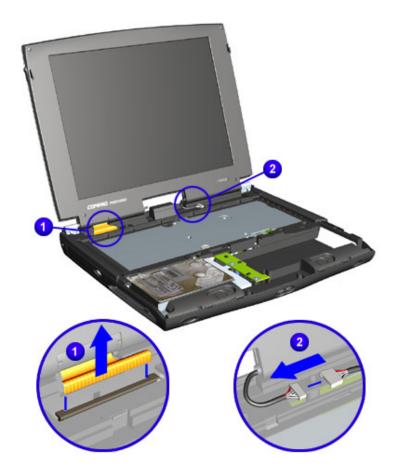
Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Display Panel Assembly

Note: Illustrations may show parts removed that are not part of this procedure. It is necessary to remove only the parts listed in the written procedure.

- 1. To remove the display panel assembly, complete the following steps:
- 2. Prepare the Notebook for disassembly (pg 9).
- 3. Remove the Internet zone cover (pg 18).
- 4. Disconnect the display flex cable 1 and backlight cable 2 from the system board.





Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

5. While supporting the display, remove 1 the two outermost screws securing the display to the chassis and lift 2 the display panel out of the hinges.



To replace the display panel, reverse these procedures.



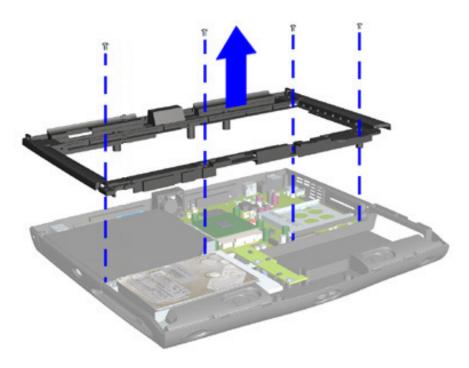
Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Upper CPU Cover

To remove the upper CPU cover, complete the following:

- 1. Prepare the Notebook for disassembly (pq 9).
- 2. Remove the Palmrest cover with TouchPad (pg 14).
- 3. Remove the keyboard (pg 16).
- 4. Remove the Heatspreader (pq 17).
- 5. Remove the Internet zone cover (pq 18).
- 6. Remove the LVDS button board (pg 22).
- 7. Remove the hard drive (pq 24).
- 8. Remove the display panel assembly (pg 29).
- 9. Remove four screws located on the top of the upper CPU cover and lift the cover off the chassis.





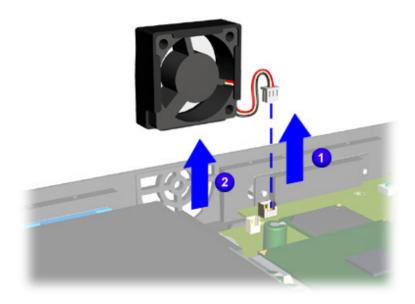
Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Fan Assembly

To remove the fan assembly, complete the following:

- 1. Prepare the Notebook for disassembly (pg 9).
- 2. Remove the Palmrest cover with TouchPad (pg 14).
- 3. Remove the keyboard (pg 16).
- 4. Remove the Heatspreader (pq 17).
- 5. Remove the Internet zone cover (pq 18).
- 6. Remove the LVDS button board (pg 22).
- 7. Remove the hard drive (pg 24).
- 8. Remove the display panel assembly (pg 29).
- 9. Remove the upper CPU cover (pg 31).
- 10. Disconnect 1 the fan cable from the connector on the system board and lift 2 the fan assembly from the chassis slot.



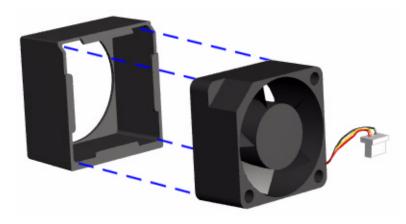


Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Fan Gasket

To remove the fan gasket, pull the gasket from the fan.



To replace the fan assembly and gasket, reverse these procedures.

