HEWLETT®
PACKARD

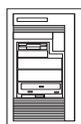# HP Kayak
PC Workstation
Service Handbook

PC Workstations and
Accessories

4th Edition
June 2000

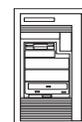# HP Kayak XU800 PC Workstation

Models and Accessories

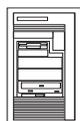| Product Number[1]	Processors	Std. RAM	Hard Drive	Video Controller	Multi-media	LAN[2]
Kayak XU800 PC Workstation						
HP Kayak XU800 PC Workstation 533EB MHz - 133 FSB[3] (CPL: 01/2000▶)						
D8002N and D8002T	Pentium® III Slot 1 processor with i256 KB of L2 cache memory	128 MB SDRAM ECC	9.1 GB 7.2k rpm SCSI	Matrox Millennium G250 8 MB SGRAM video memory fitted.	48✗ Max IDE CD-ROM	10/100 BT PCI
D8003N and D8003T		128 MB RDRAM ECC	9.1 GB 10k rpm SCSI	Matrox Millennium G400-Dual 16 MB video memory fitted		
D8017N and D8017T		128 MB SDRAM ECC	9.1 GB 7.2k rpm SCS	Matrox Millennium G250 8 MB SGRAM video memory fitted.		
D8018N and D8018T		128 MB RDRAM ECC	9.1 GB 10k rpm SCSI	Matrox Millennium G400 32 MB video memory fitted.		
D8019N and D8019T		128 MB SDRAM ECC	15 GB 7.2k rpm IDE	Matrox Millennium G250 8 MB SGRAM video memory fitted.		
D8020N and D8020T			9.1 GB 7.2k rpm SCSI	Elsa Synergy II, 32 MB SGRAM video memory fitted.		

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PC Workstations

HP Kayak XU800 PC Workstation 1-1

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HP Kayak XU800 PC Workstation

Product Number[1]	Processors	Std. RAM	Hard Drive	Video Controller	Multi-media	LAN[2]
HP Kayak XU800 600 MHz - 133 FSB (CPL: 01/2000▶)						
D8000N[4] and D8000T	Pentium III Slot 1 with i256 KB of L2 cache memory	128 MB SDRAM ECC	9.1 GB 10k rpm SCSI	Matrox Millennium G250 8 MB SGRAM video memory fitted.	48✗ IDE CD-ROM.	10/100 BT PCI
D8001N[4] and D8001T		128 MB RDRAM ECC				
D8006N and D8006T		128 MB RDRAM ECC		Matrox Millennium G400 32 MB video memory fitted.	DVD drive	
D8007N and D8007T		128 MB SDRAM ECC		Elsa Synergy II, 32 MB SGRAM video memory fitted.	48✗ Max IDE CD-ROM	
D8009N and D8009T		128 MB RDRAM ECC		3Dlabs Oxygen, 32 MB SGRAM video memory fitted.	CD-RW drive	
D8021N and D8021T		128 MB SDRAM ECC	15 GB 7.2k rpm IDE	Matrox Millennium G400 32 MB video memory fitted.	48✗ Max IDE CD-ROM	
HP Kayak XU800 667 MHz - 133 FSB (CPL:01/2000▶)						
D8016N and D8016T	Single Pentium III Slot with i256 KB of L2 cache memory	128 MB SDRAM ECC	9.1 GB 10k rpm SCSI	Matrox Millennium G250 8 MB SGRAM video memory fitted.	48✗ Max IDE CD-ROM	10/100 BT PCI
P1588N and P1588T			9.1 GB 10k rpm SCSI U160	Elsa Synergy II, 32 MB SGRAM video memory fitted		

Product Number[1]	Processors	Std. RAM	Hard Drive	Video Controller	Multi-media	LAN[2]
HP Kayak XU800 733 MHz - 133 FSB (CPL:01/2000▶)						
D8010N and D8010T	Single Pentium III Slot with i256 KB of L2 cache memory	128 MB SDRAM ECC	9.1 GB 10k rpm SCSI	Matrox Millennium G250 8 MB SGRAM video memory fitted.	48✕ Max IDE CD-ROM	10/100 BT PCI
D8012N and D8012T		128 MB RDRAM ECC		Matrox Millennium G400 32 MB video memory fitted.	DVD drive	
D8013N and D8013T				Elsa Synergy II, 32 MB SGRAM video memory fitted.	48✕ Max IDE CD-ROM	
D8015N and D8015T		256 MB RDRAM ECC		3Dlabs Oxygen, 32 MB SGRAM video memory fitted.	CD-RW drive	
P1585N and P1585T		128 MB SDRAM ECC	9.1 GB 10k rpm SCSI U160	Matrox Millennium G250 8 MB SGRAM video memory fitted.	48✕ Max IDE CD-ROM	
P1586N and P1586T			15 GB 7.2k rpm IDE	Matrox Millennium G400-Dual 16 MB video memory fitted		
P1587N and P1587T			9.1 GB 10k rpm SCSI U160		DVD drive	
HP Kayak XU800 800EB MHz - 133 FSB (CPL:01/2000▶)						
D8022N and D8022T	Single Pentium III Slot with i256 KB of L2 cache memory	256 MB RDRAM ECC	9.1 GB 10k rpm SCSI	Elsa Synergy II, 32 MB SGRAM video memory fitted.	DVD drive	None

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PC Workstations

HP Kayak XU800 PC Workstation 1-3

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HP Kayak XU800 PC Workstation

