

Notice to Users

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. This manual and the software described herein, in whole or in part, may not be reproduced, translated, or reduced to any machine-readable form without prior written approval.

NOTICE

Updates and additions to software may require an additional charge. Subscriptions to online service providers may require a fee and credit card information. Financial services may require prior arrangements with participating financial institutions.

Sony, VAIO, the VAIO logo, VAIO Smart, VAIO Digital Studio, Media Park, DVgate, Media Bar, Handycam, Mavica, PictureGear and i.LINK are trademarks of Sony. Intel, Pentium, and Celeron are trademarks of Intel Corporation. Microsoft, Windows, and the Windows 98 logo are registered trademarks of Microsoft Corporation. All other trademarks are trademarks or registered trademarks of their respective owners.

Declaration of Conformity

Trade Name: SONY

Model No.: PCV-R545DS/ PCV-R547DS/PCV-R549DS/

Responsible Party: Sony Electronics Inc.

Address: 1 Sony Drive

Park Ridge, NJ 07656

Telephone: 201-930-6972

This phone number is for FCC-related matters only.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Owner's Record

The model number and serial number are located on the bottom of your Sony VAIO Digital Studio computer. Refer to the model and serial numbers when you call your Sony Service Center.

Model Number: PCV-R545DS/PCV-R547DS/ PCV-R549DS

Read Me First

PCV-R545DS

Frequently Asked Questions (FAQs)

Q: How do I recover applications or drivers that came with my computer if the files are corrupted or deleted?

A: The Application Recovery CDs allow 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).

You must be in the Windows® operating system 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 Customer Support at <http://www.sony.com/pcsupport>

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.

Q: How do I change the parallel port type to ECP, EPP, or bi-directional?

A: You can change the parallel port type using the System Setup utility (CMOS Setup Utility). To access System Setup, click the Start button, select Shut Down, and then select Restart. When the Sony screen displays and you hear the Sony jingle, press the F2 key on your keyboard. Select the Advanced tab from the CMOS Setup Utility screen. Select "I/O Device Configuration," and use the arrow keys to highlight Parallel Port Mode. You can toggle between the Normal (bi-directional), EPP, ECP, and ECP+EPP options using the Plus (+) or Minus (-) keys. When the desired setting displays, press the Escape key.

Q: Why isn't the DVD-ROM drive reading a CD?

A: After inserting a CD, you must wait a few seconds for the CD to be detected before trying to access it. If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

Q: How do I set up faxing capability in Windows® 98 Second Edition?

A: Windows® 98 Second Edition does not provide a built-in fax utility. Sony has included the Symantec WinFax® Basic Edition software for your faxing needs. To set up WinFax Basic Edition, click the Start menu button. Point to Programs, Symantec Winfax Basic Edition, and select Configure WinFax Basic Edition software. Follow the on-screen instructions to configure the fax utility.

Q: How do I change the video resolution of my display?

A: From the Start menu, select Settings and click Control Panel. Click the Display icon and select Settings. Move the Screen area slider to change the resolution.

Q: Why does Windows lock up during shut down?



A: The Windows® operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or non-responsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

Q: Why is my system running slowly?

A: The system responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>. For information on installing memory, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Q: Why is there no sound in any application?

A: There are independent controls for your system volume.

- There is volume control  in the Windows® task tray. Click the icon and slide the level bar up to increase the volume.
- In addition to adjusting the volume, check that the Mute check box is not selected in the Windows volume control .

Q: Why doesn't my CD-RW drive record at the highest speed?

A: You must use 4x media to achieve optimum performance. If you must use other media, the following steps may be helpful:

If you are having difficulty formatting non-4x writable media, change the write speed from 4x to 2x or 1x. To change the write speed from the 4x default to another speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.

Q: How do I change my modem to rotary or Touch-Tone dialing?

A: Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

Q: Why is there unusual activity on my floppy disk drive?

A: If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.

Supplementary Information

Recovering Microsoft® Word 2000

If you recover your operating system using the System Recovery CD, Word 2000 will not be recovered. Use the Word 2000 CD-ROM to recover this application.

Standby Mode

Resuming from Standby Mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

Resetting Your Computer For Printer Use After Resuming From A Power Saving Mode

Your connected printer may not function after the computer resumes from a power saving mode. When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.

The printer should now function properly.

Connecting Computers by i.LINK® Interface

When connecting more than two computers by i.LINK interface, do not allow any of the connected computers to enter Suspend, Hibernation, or Standby mode during a file transfer, as this could result in a loss of data. If one of the connected computers does enter a power saving mode, resume power, then disconnect and reconnect the i.LINK cable. Note that if you connect a notebook computer docking station using an i.LINK cable, you cannot use Smart Connect when the computer is not in the docking station.

Upgrading Your Computer

For information on upgrading your computer, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D.

Switching Between NTSC and PAL Standards

Your computer is designed to allow you to switch between NTSC and PAL

standards. For details on switching from one standard to another, go to the Knowledge Database at <http://www.sony.com/pcsupport>.

VAIO Smart Keyboard Default Settings

The VAIO Smart Keyboard programmable buttons come with the following applications as their default settings:

S1 - Easy Internet Access Browser (Internet)

S2 - Microsoft® Outlook® Express (Mail)

S3- Wild Metal Country®

S4 - Microsoft® Word 2000

S5 - Quicken® Basic 99(Finance)

S6 - Help

All six buttons are reprogrammable.

Memory Upgrade Specifications

When upgrading memory, use only 3.3V 64-bit PC-100 168 PIN SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

Restoring Outlook Express

If Outlook Express is corrupted or accidentally deleted, restore this application by following these steps:

1. From the Windows Start menu, point to Settings and select Control Panel.
2. Click Add/Remove Programs.
3. Click the Window Setup tab.
4. If Outlook is checked, uncheck the box and click Apply.

Restore the application by repeating steps 1 through 3. Then, check the box next to Outlook and click Apply.

Self-launching CDs

For self-launching CDs, place the CD in the DVD-ROM drive, which is the upper drive on your system unit. If you are prompted to insert the CD when starting the application, insert the CD into the DVD-ROM drive.

Enabling Smart Connect

For information on enabling Smart Connect, please see your *VAIO Digital Studio Computer User Guide*.

If You Get an Error Message When Your Modem Tries to Dial

If you get a message informing you that your modem is unable to complete a dialup connection, the message may be appearing because you are dialing from an area where an overlay area code¹ has been implemented. In such areas, even local calls require dialing the area code, or 1 + the area code, before the 7-digit telephone number. If you are dialing from such an area, you need to configure your dialup software to dial the area code, or 1 + the area code, before the 7-digit number.

For instructions on how to do this, consult your dialup software's manual or online help. The same instructions will also tell you how to configure your dialup software to dial a 9 or other number to access an outside line (you may need to do this if, for instance, you are dialing from an office building).

For Answers to Your Software Questions

Adobe Systems Incorporated 206-628-2746 (M-F, 6 AM-5 PM PT)

America Online 800-827-3338 (7 days a week, 6 AM - 2 PM ET)

AT&T 800-400-1447 (7 days a week, 24 hours a day)

CompuServe Interactive Services 800-848-8990 (M-F, 8 AM - 1 AM ET, S-S 10 AM - 10 PM ET)

EarthLink Network, Inc. 800-395-8410 (7 days a week, 24 hours a day)

GTE Intelligent Network Services, Inc. 800-927-3000

Infogrames North America 408-296-8400 (M-F, 9AM - 5PM PT)

Intuit Inc. 900-555-4688 (7 days a week, 24 hours a day)

MindSpring Enterprises, Inc. 800-719-4660

Network Associates, Inc. 408-988-3832 (M-F, 9 AM - 5 PM CT)

Softlink 408-970-3370 (M-F, 8 AM - 5 PM PT)

Symantec Corporation 800-798-0850

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, the VAIO logo, VAIO Smart, VAIO Digital Studio, DVgate, and i.LINK are trademarks of Sony. All other trademarks are trademarks or registered trademarks of their respective owners.

¹ An overlay area code is a second area code added to the same geographical area as an existing area code.

Read Me First

PCV-R545DS

Frequently Asked Questions (FAQs)

Q: How do I recover applications or drivers that came with my computer if the files are corrupted or deleted?

A: The Application Recovery CDs allow 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).

You must be in the Windows® operating system 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 Customer Support at <http://www.sony.com/pcsupport>

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.

Q: How do I change the parallel port type to ECP, EPP, or bi-directional?

A: You can change the parallel port type using the System Setup utility (CMOS Setup Utility). To access System Setup, click the Start button, select Shut Down, and then select Restart. When the Sony screen displays and you hear the Sony jingle, press the F2 key on your keyboard. Select the Advanced tab from the CMOS Setup Utility screen. Select "I/O Device Configuration," and use the arrow keys to highlight Parallel Port Mode. You can toggle between the Normal (bi-directional), EPP, ECP, and ECP+EPP options using the Plus (+) or Minus (-) keys. When the desired setting displays, press the Escape key.

Q: Why isn't the DVD-ROM drive reading a CD?

A: After inserting a CD, you must wait a few seconds for the CD to be detected before trying to access it. If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

Q: How do I set up faxing capability in Windows® 98 Second Edition?

A: Windows® 98 Second Edition does not provide a built-in fax utility. Sony has included the Symantec WinFax® Basic Edition software for your faxing needs. To set up WinFax Basic Edition, click the Start menu button. Point to Programs, Symantec Winfax Basic Edition, and select Configure WinFax Basic Edition software. Follow the on-screen instructions to configure the fax utility.

Q: How do I change the video resolution of my display?

A: From the Start menu, select Settings and click Control Panel. Click the Display icon and select Settings. Move the Screen area slider to change the resolution.

Q: Why does Windows lock up during shut down?



A: The Windows® operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or non-responsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

Q: Why is my system running slowly?

A: The system responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>. For information on installing memory, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Q: Why is there no sound in any application?

A: There are independent controls for your system volume.

- There is volume control  in the Windows® task tray. Click the icon and slide the level bar up to increase the volume.
- In addition to adjusting the volume, check that the Mute check box is not selected in the Windows volume control .

Q: Why doesn't my CD-RW drive record at the highest speed?

A: You must use 4x media to achieve optimum performance. If you must use other media, the following steps may be helpful:

If you are having difficulty formatting non-4x writable media, change the write speed from 4x to 2x or 1x. To change the write speed from the 4x default to another speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.

Q: How do I change my modem to rotary or Touch-Tone dialing?

A: Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

Q: Why is there unusual activity on my floppy disk drive?

A: If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.

Supplementary Information

Recovering Microsoft® Word 2000

If you recover your operating system using the System Recovery CD, Word 2000 will not be recovered. Use the Word 2000 CD-ROM to recover this application.

Standby Mode

Resuming from Standby Mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

Resetting Your Computer For Printer Use After Resuming From A Power Saving Mode

Your connected printer may not function after the computer resumes from a power saving mode. When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.

The printer should now function properly.

Connecting Computers by i.LINK® Interface

When connecting more than two computers by i.LINK interface, do not allow any of the connected computers to enter Suspend, Hibernation, or Standby mode during a file transfer, as this could result in a loss of data. If one of the connected computers does enter a power saving mode, resume power, then disconnect and reconnect the i.LINK cable. Note that if you connect a notebook computer docking station using an i.LINK cable, you cannot use Smart Connect when the computer is not in the docking station.

Upgrading Your Computer

For information on upgrading your computer, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D.

Switching Between NTSC and PAL Standards

Your computer is designed to allow you to switch between NTSC and PAL

standards. For details on switching from one standard to another, go to the Knowledge Database at <http://www.sony.com/pcsupport>.

VAIO Smart Keyboard Default Settings

The VAIO Smart Keyboard programmable buttons come with the following applications as their default settings:

S1 - Easy Internet Access Browser (Internet)

S2 - Microsoft® Outlook® Express (Mail)

S3- Wild Metal Country®

S4 - Microsoft® Word 2000

S5 - Quicken® Basic 99(Finance)

S6 - Help

All six buttons are reprogrammable.

Memory Upgrade Specifications

When upgrading memory, use only 3.3V 64-bit PC-100 168 PIN SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

Restoring Outlook Express

If Outlook Express is corrupted or accidentally deleted, restore this application by following these steps:

1. From the Windows Start menu, point to Settings and select Control Panel.
2. Click Add/Remove Programs.
3. Click the Window Setup tab.
4. If Outlook is checked, uncheck the box and click Apply.

Restore the application by repeating steps 1 through 3. Then, check the box next to Outlook and click Apply.

Self-launching CDs

For self-launching CDs, place the CD in the DVD-ROM drive, which is the upper drive on your system unit. If you are prompted to insert the CD when starting the application, insert the CD into the DVD-ROM drive.

Enabling Smart Connect

For information on enabling Smart Connect, please see your *VAIO Digital Studio Computer User Guide*.

If You Get an Error Message When Your Modem Tries to Dial

If you get a message informing you that your modem is unable to complete a dialup connection, the message may be appearing because you are dialing from an area where an overlay area code¹ has been implemented. In such areas, even local calls require dialing the area code, or 1 + the area code, before the 7-digit telephone number. If you are dialing from such an area, you need to configure your dialup software to dial the area code, or 1 + the area code, before the 7-digit number.

For instructions on how to do this, consult your dialup software's manual or online help. The same instructions will also tell you how to configure your dialup software to dial a 9 or other number to access an outside line (you may need to do this if, for instance, you are dialing from an office building).

For Answers to Your Software Questions

Adobe Systems Incorporated 206-628-2746 (M-F, 6 AM-5 PM PT)

America Online 800-827-3338 (7 days a week, 6 AM - 2 PM ET)

AT&T 800-400-1447 (7 days a week, 24 hours a day)

CompuServe Interactive Services 800-848-8990 (M-F, 8 AM - 1 AM ET, S-S 10 AM - 10 PM ET)

EarthLink Network, Inc. 800-395-8410 (7 days a week, 24 hours a day)

GTE Intelligent Network Services, Inc. 800-927-3000

Infogrames North America 408-296-8400 (M-F, 9AM - 5PM PT)

Intuit Inc. 900-555-4688 (7 days a week, 24 hours a day)

MindSpring Enterprises, Inc. 800-719-4660

Network Associates, Inc. 408-988-3832 (M-F, 9 AM - 5 PM CT)

Softlink 408-970-3370 (M-F, 8 AM - 5 PM PT)

Symantec Corporation 800-798-0850

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, the VAIO logo, VAIO Smart, VAIO Digital Studio, DVgate, and i.LINK are trademarks of Sony. All other trademarks are trademarks or registered trademarks of their respective owners.

¹ An overlay area code is a second area code added to the same geographical area as an existing area code.

Read Me First

PCV-R545DS

Frequently Asked Questions (FAQs)

Q: How do I recover applications or drivers that came with my computer if the files are corrupted or deleted?

A: The Application Recovery CDs allow 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).

You must be in the Windows® operating system 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 Customer Support at <http://www.sony.com/pcsupport>

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.

Q: How do I change the parallel port type to ECP, EPP, or bi-directional?

A: You can change the parallel port type using the System Setup utility (CMOS Setup Utility). To access System Setup, click the Start button, select Shut Down, and then select Restart. When the Sony screen displays and you hear the Sony jingle, press the F2 key on your keyboard. Select the Advanced tab from the CMOS Setup Utility screen. Select "I/O Device Configuration," and use the arrow keys to highlight Parallel Port Mode. You can toggle between the Normal (bi-directional), EPP, ECP, and ECP+EPP options using the Plus (+) or Minus (-) keys. When the desired setting displays, press the Escape key.

Q: Why isn't the DVD-ROM drive reading a CD?

A: After inserting a CD, you must wait a few seconds for the CD to be detected before trying to access it. If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

Q: How do I set up faxing capability in Windows® 98 Second Edition?

A: Windows® 98 Second Edition does not provide a built-in fax utility. Sony has included the Symantec WinFax® Basic Edition software for your faxing needs. To set up WinFax Basic Edition, click the Start menu button. Point to Programs, Symantec Winfax Basic Edition, and select Configure WinFax Basic Edition software. Follow the on-screen instructions to configure the fax utility.

Q: How do I change the video resolution of my display?

A: From the Start menu, select Settings and click Control Panel. Click the Display icon and select Settings. Move the Screen area slider to change the resolution.

Q: Why does Windows lock up during shut down?



A: The Windows® operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or non-responsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

Q: Why is my system running slowly?

A: The system responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>. For information on installing memory, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Q: Why is there no sound in any application?

A: There are independent controls for your system volume.

- There is volume control  in the Windows® task tray. Click the icon and slide the level bar up to increase the volume.
- In addition to adjusting the volume, check that the Mute check box is not selected in the Windows volume control .

Q: Why doesn't my CD-RW drive record at the highest speed?

A: You must use 4x media to achieve optimum performance. If you must use other media, the following steps may be helpful:

If you are having difficulty formatting non-4x writable media, change the write speed from 4x to 2x or 1x. To change the write speed from the 4x default to another speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.

Q: How do I change my modem to rotary or Touch-Tone dialing?

A: Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

Q: Why is there unusual activity on my floppy disk drive?

A: If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.

Supplementary Information

Recovering Microsoft® Word 2000

If you recover your operating system using the System Recovery CD, Word 2000 will not be recovered. Use the Word 2000 CD-ROM to recover this application.

Standby Mode

Resuming from Standby Mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

Resetting Your Computer For Printer Use After Resuming From A Power Saving Mode

Your connected printer may not function after the computer resumes from a power saving mode. When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.

The printer should now function properly.

Connecting Computers by i.LINK® Interface

When connecting more than two computers by i.LINK interface, do not allow any of the connected computers to enter Suspend, Hibernation, or Standby mode during a file transfer, as this could result in a loss of data. If one of the connected computers does enter a power saving mode, resume power, then disconnect and reconnect the i.LINK cable. Note that if you connect a notebook computer docking station using an i.LINK cable, you cannot use Smart Connect when the computer is not in the docking station.

Upgrading Your Computer

For information on upgrading your computer, see the online document [Upgrading and Maintaining Your VAIOR® Computer](#).

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D.

Switching Between NTSC and PAL Standards

Your computer is designed to allow you to switch between NTSC and PAL

standards. For details on switching from one standard to another, go to the Knowledge Database at <http://www.sony.com/pcsupport>.

VAIO Smart Keyboard Default Settings

The VAIOR Smart Keyboard programmable buttons come with the following applications as their default settings:

S1 - Easy Internet Access Browser (Internet)

S2 - Microsoft® Outlook® Express (Mail)

S3- Wild Metal Country®

S4 - Microsoft® Word 2000

S5 - Quicken® Basic 99(Finance)

S6 - Help

All six buttons are reprogrammable.

Memory Upgrade Specifications

When upgrading memory, use only 3.3V 64-bit PC-100 168 PIN SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

Restoring Outlook Express

If Outlook Express is corrupted or accidentally deleted, restore this application by following these steps:

1. From the Windows Start menu, point to Settings and select Control Panel.
2. Click Add/Remove Programs.
3. Click the Window Setup tab.
4. If Outlook is checked, uncheck the box and click Apply.

Restore the application by repeating steps 1 through 3. Then, check the box next to Outlook and click Apply.

Self-launching CDs

For self-launching CDs, place the CD in the DVD-ROM drive, which is the upper drive on your system unit. If you are prompted to insert the CD when starting the application, insert the CD into the DVD-ROM drive.

Enabling Smart Connect

For information on enabling Smart Connect, please see your *VAIO Digital Studio Computer User Guide*.

If You Get an Error Message When Your Modem Tries to Dial

If you get a message informing you that your modem is unable to complete a dialup connection, the message may be appearing because you are dialing from an area where an overlay area code¹ has been implemented. In such areas, even local calls require dialing the area code, or 1 + the area code, before the 7-digit telephone number. If you are dialing from such an area, you need to configure your dialup software to dial the area code, or 1 + the area code, before the 7-digit number.

For instructions on how to do this, consult your dialup software's manual or online help. The same instructions will also tell you how to configure your dialup software to dial a 9 or other number to access an outside line (you may need to do this if, for instance, you are dialing from an office building).

For Answers to Your Software Questions

Adobe Systems Incorporated 206-628-2746 (M-F, 6 AM-5 PM PT)

America Online 800-827-3338 (7 days a week, 6 AM - 2 PM ET)

AT&T 800-400-1447 (7 days a week, 24 hours a day)

CompuServe Interactive Services 800-848-8990 (M-F, 8 AM - 1 AM ET, S-S 10 AM - 10 PM ET)

EarthLink Network, Inc. 800-395-8410 (7 days a week, 24 hours a day)

GTE Intelligent Network Services, Inc. 800-927-3000

Infogrames North America 408-296-8400 (M-F, 9AM - 5PM PT)

Intuit Inc. 900-555-4688 (7 days a week, 24 hours a day)

MindSpring Enterprises, Inc. 800-719-4660

Network Associates, Inc. 408-988-3832 (M-F, 9 AM - 5 PM CT)

Softlink 408-970-3370 (M-F, 8 AM - 5 PM PT)

Symantec Corporation 800-798-0850

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, the VAIO logo, VAIO Smart, VAIO Digital Studio, DVgate, and i.LINK are trademarks of Sony. All other trademarks are trademarks or registered trademarks of their respective owners.

¹ An overlay area code is a second area code added to the same geographical area as an existing area code.

Read Me First

PCV-R545DS

Frequently Asked Questions (FAQs)

Q: How do I recover applications or drivers that came with my computer if the files are corrupted or deleted?

A: The Application Recovery CDs allow 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).

You must be in the Windows® operating system 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 Customer Support at <http://www.sony.com/pcsupport>

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.

Q: How do I change the parallel port type to ECP, EPP, or bi-directional?

A: You can change the parallel port type using the System Setup utility (CMOS Setup Utility). To access System Setup, click the Start button, select Shut Down, and then select Restart. When the Sony screen displays and you hear the Sony jingle, press the F2 key on your keyboard. Select the Advanced tab from the CMOS Setup Utility screen. Select "I/O Device Configuration," and use the arrow keys to highlight Parallel Port Mode. You can toggle between the Normal (bi-directional), EPP, ECP, and ECP+EPP options using the Plus (+) or Minus (-) keys. When the desired setting displays, press the Escape key.

Q: Why isn't the DVD-ROM drive reading a CD?

A: After inserting a CD, you must wait a few seconds for the CD to be detected before trying to access it. If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

Q: How do I set up faxing capability in Windows® 98 Second Edition?

A: Windows® 98 Second Edition does not provide a built-in fax utility. Sony has included the Symantec WinFax® Basic Edition software for your faxing needs. To set up WinFax Basic Edition, click the Start menu button. Point to Programs, Symantec Winfax Basic Edition, and select Configure WinFax Basic Edition software. Follow the on-screen instructions to configure the fax utility.

Q: How do I change the video resolution of my display?

A: From the Start menu, select Settings and click Control Panel. Click the Display icon and select Settings. Move the Screen area slider to change the resolution.

Q: Why does Windows lock up during shut down?



A: The Windows® operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or non-responsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

Q: Why is my system running slowly?

A: The system responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>. For information on installing memory, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Q: Why is there no sound in any application?

A: There are independent controls for your system volume.

- There is volume control  in the Windows® task tray. Click the icon and slide the level bar up to increase the volume.
- In addition to adjusting the volume, check that the Mute check box is not selected in the Windows volume control .

Q: Why doesn't my CD-RW drive record at the highest speed?

A: You must use 4x media to achieve optimum performance. If you must use other media, the following steps may be helpful:

If you are having difficulty formatting non-4x writable media, change the write speed from 4x to 2x or 1x. To change the write speed from the 4x default to another speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.

Q: How do I change my modem to rotary or Touch-Tone dialing?

A: Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

Q: Why is there unusual activity on my floppy disk drive?

A: If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.

Supplementary Information

Recovering Microsoft® Word 2000

If you recover your operating system using the System Recovery CD, Word 2000 will not be recovered. Use the Word 2000 CD-ROM to recover this application.

Standby Mode

Resuming from Standby Mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

Resetting Your Computer For Printer Use After Resuming From A Power Saving Mode

Your connected printer may not function after the computer resumes from a power saving mode. When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.

The printer should now function properly.

Connecting Computers by i.LINK® Interface

When connecting more than two computers by i.LINK interface, do not allow any of the connected computers to enter Suspend, Hibernation, or Standby mode during a file transfer, as this could result in a loss of data. If one of the connected computers does enter a power saving mode, resume power, then disconnect and reconnect the i.LINK cable. Note that if you connect a notebook computer docking station using an i.LINK cable, you cannot use Smart Connect when the computer is not in the docking station.

Upgrading Your Computer

For information on upgrading your computer, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D.

Switching Between NTSC and PAL Standards

Your computer is designed to allow you to switch between NTSC and PAL

standards. For details on switching from one standard to another, go to the Knowledge Database at <http://www.sony.com/pcsupport>.

VAIO Smart Keyboard Default Settings

The VAIO Smart Keyboard programmable buttons come with the following applications as their default settings:

S1 - Easy Internet Access Browser (Internet)

S2 - Microsoft® Outlook® Express (Mail)

S3- Wild Metal Country®

S4 - Microsoft® Word 2000

S5 - Quicken® Basic 99(Finance)

S6 - Help

All six buttons are reprogrammable.

Memory Upgrade Specifications

When upgrading memory, use only 3.3V 64-bit PC-100 168 PIN SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

Restoring Outlook Express

If Outlook Express is corrupted or accidentally deleted, restore this application by following these steps:

1. From the Windows Start menu, point to Settings and select Control Panel.
2. Click Add/Remove Programs.
3. Click the Window Setup tab.
4. If Outlook is checked, uncheck the box and click Apply.

Restore the application by repeating steps 1 through 3. Then, check the box next to Outlook and click Apply.

Self-launching CDs

For self-launching CDs, place the CD in the DVD-ROM drive, which is the upper drive on your system unit. If you are prompted to insert the CD when starting the application, insert the CD into the DVD-ROM drive.

Enabling Smart Connect

For information on enabling Smart Connect, please see your *VAIO Digital Studio Computer User Guide*.

If You Get an Error Message When Your Modem Tries to Dial

If you get a message informing you that your modem is unable to complete a dialup connection, the message may be appearing because you are dialing from an area where an overlay area code¹ has been implemented. In such areas, even local calls require dialing the area code, or 1 + the area code, before the 7-digit telephone number. If you are dialing from such an area, you need to configure your dialup software to dial the area code, or 1 + the area code, before the 7-digit number.

For instructions on how to do this, consult your dialup software's manual or online help. The same instructions will also tell you how to configure your dialup software to dial a 9 or other number to access an outside line (you may need to do this if, for instance, you are dialing from an office building).

For Answers to Your Software Questions

Adobe Systems Incorporated 206-628-2746 (M-F, 6 AM-5 PM PT)

America Online 800-827-3338 (7 days a week, 6 AM - 2 PM ET)

AT&T 800-400-1447 (7 days a week, 24 hours a day)

CompuServe Interactive Services 800-848-8990 (M-F, 8 AM - 1 AM ET, S-S 10 AM - 10 PM ET)

EarthLink Network, Inc. 800-395-8410 (7 days a week, 24 hours a day)

GTE Intelligent Network Services, Inc. 800-927-3000

Infogrames North America 408-296-8400 (M-F, 9AM - 5PM PT)

Intuit Inc. 900-555-4688 (7 days a week, 24 hours a day)

MindSpring Enterprises, Inc. 800-719-4660

Network Associates, Inc. 408-988-3832 (M-F, 9 AM - 5 PM CT)

Softlink 408-970-3370 (M-F, 8 AM - 5 PM PT)

Symantec Corporation 800-798-0850

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, the VAIO logo, VAIO Smart, VAIO Digital Studio, DVgate, and i.LINK are trademarks of Sony. All other trademarks are trademarks or registered trademarks of their respective owners.

¹ An overlay area code is a second area code added to the same geographical area as an existing area code.

Read Me First

PCV-R545DS

Frequently Asked Questions (FAQs)

Q: How do I recover applications or drivers that came with my computer if the files are corrupted or deleted?

A: The Application Recovery CDs allow 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).

You must be in the Windows® operating system 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 Customer Support at <http://www.sony.com/pcsupport>

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.

Q: How do I change the parallel port type to ECP, EPP, or bi-directional?

A: You can change the parallel port type using the System Setup utility (CMOS Setup Utility). To access System Setup, click the Start button, select Shut Down, and then select Restart. When the Sony screen displays and you hear the Sony jingle, press the F2 key on your keyboard. Select the Advanced tab from the CMOS Setup Utility screen. Select "I/O Device Configuration," and use the arrow keys to highlight Parallel Port Mode. You can toggle between the Normal (bi-directional), EPP, ECP, and ECP+EPP options using the Plus (+) or Minus (-) keys. When the desired setting displays, press the Escape key.

Q: Why isn't the DVD-ROM drive reading a CD?

A: After inserting a CD, you must wait a few seconds for the CD to be detected before trying to access it. If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

Q: How do I set up faxing capability in Windows® 98 Second Edition?

A: Windows® 98 Second Edition does not provide a built-in fax utility. Sony has included the Symantec WinFax® Basic Edition software for your faxing needs. To set up WinFax Basic Edition, click the Start menu button. Point to Programs, Symantec Winfax Basic Edition, and select Configure WinFax Basic Edition software. Follow the on-screen instructions to configure the fax utility.

Q: How do I change the video resolution of my display?

A: From the Start menu, select Settings and click Control Panel. Click the Display icon and select Settings. Move the Screen area slider to change the resolution.

Q: Why does Windows lock up during shut down?



A: The Windows® operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or non-responsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

Q: Why is my system running slowly?

A: The system responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>. For information on installing memory, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Q: Why is there no sound in any application?

A: There are independent controls for your system volume.

- There is volume control  in the Windows® task tray. Click the icon and slide the level bar up to increase the volume.
- In addition to adjusting the volume, check that the Mute check box is not selected in the Windows volume control .

Q: Why doesn't my CD-RW drive record at the highest speed?

A: You must use 4x media to achieve optimum performance. If you must use other media, the following steps may be helpful:

If you are having difficulty formatting non-4x writable media, change the write speed from 4x to 2x or 1x. To change the write speed from the 4x default to another speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.

Q: How do I change my modem to rotary or Touch-Tone dialing?

A: Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

Q: Why is there unusual activity on my floppy disk drive?

A: If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.

Supplementary Information

Recovering Microsoft® Word 2000

If you recover your operating system using the System Recovery CD, Word 2000 will not be recovered. Use the Word 2000 CD-ROM to recover this application.

Standby Mode

Resuming from Standby Mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

Resetting Your Computer For Printer Use After Resuming From A Power Saving Mode

Your connected printer may not function after the computer resumes from a power saving mode. When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.

The printer should now function properly.

Connecting Computers by i.LINK® Interface

When connecting more than two computers by i.LINK interface, do not allow any of the connected computers to enter Suspend, Hibernation, or Standby mode during a file transfer, as this could result in a loss of data. If one of the connected computers does enter a power saving mode, resume power, then disconnect and reconnect the i.LINK cable. Note that if you connect a notebook computer docking station using an i.LINK cable, you cannot use Smart Connect when the computer is not in the docking station.

Upgrading Your Computer

For information on upgrading your computer, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D.

Switching Between NTSC and PAL Standards

Your computer is designed to allow you to switch between NTSC and PAL

standards. For details on switching from one standard to another, go to the Knowledge Database at <http://www.sony.com/pcsupport>.

VAIO Smart Keyboard Default Settings

The VAIO Smart Keyboard programmable buttons come with the following applications as their default settings:

S1 - Easy Internet Access Browser (Internet)

S2 - Microsoft® Outlook® Express (Mail)

S3- Wild Metal Country®

S4 - Microsoft® Word 2000

S5 - Quicken® Basic 99(Finance)

S6 - Help

All six buttons are reprogrammable.

Memory Upgrade Specifications

When upgrading memory, use only 3.3V 64-bit PC-100 168 PIN SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

Restoring Outlook Express

If Outlook Express is corrupted or accidentally deleted, restore this application by following these steps:

1. From the Windows Start menu, point to Settings and select Control Panel.
2. Click Add/Remove Programs.
3. Click the Window Setup tab.
4. If Outlook is checked, uncheck the box and click Apply.

Restore the application by repeating steps 1 through 3. Then, check the box next to Outlook and click Apply.

Self-launching CDs

For self-launching CDs, place the CD in the DVD-ROM drive, which is the upper drive on your system unit. If you are prompted to insert the CD when starting the application, insert the CD into the DVD-ROM drive.

Enabling Smart Connect

For information on enabling Smart Connect, please see your *VAIO Digital Studio Computer User Guide*.

If You Get an Error Message When Your Modem Tries to Dial

If you get a message informing you that your modem is unable to complete a dialup connection, the message may be appearing because you are dialing from an area where an overlay area code¹ has been implemented. In such areas, even local calls require dialing the area code, or 1 + the area code, before the 7-digit telephone number. If you are dialing from such an area, you need to configure your dialup software to dial the area code, or 1 + the area code, before the 7-digit number.

For instructions on how to do this, consult your dialup software's manual or online help. The same instructions will also tell you how to configure your dialup software to dial a 9 or other number to access an outside line (you may need to do this if, for instance, you are dialing from an office building).

For Answers to Your Software Questions

Adobe Systems Incorporated 206-628-2746 (M-F, 6 AM-5 PM PT)

America Online 800-827-3338 (7 days a week, 6 AM - 2 PM ET)

AT&T 800-400-1447 (7 days a week, 24 hours a day)

CompuServe Interactive Services 800-848-8990 (M-F, 8 AM - 1 AM ET, S-S 10 AM - 10 PM ET)

EarthLink Network, Inc. 800-395-8410 (7 days a week, 24 hours a day)

GTE Intelligent Network Services, Inc. 800-927-3000

Infogrames North America 408-296-8400 (M-F, 9AM - 5PM PT)

Intuit Inc. 900-555-4688 (7 days a week, 24 hours a day)

MindSpring Enterprises, Inc. 800-719-4660

Network Associates, Inc. 408-988-3832 (M-F, 9 AM - 5 PM CT)

Softlink 408-970-3370 (M-F, 8 AM - 5 PM PT)

Symantec Corporation 800-798-0850

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, the VAIO logo, VAIO Smart, VAIO Digital Studio, DVgate, and i.LINK are trademarks of Sony. All other trademarks are trademarks or registered trademarks of their respective owners.

¹ An overlay area code is a second area code added to the same geographical area as an existing area code.

Read Me First

PCV-R545DS

Frequently Asked Questions (FAQs)

Q: How do I recover applications or drivers that came with my computer if the files are corrupted or deleted?

A: The Application Recovery CDs allow 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).

You must be in the Windows[®] operating system 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 Customer Support at <http://www.sony.com/pcsupport>

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.

Q: How do I change the parallel port type to ECP, EPP, or bi-directional?

A: You can change the parallel port type using the System Setup utility (CMOS Setup Utility). To access System Setup, click the Start button, select Shut Down, and then select Restart. When the Sony screen displays and you hear the Sony jingle, press the F2 key on your keyboard. Select the Advanced tab from the CMOS Setup Utility screen. Select "I/O Device Configuration," and use the arrow keys to highlight Parallel Port Mode. You can toggle between the Normal (bi-directional), EPP, ECP, and ECP+EPP options using the Plus (+) or Minus (-) keys. When the desired setting displays, press the Escape key.

Q: Why isn't the DVD-ROM drive reading a CD?

A: After inserting a CD, you must wait a few seconds for the CD to be detected before trying to access it. If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

Q: How do I set up faxing capability in Windows[®] 98 Second Edition?

A: Windows[®] 98 Second Edition does not provide a built-in fax utility. Sony has included the Symantec WinFax[®] Basic Edition software for your faxing needs. To set up WinFax Basic Edition, click the Start menu button. Point to Programs, Symantec Winfax Basic Edition, and select Configure WinFax Basic Edition software. Follow the on-screen instructions to configure the fax utility.

Q: How do I change the video resolution of my display?

A: From the Start menu, select Settings and click Control Panel. Click the Display icon and select Settings. Move the Screen area slider to change the resolution.

Q: Why does Windows lock up during shut down?



A: The Windows® operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or non-responsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

Q: Why is my system running slowly?

A: The system responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>. For information on installing memory, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Q: Why is there no sound in any application?

A: There are independent controls for your system volume.

- There is volume control  in the Windows® task tray. Click the icon and slide the level bar up to increase the volume.
- In addition to adjusting the volume, check that the Mute check box is not selected in the Windows volume control .

Q: Why doesn't my CD-RW drive record at the highest speed?

A: You must use 4x media to achieve optimum performance. If you must use other media, the following steps may be helpful:

If you are having difficulty formatting non-4x writable media, change the write speed from 4x to 2x or 1x. To change the write speed from the 4x default to another speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.

Q: How do I change my modem to rotary or Touch-Tone dialing?

A: Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

Q: Why is there unusual activity on my floppy disk drive?

A: If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.

Supplementary Information

Recovering Microsoft® Word 2000

If you recover your operating system using the System Recovery CD, Word 2000 will not be recovered. Use the Word 2000 CD-ROM to recover this application.

Standby Mode

Resuming from Standby Mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

Resetting Your Computer For Printer Use After Resuming From A Power Saving Mode

Your connected printer may not function after the computer resumes from a power saving mode. When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.

The printer should now function properly.

Connecting Computers by i.LINK® Interface

When connecting more than two computers by i.LINK interface, do not allow any of the connected computers to enter Suspend, Hibernation, or Standby mode during a file transfer, as this could result in a loss of data. If one of the connected computers does enter a power saving mode, resume power, then disconnect and reconnect the i.LINK cable. Note that if you connect a notebook computer docking station using an i.LINK cable, you cannot use Smart Connect when the computer is not in the docking station.

Upgrading Your Computer

For information on upgrading your computer, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D.

Switching Between NTSC and PAL Standards

Your computer is designed to allow you to switch between NTSC and PAL

standards. For details on switching from one standard to another, go to the Knowledge Database at <http://www.sony.com/pcsupport>.

VAIO Smart Keyboard Default Settings

The VAIO Smart Keyboard programmable buttons come with the following applications as their default settings:

S1 - Easy Internet Access Browser (Internet)

S2 - Microsoft® Outlook® Express (Mail)

S3- Wild Metal Country®

S4 - Microsoft® Word 2000

S5 - Quicken® Basic 99(Finance)

S6 - Help

All six buttons are reprogrammable.

Memory Upgrade Specifications

When upgrading memory, use only 3.3V 64-bit PC-100 168 PIN SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

Restoring Outlook Express

If Outlook Express is corrupted or accidentally deleted, restore this application by following these steps:

1. From the Windows Start menu, point to Settings and select Control Panel.
2. Click Add/Remove Programs.
3. Click the Window Setup tab.
4. If Outlook is checked, uncheck the box and click Apply.

Restore the application by repeating steps 1 through 3. Then, check the box next to Outlook and click Apply.

Self-launching CDs

For self-launching CDs, place the CD in the DVD-ROM drive, which is the upper drive on your system unit. If you are prompted to insert the CD when starting the application, insert the CD into the DVD-ROM drive.

Enabling Smart Connect

For information on enabling Smart Connect, please see your *VAIO Digital Studio Computer User Guide*.

If You Get an Error Message When Your Modem Tries to Dial

If you get a message informing you that your modem is unable to complete a dialup connection, the message may be appearing because you are dialing from an area where an overlay area code¹ has been implemented. In such areas, even local calls require dialing the area code, or 1 + the area code, before the 7-digit telephone number. If you are dialing from such an area, you need to configure your dialup software to dial the area code, or 1 + the area code, before the 7-digit number.

For instructions on how to do this, consult your dialup software's manual or online help. The same instructions will also tell you how to configure your dialup software to dial a 9 or other number to access an outside line (you may need to do this if, for instance, you are dialing from an office building).

For Answers to Your Software Questions

Adobe Systems Incorporated 206-628-2746 (M-F, 6 AM-5 PM PT)

America Online 800-827-3338 (7 days a week, 6 AM - 2 PM ET)

AT&T 800-400-1447 (7 days a week, 24 hours a day)

CompuServe Interactive Services 800-848-8990 (M-F, 8 AM - 1 AM ET, S-S 10 AM - 10 PM ET)

EarthLink Network, Inc. 800-395-8410 (7 days a week, 24 hours a day)

GTE Intelligent Network Services, Inc. 800-927-3000

Infogrames North America 408-296-8400 (M-F, 9AM - 5PM PT)

Intuit Inc. 900-555-4688 (7 days a week, 24 hours a day)

MindSpring Enterprises, Inc. 800-719-4660

Network Associates, Inc. 408-988-3832 (M-F, 9 AM - 5 PM CT)

Softlink 408-970-3370 (M-F, 8 AM - 5 PM PT)

Symantec Corporation 800-798-0850

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, the VAIO logo, VAIO Smart, VAIO Digital Studio, DVgate, and i.LINK are trademarks of Sony. All other trademarks are trademarks or registered trademarks of their respective owners.

¹ An overlay area code is a second area code added to the same geographical area as an existing area code.

Read Me First

PCV-R545DS

Frequently Asked Questions (FAQs)

Q: How do I recover applications or drivers that came with my computer if the files are corrupted or deleted?

A: The Application Recovery CDs allow 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).

You must be in the Windows® operating system 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 Customer Support at <http://www.sony.com/pcsupport>

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.

Q: How do I change the parallel port type to ECP, EPP, or bi-directional?

A: You can change the parallel port type using the System Setup utility (CMOS Setup Utility). To access System Setup, click the Start button, select Shut Down, and then select Restart. When the Sony screen displays and you hear the Sony jingle, press the F2 key on your keyboard. Select the Advanced tab from the CMOS Setup Utility screen. Select "I/O Device Configuration," and use the arrow keys to highlight Parallel Port Mode. You can toggle between the Normal (bi-directional), EPP, ECP, and ECP+EPP options using the Plus (+) or Minus (-) keys. When the desired setting displays, press the Escape key.

Q: Why isn't the DVD-ROM drive reading a CD?

A: After inserting a CD, you must wait a few seconds for the CD to be detected before trying to access it. If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

Q: How do I set up faxing capability in Windows® 98 Second Edition?

A: Windows® 98 Second Edition does not provide a built-in fax utility. Sony has included the Symantec WinFax® Basic Edition software for your faxing needs. To set up WinFax Basic Edition, click the Start menu button. Point to Programs, Symantec Winfax Basic Edition, and select Configure WinFax Basic Edition software. Follow the on-screen instructions to configure the fax utility.

Q: How do I change the video resolution of my display?

A: From the Start menu, select Settings and click Control Panel. Click the Display icon and select Settings. Move the Screen area slider to change the resolution.

Q: Why does Windows lock up during shut down?



A: The Windows® operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or non-responsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

Q: Why is my system running slowly?

A: The system responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>. For information on installing memory, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Q: Why is there no sound in any application?

A: There are independent controls for your system volume.

- There is volume control  in the Windows® task tray. Click the icon and slide the level bar up to increase the volume.
- In addition to adjusting the volume, check that the Mute check box is not selected in the Windows volume control .

Q: Why doesn't my CD-RW drive record at the highest speed?

A: You must use 4x media to achieve optimum performance. If you must use other media, the following steps may be helpful:

If you are having difficulty formatting non-4x writable media, change the write speed from 4x to 2x or 1x. To change the write speed from the 4x default to another speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.

Q: How do I change my modem to rotary or Touch-Tone dialing?

A: Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

Q: Why is there unusual activity on my floppy disk drive?

A: If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.

Supplementary Information

Recovering Microsoft® Word 2000

If you recover your operating system using the System Recovery CD, Word 2000 will not be recovered. Use the Word 2000 CD-ROM to recover this application.

Standby Mode

Resuming from Standby Mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

Resetting Your Computer For Printer Use After Resuming From A Power Saving Mode

Your connected printer may not function after the computer resumes from a power saving mode. When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.

The printer should now function properly.

Connecting Computers by i.LINK® Interface

When connecting more than two computers by i.LINK interface, do not allow any of the connected computers to enter Suspend, Hibernation, or Standby mode during a file transfer, as this could result in a loss of data. If one of the connected computers does enter a power saving mode, resume power, then disconnect and reconnect the i.LINK cable. Note that if you connect a notebook computer docking station using an i.LINK cable, you cannot use Smart Connect when the computer is not in the docking station.

Upgrading Your Computer

For information on upgrading your computer, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D.

Switching Between NTSC and PAL Standards

Your computer is designed to allow you to switch between NTSC and PAL

standards. For details on switching from one standard to another, go to the Knowledge Database at <http://www.sony.com/pcsupport>.

VAIO Smart Keyboard Default Settings

The VAIO Smart Keyboard programmable buttons come with the following applications as their default settings:

S1 - Easy Internet Access Browser (Internet)

S2 - Microsoft® Outlook® Express (Mail)

S3- Wild Metal Country®

S4 - Microsoft® Word 2000

S5 - Quicken® Basic 99(Finance)

S6 - Help

All six buttons are reprogrammable.

Memory Upgrade Specifications

When upgrading memory, use only 3.3V 64-bit PC-100 168 PIN SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

Restoring Outlook Express

If Outlook Express is corrupted or accidentally deleted, restore this application by following these steps:

1. From the Windows Start menu, point to Settings and select Control Panel.
2. Click Add/Remove Programs.
3. Click the Window Setup tab.
4. If Outlook is checked, uncheck the box and click Apply.

Restore the application by repeating steps 1 through 3. Then, check the box next to Outlook and click Apply.

Self-launching CDs

For self-launching CDs, place the CD in the DVD-ROM drive, which is the upper drive on your system unit. If you are prompted to insert the CD when starting the application, insert the CD into the DVD-ROM drive.

Enabling Smart Connect

For information on enabling Smart Connect, please see your *VAIO Digital Studio Computer User Guide*.

If You Get an Error Message When Your Modem Tries to Dial

If you get a message informing you that your modem is unable to complete a dialup connection, the message may be appearing because you are dialing from an area where an overlay area code¹ has been implemented. In such areas, even local calls require dialing the area code, or 1 + the area code, before the 7-digit telephone number. If you are dialing from such an area, you need to configure your dialup software to dial the area code, or 1 + the area code, before the 7-digit number.

For instructions on how to do this, consult your dialup software's manual or online help. The same instructions will also tell you how to configure your dialup software to dial a 9 or other number to access an outside line (you may need to do this if, for instance, you are dialing from an office building).

For Answers to Your Software Questions

Adobe Systems Incorporated 206-628-2746 (M-F, 6 AM-5 PM PT)

America Online 800-827-3338 (7 days a week, 6 AM - 2 PM ET)

AT&T 800-400-1447 (7 days a week, 24 hours a day)

CompuServe Interactive Services 800-848-8990 (M-F, 8 AM - 1 AM ET, S-S 10 AM - 10 PM ET)

EarthLink Network, Inc. 800-395-8410 (7 days a week, 24 hours a day)

GTE Intelligent Network Services, Inc. 800-927-3000

Infogrames North America 408-296-8400 (M-F, 9AM - 5PM PT)

Intuit Inc. 900-555-4688 (7 days a week, 24 hours a day)

MindSpring Enterprises, Inc. 800-719-4660

Network Associates, Inc. 408-988-3832 (M-F, 9 AM - 5 PM CT)

Softlink 408-970-3370 (M-F, 8 AM - 5 PM PT)

Symantec Corporation 800-798-0850

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, the VAIO logo, VAIO Smart, VAIO Digital Studio, DVgate, and i.LINK are trademarks of Sony. All other trademarks are trademarks or registered trademarks of their respective owners.

¹ An overlay area code is a second area code added to the same geographical area as an existing area code.

Read Me First

PCV-R545DS

Frequently Asked Questions (FAQs)

Q: How do I recover applications or drivers that came with my computer if the files are corrupted or deleted?

A: The Application Recovery CDs allow 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).

You must be in the Windows® operating system 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 Customer Support at <http://www.sony.com/pcsupport>

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.

Q: How do I change the parallel port type to ECP, EPP, or bi-directional?

A: You can change the parallel port type using the System Setup utility (CMOS Setup Utility). To access System Setup, click the Start button, select Shut Down, and then select Restart. When the Sony screen displays and you hear the Sony jingle, press the F2 key on your keyboard. Select the Advanced tab from the CMOS Setup Utility screen. Select "I/O Device Configuration," and use the arrow keys to highlight Parallel Port Mode. You can toggle between the Normal (bi-directional), EPP, ECP, and ECP+EPP options using the Plus (+) or Minus (-) keys. When the desired setting displays, press the Escape key.

Q: Why isn't the DVD-ROM drive reading a CD?

A: After inserting a CD, you must wait a few seconds for the CD to be detected before trying to access it. If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

Q: How do I set up faxing capability in Windows® 98 Second Edition?

A: Windows® 98 Second Edition does not provide a built-in fax utility. Sony has included the Symantec WinFax® Basic Edition software for your faxing needs. To set up WinFax Basic Edition, click the Start menu button. Point to Programs, Symantec Winfax Basic Edition, and select Configure WinFax Basic Edition software. Follow the on-screen instructions to configure the fax utility.

Q: How do I change the video resolution of my display?

A: From the Start menu, select Settings and click Control Panel. Click the Display icon and select Settings. Move the Screen area slider to change the resolution.

Q: Why does Windows lock up during shut down?



A: The Windows® operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or non-responsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

Q: Why is my system running slowly?

A: The system responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>. For information on installing memory, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Q: Why is there no sound in any application?

A: There are independent controls for your system volume.

- There is volume control  in the Windows® task tray. Click the icon and slide the level bar up to increase the volume.
- In addition to adjusting the volume, check that the Mute check box is not selected in the Windows volume control .

Q: Why doesn't my CD-RW drive record at the highest speed?

A: You must use 4x media to achieve optimum performance. If you must use other media, the following steps may be helpful:

If you are having difficulty formatting non-4x writable media, change the write speed from 4x to 2x or 1x. To change the write speed from the 4x default to another speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.

Q: How do I change my modem to rotary or Touch-Tone dialing?

A: Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

Q: Why is there unusual activity on my floppy disk drive?

A: If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.

Supplementary Information

Recovering Microsoft® Word 2000

If you recover your operating system using the System Recovery CD, Word 2000 will not be recovered. Use the Word 2000 CD-ROM to recover this application.

Standby Mode

Resuming from Standby Mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

Resetting Your Computer For Printer Use After Resuming From A Power Saving Mode

Your connected printer may not function after the computer resumes from a power saving mode. When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.

The printer should now function properly.

Connecting Computers by i.LINK® Interface

When connecting more than two computers by i.LINK interface, do not allow any of the connected computers to enter Suspend, Hibernation, or Standby mode during a file transfer, as this could result in a loss of data. If one of the connected computers does enter a power saving mode, resume power, then disconnect and reconnect the i.LINK cable. Note that if you connect a notebook computer docking station using an i.LINK cable, you cannot use Smart Connect when the computer is not in the docking station.

Upgrading Your Computer

For information on upgrading your computer, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D.

Switching Between NTSC and PAL Standards

Your computer is designed to allow you to switch between NTSC and PAL

standards. For details on switching from one standard to another, go to the Knowledge Database at <http://www.sony.com/pcsupport>.

VAIO Smart Keyboard Default Settings

The VAIO Smart Keyboard programmable buttons come with the following applications as their default settings:

S1 - Easy Internet Access Browser (Internet)

S2 - Microsoft® Outlook® Express (Mail)

S3- Wild Metal Country®

S4 - Microsoft® Word 2000

S5 - Quicken® Basic 99(Finance)

S6 - Help

All six buttons are reprogrammable.

Memory Upgrade Specifications

When upgrading memory, use only 3.3V 64-bit PC-100 168 PIN SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

Restoring Outlook Express

If Outlook Express is corrupted or accidentally deleted, restore this application by following these steps:

1. From the Windows Start menu, point to Settings and select Control Panel.
2. Click Add/Remove Programs.
3. Click the Window Setup tab.
4. If Outlook is checked, uncheck the box and click Apply.

Restore the application by repeating steps 1 through 3. Then, check the box next to Outlook and click Apply.

Self-launching CDs

For self-launching CDs, place the CD in the DVD-ROM drive, which is the upper drive on your system unit. If you are prompted to insert the CD when starting the application, insert the CD into the DVD-ROM drive.

Enabling Smart Connect

For information on enabling Smart Connect, please see your *VAIO Digital Studio Computer User Guide*.

If You Get an Error Message When Your Modem Tries to Dial

If you get a message informing you that your modem is unable to complete a dialup connection, the message may be appearing because you are dialing from an area where an overlay area code¹ has been implemented. In such areas, even local calls require dialing the area code, or 1 + the area code, before the 7-digit telephone number. If you are dialing from such an area, you need to configure your dialup software to dial the area code, or 1 + the area code, before the 7-digit number.

For instructions on how to do this, consult your dialup software's manual or online help. The same instructions will also tell you how to configure your dialup software to dial a 9 or other number to access an outside line (you may need to do this if, for instance, you are dialing from an office building).

For Answers to Your Software Questions

Adobe Systems Incorporated 206-628-2746 (M-F, 6 AM-5 PM PT)

America Online 800-827-3338 (7 days a week, 6 AM - 2 PM ET)

AT&T 800-400-1447 (7 days a week, 24 hours a day)

CompuServe Interactive Services 800-848-8990 (M-F, 8 AM - 1 AM ET, S-S 10 AM - 10 PM ET)

EarthLink Network, Inc. 800-395-8410 (7 days a week, 24 hours a day)

GTE Intelligent Network Services, Inc. 800-927-3000

Infogrames North America 408-296-8400 (M-F, 9AM - 5PM PT)

Intuit Inc. 900-555-4688 (7 days a week, 24 hours a day)

MindSpring Enterprises, Inc. 800-719-4660

Network Associates, Inc. 408-988-3832 (M-F, 9 AM - 5 PM CT)

Softlink 408-970-3370 (M-F, 8 AM - 5 PM PT)

Symantec Corporation 800-798-0850

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, the VAIO logo, VAIO Smart, VAIO Digital Studio, DVgate, and i.LINK are trademarks of Sony. All other trademarks are trademarks or registered trademarks of their respective owners.

¹ An overlay area code is a second area code added to the same geographical area as an existing area code.

Read Me First

PCV-R545DS

Frequently Asked Questions (FAQs)

Q: How do I recover applications or drivers that came with my computer if the files are corrupted or deleted?

A: The Application Recovery CDs allow 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).

You must be in the Windows® operating system 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 Customer Support at <http://www.sony.com/pcsupport>

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.

Q: How do I change the parallel port type to ECP, EPP, or bi-directional?

A: You can change the parallel port type using the System Setup utility (CMOS Setup Utility). To access System Setup, click the Start button, select Shut Down, and then select Restart. When the Sony screen displays and you hear the Sony jingle, press the F2 key on your keyboard. Select the Advanced tab from the CMOS Setup Utility screen. Select "I/O Device Configuration," and use the arrow keys to highlight Parallel Port Mode. You can toggle between the Normal (bi-directional), EPP, ECP, and ECP+EPP options using the Plus (+) or Minus (-) keys. When the desired setting displays, press the Escape key.

Q: Why isn't the DVD-ROM drive reading a CD?

A: After inserting a CD, you must wait a few seconds for the CD to be detected before trying to access it. If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

Q: How do I set up faxing capability in Windows® 98 Second Edition?

A: Windows® 98 Second Edition does not provide a built-in fax utility. Sony has included the Symantec WinFax® Basic Edition software for your faxing needs. To set up WinFax Basic Edition, click the Start menu button. Point to Programs, Symantec Winfax Basic Edition, and select Configure WinFax Basic Edition software. Follow the on-screen instructions to configure the fax utility.

Q: How do I change the video resolution of my display?

A: From the Start menu, select Settings and click Control Panel. Click the Display icon and select Settings. Move the Screen area slider to change the resolution.

Q: Why does Windows lock up during shut down?



A: The Windows® operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or non-responsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

Q: Why is my system running slowly?

A: The system responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>. For information on installing memory, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Q: Why is there no sound in any application?

A: There are independent controls for your system volume.

- There is volume control  in the Windows® task tray. Click the icon and slide the level bar up to increase the volume.
- In addition to adjusting the volume, check that the Mute check box is not selected in the Windows volume control .

Q: Why doesn't my CD-RW drive record at the highest speed?

A: You must use 4x media to achieve optimum performance. If you must use other media, the following steps may be helpful:

If you are having difficulty formatting non-4x writable media, change the write speed from 4x to 2x or 1x. To change the write speed from the 4x default to another speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.

Q: How do I change my modem to rotary or Touch-Tone dialing?

A: Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

Q: Why is there unusual activity on my floppy disk drive?

A: If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.

Supplementary Information

Recovering Microsoft® Word 2000

If you recover your operating system using the System Recovery CD, Word 2000 will not be recovered. Use the Word 2000 CD-ROM to recover this application.

Standby Mode

Resuming from Standby Mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

Resetting Your Computer For Printer Use After Resuming From A Power Saving Mode

Your connected printer may not function after the computer resumes from a power saving mode. When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.

The printer should now function properly.

Connecting Computers by i.LINK® Interface

When connecting more than two computers by i.LINK interface, do not allow any of the connected computers to enter Suspend, Hibernation, or Standby mode during a file transfer, as this could result in a loss of data. If one of the connected computers does enter a power saving mode, resume power, then disconnect and reconnect the i.LINK cable. Note that if you connect a notebook computer docking station using an i.LINK cable, you cannot use Smart Connect when the computer is not in the docking station.

Upgrading Your Computer

For information on upgrading your computer, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D.

Switching Between NTSC and PAL Standards

Your computer is designed to allow you to switch between NTSC and PAL

standards. For details on switching from one standard to another, go to the Knowledge Database at <http://www.sony.com/pcsupport>.

VAIO Smart Keyboard Default Settings

The VAIO Smart Keyboard programmable buttons come with the following applications as their default settings:

S1 - Easy Internet Access Browser (Internet)

S2 - Microsoft® Outlook® Express (Mail)

S3- Wild Metal Country®

S4 - Microsoft® Word 2000

S5 - Quicken® Basic 99(Finance)

S6 - Help

All six buttons are reprogrammable.

Memory Upgrade Specifications

When upgrading memory, use only 3.3V 64-bit PC-100 168 PIN SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

Restoring Outlook Express

If Outlook Express is corrupted or accidentally deleted, restore this application by following these steps:

1. From the Windows Start menu, point to Settings and select Control Panel.
2. Click Add/Remove Programs.
3. Click the Window Setup tab.
4. If Outlook is checked, uncheck the box and click Apply.

Restore the application by repeating steps 1 through 3. Then, check the box next to Outlook and click Apply.

Self-launching CDs

For self-launching CDs, place the CD in the DVD-ROM drive, which is the upper drive on your system unit. If you are prompted to insert the CD when starting the application, insert the CD into the DVD-ROM drive.

Enabling Smart Connect

For information on enabling Smart Connect, please see your *VAIO Digital Studio Computer User Guide*.

If You Get an Error Message When Your Modem Tries to Dial

If you get a message informing you that your modem is unable to complete a dialup connection, the message may be appearing because you are dialing from an area where an overlay area code¹ has been implemented. In such areas, even local calls require dialing the area code, or 1 + the area code, before the 7-digit telephone number. If you are dialing from such an area, you need to configure your dialup software to dial the area code, or 1 + the area code, before the 7-digit number.

For instructions on how to do this, consult your dialup software's manual or online help. The same instructions will also tell you how to configure your dialup software to dial a 9 or other number to access an outside line (you may need to do this if, for instance, you are dialing from an office building).

For Answers to Your Software Questions

Adobe Systems Incorporated 206-628-2746 (M-F, 6 AM-5 PM PT)

America Online 800-827-3338 (7 days a week, 6 AM - 2 PM ET)

AT&T 800-400-1447 (7 days a week, 24 hours a day)

CompuServe Interactive Services 800-848-8990 (M-F, 8 AM - 1 AM ET, S-S 10 AM - 10 PM ET)

EarthLink Network, Inc. 800-395-8410 (7 days a week, 24 hours a day)

GTE Intelligent Network Services, Inc. 800-927-3000

Infogrames North America 408-296-8400 (M-F, 9AM - 5PM PT)

Intuit Inc. 900-555-4688 (7 days a week, 24 hours a day)

MindSpring Enterprises, Inc. 800-719-4660

Network Associates, Inc. 408-988-3832 (M-F, 9 AM - 5 PM CT)

Softlink 408-970-3370 (M-F, 8 AM - 5 PM PT)

Symantec Corporation 800-798-0850

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, the VAIO logo, VAIO Smart, VAIO Digital Studio, DVgate, and i.LINK are trademarks of Sony. All other trademarks are trademarks or registered trademarks of their respective owners.

¹ An overlay area code is a second area code added to the same geographical area as an existing area code.

Read Me First

PCV-R545DS

Frequently Asked Questions (FAQs)

Q: How do I recover applications or drivers that came with my computer if the files are corrupted or deleted?

A: The Application Recovery CDs allow 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).

You must be in the Windows® operating system 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 Customer Support at <http://www.sony.com/pcsupport>

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.

Q: How do I change the parallel port type to ECP, EPP, or bi-directional?

A: You can change the parallel port type using the System Setup utility (CMOS Setup Utility). To access System Setup, click the Start button, select Shut Down, and then select Restart. When the Sony screen displays and you hear the Sony jingle, press the F2 key on your keyboard. Select the Advanced tab from the CMOS Setup Utility screen. Select "I/O Device Configuration," and use the arrow keys to highlight Parallel Port Mode. You can toggle between the Normal (bi-directional), EPP, ECP, and ECP+EPP options using the Plus (+) or Minus (-) keys. When the desired setting displays, press the Escape key.

Q: Why isn't the DVD-ROM drive reading a CD?

A: After inserting a CD, you must wait a few seconds for the CD to be detected before trying to access it. If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

Q: How do I set up faxing capability in Windows® 98 Second Edition?

A: Windows® 98 Second Edition does not provide a built-in fax utility. Sony has included the Symantec WinFax® Basic Edition software for your faxing needs. To set up WinFax Basic Edition, click the Start menu button. Point to Programs, Symantec Winfax Basic Edition, and select Configure WinFax Basic Edition software. Follow the on-screen instructions to configure the fax utility.

Q: How do I change the video resolution of my display?

A: From the Start menu, select Settings and click Control Panel. Click the Display icon and select Settings. Move the Screen area slider to change the resolution.

Q: Why does Windows lock up during shut down?



A: The Windows® operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or non-responsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

Q: Why is my system running slowly?

A: The system responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>. For information on installing memory, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Q: Why is there no sound in any application?

A: There are independent controls for your system volume.

- There is volume control  in the Windows® task tray. Click the icon and slide the level bar up to increase the volume.
- In addition to adjusting the volume, check that the Mute check box is not selected in the Windows volume control .

Q: Why doesn't my CD-RW drive record at the highest speed?

A: You must use 4x media to achieve optimum performance. If you must use other media, the following steps may be helpful:

If you are having difficulty formatting non-4x writable media, change the write speed from 4x to 2x or 1x. To change the write speed from the 4x default to another speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.

Q: How do I change my modem to rotary or Touch-Tone dialing?

A: Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

Q: Why is there unusual activity on my floppy disk drive?

A: If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.

Supplementary Information

Recovering Microsoft® Word 2000

If you recover your operating system using the System Recovery CD, Word 2000 will not be recovered. Use the Word 2000 CD-ROM to recover this application.

Standby Mode

Resuming from Standby Mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

Resetting Your Computer For Printer Use After Resuming From A Power Saving Mode

Your connected printer may not function after the computer resumes from a power saving mode. When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.

The printer should now function properly.

Connecting Computers by i.LINK® Interface

When connecting more than two computers by i.LINK interface, do not allow any of the connected computers to enter Suspend, Hibernation, or Standby mode during a file transfer, as this could result in a loss of data. If one of the connected computers does enter a power saving mode, resume power, then disconnect and reconnect the i.LINK cable. Note that if you connect a notebook computer docking station using an i.LINK cable, you cannot use Smart Connect when the computer is not in the docking station.

Upgrading Your Computer

For information on upgrading your computer, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D.

Switching Between NTSC and PAL Standards

Your computer is designed to allow you to switch between NTSC and PAL

standards. For details on switching from one standard to another, go to the Knowledge Database at <http://www.sony.com/pcsupport>.

VAIO Smart Keyboard Default Settings

The VAIO Smart Keyboard programmable buttons come with the following applications as their default settings:

S1 - Easy Internet Access Browser (Internet)

S2 - Microsoft® Outlook® Express (Mail)

S3- Wild Metal Country®

S4 - Microsoft® Word 2000

S5 - Quicken® Basic 99(Finance)

S6 - Help

All six buttons are reprogrammable.

Memory Upgrade Specifications

When upgrading memory, use only 3.3V 64-bit PC-100 168 PIN SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

Restoring Outlook Express

If Outlook Express is corrupted or accidentally deleted, restore this application by following these steps:

1. From the Windows Start menu, point to Settings and select Control Panel.
2. Click Add/Remove Programs.
3. Click the Window Setup tab.
4. If Outlook is checked, uncheck the box and click Apply.

Restore the application by repeating steps 1 through 3. Then, check the box next to Outlook and click Apply.

Self-launching CDs

For self-launching CDs, place the CD in the DVD-ROM drive, which is the upper drive on your system unit. If you are prompted to insert the CD when starting the application, insert the CD into the DVD-ROM drive.

Enabling Smart Connect

For information on enabling Smart Connect, please see your *VAIO Digital Studio Computer User Guide*.

If You Get an Error Message When Your Modem Tries to Dial

If you get a message informing you that your modem is unable to complete a dialup connection, the message may be appearing because you are dialing from an area where an overlay area code¹ has been implemented. In such areas, even local calls require dialing the area code, or 1 + the area code, before the 7-digit telephone number. If you are dialing from such an area, you need to configure your dialup software to dial the area code, or 1 + the area code, before the 7-digit number.

For instructions on how to do this, consult your dialup software's manual or online help. The same instructions will also tell you how to configure your dialup software to dial a 9 or other number to access an outside line (you may need to do this if, for instance, you are dialing from an office building).

For Answers to Your Software Questions

Adobe Systems Incorporated 206-628-2746 (M-F, 6 AM-5 PM PT)

America Online 800-827-3338 (7 days a week, 6 AM - 2 PM ET)

AT&T 800-400-1447 (7 days a week, 24 hours a day)

CompuServe Interactive Services 800-848-8990 (M-F, 8 AM - 1 AM ET, S-S 10 AM - 10 PM ET)

EarthLink Network, Inc. 800-395-8410 (7 days a week, 24 hours a day)

GTE Intelligent Network Services, Inc. 800-927-3000

Infogrames North America 408-296-8400 (M-F, 9AM - 5PM PT)

Intuit Inc. 900-555-4688 (7 days a week, 24 hours a day)

MindSpring Enterprises, Inc. 800-719-4660

Network Associates, Inc. 408-988-3832 (M-F, 9 AM - 5 PM CT)

Softlink 408-970-3370 (M-F, 8 AM - 5 PM PT)

Symantec Corporation 800-798-0850

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, the VAIO logo, VAIO Smart, VAIO Digital Studio, DVgate, and i.LINK are trademarks of Sony. All other trademarks are trademarks or registered trademarks of their respective owners.

¹ An overlay area code is a second area code added to the same geographical area as an existing area code.

Read Me First

PCV-R545DS

Frequently Asked Questions (FAQs)

Q: How do I recover applications or drivers that came with my computer if the files are corrupted or deleted?

A: The Application Recovery CDs allow 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).

You must be in the Windows® operating system 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 Customer Support at <http://www.sony.com/pcsupport>

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.

Q: How do I change the parallel port type to ECP, EPP, or bi-directional?

A: You can change the parallel port type using the System Setup utility (CMOS Setup Utility). To access System Setup, click the Start button, select Shut Down, and then select Restart. When the Sony screen displays and you hear the Sony jingle, press the F2 key on your keyboard. Select the Advanced tab from the CMOS Setup Utility screen. Select "I/O Device Configuration," and use the arrow keys to highlight Parallel Port Mode. You can toggle between the Normal (bi-directional), EPP, ECP, and ECP+EPP options using the Plus (+) or Minus (-) keys. When the desired setting displays, press the Escape key.

Q: Why isn't the DVD-ROM drive reading a CD?

A: After inserting a CD, you must wait a few seconds for the CD to be detected before trying to access it. If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

Q: How do I set up faxing capability in Windows® 98 Second Edition?

A: Windows® 98 Second Edition does not provide a built-in fax utility. Sony has included the Symantec WinFax® Basic Edition software for your faxing needs. To set up WinFax Basic Edition, click the Start menu button. Point to Programs, Symantec Winfax Basic Edition, and select Configure WinFax Basic Edition software. Follow the on-screen instructions to configure the fax utility.

Q: How do I change the video resolution of my display?

A: From the Start menu, select Settings and click Control Panel. Click the Display icon and select Settings. Move the Screen area slider to change the resolution.

Q: Why does Windows lock up during shut down?



A: The Windows® operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or non-responsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

Q: Why is my system running slowly?

A: The system responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>. For information on installing memory, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Q: Why is there no sound in any application?

A: There are independent controls for your system volume.

- There is volume control  in the Windows® task tray. Click the icon and slide the level bar up to increase the volume.
- In addition to adjusting the volume, check that the Mute check box is not selected in the Windows volume control .

Q: Why doesn't my CD-RW drive record at the highest speed?

A: You must use 4x media to achieve optimum performance. If you must use other media, the following steps may be helpful:

If you are having difficulty formatting non-4x writable media, change the write speed from 4x to 2x or 1x. To change the write speed from the 4x default to another speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.

Q: How do I change my modem to rotary or Touch-Tone dialing?

A: Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

Q: Why is there unusual activity on my floppy disk drive?

A: If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.

Supplementary Information

Recovering Microsoft® Word 2000

If you recover your operating system using the System Recovery CD, Word 2000 will not be recovered. Use the Word 2000 CD-ROM to recover this application.

Standby Mode

Resuming from Standby Mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

Resetting Your Computer For Printer Use After Resuming From A Power Saving Mode

Your connected printer may not function after the computer resumes from a power saving mode. When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.

The printer should now function properly.

Connecting Computers by i.LINK® Interface

When connecting more than two computers by i.LINK interface, do not allow any of the connected computers to enter Suspend, Hibernation, or Standby mode during a file transfer, as this could result in a loss of data. If one of the connected computers does enter a power saving mode, resume power, then disconnect and reconnect the i.LINK cable. Note that if you connect a notebook computer docking station using an i.LINK cable, you cannot use Smart Connect when the computer is not in the docking station.

Upgrading Your Computer

For information on upgrading your computer, see the online document [Upgrading and Maintaining Your VAIOR® Computer](#).

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D.

Switching Between NTSC and PAL Standards

Your computer is designed to allow you to switch between NTSC and PAL

standards. For details on switching from one standard to another, go to the Knowledge Database at <http://www.sony.com/pcsupport>.

VAIO Smart Keyboard Default Settings

The VAIOR Smart Keyboard programmable buttons come with the following applications as their default settings:

S1 - Easy Internet Access Browser (Internet)

S2 - Microsoft® Outlook® Express (Mail)

S3- Wild Metal Country®

S4 - Microsoft® Word 2000

S5 - Quicken® Basic 99(Finance)

S6 - Help

All six buttons are reprogrammable.

Memory Upgrade Specifications

When upgrading memory, use only 3.3V 64-bit PC-100 168 PIN SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

Restoring Outlook Express

If Outlook Express is corrupted or accidentally deleted, restore this application by following these steps:

1. From the Windows Start menu, point to Settings and select Control Panel.
2. Click Add/Remove Programs.
3. Click the Window Setup tab.
4. If Outlook is checked, uncheck the box and click Apply.

Restore the application by repeating steps 1 through 3. Then, check the box next to Outlook and click Apply.

Self-launching CDs

For self-launching CDs, place the CD in the DVD-ROM drive, which is the upper drive on your system unit. If you are prompted to insert the CD when starting the application, insert the CD into the DVD-ROM drive.

Enabling Smart Connect

For information on enabling Smart Connect, please see your *VAIO Digital Studio Computer User Guide*.

If You Get an Error Message When Your Modem Tries to Dial

If you get a message informing you that your modem is unable to complete a dialup connection, the message may be appearing because you are dialing from an area where an overlay area code¹ has been implemented. In such areas, even local calls require dialing the area code, or 1 + the area code, before the 7-digit telephone number. If you are dialing from such an area, you need to configure your dialup software to dial the area code, or 1 + the area code, before the 7-digit number.

For instructions on how to do this, consult your dialup software's manual or online help. The same instructions will also tell you how to configure your dialup software to dial a 9 or other number to access an outside line (you may need to do this if, for instance, you are dialing from an office building).

For Answers to Your Software Questions

Adobe Systems Incorporated 206-628-2746 (M-F, 6 AM-5 PM PT)

America Online 800-827-3338 (7 days a week, 6 AM - 2 PM ET)

AT&T 800-400-1447 (7 days a week, 24 hours a day)

CompuServe Interactive Services 800-848-8990 (M-F, 8 AM - 1 AM ET, S-S 10 AM - 10 PM ET)

EarthLink Network, Inc. 800-395-8410 (7 days a week, 24 hours a day)

GTE Intelligent Network Services, Inc. 800-927-3000

Infogrames North America 408-296-8400 (M-F, 9AM - 5PM PT)

Intuit Inc. 900-555-4688 (7 days a week, 24 hours a day)

MindSpring Enterprises, Inc. 800-719-4660

Network Associates, Inc. 408-988-3832 (M-F, 9 AM - 5 PM CT)

Softlink 408-970-3370 (M-F, 8 AM - 5 PM PT)

Symantec Corporation 800-798-0850

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, the VAIO logo, VAIO Smart, VAIO Digital Studio, DVgate, and i.LINK are trademarks of Sony. All other trademarks are trademarks or registered trademarks of their respective owners.

¹ An overlay area code is a second area code added to the same geographical area as an existing area code.

Read Me First

PCV-R545DS

Frequently Asked Questions (FAQs)

Q: How do I recover applications or drivers that came with my computer if the files are corrupted or deleted?

A: The Application Recovery CDs allow 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).

You must be in the Windows® operating system 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 Customer Support at <http://www.sony.com/pcsupport>

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.

Q: How do I change the parallel port type to ECP, EPP, or bi-directional?

A: You can change the parallel port type using the System Setup utility (CMOS Setup Utility). To access System Setup, click the Start button, select Shut Down, and then select Restart. When the Sony screen displays and you hear the Sony jingle, press the F2 key on your keyboard. Select the Advanced tab from the CMOS Setup Utility screen. Select "I/O Device Configuration," and use the arrow keys to highlight Parallel Port Mode. You can toggle between the Normal (bi-directional), EPP, ECP, and ECP+EPP options using the Plus (+) or Minus (-) keys. When the desired setting displays, press the Escape key.

Q: Why isn't the DVD-ROM drive reading a CD?

A: After inserting a CD, you must wait a few seconds for the CD to be detected before trying to access it. If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

Q: How do I set up faxing capability in Windows® 98 Second Edition?

A: Windows® 98 Second Edition does not provide a built-in fax utility. Sony has included the Symantec WinFax® Basic Edition software for your faxing needs. To set up WinFax Basic Edition, click the Start menu button. Point to Programs, Symantec Winfax Basic Edition, and select Configure WinFax Basic Edition software. Follow the on-screen instructions to configure the fax utility.

Q: How do I change the video resolution of my display?

A: From the Start menu, select Settings and click Control Panel. Click the Display icon and select Settings. Move the Screen area slider to change the resolution.

Q: Why does Windows lock up during shut down?



A: The Windows® operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or non-responsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

Q: Why is my system running slowly?

A: The system responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>. For information on installing memory, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Q: Why is there no sound in any application?

A: There are independent controls for your system volume.

- There is volume control  in the Windows® task tray. Click the icon and slide the level bar up to increase the volume.
- In addition to adjusting the volume, check that the Mute check box is not selected in the Windows volume control .

Q: Why doesn't my CD-RW drive record at the highest speed?

A: You must use 4x media to achieve optimum performance. If you must use other media, the following steps may be helpful:

If you are having difficulty formatting non-4x writable media, change the write speed from 4x to 2x or 1x. To change the write speed from the 4x default to another speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.

Q: How do I change my modem to rotary or Touch-Tone dialing?

A: Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

Q: Why is there unusual activity on my floppy disk drive?

A: If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.

Supplementary Information

Recovering Microsoft® Word 2000

If you recover your operating system using the System Recovery CD, Word 2000 will not be recovered. Use the Word 2000 CD-ROM to recover this application.

Standby Mode

Resuming from Standby Mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

Resetting Your Computer For Printer Use After Resuming From A Power Saving Mode

Your connected printer may not function after the computer resumes from a power saving mode. When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.

The printer should now function properly.

Connecting Computers by i.LINK® Interface

When connecting more than two computers by i.LINK interface, do not allow any of the connected computers to enter Suspend, Hibernation, or Standby mode during a file transfer, as this could result in a loss of data. If one of the connected computers does enter a power saving mode, resume power, then disconnect and reconnect the i.LINK cable. Note that if you connect a notebook computer docking station using an i.LINK cable, you cannot use Smart Connect when the computer is not in the docking station.

Upgrading Your Computer

For information on upgrading your computer, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D.

Switching Between NTSC and PAL Standards

Your computer is designed to allow you to switch between NTSC and PAL

standards. For details on switching from one standard to another, go to the Knowledge Database at <http://www.sony.com/pcsupport>.

