

SONY®

VAIO® MicroTower User Guide



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Safety Information

Owner's Record

The model number and serial number are located on the back of your Sony computer. Record the model and serial numbers in the space provided here. Refer to the model and serial number when you call your Sony Service Center.

Model Number: _____

Serial Number: _____

WARNING

- To prevent fire or shock hazard, do not expose your Sony computer to rain or moisture.
- Never install modem or telephone wiring during a lightning storm.
- Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations
- Never touch uninsulated telephone wire or terminals unless the telephone line has been disconnected at the network interface.
- Use caution when installing or modifying telephone lines.
- Avoid using the modem during an electrical storm.
- Do not use the modem or a telephone to report a gas leak in the vicinity of the leak.

! The use of optical instruments with this product will increase eye hazard.

Regulatory Information

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 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:

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

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Only peripherals (computer input/output devices, terminals, printers, etc.) that comply with FCC Class B limits may be attached to this computer product.

Operation with non-compliant peripherals is likely to result in interference to radio and television reception.

All cables used to connect peripherals must be shielded and grounded. Operation with cables, connected to peripherals, that are not shielded and grounded, may result in interference to radio and television reception.

FCC Part 68

This equipment complies with Part 68 of the FCC rules. The ringer equivalence number (REN) and the FCC registration number are printed on the modem board. If requested, this information must be supplied to the telephone company.

The REN is used to determine the quantity of devices which may be connected to the phone line. Excessive REN's on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the REN's should not exceed five (5.0). To be certain of the number of devices that may be connected to the line, as determined by the total REN's, contact the telephone company to determine the maximum REN for the calling area.

This modem uses the USOC RJ-11 telephone jack.

If this equipment causes harm to the telephone network, the telephone company will, when practical, notify you in advance that temporary discontinuance of service may be required. If advance notice isn't practical, the telephone company will notify you as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operations of the equipment. If this happens, the telephone company will notify you in advance, in order for you to make the necessary modifications in order to maintain uninterrupted service.

If trouble is experienced with this modem, for repair or warranty information, please contact 1-888-4SONY-PC, or write to the Sony Customer Information Center, One Sony Drive, Park Ridge, NJ 07656.

This equipment cannot be used on telephone-company-provided coin service. Connection to Party Line Service is subject to state tariffs.

Repair of the modem should be made only by a Sony Service Center or Sony authorized agent. For the Sony Service Center nearest you, call 1-888-4SONY-PC (1-888-476-6972).

Telephone Consumer Protection Act of 1991

The Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone facsimile machine unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent and an identification of the business, other entity, or individual sending the message, and the telephone number of the sending machine or such business, other entity, or individual.

In order to program this information into your facsimile, see your fax software documentation.



You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

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Welcome

Congratulations on your purchase of the Sony VAIO® MicroTower Computer. Sony has combined leading-edge technology in audio, video, computing, and communications to provide you with state-of-the-art personal computing.

About the User Guide

The User Guide offers a quick introduction and reference to your Sony computer.

- ❑ **Setting Up Your VAIO MicroTower** shows you how to connect the standard components of your system—generally in under 15 minutes. This section also explains how to connect additional components, such as a printer, MIDI instrument, joystick, digital camera, and more.
- ❑ **Getting Started With VAIO Space** describes how to use VAIO Space and the audio and video applications on your VAIO MicroTower.
- ❑ **Getting Help** explains the support options available to you, shows you how to use the Sony Online Support service, and offers basic troubleshooting tips.
- ❑ **Upgrading and Maintaining Your VAIO MicroTower** illustrates how to install an add-in card, add memory, install an internal hard disk drive, and replace the lithium battery.
- ❑ **Computer Basics** shows new computer users how to use a mouse, keyboard, DVD-ROM, and diskette drive.
- ❑ **Other Information** provides facts and advice about using your computer.
- ❑ **Limited Warranty Statement** provides your product warranty statement and explains how to extend your warranty for an additional nine months.

Setting Up Your VAIO MicroTower

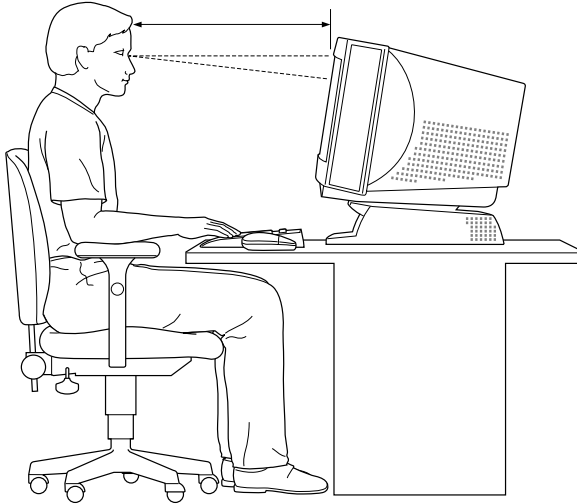
Your VAIO MicroTower comes with the software titles preinstalled on your hard disk drive. Just follow these simple steps to connect the cables and turn on the computer, and your VAIO MicroTower is ready to use.

Choosing a Location for Your Computer

Before you get started, find the best location for your new computer. Here are some things to consider when planning your workspace:

- ❑ **Stable work surface**—Use a stable work surface large enough to support the computer, the display, and other equipment.
- ❑ **Ventilation**—Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
- ❑ **Placement of the keyboard, mouse, and other input devices**—Place your keyboard, mouse, and other input devices so that your arms and hands are in a relaxed, comfortable position. The keyboard should be directly in front of you. Adjust the level of the keyboard so that your lower arms are parallel to the floor. Keep your wrists in a relaxed position when you're using the keyboard—not angled up or down. Use the palmrest only briefly, for resting. While typing, never use the palmrest or rest your hands on the table. Position the mouse at the same level as the keyboard. Hold the mouse with a relaxed hand, and use your whole arm to move it. Take breaks during sessions with your computer. Excessive use of the mouse or a joystick may strain muscles or tendons.


- ❑ **Furniture and posture**—Sit in a chair with good back support and armrests. Adjust the level of the chair so your feet are flat on the floor. A footrest may make you more comfortable. Sit in a relaxed, upright posture—avoid slouching forward or leaning far backward.






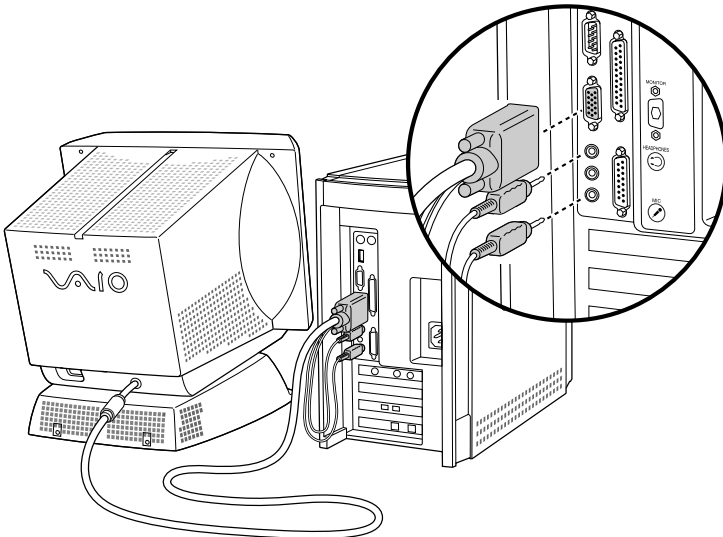
- ❑ **Viewing angle of the display**—Position the display 18 to 26 inches directly in front of you, with the top of the screen at or a little below eye level. Use the display's tilting feature to find the best position. You can reduce eye strain and muscle fatigue by placing the display in the proper position.
- ❑ **Lighting**—Choose a location where windows and lights do not create glare and reflection on the display. Use indirect lighting to avoid bright spots on the display. You can also purchase accessories for your display that help reduce glare. Proper lighting adds to your comfort and work effectiveness.

Connecting the Sony Multimedia Computer Display

The Sony Multimedia Computer Display (sold separately) is an integrated audio/video unit with built-in speakers and a microphone. Follow these steps to connect it to your computer.

 If you're connecting the computer to a TV or other video component, see "Connecting a Television (Audio/Video Out)" on page 12.


- 1 Use the blue  symbol to locate the **MONITOR** (display) connector. Plug the blue display cable into this connector, and then tighten the two screws to secure the cable.
- 2 Use the green  symbol to locate the **HEADPHONES** connector. Plug the green speaker cable into this connector.
- 3 Use the red  symbol to locate the **MIC** (microphone) connector. Plug the red microphone cable into this connector.







 See the manual that came with your Sony Multimedia Computer Display for more information on setting up and using the display.

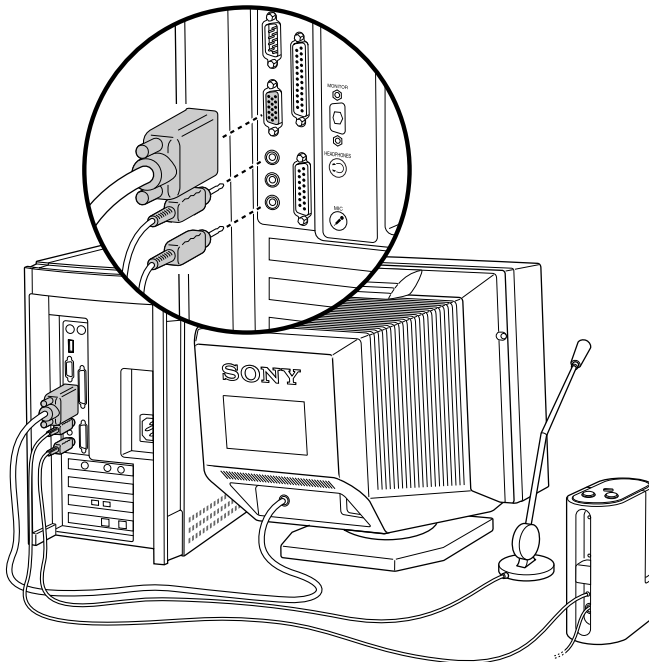
Connecting a Display, Speakers, and a Microphone

If you did not purchase the Sony Multimedia Computer Display, you need speakers and a microphone to use the computer's audio features.

 If you're connecting the computer to a TV or other video component, see "Connecting a Television (Audio/Video Out)" on page 12.

 Make sure your speakers are designed for computer use. See the manuals that came with your display, speakers, and microphone for more information on setting them up and using them.

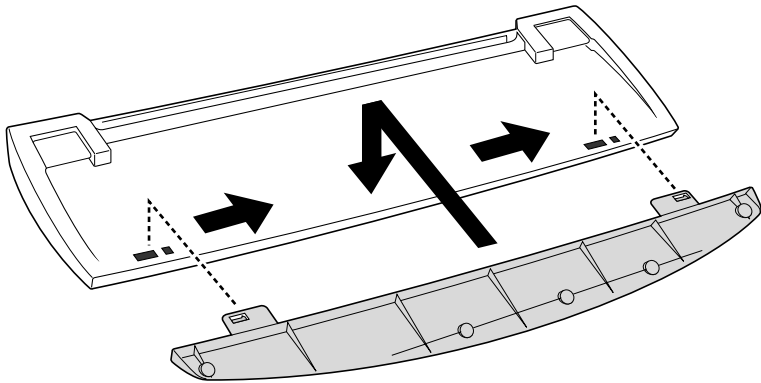
- 1 Use the blue  symbol to locate the **MONITOR** (display) connector. Plug the display cable into this connector, and then tighten the two screws to secure the cable.
- 2 Use the green  symbol to locate the **HEADPHONES** connector. Plug the speaker cable into this connector.
- 3 Use the red  to locate the **MIC** (microphone) connector. Plug the microphone cable into this connector.



Connecting the Optional Palmrest

The keyboard that comes with your computer is equipped with an optional palmrest that you can attach to your keyboard. Follow these steps to connect the palmrest.

- 1 Place the keyboard and palmrest upside down on a flat surface.
- 2 Insert the latching posts on the palmrest into the openings on the keyboard.
- 3 Move the palmrest to the right until you feel it snap into place.





Do not keep your wrists on the palmrest while typing; use the palmrest briefly only when resting.

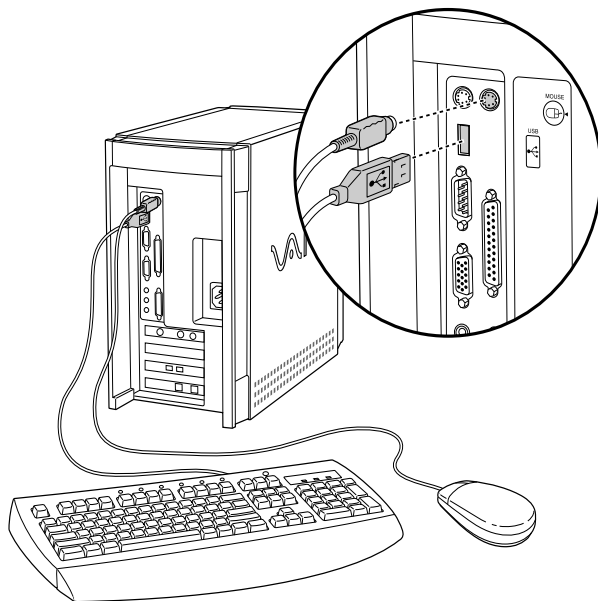
To remove the palmrest

- 1 Turn the keyboard and palmrest upside down.
- 2 Push down on the palmrest, and then move it to the left.
- 3 Lift the palmrest away from the keyboard.

Connecting the Keyboard and Mouse

Follow these steps to connect the keyboard and mouse.


- 1 Use the dark grey  symbol to locate the **USB** connector. Plug the purple keyboard cable into this connector.
- 2 Use the blue-green  symbol to locate the **MOUSE** connector and insert the blue-green mouse cable into this connector.




See "Computer Basics" on page 71 for more information on setting up and using the keyboard and mouse.

