

TABLE OF CONTENTS

1. SERVICING NOTES 4

2. DISASSEMBLY

2-1. Disassembly Flow..... 8

2-2. Case (Front) Assy..... 9

2-3. Case (Rear) Assy Block..... 10

2-4. Open The Short-land..... 10

2-5. EMMC Board 11

2-6. VOL Key Assy..... 11

2-7. Support (M)..... 12

2-8. 3Pin HP Jack Block..... 12

2-9. MOTHER Board..... 13

2-10. LCD Assy (LCD1)..... 14

2-11. Battery Assy (BAT1)..... 15

3. TEST MODE 16

4. EXPLODED VIEWS

4-1. Case Section..... 26

4-2. LCD, Battery Section..... 27

4-3. Chassis Section 28

5. ACCESSORIES 29

SAFETY-RELATED COMPONENT WARNING!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS 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 PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

FLEXIBLE CIRCUIT BOARD REPAIRING

- Keep the temperature of soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

关于安全相关零部件的警告

原理图和零件清单中标有 \triangle 记号的零部件，或带有 \triangle 记号的虚线所表示的零部件，对于安全操作至关重要。更换时，必须依据本手册或索尼公司追加发行的手册中列明的零件号，使用索尼公司的零件进行。

SECTION 1 SERVICING NOTES

<p>CAUTION Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.</p>
<p>注意 如果电池更换不当会有爆炸危险 只能用同样类型或等效类型的电池来更换</p>

System requirements

- Computer
IBM PC/AT compatible computer preinstalled with any of the following Windows operating systems (*1):
 - Windows XP Home Edition (*2) (Service Pack 3 or later)
 - Windows XP Professional (*2) (Service Pack 3 or later)
 - Windows Vista Home Basic (Service Pack 1 or later)
 - Windows Vista Home Premium (Service Pack 1 or later)
 - Windows Vista Business (Service Pack 1 or later)
 - Windows Vista Ultimate (Service Pack 1 or later)
 - Windows 7 Starter
 - Windows 7 Home Basic
 - Windows 7 Home Premium
 - Windows 7 Professional
 - Windows 7 Ultimate

Not supported by OSs other than above.
[Compatibility mode] for Windows XP (included with Windows Vista and Windows 7) is not supported.

- (*1) Excluding OS Versions not supported by Microsoft.
- (*2) Excluding 64-bit OS versions.
- CPU: 1 GHz processor (2.6 GHz recommended for video playback)
- RAM: 1 GB or more
- Hard Disk Drive: 600 MB or more of available space
- Sound card
- USB port (Hi-Speed USB is recommended)
- Windows Media Player 11 for Windows XP and Windows Vista, Windows Media Player 12 for Windows 7
- Internet Explorer 7 or later
- Broadband Internet connection is required to use Gracenote MusicID service or podcast, or to visit the web store site.

We do not guarantee operation for all computers even if they meet the above System Requirements.

- Not supported by the following environments:
- Personally constructed computers or operating systems
 - An environment that is an upgrade of the original manufacturer-installed operating system
 - Multi-boot environment
 - Multi-monitor environment
 - Macintosh

Design and specifications are subject to change without notice.

ABOUT THE REPAIRING OF BOARD

When electric parts installed by this machine are defective, replace the entire board. Individual electrical parts that the mount is done cannot be exchanged.

ABOUT THE MODEL NAME OF “WALKMAN” MAIN UNIT

The model name of “WALKMAN” main unit for NWZ-E463HK/E463K/E464K is the following model name.

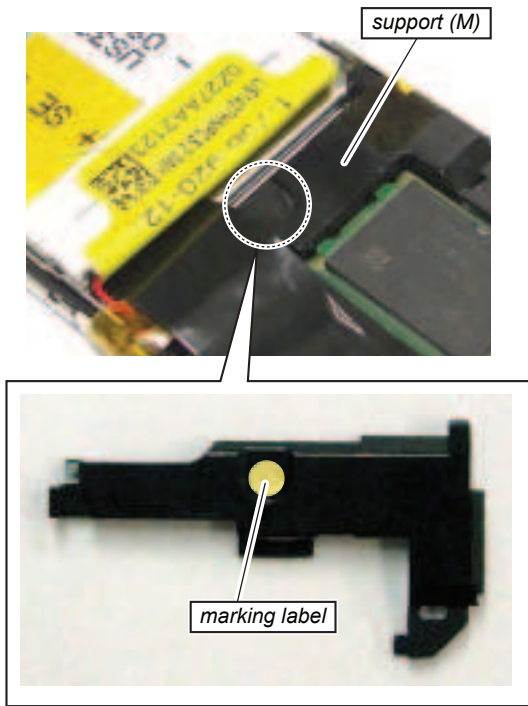
Model Name	“WALKMAN” Name
NWZ-E463HK	NWZ-E463
NWZ-E463K	NWZ-E463
NWZ-E464K	NWZ-E464

ABOUT THE METHOD OF DISTINGUISHING THE SPEAKER ATTACHMENT MODEL

NWZ-E463 and NWZ-E464 have the model to whom the speaker is attached (NWZ-E463K/E464K). However, the model name of the main unit of WALKMAN of NWZ-E463K and E464K are NWZ-E463 and NWZ-E464. The setting of the firmware is different in the WALKMAN for single sales model and the WALKMAN to which the speaker is attached. Therefore, it is necessary to distinguish whether the WALKMAN brought in to the repair is the WALKMAN to which the speaker is attached.

Distinction method:

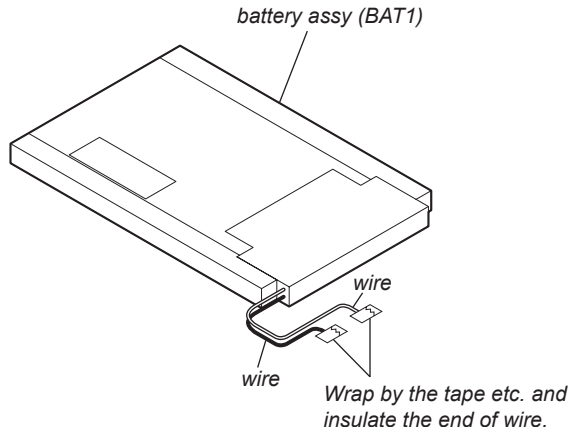
In the WALKMAN for supplied speaker model, marking label is given on the support (M).
Note: When you exchanged the support (M), peel off the marking label from the old support (M) before it exchanges it, and try to paste it to the new support (M).



Marking: WALKMAN for supplied speaker model.
No Marking: WALKMAN for single sales model.

ABOUT THE HANDLING OF THE BATTERY ASSY (BAT1)

When the battery assy (BAT1) is removed, insulate the end of wire by a tape etc. to prevent short-circuited of the wire part of battery assy (BAT1).



NOTE THE COMPLETE EMMC BOARD REPLACING

When the complete EMMC board is replaced, process it according to the following.

1. Destination setting

1-1. Outline

The destination code corresponding to each region must be installed into the EMMC board with the destination setting tool.

• EMMC board

Model	Capacity	Part No. of complete EMMC board	Pre-installed destination code
NWZ-E463/ E463HK/ E463K	4GB	9-885-159-61	E
NWZ-E464/ E464K	8GB	9-885-159-62	E
NWZ-E465	16GB	9-885-159-63	E

• Destination code

Model	Area	Destination code	Remark (Default setting for each item)
NWZ-E463/ E463HK/ E464/ E465	US	U	EQ: None SP Output Optimizer: Off
	Canadian	CA	EQ: None SP Output Optimizer: Off
	AEP, UK	CEW	EQ: None SP Output Optimizer: Off
	E, Australian, Tourist	E	EQ: None SP Output Optimizer: Off
	Chinese	CN	EQ: None SP Output Optimizer: Off
	East European	CEV	EQ: None SP Output Optimizer: Off
	Mexican	MX3	EQ: Custom 1 SP Output Optimizer: Off
NWZ-E463K/ E464K	Canadian	CA	EQ: None SP Output Optimizer: RDP-NWT16
	AEP, UK	CEW	EQ: None SP Output Optimizer: RDP-NWT16
	E, Tourist	E	EQ: None SP Output Optimizer: RDP-NWT16
	Mexican	MX3	EQ: Custom 1 SP Output Optimizer: RDP-NWT16

1-2. Preparation

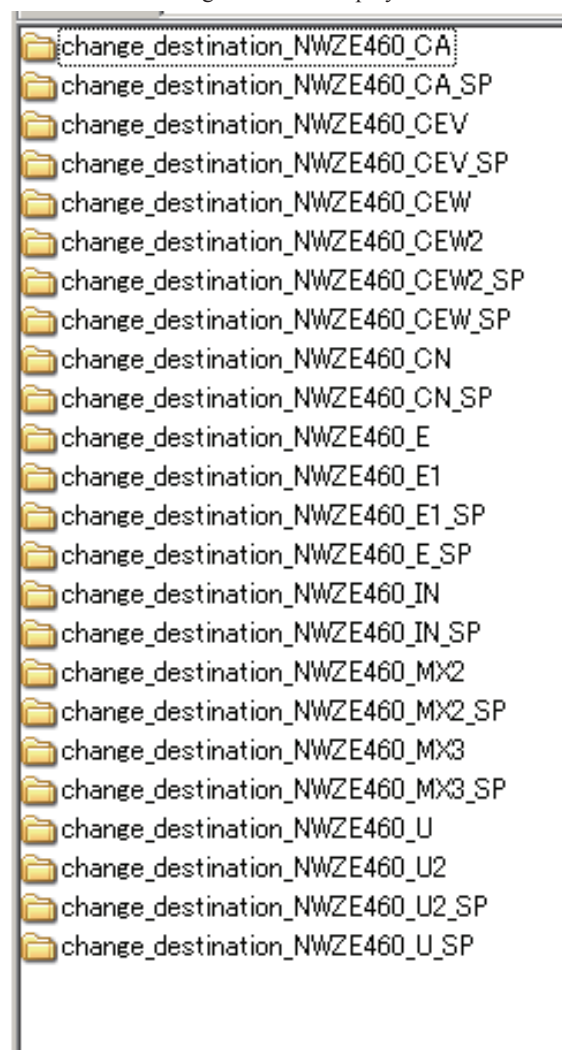
Note 1: Please use this Tool in Windows XP or later.

Note 2: Please install Windows Media Player 11 or later to make the unit recognize as MTP.

Note 3: Confirm the method of obtaining the destination setting tool to the service headquarters.

Procedure:

1. Unzip the destination setting tool.
2. Open the unzipped “change_destination_NWZE460” folder, and the following folders are displayed.



3. Select the folder corresponding to the destination of the “WALKMAN” repaired, and copy the selected folder to root directory of C drive on PC.

Note 4: Above folder in step 3 can be saved any drive as long as the folder path is with English (one byte character). Described with the example that “the folders were saved under root directory of C drive” on this service manual.

1-3. How to use the destination setting tool

Note 1: Please use this tool after closing other application software.

Will be described with below conditions as an example.

Model : NWZ-E463/E464/E465
Destination : E

Procedure:

1. Turn on power of the WALKMAN, and connect it to PC.
2. Start the command prompt application software, and change the folder path to your desired folder.
(Example: C:\change_destination_NWZE460_E)

```
C:\>cd c:\change_destination_NWZE460_E
C:\change_destination_NWZE460_E>
```

3. Input "updating-mtp" and press the Enter key on PC.

```
C:\change_destination_NWZE460_E>updating-mtp
```

4. If the following message is displayed, input "y" and press the Enter key on PC.

Note 2: When the Enter key on PC is pressed, the WALKMAN is formatted.

```
#####
#####  éμéδé:έδé:έπé-ύH(γ/n)γ
```

```
C:\change_destination_NWZE460_E>rem ##
###
### MTP用ファームウェアアップデートツールが起動されました。
###
### MTP ファームウェアアップデートを開始します。
###
### 新しいファームウェアを MTP で転送した後、再起動します。
###
### WMP, Napster, Rhapsody アプリが起動している場合は
### 終了して下さい。
###
### よろしいですか? (y/n)y
```

*MTP FW Update will start.
The WALKMAN unit reboots automatically after updating.
Before starting this program, close other application such as WMP, Napster and Rhapsody etc.
Does this program run? (y/n)*

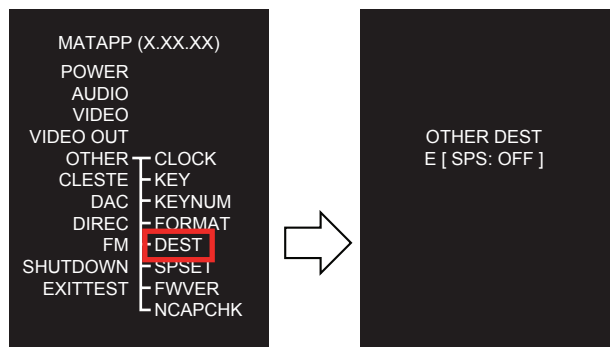
5. The following message is displayed. Then, destination setting operation starts.

```
*** デバイス上のファームウェアイメージ[NW_WM_FW_UPG]を削除しています...
*** 新しいファームウェアイメージ[NW_WM_FW_UPG]をコピーしています...
*** ファームウェアアップデートを開始しました。
*** アップデート終了までしばらくお待ちください。
***
*** ファームウェアアップデートツールを終了します。
***
C:\change_destination_NWZE460_E>exit
```

*FW Updating starts.
Please wait for a while until updating is completed.*

6. The WALKMAN reboots automatically after the destination data is updated. After rebooting, check that connecting USB (MTP) is displayed on the liquid crystal display of the WALKMAN.
7. Input "EXIT" to close the command prompt application software.
8. Disconnect the WALKMAN from PC.
9. Turn the power on of the WALKMAN.
10. Press the [BACK] key for more 1.5 seconds, the home menu is displayed.
11. Slide the [HOLD] key from OFF to ON.

