

TABLE OF CONTENTS

TABLE OF CONTENTS	1
1. Notice for PC Host(XW4000) Replacement	1
2. Introduction	1
2-1 Getting Acquainted, The Computer From The Front	1
2-2 Getting Acquainted, The Computer From The Back	2
3. PC HOST MR FRU LEVELS	2
4. WARNINGS AND CAUTIONS BEFORE YOU BEGIN	3
4-1 Fragile parts inside of PC Host	3
4-2 Static Electricity Sensitive Device	3
4-3 SCSI Cabling and System Disk (Disk unit 1) requirements	3
How to run lhinv	3
5. REPLACING THE PC HOST	4
5-1 PC Host BIOS configuration	5
5-2 PC Host SCSI settings	7
6. COMMON PROCEDURES	8
6-1 Operator Workspace and System Cabinet Power Shutdown	8
6-2 Preparing the System for Installation or Removal of Replacement Parts	8
6-3 Powering OFF the PC Host (HP Workstation)	8
6-4 Removing the Covers	9
Left Side Cover Removal	9
Front Bezel Removal	10
Left Side Cover Installation	10
7. BIT3 618 Board Replacement	11
System power off and workstation cover removal	11
Replacing the board	11
Restore the PC Host	11
8. ACCELE PORT XP 8P Replacement	12
System power off and workstation cover removal	12
Serial board replacement	12
Restore the PC Host	12
9. Port Serial Cable Replacement	13
10. SCSI COMBO Card Replacement	14
System power off and workstation cover removal	14
SCSI COMBO Card replacement	14
Restore the PC Host	14
11. HDD Replacement	15
System power off and workstation cover removal	15
HDD replacement	16
Restore the PC Host	17
Software Installation (LFC)	17

Rev 2

1. Notice for PC Host(XW4000) Replacement

Once the Option MOD is used for one PC Host, this option MOD cannot be used for other PC Host because of the system protection. When PC Host(XW4000) is replaced, it is necessary to order option key according to the site configuration.

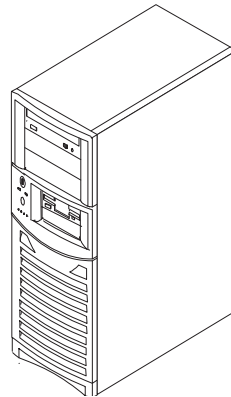
After replacement, install the Option Software according to the [Option Software Installation](#).

2. Introduction

The standard configuration of PC Host (HP Workstation) as used by GEMS MR consists of dual processor. The PC Host is located on the workspace table, the same place of Octane computer (for older versions). Illustrations 1, 2 and 3 show front, back and control panel views of PC Host.

2-1 Getting Acquainted, The Computer From The Front

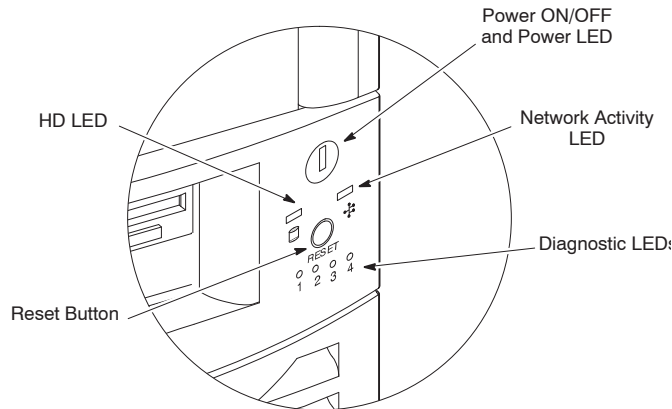
Illustration 1 shows the front of the PC Host.



PC HOST, A FRONT VIEW
ILLUSTRATION 1

Illustration 2 describes the control panel, located on the front of PC Host.

The Diagnostics LEDs on the front panel identify specific problems in the PC Host: During the PC Host start up, all four LEDs are green. Then, if no problem is detected during the start up, all four LEDs turn off. Otherwise, one or more LEDs changes the color when a problem is detected in the hardware. Please, refer to PC Host Troubleshooting manual for details.

