

PCG-R505DL/R505DS/R505DSK/R505DSP

SERVICE MANUAL

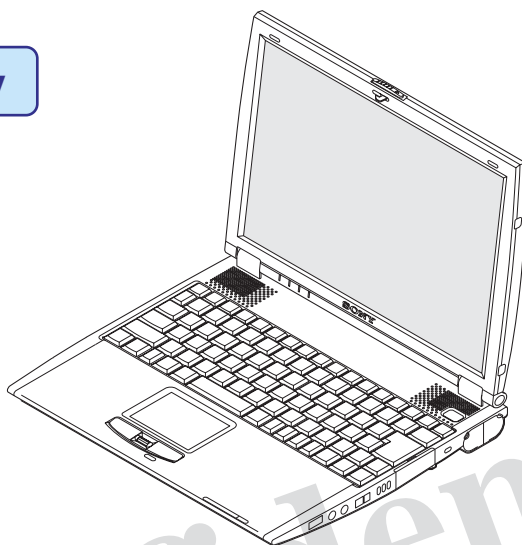
Ver. 1-2002C

Revision History

For American Area

US Model

Canadian Model



Lineup: PCG-R505DL
PCG-R505DS
PCG-R505DSK
PCG-R505DSP



The Standard for
Wireless Fidelity.



MG



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Notebook Computer
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Caution Markings for Lithium/Ion Battery - The following or similar texts shall be provided on battery pack of equipment or in both the operating and the service instructions.

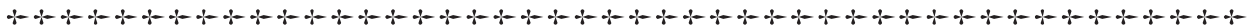
CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

CAUTION: The battery pack used in this device may present a fire or chemical burn hazard if mistreated. Do not disassemble, heat above 100°C (212°F) or incinerate.

Dispose of used battery promptly.
Keep away from children.

CAUTION: Changing the back up battery.

- Overcharging, short circuiting, reverse charging, multilation or incineration of the cells must be avoided to prevent one or more of the following occurrences; release of toxic materials, release of hydrogen and/or oxygen gas, rise in surface temperature.
- If a cell has leaked or vented, it should be replaced immediately while avoiding to touch it without any protection.



Service and Inspection Precautions

1. Obey precautionary markings and instructions

Labels and stamps on the cabinet, chassis, and components identify areas requiring special precautions. Be sure to observe these precautions, as well as all precautions listed in the operating manual and other associated documents.

2. Use designated parts only

The set's components possess important safety characteristics, such as noncombustibility and the ability to tolerate large voltages. Be sure that replacement parts possess the same safety characteristics as the originals. Also remember that the Δ mark, which appears in circuit diagrams and parts lists, denotes components that have particularly important safety functions; be extra sure to use only the designated components.

3. Always follow the original design when mounting parts and routing wires

The original layout includes various safety features, such as inclusion of insulating materials (tubes and tape) and the mounting of parts above the printer board. In addition, internal wiring has been routed and clamped so as to keep it away from hot or high-voltage parts. When mounting parts or routing wires, therefore, be sure to duplicate the original layout.

4. Inspect after completing service

After servicing, inspect to make sure that all screws, components, and wiring have been returned to their original condition. Also check the area around the repair location to ensure that repair work has caused no damage, and confirm safety.

5. When replacing chip components...

Never reuse components. Also remember that the negative side of tantalum capacitors is easily damaged by heat.

6. When handling flexible print boards...

- The temperature of the soldering-iron tip should be about 270C.
- Do not apply the tip more than three times to the same pattern.
- Handle patterns with care; never apply force.

Caution: Remember that hard disk drives are easily damaged by vibration. Always handle with care.

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		(to 5-9)

- Abbreviations
UC : US model / Canadian model

History of the changes is shown as the “Revision History” at the end of this data.

CHAPTER 1.

REMOVAL

< ATTENTION >

**Please confirm disassembly method by “Repair Manual”
which has been informed you separately.**

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CHAPTER 2.

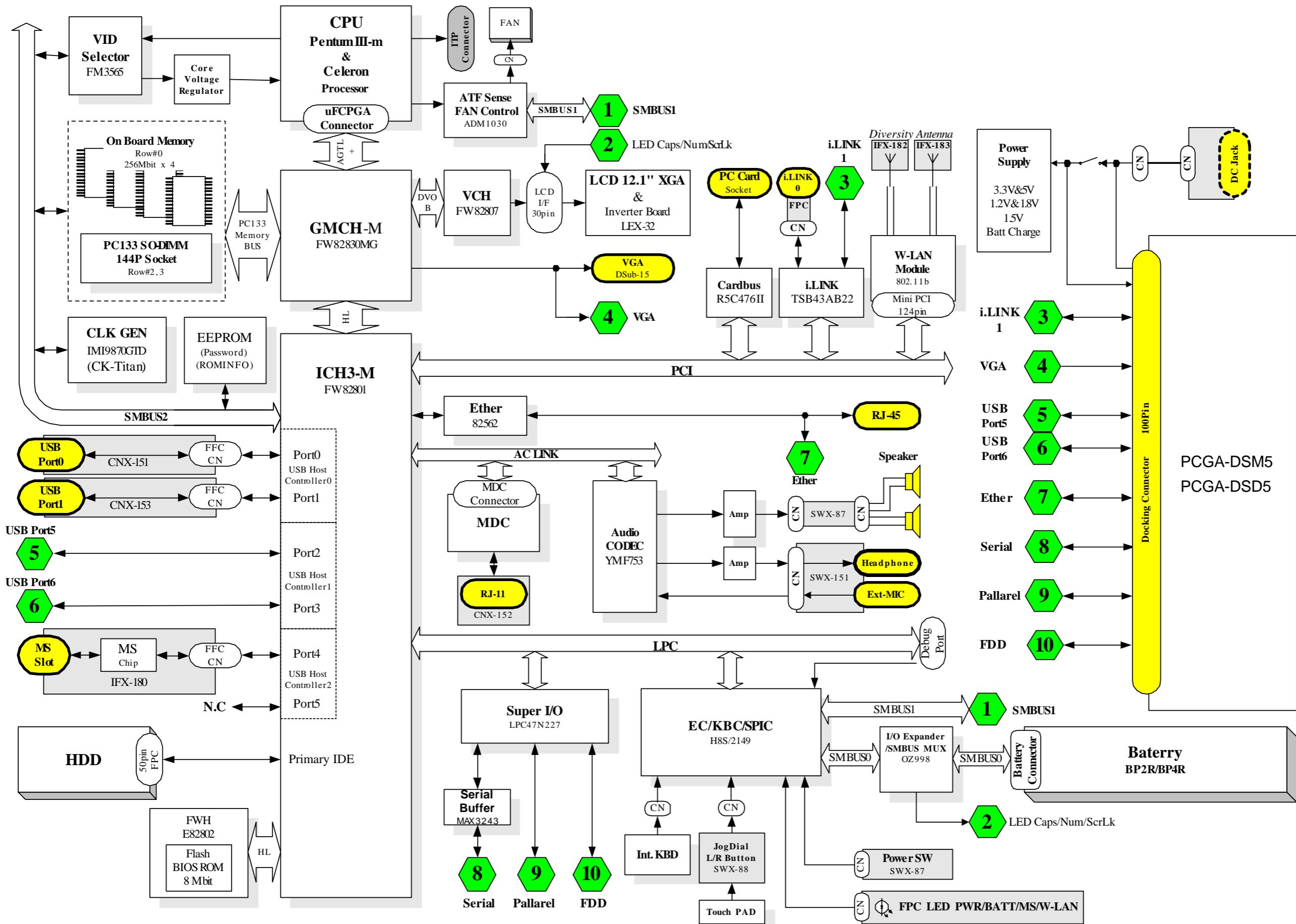
SELF DIAGNOSTICS

< ATTENTION >

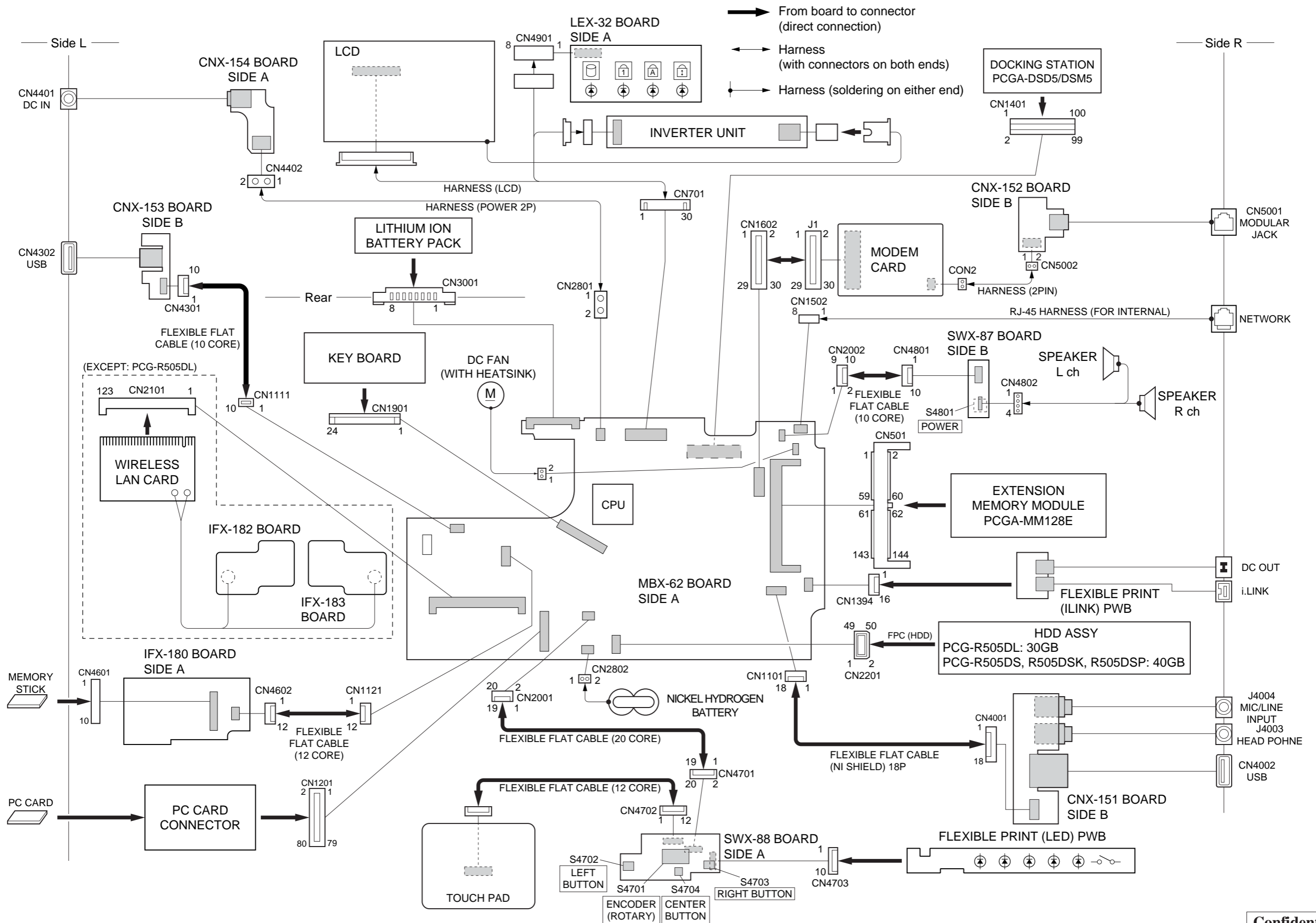
**Please confirm “Self Diagnostics” method which will be informed
you with distribution of “Self Diagnostics” software.**

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CHAPTER 3. BLOCK DIAGRAM



CHAPTER 4. FRAME HARNESS DIAGRAM



- ➔ From board to connector (direct connection)
- ⋯ Harness (with connectors on both ends)
- ➔ Harness (soldering on either end)

EXPLODED VIEWS AND PARTS LIST

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked “ * ” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- When the same reference numbers are written down in the list, please use the one listed in the first place as the main part.

