

WH-1000XM4

SERVICE MANUAL

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- (6) In addition to the above, the terms and conditions of the Service agreement shall be applied to using this information.

Revision of Information:

This information may be changed or updated at any time without any prior notice. Please confirm that this information is up-to-date before using it.

CAUTION

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

注意

如果电池更换不当会有爆炸危险
只能用同样类型或等效类型的电池来更换

警告

本電池如果更換不正確會有爆炸的危險
請依製造商說明書處理用過之電池

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For Authorized Servicer

9-896-654-02
2020I33-1
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Sony Home Entertainment &
Sound Products Inc.

SONY®

WH-1000XM4

SERVICE MANUAL

Ver. 1.1 2020.09



*US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
Chinese Model
Tourist Model*

SPECIFICATIONS

Except CH:

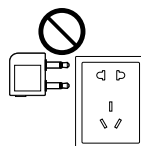
Headset
Power source: DC 3.7 V: Built-in lithium-ion rechargeable battery DC 5 V: When charged using USB
Operating temperature: 0 °C to 40 °C (32 °F to 104 °F)
Rated power consumption: 5 W
Usage hours: When connecting via the Bluetooth device Music playback time: Max. 30 hours (NC ON), Max. 22 hours (Ambient Sound Mode), Max. 38 hours (NC OFF) Communication time: Max. 24 hours (NC ON), Max. 18 hours (Ambient Sound Mode), Max. 30 hours (NC OFF) Standby time: Max. 30 hours (NC ON), Max. 22 hours (Ambient Sound Mode), Max. 200 hours (NC OFF) When connecting via the headphone cable with NC ON: Max. 22 hours Note: Usage hours may be shorter depending on the Codec and the conditions of use.
Charging time: Approx. 3 hours (About 5 hours of music playback is possible after 10 minutes charging.) Note: Charging and usage hours may be different depending on the conditions of use.
Charging temperature: 5 °C to 35 °C (41 °F to 95 °F)
Mass: Approx. 254 g (8.96 oz)
Impedance: 40 Ω (1 kHz) (when connecting via the headphone cable with the unit turned on) 16 Ω (1 kHz) (when connecting via the headphone cable with the unit turned off)
Sensitivity: 105 dB/mW (when connecting via the headphone cable with the unit turned on) 101 dB/mW (when connecting via the headphone cable with the unit turned off)
Frequency response: 4 Hz - 40,000 Hz (JEITA) (when connecting via the headphone cable with the unit turned on)
Included items: Wireless Noise Canceling Stereo Headset (1) USB Type-C® cable (USB-A to USB-C®) (approx. 20 cm (7.88 in.)) (1) Headphone cable (approx. 1.2 m (41.25 in.)) (1) Carrying case (1) Plug adaptor for in-flight use (1) ¹⁾ ¹⁾ Depending on the in-flight entertainment services, it may not be supported.

Communication specification
Communication system: Bluetooth Specification version 5.0
Output: Bluetooth Specification Power Class 1
Maximum communication range: Line of sight approx. 10 m (30 ft) ¹⁾
Frequency band (AEP, UK): 2.4 GHz band (2.4000 GHz - 2.4835 GHz)
Operating frequency (AEP, UK): Bluetooth: 2.400 MHz - 2.483.5 MHz NFC: 13.56 MHz
Maximum output power: Bluetooth: -7 dBm
Compatible Bluetooth profiles²⁾: A2DP / AVRCP / HFP / HSP
Supported Codec³⁾: SBC / AAC / LDAC™
Transmission range (A2DP): 20 Hz - 20,000 Hz (Sampling frequency 44.1 kHz) 20 Hz - 40,000 Hz (Sampling frequency LDAC 96 kHz, 990 kbps)
¹⁾ The actual range will vary depending on factors such as obstacles between devices, magnetic fields around a microwave oven, static electricity, reception sensitivity, antenna's performance, operating system, software application, etc.
²⁾ Bluetooth standard profiles indicate the purpose of Bluetooth communications between devices.
³⁾ Codec: Audio signal compression and conversion format
Design and specifications are subject to change without notice.
System requirements for battery charge using USB
USB AC adaptor A commercially available USB AC adaptor capable of supplying an output current of 1.5 A or more
Compatible iPhone/iPod models
iPhone XS Max, iPhone XS, iPhone XR, iPhone X, iPhone 8 Plus, iPhone 8, iPhone 7 Plus, iPhone 7, iPhone SE, iPhone 6s Plus, iPhone 6s, iPhone 6 Plus, iPhone 6, iPhone 5s, iPod touch (6th generation) (As of March 2020)

CH:

耳机
电源: 直流 5 V: 使用 USB 充电时
工作温度: 0 °C 至 40 °C
额定功耗: 8 W
充电时间: 约 3 小时 注意: 充电时间和使用时间可能因使用情况而异。
充电温度: 5 °C 至 35 °C
包装内物品: 无线降噪立体声耳机 (1) USB Type-C® 连接线 (USB-A 至 USB-C®) (约 20 cm) (1) 耳机连接线 (约 1.2 m) (1) 便携盒 (1) 用于飞机上的插头转接器 (1) ¹⁾
¹⁾ 视机上娱乐服务而定, 可能不受支持。

请勿插入



本插头适配器设计为在飞机上使用。请勿将其连接到电源插座。

通讯规格

通讯系统: Bluetooth 规格版本 5.0
输出: Bluetooth 规格功率等级 1
最大通讯范围: 视线约 10 m ¹⁾
频率波段: 2.4 GHz 波段 (2.4000 GHz - 2.4835 GHz)
频率范围: 2400 MHz - 2483.5 MHz
发射功率: ≤ 20 dBm (EIRP)
兼容的 Bluetooth 配置协议²⁾: A2DP / AVRCP / HFP / HSP
支持的编解码器³⁾: SBC / AAC / LDAC™
传输范围 (A2DP): 20 Hz - 20,000 Hz (采样频率 44.1 kHz) 20 Hz - 40,000 Hz (采样频率 LDAC 96 kHz, 990 kbps)

¹⁾ 实际范围将因设备间的障碍物、微波炉周围的磁场、静电、接收灵敏度、天线性能、操作系统、软件应用程序等因素而异。

²⁾ Bluetooth 标准配置协议指示设备之间的 Bluetooth 通讯目的。

³⁾ 编解码器: 音频信号压缩和转换格式

设计和规格如有变更, 恕不另行通知。

使用 USB 为电池充电的系统要求

USB 交流电源适配器
 能够供应 1.5 A 或更高输出电流的市售 USB 交流电源适配器

兼容 iPhone/iPod 机型

iPhone XS Max, iPhone XS, iPhone XR, iPhone X, iPhone 8 Plus, iPhone 8, iPhone 7 Plus, iPhone 7, iPhone SE, iPhone 6s Plus, iPhone 6s, iPhone 6 Plus, iPhone 6, iPhone 5s, iPod touch (第 6 代)
 (截至 2020 年 3 月)

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SECTION 1 SERVICING NOTES

The **SERVICING NOTES** contains important information for servicing. Be sure to read this section before repairing the unit.

ABOUT REUSE OF THE LITHIUM ION STORAGE BATTERY

When removing the lithium ion storage battery from adhesive sheet fixing the battery, the lithium ion storage battery cannot be reused. Be sure to replace them with new parts.

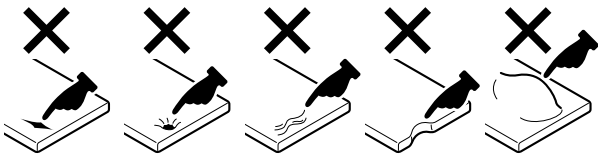
CHECKING THE NEW LITHIUM ION STORAGE BATTERY FOR BEFORE USE AND NOTES ON HANDLING

• Checking before use

When replacing the lithium ion storage battery to the new parts, be sure to check the exterior condition before installing the new lithium ion storage battery in this unit.

- No external wound such as scratches
- No swell
etc.

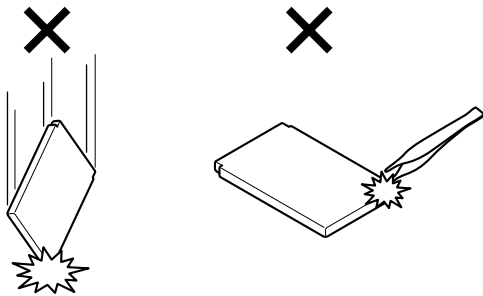
If there are some abnormality with the exterior, do not use that lithium ion storage battery.



• Notes on handling

When handling the new lithium ion storage battery, handle with notes of the following.

- Do not drop it
If it drops accidentally, do not use that lithium ion storage battery.
- Do not scratch with tweezers or other sharp objects
If it scratches accidentally, do not use that lithium ion storage battery.



ABOUT THE TYPE OF THE LITHIUM ION STORAGE BATTERY

There are two types of the lithium ion storage battery of built-in to this unit (Refer to figure below).

However, the repair parts of the lithium ion storage battery is one type.

Therefore, the shape of the lithium ion storage battery before replacement and the lithium ion storage battery after replacement may be different, but it can be used without problems.

Type-A

There is repair parts for this lithium ion storage battery.



Type-B

There is no repair parts for this lithium ion storage battery. It will be replaced for Type-A.



DESTINATION ABBREVIATIONS

The following abbreviations for model destinations are used in this service manual.

Note: The destination code is used when setting the destination.

Abbrevia- tion	Country or region indicated by Abbreviation	Destina- tion code
US, CND, LA	US, Canadian and Latin American area models	UC
AEP, UK	European area, East European area, CIS area (Moldova, Ukraine) and Middle East area (Israel) models	CE7
E, AUS, JE, RU	CIS area (Except for Moldova, Ukraine), Middle East area (Except for Israel), South East Asian area (Except for India), East Asian area (Except for China), Oceania area, African area and Tourist models	E
CH	Chinese model	CN
IND	Indian model	IN

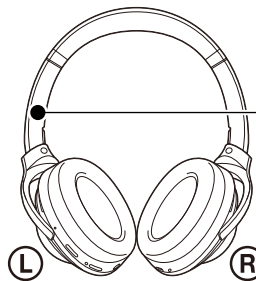
MODEL IDENTIFICATION

Refer to the model number engraved on the left inside of the head-band.

Also, the serial number is displayed at the bottom of model number engraved.

Note 1: The contents of model number might be changed in the midway of production.

Note 2: Use the notation in the angle brackets (< >) in the figure below when writing the noise canceling adjustment value and initial setting information at the MAIN L board replacement.



Note 3: "XXXXXXX" at the bottom of model number indicates the serial number.

(US, CND, LA) <UC> MADE IN MALAYSIA 5V --- FCC ID:AK8WH1000XM4 IC:409B-WH1000XM4 XXXXXXX
(AEP, UK) <CE7> MADE IN MALAYSIA 5V --- CE E Manufacturer: Sony Corporation EU Importer: Sony Europe B.V. Da Vincilaan 7-D1, 1930 Zaventem, Belgium XXXXXXX
(E, AUS, JE, RU, IND) <E> <IN> TP BY MADE IN MALAYSIA 5V --- CCA020LP0200T7 EAC WH-1000XM4 XXXXXXX
(CH) <CN> 5V --- CMIIT ID: 2020DJ1351 XXXXXXX

COLOR VARIATIONS

US, CND, LA : (B) Black, (S) Platinum Silver, (L) Blue
Except US, CND, LA: (B) Black, (S) Platinum Silver

RESETTING METHOD

If this unit does not operate properly, perform the reset of this unit with following procedure.

Note 1: Even if this work is performed, device pairing information is not deleted.

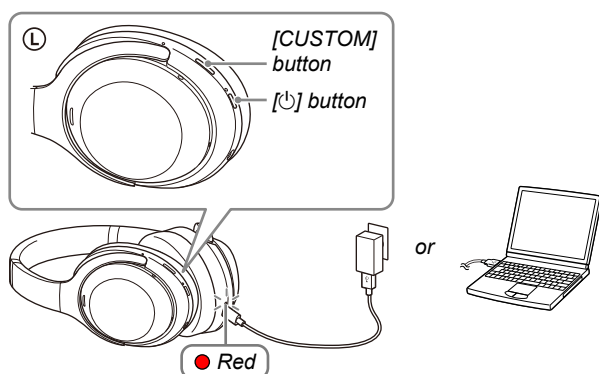
Resetting procedure:

1. Connect this unit to a booted PC or optional USB AC adaptor using the supplied USB Type-C® cable, set the charge status.
2. After connecting, check that the right channel side indicator lights up in red.

Note 2: When charging is completed, the right channel indicator lights up in red for a few seconds and then turns off.

3. Press the [⏻] button and [CUSTOM] button simultaneously.
4. This unit be reset.

Note 3: After resetting, when charging this unit, disconnect the USB Type-C® cable from this unit and connect it again.

Connection:**INITIALIZING METHOD**

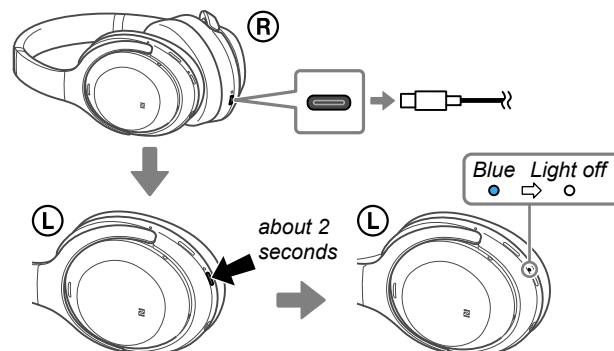
After completion of repairs, be sure to perform the following procedure to initialize this unit.

Note 1: When this work is performed, all device pairing information is deleted and settings return to factory defaults.

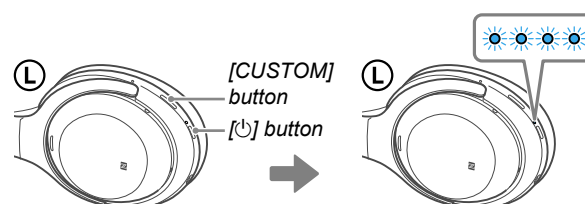
Initializing procedure:

1. Check that the USB Type-C® cable is not connected to this unit, and press the [⏻] button for about 2 seconds to turn the power off.

Note 2: If already power is turned off, check the USB Type-C® cable is not connected, perform the work from step 2.



2. Press the [⏻] button and [CUSTOM] button simultaneously for about 7 seconds or longer, then the left channel side indicator (blue) flashes 4 times and the settings automatically return to factory defaults.



Press simultaneously for about 7 seconds or longer.

Note 3: When this unit is initialized, it might not be able to connect to iPhone or PC. In that case, delete the registration of this unit on iPhone or PC, register the device again.

NFC CONNECTION CHECKING METHOD

Preparation:

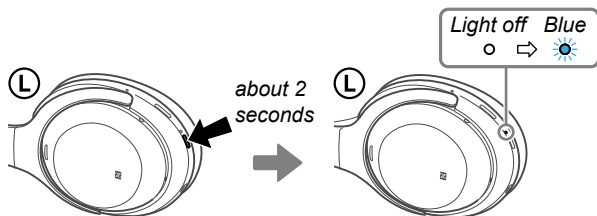
- NFC compatible device (smartphone or music player etc.)

Procedure:

- Turn on the NFC function of the NFC compatible device.
(For details, refer to the instruction manual of NFC compatible device. The figure below is a reference example)

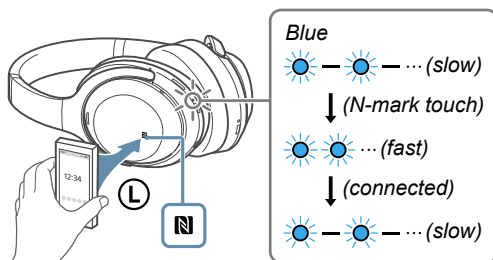


- Press the [⏻] button for about 2 seconds to turn the power on.

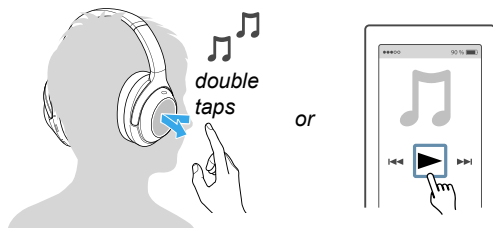


- Touch the N-mark part of the NFC compatible device to the N-mark part of this unit, the left channel side indicator (blue) flashing changes from slow to fast, and the connection is completed.
(After connection is complete, the left channel side indicator (blue) flashing is return to slow)

Note 1: If the screen of the NFC compatible device is locked, unlock it and then touch it.



- Attach this unit and then the audio playback from the NFC compatible device, and check that the sound is output normally from the left and right.



- Touch the N-mark part of this unit with N-mark of the NFC compatible device again to disconnect the connection, and complete the operation check.

Note 2: Before returning this unit to the customer, refer to "INITIALIZING METHOD" on page 5 and delete the Bluetooth device pairing information.

NOTE FOR REPLACING THE MAIN L BOARD

When the MAIN L board is replaced with a new board, it is necessary to write the necessary information to the MAIN L board and NFC L board always.

Do the work according to the contents below.

Note 1: Just replacing the MAIN L board, this unit do not operate normally.

Note 2: It is not possible to replace the MAIN L board only. When replacing the MAIN L board, be sure to replace the MAIN L board and NFC L board simultaneously. In addition to the MAIN L board, the NFC L board and NFC L board connection wire are included in the repair parts of MAIN L board.

1. Prepare the Equipment

Prepare the following equipment.

- Windows PC
- NFC compatible smartphone
(Android phone: Android OS 8.0 or later) (See Note 1)
- USB cable for the smartphone
- NVDM Writing Application (HP Value Writer.zip) (See Note 2)
- NFC Tag Data Writing Application (nfc_tag_writer_2.0.3.zip) (See Note 2, 3)

Note 1: Install the file manager application (ASTRO file manager, File Export, etc.) in advance to the smartphone.

Note 2: Confirm the method of obtaining the each application and its latest version with the each service headquarter.

Note 3: "2.0.3" in the file name indicates the version of NFC Tag Data Writing Application. Always use the latest version of the NFC Tag Data Writing Application.

Example: nfc_tag_writer_2.0.3.apk

version

a. PC	b. NFC compatible Smartphone	c. USB cable for the smartphone
	 Android	
d. NVDM Writing Application	e. NFC Tag Data Writing Application	
 HP Value Writer.zip	 nfc_tag_writer_2.0.3.zip	

Notes on the use of the NFC Tag Data Writing Application

- The NFC Tag Data Writing Application may be updated irregularly.
Always use the latest version of the NFC Tag Data Writing Application.
The version of NFC Tag Data Writing Application is represented by the file name of NFC Tag Data Writing Application.
Example: nfc_tag_writer_2.0.3.apk
version
- Be sure to uninstall older versions of the NFC Tag Data Writing Application before installing the latest version.
- The NFC Tag Data Writing Application is also used in models other than the headphone category, and there are multiple types. If multiple NFC Tag Data Writing Applications are installed on a smartphone, do not launch more than one at the same time.
- The NFC Tag Data Writing Application varies depending on your model.
Be sure to use the specified NFC Tag Data Writing Application.
Use of not specified NFC Tag Data Writing Application is strictly prohibited.

2. Write Each Information and Value to the MAIN L Board (Serial Number, Color Information, Destination Information, IR Calibration Value, Noise Canceling Adjustment Value)

2-1. Check the Information of Repairing Model

It is necessary to check the information of repairing model in advance.

Check the following information.

Model name:

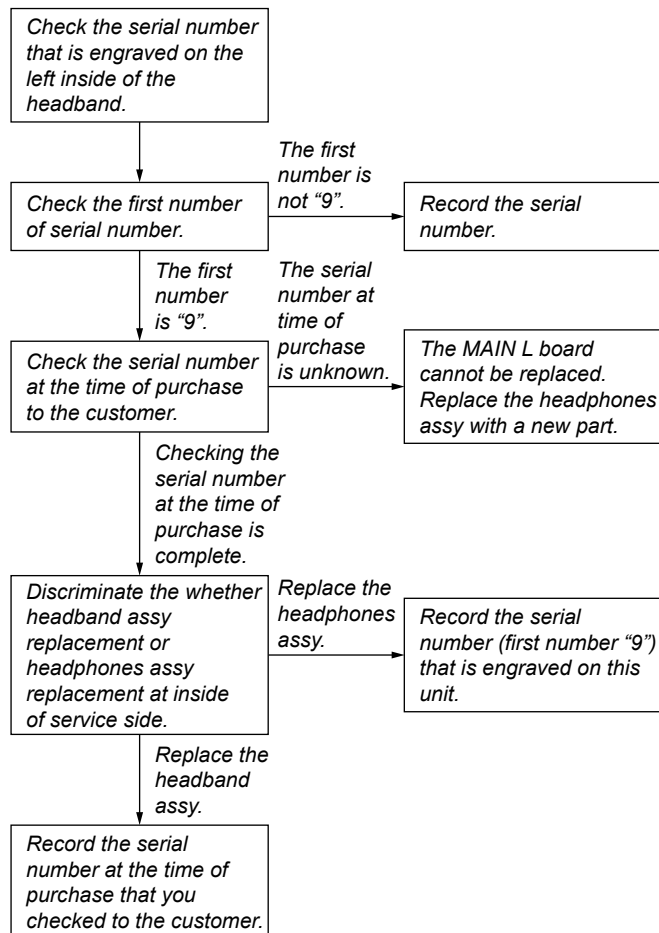
WH-1000XM4



Serial number:

Note 1: Refer to following “Checking Procedure of Serial Number”.

• Checking Procedure of Serial Number



Main unit color:

Select from the following color names.

Black (Black), Silver (Platinum Silver), Blue (Blue)

Destination code:

Select the correct destination from the following destination code.

UC (US, CND, LA), CE7 (AEP, UK), E (E, AUS, JE, RU), CN (CH), IN (IND)

Note 2: When checking the destination, refer to “MODEL IDENTIFICATION” on page 4.

2-2. Obtaining the Noise Canceling Adjustment Value and Initial Setting Information of Repairing Model

Send the model information that prepared in the “2-1. Checking the Information of Repairing Model” on this left to the service headquarter by e-mail, refer to returned e-mail from the service headquarter, and obtain the noise canceling adjustment value and initial setting information.

Description example of e-mail sent to the service headquarter:

Note 1: The following is a description example.

Note 2: Do not insert spaces between all characters, and enter all alphanumeric characters.

Subject [Request]Sony_Headphones_MB_value

Body ModelName:WH-1000XM4
 SerialNumber:1300108
 Color:Black
 Destination:CE7

Contents example of e-mail that will be returned from the service headquarter:

Note 3: The following is a description example. The order of description might be different.

Model_Name	WH-1000XM4
Serial Number	1300108
Color	Black
Destination	CE7
FF_Gain_L	-1.2
FF_Gain_R	0
FB_Gain_L	0.8
FB_Gain_R	1.6
IR Calibration	0700

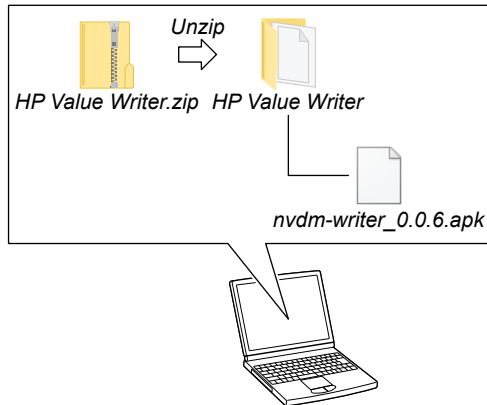
– Continued on upper right –

2-3. Transfer the NVDM Writing Application from the PC to the Smartphone and Install it

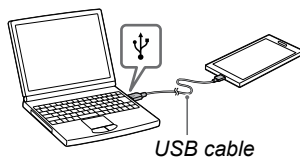
Install the NVDM Writing Application for writing the each information and value to the MAIN L board to the smartphone, and prepare the smartphone.

Procedure:

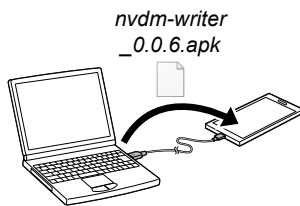
1. Unzip the NVDM Writing Application (HP Value Writer.zip) prepared in the “1. Prepare the Equipment” on page 6 on the PC, and check that there are “nvdm-writer_0.0.6.apk” in the folder.



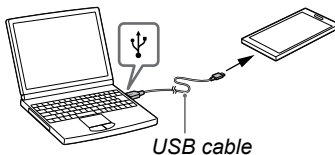
2. Using the USB cable for the smartphone, connect the smartphone and the PC.



3. Transfer the “nvdm-writer_0.0.6.apk” prepared in step 1 from the PC to the root directory of smartphone.

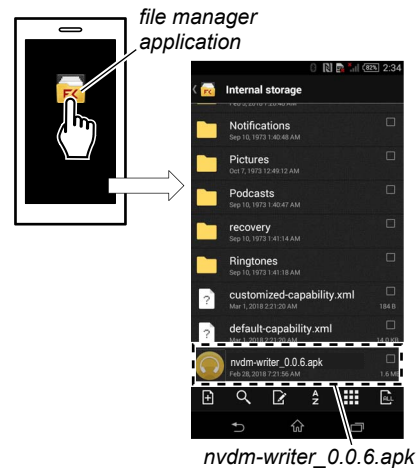


4. Disconnect the smartphone from the PC.



– Continued on upper right –

5. Start the file manager application on the smartphone, and open the location where “nvdm-writer_0.0.6.apk” is stored.

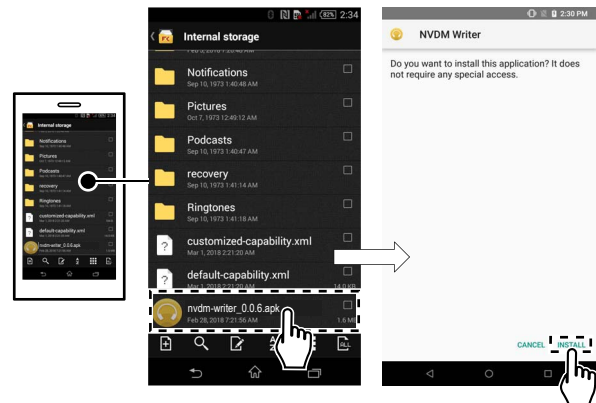


6. Tap the “nvdm-writer_0.0.6.apk”, and install it to the smartphone.

Note 1: The installing method might be different depending on Android OS version. If you do not know how to install, confirm with the each service headquarter.

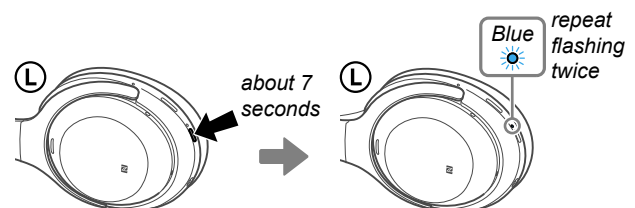
Note 2: When it cannot be installed, tap the “Settings” → “Security”, check the “Unknown sources” checkbox, and then install it. Also, after completing the installation, be sure to uncheck the “Unknown sources” checkbox.

(Depending on the version of Android OS, this setting might not exist)



7. Press the [P] button on the headset for about 7 seconds, and release your finger while the indicator next to [P] button repeats flashing twice in blue to set the pairing mode.

Note 3: For detailed method on setting the headset to pairing mode, refer to operating instructions of headset.



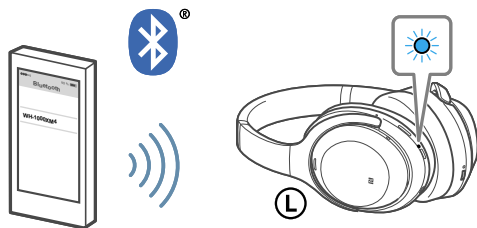
– Continued on next page –

WH-1000XM4
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8. Pairing the smartphone that installed the “nvdm-writer_0.0.6.apk” with headset. (Bluetooth connection)

Note 4: For Bluetooth connection method, refer to instruction manual of smartphone to be used or operating instructions of headset.

Note 5: It cannot be made NFC connection at this point.

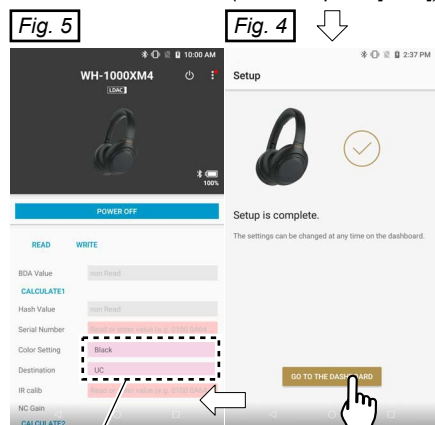
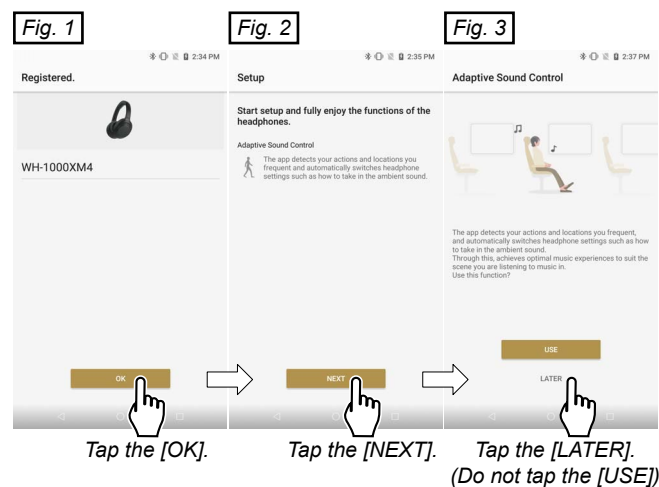


9. Tap the “NVDM Writer” icon displayed on the smartphone screen to start the application.



10. Perform the initial setting by operating the screen displayed on the smartphone screen in the following order.

Note 6: Fig. 1 to Fig. 4 might or might not be displayed. If it is displayed, operate in the following order and do not change the settings.



