

SONY®

VAIO **Reference Manual**

PCV-J150



Notice to Users

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Owner's Record

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

Model Number: PCV-J150

Serial Number: _____

Safety Information and Caution

CD-RW Laser Diode Properties

Laser output	1.0mW(Read) 35mW (Write)
Wave Length	777-787nm

- ❑ To prevent fire or shock hazard, do not expose your desktop to rain or moisture. To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.
- ❑ Never install modem or telephone wiring during a lightning storm.
- ❑ Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
- ❑ Never touch uninsulated telephone wire or terminals unless the telephone line has been disconnected at the network interface.
- ❑ Use caution when installing or modifying telephone lines.
- ❑ Avoid using the modem during an electrical storm.
- ❑ Do not use the modem or a telephone to report a gas leak in the vicinity of the leak.
- ❑ The socket outlet shall be installed near the equipment and shall be easily accessible.

! To change the backup battery, contact your nearest Sony Service Center.

! Caution - The use of optical instruments with this product will increase eye hazard. As the laser beam used in this product is harmful to the eyes, do not attempt to disassemble the drive cabinet. Refer servicing to qualified personnel only.

! For CD-RW: Danger - Invisible laser radiation when open. Avoid direct exposure to beam.

! Caution: For ADSL modem models, to reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord.

- ❑ Pour prévenir tout risque d'incendie ou d'électrocution, garder cet appareil à l'abri de la pluie et de l'humidité.
- ❑ Pour prévenir tout risque d'électrocution, ne pas ouvrir le châssis de cet appareil et ne confier son entretien qu'à une personne qualifiée.
- ❑ Ne jamais effectuer l'installation de fil modem ou téléphone durant un orage électrique.
- ❑ Ne jamais effectuer l'installation d'une prise téléphonique dans un endroit mouillé à moins que la prise soit conçue à cet effet.
- ❑ Ne jamais toucher un fil téléphonique à découvert ou un terminal à moins que la ligne téléphonique n'ait été débranché de l'interface réseau.
- ❑ Soyez très prudent lorsque vous installez ou modifiez les lignes téléphoniques.
- ❑ Évitez d'utiliser le modem durant un orage électrique.
- ❑ N'utilisez pas le modem ni le téléphone pour prévenir d'une fuite de gaz vous êtes près de la fuite.
- ❑ L'appareil doit être le plus près possible d'une prise murale pour en faciliter l'accès.

! Pour changer la pile de rechange, veuillez contacter votre centre de service Sony le plus près.

! Avertissement - L'utilisation d'instruments optiques avec ce produit augmente les risques pour les yeux. Puisque le faisceau laser utilisé dans ce produit est dommageable pour les yeux, ne tentez pas de désassembler le boîtier. Adressez-vous à un agent de service qualifié.

! Pour les CD-RW : Danger : Radiation laser visible et invisible si ouvert. Évitez l'exposition directe au faisceau.

! Attention : Pour ADSL modele modem, afin de réduire les risques d'incendie, n'utilisez qu'un cordon de communication N0. 26 AWG ou plus gros.

For questions regarding your product or for the Sony Service Center nearest you, call 1-888-476-6972 in the United States or 1-800-961-7669 in Canada.

Sony Customer Support can be reached at <http://www.sony.com/pcsupport>.

Regulatory Information

Declaration of Conformity

Trade Name: SONY
Model No.: PCV-J150
Responsible Party: Sony Electronics Inc.
Address: 680 Kinderkamack Rd
Oradell, NJ 07649
Telephone: 201-930-6972

This phone number is for FCC-related matters only.

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

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :

- ☐ Reorient or relocate the receiving antenna.
- ☐ Increase the separation between the equipment and the receiver.
- ☐ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- ☐ Consult the dealer or an experienced radio/TV technician for help.

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

Only peripherals (computer input/output devices, terminals, printers, etc.) that comply with FCC Class B limits may be attached to this computer product. Operation with noncompliant peripherals is likely to result in interference to radio and television reception.

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

FCC Part 68

This equipment complies with Part 68 of the FCC rules. The FCC Ringer Equivalence Number (REN) for this equipment is 0.7. If requested, this information must be provided to the telephone company.

This modem uses the USOC RJ-11 telephone jack.

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

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

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

If trouble is experienced with this modem, for repair or warranty information, please contact 1-888-4SONY-PC, or write to the Sony Customer Information Center, 12451 Gateway Blvd., Fort Myers, FL 33913. If the trouble is causing harm to the telephone network, the telephone company may request that you remove the equipment from the network until the problem is resolved.

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

This equipment cannot be used on public coin service provided by the telephone company. Connection to Party Line Service is subject to state and possible provincial tariffs. (Contact the state or provincial utility service commission, public service commission, or corporation commission for information.)

Telephone Consumer Protection Act of 1991 (United States)

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

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

Telephone Consumer Guidelines (Canada)

Please refer to your telephone directory under 'Privacy Issues' and/or 'Terms of Service.' For more detailed information, please contact:

CRTC

Terrasses de la Chaudière, Tour centrale
1 promenade du Portage, 5 étage Hull PQ
K1A 0N2.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

DISPOSAL OF LITHIUM BATTERY

You can return your unwanted lithium batteries to your nearest Sony Service Center or Factory Service Center.



In some areas the disposal of lithium batteries in household or business trash may be prohibited.

For the Sony Service Center nearest you, call 1-888-476-6972 in the United States or 1-800-961-7669 in Canada.

- ! Do not handle damaged or leaking lithium batteries.**
- ! Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.**
- ! The battery pack used in this device may present a fire or chemical burn hazard if mistreated. Do not disassemble, heat above 212°F (100°C) or incinerate. Dispose of used battery promptly. Keep away from children.**

- ! Ne pas manipuler les batteries au lithium qui fuient ou sont endommagées.**
- ! Une batterie non conforme présente un danger d'explosion. La remplacer seulement par une batterie identique ou de type équivalent recommandé par le fabricant. Évacuer les batteries usées selon les directives du fabricant.**
- ! La manutention incorrecte du module de batterie de cet appareil présente un risque d'incendie ou de brûlures chimiques. Ne pas démonter, incinérer ou exposer à une température de plus de 100°C. Évacuer promptement la batterie usée. Garder hors de portée des enfants.**

INDUSTRY CANADA NOTICE

NOTICE: The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document(s). The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection.

The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Equipment malfunctions or any repairs or alterations made by the user to this equipment may give the telecommunications company cause to request that the user disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

CAUTION: Users should not attempt to make such connections themselves, but should contact the appropriate electrical inspection authority, or electrician, as appropriate.

NOTICE: The Ringer Equivalence Number (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on

an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5. The Ringer Equivalence Number for this equipment is 0.7.

AVIS DE L'INDUSTRIE CANADA

AVIS: L'étiquette d'Industrie Canada identifie le matériel homologué.

Cette étiquette certifie que le matériel est conforme aux normes de protection, d'exploitation et de sécurité des réseaux de télécommunications, comme le prescrivent les documents concernant les exigences techniques relatives au matériel terminal. Le Ministère n'assure toutefois pas que le matériel fonctionnera à la satisfaction de l'utilisateur.

Avant d'installer ce matériel, l'utilisateur doit s'assurer qu'il est permis de le raccorder aux installations de l'entreprise locale de télécommunication. Le matériel doit également être installé en suivant une méthode acceptée de raccordement. L'abonné ne doit pas oublier qu'il est possible que la conformité aux conditions énoncées ci-dessus n'empêche pas la dégradation du service dans certaines situations.

Les réparations de matériel homologué doivent être coordonnées par un représentant désigné par le fournisseur. L'entreprise de télécommunications peut demander à l'utilisateur de débrancher un appareil à la suite de réparations ou de modifications effectuées par l'utilisateur ou à cause de mauvais fonctionnement.

Pour sa propre protection, l'utilisateur doit s'assurer que tous les fils de mise à la terre de la source d'énergie électrique, des lignes téléphoniques et des canalisations d'eau métalliques, s'il y en a, sont raccordés ensemble. Cette précaution est particulièrement importante dans les régions rurales.

Avertissement: L'utilisateur ne doit pas tenter de faire ces raccordements lui-même; il doit avoir recours à un service d'inspection des installations électriques, ou à un électricien, selon le cas.

AVIS: L'indice d'équivalence de la sonnerie (IES) assigné à chaque dispositif terminal indique le nombre maximal de terminaux qui peuvent être raccordés à une interface.

La terminaison d'une interface téléphonique peut consister en une combinaison de quelques dispositifs, à la seule condition que la somme d'indices d'équivalence de la sonnerie de tous les dispositifs n'excède pas 5. L'indice d'équivalence de la sonnerie de ce matériel est de 0.7.

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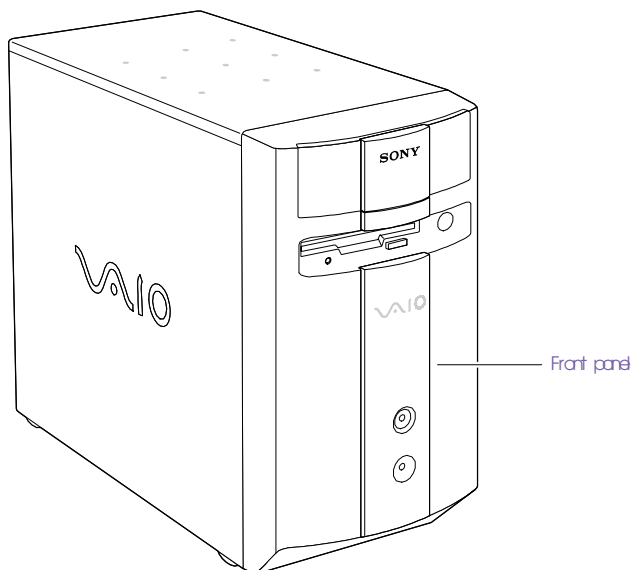
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Chapter 1

Identifying Components

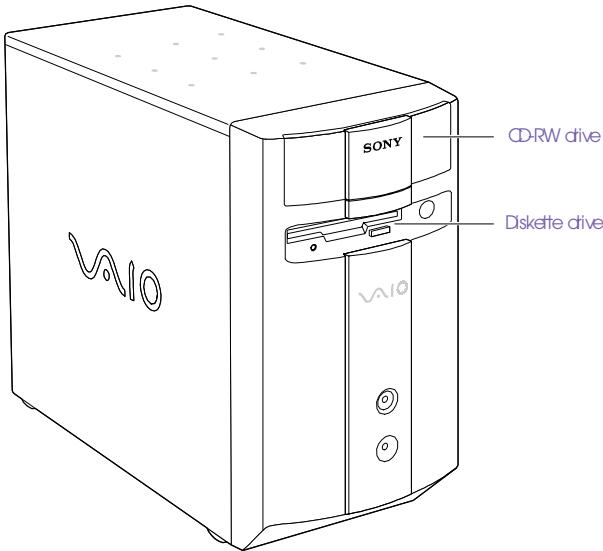
The following sections identify and describe each component that is visible from the exterior of the VAIO® Computer. Internal components are identified in the appropriate section of this manual.

Front View



CMD4694X.VSD

Drives



FRNT/FNLA/VSD

Drive	Description
Diskette drive	3.5-inch, 1.44 Mbyte.
CD-RW drive*	
CD-RW read [†]	20X maximum performance
CD-RW write [‡]	4X maximum performance
CD-R read ^{**}	32X maximum performance
CD-R write ^{††}	8X maximum performance
CD-ROM read ^{‡‡}	32X maximum performance

* The CD-RW/CD-R/CD-ROM data transfer standard 1X rate is 150 kbytes/s.

[†] Data on a CD-RW is read at a variable transfer rate, ranging from 8X at the innermost track to 20X at the outermost track. The average data transfer rate is 14X (2100 kbytes/s).

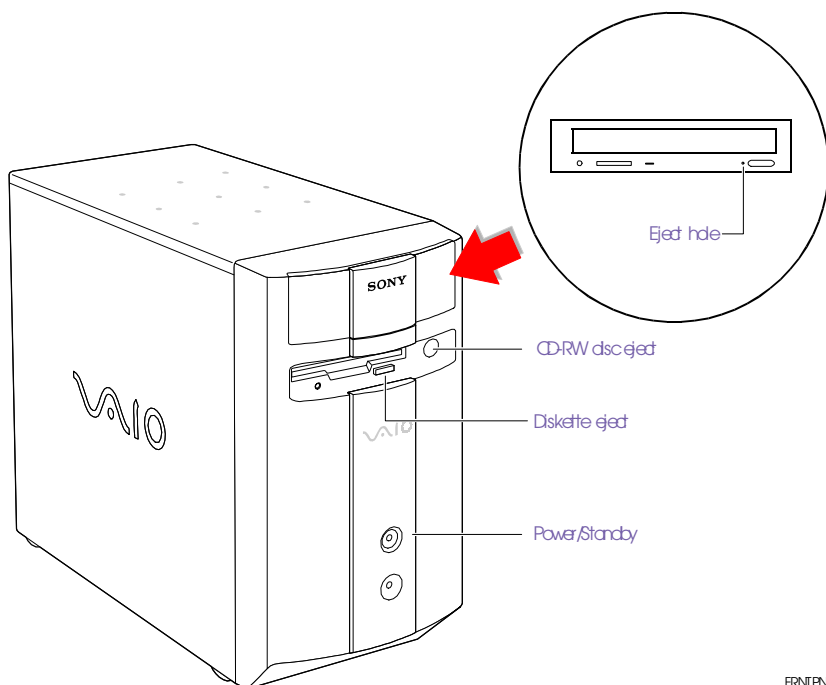
[‡] Data on a CD-RW is written at a constant transfer rate of 1X, 2X, or 4X, depending on the speed you select.

