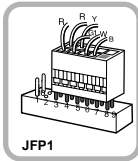
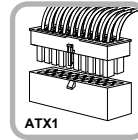


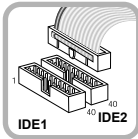
- ❶ Power switch, power/ hard disk activity LED connector (JFP1)



- ❷ Power connector (CONN1: 20 pins)

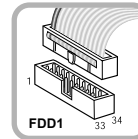


- ❸ Hard disk/CD-ROM drive connectors (IDE1, IDE2: 40 pins)



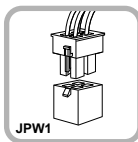
If you are attaching only one hard disk drive, be sure to connect it to IDE1.

- ❹ Floppy disk drive connector (FDD1: 34 pins)



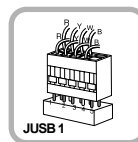
connects to the floppy disk drive.

- ❺ Power connector (JPW1: 4 pins)



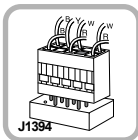
connects to the power supply.

- ❻ USB connector (JUSB1: 10 pins)



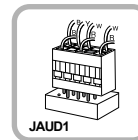
connects to the USB on the front of the computer.

- ❼ 1394 connector



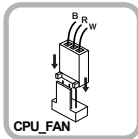
connects to the IEEE 1394 (6 pins) on the front of the computer.

- ❽ Audio connector (JAUD1: 7 pins)



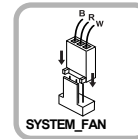
connects to the head-phone and microphone jacks on the front of the computer.

- ❾ CPU fan (C_FAN1: 3 pins)



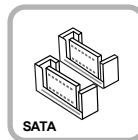
connects and supplies power to the CPU fan.

- ❿ System fan (S_FAN1: 3 pins)



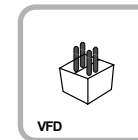
connects and supplies power to the system fan at the bottom of the computer.

- ⓫ SATA connector



connects S-ATA device

- ⓬ VFD connector

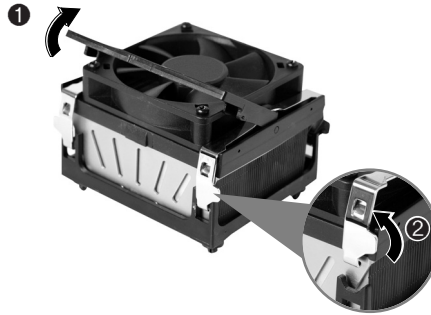


connects VFD.

3-4 Replacing the CPU (CG/DG/CM/EG models)

The shape and replacement method of the CPU fan may be different depending on the model.

1. Clamps on both sides of the CPU fasten the fan tightly to the CPU socket.
raise the handle(1) , release the clamps, and then spread them outward(2).



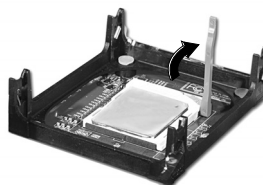
Caution

Consult your service representatives before replacing the CPU.

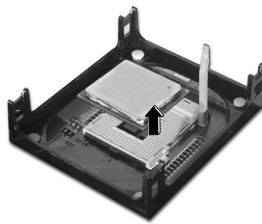
2. After releasing the clamps, lift and remove the CPU fan from the socket.



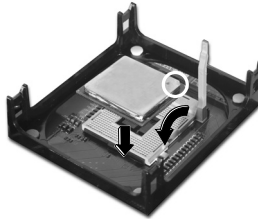
3. Raise the handle on the CPU socket to unlock the CPU.



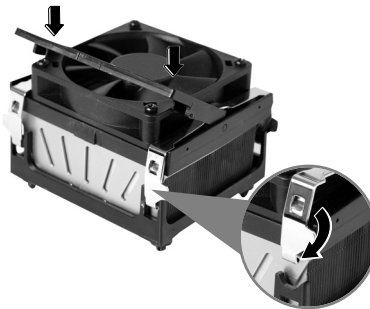
4. Lift the CPU straight up. Be careful not to damage the pins at the bottom of the CPU.



5. Align the identifying marks at the corners of the new CPU and socket, and carefully install the CPU in the socket. Lower the handle to lock the CPU in place.



