# NWZ-E353/E354/E355

# SERVICE MANUAL

**Ver. 1.1  2010.09**

*US Model*
*AEP Model*
*NWZ-E353/E354*
*Canadian Model*
*NWZ-E353/E354/E355*
*East European Model*
*South African Model*
*Indian Model*
*NWZ-E353*

**Note:**
Be sure to keep your PC used for service and checking of this unit always updated with the latest version of your anti-virus software.
In case a virus affected unit was found during service, contact your Service Headquarters.

Photo: NWZ-E353

## SPECIFICATIONS

### Supported file format

**Music (including podcasts (*1))**

| Audio Formats (Codec) | MP3 | Media File format: MP3 (MPEG-1 Layer3) file format<br>File extension: .mp3<br>Bit rate: 32 to 320 kbps (Supports variable bit rate (VBR))<br>Sampling frequency (*2): 32, 44.1, 48 kHz |
|---|---|---|
| | WMA | Media File format: ASF file format<br>File extension: .wma<br>Bit rate: 32 to 192 kbps (Supports variable bit rate (VBR))<br>Sampling frequency (*2): 44.1 kHz<br>* Compatible with WM-DRM 10 |
| | AAC-LC (*3) | Media File format: MP4 file format<br>File extension: .mp4, .m4a, .3gp<br>Bit rate: 16 to 320 kbps (Supports variable bit rate (VBR)) (*4)<br>Sampling frequency (*2): 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, 48 kHz |
| | Linear PCM | Media File format: Wave-Riff file format<br>File extension: .wav<br>Bit rate: 1,411 kbps<br>Sampling frequency (*2): 44.1 kHz |

**Video (including podcasts (*1))**

| Video Formats (Codec) | | Frame rate: Max. 30 fps<br>Resolution: Max. 720 × 480 (*5) |
|---|---|---|
| | Windows Media Video 9 (*6) | Media File format: ASF file format<br>File extension: .wmv<br>Profile: VC1 simple profile, main profile<br>Bit rate: Max. 6 Mbps |
| Audio Formats (Codec) | WMA (for Windows Media Video 9) | Bit rate: 32 to 192 kbps (Supports variable bit rate (VBR))<br>Sampling frequency (*2): 44.1 kHz<br>* Compatible with WM-DRM 10 |
| File size | | Max. 4 GB |
| The number of files | | Max. 2,000 |

**Photo (*7)**

| Photo Format (Codec) | JPEG | Media File format: Compatible with DCF 2.0/Exif 2.21 file format<br>File extension: .jpg<br>Profile: Baseline Profile<br>Number of pixels: Max. 4,096 × 4,096 pixels (16,000,000 pixels) |
|---|---|---|
| The number of files | | Max. 20,000 |

(*1) The maximum recordable number of podcasts is 20,000.
(*2) Sampling frequency may not correspond to all encoders.
(*3) Copyright protected AAC-LC files cannot be played back.
(*4) Non-standard bit rates or non-guaranteed bit rates are included depending on the sampling frequency.
(*5) These numbers indicate the maximum resolution of playable video, and do not indicate the player's display resolution. The display resolution is 320 × 240.
(*6) Some WMV files can be played back only by transferring using Windows Media Player.
(*7) Some photo files cannot be played back, depending on their file formats.

### Maximum recordable number of songs and time (Approx.)

The approximate times are based on the case in which you transfer or record only 4 minute songs (not including videos and photos) in the MP3 format. Other playable audio file format song numbers and times may differ from MP3 format.

| Bit rate | NWZ-E353 | | NWZ-E354 | | NWZ-E355 | |
|---|---|---|---|---|---|---|
| | Number | Time | Number | Time | Number | Time |
| 48 kbps | 2,350 | 156 hr. 40 min. | 4,950 | 330 hr. 00 min. | 10,000 | 666 hr. 40 min. |
| 64 kbps | 1,750 | 116 hr. 40 min. | 3,650 | 243 hr. 20 min. | 7,450 | 496 hr. 40 min. |
| 128 kbps | 880 | 58 hr. 40 min. | 1,800 | 120 hr. 00 min. | 3,700 | 246 hr. 40 min. |
| 256 kbps | 440 | 29 hr. 20 min. | 925 | 61 hr. 40 min. | 1,850 | 123 hr. 20 min. |
| 320 kbps | 355 | 23 hr. 40 min. | 740 | 49 hr. 20 min. | 1,500 | 100 hr. 00 min. |

### Maximum recordable time of videos (Approx.)

The approximate recordable times are estimated in the case where only videos are transferred. The time may differ, depending on the conditions under which the player is used.

| Bit rate | NWZ-E353 | NWZ-E354 | NWZ-E355 |
|---|---|---|---|
| | Time | Time | Time |
| Video Format: 384 kbps<br>Audio Format: 128 kbps | 14 hr. 00 min. | 29 hr. 20 min. | 59 hr. 40 min. |
| Video Format: 768 kbps<br>Audio Format: 128 kbps | 8 hr. 00 min. | 16 hr. 40 min. | 34 hr. 00 min. |

### Maximum recordable number of photos that can be transferred (Approx.)

Max. 20,000
Recordable number of photos may be less depending on file sizes.

### Maximum recordable number of playlists

Maximum transferrable number of playlists: 8,192
Maximum containable number of songs in each playlist: 999

### Capacity (User available capacity) (*1)

NWZ-E353: 4 GB (Approx. 3.35 GB = 3,602,874,368 bytes)
NWZ-E354: 8 GB (Approx. 6.99 GB = 7,513,210,880 bytes)
NWZ-E355: 16 GB (Approx. 14.1 GB = 15,224,635,392 bytes)
(*1) Available storage capacity of the player may vary.
A portion of the memory is used for data management functions.

### Output (headphones)

Frequency response
20 to 20,000 Hz (when playing data file, single signal measurement)

### FM radio

FM Frequency range
87.5 to 108.0 MHz

### IF (FM)

128 kHz

# DIGITAL MEDIA PLAYER

# SONY®

# NWZ-E353/E354/E355

## Antenna
Headphone cord antenna

## Interface
Headphone: Stereo mini-jack
USB I/F: mini-B
Hi-Speed USB (USB 2.0 compliant)

## Operating temperature
5 °C to 35 °C (41 °F to 95 °F)

## Power source
- Built-in rechargeable lithium-ion battery
- USB power (from a computer via a USB connector of the player)

## Charging time
USB-based charging
Approx. 3 hours (full charge), Approx. 1.5 hours (approx. 80 %)

## Battery life (continuous playback)
Actual battery life may vary depending on settings. The estimated battery usage hours shown below are based on typical usage conditions with "Basic setting of battery life measurement" as shown in the table below.

### Note
- Even if the player is turned off for an extended period, a small amount of battery power is still consumed.
- Battery life may vary depending on volume setting, conditions of use, and ambient temperature.

| Music | |
|---|---|
| Playback at MP3 128 kbps | Approx. 50 hours |
| Playback at WMA 128 kbps | Approx. 50 hours |
| Playback at AAC-LC 128 kbps | Approx. 48 hours |
| Playback at Linear PCM 1,411 kbps | Approx. 56 hours |
| **Video** | |
| Playback at WMV 384 kbps | Approx. 10 hours |
| **FM radio** | |
| Receiving FM broadcasting | Approx. 20 hours |

## Player settings which affect battery life

| | Setting | Basic setting of battery life measurement (Default setting) |
|---|---|---|
| [Common settings] | [Screensaver]:[On/Off] (*1) | [On] |
| | [Screensaver]:[Delay] (*2) | [30 Sec] |
| | [Brightness] (*3) | [3] |
| | [Battery Care] (*4) | [Off] |
| [Music settings] | [Equalizer] (*5) | [None] (*6) |
| | [VPT(Surround)] (*5) | [None] |
| | [DSEE(Sound Enhance)] (*5) | [Off] |
| | [Clear Stereo] (*5) | [Off] |
| | [Dynamic Normalizer] (*5) | [Off] |
| | [DPC (Speed Control)] (*7) | [Off] |
| | [Display Lyrics] (*8) | [On] |
| | [Karaoke/Language Study] (*9) | [Off] |

(*1) The [Off] setting shortens the battery life for continuous music playback by about 85% compared with the [On] setting.
(*2) The longer the waiting time, the shorter the battery life for continuous music playback.
(*3) The [5] setting shortens the battery life for continuous video playback by about 45% compared with the [3] setting.
(*4) The [On] setting shortens the battery life by about 10% compared with the [Off] setting.
(*5) Setting [Equalizer] to other than [None], [VPT(Surround)] to other than [None], [DSEE(Sound Enhance)] to [On], [Clear Stereo] to [On] and [Dynamic Normalizer] to [On] shortens the battery life for continuous music playback by about 55% compared with setting them to [None] or [Off].
(*6) The default setting of players sold in the Latin America region is [Custom 1]. The [Custom 1] setting shortens the battery life for continuous music playback by about 20% compared with the [None] setting.
(*7) The [x2.0] setting shortens the battery life for continuous music playback by about 70% compared with the [Off] setting.
(*8) The [On (No Screen Off)] setting shortens the battery life for continuous music playback by about 85% compared with the [On] setting.
(*9) The [Maximum Karaoke Mode] setting shortens the battery life for continuous music playback by about 90% compared with the [Off] setting.

## Display
2-inch, TFT color display with white LED-backlight, QVGA (240 × 320 pixels), 262,144 colors

## Dimensions (w/h/d, projecting parts not included)
44 × 94.7 × 9.7 mm (1 3/4 × 3 3/4 × 13/32 inches)

## Dimensions (w/h/d)
44.1 × 95.2 × 10.4 mm (1 3/4 × 3 3/4 × 7/16 inches)

## Mass
Approx. 58 g (2.1 oz)

## Supplied items

- Headphones (1)
- USB cable (1)
- Quick Start Guide
- Software
  The software is stored in the built-in flash memory of the player, and includes the following items. For details on how to install, refer to "Quick Start Guide."
  - Content Transfer
  - WALKMAN Guide
  - User Guide, etc.

