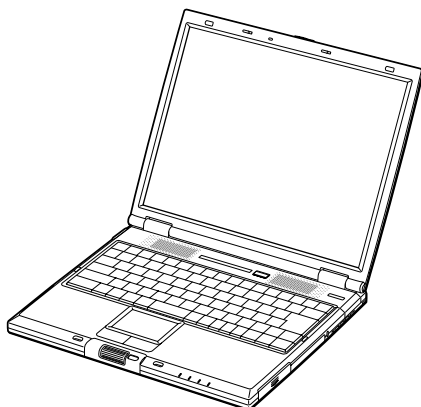


PCG-GR150/GR150K/GR170/GR170K

SERVICE MANUAL

*For American Area
US Model
Canadian Model*



Lineup : PCG-GR150
PCG-GR150K
PCG-GR170
PCG-GR170K

Illust : PCG-GR170K



Confidential

NOTEBOOK COMPUTER

SONY®

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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, mutilation 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 \triangle 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.

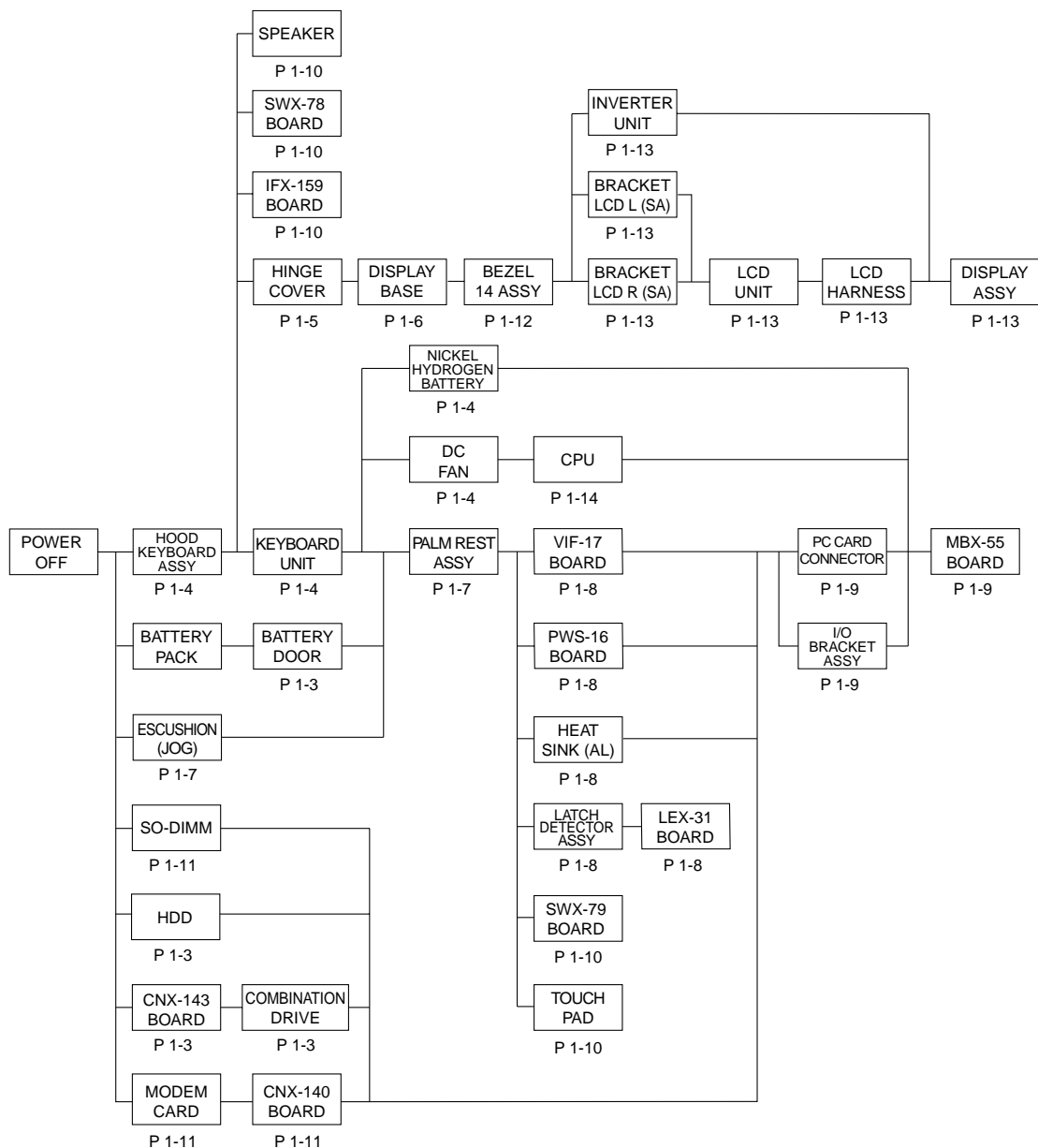
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE \triangle SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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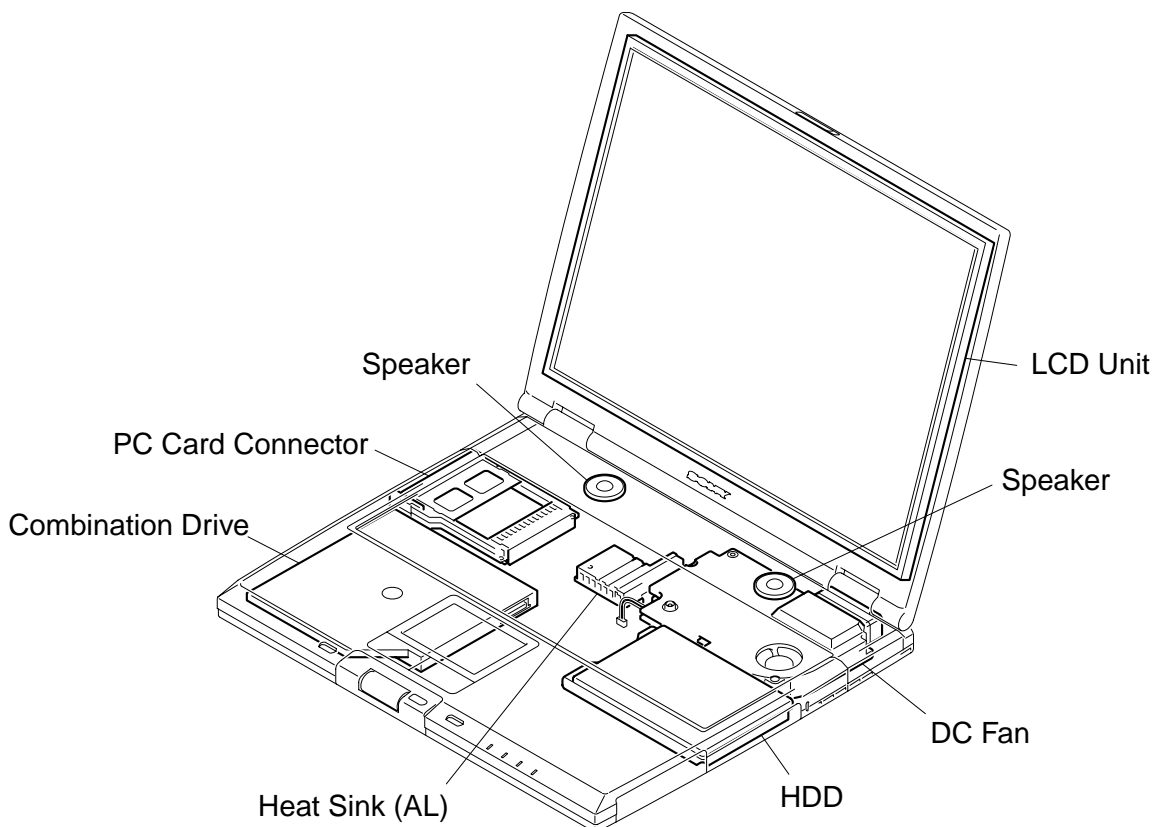
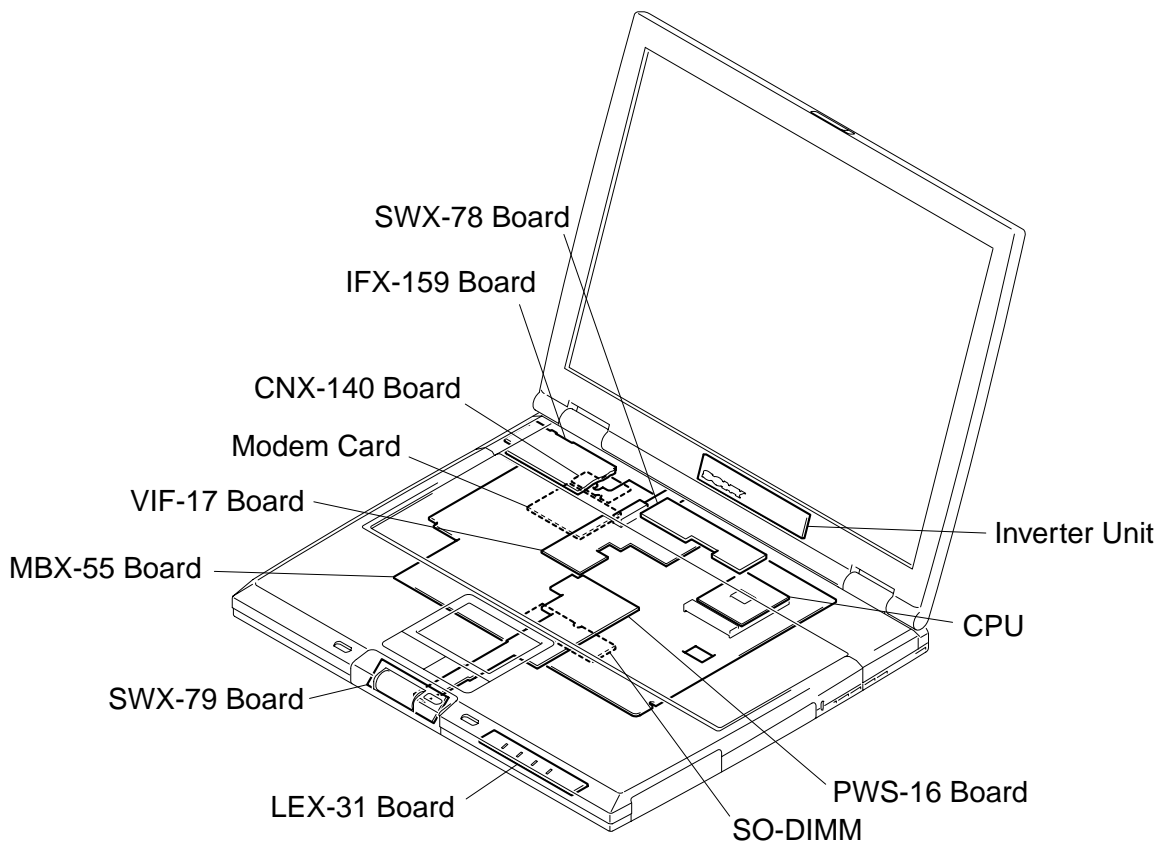
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	(to 5-6)	

1-1. Flowchart



- P XX means pages that appears in this manual.
- Remember that hard disk drives are easily damaged by vibration. Always handle with care.

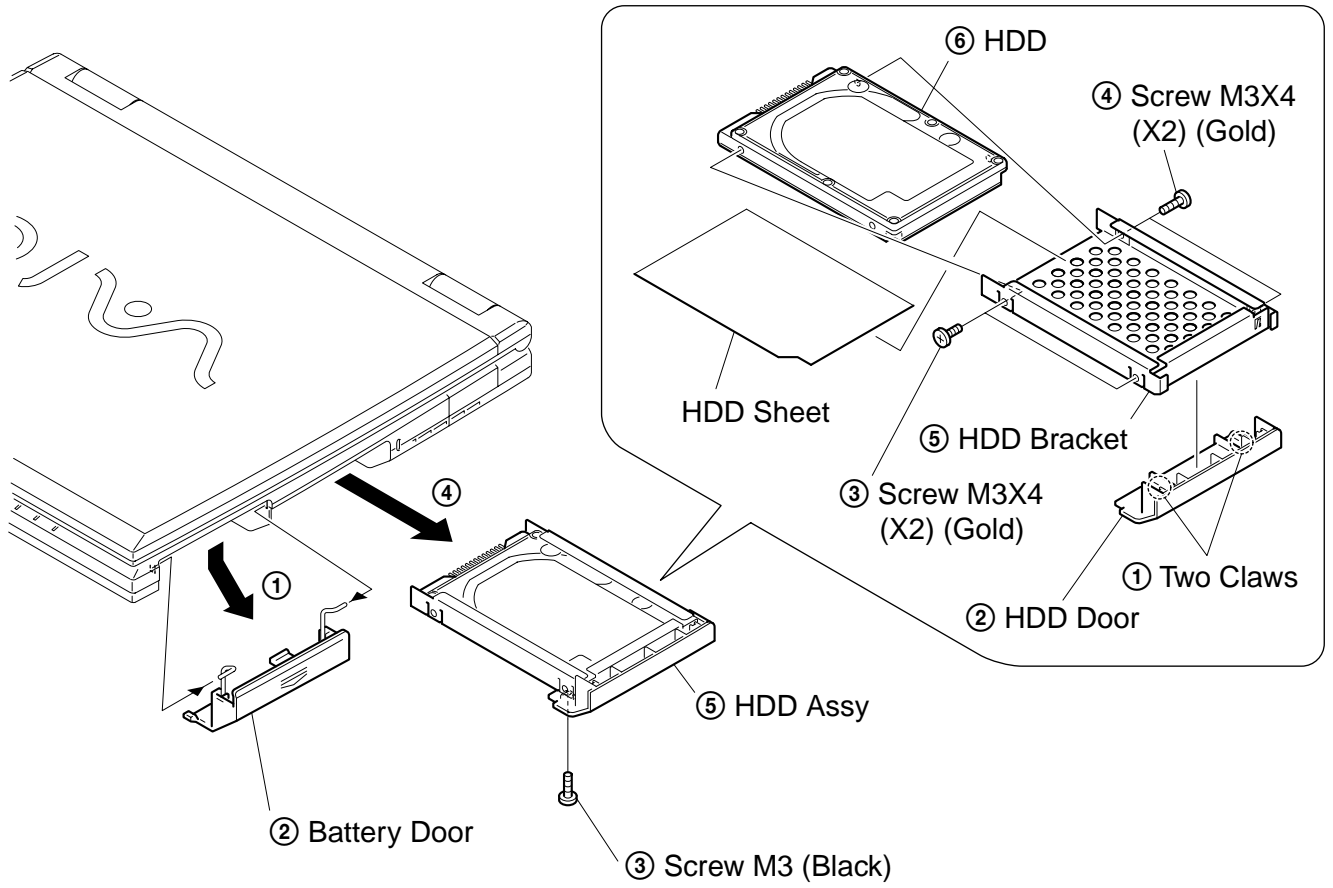
1-2. Main Electrical Parts Location Diagram



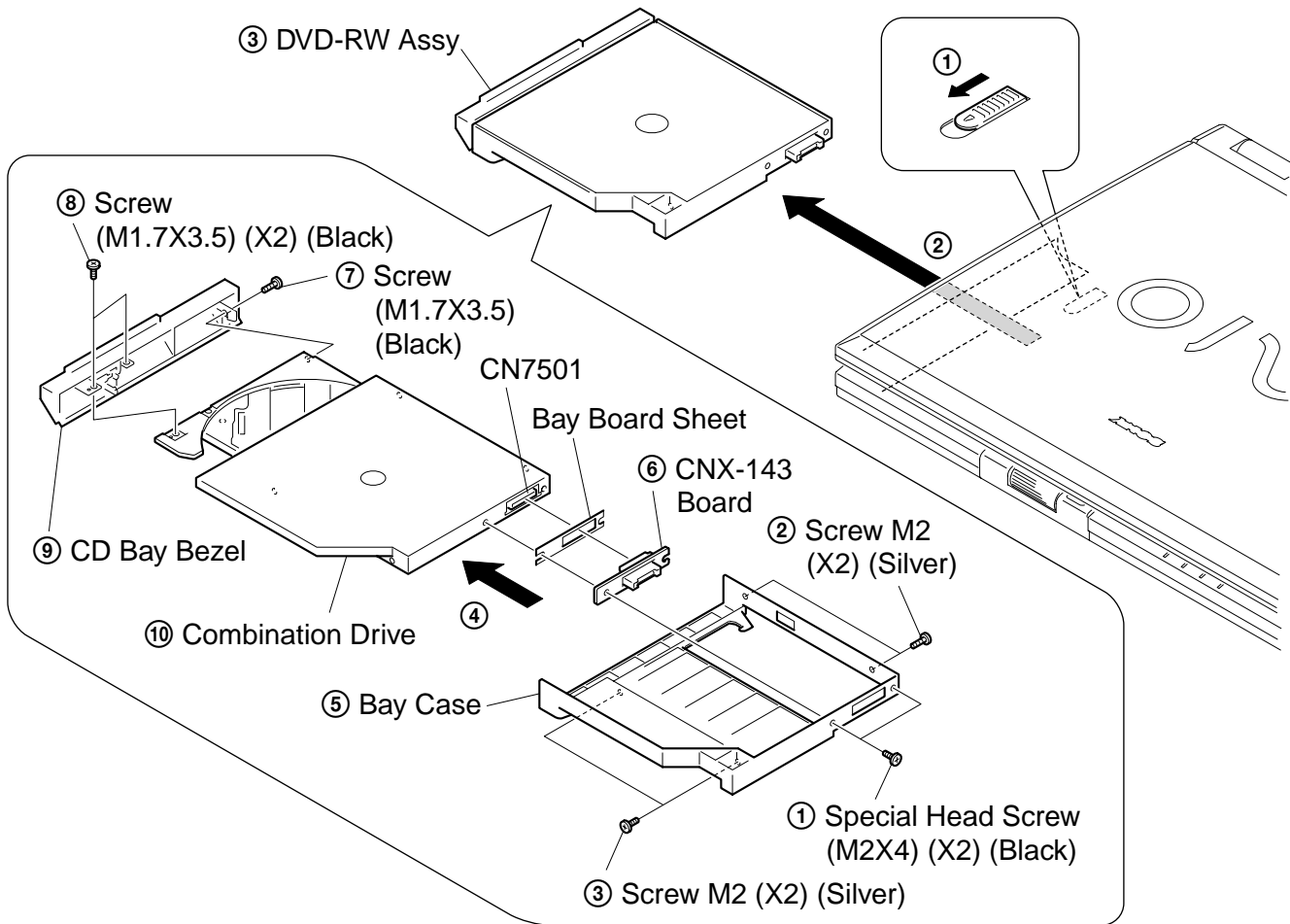
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1-3. Removal