** Data on the CD-R is read at a variable transfer rate, ranging from 13X at the innermost track to 32X at the outermost track (the data transfer standard 1X rate is 150 kbytes/s). The average data transfer rate is 22.5X (3375 kbytes/s).

^{††} Data on a CD-R is written at a constant transfer rate of 1X, 2X, 4X, or 8X, depending on the speed you select.

^{‡‡} Data on the CD-ROM is read at a variable transfer rate, ranging from 13X at the innermost track to 32X at the outermost track (the data transfer standard 1X rate is 150 kbytes/s). The average data transfer rate is 22.5X (3375 kbytes/s).

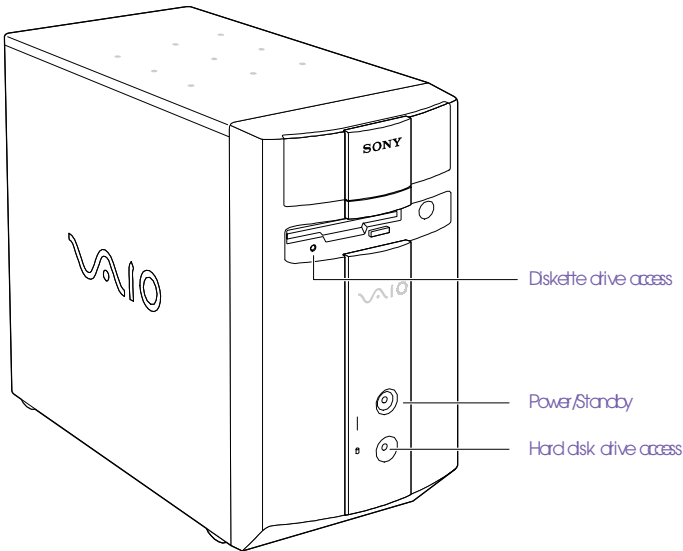
Buttons and Switches



FRNTPNLB.V5C

<i>Button or switch</i>	<i>Description</i>
Power/Standby switch	Turns system power on, off, or into standby mode.
Diskette eject button	Ejects a diskette.
CD-RW disc eject button	Automatically opens and closes the CD-RW drive tray.

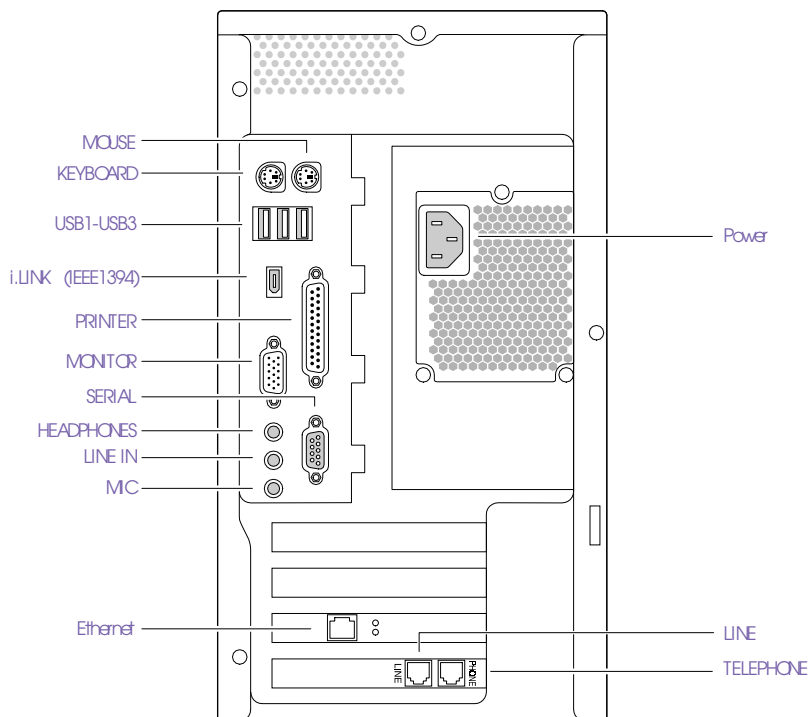
Indicators



FRNTPNLV6SD

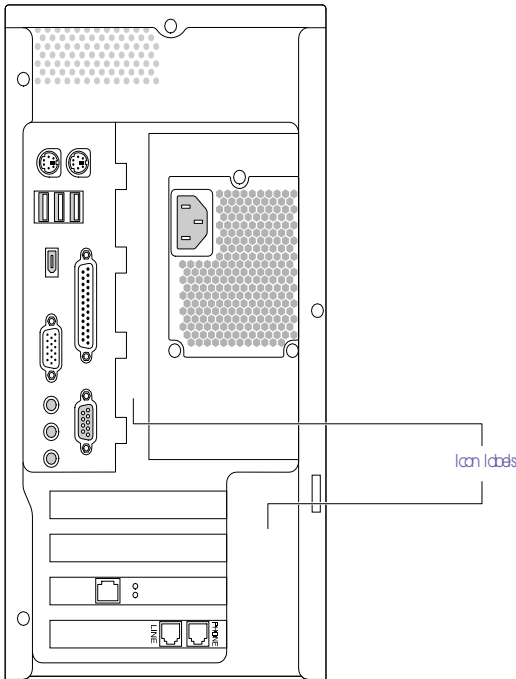
<i>Indicator</i>	<i>Description</i>
Power/Standby indicator	Standby (amber) indicates the computer is in standby mode. On (green) indicates the computer is out of standby mode, ready to use. Off (no color) indicates the computer is turned off or in hibernate mode.
Diskette drive access indicator	On (green) indicates diskette drive activity.
Hard disk drive access indicator	On (amber) indicates hard disk drive activity.

Rear View
















KY0001.VSD

Icons



OM04692X VSD

Icon	Description
	MOUSE connector
	KEYBOARD connector
	USB (Universal Serial Bus) connector
	SERIAL connector
	PRINTER connector
	HEADPHONES connector
	LINE IN jack (audio)
	MIC (microphone) jack

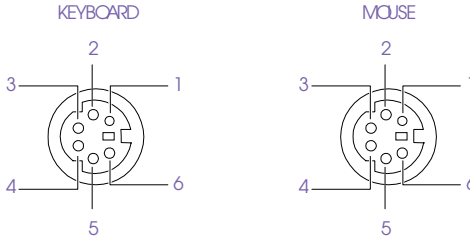
<i>Icon</i>	<i>Description</i>
	MONITOR connector
	LINE (for telephone line from primary service jack)
	TELEPHONE (for phone)
	i.LINK® (IEEE1394) interface
	Ethernet connector (10Base-T/100Base-TX) (This connector is for LAN use only. Do not plug a phone into this connector.)

I/O Connectors

The following section identifies the various I/O connectors.

KEYBOARD and MOUSE

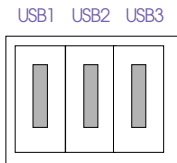
The KEYBOARD and MOUSE connectors are physically identical and have the same pinout. They are standard 6-pin PS/2®-type female connectors.



KY0002.V5

USB Connectors

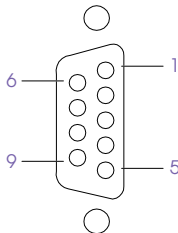
The USB connectors are standard 4-pin USB connectors. The USB connectors are located at the rear of the system.



KY0003.V5

SERIAL Connector

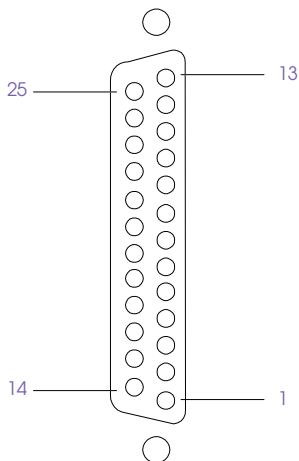
The SERIAL connector is a standard 9-pin DB-9 male connector.



KY0057.V5D

PRINTER Connector

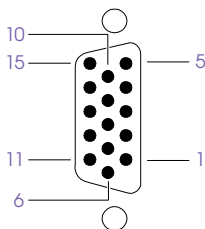
The PRINTER connector is a standard 25-pin DB-25 female connector.



KY0005.VSI

MONITOR

The MONITOR connector is a standard 15-pin female high-density VGA-type connector.



KY0004.VSI

MIC, LINE IN, and HEADPHONES

The MIC, LINE IN, and HEADPHONES jacks are physically identical, but have different connections. They are standard 3.5 mm stereo mini-jacks.

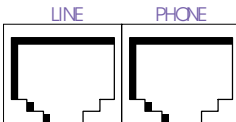


KY0013.VSD


<i>Connector</i>	<i>Description</i>
HEADPHONES	1.0 Vrms (typical).
MIC	Electret condenser microphone input.
LINE IN	1.0 Vrms (typical), 10 Kohm impedance.

TELEPHONE and LINE

The TELEPHONE and LINE jacks are physically identical and have identical connections. They are standard RJ-11 female phone jacks. However, the LINE jack is for connecting to a telephone line that comes from the wall, and the TELEPHONE jack is for connecting the computer to a telephone.





KY0014.VSD

 Accidentally plugging a phone line from the wall into the modem's TELEPHONE jack, and a telephone into the LINE jack, will not damage the modem card or telephone equipment. However, the modem will not work correctly.

i.LINK® (IEEE1394) Connector

The 6-pin i.LINK connector on the back of the system can supply power from the computer to a device if the device also has a 6-pin i.LINK connector. The 6-pin connector supplies 10V to 12V and a maximum power of 6 watts.

-  i.LINK is a trademark of Sony used only to designate that a product contains an IEEE 1394 connection. The i.LINK connection may vary, depending on the software applications, operating system and i.LINK-compatible devices. All products with an i.LINK connection may not communicate with each other.
-  Refer to the documentation that came with your i.LINK-compatible device for information on operating conditions and proper connections. Before connecting i.LINK compatible PC peripherals to your system, such as a CD-RW or Hard Disk Drive, confirm their operating system compatibility and required operating conditions.

6-pin i.LINK
(IEEE-1394)



On back of
system

KY0087.V6D

Ethernet Connector

The Ethernet connector is a standard RJ-45 modular jack that connects to a 10Base-T/100Base-TX Ethernet LAN connection.

Ethernet



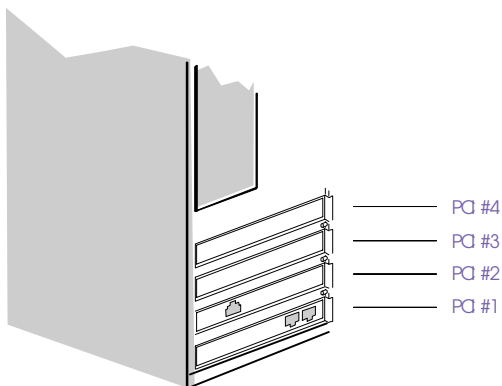
On back of system

KY0100.V6D

! This connector is for LAN use only. Do not plug a phone cord into this connector.

Expansion Slots

There are four PCI slots, two of which are available for expansion (PCI #3 and #4). The other two PCI slots are occupied by the Ethernet card (PCI #2) and fax/modem card (PCI #1).



CM04577B.VSD

Chapter 2

Configuring Your System

This chapter contains information on configuring your system. Configuring your system can consist of the following:

- ❑ Making changes to the BIOS settings
- ❑ Making changes to the display's power management settings
- ❑ Changing the system board jumper position

Accessing the BIOS Setup Utility

You must access the BIOS Setup Utility to make changes to the BIOS settings (see “CMOS Setup Options” on page 67 for information on BIOS settings).

! Before rebooting the system, save any open files and exit the Microsoft® Windows® operating system.

- 1 Reboot the system.
- 2 When the Sony logo appears, press F3. The following message appears at the bottom of the screen.

Press <F2> for setup.

- 3 Press F2.

Each menu presents options for modifying the system configuration. Use the left and right arrow keys to select a menu from the menu bar. Use the up and down arrow keys to select items within a menu. Once an item is highlighted, use the plus/minus (+/-) keys to modify a setting.

If an item has a triangle (▸) to its left, this indicates that a sub-menu of options is available. Press ENTER to access a sub-menu. If a sub-menu contains items with a triangle, there is another layer of options from which to select.

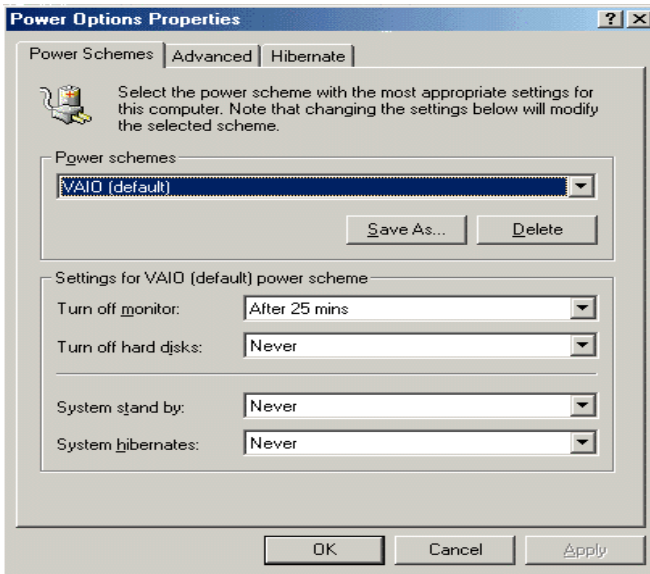
- 4 Once you select an option, press ESC to back out of each menu until you reach the top level, where the menu bar appears.
- 5 To exit the BIOS setup utility, press ESC from any top-level screen and follow the prompts.

Changing the Display's Power Management Settings

A display that has power management capability is designed to operate on reduced power or shut itself off after the system has been idle for a specified period of time.

- 1 From the Start menu, point to Settings, Control Panel, then click Power Options.

The Power Options Properties dialog box opens, with the Power Schemes tab displayed.



