

# maintenance & service guide

## Presario 1800 Series

Models: **XL180, XL181, XL182, XL183, XL185,**  
and **XL190, XL191, XL192**

## Before You Begin

### Notice

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

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Maintenance and Service Guide

Compaq Presario 1800 Series Notebook Computer

First Edition (July 2000) Compaq Computer Corporation

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## Presario 1800 Series

Models: **XL180, XL181, XL182, XL183, XL185,**  
and **XL190, XL191, XL192**


### Preface


This *Maintenance and Service Guide* is a troubleshooting guide that is used as a reference guide when servicing the Compaq Presario 1800 Series Notebook Computers.

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

### Symbols

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


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

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

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

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

### Technician Notes

 **WARNING:** Only authorized technicians trained by Compaq should repair this equipment. All troubleshooting and repair procedures are detailed to allow only subassembly/module level repair. Because of the complexity of the individual boards and subassemblies, the user should not attempt to make 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.

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### Serial Number

The unit's serial number ❶ is required when requesting information or ordering spare parts. The serial number is located on the underside of the Notebook as shown below.



### Locating Additional Information

The following documentation is available to support this product:

- Compaq Presario 1800XL Series Notebook Computer documentation set
- Introducing Windows 98 Guide
- Introducing Windows 2000 Guide
- Service Training Guides
- Compaq Service Advisories and Bulletins
- Compaq QuickFind
- Compaq Service Quick Reference Guide



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## Product Description

This chapter describes the features of each of the Presario 1800XL models. It also provides illustrations of the exterior components unique to these units.



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### Models and Features

| Compaq Presario 1800 Series Portable Notebook Computer Models |                                    |                                    |                                       |                                       |
|---|------------------------------------|------------------------------------|---------------------------------------|---------------------------------------|
| Feature   | XL180                              | XL181                              | XL182                                 | XL183                                 |
| <b>Display</b>  | 15.0" TFT                          | 15.0" TFT                          | 15.0" TFT                             | 15.0" TFT                             |
| <b>Processor</b>  | PIII 600MHz,<br>256 Cache          | PIII 500 MHz,<br>256 Cache         | PIII 600 MHz,<br>256 Cache            | PIII 600 MHz,<br>256 Cache            |
| <b>Hard Drive</b>   | 6.0 GB                             | 12.0 GB                            | 12.0 GB                               | 12.0 GB                               |
| <b>CD or DVD Drive</b>  | 6X DVD Drive                       | 6X DVD Drive                       | 6X DVD Drive                          | 6X DVD Drive                          |
| <b>Modem</b>  | 56.0 Kbps Data/<br>Fax with PCI    | 56.0 Kbps Data/<br>Fax with PCI    | 56.0 Kbps Data/<br>Fax Int'l with PCI | 56.0 Kbps Data/<br>Fax Int'l with PCI |
| <b>Networking</b>   | 10/100TX<br>Integrated<br>Ethernet | 10/100TX<br>Integrated<br>Ethernet | 10/100TX<br>Integrated<br>Ethernet    | 10/100TX<br>Integrated<br>Ethernet    |
| <b>Battery</b>  | 3.2 Li-Ion                         | 3.2 Li-Ion                         | 3.2 Li-Ion                            | 3.2 Li-Ion                            |
| <b>System Memory</b>  | 64 MB PC100                        | 64 MB PC100                        | 64 MB PC100                           | 128 MB PC100                          |

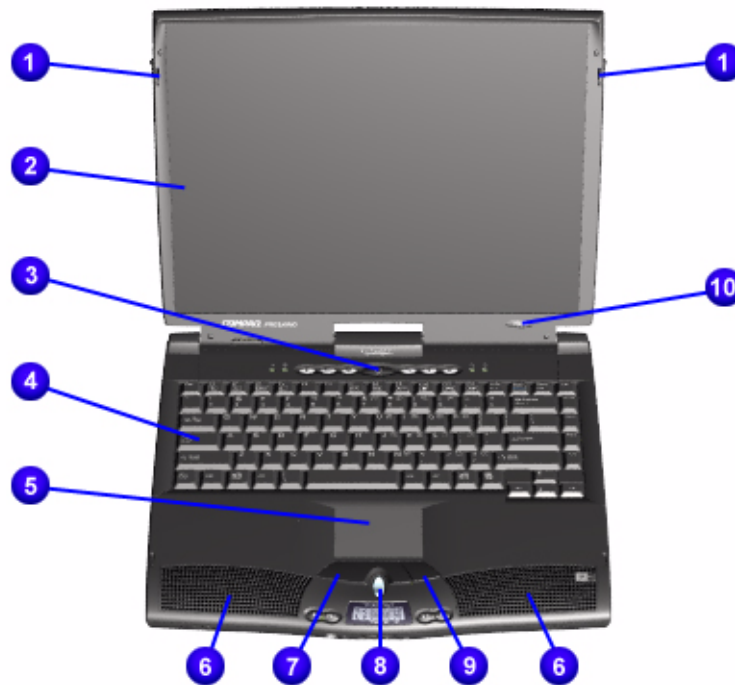
| Compaq Presario 1800 Series Portable Notebook Computer Models |                                       |                                    |                                       |                                       |
|---|---------------------------------------|------------------------------------|---------------------------------------|---------------------------------------|
| Feature   | XL185                                 | XL190                              | XL191                                 | XL192                                 |
| <b>Display</b>  | 15.0" TFT                             | 15.0" TFT                          | 15.0" TFT                             | 15.0" TFT                             |
| <b>Processor</b>  | PIII 600 MHz,<br>256 Cache            | PIII 700 MHz,<br>256 Cache         | PIII 650 MHz<br>256 Cache             | PIII 700 MHz<br>256 Cache             |
| <b>Hard Drive</b>   | 12.0 GB                               | 6.0 GB                             | 12.0 GB                               | 12.0 GB                               |
| <b>CD or DVD Drive</b>  | 6X DVD Drive                          | DVD Drive                          | 6X DVD Drive                          | 6X DVD Drive                          |
| <b>Modem</b>  | 56.0 Kbps Data/<br>Fax Int'l with PCI | 56.0 Kbps Data/<br>Fax with PCI    | 56.0 Kbps Data/<br>Fax Int'l with PCI | 56.0 Kbps Data/<br>Fax Int'l with PCI |
| <b>Networking</b>   | 10/100TX<br>Integrated<br>Ethernet    | 10/100TX<br>Integrated<br>Ethernet | 10/100TX<br>Integrated<br>Ethernet    | 10/100TX<br>Integrated<br>Ethernet    |
| <b>Battery</b>  | 3.2 Li-Ion                            | 3.2 Li-Ion                         | 3.2 Li-Ion                            | 3.2 Li-Ion                            |
| <b>System Memory</b>  | 64 MB PC100                           | 128 MB PC100                       | 128 MB PC100                          | 128 MB PC100                          |

*All models have a 3.5" Diskette Drive which use 1.44Mb Diskettes.*

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### Front of Unit

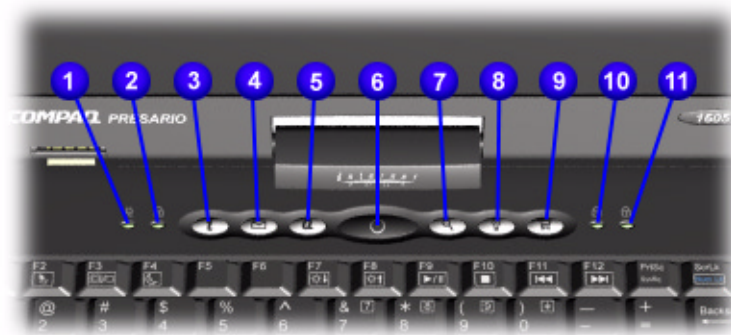


| # | Description             | # | Description           |
|---|-------------------------|---|-----------------------|
| ① | Display Release Latches | ⑥ | Integrated Speakers   |
| ② | Display                 | ⑦ | Left TouchPad Button  |
| ③ | Power (On/Off) Button   | ⑧ | Scroll Up/Down Button |
| ④ | Keyboard                | ⑨ | Right TouchPad Button |
| ⑤ | TouchPad                | ⑩ | Model Number          |

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## **Internet Zone Buttons and Lights**



| # | Description                | # | Description  |
|---|----------------------------|---|--|
| ① | AC Adapter Light           | ⑦ | Instant Search   |
| ② | Caps Lock Light            | ⑧ | Online Marketplace (US/Puerto Rico)<br>Instant Answer (outside US) |
| ③ | Instant Internet Access    | ⑨ | Retail Central (US/Puerto Rico)<br>Instant E-Commerce (outside US) |
| ④ | Instant E-mail Access      | ⑩ | Num Lock Light   |
| ⑤ | My Presario Instant Access | ⑪ | Scroll Lock Light  |
| ⑥ | Power Button               |   |  |

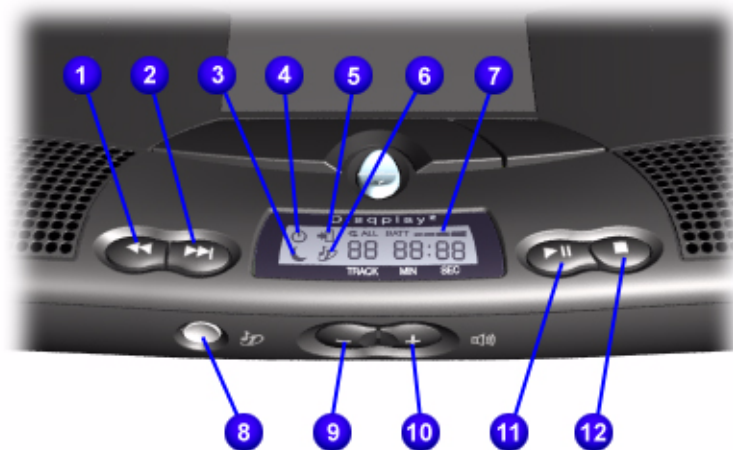


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### Front Bezel Components

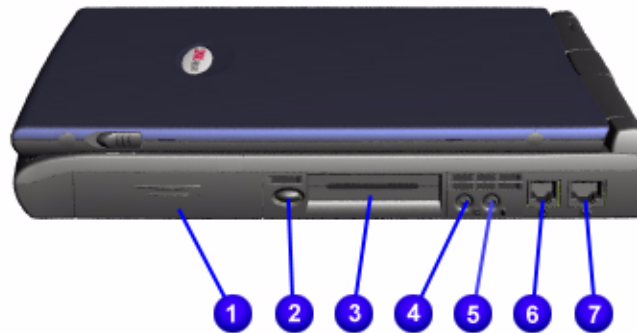


| # | Description                  | # | Description           |
|---|------------------------------|---|-----------------------|
| ① | Previous Track Button        | ⑦ | Battery Gauge         |
| ② | Next Track Button            | ⑧ | Display On/Off Button |
| ③ | Sleep Status Icon            | ⑨ |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

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### Right-Side Components

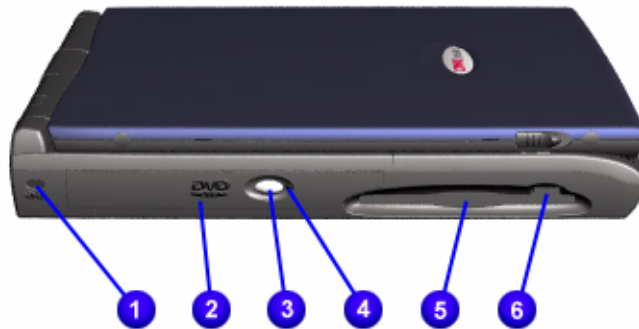


| # | Description          | # | Description     |
|---|----------------------|---|-----------------|
| ① | Battery Compartment  | ⑤ | Microphone Jack |
| ② | PC Card Eject Button | ⑥ | Modem Port      |
| ③ | PC Card Slot         | ⑦ | Ethernet Port   |
| ④ | Headphone Jack       |   |             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

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## Left-Side Components

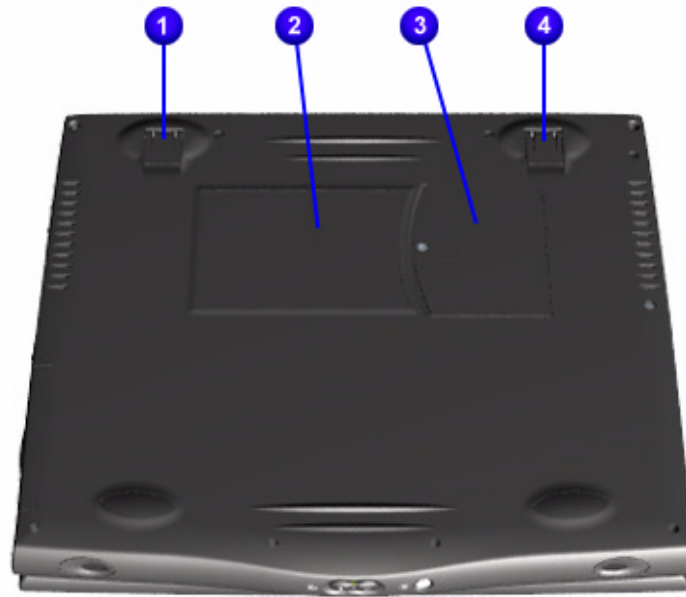


| # | Description               | # | Description                 |
|---|---------------------------|---|-----------------------------|
| ❶ | Security Slot             | ❷ | CD or DVD Drive             |
| ❸ | CD/DVD Drive Eject Button | ❹ | CD or DVD Manual Eject Hole |
|   |                           | ❺ | Diskette Drive              |
|   |                           | ❻ | Diskette Drive Eject Button |

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## *Underneath the Unit*

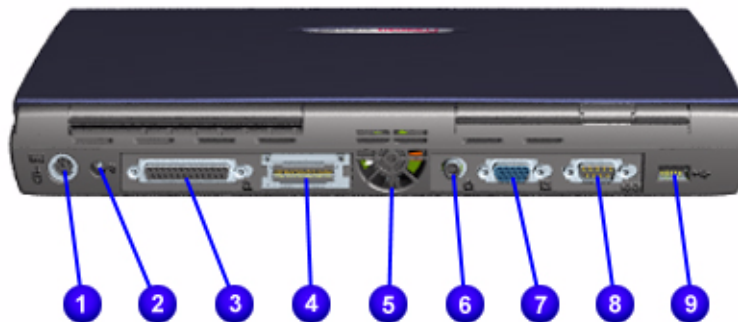


| # | Description   | # | Description        |
|---|---------------|---|--------------------|
| ❶ | Stand Feet    | ❸ | Memory Compartment |
| ❷ | Serial Number | ❹ | Stand Feet         |

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## Rear Connectors

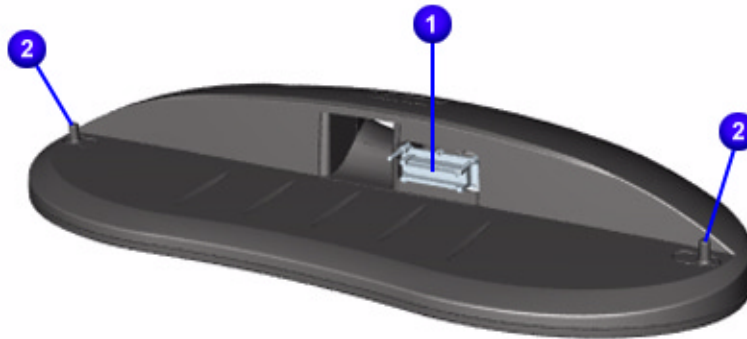


| # | Description          | # | Description               |
|---|----------------------|---|---------------------------|
| ① | Keyboard/Mouse Port  | ⑥ | TV Out Connector          |
| ② | AC Adapter Connector | ⑦ | External Monitor Port     |
| ③ | Parallel Port        | ⑧ | Serial Ports              |
| ④ | QuikDock Connector   | ⑨ | Universal Serial Bus Port |
| ⑤ | Fan Vent             |   |                           |

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### QuikDock Components



| # | Description                  |
|---|------------------------------|
| ① | QuikDock Interface Connector |
| ② | QuikDock Guide Posts         |

### QuikDock Connectors



| # | Description                  | # | Description           |
|---|------------------------------|---|-----------------------|
| ① | Universal Serial Bus Port    | ⑧ | Serial Port           |
| ② | Universal Serial Bus Port    | ⑨ | External Monitor Port |
| ③ | Power (AC Adapter) Connector | ⑩ | 10/100TX Ethernet     |
| ④ | Keyboard/Mouse Port          | ⑪ | S Video               |
| ⑤ | Keyboard/Mouse Port          | ⑫ | (Composite) TV Out    |
| ⑥ | Parallel Port                | ⑬ | Audio Out             |
| ⑦ | Game Port                    |   |                       |

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## Specifications

### Physical and Environmental

| Specification  | U.S.   | Metric                       |
|--|--|------------------------------|
| <b>Height</b>  | 1.63 in  | 4.14 cm                      |
| <b>Depth</b>   | 12.99 in   | 33.00 cm                     |
| <b>Width</b>   | 11.02 in   | 28.00 cm                     |
| <b>Weight</b><br>with 14.1" TFT Display<br>with 15.0" Display  | 7.8 lbs  | 3.54 kg                      |
| <b>Battery Pack Power Requirements</b><br>Nominal Operating<br>Maximum Average<br>Peak Operating                   | Li-ion 3.2 AHr<br><br>W @ 14.8 V<br>W @ 14.8 V<br>W @ 14.8 V                 |                              |
| <b>AC Power Requirements</b><br>Operating Voltage<br>Operating Current<br>Operating Frequency<br>Maximum Transient | 100-240 V<br>0.8/0.4 A RMS<br>47-63 Hz (meets IEC801-4 & 5)<br>1kV for 50 ns |                              |
| <b>Temperature*</b><br>Operating<br>Non-Operating  | 50° to 95°F<br>-4° to 140°F  | 10° to 35°C<br>-20° to 60°C  |
| <b>Relative Humidity (noncondensing)</b><br>Operating<br>Non-Operating (tw = 38.7°C max)                           | 10 to 90%<br>5 to 95%  | 35 to 90%<br>60 to 95%       |
| <b>Altitude</b><br>Operating<br>Non-Operating  | 0 to 10,000 ft<br>0 to 30,000 ft   | 0 to 3.05 km<br>0 to 9.14 km |
| <b>Shock</b><br>Operating<br>Non Operating   | 10 G, 11 ms, half sine<br>240 G, 2 ms, half sine                             |                              |
| <b>Vibration</b><br>Operating<br>Non Operating   | 0.5 G<br>1.5 G   |                              |