VAIO Smart Keyboard Default Settings

The VAIO Smart Keyboard programmable buttons come with the following applications as their default settings:

S1 - Easy Internet Access Browser (Internet)

S2 - Microsoft® Outlook® Express (Mail)

S3- Wild Metal Country®

S4 - Microsoft® Word 2000

S5 - Quicken® Basic 99(Finance)

S6 - Help

All six buttons are reprogrammable.

Memory Upgrade Specifications

When upgrading memory, use only 3.3V 64-bit PC-100 168 PIN SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

Restoring Outlook Express

If Outlook Express is corrupted or accidentally deleted, restore this application by following these steps:

1. From the Windows Start menu, point to Settings and select Control Panel.
2. Click Add/Remove Programs.
3. Click the Window Setup tab.
4. If Outlook is checked, uncheck the box and click Apply.

Restore the application by repeating steps 1 through 3. Then, check the box next to Outlook and click Apply.

Self-launching CDs

For self-launching CDs, place the CD in the DVD-ROM drive, which is the upper drive on your system unit. If you are prompted to insert the CD when starting the application, insert the CD into the DVD-ROM drive.

Enabling Smart Connect

For information on enabling Smart Connect, please see your *VAIO Digital Studio Computer User Guide*.

If You Get an Error Message When Your Modem Tries to Dial

If you get a message informing you that your modem is unable to complete a dialup connection, the message may be appearing because you are dialing from an area where an overlay area code¹ has been implemented. In such areas, even local calls require dialing the area code, or 1 + the area code, before the 7-digit telephone number. If you are dialing from such an area, you need to configure your dialup software to dial the area code, or 1 + the area code, before the 7-digit number.

For instructions on how to do this, consult your dialup software's manual or online help. The same instructions will also tell you how to configure your dialup software to dial a 9 or other number to access an outside line (you may need to do this if, for instance, you are dialing from an office building).

For Answers to Your Software Questions

Adobe Systems Incorporated 206-628-2746 (M-F, 6 AM-5 PM PT)

America Online 800-827-3338 (7 days a week, 6 AM - 2 PM ET)

AT&T 800-400-1447 (7 days a week, 24 hours a day)

CompuServe Interactive Services 800-848-8990 (M-F, 8 AM - 1 AM ET, S-S 10 AM - 10 PM ET)

EarthLink Network, Inc. 800-395-8410 (7 days a week, 24 hours a day)

GTE Intelligent Network Services, Inc. 800-927-3000

Infogrames North America 408-296-8400 (M-F, 9AM - 5PM PT)

Intuit Inc. 900-555-4688 (7 days a week, 24 hours a day)

MindSpring Enterprises, Inc. 800-719-4660

Network Associates, Inc. 408-988-3832 (M-F, 9 AM - 5 PM CT)

Softlink 408-970-3370 (M-F, 8 AM - 5 PM PT)

Symantec Corporation 800-798-0850

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, the VAIO logo, VAIO Smart, VAIO Digital Studio, DVgate, and i.LINK are trademarks of Sony. All other trademarks are trademarks or registered trademarks of their respective owners.

¹ An overlay area code is a second area code added to the same geographical area as an existing area code.

Read Me First

PCV-R545DS

Frequently Asked Questions (FAQs)

Q: How do I recover applications or drivers that came with my computer if the files are corrupted or deleted?

A: The Application Recovery CDs allow 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).

You must be in the Windows® operating system 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 Customer Support at <http://www.sony.com/pcsupport>

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.

Q: How do I change the parallel port type to ECP, EPP, or bi-directional?

A: You can change the parallel port type using the System Setup utility (CMOS Setup Utility). To access System Setup, click the Start button, select Shut Down, and then select Restart. When the Sony screen displays and you hear the Sony jingle, press the F2 key on your keyboard. Select the Advanced tab from the CMOS Setup Utility screen. Select "I/O Device Configuration," and use the arrow keys to highlight Parallel Port Mode. You can toggle between the Normal (bi-directional), EPP, ECP, and ECP+EPP options using the Plus (+) or Minus (-) keys. When the desired setting displays, press the Escape key.

Q: Why isn't the DVD-ROM drive reading a CD?

A: After inserting a CD, you must wait a few seconds for the CD to be detected before trying to access it. If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

Q: How do I set up faxing capability in Windows® 98 Second Edition?

A: Windows® 98 Second Edition does not provide a built-in fax utility. Sony has included the Symantec WinFax® Basic Edition software for your faxing needs. To set up WinFax Basic Edition, click the Start menu button. Point to Programs, Symantec Winfax Basic Edition, and select Configure WinFax Basic Edition software. Follow the on-screen instructions to configure the fax utility.

Q: How do I change the video resolution of my display?

A: From the Start menu, select Settings and click Control Panel. Click the Display icon and select Settings. Move the Screen area slider to change the resolution.

Q: Why does Windows lock up during shut down?



A: The Windows® operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or non-responsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

Q: Why is my system running slowly?

A: The system responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>. For information on installing memory, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Q: Why is there no sound in any application?

A: There are independent controls for your system volume.

- There is volume control  in the Windows® task tray. Click the icon and slide the level bar up to increase the volume.
- In addition to adjusting the volume, check that the Mute check box is not selected in the Windows volume control .

Q: Why doesn't my CD-RW drive record at the highest speed?

A: You must use 4x media to achieve optimum performance. If you must use other media, the following steps may be helpful:

If you are having difficulty formatting non-4x writable media, change the write speed from 4x to 2x or 1x. To change the write speed from the 4x default to another speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.

Q: How do I change my modem to rotary or Touch-Tone dialing?

A: Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

Q: Why is there unusual activity on my floppy disk drive?

A: If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.

Supplementary Information

Recovering Microsoft® Word 2000

If you recover your operating system using the System Recovery CD, Word 2000 will not be recovered. Use the Word 2000 CD-ROM to recover this application.

Standby Mode

Resuming from Standby Mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

Resetting Your Computer For Printer Use After Resuming From A Power Saving Mode

Your connected printer may not function after the computer resumes from a power saving mode. When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.

The printer should now function properly.

Connecting Computers by i.LINK® Interface

When connecting more than two computers by i.LINK interface, do not allow any of the connected computers to enter Suspend, Hibernation, or Standby mode during a file transfer, as this could result in a loss of data. If one of the connected computers does enter a power saving mode, resume power, then disconnect and reconnect the i.LINK cable. Note that if you connect a notebook computer docking station using an i.LINK cable, you cannot use Smart Connect when the computer is not in the docking station.

Upgrading Your Computer

For information on upgrading your computer, see the online document [Upgrading and Maintaining Your VAIOR® Computer](#).

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D.

Switching Between NTSC and PAL Standards

Your computer is designed to allow you to switch between NTSC and PAL

standards. For details on switching from one standard to another, go to the Knowledge Database at <http://www.sony.com/pcsupport>.

VAIO Smart Keyboard Default Settings

The VAIOR Smart Keyboard programmable buttons come with the following applications as their default settings:

S1 - Easy Internet Access Browser (Internet)

S2 - Microsoft® Outlook® Express (Mail)

S3- Wild Metal Country®

S4 - Microsoft® Word 2000

S5 - Quicken® Basic 99(Finance)

S6 - Help

All six buttons are reprogrammable.

Memory Upgrade Specifications

When upgrading memory, use only 3.3V 64-bit PC-100 168 PIN SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

Restoring Outlook Express

If Outlook Express is corrupted or accidentally deleted, restore this application by following these steps:

1. From the Windows Start menu, point to Settings and select Control Panel.
2. Click Add/Remove Programs.
3. Click the Window Setup tab.
4. If Outlook is checked, uncheck the box and click Apply.

Restore the application by repeating steps 1 through 3. Then, check the box next to Outlook and click Apply.

Self-launching CDs

For self-launching CDs, place the CD in the DVD-ROM drive, which is the upper drive on your system unit. If you are prompted to insert the CD when starting the application, insert the CD into the DVD-ROM drive.

Enabling Smart Connect

For information on enabling Smart Connect, please see your *VAIO Digital Studio Computer User Guide*.

If You Get an Error Message When Your Modem Tries to Dial

If you get a message informing you that your modem is unable to complete a dialup connection, the message may be appearing because you are dialing from an area where an overlay area code¹ has been implemented. In such areas, even local calls require dialing the area code, or 1 + the area code, before the 7-digit telephone number. If you are dialing from such an area, you need to configure your dialup software to dial the area code, or 1 + the area code, before the 7-digit number.

For instructions on how to do this, consult your dialup software's manual or online help. The same instructions will also tell you how to configure your dialup software to dial a 9 or other number to access an outside line (you may need to do this if, for instance, you are dialing from an office building).

For Answers to Your Software Questions

Adobe Systems Incorporated 206-628-2746 (M-F, 6 AM-5 PM PT)

America Online 800-827-3338 (7 days a week, 6 AM - 2 PM ET)

AT&T 800-400-1447 (7 days a week, 24 hours a day)

CompuServe Interactive Services 800-848-8990 (M-F, 8 AM - 1 AM ET, S-S 10 AM - 10 PM ET)

EarthLink Network, Inc. 800-395-8410 (7 days a week, 24 hours a day)

GTE Intelligent Network Services, Inc. 800-927-3000

Infogrames North America 408-296-8400 (M-F, 9AM - 5PM PT)

Intuit Inc. 900-555-4688 (7 days a week, 24 hours a day)

MindSpring Enterprises, Inc. 800-719-4660

Network Associates, Inc. 408-988-3832 (M-F, 9 AM - 5 PM CT)

Softlink 408-970-3370 (M-F, 8 AM - 5 PM PT)

Symantec Corporation 800-798-0850

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, the VAIO logo, VAIO Smart, VAIO Digital Studio, DVgate, and i.LINK are trademarks of Sony. All other trademarks are trademarks or registered trademarks of their respective owners.

¹ An overlay area code is a second area code added to the same geographical area as an existing area code.

Read Me First

PCV-R545DS

Frequently Asked Questions (FAQs)

Q: How do I recover applications or drivers that came with my computer if the files are corrupted or deleted?

A: The Application Recovery CDs allow 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).

You must be in the Windows® operating system 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 Customer Support at <http://www.sony.com/pcsupport>

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.

Q: How do I change the parallel port type to ECP, EPP, or bi-directional?

A: You can change the parallel port type using the System Setup utility (CMOS Setup Utility). To access System Setup, click the Start button, select Shut Down, and then select Restart. When the Sony screen displays and you hear the Sony jingle, press the F2 key on your keyboard. Select the Advanced tab from the CMOS Setup Utility screen. Select "I/O Device Configuration," and use the arrow keys to highlight Parallel Port Mode. You can toggle between the Normal (bi-directional), EPP, ECP, and ECP+EPP options using the Plus (+) or Minus (-) keys. When the desired setting displays, press the Escape key.

Q: Why isn't the DVD-ROM drive reading a CD?

A: After inserting a CD, you must wait a few seconds for the CD to be detected before trying to access it. If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

Q: How do I set up faxing capability in Windows® 98 Second Edition?

A: Windows® 98 Second Edition does not provide a built-in fax utility. Sony has included the Symantec WinFax® Basic Edition software for your faxing needs. To set up WinFax Basic Edition, click the Start menu button. Point to Programs, Symantec Winfax Basic Edition, and select Configure WinFax Basic Edition software. Follow the on-screen instructions to configure the fax utility.

Q: How do I change the video resolution of my display?

A: From the Start menu, select Settings and click Control Panel. Click the Display icon and select Settings. Move the Screen area slider to change the resolution.

Q: Why does Windows lock up during shut down?



A: The Windows® operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or non-responsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

Q: Why is my system running slowly?

A: The system responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>. For information on installing memory, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Q: Why is there no sound in any application?

A: There are independent controls for your system volume.

- There is volume control  in the Windows® task tray. Click the icon and slide the level bar up to increase the volume.
- In addition to adjusting the volume, check that the Mute check box is not selected in the Windows volume control .

Q: Why doesn't my CD-RW drive record at the highest speed?

A: You must use 4x media to achieve optimum performance. If you must use other media, the following steps may be helpful:

If you are having difficulty formatting non-4x writable media, change the write speed from 4x to 2x or 1x. To change the write speed from the 4x default to another speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.

Q: How do I change my modem to rotary or Touch-Tone dialing?

A: Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

Q: Why is there unusual activity on my floppy disk drive?

A: If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.

Supplementary Information

Recovering Microsoft® Word 2000

If you recover your operating system using the System Recovery CD, Word 2000 will not be recovered. Use the Word 2000 CD-ROM to recover this application.

Standby Mode

Resuming from Standby Mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

Resetting Your Computer For Printer Use After Resuming From A Power Saving Mode

Your connected printer may not function after the computer resumes from a power saving mode. When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.

The printer should now function properly.

Connecting Computers by i.LINK® Interface

When connecting more than two computers by i.LINK interface, do not allow any of the connected computers to enter Suspend, Hibernation, or Standby mode during a file transfer, as this could result in a loss of data. If one of the connected computers does enter a power saving mode, resume power, then disconnect and reconnect the i.LINK cable. Note that if you connect a notebook computer docking station using an i.LINK cable, you cannot use Smart Connect when the computer is not in the docking station.

Upgrading Your Computer

For information on upgrading your computer, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D.

Switching Between NTSC and PAL Standards

Your computer is designed to allow you to switch between NTSC and PAL

standards. For details on switching from one standard to another, go to the Knowledge Database at <http://www.sony.com/pcsupport>.

VAIO Smart Keyboard Default Settings

The VAIO Smart Keyboard programmable buttons come with the following applications as their default settings:

S1 - Easy Internet Access Browser (Internet)

S2 - Microsoft® Outlook® Express (Mail)

S3- Wild Metal Country®

S4 - Microsoft® Word 2000

S5 - Quicken® Basic 99(Finance)

S6 - Help

All six buttons are reprogrammable.

Memory Upgrade Specifications

When upgrading memory, use only 3.3V 64-bit PC-100 168 PIN SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

Restoring Outlook Express

If Outlook Express is corrupted or accidentally deleted, restore this application by following these steps:

1. From the Windows Start menu, point to Settings and select Control Panel.
2. Click Add/Remove Programs.
3. Click the Window Setup tab.
4. If Outlook is checked, uncheck the box and click Apply.

Restore the application by repeating steps 1 through 3. Then, check the box next to Outlook and click Apply.

Self-launching CDs

For self-launching CDs, place the CD in the DVD-ROM drive, which is the upper drive on your system unit. If you are prompted to insert the CD when starting the application, insert the CD into the DVD-ROM drive.

Enabling Smart Connect

For information on enabling Smart Connect, please see your *VAIO Digital Studio Computer User Guide*.

If You Get an Error Message When Your Modem Tries to Dial

If you get a message informing you that your modem is unable to complete a dialup connection, the message may be appearing because you are dialing from an area where an overlay area code¹ has been implemented. In such areas, even local calls require dialing the area code, or 1 + the area code, before the 7-digit telephone number. If you are dialing from such an area, you need to configure your dialup software to dial the area code, or 1 + the area code, before the 7-digit number.

For instructions on how to do this, consult your dialup software's manual or online help. The same instructions will also tell you how to configure your dialup software to dial a 9 or other number to access an outside line (you may need to do this if, for instance, you are dialing from an office building).

For Answers to Your Software Questions

Adobe Systems Incorporated 206-628-2746 (M-F, 6 AM-5 PM PT)

America Online 800-827-3338 (7 days a week, 6 AM - 2 PM ET)

AT&T 800-400-1447 (7 days a week, 24 hours a day)

CompuServe Interactive Services 800-848-8990 (M-F, 8 AM - 1 AM ET, S-S 10 AM - 10 PM ET)

EarthLink Network, Inc. 800-395-8410 (7 days a week, 24 hours a day)

GTE Intelligent Network Services, Inc. 800-927-3000

Infogrames North America 408-296-8400 (M-F, 9AM - 5PM PT)

Intuit Inc. 900-555-4688 (7 days a week, 24 hours a day)

MindSpring Enterprises, Inc. 800-719-4660

Network Associates, Inc. 408-988-3832 (M-F, 9 AM - 5 PM CT)

Softlink 408-970-3370 (M-F, 8 AM - 5 PM PT)

Symantec Corporation 800-798-0850

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, the VAIO logo, VAIO Smart, VAIO Digital Studio, DVgate, and i.LINK are trademarks of Sony. All other trademarks are trademarks or registered trademarks of their respective owners.

¹ An overlay area code is a second area code added to the same geographical area as an existing area code.

Read Me First

PCV-R545DS

Frequently Asked Questions (FAQs)

Q: How do I recover applications or drivers that came with my computer if the files are corrupted or deleted?

A: The Application Recovery CDs allow 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).

You must be in the Windows® operating system 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 Customer Support at <http://www.sony.com/pcsupport>

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.

Q: How do I change the parallel port type to ECP, EPP, or bi-directional?

A: You can change the parallel port type using the System Setup utility (CMOS Setup Utility). To access System Setup, click the Start button, select Shut Down, and then select Restart. When the Sony screen displays and you hear the Sony jingle, press the F2 key on your keyboard. Select the Advanced tab from the CMOS Setup Utility screen. Select "I/O Device Configuration," and use the arrow keys to highlight Parallel Port Mode. You can toggle between the Normal (bi-directional), EPP, ECP, and ECP+EPP options using the Plus (+) or Minus (-) keys. When the desired setting displays, press the Escape key.

Q: Why isn't the DVD-ROM drive reading a CD?

A: After inserting a CD, you must wait a few seconds for the CD to be detected before trying to access it. If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

Q: How do I set up faxing capability in Windows® 98 Second Edition?

A: Windows® 98 Second Edition does not provide a built-in fax utility. Sony has included the Symantec WinFax® Basic Edition software for your faxing needs. To set up WinFax Basic Edition, click the Start menu button. Point to Programs, Symantec Winfax Basic Edition, and select Configure WinFax Basic Edition software. Follow the on-screen instructions to configure the fax utility.

Q: How do I change the video resolution of my display?

A: From the Start menu, select Settings and click Control Panel. Click the Display icon and select Settings. Move the Screen area slider to change the resolution.

Q: Why does Windows lock up during shut down?



A: The Windows® operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or non-responsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

Q: Why is my system running slowly?

A: The system responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>. For information on installing memory, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Q: Why is there no sound in any application?

A: There are independent controls for your system volume.

- There is volume control  in the Windows® task tray. Click the icon and slide the level bar up to increase the volume.
- In addition to adjusting the volume, check that the Mute check box is not selected in the Windows volume control .

Q: Why doesn't my CD-RW drive record at the highest speed?

A: You must use 4x media to achieve optimum performance. If you must use other media, the following steps may be helpful:

If you are having difficulty formatting non-4x writable media, change the write speed from 4x to 2x or 1x. To change the write speed from the 4x default to another speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.

Q: How do I change my modem to rotary or Touch-Tone dialing?

A: Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

Q: Why is there unusual activity on my floppy disk drive?

A: If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.

Supplementary Information

Recovering Microsoft® Word 2000

If you recover your operating system using the System Recovery CD, Word 2000 will not be recovered. Use the Word 2000 CD-ROM to recover this application.

Standby Mode

Resuming from Standby Mode

There are three ways to bring your computer back from the standby mode: press the space bar on your keyboard, press the left mouse button, or momentarily depress the power button on your computer.

Resetting Your Computer For Printer Use After Resuming From A Power Saving Mode

Your connected printer may not function after the computer resumes from a power saving mode. When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.

The printer should now function properly.

Connecting Computers by i.LINK® Interface

When connecting more than two computers by i.LINK interface, do not allow any of the connected computers to enter Suspend, Hibernation, or Standby mode during a file transfer, as this could result in a loss of data. If one of the connected computers does enter a power saving mode, resume power, then disconnect and reconnect the i.LINK cable. Note that if you connect a notebook computer docking station using an i.LINK cable, you cannot use Smart Connect when the computer is not in the docking station.

Upgrading Your Computer

For information on upgrading your computer, see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D.

Switching Between NTSC and PAL Standards

Your computer is designed to allow you to switch between NTSC and PAL

standards. For details on switching from one standard to another, go to the Knowledge Database at <http://www.sony.com/pcsupport>.

VAIO Smart Keyboard Default Settings

The VAIO Smart Keyboard programmable buttons come with the following applications as their default settings:

S1 - Easy Internet Access Browser (Internet)

S2 - Microsoft® Outlook® Express (Mail)

S3- Wild Metal Country®

S4 - Microsoft® Word 2000

S5 - Quicken® Basic 99(Finance)

S6 - Help

All six buttons are reprogrammable.

Memory Upgrade Specifications

When upgrading memory, use only 3.3V 64-bit PC-100 168 PIN SDRAM DIMM modules. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

Restoring Outlook Express

If Outlook Express is corrupted or accidentally deleted, restore this application by following these steps:

1. From the Windows Start menu, point to Settings and select Control Panel.
2. Click Add/Remove Programs.
3. Click the Window Setup tab.
4. If Outlook is checked, uncheck the box and click Apply.

Restore the application by repeating steps 1 through 3. Then, check the box next to Outlook and click Apply.

Self-launching CDs

For self-launching CDs, place the CD in the DVD-ROM drive, which is the upper drive on your system unit. If you are prompted to insert the CD when starting the application, insert the CD into the DVD-ROM drive.

Enabling Smart Connect

For information on enabling Smart Connect, please see your *VAIO Digital Studio Computer User Guide*.

If You Get an Error Message When Your Modem Tries to Dial

If you get a message informing you that your modem is unable to complete a dialup connection, the message may be appearing because you are dialing from an area where an overlay area code¹ has been implemented. In such areas, even local calls require dialing the area code, or 1 + the area code, before the 7-digit telephone number. If you are dialing from such an area, you need to configure your dialup software to dial the area code, or 1 + the area code, before the 7-digit number.

For instructions on how to do this, consult your dialup software's manual or online help. The same instructions will also tell you how to configure your dialup software to dial a 9 or other number to access an outside line (you may need to do this if, for instance, you are dialing from an office building).

For Answers to Your Software Questions

Adobe Systems Incorporated 206-628-2746 (M-F, 6 AM-5 PM PT)

America Online 800-827-3338 (7 days a week, 6 AM - 2 PM ET)

AT&T 800-400-1447 (7 days a week, 24 hours a day)

CompuServe Interactive Services 800-848-8990 (M-F, 8 AM - 1 AM ET, S-S 10 AM - 10 PM ET)

EarthLink Network, Inc. 800-395-8410 (7 days a week, 24 hours a day)

GTE Intelligent Network Services, Inc. 800-927-3000

Infogrames North America 408-296-8400 (M-F, 9AM - 5PM PT)

Intuit Inc. 900-555-4688 (7 days a week, 24 hours a day)

MindSpring Enterprises, Inc. 800-719-4660

Network Associates, Inc. 408-988-3832 (M-F, 9 AM - 5 PM CT)

Softlink 408-970-3370 (M-F, 8 AM - 5 PM PT)

Symantec Corporation 800-798-0850

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, the VAIO logo, VAIO Smart, VAIO Digital Studio, DVgate, and i.LINK are trademarks of Sony. All other trademarks are trademarks or registered trademarks of their respective owners.

¹ An overlay area code is a second area code added to the same geographical area as an existing area code.

Welcome

Congratulations on your purchase of the Sony VAIO Digital Studio computer! Your new, high-performance multimedia computer combines state-of-the-art computer functionality with the latest audio/video and information technology convergence features.

Features

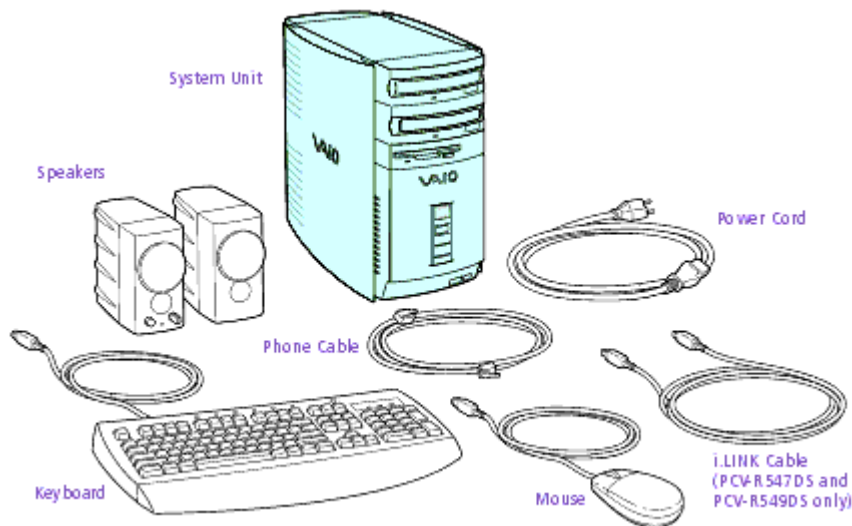


For a complete description of the specifications of your VAIO Digital Studio Computer, see [Specifications](#).

- **i.LINK® (IEEE-1394):** Two built-in i.LINK ports provide you with front and rear digital connection capability. The i.LINK name and logo identify a digital interface (IEEE-1394) for high-speed communication. By using your VAIO Digital Studio Computer, a camera that supports the i.LINK interface (such as the Sony Digital Handycam® Camcorder), the DVgate software preinstalled on your computer, and the i.LINK (IEEE-1394) interface, you can easily create and edit your own home videos.
- **Digital Media Park** : This suite of Sony original applications includes PictureGear, Smart Capture, DVgate, and Media Bar. Using the i.LINK connector, you can capture, view, and share both still and video images, then catalog everything for fast and easy storage and retrieval.
- **Exceptional performance:** Your computer includes an Intel® processor, a high-speed V.90 compatible data/fax modem,¹ and the following high-performance drives.
 - **DVD drive:** This new optical storage technology provides increased storage capacity and a rich multimedia computing experience. Your 8X DVD-ROM drive plays both DVDs and CDs.
 - **CD-RW drive:** This drive is the ideal solution for making backups and archiving data, with the ability to store up to 650 MB² of removable, rewritable storage on a single rewritable CD. Save your movies to CD-R or CD-RW media and share videos and images with family and friends.
- **VAIO Smart Keyboard:** This PS/2® keyboard has programmable shortcut buttons for launching your favorite programs or accessing the Internet.
- **Sony audio and video quality:** High-fidelity positional 3D audio system (A3D), high-powered 3D graphics (AGP), and "Sony-Tuned" MPEG digital video playback-enable you to take advantage of today's advanced multimedia applications, games, and entertainment software.
- **Microsoft® Windows® 98 Second Edition operating system:** Your system includes the latest operating system from Microsoft.
- **Communications:** Access popular online services, browse the Internet, send faxes, and more.

Unpacking Your Computer

Computer and Supplied Accessories



Manuals

- [Read Me First](#) contains Frequently Asked Questions (FAQs) and supplementary information about your computer. It also includes information on how to contact software vendors.
- The *VAIO Digital Studio Computer User Guide* (this manual) contains features and specifications for your computer. It also includes information on the applications included with your system and how to contact software vendors, get started with your computer, and solve common problems.
- The VAIO [Consumer Information Guide](#) contains safety and regulatory information, ergonomic considerations, information on help resources, and your computer's limited warranty statement.
- The *Microsoft® Windows® 98 Getting Started* manual explains how to use the basic features of the Windows operating system.

Recovery CDs

- System Recovery CD(s)
- Application Recovery CD(s)

Other

- Setting up your VAIO Digital Studio Computer (poster)
- Packet containing special product offers

Software Library

The Software Library contains the Microsoft software license agreement, Sony end-user license agreement, and the following CDs:

- Microsoft® Word 2000
- Wild Metal Country®

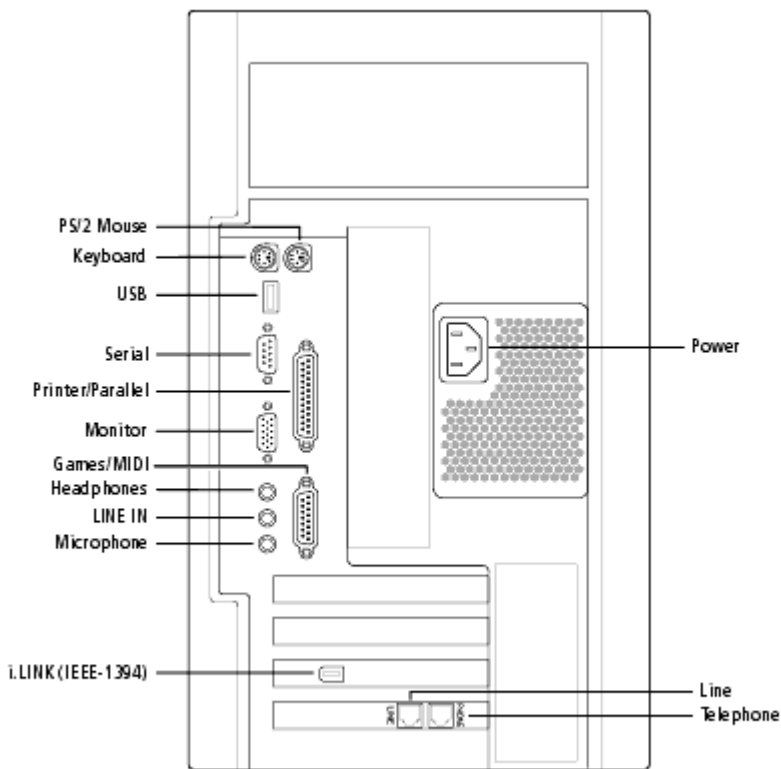


Install your equipment so that you can easily reach the outlet in the event of an emergency.

Back Panel Overview

The back panel of your computer contains the connectors where you plug in supplied and optional accessories. The icons on the back panel serve as a map to help you locate the connectors on your computer.

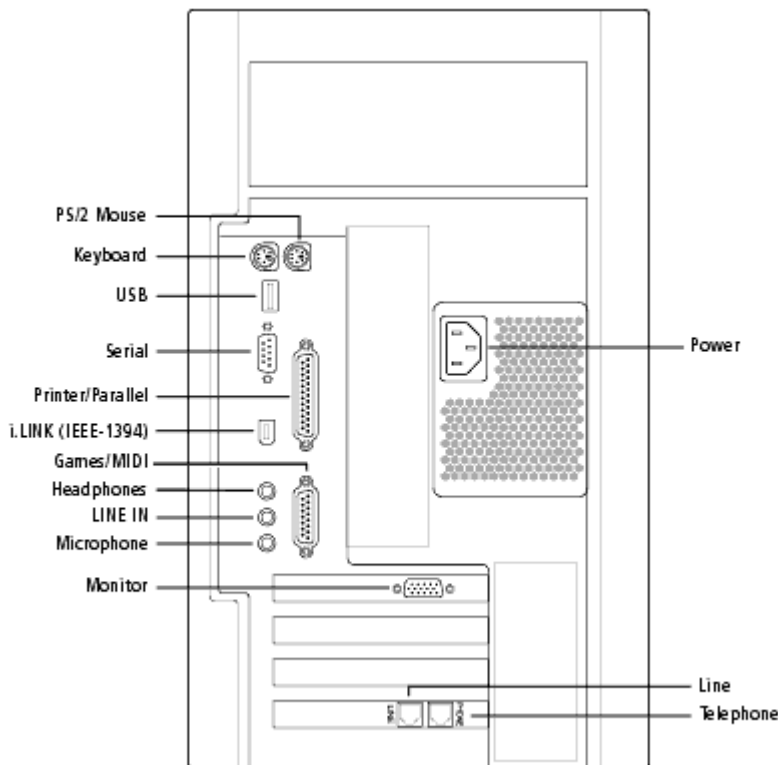
PCV-R545DS



PCV-R547DS/PCV-R549DS

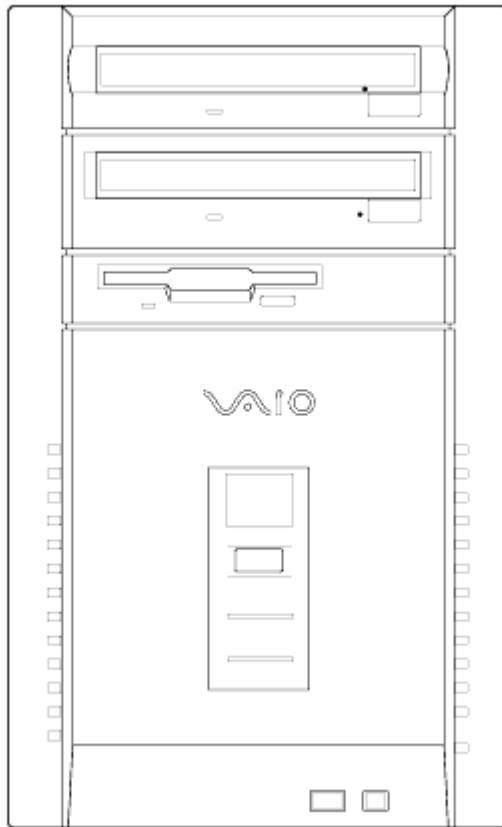


For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the back of your system is a 6-pin connector.



Front Panel Overview

The front panel of your VAIO Digital Studio Computer allows for access to the diskette, DVD, and CD-RW drives. It also includes USB and i.LINK ports to connect USB devices, digital equipment, or other components.



For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the front of your system is a 4-pin connector.

¹ Actual upload and download speeds may vary due to line conditions, ISP support, and government regulations.

² 530 MB after formatting with Direct CD .

Welcome

Congratulations on your purchase of the Sony VAIO Digital Studio computer! Your new, high-performance multimedia computer combines state-of-the-art computer functionality with the latest audio/video and information technology convergence features.

Features

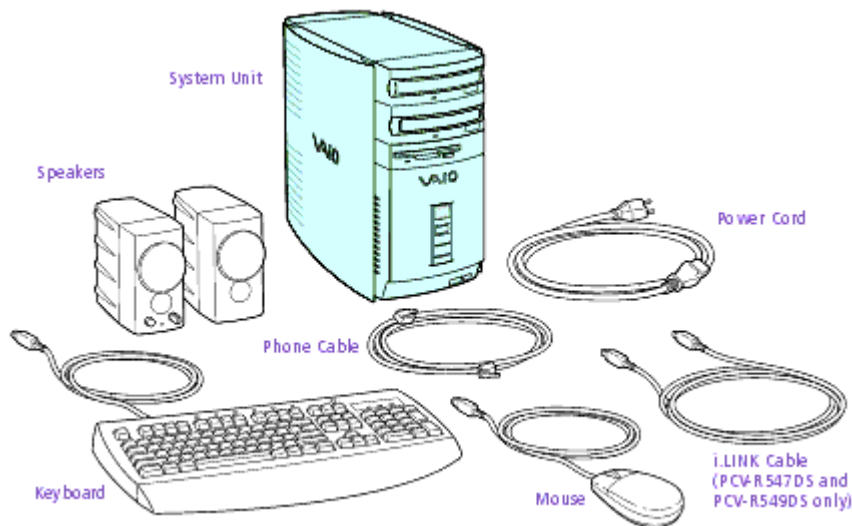


For a complete description of the specifications of your VAIO Digital Studio Computer, see [Specifications](#).

- **i.LINK® (IEEE-1394):** Two built-in i.LINK ports provide you with front and rear digital connection capability. The i.LINK name and logo identify a digital interface (IEEE-1394) for high-speed communication. By using your VAIO Digital Studio Computer, a camera that supports the i.LINK interface (such as the Sony Digital Handycam® Camcorder), the DVgate software preinstalled on your computer, and the i.LINK (IEEE-1394) interface, you can easily create and edit your own home videos.
- **Digital Media Park :** This suite of Sony original applications includes PictureGear, Smart Capture, DVgate, and Media Bar. Using the i.LINK connector, you can capture, view, and share both still and video images, then catalog everything for fast and easy storage and retrieval.
- **Exceptional performance:** Your computer includes an Intel® processor, a high-speed V.90 compatible data/fax modem,¹ and the following high-performance drives.
 - **DVD drive:** This new optical storage technology provides increased storage capacity and a rich multimedia computing experience. Your 8X DVD-ROM drive plays both DVDs and CDs.
 - **CD-RW drive:** This drive is the ideal solution for making backups and archiving data, with the ability to store up to 650 MB² of removable, rewritable storage on a single rewritable CD. Save your movies to CD-R or CD-RW media and share videos and images with family and friends.
- **VAIO Smart Keyboard:** This PS/2® keyboard has programmable shortcut buttons for launching your favorite programs or accessing the Internet.
- **Sony audio and video quality:** High-fidelity positional 3D audio system (A3D), high-powered 3D graphics (AGP), and "Sony-Tuned" MPEG digital video playback-enable you to take advantage of today's advanced multimedia applications, games, and entertainment software.
- **Microsoft® Windows® 98 Second Edition operating system:** Your system includes the latest operating system from Microsoft.
- **Communications:** Access popular online services, browse the Internet, send faxes, and more.

Unpacking Your Computer

Computer and Supplied Accessories



Manuals

- [Read Me First](#) contains Frequently Asked Questions (FAQs) and supplementary information about your computer. It also includes information on how to contact software vendors.
- The *VAIO Digital Studio Computer User Guide* (this manual) contains features and specifications for your computer. It also includes information on the applications included with your system and how to contact software vendors, get started with your computer, and solve common problems.
- The *VAIO Consumer Information Guide* contains safety and regulatory information, ergonomic considerations, information on help resources, and your computer's limited warranty statement.
- The *Microsoft® Windows® 98 Getting Started* manual explains how to use the basic features of the Windows operating system.

Recovery CDs

- System Recovery CD(s)
- Application Recovery CD(s)

Other

- Setting up your VAIO Digital Studio Computer (poster)
- Packet containing special product offers

Software Library

The Software Library contains the Microsoft software license agreement, Sony end-user license agreement, and the following CDs:

- Microsoft® Word 2000
- Wild Metal Country®

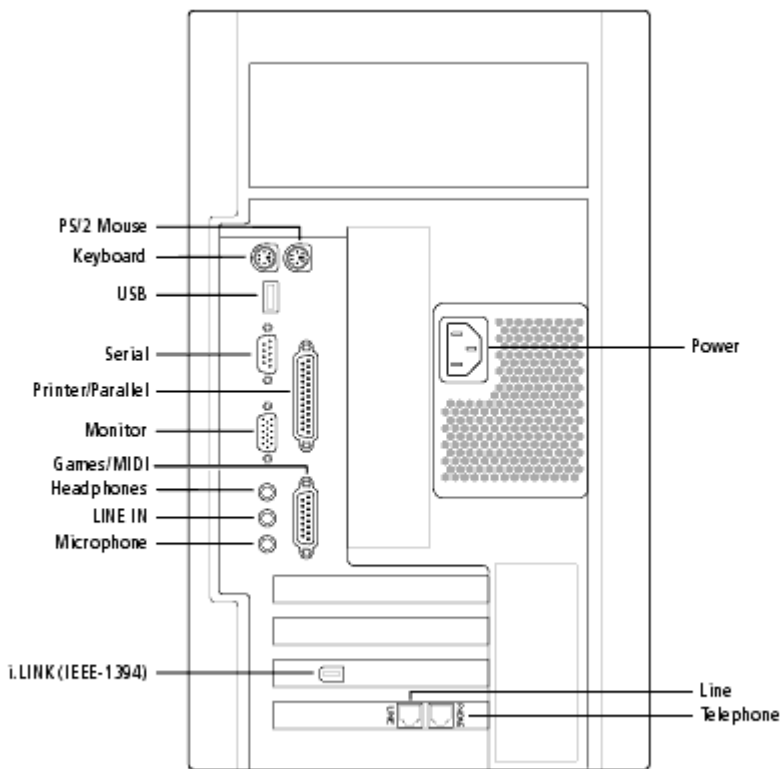


Install your equipment so that you can easily reach the outlet in the event of an emergency.

Back Panel Overview

The back panel of your computer contains the connectors where you plug in supplied and optional accessories. The icons on the back panel serve as a map to help you locate the connectors on your computer.

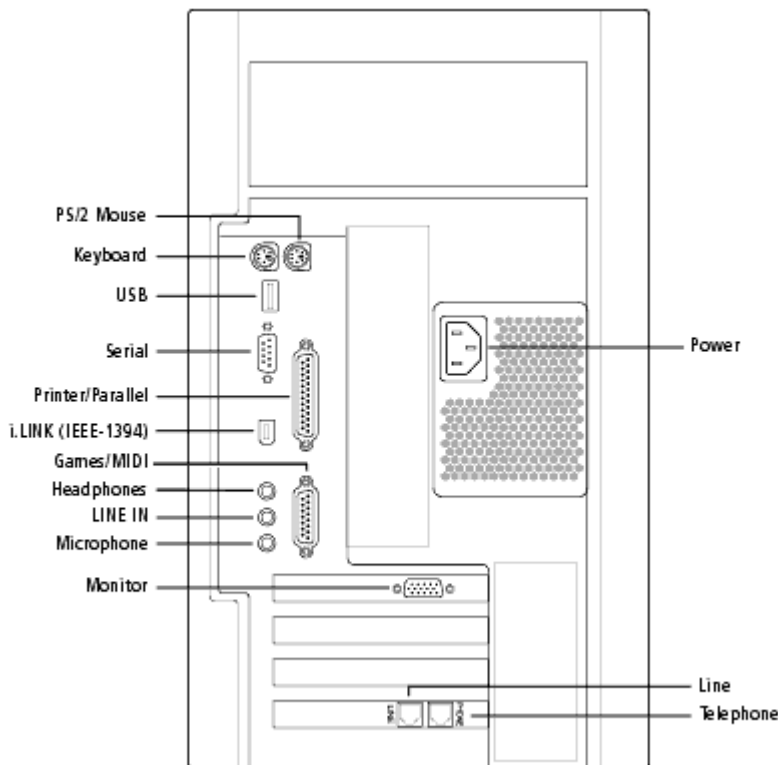
PCV-R545DS



PCV-R547DS/PCV-R549DS

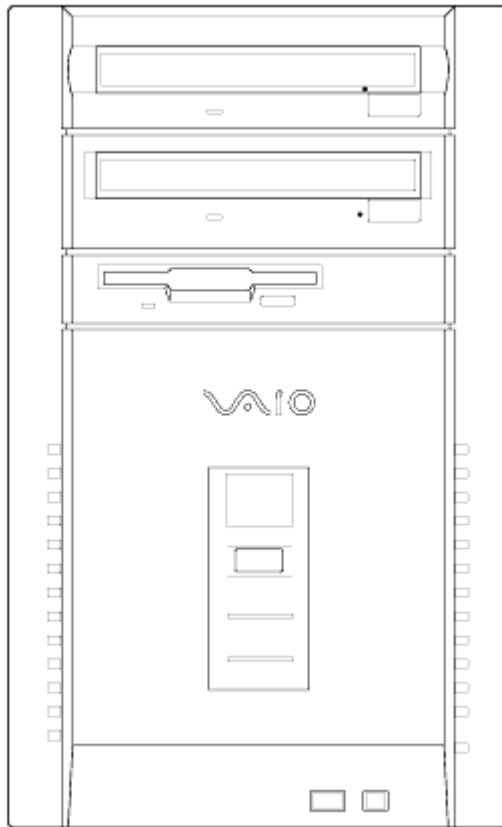


For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the back of your system is a 6-pin connector.



Front Panel Overview

The front panel of your VAIO Digital Studio Computer allows for access to the diskette, DVD, and CD-RW drives. It also includes USB and i.LINK ports to connect USB devices, digital equipment, or other components.



For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the front of your system is a 4-pin connector.

¹ Actual upload and download speeds may vary due to line conditions, ISP support, and government regulations.

² 530 MB after formatting with Direct CD .

Welcome

Congratulations on your purchase of the Sony VAIO Digital Studio computer! Your new, high-performance multimedia computer combines state-of-the-art computer functionality with the latest audio/video and information technology convergence features.

Features

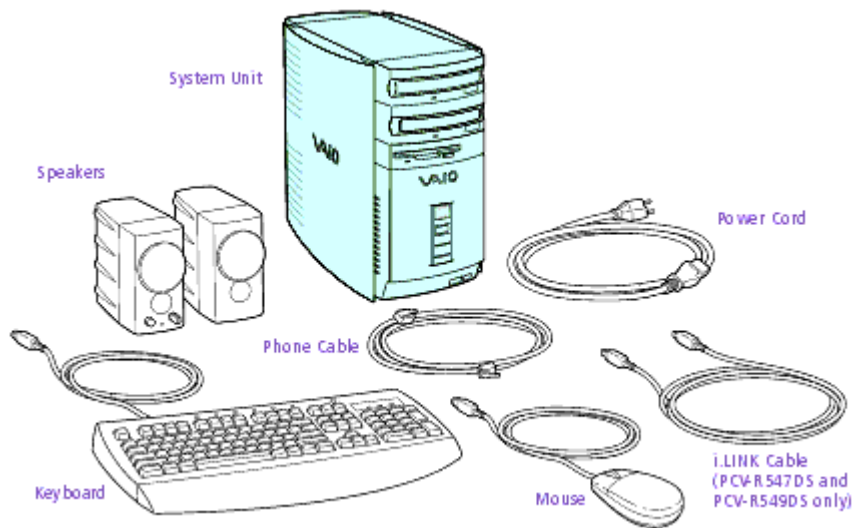


For a complete description of the specifications of your VAIO Digital Studio Computer, see [Specifications](#).

- **i.LINK® (IEEE-1394):** Two built-in i.LINK ports provide you with front and rear digital connection capability. The i.LINK name and logo identify a digital interface (IEEE-1394) for high-speed communication. By using your VAIO Digital Studio Computer, a camera that supports the i.LINK interface (such as the Sony Digital Handycam® Camcorder), the DVgate software preinstalled on your computer, and the i.LINK (IEEE-1394) interface, you can easily create and edit your own home videos.
- **Digital Media Park :** This suite of Sony original applications includes PictureGear, Smart Capture, DVgate, and Media Bar. Using the i.LINK connector, you can capture, view, and share both still and video images, then catalog everything for fast and easy storage and retrieval.
- **Exceptional performance:** Your computer includes an Intel® processor, a high-speed V.90 compatible data/fax modem,¹ and the following high-performance drives.
 - **DVD drive:** This new optical storage technology provides increased storage capacity and a rich multimedia computing experience. Your 8X DVD-ROM drive plays both DVDs and CDs.
 - **CD-RW drive:** This drive is the ideal solution for making backups and archiving data, with the ability to store up to 650 MB² of removable, rewritable storage on a single rewritable CD. Save your movies to CD-R or CD-RW media and share videos and images with family and friends.
- **VAIO Smart Keyboard:** This PS/2® keyboard has programmable shortcut buttons for launching your favorite programs or accessing the Internet.
- **Sony audio and video quality:** High-fidelity positional 3D audio system (A3D), high-powered 3D graphics (AGP), and "Sony-Tuned" MPEG digital video playback-enable you to take advantage of today's advanced multimedia applications, games, and entertainment software.
- **Microsoft® Windows® 98 Second Edition operating system:** Your system includes the latest operating system from Microsoft.
- **Communications:** Access popular online services, browse the Internet, send faxes, and more.

Unpacking Your Computer

Computer and Supplied Accessories



Manuals

- [Read Me First](#) contains Frequently Asked Questions (FAQs) and supplementary information about your computer. It also includes information on how to contact software vendors.
- The *VAIO Digital Studio Computer User Guide* (this manual) contains features and specifications for your computer. It also includes information on the applications included with your system and how to contact software vendors, get started with your computer, and solve common problems.
- The *VAIO Consumer Information Guide* contains safety and regulatory information, ergonomic considerations, information on help resources, and your computer's limited warranty statement.
- The *Microsoft® Windows® 98 Getting Started* manual explains how to use the basic features of the Windows operating system.

Recovery CDs

- System Recovery CD(s)
- Application Recovery CD(s)

Other

- Setting up your VAIO Digital Studio Computer (poster)
- Packet containing special product offers

Software Library

The Software Library contains the Microsoft software license agreement, Sony end-user license agreement, and the following CDs:

- Microsoft® Word 2000
- Wild Metal Country®

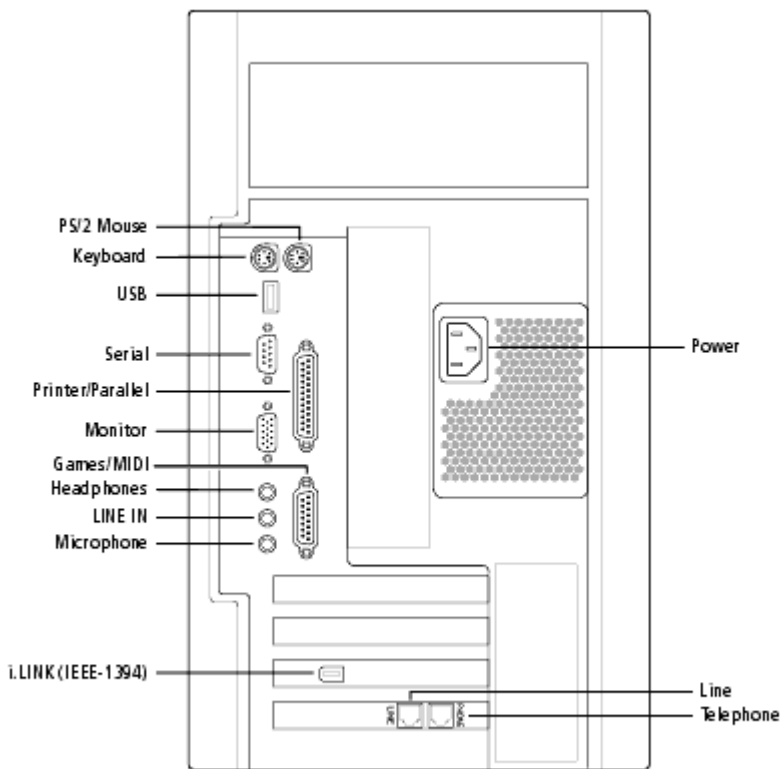


Install your equipment so that you can easily reach the outlet in the event of an emergency.

Back Panel Overview

The back panel of your computer contains the connectors where you plug in supplied and optional accessories. The icons on the back panel serve as a map to help you locate the connectors on your computer.

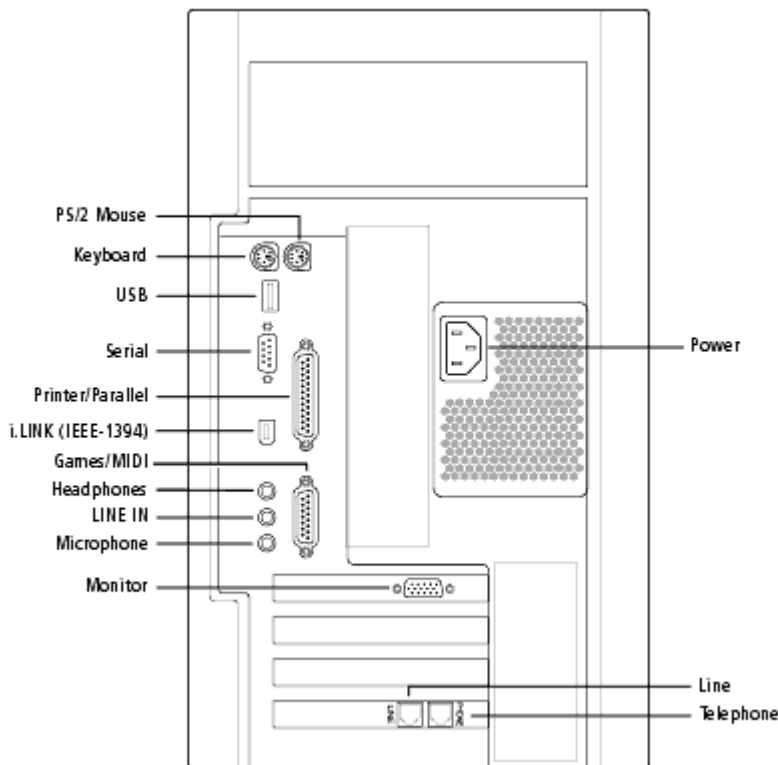
PCV-R545DS



PCV-R547DS/PCV-R549DS

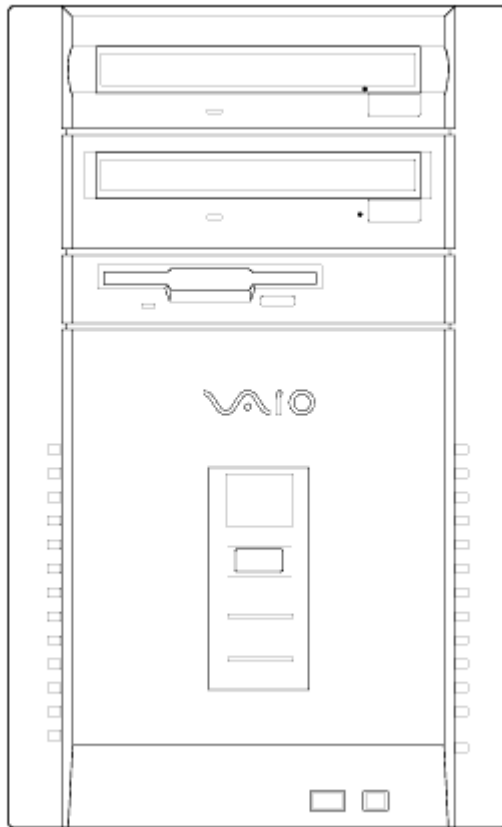


For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the back of your system is a 6-pin connector.



Front Panel Overview

The front panel of your VAIO Digital Studio Computer allows for access to the diskette, DVD, and CD-RW drives. It also includes USB and i.LINK ports to connect USB devices, digital equipment, or other components.



For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the front of your system is a 4-pin connector.

¹ Actual upload and download speeds may vary due to line conditions, ISP support, and government regulations.

² 530 MB after formatting with Direct CD .

Welcome

Congratulations on your purchase of the Sony VAIO Digital Studio computer! Your new, high-performance multimedia computer combines state-of-the-art computer functionality with the latest audio/video and information technology convergence features.

Features

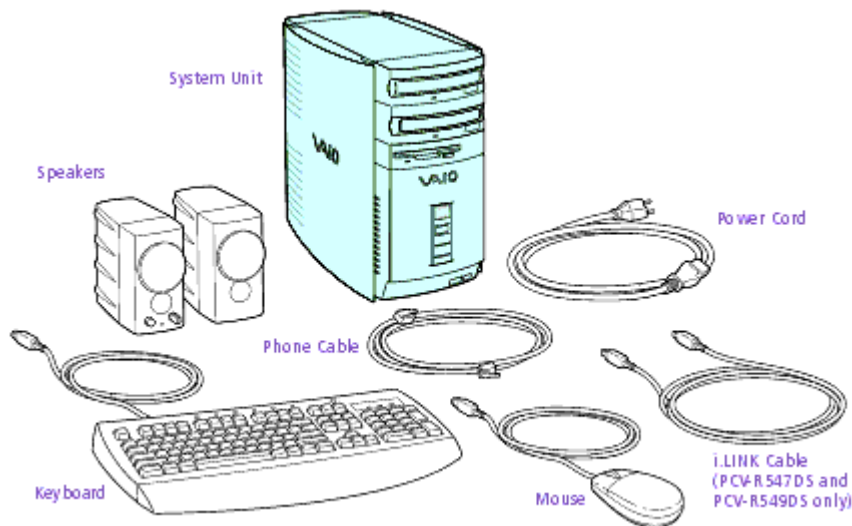


For a complete description of the specifications of your VAIO Digital Studio Computer, see [Specifications](#).

- **i.LINK® (IEEE-1394):** Two built-in i.LINK ports provide you with front and rear digital connection capability. The i.LINK name and logo identify a digital interface (IEEE-1394) for high-speed communication. By using your VAIO Digital Studio Computer, a camera that supports the i.LINK interface (such as the Sony Digital Handycam® Camcorder), the DVgate software preinstalled on your computer, and the i.LINK (IEEE-1394) interface, you can easily create and edit your own home videos.
- **Digital Media Park** : This suite of Sony original applications includes PictureGear, Smart Capture, DVgate, and Media Bar. Using the i.LINK connector, you can capture, view, and share both still and video images, then catalog everything for fast and easy storage and retrieval.
- **Exceptional performance:** Your computer includes an Intel® processor, a high-speed V.90 compatible data/fax modem,¹ and the following high-performance drives.
 - **DVD drive:** This new optical storage technology provides increased storage capacity and a rich multimedia computing experience. Your 8X DVD-ROM drive plays both DVDs and CDs.
 - **CD-RW drive:** This drive is the ideal solution for making backups and archiving data, with the ability to store up to 650 MB² of removable, rewritable storage on a single rewritable CD. Save your movies to CD-R or CD-RW media and share videos and images with family and friends.
- **VAIO Smart Keyboard:** This PS/2® keyboard has programmable shortcut buttons for launching your favorite programs or accessing the Internet.
- **Sony audio and video quality:** High-fidelity positional 3D audio system (A3D), high-powered 3D graphics (AGP), and "Sony-Tuned" MPEG digital video playback-enable you to take advantage of today's advanced multimedia applications, games, and entertainment software.
- **Microsoft® Windows® 98 Second Edition operating system:** Your system includes the latest operating system from Microsoft.
- **Communications:** Access popular online services, browse the Internet, send faxes, and more.

Unpacking Your Computer

Computer and Supplied Accessories



Manuals

- [Read Me First](#) contains Frequently Asked Questions (FAQs) and supplementary information about your computer. It also includes information on how to contact software vendors.
- The *VAIO Digital Studio Computer User Guide* (this manual) contains features and specifications for your computer. It also includes information on the applications included with your system and how to contact software vendors, get started with your computer, and solve common problems.
- The *VAIO Consumer Information Guide* contains safety and regulatory information, ergonomic considerations, information on help resources, and your computer's limited warranty statement.
- The *Microsoft® Windows® 98 Getting Started* manual explains how to use the basic features of the Windows operating system.

Recovery CDs

- System Recovery CD(s)
- Application Recovery CD(s)

Other

- Setting up your VAIO Digital Studio Computer (poster)
- Packet containing special product offers

Software Library

The Software Library contains the Microsoft software license agreement, Sony end-user license agreement, and the following CDs:

- Microsoft® Word 2000
- Wild Metal Country®

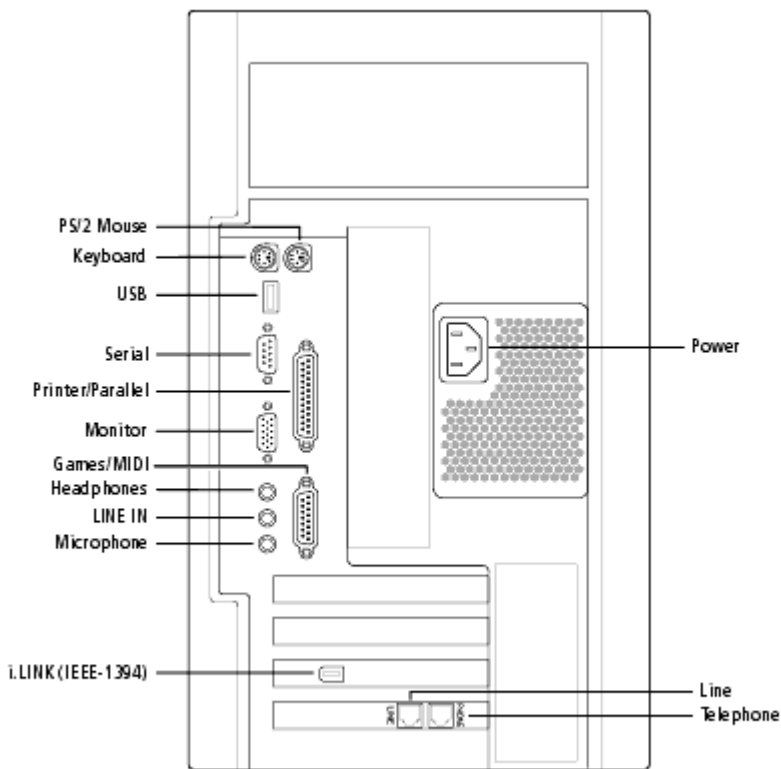


Install your equipment so that you can easily reach the outlet in the event of an emergency.


Back Panel Overview

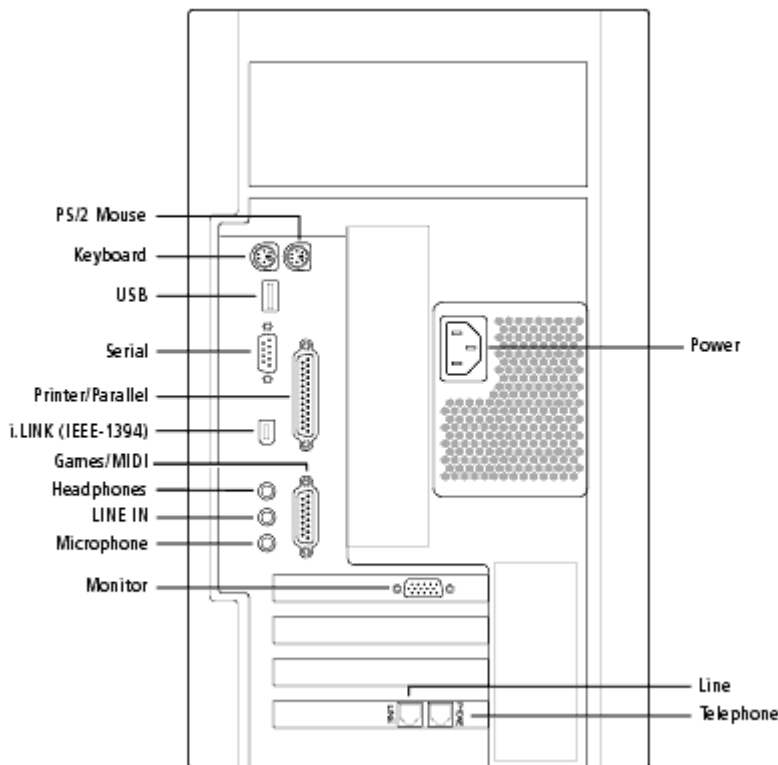
The back panel of your computer contains the connectors where you plug in supplied and optional accessories. The icons on the back panel serve as a map to help you locate the connectors on your computer.

PCV-R545DS



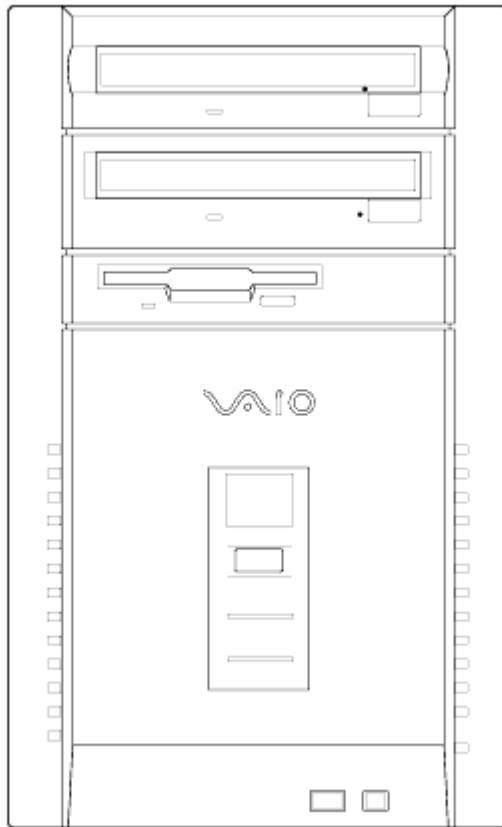
PCV-R547DS/PCV-R549DS

 For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the back of your system is a 6-pin connector.



Front Panel Overview

The front panel of your VAIO Digital Studio Computer allows for access to the diskette, DVD, and CD-RW drives. It also includes USB and i.LINK ports to connect USB devices, digital equipment, or other components.



For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the front of your system is a 4-pin connector.

¹ Actual upload and download speeds may vary due to line conditions, ISP support, and government regulations.

² 530 MB after formatting with Direct CD .

Welcome

Congratulations on your purchase of the Sony VAIO Digital Studio computer! Your new, high-performance multimedia computer combines state-of-the-art computer functionality with the latest audio/video and information technology convergence features.

Features

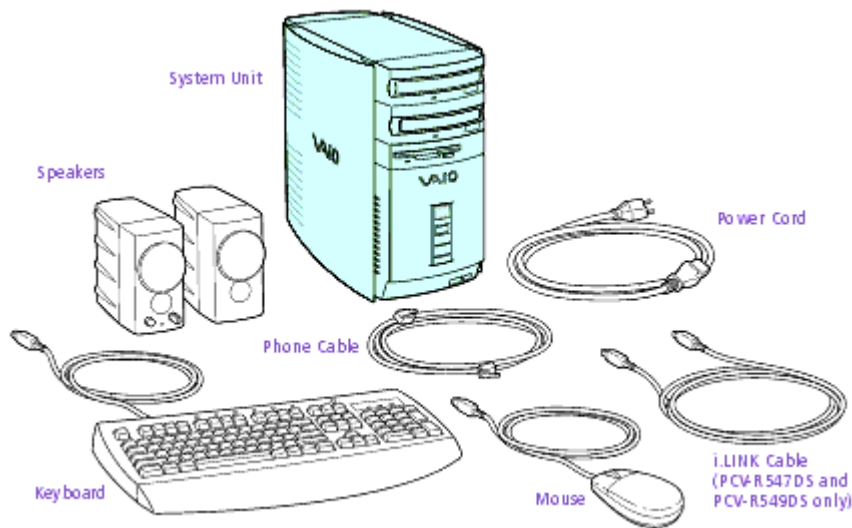


For a complete description of the specifications of your VAIO Digital Studio Computer, see [Specifications](#).

- **i.LINK® (IEEE-1394):** Two built-in i.LINK ports provide you with front and rear digital connection capability. The i.LINK name and logo identify a digital interface (IEEE-1394) for high-speed communication. By using your VAIO Digital Studio Computer, a camera that supports the i.LINK interface (such as the Sony Digital Handycam® Camcorder), the DVgate software preinstalled on your computer, and the i.LINK (IEEE-1394) interface, you can easily create and edit your own home videos.
- **Digital Media Park** : This suite of Sony original applications includes PictureGear, Smart Capture, DVgate, and Media Bar. Using the i.LINK connector, you can capture, view, and share both still and video images, then catalog everything for fast and easy storage and retrieval.
- **Exceptional performance:** Your computer includes an Intel® processor, a high-speed V.90 compatible data/fax modem,¹ and the following high-performance drives.
 - **DVD drive:** This new optical storage technology provides increased storage capacity and a rich multimedia computing experience. Your 8X DVD-ROM drive plays both DVDs and CDs.
 - **CD-RW drive:** This drive is the ideal solution for making backups and archiving data, with the ability to store up to 650 MB² of removable, rewritable storage on a single rewritable CD. Save your movies to CD-R or CD-RW media and share videos and images with family and friends.
- **VAIO Smart Keyboard:** This PS/2® keyboard has programmable shortcut buttons for launching your favorite programs or accessing the Internet.
- **Sony audio and video quality:** High-fidelity positional 3D audio system (A3D), high-powered 3D graphics (AGP), and "Sony-Tuned" MPEG digital video playback-enable you to take advantage of today's advanced multimedia applications, games, and entertainment software.
- **Microsoft® Windows® 98 Second Edition operating system:** Your system includes the latest operating system from Microsoft.
- **Communications:** Access popular online services, browse the Internet, send faxes, and more.

Unpacking Your Computer

Computer and Supplied Accessories



Manuals

- [Read Me First](#) contains Frequently Asked Questions (FAQs) and supplementary information about your computer. It also includes information on how to contact software vendors.
- The *VAIO Digital Studio Computer User Guide* (this manual) contains features and specifications for your computer. It also includes information on the applications included with your system and how to contact software vendors, get started with your computer, and solve common problems.
- The *VAIO Consumer Information Guide* contains safety and regulatory information, ergonomic considerations, information on help resources, and your computer's limited warranty statement.
- The *Microsoft® Windows® 98 Getting Started* manual explains how to use the basic features of the Windows operating system.

Recovery CDs

- System Recovery CD(s)
- Application Recovery CD(s)

Other

- Setting up your VAIO Digital Studio Computer (poster)
- Packet containing special product offers

Software Library

The Software Library contains the Microsoft software license agreement, Sony end-user license agreement, and the following CDs:

- Microsoft® Word 2000
- Wild Metal Country®

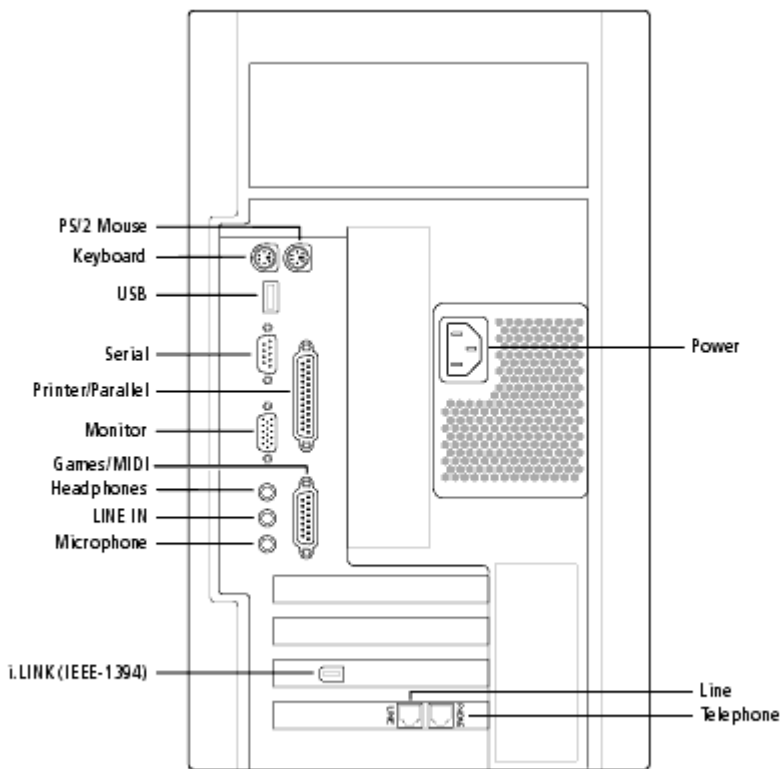


Install your equipment so that you can easily reach the outlet in the event of an emergency.

Back Panel Overview

The back panel of your computer contains the connectors where you plug in supplied and optional accessories. The icons on the back panel serve as a map to help you locate the connectors on your computer.

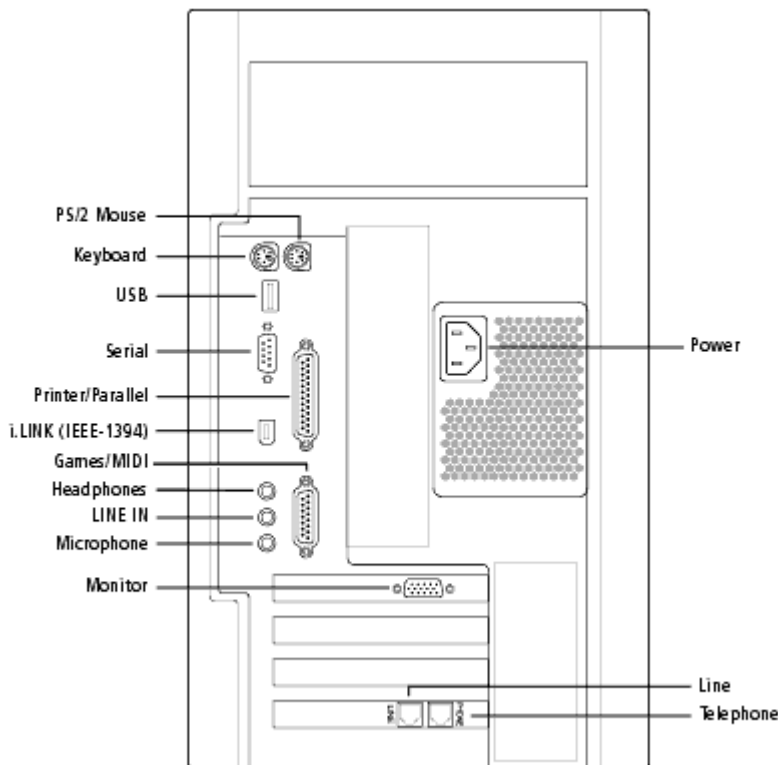
PCV-R545DS



PCV-R547DS/PCV-R549DS

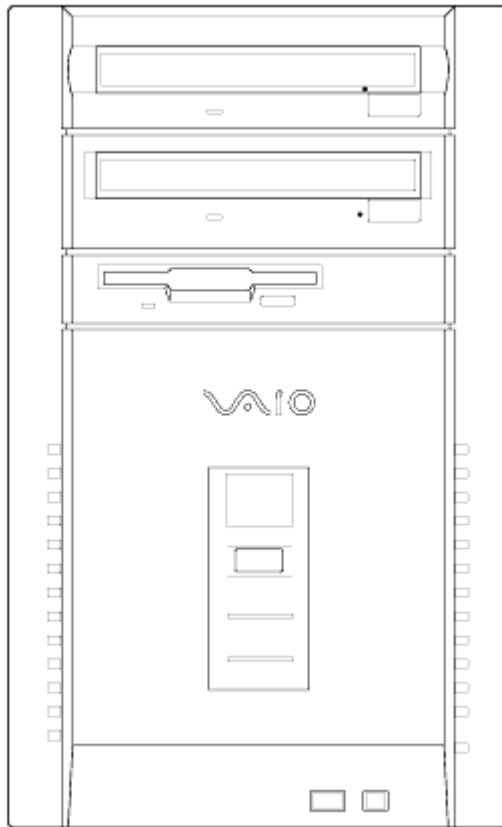


For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the back of your system is a 6-pin connector.



Front Panel Overview

The front panel of your VAIO Digital Studio Computer allows for access to the diskette, DVD, and CD-RW drives. It also includes USB and i.LINK ports to connect USB devices, digital equipment, or other components.



For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the front of your system is a 4-pin connector.

¹ Actual upload and download speeds may vary due to line conditions, ISP support, and government regulations.

² 530 MB after formatting with Direct CD .

Welcome

Congratulations on your purchase of the Sony VAIO Digital Studio computer! Your new, high-performance multimedia computer combines state-of-the-art computer functionality with the latest audio/video and information technology convergence features.

Features

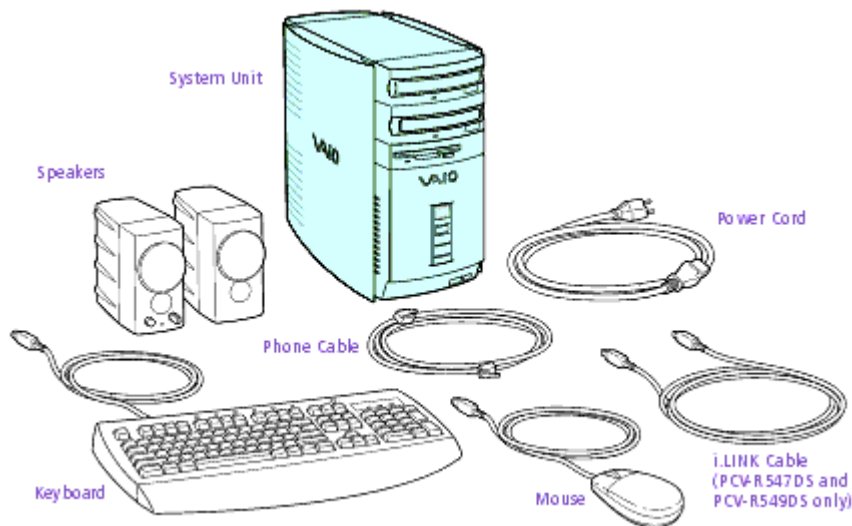


For a complete description of the specifications of your VAIO Digital Studio Computer, see [Specifications](#).

- **i.LINK® (IEEE-1394):** Two built-in i.LINK ports provide you with front and rear digital connection capability. The i.LINK name and logo identify a digital interface (IEEE-1394) for high-speed communication. By using your VAIO Digital Studio Computer, a camera that supports the i.LINK interface (such as the Sony Digital Handycam® Camcorder), the DVgate software preinstalled on your computer, and the i.LINK (IEEE-1394) interface, you can easily create and edit your own home videos.
- **Digital Media Park :** This suite of Sony original applications includes PictureGear, Smart Capture, DVgate, and Media Bar. Using the i.LINK connector, you can capture, view, and share both still and video images, then catalog everything for fast and easy storage and retrieval.
- **Exceptional performance:** Your computer includes an Intel® processor, a high-speed V.90 compatible data/fax modem,¹ and the following high-performance drives.
 - **DVD drive:** This new optical storage technology provides increased storage capacity and a rich multimedia computing experience. Your 8X DVD-ROM drive plays both DVDs and CDs.
 - **CD-RW drive:** This drive is the ideal solution for making backups and archiving data, with the ability to store up to 650 MB² of removable, rewritable storage on a single rewritable CD. Save your movies to CD-R or CD-RW media and share videos and images with family and friends.
- **VAIO Smart Keyboard:** This PS/2® keyboard has programmable shortcut buttons for launching your favorite programs or accessing the Internet.
- **Sony audio and video quality:** High-fidelity positional 3D audio system (A3D), high-powered 3D graphics (AGP), and "Sony-Tuned" MPEG digital video playback-enable you to take advantage of today's advanced multimedia applications, games, and entertainment software.
- **Microsoft® Windows® 98 Second Edition operating system:** Your system includes the latest operating system from Microsoft.
- **Communications:** Access popular online services, browse the Internet, send faxes, and more.