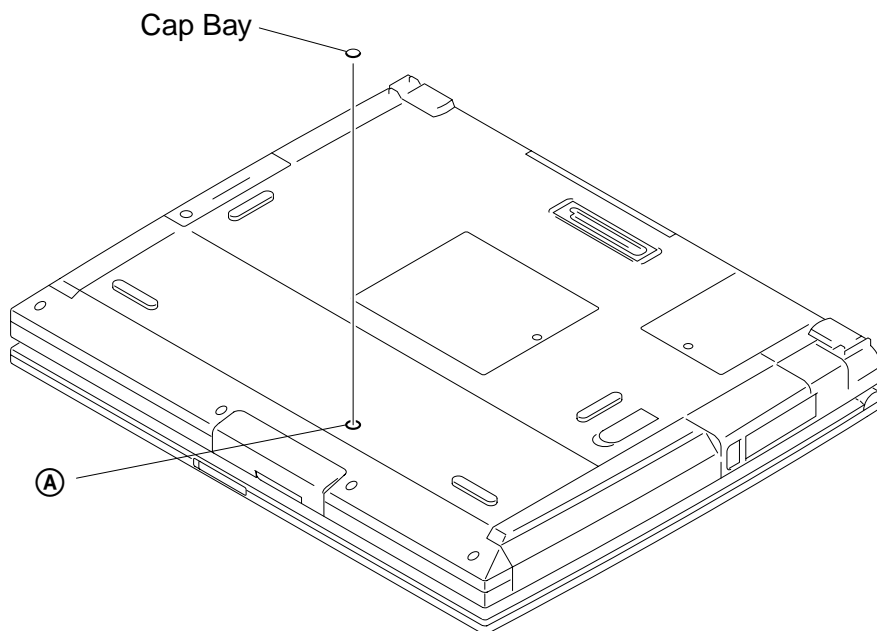
1. HDD, Battery Door



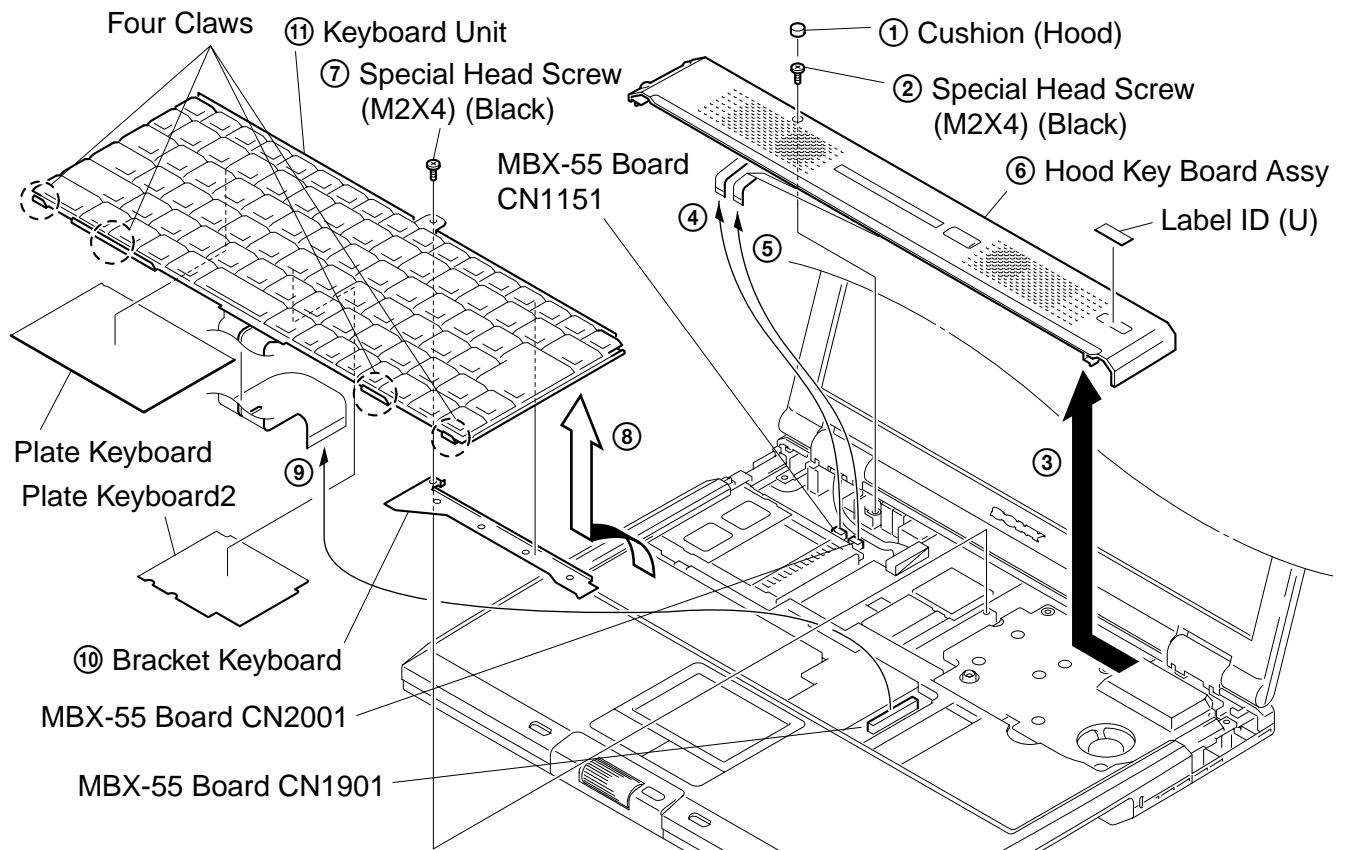
2. Combination Drive, CNX-143 Board



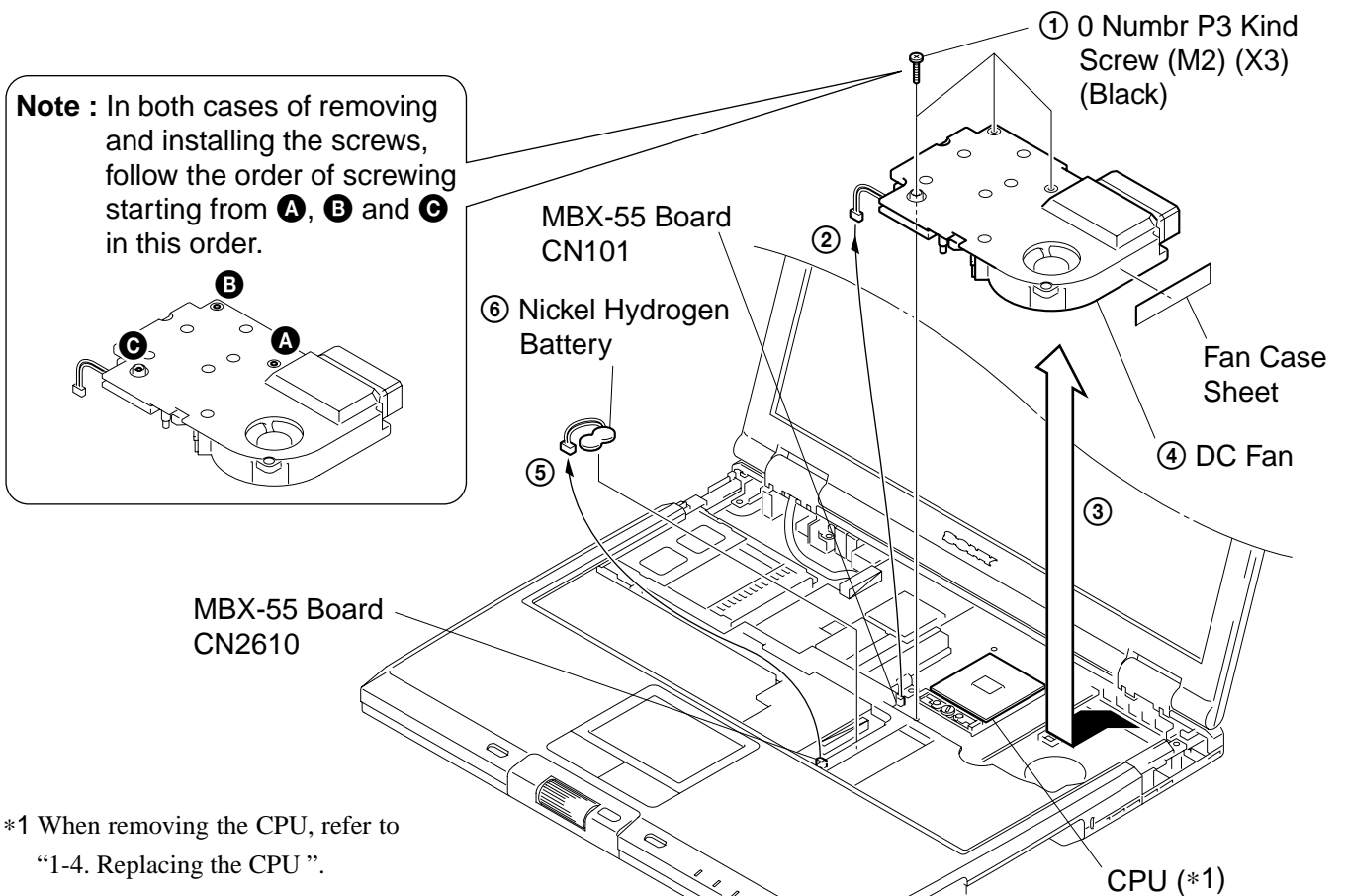
Note : If the DVD-RW Assy cannot be removed, there is a case that the portion (A) on the rear of the main unit is secured by screw. Remove the screw blind seal (Cap Bay) and check it.



3. Hood Key Board Assy, Keyboard Unit



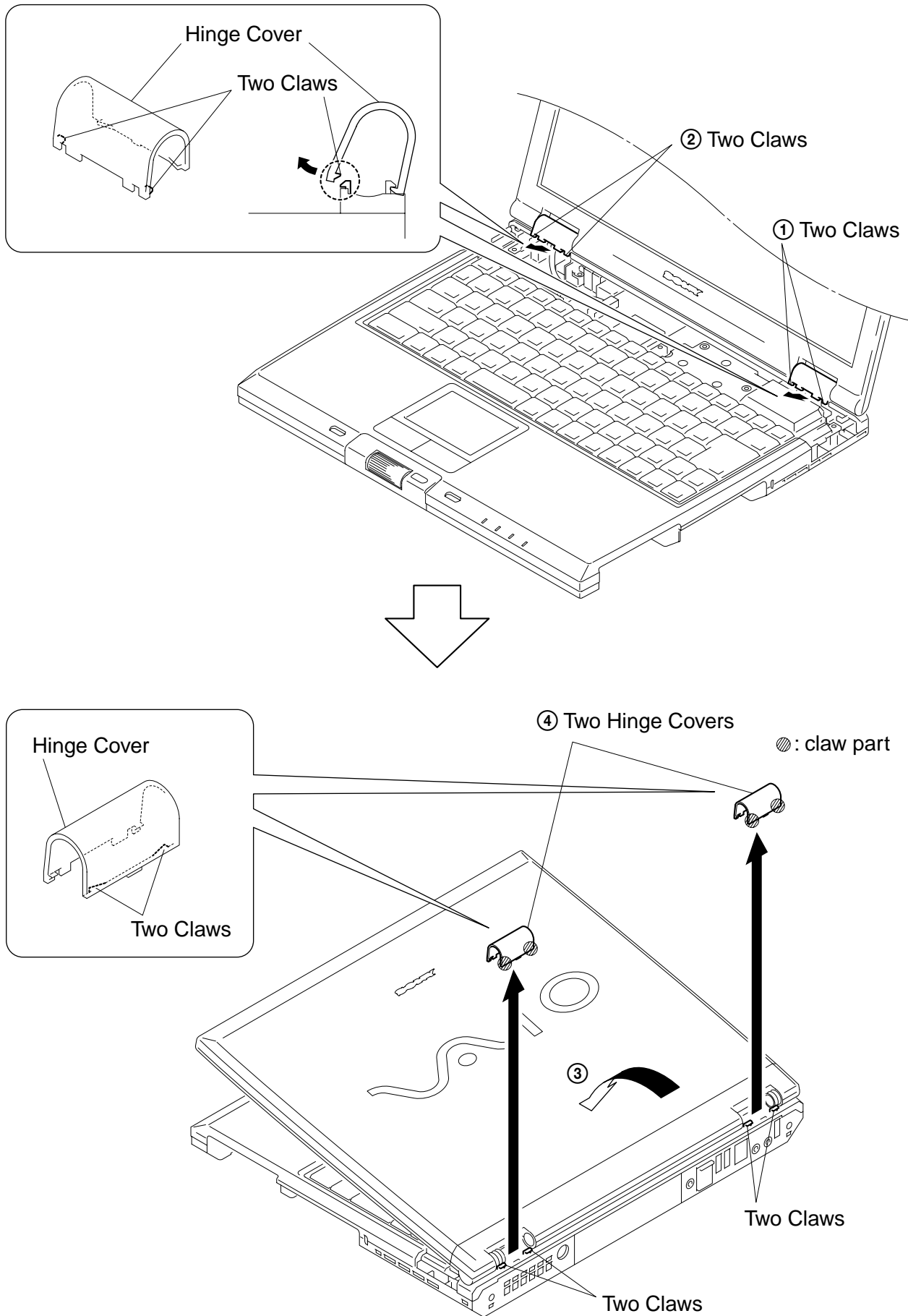
4. DC Fan, Nickel Hydrogen Battery



*1 When removing the CPU, refer to "1-4. Replacing the CPU".

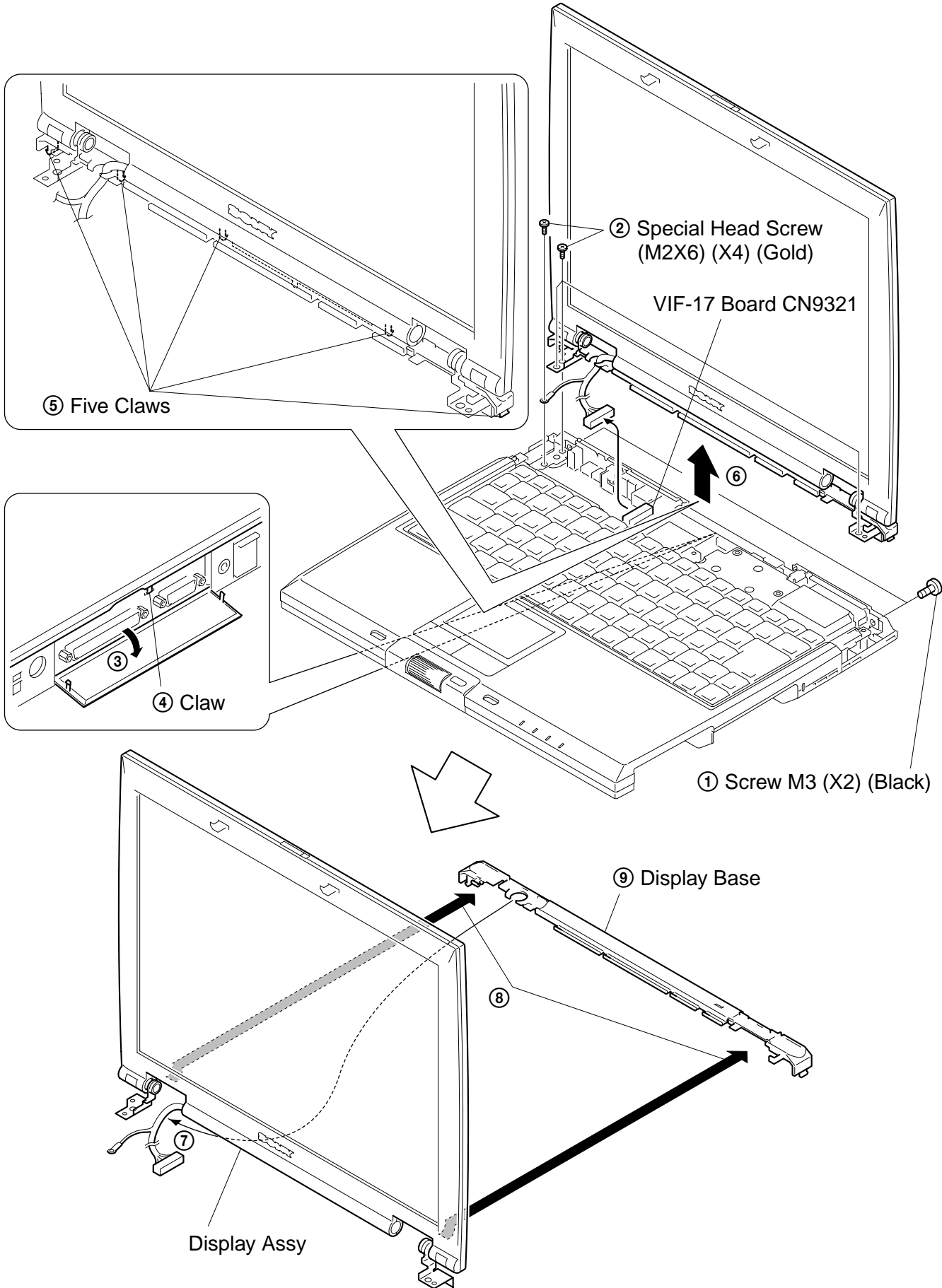
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5. Hinge Cover

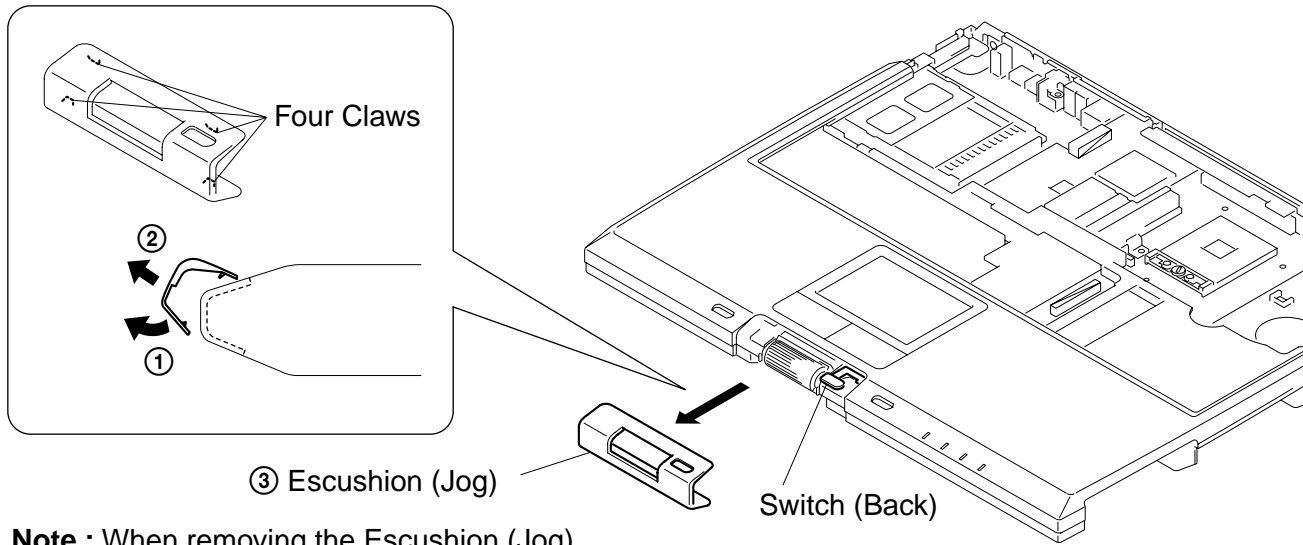


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6. Display Base

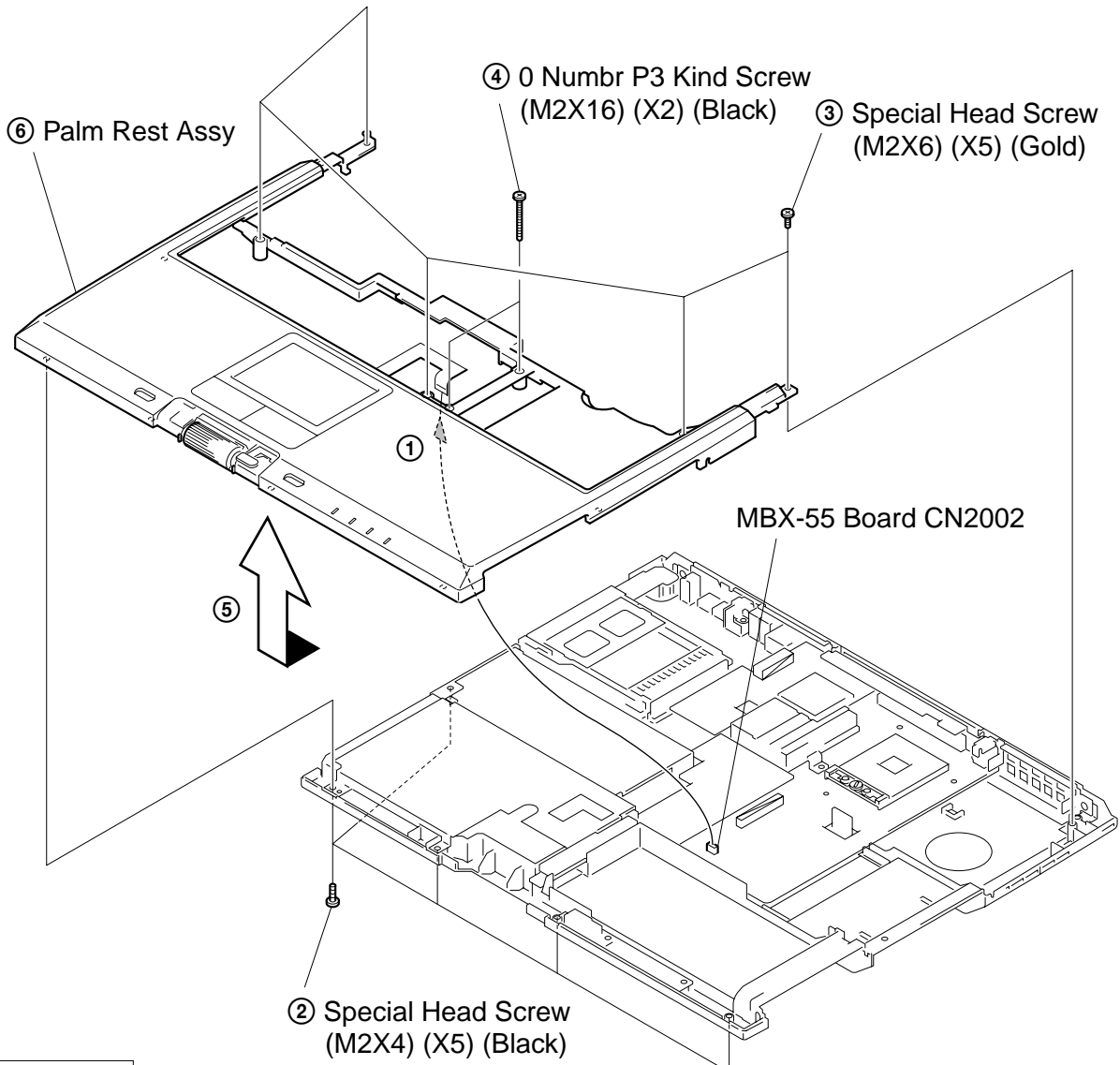


7. Escushion (Jog)



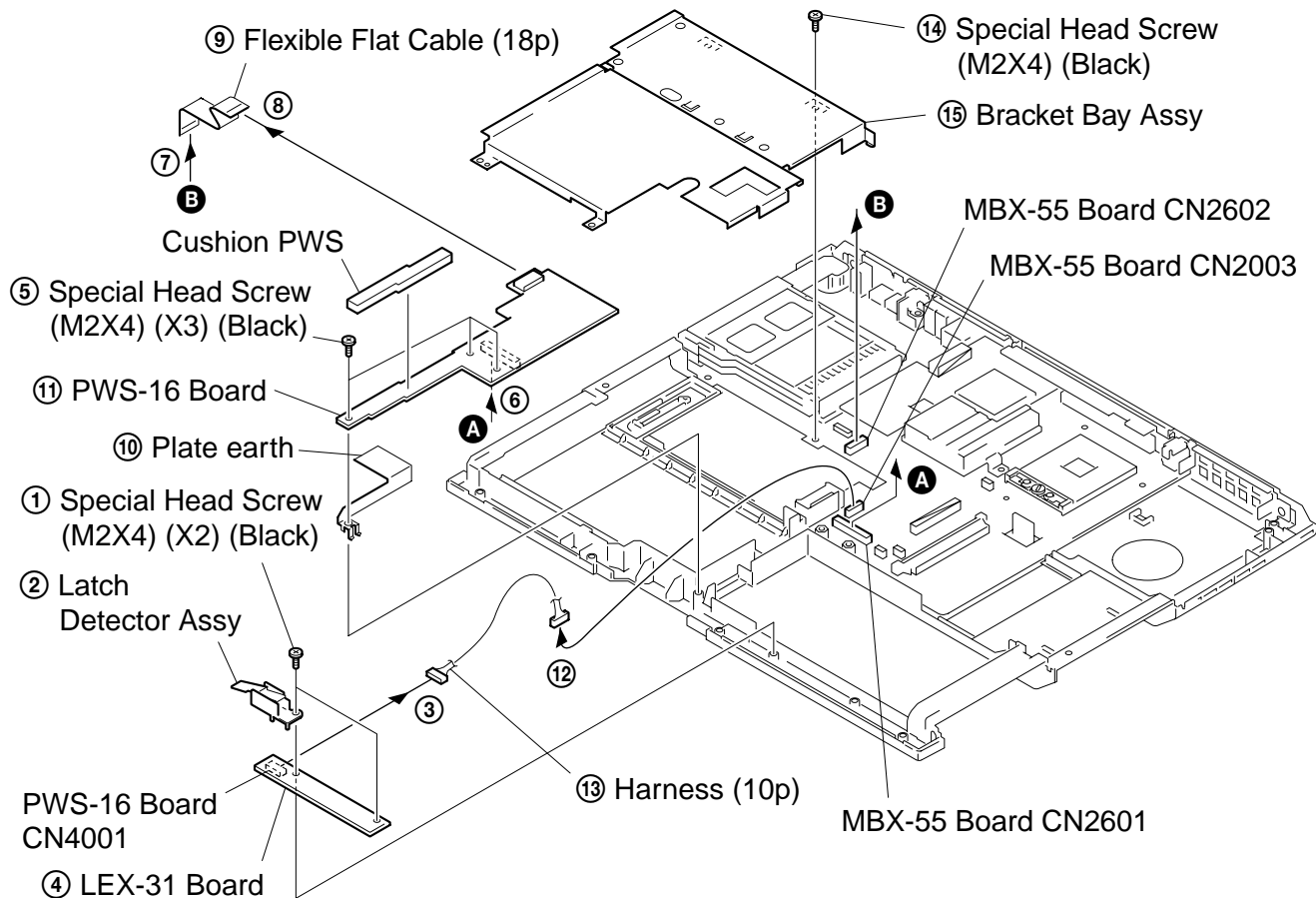
Note : When removing the Escushion (Jog), be careful not to damage the Switch (Back).