12. Press the key as following order.
[◀] → [VOL -] → [VOL +] → [▶] → [BACK] → [▶▶] → [▶] → [▶▶] → [BACK] → [◀]
13. The WALKMAN reboots and the color bar is displayed on the liquid crystal display.
14. Enter the test mode when any keys are pressed in the state of step 13, and slide the [HOLD] key from ON to OFF.
15. Press the [▲]/[▼] keys to select the "OTHER", and press the [▶] key to enter the minor item.
16. Press the [▲]/[▼] keys to select the "DEST".
17. Press the [▶▶] key, and check if the destination is updated properly.



18. Press the [BACK] key twice, return to major item selection screen.
19. Press the [▲]/[▼] keys to select the "EXITTEST", and press the [▶] key to select the "SURE?".
20. Press the [▶▶] key, turn the power off and release the test mode.

Note: Execute "Reset all settings" absolutely at the end (Refer to right).

2. Format
Formatting memory [Format]

You can format the built-in flash memory of your "WALKMAN."

Note:

- If the memory is formatted, all data (songs, videos, photos, etc., including sample data installed at the factory, bundled software installer, and the User Guide) will be erased. Be sure to verify the data stored in memory prior to formatting, and export any important data to the hard disk of your computer.
- Be sure not to initialize (format) the built-in flash memory of your "WALKMAN" using Windows Explorer. If you have formatted with Windows Explorer, format again using your "WALKMAN."

1. From the Home menu, select [Settings] → [Common Settings] → [Reset/Format] → [Format].
2. Select [Yes].
[All data will be deleted. Proceed?] appears.
3. Select [Yes].
When initialization finishes, [Memory formatted.] appears.

3. Reset all setting
Returning to the factory settings [Reset All Settings]

You can reset your "WALKMAN" to the default settings. Resetting your "WALKMAN" will not delete data such as music, video, and photos.

1. From the Home menu, select [Settings] → [Common Settings] → [Reset/Format] → [Reset All Settings] → [Yes].

Note:

- If you select this function during playback, your "WALKMAN" will pause playback before performing the reset process.

4. Wallpapers setting

How to install the wallpaper files into the WALKMAN.

Note: Confirm the method of obtaining the wallpaper files to the service headquarters.

Procedure:

1. Unzip the wallpaper files to get the following files (jpeg file).

Folder name: WALLPAPERS

- W001.jpg
- W002.jpg
- W003.jpg
- W004.jpg
- W005.jpg
- W006.jpg

2. Connect the WALKMAN to PC.
3. Start up windows explorer. Then, open [WALKMAN] - [StorageMedia].
4. Open "PICTURE" folder located under "StorageMedia" folder.
5. Copy the "WALLPAPERS" folder in step 2 under the "PICTURE" folder.

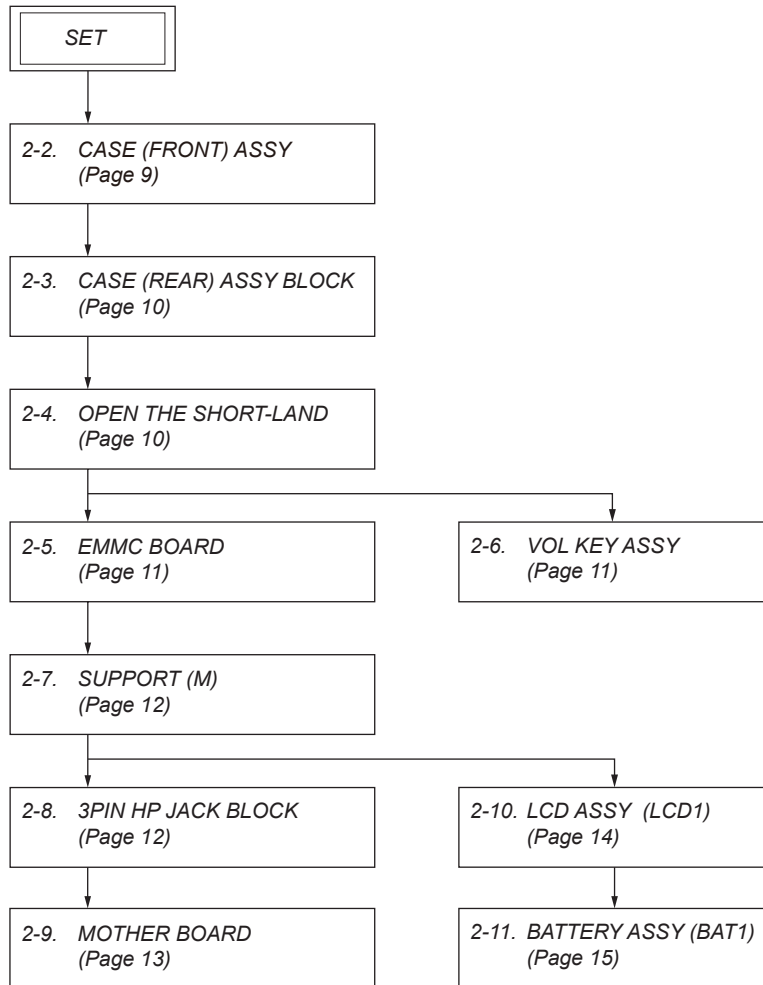
COLOR VARIATION

Model	Destination	Color					
		Black	Red	Blue	Pink	Green	Gold
NWZ-E463	US	●	●	●	●	●	-
	Canadian	●	-	-	-	-	-
	AEP, UK	●	●	●	●	●	-
	East European	●	●	●	●	-	●
	E, Australian, Tourist	●	●	●	●	●	●
	Mexican	●	●	●	●	●	-
NWZ-E463HK	Chinese	●	-	●	●	-	●
	AEP, UK	●	-	-	-	-	-
NWZ-E463K	East European	●	-	-	-	-	-
	AEP, UK	●	-	-	-	-	-
	E, Tourist	●	-	-	-	-	-
NWZ-E464	Mexican	●	-	-	-	-	-
	US	●	●	●	●	●	-
	Canadian	●	-	●	●	-	-
	AEP, UK	●	●	●	●	●	-
	East European	●	●	●	●	-	●
	E, Australian, Tourist	●	●	-	●	-	●
NWZ-E464K	Mexican	●	●	●	●	-	-
	Canadian	●	-	●	●	-	-
NWZ-E465	US	●	-	-	-	-	-
	Canadian	●	-	●	●	-	-
	E, Australian, Tourist	●	-	-	-	-	-
	Mexican	●	-	-	-	-	-

NWZ-E463/E463HK/E463K/E464/E464K/E465
SECTION 2
DISASSEMBLY

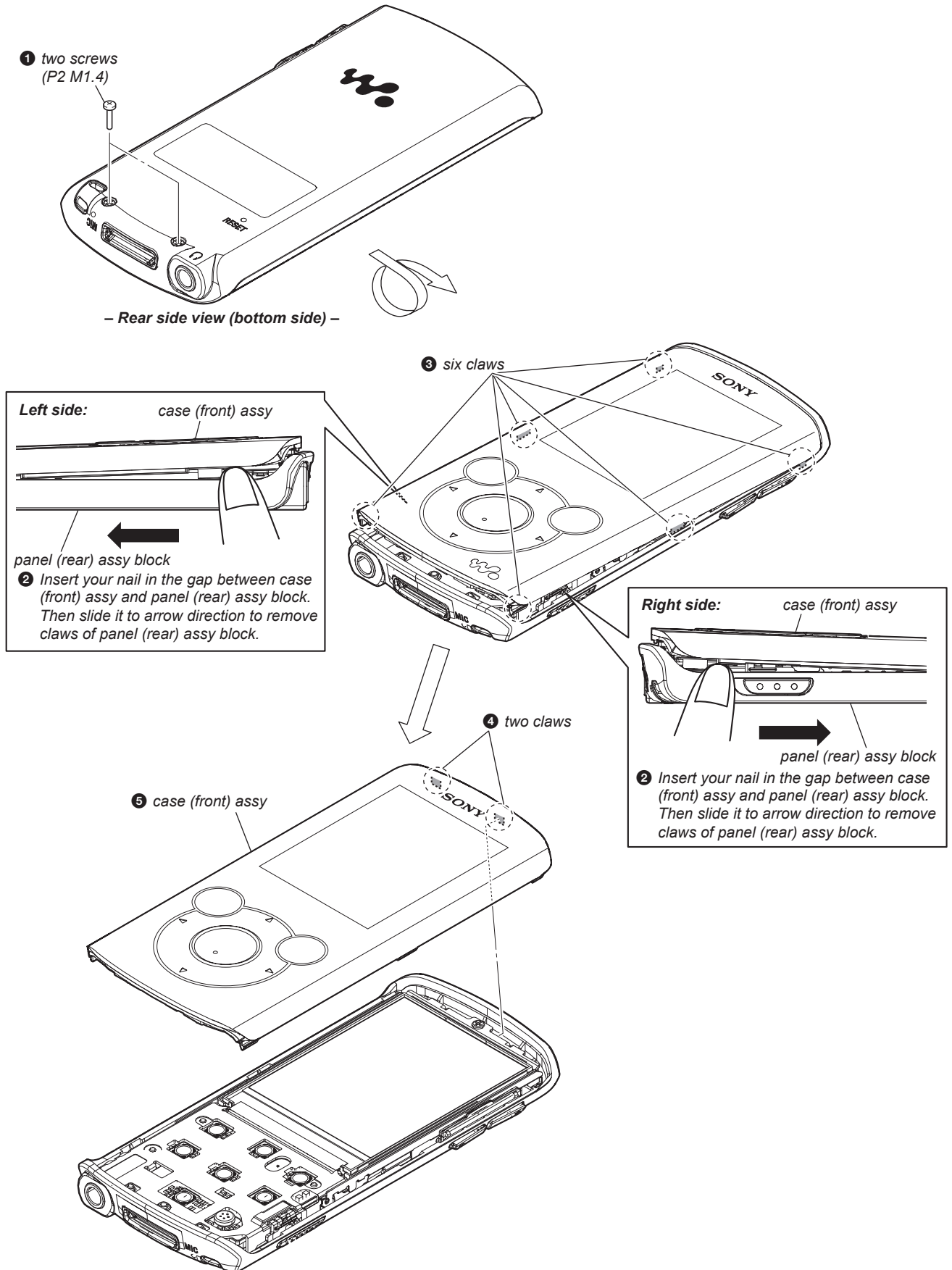
- This set can be disassembled in the order shown below.