*\*Applicable safety standards specify thermal limits for plastic surfaces. Presario 1800XL Notebooks operate well within this temperature range.*

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## System Interrupts

| Hardware IRQ | System Function                                    | Hardware IRQ | System Function                                       |
|--------------|--|--------------|---|
| IRQ0         | System Timer                                       | IRQ10        | Available   |
| IRQ1         | Standard 101/102-Key or Microsoft Natural Keyboard | IRQ11        | Intel (R) Pro/100S Mobile LAN on Motherboard          |
| IRQ2         | Programmable Interrupt Controller                  | IRQ11        | Texas Instruments PCI-1410 CardBus Controller         |
| IRQ3         | Lucent 56K V.90 PCI DF Modem                       | IRQ11        | ACPI IRQ Holder for PCI IRQ Steering                  |
| IRQ3         | ACPI IRQ Holder for PCI IRQ Steering               | IRQ11        | Intel 82371AB/EB PCI to USB Universal Host Controller |
| IRQ4         | Communications Port (COM1)                         | IRQ11        | ACPI IRQ Holder for PCI IRQ Steering                  |
| IRQ5         | ESS SOLO-1 PCI AudioDrive                          | IRQ12        | Synaptics PS/2 TouchPad                               |
| IRQ5         | ACPI IRQ Holder for PCI IRQ Steering               | IRQ13        | Numeric Data Processor                                |
| IRQ5         | RAGE Mobility AGP (English)                        | IRQ14        | Intel 82371AB/EB PCI Bus Master IDE Controller        |
| IRQ6         | Standard Floppy Disk Controller                    | IRQ14        | Primary IDE Controller (Dual FIFO)                    |
| IRQ7         | Printer Port (LPT1)                                | IRQ15        | Intel 82371AB/EB PCI Bus Master IDE Controller        |
| IRQ8         | System CMOS/Real Time Clock                        | IRQ15        | Secondary IDE Controller (Dual FIFO)                  |
| IRQ9         | SCI IRQ used by ACPI Bus                           |              |   |

## System DMA

| Hardware DMA | System Function                 |
|--------------|---------------------------------|
| DMA1         | ESS SOLO-1 DOS Emulation        |
| DMA2         | Standard Floppy Disk Controller |
| DMA3         | ECP Printer Port (LPT1)         |
| DMA4         | Direct memory access Controller |



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### System I/O Address

| <b>I/O Address</b> | <b>System Function (Shipping Configuration)</b>    |
|--------------------|--|
| 0000h - 000Fh      | Direct Memory Access Controller                    |
| 0020h - 0021h      | Programmable Interrupt Controller                  |
| 0040h - 0043h      | System Timer                                       |
| 0060h - 0060h      | Standard 101/102-Key or Microsoft Natural Keyboard |
| 0061h - 0061h      | System Speaker                                     |
| 0062h - 0062h      | ACPI Embedded Controller                           |
| 0064h - 0064h      | Standard 101/102-Key or Microsoft Natural Keyboard |
| 0066h - 0066h      | ACPI Embedded Controller                           |
| 0070h - 0071h      | System CMOS/Real Time Clock                        |
| 0081h - 008Fh      | Direct Memory Controller                           |
| 00A0h - 00A1h      | Programmable Interrupt Controller                  |
| 00C0h - 00DFh      | Direct Memory Access Controller                    |
| 00F0h - 00FEh      | Numeric Data Processor                             |
| 0170h - 0177h      | Intel 82371AB/EB PCI Bus Master IDE Controller     |
| 0170h - 0177h      | Secondary IDE Controller (dual fifo)               |
| 01F0h - 01F7h      | Intel 82371AB/EB PCI Bus Master IDE Controller     |
| 01F0h - 01F7h      | Primary IDE Controller (dual fifo)                 |
| 0200h - 0203h      | Gameport Joystick                                  |
| 0220h - 022Fh      | ESS SOLO-1 DOS Emulation                           |
| 0330h - 0331h      | ESS SOLO-1 DOS Emulation                           |
| 0376h - 0376h      | Secondary IDE Controller (Dual FIFO)               |
| 0376h - 0376h      | Intel 82371AB/EB PCI Bus Master IDE Controller     |
| 0378h - 037Fh      | Printer Port (LPT1)                                |
| 0388h - 038Bh      | ESS SOLO-1 DOS Emulation                           |
| 03B0h - 03BBh      | RAGE Mobility AGP (English)                        |
| 03C0h - 03DFh      | RAGE Mobility AGP (English)                        |
| 03F0h - 03F5h      | Standard Floppy Disk Controller                    |
| 03F6h - 03F6h      | Intel 82371AB/EB PCI Bus Master IDE Controller     |
| 03F6h - 03F6h      | Primary IDE Controller (Dual FIFO)                 |
| 03F7h - 03F7h      | Standard Floppy Disk Controller                    |

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| I/O Address   | System Function (Shipping Configuration)              |
|---------------|---|
| 03F8h - 03FFh | Communications Port (COM1)                            |
| 04D0h - 04D1h | Motherboard Resources                                 |
| 0CF8h - 0CFFh | PCI Bus   |
| 1000h - 10FFh | Lucent 56K V.90 PCI DF Modem                          |
| 1400h - 143Fh | ESS SOLO-1 PCI AudioDrive                             |
| 1440h - 147Fh | Intel (R) PRO/100 S Mobile LAN on Motherboard         |
| 1480h - 149Fh | Intel 82371AB/EB PCI to USB Universal Host Controller |
| 14A0h - 14A7h | Primary IDE Controller (Dual FIFO)                    |
| 14A0h - 14AFh | Intel 82371AB/EB PCI Bus Master IDE Controller        |
| 14A8h - 14AFh | Secondary IDE Controller (Dual FIFO)                  |
| 14B0h - 14BFh | ESS SOLO-1 PCI AudioDrive                             |
| 14C0h - 14CFh | ESS SOLO-1 PCI AudioDrive                             |
| 14D0h - 14D7h | Lucent 56K V.90 PCI DF Modem                          |
| 14D8h - 14DBh | ESS SOLO-1 PCI AudioDrive                             |
| 14DCh - 14DFh | ESS SOLO-1 PCI AudioDrive                             |
| 2180h - 218Fh | Motherboard Resources                                 |
| 8000h - 803Fh | Motherboard Resources                                 |
| 9000h - 9FFFh | Intel 82443BX Pentium II Processor to AGP Controller  |
| 9000h - 90FFh | RAGE Mobility AGP (English)                           |

## System Memory Catalog

| Memory Address        | System Function                               |
|-----------------------|---|
| 00000000h - 0009FFFFh | Not Available For Use By Devices              |
| 000A0000h - 000AFFFFh | RAGE Mobility AGP (English)                   |
| 000B0000h - 000BFFFFh | RAGE Mobility AGP (English)                   |
| 000C0000h - 000CBFFFh | RAGE Mobility AGP (English)                   |
| 000E0000h-000E7FFFh   | Not Available For Use By Devices              |
| 000E9000h-03FFFFFFh   | Not Available For Use By Devices              |
| 04000000h - 04000FFFh | Texas Instruments PCI-1410 CardBus Controller |
| F4000000h - F4000FFFh | Intel (R) PRO/100 S Mobile LAN on Motherboard |
| F4100000h-F4100FFFh   | Intel (R) PRO/100 S Mobile LAN on Motherboard |

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| Memory Address        | System Function                                      |
|-----------------------|--|
| F4101000h-F41010FFh   | Lucent 56K V.90 PCI DF Modem                         |
| F4200000h-F4200FFFh   | RAGE Mobility AGP (English)                          |
| F4200000h-F5FFFFFFh   | Intel 82443BX Pentium II Processor to AGP Controller |
| F4220000h-F423FFFFh   | RAGE Mobility AGP (English)                          |
| F5000000h-F5FFFFFFh   | RAGE Mobility AGP (English)                          |
| F8000000h - FBFFFFFFh | Intel 82443BX Pentium II Processor to PCI Bridge     |
| FFF80000h - FFFFFFFFh | Motherboard Resources                                |

## Display Information

| Display Specification | 15.0" (Diagonal) TFT with LVDS |          | 14.1" (Diagonal) TFT with LVDS |          |
|-----------------------|--------------------------------|----------|--------------------------------|----------|
|                       | U.S.                           | Metric   | U.S.                           | Metric   |
| Unit Height           | 9.48 in                        | 24.05 cm | 8.92 in                        | 22.65 cm |
| Unit Width            | 12.43 in                       | 31.55 cm | 11.76 in                       | 29.85 cm |
| Display Height        | 8.99 in                        | 22.81 cm | 8.44 in                        | 21.43 cm |
| Display Width         | 11.98 in                       | 30.41 cm | 11.26 in                       | 28.57 cm |
| Weight                | 24.36 oz                       | 690 g    | 19.94 oz                       | 565 g    |
| Contrast Ratio        | 150:1 mini                     |          | 150:1 mini                     |          |
| Brightness            | 120 cd/mm <sup>3</sup>         |          | 120 cd/mm <sup>3</sup>         |          |
| Response Time         | 50 ms                          |          | 50 ms                          |          |
| Refresh Rate          | 60 Hz                          |          | 60 Hz                          |          |

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### Memory Expansion

| Memory Expansion |                        |              |
|------------------|------------------------|--------------|
| System Memory    | Expansion Board Memory | Total Memory |
| 64 MB            | none                   | 64 MB        |
| 64 MB            | 32 MB                  | 96 MB        |
| 64 MB            | 64 MB                  | 128 MB       |
| 64 MB            | 128 MB                 | 192 MB       |
| 64 MB            | 256 MB                 | 320 MB       |

### Diskette Drive

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

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## Hard Drive

| Hard Drives                 |                |                |                |
|-----------------------------|----------------|----------------|----------------|
| Specification               | 6.0 GB         | 12.0 GB        | 18.0 GB        |
| Drive Type                  | Ultra DMA 66.7 | Ultra DMA 66.7 | Ultra DMA 66.7 |
| Cylinders                   | 15200          | 15200          | 15200          |
| Heads                       | 2              | 4              | 6              |
| Sectors per Track           | 63             | 63             | 63             |
| Bytes per Sector            | 512            | 512            | 512            |
| Seek Times (typical)        |                |                |                |
| Read/Write (incl. settling) | 13 ms          | 13 ms          | 13 ms          |
| Single track                | 3 ms           | 3 ms           | 3 ms           |
| Full stroke                 | 24 ms          | 24 ms          | 24 ms          |
| Transfer Rate at Interface  |                |                |                |
| Ultra DMA mode (max)        | 66.7 Mb/s      | 66.7 Mb/s      | 66.7 Mb/s      |
| PIO mode                    | 16.6 Mb/s      | 16.6 Mb/s      | 16.6 Mb/s      |

## CD or DVD Drive

| CD or DVD Drive                        |           |          |  |           |
|--|-----------|----------|--|-----------|
| Specification                          | 6x DVD    | 8x DVD   | CD-RW  | 24x CD    |
| Width                                  | 128 mm    | 128 mm   | 128 mm   | 128 mm    |
| Height                                 | 12.7 mm   | 12.7 mm  | 12.7 mm  | 12.7 mm   |
| Depth                                  | 129 mm    | 129 mm   | 129 mm   | 129 mm    |
| Weight                                 | 280 g     | 270 g    | 300 g  | <270 g    |
| Rotational Speed Approx.               | 3450 rpm  | 2300 rpm | 4200 rpm (CD)  | 4225 rpm  |
| Sustained Data Transfer Rate (typical) | 8100 Kb/s | 5400Kb/s | Reading:<br>3000 Kb/s (20x CD)<br>2100 Kb/s (14x CD-RW)<br>Writing:600 Kb/s (4x) | 3600 Kb/s |
| Random Access Time (Avg.)              | 140 ms    | 140 ms   | 150 ms (Typ.)  | 120 ms    |
| Spin Up Time                           | <15 s     | 3.8 s    | <10 s  | 2.7 s     |
| Data Buffer Capacity                   | 512 Kb    | 128 Kb   | 2Mb  | 128 Kb    |

# maintenance & service guide

## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

### Battery Pack

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

*\*The battery discharge/use limit changes depending on the power management settings, system components such as installed PC Cards, and the applications in use.*

# maintenance & service guide

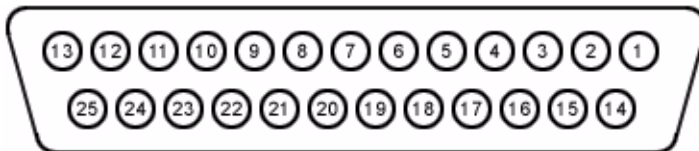
**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
**and XL190, XL191, XL192**

## Connector Pin Assignments

This chapter provides the pin assignments for Presario 1800 Series Notebook connectors. For more information on connectors or external ports, refer to [Rear Connectors](#) and [QuikDock Connectors](#).

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

### Parallel Connector



| 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       |

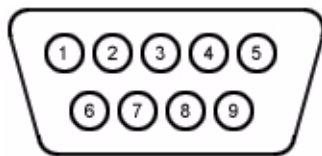
\*Signal is active low.

# maintenance & service guide

## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
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### Serial Connector



| Pin | Signal              | Pin | Signal         |
|-----|---------------------|-----|----------------|
| 1   | Carrier Detect      | 6   | Data Set Ready |
| 2   | Receive Data        | 7   | Ready to Send  |
| 3   | Transmit Data       | 8   | Clear to Send  |
| 4   | Data Terminal Ready | 9   | Ring Indicator |
| 5   | Signal Ground       |     |                |

### Keyboard/Mouse Connector



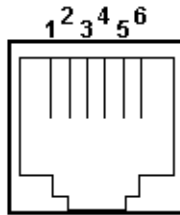
| Pin | Signal | Pin | Signal  |
|-----|--------|-----|---------|
| 1   | Data 1 | 4   | +5 V    |
| 2   | Data 2 | 5   | Clock 1 |
| 3   | Ground | 6   | Clock 2 |



## maintenance & service guide

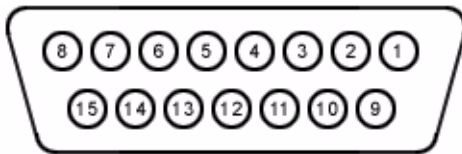
**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
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### Modem Connector



| Pin | Signal | Pin | Signal |
|-----|--------|-----|--------|
| 1   | Unused | 4   | Unused |
| 2   | Tip    | 5   | Unused |
| 3   | Ring   | 6   | Unused |

### Game Port Connector

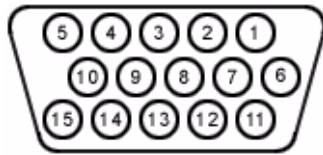


| Pin | Signal | Pin | Signal |
|-----|--------|-----|--------|
| 1   | +5V    | 9   | +5V    |
| 2   | SWA    | 10  | SWC    |
| 3   | RBTA   | 11  | RBTC   |
| 4   | GND    | 12  | RMSO   |
| 5   | GND    | 13  | RBTD   |
| 6   | RBTB   | 14  | SWD    |
| 7   | SWB    | 15  | RMSI   |
| 8   | +5V    |     |        |

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## *External VGA Monitor Port*



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

## *S-Video Connector*



| Pin | Signal | Pin | Signal |
|-----|--------|-----|--------|
| 1   | Ground | 3   | SYR    |
| 2   | Ground | 4   | SCG    |

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### *TV Out Connector*



| Pin | Signal    | Pin | Signal |
|-----|-----------|-----|--------|
| 1   | Ground    | 3   | Ground |
| 2   | Composite |     |        |

### *Univeral Serial Bus (USB)*

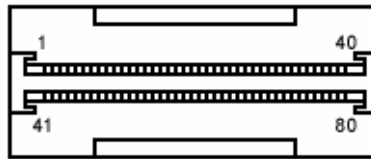


| Pin | Signal | Pin | Signal |
|-----|--------|-----|--------|
| 1   | +5V    | 3   | Data + |
| 2   | Data - | 4   | Ground |

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**Models: XL180, XL181, XL182, XL183, XL185,**  
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## QuikDock Connector



| Pin | Signal             | Pin | Signal            | Pin | Signal          | Pin | Signal          |
|-----|--------------------|-----|-------------------|-----|-----------------|-----|-----------------|
| 1   | Adapter Power      | 22  | Serial Port DCD   | 43  | Keyboard Clock  | 64  | MIDI Output     |
| 2   | Adapter Power      | 23  | Serial Port DSR   | 44  | Keyboard Data   | 65  | Headphone Sense |
| 3   | Adapter Power      | 24  | Serial Port TXD   | 45  | Mouse Clock     | 66  | USB Power       |
| 4   | Adapter Power      | 25  | Serial Port RTS   | 46  | Mouse Data      | 67  | USB Power       |
| 5   | Adapter Power      | 26  | Monitor DDC       | 47  | Lp Select       | 68  | USB Power       |
| 6   | Adapter Power      | 27  | Monitor DDC       | 48  | Lp Paper End    | 69  | USB Power       |
| 7   | Not Connected      | 28  | Monitor Indicator | 49  | Lp Initialize   | 70  | USB A-          |
| 8   | Printer Data 0     | 29  | V.SYNC            | 50  | Lp Busy         | 71  | USB A+          |
| 9   | Printer Data 1     | 30  | Ground            | 51  | Lp Error        | 72  | USB B-          |
| 10  | Printer Data 2     | 31  | H.SYNC            | 52  | Lp Acknowledge  | 73  | USB B+          |
| 11  | Printer Data 3     | 32  | Ground            | 53  | Lp AutoFeed     | 74  | 5V              |
| 12  | Printer Data 4     | 33  | Blue              | 54  | Lp Strobe       | 75  | 5V              |
| 13  | Printer Data 5     | 34  | Ground            | 55  | Joystick Data A | 76  | Line Out Left   |
| 14  | Printer Data 6     | 35  | Green             | 56  | Joystick Data B | 77  | S-Video SYR     |
| 15  | Printer Data 7     | 36  | Ground            | 57  | Joystick Data C | 78  | Ground          |
| 16  | Lp Indicator       | 37  | Red               | 58  | Joystick Data D | 79  | S-Video SCG     |
| 17  | QuikDock Indicator | 38  | Ground            | 59  | Switch A        | 80  | Ground          |
| 18  | Serial Port RXD    | 39  | Composite TV Out  | 60  | Switch B        | 81  | Ground          |
| 19  | Serial Port RI     | 40  | Line Out Right    | 61  | Switch C        | 82  | Ground          |
| 20  | Serial Port DTR    | 41  | Line Out Present  | 62  | Switch D        |     |                 |
| 21  | Serial Port CTS    | 42  | Power Cycle       | 63  | MIDI Input      |     |                 |

# maintenance & service guide

## Presario 1800 Series

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and **XL190, XL191, XL192**

## Battery and Power Management

This chapter describes power management and proper battery operating practices for Presario 1800XL Notebooks. These practices include conservation of AC power and extending the operating life of the battery. The following sections also outline proper methods to startup and shutdown the Notebook in various situations.

