

SCD-C2000ES

SERVICE MANUAL

Ver. 1.2 2005.10

*US Model
Canadian Model*



Model Name Using Similar Mechanism	SCD-CE595
CD Mechanism Type	CDM79C-DVBU51
Optical Pick-up Name	DBU-3

SPECIFICATIONS

When a Super Audio CD is played

Playing frequency range	2 Hz to 100 kHz
Frequency response	2 Hz to 40 kHz (–3 dB)
Dynamic range	101 dB or more
Total harmonic distortion rate	0.003 % 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	97 dB or more
Total harmonic distortion rate	0.0032 % or less
Wow and flutter	Value of measurable limit (±0.001 % W. PEAK) or less

Output connector

ANALOG OUT (phono jacks):	
Output level	2 Vrms (at 50 kilohms)
Load impedance	Over 10 kilohms
DIGITAL (CD) OUT OPTICAL*	
(square optical output connector):	
Output level	–18 dBm

DIGITAL (CD) OUT COAXIAL*

(coaxial output connector):	
Output level	0.5 Vp-p
Load impedance	75 ohms
PHONES (stereo phone jack):	
Output level	10 mW
Load impedance	32 ohms

* Output only the audio signals of the CD

General

Laser	Semiconductor laser (Super Audio CD: $\lambda = 650$ nm) (CD: $\lambda = 780$ nm) Emission duration: continuous
Power requirements	120 V AC, 60 Hz
Power consumption	15 W
Dimensions (w/h/d)	430 × 115 × 420 mm incl. projecting parts
Mass (approx.)	5.8 kg

Supplied accessories

Audio connecting cord	Red and White × 2 (2) Black × 2 (2)
Remote commander	RM-SC505 (1)
Battery	R6 (size-AA) (2)

Design and specifications are subject to change
without notice.

SUPER AUDIO CD PLAYER

SONY®

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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.

CAUTION

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

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

SAFETY-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 COM- POSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 SERVICING NOTES

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

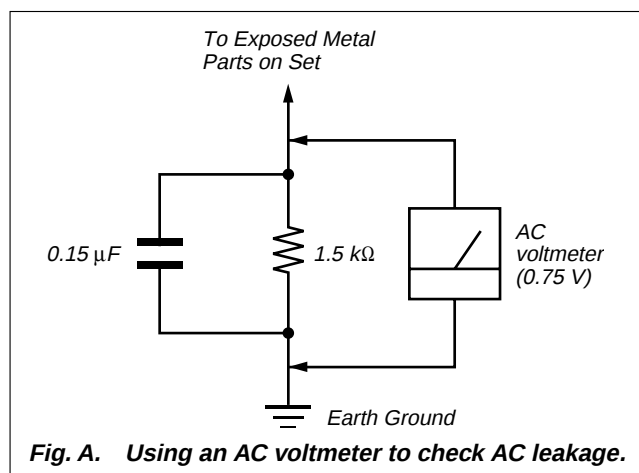
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage.

Check leakage as described below.

LEAKAGE TEST

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

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

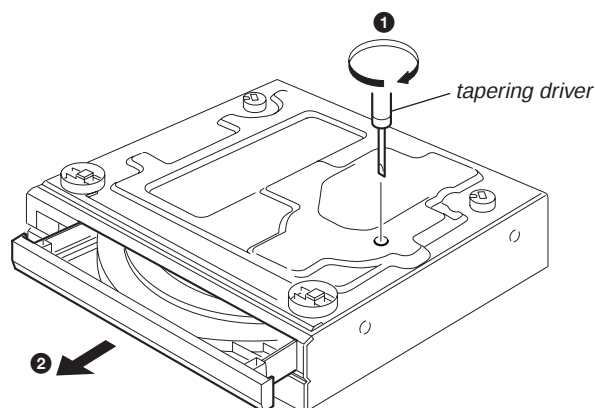


HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF

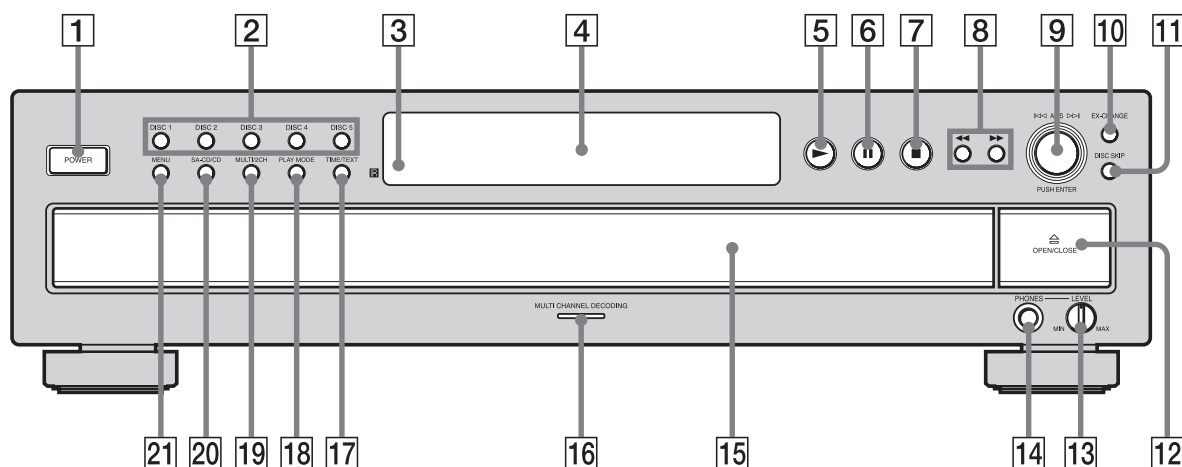
Insert a tapering driver into the aperture of the unit bottom, and turn in the direction of arrow.

Use a flat (-) head screwdriver to open the disc tray by manual operation. (Flat head screwdriver with nominal blade length of 3mm.)

* To close the disc table, turn the driver in the reverse direction.

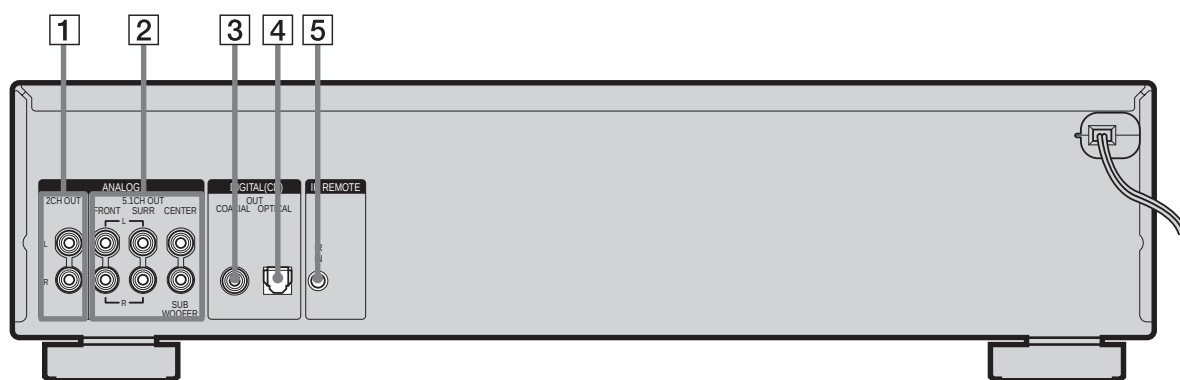


Front Panel



- 1 POWER switch (9, 22)**
- 2 DISC 1-5 buttons (10, 15)**
Press to select the disc directly.
- 3 Remote sensor  (6)**
- 4 Display window (11)**
- 5 ► button (10, 14, 15)**
- 6 || button (10)**
- 7 ■ button (10, 16, 22)**
- 8 ◀◀/▶▶ buttons (14, 21)**
- 9 ◀◀ AMS ▶▶ dial**
(AMS: Automatic Music Sensor) (9, 10, 13, 14, 15, 17, 18, 20, 21)
- 10 EX-CHANGE button (13)**
Press to replace discs while playing a disc.
- 11 DISC SKIP button (9, 13)**
Press to select the disc.
- 12  OPEN/CLOSE button (9)**
- 13 LEVEL control**
Adjust the headphones volume.
- 14 PHONES jack**
Connect the headphones.
During playback of a Multi-channel Super Audio CD, the same signal that is output from the ANALOG 5.1CH OUT FRONT L/R jacks is output from the PHONES jack.
- 15 Disc tray (9)**
- 16 MULTI CHANNEL DECODING indicator**
Turns on when you turn on the player, or when the Multi-channel Super Audio CD is loaded and select the multi-channel playback area by pressing MULTI/2CH.
- 17 TIME/TEXT button (12)**
Each time you press the button, the playing time of the track, the remaining time of the disc, or TEXT information appears in the display.
In name input mode, press to select the character type.
- 18 PLAY MODE button (9, 15)**
Press to select the play mode.
- 19 MULTI/2CH button (5, 10)**
Press to select the playback area when a disc with the 2 channel area and the multi-channel area is loaded.
- 20 SA-CD/CD button (5, 10)**
Each time you press the button while playing back a hybrid disc, the layer to be played back switches between the SA-CD layer and the CD layer.
- 21 MENU button (9, 10, 13, 17, 18, 20, 21)**
Press to enter the menu.
Press to exit from the menu and return to the normal display.

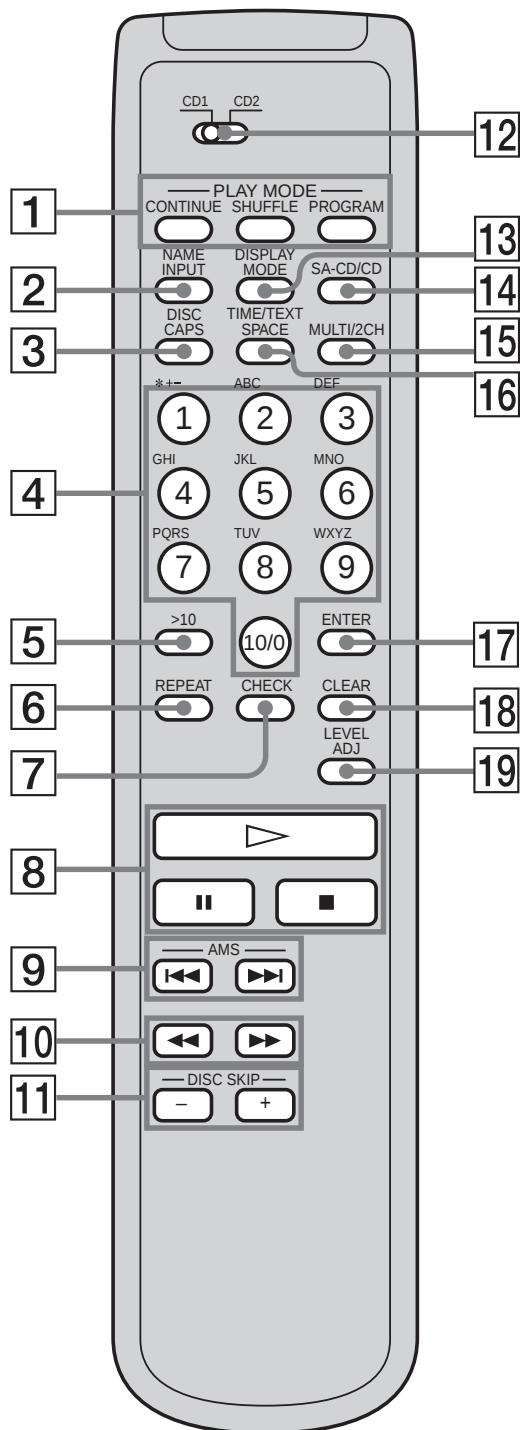
Rear Panel



- 1 ANALOG 2CH OUT jacks (7)**
- 2 ANALOG 5.1CH OUT jacks (6)**
- 3 DIGITAL (CD) OUT COAXIAL connector (8)**
- 4 DIGITAL (CD) OUT OPTICAL connector (8)**
- 5 IR REMOTE IR IN jack**

Connect to a component equipped with the IR output jack.