Important: When replacing the fan assembly ensure the manufacturing label is pointing inward.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

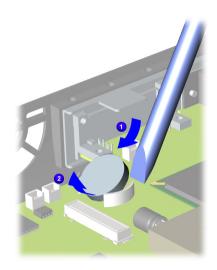
Real Time Clock Battery

CAUTION: Removing the RTC battery clears the power-on password and removes all setup attributes that are programmed in the CMOS.

To remove the RTC battery, complete the following steps:

- 1. Prepare the Notebook for disassembly (pg 9).
- 2. Remove the Palmrest cover with TouchPad (pg 14).
- 3. Remove the keyboard (pq 16).
- 4. Remove the Heatspreader (pg 17).
- 5. Remove the Upper CPU Cover (pg 31).
- 6. Locate the RTC battery next to the CD/DVD connector.
- 7. Using a non-metallic object, gently pry upward to remove the RTC battery.

To replace the RTC battery, press the battery firmly into the socket and reassemble the remaining components by reversing their removal procedures.





Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Battery Charger Board

(Voltage Converter Board)

To remove the battery charger board, complete the following:

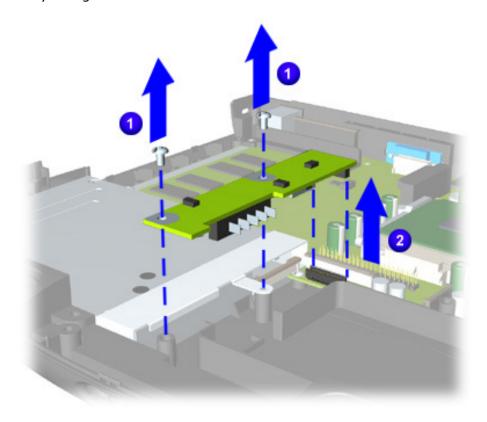
- 1. Prepare the Notebook for disassembly (pg 9).
- 2. Remove the Palmrest cover with TouchPad (pg 14).
- 3. Remove the keyboard (pq 16).
- 4. Remove the Heatspreader (pg 17).
- 5. Remove the Internet zone cover (pg 18).
- 6. Remove the LVDS button board (pg 22).
- 7. Remove the hard drive (pg 24).
- 8. Remove the display panel assembly (pg 29).
- 9. Remove the upper CPU cover (pg 31).
- 10. Remove the hard drive cable located above the battery charger board.
- 11. Remove the floppy cable located above the battery charger board.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

- 12. Remove 1 two screws from the battery charger board and unplug 2 the board from the connector on the system board.
- 13. Lift the battery charger board out of the chassis.



To replace the battery charger board, reverse these procedures.

Important: When replacing the battery charger board, ensure that the pins are aligned with the connector on the system board.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Diskette Drive

To remove the diskette drive, complete the following:

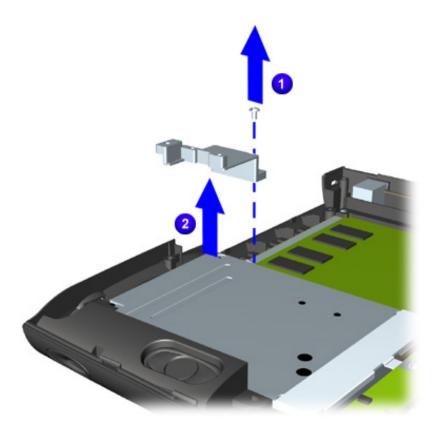
- 1. Prepare the Notebook for disassembly (pq 9).
- 2. Remove the Palmrest cover with TouchPad (pg 14).
- 3. Remove the keyboard (pg 16).
- 4. Remove the Heatspreader (pg 17).
- 5. Remove the CD or DVD drive (pg 28).
- 6. Remove the Internet Zone cover (pg 18).
- 7. Remove the LVDS button board (pg 22).
- 8. Remove the display panel assembly (pg 29).
- 9. Remove the hard drive (pg 24).
- 10. Remove the upper CPU cover (pg 31).
- 11. Remove the battery charger board (pg 35).



