NWZ-X1050/X1051/ X1060/X1061

SERVICE MANUAL

Ver. 1.0 2009.05

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-X1050

US Model
NWZ-X1051/X1061
Canadian Model
Taiwan Model
NWZ-X1060
AEP Model
UK Model
E Model
Australian Model
Chinese Model
Tourist Model
NWZ-X1050/X1060

SPECIFICATIONS

Supported file format

Music (Includes podcasts)		
Audio Formats (Codec)	MP3	Media File format: MP3 (MPEG-1 Layer 3) file format File extension: .mp3 Bit rate: 32 to 320 kbps (Supports variable bit rate (VBR)) Sampling frequency*1: 32, 44.1, 48 kHz
	WMA	Media File format: ASF file format File extension: .wma Bit rate: 32 to 192 kbps (Supports variable bit rate (VBR)) Sampling frequency*1: 44.1 kHz Compatible with WM-DRM 10
	AAC-LC*2	Media File format: MP4 file format File extension: .mp4, .m4a, .3gp Bit rate: 16 to 320 kbps (Supports variable bit rate (VBR))*3 Sampling frequency*1: 8, 11.025, 12, 16, 22.05, 24, 32, 44.1, 48 kHz
	Linear PCM	Media File format: Wave-Riff file format File extension: .wav Bit rate: 1,411 kbps Sampling frequency*1: 44.1 kHz
Video (Includes podcasts)		
Video Formats (Codec)	AVC (H.264/AVC)	Media File format: MP4 file format, "Memory Stick" video format File extension: .mp4, .m4v Profile: Baseline Profile Level: Up to 1.3 Bit rate: Max. 768 kbps Frame rate: Max. 30 fps Resolution: Max. QVGA (320 × 240)
	MPEG-4	Media File format: MP4 file format, "Memory Stick" video format File extension: .mp4, .m4v Profile: Simple Profile Bit rate: Max. 2,500 kbps Frame rate: Max. 30 fps Resolution: Max. QVGA (320 × 240)
	Windows Media Video 9	Media File format: ASF file format File extension: .wmv Profile: VC1 simple profile, main profile Bit rate: Simple profile Max. 1,700 kbps, main profile Max. 5,000 kbps Frame rate: Max. 30 fps Resolution: Simple profile Max. 480 × 270, main profile Max. QVGA (320 × 240)
Audio Formats (Codec)	AAC-LC (for AVC, MPEG-4)	Channel number: Max. 2 channels Sampling frequency*1: 24, 32, 44.1, 48 kHz Bit rate: Max. 288 kbps / channel
	WMA (for Windows Media Video 9)	Bit rate: 32 to 192 kbps (Supports variable bit rate (VBR)) Sampling frequency*1: 44.1 kHz
File size	Max. 2 GB	
The number of files	Max. 2,000	

Photo*4		
Photo Format (Codec)	JPEG	Media File format: Compatible with DCF 2.0/Exif 2.21 file format File extension: .jpg Profile: Baseline Profile Number of pixels: Max. 4,096 × 4,096 pixels
The number of files	Max. 20,000	
Podcast*5		
The number of files	Max. 20,000	

*1 Sampling frequency may not correspond to all encoders.
*2 Copyright protected files cannot be played back.
*3 Non-standard bit rates or non-guaranteed bit rates are included depending on the sampling frequency.
*4 Some photo files cannot be played back, depending on their file formats.
*5 Photo contents are not supported.

Maximum recordable number of songs and time (Approx.)

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

	NWZ-X1050		NWZ-X1060	
Bit rate	Songs	Time	Songs	Time
48 kbps	10,350	690 hr. 00 min.	21,000	1,400 hr. 00 min.
64 kbps	7,750	516 hr. 00 min.	15,650	1,042 hr. 20 min.
128 kbps	3,850	256 hr. 00 min.	7,800	520 hr. 00 min.
256 kbps	1,900	130 hr. 00 min.	3,900	260 hr. 00 min.
320 kbps	1,550	102 hr. 20 min.	3,150	210 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.

	NWZ-X1050	NWZ-X1060
Bit rate*1	Time	Time
384 kbps	61 hr. 00 min.	124 hr. 30 min.
768 kbps	35 hr. 00 min.	71 hr. 00 min.

*1 Bit rate of video. Bit rate of Audio is 128 kbps.

– Continued on next page –

DIGITAL MEDIA PLAYER

9-889-490-01
2009E05-1

Sony Corporation
Audio&Video Business Group
Published by Sony Techno Create Corporation

SONY®

Maximum recordable number of photos that can be transferred (Approx.)
Max. 20,000
Recordable number of photos may be less depending on file sizes.

Capacity (User available capacity)*1
NWZ-X1050: 16 GB (Approx. 14.6 GB = 15,775,629,312 bytes)
NWZ-X1060: 32 GB (Approx. 29.6 GB = 31,871,533,056 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 44.1 kHz sampling data file, single signal measurement)

Total Noise Suppression Ratio*1
Approx. 17 dB*2
*1 Under the Sony measurement standard.
*2 Equivalent to approx. 98.0% reduction of energy of sound compared with not wearing headphones. (NC Environment: Airplane)

FM radio
FM Frequency range
87.5 to 108.0 MHz

IF (FM)
128 kHz

Antenna
Headphone cord antenna

Wireless LAN
Standards: IEEE 802.11b/g
Communication range*1:
Approximately 50 m (160 ft)
Modulation format:
DSSS (IEEE 802.11b compliant), OFDM (IEEE 802.11g compliant)
Security: WEP/WPA/WPA2
*1 Communication range may vary depending on the operating conditions or settings.

Interface
Headphone: Stereo mini-jack
WM-PORT (multiple connecting terminal): 22 pins
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 the supplied USB cable)

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

Battery life (continuous playback)
By setting as follows, a longer battery life can be expected.
The times below are approximated when "Equalizer", "VPT (Surround)", "DSEE(Sound Enhance)", "Clear Stereo", "Dynamic Normalizer", "WLAN function On/Off" are deactivated. Furthermore, for videos, the time approximated when the brightness of the screen is set to "3."
The time below may differ depending on ambient temperature or the status of use.

	With Noise Canceling function deactivated	With Noise Canceling function activated
Music		
Playback at MP3 128 kbps	Approximately 33 hours	Approximately 21.5 hours
Playback at WMA 128 kbps	Approximately 31 hours	Approximately 21.5 hours
Playback at AAC-LC 128 kbps	Approximately 29 hours	Approximately 20.5 hours
Playback at Linear PCM 1,411 kbps	Approximately 31 hours	Approximately 21.5 hours
Video		
Playback at MPEG-4 768 kbps	Approximately 7.5 hours	Approximately 6.5 hours
Playback at MPEG-4 384 kbps	Approximately 9.0 hours	Approximately 7.5 hours
Playback at AVC Baseline 768 kbps	Approximately 7.5 hours	Approximately 6.5 hours
Playback at AVC Baseline 384 kbps	Approximately 8.0 hours	Approximately 7.5 hours
Wireless LAN		
At Web browsing	Approximately 5.5 hours	Approximately 5.0 hours
At YouTube streaming	Approximately 4.5 hours	Approximately 4.0 hours
At receiving FM broadcasting	Approximately 17.5 hours	Approximately 14 hours

Display
3-inch, OLED (Organic Light Emitting Diode) color display, WQVGA (432 × 240 pixels), 262,144 colors

Dimensions (w/h/d, projecting parts not included)
52 × 96.5 × 9.8 mm (2 1/8 × 3 7/8 × 13/32 inches)

Dimension (w/h/d)
52.5 × 97.4 × 10.5 mm (2 1/8 × 3 7/8 × 7/16 inches)

Mass
Approx. 98 g (Approx. 3.5 oz)

Supplied Accessories
- Headphones (1)
- USB cable (1)
- Earbuds (Size S, L) (1)
- Attachment (1)
  Use when connecting the player to the optional cradle, etc.
- Audio input cable (1)
- Plug adaptor for in-flight use (single/dual) (1)
- CD-ROM*1*2 (1)
  – Media Manager for WALKMAN*3
  – Windows Media Player 11
  – Content Transfer
  – Operation Guide (PDF file)
- Quick Start Guide (1)

*1 Do not attempt to play this CD-ROM in an audio CD player.
*2 Depending on the country/region in which you have purchased the player, the bundled software may be different.
*3 Media Manager for WALKMAN is not bundled with the packages sold in the U.S.A. Please download it from the following web site:
http://www.sonycreativesoftware.com/download/wmm_lite

Design and specifications are subject to change without notice.

SECTION 1
SERVICING NOTES

TABLE OF CONTENTS

Accessories are given in the last of the electrical parts list.

NOTES ON CHIP COMPONENT REPLACEMENT

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

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.

CAUTION
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(**Caution:** Some printed circuit boards may not come printed with the lead free mark due to their particular size)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40 °C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350 °C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

System Requirements

- Computer
  IBM PC/AT or compatible computer preinstalled with the following Windows operating systems:
  Windows XP Home Edition (Service Pack 2 or later) / Windows XP Professional (Service Pack 2 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)
  * Excluding OS Versions not supported by Microsoft
  * Excluding Windows® XP Professional x64 Edition
  * Excluding 64-bit OS versions for use with PC application software "Media Manager for WALKMAN"
- CPU: Pentium 4 1.0 GHz or higher
- RAM: 512 MB or more
- Hard Disk drive: 380 MB or more of available space
  The supplied software may require more available space depending on the version of Windows. Furthermore, you need more space to store data such as music, videos, photos, etc.
- 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)
  To create original CDs, a CD-R/RW drive is required.
- Sound board
- USB port (Hi-Speed USB is recommended)
- Microsoft® .NET Framework 2.0 or 3.0, QuickTime®7.3(supplied), Internet Explorer 6.0 or 7.0, Windows Media Player 10 or 11, DirectX9.0 are required. (Windows Media Player 11 recommended. Some computers that already have Windows Media Player 10 installed may encounter file limitation (AAC, video files, etc.) that can be transferred by dragging and dropping.)
- Adobe Flash Player 8 or higher needs to be installed.
- 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

NOTE THE MAIN BOARD REPLACING

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

1. Format

Format

You can format the built-in flash memory of the player.

Notes

- If the memory is formatted, all data (songs, videos, photos, etc., including sample data installed at the factory) 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 by using Windows Explorer. If you have formatted with Windows Explorer, format again by 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."

2. Reset all setting

Reset All Settings

You can reset the player to the default settings. Resetting the player also deletes the wireless LAN encryption key, but does not delete data such as music, video, and photo data.

Note

- This function is only available in the pause mode.

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.

3. Wallpapers setting

It is necessary to install the Wallpapers. Confirm details to each service headquarters.

4. Other

MAC address has been changed. Print the page 5, and pass it to the customer with the repaired set when you return the customer the repaired set.

- Please cut out along the dotted line and use it.

Note:
The MAC address of this set was changed along with this repair.
Please set it again if you are using the MAC address filtering function of access point device of connection destination.
Please refer to the operation guide of this set for the confirm method of MAC address confirming.

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MEMO

Note: Refer to page 27 for the schematic diagram. Refer to page 28 for the printed wiring boards.

METHOD OF JUDGING RIGHT AND WRONG OF PARTS RELATED TO SWITCH

In this set, only a part of parts that relate to the switch are supplied. Exchange the entire mounted board when parts that do not correspond to it are defective.
The right and wrong of the switch can be judged by the following two methods.

1. Judgment From The Test Mode

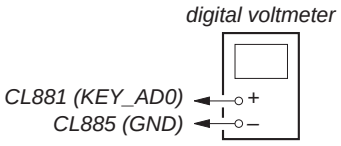
Judge the right and wrong of the switch referring to "4-4-2. Key check" (page 22).

2. Judgment from the voltage measurement

Judge the right and wrong of the switch by the voltage measurement with a test point.

2-1. [▶II]/[▶▶I]/[I◀◀] keys

Connection:

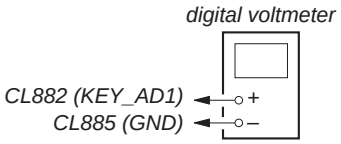


When the voltage value is below, [▶II]/[▶▶I]/[I◀◀] keys are normal.

- [▶II] key is pressed : 0 to 0.25 V
- [▶▶I] key is pressed : 0.4 to 0.6 V
- [I◀◀] key is pressed : 0.76 to 0.95 V

2-2. [VOL +]/[VOL –]/[HOME] keys

Connection:

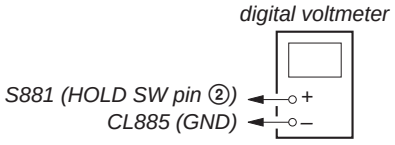


When the voltage value is below, [VOL +]/[VOL –]/[HOME] keys are normal.

