Replacing the memory

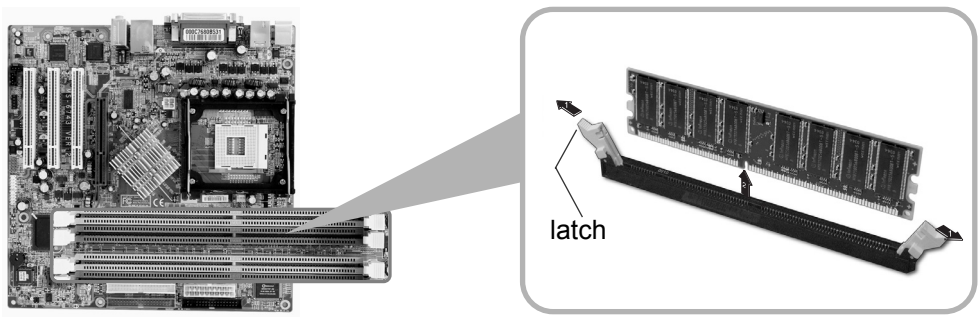
The main board configuration, memory socket, and the shape of memory may be different depending on the model.

1 Remove the screws on the rear of the computer, and open the computer case.

Note

■ Before opening the case, turn off the computer and peripheral devices, and remove the power cords.

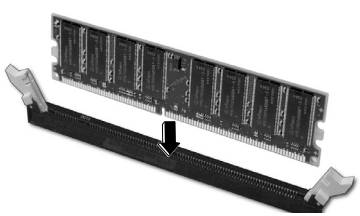
2 Pull the latch on each side of a memory socket to release the memory.



Installing a memory

1 Pull the latch on each side of a memory socket.

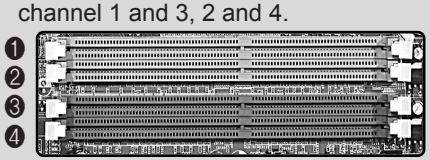
2 Align the notch at the bottom of the memory with a protrusion in the middle of the socket, and then insert the memory straight down.



Note

■ For dual channel system, each memory should be installed in independent slot(1&3 slot or 2&4 slot) when using DDR Memory

It is recognized as a single channel if there is a difference between dual channel 1 and 3, 2 and 4.



Firmly push the latch to lock the memory.

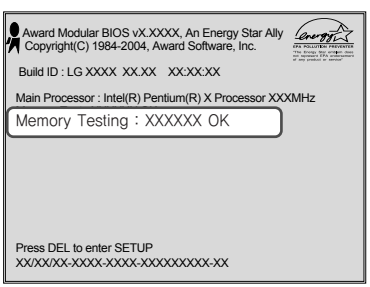
Checking the size of the installed memory

The computer automatically recognizes the newly installed memory; therefore, you do not need to change the system setup. Follow the instruction below to check the size of the installed memory.

1 Connect the power cord and other devices, and turn on the computer and monitor. The following screen appears to inspect the status of the computer.

2 If the following screen appears, press **[Esc]**. POST screen appears.

3 If the following screen appears, press **[Pause]** key to pause the screen. Make sure **[Memory Testing : XXXXXX OK]** appears.



Note

■ To stop the logo screen for a moment, press **[Delete]** key ➡ Advanced BIOS Features ➡ Full Screen Logo Show Selectable, and then select Disable.

4 After check the memory, press **[Esc]**. Windows screen appears.

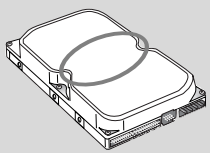
6-6. Adding a hard disk drive

Your computer supports up to 4 E-IDE controllers and 2 hard disk drives.

Before adding a hard disk drive

The following instruction describes the most typical configuration where your computer already has a master hard disk drive and you are adding a slave hard disk drive.

Note

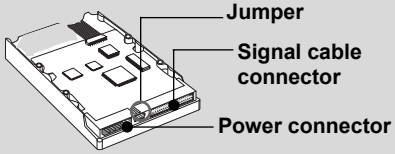


■ Check and write down the jumper settings, size, and number of cylinders, heads, and sectors of the hard disk drive where you can refer to when you use the system setup.

(Some hard disk drives do not have the information written on the drive)

Adding a hard disk drive

Note



■ Prepare the hard disk you want to add.

■ Purchase an E-IDE hard disk drive.

■ Set the jumper setting in the slave hard to SL: Slave.

■ The jumper settings differ from one hard disk drive to another, so make sure you follow the jumper setting information on top of the drive.