Product Number[1]	Processors	Std. RAM	Hard Drive	Video Controller	Multi-media	LAN[2]
HP Kayak XU800 866 MHz - 133 FSB (CPL:01/2000▶)						
P1589N[5] and P1589T	Single Pentium III Slot with i256 KB of L2 cache memory	256 MB RDRAM ECC	9.1 GB 10k rpm SCSI U160	Matrox Millennium G250 8 MB SGRAM video memory fitted.	48✗ Max IDE CD-ROM	10/100 BT PCI
P1590N[5] and P1590T			18 GB 10k rpm SCSI U160	Elsa Gloria II, 64 MB SDRAM video memory fitted.	CD-RW drive	
P1660N[4] and P1660T			9.1 GB 10k rpm SCSI U160	Matrox Millennium G250 8 MB SGRAM video memory fitted.	48✗ Max IDE CD-ROM	
P1661N[6] and P1661T			15 GB 7.2k rpm IDE	Matrox Millennium G400-Dual 16 MB video memory fitted		
P1662N[6] and P1662T			9.1 GB 10k rpm SCSI U160	Elsa Synergy II, 32 MB SGRAM video memory fitted.		
HP Kayak XU800 7/xxx Exp Base Model (CPL: 01/2000▶)						
D8495AV	V-Exp Base Model XU800					
D8822AV	V-Exp Base Model XU800 RDRAM					
D8823AV	V-Exp Base Model XU800 RDRAM					

1.   Unless otherwise mentioned, the operating system for the HP Kayak XU800 PC Workstations is Windows NT4.0
2.   Unless otherwise specified, models are supplied with an HP 10/100BT PCI Ethernet Adapter LAN card.
3.   FSB = Front Side Bus
4.   HP Kayak XU800 PC Workstation supplied with a MS-DOS operating system.
5.   HP Kayak XU800 PC Workstation supplied with Windows 2000 and Windows NT4.
6.   HP Kayak XU800 PC Workstation supplied with Windows 2000 operating system.

NOTE: All models are supplied with a 1.44 MB Flexible Disk Drive, an integrated Ultra Wide 16-bit SCSI controller, an integrated IDE controller, and an integrated audio chip on the system board.
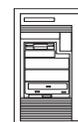
All models shipped with SDRAM memory should be converted to RDRAM memory. Consult HP Support for further information.

Supported Accessories

Memory Upgrades

SDRAM[1] 128 MB (2 x 64 MB) 100MHz main memory (unbuffered ECC)	D9512A
SDRAM[1] 256 MB (2 x 128 MB) 100MHz main memory (unbuffered ECC)	D9513A
SDRAM[1] 512 MB (2 x 256 MB) 100MHz main memory (unbuffered ECC)	D9514A
SDRAM[1] 1 GB (2 x 512 MB) 100MHz main memory (unbuffered ECC)	D9515A
RDRAM[1] 128 MB (2 x 64 MB) PC600 main memory (ECC) (2 RIMMs)	D9518A
RDRAM[1] 256 MB (2 x 128 MB) PC600 main memory (ECC) (2 RIMMs)	D9519A
RDRAM[1] 512 MB (2 x 256 MB) PC600 main memory (ECC) (2 RIMMs)	D9520A

Dual Processor Kits[2]

|	
Intel Pentium III Slot 1, 533 MHz containing i256 KB / 133 Kit	D9450A
Intel Pentium III Slot 1, 600 MHz containing i256 KB / 133 Kit	D9452A
Intel Pentium III Slot 1, 667 MHz containing i256 KB / 133 Kit	D9453A
Intel Pentium III Slot 1, 733 MHz containing i256 KB / 133 Kit	D9659A
Intel Pentium III Slot 1, 800 MHz containing i256 KB / 133 Kit	D9660A

Mass Storage—Hard Disk Drives

9.1 GB UW-SCSI hard disk, 10k rpm	D6520A
18.1 GB UW-SCSI hard disk, 10k rpm	D7515A

Removable Mass Storage

48X max-speed IDE CD-ROM drive (single)	D9444A
48X max-speed IDE CD-ROM drive (bulk pack of 10)	D9445A
8x Video IDE DVD-ROM drive	D7521A
4X internal IDE CD-Writer Plus	D9524A
100 MB internal ZIP drive (single)	D6650B
100 MB internal ZIP drive (bulk pack of 10)	D6651B

Input Devices

HP multimedia keyboard	C4742A
HP Windows® keyboard	C4735A
HP standard 2-button mini-din mouse	C3751B
HP mouse with scrolling wheel	C4736A
HP cordless scrolling mouse	C4740A

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PC Workstations

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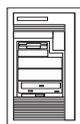
HP Kayak XU800 PC Workstation

Video Displays

All current HP PC Displays (refer to the Displays section of the Vectra
Accessory *Service Handbook*)

Security

HP Master Pass Key System kit	D6655B
HP Master Pass Key	D6658B
HP ProtectTools Smart Card Reader kit	D8436A
HP Power Protection Device	D7524A

LAN Interfaces

HP Intel 10/100 BT PCI Management Adapter (single)	D7506A
HP Intel 10/100 BT PCI Management Adapter (bulk pack of 10)	D7507A
HP 10/100 BT PCI Ethernet Adapter (single)	D7508A
HP 10/100 BT PCI Ethernet Adapter (bulk pack of 10)	D7509A
HP 10/100 PCI Ethernet Adapter 3C905C-TX with RWU (single)	D7522A
HP 10/100 PCI Ethernet Adapter 3C905C-TX with RWU (bulk pack of 10)	D7523A

Adapters

Ultra II SCSI adapter card	D9529A
FastRaid PCI card	D9661A

Video Cards

Matrox Millennium G400 Dual video card	D9521A
Elsa Gloria Synergy II 3D AGP video card	D9522A
Labs Oxygen GVX1 3D video card	D9523A

Video Memory

8 MB SGRAM SODIMM for Matrox G250 AGP graphics card	D9527A

Audio and Multimedia

Labtech amplified speakers (10 WRMS) (single)	D4545A
Labtech amplified speakers (4 WRMS) (single)	D6861A
Standard headset	D8387A

Miscellaneous

USB Hub accessory kit	D6804A

Documentation — *User's Guide*[3] Manual

Monolingual:

English	D8369-90001
Taiwanese	D8369-90011
Korean	D8369-90012
Chinese	D8369-90013
Japanese	D8369-90015
Hungarian	D8369-90020
Hebrew	D8369-90025