8. Palm Rest Assy

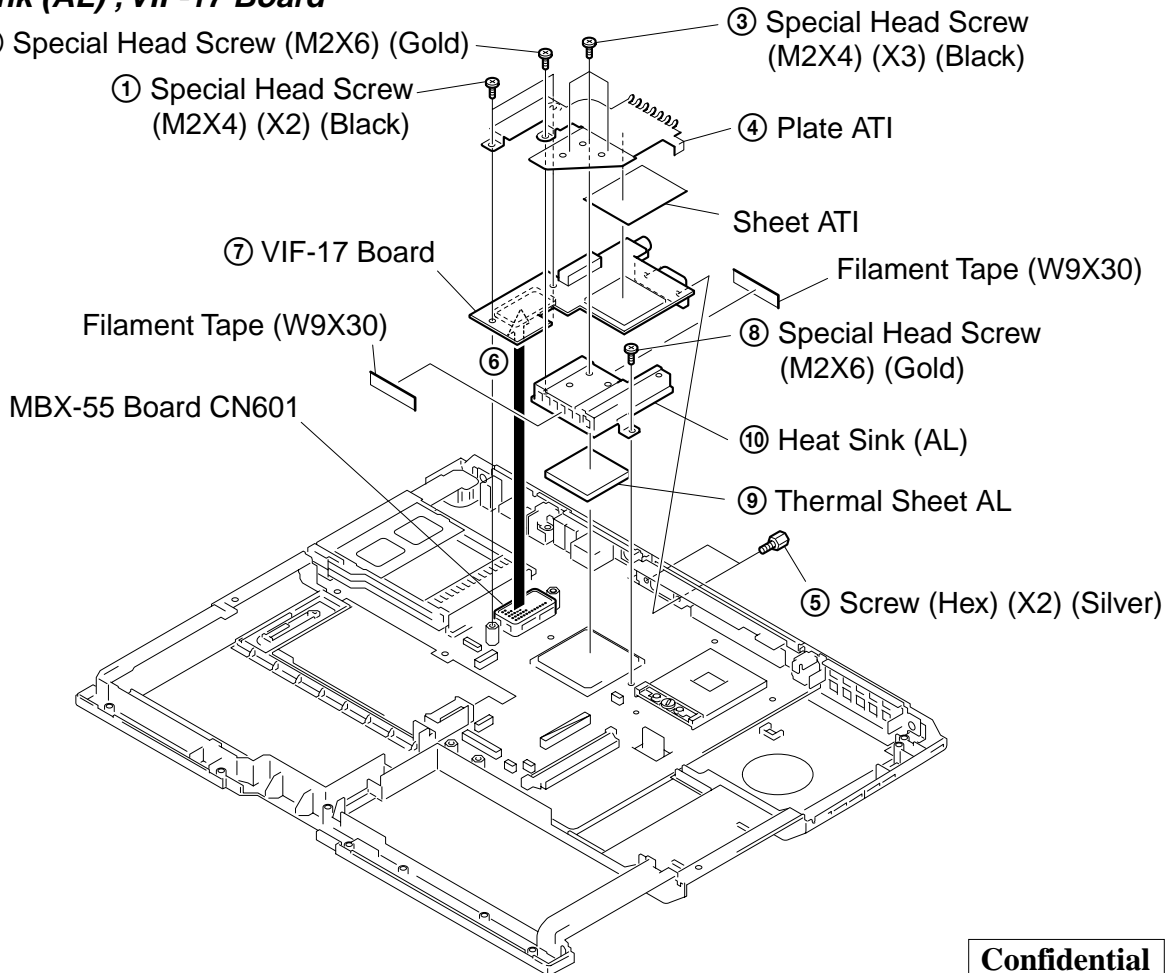


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9. Latch Detector Assy, LEX-31 Board, PWS-16 Board

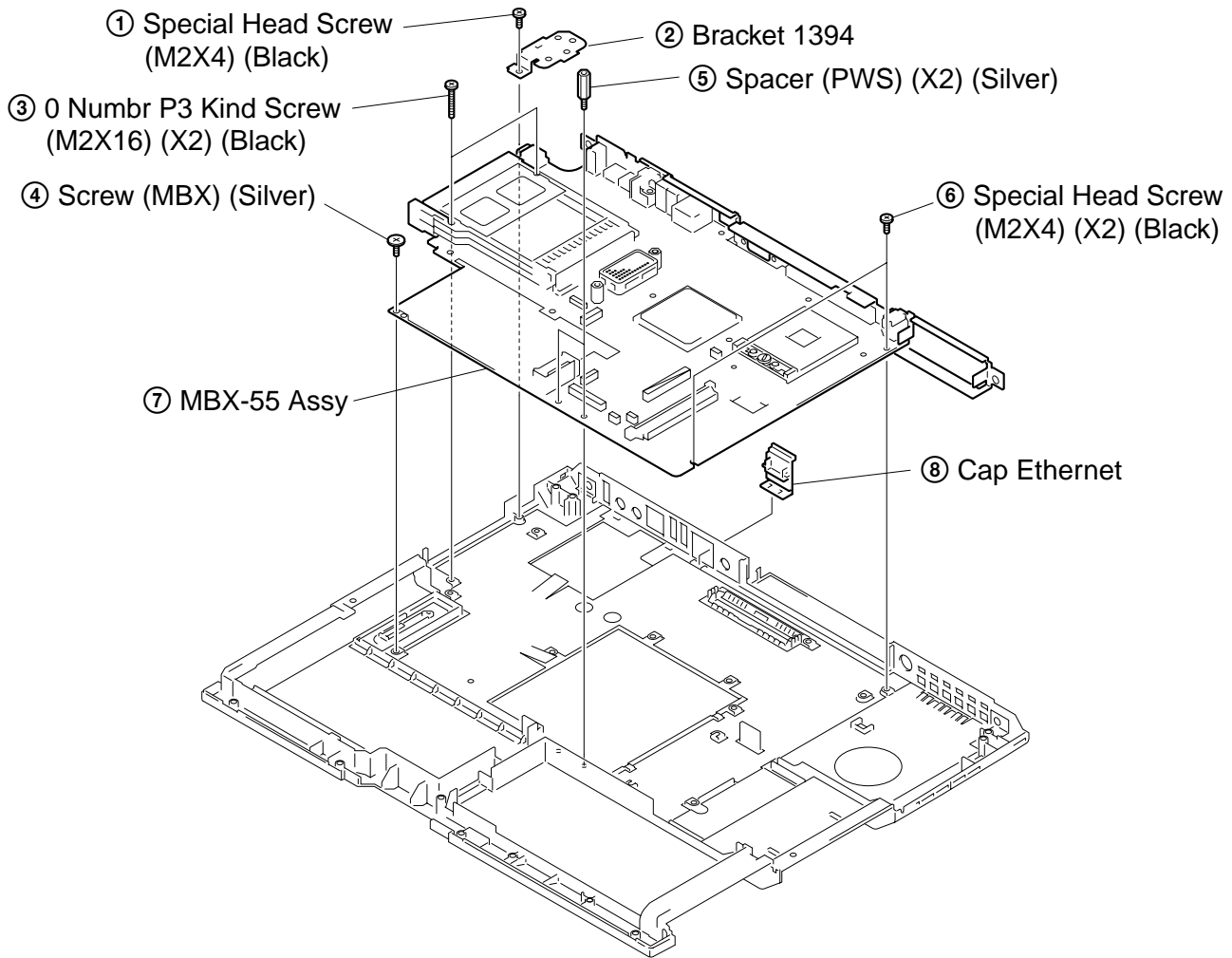


10. Heat Sink (AL), VIF-17 Board

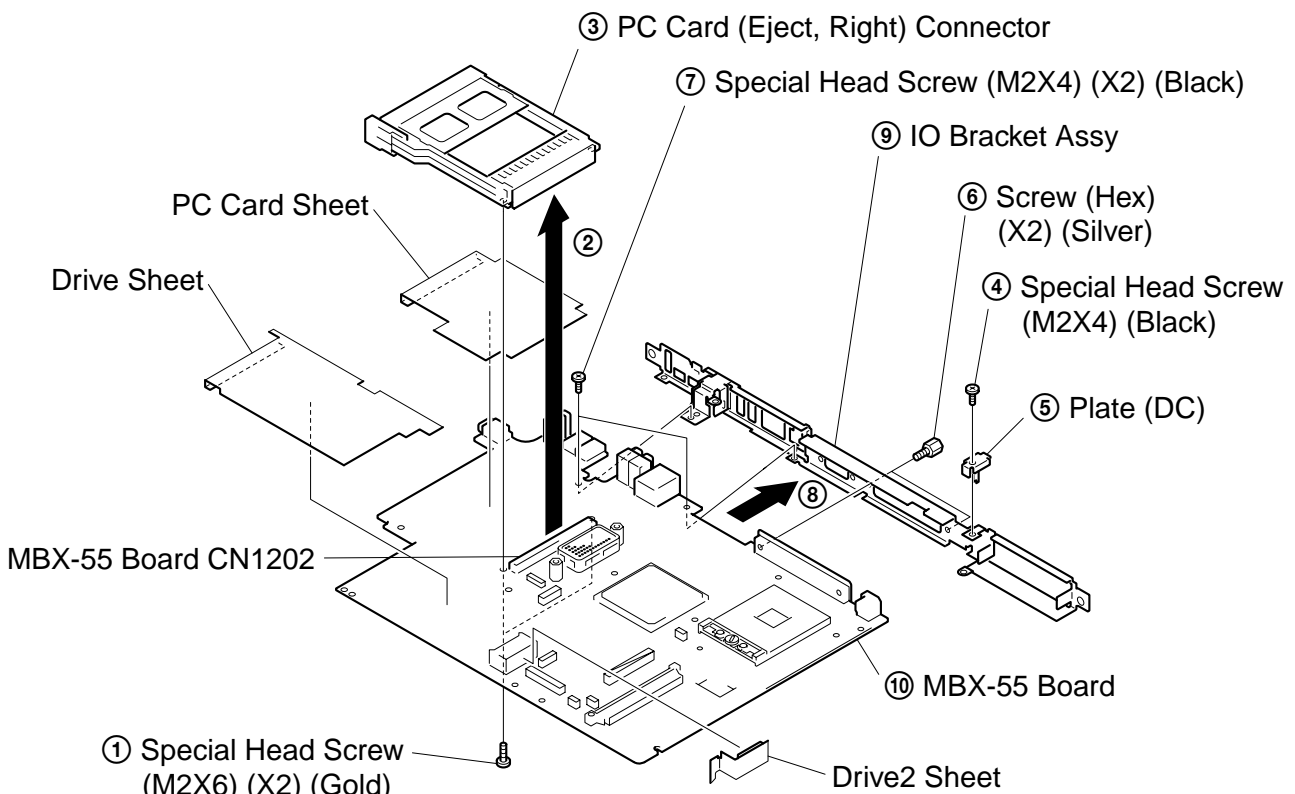


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11. MBX-55 Assy

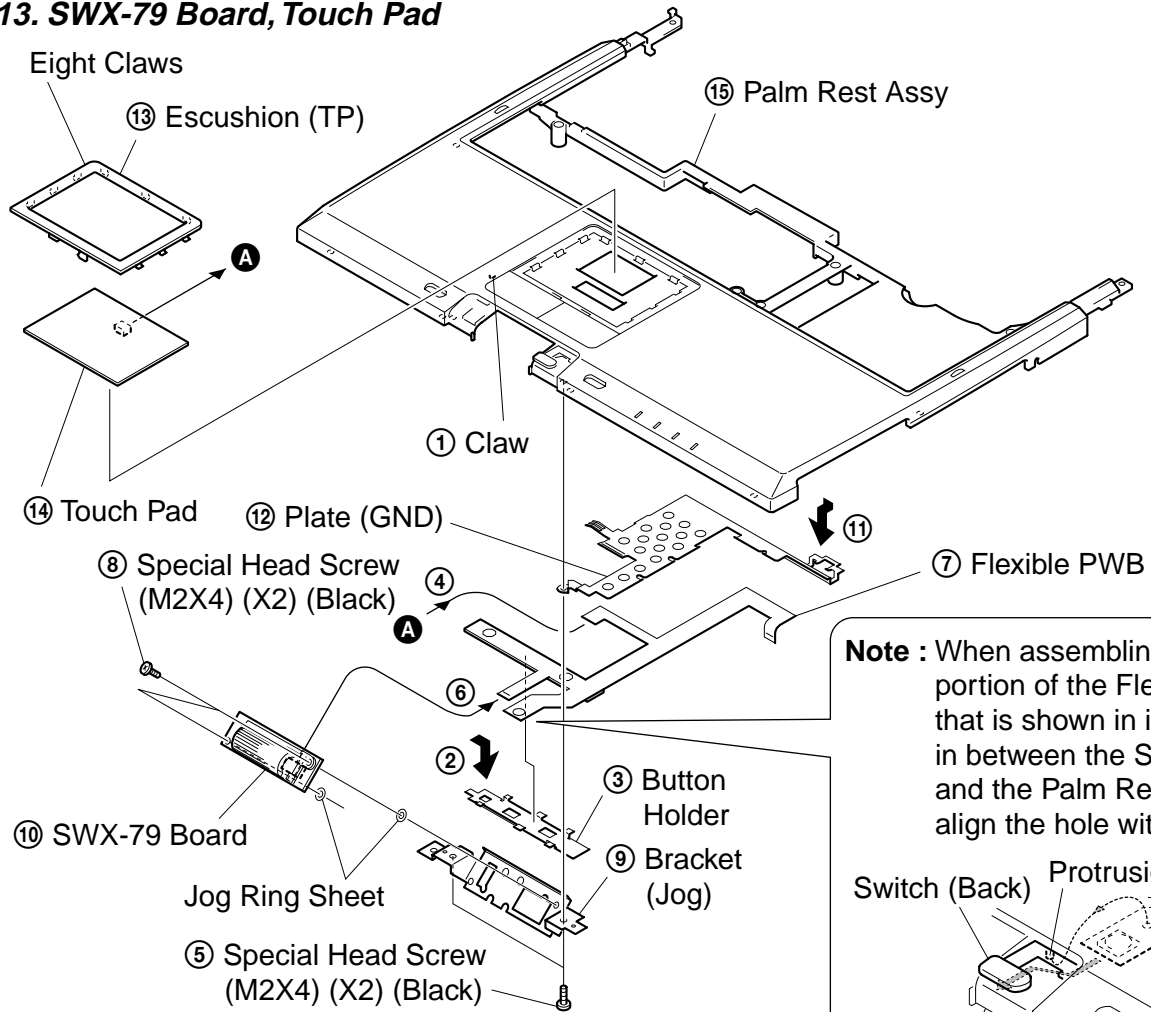


12. PC Card Connector, MBX-55 Board, IO Bracket Assy

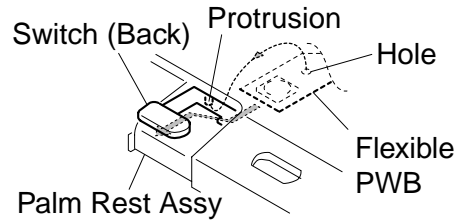


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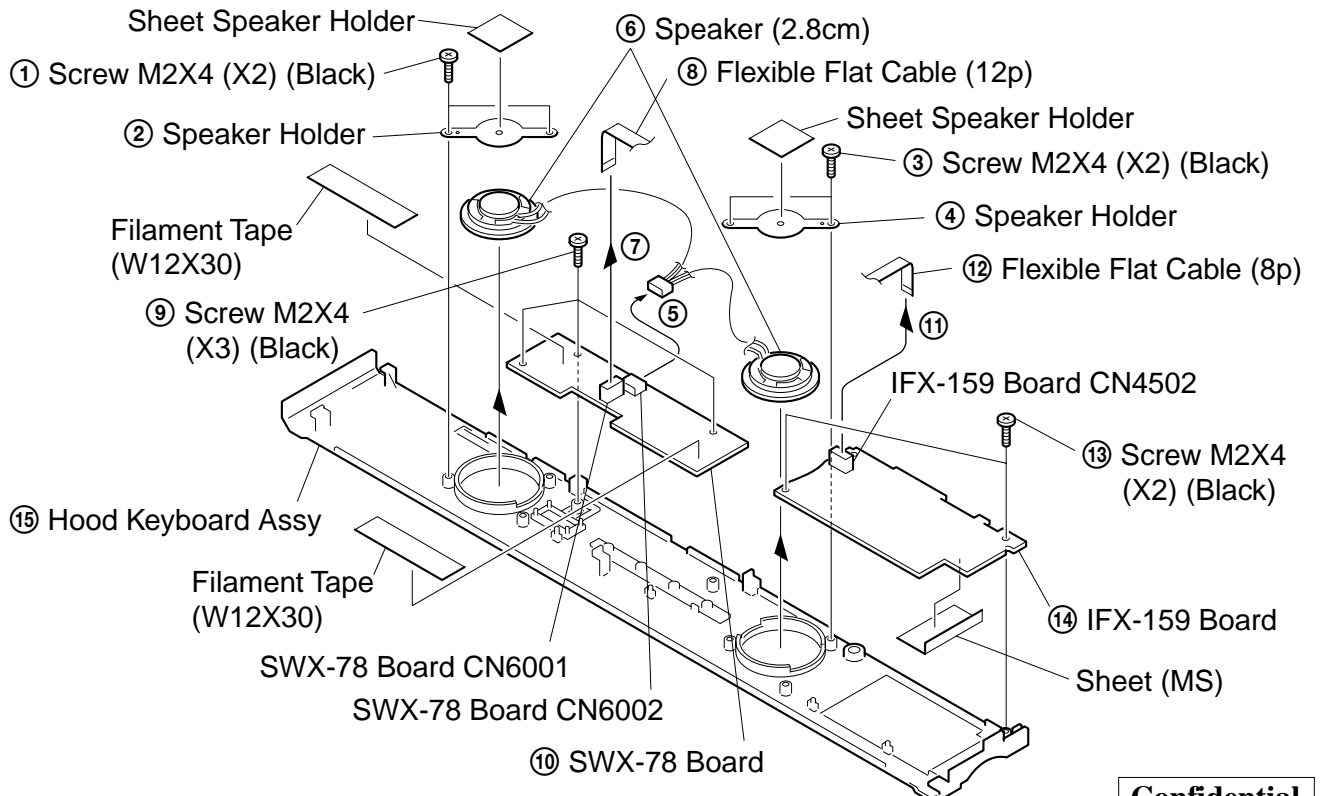
13. SWX-79 Board, Touch Pad



Note : When assembling, insert the portion of the Flexible PWB that is shown in illustration, in between the Switch (Back) and the Palm Rest Assy and align the hole with protrusion