Connecting the Phone Line and Phone

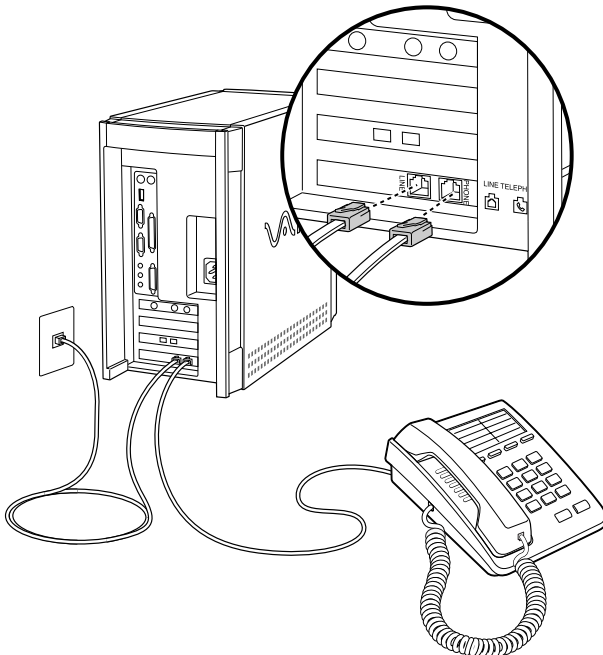
You need to connect a phone line to take advantage of online services, the Internet, and faxing. To use Sony Online Support (SOS), you must also connect a phone.


 In order to register your Sony VAIO MicroTower, register your software online, and use Sony Online Support, you must connect your computer to a phone line. Also, you must register your computer to receive the extended warranty.

There are two phone jacks on the back panel. Follow these steps to connect your phone line and phone.

 The location of the Line and Telephone jacks on your computer may vary from those shown in the illustration .

- 1 Unplug your phone from the wall jack and plug it into the **TELEPHONE** jack on the computer.
- 2 Plug one end of the phone cable that came with your system into the **LINE** jack and the other end into the wall jack.

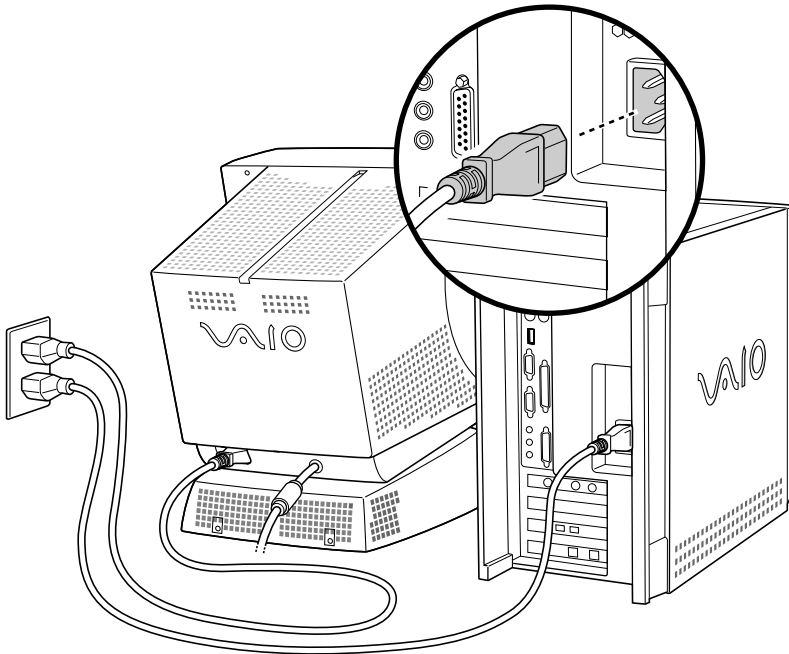


 Your computer does not work with party lines, cannot be connected to a coin-operated telephone, and may not work with multiple phone lines or a private branch exchange (PBX).

Connecting the Power Cords

Follow these steps to connect the power cords.

- 1 Plug the power cord into the connector on the computer.
- 2 If necessary, plug the display power cord into the display.
- 3 Plug both the display and power cords into a grounded AC wall outlet, power strip, or Uninterruptible Power Supply.



Connecting Peripherals

You can add functionality to your computer by connecting any of the following peripherals.

<i>Connecting</i>	<i>Enables You To</i>	<i>For Details</i>
Television	Send audio and video from the computer to the TV. Allows you to play games and watch movies on a large screen. Also useful for business presentations.	See page 12
Printer	Print documents from the computer.	See page 15
Joystick	Connect a joystick, which enhances game playing.	See page 16
MIDI device	Connect MIDI instruments.	See page 16
i.LINK (IEEE-1394) equipped device*	Connect a digital video camera without shutting down your computer. Enhance still pictures or edit your videos with easy-to-use, preloaded software applications.	See page 17
S/PDIF equipped device*	Record digital audio directly from your computer to audio recording devices such as a digital receiver or minidisc player/recorder.	See page 18
S-Link (Control A1) equipped device*	Connect a minidisc player or CD changer and create libraries of your favorite music on your computer.	See page 19
Universal Serial Bus (USB) device	Connect USB devices.	See page 20
Serial device	Connect serial devices, such as a digital camera.	See page 21

* Some models of the VAIO MicroTower may not include this feature.



Turn off the computer before connecting peripherals. In normal use, you should turn on the peripherals before turning on the computer. You can connect USB devices while the computer is on.


Connecting a Television (Audio/Video Out)

Connecting a television to your computer enables you to send audio and video from the computer to the television. (You will be able to watch video and hear audio on both the computer and the television.)




You can also connect the computer to a camcorder, VCR, or other video component that has a VIDEO IN or S VIDEO IN connector.


If your system includes the Sony Multimedia Computer Display:

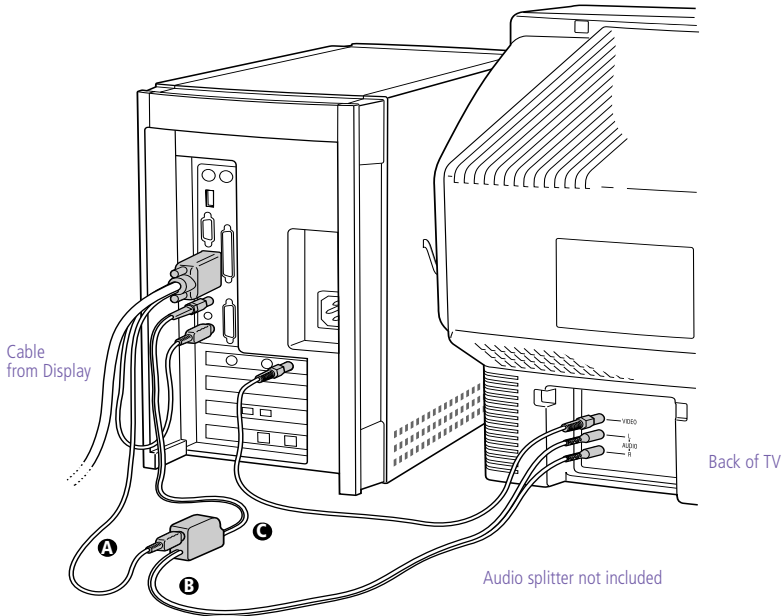
- 1 Use the yellow  symbol to locate the composite **VIDEO OUT** connector on the computer. Plug either end of the yellow video cable into this connector. Then plug the other end of the cable into the TV's **VIDEO IN** connector.




If your TV has an S VIDEO IN connector, use the S VIDEO cable to connect the computer's S VIDEO OUT jack to the TV's S VIDEO IN jack. S VIDEO provides a better picture than a conventional video connection.

- 2 Use the green  symbol to locate the **HEADPHONES** connector on the computer. Plug the black end of the audio splitter cable **A** into this connector. Then plug the red and white ends of the audio splitter cable **B** into the TV's **AUDIO IN** connectors. (This enables you to hear audio on the multimedia monitor as well as on your TV.)

- 3 Plug the green audio plug from the display cable into the connector on the audio splitter cable **C**. Then use the red  symbol to locate the MIC connector on the computer. Plug the red microphone cable from the display cable into this connector.




If your system does not include the Sony Multimedia Computer Display:

- 1 Use the yellow  symbol to locate the composite VIDEO OUT connector on the computer. Plug either end of the yellow video cable into this connector. Then plug the other end of the cable into the TV's VIDEO IN connector.

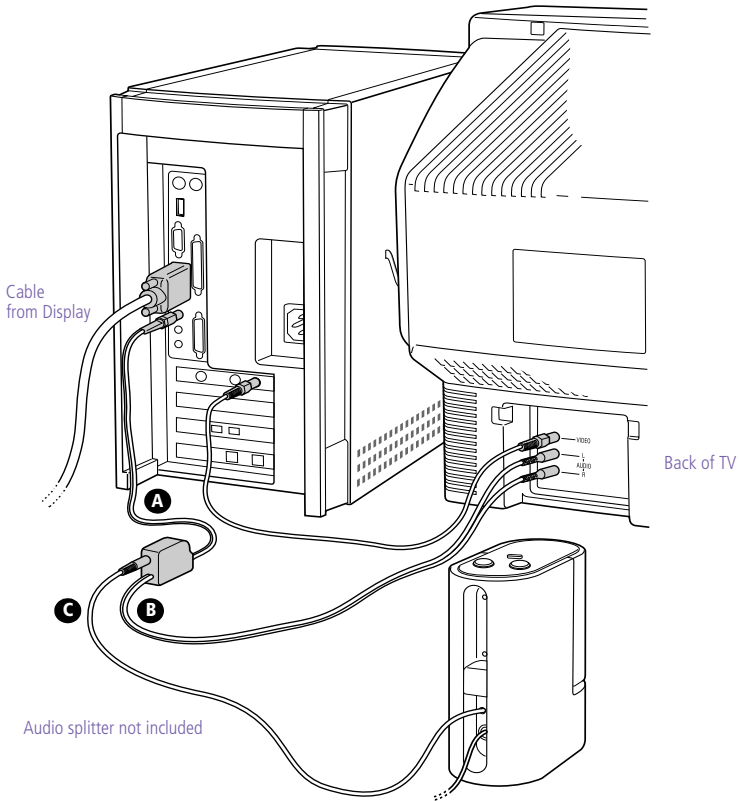


If your TV has an S VIDEO in connector, use the S VIDEO cable to connect the computer's S VIDEO OUT jack to the TV's S VIDEO IN jack. S VIDEO provides a better picture than a conventional video connection.

- 2 Use the green  symbol to locate the PHONES connector on the computer. Plug the black end of the audio splitter cable **A** into this connector. Then plug the red and white ends of the audio splitter cable **B** into the TV's AUDIO IN connectors.


3 Plug the speaker cable into the connector on the audio splitter cable

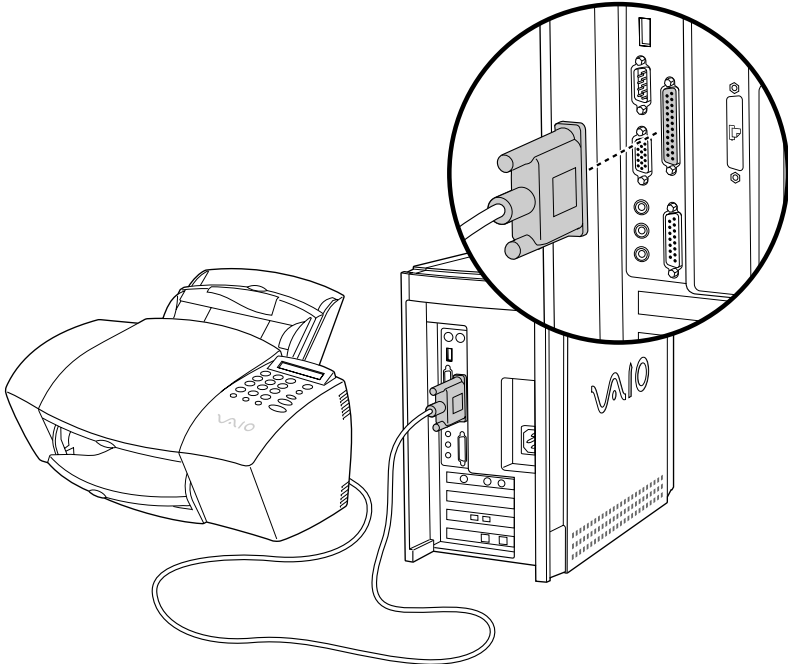
C.



Connecting a Printer

You can connect a printer to your computer to print documents from your computer.


- 1 Use the dark grey  symbol to locate the **PRINTER** connector. Plug the printer cable into this connector.
- 2 If necessary, plug one end of the printer power cord into the printer, and the other end into a grounded AC wall outlet, power strip, or Uninterrupted Power Supply.

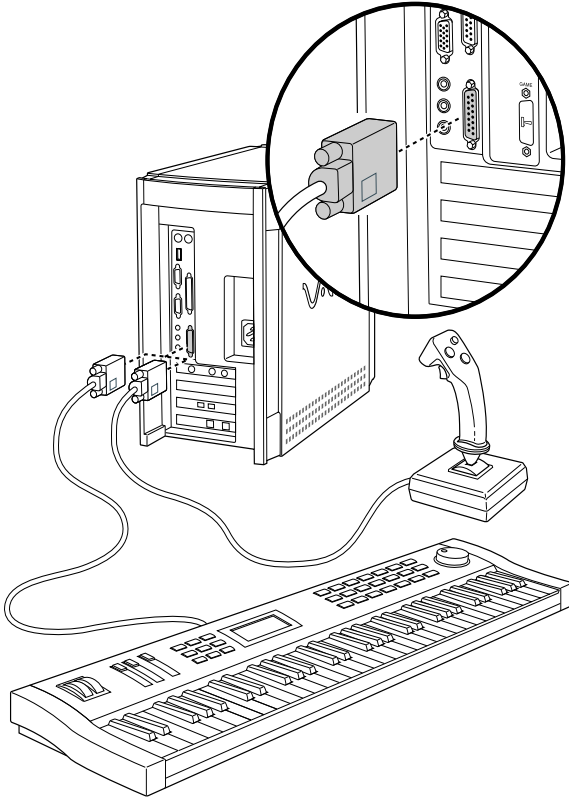



See the manual that came with your printer for more information on setting it up and using it.

Connecting a Joystick or MIDI Instrument

You can connect a joystick or MIDI instrument to your computer. You can also purchase an adapter to connect additional devices.

- Use the dark grey  symbol to locate the GAME connector. Plug the joystick or MIDI cable into this connector.




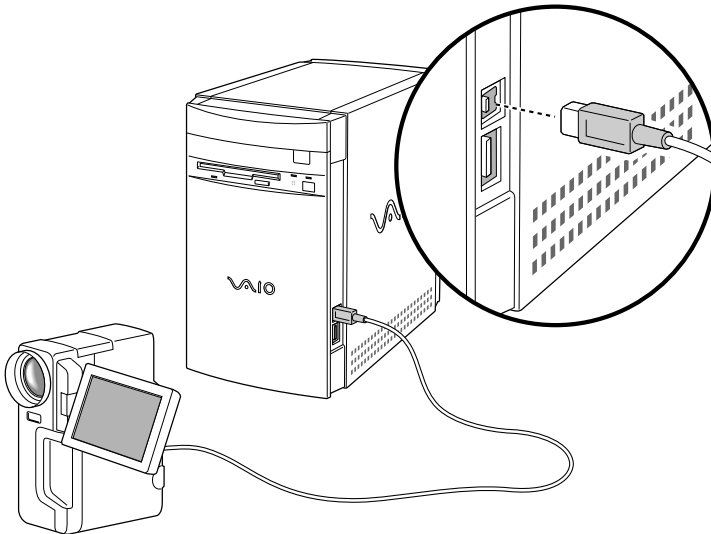
 Your MIDI instrument may have a different type of cable which requires an adapter. See the manual that came with your joystick or MIDI instrument for more information on setting it up and using it.