6. Lift the clamps and slide them into the rails at the corners of the CPU socket, and place the fan into the socket. Push down the handles to lock the clamps.



Caution

In some models, you can not lower one of the handles of the clamps all the way down. For removing CPUs in these models, release the clamp on the other side first. For installing CPUs in these models, lock this clamp first.

Replacing the CPU (FG model)

The shape and replacement method of the CPU fan may be different depending on the model.

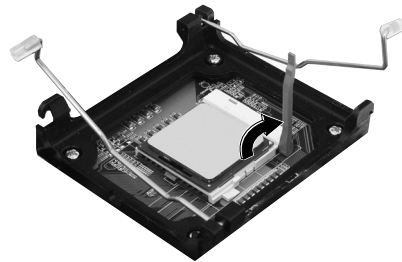
- 1 Release the clamps as arrows indicate.



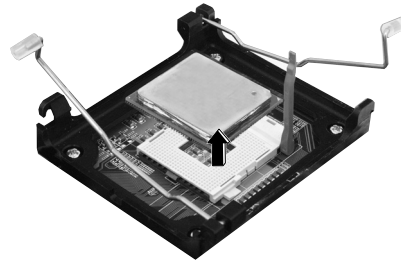
- 2 After releasing the clamps, lift and remove the CPU fan from the socket.



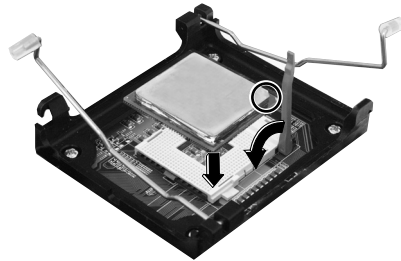
- 3 Raise the handle on the CPU socket to unlock the CPU.



- 4 Gently lift the CPU straight up to remove.



- 5 Align the identifying marks at the corners of the new CPU and socket, and carefully install the CPU in the socket. Lower the handle to lock the CPU in place.



- 6 Push the clamps as arrows indicate.,



3-5. Increasing the memory

If you run out of memory while using the computer, you may want to increase the amount of memory in your computer.

About memory

Your computer uses DDR(Double Data Rate) SDRAM DIMM(Dual In-Line Memory Module) with 184 pins. Your computer supports Unbuffered DDR SDRAM DIMM of 128MB up to 1024MB in size in each socket, and 2048MB total.

Note: Windows 95, 98SE, ME supports memory up to 512MB total. Increasing the memory beyond 512MB in these systems may cause errors while using the computer.

Before increasing the memory

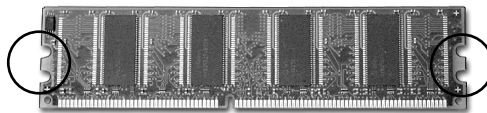
Static electricity can damage memory modules; be sure to minimize the static electricity when replacing memory.

Make sure to replace the memory of the same type as the installed memory.

DIMM is different from SIMM in that it is configured for 64 bit operation; therefore, your computer can operate with only one DIMM installed.

Note

Use a 2.5V DDR SDRAM DIMM.(The shape of the memory may be different depending on the model) DDR SDRAM enhances the rate of data transmission of the SDRAM and looks different from SDRAM.



DDR

Purchasing a memory

Check the type of memory installed in your computer and refer to the memory configuration chart before purchasing a memory.

Specification: PC2700/3200(184 pin DDR SDRAM DIMM)

Speed: 333MHz(166MHz X 2), 400MHz(200MHz X 2)

Size: 256MB, 512MB

Memory configuration chart

Total memory	DIMM 1	DIMM 2	DIMM 3	DIMM 4	DUAL/SINGLE
256MB	256				SINGLE
512MB	256MB		256MB		DUAL
		256MB		256MB	DUAL
	512 (1/4)				SINGLE
1024MB	256MB	256MB	256MB	256MB	DUAL
	512MB		512MB		DUAL
		512MB		512MB	DUAL
2048MB	512MB	512MB	512MB	512MB	DUAL



Caution

Your computer supports PC2700/3200 DDR memory.

Use Unbuffered DDR SDRAM DIMM only to increase the memory.