- [VOL –] key is pressed : 0 to 0.25 V
- [VOL +] key is pressed : 0.4 to 0.6 V
- [HOME] key is pressed : 0.76 to 0.95 V

2-3. HOLD switch (S881)

Connection:

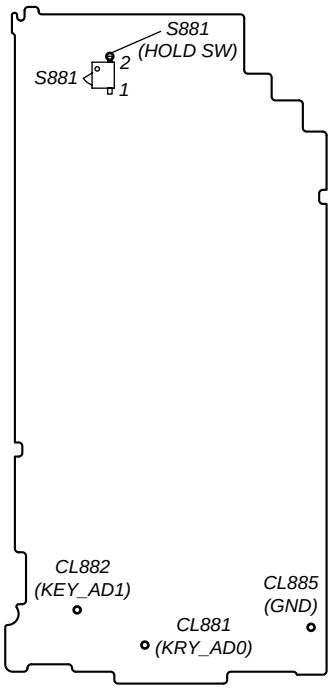


When the voltage value is below, HOLD switch (S881) is normal.

- HOLD switch is turned on : 2.85 V
- HOLD switch is turned off : 0 V

Connection location:

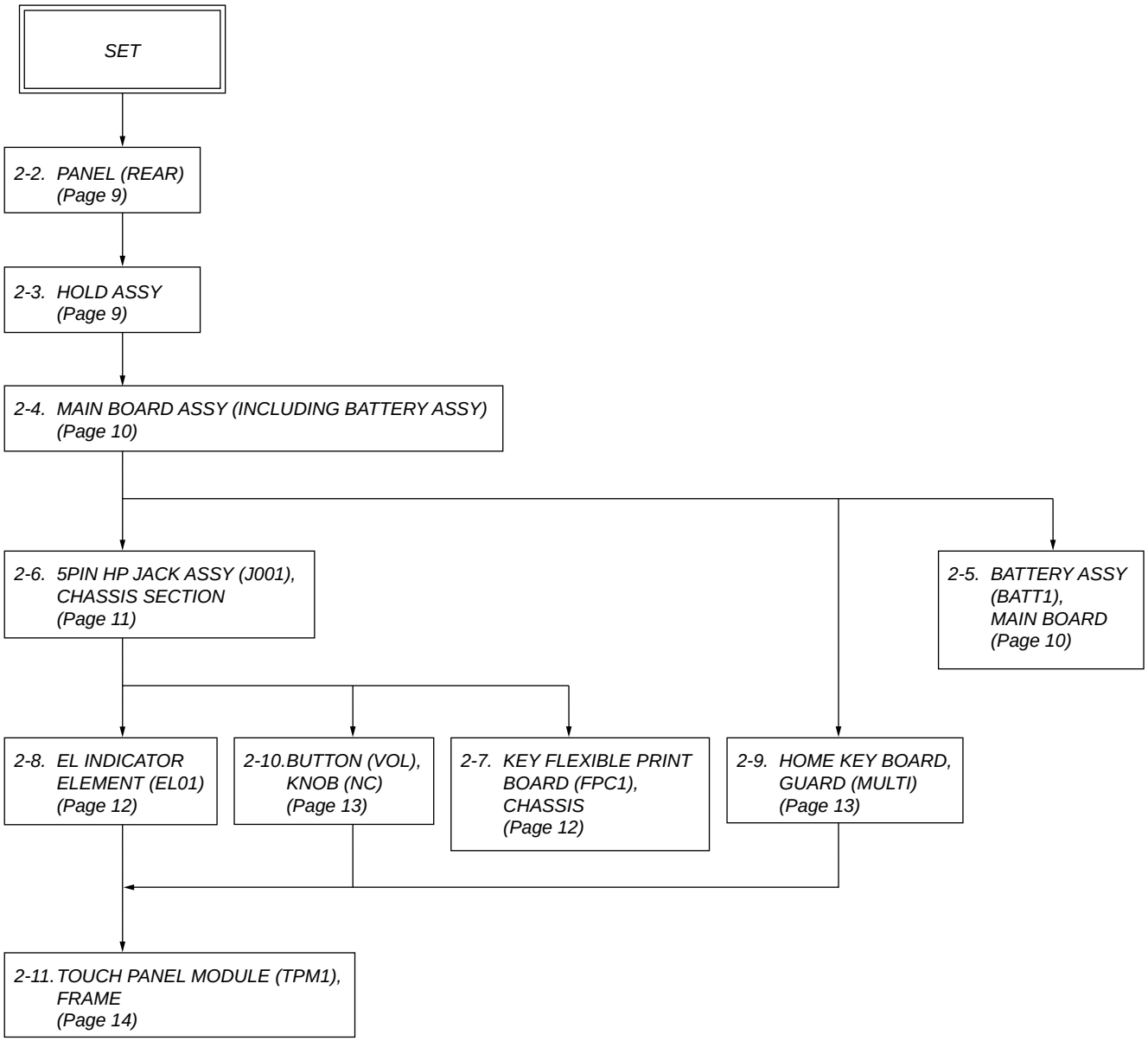
– MAIN Board (Side B) –



SECTION 2
DISASSEMBLY

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

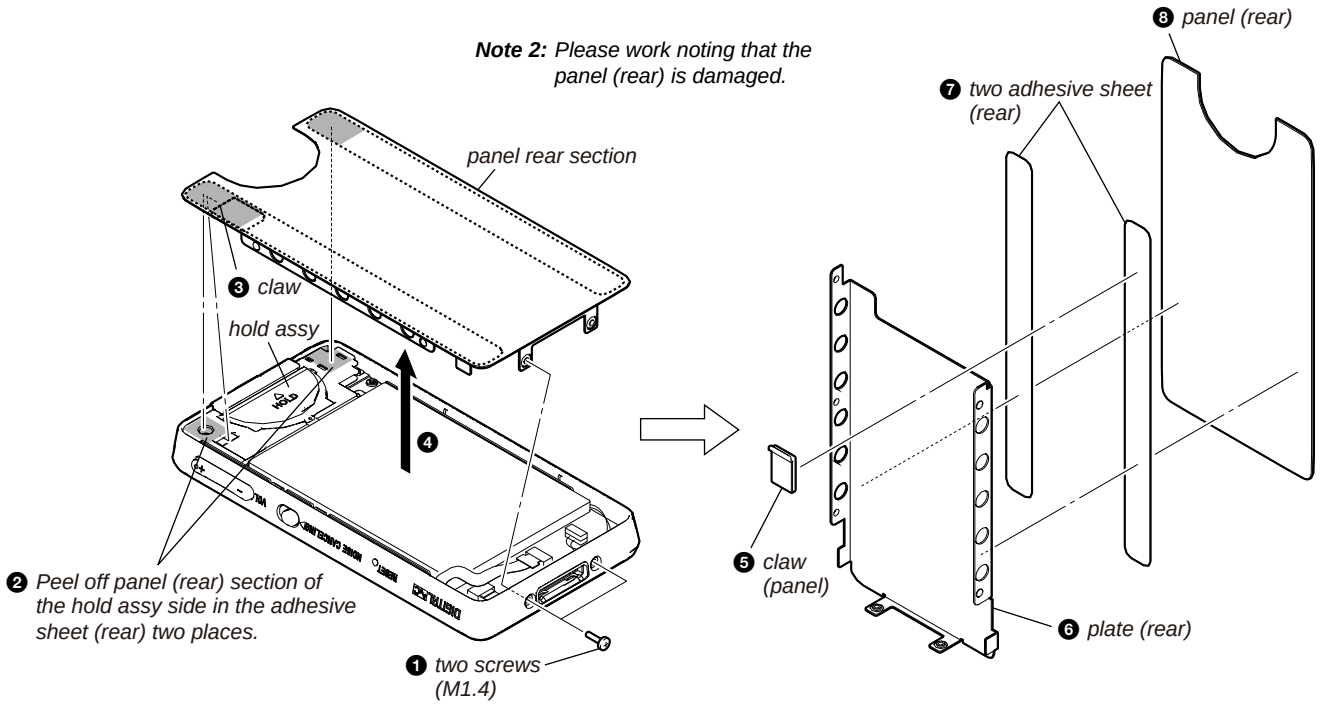
2-1. DISASSEMBLY FLOW



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

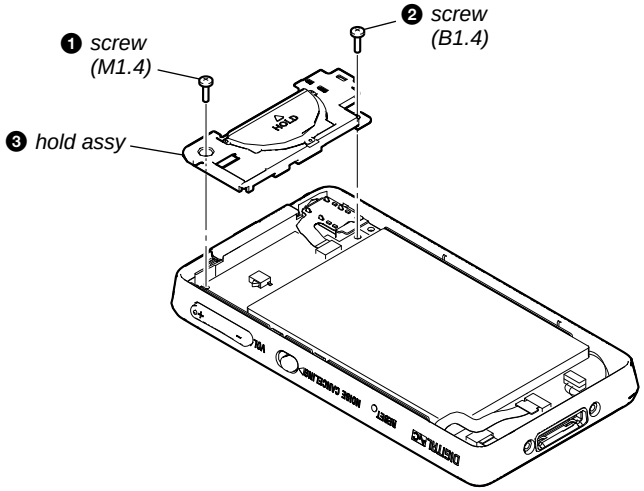
2-2. PANEL (REAR)

***Note 1**: This illustration sees the set from rear side.*



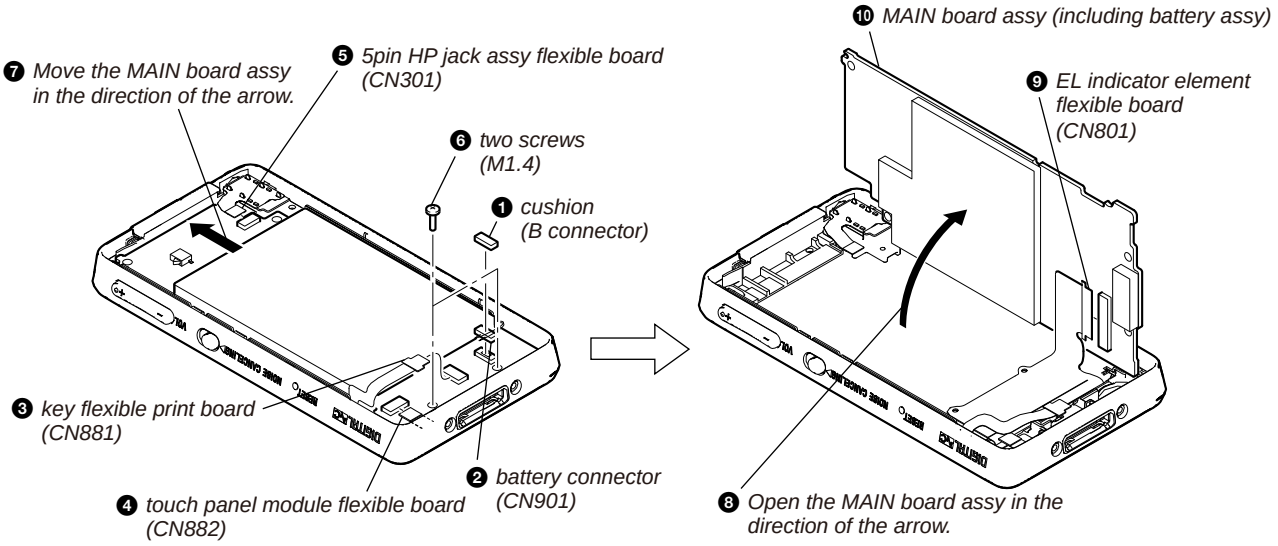
2-3. HOLD ASSY

***Note:** This illustration sees the set from rear side.*



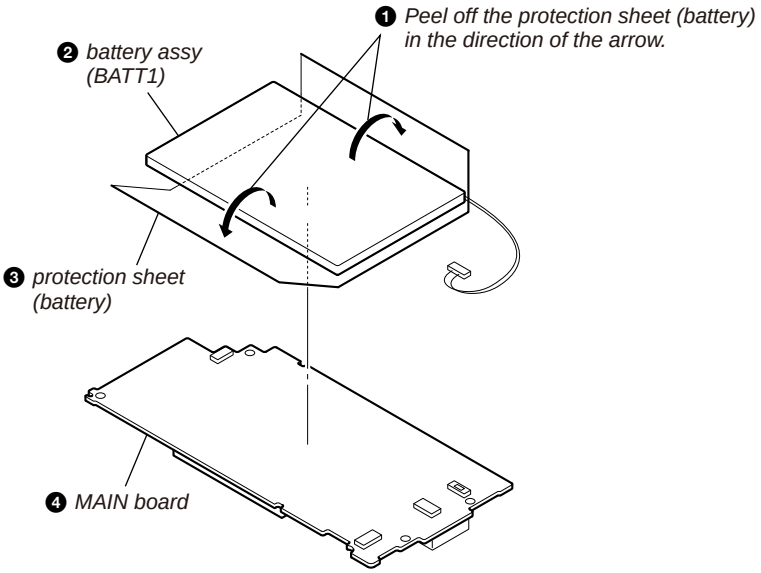
2-4. MAIN BOARD ASSY (INCLUDING BATTERY ASSY)