### Power Modes

Presario 1800XL Notebooks have three levels of low power: *Hibernation*, *Standby*, and *Off*.

#### Hibernation

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


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

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

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

#### Standby

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

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

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

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

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# maintenance & service guide

**Presario 1800 Series**  
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## Full Off

Off mode consumes no power. However, the battery charges while the Notebook is in Off mode if the battery is installed and the Notebook remains plugged into external AC power.

**Note:** Unsaved information is lost if the Notebook is shutdown without saving the data.

To activate Off mode, click the **Start** button on the Windows taskbar, click **Shut Down**, and then select **shutdown** from the options.

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



**WARNING:** The Notebook must be shutdown (Off mode) when installing or replacing components. Follow the instructions for putting the Notebook into Off mode, unplug it from the outlet, and remove the battery pack (see [Removing the Battery](#)) before servicing any parts.

## Summary of Power Modes

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

|                             | Standby Mode   | Hibernation Mode   | Off Mode   |
|-----------------------------|--|--|--|
| <b>Automatic Activation</b> | 15 minutes if using battery power* (preset default)  | When battery is low or after 1 hour of Standby*.                                       | Standard Shutdown: click <b>Start</b> on the Windows taskbar, click <b>Shutdown</b> , and then <b>shutdown</b> . |
| <b>Manual Activation</b>    | Press <b>Fn+F4</b> key combination or click <b>Start</b> on the Windows taskbar, <b>Shutdown</b> , and then <b>Standby</b> . | Press <b>Power</b> button once.  | Manual Shutdown** : Press and hold down the <b>Power</b> button for 4 seconds.                                   |
| <b>Resume/Exit</b>          | Press any key.   | Press <b>Power</b> button once.  | Press <b>Power</b> button once.  |
| <b>Indicators</b>           | Power light flashes and Moon icon appears on status display.   | Power light is off, screen is blank, and Power icon does not appear on status display. | Power light is off, screen is blank, and Power icon does not appear on status display.                           |

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

*\*\*Important: The Manual Shutdown procedure is not recommended unless the Standard Shutdown is unsuccessful.*

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**Presario 1800 Series**  
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## Power Settings

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

### Power Schemes

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

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

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

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


| Power Scheme            | AC Power   | Battery Power |
|-------------------------|------------|---------------|
| <b>Always On</b>        |            |               |
| System Standby          | Never      | 5 minutes     |
| Turn OFF Monitor        | 15 minutes | 2 minutes     |
| Turn OFF Hard Disks     | 1 hour     | 3 minutes     |
| <b>Portable/Laptop</b>  |            |               |
| System Standby          | Never      | 15 minutes    |
| Turn OFF Monitor        | 3 hours    | Never         |
| Turn OFF Hard Disks     | 15 minutes | 10 minutes    |
| <b>Home/Office Desk</b> |            |               |
| System Standby          | 20 minutes | 1 minute      |
| Turn OFF Monitor        | 15 minutes | 2 minutes     |
| Turn OFF Hard Disks     | 30 minutes | 10 minutes    |

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**Presario 1800 Series**  
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## Alarms

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

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

| Default Alarm Settings |              |                  |
|------------------------|--------------|------------------|
| Setting                | Low Battery  | Critical Battery |
| Alarm power level      | 10%          | 0%               |
| Notification           | Text Message | No Action        |
| Power Mode             | No Action    | Hibernation      |

## SpeedStep Technology

SpeedStep Technology features several options for processor response to low-power conditions. These include the following settings:

- **Maximum Performance:** always at high speed
- **Battery Optimized:** always at low speed
- **Reversed:** opposite recommended
- **Recommended:** performance on AC, Battery Optimized on Battery
- **Disabled:** no run time support, high speed

SpeedStep options can be accessed in three ways:

- Access **F10** Setup during startup and select the **Advanced** screen.
- Click **Start>Settings>Control Panel>Power Options>Intel(R) SpeedStep<sup>TM</sup> technology** tab.
- Double-click the Flag icon on the Windows taskbar to open the **Intel(R) SpeedStep<sup>TM</sup> technology** dialog box.



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## Presario 1800 Series

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### **Rebooting After a Lockup**

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

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

### **Recovering From a Loss of Electrical Power**

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

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

- Electrical power service is interrupted.
- The power cord is accidentally disconnected.

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

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

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## Presario 1800 Series

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### **Increasing Battery-Operating Life**

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

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

**Note:** The power consumption requirements for PC Cards vary widely. Some cards drain the battery pack very rapidly.

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

### **Minimizing the Energy Required**

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

- Set the power conservation levels in the Power Management utility to Maximum.
- Customize the time-out value to work more efficiently with the applications. The amount 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 Notebook when using it with AC power to supply the battery pack with a constant trickle charge.
- Store the battery pack in a cool, dry place when not in use.

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## Presario 1800 Series

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### *Conditioning a Battery Pack*

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

To condition a battery pack, complete the following steps:

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

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

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


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

The battery is now re-conditioned. Plug in the AC adapter and begin using the Notebook.

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

### *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.

# maintenance & service guide

## Presario 1800 Series

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## Troubleshooting

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

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

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

3. Attempting the recommended solutions described later in this chapter

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

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

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## Presario 1800 Series

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### *Preliminary Steps*

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

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

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

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

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


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

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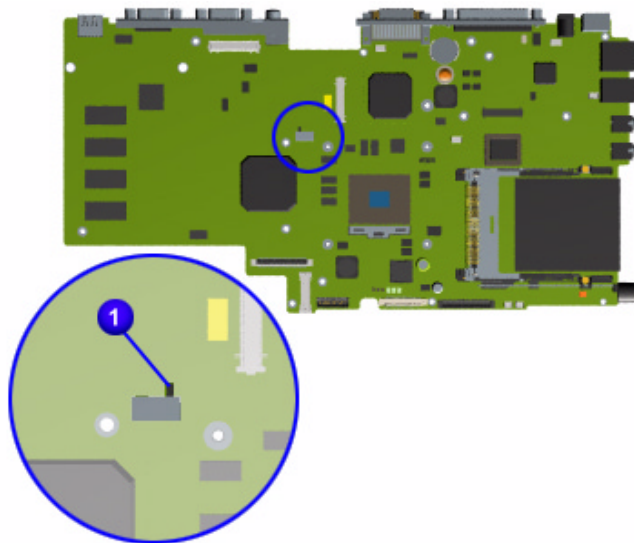
Models: XL180, XL181, XL182, XL183, XL184, XL185,  
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### *Clearing the Power-On Password*

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

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

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



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

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### Power-On Self Test (POST)

To run POST, complete these steps:

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

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

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

However, if POST detects errors, an error message will be displayed and/or an audible beep will sound.

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

### POST Error Messages

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

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

How do you start Setup? By pressing **F10** during startup?

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| XX000YZZ 201-Memory Error                                    |   |
|--|---|
| <b>Probable Cause</b>  | <b>Recommended Action</b>   |
| Memory failure   | <ol style="list-style-type: none"> <li>1. <a href="#">Replace the memory modules.</a></li> <li>2. <a href="#">Replace the system board.</a></li> </ol>  |
| 301-Keyboard Error   |   |
| <b>Probable Cause</b>  | <b>Recommended Action</b>   |
| Keyboard failure   | <ol style="list-style-type: none"> <li>1. Ensure the keys are not depressed during POST.</li> <li>2. Reconnect the keyboard with the Notebook off.</li> <li>3. <a href="#">Replace the keyboard.</a></li> </ol> |
| 304-Keyboard or System Unit Error                            |   |
| <b>Probable Cause</b>  | <b>Recommended Action</b>   |
| Keyboard or system board error                               | <ol style="list-style-type: none"> <li>1. <a href="#">Replace the keyboard.</a></li> <li>2. <a href="#">Replace the TouchPad.</a></li> <li>3. <a href="#">Replace the system board.</a></li> </ol>              |
| 601-Diskette Controller Error                                |   |
| <b>Probable Cause</b>  | <b>Recommended Action</b>   |
| Mismatch in drive type or failure in the diskette controller | <ol style="list-style-type: none"> <li>1. Run <a href="#">Checkup (TEST)</a>.</li> <li>2. <a href="#">Check or replace cables.</a></li> <li>3. <a href="#">Replace the system board.</a></li> </ol>             |
| 605-Diskette Drive Error                                     |   |
| <b>Probable Cause</b>  | <b>Recommended Action</b>   |
| Mismatch in drive type                                       | <b>Run Setup.</b>   |
| 1780-Primary Hard Drive 0 Failure                            |   |
| <b>Probable Cause</b>  | <b>Recommended Action</b>   |
| Disk 0 failed to respond                                     | <ol style="list-style-type: none"> <li>1. Run <a href="#">Checkup (TEST)</a>.</li> <li>2. <a href="#">Replace the hard drive.</a></li> </ol>  |
| Hard drive format error                                      | <ol style="list-style-type: none"> <li>1. Run <a href="#">Checkup (TEST)</a>.</li> <li>2. <a href="#">Replace the hard drive.</a></li> </ol>  |
| 1782-Hard Drive Controller                                   |   |
| <b>Probable Cause</b>  | <b>Recommended Action</b>   |
| Hard drive controller failure                                | <ol style="list-style-type: none"> <li>1. <b>Run Setup.</b></li> <li>2. <a href="#">Replace the hard drive.</a></li> </ol>  |



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### *Compaq Diagnostics*

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

The Diagnostics menu includes the following utilities:

- [Checkup \(TEST\)](#)
- [View System Information \(INSPECT\)](#)
- ??
- ??

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

How do you start the Compaq Diagnostics that are pre-installed?  
Do customers have Diagnostic Diskettes?  
How do you start the Compaq Diagnostics from the disk?

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Does the CPQ  
Diagnostics disk  
come with each  
new Notebook?

Does Checkup also  
come pre-installed  
as mentioned on the  
previous page?

## Checkup (TEST)

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

Follow these steps to run Checkup:

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

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

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

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

11. Exit the Test Option and Diagnostics menus.

Does INSPECT also come pre-installed as mentioned on the 1st page?

### *View System Information (INSPECT)*

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

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

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

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

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

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### *Diagnostic Error Codes*

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

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

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

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

Select error codes by number or type:

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

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

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

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### Keyboard Test Error Codes

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

### Parallel Printer Test Error Codes

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

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### Diskette Drive Test Error Codes

| Error Code | Description                               | Recommended Action  |
|------------|---|---|
| 600-xx     | Diskette ID drive types test failed       | 1. Replace the diskette media and retest.   |
| 601-xx     | Diskette format failed                    | 2. Check and/or replace the diskette drive cables and retest.                             |
| 602-xx     | Diskette read test failed                 | 3. <a href="#">Replace the diskette drive</a> and retest.                                 |
| 603-xx     | Diskette write, read, compare test failed | 4. <a href="#">Replace the system board</a> and retest.                                   |
| 604-xx     | Diskette random read test failed          |   |
| 605-xx     | Diskette ID media failed                  |   |
| 606-xx     | Diskette speed test failed                |   |
| 609-xx     | Diskette reset controller test failed     |   |
| 610-xx     | Diskette change line test                 |   |
| 697-xx     | Diskette type error                       |   |
| 698-xx     | Diskette drive speed not within limits    |   |
| 699-xx     | Diskette drive/media ID error             | 1. Replace media.<br>2. <a href="#">Run the Configuration and Diagnostics utilities</a> . |

### Serial Test Error Codes

| Error Code | Description             | Recommended Action   |
|------------|-------------------------|--|
| 1101-xx    | Serial port test failed | 1. <a href="#">Check port configuration</a> .<br>2. <a href="#">Replace the system board</a> and retest. |

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

\*ECC = Error Correction Code



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

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### Video Test Error Codes (Continued)

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

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

| <b>Video Test Error Codes (Continued)</b> |                                    |  |
|---|------------------------------------|--|
| <b>Error Code</b>                         | <b>Description</b>                 | <b>Recommended Action</b>                            |
| 2458-xx                                   | Advanced VGA BitBLT test failed    | <a href="#">Replace the system board</a> and retest. |
| 2468-xx                                   | Advanced VGA DAC test failed       |  |
| 2477-xx                                   | Advanced VGA data path test failed |  |
| 2478-xx                                   | Advanced VGA BitBLT test failed    |  |
| 2480-xx                                   | Advanced VGA LineDraw test failed  |  |

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### Audio Test Error Codes

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

### TouchPad Interface Test Error Codes

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

### DVD or CD Drive Test Error Codes

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

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### *Troubleshooting without Diagnostics*

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

[Audio](#)

[Battery](#)

[CD or DVD Drive](#)

[Diskette Drive](#)

[Display](#)

[Hard Drive](#)

[Hardware Installation](#)

[Memory](#)

[PC Card](#)

[Power](#)

[Printer](#)

[TouchPad](#)

[Keyboard/Numeric Keypad](#)

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



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

### *Before Replacing Parts*

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

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### Solving Minor Problems

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

#### Audio Solutions

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

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

#### Battery Pack/Gauge Solutions

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

| Battery Pack/Gauge  |                             |  |
|---|-----------------------------|--|
| Problem   | Probable Cause              | Solution(s)  |
| Notebook won't turn on when battery pack is inserted and power cord is unplugged. | Battery pack is discharged. | <ul style="list-style-type: none"> <li>• Connect the Notebook to an external power source and charge the battery pack.</li> </ul> <p style="margin-left: 20px;">OR</p> <ul style="list-style-type: none"> <li>• Replace the battery pack with a fully charged battery pack.</li> </ul> |
|   |                             | Check the battery connectors on the system board to verify they are evenly spaced and that they are not bent or broken.  |

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

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



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## CD and DVD Drive Solutions

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

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

## Diskette Drive Solutions

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

| Diskette Drive                             |   |   |
|--|---|---|
| Problem                                    | Probable Cause                            | Solution(s)   |
| Diskette drive cannot write to a diskette. | Diskette is write-protected.              | Disable the diskette's write-protect feature or use a diskette that is not write-protected. |
|  | Computer is writing to the wrong drive.   | Check the drive letter in the path statement.   |
|  | Not enough space is left on the diskette. | Use another diskette.   |
|  | Drive error has occurred.                 | Run Checkup from the Compaq Diagnostics diskette.   |
| Diskette drive cannot read a diskette.     | Diskette is not formatted.                | Format the diskette. At the system prompt, enter: <code>FORMAT A:</code>                    |
|  | The wrong type diskette is being used.    | Use the type of diskette required by the drive.   |
|  | Diskette has a bad sector.                | Copy files to hard drive or another diskette. Reformat bad floppy.                          |
|  | Drive error has occurred.                 | Run Checkup from the Compaq Diagnostics diskette.   |

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

### Solving Display Problems

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

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

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

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

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

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| Display  |   |  |
|--|---|--|
| Problem  | Probable Cause  | Solution(s)  |
| Screen is blank.   | Display has overheated.   | If the Notebook is in direct sunlight, move it and allow it to cool off.   |
| Display is blank and the Standby icon is flashing.   | System is in Standby mode.  | Press any key or touch the TouchPad.   |
| Notebook display is blank and the screen on an external monitor displays information.  | Display function was switched to the external monitor.  | Use <b>Fn+F3</b> to switch between LCD or CRT.   |
| Notebook display flashes or has garbled characters when Notebook is connected to external monitor.   | The external monitor is set for 1024x768 or higher resolution and view is toggled back to the Notebook display, which supports up to 800x600. | Restart the Notebook.  |
| The light tubes on the edge of the display panel do no light up at all and the Power-On Self-Test (POST) completes when the unit is powered up.**      | Improper backlight or display cable connections   | <ol style="list-style-type: none"> <li>1. Check the display cable connections and retest.</li> <li>2. <a href="#">Replace the display assembly.</a></li> </ol> |
|  | Defective inverter board.   | <a href="#">Replace the display assembly.</a>  |
|  | Defective display cable.  | <a href="#">Replace the display assembly.</a>  |
|  | Defective display panel.  | <a href="#">Replace the display assembly.</a>  |
|  | Defective system board.   | <a href="#">Replace the system board.</a>  |
| The light tubes on the edge of the display panel do not light up at all and Power-On Self-Test (POST) does not complete when the unit is powered up.** | Defective system board.   | <a href="#">Replace the system board.</a>  |

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

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

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

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### Hard Drive Solutions

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

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

| Hard Drive   |   |  |
|--|---|--|
| Problem  | Probable Cause  | Solution(s)  |
| Reading hard drive takes an unusually long time after restarting the Notebook. | System entered Hibernation due to low battery condition and is now exiting from it. | Give the system time to restore the previously saved data to its exact state before Hibernation.   |
| Hard drive error occurs.   | Hard drive has bad sectors or has failed.   | Run <a href="#">Checkup (TEST)</a> .   |
| Hard drive does not work.  | Hard drive is not seated properly.  | Turn off and unplug the Notebook, <a href="#">remove the battery pack</a> , and <a href="#">remove and then reinstall the hard drive</a> . |

### Hardware Installation Solutions

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

| Hardware Installation                                 |  |  |
|---|--|--|
| Problem   | Probable Cause   | Solution(s)  |
| A new device is not recognized as part of the system. | Cable(s) of new external device are loose or power cables are unplugged. | Ensure that all cables are properly and securely connected.  |
|   | Power switch of new external device is not turned on.                    | Turn off the Notebook, turn on the external device, then turn on the Notebook to integrate the device with the system. |
|   | Device is not seated properly.   | Turn off the Notebook and reinsert the device.   |

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### Keyboard/Numeric Keypad Solutions

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

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

### Solving Memory Problems

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

| Memory   |  |  |
|--|--|--|
| Problem  | Probable Cause   | Solution(s)  |
| Memory count during Power-On Self-Test (POST) is incorrect.  | Optional memory expansion card is installed incorrectly, is incompatible with the Notebook, or is defective. | Ensure that the optional memory expansion card is installed correctly, and then restart the Notebook.    |
| "Out of Memory" message is displayed on the screen or insufficient memory error occurs during operation. | System ran out of memory for the application.  | Check the application documentation for memory requirements.<br>If necessary, Install additional memory. |
|  | Too many TSR (terminate-and-stay-resident) applications are running.   | Remove from memory any TSR applications that you do not need.  |

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### PC Card Solutions

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

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

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



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### Power Solutions

See also [Battery Pack/Gauge Solutions](#) in this chapter.