- 2 Select the power scheme that is most appropriate for the way you use your computer.

To change a power scheme, change the settings for Turn off monitor, and Turn off hard disks, System standby, and System Hibernate.

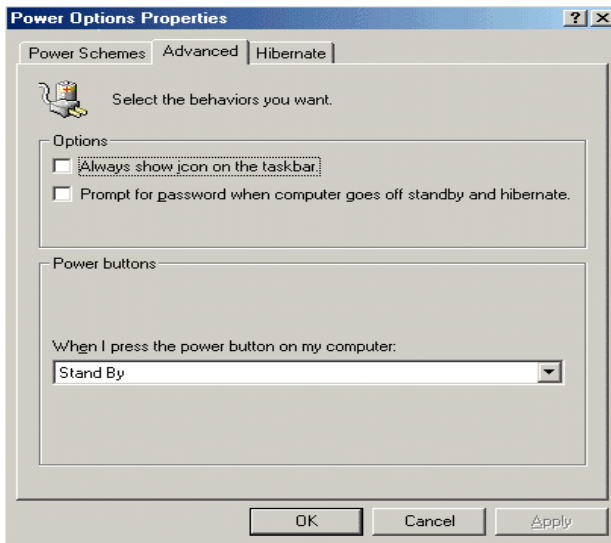
The Turn off monitor option allows you to specify the period of inactivity (in minutes) that you want to elapse before your monitor turns off when your computer is running on AC power. The display reactivates when you move the mouse or press a key.

The Turn off hard disks option allows you to specify the period of inactivity (in minutes) that you want to elapse before your hard disks turn off when your computer is running on AC power.

The System standby option allows you to specify the period of inactivity (in minutes) that you want to elapse before your computer goes on standby when your computer is running on AC power. Power is reactivated when you press spacebar on the keyboard.

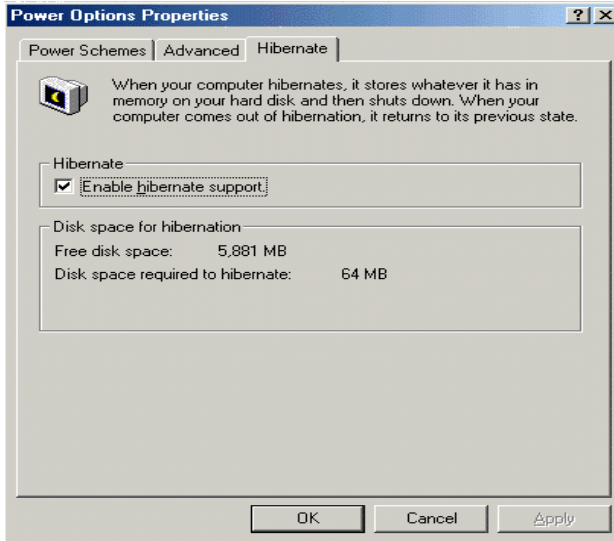
The System hibernate option allows you to specify the period of inactivity (in minutes) before your computer goes in the hibernate state. Power is reactivated when you push the power button.

- 3 To save a new power scheme, first modify the settings, click Save As, type a descriptive name, and then click OK.
- 4 Click the Advanced tab.



- 5 Select the desired settings.

6 Click the Hibernate tab.




7 Select the desired settings, and then click OK.

Configuring the System Board

The system board contains a CMOS Clear configuration jumper, and two sets of reserved jumper blocks (do not change).

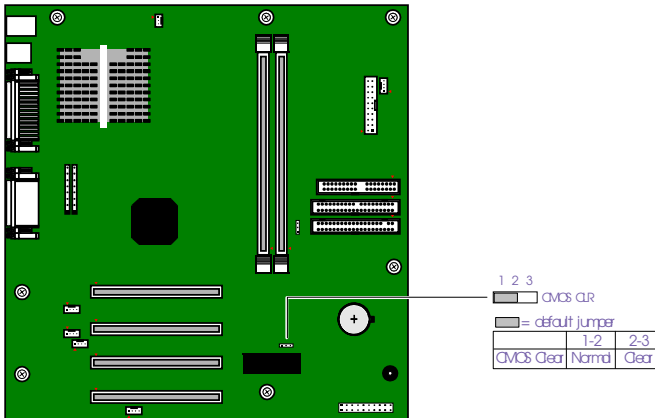
The CMOS and Non-Volatile RAM (NVRAM) settings are only cleared if the checksum test returns false. Access to specific setup fields is controlled by a supervisor password or user password.

The Clear CMOS mode removes the password that is stored in CMOS. No other parameters are cleared.

 The configuration jumpers should never need changing unless otherwise directed by a technical support or service technician.

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

- 1 Remove the side panel (see “[Removing the Side Panel](#)” on page 22).
- 2 Set the jumpers as directed by a service technician (also see “[Configuration Jumper](#)” on page 62).



CM04588.VSI

- 3 Reinstall the side panel (see “[Replacing the Side Panel](#)” on page 25).

Chapter 3

Removing, Installing, and Replacing Components

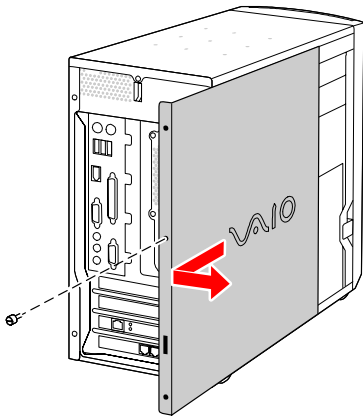
This chapter describes removing, installing, and replacing major components for upgrading, reconfiguring, and troubleshooting the components.

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

Removing the Side Panel

You must remove the side panel to access the system board, add-in cards, power supply, battery, memory, and internal drives.

- 1 From the rear of the unit, remove the single screw on the right side.
- 2 Slide back the panel about ½ inch, then lift out.

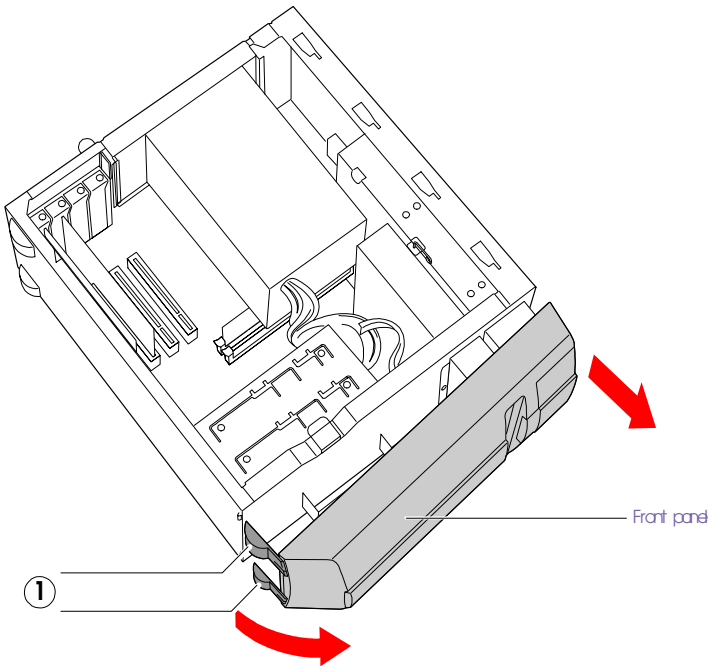


KY0064B.VSD

Removing the Front Panel

You must remove the front panel to install, remove, or replace internal components such as a drive, diskette drive, or CD-RW drive.

- 1 Lay the system down on its side.
- 2 Pull up and out on the two plastic tabs (1 in diagram) at the bottom of the chassis to release the bottom end of the front panel.

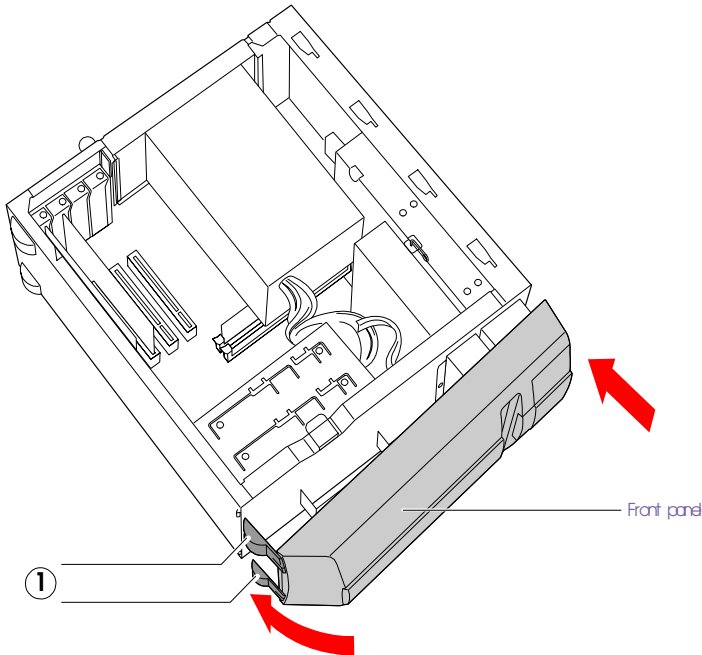


KY0091.VSD

- 3 Pull out the top end of the front panel to remove it.

Replacing the Front Panel

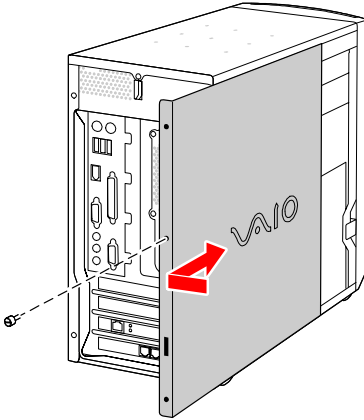
- 1 Insert the two flat plastic tabs (located on the top of the front panel) into the slots at the top of the chassis.
- 2 Push the bottom of the front panel in until the tabs snap into place.



KY0093.VSD

Replacing the Side Panel

- 1 Align the bottom of the side panel with the bottom of the chassis, with the side panel extending about ½ inch from the rear of the unit.
- 2 Slide the side panel forward until the lip on the side panel is flush with the rear of the chassis.




KV0067/VSD

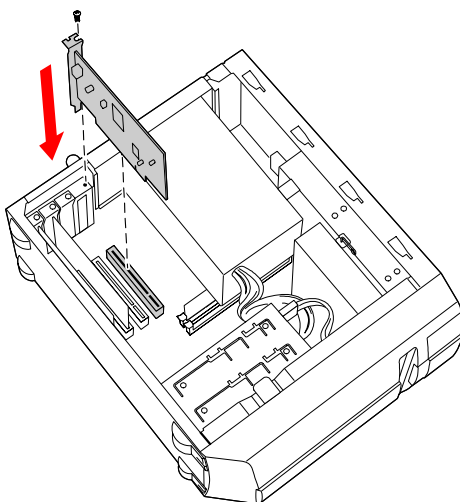
- 3 Insert the screw (removed earlier) to secure the panel.

Installing an Add-In Card

! 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 Remove the cover (see “[Removing the Side Panel](#)” on page 22).
- 2 Locate an available expansion slot connector.
- 3 Remove the slot cover adjacent to the selected slot connector (see “[Removing a Slot Cover](#)” on page 40).
- 4 Insert the add-in card into the PCI slot connector. Use a gentle rocking motion, pressing down until the card is fully seated.

 Align the card's bracket so that the bottom of the bracket fits into the slot at the bottom of the chassis. Ensure that the top of the bracket fits snugly against the chassis lip after the card is fully inserted.



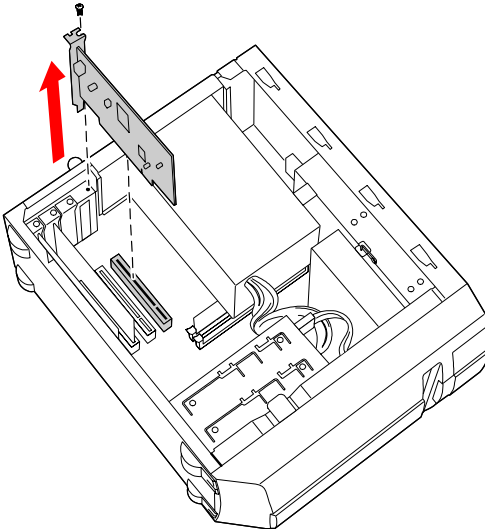
KY0070.VSD

- 5 Replace the screw that secures the card.
- 6 Attach any necessary cables to the card (see the instructions that came with the add-in card).
- 7 Replace the cover (see “[Replacing the Side Panel](#)” on page 25).
- 8 Turn on the computer and follow any instructions that came with the add-in card.


Removing an Add-in Card

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

- 1 Remove the cover (see “Removing the Side Panel” on page 22).
- 2 Disconnect any cables attached to the add-in card you want to remove.
- 3 Remove the screw that secures the add-in card to the chassis.
- 4 Remove the add-in card from the PCI slot connector and store the card in an anti-static wrapper for future use.



KY0071.VSD

 Grasp the card with one hand on each end, and gently pull up as you rock the card from side to side.

! Hold the add-in card by its edges and do not touch any components or connector contacts on the card. Static electricity in your body may damage sensitive components on the card. As a precaution, touch any exposed metal part on the metal chassis (preferably the metal part on the power supply) before handling an add-in card to discharge any static electricity in your body.

- 5 If you do not replace the card or install another add-in card, install a slot cover over the vacant slot at the rear of the chassis (see [“Covering an Open I/O Slot”](#) on page 41).
- 6 Replace the cover (see [“Replacing the Side Panel”](#) on page 25).

Replacing the Lithium Battery

You may need to replace the lithium battery if your computer consistently loses the date or time settings after turning it off. The lithium battery has a typical life of three years, after which the battery may be too weak to power the CMOS memory.

