

# **Parts Exchange and Replacement Guide**

## **HP VISUALIZE A1280 X-Class and A6034 P-Class Personal Workstations**

**Printed in USA September 2000**



**Manufacturing Part Number: A1280-90039**

**Edition E0900**

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## **Preface**

This service handbook provides a hardware parts list for the engineers and technicians who support the HP Visualize P-Class/X-Class Personal Workstations.

## **Bibliography**

The following documents are available for the P-Class and X-Class HP Visualize Personal Workstations:

- *HP Visualize Personal Workstation P-Class User's Guide* and
- *HP Visualize Personal Workstation X-Class User's Guide*.

For more information, you can go to the following web sites.

- **Sound Controller**  
<http://www.cirrus.com>
- **ELSA GLoria II and Synergy II (graphics controller)**  
<http://www.elsa.com/>
- **Intel Pentium III Processor**  
<http://developer.intel.com/design/pentiumiii/>
- **Super I/O**  
<http://www.national.com/catalog/>

## **Electrostatic Discharge (ESD) Precautions**

Electrostatic charges can damage the integrated circuits on printed circuit boards. To prevent such damage from occurring, observe the following precautions during board unpacking and installation:

- Stand on a static-free mat.
- Wear a static strap to ensure that any accumulated electrostatic charge is discharged from your body to ground.
- Create a common ground for the equipment you are working on by connecting the static-free mat, static strap, and peripheral units to that piece of equipment.
- Keep uninstalled printed circuit boards in their protective antistatic bags.
- Handle printed circuit boards by their edges, once you have removed them from their protective antistatic bags.

## **Revision History**

The revision history for each edition of the manual is listed below:

<u>Edition</u>	<u>Revision History</u>
E0599	First Printing
E1299	Second Printing
E0900	Third Printing



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# **1 HP Visualize X-Class Parts Replacement**

This document provides support information for replacement and exchange of the HP Visualize X-Class Personal Workstation's parts.

## Features and Accessories

**Table 1-1 X-Class Personal Workstation Features**

<b>Product Number</b>	<b>Processors</b>	<b>Std. RAM</b>	<b>Hard Drive</b>	<b>Video Controller</b>	<b>Multi-media</b>	<b>LAN</b>
A1280A	Pentium III with 256 KB full frequency L2 cache	256 MB, 512 MB and 1 GB SDRAM ECC	9 and 18 GB U160 10K rpm SCSI	HP Visualize fx4+ and fx6+ Graphics Cards	48X IDE CD-ROM. IDE CD-RW and 8x IDE DVD-ROM Audio chip (Cirrus Logic Crystal CS4280) integ. on sys. board.	10BT/100TX (Intel 82559 Fast Ethernet) integ. on sys. board. U160 SCSI card (Adaptec 29160)
A1280B	Pentium III with 256 KB full frequency L2 cache	256 MB, 512 MB and 1 GB SDRAM ECC	9, 18 and 36 GB U160 10K rpm SCSI	HP Visualize fx5 and fx10 Graphics Cards; ELSA GLoria II and Synergy II	48X IDE CD-ROM. IDE CD-RW and 8x IDE DVD-ROM Audio chip (Cirrus Logic Crystal CS4280) integ. on sys. board.	10BT/100TX (Intel 82559 Fast Ethernet) integ. on sys. board. U160 SCSI card (Adaptec 29160)

**NOTE**

All models are supplied with a 1.44 MB Flexible Disk Drive, an integrated IDE controller, and an integrated LAN card.

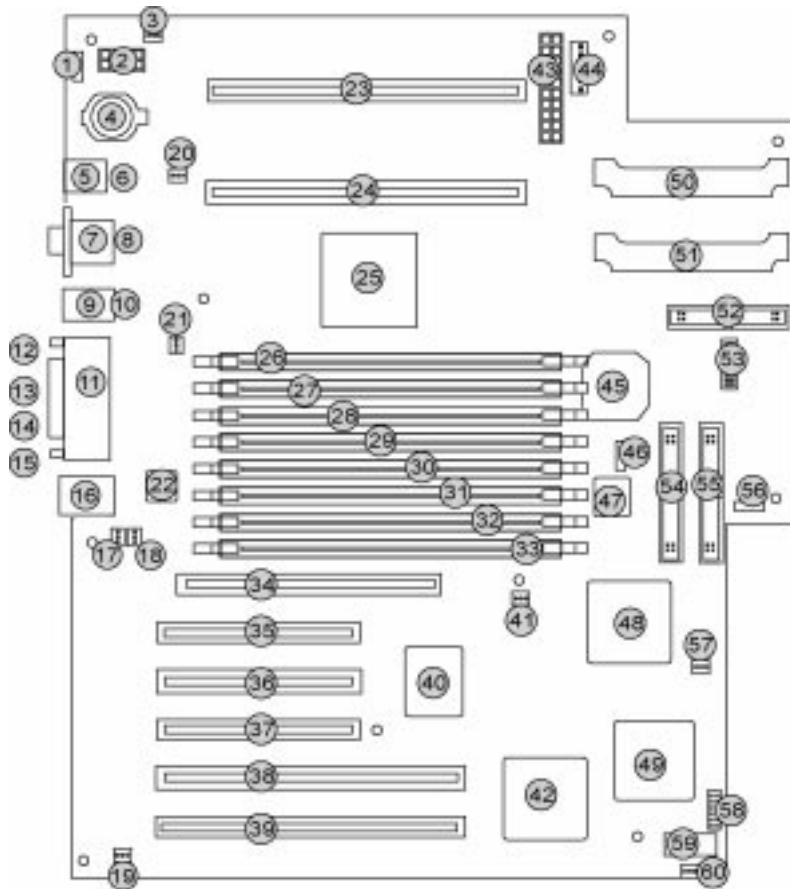


**Table 1-2 X-Class Supported Accessories**

<b>Supported Accessory</b>	<b>Part Number</b>
<b>Memory (8 slots)</b>	
SDRAM 256MB PC133 memory ECC (pair of 128 MB DIMMs)	A1285A
SDRAM 512MB PC133 memory ECC (pair of 256 MB DIMMs)	A1286A
SDRAM 1GB PC133 memory ECC (pair of 512 MB DIMMs)	A1287A
<b>Documentation</b>	
User's Guide	A1280--90002
<b>Input Devices</b>	
HP multimedia keyboard	C4742A
HP 3 button mouse	A4983-65121
<b>Video Displays</b>	
Video Displays can be found at HP's web site: <a href="http://www.hp.com/visualize/support">http://www.hp.com/visualize/support</a>	
<b>Mass Storage</b>	
9.0 GB 10K rpm Ultra 160 SCSI hard disk	A5994A
18.0 GB 10K rpm Ultra160 SCSI hard disk	A5995A
36.0 GB 10K rpm Ultra 160 SCSI hard disk	A6060A
48 Max IDE CD-ROM drive	A5988A
CD-RW IDE Drive	A5989A
DVD-ROM IDE Drive	A1252A
<b>RAID</b>	
Ultra 160 RAID (LSI Nextreme)	A1289A

