SA-WCT290/WCT291

SERVICE MANUAL

Ver. 1.0 2017.02

US Model
Canadian Model
E Model
Australian Model
SA-WCT290
AEP Model
UK Model
SA-WCT290/WCT291

Photo: SA-WCT290 (Black)

Photo: SA-WCT290 (White) / SA-WCT291

- SA-WCT290/WCT291 is the active subwoofer in HT-CT290/CT291.
- All the units included in the HT-CT290/CT291 (SA-CT290/CT291, SA-WCT290/WCT291, remote control) are required to confirm the operation of SA-CT290/CT291. Check in advance that you have all the units.

- For the TEST MODE for this unit, refer to the service manual of HT-CT290/CT291.

SPECIFICATIONS

Subwoofer (SA-WCT290/ SA-WCT291)

CH models:
POWER OUTPUT
50 W (at 4 ohms, 100 Hz)

Other models:
POWER OUTPUT (reference)
100 W (per channel at 4 ohms, 100 Hz)
Speaker system
Subwoofer system, Bass reflex
Speaker
130 mm ($5^1/_8$ in) cone type
Power requirements
US, CND models:
120 V AC, 60 Hz
LA9 models:
110 V – 240 V AC, 50/60 Hz
EA models:
127 V – 240 V AC, 50/60 Hz
Other models:
220 V – 240 V AC, 50/60 Hz
Power consumption
On: 15 W
Standby: 0.5 W or less
Dimensions (w/h/d) (approx.)
170 mm × 342 mm × 362 mm ($6^3/_4$ in × $13^1/_2$ in × $14^3/_8$ in) (vertical installation)
342 mm × 172 mm × 362 mm ($13^1/_2$ in × $6^7/_8$ in × $14^3/_8$ in) (horizontal installation)
Mass (approx.)
6.3 kg (13 Ib 15 oz)

Wireless transmitter/ receiver section

Frequency band
2.4 GHz (2.4000 GHz – 2.4835 GHz)
Modulation method
FHSS (Freq Hopping Spread Spectrum)

Design and specifications are subject to change without notice.

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ACTIVE SUBWOOFER

9-890-686-01
2017B80-1

Sony Corporation
Published by Sony EMCS (Malaysia) PG Tec

SONY®

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.

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)

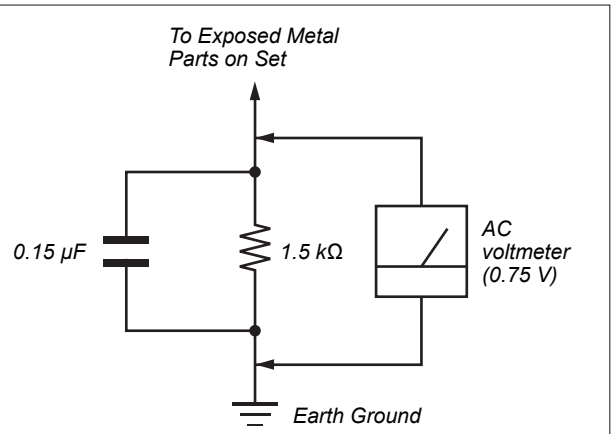


Fig. A. Using an AC voltmeter to check AC leakage.

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.

TABLE OF CONTENTS

SECTION 1
SERVICING NOTES

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.

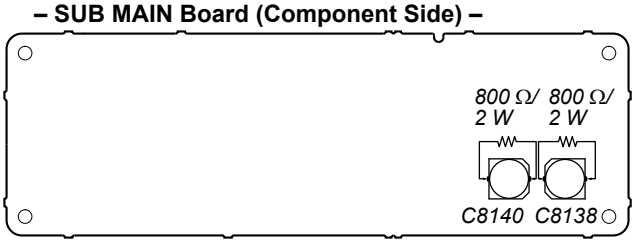
CAPACITOR ELECTRICAL DISCHARGE PROCESSING

When checking the board, for the electric shock prevention, connect the resistors to both ends of capacitors to discharge the capacitor as shown in the figure below.

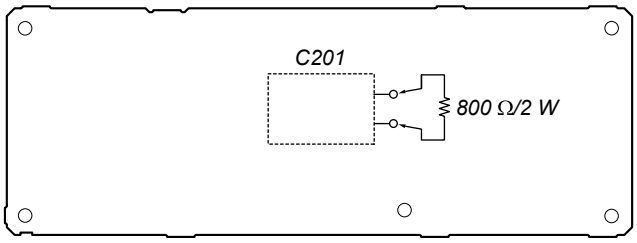
Note 1: When the connector that connects the SWITCHING REGULATOR 3L411L board (US, CND) or SWITCHING REGULATOR 3L411W board (Except US, CND, E12) or SWITCHING REGULATOR 3L411W-1 board (E12) to the SUB MAIN board is disconnected before discharging, completely finish discharging both boards, and then reconnect the connector. If discharging is not complete, sparking may occur when connecting the connector and cause a blown fuse.

Note 2: Be sure to discharge using a resistor of 800 Ω or higher.
(Do not discharge with a 0 Ω resistor)
Discharging at a point where excessive electric current flows through a fuse may cause the fuse to blow.

– SUB MAIN Board (Component Side) –



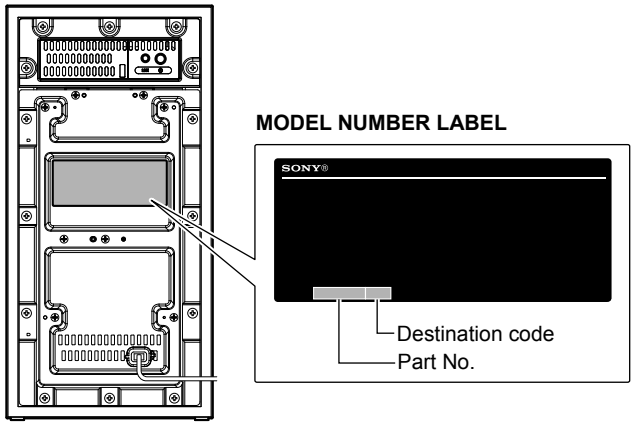
– SWITCHING REGULATOR 3L411L Board (US, CND) (Conductor Side) –
– SWITCHING REGULATOR 3L411W Board (Except US, CND, E12) (Conductor Side) –
– SWITCHING REGULATOR 3L411W-1 Board (E12) (Conductor Side) –



MODEL IDENTIFICATION

Distinguish by Part No. and destination code on the rear side of the subwoofer.

– Rear view –



Model	Part No.
SA-WCT290 (Black): US, CND	4-688-018-0□
SA-WCT290 (Black): AEP	4-688-018-1□
SA-WCT290 (Black): UK	4-688-018-2□
SA-WCT290 (Black): RU	4-688-018-3□
SA-WCT290 (Black): E12	4-688-018-4□
SA-WCT290 (Black): E3	4-688-018-5□
SA-WCT290 (Black): EA	4-688-018-6□
SA-WCT290 (Black): SP	4-688-018-7□
SA-WCT290 (Black): AUS	4-688-018-9□
SA-WCT290 (Black): TH	4-688-019-0□
SA-WCT290 (Black): LA9	4-688-019-2□
SA-WCT291 : AEP	4-688-020-0□
SA-WCT291 : UK	4-688-020-1□
SA-WCT291 : RU	4-688-020-2□
SA-WCT290 (White): EA	4-693-270-2□
SA-WCT290 (White): SP	4-693-270-3□
SA-WCT290 (White): TH	4-693-270-5□

- Abbreviation
  AUS : Australian model
  CND : Canadian model
  E3 : 240 V AC area in E model
  E12 : 220-240 V AC area in E model
  EA : Saudi Arabia model
  LA9 : Latin-American model
  RU : Russian Model
  SP : Singapore model
  TH : Thai model

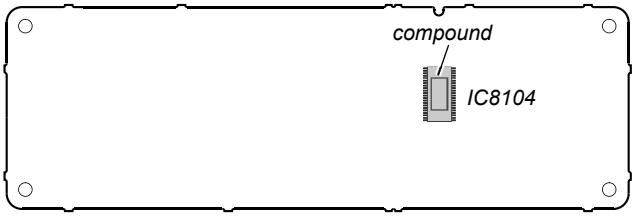
ADVANCE PREPARATION WHEN CONFIRMING OPERATION

All the units included in the HT-CT290/HT-CT291 (SA-CT290/CT291, SA-WCT290/WCT291, remote control) are required to confirm the operation of SA-CT290/CT291. Check in advance that you have all the units.

NOTE OF REPLACING THE IC8104 ON THE SUB MAIN BOARD AND THE COMPLETE SUB MAIN BOARD

When IC8104 on the SUB MAIN board and the complete SUB MAIN board are replaced, it is necessary to spread the compound between the SUB MAIN board and the heat sink.
Spread the compound referring to the figure below.

– SUB MAIN Board (Component Side) –



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

When the parts below is replaced, the wireless connection (LINK) of the Bar speaker and Subwoofer will be disconnected.
Before returning repaired products to the customer, follow the procedure below to LINK the Bar speaker and Subwoofer.
Also, if only the Bar speaker or Subwoofer is brought in for repair and the parts below are replaced, be sure to inform the customer when returning the repaired products that the customer must LINK the Bar speaker and Subwoofer.
(Indicate that the LINK procedure is described in the operating instructions)

Parts in which the LINK will be disconnected due to replacement:

- Complete SUB MAIN board
- BLUETOOTH MODULE (WB116A Y) (Ver C)

Activating wireless transmission between specific units (Secure Link)

You can specify the wireless connection to link the Bar Speaker to the subwoofer using the Secure Link function. This function can help prevent interference if you use multiple wireless products.

1 **Press LINK on the rear of the subwoofer.**
The power indicator on the subwoofer flashes in orange.

2 **Hold down CLEAR AUDIO+ for 5 seconds.**
The USB and TV indicators flash two times, then the MOVIE and MUSIC indicators flash alternately.
When the Bar Speaker is linked to the subwoofer, the indicators stop flashing and the power indicator on the subwoofer lights up in orange.
If it failed, the indicators light up for 5 seconds. Try again the above operation.

To deactivate this function, hold down CLEAR AUDIO+ for 5 seconds.
The USB indicator flashes twice.