Note: *This illustration sees the set from rear side.*



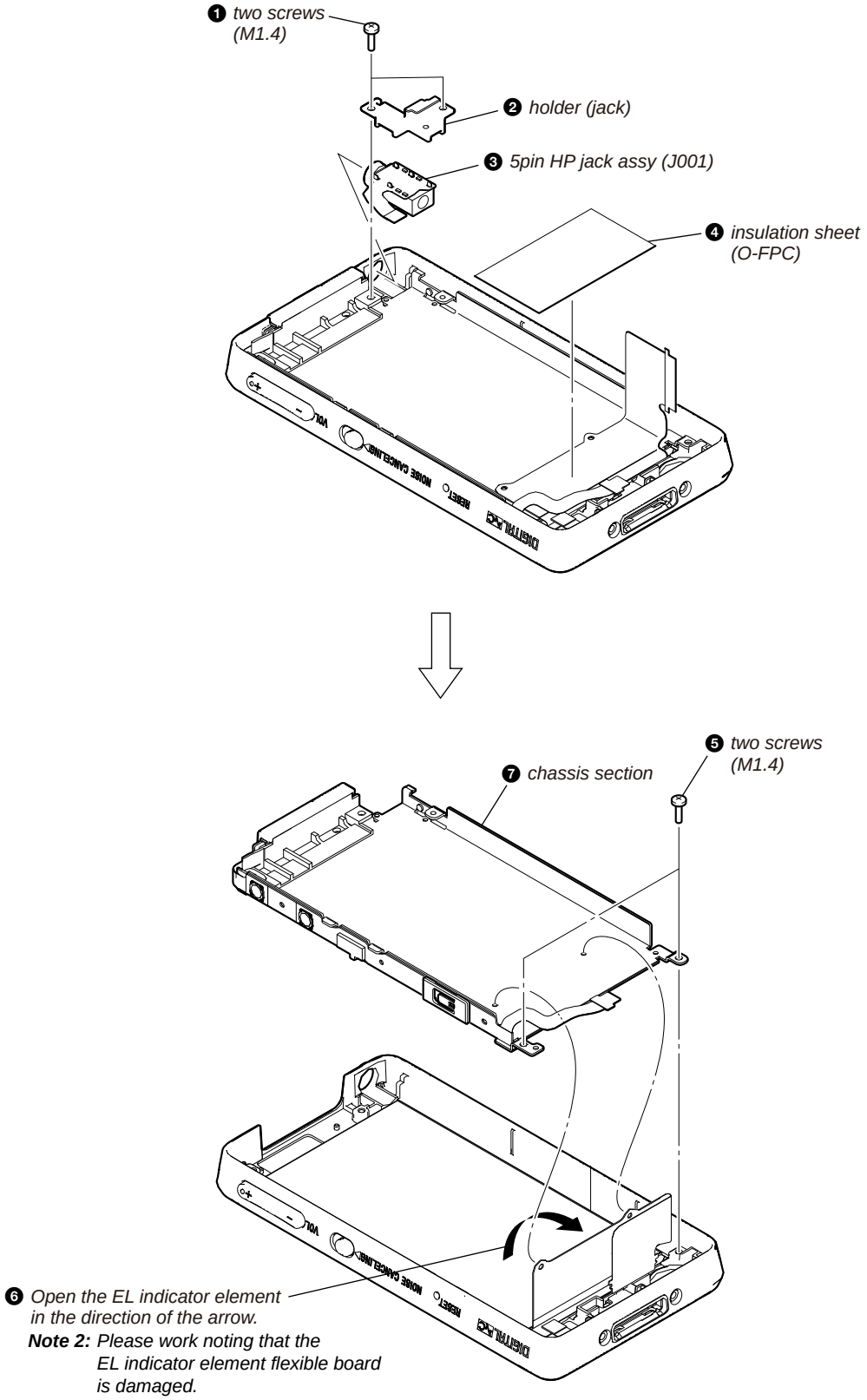
2-5. BATTERY ASSY (BATT1), MAIN BOARD

Note: *This illustration sees the MAIN board from battery assy side.*

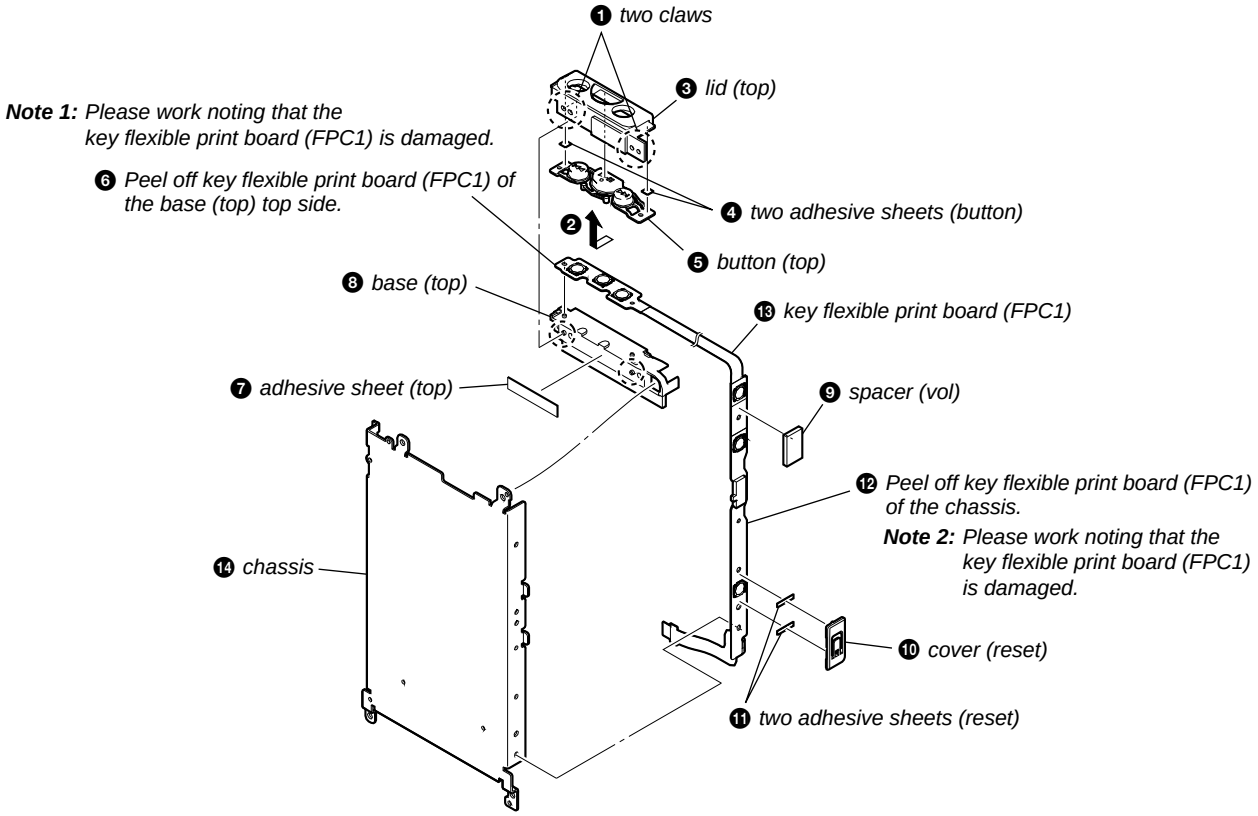


2-6. 5PIN HP JACK ASSY (J001), CHASSIS SECTION

***Note 1**: This illustration sees the set from rear side.*

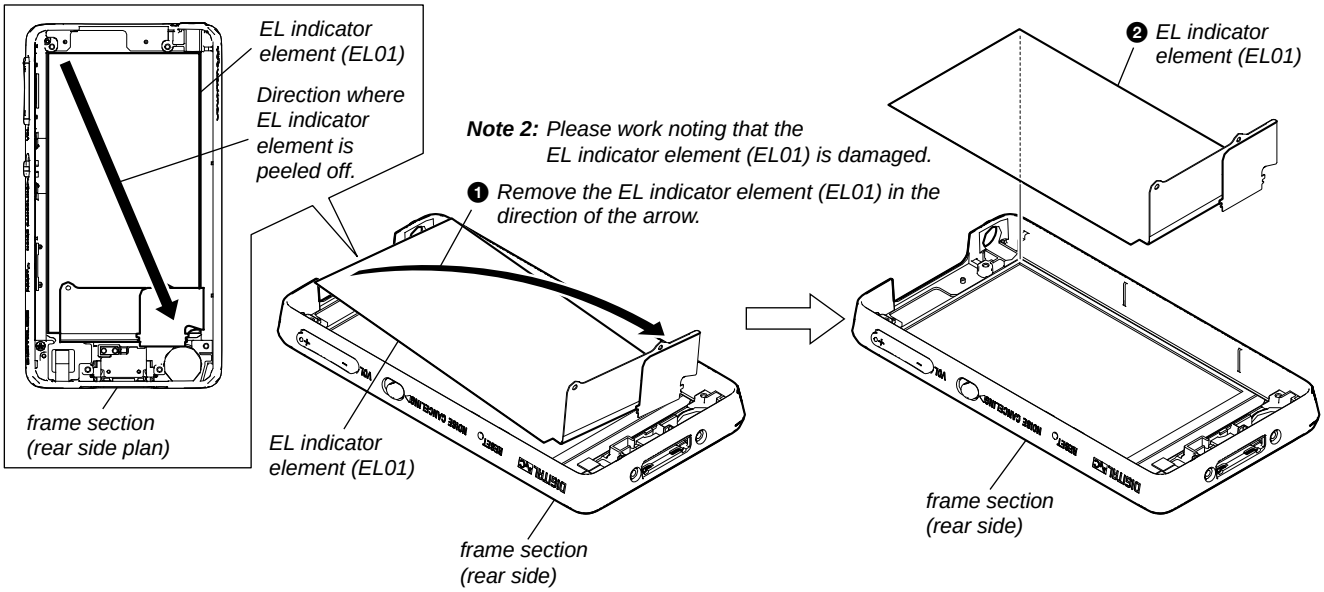


2-7. KEY FLEXIBLE PRINT BOARD (FPC1), CHASSIS



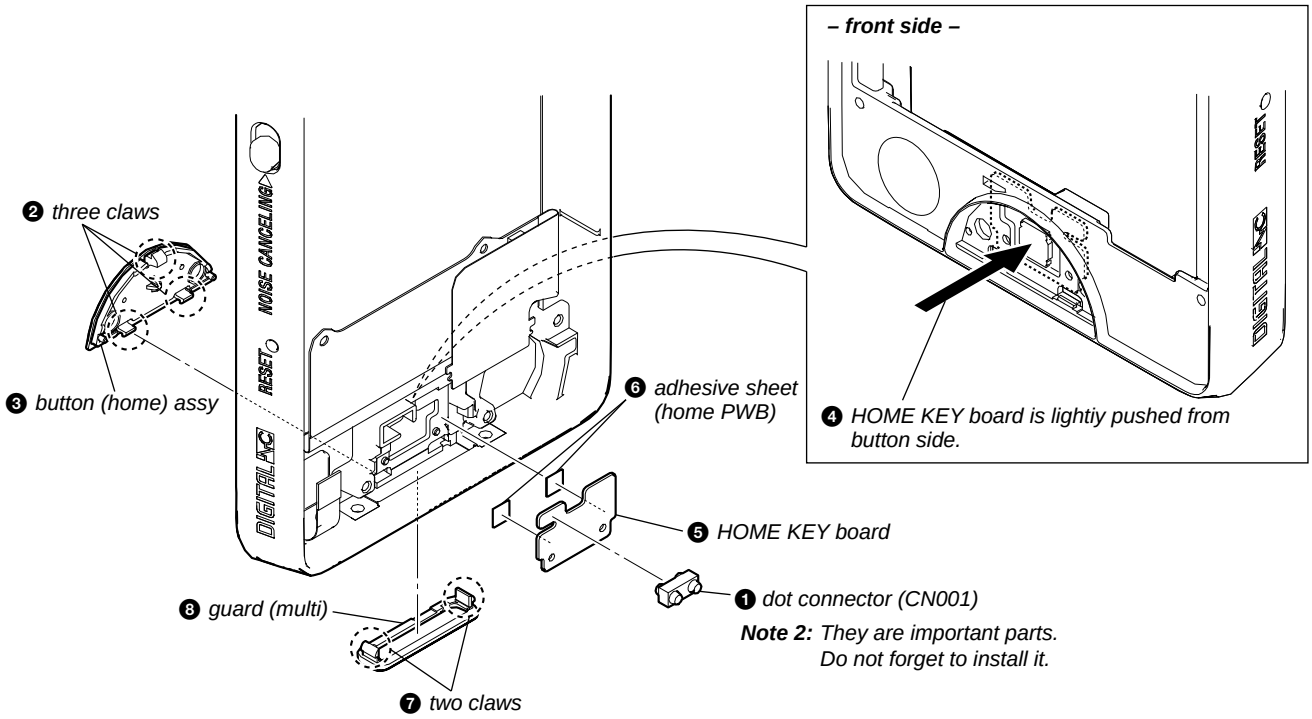
2-8. EL INDICATOR ELEMENT (EL01)