## System Board, BIOS and Memory

**Figure 1-1** System Board for the X-Class Personal Workstation



**Legend:**

1. Chassis Intrusion Connection
2. Power Supply Connection
3. Processor Fan Connection (80mm, processor duct assembly)
4. Battery Socket
5. USB 1 (Top)
6. USB 0 (Bottom)
7. COM 1 (Top)

8. Com 2 (Bottom)
9. Mouse Connection (Top)
10. Keyboard Connection ((Bottom)
11. LPT Port (Top)
12. Line In (below LPT)
13. Line Out (Below LPT)
14. Mic In (Below LPT)
15. Headset (Below LPT)
16. LAN Port
17. CD Audio Connection
18. Aux Audio Connection
19. Modem Audio In
20. Chipset Fan Connection (40mm)
21. Rear Fan Connector (120 mm, I/O bulkhead)
22. LAN Chip
23. Processor 1 Slot
24. Processor 2 Slot
25. North Bridge (under chipset fan assembly)
26. DIMM 1A (must be paired with 1B)
27. DIMM 2A (must be paired with 2B)
28. DIMM 3A (must be paired with 3B) (not implemented on P-Class)
29. DIMM 4A (must be paired with 4B) (not implemented on P-Class)
30. DIMM 1B (must be paired with 1A)
31. DIMM 2B (must be paired with 2A)
32. DIMM 3B (must be paired with 3A) (not implemented on P-Class)
33. DIMM 4B (must be paired with 4A) (not implemented on P-Class)
34. AGP Slot
35. PCI Slot 5 32 Bit / 33 MHz
36. PCI Slot 4 32 Bit / 33 MHz
37. PCI Slot 3 32 Bit / 33 MHz
38. PCI Slot 2 64 Bit / 66 MHz
39. PCI Slot 1 64 Bit / 66 MHz
40. Crystal Audio Chip
41. Wake on LAN Connection
42. I/O Bridge
43. Power Supply Connection
44. Power Supply Connection
45. Memory Controller (MADP)
46. HDD Temperature Sensor (not implemented on A1280B)
47. MAXILIFE Controller
48. South Bridge
49. Super I/O
50. Processor 1 VRM
51. Processor 2 VRM
52. Floppy
53. Switch Block

- 54. Secondary IDE
- 55. Primary IDE
- 56. Speaker Connection
- 57. PCI Fan Connection (92 mm, in I/O guide assembly)
- 58. Front Panel Connection
- 59. EEPROM
- 60. SCSI LED Connection

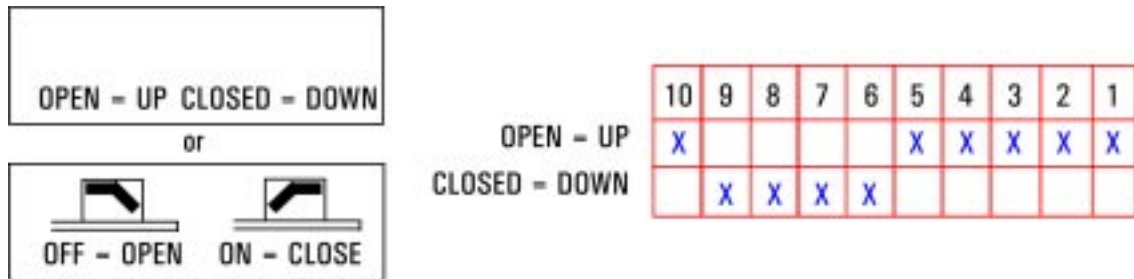
## System Board Switches

**Table 1-3 System Board Switch Settings for the X-Class Personal Workstation**

Switch		Function	Default
1-5	—	Processor frequency (autodetected by the BIOS)	—
6	OFF <sup>1</sup>	Retain configuration in CMOS, normal position	OFF
	ON	Clears CMOS	
7	OFF	Enables User and Administrator passwords	OFF
	ON	Clears User and Administrator passwords	
8	OFF	Disables power on using keyboard	ON
	ON	Enables keyboard power on	
9	OFF	Reserved	OFF
	ON		
10	OFF	Normal operation	OFF
	ON	Recovery boot active (force BIOS flashing) <sup>2</sup>	

1. Refer to the diagrams on the previous page to determine their ON/OFF position on the system board switch box.
2. Refer to “Recovery Boot Active Procedure” in the User’s Guide for the detailed recovery procedure.

**Figure 1-2 System Board Switches**



## BIOS History

For the latest BIOS, the flasher utility program and the BIOS history, refer to the HP World Wide Web site. The BIOS is in the form IDxx.FUL, where xx is the version number.

<http://www.hp.com/visualize/support>

## Cache Memory

256 KB of full frequency level-two cache memory is integrated in the Pentium III processor package.

## Main Memory

The Personal Workstation has eight DIMM slots on the system board for installing main memory. The memory must be loaded in pairs, and you can have a minimum of 256 MBytes to a maximum of 4 GBytes of memory. When you install the memory, you have to use matched pairs (for example, two 128 MByte DIMM cards installed sequentially according to the memory loading order).

When expanding the memory in your Personal Workstation, you can obtain maximum performance by keeping the size of all memory cards the same. If you are using 512 MB DIMMs, all DIMMs in the system must be 512 MB.

The memory must be removed in matching pairs (banks are interleaved). For example, if you remove a card from slot 1A, you must also remove a card of equal size from slot 1B.

## Video Memory

The HP Visualize fx4+ and fx6+ video boards each have 18 MBs of SGRAM memory. They have an optional hardware texture accelerator module with 16 MBs of SDRAM added to them.

The HP Visualize fx5 and fx10 video boards each have 64 MB of installed SGRAM memory. This includes texture memory; consequently, there is no additional texture module accessory required.

The ELSA GLoria II video board has 64 MB of installed SGRAM memory and the Synergy II has 32 MB. No switch or jumper settings are need to be changed (all jumpers should be left in the positions in which they were set by the manufacturer).

