

SCD-C333ES

SERVICE MANUAL

US Model
Canadian Model



Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM59-DVBU5
Optical Pick-up Type	KHM-230AAA/J1NP

SPECIFICATIONS

When a super audio CD is played

Playing frequency range 2 Hz to 100 kHz
Frequency response 2 Hz to 50 kHz (–3 dB)
Dynamic range 103 dB or more

Total harmonic distortion rate
0.0015 % or less

Wow and flutter Value of measurable limit (± 0.001 %
W. PEAK) or less

When a CD is played

Frequency response 2 Hz to 20 kHz
Dynamic range 99 dB or more

Total harmonic distortion rate
0.002 % or less

Wow and flutter Value of measurable limit (± 0.001 %
W. PEAK) or less

Output connector

	Jack type	Output level	Load impedance
ANALOG OUT	Phono jacks	2 Vrms (at 50 kilohms)	Over 10 kilohms
DIGITAL (CD) OUT OPTICAL*	Square optical output connector	–18 dBm	(Light emitting wave length: 660 nm)
DIGITAL (CD) OUT COAXIAL*	Coaxial output connector	0.5 Vp-p	75 ohms

	Jack type	Output level	Load impedance
PHONES	Stereo phone jack	10 mW	32 ohms

*Output only the audio signals of the CD

General

Laser radiant power: 5.47 μ W at 650 nm

*These output is the value measured at a distance of about
200mm from the objective lens surface on the optical pick-up.

Power requirements 120 V AC, 60 Hz

Power consumption 28 W

Dimensions (w/h/d) 430 $\times$ 138 $\times$ 409 mm
(17 $\times$ 5 1/2 $\times$ 16 1/8 in.)
incl. projecting parts

Mass (approx.) 10.5 kg (23 lbs 3 oz.)

Supplied accessories

- Audio connecting cord
(phono jack $\times$ 2 $\leftrightarrow$ phono jack $\times$ 2) (1)
- Remote commander (remote) RM-SC300 (1)
- R06 (size-AA) batteries (2)

Design and specifications are subject to change without notice.

SUPER AUDIO CD PLAYER

SONY®

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SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks 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

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 2V AC range are suitable. (See Fig. A)

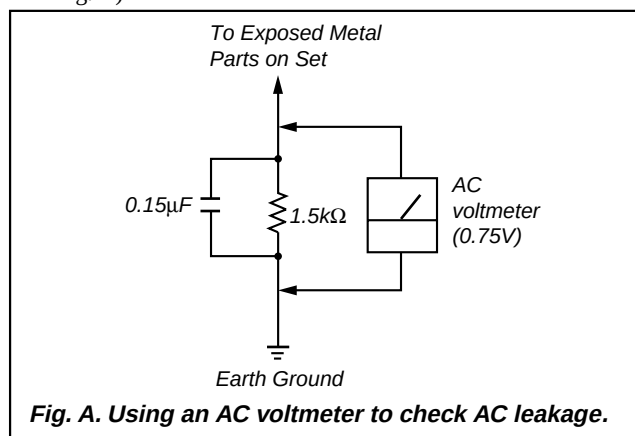


Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK $\triangle$ 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.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE $\triangle$ 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.

SECTION 1

SERVICING NOTES (1)

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

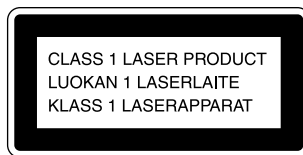
NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens. The emission check enables continuous checking of the S curve.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This appliance is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.



LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the "S curve check" in "CD section adjustment" and check that the S curve waveform is output three times.

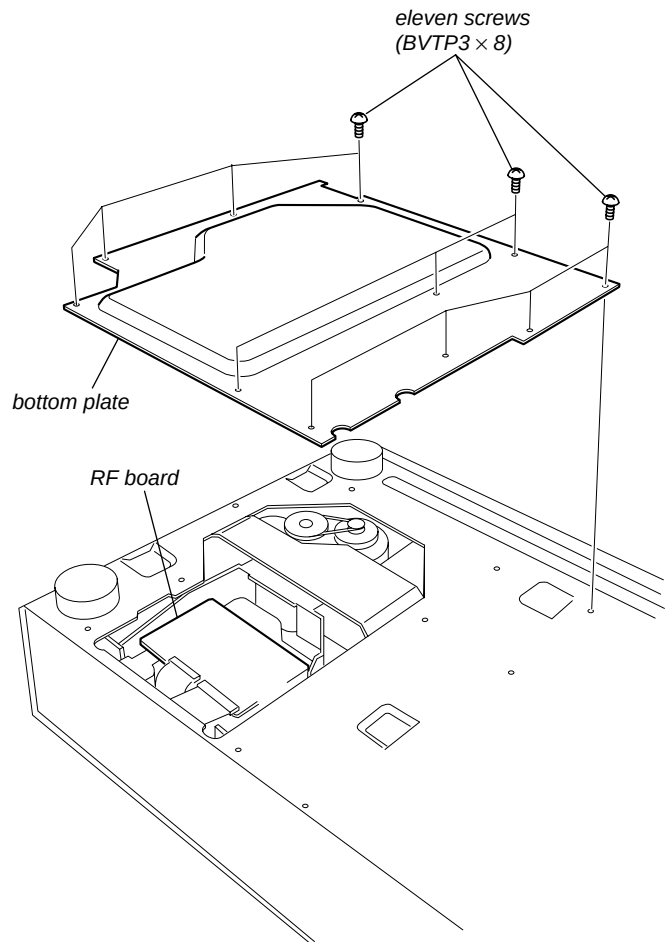
Notes on chip component replacement

- 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.

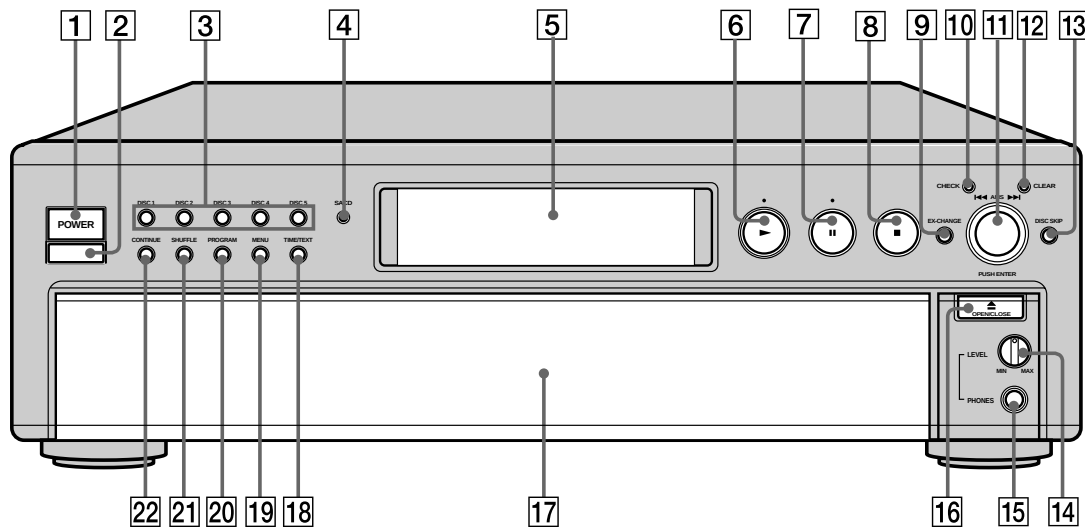
When the bottom plate is removed, the RF board can be checked.



SECTION 2 GENERAL

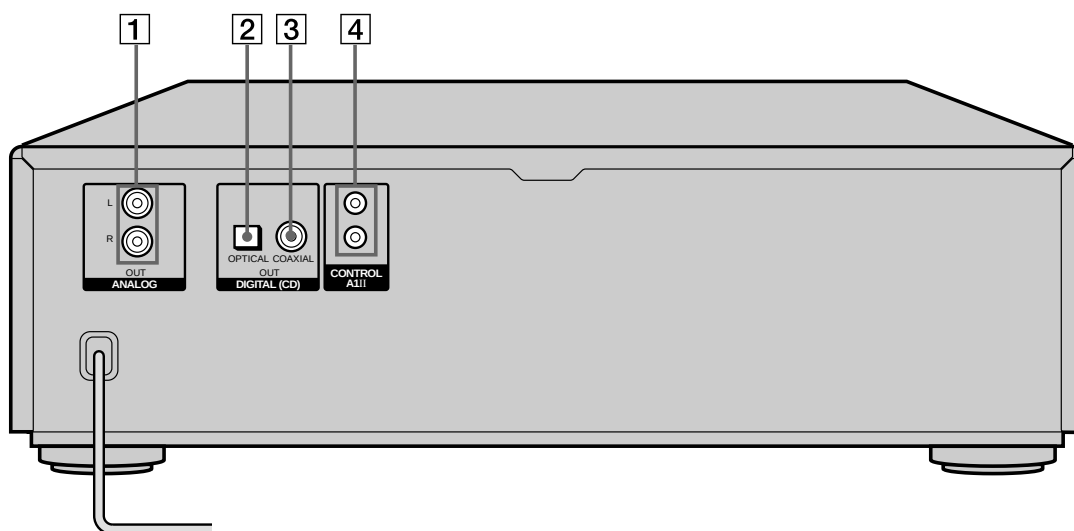
This section is extracted from instruction manual.

Front Panel Parts Descriptions



- 1** POWER switch (11)
Press to turn on / off the player.
- 2** Remote sensor (4)
- 3** DISC 1-5 button (12)
Press to select the disc.
- 4** SACD/CD button (with an LED) (10)
Each time you press the button while the Hybrid disc (page 11) is loaded, the layer changes between an HD layer (the LED turns on) and CD layer (the LED turns off).
- 5** Display window (13)
Shows various information.
- 6** ► button (12)
Press to start play.
► indicator
Lights up during playback.
- 7** || button (12)
Press to pause play.
|| indicator
Lights up during pause.
- 8** ■ button (12)
Press to stop play.
- 9** EX-CHANGE button (15)
Press to replace discs while playing a disc.
- 10** CHECK button (19)
Press to check the programmed order.
- 11** ◀◀AMS▶▶ dial (AMS: Automatic Music Sensor) (12)
When you turn the ◀◀AMS▶▶ dial counterclockwise by one click, you go back to the preceding track; when you turn the ◀◀AMS▶▶ dial clockwise by one click, you go to the succeeding track.
- 12** CLEAR button (20)
Press to delete a programmed track number.
- 13** DISC SKIP button (11)
Press to select the disc.
- 14** PHONE LEVEL control
Adjust the headphones volume.
- 15** PHONES jack
Connect the headphones.
- 16** ◀ OPEN/CLOSE button (11)
Press to open / close the disc tray.
- 17** Disc tray (11)
Press ◀ OPEN / CLOSE to open / close the disc tray.
- 18** TIME/TEXT button (13)
Each time you press the button, the playing time of the track, the total remaining time on the disc, or TEXT information appears in the display.
- 19** MENU button (5)
Press to enter the menu.
- 20** PROGRAM button (19)
Press to select Program Play.
- 21** SHUFFLE button (18)
Press to select Shuffle Play.
- 22** CONTINUE button (12)
Press to resume normal play from Shuffle Play or Program Play.

Rear Panel Parts Descriptions



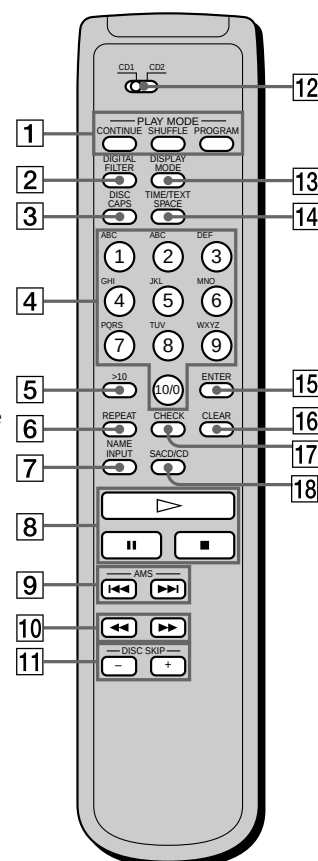
- 1** ANALOG OUT jacks (5)
Connect to an audio component using the audio connecting cord.
- 2** DIGITAL (CD) OUT OPTICAL connector (5)
Connect to an audio component using an optical digital cable.
- 3** DIGITAL (CD) OUT COAXIAL connector (5)
Connect to an audio component using the coaxial digital cable.

- 4** CONTROL A1 II jack (5)
Connect to the Sony audio component using the monaural (2P) mini-plug cord.

Note
Only the audio signals of the CD can be output from the DIGITAL (CD) OUT connectors shown in **2** and **3**. Those of the Super Audio CD cannot be output through DIGITAL (CD) OUT.

Remote Parts Descriptions

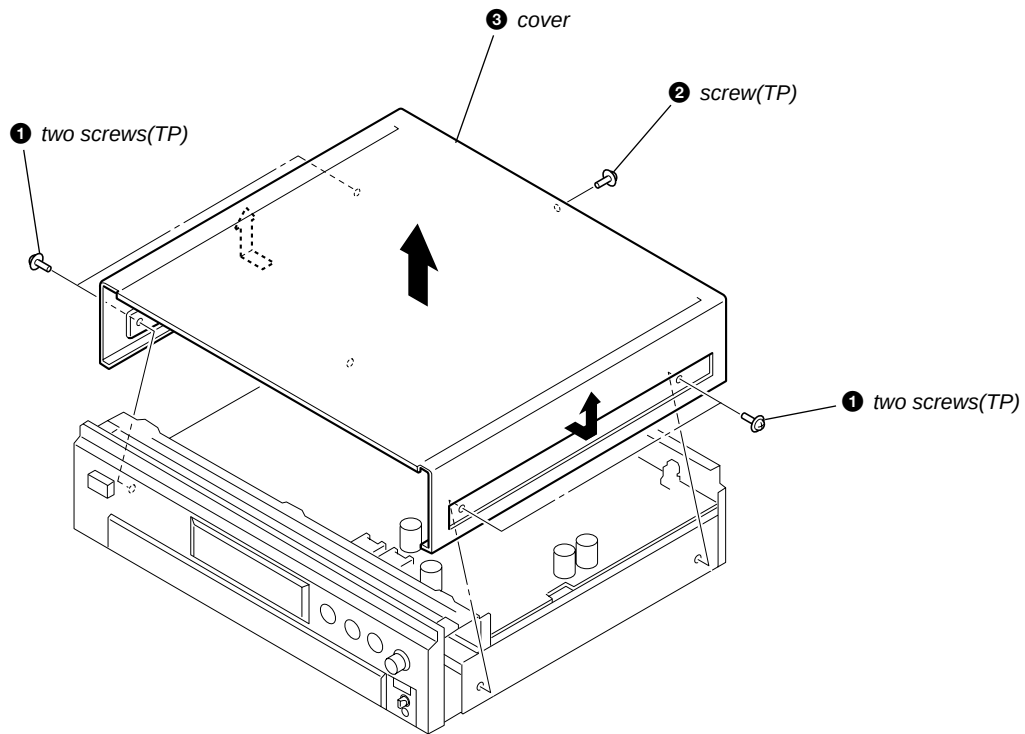
- 1** CONTINUE button (12)
Press to resume normal play from Shuffle Play or Program Play.
- SHUFFLE button (18)
Press to select Shuffle Play.
- PROGRAM button (19)
Press to select Program Play.
- 2** DIGITAL FILTER button (20)
Press to select the digital filter type when a CD is played.
- 3** DISC/CAPS button (15, 23)
Press to select the disc.
Press to select the capital letter.
- 4** Number buttons (15)
Press to enter the track numbers.
- 5** >10 button (16)
Press to locate a track numbered over 10.
- 6** REPEAT button (17)
Press repeatedly to play all tracks or only one track on the disc.
- 7** NAME INPUT button (23)
Press to enter the name input mode.
- 8** ▷ button (12)
Press to start play.
■ button (12)
Press to pause play.
■ button (12)
Press to stop play.
- 9** AMS ◀▶/▶▶ (AMS: Automatic Music Sensor) buttons (16)
Press to locate a specific track.
- 10** ◀▶▶▶ buttons (16)
Press to locate a portion you want to play within a track.
- 11** DISC SKIP +/- buttons (11)
Press to select the disc.
- 12** CD1/2 (COMMAND MODE) switch (5)
Select the command mode.
- 13** DISPLAY MODE button (13)
Press to turn off the information.
- 14** TIME/TEXT/SPACE button (13, 23)
Each time you press the button, the playing time of the track, the total remaining time on the disc, or TEXT information appears in the display.
Press to insert a space.
- 15** ENTER button (23)
Press to decide the selection.
- 16** CLEAR button (19)
Press to delete a programmed track number.
- 17** CHECK button (19)
Press to check the programmed order.
- 18** SACD/CD button (10)
Each time you press the button while the Hybrid disc (page 11) is loaded, the layer changes between an HD layer (the SACD/CD LED turns on) and CD layer (the SACD/CD LED turns off).



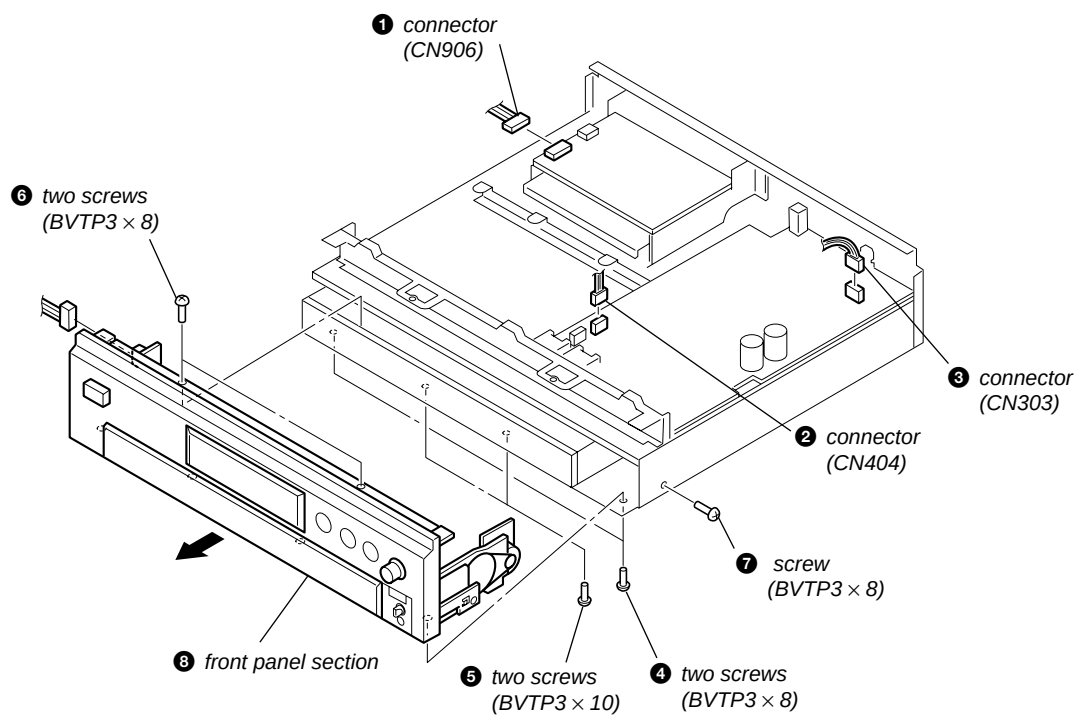
SECTION 3 DISASSEMBLY

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

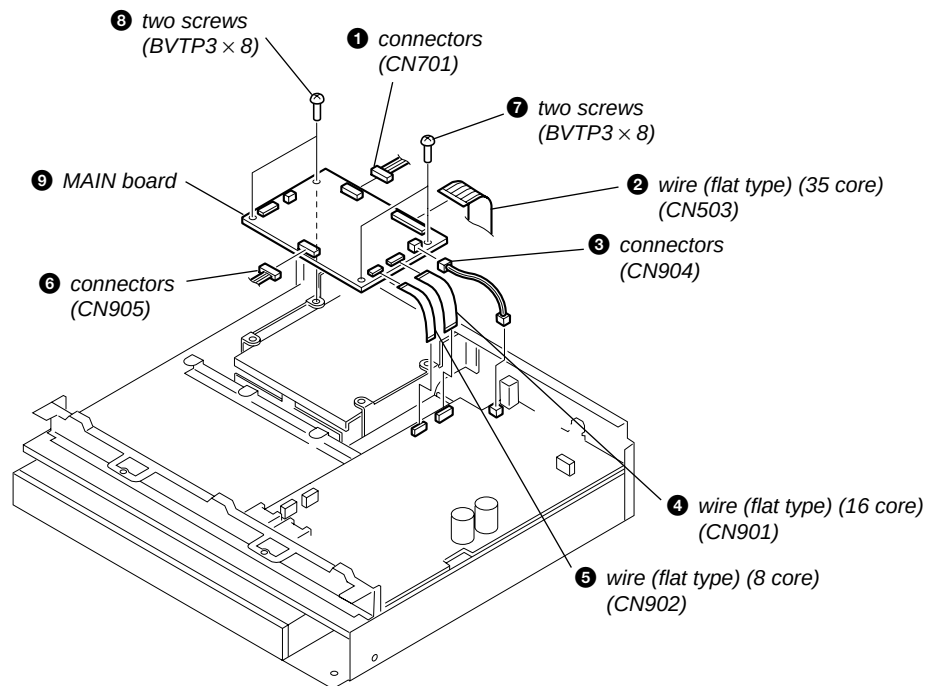
3-1. COVER



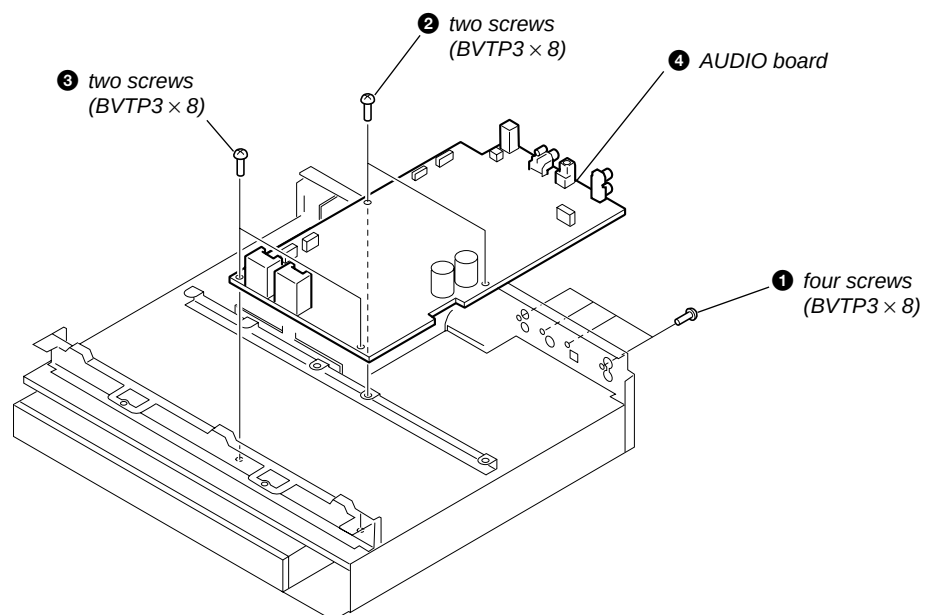
3-2. FRONT PANEL SECTION



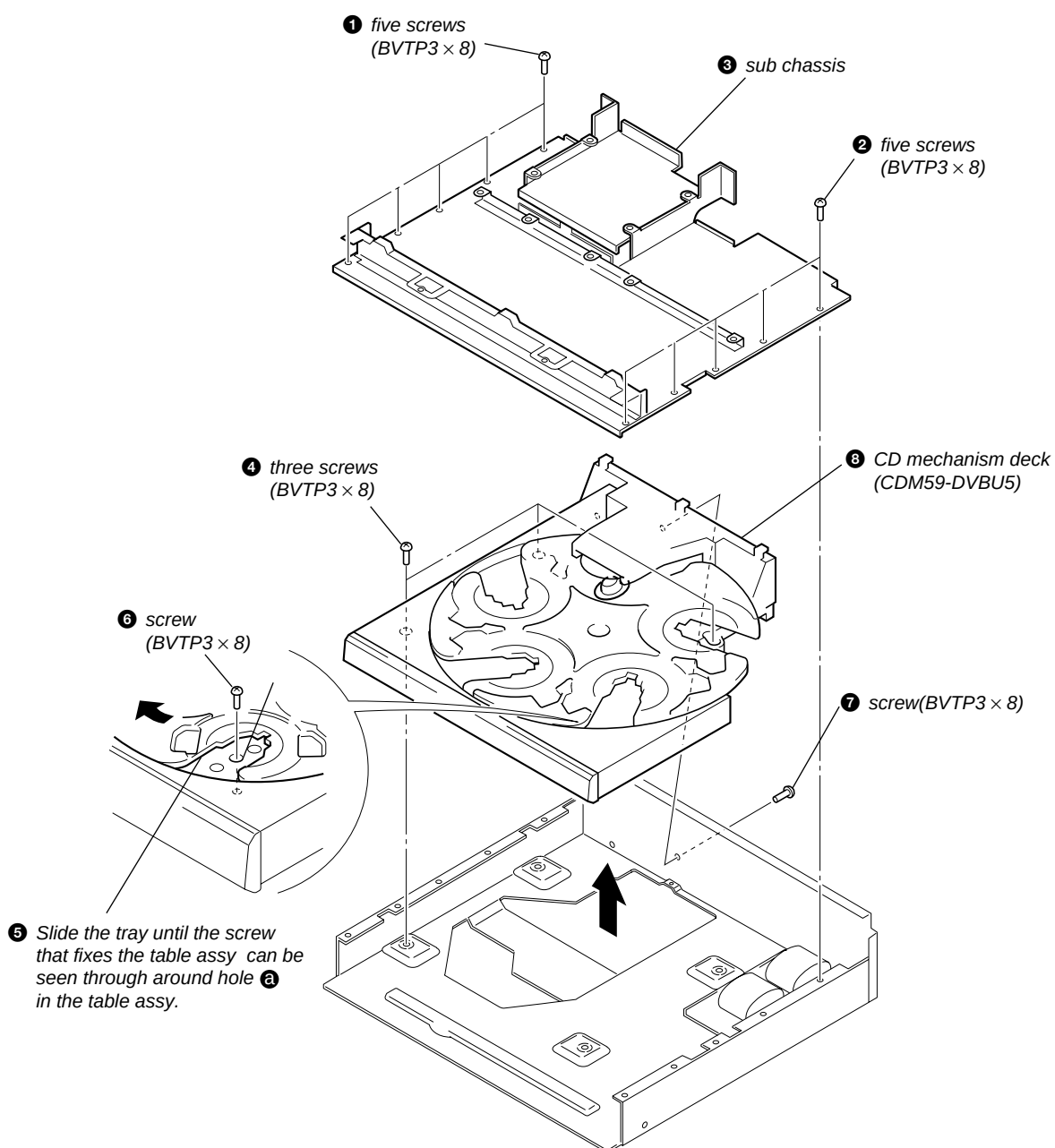
3-3. MAIN BOARD



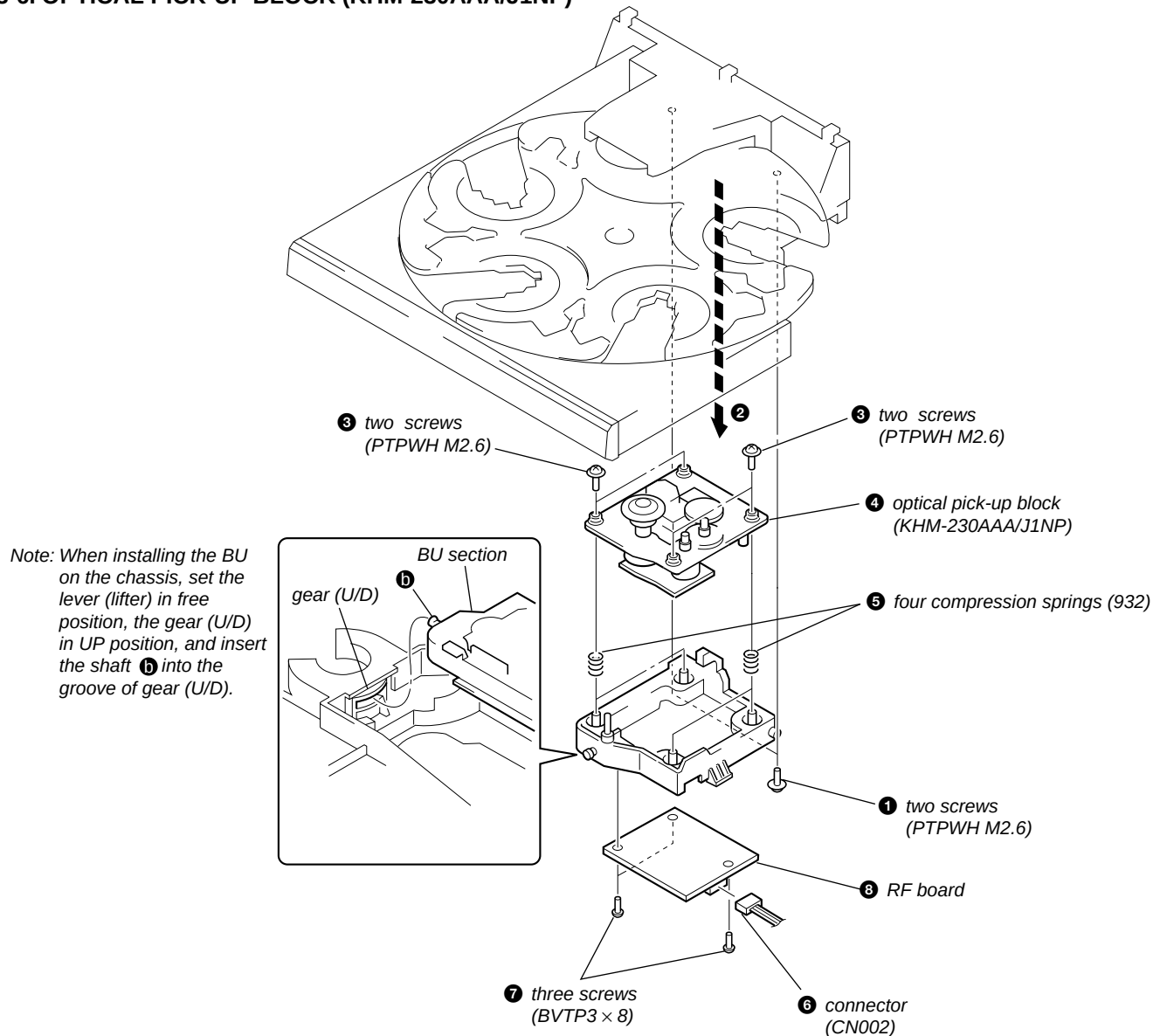
3-4. AUDIO BOARD



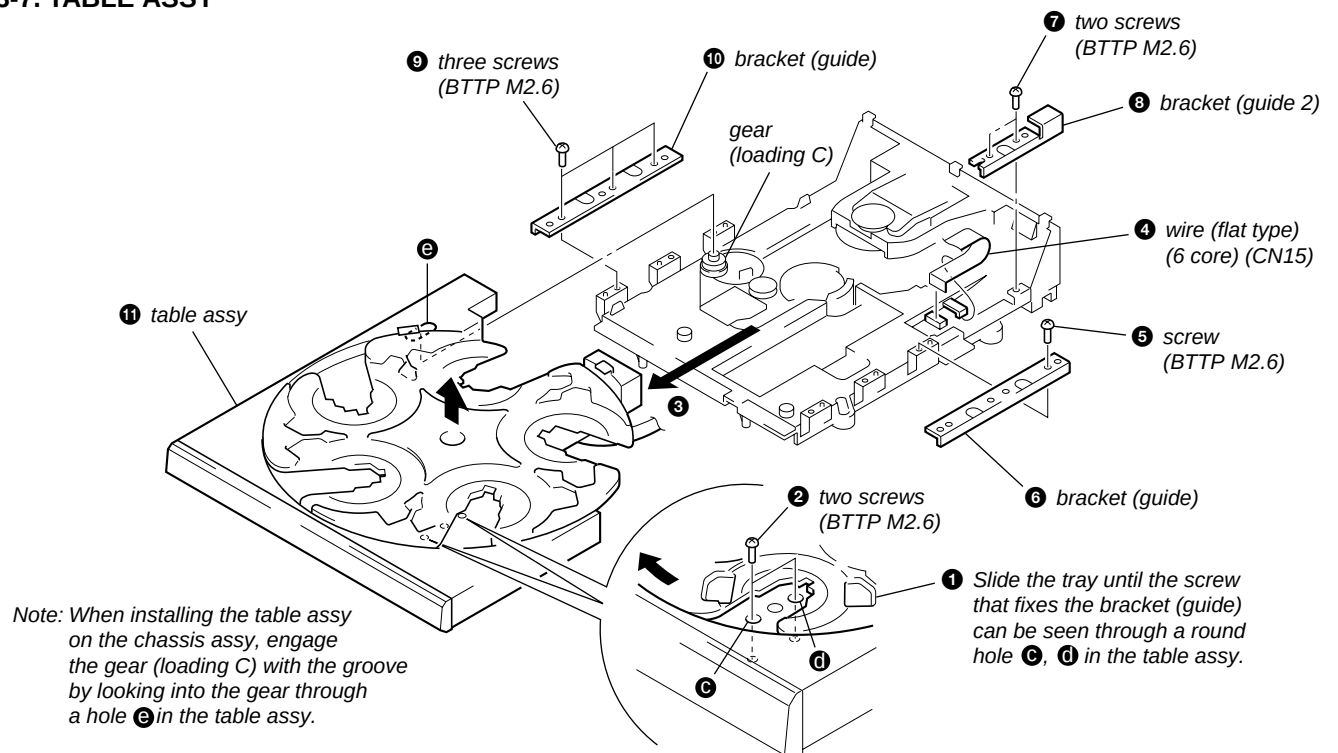
3-5. CD MECHANISM DECK (CDM59-DVBU5)



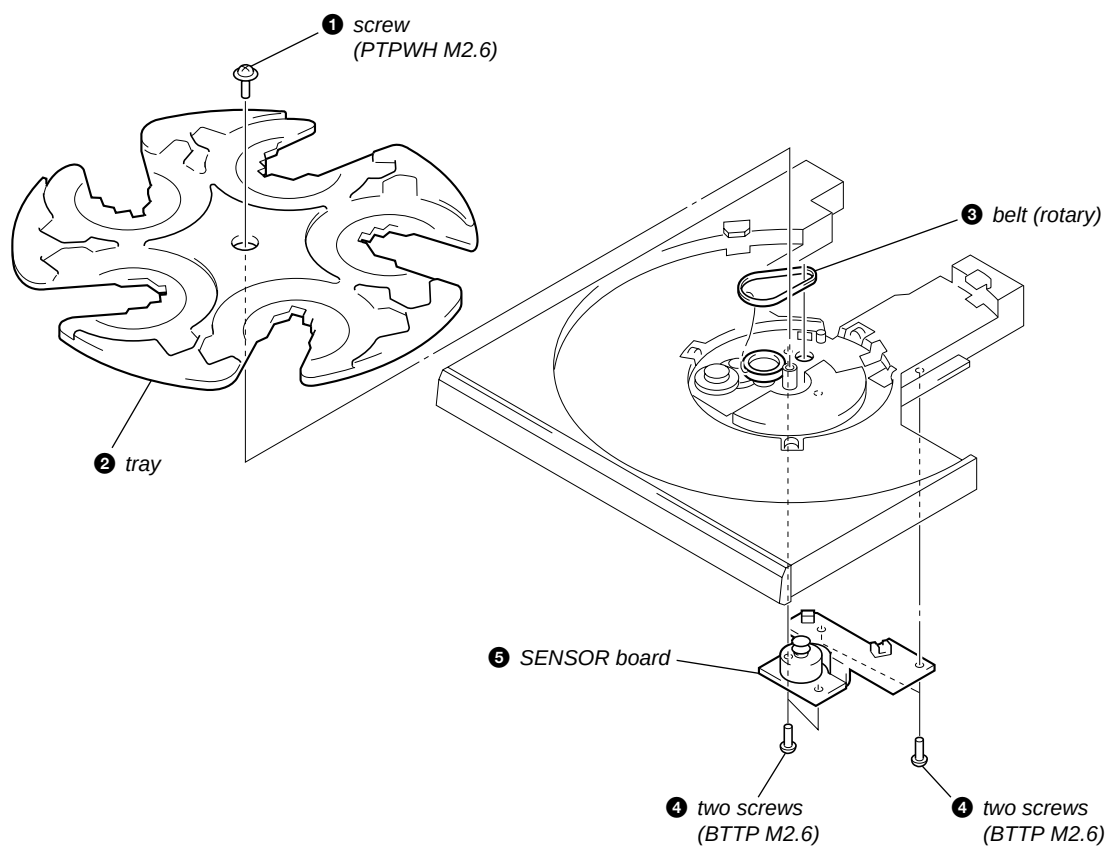
3-6. OPTICAL PICK-UP BLOCK (KHM-230AAA/J1NP)



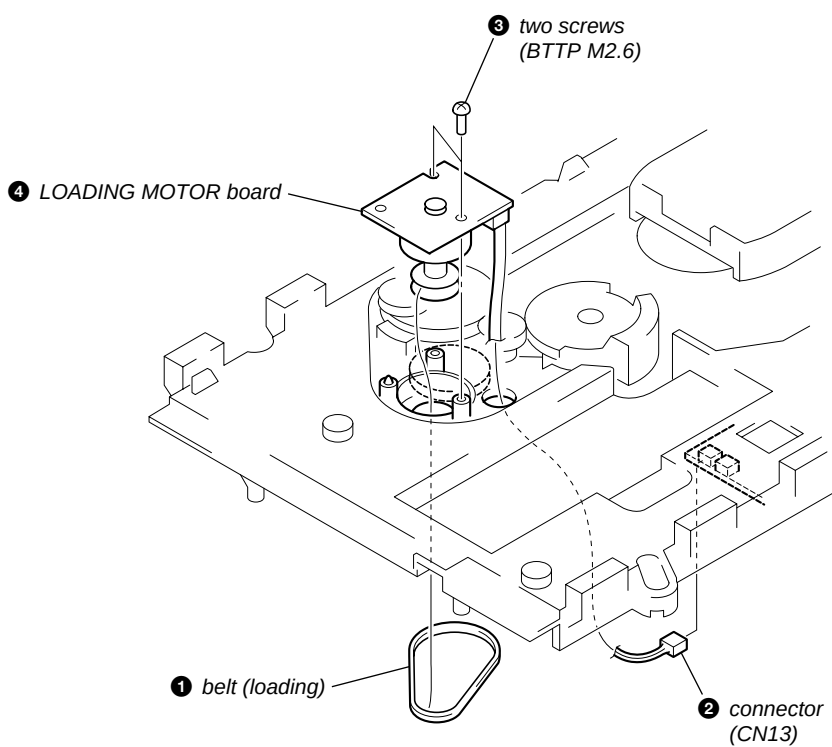
3-7. TABLE ASSY



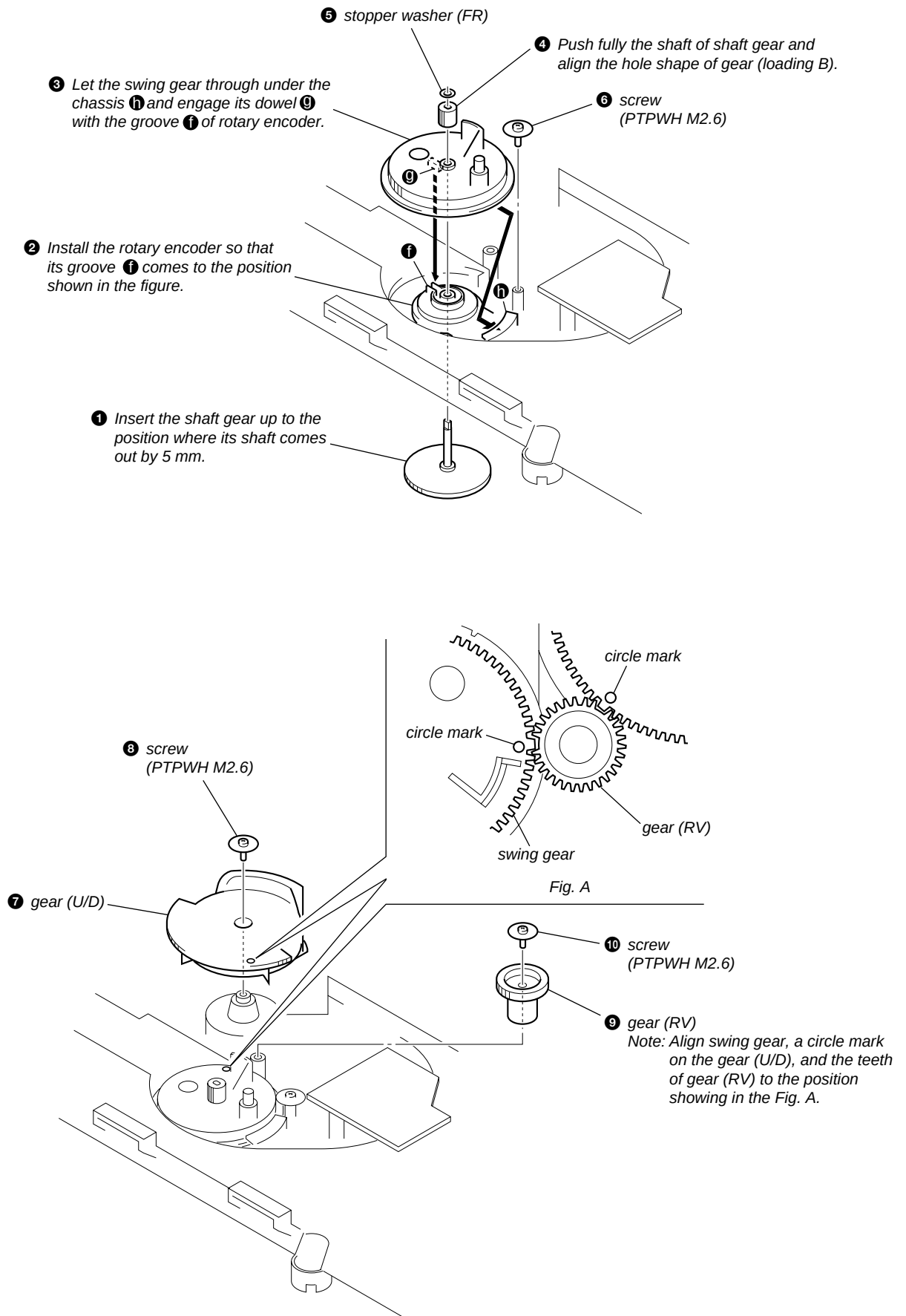
3-8. TRAY, SENSOR BOARD



3-9. LOADING MOTOR BOARD



3-10. ADJUSTING PHASE OF SWING GEAR AND GEAR (U/D)



SECTION 4 DIAGRAMS

NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

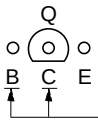
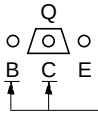
Note on Printed Wiring Board:

- — : 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: Parts on the pattern face side seen from the pattern face are indicated.
(A Side)
Parts face side: Parts on the parts face side seen from the parts face are indicated.
(B Side)

- Indication of transistor



Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF: μF 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.
- Δ : internal component.
- $\square$: panel designation.
- $\square$ with a wavy line : fusible resistor.