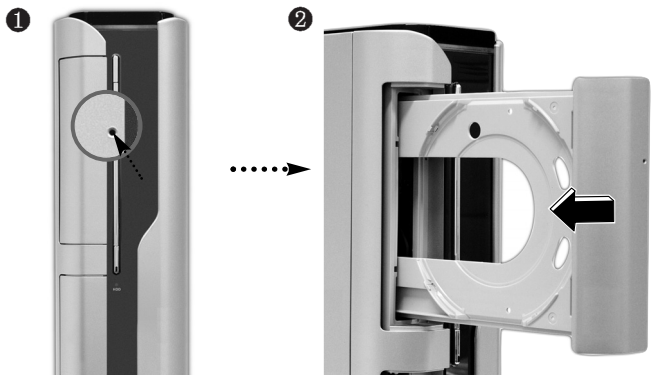
Caution

■ Always wear gloves to avoid injury when disassembling the computer.

■ If the master hard drive is set to CS(Cable Select), the slave drive must also be set to CS(Cable Select).

■ Using screws other than the ones provided with the hard disk drive can damage the drive. Using longer or thicker screws can be fatal to the disk drive. A hard disk drive must be mounted securely in order to provide reliable performance.

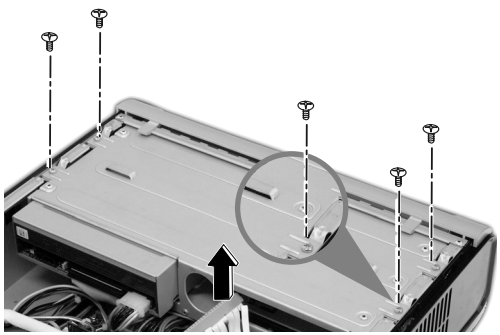
1 Open the CD-ROM drive by using a sharp pin into the emergency hole as shown on the picture No ❶. Remove the by pushing it to the direction of the arrow as shown on the picture No ❷.



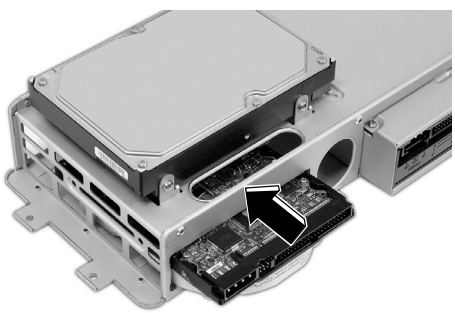
Caution

Turn off the computer and remove the cable when disassembling the computer. There is a risk of an electrical shock.

2 Refer to the page 62 to remove the cover. Remove the 4 screws from the hard case and remove the case to the direction of the arrow.



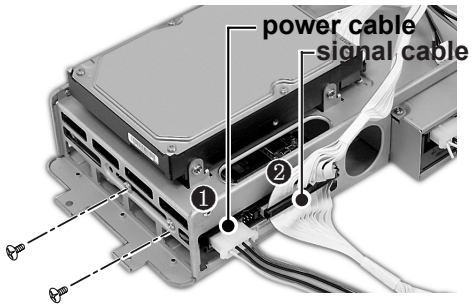
3 Push the new hard disk you want to replace with to the direction of the arrow.



Warning

Check the connection between the power cable and the signal cable. There is a risk of damage to the computer and an electrical shock.

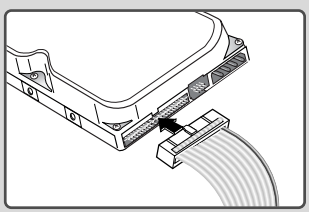
4 Connect the power cable connector and the signal cable connector to the new hard disk you want to replaced with and fasten 2 screws in the hard disk case.



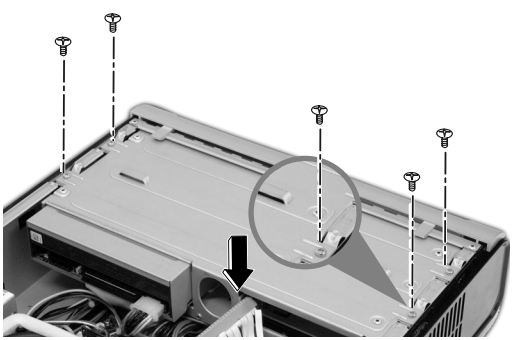
Note

■ Align the connector in a right position as show on the picture.

Actual appearance of the connector may be different from the picture, check the right position.



5 Fasten 4 screws in the hard case after connecting the cables. Refer to the page 62 to close the cover. Install the CD-ROM tray.