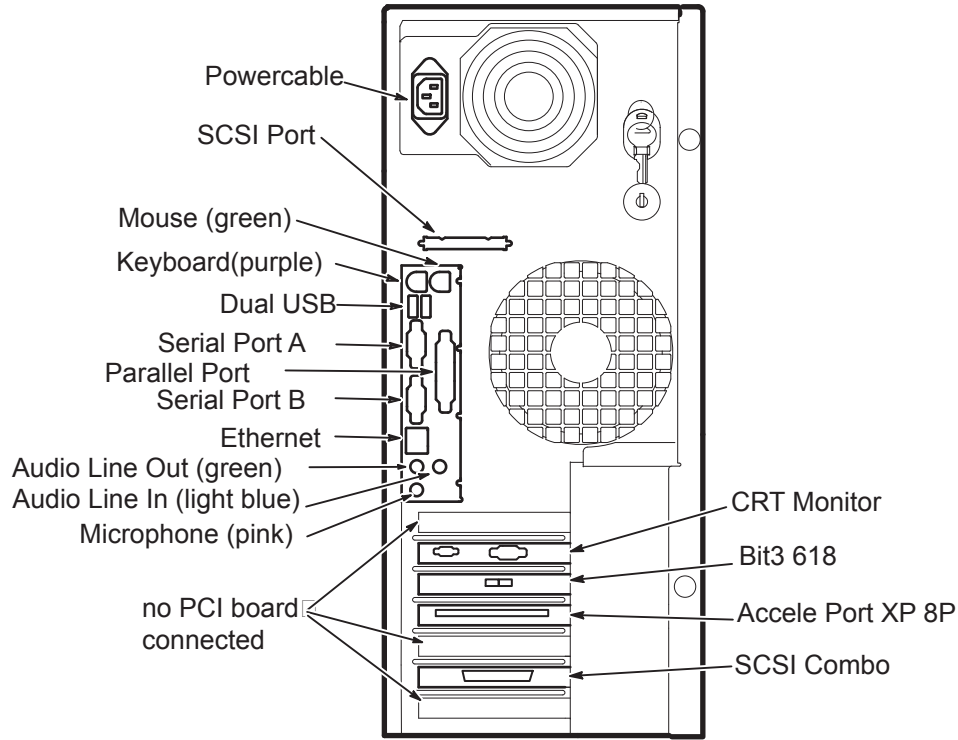


PC HOST CONTROL PANEL
ILLUSTRATION 2

Rev 2

2-2 Getting Acquainted, The Computer From The Back

Illustration 3 shows the rear side of the PC Host.



PC HOST, REAR VIEW
ILLUSTRATION 3

3. PC HOST MR FRU LEVELS

Table 3-1 gives the breakdown of FRU levels for PC Host.

TABLE 3-1

PC HOST FRU LEVELS

Part #	Description	Comment
2351335	PC Host	FRU 1
2351334	BIT3 618 (PCI only)	FRU 1
2351333	Accele Port XP 8P	FRU 1
2351336	8 Port Serial Cable	FRU 1
2354418	DSUB9 Cover	
2356616	DVI/VGA CBL	FRU 2
2195827	Jumper Plug	FRU 2
2350137	Power CBL (japanese standard plug)	FRU 1
231335-3	20GB IDE HDD	FRU 1

Rev 2

4. WARNINGS AND CAUTIONS BEFORE YOU BEGIN

WARNING!

NEVER REMOVE THE WORKSTATION COVER WITHOUT DISCONNECTING THE POWER CABLE FIRST.

4-1 Fragile parts inside of PC Host

WARNING!

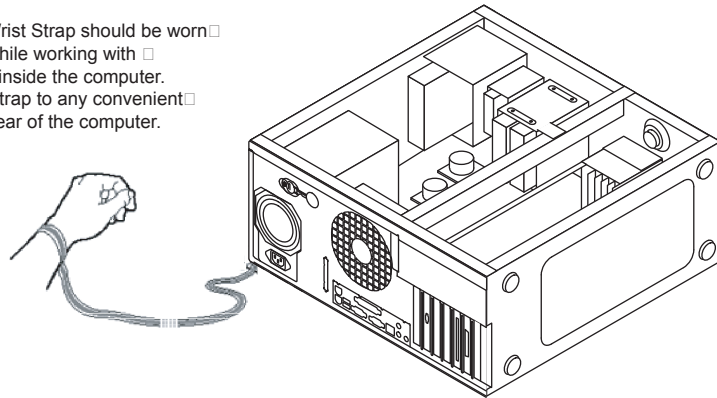
AVOID TOUCHING OR DASHING THE PROCESSOR TURBO COOLER FANS LOCATED NEAR TO HARD DISK DRIVE CAGE. THESE TURBO COOLER FAN USE VERY SENSITIVE BEARINGS.