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

12. Remove 1 screw from the diskette drive retaining bracket and lift 2 the bracket out of the chassis.

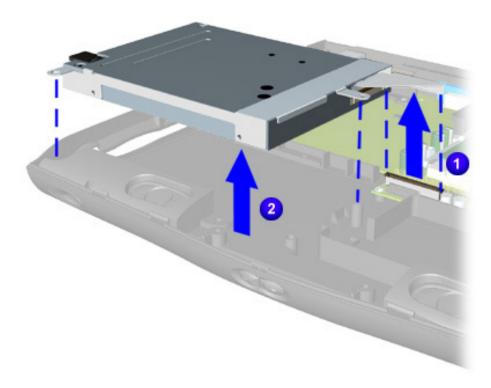




Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

13. Lift the diskette drive from the chassis.



To replace the diskette drive, reverse these procedures.

CAUTION: Ensure that cables are placed in their proper locations during the reassembly process.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Speaker Assembly

To remove the speaker assembly, complete the following:

- 1. Prepare the Notebook for disassembly (pg 9).
- 2. Remove the Palmrest cover with TouchPad (pg 14).
- 3. Remove the keyboard (pg 16).
- 4. Remove the display panel assembly (pq 29).
- 5. Remove the Internet zone cover (pg 18).
- 6. Remove the LVDS button board (pg 22).
- 7. Remove the Heatspreader (pq 17).
- 8. Remove the upper CPU cover (pg 31).
- 9. Remove the hard drive (pg 24).
- 10. Remove the battery charger board (pq 35).

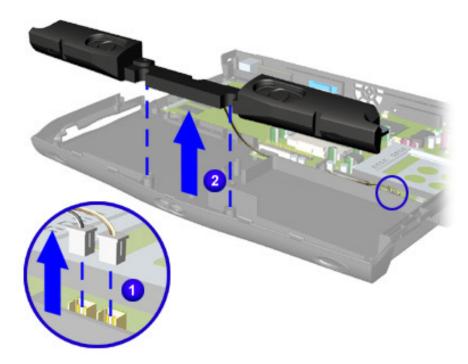


Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

11. Disconnect 1 the speaker cables from the system board and lift 2 the speaker assembly from the chassis.

Note: Before disconnecting the speaker cables from the system board, verify the color coded positioning of the left and right speaker cables to ensure that the Speaker Assembly Cable is placed in its proper location during the reassembly process.



To replace the speaker assembly, reverse these procedures.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

System Board

To remove the system board, complete the following steps:

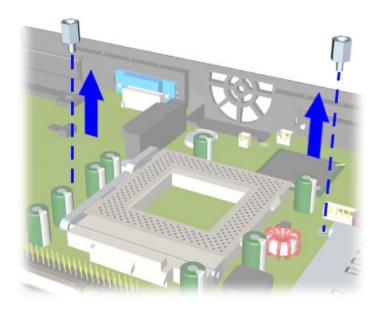
- 1. Prepare the Notebook for disassembly (pg 9).
- 2. Remove the Palmrest cover with TouchPad (pg 14).
- 3. Remove the keyboard (pg 16).
- 4. Remove the display panel assembly (pq 29).
- 5. Remove the Internet zone cover (pg 18).
- 6. Remove the LVDS button board (pg 22).
- 7. Remove the Heatspreader (pq 17).
- 8. Remove the processor (pg 26).
- 9. Remove the CD or DVD drive (pg 28).
- 10. Remove the upper CPU cover (pg 31).
- 11. Remove the hard drive (pg 24).
- 12. Remove the fan assembly (pg 32).
- 13. Remove the battery charger board (pg 35).
- 14. Disconnect the diskette drive ribbon cable from the system board (pg 5).
- 15. Disconnect the speaker assembly cables from the system board (pq 40).



