| Home Page | Notice | Preface | Product Description | Troubleshooting
| Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications
| Pin Assignments | Battery Pack Operations

Models and Features

Controls and Lights

Internet

Zone

Buttons and

Lights

Front Bezel
Components

<u>Left Side</u>

Components

Right Side

Components

Bottom of

<u>Unit</u>

Back

Connectors

Port

Replicator

Components

Port

Replicator

Connectors

Power

Management

for Windows

<u>98</u>



Welcome to the **Presario 1800 Series Maintenance and Service Guide**. This online guide is designed to serve the needs of those whose job it is to repair Compaq products. The <u>Notice</u> contains the copyright and trademark information. The <u>Preface</u> shows symbol conventions, Technician Notes and Serial Number locations on the unit.

This MSG will be periodically maintained and updated online as needed. For content comments or questions, contact Tech Support..

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

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| Home Page | Notice | Preface | Product Description |
Troubleshooting
| Illustrated Parts Catalog | Removal & Replacement Procedures |
Specifications
Pin Assignments | Battery Pack Operations

Notice

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Maintenance and Service Guide

Compaq Presario 1800 Series Portable Computer

First Edition (August 1999)
Compaq Computer Corporation

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Preface

This *Maintenance and Service Guide* is a troubleshooting guide that can be used for reference when servicing the Compaq Presario 1800 Series Portable Computers.

Compaq Computer Corporation reserves the right to make changes to the Compaq Presario 1800 Series Portable Computers without notice.

Symbols

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



WARNING: Text set off in this manner indicates that 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 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.



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 repairs 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, the computer serial number should be provided to Compaq. The serial number is located on the bottom of the computer.

Locating Additional Information

The following documentation is available to support this product:

- Compaq Presario 1800 Series Portable Computer documentation set
- Introducing Windows 98 Guide
- Service Training Guides
- Compaq Service Advisories and Bulletins
- Compaq QuickFind
- Compaq Service Quick Reference Guide

Home Page | Notice | Preface | Product Description | Troubleshooting
Illustrated Parts Catalog | Removal & Replacement Procedures |
Specifications

Pin Assignments | **Battery Pack Operations**

Product Description

Models and Features

Controls and

Lights

Internet

Zone

Buttons and

Lights

Front Bezel

Components

Left Side

Components

Right Side

Components

Bottom of

Unit

Back

Connectors

Port

Replicator

Components

Port

Replicator

Connectors

Power

Management

for Windows

98



Compag Presario 1800 Series **Portable Computers** are a new generation of multimedia portable computers with a thin and lightweight design, outstanding audio and video. advanced core features. and attractive styling.

The 1800T Series allows configure-toorder (CTO) accessibility, providing a range of outstanding and innovative features and components.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Troubleshooting

Preliminary

Steps

Clearing the

Power-On

Password

Power-On Self

Test (POST)

Compaq

Diagnostics

Diagnostic Error

Codes

Troubleshooting

Without

Diagnostics

Solving Minor

Problems

Contacting

Compaq Support This section covers troubleshooting information for the Compaq Presario 1800 Series Portable Computers. The basic steps in troubleshooting include:

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

When following the recommended actions in the Sections on <u>POST</u> and <u>Diagnostic Error Codes</u> perform them in the order listed. Rerun POST after each recommended action until the problem is solved and no error message occurs. Once the problem is solved, do not complete the remaining recommended actions.

NOTE:

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

| Home Page | Notice | Preface | Product Description |
Troubleshooting

Illustrated Parts Catalog | Removal & Replacement Procedures |
Specifications
Pin Assignments | Battery Pack Operations

Illustrated Parts Catalog

System Unit
Boards
Display

Assembly

Mass Storage
Devices

Miscellaneous

Cable Kit

Miscellaneous

<u>Hardware Kit</u>

Miscellaneous

Plastics Kit

Miscellaneous

Parts

Documentation

and Software

This section provides a breakdown of spare parts and identifies the spare part ordering number associated with each item for Compaq Presario 1800 Series Portable Computers.

| Home Page | Notice | Preface | Product Description | Troubleshooting
| Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications
| Pin Assignments | Battery Pack Operations

Removal and Replacement Procedures

This section explains the removal and replacement procedures for the computer.

Serial Number Location

Removal Sequence

Electrostatic
Discharge

Service

Considerations

Cables and Connectors

Preparing the

Computer for Disassembly

Battery Pack

Palmrest

Cover with

TouchPad

Keyboard

Status Panel

<u>Internet</u>

Button Board

Heatspreader

Network

Interface Card

Modem

Hard Drive

DisqPlay

Module

Processor

DVD or CD Drive

Display Panel

Assembly

Upper CPU

Cover

Fan Assembly

Diskette Drive

Battery

Charger Board

Speaker

Assembly

System Board

Memory Module



Report the computer serial number 1 to Compaq when requesting information or ordering spare parts. The serial number is located on the underside of the computer.

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications Pin Assignments | Battery Pack Operations Specifications This section covers the following specifications of Compaq Presario 1800 Series Portable Computers:

Physical and Environmental

System Interrupts

System I/O Address

DVD or CD drive

Battery Pack

System Memory Catalog

System DMA

• <u>Display</u>

 Memory Expansion Diskette or LS120 Drive Hard Drive

U.S.

1.65 in

13.00 in

10.99 in

7.9 lbs

Li-ion 3.2 mAh

W @ 14.8 V

W @ 14.8 V

W @ 14.8 V

100-240 V

47-63 Hz

0.8/0.4 A RMS

1kV for 50 ns

50° to 95 °F

90%

5% to 95%

0 to 10,000 ft

0 to 30,000 ft

0.5 G

1.5 G

System Function

Printer Port (LPT1)

Available

Available

System timer

10 G, 11 ms, half sine

240 G, 2 ms, half sine

System Interrupts

Programmable interrupt controller

Lucent 56K V.90 PCI DF Modem

Communications Port (COM1)

RAGE LT PRO AGP 2X (English)

Standard Floppy Disk Controller

System CMOS/real time clock

Synaptics PS/2 TouchPad

Numeric Data Processor

System I/O Address

System timer

System speaker

Keyboard

Keyboard

controller

controller

Controller

Controller

PCI bus

controller

Controller

Controller

Controller

Gameport Joystick

Direct memory access controller

System CMOS/real time clock

Programmable interrupt controller

Intel 82371AB/EB PCI Bus Master IDE

Intel 82371AB/EB PCI Bus Master IDE

Intel 82371AB/EB PCI Bus Master IDE

Secondary IDE controller (dual fifo)

Secondary IDE controller (dual fifo)

Primary IDE controller (dual fifo)

ESS SOLO-1 DOS Emulation

ESS SOLO-1 DOS Emulation

ESS SOLO-1 DOS Emulation

RAGE LT PRO AGP 2X (English)

RAGE LT PRO AGP 2X (English)

Standard Floppy Disk Controller

Primary IDE controller (dual fifo)

Standard Floppy Disk Controller

Communications Port (COM1)

RAGE LT PRO AGP 2X (English)

ESS SOLO-1 PCI AudioDrive

ESS SOLO-1 PCI AudioDrive

ESS SOLO-1 PCI AudioDrive

ESS SOLO-1 PCI AudioDrive

Lucent 56K V.90 PCI DF Modem

Lucent 56K V.90 PCI DF Modem

Primary IDE controller (dual fifo)

Intel 822371AB/EB PCI Bus Master IDE

Intel 82371AB/EB PCI to USB Universal Host

System Memory Catalog

System board extension for PnP BIOS

System board extension for PnP BIOS

System board extension for PnP BIOS

Texas Instruments PCI-1211 CardBus Controller

Intel 82443BX Pentium ® ll Processor to PCI

Intel 82443BX Pentium ® ll Processor to AGP

Intel 21143/2 based 10/100 mbps Ethernet

Metric

24.05 cm

31.55 cm

22.81 cm

30.41 cm

available

690 gm

Metric

22.65 cm

29.85 cm

21.43 cm

28.57 cm

available

565 gm

Total Memory

LS120 Drive

120 MB

3.5"

1

1

720

5458

512

20

112

800

1736

2

10.0-GB

10.0-GB

11968

512

14

24

190/330

33.3 MB/s

41.67

18.0-GB

18.0-GB

16383

512

Not available

2.5 (Read)

12 (Read)

23 (Read)

33.3 MB/s

24x CD-ROM

< 0.27 kg

4225 rpm

 $3600 \, \text{KB/s}$

120 ms

 $2.7 \mathrm{s}$

128 KB

128 x 129 x 12.7 mm

64-MB

96-MB

128-MB

192-MB

Information not

Information not

RAGE LT PRO AGP 2X (English)

RAGE LT PRO AGP 2X (English)

RAGE LT PRO AGP 2X (English)

RAGE LT PRO AGP2X (English)

RAGE LT PRO AGP 2X (English)

RAGE LT PRO AGP 2X (English)

Lucent 56K V.90 PCI DF Modem

Motherboard resources

15.0" (Diagonal) TFT Display with LVDS

U.S.

9.48 in

8.99 in

Information not available

Information not available

11.98 in

24.36 oz

14.1" (Diagonal) TFT Display with LVDS

Memory Expansion

Expansion Board

Memory

32-MB

64-MB

128-MB

150:1 mini

U.S.

8.92 in

8.44 in

Information not

11.26 in

available

19.94 oz

150:1 mini

Diskette Drive

1.44 MB/720KB

3.5"

0

1

300

500

512

18/9

3

94

15

100

80

2

Hard Drive

6.4-GB

6.4-GB

8647

512

14

24

CD/DVD Drive

Battery Pack

190/330

33.3 MB/s

6x DVD

0.28 kg

3450 rpm

8100 KB/s

140 ms

< 15 s

512 KB

Lithium Ion (Li ion) *

0.8 in (20.3 mm)

5.7 in (145 mm)

3.1 in (78.7 mm)

0.90 lb (408.2 g)

2 hr 30 min*

14.4 V

*The battery operating time changes depending on your power management settings, system

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3200 mAH

32° F (0-50° C)

-20° C -60° C 5° C-45° C

46.1 WH

128 x 129 x 12.7 mm | 128 x 129 x 12.7mm

4.8-GB

4.8-GB

11648

512

14

24

190/330

33.3 MB/s

4x DVD

0.27 kg

2300 rpm

5400 KB/s

140 ms

3.8 s

128 KB

80

120 cd/mm³

Information not available

11.76 in

120 cd/mm³

12.43 in

Motherboard resources

bridge

Controller

System Function

Secondary IDE controller (dual fifo)

ESS SOLO-1 PCI AudioDrive

Motherboard resource

Motherboard resources

Motherboard resources

Intel 82371AB/EB PCI Bus Master IDE

Intel 82443BX Pentium ® II Processor to AGP

Intel 21143/2 based 10/100 mbps Ethernet

ECP Printer Port (LPT1)

Motherboard resources

Direct memory access Controller

Motherboard resources

Motherboard resources

Motherboard resources

Numeric data processor

Direct memory controller

Programmable interrupt Controller`

ESS SOLO-1 PCI AudioDrive

Standard 101/102-key or Microsoft Natural Keyboard

Intel 21143/2 based 10/100 mbps Ethernet Controller

Intel 82371AB/EB PCI to USB Universal Host Controller

Intel 82371AB/EB PCI Bus Master Primary IDE Controller

Intel 82371AB/EB PCI Bus Master Secondary IDE Controller

Texas Instruments PCI-1211 CardBus Controller

System DMA

System Function

ESS SOLO-1 DOS Emulation

ECP Printer Port (LPT1)

System Function (Shipping Configuration)

Standard 101/102-Key or Microsoft Natural

Standard 101/102-Key or Microsoft Natural

Standard Floppy Disk Controller

Direct memory access controller

-4° to 140 °F

Meets IEC 801-4 and IEC801-5

Metric

4.20 cm

33.00 cm

27.90 cm

3.58 kg

10° to 35 °C

10% to 90%

5% to 95%

0 to 3.05 km

0 to 9.14 km

-20° to 60 °C

Maintenance & Service Guide

Presario 1800 Series

Models: 1825 and 1800T

| Home Page | Notice | Preface | Product Description | Troubleshooting

- **Physical and Environmental**
- **Computer Specifications** Dimensions
- Height Depth Width
- Weight
- Stand-Alone (Battery Pack) Power
- Requirements **Nominal Operating**
- Maximum Average **Peak Operating AC Power Requirements**
- **Operating Voltage Operating Current Operating Frequency**
- Maximum Transient
- Temperature
- Operating Nonoperating
- **Relative Humidity (noncondensing)** Operating
- Nonoperating (tw = 38.7° C max)
- Altitude Operating
- Nonoperating
- Shock Operating
- Non operating Vibration
- Operating
- Nonoperating **NOTE:** Applicable product safety standards specify thermal limits for plastic surfaces. Compaq Explorer Series Portable Computers operate well within this range of temperatures.

IRQ0

IRQ1

IRQ2

IRQ3

IRQ4

IRQ5

IRQ5

IRQ6

IRQ7

IRQ8

IRQ9

IRQ10

IRQ11

IRQ11

IRQ11

IRQ12

IRQ13

IRQ14

IRQ15

Hardware DMA

DMA 1

DMA 2

DMA 3

DMA 4

System I/O Address

I/O Address (Hex)

0000h-000Fh

0020h-0021h

0040h-0043h

0060h-0060h

0061h-0061h

0064h-0064h

0070h-0071h

0072h-0073h

0080h-0080h

0081h-008Fh

00A0h-00A1h

00C0h-00DFh

00ECh-00EFh

00F0h-00FFh

0170h-0177h

Top of Page

- Top of Page **System Interrupts Hardware IRQ**

- Top of Page System DMA

0170h-0177h
01F0h-01F7h
01F0h-01F7h
0200h-0203h
0220h-022Fh
0330h-0331h
0376h-0376h

0376h-0376h

0378h-037Fh

0388h-038Bh

03B0h-03BBh

03C0h-03Dfh

03E0h-03E1h

03F0h-03F5h

03F6h-03F6h

03F6h-03F6h

03F7h-03F7h

03F8h-03FFh

04D0h-04D1h

OCF8h-OCFFh

2180h-218Fh

8000h-803Fh

E000h-EFFFh

E800h-E8FFh

F4D8h-F4DBh

F4DCh-F4DFh

F4E0h-F4Efh

F4F0h-F4FFh

F800h-F8FFh

FC00h-FC7Fh

FC88h-FC8Fh

FC90h-FC97h

FC90h-FC9Fh

FC98h-FC9F

FCA0h-FCBFh

FCC0h-FCFFh

System Memory Catalog

Memory Address

00000000h-0009FFFFh

000A0000h-000AFFFFh

000B0000h-000BFFFFh

000C0000h-000CBFFFh

000E0000h-000E7FFh

000E8000h-000FFFFFh

00100000h-03FFFFFh

08000000h-08000FFFh

F8000000h-FBFFFFFh

FD000000h-FDFFFFFh

FD000000h-FECFFFFh

FE000000h-FE01FFFh

FECFE000h-FECFFFFh

FEDFF800h-FEDFFBFFh

FEDFFC00h-FEDFFCFFh

FFF80000h-FFFFFFFh

Display Dimensions

Dimensions

Height

Width

Depth

Contrast Ratio

Total Power Consumption

Display Dimensions

Total Power Consumption

Brightness

Dimensions

Height

Width

Depth

Contrast Ratio

Brightness

Height Width

Weight

Memory Expansion

64-MB

64-MB

64-MB

64-MB

System Memory

Diskette or LS120 Drive

Diskette Size

Capacity per Diskette (High/Low)

Number of Drives Supported

Sectors per Track (High/Low)

Tracks per Side (High/Low)

Drive Rotation (rpm)

Transfer Rate (Kbps)

Bytes per Sector

Access Times

Average (ms)

Top of Page

Hard Drive

Track-to-Track (ms)

Setting Time (ms)

Capacity Per Drive

Sectors per track

Bytes per sector

Seek Times

Single track

Average

Top of Page

Full stroke

CD/DVD Drive

Dimensions

Access Time

Spin Up time

Rotational Speed

Typical Transfer Rate

Sustained Data Transfer

Average Random Access

Data Buffer Capacity

Battery Pack Operating Time

Environmental Requirements

components, options, and applications you use.

Operating Temperature

Charging Temperature

Non-operating Temperature

Nominal Open Circuit Voltage

Weight

Rate

Time

Top of Page

Battery Pack

Dimensions

Height

Length

Weight

Energy

Capacity

Top of Page

Power

Width

Logical Configuration

(Typical, Including settling in ms)

Transfer Rate At Interface

Drive Type

Cylinders Heads

Latency Average (ms)

Cylinders (High/Low)

Number of Read/Write Heads

Number of LED Indicators (Read/Write)

Top of Page

Height

Width

Weight

Top of Page

Display

Top of Page

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Connector Pin Assignments

This section provides connector pin assignment tables for Compaq Presario 1800 Series Portable Computers. For more information on connectors, refer to the sections on Back Connectors and <a href="Portable-Po

Parallel Connector

indicated by an asterisk (*).

NOTE: The signals in all tables of this appendix are considered active high unless otherwise

	\ @@	0000000 000000000000000000000000000000	90000	
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	
* = Activ	ve low	·		

Serial Connector

Pin

1

Signal

Carrier Detect

Connector

(12346) 6789	2 3 4 5 6 7 8 9	Receive Data Transmit Data Data Terminal Ready Signal Ground Data Set Ready Ready to Send Clear to Send Ring Indicator
	Keyboard/	/Mouse
Connector	Pin	Signal
	1	Data 1
	2	Data 2
	3	Ground
	4	+ 5 V
	5	Clock 1
	6	Clock 2
Top of Page		

External VGA Monitor

Pin

2

3

4

5

6

Signal

Red Analog

Green Analog

Blue Analog

Ground

Ground

Signal

Unused

Tip

Ring

Unused

Unused

Signal

+ 5V

SWA

RBTA

GND

GND

RBTB

SWB

+ 5V

+ 5V

Not connected

Ground Analog

Connector

	7	Ground Analog
	8	Ground Analog
	9	+ 5V
	10	Ground
	11	Monitor Detect
	12	DDC2B Data
	13	Horizontal Sync
	14	Vertical Sync
	15	DDC2B Clock
Top of Page		
Un	iversal Serial	Bus
Connector	Pin	Signal
	1	+ 5V
	2	Data -
1 2 3 4	3	Data +

4

Pin

2

3

4

5

Modem

 $1^23^45^6$

070000320 0900000

Connector

Top of Page

	TV Ou	t	
Connector	Pin	Signal	
	1	Ground	
$((\))$	2	Composite	
	3	Ground	

Pin

1

2

3

4

5

6

8

Connector

	10	SWC	
	11	RBTC	
	12	RMSO	
	13	RBTD	
	14	SWD	
	15	RMSI	
Top of Page	~ · · · ·		
	S Video		
Connector	Pin	Signal	
(3 - 4)	Pin 1	Ground	
	Pin		
(3 (4)	Pin 1	Ground	
(3 (4)	Pin	Ground Ground	
(3 (4)	Pin 1 2 3	Ground Ground SYR	

<u>р</u> с	of Page				<u>SCG</u>		
ort]	Replicator Connecto	r					
Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
	Adapter Power	21	Serial Port CTS	41	Not Connected	61	Switch C
2	Adapter Power	22	Serial Port DCD	42	Power Cycle	62	Switch D
3	Adapter Power	23	Serial Port DSR	43	Keyboard Clock	63	MIDI Input
1	Adapter Power	24	Serial Port TXD	44	Keyboard Data	64	MIDI Output
5	Adapter Power	25	Serial Port RTS	45	Mouse Clock	65	Not Connected
	Adapter Power	26	Monitor DDC	46	Mouse Data	66	USB Power
•	Not Connected	27	Monitor DDC	47	Lp Select	67	USB Power
3	Printer Data 0	28	Monitor Indicator	48	Lp Paper End	68	USB Power
	Printer Data 1	29	V. SYNC	49	Lp Initialize	69	USB Power
0	Printer Data 2	30	Ground	50	Lp Busy	70	USB A-
1	Printer Data 3	31	H.SYNC	51	Lp Error	71	USB A+
2	Printer Data 4	32	Ground	52	Lp Acknowledge	72	USB B-
3	Printer Data 5	33	Blue	53	Lp AutoFeed	73	USB B+
4	Printer Data 6	34	Ground	54	Lp Strobe	74	5V
5	Printer Data 7	35	Green	55	Joystick Data A	75	5V
6	Lp Indicator	36	Ground	56	Joystick Data B	76	Not Connected
	Port Replicator Dock Indicator	37	Red	57	Joystick Data C	77	S-Video SYR
8	Serial Port RXD	38	Ground	58	Joystick Data D	78	Ground
9	Serial Port RI	39	Composite TV Out	59	Switch A	79	S-Video SCG
20	Serial Port DTR	40	Not Connected	60	Switch B	80	Ground

Maintenance & Service Guide Presario 1800 Series

Models: 1825 and 1800T

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> **Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications Pin Assignments | Battery Pack Operations**

Battery Pack Operations

This appendix covers the following information concerning battery pack operating time:

- Increasing battery pack operating time
- Conditioning a battery pack
- Disposing of a used battery pack

Increasing Battery Pack Operating Time

Battery pack operating time differs depending on several variables. To avoid unnecessary replacement, consider the following variables when determining how long a charged battery pack should last:

- Power management settings
- Hardware configuration
- Software applications
- Installed options
- Display brightness
- Hard drive usage
- Changes in operating temperature
- Type and number of installed PC Cards

The power consumption requirements for PC Cards vary widely. Some cards drain the battery pack

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

Minimizing the Energy Required

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

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

Maximizing the Energy Stored

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

- Condition the battery pack at least every 30 days to improve overall battery performance.
- Keep a battery pack in the computer 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.