Note 7: “Black” and “UC” are displayed, but they are the default display and have nothing to do with headset information.

2-4. Write the Serial Number, Color Information, Destination Information, IR Calibration Value and Noise Canceling Adjustment Value

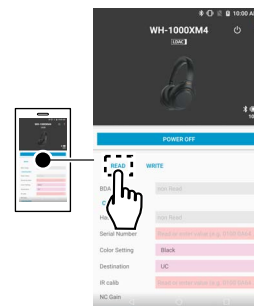
Write the each information and value to the MAIN L board of headset by using the NVDM Writing Application.

Procedure:

Note 1: The values shown in each figure are reference examples.

1. Tap the [READ] displayed on the center left side of application screen in the state of step 10 in “2-3. Transfer the NVDM Writing Application from the PC to the Smartphone and Install it” on this left.

Note 2: “Black” in the “Color setting” column and “UC” in the “Destination” column are displayed, but these display disappears by tapping the [READ].



2. Check that the values are displayed in the “BDA Value” column and “Hash Value” column on the application screen.

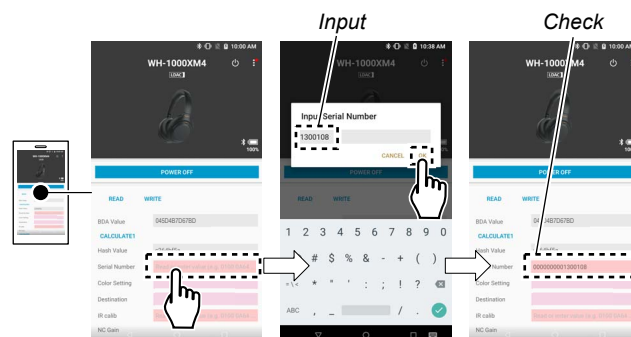
Note 3: The values are not displayed in columns other than the “BDA Value” and “Hash Value”.



3. Tap the “Serial Number” column on the application screen, enter the 7 digits serial number prepared in “2-1. Check the Information of Repairing Model” on page 7 to the displayed pop-up screen and tap the [OK].

Note 4: Before tapping the [OK], make sure that entered serial number is correct.

Note 5: After tapping the [OK], the “Serial Number” column is automatically given 9 digits 0, and the total 16 digits serial number is displayed.



– Continued on next page –

This completes the preparation of smartphone to use for NVDM writing. In this state, proceed to the “2-4. Write the Serial Number, Color Information, Destination Information, IR Calibration Value and Noise Canceling Adjustment Value” on this right.

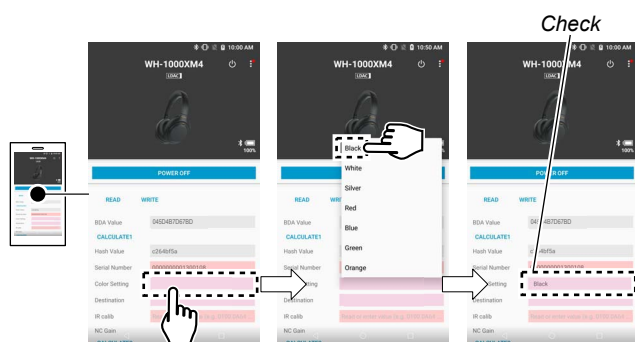
WH-1000XM4

Ver. 1.1

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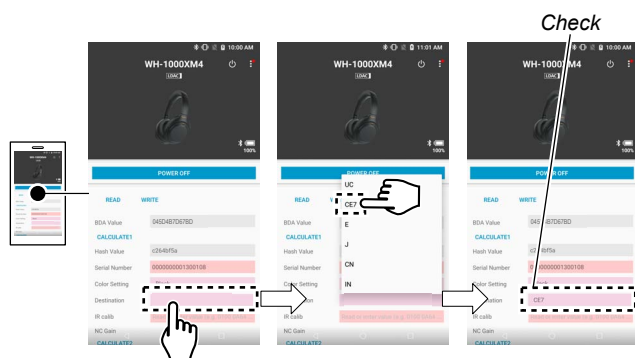
4. Tap the “Color Setting” column on the application screen, select and tap the main unit color of headset from the displayed lists.

Note 6: When the main unit color is black, select the “Black”. When the main unit color is platinum silver, select the “Silver”. When the main unit color is blue, select the “Blue”.



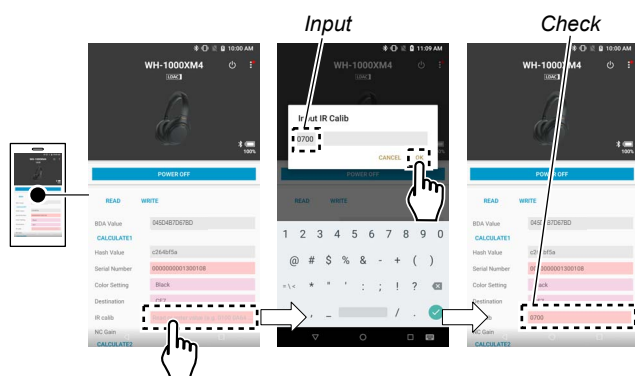
5. Tap the “Destination” column on the application screen, select and tap the destination of headset prepared in “2-1. Check the Information of Repairing Model” on page 7 from the displayed lists.

Note 7: When checking the destination, refer to “MODEL IDENTIFICATION” on page 4 and check the destination.



6. Tap the “IR calib” column on the application screen, enter the 4 digits IR calibration value prepared in “2-1. Check the Information of Repairing Model” on page 7 to the displayed pop-up screen and tap the [OK].

Note 8: Before tapping the [OK], make sure that entered IR calibration value is correct.

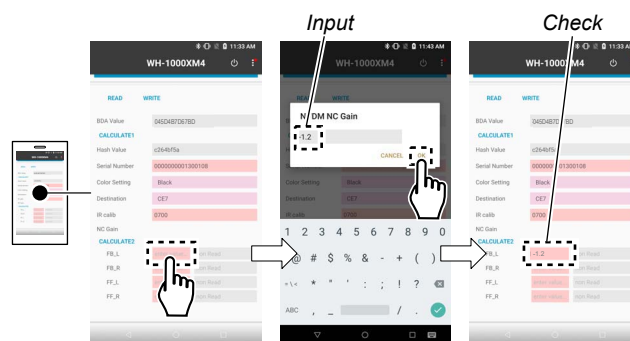


– Continued on upper right –

7. Tap the “FB_L” column on the application screen, enter the FB_L value of noise canceling adjustment value prepared in “2-1. Check the Information of Repairing Model” on page 7 to the displayed pop-up screen and tap the [OK].

Note 9: Input the FB_L value to one decimal place. However, if one digit after the decimal point is “0”, input is not required. (There is no problem when enter “0” for one decimal place)

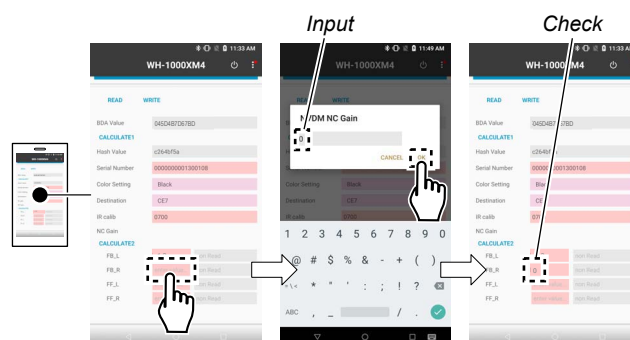
Note 10: Before tapping the [OK], make sure that entered FB_L value is correct.



8. Tap the “FB_R” column on the application screen, enter the FB_R value of noise canceling adjustment value prepared in “2-1. Check the Information of Repairing Model” on page 7 to the displayed pop-up screen and tap the [OK].

Note 11: Input the FB_R value to one decimal place. However, if one digit after the decimal point is “0”, input is not required. (There is no problem when enter “0” for one decimal place)

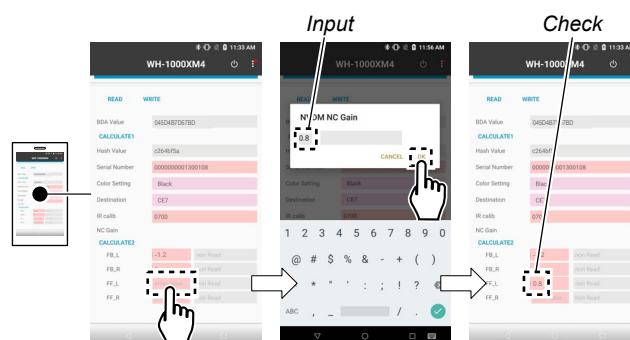
Note 12: Before tapping the [OK], make sure that entered FB_R value is correct.



9. Tap the “FF_L” column on the application screen, enter the FF_L value of noise canceling adjustment value prepared in “2-1. Check the Information of Repairing Model” on page 7 to the displayed pop-up screen and tap the [OK].

Note 13: Input the FF_L value to one decimal place. However, if one digit after the decimal point is “0”, input is not required. (There is no problem when enter “0” for one decimal place)

Note 14: Before tapping the [OK], make sure that entered FF_L value is correct.

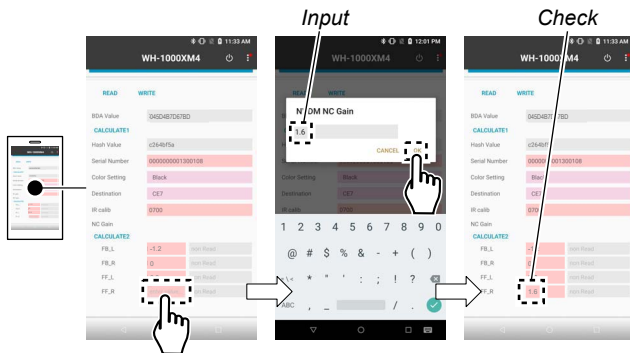


– Continued on next page –

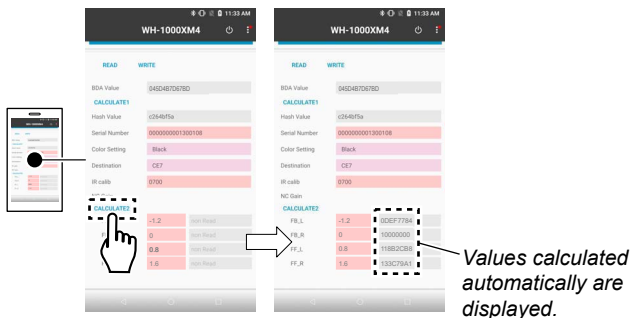
10. Tap the “FF_R” column on the application screen, enter the FF_R value of noise canceling adjustment value prepared in “2-1. Check the Information of Repairing Model” on page 7 to the displayed pop-up screen and tap the [OK].

Note 15: Input the FF_R value to one decimal place. However, if one digit after the decimal point is “0”, input is not required.
(There is no problem when enter “0” for one decimal place)

Note 16: Before tapping the [OK], make sure that entered FF_R value is correct.

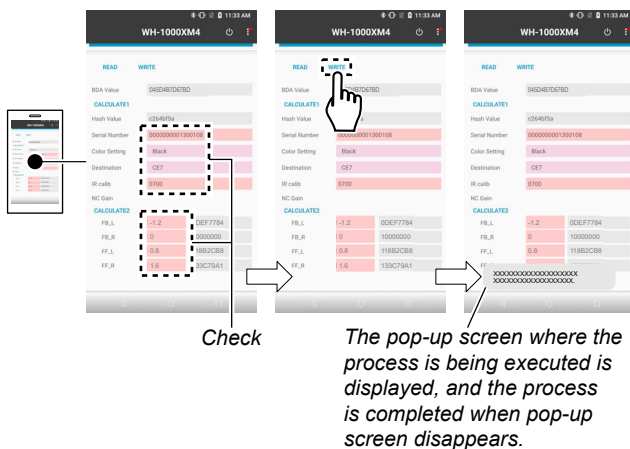


11. Tap the [CALCULATE2] on the application screen, check that the automatically calculated values are displayed on the right side of “FB_L”, “FB_R”, “FF_L” and “FF_R”.



12. Check that the entered values is correct, and tap [WRITE] on the top side of application screen to write the information.

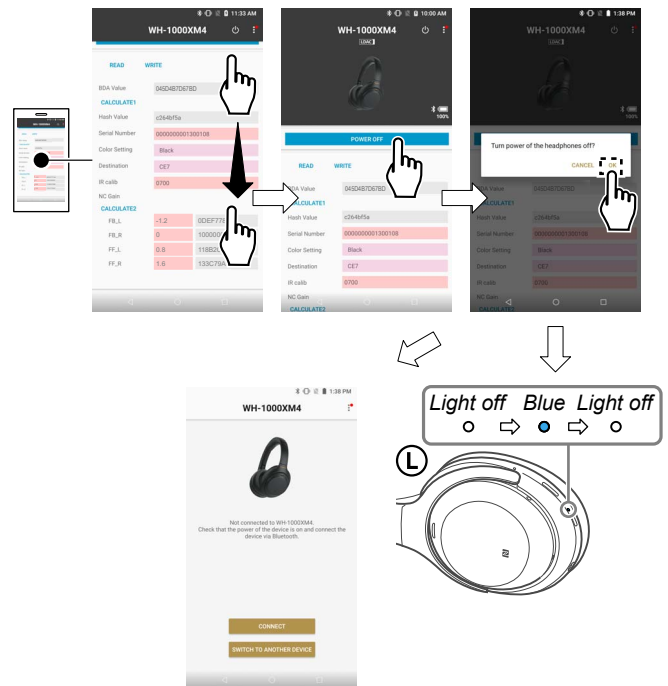
Note 17: The pop-up screen in process is displayed on the application screen, when the display disappears, writing is completed.



– Continued on upper right –

13. Scroll the application screen to the top, tap the [OK] on the pop-up screen displayed by tapping the [POWER OFF] button on the center side of application screen.

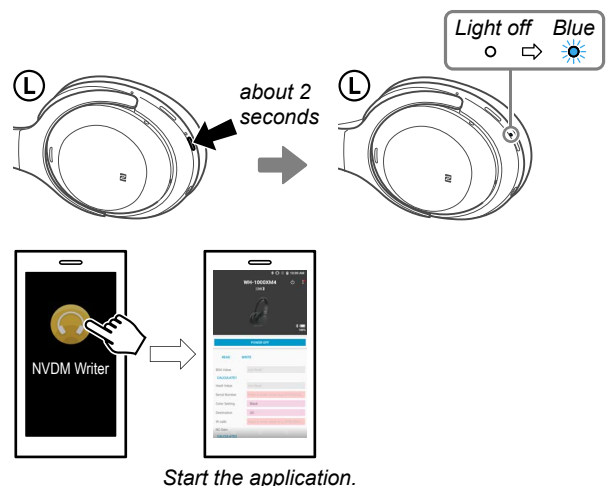
Check that headset has turned the power off and that application screen has switched to the connection screen.



14. End the NVDM Writer Application (NVDM Writer).

15. Turn the power on by pressing the [⏻] button for about 2 seconds until the blue indicator on the left channel side of headset flashes, start the NVDM Writing Application (NVDM Writer) of smartphone.

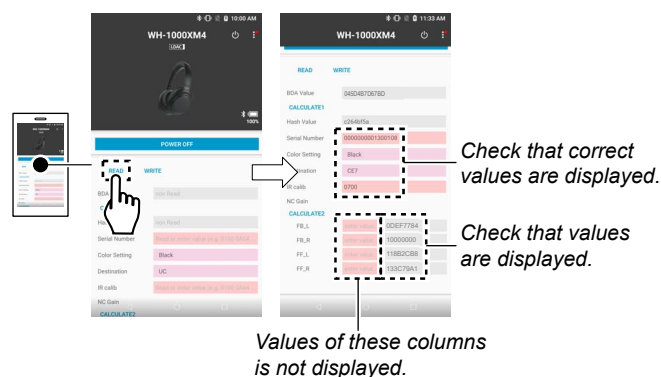
Note 18: The smartphone and headset automatically make Bluetooth connection.



– Continued on next page –

16. Tap the [READ] displayed on the center left side of application screen, check that displayed information are correct values.

Note 19: If there is a mistake in the displayed information, perform the applicable steps from step 3 to step 11, and tap the [WRITE] displayed on the top of application screen.



17. Record the value displayed in “BDA Value” column on the center of application screen in the memo etc..

Note 20: The BDA value (Bluetooth address) recorded in this process is written to the NFC L board in next process.

Note 21: Record the value without mistake. If an incorrect value is written to the NFC L board, the NFC function cannot be used.



18. End the NVDM Writer Application (NVDM Writer).

This completes the writing work of necessary each information and value after replacing the MAIN L board.
Continuously, refer to “3. Write the Bluetooth Address to the NFC L Board” on this right, and perform the work.

3. Write the Bluetooth Address to the NFC L Board

3-1. Transfer the NFC Tag Data Writing Application from the PC to the Smartphone and Install it

Install the NFC Tag Data Writing Application for writing the Bluetooth address to the NFC L board to the smartphone.

If the NFC Tag Data Writing Application is already installed, check the following, and proceed to the “3-2. Write the Bluetooth Address” on page 13.

- Be absolutely sure that the NFC Tag Data Writing Application supports your model.
- Confirm that the NFC Tag Data Writing Application is the latest version.

The version of NFC Tag Data Writing Application is represented by the file name.

Example: nfc_tag_writer_2.0.3.apk

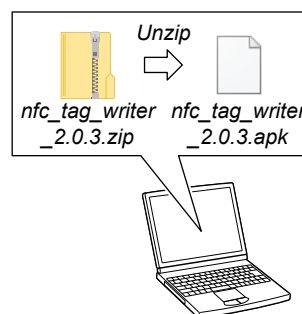
version

Procedure:

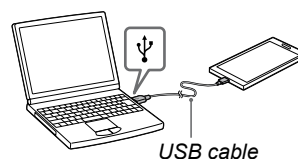
Note 1: The each figure is a reference example or an image figure.

1. Unzip the NFC Tag Data Writing Application (nfc_tag_writer_2.0.3.zip) prepared in the “1. Prepare the Equipment” on page 6 on the PC.

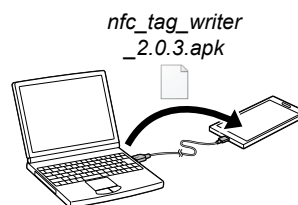
Note 2: Be absolutely sure that the NFC Tag Data Writing Application supports your model and that it is the latest version.



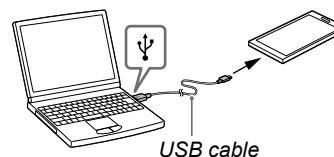
2. Using the USB cable for the smartphone, connect the smartphone and the PC.



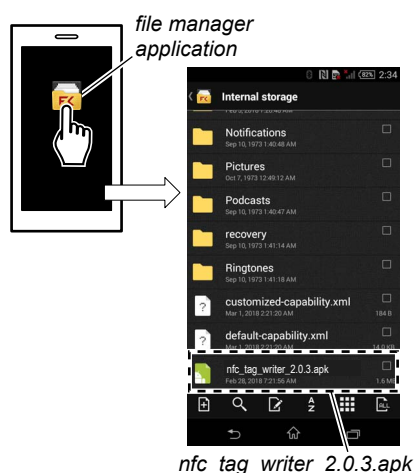
3. Transfer the “nfc_tag_writer_2.0.3.apk” prepared in step 1 from the PC to the root directory of smartphone.



4. Disconnect the smartphone from the PC.



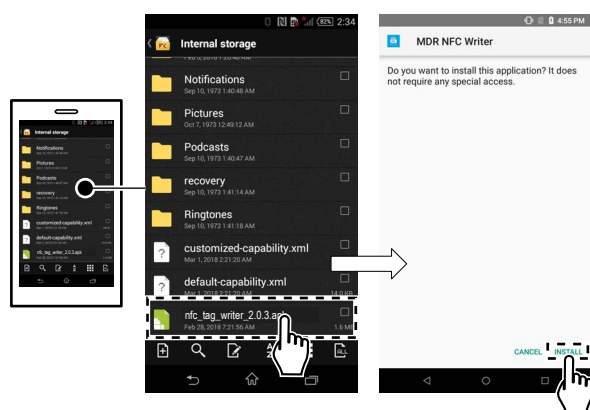
5. Start the file manager application on the smartphone, and open the location where “nfc_tag_writer_2.0.3.apk” is stored.



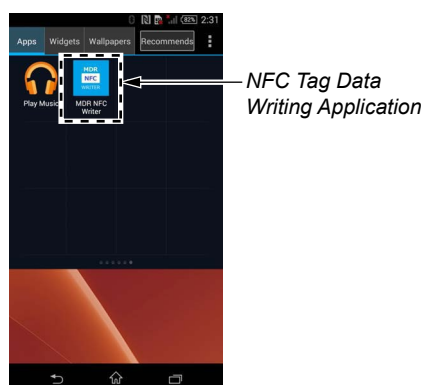
6. Tap the “nfc_tag_writer_2.0.3.apk”, and install it to the smartphone.

Note 3: The installing method might be different depending on Android OS version. If you do not know how to install, confirm with the each service headquarter.

Note 4: When it cannot be installed, tap the “Settings” → “Security”, check the “Unknown sources” checkbox, and then install it. Also, after completing the installation, be sure to uncheck the “Unknown sources” checkbox. (Depending on the version of Android OS, this setting might not exist)



7. Complete the installation of NFC Tag Data Writing Application (MDR NFC Writer).



This completes the installing the NFC Tag Data Writing Application. Proceed to the “3-2. Write the Bluetooth Address” on this right.

3-2. Write the Bluetooth Address

Write the Bluetooth address to the NFC L board of headset with using the NFC Tag Data Writing Application.

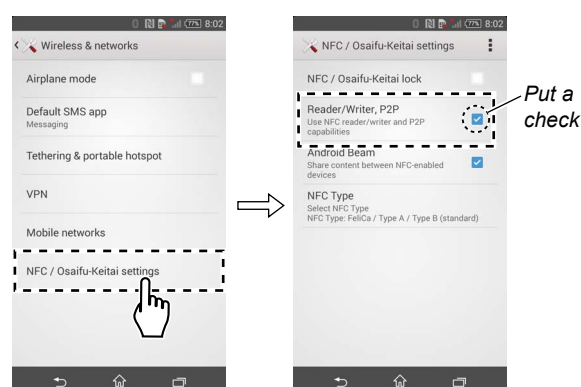
Procedure:

Note 1: The each figure is a reference example or an image figure.

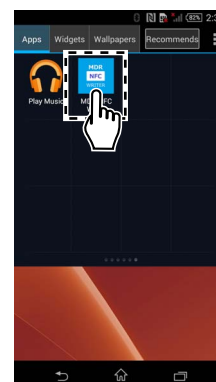
Procedure:

1. Prepare the Bluetooth address recorded in step 16 of “2-4. Write the Serial Number, Color Information, Destination Information, IR Calibration Value and Noise Canceling Adjustment Value” on page 12.
2. Turn on the NFC function of the smartphone used in “3-1. Transfer the NFC Tag Data Writing Application from the PC to the Smartphone and Install it” on page 12.

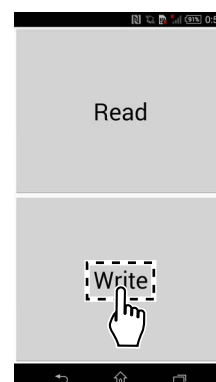
Note 2: Locations and names with settings may differ depending on the version of Android OS. Refer to the instruction manual of smartphone for more details.



3. Tap the icon of “MDR NFC Writer” on the smartphone screen to start the application.

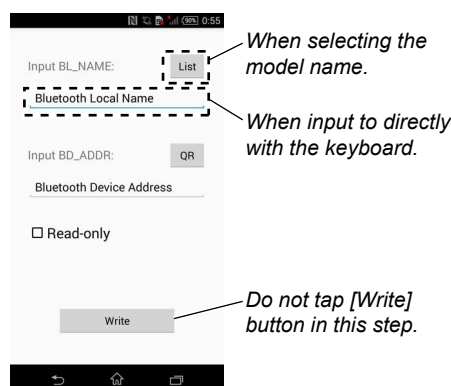


4. Tap the [Write] button on the application screen.



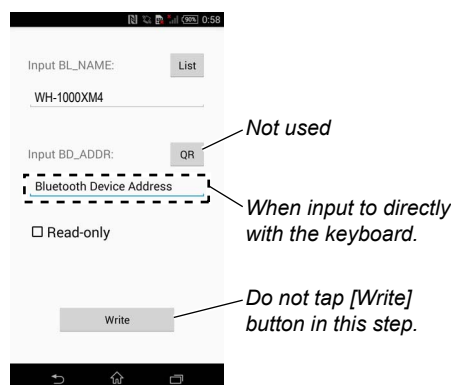
– Continued on next page –

5. Tap the [List] button on the application screen and select the model name (WH-1000XM4) of applicable headset from the displayed list, or tap the “Bluetooth Local Name” and directly input the model name (WH-1000XM4) with the keyboard on the smartphone.

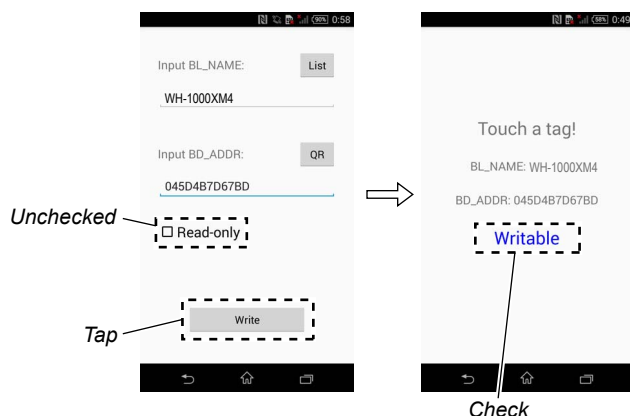


6. Tap the “Bluetooth Device Address” on the application screen and directly input the Bluetooth address (BD_ADDR) prepared in step 1 with the keyboard on the smartphone.

Note 3: In the case of this unit, [QR] button is not used.



7. Check that “Read-only” checkbox on the application screen is unchecked, and then tap the [Write] button, check that “Writ-able” is displayed.

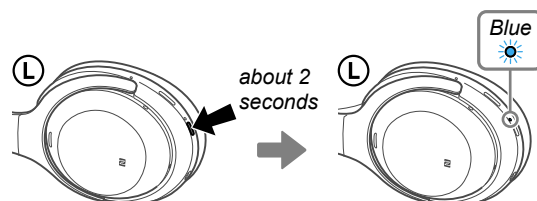


– Continued on upper right –

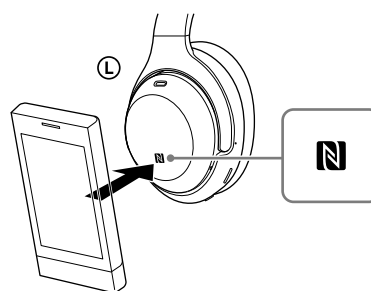
8. Press the [⏻] button for about 2 seconds until the blue indicator of left channel side on the headset flashes, and turn the power on.

Note 4: If power of headset is already turned on, proceed to next step.

Note 5: When the battery level of headset is low, the red indicator flashes for about 15 seconds. In that case, press the [⏻] button for about 2 seconds to turn off the power of headset, connect the headset to a USB AC adapter or a PC with a USB Type-C cable, and charge for a while.

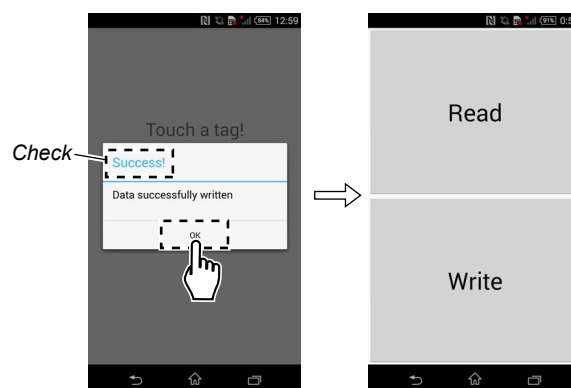


9. In the state of step 7 for the smartphone, touch the N-mark part of the smartphone to the N-mark part of headset.



10. Check that “Success!” is displayed on the application screen, and tap the [OK] button.

Note 6: When “Success!” is not displayed, refer to “3-3. Error Display” on page 16.