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

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### Printer Solutions

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

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

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## TouchPad/Pointing Device Solutions

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

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

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### *Contacting Compaq Support*

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

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

### **Shipping Preparation**

Before shipping the Notebook, complete the following:

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

**Important:** Ensure that there is no diskette in the diskette drive and that there are no PC Cards in the PC slots.

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

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## Removal and Replacement


This chapter details removing and replacing each component of the Presario 1800XL units.

### *Electrostatic Discharge*

When removing or replacing parts, be careful to discharge static electricity before touching the Notebook's internal components. A sudden discharge of static electricity from a finger or other conductor can destroy static-sensitive devices and microcircuitry. Often the spark is neither felt nor heard, but damage occurs. An electronic device exposed to an electrostatic discharge may not seem affected and it may work perfectly throughout a normal cycle. However, the discharge degrades internal layers, which reduces the operating life of the device. 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.

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

| Activity                         | Generated Electrostatic Voltage |          |         |
|----------------------------------|---------------------------------|----------|---------|
|                                  | Relative Humidity               |          |         |
|                                  | 10%                             | 40%      | 50%     |
| 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 |

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

1.800.AT.COMPAQ

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### ***Tool and Software Requirements***

The following items are required to service the Notebook:

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

### ***Screws***

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

### ***Connectors and Plastic Parts***

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


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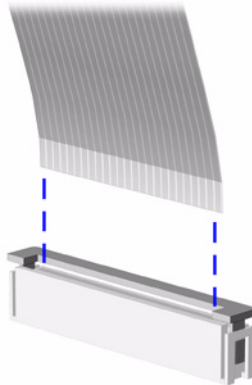
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### ZIF Connector

The 1800XL Series Notebooks use zero insertion force (ZIF) connectors on the system board.

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

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



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

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### *Cables*

Most cables used throughout the unit are ribbon cables.

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

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

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

The following illustrations show the proper placement for each cable:

- [Hard Drive Ribbon Cable](#)
- [CD/DVD Ribbon Cable](#)
- [Diskette Drive Ribbon Cable](#)
- [Speaker Assembly Cable](#)
- [Keyboard Ribbon Cable](#)



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### Hard Drive Ribbon Cable

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



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

### [Removing the Hard Drive](#)

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### CD/DVD Ribbon Cable

The ribbon cable position for the CD or DVD drive is shown below.



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

### [Removing the CD/DVD Drive](#)

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### Diskette Drive Ribbon Cable

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



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

### [Removing the Diskette Drive](#)

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### Speaker Assembly Cable

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



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

### [Removing the Speaker Assembly](#)

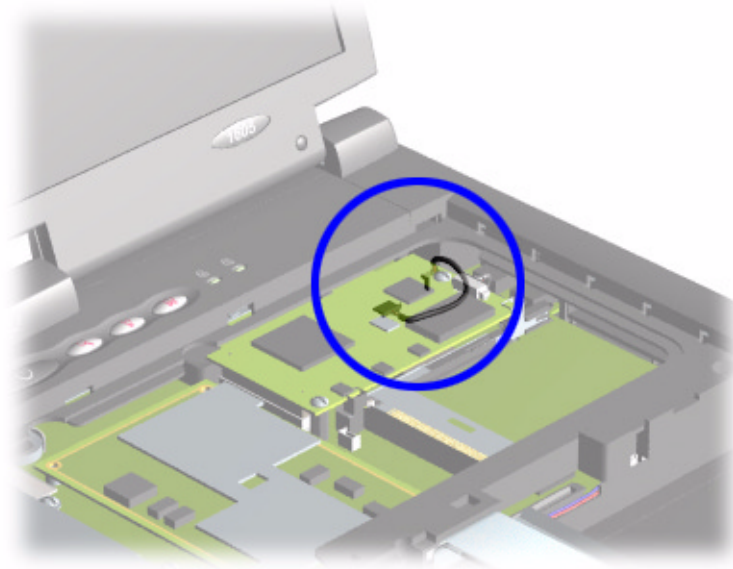
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### Modem Cable

The cable position for the modem is shown below.



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

### [Removing the Modem](#)

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## Keyboard Ribbon Cable

The ribbon cable position for the keyboard is shown below.



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

## [Removing the Keyboard](#)

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Models: **XL180, XL181, XL182, XL183, XL185,**  
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### *Preparing the Notebook for Disassembly*

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

1. Disconnect the AC power source and any external devices.
2. Remove the QuikDock ([pg 12](#)).
3. Remove any PC Cards.
4. Remove the battery pack ([pg 13](#)).

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



**WARNING:** Metal objects can damage the battery pack as well as the battery contacts in the battery compartment. To prevent damage, do not allow metal objects to touch the battery contacts. Place only the battery pack for the Compaq Presario 1800XL Series Portable Notebooks into the battery compartment. Do not force the battery pack into the bay if insertion is difficult.



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

**Note:** Compaq Presario 1800XL Series Portable Notebooks have several screws of various sizes that are **not** interchangeable. Care must be taken during reassembly to ensure that the correct screws are used in their correct location. During removal keep respective screws with their associated subassembly.

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

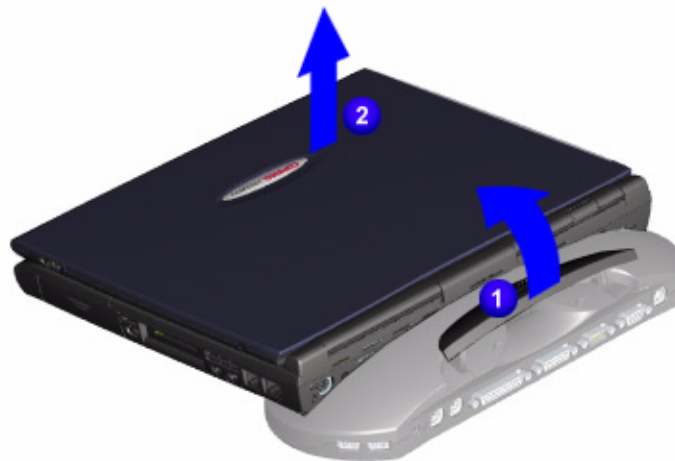
# maintenance & service guide

**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
**and XL190, XL191, XL192**

## *Disconnecting the QuikDock*

To disconnect the Notebook from the QuikDock, perform the following steps:

1. Lift up the handle **1** on top of the QuikDock.
2. Lift the Notebook **2** straight up.





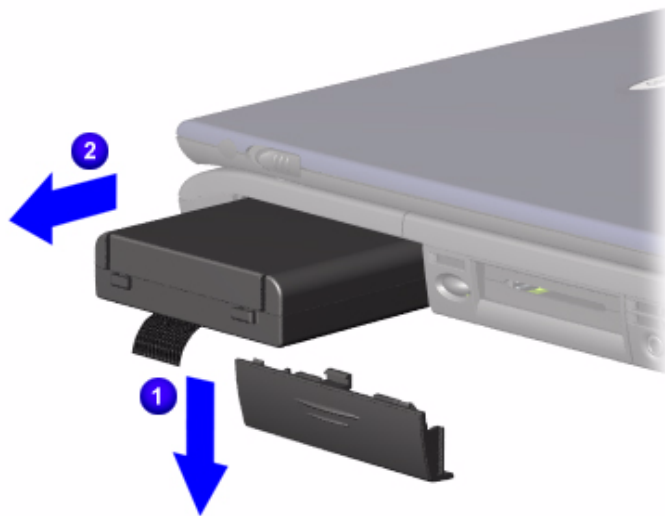
# maintenance & service guide

**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
**and XL190, XL191, XL192**

## *Removing the Battery*

To remove the battery pack, complete the following steps:

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



To replace the battery, reverse these procedures.

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

**WARNING:** Metal objects can damage the battery pack as well as the battery contacts in the battery compartment. To prevent damage, do not allow metal objects to touch the battery contacts. Place only the battery pack for Compaq Presario 1800XL Series Portable Notebooks into the battery compartment. Do not force the battery pack into the bay if insertion does not occur easily.

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

# maintenance & service guide

## Presario 1800 Series

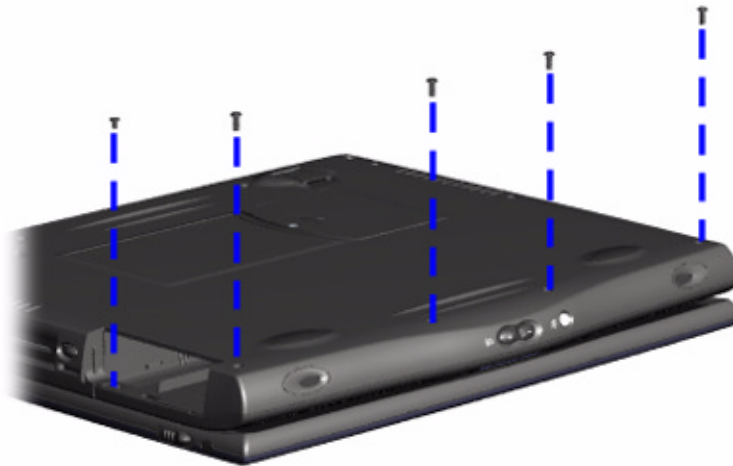
Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

### *Removing the Palmrest Cover with TouchPad*

**Note:** It is not necessary to remove the display panel assembly to access the interior components of the Notebook.

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

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Close the display and turn the Notebook upside down.
3. Remove five screws from the underside of the Notebook.



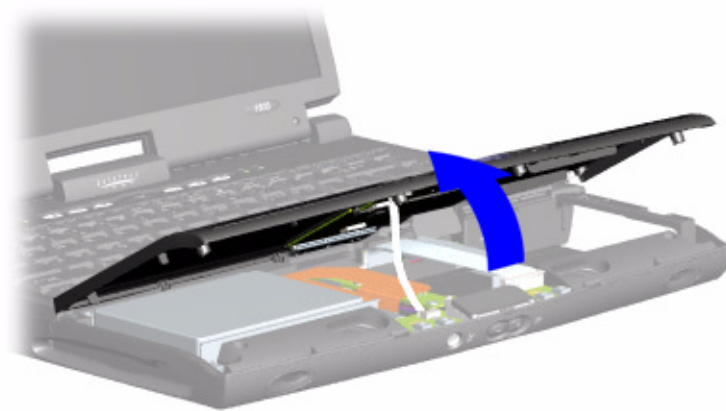
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# maintenance & service guide

## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

4. Turn the Notebook over (right side up).
5. Pull the display release latches and open the display.
6. Lift up the front end of the Palmrest cover and remove it from the groove in the chassis.



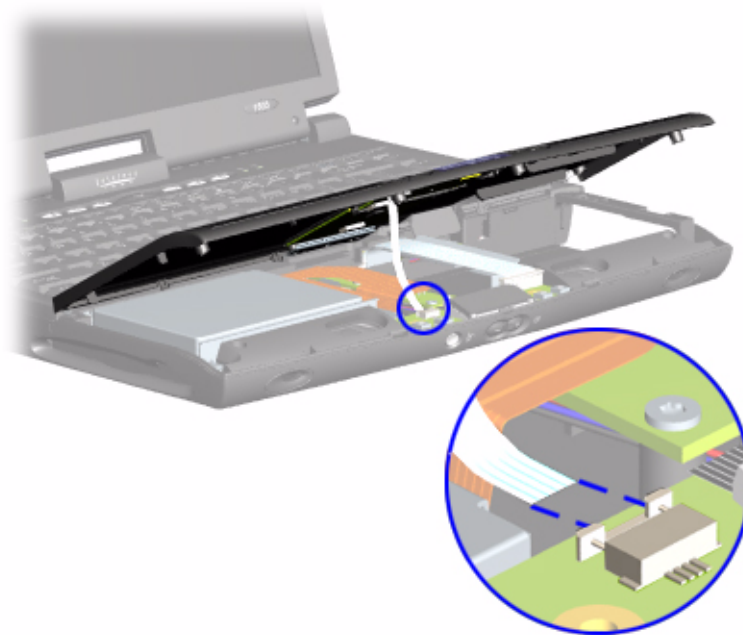
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# maintenance & service guide

## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

7. Disconnect the flex cable from the [ZIF Connector](#) on the DisqPlay module.



To replace the Palmrest cover, reverse these procedures.

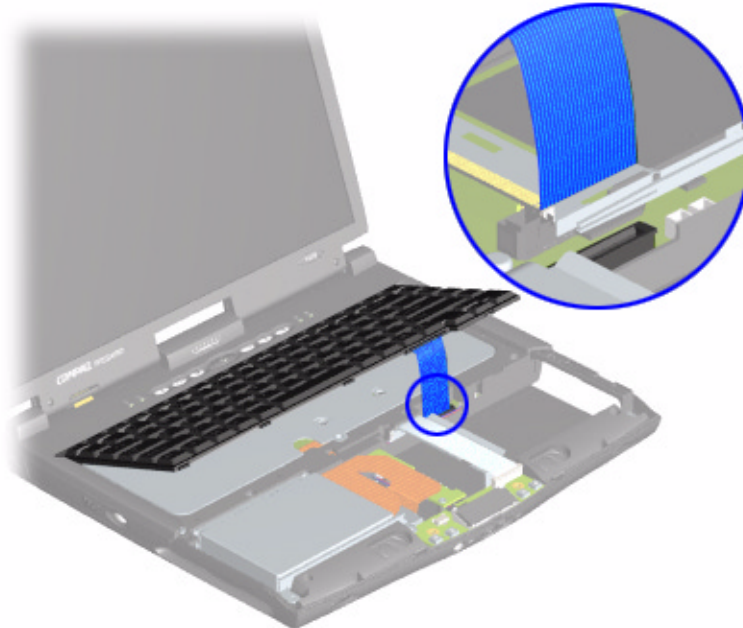
# maintenance & service guide

**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
**and XL190, XL191, XL192**

## *Removing the Keyboard*

To remove the keyboard, complete the following steps:

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Remove the Palmrest cover with TouchPad ([pg 14](#)).
3. Gently lift ❶ up the front of the keyboard and disconnect ❷ the flex cable from the [ZIF Connector](#) on the system board and remove the keyboard.



To replace the keyboard, reverse these procedures.

**Note:** When replacing the keyboard, the [Keyboard Ribbon Cable](#) should fold behind the [ZIF Connector](#) rather than underneath the keyboard.

# maintenance & service guide

## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

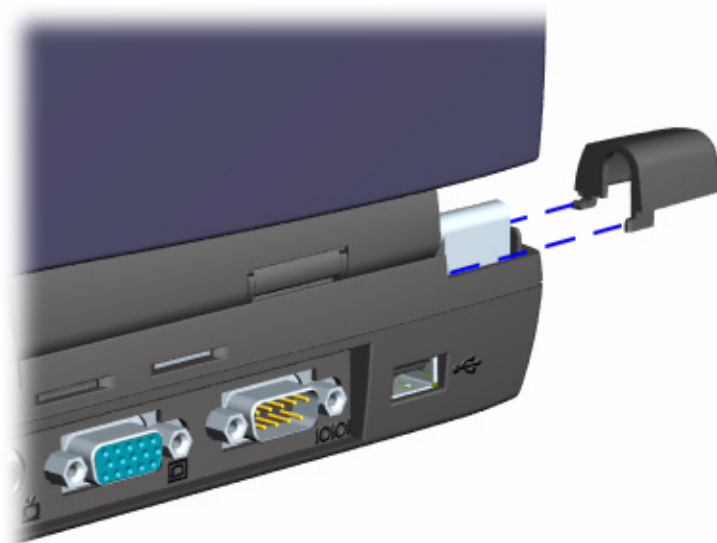
### *Removing the Internet Zone Cover*

*(Status Panel Assembly)*

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

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

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Open the display and squeeze the sides of the display hinge covers while sliding them off the hinges.