Note: *This illustration sees the set from rear side.*



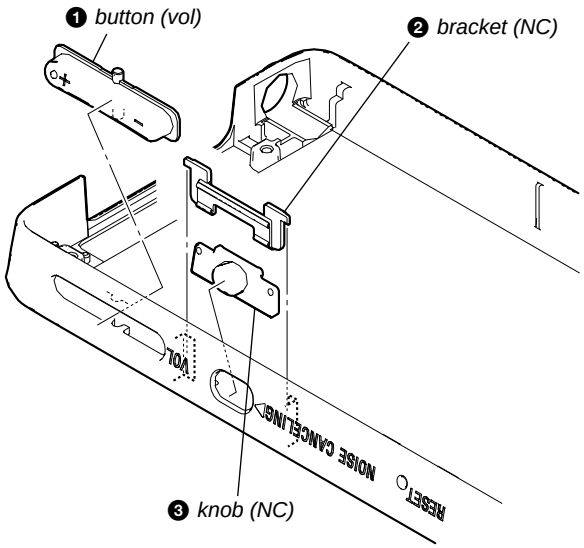
2-9. HOME KEY BOARD, GUARD (MULTI)

Note: *This illustration sees the set from rear side.*

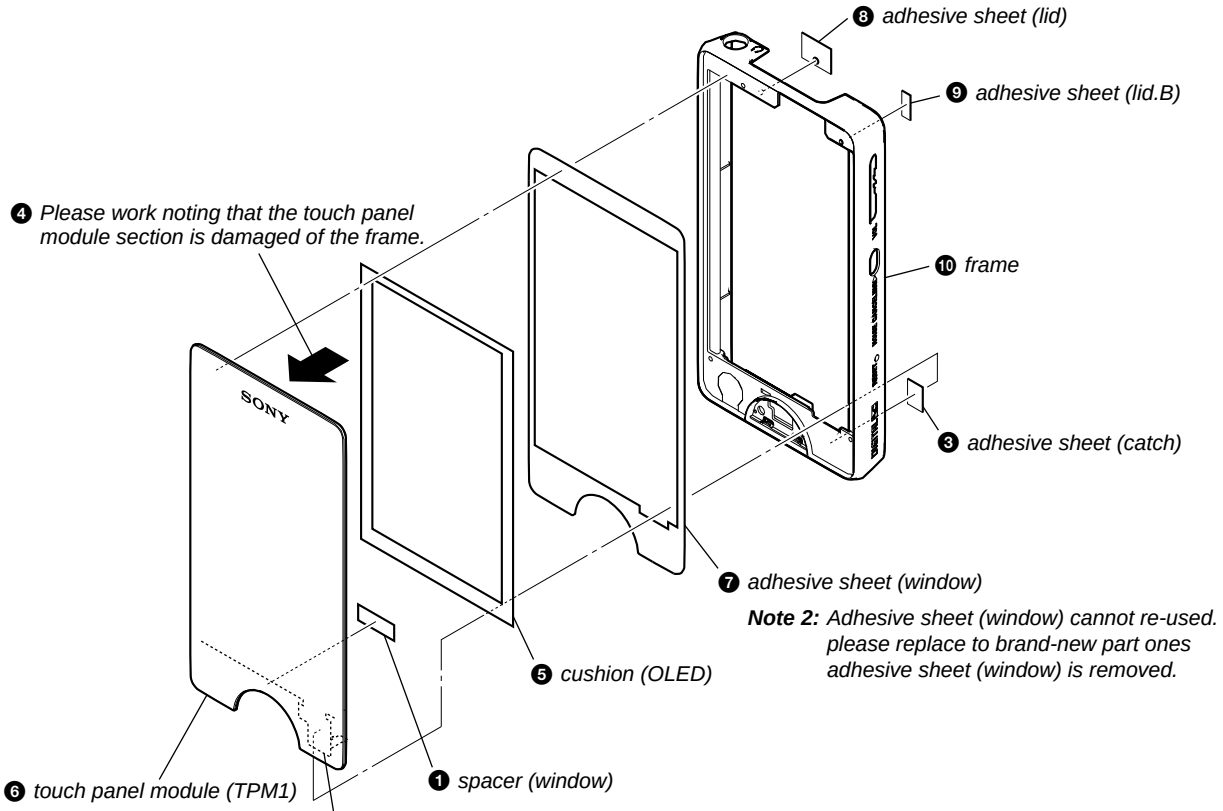


2-10. BUTTON (VOL), KNOB (NC)

Note: *This illustration sees the set from rear side.*



2-11. TOUCH PANEL MODULE (TPM1), FRAME



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:

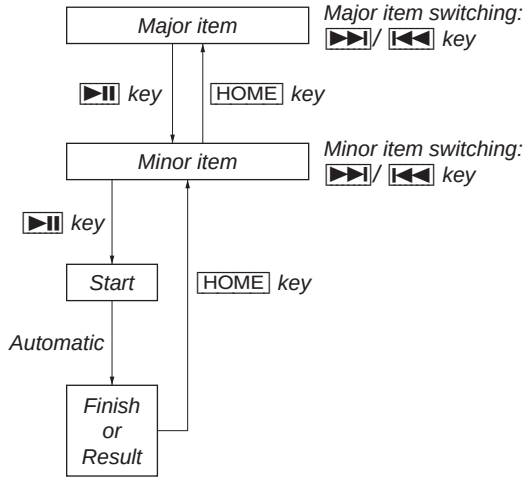
1. Turn the power on.
2. Press the [HOME] key, the home menu is displayed.
3. While touching the [Settings] icon on the touch panel, press the key as following order.
   [▶II] → [▶▶I] → [I◀◀] → [VOL +] → [▶▶I] → [VOL –] → [▶▶I]
4. The set reboots and the color bar is displayed in the liquid crystal display.
5. Enter the test mode when the [HOME] key is pressed in the state of step 4.

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 [▶▶I]/[I◀◀] key to select the "EXITTEST", and press the [▶II] key to select the "SURE ?".
3. Press the [▶II] key, turn the power off and release the test mode.

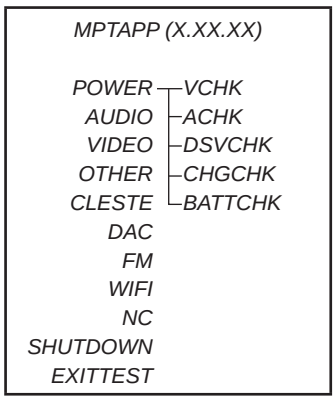
3. CONFIGURATION OF THE TEST MODE



4. OPERATION OF THE TEST MODE

4-1. Power (POWER)

Screen display



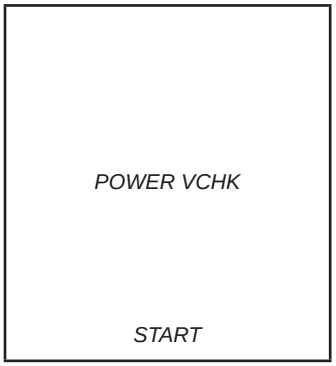
4-1-1. Power supply voltage check (VCHK)

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 [▶▶I]/[I◀◀] key to select the "POWER", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the "VCHK".
4. Press the [▶II] 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 [HOME] 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 [▶▶I]/[I◀◀] key to select the "POWER", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key 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

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

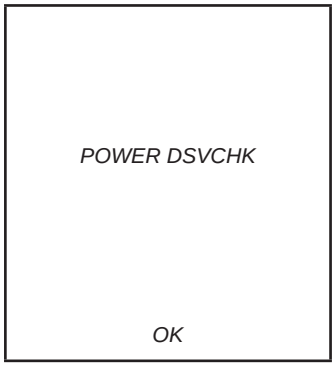
4-1-3. Standby current check (DSVCHK)

This mode is used in case standby current is checked.

Checking method:

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

Screen display



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

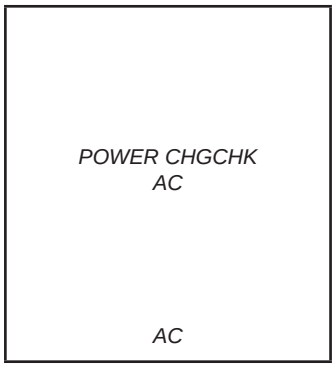
4-1-4. Charge current check (CHGCHK)

This mode is used in case charge current is checked.

Checking method:

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

Screen display



5. In this state, each time the [▶▶I] 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 [HOME] key, return to minor item selection screen.

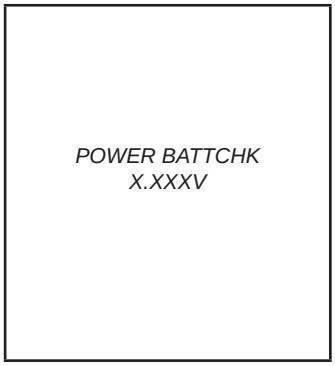
4-1-5. Battery voltage detection check (BATTCHK)

This mode is used in case battery voltage is checked.

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the “POWER”, and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] 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



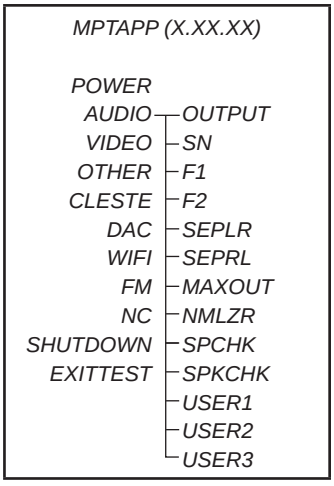
X.XXXV: Battery voltage

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

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 [I◀◀] key to switch the HP/LINE/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 [▶▶I]/[I◀◀] key to select the "AUDIO", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key 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

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

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

"Infinity Zero VOLUME: 30" audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the "AUDIO", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the "SN".
4. Press the [▶II] key, "Infinity Zero VOLUME: 30" audio signal is outputted.

Screen display

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

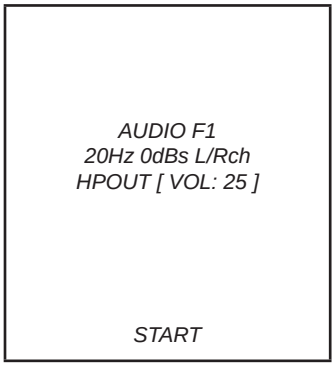
4-2-3. Frequency characteristic 1 check (F1)

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

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the "AUDIO", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key 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



5. Press the [HOME] 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 [▶▶I]/[I◀◀] key to select the "AUDIO", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key 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

5. Press the [HOME] 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 [▶▶I]/[I◀◀] key to select the "AUDIO", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the "SEPLR".
4. Press the [▶II] key, "1 kHz 0 dBs L-ch VOLUME: 25" audio signal is outputted.

Screen display

5. Press the [HOME] 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 [▶▶I]/[I◀◀] key to select the "AUDIO", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the "SEPRL".
4. Press the [▶II] key, "1 kHz 0 dBs R-ch VOLUME: 25" audio signal is outputted.

Screen display

5. Press the [HOME] 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: 14") audio signal is outputted.

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the "AUDIO", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key 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: 14") audio signal is outputted.

Screen display

5. In this state, each time the [OPTION] key is pressed, AVLS on/off switch is performed.
6. Press the [HOME] 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 [▶▶I]/[I◀◀] key to select the "AUDIO", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key 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

5. Press the [HOME] 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 [▶▶I]/[I◀◀] key to select the "AUDIO", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key 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

5. Press the [HOME] 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.

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the "AUDIO", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the "SPKCHK".
4. Press the [▶II] key, "20 – 20kHz 0dBs L-ch/R-ch VOLUME: 30" audio signal is outputted.

Screen display

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

4-2-11. User specification contents playback 1 (USER1)

"/User1.oma" is reproduced.

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the "AUDIO", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the "USER1".
4. Press the [▶II] key, "/User1.oma" is reproduced.

Screen display

XX:XX : Repetition expert totaling time

5. Press the [HOME] 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 [▶▶I]/[I◀◀] key to select the "AUDIO", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the "USER2".
4. Press the [▶II] key, "/User2.oma" is reproduced.

Screen display

XX:XX : Repetition expert totaling time

5. Press the [HOME] 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 [▶▶I]/[I◀◀] key to select the "AUDIO", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the "USER3".
4. Press the [▶II] key, "/User3.oma" is reproduced.

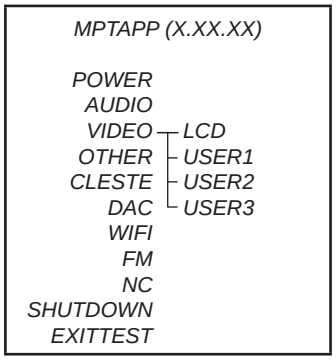
Screen display

XX:XX : Repetition expert totaling time

5. Press the [HOME] 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 [▶▶I]/[I◀◀] key to select the "VIDEO", and press the [▶II] key to select the "LCD".
3. Press the [▶II] key, all black is displayed on the screen.
4. In this state, each time the [VOL +] 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 → diagonal gradation (red) → diagonal gradation (green) → diagonal gradation (blue) → diagonal gradation (white) → Maximum drawing size confirmation

   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 [▶▶I] key is pressed, brightness min/max/middle switch is performed.
6. Press the [HOME] 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 [▶▶I]/[I◀◀] key to select the "VIDEO", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the "USER1".
4. Press the [▶II] key, "/User1.mp4" is reproduced.

