SONY

Upgrading and Maintaining Your VAIO® Computer

Overview

In the future you may want to install additional boards to expand the functionality of your computer. This section describes how to open your computer and insert add-in boards, add memory, replace the lithium battery, and install an additional hard disk drive. For more information on upgrading your Sony computer, see the computer *Reference Manual*. You can download the *Reference Manual* from the Sony web site at http://www.sony.com/pcsupport.

The procedures in this section assume you are familiar with the general terminology associated with personal computers and with the safety practices and regulatory compliance required for using and modifying electronic equipment. Read "Notes on Use" in the *VAIO Consumer Information Guide* before upgrading your Sony computer.

! **Always switch the power off before you open the system or connect your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.**

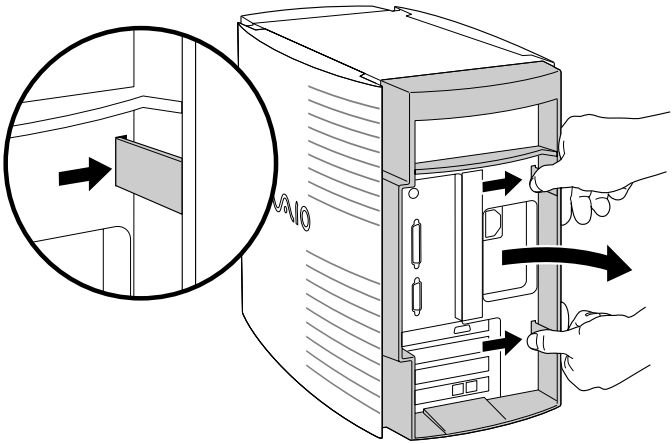
Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Do the procedures described here only at an ESD workstation. If such a station is not available, do not work in a carpeted area and do not handle materials that produce or hold static electricity (cellophane wrappers, for example). Ground yourself by maintaining continuous contact with an unpainted metal portion of the chassis while performing the procedure.

Removing the Cover

! **If you remove the cover immediately after you shut down your computer, the components may be too hot to touch. Wait until the internal parts of the system unit cool down before you attempt to remove the cover.**

1 Press the two tabs on the right side of the rear frame.

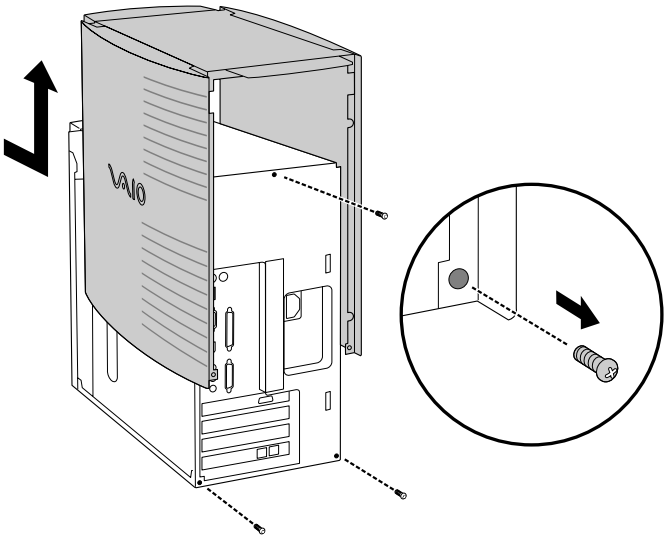
2 Remove the frame from the unit by gently pulling it from left to right.



Add-in board configuration varies by model.

3 Remove the screws from the center top, the lower left corner, and the lower right corner of the metal back plate.

4 Lift the three-sided outer panel by pulling up on the large tab extending from the top rear. Lift the outer panel up over the unit and set it aside.



Inserting an Add-in Board

Models PCV-R536DS/PCV-R538DS/PCV-R539DS

There are three PCI expansion slots in this computer. One slot contains the factory-installed modem card. The other slots are empty, enabling you to install add-in boards to expand the functionality of your system. You can install add-in boards that support Microsoft® Windows® 98 Second Edition and the PCI revision 2.1 specification.

Model PCV-R532DS

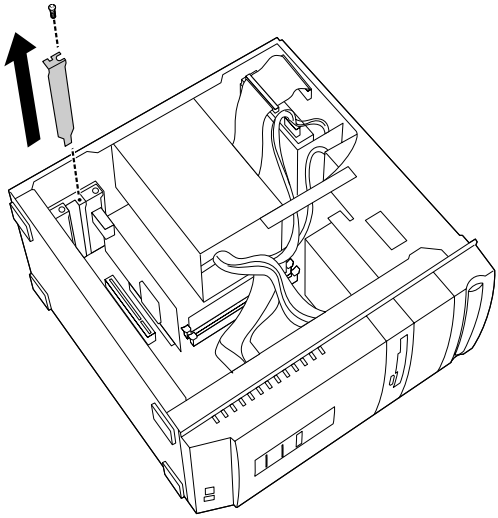
There are four PCI expansion slots in this computer. Slot 1 contains the factory-installed modem card, and Slot 2 contains the i.LINK® (IEEE-1394) card. The other slots are empty, enabling you to install add-in boards to expand the functionality of your system. You can install add-in boards that support Windows® 98 and the PCI revision 2.1 specification.