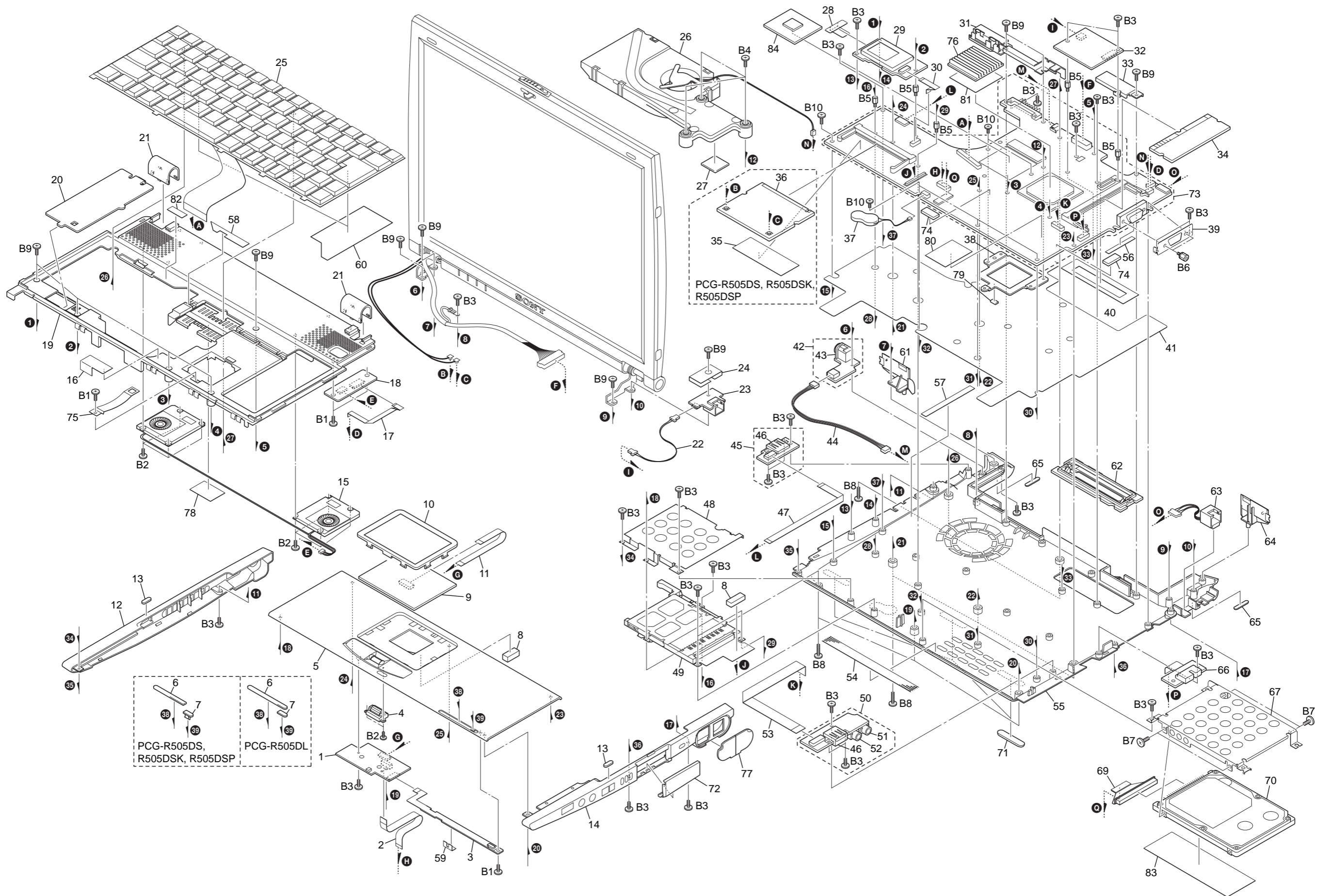
The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

5-1. MAIN SECTION

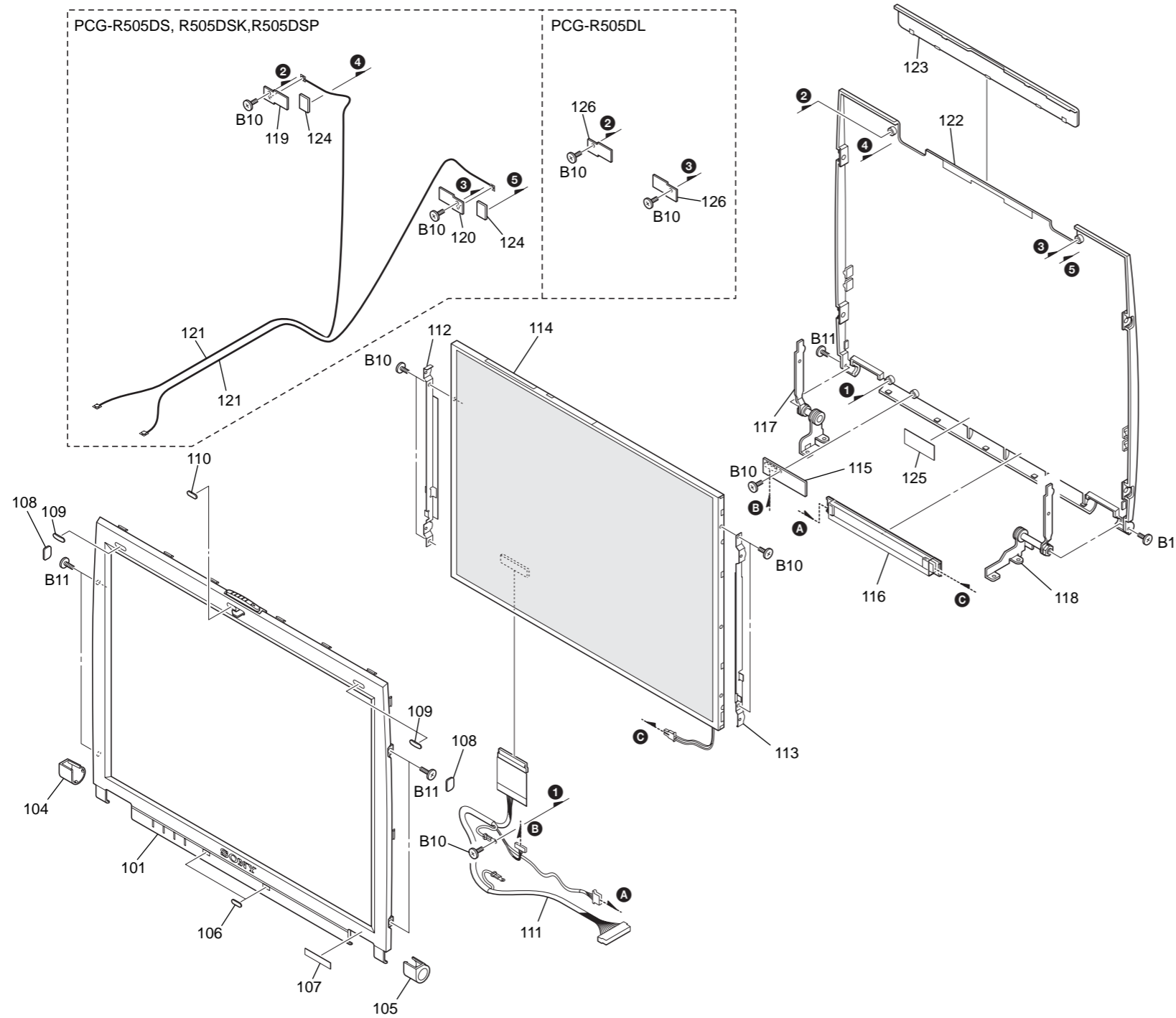
Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
1	A-8067-097-A	COMPLETE PWB SWX-88	58	4-662-893-01	SHEET, POWER HEAT SINK GROUND
2	1-823-811-11	CABLE, FLEXIBLE FLAT 20P	59	4-663-129-01	PLATE (PALMREST), INTERCEPTION
3	1-763-819-11	PWB, FLEXIBLE PRINT (FRONT LED)	60	4-662-968-01	REINFORCEMENT, KEYBOARD
4	1-476-762-31	ENCODER (ROTARY)	61	4-660-015-01	COVER (REAR L)
5	X-4624-454-2	(R505DS, R505DSK, R505DSP)... HOUSING (PALMREST) (A) ASSY	62	X-4623-577-5	LID (DOG) ASSY
5	X-4624-466-2	(R505DL)...HOUSING (PALMREST) (B) ASSY	63	1-961-661-12	HARNES, RJ-45
6	4-660-060-01	(R505DS, R505DSK, R505DSP)... COVER (PALM), LENS	64	4-660-016-01	COVER (REAR R)
6	4-660-223-01	(R505DL)...COVER (PALM) (B), LENS	65	4-657-622-01	FOOT (R2)
7	4-660-058-01	(R505DS, R505DSK, R505DSP)... KNOB, SLIDE	66	1-683-865-11	PWB, FLEXIBLE PRINT
7	4-660-603-01	(R505DL)...SPACER (LENS COVER)	* 67	4-660-022-01	BRACKET (HDD)
8	4-654-382-01	CUSHION HDD CONNECTOR	69	1-790-750-13	FPC (HDD)
9	1-796-319-11	PAD, TOUCH	70	A-8059-666-A	(R505DS, R505DSK, R505DSP)... ASSY HDD 40GB (T, 20, F) (S)
10	4-660-059-02	ESCUTHEON (PAD)	70	A-8059-226-A	(R505DL)... HDD (30GB, IC25N030ATCS04-0) (S)
11	1-823-813-11	CABLE, FLEXIBLE FLAT 12P	71	4-641-449-01	FOOT (F)
12	X-4624-451-1	COVER (SIDE L) ASSY	72	X-4624-453-1	DOOR (VGA) ASSY
13	4-660-456-01	CUSHION (COVER SIDE)	73	A-8059-716-A	MBX-62 (A) (S)
14	X-4624-452-1	COVER (SIDE R) ASSY	74	4-649-669-11	CUSHION IFX
15	1-825-082-11	SPEAKER, (2.0CM) BOX WITH	* 75	4-660-052-01	HOLDER, ALMADOR
16	4-662-617-01	SHEET (FAN), INSULATING	* 76	4-660-053-01	FIN, ALMADOR
17	1-823-812-11	CABLE, FLEXIBLE FLAT 10P	77	4-660-067-01	COVER (BOTTOM R)
18	A-8067-107-A	COMPLETE PWB SWX-87	78	4-660-524-01	SHEET (COIL), THERMAL
19	X-4624-447-1	HOUSING (FRAME) ASSY	79	4-662-616-01	GASKET (FAN 1)
* 20	4-660-019-01	KEYBOARD, PLATE	80	4-662-778-01	SHEET (HDD), SHIELD
21	4-660-020-01	COVER, HINGE	81	4-662-843-01	SHEET (CS), SHIELD
22	1-960-827-51	HARNES (2PIN)	82	4-662-881-02	CUSHION, KEYBOARD
23	A-8067-116-A	COMPLETE PWB CNX-152	83	4-662-354-01	COVER (HDD)
24	4-653-506-13	SHEET (MODEM)	84	6-700-582-01	(R505DS, R505DSK, R505DSP)... IC RH80530GZ006512
25	1-477-114-21	KEYBOARD UNIT (US)	84	6-700-583-01	(R505DL)...IC RH80530GZ001512
* 26	1-763-809-11	FAN, DC (WITH HEATSINK)	B1	4-662-967-01	SCREW (2 TAPPING) (2X4)
27	4-660-523-01	SHEET (CPU), THERMAL	B2	4-662-756-01	SCREW (1.4 TAPPING) (1.4X3.5)
28	4-662-258-01	SHEET (MS), INSULATING	B3	4-654-273-31	ACE (M2), LOCK (2X3.5)
29	A-8067-098-A	COMPLETE PWB IFX-180	B4	4-654-273-21	ACE (M2), LOCK (2X13)
30	1-823-814-11	CABLE, FLEXIBLE FLAT 12P	B5	4-651-989-31	SPACER (MBX)
31	X-4624-494-1	ASSY BRACKET WIRE	B6	4-635-966-01	SCREW (HEX)
32	1-761-380-23	CARD, MODEM	B7	4-635-301-01	SCREW M3X4
33	X-4624-743-1	ASSY COVER (BATTERY LOCK)	B8	4-644-492-01	ACE (M2), LOCK (2X6)
34	6-700-666-01	IC HYS64V16220GDL-7.5-C2	B9	4-654-273-01	ACE (M2), LOCK (2X5)
35	4-662-355-01	(R505DS, R505DSK, R505DSP)... SHEET (WL), INSULATING	B10	4-645-016-01	ACE (M2) (DIA. 4.6), LOCK (2X3)
36	1-761-495-11	(R505DS, R505DSK, R505DSP)... CARD, WIRELESS LAN	* When change the CPU (ref. 84), refer to "Replacing the CPU" on page 5-7 and 5-8.		
37	1-756-038-21	BATTERY, NICKEL HYDROGEN			
* 38	4-660-056-01	BRACKET (CPU)			
* 39	4-660-024-01	BRACKET (VGA)			
40	4-654-239-01	INSULATING SHEET			
41	4-660-018-02	INSULATOR (BOTTOM)			
42	A-8067-114-A	COMPLETE PWB CNX-154			
43	1-779-745-31	JACK, DC			
44	1-961-555-11	HARNES (POWER 2P)			
45	A-8067-101-A	COMPLETE PWB CNX-153			
46	1-793-100-11	CONNECTOR, USB			
47	1-823-815-11	CABLE, FLEXIBLE FLAT 10P			
* 48	4-660-023-01	PLATE (PC CARD)			
49	1-816-270-11	CONNECTOR, PC CARD			
50	A-8067-119-A	COMPLETE PWB CNX-151			
51	1-816-281-11	JACK, SMALL TYPE (MICROPHONE)			
52	1-695-514-21	JACK (SMALL TYPE) 1P (HEADPHONE)			
53	1-823-816-11	CABLE, FLEXIBLE FLAT			
54	4-654-610-03	COVER AIR DUCT			
55	X-4624-450-1	HOUSING (BOTTOM) ASSY			
56	4-662-966-01	SPACER (VGA)			
57	4-663-912-01	ADHESIVE TAPE (5X80)			

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* When change the CPU (ref. 84), refer to "Replacing the CPU" on page 5-7 and 5-8.