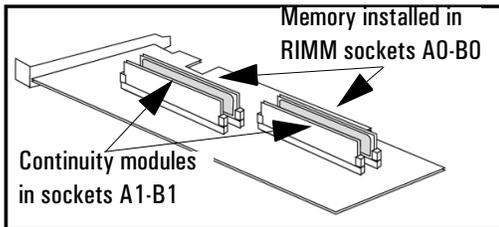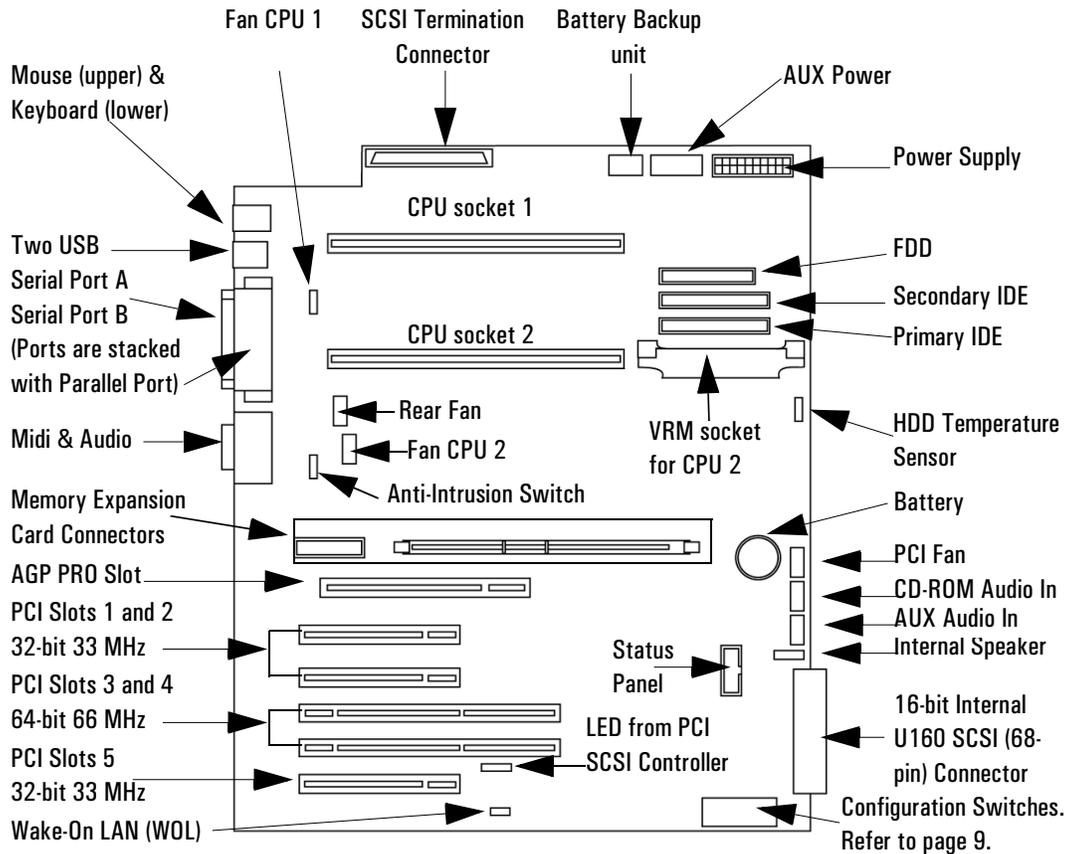Multilingual:

German/French/Dutch/Italian	D8369-90050
Spanish/Portuguese	D8369-90051
Norwegian/Danish/Swedish/Finnish	D8369-90052
Russian/Polish/Turkish/Czech	D8369-90053

1. All models shipped with SDRAM memory should be converted to RDRAM memory. Consult HP Support for further information.
2. Dual Processor Kits include: processor, voltage regulator module and heatsink.
3. This *User's Guide* contains information for both the HP Kayak XU800 and HP Kayak XM600 Minitower PC Workstations.

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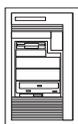
HP Kayak XU800 PC Workstation

System Board, BIOS and Memory

Fan CPU 1   SCSI Termination Connector   Battery Backup unit

Mouse (upper) & Keyboard (lower)

AUX Power

Power Supply

CPU socket 1

Two USB
Serial Port A
Serial Port B
(Ports are stacked
with Parallel Port)

FDD

Secondary IDE

Primary IDE

CPU socket 2

Rear Fan

Fan CPU 2

VRM socket
for CPU 2

HDD Temperature
Sensor

Midi & Audio

Anti-Intrusion Switch

Memory Expansion
Card Connectors

Battery

AGP PRO Slot

PCI Fan

CD-ROM Audio In
AUX Audio In
Internal Speaker

PCI Slots 1 and 2
32-bit 33 MHz

Status
Panel

PCI Slots 3 and 4
64-bit 66 MHz

16-bit Internal
U160 SCSI (68-
pin) Connector

PCI Slots 5
32-bit 33 MHz

LED from PCI
SCSI Controller

Wake-On LAN (WOL)

Configuration Switches.
Refer to page 9.

Memory installed in
RIMM sockets A0-B0

Continuity modules
in sockets A1-B1

Memory installed in
DIMM sockets A0-B0

Continuity modules
not required

Memory Expansion Card supporting RDRAM ECC memory modules installed in pairs. The first two RIMM sockets A0-B0 contain the first pair of memory modules. Upgrades are then installed in RIMM sockets A1-B1.
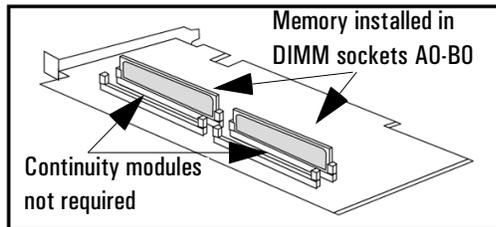
Memory Expansion Card supporting SDRAM100 MHz ECC memory modules installed in pairs. The first two DIMM sockets A0-B0 contain the first pair of memory modules. Upgrades are then installed in DIMM sockets A1-B1.
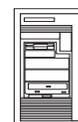
System Board Switches