2-1. DISASSEMBLY FLOW

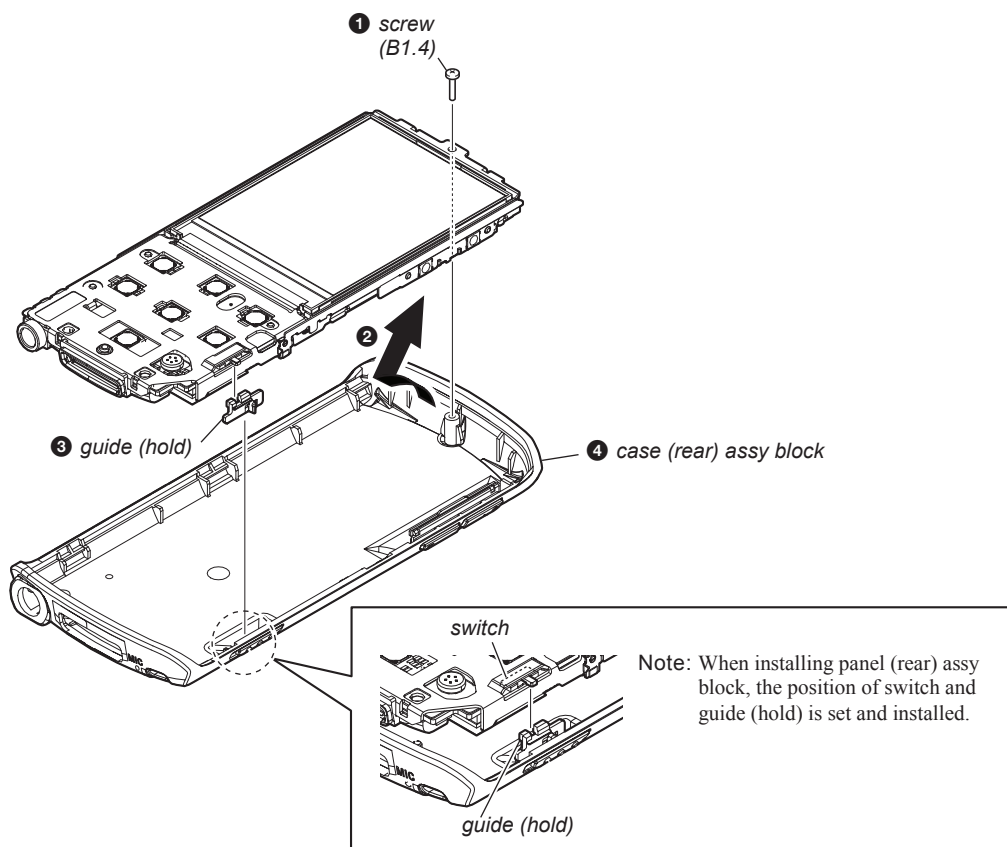


Note: Follow the disassembly procedure in the numerical order given.

2-2. CASE (FRONT) ASSY



2-3. CASE (REAR) ASSY BLOCK

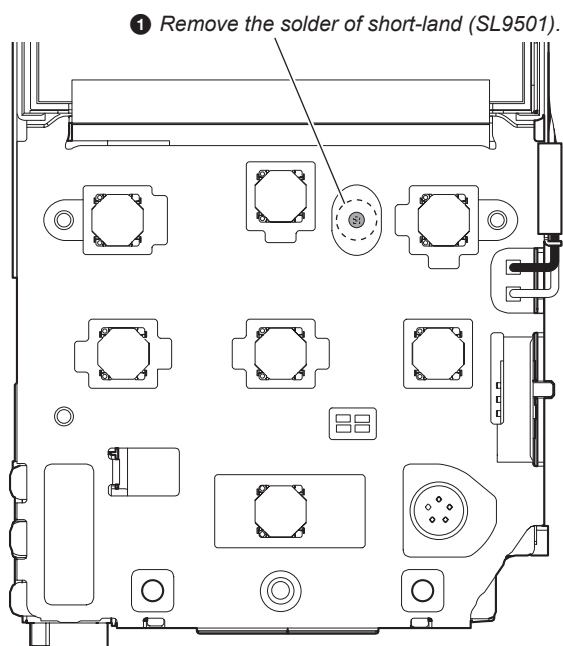


2-4. OPEN THE SHORT-LAND

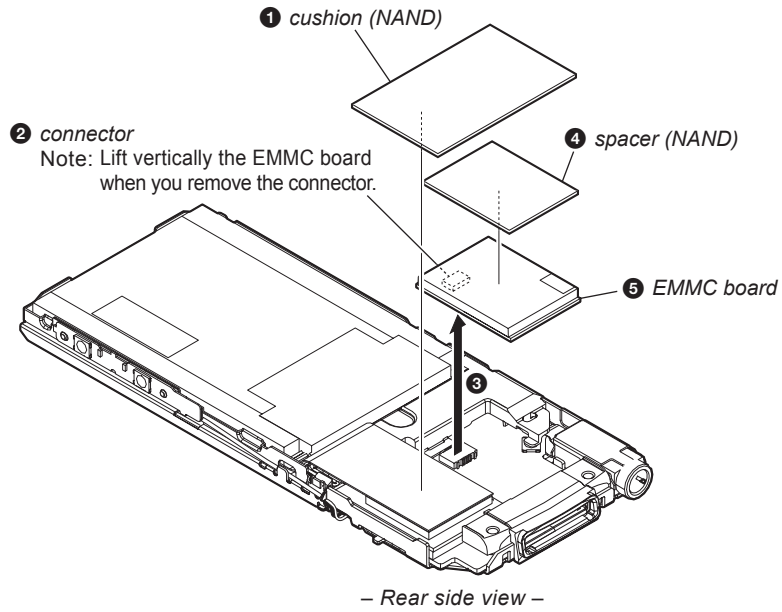
Note 1: This illustration sees the mechanical commonness block from LCD assy side.

Note 2: Make sure to remove one solder to become an open state before disassembling the mechanical commonness block.

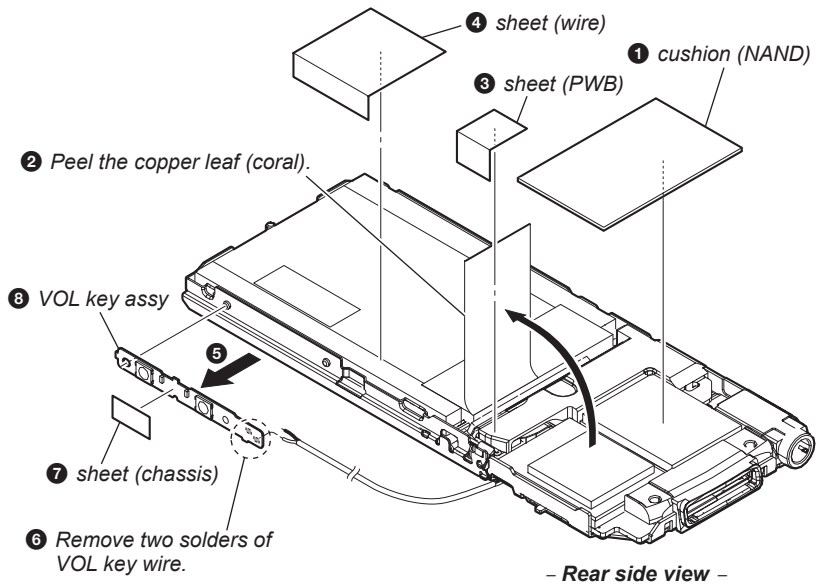
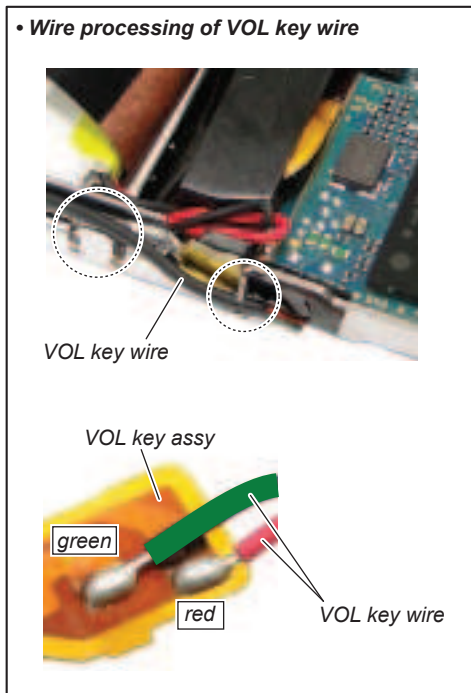
Note 3: Solder the short-land after all wirings are connected when you exchanged some mounted board.



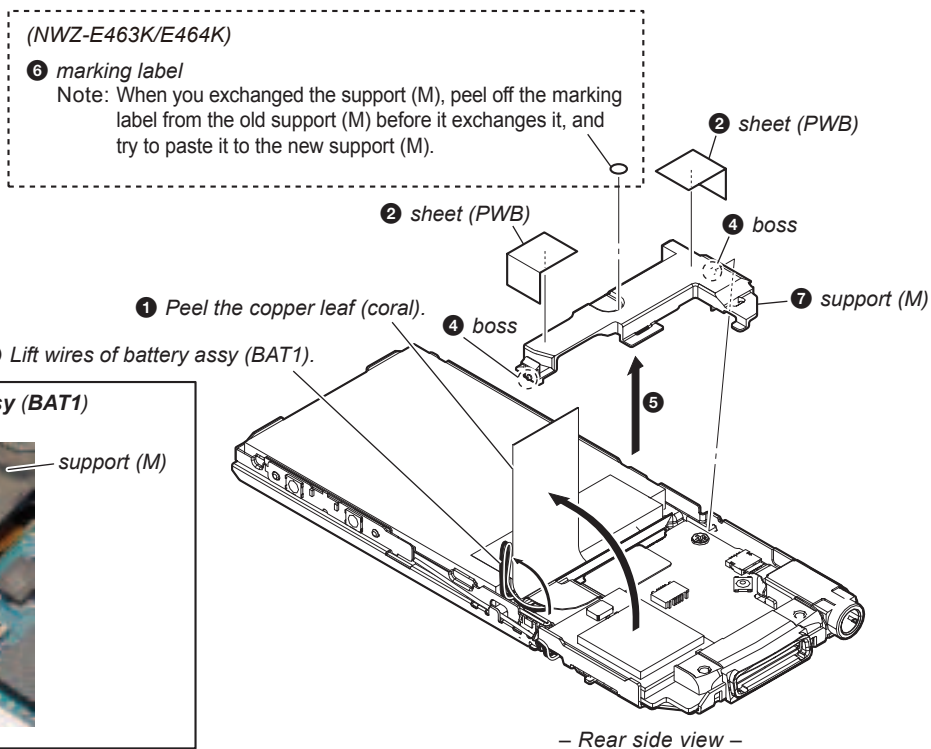
2-5. EMMC BOARD



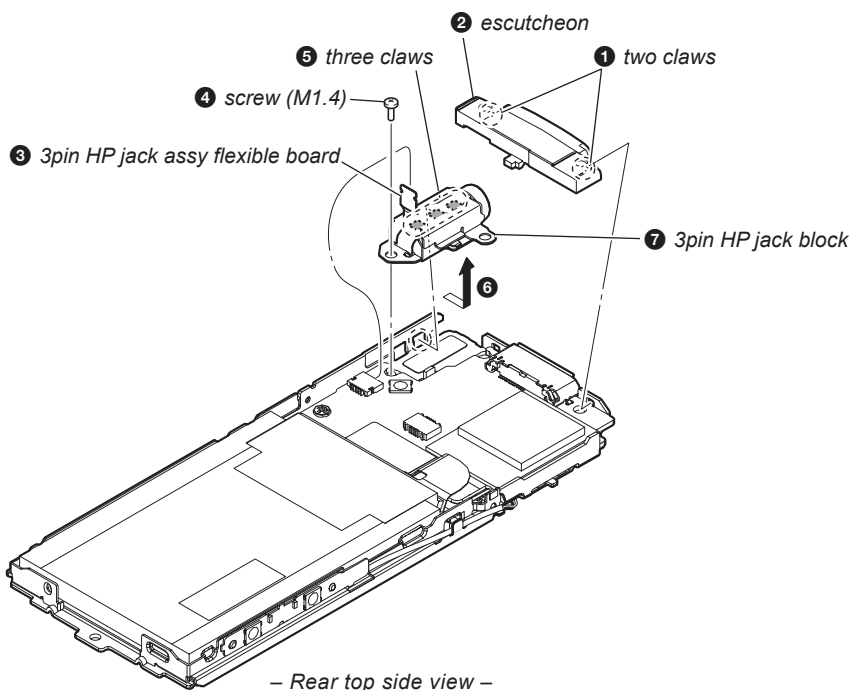
2-6. VOL KEY ASSY



2-7. SUPPORT (M)



