HT-ST9
SA-ST9

SERVICE MANUAL

Ver. 1.1 2015.06

Photo: SA-ST9

US Model
Canadian Model
AEP Model
UK Model
Australian Model
Chinese Model
Singapore Model
Taiwan Model
Latin American Model

- All of the units included in the HT-ST9 (SA-ST9/SA-WST9/Remote control) are required to confirming operation of SA-ST9. Check in advance that you have all of the units.

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

COMPONENT MODEL NAME

	HT-ST9
Bar Speaker (Active Speaker System)	SA-ST9
Subwoofer (Active Subwoofer)	SA-WST9

- Please refer to service manual separately issued for Subwoofer.

SPECIFICATIONS

Amplifier section

U.S. models:
POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
(FTC)
Front L + Front R:
With 6 ohms loads, both channels driven, from 200 - 20,000 Hz; rated 25 Watts per channel minimum RMS power, with no more than 1% total harmonic distortion from 250 milliwatts to rated output.
POWER OUTPUT (reference)
Front L/Front R speaker blocks: 75 Watts (per channel at 6 ohms, 1 kHz)
Center speaker block: 75 Watts (per channel at 6 ohms, 1 kHz)
Center tweeter block: 75 Watts (per channel at 6 ohms, 10 kHz)

Canadian models:
POWER OUTPUT (rated)
Front L + Front R: 45 W + 45 W
(at 6 ohms, 1 kHz, 1% THD)
POWER OUTPUT (reference)
Front L/Front R speaker blocks: 75 Watts (per channel at 6 ohms, 1 kHz)
Center speaker block: 75 Watts (per channel at 6 ohms, 1 kHz)
Center tweeter block: 75 Watts (per channel at 6 ohms, 10 kHz)

Chinese model:
POWER OUTPUT
Front L/Front R speaker blocks: 30 Watts (per channel at 6 ohms, 1 kHz)
Center speaker block: 30 Watts (per channel at 6 ohms, 1 kHz)
Center tweeter block: 30 Watts (per channel at 6 ohms, 10 kHz)

Other models:
POWER OUTPUT (rated)
Front L + Front R: 50 W + 50 W
(at 6 ohms, 1 kHz, 1% THD)
POWER OUTPUT (reference)
Front L/Front R speaker blocks: 75 Watts (per channel at 6 ohms, 1 kHz)
Center speaker block: 75 Watts (per channel at 6 ohms, 1 kHz)
Center tweeter block: 75 Watts (per channel at 6 ohms, 10 kHz)

Inputs
HDMI IN 1*/2/3
DIGITAL IN (TV)
ANALOG IN
Output
HDMI OUT* (ARC)
* HDMI IN 1 and HDMI OUT (ARC) jacks support HDCP 2.2 protocol. HDCP 2.2 is newly enhanced copyright protection technology that is used to protect content such as 4K movies.

HDMI section

Connector
Type A (19pin)

USB section

(USB) port:
Type A (For connecting USB memory, memory card reader, digital still camera)

LAN section

LAN (100) terminal
100BASE-TX Terminal

Wireless LAN section

Standards Compliance
IEEE 802.11 a/b/g/n
Frequency band (Except Chinese model)
2.4 GHz, 5 GHz
Frequency band (Chinese model)
2.4 GHz - 2.4835 GHz
5.15 GHz - 5.35 GHz
5.725 GHz - 5.85 GHz

BLUETOOTH section

Communication system
BLUETOOTH Specification version 3.0
Output
BLUETOOTH Specification Power Class 1
Maximum communication range
Line of sight approx. 30 m (98.4 ft)[1)]
Maximum number of devices to be registered
9 devices
Frequency band
2.4 GHz band (2.4GHz - 2.4835 GHz)
Modulation method
FHSS (Freq Hopping Spread Spectrum)
Compatible BLUETOOTH profiles[2)]
A2DP 1.2 (Advanced Audio Distribution Profile)
AVRCP 1.5 (Audio Video Remote Control Profile)
Supported Codecs[3)]
SBC[4)], AAC[5)], LDAC
Transmission range (A2DP)
20 Hz - 20,000 Hz (Sampling frequency 44.1 kHz)

1) The actual range will vary depending on factors such as obstacles between devices, magnetic fields around a microwave oven, static electricity, cordless phone use, reception sensitivity, the operating system, software applications, etc.
2) BLUETOOTH standard profiles indicate the purpose of BLUETOOTH communication between devices.
3) Codec: Audio signal compression and conversion format
4) Subband Codec
5) Advanced Audio Coding

Front L/Front R speaker blocks

Speaker system
2-way coaxial speaker system, Acoustic suspension
Speaker
Woofer: 65 mm (2 5/8 in) cone type, Magnetic fluid speaker
Tweeter: 18 mm (23/32 in) soft dome type

Center speaker block

Speaker system
Center
2-way coaxial speaker system, Acoustic suspension
Satellite
Full range speaker system, Acoustic suspension
Speaker (5 speakers)
Center
Woofer: 65 mm (2 5/8 in) cone type, Magnetic fluid speaker
Tweeter: 18 mm (23/32 in) soft dome type
Satellite
65 mm (2 5/8 in) cone type, Magnetic fluid speaker

General

Power requirements
120 V AC, 60 Hz (US and Canadian models)
120 V AC, 50 Hz/60 Hz (Taiwan model)
120 V - 240 V AC, 50 Hz/60 Hz (Latin American model)
220 V - 240 V AC, 50 Hz/60 Hz (Other models)
Power consumption
On: 60 W
Standby mode: 0.5 W or less
BLUETOOTH Standby mode: 0.5 W or less (Except AEP and UK models)
Networked Standby (all wired network ports connected, all wireless network ports activated): 7.3 W (AEP and UK models)

Dimensions (approx.) (w/h/d)
1,130 mm × 88 mm × 128 mm (44 1/2 in × 3 1/2 in × 5 1/8 in) (without grille frame, without stands, including projection portion)
1,130 mm × 88 mm × 133 mm (44 1/2 in × 3 1/2 in × 5 1/4 in) (with grille frame, without stands)
1,130 mm × 100 mm × 129 mm (44 1/2 in × 4 in × 5 1/8 in) (without grille frame, with stands, including projection portion)
1,130 mm × 101 mm × 136 mm (44 1/2 in × 4 in × 5 3/8 in) (with grille frame, with stands)
Mass (approx.)
6.8 kg (14 lb 15 7/8 oz) (without grille frame, without stands)

Compatible iPod/iPhone models

The compatible iPod/iPhone models are as follows. Update your iPod/iPhone with the latest software before using with the system.

BLUETOOTH technology works with:
iPhone 6 Plus/iPhone 6/iPhone 5s/iPhone 5c/iPhone 5/iPhone 4s/iPhone 4/iPhone 3GS
iPod touch (5th generation)/iPod touch (4th generation)

Wireless transmitter section

Communication system
Wireless Sound Specification version 3.0
Frequency band (Russian model)
5.2 GHz (5.180 GHz - 5.240 GHz)
Frequency band (Chinese model)
5.15 GHz - 5.25 GHz
Frequency band (Latin American, Singapore and Taiwan models)
5.8 GHz (5.736 GHz - 5.814 GHz)
Frequency band (Other models)
5.2 GHz (5.180 GHz - 5.240 GHz)
5.8 GHz (5.736 GHz - 5.814 GHz)
Modulation method
DSSS

– Continued on next page –

HT-ST9
SOUND BAR
SA-ST9
ACTIVE SPEAKER SYSTEM

9-896-148-02
2015F33-1
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Sony Corporation
Published by Sony Techno Create Corporation

SONY®

Video formats supported by the system

Input/Output (HDMI Repeater block)

Format	2D	3D		
		Frame packing	Side-by-Side (Half)	Over-Under (Top-and-Bottom)
4096 × 2160p @ 59.94/60Hz [1)]	○	–	–	–
4096 × 2160p @ 50 Hz [1)]	○	–	–	–
4096 × 2160p @ 23.98/24 Hz [2)]	○	–	–	–
3840 × 2160p @ 59.94/60Hz [1)]	○	–	–	–
3840 × 2160p @ 50 Hz [1)]	○	–	–	–
3840 × 2160p @ 29.97/30 Hz [2)]	○	–	–	–
3840 × 2160p @ 25 Hz [2)]	○	–	–	–
3840 × 2160p @ 23.98/24 Hz [2)]	○	–	–	–
1920 × 1080p @ 59.94/60 Hz	○	–	○	○
1920 × 1080p @ 50 Hz	○	–	○	○
1920 × 1080p @ 29.97/30 Hz	○	○	○	○
1920 × 1080p @ 25 Hz	○	○	○	○
1920 × 1080p @ 23.98/24 Hz	○	○	○	○
1920 × 1080i @ 59.94/60 Hz	○	○	○	○
1920 × 1080i @ 50 Hz	○	○	○	○
1280 × 720p @ 59.94/60 Hz	○	○	○	○
1280 × 720p @ 50 Hz	○	○	○	○
1280 × 720p @ 29.97/30 Hz	○	○	○	○
1280 × 720p @ 23.98/24 Hz	○	○	○	○
720 × 480p @ 59.94/60 Hz	○	–	–	–
720 × 576p @ 50 Hz	○	–	–	–
640 × 480p @ 59.94/60 Hz	○	–	–	–

1) YCbCr 4:2:0/Supports 8-bit only
2) Supports 8-bit only

Supplied accessories

Grille frame (1)
Remote control (1)
R03 (size AAA) batteries (2)
HDMI cable (High Speed type) (1) (Except AEP and UK models only)
Optical digital cable for a TV (1) (AEP and UK models only)
Stands* (2) and screws* (2)
* Refer to the Operating Instructions on how to use these items.
Startup Guide (1)
Operating Instructions (1)

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* excluding DSD format contents

** in comparison with SBC (Subband Coding) when the bitrate of 990 kbps (96/48 kHz) or 909 kbps (88.2/44.1 kHz) is selected

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NOTES ON CHIP COMPONENT REPLACEMENT

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

FLEXIBLE CIRCUIT BOARD REPAIRING

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

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage.
Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes.). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

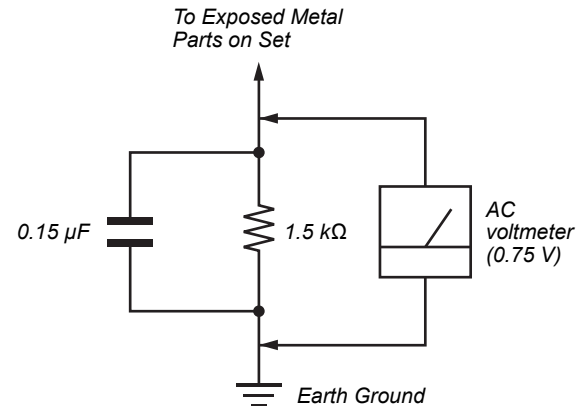


Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING!

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

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

关于安全相关零部件的警告

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

TABLE OF CONTENTS

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

SECTION 1
SERVICING NOTES

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

UNLEADED SOLDER

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

: LEAD FREE MARK

Unleaded solder has the following characteristics.

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

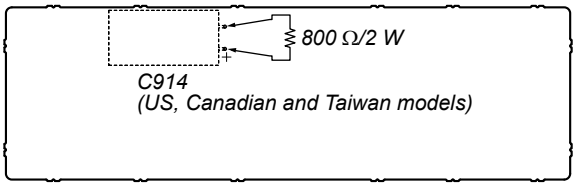
NOTE OF PERFORMING THE OPERATION CHECK IN THE STATE THAT HEAT SINK WAS REMOVED

When performing the operation check in the state that this unit was disassembled, it is possible to perform the operation check in the state that heat sink was removed. But don't perform the operation check in the long time, and perform the operation check in the volume state as low as possible.

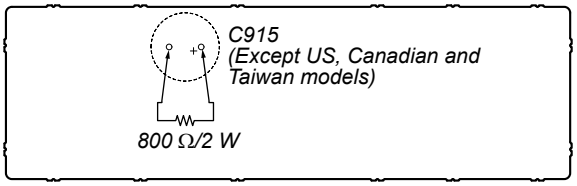
CAPACITOR ELECTRICAL DISCHARGE PROCESSING

When checking the board, for the electric shock prevention, connect the resistors to both ends of respective capacitor to discharge the capacitor.

– POWER Board (Conductor Side) –

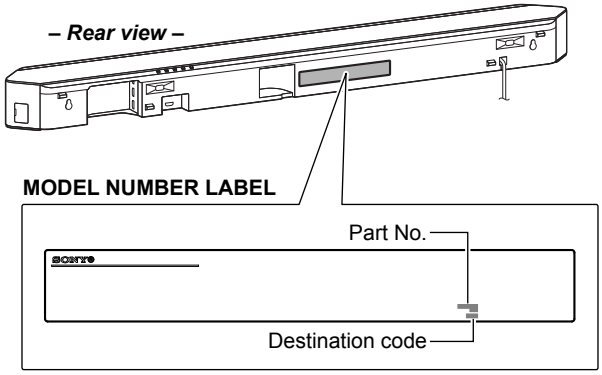


– POWER Board (Conductor Side) –



MODEL IDENTIFICATION

Distinguish by Part No. and Destination code on the rear side of a main unit.



Destination	Part No.	Destination code
US and Canadian models	4-562-118-0□	(UC2)
AEP model	4-562-118-2□	(CEL)
UK model	4-562-118-3□	(CEK)
Russian model	4-562-118-4□	(RU3)
Singapore model	4-562-118-7□	(SP1)
Chinese model	4-562-118-8□	(CN4)
Australian model	4-562-118-9□	(AU1)
Taiwan model	4-562-119-1□	(TW2)
Latin American model	4-562-119-2□	(LA9)

DESTINATION ABBREVIATIONS

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

- Abbreviations
  AUS : Australian model
  CH : Chinese model
  CND : Canadian model
  LA : Latin American model
  RU : Russian model
  SP : Singapore model
  TW : Taiwan model

ADVANCE PREPARATION WHEN CONFIRMING OPERATION

All of the units included in the HT-ST9 (SA-ST9/SA-WST9/Remote control) are required to confirming operation of SA-ST9. Check in advance that you have all of the units.

NOTE OF REPAIRING THE REPEATER_REP1, REPEATER_REP2 OR KEY BOARDS

When the REPEATER_REP1, REPEATER_REP2 or KEY boards installed by this unit are defective, replace the complete mounted board.
The mounted parts cannot replace with single.

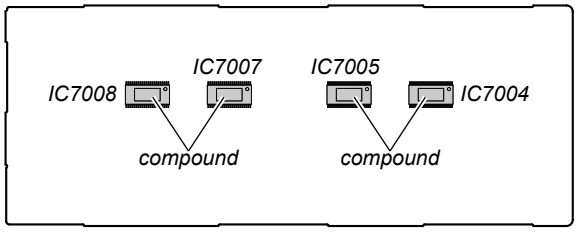
NOTE OF REPAIRING THE MB1406 BOARD

When MB1406 board installed by this unit are defective, replace the complete mounted board.
The mounted parts cannot replace with single.
Block diagram and printed wiring board that have been described on this service manual are for reference.
Schematic diagram have not described.

NOTE OF REPLACING THE IC7004, IC7005, IC7007 AND IC7008 ON THE AMP BOARD AND THE COMPLETE AMP BOARD

When IC7004, IC7005, IC7007 and IC7008 on the AMP board and the complete AMP board are replaced, it is necessary to spread the compound between the AMP board and the heat sink.
Spread the compound referring to the figure below.

– AMP Board (Side A) –



NOTE OF REPLACING THE COMPLETE MB1406 BOARD OR CARD WLAN/BT COMBO

When the complete MB1406 board or card WLAN/BT combo is replaced, you must perform the following item.

When replacing the complete MB1406 board:
- NETWORK INFORMATION WRITING AND CHECKING OF NETWORK/NFC OPERATION (refer to this page)
- NOTICE OF MAC ADDRESS CHANGE TO CUSTOMERS (refer to page 8)
- NOTES ON THE WIRELESS CONNECTION (LINK) AFTER REPAIRS ARE COMPLETE (refer to page 8)

When replacing the card WLAN/BT combo:
- NETWORK INFORMATION WRITING AND CHECKING OF NETWORK/NFC OPERATION (refer to this page)
- NOTICE OF MAC ADDRESS CHANGE TO CUSTOMERS (refer to page 8)

NETWORK INFORMATION WRITING AND CHECKING OF NETWORK/NFC OPERATION

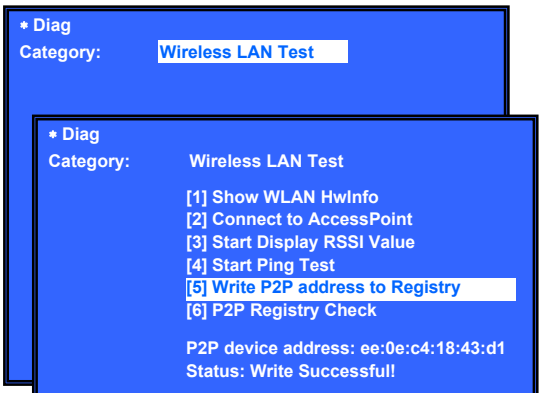
When the complete MB1406 board or card WLAN/BT combo are replaced, execute the below BD service mode. And check the operation of wireless/wired LAN and NFC.

1. Network information writing

Procedure:

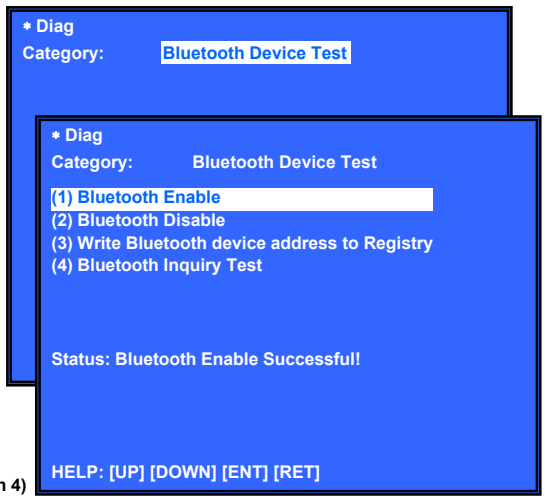
1. Connect this unit with TV monitor.
2. Press the [I/⏻] button to turn the power on.
3. Press button in order of the [■] → [DISPLAY] → [▮▮] → [▲] on the remote commander.
   (Make the interval when each button is pressed within one second)
4. Enter the BD service mode. The OSD menu on TV monitor can be operated by remote commander.
5. Press the [▼] button on the remote commander to select "Diag", and press the [⊕] button on the remote commander.
6. Press the [►] button on the remote commander to select "Wireless LAN Test". (Screen 1)
7. Press the [▼] button on the remote commander to select "[5] Write P2P address to Registry".
8. Press the [⊕] button on the remote commander, wait until the display show "Status: Write Successful!" (Screen 2).
9. Press the [BACK] button on the remote commander to return to category select screen, and press the [►] button on the remote commander to select "Bluetooth Device Test". (Screen 3)
10. Press the [⊕] button on the remote commander to select "(1) Bluetooth Enable".
11. Press the [⊕] button on the remote commander, wait until the display show "Status: Bluetooth Enable Successful!" (Screen 4).
12. Press the [▼] button on the remote commander to select "(3) Write Bluetooth device address to Registry".
13. Press the [⊕] button on the remote commander, wait until the display show "Status: Write Successful!" (Screen 5).
14. Press the [I/⏻] button to turn the power off.

(Screen 1)



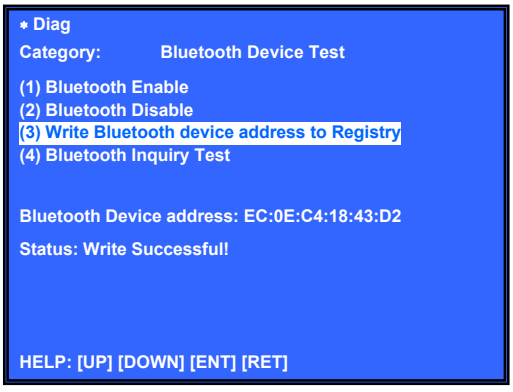
(Screen 2)

(Screen 3)



(Screen 4)

(Screen 5)



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2. Checking method of wireless LAN operation

Necessary Equipment:
- Access point supporting WPS

Procedure:
1. Connect this unit with TV monitor.
2. Press the [I/⏻] button to turn the power on.
3. Press the [HOME] button on the remote commander, display the home screen.
4. Press the [↑]/[↓] buttons on the remote commander to select the “Setup”, and press the [⊕] button on the remote commander.
5. Press the [↑]/[↓] buttons on the remote commander to select the “Network Settings”, and press the [⊕] button on the remote commander.
6. Press the [↑]/[↓] buttons on the remote commander to select the “Internet Settings”, and press the [⊕] button on the remote commander.
7. Press the [↑]/[↓] buttons on the remote commander to select the “Wireless Setup(built-in)”, and press the [→] button on the remote commander.
8. Press the [↑]/[↓] buttons on the remote commander to select the “Wi-Fi Protected Setup (WPS)”, and press the [→] button on the remote commander.
9. The “Start” screen is display, and press the [WPS] key on the access point.
10. Press the [→] button on the remote commander, setup is start.
11. The message “Next, check the network connection” is display, and press the [→] button on the remote commander.
12. When wireless LAN connection is completed, “Wireless Connection: OK” and “Internet Access: OK” is displayed.

Note: Refer to the instruction manual about details of the setting method.

3. Checking method of wired LAN operation

Necessary Equipment:
- Router
- Network LAN cable

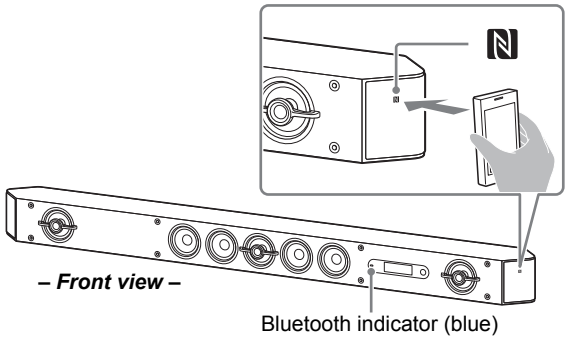
Procedure:
1. Connect this unit with TV monitor.
2. Connect the unit to the router with the network LAN cable.
3. Press the [I/⏻] button to turn the power on.
4. Press the [HOME] button on the remote commander, display the home screen.
5. Press the [↑]/[↓] buttons on the remote commander to select the “Setup”, and press the [⊕] button on the remote commander.
6. Press the [↑]/[↓] buttons on the remote commander to select the “Network Settings”, and press the [⊕] button on the remote commander.
7. Press the [↑]/[↓] buttons on the remote commander to select the “Internet Settings”, and press the [⊕] button on the remote commander.
8. Press the [↑]/[↓] buttons on the remote commander to select the “Wired Setup”, and press the [→] button on the remote commander.
9. Press the [↑]/[↓] buttons on the remote commander to select the “Auto”, and press the [→] button on the remote commander.
10. The “The network will be configured with the following settings” screen is display, and press the [→] button on the remote commander.
11. Press the [↑]/[↓] buttons on the remote commander to select the “Save & Connect”, and press the [⊕] button on the remote commander.
12. When wired LAN connection is completed, “Physical Connection: OK” and “Internet Access: OK” is displayed.

Note: Refer to the instruction manual about details of the setting method.

4. Checking method of NFC operation

Necessary Equipment:
Smartphones, tablets, or music players with the NFC function built-in (OS: Android™ 2.3.3 or later, excluding Android 3.x)

Procedure:
1. Press the [I/⏻] button to turn the power on.
2. Touch the N mark of the Bar Speaker with the Bluetooth device.



3. Make sure that the indicator (blue) of the Bar Speaker lights up. (This indicates that a connection has been established)
4. Start playback of an audio source on the Bluetooth device.

Note: After checking of NFC operation, be sure to delete the pairing information before returning this unit to the customer.

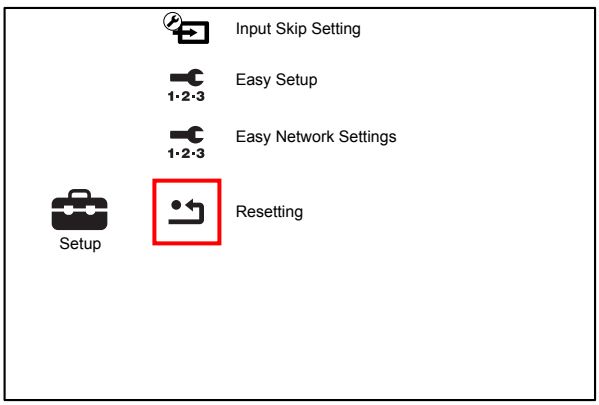
5. Factory initialize

Return all of the unit setting to their factory defaults.

Note 1: Disconnect the following connections when you use this mode.
- USB
- LAN
- HDMI IN 1
- HDMI IN 2
- HDMI IN 3

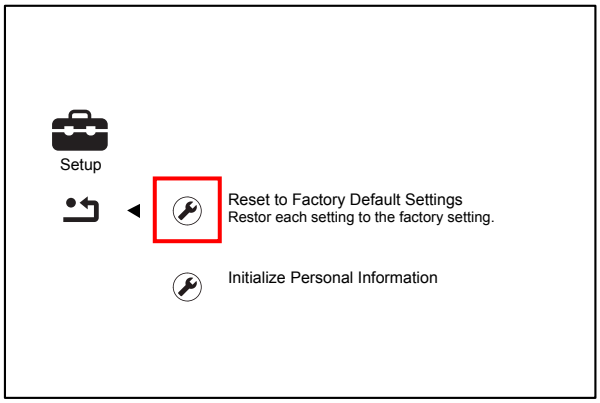
Note 2: The operation in this mode must use a remote commander and TV monitor.

Procedure:
1. Connect this unit with TV monitor.
2. Press the [I/⏻] button to turn the power on.
3. Press the [HOME] button on the remote commander, and the home menu is displayed.
4. Press the [↑]/[↓] buttons on the remote commander to select the “Setup”, and press the [⊕] button on the remote commander.
5. Press the [↑]/[↓] buttons on the remote commander to select the “Resetting”, and press the [⊕] button on the remote commander.

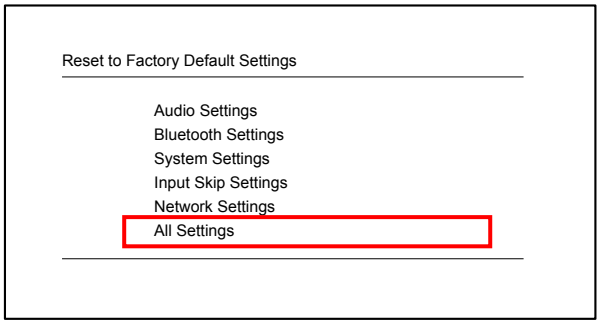


– Continued on next page –

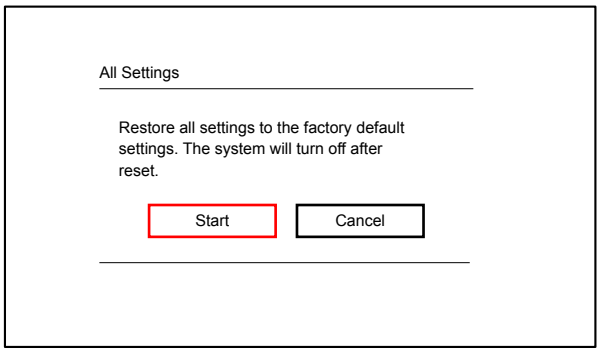
6. Select “Reset to Factory Default Settings”, and press the [⊕] button on the remote commander.



7. Press the [↑]/[↓] buttons on the remote commander to select the “All Settings”, and press the [⊕] button on the remote commander.



8. Press the [←]/[→] buttons on the remote commander to select the “Start”, and press the [⊕] button on the remote commander.



9. Turn the power off automatically, and initialization ends.

NOTICE OF MAC ADDRESS CHANGE TO CUSTOMERS

When the MB1406 board or card WLAN/BT combo is replaced, the MAC address has been changed.
Print the following explanations, and pass it to the customer with the repaired unit when you return the customer repaired unit.

Note of the MAC address change:
The MAC address of this unit was changed along with this repair.
Please set it again if you are using the MAC address filtering function of access point device of connection destination.
MAC address can be confirmed from the settings menu screen of this unit. Please refer to the “Settings and Adjustment” of Operating Instructions for details.

NOTES ON THE WIRELESS CONNECTION (LINK) AFTER REPAIRS ARE COMPLETE

When the following replacing repair is performed, the link of the Bar speaker (SA-ST9) and Subwoofer (SA-WST9) is cut.
Return the Bar speaker (SA-ST9) and Subwoofer (SA-WST9) to the customer after performing the link according to the following procedure.

Parts in which the LINK will be disconnected due to replacement:
- Complete MB1406 board

Link method:

When you turn on the Bar speaker (SA-ST9) and Subwoofer (SA-WST9), and then automatically link.
If do not to link, there is a possibility that the customer is perform the secure link. In that case, perform the following procedure.

Procedure of secure link:

1. **Select [Wireless Sound Connection] in [System Settings]**
2. **Select [Secure Link].**
3. **Select [On].**
4. **Press SECURE LINK on the rear of the subwoofer.**
   Proceed to the next step within a few minutes.
5. **Select [Start].**
   To return to the previous display, select [Cancel].
6. **After the message [Secure Link setting is complete.] appears, press ⊕.**
   The on/standby indicator on the subwoofer lights in orange.
   If the message [Cannot set Secure Link.] appears, follow the on-screen instructions.

Note: If customer had perform a secure link, only the Bar speaker is brought in for repair and the MB1406 board is replaced, be sure to inform the customer when returning the repaired products that the customer must secure link again the Bar speaker and Subwoofer. (Indicate that the secure link procedure is described in the operating instructions)

“PRTCT,” “PUSH” AND “POWER” FLASH ALTERNATELY IN THE FRONT PANEL DISPLAY

Press I/⏻ (on/standby) to turn off the system. After the indicator disappears, disconnect the AC power cord (mains lead) and make sure nothing is obstructing the ventilation holes of the system.

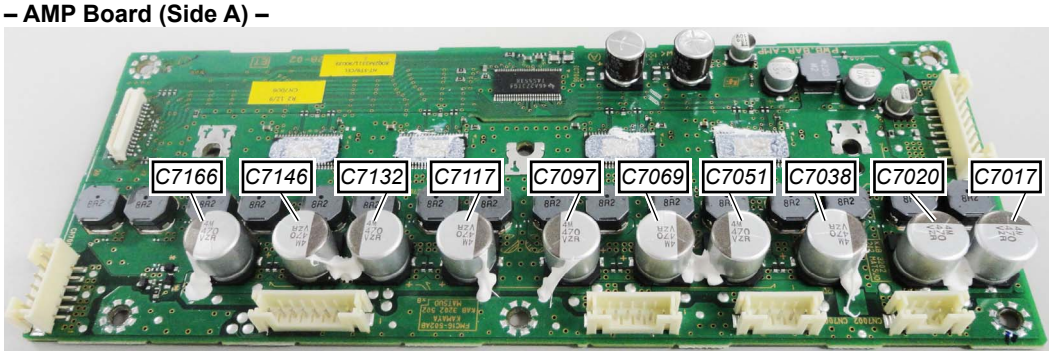
BOND FIXATION OF ELECTRIC PARTS

When the following parts are replaced, fix the parts by using the bond (SC608Z2) (Refer to the figure below).

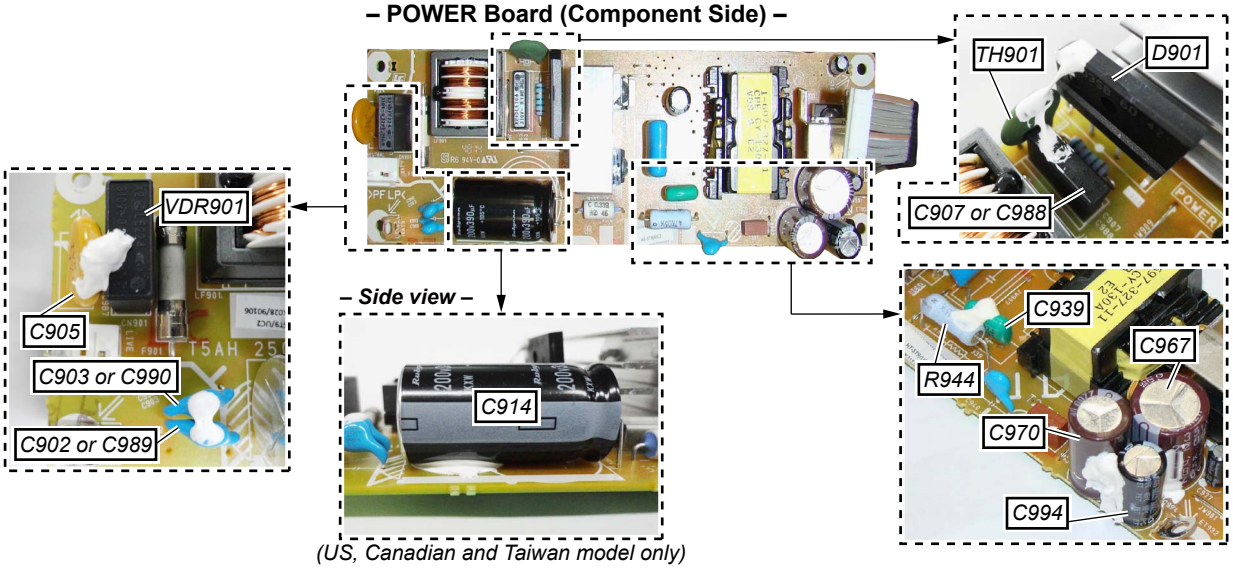
Target parts:

- AMP board: C7017, C7020, C7038, C7051, C7069, C7097, C7117, C7132, C7146, C7166
- POWER board: C902, C903, C905, C907, C914, C939, C967, C970, C988, C989, C990, C994, D901, R944, TH901, VDR901

– AMP Board (Side A) –



– POWER Board (Component Side) –



– Side view –

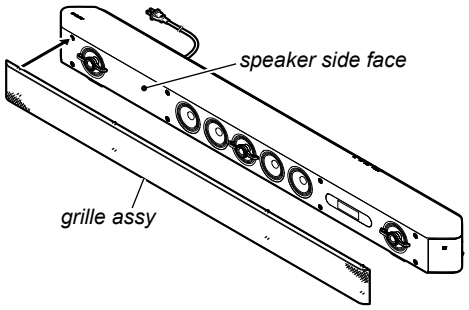
(US, Canadian and Taiwan model only)

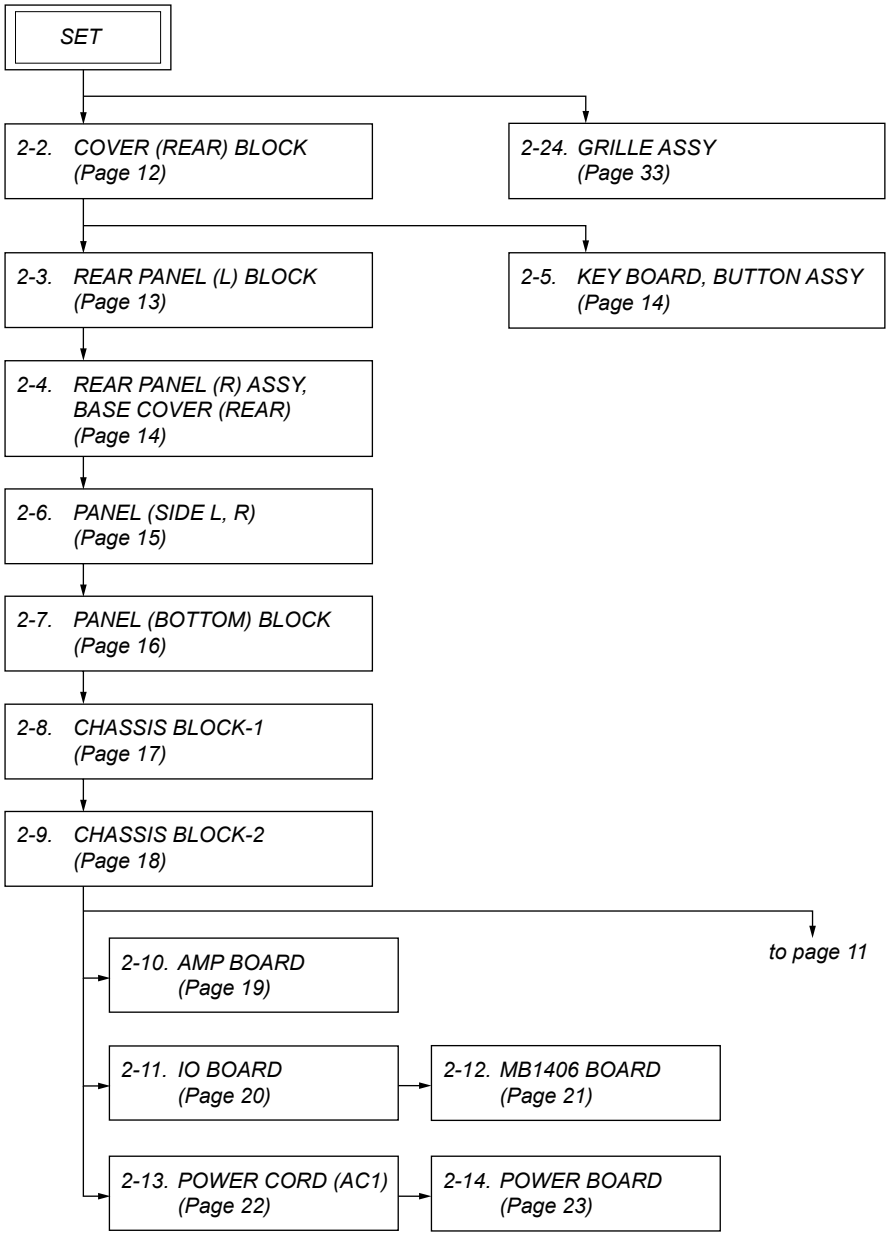
SECTION 2
DISASSEMBLY

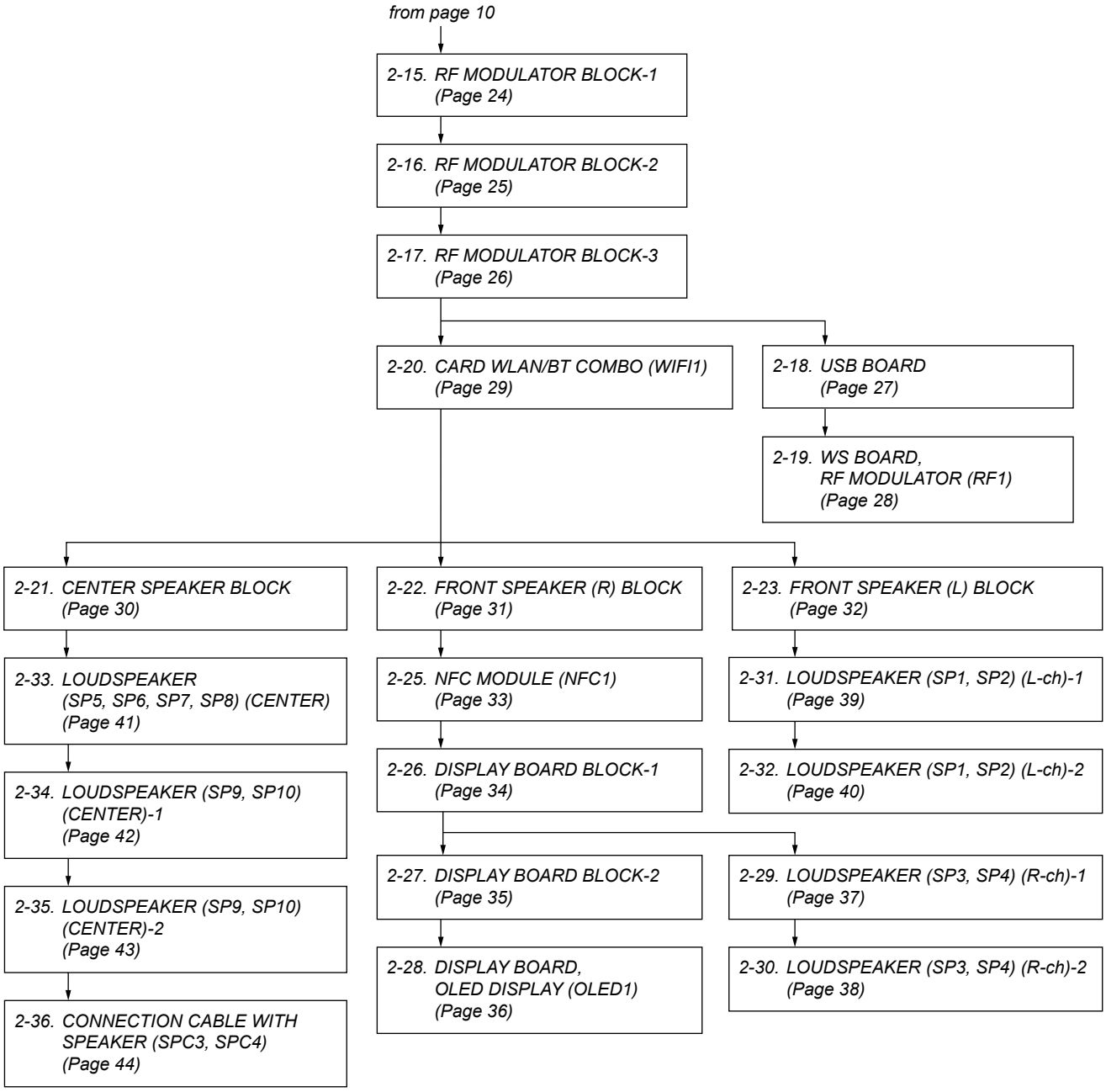
- This set can be disassembled in the order shown below.

2-1. DISASSEMBLY FLOW

Note: When disassembling with the speaker side face down, make sure to install the grille assy.
Disassembling with the speaker side face down without installing the grille assy will damage the protrusion of the tweeter.
If the grille assy cannot be installed, make sure not to disassemble with the speaker side face down.

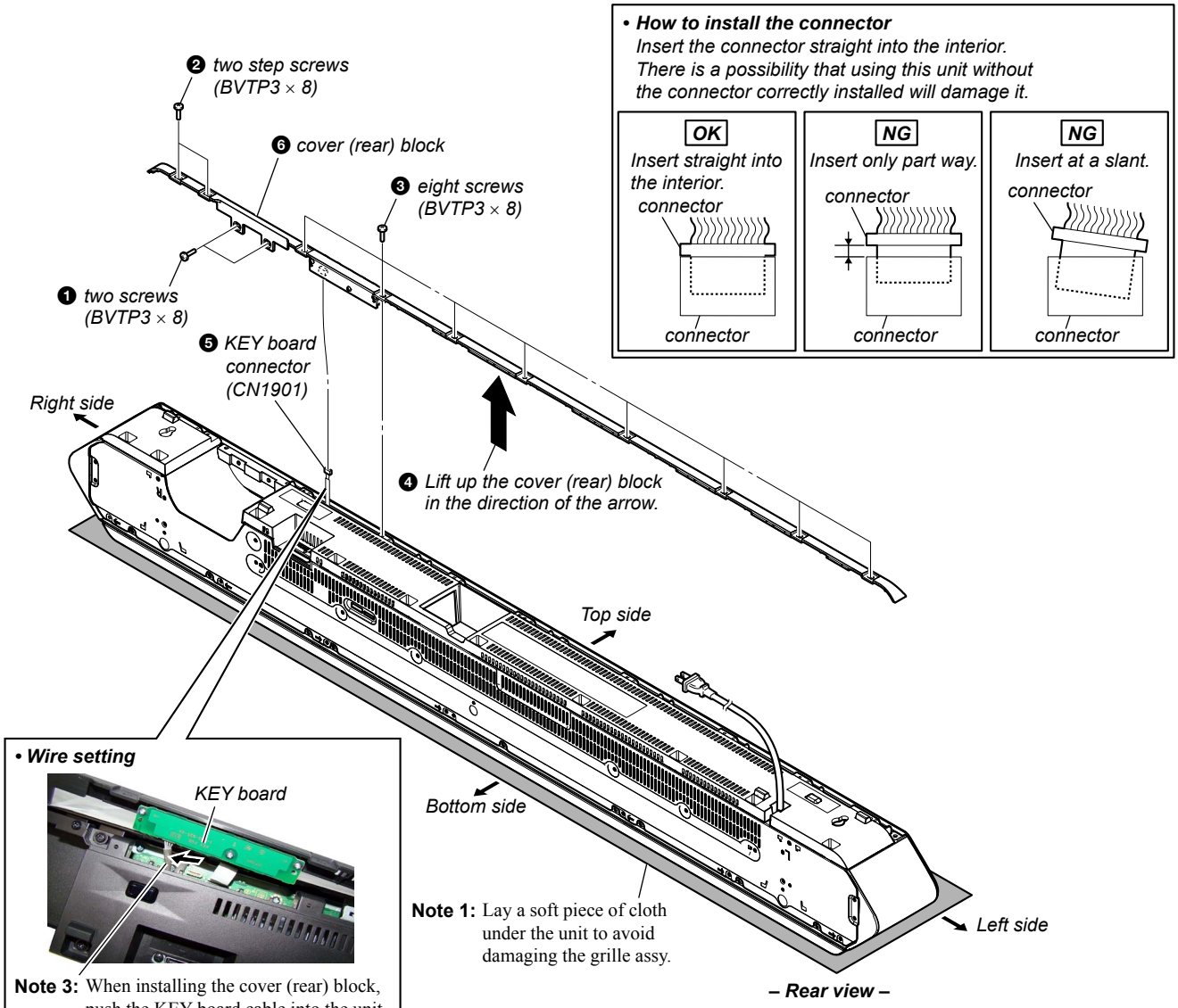




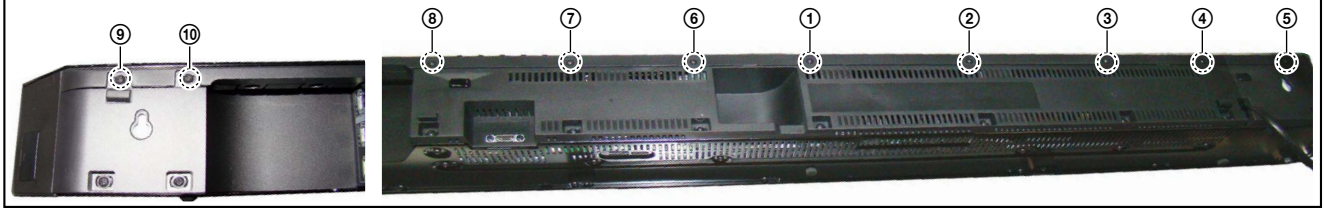

from page 10
2-15. RF MODULATOR BLOCK-1 (Page 24)
2-16. RF MODULATOR BLOCK-2 (Page 25)
2-17. RF MODULATOR BLOCK-3 (Page 26)
2-20. CARD WLAN/BT COMBO (WIFI1) (Page 29)
2-18. USB BOARD (Page 27)
2-19. WS BOARD, RF MODULATOR (RF1) (Page 28)
2-21. CENTER SPEAKER BLOCK (Page 30)
2-22. FRONT SPEAKER (R) BLOCK (Page 31)
2-23. FRONT SPEAKER (L) BLOCK (Page 32)
2-33. LOUDSPEAKER (SP5, SP6, SP7, SP8) (CENTER) (Page 41)
2-25. NFC MODULE (NFC1) (Page 33)
2-31. LOUDSPEAKER (SP1, SP2) (L-ch)-1 (Page 39)
2-34. LOUDSPEAKER (SP9, SP10) (CENTER)-1 (Page 42)
2-26. DISPLAY BOARD BLOCK-1 (Page 34)
2-32. LOUDSPEAKER (SP1, SP2) (L-ch)-2 (Page 40)
2-35. LOUDSPEAKER (SP9, SP10) (CENTER)-2 (Page 43)
2-27. DISPLAY BOARD BLOCK-2 (Page 35)
2-29. LOUDSPEAKER (SP3, SP4) (R-ch)-1 (Page 37)
2-36. CONNECTION CABLE WITH SPEAKER (SPC3, SPC4) (Page 44)
2-28. DISPLAY BOARD, OLED DISPLAY (OLED1) (Page 36)
2-30. LOUDSPEAKER (SP3, SP4) (R-ch)-2 (Page 38)

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

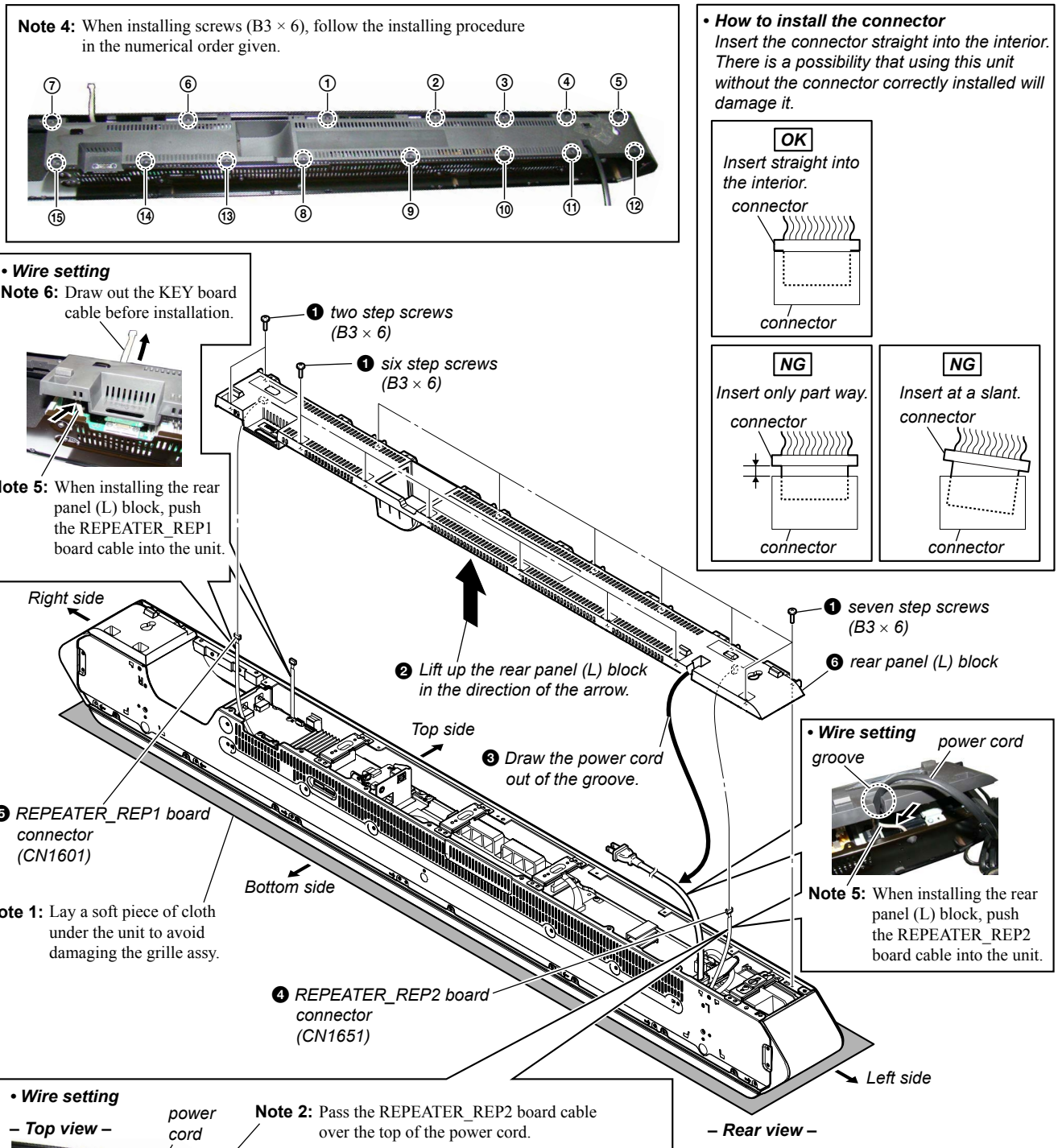
2-2. COVER (REAR) BLOCK



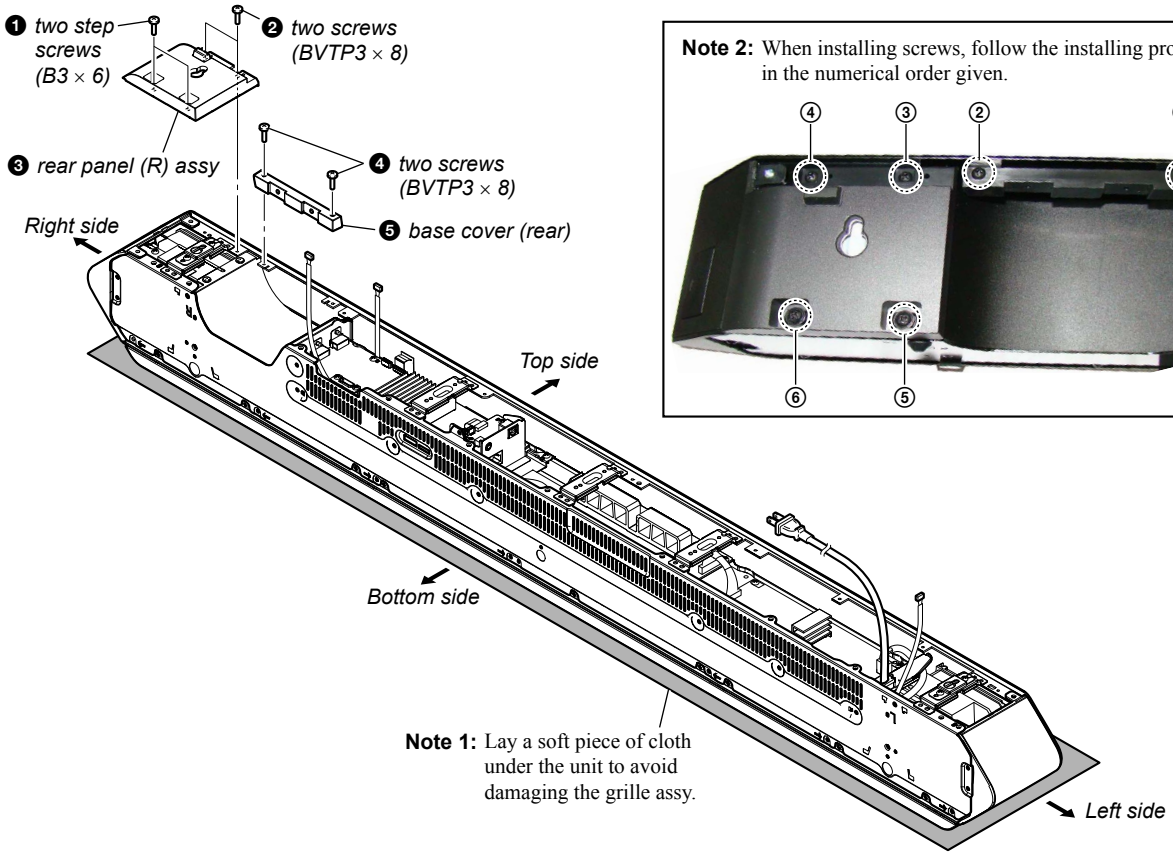
Note 2: When installing screws (BVTP3 × 8), follow the installing procedure in the numerical order given.