4-2 Static Electricity Sensitive Device

CAUTION

Use anti-static wrist strap when handling parts inside of workstation.

Grounding Wrist Strap should be worn at all times while working with components inside the computer. Ground the strap to any convenient point at the rear of the computer.



WEARING AN ANTI-STATIC WRIST STRAP
ILLUSTRATION 4

4-3 SCSI Cabling and System Disk (Disk unit 1) requirements

If it is possible, it is recommended that prior to removal of any of the SCSI cables or Disk drives in the PC Host, that the "lhin" (lower case of "L" + "hin") command be run in a c-shell and all the information reported for the disk drive locations noted.

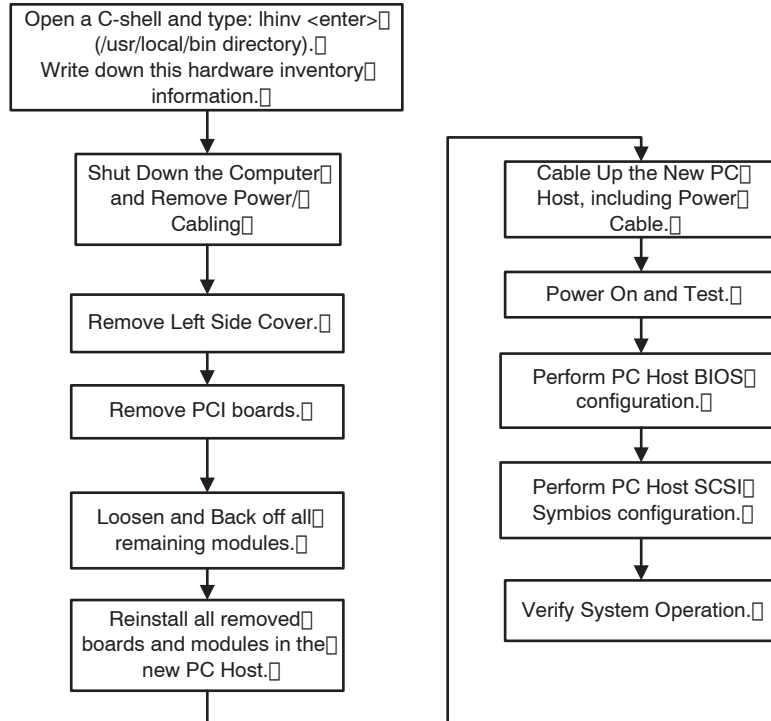
How to run lhin

1. If possible power up the computer
2. Open up a C-shell
3. Move to /usr/local/bin directory.
4. Type: lhin <enter> (lower case of "L" + "hin").
5. Note the information found related to the disk drives.

Rev 2

5. REPLACING THE PC HOST

PC Host FRU levels are defined in section 3. Refer to Illustration 5 for the basic steps involved in changing out the PC Host (HP Workstation). Also for FRU parts or individual component removal and replacement, refer to the sections of corresponding parts described in this manual.



REPLACING THE PC HOST COMPUTER
ILLUSTRATION 5

NOTE

After PC Host replacement, the BIOS and SCSI settings of the New PC Host must be changed. Please, refer to next sections how to perform each configuration.

Rev 2

5-1 PC Host BIOS configuration

1. Power on the PC Host Computer.
2. On "HP" white window, press **[F2]** to enter BIOS setup mode.
3. Using cursor keys, move to **[Advanced]** tab.
4. Using cursor, Enter, F7, F8 and ESC keys, change the following fields (fields not described below do not need to be changed):

- Integrated SCSI Computer

- Integrated SCSI [Enable]
- Option ROM Scan [Enable]
- Enable Master [Disable]
- Latency Timer [Default]

- Integrated Network Interface

- Integrated Network [Enable]
- Option ROM Scan [Disable]
- Enable Master [Disable]
- Latency Timer [Default]

- AGP Slot (Graphics)

- Enable Master [Disable]
- Latency Timer [Default]
- Graphics Aperture [128Mb]

- PCI Device, Slot #1

- Option ROM Scan [Disabled]
- Enable Master [Disable]
- Latency Timer [Default]

- PCI Device, Slot #2

- Option ROM Scan [Disabled]
- Enable Master [Disable]
- Latency Timer [Default]

- PCI Device, Slot #3

- Option ROM Scan [Disabled]
- Enable Master [Disable]
- Latency Timer Default]

Rev 2

5-1 PC Host BIOS configuration (continued)

•PCI Device, Slot #4 (64-bit)

- Option ROM Scan [Disabled]
- Enable Master [Disable]
- Latency Timer [Default]

•PCI Device, Slot #5 (64-bit)

- Option ROM Scan [Disabled]
- Enable Master [Disable]
- Latency Timer [Default]

5. Move to [Power] tab and update the followings:

- Remote Power-On [Disabled]
- After Power Failure [Stay Off]

6. Move to [Boot] tab and change the followings:

- QuickBoot Mode [Enabled]

•Boot Device Priority (Use [+] and/or [-] keys to modify the boot priority order.)