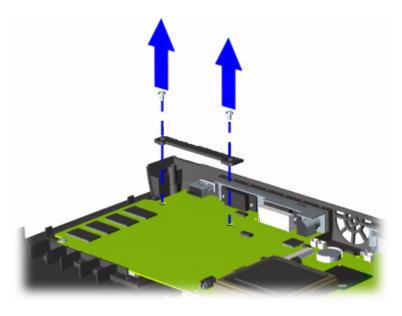
Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

16. Remove the two standoffs from the system board.



17. Remove the two screws from the CD/DVD drive mounting rail and lift the mounting rail from the system board.

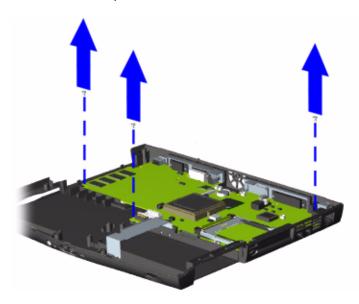




Presario 1200 Series

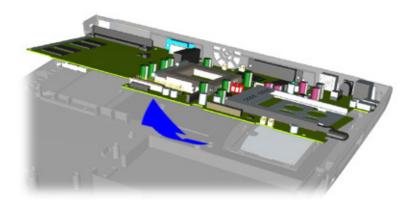
Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

18. Remove three screws from the system board.



Note: Ensure that the PCMCIA eject button is not sticking out through the slot in the chassis.

19. Shift the board to the left and lift to remove it from the chassis.



To replace the system board, reverse these procedures.

Before replacing the system board, remove all remaining cables.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Parts Catalog

This section provides illustrations of the spare parts for the Compaq Presario 1200 Series Notebook Computer and identifies the spare part's order number and the availability of each item.

Illustrated Parts

The Notebook serial number should be provided to Compaq whenever you request information or order spare parts. To order parts, refer to Part Numbers & Availability section shown later in this chapter. The serial number is located underneath the unit.

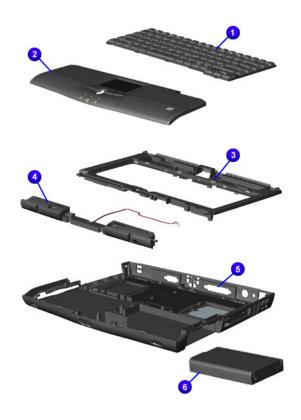




Presario 1200 Series

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System Units



#	Description
0	Keyboards
2	Palmrest w/ Touchpad Button Board
6	Upper CPU Cover
4	Speakers with Enclosure
6	Enclosure Base
0	Battery Packs Li-Ion Enhanced Li-Ion Enhanced 4.0Ahr

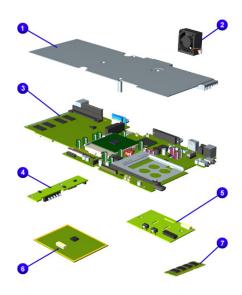
To order parts, refer to Part Numbers & Availability shown later in this chapter.



Presario 1200 Series

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System Boards



#	Description	#	Description
0	Heat Spreader	•	Modems 56K Mini 3 US 56K Mini 3 INTL 56K Mini 3 AU
2	Fan Assembly	6	Processors CEL 566MHz CEL 600MHz PIII 600MHz 256K PIII 650MHz 256K
8	System I/O Boards w/64MB SDRAM w/32MB SDRAM w/64MB TFT	•	Memory
4	Voltage Converter Board (3C)		

To order parts, refer to <u>Part Numbers & Availability</u> shown later in this chapter.



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Display Panel Assembly



Description

Display Panel Assemblies

12.1" HPA Display Panel

12.1" TFT Display Panel

13.0" HPA Display Panel

13.3" TFT Display Panel

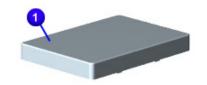
To order parts, refer to Part Numbers & Availability shown later in this chapter.

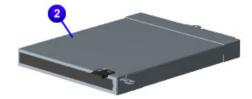


Presario 1200 Series

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Mass Storage Devices







#	Description
0	Hard Drives 5.0GB 6.0GB
2	Diskette Drive
8	8X DVD Drive
4	24X CD ROM Drive (Not Shown)

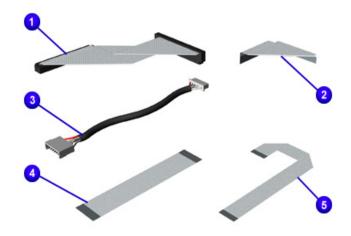
To order parts, refer to Part Numbers & Availability shown later in this chapter.



Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Miscellaneous Cables



	Description		
Miscellaneous Cable Kit*			
0	Hard Drive Cable		
2	FFC FDD (Citizen) Cable		
8	Cable INV/LCD Trans Board 12.1 in; 13.0 in		
4	FFC TouchPad Board/M/B Cable		
6	DisqPlay LCD display FFC		

^{*}Kit includes one each of the above items unless otherwise specified.

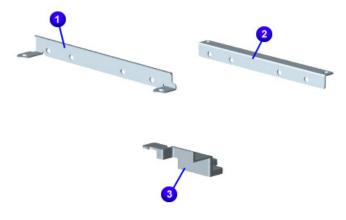
To order parts, refer to Part Numbers
& Availability shown later in this chapter.



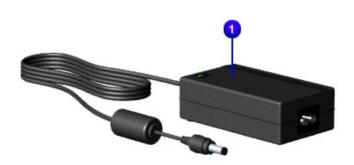
Presario 1200 Series

Model XL2, XL201, XL202, XL203, XL204, XL205, XL212, XL220, XL222, XL223, XL3, XL301, XL302, XL303, XL304, XL305, XL307, XL310, XL311, XL312, XL314, XL320, XL323, XL325, XL326, XL327, XL330

Miscellaneous Hardware



#	Description			
Miscellaneous Hardware Kit				
0	Hard Drive Mounting Bracket (L)			
2	Hard Drive Mounting Bracket (R)			
8	Reinforcement Bracket (L)			
4	CD-ROM/DVD Bracket (L) (not shown)			
6	CD-ROM/DVD Bracket (R) (not shown)			
6	Spring Latch (not shown)			
•	14.1" Spring Latch (not shown)			



#	Description		
0	Adapter 60W SLIM		
	AC 2-Wire		
	3-Wire		

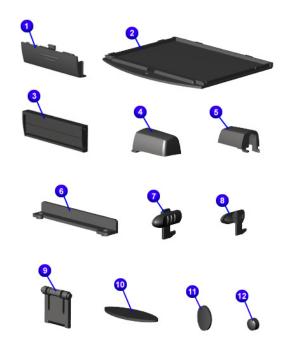
To order parts, refer to Part Numbers & Availability shown later in this chapter.



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Miscellaneous Plastics



#	Description	#	Description			
Miscellaneous Plastics Kit						
0	Battery Compartment Door (qty. 2)	0	Rubber Plug (side mount for display) (qty. 10)			
2	Memory Compartment Door	Ø	Rubber Plug (qty. 10)			
8	PCMCIA Door	®	LCD(LED) Rubber Plug (3 types) (not shown)			
4	Display Hinge Cover (R)	0	MDC Cover			
6	Display Hinge Cover (L)	6	LCD FPC Cover			
6	CD-ROM Drive Guide	©	FPC Cover (not shown)			
•	Latch (L) (qty. 10)	•	Mini PCI Modem Cover (not shown)			
8	Latch (R) (qty. 10)	To order parts, refer to Part Numbers & Availability shown later in this chapter.				
9	Stand Foot (qty. 10)					
•	Rubber Foot (qty. 10)					



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Documentation and Software

Description	Spare Pa	rt Numbers
Quick Restore CD 1	US/PR Mexico APD PRC Korea AUS Japan UK France Italy Belgium	169298-001 169298-161 169298-371 169298-AA1 169298-AD1 169298-371 169298-291 169298-031 169298-051 169298-061 169298-AK1
Quick Restore CD 2	Not Availa	ble
Beyond Setup Guide (BSG)	TBD	
Quick Reference Guide	Not Available	
Quick Find for Windows North America, Latin America, Asia Pacific	Not Available	
QuickFind for Windows Europe, Middle East, Africa	Not Availa	able

QuickFind is updated monthly. To complete the QuickFind part number, add the suffix from the table below for the desired month. If you do not specify the 3-digit suffix, the default is the current month in which the order is placed.

QuickFind Part Number Suffix				
Suffix	Month	Suffix	Month	
-001	January	-007	July	
-002	February	-008	August	
-003	March	-009	September	
-004	April	-010	October	
-005	May	-011	November	
-006	June	-012	December	



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Part Numbers and Availability

This section is a comprehensive list of the parts associated with the 1200 Series Notebooks. It provides the part number, applicable model(s), and the availability of each item.