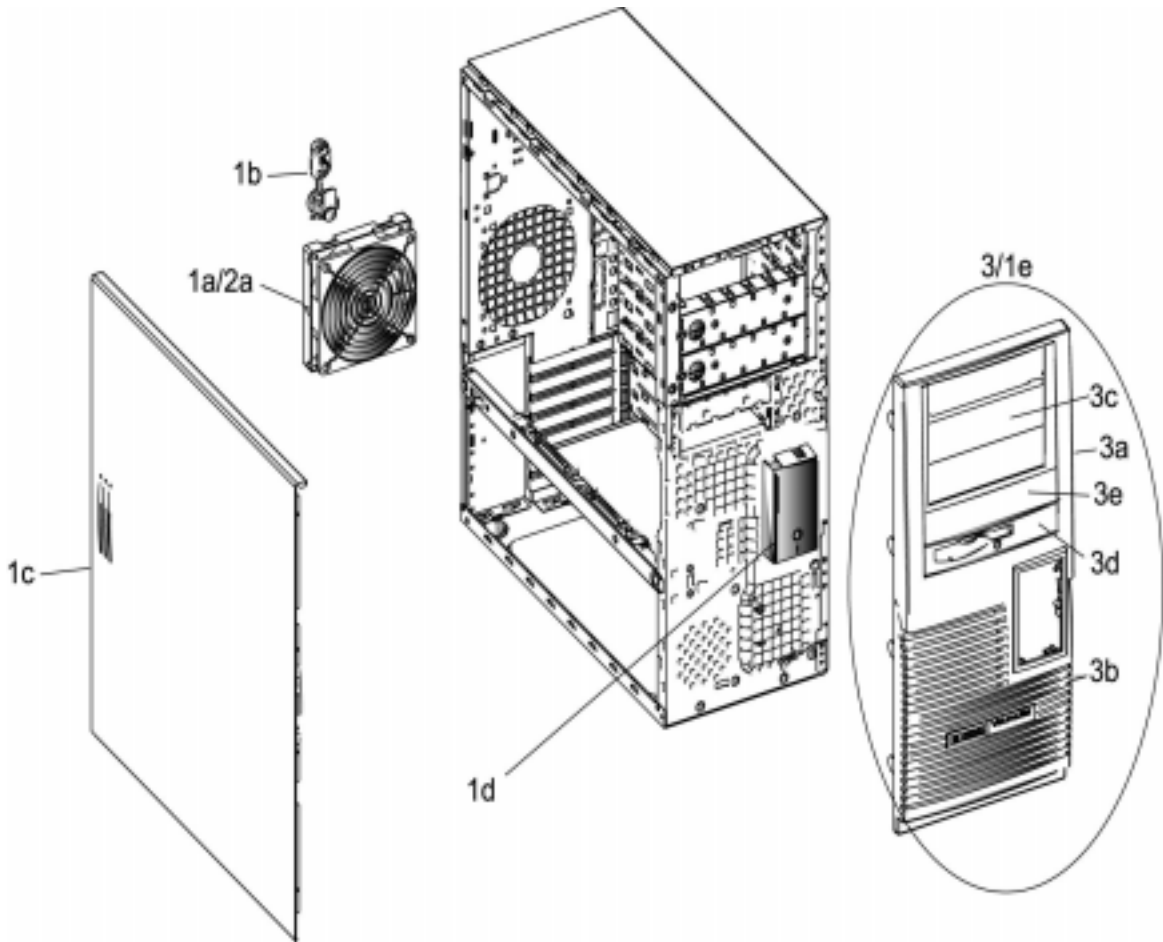
## Recovering the BIOS (Crisis Mode)

If the BIOS is corrupted and the standard flash cannot be used, use the BIOS Recovery Mode (exceptional BIOS recovery operations) to restore the BIOS.

1. Format a new floppy disk.
2. Copy the BIOS files on to the floppy disk.
3. Shut down the PC Workstation.
4. Power off the PC Workstation and remove the power cord.
5. Remove the cover.
6. Set switch 10 to the DOWN position.
7. Insert the floppy disk into the floppy disk drive.
8. Reconnect the power cord and switch on the PC Workstation.
9. The PC Workstation boots from the floppy disk, then flashes the BIOS. During the flash process, the screen remains blank. MaxiLife will display a message on the LCD panel "RECOVERY MODE".
10. The recovery process is finished when there are four beeps.
11. Power off the PC Workstation. Remove the floppy disk from the drive. Remove the power cord.
12. Set switch 10 back to the UP position.
13. Replace the cover, reconnect the power cord, then reboot the PC Workstation.

## Parts and Part Numbers

**Figure 1-3** X-Class Personal Workstation Components



**Table 1-4                      Parts List for X-Class Personal Workstation**

<b>Item</b>	<b>Description</b>	<b>Replacement Part Number</b>	<b>Exchange Part Number</b>
1	Case/Chassis Assy includes:	A1280-63001	---
1a (2a)	Fan 120mm Assy, above I/O bulkhead	A1280-68509	---
1b	Key Lock Assembly w/ 2 keys	5064-2645	---
1c	Left Door Assy w/ logo	A1280-62401	---
1d	LCD Status Panel Kit	5064-9162	---
1e (3)	Front Bezel Kit	A1280-67903	---
not shown	Chassis Rubber Feet	---	---
not shown	Tamper Detect Switch Assy	---	---
not shown	Key Holder	---	---
not shown	I/O Bulkhead Filler Panel	---	---
not shown	Thermal Sensor Clip	---	---
not shown	Misc. Parts Bag includes:	A1280-67901	---
not shown	Fan 120mm Assembly	A1280-68509	
not shown	I/O Guide Assy w/ 92mm fan & spkr	A1280-68503	
not shown	SCSI LED Cable	5183-9401	
not shown	IDE FDD Cable	5184-1216	
not shown	IDE ATA Cable	5184-1515	
not shown	Key Lock Assy w/ 2 keys	5064-2645	
not shown	No Screw Rail Assy-3.5 FDD, L		
not shown	No Screw Rail Assy-3.5 FDD, R		
not shown	No Screw Rail Assy-3.5 HDD, L		
not shown	No Screw Rail Assy-3.5 HDD, R		
not shown	2 No Screw Rail Assy-5.25 Inch		
not shown	4 Ground Clips		
not shown	Tamper Detect Switch Assy		
not shown	Bracket, Grill for 120mm Fan Assy		
not shown	Key Holder		
not shown	Thumbscrew, metal		
3	Front Bezel Kit includes:	A1280-67903	—
3a	Upper Bezel		
3b	Lower bezel		
3c	Front Filler Panels		
3d	Floppy Bezel		
3e	Blue Bezel above Floppy		