- Removable Device
 - Legacy Floppy Drives
- ATAPI CD-ROM
- Hard Disk Drive
 - (HDD model name(s) is (are) shown)
- Network Boot
- SYM53C8XX Boot support
- Intel® Boot Agent Version 4.0.14

7. Move to [Exit] tab.

8. Select <Exit Saving Changes>

9. Select [Yes] to save configuration changes and exit.

Rev 2

5-2 PC Host SCSI settings

Perform this section for PC Host replacements, because SCSI settings of new PC Host must be updated.

1. Power on the PC Host Computer.
2. After "HP" white window, the message below will appear. Press **[CTRL-C]** to enter SCSI Configuration Utility mode.

```
Adapter configuration may have changed, reconfiguration is suggested!  
Press Ctrl-C to Symbios Configuration Utility...
```

3. Select the Adapter on Symbios Host Bus Adapters menu and press **[Enter]** key.
4. Select **<Device Properties>** and then press **[Enter]** key.
5. Change the "Scan LUNs" from **[Yes]** to **[No]** of SCSI ID 8 to SCSI ID 15.
6. Press **[Esc]** key to exit Device Properties menu.
7. Press **[Esc]** key to exit Adapter Properties menu.
8. Select **<Save changes then exit this menu>** and then press **[Enter]** key. This will move back to **Symbios Host Bus Adapters** window.
9. Perform the steps 3. to 8. for remaining Adapters.
10. After finishing all Adapter configurations, press **[ESC]** from **Symbios Host Bus Adapters** window to exit.
11. Select **<Exit the Configuration Utility>** and then press **[Enter]** key.
12. The PC Host will reboot.

Rev 2

6. COMMON PROCEDURES

6-1 Operator Workspace and System Cabinet Power Shutdown

1. Log out from Host Computer.
2. Power down monitors.
3. Power down PC.
4. Power down System cabinet.

6-2 Preparing the System for Installation or Removal of Replacement Parts

Several steps need to be taken prior to actual removal or installation of replacement parts. This will ensure operator safety.

6-3 Powering OFF the PC Host (HP Workstation)

NOTE: The system configuration must be checked every time is installed, upgraded and some parts were removed or replaced. For instructions on how to check the system configuration, please refer to the Workstation manufacturer's manual (*Getting Started Guide*).

NOTE: Do NOT switch OFF the PC Host while the system is being initialized. This may crash the system.

You must first follow proper procedures to shut down any programs you are working in and log out from Host Computer.

1. Log out from Host Computer.
2. Shut down the Host Computer.
3. Bring the PC down by closing the Program Manager. Be sure that no LEDs are lighted.
4. As applicable, open the circuit breaker(s) that power the Operator Workspace to turn power off.
5. Lock and tag the circuit breaker(s). (Refer to OSHA LOCKOUT/TAGOUT REQUIREMENTS manual.)