Design and specifications are subject to change without notice.

## TABLE OF CONTENTS

## 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.

### SAFETY-RELATED COMPONENT WARNING!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ 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 ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONC-TIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DON-NÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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## System requirements

*   Computer
    IBM PC/AT compatible computer preinstalled with 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 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: Pentium III 450 MHz or higher for Windows XP, Pentium III 800 MHz or higher for Windows Vista, Pentium III 1 GHz or higher for Windows 7
*   RAM: 256 MB or more for Windows XP, 512 MB or more for Windows Vista, 1 GB or more for Windows 7 32-bit versions, 2 GB or more for Windows 7 64-bit versions
*   Hard Disk Drive: 600 MB or more of available space
*   Display:
    - Screen Resolution: 800 × 600 pixels (or higher) (recommended 1,024 × 768 or higher)
    - Colors: 8 bit or higher (16 bit recommended)
*   CD-ROM drive (supporting Digital Music CD playback capabilities using WDM)
*   Sound card
*   USB connector (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 Electronic Music Distribution (EMD) or to visit the web 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 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).



battery assy (BAT1)

wire

wire

Wrap by the tape etc. and insulate the end of wire.
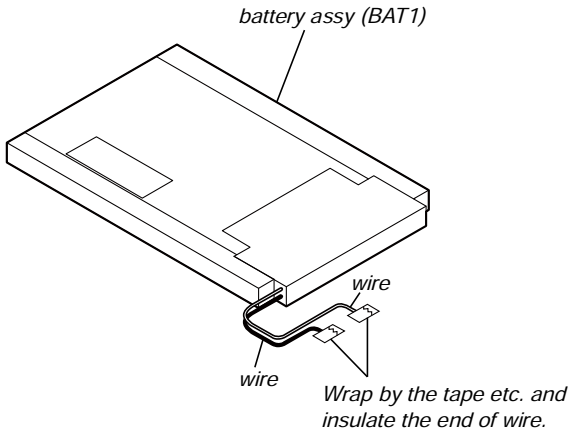
## NOTE THE COMPLETE EMMC BOARD REPLACING

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-E353 | 4GB | 9-885-147-27 | CEW |
| NWZ-E354 | 8GB | 9-885-147-28 | CEW |
| NWZ-E355 | 16GB | 9-885-147-29 | CEW |

• Destination code

| Model | Area | Destination code | Remark |
|---|---|---|---|
| NWZ-E353/ E354/E355 | USA | U2 | |
| | Canada | CA | |
| | Europe | CEW | |
| | | CEV | |
| | India | IN | |
| | South Africa | IN | Please use the destination code, IN |

### 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 to get "NWZE35XE45X_ Dest_Setting" folder.
2. There are the three folders if you open "NWZE35XE45X_ DEST_Setting" folder.
3. Copy the three folders in step 2 under C Drive.

**Remark:** Above folders in step 2 can be saved anywhere as long as the folder path is with English (one byte character).
Described with the example that "the folders were saved under C Drive" on this service manual.

**One point:** The destination setting tool for each series is stored as below.

| Folder name | Folder name | Updater files |
|---|---|---|
| NWZ-E35X | WMT_CA | updating-mtp.bat etc. |
| | WMT_CEV | updating-mtp.bat etc. |
| | WMT_CEW | updating-mtp.bat etc. |
| | WMT_IN | updating-mtp.bat etc. |
| | WMT_U2 | updating-mtp.bat etc. |

### 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-E353/E354/E355
Destination: CEW

**Procedure:**
1. Turn on power of the WALKMAN, and connect it to PC.
2. Start the command prompt application software, and change the folder pass to your desired folder (Example: c:\NWZE35X\ WMT_CEW).



```
C:¥>cd c:¥NWZE35X¥WMT_CEW

C:¥NWZE35X¥WMT_CEW>
```

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



```
C:¥NWZE35X¥WMT_CEW>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.



MTP F/W 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:\NWZE35X\WMT_CEW>exit_
```
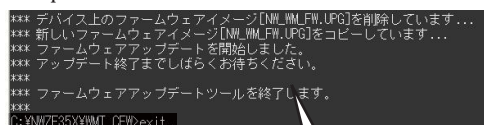
*F/W Updating starts.*

*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 WALK-MAN.
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 –] → [▶] → [◀] → [OPTION] → [BACK] → [OPTION] → [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 [▶II] key, and check if the destination is updated properly.
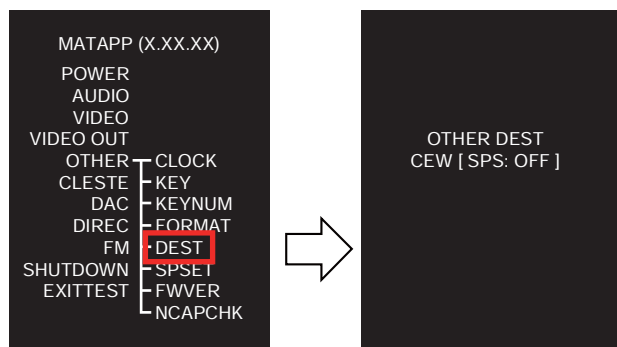


18. Press the [BACK] key twice, return to major item selection screen.
19. Press the [▲]/[▼] keys to select the "EXITTEST", and press the [▶] key to select the "SURE ?".
20. Press the [▶II] key, turn the power off and release the test mode.

**Note:** Execute "Reset all settings" absolutely at the end (Refer to "3. Reset all setting").

## 2. Format
### Formatting memory [Format]
You can format the built-in flash memory of the player.

> **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 the player using Windows Explorer. If you have formatted with Windows Explorer, format again using the player.

1. From the Home menu, select [Settings] ➡ [Common Settings] ➡ [Reset/Format] ➡ [Format].
[All data including songs will be deleted. Proceed?] appears.
2. Select [Yes].
[All data will be deleted. Proceed?] appears.
To cancel the operation, select [No].
3. Select [Yes].
When initialization finishes, [Memory formatted.] appears.
To cancel the operation, select [No].

## 3. Reset all setting
### Returning to the factory settings [Reset All Settings]
You can reset the player to the default settings. Resetting the player will not delete data such as music, video, and photos.

> **Note:**
> • If you select this function during playback, the player will pause playback before performing the reset process.

1. From the Home menu, select [Settings] , [Common Settings] , Reset/Format , [Reset All Settings] , [Yes].
[Restored factory settings.] appears.
• To cancel the operation, select [No] on the confirmation screen.

## 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
```

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 |
| NWZ-E353 | US | ● | ● | ● |
| | Canadian | ● | – | – |
| | AEP | ● | ● | – |
| | East European | ● | – | – |
| | South African | ● | ● | – |
| | Indian | ● | ● | – |
| NWZ-E354 | US | ● | ● | ● |
| | Canadian | ● | ● | ● |
| | AEP | ● | ● | – |
| NWZ-E355 | Canadian | ● | ● | ● |

# SECTION 2
# DISASSEMBLY

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

## 2-1. DISASSEMBLY FLOW