Connecting an i.LINK™ (IEEE-1394) Equipped Device

Some models of the VAIO MicroTower include i.LINK (IEEE-1394) connectors. See *Read Me First* for information on your specific model. i.LINK connectors may be located on the front, back, or both the front and back of your system.

To connect an i.LINK (IEEE-1394) device

- Use the  symbol to locate the i.LINK connector. Plug the i.LINK device into this connector.



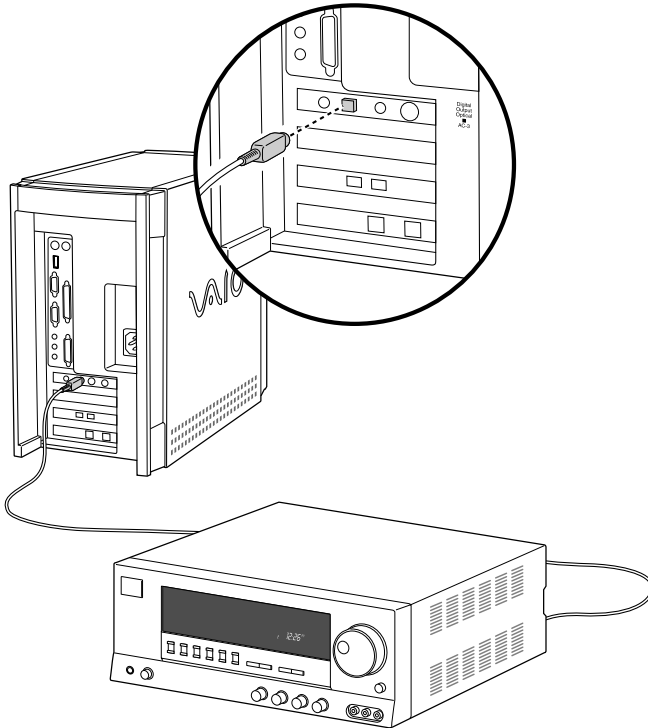
 See the manual that came with your i.LINK (IEEE-1394) equipped device for more information on setting it up and using it.


Connecting an S/PDIF Equipped Digital Audio Device

Some models of the VAIO MicroTower include an S/PDIF (Sony/Phillips Digital Interface) Optical Digital Audio Output connector. See *Read Me First* for information on your specific model.

To connect an S/PDIF device

- Locate the S/PDIF (Optical Digital Audio Output) connector. Plug the S/PDIF device into this connector.



 See the manual that came with your digital audio device for more information on setting it up and using it.

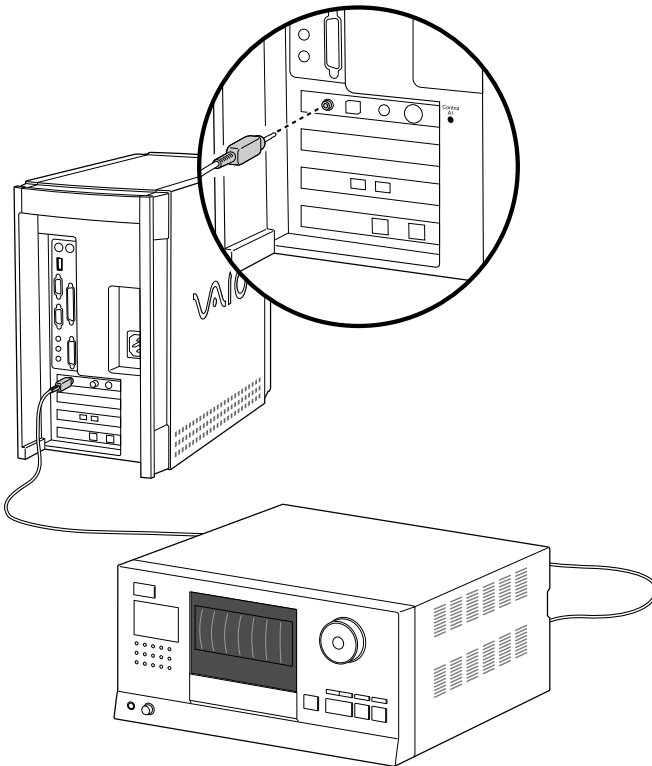
Your VAIO computer incorporates Serial Copy Management System, which will not prevent you from making a direct digital-to-digital copy from a digital source, but from such copies will prevent a second digital-to-digital copy from being made.

Connecting an S-Link™ (Control A1) Equipped Device

Some models of the VAIO MicroTower include an S-Link (Control A1) connector. Control A1 connections provide a path for the transmission of control signals, thus enabling automatic operation and control features that are usually associated with integrated audio systems. See *Read Me First* for information on your specific model.

To connect an S-Link (Control A1) device


- ❑ Locate the S-Link (Control A1) connector. Plug the S-Link (Control A1) device into this connector.

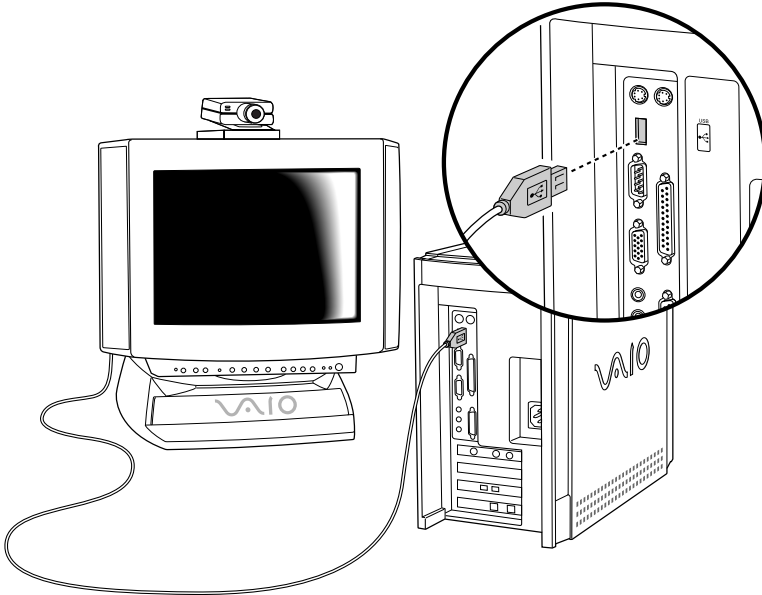


See the manual that came with your S-Link equipped device for more information on setting it up and using it.

Connecting a Universal Serial Bus Device

You can connect Universal Serial Bus (USB) devices to your computer. There is one USB connection on the front of your computer and another one on the back.

- Use the dark grey  symbol to locate the USB connector. Plug the USB cable into this connector.

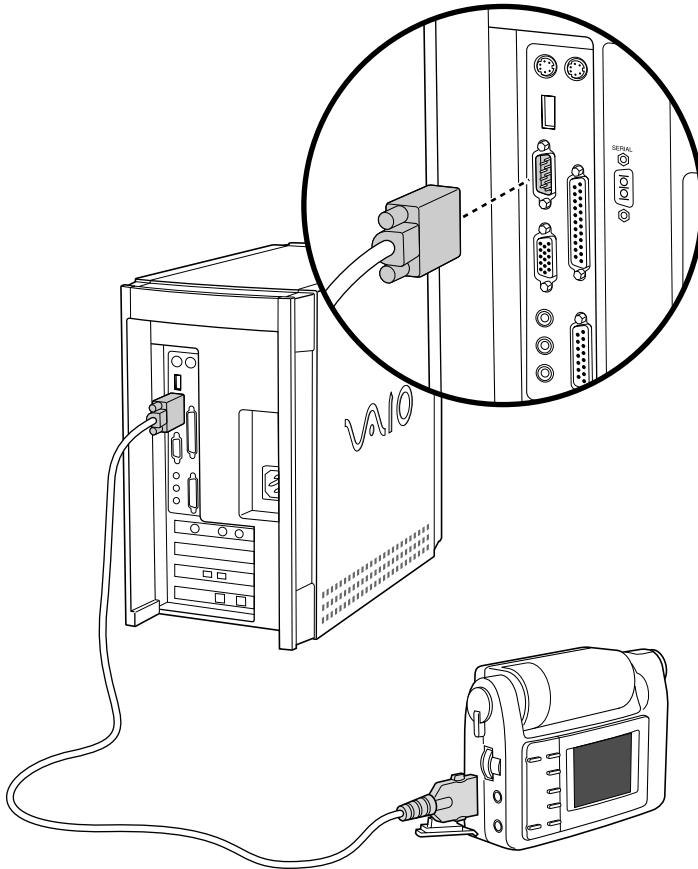


See the manuals that came with your USB devices for more information on setting up and using them.

Connecting a Digital Still Camera or Other Serial Peripheral

You can connect other computer peripherals, such as Sony's digital still camera, to the computer's serial port.

- ❑ Plug the serial cable from the digital camera into the serial port.

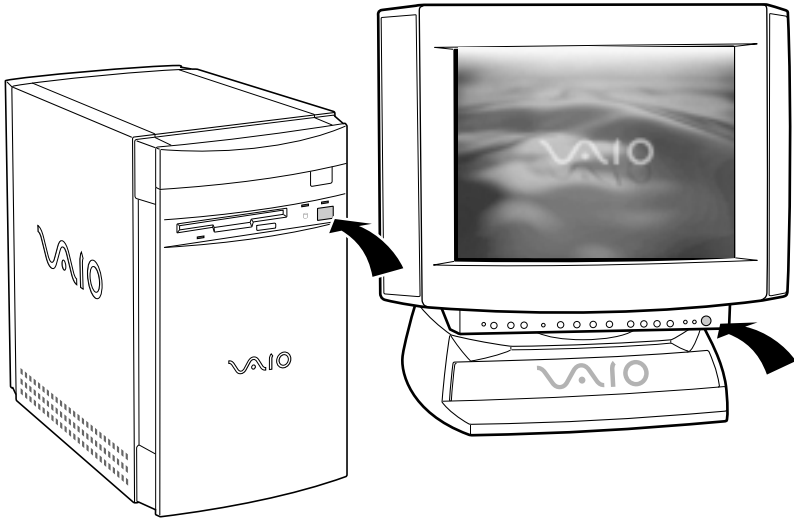


See the manual that came with your digital camera for more information on setting it up and using it.

Starting Your Computer

After you connect all the cables and accessories to your computer, you are ready to turn on the computer.

- 1 Press the power switch on the display to turn on the power.
- 2 Press the power switch on the front panel of the computer to turn on the power.



See “Using the Standby Mode” on page 25 and “Shutting Down Your Computer” on page 26 for instructions on turning off your computer.

After shutting down your computer, wait 10 seconds before turning the computer on again.

Registering Windows® 98

The first time you turn on your computer, you need to complete a few steps to register and configure the Windows software that is already installed on your computer. You do not need to repeat these steps each time you turn on your computer.



You must register Windows before you can use your computer.

The on-screen instructions guide you through the registration and configuration process. The following is an overview of the process.

- 1 Gathering information:
 - Enter your name.
 - Read and accept the License Agreement.
 - Enter your Certificate of Authenticity number located on the cover of the Windows *Getting Started* manual.
- 2 Windows setup:
 - Click the Finish button on the Windows Setup Wizard screen.
- 3 Selecting your computer settings:
 - If necessary, change the Time Zone, Date and Time on the Date/Time Properties screen.
- 4 Learning about Windows:
 - If you want, take the tour of Windows.

Registering Your Computer

Take advantage of Sony's commitment to quality customer support and receive these benefits by registering your computer:

- ❑ **Sony Online Support**—Talk to a Support Representative to troubleshoot problems you may be having with your computer.
- ❑ **Limited warranty**—Protect your investment. See “Limited Warranty Statement” on page 85 for details.



You must register your VAIO MicroTower to extend the warranty for an additional nine months beyond the initial 90-day warranty period.

- ❑ **On-site service**—Provides convenient resolution of problems.

Follow these steps to use the computer online registration service.


- 1 Click the Sony VAIO Registration icon on the VAIO desktop.
- 2 Enter the information requested on the first online registration form. Press the TAB key to move from box to box.
- 3 Click the Next button to advance to the next form.
- 4 Complete the remaining forms by clicking the Next button each time you complete a form.

The computer automatically transfers your registration information using your built-in modem and a toll-free telephone number.

Using the Standby Mode

When you are done using your computer, you can put it in standby mode rather than turn it off completely. Putting the computer in standby mode allows you to return quickly to normal computer use.

To put the computer in standby mode

- 1 Save your work and close any applications that are running. (You can leave Microsoft Windows running.)
- 2 Press the  (Standby) button on the top of the keyboard.

The computer goes into standby mode.

See *Read Me First* for additional information on using the standby mode.

To change the length of time before the computer goes into standby mode

The computer automatically goes into standby mode when there is no activity on the computer for a specified amount of time. You can select this length of time from the Windows Control Panel.

To take the computer out of standby mode

- Press any key on the keyboard, move the mouse, or press the power switch on the front panel again.

Standby Mode Indicators

You can tell which mode the computer is in by the color of the power indicator light.

Color	Mode
Amber	Computer is in standby mode.
Green	Computer is out of standby mode, ready to use.
No color	Computer is turned off.



In standby mode you may periodically hear the computer's fan turn on and off, depending on the room's temperature. This is normal functioning in standby mode.

Shutting Down Your Computer

When you're ready to turn off your computer for an extended period of time, use the following procedure to shut down the computer.

! To avoid the potential loss of data, do not press the power switch before you shut down the computer.

To shut down your computer



If you plan to shut down your computer for a short period of time, you may want to use standby mode instead. See "Using the Standby Mode" on page 25.

- 1 Click the Start button on the Windows taskbar to open the Start menu.
- 2 Click Shut Down to display the Shut Down Windows dialog box.
- 3 Select Shut down to shut down the computer.
- 4 Click OK to complete the shutdown process.



Respond to any prompts about saving documents.

- 5 Wait for your computer to turn off automatically — the power indicator light turns off.
- 6 Turn off the display and any other peripherals connected to your computer.