Top of Page

Conditioning a Battery Pack



CAUTION: To avoid a loss of data, ensure that all data is saved before 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 battery charging status icon turns off. Your battery gauge may show four bars (and Windows may report 100%) before the battery charging status icon turns off. Do not unplug the AC adapter until the battery charging status icon disappears.
- 2. Unplug the AC adapter and allow the battery to drain until the computer reaches hibernation and turns itself off. Do not plug in the AC adapter during this process or you will need to restart with Step 1. You may use the computer while the battery is draining.
- 3. Plug in the AC adapter and begin using the computer.

The table below shows the approximate battery pack charge times.

Approximate Battery Charge Time		
Computer	On Line	Off Line
Li ion Battery Pack	4.5 hours	2:50 hrs

Top of Page

Disposing of a Used Battery Pack

In the interest 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.



CAUTION: Never attempt to open or service a battery pack. Opening a battery pack not only damages the pack and makes it unusable, but also exposes potentially harmful battery components.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | **Battery Pack Operations**

Models and Features

Modem

Networking

System Memory

odels and	Compaq Pres	sario 1800 Series Portable Computer Models
eatures eatures		Model 1825
ontrols and	Display	15.0" TFT
<u>ghts</u>	Processor	Pentium II/366-MHz w/256 Cache
<u>[nternet</u>	Hard Drive	6.4-GB
<u>one</u>	CD or DVD Drive	4x DVD Drive
uttons and ghts	Diskette Drive	3.5" Floppy Drive
	Modem	56.0 Kbps Data/Fax with PCI
ont Bezel omponents	Networking	10/100TX Integrated Ethernet
	Battery	sLi ion
eft Side omponents	System Memory	64 MB
_		
ght Side omponents		Model 1800T CTO (Configure to Order)
ottom of	Display	
Jnit Back Connectors Port Replicator Components	Processor	
ort eplicator onnectors ower	Hard Drive	
lanagement or Windows 8	CD or DVD Drive	
	Diskette Drive	

56.0 Kbps Data/Fax with PCI

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10/100TX Integrated Ethernet

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | **Battery Pack Operations**

Product Description

Models and Features

Controls and Lights

<u>Internet</u>

Zone

Buttons and

Lights

Front Bezel

Components

<u>Left Side</u>

Components

Right Side Components

Bottom of

Unit

Back Connectors

Port

<u>Replicator</u>

Components

Port

Replicator

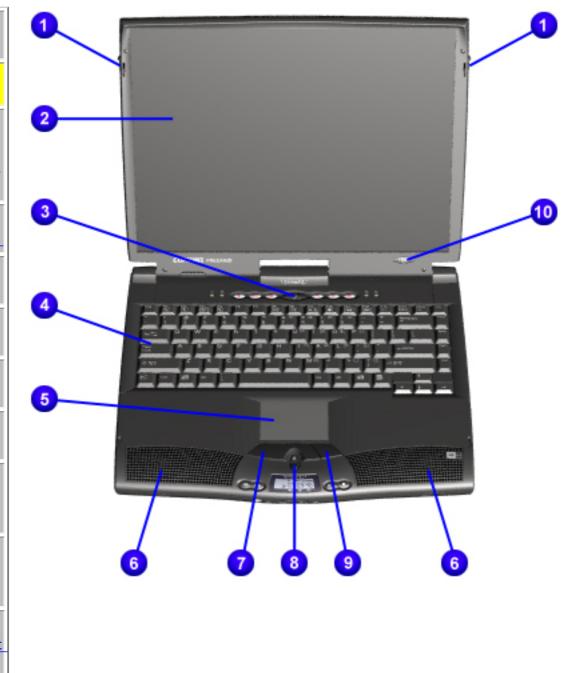
Connectors

Power

Management

for Windows

98



Controls and Lights

- **1.** Display Release Latch
- **2.** Display
- 3. Power (On/Off)
 Button
- **4**.

Keyboard

- **5**. Touch Pad
- 6.

Integrated Speakers

- 7. Touch
 Pad
 Button
 (Left)
- 8. Scroll Up/Down Button
- 9. Touch Pad Button (Right)
- 10. Model Number

| Home Page | Notice | Preface | Product Description | Troubleshooting **Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications**

Pin Assignments | Battery Pack Operations

Product Description

Models and Features

Controls and Lights

Internet Zone **Buttons and Lights**

Front Bezel Components

Left Side

Components

Right Side Components

Bottom of

Unit

Back

Connectors

Port

Replicator

Components

Port

Replicator

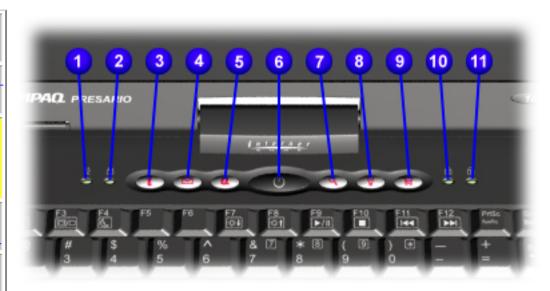
Connectors

Power

Management

for Windows

98



Internet Zone **Buttons and** Lights

- 1. AC Adapter Light
- 2. Cap Lock Light
- 3. Instant Internet Access Button
- 4. Instant E-Mail Button
- **5**. My Presario Instant Access Button
- **6**. Power Button
- 7. Instant Search Button
- 8. Online Marketplace Button (US/Puerto Rico), Instant Answer Button (countries outside the US)
- **9**. Retail Central Button (US/Puerto Rico), Instant E-Commerce Button (countries outside the US)
- 10. Num Lock Light
- 11. Scroll Lock Light

Home Page | Notice | Preface | Product Description | Troubleshooting

Illustrated Parts Catalog | Removal & Replacement Procedures |

Specifications

Pin Assignments | **Battery Pack Operations**

Product Description

Models and Features

Controls and Lights

<u>Internet</u>

Zone Buttons and

<u>Lights</u>

Front Bezel Components

<u>Left Side</u> Components

Right Side Components

Bottom of Unit

Back

Connectors

Port

Replicator

Components

Port

Replicator

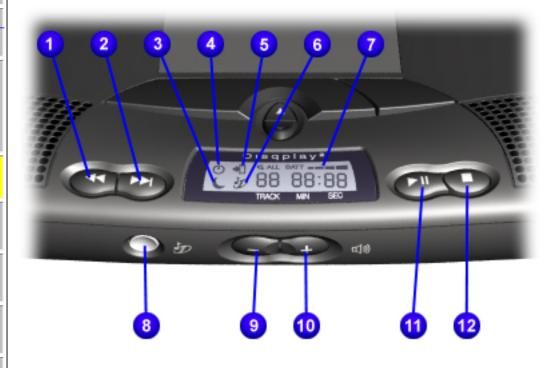
Connectors

Power

Management

for Windows

98



Front Bezel Components

- 1. Previous
 Track Button
- **2**. Next Track Button
- 3. Sleep Status
- **4**. Power Status Icon
- **5**. Battery Charging Status Icon
- **6.** DisqPlay Status Icon
- **7.** Battery Gauge
- **8**. DisqPlay On/Off Button
- **9.** Volume Down Button
- **10**.Volume Up Button
- 11. Play/Pause Button
- **12**. Stop Button

Home Page | Notice | Preface | Product Description | Troubleshooting

Illustrated Parts Catalog | Removal & Replacement Procedures |

Specifications

Pin Assignments | **Battery Pack Operations**

Product Description

Models and Features

Controls and

Lights

Internet

Zone

Buttons and

<u>Lights</u>

Front Bezel

Components

Left Side Components

Right Side

Components

Bottom of

<u>Unit</u>

Back

Connectors

Port

Replicator

Components

Port

Replicator

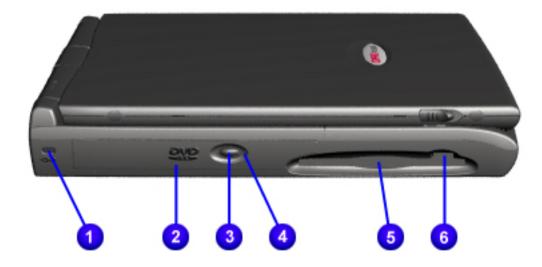
Connectors

Power

Management

<u>for Windows</u>

98



Left Side Components with Diskette Drive

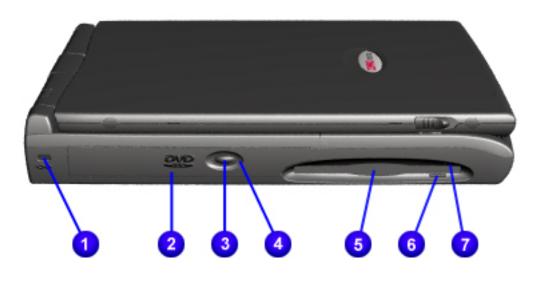
- 1. Security Slot
- 2. CD or DVD Drive
- **3**. CD or DVD Drive Eject Button
- **4**. CD or DVD Drive Manual Eject Hole
- **5.** Diskette Drive
- **6.** Diskette Drive Eject Button

Left Side
Components with
LS120 Drive

Home Page | Notice | Preface | Product Description | Troubleshooting
Illustrated Parts Catalog | Removal & Replacement Procedures |
Specifications

Pin Assignments | **Battery Pack Operations**

Product Description



Left Side Components with LS120 Drive

- 1. Security Slot
- **2**. CD or DVD Drive
- **3**. CD or DVD Drive Eject Button
- **4.** CD or DVD Drive Manual Eject Hole
- **5.** LS120 Drive
- **6.** LS120 Drive Eject Button
- **7**. LS120 Drive Manual Eject Hole

Back to Left Side Components with

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Product Description

Models and Features

Controls and

Lights

Internet

Zone

Buttons and

Lights

Front Bezel

Components

Left Side

Components

Right Side Components

Bottom of

Unit

Back

Connectors

Port

Replicator

Components

Port

Replicator

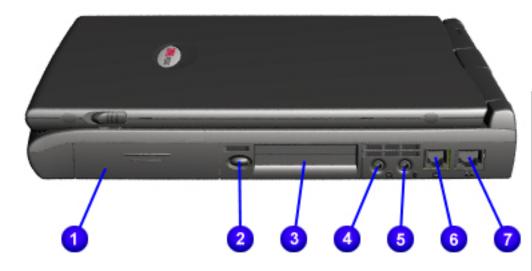
Connectors

Power

Management

for Windows

98



Right Side Components

- **1.** Battery Compartment
- **2.** PC Card Eject Button
- 3. PC Card Slot
- **4.** Headphone Jack
- **5.** Microphone Jack
- **6.** Modem Port
- 7. Ethernet Port

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Product Description

Models and Features

Controls and Lights

<u>Internet</u>

Zone

Buttons and

Lights

Front Bezel

Components

Left Side

Components

Right Side

Components

Bottom of Unit

Back

Connectors

Port

Replicator

Components

Port

Replicator

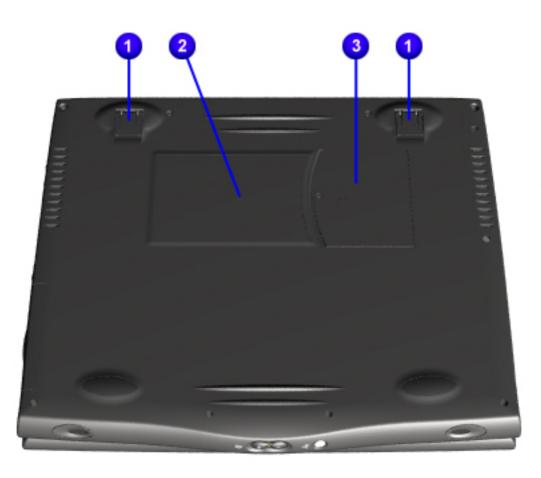
Connectors

Power

Management

for Windows

98



Bottom of Unit

- 1. Stand Feet
- **2.** Serial Number
- **3.** Memory Compartment Door

| Home Page | Notice | Preface | Product Description | Troubleshooting
| Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications
| Pin Assignments | Battery Pack Operations

Product Description

Models and Features

Controls and Lights

<u>Internet</u>

Zone

Buttons and Lights

Front Bezel

Components

Left Side Components

Right Side Components

Bottom of Unit

Back Connectors

Port

Replicator

Components

Port

Replicator

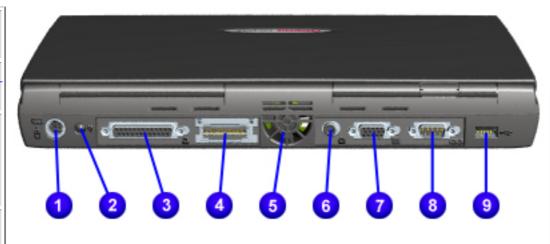
Connectors

Power

Management

for Windows

<u>98</u>



Back Connectors

- 1. Keyboard/Mouse Port
- **2.** AC Adapter Connector
- 3. Parallel Port
- **4**. Port Replicator Connector
- **5**. Fan Vent
- **6**. TV Out Connector
- **7**. External Monitor Port
- 8. Serial Port
- **9.** Universal Serial Bus Port

| Home Page | Notice | Preface | Product Description | Troubleshooting
| Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications
| Pin Assignments | Battery Pack Operations

Product Description

Models and Features

Controls and

Lights

<u>Internet</u>

Zone

Buttons and

Lights

Front Bezel

Components

Left Side

Components

Right Side

Components

Bottom of

Unit

Back

Connectors

Port

Replicator

Components

Port

Replicator

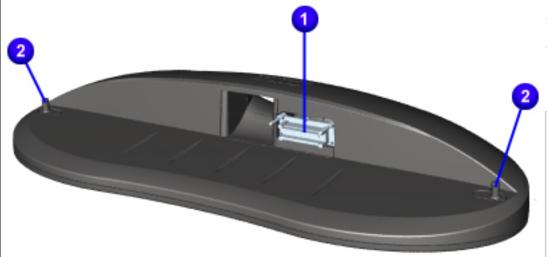
Connectors

Power

Management

for Windows

98



Port
Replicator
Components

1. Port
Replicator
Interface
Connector

2. Port Replicator Guide Posts

| Home Page | Notice | Preface | Product Description | Troubleshooting | Illustrated Parts Catalog | Removal & Replacement Procedures | | Specifications

Pin Assignments | Battery Pack Operations

Product Description

Models and Features

Controls and Lights

<u>Internet</u>

Zone

Buttons and

<u>Lights</u>

Front Bezel

Components

Left Side

Components

Right Side

Components

Bottom of

Unit

Back

Connectors

Port

Replicator

Components

Port

Replicator

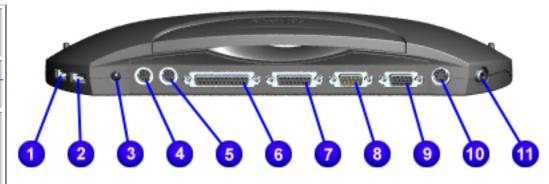
Connectors

<u>Power</u>

Management

for Windows

98



Port
Replicator
Back
Connectors

- 1. Universal Serial Bus Port
- 2. Universal Serial Bus Port
- **3**. Power (AC Adapter) Connector
- **4.** Keyboard/Mouse Port
- **5**. Keyboard/Mouse Port
- **6.** Parallel Port
- 7. Game Port
- 8. Serial Port
- **9.** External Monitor Port
- **10**. S Video
- **11**. (Composite) TV Out

| Home Page | Notice | Preface | Product Description | Troubleshooting **Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications Pin Assignments | Battery Pack Operations**

The following power management features are available for conserving AC power and extending battery operating time:

Power Management for Windows 98

• Hibernation Mode

Power Management Settings

- Sleep Mode
- Battery Operating Time
- Rebooting After a Lockup Recovering From a Loss of Electrical Power
- Servicing the Computer Full Off Mode
- **Power Management Settings**
- Differing patterns of computer use determine the level of power management. These different power management levels

can be activated based on the amount of time passed since the last system activity. System activity examples include

keyboard or mouse movement, DVD/CD playback (while under program control that monitors Sleep), and modem use. Select different power settings or schemes through Power Management. The optional settings are **Home/Office Desk**, **Portable/Laptop**, and **Always On**. Change the following settings from the default settings:

• when the computer goes into Sleep (Standby) mode when the screen times out and goes blank • when the hard drive goes into low power mode.

- Each of these system components sleeps after the selected or default periods of inactivity. (The setting for hard drive must be less than or equal to the setting for System.)

 - **IMPORTANT:** If the computer is on a network, Compag recommends **System Standby** be set to **Never**.

listed below in the tables.