```
┌──────────────┐
│   SET        │
└──────┬───────┘
       │
┌──────▼───────────────┐
│ 2-2. CASE (REAR) BLOCK│
│      (Page 7)         │
└──────┬───────────────┘
       │
┌──────▼───────────────┐
│ 2-3. CASE (FRONT)    │
│      (Page 8)         │
└──────┬───────────────┘
       │
┌──────▼───────────────┐
│ 2-4. OPEN THE SHORT-LAND│
│      (Page 9)         │
└──────┬───────────┬───┘
       │           │
┌──────▼───────┐  ┌▼──────────────────┐
│ 2-5. EMMC BOARD│ │ 2-10. VOL KEY ASSY │
│      (Page 9) │  │       (Page 13)    │
└──────┬───────┘  └────────────────────┘
       │
┌──────▼───────┐
│ 2-6. SUPPORT (M)│
│      (Page 10) │
└──────┬────────┬┘
       │        │
┌──────▼──────┐ ┌▼──────────────────┐
│2-7. 3PIN HP │ │2-8. LCD ASSY (LCD1)│
│  JACK BLOCK │ │     (Page 11)      │
│  (Page 10)  │ └──────┬─────────────┘
└──────┬──────┘        │
       │               │
┌──────▼──────┐ ┌──────▼──────────────┐
│2-9. MOTHER  │ │2-11. BATTERY ASSY   │
│  BOARD      │ │      (BAT1)         │
│  (Page 11)  │ │      (Page 13)      │
└─────────────┘ └─────────────────────┘
```
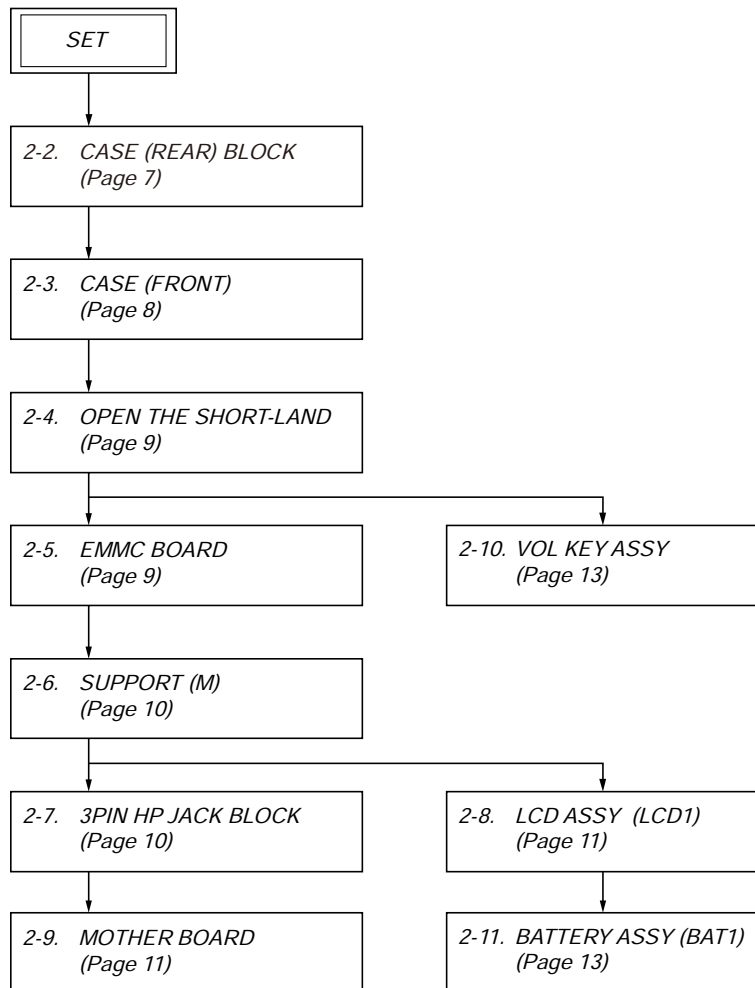
**Note:** Follow the disassembly procedure in the numerical order given.

## 2-2.   CASE (REAR)  BLOCK

❶ two screws (M1.4)

– **Rear side view** –

❷ Shift the mechanical commonness block
in the direction of arrow Ⓐ.

❸ claw

❸ claw

Ⓐ

❸ claw

❸ claw

– **Front side view** –

**Note 1:** Shift the mechanical commonness block
until the screw is seen like this.

❹ Remove the mechanical commonness block from
the case (rear) block in the direction of arrow Ⓑ.
**Note 2:** Make sure not to break the knob (hold).

Ⓑ

❺ case (rear) block

knob (hold)
**Note 2:** Make sure not to break the knob (hold).

– **Front side view** –

## 2-3. CASE (FRONT)

**❶** screw (M1.4)

**❹** guide (hold)

– **Front side view** –

– **Rear side view** –

Ⓐ

**❷** Set the guide (hold) to the HOLD off position.

**❸** Shifting the case (front) block slightly in the direction of arrow Ⓐ.

case (front) block

**❺** claw

**❺** claw

**❻**

**❼** mechanical commonness block

**⑫** cushion (LCD)

– **Rear side view** –

**⑪** two spacers (CF2)

**❽** button (play)

**⑩** two spacers (case front)

**❾** button (4D) block

**⑬** case (front)

– **Rear side view** –

## 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.

❶ *Remove the solder of short-land (SL9501).*

## 2-5. EMMC BOARD

❶ *cushion (NAND)*

❷ *connector*
**Note:** Lift vertically the EMMC board
when you remove the connector.

❹ *spacer (NAND)*

❸

❺ *EMMC board*

*– Rear side view –*

## 2-6.  SUPPORT (M)

❷ sheet (PWB)

❷ sheet (PWB)

❹ boss

❶ *Peel the copper leaf (coral).*

❹ *boss*

❻ support (M)

❸ *Lift wires of battery assy (BAT1).*

• **Wire processing of battery assy (BAT1)**

support (M)

wire of battery assy (BAT1)

❺

**– Rear side view –**

## 2-7.  3PIN  HP  JACK  BLOCK

❷ *claw*

❻ *three claws*

❶ *sheet (VOL FPC)*

❺ *screw (M1.4)*

❸ *support (main) (RT)*

❷ *claw*

❹ *3pin HP jack assy flexible board*

❼

❽ *3pin HP jack block*

**– Rear top side view –**

## 2-8.   LCD  ASSY (LCD1)

❹ LCD assy (LCD1)

❸ adhesive sheet (LCD)

❷ Pull out the LCD assy
flexible board from the
ditch of the chassis assy.

*– Front side view –*

❶ Remove the LCD assy flexible board in the direction of arrow Ⓐ.

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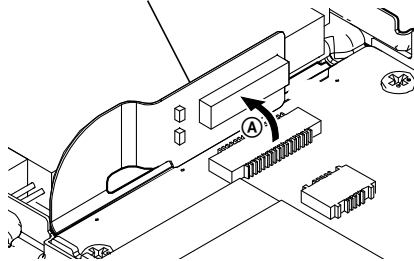
**Note 1:** There is a possibility of damaging LCD assy flexible board when
removing excluding the direction of arrow Ⓐ.

OK

1-756-920-11
LIS142THNPAS/2.0Wh

NG

1-756-920-11
LIS142THNPAS/2.0Wh

NG

**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.

*two ribs*      *two ditches*

LIS142THN
0206A41866

## 2-9. MOTHER BOARD

**❽** sheet (coral) adhesive

**❾** label (2d code)

**❶** sheet (PWB)

**❺** two screws (M1.4)
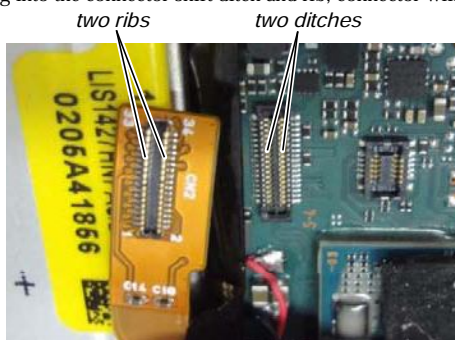
**❿** MOTHER board

**❷** 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).

**❹** Remove two solders of VOL KEY wire.

**❼** sheet (MOTHER)

**❻**

**• Wire processing of battery assy (BAT1)**

wire of battery assy (BAT1)

MOTHER board

red

black

– Rear side view –

**• Wire processing of VOL key wire**
**– Front side view –**

MOTHER board

black

red

VOL KEY wire
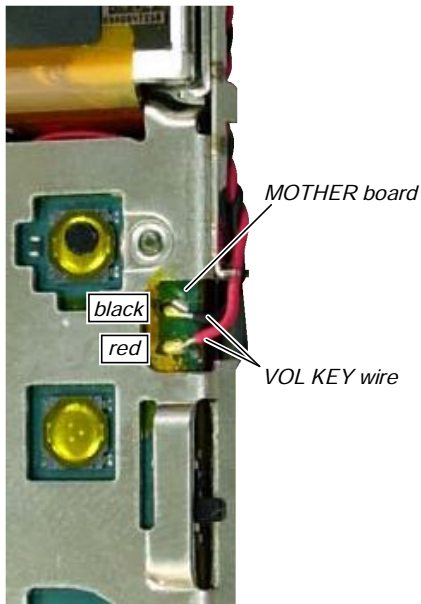
**❸** Cut and peel off the sheet (MOTHER).

sheet (MOTHER)
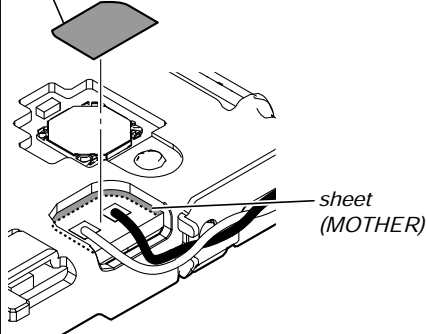
**Note 2:** When assembling, please paste the polyimide sheet by using the follwing part and make the size, Approx. 3 mm × 4 mm.

Part No.     : 9-913-402-43
Description : polyimide sheet, t=0.075

3 mm

4 mm

## 2-10. VOL KEY ASSY

• **Wire processing of VOL KEY wire**



VOL KEY wire

VOL KEY assy

black

red

VOL KEY wire

❹ sheet (wire)

❶ cushion (NAND)

❸ sheet (PWB)

❷ Peel the copper leaf (coral).

❾ VOL KEY assy

❺

❽ sheet (chassis)

❼ Remove two solders of VOL KEY wire.

❻ sheet (VOL FPC)

– Rear side view –

## 2-11. BATTERY ASSY (BAT1)

❸ sheet (wire)

❻ battery assy (BAT1)

❶ sheet (PWB)

• **Wire processing of battery assy (BAT1)**

wire of battery assy (BAT1)

MOTHER board

red

black

❺ adhesive sheet (BATT)

❹

– Rear side view –

❷ 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).

*13*

# NWZ-E353/E354/E355

**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 −] → [▶] → [◀] → [OPTION] → [BACK] → [OPTION] → [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 [▶II] key, turn the power off and release the test mode.

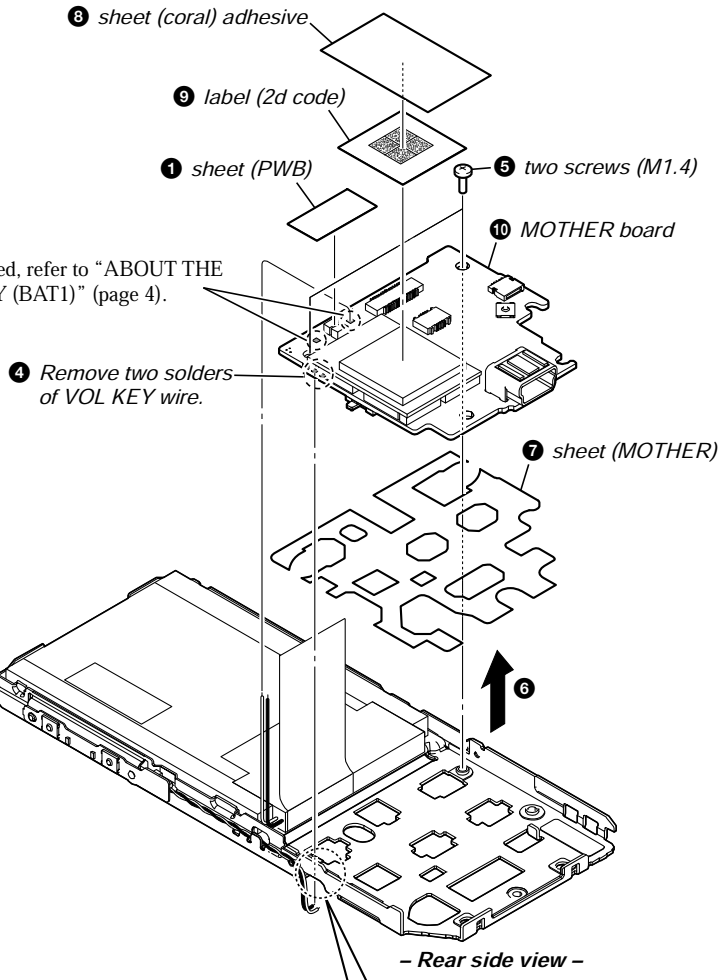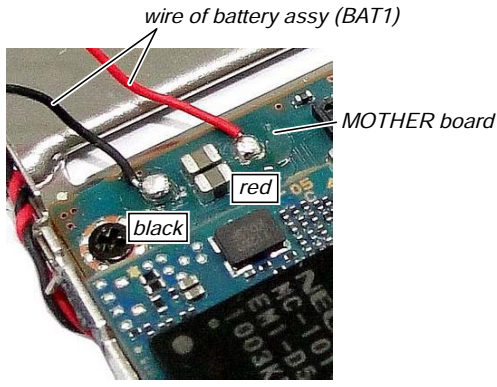## 3. CONFIGURATION OF THE TEST MODE
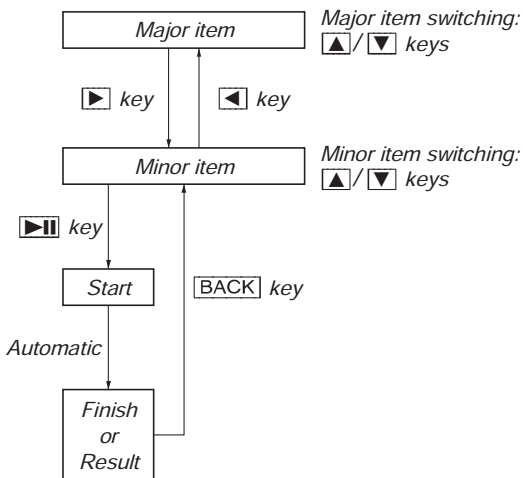


## 4. OPERATION OF THE TEST MODE
## 4-1. Power (POWER)

*Screen display*