Getting Started With VAIO Space

VAIO Space is Sony's original utility that organizes the preinstalled applications on your VAIO MicroTower, making it easier for you to find and launch the applications on your computer, use the Sony audio and video players, connect to the Internet, and more.

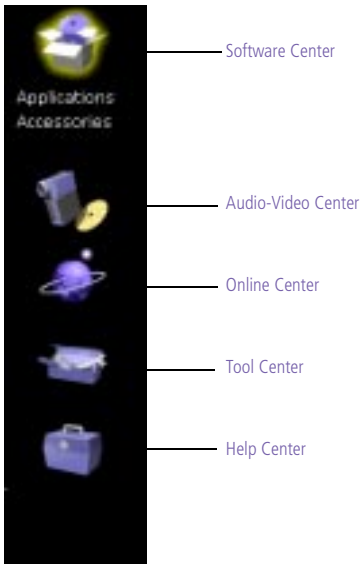


Starting VAIO Space

To start VAIO Space






- Click the VAIO Space icon on the Windows desktop.

The VAIO Launcher appears, which includes icons for the five VAIO Space centers:



VAIO Space Centers

There are five centers within VAIO Space, as follows:

<i>Center Name and Icon</i>	<i>Contains</i>	<i>Description</i>
Software Center 	Applications Accessories	Contains icons for preinstalled applications and accessories. See "Using the Software Center" on page 31 for details.
Audio-Video Center 	Video Audio Still Imaging DV Editing Adv. Audio DVD	Launches the video and audio applications included with your computer. See "Using the Audio-Video Center" on page 32 for details.
Online Center 	Easy Internet VAIO Direct Club VAIO ImageStation Internet VAIO Links	Allows you to connect to the Internet, go to selected Sony web sites, and manage bookmarks. See "Using the Online Center" on page 33 for details.
Tool Center 	VAIO Find Desktop Tools Options	Provides tools that help you find specific application files, change your desktop configuration, analyze and fix system-related problems, and customize VAIO Space. See "Using the Tool Center" on page 34 for details.
Help Center 	Help Center	Contains links to various sources of help for your VAIO MicroTower computer. See "Using the Help Center" on page 35 for details.

Navigating through VAIO Space

To go to a center within VAIO Space

- 1 Move the mouse pointer over an icon on the VAIO Launcher. Categories for each center appear.














← Moving the mouse over the icon displays the categories of programs for that icon

- 2 Click the category text (such as **Applications**) to open the VAIO screen.



Your application screen may appear different from the one shown here.

VAIO Space Controls

Button	Function
	Goes to the previous screen or page in a sequence. Unavailable until you go to another screen.
	Goes to the next screen or page in a sequence. Unavailable on the last screen in a sequence.
	Stops loading the current page (used for web pages).
	Refreshes the current page (used for web pages).
	Adds the currently displayed page to the list of bookmarks under the Online Center's VAIO Links (see "Using the Online Center" on page 33). VAIO Links are also accessible through the Internet Explorer Favorites list.
	Displays the current website address (URL) or file name path. You can also type an address or path in this box.
	Minimizes, maximizes/restores, and closes VAIO Space.
	Scrolls up to show the contents of the VAIO Launcher.
	Scrolls down to show the contents of the VAIO Launcher.
	Closes the VAIO Launcher. Click again to open the VAIO Launcher.
	Animates when a web page is loading.







Using the Software Center

To launch the Software Center

- 1 Move the mouse pointer over the Software Center icon on the VAIO Launcher.
- 2 Click the text of the category (**Applications** or **Accessories**) to open the VAIO screen.
- 3 To start an application, click the icon.

Other Software Center Functions

Action	Procedure
Display information about a program.	Move the mouse pointer over the program icon.
Display questions and answers about the highlighted program.	Click  <i>(grayed out when unavailable)</i>
Create and save notes about the highlighted program.	Click 
Display a help or readme file about the highlighted program.	Click  <i>(grayed out when unavailable)</i>
Displays the application's upgrade web page.	Click  <i>(grayed out when unavailable)</i>
Add an application icon to the Software Center.	Drag and drop an application icon from anywhere within Windows onto the VAIO screen.
Remove an application icon from the Software Center.	Drag and drop an application icon from the Software Center to the Windows Recycle Bin.



Using the Audio-Video Center

The Audio-Video Center includes the following programs:

<i>Program</i>	<i>Description</i>
Video	Plays MPEG (.mpg), MPEG2 (.vob, .mpg) and AVI (.avi) video files.
Audio	Includes the following players: <ul style="list-style-type: none"> <input type="checkbox"/> Mixer, which controls the volume and balance for sound files, videos, audio tracks, etc. <input type="checkbox"/> Media player, which plays WAV (.wav), MIDI (.mid), and the audio portion of MPEG (.mpg) files. <input type="checkbox"/> DVD player, which plays DVD and CD audio tracks from your DVD-ROM drive.
Still Imaging	DVgate Still and Picture Gear <ul style="list-style-type: none"> <input type="checkbox"/> DVgate Still allows you to capture frames from video and save them as still images. <input type="checkbox"/> Picture Gear allows you to organize, create a slide show, and make a screen saver from your still images.
DV Editing	DVgate Motion Create your own movie by bringing video into your VAIO computer from your digital video camera; divide your captured video into precise video clips; and reassemble video clips into a full-motion action movie.
Advanced Audio	Digital Media Park <ul style="list-style-type: none"> <input type="checkbox"/> Media Bar plays video files and audio files from multi-disc CD players. <input type="checkbox"/> Library allows you to create and organize multiple-named playlists. <input type="checkbox"/> Showcase library components allow you to organize all kinds of digital media. Minidisc Editor combines music and sounds from multiple sources into a minidisc.
DVD	Plays DVDs (Digital Versatile Discs).

For details on using the application, see the application's on-line help.



Using the Online Center

To launch the Online Center

- 1 Move the mouse pointer over the Online Center icon on the VAIO Launcher.
- 2 Click the text of the category as described below.

<i>Category</i>	<i>Description</i>
Easy Internet	Provides an intuitive interface to do almost everything on the Internet: browsing, e-mail, navigating to the best sites on the web, and interacting with multimedia content. Includes 50 free hours of Internet access from GTE Internetworking. (No credit card needed.)
VAIO Direct	Save money by ordering products direct from Sony Online.
Club VAIO	Find out the latest developments in the world of VAIO; interact with other VAIO users.
ImageStation	The easy way to share your photos with friends and family online.
Internet	Shortcuts to all your Internet applications.
VAIO Links	A convenient tool for organizing all your bookmarks to local or Internet pages.



Using the Tool Center

Using Tool Center Tools

- 1 Move the mouse pointer over the Tool Center icon on the VAIO Launcher.
- 2 Click the text of the category as described below.

<i>Category</i>	<i>Description</i>
VAIO Find	One-button searches for picture files, movies, sound files, text documents, or Microsoft Works files.
Desktop	Displays the Windows Display Properties box, which lets you change the wallpaper, screen saver, and display resolution.
Tools	Displays applications that provide tools to help you analyze and fix system-related problems. (This screen also functions similarly to the Software Center screen. For details, see “Other Software Center Functions” on page 31.)
Options	Lets you customize the way VAIO Space works.



Using the Help Center

To launch the Help Center:

- 1 Move the mouse pointer over the Help Center icon on the VAIO Launcher.
- 2 Click **Help Center** to open the VAIO screen.
- 3 Follow the on-screen instructions to find the appropriate source of help for the problem you are having.

Exiting VAIO Space

To exit VAIO Space

- Click the  (Close) button.

Getting Help

Sony provides several support options for your Sony computer. When you have questions about your computer and the preinstalled software, check these sources for answers, in the following sequence:

1	<i>VAIO MicroTower Read Me First</i>	Contains a complete list of the items that ship with your computer, product specifications, software support information, and the most up-to-date information on using your computer.
2	<i>VAIO MicroTower User Guide</i>	Explains how to set up and upgrade your computer.
3	<i>Online User Guide</i>	This electronic document contains additional information on the preinstalled software titles. You can access this guide from the Help Center on the Windows Start menu.
4	<i>VAIO MicroTower Reference Manual</i>	Provides detailed technical information about the hardware in your VAIO MicroTower. This electronic document is available from Sony's website at http://www.sony.com/pcsupport
5	<i>Manuals and online help files that may accompany your preinstalled software</i>	Most of the manuals for preinstalled software are located on your hard disk drive as online help files. You can access the online help files from the Help menu in the specific application. A printed manual is available for some applications.
6	<i>Knowledge Database</i>	Provides instant access to information on commonly encountered problems. Enter a description of your problem and the Knowledge Database searches for the corresponding solutions online. You can access the Sony Knowledge Database at: http://www.sony.com/pcsupport

-
- | | | |
|-------|---------------------------|--|
| 7 | <i>Sony Fax-on-Demand</i> | This service provides you with answers to commonly asked questions. You can use this automated service to request a list of available topics and then select the topics that you want to receive. To contact the Sony fax-on-demand service, call 1-888-4SONYPC (1-888-476-6972). (Requires a fax machine or your fax software. Fax software is included on your system as part of Microsoft Outlook.) |
| <hr/> | | |
| 8 | <i>Sony SOS software</i> | This preinstalled program connects you to a Customer Support Representative. SOS is available seven days a week for 90 days after the original date of purchase. Connect a phone line and phone before you call, so the representative can access your system if necessary. "Calling SOS" on page 39 describes how to use the SOS software. |
| <hr/> | | |
| 9 | <i>Calling SOS</i> | You can call and speak with a Sony Customer Support Representative without using your computer by calling 1-888-4SONYPC (1-888-476-6972). Software support is available 24 hours a day, seven days a week for 90 days at no charge after the original date of purchase. |
-

Calling SOS

The SOS application enables you to exchange information with a Sony Customer Support Representative (CSR). Here's how it works:

- ❑ Type your name, phone number, and the problem details in the SOS window.
- ❑ Dial the SOS hotline with a single click of the mouse.
- ❑ Specify the access level for the CSR.
- ❑ The CSR resolves the problem.

Before using SOS, make sure the computer is connected to a phone line and telephone as described in "Connecting the Phone Line and Phone" on page 9. If you do not have a phone line connected to your computer, you can place a voice call to SOS by dialing 1-888-4SONYPC (1-888-476-6972). SOS support is available at no charge for 90 days from the original date of purchase.

To place a call to SOS

- 1 Click the Start button on the Windows 98 taskbar.
- 2 Point to Programs, point to VoiceView, and then click VoiceView. The SOS window appears.

VoiceView
File Help

Sony Online Support **SOS**

Person Calling

First Name: **Last Name:** **Phone Number:**

Problem Details

SOS Help **Call SOS**

Note: In order to use Sony Online Support, please connect a phone line to your VAIO computer.

Status: Ready Mode: Voice

- 3 In the SOS window, type your name, phone number, and a description of the problem. This information cannot be seen by the

customer support representative until you give the CSR access to your computer.

- 4 Click the Call SOS button. The confirmation screen appears.
- 5 Click the OK button. The Dialer screen appears.
- 6 Pick up the handset and click the Dial button as instructed. Your modem dials the toll-free number and connects you to the Sony support center.
- 7 You are asked whether you wish to test your system or talk to a support representative. You are then prompted to indicate the type of computer you are using.
- 8 Discuss the problem with the CSR and follow the CSR's instructions to resolve the problem. Only if the CSR needs to access your computer are you prompted to select a security option, as described in the next step.
- 9 Select an access level in the Remote Command Security dialog box by clicking one of these options:

<i>Options</i>	<i>Descriptions</i>
Full access	Allows the CSR to fully interact with your computer. The CSR can access all the files on your hard disk drive and can copy files to and from your computer to solve your problem.
Limited access	Lets the CSR view your system, but you must approve every action the CSR takes. If the CSR wants to copy a file, for example, the Remote Command Permission dialog box prompts you to approve this action.
No access	Prevents the CSR from accessing your system. You must perform all the operations as described to you by the CSR.



You can change the access level during your call to SOS.

If you experience difficulty hearing the CSR, adjust the speaker volume.

When a file is transferred between your computer and SOS, a status box displays the progress of the file transfer.

- 10 To end a call, click the Hang Up button.
- 11 Click the Close box at the top right corner of the SOS window or select Exit from the File menu to close the SOS window.

Troubleshooting

This section describes how to solve common problems you may encounter when using your computer. Many problems have simple solutions, so try these suggestions before you call Sony Online Support. For more advanced troubleshooting information, see the *VAIO MicroTower Reference Manual*. You can download this electronic document from Sony's website at <http://www.sony.com/pcsupport>.

My computer won't start

- ❑ Check that the computer is plugged into a power source and that it is turned on. Check that the power light is lit on the front panel of the computer.
- ❑ Make sure a diskette is not in the diskette drive.
- ❑ Confirm that the power cord and all cables are connected firmly, as described in the "Setting Up Your VAIO MicroTower" chapter.
- ❑ If you plugged the computer into a power strip or UPS, make sure the power strip or UPS is turned on and working.
- ❑ Check that the display is plugged into a power source and turned on. Check that the brightness and contrast controls are adjusted correctly. See the manual that came with your display for details.
- ❑ Check that the computer is not in standby mode (see "Using the Standby Mode" on page 25).

My computer "locks up"

- ❑ Close the application that is currently locked up by pressing ALT+F4.
- ❑ Try restarting the computer. On the Windows taskbar, click the Start button, click Shut Down, click Restart, and then click OK.
- ❑ If you cannot restart as described in the preceding step, you can restart the computer by pressing CTRL+ALT+DELETE or press the power switch for more than six seconds.

! Pressing CTRL+ALT+DELETE may result in losing changes made to files that are currently open.

My software program "locks up" or crashes

- ❑ Close the application that is currently locked up by pressing ALT+F4.
- ❑ Contact the software publisher or designated provider for technical support. See the online *User Guide* for a complete list of phone numbers.

My DVD-ROM drive tray won't open

- ❑ Make sure the computer is turned on.
- ❑ Press the Eject button on the drive.
- ❑ Double-click the My Computer icon on the Windows desktop. Right-click the CD-ROM icon. Select the Eject option from the pop-up menu.
- ❑ If the Eject button does not work, you can open the tray by inserting a straightened heavy-weight paper clip into the emergency eject hole.

I cannot play a CD-ROM disc

- ❑ Make sure you place the disc in the tray with the label side facing up.
- ❑ Make sure the software is installed according to the program's instructions.