Remote

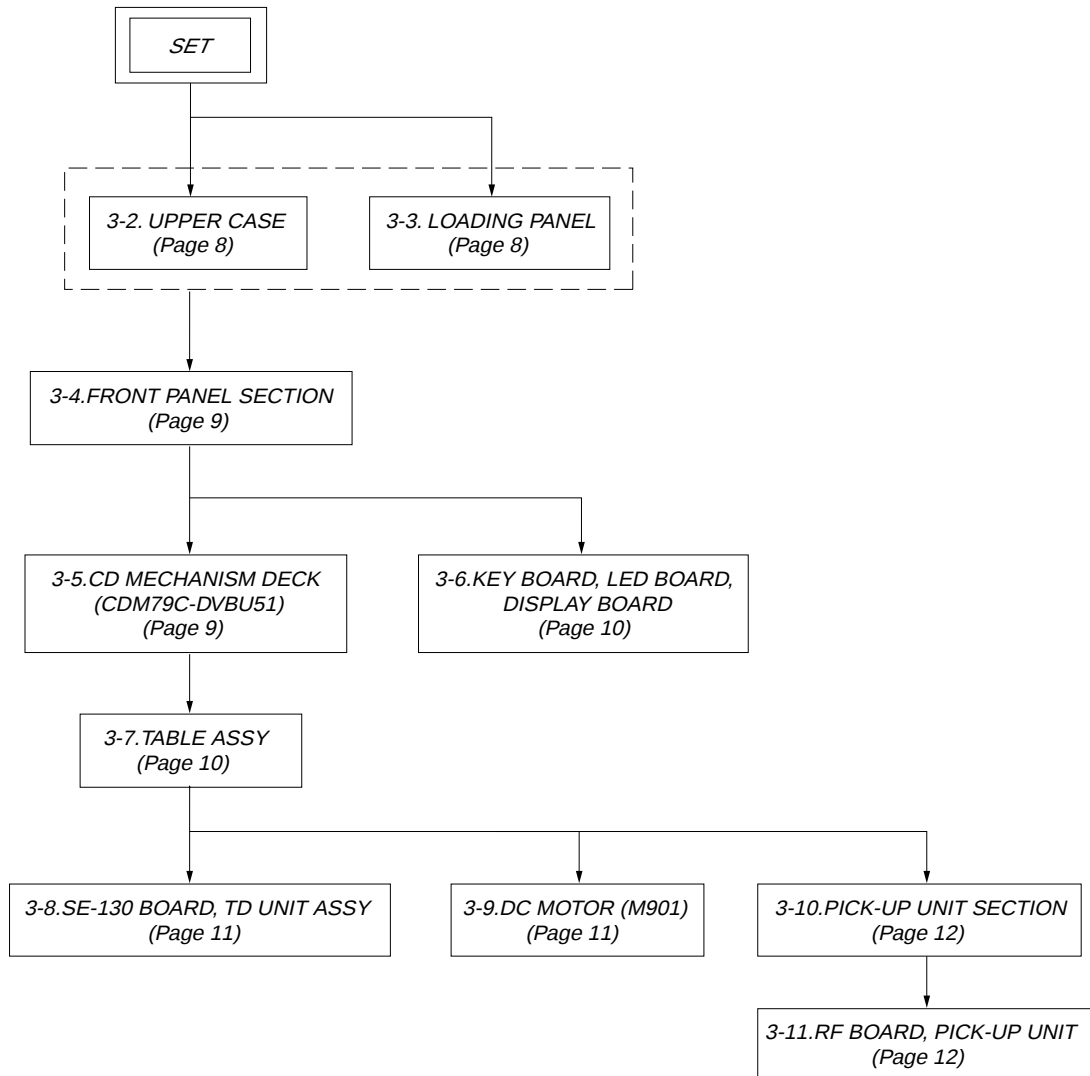


- 1 CONTINUE button (9, 15, 16)**
Press to resume Continuous Play from Shuffle Play or Program Play.
SHUFFLE button (15)
PROGRAM button (15)
- 2 NAME INPUT button (21)**
Press to enter the name input mode.
- 3 DISC button (10, 15)**
Press to select the disc.
CAPS button (21)
Press to switch between capital letters (ABC) and numbers (123) in name input mode.
- 4 Numeric buttons (10, 15, 21)**
- 5 >10 button (10, 15)**
- 6 REPEAT button (14)**
- 7 CHECK button (16)**
Press to check the programmed order.
- 8 ▷ button (10, 14, 15)**
|| button (10)
■ button (10, 16, 22)
- 9 AMS I◀◀/▶▶I buttons (AMS: Automatic Music Sensor) (9, 10, 13, 14, 15, 17, 18, 20, 21)**
- 10 ◀◀/▶▶ buttons (14, 21)**
- 11 DISC SKIP +/- buttons (9, 13)**
Press to select the disc.
- 12 CD1/2 (command mode) switch (9)**
Select the command mode.
- 13 DISPLAY MODE button (13)**
Press to turn the display information off or on.
- 14 SA-CD/CD button (5, 10)**
Each time you press the button while playing back a hybrid disc, the layer to be played back switches between the SA-CD layer and the CD layer.
- 15 MULTI/2CH button (5, 10)**
Press to select the playback area when a disc with the 2 channel area and the multi-channel area is loaded.
- 16 TIME/TEXT button (12)**
Each time you press the button, the playing time of the track, the remaining time of the disc, or TEXT information appears in the display.
SPACE button (21)
Press to insert a space in name input mode.
- 17 ENTER button (9, 10, 13, 15, 17, 19, 20, 22)**
- 18 CLEAR button (15, 16, 22)**
Press to delete a programmed track number.
- 19 LEVEL ADJ button (18)**
Press to adjust the output level balance for the Multi-channel management function.

SECTION 3 DISASSEMBLY

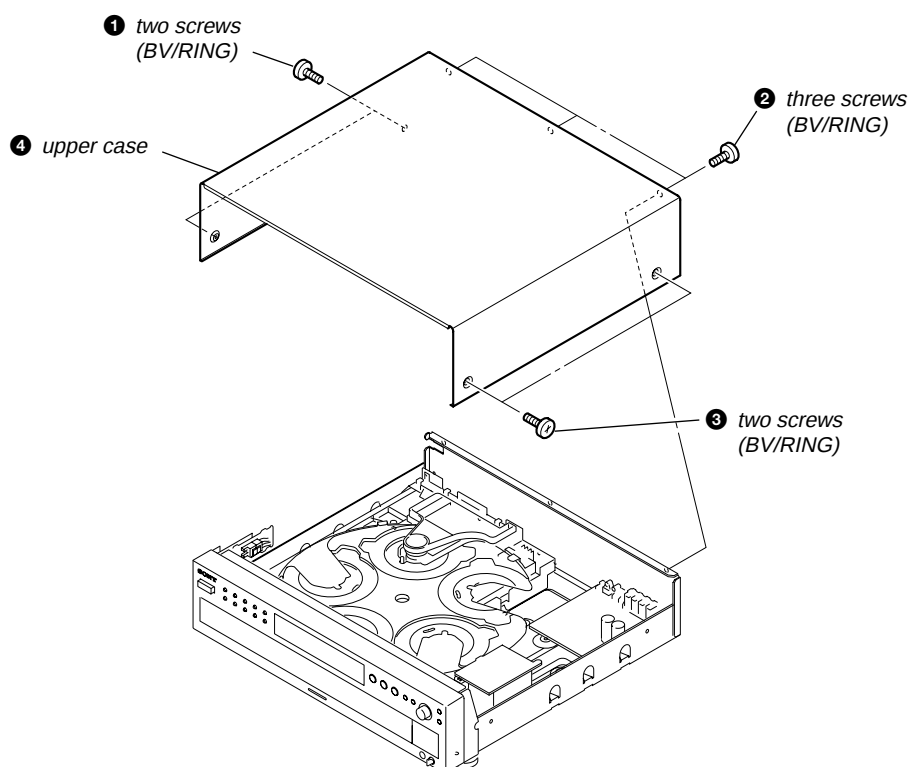
- This set can be disassembled in the order shown below.
- The dotted square with arrow (□→) prompts you to move to the next job when all of the works within the dotted square (□) are completed.

3-1. DISASSEMBLY FLOW

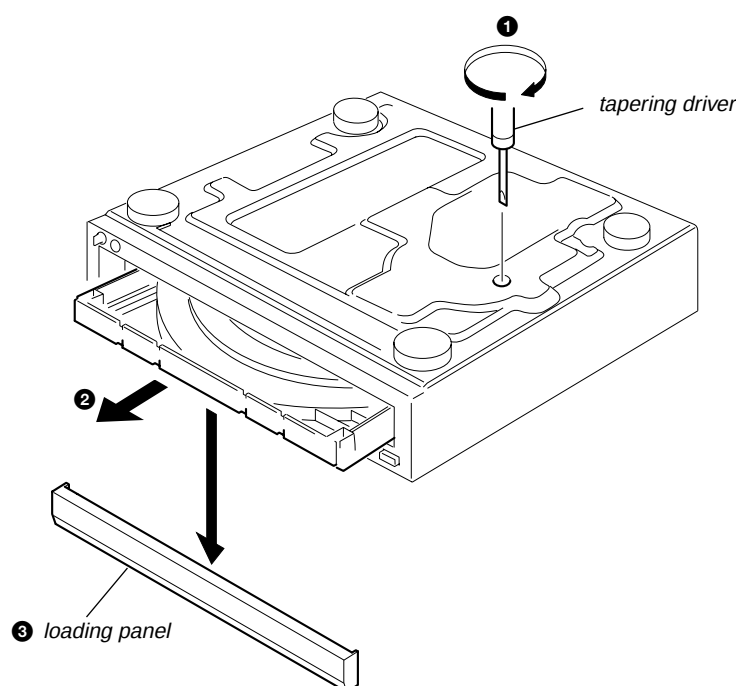


Note: Follow the disassembly procedure in the numerical order given.