2-8. 3PIN HP JACK BLOCK

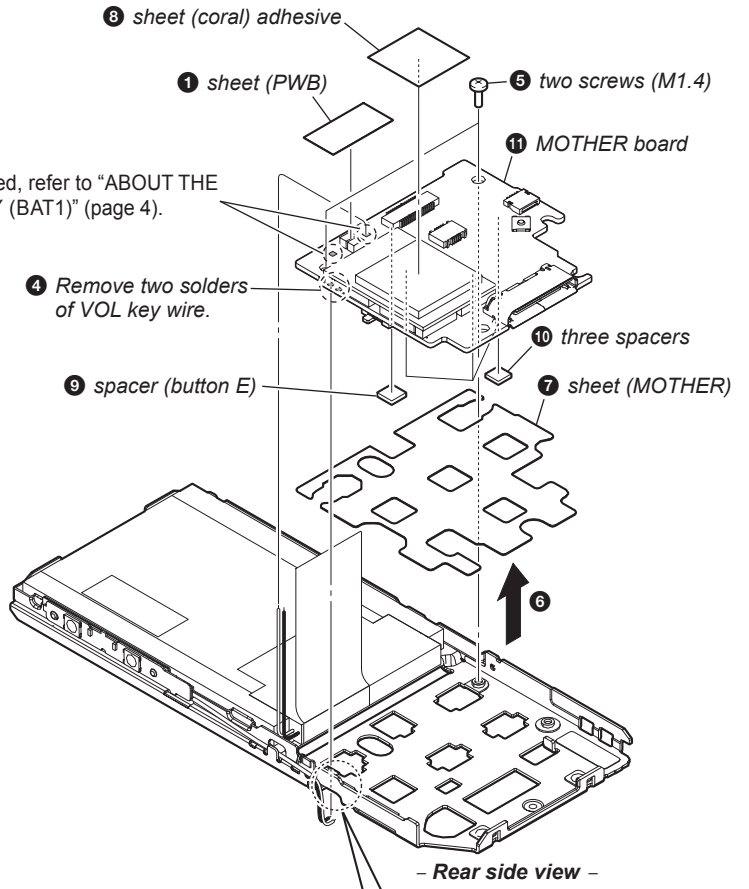
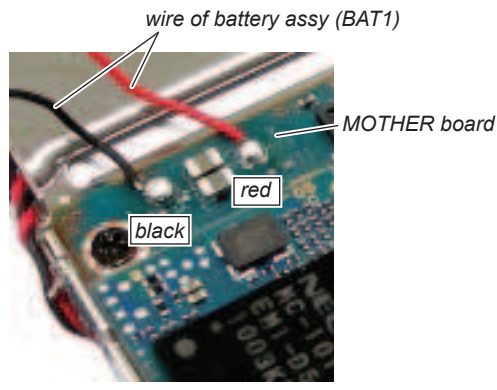


2-9. MOTHER BOARD

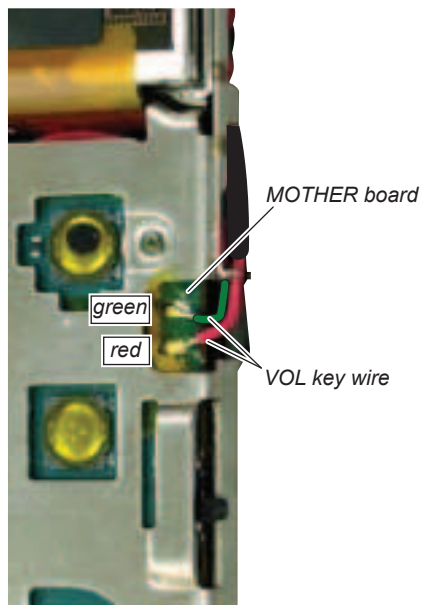
② Remove two solders of battery assy (BAT1).

Note 1: When the battery assy (BAT1) is removed, refer to "ABOUT THE HANDLING OF THE BATTERY ASSY (BAT1)" (page 4).

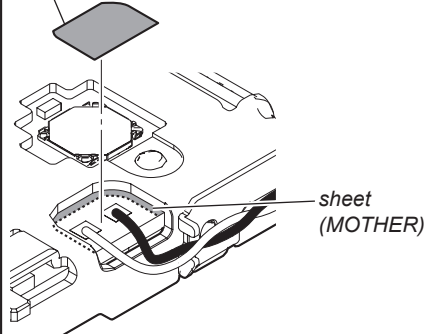
• Wire processing of battery assy (BAT1)



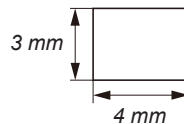
• Wire processing of VOL key wire
- Front side view -



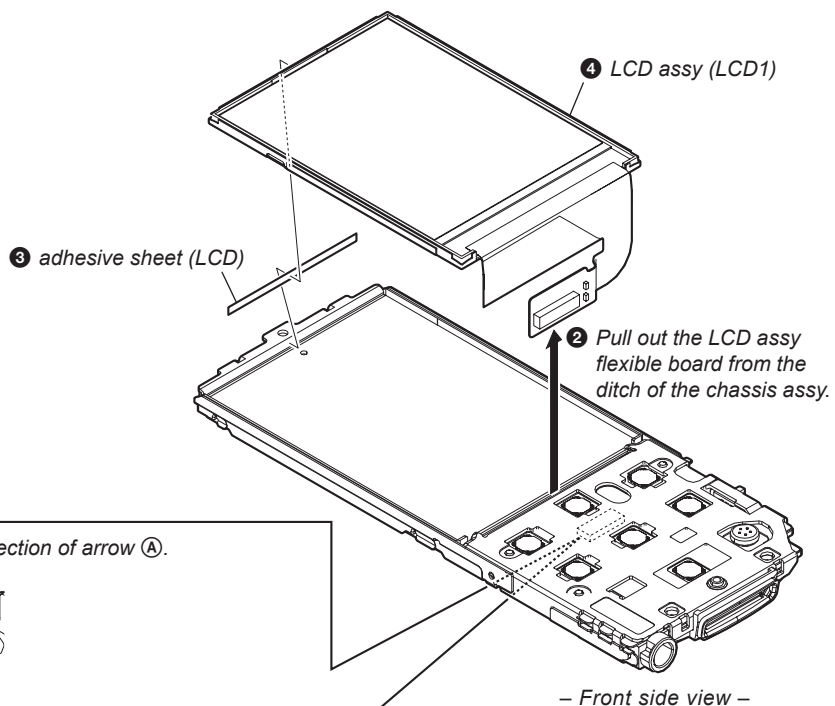
③ Cut and peel off the sheet (MOTHER).



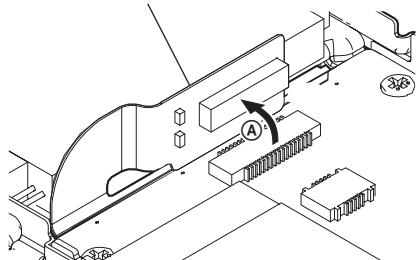
Note 2: When assembling, please cut the polyimide sheet for service in the following size and paste it to the part where the sheet (MOTHER) was peeled off.



2-10. LCD ASSY (LCD1)



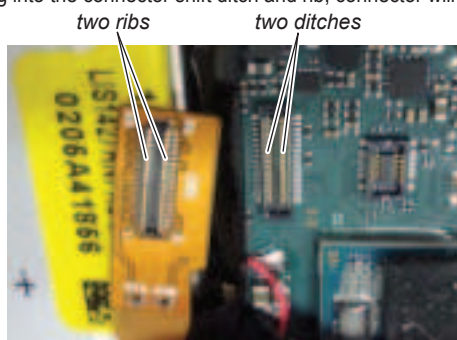
① Remove the LCD assy flexible board in the direction of arrow (A).



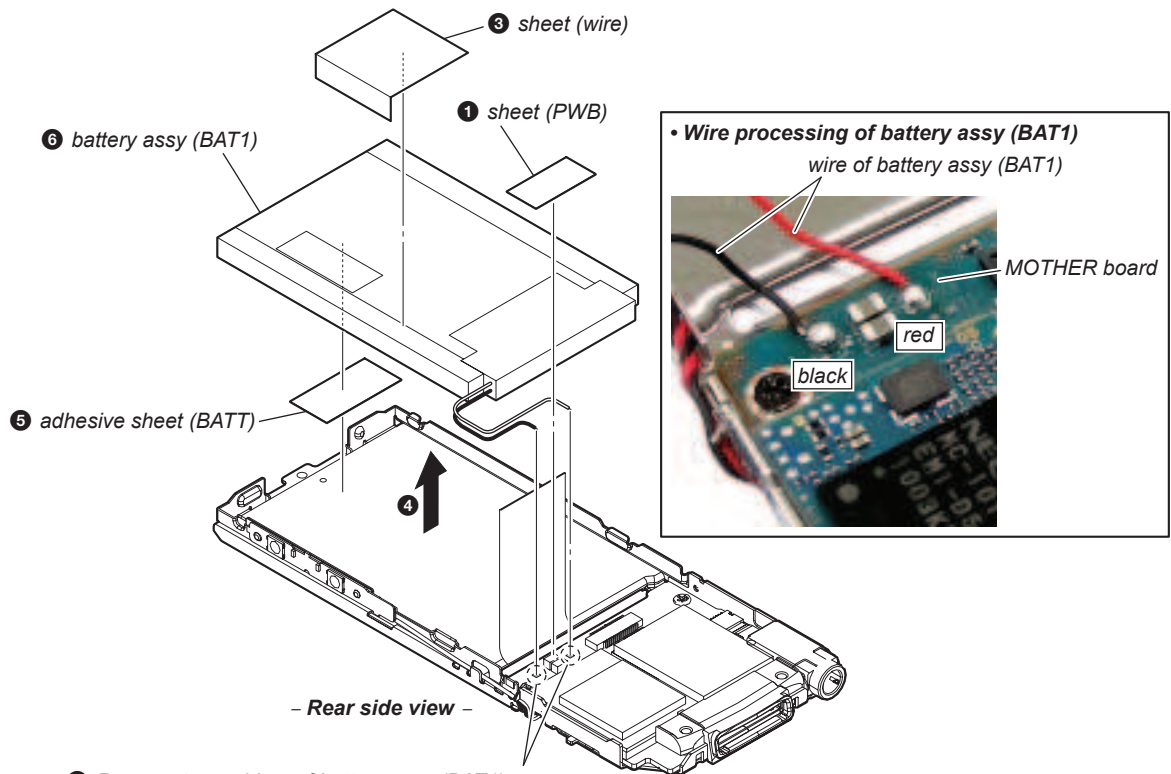
Note 1: There is a possibility of damaging LCD assy flexible board when removing excluding the direction of arrow (A).



Note 2: Please match the position of two ditches and two ribs when you install LCD assy flexible board.
If putting into the connector shift ditch and rib, connector will be broken.



2-11. BATTERY ASSY (BAT1)



2 Remove two solders of battery assy (BAT1).

Note 2: When the battery assy (BAT1) is removed, refer to "ABOUT THE HANDLING OF THE BATTERY ASSY (BAT1)" (page 4).

SECTION 3 TEST MODE

Note 1: Information on the test mode must correspond in enough security. When the leakage has been revealed by any chance, the source of information is specified.

Note 2: Execute "EXITTEST" when you release the test mode.

1. SETTING THE TEST MODE

Note: Perform the test mode in the state of 3.6 V or more in the battery voltage.

Setting method:

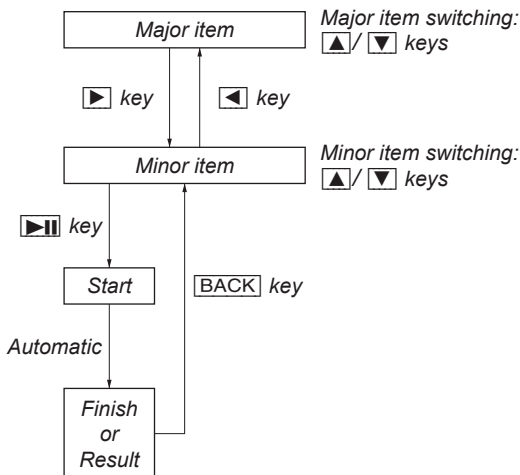
1. Turn the power on.
2. Press the [BACK] key for more 1.5 seconds, the home menu is displayed.
3. Slide the [HOLD] key from OFF to ON.
4. Press the key as following order.
[◀] → [VOL -] → [VOL +] → [▶] → [BACK] → [▶▶] → [▶] → [▶▶] → [BACK] → [◀]
5. The set reboots and the color bar is displayed on the liquid crystal display.
6. Enter the test mode when any keys are pressed in the state of step 5, and slide the [HOLD] key from ON to OFF.

Note: The destination setting and sound pressure regulation setting cannot be executed by this test mode.

2. RELEASING THE TEST MODE

1. Display the major item selection screen.
2. Press the [▲]/[▼] keys to select the "EXITTEST", and press the [▶] key to select the "SURE?".
3. Press the [▶▶] key, turn the power off and release the test mode.