Unpacking Your Computer

Computer and Supplied Accessories



Manuals

- [Read Me First](#) contains Frequently Asked Questions (FAQs) and supplementary information about your computer. It also includes information on how to contact software vendors.
- The *VAIO Digital Studio Computer User Guide* (this manual) contains features and specifications for your computer. It also includes information on the applications included with your system and how to contact software vendors, get started with your computer, and solve common problems.
- The *VAIO Consumer Information Guide* contains safety and regulatory information, ergonomic considerations, information on help resources, and your computer's limited warranty statement.
- The *Microsoft® Windows® 98 Getting Started* manual explains how to use the basic features of the Windows operating system.

Recovery CDs

- System Recovery CD(s)
- Application Recovery CD(s)

Other

- Setting up your VAIO Digital Studio Computer (poster)
- Packet containing special product offers

Software Library

The Software Library contains the Microsoft software license agreement, Sony end-user license agreement, and the following CDs:

- Microsoft® Word 2000
- Wild Metal Country®

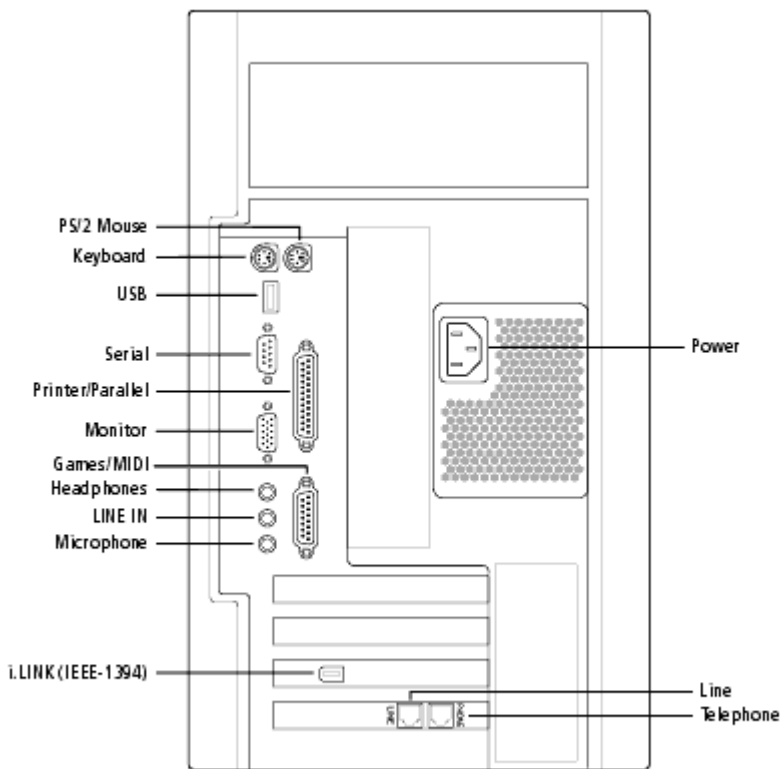


Install your equipment so that you can easily reach the outlet in the event of an emergency.

Back Panel Overview

The back panel of your computer contains the connectors where you plug in supplied and optional accessories. The icons on the back panel serve as a map to help you locate the connectors on your computer.

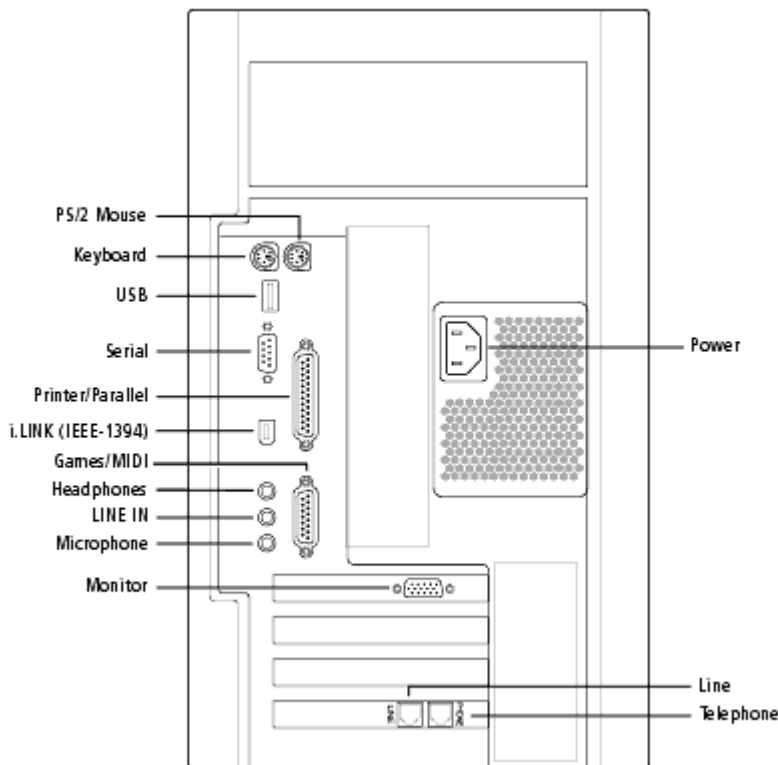
PCV-R545DS



PCV-R547DS/PCV-R549DS

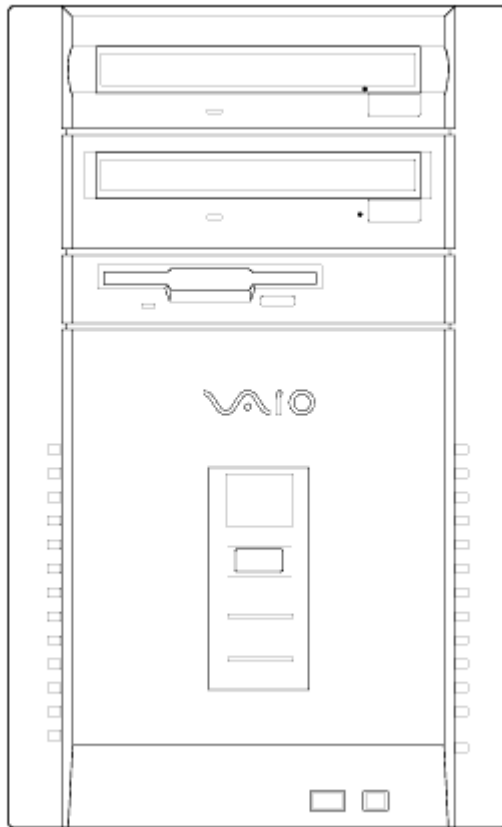


For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the back of your system is a 6-pin connector.



Front Panel Overview

The front panel of your VAIO Digital Studio Computer allows for access to the diskette, DVD, and CD-RW drives. It also includes USB and i.LINK ports to connect USB devices, digital equipment, or other components.



For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the front of your system is a 4-pin connector.

¹ Actual upload and download speeds may vary due to line conditions, ISP support, and government regulations.

² 530 MB after formatting with Direct CD .

Welcome

Congratulations on your purchase of the Sony VAIO Digital Studio computer! Your new, high-performance multimedia computer combines state-of-the-art computer functionality with the latest audio/video and information technology convergence features.

Features

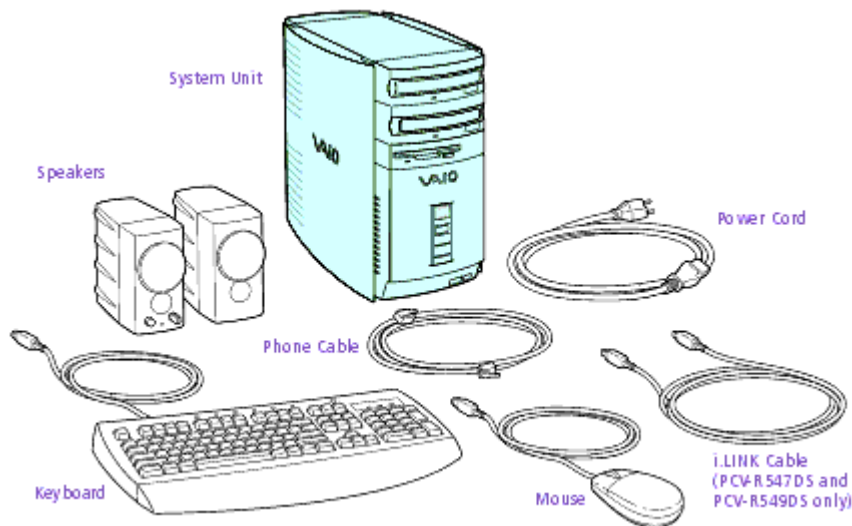


For a complete description of the specifications of your VAIO Digital Studio Computer, see [Specifications](#).

- **i.LINK® (IEEE-1394):** Two built-in i.LINK ports provide you with front and rear digital connection capability. The i.LINK name and logo identify a digital interface (IEEE-1394) for high-speed communication. By using your VAIO Digital Studio Computer, a camera that supports the i.LINK interface (such as the Sony Digital Handycam® Camcorder), the DVgate software preinstalled on your computer, and the i.LINK (IEEE-1394) interface, you can easily create and edit your own home videos.
- **Digital Media Park** : This suite of Sony original applications includes PictureGear, Smart Capture, DVgate, and Media Bar. Using the i.LINK connector, you can capture, view, and share both still and video images, then catalog everything for fast and easy storage and retrieval.
- **Exceptional performance:** Your computer includes an Intel® processor, a high-speed V.90 compatible data/fax modem,¹ and the following high-performance drives.
 - **DVD drive:** This new optical storage technology provides increased storage capacity and a rich multimedia computing experience. Your 8X DVD-ROM drive plays both DVDs and CDs.
 - **CD-RW drive:** This drive is the ideal solution for making backups and archiving data, with the ability to store up to 650 MB² of removable, rewritable storage on a single rewritable CD. Save your movies to CD-R or CD-RW media and share videos and images with family and friends.
- **VAIO Smart Keyboard:** This PS/2® keyboard has programmable shortcut buttons for launching your favorite programs or accessing the Internet.
- **Sony audio and video quality:** High-fidelity positional 3D audio system (A3D), high-powered 3D graphics (AGP), and "Sony-Tuned" MPEG digital video playback-enable you to take advantage of today's advanced multimedia applications, games, and entertainment software.
- **Microsoft® Windows® 98 Second Edition operating system:** Your system includes the latest operating system from Microsoft.
- **Communications:** Access popular online services, browse the Internet, send faxes, and more.

Unpacking Your Computer

Computer and Supplied Accessories



Manuals

- [Read Me First](#) contains Frequently Asked Questions (FAQs) and supplementary information about your computer. It also includes information on how to contact software vendors.
- The *VAIO Digital Studio Computer User Guide* (this manual) contains features and specifications for your computer. It also includes information on the applications included with your system and how to contact software vendors, get started with your computer, and solve common problems.
- The *VAIO Consumer Information Guide* contains safety and regulatory information, ergonomic considerations, information on help resources, and your computer's limited warranty statement.
- The *Microsoft® Windows® 98 Getting Started* manual explains how to use the basic features of the Windows operating system.

Recovery CDs

- System Recovery CD(s)
- Application Recovery CD(s)

Other

- Setting up your VAIO Digital Studio Computer (poster)
- Packet containing special product offers

Software Library

The Software Library contains the Microsoft software license agreement, Sony end-user license agreement, and the following CDs:

- Microsoft® Word 2000
- Wild Metal Country®

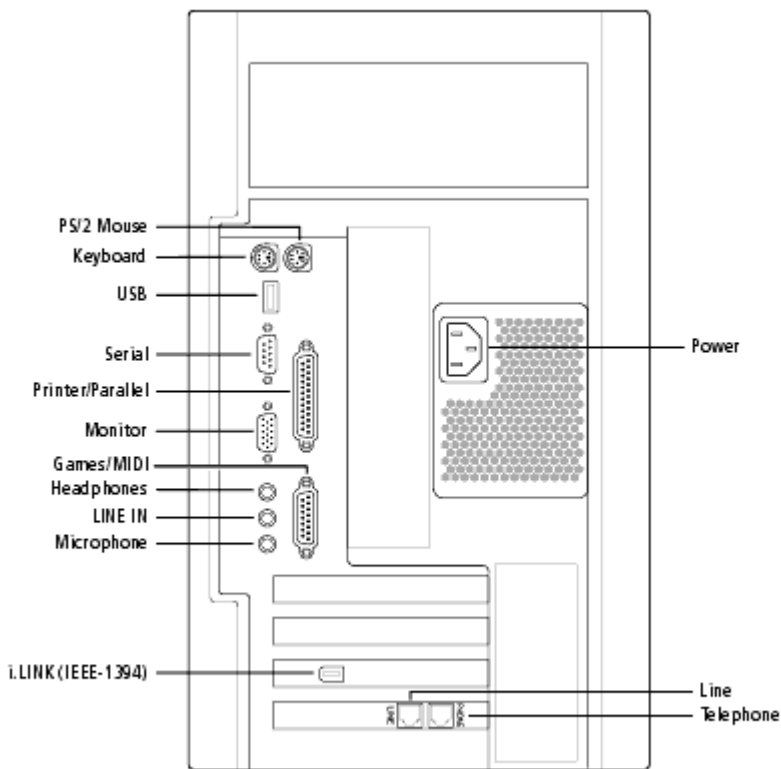


Install your equipment so that you can easily reach the outlet in the event of an emergency.

Back Panel Overview

The back panel of your computer contains the connectors where you plug in supplied and optional accessories. The icons on the back panel serve as a map to help you locate the connectors on your computer.

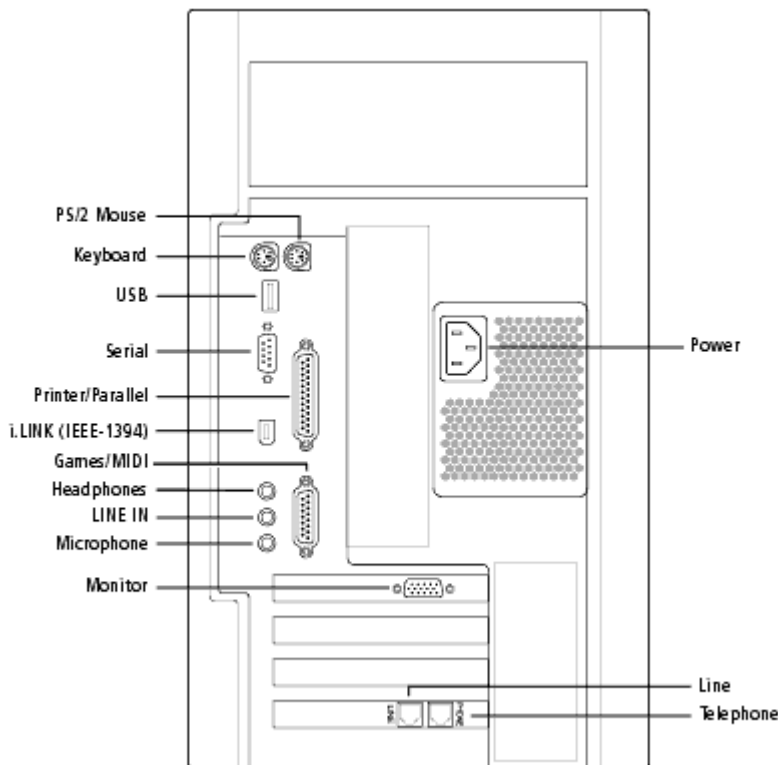
PCV-R545DS



PCV-R547DS/PCV-R549DS

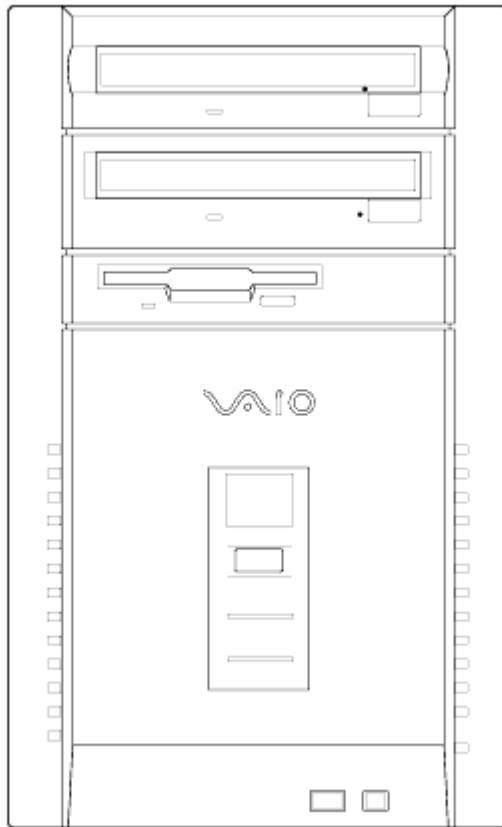



For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the back of your system is a 6-pin connector.



Front Panel Overview

The front panel of your VAIO Digital Studio Computer allows for access to the diskette, DVD, and CD-RW drives. It also includes USB and i.LINK ports to connect USB devices, digital equipment, or other components.



 For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the front of your system is a 4-pin connector.

¹ Actual upload and download speeds may vary due to line conditions, ISP support, and government regulations.

² 530 MB after formatting with Direct CD .

Welcome

Congratulations on your purchase of the Sony VAIO Digital Studio computer! Your new, high-performance multimedia computer combines state-of-the-art computer functionality with the latest audio/video and information technology convergence features.

Features

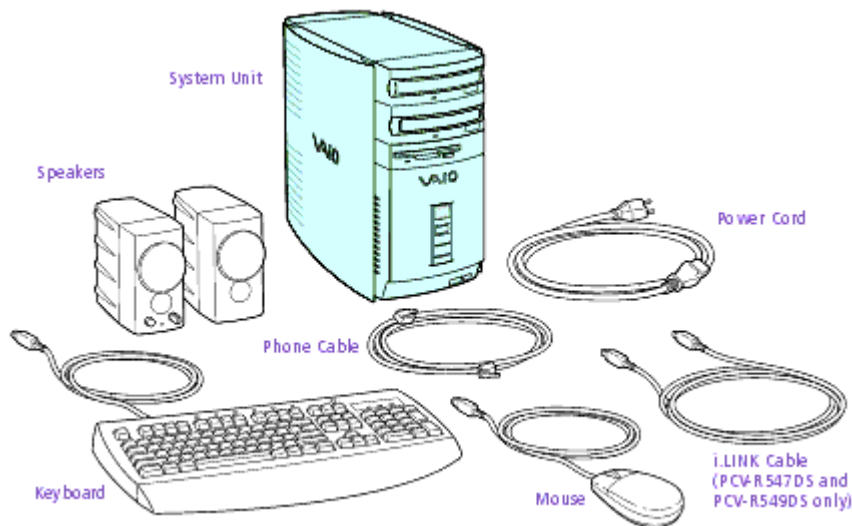


For a complete description of the specifications of your VAIO Digital Studio Computer, see [Specifications](#).

- **i.LINK® (IEEE-1394):** Two built-in i.LINK ports provide you with front and rear digital connection capability. The i.LINK name and logo identify a digital interface (IEEE-1394) for high-speed communication. By using your VAIO Digital Studio Computer, a camera that supports the i.LINK interface (such as the Sony Digital Handycam® Camcorder), the DVgate software preinstalled on your computer, and the i.LINK (IEEE-1394) interface, you can easily create and edit your own home videos.
- **Digital Media Park** : This suite of Sony original applications includes PictureGear, Smart Capture, DVgate, and Media Bar. Using the i.LINK connector, you can capture, view, and share both still and video images, then catalog everything for fast and easy storage and retrieval.
- **Exceptional performance:** Your computer includes an Intel® processor, a high-speed V.90 compatible data/fax modem,¹ and the following high-performance drives.
 - **DVD drive:** This new optical storage technology provides increased storage capacity and a rich multimedia computing experience. Your 8X DVD-ROM drive plays both DVDs and CDs.
 - **CD-RW drive:** This drive is the ideal solution for making backups and archiving data, with the ability to store up to 650 MB² of removable, rewritable storage on a single rewritable CD. Save your movies to CD-R or CD-RW media and share videos and images with family and friends.
- **VAIO Smart Keyboard:** This PS/2® keyboard has programmable shortcut buttons for launching your favorite programs or accessing the Internet.
- **Sony audio and video quality:** High-fidelity positional 3D audio system (A3D), high-powered 3D graphics (AGP), and "Sony-Tuned" MPEG digital video playback-enable you to take advantage of today's advanced multimedia applications, games, and entertainment software.
- **Microsoft® Windows® 98 Second Edition operating system:** Your system includes the latest operating system from Microsoft.
- **Communications:** Access popular online services, browse the Internet, send faxes, and more.

Unpacking Your Computer

Computer and Supplied Accessories



Manuals

- [Read Me First](#) contains Frequently Asked Questions (FAQs) and supplementary information about your computer. It also includes information on how to contact software vendors.
- The *VAIO Digital Studio Computer User Guide* (this manual) contains features and specifications for your computer. It also includes information on the applications included with your system and how to contact software vendors, get started with your computer, and solve common problems.
- The *VAIO Consumer Information Guide* contains safety and regulatory information, ergonomic considerations, information on help resources, and your computer's limited warranty statement.
- The *Microsoft® Windows® 98 Getting Started* manual explains how to use the basic features of the Windows operating system.

Recovery CDs

- System Recovery CD(s)
- Application Recovery CD(s)

Other

- Setting up your VAIO Digital Studio Computer (poster)
- Packet containing special product offers

Software Library

The Software Library contains the Microsoft software license agreement, Sony end-user license agreement, and the following CDs:

- Microsoft® Word 2000
- Wild Metal Country®

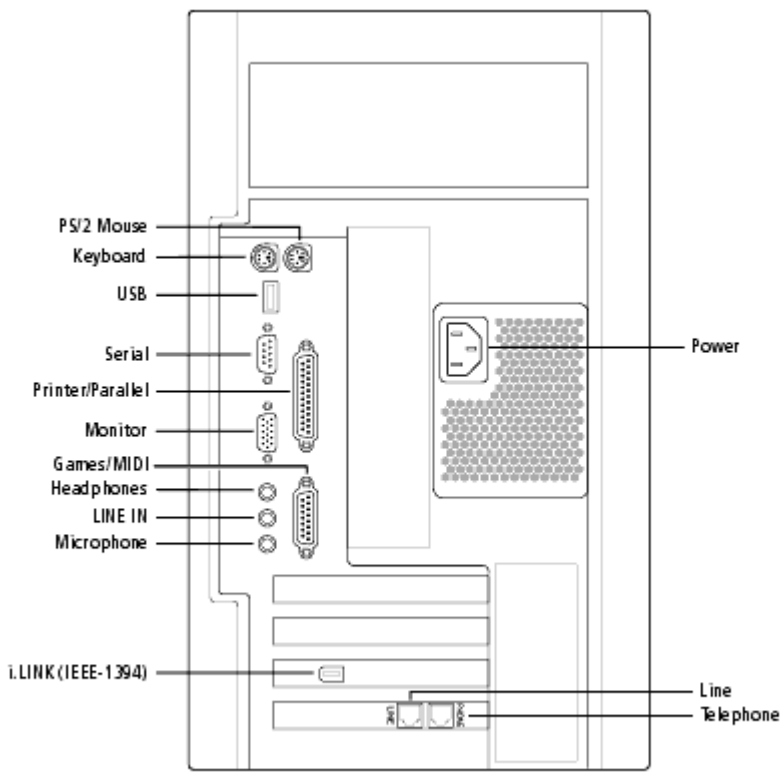


Install your equipment so that you can easily reach the outlet in the event of an emergency.

Back Panel Overview

The back panel of your computer contains the connectors where you plug in supplied and optional accessories. The icons on the back panel serve as a map to help you locate the connectors on your computer.

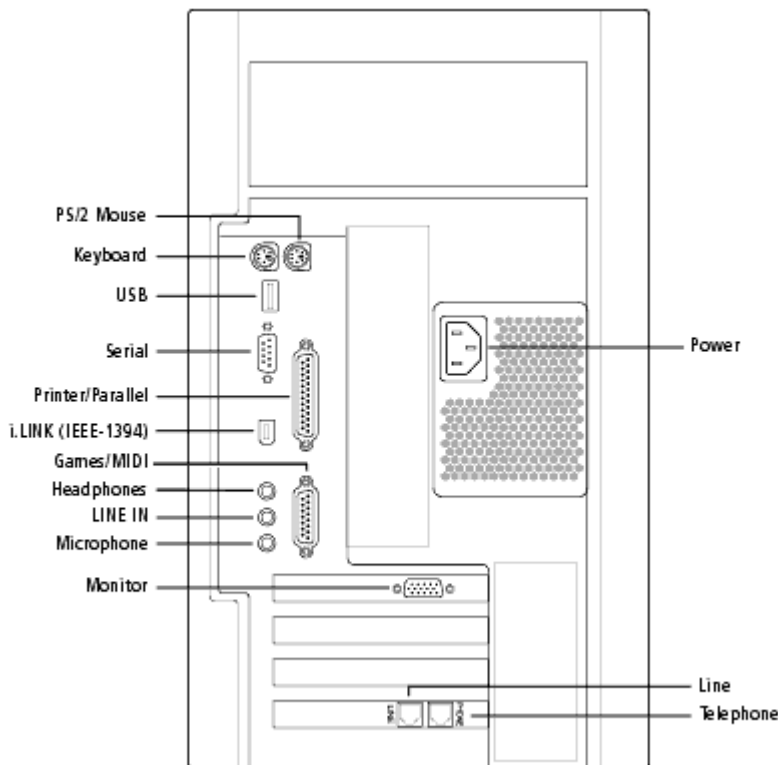
PCV-R545DS



PCV-R547DS/PCV-R549DS

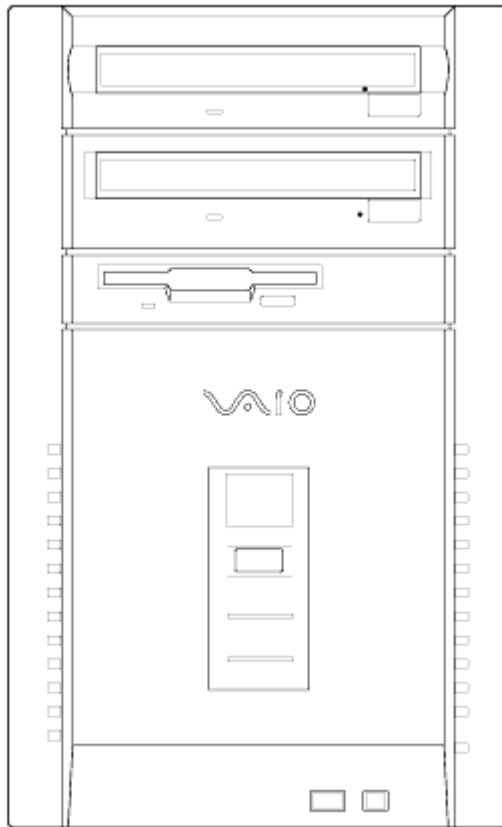


For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the back of your system is a 6-pin connector.



Front Panel Overview

The front panel of your VAIO Digital Studio Computer allows for access to the diskette, DVD, and CD-RW drives. It also includes USB and i.LINK ports to connect USB devices, digital equipment, or other components.



For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the front of your system is a 4-pin connector.

¹ Actual upload and download speeds may vary due to line conditions, ISP support, and government regulations.

² 530 MB after formatting with Direct CD .

Welcome

Congratulations on your purchase of the Sony VAIO Digital Studio computer! Your new, high-performance multimedia computer combines state-of-the-art computer functionality with the latest audio/video and information technology convergence features.

Features

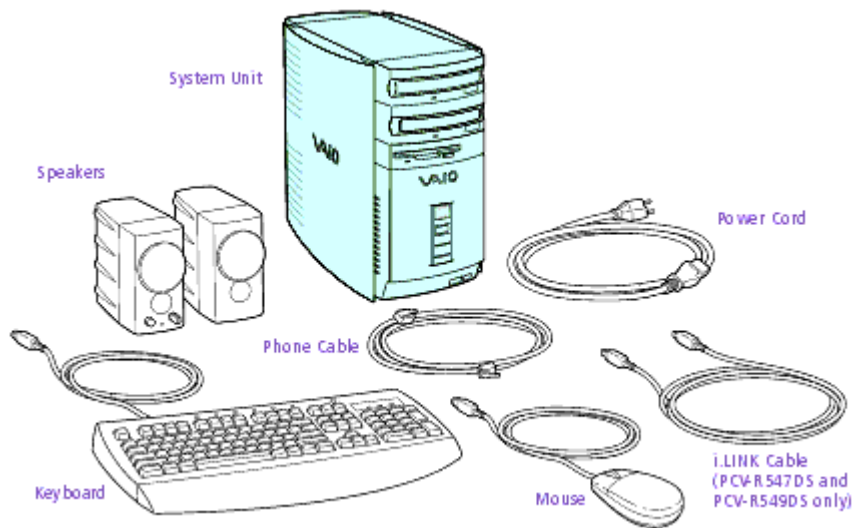


For a complete description of the specifications of your VAIO Digital Studio Computer, see [Specifications](#).

- **i.LINK® (IEEE-1394):** Two built-in i.LINK ports provide you with front and rear digital connection capability. The i.LINK name and logo identify a digital interface (IEEE-1394) for high-speed communication. By using your VAIO Digital Studio Computer, a camera that supports the i.LINK interface (such as the Sony Digital Handycam® Camcorder), the DVgate software preinstalled on your computer, and the i.LINK (IEEE-1394) interface, you can easily create and edit your own home videos.
- **Digital Media Park :** This suite of Sony original applications includes PictureGear, Smart Capture, DVgate, and Media Bar. Using the i.LINK connector, you can capture, view, and share both still and video images, then catalog everything for fast and easy storage and retrieval.
- **Exceptional performance:** Your computer includes an Intel® processor, a high-speed V.90 compatible data/fax modem,¹ and the following high-performance drives.
 - **DVD drive:** This new optical storage technology provides increased storage capacity and a rich multimedia computing experience. Your 8X DVD-ROM drive plays both DVDs and CDs.
 - **CD-RW drive:** This drive is the ideal solution for making backups and archiving data, with the ability to store up to 650 MB² of removable, rewritable storage on a single rewritable CD. Save your movies to CD-R or CD-RW media and share videos and images with family and friends.
- **VAIO Smart Keyboard:** This PS/2® keyboard has programmable shortcut buttons for launching your favorite programs or accessing the Internet.
- **Sony audio and video quality:** High-fidelity positional 3D audio system (A3D), high-powered 3D graphics (AGP), and "Sony-Tuned" MPEG digital video playback-enable you to take advantage of today's advanced multimedia applications, games, and entertainment software.
- **Microsoft® Windows® 98 Second Edition operating system:** Your system includes the latest operating system from Microsoft.
- **Communications:** Access popular online services, browse the Internet, send faxes, and more.

Unpacking Your Computer

Computer and Supplied Accessories



Manuals

- [Read Me First](#) contains Frequently Asked Questions (FAQs) and supplementary information about your computer. It also includes information on how to contact software vendors.
- The *VAIO Digital Studio Computer User Guide* (this manual) contains features and specifications for your computer. It also includes information on the applications included with your system and how to contact software vendors, get started with your computer, and solve common problems.
- The VAIO [Consumer Information Guide](#) contains safety and regulatory information, ergonomic considerations, information on help resources, and your computer's limited warranty statement.
- The *Microsoft® Windows® 98 Getting Started* manual explains how to use the basic features of the Windows operating system.

Recovery CDs

- System Recovery CD(s)
- Application Recovery CD(s)

Other

- Setting up your VAIO Digital Studio Computer (poster)
- Packet containing special product offers

Software Library

The Software Library contains the Microsoft software license agreement, Sony end-user license agreement, and the following CDs:

- Microsoft® Word 2000
- Wild Metal Country®

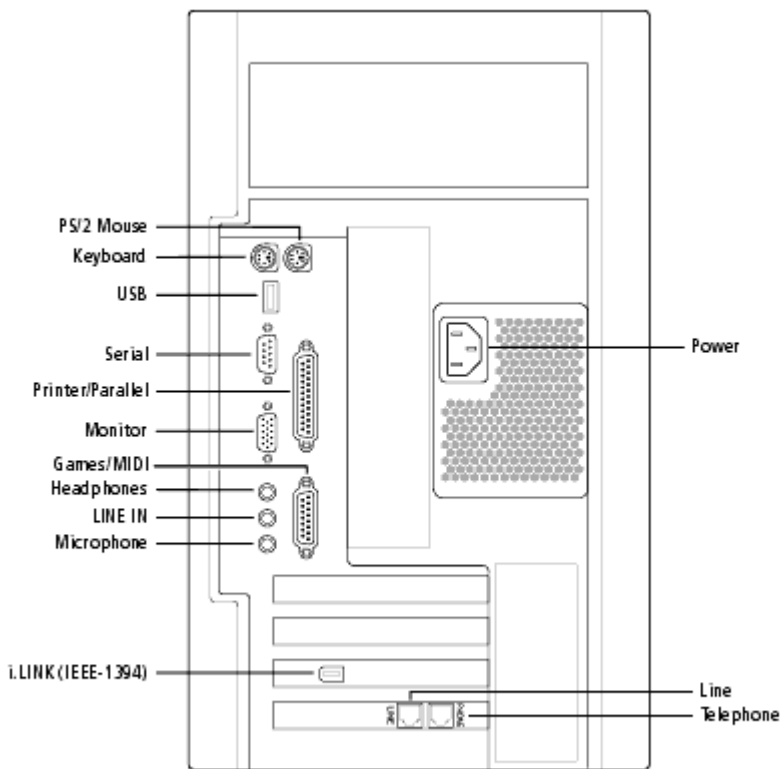


Install your equipment so that you can easily reach the outlet in the event of an emergency.

Back Panel Overview

The back panel of your computer contains the connectors where you plug in supplied and optional accessories. The icons on the back panel serve as a map to help you locate the connectors on your computer.

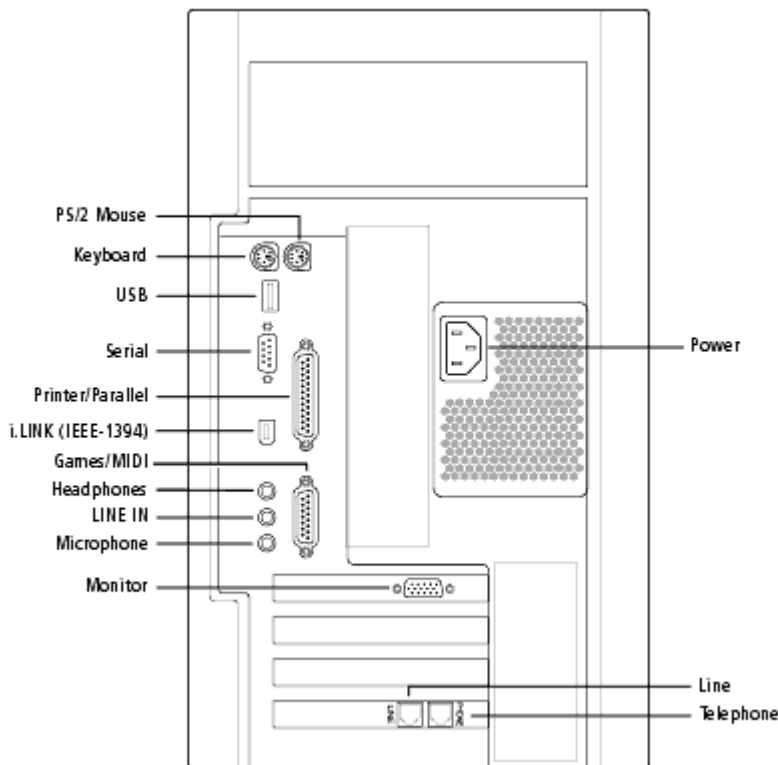
PCV-R545DS



PCV-R547DS/PCV-R549DS

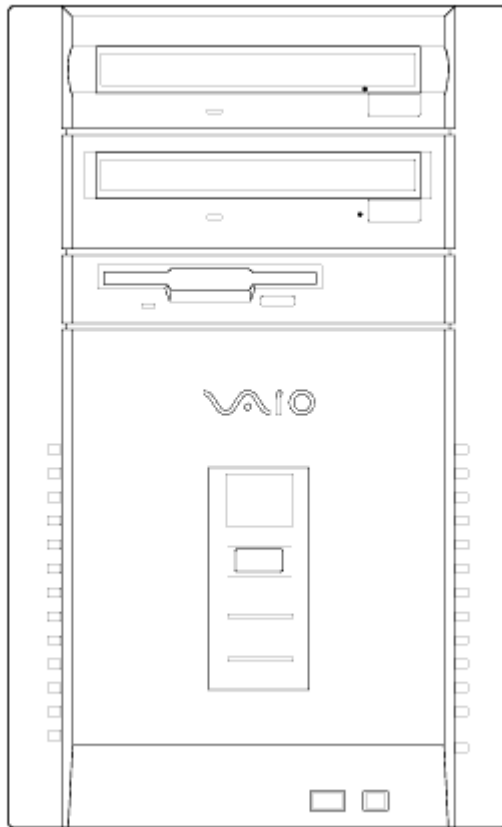


For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the back of your system is a 6-pin connector.



Front Panel Overview

The front panel of your VAIO Digital Studio Computer allows for access to the diskette, DVD, and CD-RW drives. It also includes USB and i.LINK ports to connect USB devices, digital equipment, or other components.



For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the front of your system is a 4-pin connector.

¹ Actual upload and download speeds may vary due to line conditions, ISP support, and government regulations.

² 530 MB after formatting with Direct CD .

Welcome

Congratulations on your purchase of the Sony VAIO Digital Studio computer! Your new, high-performance multimedia computer combines state-of-the-art computer functionality with the latest audio/video and information technology convergence features.

Features

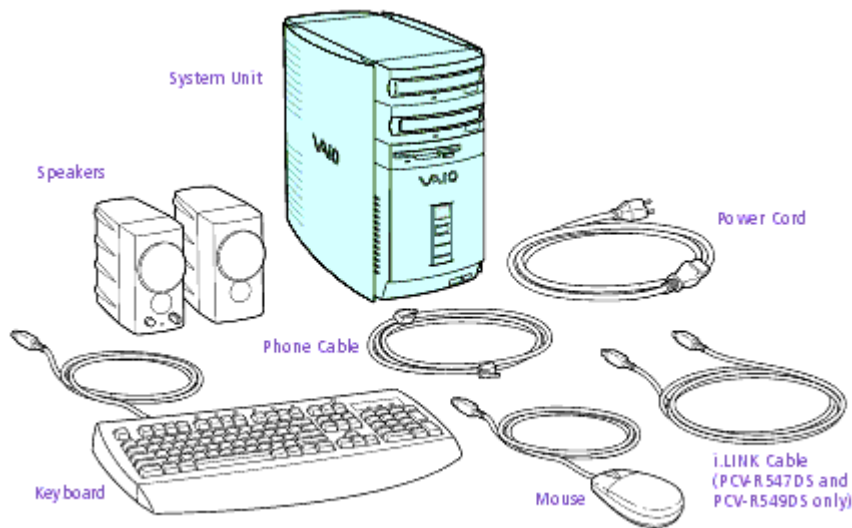


For a complete description of the specifications of your VAIO Digital Studio Computer, see [Specifications](#).

- **i.LINK® (IEEE-1394):** Two built-in i.LINK ports provide you with front and rear digital connection capability. The i.LINK name and logo identify a digital interface (IEEE-1394) for high-speed communication. By using your VAIO Digital Studio Computer, a camera that supports the i.LINK interface (such as the Sony Digital Handycam® Camcorder), the DVgate software preinstalled on your computer, and the i.LINK (IEEE-1394) interface, you can easily create and edit your own home videos.
- **Digital Media Park :** This suite of Sony original applications includes PictureGear, Smart Capture, DVgate, and Media Bar. Using the i.LINK connector, you can capture, view, and share both still and video images, then catalog everything for fast and easy storage and retrieval.
- **Exceptional performance:** Your computer includes an Intel® processor, a high-speed V.90 compatible data/fax modem,¹ and the following high-performance drives.
 - **DVD drive:** This new optical storage technology provides increased storage capacity and a rich multimedia computing experience. Your 8X DVD-ROM drive plays both DVDs and CDs.
 - **CD-RW drive:** This drive is the ideal solution for making backups and archiving data, with the ability to store up to 650 MB² of removable, rewritable storage on a single rewritable CD. Save your movies to CD-R or CD-RW media and share videos and images with family and friends.
- **VAIO Smart Keyboard:** This PS/2® keyboard has programmable shortcut buttons for launching your favorite programs or accessing the Internet.
- **Sony audio and video quality:** High-fidelity positional 3D audio system (A3D), high-powered 3D graphics (AGP), and "Sony-Tuned" MPEG digital video playback-enable you to take advantage of today's advanced multimedia applications, games, and entertainment software.
- **Microsoft® Windows® 98 Second Edition operating system:** Your system includes the latest operating system from Microsoft.
- **Communications:** Access popular online services, browse the Internet, send faxes, and more.

Unpacking Your Computer

Computer and Supplied Accessories



Manuals

- [Read Me First](#) contains Frequently Asked Questions (FAQs) and supplementary information about your computer. It also includes information on how to contact software vendors.
- The *VAIO Digital Studio Computer User Guide* (this manual) contains features and specifications for your computer. It also includes information on the applications included with your system and how to contact software vendors, get started with your computer, and solve common problems.
- The *VAIO Consumer Information Guide* contains safety and regulatory information, ergonomic considerations, information on help resources, and your computer's limited warranty statement.
- The *Microsoft® Windows® 98 Getting Started* manual explains how to use the basic features of the Windows operating system.

Recovery CDs

- System Recovery CD(s)
- Application Recovery CD(s)

Other

- Setting up your VAIO Digital Studio Computer (poster)
- Packet containing special product offers

Software Library

The Software Library contains the Microsoft software license agreement, Sony end-user license agreement, and the following CDs:

- Microsoft® Word 2000
- Wild Metal Country®

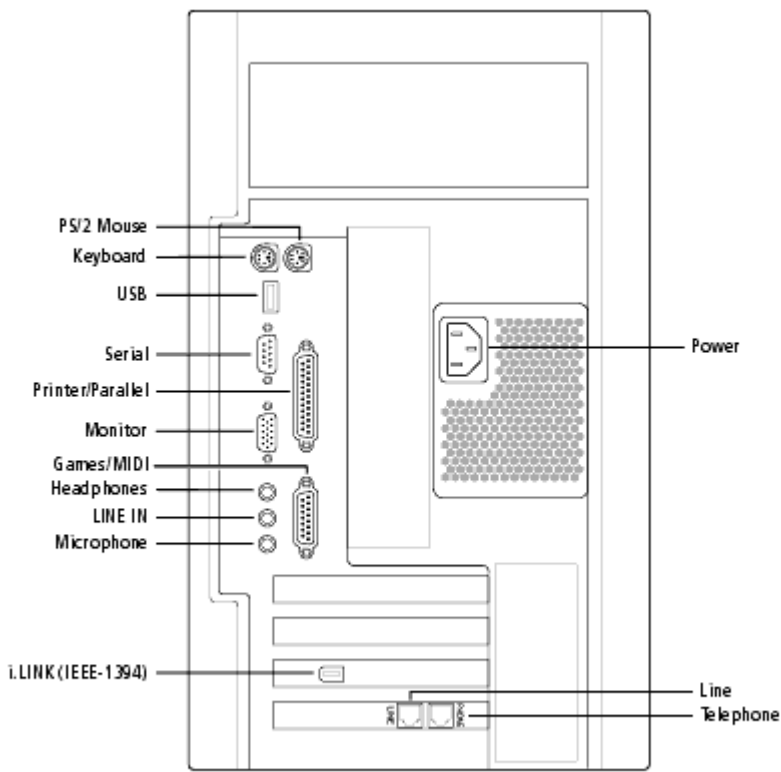


Install your equipment so that you can easily reach the outlet in the event of an emergency.

Back Panel Overview

The back panel of your computer contains the connectors where you plug in supplied and optional accessories. The icons on the back panel serve as a map to help you locate the connectors on your computer.

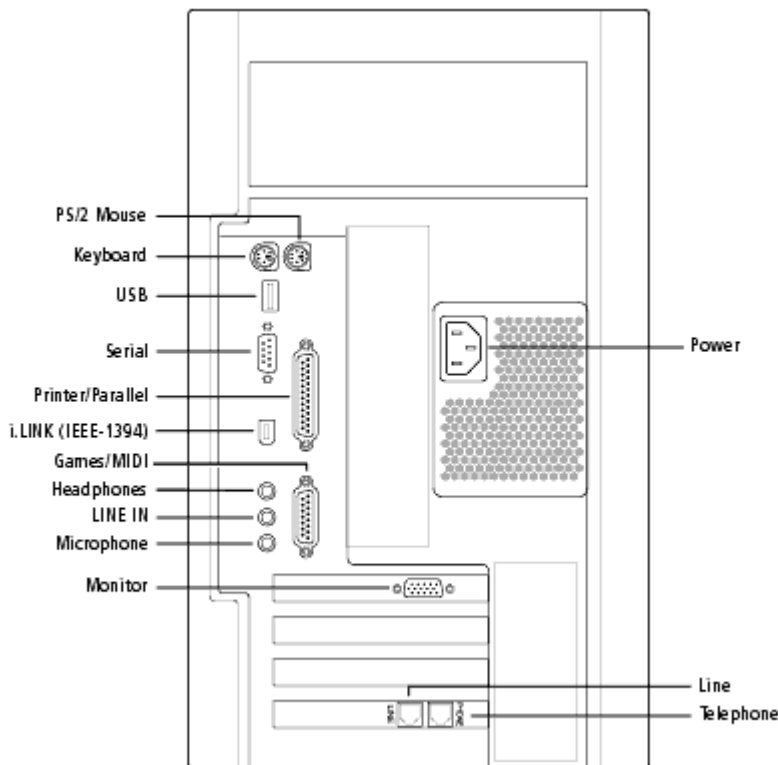
PCV-R545DS



PCV-R547DS/PCV-R549DS

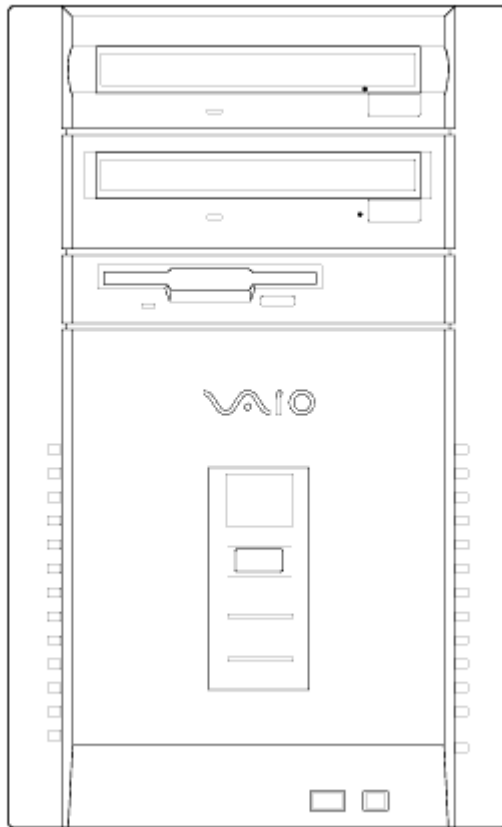


For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the back of your system is a 6-pin connector.



Front Panel Overview

The front panel of your VAIO Digital Studio Computer allows for access to the diskette, DVD, and CD-RW drives. It also includes USB and i.LINK ports to connect USB devices, digital equipment, or other components.



For your convenience, your computer includes USB and i.LINK connectors on both the front and back panels, allowing you to connect to either set of connectors. The i.LINK connector on the front of your system is a 4-pin connector.

¹ Actual upload and download speeds may vary due to line conditions, ISP support, and government regulations.


² 530 MB after formatting with Direct CD .

Setting Up Your Computer

Registering Your Computer

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

- **Sony customer 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](#) in the [VAIO Consumer Information Guide](#) for details.

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

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

If you did not register the first time you turned on your new VAIO Digital Studio computer, 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.
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.

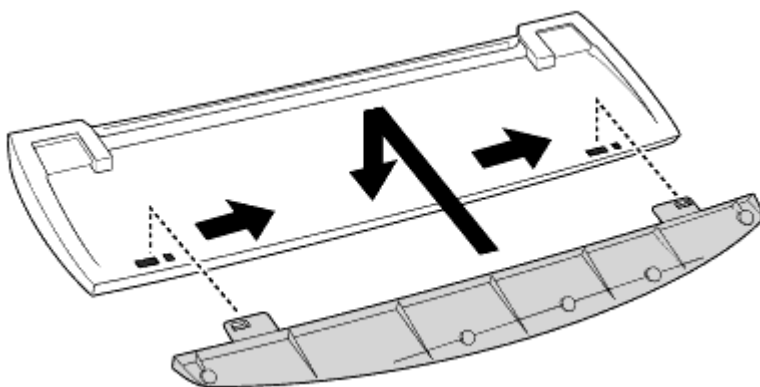
The computer automatically transfers your registration information using your built-in modem and a toll-free telephone number.


Using the VAIO Smart Keyboard and the Wheel Mouse

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.

Changing the Window Design of Sony Software

To change the window design of Sony software:

1. Click the Start button, point to Settings, and then click Control Panel.
2. Click UI Design Selector.
3. Click << or >> and select the desired design.
4. Click Apply.

The "UI Design Selector" window design changes. The window design for your Sony software will match the "UI Design Selector" window.

To try another selection, click << or >>. Then, click OK.

The UI Design Selector closes and the window design of your Sony software window design displays.




You may use the feature with UI Design Selector-compatible software only.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

VAIO Action Setup manages the settings for your computer's Shortcut keys (S Keys) and i.LINK interface.

To change the settings of the S Keys:

1. From the Start menu, point to Programs/VAIO Action Setup/VAIO Action Setup. Alternatively, double-click  on the Windows taskbar. VAIO Action Setup opens.
2. Click the S Key whose setting you want to change.
3. From the Select Application dialog box, click the radio button for the desired type of function. The corresponding applications appear in the list box on the right. You may also use the Drag&Drop feature to assign any application by simply dragging and dropping the application into the list box. Click the application you want to assign to the S Key. Click Next to finish this step.
4. The Confirmation Application Name window appears showing you the application you have selected. Click Next.
5. You may now type a new name and description, if desired. Then, click Finish.

To pre-set your i.LINK-equipped device to launch a desired function, such as automatically starting DVgate applications or connecting two VAIO computers:

1. Open VAIO Action Setup, as described in step 1 above.
2. Click i.LINK.
3. Click the Advanced Setting tab.
4. Click the Enable i.LINK launcher function checkbox. Then, click Apply.
5. Connect the device to your computer with your i.LINK cable (supplied with PCV-R547DS and PCV-R549DS only).

6. Turn on the device.
7. The VAIIO Action Setup dialog box appears. Click OK.
8. To modify the device name, click the current device name in the list box and click Modify device name. Type the desired name and click Apply.
9. To assign an application, click Modify.
10. The Select Application dialog box appears. Select the desired application and click Next.
11. Click Next to confirm the application name.
12. The Input Application Name dialog box appears. You may change the name and description of the application you want to launch. Click Finish to complete this step. Next time the device is connected and turned on, the assigned application will launch automatically.


Using the Wheel Mouse

For information on the Wheel Mouse, see MouseWare Help. To access MouseWare Help, from the Start menu, point to Programs, MouseWare, and then click MouseWare Help.

Using the Standby Function

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 and saves energy.

To put the computer in standby mode

1. Save your work and close any applications that are running. (You can leave the Windows® operating system running.)
2. Press the  (Standby) button on the top of the keyboard (or press the power switch momentarily on the front panel of the computer).

The computer goes into standby mode.

Alternatively, you can click the Start button on the Windows taskbar, click Shut Down, select Standby, and then click OK.

To let the computer go into standby mode automatically

Click the My Computer icon on your desktop. Click Control Panel, and then click the Power Management icon. On the Power Schemes tab, select from the options in the Power schemes drop-down list. Then, choose settings for the power scheme you have selected. To save the settings under a name that is not offered in the Power schemes pull down menu, choose your settings and then click Save As. Type in a name, and click OK. Click Apply to finalize your power settings.

To resume from standby mode

Press the space on the keyboard, click the mouse button, 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.



The computer's fan runs at low speed when the computer is in standby mode. This is normal.

Shutting Down Your Computer

When you are 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 use the power switch to 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 Function](#).

1. Click the Start button on the Windows[®] taskbar to open the Start menu.
2. Click Shut Down to display the Shut Down dialog box.
3. Select the Shut down option.
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.
-

Setting Up Your Computer

Registering Your Computer

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

- **Sony customer 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](#) in the [VAIO Consumer Information Guide](#) for details.

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

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

If you did not register the first time you turned on your new VAIO Digital Studio computer, 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.
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.

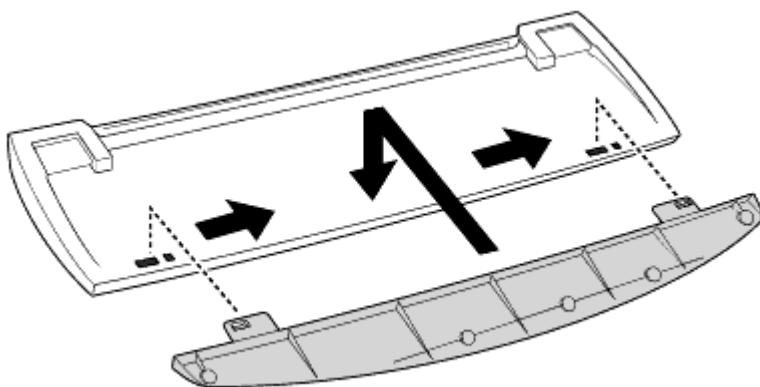
The computer automatically transfers your registration information using your built-in modem and a toll-free telephone number.


Using the VAIO Smart Keyboard and the Wheel Mouse

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.

Changing the Window Design of Sony Software

To change the window design of Sony software:

1. Click the Start button, point to Settings, and then click Control Panel.
2. Click UI Design Selector.
3. Click << or >> and select the desired design.
4. Click Apply.

The "UI Design Selector" window design changes. The window design for your Sony software will match the "UI Design Selector" window.

To try another selection, click << or >>. Then, click OK.

The UI Design Selector closes and the window design of your Sony software window design displays.




You may use the feature with UI Design Selector-compatible software only.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

VAIO Action Setup manages the settings for your computer's Shortcut keys (S Keys) and i.LINK interface.

To change the settings of the S Keys:

1. From the Start menu, point to Programs/VAIO Action Setup/VAIO Action Setup. Alternatively, double-click  on the Windows taskbar. VAIO Action Setup opens.
2. Click the S Key whose setting you want to change.
3. From the Select Application dialog box, click the radio button for the desired type of function. The corresponding applications appear in the list box on the right. You may also use the Drag&Drop feature to assign any application by simply dragging and dropping the application into the list box. Click the application you want to assign to the S Key. Click Next to finish this step.
4. The Confirmation Application Name window appears showing you the application you have selected. Click Next.
5. You may now type a new name and description, if desired. Then, click Finish.

To pre-set your i.LINK-equipped device to launch a desired function, such as automatically starting DVgate applications or connecting two VAIO computers:

1. Open VAIO Action Setup, as described in step 1 above.
2. Click i.LINK.
3. Click the Advanced Setting tab.
4. Click the Enable i.LINK launcher function checkbox. Then, click Apply.
5. Connect the device to your computer with your i.LINK cable (supplied with PCV-R547DS and PCV-R549DS only).

6. Turn on the device.
7. The VAIIO Action Setup dialog box appears. Click OK.
8. To modify the device name, click the current device name in the list box and click Modify device name. Type the desired name and click Apply.
9. To assign an application, click Modify.
10. The Select Application dialog box appears. Select the desired application and click Next.
11. Click Next to confirm the application name.
12. The Input Application Name dialog box appears. You may change the name and description of the application you want to launch. Click Finish to complete this step. Next time the device is connected and turned on, the assigned application will launch automatically.


Using the Wheel Mouse

For information on the Wheel Mouse, see MouseWare Help. To access MouseWare Help, from the Start menu, point to Programs, MouseWare, and then click MouseWare Help.

Using the Standby Function

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 and saves energy.

To put the computer in standby mode

1. Save your work and close any applications that are running. (You can leave the Windows® operating system running.)
2. Press the  (Standby) button on the top of the keyboard (or press the power switch momentarily on the front panel of the computer).

The computer goes into standby mode.

Alternatively, you can click the Start button on the Windows taskbar, click Shut Down, select Standby, and then click OK.

To let the computer go into standby mode automatically

Click the My Computer icon on your desktop. Click Control Panel, and then click the Power Management icon. On the Power Schemes tab, select from the options in the Power schemes drop-down list. Then, choose settings for the power scheme you have selected. To save the settings under a name that is not offered in the Power schemes pull down menu, choose your settings and then click Save As. Type in a name, and click OK. Click Apply to finalize your power settings.

To resume from standby mode

Press the space on the keyboard, click the mouse button, 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.



The computer's fan runs at low speed when the computer is in standby mode. This is normal.

Shutting Down Your Computer

When you are 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 use the power switch to 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 Function](#).

1. Click the Start button on the Windows[®] taskbar to open the Start menu.
2. Click Shut Down to display the Shut Down dialog box.
3. Select the Shut down option.
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.
-

Setting Up Your Computer

Registering Your Computer

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

- **Sony customer 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](#) in the [VAIO Consumer Information Guide](#) for details.

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

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

If you did not register the first time you turned on your new VAIO Digital Studio computer, 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.
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.

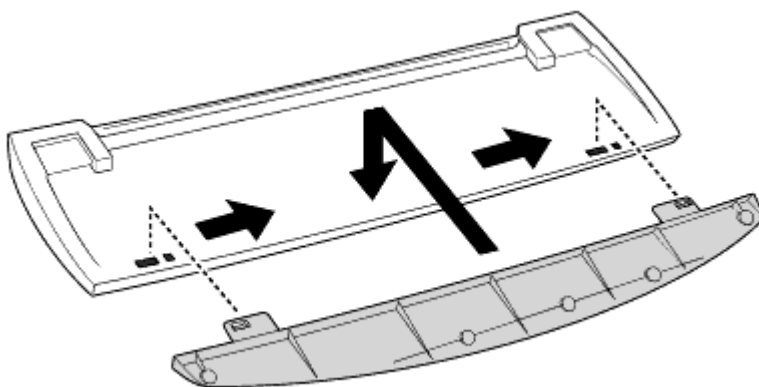
The computer automatically transfers your registration information using your built-in modem and a toll-free telephone number.


Using the VAIO Smart Keyboard and the Wheel Mouse

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.

Changing the Window Design of Sony Software

To change the window design of Sony software:

1. Click the Start button, point to Settings, and then click Control Panel.
2. Click UI Design Selector.
3. Click << or >> and select the desired design.
4. Click Apply.

The "UI Design Selector" window design changes. The window design for your Sony software will match the "UI Design Selector" window.

To try another selection, click << or >>. Then, click OK.

The UI Design Selector closes and the window design of your Sony software window design displays.




You may use the feature with UI Design Selector-compatible software only.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

VAIO Action Setup manages the settings for your computer's Shortcut keys (S Keys) and i.LINK interface.

To change the settings of the S Keys:

1. From the Start menu, point to Programs/VAIO Action Setup/VAIO Action Setup. Alternatively, double-click  on the Windows taskbar. VAIO Action Setup opens.
2. Click the S Key whose setting you want to change.
3. From the Select Application dialog box, click the radio button for the desired type of function. The corresponding applications appear in the list box on the right. You may also use the Drag&Drop feature to assign any application by simply dragging and dropping the application into the list box. Click the application you want to assign to the S Key. Click Next to finish this step.
4. The Confirmation Application Name window appears showing you the application you have selected. Click Next.
5. You may now type a new name and description, if desired. Then, click Finish.

To pre-set your i.LINK-equipped device to launch a desired function, such as automatically starting DVgate applications or connecting two VAIO computers:

1. Open VAIO Action Setup, as described in step 1 above.
2. Click i.LINK.
3. Click the Advanced Setting tab.
4. Click the Enable i.LINK launcher function checkbox. Then, click Apply.
5. Connect the device to your computer with your i.LINK cable (supplied with PCV-R547DS and PCV-R549DS only).

6. Turn on the device.
7. The VAIIO Action Setup dialog box appears. Click OK.
8. To modify the device name, click the current device name in the list box and click Modify device name. Type the desired name and click Apply.
9. To assign an application, click Modify.
10. The Select Application dialog box appears. Select the desired application and click Next.
11. Click Next to confirm the application name.
12. The Input Application Name dialog box appears. You may change the name and description of the application you want to launch. Click Finish to complete this step. Next time the device is connected and turned on, the assigned application will launch automatically.


Using the Wheel Mouse

For information on the Wheel Mouse, see MouseWare Help. To access MouseWare Help, from the Start menu, point to Programs, MouseWare, and then click MouseWare Help.

Using the Standby Function

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 and saves energy.

To put the computer in standby mode

1. Save your work and close any applications that are running. (You can leave the Windows[®] operating system running.)
2. Press the  (Standby) button on the top of the keyboard (or press the power switch momentarily on the front panel of the computer).

The computer goes into standby mode.

Alternatively, you can click the Start button on the Windows taskbar, click Shut Down, select Standby, and then click OK.

To let the computer go into standby mode automatically

Click the My Computer icon on your desktop. Click Control Panel, and then click the Power Management icon. On the Power Schemes tab, select from the options in the Power schemes drop-down list. Then, choose settings for the power scheme you have selected. To save the settings under a name that is not offered in the Power schemes pull down menu, choose your settings and then click Save As. Type in a name, and click OK. Click Apply to finalize your power settings.

To resume from standby mode

Press the space on the keyboard, click the mouse button, 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.



The computer's fan runs at low speed when the computer is in standby mode. This is normal.

Shutting Down Your Computer

When you are 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 use the power switch to 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 Function](#).

1. Click the Start button on the Windows[®] taskbar to open the Start menu.
2. Click Shut Down to display the Shut Down dialog box.
3. Select the Shut down option.
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.
-

Setting Up Your Computer

Registering Your Computer

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

- **Sony customer 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](#) in the [VAIO Consumer Information Guide](#) for details.

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

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

If you did not register the first time you turned on your new VAIO Digital Studio computer, 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.
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.

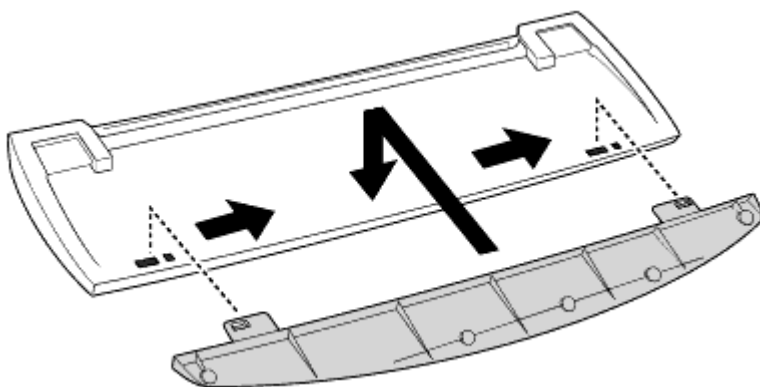
The computer automatically transfers your registration information using your built-in modem and a toll-free telephone number.


Using the VAIO Smart Keyboard and the Wheel Mouse

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.

Changing the Window Design of Sony Software

To change the window design of Sony software:

1. Click the Start button, point to Settings, and then click Control Panel.
2. Click UI Design Selector.
3. Click << or >> and select the desired design.
4. Click Apply.

The "UI Design Selector" window design changes. The window design for your Sony software will match the "UI Design Selector" window.

To try another selection, click << or >>. Then, click OK.

The UI Design Selector closes and the window design of your Sony software window design displays.




You may use the feature with UI Design Selector-compatible software only.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

VAIO Action Setup manages the settings for your computer's Shortcut keys (S Keys) and i.LINK interface.

To change the settings of the S Keys:

1. From the Start menu, point to Programs/VAIO Action Setup/VAIO Action Setup. Alternatively, double-click  on the Windows taskbar. VAIO Action Setup opens.
2. Click the S Key whose setting you want to change.
3. From the Select Application dialog box, click the radio button for the desired type of function. The corresponding applications appear in the list box on the right. You may also use the Drag&Drop feature to assign any application by simply dragging and dropping the application into the list box. Click the application you want to assign to the S Key. Click Next to finish this step.
4. The Confirmation Application Name window appears showing you the application you have selected. Click Next.
5. You may now type a new name and description, if desired. Then, click Finish.

To pre-set your i.LINK-equipped device to launch a desired function, such as automatically starting DVgate applications or connecting two VAIO computers:

1. Open VAIO Action Setup, as described in step 1 above.
2. Click i.LINK.
3. Click the Advanced Setting tab.
4. Click the Enable i.LINK launcher function checkbox. Then, click Apply.
5. Connect the device to your computer with your i.LINK cable (supplied with PCV-R547DS and PCV-R549DS only).

6. Turn on the device.
7. The VAIIO Action Setup dialog box appears. Click OK.
8. To modify the device name, click the current device name in the list box and click Modify device name. Type the desired name and click Apply.
9. To assign an application, click Modify.
10. The Select Application dialog box appears. Select the desired application and click Next.
11. Click Next to confirm the application name.
12. The Input Application Name dialog box appears. You may change the name and description of the application you want to launch. Click Finish to complete this step. Next time the device is connected and turned on, the assigned application will launch automatically.


Using the Wheel Mouse

For information on the Wheel Mouse, see MouseWare Help. To access MouseWare Help, from the Start menu, point to Programs, MouseWare, and then click MouseWare Help.

Using the Standby Function

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 and saves energy.

To put the computer in standby mode

1. Save your work and close any applications that are running. (You can leave the Windows® operating system running.)
2. Press the  (Standby) button on the top of the keyboard (or press the power switch momentarily on the front panel of the computer).

The computer goes into standby mode.

Alternatively, you can click the Start button on the Windows taskbar, click Shut Down, select Standby, and then click OK.

To let the computer go into standby mode automatically

Click the My Computer icon on your desktop. Click Control Panel, and then click the Power Management icon. On the Power Schemes tab, select from the options in the Power schemes drop-down list. Then, choose settings for the power scheme you have selected. To save the settings under a name that is not offered in the Power schemes pull down menu, choose your settings and then click Save As. Type in a name, and click OK. Click Apply to finalize your power settings.

To resume from standby mode

Press the space on the keyboard, click the mouse button, 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.



The computer's fan runs at low speed when the computer is in standby mode. This is normal.

Shutting Down Your Computer

When you are 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 use the power switch to 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 Function](#).

1. Click the Start button on the Windows[®] taskbar to open the Start menu.
2. Click Shut Down to display the Shut Down dialog box.
3. Select the Shut down option.
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.
-

Setting Up Your Computer

Registering Your Computer

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

- **Sony customer 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](#) in the [VAIO Consumer Information Guide](#) for details.

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

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

If you did not register the first time you turned on your new VAIO Digital Studio computer, 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.
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.

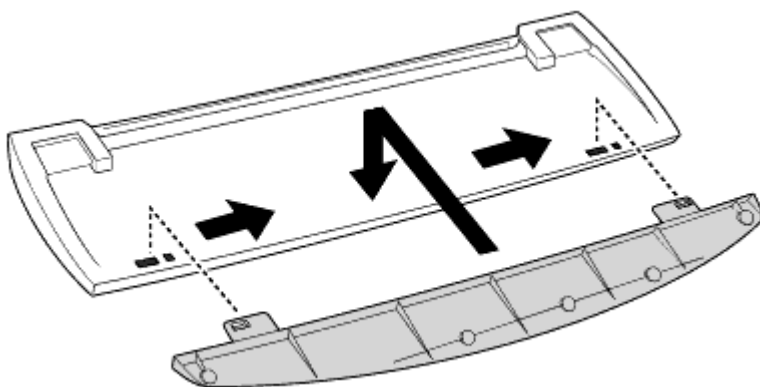
The computer automatically transfers your registration information using your built-in modem and a toll-free telephone number.


Using the VAIO Smart Keyboard and the Wheel Mouse

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.

Changing the Window Design of Sony Software

To change the window design of Sony software:

1. Click the Start button, point to Settings, and then click Control Panel.
2. Click UI Design Selector.
3. Click << or >> and select the desired design.
4. Click Apply.

The "UI Design Selector" window design changes. The window design for your Sony software will match the "UI Design Selector" window.

To try another selection, click << or >>. Then, click OK.

The UI Design Selector closes and the window design of your Sony software window design displays.




You may use the feature with UI Design Selector-compatible software only.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

VAIO Action Setup manages the settings for your computer's Shortcut keys (S Keys) and i.LINK interface.

To change the settings of the S Keys:

1. From the Start menu, point to Programs/VAIO Action Setup/VAIO Action Setup. Alternatively, double-click  on the Windows taskbar. VAIO Action Setup opens.
2. Click the S Key whose setting you want to change.
3. From the Select Application dialog box, click the radio button for the desired type of function. The corresponding applications appear in the list box on the right. You may also use the Drag&Drop feature to assign any application by simply dragging and dropping the application into the list box. Click the application you want to assign to the S Key. Click Next to finish this step.
4. The Confirmation Application Name window appears showing you the application you have selected. Click Next.
5. You may now type a new name and description, if desired. Then, click Finish.

To pre-set your i.LINK-equipped device to launch a desired function, such as automatically starting DVgate applications or connecting two VAIO computers:

1. Open VAIO Action Setup, as described in step 1 above.
2. Click i.LINK.
3. Click the Advanced Setting tab.
4. Click the Enable i.LINK launcher function checkbox. Then, click Apply.
5. Connect the device to your computer with your i.LINK cable (supplied with PCV-R547DS and PCV-R549DS only).

6. Turn on the device.
7. The VAIIO Action Setup dialog box appears. Click OK.
8. To modify the device name, click the current device name in the list box and click Modify device name. Type the desired name and click Apply.
9. To assign an application, click Modify.
10. The Select Application dialog box appears. Select the desired application and click Next.
11. Click Next to confirm the application name.
12. The Input Application Name dialog box appears. You may change the name and description of the application you want to launch. Click Finish to complete this step. Next time the device is connected and turned on, the assigned application will launch automatically.


Using the Wheel Mouse

For information on the Wheel Mouse, see MouseWare Help. To access MouseWare Help, from the Start menu, point to Programs, MouseWare, and then click MouseWare Help.

Using the Standby Function

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 and saves energy.

To put the computer in standby mode

1. Save your work and close any applications that are running. (You can leave the Windows® operating system running.)
2. Press the  (Standby) button on the top of the keyboard (or press the power switch momentarily on the front panel of the computer).

The computer goes into standby mode.

Alternatively, you can click the Start button on the Windows taskbar, click Shut Down, select Standby, and then click OK.

To let the computer go into standby mode automatically

Click the My Computer icon on your desktop. Click Control Panel, and then click the Power Management icon. On the Power Schemes tab, select from the options in the Power schemes drop-down list. Then, choose settings for the power scheme you have selected. To save the settings under a name that is not offered in the Power schemes pull down menu, choose your settings and then click Save As. Type in a name, and click OK. Click Apply to finalize your power settings.

To resume from standby mode

Press the space on the keyboard, click the mouse button, 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.



The computer's fan runs at low speed when the computer is in standby mode. This is normal.

Shutting Down Your Computer

When you are 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 use the power switch to 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 Function](#).

1. Click the Start button on the Windows® taskbar to open the Start menu.
2. Click Shut Down to display the Shut Down dialog box.
3. Select the Shut down option.
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.
-

Setting Up Your Computer

Registering Your Computer

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

- **Sony customer 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](#) in the [VAIO Consumer Information Guide](#) for details.

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

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

If you did not register the first time you turned on your new VAIO Digital Studio computer, 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.
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.

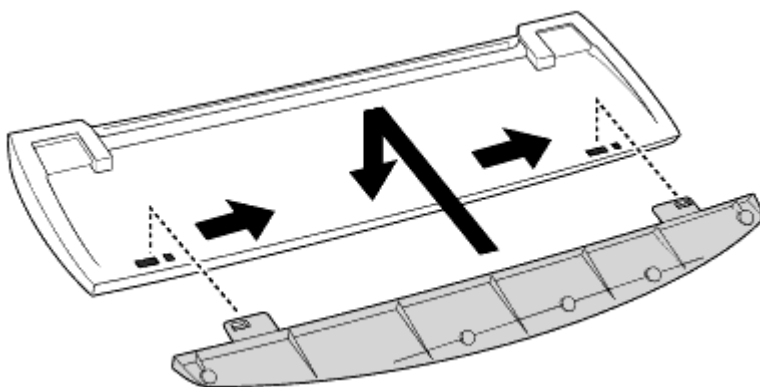
The computer automatically transfers your registration information using your built-in modem and a toll-free telephone number.


Using the VAIO Smart Keyboard and the Wheel Mouse

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.

Changing the Window Design of Sony Software

To change the window design of Sony software:

1. Click the Start button, point to Settings, and then click Control Panel.
2. Click UI Design Selector.
3. Click << or >> and select the desired design.
4. Click Apply.

The "UI Design Selector" window design changes. The window design for your Sony software will match the "UI Design Selector" window.

To try another selection, click << or >>. Then, click OK.

The UI Design Selector closes and the window design of your Sony software window design displays.




You may use the feature with UI Design Selector-compatible software only.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

VAIO Action Setup manages the settings for your computer's Shortcut keys (S Keys) and i.LINK interface.

To change the settings of the S Keys:

1. From the Start menu, point to Programs/VAIO Action Setup/VAIO Action Setup. Alternatively, double-click  on the Windows taskbar. VAIO Action Setup opens.
2. Click the S Key whose setting you want to change.
3. From the Select Application dialog box, click the radio button for the desired type of function. The corresponding applications appear in the list box on the right. You may also use the Drag&Drop feature to assign any application by simply dragging and dropping the application into the list box. Click the application you want to assign to the S Key. Click Next to finish this step.
4. The Confirmation Application Name window appears showing you the application you have selected. Click Next.
5. You may now type a new name and description, if desired. Then, click Finish.

To pre-set your i.LINK-equipped device to launch a desired function, such as automatically starting DVgate applications or connecting two VAIO computers:

1. Open VAIO Action Setup, as described in step 1 above.
2. Click i.LINK.
3. Click the Advanced Setting tab.
4. Click the Enable i.LINK launcher function checkbox. Then, click Apply.
5. Connect the device to your computer with your i.LINK cable (supplied with PCV-R547DS and PCV-R549DS only).

6. Turn on the device.
7. The VAIIO Action Setup dialog box appears. Click OK.
8. To modify the device name, click the current device name in the list box and click Modify device name. Type the desired name and click Apply.
9. To assign an application, click Modify.
10. The Select Application dialog box appears. Select the desired application and click Next.
11. Click Next to confirm the application name.
12. The Input Application Name dialog box appears. You may change the name and description of the application you want to launch. Click Finish to complete this step. Next time the device is connected and turned on, the assigned application will launch automatically.


Using the Wheel Mouse

For information on the Wheel Mouse, see MouseWare Help. To access MouseWare Help, from the Start menu, point to Programs, MouseWare, and then click MouseWare Help.

Using the Standby Function

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 and saves energy.

To put the computer in standby mode

1. Save your work and close any applications that are running. (You can leave the Windows® operating system running.)
2. Press the  (Standby) button on the top of the keyboard (or press the power switch momentarily on the front panel of the computer).

The computer goes into standby mode.

Alternatively, you can click the Start button on the Windows taskbar, click Shut Down, select Standby, and then click OK.

To let the computer go into standby mode automatically

Click the My Computer icon on your desktop. Click Control Panel, and then click the Power Management icon. On the Power Schemes tab, select from the options in the Power schemes drop-down list. Then, choose settings for the power scheme you have selected. To save the settings under a name that is not offered in the Power schemes pull down menu, choose your settings and then click Save As. Type in a name, and click OK. Click Apply to finalize your power settings.

To resume from standby mode

Press the space on the keyboard, click the mouse button, 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.



The computer's fan runs at low speed when the computer is in standby mode. This is normal.

Shutting Down Your Computer

When you are 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 use the power switch to 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 Function](#).

1. Click the Start button on the Windows[®] taskbar to open the Start menu.
2. Click Shut Down to display the Shut Down dialog box.
3. Select the Shut down option.
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.
-

Setting Up Your Computer

Registering Your Computer

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

- **Sony customer 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](#) in the [VAIO Consumer Information Guide](#) for details.

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

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

If you did not register the first time you turned on your new VAIO Digital Studio computer, 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.
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.