Rev 2

6-4 Removing the Covers

Left Side Cover Removal

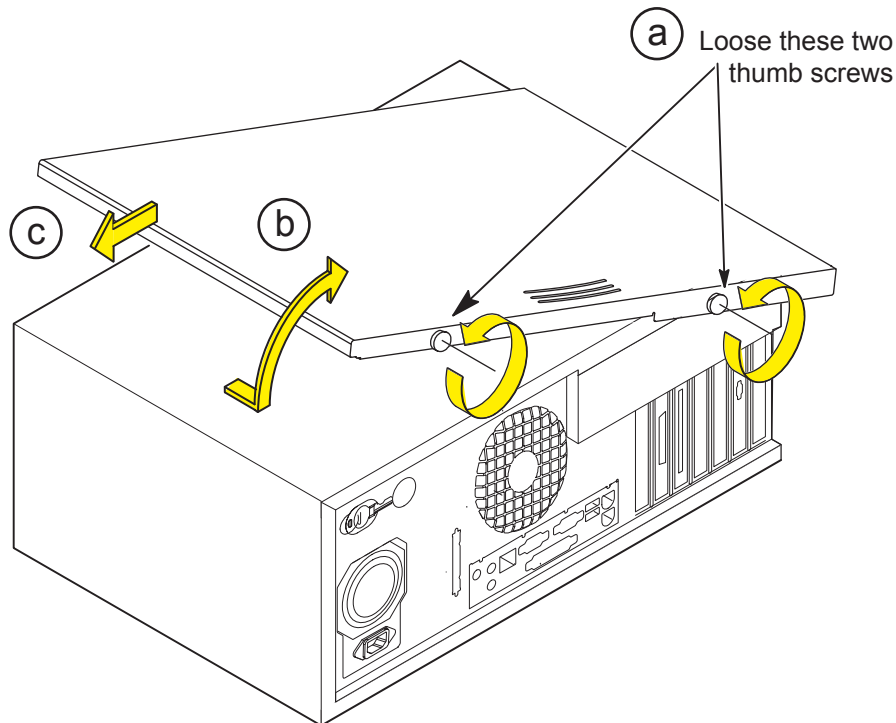
For all part replacement inside of PC Host, it should be starting by removing the left side cover. For easy access to the internal parts, put the PC Host horizontally with the left side on the top. Use an anti-static wrist strap when handling any parts inside of workstation. The components of this workstation are extremely sensitive to static electricity.

TABLE 6-1

REQUIRED TOOL

Item	Part Name	Check
1	Screw Driver and/or Torx Driver	

1. Before starting this procedure, perform 6-3 "Powering OFF the PC Host".
2. Mark and disconnect all cables from the PC Host (includes power, communications cables).
3. If the PC Host cover is locked, unlock using the key it on the back of the workstation.
4. Using Torx driver, loose the two thumb screws located at the back of the PC Host until they release. It is not necessary to remove completely to remove the cover.
Standing at the back of PC Host, slide the cover towards in your direction, tilt it to open and then lift it off.



LEFT SIDE COVER REMOVAL
ILLUSTRATION 6

Rev 2

Front Bezel Removal

You only need to remove the Front Bezel when your are adding or removing devices in the 5.25-inch or 3.5-inch front drive bays.

1. Gently lift the four plastic tabs starting with the bottom tab and working your way to the top.
2. Rotate the bezel off the PC Host chassis.

Left Side Cover Installation

1. Ensure that all cables inside of PC Host are properly connected.
2. Standing at the back of the workstation, lower the cover onto the chassis - aligning the guide rail on the bottom inside edge of the cover with the bottom edge of the PC Host chassis.
3. Shut the cover ensuring that the guides on the top of the cover slide into the rails at the top of the chassis.
4. Slide the cover forward, then tighten the two thumbscrews, located in the rear part of PC Host.
5. Lock the Left Side Cover, if necessary.

Rev 2

7. BIT3 618 Board Replacement

WARNING!

NEVER REMOVE THE WORKSTATION COVER WITHOUT DISCONNECTING THE POWER CABLE FIRST.

WARNING!

AVOID TOUCHING OR DASHING THE PROCESSOR TURBO COOLER FANS LOCATED NEAR TO HARD DISK DRIVE CAGE. THESE TURBO COOLER FAN USE VERY SENSITIVE BEARINGS.

CAUTION

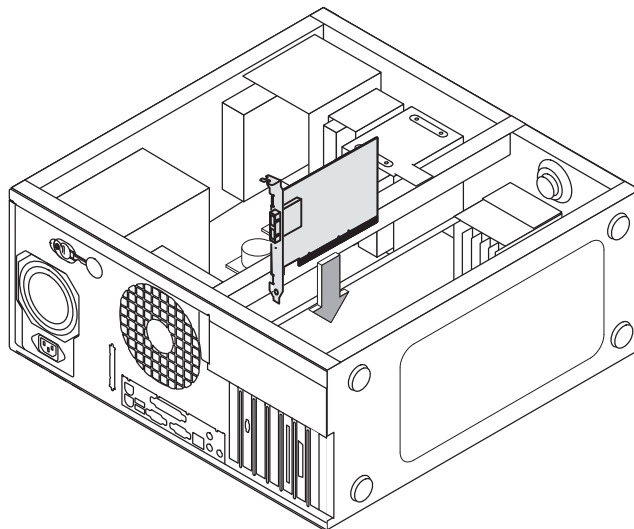
Use anti-static wrist strap when handling parts inside of workstation.