**Table 1-4                      Parts List for X-Class Personal Workstation**

<b>Item</b>	<b>Description</b>	<b>Replacement Part Number</b>	<b>Exchange Part Number</b>
not shown	400W Power Supply	A1280-62090	---
not shown	System Boards: A1280A A1280B	A1280-66510 <sup>1</sup> A1280-66515	A1280-69511 A1280-69515
not shown	Fan 40mm Assy, Chipset	A1280-68511	---
not shown	CPU Air Duct Assy w/ 80mm fan	A1280-68508	—
not shown	CPU Air Duct Assy w/ 80mm fan, 1 Ghz CPU	A1280-62403	---
not shown	SCSI Twisted Pair Cable	A1280-63001	—
not shown	HDD Thermal Sensor Cable Assy (A1280A only)	A1280-63301	—
not shown	IDE Audio Cable	5182-1857	—
not shown	Voltage Regulator Module	0950-3633	---
not shown	Processors: 733/133 Pentium III 800/133 Pentium III 866/133 Pentium III 1000/133 Pentium III	A1283-60001 A6024-60001 A6032-60001 A6059-71000	A1283-69001 A6024-69001 A6032-69001 A6059-69000
not shown	Processor Terminator	A1280-62101	---
not shown	Optical Drives: CD-ROM 48x IDE CD-RW IDE DVD-ROM 8x IDE	D4389-63031 C4465-63001 D4388-63002	--- C4465-69001 D4388-69002
not shown	Floppy Disk Drive	D2035-60391	
not shown	Hard Disk Drives: 9 GB SCSI U160 10K rpm 18 GB SCSI U160 10K rpm 36 GB SCSI U160 10K rpm	D8608-63003 D8609-63003 P1577-63001	D8608-69003 D8609-69003 P1577-69001

**Table 1-4                      Parts List for X-Class Personal Workstation**

<b>Item</b>	<b>Description</b>	<b>Replacement Part Number</b>	<b>Exchange Part Number</b>
not shown	Graphics Cards:  fx4+ AGP Pro (A1280A) fx6+ AGP Pro (A1280A) fx+ Single Texture Module (A1280A) ELSA GLoria II (A1280B) ELSA Synergy II (A1280B) fx5 NT w/ SDram (A1280B) fx10 NT w/ SDram (A1280B)	  A1278-60001 A1277-60001 A5022-60001 A6007-60001 5064-9794 A1264-66501 A1264-66502	  A1278-69001 A1277-69001 A5022-69001 A6007-69001 D7992-69501 A1264-69001 A1264-69002
not shown	Ultra 160 SCSI Card	A1280-66502	A1280-69502
not shown	Ultra 160 RAID Card	A1289-63001	A1289-69001
not shown	Memory:  128 MB SDRAM 133 MHz 256 MB SDRAM 133 MHz 512 MB SDRAM 133 MHz	  A1285-60000 A1286-60000 A1287-60000	  A1285-69000 A1286-69000 A1287-69000
not shown	Mouse, PS 2 PC99	A4983-65001	---
not shown	Multimedia Keyboards:  Trad. Chinese, Taiwan (AB0) US English (ABA) & China (AB2) UK English (ABU) Canada French (ABC) France French (ABF) Swiss German (ABP) and French (ABQ) Germany German (ABD) Spain Spanish (ABE) Latin American Spanish (ABM) Swedish (ABS) and Finnish (ABX) Italian (ABZ) Korean (AB1) Japanese (ABJ)	  C4742-60123 C4742-60101 C4742-60113 C4742-60102 C4742-60105 C4742-60111 C4742-60103 C4742-60104 C4742-60108 C4742-60112 C4742-60117 C4742-60121 C4742-60124	
not shown	Battery, 3V Lithium	1420-0356	---

1. In late April 2000, the A1280-66510 board was modified in manufacturing to fix a class issue (see Service Note A1280A-01). The manufacturing part number (replacement part number) A1280-66510 was not changed, but the Mod ID was. If the Mod ID label for the A1280-66510 has the string "E-181-CC," it is a modified board and does NOT need to be replaced with the A1280-69511. The Mod ID label can be found either at the top-left or bottom of the board (near the part number).

**Table 1-5 Documentation for X-Class Personal Workstation**

P- (A6034) and X-Class (A1280) User's Guide	A1280-90002
P- (A6034) and X-Class (A1280) Technical Reference Manual	A1280-90016
HP Visualize fx2+/fx4+/fx6+ and Texture Module User's Guide	A5021-90001
HP Visualize fx5 and fx10 Configuration Guide	A5021-90015
ELSA Synergy II/GLoria II User's Guide	A1280-90025
HP Ultra 160 RAID Installation and Recovery Guide	A1289-90003

**Table 1-6 Software for X-Class Personal Workstation**

<b>NT 4.0 Recovery CD ROMs with drivers</b>	
Trad. Chinese, Taiwan (AB0)	A1280-87925
Simp. Chinese, China (AB2)	A1280-87927
US English (ABA)	
UK English (ABU)	
Can French (ABC)	
Fr French (ABF)	
Swiss French (ABQ)	
Swiss German (ABP)	
Gr German (ABD)	
Sp Spanish (ABE)	
L Amer. Spanish (ABM)	
Swedish (ABS)	
Finnish (ABX)	
Italian (ABZ)	
Korean (AB1)	
Japanese (ABJ)	
Latest drivers and BIOS	<a href="http://www.hp.com/visualize">http://www.hp.com/visualize</a>

HP Visualize X-Class Parts Replacement  
**Parts and Part Numbers**

**Notes:**

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# **2 HP Visualize P-Class Parts Replacement**

This section provides support information for replacement and exchange of the HP Visualize P-Class Personal Workstation's parts.

## Features and Accessories

**Table 2-1 P-Class Personal Workstation Features**

Product Number	Processors	Std. RAM	Hard Drive	Video Controller	Multi-media	LAN
A6034	Pentium III with 256 KB full frequency L2 cache	128MB, 256 MB, 512 MB and 1 GB ECC SDRAM	9, 18 and 36 GB U160 10K rpm SCSI	HP Visualize fx5+ and fx10 Graphics Cards, ELSA GLoria II and Synergy II	48X IDE CD-ROM. IDE CD-RW and 8x IDE DVD-ROM Audio chip (Cirrus Logic Crystal CS4280) integ. on sys. board.	10BT/100TX (Intel 82559 Fast Ethernet) integ. on sys. board. U160 SCSI card (Adaptec 29160)

**NOTE** All models are supplied with a 1.44 MB Flexible Disk Drive, an integrated IDE controller, and an integrated LAN card.

