

# VGC-RC Series

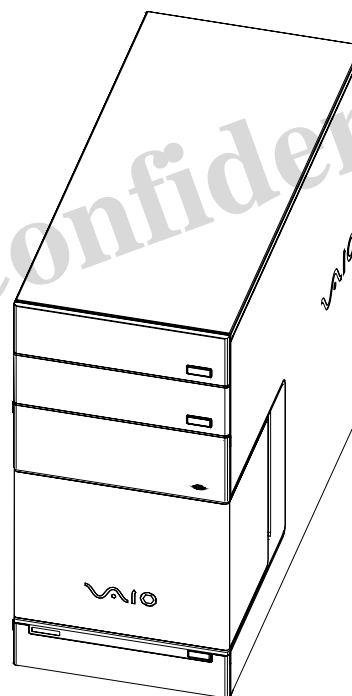
## SERVICE MANUAL

Ver. 2 2006A

### Revision History

Area	Model	Lineup
American	US Canadian	VGC-RC110G
		VGC-RC210G

⚠ [MA]



This manual and the constituent data may not be replicated, copied nor reprinted in whole or in part without prior written authorization of Sony Corporation.

- Design and specifications are subject to change without notice.

## PERSONAL COMPUTER

# SONY®

**Information in this document is subject to change without notice.**

Sony, VAIO and CLIE are trademarks or registered trademarks of Sony. Microsoft, Windows, Windows Media, Outlook, Bookshelf and other Microsoft products are trademarks or registered trademarks of Microsoft Corporation in the United States and other countries.

The word Bluetooth and the Bluetooth logo are trademarks of Bluetooth SIG, Inc. AMD, the AMD logo, other AMD product names and combinations thereof are trademarks of Advanced Micro Devices, Inc. Intel Inside logo, Pentium and Celeron are trademarks or registered trademarks of Intel Corporation. Transmeta, the Transmeta logo, Crusoe Processor, the Crusoe logo and combinations thereof are trademarks of Transmeta Corporation in the USA and other countries. Graffiti, HotSync, PalmModem, and Palm OS are registered trademarks, and the HotSync logo and Palm are trademarks of Palm, Inc. or its subsidiaries. (M) and Motorola are trademarks of Motorola, Inc. Other Motorola products and services with (R) mark like Dragomball are the trademarks of Motorola, Inc.

All other names of systems, products and services in this manual are trademarks or registered trademarks of their respective owners.

In this manual, the (TM) or (R) mark are not specified.

## CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.  
Dispose of used batteries according to the manufacturer's instructions.

## 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  $\Delta$  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 270°C.
- 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.

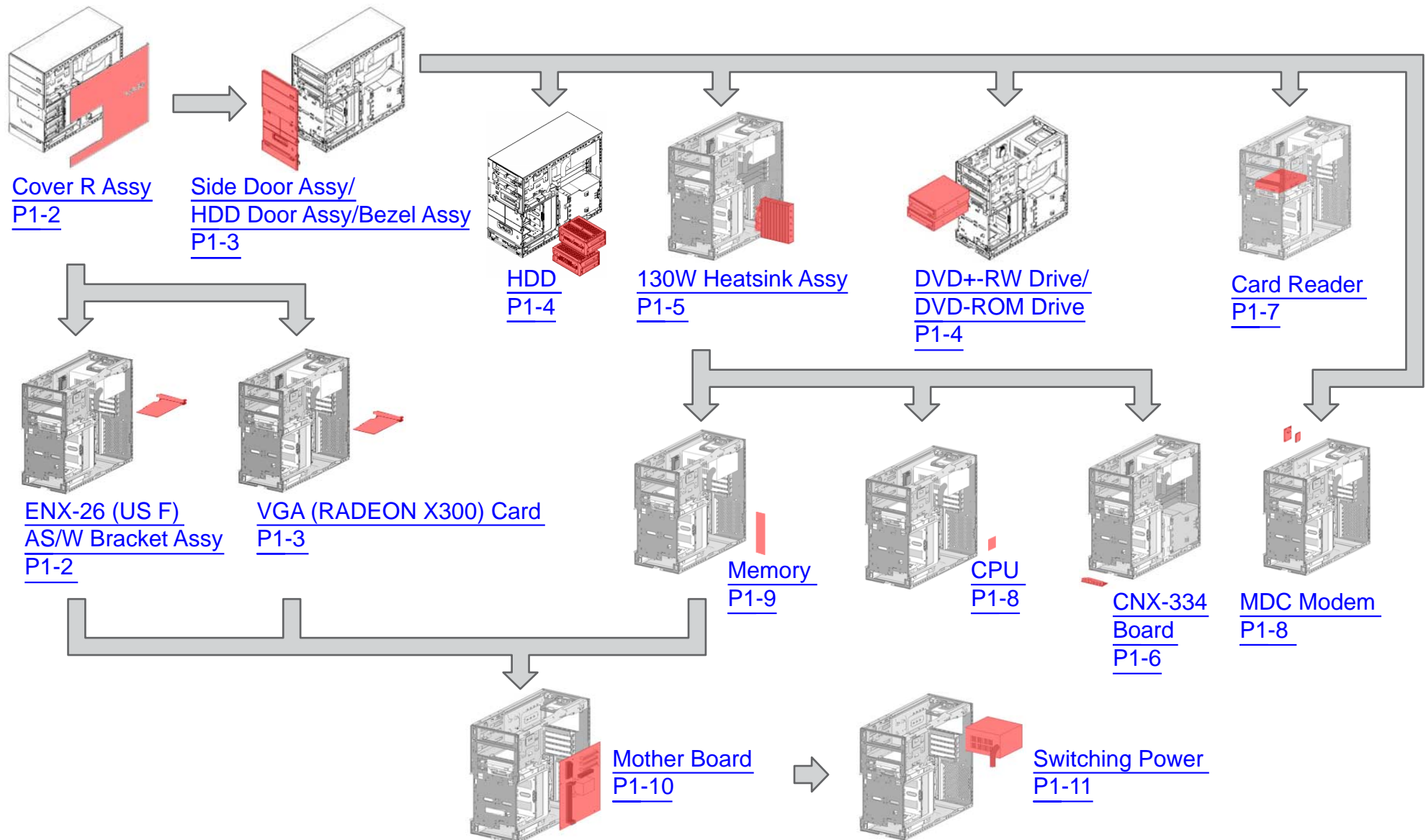
## TABLE OF CONTENTS

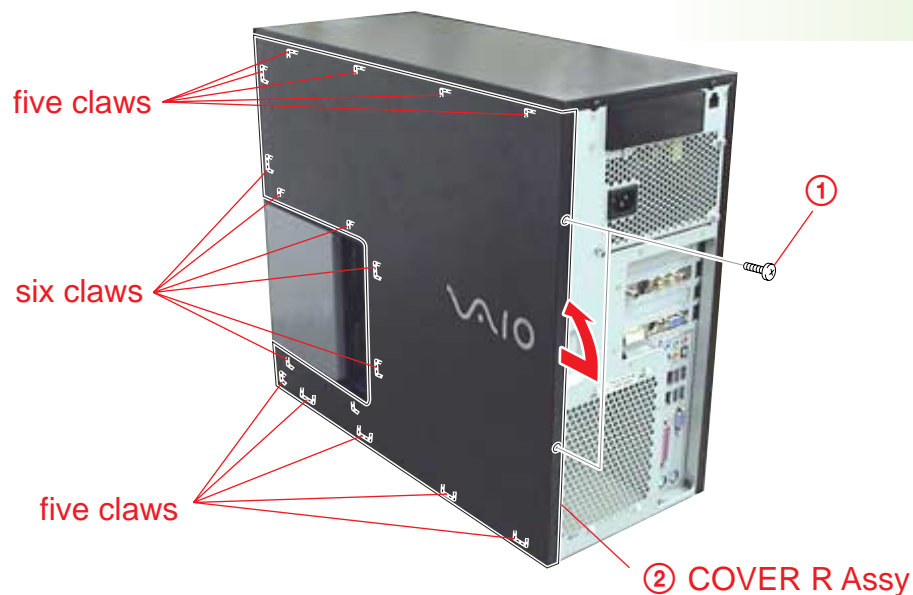
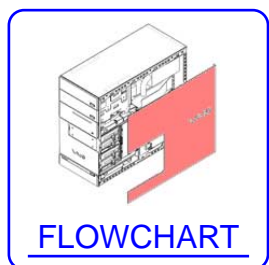
<u>Section</u>	<u>Title</u>	<u>Page</u>
<b>CHAPTER 1. DISASSEMBLY</b>		1-1
		(to 1-11)
<b>CHAPTER 2. FRAME HARNESS DIAGRAM</b>		2-1
		(to 2-1)
<b>CHAPTER 3. EXPLODED VIEWS AND PARTS LIST</b>		
3-1. Exploded View		3-1
		(to 3-4)
3-2. Parts List		3-5
		(to 3-6)