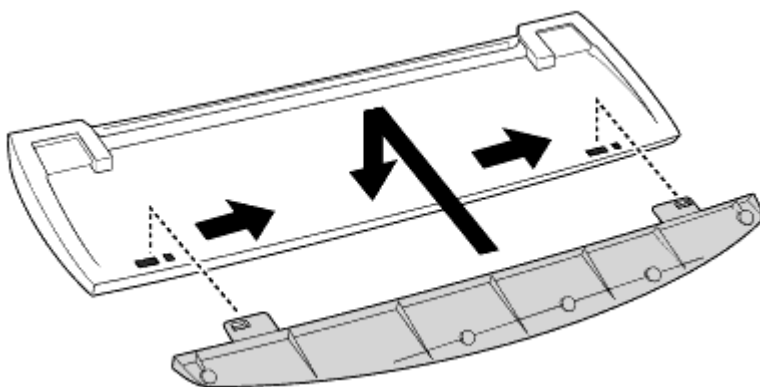
The computer automatically transfers your registration information using your built-in modem and a toll-free telephone number.


Using the VAIO Smart Keyboard and the Wheel Mouse

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.

Changing the Window Design of Sony Software

To change the window design of Sony software:

1. Click the Start button, point to Settings, and then click Control Panel.
2. Click UI Design Selector.
3. Click << or >> and select the desired design.
4. Click Apply.

The "UI Design Selector" window design changes. The window design for your Sony software will match the "UI Design Selector" window.

To try another selection, click << or >>. Then, click OK.

The UI Design Selector closes and the window design of your Sony software window design displays.




You may use the feature with UI Design Selector-compatible software only.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

VAIO Action Setup manages the settings for your computer's Shortcut keys (S Keys) and i.LINK interface.

To change the settings of the S Keys:

1. From the Start menu, point to Programs/VAIO Action Setup/VAIO Action Setup. Alternatively, double-click  on the Windows taskbar. VAIO Action Setup opens.
2. Click the S Key whose setting you want to change.
3. From the Select Application dialog box, click the radio button for the desired type of function. The corresponding applications appear in the list box on the right. You may also use the Drag&Drop feature to assign any application by simply dragging and dropping the application into the list box. Click the application you want to assign to the S Key. Click Next to finish this step.
4. The Confirmation Application Name window appears showing you the application you have selected. Click Next.
5. You may now type a new name and description, if desired. Then, click Finish.

To pre-set your i.LINK-equipped device to launch a desired function, such as automatically starting DVgate applications or connecting two VAIO computers:

1. Open VAIO Action Setup, as described in step 1 above.
2. Click i.LINK.
3. Click the Advanced Setting tab.
4. Click the Enable i.LINK launcher function checkbox. Then, click Apply.
5. Connect the device to your computer with your i.LINK cable (supplied with PCV-R547DS and PCV-R549DS only).

6. Turn on the device.
7. The VAIIO Action Setup dialog box appears. Click OK.
8. To modify the device name, click the current device name in the list box and click Modify device name. Type the desired name and click Apply.
9. To assign an application, click Modify.
10. The Select Application dialog box appears. Select the desired application and click Next.
11. Click Next to confirm the application name.
12. The Input Application Name dialog box appears. You may change the name and description of the application you want to launch. Click Finish to complete this step. Next time the device is connected and turned on, the assigned application will launch automatically.


Using the Wheel Mouse

For information on the Wheel Mouse, see MouseWare Help. To access MouseWare Help, from the Start menu, point to Programs, MouseWare, and then click MouseWare Help.

Using the Standby Function

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 and saves energy.

To put the computer in standby mode

1. Save your work and close any applications that are running. (You can leave the Windows® operating system running.)
2. Press the  (Standby) button on the top of the keyboard (or press the power switch momentarily on the front panel of the computer).

The computer goes into standby mode.

Alternatively, you can click the Start button on the Windows taskbar, click Shut Down, select Standby, and then click OK.

To let the computer go into standby mode automatically

Click the My Computer icon on your desktop. Click Control Panel, and then click the Power Management icon. On the Power Schemes tab, select from the options in the Power schemes drop-down list. Then, choose settings for the power scheme you have selected. To save the settings under a name that is not offered in the Power schemes pull down menu, choose your settings and then click Save As. Type in a name, and click OK. Click Apply to finalize your power settings.

To resume from standby mode

Press the space on the keyboard, click the mouse button, 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.



The computer's fan runs at low speed when the computer is in standby mode. This is normal.

Shutting Down Your Computer

When you are 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 use the power switch to 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 Function](#).

1. Click the Start button on the Windows[®] taskbar to open the Start menu.
2. Click Shut Down to display the Shut Down dialog box.
3. Select the Shut down option.
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.
-

Setting Up Your Computer

Registering Your Computer

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

- **Sony customer 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](#) in the [VAIO Consumer Information Guide](#) for details.

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

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

If you did not register the first time you turned on your new VAIO Digital Studio computer, 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.
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.

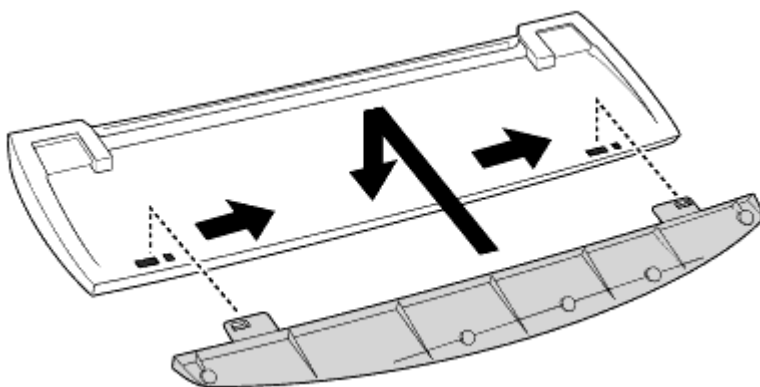
The computer automatically transfers your registration information using your built-in modem and a toll-free telephone number.


Using the VAIO Smart Keyboard and the Wheel Mouse

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.

Changing the Window Design of Sony Software

To change the window design of Sony software:

1. Click the Start button, point to Settings, and then click Control Panel.
2. Click UI Design Selector.
3. Click << or >> and select the desired design.
4. Click Apply.

The "UI Design Selector" window design changes. The window design for your Sony software will match the "UI Design Selector" window.

To try another selection, click << or >>. Then, click OK.

The UI Design Selector closes and the window design of your Sony software window design displays.




You may use the feature with UI Design Selector-compatible software only.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

VAIO Action Setup manages the settings for your computer's Shortcut keys (S Keys) and i.LINK interface.

To change the settings of the S Keys:

1. From the Start menu, point to Programs/VAIO Action Setup/VAIO Action Setup. Alternatively, double-click  on the Windows taskbar. VAIO Action Setup opens.
2. Click the S Key whose setting you want to change.
3. From the Select Application dialog box, click the radio button for the desired type of function. The corresponding applications appear in the list box on the right. You may also use the Drag&Drop feature to assign any application by simply dragging and dropping the application into the list box. Click the application you want to assign to the S Key. Click Next to finish this step.
4. The Confirmation Application Name window appears showing you the application you have selected. Click Next.
5. You may now type a new name and description, if desired. Then, click Finish.

To pre-set your i.LINK-equipped device to launch a desired function, such as automatically starting DVgate applications or connecting two VAIO computers:

1. Open VAIO Action Setup, as described in step 1 above.
2. Click i.LINK.
3. Click the Advanced Setting tab.
4. Click the Enable i.LINK launcher function checkbox. Then, click Apply.
5. Connect the device to your computer with your i.LINK cable (supplied with PCV-R547DS and PCV-R549DS only).

6. Turn on the device.
7. The VAIIO Action Setup dialog box appears. Click OK.
8. To modify the device name, click the current device name in the list box and click Modify device name. Type the desired name and click Apply.
9. To assign an application, click Modify.
10. The Select Application dialog box appears. Select the desired application and click Next.
11. Click Next to confirm the application name.
12. The Input Application Name dialog box appears. You may change the name and description of the application you want to launch. Click Finish to complete this step. Next time the device is connected and turned on, the assigned application will launch automatically.


Using the Wheel Mouse

For information on the Wheel Mouse, see MouseWare Help. To access MouseWare Help, from the Start menu, point to Programs, MouseWare, and then click MouseWare Help.

Using the Standby Function

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 and saves energy.

To put the computer in standby mode

1. Save your work and close any applications that are running. (You can leave the Windows® operating system running.)
2. Press the  (Standby) button on the top of the keyboard (or press the power switch momentarily on the front panel of the computer).

The computer goes into standby mode.

Alternatively, you can click the Start button on the Windows taskbar, click Shut Down, select Standby, and then click OK.

To let the computer go into standby mode automatically

Click the My Computer icon on your desktop. Click Control Panel, and then click the Power Management icon. On the Power Schemes tab, select from the options in the Power schemes drop-down list. Then, choose settings for the power scheme you have selected. To save the settings under a name that is not offered in the Power schemes pull down menu, choose your settings and then click Save As. Type in a name, and click OK. Click Apply to finalize your power settings.

To resume from standby mode

Press the space on the keyboard, click the mouse button, 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.



The computer's fan runs at low speed when the computer is in standby mode. This is normal.

Shutting Down Your Computer

When you are 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 use the power switch to 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 Function](#).

1. Click the Start button on the Windows® taskbar to open the Start menu.
2. Click Shut Down to display the Shut Down dialog box.
3. Select the Shut down option.
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.
-

Setting Up Your Computer

Registering Your Computer

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

- **Sony customer 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](#) in the [VAIO Consumer Information Guide](#) for details.

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

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

If you did not register the first time you turned on your new VAIO Digital Studio computer, 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.
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.

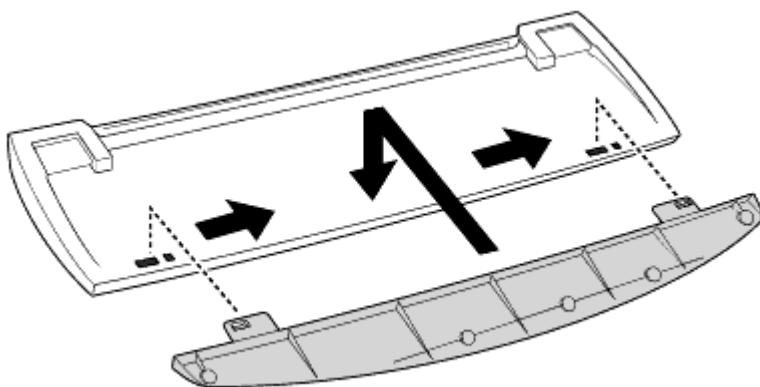
The computer automatically transfers your registration information using your built-in modem and a toll-free telephone number.


Using the VAIO Smart Keyboard and the Wheel Mouse

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.

Changing the Window Design of Sony Software

To change the window design of Sony software:

1. Click the Start button, point to Settings, and then click Control Panel.
2. Click UI Design Selector.
3. Click << or >> and select the desired design.
4. Click Apply.

The "UI Design Selector" window design changes. The window design for your Sony software will match the "UI Design Selector" window.

To try another selection, click << or >>. Then, click OK.

The UI Design Selector closes and the window design of your Sony software window design displays.




You may use the feature with UI Design Selector-compatible software only.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

VAIO Action Setup manages the settings for your computer's Shortcut keys (S Keys) and i.LINK interface.

To change the settings of the S Keys:

1. From the Start menu, point to Programs/VAIO Action Setup/VAIO Action Setup. Alternatively, double-click  on the Windows taskbar. VAIO Action Setup opens.
2. Click the S Key whose setting you want to change.
3. From the Select Application dialog box, click the radio button for the desired type of function. The corresponding applications appear in the list box on the right. You may also use the Drag&Drop feature to assign any application by simply dragging and dropping the application into the list box. Click the application you want to assign to the S Key. Click Next to finish this step.
4. The Confirmation Application Name window appears showing you the application you have selected. Click Next.
5. You may now type a new name and description, if desired. Then, click Finish.

To pre-set your i.LINK-equipped device to launch a desired function, such as automatically starting DVgate applications or connecting two VAIO computers:

1. Open VAIO Action Setup, as described in step 1 above.
2. Click i.LINK.
3. Click the Advanced Setting tab.
4. Click the Enable i.LINK launcher function checkbox. Then, click Apply.
5. Connect the device to your computer with your i.LINK cable (supplied with PCV-R547DS and PCV-R549DS only).

6. Turn on the device.
7. The VAIIO Action Setup dialog box appears. Click OK.
8. To modify the device name, click the current device name in the list box and click Modify device name. Type the desired name and click Apply.
9. To assign an application, click Modify.
10. The Select Application dialog box appears. Select the desired application and click Next.
11. Click Next to confirm the application name.
12. The Input Application Name dialog box appears. You may change the name and description of the application you want to launch. Click Finish to complete this step. Next time the device is connected and turned on, the assigned application will launch automatically.


Using the Wheel Mouse

For information on the Wheel Mouse, see MouseWare Help. To access MouseWare Help, from the Start menu, point to Programs, MouseWare, and then click MouseWare Help.

Using the Standby Function

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 and saves energy.

To put the computer in standby mode

1. Save your work and close any applications that are running. (You can leave the Windows[®] operating system running.)
2. Press the  (Standby) button on the top of the keyboard (or press the power switch momentarily on the front panel of the computer).

The computer goes into standby mode.

Alternatively, you can click the Start button on the Windows taskbar, click Shut Down, select Standby, and then click OK.

To let the computer go into standby mode automatically

Click the My Computer icon on your desktop. Click Control Panel, and then click the Power Management icon. On the Power Schemes tab, select from the options in the Power schemes drop-down list. Then, choose settings for the power scheme you have selected. To save the settings under a name that is not offered in the Power schemes pull down menu, choose your settings and then click Save As. Type in a name, and click OK. Click Apply to finalize your power settings.

To resume from standby mode

Press the space on the keyboard, click the mouse button, 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.



The computer's fan runs at low speed when the computer is in standby mode. This is normal.

Shutting Down Your Computer

When you are 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 use the power switch to 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 Function](#).

1. Click the Start button on the Windows® taskbar to open the Start menu.
2. Click Shut Down to display the Shut Down dialog box.
3. Select the Shut down option.
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.
-

Setting Up Your Computer

Registering Your Computer

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

- **Sony customer 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](#) in the [VAIO Consumer Information Guide](#) for details.

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

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

If you did not register the first time you turned on your new VAIO Digital Studio computer, 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.
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.

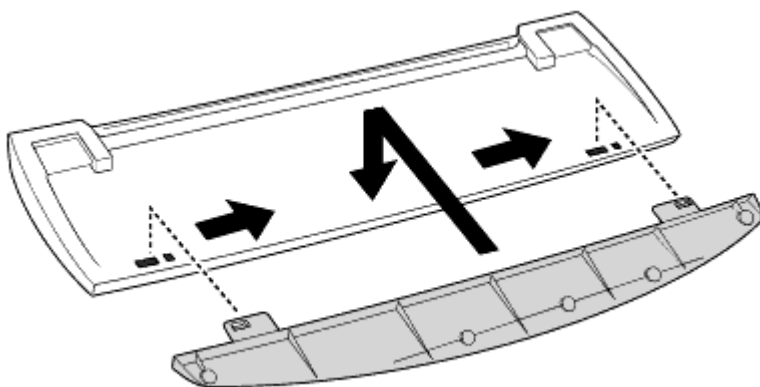
The computer automatically transfers your registration information using your built-in modem and a toll-free telephone number.


Using the VAIO Smart Keyboard and the Wheel Mouse

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.

Changing the Window Design of Sony Software

To change the window design of Sony software:

1. Click the Start button, point to Settings, and then click Control Panel.
2. Click UI Design Selector.
3. Click << or >> and select the desired design.
4. Click Apply.

The "UI Design Selector" window design changes. The window design for your Sony software will match the "UI Design Selector" window.

To try another selection, click << or >>. Then, click OK.

The UI Design Selector closes and the window design of your Sony software window design displays.




You may use the feature with UI Design Selector-compatible software only.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

VAIO Action Setup manages the settings for your computer's Shortcut keys (S Keys) and i.LINK interface.

To change the settings of the S Keys:

1. From the Start menu, point to Programs/VAIO Action Setup/VAIO Action Setup. Alternatively, double-click  on the Windows taskbar. VAIO Action Setup opens.
2. Click the S Key whose setting you want to change.
3. From the Select Application dialog box, click the radio button for the desired type of function. The corresponding applications appear in the list box on the right. You may also use the Drag&Drop feature to assign any application by simply dragging and dropping the application into the list box. Click the application you want to assign to the S Key. Click Next to finish this step.
4. The Confirmation Application Name window appears showing you the application you have selected. Click Next.
5. You may now type a new name and description, if desired. Then, click Finish.

To pre-set your i.LINK-equipped device to launch a desired function, such as automatically starting DVgate applications or connecting two VAIO computers:

1. Open VAIO Action Setup, as described in step 1 above.
2. Click i.LINK.
3. Click the Advanced Setting tab.
4. Click the Enable i.LINK launcher function checkbox. Then, click Apply.
5. Connect the device to your computer with your i.LINK cable (supplied with PCV-R547DS and PCV-R549DS only).

6. Turn on the device.
7. The VAIIO Action Setup dialog box appears. Click OK.
8. To modify the device name, click the current device name in the list box and click Modify device name. Type the desired name and click Apply.
9. To assign an application, click Modify.
10. The Select Application dialog box appears. Select the desired application and click Next.
11. Click Next to confirm the application name.
12. The Input Application Name dialog box appears. You may change the name and description of the application you want to launch. Click Finish to complete this step. Next time the device is connected and turned on, the assigned application will launch automatically.


Using the Wheel Mouse

For information on the Wheel Mouse, see MouseWare Help. To access MouseWare Help, from the Start menu, point to Programs, MouseWare, and then click MouseWare Help.

Using the Standby Function

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 and saves energy.

To put the computer in standby mode

1. Save your work and close any applications that are running. (You can leave the Windows® operating system running.)
2. Press the  (Standby) button on the top of the keyboard (or press the power switch momentarily on the front panel of the computer).

The computer goes into standby mode.

Alternatively, you can click the Start button on the Windows taskbar, click Shut Down, select Standby, and then click OK.

To let the computer go into standby mode automatically

Click the My Computer icon on your desktop. Click Control Panel, and then click the Power Management icon. On the Power Schemes tab, select from the options in the Power schemes drop-down list. Then, choose settings for the power scheme you have selected. To save the settings under a name that is not offered in the Power schemes pull down menu, choose your settings and then click Save As. Type in a name, and click OK. Click Apply to finalize your power settings.

To resume from standby mode

Press the space on the keyboard, click the mouse button, 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.



The computer's fan runs at low speed when the computer is in standby mode. This is normal.

Shutting Down Your Computer

When you are 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 use the power switch to 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 Function](#).

1. Click the Start button on the Windows® taskbar to open the Start menu.
2. Click Shut Down to display the Shut Down dialog box.
3. Select the Shut down option.
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.
-

Sony Digital Media Park Applications

Media Bar

Media Bar software is your all-in-one solution for audio/video playback. Media Bar software handles all common computer multimedia formats, and controls selected Sony devices. Media Bar software encompasses audio/video library cataloging and playlist management, in addition to digital video quality control and effects features. Media Bar seamlessly integrates a variety of new media formats with an easy-to-use software interface.

DVgate Applications

DVgate makes it easy to edit digital videos. You can capture, edit, and grab digital video clips and then assemble them into a polished home video everyone will enjoy. You can also use DVgate to capture individual frames from digital video clips, and then save them as graphic files. Enhance your Web page, send family and friends your favorite stills, create your own wallpaper. The possibilities are endless.

PictureGear

PictureGear is a digital image management application that allows you to see all the images stored in any directory on your computer. Thumbnail views provide quick reminders of your pictures. Brighten, contrast, enhance, resize, crop, and color-correct your pictures. Create panoramic views, animations, screen savers, wallpaper, and even HTML photo albums.

Smart Capture

Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK connection between your computer and a Sony Digital Handycam Camcorder, or other cameras that support the i.LINK interface. Smart Capture allows you to capture and compress video or still images that you can save or share via e-mail. Captures are low resolution, making it ideal for e-mail. For high-quality captures, use DVgate.

Using Digital Video

Connecting a Digital Video Recorder

Before connecting a digital video camera recorder to your computer, turn off the power on the camera. After connecting the camera, turn the power back on. You do not need to turn off the computer when connecting a camera.

Using DVgate

DVgate Motion saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate Motion, you should defragment your D partition regularly. For information on how to defragment your D partition, see your *VAIO Digital Studio Computer User Guide*.

When capturing clips:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
- Captures larger than 2 GB (9 minutes and 30 seconds) are automatically continued in a second file.
- You can record stereo audio (stereo 1) while capturing video. You cannot add audio on the stereo 2 track after capturing the video data.
- You cannot use different audio modes on the same tape. You should perform a separate capture for each audio mode you wish to use.
- DVgate does not support hard disk compression. You should not use disk compression if you are planning to work with DVgate.

- Title data is saved in the flash memory of a digital video camera and is not transferred to tape by DVgate.
- To avoid interruption of capture sessions, you should disable the screen saver.
- The drop frame compensation feature does not provide accurate compensation adjustments for tapes recorded in LP mode.
- For tapes that include a mixture of both SP and LP mode, the information displayed by the capture progress indicator may not be accurate.
- Make sure the video head of your digital video device is properly cleaned. Anomalies that you see in captured data could be due to dust or other particles on the video head.
 - The last frame captured is one frame before your selected [OUT] point. The frame you see immediately after clicking the [OUT] button is not captured.

When recording AVI files to tape:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
 - You can record only AVI files. MPEG files cannot be recorded.
- To avoid recording problems, such as a single frame appearing in multiple frames, close other applications on your system while recording.
- You cannot use different audio modes on the same tape. If you have AVI files that use different audio modes, they cannot be recorded at the same time, but must be recorded separately.
- Do not attempt to work with AVI files that are smaller than 4 MB.
- DVgate does not support hard disk compression. Do not use disk compression if you are planning to work with DVgate.
- In order to maximize recording capabilities, video and audio data are not available while you are recording.

If DVgate indicates that frames have been dropped, close all open applications, or defragment your hard drive.

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D. DVgate saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate, you should defragment your D partition regularly.

Defragmenting your Hard Disk Drive

If you encounter frame dropping while recording digital video onto your hard disk drive, defragmentation may be necessary. To defragment your hard disk drive, click the Start button, point to Programs/Accessories/System Tools, and then select Disk Defragmenter. Please note that it may take more than a couple of hours to complete defragmentation, depending on the data capacity and utilization of your computer's hard disk drive(s).

Applications That Use the TWAIN Driver

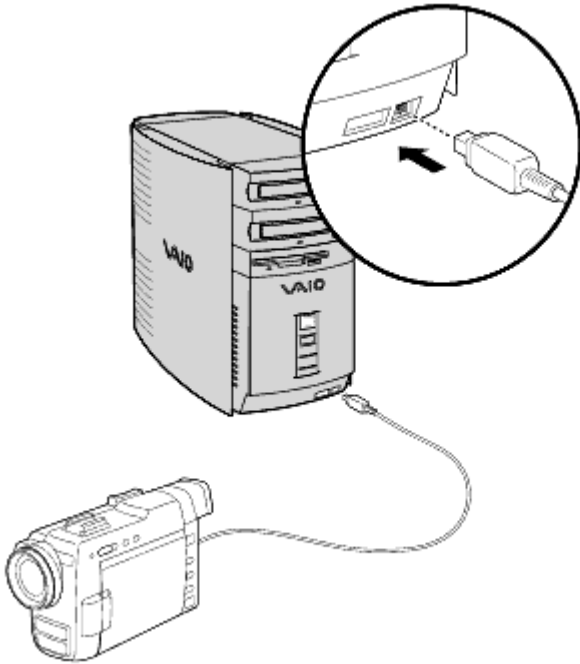
Digital imaging applications, such as Adobe PhotoDeluxe®, allow you to transfer images to your computer from external devices, including scanners or digital cameras. For some devices, a TWAIN driver window appears on the screen. Always close the TWAIN driver window before exiting or minimizing a digital imaging application.


i.LINK (IEEE-1394) Compatibility

Your VAIO® computer includes a 4-pin i.LINK connector on the front of the system and a 6-pin i.LINK connector on the back of the system. A 6-pin i.LINK connector can supply power from the computer to the connected device if the device is equipped with a 6-pin connector. A 6-pin connector supplies 10V to 12V. The total power supplied by the 6-pin i.LINK connector cannot exceed 6 watts. A 4-pin i.LINK connector cannot supply power to a connected device. The following Sony i.LINK 400 Mbps cables are available and recommended for use with your computer: VMC-IL4415, VMC-IL4435, VMC-IL4615, VMC-IL4635, VMC-IL6615, and VMC-IL6635. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

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

- Use the  symbol to locate the **i.link** connector. Plug the i.LINK cable 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.

Enabling Smart Connect

Your computer comes with preinstalled Smart Connect software. To enable faster startup, your computer ships with this software disabled. To enable Smart Connect:

1. Click the Start button, select Settings, and click Control Panel. The Control Panel window appears.
2. Click the System icon. The System Properties window appears. Click the Device Manager tab.
3. Double-click Sony i.LINK(1394) Adapter. The Sony i.LINK(1394) Adapter window appears. Click the Enable Device button.
4. Click OK. The Sony i.LINK(1394) Adapter icon should no longer have an "X" on it. This means Smart Connect is now enabled.
5. Close all windows, and restart your computer in order for the new settings to take effect.

Now your Smart Connect software is ready to use. Note that when you use Smart Connect to connect two VAIO computers, you must assign each computer a unique name by which it can be identified when the two computers are networked. See the Smart Connect online help for more information.

Sony Digital Media Park Applications

Media Bar

Media Bar software is your all-in-one solution for audio/video playback. Media Bar software handles all common computer multimedia formats, and controls selected Sony devices. Media Bar software encompasses audio/video library cataloging and playlist management, in addition to digital video quality control and effects features. Media Bar seamlessly integrates a variety of new media formats with an easy-to-use software interface.

DVgate Applications

DVgate makes it easy to edit digital videos. You can capture, edit, and grab digital video clips and then assemble them into a polished home video everyone will enjoy. You can also use DVgate to capture individual frames from digital video clips, and then save them as graphic files. Enhance your Web page, send family and friends your favorite stills, create your own wallpaper. The possibilities are endless.

PictureGear

PictureGear is a digital image management application that allows you to see all the images stored in any directory on your computer. Thumbnail views provide quick reminders of your pictures. Brighten, contrast, enhance, resize, crop, and color-correct your pictures. Create panoramic views, animations, screen savers, wallpaper, and even HTML photo albums.

Smart Capture

Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK connection between your computer and a Sony Digital Handycam Camcorder, or other cameras that support the i.LINK interface. Smart Capture allows you to capture and compress video or still images that you can save or share via e-mail. Captures are low resolution, making it ideal for e-mail. For high-quality captures, use DVgate.

Using Digital Video

Connecting a Digital Video Recorder

Before connecting a digital video camera recorder to your computer, turn off the power on the camera. After connecting the camera, turn the power back on. You do not need to turn off the computer when connecting a camera.

Using DVgate

DVgate Motion saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate Motion, you should defragment your D partition regularly. For information on how to defragment your D partition, see your *VAIO Digital Studio Computer User Guide*.

When capturing clips:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
- Captures larger than 2 GB (9 minutes and 30 seconds) are automatically continued in a second file.
- You can record stereo audio (stereo 1) while capturing video. You cannot add audio on the stereo 2 track after capturing the video data.
- You cannot use different audio modes on the same tape. You should perform a separate capture for each audio mode you wish to use.
- DVgate does not support hard disk compression. You should not use disk compression if you are planning to work with DVgate.

- Title data is saved in the flash memory of a digital video camera and is not transferred to tape by DVgate.
- To avoid interruption of capture sessions, you should disable the screen saver.
- The drop frame compensation feature does not provide accurate compensation adjustments for tapes recorded in LP mode.
- For tapes that include a mixture of both SP and LP mode, the information displayed by the capture progress indicator may not be accurate.
- Make sure the video head of your digital video device is properly cleaned. Anomalies that you see in captured data could be due to dust or other particles on the video head.
 - The last frame captured is one frame before your selected [OUT] point. The frame you see immediately after clicking the [OUT] button is not captured.

When recording AVI files to tape:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
 - You can record only AVI files. MPEG files cannot be recorded.
- To avoid recording problems, such as a single frame appearing in multiple frames, close other applications on your system while recording.
- You cannot use different audio modes on the same tape. If you have AVI files that use different audio modes, they cannot be recorded at the same time, but must be recorded separately.
- Do not attempt to work with AVI files that are smaller than 4 MB.
- DVgate does not support hard disk compression. Do not use disk compression if you are planning to work with DVgate.
- In order to maximize recording capabilities, video and audio data are not available while you are recording.

If DVgate indicates that frames have been dropped, close all open applications, or defragment your hard drive.

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D. DVgate saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate, you should defragment your D partition regularly.

Defragmenting your Hard Disk Drive

If you encounter frame dropping while recording digital video onto your hard disk drive, defragmentation may be necessary. To defragment your hard disk drive, click the Start button, point to Programs/Accessories/System Tools, and then select Disk Defragmenter. Please note that it may take more than a couple of hours to complete defragmentation, depending on the data capacity and utilization of your computer's hard disk drive(s).

Applications That Use the TWAIN Driver

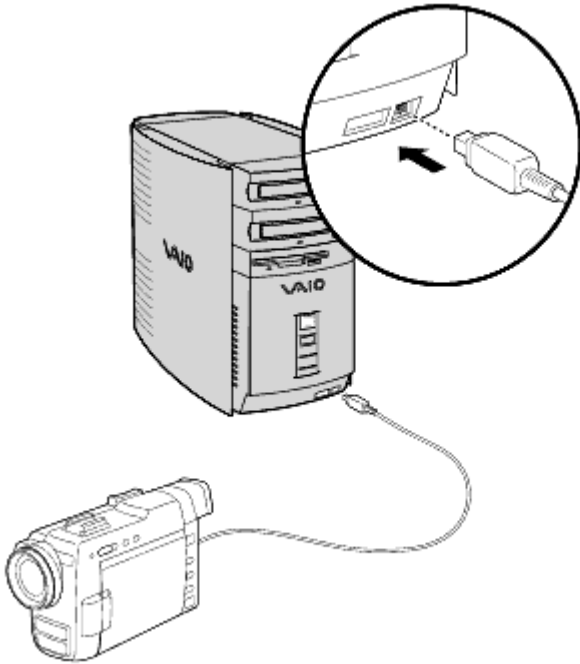
Digital imaging applications, such as Adobe PhotoDeluxe®, allow you to transfer images to your computer from external devices, including scanners or digital cameras. For some devices, a TWAIN driver window appears on the screen. Always close the TWAIN driver window before exiting or minimizing a digital imaging application.


i.LINK (IEEE-1394) Compatibility

Your VAIO® computer includes a 4-pin i.LINK connector on the front of the system and a 6-pin i.LINK connector on the back of the system. A 6-pin i.LINK connector can supply power from the computer to the connected device if the device is equipped with a 6-pin connector. A 6-pin connector supplies 10V to 12V. The total power supplied by the 6-pin i.LINK connector cannot exceed 6 watts. A 4-pin i.LINK connector cannot supply power to a connected device. The following Sony i.LINK 400 Mbps cables are available and recommended for use with your computer: VMC-IL4415, VMC-IL4435, VMC-IL4615, VMC-IL4635, VMC-IL6615, and VMC-IL6635. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

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

- Use the  symbol to locate the **i.link** connector. Plug the i.LINK cable 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.

Enabling Smart Connect

Your computer comes with preinstalled Smart Connect software. To enable faster startup, your computer ships with this software disabled. To enable Smart Connect:

1. Click the Start button, select Settings, and click Control Panel. The Control Panel window appears.
2. Click the System icon. The System Properties window appears. Click the Device Manager tab.
3. Double-click Sony i.LINK(1394) Adapter. The Sony i.LINK(1394) Adapter window appears. Click the Enable Device button.
4. Click OK. The Sony i.LINK(1394) Adapter icon should no longer have an "X" on it. This means Smart Connect is now enabled.
5. Close all windows, and restart your computer in order for the new settings to take effect.

Now your Smart Connect software is ready to use. Note that when you use Smart Connect to connect two VAIO computers, you must assign each computer a unique name by which it can be identified when the two computers are networked. See the Smart Connect online help for more information.

Sony Digital Media Park Applications

Media Bar

Media Bar software is your all-in-one solution for audio/video playback. Media Bar software handles all common computer multimedia formats, and controls selected Sony devices. Media Bar software encompasses audio/video library cataloging and playlist management, in addition to digital video quality control and effects features. Media Bar seamlessly integrates a variety of new media formats with an easy-to-use software interface.

DVgate Applications

DVgate makes it easy to edit digital videos. You can capture, edit, and grab digital video clips and then assemble them into a polished home video everyone will enjoy. You can also use DVgate to capture individual frames from digital video clips, and then save them as graphic files. Enhance your Web page, send family and friends your favorite stills, create your own wallpaper. The possibilities are endless.

PictureGear

PictureGear is a digital image management application that allows you to see all the images stored in any directory on your computer. Thumbnail views provide quick reminders of your pictures. Brighten, contrast, enhance, resize, crop, and color-correct your pictures. Create panoramic views, animations, screen savers, wallpaper, and even HTML photo albums.

Smart Capture

Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK connection between your computer and a Sony Digital Handycam Camcorder, or other cameras that support the i.LINK interface. Smart Capture allows you to capture and compress video or still images that you can save or share via e-mail. Captures are low resolution, making it ideal for e-mail. For high-quality captures, use DVgate.

Using Digital Video

Connecting a Digital Video Recorder

Before connecting a digital video camera recorder to your computer, turn off the power on the camera. After connecting the camera, turn the power back on. You do not need to turn off the computer when connecting a camera.

Using DVgate

DVgate Motion saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate Motion, you should defragment your D partition regularly. For information on how to defragment your D partition, see your *VAIO Digital Studio Computer User Guide*.

When capturing clips:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
- Captures larger than 2 GB (9 minutes and 30 seconds) are automatically continued in a second file.
- You can record stereo audio (stereo 1) while capturing video. You cannot add audio on the stereo 2 track after capturing the video data.
- You cannot use different audio modes on the same tape. You should perform a separate capture for each audio mode you wish to use.
- DVgate does not support hard disk compression. You should not use disk compression if you are planning to work with DVgate.

- Title data is saved in the flash memory of a digital video camera and is not transferred to tape by DVgate.
- To avoid interruption of capture sessions, you should disable the screen saver.
- The drop frame compensation feature does not provide accurate compensation adjustments for tapes recorded in LP mode.
- For tapes that include a mixture of both SP and LP mode, the information displayed by the capture progress indicator may not be accurate.
- Make sure the video head of your digital video device is properly cleaned. Anomalies that you see in captured data could be due to dust or other particles on the video head.
 - The last frame captured is one frame before your selected [OUT] point. The frame you see immediately after clicking the [OUT] button is not captured.

When recording AVI files to tape:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
 - You can record only AVI files. MPEG files cannot be recorded.
- To avoid recording problems, such as a single frame appearing in multiple frames, close other applications on your system while recording.
- You cannot use different audio modes on the same tape. If you have AVI files that use different audio modes, they cannot be recorded at the same time, but must be recorded separately.
- Do not attempt to work with AVI files that are smaller than 4 MB.
- DVgate does not support hard disk compression. Do not use disk compression if you are planning to work with DVgate.
- In order to maximize recording capabilities, video and audio data are not available while you are recording.

If DVgate indicates that frames have been dropped, close all open applications, or defragment your hard drive.

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D. DVgate saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate, you should defragment your D partition regularly.

Defragmenting your Hard Disk Drive

If you encounter frame dropping while recording digital video onto your hard disk drive, defragmentation may be necessary. To defragment your hard disk drive, click the Start button, point to Programs/Accessories/System Tools, and then select Disk Defragmenter. Please note that it may take more than a couple of hours to complete defragmentation, depending on the data capacity and utilization of your computer's hard disk drive(s).

Applications That Use the TWAIN Driver

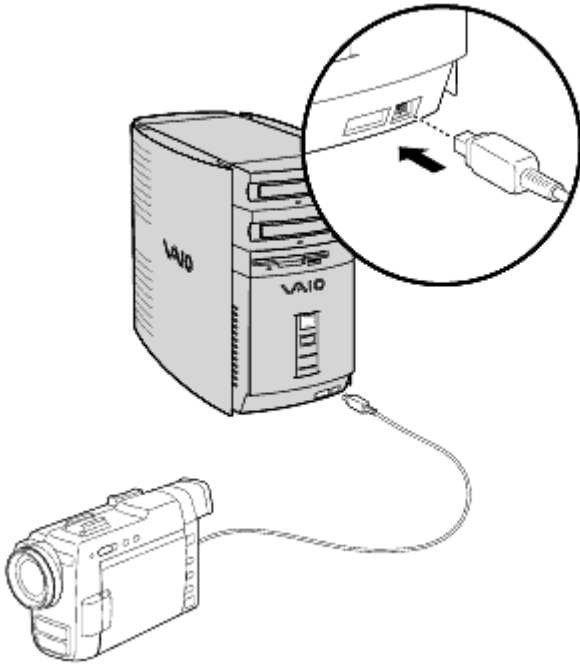
Digital imaging applications, such as Adobe PhotoDeluxe®, allow you to transfer images to your computer from external devices, including scanners or digital cameras. For some devices, a TWAIN driver window appears on the screen. Always close the TWAIN driver window before exiting or minimizing a digital imaging application.


i.LINK (IEEE-1394) Compatibility

Your VAIO® computer includes a 4-pin i.LINK connector on the front of the system and a 6-pin i.LINK connector on the back of the system. A 6-pin i.LINK connector can supply power from the computer to the connected device if the device is equipped with a 6-pin connector. A 6-pin connector supplies 10V to 12V. The total power supplied by the 6-pin i.LINK connector cannot exceed 6 watts. A 4-pin i.LINK connector cannot supply power to a connected device. The following Sony i.LINK 400 Mbps cables are available and recommended for use with your computer: VMC-IL4415, VMC-IL4435, VMC-IL4615, VMC-IL4635, VMC-IL6615, and VMC-IL6635. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

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

- Use the  symbol to locate the **i.link** connector. Plug the i.LINK cable 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.

Enabling Smart Connect

Your computer comes with preinstalled Smart Connect software. To enable faster startup, your computer ships with this software disabled. To enable Smart Connect:

1. Click the Start button, select Settings, and click Control Panel. The Control Panel window appears.
2. Click the System icon. The System Properties window appears. Click the Device Manager tab.
3. Double-click Sony i.LINK(1394) Adapter. The Sony i.LINK(1394) Adapter window appears. Click the Enable Device button.
4. Click OK. The Sony i.LINK(1394) Adapter icon should no longer have an "X" on it. This means Smart Connect is now enabled.
5. Close all windows, and restart your computer in order for the new settings to take effect.

Now your Smart Connect software is ready to use. Note that when you use Smart Connect to connect two VAIO computers, you must assign each computer a unique name by which it can be identified when the two computers are networked. See the Smart Connect online help for more information.

Sony Digital Media Park Applications

Media Bar

Media Bar software is your all-in-one solution for audio/video playback. Media Bar software handles all common computer multimedia formats, and controls selected Sony devices. Media Bar software encompasses audio/video library cataloging and playlist management, in addition to digital video quality control and effects features. Media Bar seamlessly integrates a variety of new media formats with an easy-to-use software interface.

DVgate Applications

DVgate makes it easy to edit digital videos. You can capture, edit, and grab digital video clips and then assemble them into a polished home video everyone will enjoy. You can also use DVgate to capture individual frames from digital video clips, and then save them as graphic files. Enhance your Web page, send family and friends your favorite stills, create your own wallpaper. The possibilities are endless.

PictureGear

PictureGear is a digital image management application that allows you to see all the images stored in any directory on your computer. Thumbnail views provide quick reminders of your pictures. Brighten, contrast, enhance, resize, crop, and color-correct your pictures. Create panoramic views, animations, screen savers, wallpaper, and even HTML photo albums.

Smart Capture

Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK connection between your computer and a Sony Digital Handycam Camcorder, or other cameras that support the i.LINK interface. Smart Capture allows you to capture and compress video or still images that you can save or share via e-mail. Captures are low resolution, making it ideal for e-mail. For high-quality captures, use DVgate.

Using Digital Video

Connecting a Digital Video Recorder

Before connecting a digital video camera recorder to your computer, turn off the power on the camera. After connecting the camera, turn the power back on. You do not need to turn off the computer when connecting a camera.

Using DVgate

DVgate Motion saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate Motion, you should defragment your D partition regularly. For information on how to defragment your D partition, see your *VAIO Digital Studio Computer User Guide*.

When capturing clips:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
- Captures larger than 2 GB (9 minutes and 30 seconds) are automatically continued in a second file.
- You can record stereo audio (stereo 1) while capturing video. You cannot add audio on the stereo 2 track after capturing the video data.
- You cannot use different audio modes on the same tape. You should perform a separate capture for each audio mode you wish to use.
- DVgate does not support hard disk compression. You should not use disk compression if you are planning to work with DVgate.

- Title data is saved in the flash memory of a digital video camera and is not transferred to tape by DVgate.
- To avoid interruption of capture sessions, you should disable the screen saver.
- The drop frame compensation feature does not provide accurate compensation adjustments for tapes recorded in LP mode.
- For tapes that include a mixture of both SP and LP mode, the information displayed by the capture progress indicator may not be accurate.
- Make sure the video head of your digital video device is properly cleaned. Anomalies that you see in captured data could be due to dust or other particles on the video head.
 - The last frame captured is one frame before your selected [OUT] point. The frame you see immediately after clicking the [OUT] button is not captured.

When recording AVI files to tape:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
 - You can record only AVI files. MPEG files cannot be recorded.
- To avoid recording problems, such as a single frame appearing in multiple frames, close other applications on your system while recording.
- You cannot use different audio modes on the same tape. If you have AVI files that use different audio modes, they cannot be recorded at the same time, but must be recorded separately.
- Do not attempt to work with AVI files that are smaller than 4 MB.
- DVgate does not support hard disk compression. Do not use disk compression if you are planning to work with DVgate.
- In order to maximize recording capabilities, video and audio data are not available while you are recording.

If DVgate indicates that frames have been dropped, close all open applications, or defragment your hard drive.

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D. DVgate saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate, you should defragment your D partition regularly.

Defragmenting your Hard Disk Drive

If you encounter frame dropping while recording digital video onto your hard disk drive, defragmentation may be necessary. To defragment your hard disk drive, click the Start button, point to Programs/Accessories/System Tools, and then select Disk Defragmenter. Please note that it may take more than a couple of hours to complete defragmentation, depending on the data capacity and utilization of your computer's hard disk drive(s).

Applications That Use the TWAIN Driver

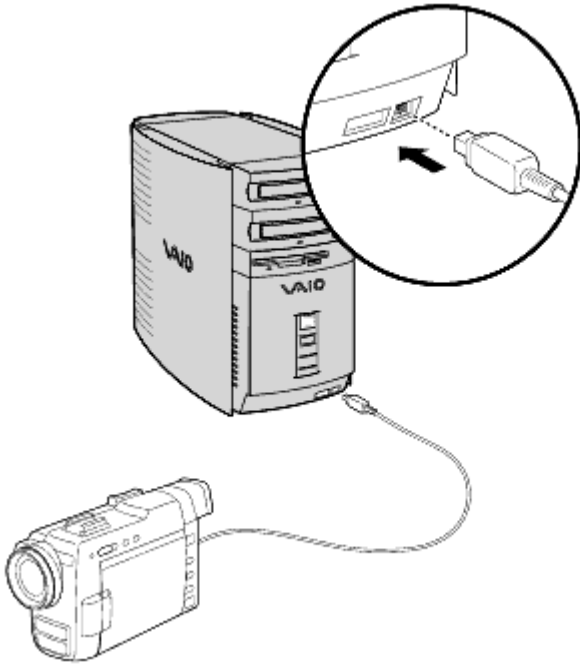
Digital imaging applications, such as Adobe PhotoDeluxe®, allow you to transfer images to your computer from external devices, including scanners or digital cameras. For some devices, a TWAIN driver window appears on the screen. Always close the TWAIN driver window before exiting or minimizing a digital imaging application.


i.LINK (IEEE-1394) Compatibility

Your VAIO® computer includes a 4-pin i.LINK connector on the front of the system and a 6-pin i.LINK connector on the back of the system. A 6-pin i.LINK connector can supply power from the computer to the connected device if the device is equipped with a 6-pin connector. A 6-pin connector supplies 10V to 12V. The total power supplied by the 6-pin i.LINK connector cannot exceed 6 watts. A 4-pin i.LINK connector cannot supply power to a connected device. The following Sony i.LINK 400 Mbps cables are available and recommended for use with your computer: VMC-IL4415, VMC-IL4435, VMC-IL4615, VMC-IL4635, VMC-IL6615, and VMC-IL6635. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

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

- Use the  symbol to locate the **i.link** connector. Plug the i.LINK cable 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.

Enabling Smart Connect

Your computer comes with preinstalled Smart Connect software. To enable faster startup, your computer ships with this software disabled. To enable Smart Connect:

1. Click the Start button, select Settings, and click Control Panel. The Control Panel window appears.
2. Click the System icon. The System Properties window appears. Click the Device Manager tab.
3. Double-click Sony i.LINK(1394) Adapter. The Sony i.LINK(1394) Adapter window appears. Click the Enable Device button.
4. Click OK. The Sony i.LINK(1394) Adapter icon should no longer have an "X" on it. This means Smart Connect is now enabled.
5. Close all windows, and restart your computer in order for the new settings to take effect.

Now your Smart Connect software is ready to use. Note that when you use Smart Connect to connect two VAIO computers, you must assign each computer a unique name by which it can be identified when the two computers are networked. See the Smart Connect online help for more information.

Sony Digital Media Park Applications

Media Bar

Media Bar software is your all-in-one solution for audio/video playback. Media Bar software handles all common computer multimedia formats, and controls selected Sony devices. Media Bar software encompasses audio/video library cataloging and playlist management, in addition to digital video quality control and effects features. Media Bar seamlessly integrates a variety of new media formats with an easy-to-use software interface.

DVgate Applications

DVgate makes it easy to edit digital videos. You can capture, edit, and grab digital video clips and then assemble them into a polished home video everyone will enjoy. You can also use DVgate to capture individual frames from digital video clips, and then save them as graphic files. Enhance your Web page, send family and friends your favorite stills, create your own wallpaper. The possibilities are endless.

PictureGear

PictureGear is a digital image management application that allows you to see all the images stored in any directory on your computer. Thumbnail views provide quick reminders of your pictures. Brighten, contrast, enhance, resize, crop, and color-correct your pictures. Create panoramic views, animations, screen savers, wallpaper, and even HTML photo albums.

Smart Capture

Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK connection between your computer and a Sony Digital Handycam Camcorder, or other cameras that support the i.LINK interface. Smart Capture allows you to capture and compress video or still images that you can save or share via e-mail. Captures are low resolution, making it ideal for e-mail. For high-quality captures, use DVgate.

Using Digital Video

Connecting a Digital Video Recorder

Before connecting a digital video camera recorder to your computer, turn off the power on the camera. After connecting the camera, turn the power back on. You do not need to turn off the computer when connecting a camera.

Using DVgate

DVgate Motion saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate Motion, you should defragment your D partition regularly. For information on how to defragment your D partition, see your *VAIO Digital Studio Computer User Guide*.

When capturing clips:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
- Captures larger than 2 GB (9 minutes and 30 seconds) are automatically continued in a second file.
- You can record stereo audio (stereo 1) while capturing video. You cannot add audio on the stereo 2 track after capturing the video data.
- You cannot use different audio modes on the same tape. You should perform a separate capture for each audio mode you wish to use.
- DVgate does not support hard disk compression. You should not use disk compression if you are planning to work with DVgate.

- Title data is saved in the flash memory of a digital video camera and is not transferred to tape by DVgate.
- To avoid interruption of capture sessions, you should disable the screen saver.
- The drop frame compensation feature does not provide accurate compensation adjustments for tapes recorded in LP mode.
- For tapes that include a mixture of both SP and LP mode, the information displayed by the capture progress indicator may not be accurate.
- Make sure the video head of your digital video device is properly cleaned. Anomalies that you see in captured data could be due to dust or other particles on the video head.
 - The last frame captured is one frame before your selected [OUT] point. The frame you see immediately after clicking the [OUT] button is not captured.

When recording AVI files to tape:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
 - You can record only AVI files. MPEG files cannot be recorded.
- To avoid recording problems, such as a single frame appearing in multiple frames, close other applications on your system while recording.
- You cannot use different audio modes on the same tape. If you have AVI files that use different audio modes, they cannot be recorded at the same time, but must be recorded separately.
- Do not attempt to work with AVI files that are smaller than 4 MB.
- DVgate does not support hard disk compression. Do not use disk compression if you are planning to work with DVgate.
- In order to maximize recording capabilities, video and audio data are not available while you are recording.

If DVgate indicates that frames have been dropped, close all open applications, or defragment your hard drive.

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D. DVgate saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate, you should defragment your D partition regularly.

Defragmenting your Hard Disk Drive

If you encounter frame dropping while recording digital video onto your hard disk drive, defragmentation may be necessary. To defragment your hard disk drive, click the Start button, point to Programs/Accessories/System Tools, and then select Disk Defragmenter. Please note that it may take more than a couple of hours to complete defragmentation, depending on the data capacity and utilization of your computer's hard disk drive(s).

Applications That Use the TWAIN Driver

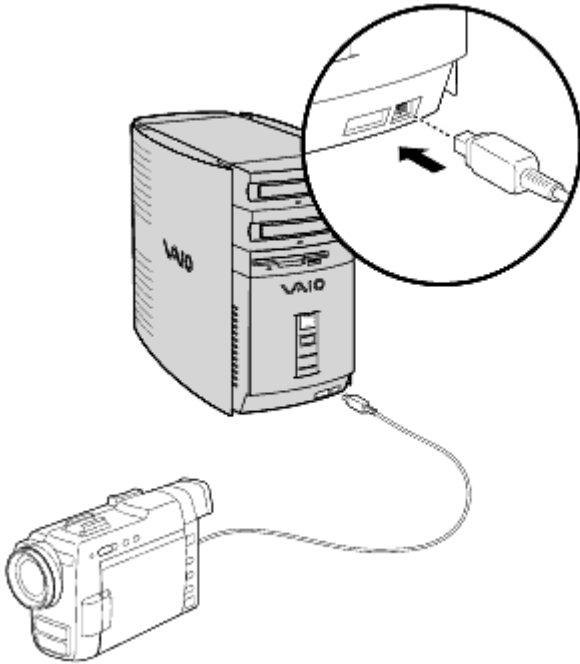
Digital imaging applications, such as Adobe PhotoDeluxe®, allow you to transfer images to your computer from external devices, including scanners or digital cameras. For some devices, a TWAIN driver window appears on the screen. Always close the TWAIN driver window before exiting or minimizing a digital imaging application.


i.LINK (IEEE-1394) Compatibility

Your VAIO® computer includes a 4-pin i.LINK connector on the front of the system and a 6-pin i.LINK connector on the back of the system. A 6-pin i.LINK connector can supply power from the computer to the connected device if the device is equipped with a 6-pin connector. A 6-pin connector supplies 10V to 12V. The total power supplied by the 6-pin i.LINK connector cannot exceed 6 watts. A 4-pin i.LINK connector cannot supply power to a connected device. The following Sony i.LINK 400 Mbps cables are available and recommended for use with your computer: VMC-IL4415, VMC-IL4435, VMC-IL4615, VMC-IL4635, VMC-IL6615, and VMC-IL6635. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

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

- Use the  symbol to locate the **i.link** connector. Plug the i.LINK cable 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.

Enabling Smart Connect

Your computer comes with preinstalled Smart Connect software. To enable faster startup, your computer ships with this software disabled. To enable Smart Connect:

1. Click the Start button, select Settings, and click Control Panel. The Control Panel window appears.
2. Click the System icon. The System Properties window appears. Click the Device Manager tab.
3. Double-click Sony i.LINK(1394) Adapter. The Sony i.LINK(1394) Adapter window appears. Click the Enable Device button.
4. Click OK. The Sony i.LINK(1394) Adapter icon should no longer have an "X" on it. This means Smart Connect is now enabled.
5. Close all windows, and restart your computer in order for the new settings to take effect.

Now your Smart Connect software is ready to use. Note that when you use Smart Connect to connect two VAIO computers, you must assign each computer a unique name by which it can be identified when the two computers are networked. See the Smart Connect online help for more information.

Sony Digital Media Park Applications

Media Bar

Media Bar software is your all-in-one solution for audio/video playback. Media Bar software handles all common computer multimedia formats, and controls selected Sony devices. Media Bar software encompasses audio/video library cataloging and playlist management, in addition to digital video quality control and effects features. Media Bar seamlessly integrates a variety of new media formats with an easy-to-use software interface.

DVgate Applications

DVgate makes it easy to edit digital videos. You can capture, edit, and grab digital video clips and then assemble them into a polished home video everyone will enjoy. You can also use DVgate to capture individual frames from digital video clips, and then save them as graphic files. Enhance your Web page, send family and friends your favorite stills, create your own wallpaper. The possibilities are endless.

PictureGear

PictureGear is a digital image management application that allows you to see all the images stored in any directory on your computer. Thumbnail views provide quick reminders of your pictures. Brighten, contrast, enhance, resize, crop, and color-correct your pictures. Create panoramic views, animations, screen savers, wallpaper, and even HTML photo albums.

Smart Capture

Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK connection between your computer and a Sony Digital Handycam Camcorder, or other cameras that support the i.LINK interface. Smart Capture allows you to capture and compress video or still images that you can save or share via e-mail. Captures are low resolution, making it ideal for e-mail. For high-quality captures, use DVgate.

Using Digital Video

Connecting a Digital Video Recorder

Before connecting a digital video camera recorder to your computer, turn off the power on the camera. After connecting the camera, turn the power back on. You do not need to turn off the computer when connecting a camera.

Using DVgate

DVgate Motion saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate Motion, you should defragment your D partition regularly. For information on how to defragment your D partition, see your *VAIO Digital Studio Computer User Guide*.

When capturing clips:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
- Captures larger than 2 GB (9 minutes and 30 seconds) are automatically continued in a second file.
- You can record stereo audio (stereo 1) while capturing video. You cannot add audio on the stereo 2 track after capturing the video data.
- You cannot use different audio modes on the same tape. You should perform a separate capture for each audio mode you wish to use.
- DVgate does not support hard disk compression. You should not use disk compression if you are planning to work with DVgate.

- Title data is saved in the flash memory of a digital video camera and is not transferred to tape by DVgate.
- To avoid interruption of capture sessions, you should disable the screen saver.
- The drop frame compensation feature does not provide accurate compensation adjustments for tapes recorded in LP mode.
- For tapes that include a mixture of both SP and LP mode, the information displayed by the capture progress indicator may not be accurate.
- Make sure the video head of your digital video device is properly cleaned. Anomalies that you see in captured data could be due to dust or other particles on the video head.
 - The last frame captured is one frame before your selected [OUT] point. The frame you see immediately after clicking the [OUT] button is not captured.

When recording AVI files to tape:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
 - You can record only AVI files. MPEG files cannot be recorded.
- To avoid recording problems, such as a single frame appearing in multiple frames, close other applications on your system while recording.
- You cannot use different audio modes on the same tape. If you have AVI files that use different audio modes, they cannot be recorded at the same time, but must be recorded separately.
- Do not attempt to work with AVI files that are smaller than 4 MB.
- DVgate does not support hard disk compression. Do not use disk compression if you are planning to work with DVgate.
- In order to maximize recording capabilities, video and audio data are not available while you are recording.

If DVgate indicates that frames have been dropped, close all open applications, or defragment your hard drive.

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D. DVgate saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate, you should defragment your D partition regularly.

Defragmenting your Hard Disk Drive

If you encounter frame dropping while recording digital video onto your hard disk drive, defragmentation may be necessary. To defragment your hard disk drive, click the Start button, point to Programs/Accessories/System Tools, and then select Disk Defragmenter. Please note that it may take more than a couple of hours to complete defragmentation, depending on the data capacity and utilization of your computer's hard disk drive(s).

Applications That Use the TWAIN Driver

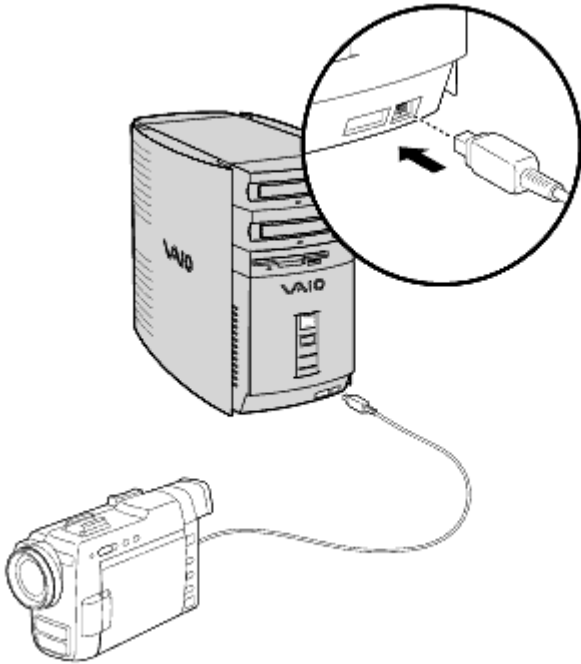
Digital imaging applications, such as Adobe PhotoDeluxe®, allow you to transfer images to your computer from external devices, including scanners or digital cameras. For some devices, a TWAIN driver window appears on the screen. Always close the TWAIN driver window before exiting or minimizing a digital imaging application.


i.LINK (IEEE-1394) Compatibility

Your VAIO® computer includes a 4-pin i.LINK connector on the front of the system and a 6-pin i.LINK connector on the back of the system. A 6-pin i.LINK connector can supply power from the computer to the connected device if the device is equipped with a 6-pin connector. A 6-pin connector supplies 10V to 12V. The total power supplied by the 6-pin i.LINK connector cannot exceed 6 watts. A 4-pin i.LINK connector cannot supply power to a connected device. The following Sony i.LINK 400 Mbps cables are available and recommended for use with your computer: VMC-IL4415, VMC-IL4435, VMC-IL4615, VMC-IL4635, VMC-IL6615, and VMC-IL6635. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

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

- Use the  symbol to locate the **i.link** connector. Plug the i.LINK cable 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.

Enabling Smart Connect

Your computer comes with preinstalled Smart Connect software. To enable faster startup, your computer ships with this software disabled. To enable Smart Connect:

1. Click the Start button, select Settings, and click Control Panel. The Control Panel window appears.
2. Click the System icon. The System Properties window appears. Click the Device Manager tab.
3. Double-click Sony i.LINK(1394) Adapter. The Sony i.LINK(1394) Adapter window appears. Click the Enable Device button.
4. Click OK. The Sony i.LINK(1394) Adapter icon should no longer have an "X" on it. This means Smart Connect is now enabled.
5. Close all windows, and restart your computer in order for the new settings to take effect.

Now your Smart Connect software is ready to use. Note that when you use Smart Connect to connect two VAIO computers, you must assign each computer a unique name by which it can be identified when the two computers are networked. See the Smart Connect online help for more information.

Sony Digital Media Park Applications

Media Bar

Media Bar software is your all-in-one solution for audio/video playback. Media Bar software handles all common computer multimedia formats, and controls selected Sony devices. Media Bar software encompasses audio/video library cataloging and playlist management, in addition to digital video quality control and effects features. Media Bar seamlessly integrates a variety of new media formats with an easy-to-use software interface.

DVgate Applications

DVgate makes it easy to edit digital videos. You can capture, edit, and grab digital video clips and then assemble them into a polished home video everyone will enjoy. You can also use DVgate to capture individual frames from digital video clips, and then save them as graphic files. Enhance your Web page, send family and friends your favorite stills, create your own wallpaper. The possibilities are endless.

PictureGear

PictureGear is a digital image management application that allows you to see all the images stored in any directory on your computer. Thumbnail views provide quick reminders of your pictures. Brighten, contrast, enhance, resize, crop, and color-correct your pictures. Create panoramic views, animations, screen savers, wallpaper, and even HTML photo albums.

Smart Capture

Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK connection between your computer and a Sony Digital Handycam Camcorder, or other cameras that support the i.LINK interface. Smart Capture allows you to capture and compress video or still images that you can save or share via e-mail. Captures are low resolution, making it ideal for e-mail. For high-quality captures, use DVgate.

Using Digital Video

Connecting a Digital Video Recorder

Before connecting a digital video camera recorder to your computer, turn off the power on the camera. After connecting the camera, turn the power back on. You do not need to turn off the computer when connecting a camera.

Using DVgate

DVgate Motion saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate Motion, you should defragment your D partition regularly. For information on how to defragment your D partition, see your *VAIO Digital Studio Computer User Guide*.

When capturing clips:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
- Captures larger than 2 GB (9 minutes and 30 seconds) are automatically continued in a second file.
- You can record stereo audio (stereo 1) while capturing video. You cannot add audio on the stereo 2 track after capturing the video data.
- You cannot use different audio modes on the same tape. You should perform a separate capture for each audio mode you wish to use.
- DVgate does not support hard disk compression. You should not use disk compression if you are planning to work with DVgate.

- Title data is saved in the flash memory of a digital video camera and is not transferred to tape by DVgate.
- To avoid interruption of capture sessions, you should disable the screen saver.
- The drop frame compensation feature does not provide accurate compensation adjustments for tapes recorded in LP mode.
- For tapes that include a mixture of both SP and LP mode, the information displayed by the capture progress indicator may not be accurate.
- Make sure the video head of your digital video device is properly cleaned. Anomalies that you see in captured data could be due to dust or other particles on the video head.
 - The last frame captured is one frame before your selected [OUT] point. The frame you see immediately after clicking the [OUT] button is not captured.

When recording AVI files to tape:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
 - You can record only AVI files. MPEG files cannot be recorded.
- To avoid recording problems, such as a single frame appearing in multiple frames, close other applications on your system while recording.
- You cannot use different audio modes on the same tape. If you have AVI files that use different audio modes, they cannot be recorded at the same time, but must be recorded separately.
- Do not attempt to work with AVI files that are smaller than 4 MB.
- DVgate does not support hard disk compression. Do not use disk compression if you are planning to work with DVgate.
- In order to maximize recording capabilities, video and audio data are not available while you are recording.

If DVgate indicates that frames have been dropped, close all open applications, or defragment your hard drive.

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D. DVgate saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate, you should defragment your D partition regularly.

Defragmenting your Hard Disk Drive

If you encounter frame dropping while recording digital video onto your hard disk drive, defragmentation may be necessary. To defragment your hard disk drive, click the Start button, point to Programs/Accessories/System Tools, and then select Disk Defragmenter. Please note that it may take more than a couple of hours to complete defragmentation, depending on the data capacity and utilization of your computer's hard disk drive(s).

Applications That Use the TWAIN Driver

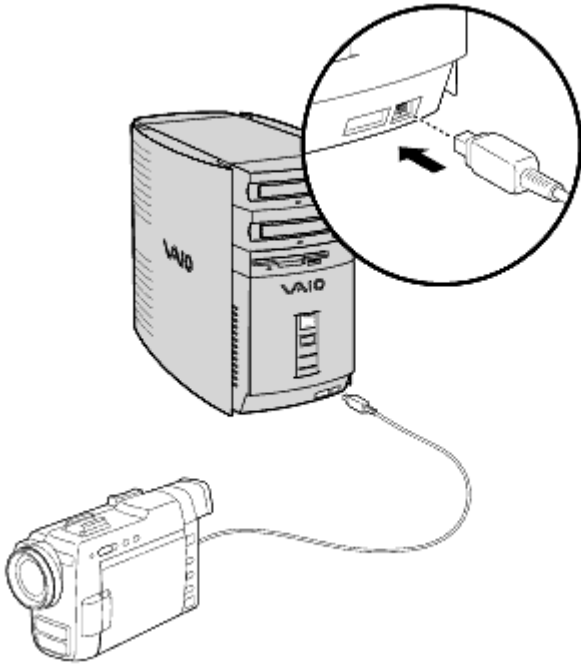
Digital imaging applications, such as Adobe PhotoDeluxe®, allow you to transfer images to your computer from external devices, including scanners or digital cameras. For some devices, a TWAIN driver window appears on the screen. Always close the TWAIN driver window before exiting or minimizing a digital imaging application.


i.LINK (IEEE-1394) Compatibility

Your VAIO® computer includes a 4-pin i.LINK connector on the front of the system and a 6-pin i.LINK connector on the back of the system. A 6-pin i.LINK connector can supply power from the computer to the connected device if the device is equipped with a 6-pin connector. A 6-pin connector supplies 10V to 12V. The total power supplied by the 6-pin i.LINK connector cannot exceed 6 watts. A 4-pin i.LINK connector cannot supply power to a connected device. The following Sony i.LINK 400 Mbps cables are available and recommended for use with your computer: VMC-IL4415, VMC-IL4435, VMC-IL4615, VMC-IL4635, VMC-IL6615, and VMC-IL6635. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

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

- Use the  symbol to locate the **i.link** connector. Plug the i.LINK cable 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.

Enabling Smart Connect

Your computer comes with preinstalled Smart Connect software. To enable faster startup, your computer ships with this software disabled. To enable Smart Connect:

1. Click the Start button, select Settings, and click Control Panel. The Control Panel window appears.
2. Click the System icon. The System Properties window appears. Click the Device Manager tab.
3. Double-click Sony i.LINK(1394) Adapter. The Sony i.LINK(1394) Adapter window appears. Click the Enable Device button.
4. Click OK. The Sony i.LINK(1394) Adapter icon should no longer have an "X" on it. This means Smart Connect is now enabled.
5. Close all windows, and restart your computer in order for the new settings to take effect.

Now your Smart Connect software is ready to use. Note that when you use Smart Connect to connect two VAIO computers, you must assign each computer a unique name by which it can be identified when the two computers are networked. See the Smart Connect online help for more information.

Sony Digital Media Park Applications

Media Bar

Media Bar software is your all-in-one solution for audio/video playback. Media Bar software handles all common computer multimedia formats, and controls selected Sony devices. Media Bar software encompasses audio/video library cataloging and playlist management, in addition to digital video quality control and effects features. Media Bar seamlessly integrates a variety of new media formats with an easy-to-use software interface.

DVgate Applications

DVgate makes it easy to edit digital videos. You can capture, edit, and grab digital video clips and then assemble them into a polished home video everyone will enjoy. You can also use DVgate to capture individual frames from digital video clips, and then save them as graphic files. Enhance your Web page, send family and friends your favorite stills, create your own wallpaper. The possibilities are endless.

PictureGear

PictureGear is a digital image management application that allows you to see all the images stored in any directory on your computer. Thumbnail views provide quick reminders of your pictures. Brighten, contrast, enhance, resize, crop, and color-correct your pictures. Create panoramic views, animations, screen savers, wallpaper, and even HTML photo albums.

Smart Capture

Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK connection between your computer and a Sony Digital Handycam Camcorder, or other cameras that support the i.LINK interface. Smart Capture allows you to capture and compress video or still images that you can save or share via e-mail. Captures are low resolution, making it ideal for e-mail. For high-quality captures, use DVgate.

Using Digital Video

Connecting a Digital Video Recorder

Before connecting a digital video camera recorder to your computer, turn off the power on the camera. After connecting the camera, turn the power back on. You do not need to turn off the computer when connecting a camera.

Using DVgate

DVgate Motion saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate Motion, you should defragment your D partition regularly. For information on how to defragment your D partition, see your *VAIO Digital Studio Computer User Guide*.

When capturing clips:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
- Captures larger than 2 GB (9 minutes and 30 seconds) are automatically continued in a second file.
- You can record stereo audio (stereo 1) while capturing video. You cannot add audio on the stereo 2 track after capturing the video data.
- You cannot use different audio modes on the same tape. You should perform a separate capture for each audio mode you wish to use.
- DVgate does not support hard disk compression. You should not use disk compression if you are planning to work with DVgate.

- Title data is saved in the flash memory of a digital video camera and is not transferred to tape by DVgate.
- To avoid interruption of capture sessions, you should disable the screen saver.
- The drop frame compensation feature does not provide accurate compensation adjustments for tapes recorded in LP mode.
- For tapes that include a mixture of both SP and LP mode, the information displayed by the capture progress indicator may not be accurate.
- Make sure the video head of your digital video device is properly cleaned. Anomalies that you see in captured data could be due to dust or other particles on the video head.
 - The last frame captured is one frame before your selected [OUT] point. The frame you see immediately after clicking the [OUT] button is not captured.

When recording AVI files to tape:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
 - You can record only AVI files. MPEG files cannot be recorded.
- To avoid recording problems, such as a single frame appearing in multiple frames, close other applications on your system while recording.
- You cannot use different audio modes on the same tape. If you have AVI files that use different audio modes, they cannot be recorded at the same time, but must be recorded separately.
- Do not attempt to work with AVI files that are smaller than 4 MB.
- DVgate does not support hard disk compression. Do not use disk compression if you are planning to work with DVgate.
- In order to maximize recording capabilities, video and audio data are not available while you are recording.

If DVgate indicates that frames have been dropped, close all open applications, or defragment your hard drive.

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D. DVgate saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate, you should defragment your D partition regularly.

Defragmenting your Hard Disk Drive

If you encounter frame dropping while recording digital video onto your hard disk drive, defragmentation may be necessary. To defragment your hard disk drive, click the Start button, point to Programs/Accessories/System Tools, and then select Disk Defragmenter. Please note that it may take more than a couple of hours to complete defragmentation, depending on the data capacity and utilization of your computer's hard disk drive(s).

Applications That Use the TWAIN Driver

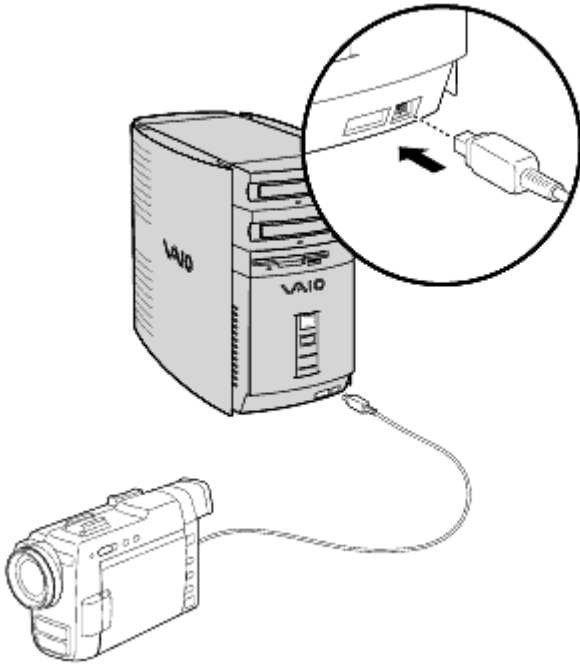
Digital imaging applications, such as Adobe PhotoDeluxe®, allow you to transfer images to your computer from external devices, including scanners or digital cameras. For some devices, a TWAIN driver window appears on the screen. Always close the TWAIN driver window before exiting or minimizing a digital imaging application.


i.LINK (IEEE-1394) Compatibility

Your VAIO® computer includes a 4-pin i.LINK connector on the front of the system and a 6-pin i.LINK connector on the back of the system. A 6-pin i.LINK connector can supply power from the computer to the connected device if the device is equipped with a 6-pin connector. A 6-pin connector supplies 10V to 12V. The total power supplied by the 6-pin i.LINK connector cannot exceed 6 watts. A 4-pin i.LINK connector cannot supply power to a connected device. The following Sony i.LINK 400 Mbps cables are available and recommended for use with your computer: VMC-IL4415, VMC-IL4435, VMC-IL4615, VMC-IL4635, VMC-IL6615, and VMC-IL6635. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

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

- Use the  symbol to locate the **i.link** connector. Plug the i.LINK cable 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.

Enabling Smart Connect

Your computer comes with preinstalled Smart Connect software. To enable faster startup, your computer ships with this software disabled. To enable Smart Connect:

1. Click the Start button, select Settings, and click Control Panel. The Control Panel window appears.
2. Click the System icon. The System Properties window appears. Click the Device Manager tab.
3. Double-click Sony i.LINK(1394) Adapter. The Sony i.LINK(1394) Adapter window appears. Click the Enable Device button.
4. Click OK. The Sony i.LINK(1394) Adapter icon should no longer have an "X" on it. This means Smart Connect is now enabled.
5. Close all windows, and restart your computer in order for the new settings to take effect.

Now your Smart Connect software is ready to use. Note that when you use Smart Connect to connect two VAIO computers, you must assign each computer a unique name by which it can be identified when the two computers are networked. See the Smart Connect online help for more information.

Sony Digital Media Park Applications

Media Bar

Media Bar software is your all-in-one solution for audio/video playback. Media Bar software handles all common computer multimedia formats, and controls selected Sony devices. Media Bar software encompasses audio/video library cataloging and playlist management, in addition to digital video quality control and effects features. Media Bar seamlessly integrates a variety of new media formats with an easy-to-use software interface.

DVgate Applications

DVgate makes it easy to edit digital videos. You can capture, edit, and grab digital video clips and then assemble them into a polished home video everyone will enjoy. You can also use DVgate to capture individual frames from digital video clips, and then save them as graphic files. Enhance your Web page, send family and friends your favorite stills, create your own wallpaper. The possibilities are endless.

PictureGear

PictureGear is a digital image management application that allows you to see all the images stored in any directory on your computer. Thumbnail views provide quick reminders of your pictures. Brighten, contrast, enhance, resize, crop, and color-correct your pictures. Create panoramic views, animations, screen savers, wallpaper, and even HTML photo albums.

Smart Capture

Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK connection between your computer and a Sony Digital Handycam Camcorder, or other cameras that support the i.LINK interface. Smart Capture allows you to capture and compress video or still images that you can save or share via e-mail. Captures are low resolution, making it ideal for e-mail. For high-quality captures, use DVgate.

Using Digital Video

Connecting a Digital Video Recorder

Before connecting a digital video camera recorder to your computer, turn off the power on the camera. After connecting the camera, turn the power back on. You do not need to turn off the computer when connecting a camera.

Using DVgate

DVgate Motion saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate Motion, you should defragment your D partition regularly. For information on how to defragment your D partition, see your *VAIO Digital Studio Computer User Guide*.

When capturing clips:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
- Captures larger than 2 GB (9 minutes and 30 seconds) are automatically continued in a second file.
- You can record stereo audio (stereo 1) while capturing video. You cannot add audio on the stereo 2 track after capturing the video data.
- You cannot use different audio modes on the same tape. You should perform a separate capture for each audio mode you wish to use.
- DVgate does not support hard disk compression. You should not use disk compression if you are planning to work with DVgate.

- Title data is saved in the flash memory of a digital video camera and is not transferred to tape by DVgate.
- To avoid interruption of capture sessions, you should disable the screen saver.
- The drop frame compensation feature does not provide accurate compensation adjustments for tapes recorded in LP mode.
- For tapes that include a mixture of both SP and LP mode, the information displayed by the capture progress indicator may not be accurate.
- Make sure the video head of your digital video device is properly cleaned. Anomalies that you see in captured data could be due to dust or other particles on the video head.
 - The last frame captured is one frame before your selected [OUT] point. The frame you see immediately after clicking the [OUT] button is not captured.

When recording AVI files to tape:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
 - You can record only AVI files. MPEG files cannot be recorded.
- To avoid recording problems, such as a single frame appearing in multiple frames, close other applications on your system while recording.
- You cannot use different audio modes on the same tape. If you have AVI files that use different audio modes, they cannot be recorded at the same time, but must be recorded separately.
- Do not attempt to work with AVI files that are smaller than 4 MB.
- DVgate does not support hard disk compression. Do not use disk compression if you are planning to work with DVgate.
- In order to maximize recording capabilities, video and audio data are not available while you are recording.

If DVgate indicates that frames have been dropped, close all open applications, or defragment your hard drive.

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D. DVgate saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate, you should defragment your D partition regularly.

Defragmenting your Hard Disk Drive

If you encounter frame dropping while recording digital video onto your hard disk drive, defragmentation may be necessary. To defragment your hard disk drive, click the Start button, point to Programs/Accessories/System Tools, and then select Disk Defragmenter. Please note that it may take more than a couple of hours to complete defragmentation, depending on the data capacity and utilization of your computer's hard disk drive(s).

Applications That Use the TWAIN Driver

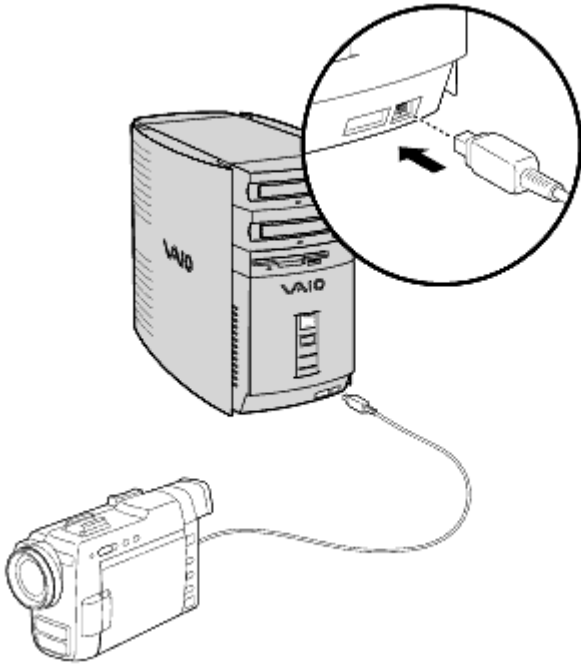
Digital imaging applications, such as Adobe PhotoDeluxe®, allow you to transfer images to your computer from external devices, including scanners or digital cameras. For some devices, a TWAIN driver window appears on the screen. Always close the TWAIN driver window before exiting or minimizing a digital imaging application.


i.LINK (IEEE-1394) Compatibility

Your VAIO® computer includes a 4-pin i.LINK connector on the front of the system and a 6-pin i.LINK connector on the back of the system. A 6-pin i.LINK connector can supply power from the computer to the connected device if the device is equipped with a 6-pin connector. A 6-pin connector supplies 10V to 12V. The total power supplied by the 6-pin i.LINK connector cannot exceed 6 watts. A 4-pin i.LINK connector cannot supply power to a connected device. The following Sony i.LINK 400 Mbps cables are available and recommended for use with your computer: VMC-IL4415, VMC-IL4435, VMC-IL4615, VMC-IL4635, VMC-IL6615, and VMC-IL6635. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

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

- Use the  symbol to locate the **i.link** connector. Plug the i.LINK cable 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.