**Table 2-2 P-Class Supported Accessories**

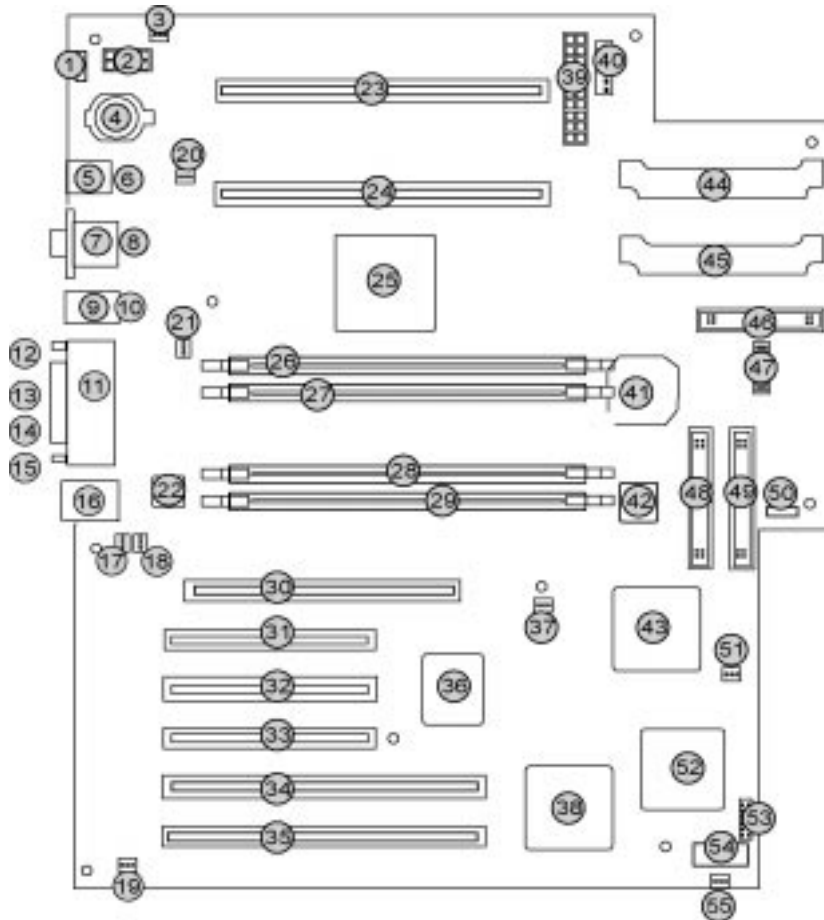
Supported Accessory	Part Number
<b>Memory (4 slots)</b>	
SSDRAM 128 MB PC133 memory ECC (pair of 64 MB DIMMs)	A6040A
SDRAM 256MB PC133 memory ECC (pair of 128 MB DIMMs)	A1285A
SDRAM 512MB PC133 memory ECC (pair of 256 MB DIMMs)	A1286A
SDRAM 1GB PC133 memory ECC (pair of 512 MB DIMMs)	A1287A
<b>Documentation</b>	
User's Guide	A1280--90002
<b>Input Devices</b>	
HP multimedia keyboard	C4742A
HP 3 button mouse	A4983-65121
<b>Video Displays</b>	

**Table 2-2 P-Class Supported Accessories**

Video Displays can be found at HP's web site: <a href="http://www.hp.com/visualize/support">http://www.hp.com/visualize/support</a>	
<b>Mass Storage</b>	
9.0 GB 10K rpm Ultra 160 SCSI hard disk	A5994A
18.0 GB 10K rpm Ultra 160 SCSI hard disk	A5995A
36.0 GB 10K rpm Ultra 160 SCSI hard disk	A6060A
48 Max IDE CD-ROM drive	A5988A
CD-RW IDE Drive	A5989A
DVD-ROM IDE Drive	A1252A
<b>RAID</b>	
Ultra 160 RAID (LSI Nextreme)	A1289A

## System Board, BIOS and Memory

Figure 2-1 System Board for the P-Class Personal Workstation



Legend:

- 1. Chassis Intrusion Connection
- 2. Power Supply Connection
- 3. Processor Fan Connection (80mm, processor duct assembly)
- 4. Battery Socket
- 5. USB 1 (Top)



6. USB 0 (Bottom)
7. COM 1 (Top)
8. COM 2 (Bottom)
9. Mouse Connection (Top)
10. Keyboard Connection (Bottom)
11. LPT Port (Top)
12. Line In (Below LPT)
13. Line Out (Below LPT)
14. Mic In (Below LPT)
15. Headset (Below LPT)
16. LAN Port
17. CD Audio Connection
18. Aux Audio Connection
19. Modem Audio In
20. Chipset Fan Connection (40mm)
21. Rear Fan Connector (120 mm, I/O bulkhead)
22. LAN Chip
23. Processor 1 Slot
24. Processor 2 Slot
25. North Bridge (under chipset fan assembly)
26. DIMM 1A (must be paired with 1B)
27. DIMM 2A (must be paired with 2B)
28. DIMM 1B (must be paired with 1A)
29. DIMM 2B (must be paired with 2A)
30. AGP Slot
31. PCI Slot 5 32 Bit / 33 MHz
32. PCI Slot 4 32 Bit / 33 MHz
33. PCI Slot 3 32 Bit / 33 MHz
34. PCI Slot 2 64 Bit / 66 MHz
35. PCI Slot 1 64 Bit / 66 MHz
36. Crystal Audio Chip
37. Wake on LAN Connection
38. I/O Bridge
39. Power Supply Connection
40. Power Supply Connection
41. Memory Controller (MADP)
42. MAXILIFE Controller
43. South Bridge
44. Super I/O
45. Processor 1 VRM
46. Processor 2 VRM
47. Floppy
48. Switch Block
49. Secondary IDE
50. Primary IDE
51. Speaker Connection

- 52. PCI Fan Connection (92 mm, in I/O guide assembly)
- 53. Front Panel Connection
- 54. EEPROM
- 55. SCSI LED Connection

