

TA-S3

SERVICE MANUAL

Ver 1.0 2001.05

*AEP Model
UK Model*



TA-S3 is the Amplifier section in
MHC-S3.

SPECIFICATIONS

Amplifier section

DIN power output (rated) 60 + 60 watts
(6 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)
80 + 80 watts
(6 ohms at 1 kHz, 10% THD)

Music power output (reference)
150 + 150 watts
(6 ohms at 1 kHz, 10% THD)

Inputs
VIDEO (AUDIO) IN: voltage 250 mV,
(phono jacks) impedance 47 kilohms
MD IN: voltage 450 mV,
(phono jacks) impedance 47 kilohms
OPTICAL IN:
(Square optical connector jacks, rear panel)
wavelength 700 nm

Outputs
MD OUT: voltage 250 mV
(phono jacks) impedance 1 kilohms
PHONES: accepts headphones of
(stereo mini jack) 8 ohms or more
FRONT SPEAKER: accepts impedance of 6 to
16 ohms
SUB WOOFER OUT: Voltage 1 V,
impedance 1 kilohms

General

Power requirements 230 V AC, 50/60 Hz

Power consumption 180 watts
0.6 watts (during Power Saving Mode)

Dimensions (w/h/d) Approx. 280 x 128 x 350 mm

Mass Approx. 6.2 kg

Design and specifications are subject to change
without notice.

AV AMPLIFIER

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK $\triangle$ OR DOTTED LINE WITH MARK $\triangle$ 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.

SECTION 1 SERVICING NOTES

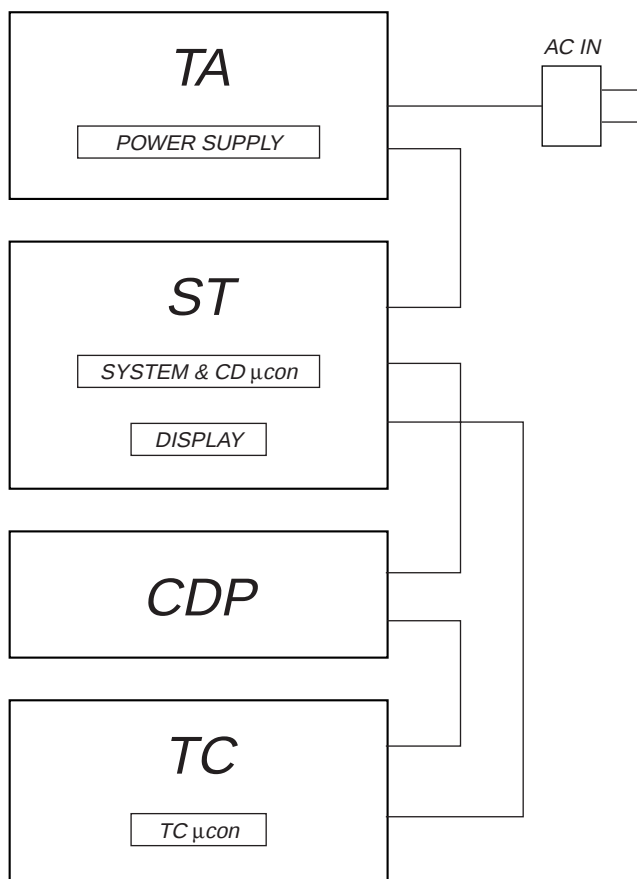
This set is a component of the MHC-S3.

The MHC-S3 system configuration is as shown below, and therefore it does not operate normally unless all four components are connected.

In performing the repair, connect all components with the system cables.

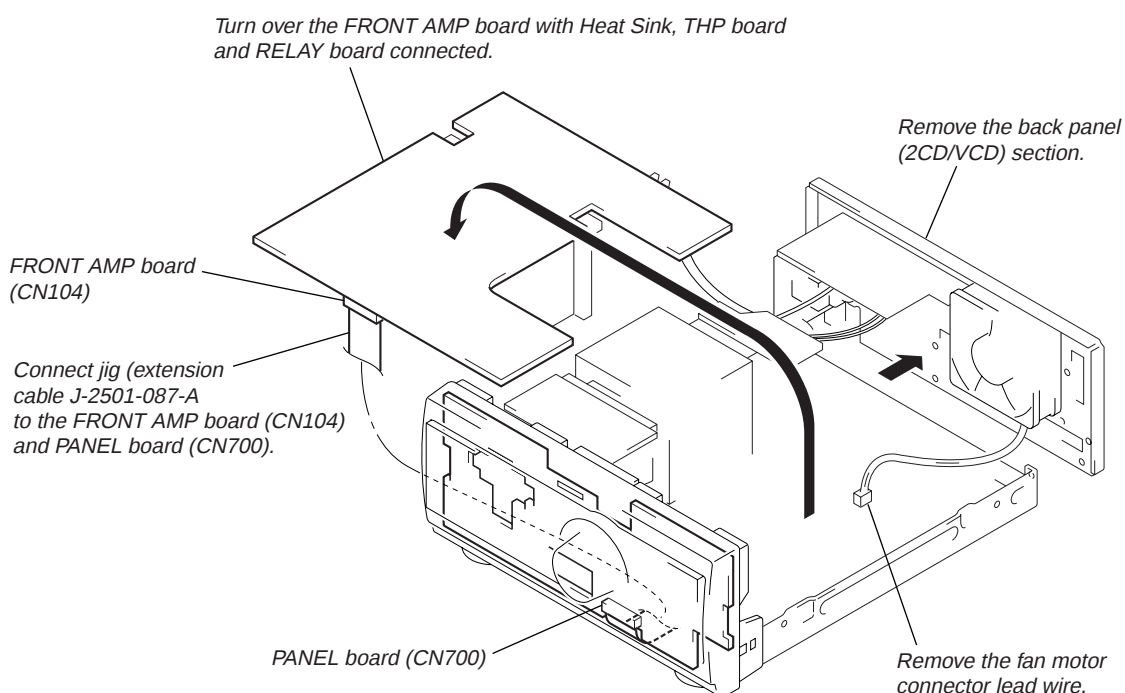
Note: The precaution to the users is described on the label stuck on the back panel (CD player) and in the troubleshooting section in the Operation Manual.

System Configuration:



FRONT AMP BOARD SERVICE POSITION

In checking the FRONT AMP board, prepare jig (extension cable J-2501-087-A: 1.25 mm Pitch, 23 core, Length 300 mm) (Fig A)



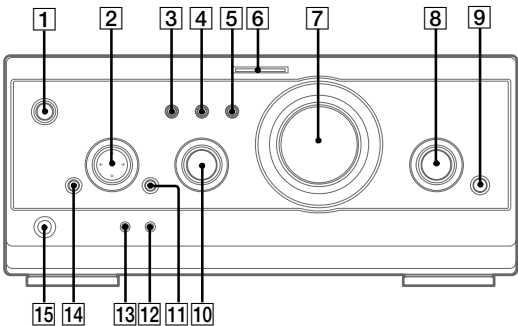
(Fig A)

Parts Identification

The items are arranged in alphabetical order.
Refer to the pages indicated in parentheses () for details.

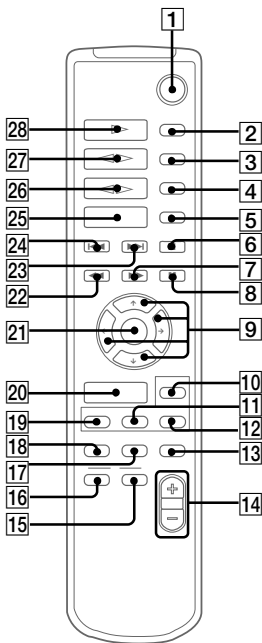
Main unit

A/V amplifier



- DIGITAL [9] (28, 32)
- ENTER/↑/→/←/→ [2] (9, 12, 18, 19, 22–27)
- EQ [11] (24)
- EQ ON/OFF [12] (9, 24)
- FILE SELECT [10] (20, 24)
- FUNCTION [8] (9, 11, 12, 17, 18, 28)
- GROOVE [5] (20)
- MOVIE MODE [4] (20, 21)
- MULTI CHANNEL DECODING indicator [6] (22)
- MUSIC MODE [3] (20, 21)
- PHONES jack [15]
- SET UP [13] (23–26)
- SUR [14] (22)
- VOLUME [7]
- I/⏻ (power) [1] (8, 9, 32)

Remote Control



- CD ▷ [28] (11, 12)
- CHECK [3] (12)
- CLEAR [4] (12)
- CLOCK/TIMER SELECT [15] (19, 27)
- CLOCK/TIMER SET [16] (9, 18, 26)
- DBFB [13] (20)
- DISPLAY [18] (10, 13, 15, 26, 32)
- D.SKIP [2] (11)
- ENTER [21] (9, 12, 14, 15, 18, 19, 22–27)
- EQ [11] (24)
- EQ ON/OFF [12] (9, 24)
- FUNCTION [20] (9, 11, 12, 17, 18, 28)
- GROOVE [17] (20)
- SET UP [10] (23–26)
- SLEEP [5] (26)
- SUR [19] (22)
- TAPE A ◀▶ [27] (16)
- TAPE B ◀▶ [26] (16, 17)
- TUNER/BAND [25] (14)
- TUNING + [7] (14)
- TUNING – [22] (14)
- VOL +/- [14]

BUTTON DESCRIPTIONS

- I/⏻ (power) [1]
- ⏸ (pause) [8]
- (stop) [6]
- ◀◀ (go back) [24]
- ▶▶ (go forward) [23]
- ◀◀ (rewind) [22]
- ▶▶ (fast forward) [7]
- ↑/→/←/→ [9]