FSB Frequency	Supported memory type
533/800 MHz	PC2700/3200-DDR SDRAM 333/400 MHz

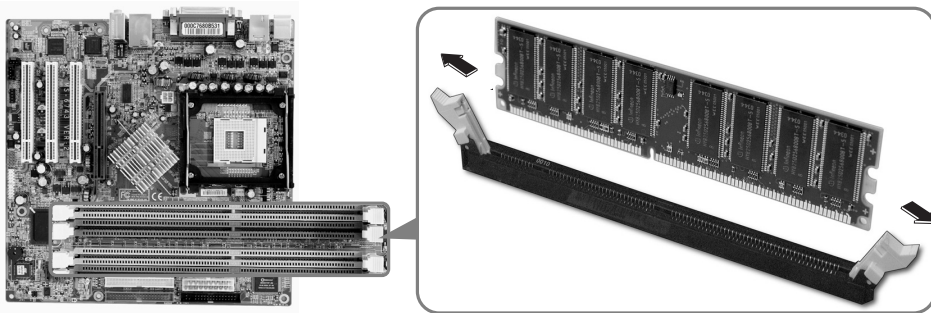
Replacing the memory

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.

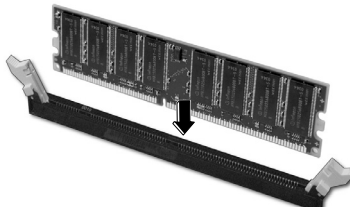


Installing a memory

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.

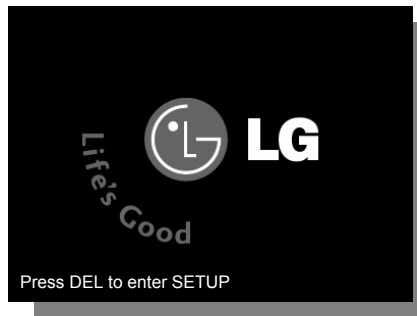


Note: Push the latch inward so that the memory is securely locked in the socket.

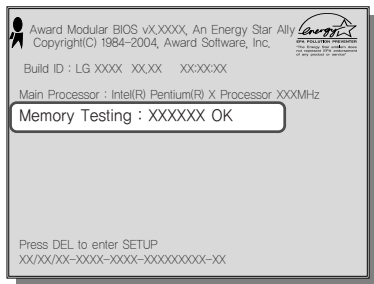
Checking the size of the installed memory

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.
2. Press Delete when the following logo screen appears. In CMOS Setup Utility, select Advanced BIOS Features. Change Full Screen Logo Show Selectable from Enabled to Disabled. Press F10, and Enter to save the new setting.



3. The computer restarts. Press Esc at the logo screen shown above. If the following screen appears, press Pause to stop and check the **size of memory** next to Memory Testing.



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. Press Esc to continue the startup.

3-6. 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)

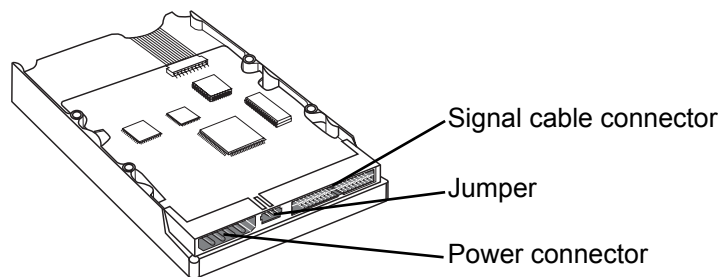
Adding a hard disk drive

Note

Purchase an E-IDE hard disk drive.

Set the jumper setting 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.



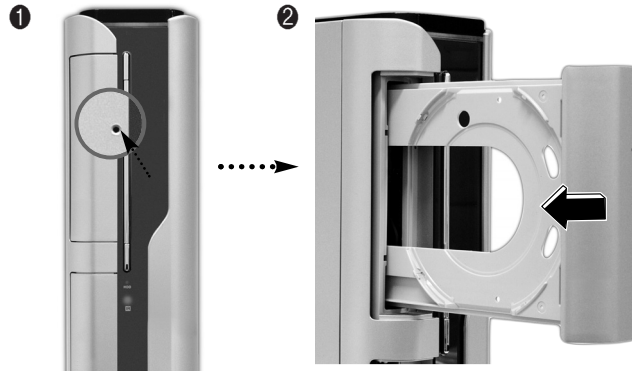
Caution

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.