THE ON/STANDBY INDICATOR FLASHES IN RED

→ If the power indicator flashes in red, press ⏻ on the subwoofer to turn off the power and check whether the ventilation opening of the subwoofer is blocked or not.

BOND FIXATION OF ELECTRIC PARTS

When SWITCHING REGULATOR 3L411L board (US, CND) or SWITCHING REGULATOR 3L411W board (Except US, CND, E12) or SWITCHING REGULATOR 3L411W-1 board (E12) is replaced, it is necessary to fix parts to the boards by using a specified bond without fail.

• Object boards

1. SWITCHING REGULATOR 3L411L board (US, CND)
2. SWITCHING REGULATOR 3L411W board (Except US, CND, E12)
3. SWITCHING REGULATOR 3L411W-1 board (E12)

• Use bond

Part No.	Description
7-600-020-70	ADHESIVE (SC608Z2) 180ML

• Parts position

1. SWITCHING REGULATOR 3L411L board (US, CND) (page 4)
2. SWITCHING REGULATOR 3L411W board (Except US, CND, E12) (page 5)
3. SWITCHING REGULATOR 3L411W-1 board (E12) (page 5)

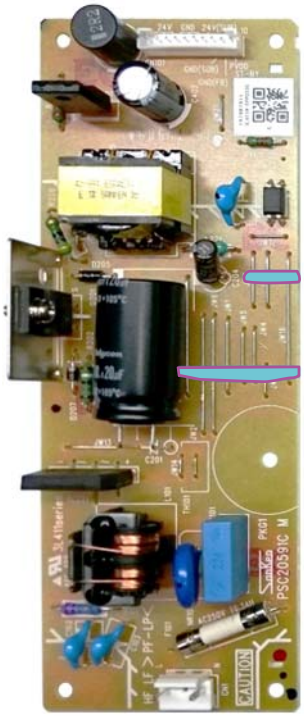
1. SWITCHING REGULATOR 3L411L board (US, CND)

– SWITCHING REGULATOR 3L411L board (US, CND) (Component Side) –

*The portion which applies bond:

2. **SWITCHING REGULATOR 3L411W board (Except US, CND, E12)**

– SWITCHING REGULATOR 3L411W board (Except US, CND, E12) (Component Side) –



*The portion which applies bond:

3. **SWITCHING REGULATOR 3L411W-1 board (E12)**

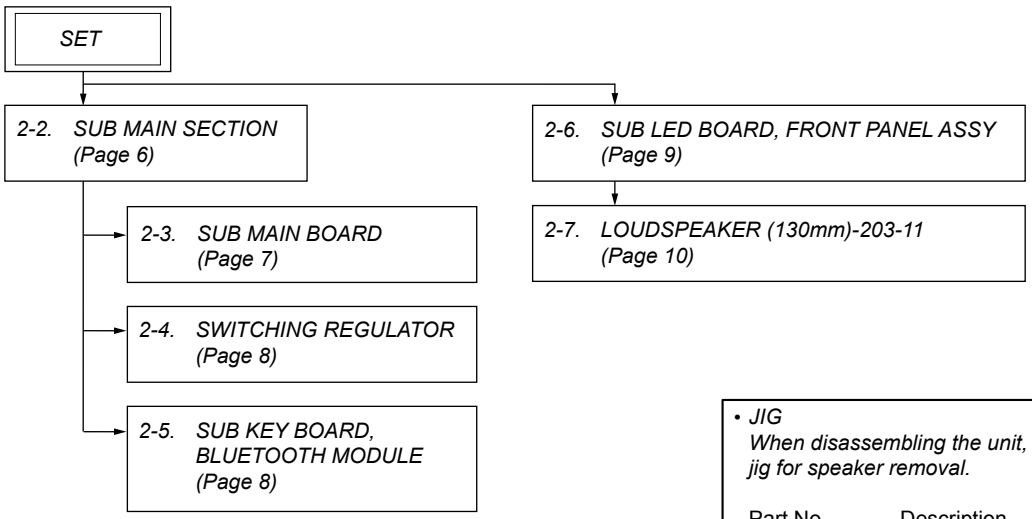
– SWITCHING REGULATOR 3L411W-1 board (E12) (Component Side) –

*The portion which applies bond:

SECTION 2
DISASSEMBLY

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

2-1. DISASSEMBLY FLOW

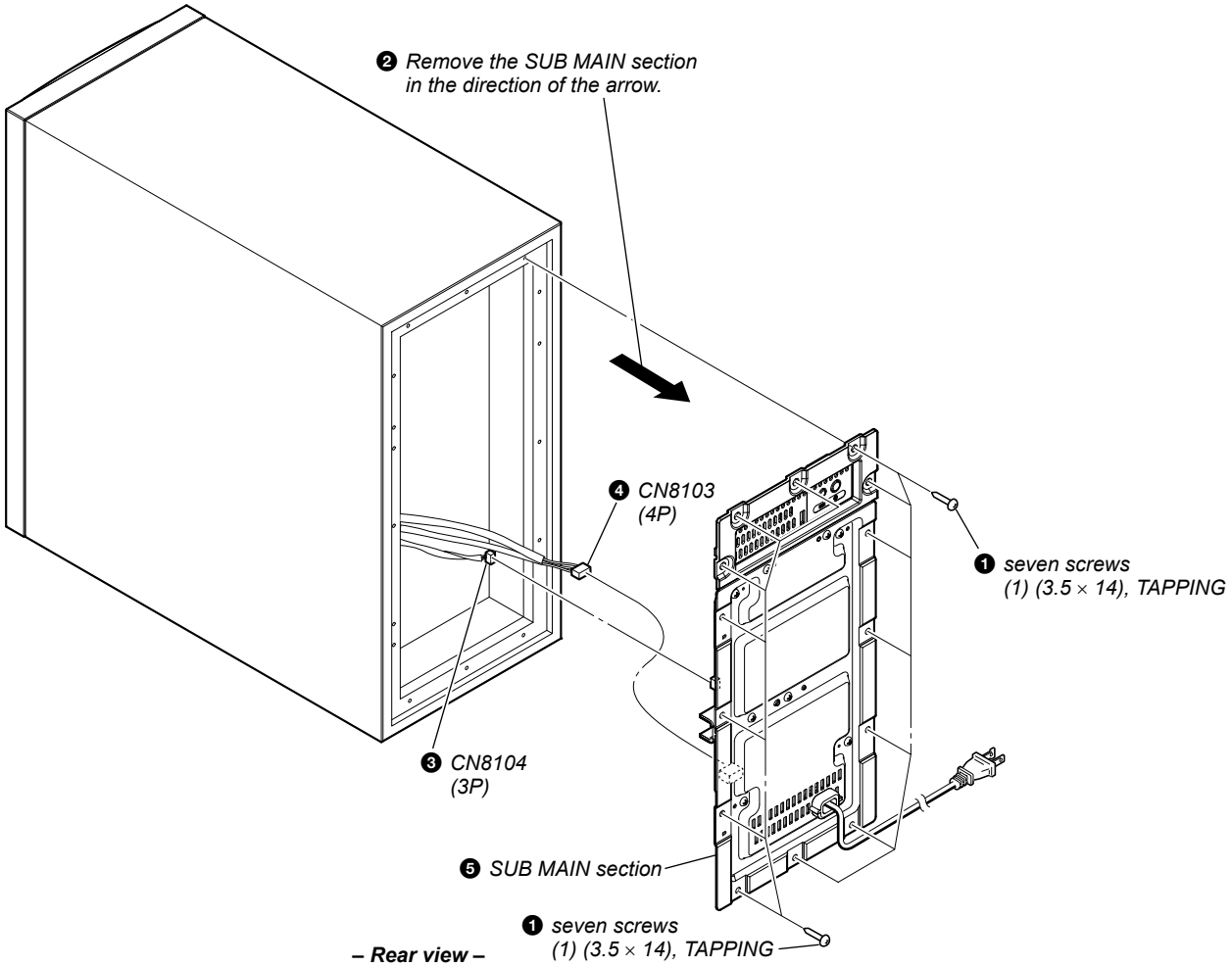


• *JIG*
When disassembling the unit, use the following jig for speaker removal.

Part No.	Description
J-2501-238-A	JIG FOR SPEAKER REMOVAL

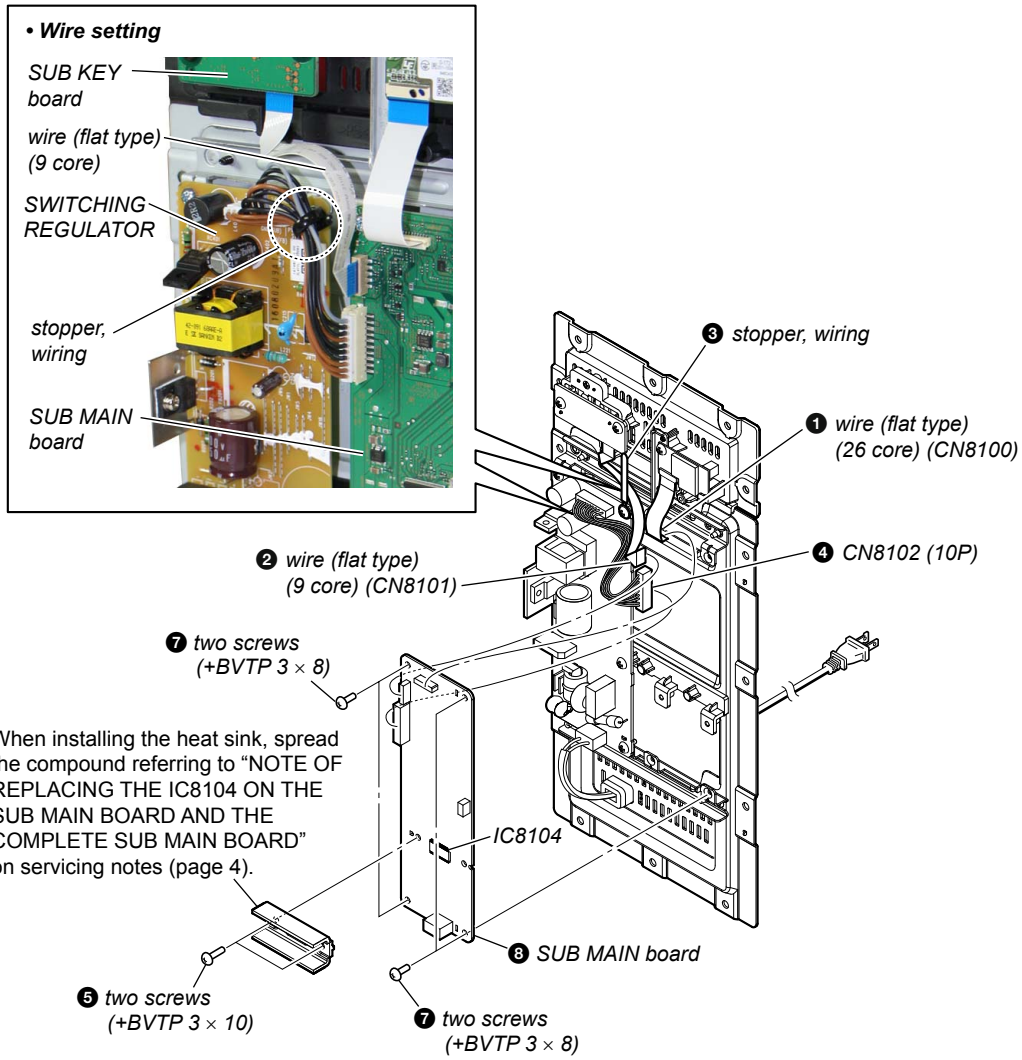
Note: Follow the disassembly procedure in the numerical order given.