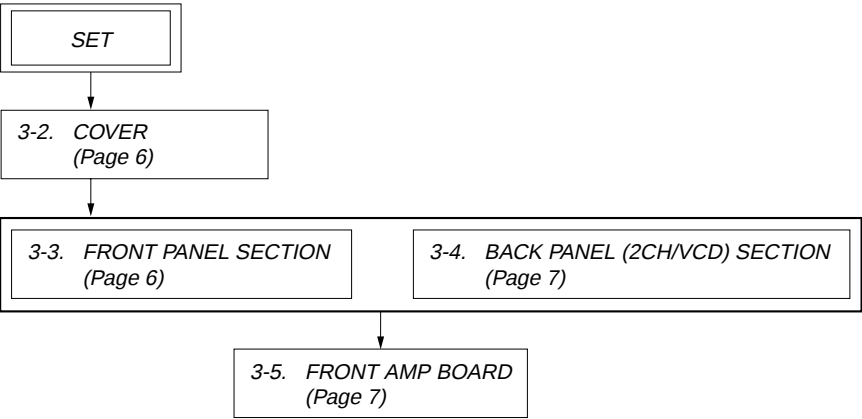
SECTION 3
DISASSEMBLY

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

3-1. DISASSEMBLY FLOW

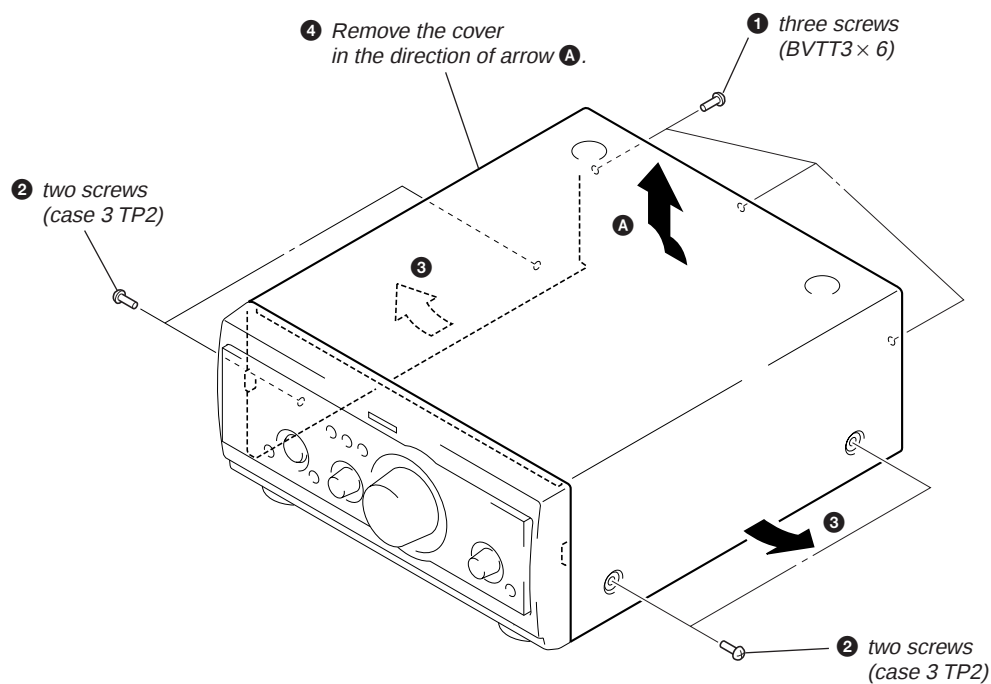
Note 1: The process described in ㉔ can be performed in any order.

Note 2: Without completing the process described in ㉔, the next process can not be performed.

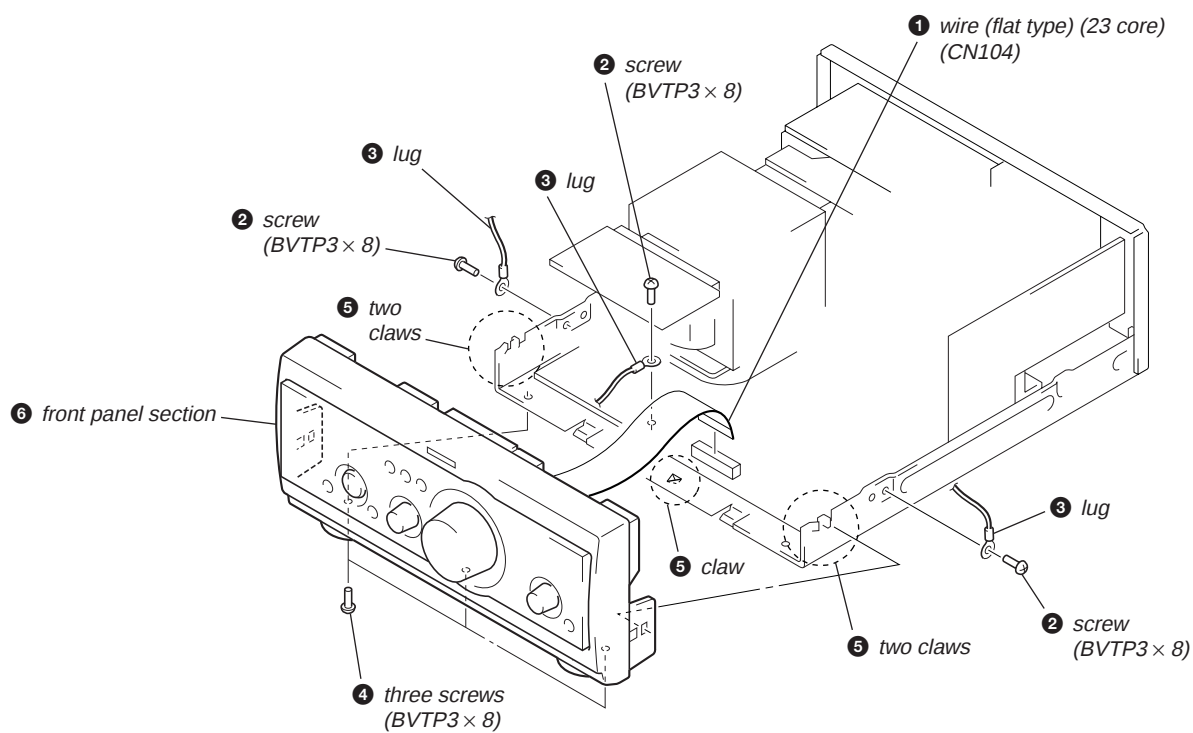


Note: Follow the disassembly procedure in the numerical order given.

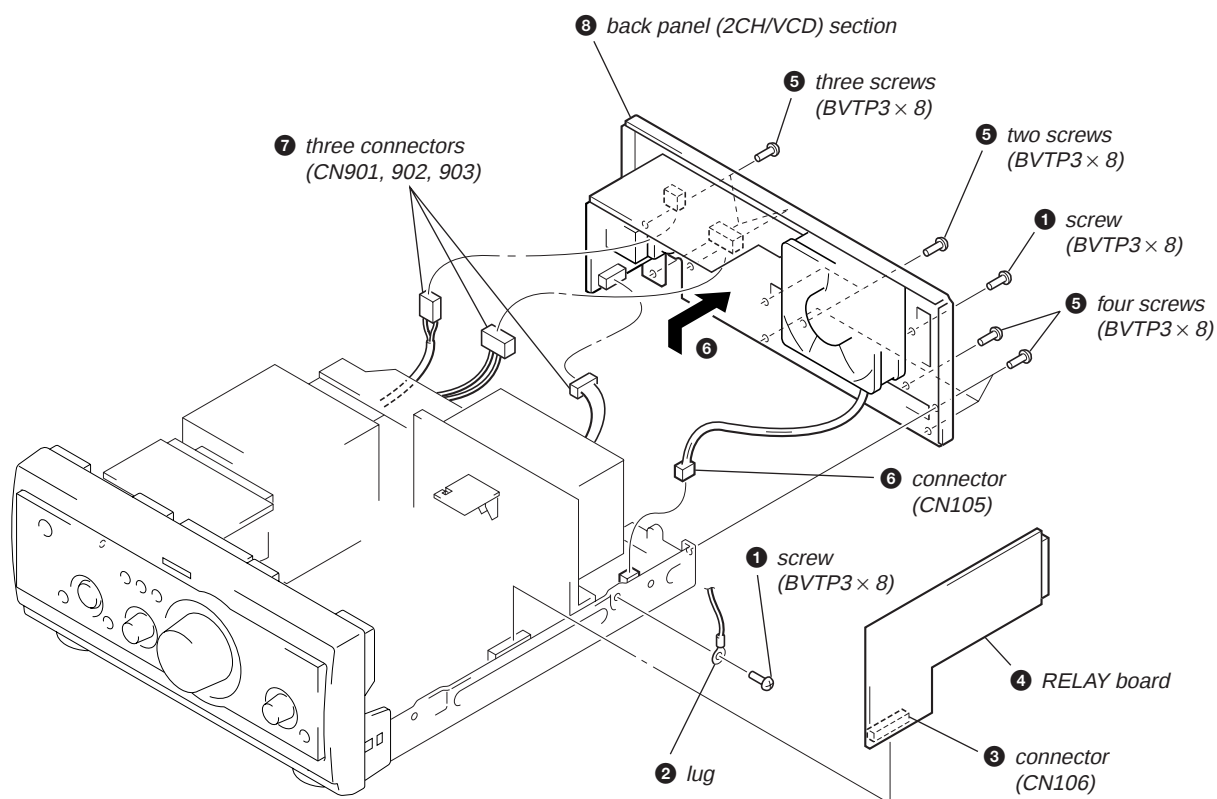
3-2. COVER



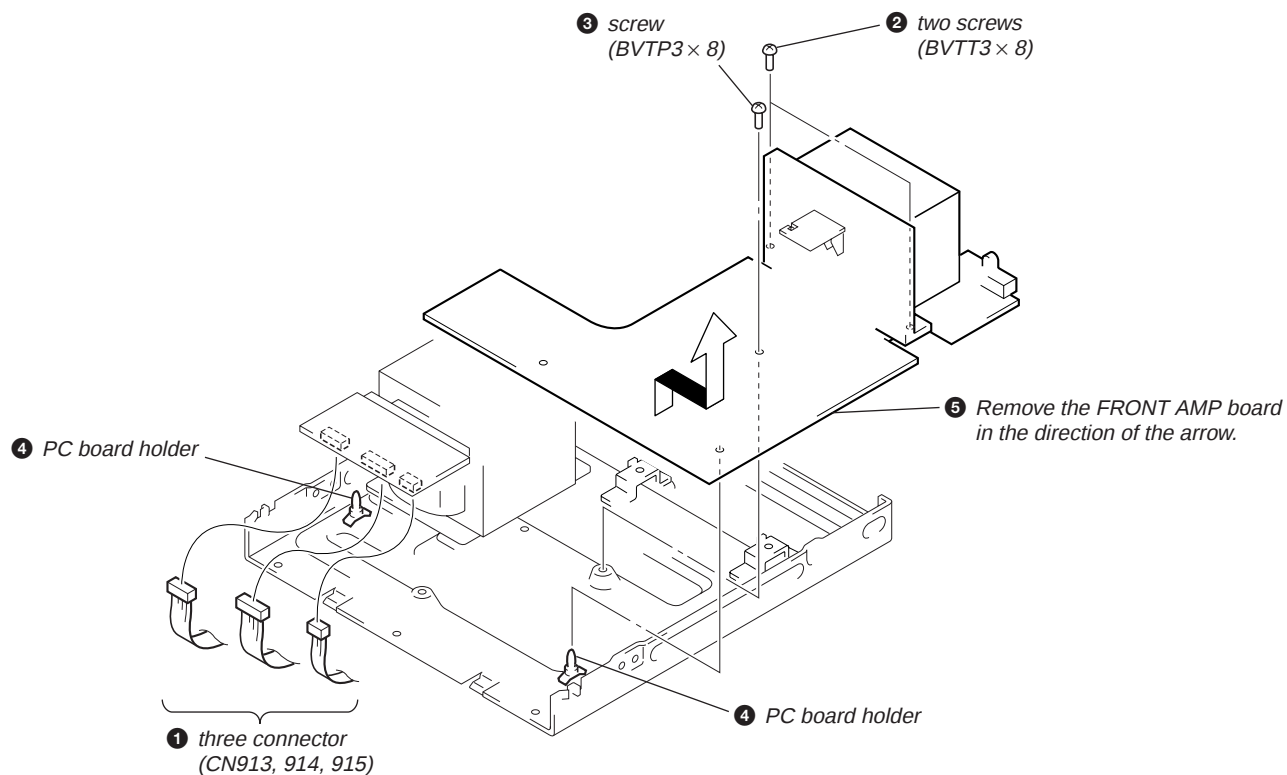
3-3. FRONT PANEL SECTION



3-4. BACK PANEL (2CH/VCD) SECTION



3-5. FRONT AMP BOARD



SECTION 4

TEST MODE

Note: Use following buttons in the test mode.