2-3. REAR PANEL (L) BLOCK

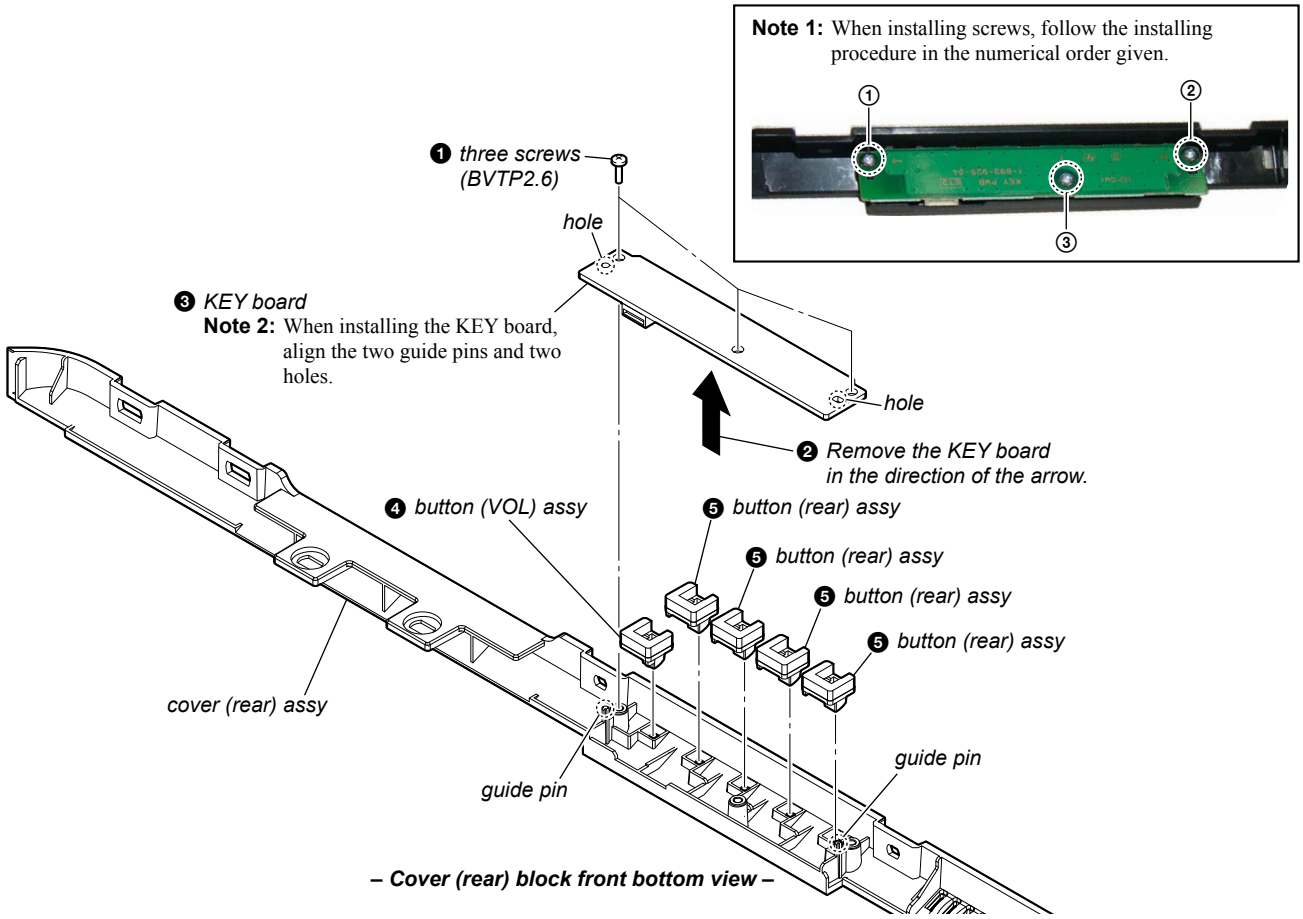


2-4. REAR PANEL (R) ASSY, BASE COVER (REAR)



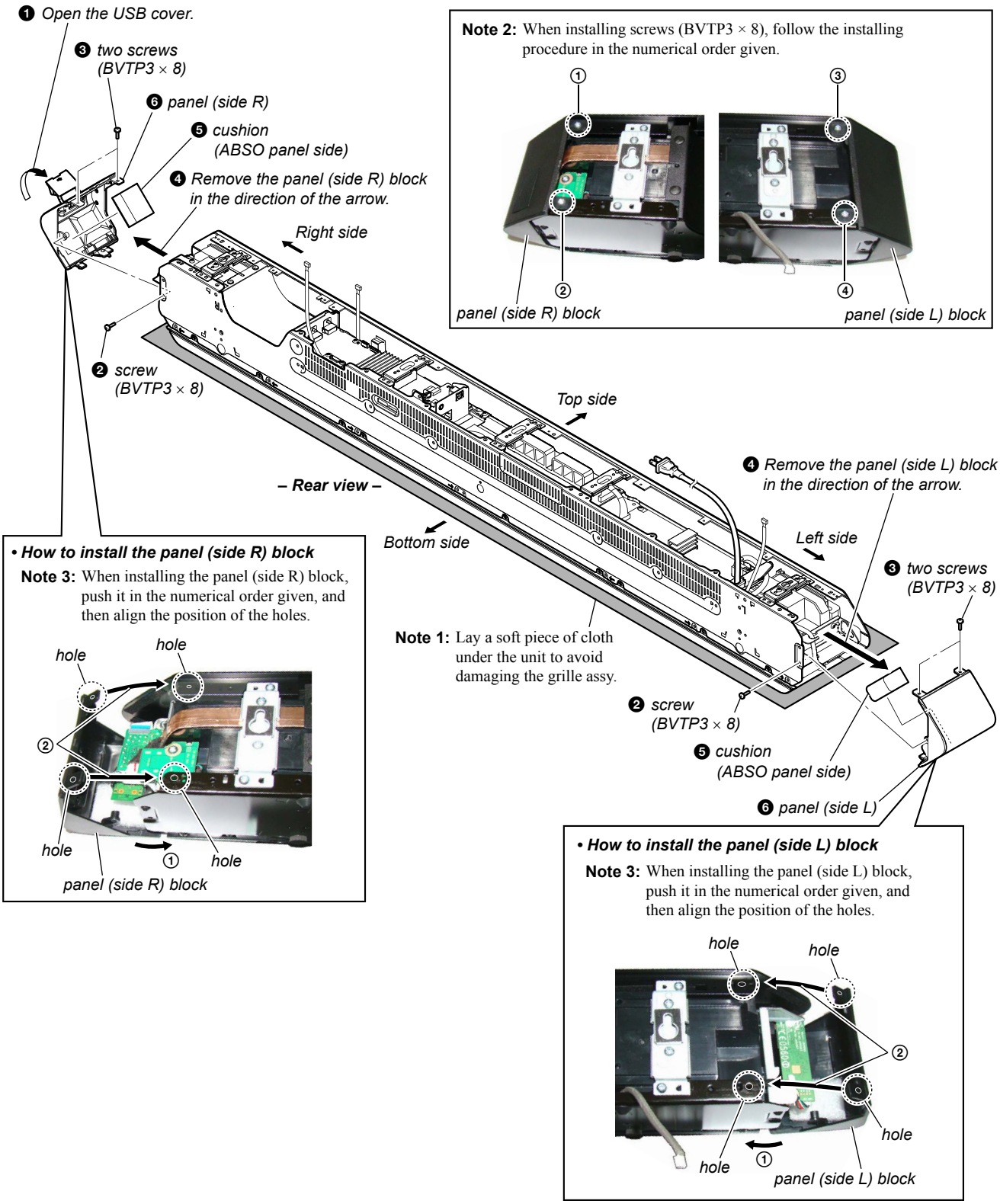
– Rear view –

2-5. KEY BOARD, BUTTON ASSY

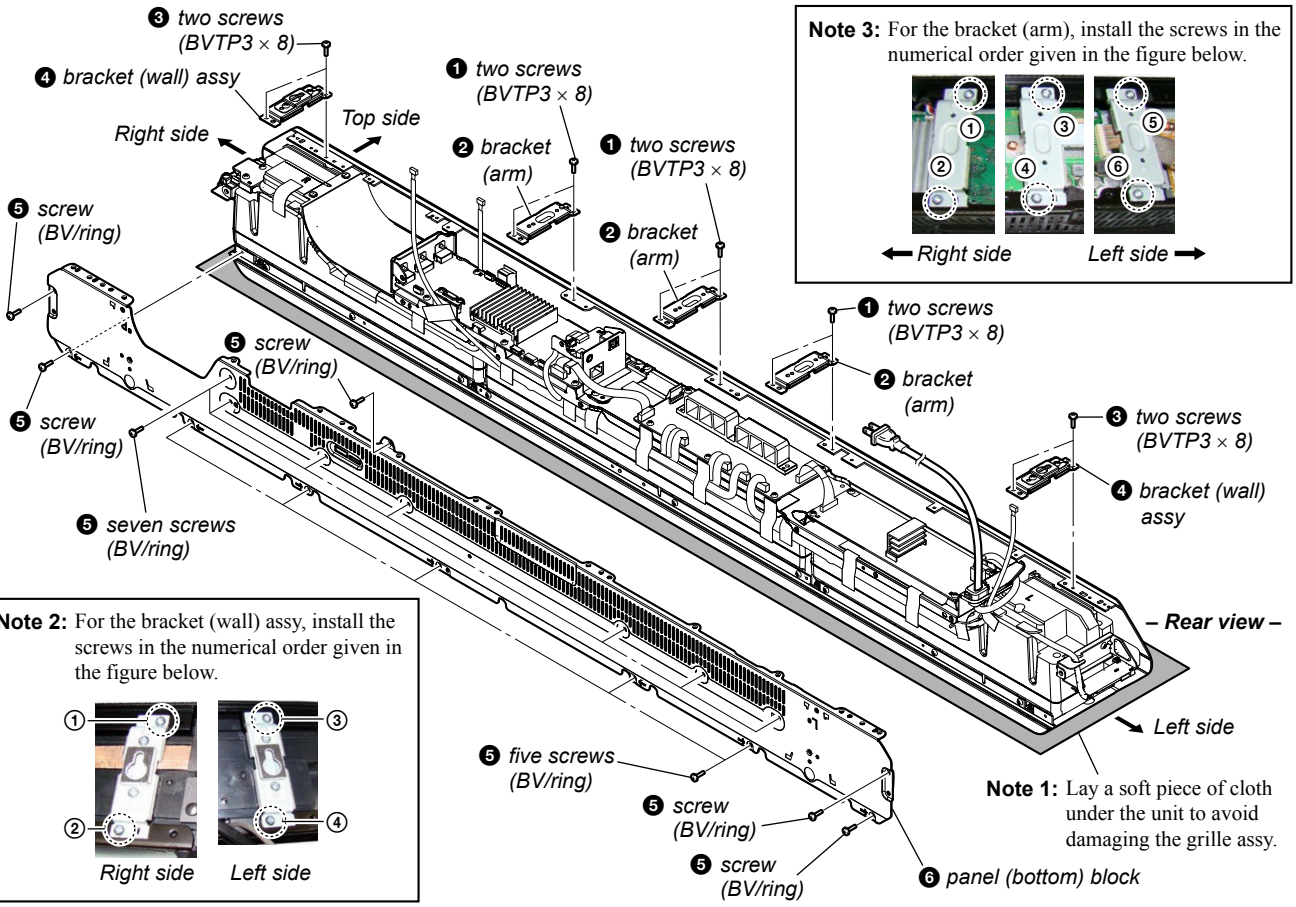


– Cover (rear) block front bottom view –

2-6. PANEL (SIDE L, R)



2-7. PANEL (BOTTOM) BLOCK



Note 3: For the bracket (arm), install the screws in the numerical order given in the figure below.

Note 2: For the bracket (wall) assy, install the screws in the numerical order given in the figure below.

Note 1: Lay a soft piece of cloth under the unit to avoid damaging the grille assy.

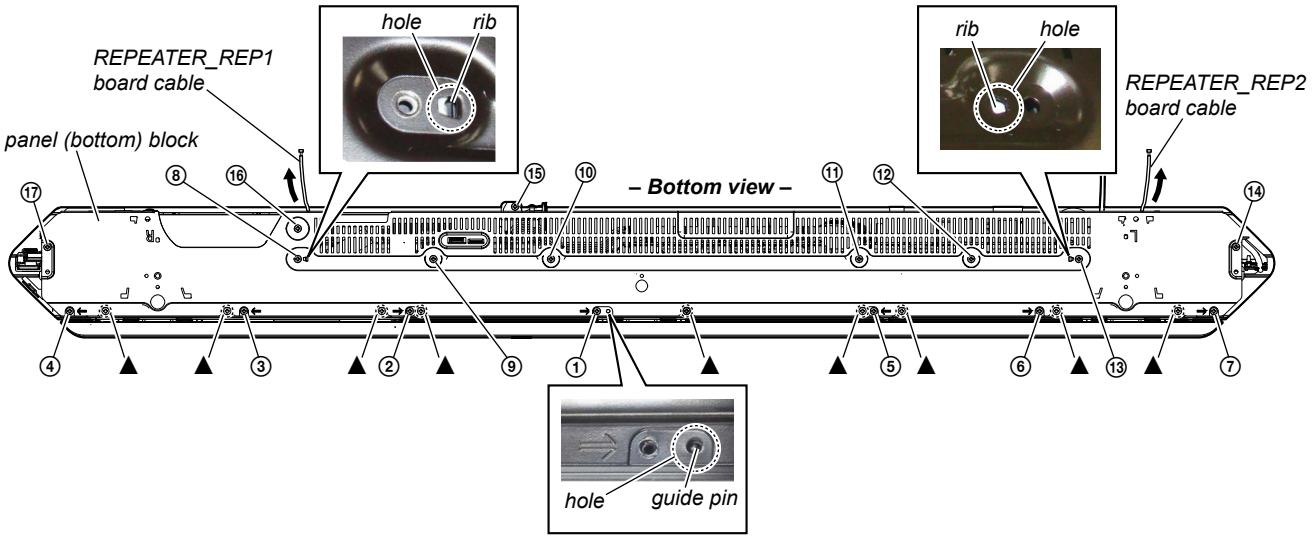
• Notes when assembling or disassembling the panel (bottom) block

Disassembling:

Removing the nine screws at the ▲ mark screws is not necessary.

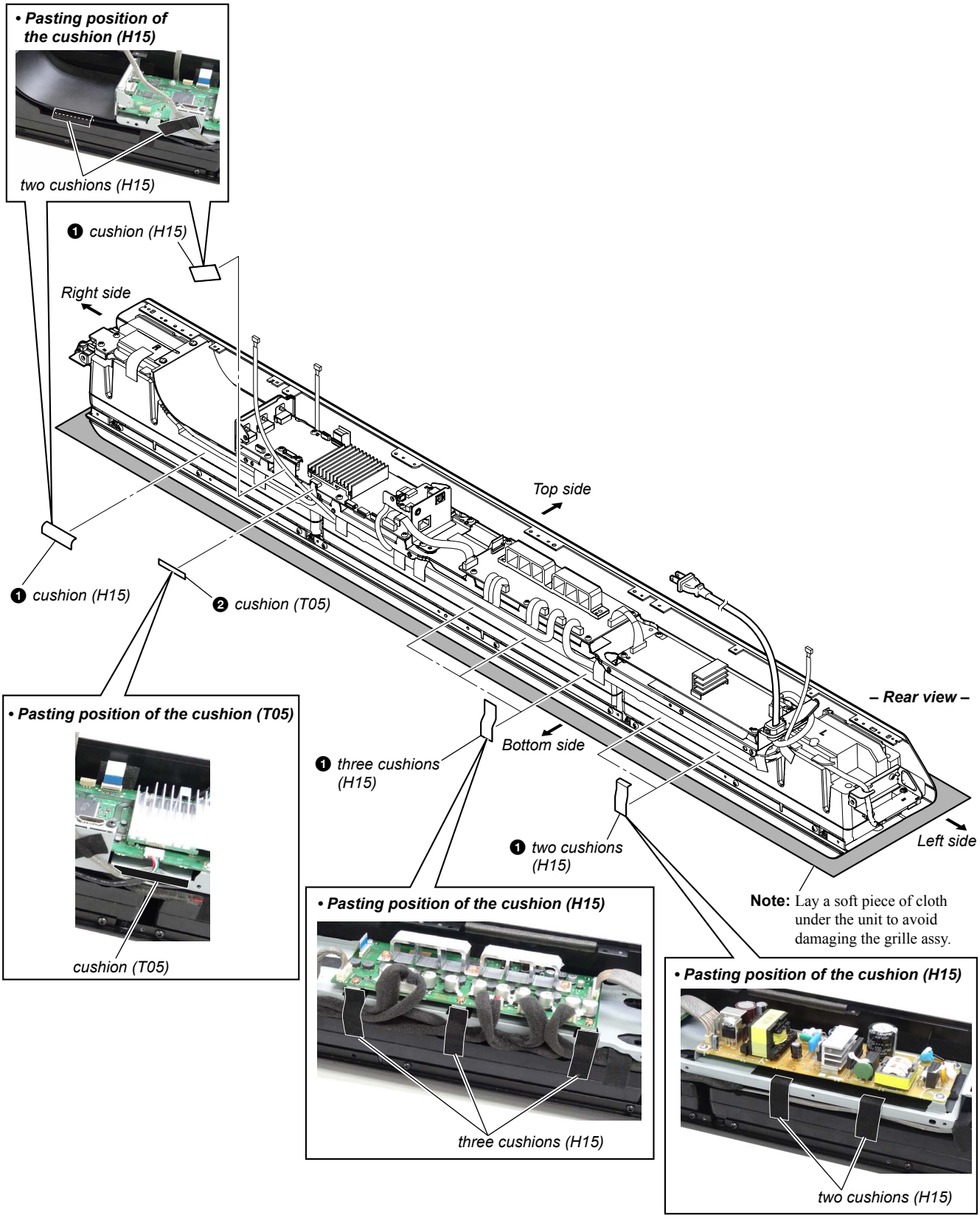
Assembling:

Align the guide pin and two ribs with three holes, and then fasten with seventeen screws at the numerical order (① to ⑰) given.
Draw out the REPEATER_REP1 board cable and REPEATER_REP2 board cable before installation.

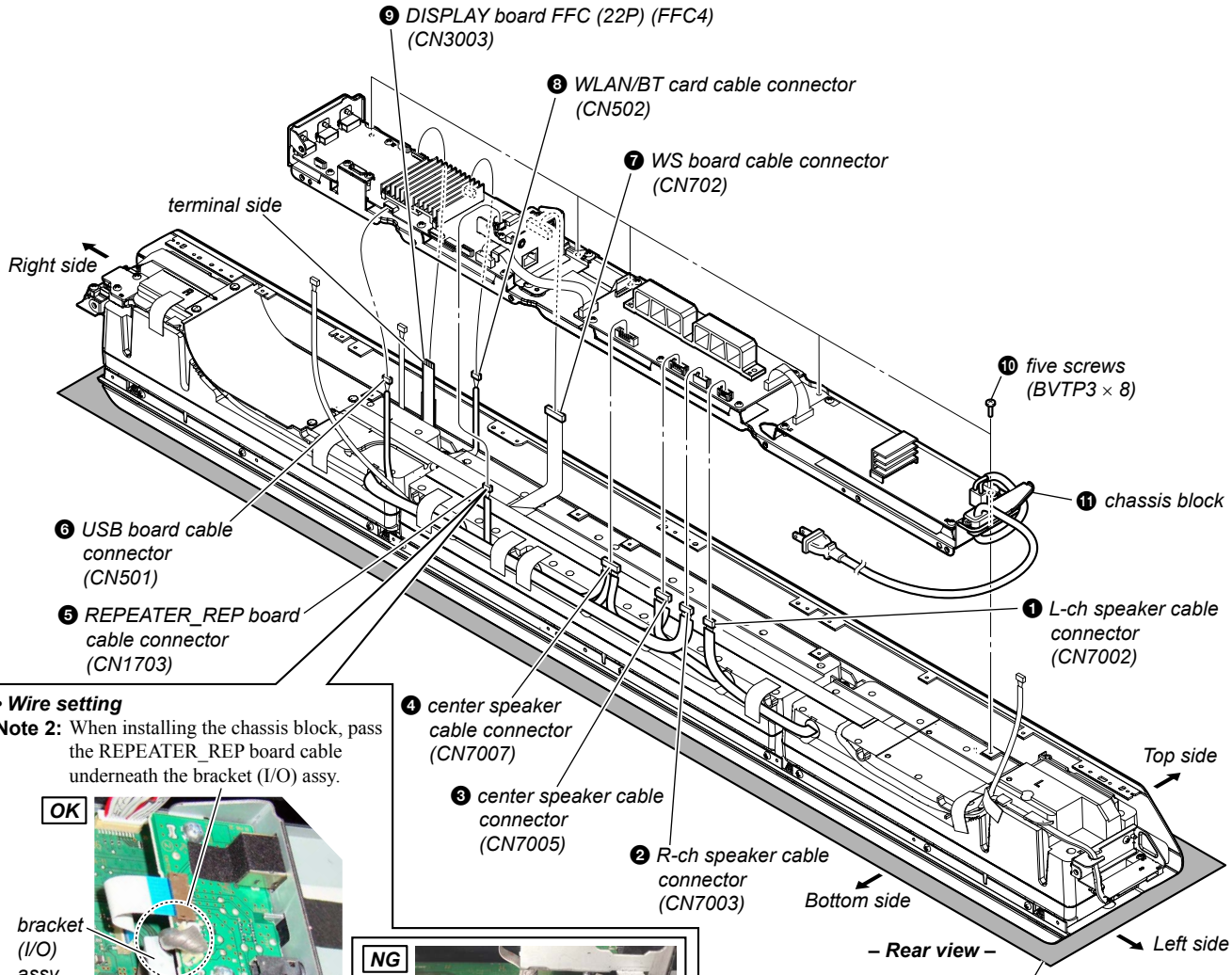


2-8. CHASSIS BLOCK-1

• Continued on 2-9 (page 18).



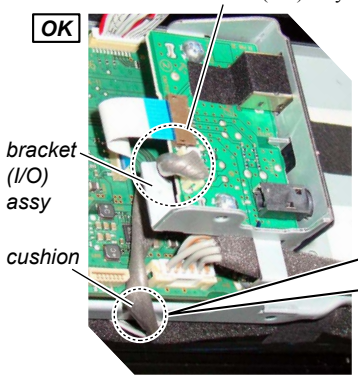
2-9. CHASSIS BLOCK-2

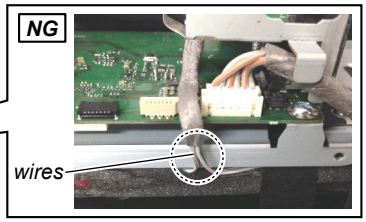


Note 1: Lay a soft piece of cloth under the unit to avoid damaging the grille assy.

• ***Wire setting***

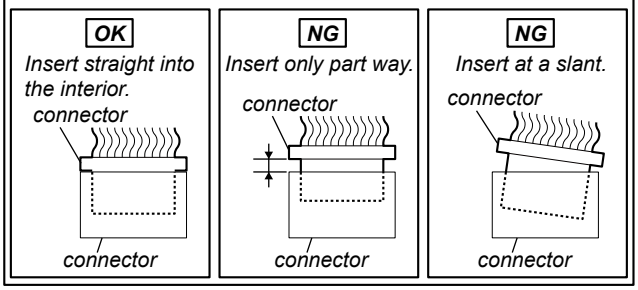
Note 2: When installing the chassis block, pass the REPEATER_REP board cable underneath the bracket (I/O) assy.





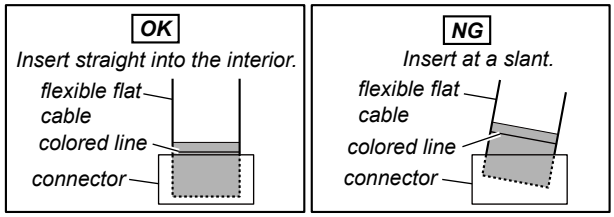
• ***How to install the connector***

Insert the connector straight into the interior. There is a possibility that using this unit without the connector correctly installed will damage it.



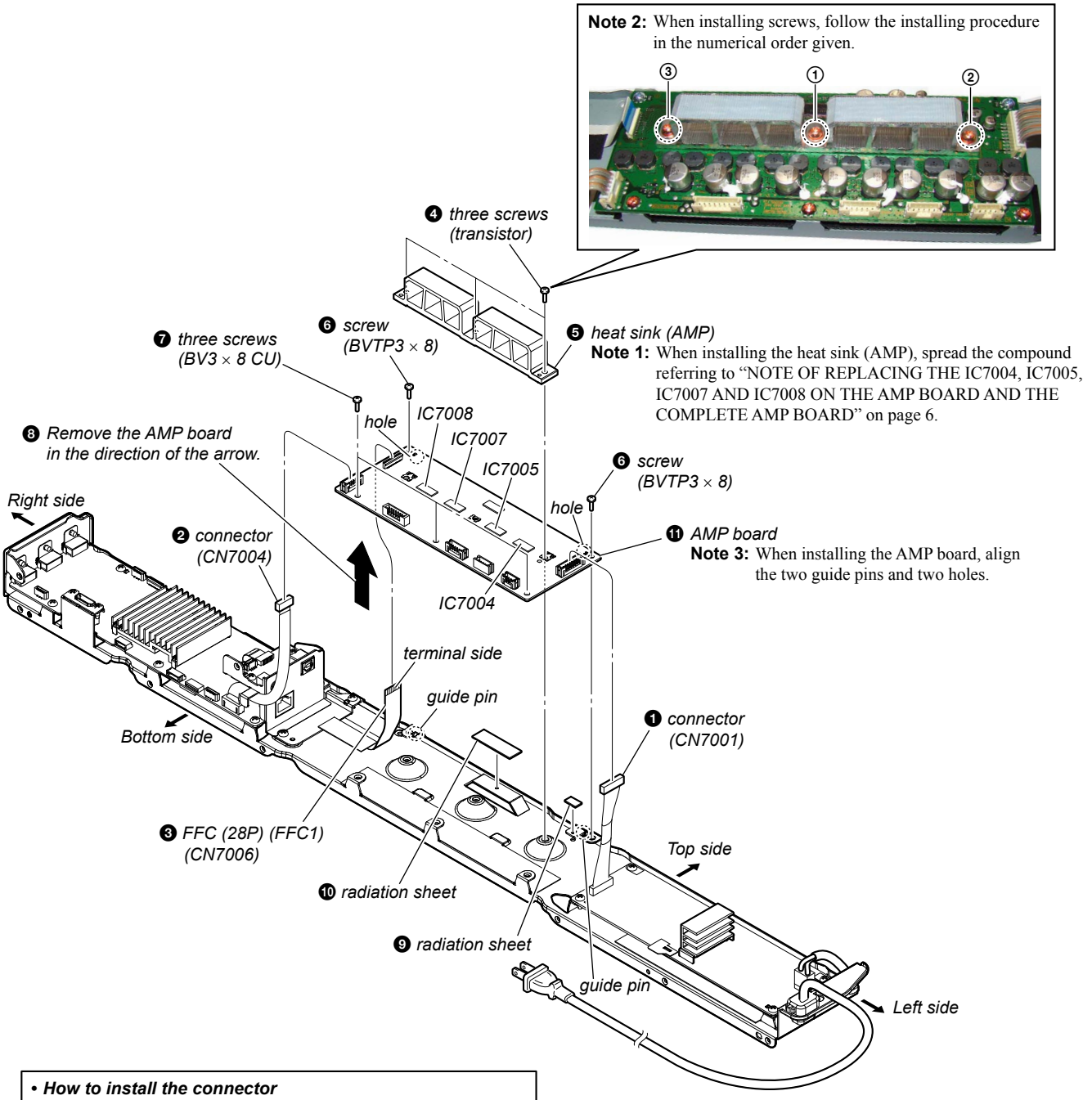
• ***How to install the flexible flat cable***

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



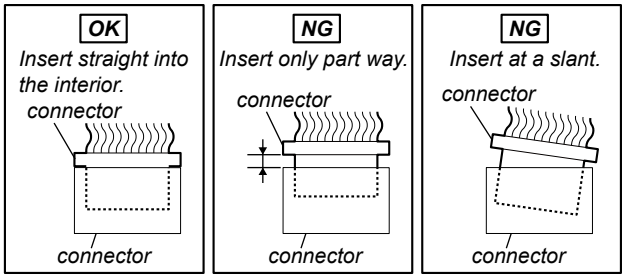
Note 3: When installing screws (BVTP3 × 8), follow the installing procedure in the numerical order given.

2-10. AMP BOARD

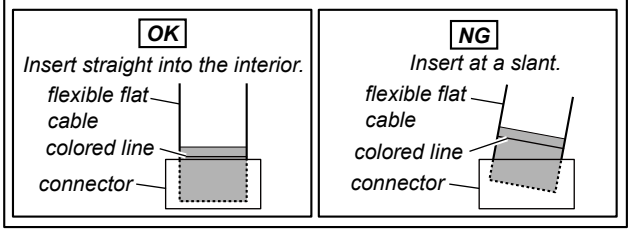


– Chassis block rear view –

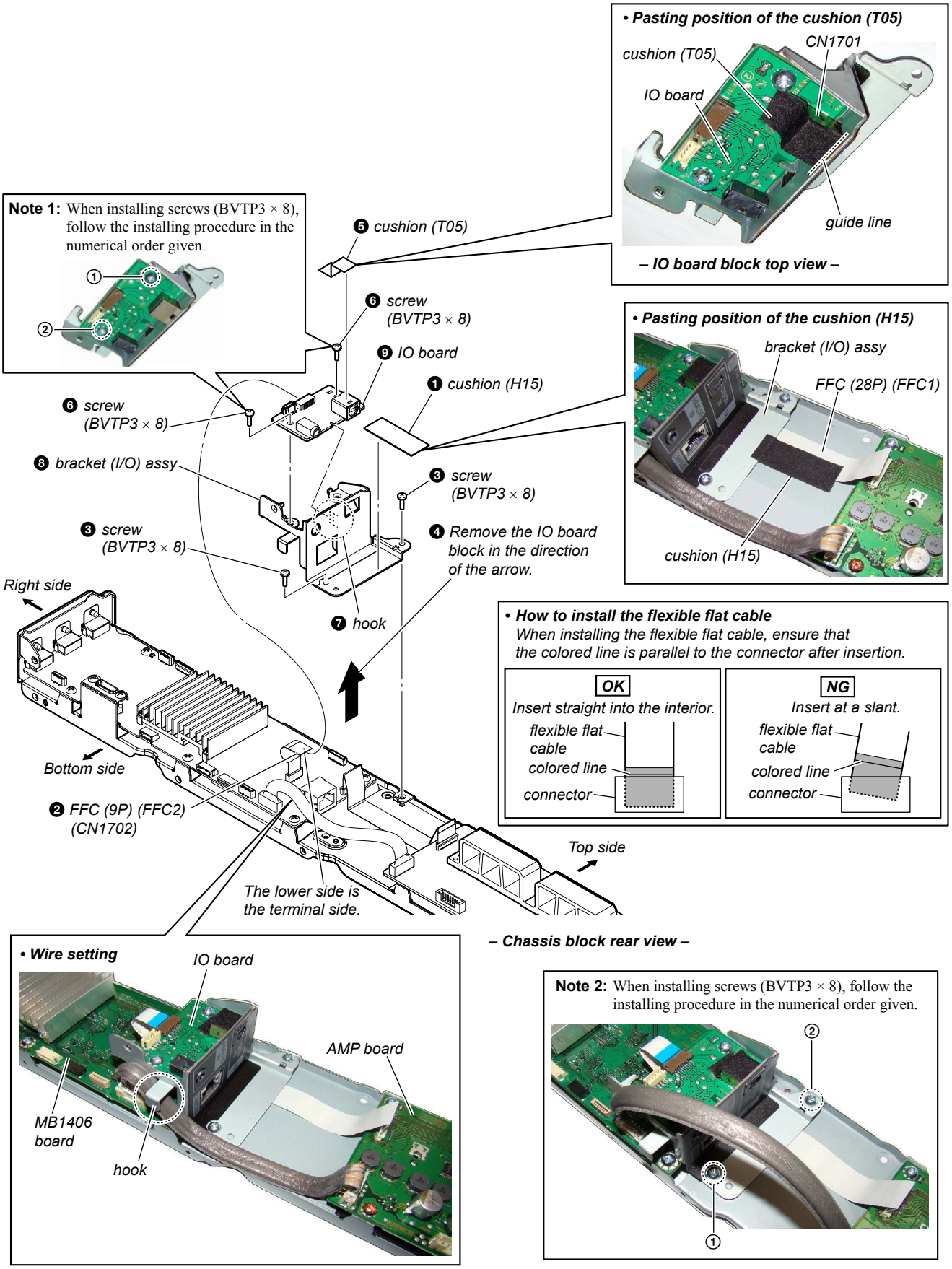
• **How to install the connector**
Insert the connector straight into the interior.
There is a possibility that using this unit without the connector correctly installed will damage it.



• **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.



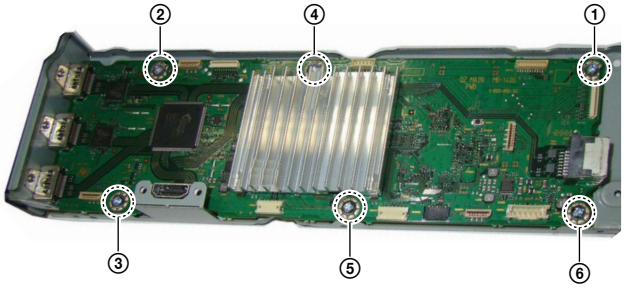
2-11. IO BOARD

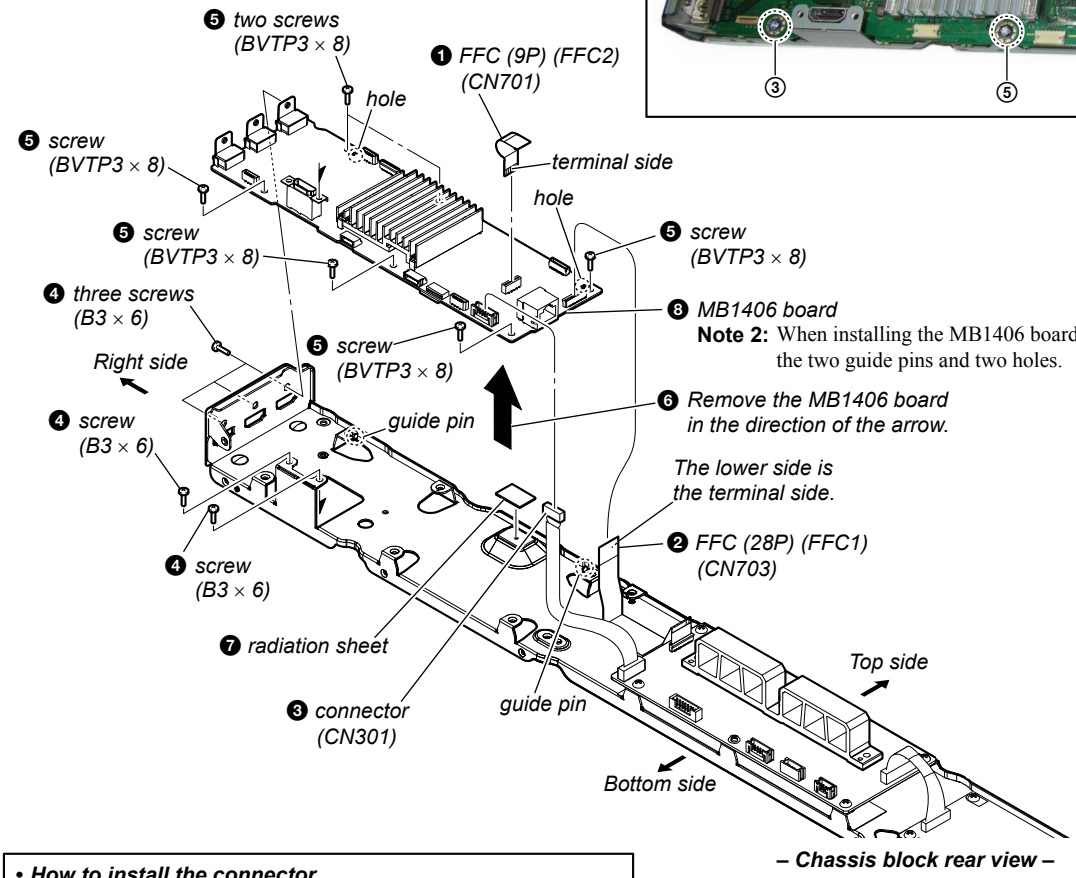

• Pasting position of the cushion (T05)
CN1701
cushion (T05)
IO board
guide line
– IO board block top view –
Note 1: When installing screws (BVTP3 × 8), follow the installing procedure in the numerical order given.
❺ cushion (T05)
❻ screw (BVTP3 × 8)
❾ IO board
❶ cushion (H15)
❻ screw (BVTP3 × 8)
❽ bracket (I/O) assy
❸ screw (BVTP3 × 8)
❸ screw (BVTP3 × 8)
❹ Remove the IO board block in the direction of the arrow.
❼ hook
• Pasting position of the cushion (H15)
bracket (I/O) assy
FFC (28P) (FFC1)
cushion (H15)
Right side
Bottom side
❷ FFC (9P) (FFC2) (CN1702)
Top side
The lower side is the terminal side.
– Chassis block rear view –
• 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.
OK
Insert straight into the interior.
flexible flat cable
colored line
connector
NG
Insert at a slant.
flexible flat cable
colored line
connector
• Wire setting
IO board
AMP board
MB1406 board
hook
Note 2: When installing screws (BVTP3 × 8), follow the installing procedure in the numerical order given.
②
①

2-12. MB1406 BOARD

Note 1: When the complete MB1406 board is replaced, refer to "NOTE OF REPLACING THE COMPLETE MB1406 BOARD OR CARD WLAN/BT COMBO" on page 6.

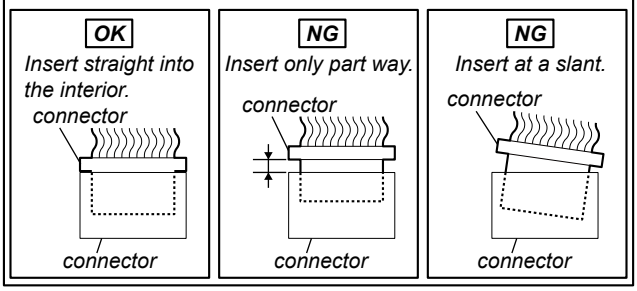
Note 3: When installing screws (BVTP3 × 8), follow the installing procedure in the numerical order given.



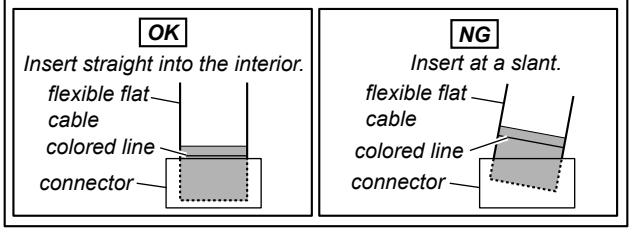


– Chassis block rear view –

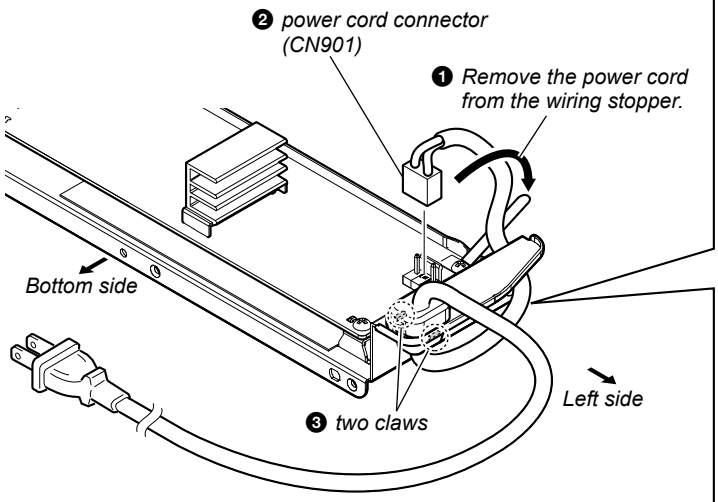
• ***How to install the connector***
Insert the connector straight into the interior.
There is a possibility that using this unit without the connector correctly installed will damage it.



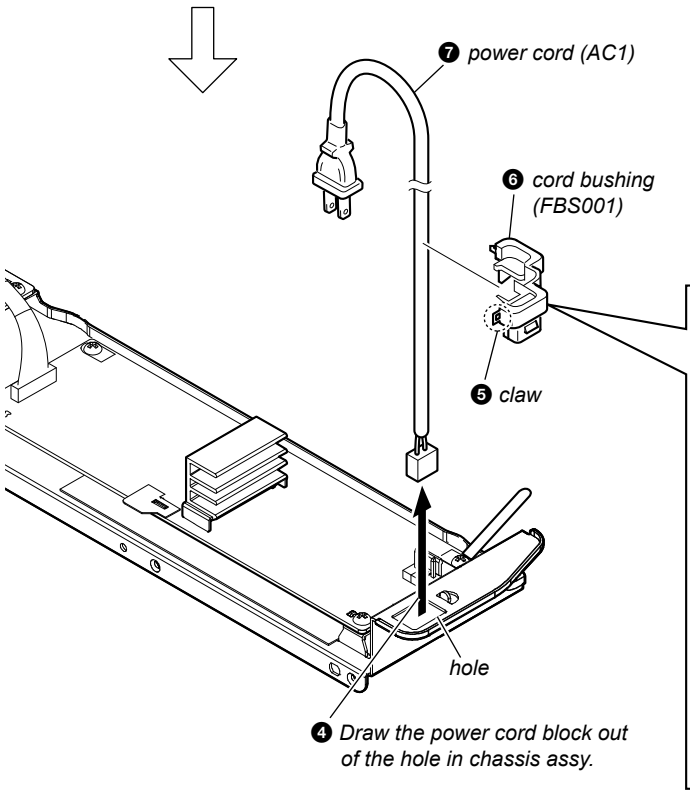
• ***How to install the flexible flat cable***
When installing the flexible flat cable, ensure that the colored line is parallel to the connector after insertion.



2-13. POWER CORD (AC1)

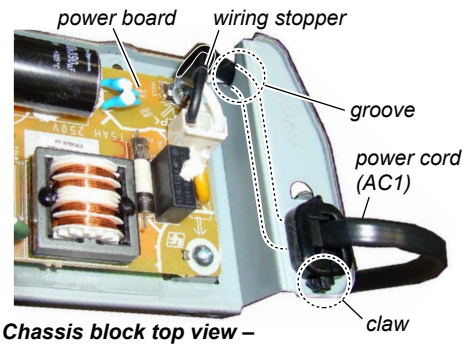


– Chassis block rear view –



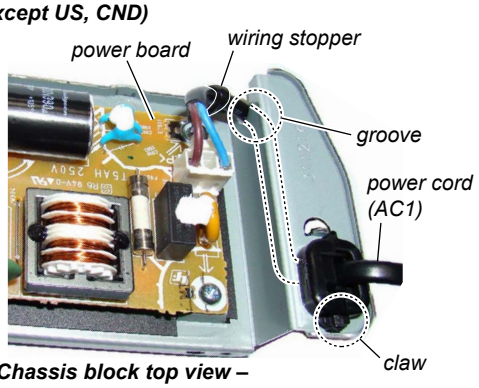
• **Power cord (AC1) setting**

(US, CND)



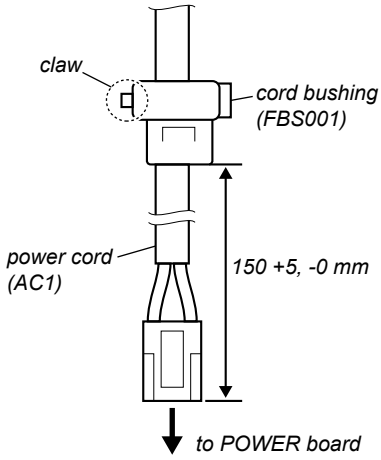
– Chassis block top view –

(Except US, CND)



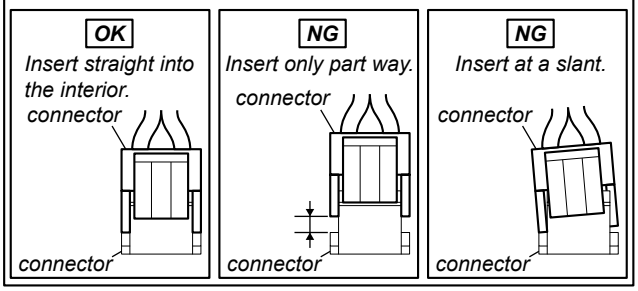
– Chassis block top view –

• **Installation position of the cord bushing (FBS001)**

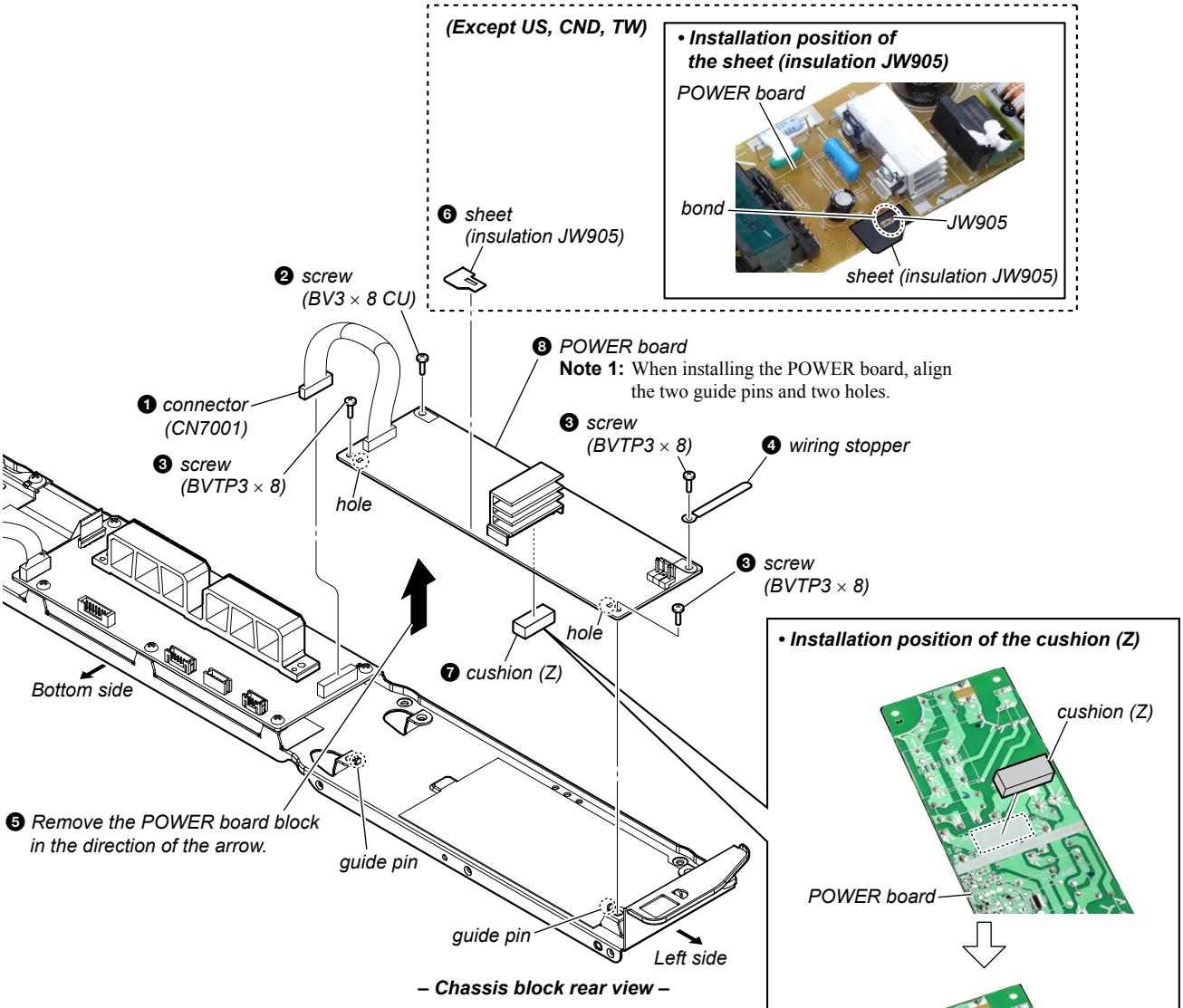


• **How to install the connector**

Insert the connector straight into the interior. There is a possibility that using this unit without the connector correctly installed will damage it.



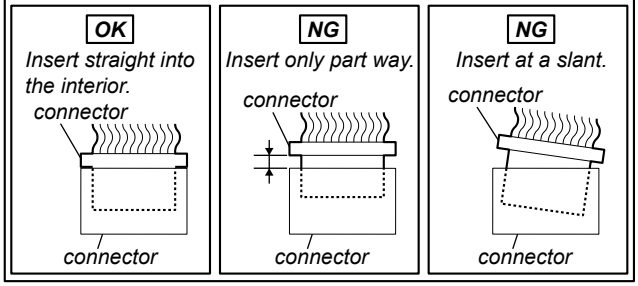
2-14. POWER BOARD



Note 2: When installing screws, follow the installing procedure in the numerical order given.