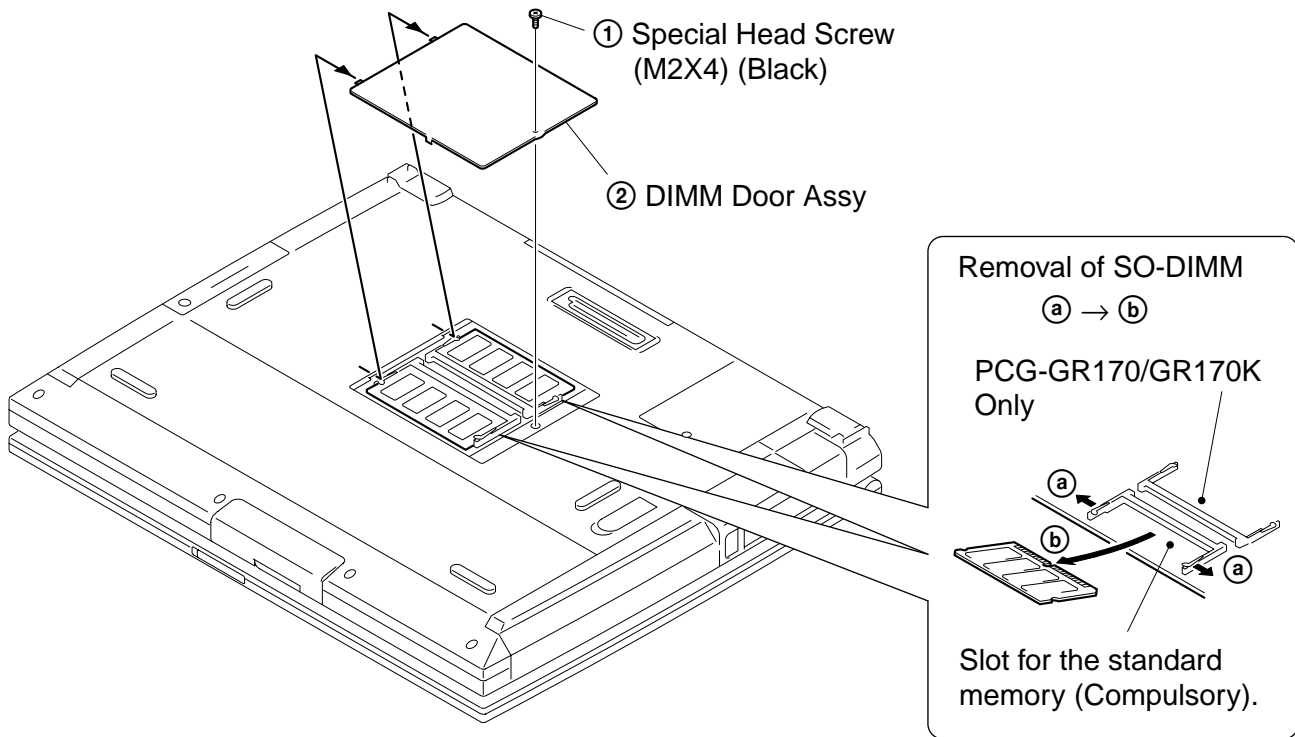


14. Speaker, SWX-78 Board, IFX-159 Board

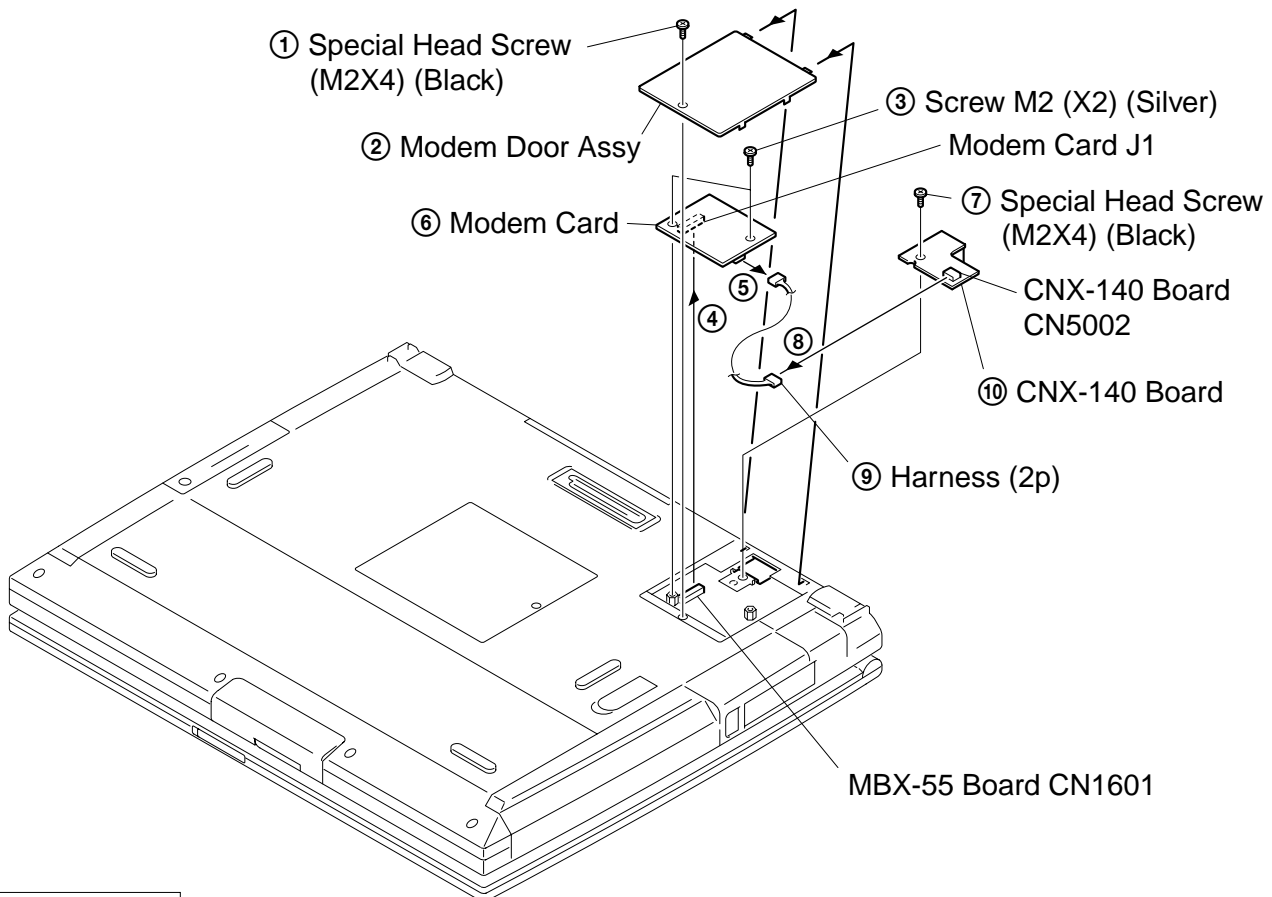


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15. SO-DIMM

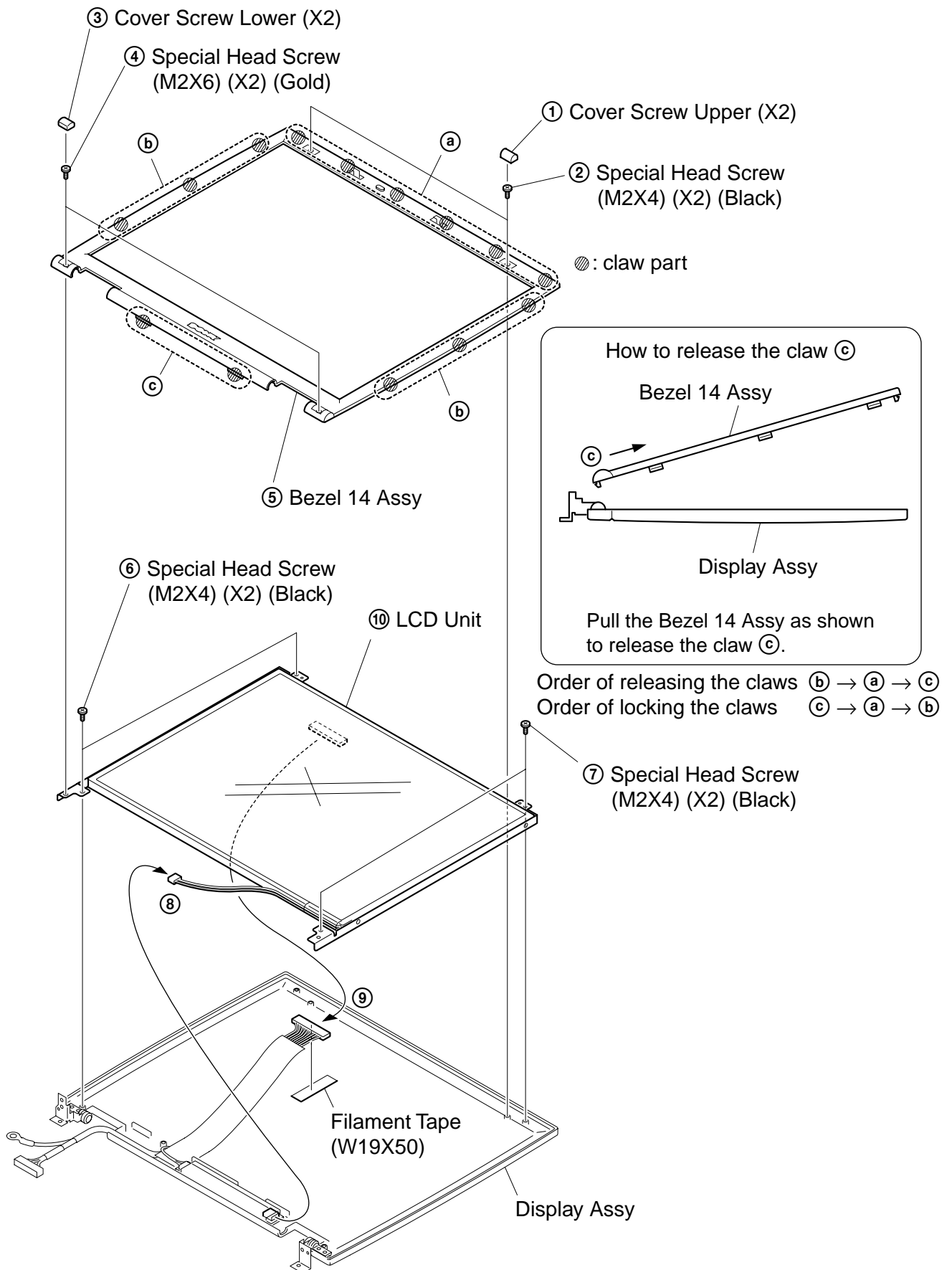


16. Modem Card, CNX-140 Board



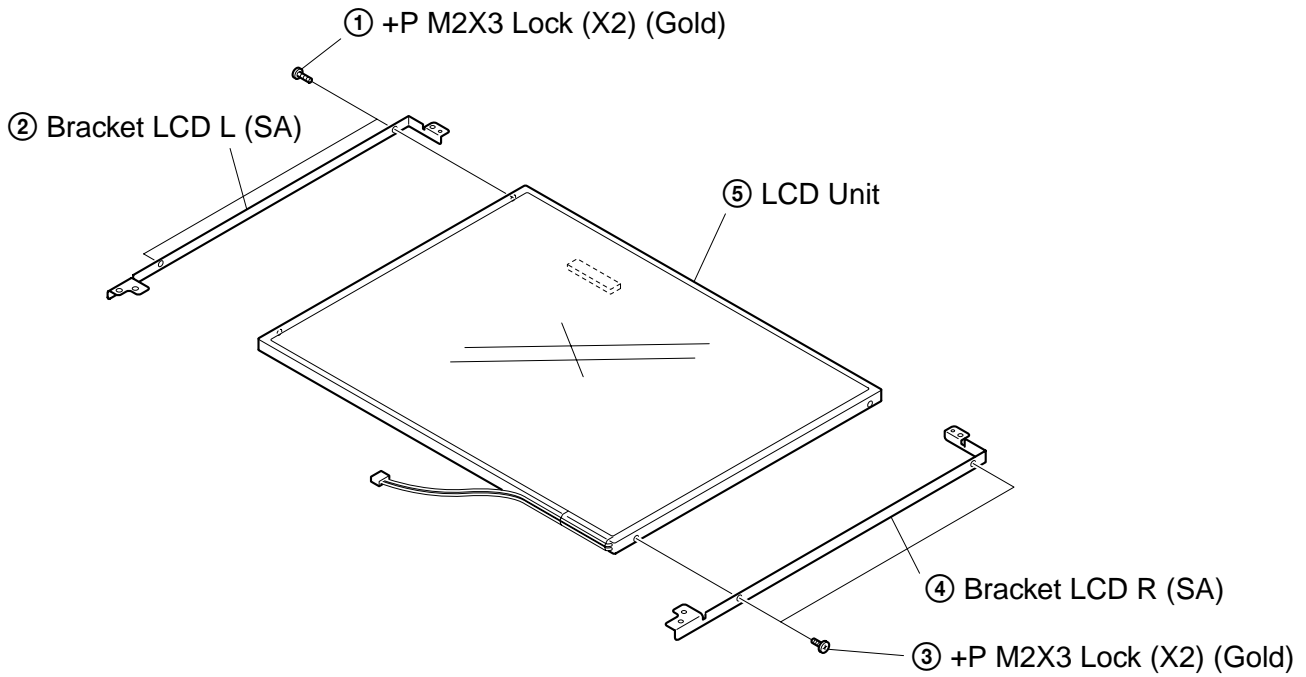
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17. LCD Section – Made by SH/HI –
1. Bezel 14 Assy

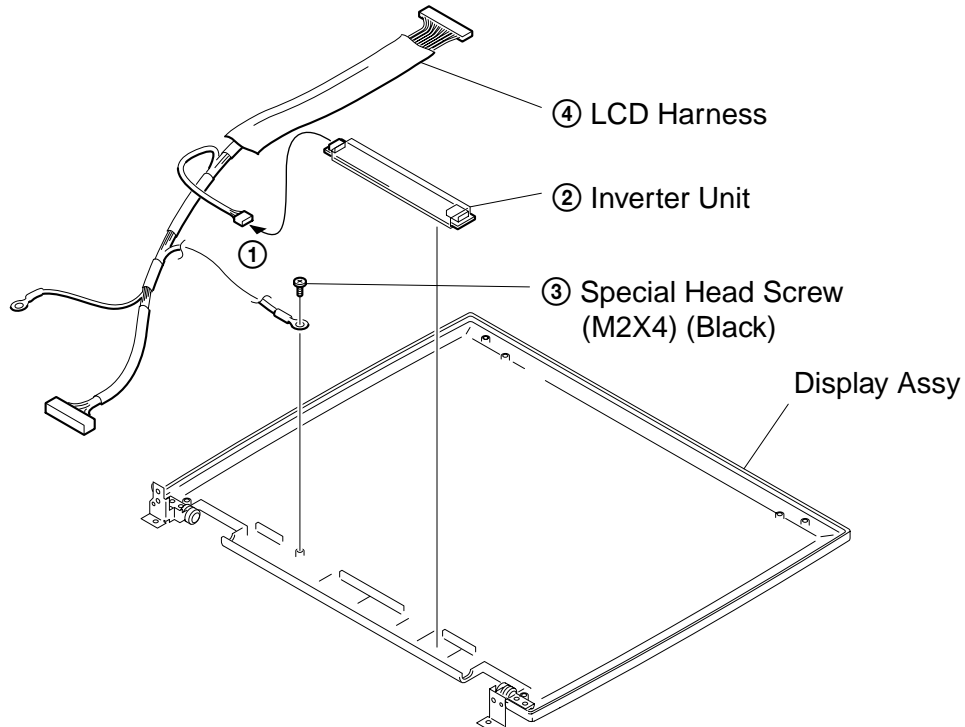


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2. LCD Unit, Bracket LCD L (SA), Bracket LCD R (SA)



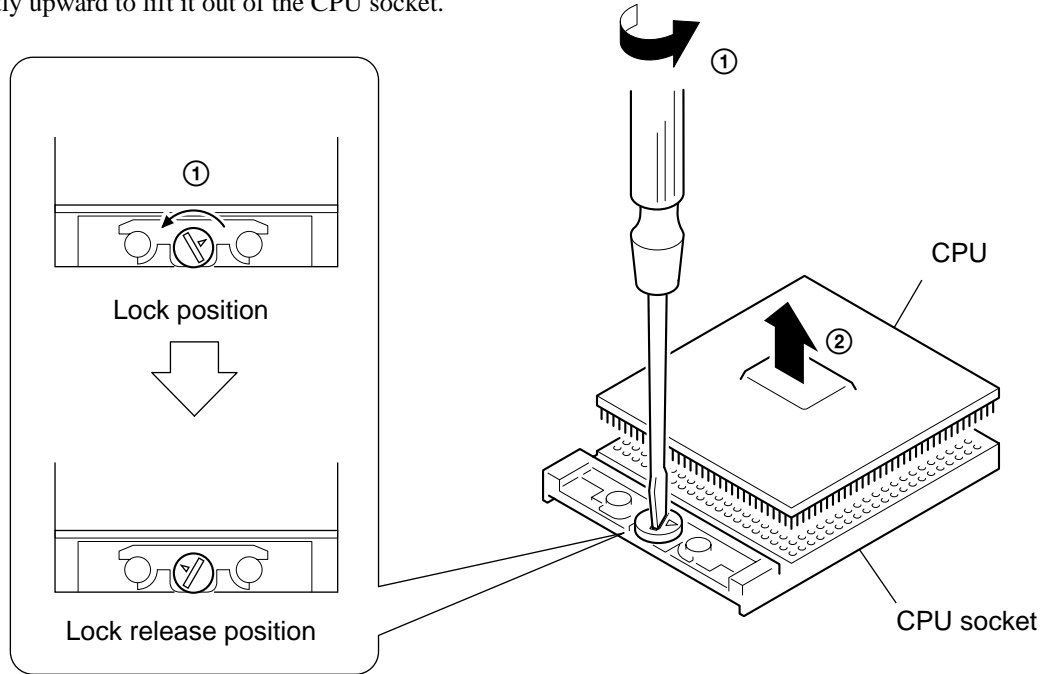
3. Inverter Unit, LCD Harness, Display Assy



1-4. Replacing the CPU

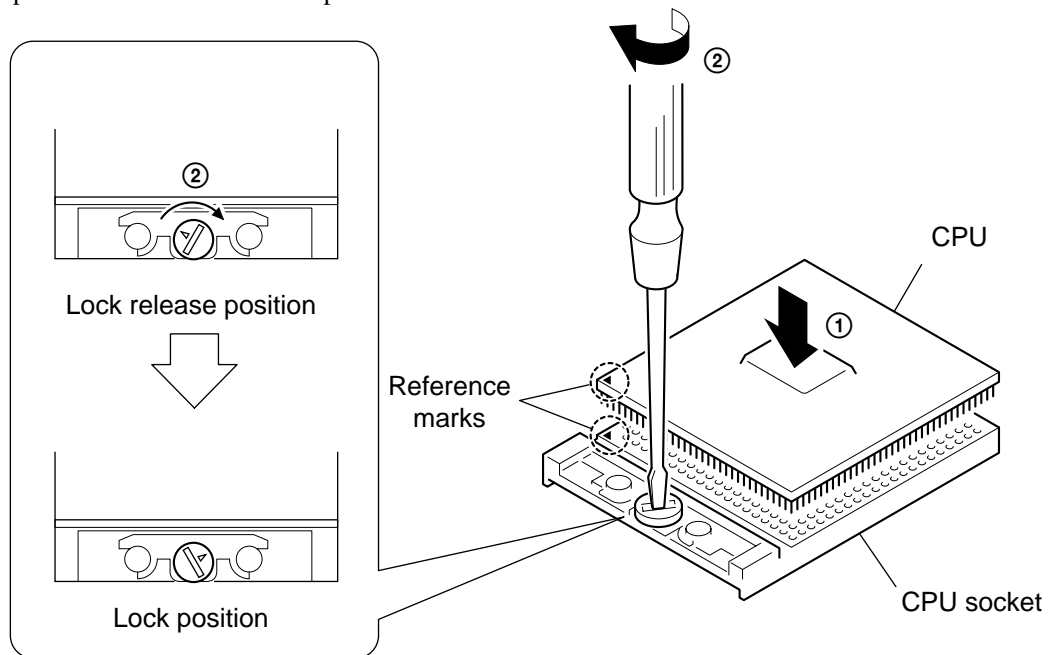
1. Removing the CPU

- ① Insert a flat-blade screwdriver into the notch as shown in the illustration and rotate it so that the protrusion comes to the lock release position.
- ② Pull the CPU gently upward to lift it out of the CPU socket.



2. Installing the CPU

- ① Align the triangle reference mark of the CPU with that of the CPU socket and insert all the pins of the CPU to the corresponding holes of the CPU socket.
- ② Insert a flat-blade screwdriver into the notch as shown in the illustration and rotate it so that the protrusion comes to the lock position.

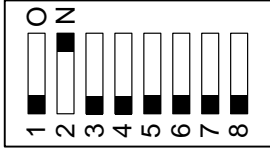
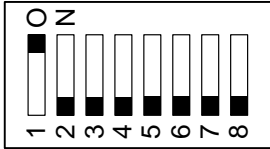


NOTE:

Rotate a flat-blade screwdriver to the lock position securely. If not, the operation of the CPU may become unstable.

1-5. DIP Switch Setting of the MBX-55 Board

Set the DIP switch on the MBX-55 board (main board) to match with the LCD that is used in this computer, because several types of LCD are used as shown in the following table and the DIP switch setting differs depending on the LCD type.

MODEL	Name of LCD	Part No.	DIP switch setting																		
GR170/GR170K	SH	A-8066-841-A	 <p>The upper position where ON indication is shown is the ON position . The lower position is the OFF position.</p> <table border="1" data-bbox="863 824 1278 898"> <thead> <tr> <th>No.</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> </tr> </thead> <tbody> <tr> <td>ON/OFF</td> <td>1</td> <td>0</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> </tbody> </table> <p>0 : ON 1: OFF</p>	No.	1	2	3	4	5	6	7	8	ON/OFF	1	0	1	1	1	1	1	1
No.	1	2	3	4	5	6	7	8													
ON/OFF	1	0	1	1	1	1	1	1													
GR150/GR150K	HI	1-476-789-11	 <p>The upper position where ON indication is shown is the ON position . The lower position is the OFF position.</p> <table border="1" data-bbox="863 1279 1278 1352"> <thead> <tr> <th>No.</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> </tr> </thead> <tbody> <tr> <td>ON/OFF</td> <td>0</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> </tbody> </table> <p>0 : ON 1: OFF</p>	No.	1	2	3	4	5	6	7	8	ON/OFF	0	1	1	1	1	1	1	1
No.	1	2	3	4	5	6	7	8													
ON/OFF	0	1	1	1	1	1	1	1													

CHAPTER 2.