To insert an add-in board

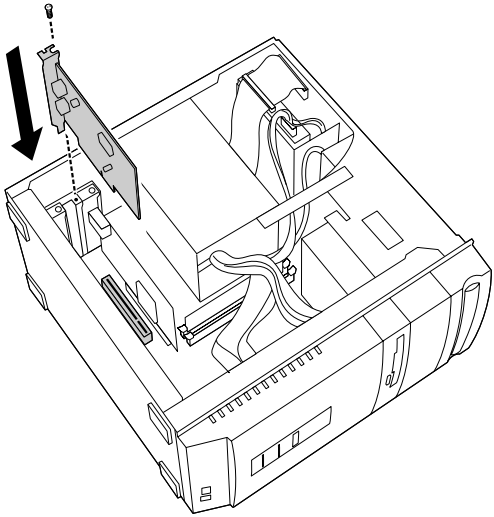
! **Make sure you observe the proper safety precautions when you add boards to your Sony computer. See "Notes on Use" in the VAIO Consumer Information Guide.**

1. Shut down your computer and turn off all peripheral devices, such as your printer.
2. Unplug your computer and any peripheral devices.
3. Remove the cover as described on page 3.

4 Locate one of the available expansion slots. Remove the screw, and then remove the slot cover.



5 Install the add-in board by plugging it into the expansion slot.



6 Attach any internal cables that the board requires (see the manual for the add-in board).

7 Replace the cover and reinstall the screws as described on page 16.

8 Connect all peripheral devices and AC power, and then turn on the computer.

Adding Memory

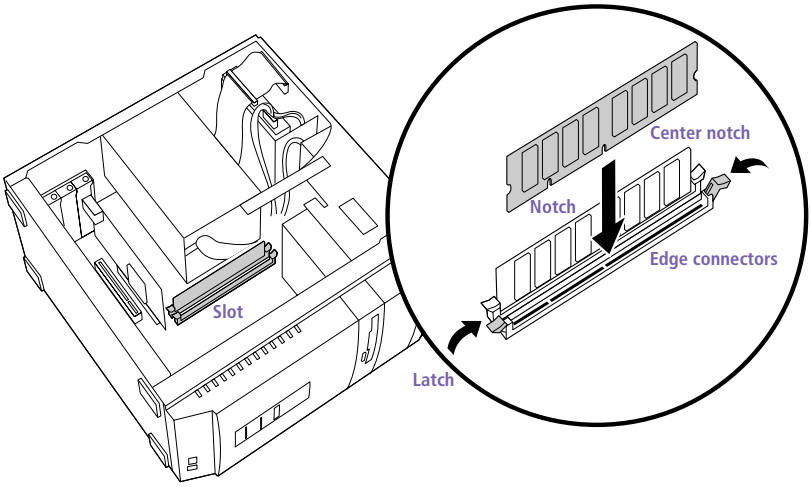
The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. Sony computer supplies, accessories and peripherals can be purchased from your dealer or by contacting Sony at http://www.sony.com/accessories.

To install memory

! **Make sure you observe the proper safety precautions when you add DIMMs to your Sony computer. See "Notes on Use" in the VAIO Consumer Information Guide.**

1. Shut down your computer and turn off all peripheral devices, such as your printer.
2. Unplug your computer and any peripheral devices.
3. Remove the cover as described on page 3.
4. If necessary, remove any cables, add-in cards, or other components to access the DIMM sockets.
5. Handle the DIMM only by the edges, and remove it from its anti-static package.
6. Locate the keys on the bottom edge of the DIMM.

7 Align the DIMM over the socket.



! **To avoid damaging the DIMM socket, move the DIMM socket tabs slightly outward to relieve pressure. The DIMM should then click easily into place.**