System power off and workstation cover removal

1. Turn OFF the System.
2. Mark and disconnect all cables from PC Host.
3. Remove the PC Host left side cover. (Refer to “Left Side Cover Removal”).
4. To ease installation, place the PC Host on its side with the system board facing upwards.

Replacing the board

5. Remove the screw that attaches the Bit3 board and remove it from PCI slot.
6. Store the current board in a static bag.
7. Align the new Bit3 board carefully and slide it into position. Press it firmly into the PCI slot.
8. Using the screw removed in the step 5., install the new Bit3 board.



BIT3 BOARD
ILLUSTRATION 7

Restore the PC Host

9. Place the PC Host in its original position.
10. Reinstall the PC Host left side cover. (Refer to “Left Side Cover Installation”).
11. Reconnect all removed cables. (Power cables, Serial, SCSI, communication cables).

Rev 2

8. ACCELE PORT XP 8P Replacement

WARNING!

NEVER REMOVE THE WORKSTATION COVER WITHOUT DISCONNECTING THE POWER CABLE FIRST.

WARNING!

AVOID TOUCHING OR DASHING THE PROCESSOR TURBO COOLER FANS LOCATED NEAR TO HARD DISK DRIVE CAGE. THESE TURBO COOLER FAN USE VERY SENSITIVE BEARINGS.

CAUTION

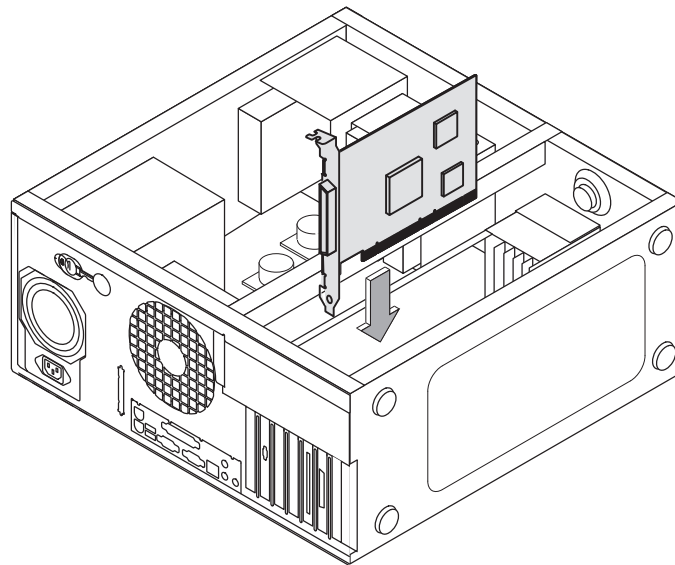
Use anti-static wrist strap when handling parts inside of workstation.

System power off and workstation cover removal

1. Turn OFF the System.
2. Mark and disconnect all cables from PC Host.
3. Remove the PC Host left side cover. (Refer to “Left Side Cover Removal”).
4. To ease installation, place the PC Host on its side with the system board facing upwards.

Serial board replacement

5. Remove the screw that attaches the serial board and remove it from PCI slot.
6. Store the current board in a static bag.
7. Align the new serial board carefully and slide it into position. Press it firmly into the PCI slot.
8. Using the screw removed in the step 5., install the new serial board.



BIT3 BOARD
ILLUSTRATION 8

Restore the PC Host

9. Place the PC Host in its original position.
10. Reinstall the PC Host left side cover. (Refer to “Left Side Cover Installation”).
11. Reconnect all removed cables. (Power cables, Serial, SCSI, communication cables).

Rev 2

9. 8 Port Serial Cable Replacement

WARNING!

NEVER REMOVE THE WORKSTATION COVER WITHOUT DISCONNECTING THE POWER CABLE FIRST.

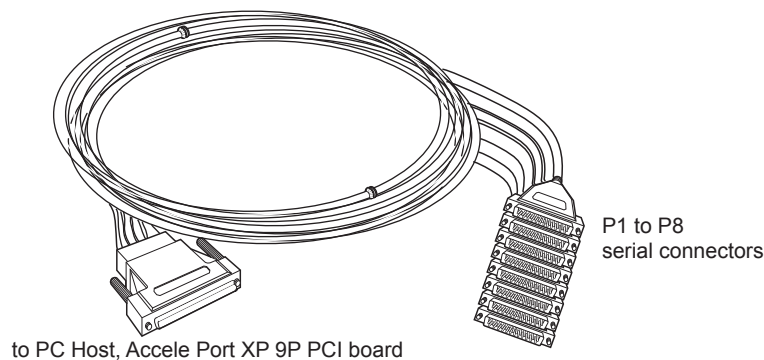
WARNING!