```
MPTAPP (X.XX.XX)

POWER ──── VCHK
AUDIO ──── ACHK
VIDEO ──── DSVCHK
VIDEO OUT ──── CHGCHK
OTHER ──── BATTCHK
CLESTE ──── RMVBATT
DAC ──── FORCECHG
DIREC
FM
SHUTDOWN
EXITTEST
```

### 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 [▶II] key, all power supply lines are started.

*Screen display*

```
POWER VCHK



START
```
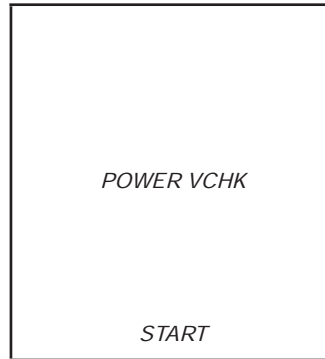
In this state, the power supply voltage of each power supply line can be confirmed by measuring the voltage.
5. Press the [BACK] key, return to minor item selection screen.

### 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 [▶II] key, "1 kHz 0 dBs L-ch/R-ch VOLUME: 15" audio signal is outputted.

*Screen display*

```
POWER ACHK
1kHz 0dBs L/Rch
HPOUT [ VOL: 15 ]



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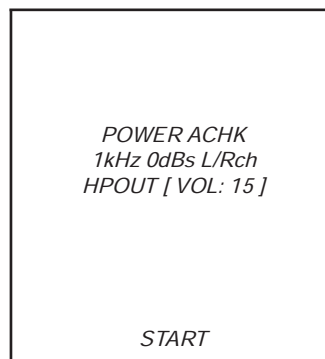
5. In this state, each time the [▶] key is pressed, LCD back light on/off switch is performed.
6. Press the [BACK] key, return to minor item selection screen.

**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 [▶II] key, enter the state of the deep sleep.
5. Press the [BACK] key, release the state of the deep sleep.

*Screen display*

```
POWER DSVCHK




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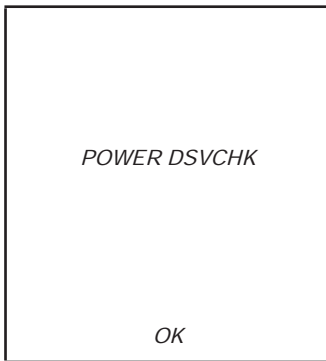
6. Press the [BACK] key, return to minor item selection screen.

**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 [▶II] key, the charge setting is displayed.

*Screen display*

```
POWER CHGCHK
AC




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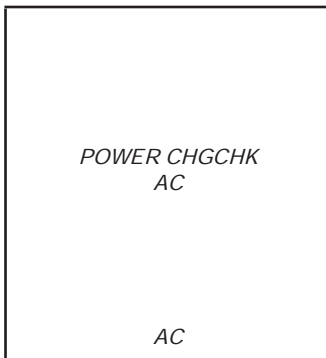
5. In this state, each time the [▶] key is pressed, the port setting for the charge is changed as shown in the table below.

| | 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 [▶II] key, the battery voltage is displayed.
   When the battery voltage cannot be confirmed, "ERROR" is displayed.

*Screen display*

```
POWER BATTCHK
X.XXXV
```
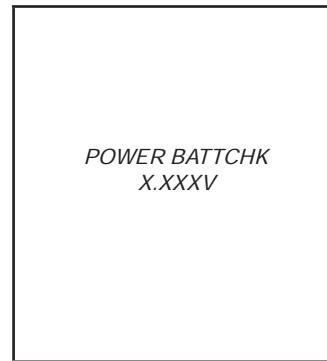
X.XXXV: Battery voltage

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.

**4-1-7. Compulsion charge (FORCECHG)**
When compulsorily charging a battery, 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*

```
MPTAPP (X.XX.XX)

POWER
AUDIO ─── OUTPUT
VIDEO ├ SN
VIDEO OUT ├ F1
OTHER ├ F2
CLESTE ├ SEPLR
DAC ├ SEPRL
DIREC ├ MAXOUT
FM ├ NMLZR
SHUTDOWN ├ SPCHK
EXITTEST ├ SPKCHK
├ USER1
├ USER2
└ USER3
```

# NWZ-E353/E354/E355
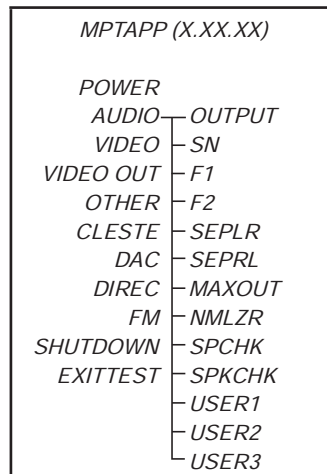
## 4-2-1. Output check (OUTPUT)

"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 [►II] key, "1 kHz 0 dBs L-ch/R-ch VOLUME: 25" audio signal is outputted.

*Screen display*

```
           AUDIO OUTPUT
           1kHz 0dBs L/Rch
           HPOUT [ VOL: 25 ]




              START
```

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 [►II] key, "Infinity Zero VOLUME: 25" audio signal is outputted.

*Screen display*

```
            AUDIO SN
            Infinity Zero
           HPOUT [ VOL: 25 ]




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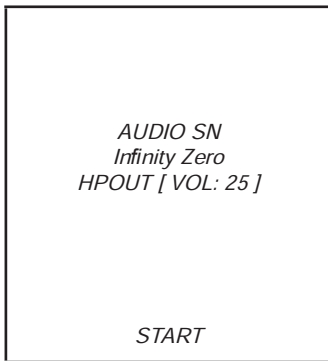
5. Press the [BACK] key, return to minor item selection screen.

## 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 [►II] key, "20 Hz 0 dBs L-ch/R-ch VOLUME: 25" audio signal is outputted.

*Screen display*

```
             AUDIO F1
           20Hz 0dBs L/Rch
           HPOUT [ VOL: 25 ]




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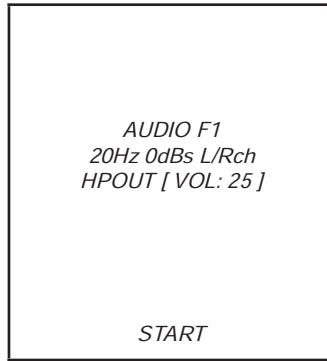
5. Press the [BACK] key, return to minor item selection screen.

## 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 [►II] key, "20 kHz 0 dBs L-ch/R-ch VOLUME: 25" audio signal is outputted.