8 Firmly insert the bottom edge of the DIMM into the socket.

9 Press evenly against the DIMM's upper corners. The end latches snap into position automatically.

10 Reinstall any add-in cards or components you removed.

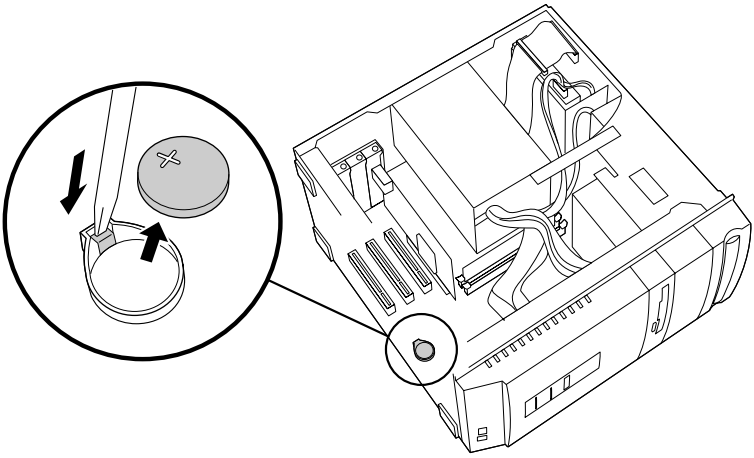
11 Replace the cover and reinstall the screws, as described on page 16.

Replacing the Lithium Battery

After several years, when the lithium battery starts to weaken, the system settings stored in CMOS RAM, such as the date and time, may be wrong. When this occurs, you need to replace the lithium battery.

To replace the lithium battery

1. Write down any changes you have made to the settings in the BIOS Setup utility. If you have not made any changes to the BIOS settings, proceed to step 2.
2. Shut down your computer and turn off all peripheral devices, such as your printer. Unplug your computer.
3. Remove the cover as described on page 3.
4. If necessary, remove any cables, add-in cards, or other components to access the lithium battery.
5. Remove the old battery, and install the new battery with the plus (+) side up.



! **There is danger of the battery exploding if it is replaced incorrectly. You must replace the battery only with a CR2032 type lithium battery. Discard used batteries according to the instructions in the VAIO Consumer Information Guide.**

6 Replace the cover and reinstall the screws, as described on page 16.

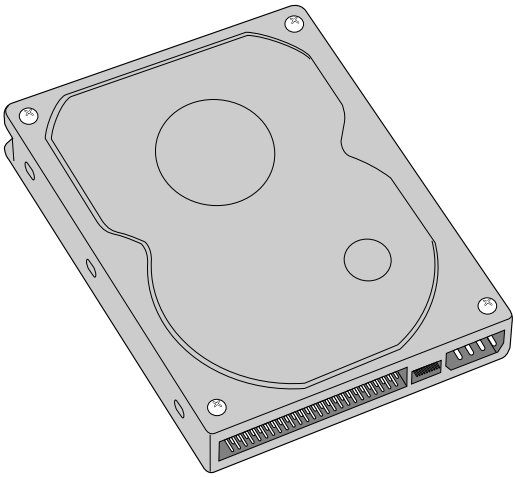
The values stored in the CMOS memory are now reset to the factory default values. You must run the Setup utility to reset the date, time, passwords, and other changes you may have made to the BIOS settings. If you do not wish to customize your BIOS settings, you do not need to run the Setup utility. If you simply wish to reset the date and time, see Windows Help for instructions.

Installing an Additional Hard Disk Drive

Your computer comes with an available internal bay to hold a second standard 3½ inch hard disk drive. You may also use the additional 5¼ inch external bay on the PCV-R532DS and PCV-R536DS. The hard disk drive access light blinks when either internal drive is active. For information on how to install additional drives into the external drive, see the computer *Reference Manual*. You can download the *Reference Manual* from the Sony web site at http://www.sony.com/pcsupport.

! **Before opening the system unit, save any open files, exit Windows, turn off the power of the computer and all attached peripherals, and then unplug the power cord.**

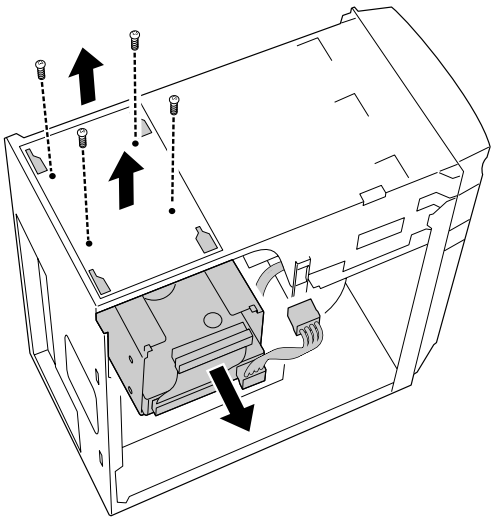
1 Configure the jumpers on the new drive as a slave (see your drive's documentation for configuration instructions).