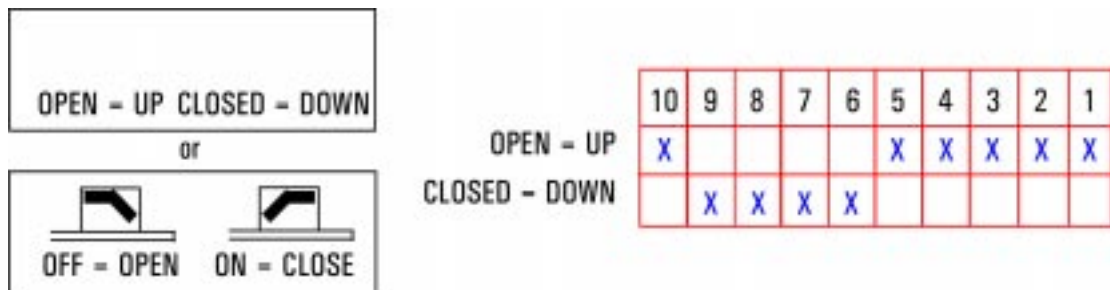
## System Board Switches

**Table 2-3 System Board Switch Settings - P-Class Personal Workstation**

Switch		Function	Default
1-5	—	Processor frequency (autodetected by the BIOS)	—
6	OFF <sup>1</sup>	Retain configuration in CMOS, normal position	OFF
	ON	Clears CMOS	
7	OFF	Enables User and Administrator passwords	OFF
	ON	Clears User and Administrator passwords	
8	OFF	Disables power on using keyboard	ON
	ON	Enables keyboard power on	
9	OFF	Reserved	ON
	ON		
10	OFF	Normal operation	OFF
	ON	Recovery boot active (force BIOS flashing) <sup>2</sup>	

1. Refer to the diagrams on the previous page to determine their ON/OFF position on the system board switch box.
2. Refer to “Recovery Boot Active Procedure” in the User’s Guide for the detailed recovery procedure.

**Figure 2-2 System Board Switches**



## BIOS History

For the latest BIOS, the flasher utility program, and the BIOS history, refer to the HP World Wide Web site. The BIOS is in the form IDxxx.FUL, where xx is the version number.

<http://www.hp.com/visualize/support>

## Cache Memory

256 KB of full frequency level-two cache memory is integrated in the Pentium III processor package.

## Main Memory

The Personal Workstation has four DIMM slots on the system board for installing main memory. The memory must be loaded in pairs, and you can have a minimum of 128 MBytes to a maximum of 2GBytes of memory. When you install the memory, you have to use matched pairs (for example, two 128 MByte DIMM cards installed sequentially according to the memory loading order).

When expanding the memory in your Personal Workstation, you can obtain maximum performance by keeping the size of all memory cards the same. If you are using 512 MB DIMMs, all DIMMs in the system must be 512 MB.

The memory must be removed in matching pairs (banks are interleaved). For example, if you remove a card from slot 1A, you must also remove a card of equal size from slot 1B.

## Video Memory

The HP Visualize fx5 and fx10 video boards each have 64 MBs of SGRAM memory. They have an optional hardware texture accelerator module with 16 MBs of SDRAM added to them.

The HP Visualize fx5 and fx10 video boards each have 64 MB of installed SGRAM memory. This includes texture memory; consequently, there is no additional texture module accessory required.

The ELSA GLoria II video board has 64 MB of installed SGRAM memory and the Synergy II has 32 MB. No switch or jumper settings are need to be changed (all jumpers should be left in the positions in which they were set by the manufacturer).

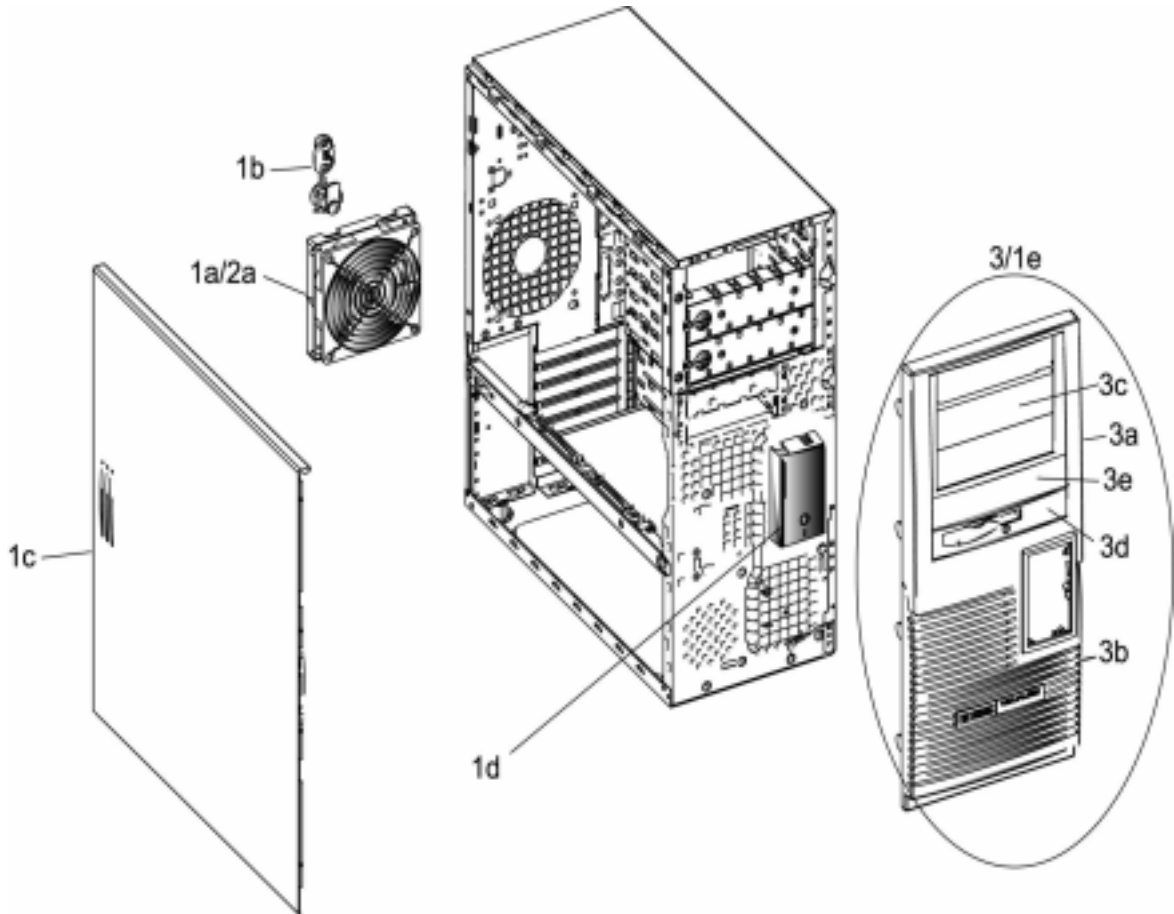
## **Recovering the BIOS (Crisis Mode)**

If the BIOS is corrupted and the standard flash cannot be used, use the BIOS Recovery Mode (exceptional BIOS recovery operations) to restore the BIOS.