Switch	Default Position	Function:
1	UP[1]	Enables normal mode. DOWN enables the BIOS recovery mode at next boot.
2	UP	Reserved. **Do Not change Default Setting**
3	UP	Enables User and System Administrator passwords. DOWN clears the passwords at next boot.
4	UP	Retains CMOS memory. DOWN clears CMOS memory at next boot.
5	UP	Reserved 5-6. **Do Not change Default Settings**
6	DOWN	
7	DOWN	Enables keyboard power-on. UP disables this option.
8	DOWN	Reserved 8-10. **Do Not change Default Settings**
9	DOWN	
10	UP	

1.   Switches can also be referenced as:
      UP = Open = Off (disable)
      DOWN = Close = On (enable)

```
         ⟍      ⟋
OPEN = UP  CLOSED = DOWN
          or
      ▬       ▬
OFF = OPEN   ON = CLOSE
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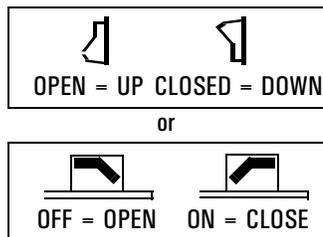
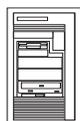|	10	9	8	7	6	5	4	3	2	1
OPEN = UP	X					X	X	X	X	X
CLOSED = DOWN		X	X	X	X					

Setup and 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 IA11yy, where yy is the version number.

http://www.hp.com/go/kayaksupport

Then select HP Kayak XU800 PC Workstation.

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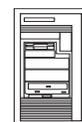**PC Workstations**

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HP Kayak XU800 PC Workstation

Recovering the BIOS (Crisis Mode)

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

The following recovery operation is also documented in the flash.txt file which is supplied with the downloaded BIOS files.

To restore the BIOS:

1 Copy the BIOS files on to the floppy disk.
2 Rename the file AI11xx.rom to **amiboot.rom**.
3 Shut down the PC Workstation.
4 Power off the PC Workstation and remove the power cord and cables.
5 Remove the cover.
6 Set switch 1 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. However, it should be noted that 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 1 back to the UP position.
13 Replace the cover, reconnect the power cord, then reboot the PC Workstation.

Installing a Dual Processor / Replacing a Processor

HP Kayak XU800 PC Workstations have two slot 1 connectors supporting Pentium III processors. CPU 1 includes an onboard VRM (Voltage Regulator Module), while a VRM is required to be installed in the VRM socket when installing a second processor.

Single processor models can be upgraded to dual processor systems by installing a second processor accessory in the vacant processor slot. A VRM is also included in the second processor accessory kit.

Both processors must have the same technical characteristics (speed and level-2 cache memory capacity). Remove the processor termination card from the processor connector slot (CPU 2). Carefully push down onto the processor until you hear two clicks as the retention mechanism pops back, thereby locking the processor into the processor connector. Insert the VRM (that was supplied with the processor accessory kit) into the VRM socket (refer to the diagram on page 8 for its position on the system board).

After installation of a second processor, use the HP DualExpress! application when upgrading Windows NT from a single-processor to a multi-processor system. This application is included with the HP processor accessory kit.

The following table explains how to perform supported processor upgrades.

	Dual Processor Upgrade				
Upgrade to ➡	**2** X **533 MHz**	**2** X **600 MHz**	**2** X **667 MHz**	**2** X **733 MHz**	**2** X **800 MHz**
	(i256 KB of L2 cache memory)				
1 X **533 MHz** (D9450A)	Add 2nd D9450A[1].	Remove D9450A. Add 2 D9452A[2].	Remove D9450A. Add 2 D9453A[2].	Remove D9450A. Add 2 D9659A[2].	Remove D9450A. Add 2 800 MHz[2].
1 X **600 MHz** (D9452A)	N/A	Add 2nd D9452A[1].	Remove D9452A. Add 2 D9453A[2].	Remove D9452A. Add 2 D9659A[2].	Remove D9452A. Add 2 800 MHz[2].
1 X **667 MHz** (D9453A)	N/A	N/A	Add 2nd D9453A[1].	Remove D9453A. Add 2 D9659A[2].	Remove D9453A. Add 2 800 MHz[2].
1 X **733 MHz** (D9659A)	N/A	N/A	N/A	Add 2nd D9659A[1].	Remove D9569A. Add 2 800 MHz[2].
1 X **800 MHz**	N/A	N/A	N/A	N/A	Add 2nd 800 MHz[1].

1. Insert VRM that was supplied with the second processor into the VRM socket.
2. The HP Kayak XU800 includes an integrated VRM on the system board for the first processor, and one VRM socket for the second processor.

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PC Workstations

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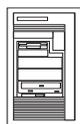
HP Kayak XU800 PC Workstation

NOTE:　　　　　　　The processor type and speed is automatically recognized by the BIOS. This means that no particular switch setting changes are required.

Main Memory

The Kayak XU800 PC Workstation includes a single Memory Expansion Card connector on the system board that supports a Memory Expansion Card installed with either RIMM (Rambus In-Line Memory Module) or DIMM (Dynamic In-Line Memory Module) sockets. Whether it is for a RIMM or DIMM configuration, the maximum amount of memory that can be installed is 2 GB.

Memory Expansion Card with DIMM Sockets