5-2. LCD Section



Ref.No.	Part No.	Description
101	X-4624-448-1	HOUSING (BEZEL) ASSY
104	4-660-035-01	COVER (DL)
105	4-660-036-01	COVER (DR)
106	4-660-039-01	BLIND (LCD B), HOLE
107	4-663-268-01	(R505DSP)...LABEL (ID) (U)
107	4-663-268-11	(R505DSK)...LABEL (ID) (U)
107	4-663-268-21	(R505DS)...LABEL (ID) (U)
107	4-663-268-31	(R505DL)...LABEL (ID) (U)
108	4-652-933-02	BLIND (SIDE), HOLE
109	4-660-038-01	BLIND (LCD), HOLE
110	4-652-938-02	CUSHION (LATCH)
111	1-961-579-11	HARNESS (LCD)
* 112	4-660-031-01	BRACKET (LCD-L)
* 113	4-660-032-01	BRACKET (LCD-R)
114	A-8059-714-A	LCD (12.1)(H)(S)
115	A-8067-109-A	COMPLETE PWB LEX-32
116	1-476-317-12	INVERTER UNIT
* 117	4-660-033-01	TILT UNIT (L)
* 118	4-660-034-01	TILT UNIT (R)
119	A-8067-103-A	(R505DS, R505DSK, R505DSP)... COMPLETE PWB IFX-182
120	A-8067-105-A	(R505DS, R505DSK, R505DSP)... COMPLETE PWB IFX-183
121	1-823-844-11	(R505DS, R505DSK, R505DSP)... CABLE, COAXIAL
122	X-4624-449-1	HOUSING (DISPLAY) ASSY
123	4-660-029-01	COVER (DISPLAY)
124	4-662-650-01	(R505DS, R505DSK, R505DSP)... GASKET (W-LAN)
125	4-649-669-11	CUSHION IFX
126	4-663-174-01	(R505DL)...SPACER (W-LAN)
B10	4-645-016-01	ACE (M2) (DIA. 4.6), LOCK (2X3)
B11	4-643-356-01	SCREW (M2X5)

• Replacing the CPU

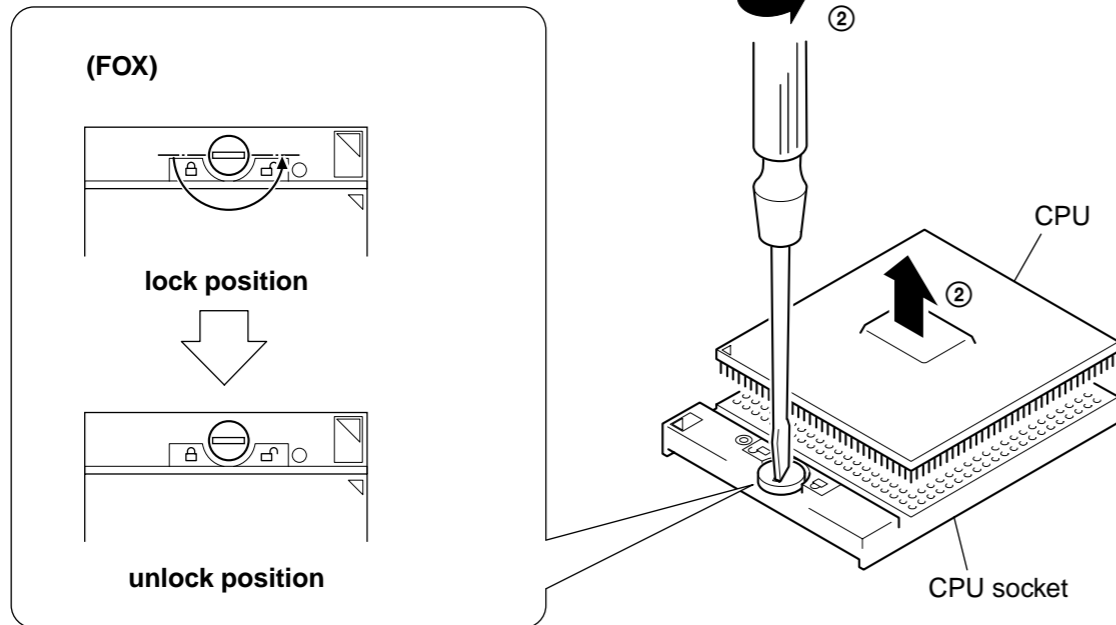
Note: We have two kinds of CPU for this set, and either of them is used.

Two kinds of CPU have differences in the lock position and the unlock position.

1. Socket configuration 1

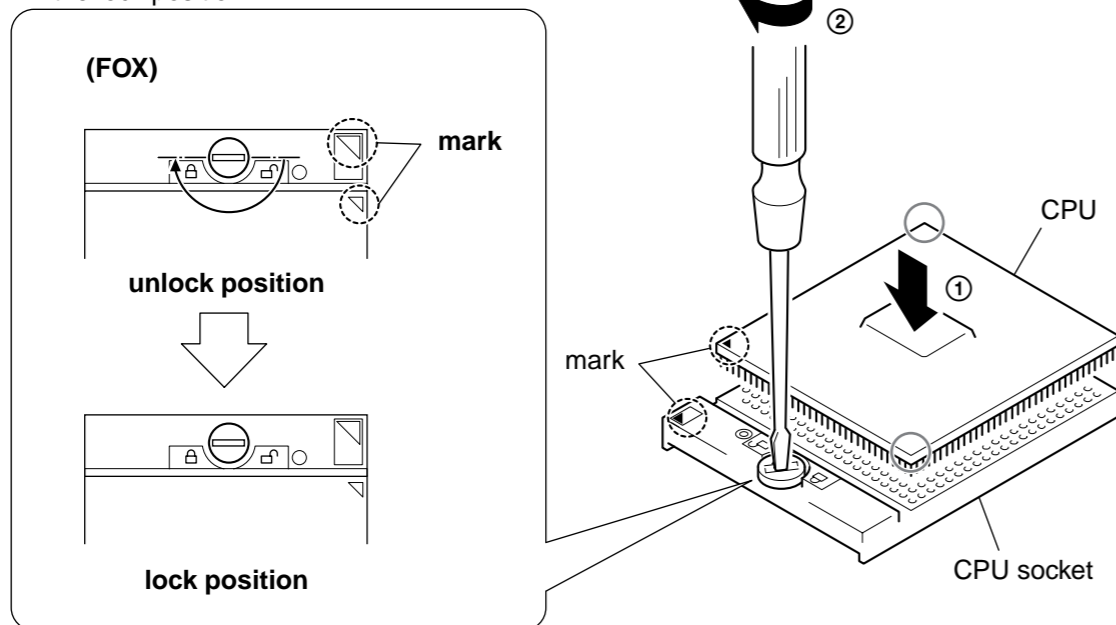
1. How to remove the CPU

- ① Rotate the lock with a flat-blade screwdriver toward the unlock position shown in the figure.
- ② Remove up the CPU.



2. How to install the CPU

- ① Position the mark on the CPU to the mark on the CPU socket and put in all pins to the holes on the CPU socket.
- ② Pressing two corners marked with ○ in the figure, rotate the lock with a flat-blade screwdriver toward the lock position.

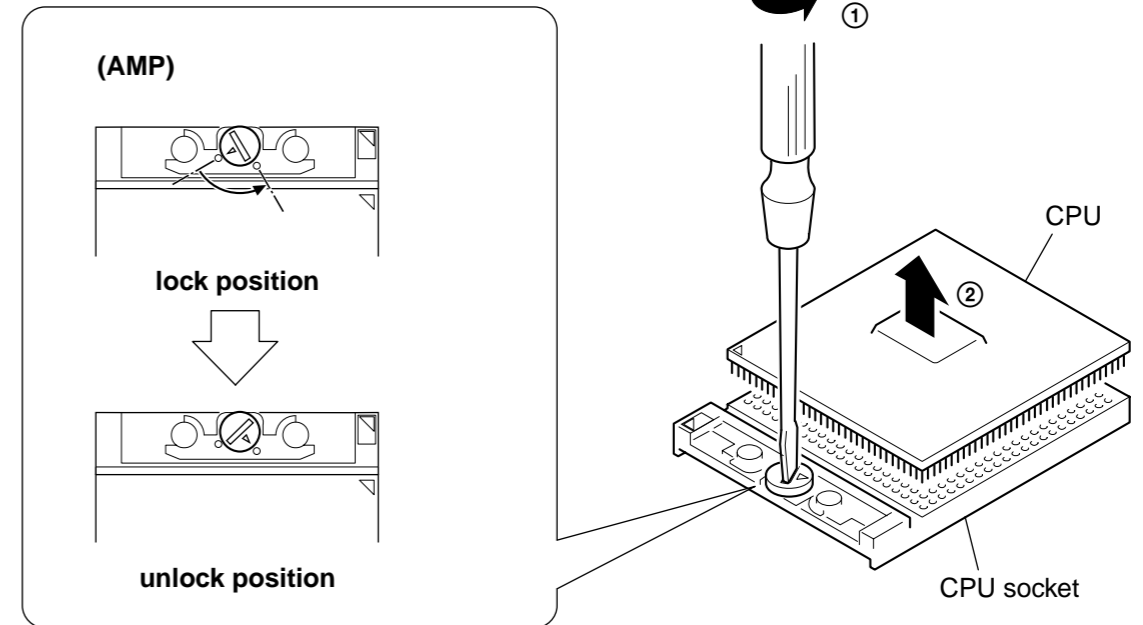


Note: Lock the CPU properly, or operation becomes unstable.

2. Socket configuration 2

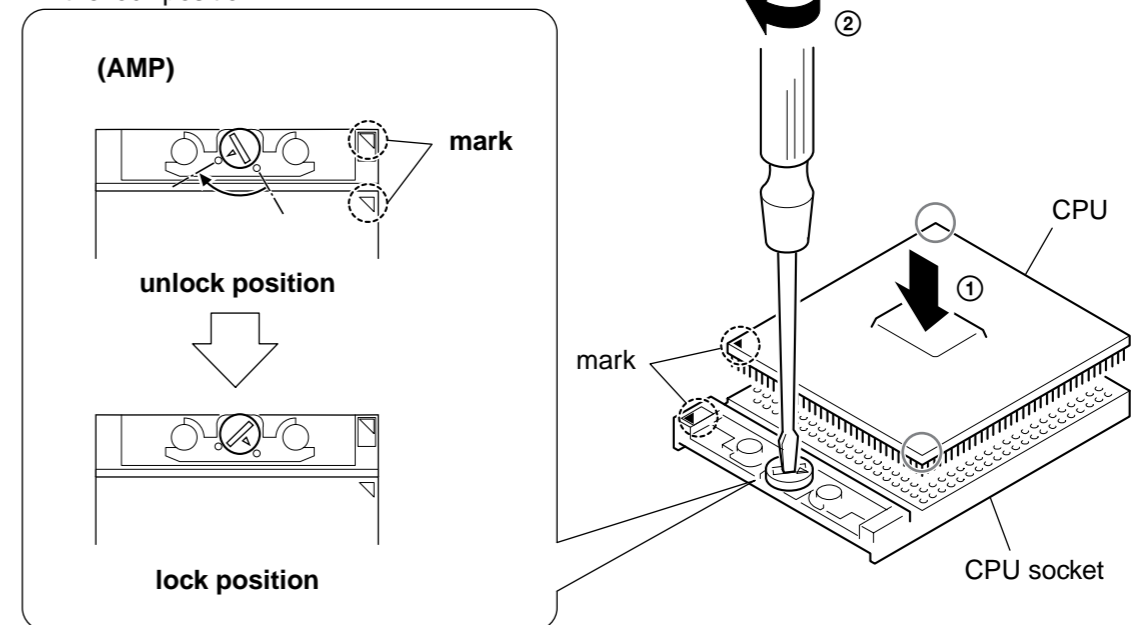
1. How to remove the CPU

- ① Rotate the lock with a flat-blade screwdriver toward the unlock position shown in the figure.
- ② Remove up the CPU.



2. How to install the CPU

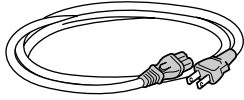
- ① Position the mark on the CPU to the mark on the CPU socket and put in all pins to the holes on the CPU socket.
- ② Pressing two corners marked with ○ in the figure, rotate the lock with a flat-blade screwdriver toward the lock position.



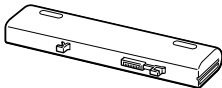
Note: Lock the CPU properly, or operation becomes unstable.

5-3. Accessories

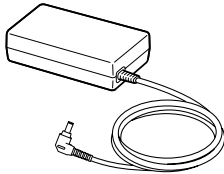
201 Power Cord



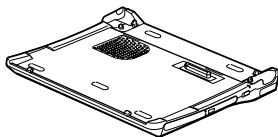
202 Battery Pack



203 AC Adaptor



204 Docking Station (PCGA-DSM5)



Ref.No.	Part No.	Description
		ACCESSORIES *****
△ 201	1-575-562-21	CORD, POWER
202	1-756-152-41	BATTERY PACK, LITHIUM ION
△ 203	1-477-205-11	ADAPTOR, AC
	4-646-847-11	(R505DSK)...W2K FIRST STEP GUIDE
	4-661-919-01	QUICK START

LOOK AT EXPLODED VIEWS OF THE PART

204 PCGA-DSM5

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

* The main unit is not assigned with a part number. Refer to the PCGA-DSD5/DSM5 Service Manual (9-874-401-11).

SONY

***VAIO[®] Notebook
Quick Start***

PCG-R505 Series

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Welcome

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

Features



For complete specifications of your VAIO® notebook, refer to the Specifications flyer supplied with your notebook.

- ❑ **Exceptional performance** — Your notebook includes a mobile Intel® Pentium® III processor* and a V.90 modem.†
- ❑ **Portability** — Rechargeable battery pack provides hours of use without AC power, even while you use the optional docking station.
- ❑ **Sony audio and video quality** — High-quality MPEG2 video, which supports full-screen display (12.1-inch Active Matrix LCD screen) and enables you to take advantage of today's advanced multimedia applications, games, and entertainment software.
- ❑ **Multimedia features** — Enjoy the stereo speakers or use headphones (not supplied) to listen to audio and video CDs.
- ❑ **Microsoft® Windows® operating system** — Your system includes the latest Microsoft® Windows® operating system.
- ❑ **Communications** — Access popular online services, send e-mail, browse the Internet, and use fax features.

* CPU speed will be reduced under certain operating conditions.

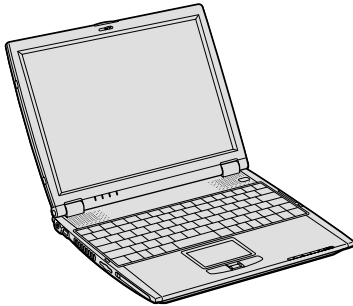
† Actual upload and download speeds may vary due to line conditions, ISP support, and government regulations.