Note:

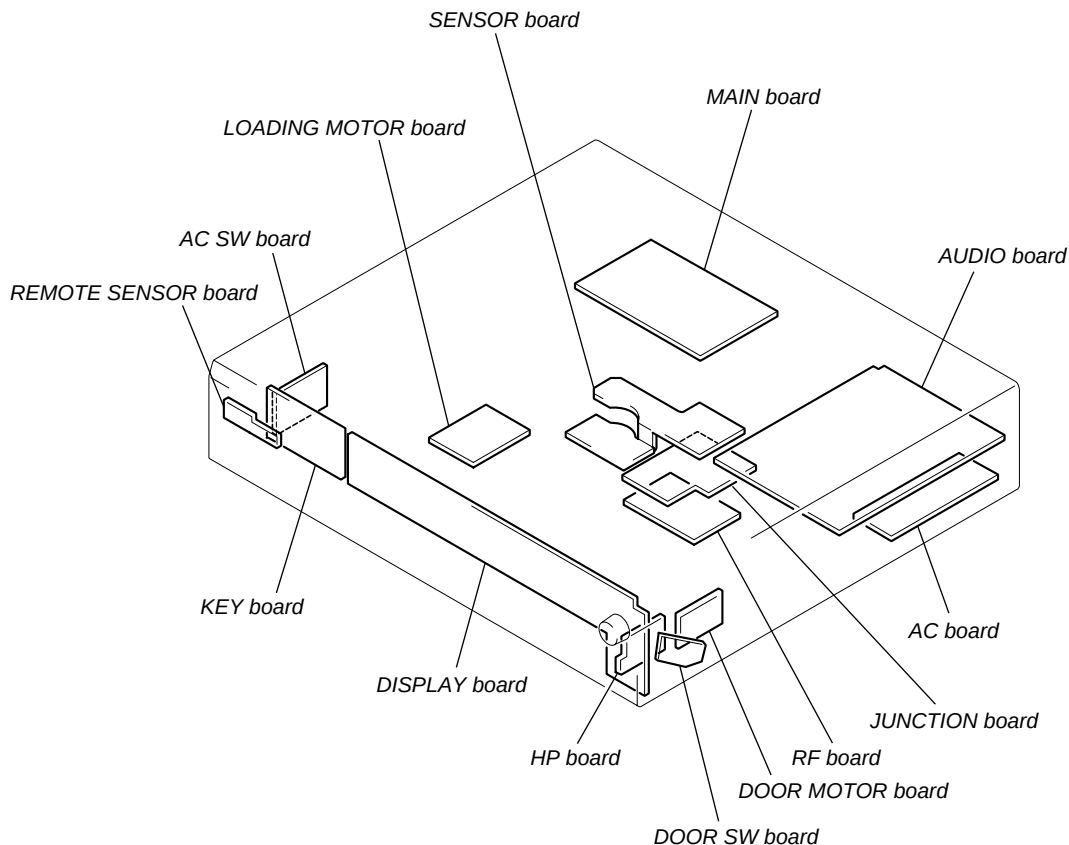
The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

Note:

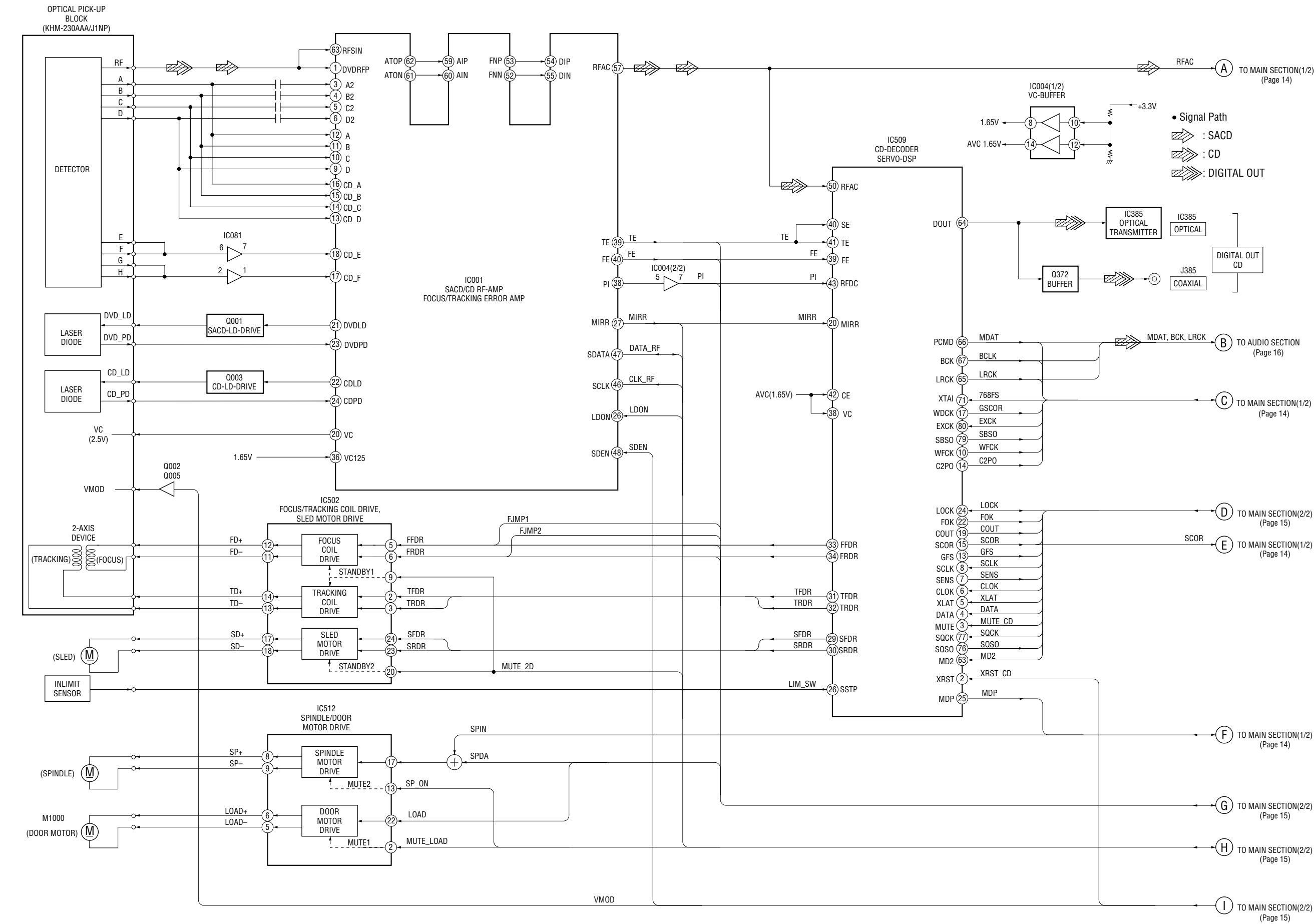
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- $\square$ B+ : B+ Line.
- $\square$ B- : B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 M Ω). 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.
 $\Rightarrow$: SACD
 $\Rightarrow$: CD
 $\Rightarrow$: DIGITAL OUT

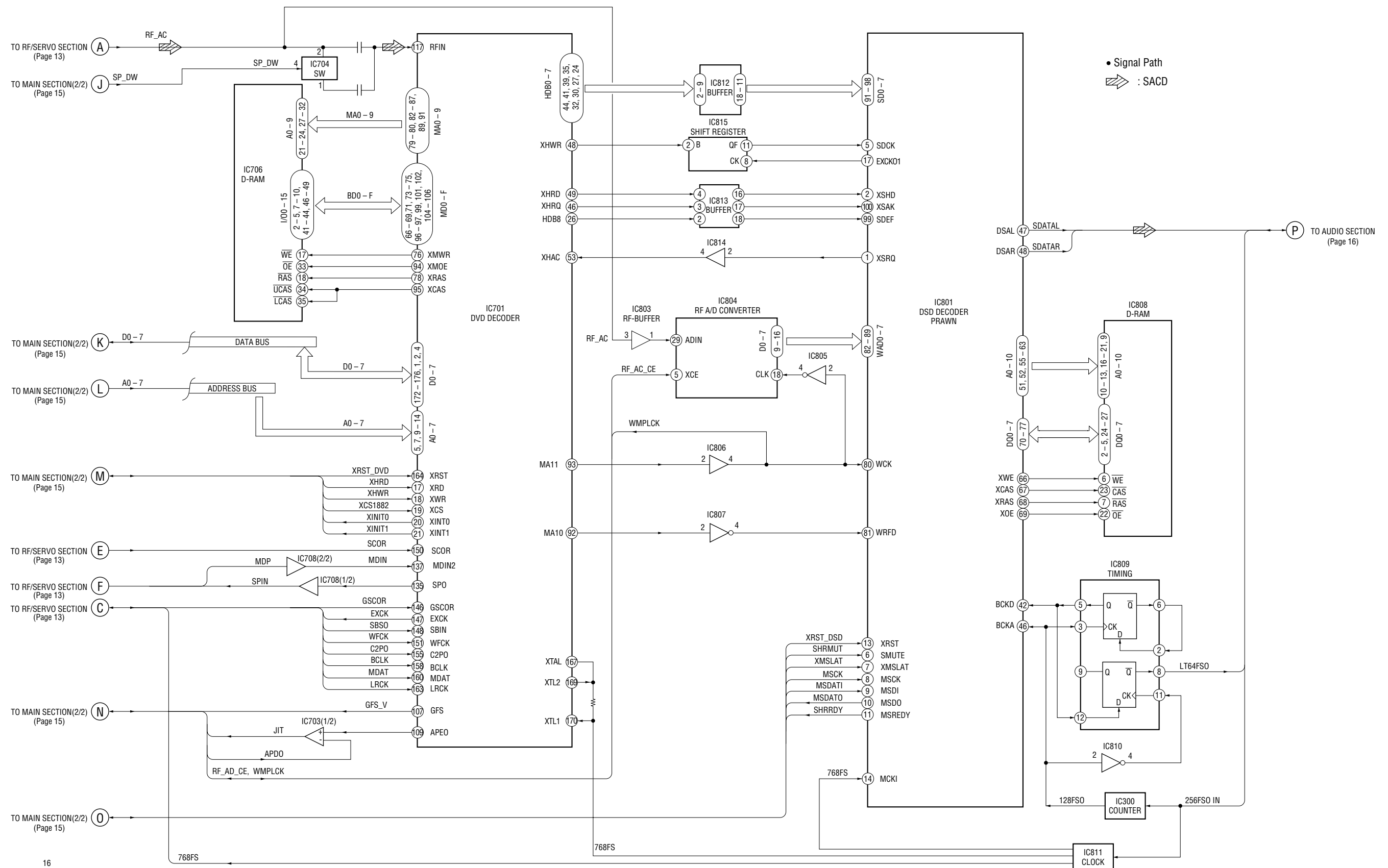
• Circuit Boards Location



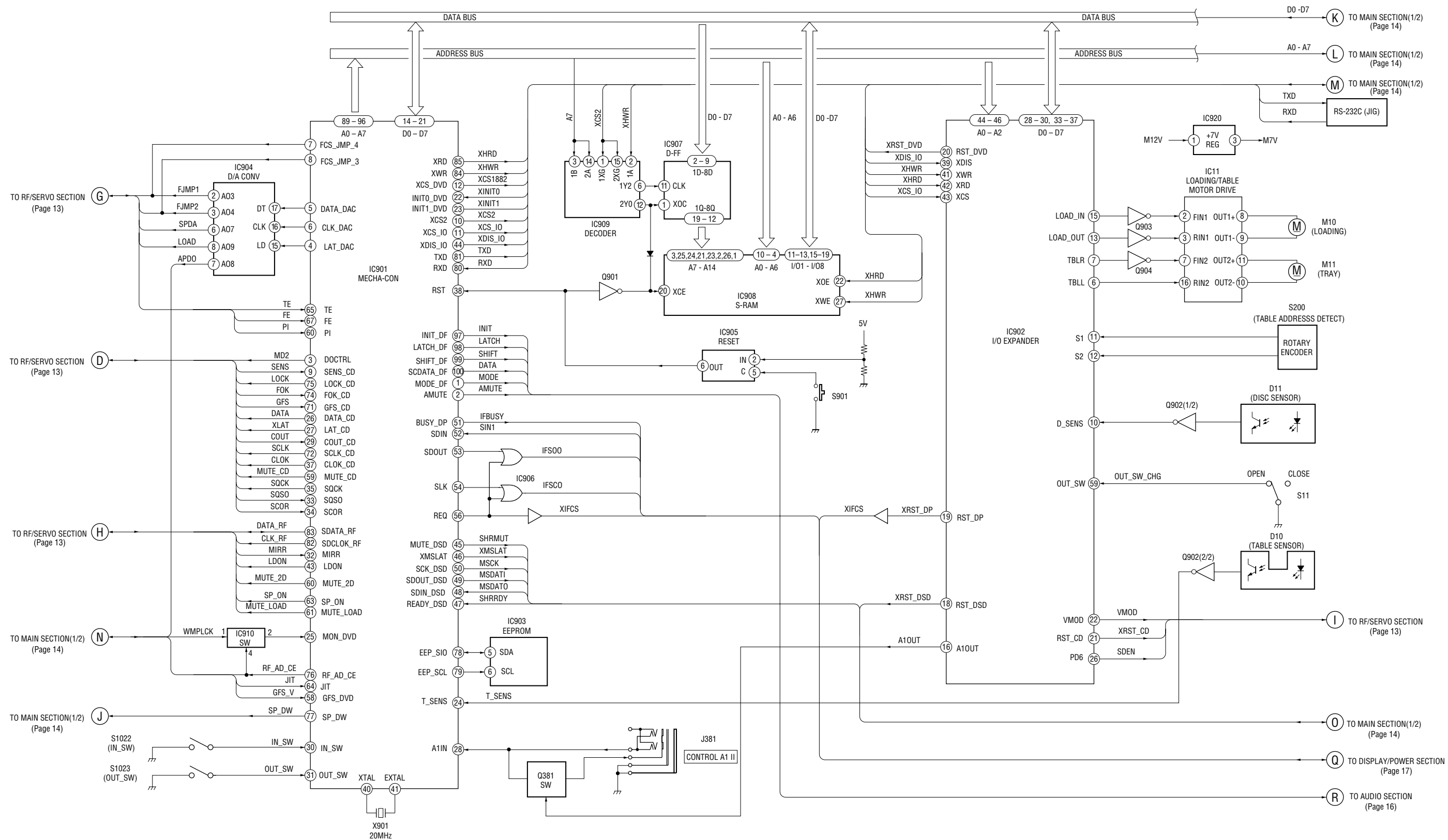
4-1. BLOCK DIAGRAMS RF SECTION



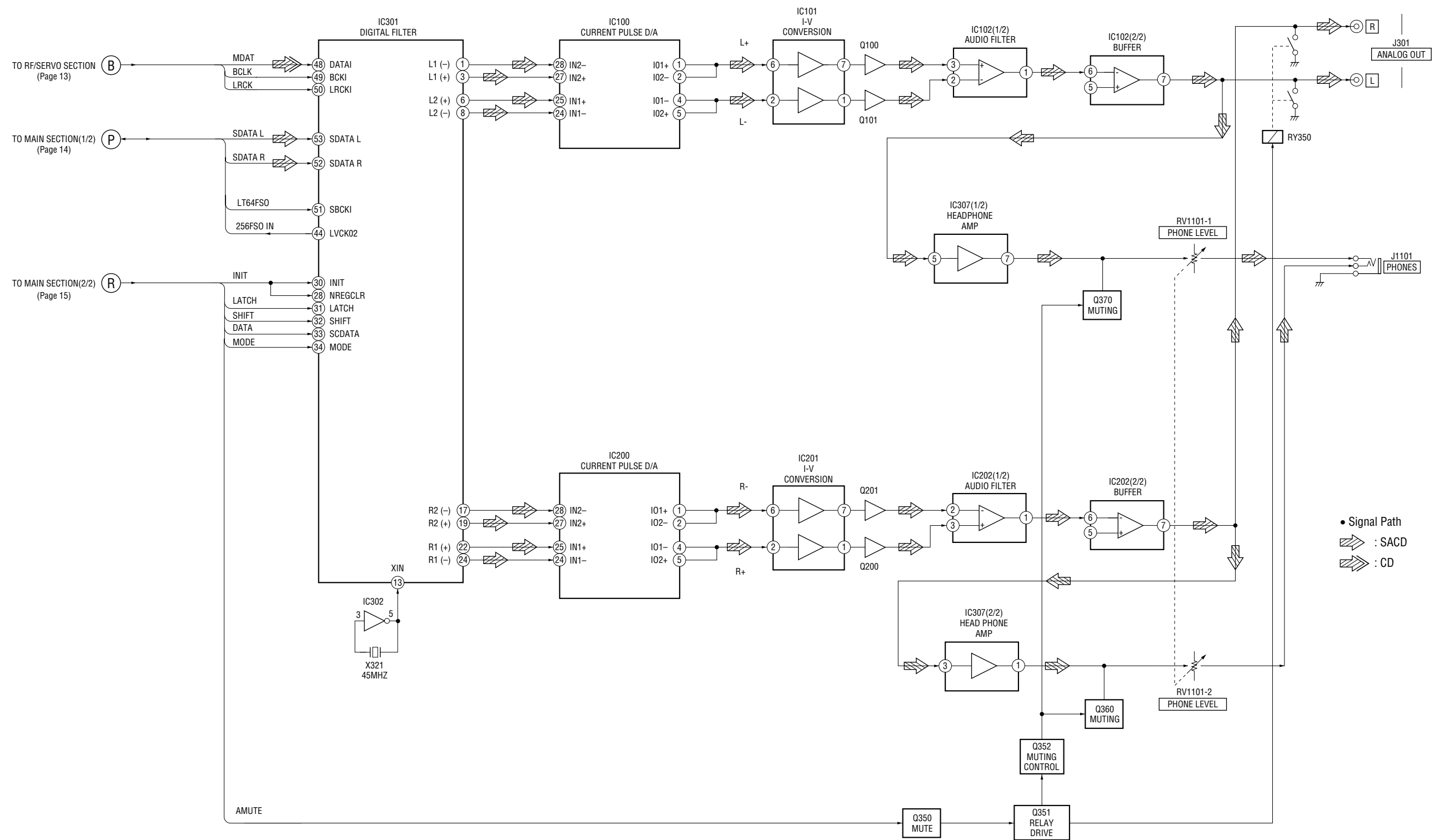
MAIN SECTION-1



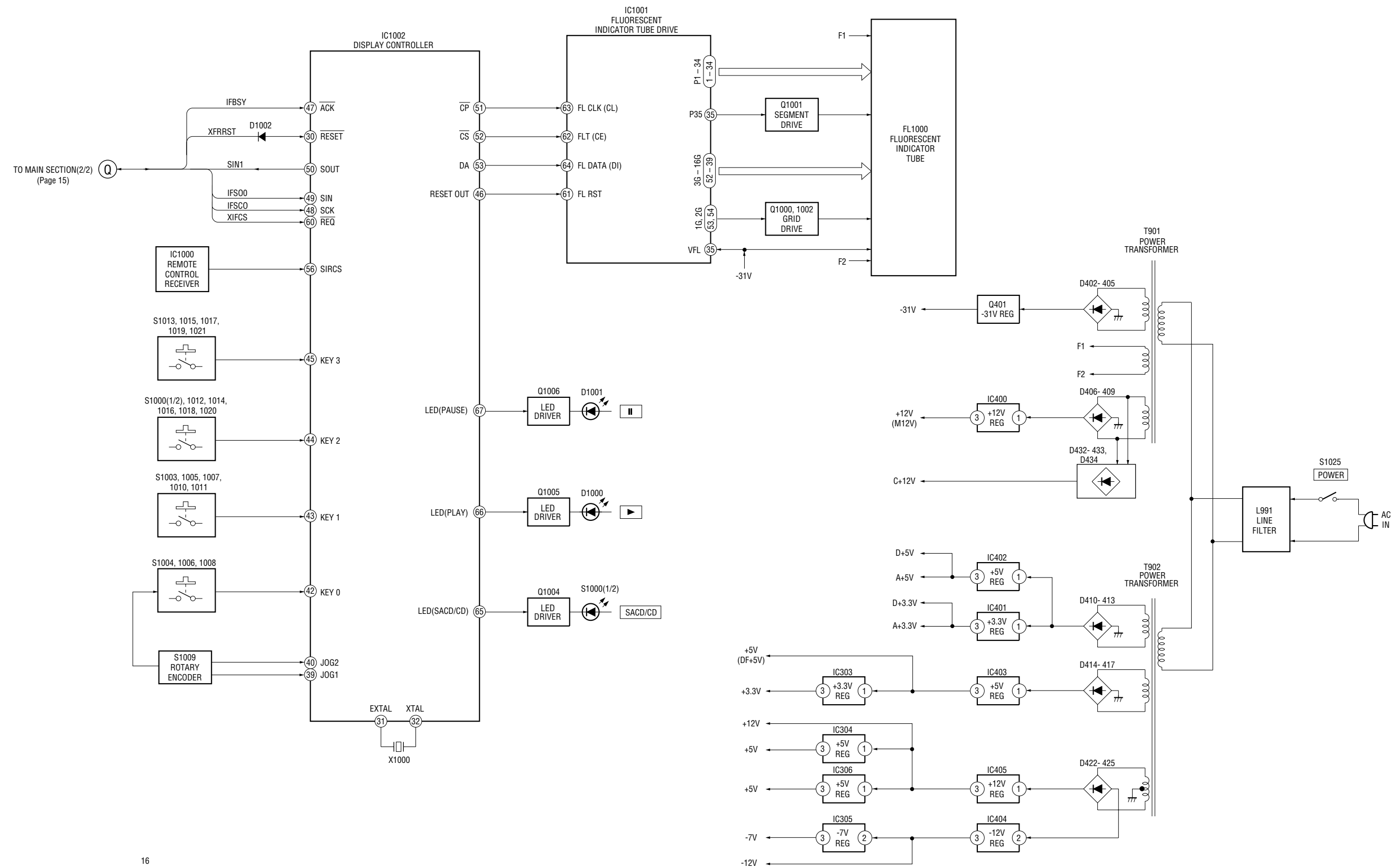
MAIN SECTION-2



AUDIO SECTION



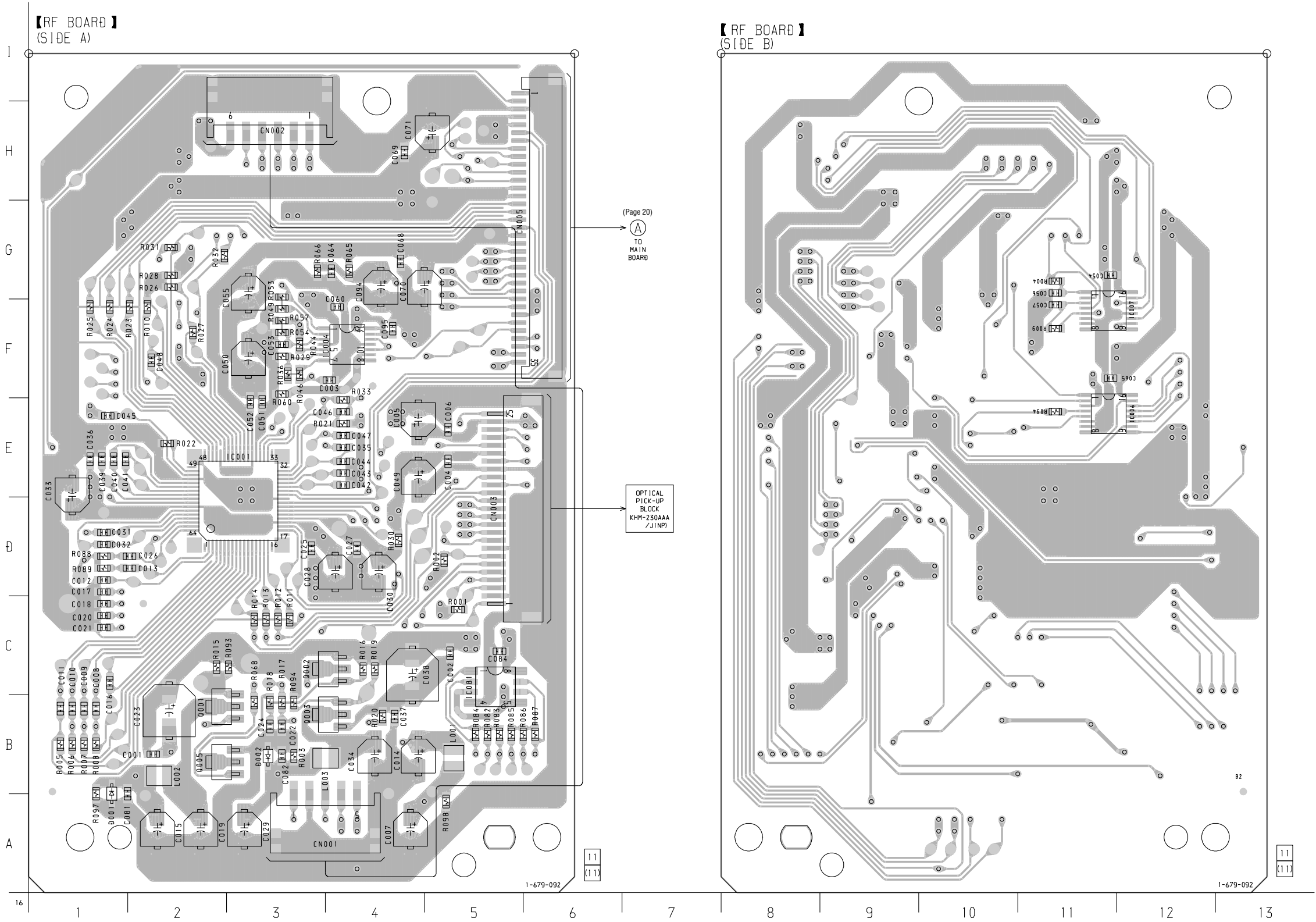
DISPLAY/POWER SECTION





4-3. PRINTED WIRING BOARD RF SECTION • Refer to page 12 for Circuit Board Location.

There are a few cases that the part printed on this diagram isn't mounted in this model.



• Semiconductor Location

Ref. No.	Location
D001	A-1
D002	B-3
IC001	E-3
IC004	F-4
IC081	C-5
Q001	B-2
Q002	C-3
Q003	B-3
Q005	B-2

(Page 19)

(A)

TO
RF BOARD

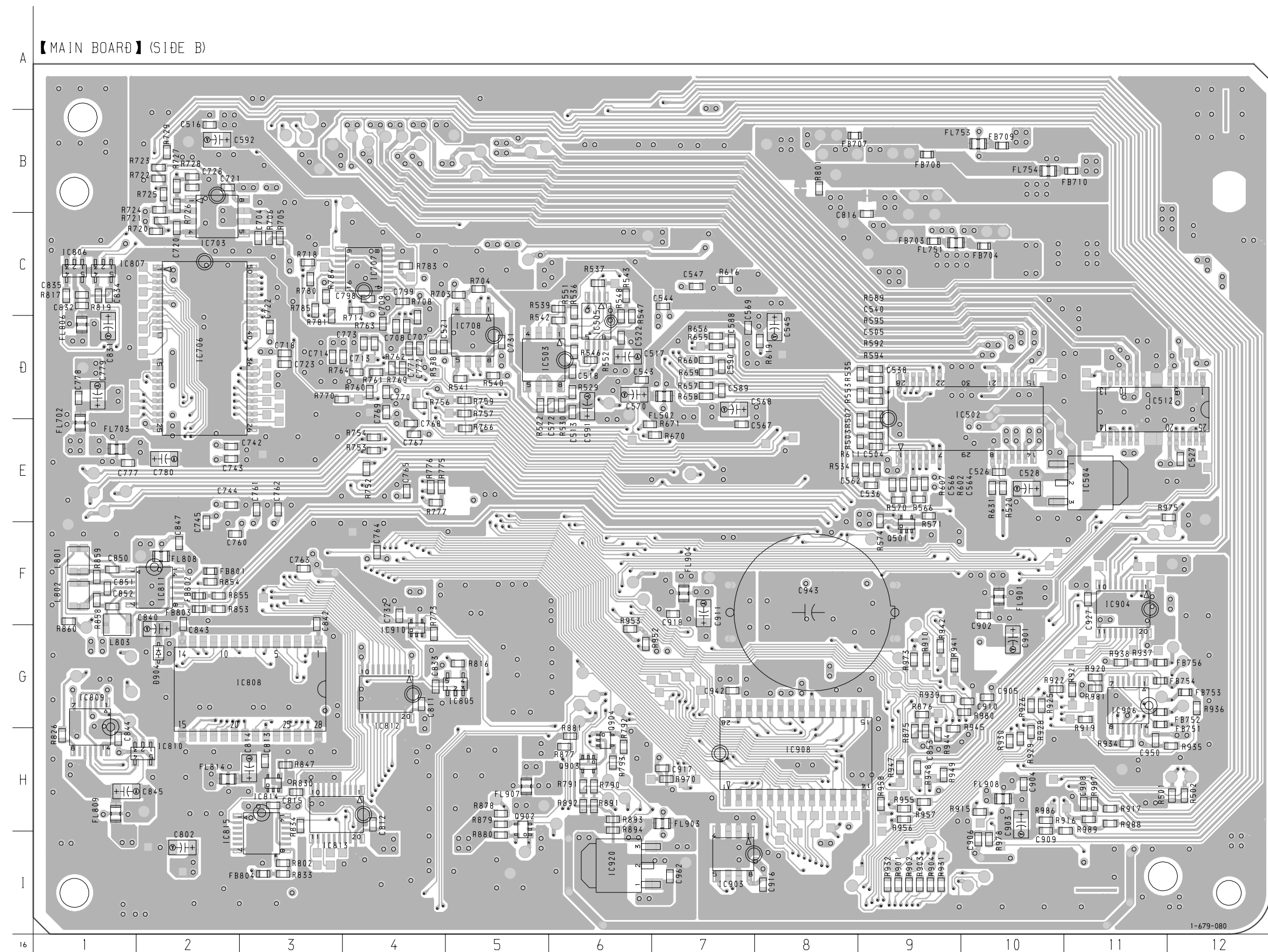
Ref. No.	Location
D901	C-5
D902	C-5
D903	I-11
IC509	F-6
IC701	F-10
IC704	G-9
IC801	B-10
IC803	D-8
IC804	C-8
IC901	B-3
IC902	C-6
IC905	D-5
IC907	B-5
IC909	B-5
Q901	C-5
Q905	C-5



4-5. PRINTED WIRING BOARD MAIN SECTION (SIDE B)

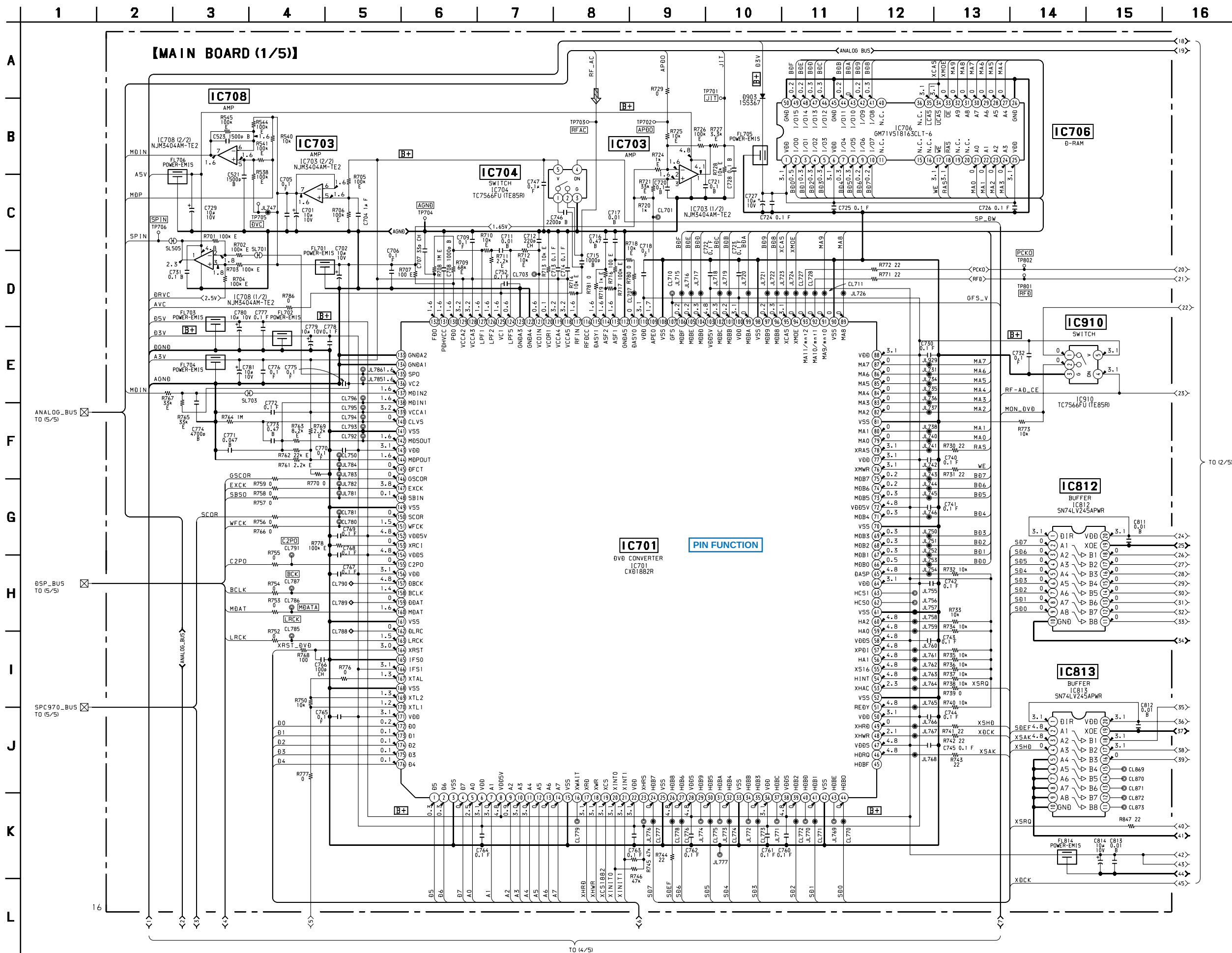
- Refer to page 12 for Circuit Board Location.

There are a few cases that the part printed on this diagram isn't mounted in this model.



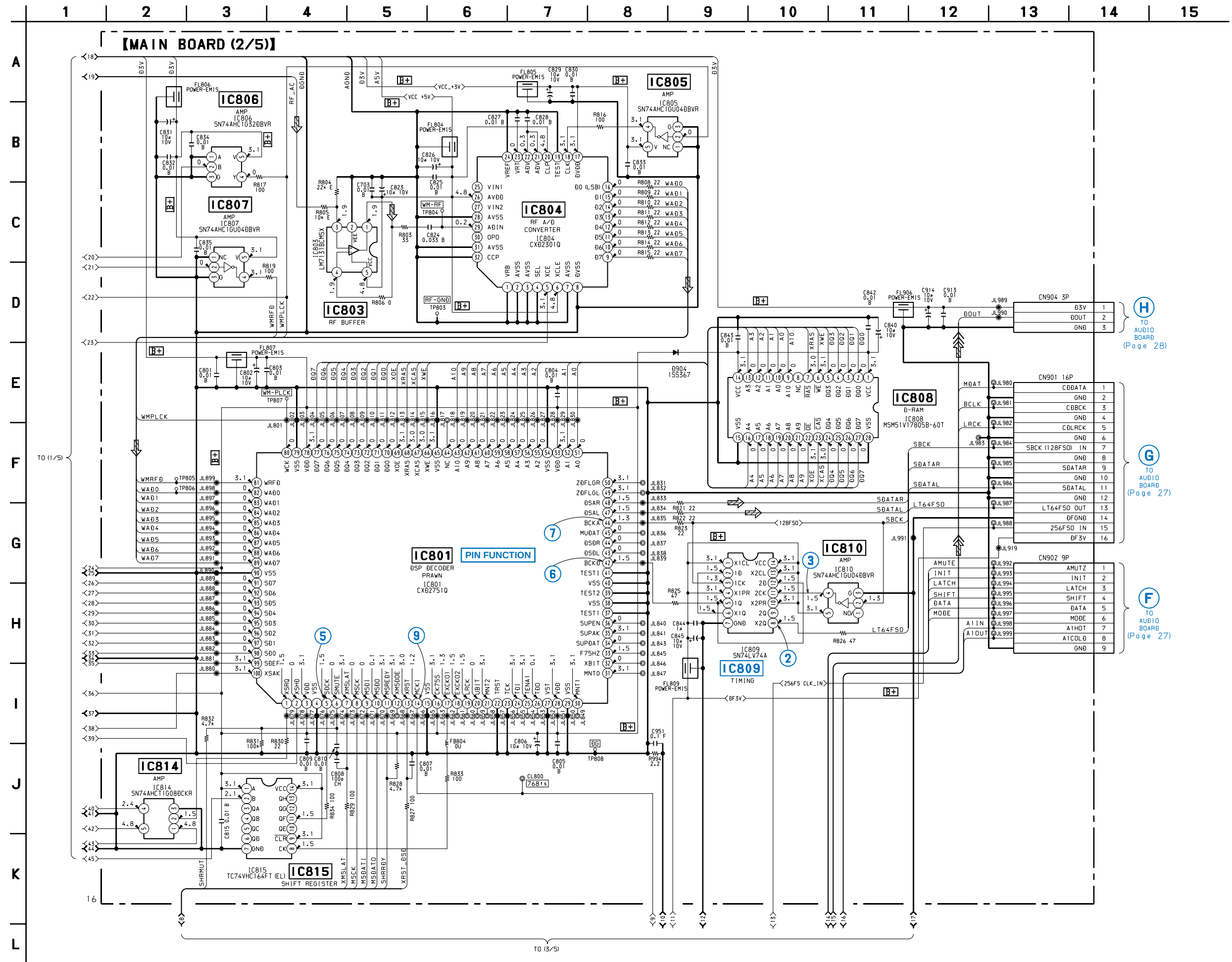
- **Semiconductor Location**

Ref. No.	Location
D904	G-2
IC502	D-9
IC503	D-5
IC504	E-11
IC512	D-11
IC703	C-2
IC706	D-2
IC708	D-5
IC805	G-5
IC806	C-1
IC807	C-1
IC808	G-3
IC809	G-1
IC810	H-2
IC811	C-2
IC812	G-4
IC813	H-3
IC814	H-3
IC815	I-3
IC903	I-7
IC904	F-11
IC906	G-11
IC908	G-8
IC910	G-4
IC920	I-6
Q902	H-5
Q903	H-6
Q904	H-6



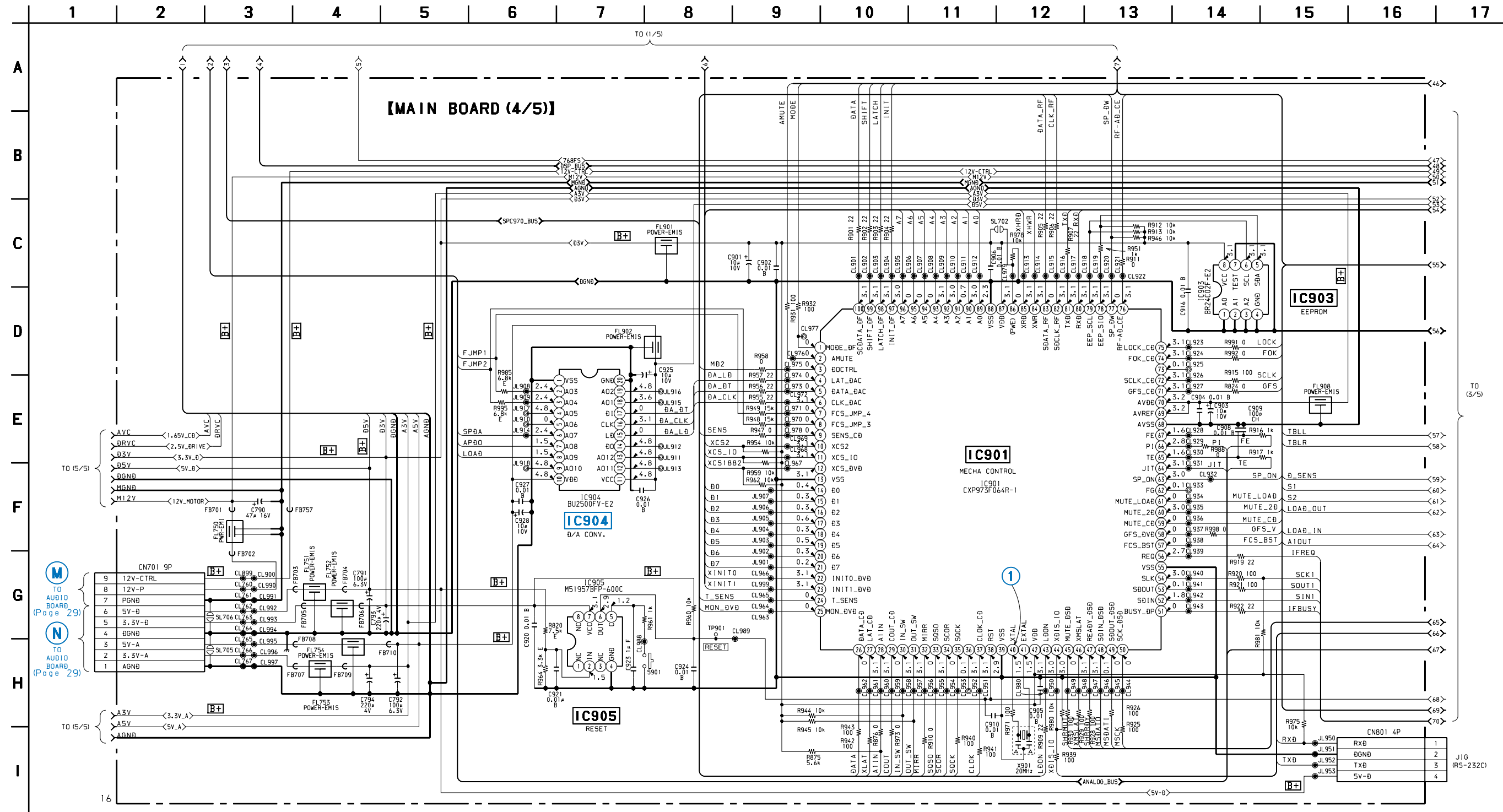
4-7. SCHEMATIC DIAGRAM MAIN SECTION (2/5)

- Refer to page 40 for Waveforms.
- Refer to page 41 for IC Block Diagrams.
- Refer to page 46 for IC Pin Function.