Enabling Smart Connect

Your computer comes with preinstalled Smart Connect software. To enable faster startup, your computer ships with this software disabled. To enable Smart Connect:

1. Click the Start button, select Settings, and click Control Panel. The Control Panel window appears.
2. Click the System icon. The System Properties window appears. Click the Device Manager tab.
3. Double-click Sony i.LINK(1394) Adapter. The Sony i.LINK(1394) Adapter window appears. Click the Enable Device button.
4. Click OK. The Sony i.LINK(1394) Adapter icon should no longer have an "X" on it. This means Smart Connect is now enabled.
5. Close all windows, and restart your computer in order for the new settings to take effect.

Now your Smart Connect software is ready to use. Note that when you use Smart Connect to connect two VAIO computers, you must assign each computer a unique name by which it can be identified when the two computers are networked. See the Smart Connect online help for more information.

Sony Digital Media Park Applications

Media Bar

Media Bar software is your all-in-one solution for audio/video playback. Media Bar software handles all common computer multimedia formats, and controls selected Sony devices. Media Bar software encompasses audio/video library cataloging and playlist management, in addition to digital video quality control and effects features. Media Bar seamlessly integrates a variety of new media formats with an easy-to-use software interface.

DVgate Applications

DVgate makes it easy to edit digital videos. You can capture, edit, and grab digital video clips and then assemble them into a polished home video everyone will enjoy. You can also use DVgate to capture individual frames from digital video clips, and then save them as graphic files. Enhance your Web page, send family and friends your favorite stills, create your own wallpaper. The possibilities are endless.

PictureGear

PictureGear is a digital image management application that allows you to see all the images stored in any directory on your computer. Thumbnail views provide quick reminders of your pictures. Brighten, contrast, enhance, resize, crop, and color-correct your pictures. Create panoramic views, animations, screen savers, wallpaper, and even HTML photo albums.

Smart Capture

Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK connection between your computer and a Sony Digital Handycam Camcorder, or other cameras that support the i.LINK interface. Smart Capture allows you to capture and compress video or still images that you can save or share via e-mail. Captures are low resolution, making it ideal for e-mail. For high-quality captures, use DVgate.

Using Digital Video

Connecting a Digital Video Recorder

Before connecting a digital video camera recorder to your computer, turn off the power on the camera. After connecting the camera, turn the power back on. You do not need to turn off the computer when connecting a camera.

Using DVgate

DVgate Motion saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate Motion, you should defragment your D partition regularly. For information on how to defragment your D partition, see your *VAIO Digital Studio Computer User Guide*.

When capturing clips:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
- Captures larger than 2 GB (9 minutes and 30 seconds) are automatically continued in a second file.
- You can record stereo audio (stereo 1) while capturing video. You cannot add audio on the stereo 2 track after capturing the video data.
- You cannot use different audio modes on the same tape. You should perform a separate capture for each audio mode you wish to use.
- DVgate does not support hard disk compression. You should not use disk compression if you are planning to work with DVgate.

- Title data is saved in the flash memory of a digital video camera and is not transferred to tape by DVgate.
- To avoid interruption of capture sessions, you should disable the screen saver.
- The drop frame compensation feature does not provide accurate compensation adjustments for tapes recorded in LP mode.
- For tapes that include a mixture of both SP and LP mode, the information displayed by the capture progress indicator may not be accurate.
- Make sure the video head of your digital video device is properly cleaned. Anomalies that you see in captured data could be due to dust or other particles on the video head.
 - The last frame captured is one frame before your selected [OUT] point. The frame you see immediately after clicking the [OUT] button is not captured.

When recording AVI files to tape:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
 - You can record only AVI files. MPEG files cannot be recorded.
- To avoid recording problems, such as a single frame appearing in multiple frames, close other applications on your system while recording.
- You cannot use different audio modes on the same tape. If you have AVI files that use different audio modes, they cannot be recorded at the same time, but must be recorded separately.
- Do not attempt to work with AVI files that are smaller than 4 MB.
- DVgate does not support hard disk compression. Do not use disk compression if you are planning to work with DVgate.
- In order to maximize recording capabilities, video and audio data are not available while you are recording.

If DVgate indicates that frames have been dropped, close all open applications, or defragment your hard drive.

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D. DVgate saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate, you should defragment your D partition regularly.

Defragmenting your Hard Disk Drive

If you encounter frame dropping while recording digital video onto your hard disk drive, defragmentation may be necessary. To defragment your hard disk drive, click the Start button, point to Programs/Accessories/System Tools, and then select Disk Defragmenter. Please note that it may take more than a couple of hours to complete defragmentation, depending on the data capacity and utilization of your computer's hard disk drive(s).

Applications That Use the TWAIN Driver

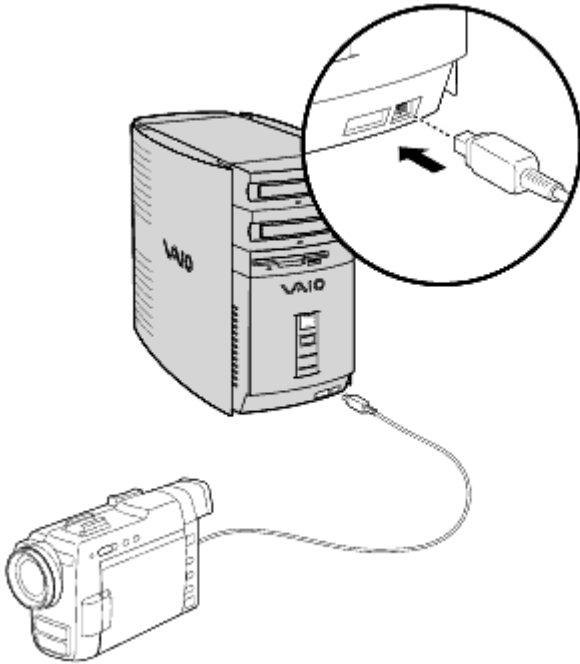
Digital imaging applications, such as Adobe PhotoDeluxe®, allow you to transfer images to your computer from external devices, including scanners or digital cameras. For some devices, a TWAIN driver window appears on the screen. Always close the TWAIN driver window before exiting or minimizing a digital imaging application.


i.LINK (IEEE-1394) Compatibility

Your VAIO® computer includes a 4-pin i.LINK connector on the front of the system and a 6-pin i.LINK connector on the back of the system. A 6-pin i.LINK connector can supply power from the computer to the connected device if the device is equipped with a 6-pin connector. A 6-pin connector supplies 10V to 12V. The total power supplied by the 6-pin i.LINK connector cannot exceed 6 watts. A 4-pin i.LINK connector cannot supply power to a connected device. The following Sony i.LINK 400 Mbps cables are available and recommended for use with your computer: VMC-IL4415, VMC-IL4435, VMC-IL4615, VMC-IL4635, VMC-IL6615, and VMC-IL6635. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

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

- Use the  symbol to locate the **i.link** connector. Plug the i.LINK cable 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.

Enabling Smart Connect

Your computer comes with preinstalled Smart Connect software. To enable faster startup, your computer ships with this software disabled. To enable Smart Connect:

1. Click the Start button, select Settings, and click Control Panel. The Control Panel window appears.
2. Click the System icon. The System Properties window appears. Click the Device Manager tab.
3. Double-click Sony i.LINK(1394) Adapter. The Sony i.LINK(1394) Adapter window appears. Click the Enable Device button.
4. Click OK. The Sony i.LINK(1394) Adapter icon should no longer have an "X" on it. This means Smart Connect is now enabled.
5. Close all windows, and restart your computer in order for the new settings to take effect.

Now your Smart Connect software is ready to use. Note that when you use Smart Connect to connect two VAIO computers, you must assign each computer a unique name by which it can be identified when the two computers are networked. See the Smart Connect online help for more information.

Sony Digital Media Park Applications

Media Bar

Media Bar software is your all-in-one solution for audio/video playback. Media Bar software handles all common computer multimedia formats, and controls selected Sony devices. Media Bar software encompasses audio/video library cataloging and playlist management, in addition to digital video quality control and effects features. Media Bar seamlessly integrates a variety of new media formats with an easy-to-use software interface.

DVgate Applications

DVgate makes it easy to edit digital videos. You can capture, edit, and grab digital video clips and then assemble them into a polished home video everyone will enjoy. You can also use DVgate to capture individual frames from digital video clips, and then save them as graphic files. Enhance your Web page, send family and friends your favorite stills, create your own wallpaper. The possibilities are endless.

PictureGear

PictureGear is a digital image management application that allows you to see all the images stored in any directory on your computer. Thumbnail views provide quick reminders of your pictures. Brighten, contrast, enhance, resize, crop, and color-correct your pictures. Create panoramic views, animations, screen savers, wallpaper, and even HTML photo albums.

Smart Capture

Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK connection between your computer and a Sony Digital Handycam Camcorder, or other cameras that support the i.LINK interface. Smart Capture allows you to capture and compress video or still images that you can save or share via e-mail. Captures are low resolution, making it ideal for e-mail. For high-quality captures, use DVgate.

Using Digital Video

Connecting a Digital Video Recorder

Before connecting a digital video camera recorder to your computer, turn off the power on the camera. After connecting the camera, turn the power back on. You do not need to turn off the computer when connecting a camera.

Using DVgate

DVgate Motion saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate Motion, you should defragment your D partition regularly. For information on how to defragment your D partition, see your *VAIO Digital Studio Computer User Guide*.

When capturing clips:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
- Captures larger than 2 GB (9 minutes and 30 seconds) are automatically continued in a second file.
- You can record stereo audio (stereo 1) while capturing video. You cannot add audio on the stereo 2 track after capturing the video data.
- You cannot use different audio modes on the same tape. You should perform a separate capture for each audio mode you wish to use.
- DVgate does not support hard disk compression. You should not use disk compression if you are planning to work with DVgate.

- Title data is saved in the flash memory of a digital video camera and is not transferred to tape by DVgate.
- To avoid interruption of capture sessions, you should disable the screen saver.
- The drop frame compensation feature does not provide accurate compensation adjustments for tapes recorded in LP mode.
- For tapes that include a mixture of both SP and LP mode, the information displayed by the capture progress indicator may not be accurate.
- Make sure the video head of your digital video device is properly cleaned. Anomalies that you see in captured data could be due to dust or other particles on the video head.
 - The last frame captured is one frame before your selected [OUT] point. The frame you see immediately after clicking the [OUT] button is not captured.

When recording AVI files to tape:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
 - You can record only AVI files. MPEG files cannot be recorded.
- To avoid recording problems, such as a single frame appearing in multiple frames, close other applications on your system while recording.
- You cannot use different audio modes on the same tape. If you have AVI files that use different audio modes, they cannot be recorded at the same time, but must be recorded separately.
- Do not attempt to work with AVI files that are smaller than 4 MB.
- DVgate does not support hard disk compression. Do not use disk compression if you are planning to work with DVgate.
- In order to maximize recording capabilities, video and audio data are not available while you are recording.

If DVgate indicates that frames have been dropped, close all open applications, or defragment your hard drive.

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D. DVgate saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate, you should defragment your D partition regularly.

Defragmenting your Hard Disk Drive

If you encounter frame dropping while recording digital video onto your hard disk drive, defragmentation may be necessary. To defragment your hard disk drive, click the Start button, point to Programs/Accessories/System Tools, and then select Disk Defragmenter. Please note that it may take more than a couple of hours to complete defragmentation, depending on the data capacity and utilization of your computer's hard disk drive(s).

Applications That Use the TWAIN Driver

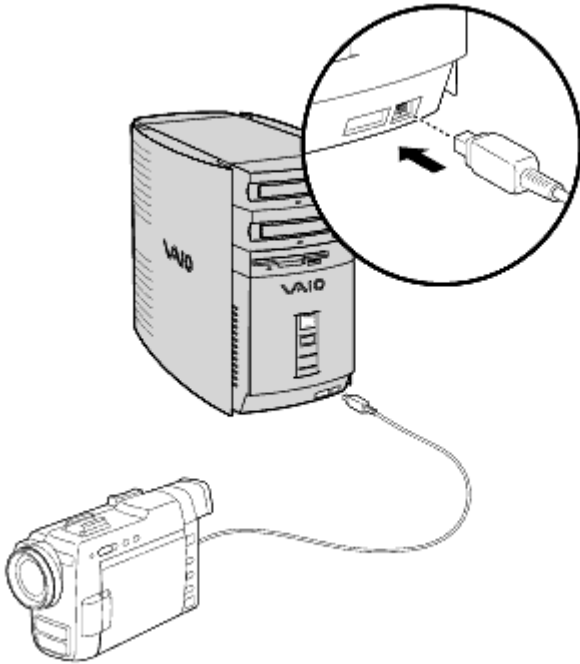
Digital imaging applications, such as Adobe PhotoDeluxe®, allow you to transfer images to your computer from external devices, including scanners or digital cameras. For some devices, a TWAIN driver window appears on the screen. Always close the TWAIN driver window before exiting or minimizing a digital imaging application.


i.LINK (IEEE-1394) Compatibility

Your VAIO® computer includes a 4-pin i.LINK connector on the front of the system and a 6-pin i.LINK connector on the back of the system. A 6-pin i.LINK connector can supply power from the computer to the connected device if the device is equipped with a 6-pin connector. A 6-pin connector supplies 10V to 12V. The total power supplied by the 6-pin i.LINK connector cannot exceed 6 watts. A 4-pin i.LINK connector cannot supply power to a connected device. The following Sony i.LINK 400 Mbps cables are available and recommended for use with your computer: VMC-IL4415, VMC-IL4435, VMC-IL4615, VMC-IL4635, VMC-IL6615, and VMC-IL6635. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

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

- Use the  symbol to locate the **i.link** connector. Plug the i.LINK cable 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.

Enabling Smart Connect

Your computer comes with preinstalled Smart Connect software. To enable faster startup, your computer ships with this software disabled. To enable Smart Connect:

1. Click the Start button, select Settings, and click Control Panel. The Control Panel window appears.
2. Click the System icon. The System Properties window appears. Click the Device Manager tab.
3. Double-click Sony i.LINK(1394) Adapter. The Sony i.LINK(1394) Adapter window appears. Click the Enable Device button.
4. Click OK. The Sony i.LINK(1394) Adapter icon should no longer have an "X" on it. This means Smart Connect is now enabled.
5. Close all windows, and restart your computer in order for the new settings to take effect.

Now your Smart Connect software is ready to use. Note that when you use Smart Connect to connect two VAIO computers, you must assign each computer a unique name by which it can be identified when the two computers are networked. See the Smart Connect online help for more information.

Sony Digital Media Park Applications

Media Bar

Media Bar software is your all-in-one solution for audio/video playback. Media Bar software handles all common computer multimedia formats, and controls selected Sony devices. Media Bar software encompasses audio/video library cataloging and playlist management, in addition to digital video quality control and effects features. Media Bar seamlessly integrates a variety of new media formats with an easy-to-use software interface.

DVgate Applications

DVgate makes it easy to edit digital videos. You can capture, edit, and grab digital video clips and then assemble them into a polished home video everyone will enjoy. You can also use DVgate to capture individual frames from digital video clips, and then save them as graphic files. Enhance your Web page, send family and friends your favorite stills, create your own wallpaper. The possibilities are endless.

PictureGear

PictureGear is a digital image management application that allows you to see all the images stored in any directory on your computer. Thumbnail views provide quick reminders of your pictures. Brighten, contrast, enhance, resize, crop, and color-correct your pictures. Create panoramic views, animations, screen savers, wallpaper, and even HTML photo albums.

Smart Capture

Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK connection between your computer and a Sony Digital Handycam Camcorder, or other cameras that support the i.LINK interface. Smart Capture allows you to capture and compress video or still images that you can save or share via e-mail. Captures are low resolution, making it ideal for e-mail. For high-quality captures, use DVgate.

Using Digital Video

Connecting a Digital Video Recorder

Before connecting a digital video camera recorder to your computer, turn off the power on the camera. After connecting the camera, turn the power back on. You do not need to turn off the computer when connecting a camera.

Using DVgate

DVgate Motion saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate Motion, you should defragment your D partition regularly. For information on how to defragment your D partition, see your *VAIO Digital Studio Computer User Guide*.

When capturing clips:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
- Captures larger than 2 GB (9 minutes and 30 seconds) are automatically continued in a second file.
- You can record stereo audio (stereo 1) while capturing video. You cannot add audio on the stereo 2 track after capturing the video data.
- You cannot use different audio modes on the same tape. You should perform a separate capture for each audio mode you wish to use.
- DVgate does not support hard disk compression. You should not use disk compression if you are planning to work with DVgate.

- Title data is saved in the flash memory of a digital video camera and is not transferred to tape by DVgate.
- To avoid interruption of capture sessions, you should disable the screen saver.
- The drop frame compensation feature does not provide accurate compensation adjustments for tapes recorded in LP mode.
- For tapes that include a mixture of both SP and LP mode, the information displayed by the capture progress indicator may not be accurate.
- Make sure the video head of your digital video device is properly cleaned. Anomalies that you see in captured data could be due to dust or other particles on the video head.
 - The last frame captured is one frame before your selected [OUT] point. The frame you see immediately after clicking the [OUT] button is not captured.

When recording AVI files to tape:

- Do not use DVgate when the connected digital video peripheral is in Timer Recording mode, as this could produce a malfunction in the peripheral.
 - You can record only AVI files. MPEG files cannot be recorded.
- To avoid recording problems, such as a single frame appearing in multiple frames, close other applications on your system while recording.
- You cannot use different audio modes on the same tape. If you have AVI files that use different audio modes, they cannot be recorded at the same time, but must be recorded separately.
- Do not attempt to work with AVI files that are smaller than 4 MB.
- DVgate does not support hard disk compression. Do not use disk compression if you are planning to work with DVgate.
- In order to maximize recording capabilities, video and audio data are not available while you are recording.

If DVgate indicates that frames have been dropped, close all open applications, or defragment your hard drive.

Hard Drive Partition

In order to improve the performance of your computer's DVgate software, the hard disk drive on your computer has been formatted with two partitions, C and D. DVgate saves files to the D partition. This prevents large video captures from consuming the available space on your C partition. To maintain optimum performance of DVgate, you should defragment your D partition regularly.

Defragmenting your Hard Disk Drive

If you encounter frame dropping while recording digital video onto your hard disk drive, defragmentation may be necessary. To defragment your hard disk drive, click the Start button, point to Programs/Accessories/System Tools, and then select Disk Defragmenter. Please note that it may take more than a couple of hours to complete defragmentation, depending on the data capacity and utilization of your computer's hard disk drive(s).

Applications That Use the TWAIN Driver

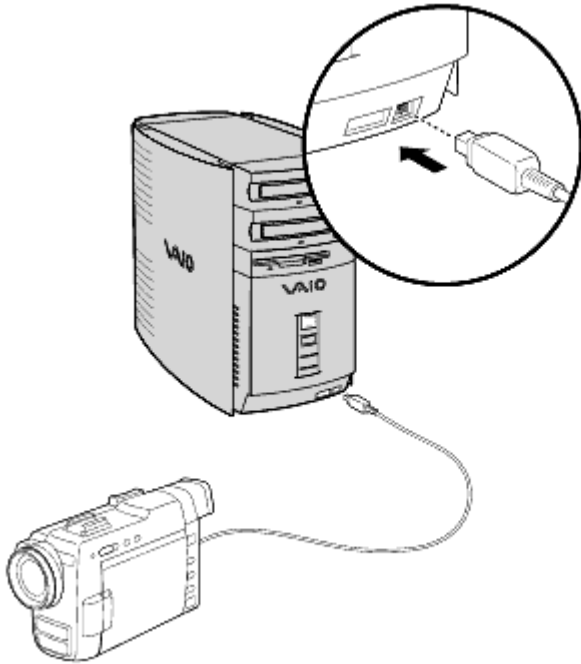
Digital imaging applications, such as Adobe PhotoDeluxe®, allow you to transfer images to your computer from external devices, including scanners or digital cameras. For some devices, a TWAIN driver window appears on the screen. Always close the TWAIN driver window before exiting or minimizing a digital imaging application.


i.LINK (IEEE-1394) Compatibility

Your VAIO® computer includes a 4-pin i.LINK connector on the front of the system and a 6-pin i.LINK connector on the back of the system. A 6-pin i.LINK connector can supply power from the computer to the connected device if the device is equipped with a 6-pin connector. A 6-pin connector supplies 10V to 12V. The total power supplied by the 6-pin i.LINK connector cannot exceed 6 watts. A 4-pin i.LINK connector cannot supply power to a connected device. The following Sony i.LINK 400 Mbps cables are available and recommended for use with your computer: VMC-IL4415, VMC-IL4435, VMC-IL4615, VMC-IL4635, VMC-IL6615, and VMC-IL6635. Sony computer supplies, accessories, and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

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

- Use the  symbol to locate the **i.link** connector. Plug the i.LINK cable 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.

Enabling Smart Connect

Your computer comes with preinstalled Smart Connect software. To enable faster startup, your computer ships with this software disabled. To enable Smart Connect:

1. Click the Start button, select Settings, and click Control Panel. The Control Panel window appears.
2. Click the System icon. The System Properties window appears. Click the Device Manager tab.
3. Double-click Sony i.LINK(1394) Adapter. The Sony i.LINK(1394) Adapter window appears. Click the Enable Device button.
4. Click OK. The Sony i.LINK(1394) Adapter icon should no longer have an "X" on it. This means Smart Connect is now enabled.
5. Close all windows, and restart your computer in order for the new settings to take effect.

Now your Smart Connect software is ready to use. Note that when you use Smart Connect to connect two VAIO computers, you must assign each computer a unique name by which it can be identified when the two computers are networked. See the Smart Connect online help for more information.

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 Customer Support. For more advanced troubleshooting information, see the *VAIO Digital Studio Computer Reference Manual*. You can download this electronic document from Sony's Web site at <http://www.sony.com/pcsupport>.

My computer does not 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.
- Confirm that a diskette is not in the diskette drive (unless you are using a bootable diskette).
- Confirm that the power cord and all cables are connected firmly, as described on the color poster.
- 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 Function](#)).

My files are corrupted or deleted and I want to recover applications or drivers that came with my computer

See [Using the Application Recovery CD\(s\)](#) of this manual.

My computer or software program "locks up"

- Close the application that is currently "locked up" by pressing Ctrl+Alt+Delete. In the Close Program dialog box, scroll down until you locate "(Not responding)" next to an application. Select this application and click End Task. Windows attempts to close the application. If the attempt is unsuccessful, a second dialog box appears. Select End Task again.
- If you are unable to "unlock" the application, repeat the above steps but select Shut Down when the Close Program dialog box appears.
- If the above steps fail to "unlock" your computer, save any unsaved work, if possible. Press Alt+F4. Select Restart and click OK.
- If you cannot restart as described in the preceding steps, you can restart the computer by pressing Ctrl+Alt+Delete or by pressing the power switch for more than six seconds.



Pressing Ctrl+Alt+Delete twice consecutively may result in the loss of changes made to files that are currently open.

- Contact the software publisher or designated provider for technical support. See the contact information on [For Answers to Your Software Questions-Windows® 98 Second Edition Operating System, Internet Explorer 5, Outlook® Express, Word 2000 \(Microsoft Corporation\)](#).

My DVD-ROM/CD-RW drive tray does not open

- Make sure the computer is turned on.
- Press the Eject button on the drive.
- 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, heavyweight paper clip into the emergency eject hole.

I cannot play a CD-ROM

- After inserting your CD, wait a few seconds for it to be detected before trying to access it.
- 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.
- If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

I cannot play a DVD-ROM

- If a region code warning appears when you are using the DVD player, it could be that the DVD-ROM you are trying to play is incompatible with the DVD-ROM drive in your VAIIO Digital Studio Computer. 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. Unless a "1" or "ALL" appears on the DVD or on the packaging, 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 screen area to 800 x 600 using 16-bit color. To change this setting, click the My Computer icon on your desktop, click Control Panel, and then click Display. Click the Settings tab. You can now change the screen area and color.
- If you see video but cannot hear audio, check all of the following: Make sure your DVD player's mute setting is off. Check the master volume setting in the audio Mixer. Check the volume settings on 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.

I want to play a CD with my Microsoft CD Player

When you insert a music CD, the Sony Media Bar automatically launches to play your CD. When the Sony Media Bar is running, the Microsoft CD Player does not have access to the CD. Close Media Bar to use the Microsoft CD Player. If you do not hear any music, check all your volume controls.

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

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

Why doesn't my CD-RW drive record at the highest speed?


You must use the correct media to achieve optimum performance. Use 8x media for PCV-R547DS and PCV-R549DS, and 4x media for PCV-R545DS. If you must use other media, the following steps may be helpful:

- If you are having difficulty formatting non-8x/4x writable media, change the write speed from 8x/4x to 2x or 1x. To change the default write speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.
- Right-click the CD-RW drive icon, select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK. Your CD-RW drive is assigned drive H as its default.

I need to change the video resolution of my display

From the Start menu, select Settings, and then click Control Panel. Click the Display icon. Select the Settings tab. Move the slider under Screen area to change the resolution.

My speakers have no sound

- Check that the speakers are plugged into the **headphones** connector.
- 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. There is a volume control  on the Windows® taskbar. Click the icon and slide the level bar up to increase the volume.
- 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 Lucent 1648 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 does not work

- Check that the phone line is plugged into the **line** jack.
- 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.
- Verify that the software you are using is appropriately configured to recognize and interact with the Sony computer modem. Call the software publisher if you do not know how to configure the software to recognize the modem. All programs, preinstalled by Sony, are compatible.
- If you suspect your modem is not functioning, you can perform a simple test to find out. Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click the Diagnostics tab and select COM2. Click More Info. If your modem is functioning, a More Info dialog box will display. If your modem is not functioning, an error message will appear.

I cannot change my modem to rotary/touch-tone dialing.

Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

I need to set up faxing in Windows® 98

Windows 98 does not provide a built-in fax utility. Sony has included the Symantec WinFax[®] Basic Edition for your faxing needs. To set up WinFax Basic, click the Start button, point to Programs, choose Symantec WinFax Basic Edition, and select Configure WinFax Basic Edition. Follow the on-screen instructions to configure the fax utility.

My microphone does not work

Check that the microphone is plugged into the **mic** connector.

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 check box for 1 Mic Gain (+20dB), then click the Close button.
7. Close the Recording Control window.

My mouse does not work

- Check that the mouse is plugged into the **mouse** connector.
- There may be dust or dirt inside the mouse mechanism. To clean the mouse, follow these steps:
 1. Turn off your computer. See [Shutting Down Your Computer](#) for details.
 2. Remove the mouse ball cover on the back side of the mouse.
 3. Turn the mouse upright, and drop the mouse ball into your hand.
 4. Using a piece of tape, remove any dust or dirt on the mouse ball and inside the mouse ball socket.
 5. Return the mouse ball to the socket, and replace the mouse ball cover.

My mouse needs to be set up for left-hand use

To set up the mouse for left-hand use:

1. Click the My Computer icon on your desktop.
2. Click Control Panel, and then click Mouse. The Mouse Properties dialog box appears.
3. In the Quick Setup tab, click Device Setup.
4. In the Device Setup Wizard dialog box, click Next.
5. Select the radio button next to "Left side of the keyboard."
6. Click Next three times, and then click Finish.
7. Click Apply.

My keyboard does not work

Check that the keyboard is plugged into the **keyboard** connector.

I cannot 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.

Windows locks up during shut down

The Windows operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or nonresponsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

My system is running slowly

Your system's responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. For information on installing memory, please see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Sony computer supplies, accessories and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

My i.LINK® peripheral does not appear on the desktop

Turn off and disconnect your peripheral. Reconnect your peripheral, and then turn on the power.

My connected printer doesn't function after the computer resumes from a power saving mode.

When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.
4. The printer should now function properly.

There is unusual activity on my floppy disk drive

If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.



See the VAIO Digital Studio Computer [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\(s\)](#).

The System Recovery CD(s) contains a backup copy of 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. If your hard drive is partitioned into C and D drives, the computer offers you the option to reformat the drive into a single partition.
- **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 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 Customer Support.

To use the System Recovery CD(s)



You need to complete the Windows registration process when you use the System Recovery CD(s).

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 drive when you turn on the computer.

2. Shut down your computer as described in [Shutting Down Your Computer](#).
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 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\(s\)](#).

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

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.

About the Software on Your Computer

Your VAIO Digital Studio computer is ready to help you work, play, learn, and communicate as soon as you turn it on. This section gives you an overview of the activities you can perform with your software titles. For support information, see [For Answers to Your Software Questions](#).

Adobe Acrobat® Reader

Adobe Systems Incorporated

Acrobat Reader software allows you to view, navigate, and print electronic documents in Adobe's Portable Document Format (PDF), an open file format that is intended to preserve the fidelity of documents created on all major computer platforms.

Adobe PhotoDeluxe® Home Edition

Adobe Systems Incorporated

Create amazing photo effects with PhotoDeluxe. Without learning complex software, you can enhance, restore, and be creative with your photos. Includes built-in guided activities, stock photos, clip art, and templates to assist you.

Adobe Premiere® LE (PCV-R547DS/PCV-R549DS only)

Adobe Systems Incorporated

Adobe Premiere LE offers an interface and editing tool for producing movies for video, multimedia, or the Web. View source clips and edited footage simultaneously in the monitor window. Create video clips up to three hours long with complete audio-video synchronization.

America Online®

America Online

America Online is the world's most popular Internet online service. Stay in touch with family and friends with Easy-to-Use E-mail, manage your personal finances, get the latest news and sports scores, and chat with thousands of others who share your interests.

AT&T WorldNet® Service

AT&T

Fast, reliable Internet access from AT&T WorldNet Service. AT&T WorldNet Service provides Web-based e-mail, a personalized start page from Excite, easy access to the Excite search engine, free Web pages, online and live agent technical support, instant messaging, and special shopping discounts at Market Square.

CompuServe® 2000

CompuServe Interactive Services

The all-new CompuServe 2000 delivers a powerful tool for Internet users who want serious and timely information, in-depth research, and professional communities backed by state-of-the-art technologies, including high-speed access and powerful e-mail messaging.

Digital Media Bar

Sony Electronics

Media Bar is your all-in-one solution for audio/video playback. For more information, see [Media Bar](#)

—.

Direct CD

Adaptec

DirectCD is software that allows you to drag and drop files directly to your CD-R or CD-RW drive under Windows 95 / 98 / NT 4.0 or Mac OS. In other words, you can save, rename, move or "delete" files right on your CD-R as if it were a giant floppy disk.

DVgate Applications

Sony Electronics

Sony Electronics DVgate makes editing digital video easy and fun. For more information, see [DVgate Applications](#).

EarthLink Sprint TotalAccess

EarthLink Network, Inc.

An Internet Service Provider that supplies access, information, and assistance to its customers, introducing them to the Internet. Member benefits include e-mail, newsgroups, a Personal Start Page, a free 6 MB Web site, a member magazine, and 24-hour technical support.

Easy CD Creator

Adaptec

Easy CD Creator lets you make your own data, audio and multimedia CDs. You can back up your important files to CD, and read them back on standard CD-ROM drives. Create your own audio CDs right on your desktop, and play them back on your home or car stereo CD player. You can make your own personalized color jewel case inserts with custom text and graphics. You can even make backup copies of your existing CDs. The easy CD Creator Wizard makes creating your own custom CDs a simple process.

eMail inChorus (PCV-R545DS only)

Softlink, Inc.

This communications tool turns your e-mail into multimedia e-mail. With eMail inChorus , in minutes you can send your colleagues and friends presentations and e-mails narrated with your prerecorded voice, and illustrated with graphics and animated annotation.

McAfee's VirusScan®

Network Associates, Inc.

Protect your computer from viruses. VirusScan can detect viruses from floppy disks, Internet downloads, e-mail attachments, intranets, shared files, CD-ROMs, and online services.

Microsoft® Internet Explorer 5

Microsoft Corporation

Internet Explorer delivers the web the way you want it. It's safe, easy to use, and you can personalize how you access the web. Outlook Express and other tools in Internet Explorer also help you have a great experience when you are on the web!

Microsoft® Outlook® Express

Microsoft Corporation

Outlook Express, the messaging tool that takes your e-mail and newsgroup communications to new heights! Outlook Express is easy to set up and use, and provides you with secure, personalized, and complete features that make creating, sending, and reading your e-mail a more

rich and dynamic experience.

Microsoft® Word 2000

Microsoft Corporation

Microsoft Word 2000 makes it easy to create common Web, e-mail, and print documents for use around the world. It embraces HTML as a first-class file format and extends Word's ease-of-use to the Web and e-mail. Word 2000 also extends that ease of use to international users, making it easy to create multilingual documents.

MindSpring® Internet Desktop

MindSpring Enterprises, Inc.

The MindSpring Internet Desktop offers you access to different areas of the Internet from one convenient program. With a single click on the MindSpring Internet Desktop, you can easily search the Internet, send and receive e-mail, access news and weather, and more.

Netscape Communicator®

Netscape Communications

Netscape Communicator is the all-in-one Internet tool that makes it easy to browse the Web, send Internet e-mail, chat, read newsgroups, and compose great Web documents.

PictureGear

Sony Electronics

This image management software displays images from your hard drive, a Sony digital still camera, or a Sony Mavica® camera. The images appear in a convenient light-table format, so that you can easily view the contents of an entire folder.

Prodigy Internet

Prodigy Communications Corporation

An Internet service that helps you find what you need online faster and smarter. Prodigy delivers powerful online content, such as sports scores, stock quotes, news, and easy access to Excite , plus a personal e-mail account and quality customer service -- all at a competitive price.

Quicken® Basic

Intuit, Inc.

Quicken is the fastest, easiest way to organize your finances. Quicken works just like your checkbook, so it's easy to learn and use. Quicken manages all of your finances, bank accounts, credit cards, investments, and loans. You can even pay your bills online.

Smart Capture

Sony Electronics

By managing the i.LINK connection between your computer and a camera with an i.LINK interface, Smart Capture enables you to capture and compress video or still images that you can save or share via e-mail. A smart solution to computer, digital audio/video, and network convergence. For more information, see [Smart Capture](#).

Smart Connect

Sony Electronics

Smart Connect allows you to use an i.LINK cable to connect your VAIO computer to another VAIO computer that supports Smart Connect. You can then use one computer to copy, delete, and edit files on the other computer. You can also print from a printer attached to either computer.

Sound Forge® XP (PCV-R547DS/PCV-R549DS only)

Sonic Foundry

Sound Forge XP allows you to put powerful audio processing tools and effects to work on your desktop. Simply cut, copy, and paste your way to striking multimedia files for use in everything from Web pages to desktop presentations.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

Sony Electronics Inc.

VAIO Action Setup manages the settings for your computer's Shortcut keys and i.LINK interface. For details on using VAIO Action Setup, see [VAIO Action Setup \(PCV-R547DS/PCV-R549DS only\)](#).

VAIO Smart Keyboard

Sony Electronics

VAIO Smart Keyboard software operates your new easy-to-use programmable PS/2 keyboard. Six programmable buttons enable you to launch your favorite applications, open frequently used files, access Explorer, or even open your Web browser with just the click of a button.

Wild Metal Country®

Infogrames North America

Attempt to reclaim planets in the Tehric system, where a devastating civil war has left hunter-killer machines in control. In your war machine, you will seek control of vital power cores and fight off the enemy with a wide array of sophisticated ammunition.

WinFax® Basic Edition

Symantec Corporation

WinFax Basic Edition incorporates an easy-to-use interface that allows you to send and receive faxes easily. Upgrade to WinFax Pro to receive additional features.

About Your Recovery CDs

Application Recovery CD(s)

Sony Electronics

The Application Recovery CD program allows you to reinstall individual applications and device drivers. Use it to restore corrupted or accidentally erased files.

System Recovery CD(s)

Sony Electronics

The System Recovery CD program allows you to restore the software titles that shipped with your computer if they become corrupted or are erased accidentally. It can be used only to restore the hard disk of the Sony computer you purchased.

For Answers to Your Software Questions

Sony Service Center

For the Sony Service Center nearest you, call 1-888-4SONYPC (1-888-476-6972). This service is free of charge for 90 days after the original date of purchase.

Acrobat® Reader, Adobe PhotoDeluxe® Home Edition, Adobe Premiere® LE (Adobe Systems Incorporated)

Web site <http://www.adobe.com/>
phone 206-628-2746 (fee-based support)
fax 206-628-5737
e-mail techdocs@adobe.com
hours M - F, 6 AM - 5 PM PT

America Online® (America Online)

Web site <http://www.aol.com/>
phone 800-827-3338
hours 7 days a week, 6 AM - 2 PM ET

AT&T WorldNet® Service (AT&T)

Web site <http://www.att.net/>¹
phone 800-400-1447
e-mail worldnet@attmail.com
hours 7 days a week, 24 hours a day
¹ You must be a WorldNet Service customer to access online support.

CompuServe® 2000 (CompuServe Interactive Services)

Web site <http://www.compuserve.com/>
phone 800-848-8990

EarthLink TotalAccess (EarthLink Network, Inc.)

Web site <http://help.earthlink.net/techsupport/>
phone 800-395-8410
e-mail support@earthlink.net
hours 7 days a week, 24 hours a day

eMail inChorus (Softlink, Inc.)

Web site <http://www.sonk.com>
phone 408-970-3370
e-mail support@sonk.com

McAfee's VirusScan® (Network Associates, Inc.)

Web site <http://support.mcafee.com>
phone 408-988-3832
e-mail cybr@nai.com
hours M - F, 9 AM - 5 PM CT

Quicken® Basic (Intuit, Inc.)

Web site <http://www.intuit.com/support/>
phone 900-555-4688
hours 7 days a week, 24 hours a day

Sound Forge® (Sonic Foundry)

Web site <http://www.sonicfoundry.com/support/>
phone 608-256-5555
fax 608-256-7300
e-mail support@sonicfoundry.com
hours M - F, 8 AM - 7 PM CT

Wild Metal Country® (Infogrames North America)

Web site <http://www.infogrames.net>
phone 408-296-8400
fax 408-246-0231
e-mail help@infogrames.net
hours M - F, 9 AM - 5 PM PT

Windows® 98 Second Edition Operating System, Internet Explorer 5, Outlook® Express, Word 2000 (Microsoft Corporation)

Web site <http://www.sony.com/pcsupport>
phone 888-4SONYPC (888-476-6972)¹
hours 7 days a week, 24 hours a day

¹ Support from 1-888-4SONYPC is free of charge for 90 days after the original date of purchase.

WinFax® Basic Edition (Symantec Corporation)

Web site <http://www.symantec.com/techsupp/>
phone 800-798-0850
fax 800-554-4403 in North America
541-984-2490 outside North America

Specifications

Model	PCV-R545DS	PCV-R547DS
Processor	500 MHz ¹ Pentium® III	600 MHz* Pentium® III
Hard Disk Drive	20 GB ²	27 GB
Standard SDRAM	128 MB PC-100 SDRAM, expandable to 256 MB	128 MB PC-100 SDRAM, expandable to 256 MB
Video RAM	Shared with system memory 16 MB SDRAM	
MPEG	"Sony Tuned" MPEG Digital Video supports full-screen video playback	
Graphics	Intel 810	nVidia TNT 2 Pro
Sound Capabilities	Aureal 8810 Aureal 8830	
Diskette Drive	3.5" 1.44 MB FDD 3.5" 1.44 MB FDD	
CD-RW Drive	24X max. CD-ROM reading, 4X max. CD-R writing, 24X max. CD-R reading, 2X max. CD-RW writing, 8X max. CD-RW reading 32X max. CD-ROM reading, 8X max. CD-R writing, 32X max. CD-R reading, 4X max. CD-RW writing, 20X max. CD-RW reading	
DVD-ROM Drive	8X max. DVD-ROM (40X max. CD-ROM) ³	
Modem	Lucent 1646 technology/V.90 compatible data/fax modem ⁴	
Expansion Capabilities	HDD bay	HDD bay
Connection Capabilities (Front)	USB port	
i.LINK port (4--pin)	USB port	
i.LINK port (4--pin)		
Connection Capabilities (Rear)	USB port	
PS/2 (2)		
VGA Monitor port		
Serial port		
Parallel (printer)		
Game/MIDI		
Headphones		
Line In		
Microphone		
i.LINK (6-pin)		
Modem line (RJ-11)		
Phone line (RJ-11)	USB port	
PS/2 (2)		
VGA Monitor port		
Serial port		
Parallel (printer)		
Game/MIDI		
Headphones		
Line In		
Microphone		
i.LINK (6-pin)		
Modem line (RJ-11)		
Phone line (RJ-11)		
Supplied Accessories	VAIO Smart Keyboard	
PS/2 Wheel Mouse		
Speakers (SRS- Z050V)		
Power cord		
Modem cable	VAIO Smart Keyboard	
PS/2 Wheel Mouse		
Speakers (SRS- Z050V)		
Power cord		
Modem cable		
i.LINK cable		
Service	90-day limited service. Extendible to one year from original date of purchase upon	

registration⁵

Limited Warranty 90-day parts/labor standard. Extendible to one year from original date of purchase upon registration⁶

Power Requirements 200 watts maximum

Dimensions 8.6"(w) x 14"(h) x 15.5"(d) (220mm x 358mm x 394mm)

Weight 25.3lbs (11.5kg) 25.3lbs (11.5kg)

Operating Temperature 50°F to 95°F (+10°C to 35°C)

¹ MHz denotes microprocessor internal clock speed; other factors may affect application performance.

² GB means one billion bytes when referring to hard drive capacity. Accessible capacity may vary.

³ Data on a DVD-ROM is read at a variable transfer rate, ranging from 3.3X at the innermost track to 8X at the outermost track (the data transfer standard 1X rate is 1385 kbytes/s). The average data transfer rate is 5.6X (7634 kbytes/s). Data on a CD-ROM is read at a variable transfer rate, ranging from 17.2X at the innermost track to 40X at the outermost track (the data transfer standard 1X rate is 150 kbytes/s). The average data transfer rate is 28.6X (4293 kbytes/s).

⁴ Maximum speed for faxing is 14.4 kbytes/s. Your modem is capable of downloading at 56 kbytes/s using K56flex technology or V.90. Your phone service, online service, or Internet Service Provider, however, may not support this technology or operate at this speed.

⁵ Certain restrictions apply

⁶ Certain restrictions apply

Specifications are subject to change without notice.

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 Customer Support. For more advanced troubleshooting information, see the *VAIO Digital Studio Computer Reference Manual*. You can download this electronic document from Sony's Web site at <http://www.sony.com/pcsupport>.

My computer does not 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.
- Confirm that a diskette is not in the diskette drive (unless you are using a bootable diskette).
- Confirm that the power cord and all cables are connected firmly, as described on the color poster.
- 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 Function](#)).

My files are corrupted or deleted and I want to recover applications or drivers that came with my computer

See [Using the Application Recovery CD\(s\)](#) of this manual.

My computer or software program "locks up"

- Close the application that is currently "locked up" by pressing Ctrl+Alt+Delete. In the Close Program dialog box, scroll down until you locate "(Not responding)" next to an application. Select this application and click End Task. Windows attempts to close the application. If the attempt is unsuccessful, a second dialog box appears. Select End Task again.
- If you are unable to "unlock" the application, repeat the above steps but select Shut Down when the Close Program dialog box appears.
- If the above steps fail to "unlock" your computer, save any unsaved work, if possible. Press Alt+F4. Select Restart and click OK.
- If you cannot restart as described in the preceding steps, you can restart the computer by pressing Ctrl+Alt+Delete or by pressing the power switch for more than six seconds.



Pressing Ctrl+Alt+Delete twice consecutively may result in the loss of changes made to files that are currently open.

- Contact the software publisher or designated provider for technical support. See the contact information on [For Answers to Your Software Questions-Windows® 98 Second Edition Operating System, Internet Explorer 5, Outlook® Express, Word 2000 \(Microsoft Corporation\)](#).

My DVD-ROM/CD-RW drive tray does not open

- Make sure the computer is turned on.
- Press the Eject button on the drive.
- 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, heavyweight paper clip into the emergency eject hole.

I cannot play a CD-ROM

- After inserting your CD, wait a few seconds for it to be detected before trying to access it.
- 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.
- If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

I cannot play a DVD-ROM

- If a region code warning appears when you are using the DVD player, it could be that the DVD-ROM you are trying to play is incompatible with the DVD-ROM drive in your VAIIO Digital Studio Computer. 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. Unless a "1" or "ALL" appears on the DVD or on the packaging, 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 screen area to 800 x 600 using 16-bit color. To change this setting, click the My Computer icon on your desktop, click Control Panel, and then click Display. Click the Settings tab. You can now change the screen area and color.
- If you see video but cannot hear audio, check all of the following: Make sure your DVD player's mute setting is off. Check the master volume setting in the audio Mixer. Check the volume settings on 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.

I want to play a CD with my Microsoft CD Player

When you insert a music CD, the Sony Media Bar automatically launches to play your CD. When the Sony Media Bar is running, the Microsoft CD Player does not have access to the CD. Close Media Bar to use the Microsoft CD Player. If you do not hear any music, check all your volume controls.

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

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

Why doesn't my CD-RW drive record at the highest speed?


You must use the correct media to achieve optimum performance. Use 8x media for PCV-R547DS and PCV-R549DS, and 4x media for PCV-R545DS. If you must use other media, the following steps may be helpful:

- If you are having difficulty formatting non-8x/4x writable media, change the write speed from 8x/4x to 2x or 1x. To change the default write speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.
- Right-click the CD-RW drive icon, select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK. Your CD-RW drive is assigned drive H as its default.

I need to change the video resolution of my display

From the Start menu, select Settings, and then click Control Panel. Click the Display icon. Select the Settings tab. Move the slider under Screen area to change the resolution.

My speakers have no sound

- Check that the speakers are plugged into the **headphones** connector.
- 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. There is a volume control  on the Windows® taskbar. Click the icon and slide the level bar up to increase the volume.
- 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 Lucent 1648 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 does not work

- Check that the phone line is plugged into the **line** jack.
- 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.
- Verify that the software you are using is appropriately configured to recognize and interact with the Sony computer modem. Call the software publisher if you do not know how to configure the software to recognize the modem. All programs, preinstalled by Sony, are compatible.
- If you suspect your modem is not functioning, you can perform a simple test to find out. Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click the Diagnostics tab and select COM2. Click More Info. If your modem is functioning, a More Info dialog box will display. If your modem is not functioning, an error message will appear.

I cannot change my modem to rotary/touch-tone dialing.

Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

I need to set up faxing in Windows® 98

Windows 98 does not provide a built-in fax utility. Sony has included the Symantec WinFax[®] Basic Edition for your faxing needs. To set up WinFax Basic, click the Start button, point to Programs, choose Symantec WinFax Basic Edition, and select Configure WinFax Basic Edition. Follow the on-screen instructions to configure the fax utility.

My microphone does not work

Check that the microphone is plugged into the **mic** connector.

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 check box for 1 Mic Gain (+20dB), then click the Close button.
7. Close the Recording Control window.

My mouse does not work

- Check that the mouse is plugged into the **mouse** connector.
- There may be dust or dirt inside the mouse mechanism. To clean the mouse, follow these steps:
 1. Turn off your computer. See [Shutting Down Your Computer](#) for details.
 2. Remove the mouse ball cover on the back side of the mouse.
 3. Turn the mouse upright, and drop the mouse ball into your hand.
 4. Using a piece of tape, remove any dust or dirt on the mouse ball and inside the mouse ball socket.
 5. Return the mouse ball to the socket, and replace the mouse ball cover.

My mouse needs to be set up for left-hand use

To set up the mouse for left-hand use:

1. Click the My Computer icon on your desktop.
2. Click Control Panel, and then click Mouse. The Mouse Properties dialog box appears.
3. In the Quick Setup tab, click Device Setup.
4. In the Device Setup Wizard dialog box, click Next.
5. Select the radio button next to "Left side of the keyboard."
6. Click Next three times, and then click Finish.
7. Click Apply.

My keyboard does not work

Check that the keyboard is plugged into the **keyboard** connector.

I cannot 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.

Windows locks up during shut down

The Windows operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or nonresponsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

My system is running slowly

Your system's responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. For information on installing memory, please see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Sony computer supplies, accessories and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

My i.LINK® peripheral does not appear on the desktop

Turn off and disconnect your peripheral. Reconnect your peripheral, and then turn on the power.

My connected printer doesn't function after the computer resumes from a power saving mode.

When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.
4. The printer should now function properly.

There is unusual activity on my floppy disk drive

If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.



See the VAIO Digital Studio Computer [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\(s\)](#).

The System Recovery CD(s) contains a backup copy of 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. If your hard drive is partitioned into C and D drives, the computer offers you the option to reformat the drive into a single partition.
- **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 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 Customer Support.

To use the System Recovery CD(s)



You need to complete the Windows registration process when you use the System Recovery CD(s).

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 drive when you turn on the computer.

2. Shut down your computer as described in [Shutting Down Your Computer](#).
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 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\(s\)](#).

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

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.

About the Software on Your Computer

Your VAIO Digital Studio computer is ready to help you work, play, learn, and communicate as soon as you turn it on. This section gives you an overview of the activities you can perform with your software titles. For support information, see [For Answers to Your Software Questions](#).

Adobe Acrobat® Reader

Adobe Systems Incorporated

Acrobat Reader software allows you to view, navigate, and print electronic documents in Adobe's Portable Document Format (PDF), an open file format that is intended to preserve the fidelity of documents created on all major computer platforms.

Adobe PhotoDeluxe® Home Edition

Adobe Systems Incorporated

Create amazing photo effects with PhotoDeluxe. Without learning complex software, you can enhance, restore, and be creative with your photos. Includes built-in guided activities, stock photos, clip art, and templates to assist you.

Adobe Premiere® LE (PCV-R547DS/PCV-R549DS only)

Adobe Systems Incorporated

Adobe Premiere LE offers an interface and editing tool for producing movies for video, multimedia, or the Web. View source clips and edited footage simultaneously in the monitor window. Create video clips up to three hours long with complete audio-video synchronization.

America Online®

America Online

America Online is the world's most popular Internet online service. Stay in touch with family and friends with Easy-to-Use E-mail, manage your personal finances, get the latest news and sports scores, and chat with thousands of others who share your interests.

AT&T WorldNet® Service

AT&T

Fast, reliable Internet access from AT&T WorldNet Service. AT&T WorldNet Service provides Web-based e-mail, a personalized start page from Excite, easy access to the Excite search engine, free Web pages, online and live agent technical support, instant messaging, and special shopping discounts at Market Square.

CompuServe® 2000

CompuServe Interactive Services

The all-new CompuServe 2000 delivers a powerful tool for Internet users who want serious and timely information, in-depth research, and professional communities backed by state-of-the-art technologies, including high-speed access and powerful e-mail messaging.

Digital Media Bar

Sony Electronics

Media Bar is your all-in-one solution for audio/video playback. For more information, see [Media Bar](#)

—.

Direct CD

Adaptec

DirectCD is software that allows you to drag and drop files directly to your CD-R or CD-RW drive under Windows 95 / 98 / NT 4.0 or Mac OS. In other words, you can save, rename, move or "delete" files right on your CD-R as if it were a giant floppy disk.

DVgate Applications

Sony Electronics

Sony Electronics DVgate makes editing digital video easy and fun. For more information, see [DVgate Applications](#).

EarthLink Sprint TotalAccess

EarthLink Network, Inc.

An Internet Service Provider that supplies access, information, and assistance to its customers, introducing them to the Internet. Member benefits include e-mail, newsgroups, a Personal Start Page, a free 6 MB Web site, a member magazine, and 24-hour technical support.

Easy CD Creator

Adaptec

Easy CD Creator lets you make your own data, audio and multimedia CDs. You can back up your important files to CD, and read them back on standard CD-ROM drives. Create your own audio CDs right on your desktop, and play them back on your home or car stereo CD player. You can make your own personalized color jewel case inserts with custom text and graphics. You can even make backup copies of your existing CDs. The easy CD Creator Wizard makes creating your own custom CDs a simple process.

eMail inChorus (PCV-R545DS only)

Softlink, Inc.

This communications tool turns your e-mail into multimedia e-mail. With eMail inChorus , in minutes you can send your colleagues and friends presentations and e-mails narrated with your prerecorded voice, and illustrated with graphics and animated annotation.

McAfee's VirusScan®

Network Associates, Inc.

Protect your computer from viruses. VirusScan can detect viruses from floppy disks, Internet downloads, e-mail attachments, intranets, shared files, CD-ROMs, and online services.

Microsoft® Internet Explorer 5

Microsoft Corporation

Internet Explorer delivers the web the way you want it. It's safe, easy to use, and you can personalize how you access the web. Outlook Express and other tools in Internet Explorer also help you have a great experience when you are on the web!

Microsoft® Outlook® Express

Microsoft Corporation

Outlook Express, the messaging tool that takes your e-mail and newsgroup communications to new heights! Outlook Express is easy to set up and use, and provides you with secure, personalized, and complete features that make creating, sending, and reading your e-mail a more

rich and dynamic experience.

Microsoft® Word 2000

Microsoft Corporation

Microsoft Word 2000 makes it easy to create common Web, e-mail, and print documents for use around the world. It embraces HTML as a first-class file format and extends Word's ease-of-use to the Web and e-mail. Word 2000 also extends that ease of use to international users, making it easy to create multilingual documents.

MindSpring® Internet Desktop

MindSpring Enterprises, Inc.

The MindSpring Internet Desktop offers you access to different areas of the Internet from one convenient program. With a single click on the MindSpring Internet Desktop, you can easily search the Internet, send and receive e-mail, access news and weather, and more.

Netscape Communicator®

Netscape Communications

Netscape Communicator is the all-in-one Internet tool that makes it easy to browse the Web, send Internet e-mail, chat, read newsgroups, and compose great Web documents.

PictureGear

Sony Electronics

This image management software displays images from your hard drive, a Sony digital still camera, or a Sony Mavica® camera. The images appear in a convenient light-table format, so that you can easily view the contents of an entire folder.

Prodigy Internet

Prodigy Communications Corporation

An Internet service that helps you find what you need online faster and smarter. Prodigy delivers powerful online content, such as sports scores, stock quotes, news, and easy access to Excite , plus a personal e-mail account and quality customer service -- all at a competitive price.

Quicken® Basic

Intuit, Inc.

Quicken is the fastest, easiest way to organize your finances. Quicken works just like your checkbook, so it's easy to learn and use. Quicken manages all of your finances, bank accounts, credit cards, investments, and loans. You can even pay your bills online.

Smart Capture

Sony Electronics

By managing the i.LINK connection between your computer and a camera with an i.LINK interface, Smart Capture enables you to capture and compress video or still images that you can save or share via e-mail. A smart solution to computer, digital audio/video, and network convergence. For more information, see [Smart Capture](#).

Smart Connect

Sony Electronics

Smart Connect allows you to use an i.LINK cable to connect your VAIO computer to another VAIO computer that supports Smart Connect. You can then use one computer to copy, delete, and edit files on the other computer. You can also print from a printer attached to either computer.

Sound Forge® XP (PCV-R547DS/PCV-R549DS only)

Sonic Foundry

Sound Forge XP allows you to put powerful audio processing tools and effects to work on your desktop. Simply cut, copy, and paste your way to striking multimedia files for use in everything from Web pages to desktop presentations.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

Sony Electronics Inc.

VAIO Action Setup manages the settings for your computer's Shortcut keys and i.LINK interface. For details on using VAIO Action Setup, see [VAIO Action Setup \(PCV-R547DS/PCV-R549DS only\)](#).

VAIO Smart Keyboard

Sony Electronics

VAIO Smart Keyboard software operates your new easy-to-use programmable PS/2 keyboard. Six programmable buttons enable you to launch your favorite applications, open frequently used files, access Explorer, or even open your Web browser with just the click of a button.

Wild Metal Country®

Infogrames North America

Attempt to reclaim planets in the Tehric system, where a devastating civil war has left hunter-killer machines in control. In your war machine, you will seek control of vital power cores and fight off the enemy with a wide array of sophisticated ammunition.

WinFax® Basic Edition

Symantec Corporation

WinFax Basic Edition incorporates an easy-to-use interface that allows you to send and receive faxes easily. Upgrade to WinFax Pro to receive additional features.

About Your Recovery CDs

Application Recovery CD(s)

Sony Electronics

The Application Recovery CD program allows you to reinstall individual applications and device drivers. Use it to restore corrupted or accidentally erased files.

System Recovery CD(s)

Sony Electronics

The System Recovery CD program allows you to restore the software titles that shipped with your computer if they become corrupted or are erased accidentally. It can be used only to restore the hard disk of the Sony computer you purchased.

For Answers to Your Software Questions

Sony Service Center

For the Sony Service Center nearest you, call 1-888-4SONYPC (1-888-476-6972). This service is free of charge for 90 days after the original date of purchase.

Acrobat® Reader, Adobe PhotoDeluxe® Home Edition, Adobe Premiere® LE (Adobe Systems Incorporated)

Web site <http://www.adobe.com/>
phone 206-628-2746 (fee-based support)
fax 206-628-5737
e-mail techdocs@adobe.com
hours M - F, 6 AM - 5 PM PT

America Online® (America Online)

Web site <http://www.aol.com/>
phone 800-827-3338
hours 7 days a week, 6 AM - 2 PM ET

AT&T WorldNet® Service (AT&T)

Web site <http://www.att.net/>¹
phone 800-400-1447
e-mail worldnet@attmail.com
hours 7 days a week, 24 hours a day
¹ You must be a WorldNet Service customer to access online support.

CompuServe® 2000 (CompuServe Interactive Services)

Web site <http://www.compuserve.com/>
phone 800-848-8990

EarthLink TotalAccess (EarthLink Network, Inc.)

Web site <http://help.earthlink.net/techsupport/>
phone 800-395-8410
e-mail support@earthlink.net
hours 7 days a week, 24 hours a day

eMail inChorus (Softlink, Inc.)

Web site <http://www.sonk.com>
phone 408-970-3370
e-mail support@sonk.com

McAfee's VirusScan® (Network Associates, Inc.)

Web site <http://support.mcafee.com>
phone 408-988-3832
e-mail cybr@nai.com
hours M - F, 9 AM - 5 PM CT

Quicken® Basic (Intuit, Inc.)

Web site <http://www.intuit.com/support/>
phone 900-555-4688
hours 7 days a week, 24 hours a day

Sound Forge® (Sonic Foundry)

Web site <http://www.sonicfoundry.com/support/>
phone 608-256-5555
fax 608-256-7300
e-mail support@sonicfoundry.com
hours M - F, 8 AM - 7 PM CT

Wild Metal Country® (Infogrames North America)

Web site <http://www.infogrames.net>
phone 408-296-8400
fax 408-246-0231
e-mail help@infogrames.net
hours M - F, 9 AM - 5 PM PT

Windows® 98 Second Edition Operating System, Internet Explorer 5, Outlook® Express, Word 2000 (Microsoft Corporation)

Web site <http://www.sony.com/pcsupport>
phone 888-4SONYPC (888-476-6972)¹
hours 7 days a week, 24 hours a day

¹ Support from 1-888-4SONYPC is free of charge for 90 days after the original date of purchase.

WinFax® Basic Edition (Symantec Corporation)

Web site <http://www.symantec.com/techsupp/>
phone 800-798-0850
fax 800-554-4403 in North America
541-984-2490 outside North America

Specifications

Model	PCV-R545DS	PCV-R547DS
Processor	500 MHz ¹ Pentium® III	600 MHz* Pentium® III
Hard Disk Drive	20 GB ²	27 GB
Standard SDRAM	128 MB PC-100 SDRAM, expandable to 256 MB	128 MB PC-100 SDRAM, expandable to 256 MB
Video RAM	Shared with system memory 16 MB SDRAM	
MPEG	"Sony Tuned" MPEG Digital Video supports full-screen video playback	
Graphics	Intel 810	nVidia TNT 2 Pro
Sound Capabilities	Aureal 8810 Aureal 8830	
Diskette Drive	3.5" 1.44 MB FDD 3.5" 1.44 MB FDD	
CD-RW Drive	24X max. CD-ROM reading, 4X max. CD-R writing, 24X max. CD-R reading, 2X max. CD-RW writing, 8X max. CD-RW reading 32X max. CD-ROM reading, 8X max. CD-R writing, 32X max. CD-R reading, 4X max. CD-RW writing, 20X max. CD-RW reading	
DVD-ROM Drive	8X max. DVD-ROM (40X max. CD-ROM) ³	
Modem	Lucent 1646 technology/V.90 compatible data/fax modem ⁴	
Expansion Capabilities	HDD bay	HDD bay
Connection Capabilities (Front)	USB port	
i.LINK port (4--pin)	USB port	
i.LINK port (4--pin)		
Connection Capabilities (Rear)	USB port	
PS/2 (2)		
VGA Monitor port		
Serial port		
Parallel (printer)		
Game/MIDI		
Headphones		
Line In		
Microphone		
i.LINK (6-pin)		
Modem line (RJ-11)		
Phone line (RJ-11)	USB port	
PS/2 (2)		
VGA Monitor port		
Serial port		
Parallel (printer)		
Game/MIDI		
Headphones		
Line In		
Microphone		
i.LINK (6-pin)		
Modem line (RJ-11)		
Phone line (RJ-11)		
Supplied Accessories	VAIO Smart Keyboard	
PS/2 Wheel Mouse		
Speakers (SRS- Z050V)		
Power cord		
Modem cable	VAIO Smart Keyboard	
PS/2 Wheel Mouse		
Speakers (SRS- Z050V)		
Power cord		
Modem cable		
i.LINK cable		
Service	90-day limited service. Extendible to one year from original date of purchase upon	

registration⁵

Limited Warranty 90-day parts/labor standard. Extendible to one year from original date of purchase upon registration⁶

Power Requirements 200 watts maximum

Dimensions 8.6"(w) x 14"(h) x 15.5"(d) (220mm x 358mm x 394mm)

Weight 25.3lbs (11.5kg) 25.3lbs (11.5kg)

Operating Temperature 50°F to 95°F (+10°C to 35°C)

¹ MHz denotes microprocessor internal clock speed; other factors may affect application performance.

² GB means one billion bytes when referring to hard drive capacity. Accessible capacity may vary.

³ Data on a DVD-ROM is read at a variable transfer rate, ranging from 3.3X at the innermost track to 8X at the outermost track (the data transfer standard 1X rate is 1385 kbytes/s). The average data transfer rate is 5.6X (7634 kbytes/s). Data on a CD-ROM is read at a variable transfer rate, ranging from 17.2X at the innermost track to 40X at the outermost track (the data transfer standard 1X rate is 150 kbytes/s). The average data transfer rate is 28.6X (4293 kbytes/s).

⁴ Maximum speed for faxing is 14.4 kbytes/s. Your modem is capable of downloading at 56 kbytes/s using K56flex technology or V.90. Your phone service, online service, or Internet Service Provider, however, may not support this technology or operate at this speed.

⁵ Certain restrictions apply

⁶ Certain restrictions apply

Specifications are subject to change without notice.

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 Customer Support. For more advanced troubleshooting information, see the *VAIO Digital Studio Computer Reference Manual*. You can download this electronic document from Sony's Web site at <http://www.sony.com/pcsupport>.

My computer does not 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.
- Confirm that a diskette is not in the diskette drive (unless you are using a bootable diskette).
- Confirm that the power cord and all cables are connected firmly, as described on the color poster.
- 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 Function](#)).

My files are corrupted or deleted and I want to recover applications or drivers that came with my computer

See [Using the Application Recovery CD\(s\)](#) of this manual.

My computer or software program "locks up"

- Close the application that is currently "locked up" by pressing Ctrl+Alt+Delete. In the Close Program dialog box, scroll down until you locate "(Not responding)" next to an application. Select this application and click End Task. Windows attempts to close the application. If the attempt is unsuccessful, a second dialog box appears. Select End Task again.
- If you are unable to "unlock" the application, repeat the above steps but select Shut Down when the Close Program dialog box appears.
- If the above steps fail to "unlock" your computer, save any unsaved work, if possible. Press Alt+F4. Select Restart and click OK.
- If you cannot restart as described in the preceding steps, you can restart the computer by pressing Ctrl+Alt+Delete or by pressing the power switch for more than six seconds.



Pressing Ctrl+Alt+Delete twice consecutively may result in the loss of changes made to files that are currently open.

- Contact the software publisher or designated provider for technical support. See the contact information on [For Answers to Your Software Questions-Windows® 98 Second Edition Operating System, Internet Explorer 5, Outlook® Express, Word 2000 \(Microsoft Corporation\)](#).

My DVD-ROM/CD-RW drive tray does not open

- Make sure the computer is turned on.
- Press the Eject button on the drive.
- 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, heavyweight paper clip into the emergency eject hole.

I cannot play a CD-ROM

- After inserting your CD, wait a few seconds for it to be detected before trying to access it.
- 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.
- If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

I cannot play a DVD-ROM

- If a region code warning appears when you are using the DVD player, it could be that the DVD-ROM you are trying to play is incompatible with the DVD-ROM drive in your VAIIO Digital Studio Computer. 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. Unless a "1" or "ALL" appears on the DVD or on the packaging, 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 screen area to 800 x 600 using 16-bit color. To change this setting, click the My Computer icon on your desktop, click Control Panel, and then click Display. Click the Settings tab. You can now change the screen area and color.
- If you see video but cannot hear audio, check all of the following: Make sure your DVD player's mute setting is off. Check the master volume setting in the audio Mixer. Check the volume settings on 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.

I want to play a CD with my Microsoft CD Player

When you insert a music CD, the Sony Media Bar automatically launches to play your CD. When the Sony Media Bar is running, the Microsoft CD Player does not have access to the CD. Close Media Bar to use the Microsoft CD Player. If you do not hear any music, check all your volume controls.

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

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

Why doesn't my CD-RW drive record at the highest speed?


You must use the correct media to achieve optimum performance. Use 8x media for PCV-R547DS and PCV-R549DS, and 4x media for PCV-R545DS. If you must use other media, the following steps may be helpful:

- If you are having difficulty formatting non-8x/4x writable media, change the write speed from 8x/4x to 2x or 1x. To change the default write speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.
- Right-click the CD-RW drive icon, select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK. Your CD-RW drive is assigned drive H as its default.

I need to change the video resolution of my display

From the Start menu, select Settings, and then click Control Panel. Click the Display icon. Select the Settings tab. Move the slider under Screen area to change the resolution.

My speakers have no sound

- Check that the speakers are plugged into the **headphones** connector.
- 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. There is a volume control  on the Windows® taskbar. Click the icon and slide the level bar up to increase the volume.
- 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 Lucent 1648 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 does not work

- Check that the phone line is plugged into the **line** jack.
- 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.
- Verify that the software you are using is appropriately configured to recognize and interact with the Sony computer modem. Call the software publisher if you do not know how to configure the software to recognize the modem. All programs, preinstalled by Sony, are compatible.
- If you suspect your modem is not functioning, you can perform a simple test to find out. Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click the Diagnostics tab and select COM2. Click More Info. If your modem is functioning, a More Info dialog box will display. If your modem is not functioning, an error message will appear.

I cannot change my modem to rotary/touch-tone dialing.

Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

I need to set up faxing in Windows® 98

Windows 98 does not provide a built-in fax utility. Sony has included the Symantec WinFax[®] Basic Edition for your faxing needs. To set up WinFax Basic, click the Start button, point to Programs, choose Symantec WinFax Basic Edition, and select Configure WinFax Basic Edition. Follow the on-screen instructions to configure the fax utility.

My microphone does not work

Check that the microphone is plugged into the **mic** connector.

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 check box for 1 Mic Gain (+20dB), then click the Close button.
7. Close the Recording Control window.

My mouse does not work

- Check that the mouse is plugged into the **mouse** connector.
- There may be dust or dirt inside the mouse mechanism. To clean the mouse, follow these steps:
 1. Turn off your computer. See [Shutting Down Your Computer](#) for details.
 2. Remove the mouse ball cover on the back side of the mouse.
 3. Turn the mouse upright, and drop the mouse ball into your hand.
 4. Using a piece of tape, remove any dust or dirt on the mouse ball and inside the mouse ball socket.
 5. Return the mouse ball to the socket, and replace the mouse ball cover.

My mouse needs to be set up for left-hand use

To set up the mouse for left-hand use:

1. Click the My Computer icon on your desktop.
2. Click Control Panel, and then click Mouse. The Mouse Properties dialog box appears.
3. In the Quick Setup tab, click Device Setup.
4. In the Device Setup Wizard dialog box, click Next.
5. Select the radio button next to "Left side of the keyboard."
6. Click Next three times, and then click Finish.
7. Click Apply.

My keyboard does not work

Check that the keyboard is plugged into the **keyboard** connector.

I cannot 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.

Windows locks up during shut down

The Windows operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or nonresponsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

My system is running slowly

Your system's responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. For information on installing memory, please see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Sony computer supplies, accessories and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

My i.LINK® peripheral does not appear on the desktop

Turn off and disconnect your peripheral. Reconnect your peripheral, and then turn on the power.

My connected printer doesn't function after the computer resumes from a power saving mode.

When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.
4. The printer should now function properly.

There is unusual activity on my floppy disk drive

If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.



See the VAIO Digital Studio Computer [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\(s\)](#).

The System Recovery CD(s) contains a backup copy of 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. If your hard drive is partitioned into C and D drives, the computer offers you the option to reformat the drive into a single partition.
- **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 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 Customer Support.

To use the System Recovery CD(s)



You need to complete the Windows registration process when you use the System Recovery CD(s).

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 drive when you turn on the computer.

2. Shut down your computer as described in [Shutting Down Your Computer](#).
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 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\(s\)](#).

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

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.

About the Software on Your Computer

Your VAIO Digital Studio computer is ready to help you work, play, learn, and communicate as soon as you turn it on. This section gives you an overview of the activities you can perform with your software titles. For support information, see [For Answers to Your Software Questions](#).

Adobe Acrobat® Reader

Adobe Systems Incorporated

Acrobat Reader software allows you to view, navigate, and print electronic documents in Adobe's Portable Document Format (PDF), an open file format that is intended to preserve the fidelity of documents created on all major computer platforms.

Adobe PhotoDeluxe® Home Edition

Adobe Systems Incorporated

Create amazing photo effects with PhotoDeluxe. Without learning complex software, you can enhance, restore, and be creative with your photos. Includes built-in guided activities, stock photos, clip art, and templates to assist you.

Adobe Premiere® LE (PCV-R547DS/PCV-R549DS only)

Adobe Systems Incorporated

Adobe Premiere LE offers an interface and editing tool for producing movies for video, multimedia, or the Web. View source clips and edited footage simultaneously in the monitor window. Create video clips up to three hours long with complete audio-video synchronization.

America Online®

America Online

America Online is the world's most popular Internet online service. Stay in touch with family and friends with Easy-to-Use E-mail, manage your personal finances, get the latest news and sports scores, and chat with thousands of others who share your interests.

AT&T WorldNet® Service

AT&T

Fast, reliable Internet access from AT&T WorldNet Service. AT&T WorldNet Service provides Web-based e-mail, a personalized start page from Excite, easy access to the Excite search engine, free Web pages, online and live agent technical support, instant messaging, and special shopping discounts at Market Square.

CompuServe® 2000

CompuServe Interactive Services

The all-new CompuServe 2000 delivers a powerful tool for Internet users who want serious and timely information, in-depth research, and professional communities backed by state-of-the-art technologies, including high-speed access and powerful e-mail messaging.

Digital Media Bar

Sony Electronics

Media Bar is your all-in-one solution for audio/video playback. For more information, see [Media Bar](#)

—.

Direct CD

Adaptec

DirectCD is software that allows you to drag and drop files directly to your CD-R or CD-RW drive under Windows 95 / 98 / NT 4.0 or Mac OS. In other words, you can save, rename, move or "delete" files right on your CD-R as if it were a giant floppy disk.

DVgate Applications

Sony Electronics

Sony Electronics DVgate makes editing digital video easy and fun. For more information, see [DVgate Applications](#).

EarthLink Sprint TotalAccess

EarthLink Network, Inc.

An Internet Service Provider that supplies access, information, and assistance to its customers, introducing them to the Internet. Member benefits include e-mail, newsgroups, a Personal Start Page, a free 6 MB Web site, a member magazine, and 24-hour technical support.

Easy CD Creator

Adaptec

Easy CD Creator lets you make your own data, audio and multimedia CDs. You can back up your important files to CD, and read them back on standard CD-ROM drives. Create your own audio CDs right on your desktop, and play them back on your home or car stereo CD player. You can make your own personalized color jewel case inserts with custom text and graphics. You can even make backup copies of your existing CDs. The easy CD Creator Wizard makes creating your own custom CDs a simple process.

eMail inChorus (PCV-R545DS only)

Softlink, Inc.

This communications tool turns your e-mail into multimedia e-mail. With eMail inChorus , in minutes you can send your colleagues and friends presentations and e-mails narrated with your prerecorded voice, and illustrated with graphics and animated annotation.

McAfee's VirusScan®

Network Associates, Inc.

Protect your computer from viruses. VirusScan can detect viruses from floppy disks, Internet downloads, e-mail attachments, intranets, shared files, CD-ROMs, and online services.

Microsoft® Internet Explorer 5

Microsoft Corporation

Internet Explorer delivers the web the way you want it. It's safe, easy to use, and you can personalize how you access the web. Outlook Express and other tools in Internet Explorer also help you have a great experience when you are on the web!

Microsoft® Outlook® Express

Microsoft Corporation

Outlook Express, the messaging tool that takes your e-mail and newsgroup communications to new heights! Outlook Express is easy to set up and use, and provides you with secure, personalized, and complete features that make creating, sending, and reading your e-mail a more

rich and dynamic experience.

Microsoft® Word 2000

Microsoft Corporation

Microsoft Word 2000 makes it easy to create common Web, e-mail, and print documents for use around the world. It embraces HTML as a first-class file format and extends Word's ease-of-use to the Web and e-mail. Word 2000 also extends that ease of use to international users, making it easy to create multilingual documents.

MindSpring® Internet Desktop

MindSpring Enterprises, Inc.

The MindSpring Internet Desktop offers you access to different areas of the Internet from one convenient program. With a single click on the MindSpring Internet Desktop, you can easily search the Internet, send and receive e-mail, access news and weather, and more.

Netscape Communicator®

Netscape Communications

Netscape Communicator is the all-in-one Internet tool that makes it easy to browse the Web, send Internet e-mail, chat, read newsgroups, and compose great Web documents.

PictureGear

Sony Electronics

This image management software displays images from your hard drive, a Sony digital still camera, or a Sony Mavica® camera. The images appear in a convenient light-table format, so that you can easily view the contents of an entire folder.

Prodigy Internet

Prodigy Communications Corporation

An Internet service that helps you find what you need online faster and smarter. Prodigy delivers powerful online content, such as sports scores, stock quotes, news, and easy access to Excite , plus a personal e-mail account and quality customer service -- all at a competitive price.

Quicken® Basic

Intuit, Inc.

Quicken is the fastest, easiest way to organize your finances. Quicken works just like your checkbook, so it's easy to learn and use. Quicken manages all of your finances, bank accounts, credit cards, investments, and loans. You can even pay your bills online.

Smart Capture

Sony Electronics

By managing the i.LINK connection between your computer and a camera with an i.LINK interface, Smart Capture enables you to capture and compress video or still images that you can save or share via e-mail. A smart solution to computer, digital audio/video, and network convergence. For more information, see [Smart Capture](#).

Smart Connect

Sony Electronics

Smart Connect allows you to use an i.LINK cable to connect your VAIO computer to another VAIO computer that supports Smart Connect. You can then use one computer to copy, delete, and edit files on the other computer. You can also print from a printer attached to either computer.

Sound Forge® XP (PCV-R547DS/PCV-R549DS only)

Sonic Foundry

Sound Forge XP allows you to put powerful audio processing tools and effects to work on your desktop. Simply cut, copy, and paste your way to striking multimedia files for use in everything from Web pages to desktop presentations.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

Sony Electronics Inc.

VAIO Action Setup manages the settings for your computer's Shortcut keys and i.LINK interface. For details on using VAIO Action Setup, see [VAIO Action Setup \(PCV-R547DS/PCV-R549DS only\)](#).

VAIO Smart Keyboard

Sony Electronics

VAIO Smart Keyboard software operates your new easy-to-use programmable PS/2 keyboard. Six programmable buttons enable you to launch your favorite applications, open frequently used files, access Explorer, or even open your Web browser with just the click of a button.