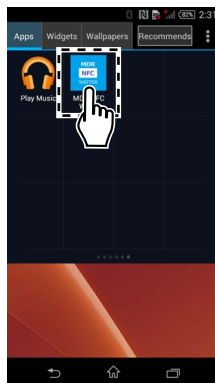


11. End the NFC Tag Data Writing Application (MDR NFC Writer).

12. Check the connection between the smartphone and the headset several times using the NFC function to check there is no problem.

– Continued on next page –

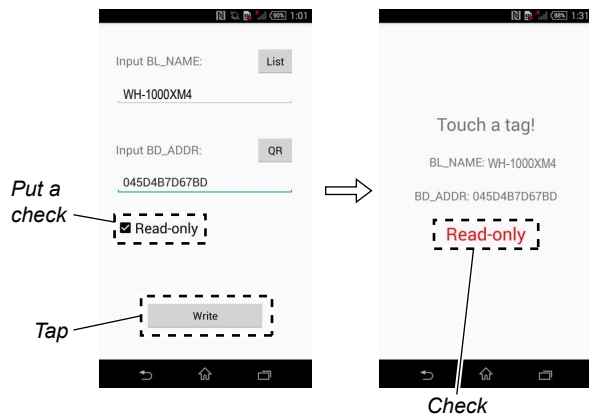
13. Start the NFC Tag Data Writing Application (MDR NFC Writer) again.



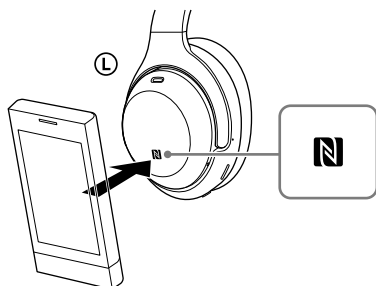
14. Tap the [Write] button on the application screen.



15. Check the “Read-only” checkbox on the application screen, tap the [Write] button, and check that “Read-only” is displayed.

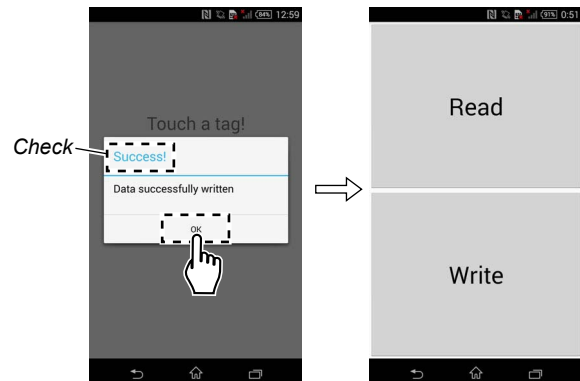


16. In the state of step 15 for the smartphone, touch the N-mark part of the smartphone to the N-mark part of headset.

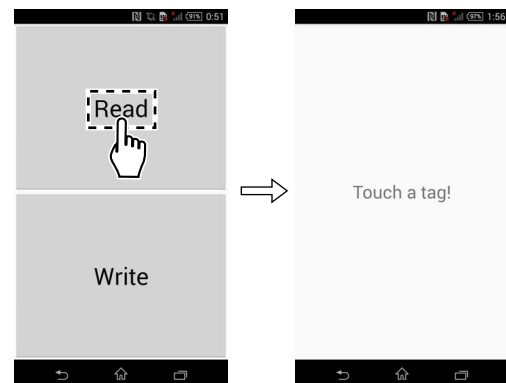


17. Check that “Success!” is displayed on the application screen, and tap the [OK] button.

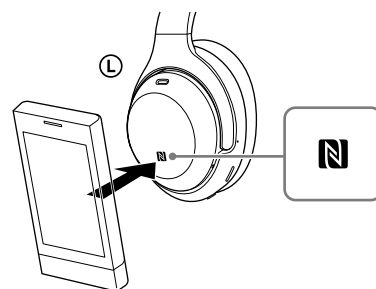
Note 7: When “Success!” is not displayed, refer to “3-3. Error Display” on page 16.



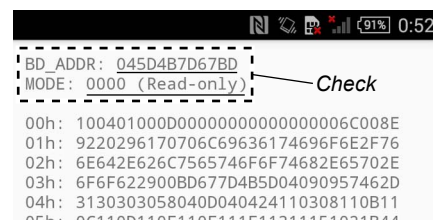
18. Tap the [Read] button on the application screen.



19. In the state of step 18 for the smartphone, touch the N-mark part of the smartphone to the N-mark part of headset.



20. Check that “BD_ADDR” displayed on the smartphone screen matches the Bluetooth address (BD_ADDR) checked in step 1 and the “MODE” column is “0000 (Read-only)”.



21. End the NFC Tag Data Writing Application (MDR NFC Writer).

– Continued on next page –

– Continued on upper right –

Refer to the following as necessary.

“3-3. Error Display” (this right)

“3-4. Check Method of the NFC Tag Data” (page 17)

“3-5. The Factor that One Touch Connection (NFC function) is Impossible” (page 18)

This completes the writing work of necessary each information and values after replacing the MAIN L board.

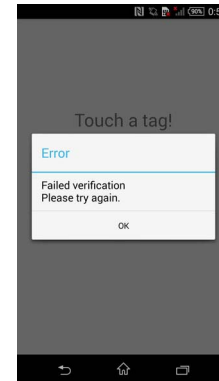
This completes the writing work of Bluetooth address for NFC L board.

3-3. Error Display

When the writing of NFC tag data has failed, “Error” is displayed on the smartphone screen.

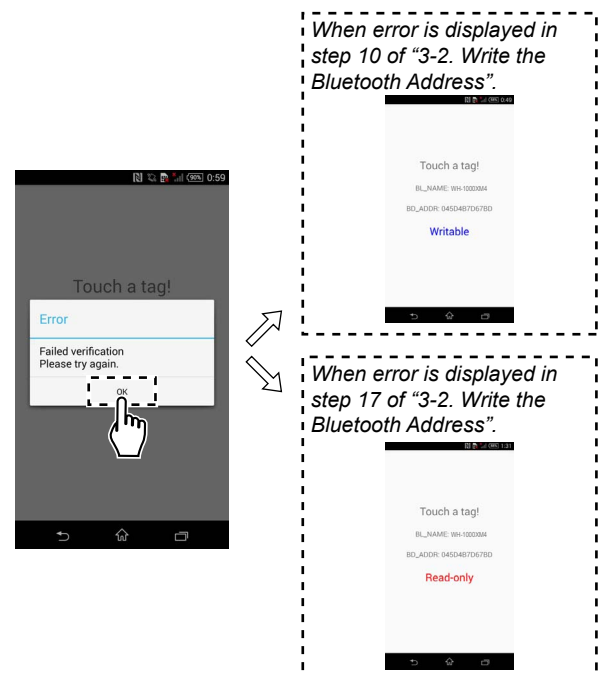
When “Error” is displayed, operate according to the procedure below.

Error display screen
(reference example)



Procedure:

1. Tap the [OK] button of “Error” display screen.

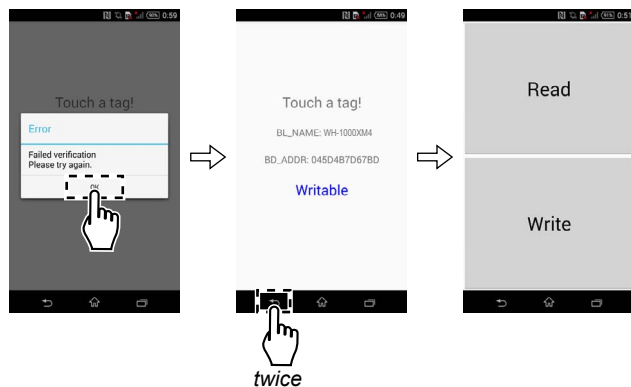


2. When error is displayed in step 10 of “3-2. Write the Bluetooth Address” on page 14, operate from step 9 on page 14 again, also when is displayed in step 17 of “3-2. Write the Bluetooth Address” on page 15, operate from step 16 on page 15 again.

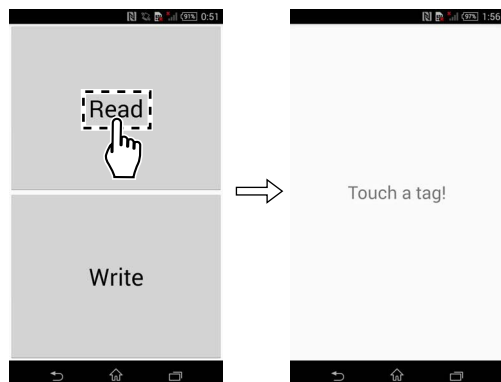
– Continued on next page –

3. If “Error” is displayed again in step 10 of “3-2. Write the Bluetooth Address” on page 14 or step 17 of “3-2. Write the Bluetooth Address” on page 15, after tapping the [OK] button on “Error” display screen, tap the “↵” (or “<” etc.) of smartphone twice and return to the first screen.

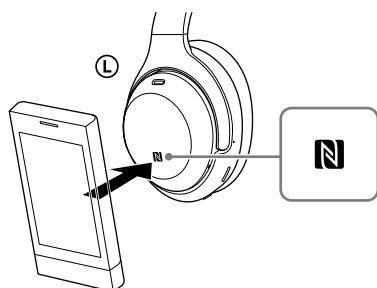
(The figure below is a reference example when error is displayed in step 10 on page 14)



4. Tap the [Read] button on the application screen.

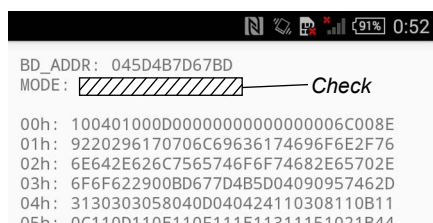


5. In the state of the above step 4 for the smartphone, touch the N-mark part of the smartphone to the N-mark part of headset.



6. Check that the “MODE” column displayed on the application screen is other than “0000 (Read-only)”.

Note: If “MODE” column is displayed as “0000 (Read-only)”, NFC tag data cannot be written. Prepare another new MAIN L board (Including NFC L board) again, and restart from the “2-4. Write the Serial Number, Color Information, Destination Information, IR Calibration Value and Noise Canceling Adjustment Value” on page 9.
(The NFC L board indicated as “0000 (Read-only)” cannot be used)



3-4. Check Method of the NFC Tag Data

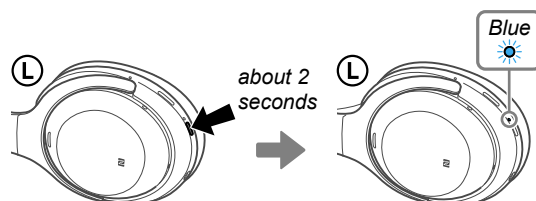
If you want to check the NFC tag data of headset after completing writing NFC tag data, check to the following procedure.

Procedure:

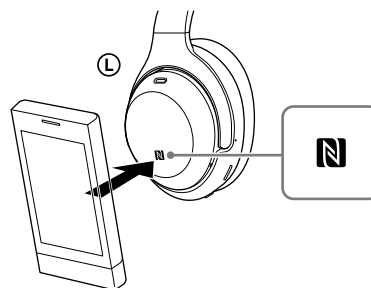
1. Press the [⏻] button for about 2 seconds until the blue indicator of left channel side on the headset flashes, and turn the power on.

Note 1: If power of headset is already turned on, proceed to next step.

Note 2: When the battery level of headset is low, the red indicator flashes for about 15 seconds. In that case, press the [⏻] button for about 2 seconds to turn off the power of headset, connect the headset to a USB AC adapter or a PC with a USB Type-C cable, and charge for a while.



2. Touch the N-mark part of the smartphone to the N-mark part of headset.



3. Tap the “NVDM Writer” icon on the smartphone screen to start the application.



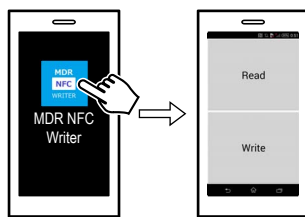
4. Tap the [READ] displayed on the center left side of application screen, record the value displayed in “BDA Value” column in the memo etc..



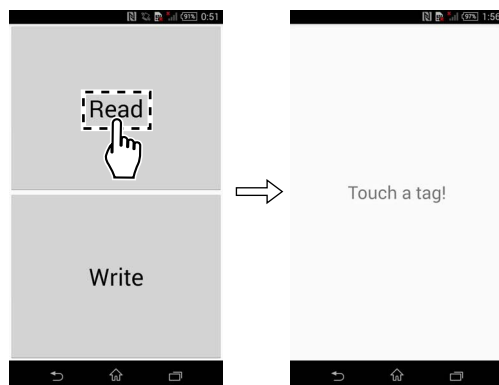
5. End the NVDM Writing Application (NVDM Writer).

– Continued on next page –

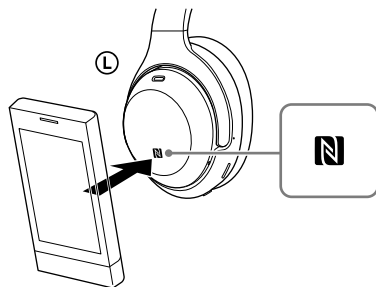
6. Tap the “MDR NFC Writer” icon on the smartphone screen to start the application.



7. Tap the [Read] button on the application screen.



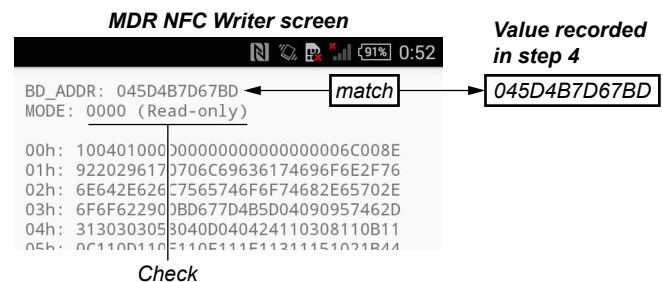
8. In the state of step 7 for the smartphone, touch the N-mark part of the smartphone to the N-mark part of headset.



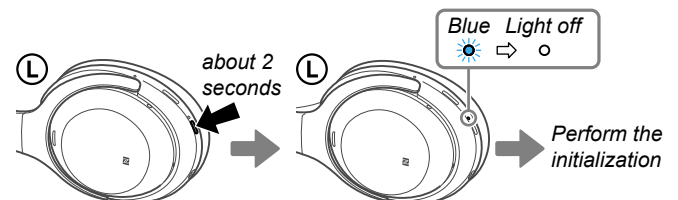
– Continued on upper right –

9. Check that the alphanumeric characters of “BD_ADDR” displayed on the application screen matches the value recorded in step 4.

Note 3: If “0000 (Read-only)” is displayed in the “MODE” column on the application screen, NFC tag data has been written without any problem and cannot be changed.



10. End the NFC Tag Data Writing Application (MDR NFC Writer).
11. Press the [⏻] button for about 2 seconds until the blue indicator of left channel side on the headset lights off to turn the power off, and then perform the “INITIALIZING METHOD” on page 5 to delete the connection history.



3-5. The Factor that One Touch Connection (NFC function) is Impossible

The four following factors are considered as the factor that one touch connection (NFC function) is impossible.

Guess and check the defective factor by each checking result.

Note: The four failure factors are examples.

	Factor	Bluetooth manual connection check by user	NFC tag data check	Bluetooth manual connection check by servicing	NFC one touch connection check with smartphone
1	Left channel side defect	NG	—	NG	NG
2	NFC L board defect	OK	NG	OK	NG
3	NFC tag data writing failure	OK	NG	OK	NG
4	Smartphone trouble	OK	OK	OK	NG

4. Check the Operation of Headset

After completing the writing of each information to the MAIN L board and NFC L board, be sure to check the operation of headset according to the following.

Procedure:

Note 1: When the headphone exclusive application (Headphones Connect) is not installed on the smartphone, installing the headphone exclusive application (Headphones Connect) in advance, and then check it.

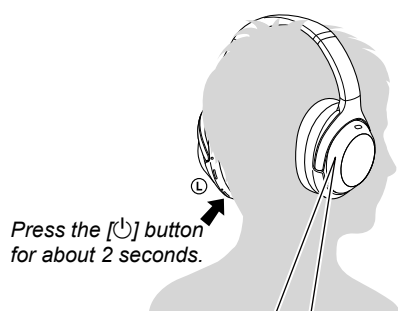
Note 2: If already power is turned on, turn the power off once, and then check it.

1. Attach the headset.



2. Press the [P] button on the headset for about 2 seconds until the blue indicator of left channel side flashes, turn the power on, and check the language of voice guidance.

Note 3: When the battery level is low, the red indicator flashes for about 15 seconds. In that case, press the [P] button for about 2 seconds to turn off the power of headset, connect the headset to a USB AC adapter or a PC with a USB Type-C cable, and charge for a while.



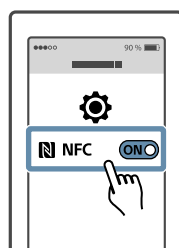
Voice guidance

When set to "CN" : Chinese
When set to other than "CN" : English

Note 4: If you cannot hear the voice guidance in the above language, the correct destination information has not been written. Write each information again.

3. Turn on the NFC function of the NFC compatible smartphone installed the headphone exclusive application (Headphones Connect).

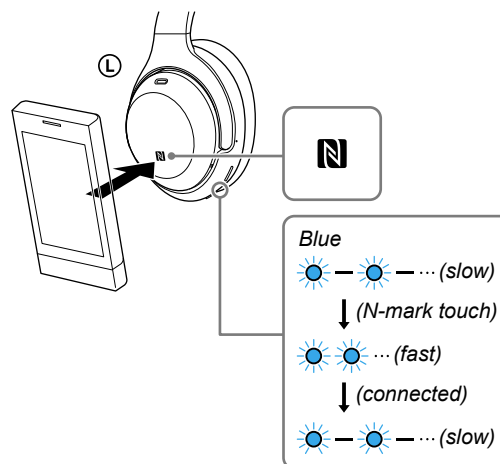
(For details, refer to the instruction manual of NFC compatible smartphone. The figure below is a reference example)



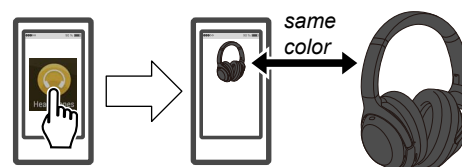
4. Touch the N-mark part of the NFC compatible smartphone to the N-mark part of headset, the left channel side indicator (blue) flashing changes from slow to fast, and the connection is completed.

(After connection is complete, the left channel side indicator (blue) flashing is return to slow)

Note 5: If the smartphone screen is locked, unlock it and then touch it.

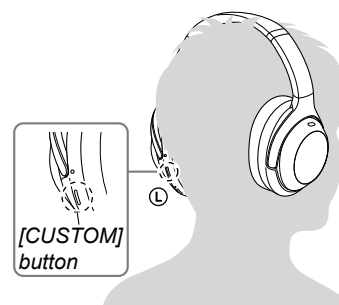


5. Start the headphone exclusive application (Headphones Connect) on the smartphone, and check that headset of same color as the main unit color is displayed on the smartphone screen.



6. Press the [CUSTOM] button repeatedly to change the noise canceling function ON or OFF, and check that noise canceling effect is fully obtained and that there is no difference in the noise canceling effect between the left and right channels.

Note 6: Adjust the amount of noise canceling with Headphones Connect, and check the effect.



7. Remove the headset from your ears, initialize the headset.

Note 7: Refer to "INITIALIZING METHOD" on page 5 for initializing method.

This thoroughly completes the writing of necessary information after replacing the MAIN L board.

– Continued on upper right –

DISASSEMBLY PROHIBITION AND PARTS REPLACEMENT THAT AFFECT THE NOISE CANCELING FUNCTION

The precise noise canceling function of this unit is adjusted in the production process.

Therefore, it is not possible to disassemble the portion affecting the adjustment of the noise canceling function or to replace the single parts affecting it.

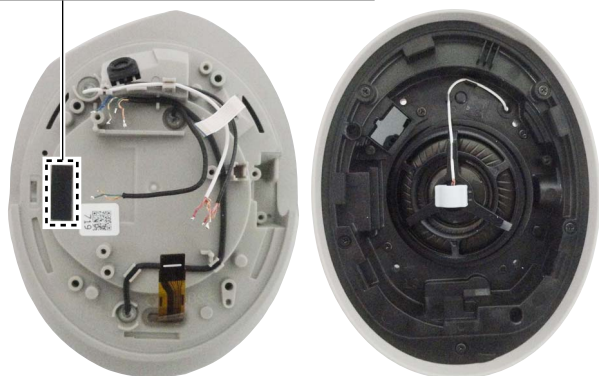
Be sure to refer to the below before disassembling this unit.

- Disassembly Prohibition of Front Plate Portion**

Do not disassemble the left and right front plate portion.

If disassembling the front plate portion, malfunction will occur in adjustment value of the noise canceling function.

Note 1: Do not touch the rear resistor (left).
Noise canceling performance etc.
might be affected.



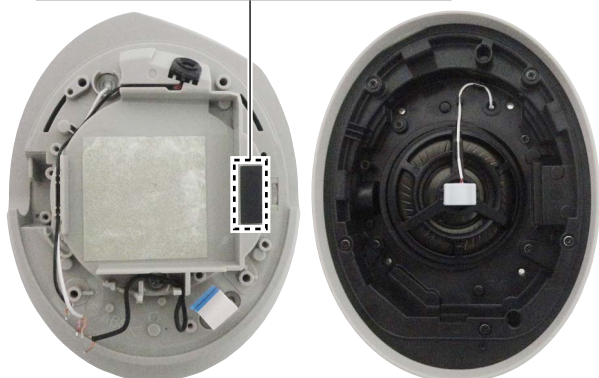
– Left front plate interior (internal side) –

Disassembly of parts other than ornament, MAIN L board and NFC L board are prohibited.

– Left front plate interior (front side) –

Disassembly of parts other than earpad, screen and ornament fixing screw are prohibited.

Note 2: Do not touch the rear resistor (right).
Noise canceling performance etc.
might be affected.



– Right front plate interior (internal side) –

Disassembly of parts other than ornament, SUB R board, THM R board and lithium ion storage battery are prohibited.

– Right front plate interior (front side) –

Disassembly of parts other than earpad, screen and ornament fixing screw are prohibited.

- Parts Replacement**

It is not possible for replacement of left and right front plate portion, or replacement of electret cap microphone only.

When the left and right front plate portion or electret cap microphone is defective, replace with the SV headphones assy (EXPLODED VIEWS: Ref. No. HPN1) including them.

front plate portion (L-ch)



front plate portion (R-ch)



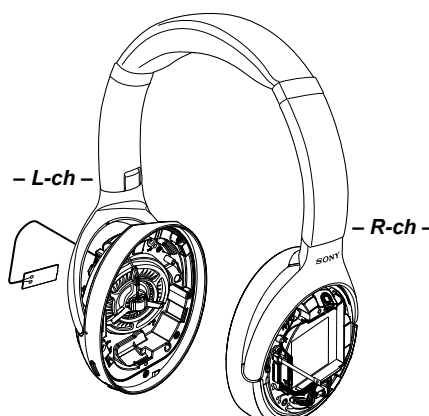
– Left front plate inner view –

electret cap microphone



– Right front plate inner view –

electret cap microphone



SV headphones assy
(EXPLODED VIEWS: Ref. No. HPN1)

(Refer to “COMPONENT PARTS OF SV HEADPHONES ASSY” on page 22 for component parts of SV headphones assy)

REPLACEMENT OF EACH BOARD FOR REPAIR

When each board installed in this unit are defective, it is replaced by the board or part including the board.

It is not possible to replace the electrical parts mounted on the boards for repair.

When each board is defective, replace for repair according to the following.

– Left Channel Side –**MAIN L board:**

When MAIN L board is defective, it can be replaced with a new MAIN L board.

But when replacing the MAIN L board, be sure to replace the MAIN L board and NFC L board simultaneously. It is not possible to replace the MAIN L board only. In addition to the MAIN L board, the NFC L board and NFC L board connection wire are included in the repair parts of MAIN L board.

Also, when MAIN L board and NFC L board are replaced, then it is always necessary to work the writing for multiple information such as Bluetooth address and adjustment value of noise canceling function etc..

When MAIN L board is replaced, be sure to refer “NOTE FOR REPLACING THE MAIN L BOARD” on page 6.

NFC L board:

It is not possible to replace the NFC L board only.

When replacing the NFC L board, be sure to replace the MAIN L board and NFC L board simultaneously.

The repair parts of NFC L board is included in the repair parts of MAIN L board.

Also, when MAIN L board and NFC L board are replaced, then it is always necessary to work the writing for multiple information such as Bluetooth address and adjustment value of noise canceling function etc..

When NFC L board is replaced, be sure to refer “NOTE FOR REPLACING THE MAIN L BOARD” on page 6.

JACK L board:

It is not possible to replace the JACK L board only.

When JACK L board is defective, replace the “SV headphones assy” (EXPLODED VIEWS: Ref. No. HPN1) with a new part.

SENS L board:

It is not possible to replace the SENS L board only.

When SENS L board is defective, replace the “SV headphones assy” (EXPLODED VIEWS: Ref. No. HPN1) with a new part.

KEY board:

It is not possible to replace the KEY board only.

When KEY board is defective, replace the “SV headphones assy” (EXPLODED VIEWS: Ref. No. HPN1) with a new part.

DMIC module:

It is not possible to replace the DMIC module only.

When DMIC module is defective, replace the “SV ornament L assy” (EXPLODED VIEWS: Ref. No. DMIC1) that DMIC module is pasted on the left ornament block with a new part.

– Right Channel Side –**TPAD R board:**

It is not possible to replace the TPAD R board only.

When TPAD R board is defective, replace the “SV ornament R assy” (EXPLODED VIEWS: Ref. No. TPS1) that TPAD R board is pasted on the right ornament block with a new part.

SUB R board:

When SUB R board is defective, it can be replaced with a new SUB R board.

USB R board:

It is not possible to replace the USB R board only.

When USB R board is defective, replace the “SV headphones assy” (EXPLODED VIEWS: Ref. No. HPN1) with a new part.

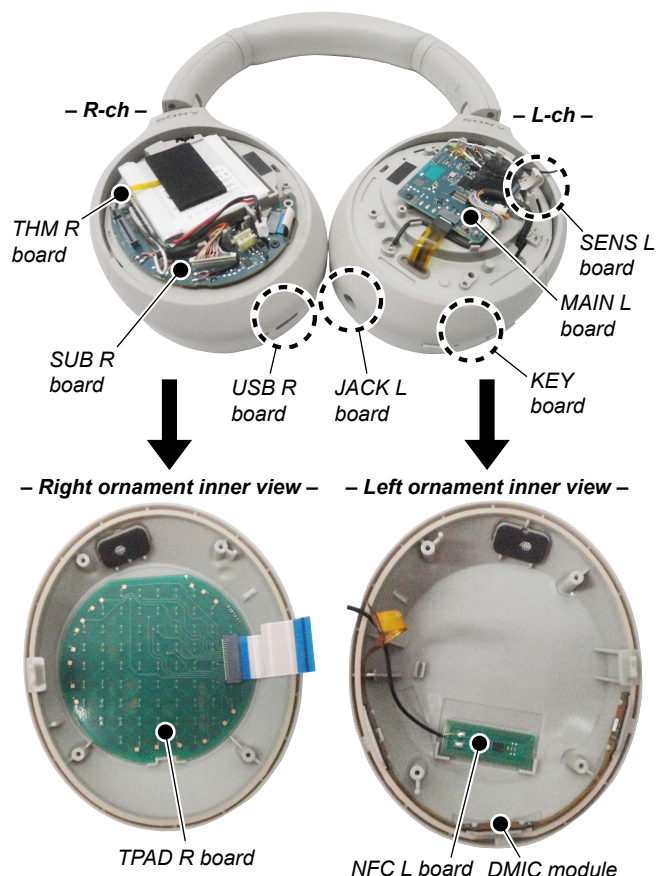
THM R board:

When THM R board is defective, it can be replaced with a new THM R board.

– Others –

“SV headphones assy” (EXPLODED VIEWS: Ref. No. HPN1) includes all the boards other than the DMIC module and TPAD R board.

Therefore, when MAIN L board, NFC L board, SUB R board and THM R board are defective, it can be replaced them according to their respective explanations, or it can be replaced the “SV headphones assy” with a new part.