2-2. SUB MAIN SECTION

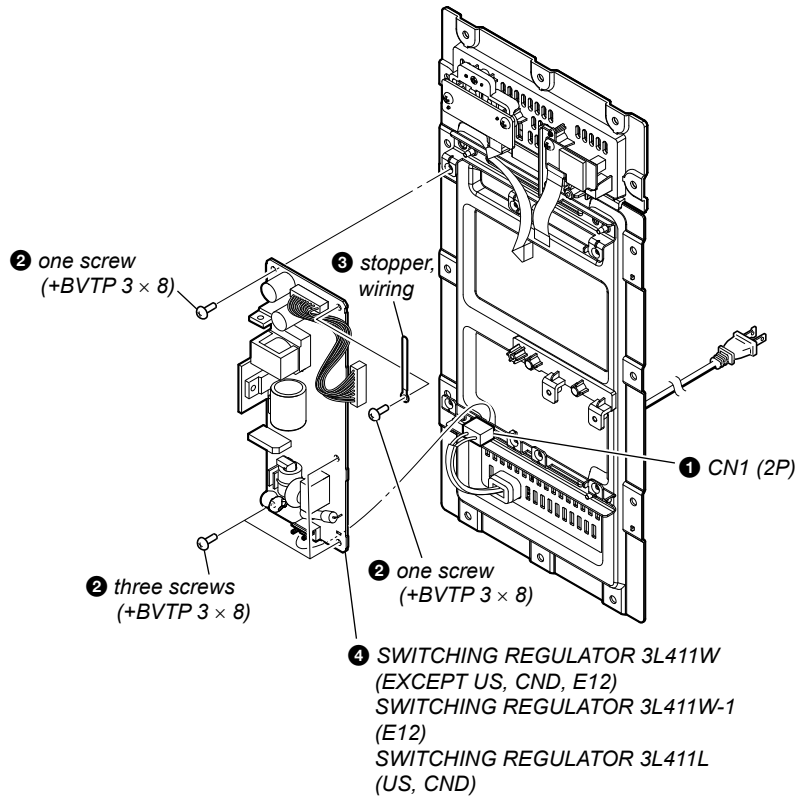


2-3. SUB MAIN BOARD

Note 1: When the complete SUB MAIN board is replaced, refer to “NOTES ON THE WIRELESS CONNECTION (LINK) AFTER REPAIRS ARE COMPLETE” on page 4.



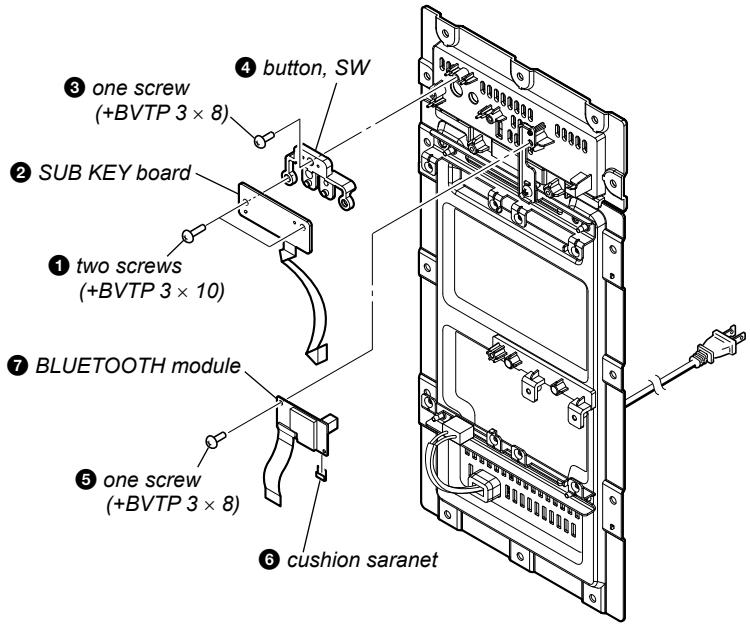
2-4. SWITCHING REGULATOR



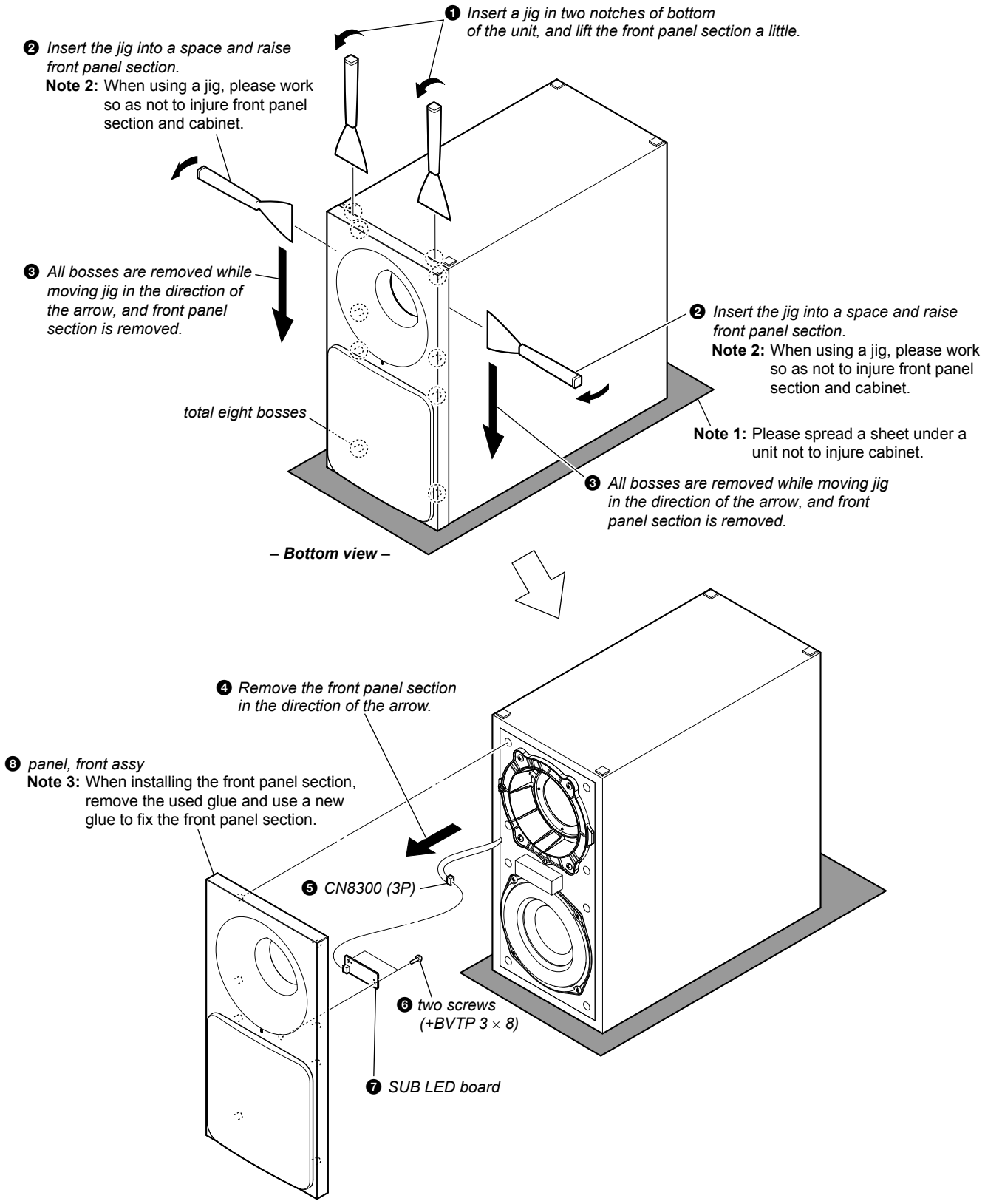
- Abbreviation
  CND : Canadian model
  E12 : 220-240 V AC area in E model

2-5. SUB KEY BOARD, BLUETOOTH MODULE

Note: When the BLUETOOTH module is replaced, refer to "NOTES ON THE WIRELESS CONNECTION (LINK) AFTER REPAIRS ARE COMPLETE" on page 4.