Adding a hard disk drive (FG model)

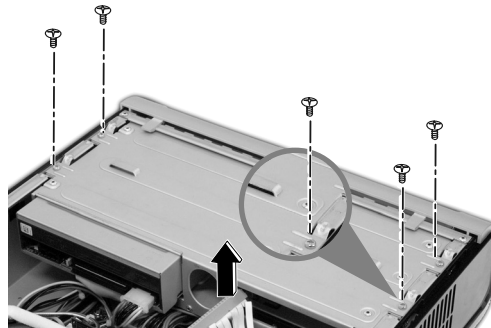
- 1 Open the CD-ROM tray using a sharp pin 1...Remove the CD-ROM tray in the direction of arrow 2.



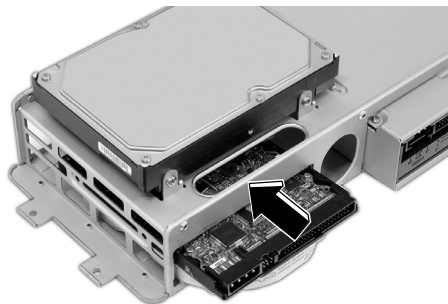
Warning

Turn off the computer before remove power cable from your computer. There is a risk of electrical shock

- 2 Use the screwdriver to remove the computer cover.



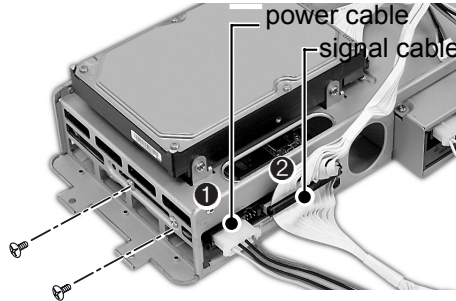
- 3 Gently push a new hard disk drive in the hard drive case as the direction of arrow



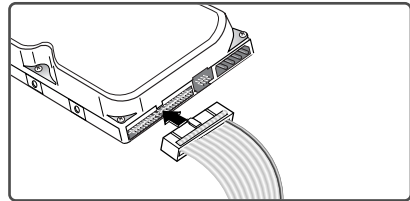
Warning

Incorrect connection of the power and signal cables to a hard disk drive may damage the drive and result in drive malfunction or electric shock.

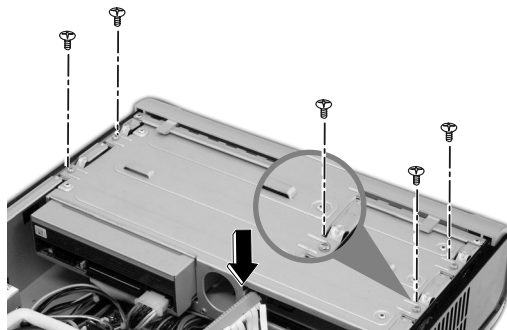
- 4 Connect a signal and power cable to the newly installed hard disk drive.



Note: When connecting the signal cable to the hard disk drive, be sure to align the tab in the middle of the cable with the notch on the connector of the hard disk drive. The notch and tab prevent inserting the cable upside down. Depending on the hard disk drive, the notch may be at the bottom of the connector.



- 5 Install the hard disk drive case to the computer and tighten screws.

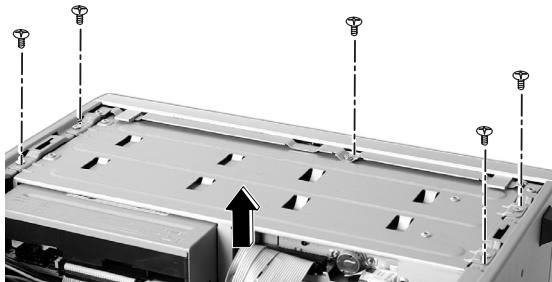


Note

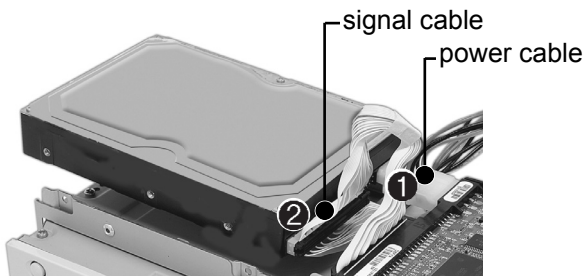
You must setup and format the newly installed hard disk drive. Refer to Hard disk drive setup.