Note

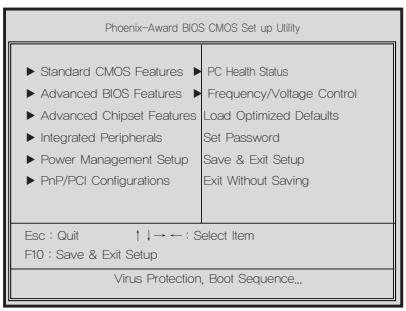
■ After installing the hard disk you should setup and format your system. Refer to the Hard disk setup on page 77.

Hard disk drive setup

1 Turn on the computer and monitor.

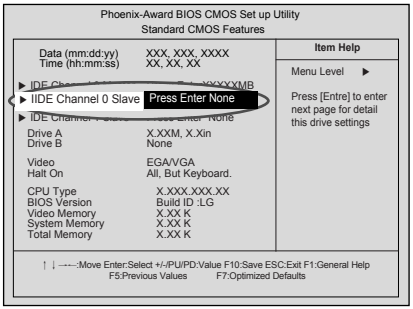
2 Press **[Delete]**key when the logo screen appears.

3 The CMOS Setup Utility opens.

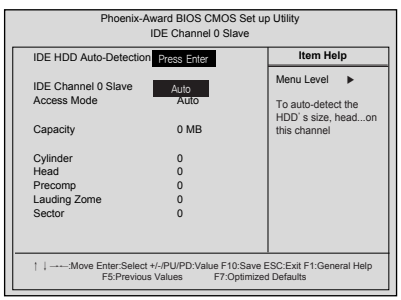


4 Use arrow [↑],[↓],[←], and [→] keys to select **Standard CMOS Features**, and press Enter.

5 Use arrow [↑],[↓],[←], and [→] keys to select **IDE Channel 0 Slave**, and press **[Enter]**.

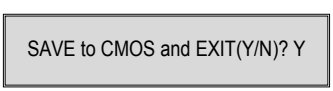


6 After setting **IDE Channel 0 Slave** to **Auto** by pressing **[Enter]**, press **[Enter]** in **IDE HDD Auto-Detection** so the system automatically recognizes the newly installed slave hard disk drive.



7 Press **[F10]** to save the new setting.

8 If the following message appears, press **[Enter]**. The computer restarts.



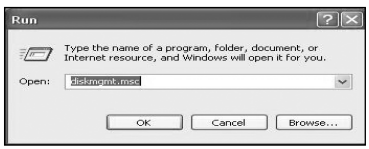
Hard disk setup (Hard disk with factory default setting)

Caution

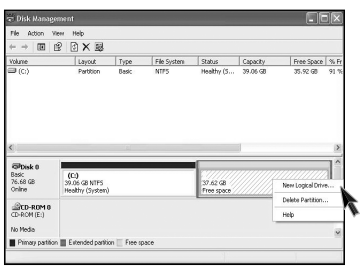
Be careful, Using <diskmgmt.msc> to divide partition delete data in a selected driver.

1 Click **[Start]** and **[Run]**.

2 Type '**diskmgmt.msc**' and press **[OK]**.

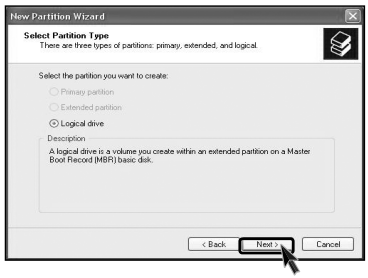


3 If the following window appears, select disk1. Click right button on the mouse to select New partition.

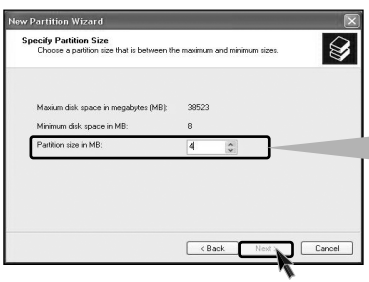


4 Click **[Next]** if the following message appears.

5 Select a partition and click **[Next]**.



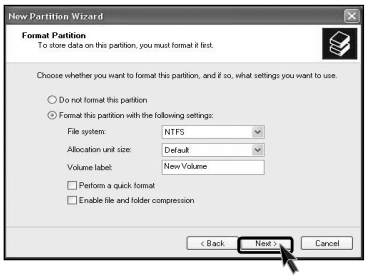
6 Select the maximum size and click **[Next]**.



A selected space of the disk will be available to use.

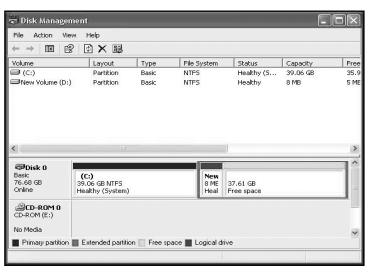
7 Click **[Next]** after selecting a drive value.