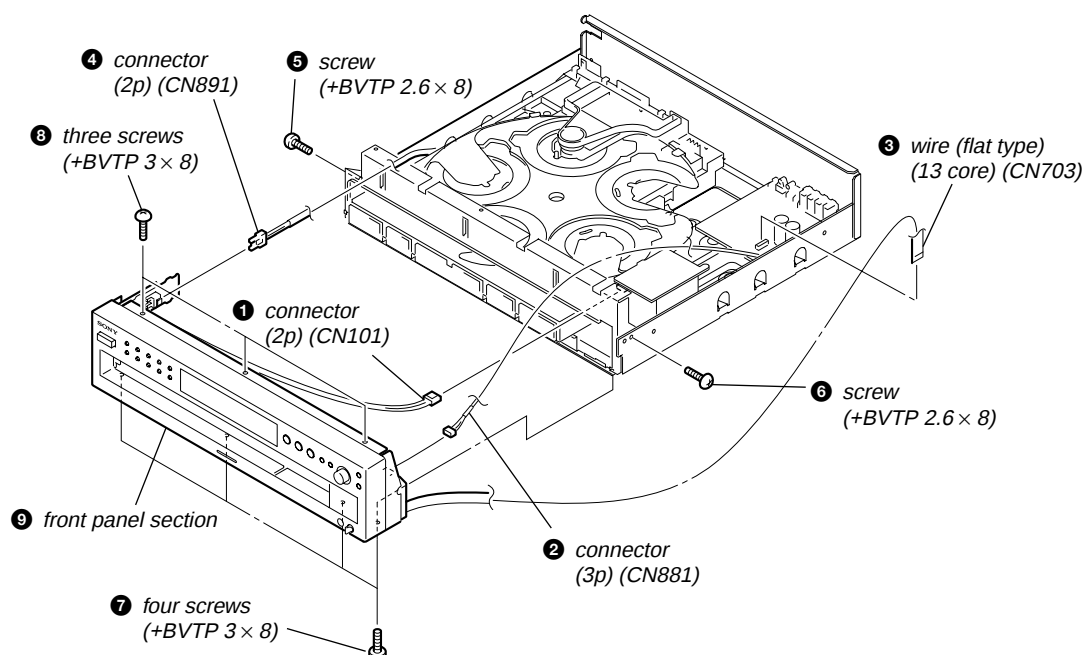
3-2. UPPER CASE



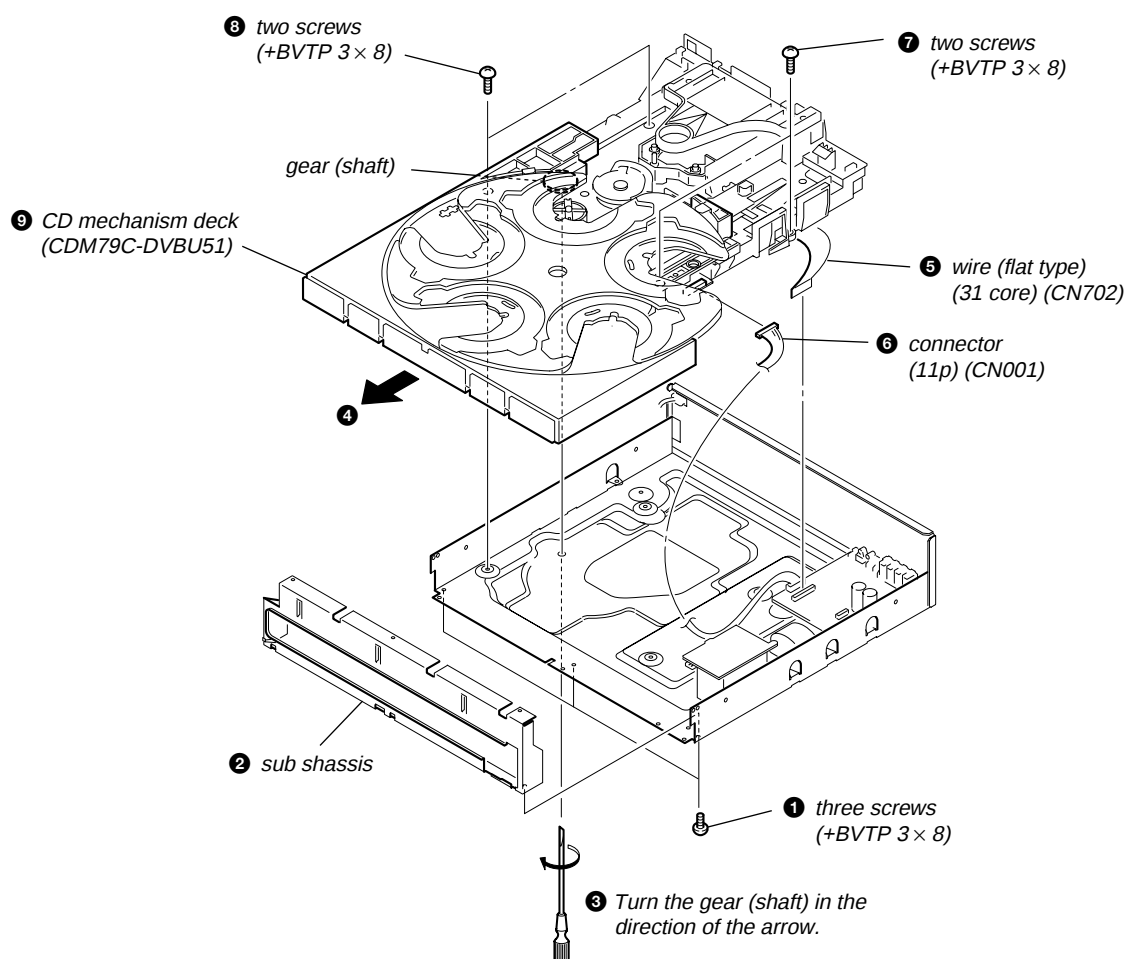
3-3. LOADING PANEL



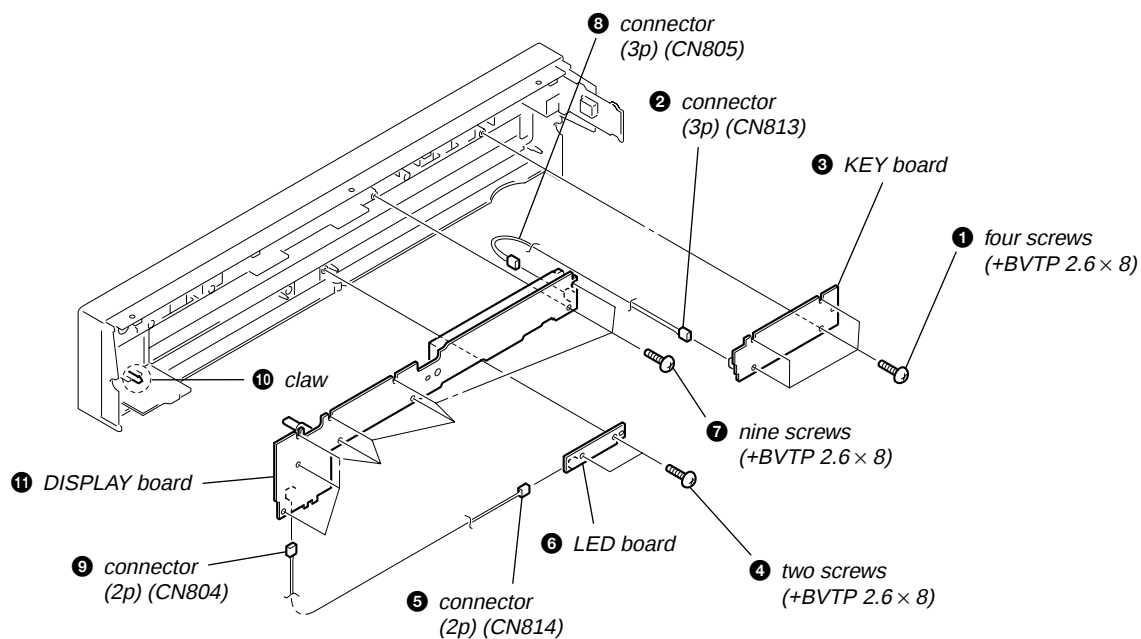
3-4. FRONT PANEL SECTION



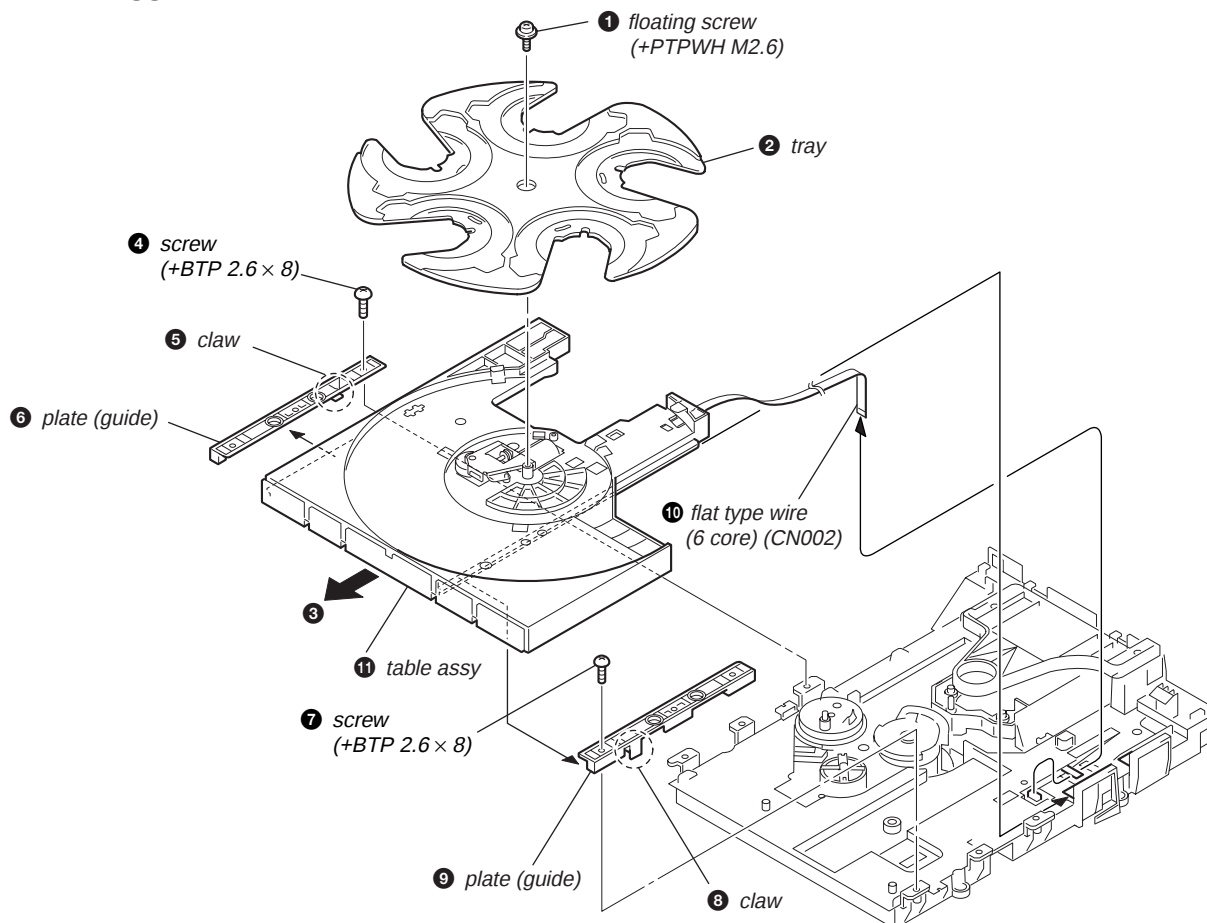
3-5. CD MECHANISM DECK (CDM79C-DVBU51)



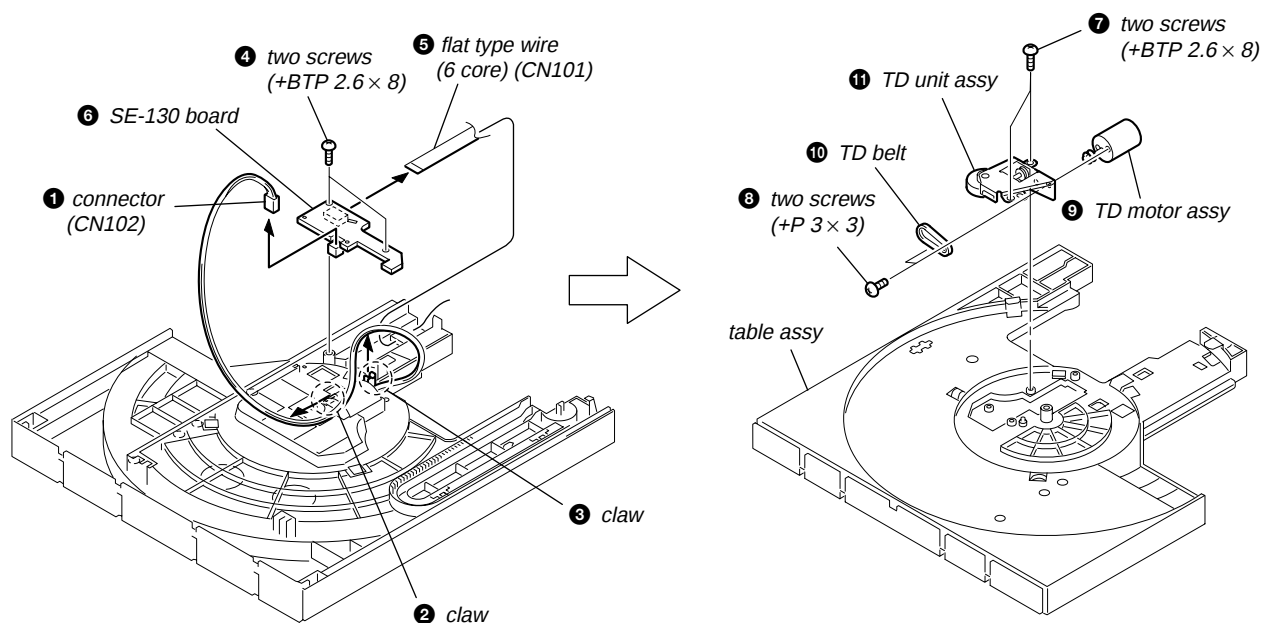
3-6. KEY BOARD, LED BOARD, DISPLAY BOARD



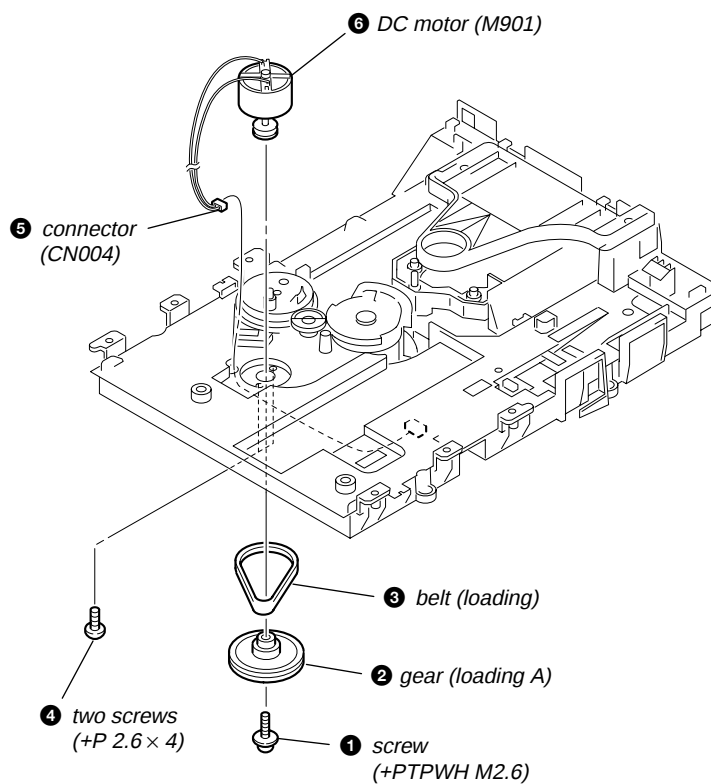
3-7. TABLE ASSY



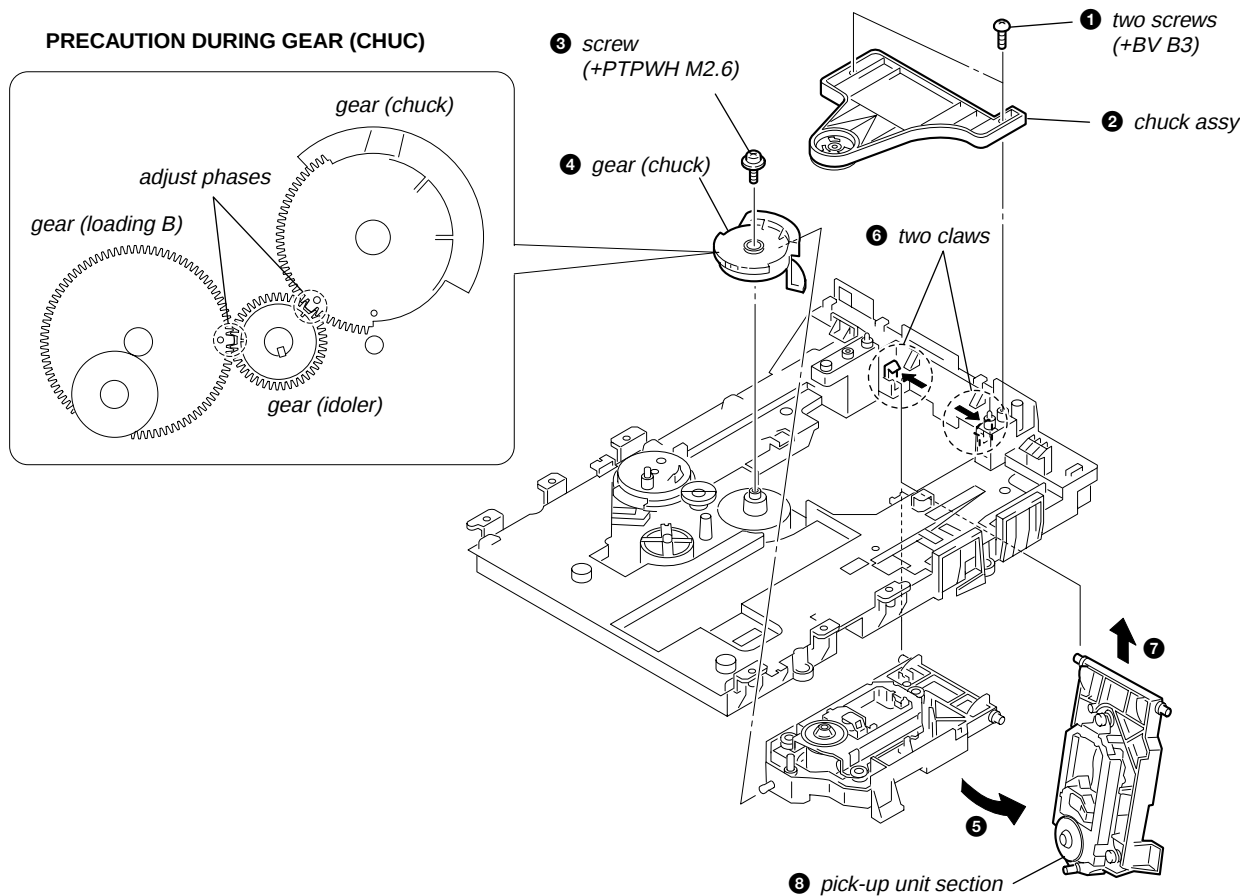
3-8. SE-130 BOARD, TD UNIT ASSY



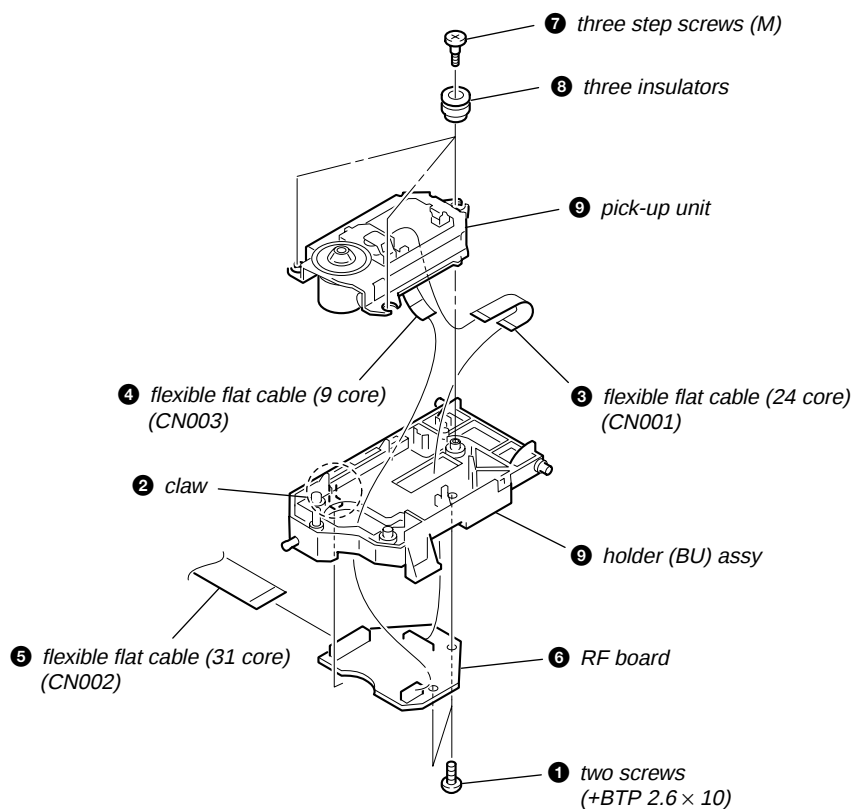
3-9. DC MOTOR (M901)



3-10. PICK-UP UNIT SECTION



3-11. RF BOARD, PICK-UP UNIT



SECTION 4
DIAGRAMS

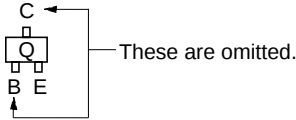
NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note on Printed Wiring Board:

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : indicates side identified with part number.
- △ : internal component.
- : Pattern from the side which enables seeing.