• Installation Position of Each Board

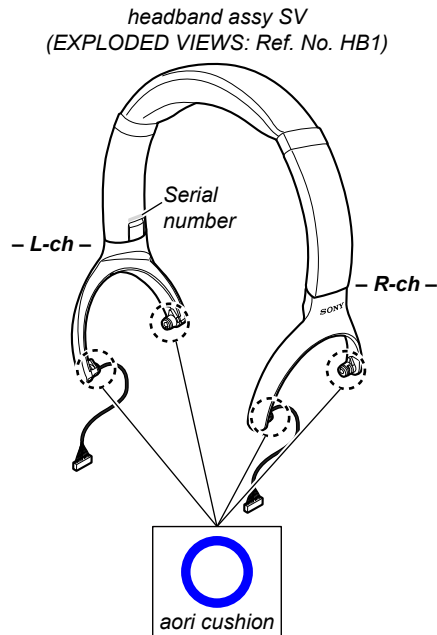
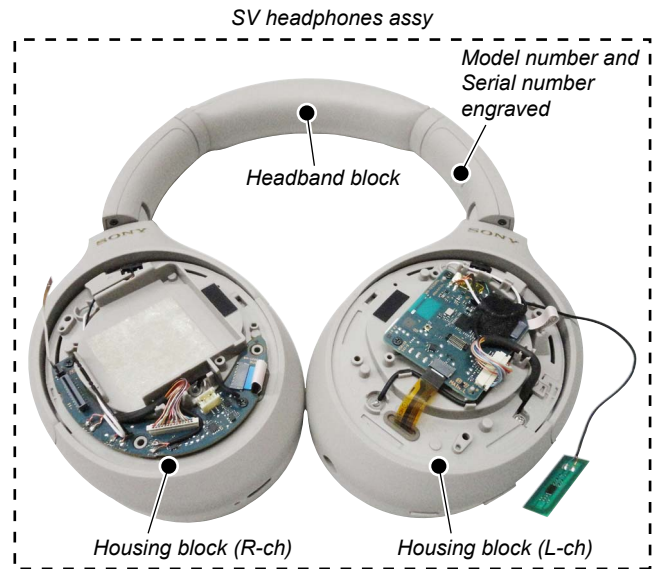
REPLACEMENT OF HEADBAND BLOCK FOR REPAIR

When headband block is defective, it is possible to replace for repair the headband block only.

Remove the left and right housing block from the hanger, replace it with a new headband block (headband assy SV (EXPLODED VIEWS: Ref. No. HB1). It is not possible to repair by disassembling the headband block.

Note 1: It is possible to remove the aori cushion from the headband block, and to replace it with a new part.

Note 2: Since the serial number is engraved on the headband block, when headband is replaced with a new part, the serial number is changed.

**COMPONENT PARTS OF SV HEADPHONES ASSY**

- Component Parts of SV Headphones Assy**

Headband block
Headband assy Model number and Serial number engraved

	Housing block (R-ch)	Housing block (L-ch)
Mechanical parts	P2 tapping screw Cover FB MIC Light guide (USB) MIC (FF) holder Plate front (R) sub assy	P2 tapping screw Cover FB MIC Holder sensor Holder KEY FPC Kapton sheet Wire sheet MIC (FF) holder Plate front (L) sub assy
Electrical parts	Driver (040F062) Flexible flat cable (14 core) MDD R (UEWX2) wire Electret CAP microphone (FB) Electret CAP microphone (FF)	Driver (040F062) Flexible flat cable (6 core) MDD L (UEWX2) wire NFC (UEWX2) wire Electret CAP microphone (FB) Electret CAP microphone (FF) JACK (UEWX4) wire
Board	THM R board SUB R board USB R board	MAIN L board NFC L board KEY board JACK L board SENS L board

- Parts not Included in the Component of SV Headphones Assy**

Housing block (R-ch)	Housing block (L-ch)
Earpad (R) assy Screen (R) Cushion (BATT) Lithium ion storage battery Flexible flat cable (22 core) Ornament R assy (with TPAD R board) P2 tapping screw (4 pieces)	Earpad (L) assy Screen (L) Ornament L assy (with DMIC module, Adhesive NFC) P2 tapping screw (4 pieces)

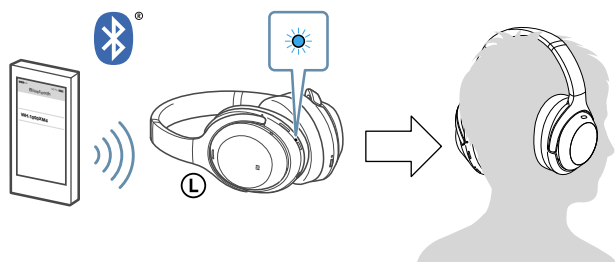
CHECKING METHOD AFTER INSTALLING THE ORNAMENT L ASSY

If you removed and installed the ornament L assy, perform the checking work according to the following procedure.

Checking procedure:

1. Connect the smartphone to this unit by the Bluetooth and attach this unit to your ears.

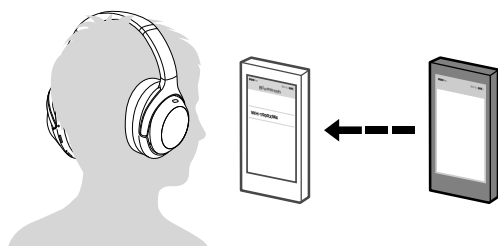
Note 1: For the method of Bluetooth connection, refer to the operating instructions or refer to "NFC CONNECTION CHECKING METHOD" on page 6.



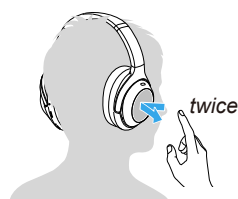
2. Call from another smartphone or mobile phone to the smartphone used in step 1.

Note 2: Be sure to make a call using a general telephone line. When using a line other than a general telephone line, symptoms of trouble may not be confirmed.

Note 3: This procedure explains the procedure to receive with the smartphone used in step 1, but you can also confirm by calling to another smartphone etc. from the smartphone used in step 1.



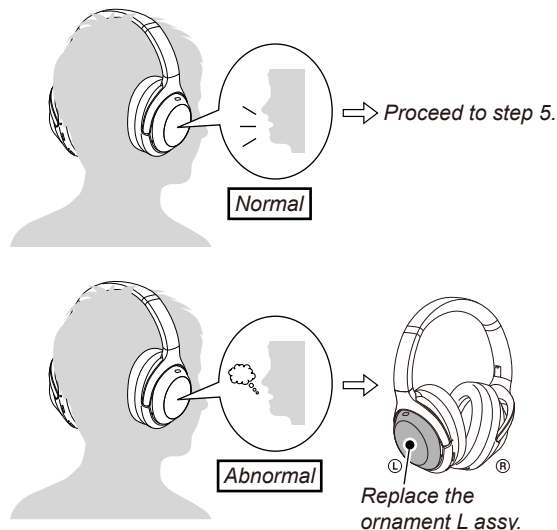
3. Check that ring tone is heard from this unit, double tap the touch sensor control panel and receive the call.



– Continued on upper right –

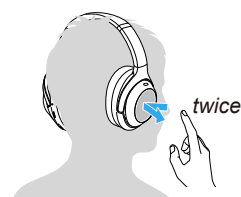
4. Talk on a smartphone and check that the sound is heard normally from this unit.

Note 4: If there is a symptom such as the sound is not heard normally, or the sound is echoed, trouble of the ornament L assy assumed. Refer to "2. DISASSEMBLY" on page 24 and after, replace the ornament L assy with a new part.



5. Double tap the touch sensor control panel to end the call and complete the checking work.

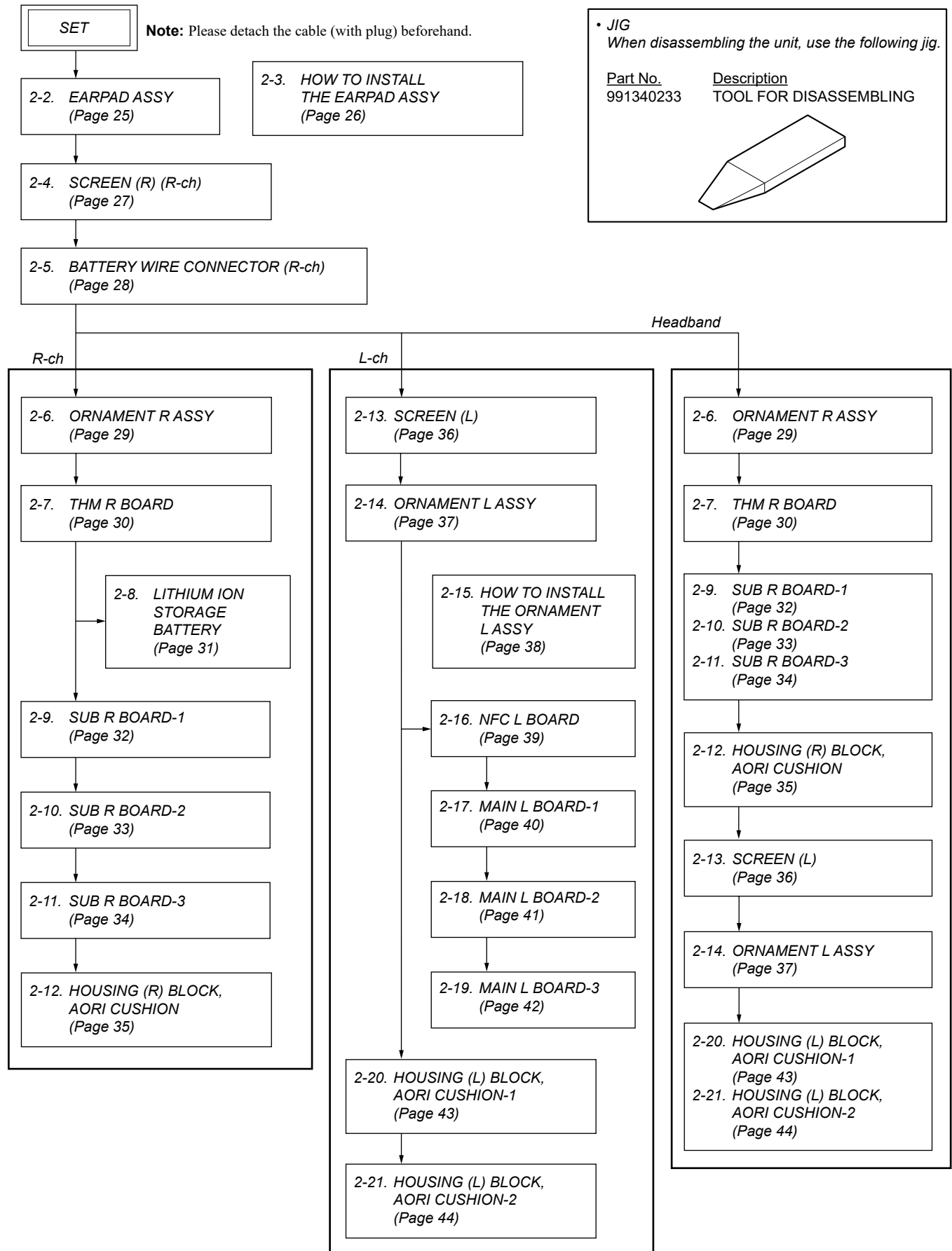
Note 5: Refer to "INITIALIZING METHOD" on page 5 and delete the connection history.



SECTION 2 DISASSEMBLY

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

2-1. DISASSEMBLY FLOW



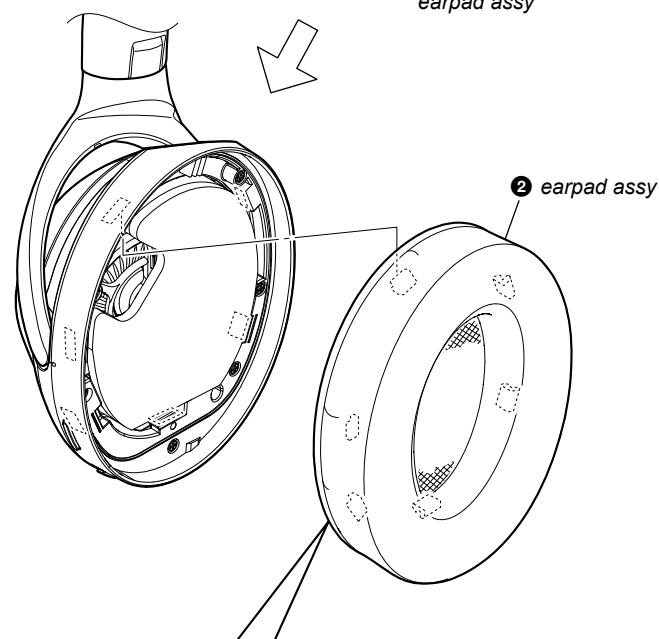
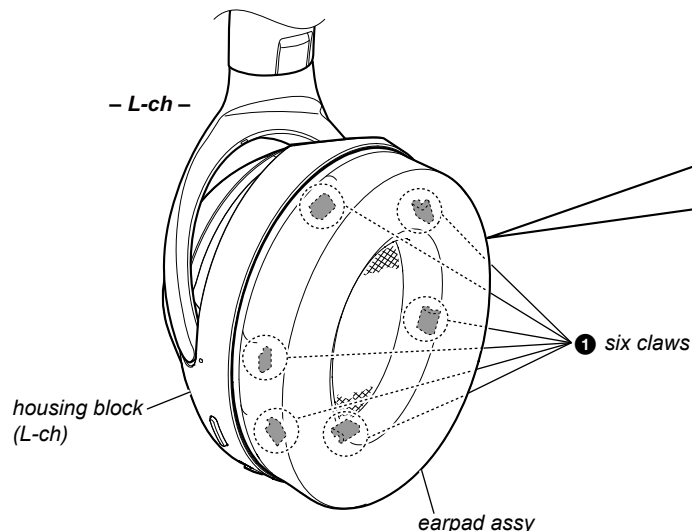
Note: Follow the disassembly procedure in the numerical order given.

2-2. EARPAD ASSY

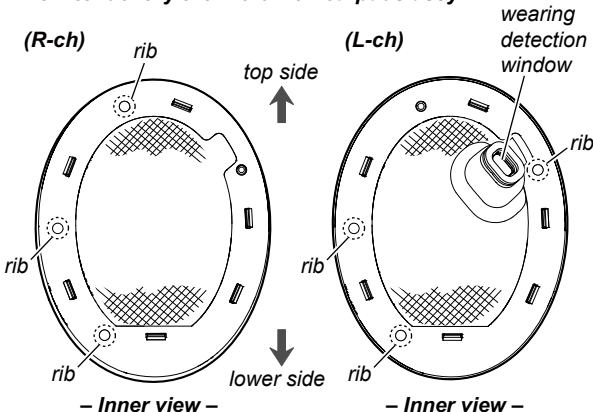
Note 1: The left and right earpads assy can be removed using the same procedure.

This explanation uses illustrations from the left side.

Note 2: See page 26 for how to install the earpad assy.

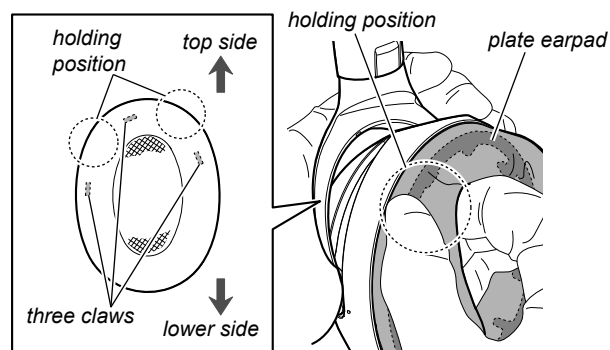


• How to identify the L-ch/R-ch earpads assy



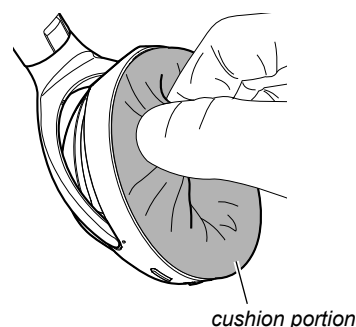
• How to remove the earpad assy

Refer to the figure below, hold the plate earpad (hard plastic part internal of the earpad assy) by hand, pull it inside until sound that claw of the earpad assy remove from the housing block is heard, and remove the total of six claws in order.

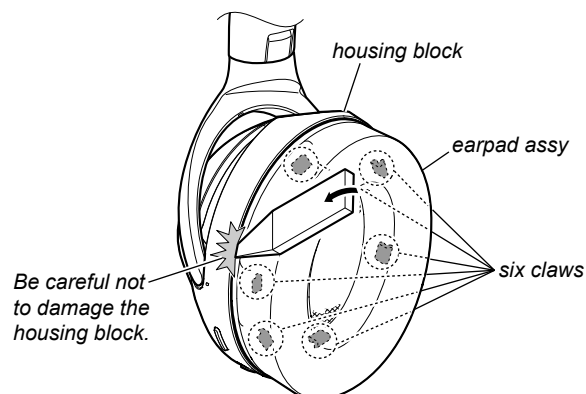


NG

Note 3: Do not hold and pull the cushion portion of the earpad assy. Doing so will damage the earpad assy.

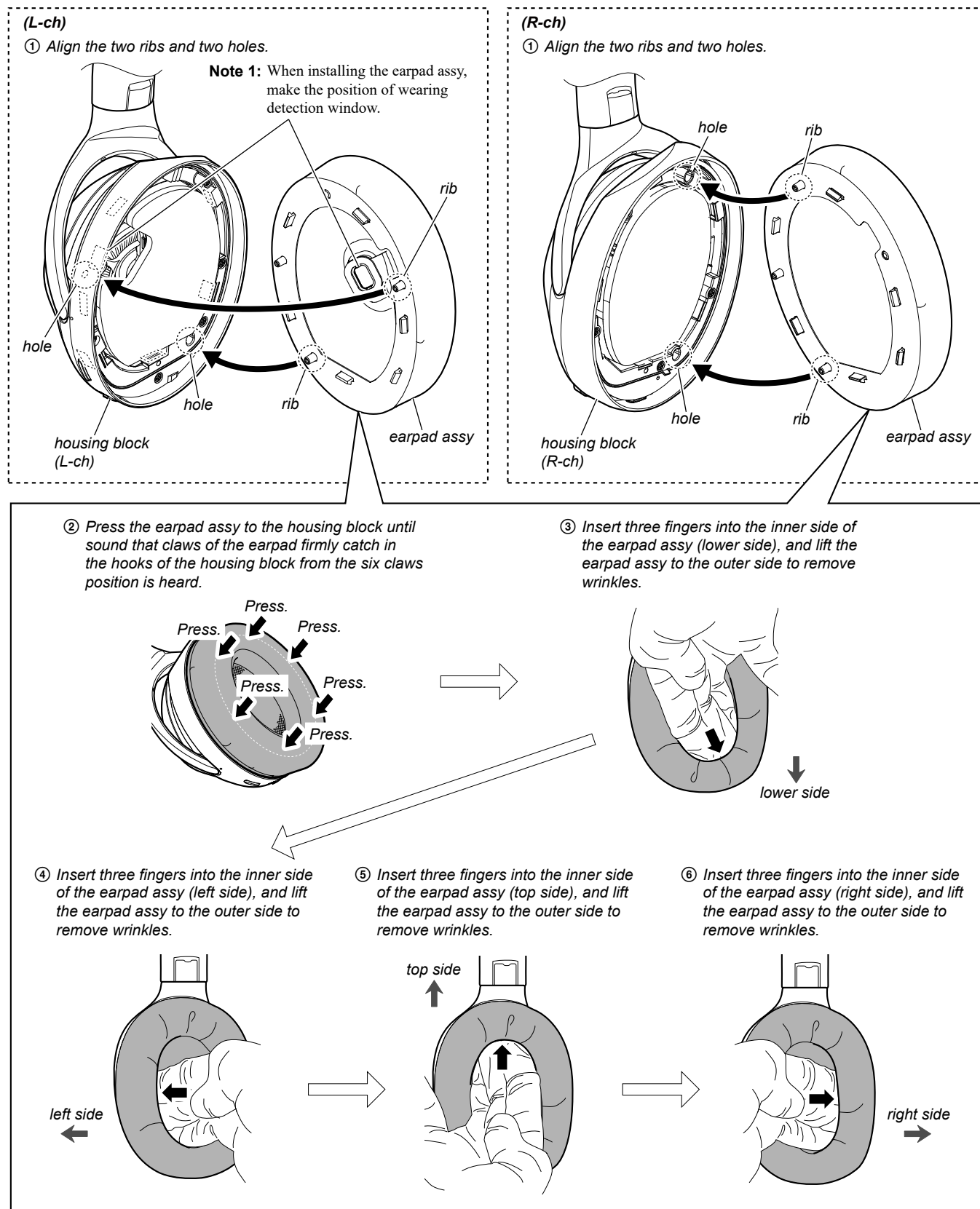


Note 4: If you cannot remove the earpad assy by hand, insert the TOOL FOR DISASSEMBLING (Part No.: 991340233) into the gap between the earpad assy and housing block at the claw positions, and remove the claws to remove the earpad assy. In this case, be careful as you may damage the housing block.



2-3. HOW TO INSTALL THE EARPAD ASSY

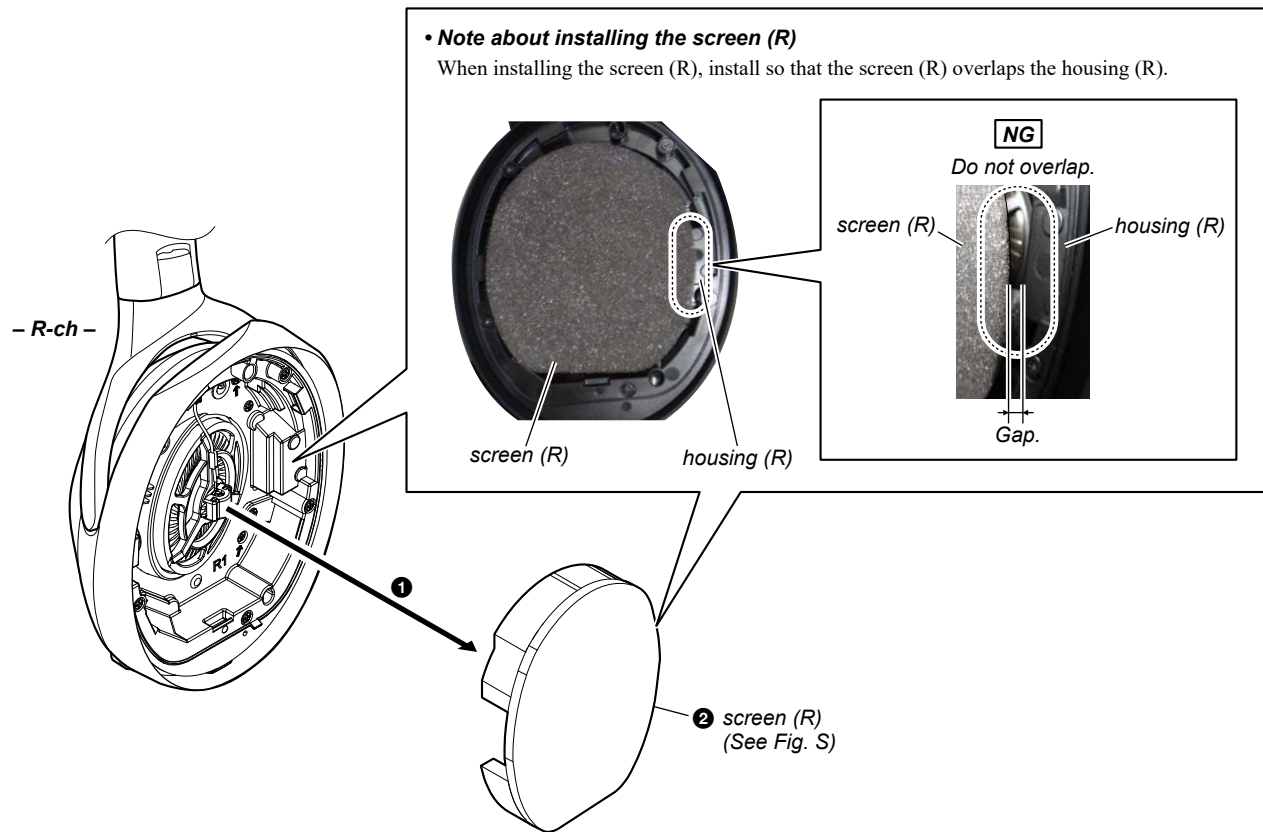
Attach in order from ① to ⑥.



Note 2: Before performing steps ③ to ⑥, make sure that the claws of the earpad are firmly locked to the housing block.

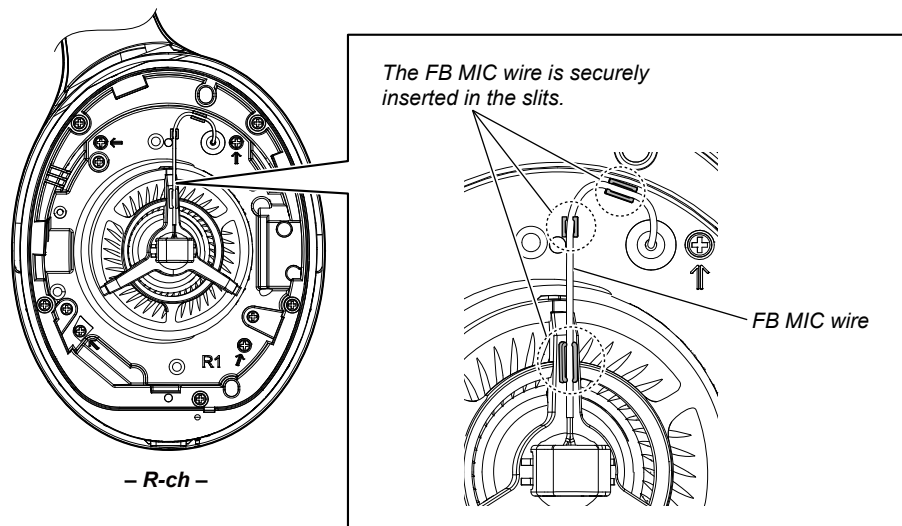
Note 3: In steps ③ to ⑥, wrinkles on the earpad resulting from customer use cannot be removed.

2-4. SCREEN (R) (R-ch)

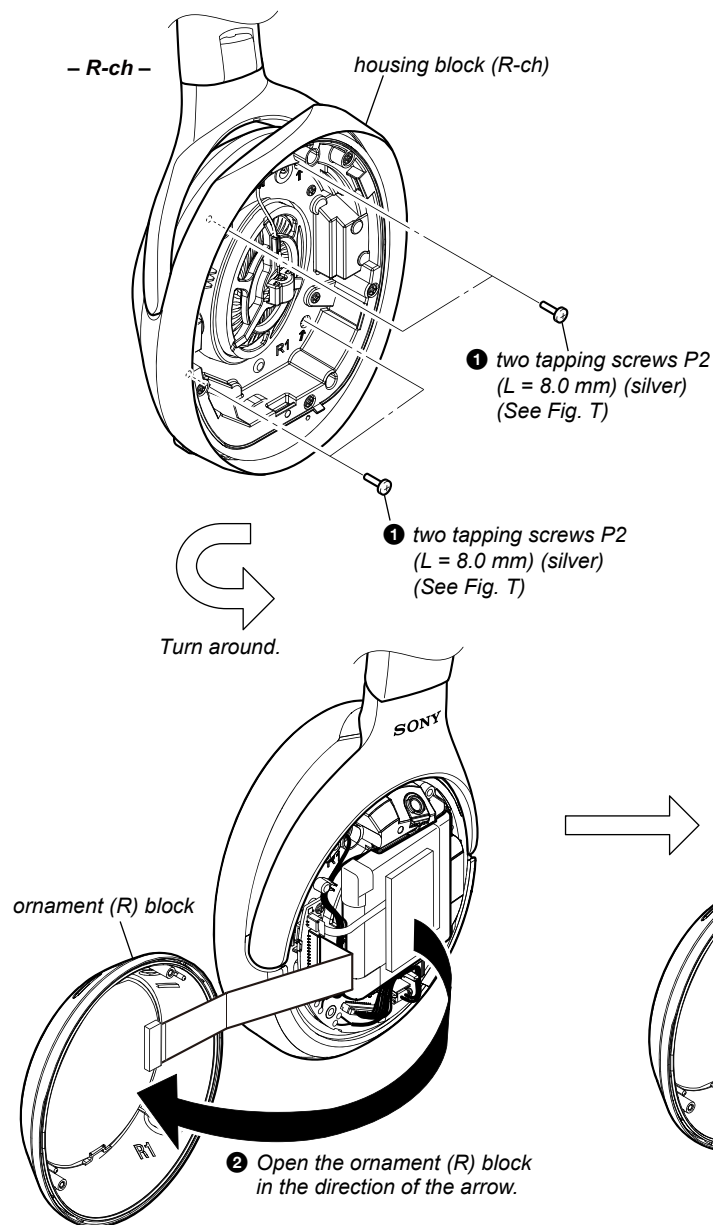
• **Checking before installing the screen (R)**

< Fig. S >

Before installing the screen (R), make sure to check that the FB MIC wire is correctly installed in the slits.