AVOID TOUCHING OR DASHING THE PROCESSOR TURBO COOLER FANS LOCATED NEAR TO HARD DISK DRIVE CAGE. THESE TURBO COOLER FAN USE VERY SENSITIVE BEARINGS.

CAUTION

Use anti-static wrist strap when handling parts inside of workstation.

1. Turn OFF the System.
2. Mark and disconnect the 8 Port Serial cable from PC Host.
3. Replace the cable by checking that all plugs are properly connected.



8 PORT SERIAL CABLE
ILLUSTRATION 9

Rev 2

10.SCSI COMBO Card Replacement

WARNING!

NEVER REMOVE THE WORKSTATION COVER WITHOUT DISCONNECTING THE POWER CABLE FIRST.

WARNING!

AVOID TOUCHING OR DASHING THE PROCESSOR TURBO COOLER FANS LOCATED NEAR TO HARD DISK DRIVE CAGE. THESE TURBO COOLER FAN USE VERY SENSITIVE BEARINGS.

CAUTION

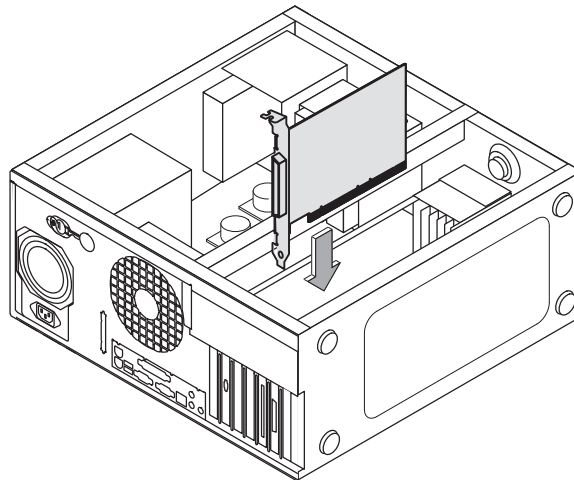
Use anti-static wrist strap when handling parts inside of workstation.

System power off and workstation cover removal

1. Turn OFF the System.
2. Mark and disconnect all cables from PC Host.
3. Remove the PC Host left side cover. (Refer to “Left Side Cover Removal”).
4. To ease installation, place the PC Host on its side with the system board facing upwards.

SCSI COMBO Card replacement

5. Remove the screw that attaches the SCSI COMBO card and remove it from PCI slot.
6. Store the current board in a static bag.
7. Align the new COMBO card carefully and slide it into position. Press it firmly into the PCI slot.
8. Using the screw removed in the step 5., install the new COMBO card.



SCSI COMBO CARD
ILLUSTRATION 10

Restore the PC Host

9. Place the PC Host in its original position.
- 10.Reinstall the PC Host left side cover. (Refer to “Left Side Cover Installation”).
- 11.Reconnect all removed cables. (Power cables, serial cables, SCSI cables, communication cables).

PC Host SCSI Settings

- 12.Perform SCSI bios settings by following the steps 1. to 12. of section 5-2 PC Host Settings.

Rev 2

11.HDD Replacement

WARNING!

NEVER REMOVE THE WORKSTATION COVER WITHOUT DISCONNECTING THE POWER CABLE FIRST.

WARNING!

AVOID TOUCHING OR DASHING THE PROCESSOR TURBO COOLER FANS LOCATED NEAR TO HARD DISK DRIVE CAGE. THESE TURBO COOLER FAN USE VERY SENSITIVE BEARINGS.

CAUTION

Use anti-static wrist strap when handling parts inside of workstation.

System power off and workstation cover removal

1. Turn OFF the System.
2. Mark and disconnect all cables from PC Host.
3. Remove the PC Host left side cover. (Refer to “Left Side Cover Removal”).
4. To ease installation, place the PC Host on its side with the system board facing upwards.