I cannot play a DVD-ROM disc

- ❑ If a region code warning appears when you are using the DVD player, it could be that the DVD-ROM disc you are trying to play is incompatible with the DVD-ROM drive in your VAIO MicroTower. The region code is listed on the disc's packaging. Region code indicators such as "1" or "ALL" are labeled on some DVDs to indicate what type of player can play the disc. If a number or "ALL" does not appear on the DVD, you cannot play the disc on this computer.
- ❑ If you hear audio but cannot see video, your computer's video resolution may be set too high. For best results, change the Windows Control Panel/Display/Settings to 800 x 600 using 16-bit color.
- ❑ If you see video but cannot hear audio, check all of the following: Make sure the mute setting is off in your DVD player. Check the master volume setting in the audio Mixer. Check the volume settings in your computer speakers. Check the connections between your speakers and the computer. Check the Windows Control Panel/System/Device Manager to see that the drivers are installed properly.
- ❑ A dirty or damaged disc may cause the computer to "hang" while it tries to read the disc. If necessary, reboot the computer, remove the disc, and then check that it is not dirty or damaged. For cleaning instructions, see "On Cleaning CD-ROM and DVD-ROM Discs" on page 83.

When I double-click an application icon, a message such as “You must insert the application CD into your CD-ROM drive” appears and the software does not start

- ❑ Some titles require specific files that are located on the application’s CD-ROM disc. Insert the disc and try starting the program again.
- ❑ Check to make sure you inserted the CD-ROM disc with the label side facing up.

My speakers have no sound

- ❑ Check that the speakers are plugged into the **HEADPHONES** connector. See “Connecting the Sony Multimedia Computer Display” on page 5 or “Connecting a Display, Speakers, and a Microphone” on page 6 for details.
- ❑ If the speakers have a mute button, make sure it is off.
- ❑ If the speakers are powered by batteries, check that the batteries are inserted properly and that they are charged.
- ❑ If the speakers use an external power source, make sure that the power cord is plugged into a grounded wall outlet or power strip.
- ❑ If the speakers have their own volume control, check the volume level.
- ❑ If the program you are using has its own volume control, check that the volume is turned up.
- ❑ Check the volume controls in the application, in the audio Mixer, and in Windows.
- ❑ If you connected headphones to the computer, you will not hear sound from the speakers.

My modem connection is slow

The computer's modem uses K56flex™ technology/V.90. Many factors influence modem connection speed, including telephone line noise or compatibility with telephone equipment (such as fax machines or other modems). If you think your modem is not connecting properly to other PC-based modems, fax machines or your Internet Service Provider, check the following:

- ❑ Have your phone company check that your phone line is free from any line noise.
- ❑ If your problem is fax-related, check that there are no problems with the fax machine you are calling and that it is compatible with fax modems.
- ❑ If you are having a problem connecting with your Internet Service Provider, check that the ISP is not experiencing technical problems.
- ❑ If you have a second phone line available, try connecting the modem to this line.

My modem doesn't work

- ❑ Check that the phone line is plugged into the **LINE** jack. See "Connecting the Phone Line and Phone" on page 9 for details.
- ❑ Check that the phone line is working. You can check the line by plugging in an ordinary phone and listening for a dial tone.
- ❑ Check that the phone number the program is dialing is correct.
- ❑ Check that the software you are using is compatible with the Sony computer modem. (All preinstalled programs are compatible.) Call the software publisher or Sony Online Support.

My microphone doesn't work

Check that the microphone is plugged into the **MIC** connector. See "Connecting the Sony Multimedia Computer Display" on page 5 or "Connecting a Display, Speakers, and a Microphone" on page 6 for details.

My microphone is too sensitive to background noise

If you find there is too much background noise when you record sound, you should adjust the microphone gain by following these steps:

- 1 Right-click the speaker icon (Volume) in the lower right Windows task tray.
- 2 Click Open Volume Controls. The Volume Control screen appears.
- 3 In the Options menu, select Properties. The Properties screen appears.
- 4 Change the setting for "Adjust volume for" from Playback to Recording, then click OK.
- 5 Click the Advanced button under Microphone Balance. The Advanced Controls for Microphone screen appears.
- 6 Deselect the checkbox for 1 Mic Gain (+20dB), then click the Close button.
- 7 Close the Recording Control window.

My mouse doesn't work

- ❑ Check that the mouse is plugged into the **MOUSE** connector. See "Connecting the Keyboard and Mouse" on page 8 for details.
- ❑ There may be dust or dirt inside the mouse mechanism. To clean the mouse, follow these steps:
 - ❑ Turn off your computer. See "Shutting Down Your Computer" on page 26 for details.
 - ❑ Remove the mouse ball cover on the back side of the mouse.
 - ❑ Turn the mouse upright, and drop the mouse ball into your hand.
 - ❑ Using a piece of tape, remove any dust or dirt on the mouse ball and inside the mouse ball socket.
 - ❑ Return the mouse ball to the socket, and replace the mouse ball cover.

My keyboard doesn't work

Check that the keyboard is plugged into the **USB** connector. See “Connecting the Keyboard and Mouse” on page 8 for details.

I can't find the Windows taskbar

- Check that the taskbar is not hidden or shrunken.
- Use the mouse to point to the left, right, top, and bottom edges of the screen.



See the VAIO MicroTower Read Me First for additional information on using your Sony computer.

Using the System Recovery CD(s)

You can reinstall software titles that shipped with your computer if they are corrupted or accidentally erased. You may not need to recover the entire contents of your hard drive. If you experience a problem with your computer, reinstalling an individual device driver or software title may correct the problem.

Use the Application Recovery CD(s) to reinstall individual applications or device drivers. See “Using the Application Recovery CD(s)” on page 49.

The System Recovery CD(s) contains a backup copy of the all the software originally installed on your hard disk drive. **It can be used only to recover the hard disk of the Sony computer you purchased.**

The System Recovery utility gives you three options:

- ❑ **Full Restore without Format** restores all the software titles that originally came with your computer without formatting the hard disk.
- ❑ **Full Restore with Format** formats the hard disk drive and then restores all the original software.
- ❑ **Operating System Only** formats the hard disk drive and restores the Windows operating system and the device drivers that shipped with your computer. This option is recommended for advanced users only.

! If you choose the Full Restore with Format or Operating System Only option, your hard disk will be formatted, which removes all the information on the hard disk drive. You will lose any software you have installed and any other files you have created since you started to use your computer. This means you will have to reinstall any applications that were not included with the computer when you purchased it. If you choose to the Full Restore without Format option, you may need to reinstall applications that were not included with the computer when you purchased it. If you have any questions on using the System Recovery CD(s), contact Sony Online Support (SOS).

To use the System Recovery CD(s)



You need to complete the Windows registration process when you use the System Recovery CD(s). Make sure you have the product ID number located on the cover of your Microsoft Windows manual. You will need this number to complete the recovery process.

1 Insert the Sony System Recovery CD in the DVD-ROM drive.



The System Recovery utility boots from the DVD-ROM drive. It must be in the DVD-ROM drive when you turn on the computer.

2 Shut down your computer as described on “Shutting Down Your Computer” on page 26.

3 Wait 30 seconds and turn on your computer.

4 Click OK to signify you have read and accept the Microsoft End-User License Agreement.

5 When the System Recovery menu appears, follow the on-screen instructions to complete the recovery process.



Your system may include one or two System Recovery CDs. If you have two System Recovery CDs, insert the first CD to run the System Recovery program. You are prompted to insert the second CD once the information from the first CD has been installed.

The recovery process takes between 30 to 60 minutes to complete.

Using the Application Recovery CD(s)

The Application Recovery CD(s) allows you to reinstall individual applications and device drivers if they are corrupted or accidentally erased. Reinstalling an individual device driver or software title may correct a problem you are experiencing with your computer, and you may not need to recover the entire contents of your hard drive. If you do need to reinstall all the software titles that shipped with your computer, use the System Recovery CD(s). See “Using the System Recovery CD(s)” on page 47.

You must be in Windows to run the Application Recovery CD(s). The application will not run from DOS. If you have any questions on using the Application Recovery CD(s), contact Sony Online Support (SOS).

To use the Application Recovery CD(s)

- 1 Turn on your computer. If your computer is already on, close all applications.
- 2 When the Windows desktop appears, insert the Sony Application Recovery CD in the DVD-ROM drive. The Application Recovery utility loads automatically.
- 3 When the Application Recovery menu appears, follow the on-screen instructions to complete the recovery process.



Your system may include one or two Application Recovery CDs. If you have two Application Recovery CDs, insert the first CD to run the Application Recovery program. You may be prompted to insert the second CD, depending on the application you wish to restore.

Upgrading and Maintaining Your VAIO MicroTower

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 *VAIO MicroTower Reference Manual*. You can download this electronic document from the Sony website 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” on page 79 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.

Inserting an Add-in Board

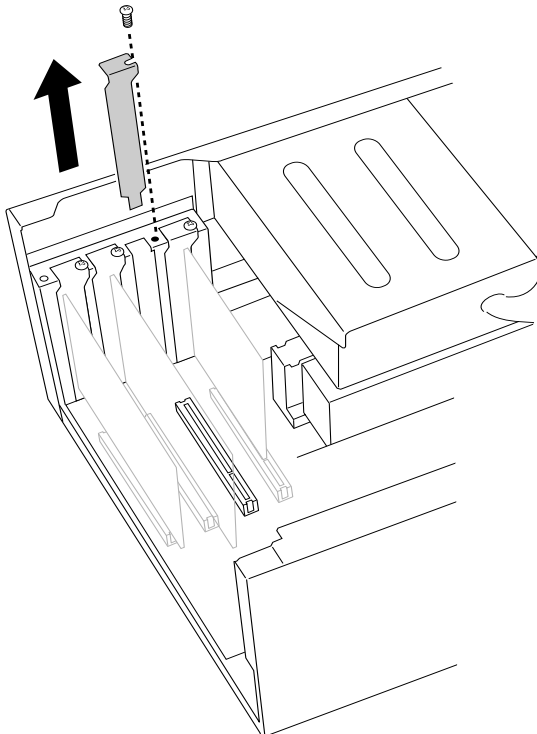
You can add up to two additional PCI boards to the system.

 Your VAIO MicroTower cannot accommodate PCI add-in boards exceeding 7.7" in length.

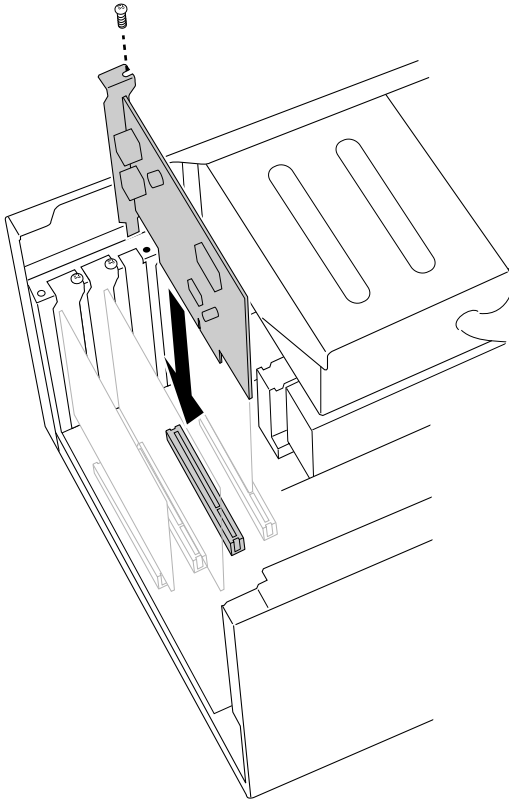
To insert an add-in board

! Make sure you observe the proper safety precautions when you add boards to your Sony computer. See page 79.

- 1 Shut down your computer and turn off all peripheral devices, such as your printer, display, and speakers.
- 2 Unplug your computer and any peripheral devices.
- 3 Remove the left-side panel as described on page 63.
- 4 Identify the expansion slot where you want to insert the add-in board.
- 5 Remove the slot cover for the slot you have chosen.



- 6 Install the add-in board by plugging it into the expansion slot on the system board. Attach any internal cables that the board requires (see the manual for the add-in board).



- 7 Replace the left-side panel as described on page 70.

Adding Memory

In order to increase your computer's memory, you may need to remove one of the factory-installed DIMMs and replace it with one of greater capacity. For details, see the *VAIO MicroTower Reference Manual*, which is available at Sony's website at <http://www.sony.com/pcsupport>.

For memory upgrades, use only 3.3V unbuffered 4-clock 64-bit 66 MHz SDRAM DIMM module Rev1.0 or 3.3V unbuffered 4-clock 72-bit 66 MHz SDRAM DIMM module Rev1.0. For more information on MicroTower compatible memory, call Sony at 1-888-4SONYPC (1-888-476-6972).

To install memory

! Make sure you observe the proper safety precautions when you add DIMMs to your Sony computer. See "Notes on Use" on page 79.

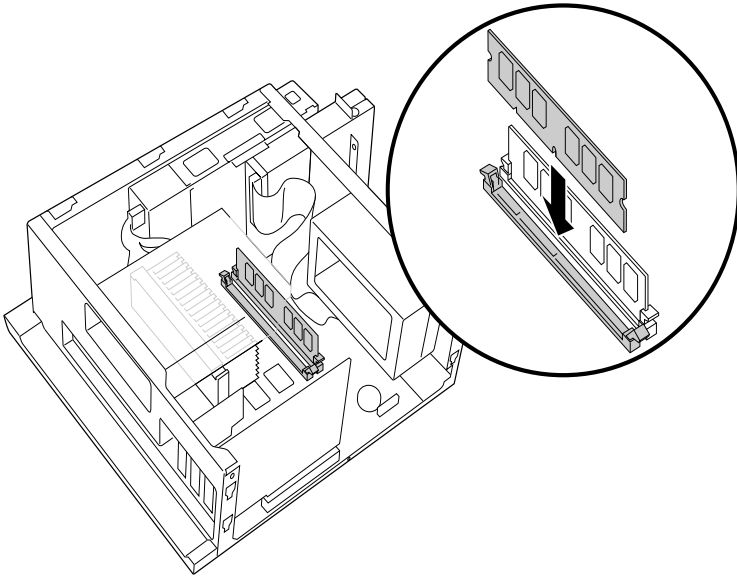
- 1 Shut down your computer and turn off all peripheral devices, such as your printer, display, and speakers.
- 2 Unplug your computer and any peripheral devices.
- 3 Remove the left-side panel, bottom panel, and front panel, as described on pages 63 to 65. Then detach the diskette drive, as described on page 66.



You do not need to completely remove the diskette drive in order to access the DIMM sockets.

- 4 If necessary, remove any cables, add-in cards or other components to access the DIMM sockets.
- 5 Remove either (or both) of the factory-installed DIMMs.
- 6 Handle the DIMM only by the edges, and remove it from its anti-static package.
- 7 Locate the keys on the bottom edge of the DIMM.

- 8 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.