Alphabetical Spares Listing

In this section, the following spare parts pertaining to the 1200 Series Notebooks are listed alphabetically. To find a part, choose the letter that your part starts with from the alphabet index below (Example: choose "P" for Processor).

<u>ABCDEFGHIJKLM</u>NOPQRSTUVWXYZ

Spare Part Description	Part Number	Applicable Models
AC Adapter (60W Slim 3 Wire)	180675-001	202, 203, 205, 212, 222, 302, 303, 305, 307, 312, 314
AC Adapter (60W Slim 2 Wire)	180676-001	2, 201, 204, 220, 223, 3, 301, 304, 310, 311, 320, 323, 325, 326, 327, CTO
AC Power Cord (3 Wire) US	170513-001	205, 212, 305, 312, 314
AC Power Cord (3 Wire) Intl	170513-002	202, 203, 222, 302, 303, 307
AC Power Cord (3 Wire) UK	170513-031	203, 222, 302, 303, 307
AC Power Cord (3 Wire) SWI	170513-115	202, 222, 302
AC Power Cord (3 Wire) AU	170513-011	205, 212, 305, 312
AC Power Cord (3 Wire) DK	170513-081	205, 212, 305, 312
AC Power Cord (3 Wire) PRC	170513-AA3	202, 302
AC Power Cord (3 Wire) IT	170513-061	205, 212
AC Power Cord NA	293831-001	202, 222, 302, 303, 307
Additional AC Adapter with Power Cord	TBD	СТО
Additional Battery (Li-ion 3.2)	TBD	СТО
Additional Mouse USB	TBD	СТО
Battery Pack (Li-ion Enhanced)	138184-001	212, 220, 222, 223, 303, 307, 310, 311, 312, 314, 320, 323, 325, 326, 327, 330, CTO
Battery Pack (4.0 Ahr, Li-ion Enhanced)	202960-001	2, 201, 202, 203, 204, 205, 3, 301, 302, 303, 304, 305, CTO
Battery Pack (Li-ion Enhanced)	177458-001	311, CTO
Battery Pack (3.8 NiMH)	TBD	СТО

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Spare Part Description	Part Number	Applicable Models
Button Board Cover w/Internet Buttons	202959-001	All, CTO
Base Unit (1200T, WinME, US)	TBD	СТО
CD-ROM Drive 24X	159487-001	2, 201, 202, 203, 204, 205, 212, 220, 222, 3, 301, 302, 303, 304, 305, 312, 314, 320, 326, 327, 330, CTO
CTO Packaging	TBD	СТО
Diskette Drive (1.44 MB)	202961-001	All, CTO
Display Panel (12.1-in TFT)	202949-001	222, 303, 305, 310, 312, 320, 330, CTO
Display Panel (12.1-in HPA)	202947-001	2, 201, 202, 203, 205, 3, 301, 302, CTO
Display Panel (13.0-in HPA)	202948-001	204, 220, 304, 326, 327
Display Panel (13.3-in TFT)	202950-001	212, 223, 307, 311, 314, 323, 325
DVD Drive (8X)	202952-001	223, 307, 310, 311, 323, 325, CTO
Enclosure Base	202957-001	All, CTO
Fan	159500-001	All, CTO
Hard Drive (5.0 GB)	202953-001	2, 201, 202, 203, 204, 205, 212, 3, 301, 302, CTO
Hard Drive (6.0 GB)	202954-001	220, 222, 223, 303, 304, 305, 307, 310, 312, 314, 320, 325, 326, 327, 330, CTO
Hard Drive (10.0 GB)	200349-001	303, 311, 323, CTO
Heat Spreader FC-PGA	202963-001	All, CTO
Keyboard (US)	207683-001	2, 204, 205, 212, 220, 223, 3, 302, 303, 304, 305, 307, 310, 312, 314, 320, 323, 325, 326, 327, 330, CTO
Keyboard (UK)	207683-031	203, 222, 302, 303, 307
Keyboard (FR)	207683-051	203, 222, 302, 307
Keyboard (IT)	207683-061	203, 222, 302, 303
Keyboard (DK)	207683-081	202, 302
Keyboard (NOR)	207683-091	202, 302
Keyboard (SE)	207683-101	202, 302
Keyboard (PT)	207683-131	202, 302, 303
Keyboard (LA)	207683-161	201, 202, 222, 301, 302, 303
Keyboard (SG)	207683-311	202, 222