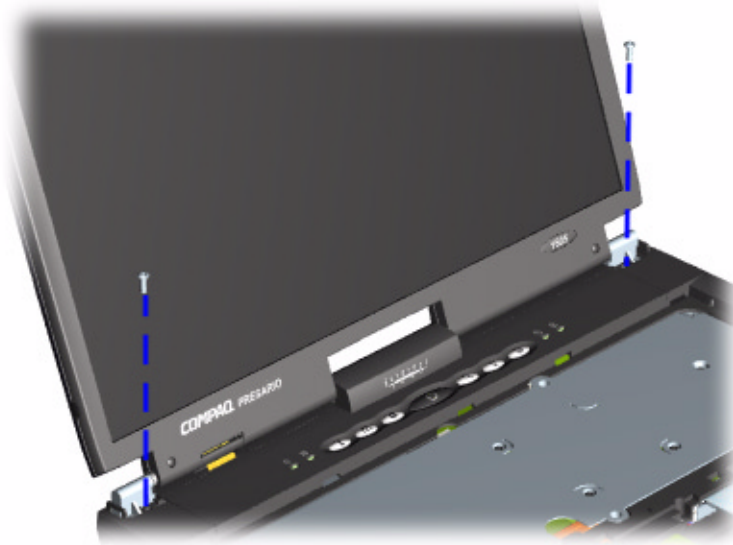
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# maintenance & service guide

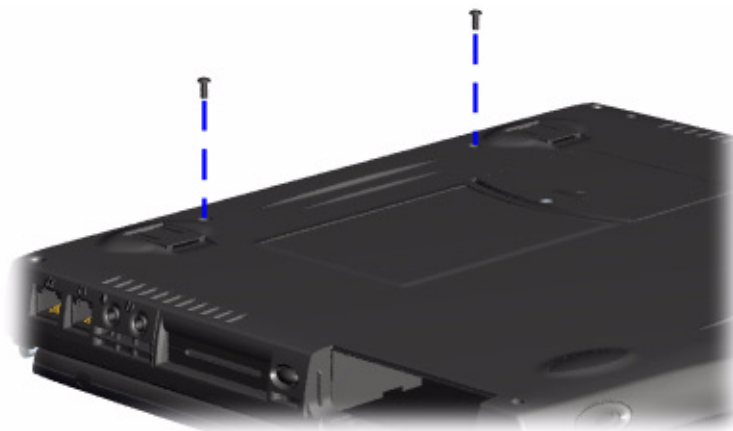
## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

3. Remove two innermost screws from the display hinges that secure the Internet Zone cover to the chassis.



4. Turn the unit upside down and remove the two screws located near the back of the Notebook that secure the Internet Zone cover to the chassis.



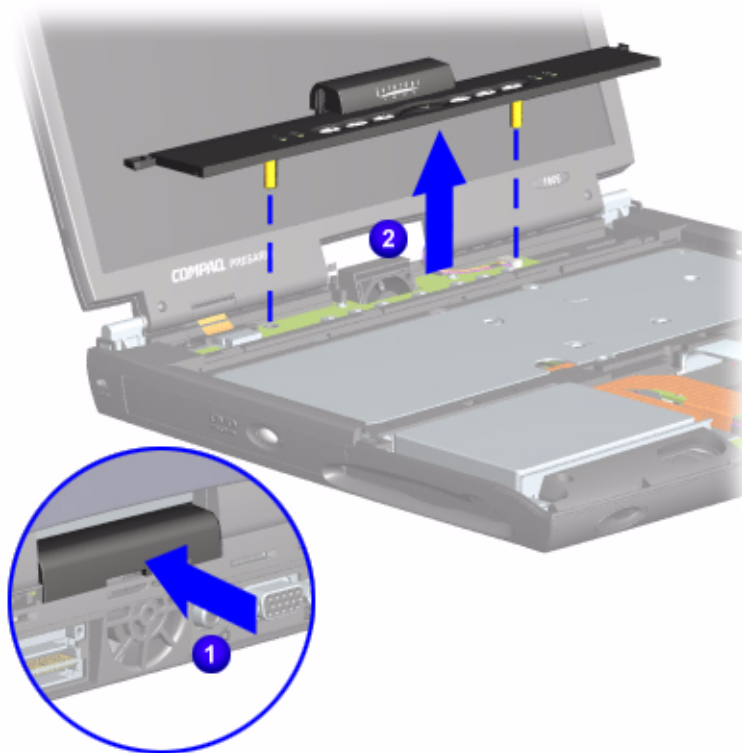
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# maintenance & service guide

## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

5. Turn the unit over (right side up) and open the display.
6. Lift up one corner of the Internet Zone cover, ❶ push forward from the back (center piece) to release the snaps on the Internet Zone cover, and ❷ remove from the chassis.



To replace the status panel assembly, reverse these procedures.



# maintenance & service guide

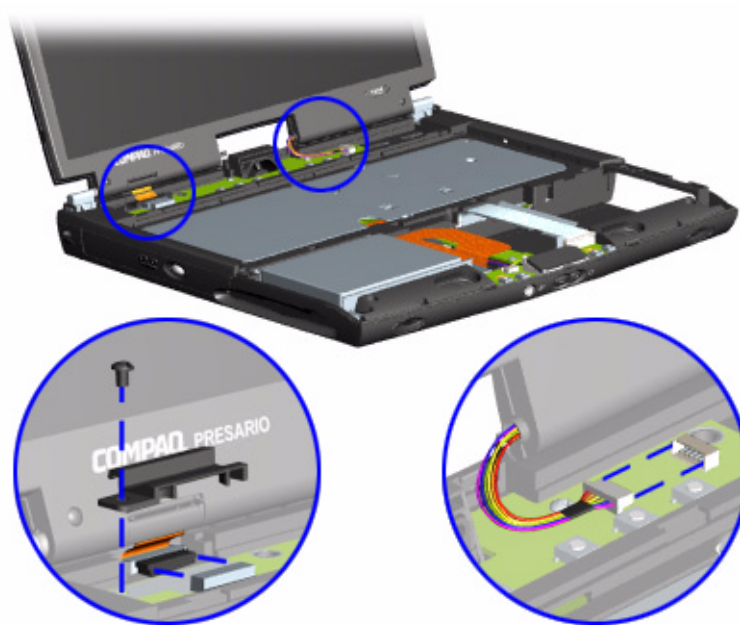
**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
**and XL190, XL191, XL192**

## *Removing the Internet Button Board*

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

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

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Remove the Internet Zone Cover ([pg 18](#)).
3. Remove the screw securing the display flex cable bracket and disconnect both the display flex cable and backlight cable from the system board.



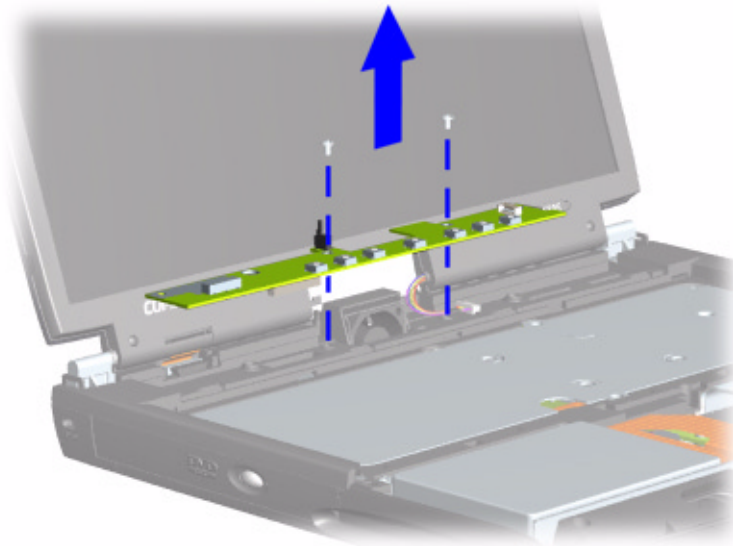
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# maintenance & service guide

## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

4. Remove two screws securing the Internet button board and remove from the chassis.



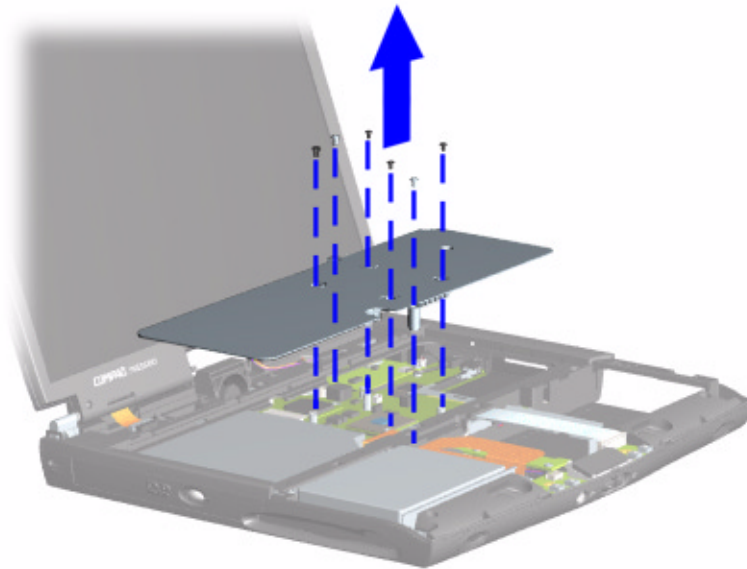
To replace the Internet button board, reverse these procedures.

**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
**and XL190, XL191, XL192**

## *Removing the Heatspreader*

To remove the Heatspreader, complete the following steps:

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Remove the Palmrest cover with TouchPad ([pg 14](#)).
3. Remove the keyboard ([pg 17](#)).
4. Remove six screws from the Heatspreader and lift out of the chassis.



To replace the Heatspreader, reverse these procedures.

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

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



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

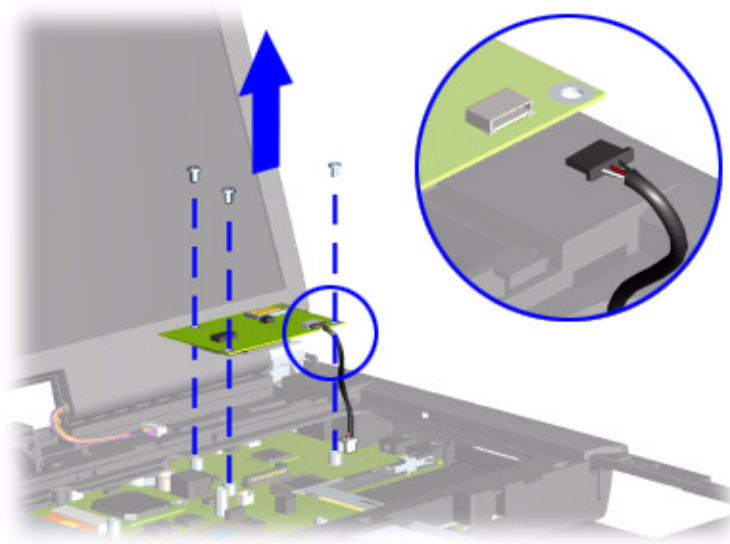
# maintenance & service guide

**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
**and XL190, XL191, XL192**

## *Removing the Modem*

To remove the modem, complete the following steps:

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Remove the Palmrest cover with TouchPad ([pg 14](#)).
3. Remove the keyboard ([pg 17](#)).
4. Remove the Internet Zone cover ([pg 18](#)).
5. Remove the Heatspreader ([pg 23](#)).
6. Remove three screws from the modem board and lift the modem off the connector on the system board.
7. Disconnect the cable from the modem board.



To replace the modem board, reverse these procedures.

**CAUTION:** When replacing the modem, ensure that the [Modem Cable](#) is placed in its proper location during the reassembly process. Improper cable placement can damage the Notebook.

# maintenance & service guide

## Presario 1800 Series

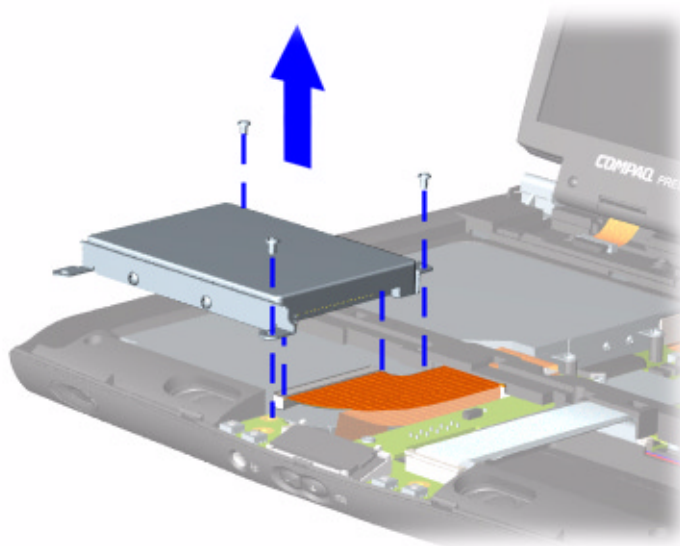
Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

### *Removing the Hard Drive*

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

To remove the hard drive, complete the following steps:

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Remove the Palmrest cover with TouchPad ([pg 14](#)).
3. Remove three screws from the hard drive mounting bracket.
4. Disconnect the hard drive data cable and lift out the hard drive.



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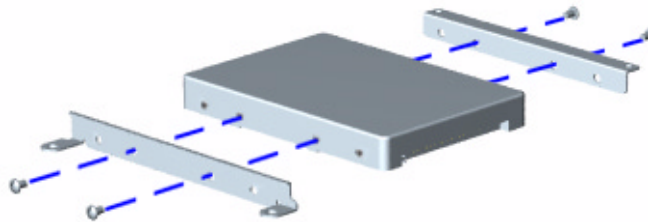
# maintenance & service guide

## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

### Removing the Hard Drive Mounting Brackets

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



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

# maintenance & service guide

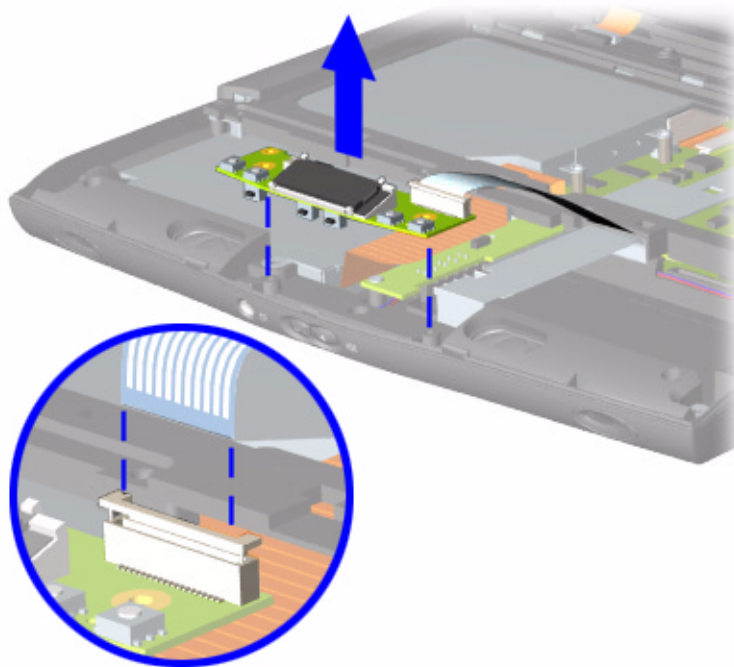
**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
**and XL190, XL191, XL192**

## *Removing the DisqPlay Module*

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

To remove the DisqPlay module, complete the following steps:

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Remove the Palmrest cover with TouchPad ([pg 14](#)).
3. Remove the hard drive ([pg 25](#)).
4. Lift up the DisqPlay module and disconnect the flex cable from [ZIF Connector](#) on the module.
5. Remove the DisqPlay module from the chassis.



To replace the DisqPlay module, reverse these procedures.

# maintenance & service guide

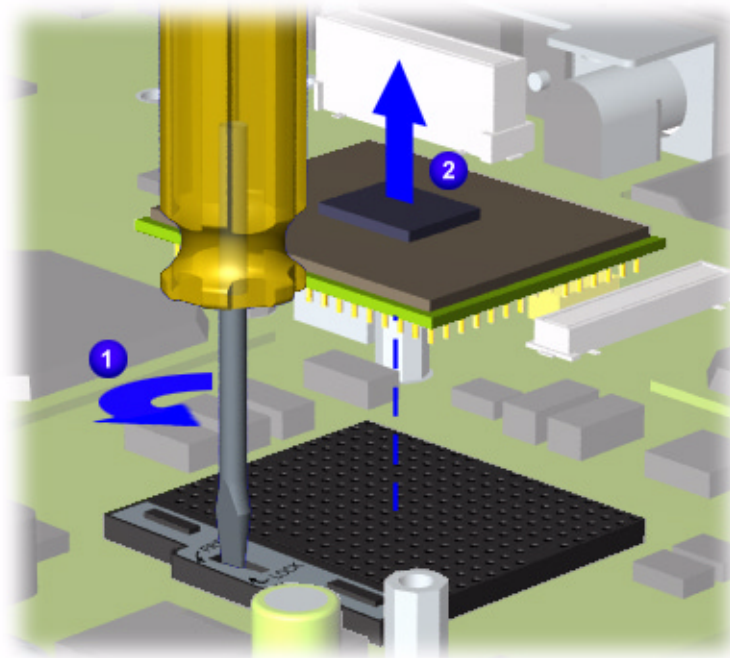
## Presario 1800 Series

Models: **XL180, XL181, XL182, XL183, XL185,**  
and **XL190, XL191, XL192**

### *Removing the Processor*

To remove the processor, complete the following steps:

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Remove the Palmrest cover with TouchPad ([pg 14](#)).
3. Remove the keyboard ([pg 17](#)).
4. Remove the Heatspreader ([pg 23](#)).
5. If the processor matches the one shown below, proceed with step **a** below. If the processor does not match the one shown, skip step a and proceed with step **b** on the next page.
  - a. Place tip of standard screwdriver in center slot, twist screwdriver toward "Free" until it snaps, and lift processor from the chassis.