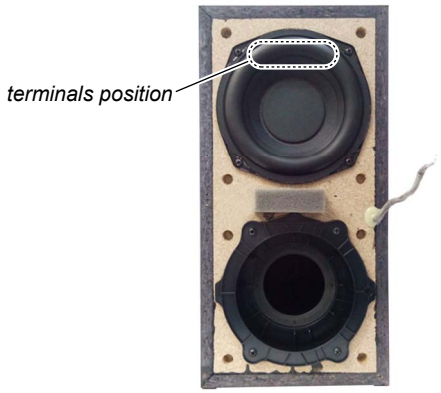
2-6. SUB LED BOARD, FRONT PANEL ASSY



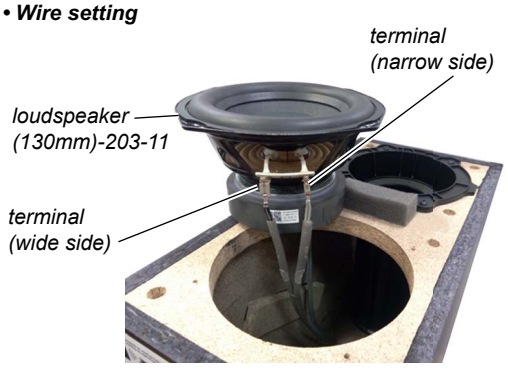
2-7. LOUDSPEAKER (130mm)-203-11

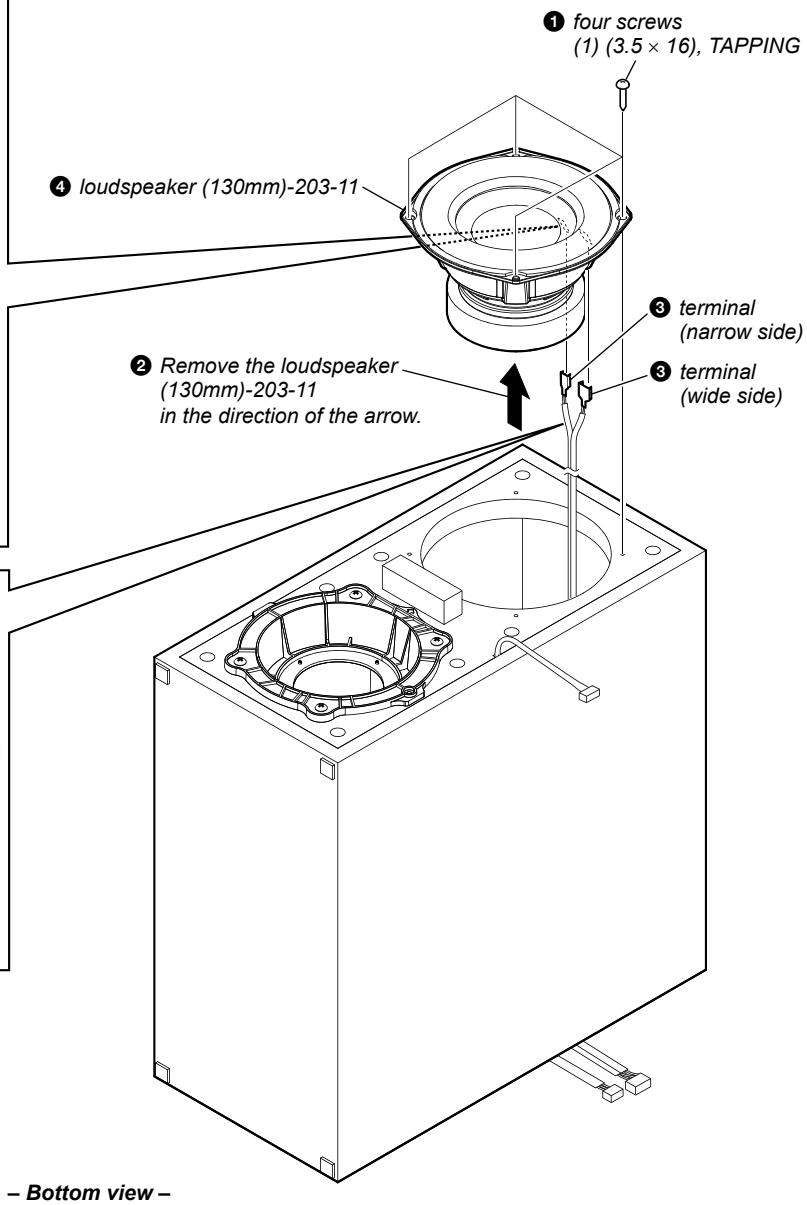
• ***Installation direction for the loudspeaker (130mm)-203-11***

Note: When installing the loudspeaker (130mm)-203-11, make sure that there is a position of the speaker terminal to the position shown in the figure below.