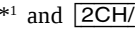
no mark : Button of amplifier unit (TA-S3)

*1 : Button of tuner unit (ST-S3)

*2 : Button of CD unit (CDP-S3)

[MC Test Mode]

Enter the MC Test Mode

1. Press the  button to turn the power on.
2. While pressing the both  *1 and  buttons, press the  button.
3. "GROOVE" indication blinks on the fluorescent indicator tube in the midst of MC test mode.
4. This mode has two modes (mode 1/mode 2).
5. To change the modes, press three buttons in the same manner as entering this mode (step 2). Each time the step 2 operation is repeated, it changes modes alternately.
6. To distinguish the mode, turn the  knob clockwise or counterclockwise. Then display is shown as follows.

Mode 1: only "MIN" or "MAX"

Mode 2: "MIN", "1 to 30" or "MAX"

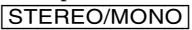
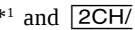
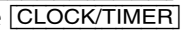
Releasing the MC Test Mode

To release from this mode, press the  button or disconnect the power cord.

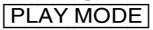
[GC Test Mode]

Enter the GC Test Mode

Procedure 1:

1. Press the  button to turn the power on.
2. While pressing the both  *1 and  buttons, press the  *1 button.
3. LEDs and fluorescent indicator tube are all turned on of all units.

Procedure 2:

1. Press the  button to turn the power on.
2. While pressing the both  *2 and  *2 buttons, press the  (DISC 1) *2 button.
3. LEDs and fluorescent indicator tube are all turned on of all units.

Version Display Mode

Procedure:

1. Enter the GC test mode.
2. Each time the  *1 or  *2 button is pressed, microcomputer or mechanism deck version is displayed of each unit.
3. Press the  *1 or  *2 button to detail is displayed the version.

Key Check Mode

Procedure:

1. Enter the GC test mode.
2. Press the  *1 or  *2 button to set the key check mode.
3. In the key check mode, the fluorescent indicator tube displays "K 0 J 0 V 0". Each time a button is pressed, "K" value increases. However, once a button is pressed, it is no longer taken into account.
 "J" value increases like 1, 2, 3 ... if turn the  knob clockwise, or it decreases like 0, 9, 8 ... if turn the JOG dial counterclockwise.
 "V" value increases like 1, 2, 3 ... if turn the  knob clockwise, or it decreases like 0, 9, 8 ... if turn the JOG dial counterclockwise.

Releasing the GC Test Mode

To release from this mode, press three buttons in the same manner as entering this mode or disconnect the power cord.

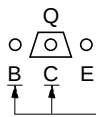
MEMO

SECTION 5 DIAGRAMS

5-1. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Boards:

- — : parts extracted from the component side.
- : parts extracted from the conductor side.
- △ : internal component.
- : Pattern from the side which enables seeing.
- Indication of transistor.



These are omitted.

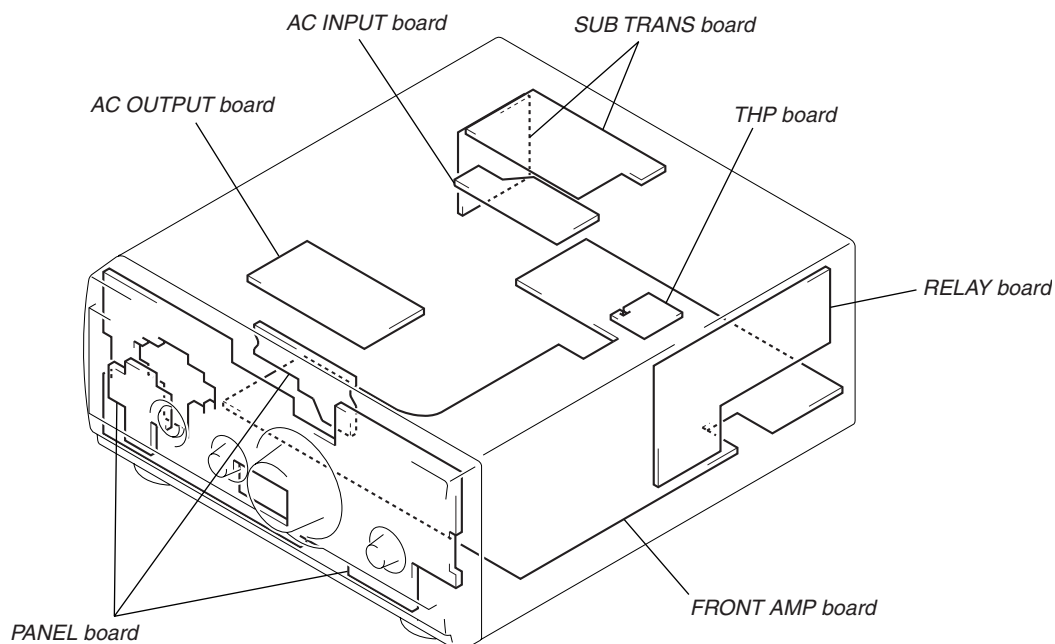
Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$ 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- △ : internal component.
- ⎓ : nonflammable resistor.
- ⎓ : fusible resistor.
- : panel designation.

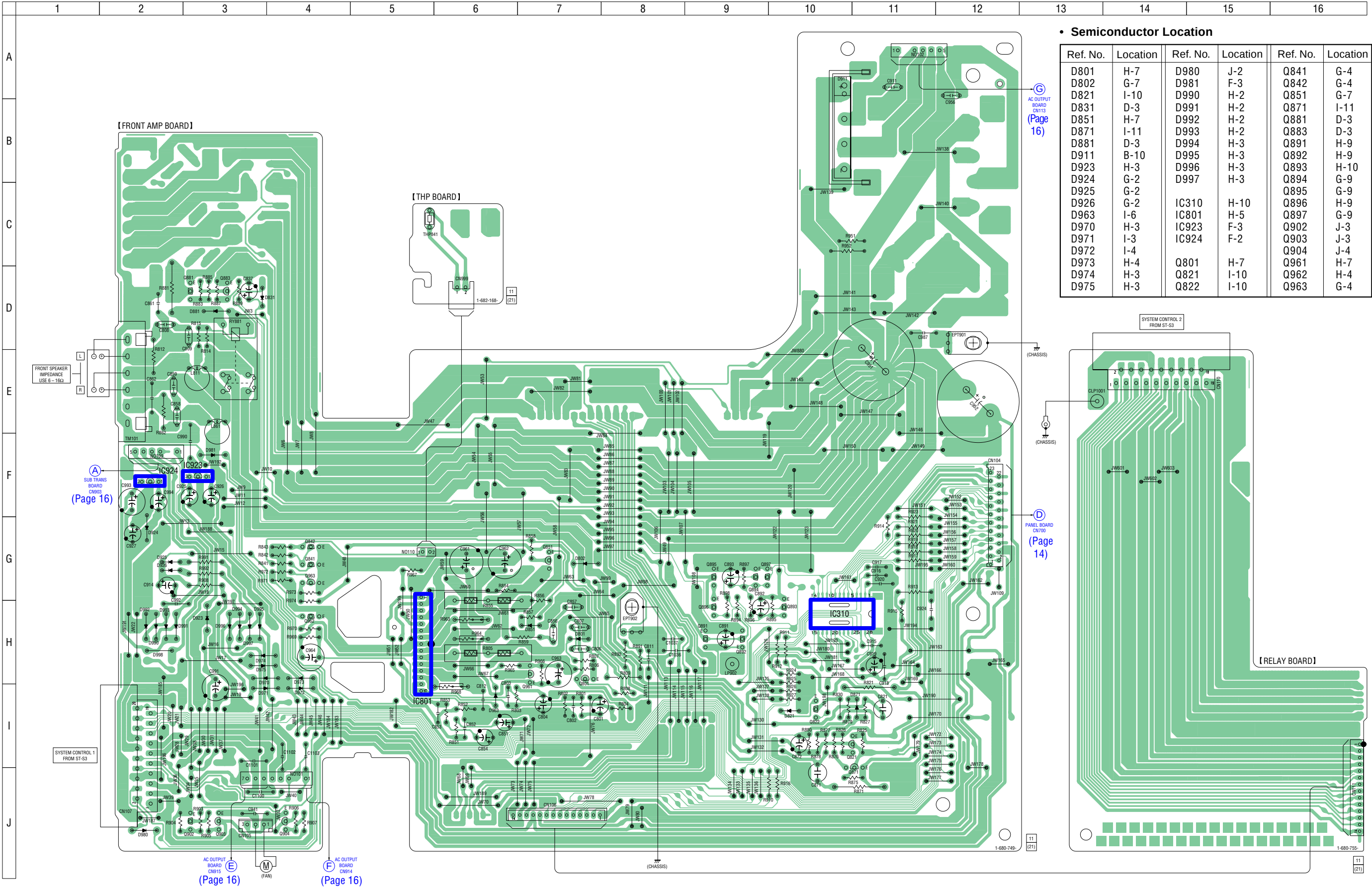
Note: The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

- : B+ Line.
- : B- Line.
- Voltages are dc with respect to ground under no-signal conditions.
- no mark : Power on
- Voltages are taken with a VOM (Input impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- ⇒ : AUDIO