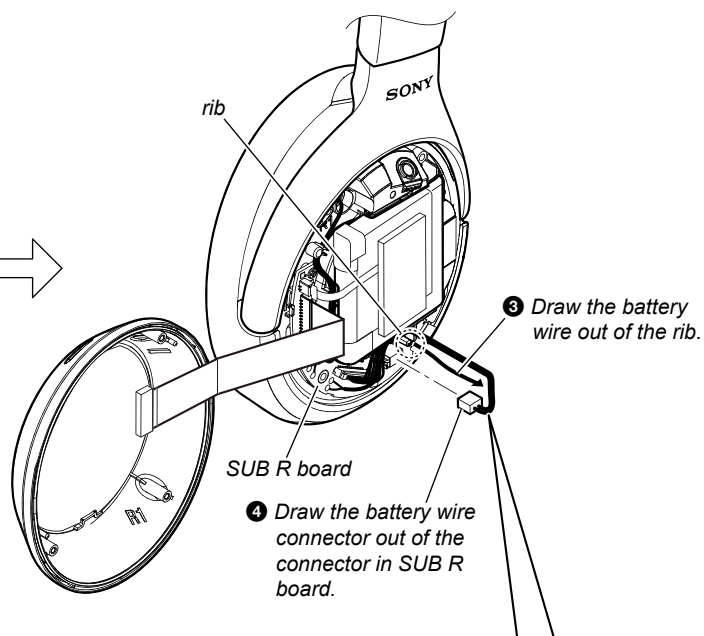
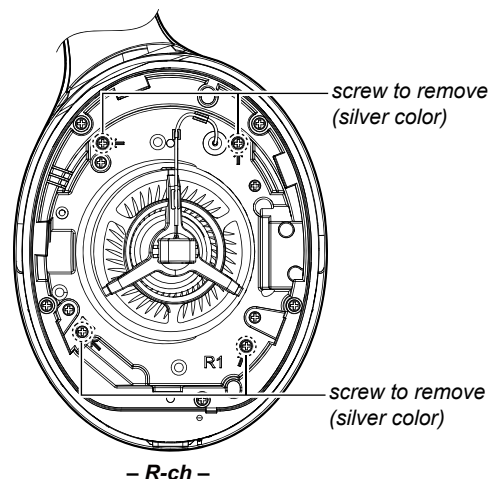
2-5. BATTERY WIRE CONNECTOR (R-ch)



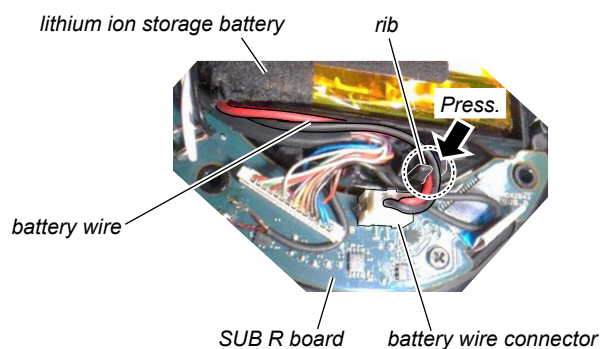
• Note when removing the screws

< Fig. T >

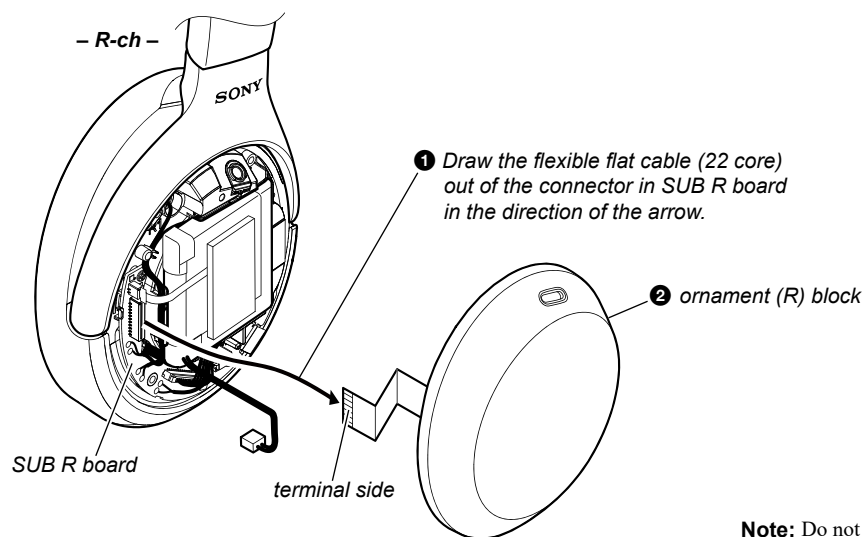
There are only four screws (silver color) required to remove the ornament (R) block as shown in the figure below. Do not remove the other screws.



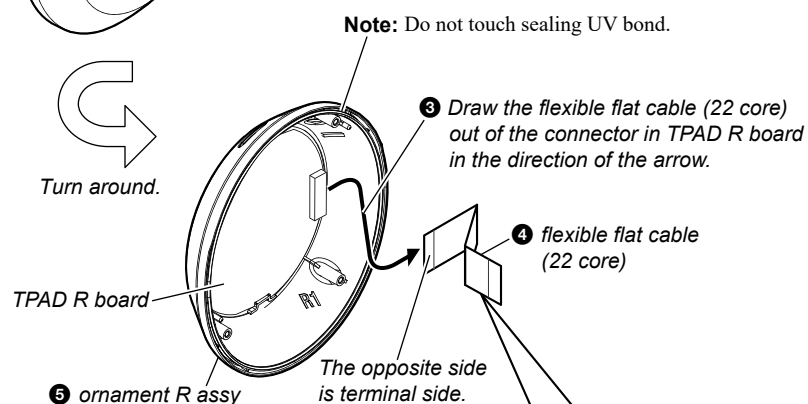
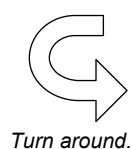
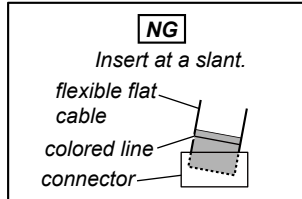
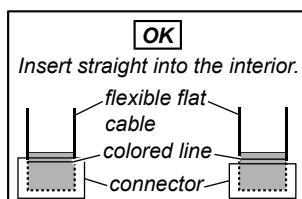
• Battery wire setting



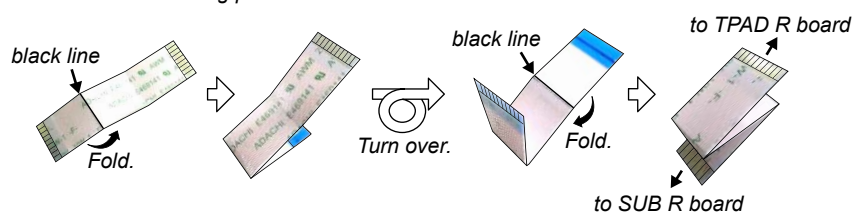
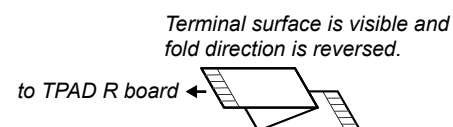
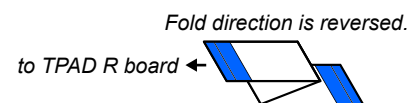
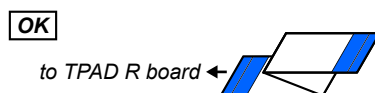
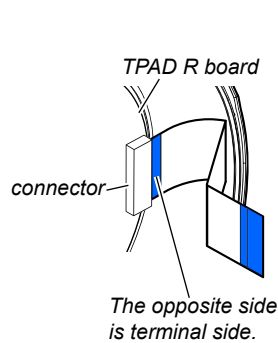
2-6. ORNAMENT R ASSY (R-ch)



- **How to install the flexible flat cable**
When installing the flexible flat cable, ensure that the colored line is parallel to the connector after insertion.

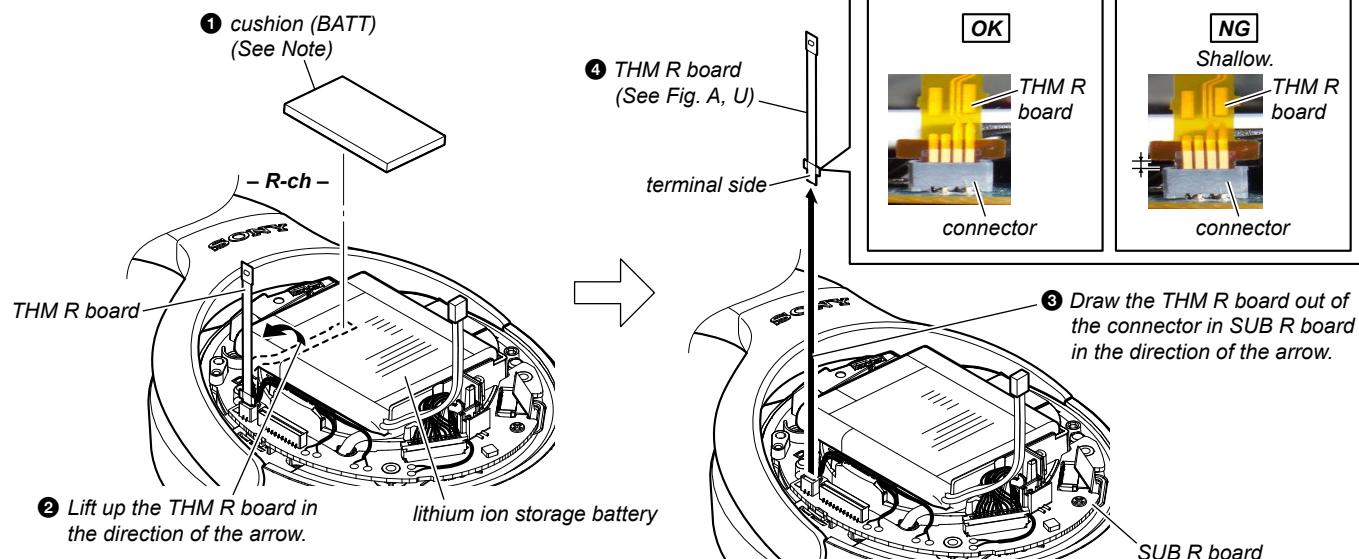
• **Folding the flexible flat cable (22 core)**

Before installing the flexible flat cable (22 core) to the board, fold it with the following procedure.

• **Installation direction for the flexible flat cable (22 core)**

2-7. THM R BOARD (R-ch)

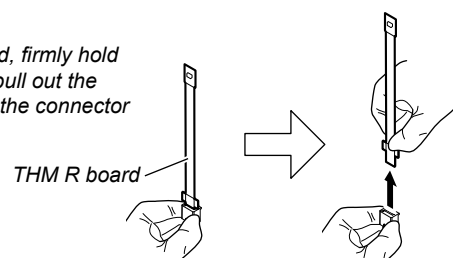
Note: When removing the cushion (BATT) from the lithium ion storage battery, be careful so that the lithium ion storage battery is never damaged.



Note when removing the THM R board

< Fig. U >

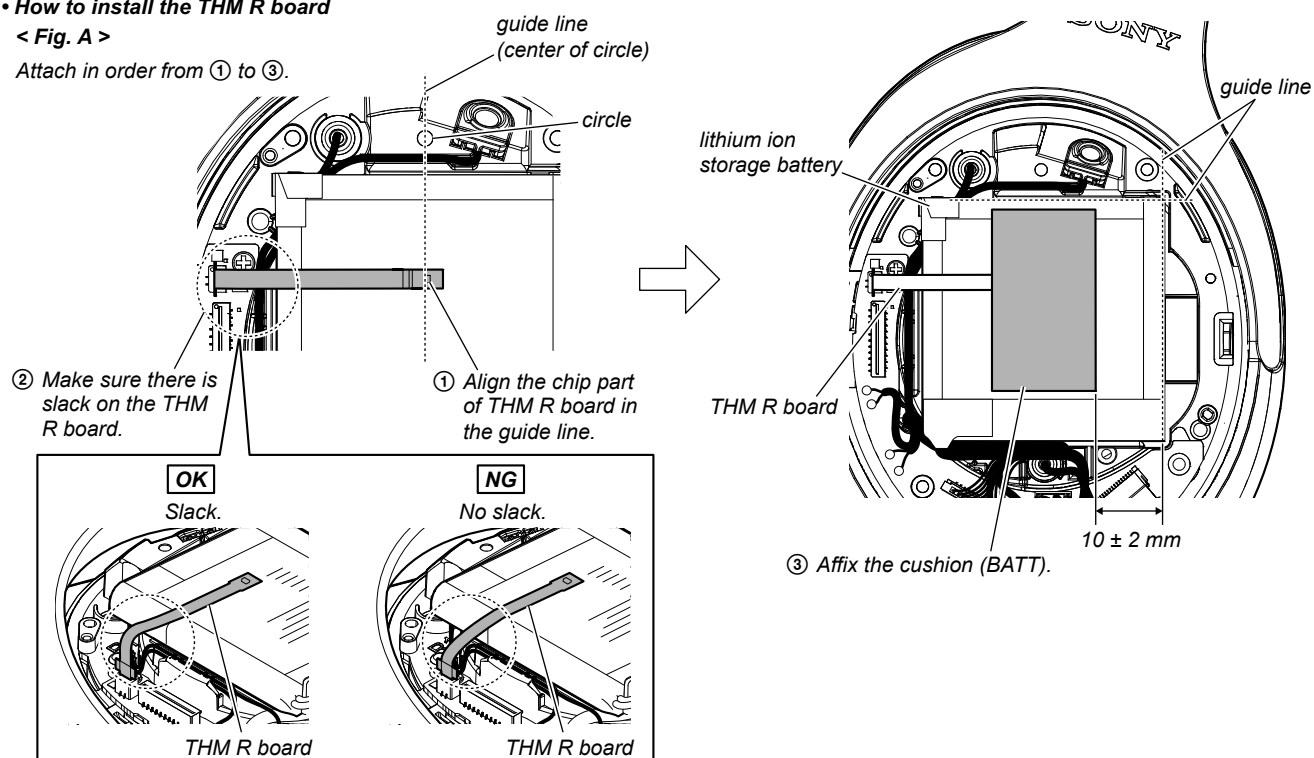
When removing the THM R board, firmly hold down the connector, and slowly pull out the THM R board straight up so that the connector does not get damaged.



How to install the THM R board

< Fig. A >

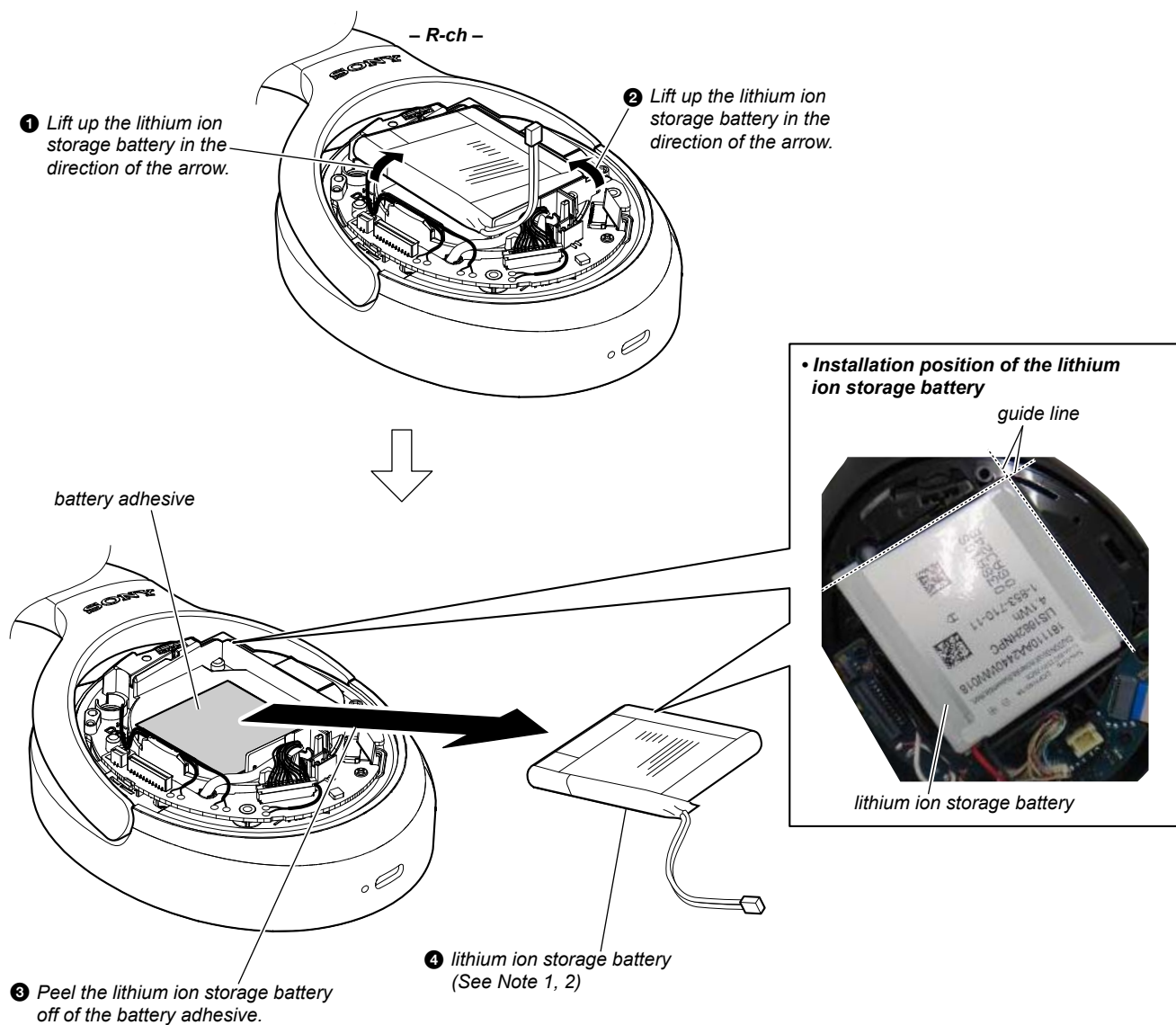
Attach in order from ① to ③.



2-8. LITHIUM ION STORAGE BATTERY (R-ch)

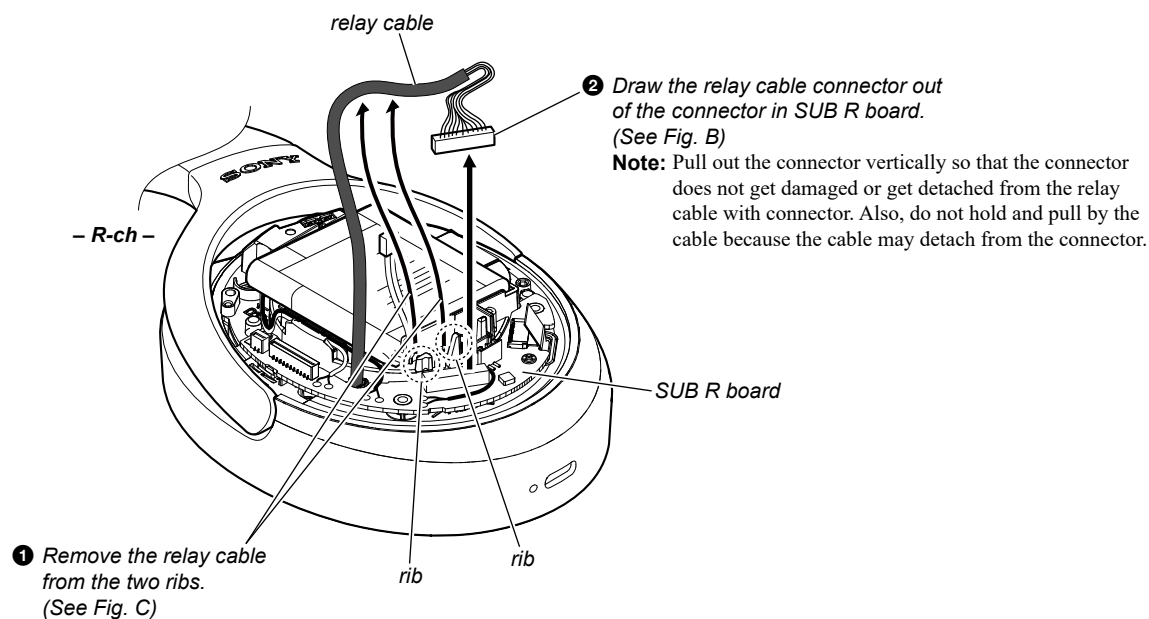
Note 1: When removing the lithium ion storage battery, the lithium ion storage battery cannot be reused.
Be sure to replace it with a new part.
Also, when replacing the lithium ion storage battery, refer to “CHECKING THE NEW LITHIUM ION STORAGE BATTERY FOR BEFORE USE AND NOTES ON HANDLING” on page 4.

Note 2: There are two types of the lithium ion storage battery, but the repair parts of the lithium ion storage battery is one type.
For details, refer to “ABOUT THE TYPE OF THE LITHIUM ION STORAGE BATTERY” on page 4.



2-9. SUB R BOARD-1 (R-ch)

- Continued on 2-10 (page 33).

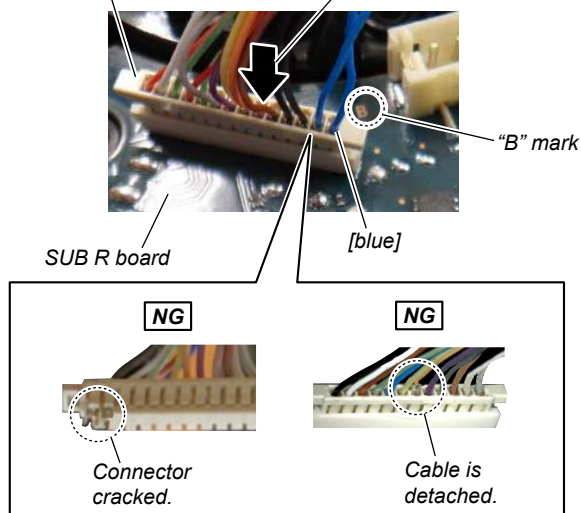


• Wire setting

Attach in order from ① to ③.

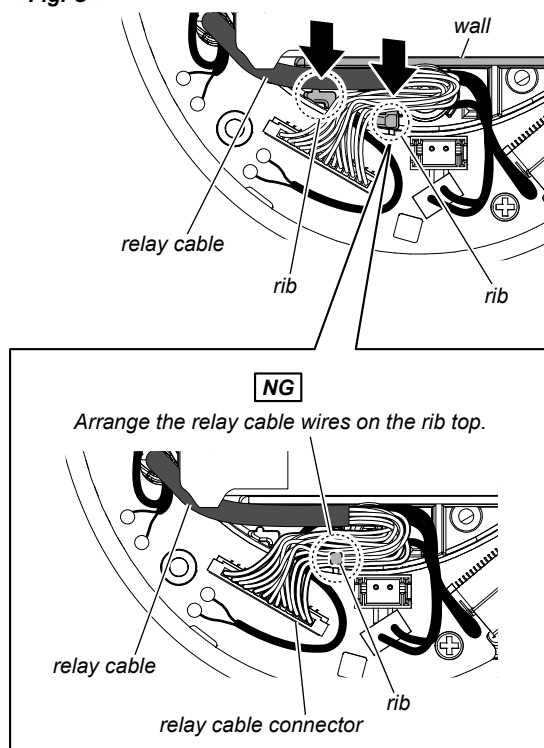
< Fig. B >

- ① Insert the connector gently. (The [blue] wire is "B" mark side)
- ② Press in the connector vertically.



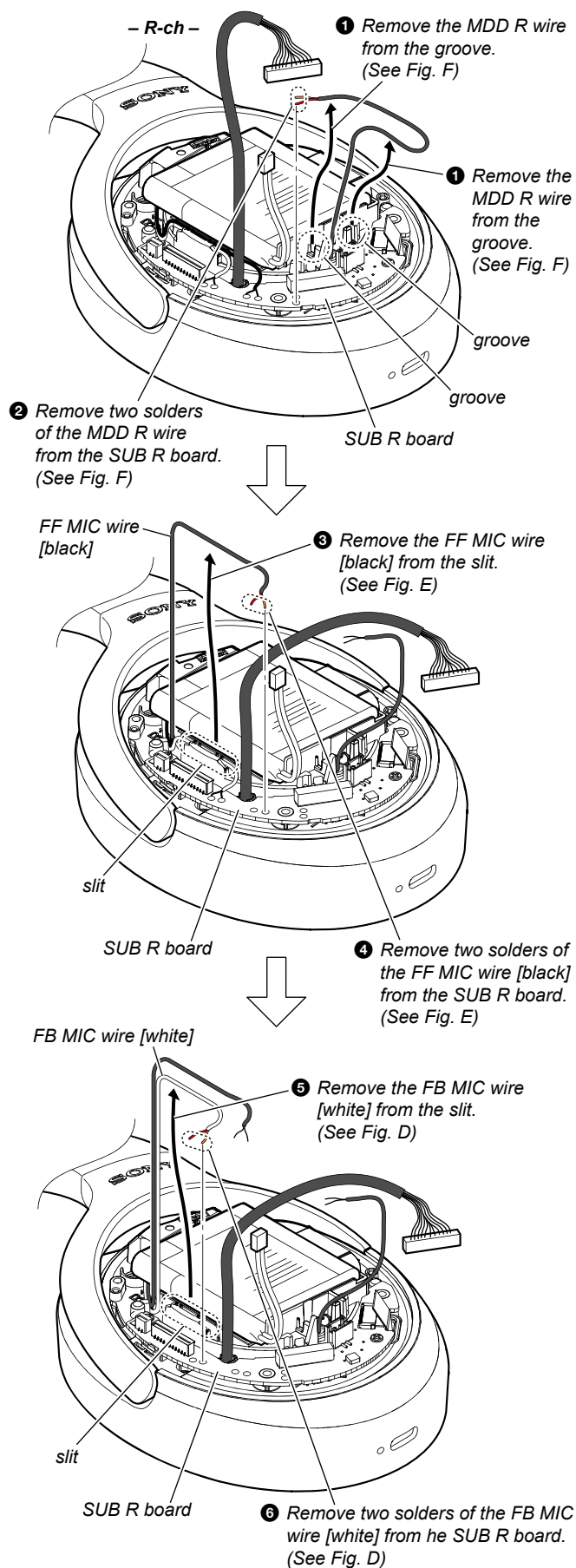
< Fig. C >

- ③ Press the relay cable into the gap between the wall and two ribs.



2-10. SUB R BOARD-2 (R-ch)

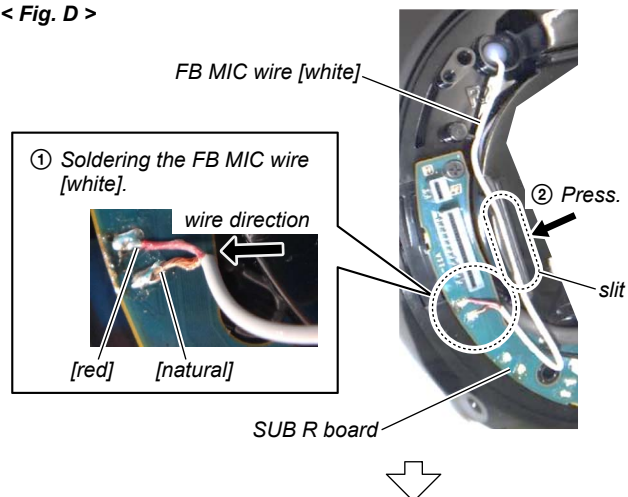
• Continued on 2-11 (page 34).



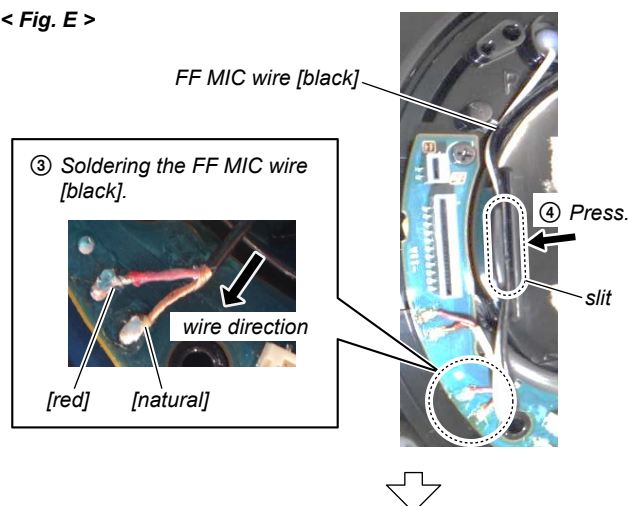
• Wire setting

Attach in order from ① to ⑥.