Rev 2

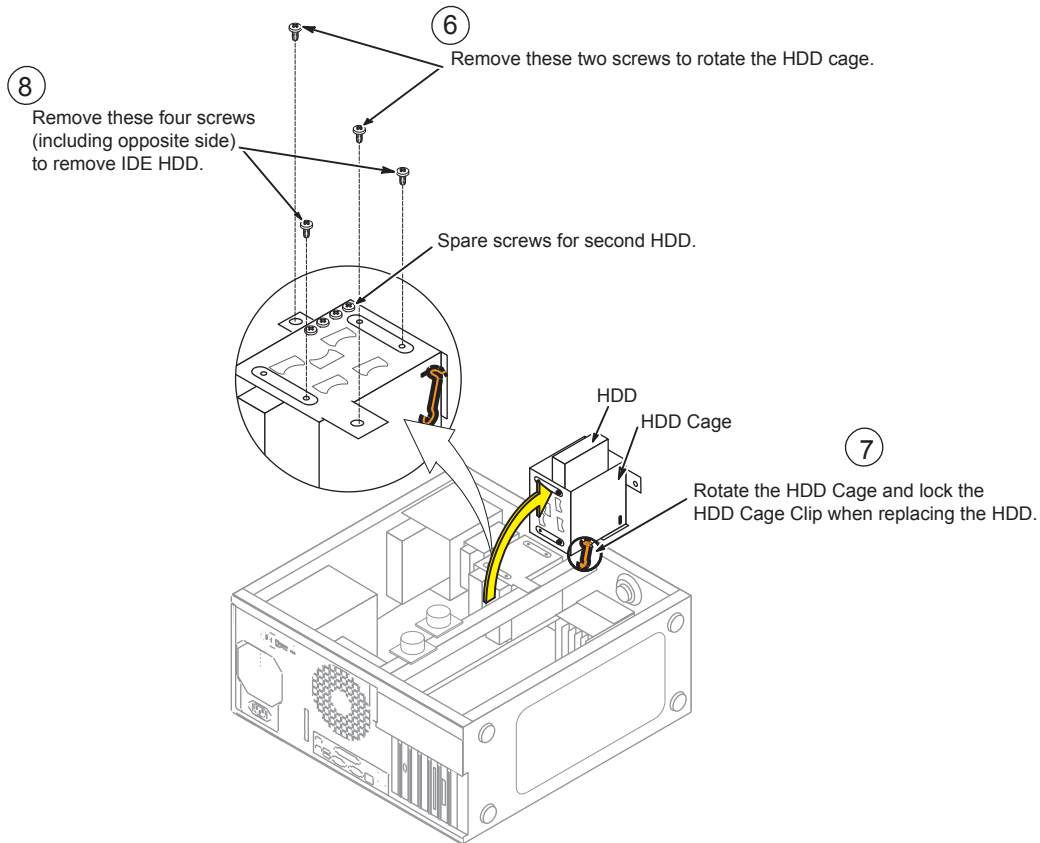
HDD replacement

5. Disconnect the IDE HDD cable and power cable from HDD.
6. Remove two screws which attaches the HDD Cage. (Illustration 11).
7. Rotate the HDD Cage until the HDD Cage Clip latches the cage.



Latch the HDD Cage Clip when replacing the HDD. Otherwise, an injury may occur and the HDD may crash due to cage abrupt fall.

8. Remove the HDD by unscrewing four screws.
9. Adjust the HDD jumper settings of new HDD exactly the same as the old one.
10. Replace the HDD reusing the same screws



F

**HDD REPLACEMENT
ILLUSTRATION 11**

Rev 2

Restore the PC Host

11. Unlatch the Cage Clip and rotate carefully the HDD Cage to its original position.

NOTE:

Verify that no cables and/or connectors obstruct the area where the cage rests on the chassis.

12. Fasten the HDD Cage with the removed two screws.

13. Reconnect the IDE and power cables.

14. Reinstall the PC Host left side cover. (Refer to “Left Side Cover Installation”).

15. Place the PC Host in its original position.

16. Reconnect all removed cables. (Power cables, serial cables, SCSI cables, communication cables).

Software Installation (LFC)

Please, refer to “PC Host Software Install” manual, in the Signa Ovation Service Methods CDROM.

1. From the referred page, click on [Operator WorkSpace] illustration.
2. Select [Setup and Calibration].
3. Click on [Host Software Install (For PC Host)] and the Host Software Install manual will come up.

Rev 2

Revision History

Rev	Date	Author	Primary Reasons For Change
0	Sep. 27, 2002	H. Hiwatashi	Initial Release
1	Nov. 22, 2002	H. Hiwatashi	General updates
2	Apr. 16, 2009	Y.Masumo	P1 Added '1. Notice for PC Replacement'