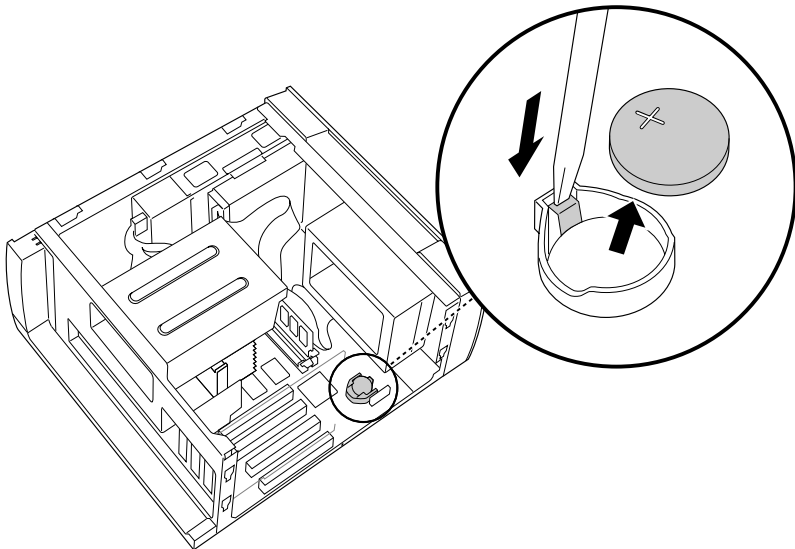
- 9 Firmly insert the bottom edge of the DIMM into the socket.
- 10 Press evenly against the DIMM's upper corners. The end latches snap into position automatically.
- 11 Reinstall any add-in cards or components you removed.
- 12 Replace the diskette drive and cover panels, as described on page 67 to 70.

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 To run the Setup utility, press F3 when your computer is starting up. Then press F1 to run the BIOS setup utility.
- 2 Write down the current BIOS Setup options.
- 3 Shut down your computer and turn off all peripheral devices, such as your printer, display, and speakers. Unplug your computer.
- 4 Remove the left-side and bottom panels, as described on pages 63 through 64, respectively.
- 5 Install the new battery with the plus (+) side up.



! There is danger of explosion if you replace the battery incorrectly. You must replace the battery only with a CR2032 type lithium battery. Discard used batteries according to the instructions on page 80.

- 6 Replace the bottom and left-side panels, as described on pages 68 and 70, respectively.



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 options. See the VAIO MicroTower Reference Manual for details.

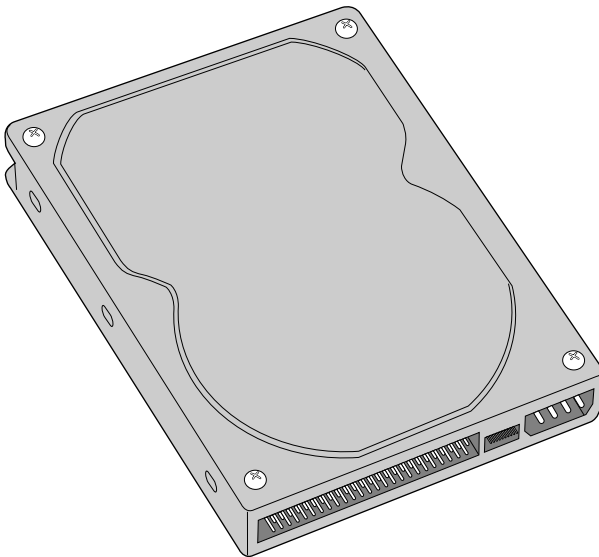
- 7 To run the Setup utility, press F3 when your computer is starting up. Then press F1 to run the BIOS setup utility.
- 8 Change the default values to the values you wrote down in step 2.
- 9 Save your Setup changes, and then exit the Setup utility.

Installing an Internal Hard Disk Drive

Your VAIO MicroTower comes with an available bay to hold an additional hard disk drive. The drive you install must not require front panel access. The hard disk drive access light blinks when either internal drive is active.

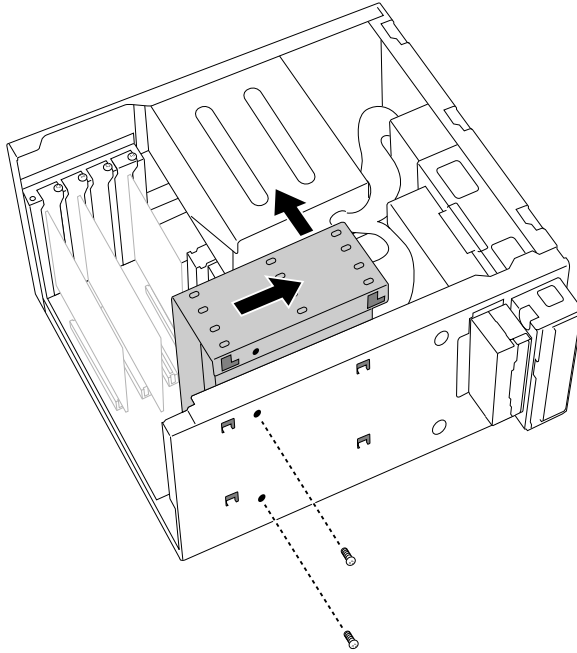
! Before opening the system unit, save any open files, exit Windows, turn off the power of the computer and all attached peripherals, and then unplug the power cord.

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

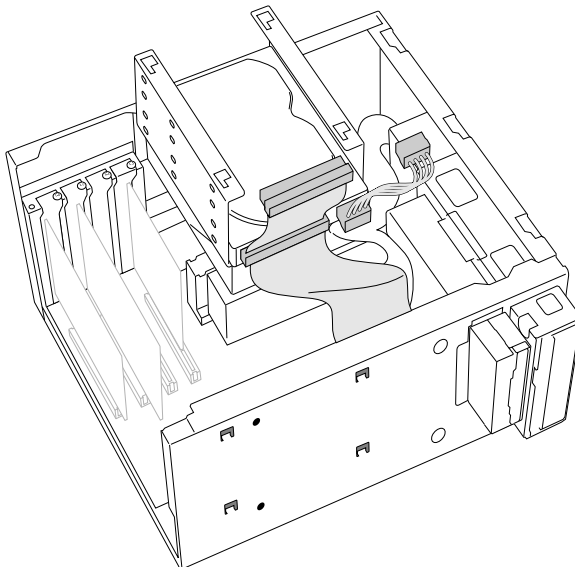


- 2 Remove the left-side panel, as described on page 63.
- 3 Remove the front panel, as described on page 65.
- 4 Remove the bottom panel, as described on page 64.
- 5 Lay the system on its right side (left side faces up—see diagram that follows).
- 6 Remove the two screws that secure the drive holder.

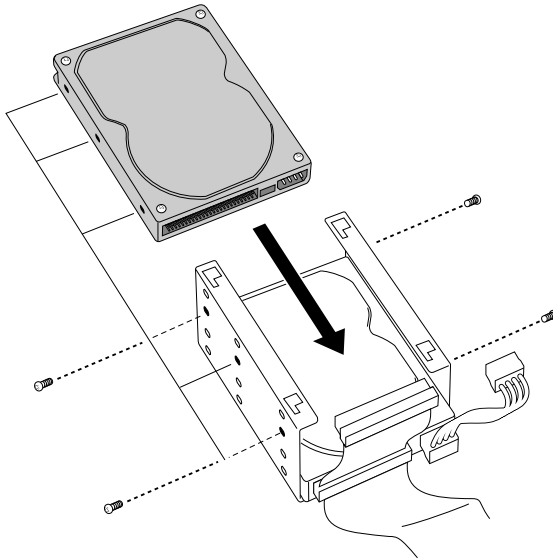
- 7 Slide the drive holder forward and then out.



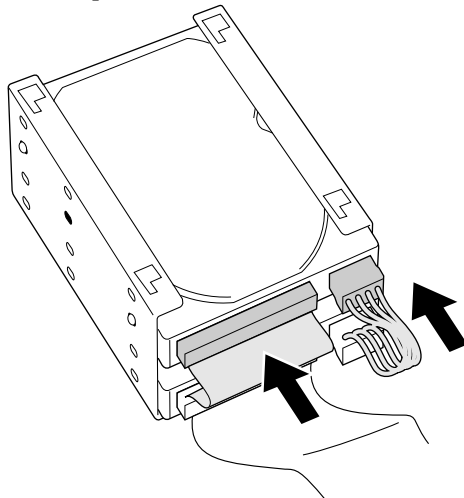
- 8 Place the drive holder upside down on top of the power supply.



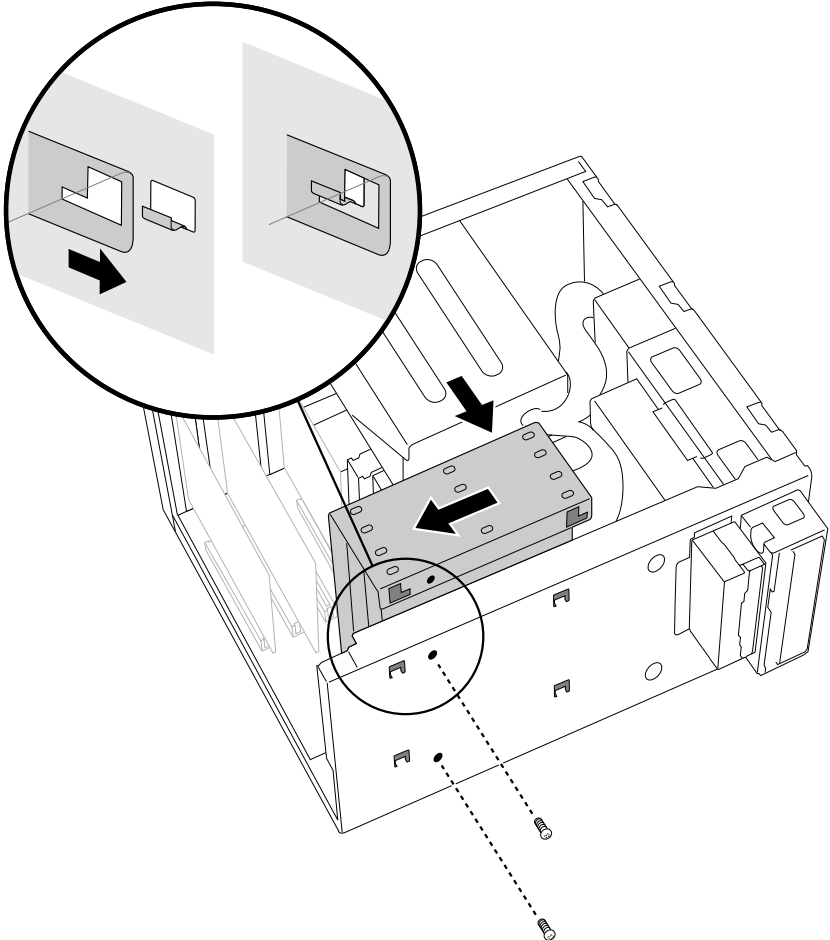
- 9 Slide the new drive into the drive holder and align the holes on each side of the drive bay.



- 10 Secure the drive to the drive holder using any two of the three holes on each side of the drive holder (screws are provided with the new drive). Do not overtighten the screws.
- 11 Connect the second drive connector to the new drive.
- 12 Connect the second power connector to the new drive.



- 13 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.



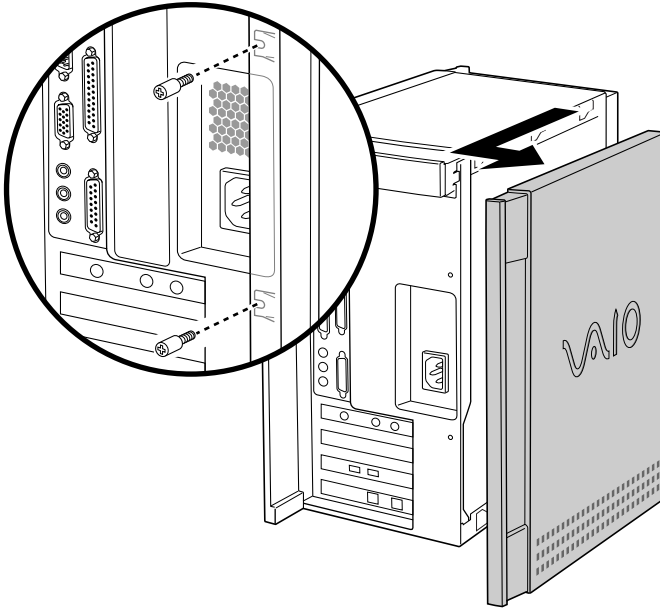
- 14 Replace the two screws that secure the holder to the chassis.
15 Replace the bottom panel, as described on page 68.
16 Replace the front panel, as described on page 69.
17 Replace the left-side panel, as described on page 70.
18 Reconnect the power cord and then turn on your computer.

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

Removing the Left-Side Panel

To remove the left-side panel

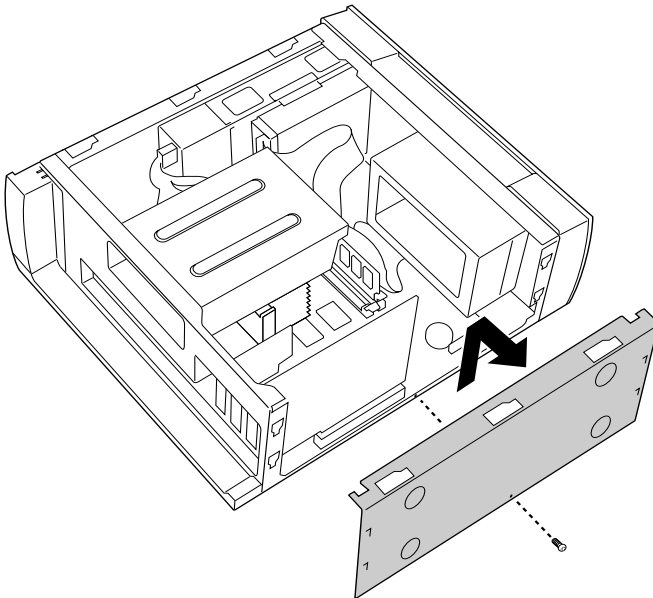
- 1 Remove the two screws that secure the panel to the chassis.
- 2 Slide the panel back until it stops.
- 3 Pull the panel straight out to remove it.