NOTE:　　　　　　　All models shipped with SDRAM memory should be converted to RDRAM memory. Consult HP Support for further information.

There are four DIMM sockets with each socket supporting SDRAM 100 MHz or 133 MHz ECC unbuffered memory modules that are used in pairs. The first two DIMM sockets (A0-B0), closest to the system board, contain the first pair of memory modules. If any of the sockets are unused, leave them free, because a continuity module is not required.

Models are supplied with a minimum of 128 MB of SDRAM unbuffered ECC main memory. Memory upgrades are available in 128 MB, 256 MB, 512 MB and 1 GB unbuffered ECC SDRAM modules.

When upgrading memory, verify that:

■ SDRAM modules are installed in pairs (A0-B0 or A1-B1).
■ SDRAM modules are of the same type installed in pairs (A0-B0 or A1-B1).

Memory Expansion Card with RIMM Sockets

There are four RIMM sockets with each socket hosting RDRAM ECC memory modules installed in pairs that must contain the same parameters per channel. The first two RIMM sockets (A0-B0), closest to the system board, contain the first pair of memory modules. Any unused RIMM sockets *must* contain a continuity module.

Only ECC RIMM modules are supported. While speed ratings for RIMM modules exist between: PC600 to PC800, when upgrading memory, paired RIMM modules should only be installed with the same speed rating.
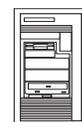
The following example shows that it is possible to upgrade the memory using modules that are higher than the first two models in sockets A0-B0:

RIMM SOCKETS			
Pair		*Pair*	
A0	B0	A1	B1
Installed 128 MB	128 MB	Continuity Modules	
Memory upgrade. Continuity modules replaced with:			
Installed 128 MB	128 MB	256 MB	256 MB

Models are supplied with either 128 MB or 256 MB RDRAM ECC main memory. Memory upgrades are available in 128 MB, 256 MB or 512 MB RDRAM ECC modules in pairs.

When upgrading memory, verify that:

■ RDRAM modules are installed in pairs (A0-B0 or A1-B1).
■ RDRAM modules are ECC type.
■ Paired RDRAM modules have the same speed rating.
■ Unused RIMM sockets contain continuity modules.
■ Memory module is not installed in the Memory Expansion Card connector on the system board.
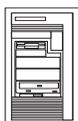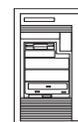
HP Kayak XU800 PC Workstation

Mass Storage Device Guide Rails

Attached on the side of the front access cage, additional guide rails are available for mass storage device installations. Depending on the device to be installed, dedicated guide rails are required and are easily recognized by their distinct size and color.

The following table indicates the device, location, and required rails.

Device to be Installed	Location	Required Rails	Installing the Rails
3.5-inch device (hard disk drive)	3.5-inch internal shelf (two shelves)	Short blue left and right rails	Insert the guide rail labeled "L" on the left-hand side (cable connectors facing towards you and positioned at the bottom), and the guide rail "R" on the right-hand side of the hard disk drive.
5.25-inch device (CD-ROM, etc.)	5.25-inch front access cage shelf	Long green rails	There is no specific side to which these guides must be installed. However, they must be inserted in the two holes located at the bottom of the drive.
Third 3.5-inch hard disk drive			Hard disk drive is mounted on the pre-installed 5.25-inch hard disk drive tray and secured to the tray using the supplied four screws.
3.5-inch device (zip drive		Short green left and right rails	Carefully break off the metal plate from the chassis. Insert the guide rail labeled "L" on the left-hand side (cable connectors facing towards you and positioned at the top), and the guide rail "R" on the right-hand side of the hard disk drive.
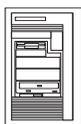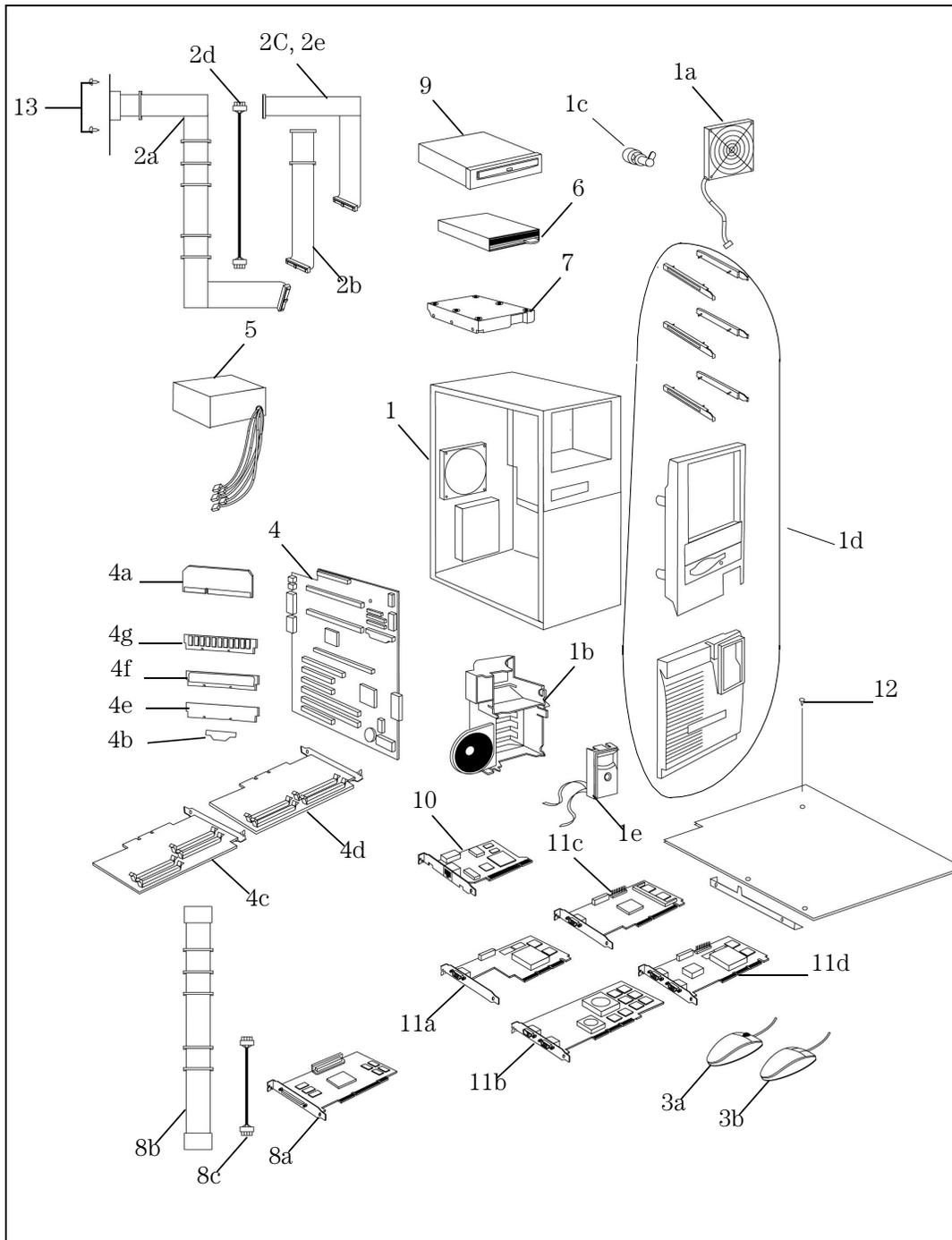
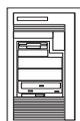# Part Numbers

HP Kayak XU800 PC Workstation

Parts List

Item	Description		Repl. Part Number	Exchange Part Number
1	Chassis assembly (including top cover):		5064-0435	—
	a Rear fan assembly		5065-0483	—
	b Input/output assembly guide, including speaker and PCI fan		5060-0484	—
	c Cover lock assembly		5064-2645	—
	d Minitower kit, including:	Qty	5065-0433	—
	• HP logo XU800	1		
	• rubber feet	4		
	• thumbscrew cover	2		
	• I/O bracket	1		
	• CPU metal bracket and screw	1		
	• system board captive chassis screw	1		
	• tamper detect switch assembly	1		
	• hard disk drive thermal assembly	1		
	• lower bezel and upper bezel	1		
	• 5¼-inch drive blank panel	1		
	• 3½-inch drive blank panel	1		
	• 3½-inch floppy disk drive panel	1		
	• two pair of 5¼-inch long green guide rails	2		
	• one pair 3½-inch L&R HDD short blue guide rails	1		
	• one pair 3½-inch L&R FDD short green guide rails	1		
	• rear fan airflow guide	1		
	e LCD status panel		5064-9162	—
2	Cables:			
	a SCSI U3 cable		5184-1502	—
	b IDE CD-ROM cable		5184-1515	—
	c Floppy disk drive cable		5184-1516	—
	d CD-ROM to audio cable		5182-1857	—
	e IDE HDD cable		5065-1271	—
3	Mouse:			
	a Three-button mouse		C4728-60101	—