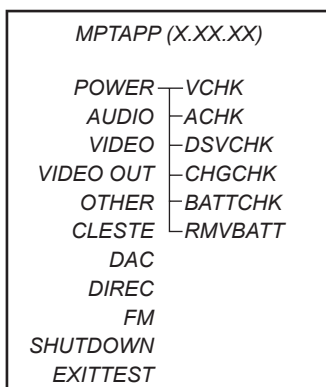
3. CONFIGURATION OF THE TEST MODE



4. OPERATION OF THE TEST MODE

4-1. Power (POWER)

Screen display



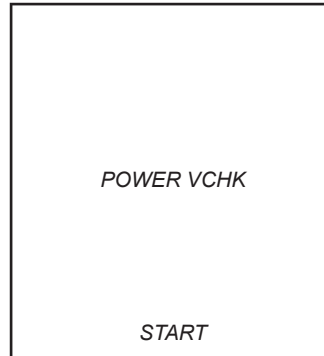
4-1-1. Power supply voltage check (VCHK)

This mode is used in case power supply voltage in the state where all power supply lines are starting is checked.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the "POWER", and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the "VCHK".
4. Press the [▶▶] key, all power supply lines are started.

Screen display



In this state, the power supply voltage of each power supply line can be confirmed by measuring the voltage.

5. Press the [BACK] key, return to minor item selection screen.

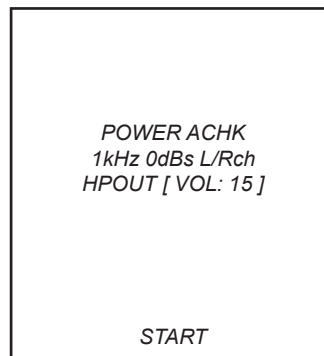
4-1-2. Consumption current (audio playback) check (ACHK)

This mode is used in case consumption current (audio playback) is checked in the state where "1 kHz 0 dBs L-ch/R-ch VOLUME: 15" audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the "POWER", and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the "ACHK".
4. Press the [▶▶] key, "1 kHz 0 dBs L-ch/R-ch VOLUME: 15" audio signal is outputted.

Screen display



5. In this state, each time the [▶] key is pressed, LCD back light on/off switch is performed.
6. Press the [BACK] key, return to minor item selection screen.

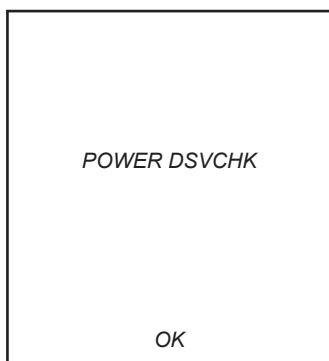
4-1-3. Standby current check (DSVCHK)

This mode is used in case standby current is checked.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “POWER”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “DSVCHK”.
4. Press the [▶▶] key, enter the state of the deep sleep.
5. Press the [BACK] key, release the state of the deep sleep.

Screen display



6. Press the [BACK] key, return to minor item selection screen.

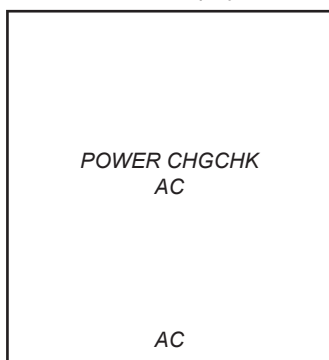
4-1-4. Charge current check (CHGCHK)

This mode is used in case charge current is checked.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “POWER”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “CHGCHK”.
4. Press the [▶▶] key, the charge setting is displayed.

Screen display



5. In this state, each time the [▶] key is pressed, the port setting for the charge is changed as shown in the table below.

	Port control		
Display	CHG_XCHGEN	CHG_PEN1	CHG_PEN2
AC	L	H	H
USB500	L	H	H
USB100	L	H	L

6. Press the [BACK] key, return to minor item selection screen.

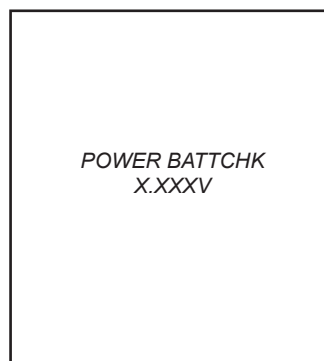
4-1-5. Battery voltage detection check (BATTCHK)

This mode is used in case battery voltage is checked.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “POWER”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys key to select the “BATTCHK”.
4. Press the [▶▶] key, the battery voltage is displayed.
When the battery voltage cannot be confirmed, “ERROR” is displayed.

Screen display



X.XXXV: Battery voltage

5. Press the [BACK] key, return to minor item selection screen.

4-1-6. Battery separation (RMVBATT)

When the battery is removed, this mode is used.

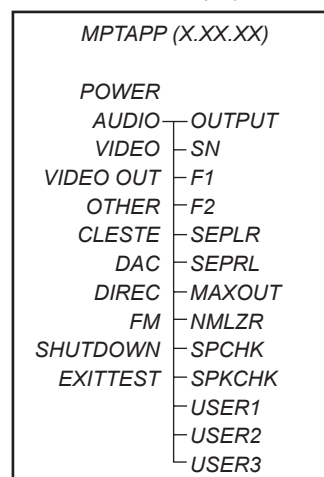
Note: Not used for the servicing.

4-2. Audio (AUDIO)

While playing the audio track, it's in a repeat state. If [BACK] key is pressed, it's stopped.

Press the [◀] key to switch the HPOUT/LINEOUT/SPEAKER.

Screen display



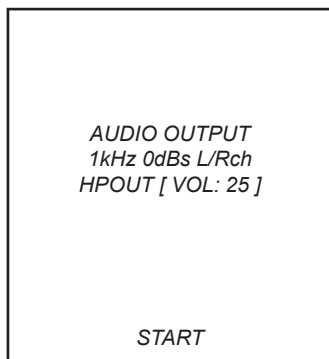
4-2-1. Output check (OUTPUT)

“1 kHz 0 dBs L-ch/R-ch VOLUME: 25” audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “OUTPUT”.
4. Press the [▶] key, “1 kHz 0 dBs L-ch/R-ch VOLUME: 25” audio signal is outputted.

Screen display



5. Press the [BACK] key, return to minor item selection screen.

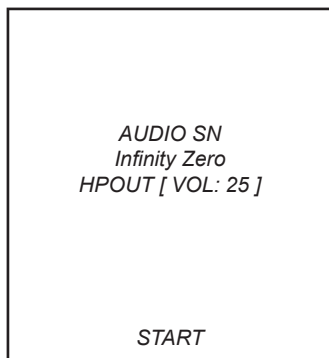
4-2-2. S/N check (SN)

“Infinity Zero VOLUME: 25” audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “SN”.
4. Press the [▶] key, “Infinity Zero VOLUME: 25” audio signal is outputted.

Screen display



5. Press the [BACK] key, return to minor item selection screen.

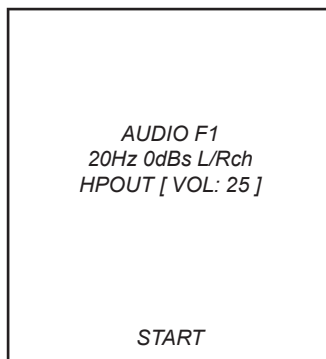
4-2-3. Frequency characteristic 1 check (F1)

“20 Hz 0 dBs L-ch/R-ch VOLUME: 25” audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “F1”.
4. Press the [▶] key, “20 Hz 0 dBs L-ch/R-ch VOLUME: 25” audio signal is outputted.

Screen display



5. Press the [BACK] key, return to minor item selection screen.

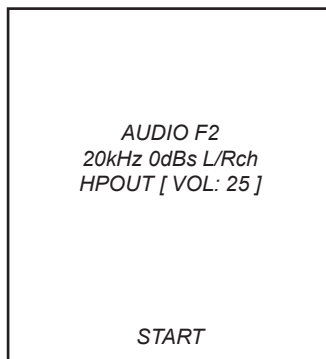
4-2-4. Frequency characteristic 2 check (F2)

“20 kHz 0 dBs L-ch/R-ch VOLUME: 25” audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “F2”.
4. Press the [▶] key, “20 kHz 0 dBs L-ch/R-ch VOLUME: 25” audio signal is outputted.

Screen display



5. Press the [BACK] key, return to minor item selection screen.

4-2-5. CH separation (L-ch) check (SEPLR)

“1 kHz 0 dBs L-ch VOLUME: 25” audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “SEPLR”.
4. Press the [▶] key, “1 kHz 0 dBs L-ch VOLUME: 25” audio signal is outputted.

Screen display



5. Press the [BACK] key, return to minor item selection screen.

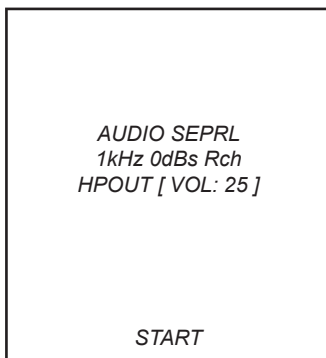
4-2-6. CH separation (R-ch) check (SEPRL)

“1 kHz 0 dBs R-ch VOLUME: 25” audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “SEPRL”.
4. Press the [▶] key, “1 kHz 0 dBs R-ch VOLUME: 25” audio signal is outputted.

Screen display



5. Press the [BACK] key, return to minor item selection screen.

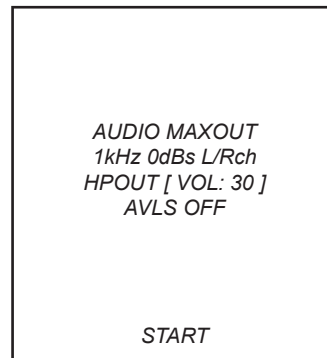
4-2-7. Maximum output check (MAXOUT)

“1 kHz 0 dBs L-ch/R-ch VOLUME: 30” (Headphone output when AVLS operates: “1 kHz 0 dBs L-ch/R-ch VOLUME: 13”) audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “MAXOUT”.
4. Press the [▶] key, “1 kHz 0 dBs L-ch/R-ch VOLUME: 30” (Headphone output when AVLS operates: “1 kHz 0 dBs L-ch/R-ch VOLUME: 13”) audio signal is outputted.

Screen display



5. In this state, each time the [▶] key is pressed, AVLS on/off switch is performed.
6. Press the [BACK] key, return to minor item selection screen.

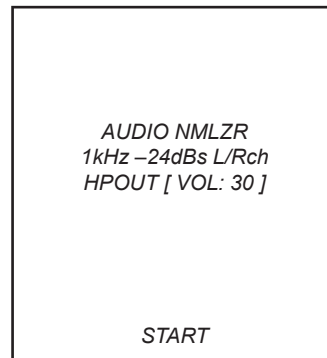
4-2-8. Normalizer check (NMLZR)

“1 kHz -24 dBs L-ch/R-ch VOLUME: 30” audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “NMLZR”.
4. Press the [▶] key, “1 kHz -24 dBs L-ch/R-ch VOLUME: 30” audio signal is outputted.

Screen display



5. Press the [BACK] key, return to minor item selection screen.

4-2-9. Sound pressure regulation level check (SPCHK)
 “1 kHz 0 dBs L-ch/R-ch VOLUME: 30” audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “SPCHK”.
4. Press the [▶▶] key, “1 kHz 0 dBs L-ch/R-ch VOLUME: 30” audio signal is outputted.

Screen display



5. Press the [BACK] key, return to minor item selection screen.

4-2-10. Speaker check

“20 – 20kHz 0dBs L-ch/R-ch VOLUME: 30” audio signal is outputted.

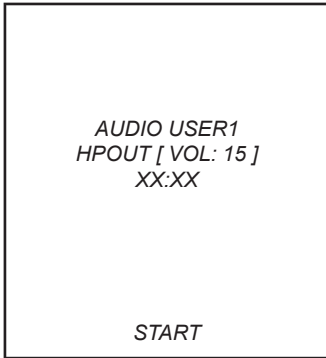
Note: Not used for the servicing.

4-2-11. User specification contents playback 1 (USER1)
 “/User1.oma” is reproduced.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “USER1”.
4. Press the [▶▶] key, “/User1.oma” is reproduced.

Screen display



XX:XX : Repetition expert totaling time

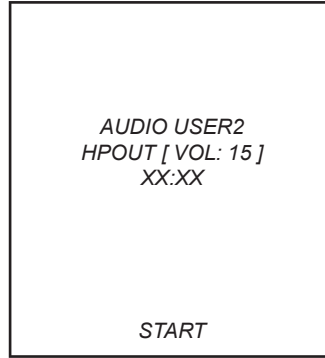
5. Press the [BACK] key, return to minor item selection screen.