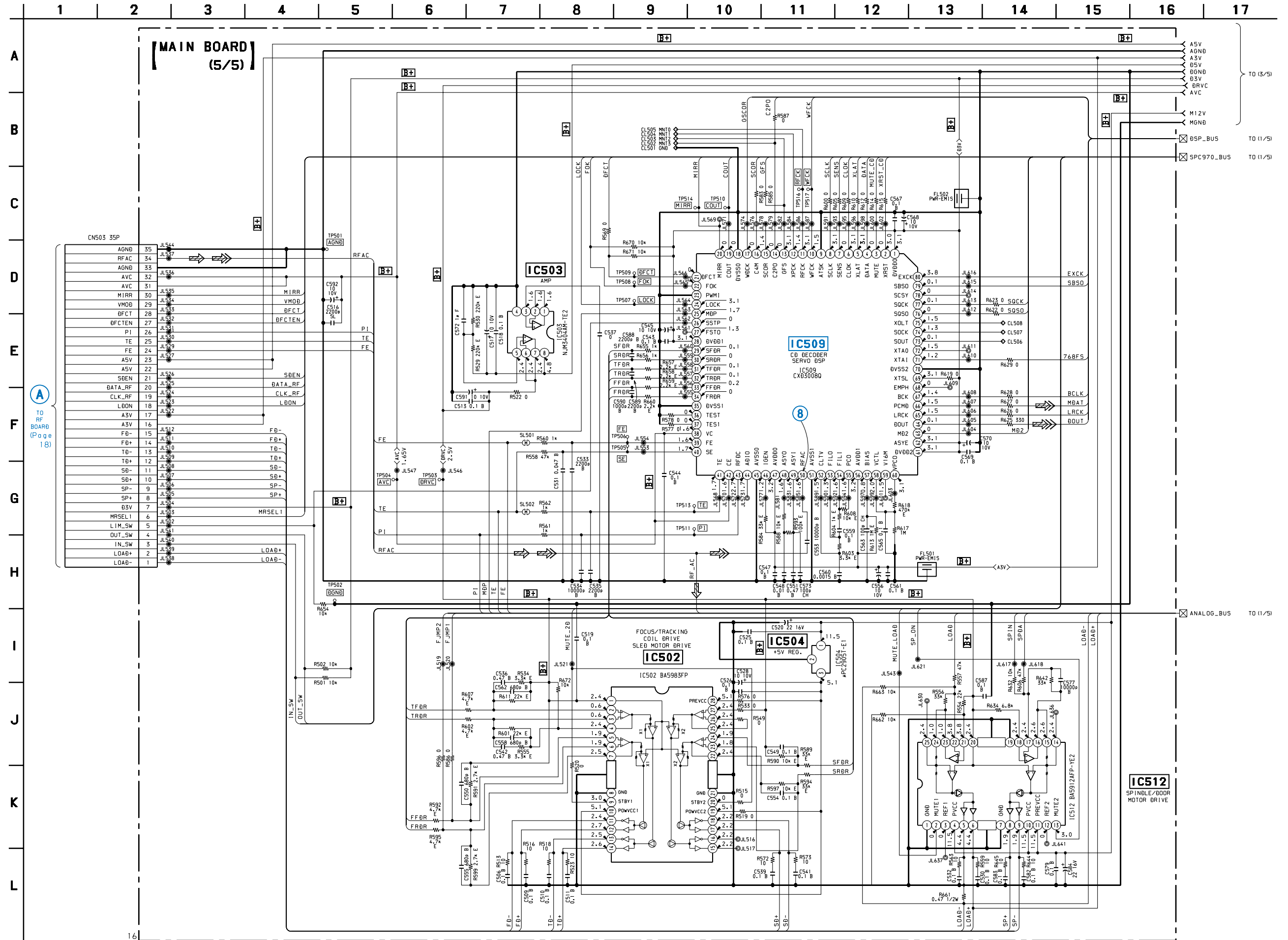




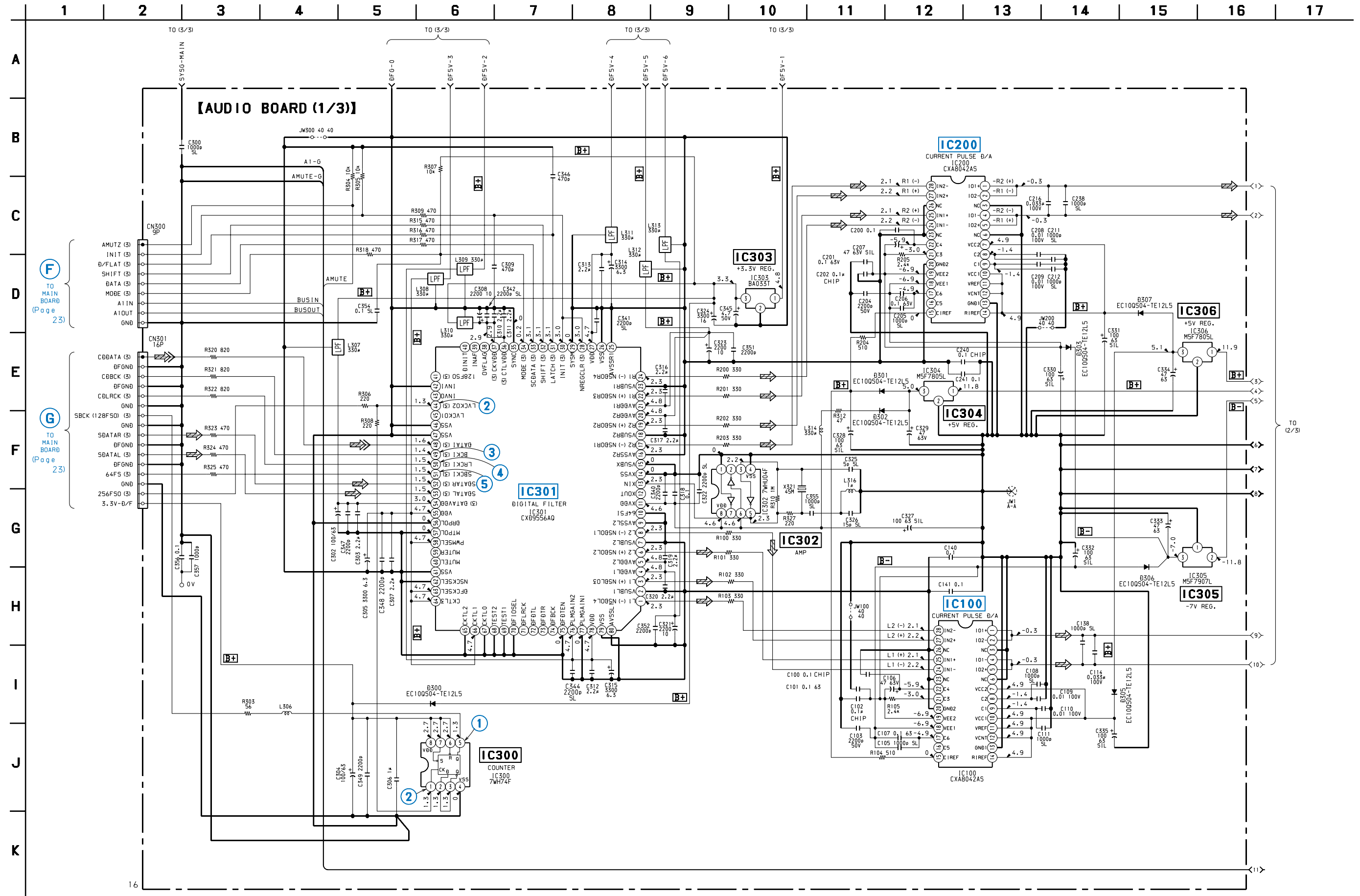
4-9. SCHEMATIC DIAGRAM MAIN SECTION (4/5) • Refer to page 40 for Waveform. • Refer to page 42 for IC Block Diagrams.



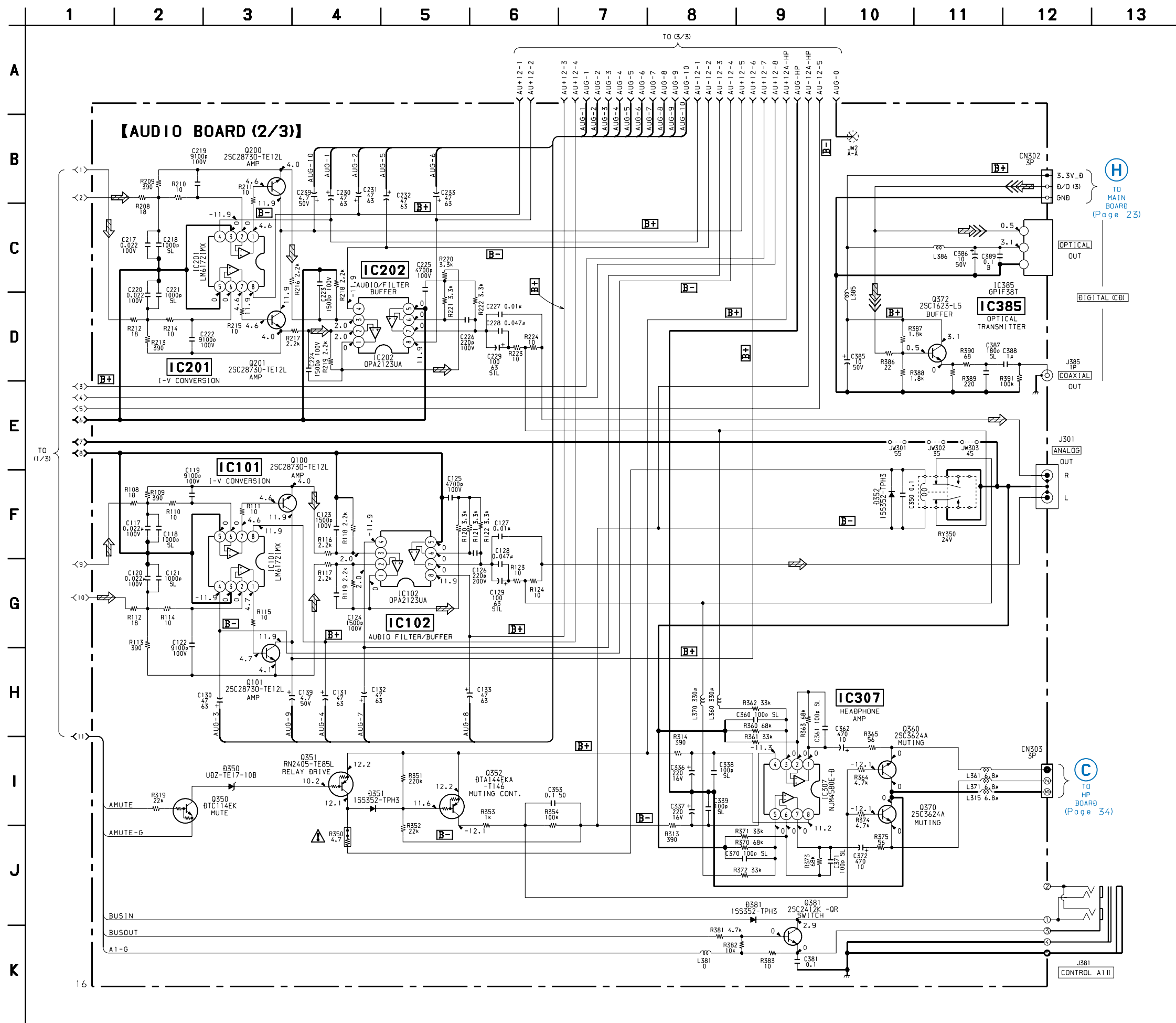
4-10. SCHEMATIC DIAGRAM MAIN SECTION (5/5) • Refer to page 40 for Waveform. • Refer to page 43 for IC Block Diagrams.



4-11. SCHEMATIC DIAGRAM AUDIO SECTION (1/3) • Refer to page 40 for Waveforms. • Refer to page 44, 45 for IC Block Diagrams.



4-12. SCHEMATIC DIAGRAM AUDIO SECTION (2/3)

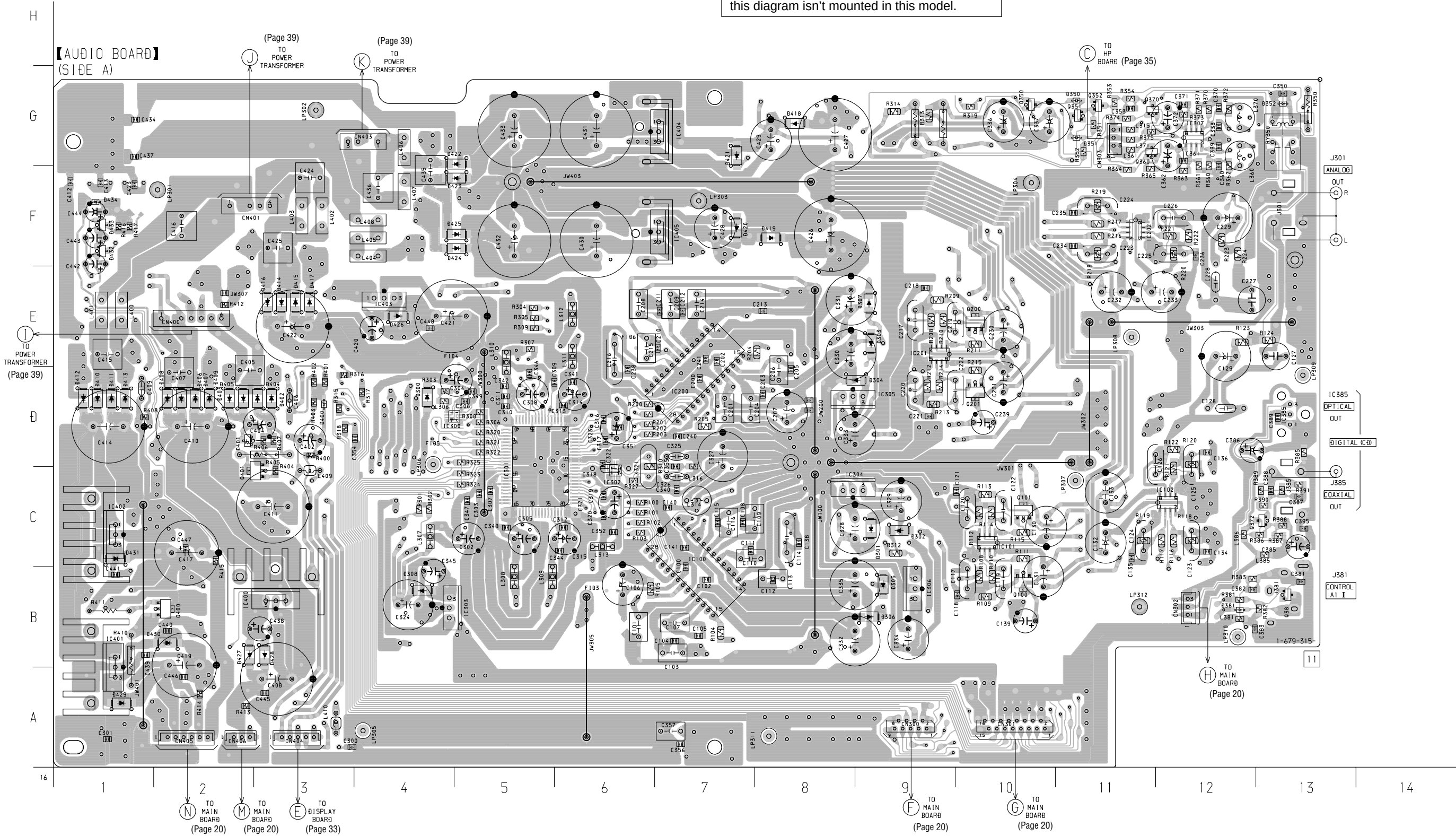


	1	2	3	
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4-14. PRINTED WIRING BOARD AUDIO SECTION (SIDE A) • Refer to page 12 for Circuit Board Location.

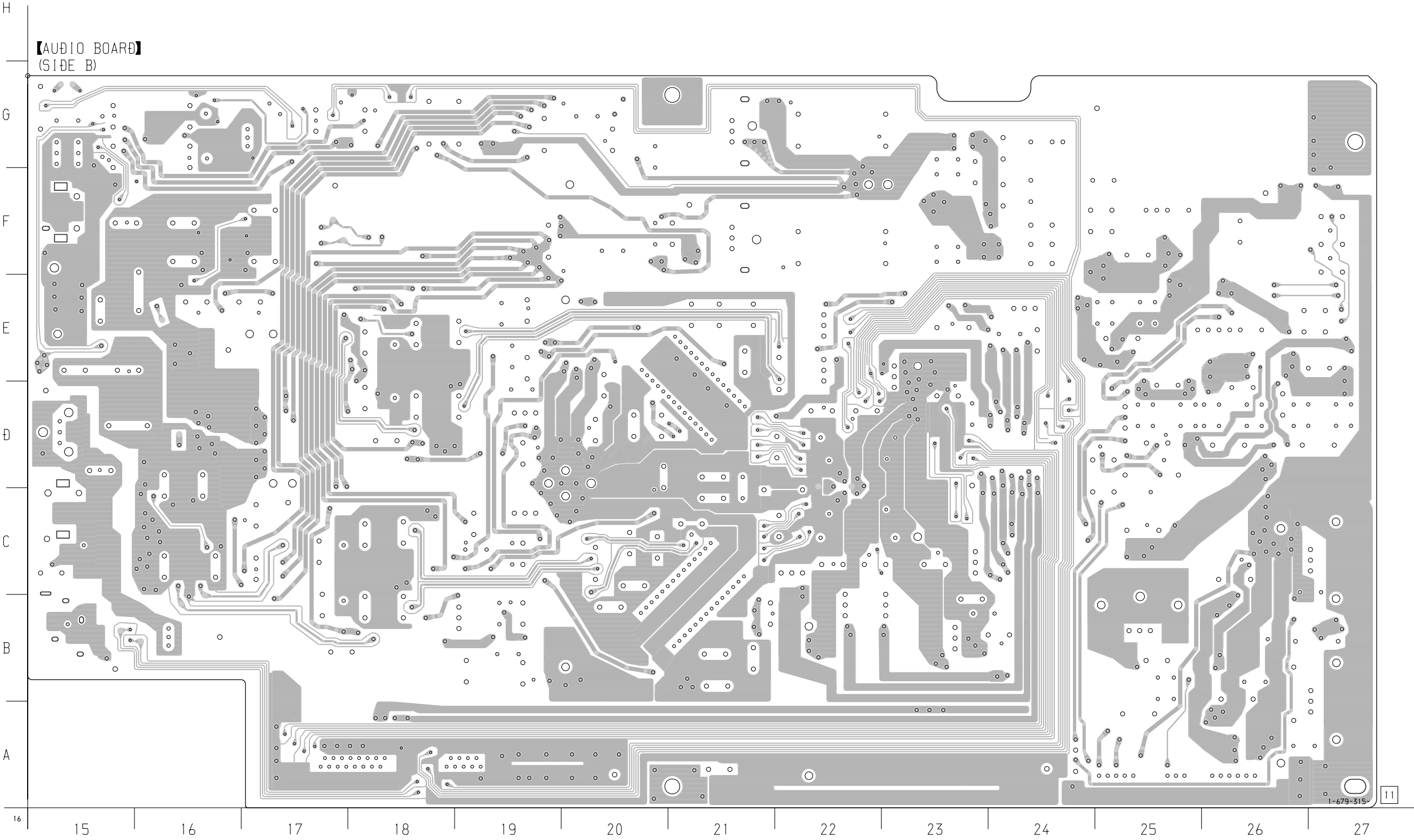
There are a few cases that the part printed on this diagram isn't mounted in this model.



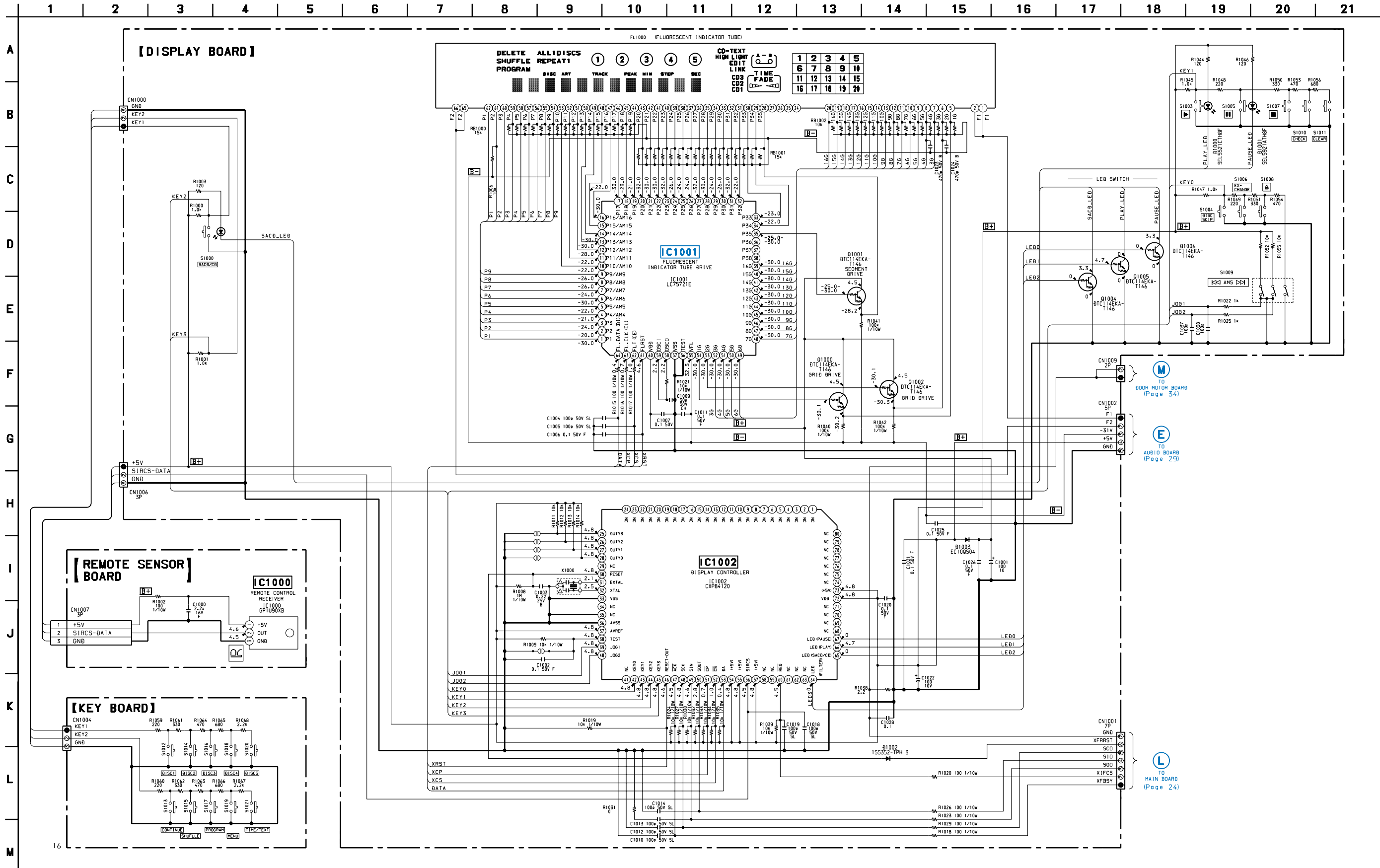
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D300	D-4	D400	D-3	D411	D-1	D424	F-4	IC102	C-12	IC307	G-12	Q200	E-10	Q162	C-1
D301	C-9	D401	D-2	D412	D-1	D425	F-4	IC200	D-7	IC385	D-13	Q201	D-10	Q163	C-1
D302	C-9	D402	D-3	D413	D-1	D426	E-4	IC201	Q-9	IC400	B-3	Q350	G-10	Q181	B-3
D303	E-9	D403	D-2	D414	E-3	D427	B-2	IC202	F-11	IC401	B-1	Q351	G-11	Q182	B-2
D305	B-9	D404	D-3	D415	E-3	D428	B-3	IC300	D-4	IC402	C-1	Q352	G-11		
D306	B-9	D405	D-2	D416	E-3	D432	F-1	IC301	D-5	IC403	E-4	Q360	G-11		
D307	E-9	D406	D-2	D417	E-3	D433	F-1	IC302	C-6	IC404	G-7	Q370	G-11		
D350	G-11	D407	D-2	D418	G-8	D434	F-1	IC303	B-4	IC405	F-7	Q372	C-13		
D351	G-11	D408	D-2	D419	F-8			IC304	C-8			Q381	B-13		
D352	G-13	D409	D-2	D422	F-4	IC100	B-7	IC305	D-8	Q100	B-10	Q401	C-3		
D381	B-12	D410	D-1	D423	F-4	IC101	C-10	IC306	B-9	Q101	C-10	Q104	C-8		

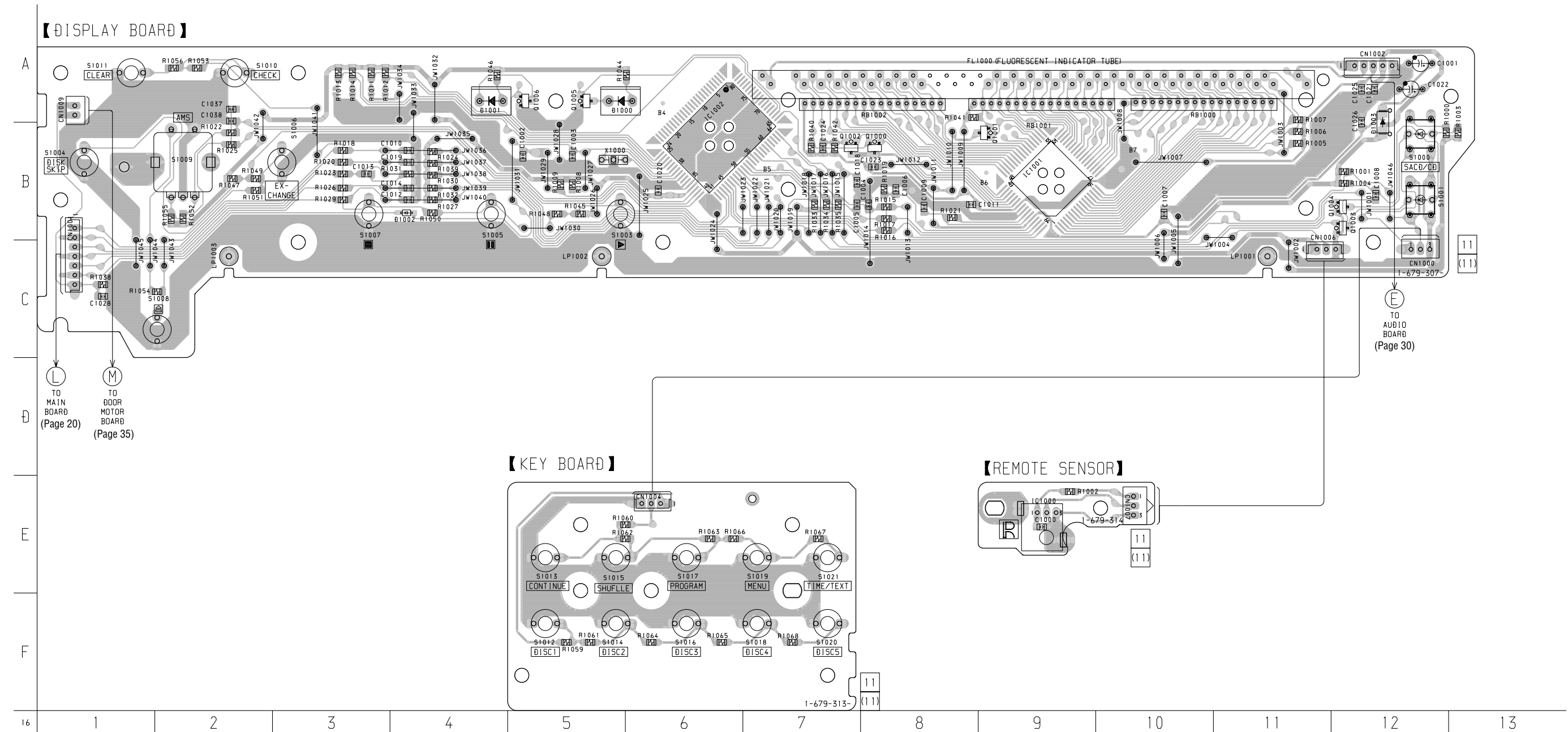
4-15. PRINTED WIRING BOARD AUDIO SECTION (SIDE B) • Refer to page 12 for Circuit Board Location.



4-16. SCHEMATIC DIAGRAM DISPLAY SECTION • Refer to page 45 for IC Block Diagrams.

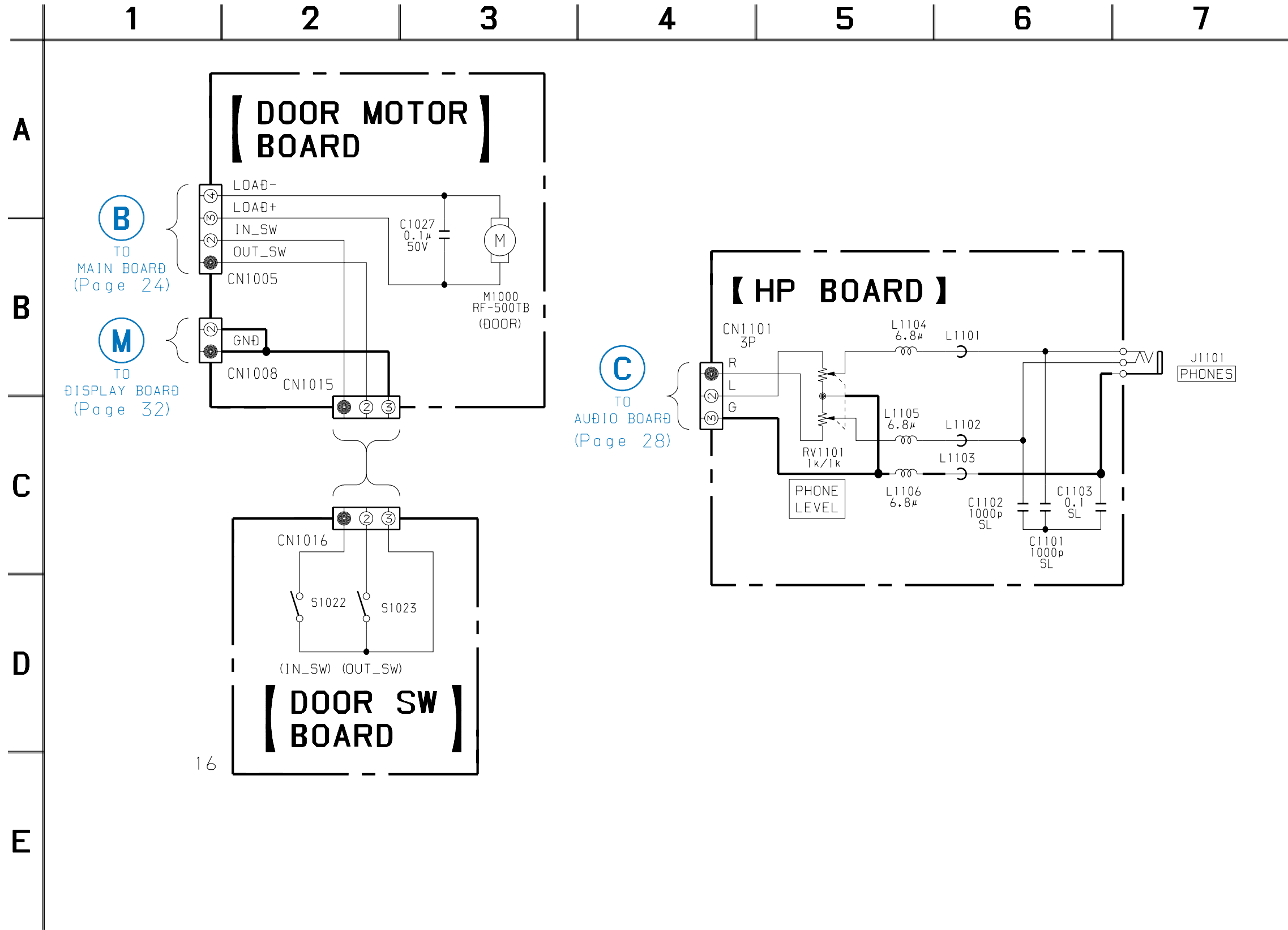


4-17. PRINTED WIRING BOARD DISPLAY SECTION • Refer to page 12 for Circuit Board Location.



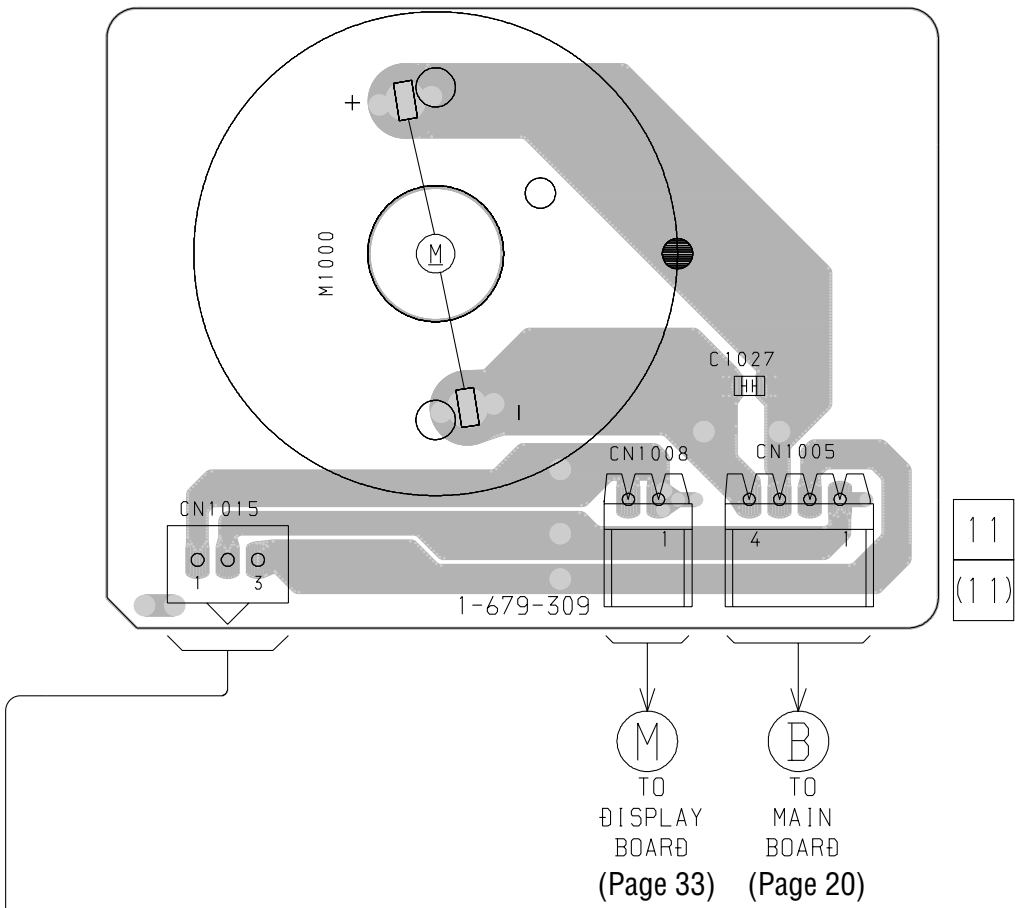
- **Semiconductor Location**

Ref. No.	Location
D1000	A-5
D1001	A-4
D1002	B-4
D1003	B-12
IC1001	B-9
IC1002	B-6
Q1000	B-8
Q1001	B-9
Q1002	B-7
Q1004	B-12
Q1005	A-5
Q1006	A-5

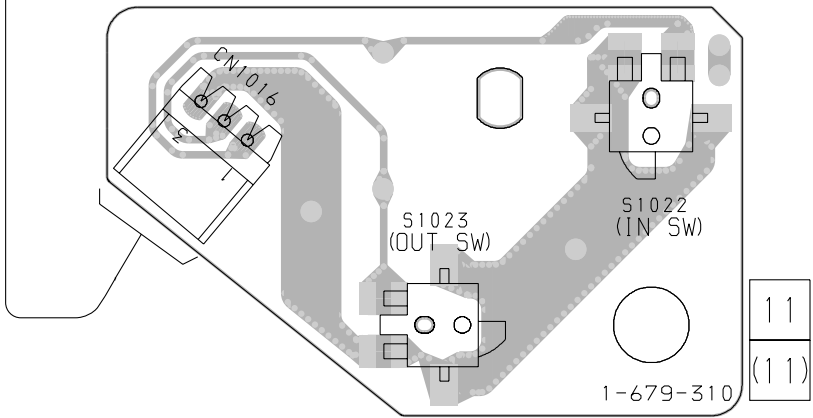


4-19. PRINTED WIRING BOARD HP SECTION • Refer to page 12 for Circuit Board Location.

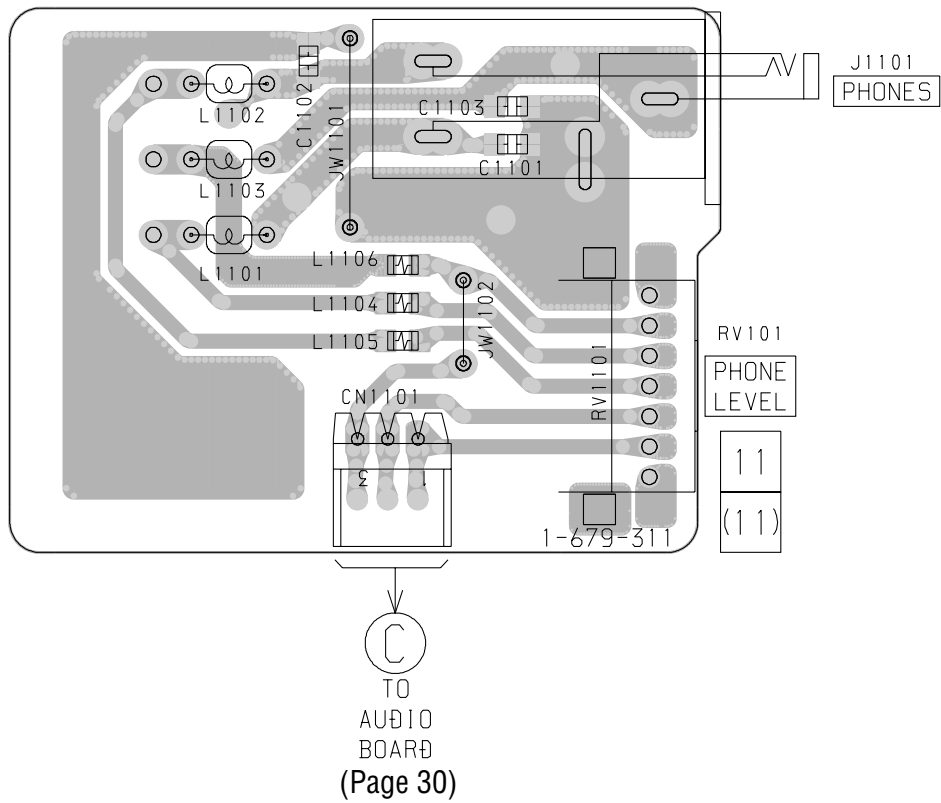
【 DOOR MOTOR BOARD 】



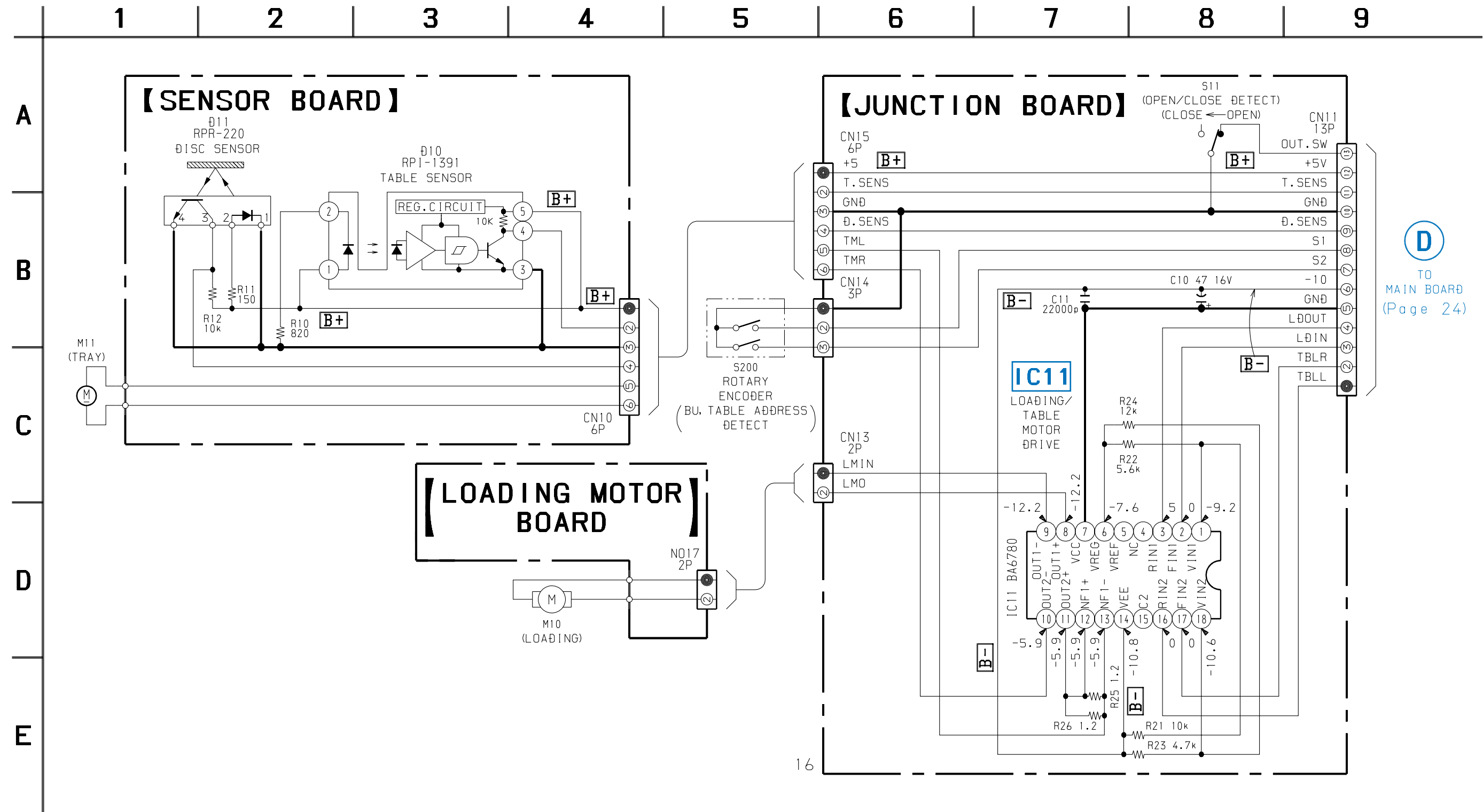
【 DOOR SW BOARD 】



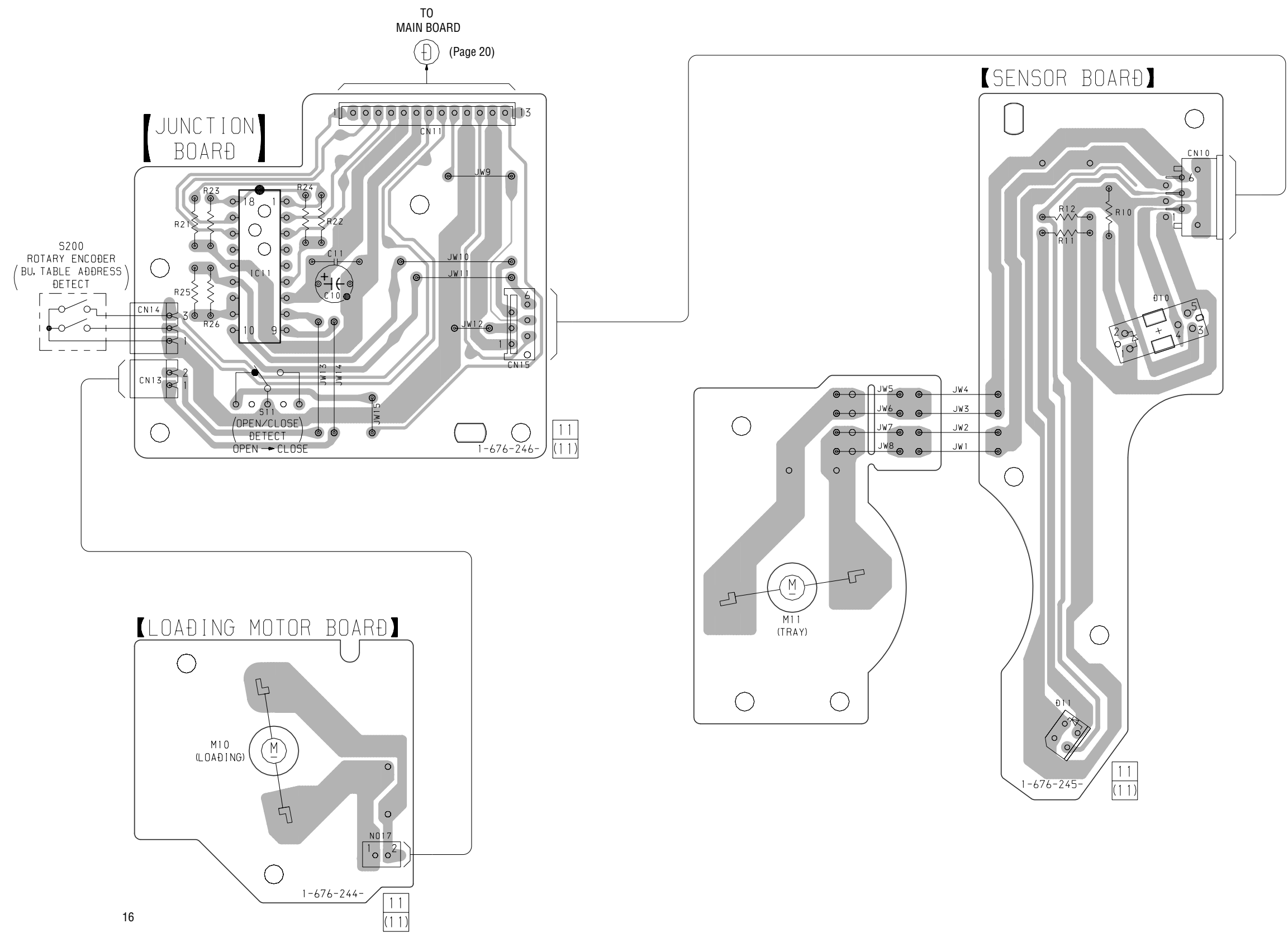
【 HP BOARD 】



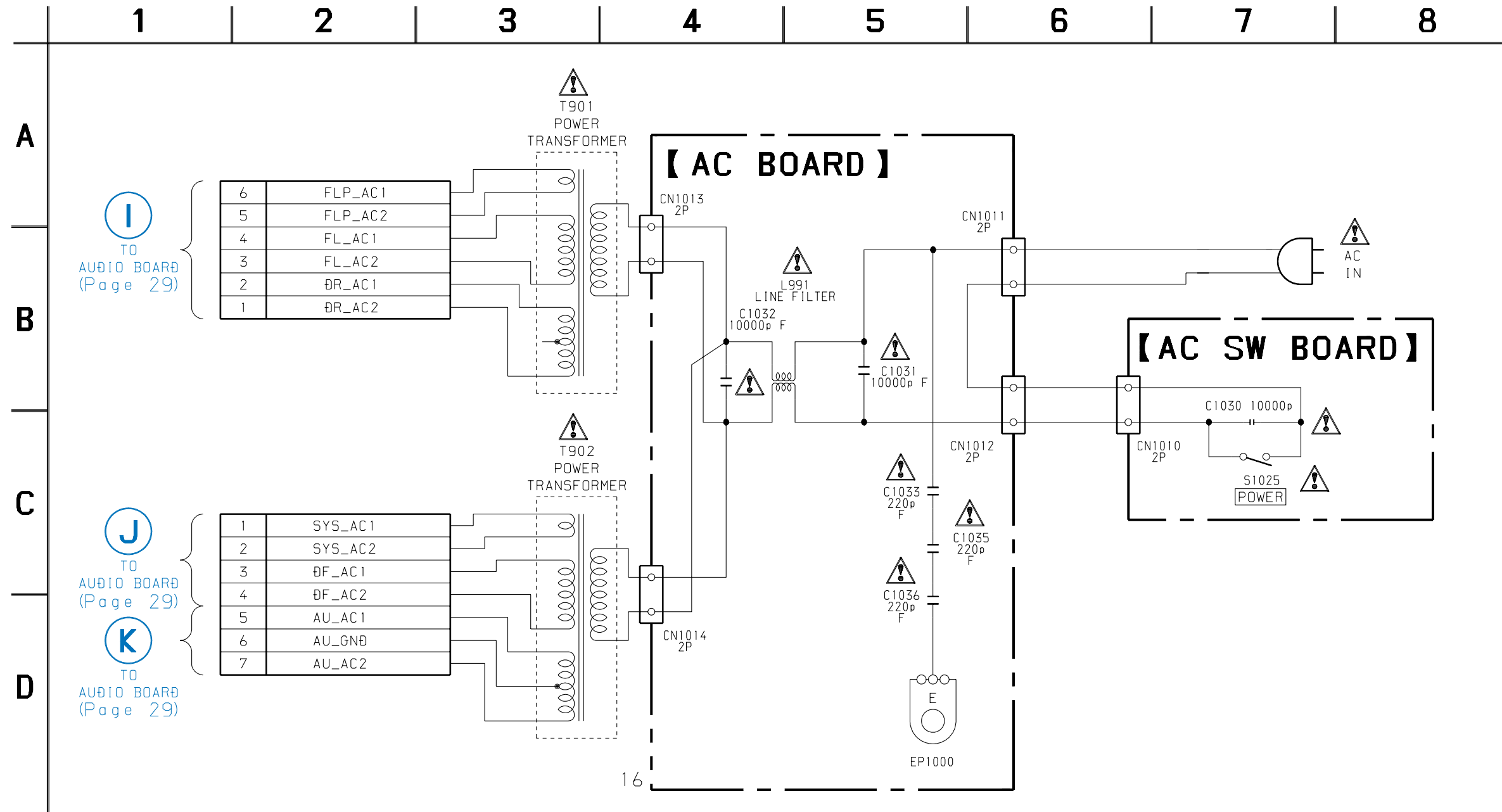
4-20. SCHEMATIC DIAGRAM SENSOR SECTION • Refer to page 45 for IC Block Diagram.