There are five categories of power management settings under the Control Panel. The default setting for each feature is

Power Management Properties

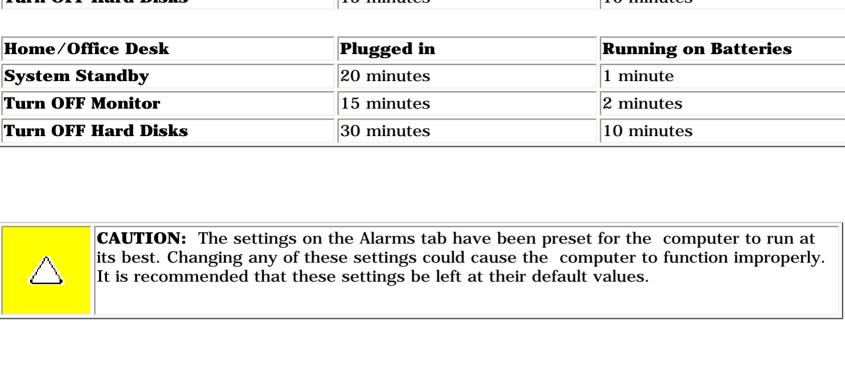
Running on Batteries

5 minutes

Turn OFF Monitor 15 minutes 2 minutes **Turn OFF Hard Disks** 1 hour 3 minutes Portable/Laptop Plugged in Running on Batteries System Standby Never 15 minutes **Turn OFF Monitor** 3 hours Never Turn OFF Hard Disks 15 minutes 10 minutes Plugged in Running on Batteries 20 minutes 1 minute **Turn OFF Monitor** 15 minutes 2 minutes Turn OFF Hard Disks 30 minutes 10 minutes

Plugged in

Never



Power Management Properties

Notification: Text

Compaq Presario 1800 Series Computers have two levels of power management: **Hibernation** and **Sleep**.

Power Mode: No Action

10%

0%



Low Battery Alarm:

Alarm Actions:

Critical Battery Alarm

clicking the **Start** button, then **Shutdown**, then **Standby**.

click **Standby**.

power.

if using battery power.

enter Sleep mode if on AC

Time-Out Default - 15 minutes

Computer will not automatically

Always on

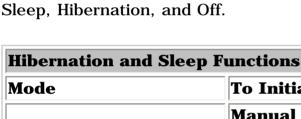
System Standby

Hibernation mode occurs by pressing the **Power** button once. The computer saves the contents of the computer memory to the hard drive. This is followed by the computer turning off.

CAUTION: While in Sleep mode, the computer will maintain system information and open files. Unsaved information will be lost if the computer is turned off prior to system wakeup, or if a power loss occurs while using the AC adapter.

The following table shows the conditions and indicators for getting in and out of the various power management modes,

Sleep mode is a low-power mode, also referred to as Standby mode. It occurs by pressing the **Fn+F4** function key or by



Sleep

To Initiate To End **Indicators** Manual - Fn + F4 keyFlashing **Power** light* combination or click the **Start** button on the Windows Taskbar, Press any key. then point to Shutdown, then

* **Moon** icon appears on status display

(1800 Series only)

1	11-	1	'
	Manual - Press Power Button once		Power light is off, screen is blank*
Hibernate		Press Power Button once	*Power icon does not appear on status display (1800 Series only)
	Time-Out Default - If your battery is low or after 1 hour of Sleep. Computer will not automatically enter Hibernation mode if on AC power.		
Off	Standard - Perform normal Windows shutdown using the Start button on the Windows Taskbar.	Press Power Button once	No Power light (or icon), screen is blank.
	Manual* - Press and hold down the Power button for 4 seconds.		
	*The Manual shutdown mode is not recommended unless the Standard shutdown mode does not work.		
Hibernation Mode			
_	e computer enters Hibernation, it auton		be a routine power-saving event or the result ne content of the computer memory to the
	omatically enter Hibernation mode wher power) has been in Sleep mode for mor		little power left or when the computer Activate Hibernation mode by pressing the
To restart the comput displays a Progress wi		the computer e	nters or wakes from Hibernation mode, it
Top of Page			

Selecting Sleep mode instead of turning off the computer when finished allows the computer to wake up faster than turning it completely off and saves power over the active (On) mode.

Sleep Mode

Rebooting After a Lockup

Top of Page

Top of Page

To reboot the computer (as if from a cold start), when the keyboard is frozen or the screen is locked, press and hold down the **Power** button for at least four seconds, which will cause a manual shutdown. Then, restart it with a single press of the Power button. If it still does not recover, press the Power button and hold for four seconds to shut it down, then remove the battery or unplug the AC power for at least 30 seconds. Reinsert the battery or reconnect AC power and press the

Loss of electrical power will cause the Internet PC to automatically turn off. This may cause loss of data because the

If power surges or sags, the display and status lights may flicker, and the computer may automatically restart. If an

ScanDisk will determine if the improper shutdown caused any errors on the hard disk. These errors may occur if the

improper shutdown occurs, ScanDisk, a Microsoft Windows utility program, will automatically run once power is restored.

Microsoft Windows operating system was not able to properly close all files before the shutdown. If no errors are found, the restart process will continue. If ScanDisk does detect errors, follow the instructions shown to continue the restart process.

Microsoft Windows operating system is not able to properly close all files and programs.

above for properly putting the computer into Off mode, unplug from the outlet, and remove the battery (see battery

The computer must be turned off *completely* when installing or replacing components in the system. Follow the instructions

Activate Sleep mode by pressing **Fn+F4**. Or, click **Start**, select the **Shut Down** option, and click **Standby**.

Recovering From a Loss of Electrical Power

Servicing the Computer - Full Off Mode

section for instruction on removing battery).

• Electrical power service is interrupted.

Power button once to reboot.

Work that was not saved prior to the lockup may be lost.

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

The power cord is accidentally disconnected.

Use of a surge suppressor, line conditioner, or uninterruptible power supply (UPS) may protect the computer from damage caused by power surges or sags. If a power failure occurs or the power cord disconnects while the computer is turned on, turn off the computer until normal

Top of Page **Battery Operating Time**

service has been restored. ScanDisk may run to check the hard disk for errors caused by the improper shutdown the next

 Power conservation settings Hardware configuration

Battery operating time is affected by variables such as the following:

time the computer turns on.

- Software applications
- Installed options
- Display brightness
 - Hard drive usage
- Changes in operating temperature Type and number of installed PC Cards

For more information on increasing battery pack operating time, conditioning the battery pack, and disposing of a used

battery pack, refer to the Battery Pack Operations.

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Top of Page

| Home Page | Notice | Preface | Product Description | Troubleshooting **Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications Pin Assignments | Battery Pack Operations**

Preliminary Steps

Before running **POST**, complete the following preliminary steps:

- 1. If a power-on password has been established, type the password and press the **Enter** key. If the password is not known, <u>clear the password.</u>
- 2. Run Computer Checkup.
- 3. Turn off the computer and its external devices.
- 4. Disconnect any external devices that you do not want to test. Do not disconnect the printer if you want to test it or use it to log error messages.



If the problem only occurs when an external device is connected to the computer, **IMPORTANT:** the problem may be related to the external device or its cable. Verify this by running POST with and without the external device connected.

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

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

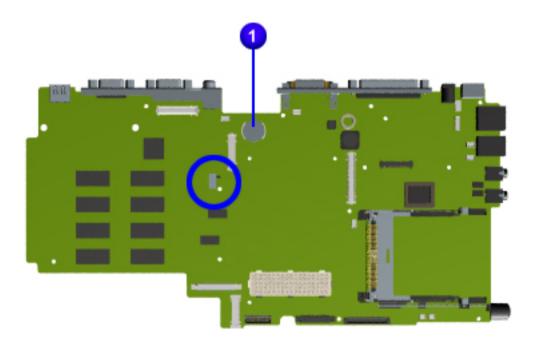
| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

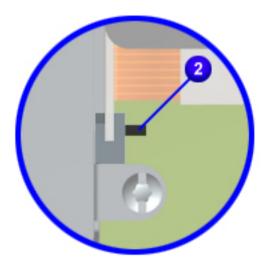
Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | **Battery Pack Operations**

Troubleshooting

Clearing the Power-on Password





Clearing the power-on password requires removing all Setup attributes that are programmed in the CMOS.

The 1 RTC battery is located on the system board directly forward of the fan.

If the password is not known, clear it by performing the following steps:

- 1. Turn off the computer.
- 2. Disconnect the power cord.
- 3. Remove the <u>battery pack</u>.
- 4. Remove the <u>palmrest cover</u> with touchpad.
- 5. Remove the <u>keyboard</u>.
- 6. Remove the <u>heatspreader</u>.
- 7. Slide the black switch toward the front of the computer to clear CMOS. Hold the switch in the forward position for at least 15 seconds to ensure that the password is cleared. The switch is located on the back of the DVD or CD drive in the middle of the system board.
- 8. Reassemble the computer.
- 9. Turn on the computer to verify that the power-on password has been cleared. If it has not been cleared, repeat Steps 1 through 9.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> **Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications Pin Assignments** | **Battery Pack Operations**

Power-On Self Test (POST)

Running POST

To run POST, complete these directions:

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

If POST does not detect any errors, the computer will not beep. This indicates successful completion of the POST test. POST

has run successfully and boots from the hard drive (or from a bootable diskette if one is installed in the diskette drive).

If POST detects errors, the errors are indicated by screen and/or audible messages. Refer to "Power-On Self-Test (POST) Codes" in the tables for a list of POST codes and their relevant descriptions.

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

Power-On Self-Test Messages			
102-System Board Failure			
Probable Cause	Recommended Action		
DMA, timers, etc.	Replace the system board.		
162-Sy	ystem Options Not Set		
Probable Cause	Recommended Action		
Configuration incorrect	Run Computer Setup.		
CMOS reflects that an invalid configuration has been set.	Run Computer Setup.		
RAM failure	1. Replace the memory modules.		
	2. Replace the system board.		
Memory test data error	1. Replace the memory modules.		
	2. Replace the system board.		
XX000YZZ RAM failure	Replace the system board.		

YY00	OOYZZ 201-Memory Error
Probable Cause	Recommended Action
1 Tobuble eduse	1. Replace the memory modules.
	in hepatee the memory modules.
	2 Replace the system board.
	301-Keyboard Error
Probable Cause	Recommended Action
Keyboard failure	1. Ensure the keys are not depressed during POST.
	2. Reconnect the keyboard with the computer off.
	3. Replace the keyboard.
	board or System Unit Error
Probable Cause	Recommended Action
Keyboard or system board error	1. Replace the keyboard.
	2. Replace the TouchPad or mouse.
	3. Replace the system board.
601-	Diskette Controller Error
Probable Cause	Recommended Action
Mismatch in drive type or failure in the diskette controller	1. Run Computer Checkup (TEST).
	2. Check and/or replace cables.
	3. Replace the system board.
60	5-Diskette Drive Error
Probable Cause	Recommended Action
Mismatch in drive type	Run Computer Setup.
1780-Pi	rimary Hard Drive 0 Failure
Probable Cause	Recommended Action
Disk 0 failed to respond	1. Run Computer Checkup (TEST).
	2. Replace the hard drive.
Hard drive format error	1. Run Computer Checkup (TEST).
	2. Replace the hard drive.
	2-Hard Drive Controller
Probable Cause	Recommended Action
Hard drive controller failure	1. Run Computer Setup.

Top of Page

2. Replace the hard drive.

Home Page | Notice | Preface | Product Description | Troubleshooting
Illustrated Parts Catalog | Removal & Replacement Procedures |
Specifications

Pin Assignments | **Battery Pack Operations**

Compaq Diagnostics

Compaq Diagnostics is installed on the hard drive of the computer. Run the Diagnostics 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 it is version 10.11 or later.

The Diagnostics menu includes the following utilities:

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

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

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 computer into an external power source. (A low battery condition could interrupt the program.)
- 2. Turn on the external devices that 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 computer. The computer starts from drive A, and the **Diagnostics Welcome** screen appears.
 - 5. Press **Enter** to continue. The **Diagnostics** menu appears.
 - 6. Select Computer Checkup from the **Diagnostics** menu. A **Test Option** menu appears.
- 7. Select **View the Device List** from the **Test Option** menu. A list of the installed Compaq devices appears.
 - 8. If the list of installed devices is correct, select **OK**. The **Test Option** menu appears.

NOTE: If the list is incorrect, ensure that any new devices are installed properly.

- 9. Select one of the following from the **Test Option** menu:
 - Quick Check Diagnostics. Runs a quick, general test on each device with a minimal number of prompts. If errors occur, they display when the testing is complete. You cannot print or save the error messages.
 - Automatic Diagnostics. Runs unattended, maximum testing of each device with minimal prompts. You can choose how many times to run the tests, to stop on errors, or to print or save a log of errors.
 - Prompted Diagnostics. Allows maximum control over testing the devices. You can choose attended or unattended testing, decide to stop on errors, or choose to print or save a log of errors.
- 10. Follow the instructions on the screen as the devices are tested. When testing is complete, the **Test Option** menu appears.
 - 11. Exit the **Test Option** menu.
 - 12. Exit the **Diagnostics** menu.

View System Information (INSPECT)

The View System Information (INSPECT) utility provides information about the computer and installed or connected devices. You can display, print, or save the information.

1. Turn on the external devices that you want to test. Connect the printer if you want to print the

Follow these steps to run View System Information (INSPECT) from the Compaq Diagnostics diskette:

- information.
 - 2. Insert the Compaq Diagnostics diskette in drive A.
- 3. Turn on or restart the computer. The computer starts from drive A, and the **Diagnostics Welcome** screen appears.
 - 4. Press **Enter** to continue. The Diagnostics menu appears.
 - 5. Select **View System Information (INSPECT)** from the **Diagnostics** menu.
 - 6. Select the item you want to view from the following list:

ROM Audio
Keyboard Operating system

System ports System files
System storage Windows files
Craphics

_

System

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

Memory

| Home Page | Notice | Preface | Product Description |
Troubleshooting

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | Battery Pack Operations

Contacting Compaq Support

Obtain the following information before contacting Compaq Reseller Support:

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

Shipping Preparation

To ship the computer, complete the following steps:

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

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 computer.
- 5. Pack the computer with sufficient packing material to protect it. Use the original packing box or similar packaging.

Models: 1825 and 1800T | Home Page | Notice | Preface | Product Description | **Troubleshooting Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications Pin Assignments | Battery Pack Operations**

Maintenance & Service Guide

Presario 1800 Series

Diagnostic error codes occur if the system recognizes a problem while running the Compaq Diagnostic program. These error codes help identify possibly defective subassemblies.

Diagnostic Error Codes

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 has been resolved, do not proceed with the remaining steps.

and Replacement Procedures.

For the removal and replacement of a particular subassembly, see **Removal**

Select error codes by number or type: 101 through 114 **Processor Test**

200 through 215 **Memory Test** 300 through 304 **Keyboard Test** 401 through 403 **Parallel Printer Test**

600 through 699 Diskette or LS120 Drive Test <u>1101</u> Serial Test **Hard Drive Test** 1701 through 1736 501 through 516 Video Test

2402 through 2456 2458 through 2480 3206

Audio Test 8601 through 8602 TouchPad Pointing Device Test

3301 through 6623 **Processor Test Error Codes Error**

Description CPU test failed

DVD or **CD** Test Code 101-xx 102-xx Coprocessor or Weitek Error

Port 61 error

failed

CMOS RAM test failed

CMOS clock test failed

Speaker test failed

Write/Read test failed

Random pattern test failed

Random address test failed

Failed Self-test/Interface Test

Failed Individual Key Test

Failed Keyboard Repeat Test

Printer failed or not connected

Diskette or LS120 ID drive types test

Diskette or LS120 format failed

Diskette or LS120 write, read,

compare test failed

Diskette or LS 120 read test failed

Diskette or LS120 random read test

Diskette or LS120 ID media failed

Diskette or LS120 speed test failed

Diskette or LS120 change line test

Diskette or LS120 drive speed not

Diskette or LS120 drive/media ID

Diskette or LS120 type error

Diskette or LS120 reset controller test

Printer pattern test failed

Address test failed

Noise test failed

Failed ID Test

Failed Port Test

failed

failed

failed

failed

error

failed

failed

* ECC = Error Correction Code

within limits

Serial port test failed

Hard drive format test failed

Hard drive write/read/compare test

Hard drive random seek test failed

Hard drive recalibration test failed

Hard drive park head test failed

Hard drive head select test failed

Hard drive conditional format test

Hard drive power mode test failed

Network preparation test failed

Hard drive ECC* test failed

Drive monitoring test failed

Video controller test failed

Video memory test failed

Video attribute test failed

cell test failed

cell test failed

failed

failed

Video character set test failed

Video 40 x 25 mode test failed

Video 80 x 25 mode 9 x 14 character

Video 80 x 25 mode 8 x 8 character

Video 320 x 200 mode color set 0 test

Video 320 x 200 mode color set 1 test

Video screen memory page test failed

Video 640 x 200 mode test failed

Video gray scale test failed

Video memory test failed

Video attribute test failed

cell test failed

cell test failed

failed

failed

test failed

failed

failed

failed

test failed

test failure

test failed

Video white screen test failed

Video noise pattern test failed

Video character set test failed

Video 80 x 25 mode 9 x 14 character

Video 80 x 25 mode 8 x 8 character

Video 320 x 200 mode color set 0 test

Video 320 x 200 mode color set 1 test

Video screen memory page test failed

Video 640 x 200 mode test failed

Video gray scale test failed

Video white screen test failed

Video noise pattern test failed

ECG/VGC memory test failed

ECG/VGC ROM checksum test failed

ECG/VGC 640 x 200 graphics mode

ECG/VGC 640 x 350 16 color set test

ECG/VGC 640 x 350 64 color set test

ECG/VGC monochrome text mode test

ECG/VGC monochrome graphics mode

320 x 200 graphics (256 color mode)

Advanced VGA Controller test failed

132-column Advanced VGA test failed

640 x 480 graphics test failure

Advanced VGA 256 Color

Advanced VGA BitBLT test

Advanced VGA DAC test

Advanced VGA data path test

Advanced VGA LineDraw test

Audio System Internal Error

DVD or CD drive read test failed

DVD or CD drive seek test failed

Mouse test failed

ID test failed

Read test failed

Controller test failed

Random read test failed

Interface test failed

Audio Test Error Codes

TouchPad/Pointing Device Interface Test Error Codes

DVD or CD Drive Test Error Codes

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Advanced VGA BitBLT test

Hard drive format bad track test failed

Hard drive reset controller test failed

Hard drive controller test failed

Hard drive ready test failed

Hard drive read test failed

CMOS interrupt test failed

Protected mode test failed

Memory machine ID test failed

Memory system ROM checksum failed

103-xx

104-xx

105-xx

106-xx

107-xx

108-xx

109-xx110-xx

113-xx

114-01

200-xx

202-xx

203-xx

204-xx

211-xx 214-xx

215-xx

300-xx

301-xx

302-xx

304-xx

401-xx

402-xx

403-xx

600-xx

601-xx

602-xx

603-xx

604-xx

605-xx

606-xx

609-xx

610-xx

697-xx

698-xx

699 - xx

1101-xx

1701-xx

1702-xx

1703-xx

1704-xx

1705-xx 1706-xx

1707-xx

1708-xx

1709-xx

1710-xx

1715-xx

1716-xx

1717-xx

1719-xx

1724-xx

1736-xx

501-xx

502-xx

503-xx

504-xx

505-xx

506-xx

507-xx

508-xx

509-xx

510-xx 511-xx

512-xx

514-xx

516-xx

2402-xx

2403-xx

2404-xx

2405-xx

2406-xx

2408-xx

2409-xx

2410-xx

2411-xx 2412-xx

2414-xx

2416-xx

2418-xx

2419-xx

2421-xx

2422-xx

2423-xx

2424-xx

2425-xx

2431-xx

2432-xx

2448-xx

2451-xx

2456-xx

2458-xx

2468-xx

2477-xx

2478-xx

2480-xx

3206-xx

8601-xx

8602-xx

3301-xx

3305-xx

6600-xx

6605-xx

6608-xx

6623-xx

Top of Page

Return to Troubleshooting

DMA page registers test failed

Interrupt controller master test failed

Keyboard controller self-test failed

Programmable timer load data test

Recommended Action

1. Run the Configuration and Diagnostics

2. Replace the processor board and retest.

Replace the system board and retest.