• ***Wire setting***

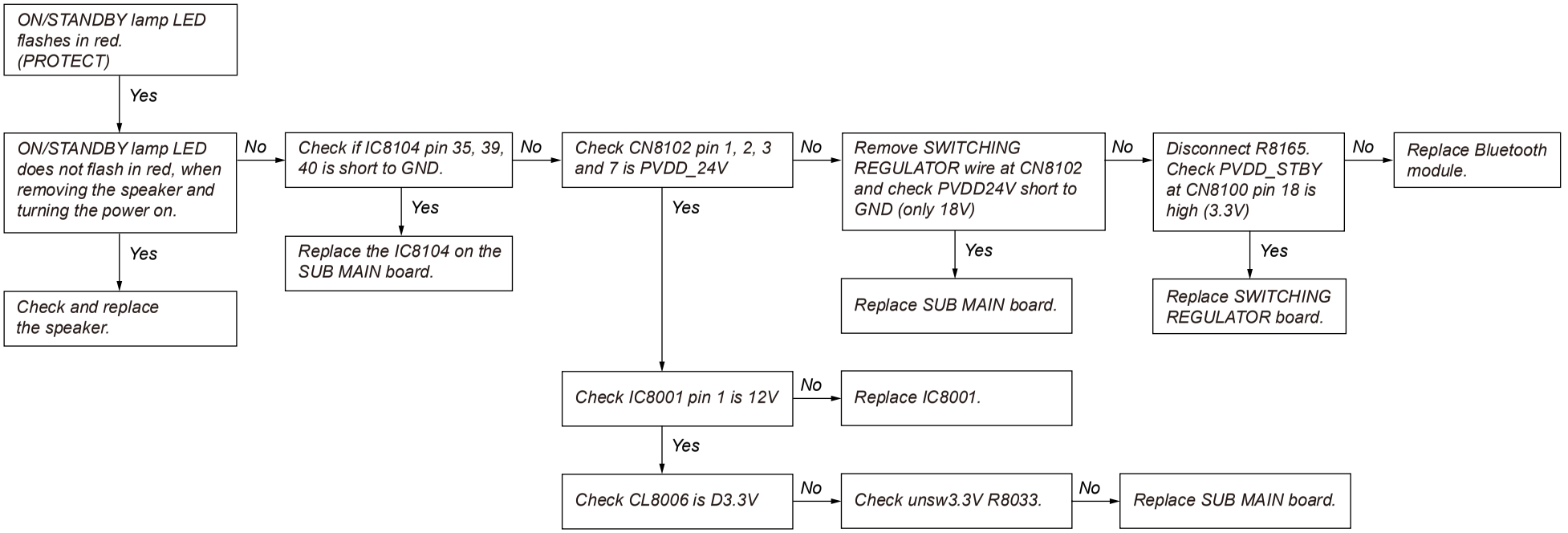




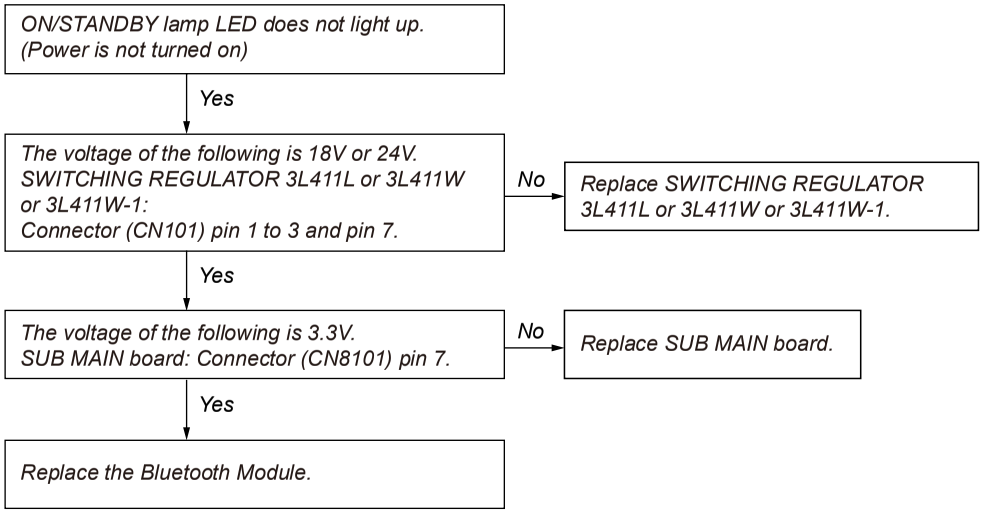
– Bottom view –

1. ON/STANDBY lamp LED flashes in red (PROTECT)

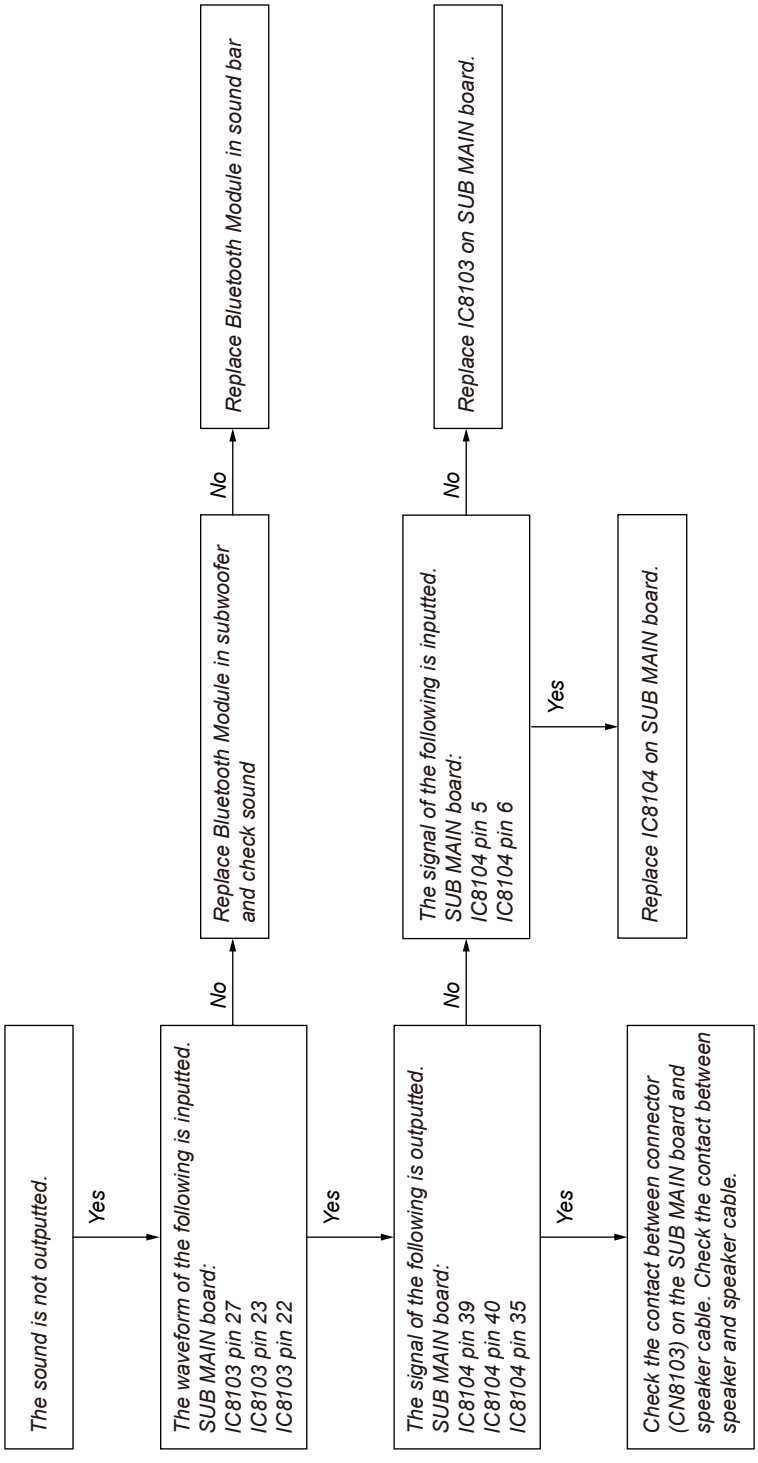
Note: Do not set volume MIN



2. ON/STANDBY lamp LED does not light up after AC in (Power is not turned on)

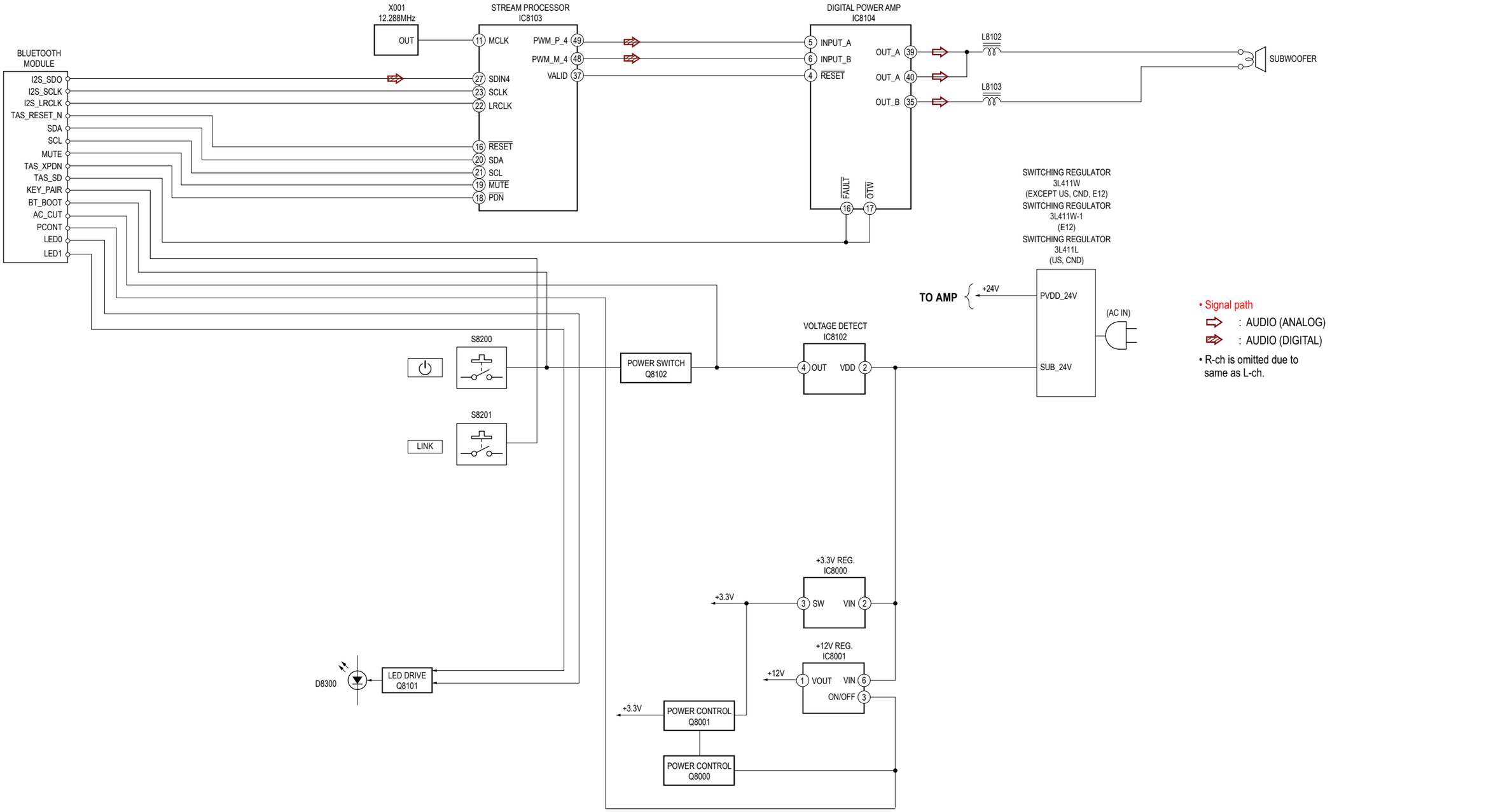


3. The sound is not outputted



SECTION 4
DIAGRAMS

4-1. BLOCK DIAGRAM - AMP/PANEL/POWER SUPPLY Section -



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

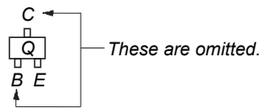
For Printed Wiring Boards.

Note:

- o——: 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.

- Indication of transistor.



These are omitted.

- Abbreviation
  AUS : Australian model
  CND : Canadian model
  E3 : 240 V AC area in E model
  E12 : 220-240 V AC area in E model
  EA : Saudi Arabia model
  LA9 : Latin-American model
  RU : Russian Model
  SP : Singapore model
  TH : Thai model

Note: When the complete SUB MAIN board is replaced, refer to "NOTE OF REPLACING THE IC8104 ON THE SUB MAIN BOARD AND THE COMPLETE SUB MAIN BOARD" and "NOTES ON THE WIRELESS CONNECTION (LINK) AFTER REPAIRS ARE COMPLETE" on page 4.

For Schematic Diagrams.

Note:

- All capacitors are in µF unless otherwise noted. (p: pF) 50 V 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.

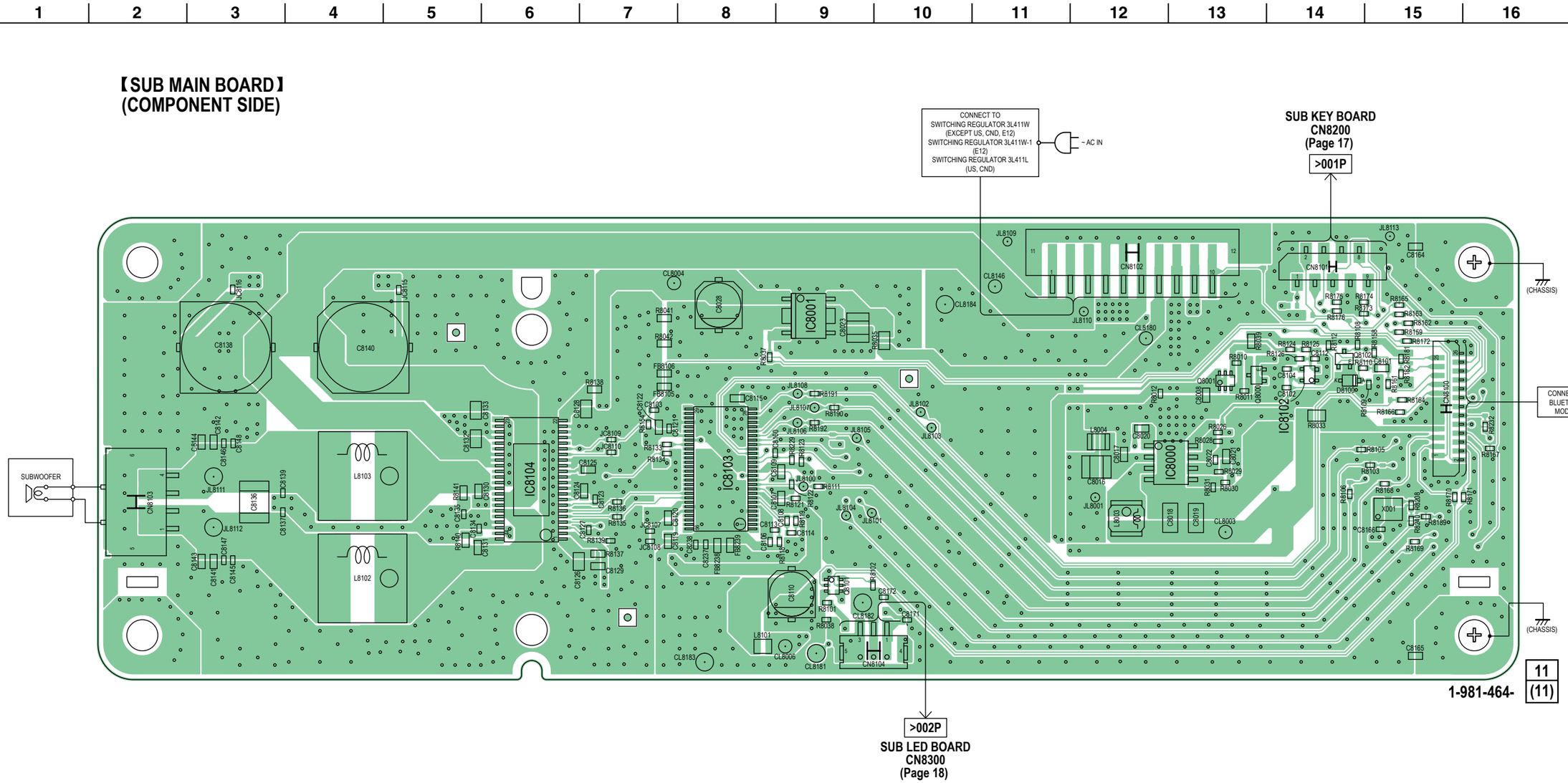
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

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

- : B+ Line.
- Voltages and waveforms are dc with respect to ground in wireless connection to the bar speaker (SA-CT380/CT381).
  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 (ANALOG)
  ⇨ : AUDIO (DIGITAL)
- Abbreviation
  AUS : Australian model
  CND : Canadian model
  E3 : 240 V AC area in E model
  E12 : 220-240 V AC area in E model
  EA : Saudi Arabia model
  LA9 : Latin-American model
  RU : Russian Model
  SP : Singapore model
  TH : Thai model

4-2. PRINTED WIRING BOARD - SUB MAIN Board (Component Side) - • : Uses unleaded solder.