! When you remove the lithium battery, all values stored in the CMOS memory (BIOS setup values and Plug and Play values) may be lost. Although the computer can hold the charge for a short time while replacing the battery, it is safer to assume that the settings will be lost. When the values are lost, the BIOS values revert to their factory-default settings (see [“Accessing the BIOS Setup Utility”](#) on page 16).

Do not handle damaged or leaking batteries.

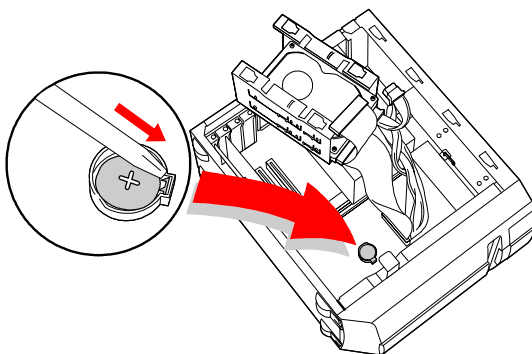
The lithium battery may explode if mistreated. Do not disassemble it or dispose of it in fire.

- 1 Reboot your computer by selecting Shut Down... from the Start menu, and then selecting Restart the computer.
- 2 If the error message “Error: Check date and time settings” appears during the reboot sequence, press F2 during the reboot process to access the BIOS Setup Utility. Otherwise it is not necessary to replace the battery at this time, and you can skip all remaining steps.
- 3 Compare all the BIOS options to their default settings (see [“CMOS Setup Options”](#) on page 67). Make a list of all the BIOS options that are different from their default values. You will refer to this list when you restore the BIOS settings later.
- 4 Select Exit Discarding Changes from the main menu using the right arrow key.
- 5 Press Enter, type Y when prompted to discard changes, then press Enter to exit the BIOS Setup Utility.
- 6 Turn off the computer and unplug the power cord.
- 7 Remove the side panel (see [“Removing the Side Panel”](#) on page 22).


- 8 If necessary, remove any add-in cards (see “[Removing an Add-in Card](#)” on page 28) to gain access to the battery. You may also need to disconnect some cables.

! Touch any exposed metal part of chassis to discharge static electricity in your body before handling an add-in card or other sensitive electronic component.


- 9 Use a flathead screwdriver to push in on the small tab inside the battery holder to pop out the battery.



KY0072.VSD

 The battery is located just beneath the hard drive holder. Although you do not have to remove the hard drive holder, this illustration shows the battery with the drive holder removed for clarity.

- 10 Use your fingers to lift out the battery and dispose of it according to the instructions that came with the new battery.
- 11 Insert the new battery into the battery holder, with the plus (+) side up, and gently press down until the battery snaps into place.

 The Sony CR2032 battery is recommended. Using a type of battery other than a CR2032 may present a risk of fire or explosion.

- 12 Replace any add-in cards that were removed.
- 13 Reconnect any cables that were disconnected.
- 14 Replace the side panel (see “[Replacing the Side Panel](#)” on page 25).
- 15 Reconnect the power cord and turn on the computer.

- 16 If the error message “Error: Check date and time settings.” appears during the reboot sequence, press F2 during the reboot process to access the BIOS Setup Utility. If no error message displays, the computer’s BIOS settings were retained during the battery replacement and you can skip the remaining steps.
- 17 Refer to the list you made in step 3 and restore any non-default BIOS settings (see “[CMOS Setup Options](#)” on page 67).
- 18 Select Exit Saving Changes from the main menu using the right arrow key.
- 19 Press Enter, type Y when prompted to save configuration changes, then press Enter to exit the BIOS Setup Utility.

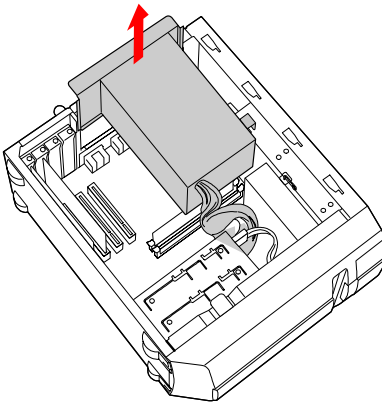
The computer’s BIOS settings are now restored.

Removing a Memory Module


You may need to remove a memory module if you change the memory configuration or replace a bad module.

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

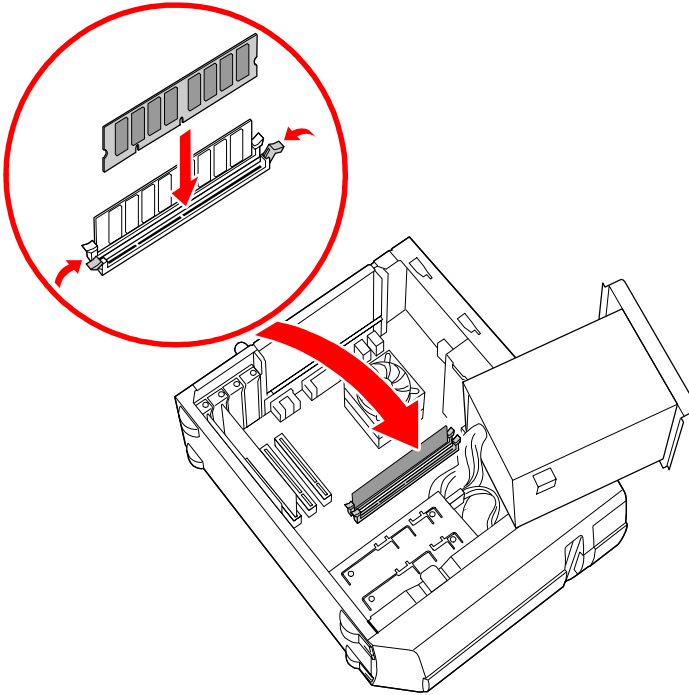
- 1 Remove the left side cover (see “Removing the Side Panel” on page 22).
- 2 Remove the power supply by lifting it up and resting it upside down over the corner of the chassis where the CD-RW and floppy drives are located.



AUJ001.VSD

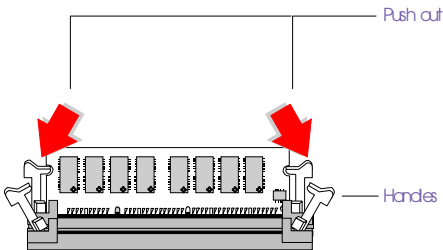
 The screw that secures the power supply to the chassis is the same screw that secures the side panel to the chassis.

- 3 Locate the memory module you wish to remove.




KY0073.V6D

- 4 Push down the handle on each side of the memory module to eject the module from its socket.



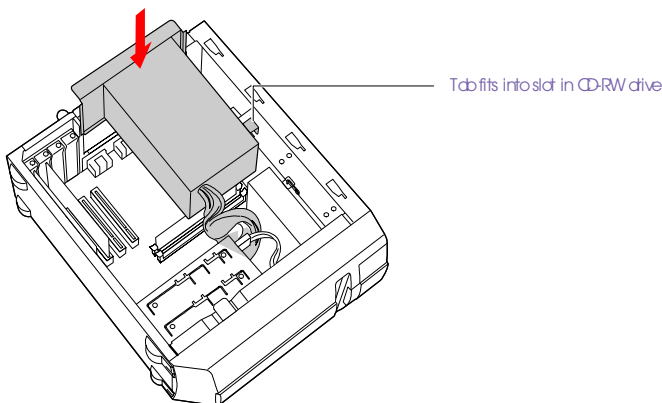
KY0042.V6

 Gently push the power supply cables and ribbon cables aside as you reach inside the system to access the module connector.

- 5 Grasp one edge of the memory module and lift out. Store the module in a static-free bag.

! Touch any exposed metal part of the chassis to discharge static electricity in your body before handling the memory module.

- 6 To install system memory, see “Installing System Memory” on page 36.
- 7 Replace the power supply by sliding it down the rails on each side of the chassis opening until the metal tab on the power supply slips into the slot in the CD-RW drive.



AUROC2.VSD

- 8 Replace the side panel (see “Replacing the Side Panel” on page 25).
- 9 Reconnect the power cord and turn on the computer.

Your computer automatically recognizes any change in memory and will configure itself accordingly when you turn on the computer. No further action is required.

Installing System Memory

! 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 Remove the new memory module(s) from its anti-static package. Hold the memory module only by its edges to prevent static-electricity damage.
- 2 Choose the size of the memory module and configuration as shown in the following table. Memory modules can vary in size and speed between sockets. The minimum memory size is 8 MB. The maximum memory size is 512 MB. The BIOS automatically detects the type, size and speed of the memory modules.

Memory module configurations (MB)*

<i>DIMM1</i>	<i>DIMM2</i>
0, 8, 16, 32, 64, 128, 256	0, 8, 16, 32, 64, 128, 256

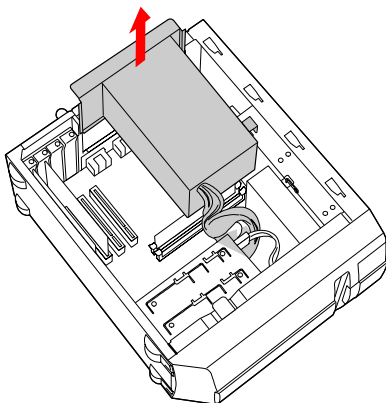
* The PCV-J150 ships with 64 MB. SDRAM is expandable to 512 MB.

! Touch any exposed metal part of the chassis to discharge static electricity in your body before handling a memory module.


 Use only 3.3V 64-bit PC-133 SDRAM DIMM modules. Do not mix 66 MHz or 100MHz memory with 133 MHz memory. Supports SDRAM memory. Does not support EDO memory or buffered DIMM memory.

- 3 Disconnect the power cord from the computer.
- 4 Remove the side panel (see “[Removing the Side Panel](#)” on page 22).
- 5 Remove the front panel (see “[Removing the Front Panel](#)” on page 23).

- 6 Remove the power supply by lifting it up and rest it upside down over the corner of the chassis where the CD-RW and floppy drives are located.

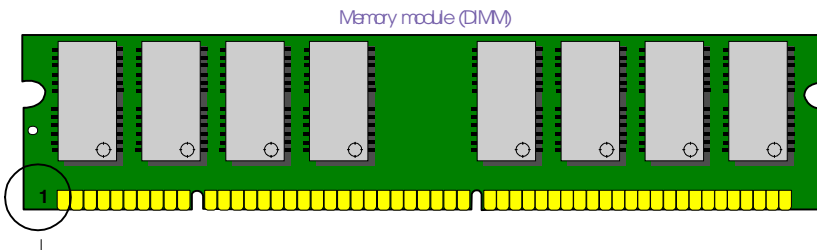
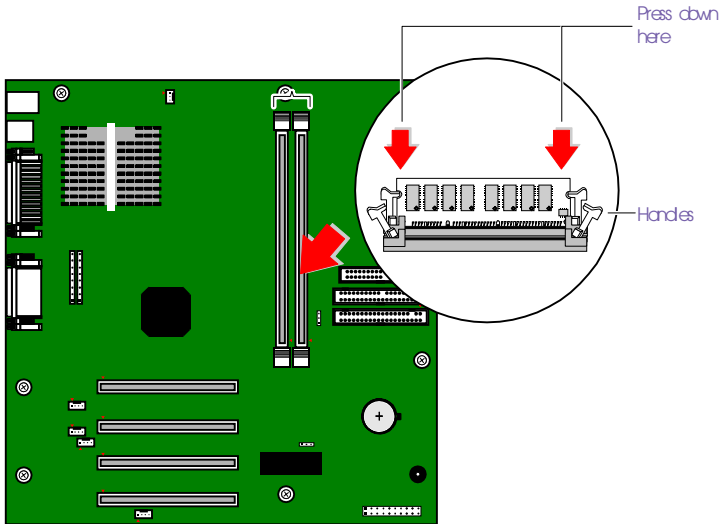


AUIR001.VSD


 The screw that secures the power supply to the chassis is the same screw that secures the side panel to the chassis.

- 7 If necessary, remove the memory module you wish to replace (see “Removing a Memory Module” on page 33).


- 8 Align the memory module over the appropriate socket, noting the location of pin 1 on the module and pin 1 on the socket.



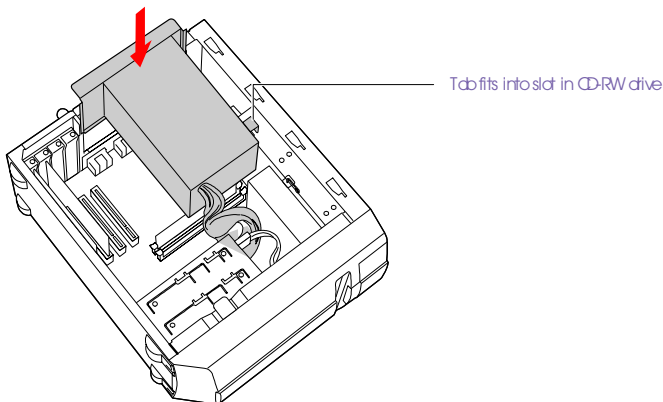
- 9 Carefully but firmly insert the edge of the module into the socket.

 Gently push the power supply cables and ribbon cables aside as you slip your hands into the system to reach the module connector.

- 10 Press down firmly and evenly at both corners until the module is fully seated.

 When the module is fully seated, the handles on each side are straight up and locked into the slot on each side of the module. If the handles are not totally straight upright, continue to press down on each side of the module until the handles lock into place.

- 11 Replace the power supply by sliding it down the rails on each side of the chassis opening until the metal tab on the power supply slips into the slot in the CD-RW drive.