Screen display

XX:XX : Repetition expert totaling time

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

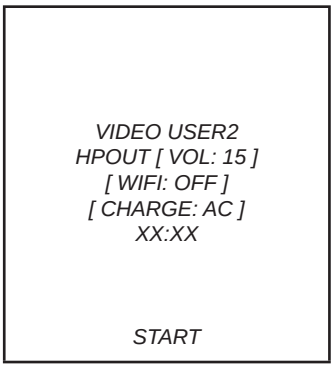
4-3-3. User specification contents playback 2 (USER2)

"/User2.mp4" is reproduced.

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the "VIDEO", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the "USER2".
4. Press the [▶II] key, "/User2.mp4" is reproduced.

Screen display



XX:XX : Repetition expert totaling time

5. Press the [HOME] 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 [▶▶I]/[I◀◀] key to select the "VIDEO", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the "USER3".
4. Press the [▶II] key, "/User3.mp4" is reproduced.

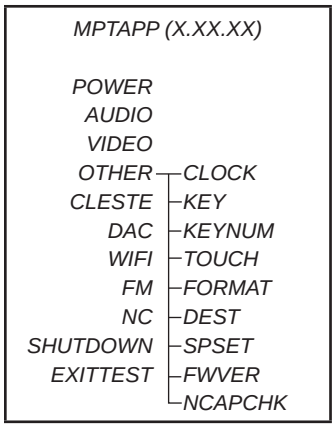
Screen display

XX:XX : Repetition expert totaling time

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

4-4. Other (OTHER)

Screen display



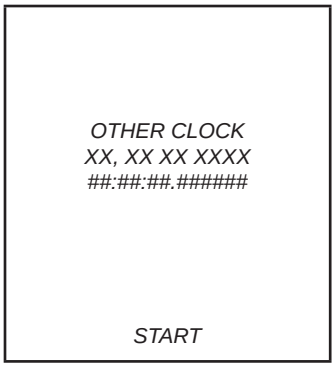
4-4-1. Clock check (CLOCK)

The movement of an internal clock is confirmed.

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the "OTHER", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the "CLOCK".
4. Press the [▶II] key, date and time are displayed.

Screen display



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

"START" changes into "OK" if the movement of an internal clock is confirmed.

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

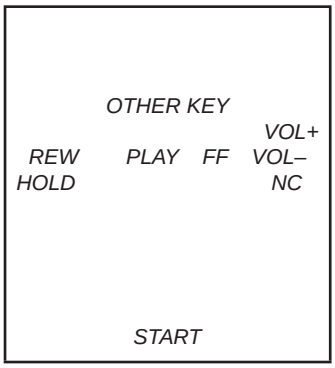
4-4-2. Key check (KEY)

The operation of the key is confirmed.

Checking method:

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

Screen display



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.

4-4-3. 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.

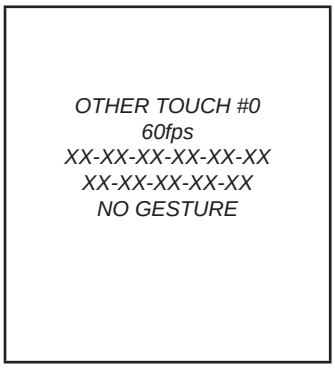
4-4-4. Touch panel check (TOUCH)

The position in which the touch panel is pressed is displayed.

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the “OTHER”, and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the “TOUCH”.
4. Enter the mode when the [▶II] key is pressed. When the touch panel is pressed, the position in which the touch panel is pushed at that time is displayed.

Screen display



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

4-4-5. 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” → “Format” when it home menu in usually operates when the set should format it.

4-4-6. 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.

4-4-7. Sound pressure regulation setting (SPSET)

ON/OFF of sound pressure regulation is confirmed.

Note: Not used for the servicing.

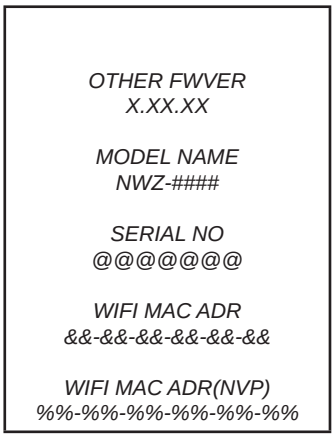
4-4-8. Firmware version check (FWVER)

The firmware version is displayed.

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the “OTHER” and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the “FWVER”.
4. Press the [▶II] key, the firmware version is displayed.

Screen display



X.XX.XX	: Firmware version
####	: Model name
@@@@@@@@	: Serial No.
&&-&&-&&-&&-&&-&&	: MAC address of WiFi module
%%-%%-%%-%%-%%-%%	: MAC address of WiFi in NVP

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

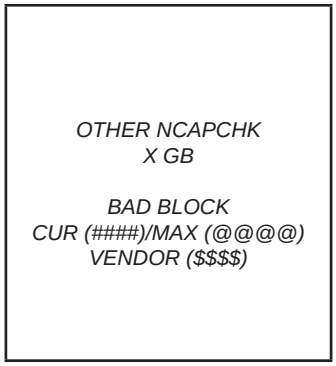
4-4-9. NAND capacity check (NCAPCHK)

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 [▶▶I]/[I◀◀] key to select the "OTHER", and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the "NCAPCHK".
4. Press the [▶II] key, capacity of NAND flash memory, present bad block, maximum bad block, and vender ID are displayed.

Screen display

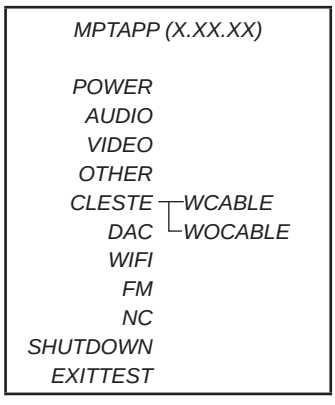


X : Capacity of NAND flash memory
@@@@ : Number of present bad block
(It makes an error the acquisition of the number of bad blocks at "–1")
: Number of maximum bud block
(It makes an error the acquisition of the vender ID at "–1")
$$$$: Vender ID of NAND flash memory
0x98/0xec (TOSHIBA/SAMSUNG)
(It makes an error the acquisition of the vender ID at "–1")

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

4-5. CLESTE

Screen display



4-5-1. 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.

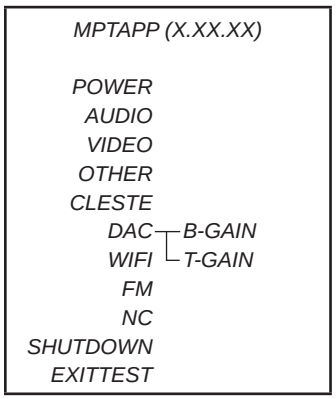
4-5-2. Clear stereo setting (No cable) (WOCABLE)

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

Note: Not used for the servicing.

4-6. DAC

Screen display



4-6-1. BASS-Gain/Fc setting (B-GAIN)

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

Note: Not used for the servicing.

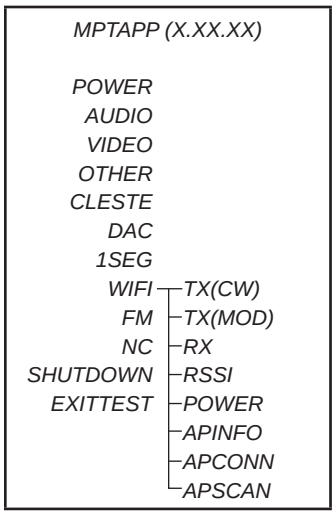
4-6-2. TREBLE-Gain/Fc setting (T-GAIN)

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

Note: Not used for the servicing.

4-7. Wi-Fi (WIFI)

Screen display



4-7-1. Consecutive no-modulation Wi-Fi transmission (TX (CW))

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the “WIFI”, and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the “TX(CW)”.
4. Press the [▶II] key, the consecutive no-modulation Wi-Fi transmission is begun.

Screen display

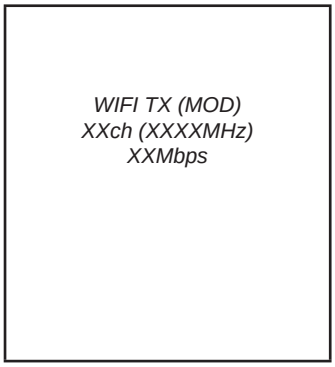
5. In this state, each time the [VOL +]/[VOL –] keys are pressed, the transmission channel is changed.
6. Press the [HOME] key, return to minor item selection screen.

4-7-2. Consecutive modulation Wi-Fi transmission (TX (MOD))

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the “WIFI”, and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the “TX(MOD)”.
4. Press the [▶II] key, the consecutive modulation Wi-Fi transmission is begun.

Screen display



5. In this state, each time the [VOL +]/[VOL –] keys are pressed, the transmission channel is changed.
6. In this state, each time the [▶▶I]/[I◀◀] keys are pressed, the transmission bit rate is changed.
7. Press the [HOME] key, return to minor item selection screen.

4-7-3. Consecutive Wi-Fi receptions (RX)

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the “WIFI”, and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the “RX”.
4. Press the [▶II] key, the consecutive Wi-Fi reception is begun.

Screen display

5. In this state, each time the [VOL +]/[VOL –] keys are pressed, the reception channel is changed.
6. Press the [HOME] key, return to minor item selection screen.

4-7-4. Wi-Fi RSSI acquisitions (RSSI)

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the “WIFI”, and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the “RSSI”.
4. Press the [▶II] key, the RSSI is acquired. The RSSI is regularly renewed.

Screen display

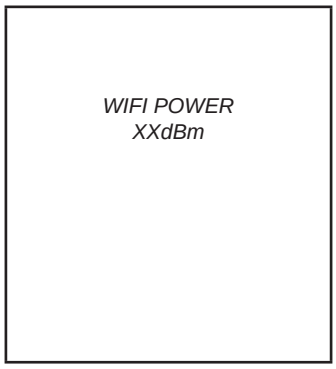
5. Press the [HOME] key, return to minor item selection screen.

4-7-5. Wi-Fi power setting (POWER)

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the “WIFI”, and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the “POWER”.
4. Press the [▶II] key, the power setting is displayed.

Screen display



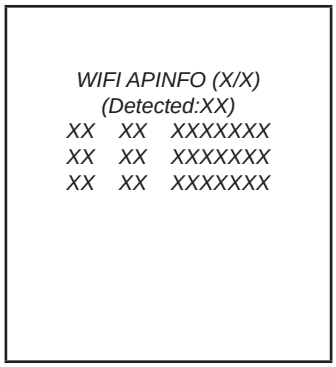
5. In this state, each time the [VOL +]/[VOL –] keys are pressed, the power setting is changed.
6. Press the [HOME] key, return to minor item selection screen.

4-7-6. Wi-Fi access point information acquisitions (APINFO)

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the “WIFI”, and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the “APINFO”.
4. Press the [▶II] key, the Wi-Fi access point is acquired.

Screen display



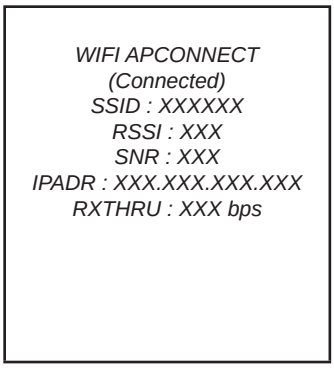
5. In this state, each time the [▶▶I]/[I◀◀] keys are pressed, displayed page is changed.
6. In this state, each time the [▶II] key is pressed, access point information is acquired again.
7. Press the [HOME] key, return to minor item selection screen.

4-7-7. Wi-Fi access point connection (APCONN)

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the “WIFI”, and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the “APCONN”.
4. Press the [▶II] key, the connection with the access point is begun.

Screen display



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

4-7-8. Wi-Fi access point consecutive connection (APSCAN)

Checking method:

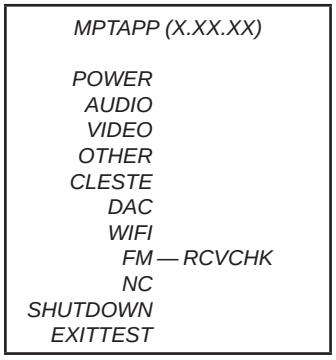
1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the “WIFI”, and press the [▶II] key to enter the minor item.
3. Press the [▶▶I]/[I◀◀] key to select the “APSCAN”.
4. Press the [▶II] key, the consecutive connection with the access point is begun. At this time, the result is not displayed.

Screen display

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

4-8. FM

Screen display



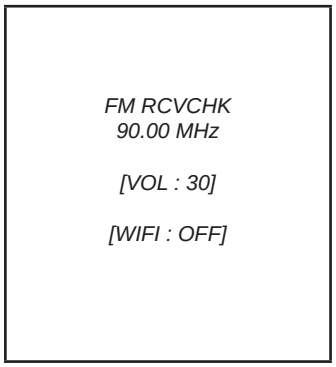
4-8-1. Reception output check (RCVCHK)

FM tuning checked.

Checking method:

1. Enter the test mode.
2. Press the [▶▶I]/[I◀◀] key to select the “FM”, and press the [▶II] key to select the “RCVCHK”.
3. Press the [▶II] key, “90.00 MHz”.
4. In this state, each time the [OPTION] key is pressed, frequency is changes in the following order.