1. Check system configuration.

2. Verify cable connections to speaker. 3. Replace the system board and retest.

1. Flash the system ROM and retest. 2. Replace the system board and retest.

2. Install a new memory module and

1. Check the keyboard connection. If

2. Replace the keyboard and retest.

connect the keyboard.

1. Connect the printer.

2. Check power to the printer.

and signal cables and retest.

disconnected, turn off the computer and

3. Replace the system board and retest.

3. Install the loop-back connector and

4. Check port and IRQ configuration.

5. Replace the system board and retest.

1. Replace the diskette media and retest.

2. Check and/or replace the diskette power

3. Replace the diskette or LS120 drive and

4. Replace the system board and retest.

2. Run the Configuration and Diagnostics

2. Replace the system board and retest.

1. Run the Configuration and Diagnostics

2. Verify that all secondary drives have

3. Replace the hard drive and retest. 4. Replace the system board and retest.

1. Remove the memory module and retest.

Replace the processor and retest.

Utilities.

Memory Test Error Codes

Keyboard Test Error Codes

Parallel Printer Test Error Codes

Diskette or LS 120 Drive Test

Serial Test Error Codes

Hard Drive Test Error Codes

Video Test Error Codes

xx:

The following steps

with internal LCD display.

apply to error codes 501-xx through 516-

1. Disconnect external monitor and test

3. Replace the system board and retest.

The following steps apply to error codes

1. Run the Configuration and Diagnostics

1. Run the Configuration and Diagnostics

2. Disconnect external monitor and test

The following step applies to error codes

Replace the system board and retest.

Replace the system board and retest.

1. Replace the TouchPad and retest. 2. Replace the system board and retest.

1. Replace the DVD or CD and retest. 2. Verify that the speakers are connected.

3. Verify that drivers are loaded and

4. Replace the DVD or CD drive and retest. 5. Replace the system board and retest.

properly installed.

2458-xx through 2480-xx:

3. Replace the display assembly and retest. 4. Replace the system board and retest.

with internal LCD display.

2. Replace the display assembly and retest. 3. Replace the system board and retest.

2402-xx through 2456-xx:

Utilities.

Utilities.

2. Replace the display assembly and retest.

retest.

retest.

retest.

1. Replace media.

1. Check port configuration

Utilities and verify drive type.

secondary drive capability.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

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 on:

AudioMemoryBatteryPC CardDVD or CD drivePowerDiskette or LS120 DrivePrinterDisplayTouchPad

<u>Hard drive</u> <u>Keyboard/Numeric keypad</u>

Hardware Installation

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



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.

Top of Page

| Home Page | Notice | Preface | Product Description | Troubleshooting **Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications Pin Assignments | Battery Pack Operations**

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 Battery Pack and Battery Gauge Problems

Some common audio problems and solutions are listed in the following table. **Solving Audio Problems Problem Probable Cause** Solution(s)

(POST).

This is typical; it indicates successful

completion of the Power-On Self-Test

No action is required.

Turn off or disconnect external devices

Enable power management in Computer

Setup and in Windows Power Properties.

Turn off or disconnect external devices

Condition the battery pack by fully

charging, fully discharging, then fully

To maintain the charge, leave battery packs in the computer when it is connected to external power.

If the computer is disconnected from external power for more than two weeks, remove battery packs from the computer to reduce the discharge rate.

Keep the battery pack within the

Operating: 50° F to 104° F

Recharge the battery pack.

Storage: -4° F to 86° F

(10° C to 40° C)

(-20° C to 30° C)

Solution(s)

Remove the CD.

Solution(s)

protected.

diskette.

FORMAT A:

floppy.

diskette.

FORMAT A:

Solution(s)

 $\mathbf{Fn} + \mathbf{F8} (-).$

Touch Pad.

TouchPad.

LCD or **CRT**.

Solution(s)

Restart the computer.

Replace the display assembly.

Replace the display assembly.

Replace the display assembly.

Replace the display assembly.

1. Reseat the display cable to the

2. Replace the display assembly.

Replace the display assembly.

Replace the display assembly.

Reseat the display cable to the following

until the problem is solved:

Replace the display assembly.

Replace the display assembly.

Replace the display assembly.

Solution(s)

before Hibernation.

Solutions(s)

connected.

system.

Run Computer Checkup.

Give the system time to restore the

Turn off and unplug the computer, remove the battery pack, and remove

and then reinstall the hard drive.

Ensure that all cables are

Turn off the computer, turn on

the external device, then turn on the computer to integrate the device with the computer

Turn off the computer and

reinsert the device.

Solution(s)

computer.

Solution(s)

Ensure that the optional

installed correctly.

Check the application

requirements.

not need.

documentation for memory

Install additional memory.

Remove from memory any

TSR applications that you do

memory expansion card is

Press the **Shift+NumLk** keys

to enable the Num Lock

function and embedded

Disconnect the external

numeric keypad from the

numeric keypad. The Num

Lock icon on the status panel

properly and securely

previously saved data to its exact state

Replace the system board.

Replace the system board.

Replace the system board.

Replace the system board.

system board.

Solution(s)

1. System board

2. Display assembly

Adjust the Brightness of the

display by using $\mathbf{Fn} + \mathbf{F7} (^{-})$

Tilt display or move computer.

If computer is in direct sunlight, move it and allow it to cool off.

Use **Fn** + **F3** to switch between

Press any key or touch the

Press any key or touch the

drive A.

path statement.

Use another diskette.

the Compaq Diagnostics

Format the diskette. At

Use the type of diskette

Copy files to hard drive or

another diskette. Reformat bad

Run Computer Checkup from

Format the diskette. At the

Put the bootable diskette in

Run Computer Setup and set

diskette as first to boot.

the Compaq Diagnostics

system prompt, enter

required by the drive.

the system prompt, enter

recommended temperature ranges.

Open the loading tray, lay the compact disc in it (label side up), then close the

Cannot read these type CDs in 24x.

Disable the diskette's write-

Check the drive letter in the

Run Computer Checkup from

protect feature or use a diskette that is not write-

when not using them.

No action is required.

when not using them.

recharging it.

Maintenance & Service Guide

Presario 1800 Series

Models: 1825 and 1800T

Self-Test (POST).

Computer does not beep after the Power-On

Solving Audio 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 and Battery Gauge Problems Probable Cause Problem Solution(s) Computer won't turn on when battery Battery pack is discharged. Connect the computer to an external pack is inserted and power cord is power source and charge the battery unplugged. pack.

charged battery pack. broken. Computer is beeping and battery icon is Battery charge is low.

Replace the battery pack with a fully Check the battery connectors on the system board to verify they are evenly blinking. do any one of the following:

spaced and that they are not bent or Immediately save any open file(s). Then • Connect the computer to an the battery pack.

external power source to charge • Turn off the computer or initiate Hibernation until you can find another power source or charge the battery pack.

Volume is turned down too low. Computer battery icon (front on the Adjust the volume. unit) blinks to indicate low battery

condition, but computer does not beep. Battery icon doesn't light and battery Battery pack is already charged. No action is necessary. pack won't fast charge. Allow time for the battery pack to return

Battery pack was exposed to temperature extremes. to room temperature.

Battery pack is at end of its life. Replace battery pack. You have to set the date and time every RTC battery is dead. Replace the RTC battery.

time you turn on the computer.

Top of Page

Problem Probable Cause Solution(s)

Battery charge does not last as long Battery is being exposed to high Keep the battery pack within the as expected. temperatures or extremely cold recommended operating temperature

range 50° F to 104° F (10° C to 40° C) temperatures. or recommended 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.

Power management is disabled. Set a power management level in Computer Setup.

An external device or PC Card is draining

An external device or PC Card is draining

Battery pack is being exposed to high

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

Solving DVD or CD Drive Problems

Disc is upside down or is improperly

CD is CD Plus or Pregap/Track 0 type.

Solving Diskette and Diskette Drive Problems

Diskette is write-protected.

Computer is writing to

Not enough space is left

Drive error has occurred.

Diskette is not formatted.

The wrong type of diskette is

Diskette has a bad sector.

Drive error has occurred.

Bootable diskette is not in

Diskette Boot has incorrect

setting in Computer Setup.

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

The display should be white. A narrow black border may also appear on the left and right sides of

Solving Display Problems

Computer screen is in direct

Screen save was initiated by

Display function was switched

Probable Cause

Using 1024×768 or

higher resolution on external monitor and

have toggled back to internal display, which

Improper backlight or display

Defective inverter board.

Defective display cable.

Defective display panel.

Defective system board.

Defective system board.

Improper display cable

Defective inverter board.

Defective display cable.

Defective system board.

** This problem indicates that the backlight or its power circuitry has failed. Since you cannot observe the POST result on the display panel when the backlight is not functioning, connect the unit to an external monitor before powering the unit up. If an external monitor is not available, verify that POST completes by opening and closing the display, listening for the

Probable Cause

connections

Improper display cable

Defective display cable.

Defective inverter board.

Defective system board.

Defective display panel.

To perform a "self-test" on an external VGA color or monochrome monitor, complete the following steps: 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

CAUTION: To prevent loss of information, always maintain an up-to-date backup of

Solving Hard Drive Problems

System entered Hibernation due to

low battery condition and is now

Hard drive has bad sectors or has

Hard drive is not seated properly.

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

Solving Hardware Installation Problems

power cables are unplugged.

Power switch of new external

Device is not seated properly.

device is not turned on.

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

Probable Cause

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

Probable Cause

is incompatible with

System ran out of

and stay-resident)

Memory count during Power-On Self-Optional memory expansion

Solving Memory Problems

card is installed incorrectly,

the computer, or is defective.

memory for the application.

Too many TSR (terminate-

applications are running.

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enabled.

Solving Keyboard/Numeric Keypad Problems

Num Lock function is not

External numeric keypad is

connected to the computer.

Probable Cause

device are loose or

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

your hard drive at all times, in case of errors or failures.

Probable Cause

exiting from it.

failed.

Solving Hardware Installation Problems

A new device is not recognized as Cable(s) of new external

Solving Keyboard/Numeric Keypad Problems

connections.

single or double beep, and watching for the icons to turn on at the front of the computer.

supports up to

cable connections

 800×600 .

Power Management due to

Display has overheated.

to the external monitor.

lack of user activity.

You can perform a monitor self-test on an external VGA color or monochrome monitor by

disconnecting the monitor from the computer. To do so, complete the following steps:

3. Disconnect the monitor signal cable from the computer.

4. Turn on the monitor and allow it to warm up for one minute.

light.

Display is blank and the Suspend System is in Suspend mode.

the display. Either of these displays indicates that the monitor is working properly.

Probable Cause

Control for brightness

the wrong drive.

on the diskette.

being used.

Diskette is not

formatted.

drive A.

inserted in the DVD or CD drive.

Some common causes and solutions for diskette and LS120 drive problems are listed in the

Probable Cause

Probable Cause

temperatures or extremely cold

Normal warming has occurred due to

Power management is turned off or

Battery pack has partially self-

the battery.

charging.

disabled.

the battery.

discharged.

temperatures.

Battery pack is warm to the touch

Battery pack operating time is far

less than the documented average

after charging.

operating time.

Top of Page

Problem

Top of Page

following table.

write to a diskette.

Problem

Solving DVD or CD Drive Problems

Solving Diskette or LS120 Drive Problems

DVD or CD drive cannot read a compact

Diskette or LS120 drive cannot

Diskette or LS120 drive cannot

Cannot boot from diskette.

Solving Display Problems

1. Turn off the monitor.

2. Turn off the computer.

Top of Page

problems.

Problem

Screen is dim.

Screen is blank.

icon is flashing.

Top of Page

Problem

up.**

powered up. * *

 $Fn + F7 (^{-}) or$

Problem

one section).

Top of Page

NOTE:

Problem

table.

Problem

Top of Page

following table.

Embedded numeric keypad on

computer keyboard is disabled.

Embedded numeric keypad is

disabled and Num Lock function is

Solving Memory Problems

Test (POST) is incorrect.

"Out of Memory" message is

insufficient memory error occurs

Solving Minor Problems continued

Return to Troubleshooting

displayed on the screen or

during operation.

Top of Page

Problem

on.

Top of Page

Problem

Fn + F8 (-).***

displays information.

Internal display is blank and the

Internal display flashes or has garbled

The light tubes on the edge of the display panel

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

Backlight (brightness) cannot be adjusted with

This display panel has a continuous pattern

patterns across the entire panel (not just on

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.

working properly.

Reading hard drive takes an unusually

part of the computer system.

Hard drive error occurs.

Hard drive does not work.

long time after restarting the computer.

Solving Hard Drive Problems

across it (e.g., a "jailbars" pattern), has a

single color on it, or has garbled graphics across the entire panel. This failure is for

do not light up at all and Power-On Self-Test (POST) completes when the unit is powered

characters when computer is

connected to external monitor.

screen on an external monitor

read a diskette.

Home Page | Notice | Preface | Product Description | Troubleshooting **Pin Assignments** | **Battery Pack Operations**

PC Card modem, fax, or network

PC Card modem or fax card does

Modem network PC Card does not

Memory or storage card does

card does not work.

not work.

work.

not work.

Top of Page

Problem

is off.

Top of Page

documentation.

Problem

Solving Power Problems

Computer won't turn on and

battery pack is not inserted.

Computer turned off while it was

Solving Printer Problems

printer for instructions.

Printer will not turn on.

Printer will not print.

Printer prints garbled information.

External mouse does not work.

TouchPad or mouse does not work

even though the device is enabled

Cursor skips or moves abnormally

Return to Solving Minor Problems

when using the TouchPad.

Return to Troubleshooting

Top of Page

Problem

in Windows.

left unattended and the power icon

mserteu.	PC Card beeps are disabled.	Double-click the PC Card icon in 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 in the Control Panel for installation instructions.
		If PC Card or drivers are not compatible with Windows, install drivers and use the PC Card in MS-DOS mode.
	Card or card driver is not supported.	Contact your Compaq authorized service provider for a list of PC Cards tested successfully in Compaq

Card is not fully inserted into the

Telephone cord is not plugged in

You are trying to access the card

Network driver is not installed or

Telephone cord is not properly

SRAM and flash memory cards

require the memory card driver

Flash memory cards require the

mass storage cards require the PC Card ATA driver to be loaded.

You are trying to access the hard

drive card using the wrong drive

Solving Power Problems

Computer is not connected to a

Power cords to the external

Power adapter is defective.

System board is defective.

System initiated Hibernation

to a critical low-battery

after a preset timeout.

condition.

System initiated Hibernation due

If you experience problems printing, run a printer self-test. Refer to the documentation provided with your

Solving Printer Problems

connected properly, or the printer

If the self-test fails, it is a printer-specific problem. Also refer to the printing section of your application

The signal cable may not be

Printer is not turned on or is

The device drivers for your

Printer that is set up for a

Printer cable is too long, unshielded, or defective.

Correct printer drivers are not

Cable is not connected properly.

Solving Touch Pad/Pointing Device Problems

The device driver is not installed

Mouse is not securely connected

or is connected to an incorrect

Cable not properly seated in

Defective TouchPad board.

Device driver is not correctly

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The TouchPad needs to be

Defective system board.

installed in Windows.

cleaned.

Paper tray is empty.

network is not connected to the

application are not installed.

Probable Cause

is unplugged.

offline.

network.

installed.

Some common causes and solutions for TouchPad/pointing device problems are listed in the following table.

Cause

installed.

in Windows.

external connector.

TouchPad board.

Mouse is not enabled.

TouchPad or mouse does not work. Incorrect or no device driver is

Solving TouchPad/Pointing Device Problems

power source are unplugged.

Probable Cause

power source.

The card is not supported.

Microsoft FlashFile System to

to be loaded (turned on).

Hard drives on flash

The card conflicts with a serial

slot or is not inserted properly.

Necessary drivers are not

using the wrong COM port.

The card is not supported.

is not set up properly.

installed (turned on).

all the way.

device.

connected.

be loaded.

letter.

Also see "Solving Battery and Battery Gauge Problems" in this section.

PC Card platforms.

connection.

port.

Install drivers.

Install driver.

Install driver.

the card.

Solution(s)

properly.

the correct orientation.

Check and secure telephone

See Specifications to verify COM

Use supported cards only.

Verify telephone connection.

Double-click **My Computer** to

verify the drive letter assigned to

Contact your Compaq authorized service provider for a list of PC

Cards tested successfully in Compaq PC Card platforms.

Insert battery or connect an

Ensure that power cords connecting

Replace the battery pack with a fully

charged battery pack or connect the

source. Then turn on the computer.

the computer and the external

Replace AC Adapter and restart.

computer to an external power

Ensure that the signal cable is

properly connected and that the

power cord is connected to the

Turn the printer on and set it to

Refer to the printer documentation

to install the correct printer driver.

Connect the printer to the network.

Fill the paper tray with paper and

Refer to the printer documentation

to install the correct printer driver.

Ensure that the printer signal cable

Install the device driver and add to

Install the TouchPad/mouse driver in

Ensure that the mouse is securely

Enter MOUSE at the system prompt

to activate the mouse device driver.

Add a line in the AUTOEXEC.BAT file to automatically activate the mouse device driver each time computer is

Install the appropriate device driver

ammonia-based glass cleaner. Wipe

Clean the TouchPad with a cloth

dampened with alcohol or an

up liquid with a dry cloth.

connected to the appropriate

the AUTOEXEC.BAT file or

is properly connected to the

computer.

Solution(s)

Windows.

CONFIG.SYS file.

external connector.

turned on or restarted.

Replace TouchPad board.

Replace system board.

Reseat cable.

in Windows.

set the printer to online.

power source are plugged in

Replace the system board.

Turn on the computer.

Solution(s)

electrical outlet.

Replace the cable.

online.

external power source.

See **Specifications** to verify address.