AU0002.VSD

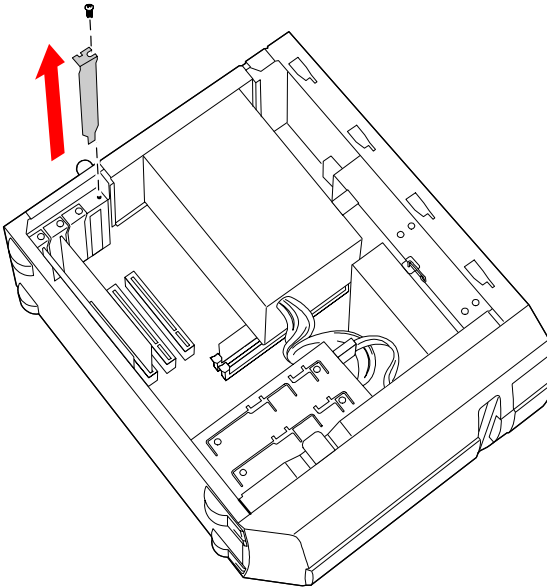
- 12 Replace the side panel (see [“Replacing the Side Panel”](#) on page 25).
- 13 Reconnect the power cord and turn on the computer.

Your computer automatically recognizes the extra memory and will configure itself accordingly when you turn on the computer. No further action is required.

Removing a Slot Cover

You remove a slot cover when you install an add-in card that occupies a previously-empty slot.

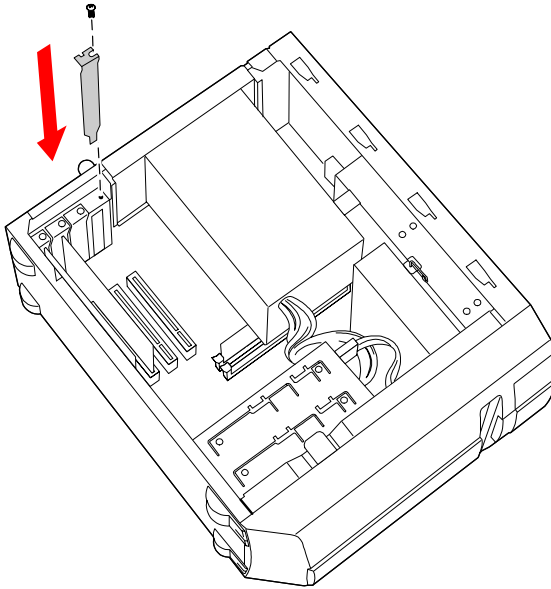
- 1 Disconnect the power cord from the computer.
- 2 Lay the system on its side.
- 3 Remove the side panel (see [“Removing the Side Panel”](#) on page 22).
- 4 Locate the slot whose cover you want to remove.
- 5 Remove the screw from the slot cover.
- 6 Remove the loose slot cover and retain it for future use.



Covering an Open I/O Slot

Slot covers prevent air from escaping through the empty hole. If air escapes, the components inside the computer cannot be properly cooled. This may damage some components, especially the main processor (which generates the most heat).

- 1 Slide the tip of the slot cover (removed earlier) between the chassis and system board.



KY0076.VSD

- 2 Push the slot cover down until it rests firmly on the lip in the chassis. All add-in card brackets and slot covers rest on this lip.
- 3 Replace the screw (removed earlier) to secure the I/O slot cover.

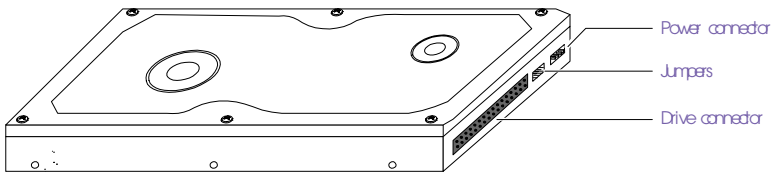
Installing a 3½" Internal Hard Disk Drive

Your system comes with an available bay to hold an additional 3½" IDE hard disk drive. Some models, such as Configure-to-Order (CTO) systems, may already have a second hard disk drive.

Your system can support ATA-33, ATA-66, or ATA-100 hard disk drives. The drive you install must not require front panel access. The hard disk drive access light blinks when either internal drive is active.

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

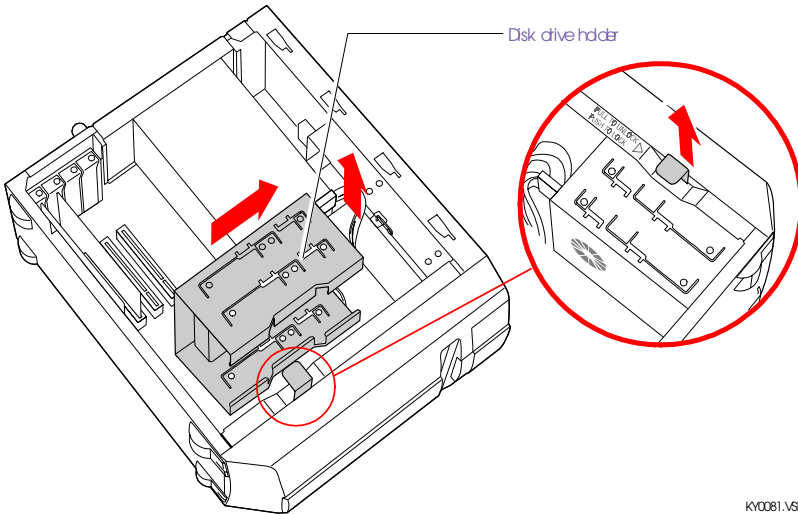
- 1 Configure the jumpers on the new drive as a slave device (see your drive's documentation for configuration instructions).



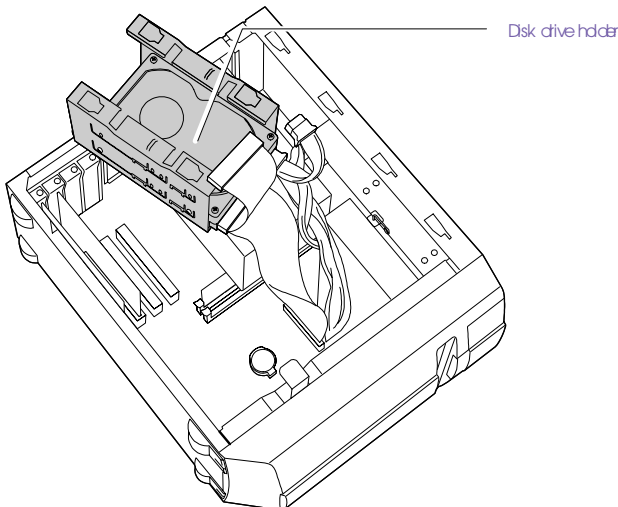
KY0084.VSD

- 2 Disconnect the power cord from the computer.
- 3 Remove the side panel (see [“Removing the Side Panel”](#) on page 22).
- 4 Lift the tab adjacent to the drive holder.

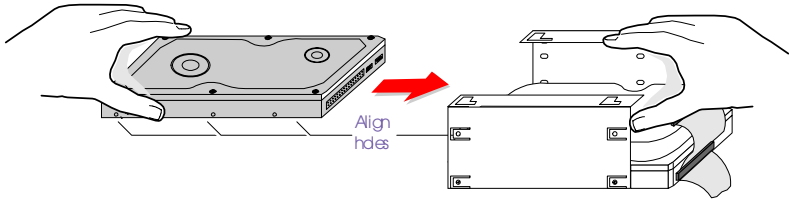
- 5 Slide the drive holder forward (towards the diskette drive) about a ½ inch, and then lift out.



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

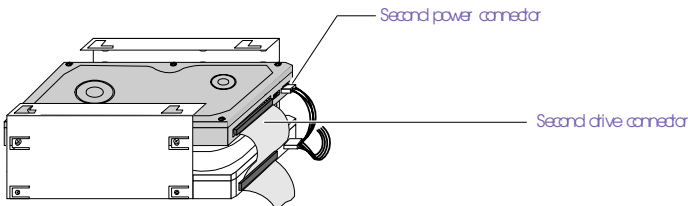


- 7 Slide the new drive into the drive holder and align the holes on each side of the drive holder.



KY0083.VSD

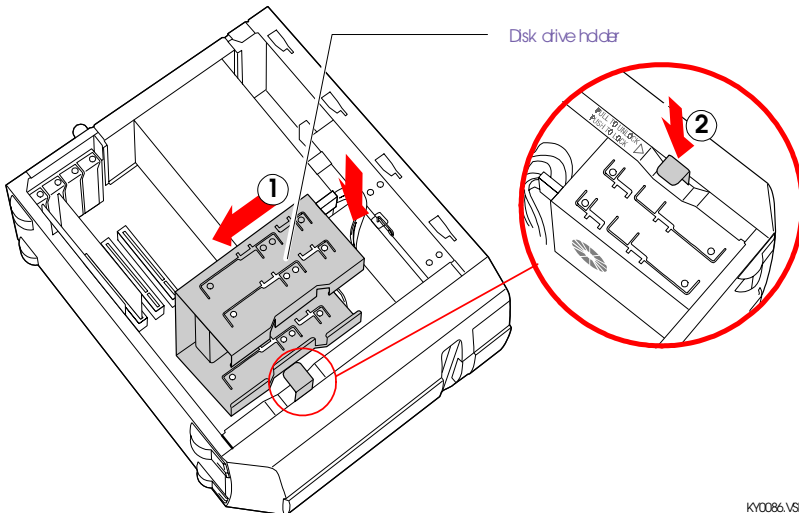
- 8 Secure the drive to the drive holder using the two holes on each side of the drive holder (screws are provided with the new drive). Do not overtighten the screws.
- 9 Connect the second drive connector to the new drive (see next diagram).
- 10 Connect the second power connector to the new drive.



KY0085.VSD

- 11 Make sure the drive connector is connected securely to the motherboard.

- 12 Lower the drive holder down and slide it back against the chassis (item 1 in diagram). Be sure the drive holder feels secure against the chassis.



KY0086.VSD

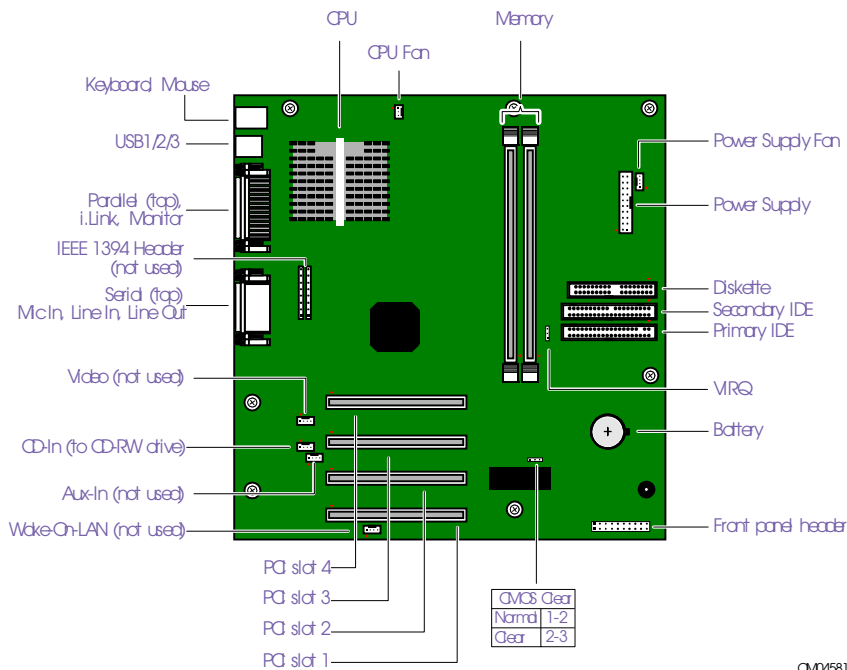
- 13 Push the tab down (item 2 in diagram) to secure the drive holder.
- 14 Replace the side panel (see [“Replacing the Side Panel”](#) on page 25).
- 15 Reconnect the power cord and then turn on your computer.

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

Chapter 4

System Board

This chapter identifies each component on the system board and provides a detailed description of each connector, jumper, and switch on the system board.

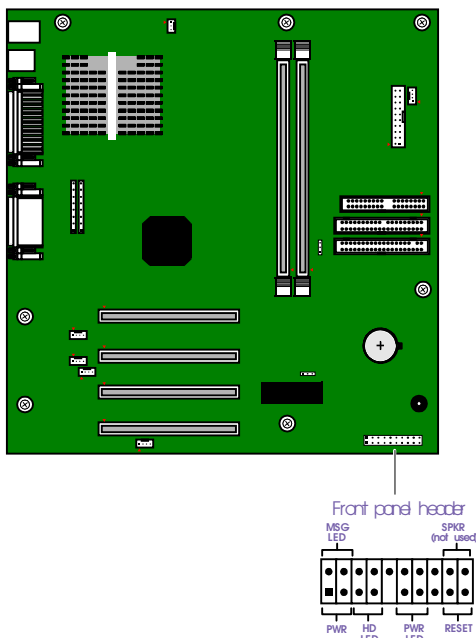


OMD4581.VS

Connectors

Front Panel Header

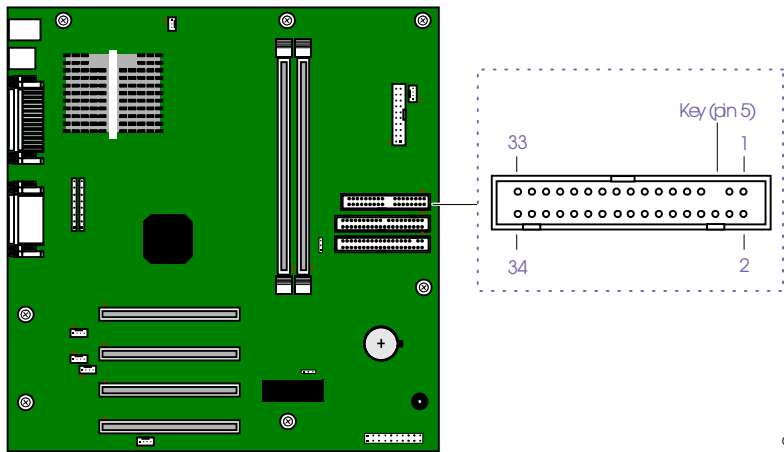
The front panel header is a 20-pin header (one pin is removed for the key) that provides connections to various front panel functions. A 20-pin connector with only eight wires is used to interface the system board to the front panel.