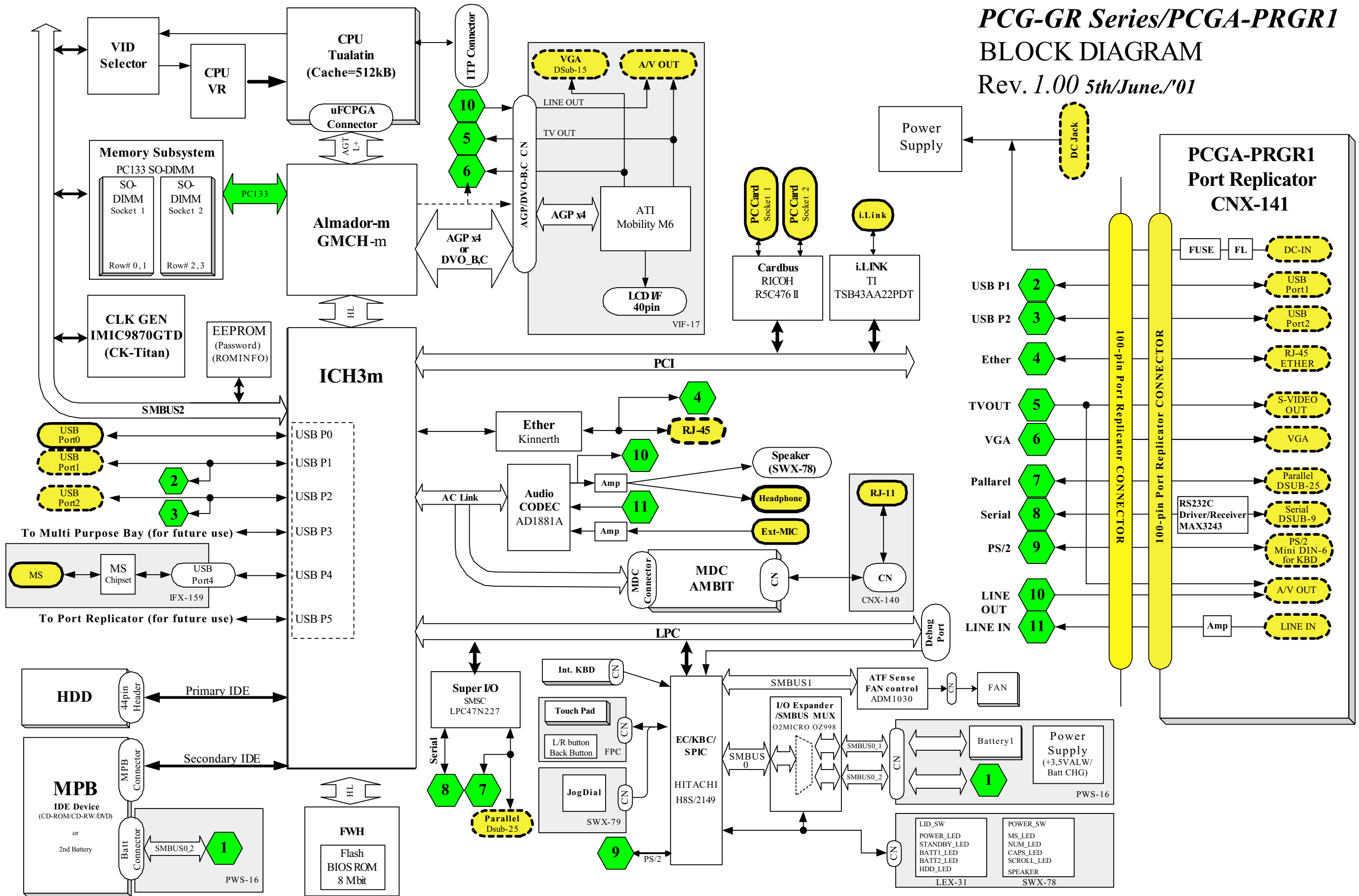
SELF DIAGNOSTICS

ATTENTION

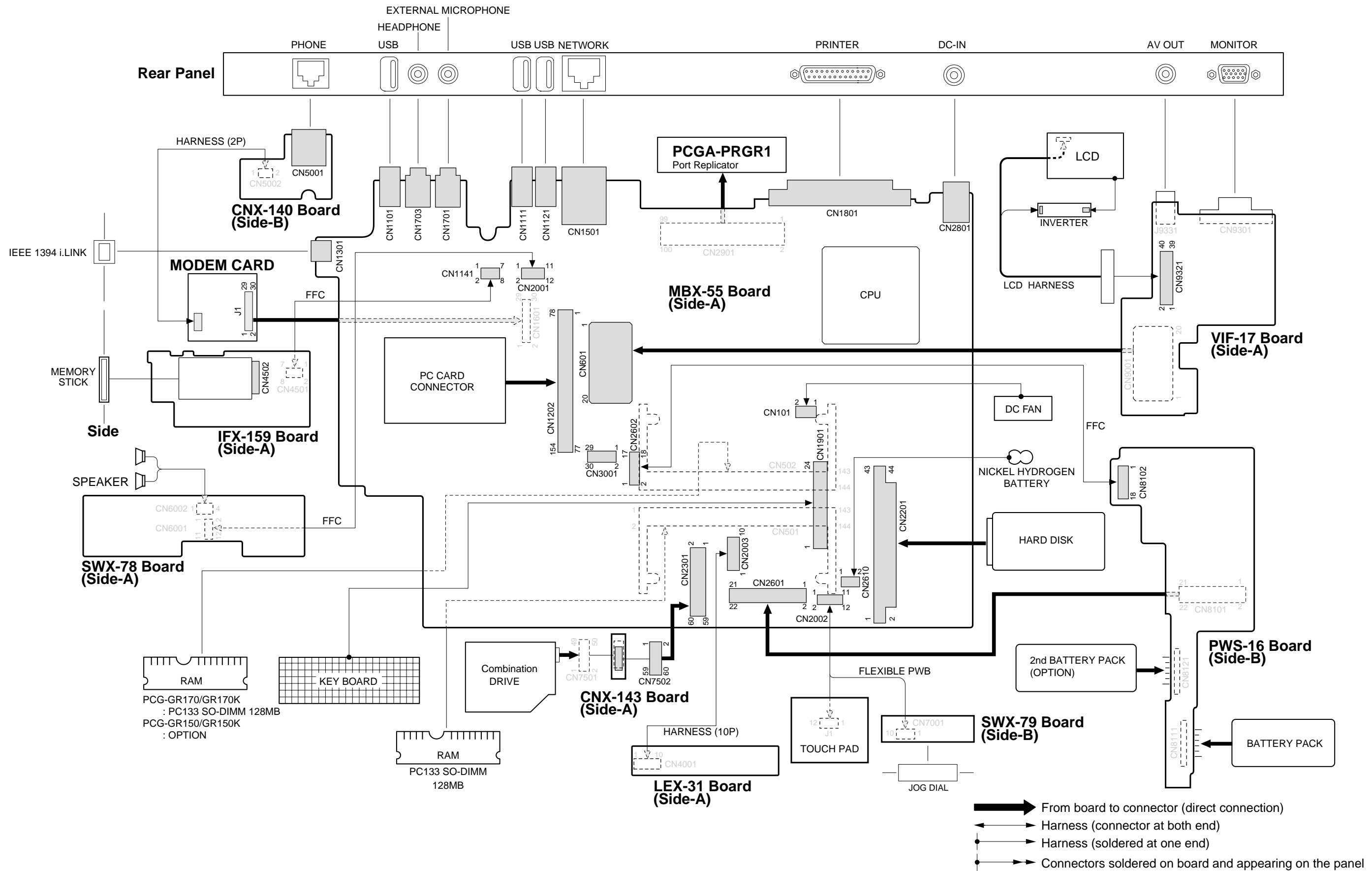
Please confirm “Self Diagnostics” method which will be informed you with distribution of “Self Diagnostics” software.

CHAPTER 3. BLOCK DIAGRAM

PCG-GR Series/PCGA-PRGR1 BLOCK DIAGRAM Rev. 1.00 5th/June./'01



CHAPTER 4. FRAME HARNESS DIAGRAM



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 two or more parts are shown in parallel, use the part described first 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.

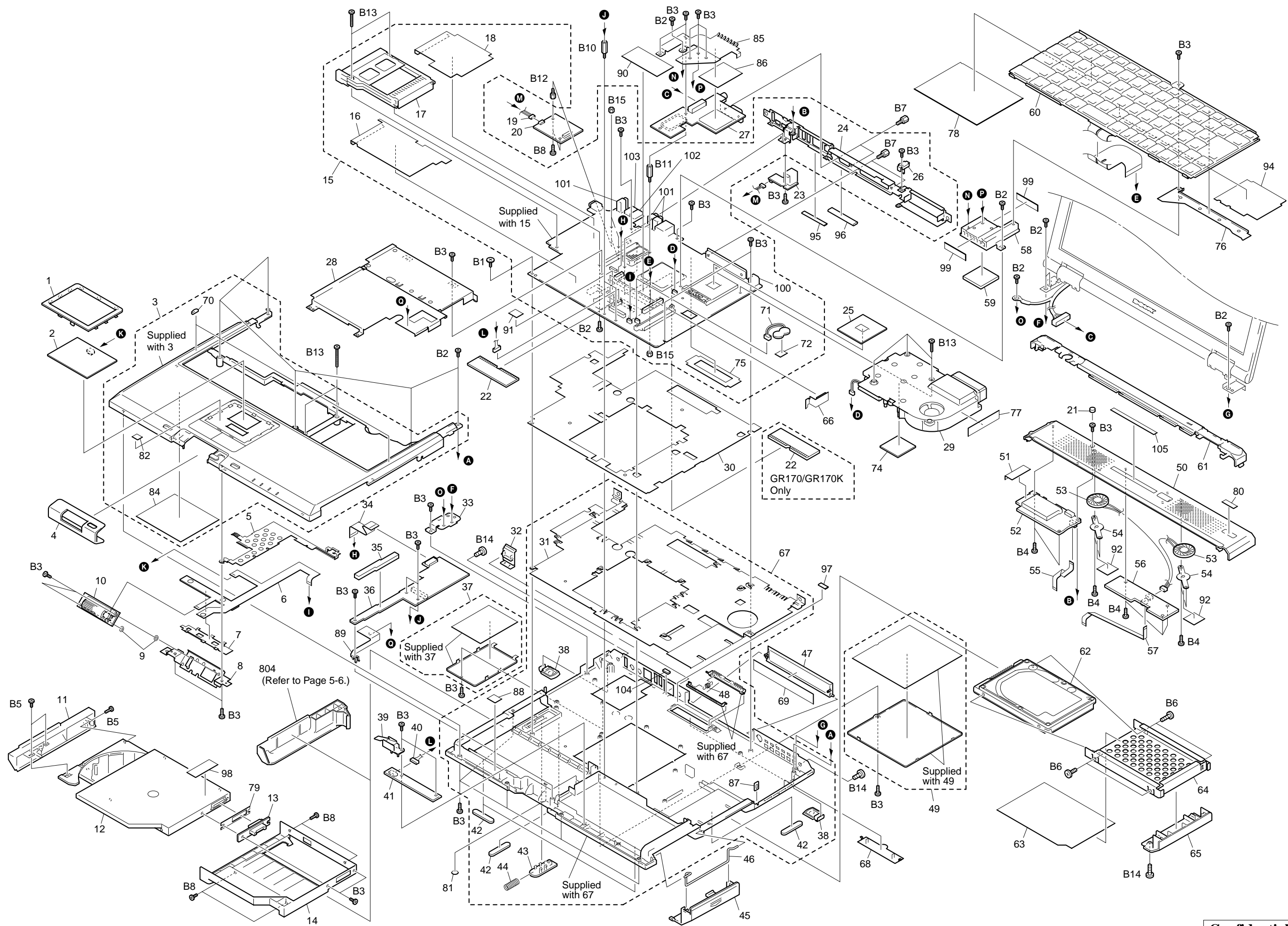
Les composants identifiés par une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

5-1. Main Section

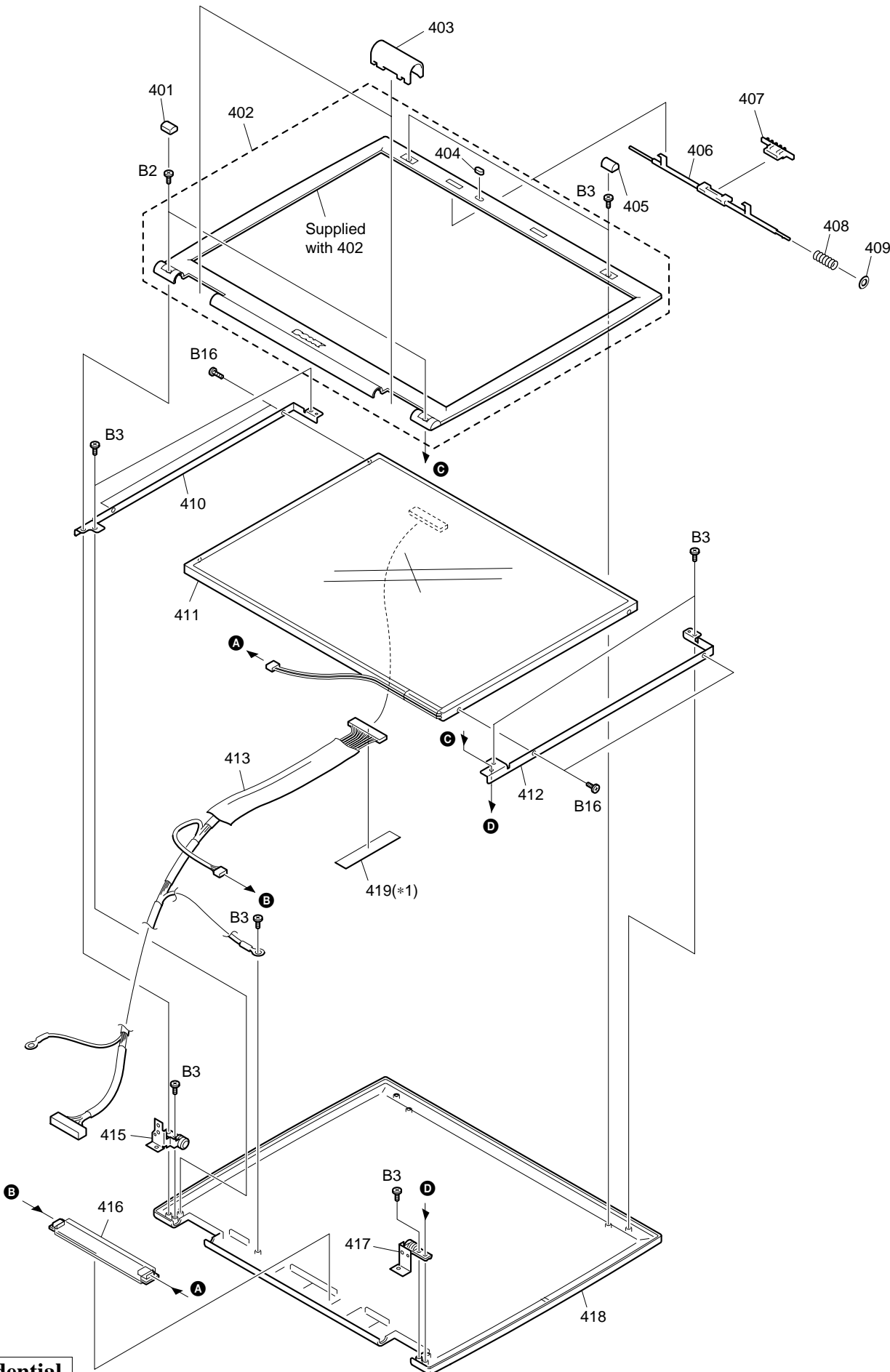
Ref.No.	Part No.	Description	Ref.No.	Part No.	Description
1	4-653-760-01	ESCUSHION (TP)	60	1-476-788-21	KEY BOARD UNIT (US)
2	1-796-166-11	PAD, TOUCH	61	4-653-766-12	DISPLAY BASE
3	X-4623-630-2	ASSY PALMREST	62	1-796-184-11	HDD (DK23CA-20F-20G)
4	4-653-746-01	ESCUSHION (JOG)	63	4-653-801-02	SHEET HDD
* 5	4-653-796-11	PLATE GND	* 64	4-653-799-02	BRACKET HDD
6	1-761-425-11	PWB, FLEXIBLE	65	4-653-800-02	DOOR HDD
* 7	4-653-795-11	BUTTON HOLDER	66	4-655-681-01	SHEET DRIVE2
* 8	4-653-756-11	BRACKET (JOG)	67	X-4623-627-2	ASSY BOTTOM
9	4-657-720-01	JOG RINGSHEET	68	4-654-379-01	COVER PORT
10	A-8066-782-A	COMPLETE PWB SWX-79	69	4-654-523-01	LABEL IO
11	X-4624-105-1	ASSY CD BAY BEZEL	70	4-654-440-12	CUSHION (PALM)
12	1-796-072-12	COMBO DRIVE (UJDA710)	71	1-756-038-11	BATTERY, NICKEL HYDROGEN
13	A-8066-778-A	COMPLETE PWB CNX-143	72	4-642-711-01	SHEET (BATTERY), ADHESIVE
14	4-653-767-02	BAY CASE	74	4-654-350-01	SHEET (CPU), THERMAL
15	A-8066-840-A	MBX-55 ASSY (S)	75	4-654-953-01	SHEET PORT
16	4-654-621-01	SHEET DRIVE	76	X-4624-120-1	ASSY BRACKET KEYBOARD
17	1-815-594-11	CONNECTOR, PC CARD (EJECT,RIGHT)	77	4-655-961-01	SHEET FAN CASE
18	4-655-960-01	SHEET PC CARD	78	X-4624-119-1	ASSY PLATE KEYBOARD
19	1-960-827-31	HARNES (2 PIN)	79	4-654-837-01	SHEET BAY BOARD
20	1-761-380-23	CARD, MODEM	80	4-656-169-32	(GR150)...LABEL (ID) (U)
21	4-654-439-01	CUSHION (HOOD)	80	4-656-169-22	(GR150K)...LABEL (ID) (U)
22	8-749-019-77	IC HYM71V16M635HCT6-H (PC-133 128MB)	80	4-656-169-12	(GR170)...LABEL (ID) (U)
23	A-8066-776-A	COMPLETE PWB CNX-140	80	4-656-169-02	(GR170K)...LABEL ID (U)
* 24	X-4623-881-1	ASSY BRACKET IO	81	4-654-380-11	CAP BAY
25	6-700-584-01	(GR150/GR150K)... IC RH80530GZ8665i2 (PentiumIII 866MHz)	82	4-657-284-01	ADHESIVE TAPE
25	6-700-583-01	(GR170/GR170K)... IC RH80530GZ001512 (PentiumIII 1000MHz)	84	4-656-070-01	PLATE (PARM)
* 26	4-654-119-11	PLATE (DC)	85	4-656-207-01	PLATE ATI
27	A-8066-786-A	COMPLETE PWB VIF-17	86	4-656-220-01	SHEET ATI
28	X-4623-884-1	ASSY BRACKET BAY	87	4-653-792-11	BRACKET LOCK
* 29	1-763-715-11	FAN, DC (WITH HEAT SINK)	88	4-656-042-02	BLIND SHEET
30	4-653-770-02	INSULATOR HEATSINK BOTTOM	89	4-656-960-01	PLATE EARTH
* 31	4-653-727-12	HEATSINK BOTTOM	90	4-656-906-02	SHEET AL
32	4-653-761-11	CAP ETHERNET	91	4-656-925-02	SHEET R
* 33	4-654-285-11	BRACKET 1394	92	4-657-577-01	SHEET SPEAKERHOLDER
34	1-823-101-11	CABLE, FLEXIBLE FLAT	94	4-657-784-01	PLATE KEYBOARD2
35	4-654-952-01	CUSHION PWS	95	4-657-654-01	GASKET USB
36	A-8066-790-A	COMPLETE PWB PWS-16	96	4-657-655-01	GASKET VGA
37	X-4623-631-1	ASSY DOOR MODEM	97	4-657-657-01	GASKET TV
38	4-653-733-02	FOOT WING	98	4-657-855-01	LABEL COMBO DRIVE
39	X-4623-779-1	ASSY LATCH DETECTOR	99		FILAMENT TAPE (W9X30) (*1)
40	1-961-255-11	HARNES (10P)	100	1-779-745-41	JACK, DC
41	A-8066-784-A	COMPLETE PWB LEX-31	101	1-785-842-11	CONNECTOR, USB (VERTICAL TYPE)
42	4-653-718-11	FOOT FRONT	102	1-793-162-11	JACK, SMALL TYPE
43	4-653-731-02	LATCH BAY	103	1-695-514-21	JACK (SMALL TYPE) 1P
44	4-653-745-01	SPRING BAY	104	4-658-513-01	SPACER CE
45	4-653-793-02	DOOR BATTERY	105	4-654-442-01	ICON SHEET
46	4-653-794-01	DOOR BATTERY SPRING	B1	4-654-387-01	SCREW (MBX)
47	4-653-726-02	DOOR IO	B2	4-641-726-41	SCREW (M2), SPECIAL HEAD
48	4-653-728-01	SPRING DOOR PORT	B3	4-641-726-11	SCREW (M2), SPECIAL HEAD
49	X-4623-628-1	ASSY DOOR DIMM	B4	4-639-112-01	SCREW M2X4
50	X-4623-629-1	ASSY HOOD KEYBORD	B5	4-645-177-01	SCREW (M1.7X3.5)
51	4-654-606-01	SHEET (MS)	B6	4-635-301-01	SCREW M3X4
52	A-8066-788-A	COMPLETE PWB IFX-159	B7	4-635-966-01	SCREW (HEX)
53	1-529-878-21	SPEAKER (2.8CM)	B8	4-656-703-01	SCREW M2
54	4-653-753-12	SPEAKER HOLDER	B10	4-654-386-01	SPACER (PWS)
55	1-823-099-11	CABLE, FLEXIBLE FLAT	B11	4-654-385-01	SPACER (VIF)
56	A-8066-780-A	COMPLETE PWB SWX-78	B12	4-651-989-01	SPACER (MBX)
57	1-823-100-11	CABLE, FLEXIBLE FLAT	B13	4-644-899-01	SCREW (M2), 0 NUMBER P3 KIND
* 58	4-654-388-01	HEAT SINK (AL)	B14	4-654-811-01	SCREW M3
59	4-655-488-01	THERMAL SHEET AL	B15	7-622-205-05	NUT M2 TYPE2

*1 Use the FILAMENT TAPE.

Confidential



5-2. LCD Section – Made by SH /HI–



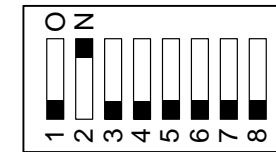
Ref.No.	Part No.	Description
401	4-653-722-01	COVER SCREW LOWER
402	X-4624-046-1	ASSY BEZEL 14 (EXP)
403	4-653-754-01	COVER HINGE
404	4-654-794-01	CUSHION LATCH
405	4-653-723-01	COVER SCREW UPPER
406	4-653-730-11	HOOK DISPLAY
407	4-653-738-11	LATCH DISPLAY
408	4-637-903-01	SPRING LATCH
409	4-656-034-01	WASHER LATCH
* 410	4-653-735-11	BRACKET LCD L (SA)
411	A-8066-841-A	(GR170/GR170K)... ASSY LCD 14SXGA-SH (S)
411	1-476-789-11	(GR150/GR150K)... LCD UNIT (14.1XGA HI)
* 412	4-653-736-11	BRACKET LCD R (SA)
413	1-961-254-11	(GR170/GR170K)...HARNES, LCD
413	1-961-256-11	(GR150/GR150K)...HARNES, LCD
415	X-4623-633-1	HINGE LEFT
416	1-476-735-11	INVERTER UNIT
417	X-4623-634-1	HINGE RIGHT
418	X-4624-047-1	ASSY DISPLAY (EXP)
419		FILAMENT TAPE (W19X50) (*1)
B2	4-641-726-41	SCREW (M2), SPECIAL HEAD
B3	4-641-726-11	SCREW (M2), SPECIAL HEAD
B16	4-642-761-01	+P M2X3 LOCK

*1 Use the FILAMENT TAPE.

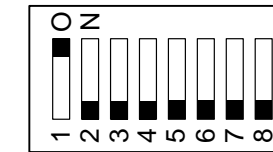
NOTE :

Set the DIP switch on the MBX-55 board (Main board) to match with the LCD that is used in this computer.

GR170/GR170K



GR150/GR150K



The upper position where ON indication is shown is the ON position . The lower position is the OFF position.

GR170/GR170K

No.	1	2	3	4	5	6	7	8
ON/OFF	1	0	1	1	1	1	1	1

0 : ON 1: OFF

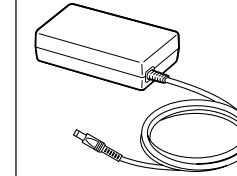
GR150/GR150K

No.	1	2	3	4	5	6	7	8
ON/OFF	0	1	1	1	1	1	1	1

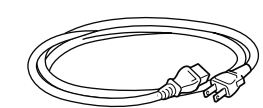
0 : ON 1: OFF

Ref.No.	Part No.	Description
		ACCESSORIES *****
△ 800	1-476-161-21	ADAPTOR, AC
801	1-756-198-11	BATTERY, LITHIUM ION (L)
△ 802	1-757-562-21	CORD, POWER
804	4-653-768-01	WEIGHT SAVER (Refer to page 5-3.)
	4-655-646-01	QUICK START,XG

800
AC Adaptor (1)



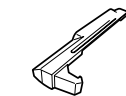
802
Power Cord (1)



801
Battery Pack (1)



804
Weight Saver (1)



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.

SONY®

***VAIO® Notebook
Quick Start***

**PCG-GR150/150K
PCG-GR170/170K**



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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. In this chapter, you will find information on the following topics:

- Features
- Unpacking Your Notebook
- Registering Your Notebook

Features

 For a complete description of the specifications of your VAIO® Notebook, see the Specifications flyer supplied with your notebook.