1. Format a new floppy disk.
2. Copy the BIOS files on to the floppy disk.
3. Shut down the PC Workstation.
4. Power off the PC Workstation and remove the power cord.
5. Remove the cover.
6. Set switch 10 to the DOWN position.
7. Insert the floppy disk into the floppy disk drive.
8. Reconnect the power cord and switch on the PC Workstation.
9. The PC Workstation boots from the floppy disk, then flashes the BIOS. During the flash process, the screen remains blank. MaxiLife will display a message on the LCD panel "RECOVERY MODE".
10. The recovery process is finished when there are four beeps.
11. Power off the PC Workstation. Remove the floppy disk from the drive. Remove the power cord.
12. Set switch 10 back to the UP position.
13. Replace the cover, reconnect the power cord, then reboot the PC Workstation.

## Parts and Part Numbers

**Figure 2-3** Personal P-Class Workstation Components



**Table 2-4                      Parts List for P-Class Personal Workstation**

<b>Item</b>	<b>Description</b>	<b>Replacement Part Number</b>	<b>Exchange Part Number</b>
1	Case/Chassis Assy includes:	A1280-60102	---
1a (2a)	Fan 120mm Assy, above I/O bulkhead	A1280-68509	---
1b	Key Lock Assembly w/ 2 keys	5064-2645	---
1c	Left Door Assy w/ logo	A1280-62401	---
1d	LCD Status Panel Kit	5064-9162	---
1e (3)	Front Bezel Kit	A1280-67903	---
not shown	Chassis Rubber Feet	---	---
not shown	Tamper Detect Switch Assy	---	---
not shown	Key Holder	---	---
not shown	I/O Bulkhead Filler Panel	---	---
not shown	Thermal Sensor Clip	---	---
not shown	Misc. Parts Bag includes:	A1280-67901	---
not shown	Fan 120mm Assembly	A1280-68509	
not shown	I/O Guide Assy w/ 92mm fan & spkr	A1280-68503	
not shown	SCSI LED Cable	5183-9401	
not shown	IDE FDD Cable	5184-1516	
not shown	IDE ATA Cable	5184-1515	
not shown	Key Lock Assy w/ 2 keys	5064-2645	
not shown	No Screw Rail Assy-3.5 FDD, L		
not shown	No Screw Rail Assy-3.5 FDD, R		
not shown	No Screw Rail Assy-3.5 HDD, L		
not shown	No Screw Rail Assy-3.5 HDD, R		
not shown	2 No Screw Rail Assy-5.25 Inch		
not shown	4 Ground Clips		
not shown	Tamper Detect Switch Assy		
not shown	Bracket, Grill for 120mm Fan Assy		
not shown	Key Holder		
not shown	Thumbscrew, metal		
3	Front Bezel Kit includes:	A1280-67903	—
3a	Upper Bezel		
3b	Lower bezel		
3c	Front Filler Panels		
3d	Floppy Bezel		
3e	Blue Bezel above Floppy		
not shown	400W Power Supply	A1280-62090	---

**Table 2-4**                      **Parts List for P-Class Personal Workstation**

<b>Item</b>	<b>Description</b>	<b>Replacement Part Number</b>	<b>Exchange Part Number</b>
not shown	System Board	A6034-66510	A6034-69510
not shown	Fan 40mm Assy, Chipset	A1280-68511	---
not shown	CPU Air Duct Assy w/ 80mm fan	A1280-68508	---
not shown	SCSI Twisted Pair Cable	A1280-63001	---
not shown	IDE Audio Cable	5182-1857	---
not shown	Voltage Regulator Module	0950-3633	---
not shown	Processors:		
	733/133 Pentium III	A1283-60001	A1283-69001
	800/133 Pentium III	A6024-60001	A6024-69001
	866/133 Pentium III	A6032-60001	A6032-69001
not shown	Processor Terminator	A1280-62101	---
not shown	Optical Drives:		
	CD-ROM 48x IDE	D4389-63031	---
	CD-RW IDE	C4465-63001	C4465-69001
	DVD-ROM 8x IDE	D4388-63002	D4388-69002
not shown	Floppy Disk Drive	D2035-60391	
not shown	Hard Disk Drives:		
	9 GB SCSI U160 10K rpm	D8608-63003	D8608-69003
	18 GB SCSI U160 10K rpm	D8609-63003	D8609-69003
	36 GB SCSI U160 10K rpm	P1577-63001	P1577-69001
not shown	Graphics Cards:		
	ELSA GLoria II (A1280B)	A6007-60001	A6007-69001
	ELSA Synergy II (A1280B)	5064-9794	D7992-69501
	fx5 NT w/ SDram (A1280B)	A1264-66501	A1264-69001
	fx10 NT w/ SDram (A1280B)	A1264-66502	A1264-69002
not shown	Ultra 160 SCSI Card	A1280-66502	A1280-69502
not shown	Memory:		
	64 MB SDRAM 133 MHz	A6040-63000	A6040-69000
	128 MB SDRAM 133 MHz	A1285-60000	A1285-69000
	256 MB SDRAM 133 MHz	A1286-60000	A1286-69000
	512 MB SDRAM 133 MHz	A1287-60000	A1287-69000
not shown	Mouse, PS 2 PC99	A4983-65001	---

**Table 2-4                      Parts List for P-Class Personal Workstation**

<b>Item</b>	<b>Description</b>	<b>Replacement Part Number</b>	<b>Exchange Part Number</b>
not shown	Multimedia Keyboards:  Trad. Chinese, Taiwan (AB0) US English (ABA) & China (AB2) UK English (ABU) Canada French (ABC) France French (ABF) Swiss German (ABP) and French (ABQ) Germany German (ABD) Spain Spanish (ABE) Latin American Spanish (ABM) Swedish (ABS) and Finnish (ABX) Italian (ABZ) Korean (AB1) Japanese (ABJ)	C4742-60123 C4742-60101 C4742-60113 C4742-60102 C4742-60105 C4742-60111 C4742-60103 C4742-60104 C4742-60108 C4742-60112 C4742-60117 C4742-60121 C4742-60124	
not shown	Battery, 3V Lithium	1420-0356	---

**Table 2-5                      Documentation for P-Class Personal Workstation**

P- (A6034) and X-Class (A1280) User's Guide	A1280-90002
P- (A6034) and X-Class (A1280) Technical Reference Manual	A1280-90016
HP Visualize fx5 and fx10 Configuration Guide	A5021-90015
ELSA Synergy II/GLoria II User's Guide	A1280-90025