Removing the Bottom Panel

To remove the bottom panel

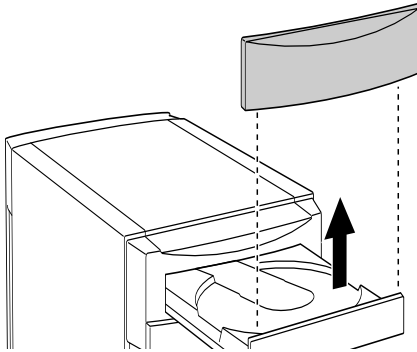
- 1 Remove the screw that secures the bottom panel to the chassis.
- 2 Pull the bottom panel straight out to remove it.



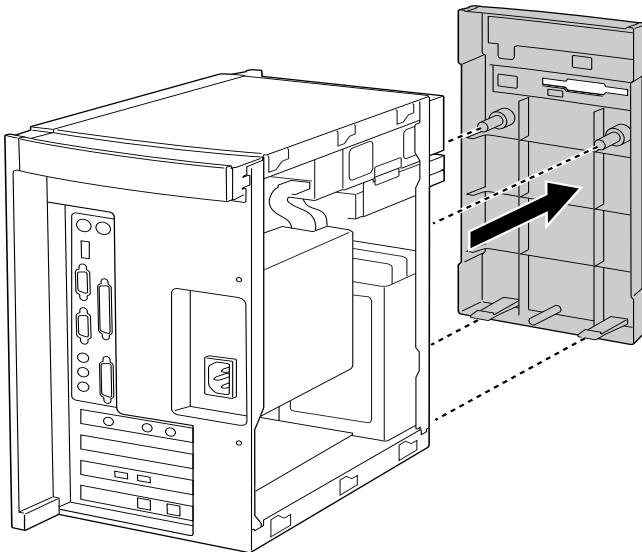
Removing the Front Panel

To remove the front panel

- 1 Open the CD tray by inserting a thin, pointed object into the emergency eject opening.
- 2 Slide the CD tray forward.
- 3 Remove the front cover of the CD tray by lifting it upwards.



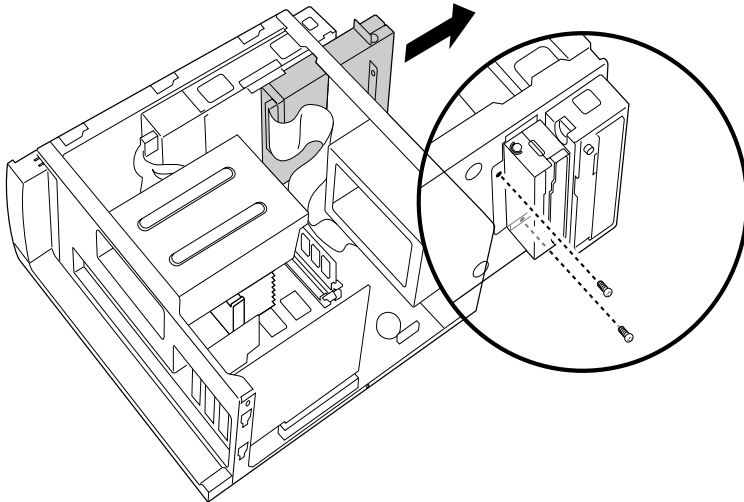
- 4 Press down on each of the two tabs on the bottom of the front panel to release the panel.
- 5 Pull the front panel forward to remove it.



Detaching the Diskette Drive

To detach the diskette drive

- 1 Remove the front panel, as described on page 65.
- 2 Remove the two screws that secure the diskette drive to the front of the chassis.
- 3 Pull the diskette drive forward.

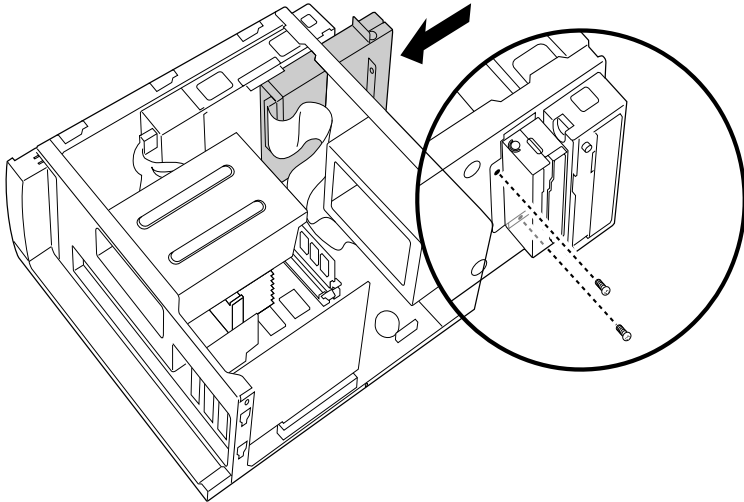


If you are adding memory, you do not need to completely remove the diskette drive or disconnect the cable.

Replacing the Diskette Drive

To replace the diskette drive

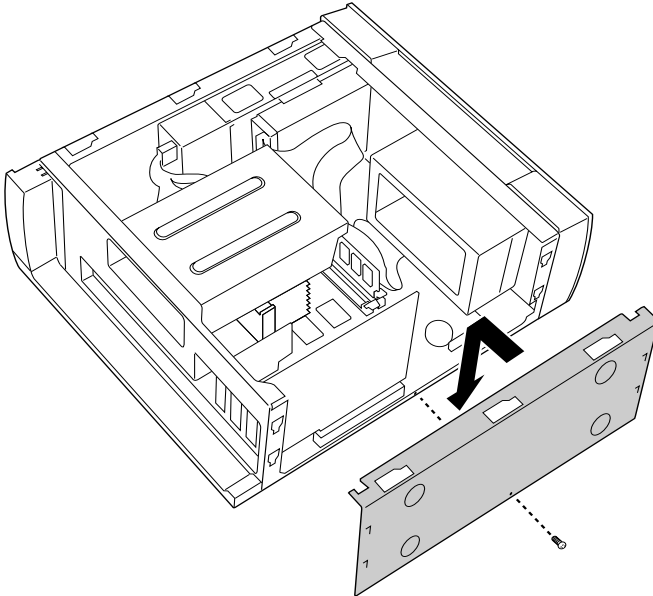
- 1 Push the diskette drive straight into the drive slot.
- 2 Replace the two screws that secure the diskette drive to the front of the chassis.
- 3 Replace the front panel, as described on page 69.



Replacing the Bottom Panel

To replace the bottom panel

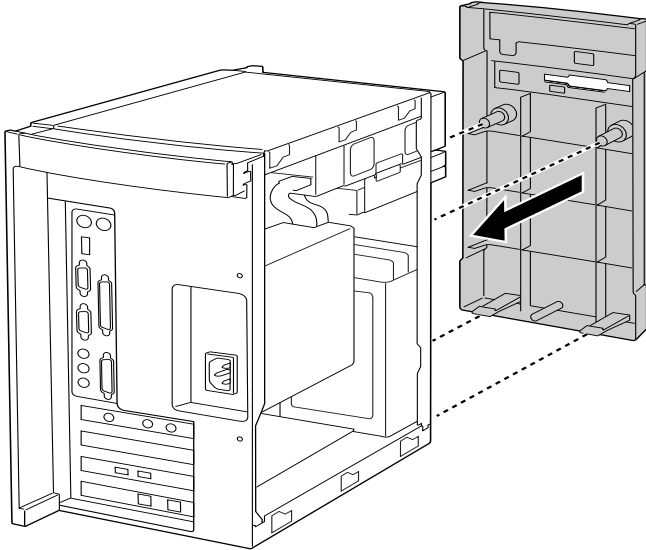
- 1 Align the bottom panel with the screw hole on the bottom of the chassis.
- 2 Replace the screw that secures the bottom panel to the chassis.



Replacing the Front Panel

To replace the front panel

- 1 Push the front panel straight onto the front of the chassis until it clicks into place.

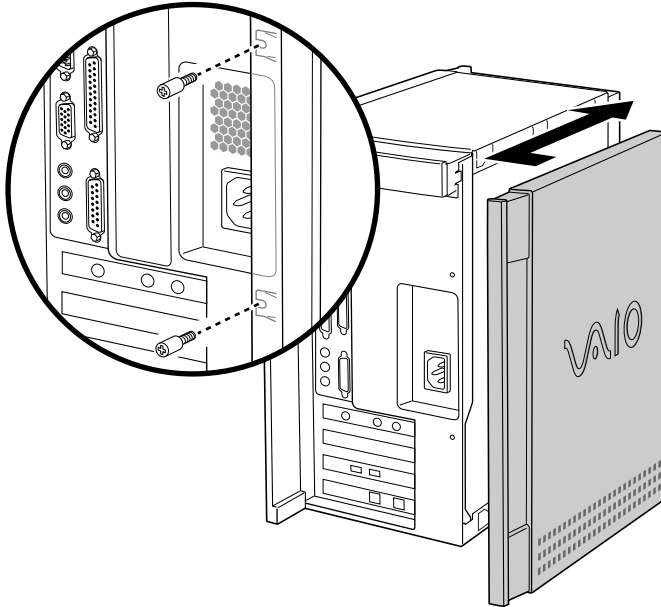


- 2 Replace the front cover of the CD tray by sliding it down onto the front of the open tray.
- 3 Close the CD tray.

Replacing the Left-Side Panel

To replace the left-side panel

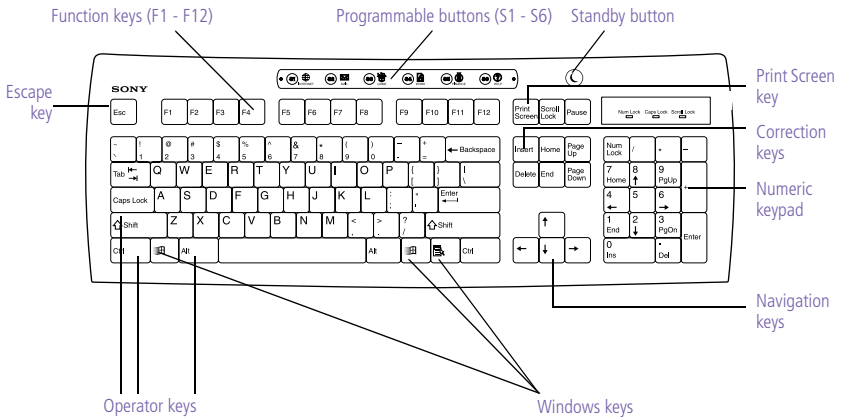
- 1 Slide the panel forward until it stops.
- 2 Replace the two screws that secure the panel to the chassis.



Computer Basics

Using the Keyboard

Your keyboard is very similar to a typewriter's, but the keyboard has additional buttons that perform specific computer-related tasks.



Key	Description
Programmable buttons	The six programmable buttons along the top of the keyboard are preprogrammed to perform specific functions. To change the function of these buttons, see “Changing the Function of the Programmable Buttons” on page 73.
Standby button	The Standby button switches the computer to standby mode. For details, see “Using the Standby Mode” on page 25.

<i>Key</i>	<i>Description</i>
Numeric keypad	Contains the keys found on a typical calculator. Use the numeric keypad to type numbers or to perform mathematical calculations such as addition and subtraction. Note that you must press NUM LOCK to activate the numeric keypad. (When you do so, the Num Lock light will be on.)
Navigation keys	Several keys are devoted to moving the cursor on the screen (the four arrow keys and the HOME, END, PAGE UP, and PAGE DOWN keys). These keys are also available on the numeric keypad when Num Lock is turned off.
Correction keys	The INSERT and DELETE keys enable you to make corrections in your documents. These keys are also available on the numeric keypad when Num Lock is turned off.
Function keys	The twelve function keys along the top of the keyboard are used to perform designated tasks. For example, in many applications, F1 is the Help key. The task associated with each function key may vary from one application to the next.
Escape keys	The ESC (Escape) key is used to cancel commands.
Print Screen keys	The PRINT SCREEN key takes an electronic snapshot of the screen and places it in the Windows Clipboard. You can then paste the screen shot into a document and print it.
Operator keys	Several keys are always used with at least one other key: CTRL, ALT, and SHIFT. When held down with another keys, the CTRL (Control) and ALT (Alternate) keys offer another way to give commands. For example, in many applications, instead of choosing the Save command from a menu, you can hold down CTRL and press S (referred to as CTRL+S). The SHIFT key operates the same way as on a typewriter; it is used to produce capital letters or special symbols such as @ and \$.
Windows keys	The keys with the Windows logo display the Windows Start menu; it is the equivalent of clicking the Start key on the taskbar. The Applications key displays a shortcut menu of context-sensitive choices; pressing this key is the equivalent of clicking the right mouse button.

The keyboard also has three lights:

<i>Light</i>	<i>On</i>	<i>Off</i>
Num Lock	The number keys on the numeric keypad are active.	The arrow keys, navigation keys, and correction keys on the keypad are active.
Cap Lock	Letters appear in uppercase as you type. The SHIFT key lowers the case of typed letters when Cap Lock is on.	Letters appear in lower case as you type (unless you hold down the SHIFT key).
Scroll Lock	The screen scrolls differently. (Exactly how it scrolls depends on the specific application. It has no effect in many applications.)	Information moves across the display normally.

Changing the Function of the Programmable Buttons

You can change the function of the programmable buttons as follows:

- 1 Click the Start button on the Windows taskbar to open the Start menu.
- 2 Point to Programs and click VAIO Smart™ Keyboard.

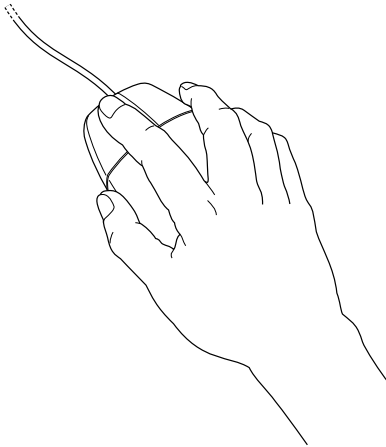
 Alternatively, you can click the VAIO Smart Keyboard icon in the Windows task tray.
- 3 Click the on-screen button that represents the button on the keyboard (S1 to S6) that you want to program.
- 4 Complete the Customization dialog box to specify the function and label you want to assign to the button. Then click OK.

 Alternatively, you can drag and drop any Windows icon that represents the function you want to assign onto the on-screen button. However, you cannot drag and drop icons that are specific to the Windows operating system, such as My Computer.
- 5 Close the Customization dialog box.

Using the Mouse

Using a mouse may be difficult at first, but after you become comfortable using it, you can save a lot of time. The following terms are commonly used to describe actions you perform with a mouse.

<i>Term</i>	<i>Description</i>
Point	Place the mouse pointer on an item or object.
Click	Press and release the left mouse button, without moving the mouse.
Double-click	Press the left mouse button two consecutive times, without moving the mouse.
Right-click	Press the right mouse button. In many applications, this action displays a shortcut menu of context-sensitive choices.
Drag	Hold down the left mouse button and then move the mouse in the desired direction. This action is used to select text and move objects.