- ❑ **Exceptional performance** — Your notebook includes a Mobile Intel® Pentium® III processor-M* and a V.90/K56flex-compatible modem.†
- ❑ **Portability** — Rechargeable battery pack provides hours of use without AC power.
- ❑ **Sony audio and video quality** — Enjoy high-quality MPEG1/MPEG2 video, which supports full-screen display and enables you to take advantage of today's advanced multimedia applications, games, and entertainment software.
- ❑ **Multimedia features** — Use the stereo speakers or plug a pair of headphones (not supplied) to listen to audio CDs and DVDs.
- ❑ **Microsoft® Windows® operating system** — Your system includes Microsoft® Windows® Millennium Edition (Windows Me™) or Microsoft® Windows® 2000 Professional Edition.
- ❑ **Communications** — Access popular online services, send e-mail, browse the Internet, and use fax features.
- ❑ **Removable hard disk drive** — Take advantage of the increased computing versatility and expansion capabilities that a removable drive affords.‡
- ❑ **Optical disc drive** — Your system includes either a CD-RW/DVD Combo Drive or a DVD-ROM drive. The CD-RW/DVD Combo Drive utilizes a new optical storage technology that combines the features of both a CD-RW drive and DVD-ROM drive, providing increased storage capacity and a rich multimedia computing experience. If your model is equipped with Windows® 2000, this drive is hot-swappable. Optical disc drives play DVD-ROM, CD-ROM, CD-RW, and CD-R discs.

* The processor may be reduced to a lower operating speed when operating on battery power.

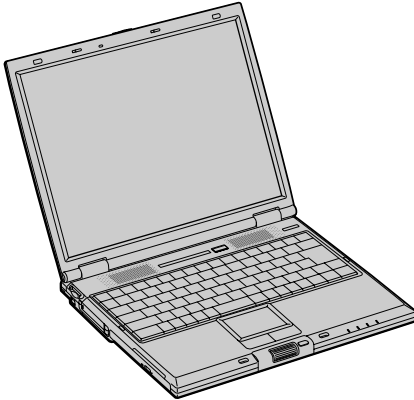
† Actual upload and download speeds may vary due to line conditions, ISP support, and government regulations.

‡ Sony does not guarantee interoperability with removable hard disk drives other than the one provided.

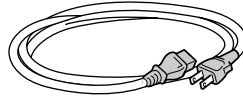
Unpacking Your Notebook

Remove the following hardware items from the box:

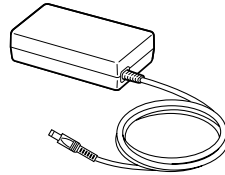
Main unit*



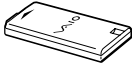
Power cord



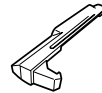
AC adapter



Rechargeable battery pack



Weight saver



* The removable hard disk drive and removable optical disc drive are preinstalled in your notebook.

Documentation

- ❑ **VAIO® Notebook Quick Start** — Contains information on unpacking and setting up your notebook, supplementary updates, and software information.
- ❑ **Microsoft® Windows Millennium Edition *Getting Started* or Microsoft® Windows 2000 Professional Edition *Getting Started* manual** — Explains how to use the basic features of this latest Windows operating system.
- ❑ **Safety Information** — Explains notes on use and offers safety tips.
- ❑ **Specifications Flyer** — Details the hardware specifications for your notebook.

Software CDs

- ❑ **Microsoft® Word** — Enables you to reinstall Microsoft Word to the VAIO® Notebook you purchased.

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 format the C:\ partition of the hard disk drive, then reinstall the operating system and software titles that shipped with your notebook if they become corrupted or are erased.

Other

- ❑ Packet containing special product offers
- ❑ 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 Warranty Card for more details.

If you did not register your notebook when you first turned it on, following these steps to use the online computer registration service.

- 1 Make sure your notebook is connected to a phone line.
- 2 Click the registration icon on the VAIO desktop.
- 3 Enter the information requested on the first online registration form.

 Press the tab key to move from box to box.

- 4 Click the Next button to advance to the next form.
- 5 Complete the remaining forms by clicking the Next button each time you complete a form.
- 6 The notebook automatically transfers your registration information using your built-in modem and a toll-free telephone number or a local number.

 You may sign up for Internet access with a Sony preferred Internet Service Provider.

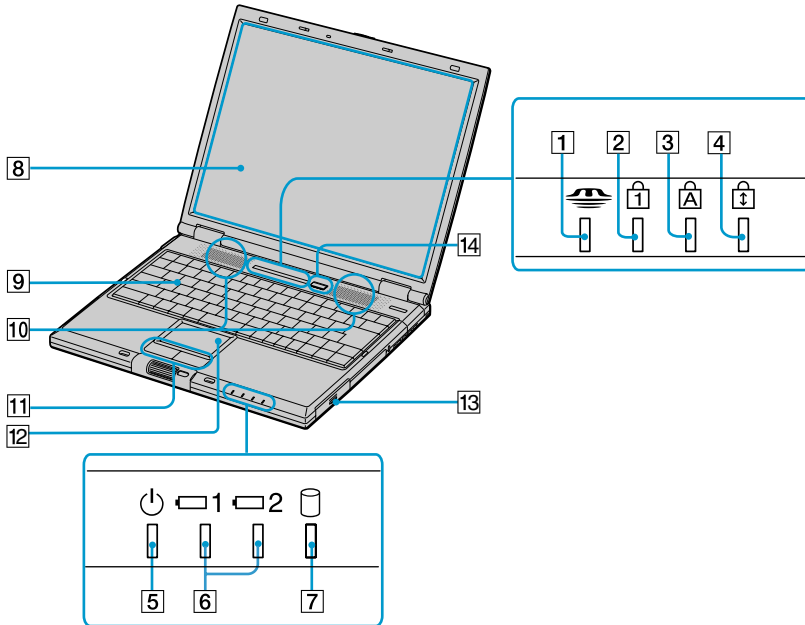
Setting Up Your VAIO® Notebook

In this chapter, you will find information on how to set up and install your Sony VAIO® Notebook. The following topics are discussed:

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

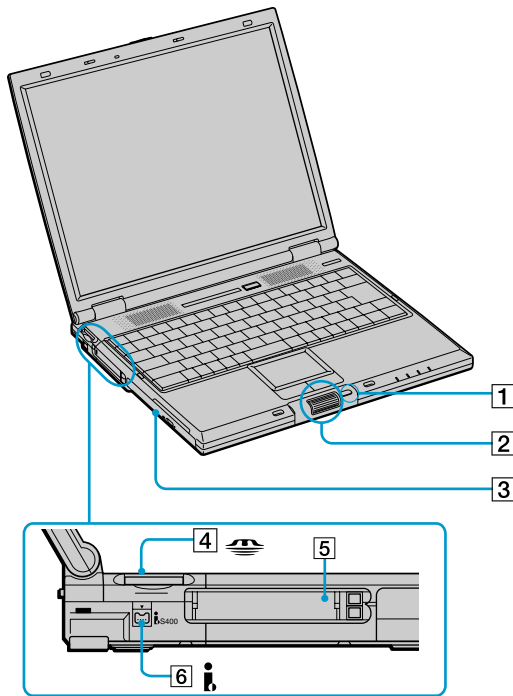
Locating Controls and Ports

Front



1	Memory Stick indicator	8	LCD (Liquid Crystal Display) screen
2	Num Lock indicator	9	Keyboard
3	Caps Lock indicator	10	Speakers
4	Scroll Lock indicator	11	Left and right buttons
5	Power indicator	12	Touchpad
6	Battery 1 and 2 indicators	13	Battery bay
7	Hard disk drive indicator	14	Power button

Left

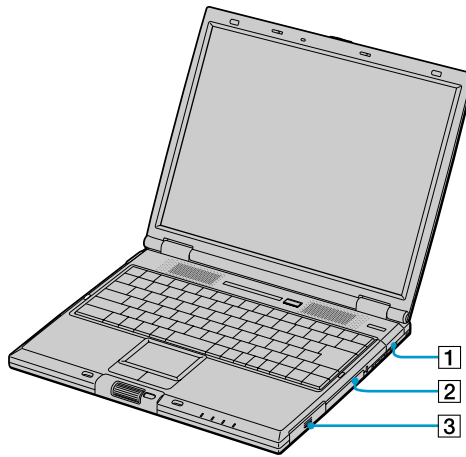


1	Back button for center Jog Dial™ control	4	Memory Stick® slot
2	Center Jog Dial™ control	5	PC Card slots
3	CD-RW/DVD Combo Drive or DVD-ROM drive in multipurpose bay*	6	i.LINK® (IEEE1394) S400 port†

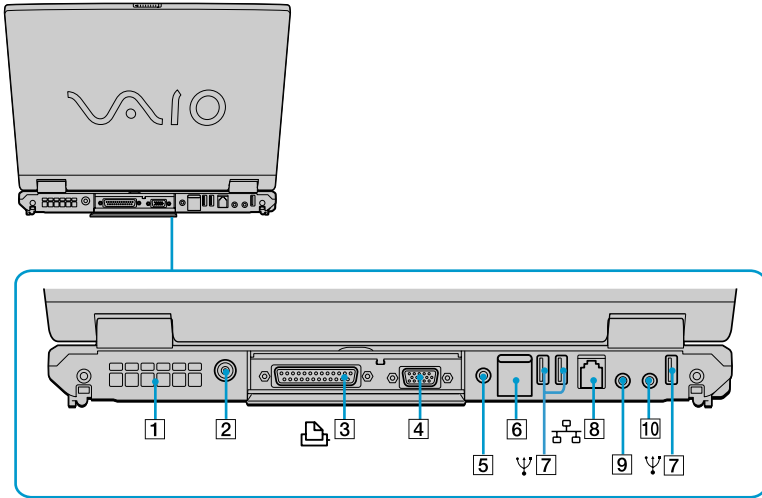
* This multipurpose bay can house either an optical disc drive or a secondary battery.

† i.LINK is a trademark of Sony used 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 connector 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.

Right



-
- 1** *Cooling vent*
-
- 2** *Drive bay with removable hard disk drive*
-
- 3** *Battery bay*
-

Back

1	Cooling vent	6	Ethernet port
2	DC In port	7	USB ports
3	Printer port	8	Modem jack
4	VGA port	9	Microphone jack*
5	AV Out jack	10	Headphone jack

* There is a protruding dot above the Microphone jack to further distinguish it from other jacks and ports. Do not connect a microphone to the Headphone jack.

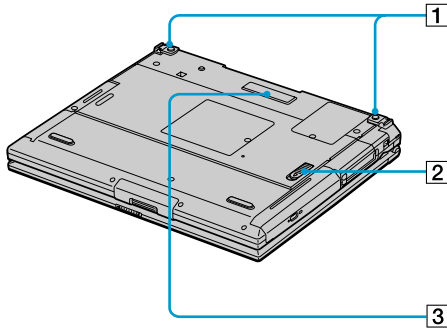
**Warning:**

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.



There is a ventilation slot located on the left side of the back panel. Do not cover the ventilation slot when your notebook is on.

Bottom



-
- 1** *Tilt stands*

 - 2** *Multipurpose bay Release lever*

 - 3** *Port replicator connector*

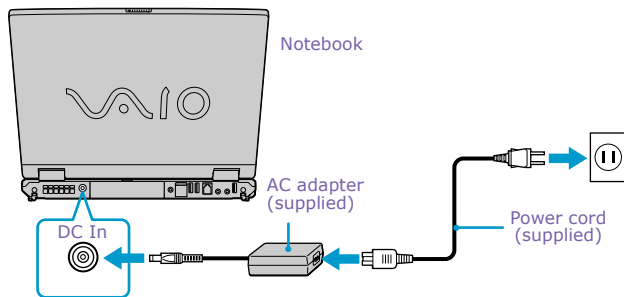
Connecting a Power Source

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 the AC adapter



Notes on the AC Adapter

- ❑ Your notebook operates on 100V-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 notebook 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 AC adapter supplied. Do not use any other AC adapter.


Using Battery Power

You can use one or two battery packs as a source of power. The second battery pack inserts into the multipurpose bay on the left side of the notebook. (See “Using a Second Battery Pack” in the online VAIO® Notebook User Guide for more information.) Additional battery packs are available as a separate option.

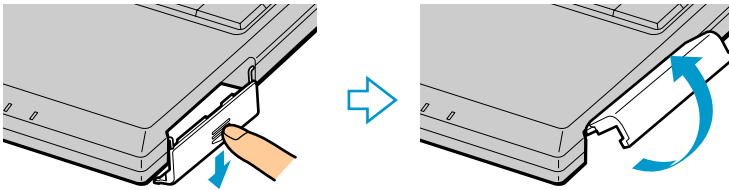
The battery pack that comes with your notebook is not fully charged at the time of purchase. Follow the steps below to insert and charge the battery pack.

To insert the battery pack

- 1 Push the battery bay cover down to open it.

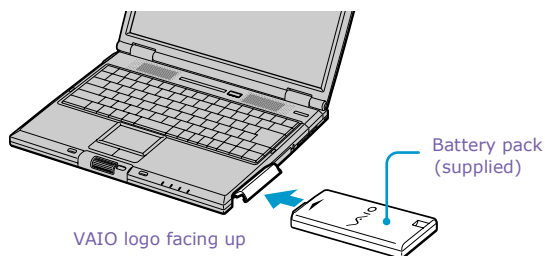
 The battery bay cover swings out but does not detach.

Battery bay




- 2 Insert the battery pack into the battery bay on the right side of the notebook.

Inserting battery pack



- 3 Lift the battery bay cover up until it clicks into place.


 If the port replicator is attached to your notebook, do not attempt to insert or remove the battery pack. Lifting and turning the notebook with a port replicator attached could cause a temporary loss of power.

To charge the battery pack

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

The notebook automatically charges the battery. The battery indicator flashes in a double-blink pattern as the battery charges.

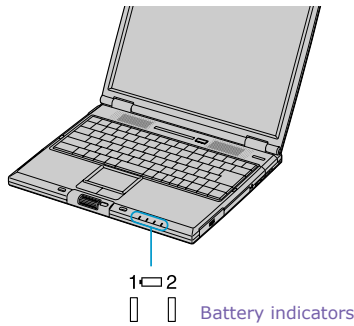
- 3 When the battery is 85 percent full, the battery indicator turns off. This process takes 3 hours when your notebook is using AC power.

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

To view battery indicators

There are two battery indicators on the notebook. One indicator is for the primary battery pack located in the battery bay. The second indicator is for the optional secondary battery pack that can be inserted into the multipurpose bay.

Battery indicators



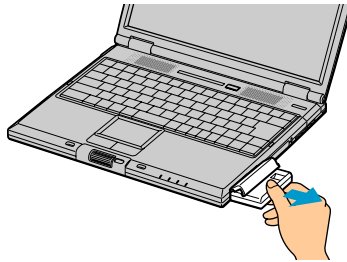
Battery Indicator	Description
1	Indicates the status of the battery pack in the battery bay on the right side of the notebook.
2	Indicates the status of the battery pack in the multipurpose bay on the left side of the notebook.

Battery Indicator Light Status	Description
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.

To remove the battery pack

- 1 Push the battery bay cover down to open it.
- 2 Pull out the battery pack.

Removing the battery pack



- 3 Push in and lift up the battery bay cover until it clicks.



You will 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

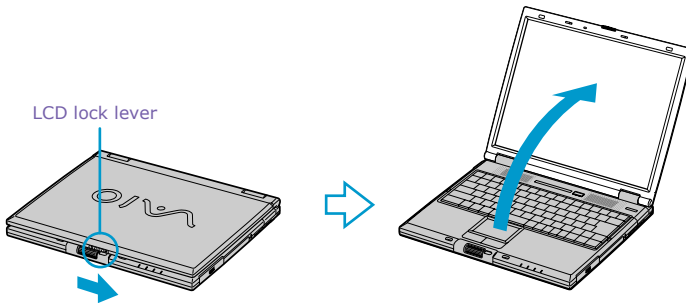
- ❑ To determine the remaining battery charge, see “Displaying Battery Information” in the online User Guide for more information.
- ❑ When the battery power is running low, both the battery and power indicators blink.
- ❑ When the notebook is directly connected to AC power and has a battery pack in the battery bay, it uses power from the AC outlet.
- ❑ See “Using a Second Battery Pack” in the online User Guide for information on installing and charging a battery pack in the multipurpose bay.
- ❑ Keep the battery pack in the notebook while it is directly connected to AC power. The battery pack continues to charge while you are using the notebook.
- ❑ If the battery level falls below 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 25 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 starts flashing.
- ❑ For some software applications and some peripheral devices, your notebook may not enter Hibernate mode when the battery life is low. To avoid loss of data when using battery power, you should save your data frequently and manually activate a power management mode, such as Standby or Hibernate.
- ❑ 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 batteries 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 process is normal.
- ❑ Keep the battery pack away from all sources of heat.
- ❑ Keep the battery pack dry.
- ❑ Do not attempt to open or 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 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.

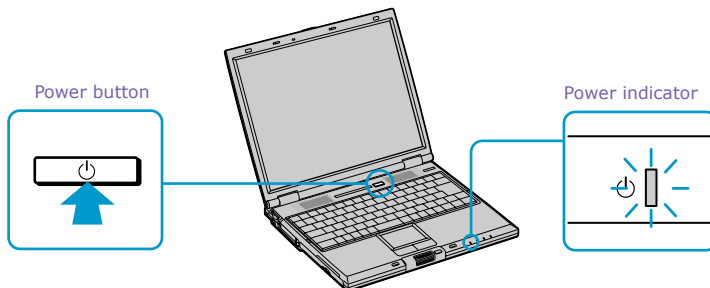
Opening the notebook




- 2 Press the power button on top of the notebook until the green power indicator turns on.

 (Windows Me™ only) When starting your notebook for the first time, the VAIO InitManager dialog box will appear. Please select “OK” to begin initial setup. If you do not execute the initial setup, you cannot use VAIO original hardware functions such as Power Management tools, the scroll function of the touchpad, and keyboard shortcut key combined with the Fn key.

Power button



 If you hold the power button down for more than four seconds, the notebook turns off.


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

Shutting Down Your Notebook




To avoid potential loss of data, follow these steps to shut down your notebook.

- 1 Click the Start button on the Windows® taskbar.
- 2 Click Shut Down at the bottom of the Start menu to display the Shut Down Windows dialog box.
- 3 Select Shut Down.
- 4 Click OK.


 Respond to any prompts warning you to save documents.

- 5 Wait for your notebook to turn off automatically. The notebook is off when the power indicator turns off.
- 6 Turn off any peripherals 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 VAIO® Notebook User Guide for more information.


If you are still unable to shut down your notebook, follow the procedure below.

- 1 Close or end all operations as follows:
 - ❑ Close all applications.
 - ❑ Remove the PC Cards.
 - ❑ Disconnect USB devices.
- 2 Restart the notebook. You can restart your notebook by pressing Ctrl+Alt+Delete simultaneously.

 If you are still unable to shut down the notebook, press the power button and hold it for more than four 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 if the remaining battery charge drops below 5 percent, regardless of the power management setting you previously select.

 If the battery level falls below 10 percent, you should either attach the AC adapter to recharge the battery or shut down 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 activate Standby mode

To activate Standby mode, press the power button and release it immediately. You can also use the PowerPanel utility to enter Standby mode.

To return to normal mode


Press any key to return to normal mode.

Hibernate Mode

In the 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 activate Hibernate mode


To activate Hibernate mode, press the key combination Fn+F12.

 (Windows 2000) The “Save to Disk Manager” screen appears, and then the notebook enters Hibernate mode.

Do not move the notebook until its power indicator turns off.

To return to normal mode

To return to normal mode, turn on the notebook by pressing the power button. The notebook returns to its previous state.

 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 for more than four seconds.

- Time required to return to normal mode
Standby requires less time than Hibernate to return to normal mode.
- Power consumption
Standby uses more power than Hibernate.

Adding Memory

Your Sony VAIO® Notebook enables you to install and replace memory modules to expand the functionality of your notebook. In this chapter, you will find information on the following topics:

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

Depending on the model you purchased, either 128 MB of memory is preinstalled in one of the two available memory module bays (128 MB x 1), or 256 MB of memory is preinstalled utilizing both memory module bays (128 MB x 2). You can replace both memory modules with optional 256 MB memory modules to increase memory up to 512 MB. For memory upgrades, use only PC133 (CL2) SDRAM SO-DIMMs (gold lead contacts).



Make sure you observe the proper safety precautions when you install memory modules in your notebook. See the bulleted list below. Be careful when adding memory. Mistakes when installing or removing a memory module may cause a malfunction.

Precautions and Procedures

- ❑ The procedures described below assume you are familiar with the general terminology associated with personal computers and with common safety practices required for using and modifying electronic equipment.
- ❑ Disconnect your system from its power source and from any telecommunications links, networks, or modems before you open the system or follow any of the procedures described below. Personal injury or equipment damage may result from failure to take these precautions.
- ❑ Electrostatic discharge (ESD) can damage memory modules 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.

Models with 128 MB Memory**Typical expansion memory configuration**

Total System Memory (MB)	Slot 1 (MB)	Slot 2 (MB)
128	128	
192	128	64
256	128	128
384	128	256
512	256	256

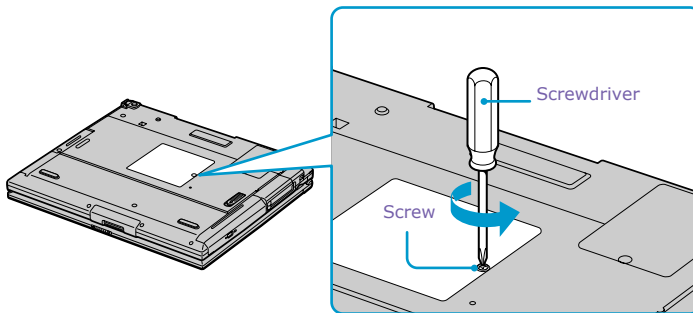
Models with 256 MB Memory**Typical expansion memory configuration**

Total System Memory (MB)	Slot 1 (MB)	Slot 2 (MB)
256	128	128
384	128	256
512	256	256

Removing a Memory Module

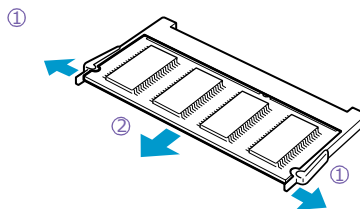
- 1 Shut down your notebook and disconnect all peripheral devices, such as your printer.
- 2 Unplug the notebook and remove the battery pack(s).
- 3 After the notebook has cooled, loosen and remove the screw that secures the cover of the memory bay on the bottom of your notebook. Use an appropriate screwdriver.

Removing the memory module cover



- 4 Touch a metal object (such as the connector panel on the back of your notebook) to discharge any static electricity.
- 5 Remove the memory module.


Removing memory module



① Pull the tabs in the direction of the arrows. The memory module is released.

② Pull the memory module in the direction of the arrow.