*Screen display*

```
             AUDIO F2
           20kHz 0dBs L/Rch
           HPOUT [ VOL: 25 ]




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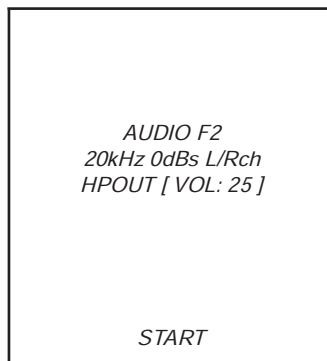
5. Press the [BACK] key, return to minor item selection screen.

### 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 [▶Ⅱ] key, "1 kHz 0 dBs L-ch VOLUME: 25" audio signal is outputted.

*Screen display*

```
        AUDIO SEPLR
        1kHz 0dBs Lch
        HPOUT [ VOL: 25 ]




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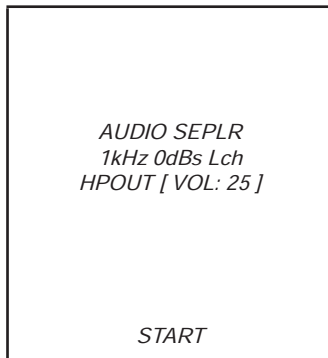
5. Press the [BACK] key, return to minor item selection screen.

### 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 [▶Ⅱ] key, "1 kHz 0 dBs R-ch VOLUME: 25" audio signal is outputted.

*Screen display*

```
        AUDIO SEPRL
        1kHz 0dBs Rch
        HPOUT [ VOL: 25 ]




            START
```

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

### 4-2-7.  Maximum output check (MAXOUT)
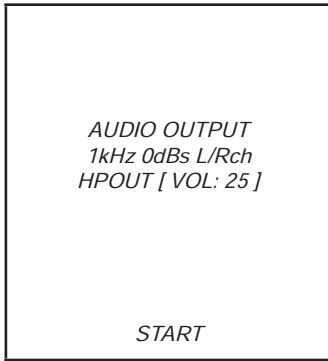
"1 kHz 0 dBs L-ch/R-ch VOLUME: 30" (Headphone output when AVLS operates: "1 kHz 0 dBs L-ch/R-ch VOLUME: 13") audio signal is outputted.

**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 [▶Ⅱ] 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*

```
        AUDIO MAXOUT
        1kHz 0dBs L/Rch
        HPOUT [ VOL: 30 ]
          AVLS OFF



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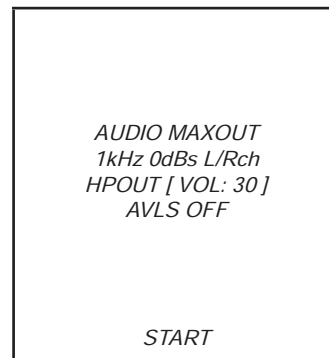
5. In this state, each time the [▶] key is pressed, AVLS on/off switch is performed.
6. Press the [BACK] key, return to minor item selection screen.

### 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 [▶Ⅱ] key, "1 kHz –24 dBs L-ch/R-ch VOLUME: 30" audio signal is outputted.

*Screen display*

```
        AUDIO NMLZR
        1kHz –24dBs L/Rch
        HPOUT [ VOL: 30 ]




            START
```

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

# NWZ-E353/E354/E355

**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 [►II] key, "1 kHz 0 dBs L-ch/R-ch VOLUME: 30" audio signal is outputted.

*Screen display*

```
AUDIO SPCHK
1kHz 0dBs L/Rch
HPOUT [ VOL: 30 ]




START
```

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 [►II] key, "/User1.oma" is reproduced.

*Screen display*

```
AUDIO USER1
HPOUT [ VOL: 15 ]
XX:XX




START
```

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 [►II] key, "/User2.oma" is reproduced.

*Screen display*

```
AUDIO USER2
HPOUT [ VOL: 15 ]
XX:XX




START
```

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 [►II] key, "/User3.oma" is reproduced.

*Screen display*

```
AUDIO USER3
HPOUT [ VOL: 15 ]
XX:XX




START
```

XX:XX : Repetition expert totaling time

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

## 4-3. Video (VIDEO)

*Screen display*

```
MPTAPP (X.XX.XX)

POWER
AUDIO
VIDEO ── LCD
VIDEO OUT ─┤ USER1
OTHER ─┤ USER2
CLESTE ─┘ USER3
DAC
DIREC
FM
SHUTDOWN
EXITTEST
```

### 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 [▶Ⅱ] 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.
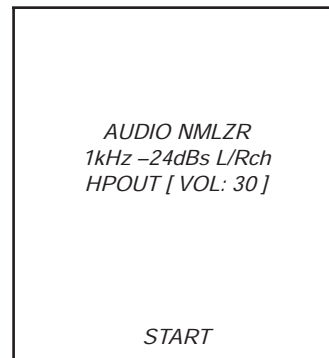6. Press the [BACK] key, return to minor item selection screen.
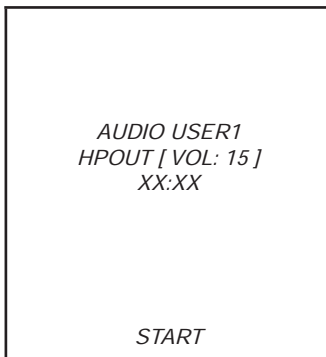
### 4-3-2. User specification contents playback 1 (USER1)
"/User1.mp4" is reproduced.

**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 [▶Ⅱ] key, "/User1.mp4" is reproduced.
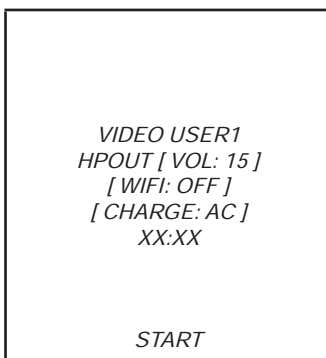
*Screen display*

```
VIDEO USER1
HPOUT [ VOL: 15 ]
[ WIFI: OFF ]
[ CHARGE: AC ]
XX:XX



START
```

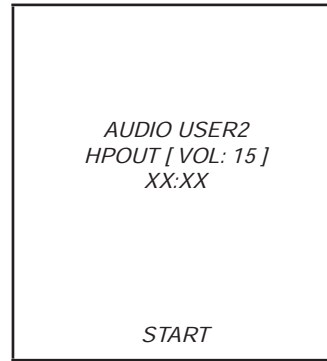XX:XX : Repetition expert totaling time

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 [▶Ⅱ] key, "/User2.mp4" is reproduced.
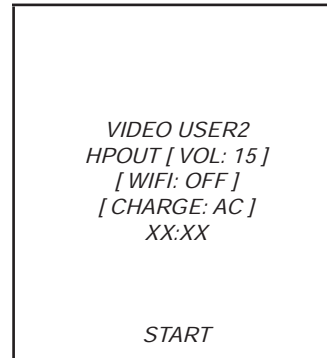
*Screen display*

```
VIDEO USER2
HPOUT [ VOL: 15 ]
[ WIFI: OFF ]
[ CHARGE: AC ]
XX:XX



START
```

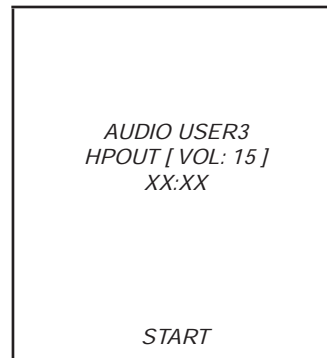XX:XX : Repetition expert totaling time

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".
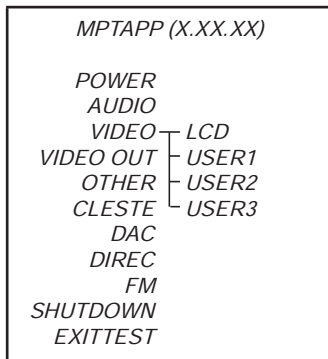4. Press the [▶Ⅱ] key, "/User3.mp4" is reproduced.
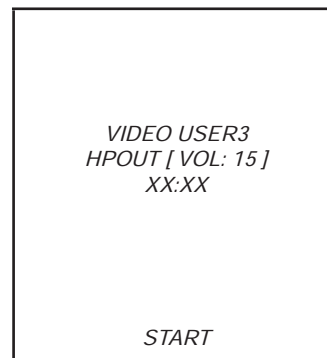
*Screen display*

```
VIDEO USER3
HPOUT [ VOL: 15 ]
XX:XX



START
```

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.

Screen display

```
MPTAPP (X.XX.XX)

    POWER
    AUDIO
    VIDEO
  VIDEO OUT  ◄────────── Do not select VIDEO OUT.
    OTHER
    CLESTE
     DAC
    DIREC
      FM
 SHUTDOWN
  EXITTEST
```

## 4-5. Other (OTHER)

Screen display

```
MPTAPP (X.XX.XX)

    POWER
    AUDIO
    VIDEO
  VIDEO OUT
    OTHER ──┬── CLOCK
    CLESTE  ├── KEY
     DAC    ├── KEYNUM
    DIREC   ├── FORMAT
      FM    ├── DEST
 SHUTDOWN   ├── SPSET
  EXITTEST  ├── FWVER
            └── NCAPCHK
```

### 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 [►II] key, date and time are displayed.
   "START" changes into "OK" if the movement of an internal clock is confirmed.

Screen display

```
   OTHER CLOCK
   XX, XX XX XXXX
   ##:##:##.#####




      START
```

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 [►II] key, all keys are displayed.

Screen display

```
     OTHER KEY
           UP        VOL+
   REW    PLAY  FF  VOL−
          DOWN      OPTION
 HOLD                BACK