8 If the following window appears, select File system, Allocation unit size and Volume label ,and click [Next].



9 New Partition Wizard is complete, click [Finish].

10 After the format is complete, the hard disk operates normally.



6-7.Installing expansion cards

When you are using the computer, you may need to install expansion cards to improve funtionality. The following instruction describes how to install expansion cards.

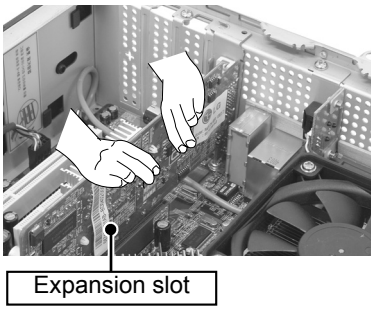
1 Refer to Opening the computer case to open the computer case cover.

Warning

Always use a screwdriver to open the case cover. There is the risk of injury.

2 Remove 3 screws as shown on the picture Remove the slot using driver where the expension card is located.(Remove the slot when expansion card is installed)

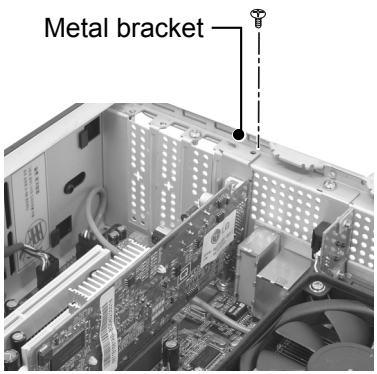
3 Hold the expansion card with both hands and align the expansion card and slot. Push down evenly to insert the card into the slot.



Caution

Incorrect installation of an expansion card may damage the main board and result in a computer malfunction.

4 Fasten a screw to fasten the metal bracket of the card to the computer case.



Warning

Using the computer without closing the case may result in fire, electric shock, injury, and/or damage to the computer.

5 Refer to Closing the computer case page 64 to close the case cover of the computer.

6 Install the driver program for the new expansion card.

Specifications *FG model

※ Specifications below differ depending on the models.

CPU	Intel Pentium 4 / Celeron mPGA478 type (2.4GHz or above)
System memory	256MB (up to 2.0 GB) - If built-in VGA is used, maximum 16MB and minimum 1MB is applied for Video Frame buffer in DOS Mode, but Windows Mode automatically manages the video memory (up to 96MB depending on System Memory size).
Cache memory	L1: 8KB/16KB or above, L2: 128KB/256KB/512KB/1024KB or above.
Hard disk drive	40GB or above (E-IDE type)
Keyboard	PS/2 keyboard (104keys)
Mouse	PS/2 mouse or USB (ball / wheel)
Video	Integrated or external AGP graphic
Sound	Built-in AC'97 audio. Support MIC-IN, SPEAKER-OUT and LINE-IN.(Support virtual 5.1 channel output)
LAN	Integrated 10/100Base-T Ethernet
USB	6ports (support USB 2.0)
Serial I/O	One RS-232C (9pins)
Front I/O	Two USB ports and audio ports (SPEAKER-OUT and MIC-IN)
Parallel I/O	One printer port (25pins)
IEEE1394	One IEEE1394
Extension slot	Three PCI slots, one AGP slot and four memory DIMM slots
Product size	Width 100 x Height 365 x depth 460(mm)
Cable	Power cable length 1.8m
Multi-memory card slot	CF/MD/MS/MS-Pro/SD/MMC/SMC card supported in the front pannel.
Power spec	100~127 / 200~240VAC, 5A / 4A, 50/60Hz or 200~240VAC. 4A, 50/60Hz
Environmental requirement	Temperature:Average temperature:77℉(25℃) Operating temperature:41℉~95℉ (5~35℃) Storage temperature:-4℉~131℉(-25~55℃)/Humidity:Average humidity:60%(RH) Operating humidity:30%~80%(RH)/Storage humidity:30%~80%(RH)

NOTE

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 pro-vide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radi-ate radio frequency energy and, if not in-stalled and used in accordance with the in-structions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equip-ment 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 try to correct the interference by one or more of the fol-lowing measures:

-. Reorient or relocate the receiving antenna.
-. Increase the separation between the equip-ment and receiver.
-. Connect the equipment into an outlet on a circuit different from that to which the re-ceiver is connected.
-. Consult the dealer or an experienced radio/TV technician for help.

Caution

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

memo