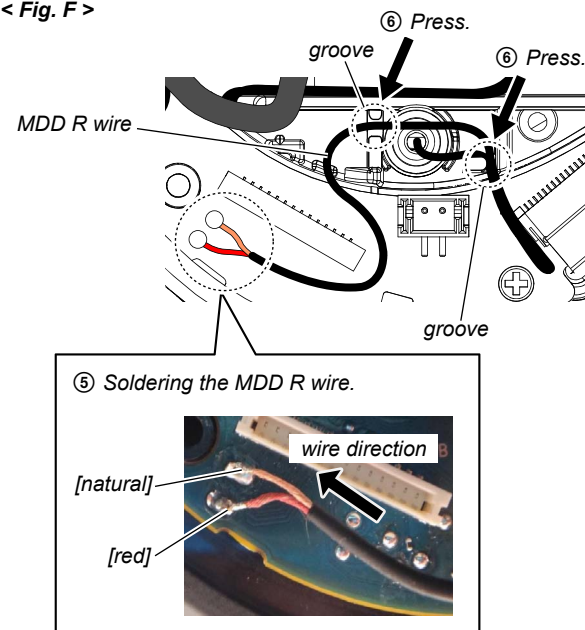
< Fig. D >



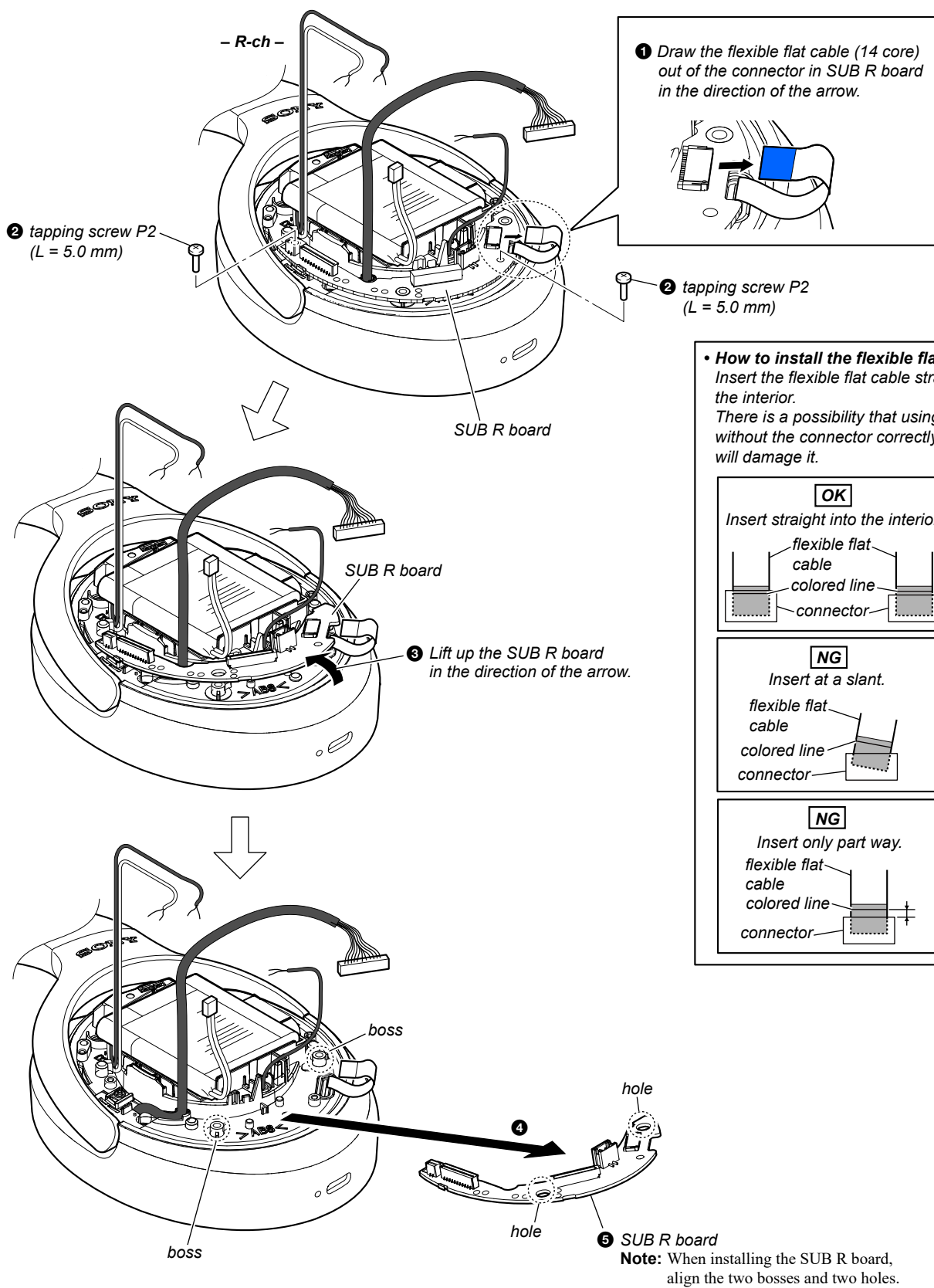
< Fig. E >



< Fig. F >



2-11. SUB R BOARD-3 (R-ch)

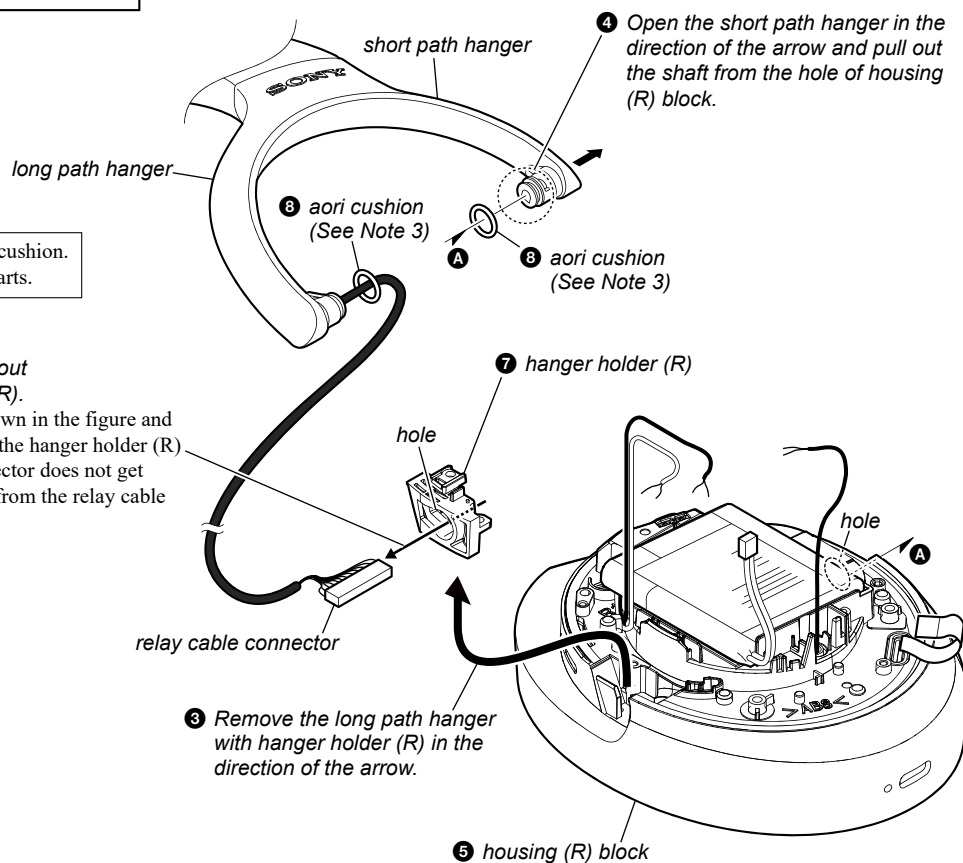
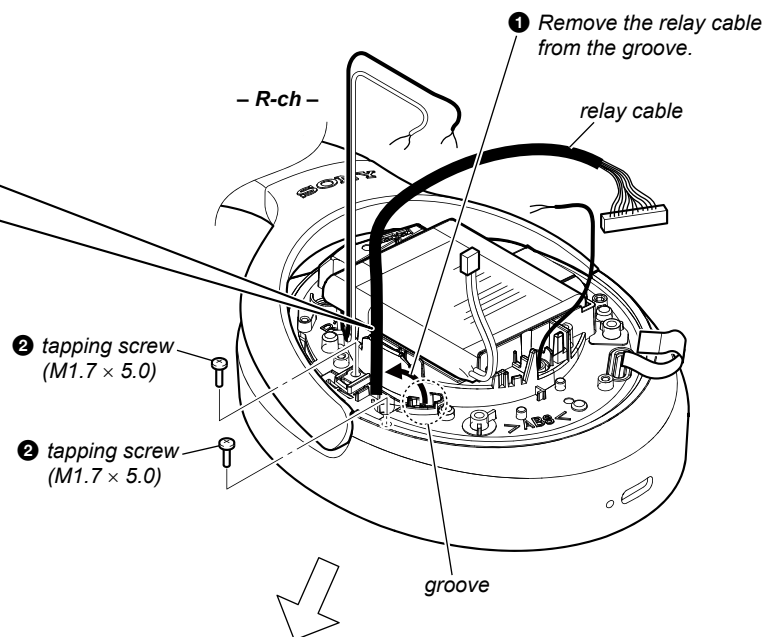
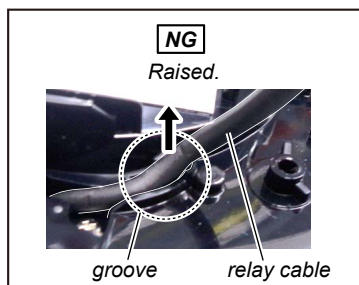
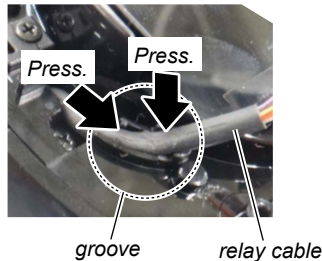


2-12. HOUSING (R) BLOCK, AORI CUSHION (R-ch)

Note 1: When the headband assy is replaced with a new part, the serial number is changed.

• **Wire setting**

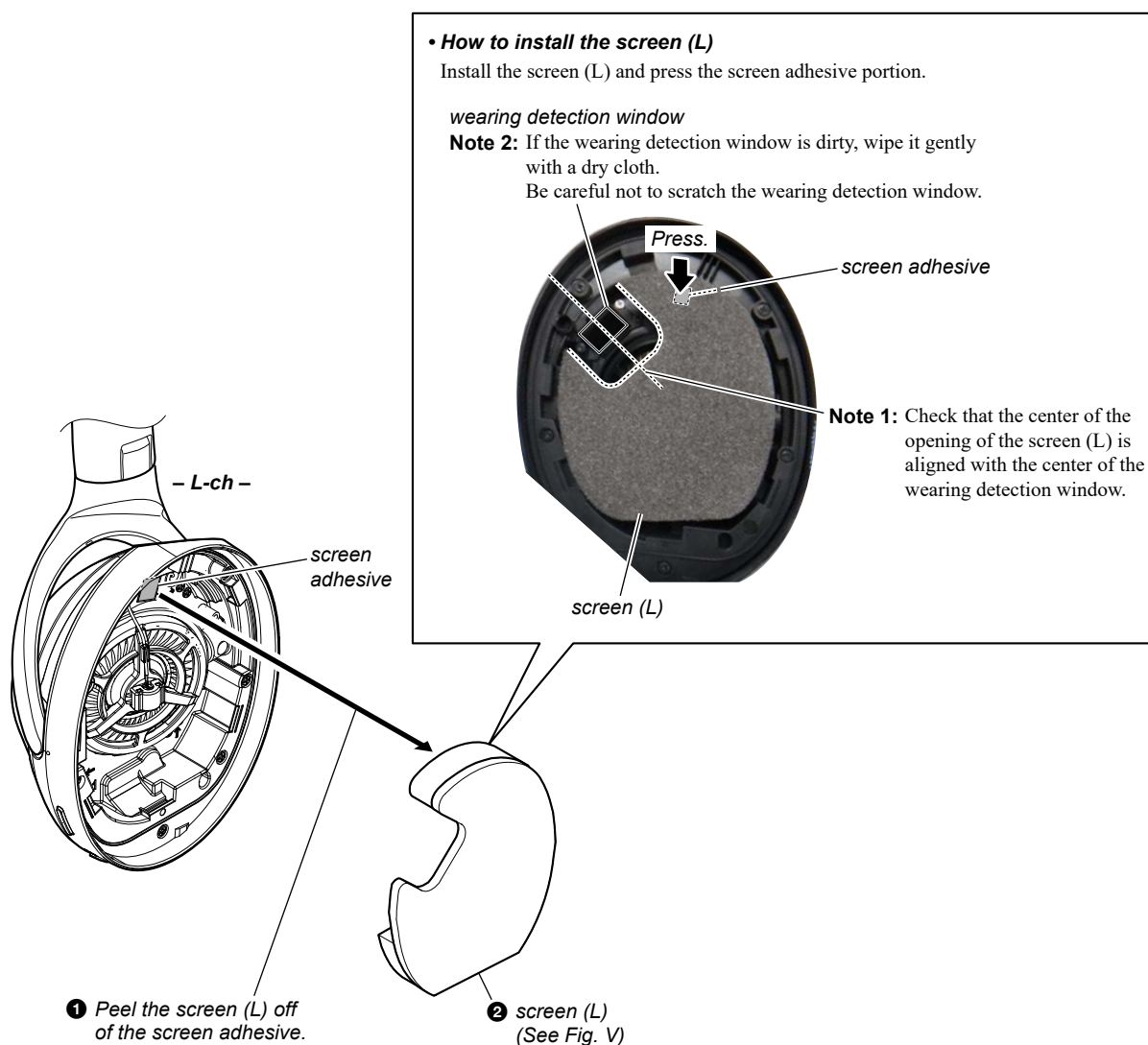
Press the relay cable firmly into the groove.



Note 3: Lubricant is applied to the aori cushion. Be careful when handling the parts.

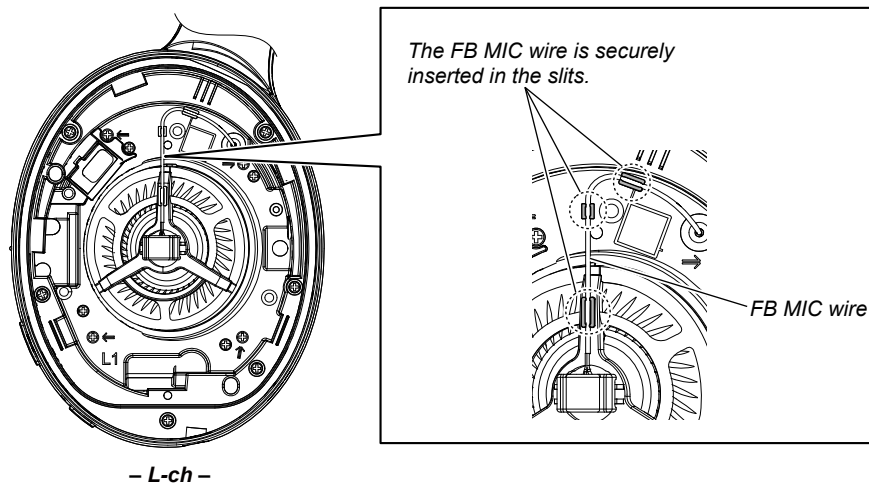
6 Draw the relay cable connector out from the hole of hanger holder (R).

Note 2: Bend the connector as shown in the figure and detach it from the hole of the hanger holder (R) carefully so that the connector does not get damaged or get detached from the relay cable connector.

2-13. SCREEN (L) (L-ch)

• Checking before installing the screen (L)

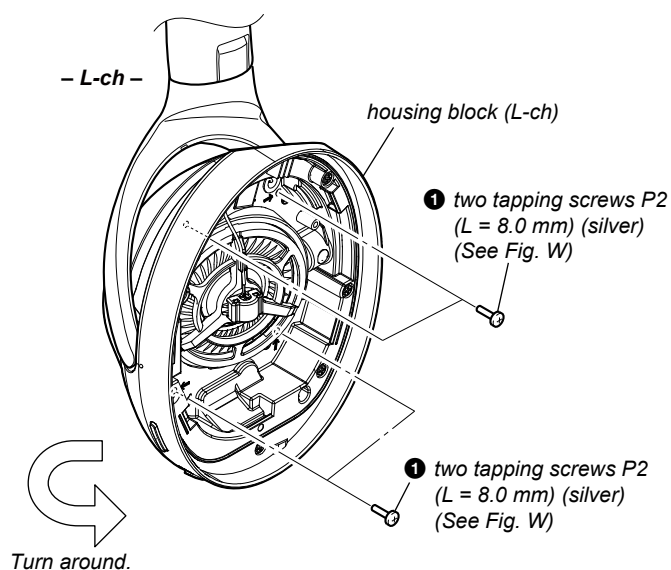
< Fig. V >

Before installing the screen (L), make sure to check that the FB MIC wire is correctly installed in the slits.



2-14. ORNAMENT L ASSY (L-ch)

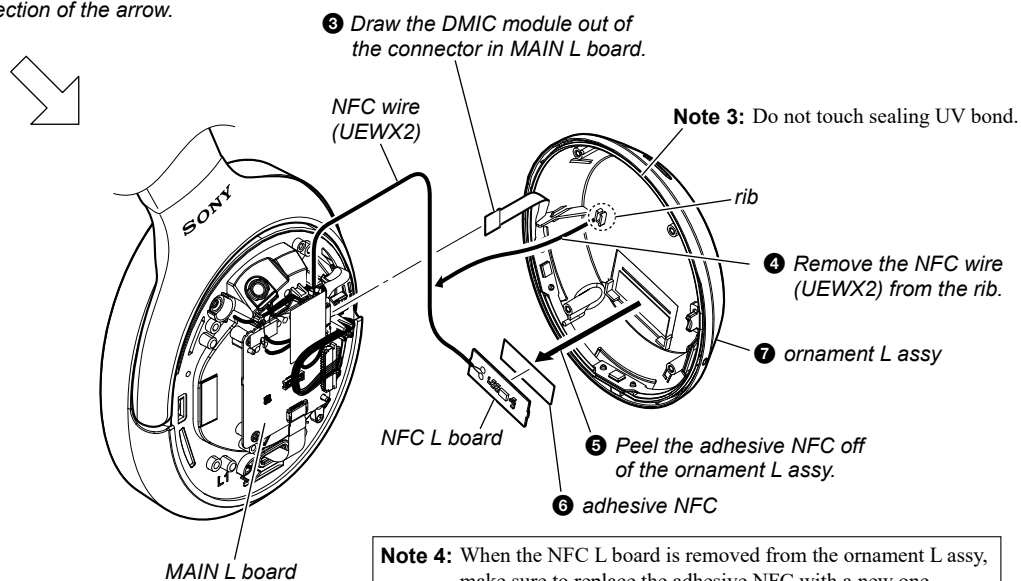
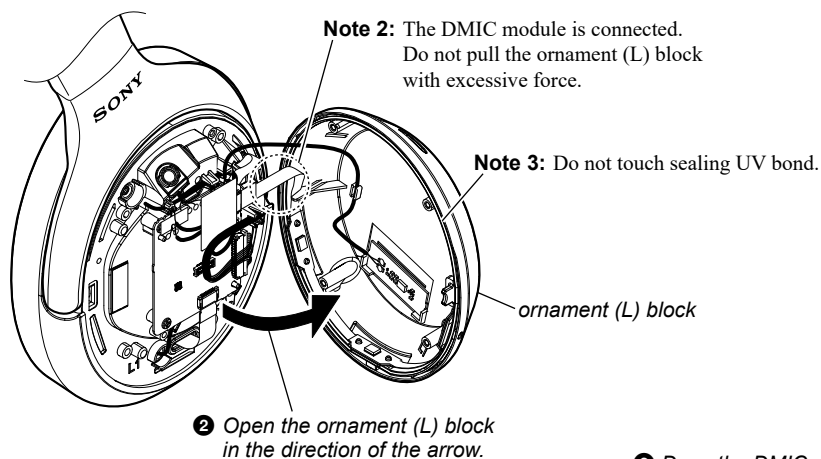
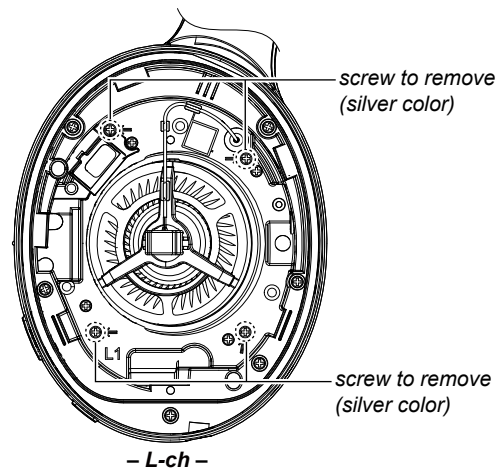
Note 1: When installing the ornament L assy, refer to “2-15. HOW TO INSTALL THE ORNAMENT L ASSY” on page 38.



• **Note when removing the screws**

< Fig. W >

There are only four screws (silver color) required to remove the ornament (L) block as shown in the figure below. Do not remove the other screws.

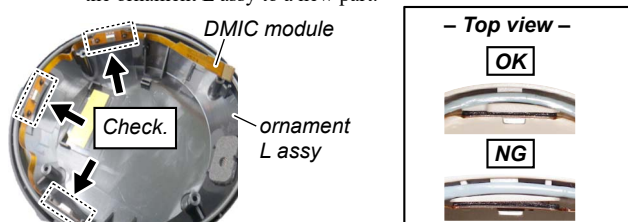


2-15. HOW TO INSTALL THE ORNAMENT L ASSY (L-ch)

When installing the ornament L assy, be sure to refer to the following procedure and install in order of ① to ⑨. Install it while being especially careful not to peel off the DMIC module or turn up the DMIC module.

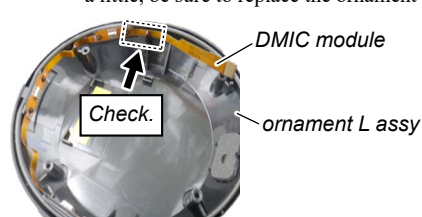
- ① Check that the microphone part of the three places in the figure below are not peeled off or turned up.

Note 1: As shown figure blow in the frame, when the microphone part is floating or is rolling up even just a little, be sure to replace the ornament L assy to a new part.



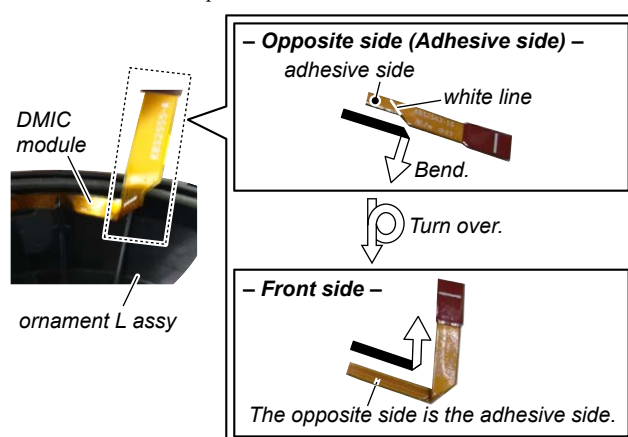
- ② Check that the adhesive fixing part surrounded by the dotted frame in the figure below is not peeled off or turned up.

Note 2: When the adhesive fixing part is floating or rolling up even just a little, be sure to replace the ornament L assy to a new part.



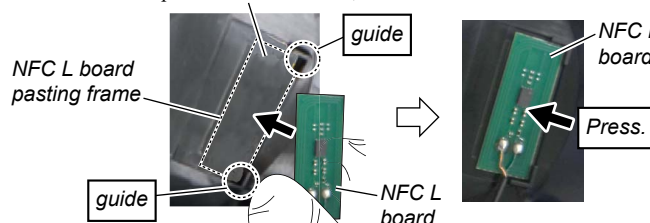
- ③ Check that the DMIC module is surely bent.

Note 3: When the DMIC module is not bent, bend it firmly along with the white line printed on the DMIC module.

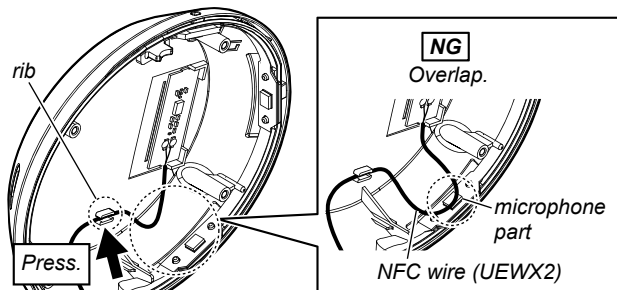


- ④ Paste the NFC L board into the frame in accordance with the guide of the ornament L assy, press firmly it.

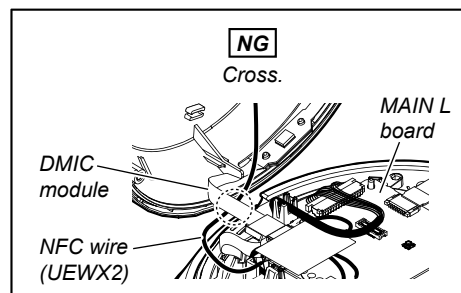
Note 7: If the ornament L assy is replaced with a new one, peel off the adhesive NFC release paper. If the ornament L assy is not replaced with a new one, affix a new adhesive NFC.



- ⑤ Press the NFC wire (UEWX2) into the rib.

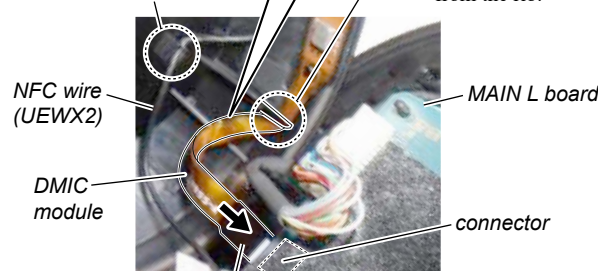


- ⑥ Insert the DMIC module securely into the connector on the MAIN L board.

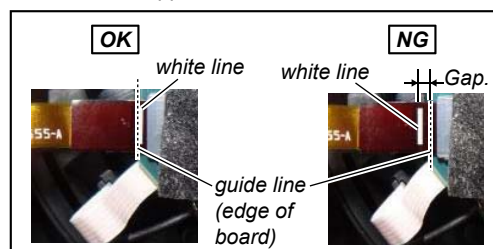


Note 4: Check that the NFC wire (UEWX2) is not detached from the rib.

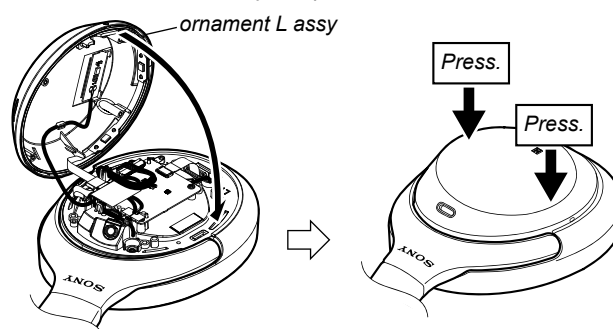
Note 5: Check that the DMIC module is not detached from the rib.



The opposite side is the terminal side.



- ⑦ Close the ornament L assy and press it from above.



- ⑧ Install four screws P2 (L = 8.0 mm) (silver).



- ⑨ Install the earpad assy, perform the operation check.

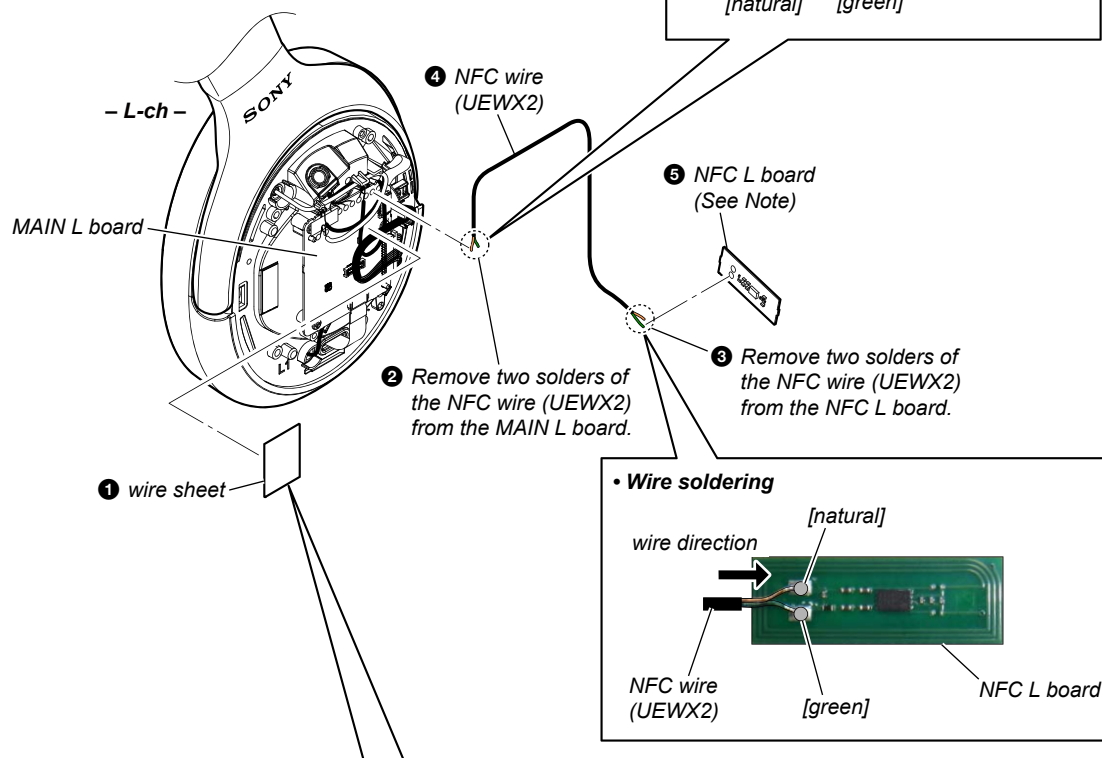
Note 6: Refer to "CHECKING METHOD AFTER INSTALLING THE ORNAMENT L ASSY" on page 23, for the operation checking method.

2-16. NFC L BOARD (L-ch)

Note: Replacing only the NFC L board is not possible.