Wild Metal Country®

Infogrames North America

Attempt to reclaim planets in the Tehric system, where a devastating civil war has left hunter-killer machines in control. In your war machine, you will seek control of vital power cores and fight off the enemy with a wide array of sophisticated ammunition.

WinFax® Basic Edition

Symantec Corporation

WinFax Basic Edition incorporates an easy-to-use interface that allows you to send and receive faxes easily. Upgrade to WinFax Pro to receive additional features.

About Your Recovery CDs

Application Recovery CD(s)

Sony Electronics

The Application Recovery CD program allows you to reinstall individual applications and device drivers. Use it to restore corrupted or accidentally erased files.

System Recovery CD(s)

Sony Electronics

The System Recovery CD program allows you to restore the software titles that shipped with your computer if they become corrupted or are erased accidentally. It can be used only to restore the hard disk of the Sony computer you purchased.

For Answers to Your Software Questions

Sony Service Center

For the Sony Service Center nearest you, call 1-888-4SONYPC (1-888-476-6972). This service is free of charge for 90 days after the original date of purchase.

Acrobat® Reader, Adobe PhotoDeluxe® Home Edition, Adobe Premiere® LE (Adobe Systems Incorporated)

Web site <http://www.adobe.com/>
phone 206-628-2746 (fee-based support)
fax 206-628-5737
e-mail techdocs@adobe.com
hours M - F, 6 AM - 5 PM PT

America Online® (America Online)

Web site <http://www.aol.com/>
phone 800-827-3338
hours 7 days a week, 6 AM - 2 PM ET

AT&T WorldNet® Service (AT&T)

Web site <http://www.att.net/>¹
phone 800-400-1447
e-mail worldnet@attmail.com
hours 7 days a week, 24 hours a day
¹ You must be a WorldNet Service customer to access online support.

CompuServe® 2000 (CompuServe Interactive Services)

Web site <http://www.compuserve.com/>
phone 800-848-8990

EarthLink TotalAccess (EarthLink Network, Inc.)

Web site <http://help.earthlink.net/techsupport/>
phone 800-395-8410
e-mail support@earthlink.net
hours 7 days a week, 24 hours a day

eMail inChorus (Softlink, Inc.)

Web site <http://www.sonk.com>
phone 408-970-3370
e-mail support@sonk.com

McAfee's VirusScan® (Network Associates, Inc.)

Web site <http://support.mcafee.com>
phone 408-988-3832
e-mail cybr@nai.com
hours M - F, 9 AM - 5 PM CT

Quicken® Basic (Intuit, Inc.)

Web site <http://www.intuit.com/support/>
phone 900-555-4688
hours 7 days a week, 24 hours a day

Sound Forge® (Sonic Foundry)

Web site <http://www.sonicfoundry.com/support/>
phone 608-256-5555
fax 608-256-7300
e-mail support@sonicfoundry.com
hours M - F, 8 AM - 7 PM CT

Wild Metal Country® (Infogrames North America)

Web site <http://www.infogrames.net>
phone 408-296-8400
fax 408-246-0231
e-mail help@infogrames.net
hours M - F, 9 AM - 5 PM PT

Windows® 98 Second Edition Operating System, Internet Explorer 5, Outlook® Express, Word 2000 (Microsoft Corporation)

Web site <http://www.sony.com/pcsupport>
phone 888-4SONYPC (888-476-6972)¹
hours 7 days a week, 24 hours a day

¹ Support from 1-888-4SONYPC is free of charge for 90 days after the original date of purchase.

WinFax® Basic Edition (Symantec Corporation)

Web site <http://www.symantec.com/techsupp/>
phone 800-798-0850
fax 800-554-4403 in North America
541-984-2490 outside North America

Specifications

Model	PCV-R545DS	PCV-R547DS
Processor	500 MHz ¹ Pentium® III	600 MHz* Pentium® III
Hard Disk Drive	20 GB ²	27 GB
Standard SDRAM	128 MB PC-100 SDRAM, expandable to 256 MB	128 MB PC-100 SDRAM, expandable to 256 MB
Video RAM	Shared with system memory 16 MB SDRAM	
MPEG	"Sony Tuned" MPEG Digital Video supports full-screen video playback	
Graphics	Intel 810	nVidia TNT 2 Pro
Sound Capabilities	Aureal 8810 Aureal 8830	
Diskette Drive	3.5" 1.44 MB FDD 3.5" 1.44 MB FDD	
CD-RW Drive	24X max. CD-ROM reading, 4X max. CD-R writing, 24X max. CD-R reading, 2X max. CD-RW writing, 8X max. CD-RW reading 32X max. CD-ROM reading, 8X max. CD-R writing, 32X max. CD-R reading, 4X max. CD-RW writing, 20X max. CD-RW reading	
DVD-ROM Drive	8X max. DVD-ROM (40X max. CD-ROM) ³	
Modem	Lucent 1646 technology/V.90 compatible data/fax modem ⁴	
Expansion Capabilities	HDD bay	HDD bay
Connection Capabilities (Front)	USB port	
i.LINK port (4--pin)	USB port	
i.LINK port (4--pin)		
Connection Capabilities (Rear)	USB port	
PS/2 (2)		
VGA Monitor port		
Serial port		
Parallel (printer)		
Game/MIDI		
Headphones		
Line In		
Microphone		
i.LINK (6-pin)		
Modem line (RJ-11)		
Phone line (RJ-11)	USB port	
PS/2 (2)		
VGA Monitor port		
Serial port		
Parallel (printer)		
Game/MIDI		
Headphones		
Line In		
Microphone		
i.LINK (6-pin)		
Modem line (RJ-11)		
Phone line (RJ-11)		
Supplied Accessories	VAIO Smart Keyboard	
PS/2 Wheel Mouse		
Speakers (SRS- Z050V)		
Power cord		
Modem cable	VAIO Smart Keyboard	
PS/2 Wheel Mouse		
Speakers (SRS- Z050V)		
Power cord		
Modem cable		
i.LINK cable		
Service	90-day limited service. Extendible to one year from original date of purchase upon	

registration⁵

Limited Warranty 90-day parts/labor standard. Extendible to one year from original date of purchase upon registration⁶

Power Requirements 200 watts maximum

Dimensions 8.6"(w) x 14"(h) x 15.5"(d) (220mm x 358mm x 394mm)

Weight 25.3lbs (11.5kg) 25.3lbs (11.5kg)

Operating Temperature 50°F to 95°F (+10°C to 35°C)

¹ MHz denotes microprocessor internal clock speed; other factors may affect application performance.

² GB means one billion bytes when referring to hard drive capacity. Accessible capacity may vary.

³ Data on a DVD-ROM is read at a variable transfer rate, ranging from 3.3X at the innermost track to 8X at the outermost track (the data transfer standard 1X rate is 1385 kbytes/s). The average data transfer rate is 5.6X (7634 kbytes/s). Data on a CD-ROM is read at a variable transfer rate, ranging from 17.2X at the innermost track to 40X at the outermost track (the data transfer standard 1X rate is 150 kbytes/s). The average data transfer rate is 28.6X (4293 kbytes/s).

⁴ Maximum speed for faxing is 14.4 kbytes/s. Your modem is capable of downloading at 56 kbytes/s using K56flex technology or V.90. Your phone service, online service, or Internet Service Provider, however, may not support this technology or operate at this speed.

⁵ Certain restrictions apply

⁶ Certain restrictions apply

Specifications are subject to change without notice.

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 Customer Support. For more advanced troubleshooting information, see the *VAIO Digital Studio Computer Reference Manual*. You can download this electronic document from Sony's Web site at <http://www.sony.com/pcsupport>.

My computer does not 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.
- Confirm that a diskette is not in the diskette drive (unless you are using a bootable diskette).
- Confirm that the power cord and all cables are connected firmly, as described on the color poster.
- 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 Function](#)).

My files are corrupted or deleted and I want to recover applications or drivers that came with my computer

See [Using the Application Recovery CD\(s\)](#) of this manual.

My computer or software program "locks up"

- Close the application that is currently "locked up" by pressing Ctrl+Alt+Delete. In the Close Program dialog box, scroll down until you locate "(Not responding)" next to an application. Select this application and click End Task. Windows attempts to close the application. If the attempt is unsuccessful, a second dialog box appears. Select End Task again.
- If you are unable to "unlock" the application, repeat the above steps but select Shut Down when the Close Program dialog box appears.
- If the above steps fail to "unlock" your computer, save any unsaved work, if possible. Press Alt+F4. Select Restart and click OK.
- If you cannot restart as described in the preceding steps, you can restart the computer by pressing Ctrl+Alt+Delete or by pressing the power switch for more than six seconds.



Pressing Ctrl+Alt+Delete twice consecutively may result in the loss of changes made to files that are currently open.

- Contact the software publisher or designated provider for technical support. See the contact information on [For Answers to Your Software Questions-Windows® 98 Second Edition Operating System, Internet Explorer 5, Outlook® Express, Word 2000 \(Microsoft Corporation\)](#).

My DVD-ROM/CD-RW drive tray does not open

- Make sure the computer is turned on.
- Press the Eject button on the drive.
- 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, heavyweight paper clip into the emergency eject hole.

I cannot play a CD-ROM

- After inserting your CD, wait a few seconds for it to be detected before trying to access it.
- 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.
- If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

I cannot play a DVD-ROM

- If a region code warning appears when you are using the DVD player, it could be that the DVD-ROM you are trying to play is incompatible with the DVD-ROM drive in your VAIIO Digital Studio Computer. 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. Unless a "1" or "ALL" appears on the DVD or on the packaging, 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 screen area to 800 x 600 using 16-bit color. To change this setting, click the My Computer icon on your desktop, click Control Panel, and then click Display. Click the Settings tab. You can now change the screen area and color.
- If you see video but cannot hear audio, check all of the following: Make sure your DVD player's mute setting is off. Check the master volume setting in the audio Mixer. Check the volume settings on 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.

I want to play a CD with my Microsoft CD Player

When you insert a music CD, the Sony Media Bar automatically launches to play your CD. When the Sony Media Bar is running, the Microsoft CD Player does not have access to the CD. Close Media Bar to use the Microsoft CD Player. If you do not hear any music, check all your volume controls.

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

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

Why doesn't my CD-RW drive record at the highest speed?


You must use the correct media to achieve optimum performance. Use 8x media for PCV-R547DS and PCV-R549DS, and 4x media for PCV-R545DS. If you must use other media, the following steps may be helpful:

- If you are having difficulty formatting non-8x/4x writable media, change the write speed from 8x/4x to 2x or 1x. To change the default write speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.
- Right-click the CD-RW drive icon, select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK. Your CD-RW drive is assigned drive H as its default.

I need to change the video resolution of my display

From the Start menu, select Settings, and then click Control Panel. Click the Display icon. Select the Settings tab. Move the slider under Screen area to change the resolution.

My speakers have no sound

- Check that the speakers are plugged into the **headphones** connector.
- 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. There is a volume control  on the Windows® taskbar. Click the icon and slide the level bar up to increase the volume.
- 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 Lucent 1648 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 does not work

- Check that the phone line is plugged into the **line** jack.
- 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.
- Verify that the software you are using is appropriately configured to recognize and interact with the Sony computer modem. Call the software publisher if you do not know how to configure the software to recognize the modem. All programs, preinstalled by Sony, are compatible.
- If you suspect your modem is not functioning, you can perform a simple test to find out. Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click the Diagnostics tab and select COM2. Click More Info. If your modem is functioning, a More Info dialog box will display. If your modem is not functioning, an error message will appear.

I cannot change my modem to rotary/touch-tone dialing.

Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

I need to set up faxing in Windows® 98

Windows 98 does not provide a built-in fax utility. Sony has included the Symantec WinFax[®] Basic Edition for your faxing needs. To set up WinFax Basic, click the Start button, point to Programs, choose Symantec WinFax Basic Edition, and select Configure WinFax Basic Edition. Follow the on-screen instructions to configure the fax utility.

My microphone does not work

Check that the microphone is plugged into the **mic** connector.

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 check box for 1 Mic Gain (+20dB), then click the Close button.
7. Close the Recording Control window.

My mouse does not work

- Check that the mouse is plugged into the **mouse** connector.
- There may be dust or dirt inside the mouse mechanism. To clean the mouse, follow these steps:
 1. Turn off your computer. See [Shutting Down Your Computer](#) for details.
 2. Remove the mouse ball cover on the back side of the mouse.
 3. Turn the mouse upright, and drop the mouse ball into your hand.
 4. Using a piece of tape, remove any dust or dirt on the mouse ball and inside the mouse ball socket.
 5. Return the mouse ball to the socket, and replace the mouse ball cover.

My mouse needs to be set up for left-hand use

To set up the mouse for left-hand use:

1. Click the My Computer icon on your desktop.
2. Click Control Panel, and then click Mouse. The Mouse Properties dialog box appears.
3. In the Quick Setup tab, click Device Setup.
4. In the Device Setup Wizard dialog box, click Next.
5. Select the radio button next to "Left side of the keyboard."
6. Click Next three times, and then click Finish.
7. Click Apply.

My keyboard does not work

Check that the keyboard is plugged into the **keyboard** connector.

I cannot 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.

Windows locks up during shut down

The Windows operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or nonresponsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

My system is running slowly

Your system's responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. For information on installing memory, please see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Sony computer supplies, accessories and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

My i.LINK® peripheral does not appear on the desktop

Turn off and disconnect your peripheral. Reconnect your peripheral, and then turn on the power.

My connected printer doesn't function after the computer resumes from a power saving mode.

When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.
4. The printer should now function properly.

There is unusual activity on my floppy disk drive

If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.



See the VAIO Digital Studio Computer [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\(s\)](#).

The System Recovery CD(s) contains a backup copy of 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. If your hard drive is partitioned into C and D drives, the computer offers you the option to reformat the drive into a single partition.
- **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 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 Customer Support.

To use the System Recovery CD(s)



You need to complete the Windows registration process when you use the System Recovery CD(s).

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 drive when you turn on the computer.

2. Shut down your computer as described in [Shutting Down Your Computer](#).
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 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\(s\)](#).

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

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.

About the Software on Your Computer

Your VAIO Digital Studio computer is ready to help you work, play, learn, and communicate as soon as you turn it on. This section gives you an overview of the activities you can perform with your software titles. For support information, see [For Answers to Your Software Questions](#).

Adobe Acrobat® Reader

Adobe Systems Incorporated

Acrobat Reader software allows you to view, navigate, and print electronic documents in Adobe's Portable Document Format (PDF), an open file format that is intended to preserve the fidelity of documents created on all major computer platforms.

Adobe PhotoDeluxe® Home Edition

Adobe Systems Incorporated

Create amazing photo effects with PhotoDeluxe. Without learning complex software, you can enhance, restore, and be creative with your photos. Includes built-in guided activities, stock photos, clip art, and templates to assist you.

Adobe Premiere® LE (PCV-R547DS/PCV-R549DS only)

Adobe Systems Incorporated

Adobe Premiere LE offers an interface and editing tool for producing movies for video, multimedia, or the Web. View source clips and edited footage simultaneously in the monitor window. Create video clips up to three hours long with complete audio-video synchronization.

America Online®

America Online

America Online is the world's most popular Internet online service. Stay in touch with family and friends with Easy-to-Use E-mail, manage your personal finances, get the latest news and sports scores, and chat with thousands of others who share your interests.

AT&T WorldNet® Service

AT&T

Fast, reliable Internet access from AT&T WorldNet Service. AT&T WorldNet Service provides Web-based e-mail, a personalized start page from Excite, easy access to the Excite search engine, free Web pages, online and live agent technical support, instant messaging, and special shopping discounts at Market Square.

CompuServe® 2000

CompuServe Interactive Services

The all-new CompuServe 2000 delivers a powerful tool for Internet users who want serious and timely information, in-depth research, and professional communities backed by state-of-the-art technologies, including high-speed access and powerful e-mail messaging.

Digital Media Bar

Sony Electronics

Media Bar is your all-in-one solution for audio/video playback. For more information, see [Media Bar](#)

—

Direct CD

Adaptec

DirectCD is software that allows you to drag and drop files directly to your CD-R or CD-RW drive under Windows 95 / 98 / NT 4.0 or Mac OS. In other words, you can save, rename, move or "delete" files right on your CD-R as if it were a giant floppy disk.

DVgate Applications

Sony Electronics

Sony Electronics DVgate makes editing digital video easy and fun. For more information, see [DVgate Applications](#).

EarthLink Sprint TotalAccess

EarthLink Network, Inc.

An Internet Service Provider that supplies access, information, and assistance to its customers, introducing them to the Internet. Member benefits include e-mail, newsgroups, a Personal Start Page, a free 6 MB Web site, a member magazine, and 24-hour technical support.

Easy CD Creator

Adaptec

Easy CD Creator lets you make your own data, audio and multimedia CDs. You can back up your important files to CD, and read them back on standard CD-ROM drives. Create your own audio CDs right on your desktop, and play them back on your home or car stereo CD player. You can make your own personalized color jewel case inserts with custom text and graphics. You can even make backup copies of your existing CDs. The easy CD Creator Wizard makes creating your own custom CDs a simple process.

eMail inChorus (PCV-R545DS only)

Softlink, Inc.

This communications tool turns your e-mail into multimedia e-mail. With eMail inChorus , in minutes you can send your colleagues and friends presentations and e-mails narrated with your prerecorded voice, and illustrated with graphics and animated annotation.

McAfee's VirusScan®

Network Associates, Inc.

Protect your computer from viruses. VirusScan can detect viruses from floppy disks, Internet downloads, e-mail attachments, intranets, shared files, CD-ROMs, and online services.

Microsoft® Internet Explorer 5

Microsoft Corporation

Internet Explorer delivers the web the way you want it. It's safe, easy to use, and you can personalize how you access the web. Outlook Express and other tools in Internet Explorer also help you have a great experience when you are on the web!

Microsoft® Outlook® Express

Microsoft Corporation

Outlook Express, the messaging tool that takes your e-mail and newsgroup communications to new heights! Outlook Express is easy to set up and use, and provides you with secure, personalized, and complete features that make creating, sending, and reading your e-mail a more

rich and dynamic experience.

Microsoft® Word 2000

Microsoft Corporation

Microsoft Word 2000 makes it easy to create common Web, e-mail, and print documents for use around the world. It embraces HTML as a first-class file format and extends Word's ease-of-use to the Web and e-mail. Word 2000 also extends that ease of use to international users, making it easy to create multilingual documents.

MindSpring® Internet Desktop

MindSpring Enterprises, Inc.

The MindSpring Internet Desktop offers you access to different areas of the Internet from one convenient program. With a single click on the MindSpring Internet Desktop, you can easily search the Internet, send and receive e-mail, access news and weather, and more.

Netscape Communicator®

Netscape Communications

Netscape Communicator is the all-in-one Internet tool that makes it easy to browse the Web, send Internet e-mail, chat, read newsgroups, and compose great Web documents.

PictureGear

Sony Electronics

This image management software displays images from your hard drive, a Sony digital still camera, or a Sony Mavica® camera. The images appear in a convenient light-table format, so that you can easily view the contents of an entire folder.

Prodigy Internet

Prodigy Communications Corporation

An Internet service that helps you find what you need online faster and smarter. Prodigy delivers powerful online content, such as sports scores, stock quotes, news, and easy access to Excite , plus a personal e-mail account and quality customer service -- all at a competitive price.

Quicken® Basic

Intuit, Inc.

Quicken is the fastest, easiest way to organize your finances. Quicken works just like your checkbook, so it's easy to learn and use. Quicken manages all of your finances, bank accounts, credit cards, investments, and loans. You can even pay your bills online.

Smart Capture

Sony Electronics

By managing the i.LINK connection between your computer and a camera with an i.LINK interface, Smart Capture enables you to capture and compress video or still images that you can save or share via e-mail. A smart solution to computer, digital audio/video, and network convergence. For more information, see [Smart Capture](#).

Smart Connect

Sony Electronics

Smart Connect allows you to use an i.LINK cable to connect your VAIO computer to another VAIO computer that supports Smart Connect. You can then use one computer to copy, delete, and edit files on the other computer. You can also print from a printer attached to either computer.

Sound Forge® XP (PCV-R547DS/PCV-R549DS only)

Sonic Foundry

Sound Forge XP allows you to put powerful audio processing tools and effects to work on your desktop. Simply cut, copy, and paste your way to striking multimedia files for use in everything from Web pages to desktop presentations.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

Sony Electronics Inc.

VAIO Action Setup manages the settings for your computer's Shortcut keys and i.LINK interface. For details on using VAIO Action Setup, see [VAIO Action Setup \(PCV-R547DS/PCV-R549DS only\)](#).

VAIO Smart Keyboard

Sony Electronics

VAIO Smart Keyboard software operates your new easy-to-use programmable PS/2 keyboard. Six programmable buttons enable you to launch your favorite applications, open frequently used files, access Explorer, or even open your Web browser with just the click of a button.

Wild Metal Country®

Infogrames North America

Attempt to reclaim planets in the Tehric system, where a devastating civil war has left hunter-killer machines in control. In your war machine, you will seek control of vital power cores and fight off the enemy with a wide array of sophisticated ammunition.

WinFax® Basic Edition

Symantec Corporation

WinFax Basic Edition incorporates an easy-to-use interface that allows you to send and receive faxes easily. Upgrade to WinFax Pro to receive additional features.

About Your Recovery CDs

Application Recovery CD(s)

Sony Electronics

The Application Recovery CD program allows you to reinstall individual applications and device drivers. Use it to restore corrupted or accidentally erased files.

System Recovery CD(s)

Sony Electronics

The System Recovery CD program allows you to restore the software titles that shipped with your computer if they become corrupted or are erased accidentally. It can be used only to restore the hard disk of the Sony computer you purchased.

For Answers to Your Software Questions

Sony Service Center

For the Sony Service Center nearest you, call 1-888-4SONYPC (1-888-476-6972). This service is free of charge for 90 days after the original date of purchase.

Acrobat® Reader, Adobe PhotoDeluxe® Home Edition, Adobe Premiere® LE (Adobe Systems Incorporated)

Web site <http://www.adobe.com/>
phone 206-628-2746 (fee-based support)
fax 206-628-5737
e-mail techdocs@adobe.com
hours M - F, 6 AM - 5 PM PT

America Online® (America Online)

Web site <http://www.aol.com/>
phone 800-827-3338
hours 7 days a week, 6 AM - 2 PM ET

AT&T WorldNet® Service (AT&T)

Web site <http://www.att.net/>¹
phone 800-400-1447
e-mail worldnet@attmail.com
hours 7 days a week, 24 hours a day
¹ You must be a WorldNet Service customer to access online support.

CompuServe® 2000 (CompuServe Interactive Services)

Web site <http://www.compuserve.com/>
phone 800-848-8990

EarthLink TotalAccess (EarthLink Network, Inc.)

Web site <http://help.earthlink.net/techsupport/>
phone 800-395-8410
e-mail support@earthlink.net
hours 7 days a week, 24 hours a day

eMail inChorus (Softlink, Inc.)

Web site <http://www.sonk.com>
phone 408-970-3370
e-mail support@sonk.com

McAfee's VirusScan® (Network Associates, Inc.)

Web site <http://support.mcafee.com>
phone 408-988-3832
e-mail cybr@nai.com
hours M - F, 9 AM - 5 PM CT

Quicken® Basic (Intuit, Inc.)

Web site <http://www.intuit.com/support/>
phone 900-555-4688
hours 7 days a week, 24 hours a day

Sound Forge® (Sonic Foundry)

Web site <http://www.sonicfoundry.com/support/>
phone 608-256-5555
fax 608-256-7300
e-mail support@sonicfoundry.com
hours M - F, 8 AM - 7 PM CT

Wild Metal Country® (Infogrames North America)

Web site <http://www.infogrames.net>
phone 408-296-8400
fax 408-246-0231
e-mail help@infogrames.net
hours M - F, 9 AM - 5 PM PT

Windows® 98 Second Edition Operating System, Internet Explorer 5, Outlook® Express, Word 2000 (Microsoft Corporation)

Web site <http://www.sony.com/pcsupport>
phone 888-4SONYPC (888-476-6972)¹
hours 7 days a week, 24 hours a day

¹ Support from 1-888-4SONYPC is free of charge for 90 days after the original date of purchase.

WinFax® Basic Edition (Symantec Corporation)

Web site <http://www.symantec.com/techsupp/>
phone 800-798-0850
fax 800-554-4403 in North America
541-984-2490 outside North America

Specifications

Model	PCV-R545DS	PCV-R547DS
Processor	500 MHz ¹ Pentium® III	600 MHz* Pentium® III
Hard Disk Drive	20 GB ²	27 GB
Standard SDRAM	128 MB PC-100 SDRAM, expandable to 256 MB	128 MB PC-100 SDRAM, expandable to 256 MB
Video RAM	Shared with system memory 16 MB SDRAM	
MPEG	"Sony Tuned" MPEG Digital Video supports full-screen video playback	
Graphics	Intel 810	nVidia TNT 2 Pro
Sound Capabilities	Aureal 8810 Aureal 8830	
Diskette Drive	3.5" 1.44 MB FDD 3.5" 1.44 MB FDD	
CD-RW Drive	24X max. CD-ROM reading, 4X max. CD-R writing, 24X max. CD-R reading, 2X max. CD-RW writing, 8X max. CD-RW reading 32X max. CD-ROM reading, 8X max. CD-R writing, 32X max. CD-R reading, 4X max. CD-RW writing, 20X max. CD-RW reading	
DVD-ROM Drive	8X max. DVD-ROM (40X max. CD-ROM) ³	
Modem	Lucent 1646 technology/V.90 compatible data/fax modem ⁴	
Expansion Capabilities	HDD bay	HDD bay
Connection Capabilities (Front)	USB port i.LINK port (4--pin) USB port i.LINK port (4--pin)	
Connection Capabilities (Rear)	USB port PS/2 (2) VGA Monitor port Serial port Parallel (printer) Game/MIDI Headphones Line In Microphone i.LINK (6-pin) Modem line (RJ-11) Phone line (RJ-11) USB port PS/2 (2) VGA Monitor port Serial port Parallel (printer) Game/MIDI Headphones Line In Microphone i.LINK (6-pin) Modem line (RJ-11) Phone line (RJ-11)	
Supplied Accessories	VAIO Smart Keyboard PS/2 Wheel Mouse Speakers (SRS- Z050V) Power cord Modem cable VAI0 Smart Keyboard PS/2 Wheel Mouse Speakers (SRS- Z050V) Power cord Modem cable i.LINK cable	
Service	90-day limited service. Extendible to one year from original date of purchase upon	

registration⁵

Limited Warranty 90-day parts/labor standard. Extendible to one year from original date of purchase upon registration⁶

Power Requirements 200 watts maximum

Dimensions 8.6"(w) x 14"(h) x 15.5"(d) (220mm x 358mm x 394mm)

Weight 25.3lbs (11.5kg) 25.3lbs (11.5kg)

Operating Temperature 50°F to 95°F (+10°C to 35°C)

¹ MHz denotes microprocessor internal clock speed; other factors may affect application performance.

² GB means one billion bytes when referring to hard drive capacity. Accessible capacity may vary.

³ Data on a DVD-ROM is read at a variable transfer rate, ranging from 3.3X at the innermost track to 8X at the outermost track (the data transfer standard 1X rate is 1385 kbytes/s). The average data transfer rate is 5.6X (7634 kbytes/s). Data on a CD-ROM is read at a variable transfer rate, ranging from 17.2X at the innermost track to 40X at the outermost track (the data transfer standard 1X rate is 150 kbytes/s). The average data transfer rate is 28.6X (4293 kbytes/s).

⁴ Maximum speed for faxing is 14.4 kbytes/s. Your modem is capable of downloading at 56 kbytes/s using K56flex technology or V.90. Your phone service, online service, or Internet Service Provider, however, may not support this technology or operate at this speed.

⁵ Certain restrictions apply

⁶ Certain restrictions apply

Specifications are subject to change without notice.

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 Customer Support. For more advanced troubleshooting information, see the *VAIO Digital Studio Computer Reference Manual*. You can download this electronic document from Sony's Web site at <http://www.sony.com/pcsupport>.

My computer does not 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.
- Confirm that a diskette is not in the diskette drive (unless you are using a bootable diskette).
- Confirm that the power cord and all cables are connected firmly, as described on the color poster.
- 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 Function](#)).

My files are corrupted or deleted and I want to recover applications or drivers that came with my computer

See [Using the Application Recovery CD\(s\)](#) of this manual.

My computer or software program "locks up"

- Close the application that is currently "locked up" by pressing Ctrl+Alt+Delete. In the Close Program dialog box, scroll down until you locate "(Not responding)" next to an application. Select this application and click End Task. Windows attempts to close the application. If the attempt is unsuccessful, a second dialog box appears. Select End Task again.
- If you are unable to "unlock" the application, repeat the above steps but select Shut Down when the Close Program dialog box appears.
- If the above steps fail to "unlock" your computer, save any unsaved work, if possible. Press Alt+F4. Select Restart and click OK.
- If you cannot restart as described in the preceding steps, you can restart the computer by pressing Ctrl+Alt+Delete or by pressing the power switch for more than six seconds.



Pressing Ctrl+Alt+Delete twice consecutively may result in the loss of changes made to files that are currently open.

- Contact the software publisher or designated provider for technical support. See the contact information on [For Answers to Your Software Questions-Windows® 98 Second Edition Operating System, Internet Explorer 5, Outlook® Express, Word 2000 \(Microsoft Corporation\)](#).

My DVD-ROM/CD-RW drive tray does not open

- Make sure the computer is turned on.
- Press the Eject button on the drive.
- 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, heavyweight paper clip into the emergency eject hole.

I cannot play a CD-ROM

- After inserting your CD, wait a few seconds for it to be detected before trying to access it.
- 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.
- If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

I cannot play a DVD-ROM

- If a region code warning appears when you are using the DVD player, it could be that the DVD-ROM you are trying to play is incompatible with the DVD-ROM drive in your VAIIO Digital Studio Computer. 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. Unless a "1" or "ALL" appears on the DVD or on the packaging, 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 screen area to 800 x 600 using 16-bit color. To change this setting, click the My Computer icon on your desktop, click Control Panel, and then click Display. Click the Settings tab. You can now change the screen area and color.
- If you see video but cannot hear audio, check all of the following: Make sure your DVD player's mute setting is off. Check the master volume setting in the audio Mixer. Check the volume settings on 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.

I want to play a CD with my Microsoft CD Player

When you insert a music CD, the Sony Media Bar automatically launches to play your CD. When the Sony Media Bar is running, the Microsoft CD Player does not have access to the CD. Close Media Bar to use the Microsoft CD Player. If you do not hear any music, check all your volume controls.

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

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

Why doesn't my CD-RW drive record at the highest speed?


You must use the correct media to achieve optimum performance. Use 8x media for PCV-R547DS and PCV-R549DS, and 4x media for PCV-R545DS. If you must use other media, the following steps may be helpful:

- If you are having difficulty formatting non-8x/4x writable media, change the write speed from 8x/4x to 2x or 1x. To change the default write speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.
- Right-click the CD-RW drive icon, select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK. Your CD-RW drive is assigned drive H as its default.

I need to change the video resolution of my display

From the Start menu, select Settings, and then click Control Panel. Click the Display icon. Select the Settings tab. Move the slider under Screen area to change the resolution.

My speakers have no sound

- Check that the speakers are plugged into the **headphones** connector.
- 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. There is a volume control  on the Windows® taskbar. Click the icon and slide the level bar up to increase the volume.
- 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 Lucent 1648 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 does not work

- Check that the phone line is plugged into the **line** jack.
- 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.
- Verify that the software you are using is appropriately configured to recognize and interact with the Sony computer modem. Call the software publisher if you do not know how to configure the software to recognize the modem. All programs, preinstalled by Sony, are compatible.
- If you suspect your modem is not functioning, you can perform a simple test to find out. Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click the Diagnostics tab and select COM2. Click More Info. If your modem is functioning, a More Info dialog box will display. If your modem is not functioning, an error message will appear.

I cannot change my modem to rotary/touch-tone dialing.

Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

I need to set up faxing in Windows® 98

Windows 98 does not provide a built-in fax utility. Sony has included the Symantec WinFax[®] Basic Edition for your faxing needs. To set up WinFax Basic, click the Start button, point to Programs, choose Symantec WinFax Basic Edition, and select Configure WinFax Basic Edition. Follow the on-screen instructions to configure the fax utility.

My microphone does not work

Check that the microphone is plugged into the **mic** connector.

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 check box for 1 Mic Gain (+20dB), then click the Close button.
7. Close the Recording Control window.

My mouse does not work

- Check that the mouse is plugged into the **mouse** connector.
- There may be dust or dirt inside the mouse mechanism. To clean the mouse, follow these steps:
 1. Turn off your computer. See [Shutting Down Your Computer](#) for details.
 2. Remove the mouse ball cover on the back side of the mouse.
 3. Turn the mouse upright, and drop the mouse ball into your hand.
 4. Using a piece of tape, remove any dust or dirt on the mouse ball and inside the mouse ball socket.
 5. Return the mouse ball to the socket, and replace the mouse ball cover.

My mouse needs to be set up for left-hand use

To set up the mouse for left-hand use:

1. Click the My Computer icon on your desktop.
2. Click Control Panel, and then click Mouse. The Mouse Properties dialog box appears.
3. In the Quick Setup tab, click Device Setup.
4. In the Device Setup Wizard dialog box, click Next.
5. Select the radio button next to "Left side of the keyboard."
6. Click Next three times, and then click Finish.
7. Click Apply.

My keyboard does not work

Check that the keyboard is plugged into the **keyboard** connector.

I cannot 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.

Windows locks up during shut down

The Windows operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or nonresponsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

My system is running slowly

Your system's responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. For information on installing memory, please see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Sony computer supplies, accessories and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

My i.LINK® peripheral does not appear on the desktop

Turn off and disconnect your peripheral. Reconnect your peripheral, and then turn on the power.

My connected printer doesn't function after the computer resumes from a power saving mode.

When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.
4. The printer should now function properly.

There is unusual activity on my floppy disk drive

If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.



See the VAIO Digital Studio Computer [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\(s\)](#).

The System Recovery CD(s) contains a backup copy of 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. If your hard drive is partitioned into C and D drives, the computer offers you the option to reformat the drive into a single partition.
- **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 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 Customer Support.

To use the System Recovery CD(s)



You need to complete the Windows registration process when you use the System Recovery CD(s).

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 drive when you turn on the computer.

2. Shut down your computer as described in [Shutting Down Your Computer](#).
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 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\(s\)](#).

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

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.

About the Software on Your Computer

Your VAIO Digital Studio computer is ready to help you work, play, learn, and communicate as soon as you turn it on. This section gives you an overview of the activities you can perform with your software titles. For support information, see [For Answers to Your Software Questions](#).

Adobe Acrobat® Reader

Adobe Systems Incorporated

Acrobat Reader software allows you to view, navigate, and print electronic documents in Adobe's Portable Document Format (PDF), an open file format that is intended to preserve the fidelity of documents created on all major computer platforms.

Adobe PhotoDeluxe® Home Edition

Adobe Systems Incorporated

Create amazing photo effects with PhotoDeluxe. Without learning complex software, you can enhance, restore, and be creative with your photos. Includes built-in guided activities, stock photos, clip art, and templates to assist you.

Adobe Premiere® LE (PCV-R547DS/PCV-R549DS only)

Adobe Systems Incorporated

Adobe Premiere LE offers an interface and editing tool for producing movies for video, multimedia, or the Web. View source clips and edited footage simultaneously in the monitor window. Create video clips up to three hours long with complete audio-video synchronization.

America Online®

America Online

America Online is the world's most popular Internet online service. Stay in touch with family and friends with Easy-to-Use E-mail, manage your personal finances, get the latest news and sports scores, and chat with thousands of others who share your interests.

AT&T WorldNet® Service

AT&T

Fast, reliable Internet access from AT&T WorldNet Service. AT&T WorldNet Service provides Web-based e-mail, a personalized start page from Excite, easy access to the Excite search engine, free Web pages, online and live agent technical support, instant messaging, and special shopping discounts at Market Square.

CompuServe® 2000

CompuServe Interactive Services

The all-new CompuServe 2000 delivers a powerful tool for Internet users who want serious and timely information, in-depth research, and professional communities backed by state-of-the-art technologies, including high-speed access and powerful e-mail messaging.

Digital Media Bar

Sony Electronics

Media Bar is your all-in-one solution for audio/video playback. For more information, see [Media Bar](#)

—

Direct CD

Adaptec

DirectCD is software that allows you to drag and drop files directly to your CD-R or CD-RW drive under Windows 95 / 98 / NT 4.0 or Mac OS. In other words, you can save, rename, move or "delete" files right on your CD-R as if it were a giant floppy disk.

DVgate Applications

Sony Electronics

Sony Electronics DVgate makes editing digital video easy and fun. For more information, see [DVgate Applications](#).

EarthLink Sprint TotalAccess

EarthLink Network, Inc.

An Internet Service Provider that supplies access, information, and assistance to its customers, introducing them to the Internet. Member benefits include e-mail, newsgroups, a Personal Start Page, a free 6 MB Web site, a member magazine, and 24-hour technical support.

Easy CD Creator

Adaptec

Easy CD Creator lets you make your own data, audio and multimedia CDs. You can back up your important files to CD, and read them back on standard CD-ROM drives. Create your own audio CDs right on your desktop, and play them back on your home or car stereo CD player. You can make your own personalized color jewel case inserts with custom text and graphics. You can even make backup copies of your existing CDs. The easy CD Creator Wizard makes creating your own custom CDs a simple process.

eMail inChorus (PCV-R545DS only)

Softlink, Inc.

This communications tool turns your e-mail into multimedia e-mail. With eMail inChorus , in minutes you can send your colleagues and friends presentations and e-mails narrated with your prerecorded voice, and illustrated with graphics and animated annotation.

McAfee's VirusScan®

Network Associates, Inc.

Protect your computer from viruses. VirusScan can detect viruses from floppy disks, Internet downloads, e-mail attachments, intranets, shared files, CD-ROMs, and online services.

Microsoft® Internet Explorer 5

Microsoft Corporation

Internet Explorer delivers the web the way you want it. It's safe, easy to use, and you can personalize how you access the web. Outlook Express and other tools in Internet Explorer also help you have a great experience when you are on the web!

Microsoft® Outlook® Express

Microsoft Corporation

Outlook Express, the messaging tool that takes your e-mail and newsgroup communications to new heights! Outlook Express is easy to set up and use, and provides you with secure, personalized, and complete features that make creating, sending, and reading your e-mail a more

rich and dynamic experience.

Microsoft® Word 2000

Microsoft Corporation

Microsoft Word 2000 makes it easy to create common Web, e-mail, and print documents for use around the world. It embraces HTML as a first-class file format and extends Word's ease-of-use to the Web and e-mail. Word 2000 also extends that ease of use to international users, making it easy to create multilingual documents.

MindSpring® Internet Desktop

MindSpring Enterprises, Inc.

The MindSpring Internet Desktop offers you access to different areas of the Internet from one convenient program. With a single click on the MindSpring Internet Desktop, you can easily search the Internet, send and receive e-mail, access news and weather, and more.

Netscape Communicator®

Netscape Communications

Netscape Communicator is the all-in-one Internet tool that makes it easy to browse the Web, send Internet e-mail, chat, read newsgroups, and compose great Web documents.

PictureGear

Sony Electronics

This image management software displays images from your hard drive, a Sony digital still camera, or a Sony Mavica® camera. The images appear in a convenient light-table format, so that you can easily view the contents of an entire folder.

Prodigy Internet

Prodigy Communications Corporation

An Internet service that helps you find what you need online faster and smarter. Prodigy delivers powerful online content, such as sports scores, stock quotes, news, and easy access to Excite , plus a personal e-mail account and quality customer service -- all at a competitive price.

Quicken® Basic

Intuit, Inc.

Quicken is the fastest, easiest way to organize your finances. Quicken works just like your checkbook, so it's easy to learn and use. Quicken manages all of your finances, bank accounts, credit cards, investments, and loans. You can even pay your bills online.

Smart Capture

Sony Electronics

By managing the i.LINK connection between your computer and a camera with an i.LINK interface, Smart Capture enables you to capture and compress video or still images that you can save or share via e-mail. A smart solution to computer, digital audio/video, and network convergence. For more information, see [Smart Capture](#).

Smart Connect

Sony Electronics

Smart Connect allows you to use an i.LINK cable to connect your VAIO computer to another VAIO computer that supports Smart Connect. You can then use one computer to copy, delete, and edit files on the other computer. You can also print from a printer attached to either computer.

Sound Forge® XP (PCV-R547DS/PCV-R549DS only)

Sonic Foundry

Sound Forge XP allows you to put powerful audio processing tools and effects to work on your desktop. Simply cut, copy, and paste your way to striking multimedia files for use in everything from Web pages to desktop presentations.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

Sony Electronics Inc.

VAIO Action Setup manages the settings for your computer's Shortcut keys and i.LINK interface. For details on using VAIO Action Setup, see [VAIO Action Setup \(PCV-R547DS/PCV-R549DS only\)](#).

VAIO Smart Keyboard

Sony Electronics

VAIO Smart Keyboard software operates your new easy-to-use programmable PS/2 keyboard. Six programmable buttons enable you to launch your favorite applications, open frequently used files, access Explorer, or even open your Web browser with just the click of a button.

Wild Metal Country®

Infogrames North America

Attempt to reclaim planets in the Tehric system, where a devastating civil war has left hunter-killer machines in control. In your war machine, you will seek control of vital power cores and fight off the enemy with a wide array of sophisticated ammunition.

WinFax® Basic Edition

Symantec Corporation

WinFax Basic Edition incorporates an easy-to-use interface that allows you to send and receive faxes easily. Upgrade to WinFax Pro to receive additional features.

About Your Recovery CDs

Application Recovery CD(s)

Sony Electronics

The Application Recovery CD program allows you to reinstall individual applications and device drivers. Use it to restore corrupted or accidentally erased files.

System Recovery CD(s)

Sony Electronics

The System Recovery CD program allows you to restore the software titles that shipped with your computer if they become corrupted or are erased accidentally. It can be used only to restore the hard disk of the Sony computer you purchased.

For Answers to Your Software Questions

Sony Service Center

For the Sony Service Center nearest you, call 1-888-4SONYPC (1-888-476-6972). This service is free of charge for 90 days after the original date of purchase.

Acrobat® Reader, Adobe PhotoDeluxe® Home Edition, Adobe Premiere® LE (Adobe Systems Incorporated)

Web site <http://www.adobe.com/>
phone 206-628-2746 (fee-based support)
fax 206-628-5737
e-mail techdocs@adobe.com
hours M - F, 6 AM - 5 PM PT

America Online® (America Online)

Web site <http://www.aol.com/>
phone 800-827-3338
hours 7 days a week, 6 AM - 2 PM ET

AT&T WorldNet® Service (AT&T)

Web site <http://www.att.net/>¹
phone 800-400-1447
e-mail worldnet@attmail.com
hours 7 days a week, 24 hours a day
¹ You must be a WorldNet Service customer to access online support.

CompuServe® 2000 (CompuServe Interactive Services)

Web site <http://www.compuserve.com/>
phone 800-848-8990

EarthLink TotalAccess (EarthLink Network, Inc.)

Web site <http://help.earthlink.net/techsupport/>
phone 800-395-8410
e-mail support@earthlink.net
hours 7 days a week, 24 hours a day

eMail inChorus (Softlink, Inc.)

Web site <http://www.sonk.com>
phone 408-970-3370
e-mail support@sonk.com

McAfee's VirusScan® (Network Associates, Inc.)

Web site <http://support.mcafee.com>
phone 408-988-3832
e-mail cybr@nai.com
hours M - F, 9 AM - 5 PM CT

Quicken® Basic (Intuit, Inc.)

Web site <http://www.intuit.com/support/>
phone 900-555-4688
hours 7 days a week, 24 hours a day

Sound Forge® (Sonic Foundry)

Web site <http://www.sonicfoundry.com/support/>
phone 608-256-5555
fax 608-256-7300
e-mail support@sonicfoundry.com
hours M - F, 8 AM - 7 PM CT

Wild Metal Country® (Infogrames North America)

Web site <http://www.infogrames.net>
phone 408-296-8400
fax 408-246-0231
e-mail help@infogrames.net
hours M - F, 9 AM - 5 PM PT

Windows® 98 Second Edition Operating System, Internet Explorer 5, Outlook® Express, Word 2000 (Microsoft Corporation)

Web site <http://www.sony.com/pcsupport>
phone 888-4SONYPC (888-476-6972)¹
hours 7 days a week, 24 hours a day

¹ Support from 1-888-4SONYPC is free of charge for 90 days after the original date of purchase.

WinFax® Basic Edition (Symantec Corporation)

Web site <http://www.symantec.com/techsupp/>
phone 800-798-0850
fax 800-554-4403 in North America
541-984-2490 outside North America

Specifications

Model	PCV-R545DS	PCV-R547DS
Processor	500 MHz ¹ Pentium® III	600 MHz* Pentium® III
Hard Disk Drive	20 GB ²	27 GB
Standard SDRAM	128 MB PC-100 SDRAM, expandable to 256 MB	128 MB PC-100 SDRAM, expandable to 256 MB
Video RAM	Shared with system memory 16 MB SDRAM	
MPEG	"Sony Tuned" MPEG Digital Video supports full-screen video playback	
Graphics	Intel 810	nVidia TNT 2 Pro
Sound Capabilities	Aureal 8810 Aureal 8830	
Diskette Drive	3.5" 1.44 MB FDD 3.5" 1.44 MB FDD	
CD-RW Drive	24X max. CD-ROM reading, 4X max. CD-R writing, 24X max. CD-R reading, 2X max. CD-RW writing, 8X max. CD-RW reading 32X max. CD-ROM reading, 8X max. CD-R writing, 32X max. CD-R reading, 4X max. CD-RW writing, 20X max. CD-RW reading	
DVD-ROM Drive	8X max. DVD-ROM (40X max. CD-ROM) ³	
Modem	Lucent 1646 technology/V.90 compatible data/fax modem ⁴	
Expansion Capabilities	HDD bay	HDD bay
Connection Capabilities (Front)	USB port i.LINK port (4--pin) USB port i.LINK port (4--pin)	
Connection Capabilities (Rear)	USB port PS/2 (2) VGA Monitor port Serial port Parallel (printer) Game/MIDI Headphones Line In Microphone i.LINK (6-pin) Modem line (RJ-11) Phone line (RJ-11) USB port PS/2 (2) VGA Monitor port Serial port Parallel (printer) Game/MIDI Headphones Line In Microphone i.LINK (6-pin) Modem line (RJ-11) Phone line (RJ-11)	
Supplied Accessories	VAIO Smart Keyboard PS/2 Wheel Mouse Speakers (SRS- Z050V) Power cord Modem cable VAI0 Smart Keyboard PS/2 Wheel Mouse Speakers (SRS- Z050V) Power cord Modem cable i.LINK cable	
Service	90-day limited service. Extendible to one year from original date of purchase upon	

registration⁵

Limited Warranty 90-day parts/labor standard. Extendible to one year from original date of purchase upon registration⁶

Power Requirements 200 watts maximum

Dimensions 8.6"(w) x 14"(h) x 15.5"(d) (220mm x 358mm x 394mm)

Weight 25.3lbs (11.5kg) 25.3lbs (11.5kg)

Operating Temperature 50°F to 95°F (+10°C to 35°C)

¹ MHz denotes microprocessor internal clock speed; other factors may affect application performance.

² GB means one billion bytes when referring to hard drive capacity. Accessible capacity may vary.

³ Data on a DVD-ROM is read at a variable transfer rate, ranging from 3.3X at the innermost track to 8X at the outermost track (the data transfer standard 1X rate is 1385 kbytes/s). The average data transfer rate is 5.6X (7634 kbytes/s). Data on a CD-ROM is read at a variable transfer rate, ranging from 17.2X at the innermost track to 40X at the outermost track (the data transfer standard 1X rate is 150 kbytes/s). The average data transfer rate is 28.6X (4293 kbytes/s).

⁴ Maximum speed for faxing is 14.4 kbytes/s. Your modem is capable of downloading at 56 kbytes/s using K56flex technology or V.90. Your phone service, online service, or Internet Service Provider, however, may not support this technology or operate at this speed.

⁵ Certain restrictions apply

⁶ Certain restrictions apply

Specifications are subject to change without notice.

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 Customer Support. For more advanced troubleshooting information, see the *VAIO Digital Studio Computer Reference Manual*. You can download this electronic document from Sony's Web site at <http://www.sony.com/pcsupport>.

My computer does not 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.
- Confirm that a diskette is not in the diskette drive (unless you are using a bootable diskette).
- Confirm that the power cord and all cables are connected firmly, as described on the color poster.
- 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 Function](#)).

My files are corrupted or deleted and I want to recover applications or drivers that came with my computer

See [Using the Application Recovery CD\(s\)](#) of this manual.

My computer or software program "locks up"

- Close the application that is currently "locked up" by pressing Ctrl+Alt+Delete. In the Close Program dialog box, scroll down until you locate "(Not responding)" next to an application. Select this application and click End Task. Windows attempts to close the application. If the attempt is unsuccessful, a second dialog box appears. Select End Task again.
- If you are unable to "unlock" the application, repeat the above steps but select Shut Down when the Close Program dialog box appears.
- If the above steps fail to "unlock" your computer, save any unsaved work, if possible. Press Alt+F4. Select Restart and click OK.
- If you cannot restart as described in the preceding steps, you can restart the computer by pressing Ctrl+Alt+Delete or by pressing the power switch for more than six seconds.



Pressing Ctrl+Alt+Delete twice consecutively may result in the loss of changes made to files that are currently open.

- Contact the software publisher or designated provider for technical support. See the contact information on [For Answers to Your Software Questions-Windows® 98 Second Edition Operating System, Internet Explorer 5, Outlook® Express, Word 2000 \(Microsoft Corporation\)](#).

My DVD-ROM/CD-RW drive tray does not open

- Make sure the computer is turned on.
- Press the Eject button on the drive.
- 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, heavyweight paper clip into the emergency eject hole.

I cannot play a CD-ROM

- After inserting your CD, wait a few seconds for it to be detected before trying to access it.
- 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.
- If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

I cannot play a DVD-ROM

- If a region code warning appears when you are using the DVD player, it could be that the DVD-ROM you are trying to play is incompatible with the DVD-ROM drive in your VAIIO Digital Studio Computer. 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. Unless a "1" or "ALL" appears on the DVD or on the packaging, 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 screen area to 800 x 600 using 16-bit color. To change this setting, click the My Computer icon on your desktop, click Control Panel, and then click Display. Click the Settings tab. You can now change the screen area and color.
- If you see video but cannot hear audio, check all of the following: Make sure your DVD player's mute setting is off. Check the master volume setting in the audio Mixer. Check the volume settings on 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.

I want to play a CD with my Microsoft CD Player

When you insert a music CD, the Sony Media Bar automatically launches to play your CD. When the Sony Media Bar is running, the Microsoft CD Player does not have access to the CD. Close Media Bar to use the Microsoft CD Player. If you do not hear any music, check all your volume controls.

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

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

Why doesn't my CD-RW drive record at the highest speed?


You must use the correct media to achieve optimum performance. Use 8x media for PCV-R547DS and PCV-R549DS, and 4x media for PCV-R545DS. If you must use other media, the following steps may be helpful:

- If you are having difficulty formatting non-8x/4x writable media, change the write speed from 8x/4x to 2x or 1x. To change the default write speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.
- Right-click the CD-RW drive icon, select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK. Your CD-RW drive is assigned drive H as its default.

I need to change the video resolution of my display

From the Start menu, select Settings, and then click Control Panel. Click the Display icon. Select the Settings tab. Move the slider under Screen area to change the resolution.

My speakers have no sound

- Check that the speakers are plugged into the **headphones** connector.
- 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. There is a volume control  on the Windows® taskbar. Click the icon and slide the level bar up to increase the volume.
- 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 Lucent 1648 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 does not work

- Check that the phone line is plugged into the **line** jack.
- 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.
- Verify that the software you are using is appropriately configured to recognize and interact with the Sony computer modem. Call the software publisher if you do not know how to configure the software to recognize the modem. All programs, preinstalled by Sony, are compatible.
- If you suspect your modem is not functioning, you can perform a simple test to find out. Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click the Diagnostics tab and select COM2. Click More Info. If your modem is functioning, a More Info dialog box will display. If your modem is not functioning, an error message will appear.

I cannot change my modem to rotary/touch-tone dialing.

Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

I need to set up faxing in Windows® 98

Windows 98 does not provide a built-in fax utility. Sony has included the Symantec WinFax[®] Basic Edition for your faxing needs. To set up WinFax Basic, click the Start button, point to Programs, choose Symantec WinFax Basic Edition, and select Configure WinFax Basic Edition. Follow the on-screen instructions to configure the fax utility.

My microphone does not work

Check that the microphone is plugged into the **mic** connector.

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 check box for 1 Mic Gain (+20dB), then click the Close button.
7. Close the Recording Control window.

My mouse does not work

- Check that the mouse is plugged into the **mouse** connector.
- There may be dust or dirt inside the mouse mechanism. To clean the mouse, follow these steps:
 1. Turn off your computer. See [Shutting Down Your Computer](#) for details.
 2. Remove the mouse ball cover on the back side of the mouse.
 3. Turn the mouse upright, and drop the mouse ball into your hand.
 4. Using a piece of tape, remove any dust or dirt on the mouse ball and inside the mouse ball socket.
 5. Return the mouse ball to the socket, and replace the mouse ball cover.

My mouse needs to be set up for left-hand use

To set up the mouse for left-hand use:

1. Click the My Computer icon on your desktop.
2. Click Control Panel, and then click Mouse. The Mouse Properties dialog box appears.
3. In the Quick Setup tab, click Device Setup.
4. In the Device Setup Wizard dialog box, click Next.
5. Select the radio button next to "Left side of the keyboard."
6. Click Next three times, and then click Finish.
7. Click Apply.

My keyboard does not work

Check that the keyboard is plugged into the **keyboard** connector.

I cannot 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.

Windows locks up during shut down

The Windows operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or nonresponsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

My system is running slowly

Your system's responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. For information on installing memory, please see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Sony computer supplies, accessories and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

My i.LINK® peripheral does not appear on the desktop

Turn off and disconnect your peripheral. Reconnect your peripheral, and then turn on the power.

My connected printer doesn't function after the computer resumes from a power saving mode.

When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.
4. The printer should now function properly.

There is unusual activity on my floppy disk drive

If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.



See the VAIO Digital Studio Computer [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\(s\)](#).

The System Recovery CD(s) contains a backup copy of 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. If your hard drive is partitioned into C and D drives, the computer offers you the option to reformat the drive into a single partition.
- **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 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 Customer Support.

To use the System Recovery CD(s)



You need to complete the Windows registration process when you use the System Recovery CD(s).

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 drive when you turn on the computer.

2. Shut down your computer as described in [Shutting Down Your Computer](#).
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 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\(s\)](#).

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

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.

About the Software on Your Computer

Your VAIO Digital Studio computer is ready to help you work, play, learn, and communicate as soon as you turn it on. This section gives you an overview of the activities you can perform with your software titles. For support information, see [For Answers to Your Software Questions](#).

Adobe Acrobat® Reader

Adobe Systems Incorporated

Acrobat Reader software allows you to view, navigate, and print electronic documents in Adobe's Portable Document Format (PDF), an open file format that is intended to preserve the fidelity of documents created on all major computer platforms.

Adobe PhotoDeluxe® Home Edition

Adobe Systems Incorporated

Create amazing photo effects with PhotoDeluxe. Without learning complex software, you can enhance, restore, and be creative with your photos. Includes built-in guided activities, stock photos, clip art, and templates to assist you.

Adobe Premiere® LE (PCV-R547DS/PCV-R549DS only)

Adobe Systems Incorporated

Adobe Premiere LE offers an interface and editing tool for producing movies for video, multimedia, or the Web. View source clips and edited footage simultaneously in the monitor window. Create video clips up to three hours long with complete audio-video synchronization.

America Online®

America Online

America Online is the world's most popular Internet online service. Stay in touch with family and friends with Easy-to-Use E-mail, manage your personal finances, get the latest news and sports scores, and chat with thousands of others who share your interests.

AT&T WorldNet® Service

AT&T

Fast, reliable Internet access from AT&T WorldNet Service. AT&T WorldNet Service provides Web-based e-mail, a personalized start page from Excite, easy access to the Excite search engine, free Web pages, online and live agent technical support, instant messaging, and special shopping discounts at Market Square.

CompuServe® 2000

CompuServe Interactive Services

The all-new CompuServe 2000 delivers a powerful tool for Internet users who want serious and timely information, in-depth research, and professional communities backed by state-of-the-art technologies, including high-speed access and powerful e-mail messaging.

Digital Media Bar

Sony Electronics

Media Bar is your all-in-one solution for audio/video playback. For more information, see [Media Bar](#)

—

Direct CD

Adaptec

DirectCD is software that allows you to drag and drop files directly to your CD-R or CD-RW drive under Windows 95 / 98 / NT 4.0 or Mac OS. In other words, you can save, rename, move or "delete" files right on your CD-R as if it were a giant floppy disk.

DVgate Applications

Sony Electronics

Sony Electronics DVgate makes editing digital video easy and fun. For more information, see [DVgate Applications](#).

EarthLink Sprint TotalAccess

EarthLink Network, Inc.

An Internet Service Provider that supplies access, information, and assistance to its customers, introducing them to the Internet. Member benefits include e-mail, newsgroups, a Personal Start Page, a free 6 MB Web site, a member magazine, and 24-hour technical support.

Easy CD Creator

Adaptec

Easy CD Creator lets you make your own data, audio and multimedia CDs. You can back up your important files to CD, and read them back on standard CD-ROM drives. Create your own audio CDs right on your desktop, and play them back on your home or car stereo CD player. You can make your own personalized color jewel case inserts with custom text and graphics. You can even make backup copies of your existing CDs. The easy CD Creator Wizard makes creating your own custom CDs a simple process.

eMail inChorus (PCV-R545DS only)

Softlink, Inc.

This communications tool turns your e-mail into multimedia e-mail. With eMail inChorus , in minutes you can send your colleagues and friends presentations and e-mails narrated with your prerecorded voice, and illustrated with graphics and animated annotation.

McAfee's VirusScan®

Network Associates, Inc.

Protect your computer from viruses. VirusScan can detect viruses from floppy disks, Internet downloads, e-mail attachments, intranets, shared files, CD-ROMs, and online services.

Microsoft® Internet Explorer 5

Microsoft Corporation

Internet Explorer delivers the web the way you want it. It's safe, easy to use, and you can personalize how you access the web. Outlook Express and other tools in Internet Explorer also help you have a great experience when you are on the web!

Microsoft® Outlook® Express

Microsoft Corporation

Outlook Express, the messaging tool that takes your e-mail and newsgroup communications to new heights! Outlook Express is easy to set up and use, and provides you with secure, personalized, and complete features that make creating, sending, and reading your e-mail a more

rich and dynamic experience.

Microsoft® Word 2000

Microsoft Corporation

Microsoft Word 2000 makes it easy to create common Web, e-mail, and print documents for use around the world. It embraces HTML as a first-class file format and extends Word's ease-of-use to the Web and e-mail. Word 2000 also extends that ease of use to international users, making it easy to create multilingual documents.

MindSpring® Internet Desktop

MindSpring Enterprises, Inc.

The MindSpring Internet Desktop offers you access to different areas of the Internet from one convenient program. With a single click on the MindSpring Internet Desktop, you can easily search the Internet, send and receive e-mail, access news and weather, and more.

Netscape Communicator®

Netscape Communications

Netscape Communicator is the all-in-one Internet tool that makes it easy to browse the Web, send Internet e-mail, chat, read newsgroups, and compose great Web documents.

PictureGear

Sony Electronics

This image management software displays images from your hard drive, a Sony digital still camera, or a Sony Mavica® camera. The images appear in a convenient light-table format, so that you can easily view the contents of an entire folder.

Prodigy Internet

Prodigy Communications Corporation

An Internet service that helps you find what you need online faster and smarter. Prodigy delivers powerful online content, such as sports scores, stock quotes, news, and easy access to Excite , plus a personal e-mail account and quality customer service -- all at a competitive price.

Quicken® Basic

Intuit, Inc.

Quicken is the fastest, easiest way to organize your finances. Quicken works just like your checkbook, so it's easy to learn and use. Quicken manages all of your finances, bank accounts, credit cards, investments, and loans. You can even pay your bills online.

Smart Capture

Sony Electronics

By managing the i.LINK connection between your computer and a camera with an i.LINK interface, Smart Capture enables you to capture and compress video or still images that you can save or share via e-mail. A smart solution to computer, digital audio/video, and network convergence. For more information, see [Smart Capture](#).

Smart Connect

Sony Electronics

Smart Connect allows you to use an i.LINK cable to connect your VAIO computer to another VAIO computer that supports Smart Connect. You can then use one computer to copy, delete, and edit files on the other computer. You can also print from a printer attached to either computer.

Sound Forge® XP (PCV-R547DS/PCV-R549DS only)

Sonic Foundry

Sound Forge XP allows you to put powerful audio processing tools and effects to work on your desktop. Simply cut, copy, and paste your way to striking multimedia files for use in everything from Web pages to desktop presentations.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

Sony Electronics Inc.

VAIO Action Setup manages the settings for your computer's Shortcut keys and i.LINK interface. For details on using VAIO Action Setup, see [VAIO Action Setup \(PCV-R547DS/PCV-R549DS only\)](#).

VAIO Smart Keyboard

Sony Electronics

VAIO Smart Keyboard software operates your new easy-to-use programmable PS/2 keyboard. Six programmable buttons enable you to launch your favorite applications, open frequently used files, access Explorer, or even open your Web browser with just the click of a button.

Wild Metal Country®

Infogrames North America

Attempt to reclaim planets in the Tehric system, where a devastating civil war has left hunter-killer machines in control. In your war machine, you will seek control of vital power cores and fight off the enemy with a wide array of sophisticated ammunition.

WinFax® Basic Edition

Symantec Corporation

WinFax Basic Edition incorporates an easy-to-use interface that allows you to send and receive faxes easily. Upgrade to WinFax Pro to receive additional features.

About Your Recovery CDs

Application Recovery CD(s)

Sony Electronics

The Application Recovery CD program allows you to reinstall individual applications and device drivers. Use it to restore corrupted or accidentally erased files.

System Recovery CD(s)

Sony Electronics

The System Recovery CD program allows you to restore the software titles that shipped with your computer if they become corrupted or are erased accidentally. It can be used only to restore the hard disk of the Sony computer you purchased.

For Answers to Your Software Questions

Sony Service Center

For the Sony Service Center nearest you, call 1-888-4SONYPC (1-888-476-6972). This service is free of charge for 90 days after the original date of purchase.

Acrobat® Reader, Adobe PhotoDeluxe® Home Edition, Adobe Premiere® LE (Adobe Systems Incorporated)

Web site <http://www.adobe.com/>
phone 206-628-2746 (fee-based support)
fax 206-628-5737
e-mail techdocs@adobe.com
hours M - F, 6 AM - 5 PM PT

America Online® (America Online)

Web site <http://www.aol.com/>
phone 800-827-3338
hours 7 days a week, 6 AM - 2 PM ET

AT&T WorldNet® Service (AT&T)

Web site <http://www.att.net/>¹
phone 800-400-1447
e-mail worldnet@attmail.com
hours 7 days a week, 24 hours a day
¹ You must be a WorldNet Service customer to access online support.

CompuServe® 2000 (CompuServe Interactive Services)

Web site <http://www.compuserve.com/>
phone 800-848-8990

EarthLink TotalAccess (EarthLink Network, Inc.)

Web site <http://help.earthlink.net/techsupport/>
phone 800-395-8410
e-mail support@earthlink.net
hours 7 days a week, 24 hours a day

eMail inChorus (Softlink, Inc.)

Web site <http://www.sonk.com>
phone 408-970-3370
e-mail support@sonk.com

McAfee's VirusScan® (Network Associates, Inc.)

Web site <http://support.mcafee.com>
phone 408-988-3832
e-mail cybr@nai.com
hours M - F, 9 AM - 5 PM CT

Quicken® Basic (Intuit, Inc.)

Web site <http://www.intuit.com/support/>
phone 900-555-4688
hours 7 days a week, 24 hours a day

Sound Forge® (Sonic Foundry)

Web site <http://www.sonicfoundry.com/support/>
phone 608-256-5555
fax 608-256-7300
e-mail support@sonicfoundry.com
hours M - F, 8 AM - 7 PM CT

Wild Metal Country® (Infogrames North America)

Web site <http://www.infogrames.net>
phone 408-296-8400
fax 408-246-0231
e-mail help@infogrames.net
hours M - F, 9 AM - 5 PM PT

Windows® 98 Second Edition Operating System, Internet Explorer 5, Outlook® Express, Word 2000 (Microsoft Corporation)

Web site <http://www.sony.com/pcsupport>
phone 888-4SONYPC (888-476-6972)¹
hours 7 days a week, 24 hours a day

¹ Support from 1-888-4SONYPC is free of charge for 90 days after the original date of purchase.

WinFax® Basic Edition (Symantec Corporation)

Web site <http://www.symantec.com/techsupp/>
phone 800-798-0850
fax 800-554-4403 in North America
541-984-2490 outside North America

Specifications

Model	PCV-R545DS	PCV-R547DS
Processor	500 MHz ¹ Pentium® III	600 MHz* Pentium® III
Hard Disk Drive	20 GB ²	27 GB
Standard SDRAM	128 MB PC-100 SDRAM, expandable to 256 MB	128 MB PC-100 SDRAM, expandable to 256 MB
Video RAM	Shared with system memory	16 MB SDRAM
MPEG	"Sony Tuned" MPEG Digital Video supports full-screen video playback	
Graphics	Intel 810	nVidia TNT 2 Pro
Sound Capabilities	Aureal 8810 Aureal 8830	
Diskette Drive	3.5" 1.44 MB FDD 3.5" 1.44 MB FDD	
CD-RW Drive	24X max. CD-ROM reading, 4X max. CD-R writing, 24X max. CD-R reading, 2X max. CD-RW writing, 8X max. CD-RW reading 32X max. CD-ROM reading, 8X max. CD-R writing, 32X max. CD-R reading, 4X max. CD-RW writing, 20X max. CD-RW reading	
DVD-ROM Drive	8X max. DVD-ROM (40X max. CD-ROM) ³	
Modem	Lucent 1646 technology/V.90 compatible data/fax modem ⁴	
Expansion Capabilities	HDD bay	HDD bay
Connection Capabilities (Front)	USB port i.LINK port (4--pin) USB port i.LINK port (4--pin)	
Connection Capabilities (Rear)	USB port PS/2 (2) VGA Monitor port Serial port Parallel (printer) Game/MIDI Headphones Line In Microphone i.LINK (6-pin) Modem line (RJ-11) Phone line (RJ-11) USB port PS/2 (2) VGA Monitor port Serial port Parallel (printer) Game/MIDI Headphones Line In Microphone i.LINK (6-pin) Modem line (RJ-11) Phone line (RJ-11)	
Supplied Accessories	VAIO Smart Keyboard PS/2 Wheel Mouse Speakers (SRS- Z050V) Power cord Modem cable VAI0 Smart Keyboard PS/2 Wheel Mouse Speakers (SRS- Z050V) Power cord Modem cable i.LINK cable	
Service	90-day limited service. Extendible to one year from original date of purchase upon	

registration⁵

Limited Warranty 90-day parts/labor standard. Extendible to one year from original date of purchase upon registration⁶

Power Requirements 200 watts maximum

Dimensions 8.6"(w) x 14"(h) x 15.5"(d) (220mm x 358mm x 394mm)

Weight 25.3lbs (11.5kg) 25.3lbs (11.5kg)

Operating Temperature 50°F to 95°F (+10°C to 35°C)

¹ MHz denotes microprocessor internal clock speed; other factors may affect application performance.

² GB means one billion bytes when referring to hard drive capacity. Accessible capacity may vary.

³ Data on a DVD-ROM is read at a variable transfer rate, ranging from 3.3X at the innermost track to 8X at the outermost track (the data transfer standard 1X rate is 1385 kbytes/s). The average data transfer rate is 5.6X (7634 kbytes/s). Data on a CD-ROM is read at a variable transfer rate, ranging from 17.2X at the innermost track to 40X at the outermost track (the data transfer standard 1X rate is 150 kbytes/s). The average data transfer rate is 28.6X (4293 kbytes/s).

⁴ Maximum speed for faxing is 14.4 kbytes/s. Your modem is capable of downloading at 56 kbytes/s using K56flex technology or V.90. Your phone service, online service, or Internet Service Provider, however, may not support this technology or operate at this speed.

⁵ Certain restrictions apply

⁶ Certain restrictions apply

Specifications are subject to change without notice.

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 Customer Support. For more advanced troubleshooting information, see the *VAIO Digital Studio Computer Reference Manual*. You can download this electronic document from Sony's Web site at <http://www.sony.com/pcsupport>.

My computer does not 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.
- Confirm that a diskette is not in the diskette drive (unless you are using a bootable diskette).
- Confirm that the power cord and all cables are connected firmly, as described on the color poster.
- 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 Function](#)).

My files are corrupted or deleted and I want to recover applications or drivers that came with my computer

See [Using the Application Recovery CD\(s\)](#) of this manual.

My computer or software program "locks up"

- Close the application that is currently "locked up" by pressing Ctrl+Alt+Delete. In the Close Program dialog box, scroll down until you locate "(Not responding)" next to an application. Select this application and click End Task. Windows attempts to close the application. If the attempt is unsuccessful, a second dialog box appears. Select End Task again.
- If you are unable to "unlock" the application, repeat the above steps but select Shut Down when the Close Program dialog box appears.
- If the above steps fail to "unlock" your computer, save any unsaved work, if possible. Press Alt+F4. Select Restart and click OK.
- If you cannot restart as described in the preceding steps, you can restart the computer by pressing Ctrl+Alt+Delete or by pressing the power switch for more than six seconds.



Pressing Ctrl+Alt+Delete twice consecutively may result in the loss of changes made to files that are currently open.

- Contact the software publisher or designated provider for technical support. See the contact information on [For Answers to Your Software Questions-Windows® 98 Second Edition Operating System, Internet Explorer 5, Outlook® Express, Word 2000 \(Microsoft Corporation\)](#).

My DVD-ROM/CD-RW drive tray does not open

- Make sure the computer is turned on.
- Press the Eject button on the drive.
- 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, heavyweight paper clip into the emergency eject hole.

I cannot play a CD-ROM

- After inserting your CD, wait a few seconds for it to be detected before trying to access it.
- 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.
- If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

I cannot play a DVD-ROM

- If a region code warning appears when you are using the DVD player, it could be that the DVD-ROM you are trying to play is incompatible with the DVD-ROM drive in your VAIIO Digital Studio Computer. 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. Unless a "1" or "ALL" appears on the DVD or on the packaging, 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 screen area to 800 x 600 using 16-bit color. To change this setting, click the My Computer icon on your desktop, click Control Panel, and then click Display. Click the Settings tab. You can now change the screen area and color.
- If you see video but cannot hear audio, check all of the following: Make sure your DVD player's mute setting is off. Check the master volume setting in the audio Mixer. Check the volume settings on 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.

I want to play a CD with my Microsoft CD Player

When you insert a music CD, the Sony Media Bar automatically launches to play your CD. When the Sony Media Bar is running, the Microsoft CD Player does not have access to the CD. Close Media Bar to use the Microsoft CD Player. If you do not hear any music, check all your volume controls.

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

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

Why doesn't my CD-RW drive record at the highest speed?


You must use the correct media to achieve optimum performance. Use 8x media for PCV-R547DS and PCV-R549DS, and 4x media for PCV-R545DS. If you must use other media, the following steps may be helpful:

- If you are having difficulty formatting non-8x/4x writable media, change the write speed from 8x/4x to 2x or 1x. To change the default write speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.
- Right-click the CD-RW drive icon, select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK. Your CD-RW drive is assigned drive H as its default.

I need to change the video resolution of my display

From the Start menu, select Settings, and then click Control Panel. Click the Display icon. Select the Settings tab. Move the slider under Screen area to change the resolution.

My speakers have no sound

- Check that the speakers are plugged into the **headphones** connector.
- 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. There is a volume control  on the Windows® taskbar. Click the icon and slide the level bar up to increase the volume.
- 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 Lucent 1648 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 does not work

- Check that the phone line is plugged into the **line** jack.
- 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.
- Verify that the software you are using is appropriately configured to recognize and interact with the Sony computer modem. Call the software publisher if you do not know how to configure the software to recognize the modem. All programs, preinstalled by Sony, are compatible.
- If you suspect your modem is not functioning, you can perform a simple test to find out. Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click the Diagnostics tab and select COM2. Click More Info. If your modem is functioning, a More Info dialog box will display. If your modem is not functioning, an error message will appear.

I cannot change my modem to rotary/touch-tone dialing.

Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

I need to set up faxing in Windows® 98

Windows 98 does not provide a built-in fax utility. Sony has included the Symantec WinFax[®] Basic Edition for your faxing needs. To set up WinFax Basic, click the Start button, point to Programs, choose Symantec WinFax Basic Edition, and select Configure WinFax Basic Edition. Follow the on-screen instructions to configure the fax utility.

My microphone does not work

Check that the microphone is plugged into the **mic** connector.

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 check box for 1 Mic Gain (+20dB), then click the Close button.
7. Close the Recording Control window.

My mouse does not work

- Check that the mouse is plugged into the **mouse** connector.
- There may be dust or dirt inside the mouse mechanism. To clean the mouse, follow these steps:
 1. Turn off your computer. See [Shutting Down Your Computer](#) for details.
 2. Remove the mouse ball cover on the back side of the mouse.
 3. Turn the mouse upright, and drop the mouse ball into your hand.
 4. Using a piece of tape, remove any dust or dirt on the mouse ball and inside the mouse ball socket.
 5. Return the mouse ball to the socket, and replace the mouse ball cover.

My mouse needs to be set up for left-hand use

To set up the mouse for left-hand use:

1. Click the My Computer icon on your desktop.
2. Click Control Panel, and then click Mouse. The Mouse Properties dialog box appears.
3. In the Quick Setup tab, click Device Setup.
4. In the Device Setup Wizard dialog box, click Next.
5. Select the radio button next to "Left side of the keyboard."
6. Click Next three times, and then click Finish.
7. Click Apply.

My keyboard does not work

Check that the keyboard is plugged into the **keyboard** connector.

I cannot 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.

Windows locks up during shut down

The Windows operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or nonresponsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

My system is running slowly

Your system's responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. For information on installing memory, please see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Sony computer supplies, accessories and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

My i.LINK® peripheral does not appear on the desktop

Turn off and disconnect your peripheral. Reconnect your peripheral, and then turn on the power.

My connected printer doesn't function after the computer resumes from a power saving mode.

When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.
4. The printer should now function properly.

There is unusual activity on my floppy disk drive

If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.



See the VAIO Digital Studio Computer [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\(s\)](#).

The System Recovery CD(s) contains a backup copy of 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. If your hard drive is partitioned into C and D drives, the computer offers you the option to reformat the drive into a single partition.
- **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 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 Customer Support.

To use the System Recovery CD(s)



You need to complete the Windows registration process when you use the System Recovery CD(s).

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 drive when you turn on the computer.

2. Shut down your computer as described in [Shutting Down Your Computer](#).
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 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\(s\)](#).

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

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.

About the Software on Your Computer

Your VAIO Digital Studio computer is ready to help you work, play, learn, and communicate as soon as you turn it on. This section gives you an overview of the activities you can perform with your software titles. For support information, see [For Answers to Your Software Questions](#).

Adobe Acrobat® Reader

Adobe Systems Incorporated

Acrobat Reader software allows you to view, navigate, and print electronic documents in Adobe's Portable Document Format (PDF), an open file format that is intended to preserve the fidelity of documents created on all major computer platforms.

Adobe PhotoDeluxe® Home Edition

Adobe Systems Incorporated

Create amazing photo effects with PhotoDeluxe. Without learning complex software, you can enhance, restore, and be creative with your photos. Includes built-in guided activities, stock photos, clip art, and templates to assist you.

Adobe Premiere® LE (PCV-R547DS/PCV-R549DS only)

Adobe Systems Incorporated

Adobe Premiere LE offers an interface and editing tool for producing movies for video, multimedia, or the Web. View source clips and edited footage simultaneously in the monitor window. Create video clips up to three hours long with complete audio-video synchronization.

America Online®

America Online

America Online is the world's most popular Internet online service. Stay in touch with family and friends with Easy-to-Use E-mail, manage your personal finances, get the latest news and sports scores, and chat with thousands of others who share your interests.

AT&T WorldNet® Service

AT&T

Fast, reliable Internet access from AT&T WorldNet Service. AT&T WorldNet Service provides Web-based e-mail, a personalized start page from Excite, easy access to the Excite search engine, free Web pages, online and live agent technical support, instant messaging, and special shopping discounts at Market Square.

CompuServe® 2000

CompuServe Interactive Services

The all-new CompuServe 2000 delivers a powerful tool for Internet users who want serious and timely information, in-depth research, and professional communities backed by state-of-the-art technologies, including high-speed access and powerful e-mail messaging.