Unpacking Your Notebook

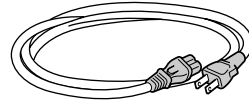
Remove the following hardware, documents, and CDs from the box:

Hardware

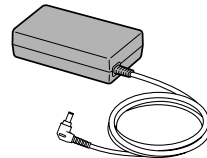
Main Unit



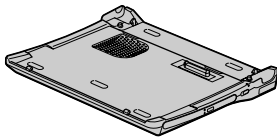
Power Cord



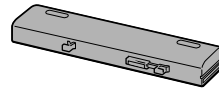
AC Adapter



Docking Station*



Rechargeable Battery Pack



* Docking station supplied with selected models.

Documents

- ❑ **VAIO® R505 SuperSlim Pro™ Notebook Quick Start** — Contains details on unpacking and setting up your notebook, supplementary updates, and software information.
- ❑ **Microsoft® Windows® manual** — Explains how to use the basic features of the latest Windows operating system.
- ❑ **VAIO® Notebook Specifications flyer** — Details the hardware specifications for your notebook and the docking station, which is supplied with selected models.

- ❑ **VAIO® Notebook Notes on Use** — Explains notes on use and offers safety tips.

Software CDs

- ❑ **Microsoft® Word** — Enables you to reinstall Microsoft Word to the VAIO® computer you purchased, if the application becomes corrupted or is erased.

Recovery CDs

- ❑ **Application Recovery CD(s)** — Enables you to reinstall individual applications if they become corrupted or are erased.
- ❑ **Driver Recovery CD(s)** — Enables you to reinstall individual device drivers if they become corrupted or are erased.
- ❑ **System Recovery CD(s)** — Enables you to restore the operating system and software that shipped with your computer if they become corrupted or are erased. This CD restores your computer to its original factory settings, so user data and applications installed since you started using your computer will be lost.



To use these recovery CDs, connect the docking station (supplied with selected models) or an optional optical drive, such as a fully atapi compliant PC Card CD-ROM drive, to the notebook.

Other

- ❑ Packet containing special product offers
- ❑ Limited Warranty Card

Registering Your Notebook

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

- ❑ **Sony Customer Support** — Talk to a Support Representative to troubleshoot problems you may be having with your notebook.
- ❑ **Limited Warranty** — Protect your investment. See the Limited Warranty Card for more details.



You are prompted to register your computer the first time you turn on the unit. Follow the on-screen instructions to complete the registration process. If you are not able to register your computer during the first session, you are provided with additional registration opportunities later.

Setting Up Your Dial-Up Connection

This section describes the basic steps for setting up your dial-up connection. The Connection Wizard guides you through the process of connecting to the Internet and choosing an Internet Service Provider (ISP) or setting up an existing account.

Setting up your Internet connection (Microsoft® Windows® XP operating system)

- 1 Click Start, point to All Programs, Accessories, Communications, and then click New Connection Wizard. The Location Information window appears.

Location Information window



- 2 Follow the on-screen instructions, and then click OK to continue. The Phone and Modem Options window appears.

Phone and Modem Options window



- 3 Select the location from where you are dialing and then click OK. The New Connection Wizard window appears.

New Connection Wizard window



- 4 Follow the on-screen instructions to finish setting up your Internet connection.

Setting up your dial-up connection (Microsoft® Windows® 2000)

- 1 Click Start, point to Programs, Accessories, Communications, and then click Internet Connection Wizard. The Internet Connection Wizard window appears.

Internet Connection Wizard window.



- 2 Follow the on-screen instructions to finish setting up your Internet connection.

Setting Up Your VAIO Notebook

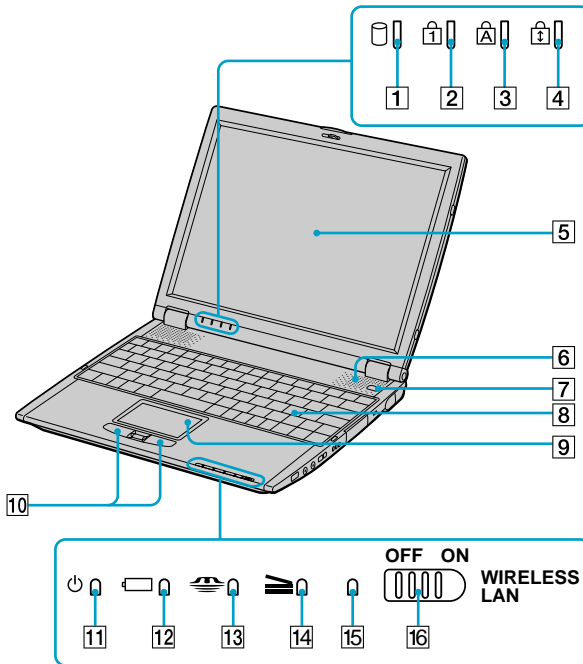
This section describes the following:

- ❑ Locating Controls and Ports
- ❑ Connecting the Docking Station
- ❑ Disconnecting the Docking Station
- ❑ Connecting a Power Source
- ❑ Starting Your Notebook
- ❑ Shutting Down Your Notebook
- ❑ Using Power Saving Modes

Locating Controls and Ports

On the Notebook

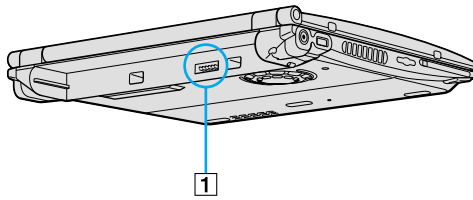
Front



1	Hard disk drive indicator	9	Touchpad
2	Num lock indicator	10	Left and right buttons
3	Caps lock indicator	11	Power indicator
4	Scroll lock indicator	12	Battery indicator
5	LCD screen	13	Memory Stick® indicator
6	Speakers	14	Docking station indicator
7	Power button	15	Wireless LAN indicator*
8	Keyboard	16	Wireless LAN switch*

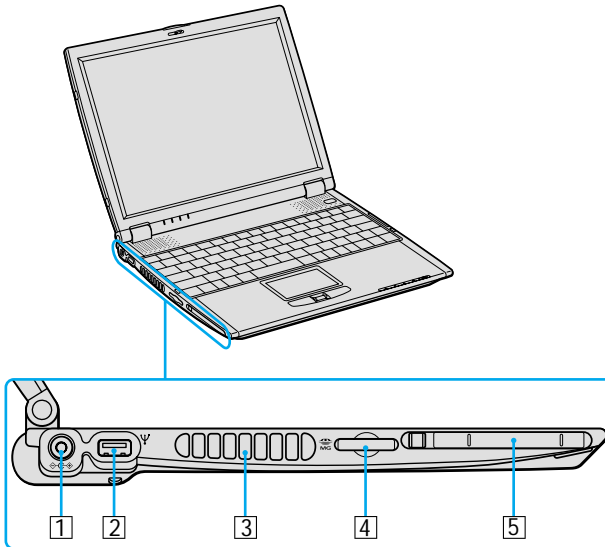
* Wireless LAN capabilities are available on selected models.

Back



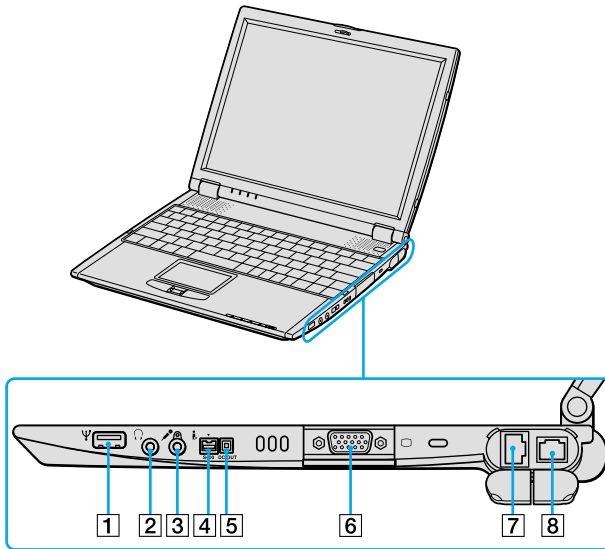
1 Battery port

Left



1 DC In port	4 Memory Stick® slot
2 Ψ USB port	5 PC Card slot
3 Air vent	

Right

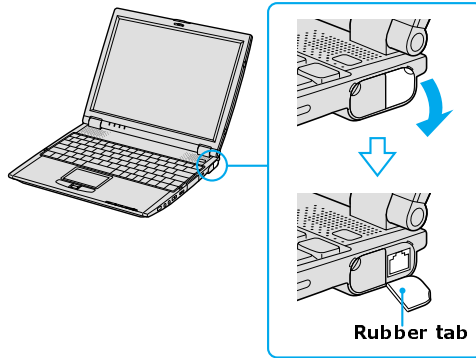



1	Ψ USB port	5	Peripheral device DC Out port
2	Headphone jack	6	Monitor port
3	Microphone jack	7	⏏ Ethernet port
4	Ⓛ i.LINK® (IEEE 1394) S400 port	8	Phone line jack



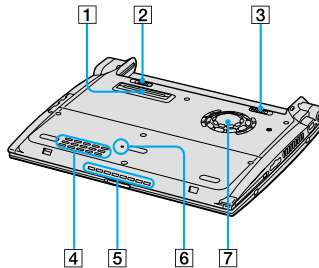
Only connect 10BASE-T and 100BASE-TX cables to the ⏏ Ethernet port. Do not connect any other type of network cable or any telephone line. Connecting cables other than those listed above may result in an electric current overload and could cause a malfunction, excessive heat, or fire in the port. To connect the unit to the network, contact your network administrator.

Removing Rubber Tab



 Gently pull the rubber tab away from the notebook to find the Ethernet port and phone line jack.

Bottom



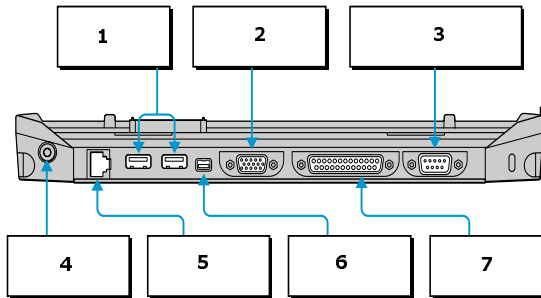
1	Docking station connector	5	Air vent
2	Battery Unlock/Lock switch	6	Reset switch
3	Battery Unlock switch	7	Ventilation fan
4	Air vent		








On the Docking Station

Your notebook may come with a PCGA-DSD5 or PCGA-DSM5 docking station, depending on the model you purchased. Both Sony docking stations offer the following features:

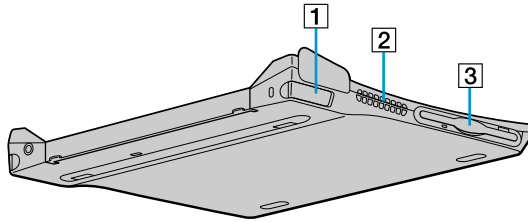
- ❑ A floppy disk drive.
- ❑ An optical drive.
- ❑ A back panel that enables you to connect additional peripherals to your notebook, as shown below.

Back Panel



1	 USB ports	5	 Ethernet/Network port (10BASE-T/100BASE-TX)
2	 Monitor port	6	 i.LINK®* (IEEE 1394) S400 port
3	 Serial port	7	 Printer port
4	 DC In port		

Left

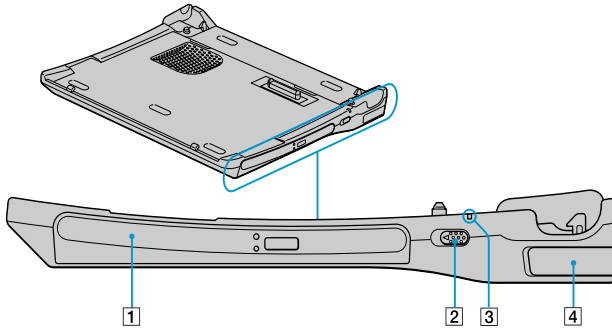


1 Left lever

3 Floppy disk drive

2 Air vent

Right



1 Optical drive

3 DC In indicator

2 Undock switch

4 Right lever

Connecting the Docking Station

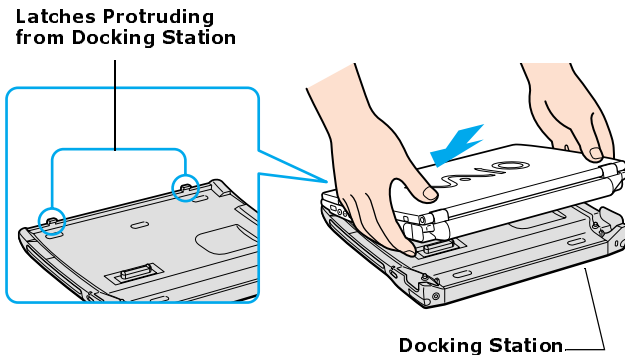
You may connect your notebook to the docking station as long as it is not in power saving mode, i.e., Standby or Hibernate. Connecting the notebook while it is in power saving mode may result in data loss or a computer malfunction. Note the following before connecting your notebook to the docking station:

- ❑ Disconnect the VGA, USB, AC, and Ethernet devices from your notebook. Leaving these devices connected while you connect the docking station could damage them.
- ❑ Ensure that the battery is installed. If you install a charged battery, you can connect the docking station while the notebook is on.

Follow the procedure below to connect your notebook to the docking station:

- 1 Plug one end of the AC adapter cable into the DC In port of the docking station and the other end into an AC outlet. The LED of the DC In port switches on.
- 2 Holding the notebook with the front side facing you, insert the two holes on the front of the notebook into the two corresponding latches protruding from the front side of the docking station.

Latching the Notebook to the Docking Station

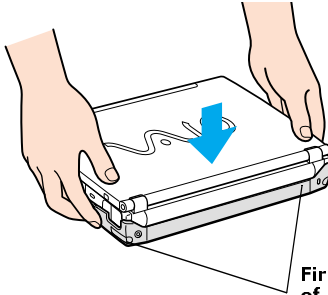


- 3 Firmly press down the two rear corners of the notebook until it clicks into place and is securely fastened to the docking station.