      START
```

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*

```
        OTHER FWVER
          X.XX.XX

        MODEL NAME
         NWZ-####

         SERIAL NO
        @@@@@@@
```
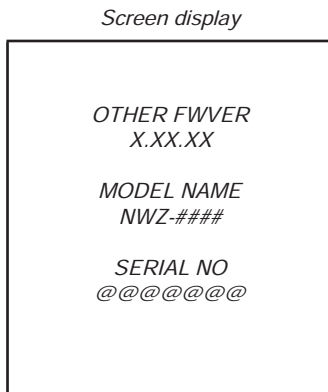
X.XX.XX                      : Firmware version
####                         : Model name
@@@@@@@                      : Serial No.

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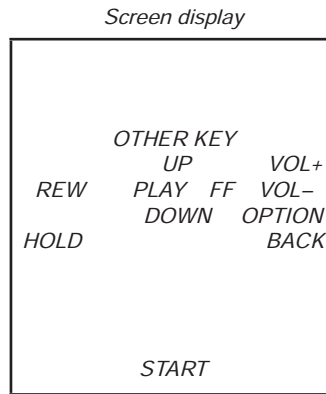
**Checking method:**
1. Enter the test mode.
2. Press the [▲]/[▼] keys to select the "OTHER", and press the [▶] key to enter the minor item.
3. Press the [▲]/[▼] keys to select the "NCAPCHK".
4. Press the [▶❚❚] key, capacity of NAND flash memory, present bad block, maximum bad block, and vender ID are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

*Screen display*

```
       OTHER NCAPCHK
           X GB

         BADBLOCK
    CUR (####)/MAX (@@@@)

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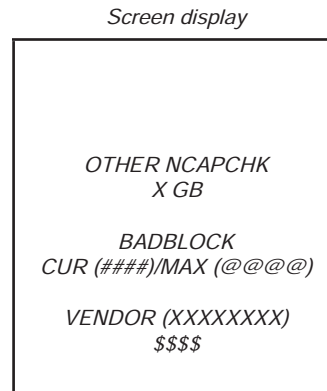
X          : Capacity of NAND flash memory
@@@@    : Number of present bad block
             (It makes an error the acquisition of the number of bad blocks at "–1")
####     : Number of maximum bud block
             (It makes an error the acquisition of the vender ID at "–1")
$$$$     : Vender of NAND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

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

### 4-6. CLESTE

*Screen display*

```
     MPTAPP (X.XX.XX)

       POWER
       AUDIO
       VIDEO
    VIDEO OUT
       OTHER
      CLESTE ┬ WCABLE
        DAC  └ WOCABLE
       DIREC
        FM
     SHUTDOWN
      EXITTEST
```

### 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*

```
MPTAPP (X.XX.XX)

    POWER
    AUDIO
    VIDEO
 VIDEO OUT
    OTHER
   CLESTE
      DAC ─┬─ B-GAIN
    DIREC  └─ T-GAIN
       FM
 SHUTDOWN
   EXITTEST
```

### 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*

```
MPTAPP (X.XX.XX)

    POWER
    AUDIO
    VIDEO
 VIDEO OUT
    OTHER
   CLESTE
      DAC
    DIREC ─┬─ OUTPUT
       FM  ├─ REC
 SHUTDOWN  ├─ PLAY
   EXITTEST ├─ FORMAT
           └─ MICCHK
```
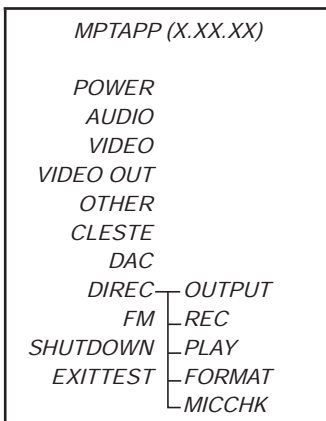
### 4-8-1. Direct recording output check (OUTPUT)

In this mode, the output confirmation is done.
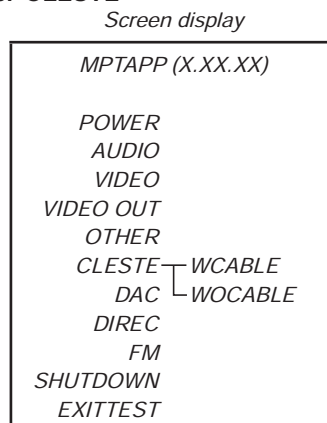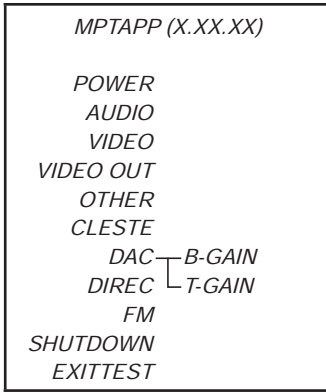
**Checking method:**

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 "OUTPUT".
4. Press the [▶❙❙] key, the sound output is begun.

*Screen display*
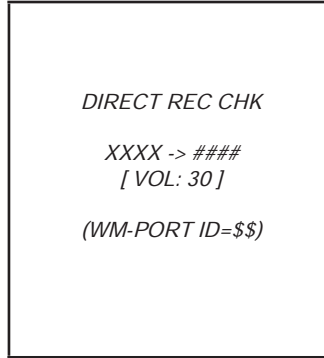
```
   DIRECT REC CHK

   XXXX -> ####
   [ VOL: 30 ]

   (WM-PORT ID=$$)
```

XXXX    : Recording cable/cradle connecting state
####    : HP/LINE output state
$$      : ID of connected device
          20 (When recording cable is connected, or cradle is connected (LINEOUT cable unconnection))
          5 (When cradle is connected (LINEOUT cable connection))

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

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

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

**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 "REC".
4. Press the [▶❙❙] key, the recording is begun.

*Screen display*

```
   REC CHECK

   XXXX -> ####
   [ VOL: 25 ]

   LPCM

   $$:$$
```
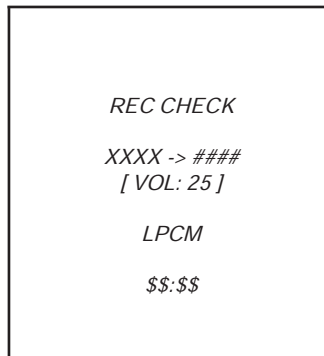
XXXX    : Recording cable/cradle/recording microphone connecting state
####    : RECODING/STOP state
$$:$$   : Recording time

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

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

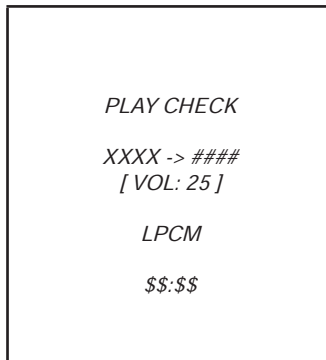In this mode, the sound recorded in "Direct recording recording" is reproduced.

**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 "PLAY".
4. Press the [▶II] key, the playback is begun.

*Screen display*

```
PLAY CHECK

XXXX -> ####
[ VOL: 25 ]

LPCM

$$:$$
```

XXXX    : PLAYING/STOP state
####    : HP/LINE output state
$$:$$   : Playing time

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

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

In this mode, the recording format is selected.
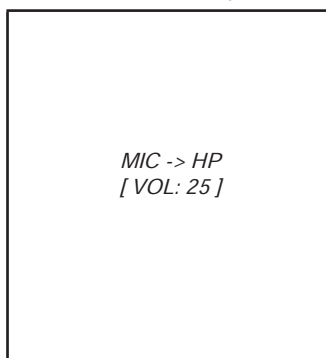
**Note:** Not used for the servicing.

### 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 [▶II] 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*

```
MIC -> HP
[ VOL: 25 ]
```

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

### 4-9. FM

*Screen display*

```
MPTAPP (X.XX.XX)

POWER
AUDIO
VIDEO
VIDEO OUT
OTHER
CLESTE
DAC
DIREC
FM — RCVCHK
SHUTDOWN
EXITTEST
```
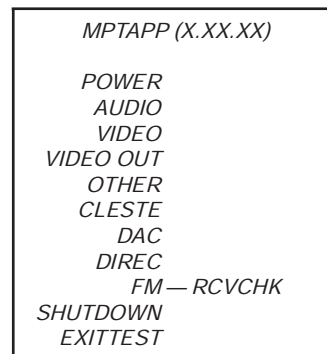
### 4-9-1. Reception output check (RCVCHK)

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 [▶II] key, "90.00 MHz" is displayed.

*Screen display*

```
FM RCVCHK
90.00 MHz
[VOL : 30]
[RSSI : XX]
[Sense-H : XX]
[Sense-L : XX]
```
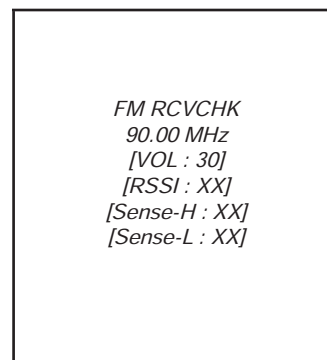
4. In this state, each time the [◀] key is pressed, frequency is changes in the following order.

   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 backlight 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 [▶II] key, turn the power off while having entered the test mode.