4-21. PRINTED WIRING BOARD SENSOR SECTION • Refer to page 12 for Circuit Board Location.

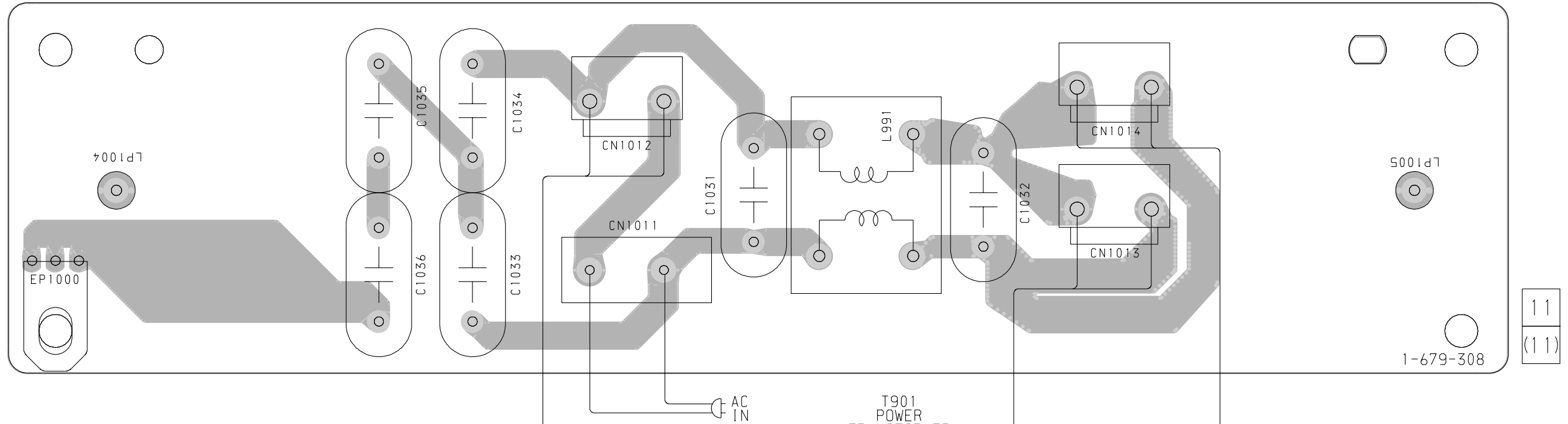


4-22. SCHEMATIC DIAGRAM POWER SECTION

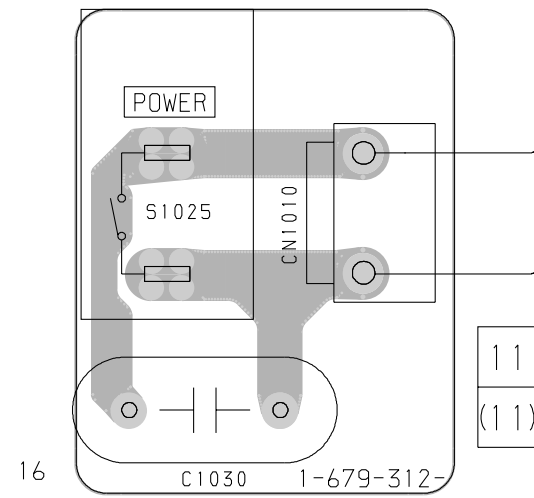


4-23. PRINTED WIRING BOARD POWER SECTION • Refer to page 12 for Circuit Board Location.

【 AC BOARD 】

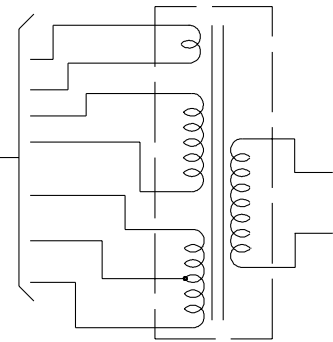


【 AC SW BOARD 】



(Page 30)

TO
AUDIO
BOARD



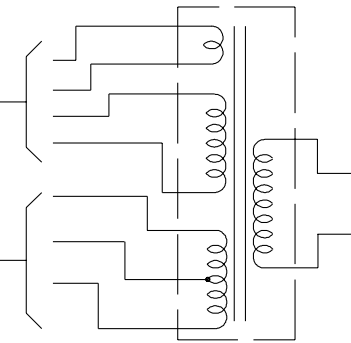
(Page 30)

TO
AUDIO
BOARD

TO
AUDIO
BOARD

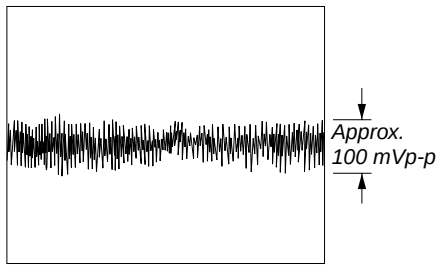
(Page 30)

T902
POWER
TRANSFORMER

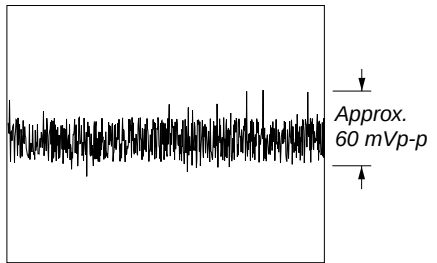


• Waveforms
– RF Board –

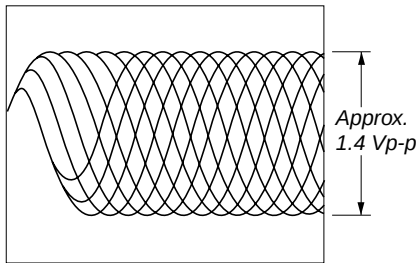
1 IC001 39 (TE) (CD PLAY)



2 IC001 40 (FE) (CD PLAY)

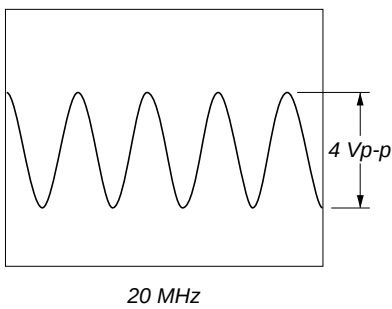


3 IC001 67 (RFAC) (CD PLAY)

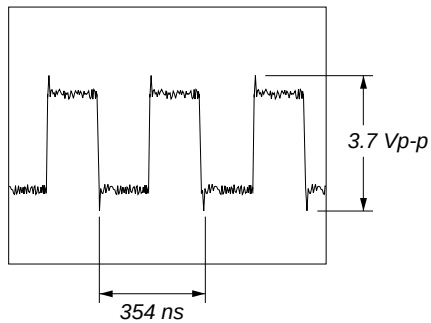


– MAIN Board –

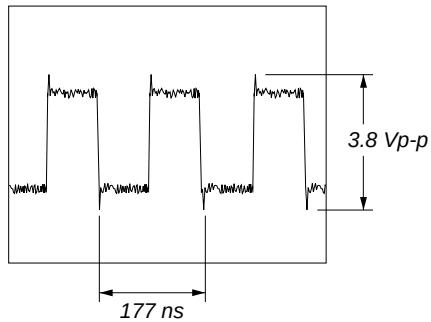
1 IC901 40 (XTAL)



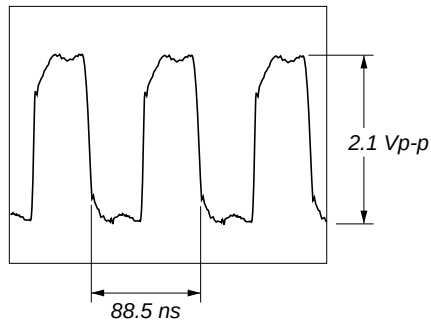
2 IC809 8 (X2Q)



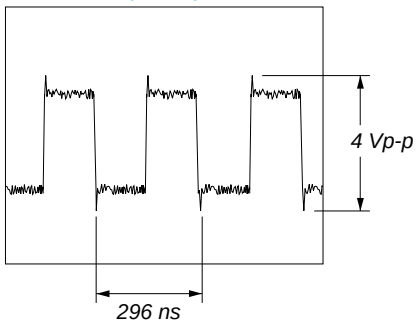
3 IC809 11 (2CK)



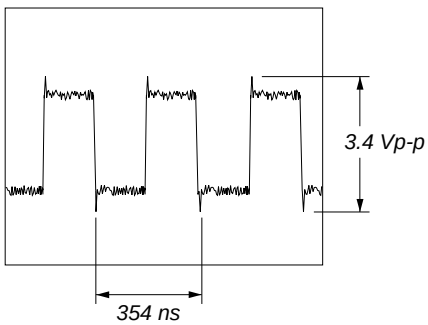
4 IC811 1



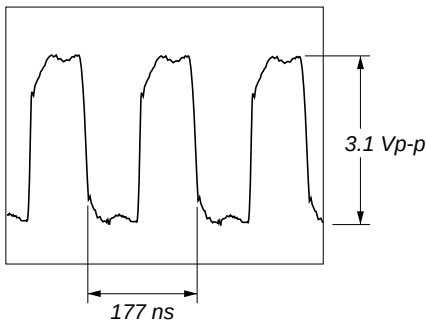
5 IC801 5 (SDCK)



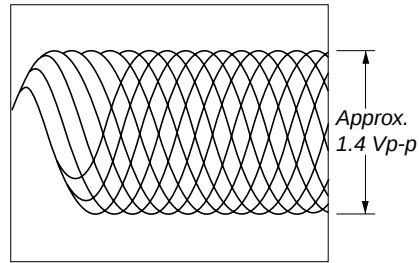
6 IC801 42 (BCKD)



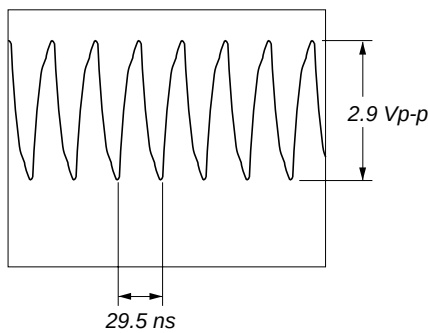
7 IC801 46 (BCKA)



8 IC509 50 (RFAC) (CD PLAY)

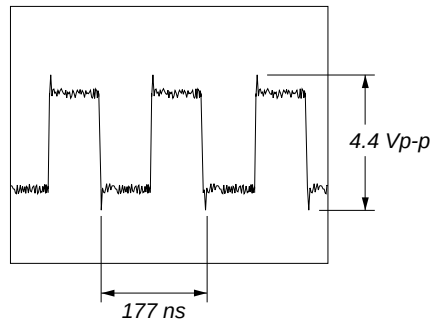


9 IC801 14 (MCKI)

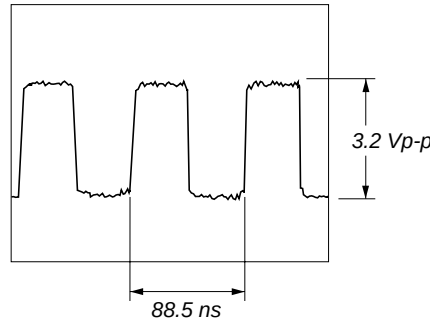


– AUDIO Board –

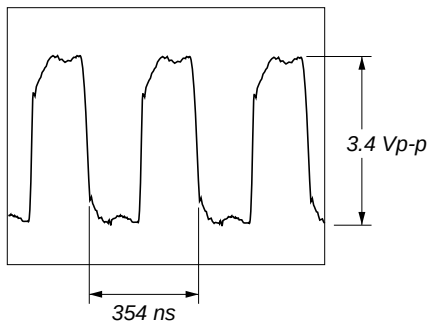
1 IC300 5 (Q)



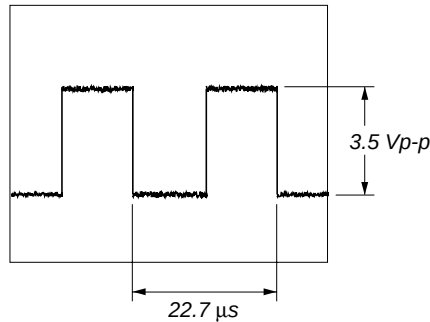
2 IC301 44 (LVCKO2),
IC300 1 (CLK)



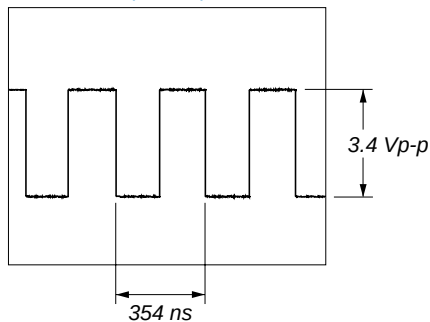
3 IC301 49 (BCKI)



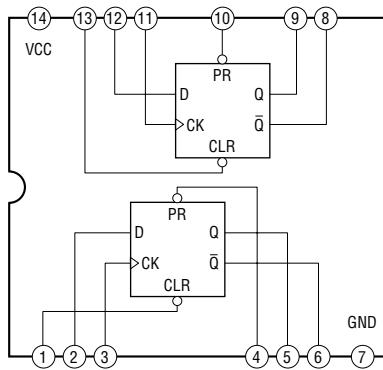
4 IC301 50 (LRCKI)



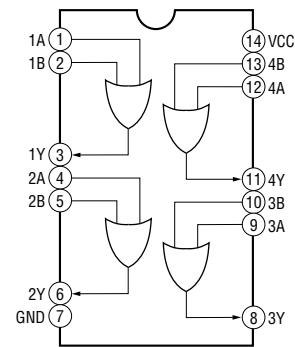
5 IC301 51 (SBCKI)



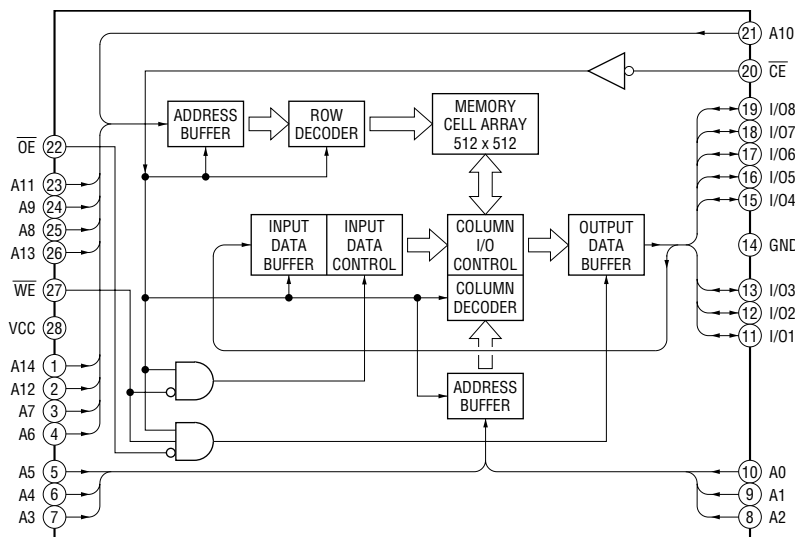
IC809 SN74LV74APWR (MAIN BOARD)



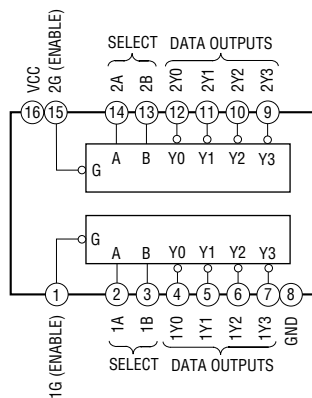
IC906 TC74VHCT32AFT (MAIN BOARD)

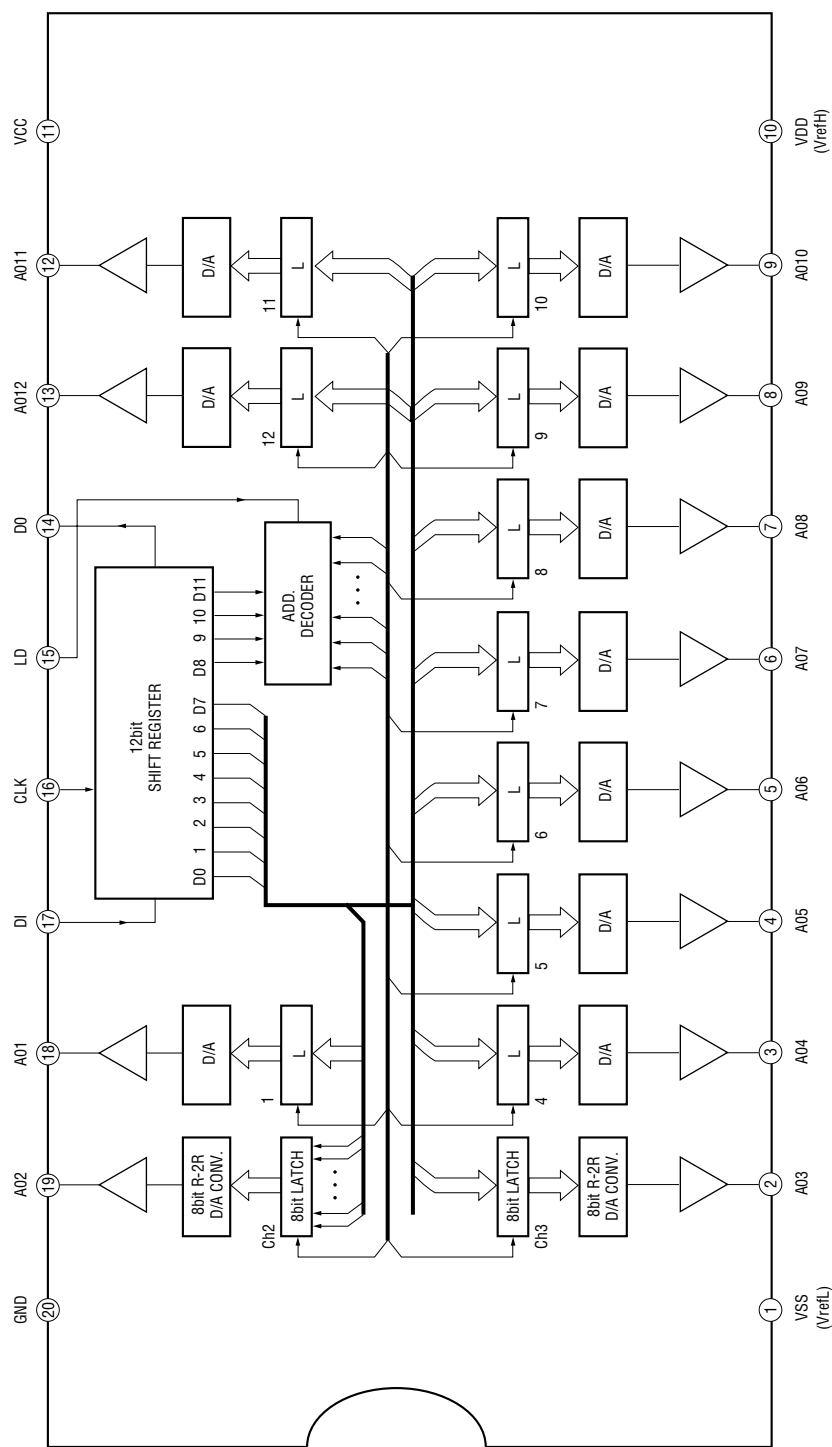


IC908 LC35256DM-70 (MAIN BOARD)

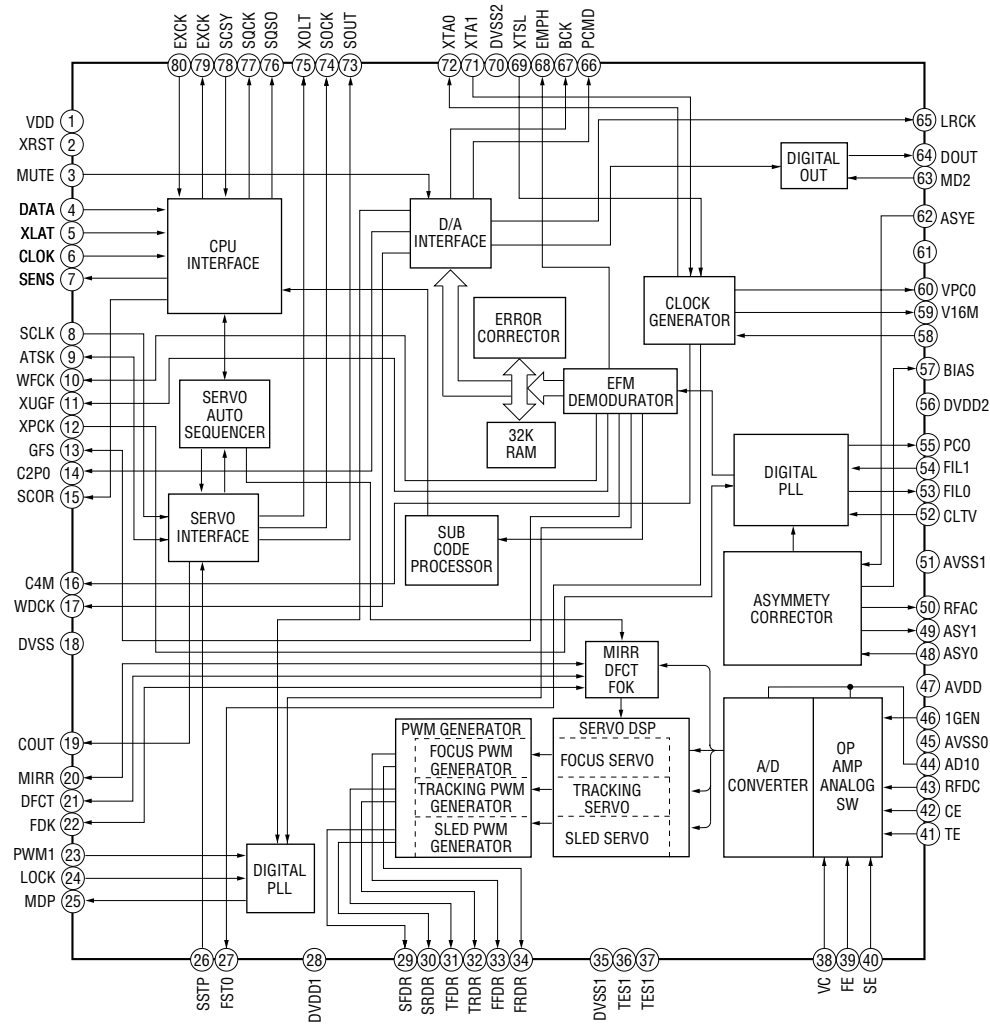


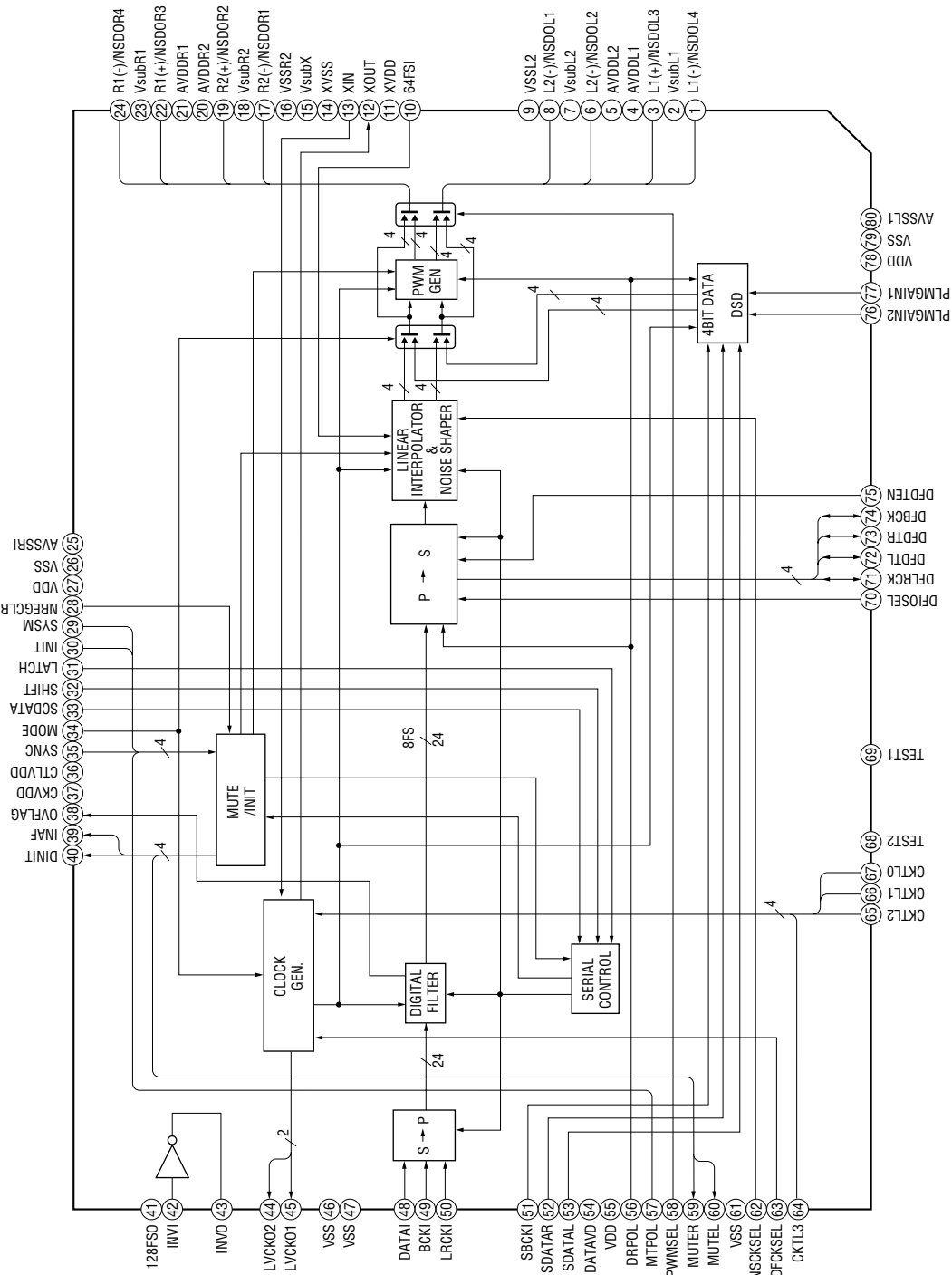
IC909 SN74HC139APWR (MAIN BOARD)



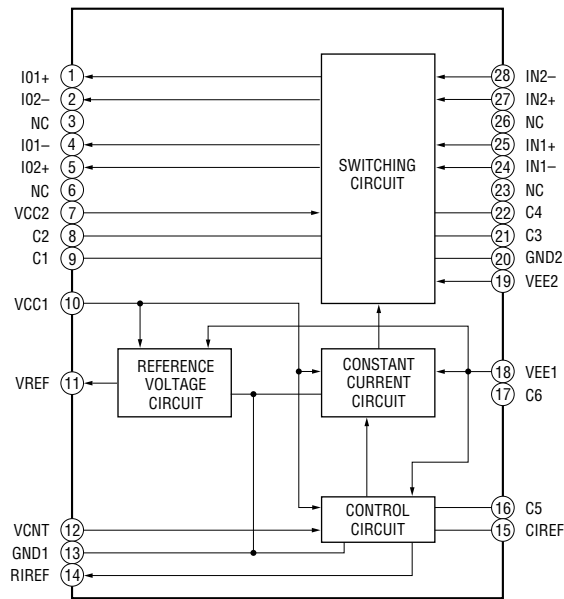


IC509 CXD3008Q (MAIN BOARD)

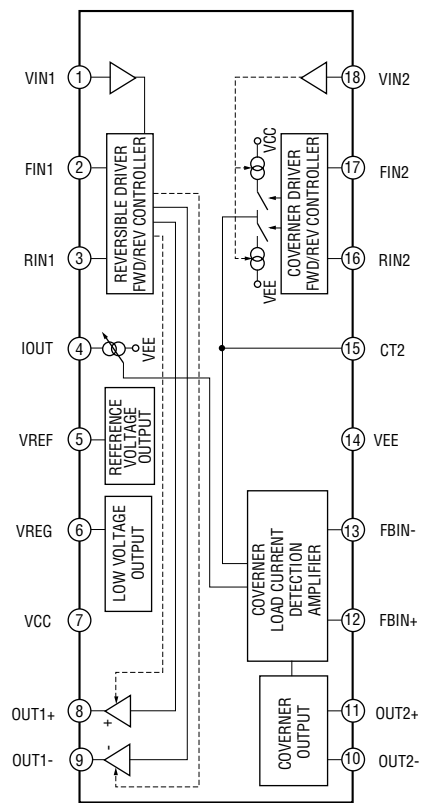




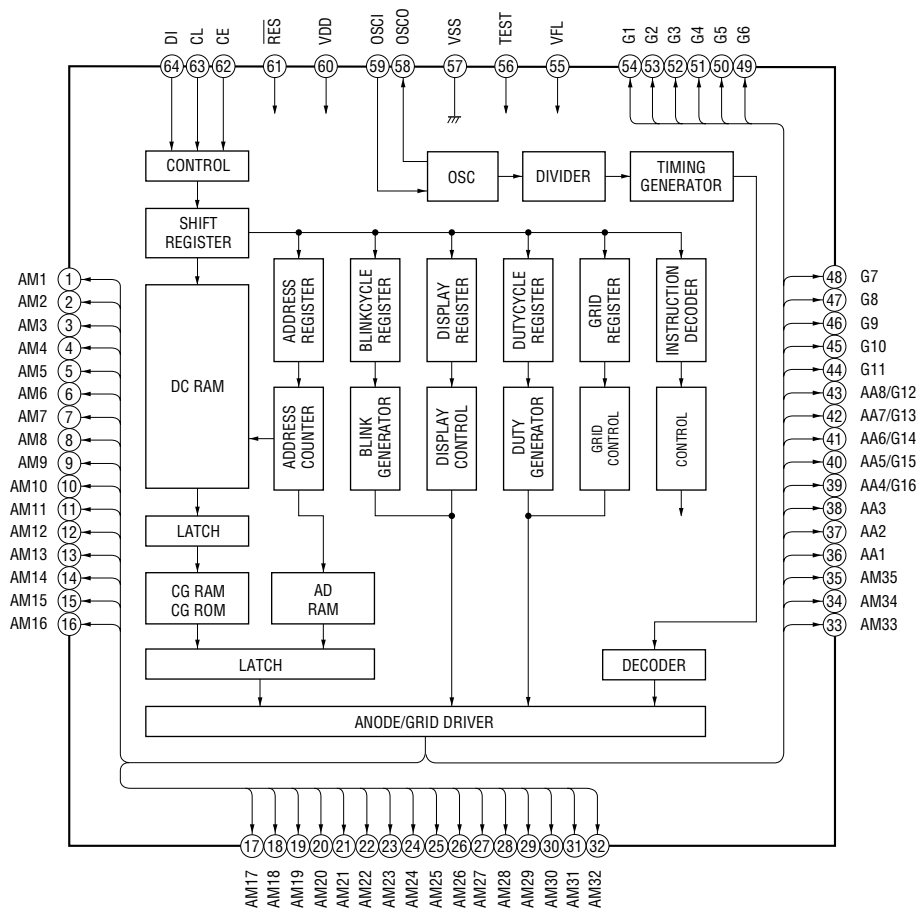
IC100, IC200 CXA8042AS (AUDIO BOARD)



IC11 BA6780 (JUNCTION BOARD)



IC1001 LC75721E (DISPLAY BOARD)



4-25. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC801 CXD2751Q (DSP DECODER)

Pin No.	Pin Name	I/O	Description
1	XSRQ	O	Data request signal output to the DVD CONVERTER (IC701)
2	XSHD	I	Header flag signal input from the DVD CONVERTER (IC701)
3	VDD	—	Power supply terminal (+3.3V)
4	VSS	—	Ground terminal
5	SDCK	I	Serial data clock signal input from the DVD CONVERTER (IC701)
6	SMUTE	I	Muting signal input from the system controller (IC901) “L”: muting
7	XMSLAT	I	Latch signal input from the system controller (IC901)
8	MSCK	I	Clock signal input from the system controller (IC901)
9	MSDATI	I	Serial data input from the system controller (IC901)
10	MSDATO	O	Serial data output to the system controller (IC901)
11	MSREDY	I	Ready signal input from the system controller (IC901) “L”: ready
12	XMSDOE	O	Data enable signal output terminal Not used (open)
13	XRST	I	Reset signal input from the expander (IC902)
14	MCKI	I	Master clock signal input terminal
15	VSS	—	Ground terminal
16	CK75S	I	Master clock select signal input terminal “L”: 512fs, “H”: 768fs (fixed at “H” in this set)
17	EXCKO1	O	External clock 1 signal output terminal
18	EXCKO2	O	External clock 2 signal output terminal Not used (open)
19	LRCK	I/O	Clock signal input/output terminal (44.1kHz) Not used (open)
20	NC	—	Not used (open)
21	MNT2	O	Monitor 2 signal output terminal Not used (open)
22	TRST	I	Reset signal input terminal (normally: fixed at “L”)
23	TCK	I	Clock signal input terminal for test (normally: fixed at “L”)
24	TDI	I	Data input terminal for test (normally: open)
25	TENA1	I	Data enable signal input terminal for test (normally: open)
26	TDO	O	Data output terminal for test (normally: open)
27	VST	—	Ground terminal for test (normally: fixed at “L”)
28	VDD	—	Power supply terminal (+3.3V)
29	VSS	—	Ground terminal
30	MNT1	O	Monitor 1 signal output terminal Not used (open)
31	MNT0	O	Monitor 0 signal output terminal Not used (open)
32	XBIT	O	Monitor signal output terminal Not used (open)
33	F75HZ	O	Clock output terminal (75Hz) Not used (open)
34	SUPDAT	O	Serial data output terminal Not used (open)
35	XSUPAK	O	Data flag signal output terminal Not used (open)
36	SUPEN	O	Data enable signal output terminal Not used (open)
37	TEST1	I	Test 1 signal input terminal for test (normally: fixed at “L”)
38	VSS	—	Ground terminal
39	TEST2	I	Test 2 signal input terminal for test (normally: fixed at “L”)
40, 41	VSS	—	Ground terminal
42	BCKD	I	Phase reference signal input terminal
43 to 45	NC	—	Not used (open)
46	BCKA	I	Shift clock signal input terminal
47	DSAL	O	DSD data (Lch) output terminal
48	DSAR	O	DSD data (Rch) output terminal
49	ZDFLGL	O	Data (Lch) flag detect signal output terminal Not used (open)

Pin No.	Pin Name	I/O	Description
50	ZDFLGR	O	Data (Rch) flag detect signal output terminal Not used (Open)
51, 52	A0, A1	O	Address signal output to the D-RAM (IC808)
53	VDD	—	Power supply terminal (+3.3V)
54	VSS	—	Ground terminal
55 to 63	A2 to A10	O	Address signal output to the D-RAM (IC808)
64	NC	—	Not used (open)
65	VSS	—	Ground terminal
66	XWE	O	Write enable signal output to the D-RAM (IC808)
67	XCAS	O	Column address strobe signal output to the D-RAM (IC808)
68	XRAS	O	Row address strobe signal output to the D-RAM (IC808)
69	XOE	O	Read enable signal output to the D-RAM (IC808)
70 to 77	DQ0 to DR7	I/O	Two-way data bus with the D-RAM (IC808)
78	VDD	—	Power supply terminal (+3.3V)
79	VSS	—	Ground terminal
80	WCK	I	Clock signal input terminal for disk mark detect
81	WRFD	I	RF data signal input terminal for disk mark detect
82 to 89	WAD0 to WAD7	I	A/D data signal input from the A/D converter (IC804) for disk mark detect
90	VSS	—	Ground terminal
91 to 98	SD7 to SD0	I	Stream data signal input from the DVD CONVERTER (IC701)
99	SDEF	I	Error flag signal input from the DVD CONVERTER (IC701)
100	XSAK	I	Data flag signal input from the DVD CONVERTER (IC701)

• **MAIN BOARD IC902 CXD1095BR (I/O EXPANDER)**

Pin No.	Pin Name	I/O	Description
1	LIM_SW	I	Limit switch for sled servo. Not used (open)
2	(WISE)	I	Rotating direction. Not used (open)
3	F_COMPL	I	Focus Jump L signal
4	SPCNTL1	O	Speed control-1. Not used (open)
5	SPCNTL0	O	Speed control-0. Not used (open)
6	TBLL	O	TABLE MOTOR - L DIRECTION
7	TBLR	O	TABLE MOTOR - R DIRECTION
8	Vss	—	Ground terminal
9	REMCODE	I	Not used (open)
10	D_SENS	I	DISC SENSOR
11	S1	I	Tray position detection sensor-1
12	S2	I	Tray position detection sensor-2
13	LOAD_OUT	O	Load signal output
14	SDCNTL	O	Sled Control
15	LOAD_IN	I	Load signal input
16	A1OUT	O	Control A1 (Output)
17	NC	—	Not used (open)
18	RST_DSD	O	Reset Signal for DSD
19	RST_DP	O	Reset Signal for DISPLAY uCOM
20	RST_DVD	O	Reset Signal for DVD DSP
21	RST_CD	O	Reset Signal for CD DSP
22	VMOD	O	
23	Vss	—	Ground terminal
24	Vdd	—	Power supply terminal
25	PD5	O	MULTI/2CH SW for AUDIO board (1: MULTI)
26	PD6	O	RF amplifier serial enable signal (SEN_RF)
27	PD7	O	To be used for disc inspection mode.
28 – 30	D0-2	I/O	Data bus
31,32	NC	—	Data bus. Not used (open)
33 – 37	D3-7	I/O	Data bus
38	XCLR	I	Clear signal input terminal (Pull up)
39	XDIS	I	Reset signal input from the ARP
40	Vss	—	Ground terminal
41	XWR	I	Strobe signal input from the CPU
42	XRD	I	Strobe signal input from the CPU
43	XCS	I	Chip enable signal input from the CPU
44 – 46	A0-2	I/O	Address bus
47	PE0	—	Not used (open)
48	PE1	—	Not used (open)
49	NC	—	Not used (open)
50	TRKFIL	O	Tracking Filter
51	—	I/O	Not used (open)
52	DFCTEN	O	Energy saving mode
53	—	O	Not used (open)
54	MRSEL1	O	CD/SACD CHANGE
55	Vss	—	Ground terminal
56	Vdd	—	Power supply terminal
57	AGING_ERR	O	DEBUG FLAG. Not used (open)
58	PA4	I	Not used (open)
59	OUT_SW	I	TRAY OUT SENSOR
60	PA6	I	Not used (open)
61	PA7	I	Not used (open)
62	F_COMPH	I	Focus Jump H Signal
63	NC	—	Not used (open)
64	NC	—	Not used (open)

• **MAIN BOARD IC701 CXD1882R (SACD DECODER)**

Pin No.	Pin Name	I/O	Description
1, 2	D5, D6	I/O	Two-way data bus with the CPU (IC901) and expander (IC902)
3	VSS	—	Ground terminal (digital system)
4	D7	I/O	Two-way data bus with the CPU (IC901) and expander (IC902)
5	A0	I	Address signal input from the CPU (IC901)
6	VDD	—	Power supply terminal (+3.3V) (digital system)
7	A1	I	Address signal input from the CPU (IC901)
8	VDD5V	—	Power supply terminal (+5V)
9 to 14	A2 to A7	I	Address signal input from the CPU (IC901)
15	VSS	—	Ground terminal (digital system)
16	XWAIT	O	Wait signal output terminal Not used (open)
17	XRD	I	Read strobe signal input from the CPU (IC901)
18	XWR	I	Write strobe signal input from the CPU (IC901)
19	XCS	I	Chip select signal input from the CPU (IC901)
20, 21	XINT0, XINT1	O	Interrupt signal output to the CPU (IC901)
22	VDD	—	Power supply terminal (+3.3V) (digital system)
23	XHRS	I	Not used (open)
24	HDB7	O	Stream data signal output to the DSD decoder (IC801)
25	VSS	—	Ground terminal (digital system)
26	HDB8	O	Error flag signal output to the DSD decoder (IC801)
27	HDB6	O	Stream data signal output to the DSD decoder (IC801)
28	VDDS	—	Power supply terminal (+5V) (digital system)
29	HDB9	O	Not used (open)
30	HDB5	O	Stream data signal output to the DSD decoder (IC801)
31	HDBA	O	Not used (open)
32	HDB4	O	Stream data signal output to the DSD decoder (IC801)
33	VSS	—	Ground terminal (digital system)
34	HDBB	O	Not used (open)
35	HDB3	O	Stream data signal output to the DSD decoder (IC801)
36	VDD	—	Power supply terminal (+3.3V) (digital system)
37	HDBC	O	Not used (open)
38	VDDS	—	Power supply terminal (+5V) (digital system)
39	HDB2	O	Stream data signal output to the DSD decoder (IC801)
40	HDBD	O	Not used (open)
41	HDB1	O	Stream data signal output to the DSD decoder (IC801)
42	VSS	—	Ground terminal (digital system)
43	HDBE	O	Not used (open)
44	HDB0	O	Stream data signal output to the DSD decoder (IC801)
45	HDBF	O	Not used (open)
46	XACK	O	Serial data transfer acknowledge signal output to the DSD decoder (IC801)
47	VDDS	—	Power supply terminal (+5V) (digital system)
48	DCK	O	Serial data transfer clock signal output to the DSD decoder (IC801)
49	XSHDR0	O	Header flag signal output to the DSD decoder (IC801)
50	VDD	—	Power supply terminal (+3.3V) (digital system)
51	REDY	O	Not used (pull up)
52	VSS	—	Ground terminal (digital system)
53	REQUEST	I	Serial data transfer request signal input from the DSD decoder (IC801)
54	HINT	O	Not used (pull up)
55	XS16	O	Not used (pull up)
56	HA1	I	Not used (fixed at "H")
57	XPDI	I/O	Not used (pull up)
58	VDDS	—	Power supply terminal (+5V) (digital system)
59, 60	HA0, HA2	I	Not used (fixed at "H")