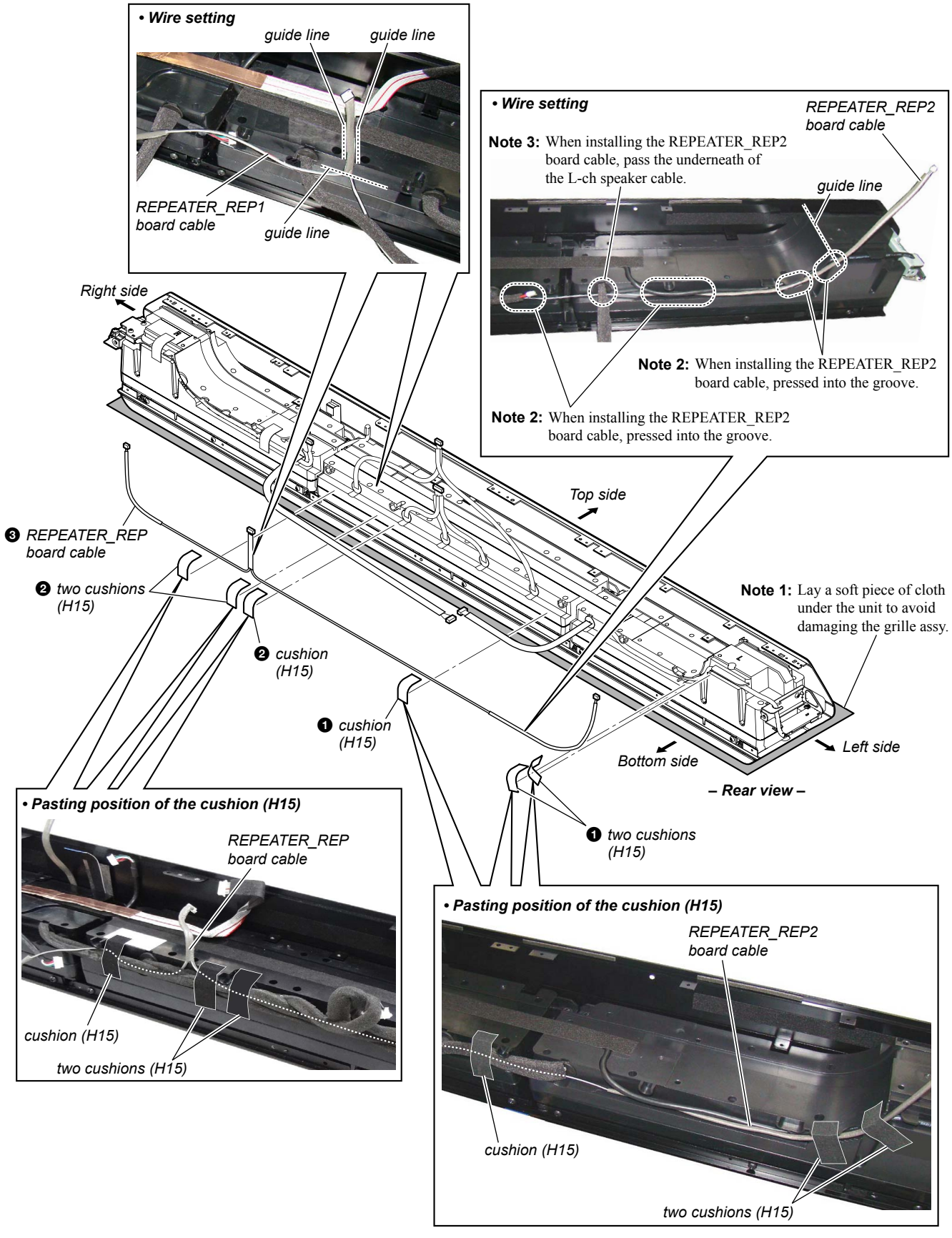
• ***How to install the connector***

Insert the connector straight into the interior. There is a possibility that using this unit without the connector correctly installed will damage it.



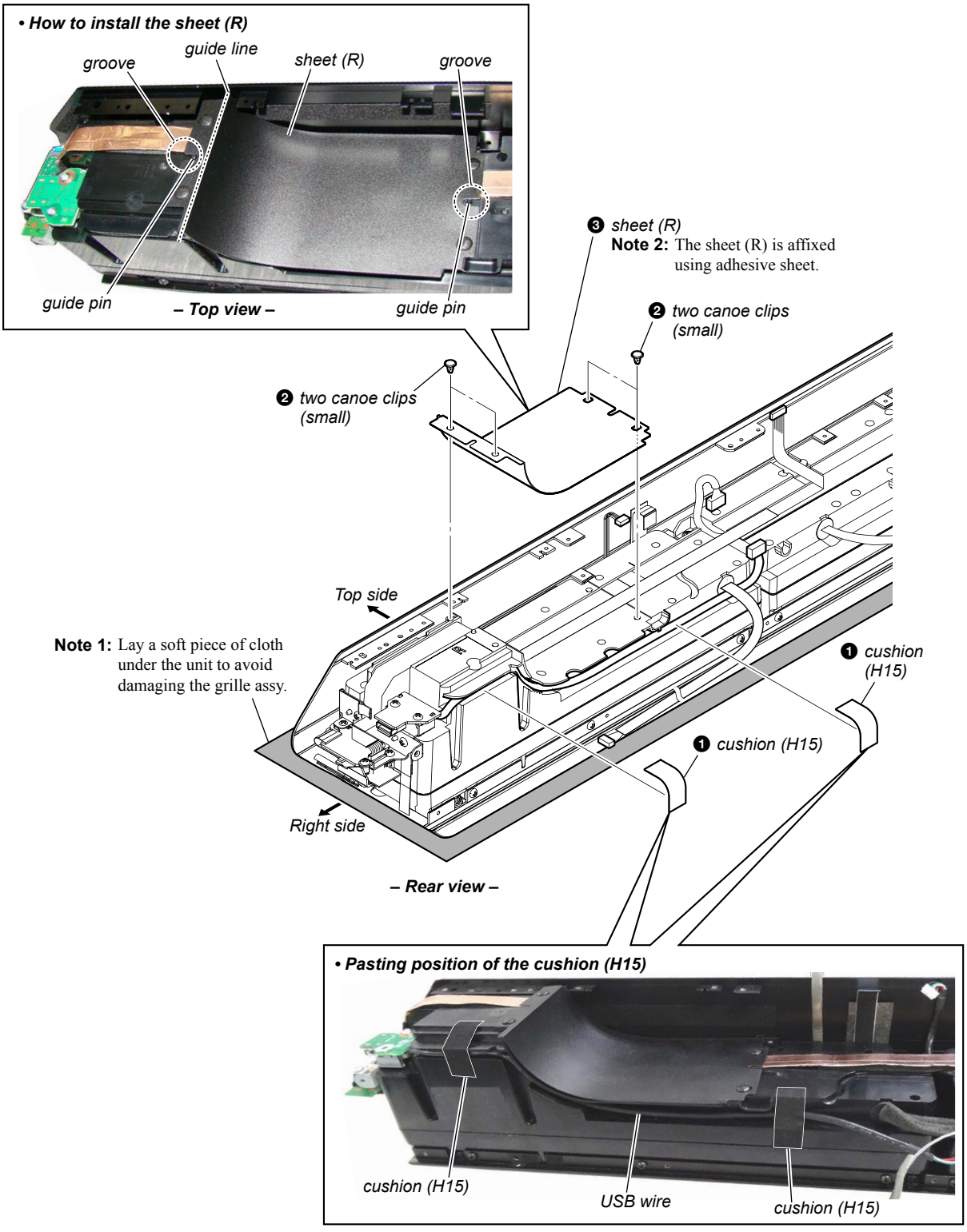
2-15. RF MODULATOR BLOCK-1

• Continued on 2-16 (page 25).

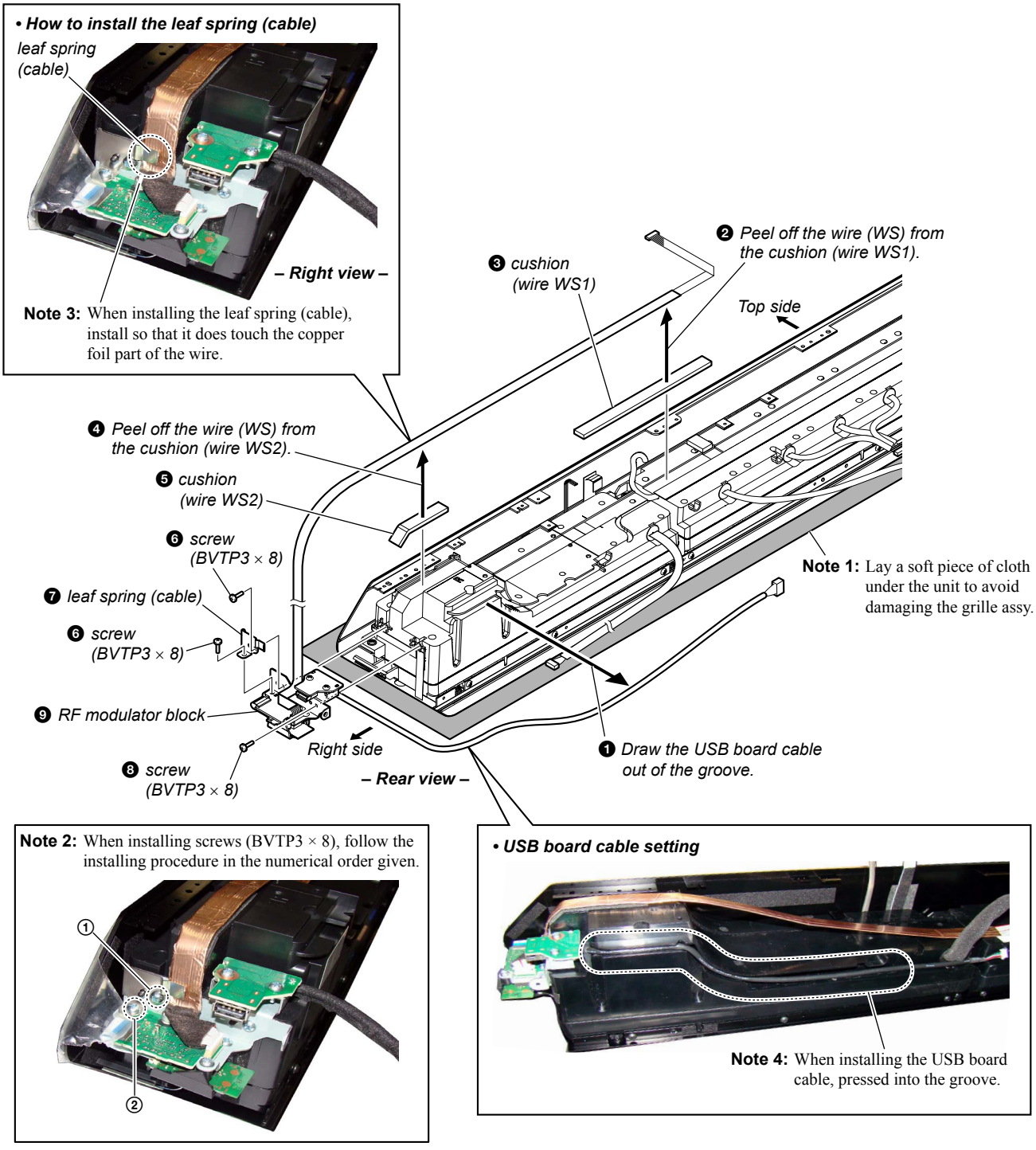


2-16. RF MODULATOR BLOCK-2

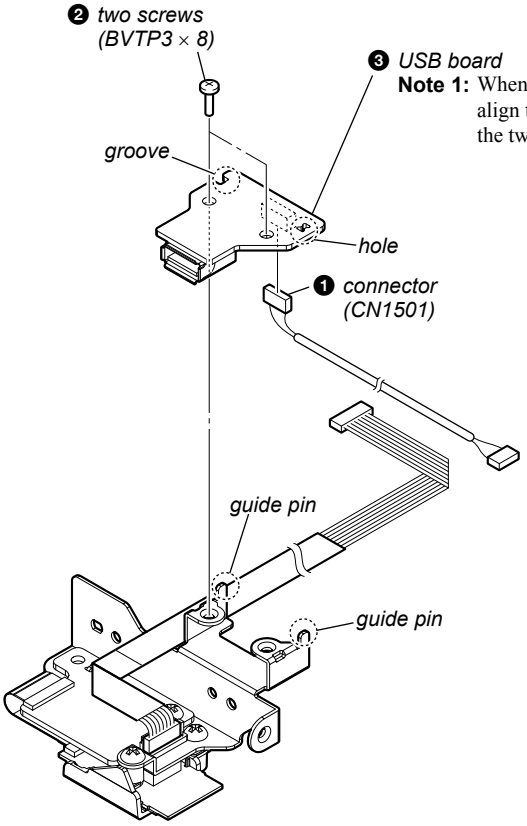
• Continued on 2-17 (page 26).



2-17. RF MODULATOR BLOCK-3



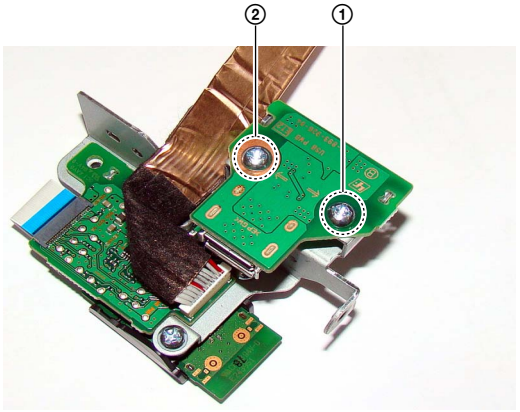
2-18. USB BOARD



– RF modulator block rear bottom view –

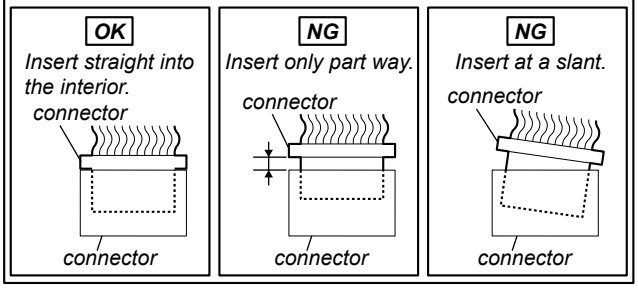
Note 1: When installing the USB board, align the hole and groove with the two guide pins.

Note 2: When installing screws (BVTP3 × 8), follow the installing procedure in the numerical order given.

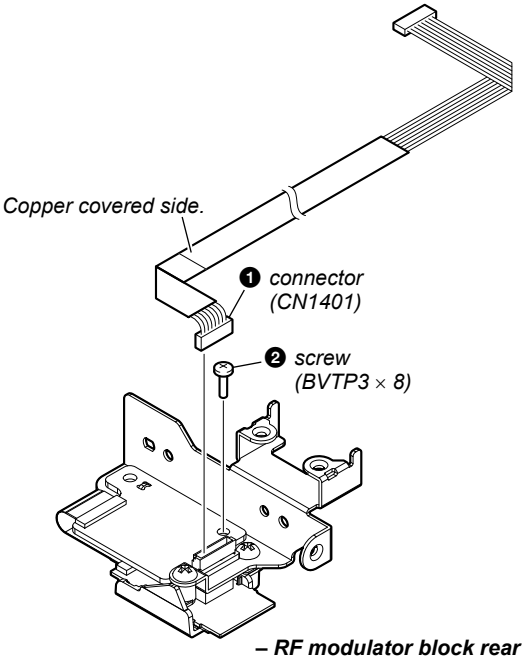


• ***How to install the connector***

Insert the connector straight into the interior.
There is a possibility that using this unit without the connector correctly installed will damage it.

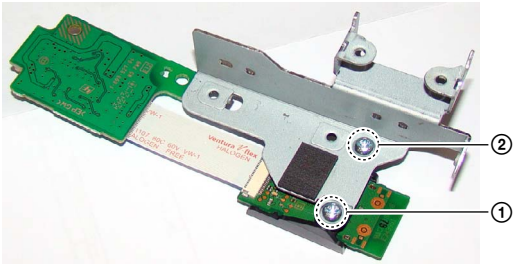


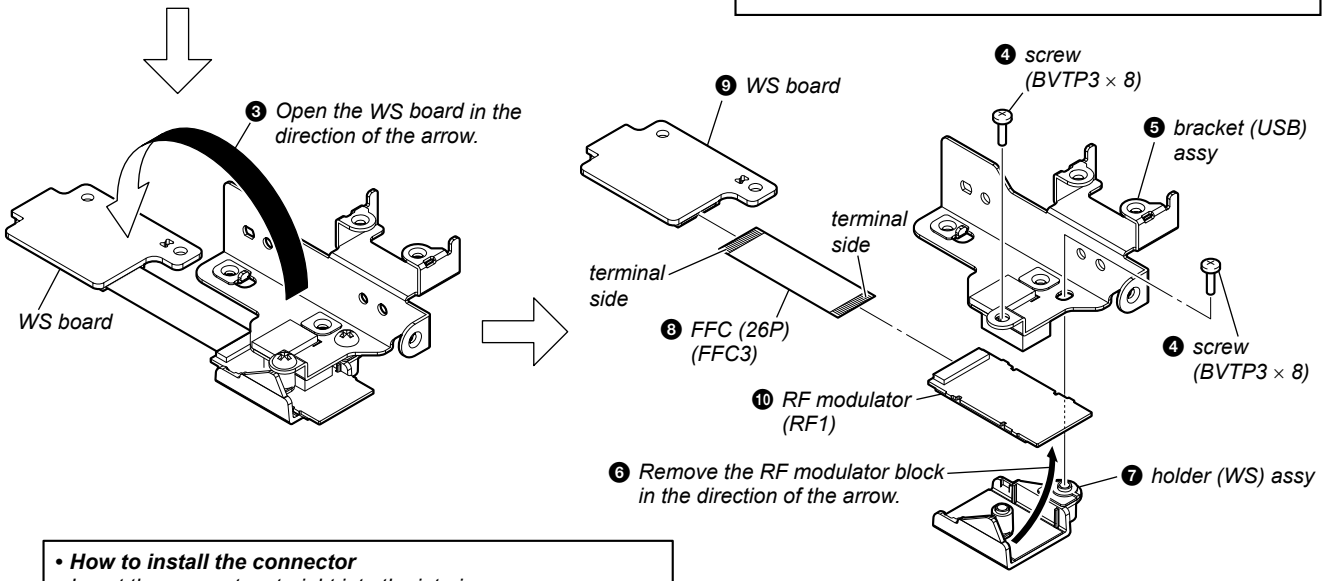
2-19. WS BOARD, RF MODULATOR (RF1)



– RF modulator block rear bottom view –

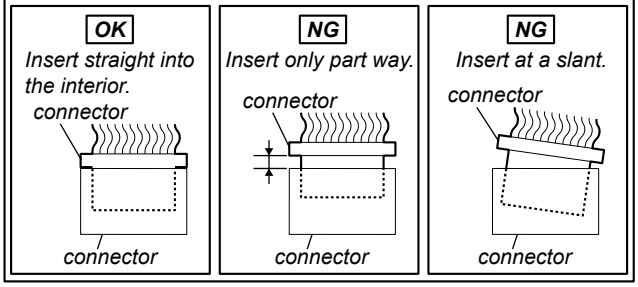
Note: When installing screws (BVTP3 × 8), follow the installing procedure in the numerical order given.





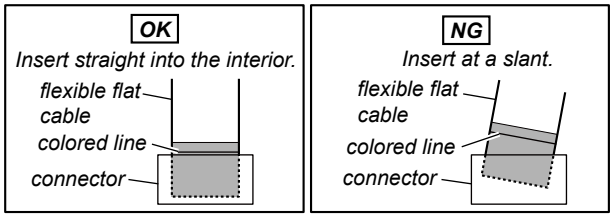
• ***How to install the connector***

Insert the connector straight into the interior. There is a possibility that using this unit without the connector correctly installed will damage it.



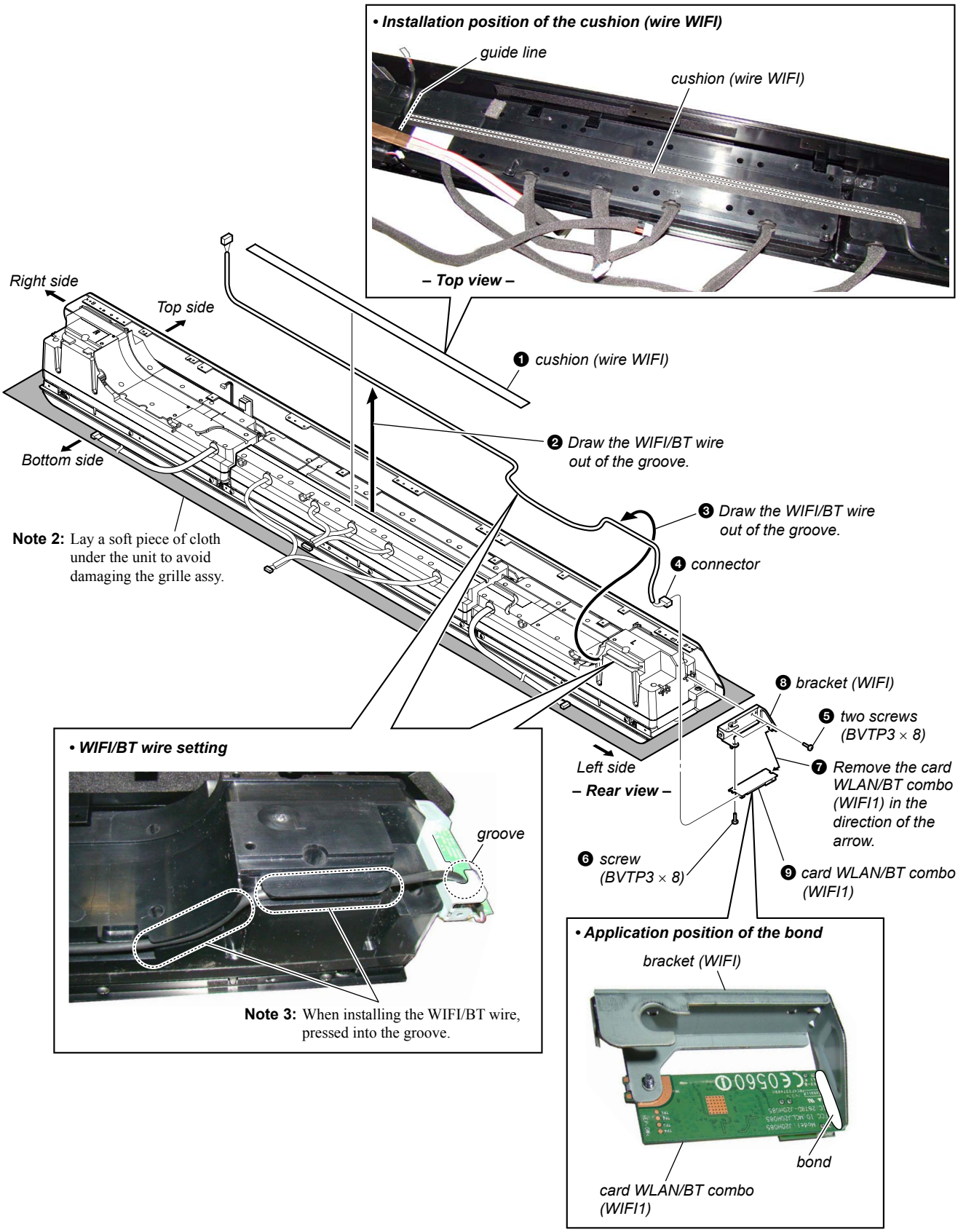
• ***How to install the flexible flat cable***

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

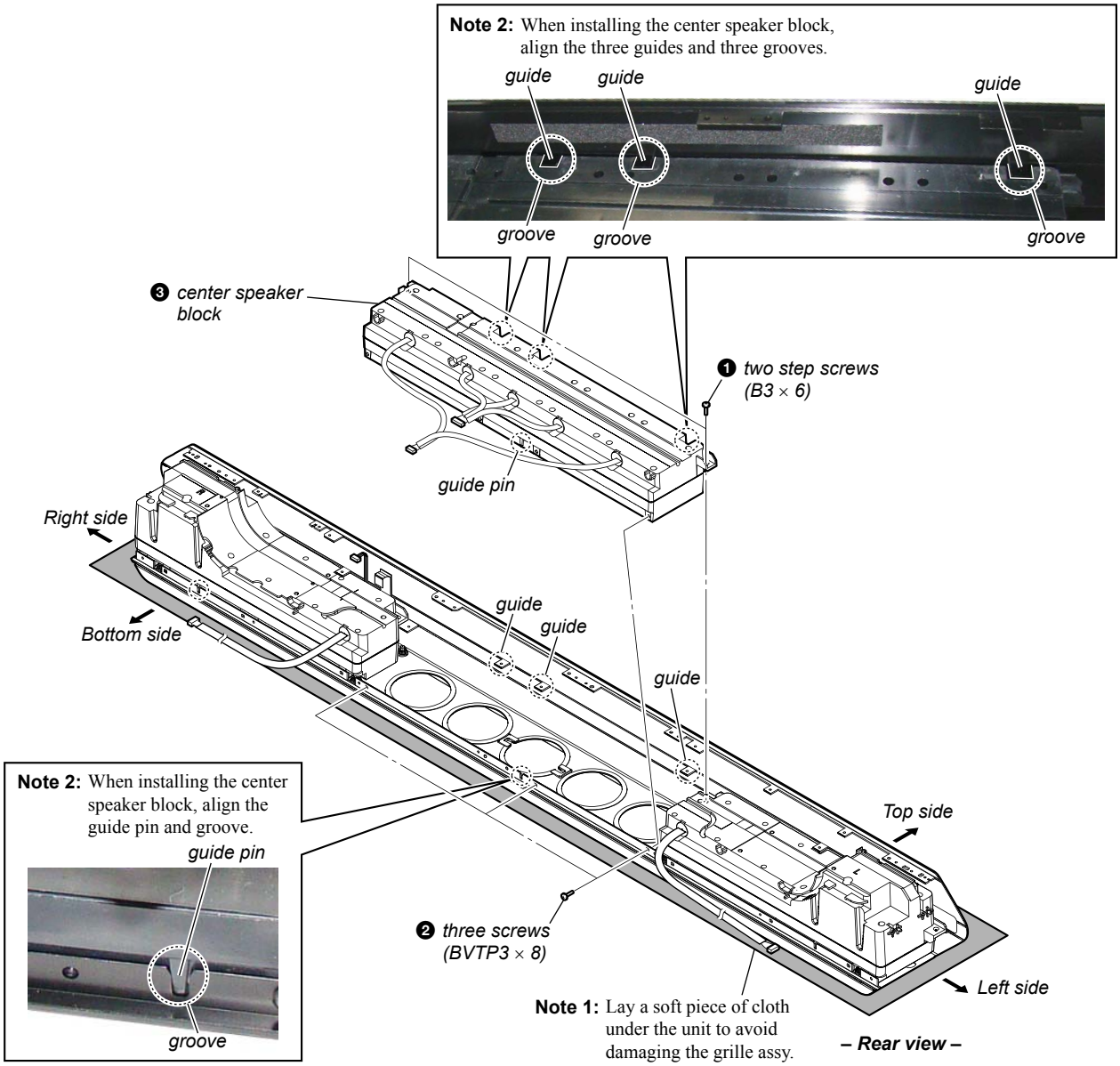


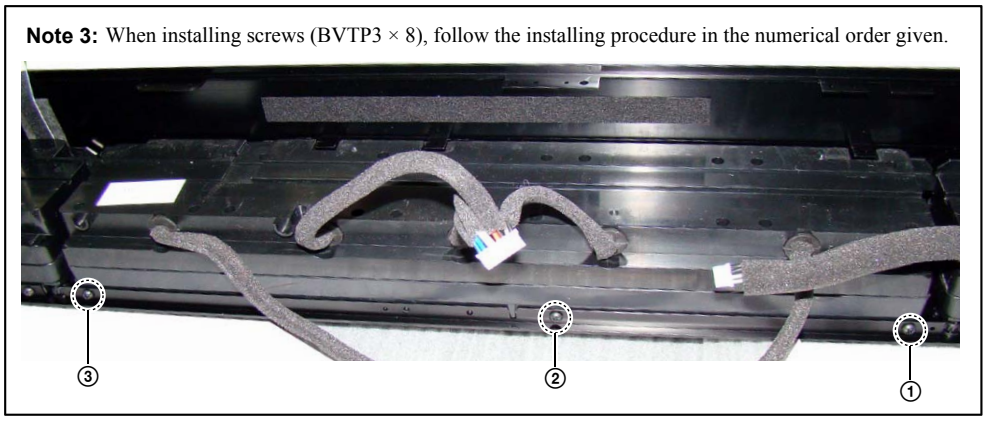
2-20. CARD WLAN/BT COMBO (WIFI1)

Note 1: When the card WLAN/BT combo is replaced, refer to "NOTE OF REPLACING THE COMPLETE MB1406 BOARD OR CARD WLAN/BT COMBO" on page 6.

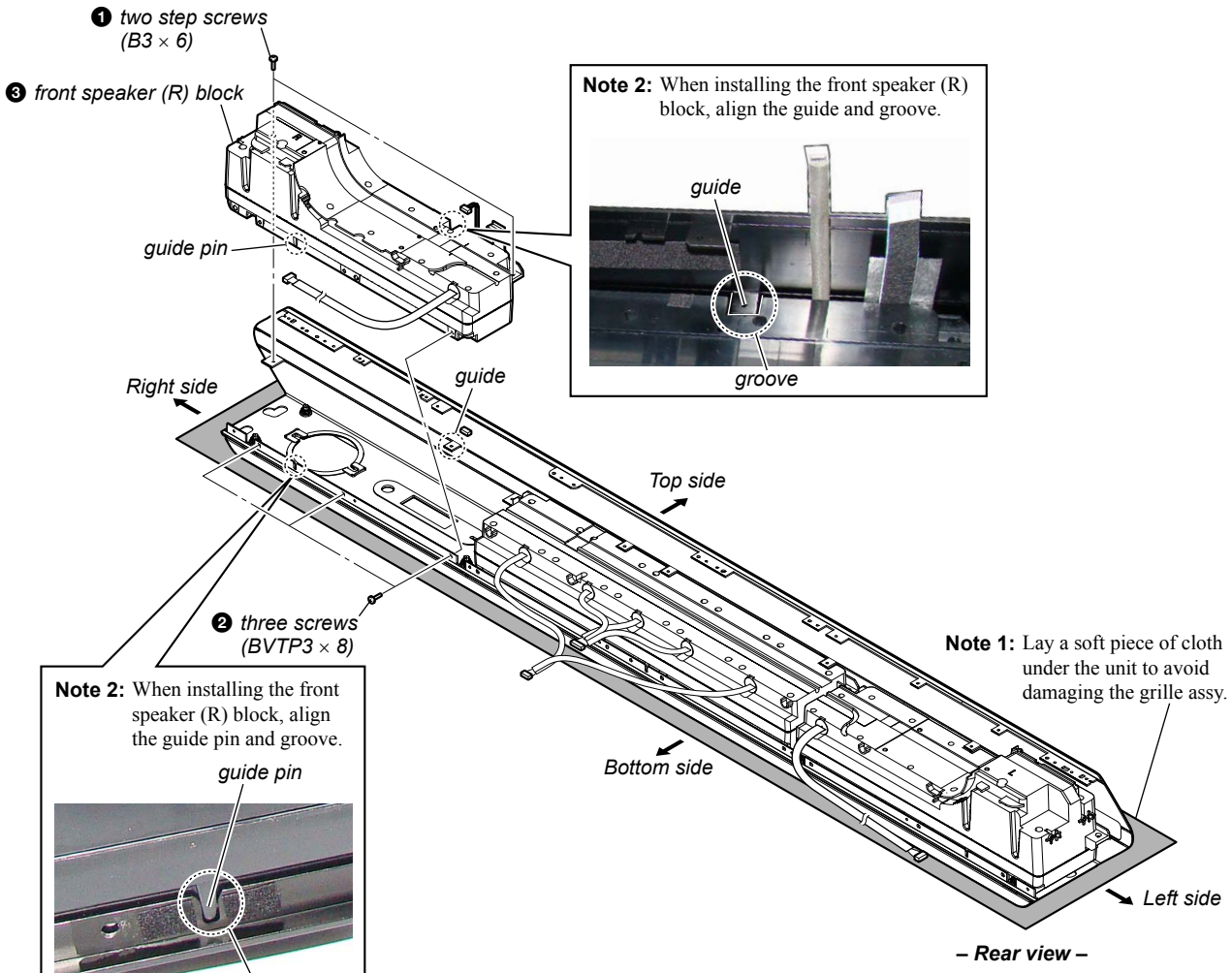


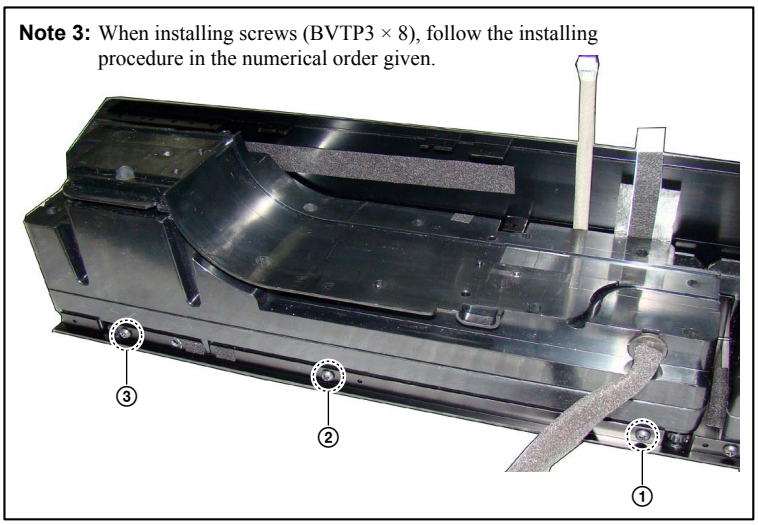
2-21. CENTER SPEAKER BLOCK



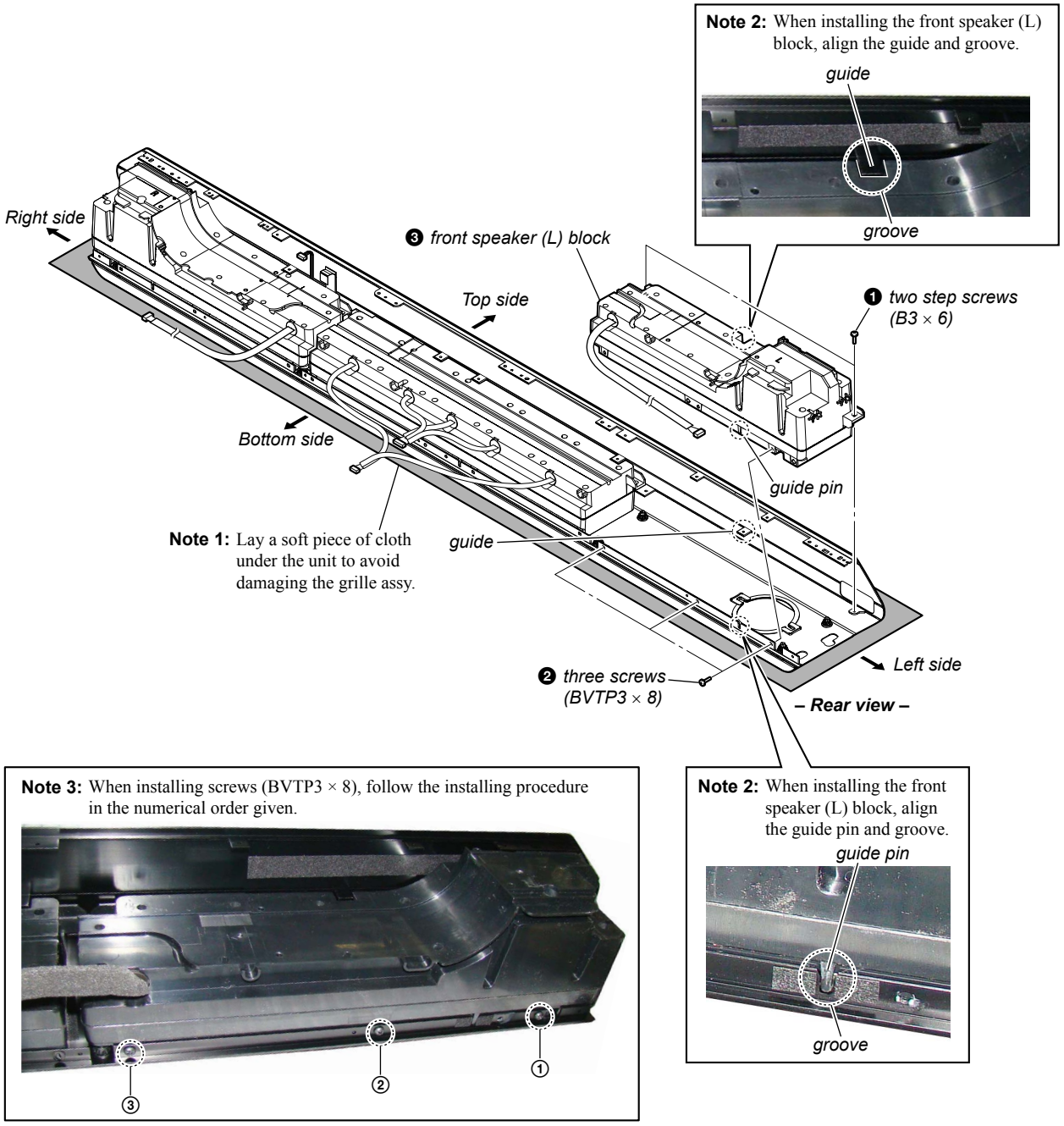


2-22. FRONT SPEAKER (R) BLOCK

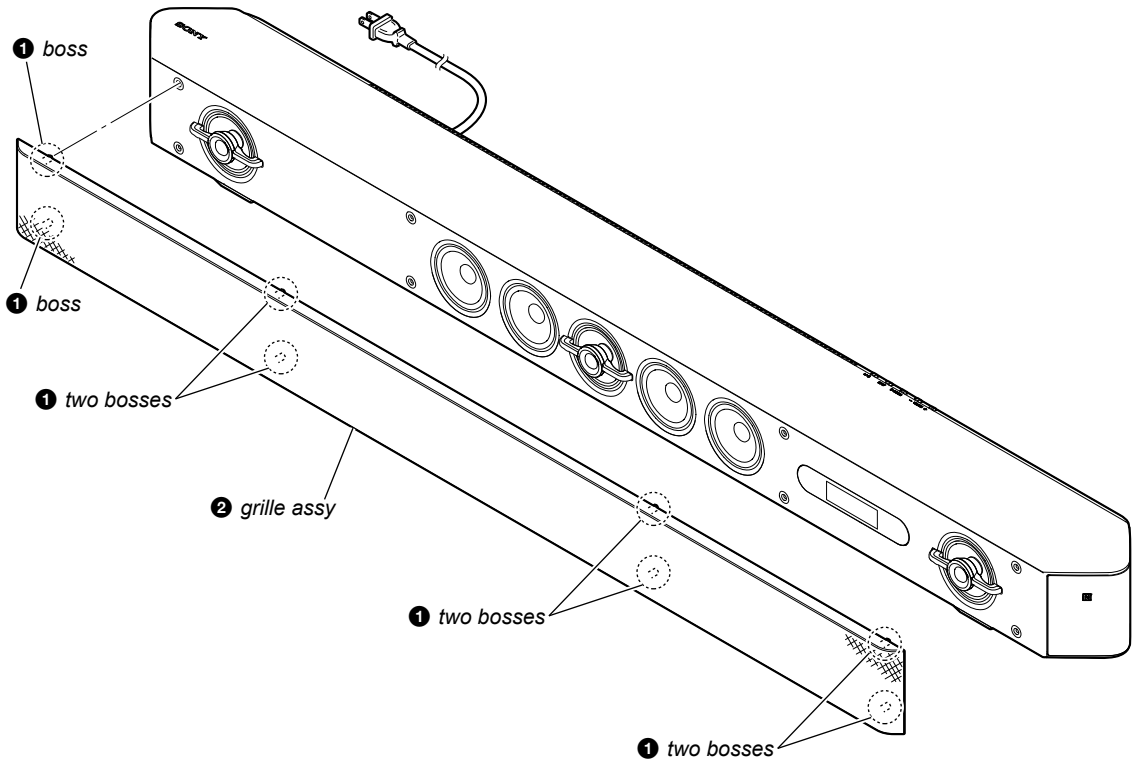




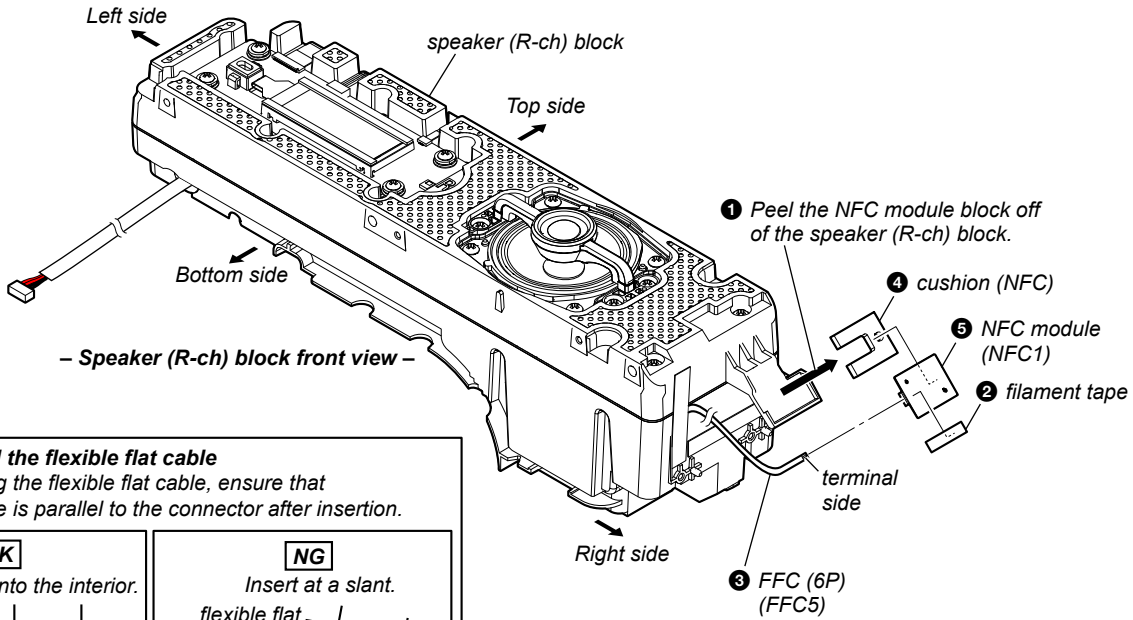
2-23. FRONT SPEAKER (L) BLOCK



2-24. GRILLE ASSY

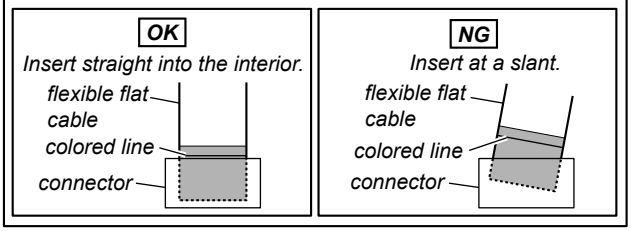


2-25. NFC MODULE (NFC1)



• How to install the flexible flat cable

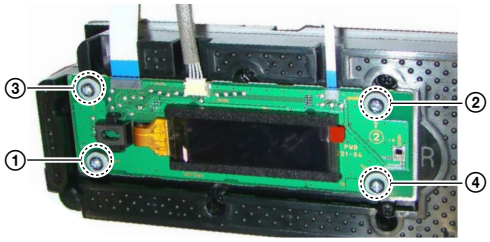
When installing the flexible flat cable, ensure that the colored line is parallel to the connector after insertion.



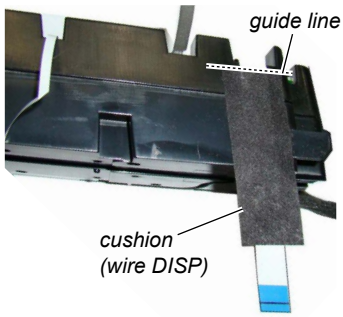
2-26. DISPLAY BOARD BLOCK-1

• Continued on 2-27 (page 35).

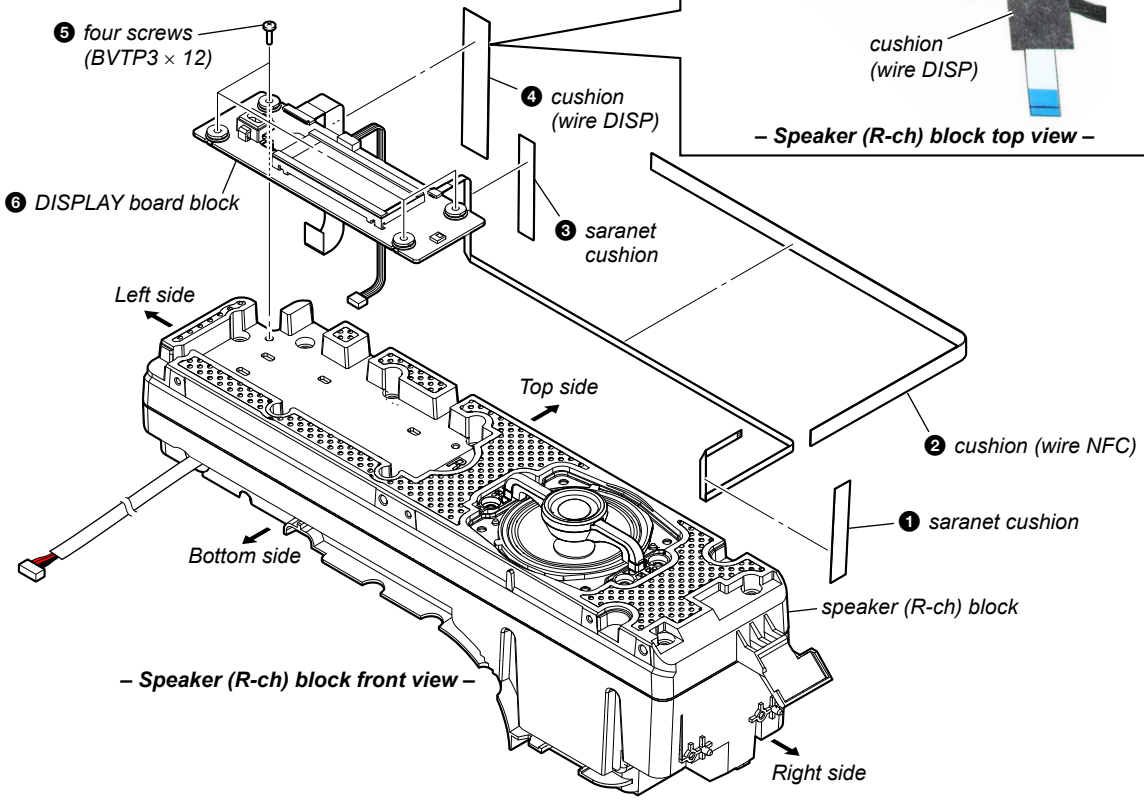
Note: When installing screws (BVTP3 × 12), follow the installing procedure in the numerical order given.



• Installation position of the cushion (wire DISP)

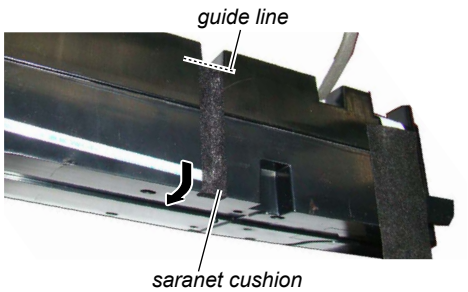


– Speaker (R-ch) block top view –

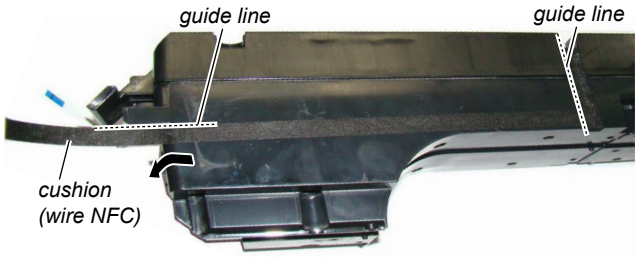


– Speaker (R-ch) block front view –

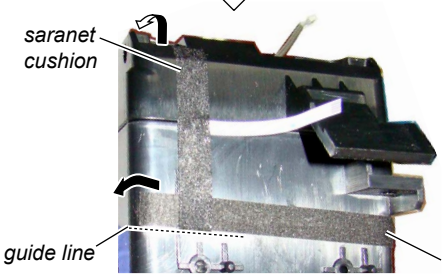
• How to install the saranet cushion and cushion (wire NFC)



– Speaker (R-ch) block top view –

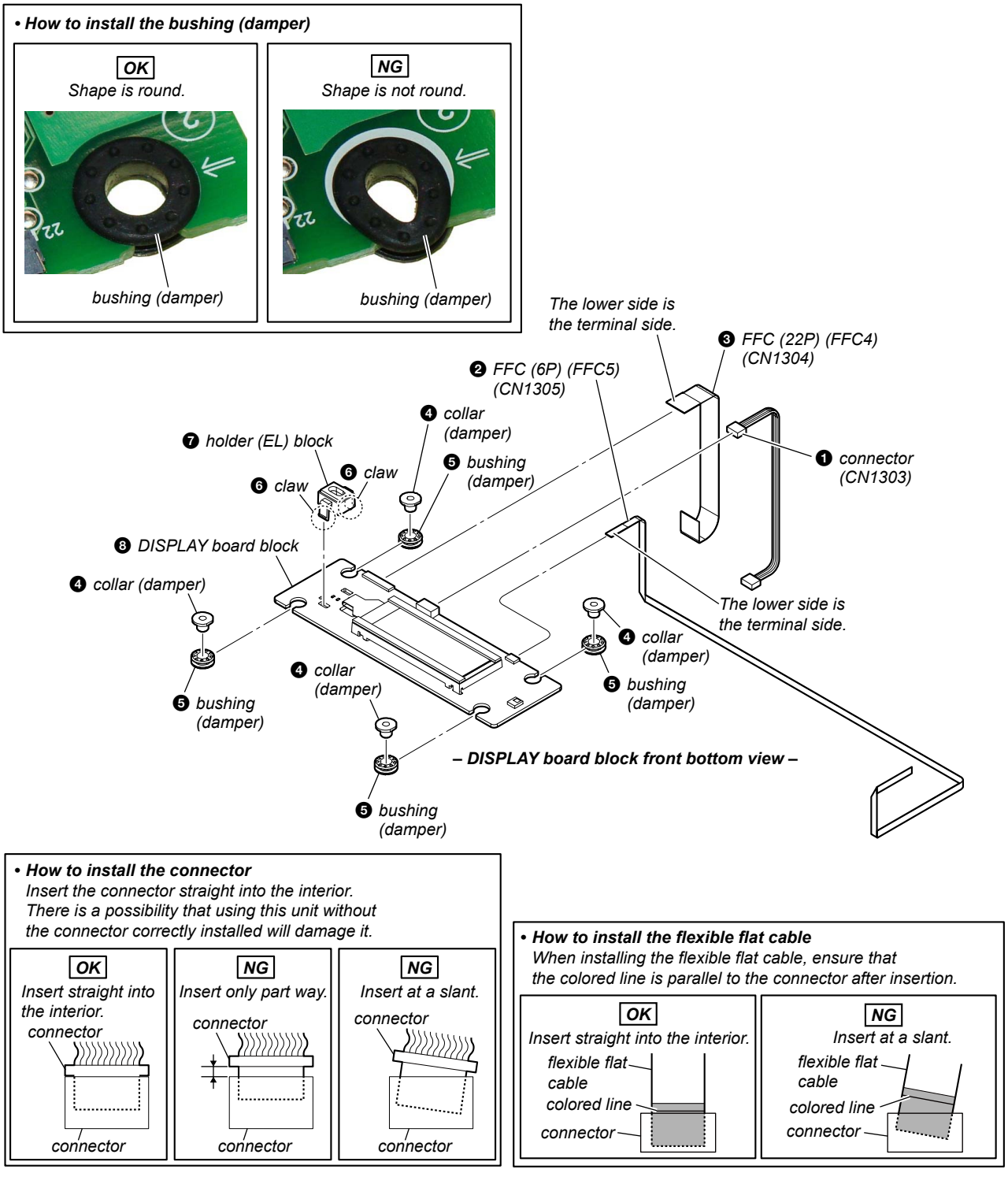


– Speaker (R-ch) block top view –

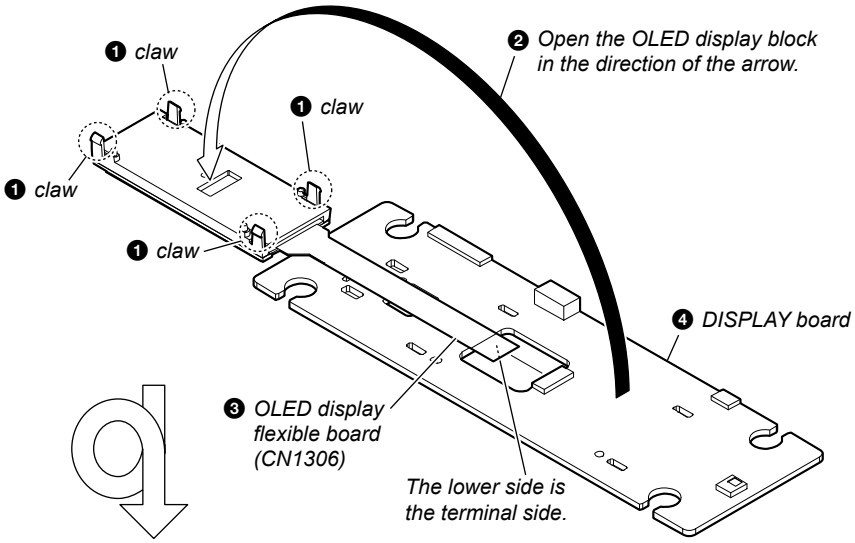


– Speaker (R-ch) block right view –

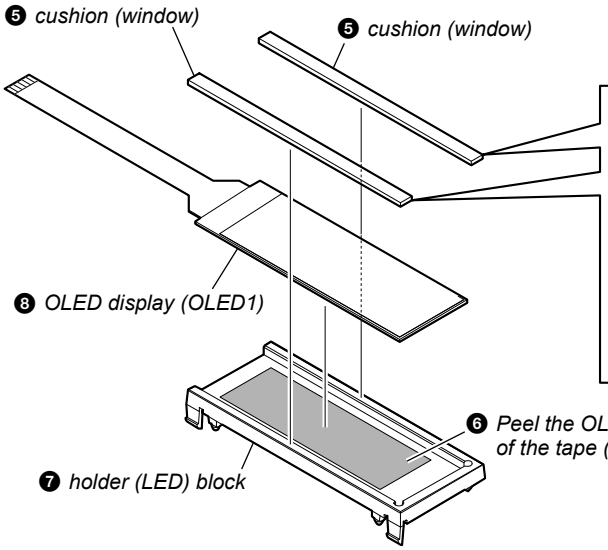
2-27. DISPLAY BOARD BLOCK-2



2-28. DISPLAY BOARD, OLED DISPLAY (OLED1)

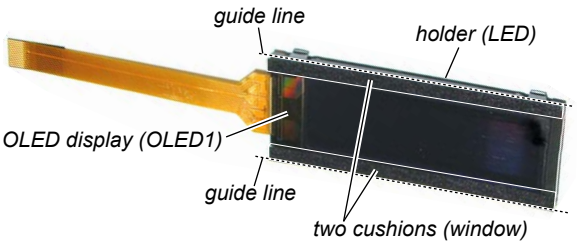


– DISPLAY board block front bottom view –



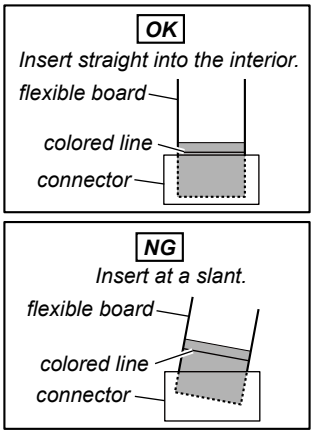
– OLED display block front bottom view –

• Pasting position of the cushion (window)



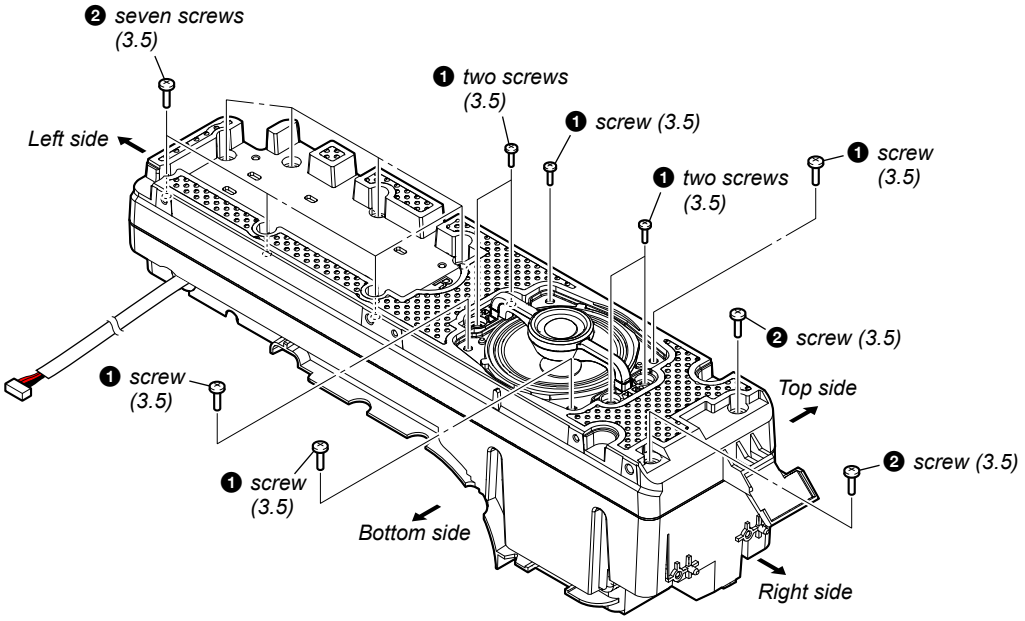
• How to install the flexible board

When installing the flexible board, ensure that the colored line is parallel to the connector after insertion.