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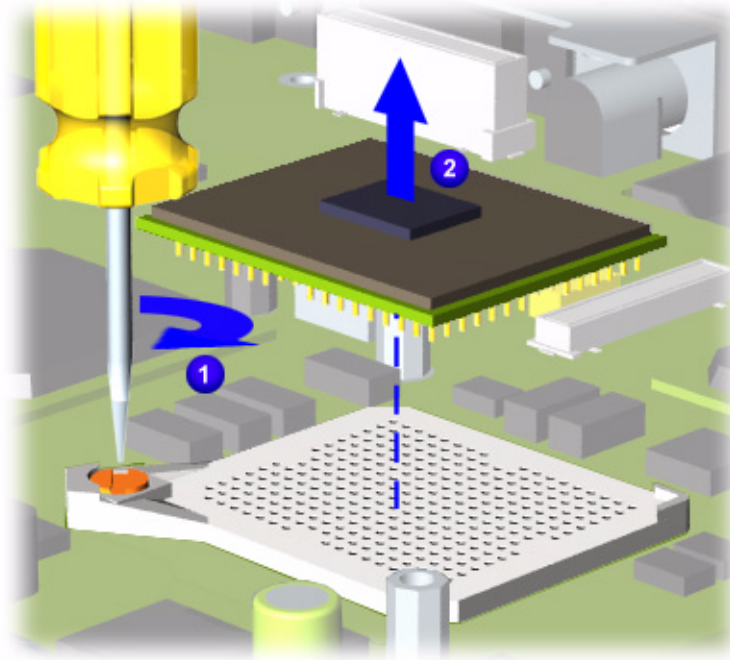


# maintenance & service guide

## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

- b. With standard screwdriver, turn screw counter-clockwise toward "0" and lift processor from the chassis.



To replace the processor, perform the following:

1. Fully align the processor connector with the system board connector.
2. Press down carefully on the processor directly over the connectors to seat the processor.
3. Reassemble the remaining subassemblies by reversing their removal procedures.

# maintenance & service guide

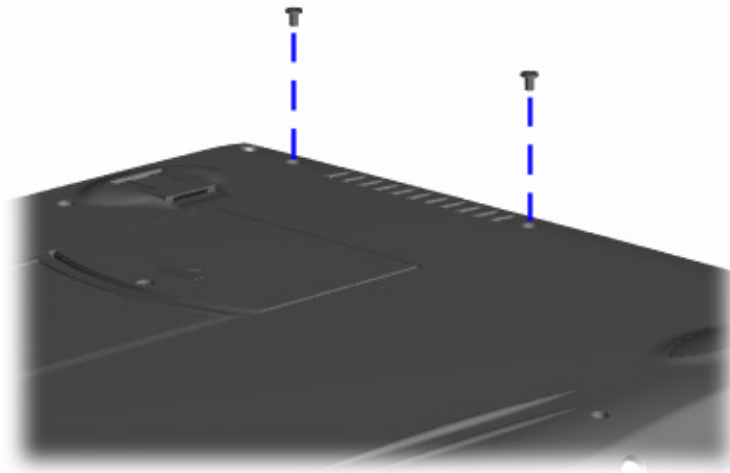
## Presario 1800 Series

Models: **XL180, XL181, XL182, XL183, XL185,**  
and **XL190, XL191, XL192**

### *Removing the CD/DVD Drive*

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

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Remove the Palmrest cover with TouchPad ([pg 14](#)).
3. Remove the keyboard ([pg 17](#)).
4. Remove the Heatspreader ([pg 23](#)).
5. Turn the Notebook over (upside down) and remove the two screws that secure the CD/DVD drive to the chassis.



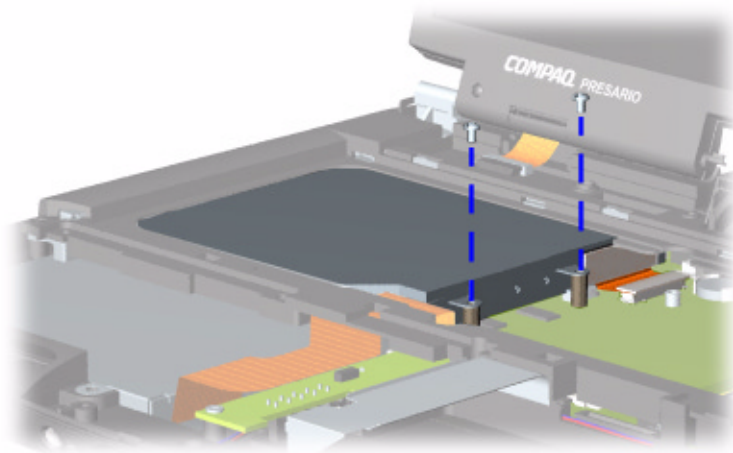
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# maintenance & service guide

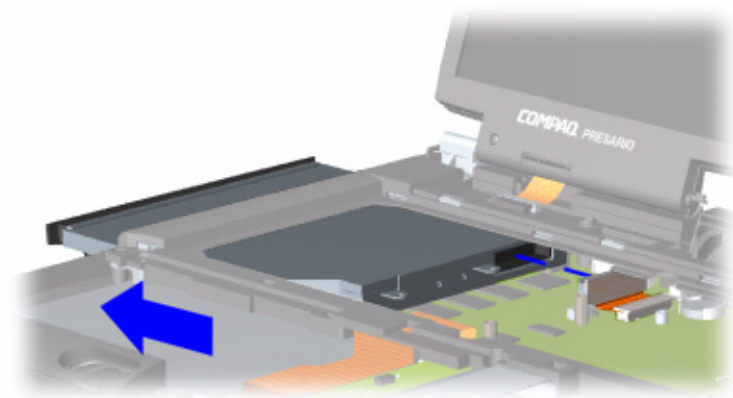
## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

6. Turn the unit over (right side up) and remove the two screws located at the back of the CD/DVD drive.



7. Disconnect the CD/DVD drive cable and push forward from the back of the drive to slide the drive out of the chassis.



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

**CAUTION:** When replacing the CD/DVD drive, ensure that the [CD/DVD Ribbon Cable](#) is placed in its proper location during the reassembly process. Improper cable placement can damage the Notebook.

# maintenance & service guide

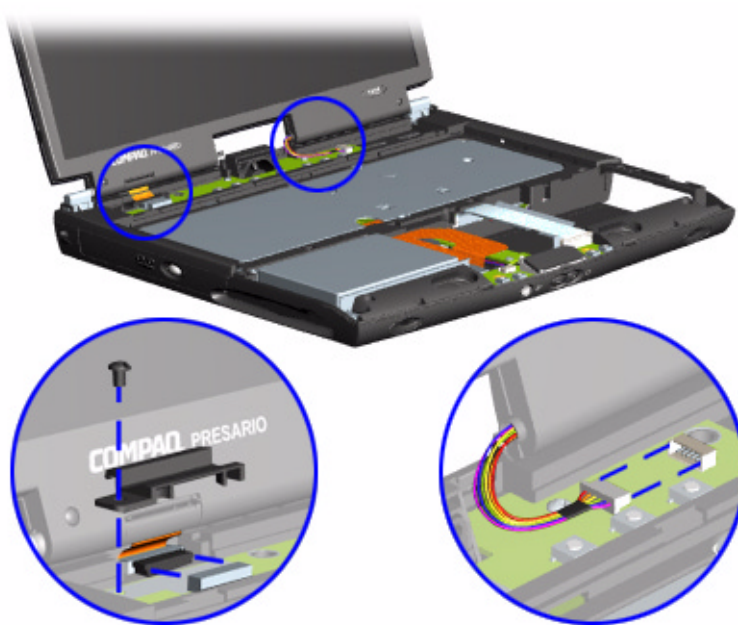
**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
**and XL190, XL191, XL192**

## *Removing the Display Panel Assembly*

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

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

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Remove the Internet Zone cover ([pg 18](#)).
3. Remove the screw securing the display flex cable bracket and disconnect the display flex cable and backlight cable from the Internet button board.



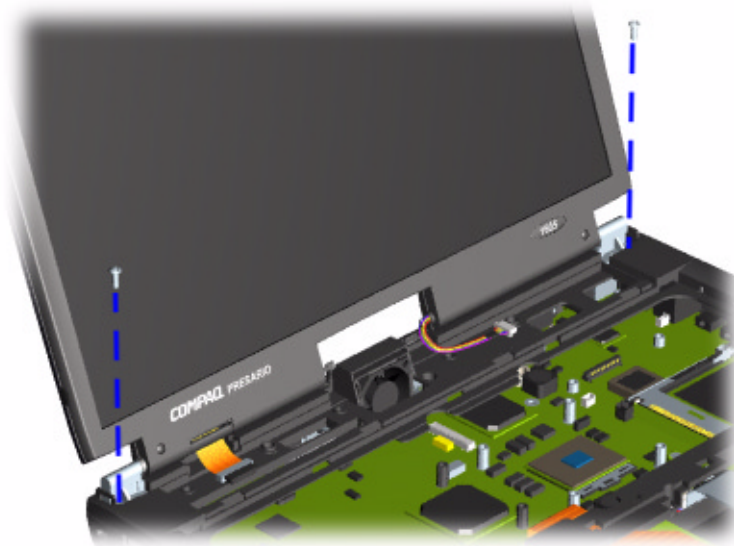
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# maintenance & service guide

## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

4. Remove the two outermost screws securing the display panel to the chassis.



5. Remove the display assembly from the chassis.



To replace the display panel, reverse these procedures.

# maintenance & service guide

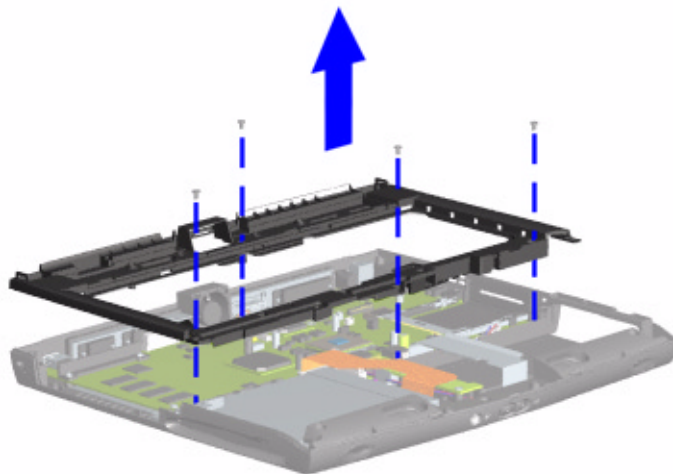
## Presario 1800 Series

Models: **XL180, XL181, XL182, XL183, XL185,**  
and **XL190, XL191, XL192**

### *Removing the Upper CPU Cover*

To remove the upper CPU cover, complete the following:

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Remove the Palmrest cover with TouchPad ([pg 14](#)).
3. Remove the keyboard ([pg 17](#)).
4. Remove the Heatspreader ([pg 23](#)).
5. Remove the Internet Zone cover ([pg 18](#)).
6. Remove the Internet button board ([pg 21](#)).
7. Remove the hard drive ([pg 25](#)).
8. Remove the display panel assembly ([pg 32](#)).
9. Remove four screws located on the top of the upper CPU cover and lift the cover off the chassis.



To replace the upper CPU cover, reverse these procedures.

# maintenance & service guide

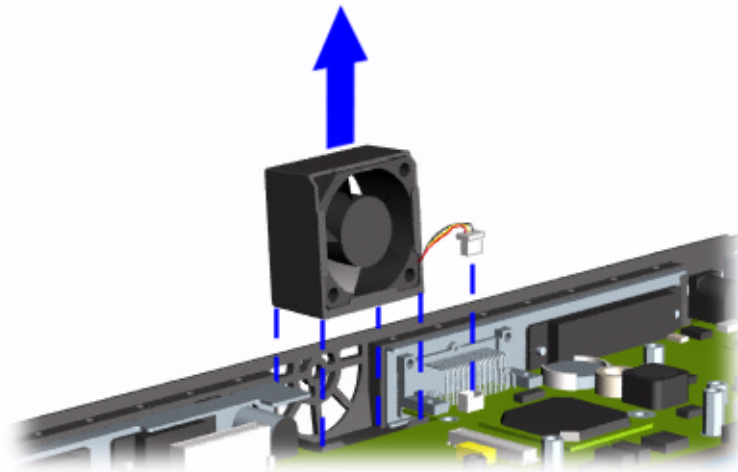
## Presario 1800 Series

Models: **XL180, XL181, XL182, XL183, XL185,**  
and **XL190, XL191, XL192**

### *Removing the Fan Assembly*

To remove the fan assembly, complete the following:

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Remove the Palmrest cover with TouchPad ([pg 14](#)).
3. Remove the keyboard ([pg 17](#)).
4. Remove the Heatspreader ([pg 23](#)).
5. Remove the Internet Zone cover ([pg 18](#)).
6. Remove the Internet button board ([pg 21](#)).
7. Remove the display panel assembly ([pg 32](#)).
8. Remove the hard drive ([pg 25](#)).
9. Remove the upper CPU cover ([pg 34](#)).
10. Disconnect the fan cable from the connector on the system board and lift the fan assembly from the chassis slot.



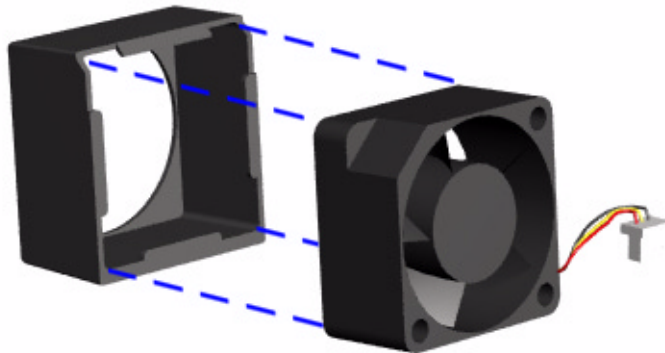
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# maintenance & service guide

## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

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



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

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




# maintenance & service guide

## Presario 1800 Series

Models: **XL180, XL181, XL182, XL183, XL185,**  
and **XL190, XL191, XL192**

### *Removing the Real Time Clock Battery*

 **CAUTION:** Removing the RTC battery [clears the power-on password](#) and removes all setup attributes that are programmed in the CMOS.

To remove the RTC battery, complete the following steps:

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Remove the Palmrest cover with TouchPad ([pg 14](#)).
3. Remove the keyboard ([pg 17](#)).
4. Remove the Heatspreader ([pg 23](#)).
5. Remove the Internet Zone cover ([pg 18](#)).
6. Remove the Internet button board ([pg 21](#)).
7. Remove the hard drive ([pg 25](#)).
8. Remove the upper CPU cover ([pg 34](#)).

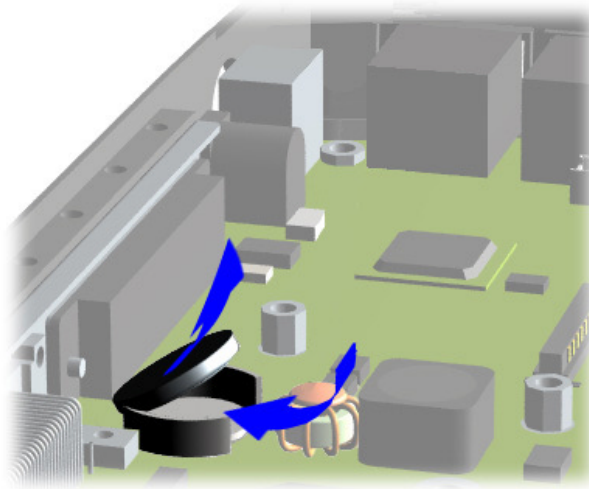
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# maintenance & service guide

## Presario 1800 Series

Models: **XL180, XL181, XL182, XL183, XL185,**  
and **XL190, XL191, XL192**

9. Locate the RTC battery on the system board behind the CD/DVD drive near the back of the unit.
10. Using your fingers or a small non-metallic object, gently pry the RTC battery upward and remove it from the battery socket.



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

# maintenance & service guide

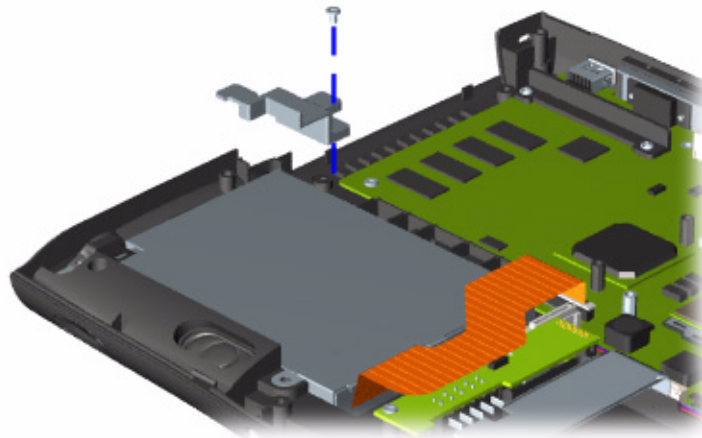
## Presario 1800 Series

Models: **XL180, XL181, XL182, XL183, XL185,**  
and **XL190, XL191, XL192**

### *Removing the Diskette Drive*

To remove the diskette drive, complete the following steps:

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Remove the Palmrest cover with TouchPad ([pg 14](#)).
3. Remove the keyboard ([pg 17](#)).
4. Remove the Heatspreader ([pg 23](#)).
5. Remove the CD/DVD drive ([pg 30](#)).
6. Remove the Internet Zone cover ([pg 18](#)).
7. Remove the Internet button board ([pg 21](#)).
8. Remove the display panel assembly ([pg 32](#)).
9. Remove the hard drive ([pg 25](#)).
10. Remove the upper CPU cover ([pg 34](#)).
11. Remove the screw from the diskette drive retaining bracket.