Be careful not to press the top of the notebook too strongly. The LCD display may be damaged.

Securing the Notebook to the Docking Station



Firmly press down the two rear corners of the notebook until it clicks into place.

Disconnecting the Docking Station

You may disconnect the notebook from the docking station when the notebook is *off* or *on*. However, do not disconnect the notebook from the docking station while the docking indicator is on, while the notebook is in Standby or Hibernate mode, or while battery power is low. If you do attempt to disconnect the docking station in any of these three states, you may lose data or the notebook may malfunction.



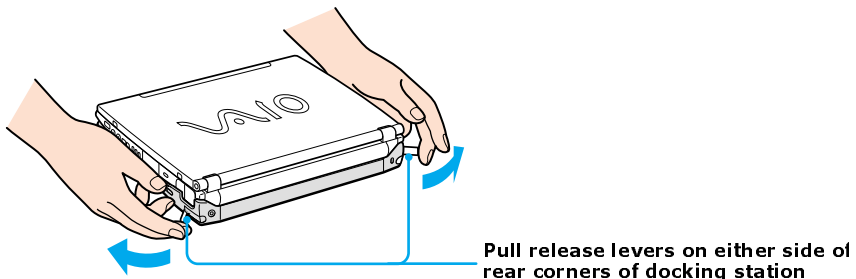
When the battery is low, turn off the notebook before you disconnect the docking station.

Follow one of the two procedures below to disconnect the docking station when the notebook is *off* or *on*.

To disconnect the docking station when the notebook is off

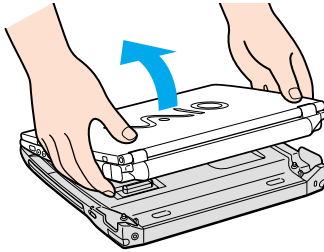
- 1 Disconnect all peripheral devices (i.e., i.LINK devices) from the notebook and the docking station.
- 2 Remove all objects placed on top of the notebook.
- 3 Pull out the two release levers on either side of the rear corners of the docking station.

Releasing the Notebook from the Docking Station



- 4 Remove the notebook from the docking station, while moving the notebook slightly back to disengage it from the two front latches of the docking station.

Removing the Notebook from the Docking Station



To disconnect the docking station when the notebook is on

You can use the Start Menu in the Windows® task tray or the UNDOCK switch on the docking station to disconnect your notebook from the docking station while the notebook is on.



(Microsoft® Windows® XP) If you switch user accounts using Fast User Switching, the UNDOCK switch function on the docking station will be interrupted. Instead, follow the instructions to disconnect the docking station from the Start menu.

From the Start menu

- 1 Click Start on the Windows® taskbar.
- 2 Select Unlock Computer to access the Undock Complete dialog box.

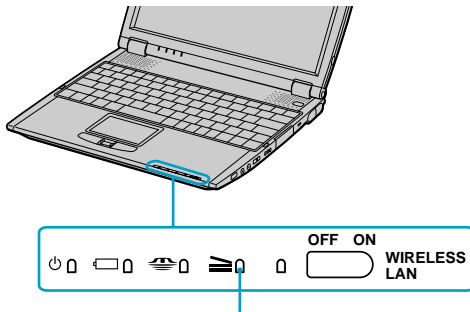


Wait for the docking indicator to switch off before undocking the notebook.



Once the Undock Complete dialog box appears, continue to step 3 to finish undocking the notebook. This prevents you from leaving the notebook on the docking station in this released state for too long.

Docking Indicator




Docking Station Indicator

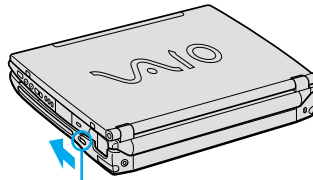
- 3 Release and remove your notebook. See “To disconnect the docking station when the notebook is off” on page 22 for instructions.

Using the **UNDOCK** switch

- 1 Pull the **UNDOCK** switch on the right side of your notebook. The Undock Complete dialog box appears.

 Once the Undock Complete dialog box appears, continue on to step 2 to finish undocking the notebook. This prevents you from leaving the notebook on the docking station in this released state for too long.

UNDOCK switch



UNDOCK Switch

- 2 Release and remove your notebook as described in “To disconnect the docking station when the notebook is off” on page 22.

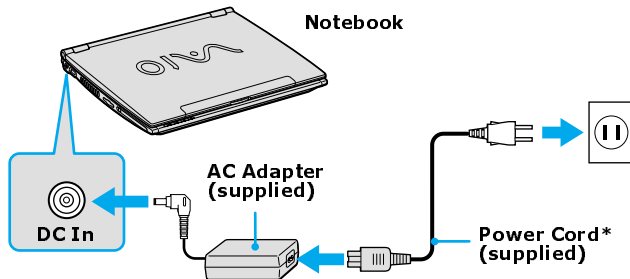
Connecting a Power Source

You can use either AC power or a rechargeable battery pack as a power source.

Using the AC adapter

- 1 Plug the cable attached to the AC adapter into the DC In port on the notebook.
- 2 Plug one end of the power cord into the AC adapter.
- 3 Plug the other end of the power cord into an AC outlet.

Connecting AC Adapter



* Power cord plug may vary depending on area voltage requirements.

Notes on the AC adapter

- ❑ Your notebook operates on 100-240V AC 50/60 Hz.
- ❑ Do not share the AC outlet with other power-consuming equipment, such as a copy machine or shredder.
- ❑ 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.
- ❑ Do not place heavy objects on the power cord.
- ❑ To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- ❑ Unplug your notebook from the wall outlet if you will not be using the notebook for a long time.

- ❑ The LED indicator on the AC adapter may be turned on until the AC adapter is unplugged from your notebook.
- ❑ When the AC adapter is not used, unplug it from the AC outlet.
- ❑ Use only the supplied AC adapter. Do not use any other AC adapter.

Using battery power

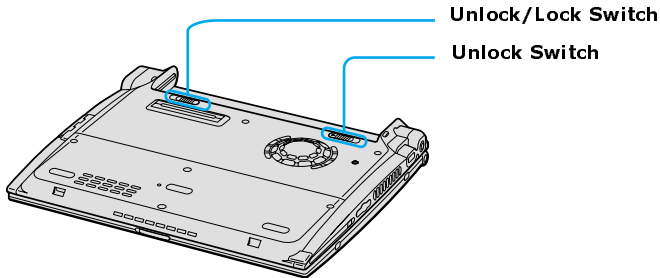
You can use a battery pack as a source of power. The battery pack that comes with your notebook is not fully charged at the time of purchase. Follow the steps below to insert and charge the battery pack.

To insert the battery pack

You do not need to turn off the notebook to insert the battery pack when your notebook is connected to the AC adapter.

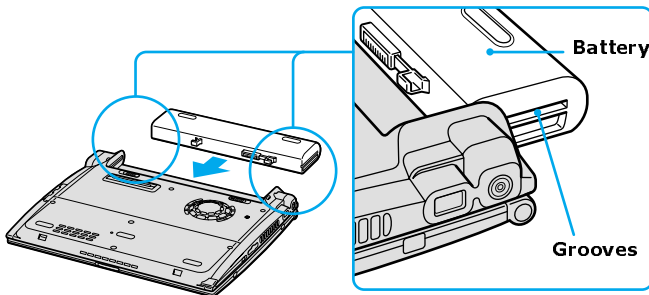
- 1 Close the cover of the notebook.
- 2 Switch the Unlock/Lock switch on the bottom of the notebook to the Unlock position.

Unlock/Lock Lever



- 3 Align the grooves and tabs on the battery with the tabs and notches on the back of the notebook, and slide the battery toward the notebook until it clicks into place.

Inserting Battery Pack



- 4 Slide the lock lever into the Lock position to secure the battery on the notebook.

To charge the battery pack


- 1 Connect the AC adapter to the notebook.
- 2 Insert the battery pack.

The battery is charging whether or not the notebook is turned on or off. The battery indicator flashes in a double-blink pattern as the battery charges.

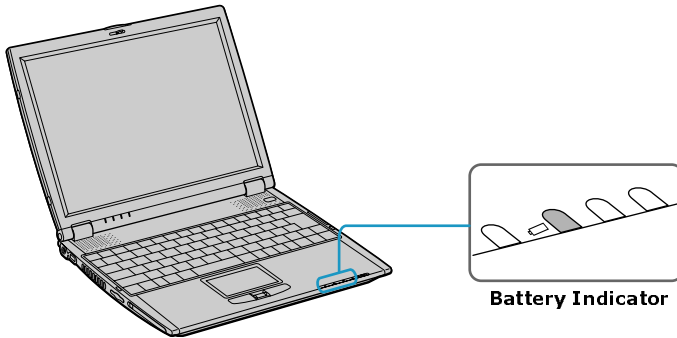
- 3 When the battery is 85 percent full, the battery indicator turns off. It takes longer to recharge the battery when the notebook is turned on than when it is turned off.



To charge the battery completely, continue charging for one additional hour. See “Displaying Battery Information” in your online VAIO® Notebook User Guide for more information.


The  battery indicator on the front of the notebook indicates the status of the battery pack.

Battery Indicator



Battery Indicator

Status	Meaning
On	The notebook is using battery power.
Single blink	The battery is running out of power.
Double blink	The battery is charging.
Off	The notebook is using AC power.

 Both the battery and power indicators blink when the battery is running out of power.

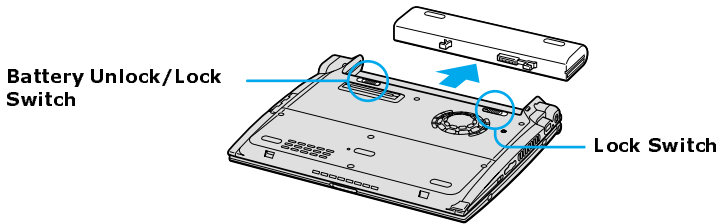
To remove the battery pack

You can remove the battery pack while your notebook is on or off; however, if you remove the battery pack while your notebook is on, make sure the notebook is connected to the AC adapter.

- 1 Close the cover of the notebook.
- 2 Slide the Unlock/Lock switch to the Unlock position.

- Slide the Unlock/Lock switch to the **UNLOCK** position and slide the battery away from the notebook.

Removing Battery Pack



You may lose data if you remove the battery pack while the notebook is on and not connected to the AC adapter or if you remove the battery while the notebook is in a power saving mode.

Notes on the battery

- ❑ To determine the remaining battery charge, see “Displaying Battery Information” in your online user guide for more information.
- ❑ Keep the battery pack in the notebook while it is connected to AC power. The battery pack continues to charge while you are using the notebook.
- ❑ If your battery level falls to less than 10 percent, you should either attach the AC adapter to recharge the battery or shut down your notebook and insert a fully-charged battery.
- ❑ You can extend battery life by changing the power management modes in the PowerPanel utility. See “Using Power Saving Modes” on page 34 for more information.
- ❑ The battery pack supplied with your notebook is a lithium-ion battery and can be recharged at any time. Charging a partially discharged battery does not affect battery life.
- ❑ The battery indicator is on while you use the battery pack as a power source. When battery life is nearly depleted, the battery indicator flashes.
- ❑ Your notebook may not enter Hibernate mode when the battery life is low, if certain software applications are active, or if certain peripheral devices are

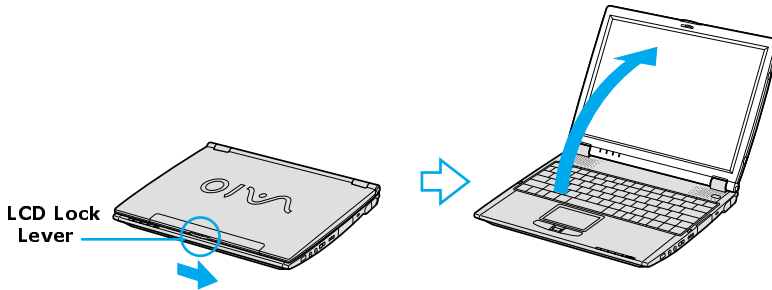
connected. To avoid loss of data when using battery power, save your data frequently and manually activate a power management mode.

- ❑ Never leave the battery pack in temperatures above 140° F (60° C), such as under direct sunlight or in a car parked in the sun.
- ❑ Battery life is shorter in a cold environment. This is due to decreased battery efficiency at low temperatures.
- ❑ Charge the battery at temperatures between 50° F and 80° F (10° C to 30° C). Lower temperatures require a longer charging time.
- ❑ While the battery is in use or being discharged, the battery pack heats up. This is normal and is not cause for concern.
- ❑ Keep the battery pack away from all sources of heat.
- ❑ Keep the battery pack dry.
- ❑ Do not open or try to disassemble the battery pack.
- ❑ Do not expose the battery pack to any mechanical shock.
- ❑ If you are not using the notebook for an extended period of time, remove the battery pack from the notebook to prevent damage to the battery.
- ❑ If, after fully charging the battery pack, the battery power is still low, the battery pack may be reaching the end of its life and should be replaced.
- ❑ You do not need to discharge the battery completely before recharging.
- ❑ If you have not used the battery pack for a considerable amount of time, recharge the battery.

Starting Your Notebook

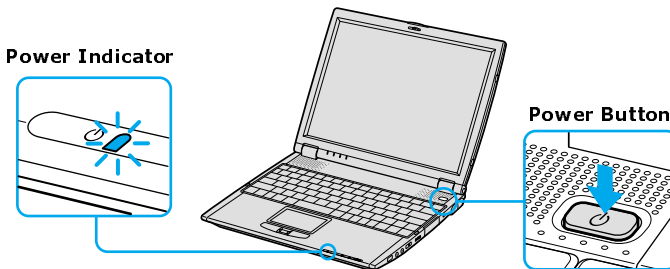
- 1 Slide the LCD lock lever in the direction of the arrow and lift the cover.