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

- Indication of transistor.



Note Schematic Diagrams.

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

Note:

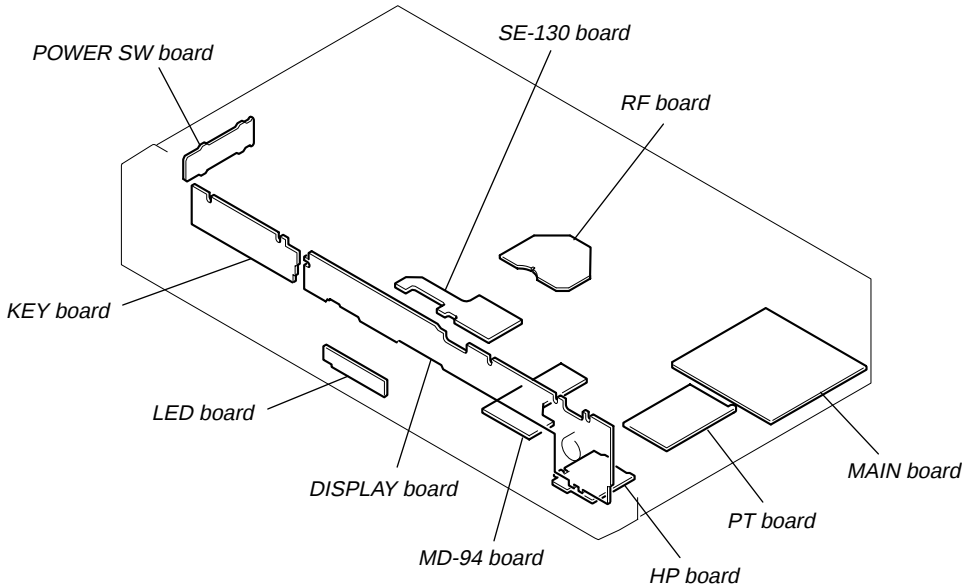
The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

Note:

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

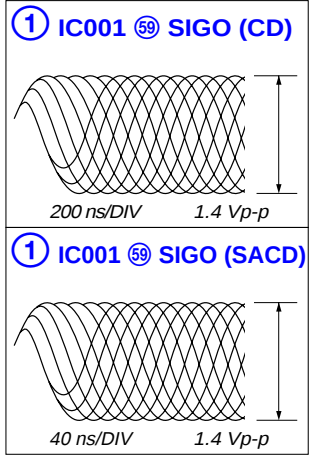
- : B+ Line.
- : B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark: SACD PLAY
() : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
⇒ : CD
⇒ : CD DIGITAL OUT (OPTICAL)