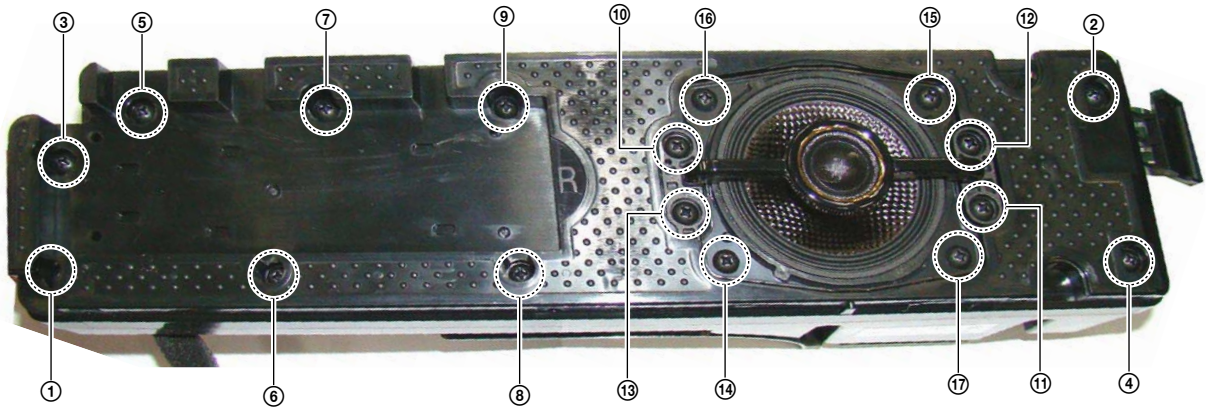
2-29. LOUDSPEAKER (SP3, SP4) (R-ch)-1

• Continued on 2-30 (page 38).



– Right speaker block front view –

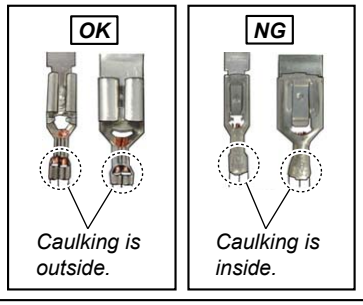
Note: When installing screws, follow the installing procedure in the numerical order given.

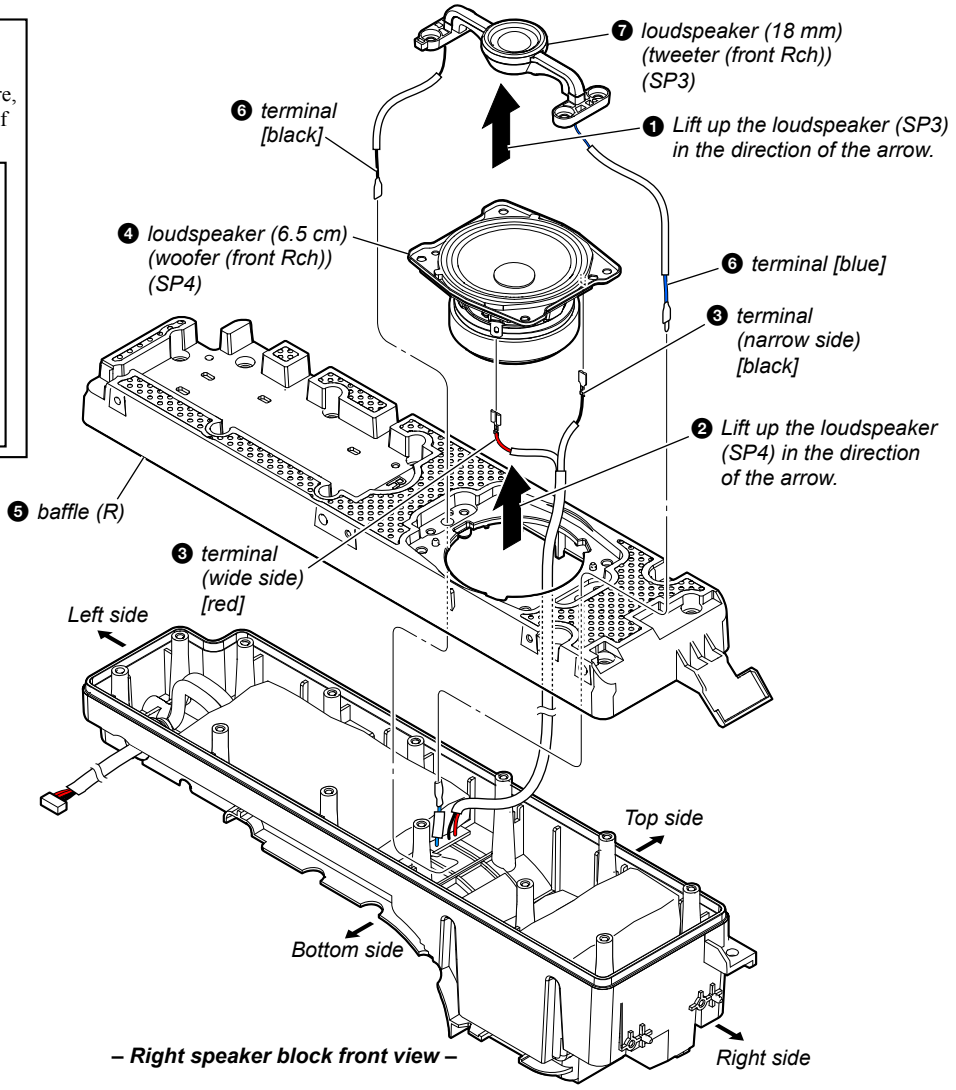


2-30. LOUDSPEAKER (SP3, SP4) (R-ch)-2

• *Installation direction for the woofer speaker wire*

Note 1: When installing the speaker wire, make the position of caulking of terminals is outside.

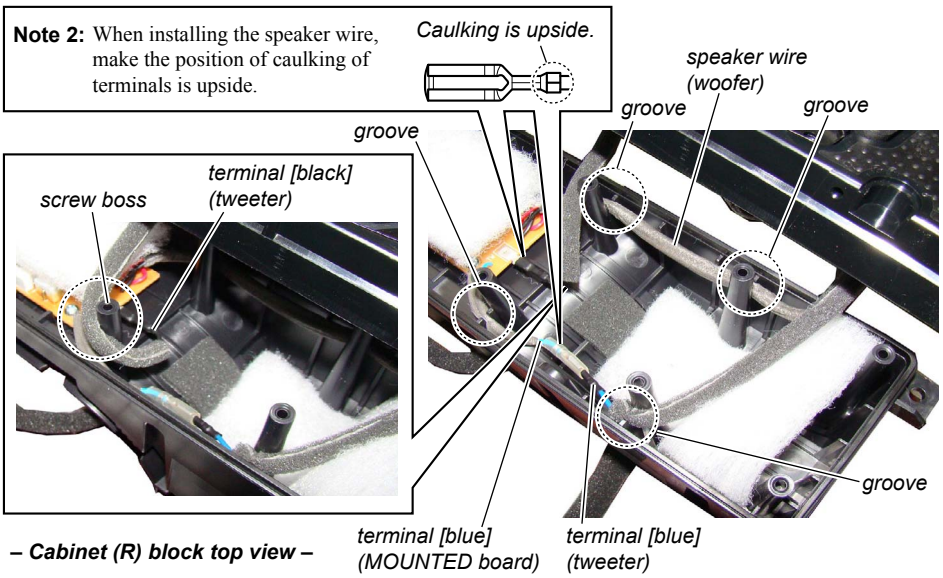




– Right speaker block front view –

• *How to install the speaker wire*

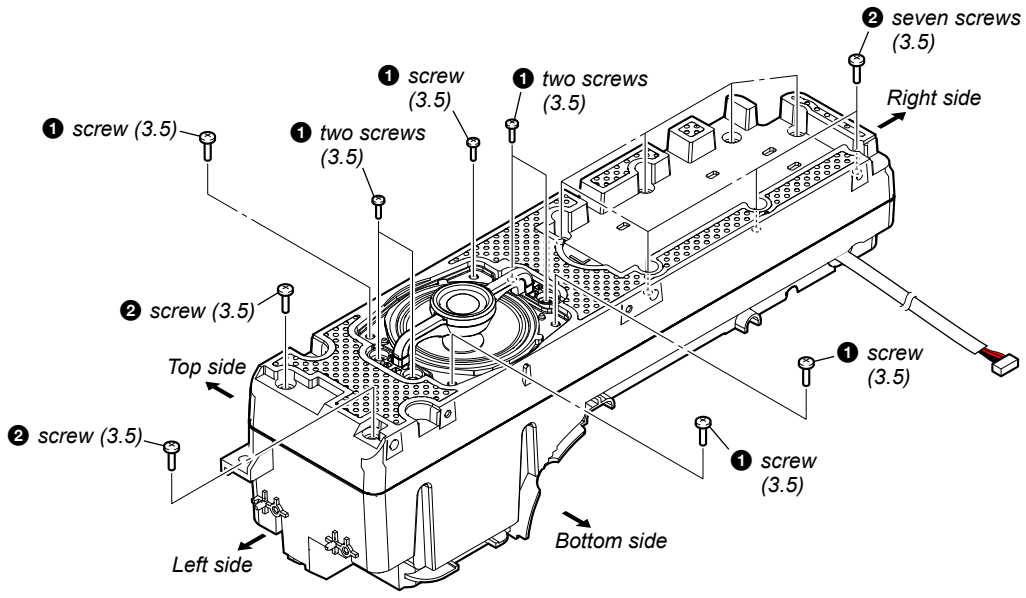
Note 2: When installing the speaker wire, make the position of caulking of terminals is upside.



– Cabinet (R) block top view –

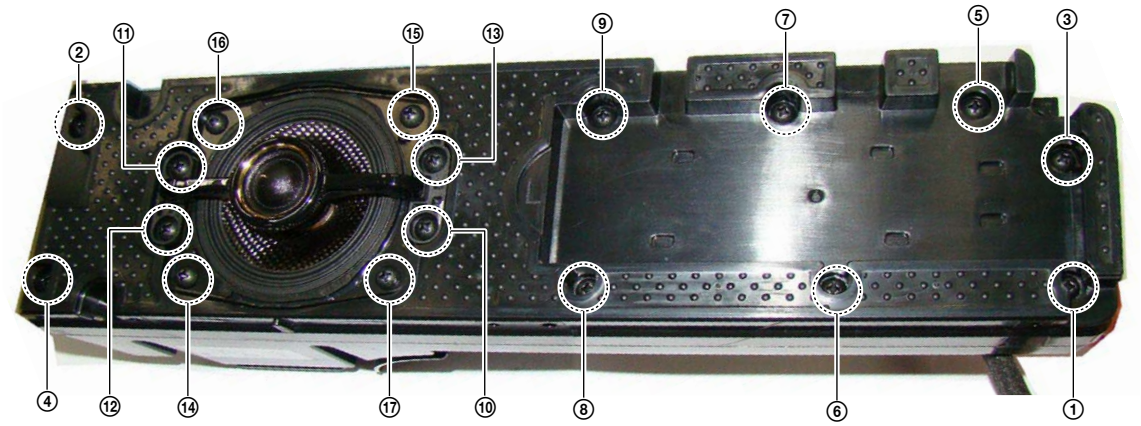
2-31. LOUDSPEAKER (SP1, SP2) (L-ch)-1

• Continued on 2-32 (page 40).

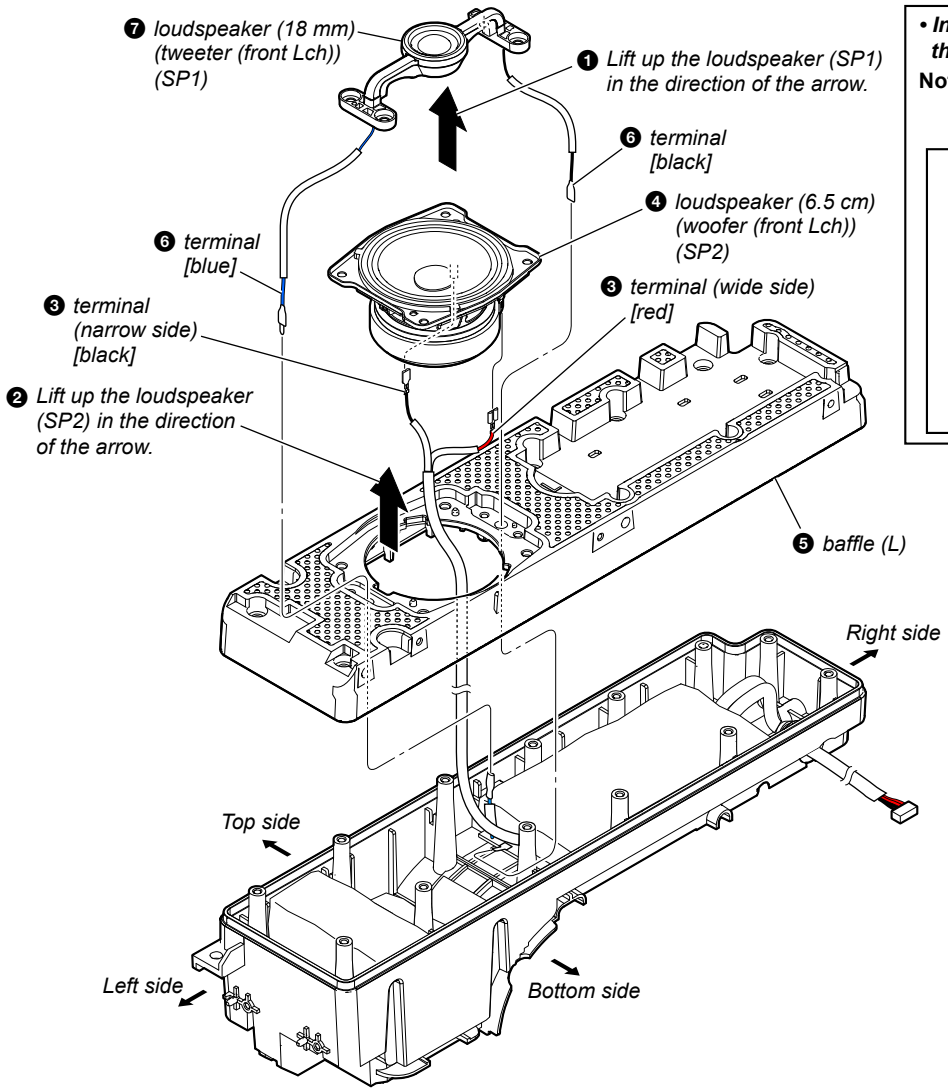


– Left speaker block front view –

Note: When installing screws, follow the installing procedure in the numerical order given.



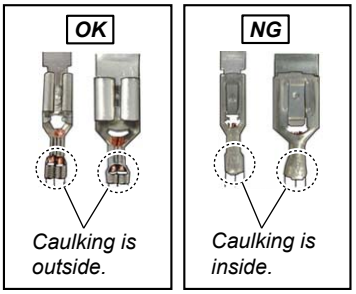
2-32. LOUDSPEAKER (SP1, SP2) (L-ch)-2



– Left speaker block front view –

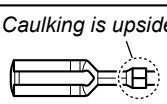
• Installation direction for the woofer speaker wire

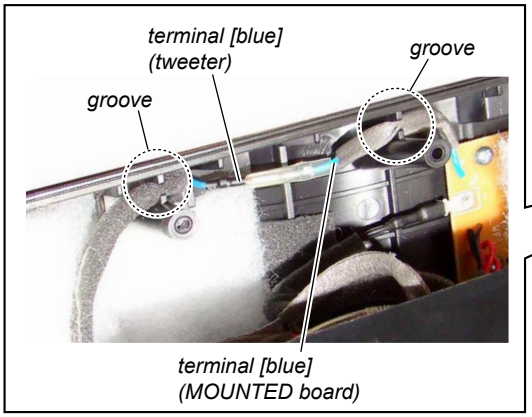
Note 1: When installing the speaker wire, make the position of caulking of terminals is outside.

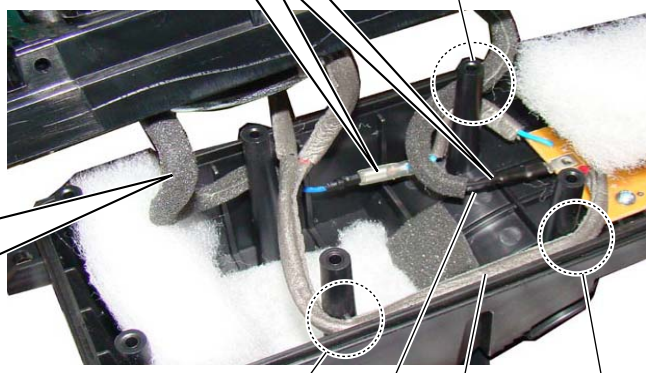


• How to install the speaker wire

Note 2: When installing the speaker wire, make the position of caulking of terminals is upside.

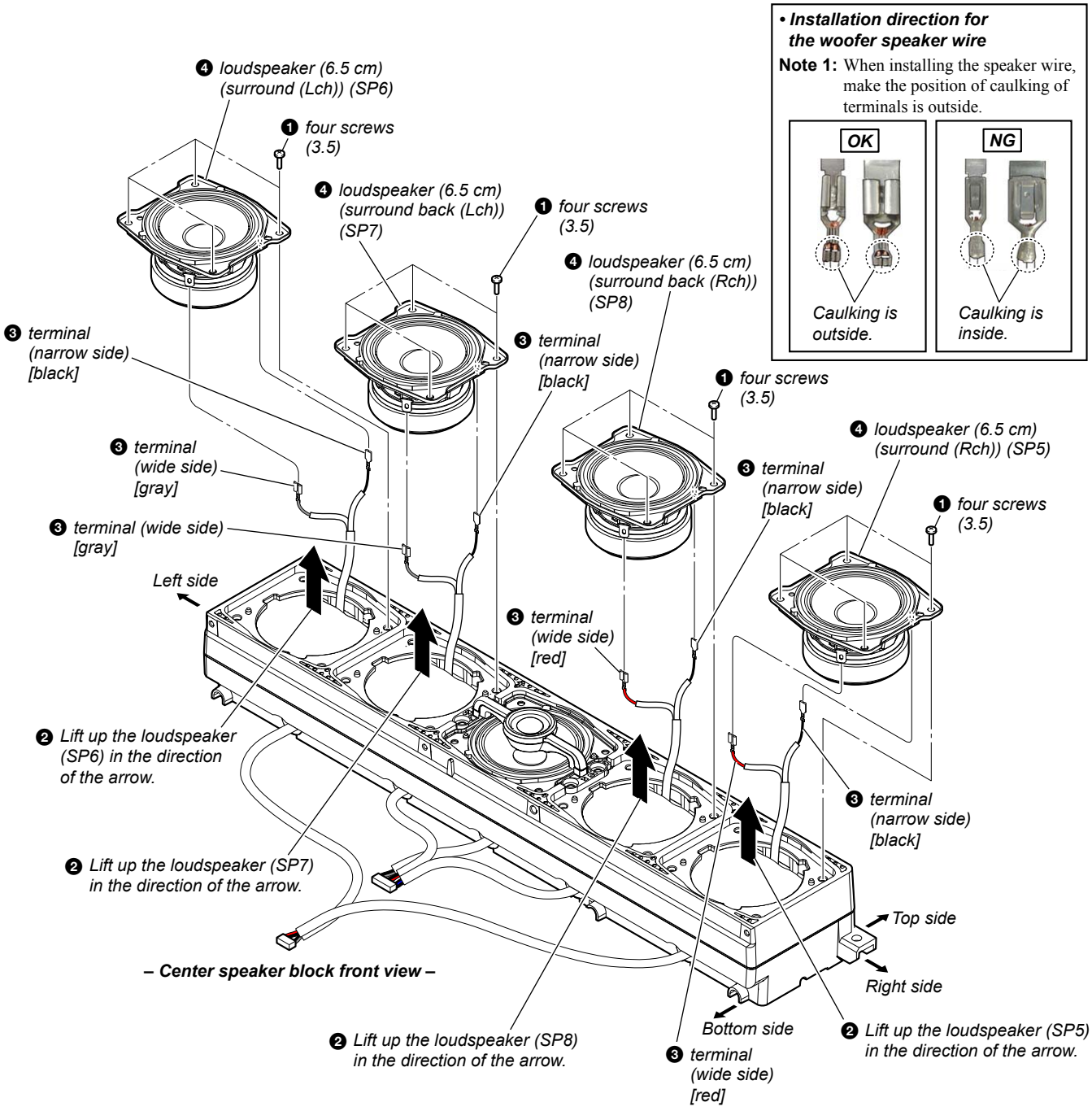




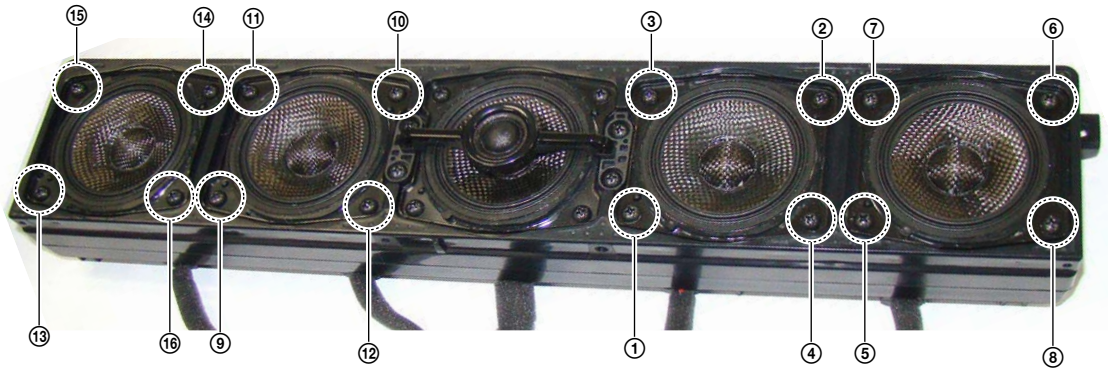


– Cabinet (L) block top view –

2-33. LOUDSPEAKER (SP5, SP6, SP7, SP8) (CENTER)

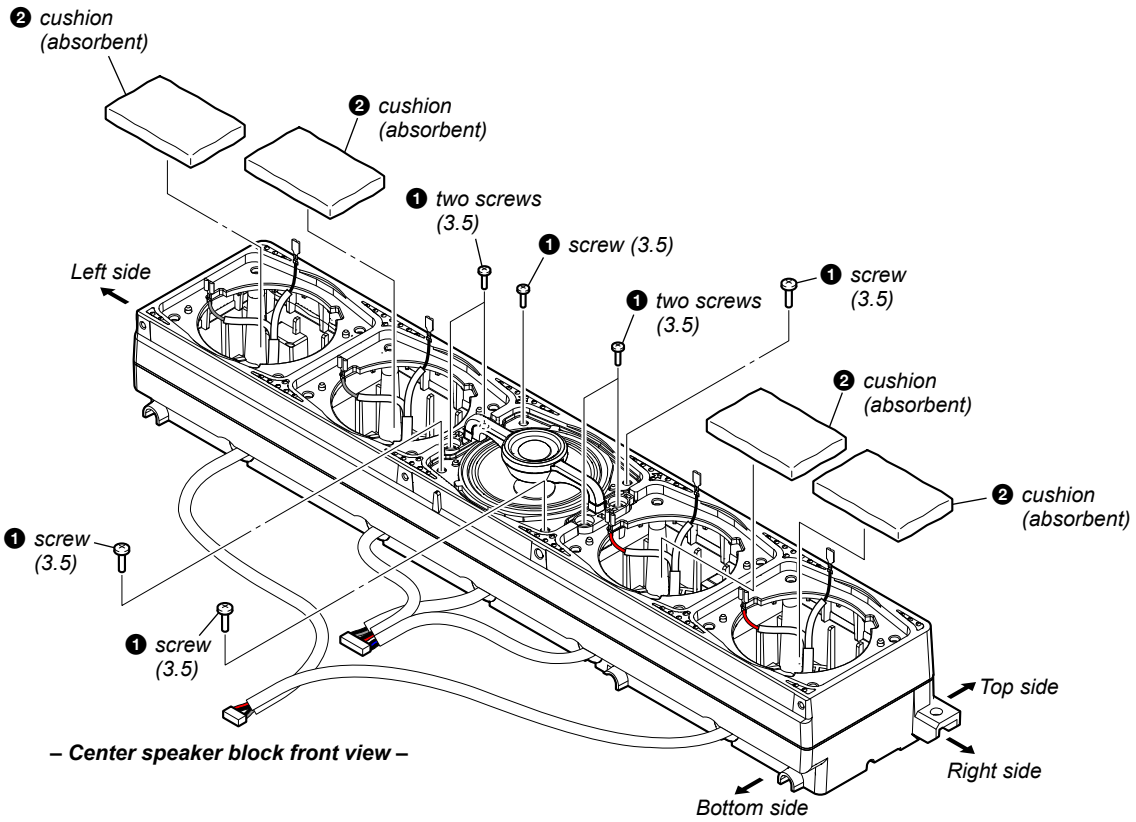


Note 2: When installing screws, follow the installing procedure in the numerical order given.



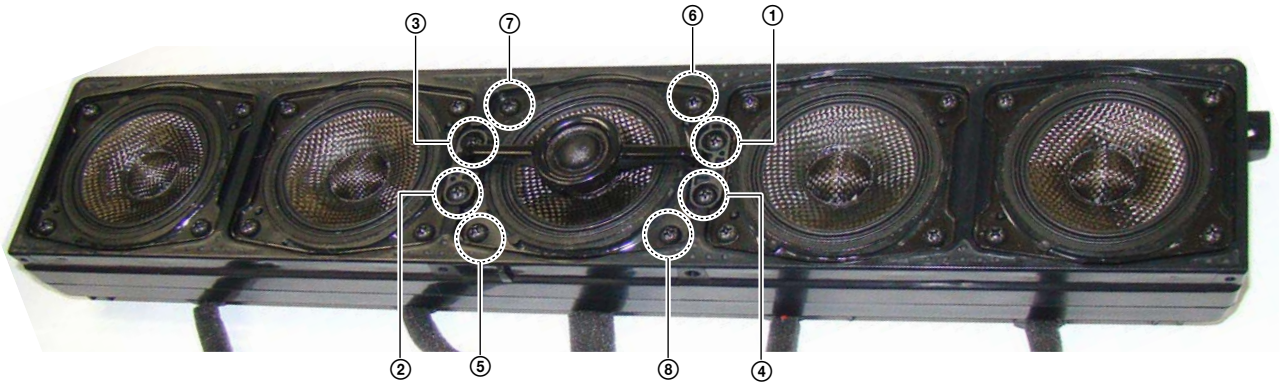
2-34. LOUDSPEAKER (SP9, SP10) (CENTER)-1

• Continued on 2-35 (page 43).

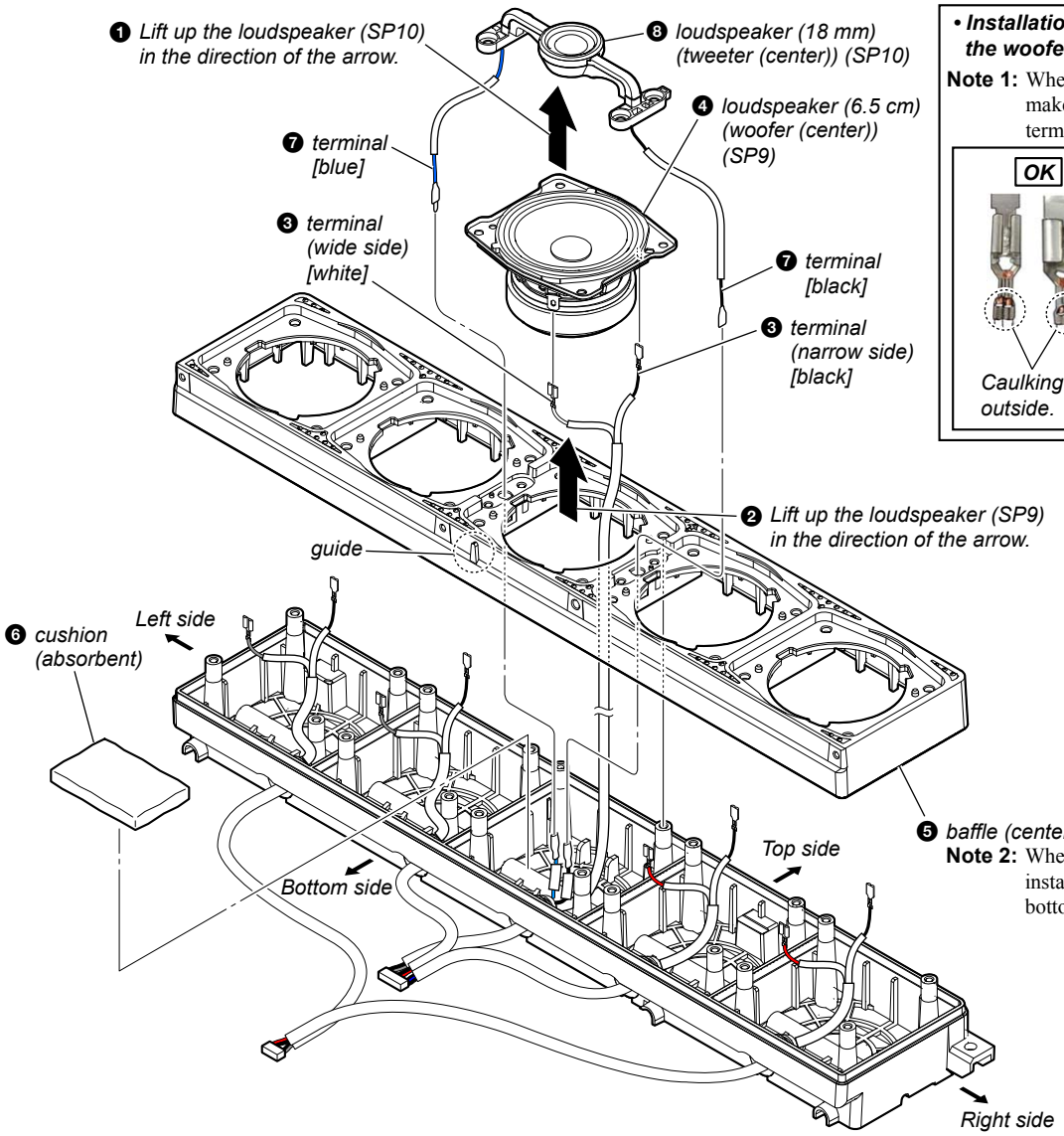


– Center speaker block front view –

Note: When installing screws, follow the installing procedure in the numerical order given.



2-35. LOUDSPEAKER (SP9, SP10) (CENTER)-2

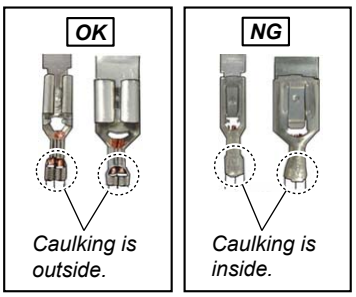


Note 2: When installing the baffle (center), install so that the guide is at the bottom side.

– Center speaker block front view –

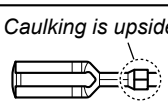
• Installation direction for the woofer speaker wire

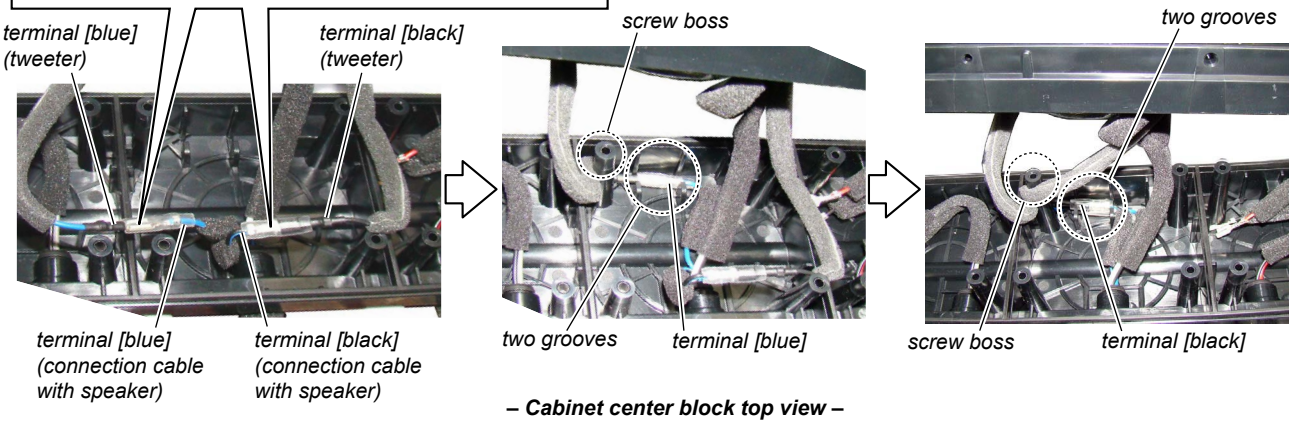
Note 1: When installing the speaker wire, make the position of caulking of terminals is outside.



• How to install the tweeter speaker wire

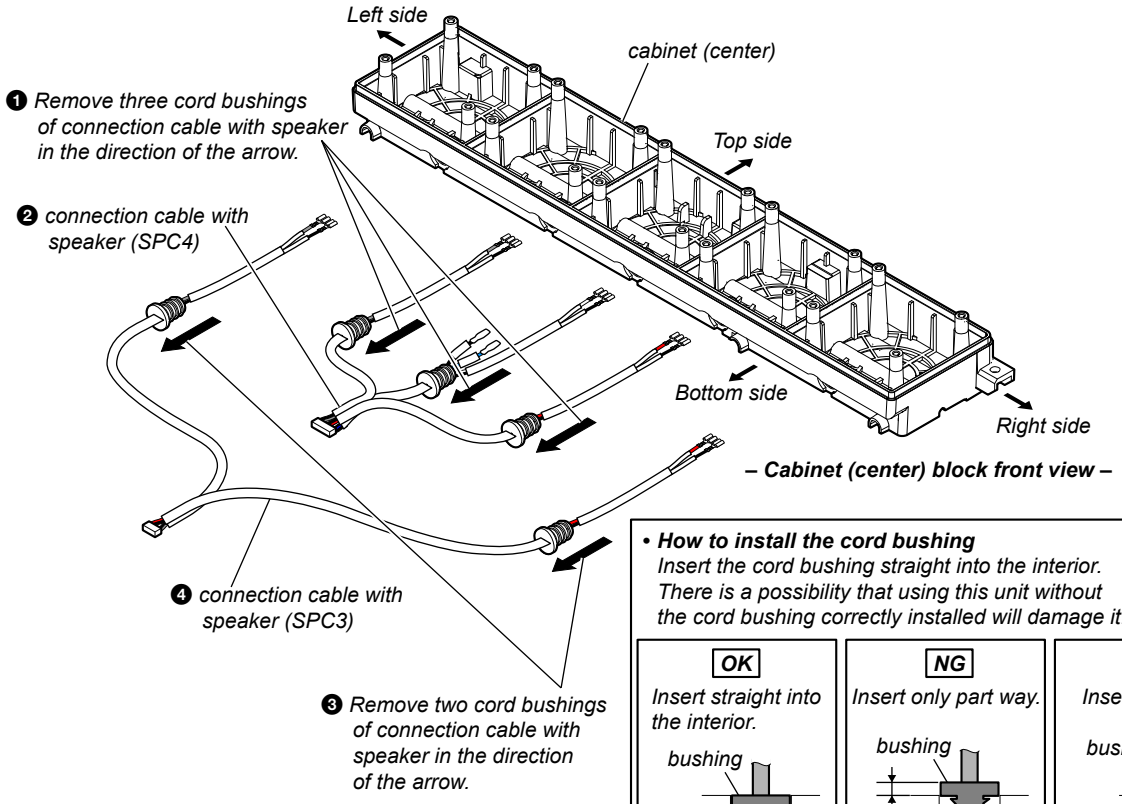
Note 3: When installing the speaker wire, make the position of caulking of terminals is upside.

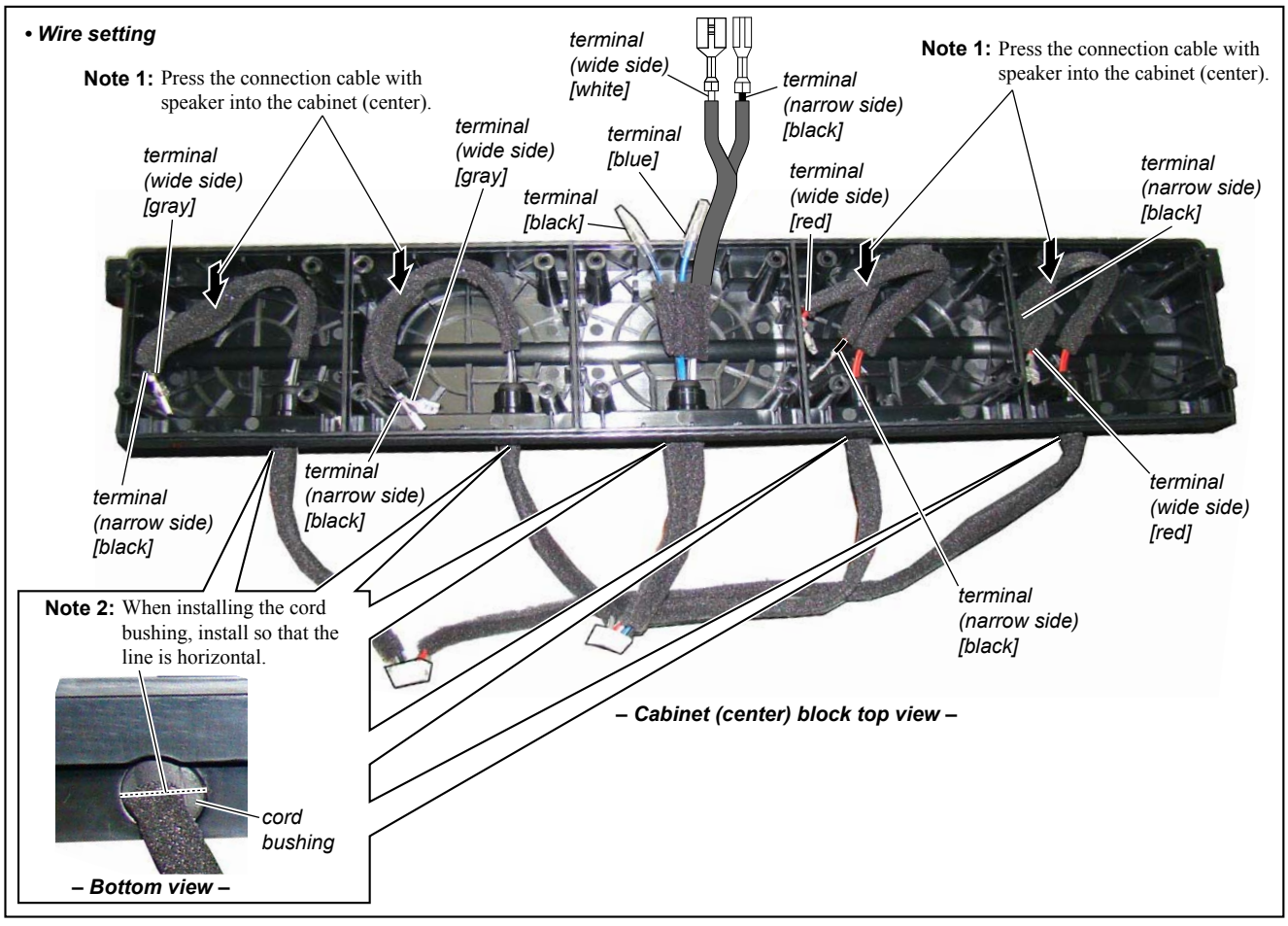




– Cabinet center block top view –

2-36. CONNECTION CABLE WITH SPEAKER (SPC3, SPC4)

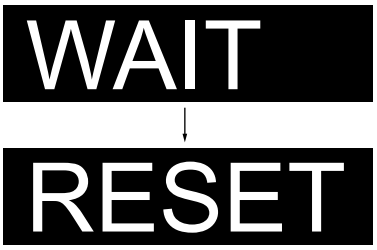




SECTION 3
TEST MODE

COLD RESET
It can initialize various backup information.

Procedure:
1. Press the [I/⏻] button to turn the power on.
2. Press the two buttons of the [VOLUME –] and [I/⏻] simultaneously for five seconds.
3. The message "WAIT" → "RESET" is displayed on the OLED display and then turn the power off.



DEMO MODE1
The demo mode1 can be performed.

Procedure:
1. Press the [I/⏻] button to turn the power on.
2. Press the two buttons of the [INPUT] and [VOLUME –] simultaneously for five seconds. Or press the buttons on the remote commander in the order of [BACK] → [⊕] → [INPUT] → [▯⤫] → [INPUT] → [▯⤫].
3. The message "DMON" is displayed on the OLED display, and enter the demo mode, then changed to the setting of initial value for demo mode1.

Initial value for demo mode1:

Function	: TV (optical)
Volume	: 32
Muting	: OFF
Sound field	: CLEAR AUDIO+
Night mode	: OFF
Voice	: Type 1
Subwoofer volume	: 10
A/V SYNC	: OFF
Dual mono	: MAIN
Auto standby	: OFF

Note 1: When the non-operation and no sound after a predetermined time is followed, setting will return to the initial value for demo mode.

Auto pairing:
Auto pairing starts when function is changed to BT function. Bluetooth pairing stop after five min automatically, and change to HOME screen.

Auto power on:
Insert the AC cord, automatically become turn the power on.

Valid key operation:
[INPUT] (unit and remote commander)
[PAIRING] (unit and remote commander)
[VOLUME +/–] (unit)
[◿ +/–] (remote commander)
[MIRRORING] (remote commander)
[▯⤫] (remote commander)
[SOUND FIELD+] (remote commander)
[CLEAR AUDIO+] (remote commander)
[FOOTBALL] (remote commander)
Note 2: Key operation other than the above are invalid.

Releasing method:
Perform the "COLD RESET".
Note 3: The demo mode does not release by unplug the AC cord.

DEMO MODE2
The demo mode2 can be performed.

Procedure:
1. Press the [I/⏻] button to turn the power on.
2. Press the buttons on the remote commander in the order of [■] → [DISPLAY] → [INPUT] → [🡅].
3. The message "Vol 32" is displayed on the OLED display, then changed to setting of initial value for demo mode2.

Initial value for demo mode2:

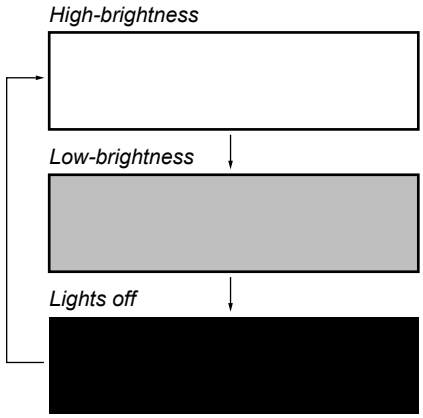
Function	: HDMI1
Volume	: 32
Auto standby	: OFF

Valid key operation:
[VOLUME +/–] (unit)
[◿ +/–] (remote commander)
[▯⤫] (remote commander)
[SOUND FIELD+] (remote commander)
[CLEAR AUDIO+] (remote commander)
[FOOTBALL] (remote commander)
Note: Key operation other than the above are invalid.

Releasing method:
Unplug the AC cord.

PANEL TEST
It can confirm the lighting of OLED display and LED, operation of buttons, display of model name, destination and software version.

Procedure:
1. Press the [I/⏻] button to turn the power on.
2. Press the buttons on the remote commander in the order of [■] → [DISPLAY] → [🡇] → [🡅].
3. LED is lighted up, and repeatedly changes display of OLED display in order from high-brightness → low-brightness → lights off.

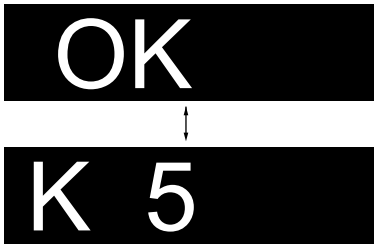


4. In the state of step 3, press the [INPUT] button on the remote commander and "K 0" is displayed on the OLED display.

Each time a button on the unit is pressed, "K 0" value increases. However, once a button is pressed, it is no longer taken into account.

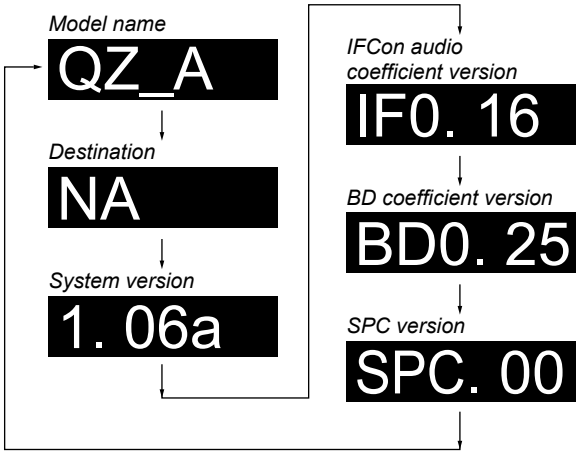
– Continued on next page –

When pressing the all buttons, "OK" and "K 5" are alternately displayed on the OLED display.



5. Press the [◿ –] button on the remote commander and return to the state of step 3.
6. In the state of step 3, press the [◿ +] button on the remote commander and "QZ_A" (model name) is displayed on the OLED display. ("A" will display differs depending on the destination)

(Displayed characters in the above figure are example)
Each time the [◿ +] button on the remote commander is pressed, the display changes from destination → system version → IFCon audio coefficient version → BD coefficient version → SPC version in this order, and returns to the model name display.



(Displayed characters/values in the above figure are example)

Destination	Display
US and Canadian models (UC2)	NA
AEP model (CEL)	CE2
Russian model (RU3)	RU
UK model (CEK)	CEK
Australian model (AU1)	AU
Chinese model (CN4)	CN
Singapore model (SP1)	SP
Taiwan model (TW2)	TW
Latin American model (LA9)	LATIN

Releasing method:
Press the [I/⏻] button and return to the normal mode.

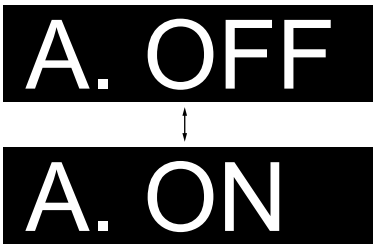
AMP TEST
It can the AMP setting and measurement.

Procedure:
1. Press the [I/⏻] button to turn the power on.
2. Press the buttons on the remote commander in the order of [■] → [DISPLAY] → [◿ –] → [▲].
3. The message "MSURE" is displayed on the OLED display and enter the AMP setting and measurement mode.

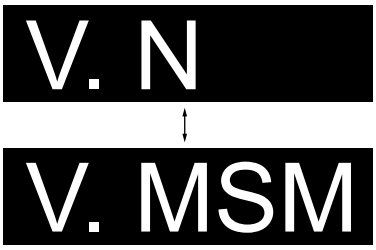
4. Each time the [DIMMER] button on the remote commander is pressed, the swap mode changes from FULL → THRU → F2S → F2SB → F2CW in this order, and returns to the "FULL" setting.

Display	Output speaker
FULL	The front L/R input is output to all speakers.
THRU	Each channel is directly output (through).
F2S	The front L/R input is output to surround L/R speakers.
F2SB	The front L/R input is output to surround back L/R speakers.
F2CW	The front R input is output to center/subwoofer speakers.