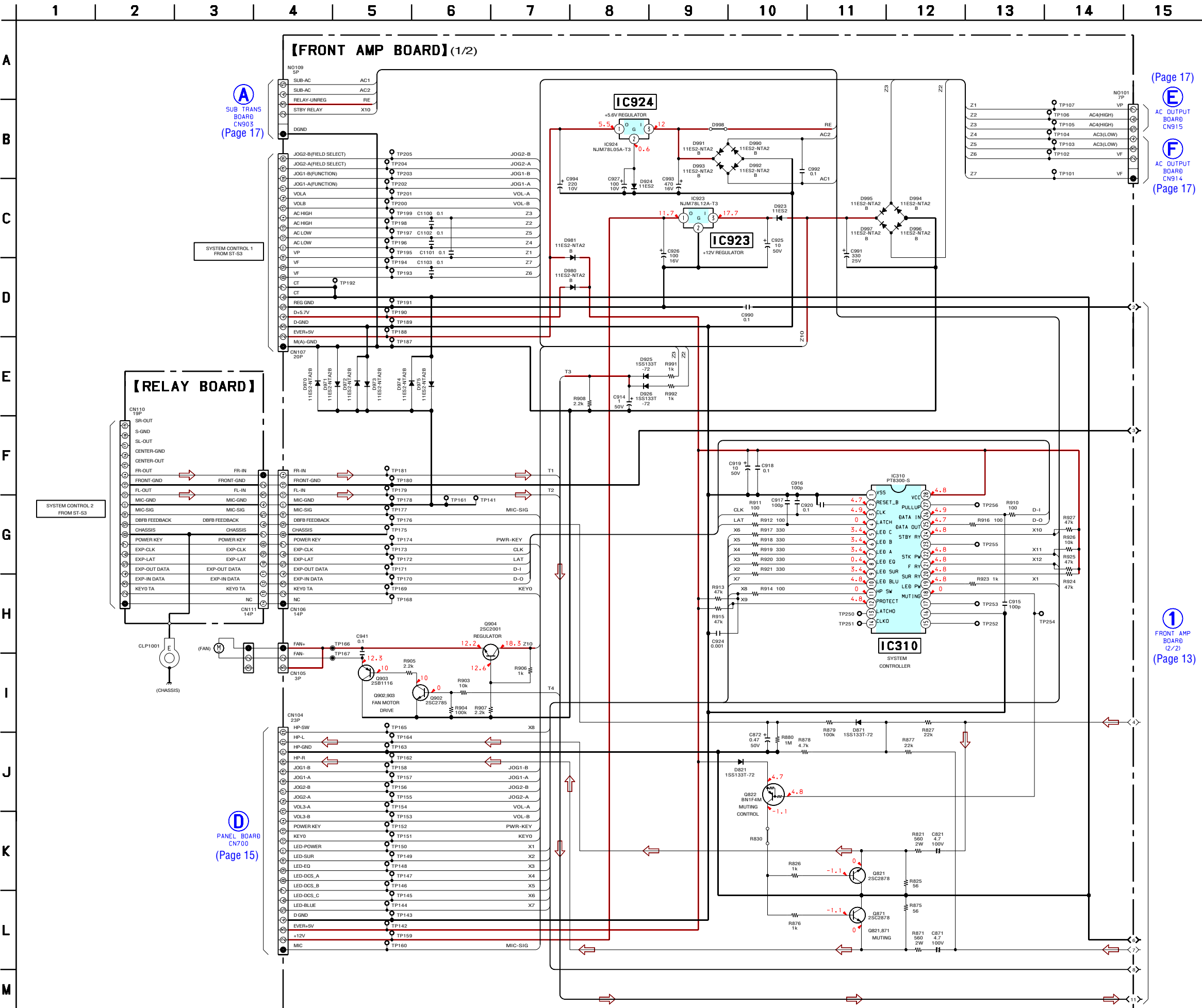
• Circuit Boards Location



5-2. PRINTED WIRING BOARDS – FRONT AMP Section – • See page 10 for Circuit Boards Location.



5-3. SCHEMATIC DIAGRAM – FRONT AMP Section (1/2) –



(Page 17)

AC OUTPUT BOARD CN915

AC OUTPUT BOARD CN914

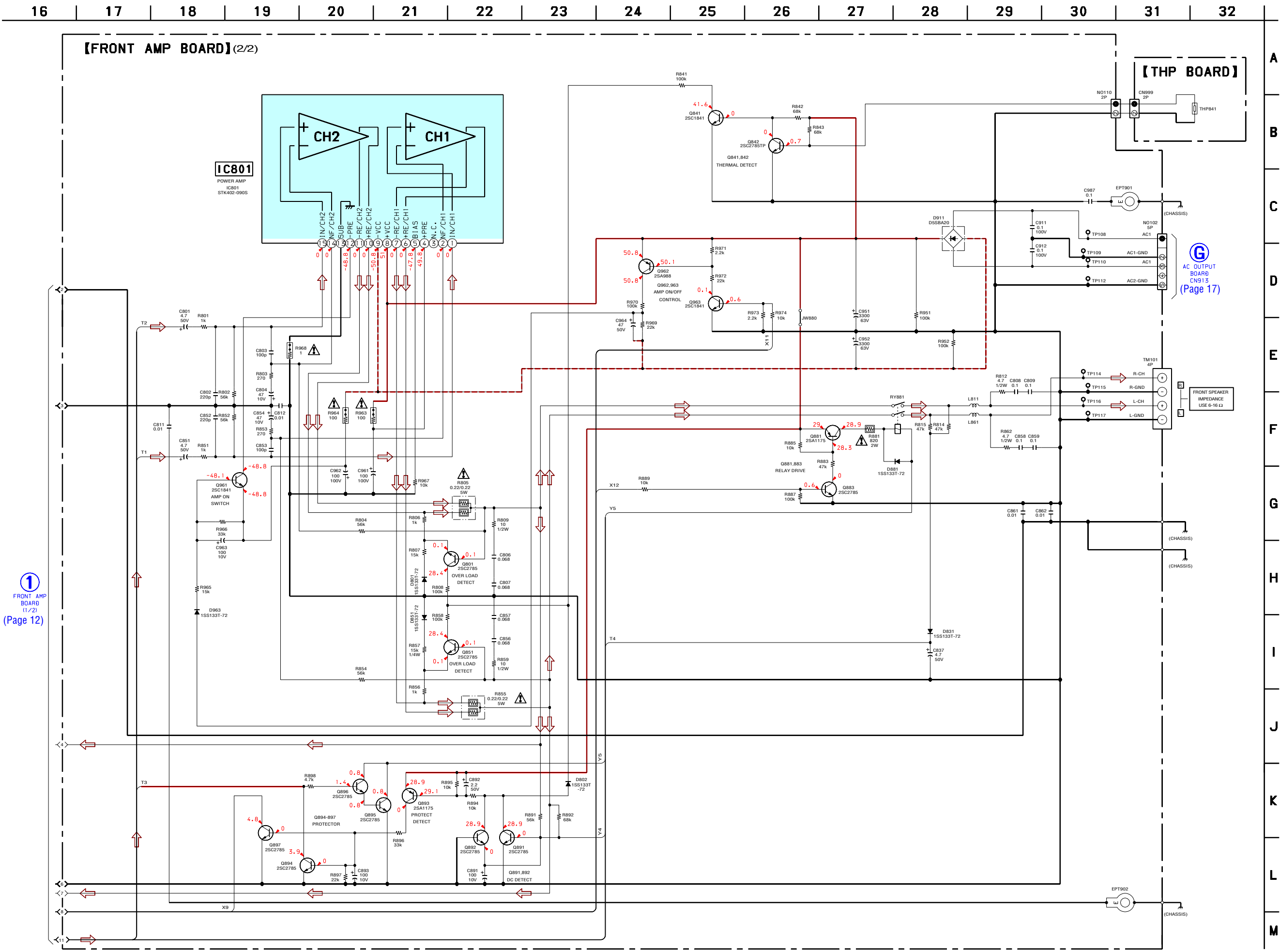
(Page 17)

1

FRONT AMP BOARD (2/2)

(Page 13)

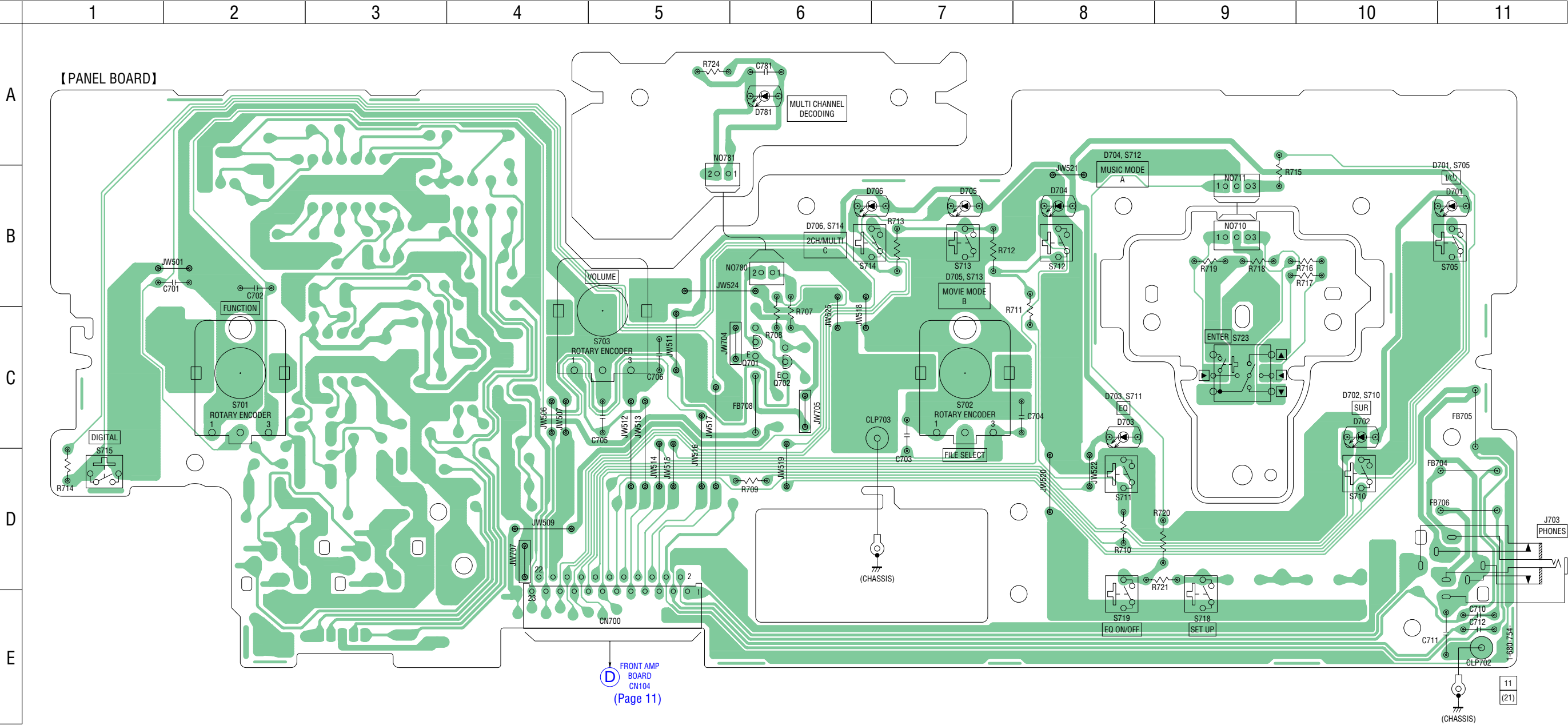
5-4. SCHEMATIC DIAGRAM – FRONT AMP Section (2/2) –