# NWZ-E353/E354/E355

**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 5) about color variation of model and destination.

## 4-1.  CASE (REAR)  SECTION
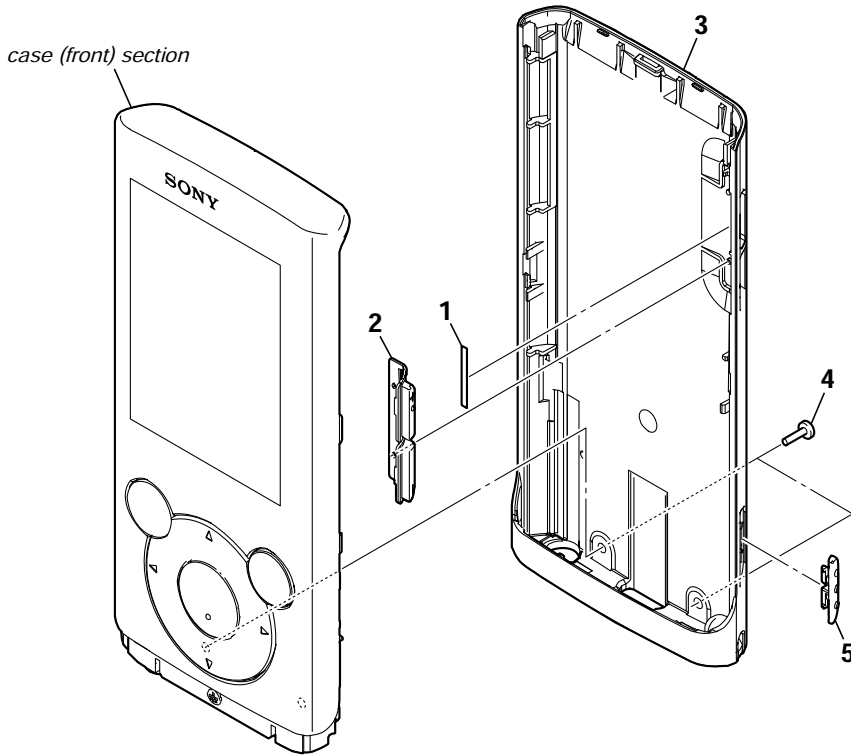
*case (front) section*

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 1 | 4-258-545-01 | SHEET (VOL), ADHESIVE | |
| 2 | 4-192-430-02 | BUTTON (VOL) (–, +) | |
| 3 | 4-192-427-01 | CASE (REAR) (RT) | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 4 | 4-195-816-11 | SCREW 0+P2 M1.4 NEW TRU-STAR | |
| 5 | 4-192-431-01 | KNOB (HOLD) | |

**4-2. CASE (FRONT) SECTION**



*LCD, battery section*
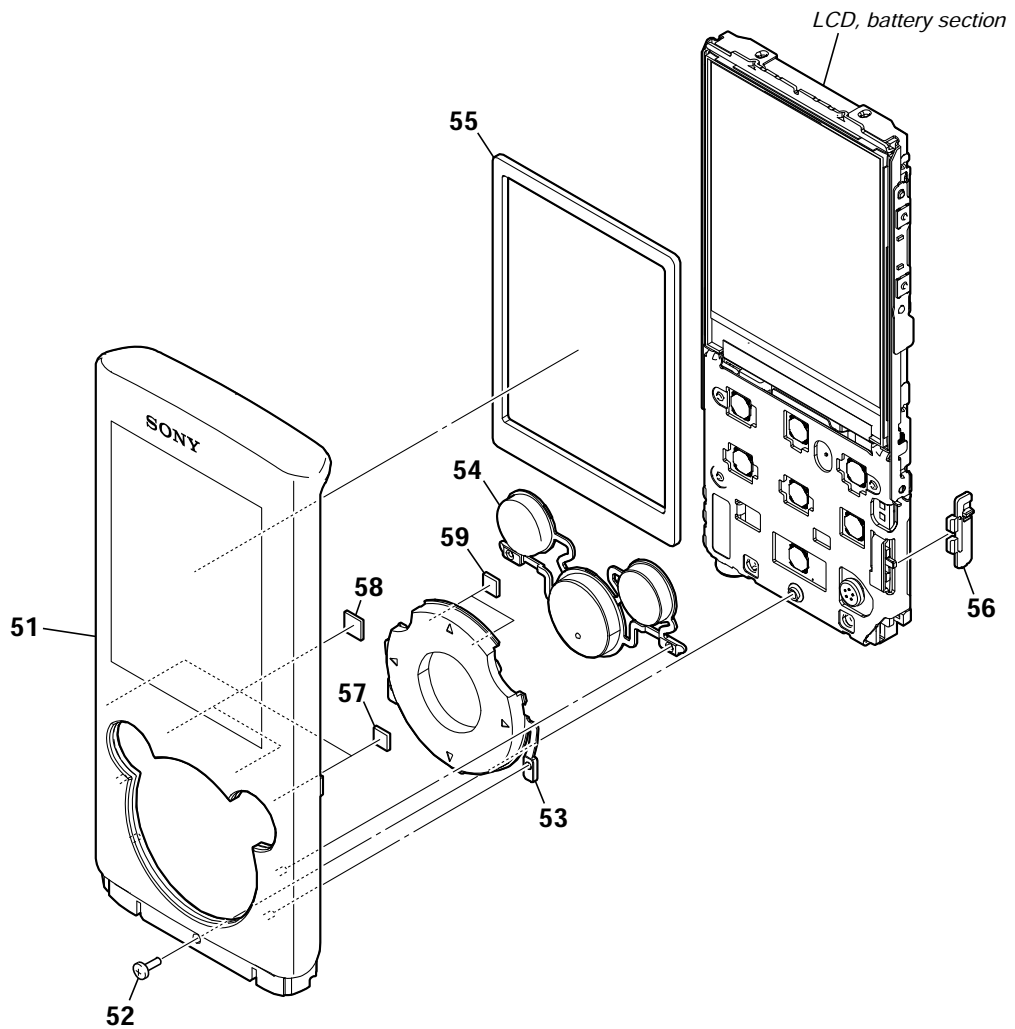
| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 51 | 4-192-425-61 | CASE (FRONT) (BLACK) | |
| 51 | 4-192-425-71 | CASE (FRONT) (RED) | |
| 51 | 4-192-425-81 | CASE (FRONT) (BLUE) | |
| 52 | 3-234-449-25 | SCREW (M1.4) | |
| 53 | 4-192-428-01 | BUTTON (4D) (△, ▷, ▽, ◁) (BLACK) | |
| 53 | 4-192-428-61 | BUTTON (4D) (△, ▷, ▽, ◁) (RED) | |
| 53 | 4-192-428-71 | BUTTON (4D) (△, ▷, ▽, ◁) (BLUE) | |
| 54 | 4-192-429-01 | BUTTON (PLAY) (BACK, OPTION, ▶II) (BLACK) | |
| 54 | 4-192-429-61 | BUTTON (PLAY) (BACK, OPTION, ▶II) (RED) | |
| 54 | 4-192-429-71 | BUTTON (PLAY) (BACK, OPTION, ▶II) (BLUE) | |
| 55 | 4-195-813-01 | CUSHION (LCD) | |
| 56 | 4-192-435-01 | GUIDE (HOLD) | |
| 57 | 4-257-827-01 | SPACER (CASE FRONT) | |
| 58 | 4-260-100-01 | SPACER (CF2) | |
| 59 | 4-268-262-01 | CUSHION (BUTTON) | |

# NWZ-E353/E354/E355

## 4-3. LCD, BATTERY SECTION

**Note 1:** This illustration is view from the battery side.

**• About Ref. No. 1000**
Please cut out and use POLYIMIDE SHEET for a specified size when you exchange it for new parts.

**Note 2:** As for this part, the material or thickness might be different compared with before. However, there is no obstacle at all.

| | A | B |
|---|---|---|
| SHEET (PWB) | 6.5 | 13 |
| SHEET (VOL FPC) | 5.5 | 7 |

unit: mm



| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 101 | 4-150-173-01 | SHEET (WIRE) | |
| 102 | 4-105-860-01 | ADHESIVE, SHEET (BATT) | |
| 103 | 4-193-078-01 | SUPPORT (M) | |
| 104 | 4-198-386-01 | CUSHION (NAND) | |
| 105 | 4-192-434-01 | SUPPORT (MAIN) (RT) | |
| 106 | 4-208-971-01 | LEAF (CORAL), COPPER | |
| 107 | 9-885-147-27 | EMMC BOARD, COMPLETE (4GB) (for SERVICE) (NWZ-E353) | |
| 107 | 9-885-147-28 | EMMC BOARD, COMPLETE (8GB) (for SERVICE) (NWZ-E354) | |