Ensure that the card is inserted in

PC Card beens are disabled

Some common causes and solutions for PC Card problems are listed in the following table. **Solving PC Card Problems** Problem **Probable Cause** Solution(s) When turned on, the computer Card is not inserted properly. Ensure that the card is inserted in does not beep when a PC Card is the correct orientation. inserted

Solving PC Card Problems

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Illustrated Parts Catalog

System Unit

Boards

<u>Display</u> Assembly

Mass Storage

Devices

Miscellaneous

Cable Kit

Miscellaneous

Hardware Kit

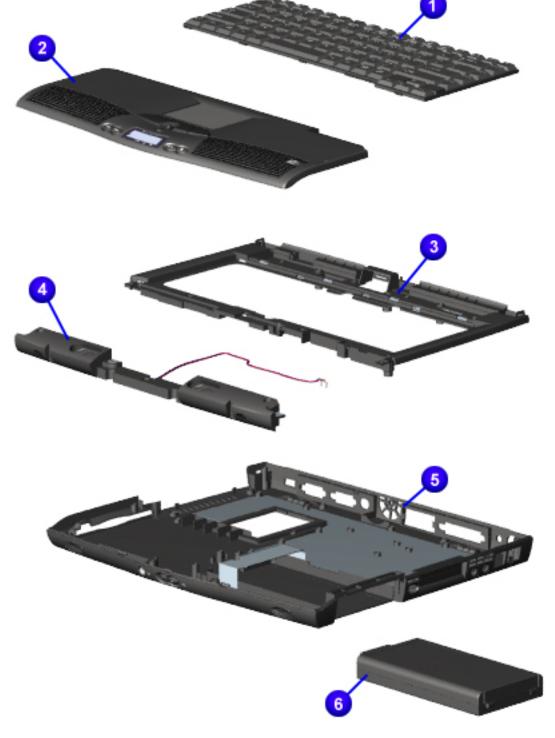
Miscellaneous

Plastics Kit

Miscellaneous

Parts

Documentation and Software



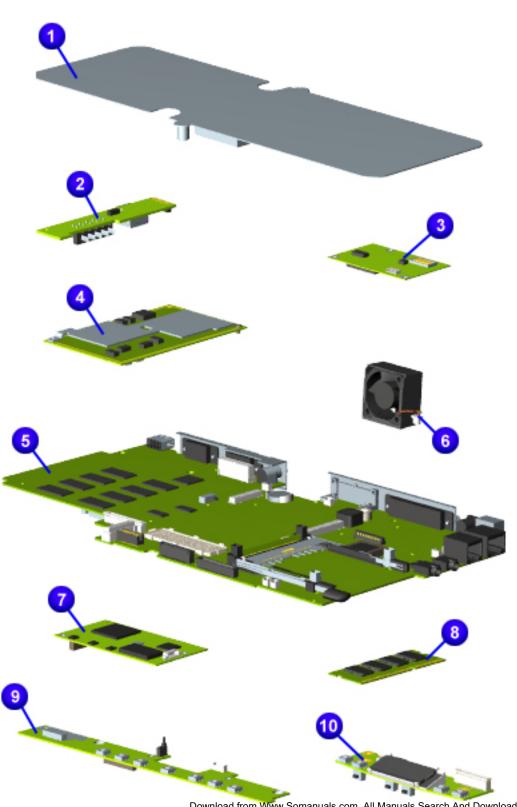
System Unit

Description	Spare Part Number
1. Keyboards	
2. Palmrest Cover w/TouchPad and Button Board	138181-001
3. Upper CPU Cover w/Power Switch	138183-001
4. Speaker Assembly w/Cables	138185-001
5. Enclosure Base	138182-001
6 . Battery Pack Li ion Enhanced	138184-001
LS120 Enclosure Base (not shown)	143925-001
Button Board Cover (not shown)	143926-001

| Home Page | Notice | Preface | Product Description | Troubleshooting **Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications Pin Assignments** | **Battery Pack Operations**

Illustrated Parts Catalog

System Unit
Boards
<u>Display</u>
<u>Assembly</u>
Mass Storage
<u>Devices</u>
<u>Miscellaneous</u>
Cable Kit
Miscellaneous Handware Vit
Hardware Kit
<u>Miscellaneous</u> Plastics Kit
<u>Miscellaneous</u> Parts
Documentation
and Software



Boards

Description	Part Number
1. Heatspreader	159698- 001
2. Battery Charger Board	138177- 001
3. Modem	
4. Processors	
5 . System Board	158804- 001
6 . Fan Assembly	138162- 001
7. Ethernet Card PCI	138164- 001
8. Memory	
9 . Internet Button Board	138186- 001
10 . LCD Indicator Module	138187- 001

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Illustrated Parts Catalog

System unit	Si	stem	Unit
-------------	----	------	------

Boards

Display Assembly

Mass Storage

Devices

Miscellaneous

Cable Kit

Miscellaneous

Hardware Kit

Miscellaneous

Plastics Kit

Miscellaneous

Parts

Documentation

and Software



Display Assembly

Description	Spare Part Number
1. Display 14.1" TFT/LVDS	138175- 001
2. Display 15.0" TFT/LVDS	138176- 001

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Illustrated Parts Catalog

S	ystem	U	nit

Boards

Display Assembly

Mass Storage

Miscellaneous

Cable Kit

Devices

Miscellaneous

Hardware Kit

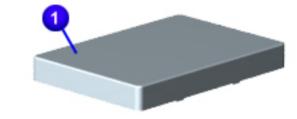
Miscellaneous

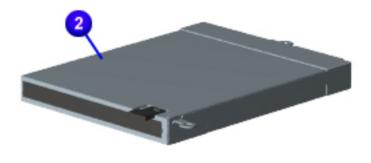
Plastics Kit

Miscellaneous

Parts

Documentation and Software





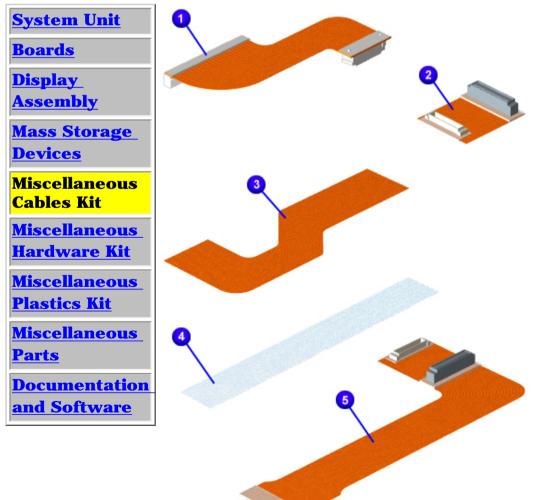


Mass Storage Devices

Description	Spare Part Number
2. Diskette Drives	
3. CD/DVD Drives	
6X DVD Drive (not shown)	158165-001
4.8-GB Hard Drive (not shown)	149371-001
24X 2C CD-ROM Drive (not shown)	143922-001
LS-120 Drive (not shown)	143927-001

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Illustrated Parts Catalog



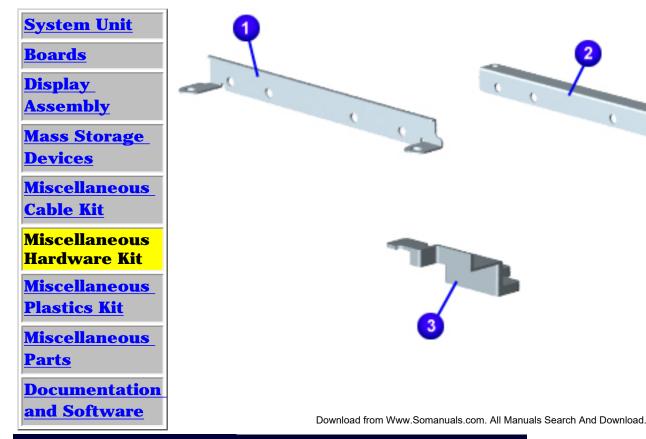
Miscellaneous Cables Kit

Miscellaneous Cables Kit
Spare Part Number: 138189-001

Description	Quantity
1. Hard Drive Cable	1 each
2. CD/DVD Drive Cable	1 each
3. Diskette Drive Cable	1 each
4. Status Panel Cable	1 each
5 . LS120/CD-ROM(DVD) Cable	1 each
Modem Cable (not shown)	1 each
Touch Pad Cable (not shown)	1 each
Network Interface Card Cable (not shown)	1 each

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Illustrated Parts Catalog



Miscellaneous Hardware Kit

Hardware Kit Spare Part Number: 138160- 001			
Description	Quantity		
1. Hard Drive Mounting Bracket (right)	1 each		
2 .Hard Drive Mounting Bracket (left)	1 each		
3.Reinforcement Bracket	1 each		

Miscellaneous

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Illustrated Parts Catalog



Miscellaneous Plastics Kit

Miscellaneous			
Plastic			
Spare			
Numb			
138190-001			
Description	Quantity		
1. Door,	1 each		
Battery Pack			
2 . Cover, Memory	1 each		
Module			
3. Door,	1 each		
PCMCIA			
4. Display	1 each		
Hinge			
Cover, (Right)			
5 . Display	1 each		
Hinge	Lacii		
Cover,			
(Left)			
6 . CD	1 each		
Drive			
Guide			
7. Latch,	10 each		
(Right)			
8 . Latch,	10 each		
(Left)			
9. Stand-	10 each		
foot			
10.	10 each		
Rubber	TO CACII		
Foot			
	10 coch		
11.	10 each		
Rubber			
Plug (Side			
Mount)			
12 .	10 each		
Rubber			
Plug, LCD			
13 .	1 each		
Cover,			
LCD FPC			

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Illustrated Parts Catalog

System Unit

Boards

Display

Assembly

Mass Storage

Devices

Miscellaneous

Cable Kit

Miscellaneous

Hardware Kit

Miscellaneous

Plastics Kit

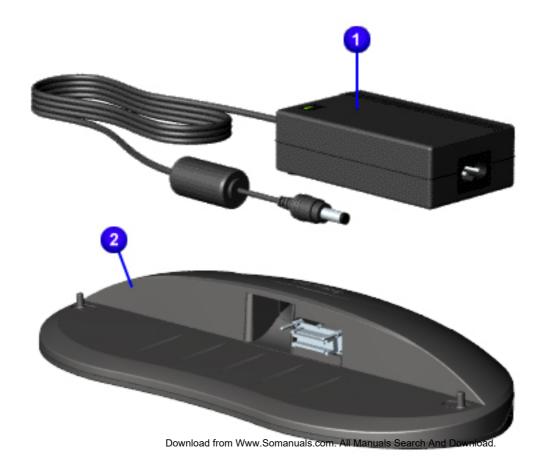
Miscellaneous

Parts

Documentation

and Software

Use the scroll down menu for the description and spare part number of spare parts Not Shown.



Miscellaneous Parts

Description	Spare Part Number
1. AC Adapter	298239-001
2 . Port Replicator	138167-001

Home Page | Notice | Preface | Product Description | Troubleshooting
Illustrated Parts Catalog | Removal & Replacement Procedures |
Specifications

Pin Assignments | **Battery Pack Operations**

Illustrated Parts Catalog

System Unit

Boards

<u>Display</u> Assembly

Mass Storage
Devices

Miscellaneous

Cable Kit

Miscellaneous

Hardware Kit

Miscellaneous
Plastics Kit

Miscellaneous Parts

Documentation and Software

Documentation and Software

Description	Spare Part Number
QuickRestore Kit	120222-001
Reference Guide	117894-001
Features Guide	120223-001
Quick Reference Guide	Information Not Available
QuickFind for Windows*	Information Not Available

*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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| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | **Battery Pack Operations**

Electrostatic Discharge

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 exposed to electrostatic discharge (ESD) may not seem to be affected at all and will work perfectly throughout a normal cycle. Although, it may function normally for a while, it may be 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 shows how different activities generate static electricity at different electrostatic voltage levels.

Typical Electrostatic Voltages				
	Relative Humidity			
Event	10%	40%	55 %	
Walking across carpet	35,000 V	15,000 V	7,500 V	
Walking across vinyl floor	12,000 V	5,000 V	3,000 V	
Motions of bench worker	6,000 V	800 V	400 V	
Removing DIPS from plastic tubes	2,000 V	700 V	400 V	
Removing DIPS from vinyl trays	11,500 V	4,000 V	2,000 V	
Removing DIPS from Styrofoam	14,500 V	5,000 V	3,500 V	
Removing bubble pack from PCBs	26,000 V	20,000 V	7,000 V	
Packing PCBs in foam-lined box	21,000 V	11,000 V	5,000 V	
NOTE: 700 volts can degrade a product.				

| Home Page | Notice | Preface | Product Description | Troubleshooting
| Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications
| Pin Assignments | Battery Pack Operations

Service Considerations

Listed below are some of the considerations that you should keep in mind during the disassembly and assembly of the computer.

Tool and Software Requirements

To service the computer, you need the following:

- Torx T-8 or T-9 screwdriver
- 5mm nut drivers (for screwlocks and standoffs)
- Small standard screwdriver
- Small Phillips screwdriver
- Diagnostics software

Screws

The screws used in the computer 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.



As each subassembly is removed from the computer, it should be placed away from the work area to prevent damage.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Cables and Connectors

Most cables used throughout the unit are ribbon cables. Cables must be handled with extreme care to avoid damage. Apply only the tension required to seat or unseat the cables during insertion or removal from the connector. Handle cables by the connector whenever possible. In all cases, avoid bending, twisting, or tearing the cables, and ensure that the cables are routed in such a way that they cannot be caught or snagged by parts being removed or replaced.

Cables

Use the following precautions when handling cables to avoid damage to the cable or computer:

- Always handle cables by their connectors.
- Avoid bending, twisting, or pulling on the cables.
- Apply minimum required force when seating or unseating the 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 computers, ensure that cables are placed in their proper location during the reassembly process. Improper cable placement can cause severe damage to the unit.

Select the desired illustration.

Removing a cable from a **ZIF Connector**.

The ribbon cable position for the <u>hard drive</u>.

The ribbon cable position for the <u>DVD or CD drive</u>.

The ribbon cable position for the <u>diskette drive</u>.

The ribbon cable position for the <u>LS120 drive</u>.

The cable position for the speaker assembly.

The cable position for the modem.

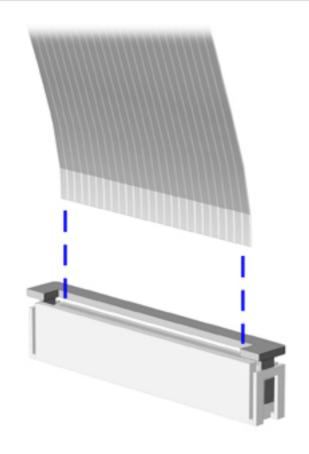
The cable position for the **Network Interface Card**.

The ribbon cable position for the <u>keyboard</u>.

Plastic Parts

Plastic parts can be damaged by the use of excessive force during disassembly and reassembly. When handling the plastic parts, use care. Apply pressure only at the points designated in the maintenance instructions.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>



The computer uses a zero insertion force (ZIF) connector for the keyboard cable to the system board. To remove a cable from a ZIF connector, lift both corners of the ZIF connector and slide simultaneously with constant light force.



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.

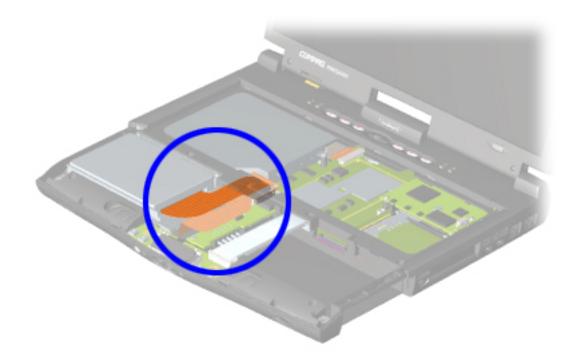


CAUTION: When servicing this computer, ensure that cables are placed in their proper location during the reassembly process. Improper cable placement can damage the computer.

| Home Page | Notice | Preface | Product Description |
Troubleshooting

Illustrated Parts Catalog | Removal & Replacement Procedures |
Specifications
Pin Assignments | Battery Pack Operations

The ribbon cable position for the hard drive.

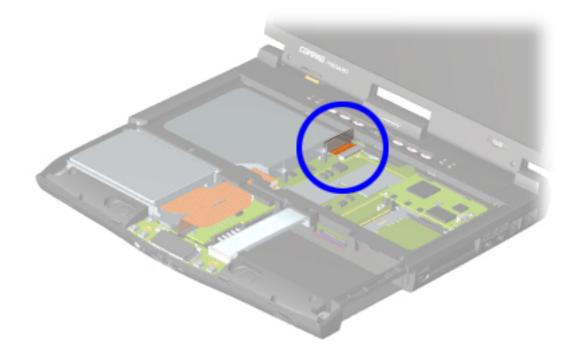


| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | Battery Pack Operations

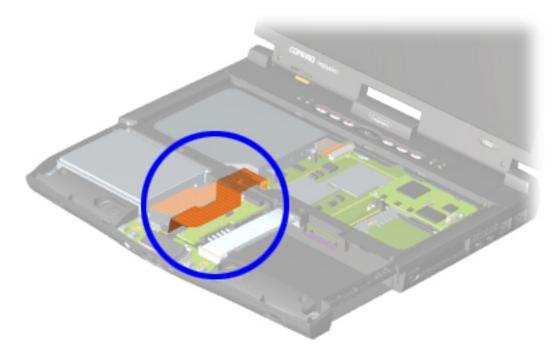
The ribbon cable position for the DVD or CD drive.



| Home Page | Notice | Preface | Product Description |
Troubleshooting

Illustrated Parts Catalog | Removal & Replacement Procedures |
Specifications
Pin Assignments | Battery Pack Operations

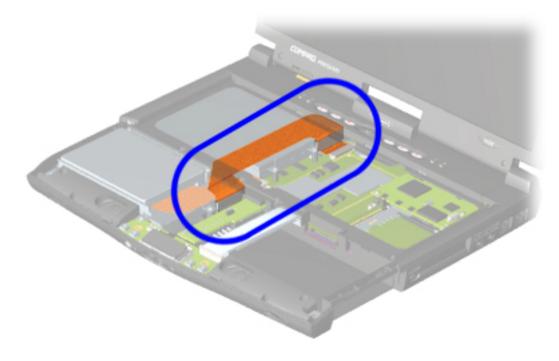
The ribbon cable position for the diskette drive.



| Home Page | Notice | Preface | Product Description |
Troubleshooting

Illustrated Parts Catalog | Removal & Replacement Procedures |
Specifications
Pin Assignments | Battery Pack Operations

The ribbon cable position for the LS120 drive.

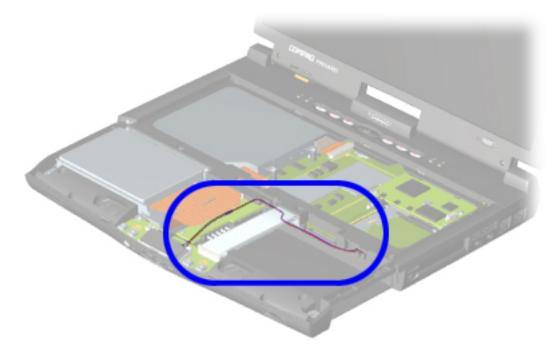


| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

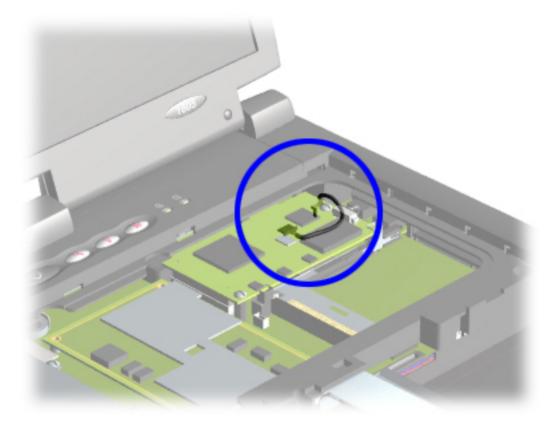
Pin Assignments | **Battery Pack Operations**

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.



| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

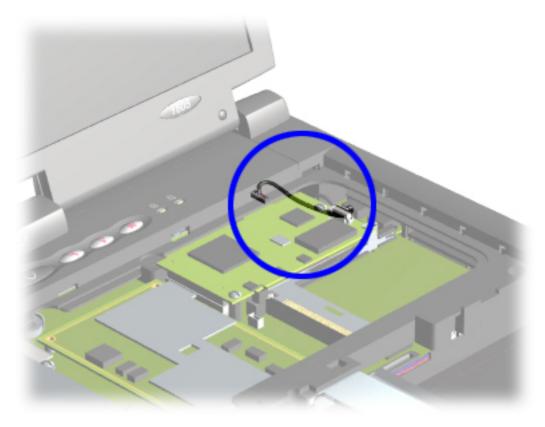
The cable position for the modem.