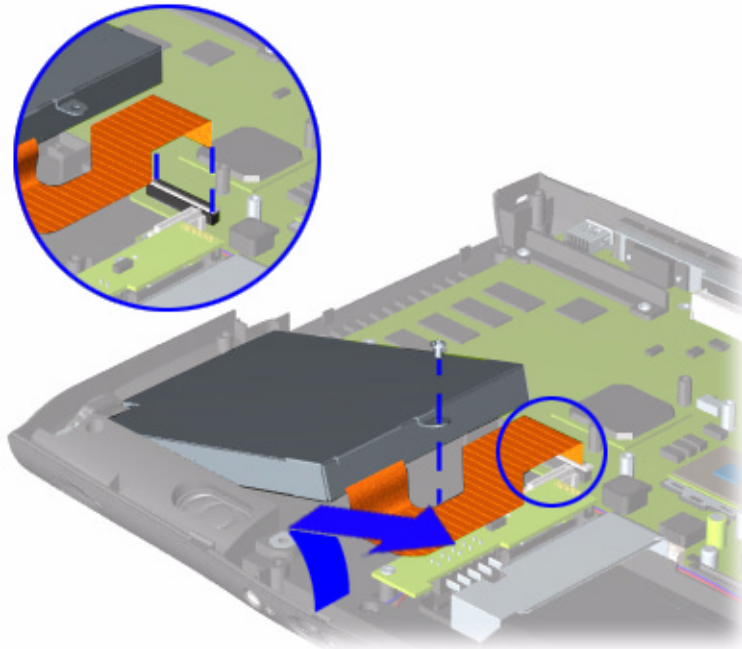
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# maintenance & service guide

## Presario 1800 Series

Models: **XL180, XL181, XL182, XL183, XL185,**  
and **XL190, XL191, XL192**

12. Remove the screw that connects the diskette drive bracket to the chassis.
13. Disconnect the diskette drive data cable from the [ZIF Connector](#) on the system board and lift the diskette drive from the chassis.



To replace the diskette drive, reverse these procedures.

**CAUTION:** When replacing the diskette drive, ensure that the [Diskette Drive Ribbon Cable](#) is placed in its proper location during the reassembly process. Improper cable placement can damage the Notebook.

**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
**and XL190, XL191, XL192**

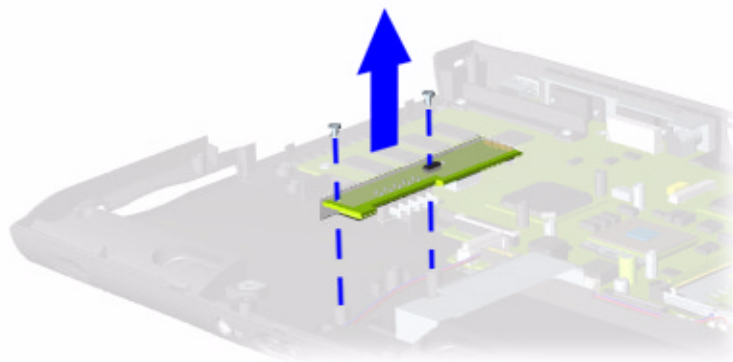
## **Removing the Battery Charger Board**

*(Voltage Converter Board)*

To remove the battery charger board, complete the following:

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Remove the Palmrest cover with TouchPad ([pg 14](#)).
3. Remove the keyboard ([pg 17](#)).
4. Remove the Heatspreader ([pg 23](#)).
5. Remove the Internet Zone cover ([pg 18](#)).
6. Remove the Internet button board ([pg 21](#)).
7. Remove the display panel assembly ([pg 32](#)).
8. Remove the hard drive ([pg 25](#)).
9. Remove the upper CPU cover ([pg 34](#)).
10. Remove two screws from the battery charger board and unplug the board from the connector on the system board.
11. Lift the battery charger board out of the chassis.

**Note:** Retain plastic insulator for reassembly with replacement battery charger board.



To replace the battery charger board, reverse these procedures.

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

# maintenance & service guide

## Presario 1800 Series

Models: **XL180, XL181, XL182, XL183, XL185,**  
and **XL190, XL191, XL192**

### *Removing the Speaker Assembly*

To remove the speaker assembly, complete the following:

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Remove the Palmrest cover with TouchPad ([pg 14](#)).
3. Remove the keyboard ([pg 17](#)).
4. Remove the Heatspreader ([pg 23](#)).
5. Remove the Internet Zone cover ([pg 18](#)).
6. Remove the Internet button board ([pg 21](#)).
7. Remove the display panel assembly ([pg 32](#)).
8. Remove the hard drive ([pg 25](#)).
9. Remove the upper CPU cover ([pg 34](#)).
10. Remove the battery charger board ([pg 41](#)).

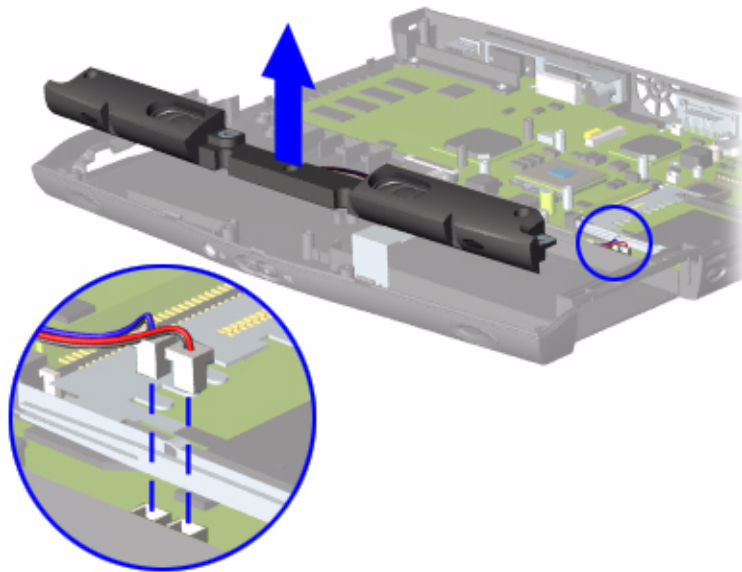
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# maintenance & service guide

## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

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



To replace the speaker assembly, reverse these procedures.

**CAUTION:** When replacing the speaker assembly, ensure that the [Speaker Assembly Cable](#) is placed in its proper location. Improper cable placement can damage the Notebook.

# maintenance & service guide

## Presario 1800 Series

Models: **XL180, XL181, XL182, XL183, XL185,**  
and **XL190, XL191, XL192**

### *Removing the System Board*

To remove the system board, complete the following steps:

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Remove the Palmrest cover with TouchPad ([pg 14](#)).
3. Remove the keyboard ([pg 17](#)).
4. Remove the Heatspreader ([pg 23](#)).
5. Remove the Internet Zone cover ([pg 18](#)).
6. Remove the Internet button board ([pg 21](#)).
7. Remove the display panel assembly ([pg 32](#)).
8. Remove the hard drive ([pg 25](#)).
9. Remove the upper CPU cover ([pg 34](#)).
10. Remove the DisqPlay Module cable from the system board.
11. Remove the modem ([pg 24](#)).
12. Remove the CD/DVD drive ([pg 30](#)).
13. Remove the fan assembly ([pg 35](#)).
14. Remove the diskette drive cable from the system board.
15. Remove the battery charger board ([pg 41](#)).
16. Disconnect the speaker assembly cables from the system board ([pg 43](#)).

Continued on the next page.



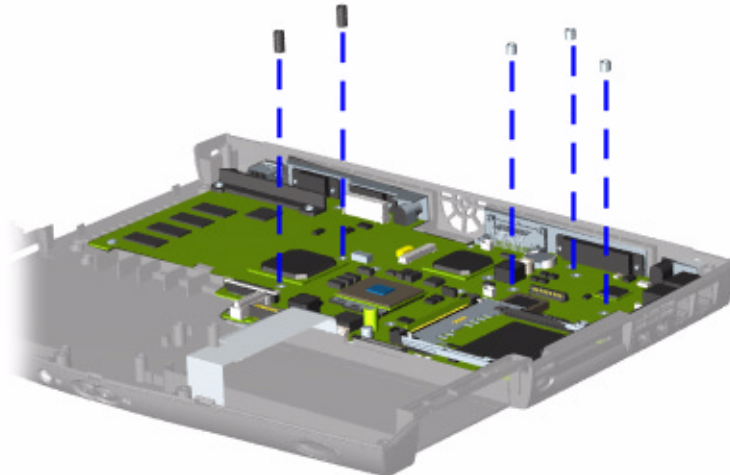
# maintenance & service guide

## Presario 1800 Series

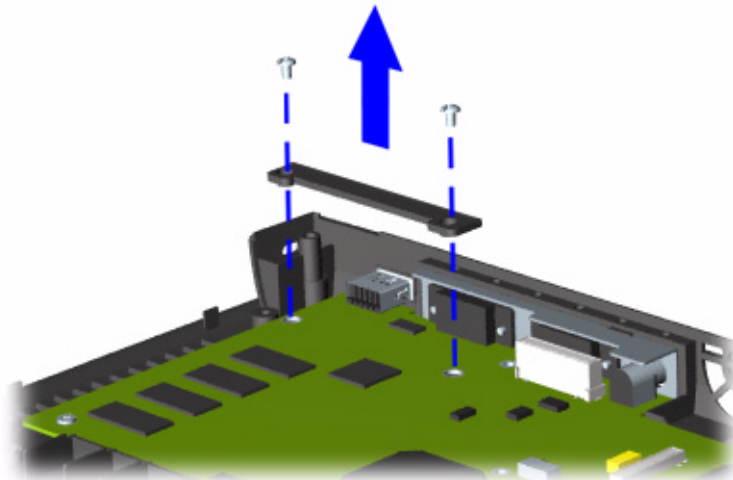
Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

17. Remove the five standoffs from the system board.

**Note:** The four remaining standoffs located on the system board may be left in place.



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



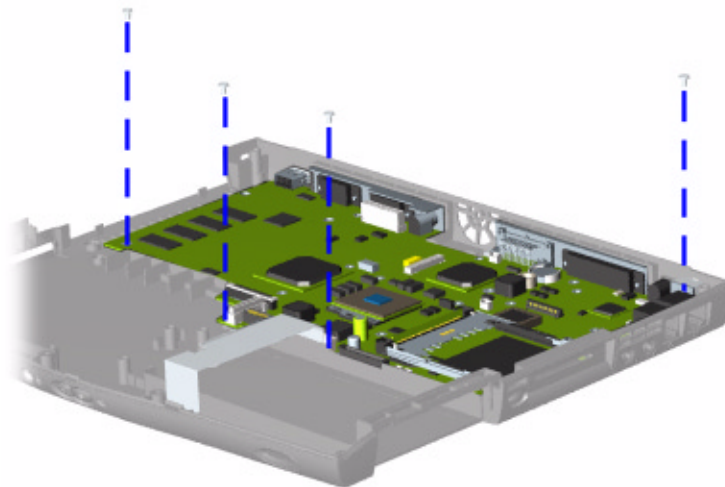
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# maintenance & service guide

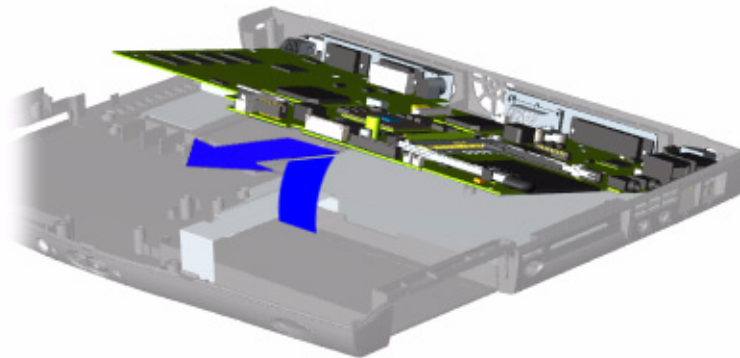
## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

19. Remove four screws from the system board.



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



To replace the system board, reverse these procedures.

**Important:** Before replacing the system board, remove all remaining cables.

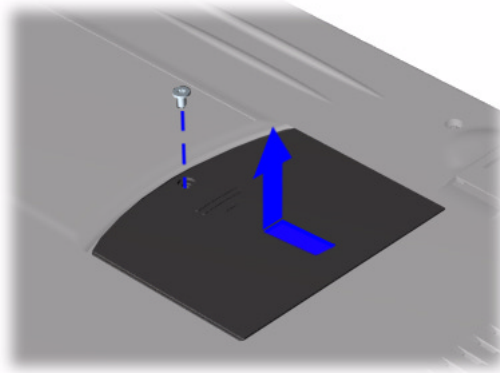
# maintenance & service guide

**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
**and XL190, XL191, XL192**

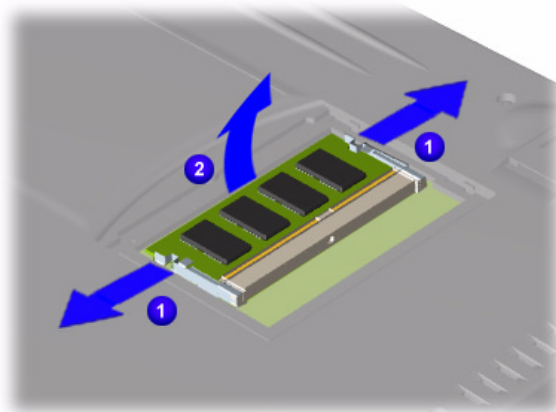
## *Removing the Memory Module*

To remove the memory module, complete the following steps:

1. Prepare the Notebook for disassembly ([pg 11](#)).
2. Close the display and turn the Notebook over (upside down).
3. Remove the screw from the memory module door.
4. With the front of the Notebook facing you, slide the memory module door to the left and lift.



5. ① Pull the side levers to release the module and ② unplug the memory module from the system board.



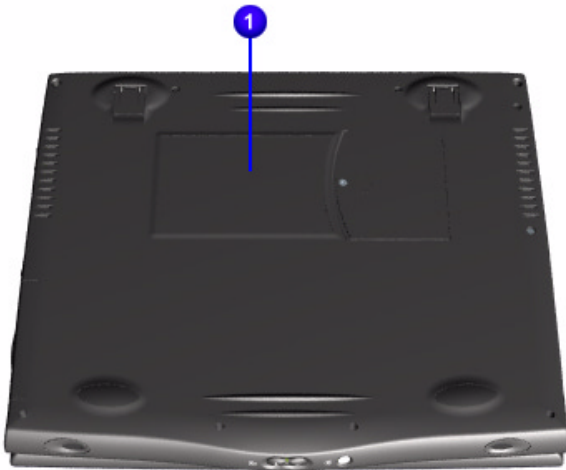
To replace the memory module, reverse these procedures.

# maintenance & service guide

## Presario 1800 Series

Models: **XL180, XL181, XL182, XL183, XL185,**  
and **XL190, XL191, XL192**

## Illustrated Parts Catalog



This chapter provides illustrations of the spare parts for Presario 1800XL Series Notebooks.

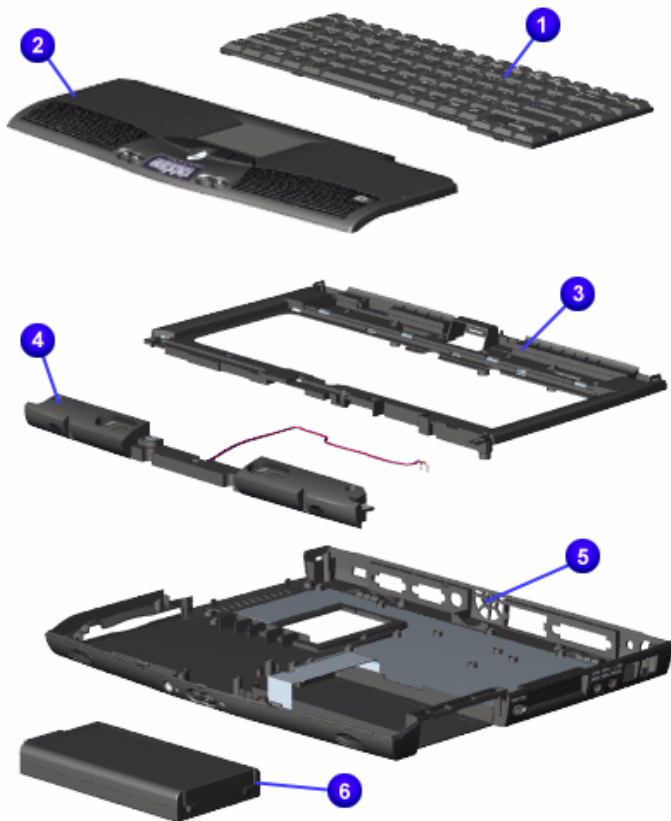
The Notebook serial number is required when customers request information or order spare parts. The serial number ① is located on the underside of the unit.