	b Enhanced mouse with scroll/zoom wheel		C4736-60101	—

Parts List

Item	Description	Repl. Part Number	Exchange Part Number
4	System board (refer to the system board parts list on the following page for processors).	D8000-63002	D8000-69002
	Processor Terminator and VRM:		
	a Processor connector termination card	5064-9725	—
	b VRM (included in processor accessory kit)	0950-3633	—
	Main memory system:		
	c RIMM Memory Expansion Card (4 sockets)	5064-2526	—
	d DIMM Memory Expansion Card (4 sockets)	5065-2525	—
	Main memory modules:		
	For RIMM sockets:		
	e 2 x 64 MB, 600 MHz ECC RDRAM	5065-0497	D9518-69001
	2 x 128 MB, 600 MHz ECC RDRAM	5065-0496	D9519-69001
	2 x 256 MB, 600 MHz ECC RDRAM	5065-0495	D9520-69001
	2 x 64 MB, 800 MHz ECC RDRAM	D9518-63010	D9518-69010
	2 x 128 MB, 800 MHz ECC RDRAM	D9519-63010	D9519-69010
	2x 256 MB, 800 MHz ECC RDRAM	D9520-63010	D9520-69010
	f RIMM continuity module	D8660-63001	—
	For DIMM[1] sockets:		
	g 128 MB (2 x 64 MB), 100 MHz ECC SDRAM	D9512-63001	D9512-69001
	256 MB (2 x 128 MB), 100 MHz ECC SDRAM	D9513-63001	D9513-69001
	512 MB (2 x 256 MB), 100 MHz ECC SDRAM	D9514-63001	D9514-69001
	1 GB (2 x 512 MB), 100 MHz ECC SDRAM	D9515-63001	D9515-69001
5	Power supply unit	0950-3628	—
6	Floppy disk drive (1.44)	D2035-60293	—
7	Hard disk drives:		
	9.1 GB SCSI, 7.2k rpm	D9475-63001	D9475-69001
	9.1 GB SCSI, 7.2k rpm	D6463-63003	D6463-69003
	9.1 GB SCSI, 10k rpm	D8608-63003	D8608-69003
	18.1 GB SCSI,10k rpm	D8609-63003	D8609-69003
	15 GB IDE, 7.2k rpm	D9804-63001	D9804-69001
8	Ultra 2 SCSI (optional):		
	a Ultra 2 SCSI card	5064-7466	—
	b SCSI U2 cable	5184-1501	—
	c SCSI LED cable	5183-9401	—
	FastRaid (optional), not shown:		
	a Controller	5064-9766	D9661-69001
	b Cable	5183-9415	—

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HP Kayak XU800 PC Workstation

Parts List

Item	Description	Repl. Part Number	Exchange Part Number
9	Mass storage drives:		
	DVD 8X drive	D4388-63002	D4388-69002
	CD-R 48X drive	D4389-63021	—
	CD-RW 4/2/24X drive	D4398-60021	D4398-69001
10	LAN Interfaces:		
	a HP Lan card	5064-9746	—
	b 3 COM 3 C905B-TX Lan card (for CAP models and accessories)	5064-7429	—
	c Intel Pro/100+ Lan card (for CAP models and accessories)	5064-7434	—
11	Graphics Interfaces:		
	a Elsa Synergy II, AGP	5064-9794	D7992-69501
	b Matrox Millennium G400-Quad, AGP	5064-9194	D8924-69501
	c Matrox Millennium G250, AGP	5064-9191	—
	d 3Dlabs Oxygen GVX1, AGP	5064-9793	D8366-69501
	The following Graphics Interfaces are also available, but not shown:		
	a Elsa Gloria II, AGP	5184-3811	D9543-69501
	b Elsa Synergy II, PCI^2	5065-0468	—
	c Appian Jeronimo Pro Quad, PCI	5064-9798	D9534-69501
	Appian Jeronimo Pro cable	5184-3831	—
	d Matrox Quad G200-Quad, PCI	5065-2514	D9536-69501
	Matrox Quad G200 cable kit (contains two Y-cables)	5184-3830	—
12	Screws 6-32 for I/O card cage	2680-0311	—
13	SCSI cable screws	5184-1577	—
Not Shown	Multimedia keyboard	C4742-601xx^3	—
	CR2032 battery	1420-0356	—
	Screws 6-32 PSU fixation	2360-0565	—

1. All models shipped with SDRAM memory should be converted to RDRAM memory. Consult HP Support for further information.
2. Should only be used in conjunction with an Elsa Synergy II AGP video card for dual monitor display.
3. xx = Language code.

1-18 HP Kayak XU800 PC Workstation   **Minitower**

PC Workstations

Downloaded from www.Manualslib.com manuals search engine

System Board Parts List

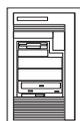| Description	Repl. Part Number	Exchange Part Number
System board:		
Processors[1]:		
Intel Pentium III 533/133 MHz, i256 KB L2 cache	D9026-63001	D9026-69001
Intel Pentium III 600/133 MHz, i256 KB L2 cache	D9452-63001	D9452-69001
Intel Pentium III 667/133 MHz, i256 KB L2 cache	D9453-63001	D9453-69001
Intel Pentium III 733/133 MHz, i256 KB L2 cache	D9659-63001	D9659-69001
Intel Pentium III 800/133 MHz, i256 KB L2 cache	D8854-63001	D8854-69001
Intel Pentium III 866/133 MHz, i256 KB L2 cache	P1551-63001	P1551-69001

1. Heat-sink is integrated in the processor package.

Manuals and Documentation

User's Guide - English only (refer to *page 7* for all other manual part numbers)	D8369-90001 and electronic file
Troubleshooting Guide	electronic file only
Technical Reference Manual	electronic file only

Software

Image Creation and Recovery CD-ROM	5011-6692-xx[1]	All languages, except for the ones indicated in the below list.
	5970-0070	For the following languages only: English, French, Italian, German, Spanish.

1. xx = Language code

Minitower PC Workstations

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HP Kayak XU800 PC Workstation

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**Minitower
PC Workstations**

A

Beep, POST, and Error Codes

Beep Codes

If an error occurs during the POST, which prevents the PC Workstation from starting, and before the display device has been initialized, a series of beep codes are issued. Beep codes indicate that a fatal error has occurred and can be reported one after another if there is more than one detected error. In this case, the first detected error is the most important.