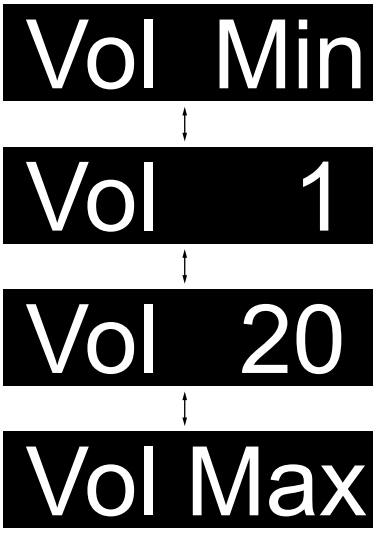
5. Each time the [◀◀] button on the remote commander is pressed, attenuate on/off setting is changed.



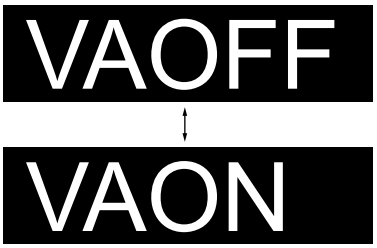
6. Each time the [▯⁄] button on the remote commander is pressed, volume setting is changed.



The setting "V.N" is normal volume mode.
The setting "V.MSM", press the [VOLUME +]/[VOLUME –] buttons, the message is changed with "Vol Min" ↔ "Vol 1" ↔ "Vol 20" ↔ "Vol Max" on the OLED display and volume setting is changed.



7. Each time the [CLEAR AUDIO+] button on the remote commander is pressed, VACS on/off setting is changed.



8. Each time the [VOICE] button on the remote commander is pressed, gain value increase. Each time the [NIGHT] button on the remote commander is pressed, gain value decrease.
(Gain value is +3.0 to –3.0)

(Displayed values in the above figure are example)

Releasing method:

Releasing method are two kinds.

- Press the [I/⏻] button, the message "WAIT" → "RESET" is displayed on the OLED display and then turn the power off.
- Unplug the AC cord.

WIRELESS SOUND COLD RESET

It can initialize various backup information of Subwoofer (SA-WST9).

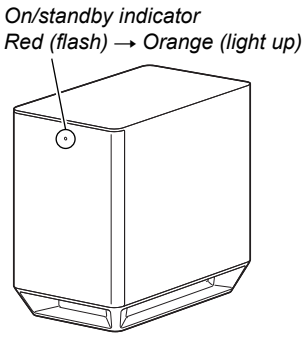
Preparation:

Connect the Subwoofer (SA-WST9) and the Bar Speaker (SA-ST9) by wireless.

Note: Refer to "NOTES ON THE WIRELESS CONNECTION (LINK) AFTER REPAIRS ARE COMPLETE"on page 8 for details of wireless connection.

Procedure:

1. Press the [I/⏻] button to turn the power on.
2. Press the buttons on the remote commander in the order of [■] → [DISPLAY] → [BACK] → [▲].
3. The on/standby indicator on the Subwoofer (SA-WST9) turns red and flashes, then turns on orange.



4. Unplug the AC cord on the Subwoofer (SA-WST9) from an outlet and insert the AC cord again.

BD SERVICE MODE

Note: The operation in this mode must use a remote commander and TV monitor.

Setting method of the BD service mode:

1. Connect this unit with TV monitor.
2. Press the [I/⏻] button to turn the power on.
3. Press button in order of the [■] → [DISPLAY] → [▮▮] → [▲] on the remote commander.
(Make the interval when each button is pressed within one second)
4. Enter the BD service mode. The OSD menu on TV monitor can be operated by remote commander.

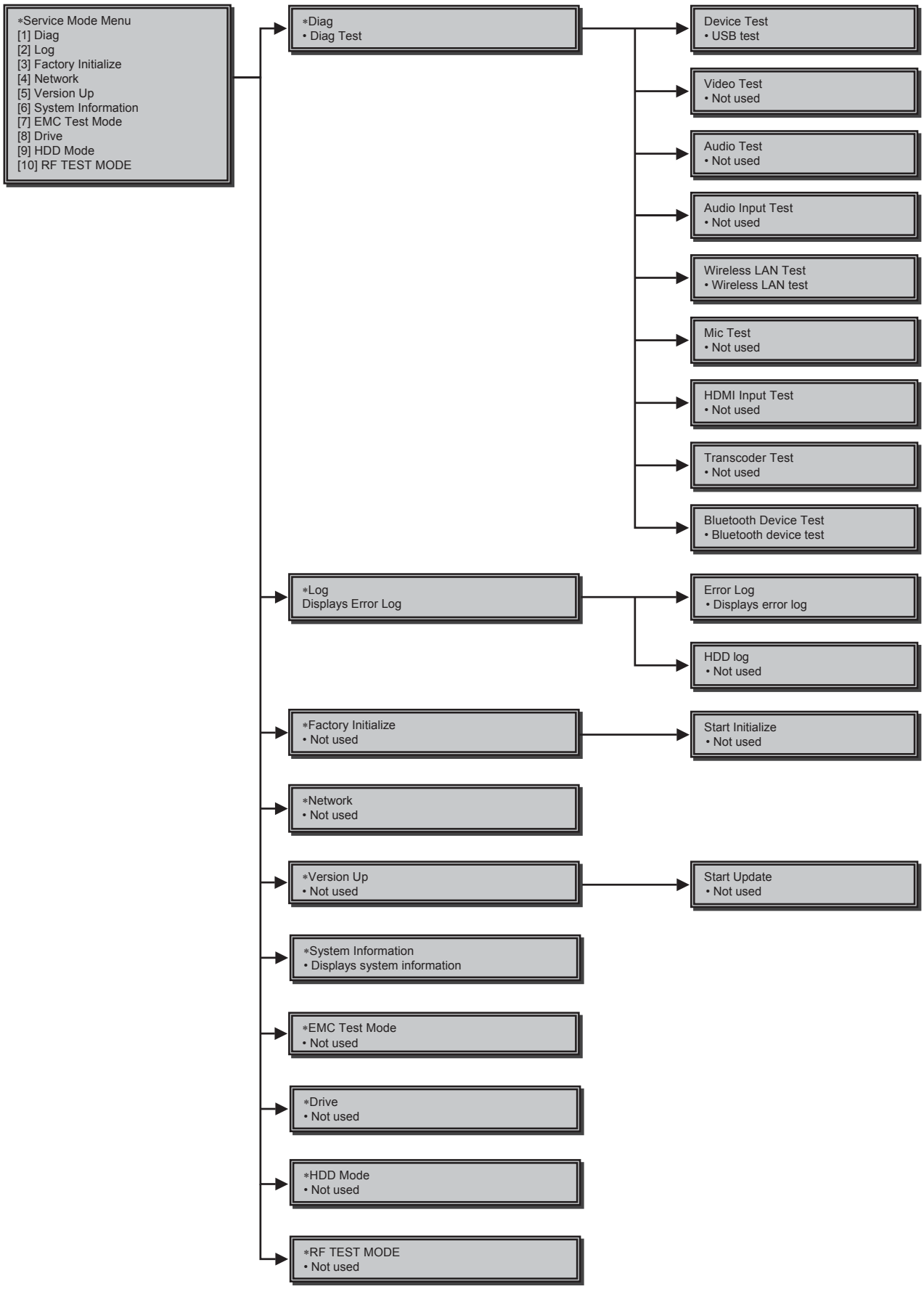
1. Main Functions

- Diag
Performs unit test of devices installed on the board.
- Log
Error log is displayed. Displayed contents can also be saved in an USB memory device.
- Factory Initialize
Not used.
- Network
Not used.
- Version Up
Not used.
- System Information
Displays the system information of the unit.
Displays information such as the software version, drive information, etc.
- EMC Test Mode
Not used.
- Drive
Not used.
- HDD mode
Not used.
- RF TEST MODE
Not used.

Releasing method:

Turn off the power by pressing the [I/⏻] button.

2. Menu Tree


*Service Mode Menu
[1] Diag
[2] Log
[3] Factory Initialize
[4] Network
[5] Version Up
[6] System Information
[7] EMC Test Mode
[8] Drive
[9] HDD Mode
[10] RF TEST MODE
*Diag
• Diag Test
Device Test
• USB test
Video Test
• Not used
Audio Test
• Not used
Audio Input Test
• Not used
Wireless LAN Test
• Wireless LAN test
Mic Test
• Not used
HDMI Input Test
• Not used
Transcoder Test
• Not used
Bluetooth Device Test
• Bluetooth device test
*Log
Displays Error Log
Error Log
• Displays error log
HDD log
• Not used
*Factory Initialize
• Not used
Start Initialize
• Not used
*Network
• Not used
*Version Up
• Not used
Start Update
• Not used
*System Information
• Displays system information
*EMC Test Mode
• Not used
*Drive
• Not used
*HDD Mode
• Not used
*RF TEST MODE
• Not used

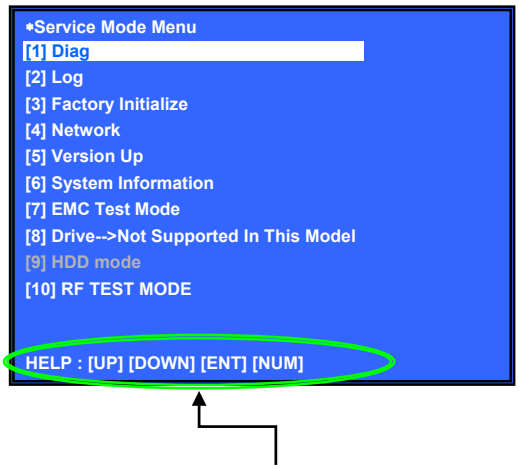
3. Service Mode Menu (Top Menu)

This is the top menu of service mode.
Each function is accessed from this screen.

Operation:

[⬆]/[⬇] Moves the cursor
[⊕] Moves to the screen of the item selected with the cursor

* Cursor is not displayed when the menu is first displayed.



HELP (currently available keys, etc.) is displayed

4. Diag (Device Test)

This screen is used for test of each devices mounted on the board.

Screen 1: Selects the test category

Operation:

[⬅]/[➡] Selects the category
[⬇]/[⊕] Moves to the selected category
[BACK] Returns to the service top menu

Screen 2: Device test

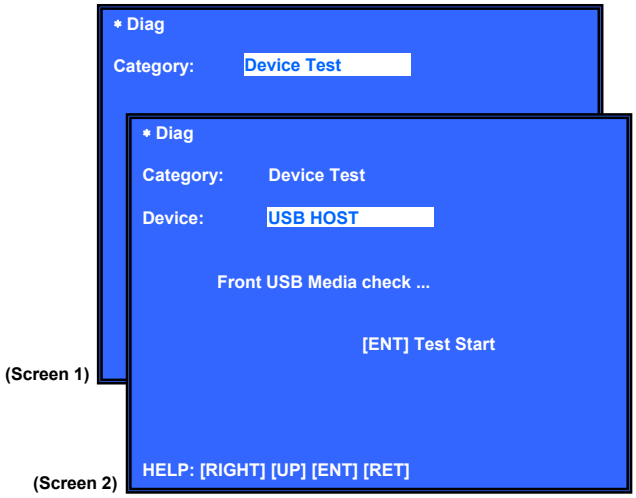
Selects the device to test after selecting “Device Test” in screen 1.

Operation:

[⬅]/[➡] Selects the device to test
[⊕] Executes the test
[⬆] Returns to selection of test category
[BACK] Returns to selection of test category

- List of test categories

Device Test
Video Test (Not used)
Audio Test (Not used)
Audio Input Test (Not used)
Wireless LAN Test
Mic Test (not used)
HDMI Input Test (not used)
Transcoder Test (not used)
Bluetooth Device Test



(Screen 1)
(Screen 2)

- Device test : List of devices

USB HOST : USB media check. Only one time.
D/A Converter : Not used in this unit.
Ifcon : Not used in this unit.
MIC : Not used in this unit.
MFI : Not used in this unit.
IPC : Not used in this unit.
External HDMI : Not used in this unit.
Transcorder : Not used in this unit.

5. Diag (Video/Audio Test)

Note: Not used in this unit.

6. Diag (Audio Input Test)

Note: Not used in this unit.

7. Diag (Wireless LAN Test)

This screen performs wireless LAN/Miracast test.

Screen 1: Selects the wireless LAN test category

Operation:

[←]/[→] Selects the category
[↓]/[⊕] Moves to the selected category
[BACK] Returns to the service top menu

Screen 2: Wireless LAN test

[1] Show WLAN HwInfo
[2] Connect to AccessPoint
[3] Start Display RSSI Value
[4] Start Ping Test
[5] Write P2P address to Registry
[6] P2P Registry Check

Operation:

[↑]/[↓] Selects the item
[⊕] Executes the test
[BACK] Returns to selection of test category

Screen 2: Select [1] Show WLAN HwInfo

(Displayed characters/values in the following figure are example)

- Viewing the display

Serial : Serial number
Hard : Hardware version
Mac : Mac address

Screen 3: Select [2] Connect to AccessPoint

Connect access point only with the following AP settings.

CERT : NO-ENCRYPT
WEPKEY : abcdef1234
PMK : ABCDE12345
SSID : SONY-Test-R
IPADDR : 192.168.1.100
NETMASK : 255.255.255.0
BROADCAST : 192.168.1.10

When connect to AP, Status is “Connected!”
When cannot connect to AP, Status is “Can’t connect!”

Screen 4: Select [3] Start Display RSSI Value

(Displayed characters/values in the following figure are example)
RSSI value is displayed.

Screen 5: Select [4] Start Ping Test

Ping test is executed (IP address use the value of “192.168.1.10”).
OK: “192.168.1.10 OK!” is displayed
NG: “192.168.1.10 failed!” is displayed

Screen 6: Select [5] Write P2P address to Registry

- Viewing the display

P2P device address : xx:xx:xx:xx:xx:xx
When write P2P address to registry is OK: “Write Successful!” is displayed
When write P2P address to registry is NG: “Write Fail!” is displayed

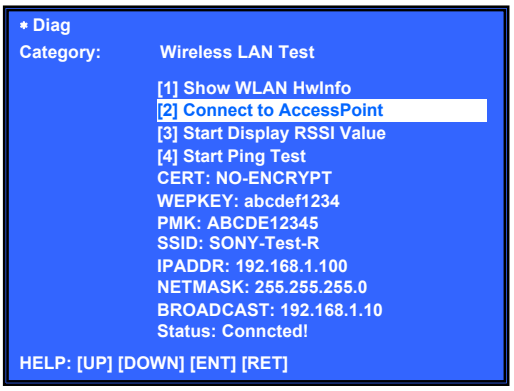
Screen 7: Select [6] P2P Registry Check

Check the P2P Registry address is the same as displayed in Screen 6.

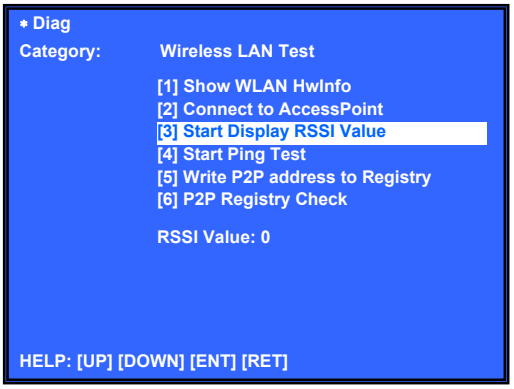
(Screen 1)

(Screen 2)

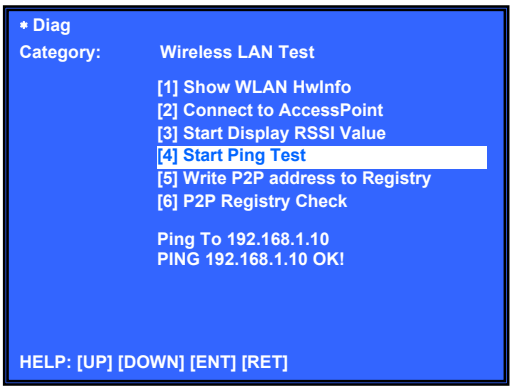
(Screen 3)



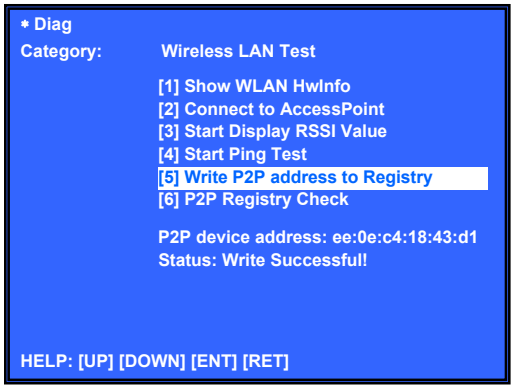
(Screen 4)



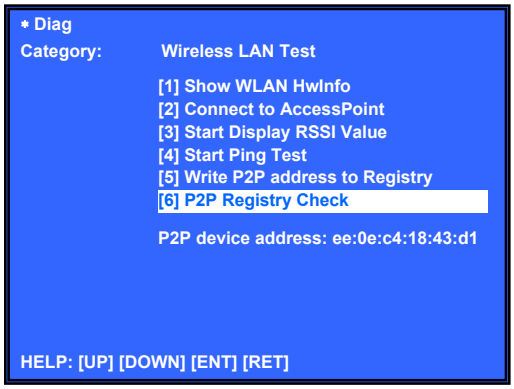
(Screen 5)



(Screen 6)



(Screen 7)



8. Diag (MIC Test)

Note: Not used in this unit.

9. Diag (HDMI Input Test)

Note: Not used in this unit.

10. Diag (Transcoder Test)

Note: Not used in this unit.

11. Diag (Bluetooth Device Test)

This screen performs Bluetooth device test.

Screen 1: Selects the Bluetooth device test category

Operation:

[←]/[→] Selects the category
[↓]/[⊕] Moves to the selected category
[BACK] Returns to the service top menu

Screen 2: Bluetooth device test

(1) Bluetooth Enable
(2) Bluetooth Disable
(3) Write Bluetooth device address to Registry
(4) Bluetooth Inquiry Test (Not used for the servicing)

Operation:

[↑]/[↓] Selects the item
[⊕] Executes the test
[BACK] Returns to selection of test category

Screen 2: Select (1) Bluetooth Enable

- Viewing the status display

OK: "Bluetooth Enable Successful!" is displayed
NG: "Bluetooth Enable Fail!" is displayed

Screen 3: Select (2) Bluetooth Disable

- Viewing the status display

OK: "Bluetooth Disable Successful!" is displayed
NG: "Bluetooth Disable Fail!" is displayed

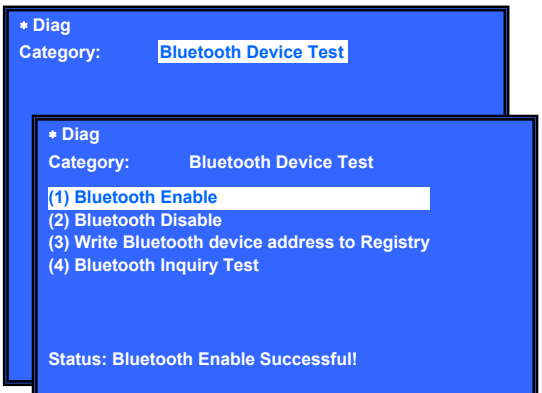
Screen 4: Select (3) Write Bluetooth device address to Registry

(Displayed characters/values in the following figure are example)
It records the address of the Bluetooth device.

- Viewing the status display

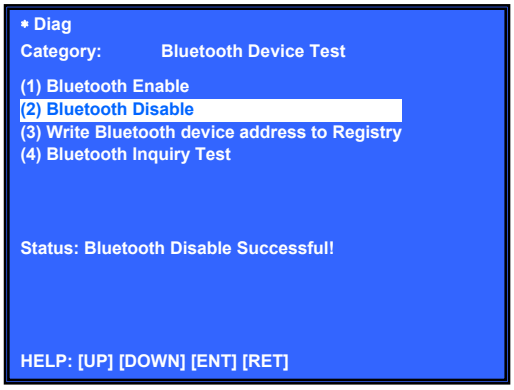
OK: "Write Successful!" is displayed
NG: "Write Fail!" is displayed

(Screen 1)



(Screen 2)

(Screen 3)



(Screen 4)

12. Log: Error Log (Output of each Log)

This screen displays the contents of each log.
Note: Do not refer to the displayed date.

Screen 1: Selects log

Operation:

[⊕] Moves to the Error Log output screen
[BACK] Returns to the top menu of the service mode

Screen 2: Displays the Error Log

(Displayed characters/values in the following figure are example)
Operation:

[⬅] Returns to the previous page
[➡] Moves to the next page
[BACK] Returns to the screen (Screen 1) that selects the log type
[RED] Writes the log contents to an USB memory device

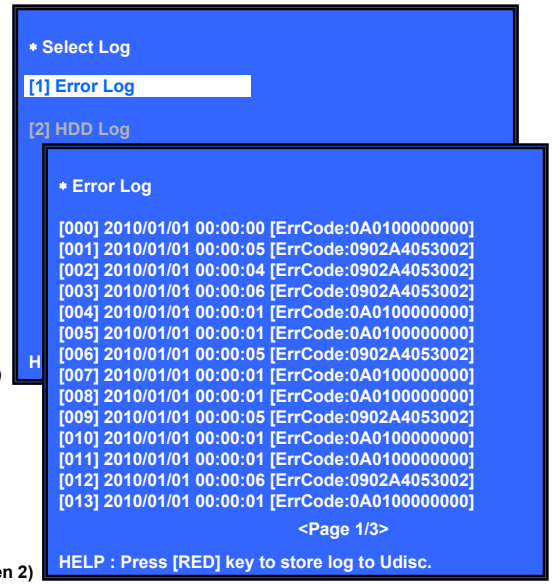
- Viewing the log display

Error Log:
[001] 2010/01/01 00:00:05 [ErrCode:0902A4053002]
[Index number] [Date] [Time] [Error code]

About copying log to USB memory device:
Press the [RED] button in each log display screen with the USB memory device inserted into the unit.
Note: Don't press the [RED] button immediately after USB memory is inserted.
Don't pull out USB memory immediately after the [RED] button was pressed.

Error Log:
When "getErrLogFile.trm file" exists in the USB memory device, errlog.log file is output.

(Screen 1)



(Screen 2)

13. Log (HDD Log)

Note: Not used for the servicing.

14. Factory Initialize (Factory Settings)

Return all of the unit setting to their factory defaults (Refer to "5. Factory initialize" on page 7).

15. Network (Network Test Diagnosis)

Note: Not used for the servicing.

16. Version UP

Note: Not used for the servicing.

17. System Information (System Information Display)

This screen displays system information.

Screen 1: Basic Information

Operation:

[➡] Drive information (delta IOP of a drive is measured) and wireless device information displayed (go to Screen 2)
[BACK] Returns to the top menu of the service mode

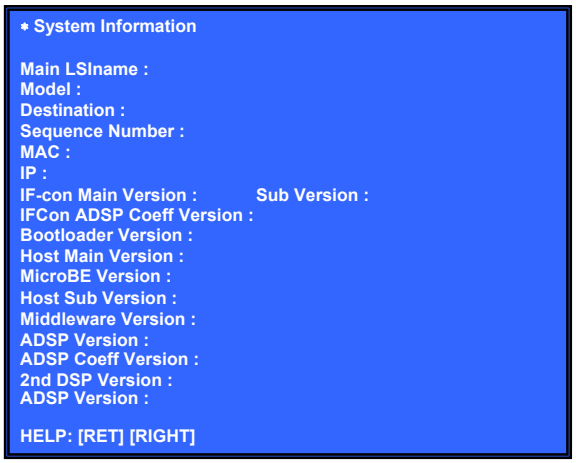
Screen 2: Drive and Wireless Information Menu

Operation:

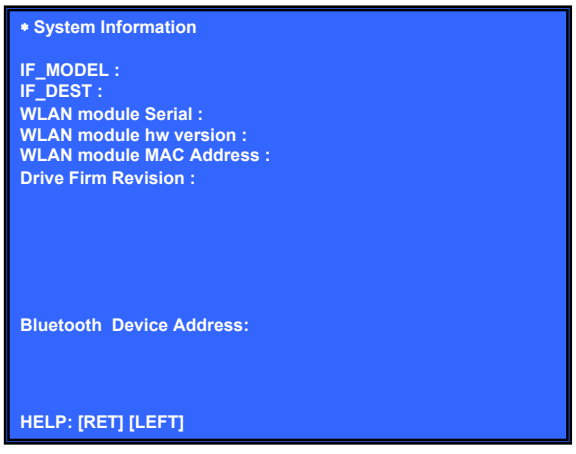
[⬅] Basic Information displayed (go to Screen 1)
[BACK] Returns to the top menu of the service mode

For drive not equipped, information of drive does not appear.

(Screen 1)



(Screen 2)



18. EMC Test Mode

Note: Not used for the servicing.

19. Drive

Note: Not used in this unit

20. HDD Mode

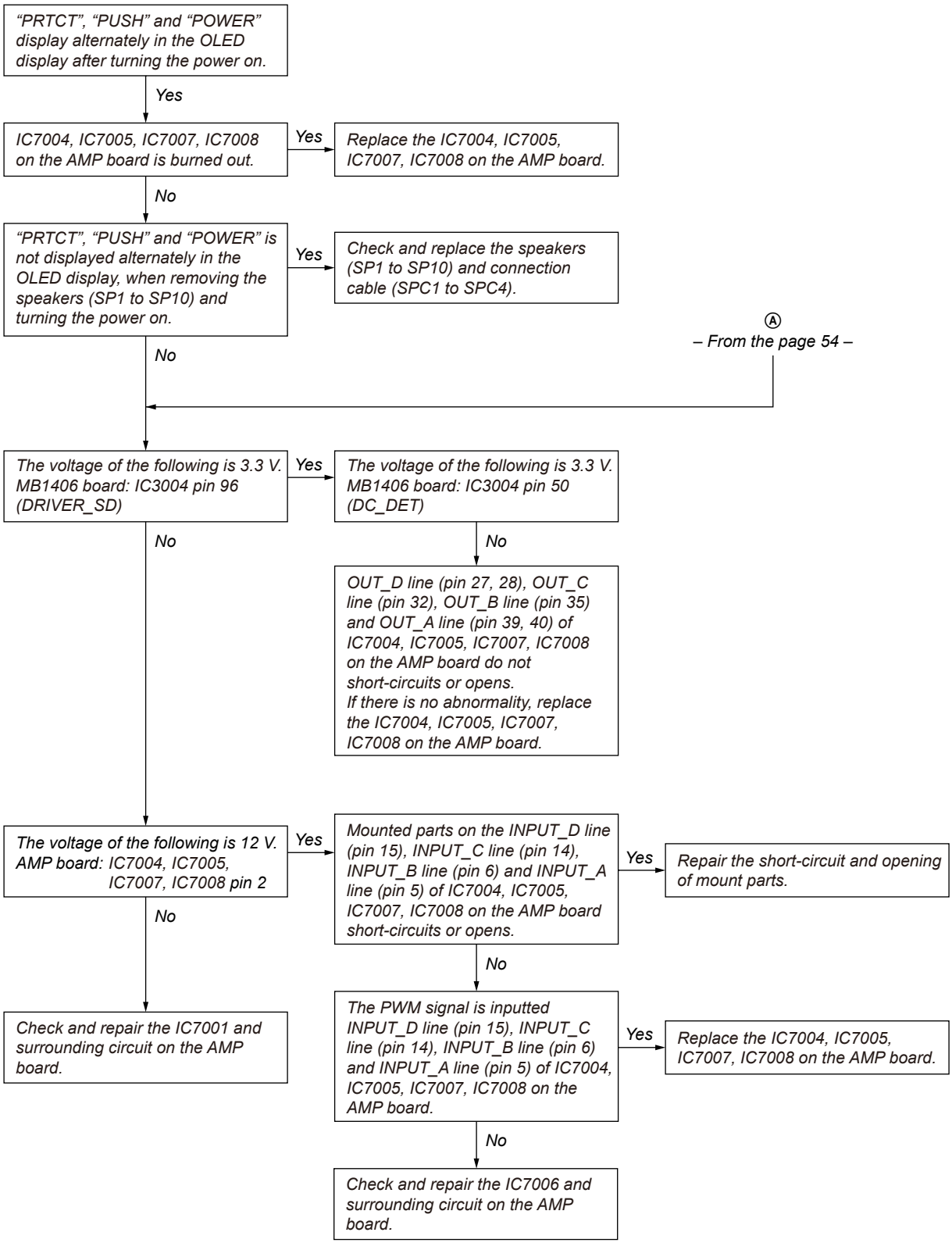
Note: Not used in this unit

21. RF TEST MODE

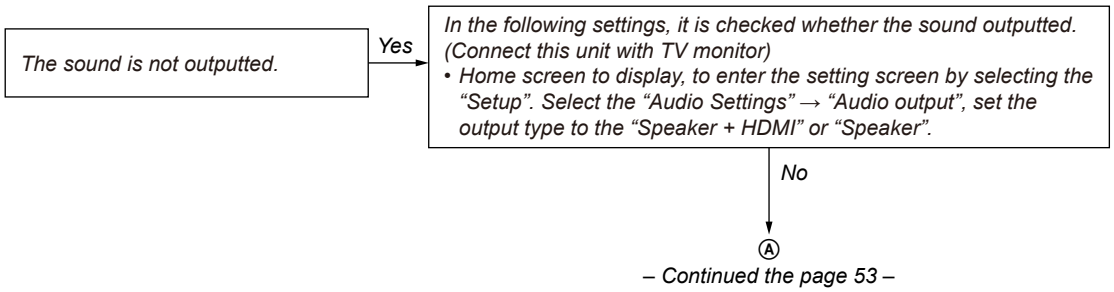
Note: Not used in this unit

SECTION 4
TROUBLESHOOTING

1. "PRTCT" is displayed on the OLED display after turning the power on

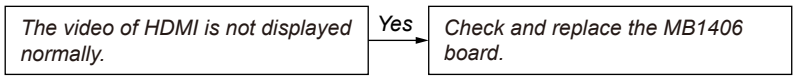


2. The sound is not outputted

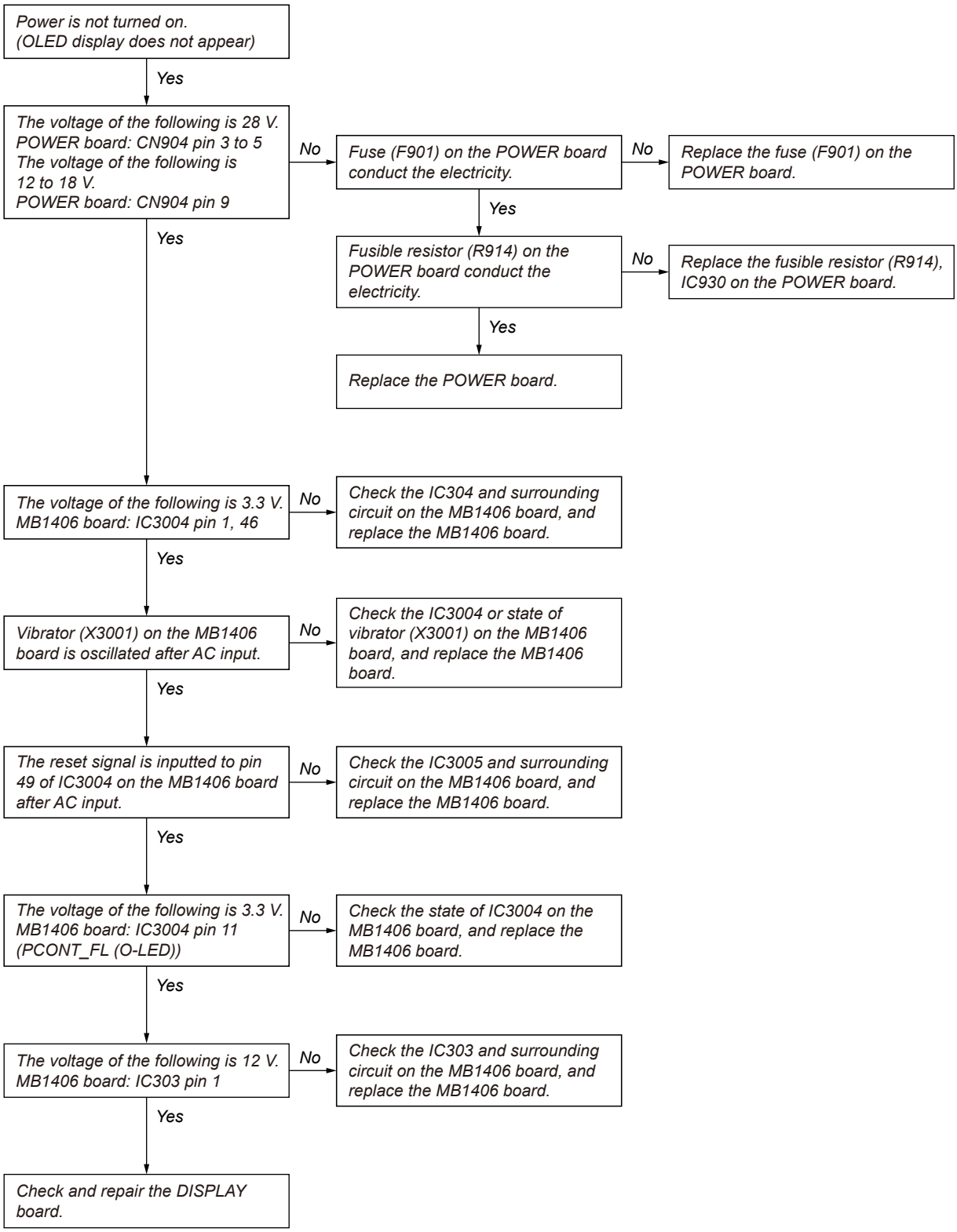


– Continued the page 53 –

3. The video of HDMI is not displayed normally



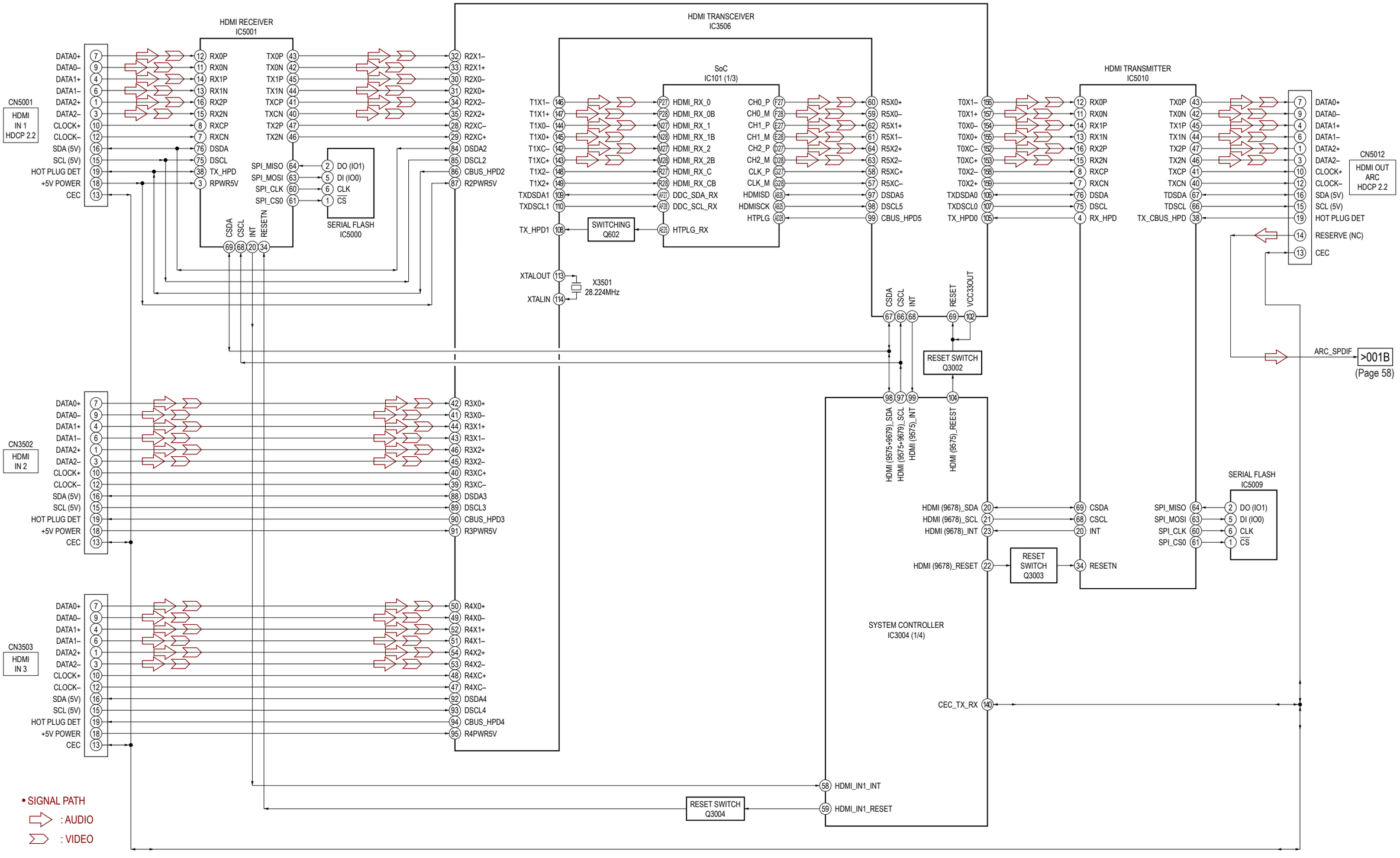
4. Power is not turned on (OLED display does not appear)



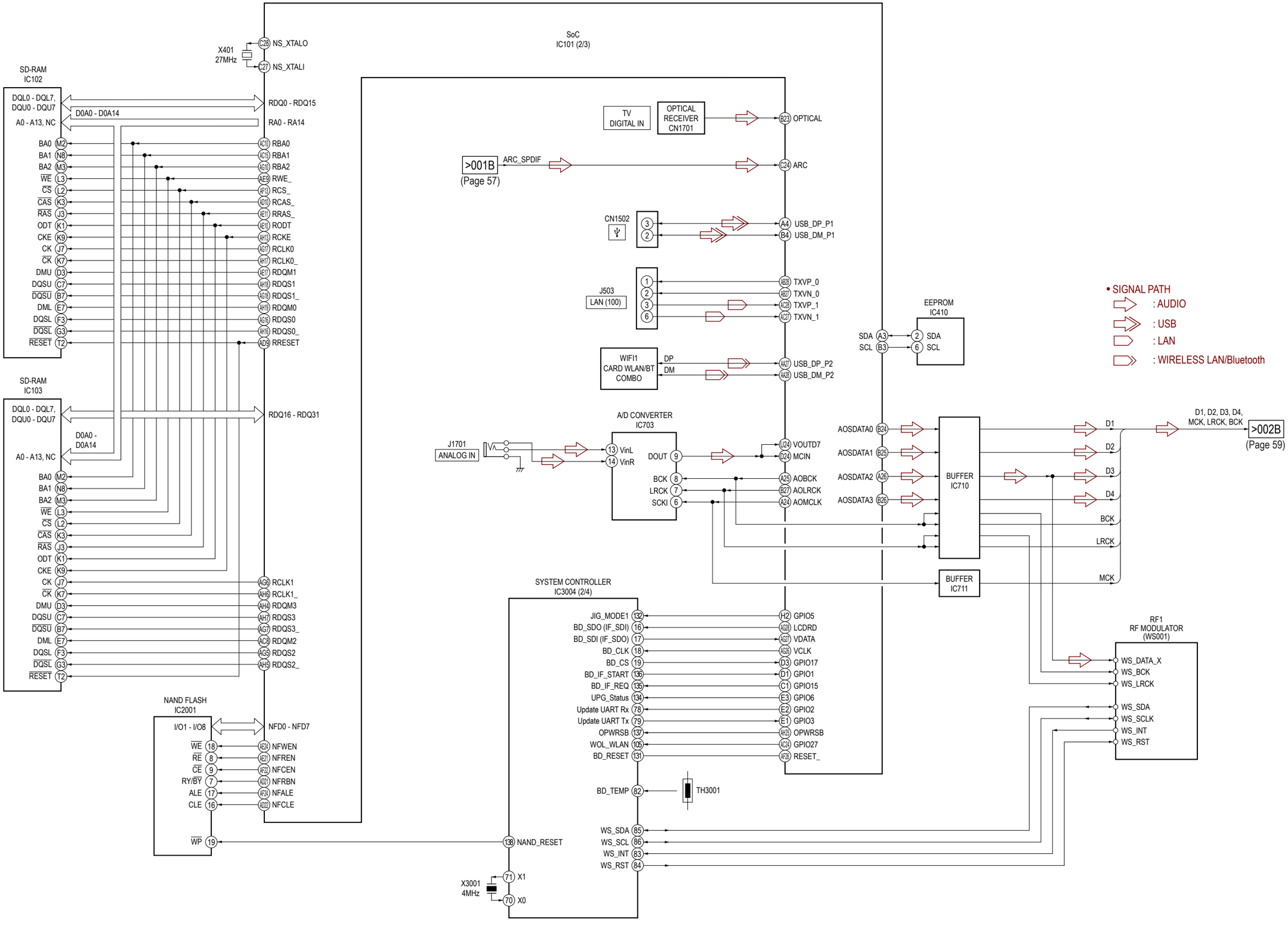
MEMO

SECTION 5
DIAGRAMS

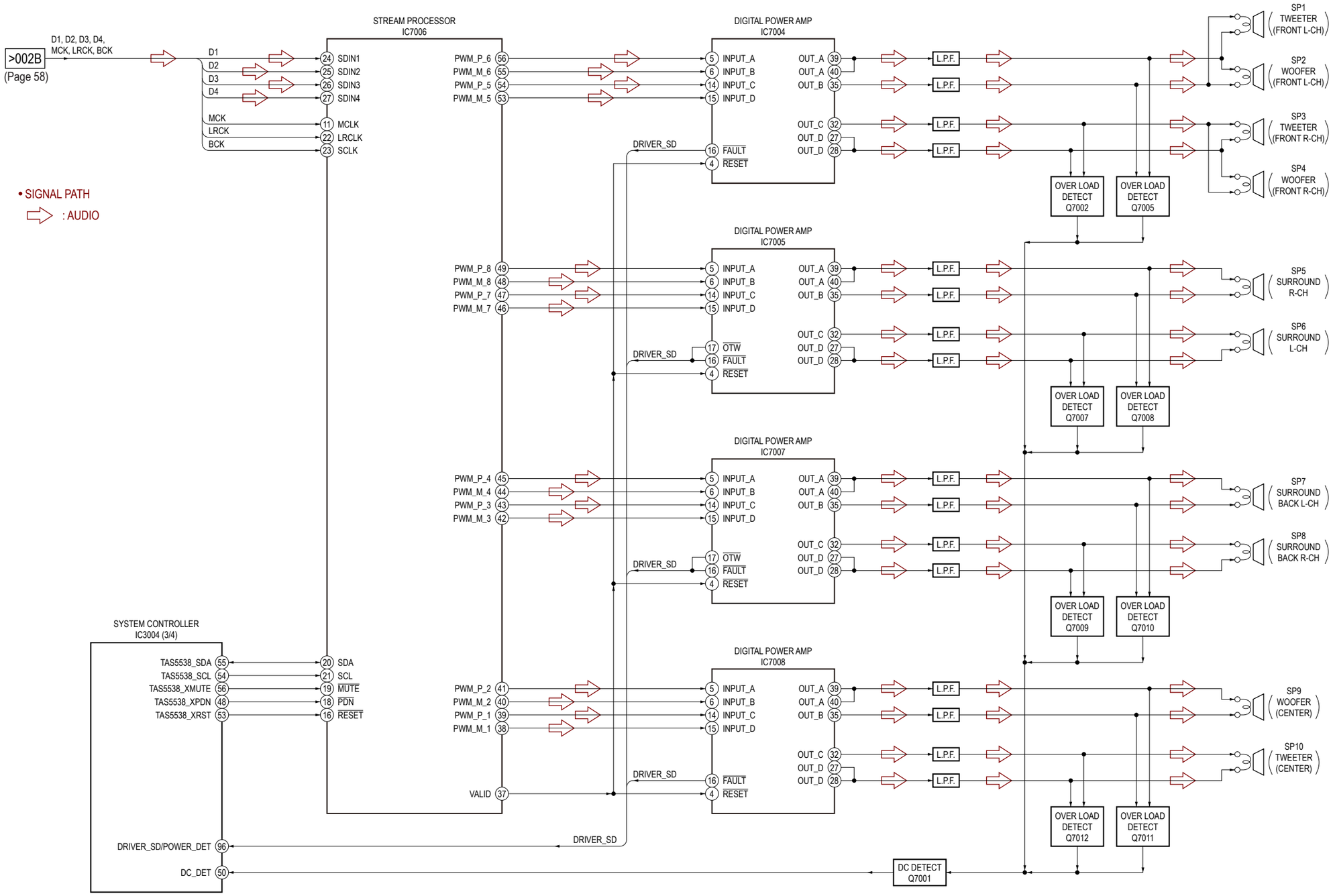
5-1. BLOCK DIAGRAM - HDMI Section -



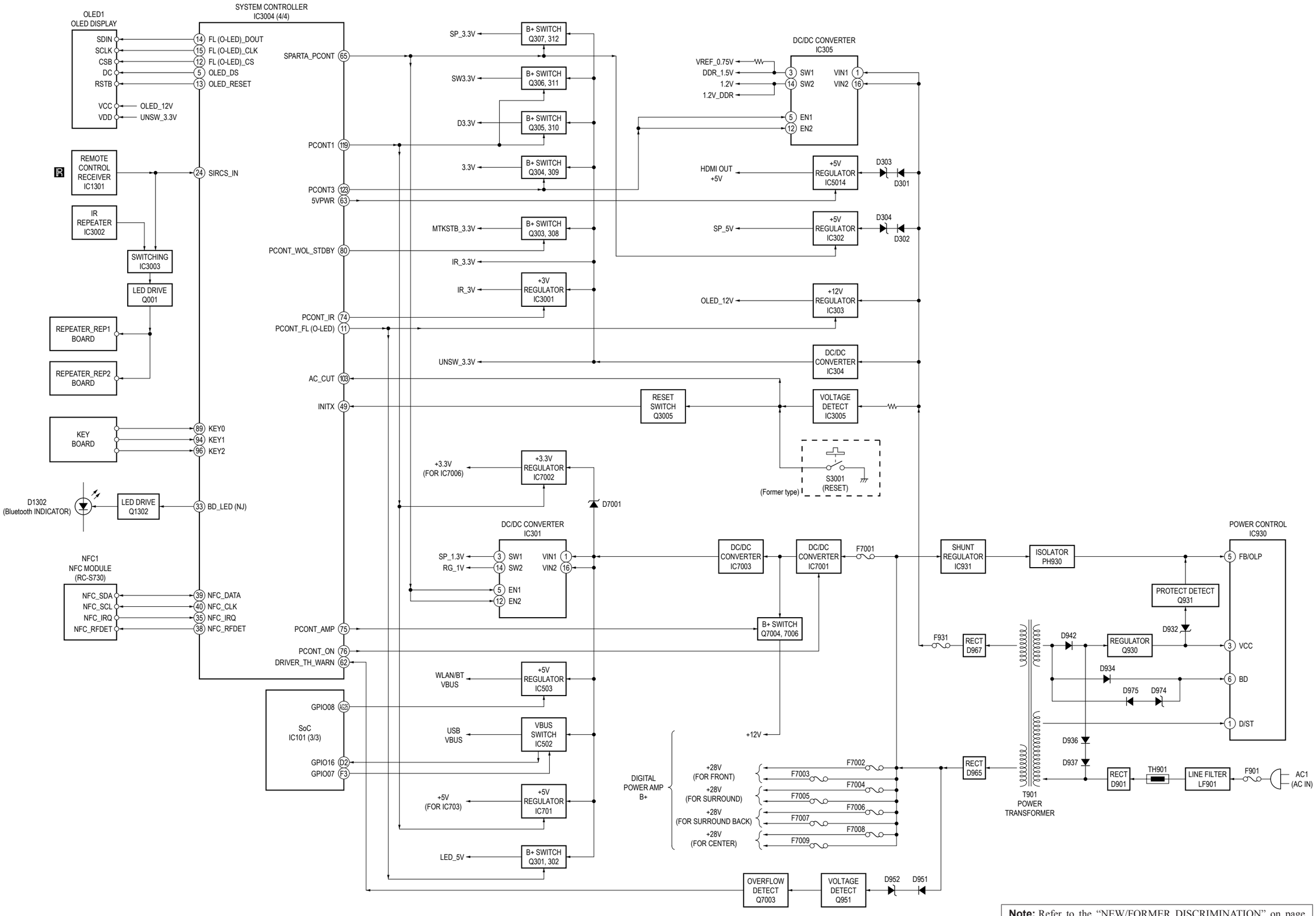
5-2. BLOCK DIAGRAM - MEMORY/MAIN Section -



5-3. BLOCK DIAGRAM - AMP Section -



5-4. BLOCK DIAGRAM - PANEL/POWER SUPPLY Section -



Note: Refer to the "NEW/FORMER DISCRIMINATION" on page 1 of service manual supplement-1 for how to distinguish New/ Former type.

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

For Printed Wiring Boards.

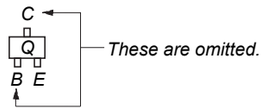
Note:

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

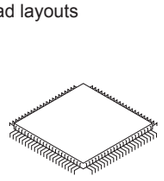
Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

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

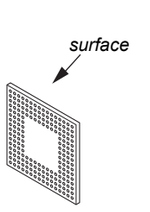
- MB1406 board is multi-layer printed board. However, the patterns of intermediate layers have not been included in diagrams.
- Indication of transistor.



- Lead layouts



Lead layout of conventional IC



CSP (Chip Size Package)

Note 1: When the MB1406 board is defective, replace the complete mounted board.

Note 2: When the complete MB1406 board is replaced, refer to "NOTE OF REPLACING THE COMPLETE MB1406 BOARD OR CARD WLAN/BT COMBO" on page 6.

Note 3: When the complete AMP board is replaced, refer to "NOTE OF REPLACING THE IC7004, IC7005, IC7007 AND IC7008 ON THE AMP BOARD AND THE COMPLETE AMP BOARD" on page 6.

For Schematic Diagrams.

Note:

- All capacitors are in µF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : Internal component.
- : Nonflammable resistor.
- : Fusible resistor.
- : Panel designation.

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

Note: Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

注意: 原理图和零件清单中标有⚠记号的零部件，或带有⚠记号的虚线所圈示的零部件，对于维系安全至关重要。因此只能以指定号码的零部件来更换。

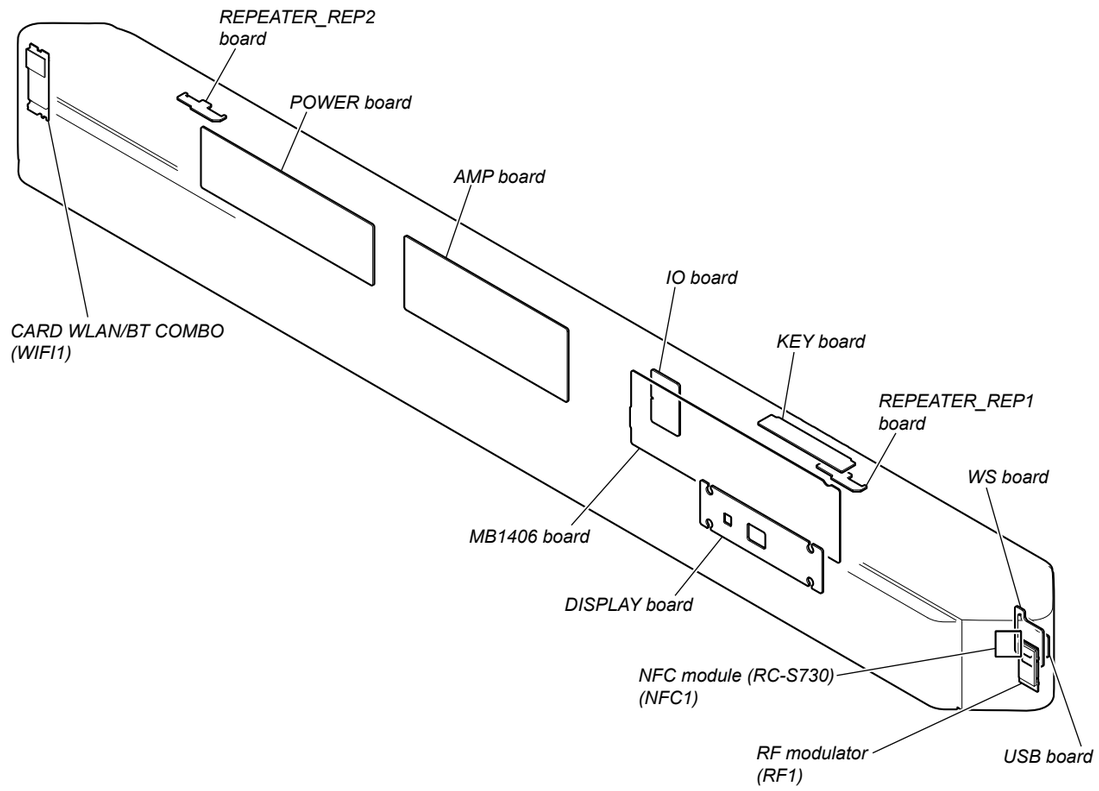
- ▬▬: B+ Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark: POWER ON
- Voltages are taken with VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : AUDIO
  - : USB
  - : LAN
  - : WIRELESS LAN/Bluetooth
  - : VIDEO

Note 1: When the MB1406 board is defective, replace the complete mounted board.