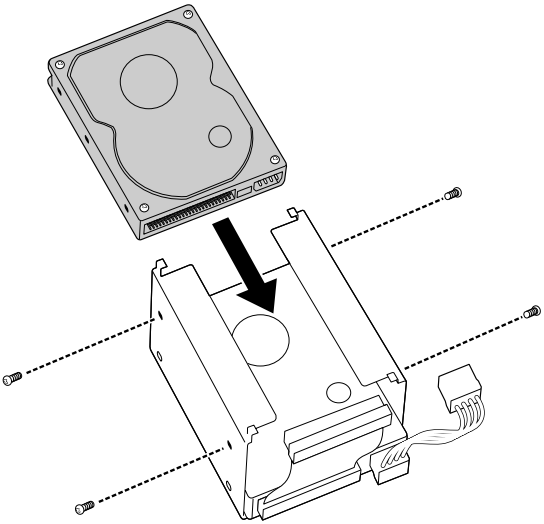
2 Remove the cover as described on page 3.

3 Remove the screws that secure the drive holder to the chassis top.

4 Slide the drive holder forward and then out.



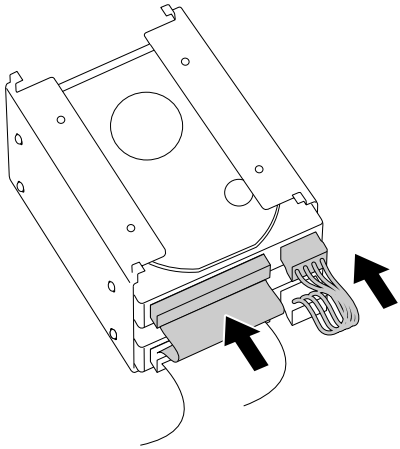
5 Slide the new drive into the drive holder and align the holes on each side of the drive bay.



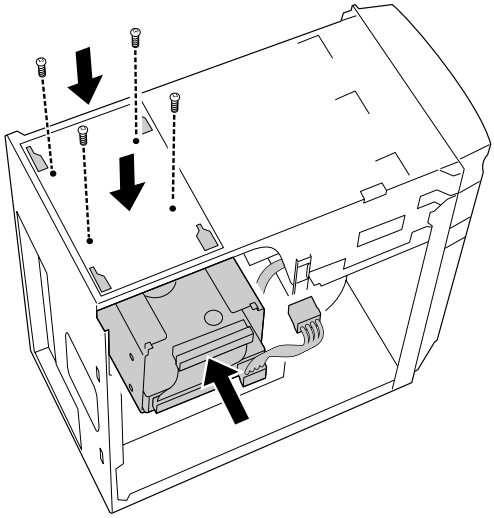
6 Secure the drive to the drive holder using the two holes on each side of the drive holder (screws are provided with the new drive). Do not overtighten the screws.

7 Connect the second drive connector to the new drive. Be sure to orient the connector so that pin 1 (the red side of the ribbon cable) is aligned with pin 1 of the new drive.

8 Connect the second power connector to the new drive.



9 Place the drive holder against the inside of the front chassis and slide it back. Be sure to align the slots on the drive holder with the tabs on the inside of the chassis. Be sure to slide the drive holder back so that the tabs slip into the notch at the bottom of the slot.



10 Replace the screws that secure the holder to the chassis.

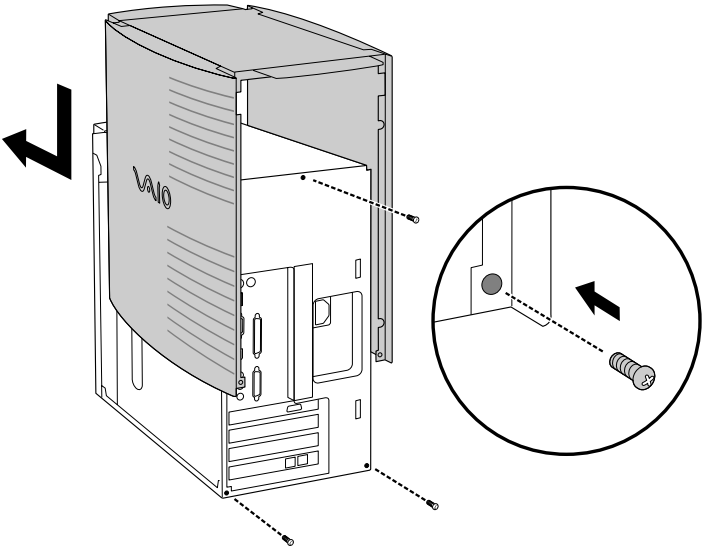
11 Replace the cover and reinstall the screws, as described on page 16.

Your computer automatically recognizes the new drive and configures itself accordingly when you turn it on. Partition and format the new drive following the instructions provided with the drive.

Replacing the Cover

1 Align the three-sided outer panel over the chassis and lower it on to the unit. Be sure to slide the panel on to the unit so that the tabs slip into the lips on the unit.

2 Replace the three screws at the center top, lower left corner, and lower right corner of the metal back plate.



3 Replace the frame by inserting the three small tabs into the slots on the left side of the unit and slipping the two larger tabs into the slots on the right side of the unit. Gently press the frame until it clicks into place.