4-2-12. User specification contents playback 2 (USER2)
 “/User2.oma” is reproduced.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “USER2”.
4. Press the [▶▶] key, “/User2.oma” is reproduced.

Screen display



XX:XX : Repetition expert totaling time

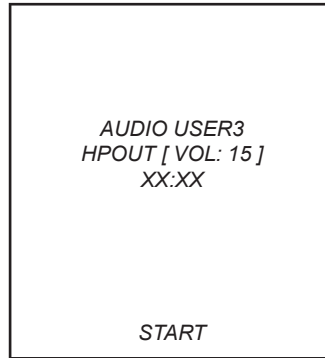
5. Press the [BACK] key, return to minor item selection screen.

4-2-13. User specification contents playback 3 (USER3)
 “/User3.oma” is reproduced.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “AUDIO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “USER3”.
4. Press the [▶▶] key, “/User3.oma” is reproduced.

Screen display

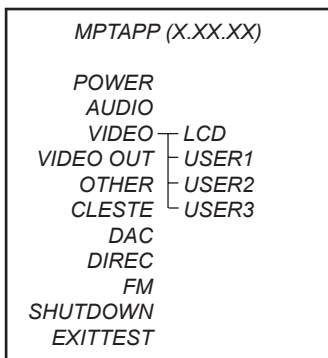


XX:XX : Repetition expert totaling time

5. Press the [BACK] key, return to minor item selection screen.

4-3. Video (VIDEO)

Screen display



4-3-1. LCD display check (LCD)

Screen display is checked.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “VIDEO”, and press the [▶] key to select the “LCD”.
3. Press the [▶▶] key, all black is displayed on the screen.
4. In this state, each time the [OPTION] key is pressed, the screen display changes in the following order.

All black (default) → Color bar (standard) → Color bar (brightness minimum) → Color bar (brightness maximum) → All red → All green → All blue → All white → Maximum drawing size confirmation → diagonal gradation (red) → diagonal gradation (green) → diagonal gradation (blue) → diagonal gradation (white)

Maximum drawing size confirmation:

All blue (All sides are red) is displayed. Whether red in all sides is seen is confirmed.

5. In this state, each time the [▶] key is pressed, brightness min/max/middle switch is performed.
6. Press the [BACK] key, return to minor item selection screen.

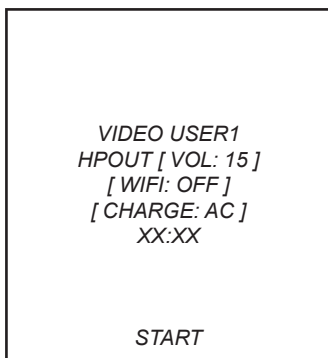
4-3-2. User specification contents playback 1 (USER1)

“/User1.mp4” is reproduced.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “VIDEO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “USER1”.
4. Press the [▶▶] key, “/User1.mp4” is reproduced.

Screen display



XX:XX : Repetition expert totaling time

5. Press the [BACK] key, return to minor item selection screen.

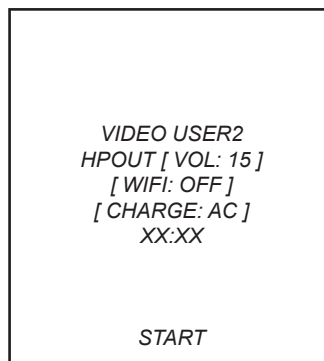
4-3-3. User specification contents playback 2 (USER2)

“/User2.mp4” is reproduced.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “VIDEO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “USER2”.
4. Press the [▶▶] key, “/User2.mp4” is reproduced.

Screen display



XX:XX : Repetition expert totaling time

5. Press the [BACK] key, return to minor item selection screen.

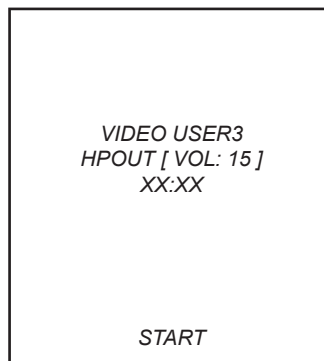
4-3-4. User specification contents playback 3 (USER3)

“/User3.mp4” is reproduced.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “VIDEO”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “USER3”.
4. Press the [▶▶] key, “/User3.mp4” is reproduced.

Screen display

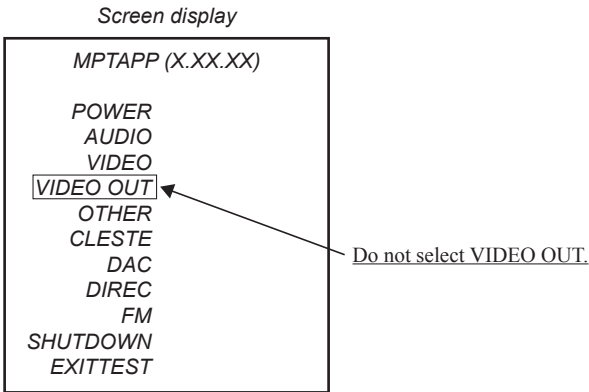


XX:XX : Repetition expert totaling time

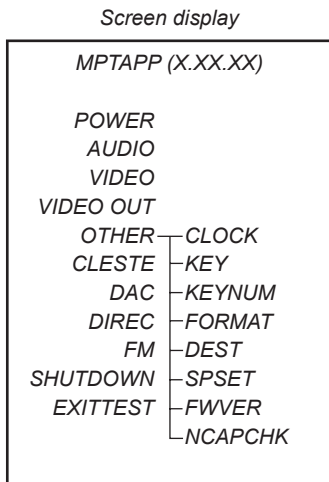
5. Press the [BACK] key, return to minor item selection screen.

4-4. Video output (VIDEO OUT)

Note: “VIDEO OUT” must select it never. There is a possibility that the problem occurs in destination setting.



4-5. Other (OTHER)



4-5-1. Clock check (CLOCK)

The movement of an internal clock is confirmed.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “OTHER”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “CLOCK”.
4. Press the [▶||] key, date and time are displayed. “START” changes into “OK” if the movement of an internal clock is confirmed.



XX, XX XX XXXX : Date
##.##.##.##### : Time

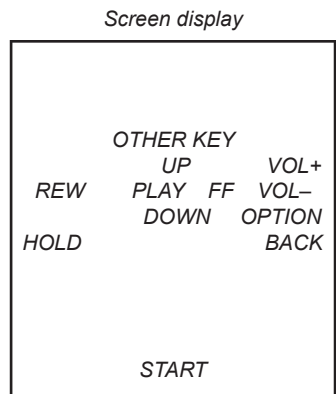
5. Press the [BACK] key, return to minor item selection screen.

4-5-2. Key check (KEY)

The operation of the key is confirmed.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “OTHER”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “KEY”.
4. Press the [▶||] key, all keys are displayed.



5. The character corresponding to the key is selected every time the key is pressed. “OK” is displayed if all keys are pressed.
6. Slide the [HOLD] key from ON to OFF, return to minor item selection screen.

4-5-3. Frequency check that presses key (KEYNUM)

The frequency to which the key is pressed, insert/pull out frequency of cradle and insert/pull out frequency of the headphone are displayed.

Note: Not used for the servicing.

4-5-4. Format (FORMAT)

The user's area is formatted, and ICV for the video and ICV for audio are initialized.

Note: Not used for the servicing.

Format the set from "Settings" → "Common settings" → "Reset/Format" → "Format" when it home menu in usually operates when the set should format it.

4-5-5. Destination setting (DEST)

The destination setting, language information, and sound pressure regulation information are written in the NAND flash memory.

Note: Not used for the servicing.

4-5-6. Sound pressure regulation setting (SPSET)

ON/OFF of sound pressure regulation is confirmed.

Note: Not used for the servicing.

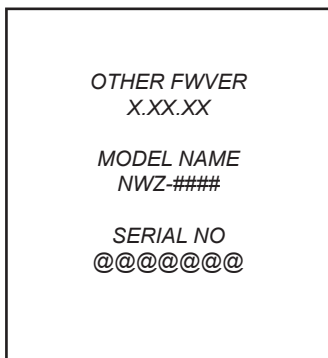
4-5-7. Firmware version check (FWVER)

The firmware version is displayed.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the "OTHER" and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the "FWVER".
4. Press the [▶] key, the firmware version is displayed.

Screen display



X.XX.XX : Firmware version
 ##### : Model name
 @@@@@" : Serial No.

5. Press the [BACK] key, return to minor item selection screen.

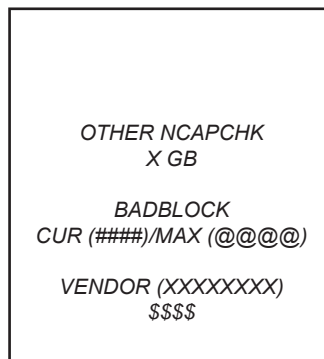
4-5-8. NAND capacity check (NCAPCHK)

Capacity of NAND flash memory, present bad block, maximum bad block, and vender ID are displayed.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the "OTHER", and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the "NCAPCHK".
4. Press the [▶] key, capacity of NAND flash memory, present bad block, maximum bad block, and vender ID are displayed.

Screen display

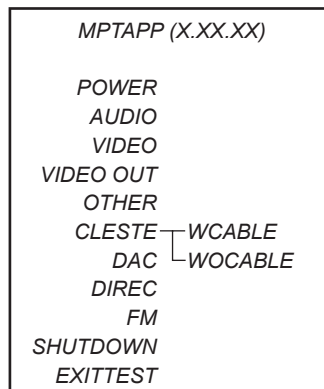


X : Capacity of NAND flash memory
 @@@@ : Number of present bad block
 (It makes an error the acquisition of the number of bad blocks at "-1")
 #### : Number of maximum bud block
 (It makes an error the acquisition of the vender ID at "-1")
 \$\$\$\$: Vender of NAND flash memory

5. Press the [BACK] key, return to minor item selection screen.

4-6. CLESTE

Screen display



4-6-1. Clear stereo setting (With cable) (WCABLE)

This mode is according to an original sound playback, for adjustment to right and left sound.

Note: Not used for the servicing.

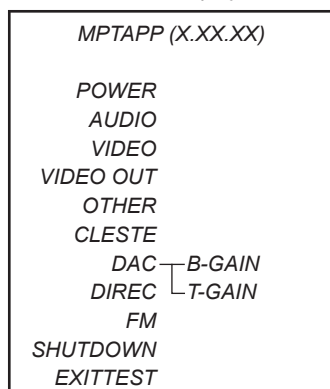
4-6-2. Clear stereo setting (No cable) (WOCABLE)

This mode is according to an original sound playback, for adjustment to right and left sound.

Note: Not used for the servicing.

4-7. DAC

Screen display



4-7-1. BASS-Gain/Fc setting (B-GAIN)

This mode is adjustment for the sound of BASS when playback.

Note: Not used for the servicing.

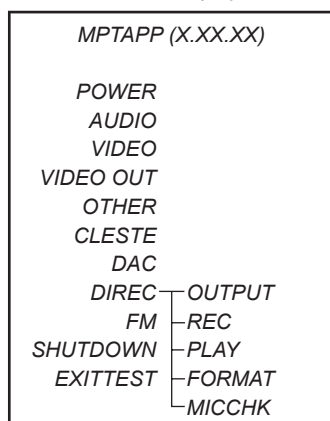
4-7-2. TREBLE-Gain/Fc setting (T-GAIN)

This mode is adjustment for the sound of TREBLE when playback.

Note: Not used for the servicing.

4-8. DIREC

Screen display



4-8-1. Direct recording output check (OUTPUT)

In this mode, the output confirmation is done.

Note: Not used in this model.

4-8-2. Direct recording recording (REC)

In this mode, it records by the format specified in “Direct recording format select”.

Note: Not used in this model.

4-8-3. Direct recording playback (PLAY)

In this mode, the sound recorded in “Direct recording recording” is reproduced.

Note: Not used in this model.

4-8-4. Direct recording format select (FORMAT)

In this mode, the recording format is selected.

Note: Not used in this model.

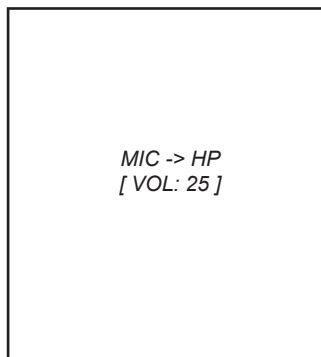
4-8-5. Built-in microphone check (MICCHK)

In this mode, the built-in microphone is checked.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “DIREC”, and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the “MICCHK”.
4. Press the [▶||] key, the built-in microphone check is begun. In this state, the sound that the built-in microphone perceived is outputted from the headphone.