These codes are useful for identifying the error when the system is unable to display the error message.

A

Beep Codes for the HP Kayak XU800

Number of Beeps	Description	Action to Take...
1	The memory refresh circuitry is faulty.	Check that: • Memory is installed correctly. • Correct memory modules are being used. If the error still occurs, replace the memory.
2	Parity error in the base memory (the first 64 KB block) of memory.	
3	Memory error.	
4	Clock error.	• Check that the system board is correctly cabled (power cables, processor and terminator). If the error still occurs, replace the system board.
5	Processor test error.	Check that: • Processor is correctly installed. • Termination card installed in processor slot 2 in a single processor system. If the error still occurs, replace: 1 Processor. 2 system board.
6	Input/Output (I/O) error.	• Keyboard is connected. • PCI card is installed correctly. • Termination card installed in processor slot 2 in a single processor system.
7	The processor on the system board generated an error.	• There is an installed processor(s). • Processor(s) is correctly installed in the processor slot(s). • Two installed processors have the same cache size (256 k). • Termination card is installed in processor slot 2 in a single processor system. • VRM is installed in the VRM socket in a dual processor system. If the error still occurs, replace the system board.
8	The system video card is either missing or faulty.	This is not a fatal error. Check that the video card is correctly installed and cabled. If missing, install the video card. If the error still occurs, replace it with a known working video card.

A-2 Beep, POST, and Error Codes

Number of Beeps	Description	Action to Take...
9	The BIOS Checksum value does not match the value encoded in the BIOS.	Perform the following actions in this order: 1 Press **F2** to enter the *Setup* program, then **F9** to load the default BIOS settings. 2 Clear the CMOS. 3 Flash the BIOS. If the error still occurs, replace the system board.
10	The CMOS RAM has failed.	Perform the following actions in this order: 1 Press **F2** to enter the *Setup* program, then **F9** to load the default BIOS settings. 2 Clear the CMOS. 3 Flash the BIOS. If the error still occurs, replace the system board.
11	The cache memory test failed.	Replace the processor(s).

A

Beep Codes for the HP Kayak XM600

Beep Pattern	Beep Code	Numeric Code	Description	Recommended Action
— -- -- ---	1-2-2-3	16h	BIOS ROM check-sum failure	Inform HP support/HP reseller that system board is defective.
— --- — —	1-3-1-1	20h	DRAM refresh test failure1	Check the memory is correctly installed. If the error still occurs, replace the module.
— --- — ---	1-3-1-3	22h	8042 Keyboard controller test failure	Inform HP support/HP reseller that system board is defective.
— --- --- —	1-3-3-1	28h	Initialization of RDRAM has failed.	Verify that memory or continuity modules are installed.
— --- ---- —	1-3-4-1	2Ch	RAM failure on address line^1....	Check the memory is correctly installed. If the error still occurs, replace the module.
— --- ---- ---	1-3-4-3	2Eh	RAM failure on data bits ....of low byte of memory bus1	Check the memory is correctly installed. If the error still occurs, replace the module.
—----——	1-4-1-1	30h	RAM failure on data bits ....of high byte of memory bus1	Check the memory is correctly installed. If the error still occurs, replace the module.
-- — -- ---	2-1-2-3	46h	ROM copyright notice check failure	Inform HP support/HP reseller that system board is defective.
-- -- --- —	2-2-3-1	58h	Unexpected interrupts test failure	Inform HP support/HP reseller that system board is defective.
— --	1-2	98h	Video configuration failure or option ROMs check-sum failure	This can be caused by problems with the ROM on integrated video, an add-on video board or the ROM on a SCSI card. Inform reseller for the affected component.

1.   Non-HP memory modules are not supported. Only HP memory modules should be used.

A-4 Beep, POST, and Error Codes

Beep Codes for Previous Models

The following beep codes are for all models before the HP Kayak XU800 and XM600 PC Workstations.

Beep Pattern	Beep Code	Numeric Code	Description
— -- -- ---	1-2-2-3	16h	BIOS ROM check-sum failure
— --- — —	1-3-1-1	20h	DRAM refresh test failure
— --- — ---	1-3-1-3	22h	8742 Keyboard controller test failure
	1-3-3-1	28h	Autosize DRAM
	1-4-4-1	30h	RAM failure on data bits of high byte of memory bus
— --- ---- —	1-3-4-1	2Ch	RAM failure on address line $xxxx$[1]
— --- ---- ---	1-3-4-3	2Eh	RAM failure on data bits $xxxx$[1] of low byte of memory bus
-- — -- ---	2-1-2-3	46h	ROM copyright notice check failure
-- -- --- —	2-2-3-1	58h	Unexpected interrupts test failure
— --	1-2	98h	Video configuration failure or option ROMs check-sum failure
-	1	B4h / F4h	This does not indicate an error. There is one short beep before system startup.
---- -- ----- -- --	4-2-4-4		Crisis recovery flash error[2]