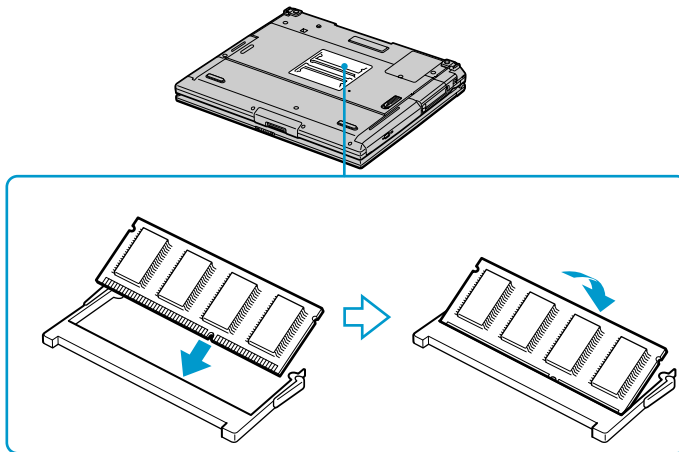
- 6 Tighten the screw on the memory bay cover.

 Your notebook comes with a memory module installed in the memory slot. To upgrade your memory, removal of these modules may be necessary before installing your upgrade memory module.

installing a Memory Module

- 1 Follow steps 1 to 4 of “Removing a Memory Module” on page 30 for removing the preinstalled memory.
- 2 Remove the new memory module from its packaging.
- 3 Install the memory module by sliding it into the memory module slot. Press the module into place until it clicks.

Installing memory module



1 Slide the memory module into the slot. 2 Press the module into place until it clicks.

- 4 Tighten the screw on the cover of the memory bay.

Viewing the amount of memory

- 1** Restart the notebook, then click the Start button on the Windows taskbar.
- 2** Select Programs, then select Sony Notebook Setup, and click Sony Notebook Setup.

The Sony Notebook Setup screen appears.

- 3** Click the “About This Computer” tab to view the amount of system memory. If the additional memory is not shown, repeat steps 1 through 4 in “installing a Memory Module” on page 31, and restart the notebook.

About the Software on Your Notebook

Your Sony VAIO® Notebook is ready to help you work, play, learn, and communicate as soon as you turn it on. In this chapter, you will find information on the software that comes with your notebook and how to use the Recovery CDs:

- Overview of Software
- Using Your Recovery CDs

Overview of Software

Adobe Acrobat® Reader™


Adobe Systems, Inc. (<http://www.adobe.com/>)

Acrobat Reader software allows you to view, navigate, and print electronic documents in Adobe Portable Document Format (PDF), an open file format that is intended to preserve the fidelity of documents created on all major computer platforms.

Adobe Photoshop® Elements (Windows Me only)

Adobe Systems, Inc. (<http://www.adobe.com/>)

Adobe Photoshop Elements offers unique features designed specifically for amateur photographers, hobbyists, and business users who want an easy-to-use, yet powerful digital imaging solution.

 When you start Adobe Photoshop® Elements for the first time, you will be prompted to enter a product code for the application to work correctly. This code is found in the printed Adobe information that is included with your notebook.

Adobe Premiere® LE (On selected models)

Adobe Systems, Inc. (<http://www.adobe.com/>)

Adobe Premiere LE offers an interface and editing tool for producing movies for video, multimedia, or the Web. View source clips and edited footage simultaneously on the monitor window. Create video clips up to three hours long with complete audio-video synchronization.

America Online®

America Online, Inc. (<http://www.aol.com/>)

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.

ArcSoft® PhotoPrinter™ 2000 Pro (Windows Me only)

ArcSoft, Inc. (<http://www.arcsoft.com/> or <http://www.photoisland.com/>)

ArcSoft PhotoPrinter 2000 is an easy-to-use, advanced printing program that lets you quickly lay out multiple images in multiple sizes on a single sheet of paper. PhotoPrinter Pro 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.

CompuServe® 2000

CompuServe Interactive Services, Inc. (<http://www.compuserve.com/>)

CompuServe is the most comprehensive source of organized business and educational information online today. CompuServe allows you to access the vastness of the Internet, without wasting time wading through it. Maximize your time online with CompuServe.

DVgate™

Sony Electronics Inc. (<http://www.sony.com/pcsupport/>)

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

Easy CD Creator™ (On selected models)

Roxio, Inc. (<http://www.roxio.com/en/support/>)

Easy CD Creator lets you make your own data, audio and multimedia CDs. You can back up your important files to CD, and read them back on standard CD-ROM drives. Create your own audio CDs right on your desktop, and play them back on your home or car stereo CD player. You can make your own personalized color jewel case inserts with custom text and graphics. You can even make backup copies of your existing CDs. The Easy CD Creator Wizard makes creating your own custom CDs a simple process.

Microsoft® Word

Microsoft Corporation (<http://www.sony.com/pcsupport/>)

Microsoft Word makes it easy to create shared 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 simple to create multilingual documents.

MovieShaker™

Sony Electronics Inc. (<http://www.sony.com/pcsupport/>)

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. (See "MovieShaker" in the online VAIO® Notebook User Guide for more information.)

* i.LINK is a trademark of Sony used 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. Please 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.

Netscape Communicator®

Netscape Communications Corporation (<http://help.netscape.com/>)

Netscape Communicator is an all-in-one Internet tool that makes it easy to browse the web, send Internet e-mail, chat, read newsgroups, and compose great Web documents.

Norton AntiVirus™

Symantec Corporation (<http://www.symantec.com/techsupp/>)

Norton AntiVirus is the world's leading anti-virus software. Just install it and forget it. It's always working in the background to protect your PC, and now it automatically updates its virus definitions when you're connected to the Internet. It also scans files you download from the Web, as well as attachments you get through e-mail.

OpenMG™ Jukebox (Windows Me only)

Sony Electronics Inc. (<http://www.sony.com/pcsupport/>)

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.

PictureGear™

Sony Electronics Inc. (<http://www.sony.com/pcsupport/>)

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. (See "PictureGear" in the online VAIO® Notebook User Guide for more information.)

PowerPanel

Sony Electronics Inc. (<http://www.sony.com/pcsupport/>)

The PowerPanel utility controls the power management of your notebook and provides key information about system activity and battery life. Automatic power management selects the most appropriate profile, depending on the application with which you are working and the conditions of use. See PowerPanel Help on your notebook for more information.

Prodigy Internet®

Prodigy Communications Corporation (<http://www.prodigy.com/>)

An online service that helps you find what you need online faster and smarter. Prodigy delivers powerful online content such as sports scores, stock quotes, news, and easy access to Excite, plus quality customer service, all at a competitive price.

Quicken® 2001

Intuit, Inc. (<http://www.intuit.com/support/>)

Quicken is a fast, easy way to organize your finances. Quicken works just like your checkbook, so it is easy to learn and use. Quicken manages all your finances, bank accounts, credit cards, investments, and loans. You can even pay your bills online.

QuickTime™

Apple Computer Inc. (<http://www.apple.com>)

QuickTime is the Apple technology that makes video, sound, music, 3D, and virtual reality come alive for your Internet browser and Windows.

RealJukebox®

RealNetworks Inc. (<http://service.real.com/rjoptions.html>)

RealJukebox is one of the world's most widely used personal music management systems. Using RealJukebox, you can capture the contents of a music CD, manage and play back your music and view various music related information via the Internet. This custom RealJukebox for Sony allows seamless check-out capabilities to a wide range of Sony personal audio devices, and offers convenient links to Sony product and music service home pages.

RealPlayer®

RealNetworks Inc. (<http://service.real.com/rjoptions.html>)

RealPlayer is the RealNetworks video and audio player which let you access 2, 500 radio stations featuring music, news, and sports.

RealProducer® G2

RealNetworks Inc. (<http://service.real.com/rjoptions.html>)

RealProducer converts your audio and video files, or live feeds, into RealAudio and RealVideo for the Internet or your intranet. RealProducer is easy to use, gives you better control over your content, and is packed with exclusive features. Featuring support for CD-quality RealAudio 8 and VHS-quality RealVideo 8, RealProducer is an excellent choice for both beginners and pros.

Smart Capture

Sony Electronics Inc. (<http://www.sony.com/pcsupport/>)

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 that you can save or share via e-mail. A smart solution to computer, digital audio/video, and network convergence.

Smart Connect (Windows 2000 only)

Sony Electronics Inc. (<http://www.sony.com/pcsupport/>)

Smart Connect allows you to use an i.LINK cable to connect your VAIO Notebook to another VAIO computer that supports Smart Connect. You can then use one computer to copy, delete, and edit files on the other computer. You can also print from a printer attached to either computer.

Sound Forge® XP (On selected models)

Sonic Foundry, Inc. (<http://www.sonicfoundry.com>)

Sound Forge XP allows you to put powerful audio processing tools and effects to work on your desktop. Simply cut, copy, and paste your way to striking multimedia files for use in everything from Web pages to desktop presentations.

VAIO Action Setup

Sony Electronics Inc. (<http://www.sony.com/pcsupport/>)

VAIO Action Setup manages the settings for your notebook's Shortcut keys and i.LINK interface.

VAIO Support Agent

Sony Electronics Inc. (<http://www.sony.com/pcsupport/>)

VAIO Support Agent provides immediate, interactive, on-line support. See "VAIO Support Agent" on page 59 for more information.

WinDVD®

InterVideo, Inc. (<http://www.intervideo.com/jsp/Support.jsp/>)

WinDVD is a simple-to-use DVD player combining all the features you would expect to find in a standard consumer DVD player, in addition to some very advanced functionality, such as full VCD 2.0 support, full precision video decode, a choice of user interfaces, and video display options. You can play DVD titles or Video CDs. WinDVD automatically determines the type of disc in the optical disc drive and uses the correct playback method.

Using Your Recovery CDs

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

Using the Application Recovery CD(s)


The Application Recovery CD utility enables 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 “Using the System Recovery CD(s)” on page 40 for more information.

You can also use the Application Recovery CD to install Windows drivers on your notebook.

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


To use the Application Recovery CD(s)

- 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 disc 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.

Using the Driver Recovery CD

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

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

To use the Driver Recovery CD(s)

- 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. Use My Computer or Windows Explorer to view the contents of the Driver Recovery CD. Select the appropriate driver.

To repair software applications using VAIO Support Agent

The Driver Recovery CD utility has an information vault that contains the original characteristics for the preinstalled software applications that are protected by VAIO Support Agent. See “VAIO Support Agent” on page 59 for instructions on how to fix your software problems.

Using the System Recovery CD(s)



This CD restores your notebook to its original state, so user data and applications will be lost.

You can use the System Recovery CD(s) to format the C:\ partition of the hard disk drive, then 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 “Using the Application Recovery CD(s)” on page 39 to reinstall individual applications or see “Using the Driver Recovery CD” on page 40 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.**

The System Recovery utility gives you Full Restore with Format. That is, it formats the hard disk drive, then restores all the original software.

Full Restore with Format removes all the information on the hard disk drive. You will lose any software you have installed and any other files you have created since you started to use your notebook. This means you will have to reinstall any applications that were not included with the notebook when you purchased it. If you have any questions on using the System Recovery CD, contact Sony Customer Support.


To use the System Recovery CD(s)

- 1 Insert the Sony System Recovery CD in the optical disc drive.
- 2 Shut down your notebook as described in the “Shutting Down Your Notebook” on page 24.
- 3 Wait four seconds and turn on your notebook.
- 4 Click OK to signify you have read and accept the Microsoft End-User License Agreement.
- 5 When the System Recovery menu appears, follow the on-screen instructions to complete the recovery process.

If your notebook does not start from the Recovery CD

- 1 Press the power button and hold it for more than four 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 Check that “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 Check that “Yes” is selected, then press Enter. The notebook restarts from the Recovery CD.

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

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

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

Troubleshooting

You may encounter common problems when using your Sony VAIO® Notebook. Since many problems have simple solutions, try the suggestions provided in this chapter before you contact Sony PC Support (<http://www.sony.com/pcsupport>). This chapter provides you with information on the following topics:

- ❑ Troubleshooting the Notebook
- ❑ Troubleshooting the LCD Screen
- ❑ Troubleshooting the Mouse and Touchpad
- ❑ Troubleshooting Drives, PC Cards, and Peripheral Devices
- ❑ Troubleshooting Software
- ❑ Troubleshooting the Modem
- ❑ Troubleshooting Audio
- ❑ Troubleshooting the Printer

Troubleshooting the Notebook

(Windows Me only) When starting your notebook for the first time, the VAIO InitManager dialog box will appear. Please select “OK” to begin initial setup. If you do not execute the initial setup, you cannot use part of VAIO original hardware functions such as Power Management tool, scroll function of touchpad, and keyboard shortcut functions combined with the Fn key.


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 front panel of the notebook indicates that the power is on.
- ❑ Check that the battery packs are inserted properly and that they are charged.
- ❑ If you have connected an external, optional 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 the “Connecting a Power Source” section of the printed Quick Start.
- ❑ If you plugged the notebook into a power strip or Uninterruptible Power Supply (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.
- ❑ Condensation may cause the notebook to malfunction. If this occurs, do not use it for at least one hour.
- ❑ Take the battery pack off the notebook, unplug the power cord, plug it in again, then turn on the power.

My notebook starts but a BIOS error appears.

- ❑ When the internal backup battery is low on power, it may not start your system properly. The message, “Press <F1> to resume, <F2> to setup” appears at the bottom of the screen. Follow these steps:
 - 1 Press F2. The BIOS Setup menu appears.
 - 2 Set the date (month/day/year). Press Enter.
 - 3 Press ↓ to select System Time, then set the time (hour: minute: second). Press Enter.

- 4 Press **→** to select Exit, then press **↓** to select Get Default Values. The message “Load default configuration now?” appears.
- 5 Select Yes and press Enter.
- 6 Select Exit (Save Changes), and then press Enter. The message “Save Configuration changes and exit now?” appears.
- 7 Select Yes, and then press Enter. The notebook restarts.

 If this occurs on a regular basis, contact Sony PC 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 an external, optional floppy disk drive, make sure there is no floppy disk in the floppy disk drive (non-bootable).
- ❑ If a non-bootable floppy disk is in a connected floppy disk drive, follow these steps:
 - 1 Turn off the notebook, and then remove the floppy disk.
 - 2 Restart the notebook and confirm that Windows starts properly.
- ❑ If Windows still does not start, follow the steps below to initialize the BIOS:
 - 1 Turn off the notebook.
 - 2 Remove any peripheral devices connected to the notebook.
 - 3 Turn the notebook back on.
 - 4 Press the F2 key when the Sony logo appears. The BIOS setup menu screen appears.
 - 5 Press the arrow keys to select the Exit menu.
 - 6 Press the arrow keys to select “Get Default Values” and then press Enter. The message “Load default configuration now?” appears.
 - 7 Select Yes, then press Enter.
 - 8 Use the directional arrow keys to select “Exit” (Save Changes), and then press Enter. The message “Save configuration changes and exit now?” appears.
 - 9 Select Yes, then press Enter. 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 “Using the System Recovery CD(s)” on page 40 for more information.



The System Recovery CD restores your notebook to its original state, so user data and applications will be lost.

My notebook stops responding or does not shut down.

It is best to shut down your notebook using the Shut Down command on the Windows Start menu. Using other methods, including those listed here, may result in loss of unsaved data.

- ❑ Try restarting the notebook. On the Windows taskbar, click the Start button, click Shut Down, and then click Restart.
- ❑ (Windows Me) If you cannot restart as described in the preceding step, you can restart the notebook by pressing Ctrl+Alt+Delete simultaneously twice. (Windows 2000) If you cannot restart as described in the preceding step, you can restart the notebook by pressing Ctrl+Alt+Delete simultaneously and clicking Shut Down on the Windows Security screen.
- ❑ If the previous step does not work, press and hold the power button for at least four seconds. This turns off the power.
- ❑ (Windows Me) If your notebook stops responding while playing a CD or DVD, stop the CD/DVD, and restart the notebook by pressing Ctrl+Alt+Delete simultaneously twice. (Windows 2000) If your notebook stops responding while playing a CD or DVD, stop the CD/DVD, and restart the notebook by pressing Ctrl+Alt+Delete simultaneously and clicking Shut Down on the Windows Security screen.
- ❑ Unplug the notebook from the AC adapter and remove the battery pack from your notebook.



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


My notebook does not enter the power saving mode I selected. (Windows Me only)

- ❑ Click Start, point to Program, point to Accessories, point to System Tools, and then click System Information.
The Help and Support window appears.
- ❑ Click System Configuration Utility under the Tools menu.
- ❑ Click the Advanced button on the General tab, and Confirm the following information:
 - 1 Enable Deep Sleep is selected with a checkmark.
 - 2 The message “Standby function is enabled” is displayed. If the message reads “Standby function is disabled,” click the Enable button.
 - 3 The message “Hibernate feature is enabled” is displayed. If the message reads “Hibernate feature is disabled,” click the Enable button.
 - 4 Click OK and restart your notebook.

The power management setting is not responding.

Your notebook’s operating system may become unstable if it is interrupted or if you attempt to make changes before the notebook completely enters a lower power state, such as Hibernate.

- ❑ To restore the notebook to its normal operating stability:
 - 1 Close all open applications.
 - 2 Restart the notebook by pressing Ctrl+Alt+Delete simultaneously and selecting Restart from the drop-down list.

 If this procedure does not work, press and hold the power button for four seconds or longer to shut down the notebook.

The sound of my notebook’s fan is too loud.

Use the PowerPanel utility to change the Thermal Control Strategy setting to Quiet. This setting slows down the CPU speed. See PowerPanel Help for more information.

Troubleshooting the LCD Screen

My LCD screen is blank.

- Check that the notebook is plugged into a power source and that it is turned on.
- Check that the power indicator on the notebook is on.
- Check that the battery pack is inserted properly and that it 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 F7 several times.

My LCD screen continues to show the previous screen.

Press the Windows key and D twice to refresh the screen.

The image on my connected external display is not centered or sized properly.

Use the controls on your external display to adjust the image. See the manual that came with your display for more information.

I want to change the video resolution of my display.

Follow this procedure to change the video resolution of your display.

- Click Start, point to Settings, point to Control Panel, and then click the Display icon.
The Display Properties dialog box appears.
- Click on the Settings tab.
- Move the Screen Area slider to change your video resolution.

I cannot switch the LCD display to TV, and vice versa.

Remove the DVD if it is inserted in the optical disc drive.

Troubleshooting the Mouse and Touchpad

My mouse does not work.

- ❑ If you are using an external mouse, check that the mouse is plugged into the mouse connector. See “Connecting a PS/2 External Mouse or Keyboard” in the online VAIO® Notebook User Guide for more information.
- ❑ If you are using an optional Sony USB mouse PCGA-UMS1 series, check that the mouse is plugged into the USB port.
- ❑ If you are still experiencing problems, use your supplied Driver Recovery CD to reinstall the mouse drivers. See “Using the Driver Recovery CD” on page 40 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 Press the Windows key and use the arrow keys to select Programs, and then Sony Notebook Setup.
 - 2 Select the Touchpad tab using the arrow keys.
 - 3 Select Enable Touchpad, and then press Enter.(Please check the instructions that came with your notebook.)
- ❑ You must restart the notebook to make the touchpad work again.
- ❑ If your touchpad is interpreting a single tap as a double-click, you must adjust the button assignments. Follow these steps:
 - 1 Press the Windows key and use the arrow keys to select Control Panel, and then Mouse.
 - 2 Change the button assignments in the Mouse Properties dialog box. (One of the buttons is assigned to the double-click action.)
- ❑ If you are still experiencing problems, ensure that another mouse was not installed.
- ❑ You may need to use your Driver Recovery CD to reinstall the mouse drivers. See “Using the Driver Recovery CD” on page 40 for more information.

The pointer does not move while using the Touchpad or Mouse.

- ❑ Press the Windows key and use the arrow keys to select Shut Down. When the Shut Down Windows dialog box appears, press Enter.
- ❑ (Windows Me) If you cannot turn off your notebook as described in the step above, press Ctrl+Alt+Delete simultaneously to restart the notebook.
(Windows 2000) If you cannot turn off your notebook as described in the step above, press Ctrl+Alt+Delete simultaneously and click Shut Down on the Windows® Security screen to restart the notebook.
- ❑ If you cannot restart your notebook as described in the step above, press and hold the power button for more than four seconds to turn off the notebook.
- ❑ If the pointer does not move while playing a disc, press Ctrl+Alt+Delete simultaneously to stop playback and restart the notebook.
- ❑ If you are still experiencing problems, ensure that another mouse was not installed.
- ❑ You may need to use your supplied Driver Recovery CD to reinstall the touchpad or mouse drivers. See “Using the Driver Recovery CD” on page 40 for more information.

Troubleshooting Drives, PC Cards, and Peripheral Devices

My floppy disk drive (optional) cannot write to a floppy disk.

- ❑ Check that the optional, external floppy disk drive is properly connected to your notebook. See “Connecting an External Floppy Disk Drive” in the online VAIO® Notebook User Guide for more information.
- ❑ If the floppy disk is write-protected, disable the write-protect feature or use a floppy disk that is not write-protected.

My optical disc drive is not playing my CD or DVD properly.

- ❑ Check that the label of the disc is facing up.
- ❑ If the disc requires software, check that the software is installed according to the manufacturer’s instructions.
- ❑ A dirty or damaged disc may cause the notebook to stop responding while it tries to read the disc. If necessary, restart the notebook, remove the disc, and then check it for dirt or damage.
- ❑ If you see video but can not hear audio, check all of the following:
 - ❑ Check that your optical disc drive does not have the mute setting enabled.
 - ❑ Check the volume setting in the audio mixer.
 - ❑ If you are using external speakers, check the volume settings, and then check the connections between your external speakers and the notebook.
 - ❑ Click Start, then Control Panel, then System, and then Device Manager. Check that the correct drivers are installed properly.
- ❑ Do not use adhesive labels to identify the CD. The label may come off while the disc is in use in the optical disc drive and cause the drive to malfunction.
- ❑ If a region code warning appears when you try to use your optical disc drive, it may be that the DVD you are trying to play is incompatible with the optical disc drive. Check the region code listing on the DVD packaging.
- ❑ Condensation may cause the notebook to malfunction. If this occurs, do not use it for at least one hour.

My optical disc drive tray does not open.

- ❑ Check that the notebook is turned on.
- ❑ Press the Eject button on the optical disc drive.
- ❑ If the Eject button does not work, open the tray by inserting a sharp, pointed object (such as a paper clip) in the hole to the right of the Eject button.

I cannot use Digital Video (DV) devices. The message “DV equipment seems to be disconnected or turned off” appears.

- ❑ Check that the DV device is turned on and that the cables are properly connected.
- ❑ If you are using multiple i.LINK®* devices, the combination or order of the devices may be causing the problem. In this case, turn off your notebook and all connected devices. Disconnect the devices that are not in use. Check the connections for each device, then restart your notebook.