1 FRONT AMP BOARD (1/2) (Page 12)

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

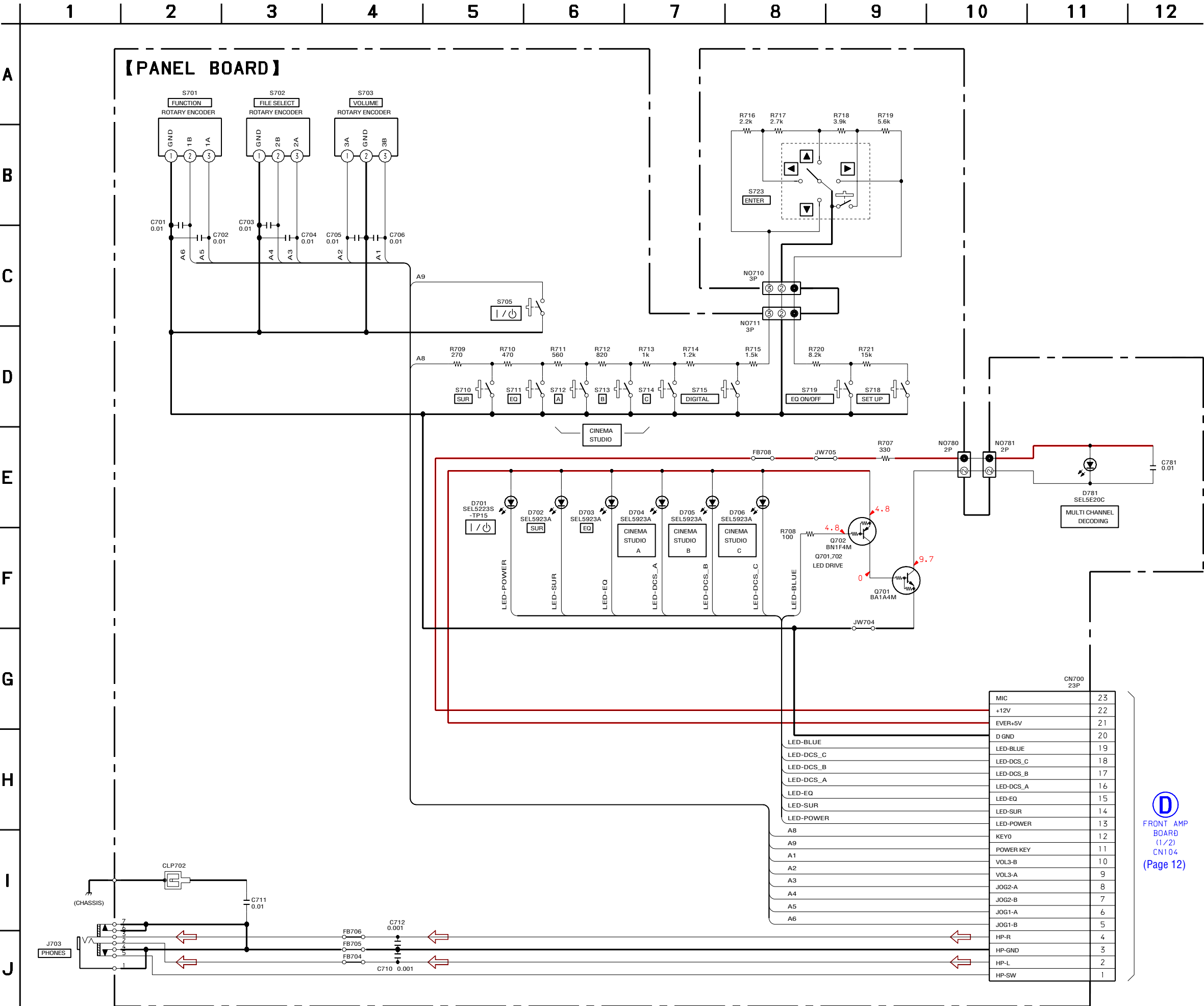
5-5. PRINTED WIRING BOARDS – CONTROL Section – • See page 10 for Circuit Boards Location.



• Semiconductor Location

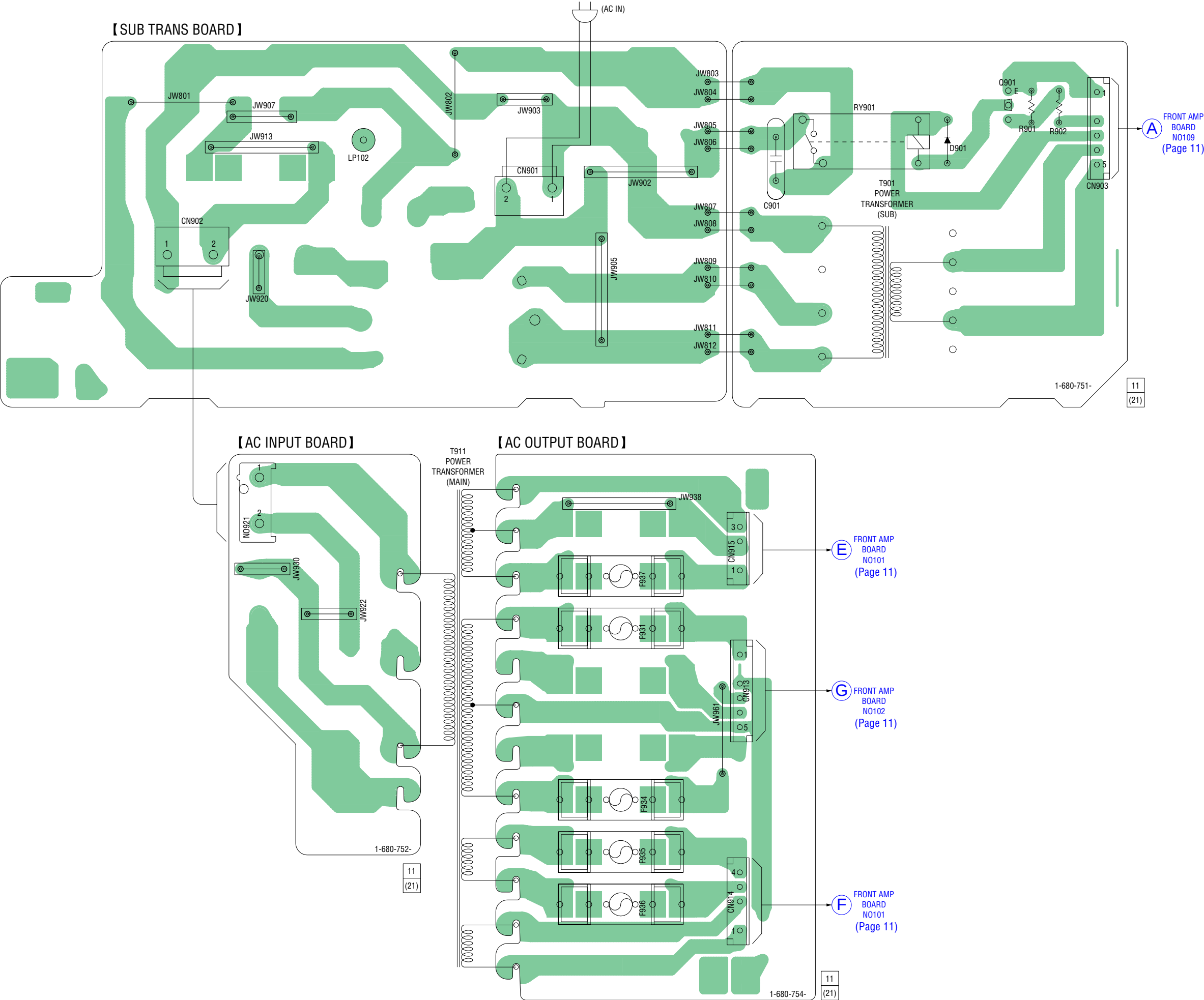
Ref. No.	Location
D701	B-11
D702	C-10
D703	C-8
D704	B-8
D705	B-7
D706	B-6
D781	A-6
Q701	C-6
Q702	C-6

5-6. SCHEMATIC DIAGRAM – CONTROL Section –

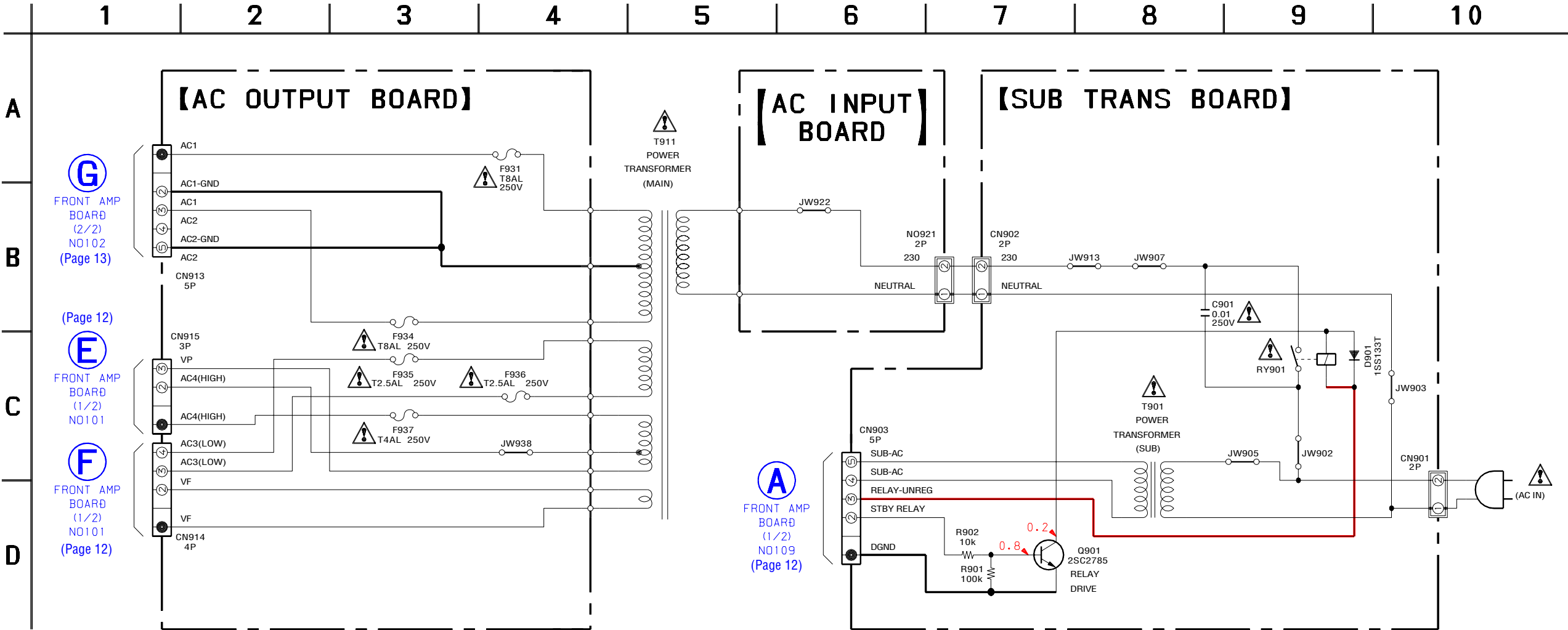


FRONT AMP BOARD (1/2) CN104 (Page 12)

5-7. PRINTED WIRING BOARDS – POWER Section – • See page 10 for Circuit Boards Location.