Pin No.	Pin Name	I/O	Description
61	VSS	—	Ground terminal (digital system)
62, 63	HCS0, HCS1	I	Not used (open)
64	VDD	—	Power supply terminal (+3.3V) (digital system)
65	DASP	I/O	Not used (pull up)
66 to 69	MDB0 to MDB3	I/O	Two-way data bus with the D-RAM (IC706)
70	VSS	—	Ground terminal (digital system)
71	MDB4	I/O	Two-way data bus with the D-RAM (IC706)
72	VDD5V	—	Power supply terminal (+5V)
73 to 75	MDB5 to MDB7	I/O	Two-way data bus with the D-RAM (IC706)
76	XMWR	O	Write enable signal output to the D-RAM (IC706)
77	VDD	—	Power supply terminal (+3.3V) (digital system)
78	XRAS	O	Row address strobe signal output to the D-RAM (IC706)
79, 80	MA0, MA1	O	Address signal output to the D-RAM (IC706)
81	VSS	—	Ground terminal (digital system)
82 to 87	MA2 to MA7	O	Address signal output to the D-RAM (IC706)
88	VDD	—	Power supply terminal (+3.3V) (digital system)
89	MA8	O	Address signal output to the D-RAM (IC706)
90	VSS	—	Ground terminal (digital system)
91	MA9/MNT0	O	Address signal output to the D-RAM (IC706)
92	MA10/MNT1	O	RF data signal output terminal for disc mark detection
93	MA11/MNT2	O	Clock signal output terminal for disc mark detection Monitor signal output to the CPU (IC901)
94	XMOE	O	Output enable signal output to the D-RAM (IC706)
95	XCAS	O	Column address strobe signal output to the D-RAM (IC706)
96, 97	MDB8, MDB9	I/O	Two-way data bus with the D-RAM (IC706)
98	VSS	—	Ground terminal (digital system)
99	MDBA	I/O	Two-way data bus with the D-RAM (IC706)
100	VDD	—	Power supply terminal (+3.3V) (digital system)
101, 102	MDBB, MDBC	I/O	Two-way data bus with the D-RAM (IC706)
103	VDD5V	—	Power supply terminal (+5V)
104 to 106	MDBD to MDBF	I/O	Two-way data bus with the D-RAM (IC706)
107	GFS	O	Guard frame sync signal output to the CPU (IC901)
108	VSS	—	Ground terminal (digital system)
109	APEO	O	Absolute phase error signal output
110	VDD	—	Power supply terminal (+3.3V) (digital system)
111	DASYO	O	RF binary signal output
112	GND A5	—	Ground terminal (analog system)
113, 114	ASF1, AFS2	—	Filter connected terminal for selection the constant asymmetry compensation
115	DASYI	I	Analog signal input after integrated from the RF binary signal
116	RFDCC	I	Input terminal for adjusting DC cut high-pass filter for RF signal
117	RF IN	I	RF signal input from the CXD1881R (IC001)
118, 119	VCCA5, VCCA4	—	Power supply terminal (+3.3V) (analog system)
120	VCOR1	—	VCO oscillating range setting resistor connected terminal
121	VCoin	I	VCO input terminal
122, 123	GND A4, GND A3	—	Ground terminal (analog system)
124	LPF5	O	Signal output from the operation amplifier from PLL loop filter
125	VC1	I	Middle point voltage (+1.65V) input terminal
126, 127	LPF2, LPF1	I	Inverted signal input to the operation amplifier from PLL loop filter
128, 129	VCCA3, VCCA2	—	Power supply terminal (+3.3V) (analog system)
130	PDO	O	Signal output from the charge pump for phase comparator
131	PDHVCC	I	Middle point voltage input terminal for RF PLL

Pin No.	Pin Name	I/O	Description
132	FDO	O	Signal output from the charge pump for frequency comparator
133, 134	GND A2, GND A1	—	Ground terminal (analog system)
135	SPO	O	Spindle motor (M3) control signal output to the BA5912AFP (IC512)
136	VC2	I	Middle point voltage (+1.65V) input terminal
137	MDIN2	I	Spindle motor (M3) control signal input from the CXD3008Q (IC509)
138	MDIN1	I	MDP input terminal
139	VCCA1	—	Power supply terminal (+3.3V) (analog system)
140	CLVS	O	Control signal output for selection the spindle control filter at CLVS
141	VSS	—	Ground terminal (digital system)
142	MDSOUT	O	Frequency error output terminal of internal CLV circuit
143	VDD	—	Power supply terminal (+3.3V) (digital system)
144	MDPOUT	O	Phase error output terminal of internal CLV circuit
145	DEFECT	I	Defect signal input terminal Not used (fixed at “L”)
146	GSCOR	I	Guard subcode sync OR signal input from the CXD3008Q (IC509)
147	EXCK	O	Subcode serial data reading clock signal output to the CXD3008Q (IC509)
148	SBIN	I	Subcode serial data input from the CXD3008Q (IC509)
149	VSS	—	Ground terminal (digital system)
150	SCOR	I	Subcode sync OR signal input from the CXD3008Q (IC509)
151	WFCK	I	Write frame clock signal input from the CXD3008Q (IC509)
152	VDD5V	—	Power supply terminal (+5V)
153	XRCI	I	RAM overflow signal input terminal Not used (fixed at “L”)
154	VDDS	—	Power supply terminal (+5V) (digital system)
155	C2PO	I	C2 pointer signal input from the CXD3008Q (IC509)
156	VDD	—	Power supply terminal (+3.3V) (digital system)
157	DBCK	O	Bit clock signal (2.8224 MHz) output terminal Not used (open)
158	BCLK	I	Bit clock signal (2.8224 MHz) input from the CXD3008Q (IC509)
159	DDAT	O	PCM data output terminal Not used (open)
160	MDAT	I	Serial data input from the CXD3008Q (IC509)
161	VSS	—	Ground terminal (digital system)
162	DLRC	O	L/R sampling clock signal (44.1 kHz) output terminal Not used (open)
163	LRCK	I	L/R sampling clock signal (44.1 kHz) input from the CXD3008Q (IC509)
164	XRST	I	Reset signal input from the expander (IC902) “L”: reset
165	IFS0	I	Interface select signal input terminal Fixed at “L” in this set
166	IFS1	I	Interface select signal input terminal Fixed at “H” in this set
167	XTAL	I	33.86688 MHz clock signal input terminal
168	VSS	—	Ground terminal (digital system)
169	XTA2	O	System clock output terminal (33.86688 MHz)
170	XTA1	I	System clock input terminal (33.86688 MHz)
171	VDD	—	Power supply terminal (+3.3V) (digital system)
172 to 176	D0 to D4	I/O	Two-way data bus with the CPU (IC901) and expander (IC902)

SECTION 5

SERVICING NOTES (2)

Cleaning of Optical Pick-up Lens

In cleaning the lens of optical pick-up, use the air blower.

Never use a cotton swab for cleaning the lens of optical pick-up, which otherwise causes a trouble.

Resetting Operation at Power ON

If the power is turned on with a disc loaded in the set, a sequence of operation as shown below will be performed.

(The operation varies depending on the type of disc) Condition: continue mode

(1) CD

1. Sled reverse move (sled in)
2. Disc detect
3. IC setting for CD
4. Servo error signal offset auto adjustment
5. Spindle kick for LD on
6. LD on
7. Focus search
8. Focus servo on
9. Spindle kick
10. Spindle servo on
11. E-F balance auto adjustment
12. Tracking & sled servo on
13. Focus bias auto adjustment
14. Focus servo gain auto adjustment
15. Tracking servo gain auto adjustment
16. Jump to lead-in area
17. Read TOC
18. Auto play (track No.1)

(2) SACD (single layer)

1. Sled reverse move (sled in)
2. Disc detect
3. IC setting for SACD
4. Servo error signal offset auto adjustment
5. Spindle kick for LD on
6. LD on
7. Focus search
8. Focus servo on
9. Spindle kick
10. Spindle servo on
11. E-F balance auto adjustment
12. Tracking & sled servo on
13. Focus bias auto adjustment
14. Focus servo gain auto adjustment
15. Tracking servo gain auto adjustment
16. Jump to lead-in area
17. Read TOC
18. Auto play (track No.1)

(3) SACD (dual layer)

1. Sled reverse move (sled in)
2. Disc detect
3. IC setting for SACD
4. Servo error signal offset auto adjustment
5. Spindle kick for LD on
6. LD on
7. Focus search
8. Focus servo on (layer 0)
9. Spindle kick
10. Spindle servo on
11. E-F balance auto adjustment (layer 0)
12. Tracking & sled servo on (layer 0)
13. Focus bias auto adjustment (layer 0)
14. Focus servo gain auto adjustment (layer 0)
15. Tracking servo gain auto adjustment (layer 0)
16. Jump to lead-in area
17. Read TOC
18. Focus jump (layer 0→layer 1)
19. E-F balance auto adjustment (layer 1)
20. Tracking & sled servo on (layer 1)
21. Focus bias auto adjustment (layer 1)
22. Focus servo gain auto adjustment (layer 1)
23. Tracking servo gain auto adjustment (layer 1)
24. Focus Jump (layer 1→layer 0)
25. Auto play (track No.1)

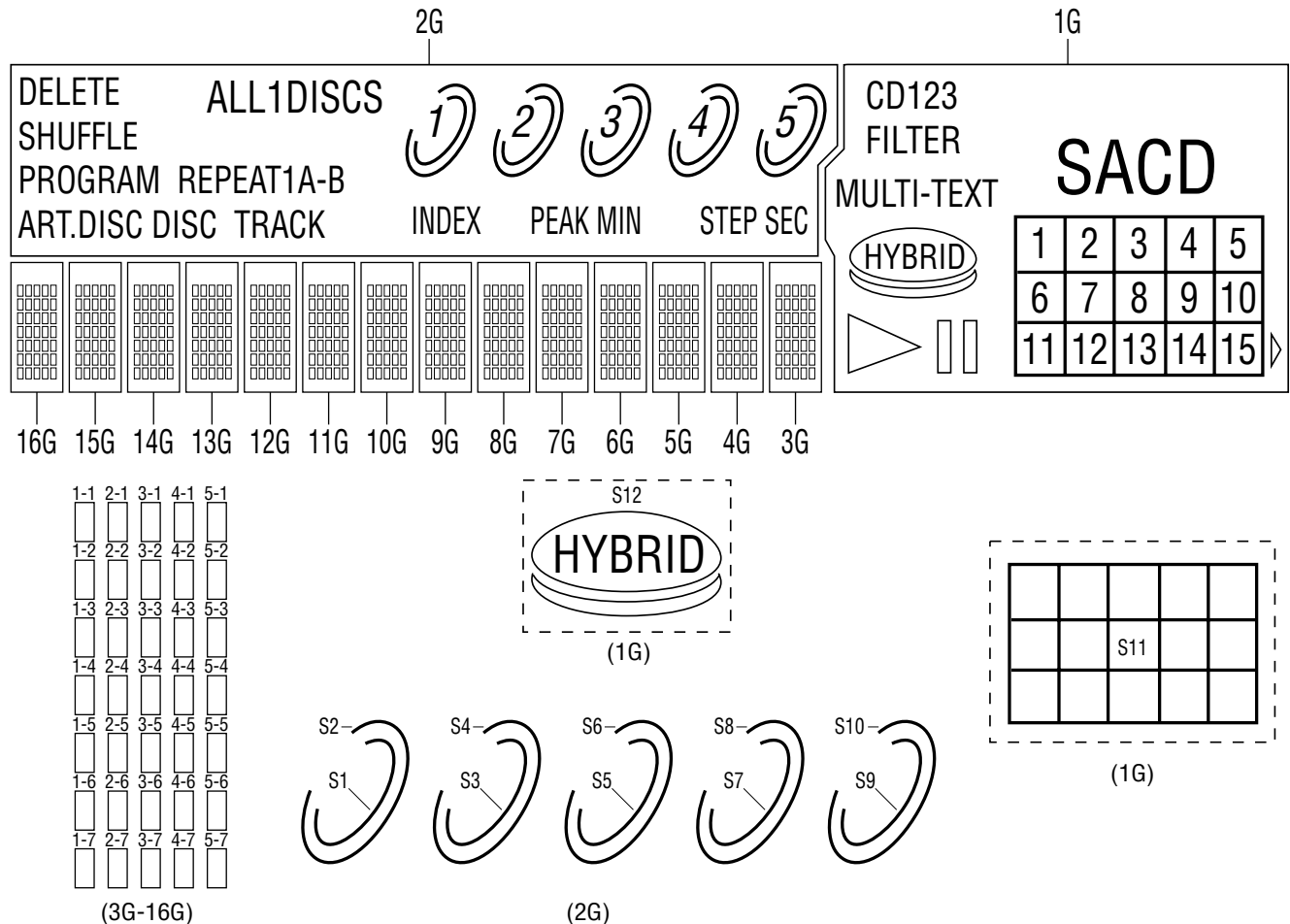
SECTION 6 TEST MODE

FLUORESCENT INDICATOR TUBE MODE

Note: Set the **[CD1/CD2]** switch on the remote commander to CD1.

Procedure:

- While shorting the Test Land and the GND side of C1002 with tweezers, press the **[D]** button and turn on the main power. The following operations will be executed automatically.
 - Grid of all segments lights up sequentially starting from 1G to 16G.
 - The vertical line (total 5 lines) of all grids lights up sequentially in the range of 3G to 16 G starting from the left.
 - The horizontal line of (total 7 lines) of all grids lights up sequentially in the range of 3G to 16G starting from the top.
 - Grids from 5G to 6G go off.
 - With the machine in the status that is set in step 1-④, press any on the remote commander. The grids 1G and 2G go off and then the machine enters the key check standby state. (When the **[EJECT]** key or the **[STOP]** key is pressed, the reception check is canceled.)
 - After the key check is completed, turn JOG clockwise to turn on the calendar segments sequentially. When the segment “15” is confirmed, turn JOG counter-clockwise that turns off the calendar segment. When the segment “1” is confirmed, this is the end of check.
 - After all the checks are completed, confirm to see that the display “%%TEST-END!!%” appears. The message indicates that the check is ended normally.
 - Press the **[D]** button to turn off the main power and disconnect the power plug from the wall outlet.
- * In the SCD-C333ES that does not have the **[MULTI/2CH]** key, attach the dummy key to the specified position and check the operation. When the check is completed and the main power is turned off, be sure to disconnect the dummy key.



This set automatically executes self-diagnosis and various checks by entering the test mode.

Note: This set automatically makes various adjustments according to the type of disc, thereby not requiring adjustment of the set when parts were replaced. However, be sure to execute 6-1. IC AND FLUORESCENT DISPLAY TUBE CHECK, 6-2. AUTO CHECK and 6-8. WAVEFORMS CHECK.

Disc for Test Mode

Various checks of this set require the following discs.

Model	Type *1	Category	Application
SATD-04 (J-2501-184-A)	SL	12 cm disc Reference disc	Adjusted value check, Operation check, Optical waveform check
Not specified	DL	12 cm disc	Operation check
PATD-012 (4-225-203-01) YEDS-18 (3-702-101-01)	CD	12 cm disc Reference disc	Adjusted value check, Operation check, Optical waveform check
Not specified	HYBRID	12 cm disc	Operation check

*1 SL: Single Layer

DL: Dual Layer

Setting Method of Test Mode

Turn the **POWER** switch on while pressing the **◀◀AMS▶▶** dial and the **TIME/TEXT** button. Release the **TIME/TEXT** button and the **◀◀AMS▶▶** dial in this order when “TEST MODE Menu” is displayed on the fluorescent display tube. (If the **◀◀AMS▶▶** dial is released first, the test mode becomes active but “TEST MODE Menu” is not displayed)

Test Mode Command List

The contents of test mode are as follows.

Note: Wrong operation in the test mode causes a trouble, thus requiring extreme care.

LINE command (1X): Use mainly for a manufacturing line.

No.	Name	Description	Remarks
05	DSP MON1	XUGF, XPCK, C2PO outputted from IC509 (CD DSP)	Not used for the servicing
06	DSP MON2	MNT0, MNT1, MNT2, MNT3 outputted from IC509 (CD DSP)	Not used for the servicing
07	DSP MON3	RFCK, XPCK, XROF, GTOP outputted from IC509 (CD DSP)	Electrical measurement, CD CLV jitter measurement

STANDARD command (1X): Use when the servo is applied by manual operation.

No.	Name	Description	Remarks
12	LD ON/OFF	The laser diode is turned on or off	On or off are switched alternately
13	SPIN ON/OFF	The spindle motor is rotated with the regulated voltage	On or off are switched alternately
14	FSRV ON/OFF	The focus servo is turned on or off	On or off are switched alternately
15	TSRV ON/OFF	The tracking servo is turned on or off	On or off are switched alternately
16	CLV ON/OFF	The spindle SLV servo is turned on or off Focus and tracking servos must be already turned on	On or off are switched alternately
17	SSRV ON/OFF	The sled servo is turned on or off Focus, tracking and spindle servos must be already turned on	On or off are switched alternately
18	ALL SRV ON	All servos are turned on	
19	ALL SRV OFF	All servos are turned off	Stop command in the test mode

OPEN/CLOSE key in the TEST mode.

The **OPEN/CLOSE** key is disabled immediately after the machine enters the TEST mode. Be sure to turn the **◀◀AMS▶▶** dial to select 59 Table Init and push **◀◀AMS▶▶** once. When initialization of the table is completed, the message INITAIL OK appears several seconds on the FL display. After this, the **OPEN/CLOSE** key is enabled and disc can be inserted and ejected.

When the command 59 Table Init is executed, the same operations of the POWER ON to the disc chucking in the normal operations as described below are performed. However, it presumes that the door and the tray are closed depending on the stop status.

59 Table Init → BU DOWN (disc unchucking) → Table rotates (disc search) → BU UP (disc chucking) at the disc that is found first of all.

When there are no discs, BU UP is executed at the DISC1 position.

Releasing Method of Test Mode

To release the test mode, turn the **POWER** switch off.

Selection/Entry of Test Mode

To select and enter the “TEST MODE Menu”, operate as follows.

1. Rotate the **◀◀AMS▶▶** dial to select the menu, and press the **◀◀AMS▶▶** dial to enter.
2. The test is switched on or off alternately each time the **◀◀AMS▶▶** dial is pressed.
3. To return to the previous step, rotate the **◀◀AMS▶▶** dial to select the desired item, and press the **◀◀AMS▶▶** dial to enter.

FOCUS command (2X): Focus related. (All servos must be already turned on (except command 21))

No.	Name	Description	Remarks
21	FSRCH ON/OFF	The continuous vertical motion of the optical pick-up lens is turned on or off	Avoid a long-time use
22	F-BIAS UP	Increase focus bias	Focus bias value
23	F-BIAS DOWN	Decrease focus bias	Focus bias value
24	ADJ FCSBIAS	The focus bias is adjusted automatically Both + and - directions are searched to search for best jitter point	
25	FGAIN UP/DW	The focus servo gain is switched between normal and down	Normal or down are switched alternately
26	FJMP UP/DWN	Focus jump is executed UP: layer 0→1, DOWN: layer 1→0	Valid only for DL
27	FOCUS AGC	The focus servo gain is adjusted automatically	
28	DISP FBdata	The focus bias adjusted value is displayed	Hexadecimal display 9 bit data

Note: On or off and up or down are switched alternately

OFFSET (PI, FE, TE) command (3X): Adjusts the offset of PI, FE and TE signals.

No.	Name	Description	Remarks
31	PI/FE OFSET	Adjusts the offset of PI, FE and TE signals This adjustment must be executed after 61 DISC DETECT	TE offset adjustment is executed for the CD only

TRACKING command (4X): Tracking servo related.

No.	Name	Description	Remarks
41	TGAIN NM/UP	The tracking servo gain is switched between normal and up	Normal or up are switched alternately
44	ADJ TRK DSP	The traverse AGC and E-F balance adjustment is performed	
45	TRACKING AGC	The tracking servo gain is adjusted automatically	

SEARCH command (5X): Track search related.(Not used for the servicing)

No.	Name	Description	Remarks
51	1-TRCK JUMP	One-track jump is performed	
52	M-TRCK MOVE	M-track movement is performed	
53	FINE SEARCH	Fine search is performed	
58	CDM Check	Measurement of table rotation hours, tray open/close hours and panel door open close hours	
59	Table Init	Initializes the table.	After this command, the OPEN/CLOSE key is enabled.

DISC DETECT command (6X): Disc type check related.

No.	Name	Description	Remarks
61	DISC DETECT	Disc type check is executed Display after judgment DSKMOD CD: Judged as CD DSKMOD SL: Judged as SACD (SL) DSKMOD DL: Judged as SACD (DL) DSKMOD HLHD: Judged as HYBRID HD DSKMOD CDRW: Judged as CD-RW	Refer to how to apply servo by manual operation (62 page)
62	SET DISC CD	Enter disc type CD setting	CD forced setting
63	SET DISC SL	Enter disc type SL setting	SL forced setting
64	SET DISC DD	Enter disc type DD setting	DD forced setting
65	SET DISC HH	Enter disc type HYBRID HD setting	HD forced setting
66	SET DISC HC	Enter disc type HYBRID CD setting	CD forced setting

TOOLS command (8X): Performs aging, reads adjusting parameters, etc.

No.	Name	Description	Remarks
81	VERSION	Firmware version is displayed	Example: Ver 1.00
83	TRAY AGING	Tray open-close aging is performed Not used for the servicing	Number of times and eccentricity measurement Not used in this set.
84	JITTER	Jitter measurement	Not used for the servicing
85	ERROR RATE	Error rate measurement CD: C1, C2 SACD: PO, PI1, PI2	Error rate Not used for the servicing
86	ALL SRV ON	Apply all servos Full automatic measurement including PI, FE and TE offset adjustment is performed	Use when applying the servo by manual operation Refer to STANDARD command (54 page)
87	DISP ADJ DT	Automatic adjusting parameters are displayed The offset adjusted values are scroll-displayed in order of RF, VC, FE and TE	Refer to auto check items (59 page) Refer to auto check items (59 page)
8d	Set Up Init	Set to factory shipping mode PLAY, REPEAT, DIGIFIL, etc. are initialized	Set when repair completed Refer to 6-7. SHIPPING MODE (64 page)
8F	49 TRCK JIT	Used for jitter measurement of 49th music on SACD-S4	For manufacturing line Not used for the servicing

QA command (9X)

No.	Name	Description	Remarks
92	SET CHECK	The set is checked	Refer to 6-2. AUTO CHECK (59 page)
94	SET AGING	The set aging is performed Repeat by the specified number of times or until an error occurred	Refer to 6-6. AGING MODE (64 page)
95	DISPLAY ERROR	The content of error recorded to the set is read and displayed (Error recording) Only one item is recorded	
96	D-OUT OnOff	Digital out of CD is turned on or off	Not used in this set.
98	APDO JITTER		Not used for the servicing
9C	BU DENCHO	The content of error recorded to the set is read, and then the S curve waveform, traverse waveform, and RF waveform can be checked successively	Refer to 6-8. WAVEFORMS CHECK (66page)
9D	P-ON HOUR	Approximate cumulative power supplying time is displayed (Initialized by 8d command)	In unit of 1 hour
9E	RFD OUT	RFD output is turned on or off SACD jitter measuring mode	Not used for the servicing

How to Apply Servo by Manual Operation

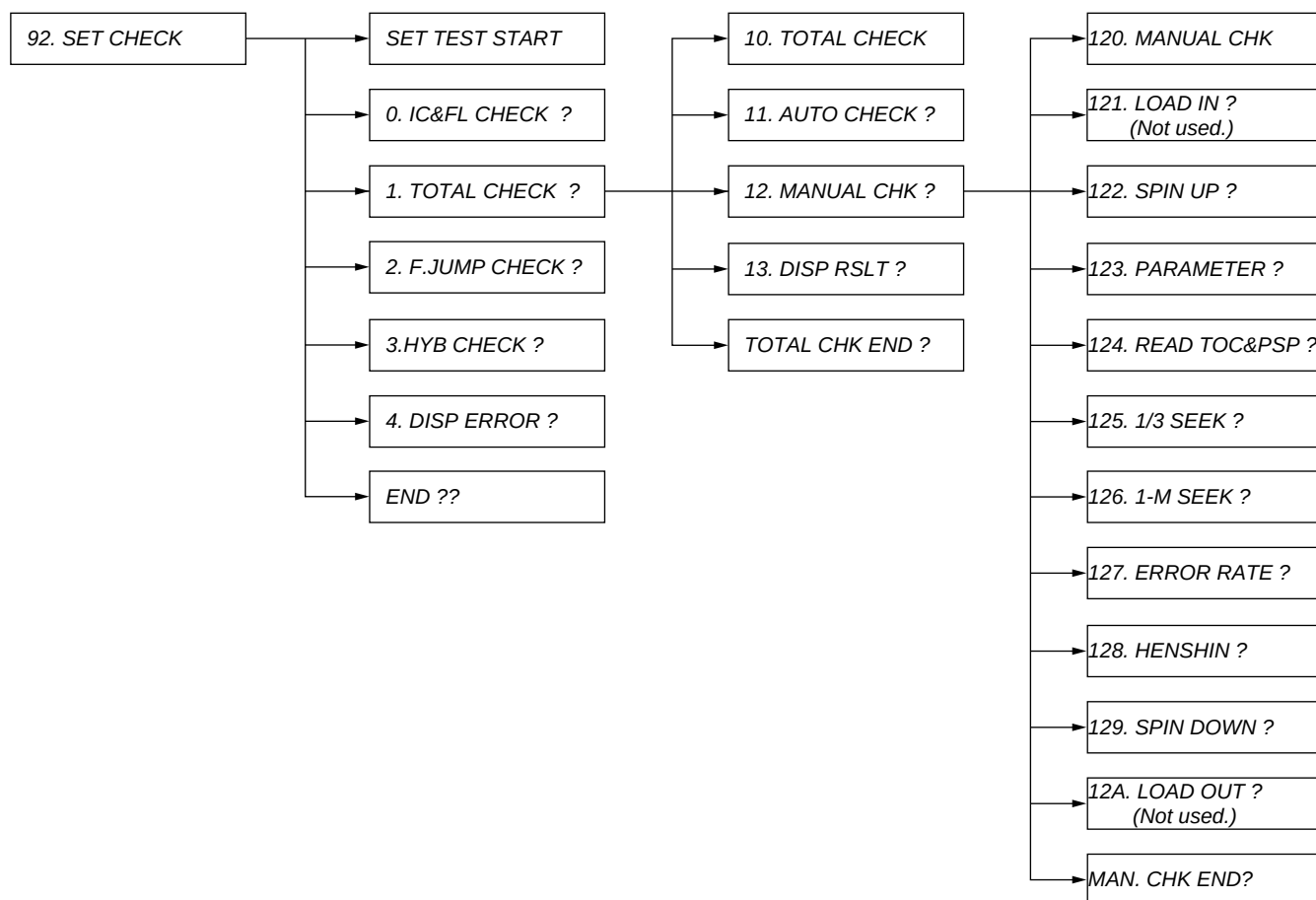
In analyzing failures of the set, the servo may be applied by manual operation. To apply servo in the test mode, use the following method.

1. After setting the test mode, rotate the **◀◀ AMS ▶▶** dial to select a command, and press the **◀◀ AMS ▶▶** dial to enter.
2. "61 DISC DETECT" (Disc type check)→"86 ALL SRV ON" (All servos on + auto adjustment)
3. If applying servo while checking the condition one by one, "61 DISC DETECT" (Disc type check)→"31 PI/FE OFFSET" (Offset automatic adjustment)→"14 FSRV ON/OFF" (Focus servo on)→"16 CLV ON/OFF" (CLV servo on)→"44 ADJ TRK DSP" (E-F balance adjustment)→"15 TSRV ON/OFF" (Tracking servo on)→"17 SSRV ON/OFF" (Sled servo on)→"24 ADJ FCSBIAS" (Focus bias adjustment)→"27 FOCUS AGC" (Focus auto gain adjustment)→"45 TRACKING AGC" (Tracking auto gain adjustment).

Note: 1. On and off are alternately switched in the same command.

2. For a stop, select "19 ALL SRV OFF" and press the **◀◀ AMS ▶▶** dial.

Set Check



Press the **AMS** dial when No.□□□□□□□□*1 is displayed, and a checking for that display will start or the lower layer will be selected. For the selection on the same layer, rotate the **AMS** dial. It is looped on the same layer, and when “END?” is displayed, press the **AMS** dial to return to the upper layer.

*1 □ denotes a displayed character.

Manual Check Method

In the “12. MANUAL CHK”, individual checks (121. LOAD IN to 12A. LOAD OUT) are possible.

Example: If 124. READ TOC of 12. MANUAL CHECK is to be checked.

Setting Method:

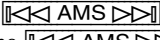
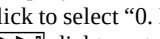
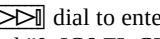
1. After setting the test mode, rotate the **AMS** dial to select “92. SET CHECK” and press the **AMS** dial to enter.
2. When “SET TEST START” is displayed, rotate the **AMS** dial clockwise by 2 clicks to select “1. TOTAL CHECK?” and press the **AMS** dial to enter.
3. When “10. TOTAL CHECK” is displayed, rotate the **AMS** dial clockwise by 2 clicks to select “12. MANUAL CHK?” and press the **AMS** dial to enter.
4. When “120. MANUAL CHK” is displayed, rotate the **AMS** dial clockwise by 4 clicks to select “124. READ TOC&PSP?” and press the **AMS** dial to enter.
5. A checking will start automatically.

Note: In making a check, the disc must be loaded. Immediately when a check started, the tray is drawn into the set. Also, the tray can be opened/closed even during the set check mode.

6-1. IC AND FLUORESCENT DISPLAY TUBE CHECK (SELF-DIAGNOSIS)

The communication between microcomputer and main ICs (self-diagnosis) and the fluorescent display tube all lit are checked.

Checking Method:

1. After setting the test mode, rotate the  dial to select "92. SET CHECK" and press the  dial to enter.
2. When "SET TEST START" is displayed, rotate the  dial clockwise by 1 click to select "0. IC&FL CHECK?" and press the  dial to enter.
3. A checking will start automatically, and "0. IC&FL CHECK" will be displayed. (Checking time is about 3 seconds)
4. After IC communication check, all segments of fluorescent display tube will be lit. At this time, check visually for a skipped character.
5. At successful completion of check, "0. IC CHECK OK" is displayed. In this case, no error exists in the IC interface. Proceed to 6-2. AUTO CHECK.

Note: The check mentioned above tests the communication from microcomputer to main ICs. Even if the check successfully finished, the IC to be checked is not always normal. Consider it for reference only.

6. In case of an IC communication error, the following display will be given during the checking. Possible causes of error are as listed below.

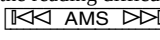
Error display	Causes (typical example)
DVD DEC. ERROR	1. IC701 (SACD decoder) is faulty 2. IC701 pin ⑩ (XRST) does not go "H" • IC901 pin ④ (XDIS) does not go "H" • IC902 (expander) is faulty 3. 768fs (33.86688 MHz) is not present to IC701 pin ⑩ (XTAL) • IC811 (3-multiplying circuit) is faulty • Clock signal 256fs is not sent from AUDIO board (CN901 pin ⑩) • CN901 pin ⑩ (DFGND) and pin ⑭ (DF3V) are open or shorted • CN901 pin ⑩ (DFGND) and pin ⑭ (DF3V) are open or shorted • CN901 and FFC connection is loose, or FFC is disconnected
DVD DRAM ERR	1. IC706 (D-RAM) is faulty 2. IC701 pin ⑩ (XRST) does not go "H" • IC901 pin ④ (XDIS) does not go "H" • IC902 (expander) is faulty 3. Faulty communication line between IC701 and IC706 • Data line, address line, WE, etc. 4. D903 (1SS367) is faulty
CD DSP ERROR	1. IC509 (CD DSP) is faulty 2. 768fs (33.86688 MHz) is not present to IC509 pin ⑦ (XTAL) Same as cause 3 of DVD DEC. ERROR 3. IC509 pin ② (XRST) does not go "H" • IC901 pin ④ (XDIS) does not go "H" • IC902 (expander) is faulty
D/A ERROR	1. IC904 (D/A converter) is faulty 2. Faulty IC703 (jitter amplifier) peripheral circuits 3. IC901 pin ⑥ (JIT) is faulty
EEPROM ERROR	1. IC903 (EEPROM) is faulty

Error display	Causes (typical example)
PRAWN DRAM ERR *1	1. IC808 (D-RAM) is faulty 2. IC801 (DSD decoder) is faulty 3. 768fs (33.86688 MHz) is not present to IC801 pin ⑭ (MCKI) Same as cause 3 of DVD DEC. ERROR 4. IC801 pin ⑬ (XRST) does not go "H" • IC901 pin ④ (XDIS) does not go "H" • IC902 (expander) is faulty 5. Faulty communication line between IC801 and IC808 • Data line, address line, WE, etc. 6. D903 (1SS367) is faulty D+3.3V is not present to IC808
RF AMP ERROR	1. IC001 (RF AMP) is faulty 2. Loose connection between CN503 on MAIN board and CN001 on RF board, or FFC disconnection CN503 pin ⑨ (CLK RF), pin ⑩ (DATA RF) and pin ⑪ (SDEN) must be checked
SRAM ERROR	1. IC908 (SRAM) is defective. 2. IC907, IC909 (address conversion IC) are defective. 3. The power voltage (3.3 V) is not supplied to IC908. C963 (Dual layer capacitor for backup) is defective. Q905 is defective. 4. IC908 pin-20 (XCE) does not go low. Q901 (digital transistor) is defective. D902 is defective.

*1 DSD decoder is also checked.

Causes Common to Each IC:

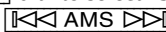
1. Faulty communication line between microcomputer and each IC.
Disconnected patterns, floating series resistors, bridge, etc.
2. Faulty IC supply voltage.
Particularly, check D+3.3V voltage. (D+5V for display microcomputer)
3. The power supply voltage for the IC is 3.3V that is generated by dividing the D5V using the voltage dividing with resistor network and transistor for SRAM (IC908).
4. Faulty microcomputer communication port to each IC

Note: In case of more than two errors, the error display is switched over one after another, thus making the reading difficult.
In such a case, press again the  dial to make a recheck for error reading.

6-2. AUTO CHECK (AUTOMATIC VARIOUS MEASUREMENTS)

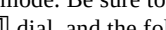
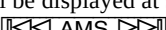
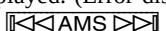
The auto check is performed to check if the set operates stably. Though a checking is made automatically, whether the measured data are within the specification is evaluated by the service person. The auto check results in NG immediately, if the check itself causes an error.

Setting Method of Auto Check Mode:

1. After setting the test mode, rotate the  dial to select “92. SET CHECK” and press the  dial to enter.
2. When “SET TEST START” is displayed, rotate the  dial clockwise by 2 clicks to select “1. TOTAL CHECK?” and press the  dial to enter.
3. When “10. TOTAL CHECK” is displayed, rotate the  dial clockwise by 1 click to select “11. AUTO CHECK?”.

CD and SACD (SL) Disc Operation Check

Checking method:

1. Press the  button to open the tray and place the test disc *1. The  key is disabled immediately after the machine enters the TEST mode. Be sure to initialize the table.
2. Press the  dial, and the following check will be performed automatically.
3. Finally, the test disc will be ejected and the auto check will finish.
4. “AUTO CHECK OK” will be displayed at successful completion of auto check.
5. Recheck is enabled if the  dial is pressed in step 4. (Also, use this operation when exchanging the test disc)
6. In case of an error during the checking, the check is interrupted automatically and the error is displayed. (Error display example: “DISC DETECT ERROR”) After error display, “CONT?STOP (J/S)” is displayed. In this case, if the  dial is pressed, the check where the error occurred is skipped and you can proceed to the next check. Also,  if button is pressed, the check finishes and “AUTO CHECK NG” is displayed when even one NG item exists.

*1 Use PATD-012 or YEDS-18 for CD, and SATD-S4 for SACD (SL). Using another disc will result in a checking failure.

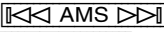
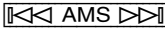
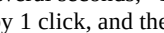
Check Items:

Items	Description	Remarks
LOAD IN TIME (msec)	Time until a disc is chucked from the state where loading tray is out	Loading in switch H→L
SPIN UP TIME (msec)	Time from spindle kick to PLL lock	Lock signal L→H
RF/VC/FE/TE (ORG)	Offset values before RF (PI), VC, FE, TE signal offset adjustment RF (8 bit data in hex notation) VC, FE, TE (9 bit data in hex notation)	At offset 0 RF: A0h VC, FE, TE: 00h
RF/VC/FE/TE (ADJ)	Offset values after RF (PI), VC, FE, TE signal offset adjustment (Less than ORG value if offset correction is normal) RF (8 bit data in hex notation) VC, FE, TE (9 bit data in hex notation)	VC offset is not adjusted (Measurement only) Also, for SACD, the TE offset is not measured and adjusted
PI/TRVS PP (ORG/ADJ)	PI (ORG): PI value at disc type check (decimal data) PI (ADJ): PI value after PI offset adjustment (read value at microcomputer A/D) (decimal data) TRVS PP (ORG): Traverse level before level correction (AGC) (decimal data) TRVS PP (ADJ): Traverse level after level correction (AGC) (decimal data)	PI level conversion Read value × 12.9mV Traverse level conversion Read value × 12.9mV 12.9mV=3.3V ÷ 256 (8 bit)
PIOR/CCR/TRCR	PIOR: Set value of PI offset coarse adjusting register CCR: Set value of FE offset coarse adjusting register TRCR: Set value of TE offset coarse adjusting register	Registers in RF amplifier
FOCUS/TRK GAIN	Auto gain adjusted values of focus and tracking servos (8 bit data in hex notation)	Reference: 30h
FBIAS/TRVSC/TRCR2/CFR	FBIAS: Focus bias set value (9 bit data in hex notation) TRVSC: Traverse center value (9 bit data in hex notation) TRCR2: Set value of E-F balance coarse adjusting register CFR: Set value of traverse level adjusting register	TRCR2 adjusts the E-F gain balance and used for CD only (Fixed to 06 for SACD) TRCR2 and CFR are registers in RF amplifier
MIN JITTER AT F.BIAS	Minimum jitter value in focus bias adjustment (CD only)	Correlative with RF jitter
READ TOC TIME (msec)	Time required for TOC reading	
PSP AMPLITUDE		SACD only
1/3 SEEK TIME F) AVE/MIN/MAX (msec): R) AVE/MIN/MAX (msec):	Seek time between 1/3LBA and 2/3LBA of the disc 1/3LBA→2/3LBA average/minimum/maximum 2/3LBA→1/3LBA average/minimum/maximum	LBA: Absolute address
1/MAX SEEK TIME F) AVE/MIN/MAX (msec): R) AVE/MIN/MAX (msec):	Seek time between most inward track (0LBA) and most outward track max LBA most inward→most outward average/minimum/maximum most outwar→most inward average/minimum/maximum	
ERROR RATE	Error rate measurement For CD: Average value/Maximum value of C1 and C2 For SACD: Average value/Maximum value of PO, PI1 and PI2	Measure for 10 sec at track No.5 For the SACD, 160 block data except the data under tracking jump

Items	Description	Remarks
HENSIN	Eccentricity measurement Eccentricity (actual eccentric amount) of disc, disc pulley total	For the CD only are measured • Read by dividing by 10 • 0 may be displayed if eccentricity is small (10um or less) (Due to measurement reason)
SPIN DOWN TIME (msec)	Time from spindle brake application to rotation stop	For CD: Over 64 monitoring For SCD: VCO1D monitoring
LOAD OUT TIME (msec)	Time until loading table comes out from the state where a disc is in chuck	Loading out switch H→L

Measured Data Reading Method:

To judge the check result, the measured data must be read.

1. When "AUTO CHECK OK" is displayed, rotate the  dial clockwise by 2 clicks.
2. When "13. DISP RSLT?" is displayed, press the  dial to enter.
3. "PLEASE WAIT" will be displayed and in several seconds, "13. DISP RESULT" will be displayed.
4. Rotate the  dial clockwise by 1 click, and the "LOAD IN" will be displayed.
5. Press the  dial to enter. The LOAD IN TIME measured value will be displayed.
6. Compare the displayed value with the following specified value.
7. Hence, repeat step 4 to 6 (display is variable) and read the measured data respectively.
8. Compare the measured data with the specified value to check for NG item.

Note: Blank display of measured value means that an error occurred during the checking or no measurement was taken place.

Specified Value:

(1) SCD (Use the test disc SATD-S4)

Note: Measured values in check items are typical ones.

Check items	Specified value
LOAD IN TIME (msec) :	Not displayed in this set.
SPIN UP TIME (msec) : 1652	2000 msec or less
RF/VC/FE/TE AVR (ORG) : 98, C, 1DE, 0	RF: 80-9B, VC: 1F1-10, FE: 1d8-42, TE: 1BB-5C
RF/VC/FE/TE AVR (ADJ) : 9F, C, 4, 0	RF: 98-A5, VC : 1F1-10, FE: 1F1-10, TE: 1F1-10
PI/TRVS PP (ORG/ADJ) : 81, 131, 78, 105	PI ORG: 70-8A, PI ADJ: 122-135
PIOR/CCR/TRCR : 1A, 31, 1F	No specified value given
FOCUS/TRK GAIN : 2E, 24	FOCUS: 1C-45, TRK: 1C-45
FBIAS/TRVSC/TRCR2/CFR : 2,13, 6, 60	F.BIAS: 1D0-4F, TRVSC: 1D0-35 TRCR2, CFR: no specified value given
READ TOC TIME (msec) : 1283	2500 msec or less
PSP AMPLITUDE : 1666	1200 msec or above
1/3 SEEK TIME	
F) AVE/MIN/MAX (msec) : 967, 928, 990	AVE: 1200 msec or less, MAX: 1500 msec or less
R) AVE/MIN/MAX (msec) : 974, 933, 993	AVE: 1200 msec or less, MAX: 1500 msec or less
1/MAX SEEK TIME	
F) AVE/MIN/MAX (msec) : 1958, 1938, 1968	AVE: 2500 msec or less, MAX: 3000 msec or less
R) AVE/MIN/MAX (msec) : 1915, 1909, 1935	AVE: 2500 msec or less, MAX: 3000 msec or less
ERROR RATE	
PO MAX/AVE FRAME : 0, 0	No specified value given
PO MAX/AVE NUM : 160, 3	MAX: 1000 msec or less, AVE: 200 msec or less
PI1 MAX/AVE FRAME : 0, 0	No specified value given
PI1 MAX/AVE NUM : 242, 17	MAX: 1000 msec or less, AVE: 200 msec or less
PI2 MAX/AVE FRAME : 0, 0	No specified value given
PI2 MAX/AVE NUM : 128, 2	MAX: 1000 msec or less, AVE: 200 msec or less
SPIN DOWN TIME (msec) : 1342	2000 msec or less
LOAD OUT TIME (msec) :	Not displayed in this set.

(2) CD (Use the test disc PATD-012 or YEDS-18)

Note: Measured values in check items are typical ones.