Opening Notebook



- 2 Press the power button located on the right side of the notebook until the green power indicator turns on.

Turning on Notebook



If you hold the power button in the On position for more than 4 seconds, the notebook turns off.

- 3 If necessary, adjust the brightness controls for the LCD display. To decrease the brightness, press Fn+F5 and then the down or left arrow key. To increase the brightness, press Fn+F5 and then the up or right arrow key.

Shutting Down Your Notebook



To avoid potential loss of data, follow these steps to turn off your notebook.

- 1 Click Start on the Windows® taskbar.
- 2 (Windows XP) Click Turn Off Computer at the bottom of the Start menu to display the Turn Off computer dialog box, and click Turn Off.
(Windows 2000) Click Shut Down at the bottom of the Start menu to display the Shut Down Windows dialog box, and click Shut Down.



Respond to any prompts warning you to save documents.

- 3 Wait for your notebook to turn off automatically. The notebook is off when the power indicator turns off.
- 4 Turn off any attachments connected to your notebook.



During a period of inactivity, you can conserve battery life by using Standby mode. See “Controlling Power Management” in the online user guide for more information.

If you are unable to turn off your notebook:

- 1 Close or end all operations.
 - Close all applications.
 - Remove the PC Cards.
 - Disconnect USB devices.
- 2 Restart the notebook. (Windows XP) Press the key combination Ctrl+Alt+Delete. The Windows Task Manager screen appears. Click the Shut Down tab, and select Restart. (Windows 2000) Press the key combination Ctrl+Alt+Delete. The Windows Security screen appears. Click Shut Down, and select Restart from the drop-down list.



If you are still unable to shut down the notebook, you can press the power button and hold it for more than 4 seconds. This operation may result in data loss.

Using Power Saving Modes

When you use a battery as the source of power for your notebook, you can take advantage of power management settings to conserve battery life. In addition to the normal operating mode, which allows you to turn off specific devices, your notebook has two distinct power saving modes: Standby and Hibernate. When using battery power, be aware that the notebook automatically enters Hibernate mode when the remaining battery charge drops below 5 percent, regardless of the power management setting you select.



If the battery level falls below 10 percent, you should either attach the AC adapter to recharge the battery or turn off your notebook and insert a fully charged battery.

Normal mode

Normal mode is the normal state of your notebook when it is in use. The power indicator displays green when your notebook is in this mode. To save power, you can turn off a specific device such as the LCD or the hard disk drive.

Standby mode

In Standby mode the notebook saves the current state of the system in RAM and switches off power to the CPU. The amber power indicator flashes in this mode.

To use Standby mode

- 1 Press the key combination Fn + Esc.
- 2 Press any key to return to normal mode.

Hibernate mode

In Hibernate mode, the state of the system is saved on the hard disk drive and power is turned off. The power indicator is off in this mode.

To use Hibernate mode

- 1 Press the key combination Fn + F12.
- 2 Press the power button to return to normal mode.

Notes on power saving modes

- ❑ When returning from Hibernate mode, the system status stored on the hard disk is erased and the notebook starts normally if you press the power button and hold it for more than 4 seconds.
- ❑ Standby mode uses more power than Hibernate mode.
- ❑ Standby mode requires less time than Hibernate mode to return to normal mode.

Adding Memory

In the future you may want to install memory modules to expand the functionality of your notebook. The amount of memory on your notebook will vary depending on the model you purchased. Expansion memory modules are available as options. For memory upgrades, use only unbuffered PC133 (CL2) SDRAM SO-DIMM (gold lead contacts). This section describes how to replace memory modules in your computer:

- Precautions and Procedures
- Installing a Memory Module
- Removing a Memory Module
- Viewing the Amount of Memory

Precautions and Procedures

The procedures described below 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. Personal injury or equipment damage may result from failure to take these precautions.



Sony recommends memory upgrades be performed by an authorized Sony Service Center. To find the nearest center or agent, see <http://www.sony.com/pcsupport>.

Observe the proper safety precautions when installing memory modules in your notebook. See the bulleted list below. Use care when adding memory. Mistakes when installing or removing a memory module may cause a malfunction.

- ❑ Disconnect the system from its power source and from any telecommunications links, networks, or modems before you open the system.
- ❑ Electrostatic discharge (ESD) can damage disk drives and other components. Perform the procedures described below 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.
- ❑ Do not open the memory module package until you are ready to install the module. The package protects the module from ESD.
- ❑ Use the special bag for preventing ESD or use aluminum foil when you store the memory module.

Typical expansion memory configuration

<i>Total System Memory (MB)</i>	<i>On board (MB)</i>	<i>Slot (MB)</i>
256	128	128
384*	128	256

* The 384 MB memory configuration may require the removal and replacement of original factory-installed memory module.

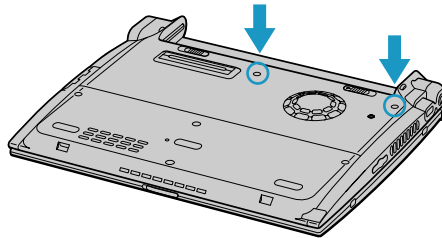
Removing a Memory Module

- 1** Turn off your notebook and disconnect all peripheral devices, such as your printer.
- 2** Unplug the notebook and remove the battery packs.
- 3** After the notebook has cooled, loosen and remove the two screws with the ←• mark located on the bottom of your notebook. Use an appropriate screwdriver.
- 4** Slide the LCD lock lever and lift the cover. Slide the keyboard toward the LCD display, then lift it away slightly.
- 5** Lift the keyboard from the LCD display side, then gently turn it over on the touchpad space. Be careful not to detach the cable when lifting the keyboard.
- 6** Touch a metal object (such as the connector panel on the back of your notebook) to discharge any static electricity.
- 7** Slide the memory module out of the slot.
- 8** Gently replace the keyboard, then press it into your notebook. Be careful not to detach the cable when lifting the keyboard.
- 9** Close the notebook cover, then tighten the screws on the bottom of the computer.

Installing a Memory Module

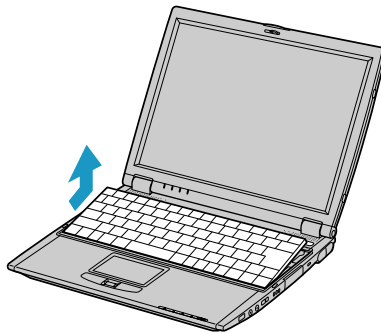
- 1 Turn off your notebook and disconnect all peripheral devices, such as your printer.
- 2 Unplug the notebook and remove the battery packs.
- 3 After the notebook has cooled, loosed and remove the two screws with the ←• mark located on the bottom of your notebook. Use an appropriate screwdriver.

Screws on Bottom of Notebook



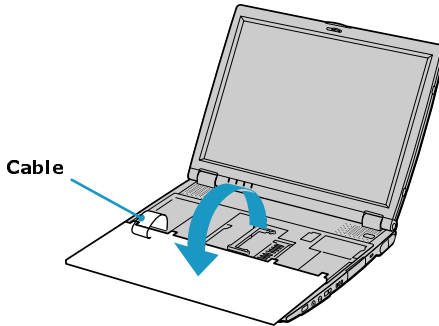
- 4 Slide the LCD lock lever and lift the cover. Slide the keyboard toward the LCD display, then lift it away slightly.

Lifting the Keyboard



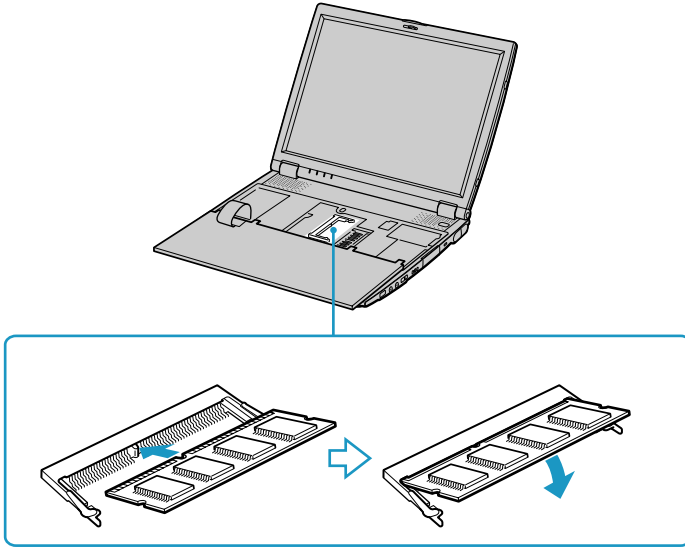
- 5 Lift the keyboard from the LCD display side, then gently turn it over on the touchpad space. Be careful not to detach the cable when lifting the keyboard.

Turning the Keyboard



- 6 You must remove the existing memory module before you can install a new module. See “Removing a Memory Module” on page 40 for instructions.
- 7 Touch a metal object (such as the connector panel on the back of your notebook) to discharge any static electricity.
- 8 Remove the new memory module from its packaging.
- 9 Slide the memory module into the empty slot.
- 10 Press the module into place until it clicks.

Installing the Memory Module



- 11** Gently replace the keyboard, then press it into your notebook. Be careful not to detach the cable when lifting the keyboard.
- 12** Close the notebook cover, then tighten the screws on the bottom of the computer.

Viewing the Amount of Memory

- 1** Restart the notebook.
- 2** (Windows XP) Click Start on the Windows® taskbar, then Control Panel, and then Performance and Maintenance. (Windows 2000) Click Start on the Windows® taskbar, then Settings, and then Control Panel.
- 3** Select Sony Notebook Setup. The Sony Notebook Setup window appears.
- 4** Make sure the About This Computer tab is open. Memory information is listed in the System Information box.



The amount of memory displayed in the Sony Notebook Setup screen is not always correct. The video adapter uses some system memory, and that amount of memory does not appear as part of the total memory shown in the Sony Notebook Setup screen.

About the Software on Your Notebook

Your VAIO®notebook is ready to help you work, play, learn, and communicate as soon as you turn it on. This section offers the following information:

- ❑ Overview of the Software on Your Notebook
- ❑ Application, Driver, and System Recovery CDs
- ❑ Using Your Recovery CDs

Overview of the Software on Your Notebook

Your computer may not be supplied with all of the software listed below, depending on the configuration you purchased. Preinstalled software may not be identical to retail versions or include supporting documentation.

Adobe® Acrobat® Reader®

Adobe Systems Inc.

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.

ArcSoft PhotoPrinter®2000 Pro

ArcSoft, Inc.

ArcSoft PhotoPrinter Pro software is an easy-to-use, yet advanced printing program that lets you quickly lay out multiple images in multiple sizes on a single sheet of paper. ArcSoft PhotoPrinter Pro software offers a wide selection of templates including landscape, portrait, free-style, mixed sizes, custom templates and more. The application includes enhancement tools and special effects for improving photos while giving you the ability to add text to any image. With ArcSoft PhotoPrinter 2000 Pro software you can create business cards, handouts, calendars, mailing labels, and much more.

Adobe® Photoshop® Elements (On selected models)

Adobe Systems Inc.

Using state-of-the-art image editing tools, you can unleash your artistic ability and create digital images for print, e-mail and posting to the Web. The versatile image capturing options allow you to start working with digital and traditional photos immediately. Explore endless creative possibilities for your personal images with Adobe Photoshop Elements software.

Adobe® Premiere® LE (On selected models)

Adobe Systems Inc.

Adobe Premiere LE software offers interface and editing tools for producing movies for video, multimedia, or the Web. View source clips and edited footage simultaneously on-screen. You can create your own personal video clips that are up to three hours in length, with complete audio-video synchronization.

America Online®

America Online, Inc.

America Online is a 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.

DigitalPrint

Sony Electronics Inc.

This image management software makes it fun and easy to edit, import, and organize your digital pictures in a photo album for rich digital printing to any standard color laser or ink-jet printer. DigitalPrint can also be used to make custom CD labels for your audio CDs.

DVgate™

Sony Electronics Inc.

Connect a digital video camera recorder to the i.LINK®* port and capture your own video clips and still images. You can edit clips from your video, add new clips, and combine clips into new movie segments. You can also save your images in a variety of popular file formats.

Drag'n Drop CD™(On selected models)

DigiOn Inc. and Easy Systems Japan Ltd.

Drag'n Drop CD software is designed to be the most simple software to make your own CD. Users can create their own best AudioCD, or data CD that can be read in many PCs. With Drag'n Drop CD software you can also create your own backup CD from the original CD that you own.

* i.LINK is a Sony trademark 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 compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

EarthLink Network Total Access®

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, free storage space for your personal Web site, a member magazine, and 24-hour technical support.

EverQuest®(On selected models)

Sony Online Entertainment Inc.

This introductory edition of EverQuest®, a living, constantly evolving fantasy world, takes users to new heights of online role-playing gaming.

Microsoft®Office XP Professional (On selected models)

Microsoft Corp.

Microsoft Office XP software redefines the relationship between people and software by providing a smarter, simpler way of working. New Office XP software features include context-sensitive smart tags, enhanced formatting options, and more, that enable you to continually integrate additional services into Office and access information anytime.

Microsoft®Office XP Small Business Edition (On selected models)

Microsoft Corp.

With Microsoft Office XP system you'll find a powerful new technology that will help you get work done more quickly by providing real-time, context-sensitive options for important actions, from formatting to error correction. Task panes consolidate important tasks into a single integrated view, enabling you to conduct searches, launch and format documents, and view the contents of your Clipboard from one location.

Microsoft®Word (On selected models)

Microsoft Corp.

Microsoft Word 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 also extends that ease-of-use to international users, making it easy to create multilingual documents.

MovieShaker™

Sony Electronics Inc.