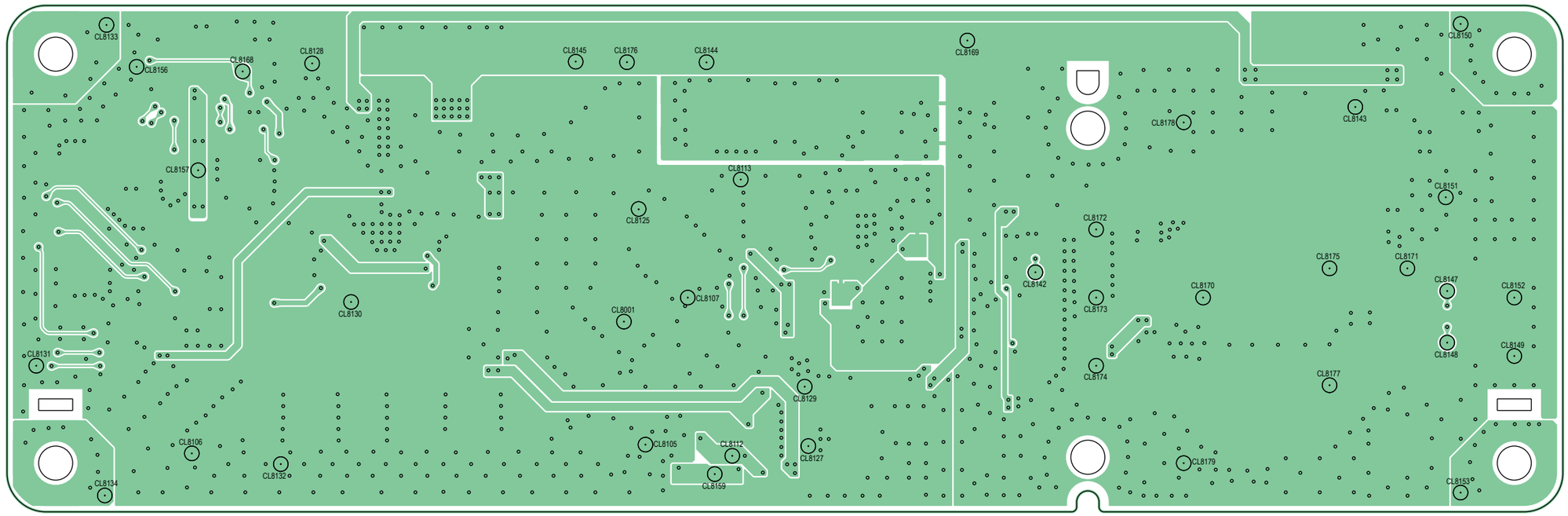
【SUB MAIN BOARD】
(COMPONENT SIDE)



Note: When the complete SUB MAIN board is replaced, refer to "NOTE OF REPLACING THE IC8104 ON THE SUB MAIN BOARD AND THE COMPLETE SUB MAIN BOARD" and "NOTES ON THE WIRELESS CONNECTION (LINK) AFTER REPAIRS ARE COMPLETE" on page 4.

4-3. PRINTED WIRING BOARD - SUB MAIN Board (Conductor Side) - • : Uses unleaded solder.

【SUB MAIN BOARD】
(CONDUCTOR SIDE)



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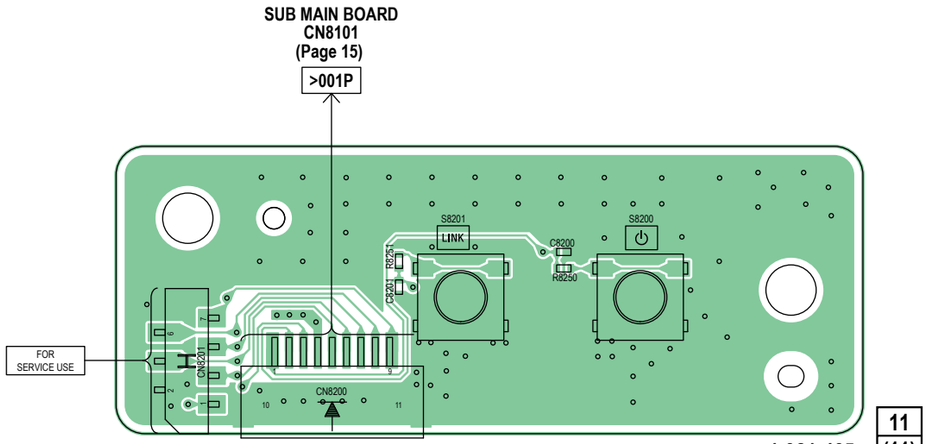
(11)

1-981-464-

Note: When the complete SUB MAIN board is replaced, refer to "NOTE OF REPLACING THE IC8104 ON THE SUB MAIN BOARD AND THE COMPLETE SUB MAIN BOARD" and "NOTES ON THE WIRELESS CONNECTION (LINK) AFTER REPAIRS ARE COMPLETE" on page 4.

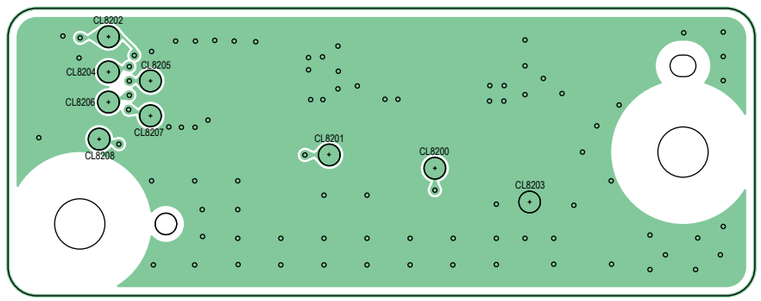
4-4. PRINTED WIRING BOARD - SUB KEY Board - • : Uses unleaded solder.

【SUB KEY BOARD】
(COMPONENT SIDE)



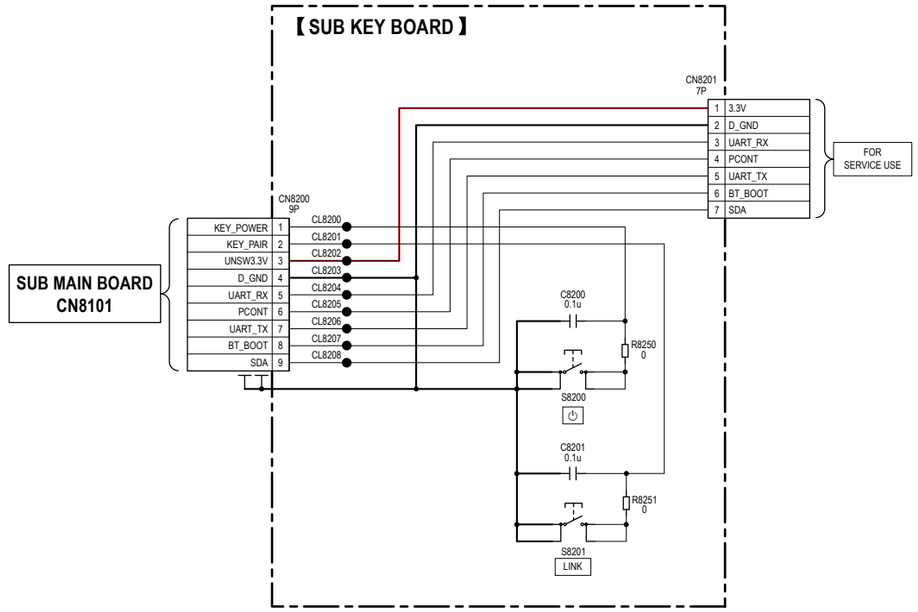
1-981-465- 11 (11)

【SUB KEY BOARD】
(CONDUCTOR SIDE)



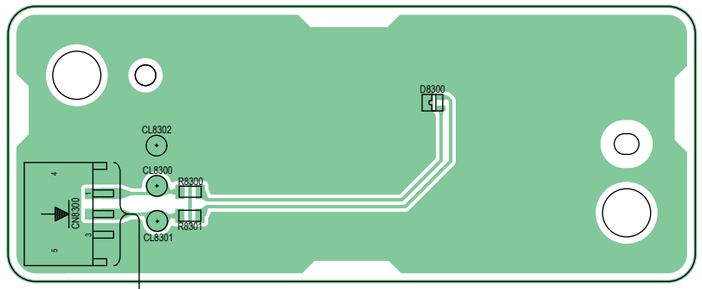
1-981-465- 11 (11)

4-5. SCHEMATIC DIAGRAM - SUB KEY Board -



4-6. PRINTED WIRING BOARD - SUB LED Board - • : Uses unleaded solder.