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Spare Part Description	Part Number	Applicable Models
Keyboard (AR)	207683-171	202, 222, 302
Keyboard (NL)	207683-331	202, 222, 302, 303
Keyboard (BE)	207683-181	202, 302
Keyboard (FC)	207683-121	204, 304
Keyboard (BR)	207683-201	311
Logo Kit	212595-001	All, CTO
LVDS Board	202951-001	212, 222, 223, 303, 307, 310, 311, 312, 314, 320, 323, 325, 330, CTO
Memory (S.O. DIMM 32 MB PC100)	122699-001	СТО
Memory (S.O. DIMM 64 MB PC100)	122700-001	СТО
Memory 64 SD 100 MHz (down)	TBD	СТО
Memory 96 SD 100 MHz (64down + 32up)	TBD	СТО
Memory 128 SD 100 MHz (64up + 64down)	TBD	СТО
Memory 192 SD 100 MHz (64down+128up)	TBD	СТО
Miscellaneous Cable Kit	202962-001	All, CTO
Miscellaneous Plastic Kit	159498-001	AII, CTO
Miscellaneous Hardware Kit	159499-001	AII, CTO
Miscellaneous Screw Kit	138161-001	AII, CTO
Modem (K-56K Mini) US	159502-001	2, 201, 204, 205, 212, 223, 220
Modem (K-56K Mini) Intl	159502-002	202, 203, 222
Modem (K-56K Mini) AU	159502-011	205, 212
Modem (K-56K Mini) US	218857-001	3, 301, 304, 305, 310, 311, 312, 314, 320, 323, 325, 326, 327, 330, CTO
Modem (K-56K Mini) Intl	218857-002	302, 303, 307
Modem (K-56K Mini) AU	218857-011	305
Palmrest w/TouchPad & Internet Buttons	202956-001	All, CTO
Processors, Celeron 566MHz 1.5V FC-PGA	201565-001	2, 201, 202, 203, 204, 205, 222, 3, CTO
Processors, Celeron 600 MHz 1.5V FC-PGA	201566-001	220, 223, 301, 302, 303, 304, 305, 307, 310, 326, CTO
Processors, Celeron 633 MHz 1.6V FC-PGA	217844-001	320, 323, 327, CTO
Processors, PIII 600 MHz 256K Cache	159485-001	220
Processors, PIII 650 MHz 256K Cache	175308-001	212, 311, 325, 330



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Spare Part Description	Part Number	Applicable Models
Processors, PIII 700 MHz 256K Cache	221415-001	312, 314, CTO (Available after 11/12/00)
Software (Feature Home Collection CD)	TBD	СТО
Software (Office 2000 Professional CD)	TBD	СТО
Software (Office 2000 SBE CD)	TBD	СТО
Speakers with Enclosure	159494-001	All, CTO
System Board (I/O w/64 MB SDRAM)	202945-001	202, 205, 220
System Board (I/O w/32 MB SDRAM)	202946-001	2, 201, 203, 204
System Board (I/O w/64 MB TFT)	210814-001	212, 222, 223
System Board (I/O w/32 MB DSTN REV: CG-C)	217841-001	3
System Board (I/O w/64 MB DSTN REV: CG-C)	217842-001	301, 302, 304, 326, 327
System Board (I/O w/64 MB TFT REV: CG-C)	217843-001	303, 307, 310, 311, 312, 314, 320, 323, 325, 330
System Board (I/O w/32 MB DSTN & TFT SB)	221414-001	СТО
System Board (I/O w/64 MB DSTN & TFT)	222699-001	СТО
Upper CPU Cover	202958-001	AII, CTO
Voltage Converter 3C Board	352891-001	All, CTO

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