Sony's original MovieShaker software creates personal movies that have transitions, background music, and text. Just import your video clips and "shake" with a click of the mouse. Your personal movies are easy to create and fun to share with family and friends.

OpenMG™ Jukebox

Sony Electronics Inc.

OpenMG Jukebox software enables you to import digital audio files by downloading audio files from Electronic Music Distribution (EMD) services over digital networks, such as the Internet. You can record audio CDs onto your hard drive in a variety of formats.

PC-Cillin@000

Trend Micro, Inc.

PC-Cillin software provides portable, easy-to-use, real-time antivirus security at your computer's entry point (beaming, synchronization, Internet access) to defend against potential threats hidden inside files, e-mail, or on the Web.

PicoPlayer™

Sony Electronics Inc.

PicoPlayer software is a video player utility that enables you to use Giga Pocket™ Personal Video Recorder functions on a computer that does not have Giga Pocket™ Personal Video Recorder installed. You can play Video Capsules created by Giga Pocket™ Personal Video Recorder, and, if a Giga Pocket Server™ is available on your home network, watch TV streamed from the Giga Pocket Server™ and remotely control the Giga Pocket Server's TV programming functions.

PictureGear™

Sony Electronics Inc.

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.

Quicken®

Intuit Inc.

Quicken software is the fastest, easiest way to organize your finances. Quicken software works just like your checkbook, so it's easy to learn and use. You can even pay your bills online. Quicken software manages all of your finances, bank accounts, credit cards, investments, and loans.

QuickTime®

Apple Computer, Inc.

The versatile QuickTime software is used to play hundreds of different kinds of files, including video, audio, and virtual reality (VR) movies. You can play QuickTime files (referred to as “QuickTime movies”) using QuickTime Player or any other application, such as a Web browser or word processor, that supports QuickTime software.

RealJukebox®

RealNetworks, Inc.

RealJukebox software is a popular digital music system that gives you the ability to easily acquire, play and manage digital music files. You can locate and download your favorite music from the Internet and organize your own personal music collection.



If you use an external CD-ROM drive connected with a PC Card, connect the external CD-ROM drive before starting RealJukebox software. Do not remove the CD-ROM drive while using RealJukebox software. Either action may cause RealJukebox software to shut down improperly.

Sony recommends using the SonicStage software's Record function to create any CDs on your VAIO® computer, if the specific model you purchased is preconfigured with all necessary components for CD-R and CD-RW capability. Downloading the optional RealJukebox software CD-burning component to create any CDs on your computer may interfere with normal system operations.

RealPlayer®

RealNetworks, Inc.

RealPlayer software is a high-quality streaming media player that supports many digital media formats. The user-friendly interface has enhanced navigation capabilities, allowing you to access and enjoy audio and video programming over the Internet. RealPlayer software is your gateway to a superb Internet multimedia experience.

Smart Capture

Sony Electronics Inc.

Smart Capture is a fun new way to send multimedia messages via e-mail. Smart Capture manages the i.LINK®* connection between your notebook and a Sony Digital Handycam® Camcorder that supports the i.LINK interface. It allows you to capture compressed video or still images and save them to your hard disk drive or share via e-mail. A smart solution for computer, digital audio/video and network convergence.

Smart Connect (On selected models)

Sony Electronics Inc.

Smart Connect enables 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.

SonicStage™

Sony Electronics Inc.

This new jukebox application adds a host of new features to its predecessor, OpenMG™ Jukebox. Continuing to take advantage of Sony's copyright-protected ATRAC3™ format for high-quality digital audio storage, SonicStage software sports a new music visualizer, a sleek new player skin design, audio CD burning capability, and a parametric equalizer for fine-tuning audio playback.

* i.LINK is a Sony trademark 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 compatible i.LINK devices. All products with an i.LINK connection may not communicate with each other. Refer to the documentation that came with your compatible i.LINK device for information on operating conditions and proper connection. Before connecting compatible i.LINK PC peripherals to your system, such as a CD-RW or hard disk drive, confirm their operating system compatibility and required operating conditions.

Sony ScreenBlast™ ACID

Sony Pictures Digital Entertainment

With the powerful Sony ScreenBlast ACID software you can create royalty-free music by utilizing its loop-based production tool, including unlimited tracks and enhanced effects.

Sony ScreenBlast™ Sound Forge®

Sony Pictures Digital Entertainment

Sony ScreenBlast™ Sound Forge® allows you to record, edit, and process mono or stereo audio files for your multimedia or Internet projects. Whether you want to use a number of professional effects, convert video into streaming media, or synchronize audio to video — this software has everything you need to create rich, immersive multimedia and Internet content.

Sony on Yahoo!

Yahoo! Inc.

Personalize your own web portal with Sony on Yahoo! Get a free webmail account, customized news and local weather reports, comics, instant messaging, and more.

VAIO Action Setup (On selected models)

Sony Electronics Inc.

VAIO Action Setup manages the settings for your computer's Shortcut keys.

VAIO Support Agent

Sony Electronics Inc.

VAIO Support Agent provides immediate, interactive, online support with information about your preinstalled software and answers to frequently asked questions.

VisualFlow™

Sony Electronics Inc.

VisualFlow software is a state-of-the-art Sony multimedia browser designed specifically for Memory Stick® media. It displays any still picture, movie or sound file stored in a Memory Stick media in a visually pleasing, artistic manner. VisualFlow software not only plays a selected movie or sound file, but also enables playback of files by other applications like PictureGear™ or Memory Stick Slideshow.

WinDVD®

InterVideo, Inc.

WinDVD software is a simple-to-use DVD player including all the features you would expect to find in a standard consumer DVD player, while also offering advanced display and navigation features such as zoom, pan, bookmark, and time search.

Application, Driver, and System Recovery CDs

Your notebook comes with the following application, driver, and system recovery CDs. See “Using Your Recovery CDs” on page 55 for information.

Application Recovery CD(s)

Sony Electronics Inc.

This CD enables you to reinstall individual applications if they become corrupted or are erased.

Driver Recovery CD(s)

Sony Electronics Inc.

This CD enables you to reinstall individual device drivers if they become corrupted or are erased.

System Recovery CD(s)

Sony Electronics Inc.

This CD enables you to restore the operating system and software that shipped with your computer if they become corrupted or are erased. This CD restores your computer to its original factory settings, so user data and applications installed since you started using your computer will be lost.



To use the recovery CD(s), connect the docking station (supplied with selected models) or an optional optical drive, such as a fully atapi compliant PC Card CD-ROM drive, to the notebook.

Using Your Recovery CDs

The following sections describe how to use the Application Recovery, Driver Recovery, and System Recovery utilities.

To use the Application Recovery CD(s)

The Application Recovery CD(s) allows you to reinstall individual applications if they become corrupted or are accidentally erased. Reinstalling an individual software title may correct a problem you are experiencing with your notebook or software application; you may not need to reinstall the entire contents of your hard drive. If you need to reinstall all the software titles that shipped with your notebook, use the System Recovery CD(s). See “To use the System Recovery CD(s)” on page 58 for more information. If you have any questions on using the Application Recovery CD, contact Sony Customer Support.



You must be in the Windows® operating system to run the Application Recovery CD. If you have any questions on using the Application Recovery CD, contact Sony Customer Support.

- 1 Turn on your notebook. If your notebook is already on, close all applications.
- 2 When the Windows desktop appears, insert the Sony Application Recovery CD in the optical drive. The Application Recovery utility loads automatically.
- 3 When the Application Recovery menu appears, select the icon for the application you want to restore and then 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.

To use the Driver Recovery CD(s)

The Driver Recovery CD utility enables you to reinstall individual drivers if they become corrupted or are erased. You can reinstall an individual driver to correct a problem that you are experiencing with your notebook, hardware, or software application. VAIO Support Agent, an application repair utility, uses a vault feature on the Driver Recovery CD(s) to repair software applications.



If you need to reinstall all of the software applications that shipped with your computer, use the System Recovery CD.

You must be in Windows® to run the Driver Recovery CD utility.

Reinstalling specific drivers with the Driver Recovery CD (Microsoft® Windows® XP)

- 1** Turn on your notebook. If your notebook is already on, close all applications.
- 2** When the Windows desktop appears, insert the Driver Recovery CD into the optical disc drive.
- 3** Click Start on the Windows taskbar, then click Control Panel. The Control Panel window appears.
- 4** Click Performance and Maintenance, then click System. The System Properties dialog box appears.
- 5** From the Hardware tab, click Device Manager.
- 6** Click to highlight the device for which you wish to reinstall the driver.
- 7** From the Actions menu, choose Properties. The Properties dialog box for that device appears.

Properties dialog box.



- 8 Click Reinstall Driver. The Hardware Update Wizard appears.
- 9 Click Next. The wizard will search for the correct driver on your Driver Recovery CD.
- 10 When the recovery process is complete, click Finish. Some drivers will require that you reboot the computer to complete installation.

Using the Driver Recovery CD(s) (Windows 2000)

- 1 Turn on your notebook. If your notebook is already on, close all applications.
- 2 When the Windows® desktop appears, insert the Driver Recovery CD in the optical disc drive.
- 3 Use My Computer or Windows Explorer to view the contents of the Driver Recovery CD.
- 4 Select the appropriate driver.

To use the System Recovery CD(s)

The System Recovery utility formats your hard disk drive and restores all original software applications. Your computer is returned to the original factory settings.



The System Recovery process removes all software that you may have installed since you started using your computer. Reinstall any applications that were not included with the computer when you purchased it.

You can use the System Recovery CD(s) to reinstall the operating system and software titles that shipped with your notebook if they become corrupted or erased. You may not need to reinstall the entire contents of your hard drive. If you experience a problem with your notebook, reinstalling an individual device driver or software title may correct the problem. Use the Application Recovery CD(s) to reinstall individual applications or use the Driver Recovery CD(s) to reinstall device drivers. See “To use the Application Recovery CD(s)” on page 55 or “To use the Driver Recovery CD(s)” on page 56 for more information.

The System Recovery CD 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 notebook you purchased.

System Recovery options

- ❑ **System Drive Recovery** — All data on Drive C is deleted. The factory default settings and software applications are restored on this drive only.
- ❑ **Change Partition Size** — All partitions, custom installations, and changes are removed from the hard disk drive. You can set the partition sizes for both the Drive C and Drive D. The original, preinstalled operating system and software applications are restored.
- ❑ **Recovery to Original Factory Defaults** — All data and partitions are removed from the hard disk drive. All original factory settings, operating system, and preinstalled software is restored.



The System Recovery utility does not back up your system's data. If you wish to retain your system data, perform a backup to an external media.

Using the System Recovery CD(s)

Your system may take a few minutes to load necessary files. A blue screen appears during the downloading process.

- 1 Insert the Sony System Recovery CD in the optical drive. The System Recovery utility starts from the optical drive. The first CD must be in the drive when you turn on the notebook.
- 2 Shut down your notebook as described in the “Shutting Down Your Notebook” section on page 33.
- 3 Wait 30 seconds and turn on your notebook.
- 4 The VAIOSystem Recovery Utility dialog box appears. Click Next.
- 5 At the pop-up prompt, select Yes to begin the system recovery process.
- 6 Follow the on-screen instructions.

If your notebook does not start from the Recovery CD

- 1 Press the power button and hold it for more than 4 seconds to turn off the notebook.
- 2 Turn on the notebook. When the Sony logo is displayed, press the F2 key. The BIOS setup menu screen appears.
- 3 Press the arrow keys to select the Exit menu.
- 4 Press the arrow keys to select “Get Default Values” and then press the Enter key. The message “Load default configuration now?” appears.
- 5 Make sure “Yes” is selected, then press the Enter key.
- 6 Press the arrow keys to select “Exit” (Save Changes) and then press the Enter key. The message “Save configuration changes and exit now?” appears.

- 7 Make sure “Yes” is selected, then press the Enter key. The notebook restarts from the Recovery CD.



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

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

After recovering your system using the System Recovery CD(s), you may be prompted to insert your Application Recovery CD(s) after restarting Windows. Insert the Application Recovery CD to automatically complete recovery of your system.

Updating the task tray (Windows 2000)

In the event that a system recovery is necessary, do the following to optimize your notebook’s performance:

- 1 Right-click the Adaptec Create CD icon in the task tray. The Task tray properties menu appears.
- 2 Select Disable Adaptec Create CD. A dialog box appears, prompting you to confirm the setting.
- 3 Click Yes.

To recover Microsoft® Word

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

Troubleshooting

This section describes how to solve common problems you may encounter when using your notebook. Many problems have simple solutions, so try these suggestions before you contact Sony Computing Support (<http://www.sony.com/pcsupport>). Consult the following sections:

- ❑ Troubleshooting Your Notebook
- ❑ Troubleshooting the Docking Station
- ❑ Troubleshooting the LCD Screen
- ❑ Troubleshooting the Mouse and Touchpad


Troubleshooting Your Notebook

My notebook does not start.

- ❑ Check that the notebook is plugged into a power source and that it is turned on. Check that the power indicator on the notebook's front panel shows that the power is on.
- ❑ Check that the battery packs are inserted properly and that they are charged.
- ❑ If you are connected to a docking station with a floppy disk drive or an external floppy disk drive, make sure there is no floppy disk in the floppy disk drive.
- ❑ Confirm that the power cord and all cables are connected firmly, as described in "Connecting a Power Source" on page 26.
- ❑ If the notebook is plugged into a power strip or UPS, make sure the power strip or UPS is turned on and working.
- ❑ If you are using an external display, check that it 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.
- ❑ Take the battery pack off the notebook, unplug the power cord and plug it in again, then turn on the power.
- ❑ If the power control button does not function, remove the AC adapter and battery pack. Wait 1 minute, then reattach them, and press the power button.
- ❑ Condensation may cause the notebook to malfunction. If this occurs, do not use the notebook for at least 1 hour.

My notebook starts but a BIOS error appears.