KY0031.VSD

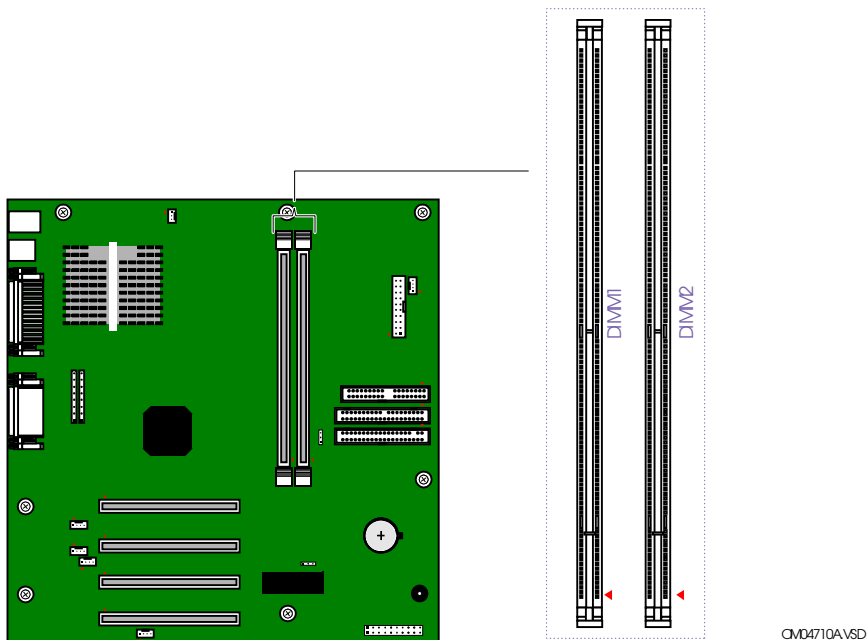
Name	Description
SPEAKER	(not used)
PWR LED	Connects to the power-on indicator light on the front panel
HD LED	Connects to the hard disk drive access light on the front panel
PWR	Connects to the power-on switch on the front panel
RESET	(not used)
MSG LED	Connects to the standby indicator light on the front panel.

Diskette Drive Connector

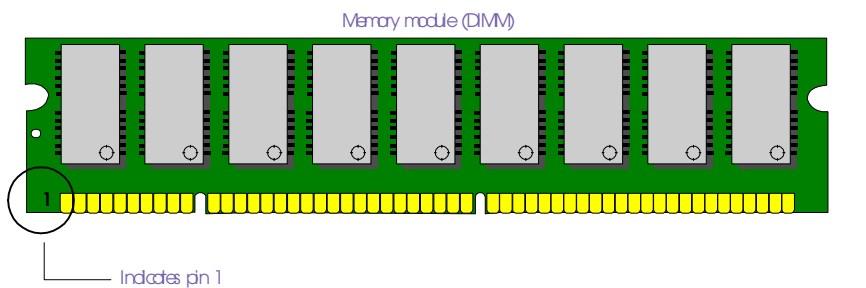


QMD4701H.VSD

Memory Module (DIMM) Connectors

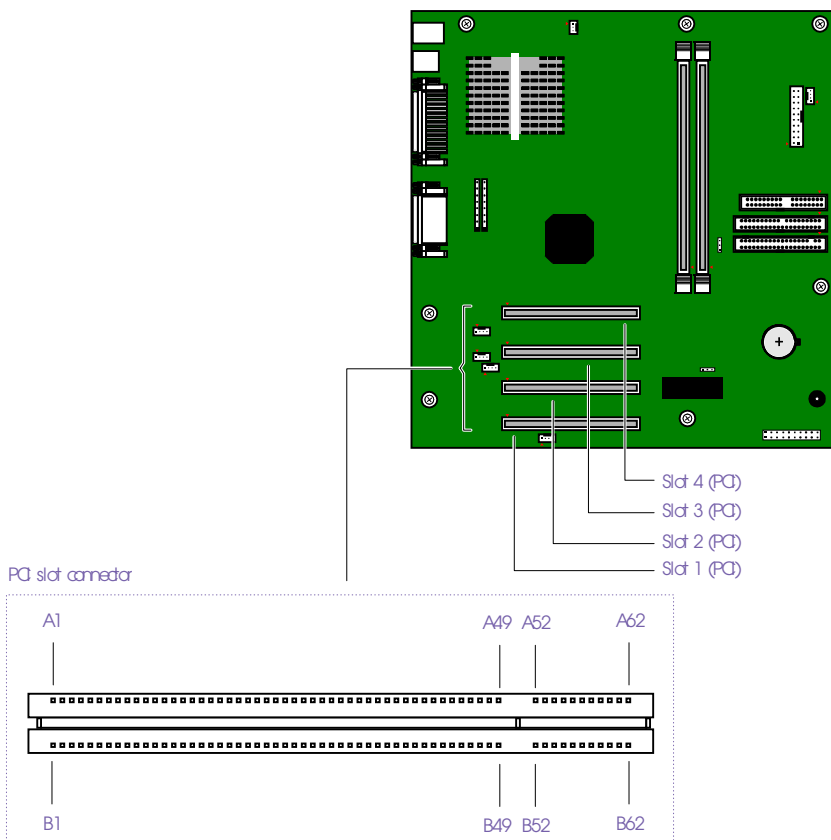


Both sides of each Dual Inline Memory Module (DIMM) look very similar. The side with pin 1 has a small "1" to the left of pin 1. Be sure to orient a DIMM correctly in the DIMM connector (a small triangle on the connector indicates pin 1).



PCI Slot Connectors

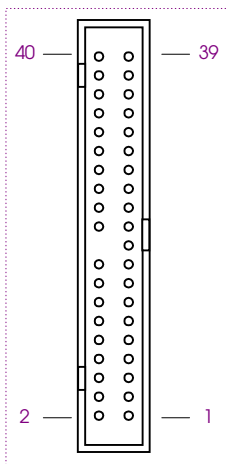
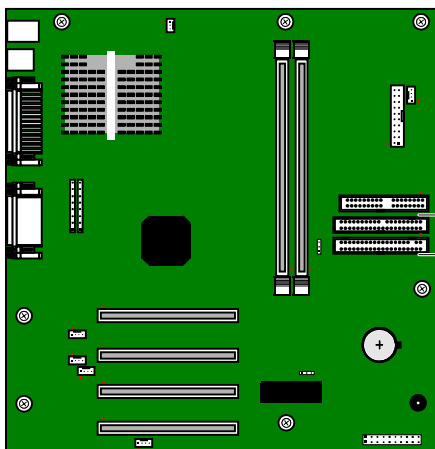
There are a total of four PCI slot connectors (slot #1 to #4). Two PCI slot connectors (slot #3 and #4) are available. The other PCI slots are occupied by the Ethernet card (slot #2) and fax/modem card (slot #1). The PCI slots support 32-bit 5V and Universal (3.3/5V) PCI add-in cards.



IDE Connectors

There are two IDE (Integrated Drive Electronics) connectors on the system board: a Primary IDE and a Secondary IDE connector.

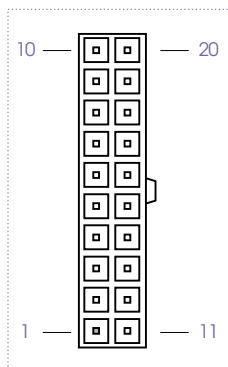
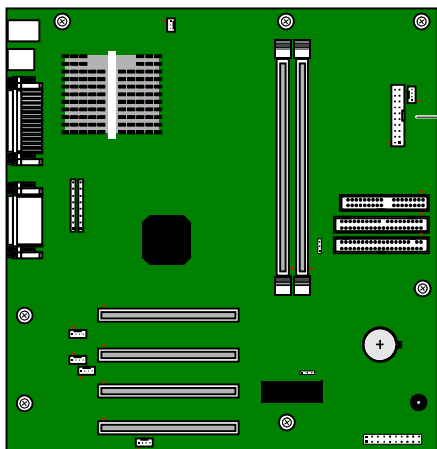
Each IDE connector supports up to two IDE drives using a ribbon cable with two connectors.



CMD4701GVSD

Power Connector

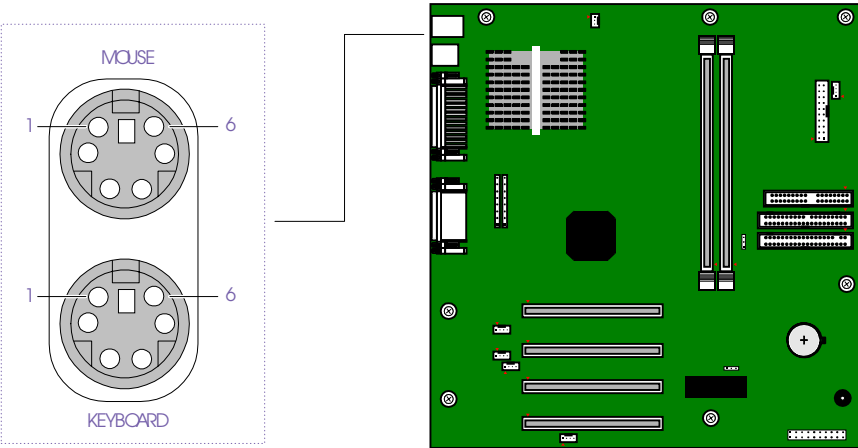
The power supply connector on the system board connects to the power supply connector labelled P1.



CMD47011VSD

KEYBOARD and MOUSE Connectors

The KEYBOARD connector and the MOUSE connector are 6-pin female PS/2-type (mini-DIN) connectors. They have identical pinouts.



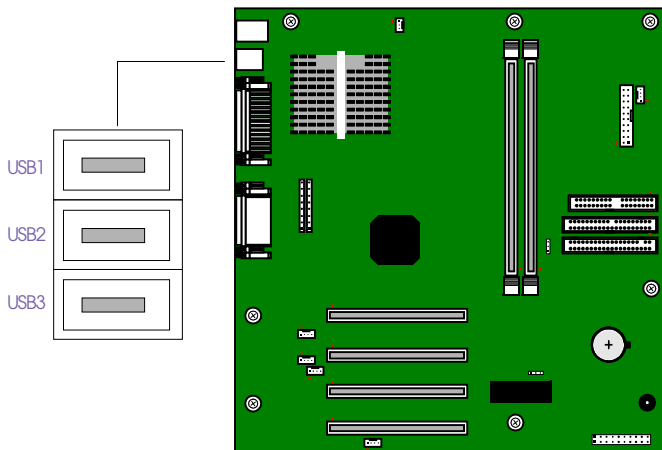
KY0032.V5C

KEYBOARD and MOUSE

Pin	Signal Name
1	DATA
2	NC
3	LOGIC GND
4	+5V (fused)
5	CLOCK
6	NC

USB Connectors

There are three USB ports that permit connection of USB peripheral devices directly to the system without having to use an external hub.



KY0033.VSD

USB1, USB2, USB3

Pin Signal Name

1	USBVCC1*
2	USBP0#
3	USBP0
4	Ground
5	USBVCC2*
6	USBP1#
7	USBP1
8	Ground
5	USBVCC3*
6	USBP2#
7	USBP2
8	Ground

* Uses over-current protector.

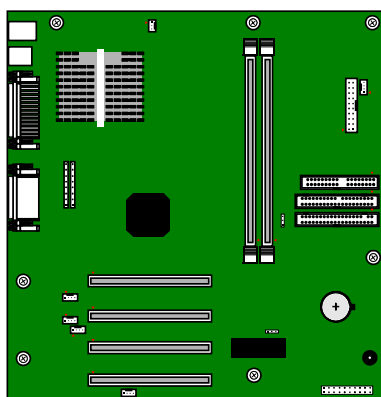
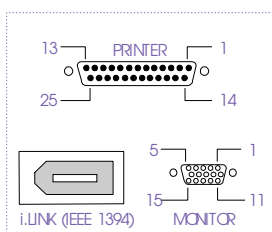
PRINTER, i.LINK, and MONITOR Connectors

The PRINTER, i.LINK (IEEE 1394), and MONITOR connectors are mounted in a single bracket on the system board.

The PRINTER connector is a DB-25 female connector.

The 6-pin i.LINK connector can supply power from the computer to a device if the device also has a 6-pin i.LINK (IEEE 1394) connector. The 6-pin connector supplies 10V to 12V and a maximum power of 6 watts.

The MONITOR connector is a standard 15-pin female high-density VGA-type connector.