Digital Media Bar

Sony Electronics

Media Bar is your all-in-one solution for audio/video playback. For more information, see [Media Bar](#)

—

Direct CD

Adaptec

DirectCD is software that allows you to drag and drop files directly to your CD-R or CD-RW drive under Windows 95 / 98 / NT 4.0 or Mac OS. In other words, you can save, rename, move or "delete" files right on your CD-R as if it were a giant floppy disk.

DVgate Applications

Sony Electronics

Sony Electronics DVgate makes editing digital video easy and fun. For more information, see [DVgate Applications](#).

EarthLink Sprint TotalAccess

EarthLink Network, Inc.

An Internet Service Provider that supplies access, information, and assistance to its customers, introducing them to the Internet. Member benefits include e-mail, newsgroups, a Personal Start Page, a free 6 MB Web site, a member magazine, and 24-hour technical support.

Easy CD Creator

Adaptec

Easy CD Creator lets you make your own data, audio and multimedia CDs. You can back up your important files to CD, and read them back on standard CD-ROM drives. Create your own audio CDs right on your desktop, and play them back on your home or car stereo CD player. You can make your own personalized color jewel case inserts with custom text and graphics. You can even make backup copies of your existing CDs. The easy CD Creator Wizard makes creating your own custom CDs a simple process.

eMail inChorus (PCV-R545DS only)

Softlink, Inc.

This communications tool turns your e-mail into multimedia e-mail. With eMail inChorus , in minutes you can send your colleagues and friends presentations and e-mails narrated with your prerecorded voice, and illustrated with graphics and animated annotation.

McAfee's VirusScan®

Network Associates, Inc.

Protect your computer from viruses. VirusScan can detect viruses from floppy disks, Internet downloads, e-mail attachments, intranets, shared files, CD-ROMs, and online services.

Microsoft® Internet Explorer 5

Microsoft Corporation

Internet Explorer delivers the web the way you want it. It's safe, easy to use, and you can personalize how you access the web. Outlook Express and other tools in Internet Explorer also help you have a great experience when you are on the web!

Microsoft® Outlook® Express

Microsoft Corporation

Outlook Express, the messaging tool that takes your e-mail and newsgroup communications to new heights! Outlook Express is easy to set up and use, and provides you with secure, personalized, and complete features that make creating, sending, and reading your e-mail a more

rich and dynamic experience.

Microsoft® Word 2000

Microsoft Corporation

Microsoft Word 2000 makes it easy to create common Web, e-mail, and print documents for use around the world. It embraces HTML as a first-class file format and extends Word's ease-of-use to the Web and e-mail. Word 2000 also extends that ease of use to international users, making it easy to create multilingual documents.

MindSpring® Internet Desktop

MindSpring Enterprises, Inc.

The MindSpring Internet Desktop offers you access to different areas of the Internet from one convenient program. With a single click on the MindSpring Internet Desktop, you can easily search the Internet, send and receive e-mail, access news and weather, and more.

Netscape Communicator®

Netscape Communications

Netscape Communicator is the all-in-one Internet tool that makes it easy to browse the Web, send Internet e-mail, chat, read newsgroups, and compose great Web documents.

PictureGear

Sony Electronics

This image management software displays images from your hard drive, a Sony digital still camera, or a Sony Mavica® camera. The images appear in a convenient light-table format, so that you can easily view the contents of an entire folder.

Prodigy Internet

Prodigy Communications Corporation

An Internet service that helps you find what you need online faster and smarter. Prodigy delivers powerful online content, such as sports scores, stock quotes, news, and easy access to Excite , plus a personal e-mail account and quality customer service -- all at a competitive price.

Quicken® Basic

Intuit, Inc.

Quicken is the fastest, easiest way to organize your finances. Quicken works just like your checkbook, so it's easy to learn and use. Quicken manages all of your finances, bank accounts, credit cards, investments, and loans. You can even pay your bills online.

Smart Capture

Sony Electronics

By managing the i.LINK connection between your computer and a camera with an i.LINK interface, Smart Capture enables you to capture and compress video or still images that you can save or share via e-mail. A smart solution to computer, digital audio/video, and network convergence. For more information, see [Smart Capture](#).

Smart Connect

Sony Electronics

Smart Connect allows you to use an i.LINK cable to connect your VAIO computer to another VAIO computer that supports Smart Connect. You can then use one computer to copy, delete, and edit files on the other computer. You can also print from a printer attached to either computer.

Sound Forge® XP (PCV-R547DS/PCV-R549DS only)

Sonic Foundry

Sound Forge XP allows you to put powerful audio processing tools and effects to work on your desktop. Simply cut, copy, and paste your way to striking multimedia files for use in everything from Web pages to desktop presentations.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

Sony Electronics Inc.

VAIO Action Setup manages the settings for your computer's Shortcut keys and i.LINK interface. For details on using VAIO Action Setup, see [VAIO Action Setup \(PCV-R547DS/PCV-R549DS only\)](#).

VAIO Smart Keyboard

Sony Electronics

VAIO Smart Keyboard software operates your new easy-to-use programmable PS/2 keyboard. Six programmable buttons enable you to launch your favorite applications, open frequently used files, access Explorer, or even open your Web browser with just the click of a button.

Wild Metal Country®

Infogrames North America

Attempt to reclaim planets in the Tehric system, where a devastating civil war has left hunter-killer machines in control. In your war machine, you will seek control of vital power cores and fight off the enemy with a wide array of sophisticated ammunition.

WinFax® Basic Edition

Symantec Corporation

WinFax Basic Edition incorporates an easy-to-use interface that allows you to send and receive faxes easily. Upgrade to WinFax Pro to receive additional features.

About Your Recovery CDs

Application Recovery CD(s)

Sony Electronics

The Application Recovery CD program allows you to reinstall individual applications and device drivers. Use it to restore corrupted or accidentally erased files.

System Recovery CD(s)

Sony Electronics

The System Recovery CD program allows you to restore the software titles that shipped with your computer if they become corrupted or are erased accidentally. It can be used only to restore the hard disk of the Sony computer you purchased.

For Answers to Your Software Questions

Sony Service Center

For the Sony Service Center nearest you, call 1-888-4SONYPC (1-888-476-6972). This service is free of charge for 90 days after the original date of purchase.

Acrobat® Reader, Adobe PhotoDeluxe® Home Edition, Adobe Premiere® LE (Adobe Systems Incorporated)

Web site <http://www.adobe.com/>
phone 206-628-2746 (fee-based support)
fax 206-628-5737
e-mail techdocs@adobe.com
hours M - F, 6 AM - 5 PM PT

America Online® (America Online)

Web site <http://www.aol.com/>
phone 800-827-3338
hours 7 days a week, 6 AM - 2 PM ET

AT&T WorldNet® Service (AT&T)

Web site <http://www.att.net/>¹
phone 800-400-1447
e-mail worldnet@attmail.com
hours 7 days a week, 24 hours a day
¹ You must be a WorldNet Service customer to access online support.

CompuServe® 2000 (CompuServe Interactive Services)

Web site <http://www.compuserve.com/>
phone 800-848-8990

EarthLink TotalAccess (EarthLink Network, Inc.)

Web site <http://help.earthlink.net/techsupport/>
phone 800-395-8410
e-mail support@earthlink.net
hours 7 days a week, 24 hours a day

eMail inChorus (Softlink, Inc.)

Web site <http://www.sonk.com>
phone 408-970-3370
e-mail support@sonk.com

McAfee's VirusScan® (Network Associates, Inc.)

Web site <http://support.mcafee.com>
phone 408-988-3832
e-mail cybr@nai.com
hours M - F, 9 AM - 5 PM CT

Quicken® Basic (Intuit, Inc.)

Web site <http://www.intuit.com/support/>
phone 900-555-4688
hours 7 days a week, 24 hours a day

Sound Forge® (Sonic Foundry)

Web site <http://www.sonicfoundry.com/support/>
phone 608-256-5555
fax 608-256-7300
e-mail support@sonicfoundry.com
hours M - F, 8 AM - 7 PM CT

Wild Metal Country® (Infogrames North America)

Web site <http://www.infogrames.net>
phone 408-296-8400
fax 408-246-0231
e-mail help@infogrames.net
hours M - F, 9 AM - 5 PM PT

Windows® 98 Second Edition Operating System, Internet Explorer 5, Outlook® Express, Word 2000 (Microsoft Corporation)

Web site <http://www.sony.com/pcsupport>
phone 888-4SONYPC (888-476-6972)¹
hours 7 days a week, 24 hours a day

¹ Support from 1-888-4SONYPC is free of charge for 90 days after the original date of purchase.

WinFax® Basic Edition (Symantec Corporation)

Web site <http://www.symantec.com/techsupp/>
phone 800-798-0850
fax 800-554-4403 in North America
541-984-2490 outside North America

Specifications

Model	PCV-R545DS	PCV-R547DS
Processor	500 MHz ¹ Pentium® III	600 MHz* Pentium® III
Hard Disk Drive	20 GB ²	27 GB
Standard SDRAM	128 MB PC-100 SDRAM, expandable to 256 MB	128 MB PC-100 SDRAM, expandable to 256 MB
Video RAM	Shared with system memory	16 MB SDRAM
MPEG	"Sony Tuned" MPEG Digital Video supports full-screen video playback	
Graphics	Intel 810	nVidia TNT 2 Pro
Sound Capabilities	Aureal 8810 Aureal 8830	
Diskette Drive	3.5" 1.44 MB FDD 3.5" 1.44 MB FDD	
CD-RW Drive	24X max. CD-ROM reading, 4X max. CD-R writing, 24X max. CD-R reading, 2X max. CD-RW writing, 8X max. CD-RW reading 32X max. CD-ROM reading, 8X max. CD-R writing, 32X max. CD-R reading, 4X max. CD-RW writing, 20X max. CD-RW reading	
DVD-ROM Drive	8X max. DVD-ROM (40X max. CD-ROM) ³	
Modem	Lucent 1646 technology/V.90 compatible data/fax modem ⁴	
Expansion Capabilities	HDD bay	HDD bay
Connection Capabilities (Front)	USB port	
i.LINK port (4--pin)	USB port	
i.LINK port (4--pin)		
Connection Capabilities (Rear)	USB port	
PS/2 (2)		
VGA Monitor port		
Serial port		
Parallel (printer)		
Game/MIDI		
Headphones		
Line In		
Microphone		
i.LINK (6-pin)		
Modem line (RJ-11)		
Phone line (RJ-11)	USB port	
PS/2 (2)		
VGA Monitor port		
Serial port		
Parallel (printer)		
Game/MIDI		
Headphones		
Line In		
Microphone		
i.LINK (6-pin)		
Modem line (RJ-11)		
Phone line (RJ-11)		
Supplied Accessories	VAIO Smart Keyboard	
PS/2 Wheel Mouse		
Speakers (SRS- Z050V)		
Power cord		
Modem cable	VAIO Smart Keyboard	
PS/2 Wheel Mouse		
Speakers (SRS- Z050V)		
Power cord		
Modem cable		
i.LINK cable		
Service	90-day limited service. Extendible to one year from original date of purchase upon	

registration⁵

Limited Warranty 90-day parts/labor standard. Extendible to one year from original date of purchase upon registration⁶

Power Requirements 200 watts maximum

Dimensions 8.6"(w) x 14"(h) x 15.5"(d) (220mm x 358mm x 394mm)

Weight 25.3lbs (11.5kg) 25.3lbs (11.5kg)

Operating Temperature 50°F to 95°F (+10°C to 35°C)

¹ MHz denotes microprocessor internal clock speed; other factors may affect application performance.

² GB means one billion bytes when referring to hard drive capacity. Accessible capacity may vary.

³ Data on a DVD-ROM is read at a variable transfer rate, ranging from 3.3X at the innermost track to 8X at the outermost track (the data transfer standard 1X rate is 1385 kbytes/s). The average data transfer rate is 5.6X (7634 kbytes/s). Data on a CD-ROM is read at a variable transfer rate, ranging from 17.2X at the innermost track to 40X at the outermost track (the data transfer standard 1X rate is 150 kbytes/s). The average data transfer rate is 28.6X (4293 kbytes/s).

⁴ Maximum speed for faxing is 14.4 kbytes/s. Your modem is capable of downloading at 56 kbytes/s using K56flex technology or V.90. Your phone service, online service, or Internet Service Provider, however, may not support this technology or operate at this speed.

⁵ Certain restrictions apply

⁶ Certain restrictions apply

Specifications are subject to change without notice.

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 Customer Support. For more advanced troubleshooting information, see the *VAIO Digital Studio Computer Reference Manual*. You can download this electronic document from Sony's Web site at <http://www.sony.com/pcsupport>.

My computer does not 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.
- Confirm that a diskette is not in the diskette drive (unless you are using a bootable diskette).
- Confirm that the power cord and all cables are connected firmly, as described on the color poster.
- 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 Function](#)).

My files are corrupted or deleted and I want to recover applications or drivers that came with my computer

See [Using the Application Recovery CD\(s\)](#) of this manual.

My computer or software program "locks up"

- Close the application that is currently "locked up" by pressing Ctrl+Alt+Delete. In the Close Program dialog box, scroll down until you locate "(Not responding)" next to an application. Select this application and click End Task. Windows attempts to close the application. If the attempt is unsuccessful, a second dialog box appears. Select End Task again.
- If you are unable to "unlock" the application, repeat the above steps but select Shut Down when the Close Program dialog box appears.
- If the above steps fail to "unlock" your computer, save any unsaved work, if possible. Press Alt+F4. Select Restart and click OK.
- If you cannot restart as described in the preceding steps, you can restart the computer by pressing Ctrl+Alt+Delete or by pressing the power switch for more than six seconds.



Pressing Ctrl+Alt+Delete twice consecutively may result in the loss of changes made to files that are currently open.

- Contact the software publisher or designated provider for technical support. See the contact information on [For Answers to Your Software Questions-Windows® 98 Second Edition Operating System, Internet Explorer 5, Outlook® Express, Word 2000 \(Microsoft Corporation\)](#).

My DVD-ROM/CD-RW drive tray does not open

- Make sure the computer is turned on.
- Press the Eject button on the drive.
- 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, heavyweight paper clip into the emergency eject hole.

I cannot play a CD-ROM

- After inserting your CD, wait a few seconds for it to be detected before trying to access it.
- 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.
- If your drive reads some CDs but not others, check the shiny side of the disc for dirt or scratches. You may also need to clean the DVD-ROM drive lens with a CD-ROM cleaner.

I cannot play a DVD-ROM

- If a region code warning appears when you are using the DVD player, it could be that the DVD-ROM you are trying to play is incompatible with the DVD-ROM drive in your VAIIO Digital Studio Computer. 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. Unless a "1" or "ALL" appears on the DVD or on the packaging, 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 screen area to 800 x 600 using 16-bit color. To change this setting, click the My Computer icon on your desktop, click Control Panel, and then click Display. Click the Settings tab. You can now change the screen area and color.
- If you see video but cannot hear audio, check all of the following: Make sure your DVD player's mute setting is off. Check the master volume setting in the audio Mixer. Check the volume settings on 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.

I want to play a CD with my Microsoft CD Player

When you insert a music CD, the Sony Media Bar automatically launches to play your CD. When the Sony Media Bar is running, the Microsoft CD Player does not have access to the CD. Close Media Bar to use the Microsoft CD Player. If you do not hear any music, check all your volume controls.

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

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

Why doesn't my CD-RW drive record at the highest speed?


You must use the correct media to achieve optimum performance. Use 8x media for PCV-R547DS and PCV-R549DS, and 4x media for PCV-R545DS. If you must use other media, the following steps may be helpful:

- If you are having difficulty formatting non-8x/4x writable media, change the write speed from 8x/4x to 2x or 1x. To change the default write speed, click the My Computer icon on your desktop. Right-click the CD-RW drive icon (your CD-RW drive is assigned drive H as its default), select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK.
- Right-click the CD-RW drive icon, select Properties, and then select the Settings tab. Change the "Current Write Speed" field to 1x or 2x, and then click OK. Your CD-RW drive is assigned drive H as its default.

I need to change the video resolution of my display

From the Start menu, select Settings, and then click Control Panel. Click the Display icon. Select the Settings tab. Move the slider under Screen area to change the resolution.

My speakers have no sound

- Check that the speakers are plugged into the **headphones** connector.
- 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. There is a volume control  on the Windows® taskbar. Click the icon and slide the level bar up to increase the volume.
- 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 Lucent 1648 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 does not work

- Check that the phone line is plugged into the **line** jack.
- 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.
- Verify that the software you are using is appropriately configured to recognize and interact with the Sony computer modem. Call the software publisher if you do not know how to configure the software to recognize the modem. All programs, preinstalled by Sony, are compatible.
- If you suspect your modem is not functioning, you can perform a simple test to find out. Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click the Diagnostics tab and select COM2. Click More Info. If your modem is functioning, a More Info dialog box will display. If your modem is not functioning, an error message will appear.

I cannot change my modem to rotary/touch-tone dialing.

Click the My Computer icon on your desktop. Click Control Panel, and then click Modems. Click Dialing Properties. Next to "Dial using," select the Tone dial or Pulse dial radio button. Click OK.

I need to set up faxing in Windows® 98

Windows 98 does not provide a built-in fax utility. Sony has included the Symantec WinFax[®] Basic Edition for your faxing needs. To set up WinFax Basic, click the Start button, point to Programs, choose Symantec WinFax Basic Edition, and select Configure WinFax Basic Edition. Follow the on-screen instructions to configure the fax utility.

My microphone does not work

Check that the microphone is plugged into the **mic** connector.

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 check box for 1 Mic Gain (+20dB), then click the Close button.
7. Close the Recording Control window.

My mouse does not work

- Check that the mouse is plugged into the **mouse** connector.
- There may be dust or dirt inside the mouse mechanism. To clean the mouse, follow these steps:
 1. Turn off your computer. See [Shutting Down Your Computer](#) for details.
 2. Remove the mouse ball cover on the back side of the mouse.
 3. Turn the mouse upright, and drop the mouse ball into your hand.
 4. Using a piece of tape, remove any dust or dirt on the mouse ball and inside the mouse ball socket.
 5. Return the mouse ball to the socket, and replace the mouse ball cover.

My mouse needs to be set up for left-hand use

To set up the mouse for left-hand use:

1. Click the My Computer icon on your desktop.
2. Click Control Panel, and then click Mouse. The Mouse Properties dialog box appears.
3. In the Quick Setup tab, click Device Setup.
4. In the Device Setup Wizard dialog box, click Next.
5. Select the radio button next to "Left side of the keyboard."
6. Click Next three times, and then click Finish.
7. Click Apply.

My keyboard does not work

Check that the keyboard is plugged into the **keyboard** connector.

I cannot 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.

Windows locks up during shut down

The Windows operating system may not shut down properly for many reasons, including incompatible or conflicting drivers, damaged files, or nonresponsive hardware. For troubleshooting information, you can search Windows Help. From the Start menu, select Help, click the Contents tab, click Troubleshooting, and then click Windows 98 Troubleshooters. Click the subject for which you want information, and then answer the questions that are appropriate for your problem.

My system is running slowly

Your system's responsiveness varies depending on the number of applications that are open and running. Close any applications that you are not currently using. Increasing the system memory may also help. The computer has two memory slots. For memory upgrades, use only 3.3V 64-bit PC-100 SDRAM DIMM modules. For information on installing memory, please see the online document [Upgrading and Maintaining Your VAIO® Computer](#).

Sony computer supplies, accessories and peripherals can be purchased from your dealer or by contacting Sony at <http://www.sony.com/accessories>.

My i.LINK® peripheral does not appear on the desktop

Turn off and disconnect your peripheral. Reconnect your peripheral, and then turn on the power.

My connected printer doesn't function after the computer resumes from a power saving mode.

When this occurs, follow the procedures below to reset the printer connection:

1. Right-click the My Computer icon on the desktop, and then select Properties.
2. Click the Device Manager tab.
3. Select Refresh, and then click OK.
4. The printer should now function properly.

There is unusual activity on my floppy disk drive

If you notice that your system is slow to respond due to unusual floppy disk drive activity, it could be because of Find Fast. To determine if Find Fast is present, click Start, point to Programs, and then point to Startup. Removing this item may remedy the problem.



See the VAIO Digital Studio Computer [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\(s\)](#).

The System Recovery CD(s) contains a backup copy of 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. If your hard drive is partitioned into C and D drives, the computer offers you the option to reformat the drive into a single partition.
- **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 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 Customer Support.

To use the System Recovery CD(s)



You need to complete the Windows registration process when you use the System Recovery CD(s).

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 drive when you turn on the computer.

2. Shut down your computer as described in [Shutting Down Your Computer](#).
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 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\(s\)](#).

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

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.

About the Software on Your Computer

Your VAIO Digital Studio computer is ready to help you work, play, learn, and communicate as soon as you turn it on. This section gives you an overview of the activities you can perform with your software titles. For support information, see [For Answers to Your Software Questions](#).

Adobe Acrobat® Reader

Adobe Systems Incorporated

Acrobat Reader software allows you to view, navigate, and print electronic documents in Adobe's Portable Document Format (PDF), an open file format that is intended to preserve the fidelity of documents created on all major computer platforms.

Adobe PhotoDeluxe® Home Edition

Adobe Systems Incorporated

Create amazing photo effects with PhotoDeluxe. Without learning complex software, you can enhance, restore, and be creative with your photos. Includes built-in guided activities, stock photos, clip art, and templates to assist you.

Adobe Premiere® LE (PCV-R547DS/PCV-R549DS only)

Adobe Systems Incorporated

Adobe Premiere LE offers an interface and editing tool for producing movies for video, multimedia, or the Web. View source clips and edited footage simultaneously in the monitor window. Create video clips up to three hours long with complete audio-video synchronization.

America Online®

America Online

America Online is the world's most popular Internet online service. Stay in touch with family and friends with Easy-to-Use E-mail, manage your personal finances, get the latest news and sports scores, and chat with thousands of others who share your interests.

AT&T WorldNet® Service

AT&T

Fast, reliable Internet access from AT&T WorldNet Service. AT&T WorldNet Service provides Web-based e-mail, a personalized start page from Excite, easy access to the Excite search engine, free Web pages, online and live agent technical support, instant messaging, and special shopping discounts at Market Square.

CompuServe® 2000

CompuServe Interactive Services

The all-new CompuServe 2000 delivers a powerful tool for Internet users who want serious and timely information, in-depth research, and professional communities backed by state-of-the-art technologies, including high-speed access and powerful e-mail messaging.

Digital Media Bar

Sony Electronics

Media Bar is your all-in-one solution for audio/video playback. For more information, see [Media Bar](#)

—

Direct CD

Adaptec

DirectCD is software that allows you to drag and drop files directly to your CD-R or CD-RW drive under Windows 95 / 98 / NT 4.0 or Mac OS. In other words, you can save, rename, move or "delete" files right on your CD-R as if it were a giant floppy disk.

DVgate Applications

Sony Electronics

Sony Electronics DVgate makes editing digital video easy and fun. For more information, see [DVgate Applications](#).

EarthLink Sprint TotalAccess

EarthLink Network, Inc.

An Internet Service Provider that supplies access, information, and assistance to its customers, introducing them to the Internet. Member benefits include e-mail, newsgroups, a Personal Start Page, a free 6 MB Web site, a member magazine, and 24-hour technical support.

Easy CD Creator

Adaptec

Easy CD Creator lets you make your own data, audio and multimedia CDs. You can back up your important files to CD, and read them back on standard CD-ROM drives. Create your own audio CDs right on your desktop, and play them back on your home or car stereo CD player. You can make your own personalized color jewel case inserts with custom text and graphics. You can even make backup copies of your existing CDs. The easy CD Creator Wizard makes creating your own custom CDs a simple process.

eMail inChorus (PCV-R545DS only)

Softlink, Inc.

This communications tool turns your e-mail into multimedia e-mail. With eMail inChorus , in minutes you can send your colleagues and friends presentations and e-mails narrated with your prerecorded voice, and illustrated with graphics and animated annotation.

McAfee's VirusScan®

Network Associates, Inc.

Protect your computer from viruses. VirusScan can detect viruses from floppy disks, Internet downloads, e-mail attachments, intranets, shared files, CD-ROMs, and online services.

Microsoft® Internet Explorer 5

Microsoft Corporation

Internet Explorer delivers the web the way you want it. It's safe, easy to use, and you can personalize how you access the web. Outlook Express and other tools in Internet Explorer also help you have a great experience when you are on the web!

Microsoft® Outlook® Express

Microsoft Corporation

Outlook Express, the messaging tool that takes your e-mail and newsgroup communications to new heights! Outlook Express is easy to set up and use, and provides you with secure, personalized, and complete features that make creating, sending, and reading your e-mail a more

rich and dynamic experience.

Microsoft® Word 2000

Microsoft Corporation

Microsoft Word 2000 makes it easy to create common Web, e-mail, and print documents for use around the world. It embraces HTML as a first-class file format and extends Word's ease-of-use to the Web and e-mail. Word 2000 also extends that ease of use to international users, making it easy to create multilingual documents.

MindSpring® Internet Desktop

MindSpring Enterprises, Inc.

The MindSpring Internet Desktop offers you access to different areas of the Internet from one convenient program. With a single click on the MindSpring Internet Desktop, you can easily search the Internet, send and receive e-mail, access news and weather, and more.

Netscape Communicator®

Netscape Communications

Netscape Communicator is the all-in-one Internet tool that makes it easy to browse the Web, send Internet e-mail, chat, read newsgroups, and compose great Web documents.

PictureGear

Sony Electronics

This image management software displays images from your hard drive, a Sony digital still camera, or a Sony Mavica® camera. The images appear in a convenient light-table format, so that you can easily view the contents of an entire folder.

Prodigy Internet

Prodigy Communications Corporation

An Internet service that helps you find what you need online faster and smarter. Prodigy delivers powerful online content, such as sports scores, stock quotes, news, and easy access to Excite , plus a personal e-mail account and quality customer service -- all at a competitive price.

Quicken® Basic

Intuit, Inc.

Quicken is the fastest, easiest way to organize your finances. Quicken works just like your checkbook, so it's easy to learn and use. Quicken manages all of your finances, bank accounts, credit cards, investments, and loans. You can even pay your bills online.

Smart Capture

Sony Electronics

By managing the i.LINK connection between your computer and a camera with an i.LINK interface, Smart Capture enables you to capture and compress video or still images that you can save or share via e-mail. A smart solution to computer, digital audio/video, and network convergence. For more information, see [Smart Capture](#).

Smart Connect

Sony Electronics

Smart Connect allows you to use an i.LINK cable to connect your VAIO computer to another VAIO computer that supports Smart Connect. You can then use one computer to copy, delete, and edit files on the other computer. You can also print from a printer attached to either computer.

Sound Forge® XP (PCV-R547DS/PCV-R549DS only)

Sonic Foundry

Sound Forge XP allows you to put powerful audio processing tools and effects to work on your desktop. Simply cut, copy, and paste your way to striking multimedia files for use in everything from Web pages to desktop presentations.

VAIO Action Setup (PCV-R547DS/PCV-R549DS only)

Sony Electronics Inc.

VAIO Action Setup manages the settings for your computer's Shortcut keys and i.LINK interface. For details on using VAIO Action Setup, see [VAIO Action Setup \(PCV-R547DS/PCV-R549DS only\)](#).

VAIO Smart Keyboard

Sony Electronics

VAIO Smart Keyboard software operates your new easy-to-use programmable PS/2 keyboard. Six programmable buttons enable you to launch your favorite applications, open frequently used files, access Explorer, or even open your Web browser with just the click of a button.

Wild Metal Country®

Infogrames North America

Attempt to reclaim planets in the Tehric system, where a devastating civil war has left hunter-killer machines in control. In your war machine, you will seek control of vital power cores and fight off the enemy with a wide array of sophisticated ammunition.

WinFax® Basic Edition

Symantec Corporation

WinFax Basic Edition incorporates an easy-to-use interface that allows you to send and receive faxes easily. Upgrade to WinFax Pro to receive additional features.

About Your Recovery CDs

Application Recovery CD(s)

Sony Electronics

The Application Recovery CD program allows you to reinstall individual applications and device drivers. Use it to restore corrupted or accidentally erased files.

System Recovery CD(s)

Sony Electronics

The System Recovery CD program allows you to restore the software titles that shipped with your computer if they become corrupted or are erased accidentally. It can be used only to restore the hard disk of the Sony computer you purchased.

For Answers to Your Software Questions

Sony Service Center

For the Sony Service Center nearest you, call 1-888-4SONYPC (1-888-476-6972). This service is free of charge for 90 days after the original date of purchase.

Acrobat® Reader, Adobe PhotoDeluxe® Home Edition, Adobe Premiere® LE (Adobe Systems Incorporated)

Web site <http://www.adobe.com/>
phone 206-628-2746 (fee-based support)
fax 206-628-5737
e-mail techdocs@adobe.com
hours M - F, 6 AM - 5 PM PT

America Online® (America Online)

Web site <http://www.aol.com/>
phone 800-827-3338
hours 7 days a week, 6 AM - 2 PM ET

AT&T WorldNet® Service (AT&T)

Web site <http://www.att.net/>¹
phone 800-400-1447
e-mail worldnet@attmail.com
hours 7 days a week, 24 hours a day

¹ You must be a WorldNet Service customer to access online support.

CompuServe® 2000 (CompuServe Interactive Services)

Web site <http://www.compuserve.com/>
phone 800-848-8990

EarthLink TotalAccess (EarthLink Network, Inc.)

Web site <http://help.earthlink.net/techsupport/>
phone 800-395-8410
e-mail support@earthlink.net
hours 7 days a week, 24 hours a day

eMail inChorus (Softlink, Inc.)

Web site <http://www.sonk.com>
phone 408-970-3370
e-mail support@sonk.com

McAfee's VirusScan® (Network Associates, Inc.)

Web site <http://support.mcafee.com>
phone 408-988-3832
e-mail cybr@nai.com
hours M - F, 9 AM - 5 PM CT

Quicken® Basic (Intuit, Inc.)

Web site <http://www.intuit.com/support/>
phone 900-555-4688
hours 7 days a week, 24 hours a day

Sound Forge® (Sonic Foundry)

Web site <http://www.sonicfoundry.com/support/>
phone 608-256-5555
fax 608-256-7300
e-mail support@sonicfoundry.com
hours M - F, 8 AM - 7 PM CT

Wild Metal Country® (Infogrames North America)

Web site <http://www.infogrames.net>
phone 408-296-8400
fax 408-246-0231
e-mail help@infogrames.net
hours M - F, 9 AM - 5 PM PT

Windows® 98 Second Edition Operating System, Internet Explorer 5, Outlook® Express, Word 2000 (Microsoft Corporation)

Web site <http://www.sony.com/pcsupport>
phone 888-4SONYPC (888-476-6972)¹
hours 7 days a week, 24 hours a day

¹ Support from 1-888-4SONYPC is free of charge for 90 days after the original date of purchase.

WinFax® Basic Edition (Symantec Corporation)

Web site <http://www.symantec.com/techsupp/>
phone 800-798-0850
fax 800-554-4403 in North America
541-984-2490 outside North America

Specifications

Model	PCV-R545DS	PCV-R547DS
Processor	500 MHz ¹ Pentium® III	600 MHz* Pentium® III
Hard Disk Drive	20 GB ²	27 GB
Standard SDRAM	128 MB PC-100 SDRAM, expandable to 256 MB	128 MB PC-100 SDRAM, expandable to 256 MB
Video RAM	Shared with system memory	16 MB SDRAM
MPEG	"Sony Tuned" MPEG Digital Video supports full-screen video playback	
Graphics	Intel 810	nVidia TNT 2 Pro
Sound Capabilities	Aureal 8810 Aureal 8830	
Diskette Drive	3.5" 1.44 MB FDD 3.5" 1.44 MB FDD	
CD-RW Drive	24X max. CD-ROM reading, 4X max. CD-R writing, 24X max. CD-R reading, 2X max. CD-RW writing, 8X max. CD-RW reading 32X max. CD-ROM reading, 8X max. CD-R writing, 32X max. CD-R reading, 4X max. CD-RW writing, 20X max. CD-RW reading	
DVD-ROM Drive	8X max. DVD-ROM (40X max. CD-ROM) ³	
Modem	Lucent 1646 technology/V.90 compatible data/fax modem ⁴	
Expansion Capabilities	HDD bay	HDD bay
Connection Capabilities (Front)	USB port i.LINK port (4--pin) USB port i.LINK port (4--pin)	
Connection Capabilities (Rear)	USB port PS/2 (2) VGA Monitor port Serial port Parallel (printer) Game/MIDI Headphones Line In Microphone i.LINK (6-pin) Modem line (RJ-11) Phone line (RJ-11) USB port PS/2 (2) VGA Monitor port Serial port Parallel (printer) Game/MIDI Headphones Line In Microphone i.LINK (6-pin) Modem line (RJ-11) Phone line (RJ-11)	
Supplied Accessories	VAIO Smart Keyboard PS/2 Wheel Mouse Speakers (SRS- Z050V) Power cord Modem cable VAI0 Smart Keyboard PS/2 Wheel Mouse Speakers (SRS- Z050V) Power cord Modem cable i.LINK cable	
Service	90-day limited service. Extendible to one year from original date of purchase upon	

registration⁵

Limited Warranty 90-day parts/labor standard. Extendible to one year from original date of purchase upon registration⁶

Power Requirements 200 watts maximum

Dimensions 8.6"(w) x 14"(h) x 15.5"(d) (220mm x 358mm x 394mm)

Weight 25.3lbs (11.5kg) 25.3lbs (11.5kg)

Operating Temperature 50°F to 95°F (+10°C to 35°C)

¹ MHz denotes microprocessor internal clock speed; other factors may affect application performance.

² GB means one billion bytes when referring to hard drive capacity. Accessible capacity may vary.

³ Data on a DVD-ROM is read at a variable transfer rate, ranging from 3.3X at the innermost track to 8X at the outermost track (the data transfer standard 1X rate is 1385 kbytes/s). The average data transfer rate is 5.6X (7634 kbytes/s). Data on a CD-ROM is read at a variable transfer rate, ranging from 17.2X at the innermost track to 40X at the outermost track (the data transfer standard 1X rate is 150 kbytes/s). The average data transfer rate is 28.6X (4293 kbytes/s).

⁴ Maximum speed for faxing is 14.4 kbytes/s. Your modem is capable of downloading at 56 kbytes/s using K56flex technology or V.90. Your phone service, online service, or Internet Service Provider, however, may not support this technology or operate at this speed.

⁵ Certain restrictions apply


⁶ Certain restrictions apply


Specifications are subject to change without notice.

Upgrading and Maintaining Your VAIO® Computer


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

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

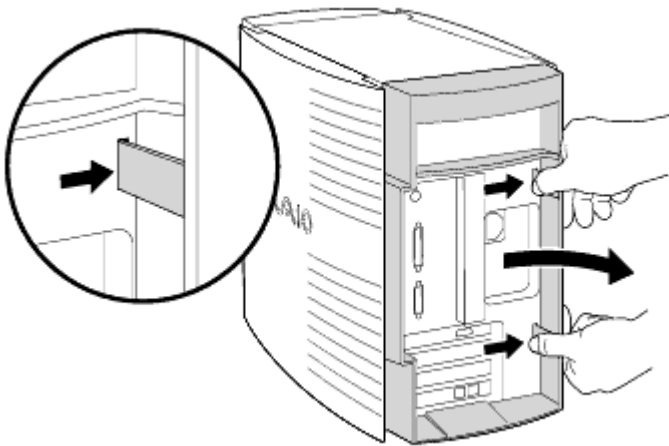
 Always switch the power off before you open the system or connect your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.

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

Removing the Cover

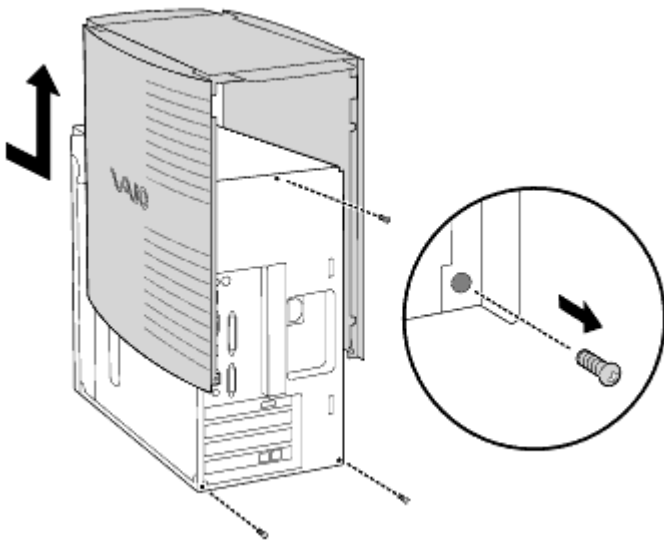
 If you remove the cover immediately after you shut down your computer, the components may be too hot to touch. Wait until the internal parts of the system unit cool down before you attempt to remove the cover.

1. Press the two tabs on the right side of the rear frame.
2. Remove the frame from the unit by gently pulling it from left to right.



 Add-in board configuration varies by model.

1. Remove the screws from the center top, the lower-left corner, and the lower-right corner of the metal backplate.
2. Lift the three-sided outer panel by pulling up on the large tab extending from the top rear. Lift the outer panel up over the unit and set it aside.



Inserting an Add-in Board

Your computer has two open PCI expansion slots, enabling you to install add-in boards to expand the functionality of your system. In PCV-R547DS and PCV-R549DS, slots 2 and 3 are available. In PCV-R545DS, slots 3 and 4 are available.



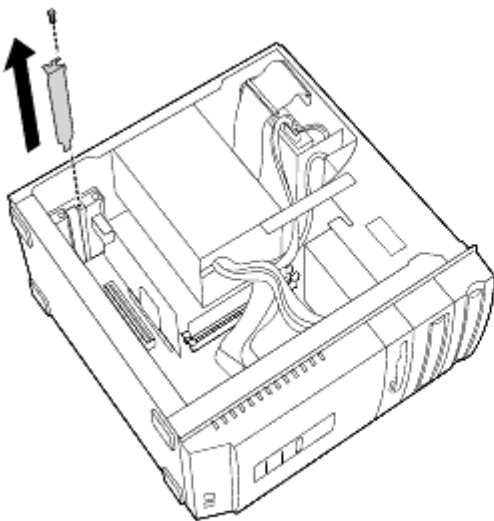
Some models, such as Configure-to-Order systems, may already contain installed add-in cards.

To insert an add-in board

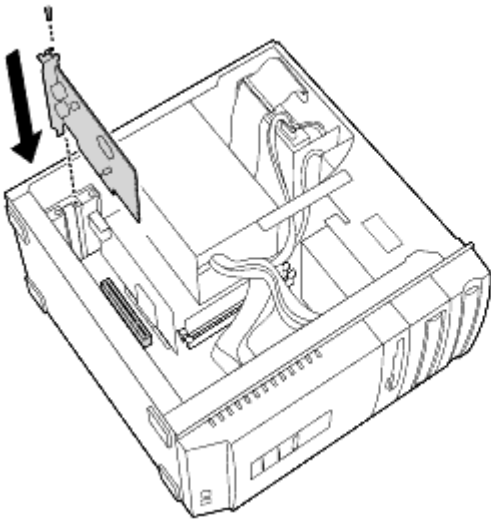


Make sure you observe the proper safety precautions when you add boards to your Sony computer. See [Notes on Use](#) in the VAIO [Consumer Information Guide](#).

1. Shut down your computer and turn off all peripheral devices, such as your printer.
2. Unplug your computer and any peripheral devices.
3. Remove the cover as described on page [Removing the Cover](#).
4. Locate one of the available expansion slots. Remove the screw, and then remove the slot cover.



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



1. Attach any internal cables that the board requires (see the manual for the add-in board).
2. Replace the cover and reinstall the screws as described on [Replacing the Cover](#).
3. Connect all peripheral devices and AC power, and then turn on the computer.

Adding Memory

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

To install memory

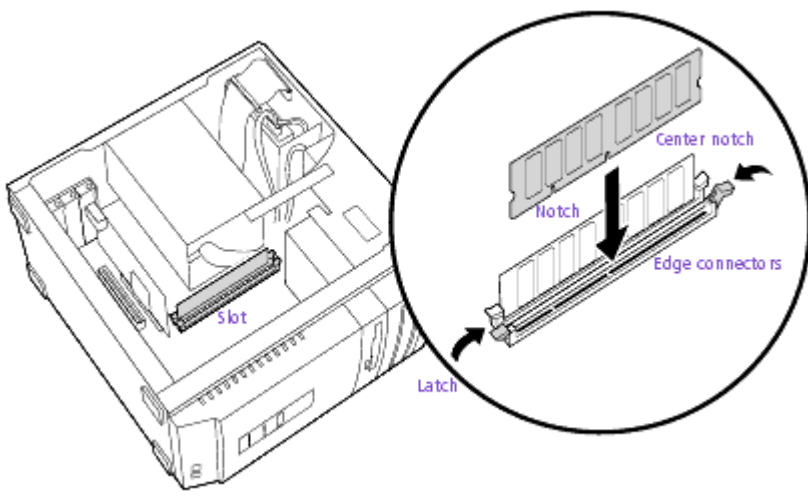


Make sure you observe the proper safety precautions when you add DIMMs to your Sony computer. See [Notes on Use](#) in the VAIO [Consumer Information Guide](#).

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



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




1. Firmly insert the bottom edge of the DIMM into the socket.
2. Press evenly against the DIMM's upper corners. The end latches snap into position automatically.
3. Reinstall any add-in cards or components you removed.
4. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).

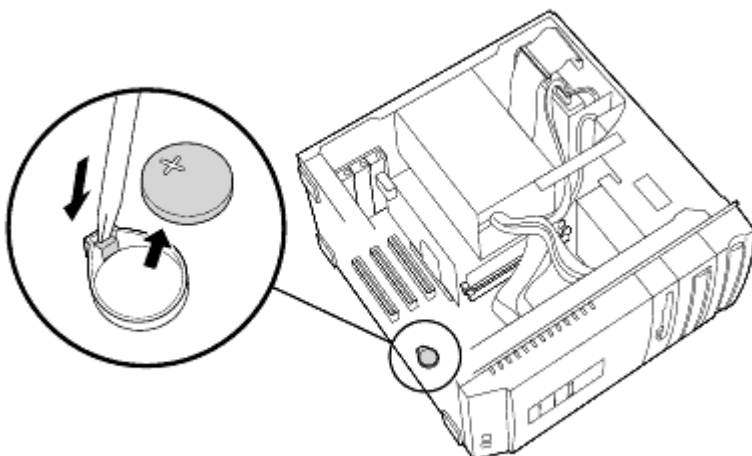
Replacing the Lithium Battery

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

To replace the lithium battery

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

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



1. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).



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

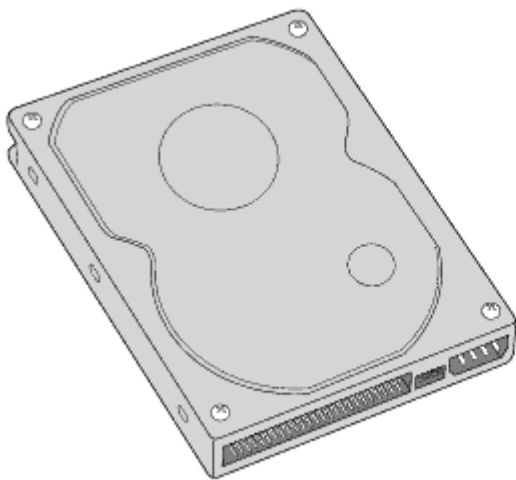
Installing an Additional Hard Disk Drive

Your computer comes with an available internal bay to hold a second standard 3½-inch hard disk drive. (Some models, such as Configure-to-Order systems, may already have a second hard disk drive.) The hard disk drive access light blinks when either internal drive is active. For information on how to install additional drives into the external drive, see the computer *Reference Manual*. You can download the *Reference Manual* from the Sony Web site at <http://www.sony.com/pcsupport>.

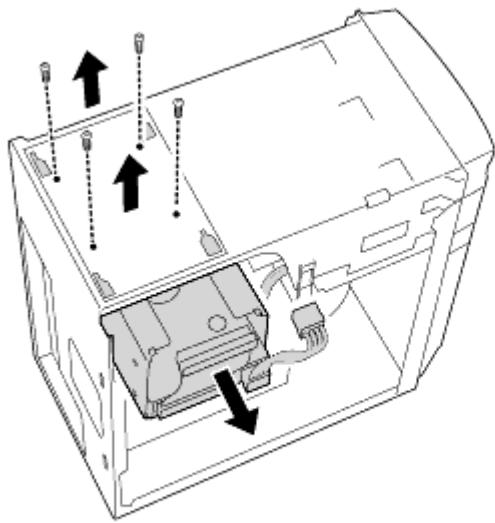


Before opening the system unit, save any open files, exit Windows, turn off the power of the computer and all attached peripherals, and then unplug the power cord.

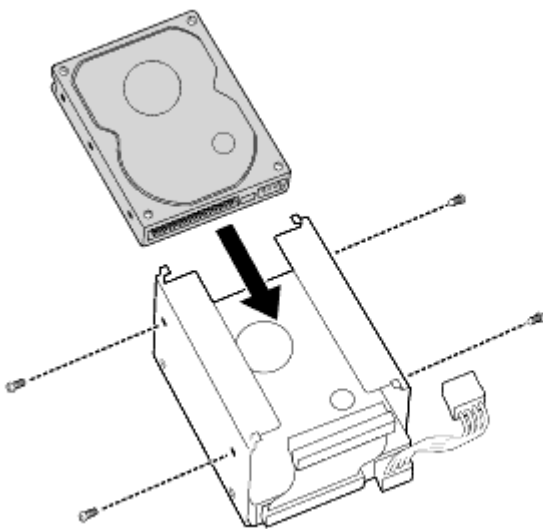
1. Configure the jumpers on the new drive as a slave (see your drive's documentation for configuration instructions).



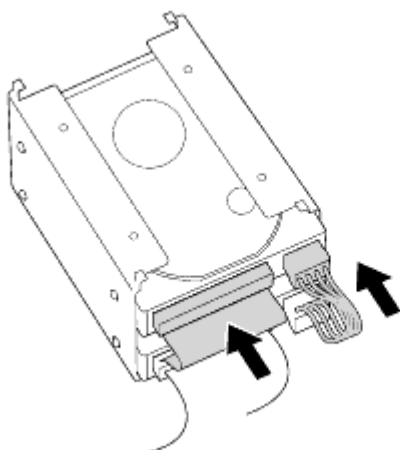
1. Remove the cover as described on page [Removing the Cover](#).
2. Remove the screws that secure the drive holder to the chassis top.
3. Slide the drive holder forward and then out.



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

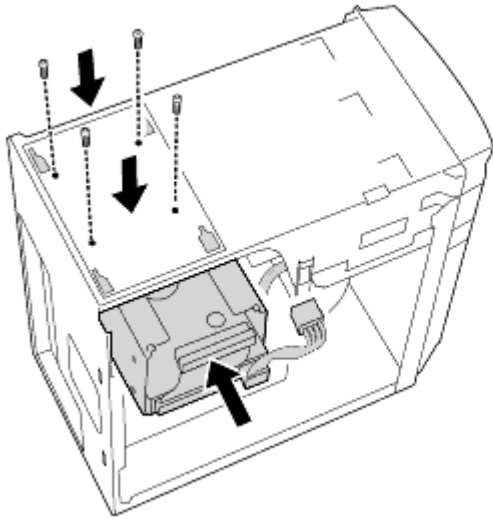


1. Secure the drive to the drive holder using the two holes on each side of the drive holder (screws are provided with the new drive). Do not overtighten the screws.
2. Connect the second drive connector to the new drive. Be sure to orient the connector so that pin 1 (the red side of the ribbon cable) is aligned with pin 1 of the new drive.
3. Connect the second power connector to the new drive.



1. 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.

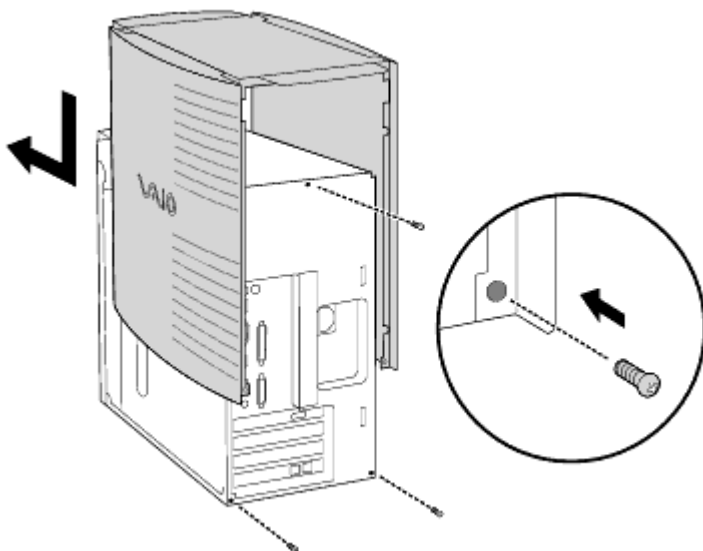


1. Replace the screws that secure the holder to the chassis.
2. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).

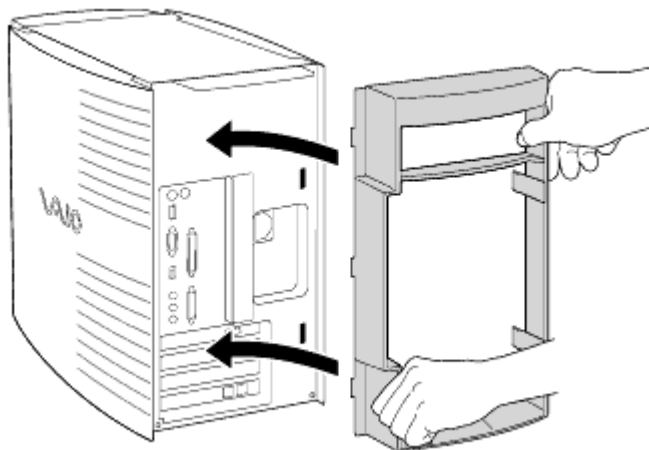
Your computer automatically recognizes the new drive and configures itself accordingly when you turn it on. Partition and format the new drive following the instructions provided with the drive.

Replacing the Cover

1. Align the three-sided outer panel over the chassis and lower it onto the unit. Be sure to slide the panel onto the unit so that the tabs slip into the lips on the unit.
2. Replace the three screws at the center top, lower-left corner, and lower-right corner of the metal backplate.



1. Replace the frame by inserting the three small tabs into the slots on the left side of the unit and slipping the two larger tabs into the slots on the right side of the unit. Gently press the




frame until it clicks into place.


© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, and the VAIO logo are trademarks of Sony. All other trademarks are trademarks of their respective owners.

Upgrading and Maintaining Your VAIO® Computer


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

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

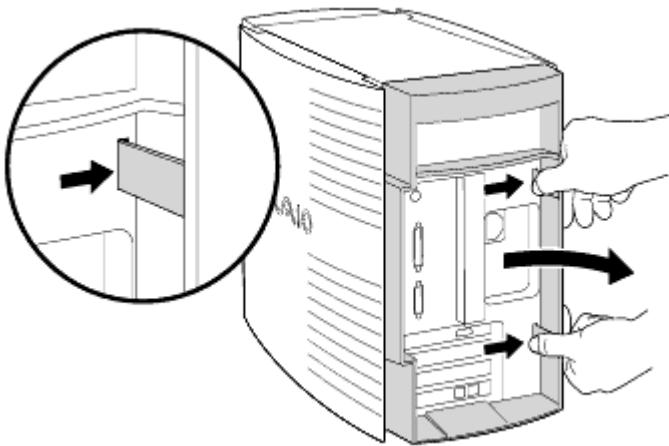
 Always switch the power off before you open the system or connect your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.

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

Removing the Cover

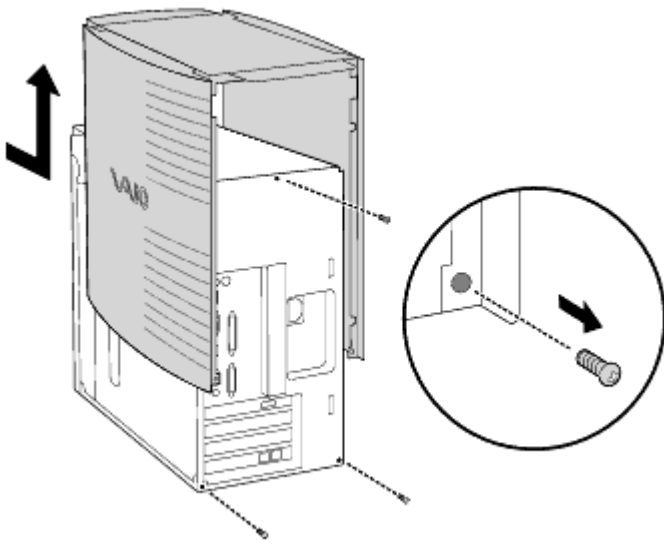
 If you remove the cover immediately after you shut down your computer, the components may be too hot to touch. Wait until the internal parts of the system unit cool down before you attempt to remove the cover.

1. Press the two tabs on the right side of the rear frame.
2. Remove the frame from the unit by gently pulling it from left to right.



 Add-in board configuration varies by model.

1. Remove the screws from the center top, the lower-left corner, and the lower-right corner of the metal backplate.
2. Lift the three-sided outer panel by pulling up on the large tab extending from the top rear. Lift the outer panel up over the unit and set it aside.



Inserting an Add-in Board

Your computer has two open PCI expansion slots, enabling you to install add-in boards to expand the functionality of your system. In PCV-R547DS and PCV-R549DS, slots 2 and 3 are available. In PCV-R545DS, slots 3 and 4 are available.



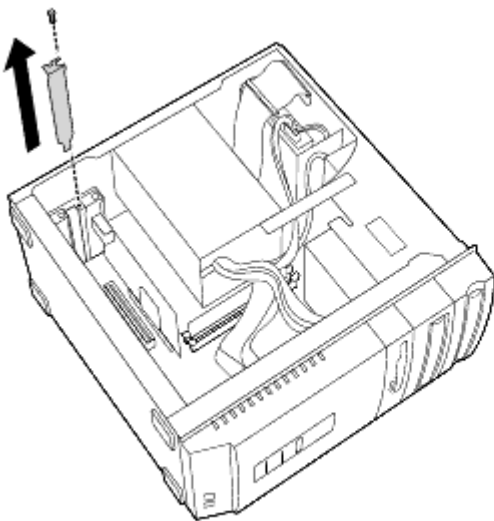
Some models, such as Configure-to-Order systems, may already contain installed add-in cards.

To insert an add-in board

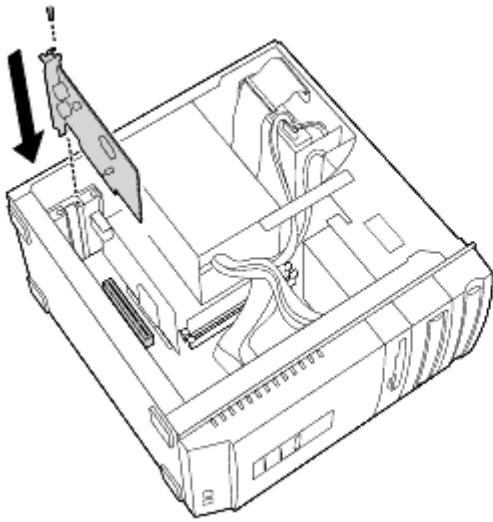


Make sure you observe the proper safety precautions when you add boards to your Sony computer. See [Notes on Use](#) in the VAIO [Consumer Information Guide](#).

1. Shut down your computer and turn off all peripheral devices, such as your printer.
2. Unplug your computer and any peripheral devices.
3. Remove the cover as described on page [Removing the Cover](#).
4. Locate one of the available expansion slots. Remove the screw, and then remove the slot cover.



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



1. Attach any internal cables that the board requires (see the manual for the add-in board).
2. Replace the cover and reinstall the screws as described on [Replacing the Cover](#).
3. Connect all peripheral devices and AC power, and then turn on the computer.

Adding Memory

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

To install memory

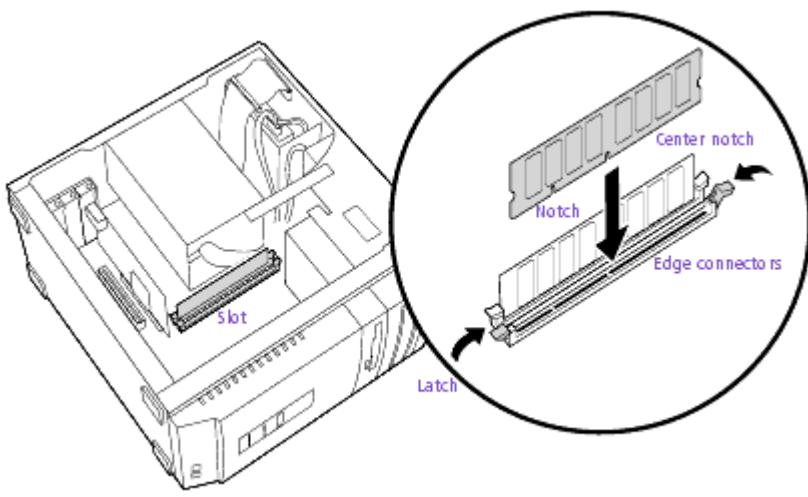


Make sure you observe the proper safety precautions when you add DIMMs to your Sony computer. See [Notes on Use](#) in the VAIO [Consumer Information Guide](#).

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



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




1. Firmly insert the bottom edge of the DIMM into the socket.
2. Press evenly against the DIMM's upper corners. The end latches snap into position automatically.
3. Reinstall any add-in cards or components you removed.
4. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).

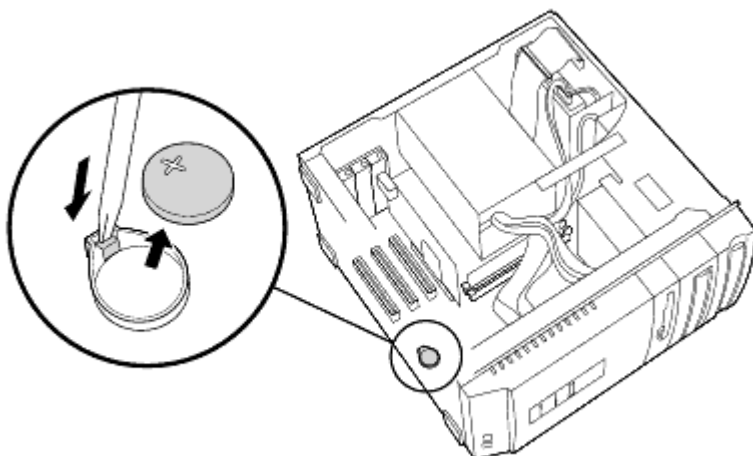
Replacing the Lithium Battery

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

To replace the lithium battery

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

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



1. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).



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

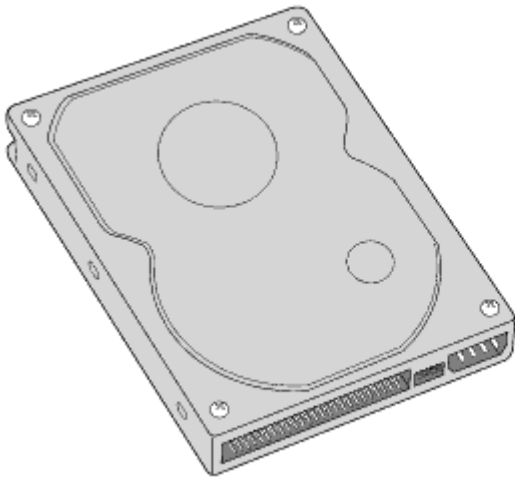
Installing an Additional Hard Disk Drive

Your computer comes with an available internal bay to hold a second standard 3½-inch hard disk drive. (Some models, such as Configure-to-Order systems, may already have a second hard disk drive.) The hard disk drive access light blinks when either internal drive is active. For information on how to install additional drives into the external drive, see the computer *Reference Manual*. You can download the *Reference Manual* from the Sony Web site at <http://www.sony.com/pcsupport>.

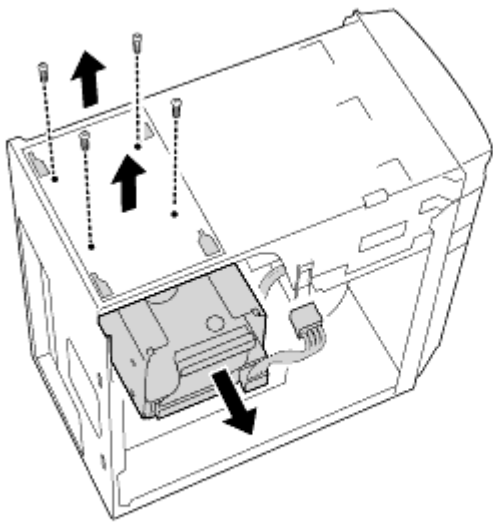


Before opening the system unit, save any open files, exit Windows, turn off the power of the computer and all attached peripherals, and then unplug the power cord.

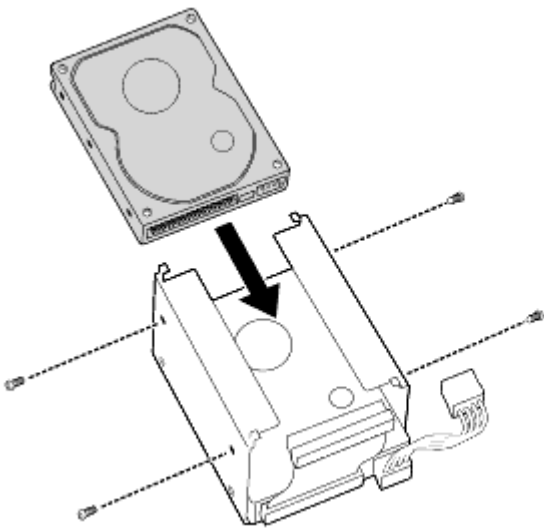
1. Configure the jumpers on the new drive as a slave (see your drive's documentation for configuration instructions).



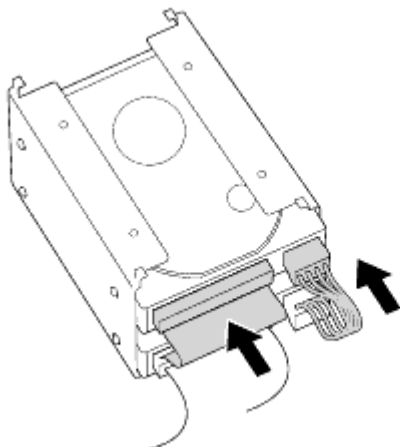
1. Remove the cover as described on page [Removing the Cover](#).
2. Remove the screws that secure the drive holder to the chassis top.
3. Slide the drive holder forward and then out.



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

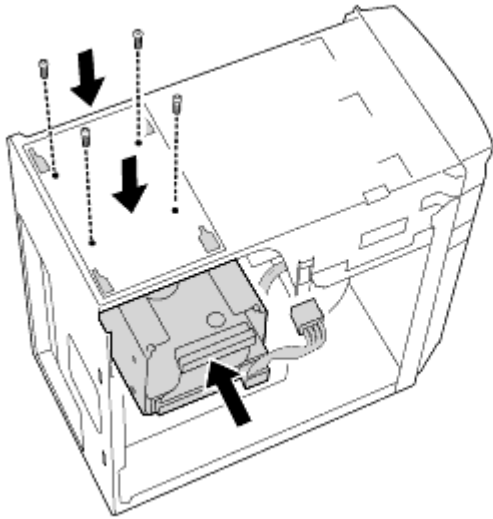


1. Secure the drive to the drive holder using the two holes on each side of the drive holder (screws are provided with the new drive). Do not overtighten the screws.
2. Connect the second drive connector to the new drive. Be sure to orient the connector so that pin 1 (the red side of the ribbon cable) is aligned with pin 1 of the new drive.
3. Connect the second power connector to the new drive.



1. 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.

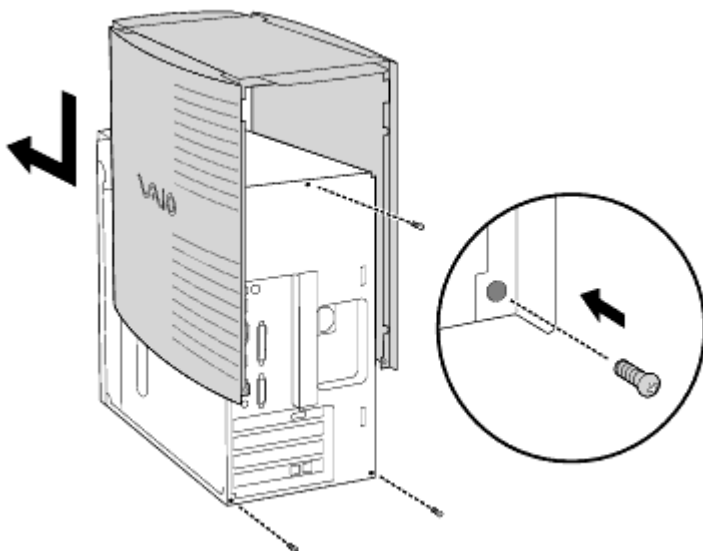


1. Replace the screws that secure the holder to the chassis.
2. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).

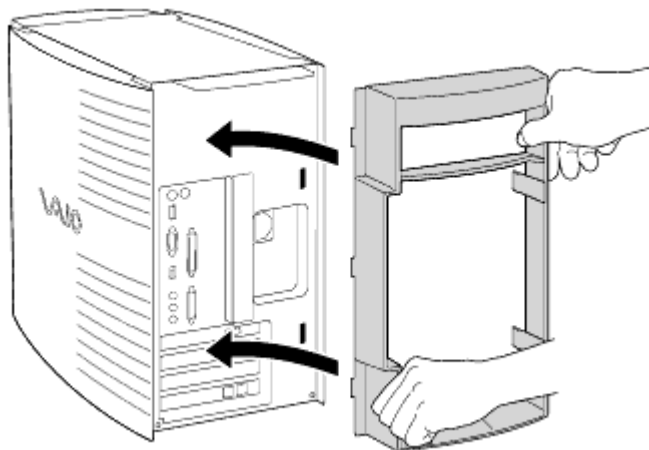
Your computer automatically recognizes the new drive and configures itself accordingly when you turn it on. Partition and format the new drive following the instructions provided with the drive.

Replacing the Cover

1. Align the three-sided outer panel over the chassis and lower it onto the unit. Be sure to slide the panel onto the unit so that the tabs slip into the lips on the unit.
2. Replace the three screws at the center top, lower-left corner, and lower-right corner of the metal backplate.



1. Replace the frame by inserting the three small tabs into the slots on the left side of the unit and slipping the two larger tabs into the slots on the right side of the unit. Gently press the




frame until it clicks into place.


© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, and the VAIO logo are trademarks of Sony. All other trademarks are trademarks of their respective owners.

Upgrading and Maintaining Your VAIO® Computer


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

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

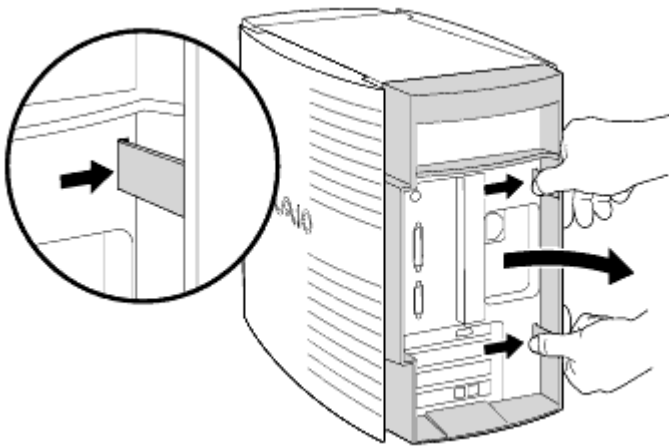
 Always switch the power off before you open the system or connect your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.

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

Removing the Cover

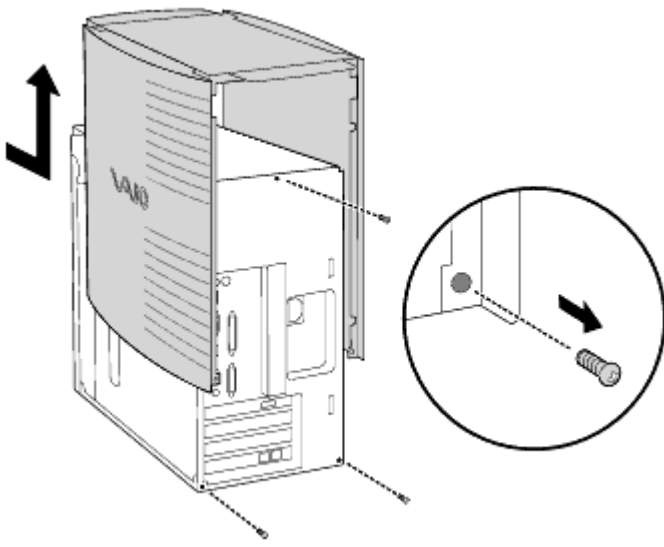
 If you remove the cover immediately after you shut down your computer, the components may be too hot to touch. Wait until the internal parts of the system unit cool down before you attempt to remove the cover.

1. Press the two tabs on the right side of the rear frame.
2. Remove the frame from the unit by gently pulling it from left to right.



 Add-in board configuration varies by model.

1. Remove the screws from the center top, the lower-left corner, and the lower-right corner of the metal backplate.
2. Lift the three-sided outer panel by pulling up on the large tab extending from the top rear. Lift the outer panel up over the unit and set it aside.



Inserting an Add-in Board

Your computer has two open PCI expansion slots, enabling you to install add-in boards to expand the functionality of your system. In PCV-R547DS and PCV-R549DS, slots 2 and 3 are available. In PCV-R545DS, slots 3 and 4 are available.



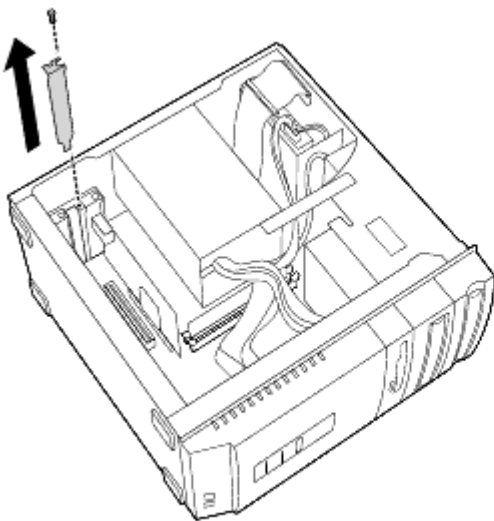
Some models, such as Configure-to-Order systems, may already contain installed add-in cards.

To insert an add-in board

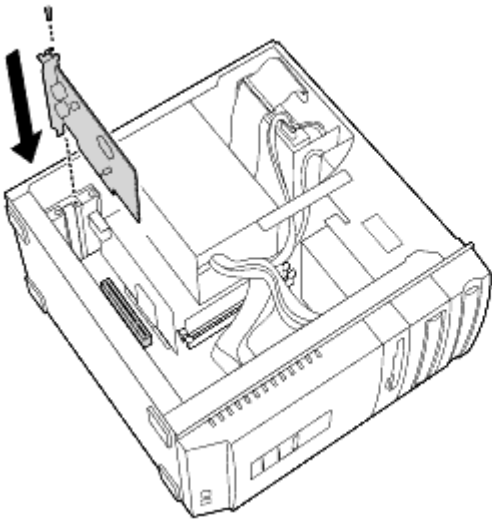


Make sure you observe the proper safety precautions when you add boards to your Sony computer. See [Notes on Use](#) in the VAIO [Consumer Information Guide](#).

1. Shut down your computer and turn off all peripheral devices, such as your printer.
2. Unplug your computer and any peripheral devices.
3. Remove the cover as described on page [Removing the Cover](#).
4. Locate one of the available expansion slots. Remove the screw, and then remove the slot cover.



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



1. Attach any internal cables that the board requires (see the manual for the add-in board).
2. Replace the cover and reinstall the screws as described on [Replacing the Cover](#).
3. Connect all peripheral devices and AC power, and then turn on the computer.

Adding Memory

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

To install memory

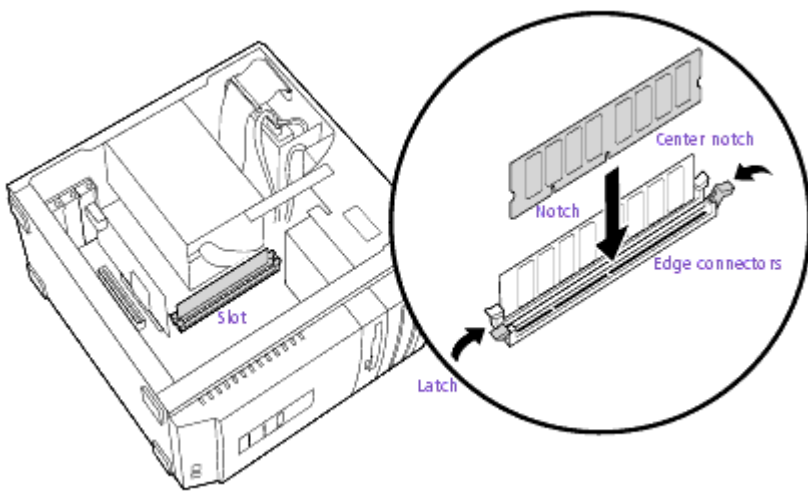


Make sure you observe the proper safety precautions when you add DIMMs to your Sony computer. See [Notes on Use](#) in the VAIO [Consumer Information Guide](#).

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



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




1. Firmly insert the bottom edge of the DIMM into the socket.
2. Press evenly against the DIMM's upper corners. The end latches snap into position automatically.
3. Reinstall any add-in cards or components you removed.
4. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).

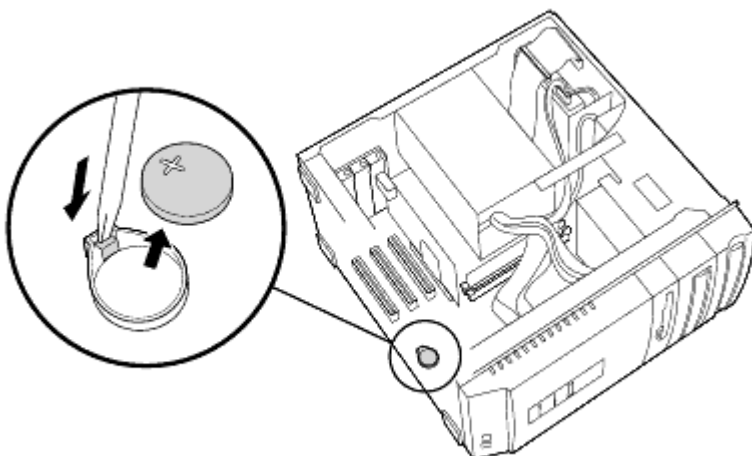
Replacing the Lithium Battery

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

To replace the lithium battery

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

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



1. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).



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

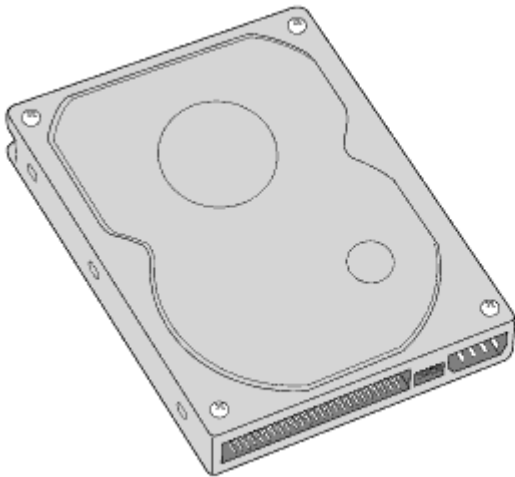
Installing an Additional Hard Disk Drive

Your computer comes with an available internal bay to hold a second standard 3½-inch hard disk drive. (Some models, such as Configure-to-Order systems, may already have a second hard disk drive.) The hard disk drive access light blinks when either internal drive is active. For information on how to install additional drives into the external drive, see the computer *Reference Manual*. You can download the *Reference Manual* from the Sony Web site at <http://www.sony.com/pcsupport>.

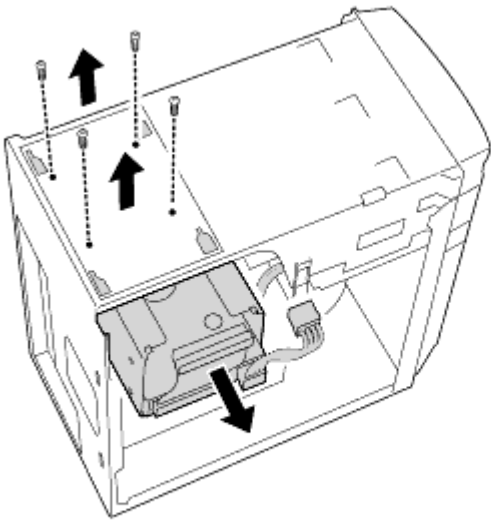


Before opening the system unit, save any open files, exit Windows, turn off the power of the computer and all attached peripherals, and then unplug the power cord.