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

# CHAPTER 1. DISASSEMBLY

## FLOWCHART

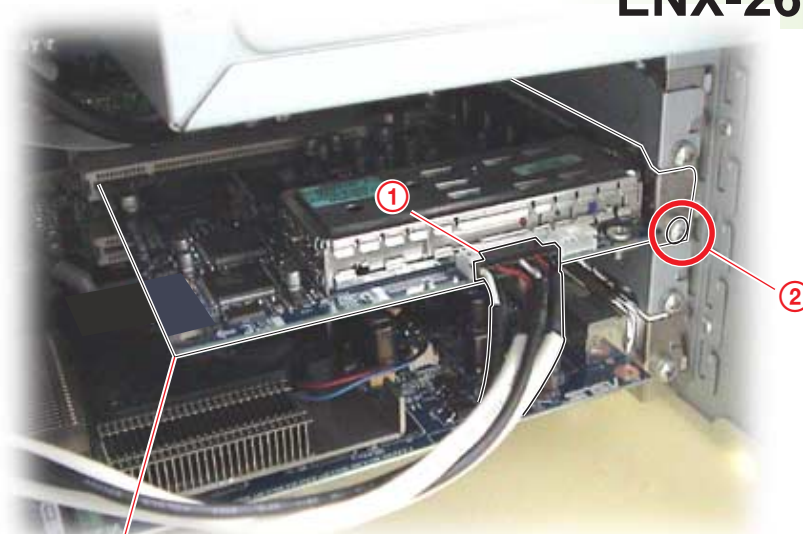
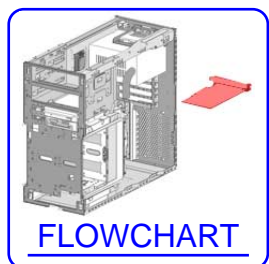
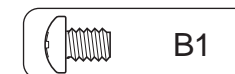




## COVER R ASSY

Procedure to remove

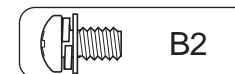
- ① Remove two screws.
- ② Remove the COVER R Assy in the direction of arrow.



## ENX-26 (US F) AS/W BRACKET ASSY

Procedure to remove

- ① Remove a connector.
- ② Remove a screw.
- ③ Remove the ENX-26 (US F) AS/W Bracket Assy.

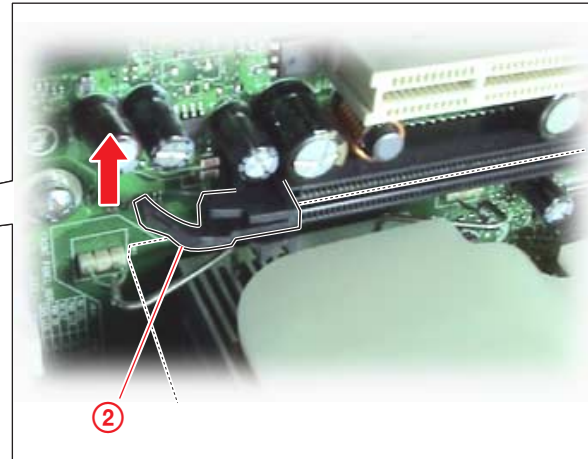
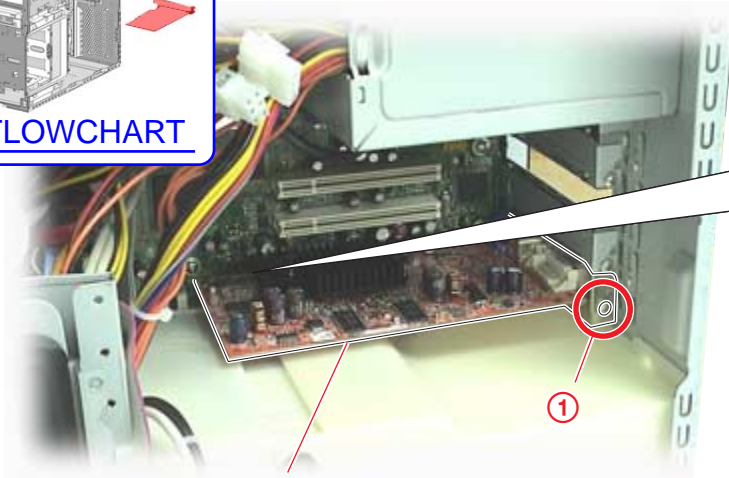
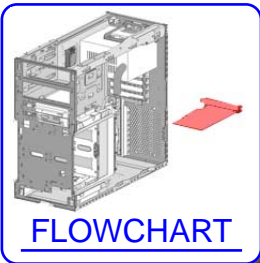


③ ENX-26 (US F) AS/W Bracket Assy

## VGA (RADEON X300) CARD

Procedure to remove

- ① Remove a screw.
- ② Lift the lever.
- ③ Remove the VGA (RADEON X300) Card.

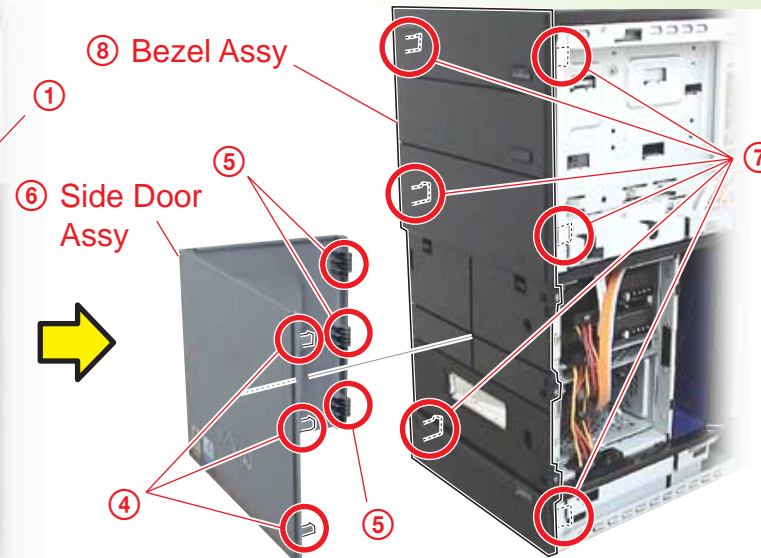
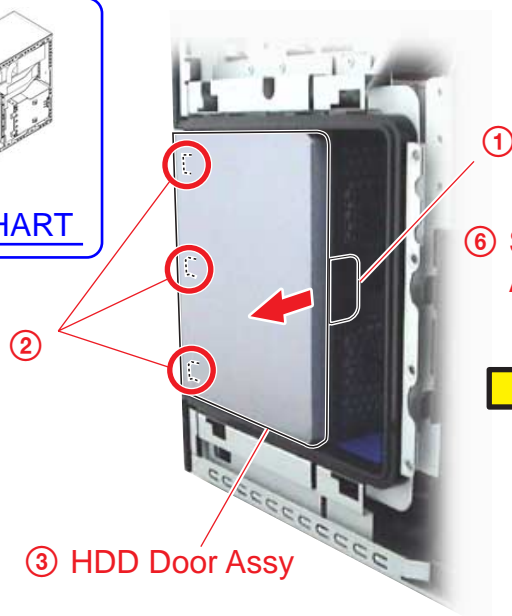
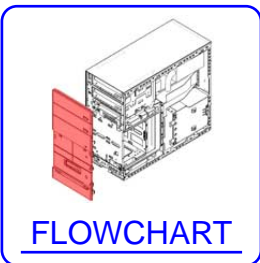


- ③ Remove the VGA (RADEON X300) Card.

## SIDE DOOR ASSY/HDD DOOR ASSY/BEZEL ASSY

Procedure to remove

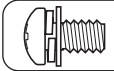
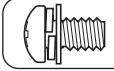
- ① Push the button.
- ② Remove three claws.
- ③ Remove the HDD Door Assy.
- ④ Remove three claws.
- ⑤ Remove three claws.
- ⑥ Remove the Side Door Assy.
- ⑦ Remove six claws.
- ⑧ Remove the Bezel Assy.