When the internal backup battery is low on power, your system may not start properly, and the message "Press <F1> to resume, <F2> to setup" may appear at the bottom of the screen. Follow these steps:

- 1 Press the F2 key. The BIOS Setup menu appears.
- 2 Set the date (month/day/year). Press the Enter key.
- 3 Press  to select System Time, then set the time (hour: minute: second). Press the Enter key.

- 4 Press **→** to select Exit, then press **↓** to select Get Default Values. The message “Load default values for all SETUP items” appears.
- 5 Press the Enter key. The Setup Confirmation window appears.
- 6 Select Yes, and press the Enter key.
- 7 Select Exit (Save Changes), then press the Enter key. The Setup Confirmation window appears.
- 8 Select Yes, then press the Enter key. The notebook restarts.



If this occurs on a regular basis, contact Sony Computing Support (<http://www.sony.com/pcsupport>).

My notebook starts, but the message “Operating system not found” appears and Windows does not start.

- ❑ If you have connected a docking station with a floppy disk drive or an external floppy disk drive, make sure there is no floppy disk in the floppy disk drive.
- ❑ If a non-bootable floppy disk is in the drive, proceed as follows:
 - 1 Shut down the notebook, then remove the floppy disk.
 - 2 Restart the notebook and confirm that the Windows operating system starts properly.
- ❑ If the Windows operating system still does not start, follow the steps below to initialize the BIOS:
 - 1 Remove any floppy disk from the floppy disk drive.
 - 2 Shut down the notebook.
 - 3 Remove any peripheral devices connected to the notebook.
 - 4 Turn on the notebook.
 - 5 Press the F2 key when the Sony logo appears. The BIOS setup menu window appears.
 - 6 Press the arrow keys to select the Exit menu.

- 7 Press the arrow keys to select Get Default Values, then press the Enter key. The message “Load default values for all SETUP items” appears.
- 8 Press the Enter key, and select Yes.
- 9 Use the arrow keys to select Exit (Save Changes), then press the Enter key. The message “Save configuration changes and exit now?” appears.
- 10 Select Yes, then press the Enter key. The notebook restarts.

If your notebook continues to display the message “Operating system not found,” and Windows does not start, use your supplied System Recovery CD to restore the software titles shipped with your notebook. See “To use the System Recovery CD(s)” on page 58 for more information.




The System Recovery process removes all software that you may have installed since you started using your computer.

My notebook stops responding or does not shut down.

It is best to shut down your notebook using the Turn Off Computer command (Microsoft® Windows® XP) or the Shut Down command (Windows 2000) on the Windows Start menu. Using other methods, including those listed below, may result in loss of unsaved data.

- ❑ (Windows XP) On the Windows® taskbar, click Start, select Turn Off Computer, and then click Turn Off.
(Windows 2000) On the Windows taskbar, click Start, then Shut Down, then select Shut Down again, and click OK.
- ❑ (Windows XP) If you cannot shut down your notebook as described in the preceding step, press the Ctrl+Alt+Delete keys simultaneously, and click Turn Off Computer on the Windows Security window.
(Windows 2000) If you cannot shut down your notebook as described in the preceding step, press the Ctrl+Alt+Delete keys simultaneously, and click Shut Down on the Windows Security window.
- ❑ If the preceding step does not work, press and hold the power button for at least 4 seconds to turn off the power.
- ❑ Unplug the notebook from the AC adapter and remove the battery pack from your notebook.
- ❑ (Windows XP) If your notebook stops responding while playing a CD or DVD, press the Ctrl+Alt+Delete keys simultaneously and click Turn Off

Computer on the Windows Security window.
(Windows 2000) If your notebook stops responding while playing a CD or DVD, press the Ctrl+Alt+Delete keys simultaneously and click Shut Down on the Windows Security window.


 Pressing the Ctrl+Alt+Delete keys simultaneously or turning off the notebook with the power button may result in data loss in files that are currently open.

Troubleshooting the Docking Station

I cannot operate the optical drive in the docking station, when the docking station is connected to the notebook.

Follow these steps to set the i.LINK® network switch.

- 1 Disconnect your notebook from the docking station.
- 2 Disconnect the AC adapter and all cables from your docking station.
- 3 Set the i.LINK® network switch on the bottom of the docking station to the unmarked side, with a thin pen tip.
- 4 Connect the docking station to the notebook.
- 5 Turn on your notebook.

 Do not set the i.LINK network switch when the notebook is on. This causes the notebook to malfunction.

Set the i.LINK network switch after removing all cables connected to the docking station.

I cannot remove the disc.

You cannot remove the disc when the notebook is in power saving mode. Return to normal mode, then press the Eject button. See “Using Power Saving Modes” on page 34 for information on how to return to normal mode.

The disc tray does not eject even after I press the Eject button.

Open the tray by inserting a thin, straight object (such as a paper clip) in the manual eject hole.

Troubleshooting the LCD Screen

My LCD screen is blank.

- ❑ Verify that the notebook is plugged into a power source and that it is turned on.
- ❑ Verify that the power indicator on the notebook is on.
- ❑ Verify that the battery pack(s) is inserted properly and is charged.
- ❑ The notebook may be in LCD (Video) Standby mode. Press any key to activate the screen.
- ❑ The display mode may be set to external display mode. Press and hold the Fn key while pressing the F7 key several times.

Troubleshooting the Mouse and Touchpad

My mouse does not work.

- ❑ If you are using an optional Sony PCGA-UMS1 series USB mouse, verify that the mouse is plugged into the USB port. See “Connecting a USB Device” in the online user guide for more information.
- ❑ If you are still experiencing problems, use your supplied Driver Recovery CD to reinstall the mouse drivers. See “To use the Driver Recovery CD(s)” on page 55 for more information.

My touchpad does not work properly.

- ❑ You may have disabled the touchpad without connecting a mouse to the notebook. To enable the touchpad:
 - 1 (Windows XP) Press the Windows key and use the arrow keys to select All Programs. Press the Enter key. (Windows 2000) Press the Windows key and use the arrow keys to select Programs. Press the Enter key.
 - 2 Use the arrow keys to select Sony Notebook Setup, and press the Enter key.
 - 3 Select Sony Notebook Setup again, and press the Enter key.
 - 4 Use the arrow keys to select the Touchpad tab.
 - 5 Press the Tab key to select Enable Touchpad, and then press Enter.

- 6 Press the Enter key.
- ❑ Restart the notebook to activate the touchpad again.
 - ❑ If your touchpad is interpreting a single tap as a double-click, adjust the button assignments. Follow these steps:
 - 1 (Windows XP) Press the Windows key and use the arrow keys to select All Programs. Press the Enter key. (Windows 2000) Press the Windows key and use the arrow keys to select Settings. Press the Enter key.
 - 2 (Windows XP) Select Sony Notebook Setup, and press the Enter key. Select Sony Notebook Setup again. (Windows 2000) Select Control Panel, and then press the Enter key.
 - 3 (Windows XP) Select the Touchpad tab and press the Alt+S keys simultaneously. (Windows 2000) Select Mouse, and then press the Enter key. The Mouse Properties dialog box appears.
 - 4 Make sure the Buttons tab is open, and change the button assignments in the Mouse Properties dialog box. Press the Enter key to save your changes and close the dialog box.
 - ❑ If you are still experiencing problems, make sure another mouse was not installed.
 - ❑ You may need to use your Driver Recovery CD to reinstall the mouse drivers. See “To use the Driver Recovery CD(s)” on page 55 for more information.

The pointer does not move when I use the Touchpad or Mouse.

- ❑ The notebook should be restarted. Follow these steps:
 - 1 Press the Windows key.
 - 2 Press the “U” key, and wait for at least 4 seconds.
 - 3 Press the “R” key to restart the notebook.
- ❑ (Windows XP) If the notebook does not restart, press the Ctrl+Alt+Delete keys simultaneously. In the Windows Task Manager dialog box, click the Shut Down menu, and select Restart. (Windows 2000) If the notebook does not restart, press Ctrl+Alt+Delete simultaneously and click Shut Down on the Windows Security window.

- ❑ If you cannot restart your notebook as described in the steps above, press and hold the power button for more than 4 seconds to shut down the notebook.
- ❑ If the pointer does not move while playing a disc, press the Ctrl+Alt+Delete keys simultaneously to stop playback and restart the notebook.
- ❑ If you are still experiencing problems, check that another mouse was not installed.
- ❑ You may need to use your supplied Driver Recovery CD to reinstall the touchpad or mouse drivers. See “To use the Driver Recovery CD(s)” on page 55 for more information.

Getting Help

Sony provides you with several support resources to answer questions about your VAIO® notebook or the preinstalled software. Refer to these resources in the order they are listed.

- Support Options
- Software Support Information

Support Options

1 **VAIO® Notebook User Guide and VAIO ® Notebook Quick Start**

The online VAIO® Notebook User Guide and printed VAIO® Notebook Quick Start provide you with information on how to maximize your notebook capabilities and solve common problems. (Windows XP) To access the online User Guide, click Start on the Windows® taskbar, select Help and Support and click VAIO User Guide. (Windows 2000) To access the online User Guide, click Start on the Windows® taskbar, select VAIO Help Center, and VAIO Documentation. The Quick Start is supplied with your notebook.

2 **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.

3 **VAIO Support Agent**

VAIO Support Agent can be accessed from the Windows desktop. Using advanced diagnostic technology, Sony's VAIO Support Agent runs scheduled protections of your applications, network settings, and other important software settings. When your software is protected, you can use VAIO Support Agent to repair software problems by restoring your software to any of the previously protected states.

4 **Sony Computing Support**

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 Computing Support at:
<http://www.sony.com/pcsupport>.

5 Sony Fax-on-Demand

This service, which requires a fax machine or your fax software, provides answers to commonly asked questions. You can use this automated service to request a list of available topics then select the topics that you want to receive. To contact the Sony fax-on-demand service, call: 1-888-4-SONY-PC (1-888-476-6972).

6 Calling Sony Customer Support

Sony provides software support free of charge for 90 days after the original date of purchase. You can speak with a Sony Customer Support Representative without using your notebook by calling: 1-888-4-SONY-PC (1-888-476-6972).

Software Support Information

Adobe® Acrobat® Reader®, Photoshop® Elements, Premiere® CE (Adobe Systems Inc.)

Web site	http://www.adobe.com/
e-mail	techdocs@adobe.com
phone	206-675-6126 (fee-based support)
fax	206-628-5737
hours	M-F, 6 AM-5 PM (PST)

Apple QuickTime® (Apple Computer, Inc.)

Web site	http://www.apple.com
phone	800-275-2273
hours	M-F, 6 AM-6 PM (PST)

America Online® (America Online, Inc.)

Web site	http://www.aol.com
telephone	800-827-3338
hours	7 days a week, 24 hours a day

Arcsoft PhotoPrinter® 000 Pro (ArcSoft, Inc.)

Web site	http://www.arcsoft.com
e-mail	support@arcsoft.com
phone	510-440-9901
fax	510-440-1270
hours	M-F, 8:30 AM-5:30 PM (PST)

EarthLink® Network Total Access (EarthLink Network Inc.)

Web site	http://support.earthlink.net/
e-mail	support@earthlink.net
telephone	800-890-5128, 800-890-6356
hours	7 days a week, 24 hours a day

EverQuest®(Sony Online Entertainment Inc.)

Web site(s)	http://www.everquest.com
e-mail	eqtech@soe.sony.com
phone	858-537-0898
hours	M-F, 8:30 AM-5:30 PM PST

PC-Cillin®000 (Trend Micro, Inc.)

Web site	http://www.antivirus.com/pc-cillin/support/
phone	949-387-7800; 900-820-8324*
hours	M-F, 8 AM-5 PM (PST)

* Support from 949-387-7800 is free of charge, but subject to delays. Support from 900-820-8324 is fee-based, but offers immediate response.

Quicken®(Intuit Inc.)

Web site	http://www.intuit.com/support
phone	900-555-4932; 800-644-3193*
hours	M-F, 5 AM-5 PM (PST)

* Support from 900-555-4932 is fee-based. Support from 800-644-3193 is automated and free of charge.

RealJukebox®RealPlayer®RealNetworks, Inc.)

Web site(s)	http://service.real.com/rjoptions.html
e-mail	http://service.real.com/help/call.html (online e-mail form)

Sony Applications (Sony Electronics Inc.)

Web site	http://www.sony.com/pcsupport
phone	888-4-SONY-PC (888-476-6972)*
hours	7 days a week, 24 hours a day

* Support from 1-888-4-SONY-PC is free of charge for 90 days after the original date of purchase.

Windows® Operating System, Word, Office XP Professional, XP Small Business (Microsoft Corp.)

Web site	http://www.sony.com/pcsupport
phone	888-4SONYPC (888-476-6972)*
hours	7 days a week, 24 hours a day

* Support from 1-888-4-SONY-PC is free of charge for 90 days after the original date of purchase.

WinDVD® (InterVideo, Inc.)

Web site	http://www.intervideo.com
phone	510-651-0888

Sony Service Center

For the Sony Service Center nearest you, call 1-888-4-SONY-PC (1-888-476-6972) or find Sony Customer Service on the Web at <http://www.sony.com/pcsupport>.

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Model	Service Manual Parts No.
PCG-R505TE PCG-R505TEK PCG-R505TS PCG-R505TSK	9-872-185-11
PCG-R505DE	9-874-420-11
PCG-R505TL PCG-R505TLK	9-874-442-11
PCG-R505JE PCG-R505JEK PCG-R505JEP PCG-R505JL PCG-R505JLK PCG-R505JLP PCG-R505JS PCG-R505JSK PCG-R505JSP	9-874-469-01
PCG-R505AFE	9-874-490-01
PCG-R505DL PCG-R505DS PCG-R505DSK PCG-R505DSP	9-874-513-01



: Additional Model

American Area : North, Central and South Americas

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