CM04701D.VSD

PRINTER connector

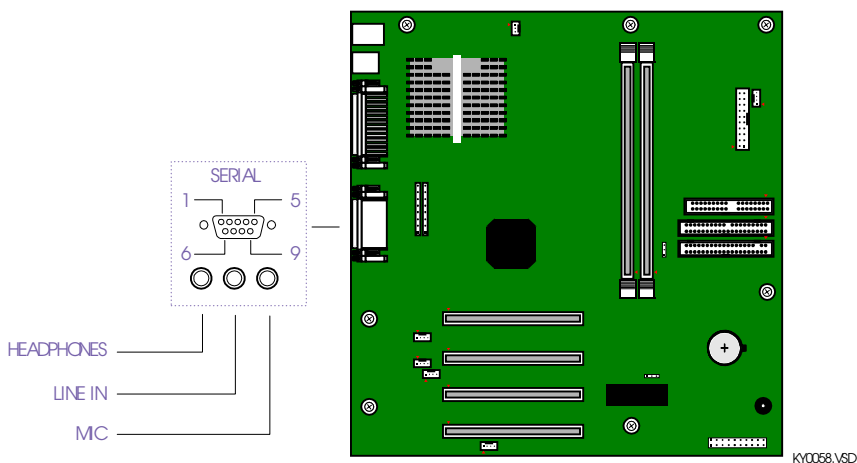
Pin	Signal Name	Pin	Signal Name
1	STROBE -	13	SELECT
2	DATA BIT 0	14	AUTO-FEED -
3	DATA BIT 1	15	ERROR -
4	DATA BIT 2	16	INIT -
5	DATA BIT 3	17	SELECT-IN -
6	DATA BIT 4	18	LOGIC GND
7	DATA BIT 5	19	LOGIC GND
8	DATA BIT 6	20	LOGIC GND
9	DATA BIT 7	21	LOGIC GND
10	ACK -	22	LOGIC GND
11	BUSY	23	LOGIC GND
12	PE	24	LOGIC GND
		25	LOGIC GND

MONITOR connector

<i>Pin</i>	<i>Signal Name</i>
1	RED
2	GREEN
3	BLUE
4	GND
5	DDC GND
6	RED GND
7	GREEN GND
8	BLUE GND
9	NC
10	GND
11	GND
12	SDA
13	HORIZONTAL SYNC
14	VERTICAL SYNC
15	SCL

SERIAL, HEADPHONES, LINE IN, MIC Connectors

The SERIAL connector is a DB-9 male connector. The HEADPHONES jack is a stereo mini-jack (3.5 mm) that connects to headphones. The LINE IN jack is a stereo mini-jack (3.5 mm) that connects to a stereo audio source (not an audio source from a video device). The MIC In jack is a stereo mini-jack (3.5 mm) that connects to a microphone.



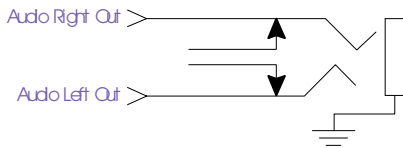
SERIAL

SERIAL connector

Pin Signal Name

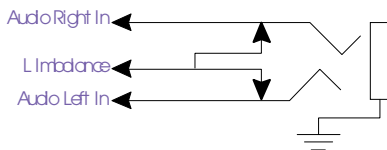
1	DCD
2	RXD
3	TXD
4	DTR
5	LOGIC GND
6	DSR
7	RTS
8	CTS
9	RI

HEADPHONES



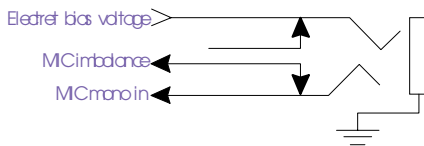
CMD4713.VSD

LINE IN



CMD4713B.VSD

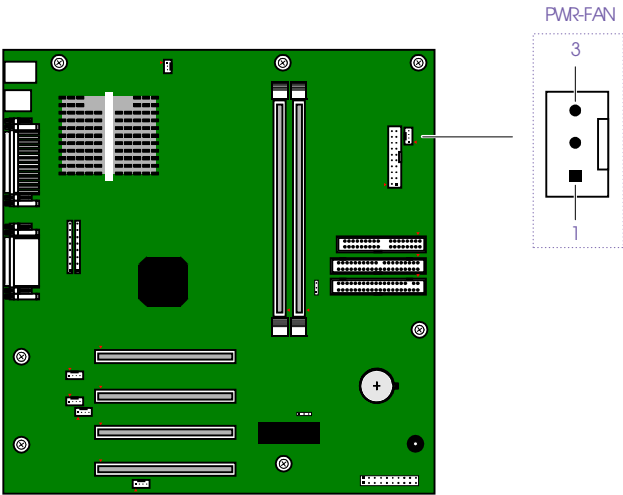
MIC



CMD4713A.VSD

Fan Connector

The PWR-FAN connector is a 1 x 3-pin straight header connector. PWR-FAN connects to the power supply and controls the power supply cooling fan.



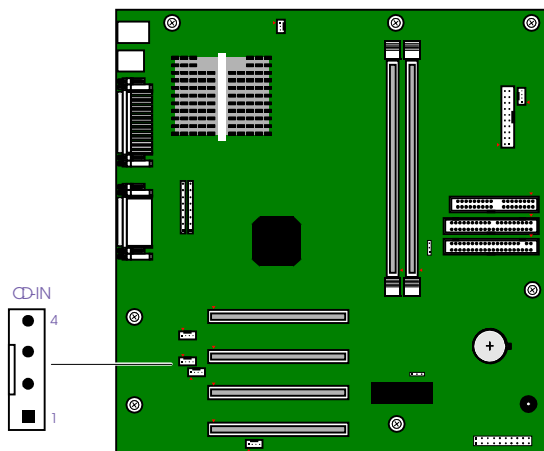
KY0004.VSD

PWR-FAN Connector

Pin	Signal Name
1	Ground
2	FAN_CTRL (+12V)
3	FAN_SEN

CD-IN Connector

The CD-IN connector on the system board is a 1 x 4-pin header connector that connects to the CR-RW drive's audio output connector.



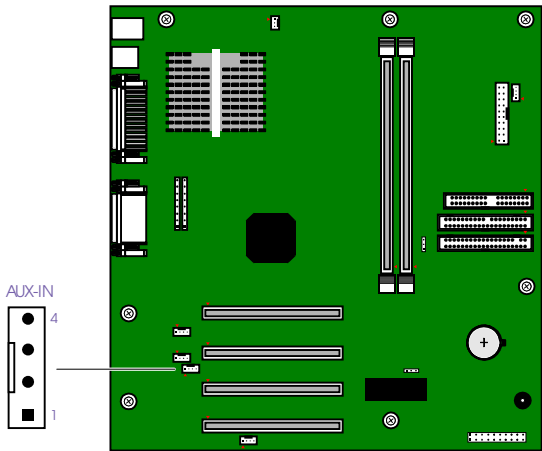
KV0062.V6D

CD-IN

Pin	Signal Name
1	Left Line In
2	Ground
3	Ground
4	Right Line In

AUX-IN Connector

The AUX-IN connector on the system board is a 1 x 4-pin header connector.



KY0062B.V5D

AUX-IN

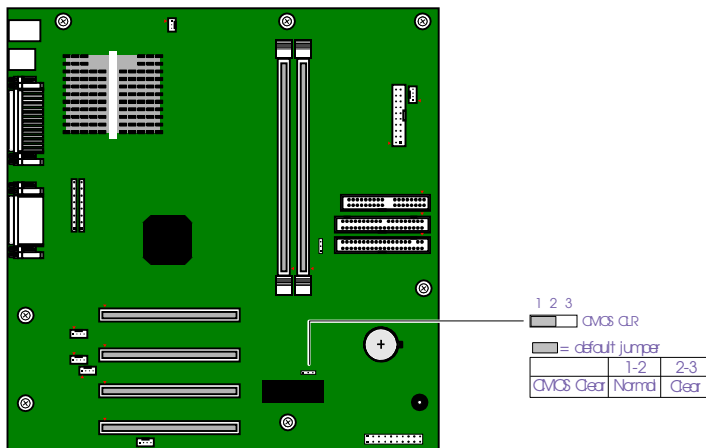
Pin Signal Name

1	Left Line In
2	Ground
3	Ground
4	Right Line In

Configuration Jumper

There is one user-configurable jumper for CMOS Clear.

The computer ships with CMOS Clear in the Normal position. Do not change the position of this jumper unless directed by a technical support person.

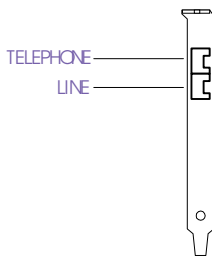


CVD4588.V6D

Chapter 5

Fax/Modem Card

The fax/modem card occupies PCI slot #1. There are two RJ-11 jacks: one to connect a telephone line, and one to connect a phone.



KY0038.VSD

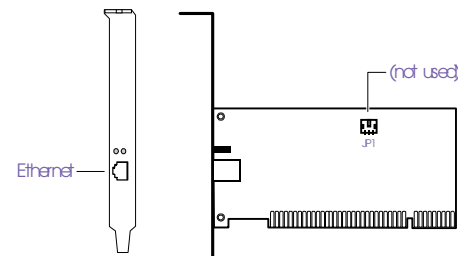
Connectors

<i>Name</i>	<i>Connector Type</i>	<i>Description</i>
TELEPHONE	RJ-11	Connects to phone
LINE	RJ-11	Connects to telephone line

Chapter 6

Ethernet Card

The Ethernet card occupies PCI slot #2. The Ethernet card has one connector that is accessible from the rear panel.



VOY002.VSD

<i>Name</i>	<i>Connector Type</i>	<i>Description</i>
Ethernet	RJ-45	Connects to 10Base-T/100Base-TX Ethernet LAN cable.

Chapter 7

CMOS Setup Options

This chapter describes each screen in the Award BIOS Setup Utility (see “Accessing the BIOS Setup Utility” on page 16).

The Award BIOS setup has five menu items on the menu bar. These are:

- ❑ Main
- ❑ Advanced
- ❑ Power
- ❑ Boot
- ❑ Exit

Options that you can change are enclosed in brackets. Text that is not enclosed in brackets cannot be changed.

A small triangle (▸) indicates that there is a sub-menu with additional information and options. Press Enter to display the sub-menu. The information and options in a sub-menu are context-sensitive (they appear or disappear, depending on which options you select).

The item shown in [brackets] in this guide is the default option. The option shown in [brackets] on the screen is the option currently set for your system.

The other available options for each item are shown without brackets directly below the default option in this guide. The available options are listed in the order they occur when you press the + key.

Use the left and right arrow keys to choose a menu item. Use the up and down arrow keys to select an option. Press Enter to display a list of options, or press the + or - key to cycle through the other options.

If you display the list of options, use the up and down arrow keys to select an option in the list, then press Enter to choose the selection.

Press Esc to go back to the main menu.

Press F10 to save the changes and exit, or press Esc to discard the changes. Follow the on-screen prompts for other choices. The bottom of the screen presents a summary of the keys to use for navigation and control.

Main Screen

System Time	[00:00:00]
System Date	[01/01/2000]
▶Primary Master (see “IDE Sub-Menus” on page 70)	
▶Primary Slave (see “IDE Sub-Menus” on page 70)	
▶Secondary Master (see “IDE Sub-Menus” on page 70)	
▶Secondary Slave (see “IDE Sub-Menus” on page 70)	
Supervisor Password	[Disabled]
User Password	[Disabled]
Installed Memory	64 MB
BIOS Revision	1002

►IDE Sub-Menus

Type	[Auto] User Type HDD CD-ROM LS-120 ZIP-100 MO Other ATAPI None
Translation Method [*]	[LBA] Large Normal Match Partition Table Manual
Cylinders [†]	[1024]
Heads [†]	[255]
Sectors [‡]	[63]
CHS Capacity [*]	8422MB
Maximum LBA Capacity [*]	30020MB
Multi-Sector Transfers [*]	[Maximum] Disabled 2 Sectors 4 Sectors 8 Sectors 16 Sectors 32 Sectors
SMART Monitoring [*]	[Disabled] Enabled
PIO Mode ^{**}	[4]
ULTRA DMA Mode [†]	[5]
Set Device As ^{††}	[Auto] Floppy Hard Disk

* This option appears when Type is set to User Type HDD.

† This option appears when Type is set to Auto or User Type HDD.

‡ This option appears when Type is set to Auto or User Type HDD.

** This option appears when Type is not set to None.

†† This option appears when Type is set to ZIP-100 or MO.

Advanced Screen

CPU Speed	800Mhz
▶ Chip Configuration	
VGA Shared Memory Size	[8MB] 16MB
▶ I/O Device Configuration	
Onboard AC97 Audio Controller	[Enabled] Disabled
Onboard 1394 Controller	[Enabled] Disabled
Onboard Serial Port 1	[3F8H/IRQ4] 2F8H/IRQ3 3E8H/IRQ4 2E8H/IRQ10 Disabled
Onboard Parallel Port	[378H/IRQ7] 278H/IRQ5 Disabled 3BCH/IRQ7
Parallel Port Mode	[Normal] EPP ECP ECP+EPP
▶ PCI Configuration	
Slot 1 IRQ to Slot 3 IRQ	[Auto] NA 3 4 5 7 9 10 11 12 14 15

Power Screen

►Power Up Control

AC PWR Loss Restart	[Disabled] Enabled
PWR Up On Modem Act	[Disabled] Enabled
Wake On PME	[Disabled] Enabled
Wake On USB	[Enabled] Disabled

►Hardware Monitor

MB Temperature	[(displays actual temperature)] Ignore
CPU Temperature	[(displays actual temperature)] Ignore
CPU Fan Speed	[Ignore] (displays actual RPM)
Power Fan Speed	[(displays actual RPM)] Ignore
VCORE Voltage	[(displays actual voltage)] Ignore
+3.3V Voltage	[(displays actual voltage)] Ignore
+5V Voltage	[(displays actual voltage)] Ignore
+12V Voltage	[(displays actual voltage)] Ignore
-12V Voltage	[(displays actual voltage)] Ignore

Boot Screen

- | | |
|----------------------|---|
| 1. ATAPI CD-ROM | [(displays installed drive)]
Disabled |
| 2. Removable Device | [Legacy Floppy]
LS120
ZIP-100
ATAPI MO
Disabled |
| 3. IDE Hard Drive | [(displays installed drive)]
Disabled |
| 4. Other Boot Device | [Disabled]
INT18 Device (Network)
SCSI Boot Device |
| Silent Boot | [Enabled]
Disabled |

Exit Screen

Exit Saving Changes

Exit Discarding Changes

Load Setup Defaults

Discard Changes

Save Changes

Chapter 8

Miscellaneous Technical Information

This chapter contains information on the following subjects:

- ❑ User and Supervisor password
- ❑ Beep code error messages
- ❑ PCI configuration status and error messages
- ❑ DMA channel assignments
- ❑ IRQ assignments
- ❑ System I/O address map
- ❑ Memory map
- ❑ PCI configuration space map

About User and Supervisor Passwords

The system allows you to specify up to two passwords (a User password and a Supervisor password) in the CMOS Setup Utility. The User password is required; the Supervisor password is optional.