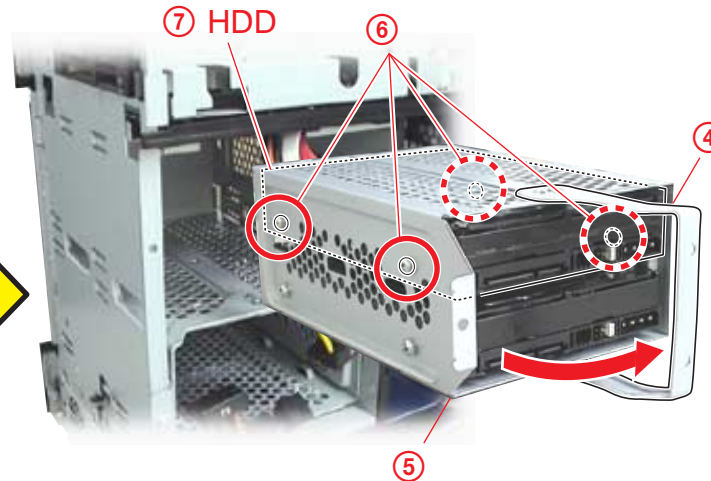
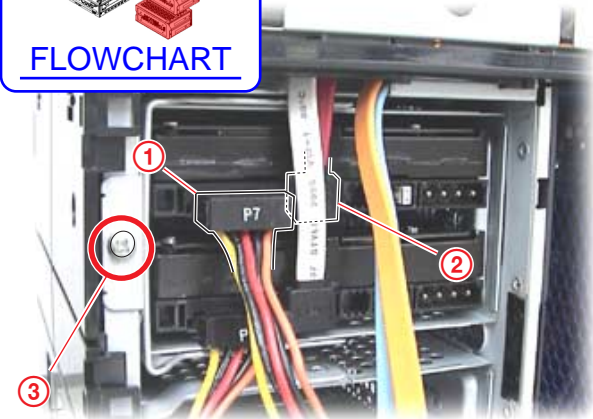
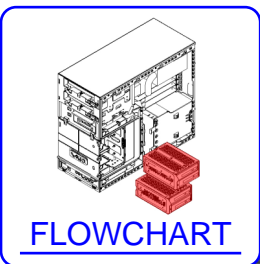




## HDD

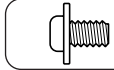
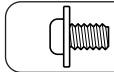
### Procedure to remove

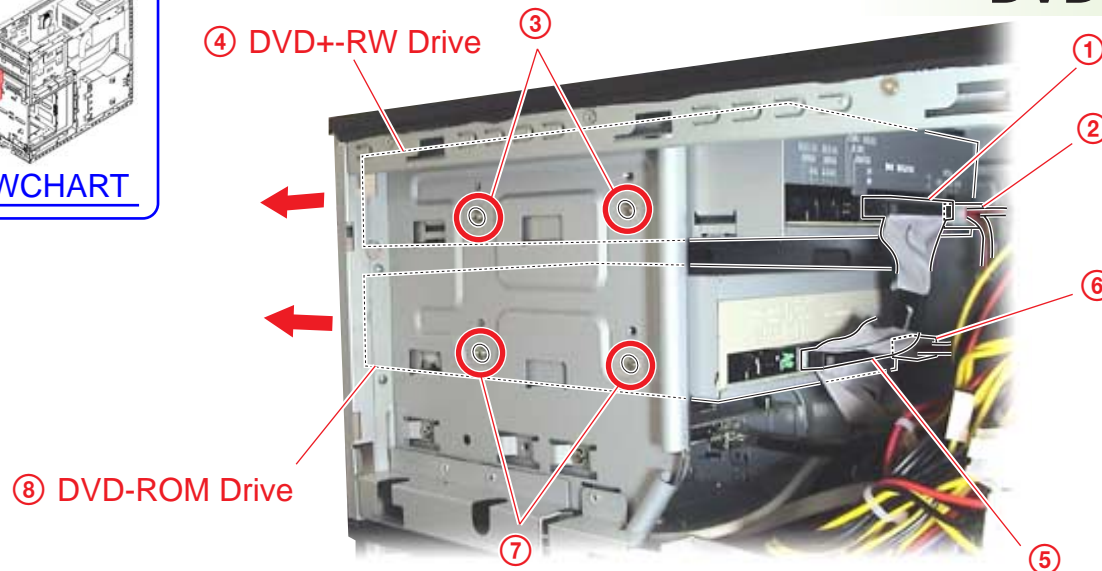
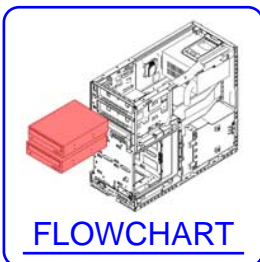
- ① Remove a connector (power).
- ② Remove a connector (SATA).
- ③ Remove a screw.  B2
- ④ Lift the lever.
- ⑤ Remove the HDD Holder Assy.
- ⑥ Remove four screws.  B2
- ⑦ Remove the HDD.



## DVD+-RW DRIVE/DVD-ROM DRIVE

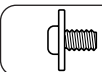
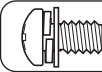
### Procedure to remove

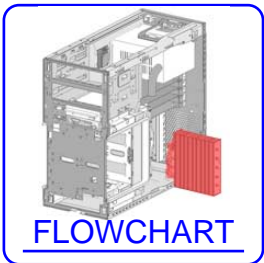
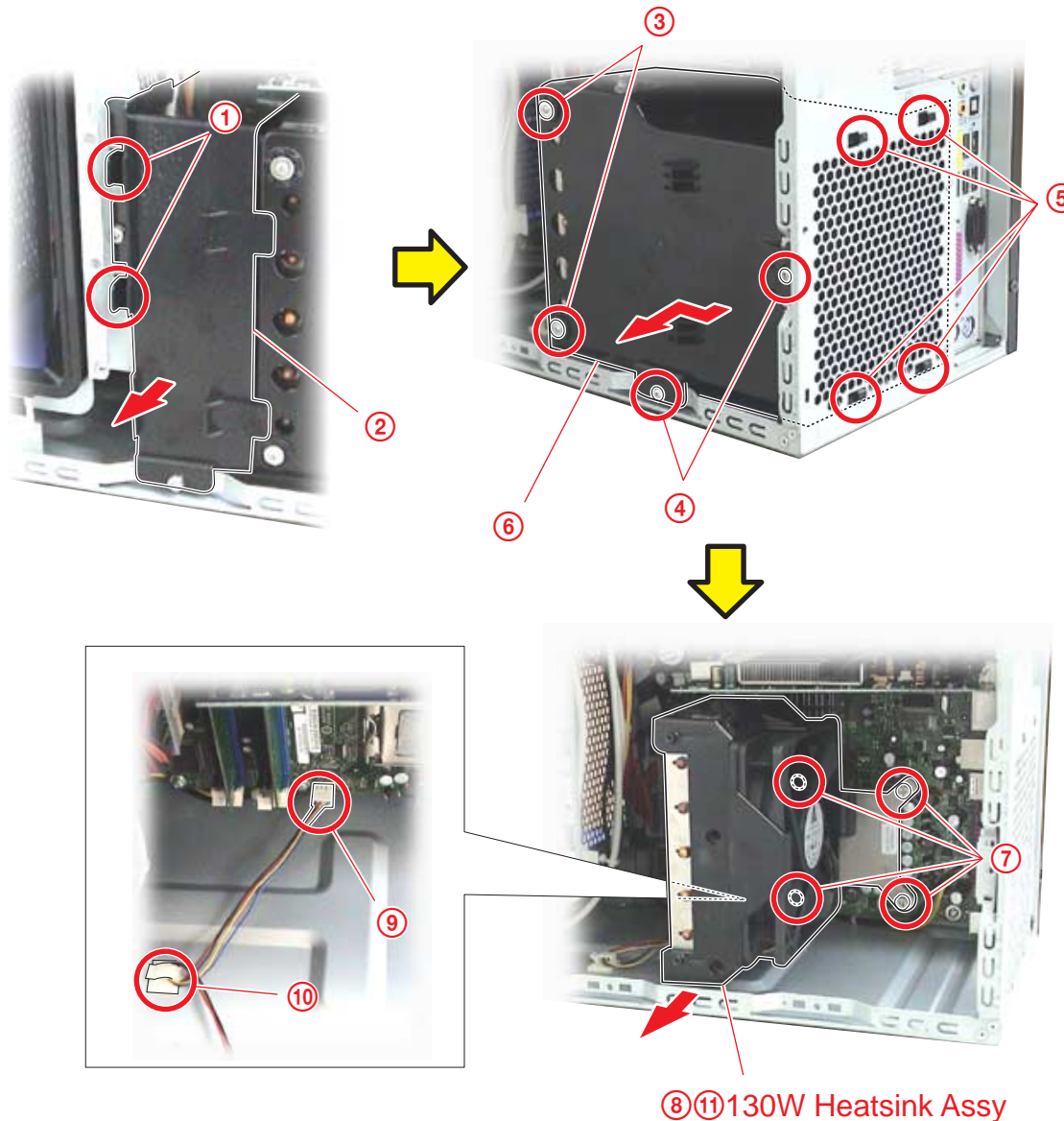
- ① Remove a connector (ODD ATA66).
- ② Remove a connector (power).
- ③ Remove two screws.  B6
- ④ Remove DVD+-RW Drive.
- ⑤ Remove a connector (ODD ATA66).
- ⑥ Remove a connector (power).
- ⑦ Remove two screws.  B6
- ⑧ Remove DVD-ROM Drive.