1. If the BIOS detects error 2C or 2E (base 512K RAM error), it displays an additional word-bitmap ($xxxx$) indicating the address line or bits that failed. For example, "2C 0002" means address line 1 (bit one set) has failed. "2E 1020" means data bits 12 and 5 (bits 12 and 5 set) have failed in the lower 16 bits.
2. For more information, refer to Appendix B.

POST and Error Codes

A list of all POST (Power-On Self-Test) and error codes are available through electronic files from the Support Center.

If you wish to view the POST details, press the [Esc] key when the Kayak logo is being displayed at power on, and the checkpoint code of the test currently in progress will appear in the upper right corner of the screen. When POST is completed, the HP Summary Screen will appear.

A

POST and Error Codes

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Recovery Boot Active Procedures

HP Kayak XU800 PC Workstation BIOS Recovery

NOTE: The following BIOS recovery (Crisis Mode) is for the HP Kayak XU800 PC Workstation models only.

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

The following recovery operation is also documented in the flash.txt file which is supplied with the downloaded BIOS files.

To restore the BIOS:

1   Copy the BIOS files on to the floppy disk.

2   Rename the file AI11xx.rom to amiboot.rom.

3   Shut down the PC Workstation.

4   Power off the PC Workstation and remove the power cord and cables.

5   Remove the cover.

6   Set switch 1 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. However, it should be noted that 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 1 back to the UP position.

13   Replace the cover, reconnect the power cord, then reboot the PC Workstation.

B

HP Kayak XM600 PC Workstation Desktop and Minitower BIOS Recovery

NOTE: The following BIOS recovery (Crisis Mode) is for the HP Kayak XM600 Desktop and Minitower PC Workstations only.

If for some reason the BIOS is corrupted and the standard flash cannot be used, use the BIOS Recovery Mode (exceptional BIOS recovery operation) to restore the BIOS. To do this:

1   Obtain a bootable DOS floppy disk.

2   Copy the BIOS files on to the floppy disk.
     The latest system BIOS (standard flash operation) can be downloaded from HP's Support Web site at: http://www.hp.com/go/kayaksupport. Then select HP Kayak XM600 PC Workstation.
     Instructions on updating the BIOS are supplied with the downloaded BIOS files and a BIOS flash utility (flash.txt).

3   Create (or edit) the file, AUTOEXEC.BAT This should contain a single line of text: "phlash /c /mode=3 IC1105US.FUL"
     (rename the BIOS filename with the one on the floppy disk).

4   Shut down the PC Workstation.

5   Power off the PC Workstation and remove the power cord.

6   Remove the cover.

7   Set switch 7 to the ON position.

8   Insert the floppy disk into the floppy disk drive.

9   Reconnect the power cord and switch on the PC Workstation.

10   The PC Workstation boots from the floppy disk, then flashes the BIOS. However, it should be noted, that during the flash process, the screen remains blank.

11   The recovery process is finished when there is one very long beep.

12   Power off the PC Workstation. Remove the floppy disk from the drive. Remove the power cord.

13   Set switch 7 back to the OFF position.

14   Replace the cover, reconnect the power cord, then reboot the PC Workstation.

Force BIOS flash, Switch 9 (XA models) or 10 (XW and XA-s models) Down Position

WARNING: WARNING: For Kayak XU Series 03xx, XA-s Series 02xx and XA Series 05xx, a specific 'Mini-Dos' bootable disk has to be used. An image of this 'Mini-Dos' bootable floppy can be obtained from the Alps/Info server (not available from the external web site). If you do not have access to the Alps/Info server, contact your escalation team.

If, for example, during a BIOS flash, the procedure is interrupted by a power failure, and the system does not restart, then you can force a BIOS flash. However, it should be noted that during the procedure, there is no image on the screen, nor access to the keyboard or mouse (only "vital" devices that are required to boot on the floppy device are initialized).

To force a BIOS flash, do the following steps:

1   Ensure that you have created a DOS-bootable diskette. This floppy diskette contains all the recovery and system BIOS programming software (phlash.exe, platform.bin and hb1xxxyy.Ful). Include the flash command in the autoexec.bat, for example: phlash /mode=3 hb1xxxyy.Ful

2   Turn off the computer.

3   Set Switch 9 (XA models) or,
Set Switch 10 (XW, XU and XA-s models) to the DOWN position (=on).

4   Insert the DOS-bootable diskette (refer to the above warning).

5   Power on the computer.

6   During the recovery process, short beeps are emitted. The recovery process is finished when there is a much longer beep (approximately around 1 to 2 minutes).

7   Power off the computer. Press the power ON/OFF button (for about 5 seconds), until the ON/OFF light switches off. Set the switch 10 to the UP position (=off).

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B-4 Recovery Boot Active Procedures