【SUB LED BOARD】
(COMPONENT SIDE)



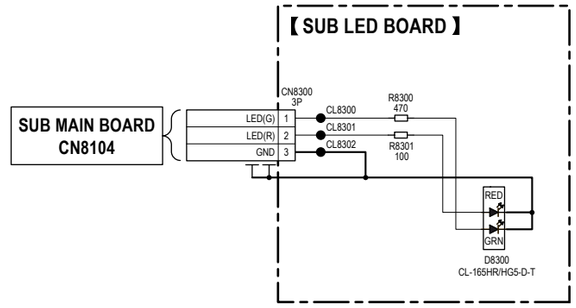
1-980-504- 12 (12)

>002P
SUB MAIN BOARD
CN8104
(Page 15)

【SUB LED BOARD】
(CONDUCTOR SIDE)

1-980-504- 12 (12)

4-7. SCHEMATIC DIAGRAM - SUB LED Board -



SECTION 5
EXPLODED VIEWS

Note:

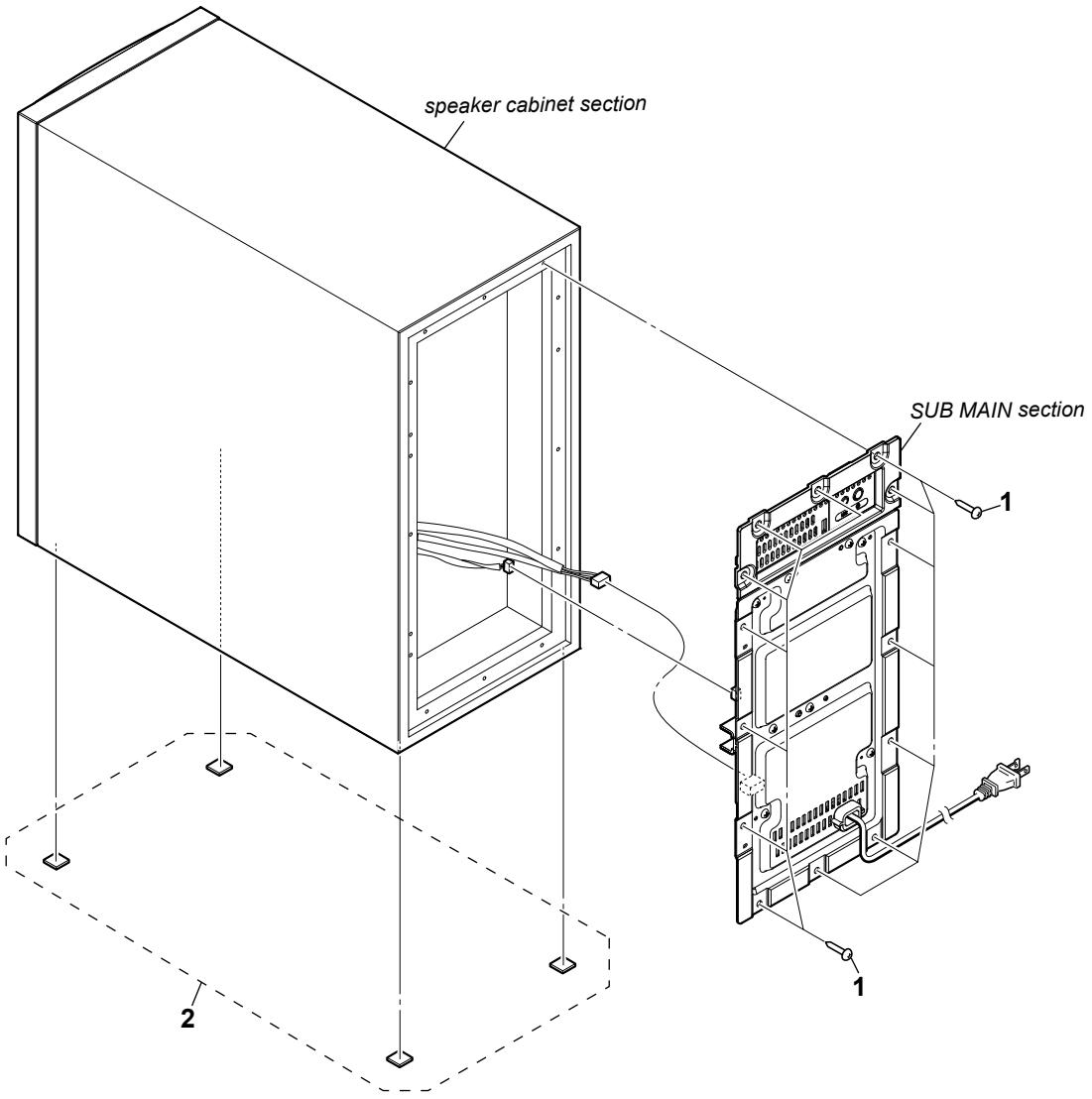
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Abbreviation
  AUS : Australian model
  CND : Canadian model
  E3 : 240 V AC area in E model
  E12 : 220-240 V AC area in E model
  EA : Saudi Arabia model
  LA9 : Latin-American model
  RU : Russian Model
  SP : Singapore model
  TH : Thai model

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.

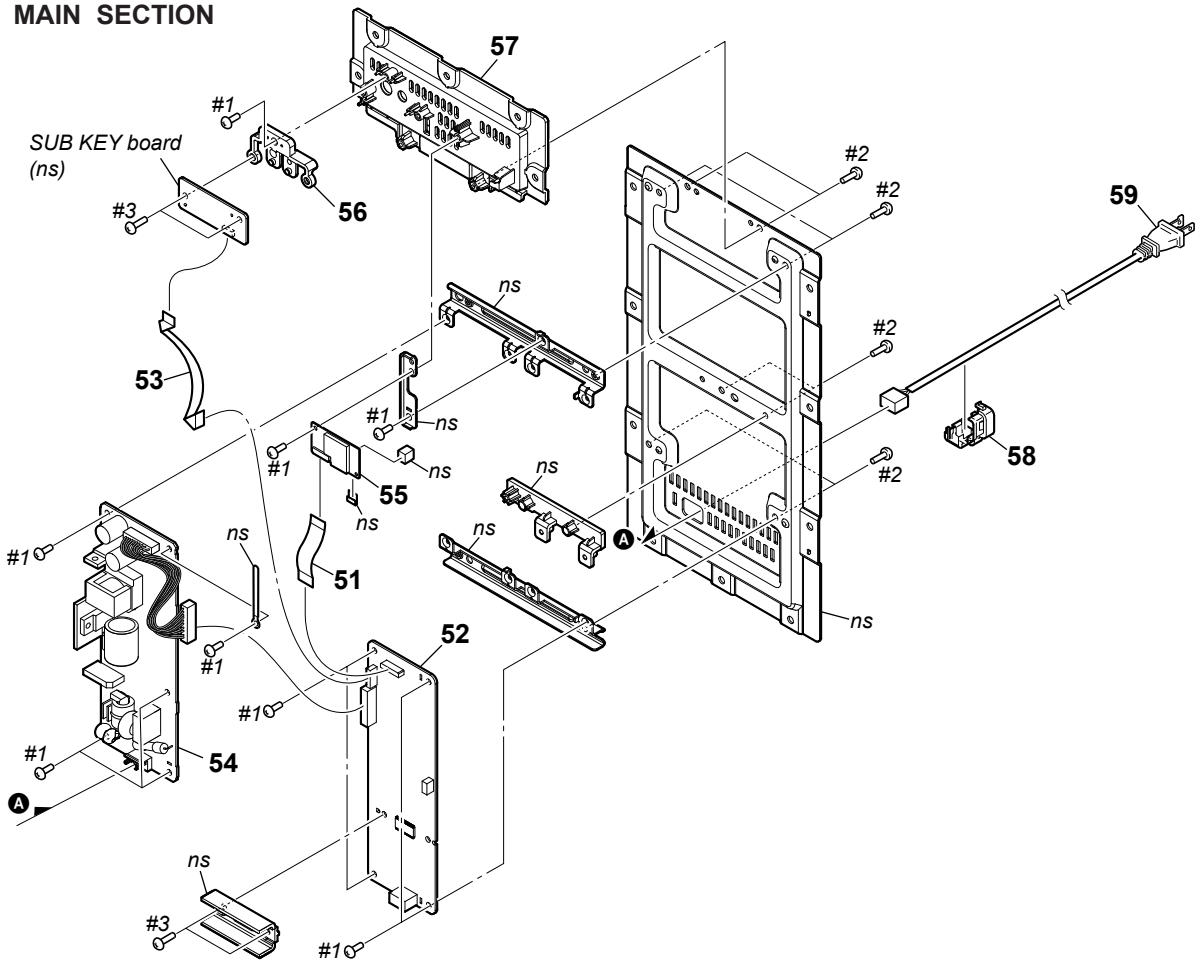
5-1. BACK PANEL SECTION

- Rear view



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-874-614-12	SCREW (1) (3.5X14), TAPPING		2	2-682-469-11	FOOT (SW) (4 pieces, 1 set)	

5-2. SUB MAIN SECTION



Note 1: When the complete SUB MAIN board is replaced, refer to "NOTE OF REPLACING THE IC8104 ON THE SUB MAIN BOARD AND THE COMPLETE SUB MAIN BOARD" and "NOTES ON THE WIRELESS CONNECTION (LINK) AFTER REPAIRS ARE COMPLETE" on page 4.