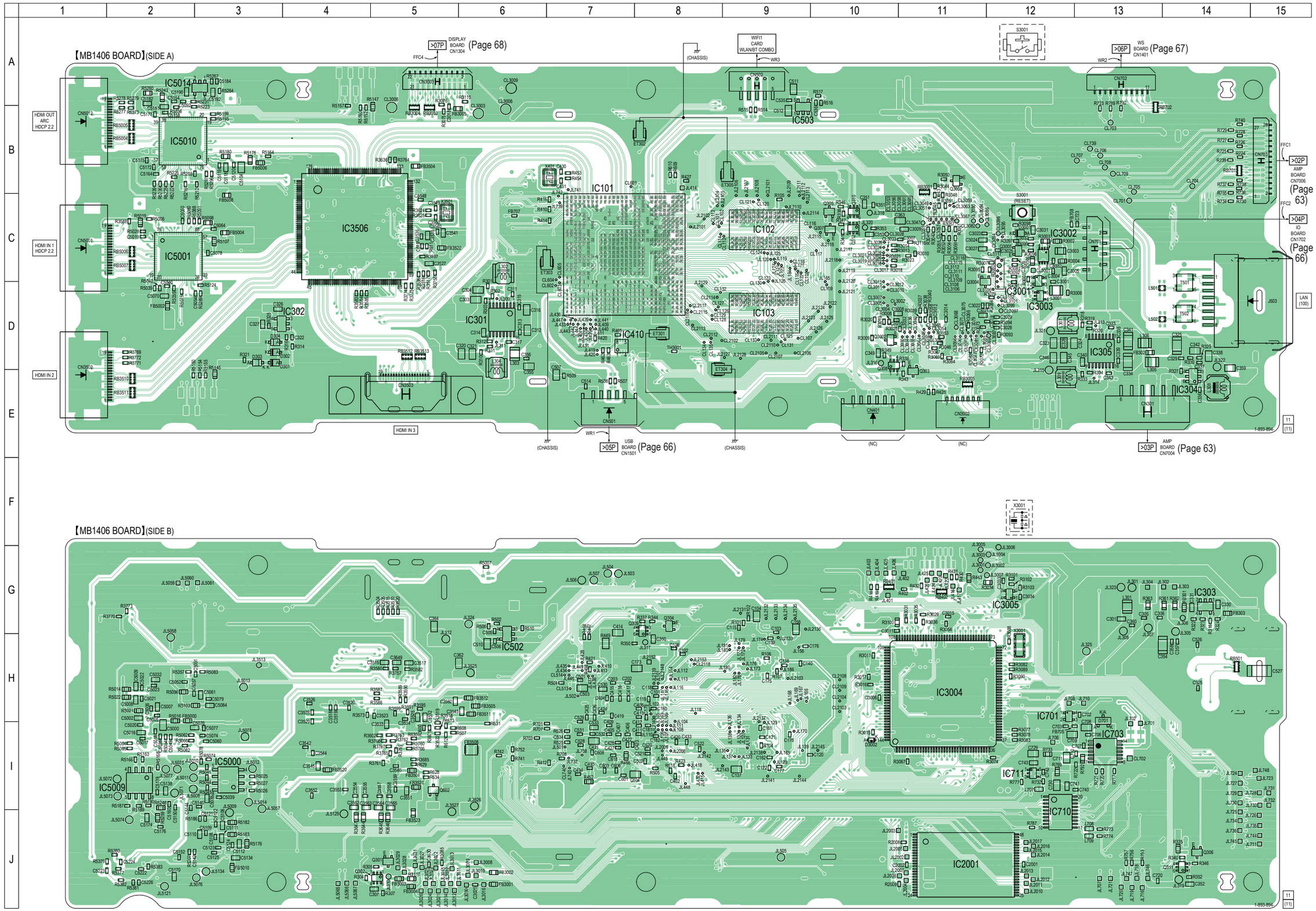
Note 2: When the complete MB1406 board is replaced, refer to "NOTE OF REPLACING THE COMPLETE MB1406 BOARD OR CARD WLAN/BT COMBO" on page 6.

Note 3: When the complete AMP board is replaced, refer to "NOTE OF REPLACING THE IC7004, IC7005, IC7007 AND IC7008 ON THE AMP BOARD AND THE COMPLETE AMP BOARD" on page 6.

- **Circuit Boards Location**

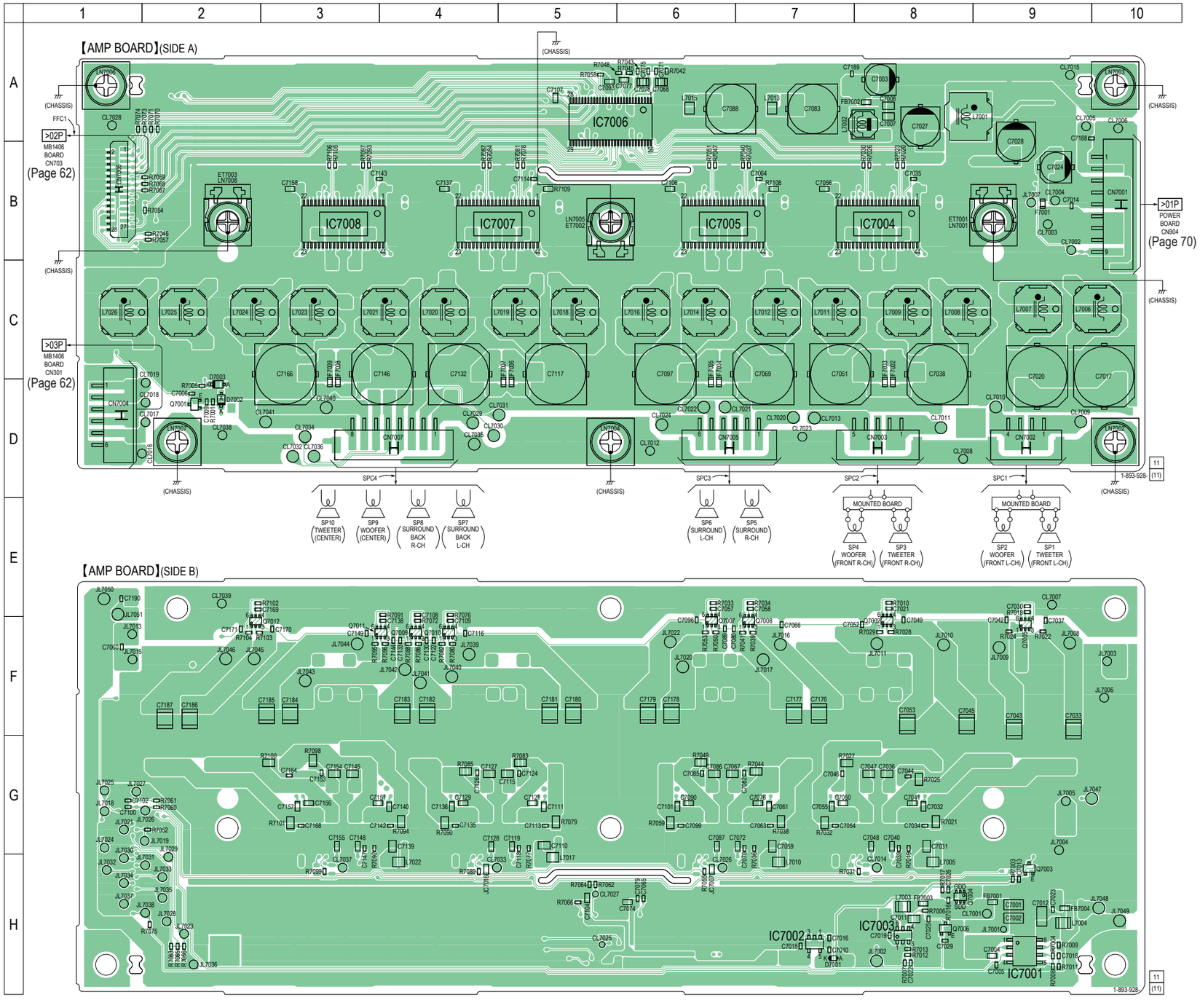


5-5. PRINTED WIRING BOARD - MB1406 Board - • See page 61 for Circuit Boards Location. • : Uses unleaded solder.



Note: When the card WLAN/BT combo (WIFI1) is replaced, refer to "NOTE OF REPLACING THE COMPLETE MB1406 BOARD OR CARD WLAN/BT COMBO" on page 6.

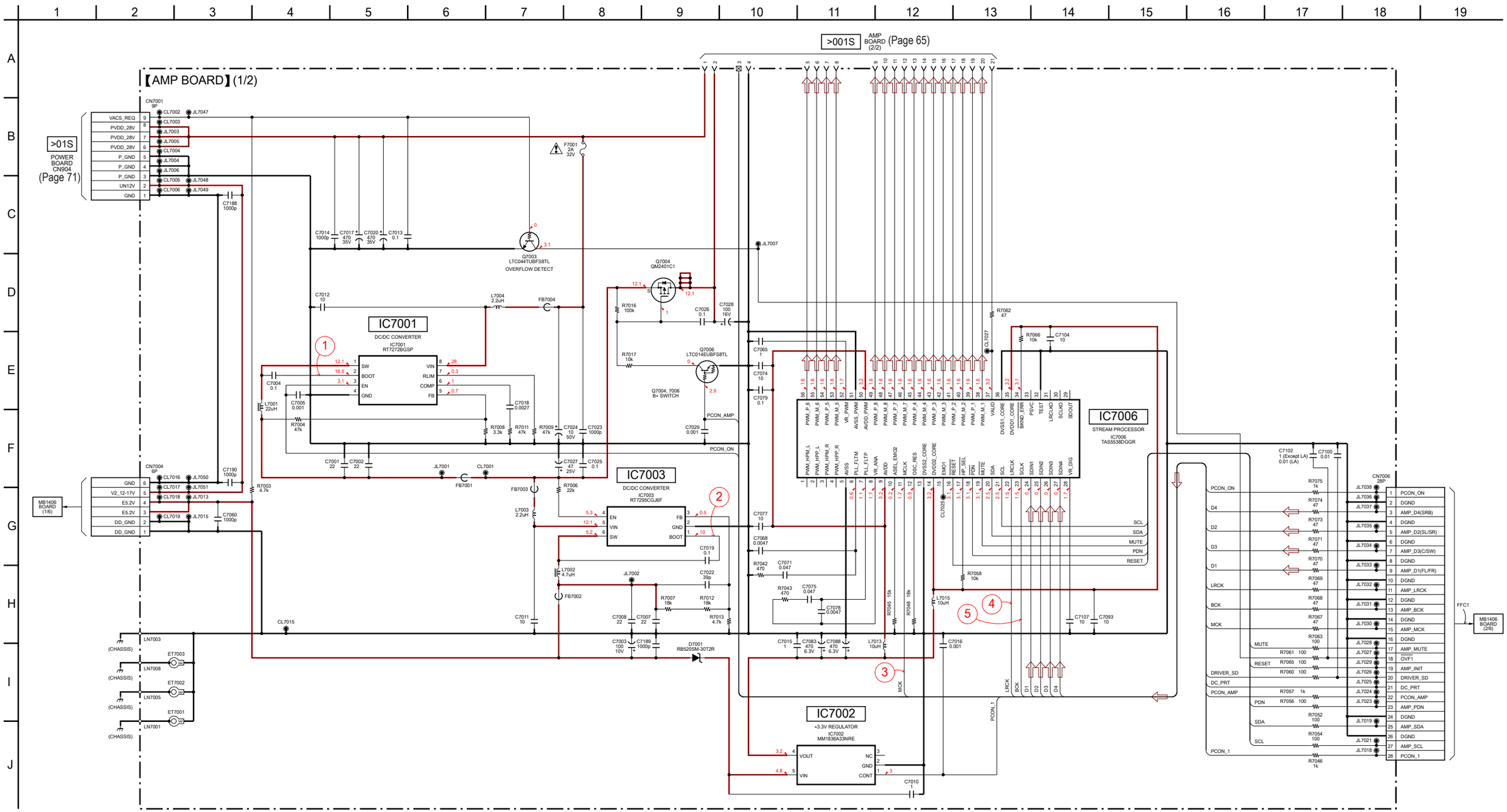
5-6. PRINTED WIRING BOARD - AMP Board - • See page 61 for Circuit Boards Location. • : Uses unleaded solder.



Note 1: When the IC7004, IC7005, IC7007 and IC7008 on the AMP board are replaced, refer to "NOTE OF REPLACING THE IC7004, IC7005, IC7007 AND IC7008 ON THE AMP BOARD AND THE COMPLETE AMP BOARD" on page 6.

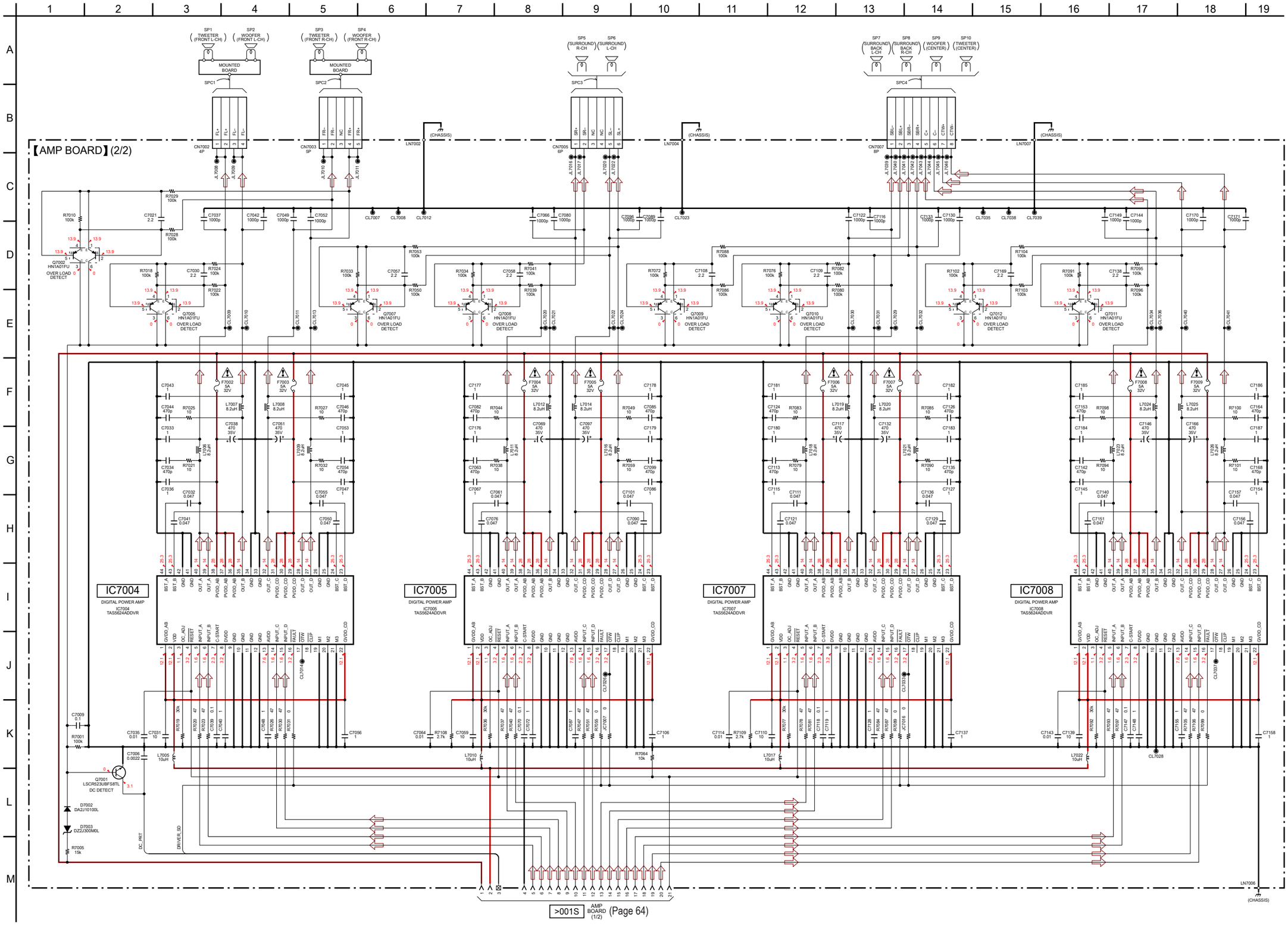
Note 2: When the C7017, C7020, C7038, C7051, C7069, C7097, C7117, C7132, C7146 and C7166 on the AMP board are replaced, refer to "BOND FIXATION OF ELECTRIC PARTS" on page 9.

5-7. SCHEMATIC DIAGRAM - AMP Section (1/2) - • See page 72 for Waveforms. • See page 72 for IC Block Diagrams.



Note: When the C7017 and C7020 on the AMP board are replaced, refer to "BOND FIXATION OF ELECTRIC PARTS" on page 9.

5-8. SCHEMATIC DIAGRAM - AMP Section (2/2) - • See page 72 for IC Block Diagrams.



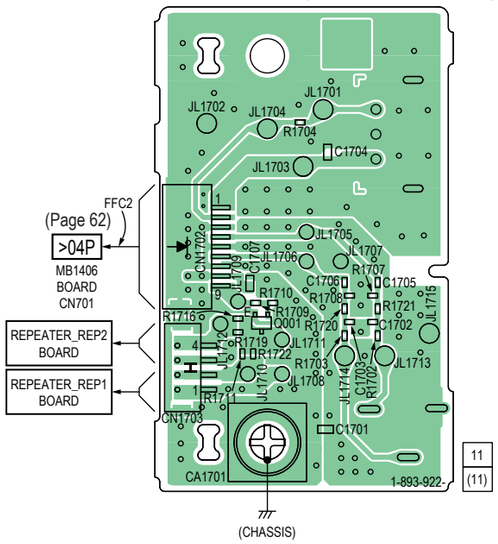
Note 1: When the IC7004, IC7005, IC7007 and IC7008 on the AMP board are replaced, refer to "NOTE OF REPLACING THE IC7004, IC7005, IC7007 AND IC7008 ON THE AMP BOARD AND THE COMPLETE AMP BOARD" on page 6.

Note 2: When the C7038, C7051, C7069, C7097, C7117, C7132, C7146 and C7166 on the AMP board are replaced, refer to "BOND FIXATION OF ELECTRIC PARTS" on page 9.

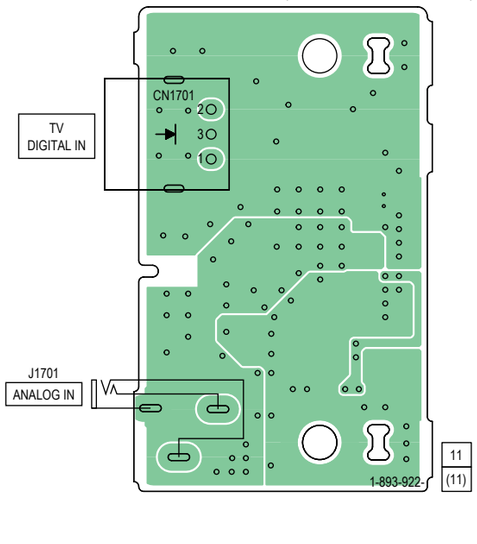
5-9. PRINTED WIRING BOARDS - IO/USB Section -

• See page 61 for Circuit Boards Location. • : Uses unleaded solder.

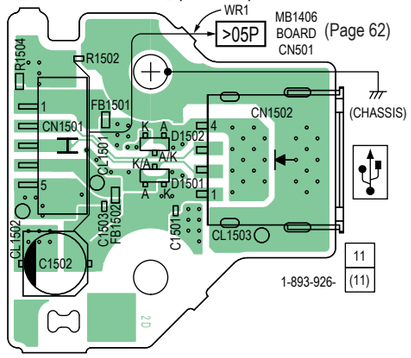
【IO BOARD】(COMPONENT SIDE)



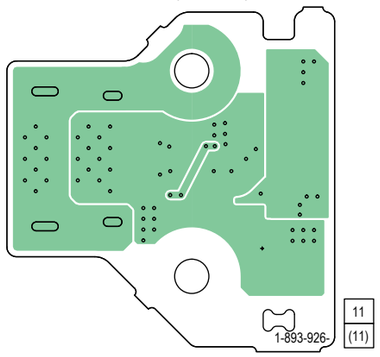
【IO BOARD】(CONDUCTOR SIDE)



【USB BOARD】(SIDE A)

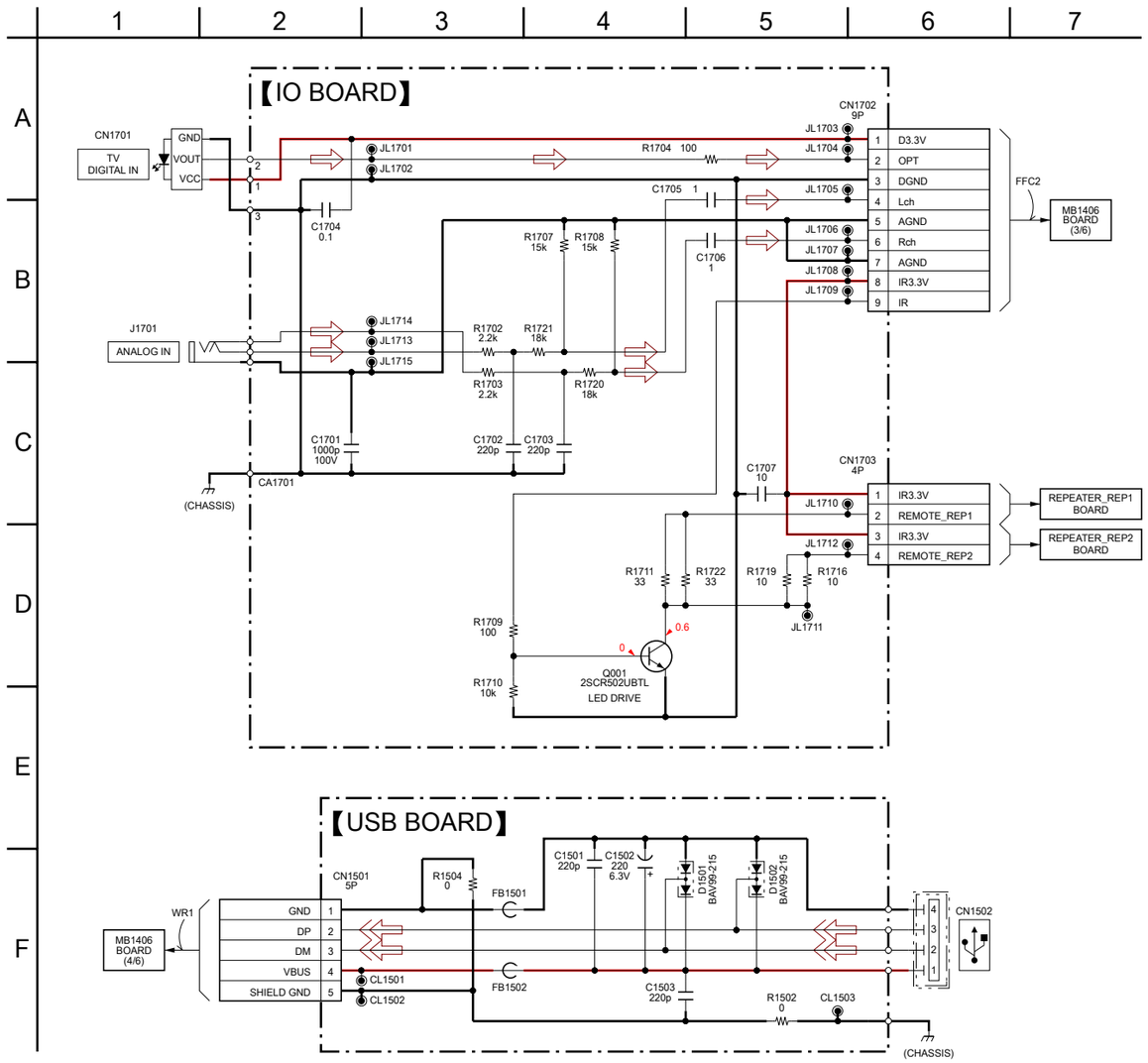


【USB BOARD】(SIDE B)



Note: When the REPEATER_REP1 or REPEATER_REP2 boards are defective, replace the complete mounted board.

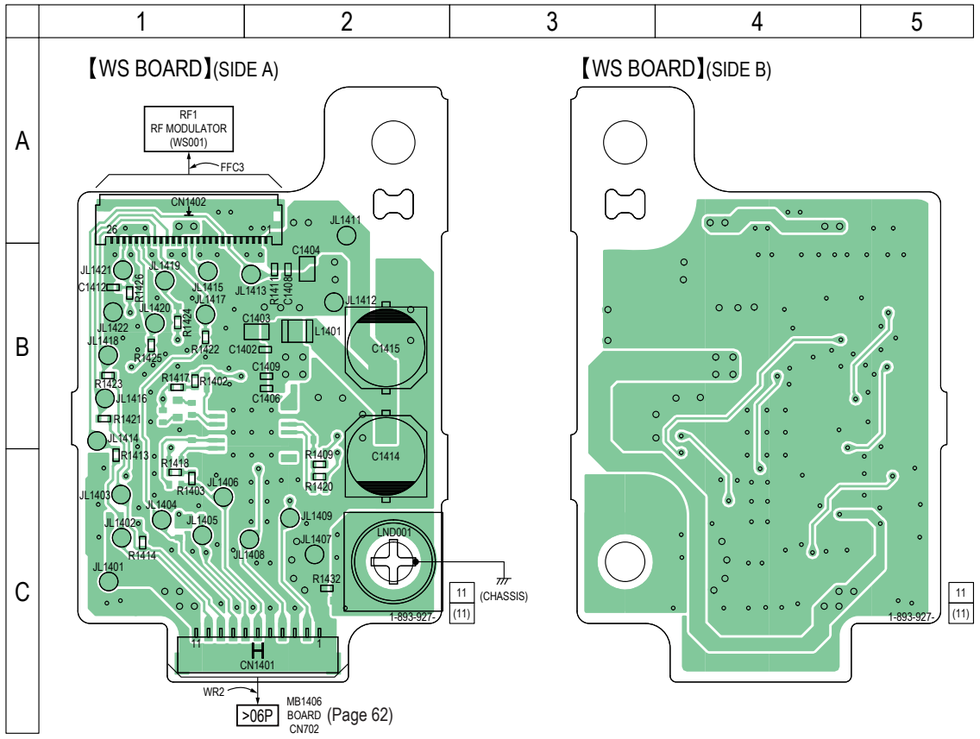
5-10. SCHEMATIC DIAGRAM - IO/USB Section -



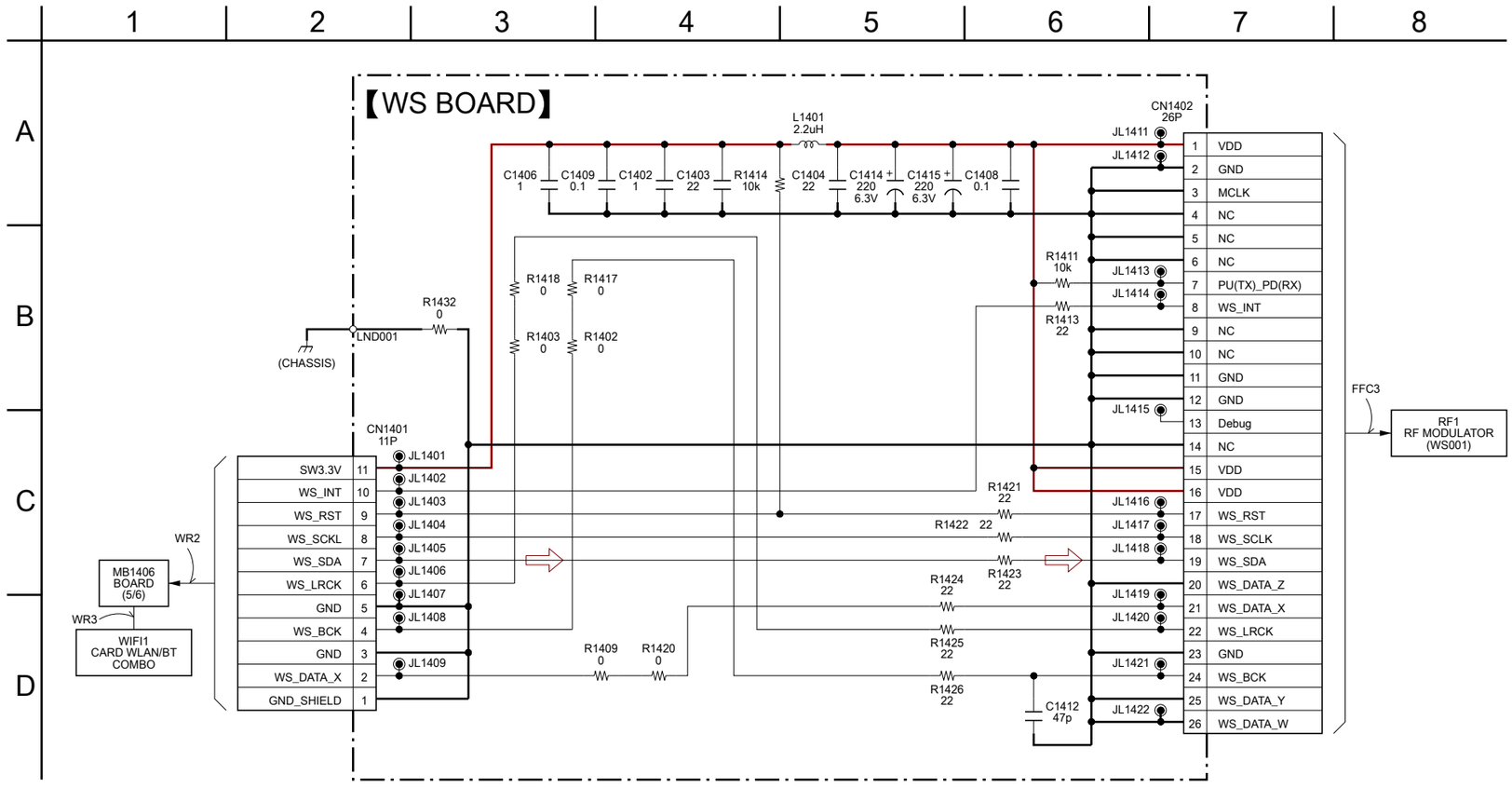
Note: When the REPEATER_REP1 or REPEATER_REP2 boards are defective, replace the complete mounted board.

5-11. PRINTED WIRING BOARD - WS Board -

• See page 61 for Circuit Boards Location. • : Uses unleaded solder.



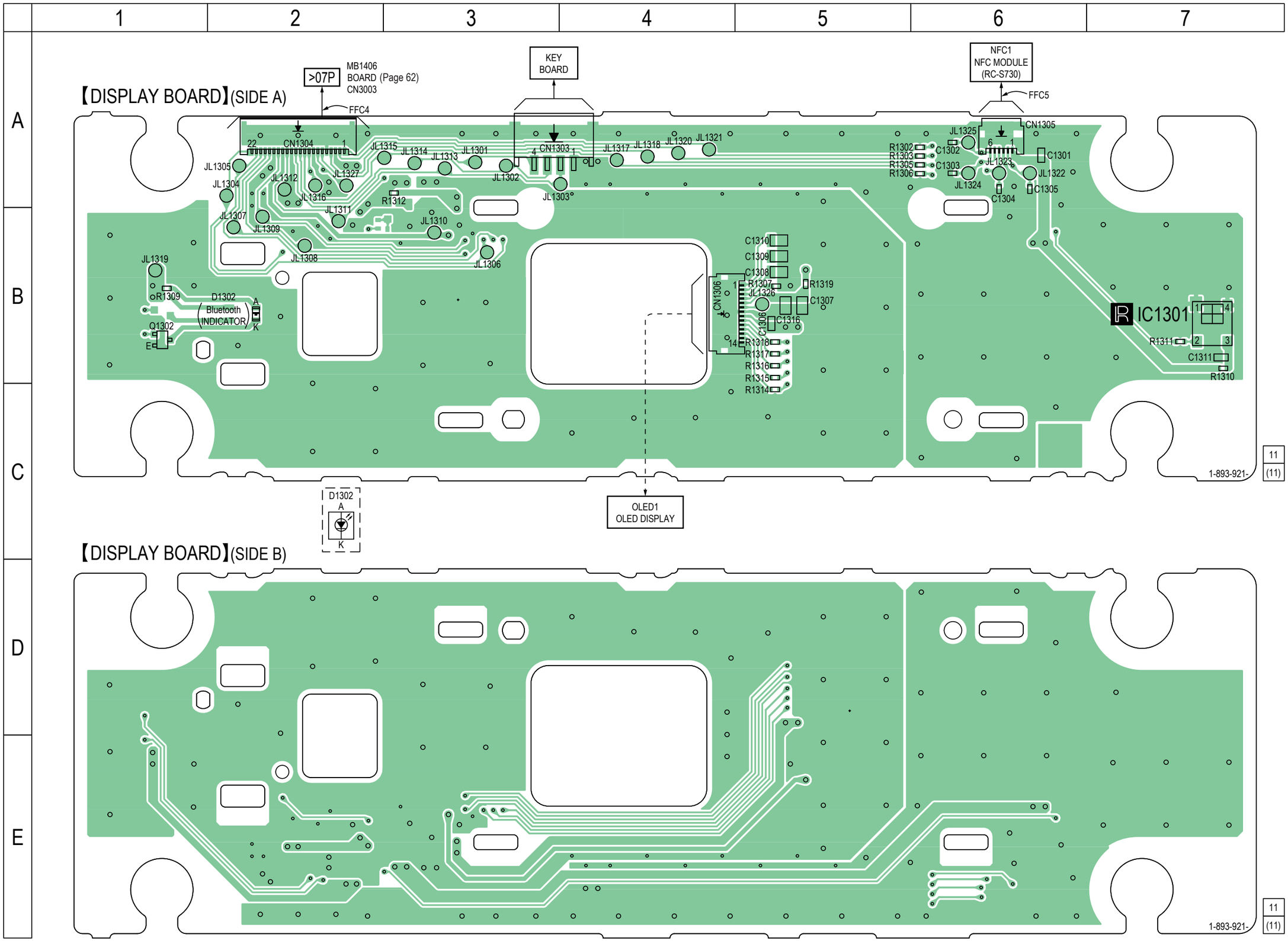
5-12. SCHEMATIC DIAGRAM - WIRELESS Section -



Note: When the card WLAN/BT combo (WIFI1) is replaced, refer to "NOTE OF REPLACING THE COMPLETE MB1406 BOARD OR CARD WLAN/BT COMBO" on page 6.

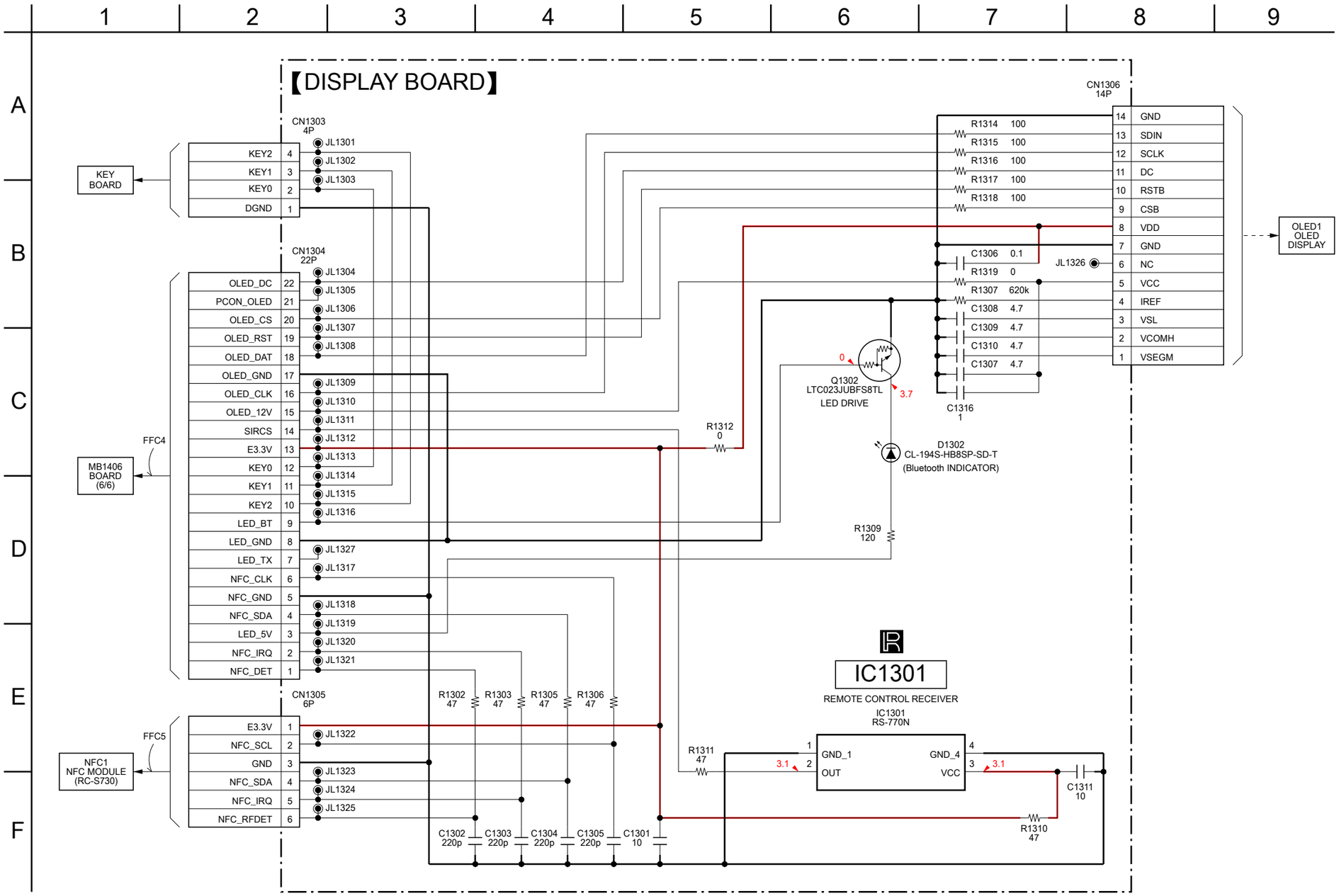
5-13. PRINTED WIRING BOARDS - DISPLAY Section -

• See page 61 for Circuit Boards Location. • : Uses unleaded solder.



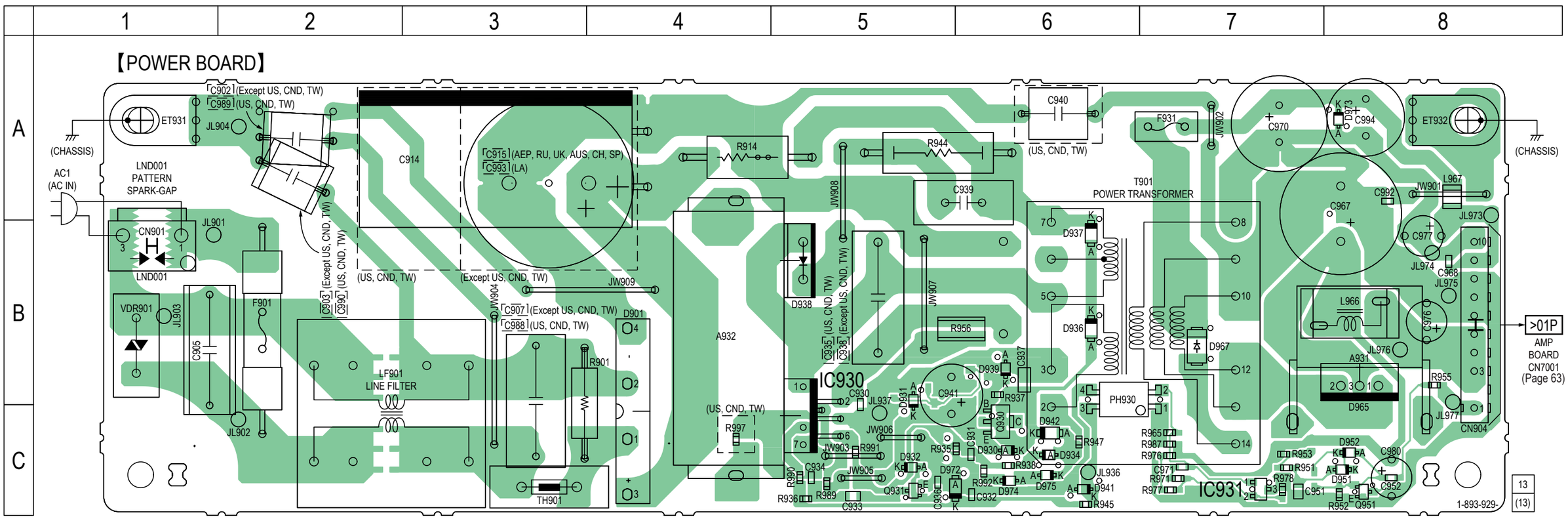
Note: When the KEY board is defective, replace the complete mounted board.

5-14. SCHEMATIC DIAGRAM - DISPLAY Section -



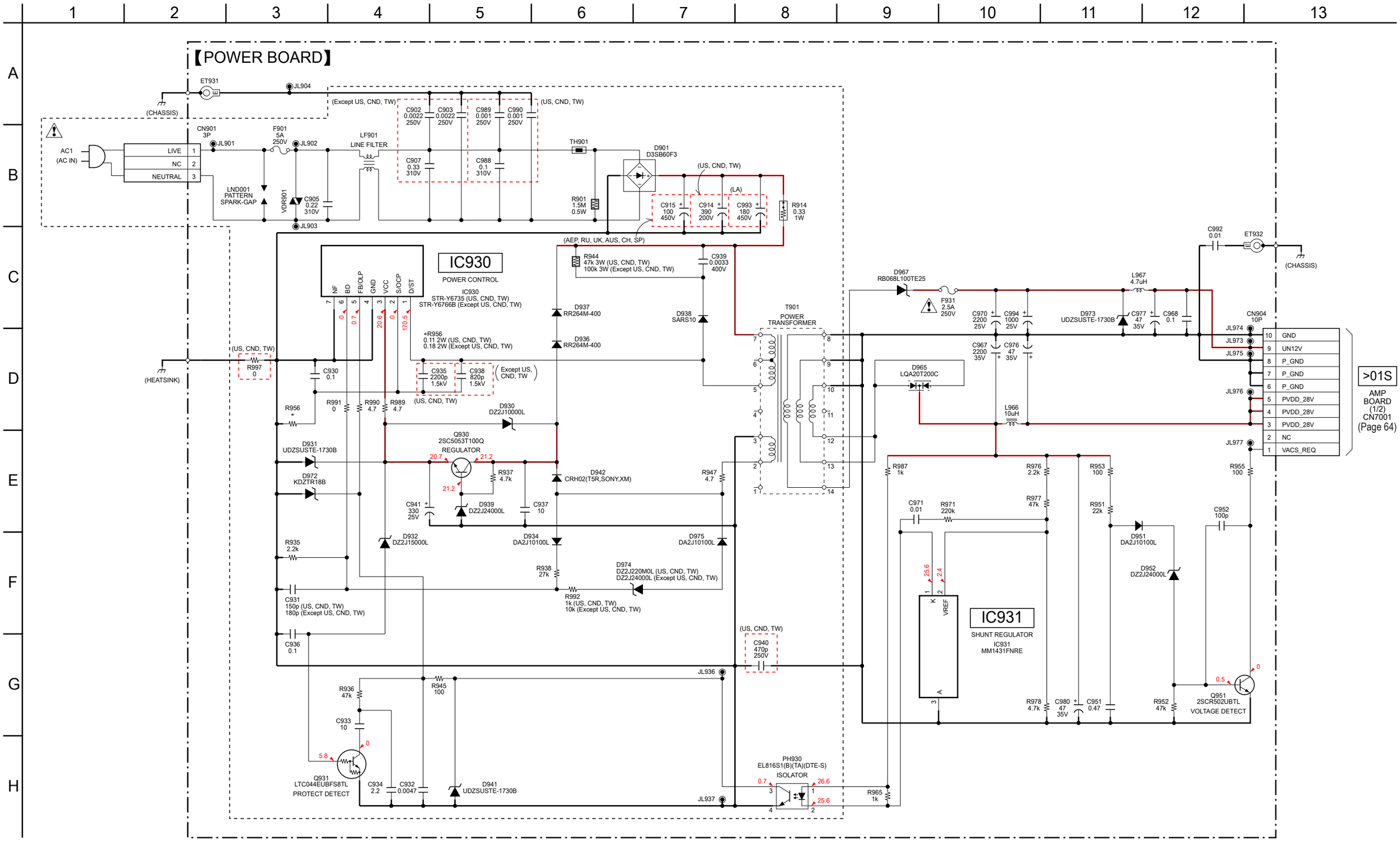
Note: When the KEY board is defective, replace the complete mounted board.

5-15. PRINTED WIRING BOARD - POWER Board - • See page 61 for Circuit Boards Location. • : Uses unleaded solder.



Note: When C902, C903, C905, C907, C914, C939, C967, C970, C988 to C990, C994, D901, R944, TH901 and VDR901 on the POWER board are replaced, refer to "BOND FIXATION OF ELECTRIC PARTS" on page 9.

5-16. SCHEMATIC DIAGRAM - POWER Board - • See page 72 for IC Block Diagrams.

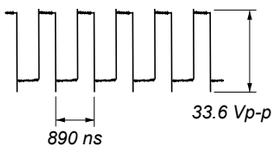


Note: When C902, C903, C905, C907, C914, C939, C967, C970, C988 to C990, C994, D901, R944, TH901 and VDR901 on the POWER board are replaced, refer to "BOND FIXATION OF ELECTRIC PARTS" on page 9.

• Waveforms

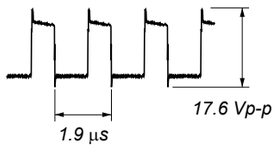
– AMP Board –

① IC7001 ② (BOOT)



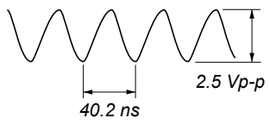
10 V/DIV, 1 μs/DIV

② IC7003 ① (BOOT)



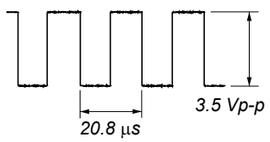
5 V/DIV, 1 μs/DIV

③ IC7006 ⑪ (MCLK)



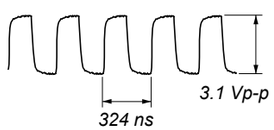
1 V/DIV, 20 ns/DIV

④ IC7006 ㉒ (LRCLK)



1 mV/DIV, 10 μs/DIV

⑤ IC7006 ㉓ (SCLK)

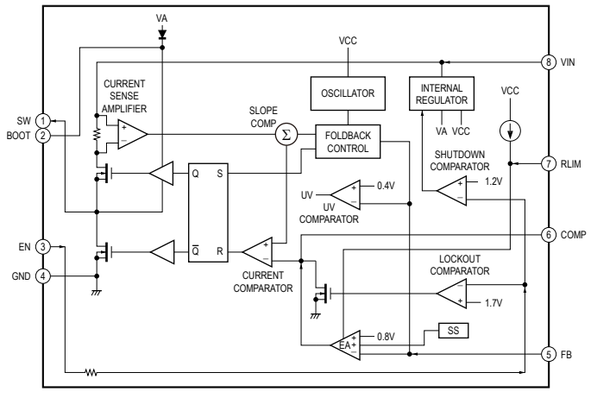


1 V/DIV, 200 ns/DIV

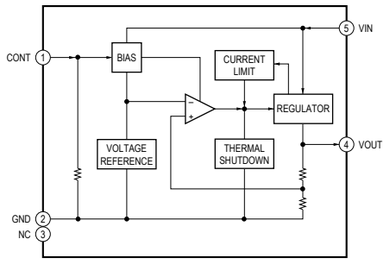
• IC Block Diagrams

– AMP Board –

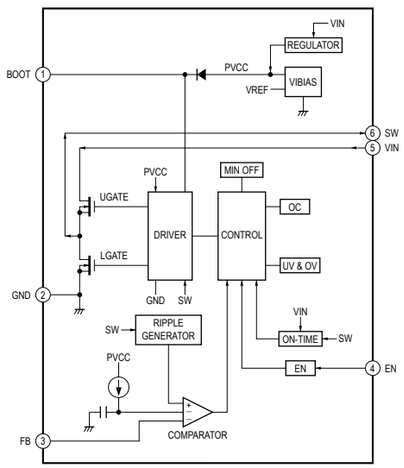
IC7001 RT7272BGSP



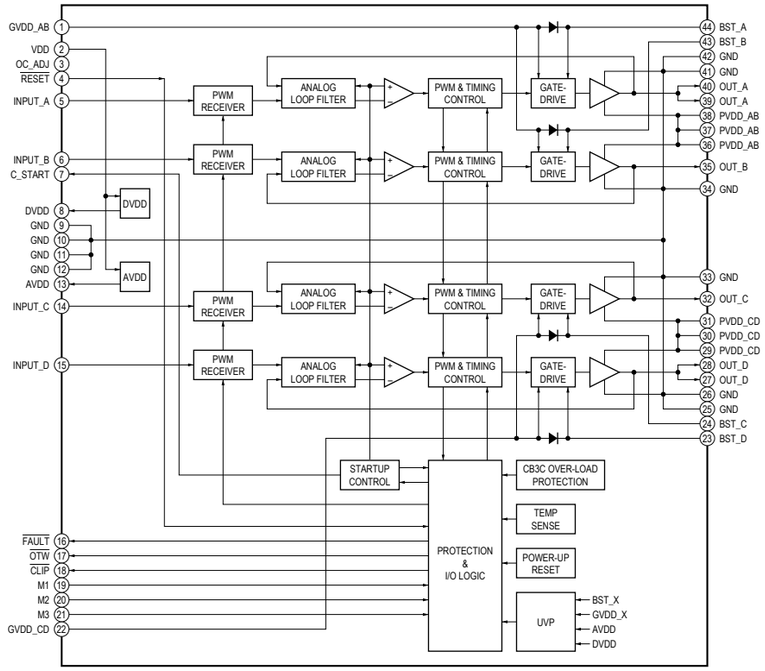
IC7002 MM1836A33NRE



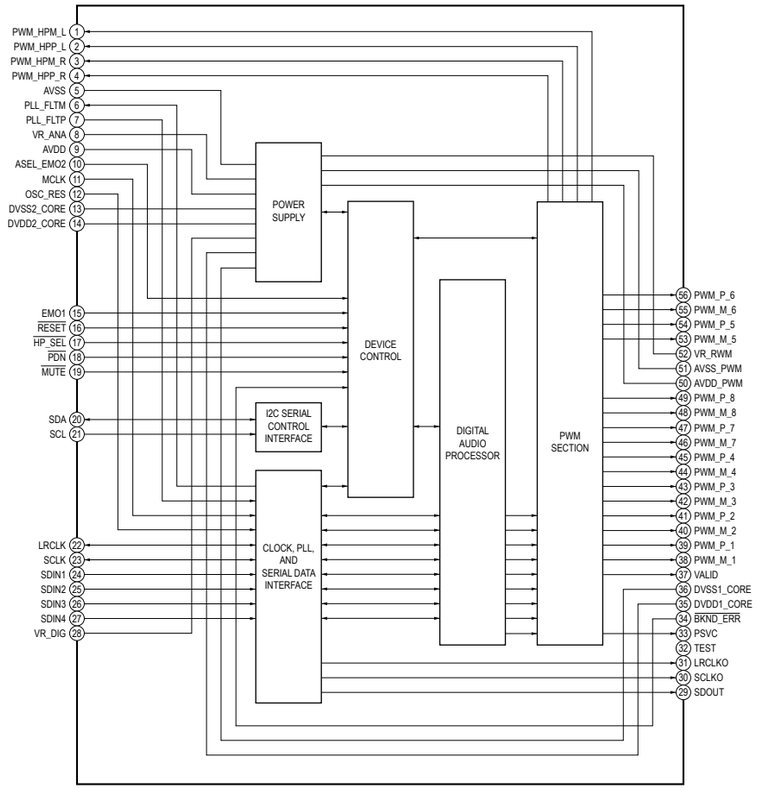
IC7003 RT7295CGJ6F



IC7004, 7005, 7007, 7008 TAS5624ADDVR

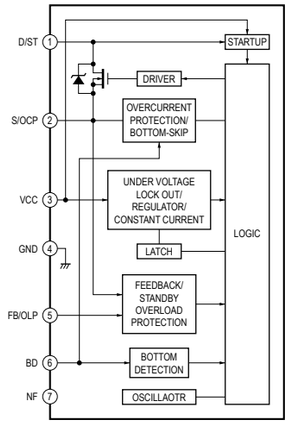


IC7006 TAS5538DGGR



– POWER Board –

IC930 STR-Y6735
(US, Canadian and Taiwan models)
IC930 STR-Y6766B
(Except US, Canadian and Taiwan models)



SECTION 6
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

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

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

原理图和零件清单中标有⚠记号的零部件，或带有⚠记号的虚线所圈示的零部件，对于维系安全至关重要。因此只能以指定号码的零部件来更换。

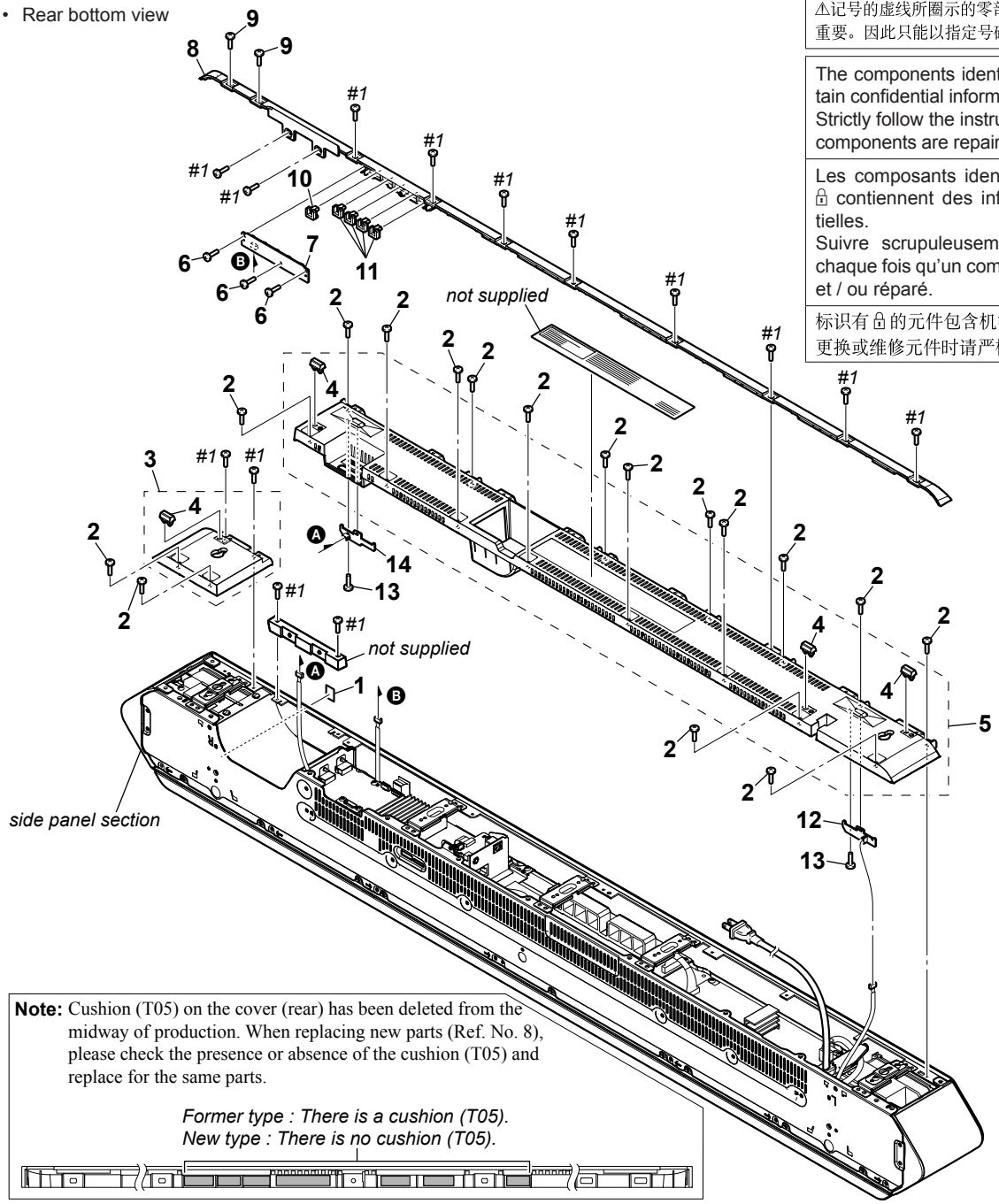
The components identified by mark 🔒 contain confidential information.
Strictly follow the instructions whenever the components are repaired and/or replaced.