Screen display

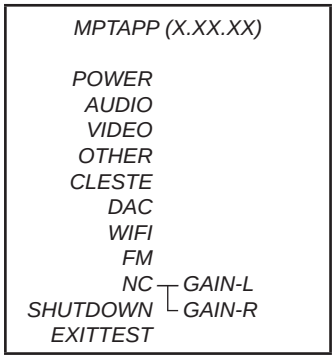


90.00 MHz (default) → 76.00 MHz → 95.75 MHz → 107.75 MHz → 87.50 MHz → 98.00 MHz → 108.00 MHz

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

4-9. NC

Screen display



4-9-1. Microphone gain (L-ch) adjustment (GAIN-L)

Microphone gain (L-ch) is adjusted.

Note: Not used for the servicing.

4-9-2. Microphone gain (R-ch) adjustment (GAIN-R)

Microphone gain (R-ch) is adjusted.

Note: Not used for the servicing.

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 [▶▶I]/[I◀◀] key to select the “SHUTDOWN”, and press the [▶II] key to select the “SURE ?”.
3. Press the [▶II] key, turn the power off while having entered the test mode.

SECTION 4
DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

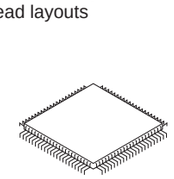
For Printed Wiring Boards.

Note:

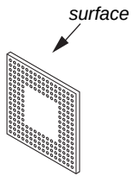
- ———: Parts extracted from the conductor side.
- ▬: Pattern from the side which enables seeing.
  (The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (SIDE B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (SIDE A)	Parts on the parts face side seen from the parts face are indicated.

- MAIN board is muliti-layer printed board.
  However, the patterns of intermediate-layers have not been included in diagrams.
- Lead layouts



Lead layout of conventional IC



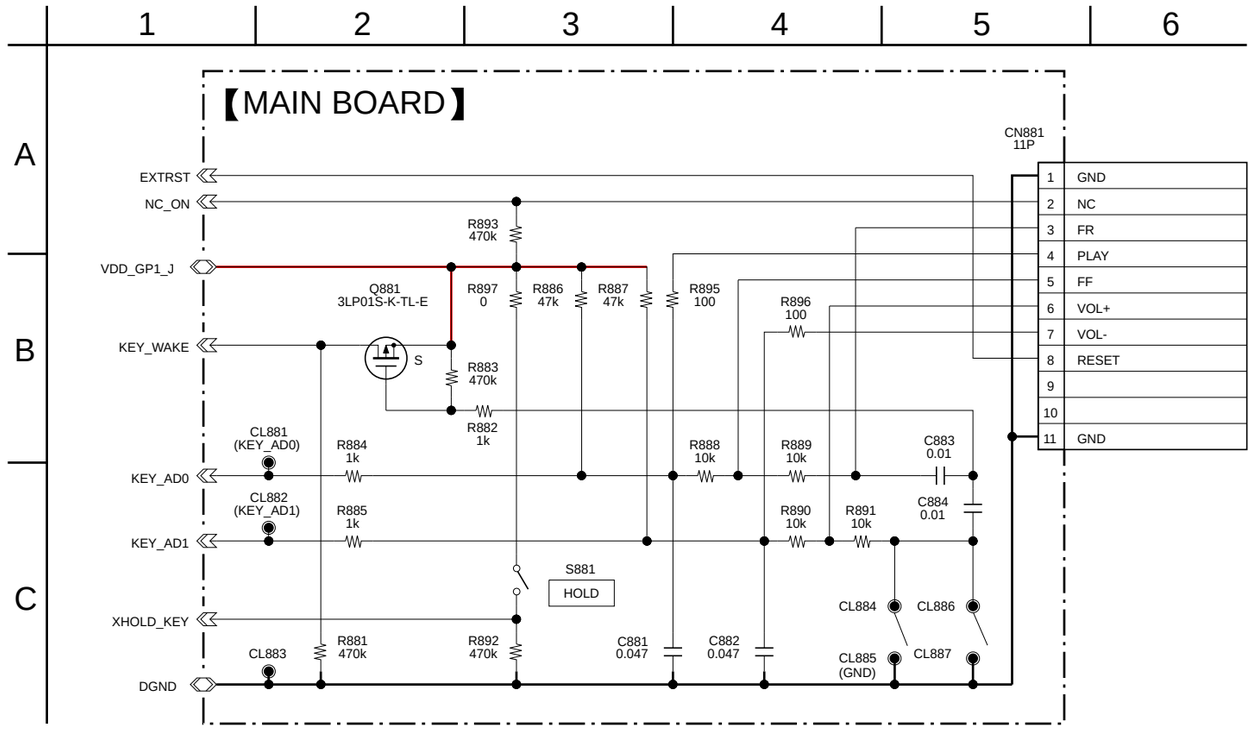
CSP (Chip Size Package)

For Schematic Diagrams.

Note:

- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ▭: Panel designation.
- ▬: B+ Line.

4-1. SCHEMATIC DIAGRAM

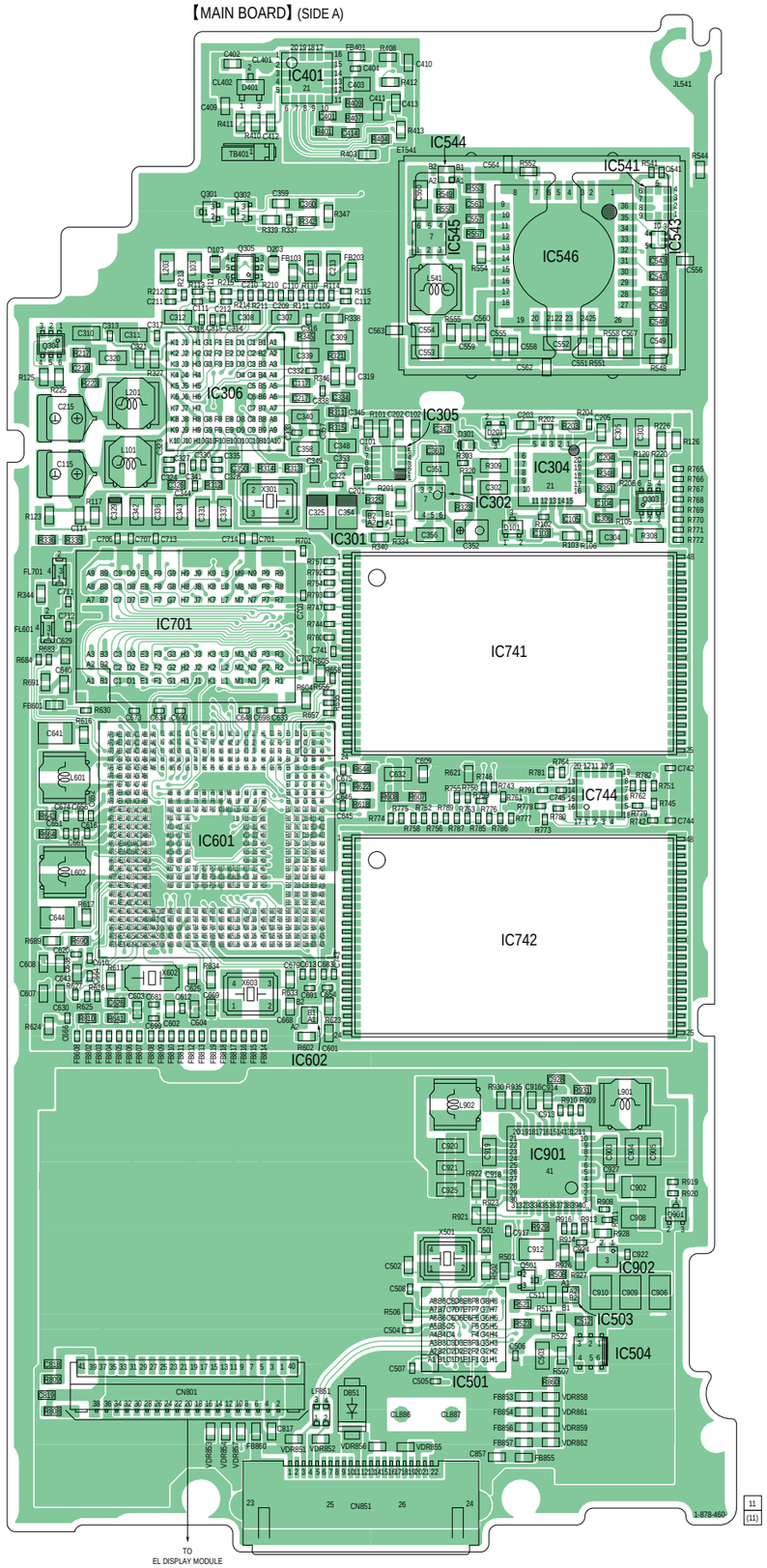


Note 1: In this set, only a part of parts that relate to the switch are supplied. Therefore, the schematic diagram excerpts and has described only a part. Replace a part according to “METHOD OF JUDGING RIGHT AND WRONG OF PARTS RELATED TO SWITCH” (page 7) in servicing notes. Exchange the entire mounted board when parts that do not correspond to it are defective.

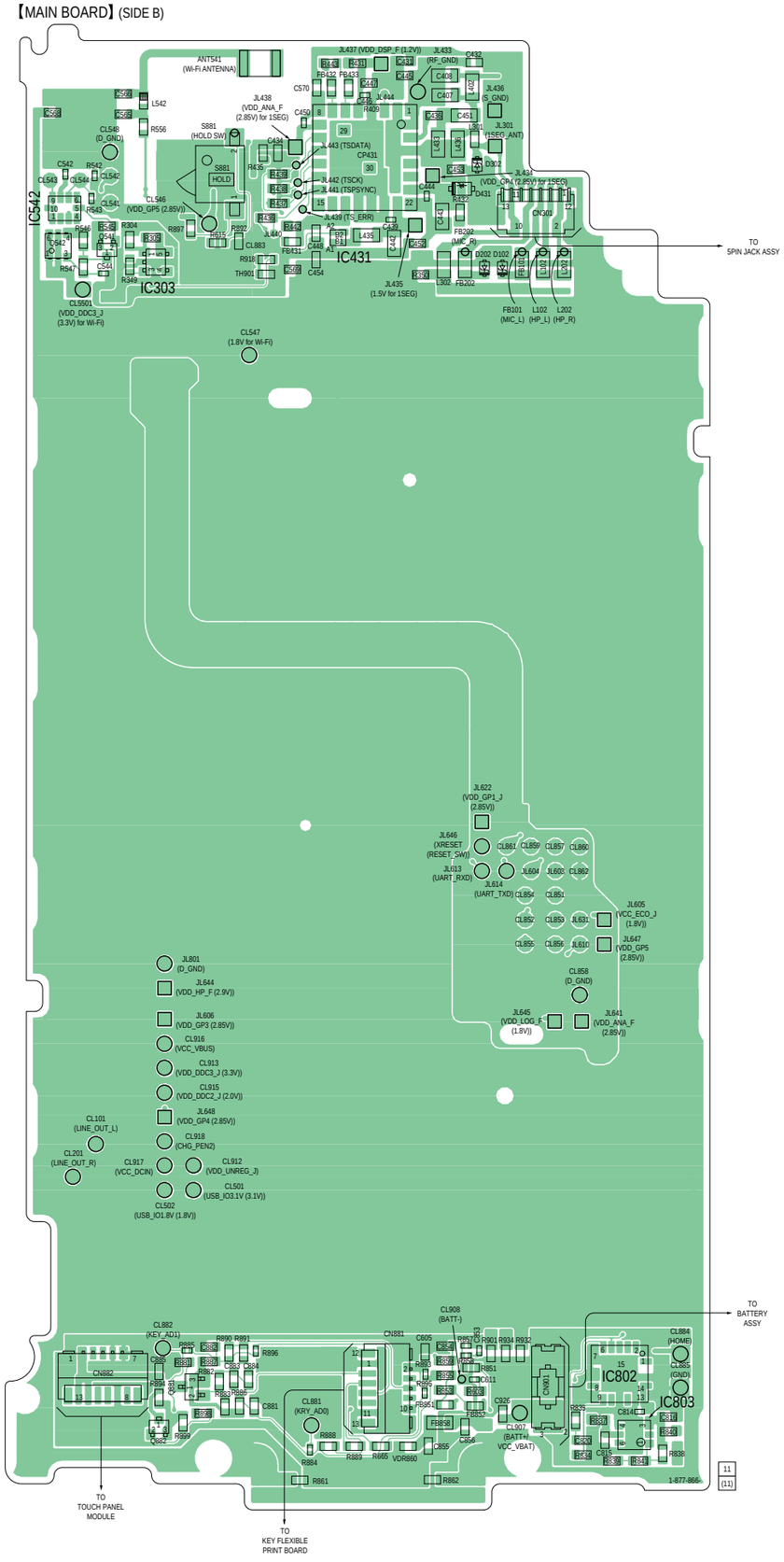
Note 2: When the MAIN board is replaced, there are some notes. Refer to “NOTE THE MAIN BOARD REPLACING” (page 4) in servicing notes for notes.