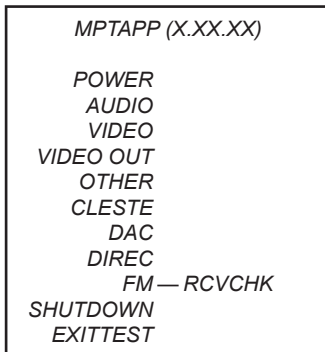
Screen display



5. Press the [BACK] key, return to minor item selection screen.

4-9. FM

Screen display



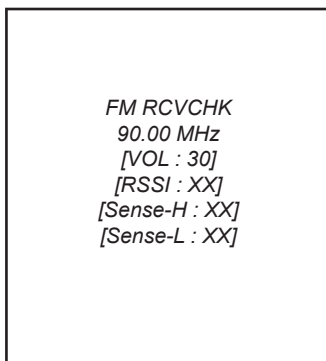
4-9-1. Reception output check (RCVCHK)

FM tuning checked.

Checking method:

1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “FM”, and press the [▶] key to select the “RCVCHK”.
3. Press the [▶||] key, “90.00 MHz” is displayed.

Screen display



4. In this state, each time the [◀] key is pressed, frequency is changes in the following order.

90.00 MHz (default) → 76.00 MHz → 95.75 MHz → 107.75 MHz → 87.50 MHz → 98.00 MHz → 108.00 MHz → 100.00 MHz

5. In this state, each time the [▶] key is pressed, the LCD back-light brightness is switched.
6. In this state, each time the [OPTION] key is pressed, color bar is displayed.
7. In this state, slide the [HOLD] key from OFF to ON. Each time the [▶]/[◀] keys are pressed, frequency changes in 0.05 MHz.
8. Press the [BACK] key, return to minor item selection screen.

4-10. Shutdown (SHUTDOWN)

Function that power supply of set can be turned off without ending static test mode.

Procedure:

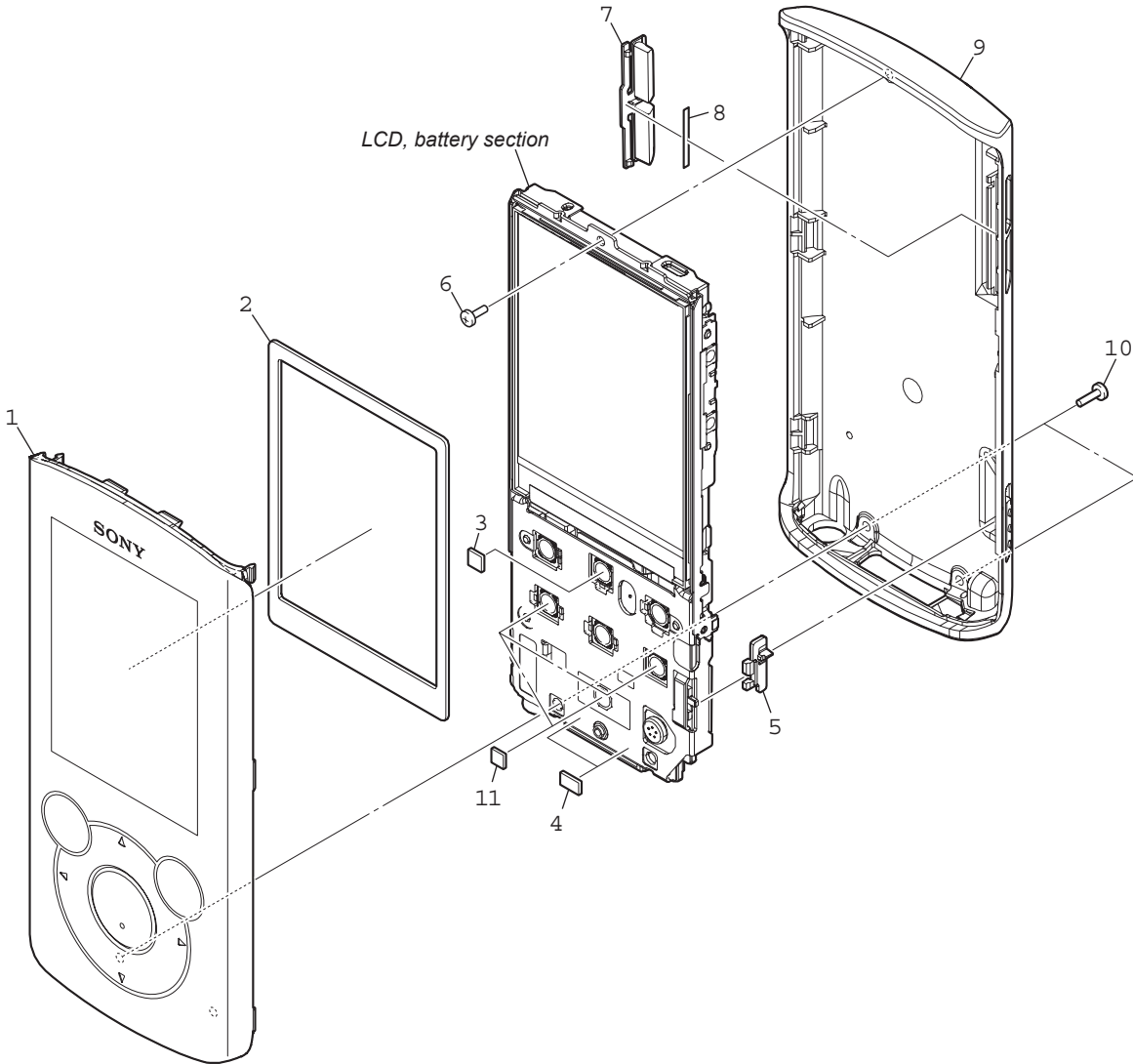
1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the “SHUTDOWN”, and press the [▶] key to select the “SURE ?”.
3. Press the [▶||] key, turn the power off while having entered the test mode.

SECTION 4
EXPLODED VIEWS

Note:

- XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Color Indication of Appearance Parts Example:
KNOB, BALANCE (WHITE) . . . (RED)
↑ ↑
Parts Color Cabinet's Color
- Refer to "COLOR VARIATION" in the "SERVICING NOTES" (page 7) about color variation of model and destination.

4-1. CASE SECTION



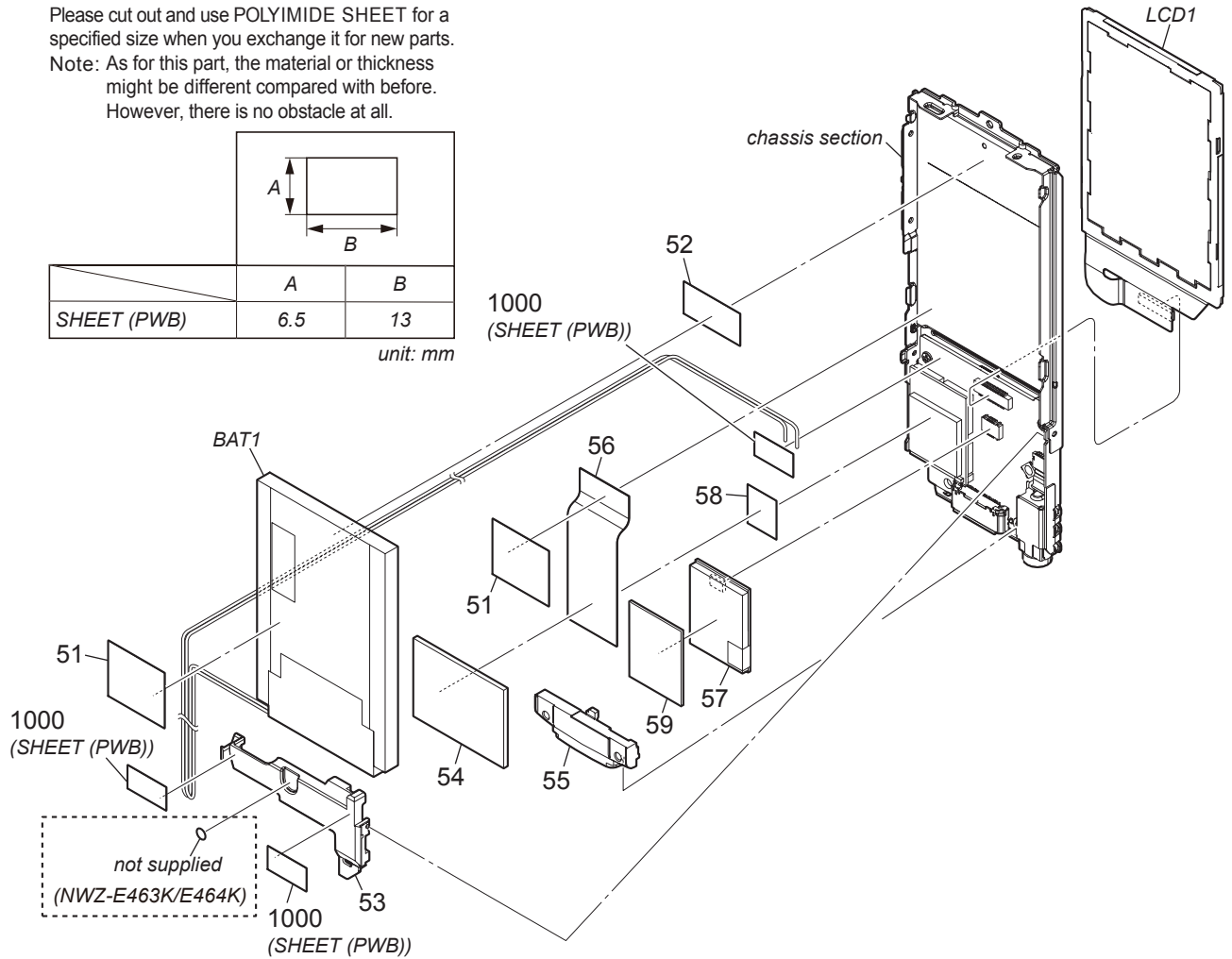
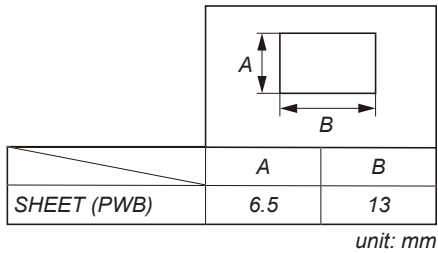
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-2581-503-1	CASE (FRONT) (B) ASSY (BLACK)		7	4-283-364-41	BUTTON (VOL) (GREEN)	
1	X-2581-684-1	CASE (FRONT) (R) ASSY (RED)		7	4-283-364-51	BUTTON (VOL) (GOLD)	
1	X-2581-685-1	CASE (FRONT) (P) ASSY (PINK)		8	4-283-366-01	SHEET (VOL), ADHESIVE	
1	X-2581-686-1	CASE (FRONT) (L) ASSY (BLUE)		9	X-2581-504-1	CASE (REAR) (B) ASSY (BLACK)	
1	X-2581-687-1	CASE (FRONT) (G) ASSY (GREEN)		9	X-2581-689-1	CASE (REAR) (R) ASSY (RED)	
1	X-2581-688-1	CASE (FRONT) (N) ASSY (GOLD)		9	X-2581-690-1	CASE (REAR) (P) ASSY (PINK)	
2	4-286-701-01	CUSHION (LCD)		9	X-2581-691-1	CASE (REAR) (L) ASSY (BLUE)	
3	4-293-221-01	SPACER (BUTTON E)		9	X-2581-692-2	CASE (REAR) (G) ASSY (GREEN)	
4	4-292-852-01	SPACER (ORNAMENT RING)		9	X-2581-693-1	CASE (REAR) (N) ASSY (GOLD)	
5	4-283-368-01	GUIDE (HOLD)		10	4-195-816-01	SCREW 0+P2 M1.4 NEW TRU-STAR (for BLUE, PINK, GREEN, GOLD)	
6	3-254-136-01	SCREW (B1.4)		10	4-195-816-11	SCREW 0+P2 M1.4 NEW TRU-STAR (for BLACK, RED)	
7	4-283-364-01	BUTTON (VOL) (BLACK)		11	4-299-401-01	SPACER	
7	4-283-364-11	BUTTON (VOL) (RED)					
7	4-283-364-21	BUTTON (VOL) (PINK)					
7	4-283-364-31	BUTTON (VOL) (BLUE)					

4-2. LCD, BATTERY SECTION

- Rear side view

• About Ref. No. 1000

Please cut out and use POLYIMIDE SHEET for a specified size when you exchange it for new parts.
 Note: As for this part, the material or thickness might be different compared with before.
 However, there is no obstacle at all.