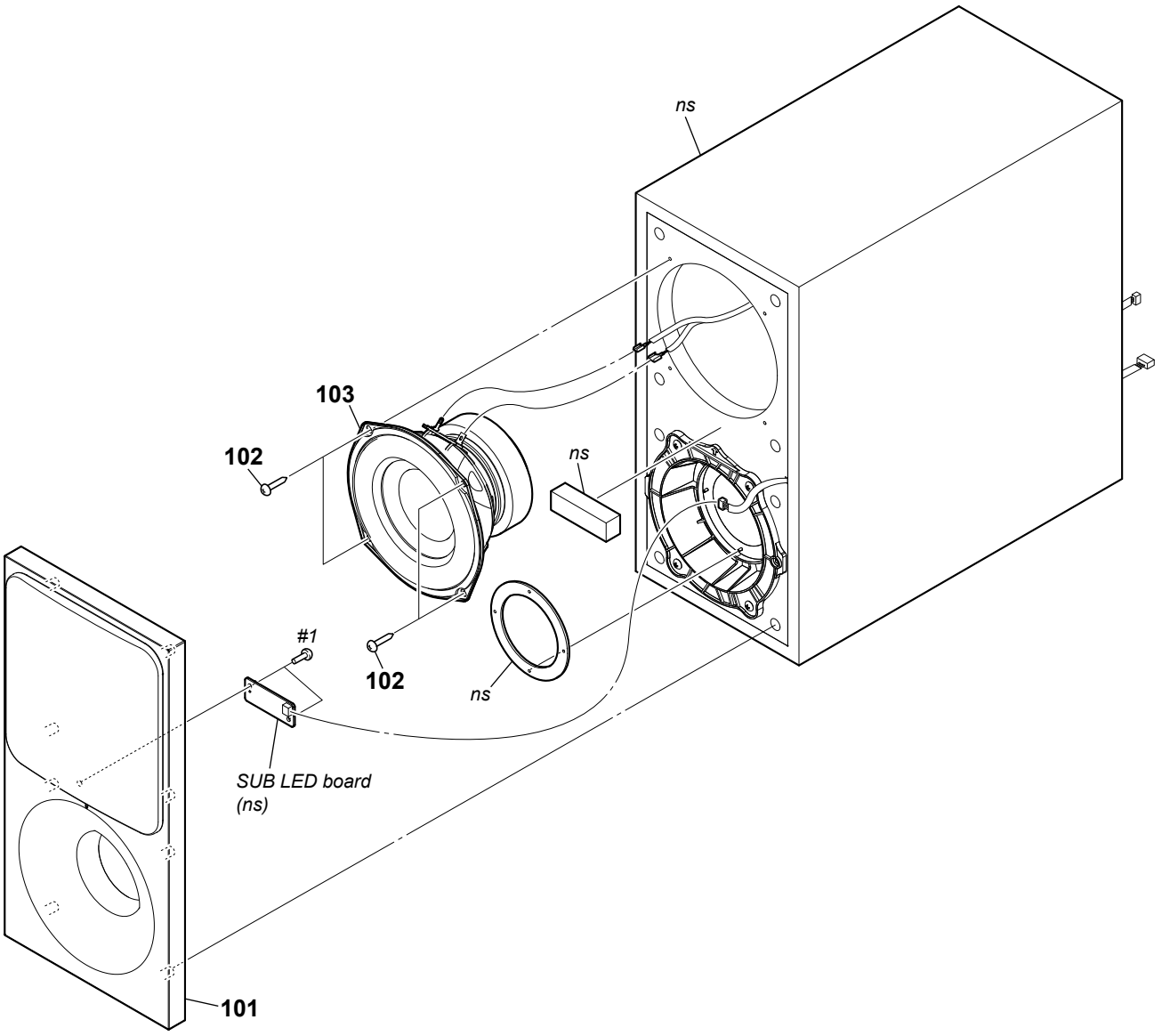
Note 2: If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

Note 3: When the BLUETOOTH module is replaced, refer to "NOTES ON THE WIRELESS CONNECTION (LINK) AFTER REPAIRS ARE COMPLETE" on page 4.

Note 4: When the SWITCHING REGULATOR board is replaced, spread the bond referring to "BOND FIXATION OF ELECTRIC PARTS" on page 4.

Ref. No.	Part No.	Description	Remark
51	1-828-256-61	WIRE (FLAT TYPE) (26 CORE)	
52	A-2165-316-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: US, CND)	
52	A-2165-413-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: AEP)	
52	A-2165-424-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: UK)	
52	A-2165-434-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: SP)	
52	A-2165-444-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: E12)	
52	A-2165-510-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for White model) (WCT291: AEP)	
52	A-2165-520-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for White model) (WCT291: UK)	
52	A-2166-007-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: LA9)	
52	A-2180-393-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: RU)	
52	A-2180-415-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: EA)	
52	A-2180-421-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: AUS)	
52	A-2180-427-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: TH)	
52	A-2180-433-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: E3)	
52	A-2180-443-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for White model) (WCT291: RU)	
52	A-2180-545-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for White model) (WCT290: LA9)	
52	A-2180-551-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for White model) (WCT290: SP)	
52	A-2180-570-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for White model) (WCT290: EA)	
52	A-2180-576-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for White model) (WCT290: TH)	
53	1-828-308-61	WIRE (FLAT TYPE) (9 CORE)	
⚠ 54	1-474-674-11	SWITCHING REGULATOR 3L411W	(EXCEPT US, CND, E12)
⚠ 54	1-474-674-21	SWITCHING REGULATOR 3L411W-1 (E12)	
⚠ 54	1-474-674-31	SWITCHING REGULATOR 3L411L (US, CND)	
55	1-493-097-41	BLUETOOTH MODULE	
56	4-582-118-01	BUTTON, SW	
57	4-581-865-01	COVER, BACK	
⚠ 58	4-966-267-12	BUSHING (FBS001), CORD	
⚠ 59	1-834-966-42	POWER-SUPPLY CORD (AEP, RU, E3, SP, LA9)	
⚠ 59	1-835-068-21	CORD, POWER (AUS)	
⚠ 59	1-837-308-12	CORD, POWER-SUPPLY (US, CND)	
⚠ 59	1-839-940-21	POWER-SUPPLY CORD (TH)	
⚠ 59	1-839-999-22	POWER-SUPPLY CORD (UK, EA3, EA)	
⚠ 59	1-848-053-12	POWER-SUPPLY CORD (E12)	
#1	7-685-646-71	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
ns	not supplied		

5-3. SPEAKER CABINET SECTION



Ref. No.	Part No.	Description	Remark
101	X-2594-348-1	PANEL, FRONT ASSY (CG-SW) B (for Black model) (WCT290)	
101	X-2594-262-1	PANEL, FRONT ASSY (CG-SW) W (for White model) (WCT290/WCT291)	
102	4-874-614-62	SCREW (1) (3.5X16), TAPPING	
103	1-859-203-11	LOUDSPEAKER (130MM)-203-11	
#1	7-685-646-71	SCREW +BVTP 3X8 TYPE2 IT-3	
ns	not supplied		

SUB KEY | SUB LED | SUB MAIN

SECTION 6
ELECTRICAL PARTS LIST

Note:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- CAPACITORS
  uF: µF
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . , uPA. . , µPA. . ,
  uPB. . : µPB. . , uPC. . , µPC. . ,
  uPD. . : µPD. .
- Abbreviation
  AUS : Australian model
  CND : Canadian model
  E3 : 240 V AC area in E model
  E12 : 220-240 V AC area in E model
  EA : Saudi Arabia model
  LA9 : Latin-American model
  RU : Russian Model
  SP : Singapore model
  TH : Thai model

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.

Ref. No.	Part No.	Description	Remark
		SUB KEY BOARD	
		**********	
		< CONNECTOR >	
CN8200	1-817-199-51	CONNECTOR, FFC/FPC 9P	
CN8201	1-785-466-51	CONNECTOR, FFC/FPC 7P	
		< SWITCH >	
S8200	1-798-528-11	TACTILE SWITCH (⏻)	
S8201	1-798-528-11	TACTILE SWITCH (LINK)	
**********			
		SUB LED BOARD	
		**********	
		< CONNECTOR >	
CN8300	1-580-056-21	PIN, CONNECTOR (SMD) 3P	
		< DIODE >	
D8300	6-502-843-01	DI CL-165HR/HG5-D-T	
**********			
	A-2165-316-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: US, CND)	
	A-2165-413-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: AEP)	
	A-2165-424-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: UK)	
	A-2165-434-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: SP)	
	A-2165-444-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: E12)	
	A-2165-510-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for White model) (WCT291: AEP)	
	A-2165-520-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for White model) (WCT291: UK)	
	A-2166-007-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: LA9)	
	A-2180-393-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: RU)	
	A-2180-415-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: EA)	
	A-2180-421-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: AUS)	
	A-2180-427-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: TH)	
	A-2180-433-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for Black model) (WCT290: E3)	
	A-2180-443-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for White model) (WCT291: RU)	
	A-2180-545-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for White model) (WCT290: LA9)	
	A-2180-551-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for White model) (WCT290: SP)	
	A-2180-570-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for White model) (WCT290: EA)	
	A-2180-576-A	SUB MAIN BOARD, COMPLETE (for SERVICE) (for White model) (WCT290: TH)	
		**********	
		< IC >	
IC8001	6-723-083-01	IC S-1212BC0-E6T1U	
IC8103	6-723-247-01	IC TAS5534DGGR-S	
IC8104	6-723-248-01	IC TAS5614LA-S	
**********			
		MISCELLANEOUS	
		**********	
51	1-828-256-61	WIRE (FLAT TYPE) (26 CORE)	
53	1-828-308-61	WIRE (FLAT TYPE) (9 CORE)	
⚠ 54	1-474-674-11	SWITCHING REGULATOR 3L411W (EXCEPT US, CND, E12)	
⚠ 54	1-474-674-21	SWITCHING REGULATOR 3L411W-1 (E12)	
⚠ 54	1-474-674-31	SWITCHING REGULATOR 3L411L (US, CND)	
55	1-493-097-41	BLUETOOTH MODULE	
⚠ 59	1-834-966-42	POWER-SUPPLY CORD (AEP, RU, E3, SP, LA9)	
⚠ 59	1-835-068-21	CORD, POWER (AUS)	
⚠ 59	1-837-308-12	CORD, POWER-SUPPLY (US, CND)	
⚠ 59	1-839-940-21	POWER-SUPPLY CORD (TH)	
⚠ 59	1-839-999-22	POWER-SUPPLY CORD (UK, EA3, EA)	
⚠ 59	1-848-053-12	POWER-SUPPLY CORD (E12)	
103	1-859-203-11	LOUDSPEAKER (130MM)-203-11	

Note 1: When the complete SUB MAIN board is replaced, refer to "NOTE OF REPLACING THE IC8104 ON THE SUB MAIN BOARD AND THE COMPLETE SUB MAIN BOARD" and "NOTES ON THE WIRELESS CONNECTION (LINK) AFTER REPAIRS ARE COMPLETE" on page 4.

Note 2: If wire (flat type) is replaced, install it after bending it in the same form as that before replacement.

Note 3: When the SWITCHING REGULATOR board is replaced, spread the bond referring to "BOND FIXATION OF ELECTRIC PARTS" on page 4.

Note 4: When the BLUETOOTH module is replaced, refer to "NOTES ON THE WIRELESS CONNECTION (LINK) AFTER REPAIRS ARE COMPLETE" on page 4.

MEMO

REVISION HISTORY

Ver.	Date	Description of Revision
1.0	2017.02	New

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.