5-8. SCHEMATIC DIAGRAM – POWER Section –



5-9. IC PIN FUNCTION DESCRIPTION

• FRONT AMP BOARD IC310 PT8300-S (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	VSS	—	Ground terminal
2	RESET_B	I	Reset signal input terminal Not used
3	CLK	I	Serial data transfer clock signal input from the tuner unit (ST-S3)
4	LATCH	I	Serial data latch pulse input from the tuner unit (ST-S3)
5	LED C	O	LED drive signal output of the 2CH/MULTI C indicator (D706) “L”: LED on
6	LED B	O	LED drive signal output of the MOVIE MODE B indicator (D705) “L”: LED on
7	LED A	O	LED drive signal output of the MUSIC MODE A indicator (D704) “L”: LED on
8	LED EQ	O	LED drive signal output of the EQ indicator (D703) “L”: LED on
9	LED SUR	O	LED drive signal output of the SUR indicator (D702) “L”: LED on
10	LED BLU	O	LED drive signal output of the MULTI CHANNEL DECODING indicator (D781) “L”: LED on
11	HP SW	I	Headphone detection signal input terminal “H”: headphone on
12	PROTECT	I	Over load detection signal input for speaker output “L”: over load
13	LATCHO	O	Serial data latch pulse output terminal Not used (open)
14	CLKO	O	Serial data transfer clock signal output terminal Not used (open)
15	—	—	Not used (open)
16	—	—	Not used (fixed at “L”)
17	—	—	Not used (open)
18	MUTING	O	Muting on/off control signal output terminal “L”: muting
19	LED PW	O	LED drive signal output of the I/⏻ indicator (D701) “L”: LED on
20	SUR RY	O	Relay drive signal output for the surround speaker (rear and center) protection “H”: on Not used (fixed at “H”)
21	F RY	O	Relay drive signal output for the front speaker protection “H”: on
22	STK PW	O	Power amplifier on/off selection signal output terminal “L”: standby, “H”: on
23	—	—	Not used (open)
24	STBY RY	O	Standby relay drive signal output terminal “L”: standby, “H”: power on
25	DATA OUT	O	Serial data output to the tuner unit (ST-S3)
26	DATA IN	I	Serial data input from the tuner unit (ST-S3)
27	PULLUP	—	Not used (open)
28	VCC	—	Power supply terminal (+5V)

SECTION 6 EXPLODED VIEWS

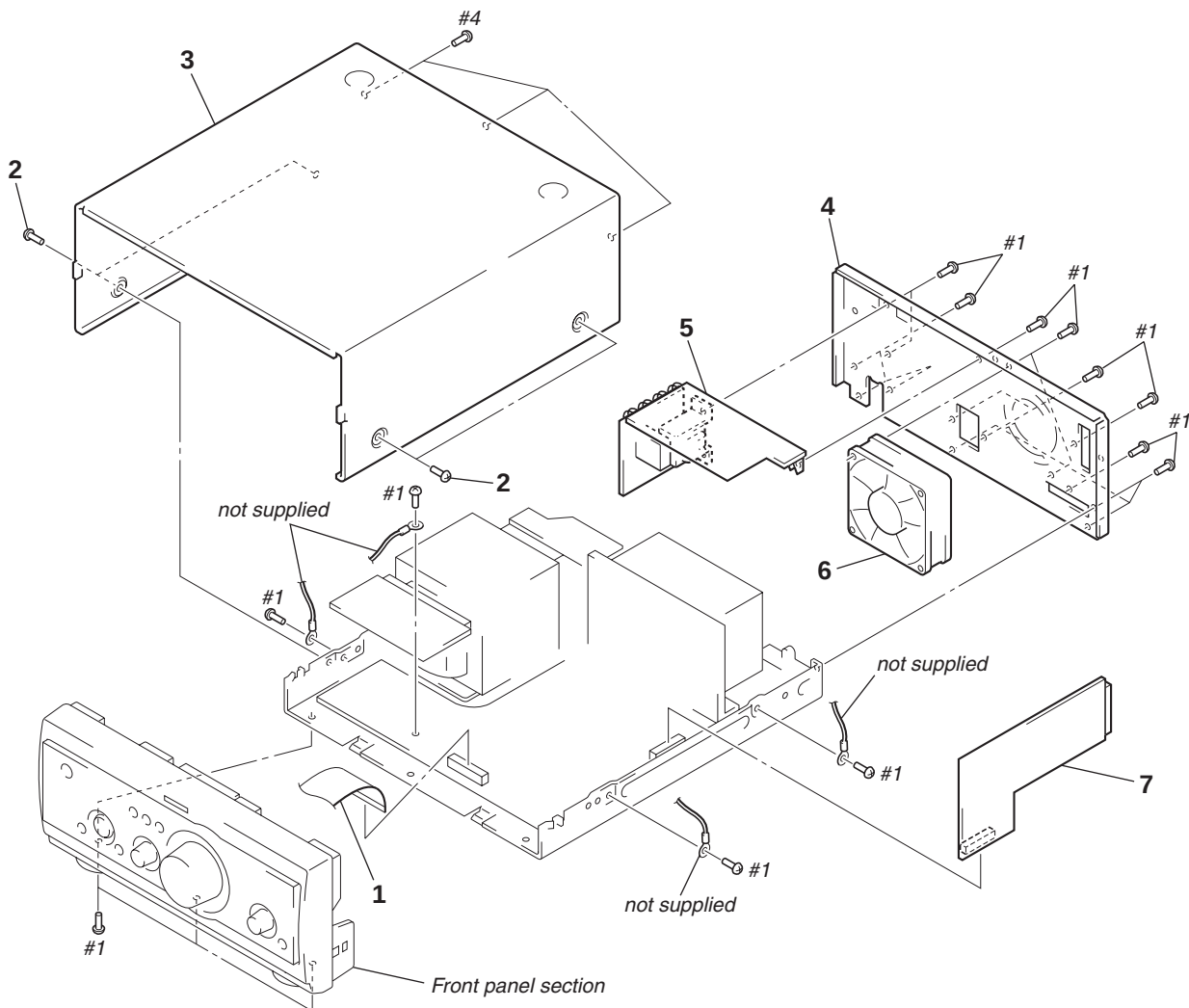
NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) . . . (RED)
 ↑ ↑
 Parts Color Cabinet's Color

- 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.
- Hardware (# mark) list is given in the last of the electrical parts list.

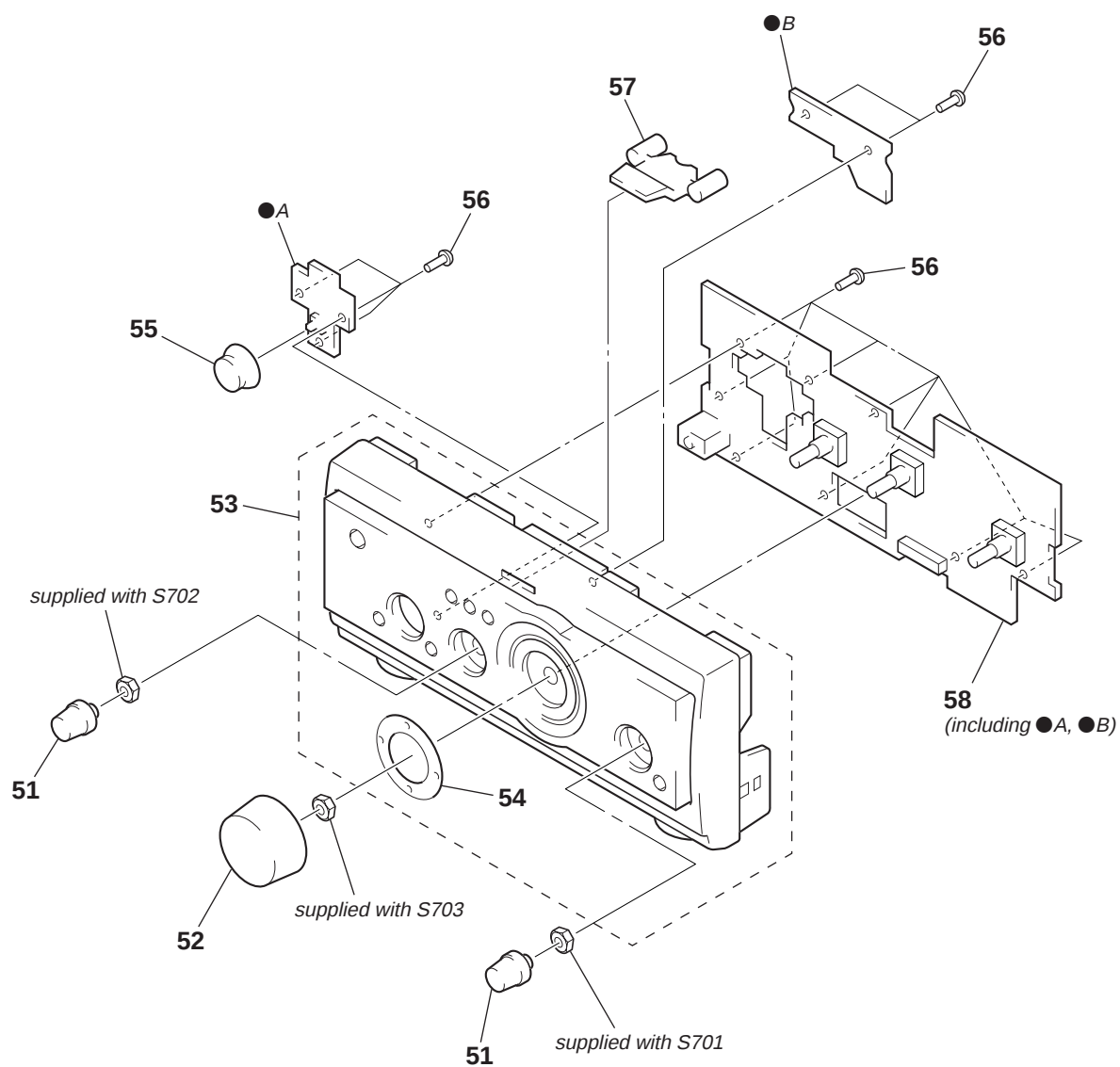
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