4-2. PRINTED WIRING BOARD

【MAIN BOARD】(SIDE A)



【MAIN BOARD】(SIDE B)



Note 1: In this set, only a part of parts that relate to the switch are supplied. Replace a part according to “METHOD OF JUDGING RIGHT AND WRONG OF PARTS RELATED TO SWITCH” (page 7) in servicing notes. Exchange the entire mounted board when parts that do not correspond to it are defective.

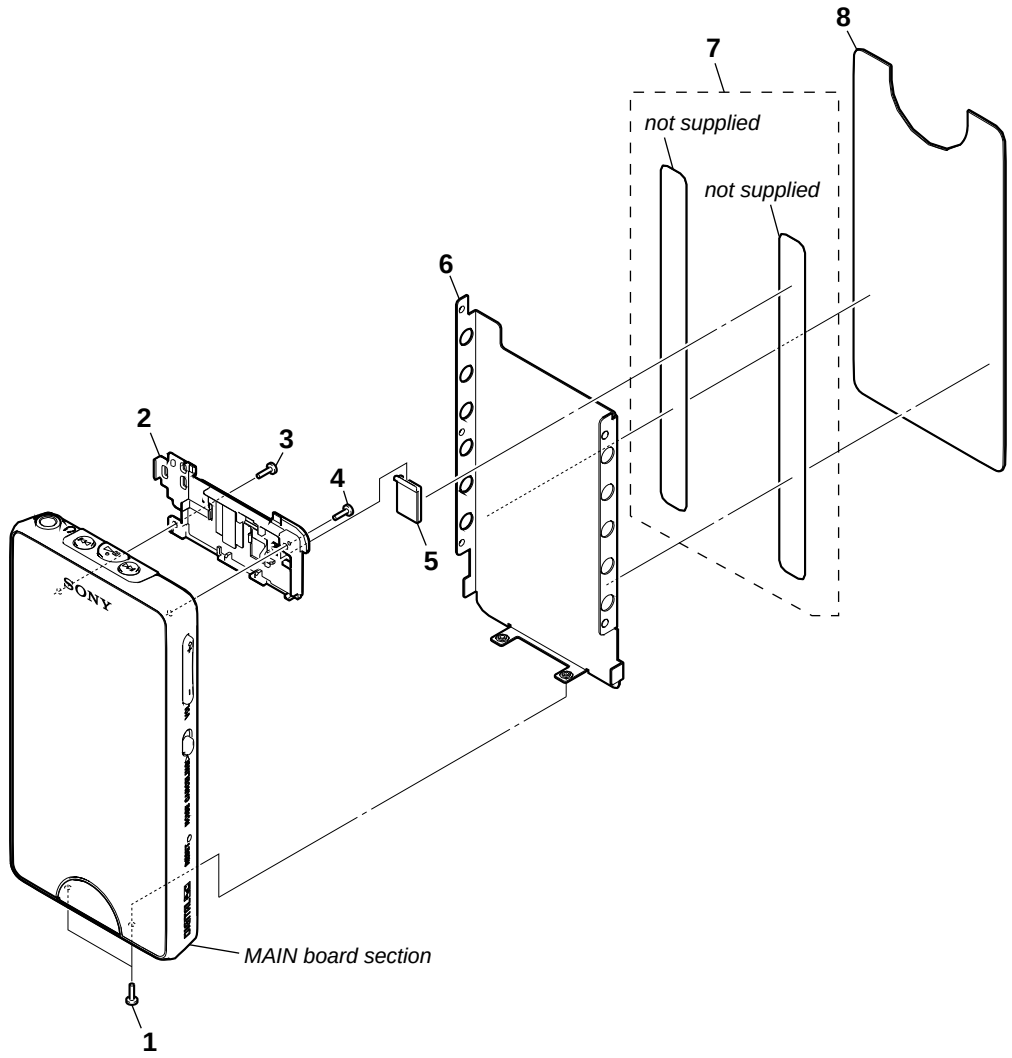
Note 2: When the MAIN board is replaced, there are some notes. Refer to “NOTE THE MAIN BOARD REPLACING” (page 4) in servicing notes for notes.

SECTION 5
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
- Abbreviation
  AUS : Australian model
  CH : Chinese model
  CND : Canadian model
  EE : East European model
  FR : French model
  JE : Tourist model
  MX : Mexican model
  TW : Taiwan model

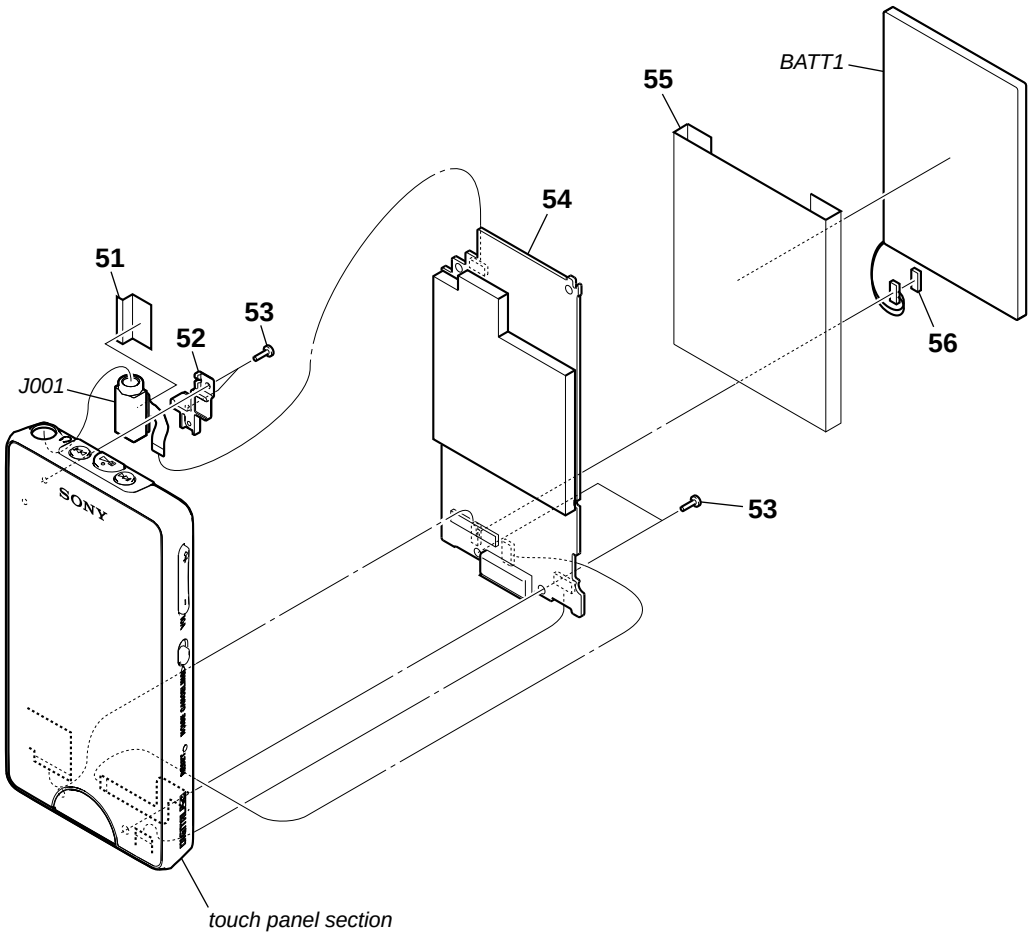
5-1. PANEL (REAR) SECTION



Ref. No.	Part No.	Description	Remark
1	4-117-206-01	SCREW M1.4	
2	A-1717-758-A	HOLD ASSY	
3	3-254-135-01	SCREW (B1.4)	
4	3-234-449-47	SCREW (M1.4)	
5	4-112-900-01	CATCH (PANEL)	

Ref. No.	Part No.	Description	Remark
6	4-112-904-01	PLATE (REAR)	
7	4-112-905-01	SHEET (REAR), ADHESIVE	
8	4-112-903-01	PANEL (REAR) (NWZ-X1050/X1060)	
8	4-112-903-21	PANEL (REAR) (NWZ-X1051)	
8	4-112-903-41	PANEL (REAR) (NWZ-X1061)	

5-2. MAIN BOARD SECTION



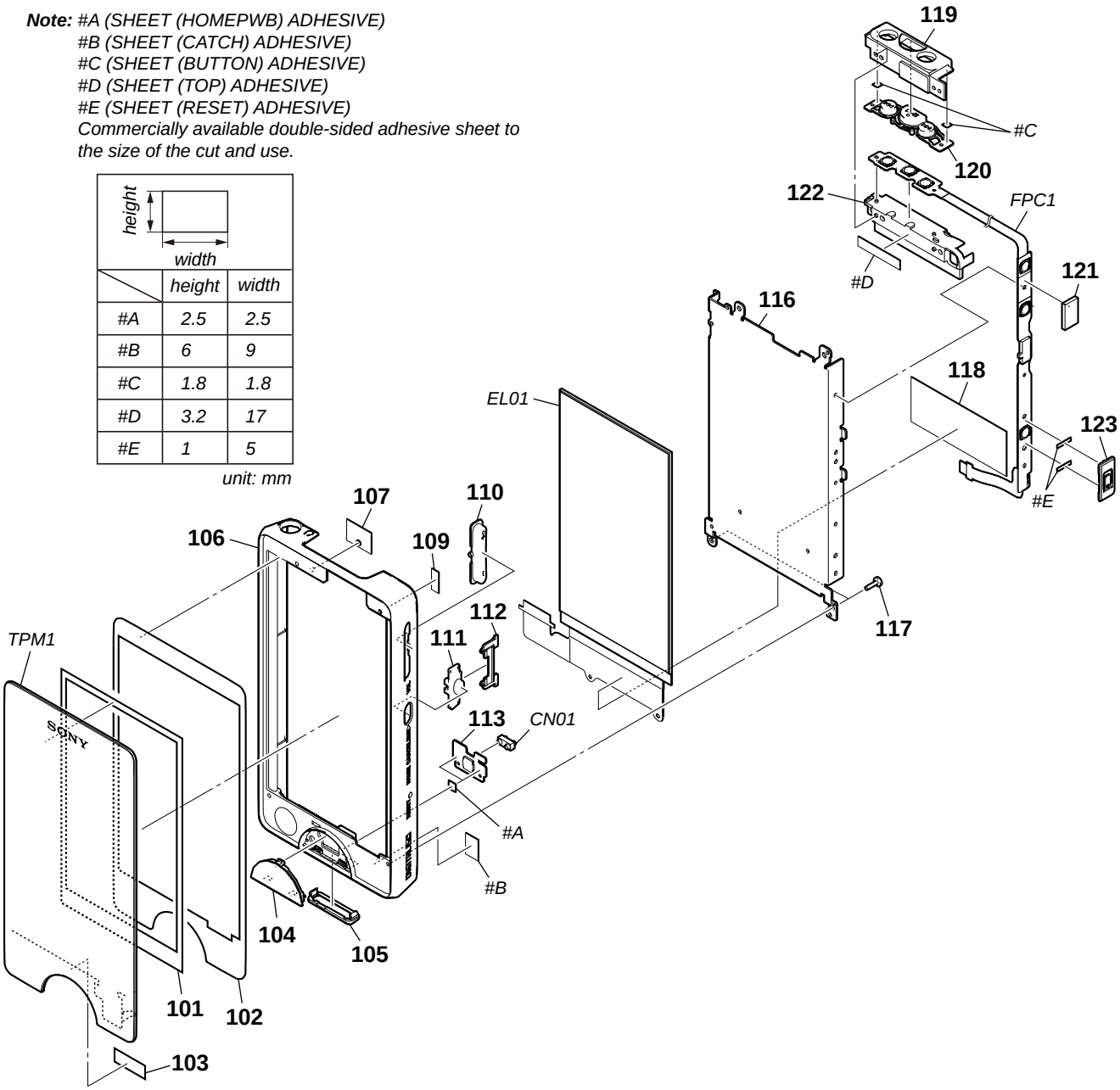
Ref. No.	Part No.	Description	Remark
51	4-124-173-01	SHEET (JACK), INSULATION	
52	4-112-892-01	HOLDER (JACK)	
53	3-234-449-31	SCREW (M1.4)	
54	9-885-133-37	MAIN BORAD, COMPLETE (16G) (for SERVICE)	(NWZ-X1050: E, AUS, JE)
54	9-885-133-38	MAIN BORAD, COMPLETE (16G) (for SERVICE)	(NWZ-X1050: CH)
54	9-885-133-39	MAIN BORAD, COMPLETE (16G) (for SERVICE)	(NWZ-X1050: MX)
54	9-885-133-41	MAIN BORAD, COMPLETE (16G) (for SERVICE)	(NWZ-X1050: AEP, UK)
54	9-885-133-43	MAIN BORAD, COMPLETE (16G) (for SERVICE)	(NWZ-X1050: FR)
54	9-885-133-44	MAIN BORAD, COMPLETE (16G) (for SERVICE)	(NWZ-X1050: EE)
54	9-885-133-45	MAIN BORAD, COMPLETE (16G) (for SERVICE)	(NWZ-X1051)
54	9-885-133-46	MAIN BORAD, COMPLETE (32G) (for SERVICE)	(NWZ-X1060: TW)
54	9-885-133-47	MAIN BORAD, COMPLETE (32G) (for SERVICE)	(NWZ-X1060: E, AUS, JE)
54	9-885-133-48	MAIN BORAD, COMPLETE (32G) (for SERVICE)	(NWZ-X1060: CH)
54	9-885-133-49	MAIN BORAD, COMPLETE (32G) (for SERVICE)	(NWZ-X1060: MX)
54	9-885-133-50	MAIN BORAD, COMPLETE (32G) (for SERVICE)	(NWZ-X1060: CND)
54	9-885-133-51	MAIN BORAD, COMPLETE (32G) (for SERVICE)	(NWZ-X1060: AEP, UK)
54	9-885-133-53	MAIN BORAD, COMPLETE (32G) (for SERVICE)	(NWZ-X1060: FR)
54	9-885-133-54	MAIN BORAD, COMPLETE (32G) (for SERVICE)	(NWZ-X1060: EE)
54	9-885-133-55	MAIN BORAD, COMPLETE (32G) (for SERVICE)	(NWZ-X1061)
55	4-146-231-01	SHEET (BATTERY), PROTECTION	
56	4-129-122-01	CUSHION (B CONNECTOR)	
BATT1	X-2349-102-1	BATTERY ASSY	
J001	A-1602-784-A	5PIN HP JACK ASSY	