Adding a hard disk drive (CG/DG/CM models)

- 1 Refer to Opening the computer case to remove the computer case cover.
- 2 Remove screws on the hard drive case.



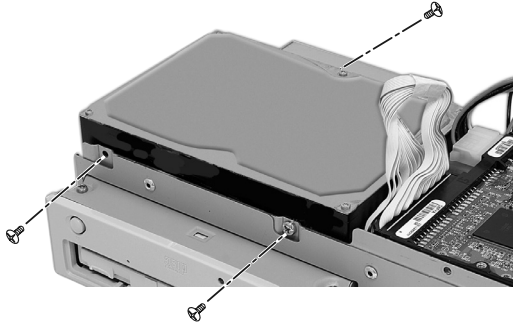
- 3 Connect a signal and power cable to the newly installed hard disk drive.



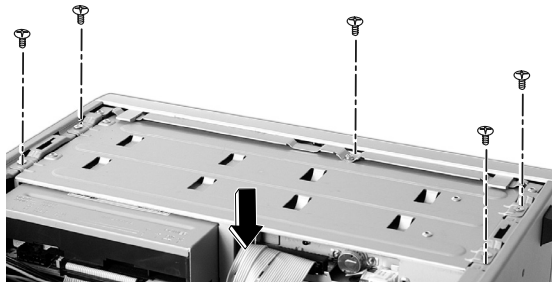
Warning

Incorrect connection of the power and signal cables to a hard disk drive may damage the drive and result in drive malfunction or electric shock.

- 4 Install the hard disk drive case to the computer and tighten screws.



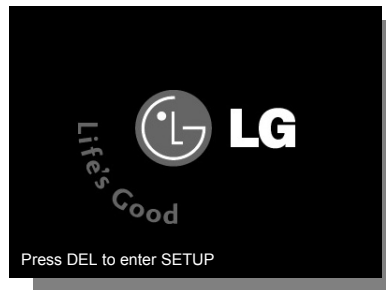
- 5 Tighten screws as shown o the picture



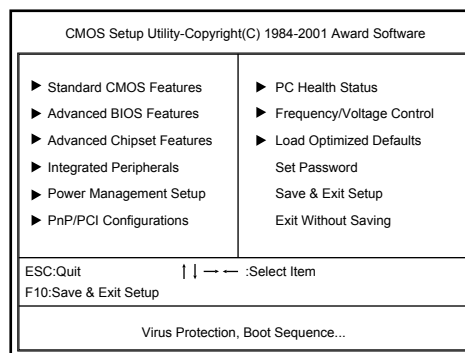
- 6 Refer to Closing the computer case to close the computer case cover