Access to the CMOS Setup Utility depends on which passwords were previously set, as indicated next.

<i>If you set these passwords...</i>	<i>...the following passwords are required:</i>
User password only	User password is required at bootup.
Supervisor password only	No password is required at bootup. Supervisor password is required by most setup options.
Both passwords	User password is required at bootup. Supervisor password is required by most setup options.

Beep Code Error Messages

During a normal bootup, a single short beep signifies that the system is OK. Other beep patterns signify errors. The number of beeps indicates the specific error that occurred.

The Sony Online Support technical representative will need to know how many beeps your system produces if there is an error, so be sure to count the number of beeps before calling for support.

PCI Configuration Status and Error Messages

The following is a list of status and error messages that may appear on your system from time to time.

<i>Message</i>	<i>Meaning</i>
Floppy Disk Controller Resource Conflict	The diskette controller has requested a resource that is already in use.
CMOS Checksum Error, CMOS Cleared	The CMOS data was reinitialized due to a CMOS checksum error.
CMOS Data Invalid, CMOS Cleared	Invalid entry in the CMOS.
Parallel Port Resource Conflict	The parallel port has requested a resource that is already in use.
PCI Error Log is Full	This message is displayed when more than 15 PCI conflict errors are detected. No additional PCI errors can be logged.
PCI I/O Port Conflict	Two devices requested the same resource, resulting in a conflict.
PCI IRQ Conflict	Two devices requested the same resource, resulting in a conflict.
PCI Memory Conflict	Two devices requested the same resource, resulting in a conflict.
Primary Boot Device Not Found	The designated primary boot device (hard disk drive, diskette drive, CD-ROM drive, or network drive) could not be found.
Primary IDE Controller Resource Conflict	The primary IDE controller has requested a resource that is already in use.
Primary Input Device Not Found	The designated primary input device (keyboard, mouse, or other, if input is redirected) could not be found.
Primary Output Device Not Found	The designated primary output device (display, serial port, or other, if input is redirected) could not be found.
Secondary IDE Controller Resource Conflict	The secondary IDE controller has requested a resource that is already in use.
Serial Port 1 Resource Conflict	Serial port 1 has requested a resource that is already in use.
Static Device Resource Conflict	A device has requested a resource that is already in use.
System Board Device Resource Conflict	A device has requested a resource that is already in use.

DMA Channel Assignments

This shows the factory default values. The Microsoft® Windows® Millenium Edition operating system reassigns resources to best meet the needs of a particular configuration.

<i>DMA Channel</i>	<i>Default Assignment</i>
------------------------	---------------------------

2	Standard diskette controller
---	------------------------------

4	Direct memory access controller
---	---------------------------------

System I/O Address Map

<i>Address Range (hex)</i>	<i>Description</i>
0000h-000Fh	Direct memory access controller
0010h-001Fh	Motherboard resources
0020h-0021h	Programmable interrupt controller
0022h-002Dh	Motherboard resources
002Eh-002Fh	Motherboard resources
0030h-003Fh	Motherboard resources
0040h-0043h	System timer
0044h-005Fh	Motherboard resources
0060h-0060h	Standard 101/102-Key or Microsoft Natural Keyboard
0061h-0061h	System speaker
0062h-0063h	Motherboard resources
0064h-0064h	Standard 101/102-Key or Microsoft Natural Keyboard
0065h-006Fh	Motherboard resources
0070h-0073h	System CMOS/real time clock
0074h-007Fh	Motherboard resources
0080h-0090h	Direct memory access controller
0091h-0093h	Motherboard resources
0094h-009Fh	Direct memory access controller
00A0h-00A1h	Programmable interrupt controller
00A2h-00BFh	Motherboard resources
00C0h-00DFh	Direct memory access controller
00E0h-00EFh	Motherboard resources
00F0h-00FFh	Numeric data processor
0170h-0177h	Secondary IDE controller (dual FIFO)
0170h-0177h	SiS 5513 dual PCI IDE controller
01F0h-01F7h	Primary IDE controller (dual FIFO)
01F0h-01F7h	SiS 5513 dual PCI IDE controller
0290h-029Eh	Motherboard resources
0376h-0376h	Secondary IDE controller (dual FIFO)
0376h-0376h	SiS 5513 dual PCI IDE controller
0378h-037Fh	Printer Port (LPT1)
03B0h-03BBh	SiS 730s

<i>Address Range (hex)</i>	<i>Description</i>
03C0h-03DFh	SiS 730s
03F0h-03F1h	Motherboard resources
03F2h-03F5h	Standard floppy disk controller
03F6h-03F6h	Primary IDE controller (dual FIFO)
03F6h-03F6h	SiS 5513 dual PCI IDE controller
03F7h-03F7h	Standard floppy disk controller
03F8h-03FFh	Communications port (COM1)
0480h-048Fh	Motherboard resources
04D0h-04D1h	Motherboard resources
0CF8h-0CFFh	PCI bus
B000h-B0FFh	WDM communication device
B400h-B407h	WDM communication device
B800h-B8FFh	Realtek RTL8139 (A/B/C/8130) PCI Fast Ethernet NIC
C000h-CFFFh	SiS Accelerated Graphics Port
C800h-C87Fh	SiS 730s
D400h-D4FFh	SiS 7018 audio driver
D800h-D807h	Primary IDE controller (dual FIFO)
D800h-D80Fh	SiS 5513 dual PCI IDE controller
D808h-D80Fh	Secondary IDE controller (dual FIFO)
E400h-E47Fh	Motherboard resources
E480h-E4FFh	Motherboard resources



I/O addresses that may be used by add-in cards are not listed.

Memory Map

<i>Address range</i>	<i>Default configuration</i>
00000000h-0009FFFFh	System board extension for ACPI BIOS
000A0000h-000AFFFFFh	SiS 730s
000B0000h-000BFFFFh	SiS 730s
000C0000h-000CBFFFFh	SiS 730s
000F0000h-000FFFFFh	System board extension for ACPI BIOS
00100000h-037FFFFFh	System board extension for ACPI BIOS
E8800000h-E8803FFFh	Texas Instruments OHCI-compliant IEEE 1394 host controller
E9000000h-E90007FFh	Texas Instruments OHCI-compliant IEEE 1394 host controller
E9800000h-E98000FFh	WDM communication device
EA000000h-EA0000FFh	Realtek RTL8139 (A/B/C/8130) PCI Fast Ethernet NIC
EA800000h-EAFFFFFFFh	SiS Accelerated Graphics Port
EA800000h-EA81FFFFh	SiS 730s
EB000000h-EB0000FFh	SiS 7018 audio driver
EB800000h-EB8000FFh	SiS 7001 PCI to USB open host controller
EC000000h-EFFFFFFFh	PCI standard host CPU bridge
F0000000h-FEBFFFFFh	SiS Accelerated Graphics Port
F0000000h-F7FFFFFFh	SiS 730s
FFEE0000h-FFEFFFFFh	Motherboard resources
FFFE0000h-FFFFFFFh	Motherboard resources

IRQ Settings

<i>IRQ</i>	<i>Settings</i>
00	System timer
01	Standard 101/102-Key or Microsoft Natural Keyboard
02	Programmable interrupt controller
03	Realtek RTL8139(A/B/C/8130) PCI Fast Ethernet NIC
03	Texas Instruments OHCI-compliant IEEE 1394 host controller
03	ACPI IRQ holder for PCI IRQ steering
04	Communications port (COM1)
05	Printer Port (LPT 2)
06	Standard floppy disk controller
07	Printer Port (LPT1)
08	System CMOS/real time clock
09	SiS 7001 PCI to USB open host controller
09	WDM communication device
09	ACPI IRQ holder for PCI IRQ steering
09	SCI IRQ used by ACPI bus
10	ACPI IRQ holder for PCI IRQ steering
10	SiS 7018 audio driver
11	SiS 730s
11	ACPI IRQ holder for PCI IRQ steering
12	PS/2® compatible mouse port
13	Numeric data processor
14	Primary IDE controller (dual FIFO)
14	SiS 5513 dual PCI IDE controller
15	Secondary IDE controller (dual FIFO)
15	SiS 5513 dual PCI IDE controller

Chapter 9

Specifications

This chapter describes the technical specifications for the Sony PCV-J150 computer.

Processor

800 MHz * AMD Duron™ processor

* MHz denotes microprocessor internal clock speed. Other factors may affect application performance.

Chipset

SiS730S

PCI Bus

PCI Level 2.2, 33 MHz zero wait state

4 PCI slots (2 open)

Memory Modules (DIMMs)

Installed memory	64 MB PC-133 SDRAM (133 MHz)
Maximum memory	512 Mbytes (256 Mbytes in each socket)
Voltage	3.3 V memory only
Pins	168-pins with gold-plated contacts
SDRAM type	PC-133, 60 ns, unrestricted CAS latency 2, unbuffered, Intel 4-clock, 64 bits (non-ECC)

DIMM Configurations

<i>DIMM1</i> *	<i>DIMM2</i> *
0, 8, 16, 32, 64, 128, 256	0, 8, 16, 32, 64, 128, 256

- * The PCV-J150 is shipped with 64 MB. SDRAM is expandable to 512 MB. Computer SDRAM is unbuffered DIMM, specification Rev. 1.0 or later. Supports SDRAM memory. Does not support EDO memory or buffered DIMM memory. Memory can be installed in either socket. Memory size can vary between sockets. DIMMs can be single- or double-sided. DIMMs must be 3.3V unbuffered 4-clock, 64-bit or 72-bit 133 MHz SDRAM module.

Cache Memory

Integrated	L1: 128Kbytes L2: 64Kbytes (exclusive)
------------	---

Graphics

Chipset	SiS730S
Video memory	Shared with system memory
Resolution (displayed resolution depends on the video monitor you use)*	
True color (24 bits)	Up to 1280 x 1024 at 85 Hz non-interlaced
High color (16 bits)	Up to 1280 x 1024 at 85 Hz non-interlaced
256 colors (8 bits)	Up to 1600 x 1200 at 75 Hz non-interlaced

- * It is recommended to use 1024x768 True color (24 bits) or High color (16 bits) when at 75 Hz or lower refresh rate for video playback applications.

Audio

Sound chip	SiS7018
Wave synthesis	64-voice Polyphony wave table synthesizer
Audio sampling rate	Up to 48 kHz at 16 bits
Rear panel connectors	MIC (for microphone) LINE IN (from stereo audio source) HEADPHONES (for stereo headphones)

Communications

Modem	V.90-compatible data/fax modem*
Fax	14.4 kbps maximum
i.LINK [®] (IEEE-1394)	400 Mbps, OHCI chipset
Ethernet	10Base-T/100Base-TX

* Due to FCC limitations, the maximum permissible data speed is 53 kbps during download transmissions. Actual data speeds may vary, depending on line conditions.

I/O and Expansion Slots

Serial ports	One high-speed NS16C550-compatible port
Parallel port	One high-speed bi-directional Centronics-compatible port with ECP and EPP modes
Modem ports	Two RJ-11 connectors (for line and phone)
USB ports	USB1, USB2, USB3 (on rear panel)
PCI slots	Two available slots. Maximum length for add-in cards is 7.75 inches
IDE connectors	Primary and secondary (cable for primary supports two ATA-100 IDE drives)
i.LINK (IEEE-1394) port	One 6-pin connector on rear panel
Ethernet	One RJ-45 connector on rear panel

Drives and Controllers

<i>Drive</i>	<i>Description</i>
Diskette drive	3.5-inch, 1.44 Mbyte.
CD-RW drive*	
CD-RW read [†]	20X maximum performance
CD-RW write [†]	4X maximum performance
CD-R read ^{**}	32X maximum performance
CD-R write ^{††}	8X maximum performance
CD-ROM read ^{‡‡}	32X maximum performance

* The CD-RW/CD-R/CD-ROM data transfer standard 1X rate is 150 kbytes/s.

† Data on a CD-RW is read at a variable transfer rate, ranging from 8X at the innermost track to 20X at the outermost track. The average data transfer rate is 14X (2100 kbytes/s).

‡ Data on a CD-RW is written at a constant transfer rate of 1X, 2X, or 4X, depending on the speed you select.

** Data on the CD-R is read at a variable transfer rate, ranging from 13X at the innermost track to 32X at the outermost track (the data transfer standard 1X rate is 150 kbytes/s). The average data transfer rate is 22.5X (3375 kbytes/s).

†† Data on a CD-R is written at a constant transfer rate of 1X, 2X, 4X, or 8X, depending on the speed you select.

‡‡ Data on the CD-ROM is read at a variable transfer rate, ranging from 13X at the innermost track to 32X at the outermost track (the data transfer standard 1X rate is 150 kbytes/s). The average data transfer rate is 22.5X (3375 kbytes/s).

System BIOS

Make and model	Award-based
ROM	2Mbit CMOS Flash memory
Passwords	User and supervisor passwords supported
Recovery boot block	Supported
Power management	APM 1.2
Advanced features	ACPI-1.0 compliant hardware for use with APM and PNP BIOS APIs
Plug and Play devices	Supported with steerable DMA channels and interrupts
Special features	PC-99 compliant, multi-boot, PCI add-in card auto-configure

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