Home Page | Notice | Preface | Product Description | Troubleshooting
Illustrated Parts Catalog | Removal & Replacement Procedures |
Specifications

Pin Assignments | **Battery Pack Operations**

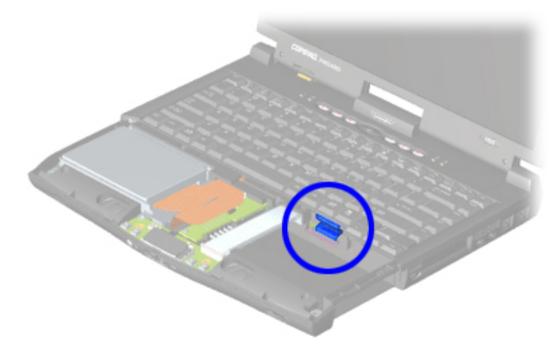
The cable position for the Network Interface Card.



| Home Page | Notice | Preface | Product Description |
Troubleshooting

Illustrated Parts Catalog | Removal & Replacement Procedures |
Specifications
Pin Assignments | Battery Pack Operations

The ribbon cable position for the keyboard.



I

| Home Page | Notice | Preface | Product Description | **Troubleshooting**

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | **Battery Pack Operations**

Preparing the Computer for Disassembly

Removal Sequence

Electrostatic

Discharge

Service

Considerations Cables and

Connectors Preparing the Computer for

Disassembly Battery Pack

Palmrest **Cover with Touch Pad**

Keyboard

Status Panel

Internet **Button Board**

Heatspreader

Network **Interface Card**

Modem

Hard Drive

DisqPlay Module

Processor

DVD or **CD Drive**

Display Panel Assembly

Upper CPU Cover

Fan Assembly

Diskette Drive

Battery

Charger Board

Speaker **Assembly**

System Board

<u>Memory</u> Module

Before beginning Removal & Replacement Procedures, complete the following steps:

- 1. Disconnect AC power and any external devices.
- 2. Remove the battery pack.
- 3. Remove any PC Cards.
- 4. Remove the Port Replicator.

IMPORTANT: The battery pack should be removed before performing any internal maintenance on the computer.



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 the Compaq Presario 1800 Series Portable Computers 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, as this damages the pack, makes it unusable, and exposes potentially harmful battery components. There are no field-serviceable parts located inside the battery pack.



The Compaq Presario 1800 Series Portable Computers have several screws of various sizes which are **not** interchangeable. Care must be **NOTE:** taken during reassembly to ensure that the correct screws are used in their correct location. During removal please keep respective screws with their associated sub-assembly.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u>

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures

Removal Sequence

Electrostatic
Discharge

Service Considerations

Cables and Connectors

Preparing the Computer for Disassembly

Battery Pack

Palmrest
Cover with
Touch Pad

Keyboard

Status Panel

<u>Internet</u>

Button Board

Heatspreader

<u>Network</u>

Interface Card

Modem

Hard Drive

<u>DisqPlay</u> Module

Processor

DVD or CD Drive

Display Panel
Assembly

Upper CPU Cover

Fan Assembly

Diskette Drive

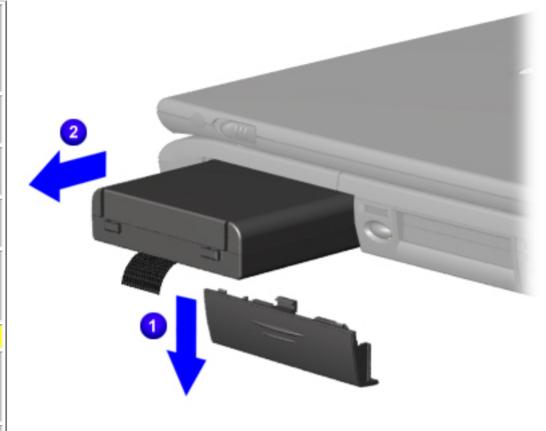
Battery

Charger Board

Speaker Assembly

System Board

Memory Module



Removing the Battery Pack

To remove the battery pack, complete the following steps:

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

To replace the battery pack, reverse the previous procedures.

Return to
Removal &
Replacement
Procedures

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u>

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures

Removal Sequence

Electrostatic
Discharge

Service Considerations

Cables and Connectors

Preparing the Computer for Disassembly

Battery Pack

Palmrest Cover with TouchPad

Keyboard

Status Panel

Internet
Button Board

<u>Heatspreader</u>

Network

Interface Card

Modem

Hard Drive

DisqPlay Module

Processor

DVD or CD Drive

Display Panel Assembly

Upper CPU

Cover

Fan Assembly

Diskette Drive

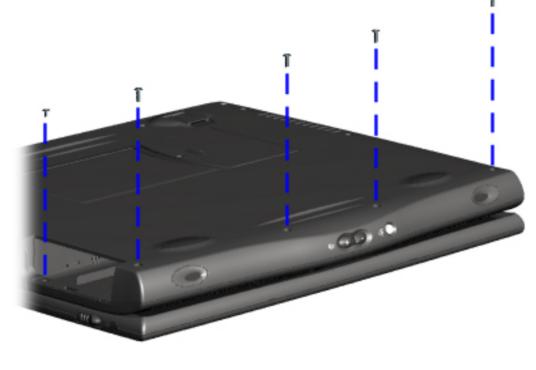
Battery

Charger Board

Speaker Assembly

System Board

Memory Module



Removing the Palmrest Cover with TouchPad

It is not necessary to remove the display panel

NOTE: assembly to access the interior components of the computer.

To remove the palmrest cover with touchpad, complete the following steps:

- 1. <u>Prepare the computer for disassembly.</u>
- 2. Close the display assembly and turn the computer upside down.
- 3. Remove five screws from the bottom of the computer.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures

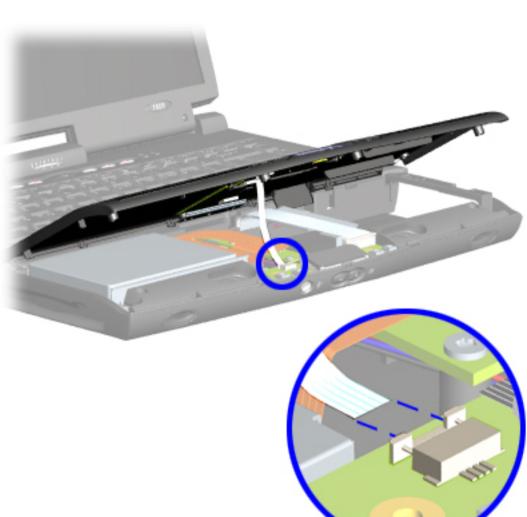


Removing the Palmrest Cover with TouchPad, continued

- 4. Turn the computer right side up.
- 5. Pull the display release latches and open the display assembly.
- 6. Lift up the front end of the palmrest cover with touchpad and remove it from the groove in the chassis.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Removal & Replacement Procedures



Removing the Palmrest Cover with TouchPad, continued

7. Disconnect the flex cable from the LIF connector on the DisqPlay Module.

To replace the palmrest cover with touchpad, reverse the previous procedures.



CAUTION: When replacing the palmrest cover with touch pad, ensure that the flex cable is fully inserted into the LIF connectors on both ends. If the metal ends should come in contact with the keyboard, damage may occur to the computer.

Return to Removal & Replacement Procedures

| Home Page | Notice | Preface | Product Description | Troubleshooting **Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications**

Pin Assignments | Battery Pack Operations

Removal & Replacement Procedures

Removal Sequence

Electrostatic Discharge

Service **Considerations**

Cables and Connectors

Preparing the Computer for Disassembly

Battery Pack

Palmrest Cover with Touch Pad

Keyboard

Status Panel

Internet **Button Board**

Heatspreader

Interface Card

Modem

Network

Hard Drive

DisqPlay Module

Processor

DVD or **CD Drive**

Display Panel <u>Assembly</u>

Upper CPU Cover

Fan Assembly

Diskette Drive

Battery

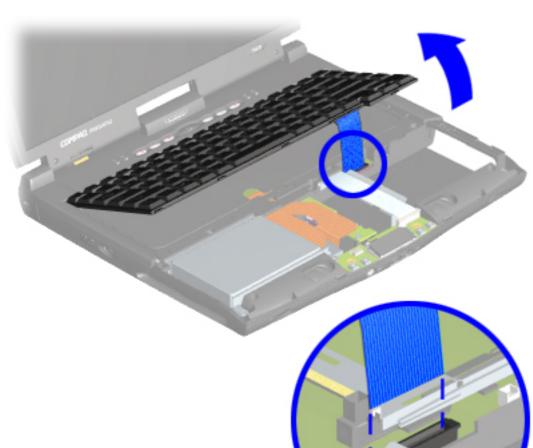
Charger Board

Speaker

Assembly

System Board

<u>Memory</u> **Module**



Removing the **Keyboard**

To remove the keyboard, complete the following steps:

- 1. Prepare the computer for disassembly.
- 2. Remove the palmrest cover with touch pad.
- 3. Gently lift up the front of the keyboard and disconnect the flex cable from the ZIF connector on the system board and remove the keyboard.

When replacing the keyboard, the <u>keyboard</u> NOTE: cable should fold behind the ZIF connector rather than underneath the keyboard.

To replace the keyboard, reverse the previous procedures.

Home Page | Notice | Preface | Product Description | Troubleshooting
Illustrated Parts Catalog | Removal & Replacement Procedures |
Specifications

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures

Removal Sequence

Electrostatic
Discharge

<u>Service</u> Considerations

Cables and Connectors

Preparing the Computer for Disassembly

Battery Pack

Palmrest
Cover with
Touch Pad

Keyboard

Status Panel

<u>Internet</u> Button Board

Heatspreader

Network

Interface Card

Modem

Hard Drive

<u>DisqPlay</u> Module

Processor

<u>DVD or</u> CD Drive

Display Panel
Assembly

<u>Upper CPU</u> Cover

Fan Assembly

Diskette Drive

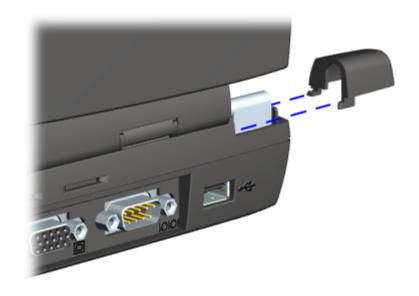
Battery

Charger Board

<u>Speaker</u> Assembly

System Board

<u>Memory</u> Module



Removing the Status Panel Assembly

Illustrations may show parts removed that are not part of this procedure.

NOTE: It is necessary to remove only the parts listed in the written procedure.

To remove the status panel assembly, complete the following steps:

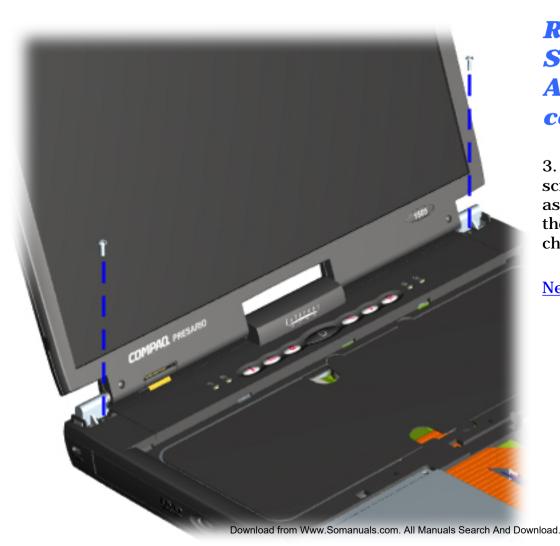
- 1. Prepare the computer for disassembly.
- 2. Open the display assembly and squeeze the sides of the display assembly hinge covers while sliding them off the hinges.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | Battery Pack Operations

Removal & Replacement Procedures

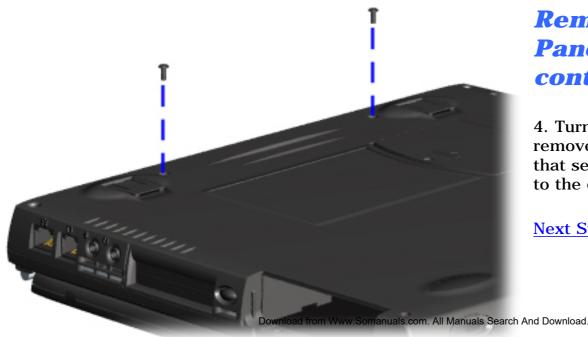


Removing the Status Panel Assembly, continued

3. Remove two innermost screws from the display assembly hinges which secure the status panel to the chassis.

Home Page | Notice | Preface | Product Description | Troubleshooting Illustrated Parts Catalog | Removal & Replacement Procedures Specifications Pin Assignments | Battery Pack Operations

Removal & Replacement Procedures



Removing the Status Panel Assembly, continued

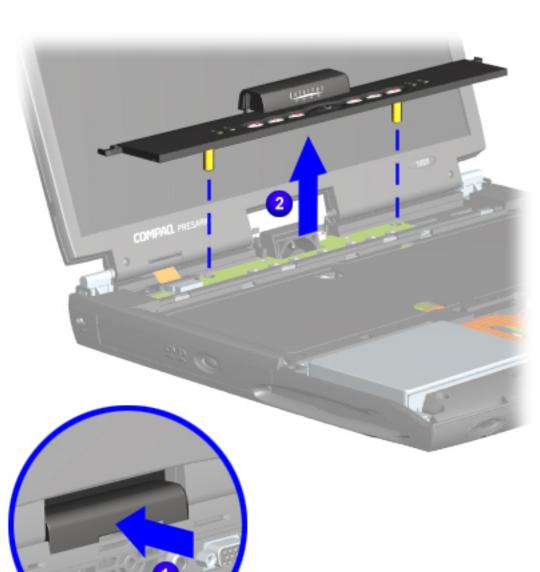
4. Turn the unit upside down and remove two screws located in the back that secure the status panel assembly to the chassis.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures



Removing the Status Panel Assembly, continued

- 5. Turn the unit right side up and open the display assembly.
- 6. Lift up one corner of the status panel assembly, 1 push forward from the back (center piece) to release the snaps on the status panel assembly and 2 remove from the chassis.

To replace the status panel assembly, reverse the previous procedures.

Return to Removal & Replacement Procedures

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| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Removal & Replacement Procedures

Removal Sequence

Electrostatic
Discharge

<u>Service</u>

Considerations

Cables and Connectors

Preparing the

Computer for Disassembly

Battery Pack

<u>Palmrest</u>

Cover with
Touch Pad

Keyboard

Status Panel

Internet Button Board

Heatspreader

Network

Interface Card

Modem

Hard Drive

<u>DisqPlay</u> Module

Processor

DVD or

CD Drive

Display Panel Assembly

Upper CPU

Cover

Fan Assembly

Diskette Drive

Battery

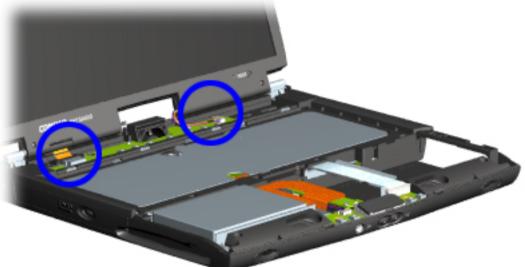
Charger Board

Speaker

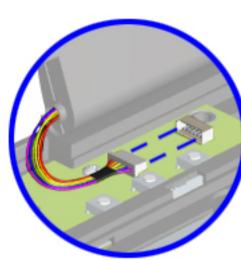
Assembly

System Board

Memory Module







Removing the Internet Button Board

Illustrations may show parts removed that are not part of this procedure.

NOTE: It is necessary to remove only the parts listed in the written procedures.

To remove the Internet Button board, complete the following steps:

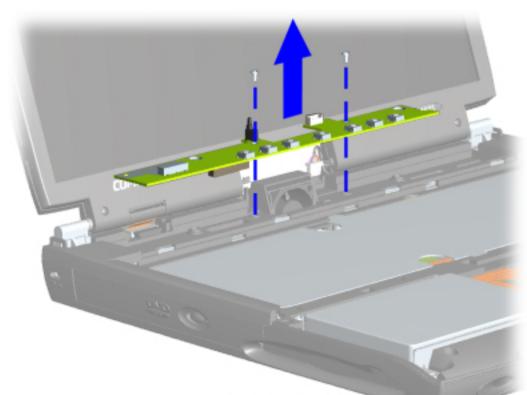
- 1. <u>Prepare the computer for disassembly.</u>
- 2. Remove the status panel.
- 3. Remove screw securing the display flex cable bracket and disconnect the display flex cable and backlight cable from the Internet Button Board.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures



Removing the Internet Button Board, continued

4. Remove two screws securing the Internet Button Board and remove from the chassis.

To replace the Internet Button Board, reverse the previous procedures.

Return to Removal & Replacement Procedures

| Home Page | Notice | Preface | Product Description | Troubleshooting **Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications Pin Assignments | Battery Pack Operations**

Removal & Replacement Procedures

Removal Sequence

Electrostatic Discharge

Service **Considerations**

Cables and **Connectors**

Preparing the Computer for Disassembly

Battery Pack

Palmrest Cover with Touch Pad

Keyboard

Status Panel

Internet **Button Board**

Heatspreader

Network **Interface Card**

Modem

Hard Drive

DisqPlay Module

Processor

DVD or **CD Drive**

Display Panel Assembly

Upper CPU Cover

Fan Assembly

Diskette Drive

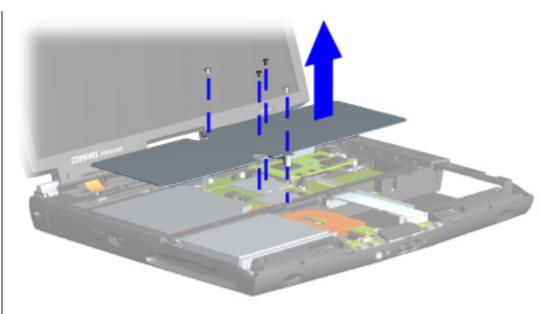
Battery

Charger Board

Speaker Assembly

System Board

Memory **Module**



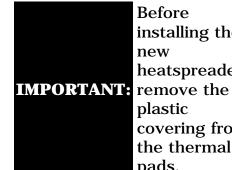
Removing the Heatspreader

To remove the heatspreader, complete the following steps:

- 1. Prepare the computer for disassembly.
- 2. Remove the palmrest cover with touch pad.
- 3. Remove the keyboard.
- 4. Remove four screws from the heatspreader and lift out of the chassis.



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



Before installing the new heatspreader, plastic covering from the thermal pads.

To replace the heatspeader, reverse the previous procedures.