**Table 2-6                      Software for P-Class Personal Workstation**

<b>NT 4.0 Recovery CD ROMs with drivers</b>	
Trad. Chinese, Taiwan (AB0)	A1280-87925
Simp. Chinese, China (AB2)	A1280-87927
US English (ABA)	A1280-87917
UK English (ABU)	A1280-87932
Can French (ABC)	A1280-87928



**Table 2-6 Software for P-Class Personal Workstation**

<b>NT 4.0 Recovery CD ROMs with drivers</b>	
Fr French (ABF)	A1280-87919
Swiss French (ABQ)	A1280-87929
Swiss German (ABP)	A1280-87930
Gr German (ABD)	A1280-87920
Sp Spanish (ABE)	A1280-87922
L Amer. Spanish (ABM)	A1280-87931
Swedish (ABS)	A1280-87923
Finnish (ABX)	A1280-87918
Italian (ABZ)	A1280-87921
Korean (AB1)	A1280-87926
Japanese (ABJ)	A1280-87924
Latest drivers and BIOS	<a href="http://www.hp.com/visualize">http://www.hp.com/visualize</a>

**Notes:**

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HP Visualize P-Class Parts Replacement  
**Parts and Part Numbers**

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# **A** **Regulatory Information**

## Declaration of Conformity

according to ISO/IEC Guide 22 and EN 45014

**Manufacturer:** Hewlett-Packard Company  
3404 East Harmony Rd.  
Fort Collins, CO 80528  
USA

**Declares that the:**  
**Product Name:** HP VISUALIZE Personal Workstations  
**Base Product Number:** A1280A, A6034A  
**Product Options:** All

**conforms to the following specifications:**

**Safety:** IEC 950:1991+A1+A2+A3+A4+A11/EN 60950:1992+A1+A2+A3+A4+A11  
IEC 60825-1:1993/EN60825-1:1994+A11  
USA 21CFR Subpart J – for FC Laser module  
China GB4943-1995  
Russia GOST R 50377-92.

**EMC** CISPR 11: 1990 / EN 55011: 1991 Class B  
CISPR 22: 1993 / EN 55022: 1994+A1+A2 Class B  
EN 50082-1:1992  
IEC 1000-3-2: 1995 / EN 61000-3-2: 1995  
IEC 1000-3-3: 1995 / EN 61000-3-3: 1995  
IEC 1000-4-2: 1995 / EN 61000-4-2: 1995 - 4kV CD, 8kV AD  
IEC 1000-4-3: 1995 / EN 61000-4-3: 1995 - 10 v/m  
IEC 1000-4-4: 1995 / EN 61000-4-4: 1995 - 2kV Signal, 4kV Power Lines  
US FCC Part 15, Class B  
Japan VCCI Class B  
Australia/New Zealand AS/NZS 2046.1/2:1992, AS/NZS 3548:1995, and  
AS/NZS 4251.1:1994  
China GB9254-1988  
Taiwan CNS13438 Class A  
Russia GOST R 29216-94.

**and is certified by:**

UL Listed to UL1950, 2nd edition, File E146385  
cUL Listed to CSA 22.2 No. 950-M93  
TUV Certified to EN60950 2nd edition with A1+A2+A3+A4+A11  
HP Fort Collins CCQD HQE

**Supplementary information:**

The product herewith complies with the requirements of the following Directives and carries the CE marking accordingly:

- the EMC directive 89/336/EEC and 92/31/EEC and 93/68/EEC
- the Low Voltage Directive 73/23/EEC and 93/68/EEC

This product was tested in a typical Hewlett-Packard workstation configuration.

Original signed by Ruth Lutes, Site Quality Manager, Fort Collins, CO, USA

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## Regulatory Information

### FCC (for USA only)

#### **Federal Communications Commission Radio Frequency Interference Statement Warning:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates and uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to correct the interference by one or more of the following measures:

- reorient or relocate the receiving antenna
- increase the separation between the equipment and the receiver
- connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- consult the dealer or an experienced radio/TV technician for help.

Hewlett-Packard's FCC Compliance Tests were conducted with HP-supported peripheral devices and HP shielded cables, such as those you receive with your system. Changes or modifications not expressly approved by Hewlett-Packard could void the user's authority to operate the equipment.

#### **Notice for Canada**

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la Class B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

#### **Safety Warning for the USA and Canada**

If the power cord is not supplied with the computer, select the proper power cord according to your local national electric code.

USA: use a UL listed type SVT detachable power cord.

Canada: use a CSA certified detachable power cord.

For your safety, never remove the PC's cover without first removing the power cord and any connection to a telecommunication network. Always replace the cover before switching on.

Si le cordon secteur n'est pas livré avec votre ordinateur, utiliser un cordon secteur en accord

avec votre code électrique national.

USA: utiliser un cordon secteur "UL listed," de type SVT.

Canada: utiliser un cordon secteur certifié CSA.

Pour votre sécurité, ne jamais retirer le capot de l'ordinateur sans avoir préalablement débranché le cordon secteur et toute connection à un réseau de télécommunication. N'oubliez pas de replacer le capot avant de rebrancher le cordon secteur.

#### **Notice for the Netherlands**

Bij dit apparaat zijn batterijen geleverd. Wanneer deze leeg zijn, moet U ze niet weggooien maar inleveren als KCA.

#### **Notice for Germany**

Wenn die Batterie nicht korrekt eingebaut wird, besteht Explosionsgefahr. Zu ihrer eigenen Sicherheit sollten Sie nicht versuchen, die Batterie wiederaufzuladen, zu zerlegen oder die alte Batterie zu verbrennen. Tauschen Sie die Batterie nur gegen den gleichen oder ähnlichen Typ aus, der vom Hersteller empfohlen wird. Bei der in diesem PC integrierten Batterie handelt es sich um eine Lithium-Batterie, die keine Schwermetalle enthält. Batterien und Akkumulatoren gehören nicht in den Hausmüll. Sie werden vom Hersteller, Händler oder deren Beauftragten kostenlos zurückgenommen, um sie einer Verwertung bzw. Entsorgung zuzuführen.

#### **Noise Declaration for Germany**

Lärmangabe nach Maschinenlärmmverordnung - 3 GSGV (Deutschland) LpA < 70 db am Arbeitsplatz normaler Betrieb nach EN27779: 11.92.

#### **Notice for Japan**

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取り扱い説明書に従って正しい取り扱いをして下さい。

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