Circuit Boards Location

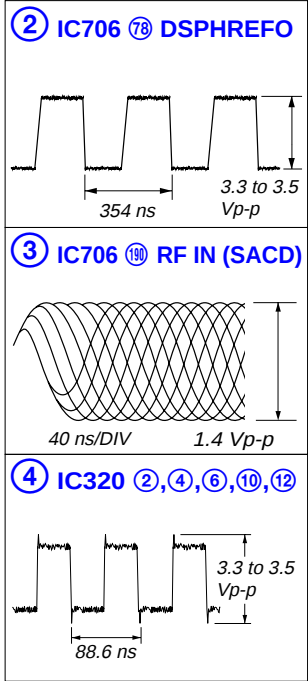


Waveforms

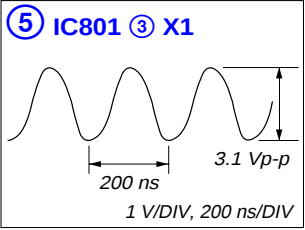
– RF Board –



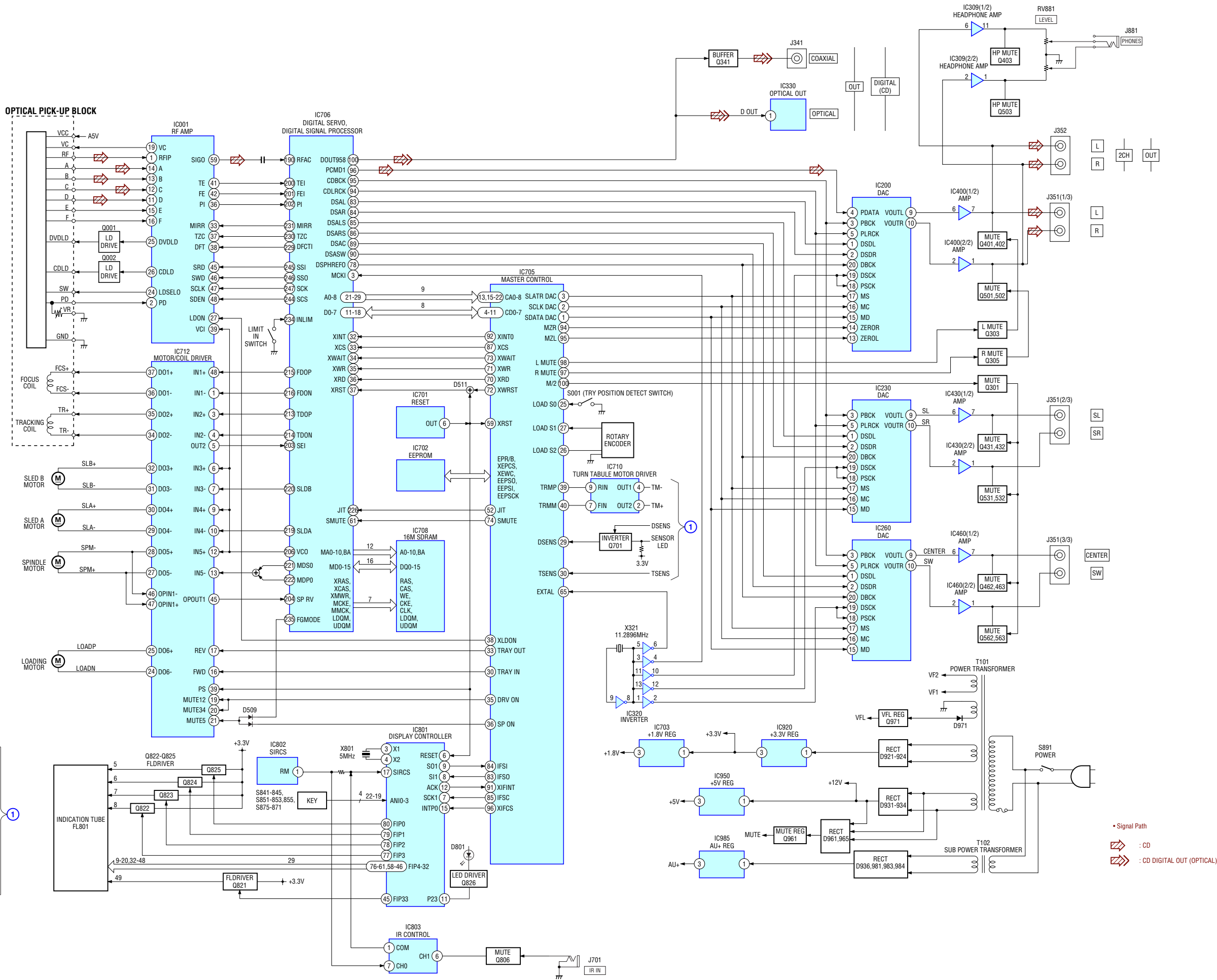
– MAIN Board –

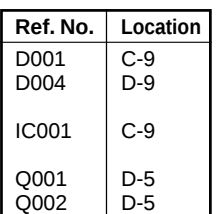


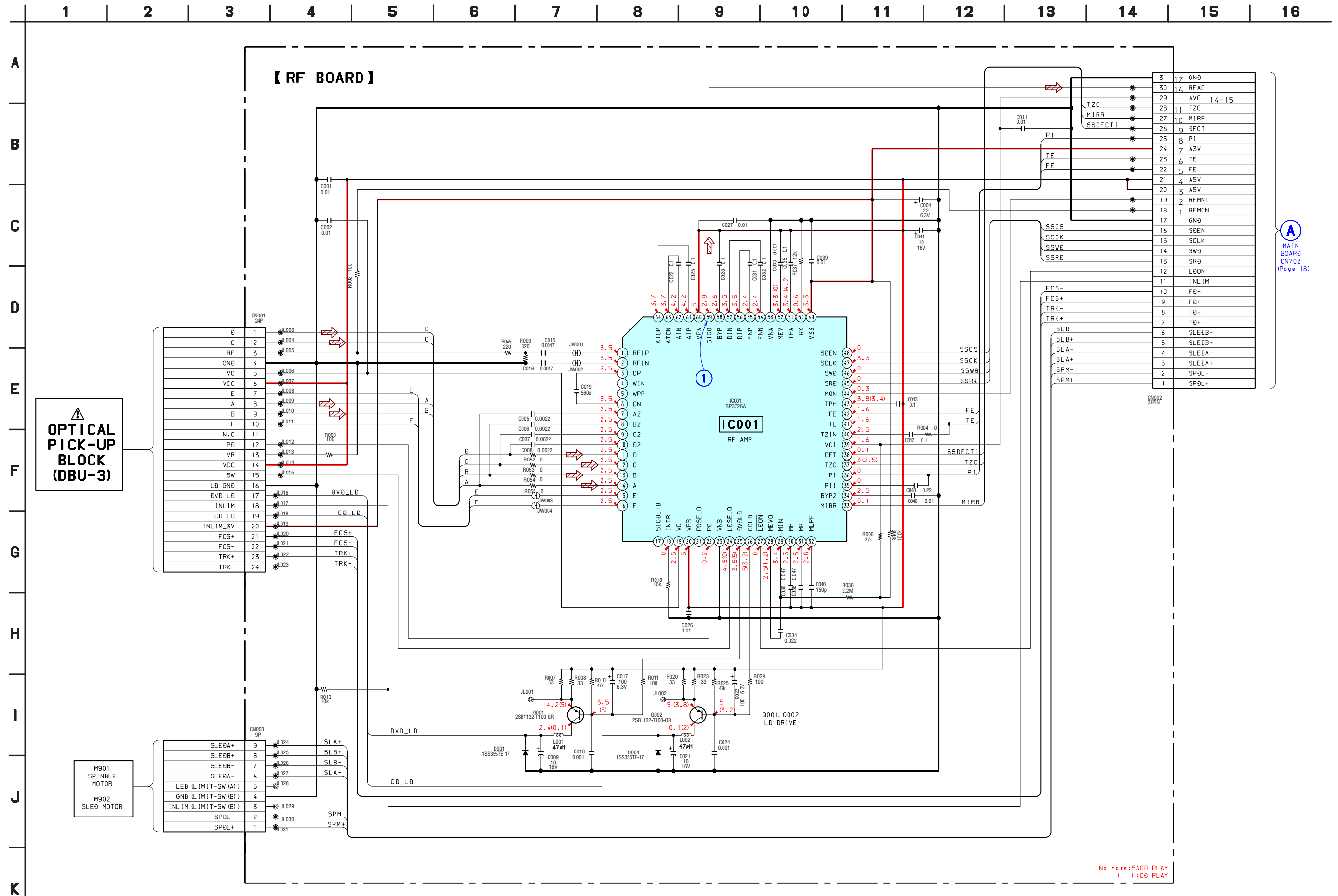
– DISPLAY Board –



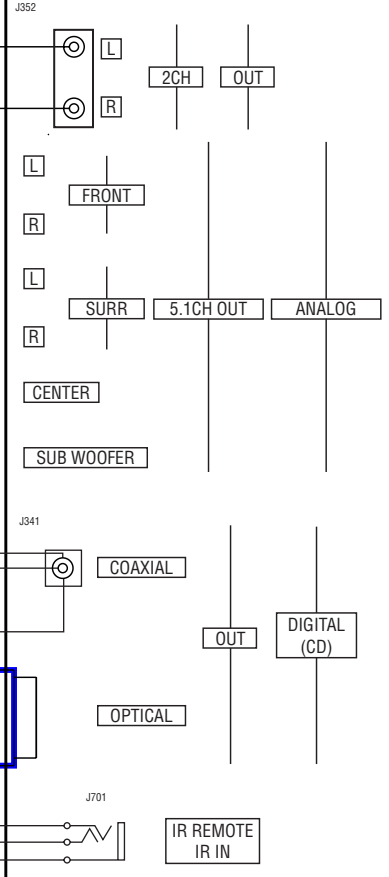
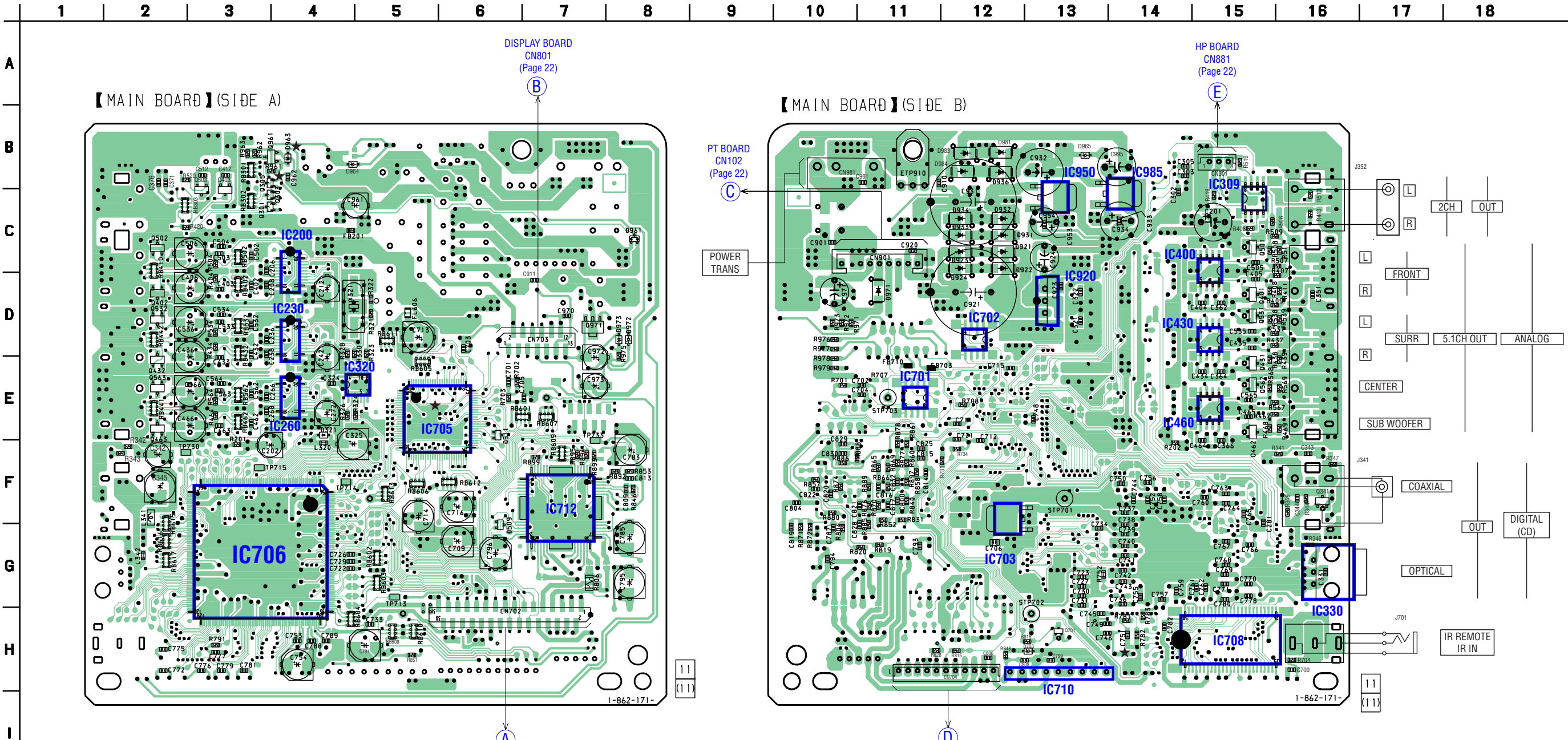
4-1. BLOCK DIAGRAM







4-4. PRINTED WIRING BOARD — MAIN SECTION — • See page 13 for Circuit Boards Location. :Uses unleaded solder.



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D321	E-4	D984	B-12	Q301	C-3
D509	G-6			Q303	C-3
D511	E-6	IC200	C-4	Q305	C-3
D703	H-13	IC230	D-4	Q341	F-16
D921	C-12	IC260	E-4	Q401	C-15
D922	C-12	IC309	B-15	Q402	D-2
D923	C-12	IC320	S-5	Q403	C-3
D924	C-12	IC330	G-16	Q431	D-15
D931	C-12	IC400	D-15	Q432	E-2
D932	C-12	IC430	D-15	Q462	E-15
D933	C-12	IC460	E-15	Q463	E-2
D934	C-12	IC701	E-11	Q501	C-15
D936	B-12	IC702	D-12	Q502	C-2
D961	C-8	IC703	F-12	Q503	C-3
D963	B-4	IC705	E-5	Q531	D-15
D964	B-5	IC706	G-3	Q532	D-2
D965	B-13	IC708	H-15	Q562	E-15
D971	D-11	IC710	H-13	Q563	E-2
D972	D-8	IC712	F-7	Q701	H-13
D973	D-8	IC920	D-13	Q961	B-3
D981	B-12	IC950	B-13	Q971	D-7
D983	B-12	IC985	B-14		

★ Attention when IC705 (MASTER CONTROL) is exchanged

This model use following three type IC for IC705 (MASTER CONTROL). Since exchange method change with type of IC, please check the original part well and replace it.

	Original Part	Repair Part
①	IC HD6432238RN51TEV	6-805-930-01 IC HD6432238RP02TEV
②	IC HD6432238RN57TEV	6-805-930-01 IC HD6432238RP02TEV
③	IC HD6432238RP02TEV	6-805-930-01 IC HD6432238RP02TEV

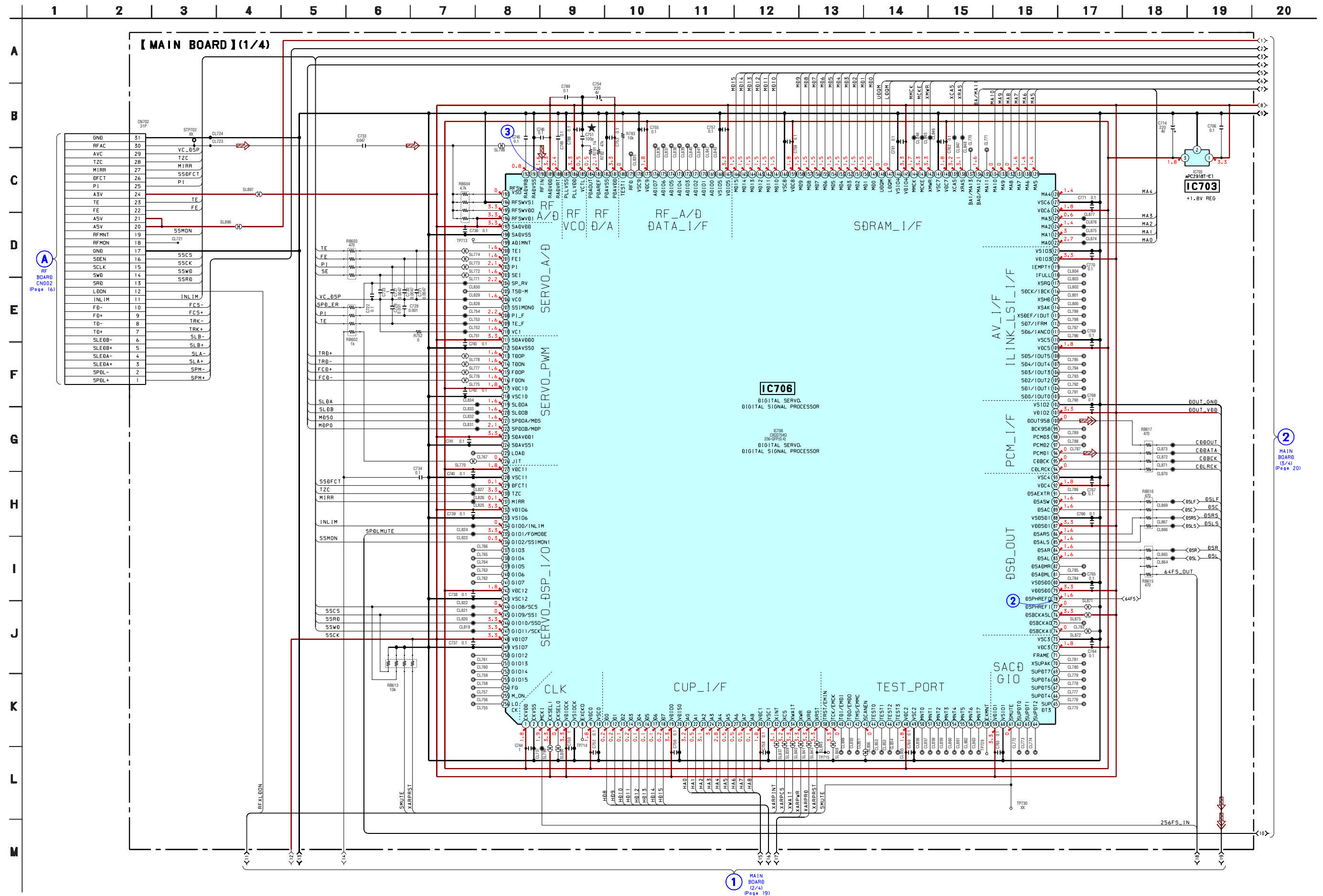
● In the case of the original part ① : Please replace following parts in conjunction with replacement of the original part ①

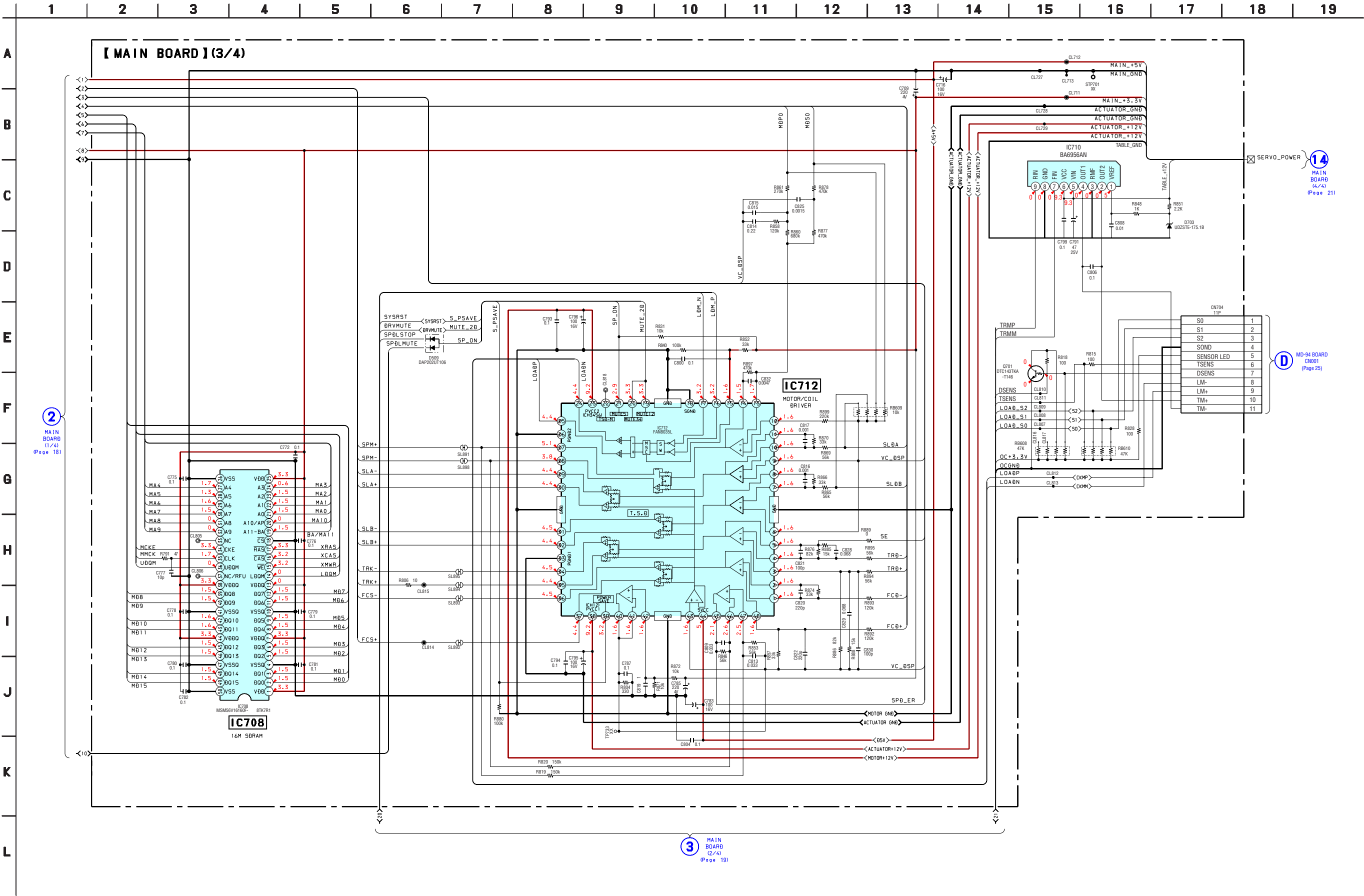
Ref.No	Original Part	Repair Part	Location
D963	6-500-696-01 DIODE UDZSTE-173.0B	6-500-697-01 DIODE UDZSTE-173.3B	B-4
R961	1-216-821-11 METAL CHIP 1k 5% 1/10W	1-216-833-11 METAL CHIP 10k 5% 1/10W	B-4

Please check that C751 is ceramic chip 100PF.

● In the case of the original part ②, ③ : Replace original parts ②, ③ into repair parts, only. At that time please check that C751 is ceramic chip 100PF.