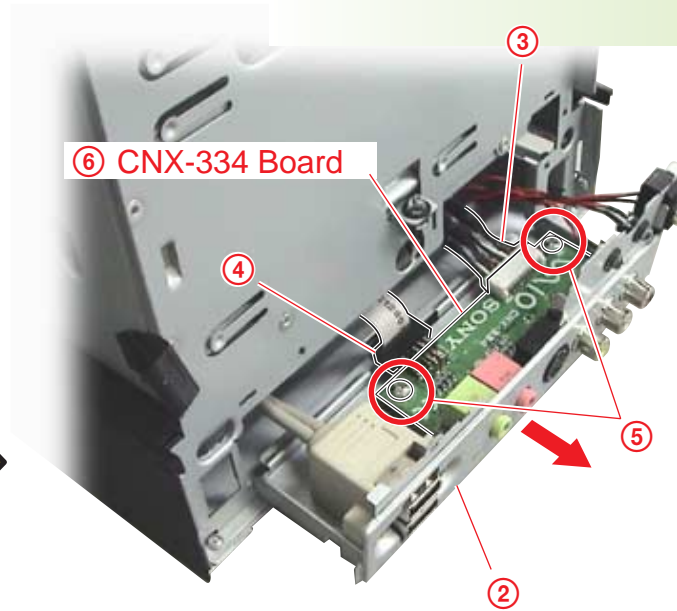
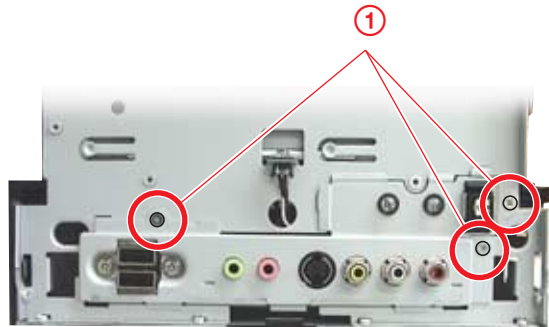
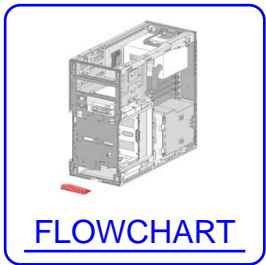
## 130W HEATSINK ASSY

### Procedure to remove

- ① Remove two claws.
- ② Remove the Air Duct Front in the direction of arrow.
- ③ Remove two screws.  B8
- ④ Remove two screws.  B2
- ⑤ Remove four claws.
- ⑥ Remove the Air Duct Assy in the direction of arrow.
- ⑦ Remove four claws.
- ⑧ Pull out the Heatsink Assy in the direction of arrow.
- ⑨ Remove a connector (DC Fan)
- ⑩ Remove the harness from Cable Clamp.
- ⑪ Remove the 130W Heatsink Assy.










## CNX-334 BOARD

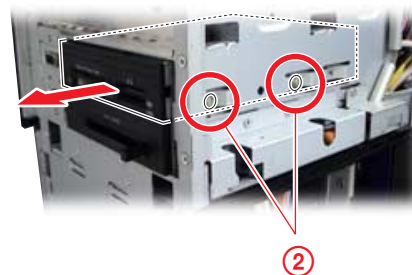
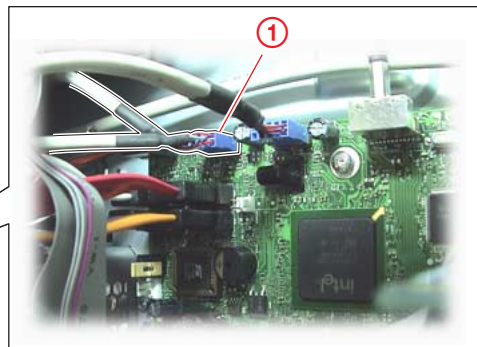
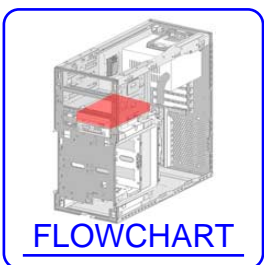
Procedure to remove

- ① Remove three screws.  B6
- ② Pull out the AV PCB BKT Assy in the direction of arrow.
- ③ Remove a connector (Video Harness).
- ④ Remove a connector (Audio Harness).
- ⑤ Remove two screws.  B6
- ⑥ Remove CNX-334 Board.

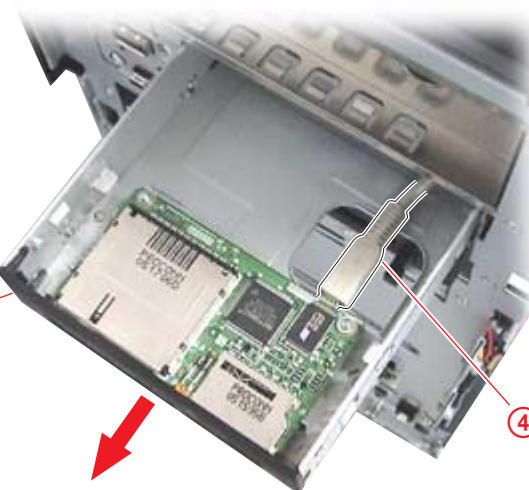
## CARD READER

Procedure to remove

- ① Remove a connector (Mini USB+1Port USB).
- ② Remove two screws.  B6
- ③ Pull out the Card Reader in the direction of arrow.
- ④ Remove a connector (Mini USB).
- ⑤ Remove The Card Reader.