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

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u>

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures

Removal Sequence

Electrostatic Discharge

Service Considerations

Cables and Connectors

Preparing the Computer for Disassembly

Battery Pack

Palmrest
Cover with
Touch Pad

Keyboard

Status Panel

Internet
Button Board

Heatspreader

Network Interface Card

Modem

Hard Drive

<u>DisqPlay</u> Module

Processor

<u>DVD or</u> CD Drive

Display Panel
Assembly

Upper CPU Cover

Fan Assembly

Diskette Drive

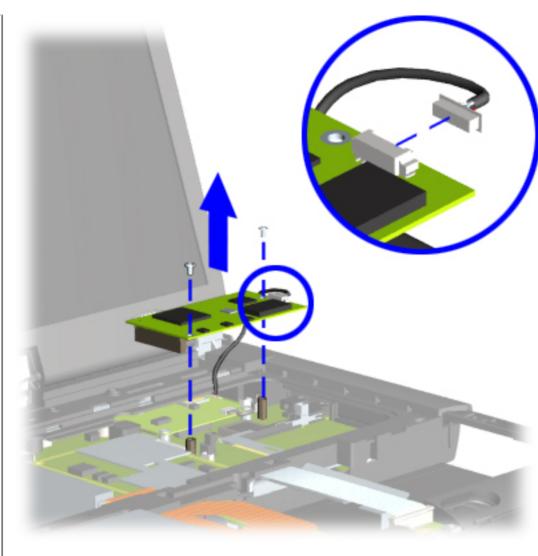
Battery

Charger Board

Speaker Assembly

System Board

Memory Module



Removing the Network Interface Card

To remove the Network Interface Card (NIC), complete the following steps:

- 1. Prepare the computer for disassembly.
- 2. Remove the palmrest cover with touchpad.
- 3. Remove the keyboard.
- 4. Remove the heatspreader.
- 5. Remove two screws from the Network Interface Card, lift the Network Interface Card off the system board and disconnect the cable from the Network Interface Card.

To replace the Network Interface Card, reverse the previous procedures.

| Home Page | Notice | Preface | Product Description | Troubleshooting **Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications**

Pin Assignments | Battery Pack Operations

Removal & Replacement Procedures

Removal Sequence

Electrostatic Discharge

Service **Considerations**

Cables and Connectors

Preparing the Computer for Disassembly

Battery Pack

Palmrest Cover with

TouchPad

Keyboard

Status Panel

Internet **Button Board**

Heatspreader

Network

Interface Card

Modem

Hard Drive

DisqPlay Module

Processor

DVD or **CD Drive**

Display Panel Assembly

Upper CPU Cover

Fan Assembly

Diskette Drive

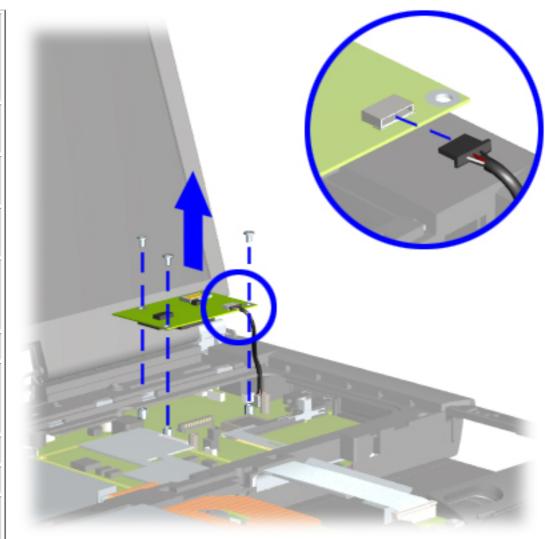
Battery

Charger Board

Speaker **Assembly**

System Board

Memory Module



Removing the Modem

To remove the modem, complete the following steps:

- 1. Prepare the computer for disassembly.
- 2. Remove the palmrest cover with touchpad.
- 3. Remove the keyboard.
- 4. Remove the status panel.
- 5. Remove the heatspreader.
- 6. Remove the **Network Interface** Card.
- 7. Remove three screws from the modem board. lift the modem board off the connector on the system board. and disconnect the modem cable from the modem board.

To replace the modem board, reverse the previous procedures.

Return to Removal & Replacement **Procedures**

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u>

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures

Removal Sequence

Electrostatic
Discharge

Service Considerations

Cables and Connectors

Preparing the Computer for Disassembly

Battery Pack

Palmrest
Cover with

Touch Pad

Keyboard

Status Panel

<u>Internet</u>

Button Board

<u>Heatspreader</u>

<u>Network</u>

Interface Card

Modem

Hard Drive

<u>DisqPlay</u> Module

Processor

DVD or CD Drive

Display Panel Assembly

<u>Upper CPU</u> Cover

Fan Assembly

Diskette Drive

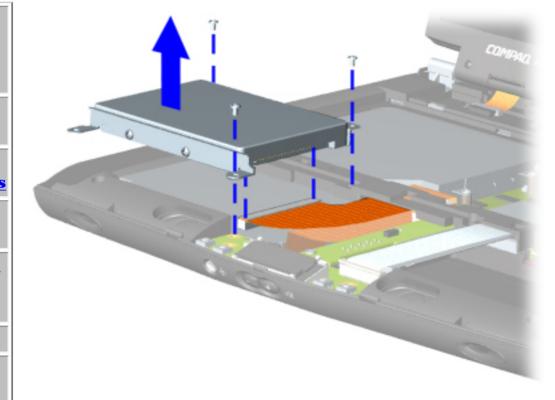
Battery

Charger Board

Speaker Assembly

System Board

Memory Module



Removing the Hard Drive

Illustrations may show parts removed that are not part of this procedure.

NOTE: It is necessary to remove only the parts listed in the written procedure.

To remove the hard drive, complete the following steps:

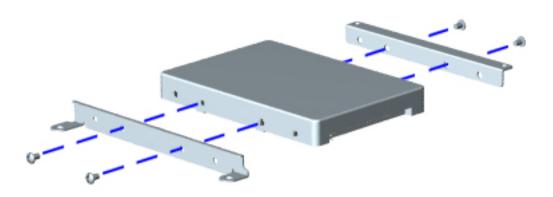
- 1. Prepare the computer for disassembly.
- 2. Remove the palmrest cover with touchpad.
- 3. Remove three screws from the hard drive mounting bracket, disconnect the hard drive data cable and lift out the hard drive with drive mounting bracket attached.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | Battery Pack Operations

Removal & Replacement Procedures



Removing the Hard Drive Mounting Brackets, continued

To remove the hard drive mounting brackets, complete the following step:

1. Remove two screws from each of the hard drive mounting brackets.

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

Return to Removal &

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Removal & Replacement Procedures

Removal Sequence

Electrostatic Discharge

Service Considerations

Cables and Connectors

Preparing the Computer for Disassembly

Battery Pack

Palmrest
Cover with
Touch Pad

Keyboard

Status Panel

<u>Internet</u> Button Board

Heatspreader

<u>Network</u> Interface Card

Modem

Hard Drive

DisqPlay Module

Processor

<u>DVD or</u> CD Drive

Display Panel
Assembly

<u>Upper CPU</u> Cover

Fan Assembly

Diskette Drive

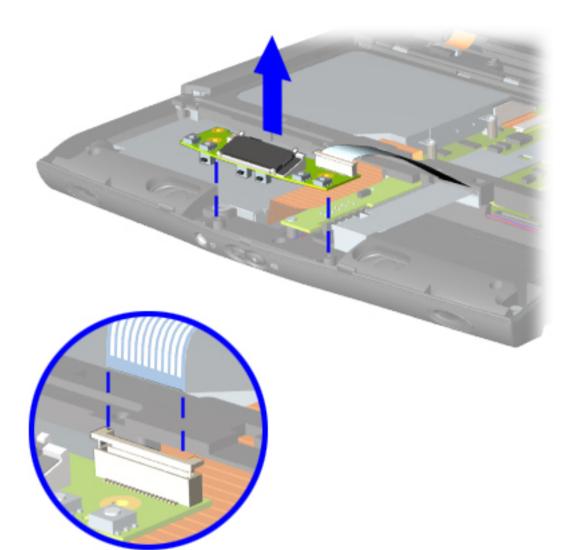
Battery

Charger Board

Speaker Assembly

System Board

Memory Module



Removing the DisqPlay Module

Illustrations may show parts removed that are not part of this procedure.

NOTE: It is necessary to remove only the parts listed in the written procedure.

To remove the DisqPlay Module, complete the following steps:

- 1. Prepare the computer for disassembly.
- 2. Remove the palmrest cover with touch pad.
- 3. Remove the hard drive.
- 4. Lift up the DisqPlay Module, disconnect the flex cable from the DisqPlay Module, and remove the DisqPlay Module from the chassis.

To replace the DisqPlay Module, reverse the previous procedures.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u>

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures

Removal Sequence

Electrostatic
Discharge

Service Considerations

Cables and Connectors

Preparing the Computer for Disassembly

Battery Pack

Palmrest
Cover with
Touch Pad

Keyboard

Status Panel

Internet
Button Board

Heatspreader

Network
Interface Card

Modem

Hard Drive

<u>DisqPlay</u> Module

Processor

DVD or CD Drive

Display Panel Assembly

Upper CPU Cover

Fan Assembly

Diskette Drive

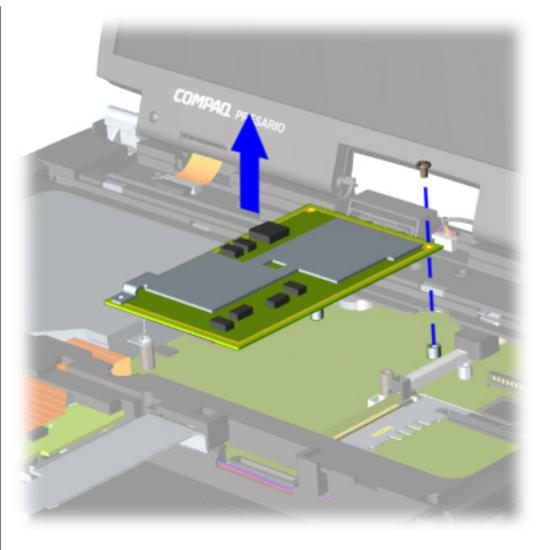
Battery

Charger Board

Speaker Assembly

System Board

Memory Module



Removing the Processor

To remove the processor, complete the following steps:

- 1. <u>Prepare the computer for disassembly.</u>
- 2. Remove the palmrest cover with touch pad.
- 3. Remove the <u>keyboard</u>.
- 4. Remove the heatspreader.
- 5. Remove screw, lift the processor up off the connector on the system board, and slide the processor from under the upper CPU cover to remove from the chassis.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

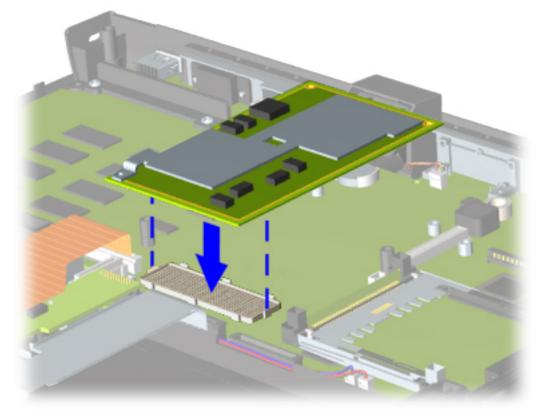
Removal & Replacement Procedures

Replacing the Processor

To replace the processor complete the following steps:

IMPORTANT:

When installing the processor, be sure that the system board connector fully aligns with the processor connector.



- 1. Press down carefully on the processor directly over the connectors to seat the processor.
- 2. Replace the screw.

Return to Removal & Replacement Procedures

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u>

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures

Removal Sequence

Electrostatic
Discharge

Service Considerations

<u>Cables and</u> Connectors

Preparing the Computer for Disassembly

Battery Pack

Palmrest
Cover with
Touch Pad

Keyboard

Status Panel

<u>Internet</u> Button Board

Heatspreader

Network

Interface Card

Modem

Hard Drive

DisqPlay Module

Processor

DVD or CD Drive

Display Panel
Assembly

<u>Upper CPU</u> Cover

Fan Assembly

Diskette Drive

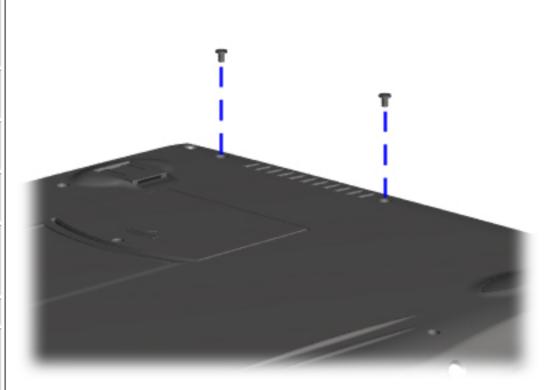
Battery

Charger Board

Speaker Assembly

System Board

Memory Module



Removing the DVD or CD Drive

To remove the DVD or CD drive, complete the following steps:

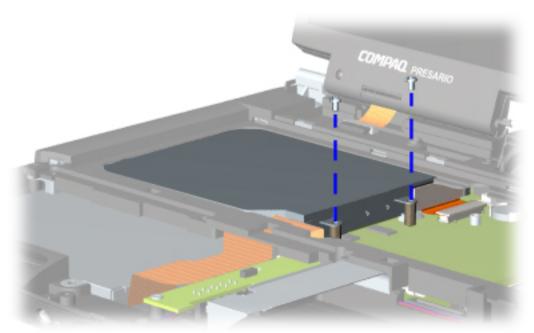
- 1. Prepare the computer for disassembly.
- 2. Remove the palmrest cover with touch pad.
- 3. Remove the keyboard.
- 4. Remove the heatspreader.
- 5. Turn the unit over and remove two screws from the base enclosure which secure the DVD or CD drive to the chassis.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures



Removing the DVD or CD Drive, continued

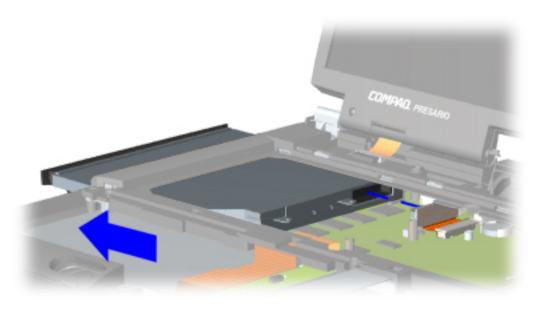
6. Turn the unit over and remove two screws located at the back of the DVD or CD drive.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

<u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | Specifications

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures



Removing the DVD or CD Drive, continued

7. Disconnect the DVD or CD drive cable from the DVD or CD drive and push forward from the back of the DVD or CD drive to remove from the chassis.

To replace the DVD or CD drive, reverse the previous procedures.

Return to Removal & Replacement Procedures

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Removal & Replacement Procedures

Removal Sequence

Electrostatic
Discharge

Service Considerations

Cables and Connectors

Preparing the Computer for Disassembly

Battery Pack

Palmrest
Cover with
TouchPad

Keyboard

Status Panel

Internet
Button Board

Heatspreader

Network
Interface Card

Modem

Hard Drive

<u>DisqPlay</u> Module

Processor

DVD or CD Drive

Display Panel Assembly

<u>Upper CPU</u> Cover

Fan Assembly

Diskette Drive

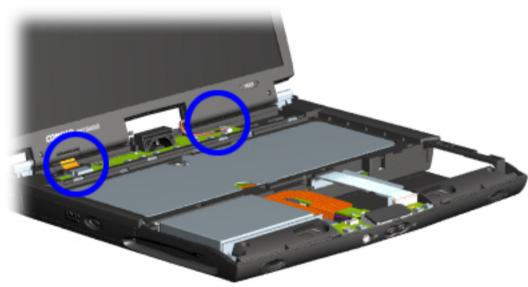
Battery

Charger Board

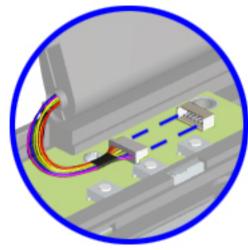
Speaker Assembly

System Board

Memory Module







Removing the Display Panel Assembly

Illustrations may show parts removed that are not part of this procedure.

NOTE: It is necessary to remove only the parts listed in the written procedures.

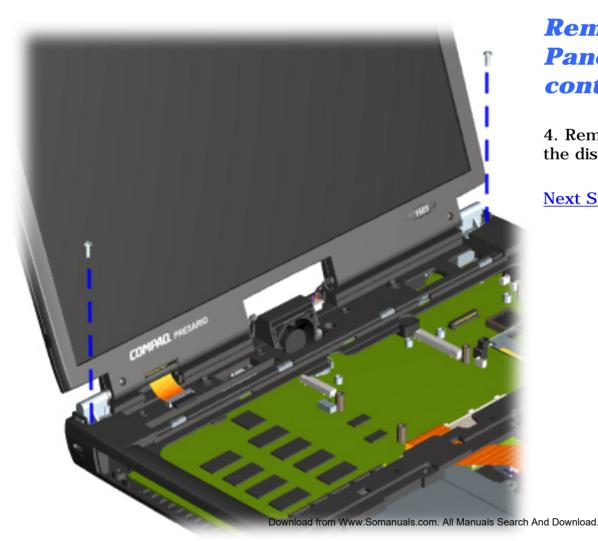
To remove the display panel assembly, complete the following steps:

- 1. Prepare the computer for disassembly.
- 2. Remove the status panel assembly.
- 3. Remove screw securing the display flex cable bracket and disconnect the display flex cable and backlight cable from the Internet Button Board.

Home Page | Notice | Preface | Product Description | Troubleshooting Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures



Removing the Display Panel Assembly, continued

4. Remove two outermost screws from the display base hinges.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures



Removing the Display Panel Assembly, continued

5. Remove the display assembly from the chassis.

To replace the display panel assembly, reverse the previous procedures.

Return to Removal
& Replacement
Procedures

| Home Page | Notice | Preface | Product Description | Troubleshooting **Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications**

Pin Assignments | Battery Pack Operations

Removal & Replacement Procedures

Removal Sequence

Electrostatic Discharge

Service **Considerations**

Cables and Connectors

Preparing the Computer for Disassembly

Battery Pack

Palmrest Cover with Touch Pad

Keyboard

Status Panel

Internet **Button Board**

Heatspreader

Network **Interface Card**

Modem

Hard Drive

DisqPlay Module

Processor

DVD or **CD Drive**

Display Panel Assembly

Upper CPU Cover

Fan Assembly

Diskette Drive

Battery

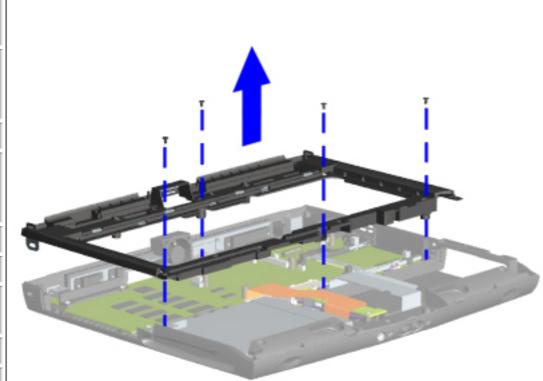
Charger Board

Speaker Assembly

System Board

Memory

Module



Removing the Upper **CPU Cover**

To remove the upper CPU cover, complete the following steps:

- 1. Prepare the computer for disassembly.
- 2. Remove the palmrest cover with touch pad.
- 3. Remove the keyboard.
- 4. Remove the heatspreader.
- 5. Remove the status panel assembly.
- 6. Remove the **Internet Button** board.
- 7. Remove the hard drive.
- 8. Remove the display panel assembly.
- 9. Remove four screws located on the top of the upper CPU cover.
- 10. Lift the upper CPU cover off the chassis.