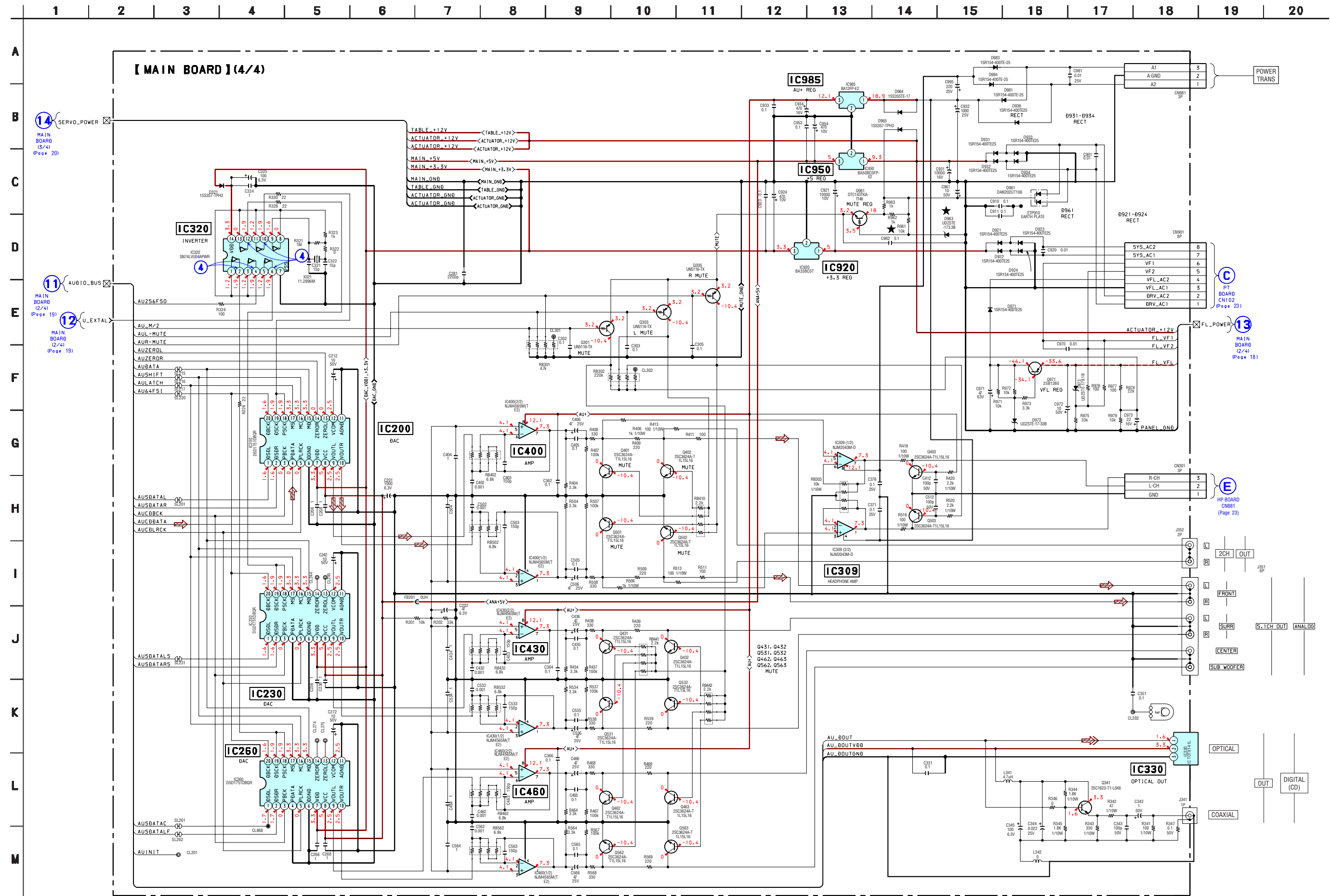
★ It is necessary for checking that C751 is ceramic chip 100PF When IC705 (MASTER CONTROL) is exchanged.
Refer to Attention when IC705 (MASTER CONTROL) exchanged (page 17).



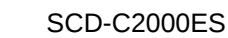


4-8. SCHEMATIC DIAGRAM — MAIN SECTION (4/4) — • See page 13 for Waveforms.

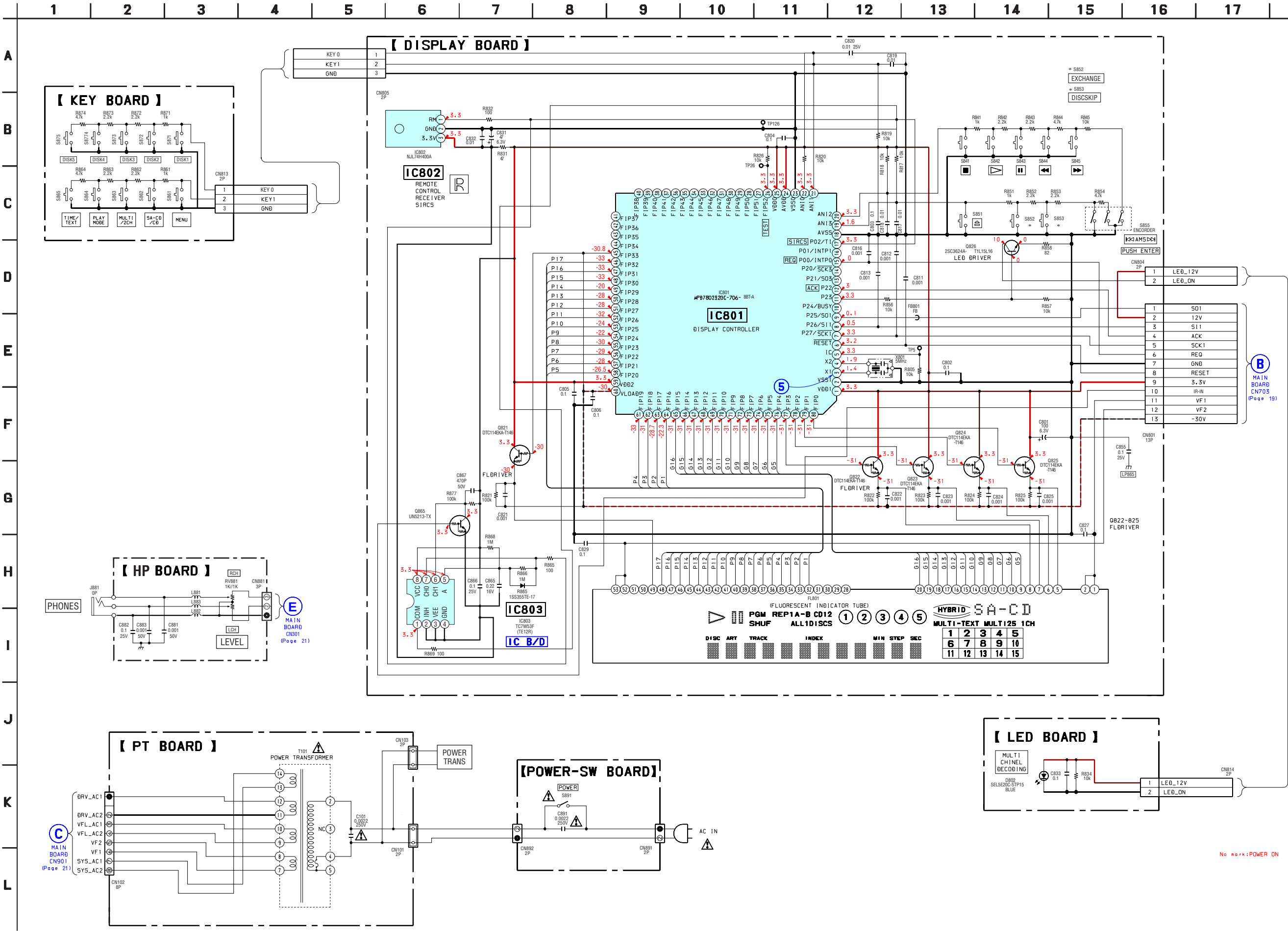
★ Replacement of D693 and R961 may be required When IC705 (MASTER CONTROL) is exchanged.
Refer to Attention when IC705 (MASTER CONTROL) is exchanged (page 17).

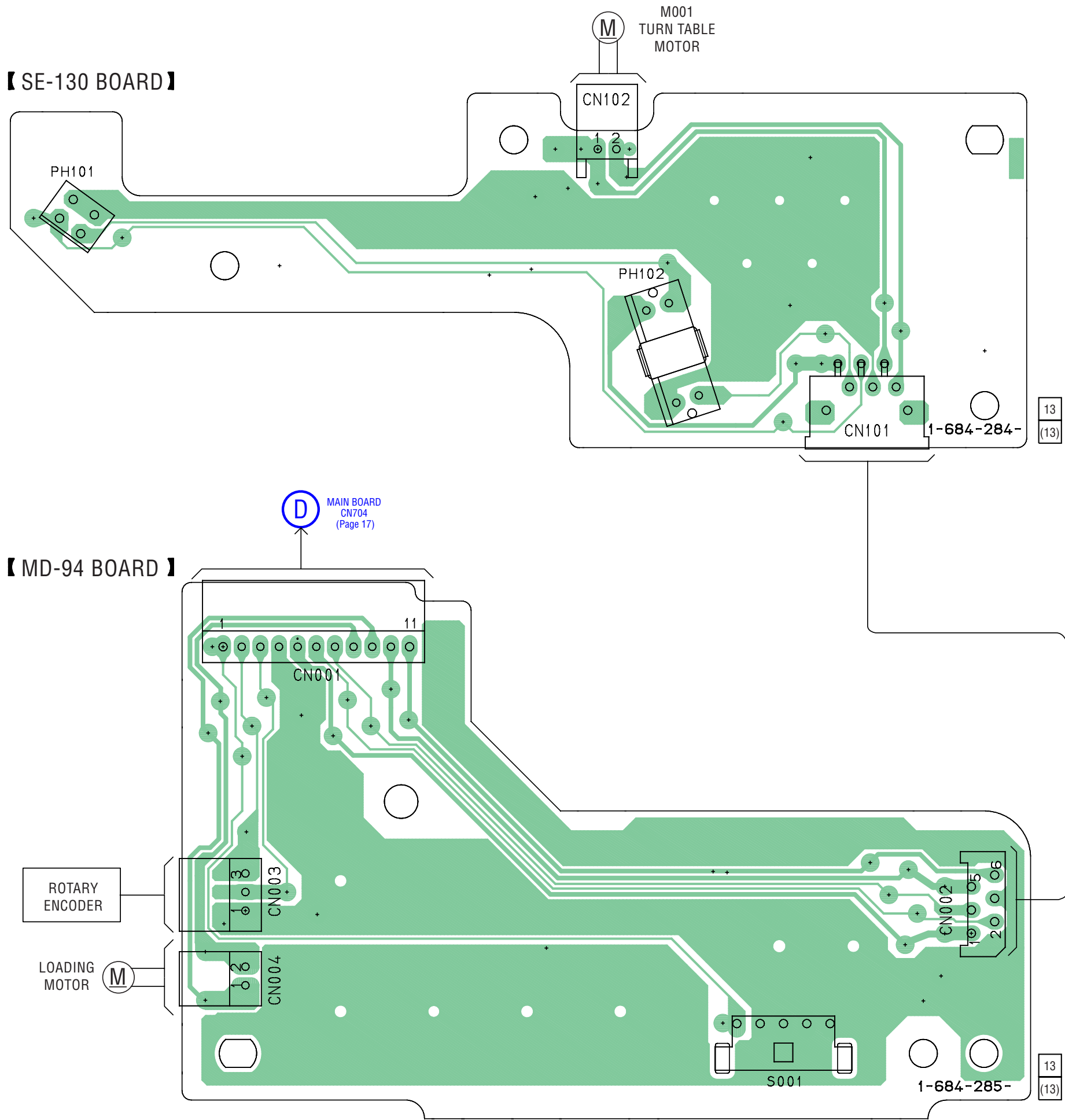


4-9. PRINTED WIRING BOARD — DISPLAY SECTION — • See page 13 for Circuit Boards Location. :Uses unleaded solder.

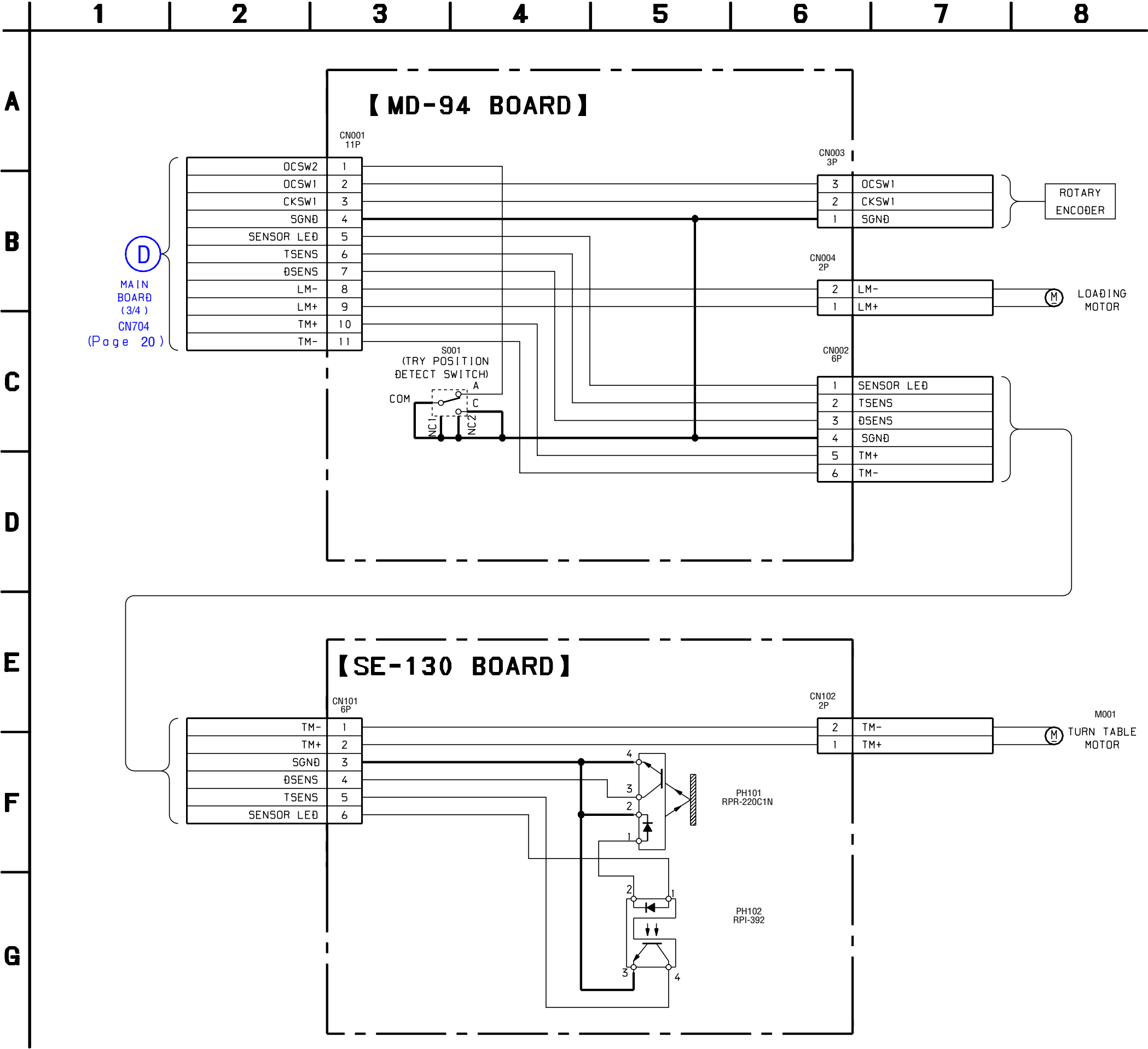


4-10. SCHEMATIC DIAGRAM — DISPLAY SECTION — • See page 26 for IC Block Diagrams. • See page 13 for Waveforms.