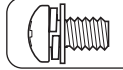


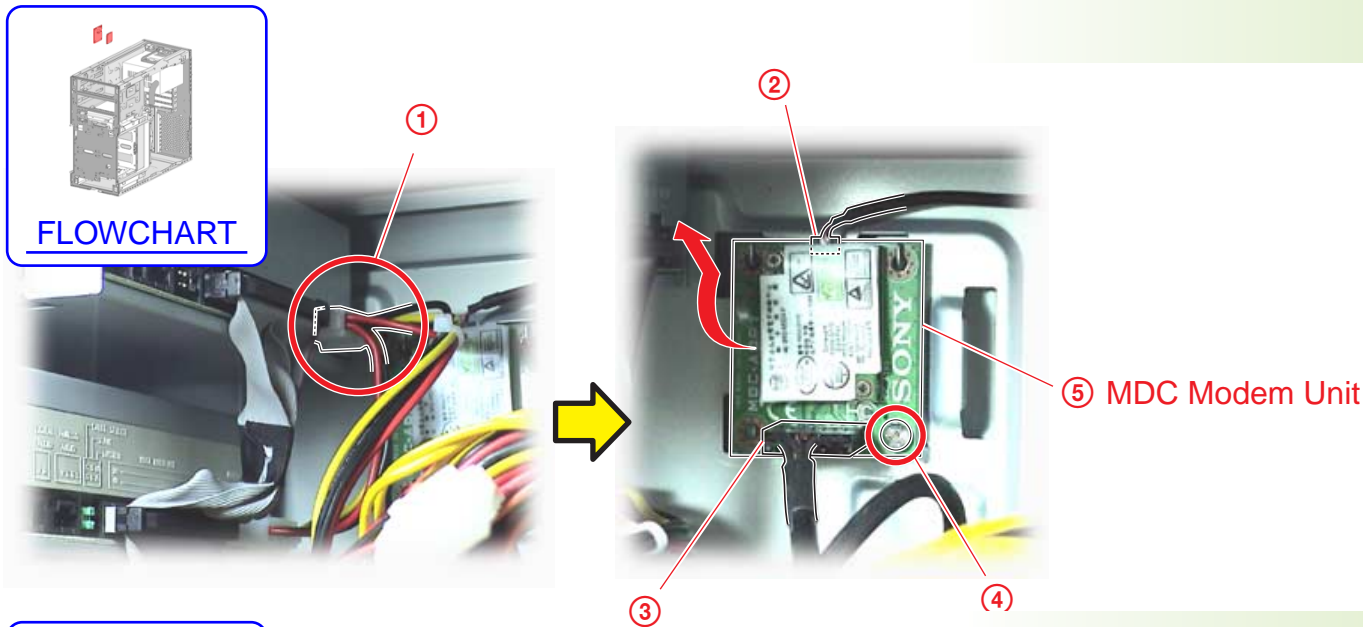
③⑤ Card Reader



## MDC MODEM UNIT

Procedure to remove

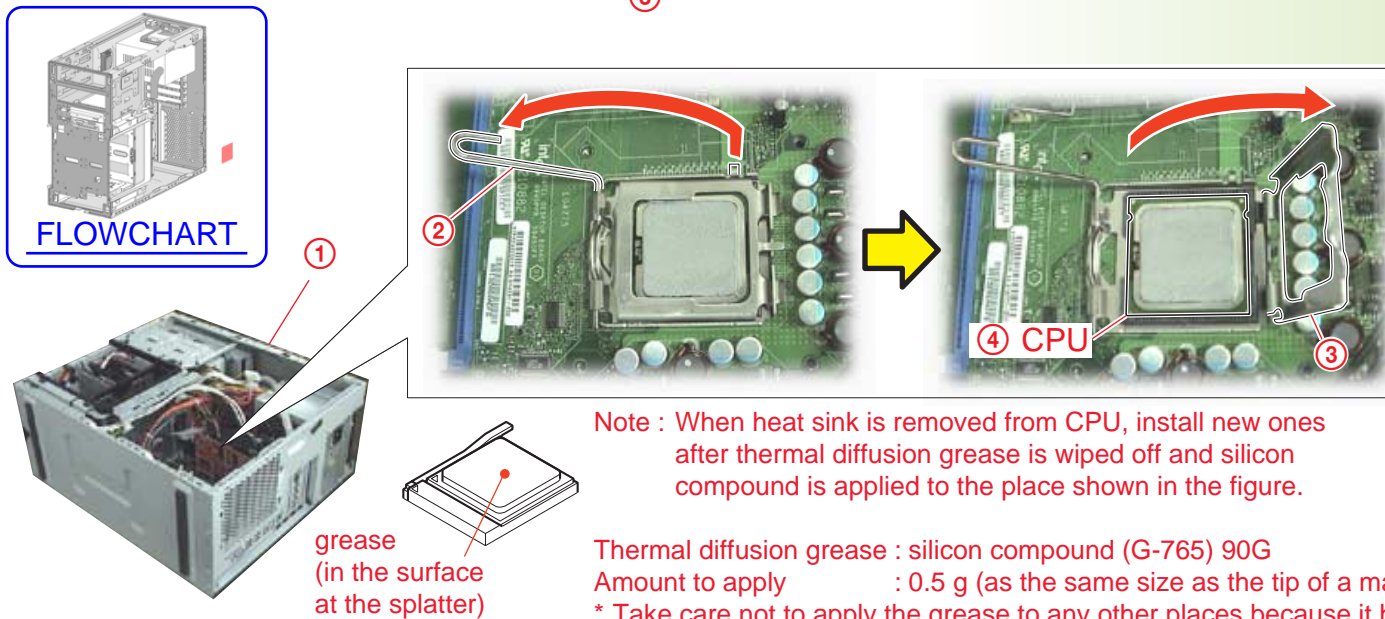
- ① Remove a connector (power).
- ② Remove a connector (Azalia Harness).
- ③ Remove a connector (RJ11 Harness).
- ④ Remove a screw.  B2
- ⑤ Remove the MDC Modem Unit in the direction of arrow.



## CPU

Procedure to remove

- ① Lay the set down sideways.
- ② Remove the lever.
- ③ Open the cover.
- ④ Remove the CPU vertically.



# MEMORY

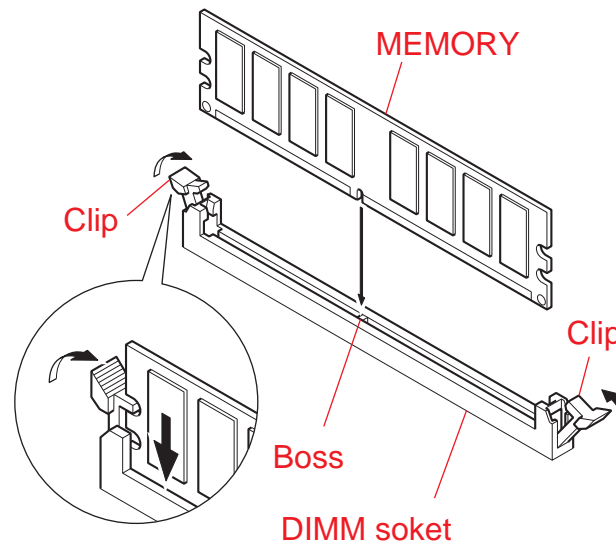
Procedure to remove

- ① Open two clips same time.
- ② Remove the Memory (DDR 512MB).



## MEMORY INSTALLATION


- Note1 : With the clips left open, insert the memory so that boss of DIMM socket engage with slot of memory.
- Note2 : Make sure that clips are closed when the memory were inserted completely.
- Note3 : Insert the memory, starting from the one having smallest bank number.

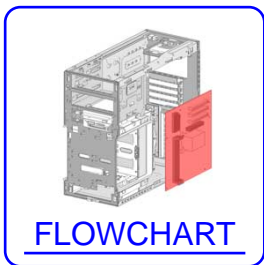




# MOTHER BOARD

Procedure to remove

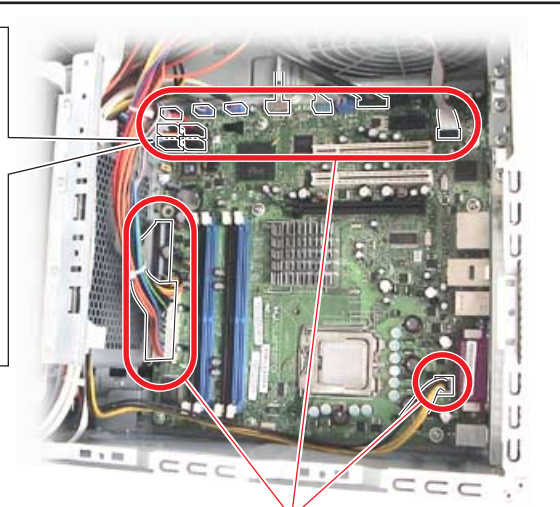
- ① Remove fourteen connectors.
- ② Remove seven screws.  B2
- ③ Remove a boss.
- ④ Remove the Mother Board in the direction of arrow.