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-150-173-01	SHEET (WIRE)		57	9-885-159-63	EMMC BOARD, COMPLETE (16GB)	
52	4-105-860-01	ADHESIVE, SHEET (BATT)				(for SERVICE) (NWZ-E465)	
53	4-283-369-02	SUPPORT (M)		58	4-257-561-01	SHEET (CORAL) ADHESIVE	
54	4-198-386-01	CUSHION (NAND)		59	4-263-096-01	SPACER (NAND)	
55	4-283-367-01	ESCUTCHEON		1000	9-913-402-43	POLYIMIDE SHEET, t=0.075 (for SERVICE)	
56	4-208-971-01	LEAF (CORAL), COPPER		BAT1	X-2546-032-2	SVX BATTERY ASSY	
57	9-885-159-61	EMMC BOARD, COMPLETE (4GB) (for SERVICE)		LCD1	A-1788-689-A	LCD ASSY	
		(NWZ-E463/E463HK/E463K)					
57	9-885-159-62	EMMC BOARD, COMPLETE (8GB) (for SERVICE)					
		(NWZ-E464/E464K)					

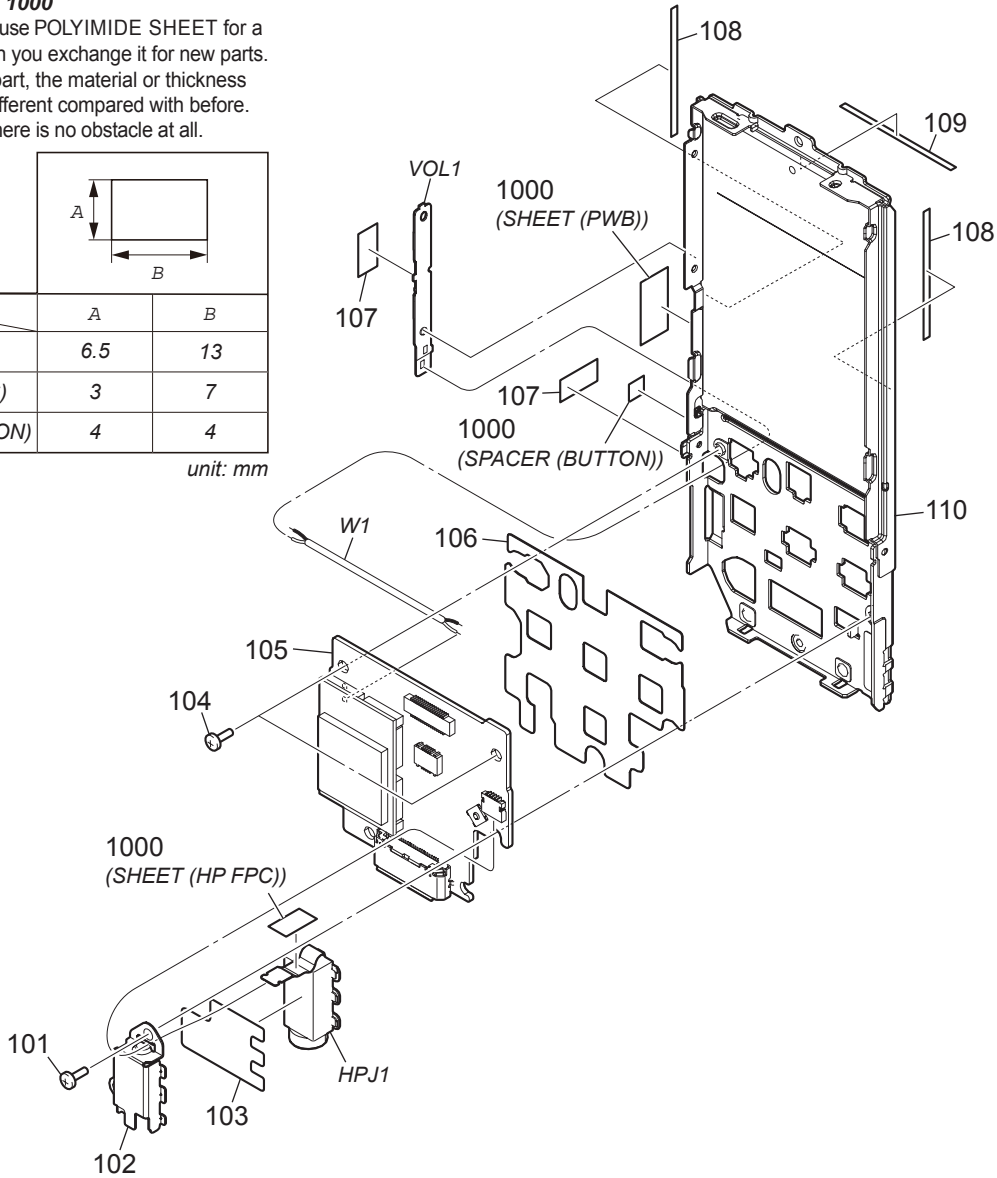
4-3. CHASSIS SECTION

- Rear side view

• About Ref. No. 1000

Please cut out and use POLYIMIDE SHEET for a specified size when you exchange it for new parts.
 Note: As for this part, the material or thickness might be different compared with before.
 However, there is no obstacle at all.

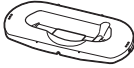
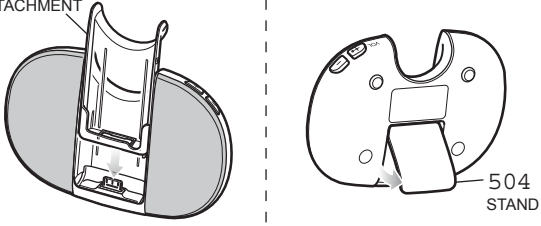
	<table border="1"> <tr> <td style="width: 50px;">A</td> <td style="width: 50px;">B</td> </tr> <tr> <td>SHEET (PWB)</td> <td>6.5 13</td> </tr> <tr> <td>SHEET (HP FPC)</td> <td>3 7</td> </tr> <tr> <td>SPACER (BUTTON)</td> <td>4 4</td> </tr> </table>	A	B	SHEET (PWB)	6.5 13	SHEET (HP FPC)	3 7	SPACER (BUTTON)	4 4
A	B								
SHEET (PWB)	6.5 13								
SHEET (HP FPC)	3 7								
SPACER (BUTTON)	4 4								
	unit: mm								



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	3-234-449-11	SCREW (M1.4)		108	4-195-814-01	SPACER (LCD)	
102	4-283-371-01	HOLDER (HP)		109	4-195-815-01	SHEET (LCD), ADHESIVE	
103	4-198-036-01	SHEET (HP JACK)		110	X-2581-502-1	CHASSIS ASSY	
104	3-234-449-05	SCREW (M1.4)		1000	9-913-402-43	POLYIMIDE SHEET, t=0.075 (for SERVICE)	
105	9-885-159-64	MOTHER BOARD, COMPLETE (for SERVICE)		HPJ1	A-1784-100-A	3PIN HP JACK ASSY	
106	4-192-485-01	SHEET (MOTHER)		VOL1	A-1828-814-A	VOL KEY ASSY	
107	4-209-153-01	SHEET (CHASSIS)		W1	1-967-951-11	VOL KEY WIRE	

NWZ-E463/E463HK/E463K/E464/E464K/E465
Ver. 1.1

SECTION 5 ACCESSORIES

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1-542-892-11		HEAD PHONE (MDR-EX083LP/BC9) (Headphones: Black) (for BLACK, RED, GOLD) (EXCEPT NWZ-E463HK)		501	4-288-523-01	ATTACHMENT (ER-O)	
1-542-892-21		HEAD PHONE (MDR-EX083LP/WC9) (Headphones: White) (for BLUE, PINK, GREEN) (EXCEPT NWZ-E463HK)		502	A-1825-725-A	RDP-NWT16 (Speaker) (BLACK) (NWZ-E463K: AEP, UK, MX/E464K)	
1-835-940-31		CORD, PC CONNECTION (USB cable)		502	A-1837-362-A	RDP-NWT16 (Speaker) (PINK) (NWZ-E464K)	
4-286-145-01		EARPAD (1 piece) (Included in MDR-ZX100) (NWZ-E463HK)		502	A-1837-363-A	RDP-NWT16 (Speaker) (BLUE) (NWZ-E464K)	
4-287-611-12		MANUAL, INSTRUCTION (Quick Start Guide) (ENGLISH) (Except Qriocity compatible model) (EXCEPT US)		502	A-1845-748-A	RDP-NWT16 (Speaker) (BLACK) (NWZ-E463K: E, JE)	
4-287-611-22		MANUAL, INSTRUCTION (Quick Start Guide) (FRENCH) (Except Qriocity compatible model) (CND, AEP, UK)		503	4-283-332-01	ATTACHMENT, E (Attachment for speaker) (SMOKE) (NWZ-E463K/E464K: for BLACK)	
4-287-611-32		MANUAL, INSTRUCTION (Quick Start Guide) (GERMAN) (Except Qriocity compatible model) (AEP, UK)		503	4-283-332-11	ATTACHMENT, E (Attachment for speaker) (CLEAR) (NWZ-E464K: for BLUE, PINK)	
4-287-611-42		MANUAL, INSTRUCTION (Quick Start Guide) (SPANISH) (Except Qriocity compatible model) (AEP, UK, MX)		504	4-193-600-01	PANEL, STAND (Stand for speaker) (BLACK) (NWZ-E463K/E464K: for BLACK)	
4-287-611-52		MANUAL, INSTRUCTION (Quick Start Guide) (ITALIAN) (Except Qriocity compatible model) (AEP, UK)		504	4-193-600-11	PANEL, STAND (Stand for speaker) (WHITE) (NWZ-E464K: for BLUE, PINK)	
4-287-611-62		MANUAL, INSTRUCTION (Quick Start Guide) (RUSSIAN) (EE)		<div style="border: 1px solid black; padding: 10px;"> <p>501</p>  <p>ATTACHMENT (Use when connecting your "WALKMAN" to the cradle (not supplied), etc.)</p> <p>502 SPEAKER (RDP-NWT16) (for NWZ-E463K/E464K)</p> <div style="border: 1px dashed black; padding: 5px;"> <p>503 ATTACHMENT</p>  <p style="text-align: center;">- Front View - - Rear View -</p> <p>504 STAND</p> </div> </div>			
4-287-611-73		MANUAL, INSTRUCTION (Quick Start Guide) (SIMPLIFIED CHINESE) (E, AUS, CH, JE)					
4-287-611-83		MANUAL, INSTRUCTION (Quick Start Guide) (TRADITIONAL CHINESE) (E, AUS, JE)					
4-287-611-92		MANUAL, INSTRUCTION (Quick Start Guide) (KOREAN) (E, AUS, JE)					
4-287-612-12		MANUAL, INSTRUCTION (Quick Start Guide) (UKRAINIAN) (EE)					
4-287-612-22		MANUAL, INSTRUCTION (Quick Start Guide) (ARABIC) (E, AUS, JE)					
4-287-612-32		MANUAL, INSTRUCTION (Quick Start Guide) (TURKISH) (EE)					
4-287-613-12		MANUAL, INSTRUCTION (for RDP-NWT16) (ENGLISH, FRENCH, GERMAN, SPANISH, ITALIAN) (NWZ-E463K: AEP, UK, MX/E464K)					
4-287-613-21		MANUAL, INSTRUCTION (for RDP-NWT16) (ENGLISH, SIMPLIFIED CHINESE, TRADITIONAL CHINESE, KOREAN, ARABIC) (NWZ-E463K: E, JE)					
4-415-380-11		MANUAL, INSTRUCTION (Quick Start Guide) (ENGLISH) (for Qriocity compatible model) (US, AEP, UK)					
4-415-380-21		MANUAL, INSTRUCTION (Quick Start Guide) (FRENCH) (for Qriocity compatible model) (AEP, UK)					
4-415-380-31		MANUAL, INSTRUCTION (Quick Start Guide) (GERMAN) (for Qriocity compatible model) (AEP, UK)					
4-415-380-41		MANUAL, INSTRUCTION (Quick Start Guide) (SPANISH) (for Qriocity compatible model) (AEP, UK)					
4-415-380-51		MANUAL, INSTRUCTION (Quick Start Guide) (ITALIAN) (for Qriocity compatible model) (AEP, UK)					
8-912-830-90		HEADPHONE (MDR-ZX100) (Headphones) (Including Earpad) (NWZ-E463HK)					

- Abbreviation
- AUS : Australian model
- CH : Chinese model
- CND : Canadian model
- EE : East European model
- JE : Tourist model
- MX : Mexican model