Hard disk drive setup

1. Turn on the computer and monitor.
2. Press Delete key at the logo screen.

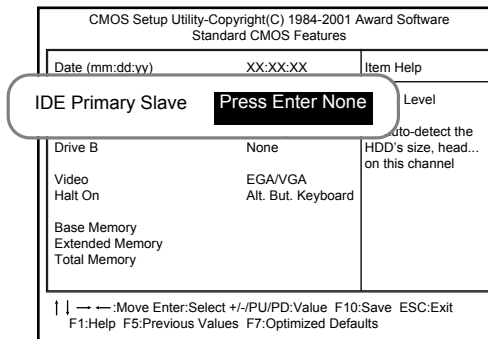


3. The CMOS Setup Utility opens.

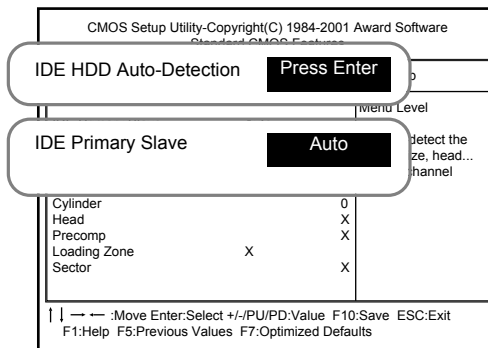


4. Use arrow keys to select Standard CMOS Features, and press Enter.

5. Use arrow keys to select IDE Primary Slave, and press Enter.

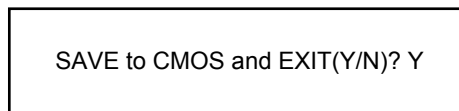


6. After setting IDE Primary Slave to Auto by pressing Enter, press Enter in IDE HDD Auto-Detection so the system automatically recognizes the newly installed slave hard disk drive.



7. Press F10 to save the new setting.

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



Installing expansion cards (FG/CG/CM/DG models)

When you are using the computer, you may need to install expansion cards to improve functionality. 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. Use a flat screwdriver to remove the metal cover for the expansion slot you are about to use. (Remove only when you are adding a new expansion card)



FG



CG/DG/CM

Installing expansion cards (EG model)

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

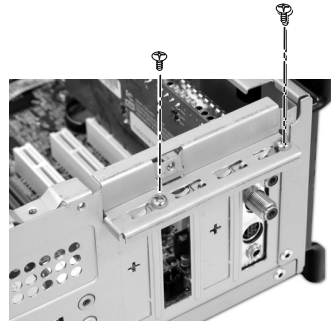
1. Refer to Opening the computer case to open the computer case cover.



Warning

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

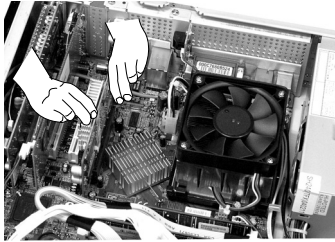
2. Use a screwdriver to remove the metal cover for the expansion slot you are about to use. (Remove only when you are adding a new expansion card)



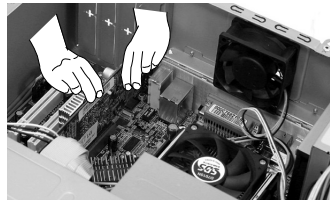
Use a screwdriver to remove the latch as shown on the right.

Installing expansion cards (Continued)

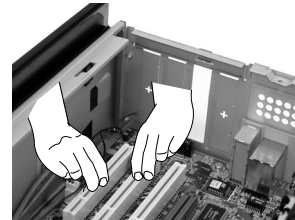
3. Hold the expansion card with both hands and align the expansion card and slot.
Push down evenly to insert the card into the slot.



FG



CG/DG/CM



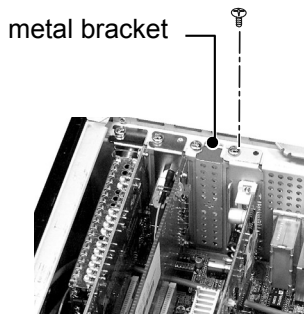
EG



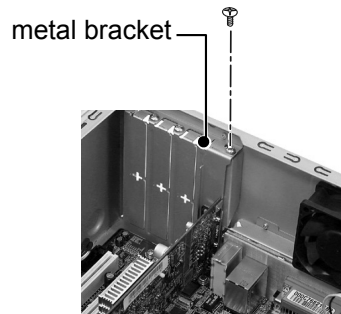
Caution

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

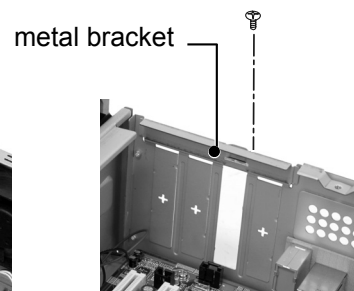
4. Tighten a screw to fasten the metal bracket of the card to the computer case.



FG



CG/DG/CM



EG

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



Warning

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

6. Install the driver program for the new expansion card.

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

WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

INFORMATION TO USER:

This equipment has been tested and found to comply with the limit of 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, 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 try to correct the interference by one or more of the following measures:

1. Reorient / Relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help



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