SATA cable

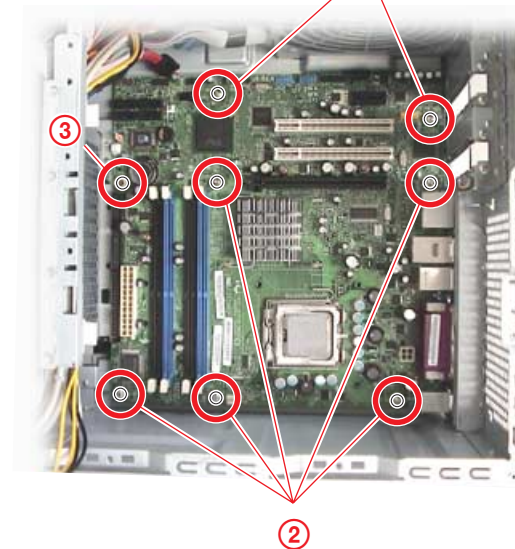


two claws



①

②



③

②

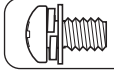
④ Mother Board

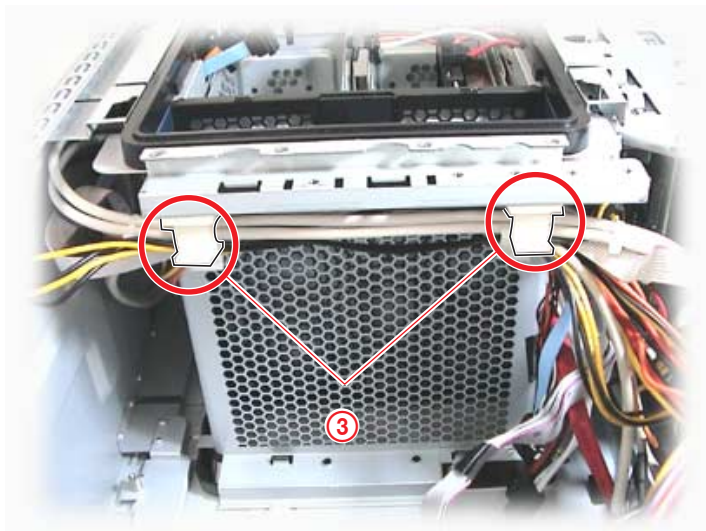
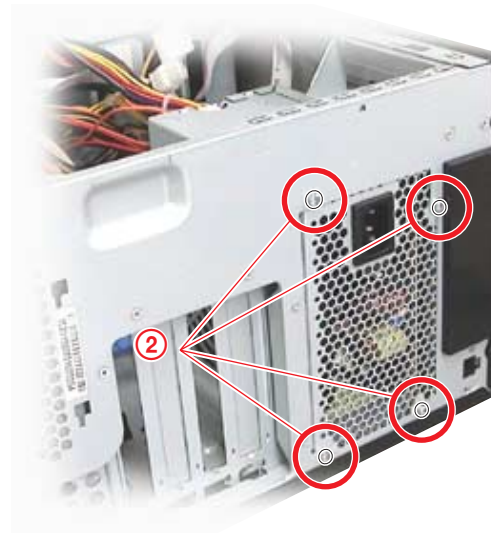
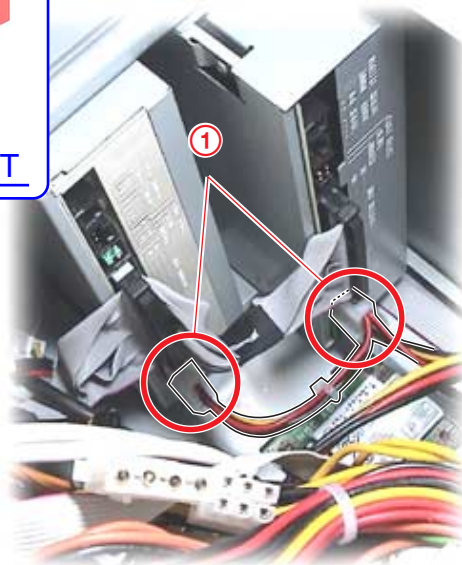
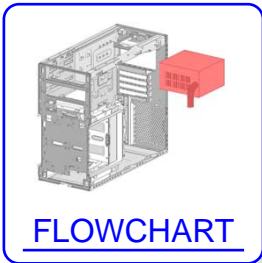




## SWITCHING POWER

Procedure to remove

- ① Remove two connectors (power)
- ② Remove four screws.  B2
- ③ Remove the cable from Cable Clamps.
- ④ Remove the Switching Power in the direction of arrow.