Setting Up the Mouse for Left-Hand Use

You can control the mouse with your right or left hand. When you use the mouse with your left-hand, you may find it easier to reverse the button functions. When the functions are reversed, the right mouse button is used for normal clicking and dragging, and the left button is for displaying shortcut menus (right-clicking).


To set up the mouse for left-hand use

- 1 Click the Start button to display the Start menu.
- 2 Point to Settings.
- 3 Click Control Panel.
- 4 Double-click the Mouse icon.
- 5 Click the Buttons tab.
- 6 Under Buttons, select Left-handed.
- 7 Click the OK button to close the Mouse Properties dialog box.

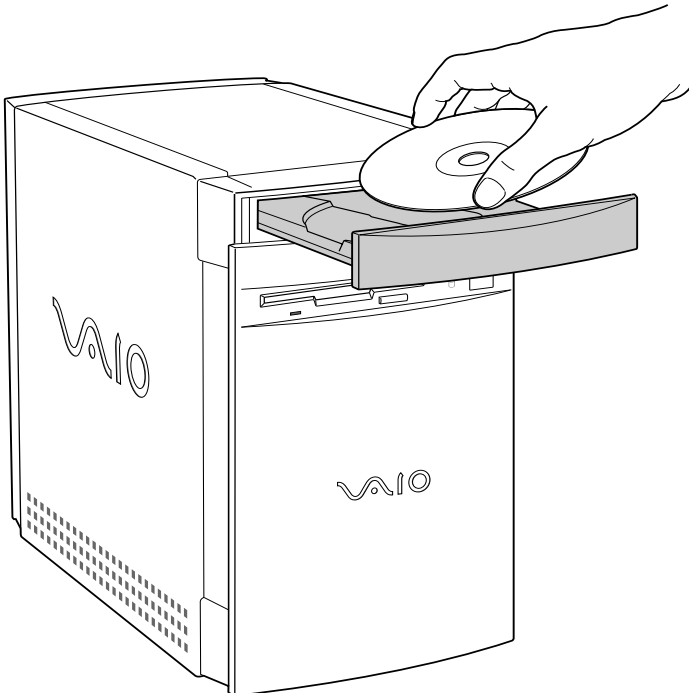
Using the DVD-ROM Drive


To use the drive

- 1 Press the Eject button on the front panel of the computer. The tray slides out.
- 2 Place the disc in the tray.

 Place CD-ROM discs in the tray with the label side facing up. For DVD discs, which can be played on both sides, the side of the disc facing up is the side that plays.

- 3 Close the tray by pushing it gently or by pressing the Eject button on the front panel.



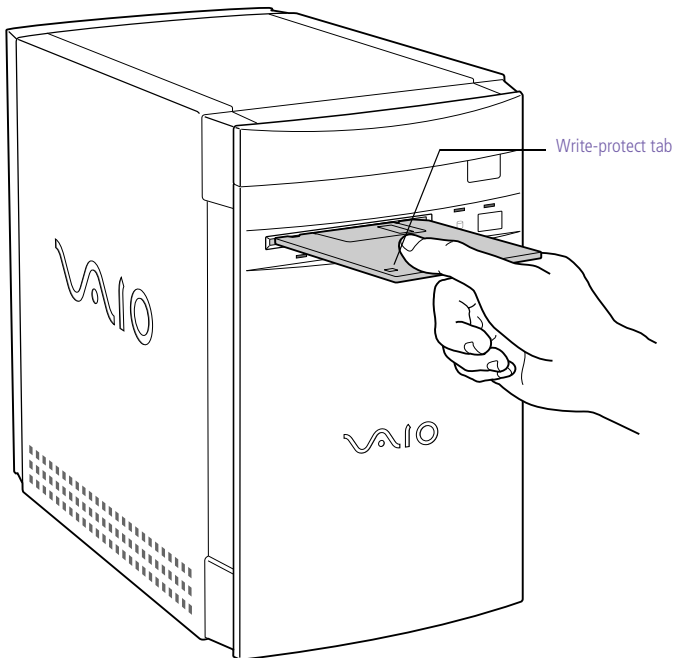
 To open the drive tray after playing a DVD disc, use the Eject button in the DVD Player application. Alternatively, you can click the My Computer icon on the Windows desktop, right-click the icon of the disc, and then click Eject.

Using the Diskette Drive

Most diskettes contain a write-protect tab. The write-protect tab prevents accidental changes to a diskette. When the hole is open, the diskette is write-protected—you can't delete, copy, or save information on the diskette. When the hole is closed, you may write to or modify the diskette contents. Just slide the write-protect tab to open and close the hole.

To use the diskette drive

- 1 Hold the diskette with the label side facing up.
- 2 Gently push the diskette into the drive until you hear it click into place.
- 3 After you finish using the diskette, press the Eject button on the diskette drive to remove the diskette.



Other Information

Notes on Use

On the Power Source

- ❑ Your computer operates on 100–120 V AC 50/60 Hz for North American countries.
- ❑ The total power draw of installed add-in cards must not exceed the specifications for the power supply. Do not overload the system by installing add-in cards that draw excessive current. The system is designed to provide 2 amps (average) of 5V power for each card in the system not to exceed a total of 12 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 12 amps. If you add components to the system that draw current from the power supply, the maximum combined +3.3V and +5V output must not exceed 80 watts.
- ❑ Plug all the power cords for your computer and its peripheral equipment into the same AC supply line. AC derived from different supply lines may result in voltage differences that can cause unstable operation or unwanted weak currents at the time of connection.
- ❑ Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
- ❑ You can purchase a power strip with a surge protector. This device prevents damage to your computer caused by sudden power surges such as those that may occur during an electrical storm.

- ❑ If you live in an area that experiences frequent power fluctuations, you may want to purchase a UPS (Uninterrupted Power Supply). This device contains both a surge protector and a battery backup. The surge protector prevents damage to your computer caused by power surges. The battery backup safeguards your data during a brief period of power loss.
- ❑ Do not place heavy objects on the power cord.
- ❑ Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
- ❑ To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- ❑ Unplug your computer from the wall outlet if you will not be using the computer for a long time.
- ❑ The power control button on the front panel does not turn off the system AC power. To remove power from the system, you must shut down the computer as described in this manual and then unplug the AC power cord from the wall outlet or power strip.
- ❑ Before touching anything inside the computer, turn the system off and let it cool for ten minutes. This will ensure that the processor heat sink will not be hot.
- ❑ Do not attempt to open the power supply. There are no user-serviceable parts in the power supply. To avoid personal injury or damage to your equipment, refer the repair or replacement of the power supply to qualified personnel only.

On Disposal of the Lithium Battery

Dispose of the lithium battery properly. In some areas, the disposal of lithium batteries in household or business trash may be prohibited. You can return your unwanted lithium batteries to your nearest Sony Service Center or Factory Service Center. For the Sony Service Center nearest you, call 1-888-4SONY-PC (1-888-476-6972).

! Do not handle damaged or leaking lithium batteries.

! The lithium battery may explode if mistreated. Do not disassemble it or dispose of it in fire.

Replace the battery with a Sony CR2032 lithium battery. Using a type of battery other than a CR2032 may present a risk of fire or explosion.

On Handling

- ❑ Clean the cabinet with a soft, dry cloth or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder, or solvent such as alcohol or benzine, as it may damage the finish of your Sony computer.
- ❑ Should any solid object or liquid fall into the cabinet, keyboard, or mouse, shut down your computer and then unplug it. You may want to have the computer checked by qualified personnel before operating it any further.

On Installation

- ❑ Do not place your Sony computer in a location subject to:
 - ❑ Heat sources, such as radiators or air ducts
 - ❑ Direct sunlight
 - ❑ Excessive dust
 - ❑ Mechanical vibration or shock
 - ❑ Strong magnets or speakers that are not magnetically shielded
 - ❑ Ambient temperature of more than 95°F (35°C) or less than 50°F (10°C)
 - ❑ High humidity, moisture, or rain
- ❑ Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
- ❑ Provide adequate air circulation to prevent internal heat build-up. Do not place your computer on loose surfaces (such as rugs or blankets) or near materials (such as curtains or draperies) that may block its ventilation slots. Leave a space of at least 8 inches from the back panel of your computer.
- ❑ The computer uses high-frequency radio signals and may cause interference to radio or TV reception. Should this occur, relocate the computer a suitable distance away from the set.
- ❑ Use only specified peripheral equipment and interface cables; otherwise, problems may result.
- ❑ Do not use cut or damaged connection cables.
- ❑ Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.

- ❑ Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
- ❑ Your Sony computer will not work with party lines, cannot be connected to a coin-operated telephone, and may not work with multiple phone lines or a private branch exchange (PBX).
- ❑ If the telephone company makes a service call to your home or office and determines that your computer is responsible for the problem, the telephone company may bill you for the service call. Also, if you do not disconnect your computer when it is adversely affecting the telephone line, the telephone company has the right to disconnect your service until you correct the problem.

On Moisture Condensation

If your computer is brought directly from a cold location to a warm one, moisture may condense inside your computer. In this case, allow at least an hour before turning on your computer. If any problem occurs, unplug your computer, and contact your Sony Service Center.

On Upgrading the System

- ❑ The procedures described in the “Upgrading and Maintaining Your VAIO MicroTower” chapter of this manual assume familiarity with the general terminology associated with personal computers and with the safety practices and regulatory compliance required for using and modifying electronic equipment.
- ❑ Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or do any of the procedures described in the “Upgrading and Maintaining Your VAIO MicroTower” section in this manual. Failure to do so may result in personal injury or equipment damage.
- ❑ Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Do the procedures described in the “Upgrading and Maintaining Your VAIO MicroTower” chapter 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 contact with an unpainted metal portion of the chassis while performing the procedure.

- ❑ When removing a slot cover, be careful not to damage components on the system board or add-in cards. You may need to temporarily remove add-in cards that are next to the slot cover you want to remove.

On Using the Hard Disk Drive

- ❑ Do not place the computer in a location that is subject to vibration or shock.
- ❑ Do not move the computer during operation.
- ❑ Do not subject the computer to sudden changes in temperature.
- ❑ Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

- ❑ Do not open the shutter manually and touch the surface of the diskette.
- ❑ Keep diskettes away from magnets.
- ❑ Keep diskettes away from direct sunlight and other heat sources.

On Handling CD-ROM and DVD-ROM Discs

- ❑ Do not touch the surface of the disc.
- ❑ Do not drop or bend the disc.

On Cleaning CD-ROM and DVD-ROM Discs

- ❑ Fingerprints and dust on the surface of a disc may cause read errors. Proper care of the disc is essential to maintain its reliability. Do not use solvents such as benzine, thinner, commercially available cleaners or anti-static spray, as they may cause damage to the disc.
- ❑ For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
- ❑ If the disc is badly soiled, moisten a soft cloth with water, wring it out well, and use it to wipe the surface of the disc from the center out. Wipe off any remaining moisture with a dry soft cloth.

Limited Warranty Statement

The limited warranty on your VAIO MicroTower covers parts and labor against defects in material or workmanship for a period of three months from the original date of purchase. You can extend the warranty period for an additional nine months by registering your computer. See “Registering Your Computer” on page 24. Once you register your computer, the limited warranty period is twelve months from the original date of purchase.

SONY ELECTRONICS INC. (“SONY”) warrants this computer hardware product (“the Product”) against defects in material or workmanship as follows:

Labor: For a period of ninety (90) calendar days from the original date of purchase from SONY or a SONY authorized reseller, SONY will repair defects in the Product at no charge, or pay the associated labor charges to a SONY authorized personal computer service facility. The ninety (90) day warranty period is extendible only to the original purchaser, for an additional period of nine (9) months, for a total of twelve (12) months from date of purchase when the Product is registered electronically. After the applicable period you must pay for all labor charges.

Parts: For a period of ninety (90) calendar days from the original date of purchase from SONY or a SONY authorized reseller, SONY will supply, at no charge, new or rebuilt, at SONY’s option, replacement parts in exchange for defective parts. Any replacement parts will be warranted for the remainder of the original warranty period or ninety (90) calendar days from installation by SONY’s authorized personal computer service facility, whichever is longer. The ninety (90) day warranty period is extendible only to the original purchaser, for an additional period of nine (9) months, for a total of twelve (12) months from date of purchase when the Product is registered electronically. All defective parts replaced under this Limited Warranty will become the property of SONY.

This Limited Warranty covers only the hardware components packaged with the Product. It does not cover technical assistance for hardware or software usage and it does not cover any software products whether or not contained in the Product; any such software is provided “AS IS” unless expressly provided for in any enclosed software limited warranty. Please refer to the End User License Agreements included with the Product for your obligations with respect to the software.

This Limited Warranty is non-transferable.

Proof of purchase in the form of a bill of sale (which is evidence that the Product is within the warranty period) must be presented to obtain warranty service. In addition, if replacement parts are required and you wish to receive the most expedient service available, you will be required to provide SONY with a credit card authorization to bill your credit card in the event you fail to return the original parts in the postage-paid envelope we provide. The credit card will only be charged for SONY’s list price for the part if the part has not been returned within thirty days.

If you purchased the Product in the United States and the Product is located in the United States, you may be entitled to on-site repair service during the warranty period, subject to certain restrictions. In all instances, however, prior to an on-site service call being provided, you must communicate with Sony sufficiently to allow it to perform initial diagnostics of your Product. Please contact SONY as set forth below for further information.

If you do not qualify for on-site warranty service or choose not to take advantage of any applicable on-site warranty service, you must take the Product, or deliver the Product freight prepaid, in either its original package or packaging providing the Product with a degree of protection equivalent to that of the original packaging, to any SONY authorized personal computer service facility. Please contact SONY as set forth below for further information.

With respect to all service provided, it is your responsibility to backup the contents of your hard drive, including any data you have stored or software you have installed on the hard drive. It is likely that the contents of your hard drive will be lost or reformatted in the course of service and SONY will not be responsible for any damage to or loss of any programs, data or other information stored on any media or any part of any Product serviced hereunder.

IF DURING THE REPAIR OF THE PRODUCT THE CONTENTS OF THE HARD DRIVE ARE ALTERED, DELETED, OR IN ANY WAY MODIFIED, SONY IS NOT RESPONSIBLE WHATSOEVER. YOUR PRODUCT WILL BE RETURNED TO YOU CONFIGURED AS ORIGINALLY PURCHASED (SUBJECT TO AVAILABILITY OF SOFTWARE).

Be sure to remove all third party hardware, software, features, parts, options, alterations, and attachments not warranted by SONY prior to sending the product to SONY for service. SONY is not liable for any loss or damage to these items.

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