6-1. COVER SECTION



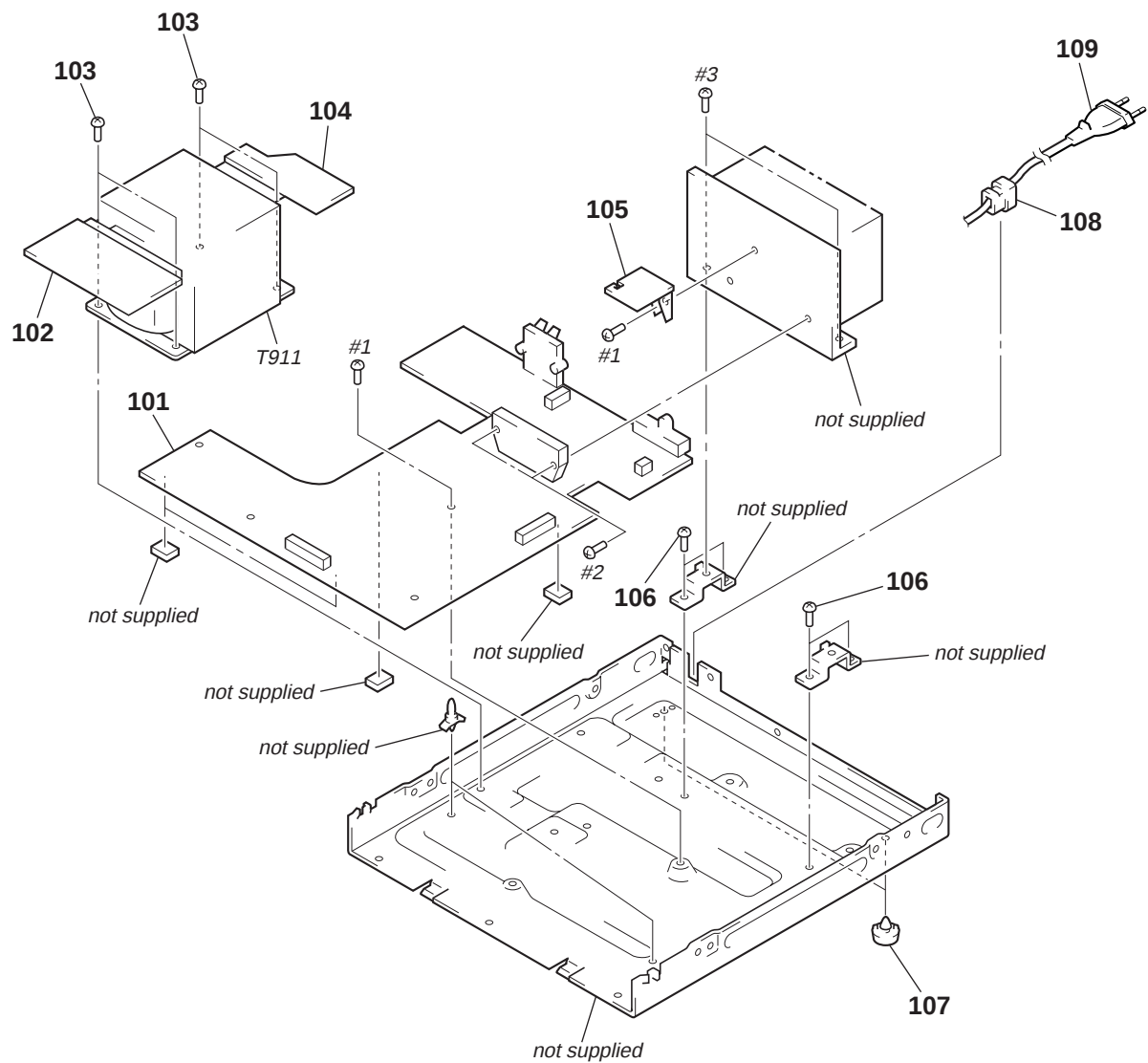
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	1-773-178-11	WIRE (FLAT TYPE) (23 CORE)		4	4-233-558-11	PANEL (2CH/VCD), BACK (UK)	
2	3-363-099-21	SCREW (CASE 3 TP2)		5	1-680-751-11	SUB TRANS BOARD	
3	4-232-336-11	COVER		6	1-763-072-11	FAN, D. C.	
4	4-233-558-01	PANEL (2CH/VCD), BACK (AEP)		7	1-680-755-11	RELAY BOARD	

6-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-232-342-01	KNOB (FUNC)		55	4-232-343-01	BUTTON (ENTER)	
52	4-232-338-01	KNOB (VOL)		56	4-951-620-01	SCREW (2.6X8), +BVTP	
53	X-4953-618-1	PANEL ASSY, FRONT		57	4-232-344-01	INDICATOR (BLUE)	
54	4-232-341-01	SHEET (VOL)		58	A-4476-220-A	PANEL BOARD, COMPLETE	

6-3. CHASSIS SECTION



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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	A-4476-205-A	FRONT AMP BOARD, COMPLETE		107	4-965-822-01	FOOT	
102	1-680-753-11	AC OUTPUT BOARD		* 108	3-703-244-00	BUSHING (2104), CORD	
103	4-900-386-01	SCREW		$\triangle$ 109	1-777-071-81	CORD, POWER (AEP)	
104	1-680-752-11	AC INPUT BOARD		$\triangle$ 109	1-790-226-11	CORD, POWER (UK)	
105	1-682-168-11	THP BOARD		$\triangle$ T911	1-435-936-11	TRANSFORMER, POWER	
106	3-970-608-01	SUMITITE (B3), +BV					

FRONT AMP

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
CN105	1-564-506-11	PLUG, CONNECTOR 3P		Q881	8-729-119-76	TRANSISTOR	2SA1175TP-HFE
CN106	1-573-846-11	CONNECTOR, BOARD TO BOARD 14P		Q883	8-729-119-78	TRANSISTOR	2SC2785TP-HFE
CN107	1-794-498-21	SOCKET, CONNECTOR 20P		Q891	8-729-119-78	TRANSISTOR	2SC2785TP-HFE
		(SYSTEM CONTROL 1 FROM ST-S3)					
		< DIODE >		Q892	8-729-119-78	TRANSISTOR	2SC2785TP-HFE
D801	8-719-911-19	DIODE 1SS133T-72		Q893	8-729-119-76	TRANSISTOR	2SA1175TP-HFE
D802	8-719-911-19	DIODE 1SS133T-72		Q894	8-729-119-78	TRANSISTOR	2SC2785TP-HFE
D821	8-719-911-19	DIODE 1SS133T-72		Q895	8-729-119-78	TRANSISTOR	2SC2785TP-HFE
D831	8-719-911-19	DIODE 1SS133T-72		Q896	8-729-119-78	TRANSISTOR	2SC2785TP-HFE
D851	8-719-911-19	DIODE 1SS133T-72					
D871	8-719-911-19	DIODE 1SS133T-72		Q897	8-729-119-78	TRANSISTOR	2SC2785TP-HFE
D881	8-719-911-19	DIODE 1SS133T-72		Q902	8-729-119-78	TRANSISTOR	2SC2785TP-HFE
D911	8-719-510-68	DIODE D5SBA204101		Q903	8-729-140-04	TRANSISTOR	2SB1116-TP-LK
D923	8-719-024-99	DIODE 11ES2-NTA2B		Q904	8-729-142-46	TRANSISTOR	2SC2001TP-LK
D924	8-719-024-99	DIODE 11ES2-NTA2B		Q961	8-729-140-84	TRANSISTOR	2SC1841TP-PAFAEA
D925	8-719-911-19	DIODE 1SS133T-72					
D926	8-719-911-19	DIODE 1SS133T-72		Q962	8-729-140-82	TRANSISTOR	2SA988TP-PAFAEA
D963	8-719-911-19	DIODE 1SS133T-72		Q963	8-729-140-84	TRANSISTOR	2SC1841TP-PAFAEA
D970	8-719-024-99	DIODE 11ES2-NTA2B					
D971	8-719-024-99	DIODE 11ES2-NTA2B					
D972	8-719-024-99	DIODE 11ES2-NTA2B					
D973	8-719-024-99	DIODE 11ES2-NTA2B					
D974	8-719-024-99	DIODE 11ES2-NTA2B					
D975	8-719-024-99	DIODE 11ES2-NTA2B					
D980	8-719-024-99	DIODE 11ES2-NTA2B					
D981	8-719-024-99	DIODE 11ES2-NTA2B					
D990	8-719-024-99	DIODE 11ES2-NTA2B					
D991	8-719-024-99	DIODE 11ES2-NTA2B					
D992	8-719-024-99	DIODE 11ES2-NTA2B					
D993	8-719-024-99	DIODE 11ES2-NTA2B					
D994	8-719-024-99	DIODE 11ES2-NTA2B					
D995	8-719-024-99	DIODE 11ES2-NTA2B					
D996	8-719-024-99	DIODE 11ES2-NTA2B					
D997	8-719-024-99	DIODE 11ES2-NTA2B					
		< GROUND TERMINAL >					
EPT901	1-537-770-21	TERMINAL BOARD, GROUND					
EPT902	1-537-770-21	TERMINAL BOARD, GROUND					
		< IC >					
IC310	6-800-467-01	IC PT8300-S					
IC801	8-749-016-94	IC STK402-090S					
IC923	8-759-595-88	IC NJM78L12A-T3					
IC924	8-759-708-05	IC NJM78L05A-T3					
		< COIL >					
L811	1-420-872-00	COIL, AIR-CORE					
L861	1-420-872-00	COIL, AIR-CORE					
		< TRANSISTOR >					
Q801	8-729-119-78	TRANSISTOR	2SC2785TP-HFE				
Q821	8-729-231-55	TRANSISTOR	2SC2878AB-TPE2				
Q822	8-729-900-63	TRANSISTOR	BN1F4M-TP				
Q841	8-729-140-84	TRANSISTOR	2SC1841TP-PAFAEA				
Q842	8-729-119-78	TRANSISTOR	2SC2785TP-HFE				
Q851	8-729-119-78	TRANSISTOR	2SC2785TP-HFE				
Q871	8-729-231-55	TRANSISTOR	2SC2878AB-TPE2				

Q881	8-729-119-76	TRANSISTOR	2SA1175TP-HFE			
Q883	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			
Q891	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			
Q892	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			
Q893	8-729-119-76	TRANSISTOR	2SA1175TP-HFE			
Q894	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			
Q895	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			
Q896	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			
Q897	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			
Q902	8-729-119-78	TRANSISTOR	2SC2785TP-HFE			
Q903	8-729-140-04	TRANSISTOR	2SB1116-TP-LK			
Q904	8-729-142-46	TRANSISTOR	2SC2001TP-LK			
Q961	8-729-140-84	TRANSISTOR	2SC1841TP-PAFAEA			
Q962	8-729-140-82	TRANSISTOR	2SA988TP-PAFAEA			
Q963	8-729-140-84	TRANSISTOR	2SC1841TP-PAFAEA			
		< RESISTOR >				
R801	1-249-417-11	CARBON	1K	5%	1/4W	
R802	1-249-438-11	CARBON	56K	5%	1/4W	
R803	1-249-410-11	CARBON	270	5%	1/4W	
R804	1-249-438-11	CARBON	56K	5%	1/4W	
△ R805	1-234-499-21	ENCAPSULATED COMPONENT	0.22	5W		
R806	1-249-417-11	CARBON	1K	5%	1/4W	
R807	1-249-431-11	CARBON	15K	5%	1/4W	
R808	1-249-441-11	CARBON	100K	5%	1/4W	
R809	1-260-076-11	CARBON	10	5%	1/2W	
R812	1-260-072-11	CARBON	4.7	5%	1/2W	
R814	1-249-437-11	CARBON	47K	5%	1/4W	
R815	1-249-437-11	CARBON	47K	5%	1/4W	
△ R821	1-216-455-11	METAL OXIDE	560	5%	2W	F
R825	1-249-402-11	CARBON	56	5%	1/4W	
R826	1-249-417-11	CARBON	1K	5%	1/4W	
R827	1-249-433-11	CARBON	22K	5%	1/4W	
R841	1-249-441-11	CARBON	100K	5%	1/4W	
R842	1-249-439-11	CARBON	68K	5%	1/4W	
R843	1-249-439-11	CARBON	68K	5%	1/4W	
R851	1-249-417-11	CARBON	1K	5%	1/4W	
R852	1-249-438-11	CARBON	56K	5%	1/4W	
R853	1-249-410-11	CARBON	270	5%	1/4W	
R854	1-249-438-11	CARBON	56K	5%	1/4W	
△ R855	1-234-499-21	ENCAPSULATED COMPONENT	0.22	5W		
R856	1-249-417-11	CARBON	1K	5%	1/4W	
R857	1-249-431-11	CARBON	15K	5%	1/4W	
R858	1-249-441-11	CARBON	100K	5%	1/4W	
R859	1-260-076-11	CARBON	10	5%	1/2W	
R862	1-260-072-11	CARBON	4.7	5%	1/2W	
△ R871	1-216-455-11	METAL OXIDE	560	5%	2W	F
R875	1-249-402-11	CARBON	56	5%	1/4W	
R876	1-249-417-11	CARBON	1K	5%	1/4W	
R877	1-249-433-11	CARBON	22K	5%	1/4W	
R878	1-249-425-11	CARBON	4.7K	5%	1/4W	
R879	1-249-441-11	CARBON	100K	5%	1/4W	
R880	1-247-903-00	CARBON	1M	5%	1/4W	
△ R881	1-216-456-00	METAL OXIDE	820	5%	2W	F
R883	1-249-437-11	CARBON	47K	5%	1/4W	
R885	1-249-429-11	CARBON	10K	5%	1/4W	
R887	1-249-441-11	CARBON	100K	5%	1/4W	