When replacing the NFC L board, be sure to replace the MAIN L board and NFC L board simultaneously. The repair parts of NFC L board is included in repair parts of MAIN L board.

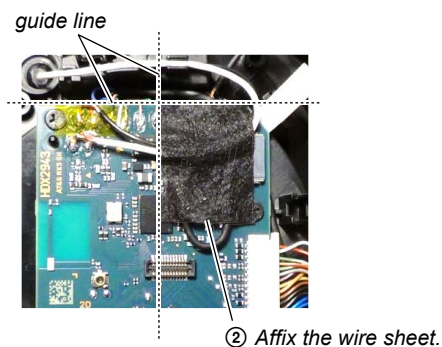
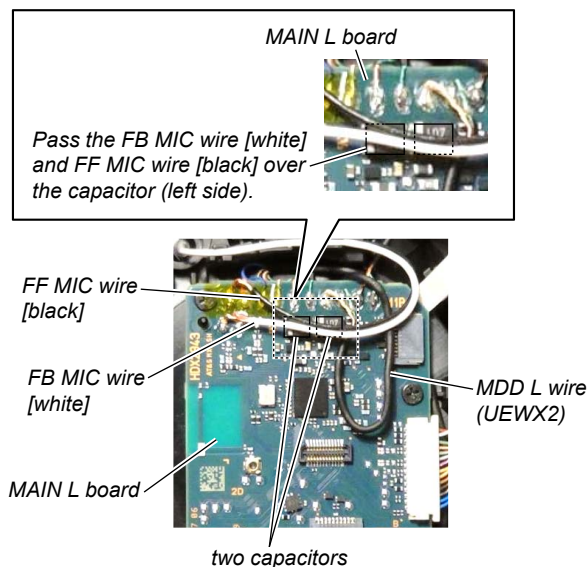
Also, when MAIN L board and NFC L board are replaced, then it is always necessary to work the writing for multiple information such as Bluetooth address and adjustment value of noise canceling function etc.. When NFC L board is replaced, be sure to refer "NOTE FOR REPLACING THE MAIN L BOARD" on page 6.



• Pasting position of the wire sheet

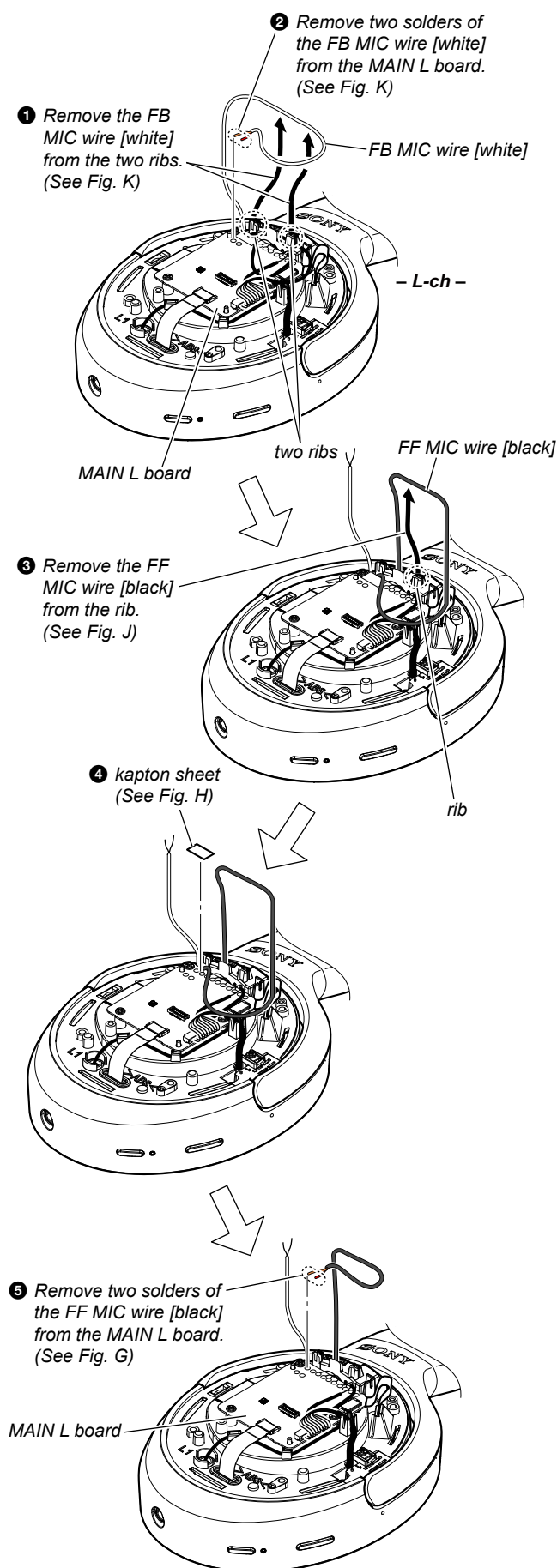
Attach in order from ① to ②.

① Arrange the each wire as shown in the figure.



2-17. MAIN L BOARD-1 (L-ch)

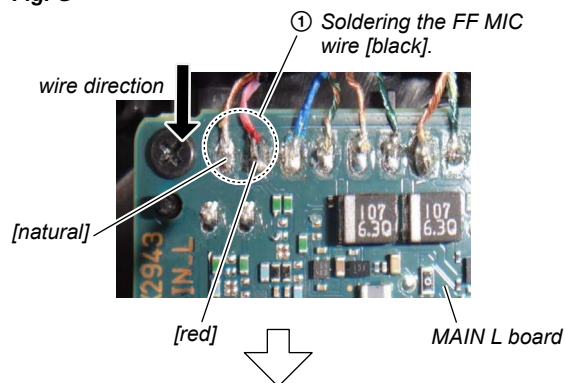
• Continued on 2-18 (page 41).



• Wire setting

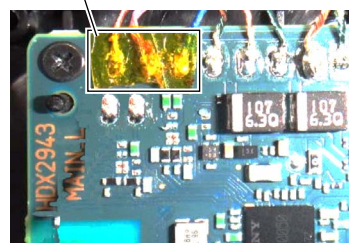
Attach in order from ① to ⑤.

< Fig. G >

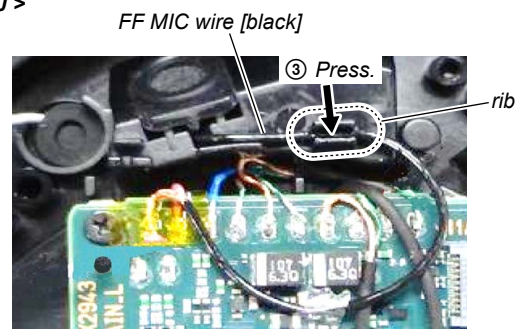


< Fig. H >

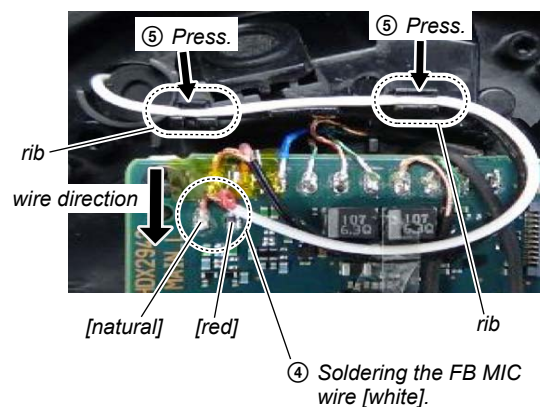
② Affix the kapton sheet.



< Fig. J >

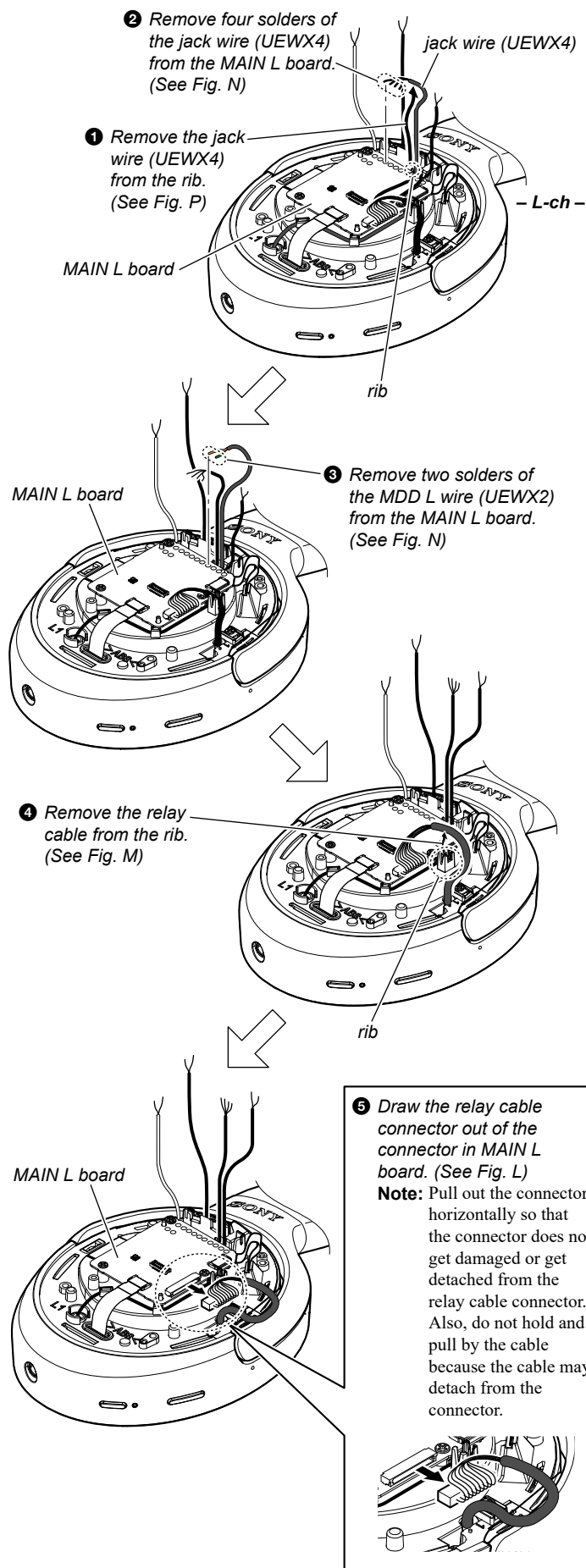


< Fig. K >



2-18. MAIN L BOARD-2 (L-ch)

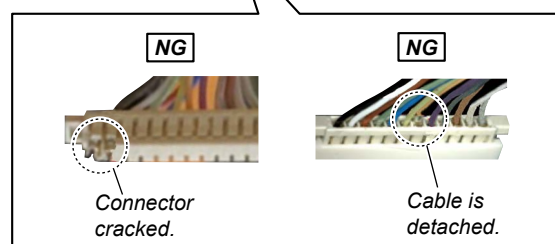
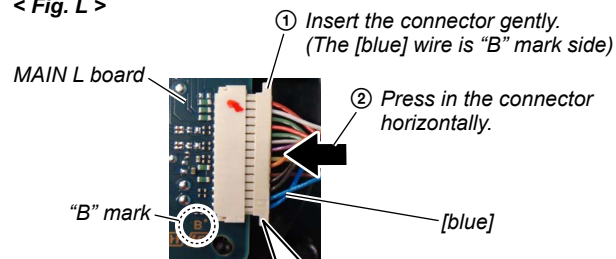
• Continued on 2-19 (page 42).



• Wire setting

Attach in order from ① to ⑥.

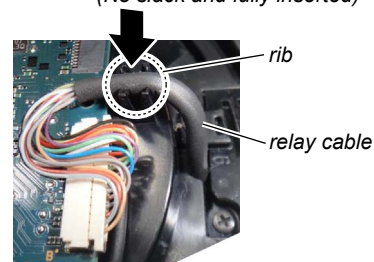
< Fig. L >



< Fig. M >



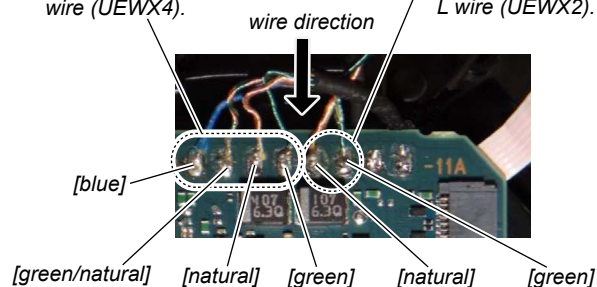
③ Press. (No slack and fully inserted)



< Fig. N >

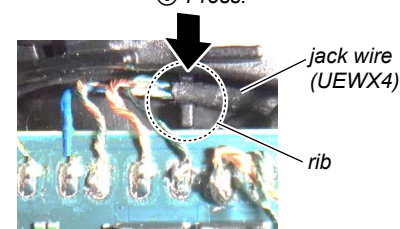
⑤ Soldering the jack wire (UEWX4).

④ Soldering the MDD L wire (UEWX2).



< Fig. P >

⑥ Press.



2-19. MAIN L BOARD-3 (L-ch)

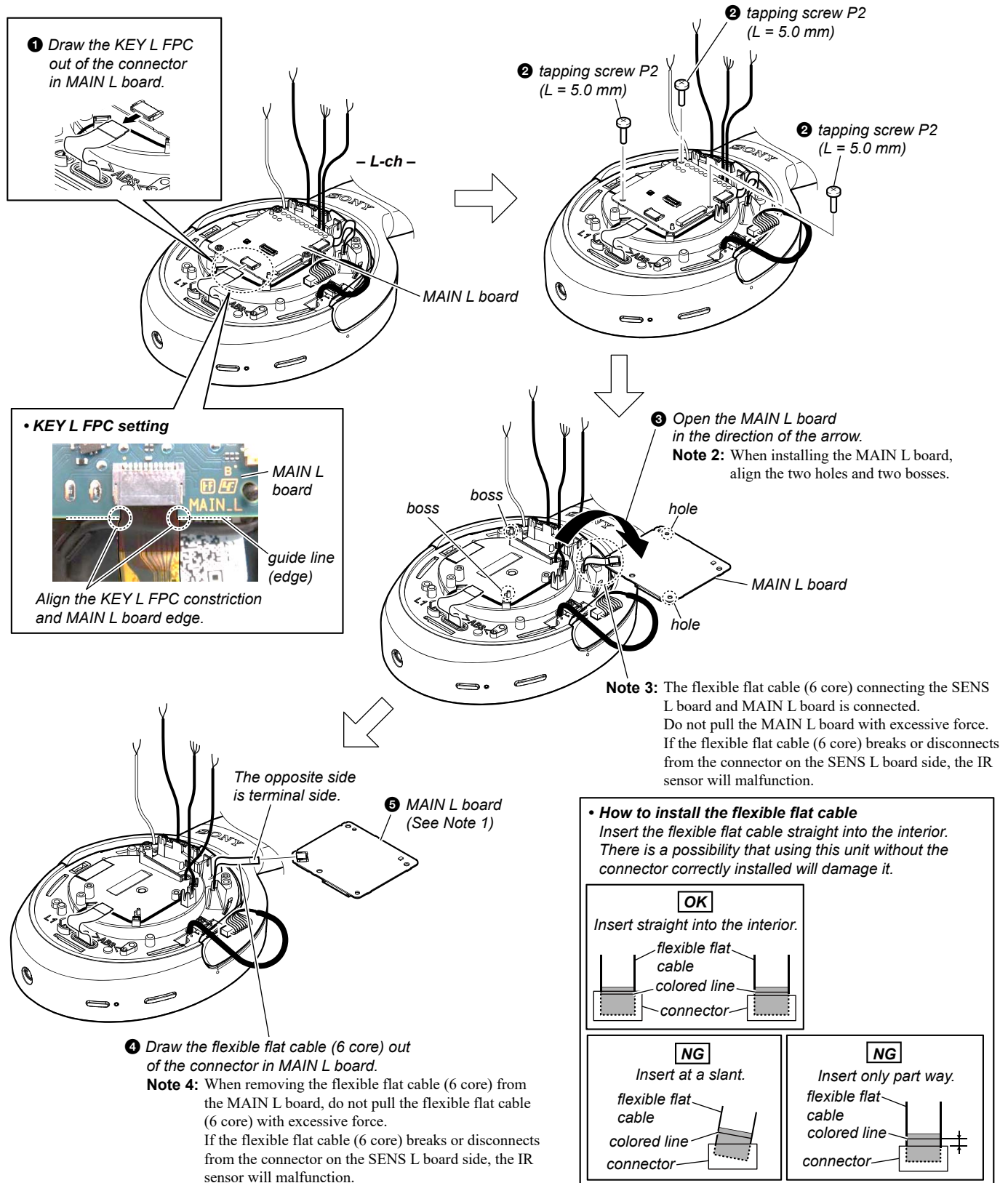
Note 1: Replacing only the MAIN L board is not possible.

When replacing the MAIN L board, be sure to replace the MAIN L board and NFC L board simultaneously.

The NFC L board and NFC L board connection wire are included in the repair parts of MAIN L board.

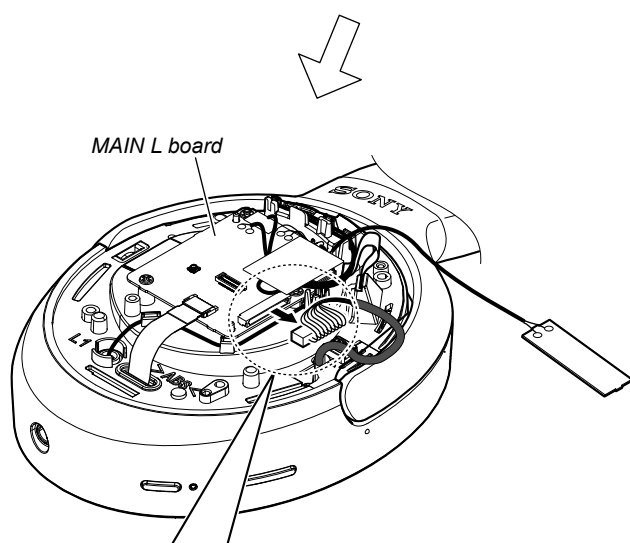
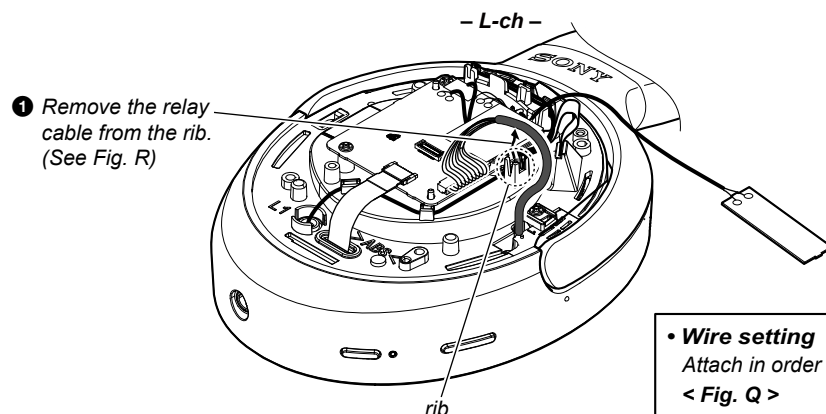
Also, when MAIN L board and NFC L board are replaced, then it is always necessary to work the writing for multiple information such as Bluetooth address and adjustment value of noise canceling function etc..

When MAIN L board is replaced, be sure to refer "NOTE FOR REPLACING THE MAIN L BOARD" on page 6.



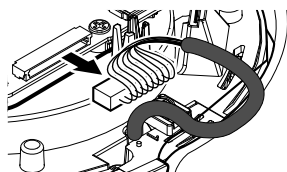
2-20. HOUSING (L) BLOCK, AORI CUSHION-1 (L-ch)

- Continued on 2-21 (page 44).



- 2 Draw the relay cable connector out of the connector in MAIN L board.
(See Fig. Q)

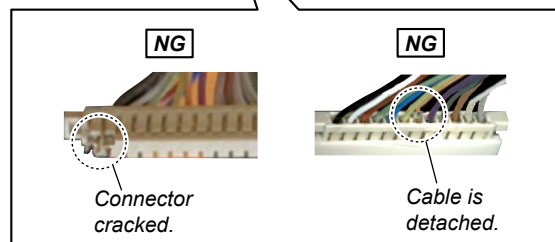
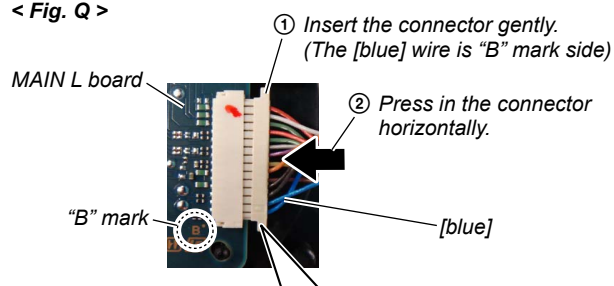
Note: Pull out the connector horizontally so that the connector does not get damaged or get detached from the relay cable connector. Also, do not hold and pull by the cable because the cable may detach from the connector.



• Wire setting

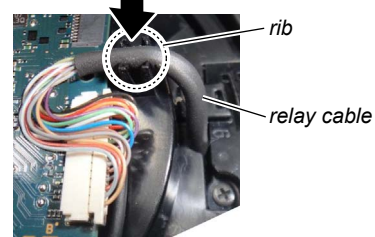
Attach in order from ① to ③.

< Fig. Q >



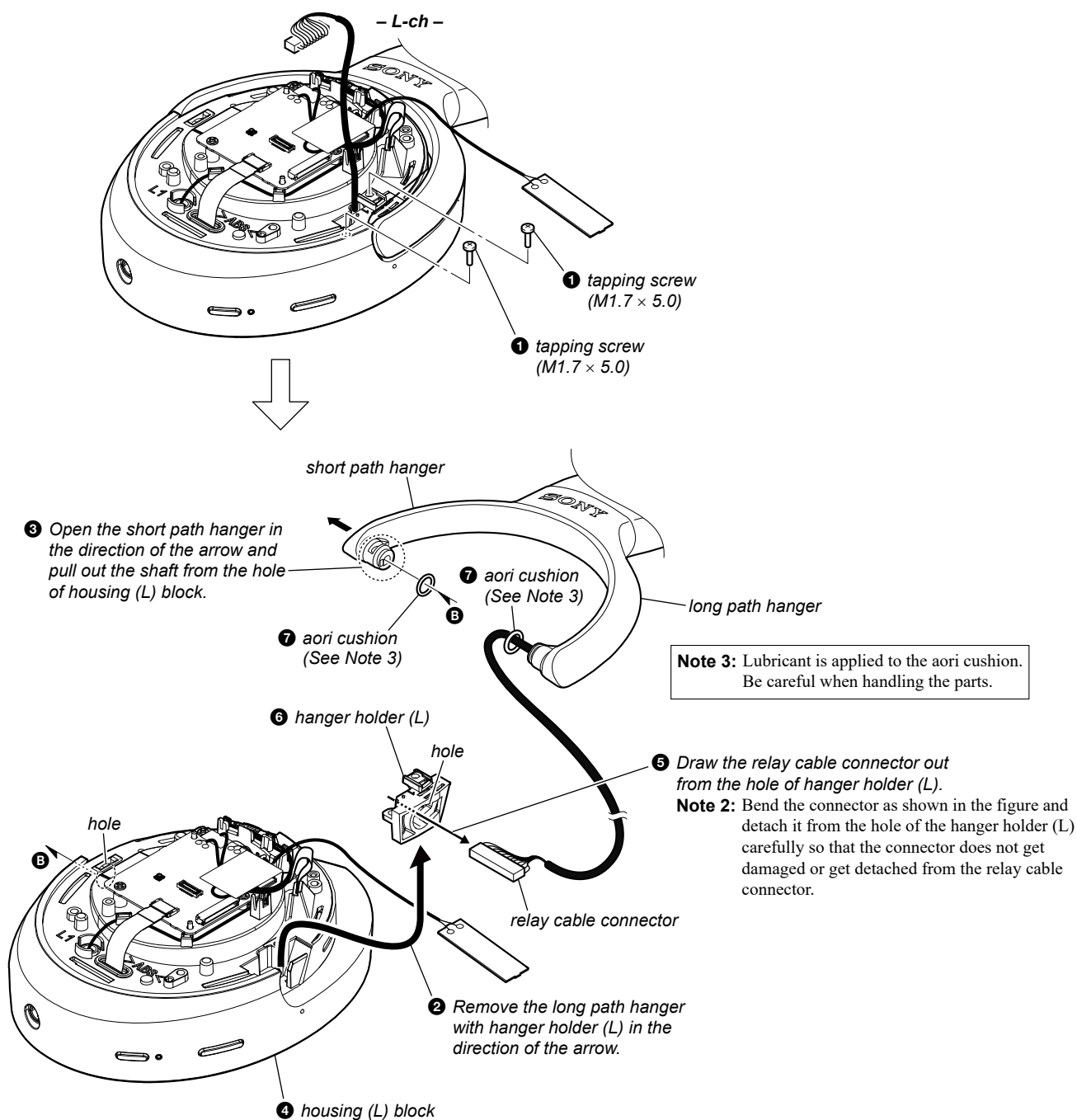
< Fig. R >

- ③ Press.
(No slack and fully inserted)



2-21. HOUSING (L) BLOCK, AORI CUSHION-2 (L-ch)

Note 1: When the headband assy is replaced with a new part, the serial number is changed.