My PC Card is not working.

- ❑ Check that the PC Card is installed properly.
- ❑ Check that the PC Card is compatible with Microsoft® Windows®.
- ❑ Use the Sony Notebook Setup utility to disable devices you are not currently using.
- ❑ If you are using two PC Cards, use the Sony Notebook Setup utility to disable the devices you are not currently using.
- ❑ Check that any necessary drivers were installed properly. See “Using the Driver Recovery CD” on page 40 for more information on installing the drivers.

* i.LINK is a Sony trademark used 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 connector 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.

Troubleshooting Software

My software program stops responding or crashes.

Contact the software publisher or designated provider for technical support. Refer to “Using the System Recovery CD(s)” on page 40 for more information.

When I click an application icon, the message “You must insert the application CD into your optical disc drive” appears and the software does not start.

- Some titles require specific files that are located on the application CD. Insert the disc and try starting the program again.
- Make sure you place the CD in the tray with the label side facing up.

I cannot use the DVgate software.

If your notebook is using the Ultimate Battery Life profile for its power saving mode, you cannot use DVgate or Smart Connect software. Please select another profile. Preferably, connect your notebook to AC power when using these features.

Troubleshooting the Modem

My modem does not work.

- ❑ Check that the phone line is plugged into the line jack. See “Connecting a Phone Line” in the online VAIO® Notebook User Guide for more information.
- ❑ Check that the phone line is working. You can check the line by plugging in an ordinary phone and listening for a dial tone.
- ❑ Check that the phone number the program is dialing is correct.
- ❑ Check that the software you are using is compatible with the notebook’s modem. (All preinstalled Sony programs are compatible.)
- ❑ If you are still experiencing problems, use your supplied Driver Recovery CD to reinstall the modem drivers. See “Using the Driver Recovery CD” on page 40 for more information.

My modem connection is slow.

Your notebook is equipped with a V.90/K56flex-compatible modem. Many factors may influence modem connection speed, including telephone line noise or compatibility with telephone equipment (such as fax machines or other modems). If you think your modem is not connecting properly to other PC-based modems, fax machines, or your Internet Service Provider (ISP), check the following:

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

Troubleshooting Audio

My speakers make no sound.

- ❑ If the built-in speakers are turned off, press Fn+F3 to turn on the speakers. You can also turn on the speakers using the center Jog Dial control.
- ❑ If the speaker volume is turned to the minimum, press Fn+F4, and then press ↓ or → to increase the volume or you can use the center Jog Dial™ control to control the volume.
- ❑ If nothing is displayed when you press Fn+F3 or Fn+F4.
 - 1 Double-click System in Control Panel.
 - 2 Set the sound device to enable in Device Manager.
- ❑ If your notebook is powered by batteries, check that the battery packs are inserted properly and that they are charged.
- ❑ If you are using an application that has its own volume control, check that the volume is turned up.
- ❑ Check the volume controls in the Windows® taskbar.
- ❑ If you connect external speakers, check that the speakers are properly connected and the volume is turned up. If the speakers have a mute button, make sure it is off. If the speakers are powered by batteries, check that the batteries are inserted properly and that they are charged.
- ❑ If you have connected an audio cable to the Headphone jack, disconnect the cable.
- ❑ If you are still experiencing problems, use the supplied Driver Recovery CD to reinstall the drivers. See “Using the Driver Recovery CD” on page 40 for more information.

My microphone does not work.

If you are using an external microphone, check that the microphone is plugged into the Microphone jack. See “Connecting an External Microphone” in the online VAIO® Notebook User Guide for more information.

Troubleshooting the Printer

I cannot print.

- ❑ The default setting for the printer port mode is correct for most printers. If you cannot print, try changing the printer port mode. In Sony Notebook Setup, select the Printer tab. If the printer port mode is set to ECP, change it to bi-directional. If the printer port mode is set to bi-directional, change it to ECP. See “Displaying the Sony Notebook Setup Screen” in the online VAIO® Notebook User Guide for details on using Sony Notebook Setup.
- ❑ Your connected printer may not function after the notebook resumes from a power saving mode. If this occurs, follow these steps to reset the printer connection:
 - ❑ Windows Me Only
 - ❑ Right-click the My Computer icon on the desktop, then select Properties.
 - ❑ Click the Device Manager tab.
 - ❑ Select Refresh, then click OK. The printer should function properly.
 - ❑ Windows 2000 Only
 - ❑ Double-click the My Computer icon on the desktop, then double-click on the Control Panel folder.
 - ❑ Double-click on the Printers folder.
 - ❑ Right-click the printer icon that is not functioning, and select Properties to access the Properties window.
 - ❑ Click OK to close the Properties window. The printer should function properly.

Getting Help

Sony provides you with several support resources to answer questions about your Sony VAIO® Notebook or the preinstalled software. In this chapter, you will find information on where to find and use the resources available to you:

- Support Options
- VAIO Support Agent

Support Options

If you have questions about your notebook or the preinstalled software, refer to the following resources for answers in the sequence listed below.

1 **VAIO® Notebook User Guide**

This 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. To access the online user guide, click Start on the Windows® taskbar, select Help Center and VAIO Documentation. The quick start is supplied with your notebook.

2 **Software Manuals and Online Help Files**

The software preinstalled on your notebook may come with an online manual. These manuals are stored on the hard disk drive as online help files. You can find the help files from the Help menu under the specific software application. Some software applications may come with a printed manual.

3 **Operating System Online Support**

Your notebook comes preinstalled with Microsoft® Windows®. For operating system support, you can access Microsoft® customer support at <http://support.microsoft.com/directory/>.

4 **VAIO Support Agent**

You can find VAIO Support Agent 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.

5 **Sony PC Support**

This service 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 Sony PC Support at: <http://www.sony.com/pcsupport>.

6 **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: 1-888-4SONYPC (1-888-476-6972).

7 **Sony Customer Support**

Software support is available free of charge for 90 days after the original date of purchase. You can call and speak with a Sony Customer Support Representative without using your notebook by calling: 1-888-4SONYPC (1-888-476-6972).

VAIO Support Agent

VAIO Support Agent helps you repair your own software problems without the assistance of a support analyst. VAIO Support Agent's advanced diagnostic technology identifies and tracks characteristics of your software applications and basic network settings. These diagnostics protect and store information in a retrievable format that enables you to restore your software to a previous working state. Sony has identified the software items that are protected by the VAIO Support Agent utility.

VAIO Support Agent has three features to help you fix your software problems: Quick Fix Wizard, Common Solutions, and Support Central. This section briefly describes these three features, and the automatic update capability of the VAIO Support Agent.

VAIO Support Agent main window




Using the Quick Fix Wizard

The VAIO Support Agent records and maintains a history of the VAIO Support Agent protected applications by taking a “snapshot” of the application at regular, timed intervals and storing it for future use. Should a problem develop with one of the protected applications, you can use the Quick Fix Wizard feature to retrieve the date/time (snapshot) that was recorded when the application worked correctly. The Quick Fix Wizard repairs the protected application files without altering the data files you have created using the application.

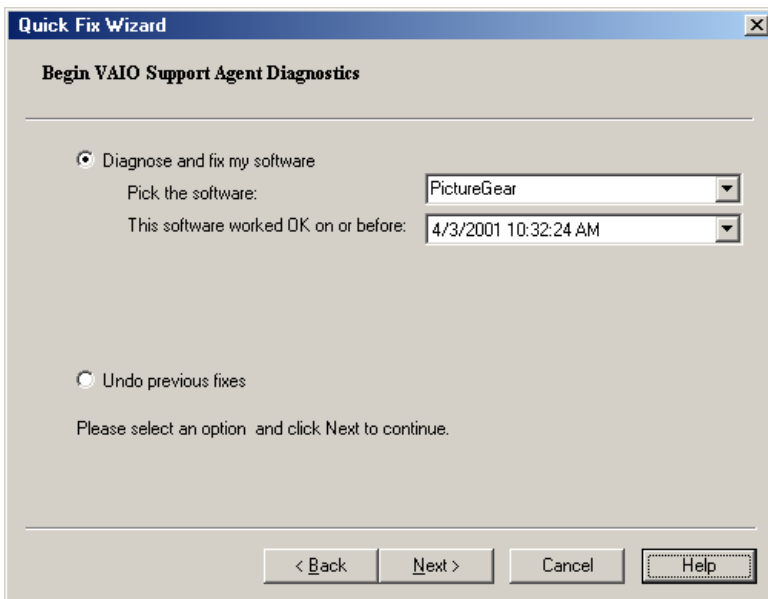
To use the Quick Fix Wizard, follow these steps:

- 1 From the VAIO Support Agent main window, click the Quick Fix Wizard button. The Welcome window appears.
- 2 Click Next. The “Quick Fix Wizard: Begin VAIO Support Agent Diagnostics” dialog box appears.
- 3 Select the “Diagnose and fix my software” option.
- 4 Select the software you wish to repair from the drop-down list.

 To view a list of software applications protected by VAIO Support Agent, click on the “Pick the software:” drop-down list.

- 5 Next, select a date/time from the drop-down list that corresponds to the last time when the software worked properly.
- 6 Click Next to continue. Follow the instructions on the screen.

Quick Fix Wizard: Begin VAIO Support Agent Diagnostics dialog box

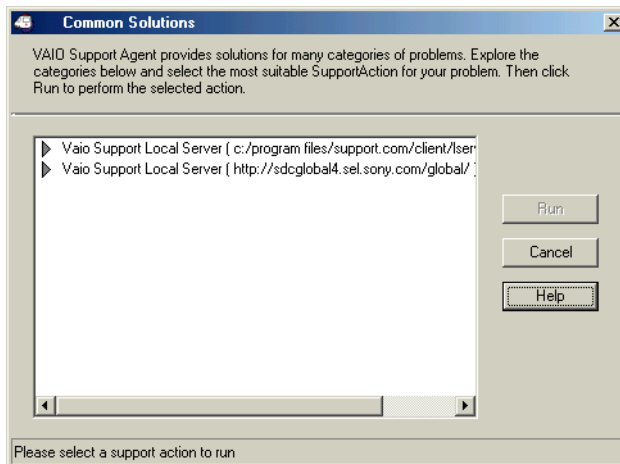



Using Common Solutions

Common Solutions offers automated, One-Click Fixes to repair common software problems. These solutions can integrate information such as knowledge base articles and Frequently Asked Questions (FAQs). You can run One-Click Fixes directly from VAIO Support Agent or from a Web browser.

- 1 Click the Common Solutions button. The Common Solutions dialog box appears.
- 2 Double-click on the desired category to expand and view available SupportActions.
 - ❑ VAIO Support Local Server (C:/program files/support.com...) provides a list of SupportActions available on your computer's hard disk drive.
 - ❑ VAIO Support Local Server (<http://sdcglobal4.sel.sony.com>...) provides a list of SupportActions available from the Internet.

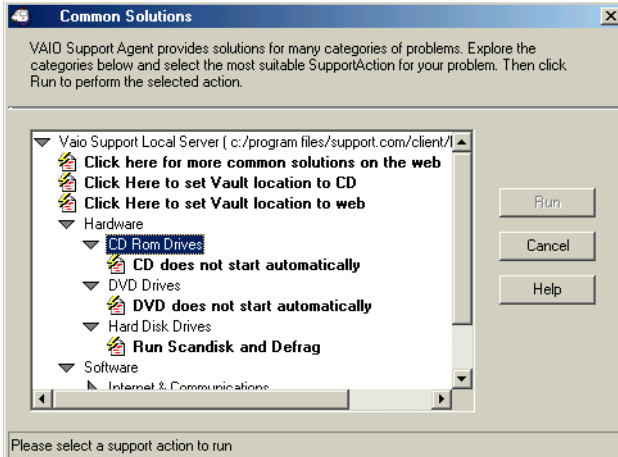
Common Solutions dialog box (1st level)




-  Connect to the Internet before attempting to view the category, “Vaio Support Local Server (<http://sdcglobal4.sel.sony.com>...)”. This category is unavailable without an Internet connection.

- 3 Click the resize arrows next to the SupportAction categories to expand or collapse the categories.

Common Solutions dialog box (2nd level)



- 4 Select the appropriate SupportAction from the list.
- 5 Click Run or double-click the desired SupportAction. The available SupportActions are shown in bold type.

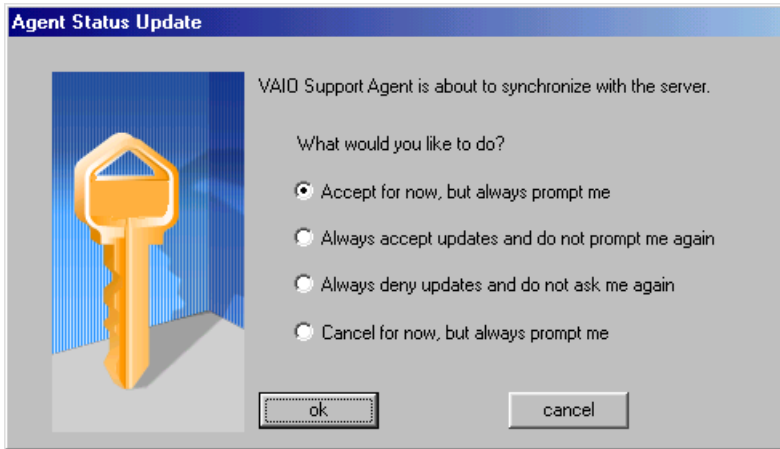
 You cannot undo One-Click Fixes.

About Automatic Updates

The VAIO Support Agent is dormant as a background process. Every 24 hours, the Agent self-activates to contact the Sony Support Server to check for new updates or fixes needed for your system. This updating action only occurs while you are connected to the Internet and when more than 24 hours has passed since the last update.

Each time the VAIO Support Agent prepares to check for updates, the Agent Status Update dialog box appears and asks you to respond, unless you have previously selected the option, “Always accept updates and do not prompt me again.”

Agent Status Update





You can choose from four response options:

- Give the Agent your permission to contact the Sony Support Server for any updates or fixes that are available specifically for your computer. The Agent continues to prompt you for your permission to retrieve updates.
- Give the Agent your permission to contact the Sony Support Server for any updates or fixes that are available specifically for your computer. The Agent automatically retrieves updates without further prompting.
- Deny the Agent your permission to contact the Sony Support Server for any updates or fixes. The Agent discontinues any update retrieval and does not prompt again for your permission to update.
- Deny the Agent your permission to contact the Sony Support Server for the current update or fix. The Agent discontinues the current update retrieval, but prompts again for your permission for the next scheduled update.

Update Notification

Once you have granted permission for the system to check for updates or fixes, the Agent contacts the Sony Support Server. Available updates or fixes may be displayed to you in one of two ways. An update or fix may be displayed in a window with an explanation and instructions to follow. Others will cause the

ambulance icon  on your task tray to blink. You should always check the ambulance icon in the task tray after the system checks for updates. If the icon is blinking, double-click the ambulance icon to view the update.

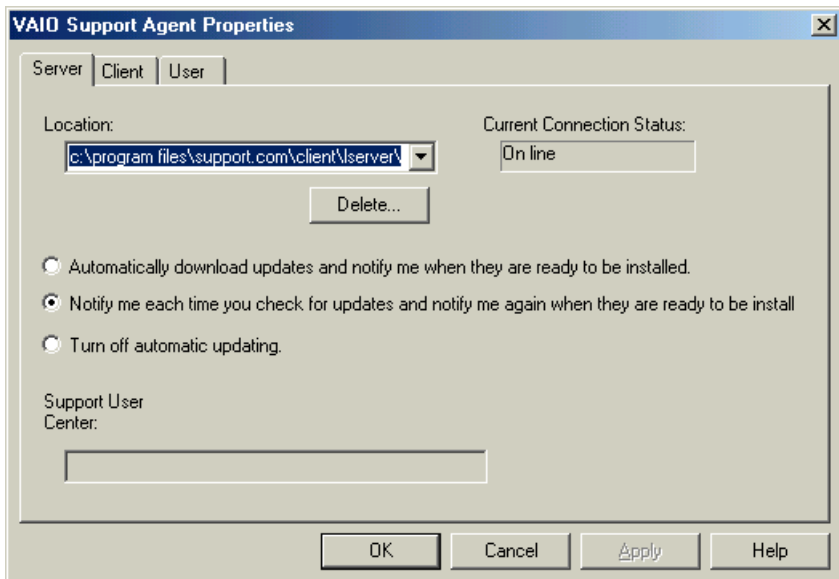
 When clicking on the flashing ambulance icon, you must be connected to the Internet to receive an update.

VAIO Support Agent Properties

To control the VAIO Support Agent automatic update feature, follow these steps:

- 1 In the VAIO Support Agent main screen, select Tools, then select Properties. The VAIO Support Agent Properties dialog box appears.
- 2 Select one of three options to customize the automatic update feature.
- 3 Click OK.


VAIO Support Agent Properties window



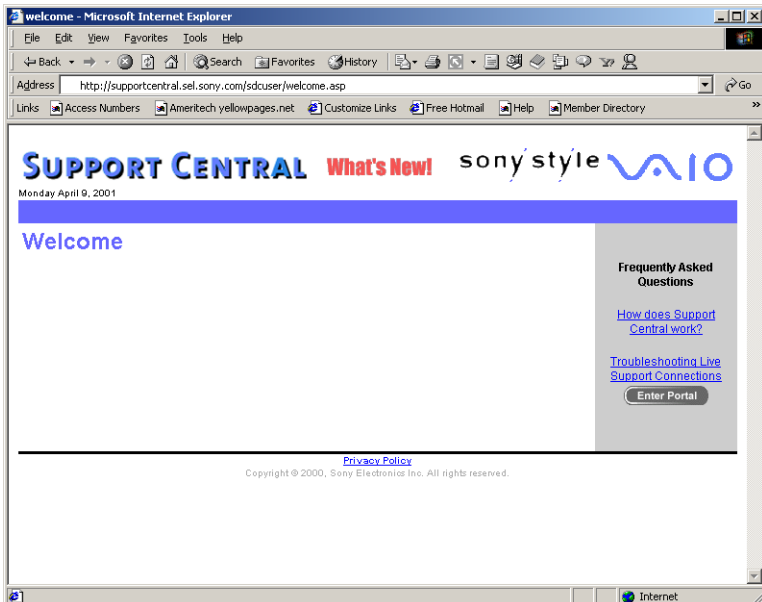
Using Support Central

The Support Central feature uses Internet resources to help you fix your software. Support Central searches the Internet for answers to your questions, additional information from knowledge base systems, and the latest software updates for your protected software. Support Central also lets you contact live support agents for additional help.


- 1 Connect to the Internet.
- 2 From the VAIO Support Agent main window, click Support Central. The Support Central Welcome page appears.

 You must have Internet access to use Support Central.

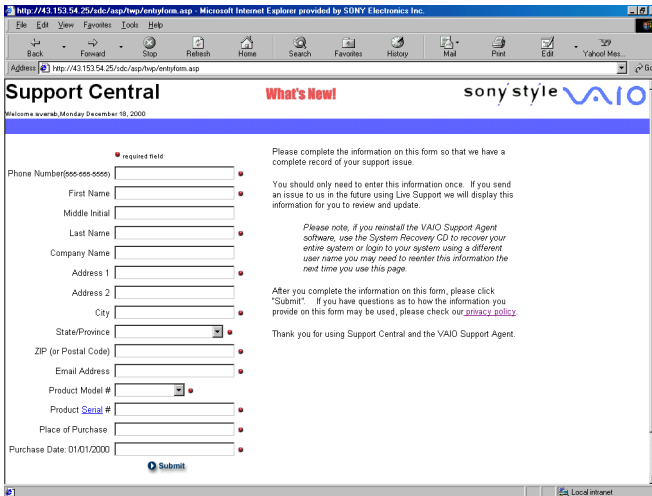
Support Central: Welcome page



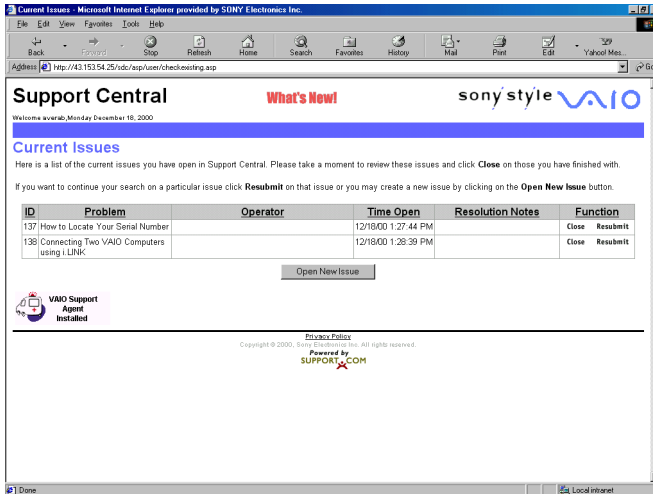
- 3 Click Enter Portal to begin using Support Central. First-time users will be asked to register with Support Central.

 Support Central retains your registration information, so you are only required to register once. If you log on to your computer with a different user name or have recovered your system using the System Recovery CDs, Support Central may require you to register again.

Support Central: Registration page

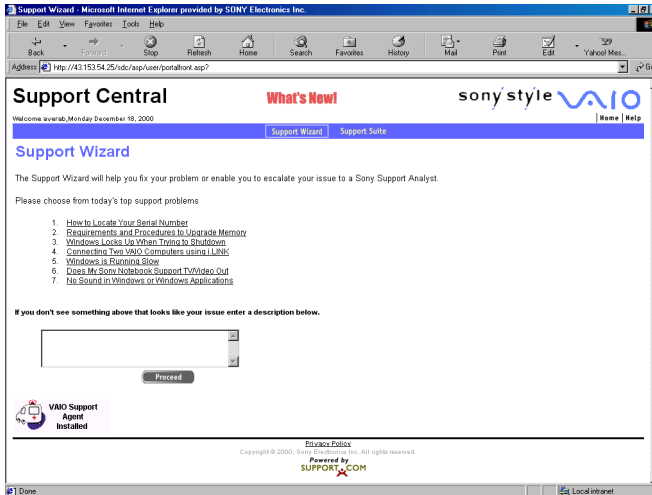


Support Central: Current Issues page




When you log on to Support Central, the Current Issues page displays, enabling you to continue working on your open issues or to close them if you are finished. Support Central has a tracking feature that stores your current issues, enabling you to return and work on them later.

Support Central: Support Wizard page



If you log on to Support Central with a new issue, or if you do not have any open issues, the Support Wizard appears. You can begin searching on the new issues.

 You must be connected to the Internet to use Support Central.

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Printed in USA

4-655-646-11



List of PCG-GR Series (As of July, 2001)

Model Name	Service Manual Part No.
PCG-GR150 PCG-GR150K PCG-GR170 PCG-GR170K	9-872-218-11

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