5-3. TOUCH PANEL SECTION

Note: *#A (SHEET (HOMEPWB) ADHESIVE)*
#B (SHEET (CATCH) ADHESIVE)
#C (SHEET (BUTTON) ADHESIVE)
#D (SHEET (TOP) ADHESIVE)
#E (SHEET (RESET) ADHESIVE)
Commercially available double-sided adhesive sheet to the size of the cut and use.

	height	width
#A	2.5	2.5
#B	6	9
#C	1.8	1.8
#D	3.2	17
#E	1	5

unit: mm



Note: When the MAIN board is replaced, there are some notes. Refer to "NOTE THE MAIN BOARD REPLACING" (page 4) in servicing notes for notes.

Ref. No.	Part No.	Description	Remark
101	4-112-855-01	CUSHION (OLED)	
102	4-112-862-01	SHEET (WINDOW), ADHESIVE	
103	4-139-129-01	SPACER (WINDOW)	
104	A-1717-757-A	BUTTON (HOME) (B) ASSY	
105	4-112-860-01	GUARD (MULTI)	
106	4-112-856-01	FRAME	
107	4-112-872-01	SHEET (LID), ADHESIVE	
109	4-119-574-01	SHEET (LID_B), ADHESIVE	
110	4-112-857-01	BUTTON (VOL) (– VOL +)	
111	4-112-858-01	KNOB (NC)	
112	4-112-889-01	BRACKET (NC)	
113	A-1602-782-A	HOME KEY BORAD, COMPLETE	

Ref. No.	Part No.	Description	Remark
116	4-112-886-01	CHASSIS	
117	3-234-449-31	SCREW (M1.4)	
118	4-124-172-01	SHEET (O-FPC), INSULATION	
119	4-112-869-01	LID (TOP)	
120	4-112-868-01	BUTTON (TOP) (⏮, ⏯, ⏭)	
121	4-112-891-01	SPACER (VOL)	
122	4-112-870-01	BASE (TOP)	
123	4-112-887-01	COVER (RESET)	
CN01	1-822-382-11	CONNECTOR, DOT	
EL01	1-802-813-11	ELEMENT, EL INDICATOR	
FPC1	1-877-868-11	KEY FLEXIBLE PRINT BOARD	
TPM1	1-480-788-11	TOUCH PANEL MODULE	

HOME KEY | MAIN

SECTION 6
ELECTRICAL PARTS LIST

Note:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -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.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . , uPA. . , µPA. . ,
  uPB. . : µPB. . , uPC. . , µPC. . ,
  uPD. . : µPD. .
- Abbreviation
  AUS : Australian model
  CH : Chinese model
  CND : Canadian model
  EE : East European model
  FR : French model
  JE : Tourist model
  MX : Mexican model
  TW : Taiwan model

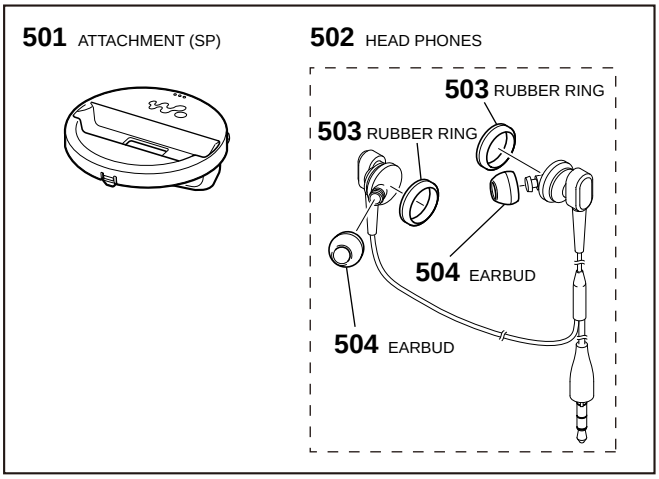
When indicating parts by reference number, please include the board name.

Ref. No.	Part No.	Description	Remark
	A-1602-782-A	HOME KEY BOARD, COMPLETE	
		**********	
When HOME KEY board is defective, exchange the entire mounted board.			
		**********	
	9-885-133-37	MAIN BOARD, COMPLETE (16G) (for SERVICE) (NWZ-X1050: E, AUS, JE)	
	9-885-133-38	MAIN BOARD, COMPLETE (16G) (for SERVICE) (NWZ-X1050: CH)	
	9-885-133-39	MAIN BOARD, COMPLETE (16G) (for SERVICE) (NWZ-X1050: MX)	
	9-885-133-41	MAIN BOARD, COMPLETE (16G) (for SERVICE) (NWZ-X1050: AEP, UK)	
	9-885-133-43	MAIN BOARD, COMPLETE (16G) (for SERVICE) (NWZ-X1050: FR)	
	9-885-133-44	MAIN BOARD, COMPLETE (16G) (for SERVICE) (NWZ-X1050: EE)	
	9-885-133-45	MAIN BOARD, COMPLETE (16G) (for SERVICE) (NWZ-X1051)	
	9-885-133-46	MAIN BOARD, COMPLETE (32G) (for SERVICE) (NWZ-X1060: TW)	
	9-885-133-47	MAIN BOARD, COMPLETE (32G) (for SERVICE) (NWZ-X1060: E, AUS, JE)	
	9-885-133-48	MAIN BOARD, COMPLETE (32G) (for SERVICE) (NWZ-X1060: CH)	
	9-885-133-49	MAIN BOARD, COMPLETE (32G) (for SERVICE) (NWZ-X1060: MX)	
	9-885-133-50	MAIN BOARD, COMPLETE (32G) (for SERVICE) (NWZ-X1060: CND)	
	9-885-133-51	MAIN BOARD, COMPLETE (32G) (for SERVICE) (NWZ-X1060: AEP, UK)	
	9-885-133-53	MAIN BOARD, COMPLETE (32G) (for SERVICE) (NWZ-X1060: FR)	
	9-885-133-54	MAIN BOARD, COMPLETE (32G) (for SERVICE) (NWZ-X1060: EE)	
	9-885-133-55	MAIN BOARD, COMPLETE (32G) (for SERVICE) (NWZ-X1061)	
		**********	
		< CAPACITOR >	
C881	1-119-923-11	CERAMIC CHIP 0.047uF 10% 10V	
C882	1-119-923-11	CERAMIC CHIP 0.047uF 10% 10V	
C883	1-164-943-81	CERAMIC CHIP 0.01uF 10% 16V	
C884	1-164-943-81	CERAMIC CHIP 0.01uF 10% 16V	
		< CONNECTOR >	
CN881	(Not supplied)	CONNECTOR, FFC/FPC 11P	
		< FET >	
Q881	6-550-747-01	FET 3LP01S-K-TL-E	
		< RESISTOR >	
R881	1-218-985-11	METAL CHIP 470K 5% 1/16W	
R882	1-218-953-11	METAL CHIP 1K 5% 1/16W	
R883	1-218-985-11	METAL CHIP 470K 5% 1/16W	
R884	1-240-695-91	METAL CHIP 1K 5% 1/20W	
R885	1-240-695-91	METAL CHIP 1K 5% 1/20W	
R886	1-208-927-11	METAL CHIP 47K 0.5% 1/16W	
R887	1-208-927-11	METAL CHIP 47K 0.5% 1/16W	
R888	1-208-911-11	METAL CHIP 10K 0.5% 1/16W	
R889	1-208-911-11	METAL CHIP 10K 0.5% 1/16W	
R890	1-208-911-11	METAL CHIP 10K 0.5% 1/16W	
R891	1-208-911-11	METAL CHIP 10K 0.5% 1/16W	
R892	1-218-985-11	METAL CHIP 470K 5% 1/16W	
R893	1-240-726-91	METAL CHIP 470K 5% 1/20W	
R895	1-240-760-91	METAL CHIP 100 0.5% 1/20W	
R896	1-240-760-91	METAL CHIP 100 0.5% 1/20W	
R897	1-218-990-81	SHORT CHIP 0	
		< SWITCH >	
S881	1-786-455-32	SWITCH, PUSH (1 KEY) (HOLD)	
		**********	
		MISCELLANEOUS	
		**********	
BATT1	X-2349-102-1	BATTERY ASSY	
CN01	1-822-382-11	CONNECTOR, DOT	
EL01	1-802-813-11	ELEMENT, EL INDICATOR	
FPC1	1-877-868-11	KEY FLEXIBLE PRINT BOARD	
J001	A-1602-784-A	5PIN HP JACK ASSY	
TPM1	1-480-788-11	TOUCH PANEL MODULE	
		**********	

Note 1: In this set, only a part of parts that relate to the switch are supplied. Replace a part according to "METHOD OF JUDGING RIGHT AND WRONG OF PARTS RELATED TO SWITCH" (page 7) in servicing notes. Exchange the entire mounted board when parts that do not correspond to it are defective.

Note 2: When the MAIN board is replaced, there are some notes. Refer to "NOTE THE MAIN BOARD REPLACING" (page 4) in servicing notes for notes.

Ref. No.	Part No.	Description	Remark
		ACCESSORIES	
		**********	
	1-477-125-23	ADAPTOR, PLUG (DUAL) (Plug adaptor for in-flight use (single/dual))	
	1-835-737-12	CONNECTION CORD (EXTERNAL AUDIO) (Audio input cable)	
	1-835-940-11	CORD, PC CONNECTION (USB cable)	
	4-137-988-11	MANUAL (QSG), INSTRUCTION (Quick Start Guide) (ENGLISH)	
	4-137-988-21	MANUAL (QSG), INSTRUCTION (Quick Start Guide) (FRENCH) (CND, AEP, UK, FR)	
	4-137-988-31	MANUAL (QSG), INSTRUCTION (Quick Start Guide) (GERMAN) (AEP, UK)	
	4-137-988-41	MANUAL (QSG), INSTRUCTION (Quick Start Guide) (SPANISH) (AEP, UK, MX)	
	4-137-988-51	MANUAL (QSG), INSTRUCTION (Quick Start Guide) (ITALIAN) (AEP, UK)	
	4-137-988-61	MANUAL (QSG), INSTRUCTION (Quick Start Guide) (RUSSIAN) (EE)	
	4-137-988-71	MANUAL (QSG), INSTRUCTION (Quick Start Guide) (SIMPLIFIED CHINESE) (E, AUS, CH, JE)	
	4-137-988-81	MANUAL (QSG), INSTRUCTION (Quick Start Guide) (TRADITIONAL CHINESE) (E, AUS, TW, JE)	
	4-137-988-91	MANUAL (QSG), INSTRUCTION (Quick Start Guide) (KOREAN) (E, AUS, JE)	
	4-137-989-11	MANUAL (QSG), INSTRUCTION (Quick Start Guide) (UKRAINIAN) (EE)	
	4-137-989-31	MANUAL (QSG), INSTRUCTION (Quick Start Guide) (ARABIC) (E, AUS, JE)	
	X-2349-337-1	SOFT APPLICATION ASSY (CD-ROM: Windows Media Player 11/Content Transfer/Operation Guide (PDF file)) (NWZ-X1051/X1061)	
	X-2349-338-1	SOFT APPLICATION ASSY (CD-ROM: Media Manager for WALKMAN/Windows Media Player 11/ Content Transfer/ Operation Guide (PDF file)) (NWZ-X1050/X1060)	
501	4-112-967-01	ATTACHMENT (SP) (Use when connecting the player to the optional cradle, etc.)	
502	A-1565-550-A	MDR-NC020LP/BM19 (SET) (Headphones) (Including RUBBER RING and EARBUDS (size S/M/L))	
503	2-699-564-02	RING, RUBBER	
504	3-272-845-21	PIECE (S), EAR (Earbud) (size S)	
504	3-272-846-21	PIECE (M), EAR (Earbud) (size M)	
504	3-272-847-21	PIECE (L), EAR (Earbud) (size L)	



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	2009.05	New