Check items	Specified value
LOAD IN TIME (msec) :	Not displayed in this set.
SPIN UP TIME (msec) : 1372	1700 msec or less
RF/VC/FE/TE AVRG (ORG) : 98, C, 1D6, 4	RF: 80-9B, VC: 1F1-10, FE: 1d8-42, TE: 1BB-5C
RF/VC/FE/TE AVRG (ADJ) : 9F, A, 1FF, 4	RF: 98-A5, VC: 1F1-10, FE: 1F1-10, TE: 1F1-10
PI/TRVS PP(ORG/ADJ) : 81, 131, 95, 92	PI ORG: 70-8A, PI ADJ: 122-135
PIOR/CCR/TRCR : 1A, 11, 1F	No specified value given
FOCUS/TRK GAIN : 2E, 2D	FOCUS: 1C-45, TRK: 1C-45
FBIAS/TRVSC/TRCR2/CFR : 0, 10, 5, A0	F.BIAS: 1E0-30, TRVSC: 1F0-10 TRCR2, CFR: no specified value given
MIN JITTER AT F.BIAS : 94	180 or less
READ TOC TIME (msec) : 1410	2500 msec or less
1/3 SEEK TIME	
F) AVE/MIN/MAX (msec) : 824, 804, 850	AVE: 1100 msec or less, MAX: 1400 msec or less
R) AVE/MIN/MAX (msec) : 850, 833, 860	AVE: 1100 msec or less, MAX: 1400 msec or less
1/MAX SEEK TIME	
F) AVE/MIN/MAX (msec) : 2086, 1999, 2151	AVE: 2400 msec or less, MAX: 2800 msec or less
R) AVE/MIN/MAX (msec) : 1805, 1793, 1835	AVE: 2400 msec or less, MAX: 2800 msec or less
ERROR RATE	
C1 MAX/AVE : 3, 0	C1 MAX: 30 or less
C2 MAX/AVE : 0, 0	C2 MAX: 0
HENSHIN RYOU (1/10um) : 89	1000 or less (100 um or less)
SPIN DOWN TIME (msec) : 1272	1700 msec or less
LOAD OUT TIME (msec) :	Not displayed in this set.

Note: RF, VC, FE, TE, FBIAS and TRVSC measured values are hexadecimal data with positive and negative signs. When comparing the measured value with the specified value, refer to the following.

Hexadecimal (hex) display 9 bit data

FF	01111111 (+255)
FE	01111110 (+254)
	⋮
01	00000001 (+1)
00	00000000 (0)
1FF	11111111 (-1)
	⋮
101	10000001 (-255)
100	10000000 (-256)

MAX

(+) Side

0

(-) Side

MIN

Hexadecimal (hex) display 8 bit data

7F	01111111 (+127)
7E	01111110 (+126)
	⋮
02	00000010 (+2)
01	00000001 (+1)
00	00000000 (0)
FF	11111111 (-1)
FE	11111110 (-2)
	⋮
81	10000001 (-127)
80	10000000 (-128)

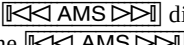
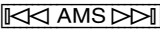
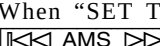
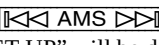
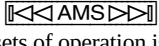
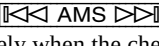
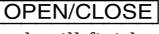
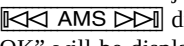
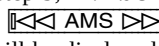
6-3. SACD (DL) DISC OPERATION CHECK

(• Perform as necessary)

The stability of the set can be checked by repeating the combined operation of focus jump (layer 0→1, layer 1→0) and access to the most inward track↔most outward track by the set number of times or until an error occurs using the dual layer HD disc, DL disc.

A set of operation including an access to the layer 0 (most inward track)→layer 0 (most outward track)→focus jump (layer 0→1)→layer 1 (most outward track)→layer 1 (most inward track)→focus jump (layer 1→0) is carried out repeatedly by the set number of times.

Checking Method:

1. After setting the test mode, rotate the  dial to select “92. SET CHECK” and press the  dial to enter.
 2. When “SET TEST START” is displayed, rotate the  dial clockwise by 3 clicks to display “2. F.JMP CHECK?”.
 3. Press the  button to open the tray, and place the DL disc.
 4. Press the  dial to load the tray into the set.
 5. “NOW SET UP” will be displayed and the DL disc setup will start. (It takes about ten and several seconds to set up the disc as two layers of layer 0 and layer 1 are adjusted)
 6. At the completion of setup, “F.JUMP TIMES” will be displayed.
 7. Rotate the  dial clockwise by 5 clicks to display “5”. (If 5 sets of operation is executed *1)
 8. Press the  dial, and the check will start.
 9. Immediately when the check finished, “UP MAX □□□□”→“UP AVE □□□□”→“DW MAX □□□□”→“DW AVE □□□□”→“F.JMP OK [TIMES]” will be displayed repeatedly. (□ denotes the measured value in msec)
UP MAX: Max time required for layer 0 (most inward track)→layer 0 (most outward track)→focus jump (layer 0→1)
UP AVE: Average time required for layer 0 (most inward track)→layer 0 (most outward track)→focus jump (layer 0→1)
DW MAX: Max time required for layer 1 (most outward track)→layer 1 (most inward track)→focus jump (layer 1→0)
DW AVE: Average time required for layer 1 (most outward track)→layer 1 (most inward track)→focus jump (layer 1→0)
Specified value: 7000 msec or less (if no error occurred)
If an error occurred due to defocusing during the checking, refer to the following error list. (64 page)
 10. Press the  button, and the disc will be ejected and the check will finish. Also, if the  dial is pressed in step 9, “2. F.JUMP CHK OK” will be displayed. Then, if the  dial is again pressed, “2. F.JMP CHECK” will be displayed instantaneously and a recheck is enabled from the step 5 in the same manner.
- *1 Setting arbitrary number of times instead of 5 allows the checking to be repeated by the set number of times. Also, setting 0 (zero) allows the aging check to be repeated until an error occurs.

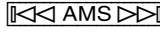
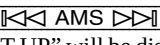
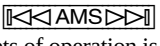
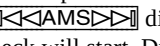
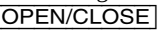
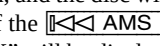
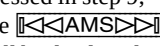
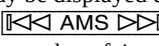
6-4. HYBRID DISC OPERATION CHECK

(• Perform as necessary)

This test checks the auto adjustment time required when the disc is switched between HD (SACD) layer and CD layer. This test is conducted to check the stability in switching from CD to SACD, or SACD to CD in the HYBRID disc.

A set of operation including CD layer stop state→HD layer auto adjustment→HD layer TOC reading→HD layer stop state→CD layer auto adjustment→CD layer TOC reading→CD layer stop state is repeated by the set number of times.

Checking Method:

1. After setting the test mode, rotate the  dial to select “92. SET CHECK” and press the  dial to enter.
 2. When “SET TEST START” is displayed, rotate the  dial clockwise by 4 clicks to display “3. HYB CHECK?”.
 3. Press the  button to open the tray, and place the HYBRID disc.
 4. Press the  dial to load the tray into the set.
 5. “NOW SET UP” will be displayed and the HYBRID disc setup will start. (It takes about several seconds to set up the disc *1)
 6. At the completion of setup, “CHANGE TIMES?” will be displayed.
 7. Rotate the  dial clockwise by 5 clicks to display “5” (if 5 sets of operation is executed *2)
 8. Press the  dial, and “START” will be displayed and the check will start. During the check, the following will be displayed.
“CD→HD” display: Time from switching from CD layer to HD layer up to start of play is measured.
“HD→CD” display: Time from switching from HD layer to CD layer up to start of play is measured.
 9. Immediately when the check finished, “CD MAX □□□□”→“CD AVE □□□□”→“HD MAX □□□□”→“HD AVE □□□□” will be displayed repeatedly. (□ denotes the measured value in msec)
Specified value: 10000 msec or less (if no error occurred)
If an error occurred due to defocusing during the checking, refer to the following error list. (64 page)
 10. Press the  button, and the disc will be ejected and the check will finish. Also, if the  dial is pressed in step 9, “HYB CHK OK” will be displayed. Then, if the  dial is again pressed, “HYBRID CHECK” will be displayed instantaneously and a recheck is enabled from the step 5 in the same manner.
- *1 “NOW SET UP” display may continue for several minutes and an error may be displayed depending on the discs. In this case, press the  dial again.
- *2 Setting arbitrary number of times instead of 5 allows the checking to be repeated by the set number of times. Also, setting 0 (zero) allows the aging check to be repeated until an error occurs

6-5. CDM59 and the Door Check

Measurement of table rotation hours, tray open/close hours and panel door open close hours can be executed together with CDM59.

Procedure

1. Enter the TEST mode. Turn the **◀◀AMS▶▶** dial and select 59 Table Init. Press **◀◀AMS▶▶** once (that enables the **OPEN/CLOSE** key.)
2. When the message INITIAL OK appears, press the **OPEN/CLOSE** key to eject the tray. Place a disc in the DISC1 of the table. (Be sure to place a disc in DISC1. If a disc is placed in any locations other than DISC1, the correct measurement cannot be executed. Therefore, be sure to place a disc in DISC by using the **DISC SKIP** key.)
3. Select 58 CDM Check by turning **◀◀AMS▶▶** and press **◀◀AMS▶▶** once.
4. Measurement starts automatically.
5. When the measurement is completed, the message DOOR OP □□.□ (□ is a decimal number) appears on the FL display.
6. Result of measurement can be check by turning **◀◀AMS▶▶**. If any measurement item does not meet specification, a message “ng” is displayed next to the measurement value.
7. When you want to repeat the test, press **◀◀AMS▶▶** again.
8. Press the **OPEN/CLOSE** key to terminate the test and remove the disc.
 - * 1.The measurement can be performed without placing a disc. However, the BU chucking time and unchucking time will be slightly different from the actual values.
 - * 2.When the machine enters this mode once, it cannot return to the normal test mode. If any other tests are desired, turn off the main power once and then back on again to enter the test mode.

Measurement items and specifications

Measurement item	Description	Specifications (unit: second)
RL	Time required for the table to make one complete rotation. (R: Clockwise rotation. L: Counter-clockwise rotation)	6.0 to 7.5
DOOR OP	Time required to open the panel door	<10.0
CLOSE	Time required to close the tray.	<2.3
BU UP	Time required for the BU block to perform chucking from the DOWN position	<1.3
EXOPEN	The XCHANGE OPEN time	<2.5
EXCLOSE	The EXCHANGE CLOSE time	<2.8
BU DOWN	Time required for the BU block to perform unchucking and going to the DOWN position	<0.9
OPEN	Time required to open the tray	<2.4
DOOR CL	Time required to close the panel door.	<10.0

If the panel door cannot be opened, the time-out error is triggered and the measurement is also stopped at this stage. Note that the tray can push the door forcibly as the software judges the door as it is in the OPEN state, if the door open/close detector switches (S1022 and S1023 on the DOOR SW board) have abnormality.

6-6 . AGING MODE

(• Perform as necessary)

6-6-1. The aging can be performed to the set in the test mode.

The aging can be continued by the set number of times or until an error occurs.

In the aging, the following operations are repeated.

Table turn→Disc chucking→Disc detect→Servo on→Auto adjustment→TOC reading→Play of first track for 5 second→Play of last track for 5 second→Play of first track for 5 second→Disc unchucking

Setting Method:

1. After setting the test mode, rotate the **[[<<AMS>>]]** dial to select “94. SET AGING” and press the **[[<<AMS>>]]** dial to enter.
2. When “AGING TIMES” is displayed, rotate the **[[<<AMS>>]]** dial to set the number of aging times. (For the number of times, every 10 times can be set. Setting 0 (zero) eliminates the count limitation where the aging is repeated until an error occurs)
Note: Do not perform unmanned overnight aging..
3. Press the **[[<<AMS>>]]** dial, and “AGING START” will be displayed instantaneously, then “DISC IN & JOG ON” will be displayed and the tray will come out automatically.
4. Place a disc (CD or the SACD SL disc) on the tray. In the case of SCD-C333ES, the multiple discs can be placed. Even when the discs (CD or the SACD SL disc) of different types are mixed, the aging test can be performed. Use the **[DISC SKIP]** key when placing a disc. When discs are placed in positions, turn the **[[<<AMS>>]]** dial.
5. The aging test starts.
6. At the completion of aging by the set number of times, the tray will come out automatically and the check will stop.
Typical time required for aging About 1 hour/100 times
“AGING SUCCESS!” will be displayed if no error occurred in the aging, or the error will be displayed if an error occurred. (Refer to the following error list)

Error List

An error occurring during the check in the aging mode of the test mode is displayed automatically (scroll display) immediately when the error occurred.

< How to view the error history >

1. Select “95 DISP ERROR” with the **[[<<AMS>>]]** key, and press the **[[<<AMS>>]]** key once.
2. The error that has occurred lastly in the set and the signal status (H = 1, L = 0) at that time are displayed on the FL display by scrolling. (Types of the errors and the signal status that can be checked, are the same as the error display of the aging mode.)
3. Press the **[[<<AMS>>]]** key once again to show the error history repeatedly.
4. When the error history is displayed with scrolling once, the mode returns to the normal test mode.

6-6-2. Aging Mode of the Panel Door Independently

1. Start up the unit in the normal operation mode.
2. While press the **[STOP]** key, turn the **[[<<AMS>>]]** dial and then press the **[CONTINUE]** key. (The program does not advance if these keys are not pressed in the above sequence.)
3. The panel door repeats opening and closing.
4. The messages “AP-B 000000” (during open) → “AP-C 000000” (during close) are repeated on the FL display. Number of times of open/close are displayed in decimal number in “000000” with OPEN/CLOSE as a set.
5. Press the **[STOP]** key to terminate the aging mode and to return to the normal mode.

6-7. SHIPPING MODE

The repaired set must be initialized, and for this purpose the set should be set to the shipping mode.

Setting Method:

1. After setting the test mode, rotate the **[[<<AMS>>]]** dial to select “8d Set Up Init” and press the **[[<<AMS>>]]** dial to enter.
2. “8D 00000000 00” will be displayed, and if the scroll starts in the left direction, the set initialization has completed
3. Press the **[POWER]** button to turn the power off.

Note: Take care not to leave the test disc in the set.

The following setups are established in the SHIPPING MODE

1. Initialization of EEPROM (IC903)
 - PLAY MODE ALL DISCS, CONTINUE
 - COMMAND MODE CD1
 - LAYER SELECT SACD
 - DIGITAL FILTER STD
 - Resetting the accumulated hours meter.
2. Initialization of SRAM (IC908) (Erasing data of DISC MEMO)
3. Chucking at the DISC1 position.

Error display is as follows.

Error name, Disc type, IN SW (Sled in switch state), FOK (FOK signal state), LOCK (LOCK signal state), From (Displayed if effective), To (Displayed if effective), Aging times (Displayed in aging mode only)

Display example

ACCESS MOVE ERROR : SACDSL : IN SW 1 FOK 0 LOCK 0 : FROM 205663 : TO 2461601 : TIMES 5

(Error name) (Disc type) (Sled in switch, FOK, LOCK signal state) (Relative address) (Relative address)(Aging times)

Display Items List:

Display items	Description	Remarks
Error name	→Refer to the error display list	
IN SW	Sled in switch state when an error occurred 0: switch off Not limit in 1: switch on Limit in (Optical pick-up is at most inward track)	
FOK	FOK signal state when an error occurred FOK signal Is focus on? 0: FOK L (Focus off), 1: FOK H (Focus on)	
LOCK	LOCK signal state when an error occurred. LOCK signal Is PLL lock? 0: LOCK L Not lock, 1: LOCK H Lock	
From	Displayed if effective in the error item →Refer to the error display list	Disc PSN (relative address) is displayed in case of access error
To	Displayed if effective in the error item →Refer to the error display list	Disc PSN (relative address) is displayed in case of access error

Error Display List:

Error display	Error description	Main causes of errors
DISC DETECT ERROR	Disc type error MIRR measured time is displayed in From:	Optical pick-up, RF amplifier or CD DSP IC is faulty
OFFSET ADJUST ERROR	Offset adjustment error	Optical pick-up, RF amplifier or CD DSP IC is faulty
FCS SRV ON ERROR	Focus servo error An error code is displayed in From:	From:1 means focus search failed From:2 means defocusing
CLV SRV ON ERROR	CLV servo error	Defocusing
E-F BALANCE ERROR	E-F balance adjustment error	Defocusing
TRK SRV ON ERROR	Tracking servo error	Tracking servo on time out Optical pick-up, RF amplifier or CD DSP IC is faulty
SLD SRV ON ERROR	Sled servo error	Sled servo on time out
FOCUS BIAS ERROR	Focus bias adjustment failed An error code is displayed in From:	Defocusing during adjustment Description of display An error code is displayed in From From:1 means retry failed 3 times From:2 means abnormal value Optical pick-up, RF amplifier or CD DSP IC is faulty
FCS AGC ERROR	Error at focus gain automatic adjustment	Defocusing during adjustment Optical pick-up, RF amplifier or CD DSP IC is faulty
TRK AGC ERROR	Error at tracking gain automatic adjustment	Defocusing during adjustment Optical pick-up, RF amplifier or CD DSP IC is faulty
ACCESS 1TJ ERROR	Access Error at one-track jump Effective addresses (PSN) are displayed in From: and To:	Access failed Defocusing at access, etc
ACCESS FINE ERROR	Access Error at fine search Effective addresses (PSN) are displayed in From: and To:	Access failed Defocusing at access, etc
ACCESS MOVE ERROR	Access Error at M-track MOVE Effective addresses (PSN) are displayed in From: and To:	Access failed Defocusing at access, etc
WHILE PLAYING ERROR	Error during disc playing	Defocusing Focusing retry failed
FCS JUMP ERROR	Time out error at focus jump	Defocusing Focusing retry failed

System errors are as follows.

Note: This error is not saved in the set.

Display	Description
Toc Error *	Error during the time from auto adjustment to TOC reading, Different type of disc (Such as a DVD disc), Disc is dirty
Toc Error ****	Illegal SACD (Such as a pirated version)
Read Error	Music data read error (Error during disc playing)

6-8. WAVEFORMS CHECK

This set performs automatic adjustment for each disc, and therefore the set need not be adjusted when parts are replaced, but it requires checking following the description in this section, 6-1. IC AND FLUORESCENT DISPLAY TUBE CHECK and 6-2. AUTO CHECK.

For the check, the test mode is used. Wrong setting causes a trouble, thus requiring extreme care.

BU Electrical Adjustment Mode

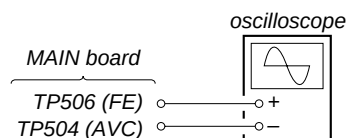
The BU electrical adjustment mode is used to check the S curve waveform, traverse waveform and RF waveform. After a disc is placed on the tray, each time the **AMS** dial is pressed, the check mode is switched in order for S curve waveform→traverse waveform→RF waveform.

Setting Method:

After setting the test mode, rotate the **AMS** dial to select "9C BU DENCHO" and press the **AMS** dial to enter. "BU MEASURE" will be displayed if the BU electrical adjustment mode becomes active.

S Curve Check

Connection:



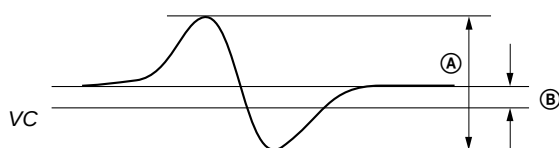
Checking Method:

- After setting the BU electrical adjustment, place the test disc (PATD-012 or SATD-S4) on the tray and close the tray, then press the **AMS** dial.
- At the completion of disc type check, "CD DETECT" will be displayed (for PATD-012 or YEDS-18).
Note: For the SATD-S4, "SACD DETECT" is displayed.
- Press again the **AMS** dial, and the S curve waveform check mode will become active and "S-J1 MODE" will be displayed.
- Connect an oscilloscope to the TP506 (FE) and TP504 (AVC) on the MAIN board.
- Check that the level **(A)** and **(B)** of waveform on the oscilloscope satisfy the specification.

Specified Value:

Disc	(A)	(B)
SATD-04	0.7 to 1.7 Vp-p	- 0.1 to +0.1V
PATD-012 or		
YEDS-18		

S curve waveform

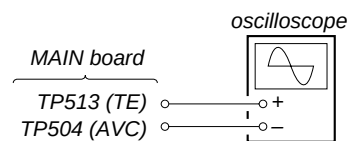


Note: For easier observation of this waveform, extend the sweep time and raise the brightness.

Checking and Connecting Location : See page 68.

Traverse Check

Connection:



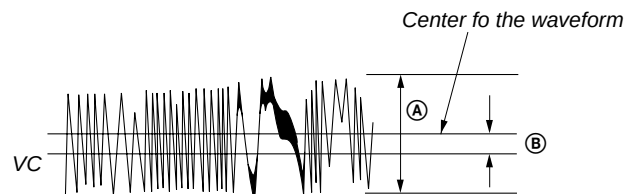
Checking Method:

- Under the condition of S curve waveform check mode in step 5, press the **AMS** dial.
- After "WAIT" is displayed, the traverse waveform check mode will become active and "TRAVERSE MODE" will be displayed.
- Connect an oscilloscope to the TP513 (TE) and TP504 (AVC) on the MAIN board.
- Check that the level **(A)** and **(B)** of waveform on the oscilloscope satisfy the specification.

Specified Value:

Disc	(A)	(B)
SATD-04	0.9 to 1.5 Vp-p	- 0.1 to +0.1V
PATD-012 or		
YEDS-18		

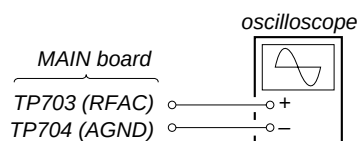
Traverse waveform



Checking and Connecting Location : See page 68.

RF Level Check

Connection:



Checking Method:

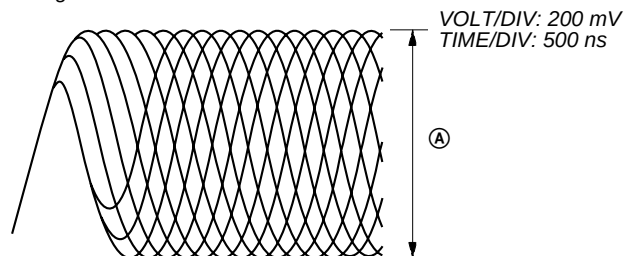
- Under the condition of traverse waveform check mode in step 4, press the **AMS** dial.
- Connect an oscilloscope to the TP703 (RFAC) and TP704 (AGND) on the MAIN board.
- After "WAIT" is displayed, the RF waveform check mode will become active and "PLAY 5th" will be displayed, and the 5th music on the disc will be played.
- Check that the RF waveform is clear and the level satisfies the specification.
- Press the **AMS** dial, and "GAISHU" will be displayed and the outward track of the disc will be played.
- Check that the RF waveform is clear and the level satisfies the specification.
- Press the **AMS** dial, and "NAISHU" will be displayed and the inward track of the disc will be played.
- Check that the RF waveform is clear and the level satisfies the specification.
- After checking, press the **AMS** dial, and the test is over when "BU MEASURE" is displayed.
- Press the **OPEN/CLOSE** button to open the tray, and remove the test disc.
- Using each type of disc, repeat from step 1 of S curve waveform check up to step 10 of RF level check.
- When the check is over, press the **POWER** button to turn the power off.

Note: Take care not to leave the test disc in the set.

Specified Value:

Disc	(A)
SATD-S4	0.9 to 1.5 Vp-p
PATD-012 or YEDS-18	

RF signal waveform

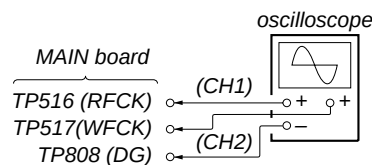


Note: Clear RF waveform refers to the waveform where $\diamond$ shapes should be distinctively observed in the center.

Checking and Connecting Location : See page 68.

CLV Jitter Check (CD only)

Connection:



Checking Method:

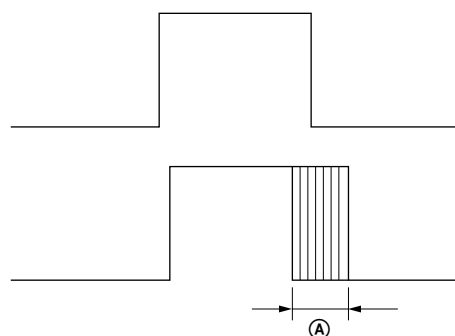
- Set the test mode.
- Connect an oscilloscope to the TP516 (RFCK) (CH1), TP517 (WFCK) (CH2) and TP808 (DG) (GND) on the MAIN board.
- Place the test disc PATD-012 or YEDS-18 on the tray, and close the tray.
- Rotate the **AMS** dial to select "61 DISC DETECT", and press the **AMS** dial to enter. Then, the disc type will be judged.
- Check that the disc type has been judged.
(For the PATD-012, "DSKMOD CD" will be displayed. Refer to the test mode, DISC DETECT command (page 55))
- Rotate the **AMS** dial to select "86 ALL SRV ON", and press the **AMS** dial. Then, the disc will rotate, automatic adjustment will be carried out, and all servos will be turned on.
- Rotate the **AMS** dial to select "07 DSP MON3", and press the **AMS** dial to enter.
- Check that the value (A) of waveform on the oscilloscope satisfies the specification.
- Rotate the **AMS** dial to select "19 ALL SRV OFF", and press the **AMS** dial. Then, all servos will be turned off and the disc rotation will stop.
- Press the **OPEN/CLOSE** button to open the tray, and remove the test disc.
- Press the **POWER** button to turn the power off.

Note: Take care not to leave the test disc in the set.

Specified Value:

Disc	(A)
PATD-012 or YEDS-18	50 μ sec or less

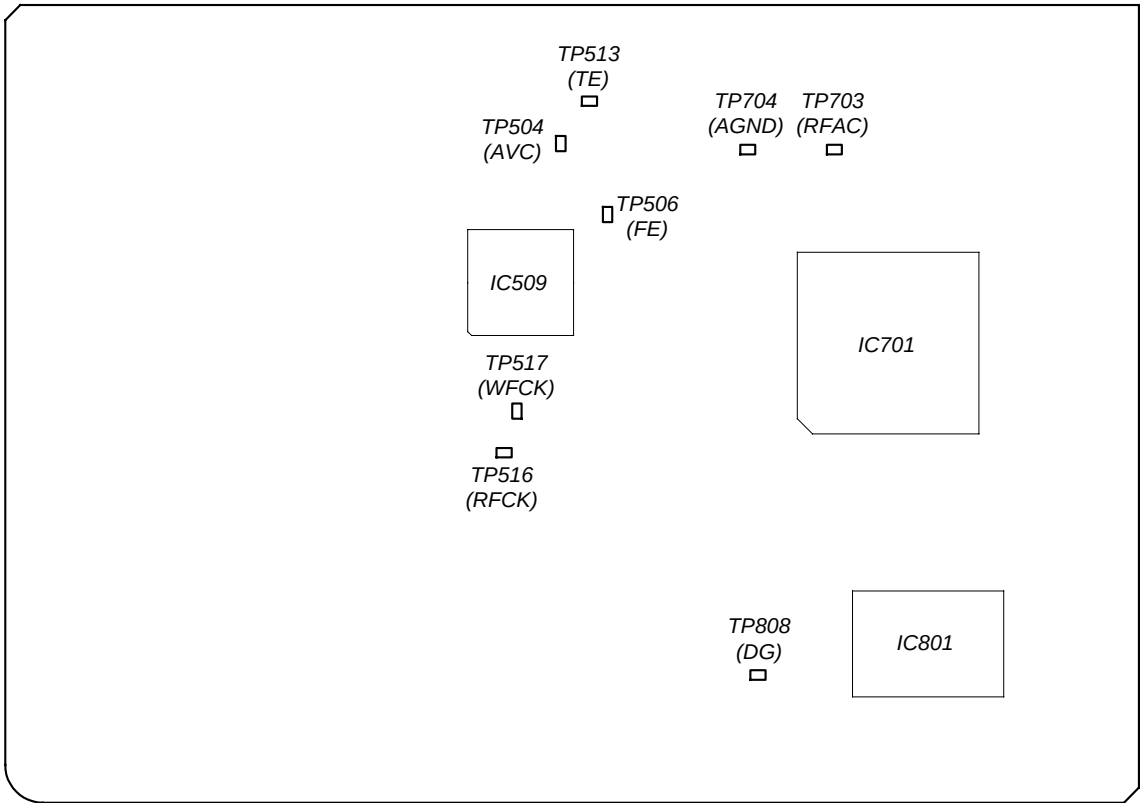
CLV jitter waveform



Checking and Connecting Location : See page 68.

Checking and Connecting Location:

- MAIN Board (Component Side) -



SECTION 7 EXPLODED VIEWS

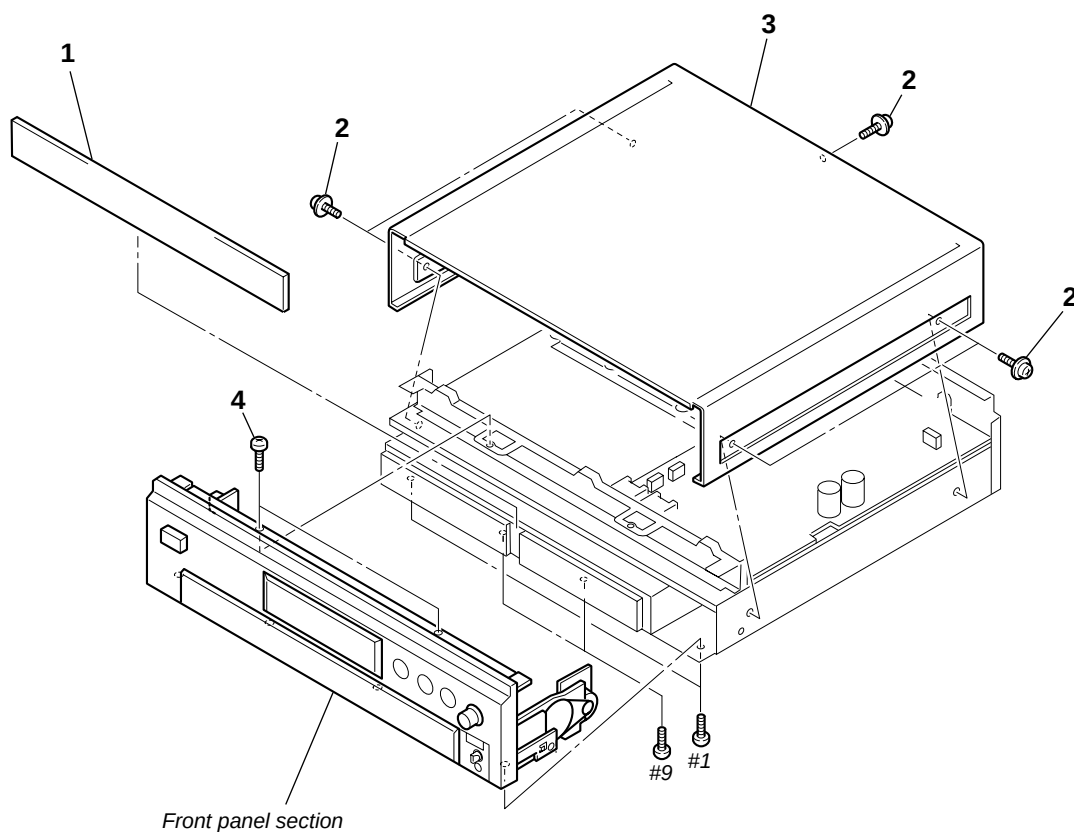
NOTE:

- -XX, -X mean standardized parts, so they may have some differences 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.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

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

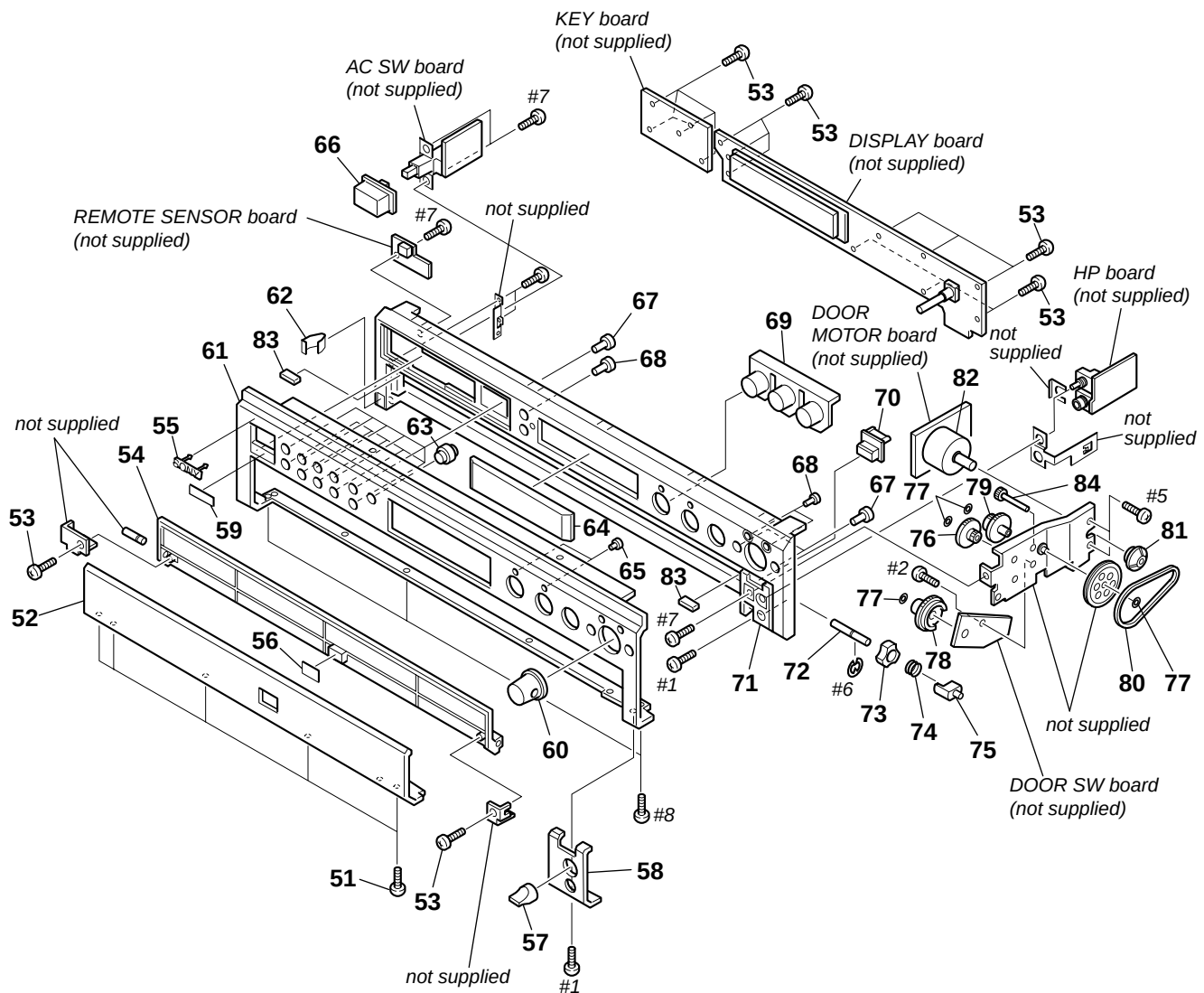
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

7-1. CASE SECTION



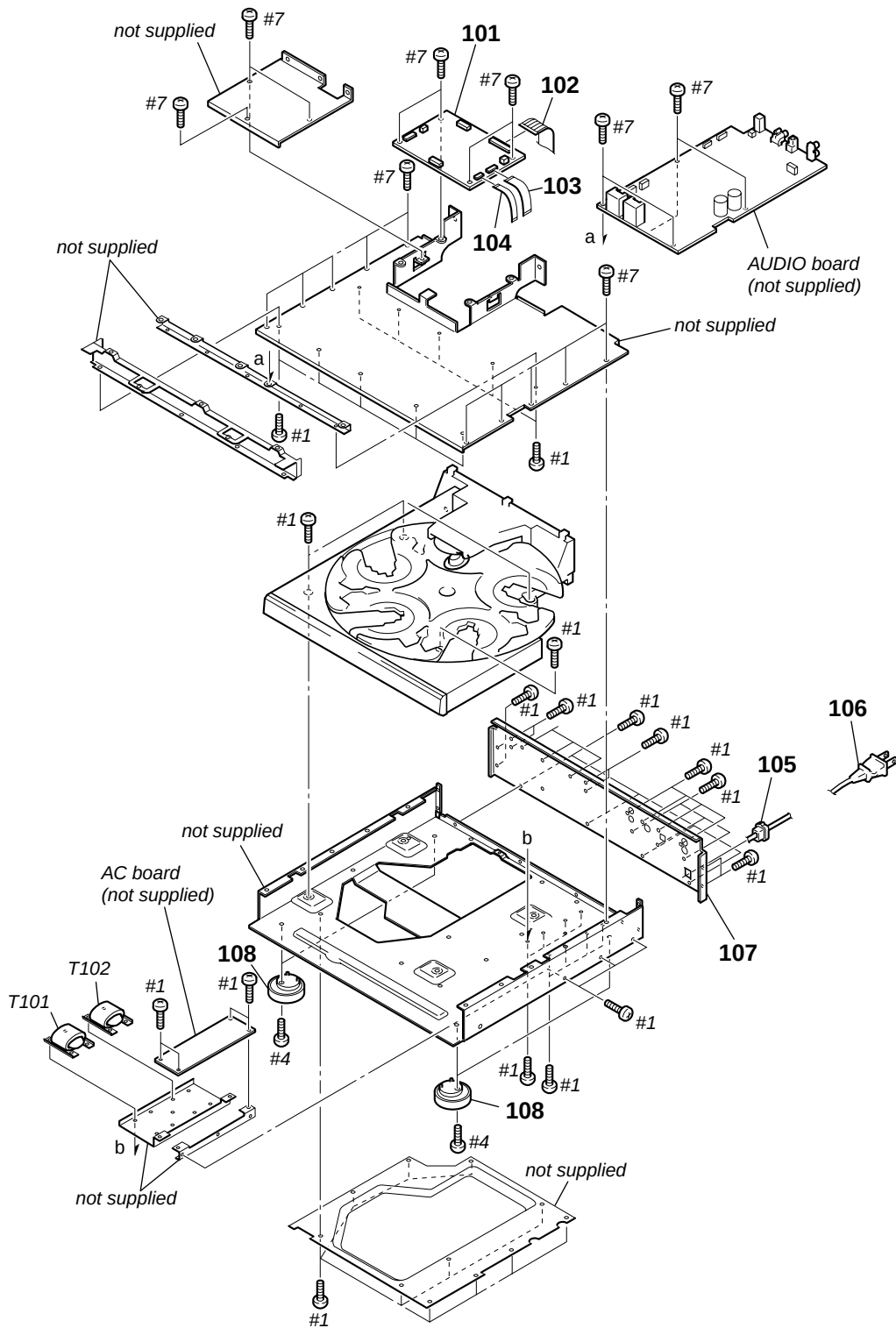
Ref. No.	Part No.	Description	Remarks
1	4-230-713-01	PANEL, LOADING	
2	4-227-843-01	SCREW (TP), FLAT HEAD	
3	4-230-684-01	CASE	
4	4-929-074-01	SCREW (3X8)	

7-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	4-929-074-01	SCREW (3X8)		68	4-220-317-01	BUTTON (FILTER)	
52	4-230-711-01	LID		69	4-230-722-01	BUTTON (PLAY)	
53	4-951-620-01	SCREW (2.6X8), +BVTP		70	4-230-723-01	BUTTON (OPEN/CLOSE)	
54	4-230-710-01	BASE, LID		71	4-230-718-01	BASE, PANEL	
55	4-942-568-41	EMBLEM (NO.5), SONY		72	4-230-703-01	SHAFT (LIMITTER)	
56	4-230-714-01	EMBLEM (SACD)		73	4-230-701-01	GEAR (LIMITTER)	
57	4-992-539-11	KNOB(PHONE LEVEL)		74	4-230-704-01	SPRING (LIMITTER)	
58	4-230-720-01	ESCUTCHEON (H.P)		75	4-230-702-01	LIMITTER	
59	4-230-636-11	PLATE (REMOTE), INDICATION		76	4-230-699-01	GEAR (C)	
60	4-230-637-11	KNOB (AMS)		77	4-926-218-01	RING (DIA.2), RETAINING	
61	4-230-717-01	PANEL, FRONT		78	4-230-700-01	GEAR (D)	
62	4-230-709-01	SPRING (SHAFT L)		79	4-230-698-01	GEAR (B)	
63	4-220-711-01	INDICATOR (FILTER)		80	4-230-712-01	BELT (DIA. 58)	
64	4-230-721-01	WINDOW (FL)		81	4-955-234-03	PULLEY (MOTOR CDM)	
65	4-230-638-01	INDICATOR (BUTTON PLAY)		82	1-541-632-11	MOTOR, DC (DOOR)	
66	4-923-520-01	KNOB, POWER		83	4-230-733-01	CUSHION (STOPPER)	
67	4-220-319-11	BUTTON (MODE)		84	X-4953-199-1	PULLEY (GEAR A) ASSY	

7-3. MAIN CHASSIS SECTION

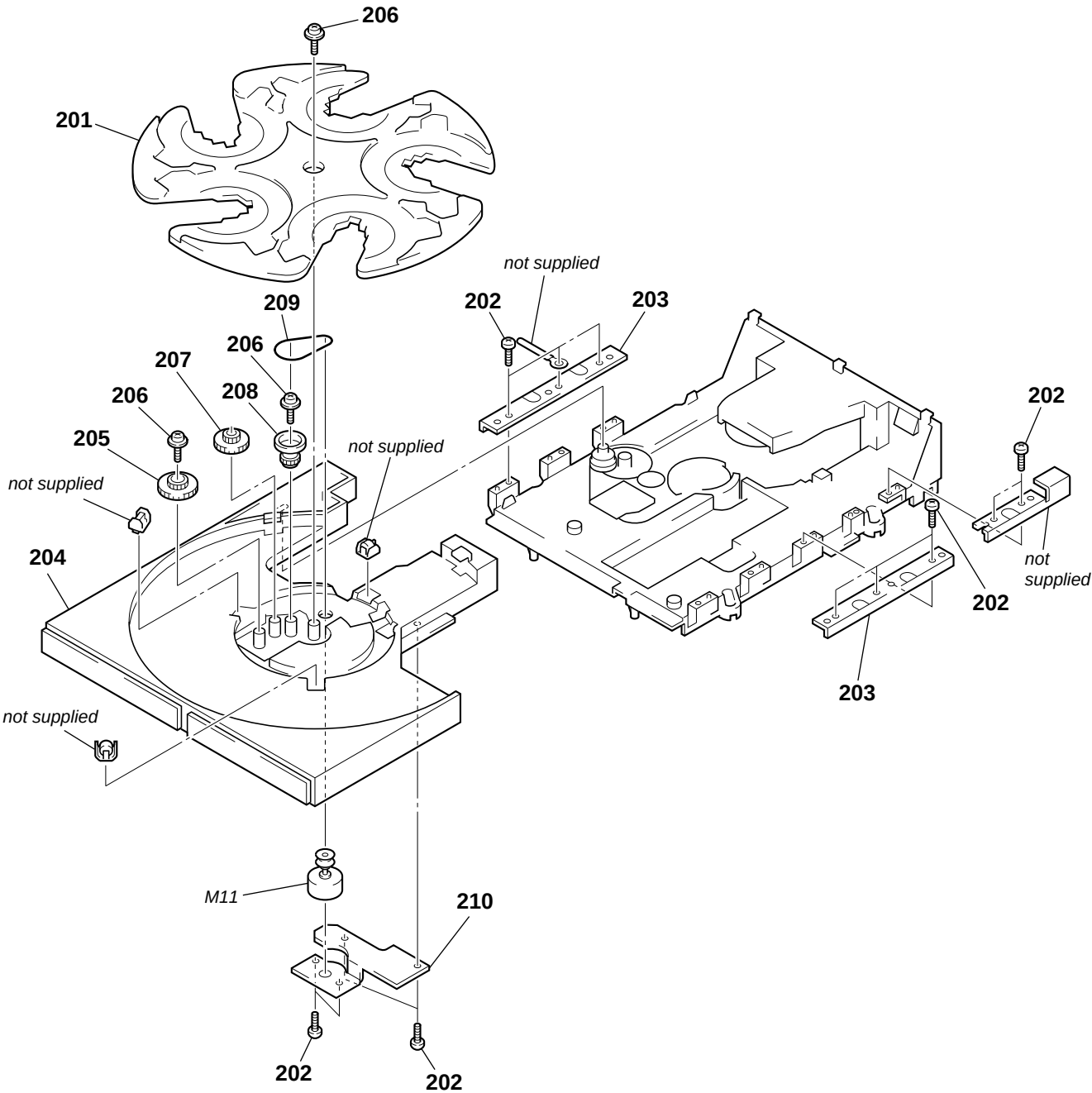


Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
101	A-4725-364-A	MAIN BOARD, COMPLETE		△ 106	1-783-531-31	CORD, POWER	
102	1-757-135-11	WIRE (FLAT TYPE) (35 CORE)		107	4-230-686-01	PANEL, BACK	
103	1-757-136-11	WIRE (FLAT TYPE) (16 CORE)		108	X-4945-356-3	FOOT ASSY (F50180S)	
104	1-757-137-11	WIRE (FLAT TYPE) (9 CORE)		△ T101	1-435-732-11	TRANSFORMER, POWER	
105	4-966-267-12	BUSHING (FBS001), CORD		△ T102	1-435-733-11	TRANSFORMER, POWER	