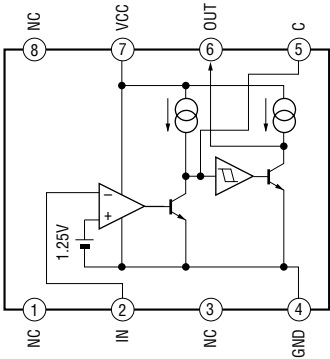
4-12. SCHEMATIC DIAGRAM — MD-94 BOARD SECTION —



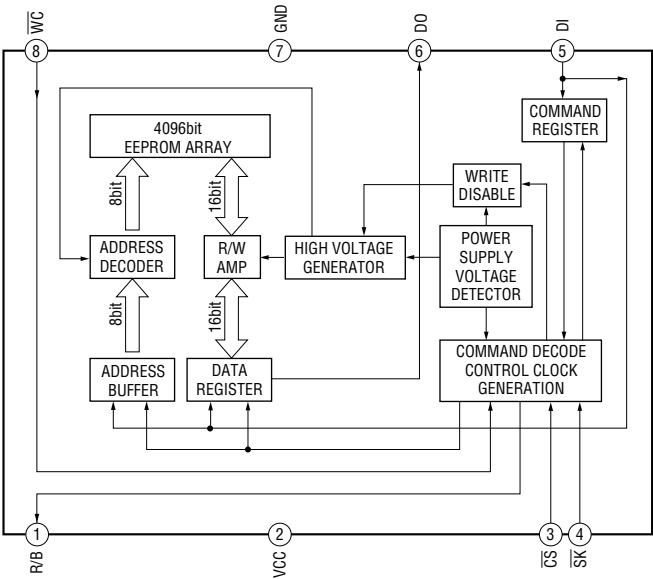
• IC Block Diagrams

– MAIN Board –

IC701 M51957BFP-600C

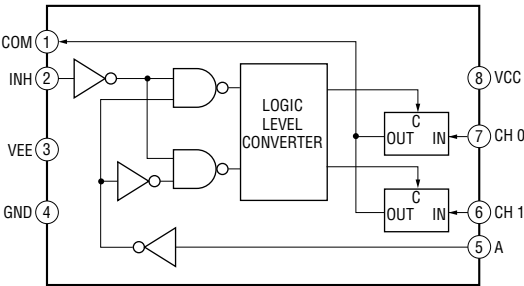


IC702 BR9040F-WF2



– DISPLAY Board –

IC803 TC7W53F (TE12R)



• IC Pin Function Description

• MAIN BOARD IC705 HD6432238RP02TEV (MASTER CONTROL)

Pin No.	Pin Name	I/O	Description
1	SDATA DAC	O	Data output to the DAC (IC200)
2	SCLK DAC	O	Clock output to the DAC (IC200)
3	SLATR DAC	O	Latch (R-ch) output to the DAC (IC200)
4 to 11	CD0 to 7	I/O	Data Bus to the Digital Servo Processor (IC706)
12	CVCC	—	Power supply terminal (+3.3V)
13	CA0	O	Address Bus to the Digital Servo Processor (IC706)
14	VSS	—	Ground terminal
15 to 22	CA1 to 8	O	Address Bus to the Digital Servo Processor (IC706)
23	PB1	—	Not used (open)
24	PB2	—	Not used (open)
25	LOAD S0	I	DISK cyacking select (S0)
26	LOAD S1	I	TRAY (S2:OPEN)
27	LOAD S2	I	TRAY (S1:TURN)
28	TSENS	I	T sens signal input
29	DSENS	I	DISK sens signal input
30	TRAY IN	O	TRAY in control output to the Motor Driver (IC712)
31	RS232CTX	O	PC serial signal
32	RS232CRX	I	PC serial signal
33	TRAY OUT	O	TRAY out control output to the Motor Driver (IC712)
34	P10	—	Not used (open)
35	DRV ON	O	Driver mute output to the Motor Driver (IC712)
36	SP ON	O	Spindle mute output to the Motor Driver (IC712)
37	P13	—	Not used (open)
38	XLDON	O	LD ON/OFF output to the Motor Driver (IC712)
39	TRMP	O	Table control (+Clockwise) output to the TMD (IC710)
40	TRMM	O	Table control (-Counterclock) output to the TMD (IC710)
41	P17	—	Not used (open)
42	AVSS	—	Ground terminal
43	DIAO	I	Test Mode input
44	P96	—	Ground terminal
45 to 50	P47 to P42	—	Ground terminal
51	MODEL	I	Model check (L:1Hi,Mi:5Es,H:5 Hi)
52	JIT	I	Waltz jetter select
53	VREF	I	Reference voltage
54	AVCC	—	Power supply terminal (+3.3V)
55	MD0	I	Moving mode control 0
56	MD1	I	Moving mode control 1
57	OSC2	—	Not used (open)
58	OSC1	—	Ground terminal
59	XRST	O	System reset
60	XNMI	I	NMI input (fixed at "H")
61	XSTBY	I	Standby input (fixed at "H")
62	VCC	—	Power supply terminal (+3.3V)
63	XTAL	—	Not used (open)
64	VSS1	—	Ground terminal
65	EXTAL	I	External clock input

Pin No.	Pin Name	I/O	Description
66	FEW	I	Flash writing Enable
67	MD2	I	Moving mode control 2
68	PF7	—	Not used (open)
69	AS	—	Not used (open)
70	XDR	O	Reed cycle signal
71	XWR	O	Write cycle signal
72	XWRST	O	Waltz reset signal output
73	XWAIT	I	Bus cycle wait signal input
74	SMUTE	O	Waltz smute signal output
75	EPR/B	I	Read/Busy signal input from the EEPROM (IC702)
76	XEPCE	O	XCS signal output to the EEPROM (IC702)
77	XEWC	O	XWC signal output to the EEPROM (IC702)
78	P32	O	Not used (open)
79	EEPS0	O	Communication signal to the EEPROM (IC702)
80	EEPS1	I	Communication signal from the EEPROM (IC702)
81	EEPSC	O	Communication signal to the EEPROM (IC702)
82	P36	—	Not used (open)
83	IFS0	O	Communication signal to the IS CON (IC801)
84	IFS1	I	Communication signal from the IS CON (IC801)
85	IFSCK	O	Communication signal to the IS CON (IC801)
86	P74	—	Not used (open)
87	XCS	O	WALTZ chip select
88	P72	—	Not used (open)
89	P71	—	Not used (open)
90	P70	—	Not used (open)
91	XIFINT	I	ACK input signal from the IS CON (IC801)
92	XINTO	I	WALTZ input from the Digital Servo Processor (IC706)
93	PG2	—	Ground terminal
94	MZR	I	ZEROR input signal from DAC (IC200)
95	MZL	I	ZEROL input signal from DAC (IC200)
96	XIFCS	O	Chip select to the IS CON (IC801)
97	R MUTE	O	Rch mute signal output
98	L MUTE	O	Lch mute signal output
99	INIT DAC	O	DAC int output
100	M/2	O	Mch mute control output (surr/Cntr/Sw)

SECTION 5

TEST MODE

1. Setting Method of Test Mode

Press three buttons , **PUSH ENTER** and **POWER** simultaneously. The test mode becomes active. Then all segments of the fluorescent indicator tube are turned on.

2. FL Tube Grid, Segments Check

Procedure:

1. Grid of all segments lights up sequentially starting from 1G to 16G.
2. The vertical line (total 5 lines) of all grids lights up sequentially in the range of 5G to 16 G starting from the left.
3. The horizontal line of (total 7 lines) of all grids lights up sequentially in the range of 5G to 16G starting from the top.

3. Sircs Receive Check

Procedure:

1. The message "SIRCS CHECK" is displayed on the fluorescent indicator tube.
2. With the machine in the status that is set in step 2, press any on the remote commander. The machine enters the key check standby state. (When the  key or the  key is pressed, the reception check is canceled.)

4. Key Check

Procedure:

1. In the key check mode, the fluorescent indicator displays "KEY CHECK**". Each time a button is pressed, "***" value. However, once a button is pressed, it is no longer taken into account.
2. To exit from this mode, the message "JOG CHECK" is displayed.

5. Jog Check

Procedure:

1. 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.

6. Releasing Method of Test Mode

1. After all the checks are completed, confirm to see that the display "TEST-END" appears. The message indicates that the check is ended normally.
2. Press the **POWER** button to turn off the main power and disconnect the power plug from the wall outlet.

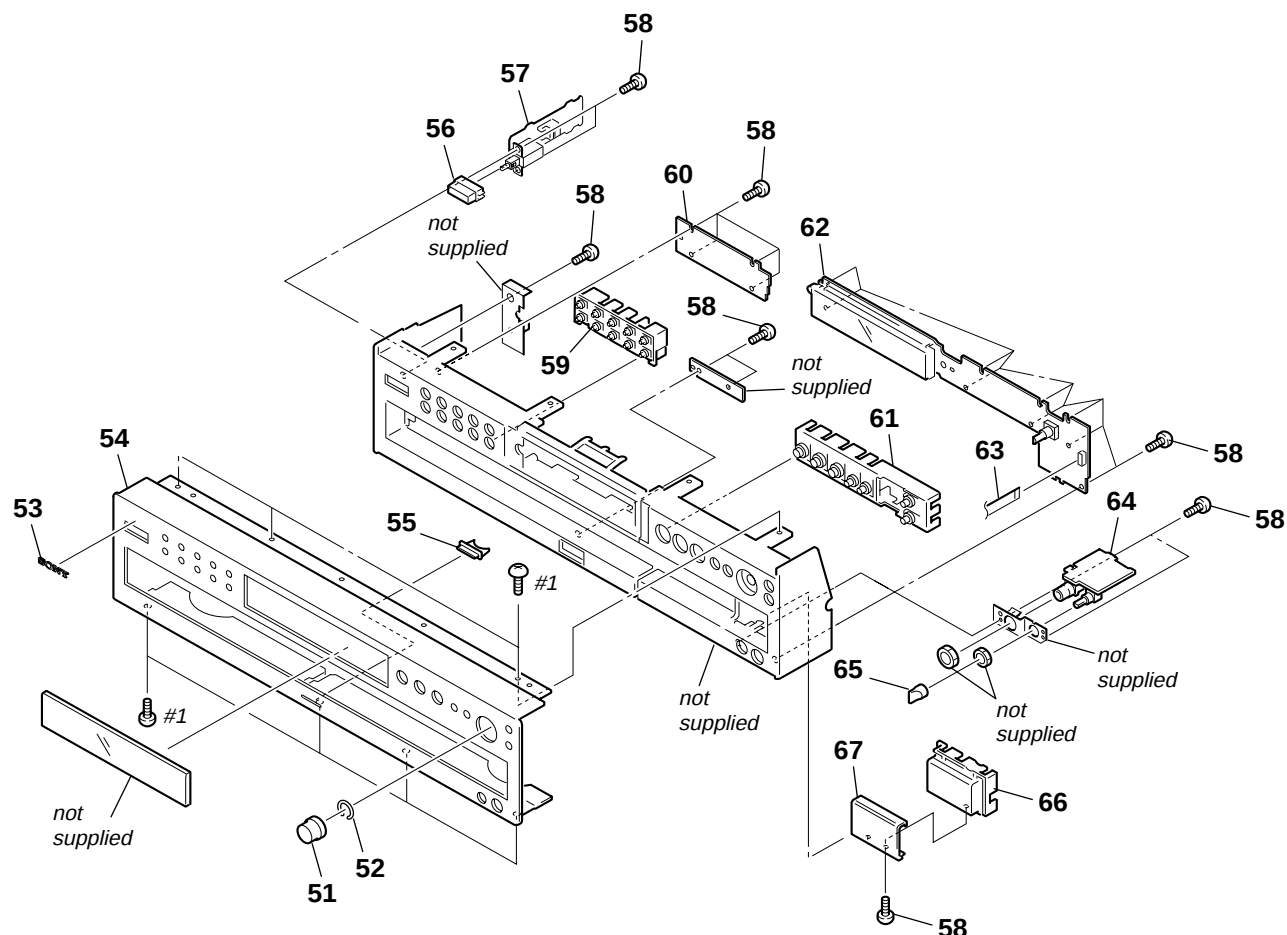
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
CND : Canadian model