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

FRONT AMP

PANEL

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R889	1-249-429-11	CARBON	10K 5% 1/4W	A-4476-220-A PANEL BOARD, COMPLETE			
R891	1-249-438-11	CARBON	56K 5% 1/4W	*****			
R892	1-249-439-11	CARBON	68K 5% 1/4W	< CAPACITOR >			
R894	1-249-429-11	CARBON	10K 5% 1/4W	C701	1-162-306-11	CERAMIC	0.01uF 30% 16V
R895	1-249-429-11	CARBON	10K 5% 1/4W	C702	1-162-306-11	CERAMIC	0.01uF 30% 16V
R896	1-249-435-11	CARBON	33K 5% 1/4W	C703	1-162-306-11	CERAMIC	0.01uF 30% 16V
R897	1-249-433-11	CARBON	22K 5% 1/4W	C704	1-162-306-11	CERAMIC	0.01uF 30% 16V
R898	1-249-425-11	CARBON	4.7K 5% 1/4W	C705	1-162-306-11	CERAMIC	0.01uF 30% 16V
R903	1-249-429-11	CARBON	10K 5% 1/4W	C706	1-162-306-11	CERAMIC	0.01uF 30% 16V
R904	1-249-441-11	CARBON	100K 5% 1/4W	C710	1-162-294-31	CERAMIC	0.001uF 10% 50V
R905	1-249-421-11	CARBON	2.2K 5% 1/4W	C711	1-162-306-11	CERAMIC	0.01uF 30% 16V
R906	1-249-417-11	CARBON	1K 5% 1/4W	C712	1-162-294-31	CERAMIC	0.001uF 10% 50V
R907	1-249-421-11	CARBON	2.2K 5% 1/4W	C781	1-162-306-11	CERAMIC	0.01uF 30% 16V
R908	1-249-421-11	CARBON	2.2K 5% 1/4W	< CONNECTOR >			
R910	1-247-807-31	CARBON	100 5% 1/4W	CN700	1-784-745-11	CONNECTOR, FFC 23P	
R911	1-247-807-31	CARBON	100 5% 1/4W	< DIODE >			
R912	1-247-807-31	CARBON	100 5% 1/4W	D701	8-719-058-04	LED SEL5223S-TP15 (I/Ⓢ)	
R913	1-249-437-11	CARBON	47K 5% 1/4W	D702	8-719-057-97	LED SEL5923A-TP15 (SUR)	
R914	1-247-807-31	CARBON	100 5% 1/4W	D703	8-719-057-97	LED SEL5923A-TP15 (EQ)	
R915	1-249-437-11	CARBON	47K 5% 1/4W	D704	8-719-057-97	LED SEL5923A-TP15 (MUSIC MODE, A)	
R916	1-247-807-31	CARBON	100 5% 1/4W	D705	8-719-057-97	LED SEL5923A-TP15 (MOVIE MODE, B)	
R917	1-249-411-11	CARBON	330 5% 1/4W	D706	8-719-057-97	LED SEL5923A-TP15 (2CH/MULTI, C)	
R918	1-249-411-11	CARBON	330 5% 1/4W	D781	8-719-084-07	LED SEL5E20CTP15	(MULTI CHANNEL DECODING)
R919	1-249-411-11	CARBON	330 5% 1/4W	< JACK >			
R920	1-249-411-11	CARBON	330 5% 1/4W	J703	1-691-293-21	JACK (PHONES)	
R921	1-249-411-11	CARBON	330 5% 1/4W	< TRANSISTOR >			
R923	1-249-417-11	CARBON	1K 5% 1/4W	Q701	8-729-900-80	TRANSISTOR	BA1A4M-TP
R924	1-249-437-11	CARBON	47K 5% 1/4W	Q702	8-729-900-63	TRANSISTOR	BN1F4M-TP
R925	1-249-437-11	CARBON	47K 5% 1/4W	< RESISTOR >			
R926	1-249-429-11	CARBON	10K 5% 1/4W	R707	1-249-411-11	CARBON	330 5% 1/4W
R927	1-249-437-11	CARBON	47K 5% 1/4W	R708	1-247-807-31	CARBON	100 5% 1/4W
R951	1-249-441-11	CARBON	100K 5% 1/4W	R709	1-249-410-11	CARBON	270 5% 1/4W
R952	1-249-441-11	CARBON	100K 5% 1/4W	R710	1-249-413-11	CARBON	470 5% 1/4W
△ R963	1-212-881-11	FUSIBLE	100 5% 1/4W F	R711	1-249-414-11	CARBON	560 5% 1/4W
△ R964	1-212-881-11	FUSIBLE	100 5% 1/4W F	R712	1-249-416-11	CARBON	820 5% 1/4W
R965	1-249-431-11	CARBON	15K 5% 1/4W	R713	1-249-417-11	CARBON	1K 5% 1/4W
R966	1-249-435-11	CARBON	33K 5% 1/4W	R714	1-249-418-11	CARBON	1.2K 5% 1/4W
R967	1-249-429-11	CARBON	10K 5% 1/4W	R715	1-249-419-11	CARBON	1.5K 5% 1/4W
△ R968	1-202-972-61	FUSIBLE	1 5% 1/4W F	R716	1-249-421-11	CARBON	2.2K 5% 1/4W
R969	1-249-433-11	CARBON	22K 5% 1/4W	R717	1-249-422-11	CARBON	2.7K 5% 1/4W
R970	1-249-441-11	CARBON	100K 5% 1/4W	R718	1-249-424-11	CARBON	3.9K 5% 1/4W
R971	1-249-421-11	CARBON	2.2K 5% 1/4W	R719	1-249-426-11	CARBON	5.6K 5% 1/4W
R972	1-249-433-11	CARBON	22K 5% 1/4W	R720	1-249-428-11	CARBON	8.2K 5% 1/4W
R973	1-249-421-11	CARBON	2.2K 5% 1/4W	R721	1-249-431-11	CARBON	15K 5% 1/4W
R974	1-249-429-11	CARBON	10K 5% 1/4W	< SWITCH >			
R991	1-249-417-11	CARBON	1K 5% 1/4W	S701	1-473-534-11	ENCODER, ROTARY (FUNCTION)	
R992	1-249-417-11	CARBON	1K 5% 1/4W	S702	1-473-534-11	ENCODER, ROTARY (FILE SELECT)	
< RELAY >				S703	1-473-392-11	ENCODER, ROTARY (VOLUME)	
RY881	1-515-920-11	RELAY		S705	1-771-410-21	SWITCH, TACTILE (I/Ⓢ)	
< TERMINAL >				S710	1-771-410-21	SWITCH, TACTILE (SUR)	
TM101	1-694-677-12	TERMINAL BOARD (4P)					
(FRONT SPEAKER IMPEDANCE USE 6-16Ω)							

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PANEL

RELAY

SUB TRANS

THP

Ref. No.	Part No.	Description	Remark
S711	1-771-410-21	SWITCH, TACTILE (EQ)	
S712	1-771-410-21	SWITCH, TACTILE (MUSIC MODE, A)	
S713	1-771-410-21	SWITCH, TACTILE (MOVIE MODE, B)	
S714	1-771-410-21	SWITCH, TACTILE (2CH/MULTI, C)	
S715	1-771-410-21	SWITCH, TACTILE (DIGITAL)	
S718	1-771-410-21	SWITCH, TACTILE (SET UP)	
S719	1-771-410-21	SWITCH, TACTILE (EQ ON/OFF)	
S723	1-771-879-11	SWITCH, TACTILE (ENTER)	

	1-680-755-11	RELAY BOARD	

		< CONNECTOR >	
CN110	1-793-351-41	SOCKET, CONNECTOR 19P	
		(SYSTEM CONTROL 2 FROM ST-S3)	
* CN111	1-573-828-11	CONNECTOR, BOARD TO BOARD 14P	

	1-680-751-11	SUB TRANS BOARD	

		< CAPACITOR >	
△ C901	1-113-925-11	CERAMIC 0.01uF 20% 250V	
		< CONNECTOR >	
CN901	1-564-321-00	PIN, CONNECTOR 2P	
* CN902	1-564-321-21	PIN, CONNECTOR 2P	
CN903	1-691-767-11	PLUG (MICRO CONNECTOR) 5P	
		< DIODE >	
D901	8-719-911-19	DIODE 1SS133T-72	
		< TRANSISTOR >	
Q901	8-729-119-78	TRANSISTOR 2SC2785TP-HFE	
		< RESISTOR >	
R901	1-249-441-11	CARBON 100K 5% 1/4W	
R902	1-249-429-11	CARBON 10K 5% 1/4W	
		< RELAY >	
△ RY901	1-755-276-11	RELAY, POWER	
		< TRANSFORMER >	
△ T901	1-435-824-11	TRANSFORMER, POWER	

	1-682-168-11	THP BOARD	

		< CONNECTOR >	
* CN999	1-564-517-11	PLUG, CONNECTOR 2P	
		< THERMISTOR (POSITIVE) >	
THP841	1-807-796-11	THERMISTOR	

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	

1	1-773-178-11	WIRE (FLAT TYPE) (23 CORE)	
6	1-763-072-11	FAN, D. C.	
△ 109	1-777-071-81	CORD, POWER (AEP)	
△ 109	1-790-226-11	CORD, POWER (UK)	
△ T911	1-435-936-11	TRANSFORMER, POWER	

		HARDWARE LIST	

#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#2	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
#3	7-685-872-09	SCREW +BVTT 3X8 (S)	
#4	7-685-871-01	SCREW +BVTT 3X6 (S)	

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MEMO

REVISION HISTORY

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