Les composants identifiés par la marque 🔒 contiennent des informations confidentielles.
Suivre scrupuleusement les instructions chaque fois qu'un composant est remplacé et / ou réparé.

标识有🔒的元件包含机密信息。
更换或维修元件时请严格遵守指示。

6-1. REAR PANEL SECTION

- Rear bottom view



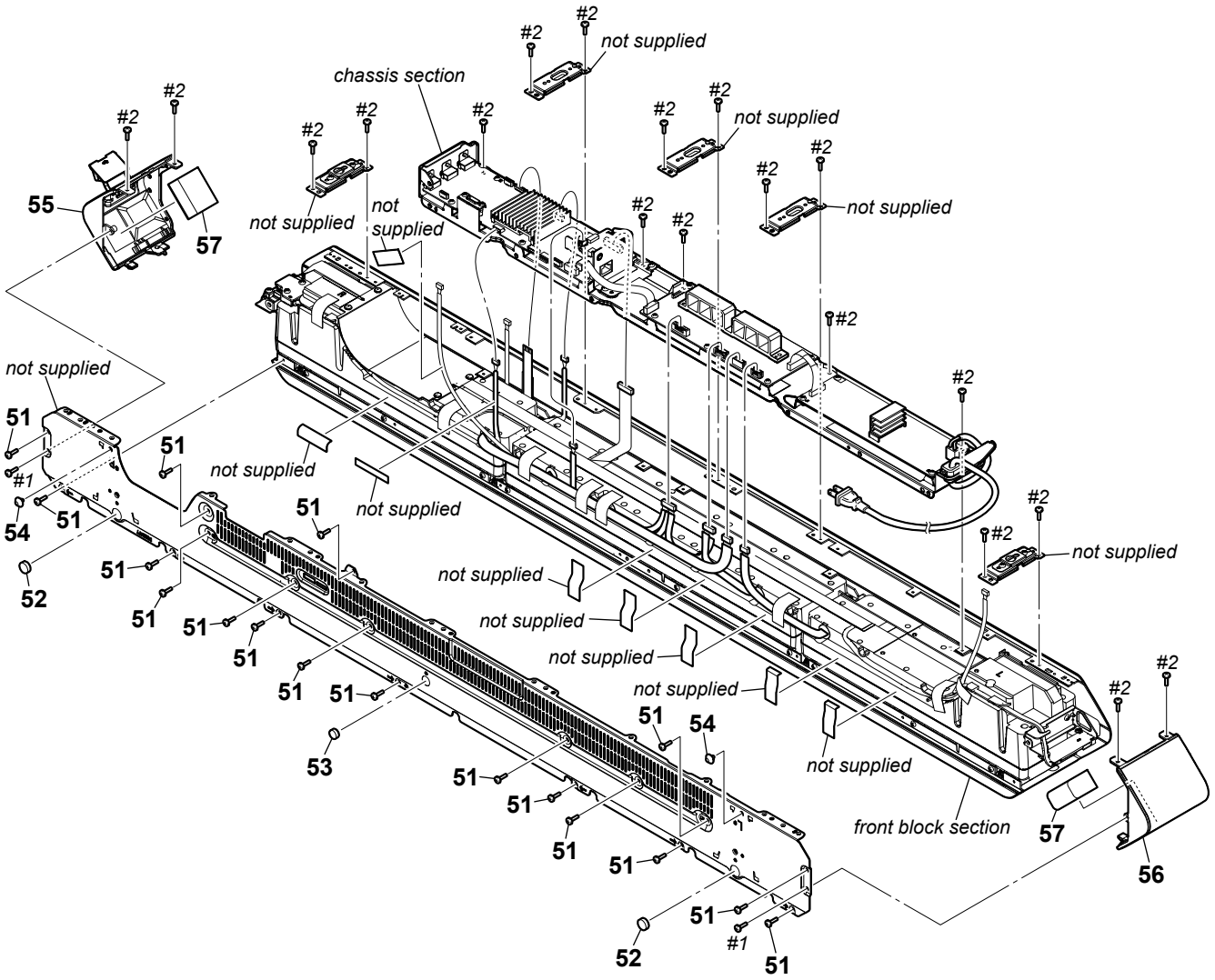
Note: Cushion (T05) on the cover (rear) has been deleted from the midway of production. When replacing new parts (Ref. No. 8), please check the presence or absence of the cushion (T05) and replace for the same parts.

Former type : There is a cushion (T05).
New type : There is no cushion (T05).

Ref. No.	Part No.	Description	Remark
1	4-477-465-21	HI-RES LABEL	
2	4-537-542-01	STEP SCREW B3X6	
3	X-2591-445-1	PANEL, REAR (R) ASSY	
4	4-559-566-01	CUSHION (REAR)	
5	X-2590-752-1	PANEL, REAR (L) ASSY	
6	3-087-053-01	+BVTP2.6 (3CR)	
7	A-2058-288-A	KEY BOARD, COMPLETE	
8	4-546-567-01	COVER (REAR) (New type) (See Note)	
8	X-2591-446-2	COVER (REAR) ASSY (Including cushion (T05)) (Former type) (See Note)	
9	4-567-311-01	SCREW, STEP +BVTP3X8	
10	X-2590-755-1	BUTTON (VOL) ASSY	
11	X-2590-754-1	BUTTON (REAR) ASSY	
12	A-2058-292-A	REPEATER_REP2 BOARD, COMPLETE	
13	4-218-254-02	SCREW, +PWH B2.6	
14	A-2054-816-A	REPEATER_REP1 BOARD, COMPLETE	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

6-2. SIDE PANEL SECTION

• Rear bottom view

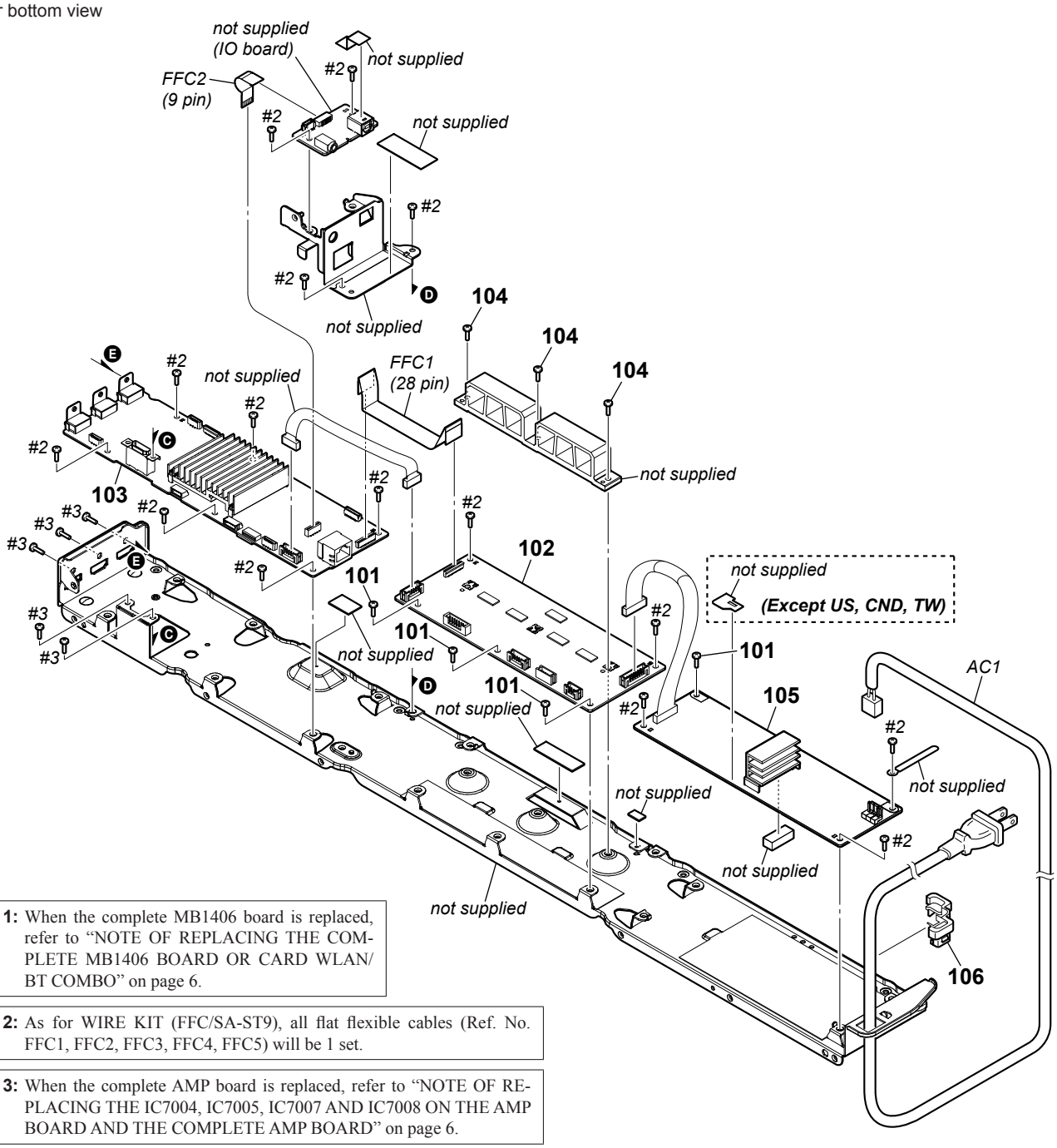


Ref. No.	Part No.	Description	Remark
51	3-704-515-22	SCREW (BV/RING)	
52	4-563-584-01	CUSHION (FOOT FRONT)	
53	4-567-511-01	CUSHION (FOOT CENTER)	
54	4-566-464-01	FOOT (Z)	
55	X-2590-685-2	PANEL (SIDE R) ASSY (for R-ch)	

Ref. No.	Part No.	Description	Remark
56	X-2591-153-1	PANEL (SIDE L) ASSY (for L-ch)	
57	4-571-335-01	CUSHION (ABSO PANEL SIDE)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-646-71	SCREW +BVTP 3X8 TYPE2 IT-3	

6-3. CHASSIS SECTION

• Rear bottom view



Note 1: When the complete MB1406 board is replaced, refer to "NOTE OF REPLACING THE COMPLETE MB1406 BOARD OR CARD WLAN/BT COMBO" on page 6.

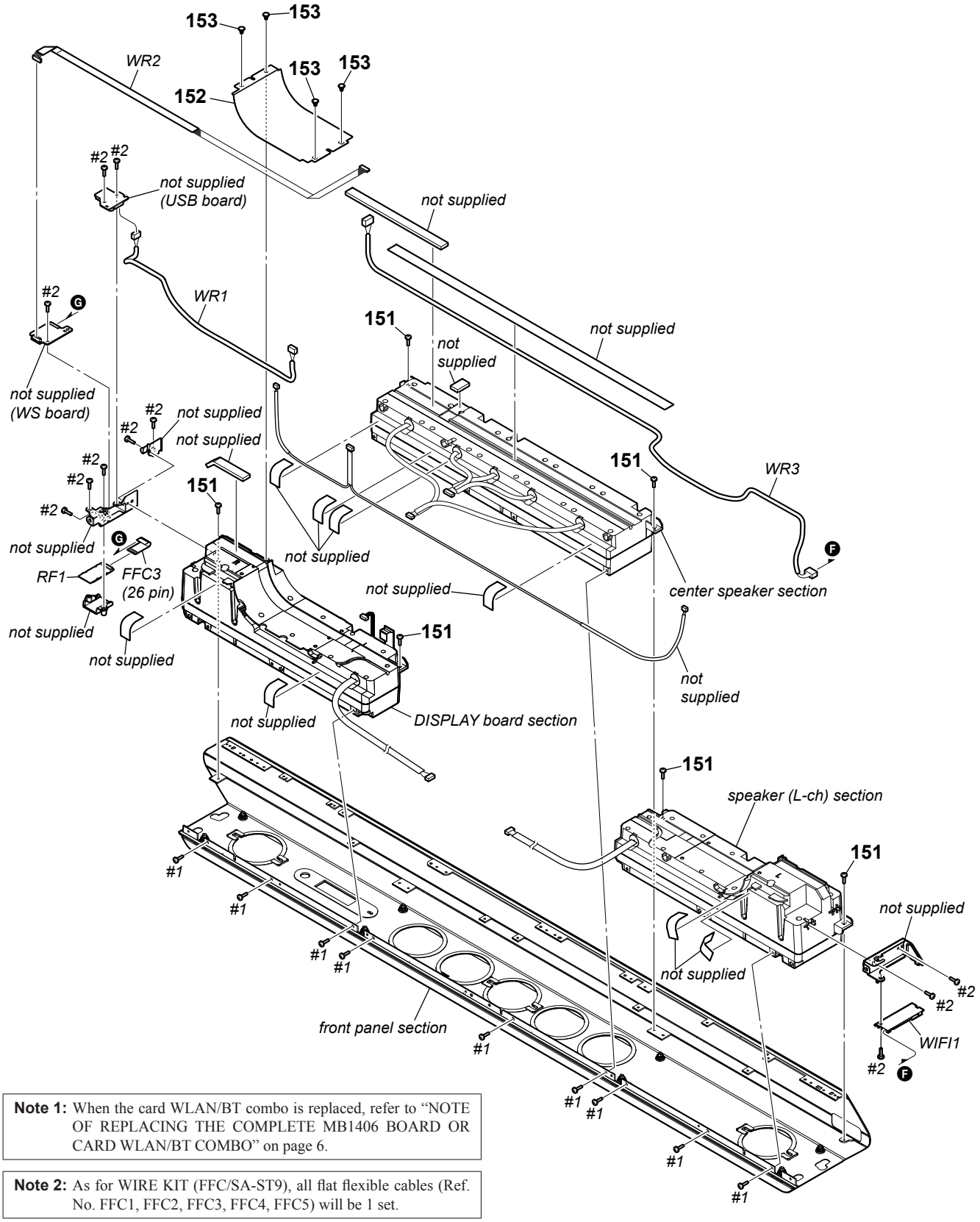
Note 2: As for WIRE KIT (FFC/SA-ST9), all flat flexible cables (Ref. No. FFC1, FFC2, FFC3, FFC4, FFC5) will be 1 set.

Note 3: When the complete AMP board is replaced, refer to "NOTE OF REPLACING THE IC7004, IC7005, IC7007 AND IC7008 ON THE AMP BOARD AND THE COMPLETE AMP BOARD" on page 6.

Ref. No.	Part No.	Description	Remark
101	4-974-510-11	SCREW (+BV 3X8 CU)	
102	A-2054-809-A	AMP BOARD, COMPLETE (Except LA)	(See Note 3)
102	A-2080-753-A	AMP BOARD, COMPLETE (LA) (See Note 3)	
🔒 103	A-2071-285-A	MB1406 BOARD, COMPLETE (SV) (US, CND)	(See Note 1)
🔒 103	A-2071-287-A	MB1406 BOARD, COMPLETE (SV) (AEP)	(See Note 1)
🔒 103	A-2071-288-A	MB1406 BOARD, COMPLETE (SV) (UK)	(See Note 1)
🔒 103	A-2071-289-A	MB1406 BOARD, COMPLETE (SV) (RU)	(See Note 1)
🔒 103	A-2071-290-A	MB1406 BOARD, COMPLETE (SV) (SP)	(See Note 1)
🔒 103	A-2071-291-A	MB1406 BOARD, COMPLETE (SV) (AUS)	(See Note 1)
🔒 103	A-2071-293-A	MB1406 BOARD, COMPLETE (SV) (CH)	(See Note 1)
🔒 103	A-2071-294-A	MB1406 BOARD, COMPLETE (SV) (TW)	(See Note 1)
🔒 103	A-2071-298-A	MB1406 BOARD, COMPLETE (SV) (LA)	(See Note 1)
104	3-905-609-13	SCREW (TRANSISTOR)	
105	A-2054-811-A	POWER BOARD, COMPLETE	(AEP, RU, UK, AUS, CH, SP)
105	A-2059-212-A	POWER BOARD, COMPLETE (US, CND, TW)	
105	A-2075-345-A	POWER BOARD, COMPLETE (LA)	
⚠ 106	4-966-267-12	BUSHING (FBS001), CORD	
⚠ AC1	1-834-966-42	POWER-SUPPLY CORD (AEP, RU, LA, SP)	
⚠ AC1	1-835-068-21	CORD, POWER (AUS)	
⚠ AC1	1-837-308-12	CORD, POWER-SUPPLY (US, CND)	
⚠ AC1	1-837-345-11	CORD, POWER-SUPPLY (TW)	
⚠ AC1	1-837-822-21	CORD, POWER-SUPPLY (CH)	
⚠ AC1	1-839-999-21	POWER-SUPPLY CORD (UK)	
FFC1	9-833-606-99	WIRE KIT (FFC/SA-ST9) (28P) (See Note 2)	
FFC2	9-833-606-99	WIRE KIT (FFC/SA-ST9) (9P) (See Note 2)	
#2	7-685-646-71	SCREW +BVTP 3X8 TYPE2 IT-3	
#3	7-682-547-09	SCREW +B 3X6	

6-4. FRONT BLOCK SECTION

• Rear bottom view



Note 1: When the card WLAN/BT combo is replaced, refer to "NOTE OF REPLACING THE COMPLETE MB1406 BOARD OR CARD WLAN/BT COMBO" on page 6.

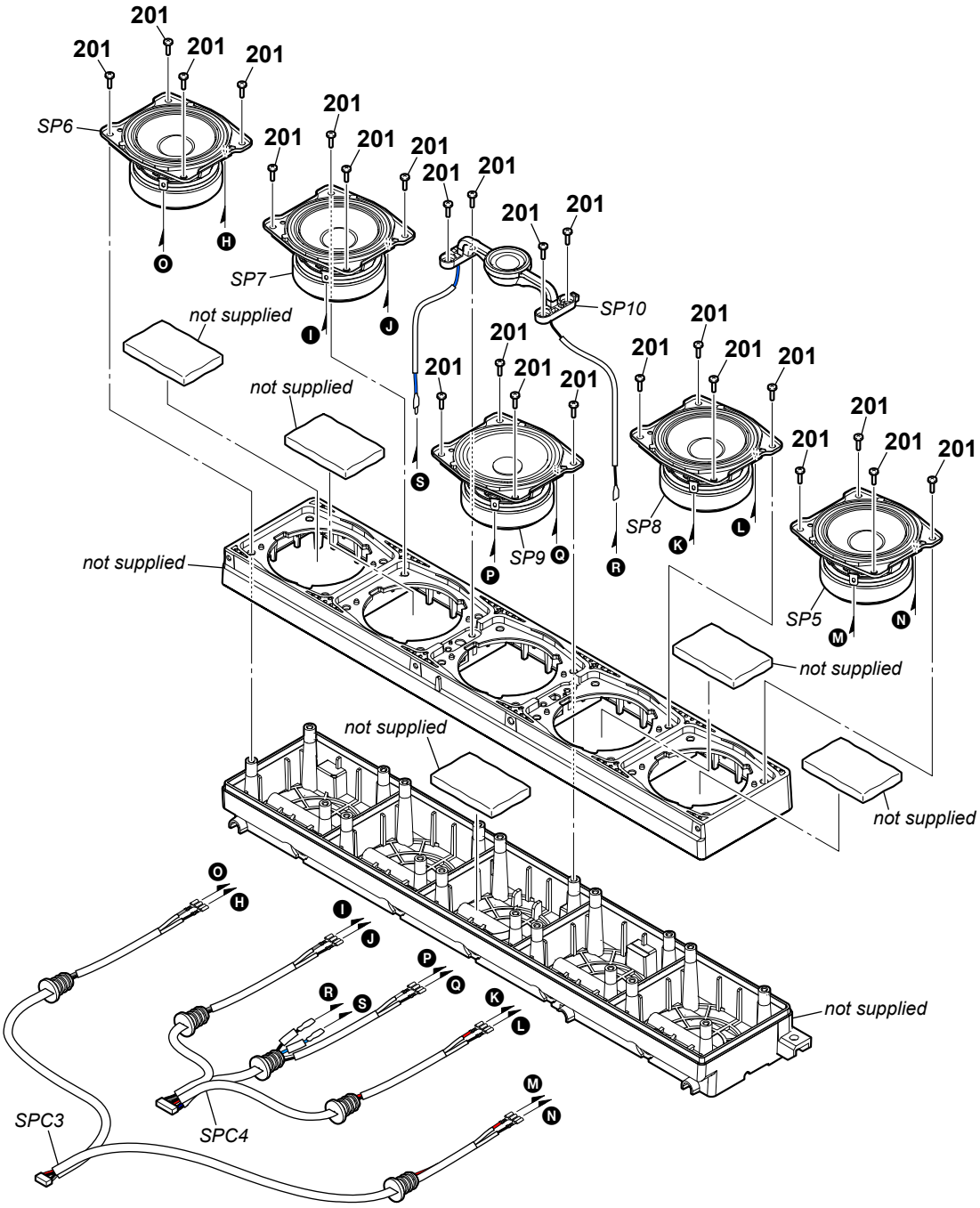
Note 2: As for WIRE KIT (FFC/SA-ST9), all flat flexible cables (Ref. No. FFC1, FFC2, FFC3, FFC4, FFC5) will be 1 set.

Ref. No.	Part No.	Description	Remark
151	4-537-542-01	STEP SCREW B3X6	
152	4-546-429-01	SHEET (R)	
153	2-249-250-00	CLIP (SMALL), CANOE	
FFC3	9-833-606-99	WIRE KIT (FFC/SA-ST9) (26P) (See Note 2)	
RF1	1-492-700-61	RF MODULATOR (WS001)	
WIFI1	1-458-765-21	CARD WLAN/BT COMBO (See Note 1)	

Ref. No.	Part No.	Description	Remark
WR1	9-833-606-82	WIRE KIT (USB)	
WR2	9-833-606-84	WIRE KIT (WS)	
WR3	9-833-606-83	WIRE KIT (WIFI/BT)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-646-71	SCREW +BVTP 3X8 TYPE2 IT-3	

6-5. CENTER SPEAKER SECTION

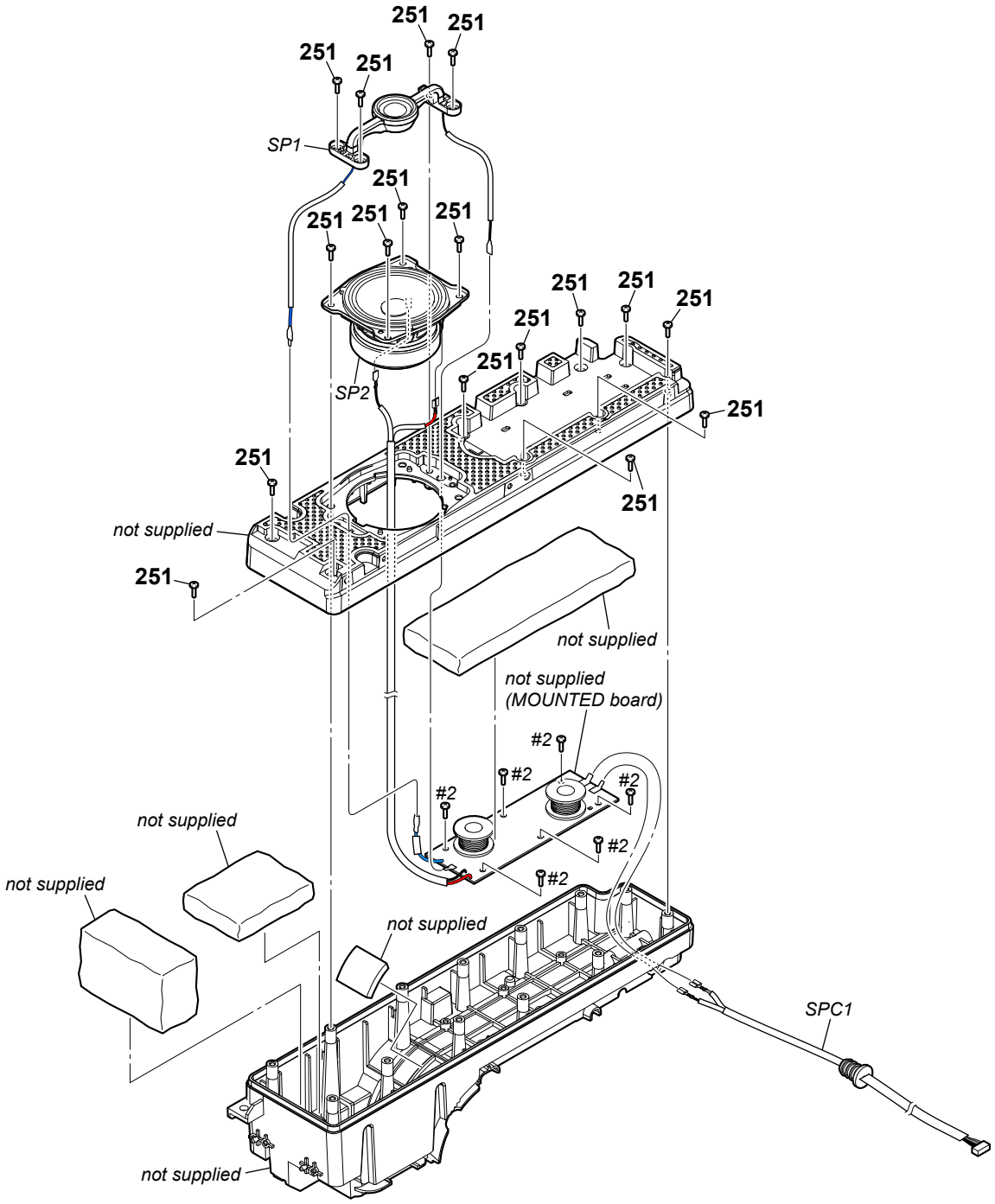
• Front bottom view



Ref. No.	Part No.	Description	Remark
201	4-986-971-02	SCREW (3.5)	
SP5	1-859-076-11	LOUDSPEAKER (6.5 cm)-076-11 (Surround (R-ch))	
SP6	1-859-076-11	LOUDSPEAKER (6.5 cm)-076-11 (Surround (L-ch))	
SP7	1-859-076-11	LOUDSPEAKER (6.5 cm)-076-11 (Surround back (L-ch))	
SP8	1-859-076-11	LOUDSPEAKER (6.5 cm)-076-11 (Surround back (R-ch))	
SP9	1-859-076-21	LOUDSPEAKER (6.5 cm)-076-21 (Woofer (Center))	
SP10	1-859-073-21	LOUDSPEAKER (18 mm, WITH BRIDGE) (Tweeter (Center))	
SPC3	1-848-698-11	CONNECTION CABLE WITH SPEAKER (for Surround L/R)	
SPC4	1-848-697-11	CONNECTION CABLE WITH SPEAKER (for Center, Surround back L/R)	

6-6. SPEAKER (L-ch) SECTION

- Front bottom view

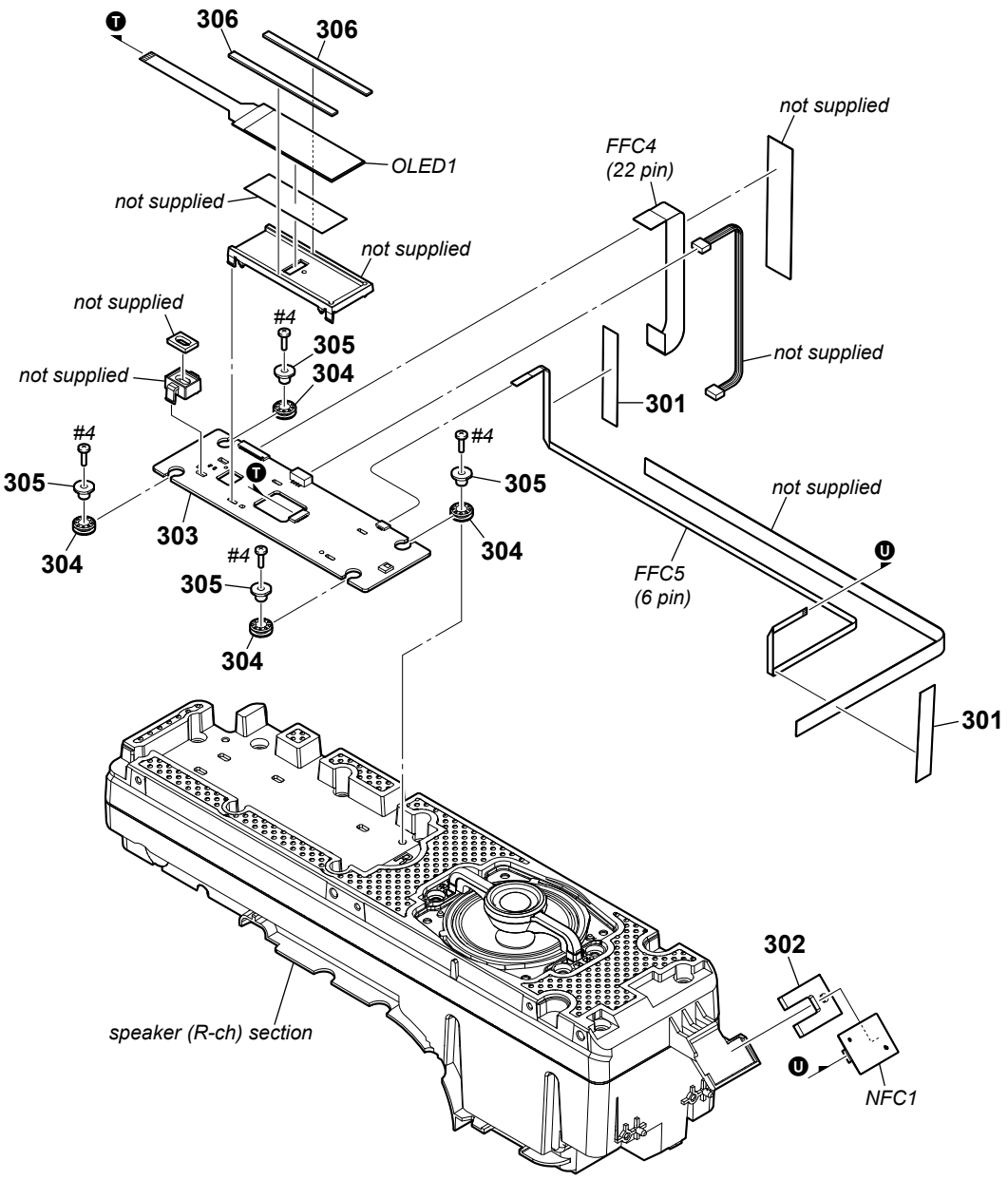


Ref. No.	Part No.	Description	Remark
251	4-986-971-02	SCREW (3.5)	
SP1	1-859-073-11	LOUDSPEAKER (18 mm, WITH BRIDGE) (Tweeter (Front L-ch))	
SP2	1-859-076-21	LOUDSPEAKER (6.5 cm)-076-21 (Woofer (Front L-ch))	

Ref. No.	Part No.	Description	Remark
SPC1	1-848-696-11	CONNECTION CABLE WITH SPEAKER (for L-ch)	
#2	7-685-646-71	SCREW +BVTP 3X8 TYPE2 IT-3	

6-7. DISPLAY BOARD SECTION

• Front bottom view



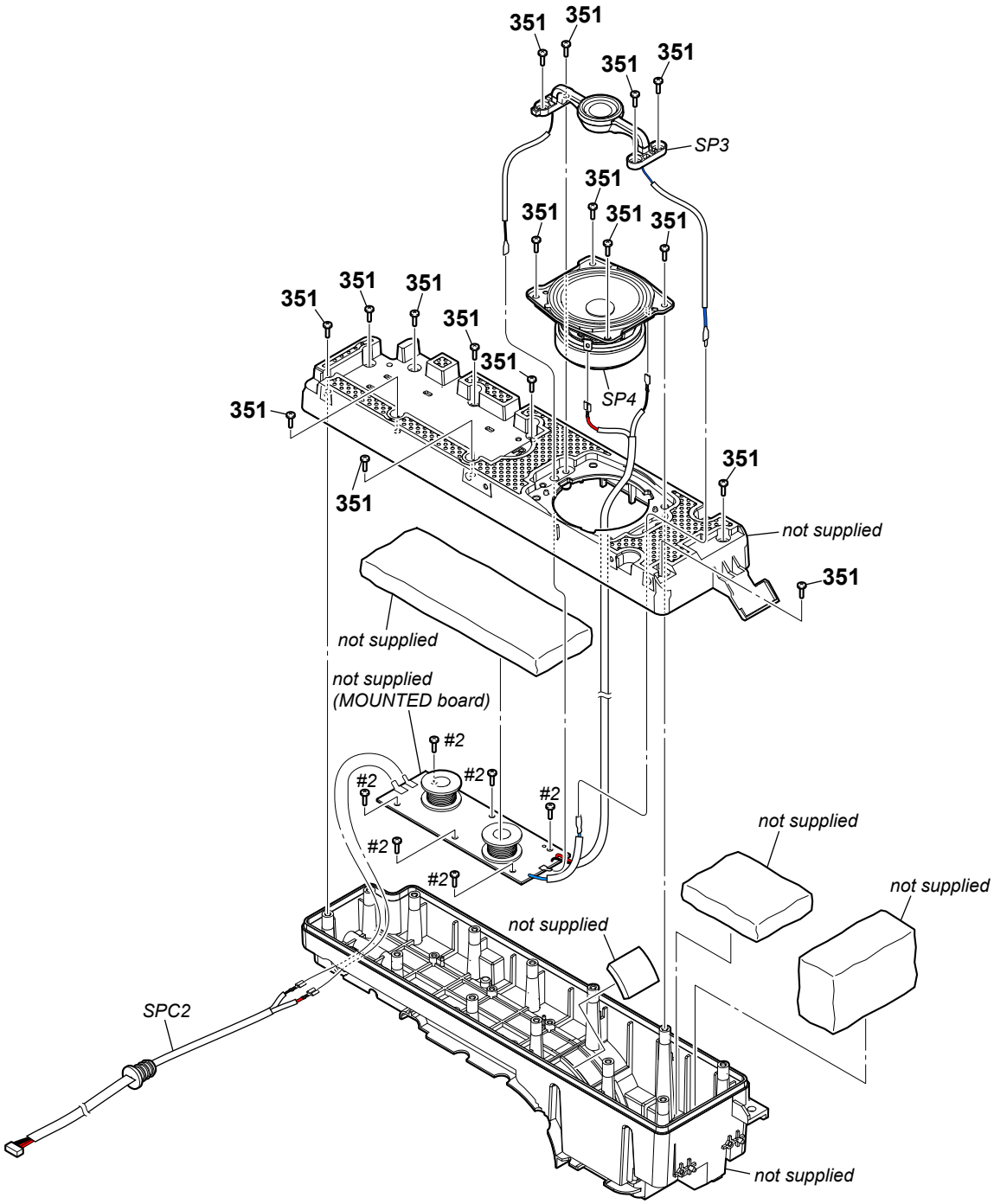
Note: As for WIRE KIT (FFC/SA-ST9), all flat flexible cables (Ref. No. FFC1, FFC2, FFC3, FFC4, FFC5) will be 1 set.

Ref. No.	Part No.	Description	Remark
* 301	3-378-109-01	CUSHION, SARANET	
302	4-546-431-01	CUSHION (NFC)	
303	A-2054-813-A	DISPLAY BOARD, COMPLETE	
304	4-453-877-01	BUSHING (DAMPER)	
305	4-453-878-01	COLLAR (DAMPER)	
306	4-559-873-01	CUSHION (WINDOW)	

Ref. No.	Part No.	Description	Remark
FFC4	9-833-606-99	WIRE KIT (FFC/SA-ST9) (22P) (See Note)	
FFC5	9-833-606-99	WIRE KIT (FFC/SA-ST9) (6P) (See Note)	
NFC1	8-989-602-00	RC-S730 (NFC module)	
OLED1	1-812-047-11	OLED DISPLAY	
#4	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	

6-8. SPEAKER (R-ch) SECTION

- Front bottom view

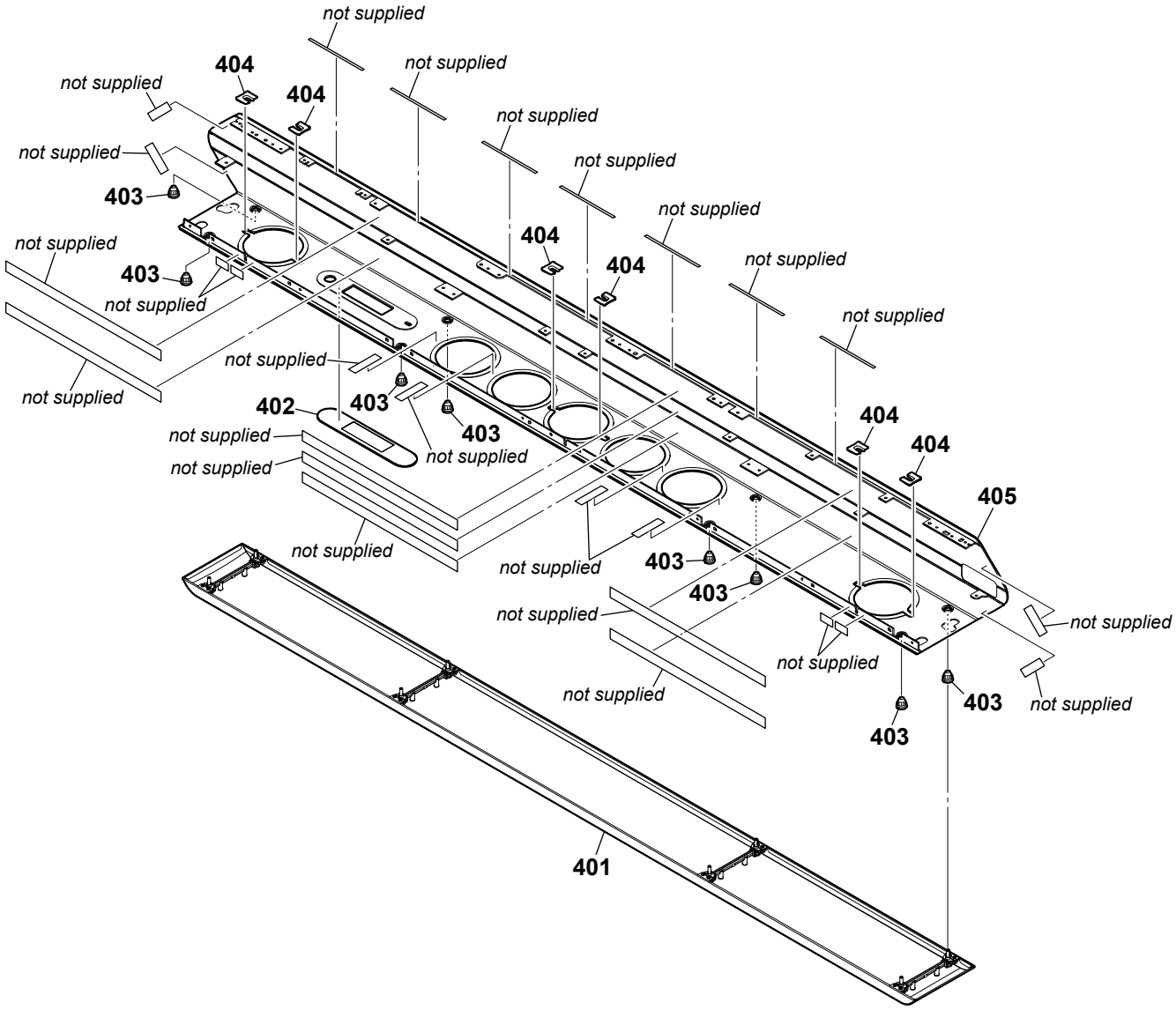


Ref. No.	Part No.	Description	Remark
351	4-986-971-02	SCREW (3.5)	
SP3	1-859-073-11	LOUDSPEAKER (18 mm, WITH BRIDGE) (Tweeter (Front R-ch))	
SP4	1-859-076-21	LOUDSPEAKER (6.5 cm)-076-21 (Woofer (Front R-ch))	

Ref. No.	Part No.	Description	Remark
SPC2	1-848-696-21	CONNECTION CABLE WITH SPEAKER (for R-ch)	
#2	7-685-646-71	SCREW +BVTP 3X8 TYPE2 IT-3	

6-9. FRONT PANEL SECTION

• Rear bottom view



Ref. No.	Part No.	Description	Remark
401	X-2590-684-1	GRILLE ASSY (Grille frame)	
402	4-546-430-01	WINDOW (DISPLAY)	
403	4-546-418-01	CATCHER (FLEX-G)	
404	4-558-986-01	SLEEVE	
405	4-546-417-01	PANEL (FRONT)	

SECTION 7
ELECTRICAL PARTS LIST

Note:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . , uPA. . , µPA. . ,
  uPB. . : µPB. . , uPC. . , µPC. . ,
  uPD. . : µPD. .

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

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

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

原理图和零件清单中标有⚠记号的零部件，或带有⚠记号的虚线所圈示的零部件，对于维系安全至关重要。因此只能以指定号码的零部件来更换。

The components identified by mark 🔒 contain confidential information.
Strictly follow the instructions whenever the components are repaired and/or replaced.

Les composants identifiés par la marque 🔒 contiennent des informations confidentielles.
Suivre scrupuleusement les instructions chaque fois qu'un composant est remplacé et / ou réparé.

标识有🔒的元件包含机密信息。
更换或维修元件时请严格遵守指示。

Ref. No.	Part No.	Description			Remark
	A-2054-809-A	AMP BOARD, COMPLETE (Except LA)			(See Note 1)
	A-2080-753-A	AMP BOARD, COMPLETE (LA) (See Note 1)			
		**********			
		< CAPACITOR >			
C7001	1-116-711-11	CERAMIC CHIP	22uF	20%	16V
C7002	1-116-711-11	CERAMIC CHIP	22uF	20%	16V
C7003	1-165-492-21	ELECT CHIP	100uF	20%	10V
C7004	1-118-361-11	CERAMIC CHIP	0.1uF	10%	50V
C7005	1-118-403-11	CERAMIC CHIP	0.001uF	10%	50V
C7006	1-118-399-11	CERAMIC CHIP	0.0022uF	10%	50V
C7007	1-118-418-11	CERAMIC CHIP	22uF	20%	6.3V
C7008	1-118-418-11	CERAMIC CHIP	22uF	20%	6.3V
C7009	1-118-386-11	CERAMIC CHIP	0.1uF	10%	16V
C7010	1-116-737-11	CERAMIC CHIP	1uF	20%	10V
C7011	1-116-716-11	CERAMIC CHIP	10uF	10%	16V
C7012	1-116-874-11	CERAMIC CHIP	10uF	10%	35V
C7013	1-118-386-11	CERAMIC CHIP	0.1uF	10%	16V
C7014	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
C7015	1-116-737-11	CERAMIC CHIP	1uF	20%	10V
C7016	1-118-403-11	CERAMIC CHIP	0.001uF	10%	50V
C7017	1-120-061-11	ELECT CHIP	470uF	20%	35V (See Note 2)
C7018	1-118-398-11	CERAMIC CHIP	0.0027uF	10%	50V
C7019	1-118-386-11	CERAMIC CHIP	0.1uF	10%	16V
C7020	1-120-061-11	ELECT CHIP	470uF	20%	35V (See Note 2)
C7021	1-116-732-11	CERAMIC CHIP	2.2uF	20%	6.3V
C7022	1-164-864-11	CERAMIC CHIP	39PF	5%	50V
C7023	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
C7024	1-128-991-21	ELECT CHIP	10uF	20%	50V
C7025	1-118-386-11	CERAMIC CHIP	0.1uF	10%	16V
C7026	1-118-386-11	CERAMIC CHIP	0.1uF	10%	16V
C7027	1-128-992-21	ELECT CHIP	47uF	20%	25V
C7028	1-114-484-11	ELECT CHIP	100uF	20%	16V
C7029	1-118-403-11	CERAMIC CHIP	0.001uF	10%	50V
C7030	1-116-732-11	CERAMIC CHIP	2.2uF	20%	6.3V
C7031	1-116-716-11	CERAMIC CHIP	10uF	10%	16V
C7032	1-118-365-11	CERAMIC CHIP	0.047uF	10%	50V
C7033	1-120-003-11	FILM CHIP	1uF	20%	35V
C7034	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
C7035	1-118-391-11	CERAMIC CHIP	0.01uF	10%	50V
C7036	1-118-952-11	CERAMIC CHIP	1uF	10%	50V
C7037	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
C7038	1-120-061-11	ELECT CHIP	470uF	20%	35V (See Note 2)
C7039	1-118-386-11	CERAMIC CHIP	0.1uF	10%	16V
* C7040	1-116-735-11	CERAMIC CHIP	1uF	10%	16V
C7041	1-118-365-11	CERAMIC CHIP	0.047uF	10%	50V
C7042	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
C7043	1-120-003-11	FILM CHIP	1uF	20%	35V
C7044	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
C7045	1-120-003-11	FILM CHIP	1uF	20%	35V
C7046	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
C7047	1-118-952-11	CERAMIC CHIP	1uF	10%	50V
* C7048	1-116-735-11	CERAMIC CHIP	1uF	10%	16V
C7049	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
C7050	1-118-365-11	CERAMIC CHIP	0.047uF	10%	50V
C7051	1-120-061-11	ELECT CHIP	470uF	20%	35V (See Note 2)
C7052	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
C7053	1-120-003-11	FILM CHIP	1uF	20%	35V
C7054	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
C7055	1-118-365-11	CERAMIC CHIP	0.047uF	10%	50V
* C7056	1-116-735-11	CERAMIC CHIP	1uF	10%	16V
C7057	1-116-732-11	CERAMIC CHIP	2.2uF	20%	6.3V
C7058	1-116-732-11	CERAMIC CHIP	2.2uF	20%	6.3V
C7059	1-116-716-11	CERAMIC CHIP	10uF	10%	16V
C7060	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
C7061	1-118-365-11	CERAMIC CHIP	0.047uF	10%	50V
C7063	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
C7064	1-118-391-11	CERAMIC CHIP	0.01uF	10%	50V
C7065	1-116-737-11	CERAMIC CHIP	1uF	20%	10V
C7066	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
C7067	1-118-952-11	CERAMIC CHIP	1uF	10%	50V
C7068	1-127-948-21	FILM CHIP	0.0047uF	5%	16V
C7069	1-120-061-11	ELECT CHIP	470uF	20%	35V (See Note 2)
C7070	1-118-386-11	CERAMIC CHIP	0.1uF	10%	16V
C7071	1-118-388-11	CERAMIC CHIP	0.047uF	10%	25V
* C7072	1-116-735-11	CERAMIC CHIP	1uF	10%	16V
* C7074	1-116-720-11	CERAMIC CHIP	10uF	20%	6.3V
C7075	1-118-388-11	CERAMIC CHIP	0.047uF	10%	25V
C7076	1-118-365-11	CERAMIC CHIP	0.047uF	10%	50V
* C7077	1-116-720-11	CERAMIC CHIP	10uF	20%	6.3V

Note 1: When the complete AMP board is replaced, refer to "NOTE OF REPLACING THE IC7004, IC7005, IC7007 AND IC7008 ON THE AMP BOARD AND THE COMPLETE AMP BOARD" on page 6.

Note 2: When C7017, C7020, C7038, C7051 and C7069 on the AMP board are replaced, refer to "BOND FIXATION OF ELECTRIC PARTS" on page 9.