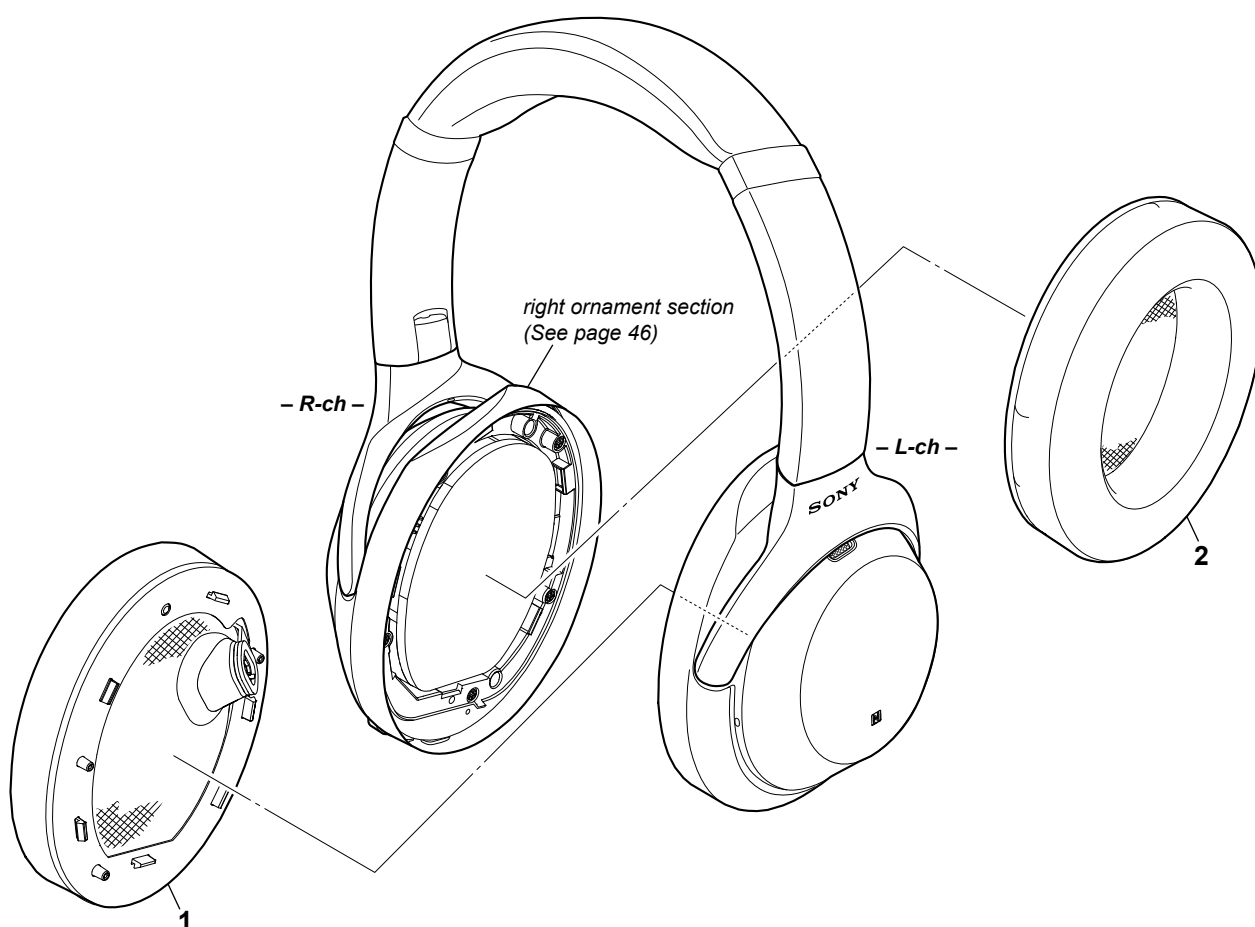


SECTION 3 EXPLODED VIEWS

Note:

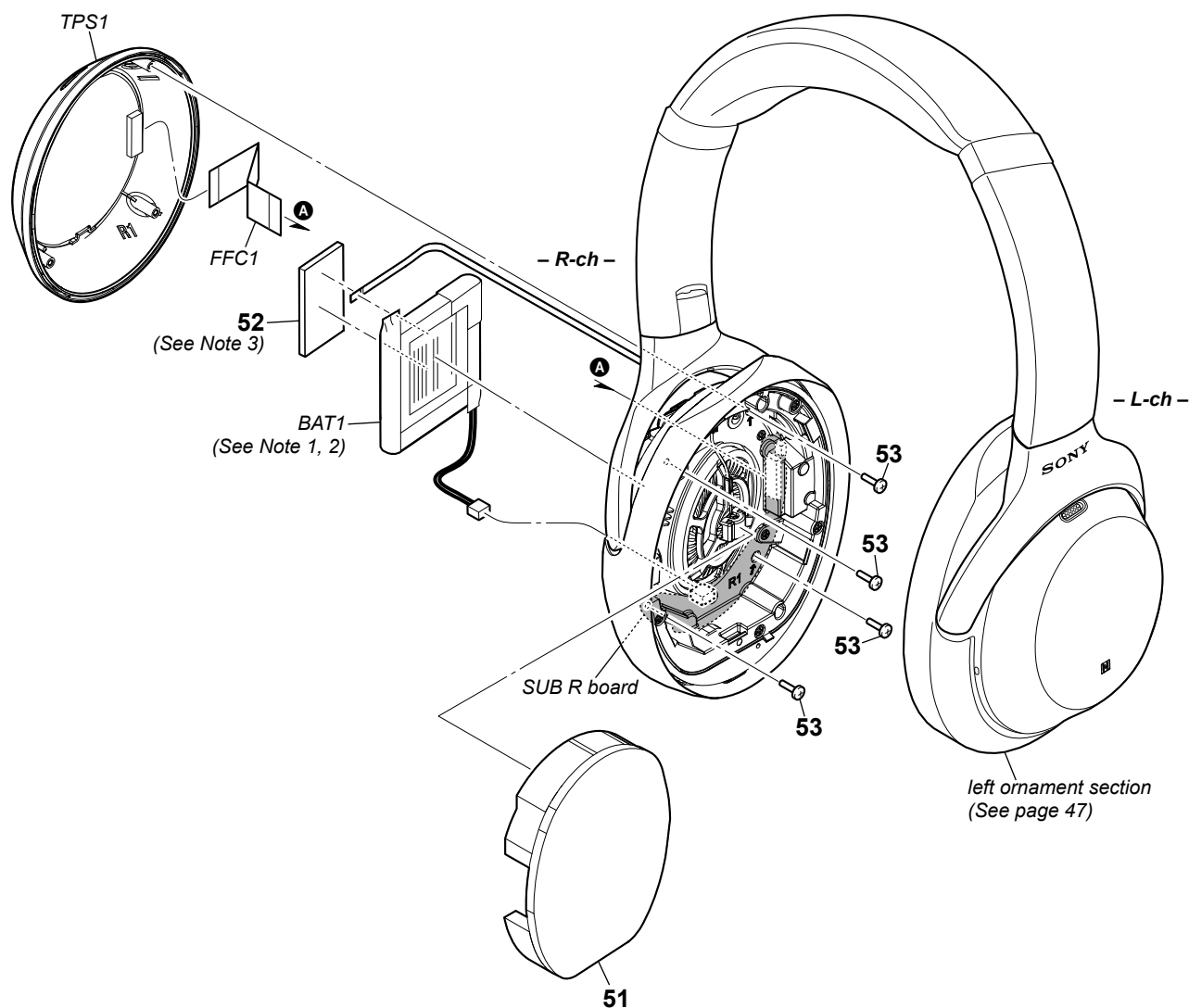
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Color Indication of Appearance Parts Example:
KNOB, BALANCE (WHITE) . . . (RED)
↑ ↑
Parts Color Cabinet's Color
- Refer to "COLOR VARIATIONS" on page 4 about color variation of the unit.

3-1. EARPAD SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X50011171	EARPAD (L) ASSY (BLACK) (for L-ch) (for Black)		2	X50011201	EARPAD (R) ASSY (SILVER) (for R-ch)	
1	X50011191	EARPAD (L) ASSY (SILVER) (for L-ch)				(for Platinum Silver)	
		(for Platinum Silver)					
1	X50019901	EARPAD (L) ASSY (BLUE) (for L-ch) (for Blue)		2	X50019911	EARPAD (R) ASSY (BLUE) (for R-ch) (for Blue)	
2	X50011181	EARPAD (R) ASSY (BLACK) (for R-ch) (for Black)					

3-2. RIGHT ORNAMENT SECTION



Note 1: When removing the lithium ion storage battery (Ref. No. BAT1), the lithium ion storage battery cannot be reused.
 Be sure to replace it with a new part.
 Also, when replacing the lithium ion storage battery, refer to “CHECKING THE NEW LITHIUM ION STORAGE BATTERY FOR BEFORE USE AND NOTES ON HANDLING” on page 4.

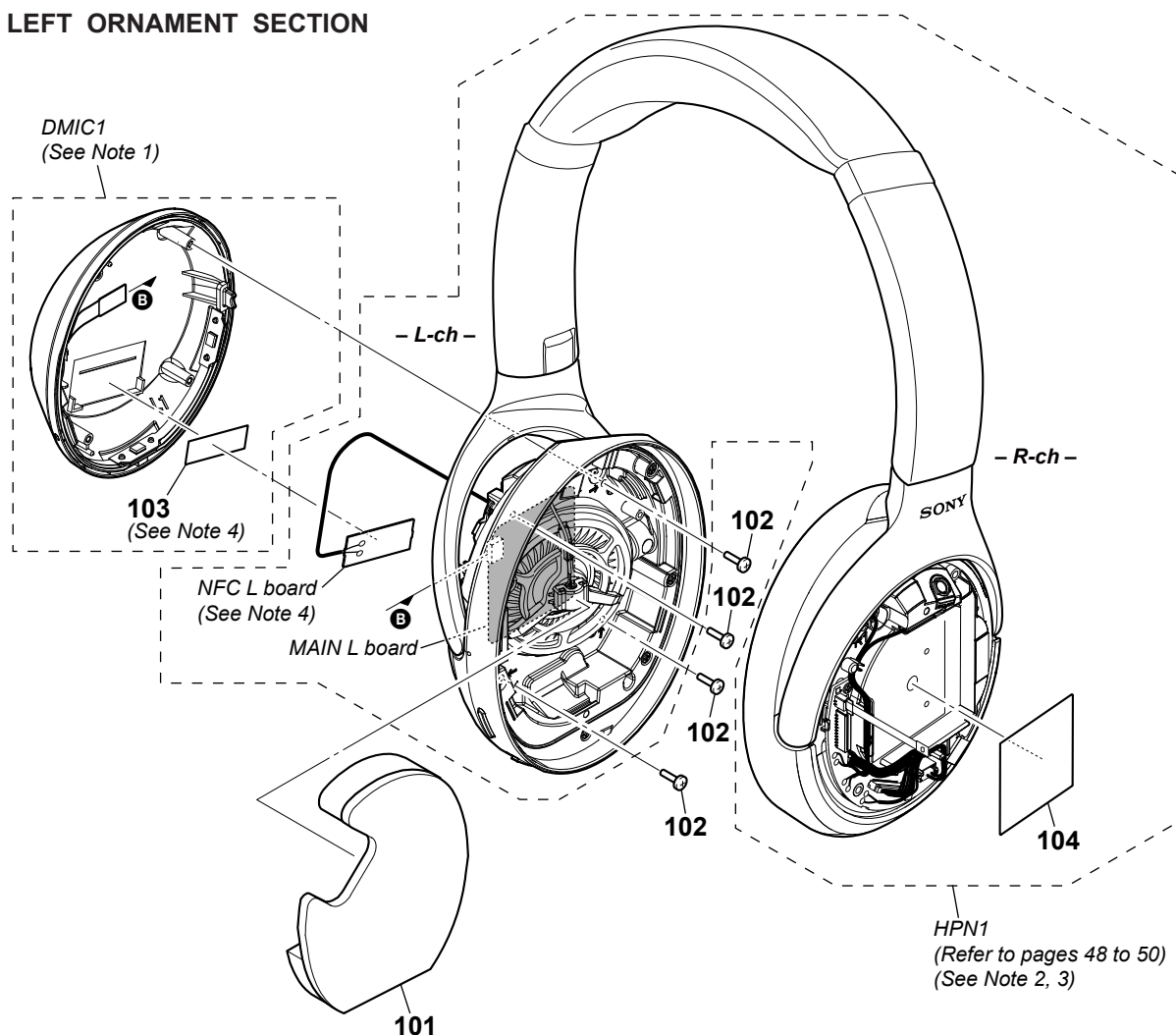
Note 2: There are two types of the lithium ion storage battery, but the repair parts of the lithium ion storage battery is one type.
 For details, refer to “ABOUT THE TYPE OF THE LITHIUM ION STORAGE BATTERY” on page 4.

Note 3: When removing the cushion (BATT) (Ref. No. 52) from the lithium ion storage battery, be careful so that the lithium ion storage battery is never damaged.

Ref. No.	Part No.	Description	Remark
51	501364901	SCREEN (R) (for R-ch)	
52	454602121	CUSHION (BATT) (See Note 3)	
53	500837311	SCREW, TAPPING, P2 (L = 8.0 mm) (Silver)	
BAT1	185371012	BATTERY, STORAGE, LITHIUM ION (See Note 1, 2)	
FFC1	100635711	FLEXIBLE FLAT CABLE (22 CORE)	
TPS1	A5018224A	ORNAMENT R ASSY, SV (for R-ch) (Including TPAD R board) (for Black)	

Ref. No.	Part No.	Description	Remark
TPS1	A5018225A	ORNAMENT R ASSY, SV (for R-ch) (Including TPAD R board) (for Platinum Silver)	
TPS1	A5024277A	ORNAMENT R ASSY, SV (for R-ch) (Including TPAD R board) (for Blue)	

3-3. LEFT ORNAMENT SECTION



Note 1: When removing the SV ornament L assy (Ref. No. DMIC1) and installing it, be sure to refer to “CHECKING METHOD AFTER INSTALLING THE ORNAMENT L ASSY” on page 23.

Note 2: The component parts of the SV headphones assy (Ref. No. HPN1) is a block without the parts deployed in pages 45 to 47, such as the Earpad assy, Screen, Ornament assy, and Battery.
For details about the component parts, refer to “COMPONENT PARTS OF SV HEADPHONES ASSY” on page 22.

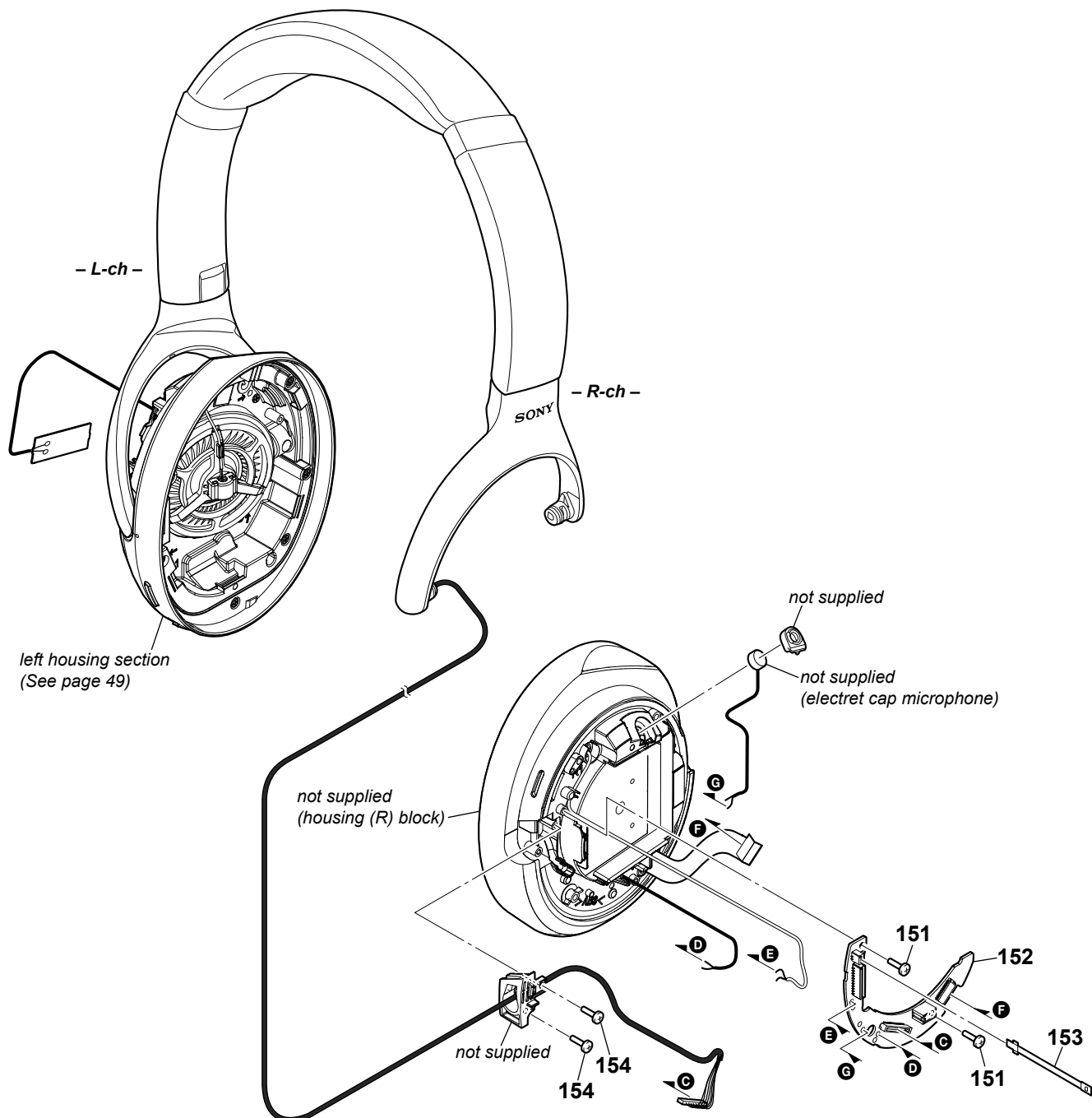
Note 3: When the SV headphones assy (Ref. No. HPN1) is replaced with a new part, the serial number is changed.

Note 4: When the NFC L board is removed from the ornament L assy, be sure to replace the adhesive NFC (Ref. No. 103) with a new part.

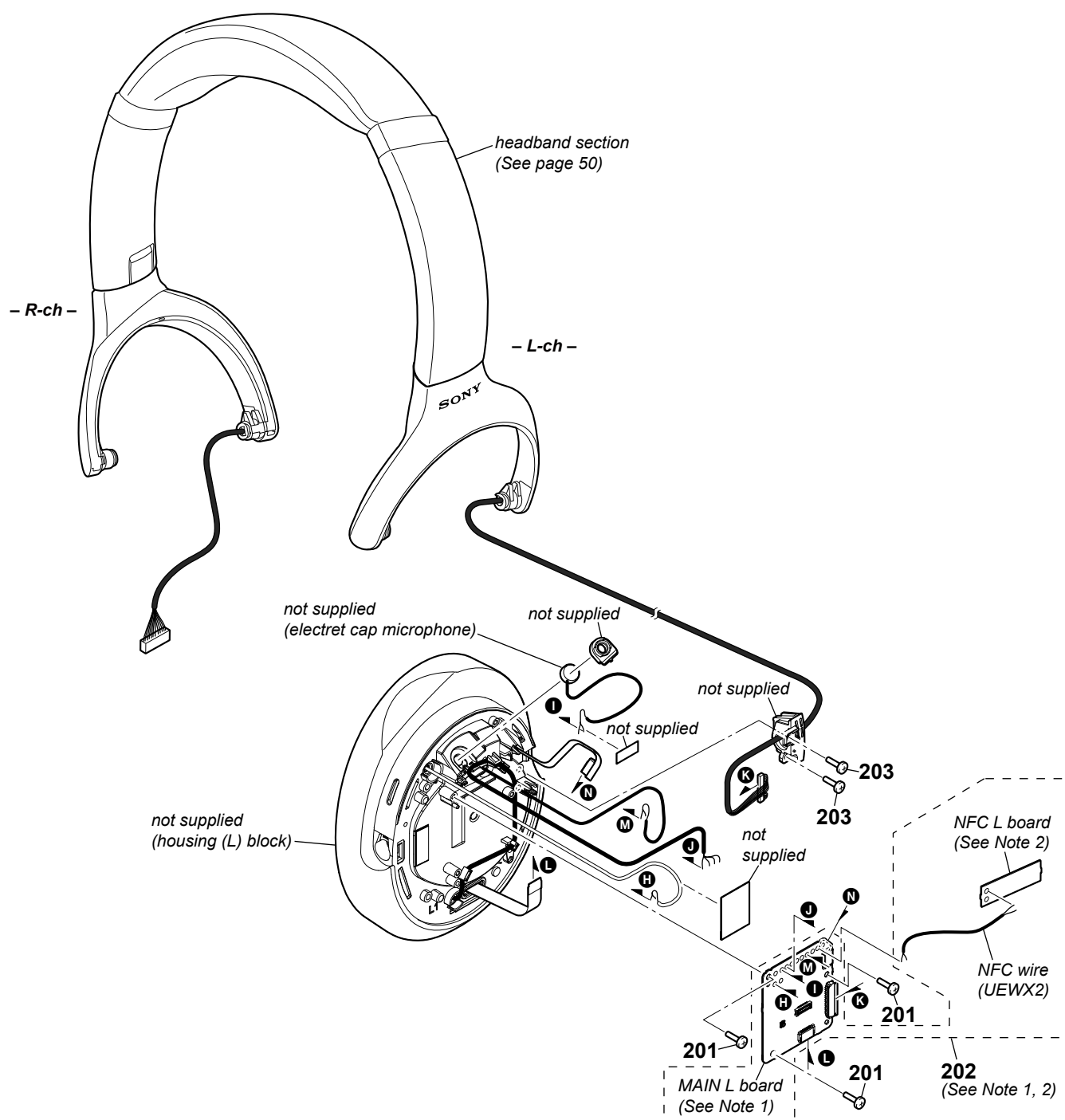
Ref. No.	Part No.	Description	Remark
101	501364801	SCREEN (L) (for L-ch)	
102	500837311	SCREW, TAPPING, P2 (L = 8.0 mm) (Silver)	
103	502155801	ADHESIVE NFC (See Note 4)	
104	X50019251	ADHESIVE BATTERY, SV	
DMIC1	A5018222A	ORNAMENT L ASSY, SV (for L-ch) (Including DMIC module, Adhesive BF MIC, Adhesive NFC) (for Black) (See Note 1)	
DMIC1	A5018223A	ORNAMENT L ASSY, SV (for L-ch) (Including DMIC module, Adhesive BF MIC, Adhesive NFC) (for Platinum Silver) (See Note 1)	
DMIC1	A5024276A	ORNAMENT L ASSY, SV (for L-ch) (Including DMIC module, Adhesive BF MIC, Adhesive NFC) (for Blue) (See Note 1)	
HPN1	A5018288A	HEADPHONES ASSY B, SV (for Black) (US, CND, LA) (See Note 2, 3)	
HPN1	A5018289B	HEADPHONES ASSY S, SV (for Platinum Silver) (US, CND, LA) (See Note 2, 3)	
HPN1	A5018292A	HEADPHONES ASSY B, SV (for Black) (CH) (See Note 2, 3)	

Ref. No.	Part No.	Description	Remark
HPN1	A5018293B	HEADPHONES ASSY S, SV (for Platinum Silver) (CH) (See Note 2, 3)	
HPN1	A5018294A	HEADPHONES ASSY B, SV (for Black) (AEP, UK) (See Note 2, 3)	
HPN1	A5018295B	HEADPHONES ASSY S, SV (for Platinum Silver) (AEP, UK) (See Note 2, 3)	
HPN1	A5018296A	HEADPHONES ASSY B, SV (for Black) (E, AUS, JE, RU) (See Note 2, 3)	
HPN1	A5018297B	HEADPHONES ASSY S, SV (for Platinum Silver) (E, AUS, JE, RU) (See Note 2, 3)	
HPN1	A5018298A	HEADPHONES ASSY B, SV (for Black) (IND) (See Note 2, 3)	
HPN1	A5018299B	HEADPHONES ASSY S, SV (for Platinum Silver) (IND) (See Note 2, 3)	
HPN1	A5024270B	HEADPHONES ASSY L, SV (for Blue) (US, CND, LA) (See Note 2, 3)	

3-4. RIGHT HOUSING SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	500837301	SCREW, TAPPING, P2 (L = 5.0 mm) (Black)		153	A5020597A	THM R BOARD, COMPLETE (SV)	
152	A5020595A	SUB R BOARD, COMPLETE (SV)		154	X50021181	SCREW, SUB ASSY, SV (Silver, M1.7 X 5.0 mm)	

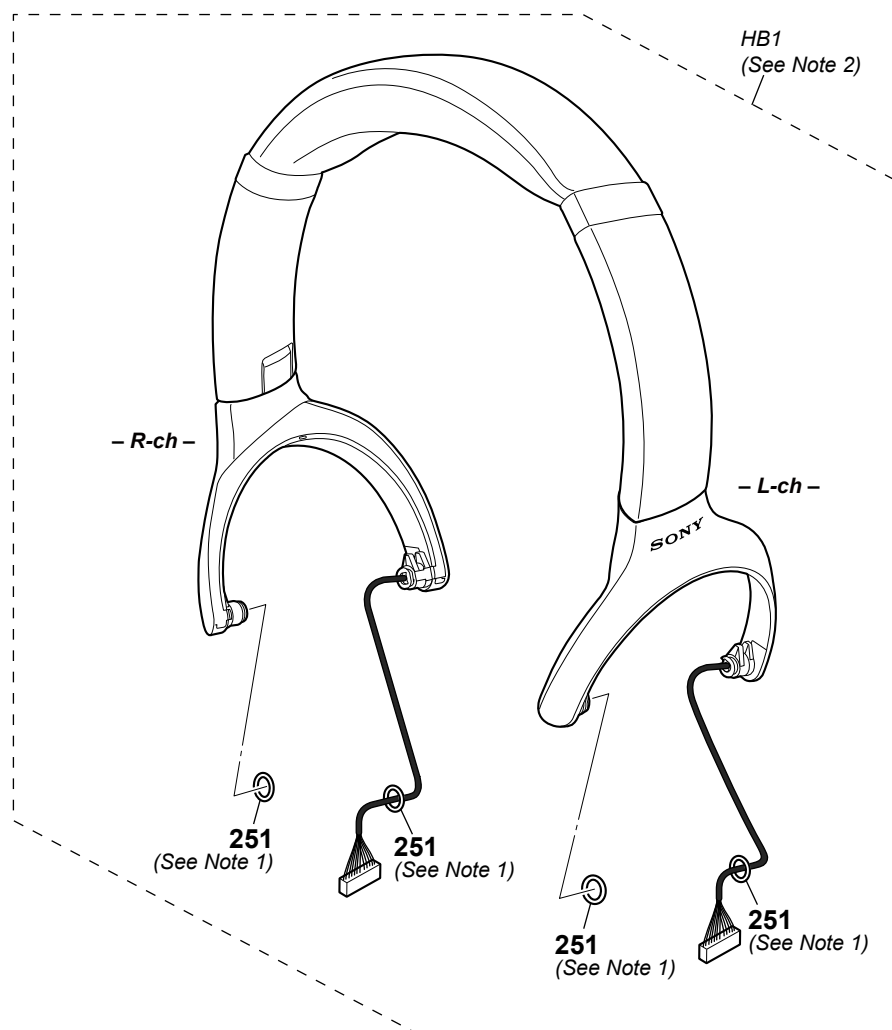


When MAIN L board is replaced, be sure to refer “NOTE FOR REPLACING THE MAIN L BOARD” on page 6.

When NFC L board is replaced, be sure to refer “NOTE FOR REPLACING THE MAIN L BOARD” on page 6.

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
201	500837301	SCREW, TAPPING, P2 (L = 5.0 mm) (Black)	
202	A5018221A	MAIN L BOARD, COMPLETE (SV) (Including NFC L board, NFC wire (UEWX2)) (See Note 1, 2)	

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
203	X50021181	SCREW, SUB ASSY, SV (Silver, M1.7 X 5.0 mm)	

3-6. HEADBAND SECTION

Note 1: Lubricant is applied to the SV sub cushion AORI assy (Ref. No. 251).
Be careful when handling the parts.

Ref. No.	Part No.	Description	Remark
251	X50018391	CUSHION AORI, SUB ASSY, SV (Applied Lubricant)	(See Note 1)
HB1	A5018265A	HEADBAND ASSY B SV (Model number is engraved) (for Black) (US, CND, LA) (See Note 2)	
HB1	A5018266B	HEADBAND ASSY S SV (Model number is engraved) (for Platinum Silver) (US, CND, LA) (See Note 2)	
HB1	A5018269A	HEADBAND ASSY B SV (Model number is engraved) (for Black) (CH) (See Note 2)	
HB1	A5018270B	HEADBAND ASSY S SV (Model number is engraved) (for Platinum Silver) (CH) (See Note 2)	

Note 2: When the headband assy SV (Ref. No. HB1) is replaced with a new part, the serial number is changed.

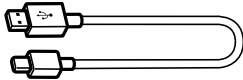
Ref. No.	Part No.	Description	Remark
HB1	A5018271A	HEADBAND ASSY B SV (Model number is engraved) (for Black) (AEP, UK) (See Note 2)	
HB1	A5018272B	HEADBAND ASSY S SV (Model number is engraved) (for Platinum Silver) (AEP, UK) (See Note 2)	
HB1	A5018273A	HEADBAND ASSY B SV (Model number is engraved) (for Black) (E, AUS, JE, RU, IND) (See Note 2)	
HB1	A5018274B	HEADBAND ASSY S SV (Model number is engraved) (for Platinum Silver) (E, AUS, JE, RU, IND) (See Note 2)	
HB1	A5024275B	HEADBAND ASSY L, SV (Model number is engraved) (for Blue) (US, CND, LA) (See Note 2)	

**SECTION 4
ACCESSORIES**

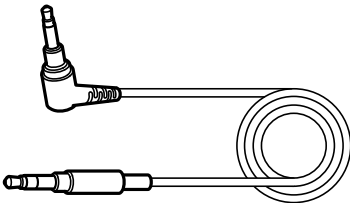
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
	501372812	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, SPANISH, DUTCH, SWEDISH, ITALIAN, PORTUGUESE, DANISH, FINNISH, NORWEGIAN, POLISH, GREEK, CZECH, HUNGARIAN, RUSSIAN, BULGARIAN, SLOVAK, SLOVENIAN, ARABIC, TRADITIONAL CHINESE, KOREAN, CROATIAN, ROMANIAN, SERBIAN, UKRAINIAN) (Except CH)	
	501372821	MANUAL, INSTRUCTION (SIMPLIFIED CHINESE) (CH)	
	501372912	GUIDE, REFERENCE (ENGLISH, SPANISH, FRENCH) (US, CND, LA)	
	501372921	GUIDE, REFERENCE (SIMPLIFIED CHINESE) (CH)	
	501372932	GUIDE, REFERENCE (ENGLISH, RUSSIAN, ARABIC, TRADITIONAL CHINESE, KOREAN) (E, AUS, JE, RU, IND)	
	501372941	GUIDE, REFERENCE (ENGLISH, FRENCH, GERMAN, SPANISH, DUTCH, SWEDISH, ITALIAN, PORTUGUESE, DANISH, FINNISH, NORWEGIAN) (AEP, UK)	
	501372951	GUIDE, REFERENCE (POLISH, GREEK, CZECH, HUNGARIAN, BULGARIAN, SLOVAK, SLOVENIAN, CROATIAN, ROMANIAN, SERBIAN) (AEP, UK)	
501	100100711	USB TYPE-C TO A CABLE (USB Type-C® cable (USB-A to USB-C®) (approx. 20 cm))	
502	191219161	CABLE (WITH PLUG) B (Headphone cable (approx. 1.2 m, BLACK)) (for Black, Blue)	
502	191219171	CABLE (WITH PLUG) S (Headphone cable (approx. 1.2 m, SILVER)) (for Platinum Silver)	
503	100319311	ADAPTOR, PLUG (IN FLIGHT USE) (Plug adaptor for in-flight use)	
504	501365602	CASE, CARRYING (for Black)	
504	501365611	CASE, CARRYING (for Platinum Silver)	
504	501365631	CASE, CARRYING (for Blue)	

501

USB Type-C® cable (USB-A to USB-C®) (approx. 20 cm) (1)

**502**

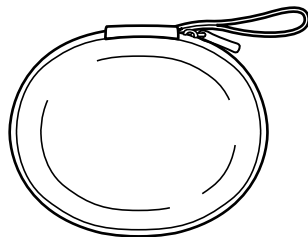
Headphone cable (approx. 1.2 m) (1)

**503**

Plug adaptor for in-flight use (1)

**504**

Carrying case (1)



- Refer to "COLOR VARIATIONS" on page 4 about color variation of the unit.

REVISION HISTORY

[illegible]