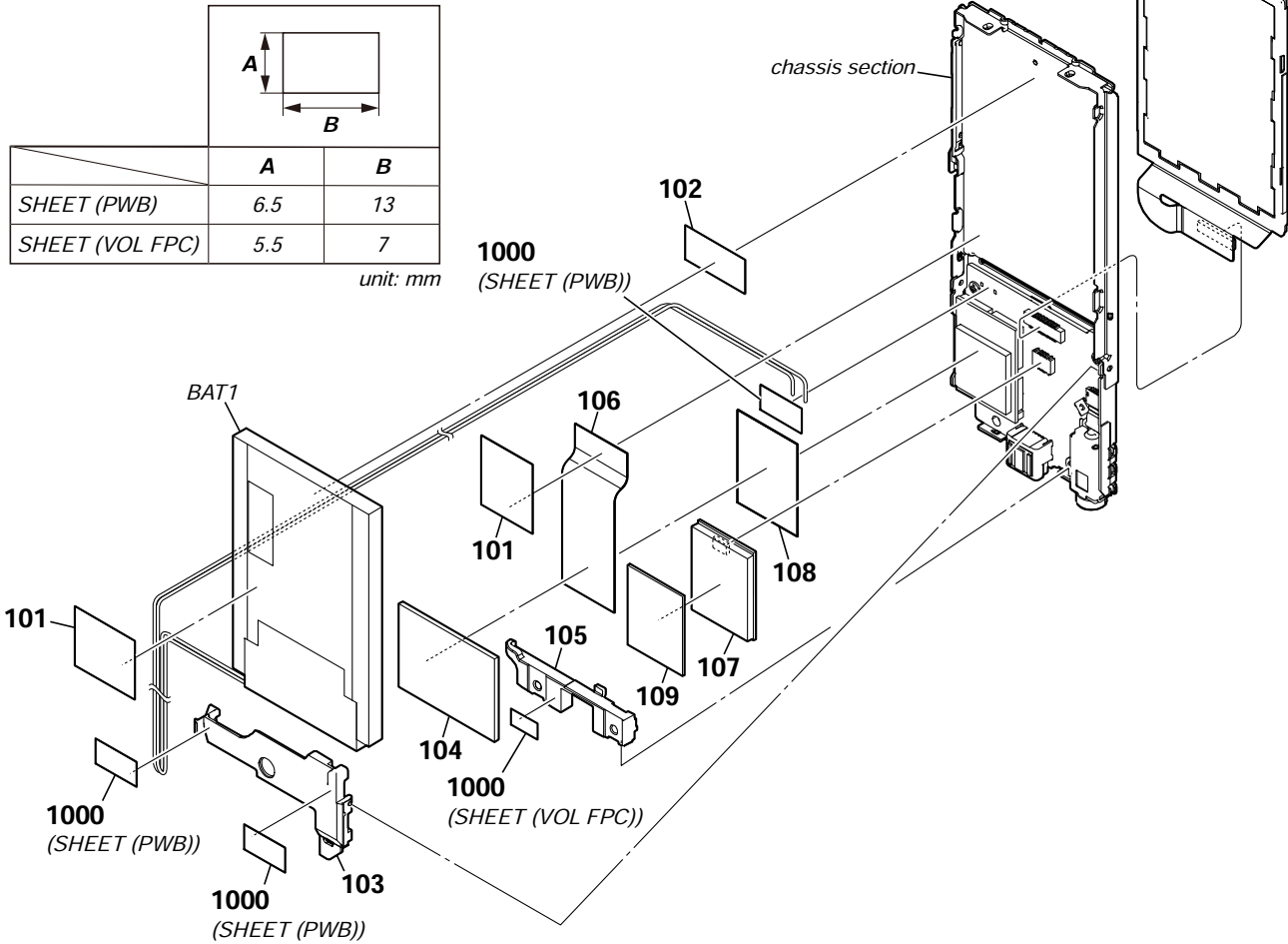| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 107 | 9-885-147-29 | EMMC BOARD, COMPLETE (16GB) (for SERVICE) (NWZ-E355) | |
| 108 | 4-257-561-01 | SHEET (CORAL) ADHESIVE | |
| 109 | 4-263-096-01 | SPACER (NAND) | |
| 1000 | 9-913-402-43 | POLYIMIDE SHEET, t=0.075 (for SERVICE) | |
| BAT1 | X-2546-032-2 | SVX BATTERY ASSY | |
| LCD1 | A-1788-689-A | LCD ASSY | |

## 4-4.  CHASSIS  SECTION

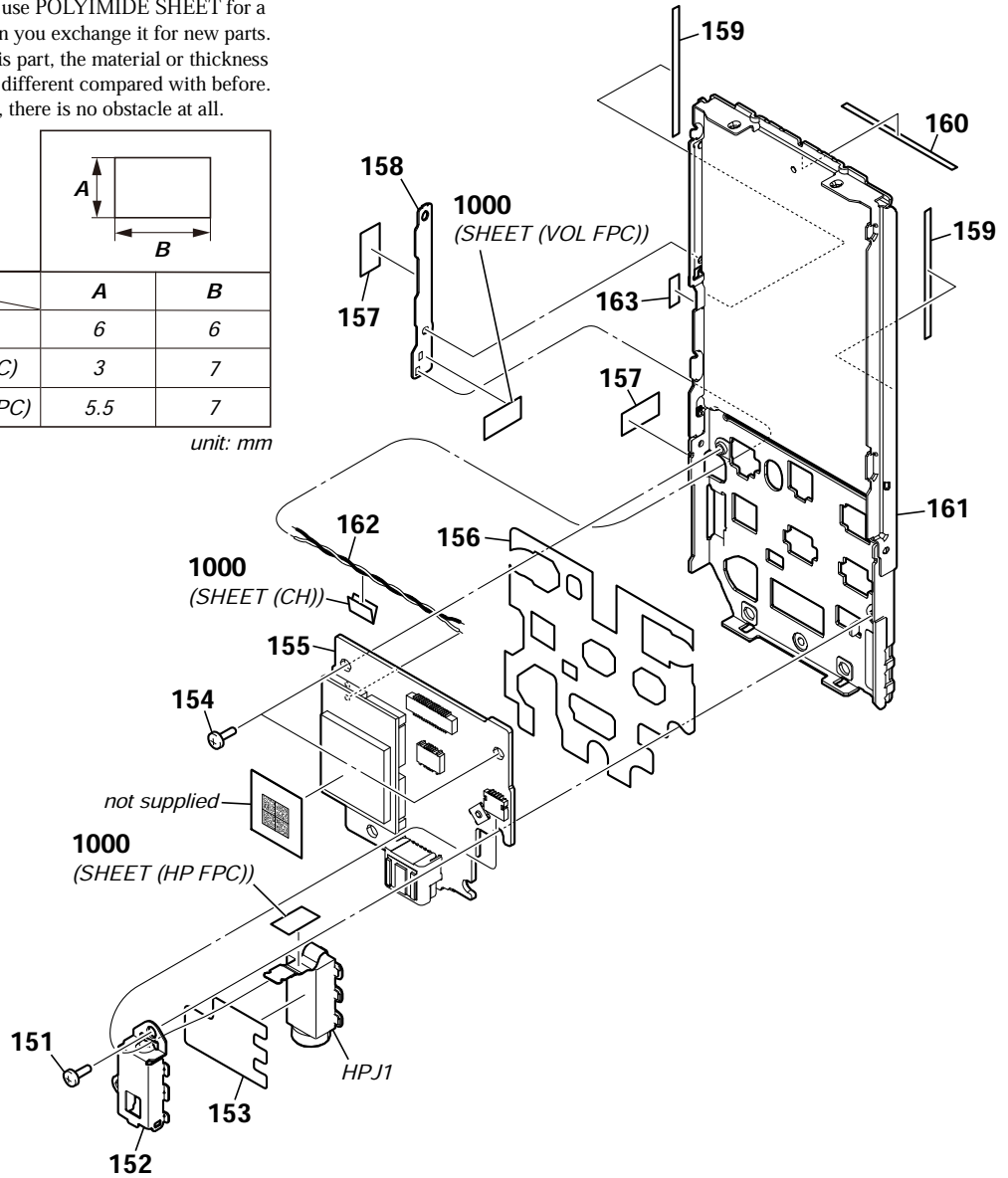**Note 1:** This illustration is view from the mother board side.

• *About Ref. No. 1000*
Please cut out and use POLYIMIDE SHEET for a
specified size when you exchange it for new parts.
**Note 2:** As for this part, the material or thickness
might be different compared with before.
However, there is no obstacle at all.

| | A | B |
|---|---|---|
| SHEET (CH) | 6 | 6 |
| SHEET (HP FPC) | 3 | 7 |
| SHEET (VOL FPC) | 5.5 | 7 |

unit: mm



| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 151 | 3-234-449-11 | SCREW (M1.4) | |
| 152 | 4-192-466-01 | HOLDER (HP) | |
| 153 | 4-198-036-01 | SHEET (HP JACK) | |
| 154 | 3-234-449-05 | SCREW (M1.4) | |
| 155 | 9-885-147-23 | MOTHER BOARD, COMPLETE (for SERVICE) | |
| | | | |
| 156 | 4-192-485-01 | SHEET (MOTHER) | |
| 157 | 4-209-153-01 | SHEET (CHASSIS) | |
| 158 | A-1784-102-A | VOL KEY ASSY | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 159 | 4-195-814-01 | SPACER (LCD) | |
| 160 | 4-195-815-01 | SHEET (LCD), ADHESIVE | |
| | | | |
| 161 | X-2548-502-1 | CHASSIS ASSY | |
| 162 | 1-967-566-21 | VOL KEY WIRE | |
| 163 | 4-264-851-01 | SHEET (FPC), ADHESIVE | |
| 1000 | 9-913-402-43 | POLYIMIDE SHEET, t=0.075 (for SERVICE) | |
| HPJ1 | A-1784-100-A | 3PIN HP JACK ASSY | |

# SECTION 5
# ACCESSORIES

| Ref. No. | Part No. | Description | Remark |
|----------|----------|-------------|--------|
| | 1-542-803-11 | HEADPHONE (MDR-E804YLP/BC29) | |
| | | | (Headphones) |
| | 1-835-329-11 | CORD, CONNECTION (USB5P) (USB cable) | |
| | 4-192-096-11 | MANUAL, INSTRUCTION (Quick Start Guide) | |
| | | | (ENGLISH) |
| | 4-192-096-21 | MANUAL, INSTRUCTION (Quick Start Guide) | |
| | | | (FRENCH) (Canadian, AEP) |
| | 4-192-096-31 | MANUAL, INSTRUCTION (Quick Start Guide) | |
| | | | (RUSSIAN) (East European) |
| | 4-192-096-41 | MANUAL, INSTRUCTION (Quick Start Guide) | |
| | | | (UKRAINIAN) (East European) |
| | 4-192-096-51 | MANUAL, INSTRUCTION (Quick Start Guide) | |
| | | | (TURKISH) (East European) |

*MEMO*

**NWZ-E353/E354/E355**

## REVISION  HISTORY

Checking the version allows you to jump to the revised page.
Also, clicking the version at the top of the revised page allows you to jump to the next revised page.

| Ver. | Date | Description of Revision |
|------|------|-------------------------|
| 1.0 | 2010.08 | New |
| 1.1 | 2010.09 | Addition of South African model (NWZ-E353) |
| | | Addition of Ref. No. 59 and 163 on EXPLODED VIEWS (SMR-10034) |
| | | |
| | | |
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