	Ref. No.	Part No.	Description			Remark
	C7078	1-127-948-21	FILM CHIP	0.0047uF	5%	16V
	C7079	1-118-386-11	CERAMIC CHIP	0.1uF	10%	16V
	C7080	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
	C7082	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
	C7083	1-114-385-11	ELECT CHIP	470uF	20%	6.3V
	C7085	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
	C7086	1-118-952-11	CERAMIC CHIP	1uF	10%	50V
*	C7087	1-116-735-11	CERAMIC CHIP	1uF	10%	16V
	C7088	1-114-385-11	ELECT CHIP	470uF	20%	6.3V
	C7089	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
	C7090	1-118-365-11	CERAMIC CHIP	0.047uF	10%	50V
*	C7093	1-116-720-11	CERAMIC CHIP	10uF	20%	6.3V
	C7096	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
	C7097	1-120-061-11	ELECT CHIP	470uF	20%	35V (See Note)
	C7099	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
	C7100	1-118-391-11	CERAMIC CHIP	0.01uF	10%	50V
	C7101	1-118-365-11	CERAMIC CHIP	0.047uF	10%	50V
	C7102	1-116-737-11	CERAMIC CHIP	1uF	20%	10V (Except LA)
	C7102	1-118-391-11	CERAMIC CHIP	0.01uF	10%	50V (LA)
*	C7104	1-116-720-11	CERAMIC CHIP	10uF	20%	6.3V
*	C7106	1-116-735-11	CERAMIC CHIP	1uF	10%	16V
*	C7107	1-116-720-11	CERAMIC CHIP	10uF	20%	6.3V
	C7108	1-116-732-11	CERAMIC CHIP	2.2uF	20%	6.3V
	C7109	1-116-732-11	CERAMIC CHIP	2.2uF	20%	6.3V
	C7110	1-116-716-11	CERAMIC CHIP	10uF	10%	16V
	C7111	1-118-365-11	CERAMIC CHIP	0.047uF	10%	50V
	C7113	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
	C7114	1-118-391-11	CERAMIC CHIP	0.01uF	10%	50V
	C7115	1-118-952-11	CERAMIC CHIP	1uF	10%	50V
	C7116	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
	C7117	1-120-061-11	ELECT CHIP	470uF	20%	35V (See Note)
	C7118	1-118-386-11	CERAMIC CHIP	0.1uF	10%	16V
*	C7119	1-116-735-11	CERAMIC CHIP	1uF	10%	16V
	C7121	1-118-365-11	CERAMIC CHIP	0.047uF	10%	50V
	C7122	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
	C7124	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
	C7126	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
	C7127	1-118-952-11	CERAMIC CHIP	1uF	10%	50V
*	C7128	1-116-735-11	CERAMIC CHIP	1uF	10%	16V
	C7129	1-118-365-11	CERAMIC CHIP	0.047uF	10%	50V
	C7130	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
	C7132	1-120-061-11	ELECT CHIP	470uF	20%	35V (See Note)
	C7133	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
	C7135	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
	C7136	1-118-365-11	CERAMIC CHIP	0.047uF	10%	50V
*	C7137	1-116-735-11	CERAMIC CHIP	1uF	10%	16V
	C7138	1-116-732-11	CERAMIC CHIP	2.2uF	20%	6.3V
	C7139	1-116-716-11	CERAMIC CHIP	10uF	10%	16V
	C7140	1-118-365-11	CERAMIC CHIP	0.047uF	10%	50V
	C7142	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
	C7143	1-118-391-11	CERAMIC CHIP	0.01uF	10%	50V
	C7144	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
	C7145	1-118-952-11	CERAMIC CHIP	1uF	10%	50V
	C7146	1-120-061-11	ELECT CHIP	470uF	20%	35V (See Note)
	C7147	1-118-386-11	CERAMIC CHIP	0.1uF	10%	16V
*	C7148	1-116-735-11	CERAMIC CHIP	1uF	10%	16V

Note: When C7097, C7117, C7132, C7146 and C7166 on the AMP board are replaced, refer to "BOND FIXATION OF ELECTRIC PARTS" on page 9.

	Ref. No.	Part No.	Description			Remark
	C7149	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
	C7151	1-118-365-11	CERAMIC CHIP	0.047uF	10%	50V
	C7153	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
	C7154	1-118-952-11	CERAMIC CHIP	1uF	10%	50V
*	C7155	1-116-735-11	CERAMIC CHIP	1uF	10%	16V
	C7156	1-118-365-11	CERAMIC CHIP	0.047uF	10%	50V
	C7157	1-118-365-11	CERAMIC CHIP	0.047uF	10%	50V
*	C7158	1-116-735-11	CERAMIC CHIP	1uF	10%	16V
	C7164	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
	C7166	1-120-061-11	ELECT CHIP	470uF	20%	35V (See Note)
	C7168	1-114-214-81	CERAMIC CHIP	470PF	5%	50V
	C7169	1-116-732-11	CERAMIC CHIP	2.2uF	20%	6.3V
	C7170	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
	C7171	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
	C7176	1-120-003-11	FILM CHIP	1uF	20%	35V
	C7177	1-120-003-11	FILM CHIP	1uF	20%	35V
	C7178	1-120-003-11	FILM CHIP	1uF	20%	35V
	C7179	1-120-003-11	FILM CHIP	1uF	20%	35V
	C7180	1-120-003-11	FILM CHIP	1uF	20%	35V
	C7181	1-120-003-11	FILM CHIP	1uF	20%	35V
	C7182	1-120-003-11	FILM CHIP	1uF	20%	35V
	C7183	1-120-003-11	FILM CHIP	1uF	20%	35V
	C7184	1-120-003-11	FILM CHIP	1uF	20%	35V
	C7185	1-120-003-11	FILM CHIP	1uF	20%	35V
	C7186	1-120-003-11	FILM CHIP	1uF	20%	35V
	C7187	1-120-003-11	FILM CHIP	1uF	20%	35V
	C7188	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
	C7189	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V
	C7190	1-112-692-11	CERAMIC CHIP	1000PF	5%	50V

< CONNECTOR >

CN7001	1-816-296-21	PIN, CONNECTOR (PC BOARD) 9P
CN7002	1-764-250-21	PIN, CONNECTOR (PC BOARD) 4P
CN7003	1-779-993-11	PIN, CONNECTOR (PWB) 5P
CN7004	1-770-470-21	PIN, CONNECTOR (PC BOARD) 6P
CN7005	1-770-470-21	PIN, CONNECTOR (PC BOARD) 6P
CN7006	1-820-841-31	CONNECTOR, FFC/FPC (LIF) 28P
CN7007	1-779-992-11	PIN, CONNECTOR (PWB) 8P

< DIODE >

* D7001	6-503-578-01	DIODE RB520SM-30T2R
D7002	6-502-961-01	DIODE DA2J10100L
D7003	6-503-040-01	DIODE DZ2J300M0L

< FUSE >

⚠ F7001	1-576-415-31	FUSE (2 A/32 V)
⚠ F7002	1-523-144-31	FUSE (5 A/32 V)
⚠ F7003	1-523-144-31	FUSE (5 A/32 V)
⚠ F7004	1-523-144-31	FUSE (5 A/32 V)
⚠ F7005	1-523-144-31	FUSE (5 A/32 V)
⚠ F7006	1-523-144-31	FUSE (5 A/32 V)
⚠ F7007	1-523-144-31	FUSE (5 A/32 V)
⚠ F7008	1-523-144-31	FUSE (5 A/32 V)
⚠ F7009	1-523-144-31	FUSE (5 A/32 V)

< FERRITE BEAD >

FB7001	1-400-180-21	INDUCTOR, EMI FERRITE (1608)
FB7002	1-400-179-21	INDUCTOR, EMI FERRITE (1608)
FB7003	1-400-180-21	INDUCTOR, EMI FERRITE (1608)
FB7004	1-400-180-21	INDUCTOR, EMI FERRITE (1608)

AMP

Ref. No.	Part No.	Description			Remark
		< IC >			
IC7001	6-721-694-01	IC RT7272BGSP			
IC7002	6-716-993-01	IC MM1836A33NRE			
IC7003	6-721-874-01	IC RT7295CGJ6F			
IC7004	6-721-021-01	IC TAS5624ADDVR (See Note)			
IC7005	6-721-021-01	IC TAS5624ADDVR (See Note)			
IC7006	6-718-103-01	IC TAS5538DGGR			
IC7007	6-721-021-01	IC TAS5624ADDVR (See Note)			
IC7008	6-721-021-01	IC TAS5624ADDVR (See Note)			
		< JUMPER RESISTOR >			
JC7007	1-216-864-11	SHORT CHIP	0		
JC7016	1-216-864-11	SHORT CHIP	0		
		< COIL >			
L7001	1-457-850-11	CHOKE COIL	22uH		
* L7002	1-460-599-11	COIL, CHOKE	4.7uH		
L7003	1-400-789-21	INDUCTOR	2.2uH		
L7004	1-400-789-21	INDUCTOR	2.2uH		
L7005	1-469-555-21	INDUCTOR	10uH		
L7006	1-460-758-11	COIL, CHOKE	8.2uH		
L7007	1-460-758-11	COIL, CHOKE	8.2uH		
L7008	1-460-758-11	COIL, CHOKE	8.2uH		
L7009	1-460-758-11	COIL, CHOKE	8.2uH		
L7010	1-469-555-21	INDUCTOR	10uH		
L7011	1-460-758-11	COIL, CHOKE	8.2uH		
L7012	1-460-758-11	COIL, CHOKE	8.2uH		
L7013	1-469-555-21	INDUCTOR	10uH		
L7014	1-460-758-11	COIL, CHOKE	8.2uH		
L7015	1-469-555-21	INDUCTOR	10uH		
L7016	1-460-758-11	COIL, CHOKE	8.2uH		
L7017	1-469-555-21	INDUCTOR	10uH		
L7018	1-460-758-11	COIL, CHOKE	8.2uH		
L7019	1-460-758-11	COIL, CHOKE	8.2uH		
L7020	1-460-758-11	COIL, CHOKE	8.2uH		
L7021	1-460-758-11	COIL, CHOKE	8.2uH		
L7022	1-469-555-21	INDUCTOR	10uH		
L7023	1-460-758-11	COIL, CHOKE	8.2uH		
L7024	1-460-758-11	COIL, CHOKE	8.2uH		
L7025	1-460-758-11	COIL, CHOKE	8.2uH		
L7026	1-460-758-11	COIL, CHOKE	8.2uH		
		< TRANSISTOR >			
Q7001	6-552-892-01	TRANSISTOR	LSCR523UBFS8TL		
Q7002	8-729-013-22	TRANSISTOR	HN1A01FU		
Q7003	6-552-446-01	TRANSISTOR	DRC5144T0L		
Q7004	6-553-470-01	FET	QM2401C1		
Q7005	8-729-013-22	TRANSISTOR	HN1A01FU		
Q7006	6-552-936-01	TRANSISTOR	LTC014EUBFS8TL		
Q7007	8-729-013-22	TRANSISTOR	HN1A01FU		
Q7008	8-729-013-22	TRANSISTOR	HN1A01FU		
Q7009	8-729-013-22	TRANSISTOR	HN1A01FU		
Q7010	8-729-013-22	TRANSISTOR	HN1A01FU		
Q7011	8-729-013-22	TRANSISTOR	HN1A01FU		
Q7012	8-729-013-22	TRANSISTOR	HN1A01FU		
		< RESISTOR >			
R7001	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7003	1-218-961-11	METAL CHIP	4.7K	5%	1/16W
R7004	1-218-973-11	METAL CHIP	47K	5%	1/16W
R7005	1-218-967-11	METAL CHIP	15K	5%	1/16W
R7006	1-218-969-11	METAL CHIP	22K	5%	1/16W
R7007	1-208-713-11	METAL CHIP	18K	0.5%	1/16W
R7008	1-218-959-11	METAL CHIP	3.3K	5%	1/16W
R7009	1-218-973-11	METAL CHIP	47K	5%	1/16W
R7010	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7011	1-218-973-11	METAL CHIP	47K	5%	1/16W
R7012	1-208-713-11	METAL CHIP	18K	0.5%	1/16W
R7013	1-208-699-11	METAL CHIP	4.7K	0.5%	1/16W
R7016	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7017	1-218-965-11	METAL CHIP	10K	5%	1/16W
R7018	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7019	1-208-922-11	METAL CHIP	30K	0.5%	1/16W
R7020	1-218-937-11	METAL CHIP	47	5%	1/16W
R7021	1-216-001-00	METAL CHIP	10	5%	1/10W
R7022	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7023	1-218-937-11	METAL CHIP	47	5%	1/16W
R7024	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7025	1-216-001-00	METAL CHIP	10	5%	1/10W
R7026	1-218-937-11	METAL CHIP	47	5%	1/16W
R7027	1-216-001-00	METAL CHIP	10	5%	1/10W
R7028	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7029	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7030	1-218-937-11	METAL CHIP	47	5%	1/16W
R7031	1-218-990-81	SHORT CHIP	0		
R7032	1-216-001-00	METAL CHIP	10	5%	1/10W
R7033	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7034	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7036	1-208-922-11	METAL CHIP	30K	0.5%	1/16W
R7037	1-218-937-11	METAL CHIP	47	5%	1/16W
R7038	1-216-001-00	METAL CHIP	10	5%	1/10W
R7039	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7040	1-218-937-11	METAL CHIP	47	5%	1/16W
R7041	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7042	1-218-949-11	METAL CHIP	470	5%	1/16W
R7043	1-218-949-11	METAL CHIP	470	5%	1/16W
R7044	1-216-001-00	METAL CHIP	10	5%	1/10W
R7045	1-218-967-11	METAL CHIP	15K	5%	1/16W
R7046	1-218-953-11	METAL CHIP	1K	5%	1/16W
R7047	1-218-937-11	METAL CHIP	47	5%	1/16W
R7048	1-208-713-11	METAL CHIP	18K	0.5%	1/16W
R7049	1-216-001-00	METAL CHIP	10	5%	1/10W
R7050	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7051	1-218-937-11	METAL CHIP	47	5%	1/16W
R7052	1-218-941-81	METAL CHIP	100	5%	1/16W
R7053	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7054	1-218-941-81	METAL CHIP	100	5%	1/16W
R7055	1-218-990-81	SHORT CHIP	0		
R7056	1-218-941-81	METAL CHIP	100	5%	1/16W
R7057	1-218-953-11	METAL CHIP	1K	5%	1/16W
R7058	1-218-965-11	METAL CHIP	10K	5%	1/16W
R7059	1-216-001-00	METAL CHIP	10	5%	1/10W
R7060	1-218-941-81	METAL CHIP	100	5%	1/16W
R7061	1-218-941-81	METAL CHIP	100	5%	1/16W
R7062	1-218-937-11	METAL CHIP	47	5%	1/16W
R7063	1-218-941-81	METAL CHIP	100	5%	1/16W
R7064	1-218-965-11	METAL CHIP	10K	5%	1/16W
R7065	1-218-941-81	METAL CHIP	100	5%	1/16W
R7066	1-218-965-11	METAL CHIP	10K	5%	1/16W

Note: When IC7004, IC7005, IC7007 and IC7008 on the AMP board are replaced, refer to "NOTE OF REPLACING THE IC7004, IC7005, IC7007 AND IC7008 ON THE AMP BOARD AND THE COMPLETE AMP BOARD" on page 6.

Ref. No.	Part No.	Description			Remark
R7067	1-218-937-11	METAL CHIP	47	5%	1/16W
R7068	1-218-937-11	METAL CHIP	47	5%	1/16W
R7069	1-218-937-11	METAL CHIP	47	5%	1/16W
R7070	1-218-937-11	METAL CHIP	47	5%	1/16W
R7071	1-218-937-11	METAL CHIP	47	5%	1/16W
R7072	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7073	1-218-937-11	METAL CHIP	47	5%	1/16W
R7074	1-218-937-11	METAL CHIP	47	5%	1/16W
R7075	1-218-953-11	METAL CHIP	1K	5%	1/16W
R7076	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7077	1-208-922-11	METAL CHIP	30K	0.5%	1/16W
R7078	1-218-937-11	METAL CHIP	47	5%	1/16W
R7079	1-216-001-00	METAL CHIP	10	5%	1/10W
R7080	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7081	1-218-937-11	METAL CHIP	47	5%	1/16W
R7082	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7083	1-216-001-00	METAL CHIP	10	5%	1/10W
R7084	1-218-937-11	METAL CHIP	47	5%	1/16W
R7085	1-216-001-00	METAL CHIP	10	5%	1/10W
R7086	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7087	1-218-937-11	METAL CHIP	47	5%	1/16W
R7088	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7089	1-218-990-81	SHORT CHIP	0		
R7090	1-216-001-00	METAL CHIP	10	5%	1/10W
R7091	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7092	1-208-922-11	METAL CHIP	30K	0.5%	1/16W
R7093	1-218-937-11	METAL CHIP	47	5%	1/16W
R7094	1-216-001-00	METAL CHIP	10	5%	1/10W
R7095	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7096	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7097	1-218-937-11	METAL CHIP	47	5%	1/16W
R7098	1-216-001-00	METAL CHIP	10	5%	1/10W
R7099	1-218-990-81	SHORT CHIP	0		
R7100	1-216-001-00	METAL CHIP	10	5%	1/10W
R7101	1-216-001-00	METAL CHIP	10	5%	1/10W
R7102	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7103	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7104	1-218-977-11	METAL CHIP	100K	5%	1/16W
R7105	1-218-937-11	METAL CHIP	47	5%	1/16W
R7106	1-218-937-11	METAL CHIP	47	5%	1/16W
R7108	1-216-826-11	METAL CHIP	2.7K	5%	1/10W
R7109	1-216-826-11	METAL CHIP	2.7K	5%	1/10W

****

A-2054-813-A DISPLAY BOARD, COMPLETE

****

< CAPACITOR >

*	C1301	1-116-720-11	CERAMIC CHIP	10uF	20%	6.3V
	C1302	1-118-412-11	CERAMIC CHIP	220PF	10%	50V
	C1303	1-118-412-11	CERAMIC CHIP	220PF	10%	50V
	C1304	1-118-412-11	CERAMIC CHIP	220PF	10%	50V
	C1305	1-118-412-11	CERAMIC CHIP	220PF	10%	50V
	C1306	1-118-347-11	CERAMIC CHIP	0.1uF	10%	25V
	C1307	1-118-046-11	CERAMIC CHIP	4.7uF	10%	25V
	C1308	1-118-046-11	CERAMIC CHIP	4.7uF	10%	25V
	C1309	1-118-046-11	CERAMIC CHIP	4.7uF	10%	25V
	C1310	1-118-046-11	CERAMIC CHIP	4.7uF	10%	25V
*	C1311	1-116-720-11	CERAMIC CHIP	10uF	20%	6.3V
	C1316	1-118-952-11	CERAMIC CHIP	1uF	10%	50V

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
CN1303	1-580-057-11	PIN, CONNECTOR (SMD) 4P			
CN1304	1-816-649-51	FFC/CONNECTOR, FPC (LIF) 22P			
CN1305	1-816-654-61	FFC/CONNECTOR, FPC (LIF) 6P			
CN1306	1-816-645-61	FFC/CONNECTOR, FPC (LIF) 14P			
		< LED >			
D1302	6-503-196-01	LED CL-194S-HB8SP-SD-T (Bluetooth INDICATOR)			
		< IC >			
IC1301	6-600-681-01	IC RS-770N (R)			
		< TRANSISTOR >			
Q1302	6-552-941-01	TRANSISTOR	LTC023JUBFS8TL		
		< RESISTOR >			
R1302	1-218-937-11	METAL CHIP	47	5%	1/16W
R1303	1-218-937-11	METAL CHIP	47	5%	1/16W
R1305	1-218-937-11	METAL CHIP	47	5%	1/16W
R1306	1-218-937-11	METAL CHIP	47	5%	1/16W
R1307	1-220-216-81	METAL CHIP	620K	5%	1/16W
R1309	1-218-942-11	METAL CHIP	120	5%	1/16W
R1310	1-218-937-11	METAL CHIP	47	5%	1/16W
R1311	1-218-937-11	METAL CHIP	47	5%	1/16W
R1312	1-218-990-81	SHORT CHIP	0		
R1314	1-218-941-81	METAL CHIP	100	5%	1/16W
R1315	1-218-941-81	METAL CHIP	100	5%	1/16W
R1316	1-218-941-81	METAL CHIP	100	5%	1/16W
R1317	1-218-941-81	METAL CHIP	100	5%	1/16W
R1318	1-218-941-81	METAL CHIP	100	5%	1/16W
R1319	1-218-990-81	SHORT CHIP	0		

****

IO BOARD

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< CAPACITOR >

	C1701	1-118-354-11	CERAMIC CHIP	1000PF	5%	100V
	C1702	1-164-882-11	CERAMIC CHIP	220PF	5%	16V
	C1703	1-164-882-11	CERAMIC CHIP	220PF	5%	16V
	C1704	1-118-347-11	CERAMIC CHIP	0.1uF	10%	25V
*	C1705	1-116-738-11	CERAMIC CHIP	1uF	10%	6.3V
*	C1706	1-116-738-11	CERAMIC CHIP	1uF	10%	6.3V
*	C1707	1-116-720-11	CERAMIC CHIP	10uF	20%	6.3V

< JACK/CONNECTOR >

CN1701	1-843-541-11	OPTICAL RECEIVER JACK (TV DIGITAL IN)	
CN1702	1-817-201-51	CONNECTOR, FFC/FPC 9P	
CN1703	1-573-290-21	PIN, CONNECTOR (1.5 mm) (SMD) 4P	
		< JACK >	
* J1701	1-842-576-11	MINI JACK (RA) (ANALOG IN)	
		< TRANSISTOR >	
Q001	6-553-292-01	TRANSISTOR	2SCR502UBTL
		< RESISTOR >	
R1702	1-218-957-11	METAL CHIP	2.2K 5% 1/16W

Ref. No.	Part No.	Description			Remark
R1703	1-218-957-11	METAL CHIP	2.2K	5%	1/16W
R1704	1-218-941-81	METAL CHIP	100	5%	1/16W
R1707	1-218-967-11	METAL CHIP	15K	5%	1/16W
R1708	1-218-967-11	METAL CHIP	15K	5%	1/16W
R1709	1-218-941-81	METAL CHIP	100	5%	1/16W
R1710	1-218-965-11	METAL CHIP	10K	5%	1/16W
R1711	1-218-935-11	METAL CHIP	33	5%	1/16W
R1716	1-218-929-11	METAL CHIP	10	5%	1/16W
R1719	1-218-929-11	METAL CHIP	10	5%	1/16W
R1720	1-218-968-11	METAL CHIP	18K	5%	1/16W
R1721	1-218-968-11	METAL CHIP	18K	5%	1/16W
R1722	1-218-935-11	METAL CHIP	33	5%	1/16W

****

A-2058-288-A KEY BOARD, COMPLETE
****

When the KEY board is defective, replace the complete mounted board.

****

🔒	A-2071-285-A	MB1406 BOARD, COMPLETE (SV) (US, CND)	(See Note 1)
🔒	A-2071-287-A	MB1406 BOARD, COMPLETE (SV) (AEP)	(See Note 1)
🔒	A-2071-288-A	MB1406 BOARD, COMPLETE (SV) (UK)	(See Note 1)
🔒	A-2071-289-A	MB1406 BOARD, COMPLETE (SV) (RU)	(See Note 1)
🔒	A-2071-290-A	MB1406 BOARD, COMPLETE (SV) (SP)	(See Note 1)
🔒	A-2071-291-A	MB1406 BOARD, COMPLETE (SV) (AUS)	(See Note 1)
🔒	A-2071-293-A	MB1406 BOARD, COMPLETE (SV) (CH)	(See Note 1)
🔒	A-2071-294-A	MB1406 BOARD, COMPLETE (SV) (TW)	(See Note 1)
🔒	A-2071-298-A	MB1406 BOARD, COMPLETE (SV) (LA)	(See Note 1)

****

When the MB1406 board is defective, replace the complete mounted board.

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A-2054-811-A POWER BOARD, COMPLETE (AEP, RU, UK, AUS, CH, SP)
A-2059-212-A POWER BOARD, COMPLETE (US, CND, TW)
A-2075-345-A POWER BOARD, COMPLETE (LA)
****

7-685-646-71 SCREW +BVTP 3X8 TYPE2 IT-3

< CAPACITOR >

⚠ C902	1-112-871-51	CERAMIC	0.0022uF	20%	250V	(Except US, CND, TW) (See Note 2)
⚠ C903	1-112-871-51	CERAMIC	0.0022uF	20%	250V	(Except US, CND, TW) (See Note 2)
⚠ C905	1-114-594-21	FILM	0.22uF	10%	310V	(See Note 2)
⚠ C907	1-116-397-21	FILM	0.33uF	10%	310V	(Except US, CND, TW) (See Note 2)
⚠ C914	1-118-996-11	ELECT	390uF	20%	200V	(US, CND, TW) (See Note 2)
⚠ C915	1-118-715-11	ELECT (BLOCK)	100uF	20 %	450V	(AEP, RU, UK, AUS, CH, SP)
⚠ C930	1-118-361-11	CERAMIC CHIP	0.1uF	10%	50V	
⚠ C931	1-164-217-91	CERAMIC CHIP	150PF	5%	50V	(US, CND, TW)
⚠ C931	1-164-218-91	CERAMIC CHIP	180PF	5%	50V	(Except US, CND, TW)
⚠ C932	1-162-968-91	CERAMIC CHIP	0.0047uF	10%	50V	
⚠ C933	1-116-717-11	CERAMIC CHIP	10uF	20%	10V	
⚠ C934	1-116-729-11	CERAMIC CHIP	2.2uF	20%	10V	
⚠ C935	1-117-824-11	FILM	2200PF	3%	1.5KV	(US, CND, TW)
⚠ C936	1-118-361-11	CERAMIC CHIP	0.1uF	10%	50V	
⚠ C937	1-116-874-11	CERAMIC CHIP	10uF	10%	35V	
⚠ C938	1-112-841-11	FILM	820PF	3%	1.5KV	(Except US, CND, TW)
⚠ C939	1-116-034-92	FILM	0.0033uF	5%	400V	(See Note 2)
⚠ C940	1-112-869-51	CERAMIC	470PF	10%	250V	(US, CND, TW)
⚠ C941	1-112-235-21	ELECT	330uF	20%	25V	
C951	1-116-739-11	CERAMIC CHIP	0.47uF	10%	50V	
C952	1-118-291-11	CERAMIC CHIP	100PF	5%	50V	
C967	1-114-994-11	ELECT	2200uF	20%	35V	(See Note 2)
C968	1-118-361-11	CERAMIC CHIP	0.1uF	10%	50V	
C970	1-112-244-11	ELECT	2200uF	20%	25V	(See Note 2)
C971	1-118-345-11	CERAMIC CHIP	0.01uF	10%	25V	
C976	1-112-245-21	ELECT	47uF	20%	35V	
C977	1-112-245-21	ELECT	47uF	20%	35V	
C980	1-112-245-21	ELECT	47uF	20%	35V	
⚠ C988	1-114-721-21	FILM	0.1uF	10%	310V	(US, CND, TW) (See Note 2)
⚠ C989	1-112-870-51	CERAMIC	0.001uF	20%	250V	(US, CND, TW) (See Note 2)
⚠ C990	1-112-870-51	CERAMIC	0.001uF	20%	250V	(US, CND, TW) (See Note 2)
C992	1-118-373-11	CERAMIC CHIP	0.01uF	10%	50V	
⚠ C993	1-116-772-11	ELECT (BLOCK)	180uF	20%	450V (LA)	
C994	1-112-241-11	ELECT	1000uF	20%	25V	(See Note 2)

< CONNECTOR >

⚠* CN901 1-793-660-11 PIN, CONNECTOR (PC BOARD) 3P

< DIODE >

⚠ D901	8-719-077-77	DIODE	D3SB60F3 (See Note 2)
⚠ D930	6-503-021-01	DIODE	DZ2J10000L
⚠ D931	8-719-083-71	DIODE	UDZSUSTE-1730B
⚠ D932	6-502-975-01	DIODE	DZ2J15000L
⚠ D934	6-502-961-01	DIODE	DA2J10100L
⚠ D936	6-501-119-01	DIODE	RR264M-400
⚠ D937	6-501-119-01	DIODE	RR264M-400
⚠ D938	6-503-731-01	DIODE	SARS10
⚠ D939	6-503-037-01	DIODE	DZ2J24000L
⚠ D941	8-719-083-71	DIODE	UDZSUSTE-1730B
⚠ D942	6-503-775-01	DIODE	CRH02 (T5R, SONY, XM)
D951	6-502-961-01	DIODE	DA2J10100L
D952	6-503-037-01	DIODE	DZ2J24000L
D965	6-504-084-01	DIODE	LQA20T200C
D967	6-503-978-01	DIODE	RB068L100TE25
⚠ D972	6-502-264-01	DIODE	KDZTR18B
D973	8-719-083-71	DIODE	UDZSUSTE-1730B
⚠ D974	6-503-036-01	DIODE	DZ2J220M0L (US, CND, TW)
⚠ D974	6-503-037-01	DIODE	DZ2J24000L (Except US, CND, TW)
⚠ D975	6-502-961-01	DIODE	DA2J10100L

Note 1: When the complete MB1406 board is replaced, refer to "NOTE OF REPLACING THE COMPLETE MB1406 BOARD OR CARD WLAN/BT COMBO" on page 6.

Note 2: When C902, C903, C905, C907, C914, C939, C967, C970, C988, C989, C990, C994 and D901 on the POWER board are replaced, refer to "BOND FIXATION OF ELECTRIC PARTS" on page 9.

Ref. No.	Part No.	Description	Remark
		< FUSE >	
⚠ F901	1-523-067-51	FUSE (5 A/250 V)	
⚠ F931	1-523-085-11	FUSE (2.5 A/250 V)	
		< IC >	
⚠ IC930	6-720-460-01	IC STR-Y6735 (US, CND, TW)	
⚠ IC930	6-721-976-01	IC STR-Y6766B (Except US, CND, TW)	
IC931	6-716-865-01	IC MM1431FNRE	
		< COIL >	
L966	1-456-606-11	COIL, CHOKE 10uH	
L967	1-481-175-21	INDUCTOR 4.7uH	
		< LINE FILTER >	
⚠ LF901	1-445-944-11	TRANSFORMER, LINE FILTER	(Except US, CND, TW)
⚠ LF901	1-460-693-11	LINE FILTER TRANSFORMER (US, CND, TW)	
		< PHOTO COUPLER >	
⚠ PH930	6-600-883-01	PHOTO COUPLER EL816S1 (B) (TA) (DTE-S)	
		< TRANSISTOR >	
⚠ Q930	8-729-056-46	TRANSISTOR 2SC5053T100Q	
⚠ Q931	6-552-949-01	TRANSISTOR LTC044EUBFS8TL	
Q951	6-553-292-01	TRANSISTOR 2SCR502UBTL	
		< RESISTOR >	
⚠ R901	1-240-938-51	METAL 1.5M 5% 0.5W F	
⚠ R914	1-248-270-15	FUSIBLE 0.33 10% 1W F	
⚠ R935	1-216-825-91	METAL CHIP 2.2K 5% 1/10W	
⚠ R936	1-216-841-91	METAL CHIP 47K 5% 1/10W	
⚠ R937	1-216-829-91	METAL CHIP 4.7K 5% 1/10W	
⚠ R938	1-216-838-91	METAL CHIP 27K 5% 1/10W	
⚠ R944	1-215-927-51	METAL OXIDE 47K 5% 3W F	(US, CND, TW) (See Note)
⚠ R944	1-215-929-51	METAL OXIDE 100K 5% 3W F	(Except US, CND, TW) (See Note)
⚠ R945	1-216-809-91	METAL CHIP 100 5% 1/10W	
⚠ R947	1-216-793-91	METAL CHIP 4.7 5% 1/10W	
R951	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R952	1-216-841-11	METAL CHIP 47K 5% 1/10W	
R953	1-216-809-11	METAL CHIP 100 5% 1/10W	
R955	1-216-809-11	METAL CHIP 100 5% 1/10W	
⚠ R956	1-257-620-11	RES-CHIP 0.11 1% 2W	(US, CND, TW)
⚠ R956	1-257-631-11	RES-CHIP 0.18 1% 2W	(Except US, CND, TW)
R965	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R971	1-216-849-11	METAL CHIP 220K 5% 1/10W	
R976	1-218-855-11	METAL CHIP 2.2K 0.5% 1/10W	
R977	1-218-887-11	METAL CHIP 47K 0.5% 1/10W	
R978	1-218-863-11	METAL CHIP 4.7K 0.5% 1/10W	
R987	1-216-821-11	METAL CHIP 1K 5% 1/10W	
⚠ R989	1-216-793-91	METAL CHIP 4.7 5% 1/10W	
⚠ R990	1-216-793-91	METAL CHIP 4.7 5% 1/10W	
⚠ R991	1-216-864-91	SHORT CHIP 0	
⚠ R992	1-216-821-91	METAL CHIP 1K 5% 1/10W	(US, CND, TW)
⚠ R992	1-216-833-91	METAL CHIP 10K 5% 1/10W	(Except US, CND, TW)
⚠ R997	1-216-864-91	SHORT CHIP 0 (US, CND, TW)	
		< TRANSFORMER >	
⚠ T901	1-697-327-11	CONVERTER TRANSFORMER (01C313)	(US, CND, TW)
⚠ T901	1-697-427-11	CONVERTER TRANSFORMER (01C421)	(Except US, CND, TW)
		< THERMISTOR >	
⚠ TH901	1-811-315-31	POWER THERMISTOR (See Note)	
		< VARISTOR >	
⚠ VDR901	1-811-165-31	VARISTOR (TVR10471-D) (See Note)	
	A-2054-816-A	REPEATER_REP1 BOARD, COMPLETE	
		When the REPEATER_REP1 board is defective, replace the complete mounted board.	
	A-2058-292-A	REPEATER_REP2 BOARD, COMPLETE	
		When the REPEATER_REP2 board is defective, replace the complete mounted board.	
		USB BOARD	
		< CAPACITOR >	
C1501	1-118-412-11	CERAMIC CHIP 220PF 10% 50V	
C1502	1-100-354-21	ELECT CHIP 220uF 20% 6.3V	
C1503	1-118-412-11	CERAMIC CHIP 220PF 10% 50V	
		< CONNECTOR >	
CN1501	1-779-993-11	PIN, CONNECTOR (PWB) 5P	
* CN1502	1-843-199-11	USB CONNECTOR (Ψ)	
		< DIODE >	
D1501	6-500-400-01	DIODE BAV99-215	
D1502	6-500-400-01	DIODE BAV99-215	
		< FERRITE BEAD >	
FB1501	1-481-467-11	BEAD, FERRITE (CHIP)	
FB1502	1-481-467-11	BEAD, FERRITE (CHIP)	
		< RESISTOR >	
R1502	1-218-990-81	SHORT CHIP 0	
R1504	1-216-864-11	SHORT CHIP 0	
		WS BOARD	
		< CAPACITOR >	
* C1402	1-116-738-11	CERAMIC CHIP 1uF 10% 6.3V	
* C1403	1-116-714-11	CERAMIC CHIP 22uF 20% 6.3V	
* C1404	1-116-714-11	CERAMIC CHIP 22uF 20% 6.3V	
* C1406	1-116-738-11	CERAMIC CHIP 1uF 10% 6.3V	
* C1408	1-118-035-11	CERAMIC CHIP 0.1uF 10% 25V	

Note: When R944, TH901 and VDR901 on the POWER board are replaced, refer to "BOND FIXATION OF ELECTRIC PARTS" on page 9.

	Ref. No.	Part No.	Description			Remark
*	C1409	1-118-035-11	CERAMIC CHIP	0.1uF	10%	25V
	C1412	1-164-866-11	CERAMIC CHIP	47PF	5%	50V
	C1414	1-100-354-21	ELECT CHIP	220uF	20%	6.3V
	C1415	1-100-354-21	ELECT CHIP	220uF	20%	6.3V
			< CONNECTOR >			
*	CN1401	1-793-152-21	CONNECTOR 11P			
	CN1402	1-843-711-11	CONNECTOR, FFC/FPC (LIF) 26P			
			< COIL >			
	L1401	1-400-789-21	INDUCTOR	2.2uH		
			< RESISTOR >			
	R1402	1-218-990-81	SHORT CHIP	0		
	R1403	1-218-990-81	SHORT CHIP	0		
	R1409	1-218-990-81	SHORT CHIP	0		
	R1411	1-218-965-11	METAL CHIP	10K	5%	1/16W
	R1413	1-218-933-11	METAL CHIP	22	5%	1/16W
	R1414	1-218-965-11	METAL CHIP	10K	5%	1/16W
	R1417	1-218-990-81	SHORT CHIP	0		
	R1418	1-218-990-81	SHORT CHIP	0		
	R1420	1-218-990-81	SHORT CHIP	0		
	R1421	1-218-933-11	METAL CHIP	22	5%	1/16W
	R1422	1-218-933-11	METAL CHIP	22	5%	1/16W
	R1423	1-218-933-11	METAL CHIP	22	5%	1/16W
	R1424	1-218-933-11	METAL CHIP	22	5%	1/16W
	R1425	1-218-933-11	METAL CHIP	22	5%	1/16W
	R1426	1-218-933-11	METAL CHIP	22	5%	1/16W
	R1432	1-218-990-81	SHORT CHIP	0		

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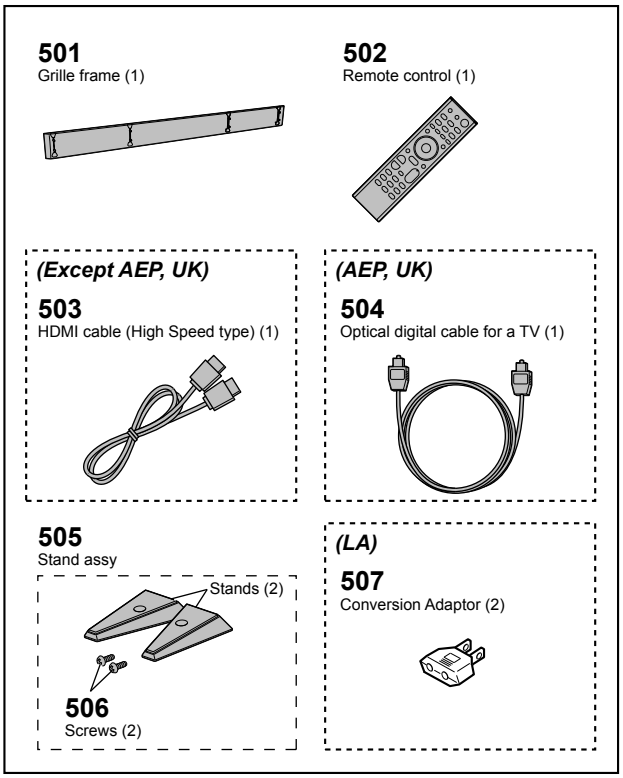
Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
⚠ AC1	1-834-966-42	POWER-SUPPLY CORD (AEP, RU, LA, SP)	
⚠ AC1	1-835-068-21	CORD, POWER (AUS)	
⚠ AC1	1-837-308-12	CORD, POWER-SUPPLY (US, CND)	
⚠ AC1	1-837-345-11	CORD, POWER-SUPPLY (TW)	
⚠ AC1	1-837-822-21	CORD, POWER-SUPPLY (CH)	
⚠ AC1	1-839-999-21	POWER-SUPPLY CORD (UK)	
FFC1	9-833-606-99	WIRE KIT (FFC/SA-ST9) (28P) (See Note 2)	
FFC2	9-833-606-99	WIRE KIT (FFC/SA-ST9) (9P) (See Note 2)	
FFC3	9-833-606-99	WIRE KIT (FFC/SA-ST9) (26P) (See Note 2)	
FFC4	9-833-606-99	WIRE KIT (FFC/SA-ST9) (22P) (See Note 2)	
FFC5	9-833-606-99	WIRE KIT (FFC/SA-ST9) (6P) (See Note 2)	
NFC1	8-989-602-00	RC-S730 (NFC module)	
OLED1	1-812-047-11	OLED DISPLAY	
RF1	1-492-700-61	RF MODULATOR (WS001)	
SP1	1-859-073-11	LOUDSPEAKER (18 mm, WITH BRIDGE)	(Tweeter (Front L-ch))
SP2	1-859-076-21	LOUDSPEAKER (6.5 cm)-076-21	(Woofer (Front L-ch))
SP3	1-859-073-11	LOUDSPEAKER (18 mm, WITH BRIDGE)	(Tweeter (Front R-ch))
SP4	1-859-076-21	LOUDSPEAKER (6.5 cm)-076-21	(Woofer (Front R-ch))
SP5	1-859-076-11	LOUDSPEAKER (6.5 cm)-076-11 (Surround (R-ch))	
SP6	1-859-076-11	LOUDSPEAKER (6.5 cm)-076-11 (Surround (L-ch))	
SP7	1-859-076-11	LOUDSPEAKER (6.5 cm)-076-11	(Surround back (L-ch))
SP8	1-859-076-11	LOUDSPEAKER (6.5 cm)-076-11	(Surround back (R-ch))
SP9	1-859-076-21	LOUDSPEAKER (6.5 cm)-076-21 (Woofer (Center))	
SP10	1-859-073-21	LOUDSPEAKER (18 mm, WITH BRIDGE)	(Tweeter (Center))
SPC1	1-848-696-11	CONNECTION CABLE WITH SPEAKER (for L-ch)	
SPC2	1-848-696-21	CONNECTION CABLE WITH SPEAKER (for R-ch)	
SPC3	1-848-698-11	CONNECTION CABLE WITH SPEAKER	(for Surround L/R)
SPC4	1-848-697-11	CONNECTION CABLE WITH SPEAKER	(for Center, Surround back L/R)
WIFI1	1-458-765-21	CARD WLAN/BT COMBO (See Note 1)	
WR1	9-833-606-82	WIRE KIT (USB)	
WR2	9-833-606-84	WIRE KIT (WS)	
WR3	9-833-606-83	WIRE KIT (WIFI/BT)	

****

Note 1: When the card WLAN/BT combo is replaced, refer to "NOTE OF REPLACING THE COMPLETE MB1406 BOARD OR CARD WLAN/BT COMBO" on page 6.

Note 2: As for WIRE KIT (FFC/SA-ST9), all flat flexible cables (Ref. No. FFC1, FFC2, FFC3, FFC4, FFC5) will be 1 set.

Ref. No.	Part No.	Description	Remark
		ACCESSORIES	
		**********	
	4-558-496-12	STARTUP GUIDE (ENGLISH, FRENCH) (US, CND)	
	4-558-496-22	STARTUP GUIDE (ENGLISH) (UK)	
	4-558-496-32	STARTUP GUIDE (FRENCH, SPANISH, DUTCH)	(AEP)
	4-558-496-42	STARTUP GUIDE (GERMAN, ITALIAN, POLISH)	(AEP)
	4-558-496-51	STARTUP GUIDE (ENGLISH, TRADITIONAL CHINESE) (SP, TW)	
	4-558-496-61	STARTUP GUIDE (RUSSIAN, UKRAINIAN) (RU)	
	4-558-496-81	STARTUP GUIDE (SPANISH) (LA)	
	4-558-497-15	MANUAL, INSTRUCTION (ENGLISH, FRENCH)	(US, CND)
	4-558-497-24	MANUAL, INSTRUCTION (ENGLISH) (UK)	
	4-558-497-34	MANUAL, INSTRUCTION (FRENCH, SPANISH, DUTCH) (AEP)	
	4-558-497-44	MANUAL, INSTRUCTION (GERMAN, ITALIAN, POLISH) (AEP)	
	4-558-497-53	MANUAL, INSTRUCTION (ENGLISH, TRADITIONAL CHINESE) (SP, TW)	
	4-558-497-63	MANUAL, INSTRUCTION (RUSSIAN, UKRAINIAN)	(RU)
	4-558-497-82	MANUAL, INSTRUCTION (SPANISH) (LA)	
	4-558-498-31	STARTUP GUIDE (SIMPLIFIED CHINESE) (CH)	
	4-558-498-42	STARTUP GUIDE (ENGLISH) (AUS)	
	4-558-499-34	MANUAL, INSTRUCTION (SIMPLIFIED CHINESE)	(CH)
	4-558-499-44	MANUAL, INSTRUCTION (ENGLISH) (AUS)	
501	X-2590-684-1	GRILLE ASSY (Grille frame)	
502	1-492-935-11	REMOTE COMMANDER (RMT-AH111U) (Remote control)	(US, CND)
502	1-492-937-11	REMOTE COMMANDER (RMT-AH111E) (Remote control)	(Except US, CND)
503	1-835-855-31	CORD WITH CONNECTOR (HDMI CABLE) (HDMI cable (High Speed type))	(Except AEP, UK)
504	1-837-197-31	CORD, LIGHT PLUG (Optical digital cable for a TV)	(AEP, UK)
505	A-2066-536-A	STAND ASSY (Including Screws) (2 pieces, 1 set)	
506	7-682-561-09	SCREW +B 4X8 (1 piece)	
⚠ 507	1-569-008-33	ADAPTOR, CONVERSION 2P (1 piece) (LA)	



MEMO

HT-ST9
SA-ST9

SONY

SERVICE MANUAL

Ver. 1.1 2015.06

US Model
Canadian Model
AEP Model
UK Model
Australian Model
Chinese Model
Singapore Model
Taiwan Model
Latin American Model

SUPPLEMENT-1

File this supplement with the service manual.

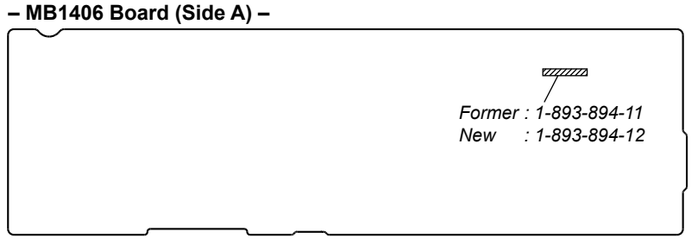
Subject: Change of MB1406 board (Suffix-12)

The MB1406 board has been changed in the midway of production.
New/former discrimination and printed wiring board of the MB1406 board of New type are described in this service manual SUPPLEMENT-1.
Printed wiring board that has been described on this service manual SUPPLEMENT-1 is for reference.
Schematic diagram have not described.
Refer to original service manual for information of Former type.

1. NEW/FORMER DISCRIMINATION

Distinguish by the part number of the engraved.

– MB1406 Board (Side A) –



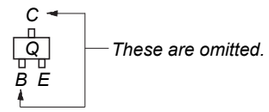
2. DIAGRAMS

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

For Printed Wiring Boards.
Note:
- o——: Parts extracted from the component side.
- ——: Parts extracted from the conductor side.
- ▬: Pattern from the side which enables seeing.
  (The other layers' patterns are not indicated.)

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

- Indication of transistor.



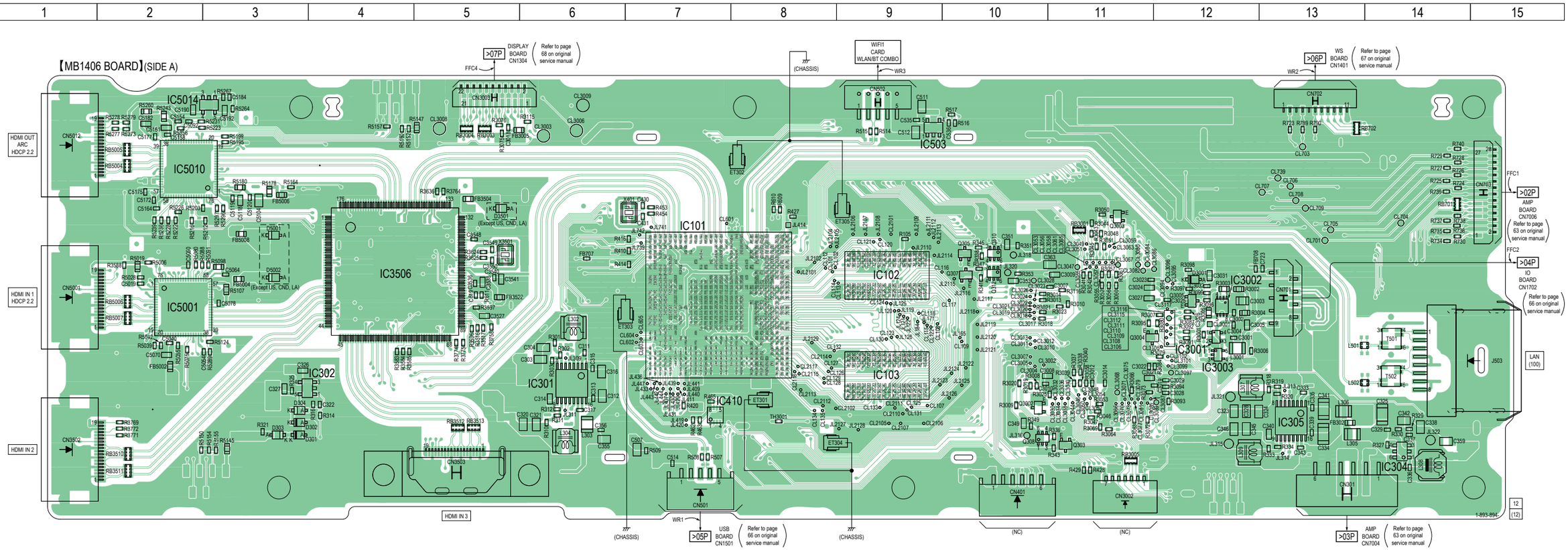
Note1: When the MB1406 board is defective, replace the complete mounted board.

Note2: When the complete MB1406 board is replaced, refer to "NOTE OF REPLACING THE COMPLETE MB1406 BOARD OR CARD WLAN/BT COMBO" on page 6 on original service manual.

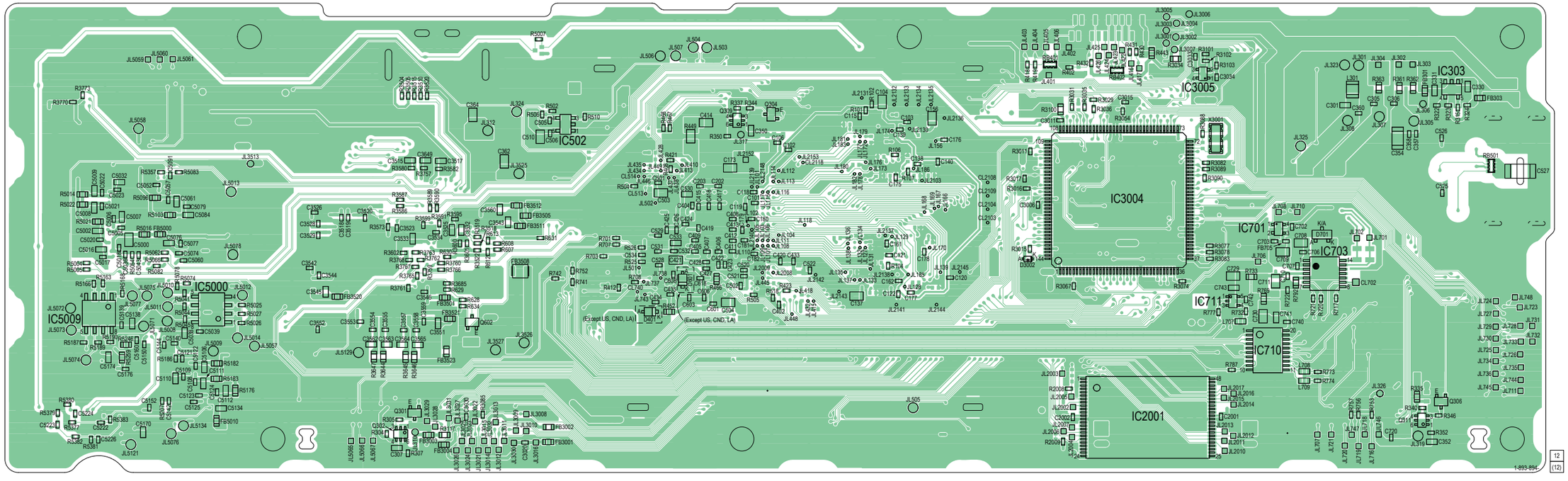
9-896-148-81

2-1. PRINTED WIRING BOARD - MB1406 Board - • : Uses unleaded solder.

【MB1406 BOARD】(SIDE A)



【MB1406 BOARD】(SIDE B)



MEMO

REVISION HISTORY

Ver.	Date	Description of Revision
1.0	2015.02	New
1.1	2015.06	Addition of Chinese, Russian, Singapore, Taiwan and Latin American models Addition of BOND FIXATION OF ELECTRIC PARTS Change of Part for COVER (REAR) (Ref. No. 8) Change of Part No. for PANEL (SIDE R) ASSY (for R-ch) (Ref. No. 55) Change of Part No. for STARTUP GUIDE and INSTRUCTION MANUAL Change of MB1406 board (Suffix-12) (SUPPLEMENT-1) (SMR-15003)

How to search for a contact point of signal lines or the like in DIAGRAMS SECTION

If a contact point of a BLOCK DIAGRAM, PRINTED WIRING BOARD or SCHEMATIC DIAGRAM is shown in a different page, use the PDF file search function to find one.

e.g.) If a contact point is shown as >001Z, follow the procedure below.

Procedure:

1. Press the [F] key while pressing the [Ctrl] key.
2. Input ">001Z" in the search box and press the [Enter] key.
3. The relevant part (page), where the contact point is shown, appears.

Note: If you still see the original page, press the [Enter] key again.