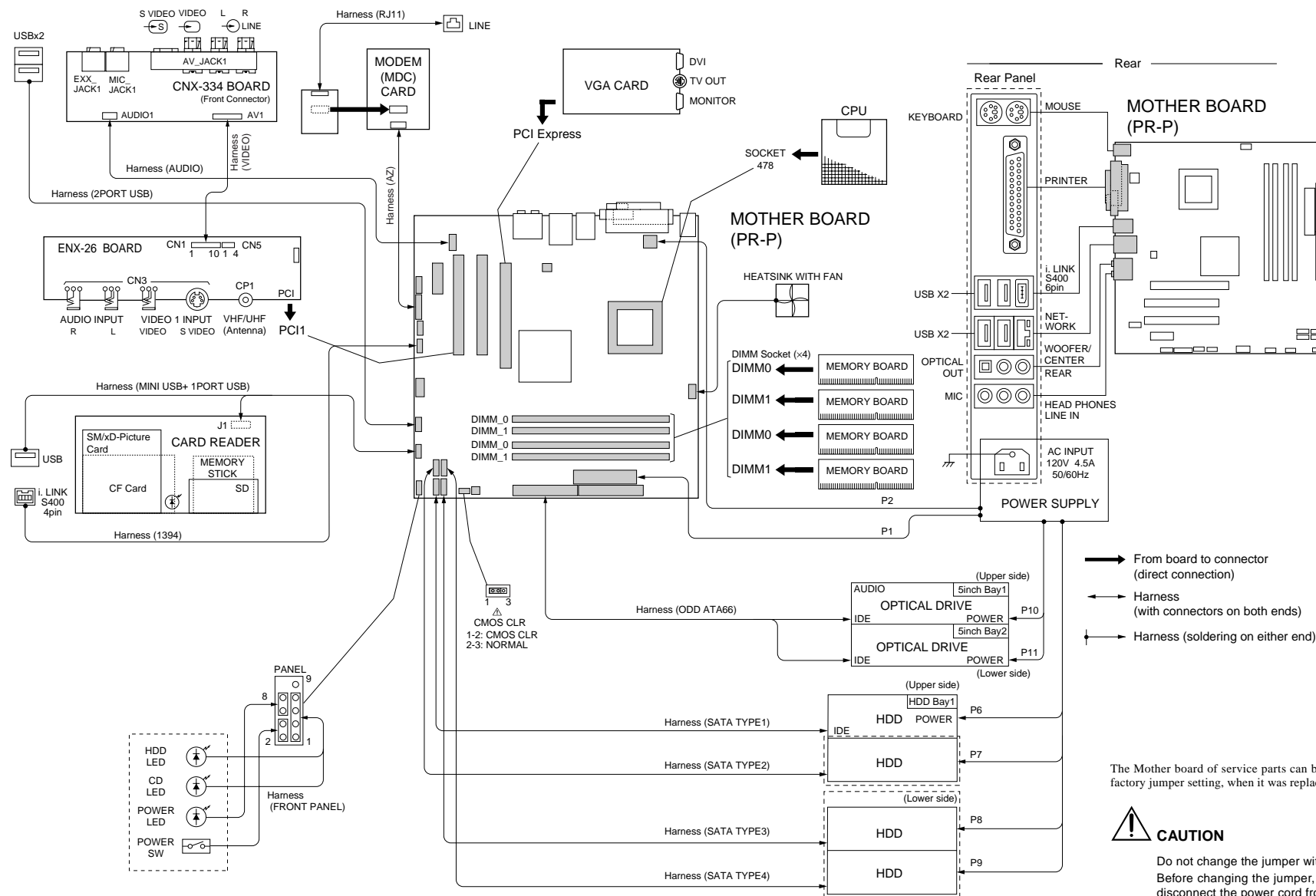


④ Switching Power

# CHAPTER 2. FRAME HARNESS DIAGRAM

## 2-1. VGC-RC Series

## MOTHER BOARD (PR) ASSY



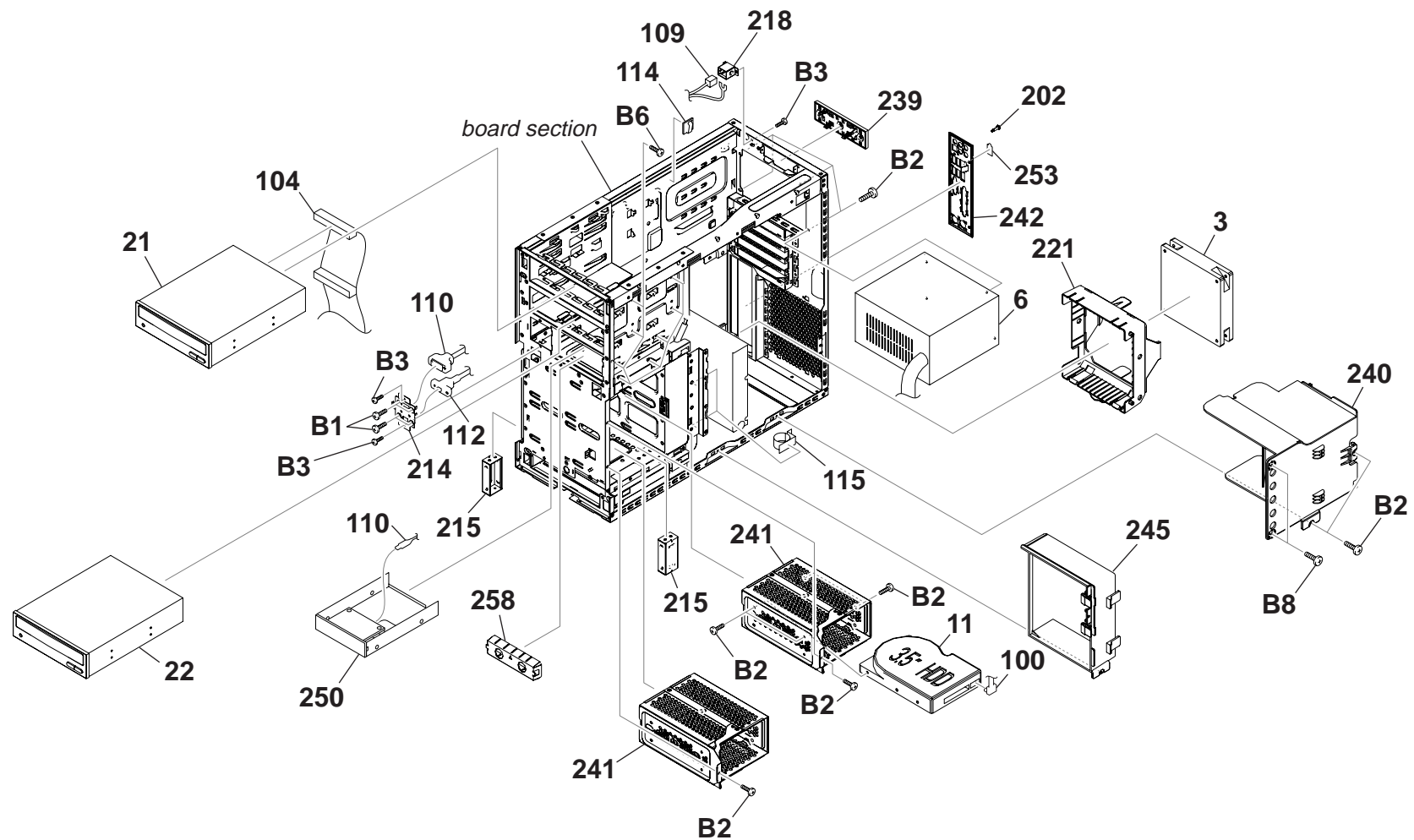
### 3-1. Exploded View

This exploded view diagram illustrates the assembly of a server chassis. The central component is the main chassis frame, labeled 200, which features a 'drive section' on the right side. Various components are shown in their relative positions for assembly:

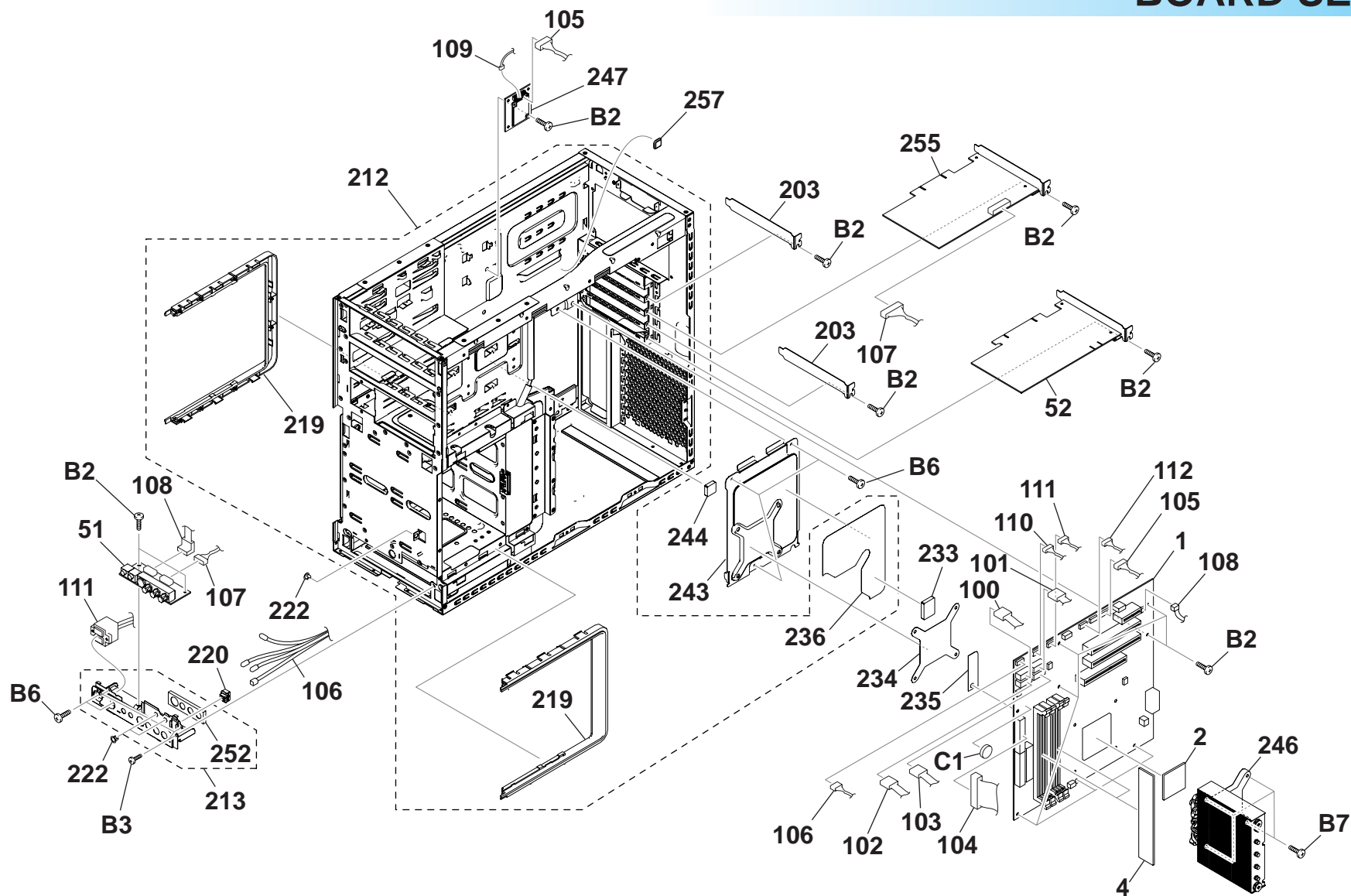
- Top Cover (201):** A large rectangular plate that fits over the top of the chassis, secured by screws B1 and B3.
- Front Panel (211):** A large panel that fits over the front of the chassis, secured by screws B1.
- Internal Components:**
  - 206, 207, 222, 223, 227, 228, 209, 231:** A series of vertical panels or dividers that fit into the front of the chassis.
  - 205, 237:** Horizontal panels or dividers that fit into the front of the chassis.
  - 208, 249:** A horizontal panel or divider that fits into the front of the chassis.
  - 225:** A small rectangular component, possibly a label or indicator, that fits into the front of the chassis.
  - 251, 254:** A vertical panel or divider that fits into the front of the chassis.
- Other Components:**
  - 210:** A small rectangular component, possibly a label or indicator, that fits into the front of the chassis.
  - 230:** A small rectangular component, possibly a label or indicator, that fits into the front of the chassis.

The diagram uses dashed lines to indicate the assembly path and alignment of the components.

# DRIVE SECTION



# BOARD SECTION





## ACCESSORIES

**900**  
REMOTE COMMANDER (RM-MC10)



**902**  
KEY BOARD



**907**  
MOUSE (USB)



**908**  
SYSTEM SPEAKER (BOX TYPE)



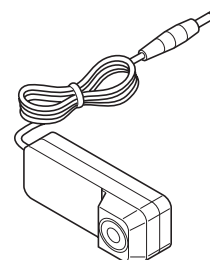
**911**  
CORD, AC



**913**  
IR RECEIVER



**914**  
VIDEO CONTROLLER



## 3-2. Parts List

### NOTE:

- The parts listed here are for service, and therefore they may be different from the parts shown in circuit diagrams or used in the set.
- # mark: The parts which can be sold.
- When you exchange the parts which the ↑ mark attached, be sure to write in firm ware etc.
- The number of the mark “2” is the quantity at the time of preinstallment.