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

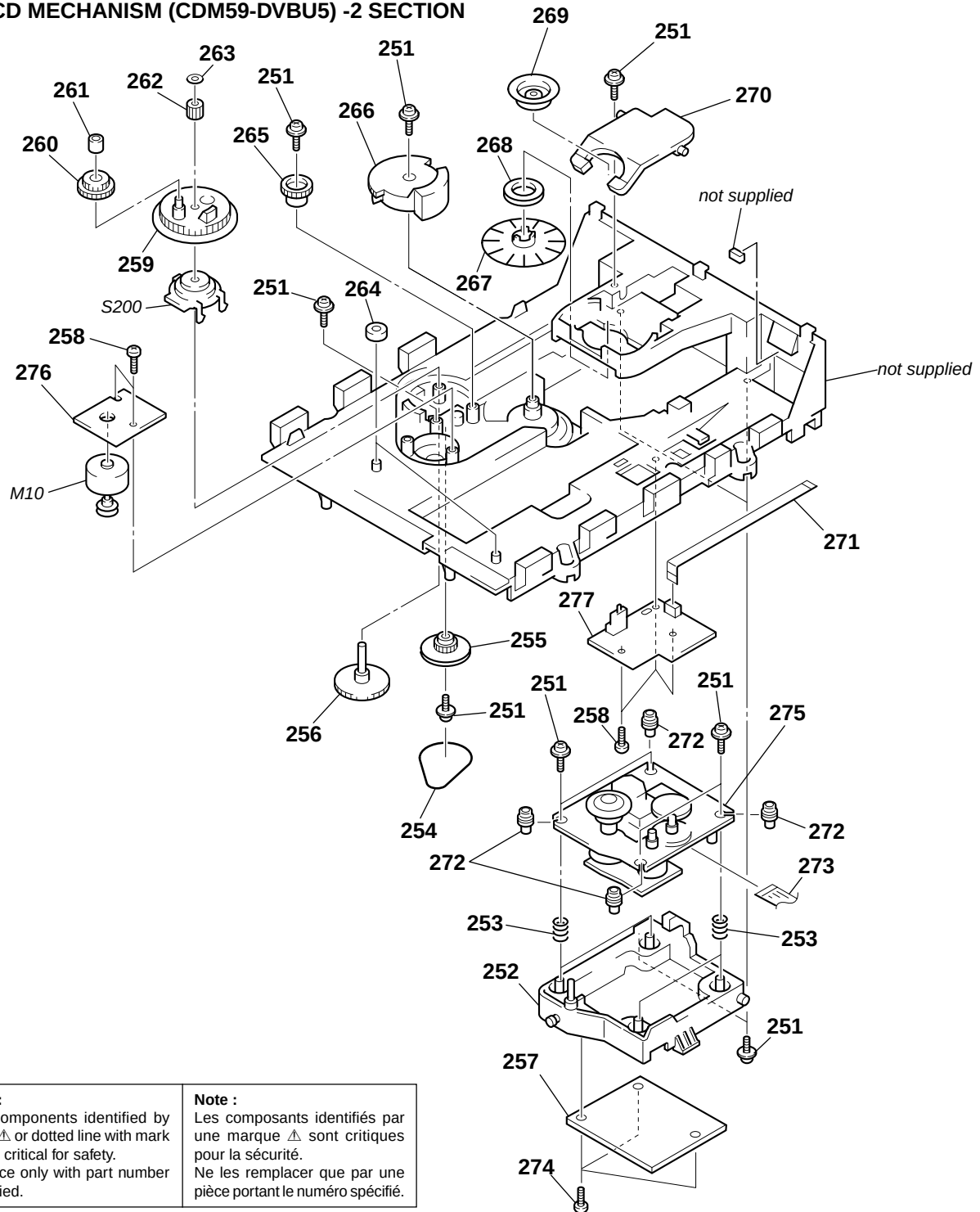
Note :
Les composants identifiés par une marque  sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

7-4. CD MECHANISM (CDM59-DVBU5) -1 SECTION



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
201	4-224-603-01	TRAY		207	4-224-616-01	GEAR (RM-M)	
202	4-218-253-01	SCREW (M2.6), +BTTP		208	4-224-615-01	GEAR (RM-B)	
203	4-224-619-01	BRACKET (GUIDE)		209	4-225-328-01	BELT (ROTARY)	
204	4-224-602-01	TABLE		210	1-676-245-11	SENSOR BOARD	
205	4-224-617-01	GEAR (RM-E)		M11	A-4672-867-A	MOTOR ASSY, ROTARY (TRAY)	
206	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING					

7-5. CD MECHANISM (CDM59-DVB05) -2 SECTION



Note :	Note :
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	Remarks	Ref. No.	Part No.	Description	Remarks
251	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING		266	4-224-605-01	GEAR (U/D)	
252	4-229-955-04	HOLDER (BU)		267	X-4953-250-1	PLATE (A) ASSY, CHUCKING	
253	4-231-449-01	SPRING (230), CONE TYPE COIL		268	3-061-886-01	YOKE	
254	4-225-885-01	BELT (LOADING)		269	4-229-957-01	PLATE (B), CHUCKING	
255	4-225-844-01	GEAR (LOADING A)		270	4-224-618-01	LEVER (LIFTER)	
256	4-224-613-01	GEAR (SHAFT)		271	1-791-930-11	WIRE (FLAT TYPE) (6 CORE)	
257	A-4725-382-A	RF BOARD, COMPLETE		272	4-227-549-11	INSULATOR	
258	4-218-253-01	SCREW (M2.6), +BTTP		273	1-757-097-11	WIRE (FLAT TYPE) (25 CORE)	
259	4-224-607-01	GEAR, SWING		274	4-951-620-01	SCREW (2.6X8), +BVTP	
260	4-224-609-01	GEAR (LOADING C)		▲ 275	8-820-132-02	OPTICAL PICK-UP KHM-230AAA/J1NP	
261	4-224-608-01	COLLAR, SWING		276	1-676-244-11	LOADING MOTOR BOARD	
262	4-224-611-01	GEAR (LOADING B)		277	1-676-246-11	JUNCTION BOARD	
263	3-016-533-21	WASHER (FR), STOPPER		M10	A-4672-879-A	MOTOR ASSY, LOADING	
* 264	4-951-619-21	CUSHION (A)		S200	1-418-746-11	ENCODER, ROTARY	
265	4-224-606-01	GEAR (RV)					

SECTION 8 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, -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.
- Abbreviation
CND : Canadian model
- CAPACITORS:
uF: μ F

- RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- COILS
uH: μ H
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A... , uPA... , μ PA... ,
uPB... , μ PB... , uPC... , μ PC... ,
uPD... , μ PD...

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

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

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

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
AC BOARD				C106	1-109-857-11	ELECT	47uF 20.00% 63V
*****				C107	1-136-850-11	MYLAR	0.1uF 5.00% 63V
< CAPACITOR >				C108	1-163-141-00	CERAMIC CHIP	0.001uF 5% 50V
Δ C1031	1-113-927-11	CERAMIC	10000PF 20.00% 250V	C109	1-130-955-00	FILM	0.01uF 5.00% 100V
Δ C1032	1-113-927-11	CERAMIC	10000PF 20.00% 250V	C110	1-130-955-00	FILM	0.01uF 5.00% 100V
Δ C1033	1-127-780-51	CERAMIC	220PF 10.00% 250V	C111	1-163-141-00	CERAMIC CHIP	0.001uF 5% 50V
Δ C1035	1-127-780-51	CERAMIC	220PF 10.00% 250V	C114	1-130-309-00	FILM	0.033uF 5.00% 100V
Δ C1036	1-127-780-51	CERAMIC	220PF 10.00% 250V	C117	1-130-973-00	FILM	0.022uF 3.00% 100V
< CONNECTOR >				C118	1-163-141-00	CERAMIC CHIP	0.001uF 5% 50V
* CN1011	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P		C119	1-136-235-91	FILM	0.0091uF 3.00% 100V
CN1012	1-564-321-00	PIN, CONNECTOR 2P		C120	1-130-973-00	FILM	0.022uF 3.00% 100V
* CN1013	1-564-321-21	PIN, CONNECTOR 2P		C121	1-163-141-00	CERAMIC CHIP	0.001uF 5% 50V
CN1014	1-564-321-00	PIN, CONNECTOR 2P		C122	1-136-235-91	FILM	0.0091uF 3.00% 100V
< COIL >				C123	1-136-252-00	FILM	0.0015uF 5.00% 100V
Δ L991	1-424-485-11	FILTER, LINE		C124	1-136-252-00	FILM	0.0015uF 5.00% 100V
*****				C125	1-136-818-11	FILM	0.0047uF 5.00% 100V
AC SW BOARD				C126	1-136-810-11	FILM	220PF 5.00% 100V
*****				C127	1-127-713-21	FILM	10000PF 5% 50V
< CAPACITOR >				C128	1-127-741-21	ELECT	0.047uF 10% 250V
Δ C1030	1-113-927-11	CERAMIC	10000PF 20.00% 250V	C129	1-128-201-11	ELECT	100uF 20.00% 63V
< CONNECTOR >				C130	1-109-857-11	ELECT	47uF 20.00% 63V
CN1010	1-564-321-00	PIN, CONNECTOR 2P		C131	1-109-857-11	ELECT	47uF 20.00% 63V
< SWITCH >				C132	1-109-857-11	ELECT	47uF 20.00% 63V
Δ S1025	1-572-267-51	SWITCH, PUSH (AC POWER)(1 KEY)(POWER)		C133	1-109-857-11	ELECT	47uF 20.00% 63V
*****				C138	1-163-141-00	CERAMIC CHIP	0.001uF 5% 50V
AUDIO BOARD				C139	1-124-927-11	ELECT	4.7uF 20% 100V
*****				C140	1-165-319-11	CERAMIC CHIP	0.1uF 50V
* 3-309-144-21	HEATSINK			C141	1-165-319-11	CERAMIC CHIP	0.1uF 50V
4-211-300-01	RING, RUBBER			C200	1-165-319-11	CERAMIC CHIP	0.1uF 50V
7-685-646-79	SCREW+BVTP 3X8 TYPE2 N-S			C201	1-136-850-11	MYLAR	0.1uF 5.00% 63V
7-685-872-09	SCREW+BVTT 3X8 (S)			C202	1-165-319-11	CERAMIC CHIP	0.1uF 50V
< CAPACITOR >				C204	1-128-654-21	FILM	2200PF 5% 50V
C100	1-165-319-11	CERAMIC CHIP	0.1uF 50V	C205	1-163-141-00	CERAMIC CHIP	0.001uF 5% 50V
C101	1-136-850-11	MYLAR	0.1uF 5.00% 63V	C206	1-136-850-11	MYLAR	0.1uF 5.00% 63V
C102	1-165-319-11	CERAMIC CHIP	0.1uF 50V	C207	1-109-857-11	ELECT	47uF 20.00% 63V
C103	1-128-654-21	FILM	2200PF 5% 50V	C208	1-130-955-00	FILM	0.01uF 5.00% 100V
C105	1-163-141-00	CERAMIC CHIP	0.001uF 5% 50V	C209	1-130-955-00	FILM	0.01uF 5.00% 100V
				C211	1-163-141-00	CERAMIC CHIP	0.001uF 5% 50V
				C212	1-163-141-00	CERAMIC CHIP	0.001uF 5% 50V
				C216	1-130-309-00	FILM	0.033uF 5.00% 100V
				C217	1-130-973-00	FILM	0.022uF 3.00% 100V
				C218	1-163-141-00	CERAMIC CHIP	0.001uF 5% 50V
				C219	1-136-235-91	FILM	0.0091uF 3.00% 100V
				C220	1-130-973-00	FILM	0.022uF 3.00% 100V
				C221	1-163-141-00	CERAMIC CHIP	0.001uF 5% 50V

Ref. No.	Part No.	Description	Remarks			Ref. No.	Part No.	Description	Remarks		
C222	1-136-235-91	FILM	0.0091uF	3.00%	100V	C346	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C223	1-136-252-00	FILM	0.0015uF	5.00%	100V	C347	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V
C224	1-136-252-00	FILM	0.0015uF	5.00%	100V	C348	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V
C225	1-136-818-11	FILM	0.0047uF	5.00%	100V	C349	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V
C226	1-136-810-11	FILM	220PF	5.00%	100V	C350	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C227	1-127-713-21	FILM	10000PF	5%	50V	C351	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V
C228	1-127-741-21	ELECT	0.047uF	10%	250V	C352	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V
C229	1-128-201-11	ELECT	100uF	20.00%	63V	C353	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C230	1-109-857-11	ELECT	47uF	20.00%	63V	C354	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C231	1-109-857-11	ELECT	47uF	20.00%	63V	C355	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C232	1-109-857-11	ELECT	47uF	20.00%	63V	C356	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C233	1-109-857-11	ELECT	47uF	20.00%	63V	C357	1-125-859-21	FILM	0.001uF	5.00%	50V
C238	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	C360	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C239	1-124-927-11	ELECT	4.7uF	20%	100V	C361	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C240	1-165-319-11	CERAMIC CHIP	0.1uF		50V	C362	1-135-669-11	ELECT	470uF		10V
C241	1-165-319-11	CERAMIC CHIP	0.1uF		50V	C370	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C300	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V	C371	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C302	1-135-671-11	ELECT	2200uF		10V	C372	1-135-669-11	ELECT	470uF		10V
C303	1-164-505-11	CERAMIC CHIP	2.2uF		16V	C381	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C304	1-135-671-11	ELECT	2200uF		10V	C385	1-126-964-11	ELECT	10uF	20.00%	50V
C305	1-135-658-11	ELECT	3300uF		6.3V	C386	1-126-964-11	ELECT	10uF	20.00%	50V
C306	1-164-346-11	CERAMIC CHIP	1uF		16V	C387	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C307	1-164-505-11	CERAMIC CHIP	2.2uF		16V	C388	1-164-346-11	CERAMIC CHIP	1uF		16V
C308	1-135-671-11	ELECT	2200uF		10V	C389	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C309	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	C402	1-128-562-11	ELECT	47uF	20.00%	100V
C310	1-164-505-11	CERAMIC CHIP	2.2uF		16V	C404	1-128-562-11	ELECT	47uF	20.00%	100V
C311	1-164-505-11	CERAMIC CHIP	2.2uF		16V	C405	1-136-820-11	FILM	0.01uF	5.00%	100V
C312	1-164-505-11	CERAMIC CHIP	2.2uF		16V	C406	1-136-818-11	FILM	0.0047uF	5.00%	100V
C313	1-164-505-11	CERAMIC CHIP	2.2uF		16V	C407	1-136-820-11	FILM	0.01uF	5.00%	100V
C314	1-135-658-11	ELECT	3300uF		6.3V	C408	1-135-698-11	ELECT	10000uF		16V
C315	1-135-658-11	ELECT	3300uF		6.3V	C409	1-136-850-11	MYLAR	0.1uF	5.00%	63V
C316	1-164-505-11	CERAMIC CHIP	2.2uF		16V	C410	1-135-748-11	ELECT	4700uF		35V
C317	1-164-505-11	CERAMIC CHIP	2.2uF		16V	C411	1-135-748-11	ELECT	4700uF		35V
C318	1-117-775-31	ELECT	0.1uF	10.00%	250V	C413	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C319	1-164-505-11	CERAMIC CHIP	2.2uF		16V	C414	1-135-698-11	ELECT	10000uF		16V
C320	1-164-505-11	CERAMIC CHIP	2.2uF		16V	C415	1-136-820-11	FILM	0.01uF	5.00%	100V
C321	1-135-671-11	ELECT	2200uF		10V	C416	1-136-820-11	FILM	0.01uF	5.00%	100V
C322	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V	C417	1-135-696-11	ELECT	4700uF		16V
C323	1-135-671-11	ELECT	2200uF		10V	C419	1-135-696-11	ELECT	4700uF		16V
C324	1-135-695-11	ELECT	3300uF		16V	C420	1-124-927-11	ELECT	4.7uF	20%	100V
C325	1-102-942-00	CERAMIC	5.0PF	±0.5PF	50V	C421	1-135-696-11	ELECT	4700uF		16V
C326	1-102-951-00	CERAMIC	15PF	5%	50V	C422	1-135-697-11	ELECT	6800uF		16V
C327	1-128-201-11	ELECT	100uF	20.00%	63V	C423	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C328	1-128-201-11	ELECT	100uF	20.00%	63V	C424	1-136-820-11	FILM	0.01uF	5.00%	100V
C329	1-109-857-11	ELECT	47uF	20.00%	63V	C425	1-136-820-11	FILM	0.01uF	5.00%	100V
C330	1-128-201-11	ELECT	100uF	20.00%	63V	C426	1-128-204-11	ELECT	470uF	20.00%	63V
C331	1-128-201-11	ELECT	100uF	20.00%	63V	C427	1-128-204-11	ELECT	470uF	20.00%	63V
C332	1-128-201-11	ELECT	100uF	20.00%	63V	C428	1-109-857-11	ELECT	47uF	20.00%	63V
C333	1-109-857-11	ELECT	47uF	20.00%	63V	C429	1-109-857-11	ELECT	47uF	20.00%	63V
C334	1-109-857-11	ELECT	47uF	20.00%	63V	C430	1-119-815-21	ELECT	2200uF	20.00%	35V
C335	1-128-201-11	ELECT	100uF	20.00%	63V	C431	1-119-815-21	ELECT	2200uF	20.00%	35V
C336	1-119-801-21	ELECT	220uF	20.00%	16V	C432	1-128-204-11	ELECT	470uF	20.00%	63V
C337	1-119-801-21	ELECT	220uF	20.00%	16V	C433	1-128-204-11	ELECT	470uF	20.00%	63V
C338	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	C435	1-136-820-11	FILM	0.01uF	5.00%	100V
C339	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	C436	1-136-820-11	FILM	0.01uF	5.00%	100V
C340	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V	C438	1-124-927-11	ELECT	4.7uF	20%	100V
C341	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V	C442	1-126-964-11	ELECT	10uF	20.00%	50V
C342	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V	C443	1-126-964-11	ELECT	10uF	20.00%	50V
C344	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V	C444	1-126-965-11	ELECT	22uF	20.00%	50V
C345	1-124-927-11	ELECT	4.7uF	20%	100V	C445	1-164-695-11	CERAMIC CHIP	0.0022uF	5.00%	50V

AUDIO

Ref. No.	Part No.	Description	Remarks
C446	1-164-695-11	CERAMIC CHIP 0.0022uF 5.00% 50V	
C447	1-164-695-11	CERAMIC CHIP 0.0022uF 5.00% 50V	
C448	1-164-695-11	CERAMIC CHIP 0.0022uF 5.00% 50V	
< CONNECTOR >			
CN300	1-770-640-11	CONNECTOR, FFC/FPC 9P	
CN301	1-770-646-11	CONNECTOR, FFC/FPC 16P	
CN302	1-506-468-11	PIN, CONNECTOR 3P	
CN303	1-506-468-11	PIN, CONNECTOR 3P	
CN400	1-691-768-11	PLUG (MICRO CONNECTOR) 6P	
CN401	1-691-766-41	PLUG (MICRO CONNECTOR) 4P	
CN403	1-691-765-31	PLUG (MICRO CONNECTOR) 3P	
* CN404	1-568-954-11	PIN, CONNECTOR 5P	
CN405	1-568-955-11	PIN, CONNECTOR 6P	
CN406	1-506-468-11	PIN, CONNECTOR 3P	
< DIODE >			
D300	8-719-210-39	DIODE EC10QS04-TE12L5	
D301	8-719-210-39	DIODE EC10QS04-TE12L5	
D302	8-719-210-39	DIODE EC10QS04-TE12L5	
D303	8-719-210-39	DIODE EC10QS04-TE12L5	
D305	8-719-210-39	DIODE EC10QS04-TE12L5	
D306	8-719-210-39	DIODE EC10QS04-TE12L5	
D307	8-719-210-39	DIODE EC10QS04-TE12L5	
D350	8-719-977-28	DIODE UDZ-TE-17-10B	
D351	8-719-016-74	DIODE 1SS352-TPH3	
D352	8-719-016-74	DIODE 1SS352-TPH3	
D381	8-719-016-74	DIODE 1SS352-TPH3	
D400	8-719-973-02	DIODE RLZ-J8.2B-TE11	
D401	8-719-420-70	DIODE MA3360-H-TX	
D402	8-719-210-33	DIODE EC10DS2TE12L	
D403	8-719-210-33	DIODE EC10DS2TE12L	
D404	8-719-210-33	DIODE EC10DS2TE12L	
D405	8-719-210-33	DIODE EC10DS2TE12L	
D406	8-719-210-33	DIODE EC10DS2TE12L	
D407	8-719-210-33	DIODE EC10DS2TE12L	
D408	8-719-210-33	DIODE EC10DS2TE12L	
D409	8-719-210-33	DIODE EC10DS2TE12L	
D410	8-719-210-39	DIODE EC10QS04-TE12L5	
D411	8-719-210-39	DIODE EC10QS04-TE12L5	
D412	8-719-210-39	DIODE EC10QS04-TE12L5	
D413	8-719-210-39	DIODE EC10QS04-TE12L5	
D414	8-719-210-39	DIODE EC10QS04-TE12L5	
D415	8-719-210-39	DIODE EC10QS04-TE12L5	
D416	8-719-210-39	DIODE EC10QS04-TE12L5	
D417	8-719-210-39	DIODE EC10QS04-TE12L5	
D418	8-719-210-39	DIODE EC10QS04-TE12L5	
D419	8-719-210-39	DIODE EC10QS04-TE12L5	
D422	8-719-210-39	DIODE EC10QS04-TE12L5	
D423	8-719-210-39	DIODE EC10QS04-TE12L5	
D424	8-719-210-39	DIODE EC10QS04-TE12L5	
D425	8-719-210-39	DIODE EC10QS04-TE12L5	
D426	8-719-210-39	DIODE EC10QS04-TE12L5	
D427	8-719-210-39	DIODE EC10QS04-TE12L5	
D428	8-719-210-39	DIODE EC10QS04-TE12L5	
D432	8-719-820-05	DIODE 1SS181-TE85L	
D433	8-719-801-78	DIODE 1SS184-TE85L	
D434	8-719-158-49	DIODE UDZ-TE-17-12B	

Ref. No.	Part No.	Description	Remarks
< IC >			
IC100	8-759-371-51	IC CXA8042AS	
IC101	8-759-566-39	IC OPA2132UA/2K5	
IC102	8-759-566-39	IC OPA2132UA/2K5	
IC200	8-759-371-51	IC CXA8042AS	
IC201	8-759-566-39	IC OPA2132UA/2K5	
IC202	8-759-566-39	IC OPA2132UA/2K5	
IC300	8-759-447-77	IC TC7WH74FU(TE12R)	
IC301	8-759-678-29	IC CXD9556AQ	
IC302	8-759-591-61	IC TC7WHU04FU(TE12R)	
IC303	8-759-445-59	IC BA033T	
IC304	8-759-231-53	IC M5F7805L	
IC305	8-759-604-90	IC M5F7907L	
IC306	8-759-231-53	IC M5F7805L	
IC307	8-759-711-85	IC NJM4580E-D(T1)	
IC385	8-749-012-69	IC GP1F38T (OPTICAL OUT)	
IC400	8-759-394-35	IC BA12T	
IC401	8-759-445-59	IC BA033T	
IC402	8-759-450-47	IC BA05T	
IC403	8-759-231-53	IC M5F7805L	
IC404	8-759-245-86	IC M5F7912L	
IC405	8-759-231-58	IC M5F7812L	
< JACK >			
J301	1-785-868-21	JACK, PIN 2P (ANALOG)	
J381	1-779-655-21	JACK (SMALL TYPE) (2 GANG) (CONTROL A1II)	
J385	1-770-905-21	JACK, PIN 1P (COAXIAL OUT)	
< COIL >			
L306	1-414-553-11	FERRITE	0uH
L307	1-410-757-21	INDUCTOR	0.33MH
L308	1-410-757-21	INDUCTOR	0.33MH
L309	1-410-757-21	INDUCTOR	0.33MH
L310	1-410-757-21	INDUCTOR	0.33MH
L311	1-410-757-21	INDUCTOR	0.33MH
L312	1-410-757-21	INDUCTOR	0.33MH
L313	1-410-757-21	INDUCTOR	0.33MH
L314	1-410-757-21	INDUCTOR	0.33MH
L315	1-412-004-31	INDUCTOR	6.8uH
L316	1-410-993-42	INDUCTOR	1uH
L360	1-410-757-21	INDUCTOR	0.33MH
L361	1-412-004-31	INDUCTOR	6.8uH
L370	1-410-757-21	INDUCTOR	0.33MH
L371	1-412-004-31	INDUCTOR	6.8uH
L381	1-216-295-11	SHORT	0
L385	1-414-553-11	FERRITE	0uH
L386	1-414-553-11	FERRITE	0uH
L400	1-424-090-11	COIL, LINE FILTER	
L401	1-424-090-11	COIL, LINE FILTER	
L402	1-424-090-11	COIL, LINE FILTER	
L403	1-424-090-11	COIL, LINE FILTER	
L404	1-424-090-11	COIL, LINE FILTER	
L405	1-424-090-11	COIL, LINE FILTER	
L406	1-424-090-11	COIL, LINE FILTER	
L407	1-424-090-11	COIL, LINE FILTER	
L408	1-424-090-11	COIL, LINE FILTER	
L409	1-410-482-31	INDUCTOR	100uH
L410	1-410-482-31	INDUCTOR	100uH

Ref. No.	Part No.	Description	Remarks			Ref. No.	Part No.	Description	Remarks		
< TRANSISTOR >						R219	1-259-999-11	CARBON MELF	2.2K	2%	1/8W
Q100	8-729-202-05	TRANSISTOR	2SC28730-TE12L			R220	1-260-002-11	CARBON MELF	3.3K	2%	1/8W
Q101	8-729-202-05	TRANSISTOR	2SC28730-TE12L			R221	1-260-002-11	CARBON MELF	3.3K	2%	1/8W
Q200	8-729-202-05	TRANSISTOR	2SC28730-TE12L			R222	1-260-002-11	CARBON MELF	3.3K	2%	1/8W
Q201	8-729-202-05	TRANSISTOR	2SC28730-TE12L			R223	1-259-971-11	CARBON MELF	10	2%	1/8W
Q350	8-729-900-53	TRANSISTOR	DTC114EKA-T146			R224	1-259-971-11	CARBON MELF	10	2%	1/8W
Q351	8-729-207-71	TRANSISTOR	RN2405-TE85L			R303	1-216-019-00	METAL CHIP	56	5%	1/10W
Q352	8-729-027-38	TRANSISTOR	DTA144EKA-T146			R304	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q360	8-729-141-74	TRANSISTOR	2SC3624A-T2L15L16			R305	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q370	8-729-141-74	TRANSISTOR	2SC3624A-T2L15L16			R306	1-216-033-00	METAL CHIP	220	5%	1/10W
Q372	8-729-120-28	TRANSISTOR	2SC1623-T1-L5L6			R307	1-216-073-00	METAL CHIP	10K	5%	1/10W
Q381	8-729-120-28	TRANSISTOR	2SC2412K-T-146-QR			R308	1-216-033-00	METAL CHIP	220	5%	1/10W
Q401	8-729-209-71	TRANSISTOR	2SA12130-TE12L			R309	1-216-041-00	METAL CHIP	470	5%	1/10W
< RESISTOR >						R310	1-260-032-11	CARBON MELF	1M	2%	1/8W
R100	1-216-037-00	METAL CHIP	330	5%	1/10W	R312	1-259-979-11	CARBON MELF	47	2%	1/8W
R101	1-216-037-00	METAL CHIP	330	5%	1/10W	R313	1-259-990-11	CARBON MELF	390	2%	1/8W
R102	1-216-037-00	METAL CHIP	330	5%	1/10W	R314	1-259-990-11	CARBON MELF	390	2%	1/8W
R103	1-216-037-00	METAL CHIP	330	5%	1/10W	R315	1-216-041-00	METAL CHIP	470	5%	1/10W
R104	1-259-919-11	CARBON MELF	510	2%	1/8W	R316	1-216-041-00	METAL CHIP	470	5%	1/10W
R105	1-259-927-11	CARBON MELF	2.4K	2%	1/8W	R317	1-216-041-00	METAL CHIP	470	5%	1/10W
R108	1-259-974-11	CARBON MELF	18	2%	1/8W	R318	1-216-041-00	METAL CHIP	470	5%	1/10W
R109	1-259-990-11	CARBON MELF	390	2%	1/8W	R319	1-216-081-00	METAL CHIP	22K	5%	1/10W
R110	1-259-971-11	CARBON MELF	10	2%	1/8W	R320	1-216-047-91	RES-CHIP	820	5%	1/10W
R111	1-259-971-11	CARBON MELF	10	2%	1/8W	R321	1-216-047-91	RES-CHIP	820	5%	1/10W
R112	1-259-974-11	CARBON MELF	18	2%	1/8W	R322	1-216-047-91	RES-CHIP	820	5%	1/10W
R113	1-259-990-11	CARBON MELF	390	2%	1/8W	R323	1-216-041-00	METAL CHIP	470	5%	1/10W
R114	1-259-971-11	CARBON MELF	10	2%	1/8W	R324	1-216-041-00	METAL CHIP	470	5%	1/10W
R115	1-259-971-11	CARBON MELF	10	2%	1/8W	R325	1-216-041-00	METAL CHIP	470	5%	1/10W
R116	1-259-999-11	CARBON MELF	2.2K	2%	1/8W	R327	1-216-033-00	METAL CHIP	220	5%	1/10W
R117	1-259-999-11	CARBON MELF	2.2K	2%	1/8W	△ R350	1-212-849-00	FUSIBLE	4.7	5%	1/4W
R118	1-259-999-11	CARBON MELF	2.2K	2%	1/8W	R351	1-216-105-91	RES-CHIP	220K	5%	1/10W
R119	1-259-999-11	CARBON MELF	2.2K	2%	1/8W	R352	1-216-081-00	METAL CHIP	22K	5%	1/10W
R120	1-260-002-11	CARBON MELF	3.3K	2%	1/8W	R353	1-216-049-11	RES-CHIP	1K	5%	1/10W
R121	1-260-002-11	CARBON MELF	3.3K	2%	1/8W	R354	1-216-097-11	RES-CHIP	100K	5%	1/10W
R122	1-260-002-11	CARBON MELF	3.3K	2%	1/8W	R360	1-216-093-91	RES-CHIP	68K	5%	1/10W
R123	1-259-971-11	CARBON MELF	10	2%	1/8W	R361	1-216-085-00	METAL CHIP	33K	5%	1/10W
R124	1-259-971-11	CARBON MELF	10	2%	1/8W	R362	1-216-085-00	METAL CHIP	33K	5%	1/10W
R200	1-216-037-00	METAL CHIP	330	5%	1/10W	R363	1-216-093-91	RES-CHIP	68K	5%	1/10W
R201	1-216-037-00	METAL CHIP	330	5%	1/10W	R364	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R202	1-216-037-00	METAL CHIP	330	5%	1/10W	R365	1-216-019-00	METAL CHIP	56	5%	1/10W
R203	1-216-037-00	METAL CHIP	330	5%	1/10W	R370	1-216-093-91	RES-CHIP	68K	5%	1/10W
R204	1-259-919-11	CARBON MELF	510	2%	1/8W	R371	1-216-085-00	METAL CHIP	33K	5%	1/10W
R205	1-259-927-11	CARBON MELF	2.4K	2%	1/8W	R372	1-216-085-00	METAL CHIP	33K	5%	1/10W
R208	1-259-974-11	CARBON MELF	18	2%	1/8W	R373	1-216-093-91	RES-CHIP	68K	5%	1/10W
R209	1-259-990-11	CARBON MELF	390	2%	1/8W	R374	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R210	1-259-971-11	CARBON MELF	10	2%	1/8W	R375	1-216-019-00	METAL CHIP	56	5%	1/10W
R211	1-259-971-11	CARBON MELF	10	2%	1/8W	R381	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R212	1-259-974-11	CARBON MELF	18	2%	1/8W	R382	1-216-073-00	METAL CHIP	10K	5%	1/10W
R213	1-259-990-11	CARBON MELF	390	2%	1/8W	R383	1-216-001-00	METAL CHIP	10	5%	1/10W
R214	1-259-971-11	CARBON MELF	10	2%	1/8W	R386	1-216-009-91	RES-CHIP	22	5%	1/10W
R215	1-259-971-11	CARBON MELF	10	2%	1/8W	R387	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R216	1-259-999-11	CARBON MELF	2.2K	2%	1/8W	R388	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R217	1-259-999-11	CARBON MELF	2.2K	2%	1/8W	R389	1-216-033-00	METAL CHIP	220	5%	1/10W
R218	1-259-999-11	CARBON MELF	2.2K	2%	1/8W	R390	1-216-021-00	METAL CHIP	68	5%	1/10W
						R391	1-216-097-11	RES-CHIP	100K	5%	1/10W

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AUDIO

DISPLAY

Ref. No.	Part No.	Description	Remarks
R400	1-216-089-11	RES-CHIP 47K 5%	1/10W
R401	1-216-025-11	RES-CHIP 100 5%	1/10W
R402	1-216-025-11	RES-CHIP 100 5%	1/10W
R403	1-216-089-11	RES-CHIP 47K 5%	1/10W
R404	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
△ R405	1-212-877-11	FUSIBLE 68 5%	1/4W
R406	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R408	1-216-013-00	METAL CHIP 33 5%	1/10W
R413	1-216-073-00	METAL CHIP 10K 5%	1/10W
R414	1-216-073-00	METAL CHIP 10K 5%	1/10W
R415	1-216-073-00	METAL CHIP 10K 5%	1/10W
R416	1-216-049-11	RES-CHIP 1K 5%	1/10W
R417	1-216-049-11	RES-CHIP 1K 5%	1/10W

< RELAY >

RY350 1-755-295-11 RELAY

< VIBRATOR >

X321 1-781-998-11 VIBRATOR, CRYSTAL 45MHz

DISPLAY BOARD

* 1-535-303-00 WIRE,JUMPER
* 4-996-686-01 HOLDER (FL)

< CAPACITOR >

C1001	1-126-785-11	ELECT 47uF 20.00%	10V
C1002	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1003	1-164-222-11	CERAMIC CHIP 0.22uF	25V
C1004	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C1005	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C1006	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1007	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1008	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1009	1-163-104-00	CERAMIC CHIP 30PF 5%	50V
C1010	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C1011	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1012	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C1013	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C1014	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C1018	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C1019	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C1020	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1021	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1022	1-126-785-11	ELECT 47uF 20.00%	10V
C1023	1-163-005-11	CERAMIC CHIP 470PF 10%	50V
C1024	1-163-005-11	CERAMIC CHIP 470PF 10%	50V
C1025	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1026	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1028	1-165-319-11	CERAMIC CHIP 0.1uF	50V
C1037	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C1038	1-163-117-00	CERAMIC CHIP 100PF 5%	50V

< CONNECTOR >

* CN1001 1-568-934-11 PIN, CONNECTOR 7P
* CN1002 1-568-954-11 PIN, CONNECTOR 5P
CN1006 1-506-468-11 PIN, CONNECTOR 3P

Ref. No.	Part No.	Description	Remarks
		< DIODE >	
D1000	8-719-046-40	DIODE SEL5521C-TH8F	
D1001	8-719-046-35	DIODE SEL5921A-TH8F	
D1002	8-719-016-74	DIODE 1SS352-TPH3	
D1003	8-719-210-39	DIODE EC10QS04-TE12L5	
		< GROUND >	
ET1001	1-537-770-21	TERMINAL BOARD, GROUND	
		< FILTER >	
FL1000	1-518-715-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC1001	8-759-337-52	IC LC75721E	
IC1002	8-752-921-04	IC XP84120-089Q	
		< TRANSISTOR >	
Q1000	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q1001	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q1002	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q1004	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q1005	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q1006	8-729-900-53	TRANSISTOR DTC114EKA-T146	
		< RESISTOR >	
R1000	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1001	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1003	1-216-027-00	METAL CHIP 120 5%	1/10W
R1006	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1008	1-216-121-11	RES-CHIP 1M 5%	1/10W
R1009	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1011	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1012	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1013	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1014	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1015	1-216-025-11	RES-CHIP 100 5%	1/10W
R1016	1-216-025-11	RES-CHIP 100 5%	1/10W
R1017	1-216-025-11	RES-CHIP 100 5%	1/10W
R1018	1-216-025-11	RES-CHIP 100 5%	1/10W
R1019	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1020	1-216-025-11	RES-CHIP 100 5%	1/10W
R1021	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1022	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1023	1-216-025-11	RES-CHIP 100 5%	1/10W
R1024	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1025	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1026	1-216-025-11	RES-CHIP 100 5%	1/10W
R1027	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1029	1-216-025-11	RES-CHIP 100 5%	1/10W
R1030	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1031	1-216-295-11	SHORT 0	
R1032	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1033	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1034	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1035	1-216-073-00	METAL CHIP 10K 5%	1/10W

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DISPLAY

DOOR MOTOR

DOOR SW

HP

JUNCTION

Ref. No.	Part No.	Description	Remarks
R1038	1-216-298-00	METAL CHIP 2.2 5%	1/10W
R1039	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1040	1-216-097-11	RES-CHIP 100K 5%	1/10W
R1041	1-216-097-11	RES-CHIP 100K 5%	1/10W
R1042	1-216-097-11	RES-CHIP 100K 5%	1/10W
R1044	1-216-027-00	METAL CHIP 120 5%	1/10W
R1045	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1046	1-216-027-00	METAL CHIP 120 5%	1/10W
R1047	1-216-049-11	RES-CHIP 1K 5%	1/10W
R1048	1-216-033-00	METAL CHIP 220 5%	1/10W
R1049	1-216-033-00	METAL CHIP 220 5%	1/10W
R1050	1-216-037-00	METAL CHIP 330 5%	1/10W
R1051	1-216-037-00	METAL CHIP 330 5%	1/10W
R1052	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1053	1-216-041-00	METAL CHIP 470 5%	1/10W
R1054	1-216-041-00	METAL CHIP 470 5%	1/10W
R1055	1-216-073-00	METAL CHIP 10K 5%	1/10W
R1056	1-216-045-00	METAL CHIP 680 5%	1/10W
< COMPOSITION CIRCUIT BLOCK >			
RB1000	1-234-521-11	CIRCUIT BLOCK, COMPOSITION	
RB1001	1-234-521-11	CIRCUIT BLOCK, COMPOSITION	
RB1002	1-234-520-11	CIRCUIT BLOCK, COMPOSITION	
< SWITCH >			
S1000	1-570-101-51	SWITCH, KEY BOARD (SACD/CD)	
S1003	1-771-349-21	SWITCH, KEYBOARD (PLAY)	
S1004	1-570-101-41	SWITCH, KEY BOARD (DISC SKIP)	
S1005	1-771-349-21	SWITCH, KEYBOARD (PAUSE)	
S1006	1-771-349-21	SWITCH, KEYBOARD (EX-CHANGE)	
S1007	1-771-349-21	SWITCH, KEYBOARD (STOP)	
S1008	1-771-349-21	SWITCH, KEYBOARD (EJECT)	
S1009	1-476-100-11	ENCODER, ROTARY (AMS)	
S1010	1-786-082-21	SWITCH, KEYBOARD (CHECK)	
S1011	1-786-082-21	SWITCH, KEYBOARD (CLEAR)	
< VIBRATOR >			
X1000	1-781-472-21	VIBRATOR, CERAMIC	

DOOR MOTOR BOARD			

< CAPACITOR >			
C1027	1-165-319-11	CERAMIC CHIP 0.1uF	50V
< CONNECTOR >			
* CN1005	1-568-942-11	PIN, CONNECTOR 4P	
CN1008	1-506-481-11	PIN, CONNECTOR 2P	

DOOR SW BOARD			

* CN1016	1-568-941-11	PIN, CONNECTOR 3P	
< SWITCH >			
S1022	1-771-339-41	SWITCH, PUSH (IN SW)	
S1023	1-771-339-41	SWITCH, PUSH (OUT SW)	

Ref. No.	Part No.	Description	Remarks
		HP BOARD	

*	4-962-201-01	PLATE(HP), GROUND	
< CAPACITOR >			
C1101	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C1102	1-163-141-00	CERAMIC CHIP 0.001uF 5%	50V
C1103	1-165-319-11	CERAMIC CHIP 0.1uF	50V
< CONNECTOR >			
* CN1101	1-568-952-91	PIN, CONNECTOR (STRAIGHT) 3P	
< JACK >			
J1101	1-750-162-61	JACK (LARGE TYPE) (PHONES)	
< COIL >			
L1101	1-424-090-11	COIL, LINE FILTER	
L1102	1-424-090-11	COIL, LINE FILTER	
L1103	1-424-090-11	COIL, LINE FILTER	
L1104	1-412-004-31	INDUCTOR 6.8uH	
L1105	1-412-004-31	INDUCTOR 6.8uH	
L1106	1-412-004-31	INDUCTOR 6.8uH	
< VARIABLE RESISTOR >			
RV1101	1-223-935-11	RES, VAR, CARBON 1K/1K (PHONE LEVEL)	

	1-676-246-11	JUNCTION BOARD	

< CAPACITOR >			
C10	1-124-589-11	ELECT 47uF 20%	16V
C11	1-161-494-00	CERAMIC 0.022uF	25V
< CONNECTOR >			
CN11	1-573-911-11	PIN, CONNECTOR 13P	
CN13	1-506-481-11	PIN, CONNECTOR 2P	
* CN14	1-568-941-11	PIN, CONNECTOR 3P	
* CN15	1-568-825-11	SOCKET, CONNECTOR 6P	
CN15	1-568-825-11	CONNECTOR, FFC/FPC 6P	
CN15	1-784-767-11	CONNECTOR, FFC 6P	
< IC >			
IC11	8-759-356-03	IC BA6780	
< RESISTOR >			
R21	1-249-429-11	CARBON 10K 5%	1/4W
R22	1-249-426-11	CARBON 5.6K 5%	1/4W
R23	1-249-425-11	CARBON 4.7K 5%	1/4W F
R24	1-249-430-11	CARBON 12K 5%	1/4W F
R25	1-249-382-11	CARBON 1.2 5%	1/6W F
R26	1-249-382-11	CARBON 1.2 5%	1/6W F
< SWITCH >			
S11	1-771-836-11	SWITCH, LEVER(SLIDE)(OPEN/CLOSE DETECT)	

KEY

LOADING MOTOR

MAIN

Ref. No.	Part No.	Description	Remarks			
		KEY BOARD	*****			
		< CONNECTOR >				
CN1004	1-506-468-11	PIN, CONNECTOR 3P				
		< RESISTOR >				
R1059	1-216-033-00	METAL CHIP	220	5%	1/10W	
R1060	1-216-033-00	METAL CHIP	220	5%	1/10W	
R1061	1-216-037-00	METAL CHIP	330	5%	1/10W	
R1062	1-216-037-00	METAL CHIP	330	5%	1/10W	
R1063	1-216-041-00	METAL CHIP	470	5%	1/10W	
R1064	1-216-041-00	METAL CHIP	470	5%	1/10W	
R1065	1-216-045-00	METAL CHIP	680	5%	1/10W	
R1066	1-216-045-00	METAL CHIP	680	5%	1/10W	
R1067	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R1068	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
		< SWITCH >				
S1012	1-771-349-21	SWITCH, KEYBOARD (DISC1)				
S1013	1-771-349-21	SWITCH, KEYBOARD (CONTINUE)				
S1014	1-771-349-21	SWITCH, KEYBOARD (DISC2)				
S1015	1-771-349-21	SWITCH, KEYBOARD (SHUFFLE)				
S1016	1-771-349-21	SWITCH, KEYBOARD (DISC3)				
S1017	1-771-349-21	SWITCH, KEYBOARD (PROGRAM)				
S1018	1-771-349-21	SWITCH, KEYBOARD (DISC4)				
S1019	1-771-349-21	SWITCH, KEYBOARD (MENU)				
S1020	1-771-349-21	SWITCH, KEYBOARD (DISC5)				
S1021	1-771-349-21	SWITCH, KEYBOARD (TIME/TEXT)				