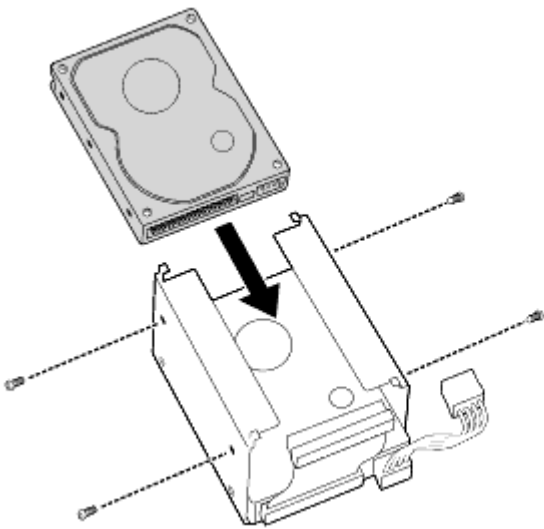
1. Configure the jumpers on the new drive as a slave (see your drive's documentation for configuration instructions).



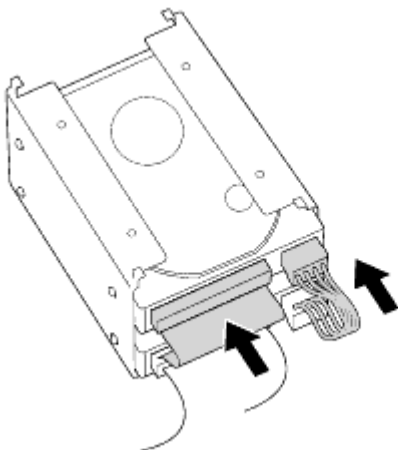
1. Remove the cover as described on page [Removing the Cover](#).
2. Remove the screws that secure the drive holder to the chassis top.
3. Slide the drive holder forward and then out.



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

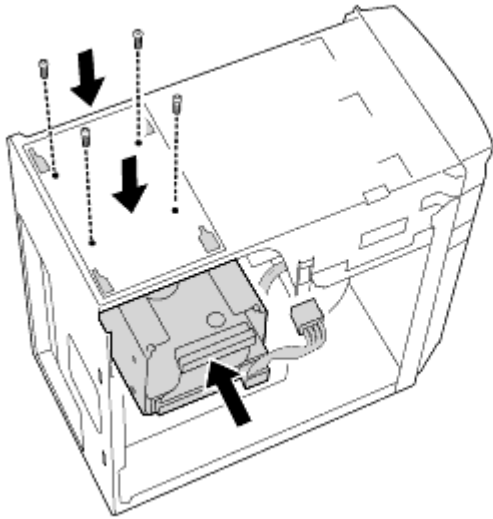


1. Secure the drive to the drive holder using the two holes on each side of the drive holder (screws are provided with the new drive). Do not overtighten the screws.
2. Connect the second drive connector to the new drive. Be sure to orient the connector so that pin 1 (the red side of the ribbon cable) is aligned with pin 1 of the new drive.
3. Connect the second power connector to the new drive.



1. 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.

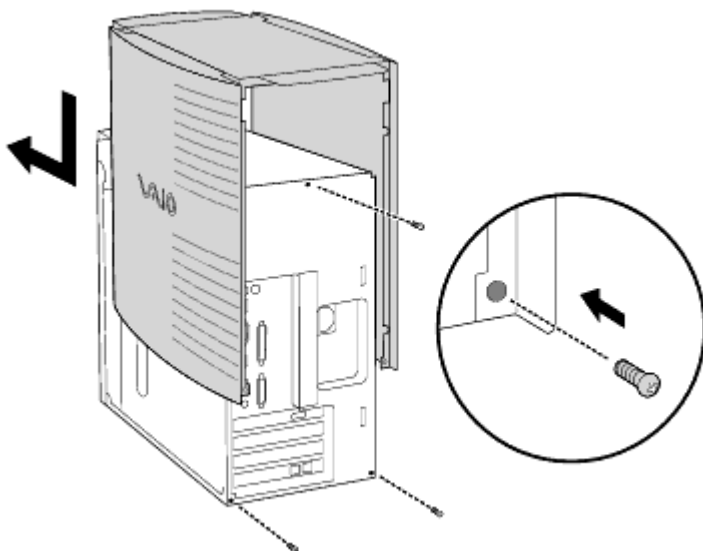


1. Replace the screws that secure the holder to the chassis.
2. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).

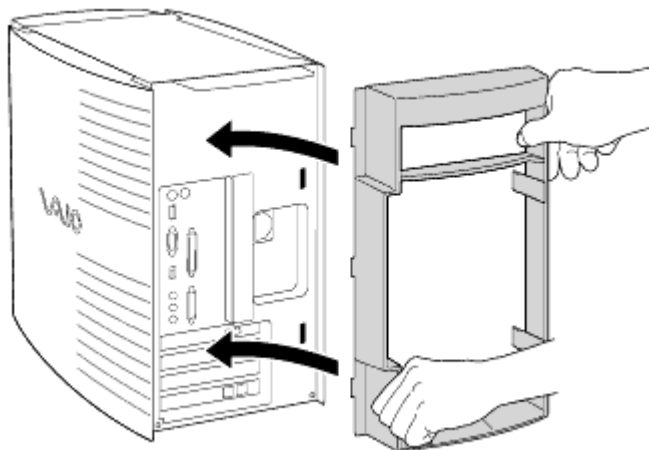
Your computer automatically recognizes the new drive and configures itself accordingly when you turn it on. Partition and format the new drive following the instructions provided with the drive.

Replacing the Cover

1. Align the three-sided outer panel over the chassis and lower it onto the unit. Be sure to slide the panel onto the unit so that the tabs slip into the lips on the unit.
2. Replace the three screws at the center top, lower-left corner, and lower-right corner of the metal backplate.



1. Replace the frame by inserting the three small tabs into the slots on the left side of the unit and slipping the two larger tabs into the slots on the right side of the unit. Gently press the




frame until it clicks into place.


© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, and the VAIO logo are trademarks of Sony. All other trademarks are trademarks of their respective owners.

Upgrading and Maintaining Your VAIO® Computer


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

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

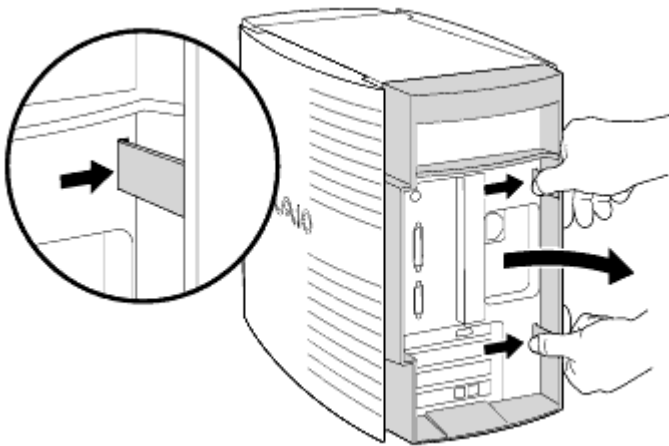
 Always switch the power off before you open the system or connect your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.

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

Removing the Cover

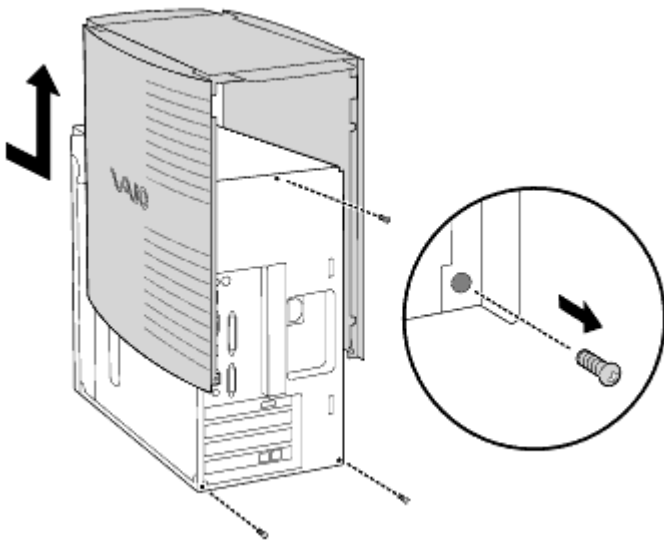
 If you remove the cover immediately after you shut down your computer, the components may be too hot to touch. Wait until the internal parts of the system unit cool down before you attempt to remove the cover.

1. Press the two tabs on the right side of the rear frame.
2. Remove the frame from the unit by gently pulling it from left to right.



 Add-in board configuration varies by model.

1. Remove the screws from the center top, the lower-left corner, and the lower-right corner of the metal backplate.
2. Lift the three-sided outer panel by pulling up on the large tab extending from the top rear. Lift the outer panel up over the unit and set it aside.



Inserting an Add-in Board

Your computer has two open PCI expansion slots, enabling you to install add-in boards to expand the functionality of your system. In PCV-R547DS and PCV-R549DS, slots 2 and 3 are available. In PCV-R545DS, slots 3 and 4 are available.



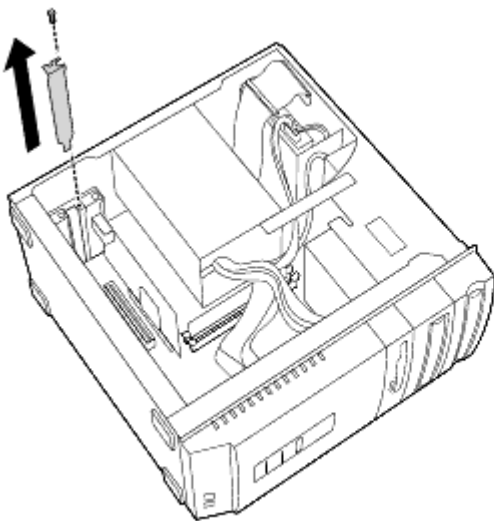
Some models, such as Configure-to-Order systems, may already contain installed add-in cards.

To insert an add-in board

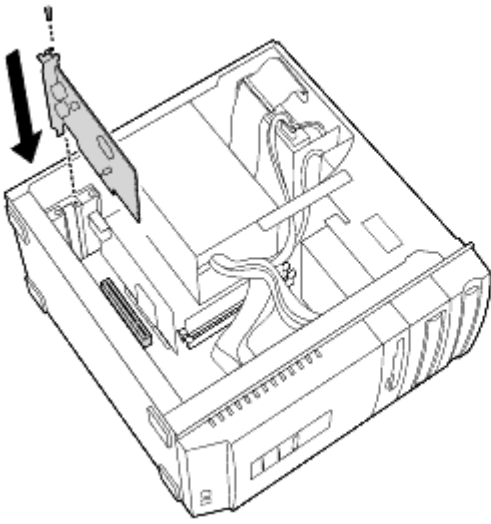


Make sure you observe the proper safety precautions when you add boards to your Sony computer. See [Notes on Use](#) in the VAIO [Consumer Information Guide](#).

1. Shut down your computer and turn off all peripheral devices, such as your printer.
2. Unplug your computer and any peripheral devices.
3. Remove the cover as described on page [Removing the Cover](#).
4. Locate one of the available expansion slots. Remove the screw, and then remove the slot cover.



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



1. Attach any internal cables that the board requires (see the manual for the add-in board).
2. Replace the cover and reinstall the screws as described on [Replacing the Cover](#).
3. Connect all peripheral devices and AC power, and then turn on the computer.

Adding Memory

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

To install memory

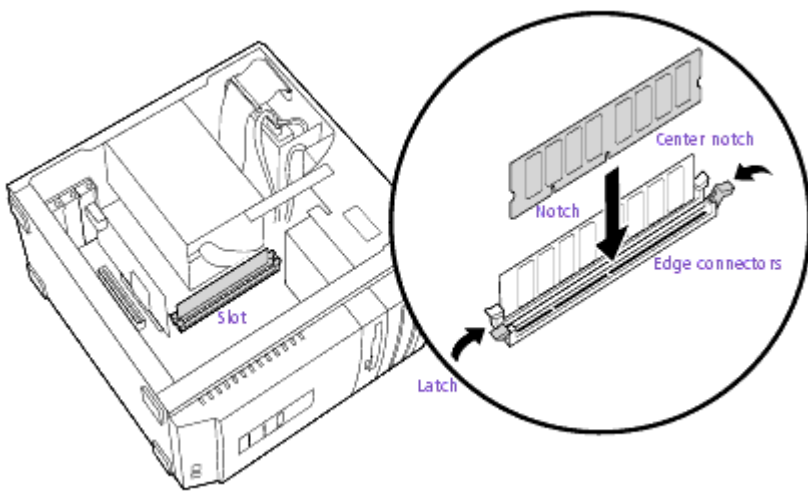


Make sure you observe the proper safety precautions when you add DIMMs to your Sony computer. See [Notes on Use](#) in the VAIO [Consumer Information Guide](#).

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



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




1. Firmly insert the bottom edge of the DIMM into the socket.
2. Press evenly against the DIMM's upper corners. The end latches snap into position automatically.
3. Reinstall any add-in cards or components you removed.
4. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).

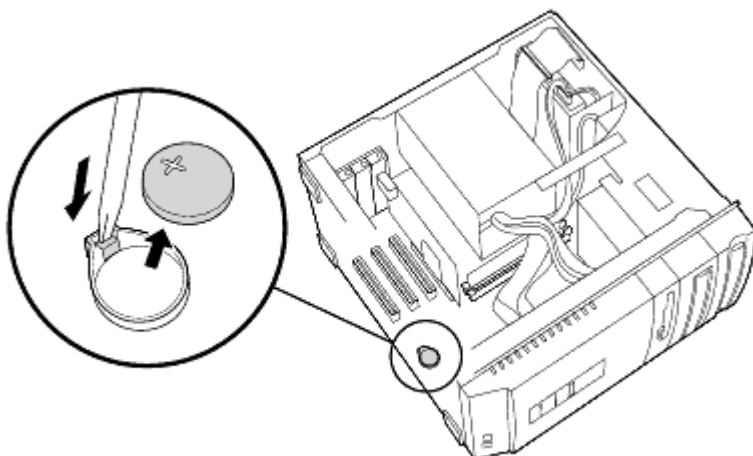
Replacing the Lithium Battery

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

To replace the lithium battery

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

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



1. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).



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

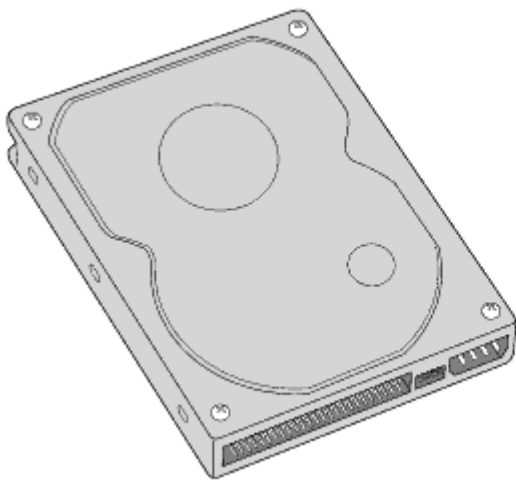
Installing an Additional Hard Disk Drive

Your computer comes with an available internal bay to hold a second standard 3½-inch hard disk drive. (Some models, such as Configure-to-Order systems, may already have a second hard disk drive.) The hard disk drive access light blinks when either internal drive is active. For information on how to install additional drives into the external drive, see the computer *Reference Manual*. You can download the *Reference Manual* from the Sony Web site at <http://www.sony.com/pcsupport>.

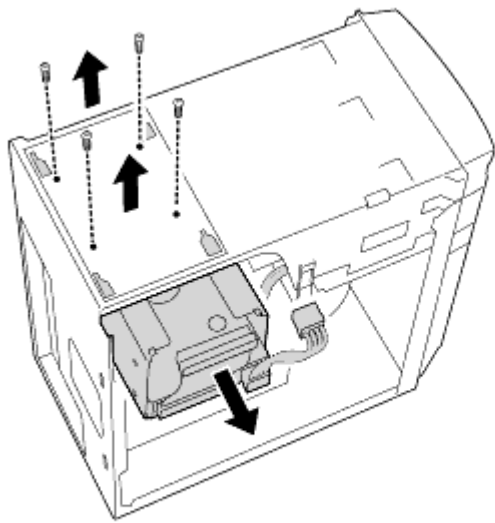


Before opening the system unit, save any open files, exit Windows, turn off the power of the computer and all attached peripherals, and then unplug the power cord.

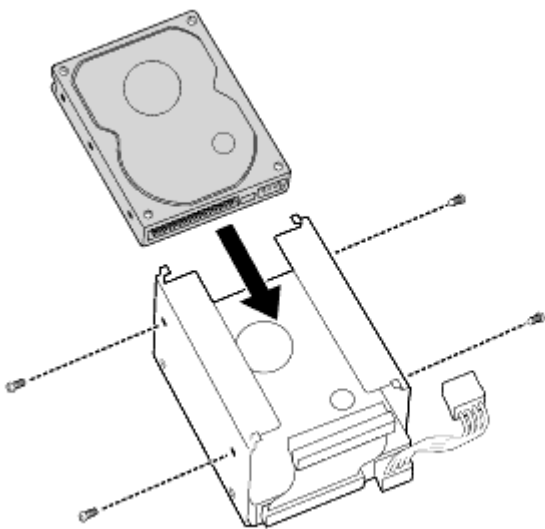
1. Configure the jumpers on the new drive as a slave (see your drive's documentation for configuration instructions).



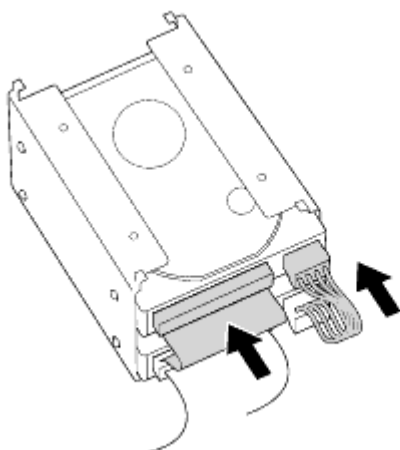
1. Remove the cover as described on page [Removing the Cover](#).
2. Remove the screws that secure the drive holder to the chassis top.
3. Slide the drive holder forward and then out.



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

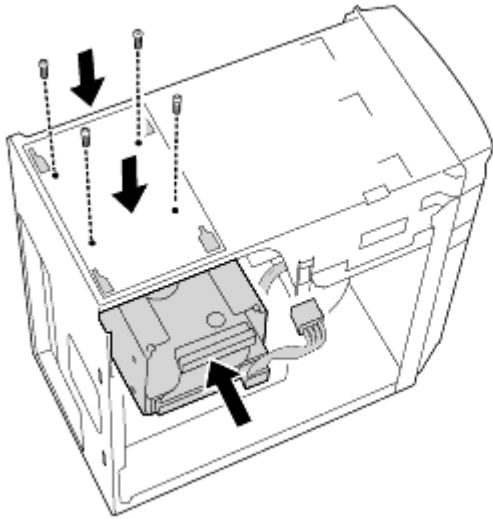


1. Secure the drive to the drive holder using the two holes on each side of the drive holder (screws are provided with the new drive). Do not overtighten the screws.
2. Connect the second drive connector to the new drive. Be sure to orient the connector so that pin 1 (the red side of the ribbon cable) is aligned with pin 1 of the new drive.
3. Connect the second power connector to the new drive.



1. 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.

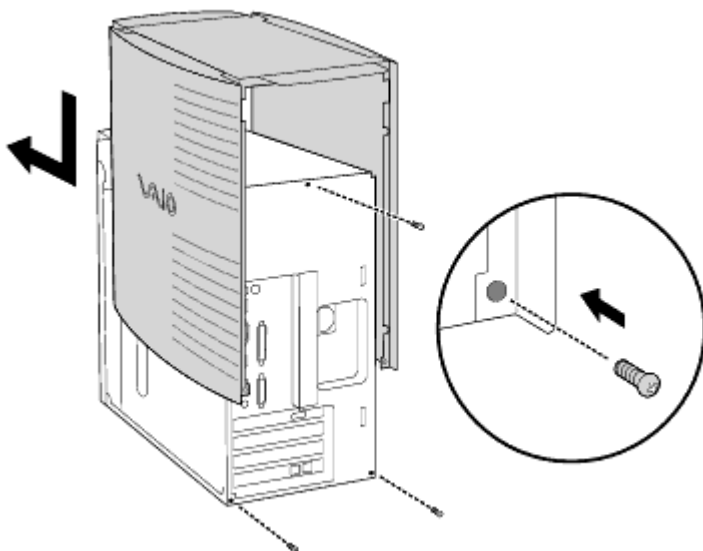


1. Replace the screws that secure the holder to the chassis.
2. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).

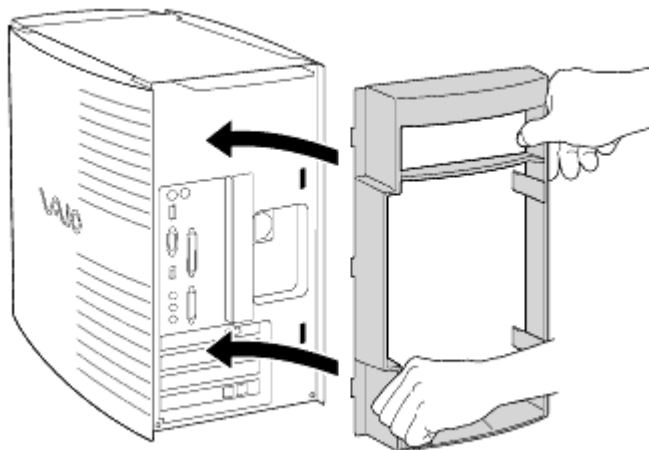
Your computer automatically recognizes the new drive and configures itself accordingly when you turn it on. Partition and format the new drive following the instructions provided with the drive.

Replacing the Cover

1. Align the three-sided outer panel over the chassis and lower it onto the unit. Be sure to slide the panel onto the unit so that the tabs slip into the lips on the unit.
2. Replace the three screws at the center top, lower-left corner, and lower-right corner of the metal backplate.



1. Replace the frame by inserting the three small tabs into the slots on the left side of the unit and slipping the two larger tabs into the slots on the right side of the unit. Gently press the




frame until it clicks into place.


© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, and the VAIO logo are trademarks of Sony. All other trademarks are trademarks of their respective owners.

Upgrading and Maintaining Your VAIO® Computer


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

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

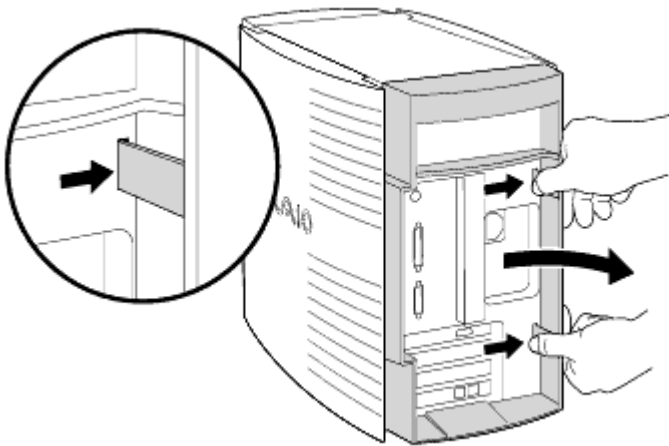
 Always switch the power off before you open the system or connect your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.

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

Removing the Cover

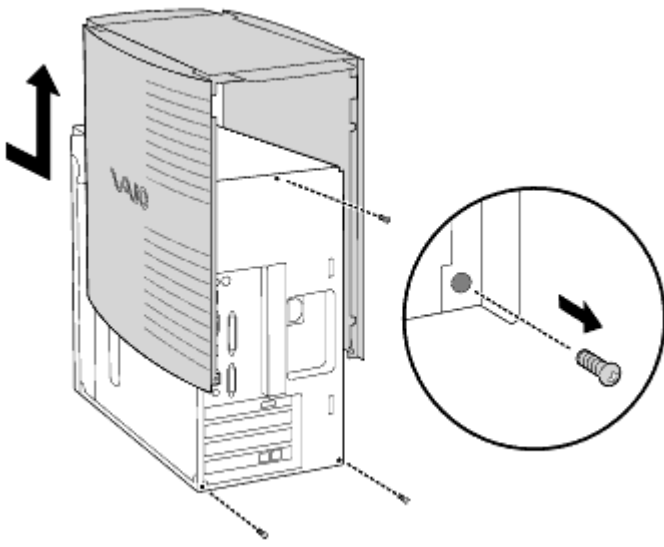
 If you remove the cover immediately after you shut down your computer, the components may be too hot to touch. Wait until the internal parts of the system unit cool down before you attempt to remove the cover.

1. Press the two tabs on the right side of the rear frame.
2. Remove the frame from the unit by gently pulling it from left to right.



 Add-in board configuration varies by model.

1. Remove the screws from the center top, the lower-left corner, and the lower-right corner of the metal backplate.
2. Lift the three-sided outer panel by pulling up on the large tab extending from the top rear. Lift the outer panel up over the unit and set it aside.



Inserting an Add-in Board

Your computer has two open PCI expansion slots, enabling you to install add-in boards to expand the functionality of your system. In PCV-R547DS and PCV-R549DS, slots 2 and 3 are available. In PCV-R545DS, slots 3 and 4 are available.



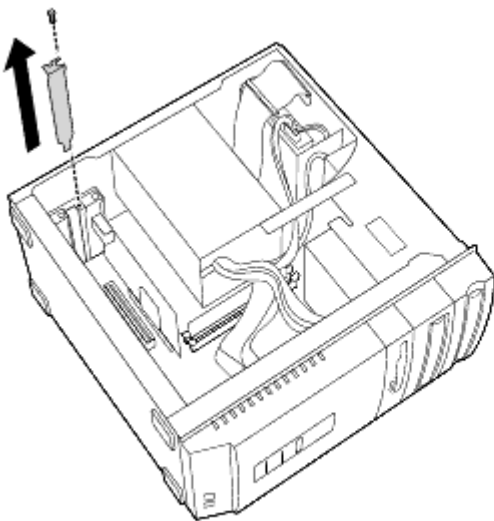
Some models, such as Configure-to-Order systems, may already contain installed add-in cards.

To insert an add-in board

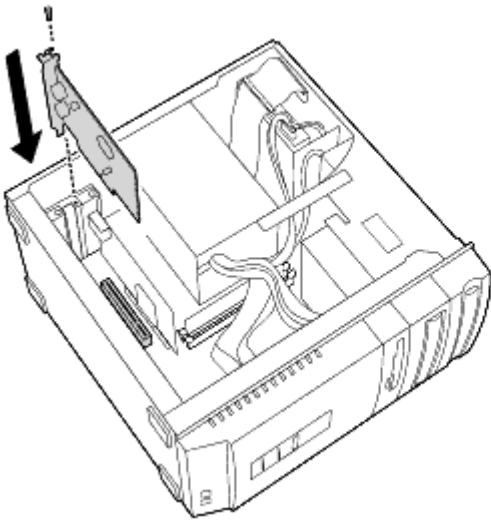


Make sure you observe the proper safety precautions when you add boards to your Sony computer. See [Notes on Use](#) in the VAIO [Consumer Information Guide](#).

1. Shut down your computer and turn off all peripheral devices, such as your printer.
2. Unplug your computer and any peripheral devices.
3. Remove the cover as described on page [Removing the Cover](#).
4. Locate one of the available expansion slots. Remove the screw, and then remove the slot cover.



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



1. Attach any internal cables that the board requires (see the manual for the add-in board).
2. Replace the cover and reinstall the screws as described on [Replacing the Cover](#).
3. Connect all peripheral devices and AC power, and then turn on the computer.

Adding Memory

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

To install memory

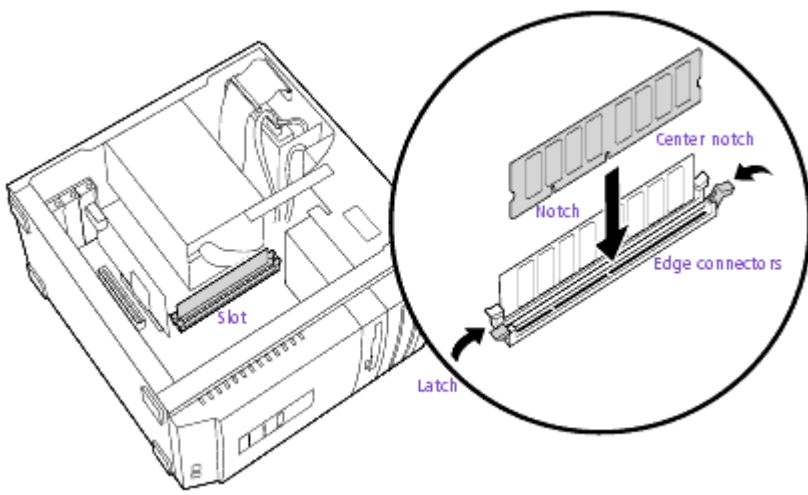


Make sure you observe the proper safety precautions when you add DIMMs to your Sony computer. See [Notes on Use](#) in the VAI0 [Consumer Information Guide](#).

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



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




1. Firmly insert the bottom edge of the DIMM into the socket.
2. Press evenly against the DIMM's upper corners. The end latches snap into position automatically.
3. Reinstall any add-in cards or components you removed.
4. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).

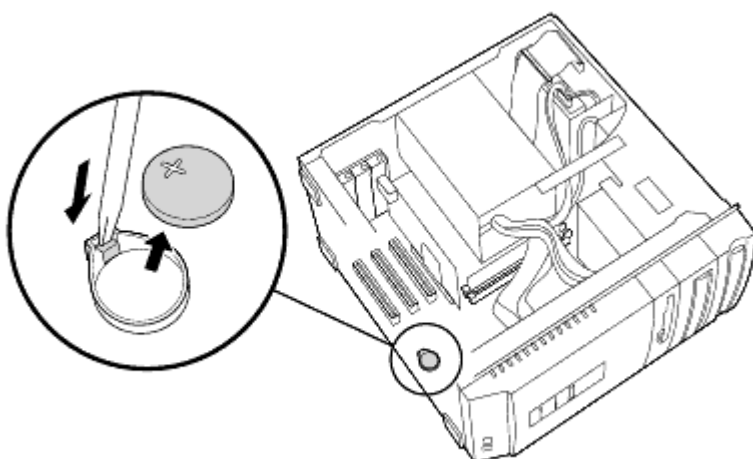
Replacing the Lithium Battery

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

To replace the lithium battery

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

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



1. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).



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

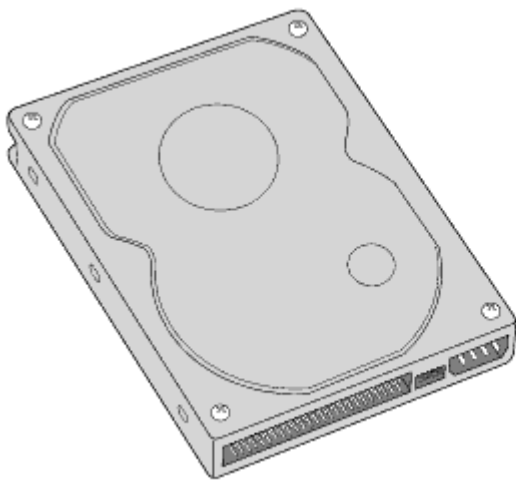
Installing an Additional Hard Disk Drive

Your computer comes with an available internal bay to hold a second standard 3½-inch hard disk drive. (Some models, such as Configure-to-Order systems, may already have a second hard disk drive.) The hard disk drive access light blinks when either internal drive is active. For information on how to install additional drives into the external drive, see the computer *Reference Manual*. You can download the *Reference Manual* from the Sony Web site at <http://www.sony.com/pcsupport>.

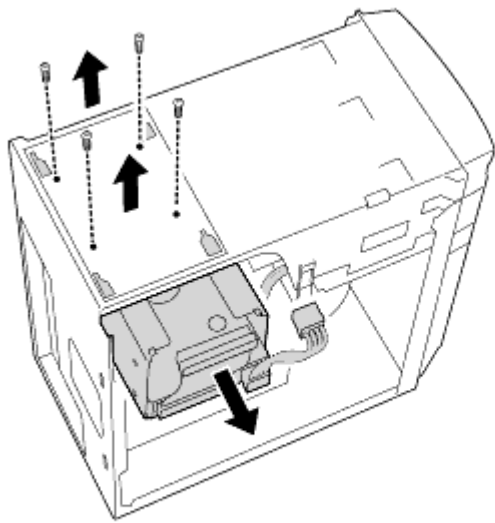


Before opening the system unit, save any open files, exit Windows, turn off the power of the computer and all attached peripherals, and then unplug the power cord.

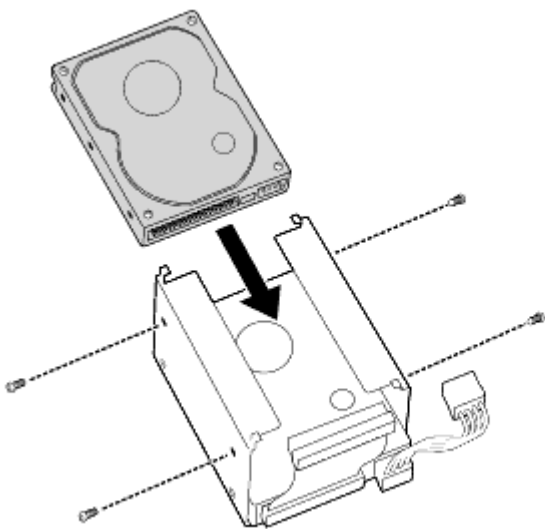
1. Configure the jumpers on the new drive as a slave (see your drive's documentation for configuration instructions).



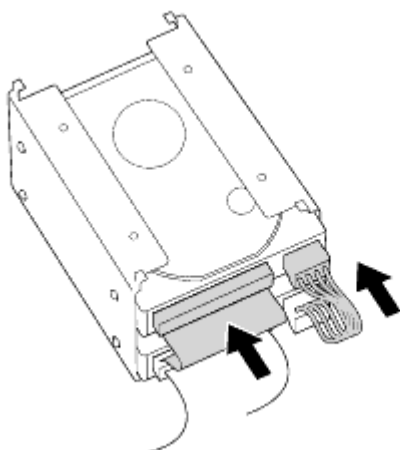
1. Remove the cover as described on page [Removing the Cover](#).
2. Remove the screws that secure the drive holder to the chassis top.
3. Slide the drive holder forward and then out.



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

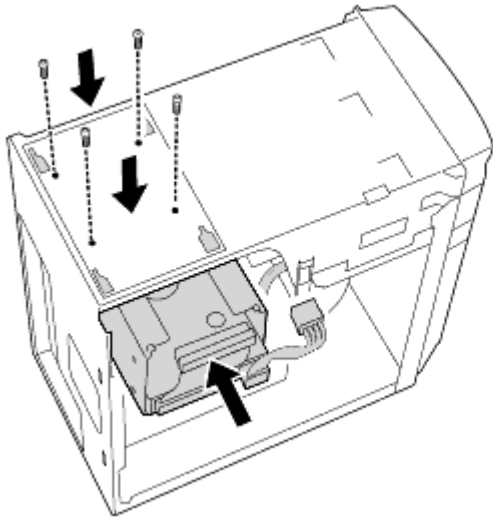


1. Secure the drive to the drive holder using the two holes on each side of the drive holder (screws are provided with the new drive). Do not overtighten the screws.
2. Connect the second drive connector to the new drive. Be sure to orient the connector so that pin 1 (the red side of the ribbon cable) is aligned with pin 1 of the new drive.
3. Connect the second power connector to the new drive.



1. 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.

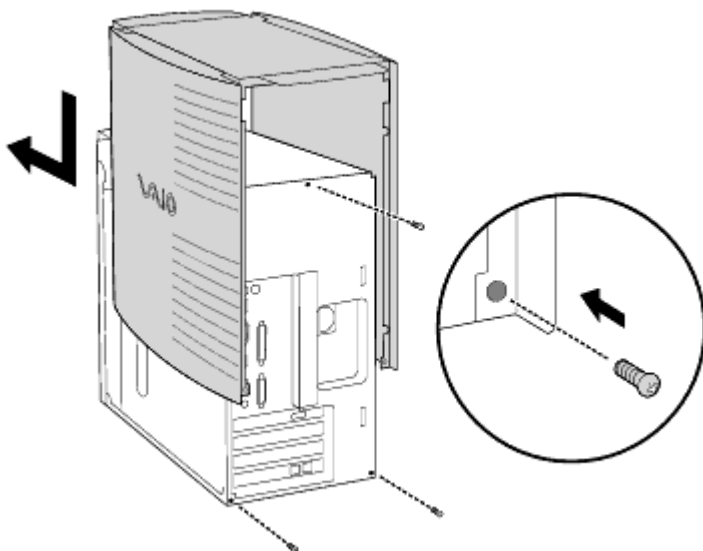


1. Replace the screws that secure the holder to the chassis.
2. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).

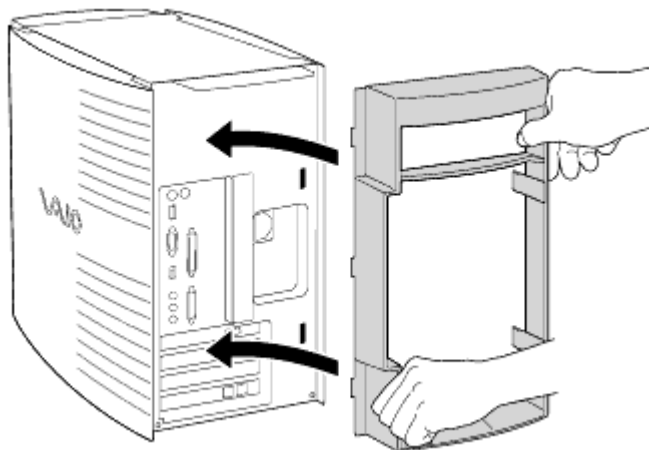
Your computer automatically recognizes the new drive and configures itself accordingly when you turn it on. Partition and format the new drive following the instructions provided with the drive.

Replacing the Cover

1. Align the three-sided outer panel over the chassis and lower it onto the unit. Be sure to slide the panel onto the unit so that the tabs slip into the lips on the unit.
2. Replace the three screws at the center top, lower-left corner, and lower-right corner of the metal backplate.



1. Replace the frame by inserting the three small tabs into the slots on the left side of the unit and slipping the two larger tabs into the slots on the right side of the unit. Gently press the




frame until it clicks into place.


© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, and the VAIO logo are trademarks of Sony. All other trademarks are trademarks of their respective owners.

Upgrading and Maintaining Your VAIO® Computer


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

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

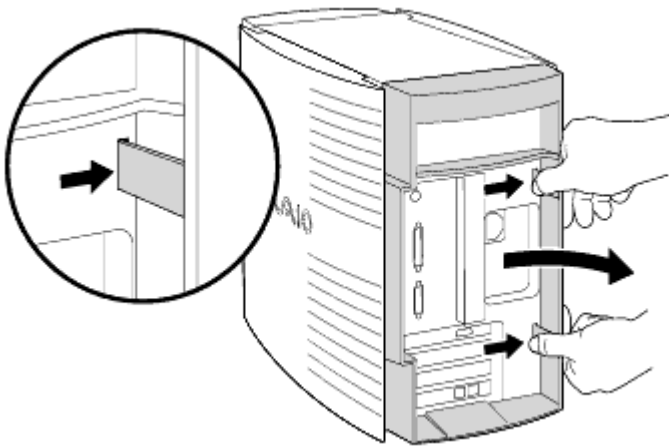
 Always switch the power off before you open the system or connect your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.

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

Removing the Cover

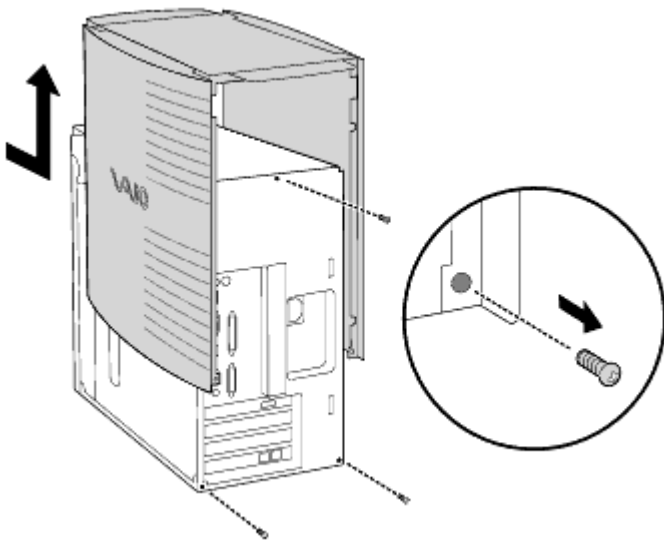
 If you remove the cover immediately after you shut down your computer, the components may be too hot to touch. Wait until the internal parts of the system unit cool down before you attempt to remove the cover.

1. Press the two tabs on the right side of the rear frame.
2. Remove the frame from the unit by gently pulling it from left to right.



 Add-in board configuration varies by model.

1. Remove the screws from the center top, the lower-left corner, and the lower-right corner of the metal backplate.
2. Lift the three-sided outer panel by pulling up on the large tab extending from the top rear. Lift the outer panel up over the unit and set it aside.



Inserting an Add-in Board

Your computer has two open PCI expansion slots, enabling you to install add-in boards to expand the functionality of your system. In PCV-R547DS and PCV-R549DS, slots 2 and 3 are available. In PCV-R545DS, slots 3 and 4 are available.



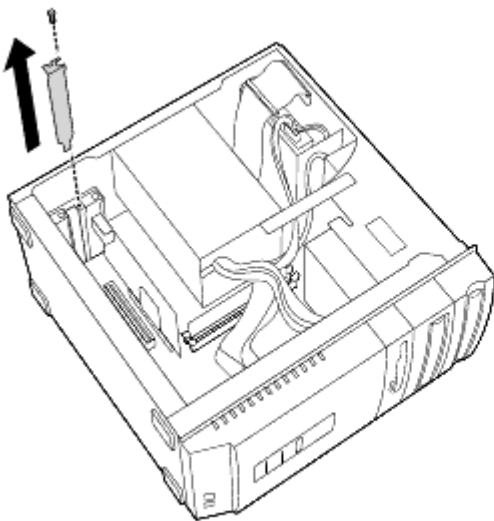
Some models, such as Configure-to-Order systems, may already contain installed add-in cards.

To insert an add-in board

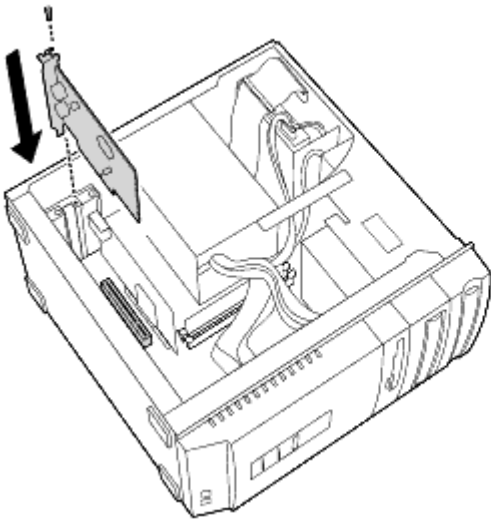


Make sure you observe the proper safety precautions when you add boards to your Sony computer. See [Notes on Use](#) in the VAIO [Consumer Information Guide](#).

1. Shut down your computer and turn off all peripheral devices, such as your printer.
2. Unplug your computer and any peripheral devices.
3. Remove the cover as described on page [Removing the Cover](#).
4. Locate one of the available expansion slots. Remove the screw, and then remove the slot cover.



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



1. Attach any internal cables that the board requires (see the manual for the add-in board).
2. Replace the cover and reinstall the screws as described on [Replacing the Cover](#).
3. Connect all peripheral devices and AC power, and then turn on the computer.

Adding Memory

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

To install memory

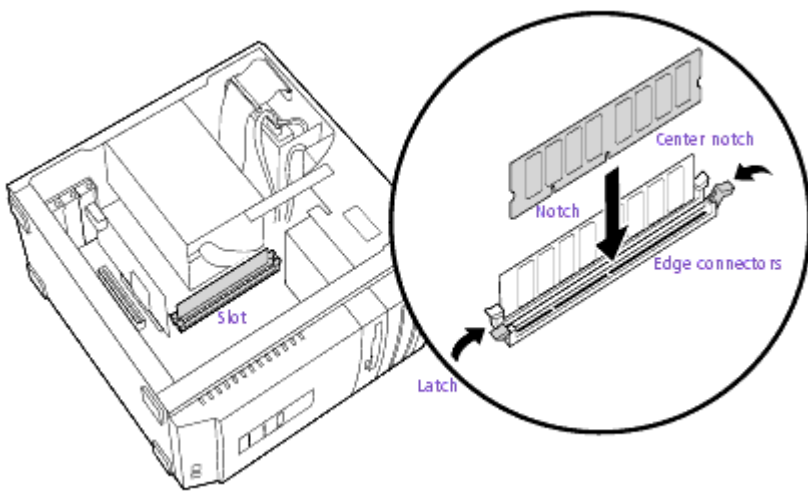


Make sure you observe the proper safety precautions when you add DIMMs to your Sony computer. See [Notes on Use](#) in the VAIO [Consumer Information Guide](#).

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



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




1. Firmly insert the bottom edge of the DIMM into the socket.
2. Press evenly against the DIMM's upper corners. The end latches snap into position automatically.
3. Reinstall any add-in cards or components you removed.
4. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).

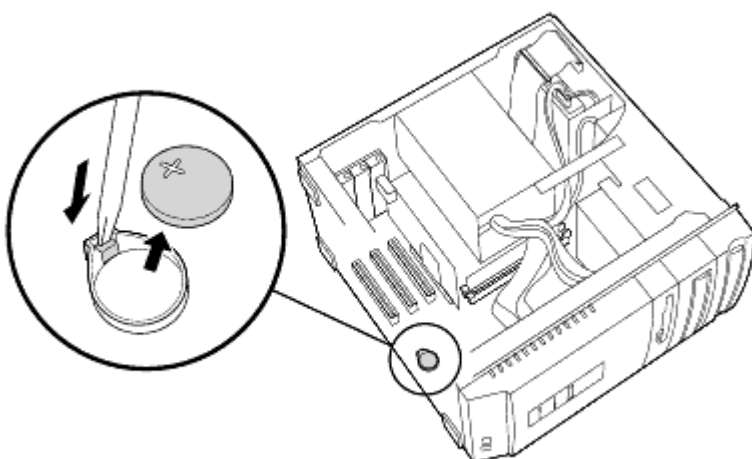
Replacing the Lithium Battery

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

To replace the lithium battery

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

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



1. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).



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

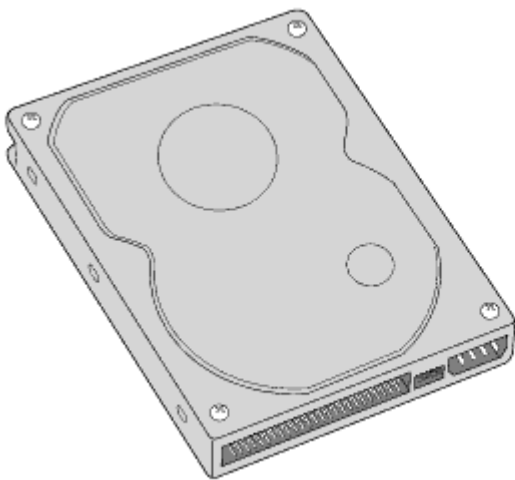
Installing an Additional Hard Disk Drive

Your computer comes with an available internal bay to hold a second standard 3½-inch hard disk drive. (Some models, such as Configure-to-Order systems, may already have a second hard disk drive.) The hard disk drive access light blinks when either internal drive is active. For information on how to install additional drives into the external drive, see the computer *Reference Manual*. You can download the *Reference Manual* from the Sony Web site at <http://www.sony.com/pcsupport>.

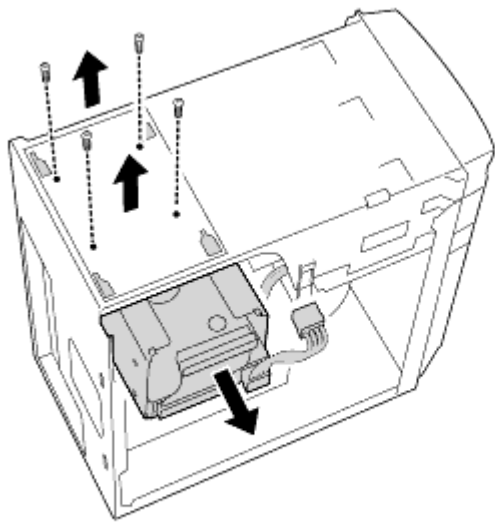


Before opening the system unit, save any open files, exit Windows, turn off the power of the computer and all attached peripherals, and then unplug the power cord.

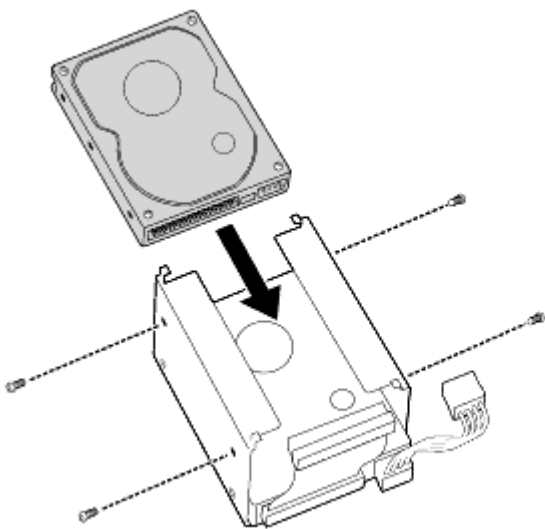
1. Configure the jumpers on the new drive as a slave (see your drive's documentation for configuration instructions).



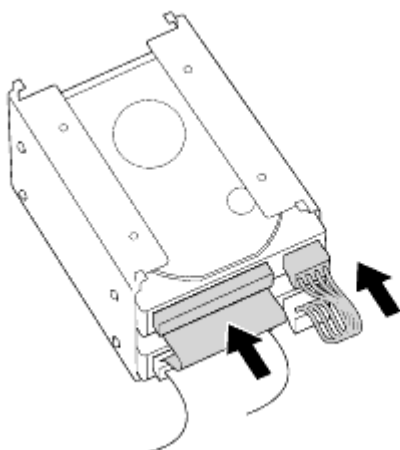
1. Remove the cover as described on page [Removing the Cover](#).
2. Remove the screws that secure the drive holder to the chassis top.
3. Slide the drive holder forward and then out.



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

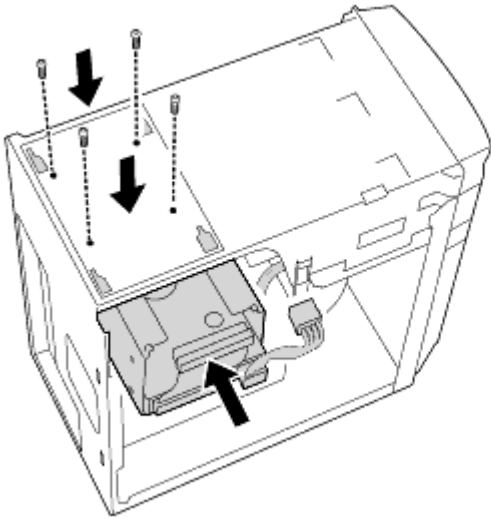


1. Secure the drive to the drive holder using the two holes on each side of the drive holder (screws are provided with the new drive). Do not overtighten the screws.
2. Connect the second drive connector to the new drive. Be sure to orient the connector so that pin 1 (the red side of the ribbon cable) is aligned with pin 1 of the new drive.
3. Connect the second power connector to the new drive.



1. 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.

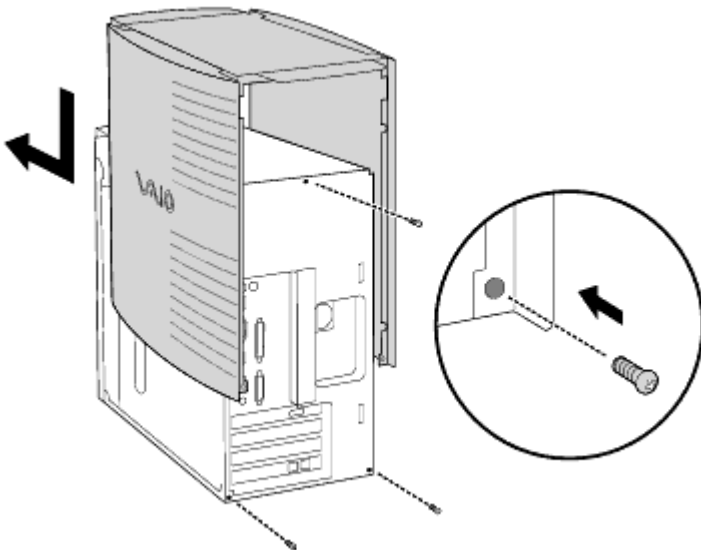


1. Replace the screws that secure the holder to the chassis.
2. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).

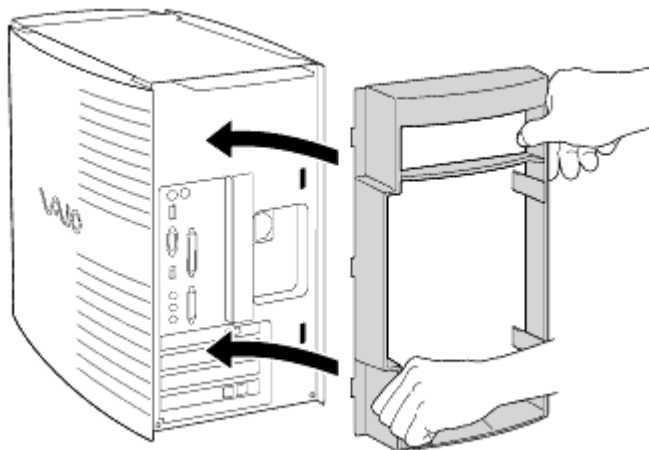
Your computer automatically recognizes the new drive and configures itself accordingly when you turn it on. Partition and format the new drive following the instructions provided with the drive.

Replacing the Cover

1. Align the three-sided outer panel over the chassis and lower it onto the unit. Be sure to slide the panel onto the unit so that the tabs slip into the lips on the unit.
2. Replace the three screws at the center top, lower-left corner, and lower-right corner of the metal backplate.



1. Replace the frame by inserting the three small tabs into the slots on the left side of the unit and slipping the two larger tabs into the slots on the right side of the unit. Gently press the




frame until it clicks into place.


© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, and the VAIO logo are trademarks of Sony. All other trademarks are trademarks of their respective owners.

Upgrading and Maintaining Your VAIO® Computer


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

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

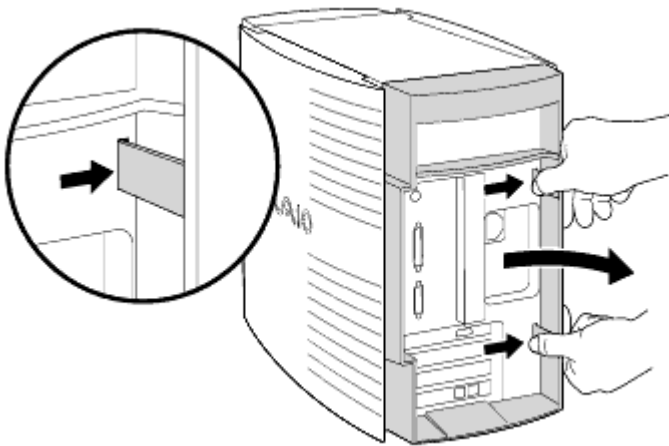
 Always switch the power off before you open the system or connect your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.

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

Removing the Cover

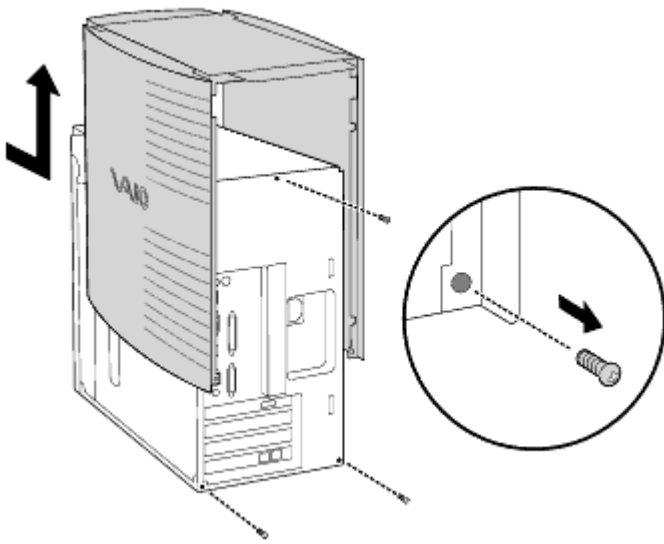
 If you remove the cover immediately after you shut down your computer, the components may be too hot to touch. Wait until the internal parts of the system unit cool down before you attempt to remove the cover.

1. Press the two tabs on the right side of the rear frame.
2. Remove the frame from the unit by gently pulling it from left to right.



 Add-in board configuration varies by model.

1. Remove the screws from the center top, the lower-left corner, and the lower-right corner of the metal backplate.
2. Lift the three-sided outer panel by pulling up on the large tab extending from the top rear. Lift the outer panel up over the unit and set it aside.



Inserting an Add-in Board

Your computer has two open PCI expansion slots, enabling you to install add-in boards to expand the functionality of your system. In PCV-R547DS and PCV-R549DS, slots 2 and 3 are available. In PCV-R545DS, slots 3 and 4 are available.



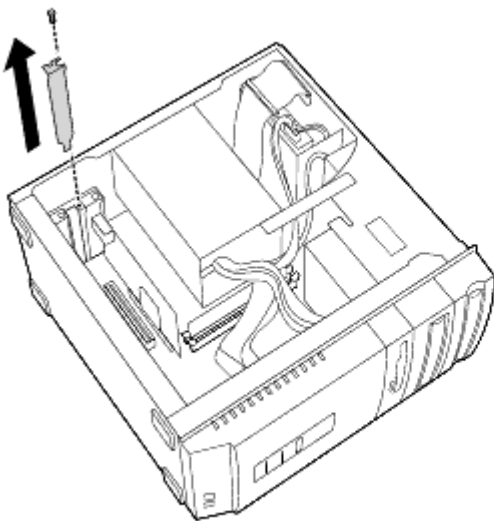
Some models, such as Configure-to-Order systems, may already contain installed add-in cards.

To insert an add-in board

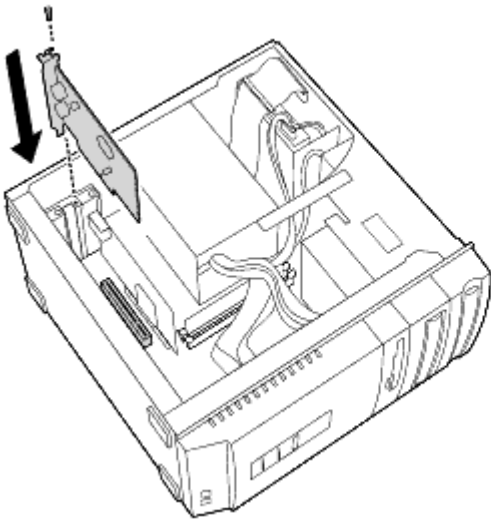


Make sure you observe the proper safety precautions when you add boards to your Sony computer. See [Notes on Use](#) in the VAIO [Consumer Information Guide](#).

1. Shut down your computer and turn off all peripheral devices, such as your printer.
2. Unplug your computer and any peripheral devices.
3. Remove the cover as described on page [Removing the Cover](#).
4. Locate one of the available expansion slots. Remove the screw, and then remove the slot cover.



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



1. Attach any internal cables that the board requires (see the manual for the add-in board).
2. Replace the cover and reinstall the screws as described on [Replacing the Cover](#).
3. Connect all peripheral devices and AC power, and then turn on the computer.

Adding Memory

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

To install memory

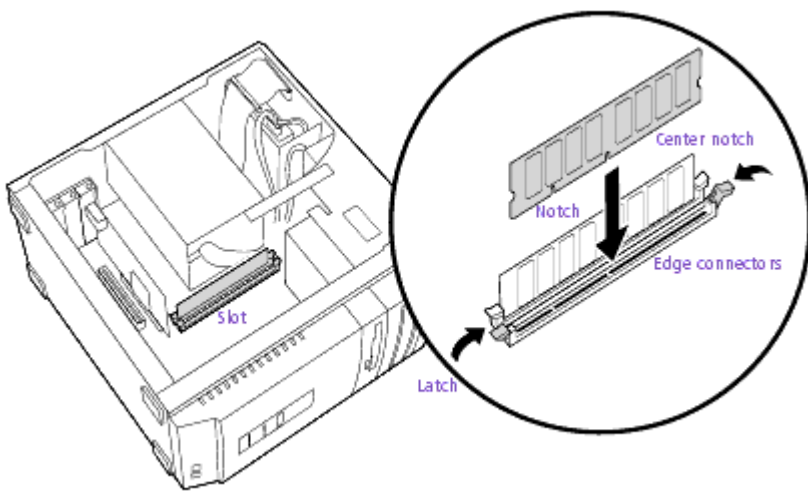


Make sure you observe the proper safety precautions when you add DIMMs to your Sony computer. See [Notes on Use](#) in the VAIO [Consumer Information Guide](#).

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



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




1. Firmly insert the bottom edge of the DIMM into the socket.
2. Press evenly against the DIMM's upper corners. The end latches snap into position automatically.
3. Reinstall any add-in cards or components you removed.
4. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).

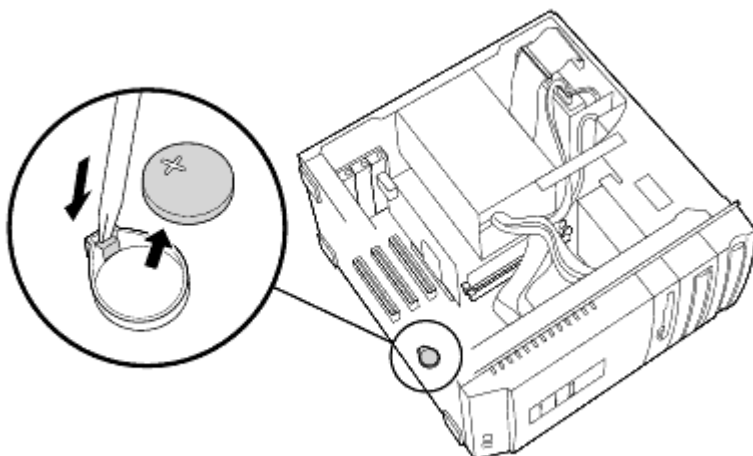
Replacing the Lithium Battery

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

To replace the lithium battery

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

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



1. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).



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

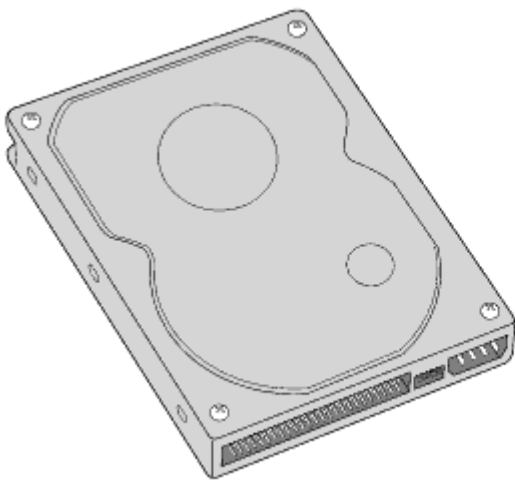
Installing an Additional Hard Disk Drive

Your computer comes with an available internal bay to hold a second standard 3½-inch hard disk drive. (Some models, such as Configure-to-Order systems, may already have a second hard disk drive.) The hard disk drive access light blinks when either internal drive is active. For information on how to install additional drives into the external drive, see the computer *Reference Manual*. You can download the *Reference Manual* from the Sony Web site at <http://www.sony.com/pcsupport>.

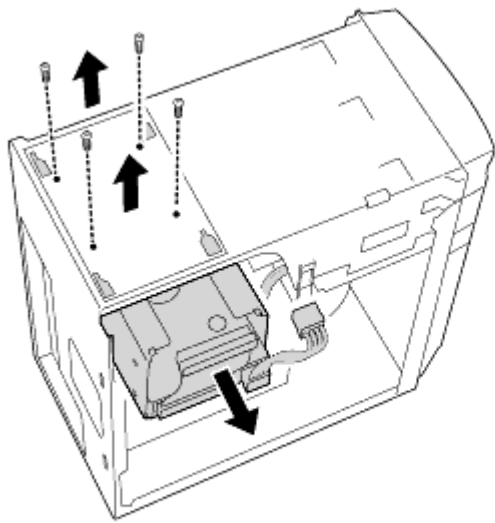


Before opening the system unit, save any open files, exit Windows, turn off the power of the computer and all attached peripherals, and then unplug the power cord.

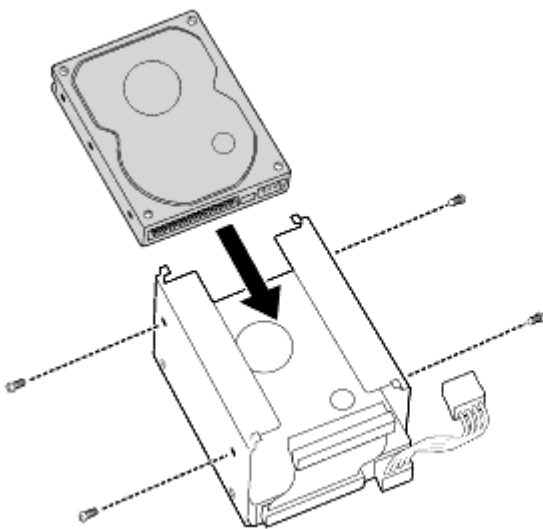
1. Configure the jumpers on the new drive as a slave (see your drive's documentation for configuration instructions).



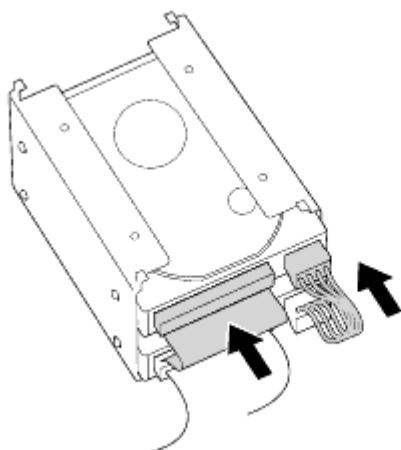
1. Remove the cover as described on page [Removing the Cover](#).
2. Remove the screws that secure the drive holder to the chassis top.
3. Slide the drive holder forward and then out.



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

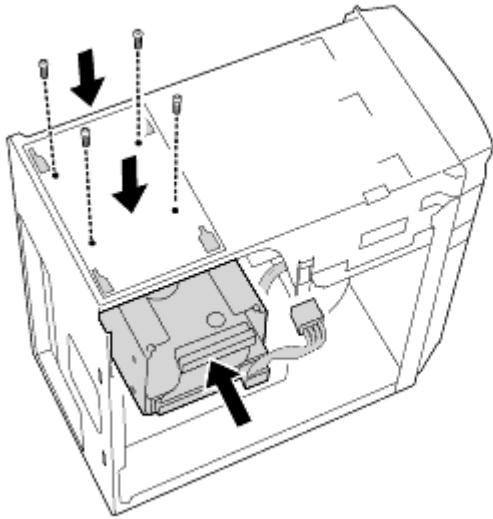


1. Secure the drive to the drive holder using the two holes on each side of the drive holder (screws are provided with the new drive). Do not overtighten the screws.
2. Connect the second drive connector to the new drive. Be sure to orient the connector so that pin 1 (the red side of the ribbon cable) is aligned with pin 1 of the new drive.
3. Connect the second power connector to the new drive.



1. 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.

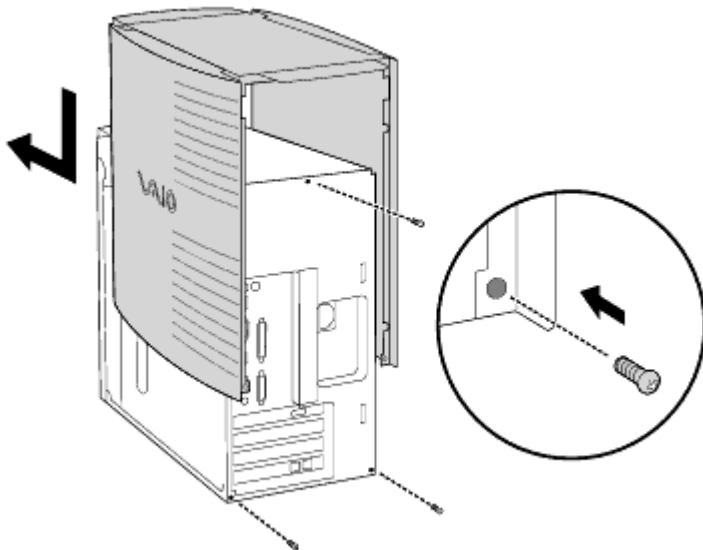


1. Replace the screws that secure the holder to the chassis.
2. Replace the cover and reinstall the screws, as described on [Replacing the Cover](#).

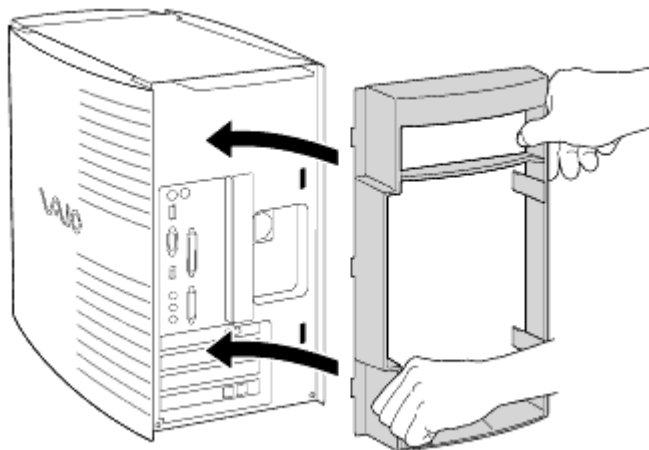
Your computer automatically recognizes the new drive and configures itself accordingly when you turn it on. Partition and format the new drive following the instructions provided with the drive.

Replacing the Cover

1. Align the three-sided outer panel over the chassis and lower it onto the unit. Be sure to slide the panel onto the unit so that the tabs slip into the lips on the unit.
2. Replace the three screws at the center top, lower-left corner, and lower-right corner of the metal backplate.



1. Replace the frame by inserting the three small tabs into the slots on the left side of the unit and slipping the two larger tabs into the slots on the right side of the unit. Gently press the



frame until it clicks into place.

© 2000 Sony Electronics Inc. Reproduction in whole or in part without written permission is prohibited. All rights reserved. Sony, VAIO, and the VAIO logo are trademarks of Sony. All other trademarks are trademarks of their respective owners.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.

Consumer Information Guide

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:

1. **Stable work surface**--Use a stable work surface large enough to support the computer, the display, and other equipment.
2. **Ventilation**--Leave at least eight inches of space on the left and back sides of your computer to enable proper ventilation.
3. **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 are 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.
4. **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.
5. **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.
6. **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.

Resources

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:

[Read Me First](#) Contains Frequently Asked Questions, the most up-to-date information on using your computer, and software support information.

User Guide Contains information on how to get the most from your computer, find help, and solve common problems. Also includes product specifications.

Electronic Documentation [Read Me First](#) and the *User Guide* are also available electronically on your hard drive. In addition, [Upgrading and Maintaining Your VAIO® Computer](#) and [Troubleshooting Help](#) are included in the VAIO Documentation folder. Click the Start button, point to Programs, and then point to VAIO Documentation.

Manuals and online help files that may accompany your preinstalled software 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.

Knowledge Database 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>

Sony Fax-on-Demand 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.)

Software Updates You can download the latest software updates and software patches for your Sony computer by selecting Software Updates on the Sony PC Support web page at <http://www.sony.com/pcsupport>

VAIO Computer Reference Manual Provides detailed technical information about your computer's hardware. This document is available from Sony's website at <http://www.sony.com/pcsupport>

Notes on Use

On the Power Source

1. Your computer operates on 100-120 V AC 50/60 Hz only. If you are operating this computer outside of North America or Japan, please verify that the local AC specifications match before plugging in the computer.
2. 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 10 amps. The total from +5V current draw in a fully-loaded system (with all the add-in card slots filled) must not exceed 10 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 70 watts.
3. 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.
4. Do not share the AC outlet with any other power-consuming equipment, such as copying machines or shredders.
5. 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.
6. 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.
7. Do not place heavy objects on the power cord.
8. Do not operate the system with the cover removed. Always reinstall the cover before turning on the system.
9. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
10. Unplug your computer from the wall outlet if you will not be using the computer for a long time.
11. 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.
12. 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.
13. 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

1. 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 benzene, as it may damage the finish of your Sony computer.
2. 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

1. 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
2. Do not place electronic equipment near your computer. The computer's electromagnetic field may cause a malfunction.
3. 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.
4. 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.
5. Use only specified peripheral equipment and interface cables; otherwise, problems may result.
6. Do not use cut or damaged connection cables.
7. Always switch the power off before connecting your computer to peripheral equipment; otherwise, damage may occur to the integrated circuits in your computer.
8. Your computer, keyboard, and mouse consist of high-precision electronic parts. Do not drop them or bump them against other objects.
9. 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).

10. 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

1. The procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
2. Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer." Failure to do so may result in personal injury or equipment damage.
3. Electrostatic discharge (ESD) can damage disk drives, add-in cards, and other components. Follow the procedures described in the online document "Upgrading and Maintaining Your VAIO Computer" 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.
4. 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 Handling an LCD Display

1. Do not leave the LCD directly facing the sun for a long period of time as it can damage the LCD.
2. Do not scratch the LCD or exert pressure on it. This could cause malfunction.
3. Using the computer in low temperature conditions may produce a residual image on the screen. This is not a malfunction. When the computer returns to normal temperature, the screen returns to normal.
4. A residual image may appear on the screen if the same image is displayed for a lengthy period of time. The image disappears after a period of time. You can use a screen saver to prevent residual images.
5. The screen becomes warm during operation. This is normal and does not indicate a malfunction.
6. The LCD is manufactured using high-precision technology. You may, however, see tiny black points and/or bright points (red, blue, or green) that continuously appear on the LCD. This is a normal result of the manufacturing process and does not indicate a malfunction.

On Handling a CRT Display

1. Do not place the display near a strong magnetic force.
2. Do not block the ventilation slots on the display.

On Using the Hard Disk Drive

1. Do not place the computer in a location that is subject to vibration or shock.

2. Do not move the computer during operation.
3. Do not subject the computer to sudden changes in temperature.
4. Do not turn off the power while the computer is accessing the hard disk drive.

On Handling Diskettes

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

On Handling CD or DVD Media

1. Do not touch the surface of the disc.
2. Do not drop or bend the disc.

On Cleaning CD or DVD Media

1. 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.
2. For normal cleaning, hold the disc by its edge and use a soft cloth to wipe the surface from the center out.
3. 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 Computer 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 the User Guide). 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.

In respect of certain components you may be entitled to express warranty service during the warranty period, subject to certain restrictions. Please contact SONY as indicated 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).

to SONY for service. SONY is not liable for any loss or damage to these items.

This Limited Warranty does not cover any consumable items (such as batteries) supplied with this Product; cosmetic damages; damage or loss to any software programs, data, or removable storage media; or damage due to (1) acts of God, accident, misuse, abuse, negligence, commercial use or modifications of this Product; (2) improper operation or maintenance of this Product; (3) connection to improper voltage supply; or (4) attempted repair by any party other than a SONY authorized personal computer service facility. This Limited Warranty does not apply when the malfunction results from the use of this Product in conjunction with accessories, products or ancillary or peripheral equipment, or where it is determined by SONY that there is no fault with this Product itself. This Limited Warranty is valid only in the United States of America.

This Limited Warranty is invalid if the factory applied serial number has been altered or removed from the Product.

Repair or replacement of defective parts or hardware as provided under this Limited Warranty is the exclusive remedy of the consumer. SONY SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER LEGAL THEORY RELATED TO THIS PRODUCT. SUCH DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFITS, LOSS OF REVENUE, LOSS OF DATA, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, DOWN TIME AND PURCHASER'S TIME. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Technical Support: Although technical support is not provided free of charge under this Limited Warranty, SONY has established a telephone number for technical support. Charges may apply for technical support, unless and to the extent that free technical support for a limited period is provided in writing as a feature of your Product. Prior to placing your call, please have available the model and serial number for your Product, date of purchase, a list of all options installed in your Product and a detailed description of the problem.

For Product support, on-line knowledge base, frequently asked questions, and free updates via the Internet: <http://www.sony.com/pcsupport>.

For Product information, service assistance, resolution of a service problem, or technical assistance, call: 1-888-4SONYPC.