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

### BASIC LIST

Ref No.	Part No.	Description	2005 Fall RC110G	2006 Spring RC210G	Note
1	1-789-306-11	BOARD, MOTHER(PR-P, ICH7R)	●	●	
2	6-708-344-01	CPU PD SMF 3G (HH80551PG0802MNSL88S)	●	●	
	6-709-267-01	IC HH80553PG0804MSL8WR [Pentium D/930/3.0GHZ]	●	●	
3	1-787-417-11	FAN, DC	●	●	
4	6-600-403-01	DDR 512MB (HYS64T64000HU-3.7-A)	2	●	
	6-600-484-01	DDR 512MB (MT8HTF6464AY-53EB3)	2	●	
	6-600-458-01	IC EBE51UD8AEFA-5C-E (512MB)	●	2	
	6-600-403-01	IC HYS64T64000HU-3.7-A (512MB)	●	2	
	6-600-484-01	IC MT8HTF6464AY-53EB3 (512MB)	●	2	
△	6	1-468-954-11 POWER, SWITCHING	●	●	
11	A-1147-418-A	HDD (M-SBR-S/7L250S0/250GB) ASSY(S)	●	●	1-797-087-21
	A-1147-419-A	HDD (A-P100-S/SP250C/250GB) ASSY(S)	●	●	1-797-324-11
	A-1126-698-A	HDD (S-TONKA/ST3250823AS/250GB) ASSY (S)	●	●	1-797-196-11
	A-1147-420-A	HDD (W-CVXL80-3WD2500JS-98MH80/250GB) ASSY(S)	●	●	1-797-340-11
	A-1147-441-A	HDD(S-AVUMA-S/160GB) ASSY(S)	●	2	1-797-341-11
	A-1147-440-A	HDD(W-CVXL80-3/160GB) ASSY(S)	●	2	1-797-338-11
21	1-797-262-21	DVD+RW/P-109-F	●	●	
22	8-449-659-10	DVD-ROM DRIVE DDU1615-VR	●	●	
51	1-789-308-11	BOARD, CNX-334 (FRONT CONN)	●	●	
52	1-789-183-31	CARD, VGA (RADEON X300)	●	●	
100	1-964-104-11	HARNESS,SATA TYPE1	●	●	
101	1-964-104-21	HARNESS,SATA TYPE2	●	●	
102	1-964-104-31	HARNESS,SATA TYPE3	●	●	
103	1-964-104-41	HARNESS,SATA TYPE4	●	●	
104	1-964-105-11	HARNESS,ODD ATA66	●	●	
105	1-964-108-11	HARNESS,AZALIA	●	●	
106	1-964-109-11	HARNESS,FRONT PANEL	●	●	
107	1-964-110-11	HARNESS,VIDEO	●	●	
108	1-964-111-11	HARNESS,AUDIO	●	●	
109	1-964-112-11	HARNESS,RJ11	●	●	
110	1-964-114-11	HARNESS,MINI USB+1PORT USB	●	●	
111	1-964-115-11	HARNESS,2PORT USB	●	●	
112	1-964-116-11	HARNESS,1394	●	●	
114	2-657-210-01	CABLE CRAMP (FOR MODEM)	●	●	
115	2-657-209-01	CABLE CRAMP (FOR POWER)	●	●	
200	A-1144-833-A	COVER R ASSY	●	●	
201	A-1144-835-A	COVER L ASSY	●	●	
202	2-653-443-01	MIC COVER	●	●	
#	203	2-651-311-01 PCI SLOT COVER	●	●	
#	205	A-1138-351-A HDD DOOR ASSY	●	●	
#	206	A-1147-050-A DOOR ODD T ASSY	●	●	
#	207	A-1147-051-A DOOR ODD B ASSY	●	●	
#	208	2-649-474-01 DOOR IO	●	●	
#	209	2-649-473-01 DOOR CARDREADER	●	●	

Ref No.	Part No.	Description	2005 Fall RC110G	2006 Spring RC210G	Note
210	A-1138-357-A	SIDE DOOR ASSY	●	●	
211	A-1138-354-A	BEZEL ASSY	●	●	
212	A-1138-350-A	CHASSIS ASSY	●	●	
213	A-1138-353-A	AV PCB BKT ASSY	●	●	
214	A-1144-834-A	AV PCB BKT 2 ASSY	●	●	
215	2-657-245-01	HDD SUPPORT BRACKET	●	●	
218	2-594-899-01	BRKT, RJ11	●	●	
219	2-649-455-01	SIDE COVER RING	●	●	
220	2-649-471-01	SWITCH HOLDER	●	●	
221	2-649-495-01	FAN HOLDER	●	●	
222	2-653-449-01	LED HOLDER	●	●	
223	2-649-482-01	SPRING ODD	●	●	
225	2-649-865-01	IO LABEL (GP)	●	●	
227	2-649-873-01	LABEL (DVD+RW), DRIVE	●	●	
228	2-649-874-01	LABEL (DVD-ROM)	●	●	
231	2-649-888-22	ID LABEL	●	●	
	2-666-644-21	LABEL, ID	●	●	
233	2-653-442-01	THERMAL SHEET	●	●	
234	2-653-445-01	MYLAR CPU	●	●	
235	2-653-446-01	MYLAR MB-1	●	●	
236	2-653-447-01	MYLAR CPU-1	●	●	
#	237	2-649-964-01 RUBBER FOOT	●	●	
239	A-1138-356-A	B CAS DUMMY ASSY	●	●	
240	A-1138-358-A	AIR DUCT ASSY	●	●	
241	A-1139-004-A	HDD HOLDER ASSY	●	●	
242	A-1139-005-A	IO ASSY	●	●	
	A-1148-971-A	IO ASSY	●	●	
243	2-649-456-01	CPU SUPPORT	●	●	
244	2-653-448-01	MB SPACER	●	●	
245	2-649-496-01	AIR DUCT FRONT	●	●	
246	2-649-953-01	130W HEATSINK	●	●	
247	A-1141-017-A	MDC MODEM UNIT	●	●	
#	249	2-653-450-01 DAMPER	●	●	
250	1-789-138-21	CARD READER	●	●	
251	2-657-208-01	FDD CUSHION	●	●	
252	2-655-825-01	AV PCB BKT SHIELD	●	●	
253	4-654-836-01	LABEL (ETHER), CAUTION	●	●	
254	2-649-962-01	CARDREADER DUMMY	●	●	
255	A-1133-281-A	ENX-26(US F) AS/W BRACKET ASSY	●	●	
257	2-659-880-01	THERMAL SHEET (SMALL)	●	●	
258	2-649-966-01	3.5 EMI SHIELDING	●	●	
B1	2-653-161-01	SCREW (NO.6-32UNC) EXTERIOR	●	●	
#	B2	4-645-944-22 SCREW (SW) (NO.6-32UNC)	●	●	
B3	4-673-018-02	SCREW SPECIAL HEAD	●	●	
B6	4-680-025-01	+PWH3X5	●	●	
B7	7-682-546-04	SCREW +B 3X5	●	●	
B8	4-218-254-22	SCREW (M2.6), +PTPWH	●	●	
C1	1-528-174-31	BATTERY, LITHIUM (CR2032 TYPE)	●	●	
C3	7-300-004-33	COMPOUND,SILICON (X-23-7762)1G	●	●	

Accessories &amp; Packing Materials List

Ref No.	Part No.	Description	2005 Fall	2006 Spring	Note
			RC110G	RC210G	
# 900	1-479-087-11	REMOTE COMMANDER (RM-MC10)	●	●	
# 902	1-477-805-32	KEYBOARD (US)	●		
	1-479-142-11	KEYBOARD	●	●	
# 907	1-797-026-41	MOUSE (USB)		●	
	1-796-824-71	MOUSE		●	
# 908	1-826-059-11	SYSTEM SPEAKER (BOX TYPE)	●	●	
# Δ 911	1-827-445-11	CORD, AC	●	●	
	1-777-786-12	CORD, AC	●	●	
# Δ 913	1-478-297-33	IR RECEIVER	●	●	
	1-793-144-11	RECEIVER (RF)	●	●	
# 914	1-417-421-21	CONTROLLER, VIDEO	●	●	
# 926	9-885-067-84	BATTERY COVER (FOR SERVICE)	●	●	


## SUBSTITUTION LIST

- If the repair part in the “BASIC LIST” was not available, refer to order the “SUBSTITUTION LIST” if available.

Ref No.	Part No.	Description	2005 Fall	2006 Spring	Note
			RC110G	RC210G	
2	6-709-043-01	CPU PD SMF 3G (HH80551PG0802MNSL8CN)	●		
4	6-600-458-01	DDR 512MB (EBE51UD8AEFA-5C-E)	2		
Δ 6	1-468-954-21	POWER, SWITCHING	●		
	1-468-984-22	POWER, SWITCHING		●	
11	A-1147-438-A	HDD/M-SBR-S (160GB) ASSY(S)		2	1-797-255-21
	A-1178-696-A	HDD/M-SBR-S (160GB) ASSY(S)		2	1-797-255-31
	A-1178-697-A	HDD/S-AYUMA-S (160GB) ASSY(S)		2	1-797-341-21
21	8-457-676-20	DRIVE, DVD DW-Q28A-VH	●		
	8-457-676-30	DRIVE, DVD DW-Q28A-VK	●		
	1-797-367-21	DVD-RW/R-T10-E		●	
22	8-457-676-30	DRIVE, DVD DW-Q28A-VK		●	
	8-457-676-10	DVD-ROM DRIVE DDW161S-VR		●	
	8-457-676-20	DRIVE, DVD DW-Q28A-VH		●	
256	A-1057-182-A	AOI (US H/B MCE) W/CARTON ASSY	●		
Δ 911	1-777-786-12	CORD, AC	●		

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

## Revision History

Suffix	Ver.	Date	Contents	QM No.
-01	Ver. 1	2005.09.26	First Edition	
-02	Ver. 2	2006.01.12	 Model Lineup	FIT-D2005_156