To replace the upper CPU cover, reverse the previous procedures.

Return to Removal & Replacement **Procedures**

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| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u>

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures

Removal Sequence

Electrostatic
Discharge

Service Considerations

<u>Cables and</u> Connectors

Preparing the Computer for Disassembly

Battery Pack

Palmrest
Cover with
Touch Pad

Keyboard

Status Panel

Internet
Button Board

<u>Heatspreader</u>

Network
Interface Card

Modem

Hard Drive

<u>DisqPlay</u> Module

Processor

DVD or CD Drive

Display Panel Assembly

<u>Upper CPU</u> Cover

Fan Assembly

Diskette Drive

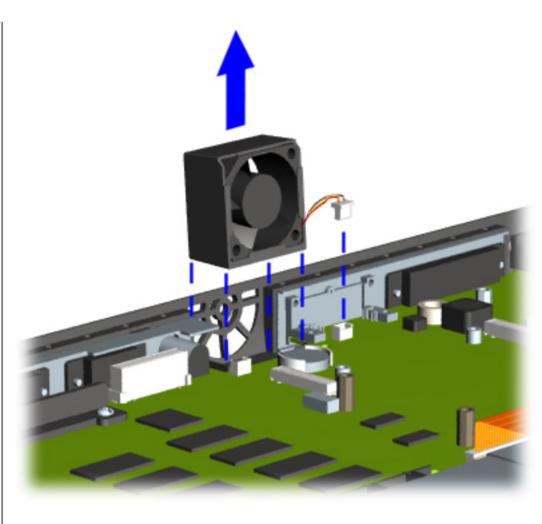
Battery

Charger Board

Speaker Assembly

System Board

Memory Module



Removing the Fan Assembly

To remove the fan assembly, complete the following steps:

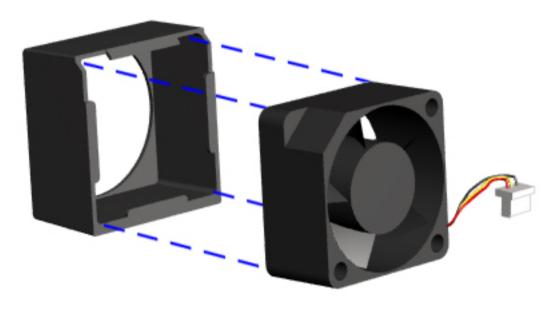
- 1. Prepare the computer for disassembly.
- 2. Remove the palmrest cover with touch pad.
- 3. Remove the <u>keyboard</u>.
- 4. Remove the <u>heatspreader</u>.
- 5. Remove the status panel assembly.
- 6. Remove the Internet Button board.
- 7. Remove the display panel assembly.
- 8. Remove the <u>hard</u> <u>drive</u>.
- 9. Remove the upper CPU cover.
- 10. Lift the fan assembly from the chassis slot and disconnect the fan cable from the connector on the system board.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures



Removing the Fan Assembly, continued

To remove the fan gasket, complete the following step:

Pull the gasket from the fan.

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



When replacing the fan assembly ensure the arrow (located on the side of the fan near the connector) is pointing inward.

Return to Removal & Replacement Procedures

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u>

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures

Removal Sequence

Electrostatic Discharge

Service Considerations

<u>Cables and</u> <u>Connectors</u>

Preparing the Computer for Disassembly

Battery Pack

Palmrest
Cover with
Touch Pad

Keyboard

Status Panel

<u>Internet</u> <u>Button Board</u>

Heatspreader

Network

Interface Card

<u>Modem</u>

Hard Drive

<u>DisqPlay</u> <u>Module</u>

Processor

DVD or CD Drive

Display Panel Assembly

<u>Upper CPU</u> Cover

Fan Assembly

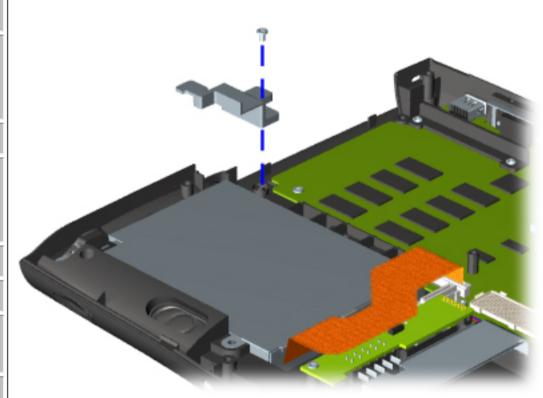
Diskette Drive

Battery Charger Board

Speaker Assembly

System Board

Memory Module



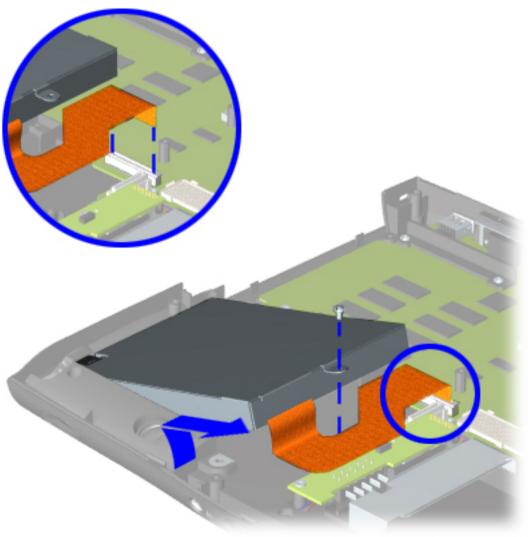
Removing the Diskette or LS120 Drive

To remove the diskette or LS120 drive, complete the following steps:

- 1. Prepare the computer for disassembly.
- 2. Remove the palmrest cover with touch pad.
- 3. Remove the <u>keyboard</u>.
- 4. Remove the <u>heatspreader</u>.
- 5. Remove the DVD or CD Drive.
- 6. Remove the status panel assembly.
- 7. Remove the Internet Button board.
- 8. Remove the display panel assembly.
- 9. Remove the hard drive.
- 10. Remove the upper CPU cover.
- 11. Remove screw from the diskette or LS120 drive retaining bracket.

| Home Page | Notice | Preface | Product Description | Troubleshooting
| Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications
| Pin Assignments | Battery Pack Operations

Removal & Replacement Procedures



Removing the Diskette or LS120 Drive, continued

12. Remove the screw that connects the diskette or LS120 drive bracket to the chassis.

13. If you have a diskette drive, then disconnect the diskette drive data cable from the ZIF connector on the system board and lift the diskette drive from the chassis.

If you have a LS 120 drive, then disconnect the <u>LS120</u> drive data cable from the back of the drive and lift the LS120 drive from the chassis.



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

To replace the diskette or LS120 drive, reverse the previous procedures.

Return to Removal & Replacement Procedures

| Home Page | Notice | Preface | Product Description | Troubleshooting **Illustrated Parts Catalog | Removal & Replacement Procedures |**

Pin Assignments | Battery Pack Operations

Specifications

Removal & Replacement Procedures

Removal Sequence

Electrostatic Discharge

Service **Considerations**

Cables and Connectors

Preparing the Computer for Disassembly

Battery Pack

Palmrest Cover with

Touch Pad Keyboard

Status Panel

Internet

Button Board

Heatspreader

Network **Interface Card**

Modem

Hard Drive

DisqPlay Module

Processor

DVD or **CD Drive**

Display Panel Assembly

Upper CPU Cover

Fan Assembly

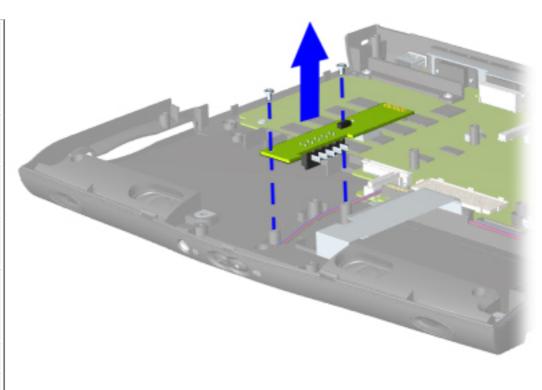
Diskette Drive

Battery Charger Board

Speaker Assembly

System Board

Memory Module



Removing the Battery **Charger Board**

To remove the battery charger board, complete the following steps:

- 1. Prepare the computer for disassembly.
- 2. Remove the palmrest cover with touch pad.
- 3. Remove the keyboard.
- 4. Remove the heatspreader.
- 5. Remove the status panel assembly.
- 6. Remove the **Internet Button** board.
- 7. Remove the display panel assembly.
- 8. Remove the hard <u>drive</u>.
- 9. Remove the Upper CPU cover.
- 10. Remove two screws from the battery charger board, unplug the board from the connector on the system board, and lift out of the chassis.

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

To replace the battery charger board, reverse the previous procedures.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u> <u>Pin Assignments</u> | <u>Battery Pack Operations</u>

Removal & Replacement Procedures

Removal Sequence

Electrostatic
Discharge

Service Considerations

Cables and Connectors

Preparing the Computer for Disassembly

Battery Pack

Palmrest
Cover with

Touch Pad Keyboard

Status Panel

Internet

Button Board

Heatspreader

Network Interface Card

Modem

Hard Drive

<u>DisqPlay</u> Module

Processor

DVD or CD Drive

Display Panel
Assembly

Upper CPU Cover

Fan Assembly

Diskette Drive

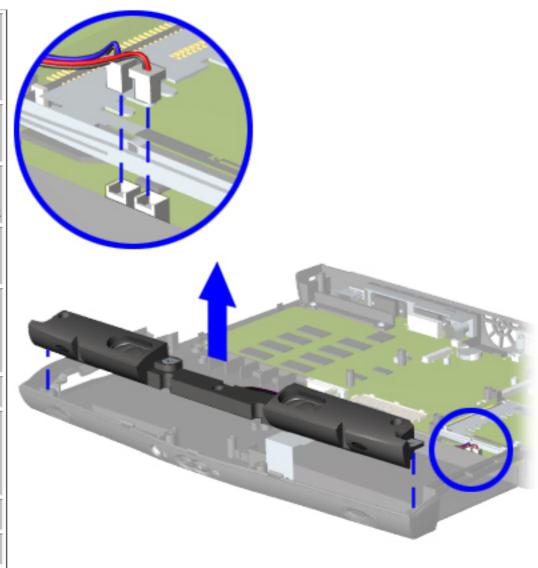
Battery

Charger Board

Speaker Assembly

System Board

<u>Memory</u> Module



Removing the Speaker Assembly

To remove the speaker assembly, complete the following steps:

- 1. Prepare the <u>computer for</u> <u>disassembly</u>.
- 2. Remove the <u>palmrest cover</u> with touch pad.
- 3. Remove the <u>keyboard</u>.
- 4. Remove the heatspreader.
- 5. Remove the <u>status panel</u> <u>assembly</u>.
- 6. Remove the <u>Internet Button</u> board.
- 7. Remove the <u>display panel</u> <u>assembly</u>.
- 8. Remove the <u>hard drive</u>.
- 9. Remove the <u>Upper CPU cover</u>.
- 10. Remove the <u>battery charger</u> <u>board</u>.
- 11. Disconnect the speaker cables from the system board and remove the speaker assembly from the chassis.



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

To replace the speaker assembly, reverse the previous procedures.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u>

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures

Charger Board

System Board

Speaker Assembly

Memory Module

Removing the System Board
To remove the system board, complete the following steps:
1. Prepare the <u>computer for disassembly</u> .
2. Remove the palmrest cover with touchpad.
3. Remove the <u>keyboard</u> .
4. Remove the <u>heatspreader</u> .
5. Remove the <u>status panel assembly</u> .
6. Remove the <u>Internet Button board.</u>
7. Remove the <u>display panel assembly</u> .
8. Remove the <u>hard drive</u> .
9. Remove the <u>Upper CPU cover</u> .
10. Disconnect the <u>DisqPlay module</u> cable from the system board.
11. Remove the <u>processor</u> .
12. Remove the <u>modem</u> .
13. Remove the <u>Network Interface Card</u> .
14. Remove the <u>DVD or CD drive</u> .
15. Remove the <u>fan assembly</u> .
16. Disconnect the <u>diskette or LS120 drive</u> cable from the system board.
17. Remove the <u>battery charger board</u> .
18. Disconnect the <u>speaker assembly</u> cables.
Next Step

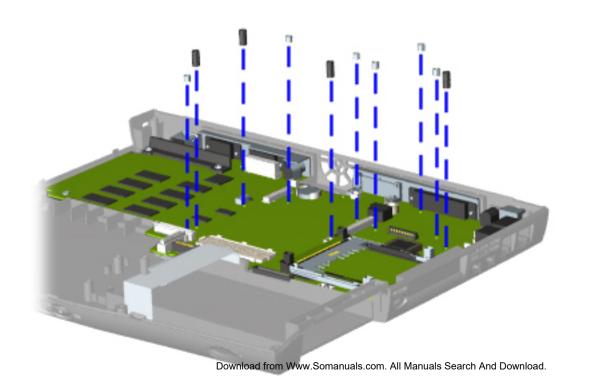
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| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures



Removing the System Board, continued

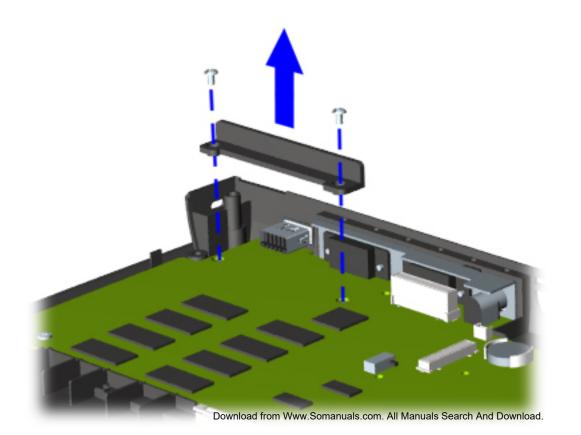
19. Remove ten standoffs from the system board.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | Battery Pack Operations

Removal & Replacement Procedures



Removing the System Board, continued

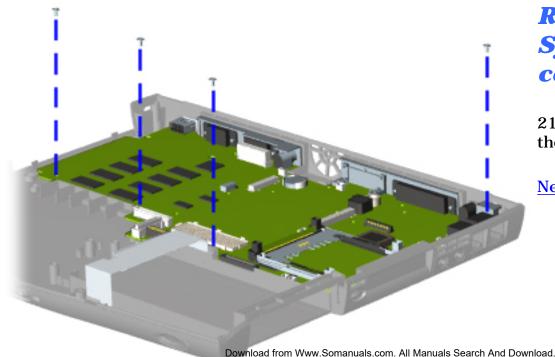
20. Remove two screws from the DVD or CD drive mounting rail and remove the mounting rail from the system board.

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u>

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures



Removing the System Board, continued

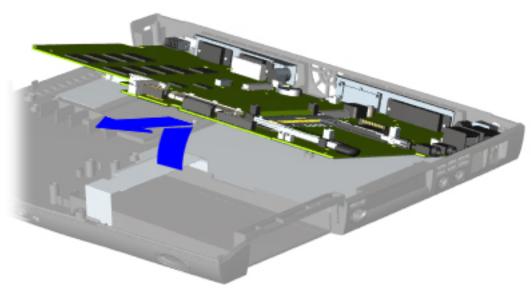
21. Remove four screws from the system board.

| Home Page | Notice | Preface | Product Description | **Troubleshooting**

Illustrated Parts Catalog | Removal & Replacement Procedures | Specifications

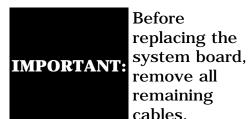
Pin Assignments | Battery Pack Operations

Removal & Replacement Procedures



Removing the System Board, continued

22. Lift up the front and pull forward to remove the system board from the chassis.



To replace the system board, reverse the previous procedures.

Return to Removal &

| <u>Home Page</u> | <u>Notice</u> | <u>Preface</u> | <u>Product Description</u> | <u>Troubleshooting</u> <u>Illustrated Parts Catalog</u> | <u>Removal & Replacement Procedures</u> | <u>Specifications</u>

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures

Removal Sequence

Electrostatic
Discharge

Service

Considerations

Cables and Connectors

Preparing the Computer for Disassembly

Battery Pack

Palmrest

Cover with Touch Pad

104011 1 40

Keyboard

Status Panel

Internet
Button Board

Heatspreader

Network
Interface Card

Modem

Hard Drive

<u>DisqPlay</u> Module

Processor

DVD or CD Drive

Display Panel

Assembly

<u>Upper CPU</u> Cover

Fan Assembly

Diskette Drive

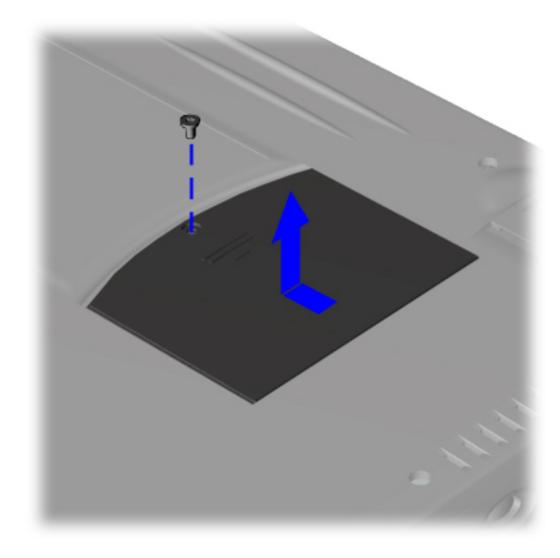
Battery

Charger Board

Speaker Assembly

System Board

Memory Module



Removing the Memory Module

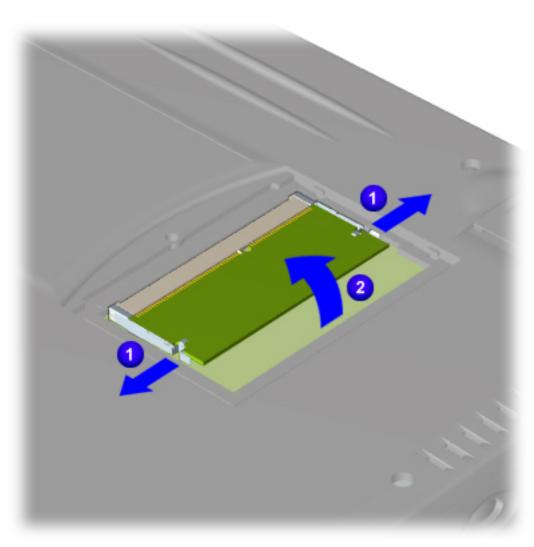
To remove the memory module, complete the following steps:

- 1. Prepare the computer for disassembly.
- 2. Close the computer and turn it upside down.
- 3. Remove the screw from the memory module door.
- 4. With the front of the computer facing you, slide the memory module door to the left.

Home Page | Notice | Preface | Product Description | Troubleshooting
Illustrated Parts Catalog | Removal & Replacement Procedures |
Specifications

Pin Assignments | **Battery Pack Operations**

Removal & Replacement Procedures



Removing the Memory Module, continued

5. Pull side levers to release the memory module and unplug the memory module from the system board.

To replace the memory module, reverse the previous procedures.

Return to Removal & Replacement Procedures Free Manuals Download Website

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