1.800.AT.COMPAQ

## maintenance & service guide

**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
**and XL190, XL191, XL192**

### System Units



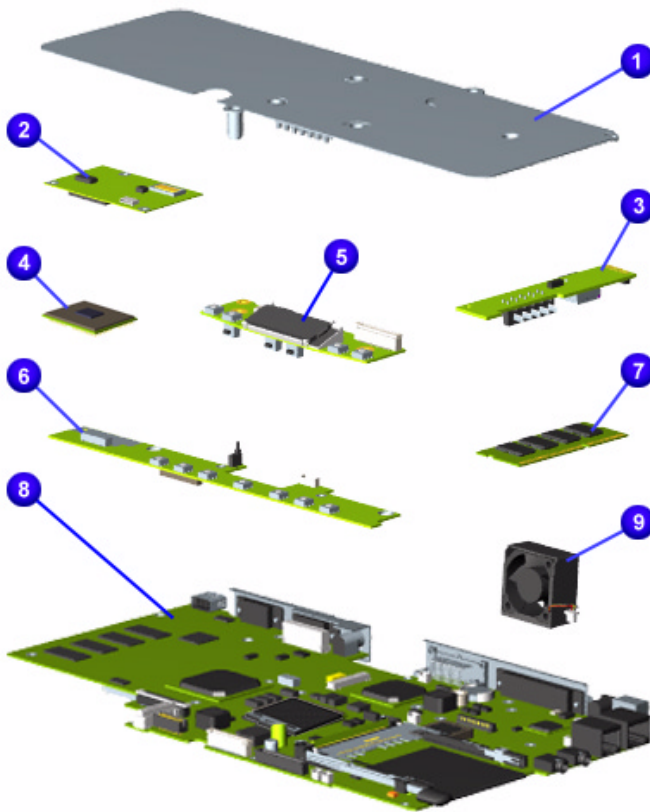
| # | Description                                 | Part No.   |
|---|---|--|
| ① | Keyboards                                   | 171819-xxx<br>US -001<br>NL -331<br>FR -051<br>IT -061<br>GR -041<br>UK -031 |
|   |   | 138180-xxx<br>UK -031<br>GR -041<br>FR -051                                  |
| ② | Palmrest Cover w/ Touchpad and Button Board | 138181-001   |
| ③ | CPU Cover w/ Power Switch                   | 138183-001   |
| ④ | Speaker Assembly w/Cables                   | 138185-001   |
| ⑤ | Enclosure Base (I)<br>Enclosure Base (II)   | 138182-001<br>171816-001   |
| ⑥ | Battery Pack Li-Ion Enhanced                | 138184-001   |
| ⑦ | Button Board Cover<br>(not shown)           | 143926-001   |

## maintenance & service guide

### Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

### System Boards



| # | Description  | Part No.   |
|---|--|--|
| ① | Heatspreader<br>Heatspreader   | 159698-001 (I)<br>171817-001 (II)                    |
| ② | Modem 56K Data/Fax<br>w/o SRAM -US<br>-Int'l   | 400445-001<br>143848-001                             |
| ③ | Voltage Converter Board<br>(battery charger)   | 138177-001 (I)<br>171815-001 (II)                    |
| ④ | Processors<br>PIII 500MHz 256K Cache<br>MMC-2<br>uPGA2<br>PII 600MHz 256K Cache<br>uPGA2<br>C500MHz 128K Cache | 161492-001<br>173755-001<br>175319-001<br>179454-001 |
| ⑤ | LCD Indicator Module<br>(not shown)  | 138187-001 (I)<br>177457-001 (II)                    |
| ⑥ | Internet Button Board  | 138186-001   |
| ⑦ | Memory S.O. Dimm<br>32 Mb PC100<br>64 Mb PC100<br>128 Mb PC100<br>256 Mb PC100                                 | 122699-001<br>122700-001<br>123930-001<br>175325-001 |
| ⑧ | System I/O Boards w/<br>64 Mb SDRAM  | 171813-001<br>158804-001<br>(Mobility-P)             |
| ⑨ | Fan Assembly   | 138162-001   |
| ⑩ | PCI Ethernet 10/100T<br>LAN Card (not shown)   | 138164-001   |

## maintenance & service guide

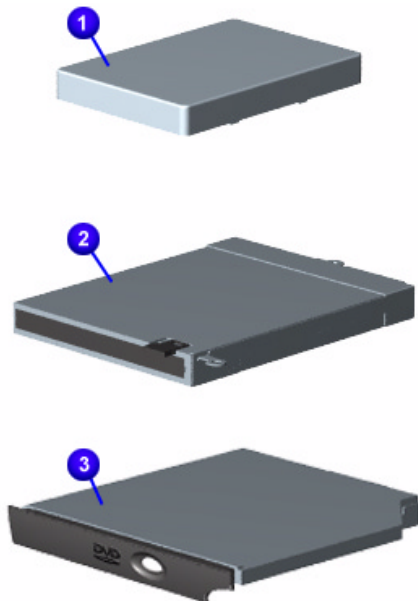
**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
**and XL190, XL191, XL192**

### Display Panel Assembly



| Description                  | Part No.                 |
|------------------------------|--------------------------|
| 15.0" TFT/LVDS Display Panel | 171814-001<br>203698-001 |

### Mass Storage Devices



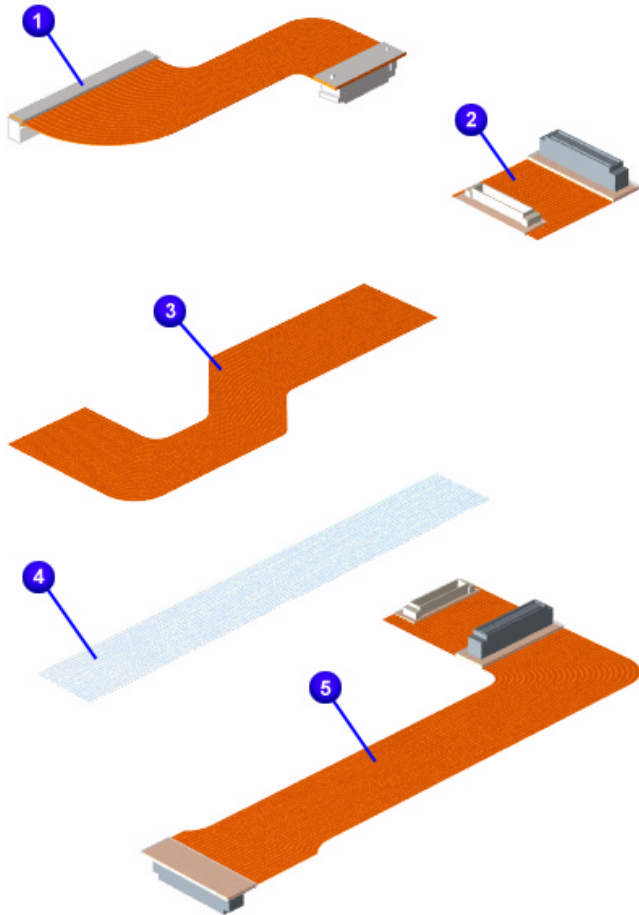
| # | Description                    | Part No.                               |
|---|--------------------------------|--|
| ① | Hard Drives<br>6.0GB<br>12.0GB | 170087-001<br>170086-001               |
| ② | 1.44-MB Diskette Drive         | 138188-001                             |
| ③ | DVD Drives<br>6X<br>6X<br>8X   | 158165-001<br>192408-001<br>175326-001 |
| ④ | 24X CD ROM Drive (not shown)   | 143922-001                             |
| ⑤ | CD-R/W Drive (not shown)       | 171377-001                             |

## maintenance & service guide

### Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

### Miscellaneous Cables



| #                               | Description                | Part No.   |
|---------------------------------|----------------------------|------------|
| <b>Miscellaneous Cable Kit*</b> |                            | 138189-001 |
| ①                               | Hard Drive Cable           |            |
| ②                               | CD/DVD Drive Cable         |            |
| ③                               | Diskette Drive Cable       |            |
| ④                               | Status Panel Cable         |            |
| ⑤                               | DisqPlay LCD Cable         |            |
| ⑥                               | Modem Cable (not shown)    |            |
| ⑦                               | TouchPad Cable (not shown) |            |

*\*Kit includes one each of the above items unless quantity specified.*

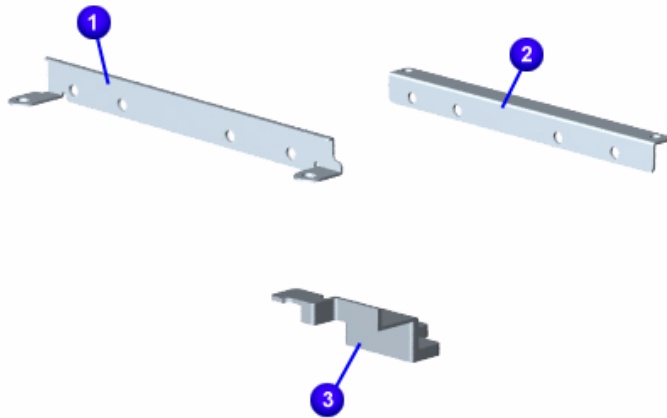


## maintenance & service guide

### Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

### Miscellaneous Hardware Kit

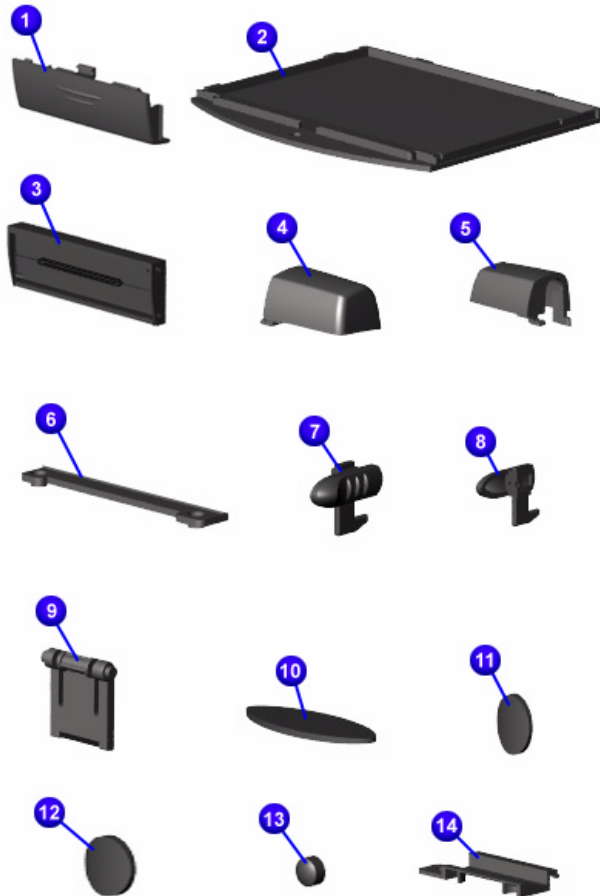


| #                                 | Description                         | Part No.   |
|-----------------------------------|-------------------------------------|------------|
| <b>Miscellaneous Hardware Kit</b> |                                     | 138160-001 |
| ①                                 | Hard Drive Mounting Bracket (right) |            |
| ②                                 | Hard Drive Mounting Bracket (left)  |            |
| ③                                 | Reinforcement Bracket               |            |

## maintenance & service guide

**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
**and XL190, XL191, XL192**

### Miscellaneous Plastics



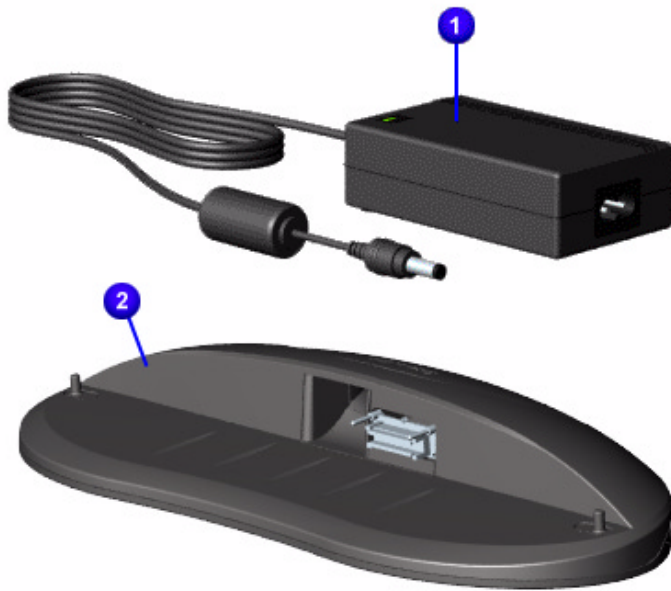
| #                                  | Description  | Part No.   |
|------------------------------------|--|------------|
| <b>Miscellaneous Plastics Kit*</b> |  | 138190-001 |
| ①                                  | Battery Pack Door                                    |            |
| ②                                  | Memory Module Cover                                  |            |
| ③                                  | PCMCIA Door  |            |
| ④                                  | Display Hinge Cover (Right)                          |            |
| ⑤                                  | Display Hinge Cover (Left)                           |            |
| ⑥                                  | CD Drive Guide                                       |            |
| ⑦                                  | Latch (Right) (qty. 10)                              |            |
| ⑧                                  | Latch (Left) (qty. 10)                               |            |
| ⑨                                  | Stand-foot (qty. 10)                                 |            |
| ⑩                                  | Rubber Foot (qty. 10)                                |            |
| ⑪                                  | Rubber Plug (side mount for 14.1" display) (qty. 10) |            |
| ⑫                                  | Rubber Plug side mount for 15.0" display) (qty. 10)  |            |
| ⑬                                  | LCD Rubber Plug (qty. 10)                            |            |
| ⑭                                  | Thin LCD Rubber Plug (14.1" Display) (qty. 10)       |            |
| ⑮                                  | LCD FPC Cover (not shown)                            |            |

*\*Kit includes one each of the above items unless quantity specified.*

## maintenance & service guide

**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
**and XL190, XL191, XL192**

### Miscellaneous Parts



| # | Description                    | Part No.   |
|---|--------------------------------|------------|
| ❶ | AC Adapter                     | 298239-001 |
|   | APD                            | 164854-001 |
|   | 60W Slim 3-Wire                | 180675-001 |
|   | 60W Slim 2-Wire                | 180676-001 |
| ❷ | QuikDock                       | 138167-001 |
| ❸ | Misc. Screw Kit<br>(not shown) | 138161-001 |
| ❹ | Logo Kit (not shown)           | 169610-001 |
| ❺ | Return Kit<br>(not shown)      | 138166-001 |
| ❻ | AC Power Cords<br>(not shown)  |            |
|   | N.America                      | 293831-001 |
|   | Int'l (3-Wire)                 | 170513-002 |
|   | UK (3-Wire)                    | 170513-031 |
|   | IT (3-Wire)                    | 170513-061 |

### Documentation and Software

| Item                            | Part No.   |
|---------------------------------|------------|
| Win98 2nd Edition Manual Kit    | 146642-001 |
| Win2000 Professional Manual Kit | 164286-001 |
| Emergency Recovery CD Kit       | 157296-002 |
| QuickRestore Kit                | 169300-001 |
| Win98 Reference Guide           | 117894-003 |
| Features Guide                  | 120223-001 |

# maintenance & service guide

**Presario 1800 Series**  
**Models: XL180, XL181, XL182, XL183, XL185,**  
**and XL190, XL191, XL192**

## Configure To Order (CTO) Parts

| Description                                  | Part No.   |
|--|------------|
| <b>Display</b>                               |            |
| 14.1" TFT                                    | 175324-001 |
| 15.0" TFT LVDS                               | 171814-001 |
| 15.0" TFT LVDS MD(Special)                   | 203698-001 |
| <b>Processors</b>                            |            |
| Pentium III 450 w/128 Cache (uPGA2)          | 175321-001 |
| Pentium III 450 w/256 Cache (uPGA2)          | 175320-001 |
| Pentium III 500 w/256 Cache (uPGA2)          | 173755-001 |
| Pentium III 600 w/256 Cache (uPGA2)          | 175319-001 |
| Pentium III 650 w/256 Cache (uPGA2)          | 175322-001 |
| Pentium III 700 w/256 Cache (uPGA2)          | 175323-001 |
| Celeron 500 w/128K Cache (uPGA2)             | 179454-001 |
| <b>System Memory S.O.DIMM</b>                |            |
| 32 MB, PC100                                 | 122699-001 |
| 64 MB, PC100                                 | 122700-001 |
| 128 MB                                       | 123930-001 |
| 256 MB                                       | 175325-001 |
| System Board I/O w/64 MB SDRAM               | 171813-001 |
| System Board I/O w/64 MB SDRAM<br>Mobility-P | 158804-001 |
| 64 MB Module Installed in Slot 1             | TBD        |
| 64 MB On System Board                        |            |
| 32 MB Module Installed in Slot 1             | TBD        |
| 64 MB On System Board                        |            |
| 128 MB Module Installed in Slot 1            | TBD        |
| 64 MB On System Board                        |            |
| 256 MB Module Installed in Slot 1            | TBD        |
| <b>CD-Rom/DVD Drives</b>                     |            |
| 8X   | 175326-001 |
| 24X  | TBD        |
| CD-R/W Drive                                 | 171377-001 |
| 24X CD-ROM Drive                             | TBD        |
| 6X-DVD Drive                                 | TBD        |
| 8X-DVD Drive                                 | TBD        |

# maintenance & service guide

## Presario 1800 Series

Models: XL180, XL181, XL182, XL183, XL185,  
and XL190, XL191, XL192

| Description                                 | Part No.   |
|---|------------|
| <b>Hard Drive</b>                           |            |
| 06.0-GB                                     | TBD        |
| 12.0-GB                                     | TBD        |
| 18.0-GB                                     | 161544-001 |
| 30.0-GB                                     | TBD        |
| <b>Base Unit</b> Floppy, 64M, 56K, ATI8M-US | TBD        |
| <b>Battery</b> Li-ON 3.6 AHr                | 177458-001 |
| <b>Software</b>                             |            |
| Windows 98                                  | TBD        |
| Windows 2000                                | TBD        |
| Word 2000                                   | TBD        |
| <b>Software Bundle</b>                      |            |
| FHC Package                                 | TBD        |
| SBE Package                                 | TBD        |
| PRO Package                                 | TBD        |