	1-676-244-11	LOADING MOTOR BOARD	*****			

	A-4725-364-A	MAIN BOARD, COMPLETE	*****			
		< CAPACITOR >				
C506	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C509	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C510	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C511	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C513	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C516	1-164-676-11	CERAMIC CHIP	2200PF	5.00%	16V	
C517	1-125-822-11	TANTALUM	10uF	20.00%	10V	
C518	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C519	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C520	1-126-395-11	ELECT	22uF	20%	16V	
C521	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V	
C523	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V	
C525	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C526	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C528	1-125-822-11	TANTALUM	10uF	20.00%	10V	
C530	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C531	1-165-176-11	CERAMIC CHIP	0.047uF	10.00%	16V	
C532	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C533	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
C534	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	

Ref. No.	Part No.	Description	Remarks			
C535	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
C536	1-125-891-11	CERAMIC CHIP	0.47uF	10.00%	10V	
C537	1-216-864-11	METAL CHIP	0	5%	1/16W	
C539	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C541	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C542	1-125-891-11	CERAMIC CHIP	0.47uF	10.00%	10V	
C543	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C544	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C545	1-125-822-11	TANTALUM	10uF	20.00%	10V	
C547	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C548	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C549	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C550	1-162-963-11	CERAMIC CHIP	680PF	10%	50V	
C551	1-125-891-11	CERAMIC CHIP	0.47uF	10.00%	10V	
C553	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C554	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C555	1-162-963-11	CERAMIC CHIP	680PF	10%	50V	
C556	1-125-822-11	TANTALUM	10uF	20.00%	10V	
C558	1-162-963-11	CERAMIC CHIP	680PF	10%	50V	
C559	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C560	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V	
C561	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C562	1-162-963-11	CERAMIC CHIP	680PF	10%	50V	
C563	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C565	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C567	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C568	1-125-822-11	TANTALUM	10uF	20.00%	10V	
C569	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C570	1-125-822-11	TANTALUM	10uF	20.00%	10V	
C572	1-115-156-11	CERAMIC CHIP	1uF		10V	
C573	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	
C577	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C579	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C582	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C583	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C584	1-126-395-11	ELECT	22uF	20%	16V	
C587	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
C588	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
C589	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
C590	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C591	1-125-822-11	TANTALUM	10uF	20.00%	10V	
C592	1-125-822-11	TANTALUM	10uF	20.00%	10V	
C701	1-125-822-11	TANTALUM	10uF	20.00%	10V	
C702	1-125-822-11	TANTALUM	10uF	20.00%	10V	
C703	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C704	1-115-156-11	CERAMIC CHIP	1uF		10V	
C705	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C706	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C707	1-162-921-11	CERAMIC CHIP	33PF	5%	50V	
C708	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C709	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C711	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C712	1-164-230-11	CERAMIC CHIP	220PF	5.00%	50V	
C713	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C714	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C715	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	
C716	1-125-891-11	CERAMIC CHIP	0.47uF	10.00%	10V	
C717	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
C718	1-164-156-11	CERAMIC CHIP	0.1uF		25V	
C720	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	

Ref. No.	Part No.	Description		Remarks	Ref. No.	Part No.	Description		Remarks
C721	1-107-826-11	CERAMIC CHIP	0.1uF	10.00% 16V	C813	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C722	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C814	1-125-822-11	TANTALUM	10uF	20.00% 10V
C723	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C815	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C724	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C823	1-125-822-11	TANTALUM	10uF	20.00% 10V
C725	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C824	1-164-677-11	CERAMIC CHIP	0.033uF	10.00% 16V
C726	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C825	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C727	1-125-822-11	TANTALUM	10uF	20.00% 10V	C826	1-125-822-11	TANTALUM	10uF	20.00% 10V
C728	1-107-826-11	CERAMIC CHIP	0.1uF	10.00% 16V	C827	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C729	1-125-822-11	TANTALUM	10uF	20.00% 10V	C828	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C730	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C829	1-125-822-11	TANTALUM	10uF	20.00% 10V
C731	1-107-826-11	CERAMIC CHIP	0.1uF	10.00% 16V	C830	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C732	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C831	1-125-822-11	TANTALUM	10uF	20.00% 10V
C740	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C832	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C741	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C833	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C742	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C834	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C743	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C835	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C744	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C840	1-125-822-11	TANTALUM	10uF	20.00% 10V
C745	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C842	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C746	1-162-966-11	CERAMIC CHIP	0.0022uF	10% 50V	C843	1-162-945-11	CERAMIC CHIP	0.01uF	10% 25V
C747	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C844	1-115-156-11	CERAMIC CHIP	1uF	10V
C752	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C845	1-125-822-11	TANTALUM	10uF	20.00% 10V
C760	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C846	1-128-994-21	ELECT CHIP	47uF	20% 10V
C761	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C847	1-107-826-11	CERAMIC CHIP	0.1uF	10.00% 16V
C762	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C850	1-162-945-11	CERAMIC CHIP	22PF	5% 50V
C763	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C851	1-162-945-11	CERAMIC CHIP	22PF	5% 50V
C764	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C852	1-162-945-11	CERAMIC CHIP	22PF	5% 50V
C765	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C901	1-125-822-11	TANTALUM	10uF	20.00% 10V
C766	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	C902	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C767	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C903	1-125-822-11	TANTALUM	10uF	20.00% 10V
C768	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C904	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C769	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C905	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C770	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C906	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C771	1-165-176-11	CERAMIC CHIP	0.047uF	10.00% 16V	C907	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C772	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C908	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C773	1-125-891-11	CERAMIC CHIP	0.47uF	10.00% 10V	C909	1-162-927-11	CERAMIC CHIP	100PF	5% 50V
C774	1-162-968-11	CERAMIC CHIP	0.0047uF	10% 50V	C910	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C775	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C911	1-125-822-11	TANTALUM	10uF	20.00% 10V
C776	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C913	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C777	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C914	1-125-822-11	TANTALUM	10uF	20.00% 10V
C778	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C915	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C779	1-125-822-11	TANTALUM	10uF	20.00% 10V	C916	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C780	1-125-822-11	TANTALUM	10uF	20.00% 10V	C917	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C781	1-125-822-11	TANTALUM	10uF	20.00% 10V	C918	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C790	1-126-204-11	ELECT CHIP	47uF	20% 16V	C920	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C791	1-126-206-11	ELECT CHIP	100uF	20% 6.3V	C921	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C792	1-126-206-11	ELECT CHIP	100uF	20% 6.3V	C923	1-115-156-11	CERAMIC CHIP	1uF	10V
C793	1-126-246-11	ELECT CHIP	220uF	20% 4V	C924	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C794	1-126-246-11	ELECT CHIP	220uF	20% 4V	C925	1-125-822-11	TANTALUM	10uF	20.00% 10V
C801	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	C926	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C802	1-125-822-11	TANTALUM	10uF	20.00% 10V	C927	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C803	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	C928	1-125-822-11	TANTALUM	10uF	20.00% 10V
C804	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	C940	1-107-826-11	CERAMIC CHIP	0.1uF	10.00% 16V
C805	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	C941	1-107-826-11	CERAMIC CHIP	0.1uF	10.00% 16V
C806	1-125-822-11	TANTALUM	10uF	20.00% 10V	C942	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C807	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	C943	1-107-818-11	CAPACITOR	1F	5.5V
C808	1-162-927-11	CERAMIC CHIP	100PF	5% 50V	C950	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V
C809	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	C951	1-164-156-11	CERAMIC CHIP	0.1uF	25V
C810	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	C960	1-128-994-21	ELECT CHIP	47uF	20% 10V
C811	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	C962	1-107-826-11	CERAMIC CHIP	0.1uF	10.00% 16V
C812	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V					

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
< CONNECTOR >							
CN503	1-784-883-21	CONNECTOR,FFC(LIF(NON-ZIF))35P		FL901	1-234-177-21	FILTER, CHIP EMI	
CN701	1-794-606-41	PIN, CONNECTOR (PC BOARD) 9P		FL902	1-234-177-21	FILTER, CHIP EMI	
* CN801	1-750-005-11	PIN, CONNECTOR (PC BOARD) 4P		FL903	1-234-177-21	FILTER, CHIP EMI	
CN901	1-784-868-21	CONNECTOR,FFC(LIF(NON-ZIF))16P		FL904	1-234-177-21	FILTER, CHIP EMI	
CN902	1-784-861-21	CONNECTOR, FFC(LIF(NON-ZIF))9P		FL905	1-234-177-21	FILTER, CHIP EMI	
CN904	1-774-653-41	PIN, CONNECTOR (PC BOARD) 3P		FL906	1-234-177-21	FILTER, CHIP EMI	
CN905	1-794-804-11	PIN, CONNECTOR 13P		FL907	1-234-177-21	FILTER, CHIP EMI	
CN906	1-794-805-11	PIN, CONNECTOR 11P		FL908	1-234-177-21	FILTER, CHIP EMI	
< DIODE >				< IC >			
D901	8-719-016-74	DIODE 1SS352-TPH3		IC502	8-759-567-26	IC BA5983FP-E2	
D902	8-719-016-74	DIODE 1SS352-TPH3		IC503	8-759-701-40	IC NJM3404AM-TE2	
D903	8-719-049-09	DIODE 1SS367-T3SONY		IC504	8-759-473-95	IC uPC2905T-E1	
D904	8-719-049-09	DIODE 1SS367-T3SONY		IC509	8-752-397-42	IC CXD3008Q	
< FERRITE BEAD >				IC512	8-759-490-71	IC BA5912AFP-YE2	
FB701	1-469-835-21	FERRITE 0UH		IC701	8-752-409-10	IC CXD1882R	
FB702	1-469-835-21	FERRITE 0UH		IC703	8-759-701-40	IC NJM3404AM-TE2	
FB703	1-500-283-11	INDUCTOR 0UH		IC704	8-759-082-60	IC TC7S66FU(TE85R)	
FB704	1-500-283-11	INDUCTOR 0UH		IC706	8-759-543-83	IC GM71VS18163CLT-6TR	
FB705	1-469-835-21	FERRITE 0UH		IC708	8-759-701-40	IC NJM3404AM-TE2	
FB706	1-469-835-21	FERRITE 0UH		IC801	8-752-400-60	IC CXD2751Q	
FB707	1-500-283-11	INDUCTOR 0UH		IC803	8-759-449-58	IC LM7131BCM5X	
FB708	1-500-283-11	INDUCTOR 0UH		IC804	8-752-356-45	IC CXD2301Q	
FB709	1-500-283-11	INDUCTOR 0UH		IC805	8-759-585-52	IC SN74AHC1GU04DBVR	
FB710	1-500-283-11	INDUCTOR 0UH		IC806	8-759-585-51	IC SN74AHC1G32DBVR	
FB751	1-500-283-11	INDUCTOR 0UH		IC807	8-759-585-52	IC SN74AHC1GU04DBVR	
FB752	1-500-283-11	INDUCTOR 0UH		IC808	8-759-676-10	IC MSM51V17805B-60TS-K	
FB753	1-500-283-11	INDUCTOR 0UH		IC809	8-759-549-23	IC SN74LV74APWR	
FB754	1-500-283-11	INDUCTOR 0UH		IC810	8-759-585-52	IC SN74AHC1GU04DBVR	
FB755	1-500-283-11	INDUCTOR 0UH		IC811	8-759-549-25	IC SN74LVU04APWR	
FB756	1-500-283-11	INDUCTOR 0UH		IC812	8-759-549-15	IC SN74LV245APWR	
FB757	1-500-283-11	INDUCTOR 0UH		IC813	8-759-549-15	IC SN74LV245APWR	
FB801	1-500-283-11	INDUCTOR 0UH		IC814	8-759-649-33	IC SN74AHCT1G08DCKR	
FB802	1-500-283-11	INDUCTOR 0UH		IC815	8-759-524-19	IC TC74VHC164FT(EL)	
FB803	1-500-283-11	INDUCTOR 0UH		IC901	8-752-906-71	IC CXP973F064R-1	
FB804	1-500-283-11	INDUCTOR 0UH		IC902	8-752-392-03	IC CXD1095BR	
< FILTER >				IC903	8-759-487-04	IC BR24C02F-E2	
FL501	1-234-177-21	FILTER, CHIP EMI		IC904	8-759-685-33	IC BU2500FV-E2	
FL502	1-234-177-21	FILTER, CHIP EMI		IC905	8-759-636-64	IC M51957BFP-600C	
FL701	1-234-177-21	FILTER, CHIP EMI		IC906	8-759-645-76	IC TC74VHCT32AFT	
FL702	1-234-177-21	FILTER, CHIP EMI		IC907	8-759-050-39	IC SN74HC574APWR	
FL703	1-234-177-21	FILTER, CHIP EMI		IC908	8-759-641-01	IC LC35256DM-70	
FL704	1-234-177-21	FILTER, CHIP EMI		IC909	8-759-660-04	IC SN74HC139APWR	
FL705	1-234-177-21	FILTER, CHIP EMI		IC910	8-759-082-60	IC TC7S66FU(TE85R)	
FL706	1-234-177-21	FILTER, CHIP EMI		IC920	8-759-460-76	IC BA07FP-E2	
FL750	1-233-893-21	FILTER, CHIP EMI		< COIL >			
FL751	1-234-177-21	FILTER, CHIP EMI		L801	1-410-369-11	INDUCTOR CHIP 1uH	
FL752	1-234-177-21	FILTER, CHIP EMI		L802	1-410-369-11	INDUCTOR CHIP 1uH	
FL753	1-234-177-21	FILTER, CHIP EMI		L803	1-410-369-11	INDUCTOR CHIP 1uH	
FL754	1-234-177-21	FILTER, CHIP EMI		< TRANSISTOR >			
FL804	1-234-177-21	FILTER, CHIP EMI		Q901	8-729-402-42	TRANSISTOR UN5213-TX	
FL805	1-234-177-21	FILTER, CHIP EMI		Q902	8-729-017-30	TRANSISTOR RN1703-TE85R	
FL806	1-234-177-21	FILTER, CHIP EMI		Q903	8-729-017-30	TRANSISTOR RN1703-TE85R	
FL807	1-234-177-21	FILTER, CHIP EMI		Q904	8-729-017-30	TRANSISTOR RN1703-TE85R	
FL808	1-234-177-21	FILTER, CHIP EMI		Q905	8-729-120-28	TRANSISTOR 2SC2412K-T-147-R	
FL809	1-234-177-21	FILTER, CHIP EMI					
FL814	1-234-177-21	FILTER, CHIP EMI					

Ref. No.	Part No.	Description				Remarks	Ref. No.	Part No.	Description				Remarks
< RESISTOR >							R608	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	
							R609	1-216-864-11	METAL CHIP	0	5%	1/16W	
R501	1-216-833-11	METAL CHIP	10K	5%	1/16W		R610	1-216-864-11	METAL CHIP	0	5%	1/16W	
R502	1-216-833-11	METAL CHIP	10K	5%	1/16W		R611	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	
R513	1-216-797-11	METAL CHIP	10	5%	1/16W		R612	1-216-864-11	METAL CHIP	0	5%	1/16W	
R515	1-216-864-11	METAL CHIP	0	5%	1/16W								
R516	1-216-797-11	METAL CHIP	10	5%	1/16W		R613	1-216-857-11	METAL CHIP	1M	5%	1/16W	
							R614	1-216-864-11	METAL CHIP	0	5%	1/16W	
R518	1-216-797-11	METAL CHIP	10	5%	1/16W		R615	1-216-864-11	METAL CHIP	0	5%	1/16W	
R519	1-216-864-11	METAL CHIP	0	5%	1/16W		R617	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R520	1-216-864-11	METAL CHIP	0	5%	1/16W		R618	1-218-911-11	METAL CHIP	470K	0.5%	1/16W	
R522	1-216-864-11	METAL CHIP	0	5%	1/16W								
R523	1-216-797-11	METAL CHIP	10	5%	1/16W		R619	1-216-864-11	METAL CHIP	0	5%	1/16W	
							R622	1-216-864-11	METAL CHIP	0	5%	1/16W	
R529	1-218-748-11	METAL CHIP	220K	0.5%	1/16W		R623	1-216-864-11	METAL CHIP	0	5%	1/16W	
R530	1-218-748-11	METAL CHIP	220K	0.5%	1/16W		R625	1-216-815-11	METAL CHIP	330	5%	1/16W	
R533	1-216-864-11	METAL CHIP	0	5%	1/16W		R626	1-216-864-11	METAL CHIP	0	5%	1/16W	
R534	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W								
R538	1-218-740-11	METAL CHIP	100K	0.5%	1/16W		R627	1-216-864-11	METAL CHIP	0	5%	1/16W	
							R628	1-216-864-11	METAL CHIP	0	5%	1/16W	
R540	1-216-833-11	METAL CHIP	10K	5%	1/16W		R629	1-216-864-11	METAL CHIP	0	5%	1/16W	
R541	1-218-740-11	METAL CHIP	100K	0.5%	1/16W		R632	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R544	1-218-740-11	METAL CHIP	100K	0.5%	1/16W		R634	1-216-831-11	METAL CHIP	6.8K	5%	1/16W	
R545	1-218-740-11	METAL CHIP	100K	0.5%	1/16W								
R549	1-216-864-11	METAL CHIP	0	5%	1/16W		R642	1-216-839-11	METAL CHIP	33K	5%	1/16W	
							R644	1-216-797-11	METAL CHIP	10	5%	1/16W	
R554	1-216-837-11	METAL CHIP	22K	5%	1/16W		R645	1-216-797-11	METAL CHIP	10	5%	1/16W	
R555	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W		R654	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R556	1-216-839-11	METAL CHIP	33K	5%	1/16W		R655	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R557	1-216-841-11	METAL CHIP	47K	5%	1/16W								
R558	1-216-841-11	METAL CHIP	47K	5%	1/16W		R656	1-216-821-11	METAL CHIP	1K	5%	1/16W	
							R657	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W	
R559	1-216-797-11	METAL CHIP	10	5%	1/16W		R658	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W	
R560	1-216-821-11	METAL CHIP	1K	5%	1/16W		R659	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W	
R561	1-216-821-11	METAL CHIP	1K	5%	1/16W		R660	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W	
R562	1-216-821-11	METAL CHIP	1K	5%	1/16W								
R563	1-216-797-11	METAL CHIP	10	5%	1/16W		R661	1-220-920-11	RES-CHIP	0.47	5%	1/2W	
							R662	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R569	1-216-864-11	METAL CHIP	0	5%	1/16W		R663	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R572	1-216-797-11	METAL CHIP	10	5%	1/16W		R670	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R573	1-216-797-11	METAL CHIP	10	5%	1/16W		R671	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R576	1-216-864-11	METAL CHIP	0	5%	1/16W								
R577	1-216-864-11	METAL CHIP	0	5%	1/16W		R672	1-216-833-11	METAL CHIP	10K	5%	1/16W	
							R701	1-218-740-11	METAL CHIP	100K	0.5%	1/16W	
R578	1-216-864-11	METAL CHIP	0	5%	1/16W		R702	1-218-740-11	METAL CHIP	100K	0.5%	1/16W	
R583	1-216-864-11	METAL CHIP	0	5%	1/16W		R703	1-218-740-11	METAL CHIP	100K	0.5%	1/16W	
R584	1-218-728-11	METAL CHIP	33K	0.5%	1/16W		R704	1-218-740-11	METAL CHIP	100K	0.5%	1/16W	
R585	1-216-864-11	METAL CHIP	0	5%	1/16W								
R586	1-216-864-11	METAL CHIP	0	5%	1/16W		R705	1-218-740-11	METAL CHIP	100K	0.5%	1/16W	
							R706	1-218-740-11	METAL CHIP	100K	0.5%	1/16W	
R587	1-216-864-11	METAL CHIP	0	5%	1/16W		R707	1-218-668-11	METAL CHIP	100	0.5%	1/16W	
R588	1-218-716-11	METAL CHIP	10K	0.5%	1/16W		R708	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R589	1-218-728-11	METAL CHIP	33K	0.5%	1/16W		R709	1-218-736-11	METAL CHIP	68K	0.5%	1/16W	
R590	1-218-716-11	METAL CHIP	10K	0.5%	1/16W								
R591	1-218-702-11	METAL CHIP	2.7K	0.5%	1/16W		R710	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	
							R711	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W	
R592	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W		R712	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	
R593	1-218-740-11	METAL CHIP	100K	0.5%	1/16W		R713	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	
R594	1-218-728-11	METAL CHIP	33K	0.5%	1/16W		R714	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	
R595	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W								
R596	1-216-864-11	METAL CHIP	0	5%	1/16W		R716	1-218-668-11	METAL CHIP	100	0.5%	1/16W	
							R717	1-218-740-11	METAL CHIP	100K	0.5%	1/16W	
R597	1-218-716-11	METAL CHIP	10K	0.5%	1/16W		R718	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	
R599	1-218-702-11	METAL CHIP	2.7K	0.5%	1/16W		R719	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	
R600	1-216-864-11	METAL CHIP	0	5%	1/16W		R720	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R601	1-218-724-11	METAL CHIP	22K	0.5%	1/16W								
R602	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W		R721	1-218-728-11	METAL CHIP	33K	0.5%	1/16W	
							R724	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	
R603	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W		R725	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	
R604	1-218-692-11	METAL CHIP	1K	0.5%	1/16W		R726	1-218-740-11	METAL CHIP	100K	0.5%	1/16W	
R605	1-216-864-11	METAL CHIP	0	5%	1/16W		R727	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W	
R606	1-216-841-11	METAL CHIP	47K	5%	1/16W								
R607	1-218-708-11	METAL CHIP	4.7K	0.5%	1/16W								

MAIN

Ref. No.	Part No.	Description	Remarks			Ref. No.	Part No.	Description	Remarks		
R728	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	R813	1-216-801-11	METAL CHIP	22	5%	1/16W
R729	1-216-864-11	METAL CHIP	0	5%	1/16W	R814	1-216-801-11	METAL CHIP	22	5%	1/16W
R730	1-216-801-11	METAL CHIP	22	5%	1/16W	R815	1-216-801-11	METAL CHIP	22	5%	1/16W
R731	1-216-801-11	METAL CHIP	22	5%	1/16W	R816	1-216-809-11	METAL CHIP	100	5%	1/16W
R732	1-216-833-11	METAL CHIP	10K	5%	1/16W	R817	1-216-809-11	METAL CHIP	100	5%	1/16W
R733	1-216-833-11	METAL CHIP	10K	5%	1/16W	R819	1-216-809-11	METAL CHIP	100	5%	1/16W
R734	1-216-833-11	METAL CHIP	10K	5%	1/16W	R820	1-218-713-11	METAL CHIP	7.5K	0.5%	1/16W
R735	1-216-833-11	METAL CHIP	10K	5%	1/16W	R821	1-216-801-11	METAL CHIP	22	5%	1/16W
R736	1-216-833-11	METAL CHIP	10K	5%	1/16W	R822	1-216-801-11	METAL CHIP	22	5%	1/16W
R737	1-216-833-11	METAL CHIP	10K	5%	1/16W	R823	1-216-801-11	METAL CHIP	22	5%	1/16W
R738	1-216-833-11	METAL CHIP	10K	5%	1/16W	R824	1-216-864-11	METAL CHIP	0	5%	1/16W
R739	1-216-864-11	METAL CHIP	0	5%	1/16W	R825	1-216-805-11	METAL CHIP	47	5%	1/16W
R740	1-216-833-11	METAL CHIP	10K	5%	1/16W	R826	1-216-805-11	METAL CHIP	47	5%	1/16W
R741	1-216-801-11	METAL CHIP	22	5%	1/16W	R827	1-216-809-11	METAL CHIP	100	5%	1/16W
R742	1-216-801-11	METAL CHIP	22	5%	1/16W	R828	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R743	1-216-801-11	METAL CHIP	22	5%	1/16W	R829	1-216-809-11	METAL CHIP	100	5%	1/16W
R744	1-216-801-11	METAL CHIP	22	5%	1/16W	R830	1-216-801-11	METAL CHIP	22	5%	1/16W
R745	1-216-841-11	METAL CHIP	47K	5%	1/16W	R831	1-216-845-11	METAL CHIP	100K	5%	1/16W
R746	1-216-841-11	METAL CHIP	47K	5%	1/16W	R832	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R750	1-216-833-11	METAL CHIP	10K	5%	1/16W	R833	1-216-809-11	METAL CHIP	100	5%	1/16W
R752	1-216-864-11	METAL CHIP	0	5%	1/16W	R834	1-216-809-11	METAL CHIP	100	5%	1/16W
R753	1-216-864-11	METAL CHIP	0	5%	1/16W	R847	1-216-801-11	METAL CHIP	22	5%	1/16W
R754	1-216-864-11	METAL CHIP	0	5%	1/16W	R853	1-216-813-11	METAL CHIP	220	5%	1/16W
R755	1-216-864-11	METAL CHIP	0	5%	1/16W	R854	1-216-813-11	METAL CHIP	220	5%	1/16W
R756	1-216-864-11	METAL CHIP	0	5%	1/16W	R855	1-216-813-11	METAL CHIP	220	5%	1/16W
R757	1-216-864-11	METAL CHIP	0	5%	1/16W	R858	1-216-819-11	METAL CHIP	680	5%	1/16W
R758	1-216-864-11	METAL CHIP	0	5%	1/16W	R859	1-216-819-11	METAL CHIP	680	5%	1/16W
R759	1-216-864-11	METAL CHIP	0	5%	1/16W	R860	1-216-819-11	METAL CHIP	680	5%	1/16W
R761	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W	R875	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R762	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	R876	1-216-864-11	METAL CHIP	0	5%	1/16W
R763	1-218-714-11	METAL CHIP	8.2K	0.5%	1/16W	R877	1-216-833-11	METAL CHIP	10K	5%	1/16W
R764	1-216-857-11	METAL CHIP	1M	5%	1/16W	R878	1-216-833-11	METAL CHIP	10K	5%	1/16W
R765	1-218-728-11	METAL CHIP	33K	0.5%	1/16W	R879	1-216-833-11	METAL CHIP	10K	5%	1/16W
R766	1-216-864-11	METAL CHIP	0	5%	1/16W	R880	1-216-833-11	METAL CHIP	10K	5%	1/16W
R767	1-218-728-11	METAL CHIP	33K	0.5%	1/16W	R881	1-216-833-11	METAL CHIP	10K	5%	1/16W
R768	1-216-809-11	METAL CHIP	100	5%	1/16W	R891	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R769	1-218-700-11	METAL CHIP	2.2K	0.5%	1/16W	R892	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R770	1-216-864-11	METAL CHIP	0	5%	1/16W	R893	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R771	1-216-801-11	METAL CHIP	22	5%	1/16W	R894	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R772	1-216-801-11	METAL CHIP	22	5%	1/16W	R901	1-216-801-11	METAL CHIP	22	5%	1/16W
R773	1-216-833-11	METAL CHIP	10K	5%	1/16W	R902	1-216-801-11	METAL CHIP	22	5%	1/16W
R776	1-216-864-11	METAL CHIP	0	5%	1/16W	R903	1-216-801-11	METAL CHIP	22	5%	1/16W
R777	1-216-864-11	METAL CHIP	0	5%	1/16W	R904	1-216-801-11	METAL CHIP	22	5%	1/16W
R778	1-218-740-11	METAL CHIP	100K	0.5%	1/16W	R905	1-216-801-11	METAL CHIP	22	5%	1/16W
R780	1-216-864-11	METAL CHIP	0	5%	1/16W	R906	1-216-801-11	METAL CHIP	22	5%	1/16W
R781	1-216-864-11	METAL CHIP	0	5%	1/16W	R907	1-216-801-11	METAL CHIP	22	5%	1/16W
R786	1-216-864-11	METAL CHIP	0	5%	1/16W	R908	1-216-801-11	METAL CHIP	22	5%	1/16W
R790	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R909	1-216-801-11	METAL CHIP	22	5%	1/16W
R791	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R910	1-216-864-11	METAL CHIP	0	5%	1/16W
R792	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R911	1-216-864-11	METAL CHIP	0	5%	1/16W
R793	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R912	1-216-833-11	METAL CHIP	10K	5%	1/16W
R803	1-216-803-11	METAL CHIP	33	5%	1/16W	R913	1-216-833-11	METAL CHIP	10K	5%	1/16W
R804	1-218-724-11	METAL CHIP	22K	0.5%	1/16W	R914	1-216-174-00	RES-CHIP	100	5%	1/8W
R805	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	R915	1-216-809-11	METAL CHIP	100	5%	1/16W
R806	1-216-864-11	METAL CHIP	0	5%	1/16W	R916	1-216-821-11	METAL CHIP	1K	5%	1/16W
R808	1-216-801-11	METAL CHIP	22	5%	1/16W	R917	1-216-821-11	METAL CHIP	1K	5%	1/16W
R809	1-216-801-11	METAL CHIP	22	5%	1/16W	R918	1-216-174-00	RES-CHIP	100	5%	1/8W
R810	1-216-801-11	METAL CHIP	22	5%	1/16W	R919	1-216-801-11	METAL CHIP	22	5%	1/16W
R811	1-216-801-11	METAL CHIP	22	5%	1/16W	R920	1-216-809-11	METAL CHIP	100	5%	1/16W
R812	1-216-801-11	METAL CHIP	22	5%	1/16W	R921	1-216-809-11	METAL CHIP	100	5%	1/16W

Ref. No.	Part No.	Description			Remarks	Ref. No.	Part No.	Description			Remarks	
R922	1-216-801-11	METAL CHIP	22	5%	1/16W	R994	1-216-789-11	METAL CHIP	2.2	5%	1/16W	
R923	1-216-833-11	METAL CHIP	10K	5%	1/16W	R995	1-218-712-11	METAL CHIP	6.8K	0.5%	1/16W	
R924	1-216-833-11	METAL CHIP	10K	5%	1/16W	R998	1-216-864-11	METAL CHIP	0	5%	1/16W	
R925	1-216-809-11	METAL CHIP	100	5%	1/16W							
R926	1-216-809-11	METAL CHIP	100	5%	1/16W			< VIBRATOR >				
R927	1-216-809-11	METAL CHIP	100	5%	1/16W	X901	1-781-945-21	VIBRATOR, CERAMIC 20MHz				
R928	1-216-809-11	METAL CHIP	100	5%	1/16W			*****				
R929	1-216-809-11	METAL CHIP	100	5%	1/16W							
R930	1-216-809-11	METAL CHIP	100	5%	1/16W			REMOTE SENSOR BOARD				
R931	1-216-809-11	METAL CHIP	100	5%	1/16W			*****				
R932	1-216-809-11	METAL CHIP	100	5%	1/16W			< CAPACITOR >				
R934	1-216-833-11	METAL CHIP	10K	5%	1/16W							
R935	1-216-833-11	METAL CHIP	10K	5%	1/16W	C1000	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
R936	1-216-829-11	METAL CHIP	4.7K	5%	1/16W							
R937	1-216-829-11	METAL CHIP	4.7K	5%	1/16W			< IC >				
R938	1-216-833-11	METAL CHIP	10K	5%	1/16W	IC1000	8-749-923-80	IC GP1U90XB				
R939	1-216-809-11	METAL CHIP	100	5%	1/16W							
R940	1-216-809-11	METAL CHIP	100	5%	1/16W			< RESISTOR >				
R941	1-216-809-11	METAL CHIP	100	5%	1/16W							
R942	1-216-809-11	METAL CHIP	100	5%	1/16W	R1002	1-216-025-11	RES-CHIP	100	5%	1/10W	

R943	1-216-809-11	METAL CHIP	100	5%	1/16W							
R944	1-216-833-11	METAL CHIP	10K	5%	1/16W		A-4725-382-A	RF BOARD, COMPLETE				
R945	1-216-833-11	METAL CHIP	10K	5%	1/16W			*****				
R946	1-216-833-11	METAL CHIP	10K	5%	1/16W							
R947	1-216-864-11	METAL CHIP	0	5%	1/16W			< CAPACITOR >				
R948	1-218-720-11	METAL CHIP	15K	0.5%	1/16W	C001	1-164-676-11	CERAMIC CHIP	2200PF	5.00%	16V	
R949	1-218-720-11	METAL CHIP	15K	0.5%	1/16W	C002	1-164-676-11	CERAMIC CHIP	2200PF	5.00%	16V	
R950	1-216-833-11	METAL CHIP	10K	5%	1/16W	C003	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
R951	1-216-821-11	METAL CHIP	1K	5%	1/16W	C004	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
R952	1-216-827-11	METAL CHIP	3.3K	5%	1/16W	C005	1-128-993-21	ELECT CHIP	22uF	20%	10V	
R953	1-216-833-11	METAL CHIP	10K	5%	1/16W	C006	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
R954	1-216-833-11	METAL CHIP	10K	5%	1/16W	C007	1-124-779-00	ELECT CHIP	10uF	20%	16V	
R955	1-216-801-11	METAL CHIP	22	5%	1/16W	C008	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
R956	1-216-801-11	METAL CHIP	22	5%	1/16W	C009	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
R957	1-216-801-11	METAL CHIP	22	5%	1/16W	C010	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
R958	1-216-864-11	METAL CHIP	0	5%	1/16W	C011	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
R959	1-216-833-11	METAL CHIP	10K	5%	1/16W	C012	1-164-172-11	CERAMIC CHIP	0.0056uF	10.00%	25V	
R960	1-216-833-11	METAL CHIP	10K	5%	1/16W	C013	1-164-172-11	CERAMIC CHIP	0.0056uF	10.00%	25V	
R961	1-216-821-11	METAL CHIP	1K	5%	1/16W	C014	1-124-779-00	ELECT CHIP	10uF	20%	16V	
R962	1-216-833-11	METAL CHIP	10K	5%	1/16W	C015	1-124-779-00	ELECT CHIP	10uF	20%	16V	
R964	1-218-704-11	METAL CHIP	3.3K	0.5%	1/16W	C016	1-164-218-11	CERAMIC CHIP	180PF	0.25PF	50V	
R965	1-218-692-11	METAL CHIP	1K	0.5%	1/16W	C017	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
R969	1-216-833-11	METAL CHIP	10K	5%	1/16W	C018	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
R970	1-216-833-11	METAL CHIP	10K	5%	1/16W	C019	1-124-779-00	ELECT CHIP	10uF	20%	16V	
R971	1-216-809-11	METAL CHIP	100	5%	1/16W	C020	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
R973	1-216-864-11	METAL CHIP	0	5%	1/16W	C021	1-162-919-11	CERAMIC CHIP	22PF	5%	50V	
R974	1-216-833-11	METAL CHIP	10K	5%	1/16W	C022	1-115-416-11	CERAMIC CHIP	0.001uF	5.00%	25V	
R975	1-216-833-11	METAL CHIP	10K	5%	1/16W	C023	1-126-206-11	ELECT CHIP	100uF	20%	6.3V	
R976	1-216-833-11	METAL CHIP	10K	5%	1/16W	C024	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
R977	1-218-716-11	METAL CHIP	10K	0.5%	1/16W	C025	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
R978	1-216-833-11	METAL CHIP	10K	5%	1/16W	C026	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	
R979	1-216-833-11	METAL CHIP	10K	5%	1/16W	C027	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
R980	1-216-833-11	METAL CHIP	10K	5%	1/16W	C028	1-128-993-21	ELECT CHIP	22uF	20%	10V	
R981	1-216-833-11	METAL CHIP	10K	5%	1/16W	C029	1-124-779-00	ELECT CHIP	10uF	20%	16V	
R982	1-216-864-11	METAL CHIP	0	5%	1/16W	C030	1-128-993-21	ELECT CHIP	22uF	20%	10V	
R983	1-216-864-11	METAL CHIP	0	5%	1/16W	C031	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
R985	1-218-712-11	METAL CHIP	6.8K	0.5%	1/16W	C032	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	
R988	1-216-864-11	METAL CHIP	0	5%	1/16W	C033	1-128-993-21	ELECT CHIP	22uF	20%	10V	
R991	1-216-864-11	METAL CHIP	0	5%	1/16W	C034	1-124-779-00	ELECT CHIP	10uF	20%	16V	
R992	1-216-864-11	METAL CHIP	0	5%	1/16W	C036	1-107-826-11	CERAMIC CHIP	0.1uF	10.00%	16V	

Ref. No.	Part No.	Description	Remarks
C037	1-115-416-11	CERAMIC CHIP 0.001uF 5.00% 25V	
C038	1-126-206-11	ELECT CHIP 100uF 20% 6.3V	
C039	1-107-826-11	CERAMIC CHIP 0.1uF 10.00% 16V	
C040	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C041	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V	
C042	1-164-677-11	CERAMIC CHIP 0.033uF 10.00% 16V	
C043	1-164-677-11	CERAMIC CHIP 0.033uF 10.00% 16V	
C044	1-162-963-11	CERAMIC CHIP 680PF 10% 50V	
C045	1-115-416-11	CERAMIC CHIP 0.001uF 5.00% 25V	
C046	1-107-826-11	CERAMIC CHIP 0.1uF 10.00% 16V	
C047	1-107-826-11	CERAMIC CHIP 0.1uF 10.00% 16V	
C048	1-165-176-11	CERAMIC CHIP 0.047uF 10.00% 16V	
C049	1-128-993-21	ELECT CHIP 22uF 20% 10V	
C050	1-128-993-21	ELECT CHIP 22uF 20% 10V	
C051	1-107-826-11	CERAMIC CHIP 0.1uF 10.00% 16V	
C052	1-107-826-11	CERAMIC CHIP 0.1uF 10.00% 16V	
C055	1-128-993-21	ELECT CHIP 22uF 20% 10V	
C060	1-107-826-11	CERAMIC CHIP 0.1uF 10.00% 16V	
C064	1-107-826-11	CERAMIC CHIP 0.1uF 10.00% 16V	
C068	1-107-826-11	CERAMIC CHIP 0.1uF 10.00% 16V	
C069	1-107-826-11	CERAMIC CHIP 0.1uF 10.00% 16V	
C070	1-128-993-21	ELECT CHIP 22uF 20% 10V	
C071	1-128-993-21	ELECT CHIP 22uF 20% 10V	
C081	1-164-357-11	CERAMIC CHIP 0.001uF 5.00% 50V	
C082	1-164-357-11	CERAMIC CHIP 0.001uF 5.00% 50V	
C084	1-107-826-11	CERAMIC CHIP 0.1uF 10.00% 16V	
C094	1-128-993-21	ELECT CHIP 22uF 20% 10V	
C095	1-107-826-11	CERAMIC CHIP 0.1uF 10.00% 16V	
< CONNECTOR >			
CN001	1-774-731-21	PIN, CONNECTOR (PC BOARD) 5P	
CN002	1-770-161-21	PIN, CONNECTOR (PC BOARD) 6P	
CN003	1-794-707-11	CONNECTOR, FFC/FPC 25P	
CN005	1-784-883-21	CONNECTOR,FFC(LIF(NON-ZIF))35P	
< DIODE >			
D001	8-719-016-74	DIODE 1SS352-TPH3	
D002	8-719-016-74	DIODE 1SS352-TPH3	
< IC >			
IC001	8-752-403-50	IC CXD1881R	
IC004	8-759-058-45	IC NJM3403AV(TE2)	
IC081	8-759-701-40	IC NJM3404AM-TE2	
< COIL >			
L001	1-412-031-11	INDUCTOR CHIP 47uH	
L002	1-412-031-11	INDUCTOR CHIP 47uH	
L003	1-412-031-11	INDUCTOR CHIP 47uH	
< TRANSISTOR >			
Q001	8-729-805-25	TRANSISTOR 2SB1121-ST-TD	
Q002	8-729-805-25	TRANSISTOR 2SB1121-ST-TD	
Q003	8-729-805-25	TRANSISTOR 2SB1121-ST-TD	
Q005	8-729-820-90	TRANSISTOR 2SD1621-ST-TD	

Ref. No.	Part No.	Description	Remarks
< RESISTOR >			
R001	1-216-864-11	METAL CHIP 0 5% 1/16W	
R002	1-218-668-11	METAL CHIP 100 0.5% 1/16W	
R003	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R005	1-216-864-11	METAL CHIP 0 5% 1/16W	
R006	1-216-864-11	METAL CHIP 0 5% 1/16W	
R007	1-216-864-11	METAL CHIP 0 5% 1/16W	
R008	1-216-864-11	METAL CHIP 0 5% 1/16W	
R011	1-216-864-11	METAL CHIP 0 5% 1/16W	
R012	1-216-864-11	METAL CHIP 0 5% 1/16W	
R013	1-216-864-11	METAL CHIP 0 5% 1/16W	
R014	1-216-864-11	METAL CHIP 0 5% 1/16W	
R015	1-216-803-11	METAL CHIP 33 5% 1/16W	
R016	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R017	1-216-817-11	METAL CHIP 470 5% 1/16W	
R018	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R019	1-216-803-11	METAL CHIP 33 5% 1/16W	
R020	1-216-817-11	METAL CHIP 470 5% 1/16W	
R021	1-219-570-11	RES-CHIP 10M 5% 1/16W	
R022	1-218-718-11	METAL CHIP 12K 0.5% 1/16W	
R023	1-216-864-11	METAL CHIP 0 5% 1/16W	
R024	1-216-864-11	METAL CHIP 0 5% 1/16W	
R025	1-216-864-11	METAL CHIP 0 5% 1/16W	
R027	1-216-864-11	METAL CHIP 0 5% 1/16W	
R029	1-216-841-11	METAL CHIP 47K 5% 1/16W	
R030	1-216-821-11	METAL CHIP 1K 5% 1/16W	
R031	1-216-864-11	METAL CHIP 0 5% 1/16W	
R032	1-216-864-11	METAL CHIP 0 5% 1/16W	
R033	1-216-864-11	METAL CHIP 0 5% 1/16W	
R036	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R044	1-216-832-11	METAL CHIP 8.2K 5% 1/16W	
R046	1-218-668-11	METAL CHIP 100 0.5% 1/16W	
R053	1-216-864-11	METAL CHIP 0 5% 1/16W	
R054	1-216-864-11	METAL CHIP 0 5% 1/16W	
R060	1-216-864-11	METAL CHIP 0 5% 1/16W	
R065	1-218-716-11	METAL CHIP 10K 0.5% 1/16W	
R066	1-218-716-11	METAL CHIP 10K 0.5% 1/16W	
R068	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R082	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R083	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R084	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R085	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R086	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R087	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R088	1-216-864-11	METAL CHIP 0 5% 1/16W	
R089	1-216-864-11	METAL CHIP 0 5% 1/16W	
R093	1-216-803-11	METAL CHIP 33 5% 1/16W	
R094	1-216-803-11	METAL CHIP 33 5% 1/16W	
R097	1-216-839-11	METAL CHIP 33K 5% 1/16W	
R098	1-216-839-11	METAL CHIP 33K 5% 1/16W	

	1-676-245-11	SENSOR BOARD	

< CONNECTOR >			
CN10	1-750-243-11	SOCKET, CONNECTOR 6P	

Ref. No.	Part No.	Description	Remarks
< DIODE >			

D10	8-749-924-18	PHOTO INTERRUPTER RPI-1391 (TABLE SENSOR)	
D11	8-749-017-45	SENSOR, PHONT RPR-220C1N (DISC SENSOR)	

< RESISTOR >

R10	1-249-416-11	CARBON	820	5%	1/4W	F
R11	1-249-407-11	CARBON	150	5%	1/4W	F
R12	1-249-429-11	CARBON	10K	5%	1/4W	

MISCELLANEOUS

82	1-541-632-11	MOTOR, DC (DOOR)
102	1-757-135-11	WIRE (FLAT TYPE) (35 CORE)
103	1-757-136-11	WIRE (FLAT TYPE) (16 CORE)
104	1-757-137-11	WIRE (FLAT TYPE) (9 CORE)
△ 106	1-783-531-31	CORD, POWER
271	1-791-930-11	WIRE (FLAT TYPE) (6 CORE)
273	1-757-097-11	WIRE (FLAT TYPE) (25 CORE)
△ 275	8-820-132-02	OPTICAL PICK-UP KHM-230AAA/J1NP
S200	1-418-746-11	ENCODER, ROTARY
△ T101	1-435-732-11	TRANSFORMER, POWER

△ T102	1-435-733-11	TRANSFORMER, POWER
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ACCESSORIES & PACKING MATERIALS

1-476-263-11	REMOTECOMMANDER (RM-SC300)
1-558-271-11	CORD, CONNECTION
4-230-687-01	MANUAL, INSTRUCTION (ENGLISH)
4-228-696-01	COVER, BATTERY (for RM-SC300)

HARDWARE LIST

#1	7-685-646-79	SCREW +BVTP3X8 TYPE2 N-S
#2	7-685-871-01	SCREW +BVTT3X6 (S)
#4	7-685-885-09	SCREW +BVTT4X16 (S)
#5	7-621-775-00	SCREW +B 2.6X3
#6	7-624-106-04	STOPRING 3.0, TYPE -E
#7	7-685-646-11	SCREW +BVTP3X8 CZN
#8	7-685-646-19	SCREW +BVTP3X8 BZN
#9	7-685-647-11	SCREW +BVTP3X10

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.