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

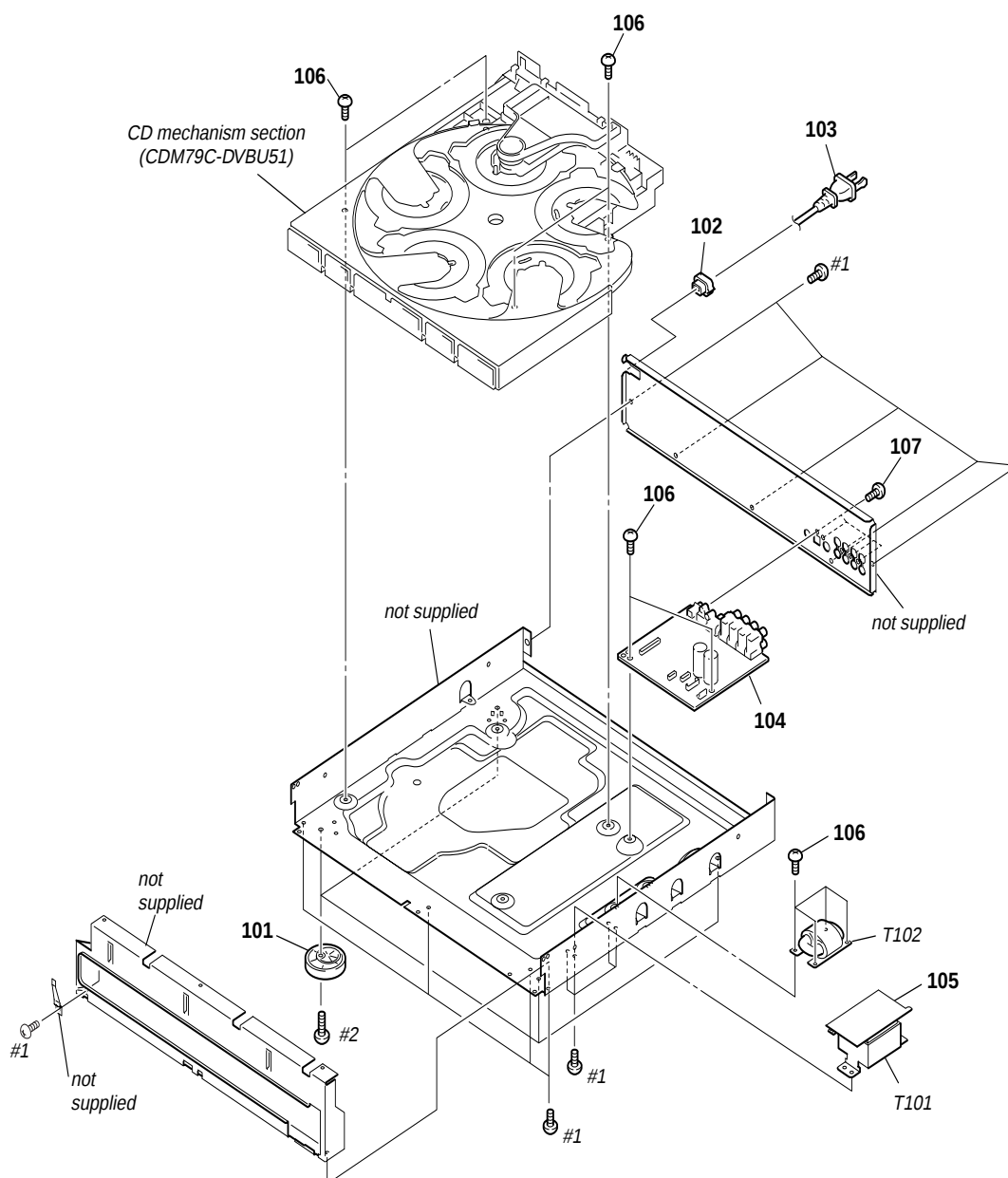
29

6-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-232-622-01	KNOB (AMS) (BLACK)		60	1-862-173-11	KEY BOARD	
51	4-232-622-31	KNOB (AMS) (SILVER)		61	4-255-255-11	BUTTON (FUNCTION) (SILVER)	
52	3-354-981-11	SPRING (SUS), RING		61	4-255-255-21	BUTTON (FUNCTION) (BLACK)	
53	4-942-568-41	EMBLEM (NO.5), SONY (BLACK)		62	A-4752-658-A	DISPLAY BOARD, COMPLETE	
53	4-942-568-61	EMBLEM (NO.5), SONY (SILVER)		63	1-828-334-11	WIRE (FLAT TYPE) (13 CORE)	
54	4-255-310-01	PANEL, FRONT (SILVER)		64	1-862-177-11	HEADPHONE BOARD	
54	4-255-310-11	PANEL, FRONT (BLACK)		65	3-931-378-31	KNOB (F10) (SILVER)	
55	4-255-316-01	INDICATOR (ES)		65	3-931-378-51	KNOB (F10) (BLACK)	
56	4-255-301-01	BUTTON (POWER) (SILVER)		66	4-255-313-01	BUTTON (OPEN CLOSE) (SILVER)	
56	4-255-301-11	BUTTON (POWER) (BLACK)		66	4-255-313-11	BUTTON (OPEN CLOSE) (BLACK)	
57	1-862-176-11	POWER SWITCH BOARD		67	4-255-317-01	PANEL, OPEN CLOSE (SILVER)	
58	3-087-053-01	+BVTP2.6 (3CR) (BLACK)		67	4-255-317-11	PANEL (OPEN, CLOSE) (BLACK)	
58	3-087-053-01	+BVTP2.6 (3CR) (SILVER)		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
59	4-255-254-02	BUTTON (DISC KEY) (BLACK)					
59	4-255-254-11	BUTTON (DISC KEY) (SILVER)					

6-3. CHASSIS SECTION



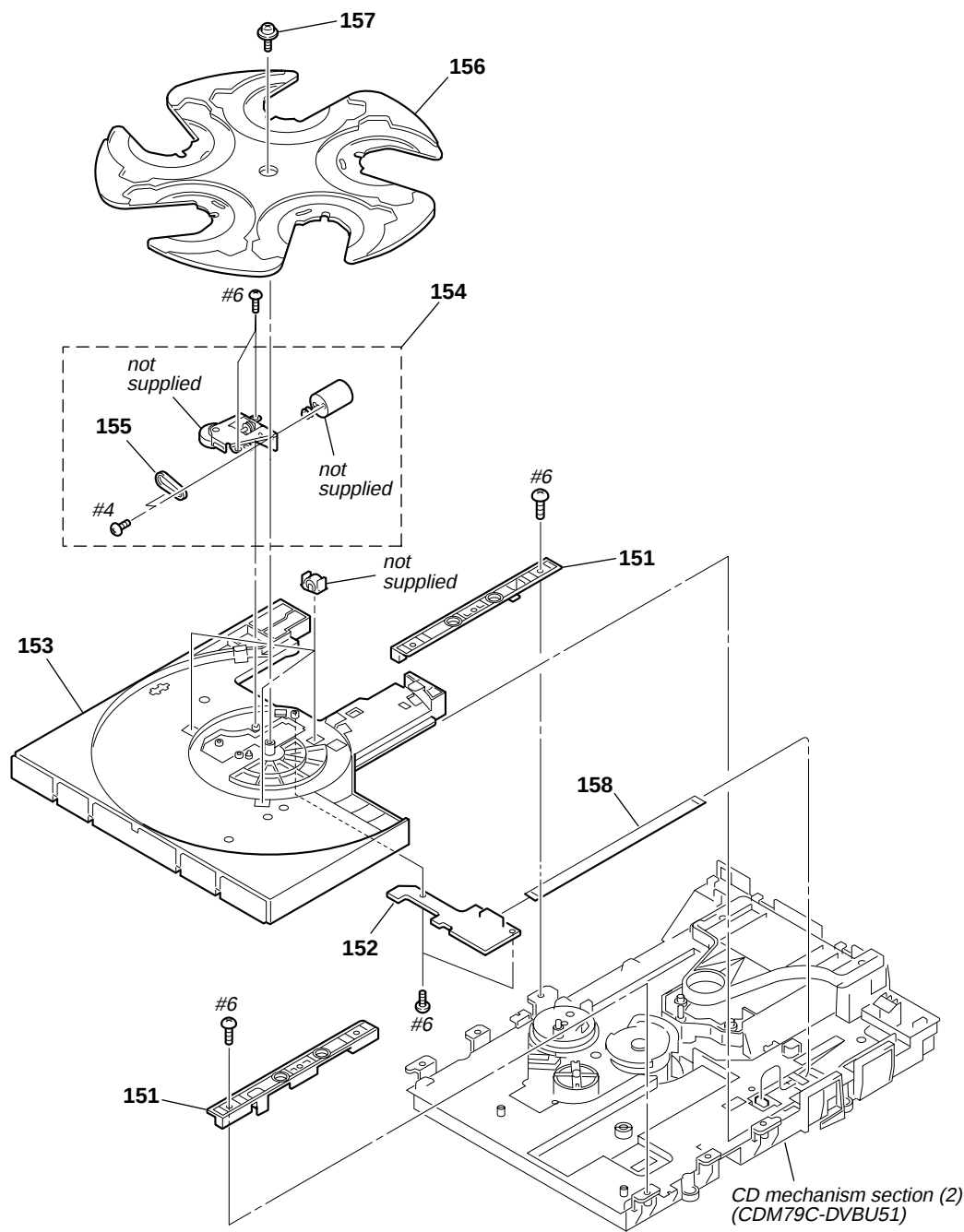
Ref. No.	Part No.	Description	Remark
101	X-4955-348-1	FOOT ASSY	
* 102	3-703-244-00	BUSHING (2104), CORD	
△ 103	1-783-532-32	CORD, POWER	
104	A-4752-592-A	MAIN (A) BOARD, COMPLETE	
105	1-862-175-11	PT BOARD	
106	3-077-331-01	+BV3 (3-CR)	

Ref. No.	Part No.	Description	Remark
107	3-704-515-22	SCREW (BV/RING)	
△ T101	1-431-174-22	TRANSFORMER, POWER	
△ T102	1-443-286-11	TRANSFORMER, POWER	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-885-09	SCREW +BVTT 4X16 (S)	

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

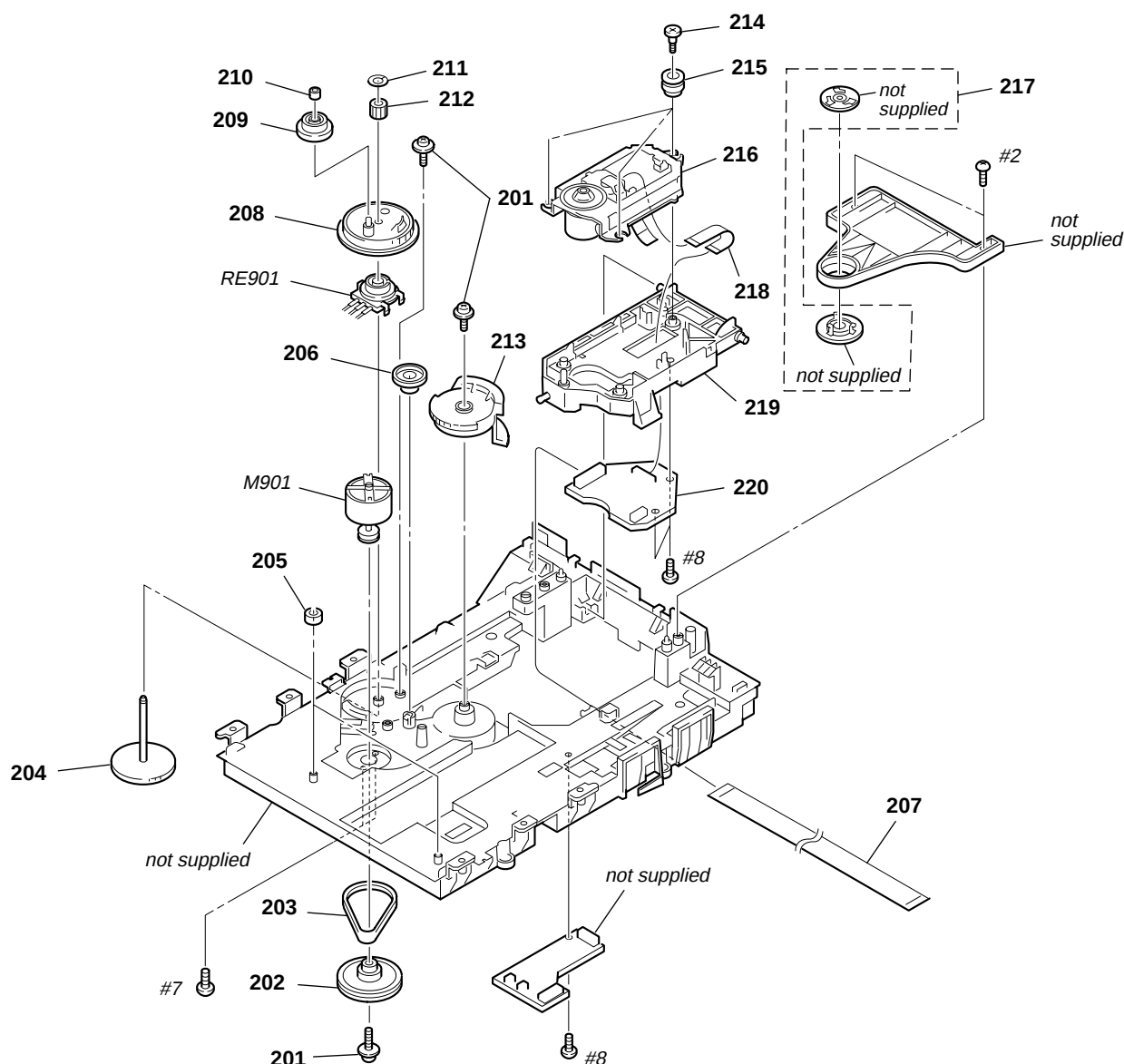
Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-4. CD MECHANISM SECTION (1)
(CDM79C-DVBU51)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	3-074-737-01	PLATE (GUIDE)		156	3-074-717-01	TRAY	
152	A-6060-642-A	SE-130 MOUNT		157	4-218-252-52	SCREW (+PTPWH M2.6), FLOATING	
153	3-074-716-01	TABLE		158	1-823-921-11	FMS-18	
154	A-6060-640-A	UNIT ASSY, TD		#4	7-682-544-04	+B 3X3	
155	3-074-725-01	BELT, TD		#6	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	

6-5. CD MECHANISM SECTION (2) (CDM79C-DVBU51)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
202	3-074-744-01	GEAR (LOADING A)		214	4-981-923-01	SCREW (M), STEP	
203	3-074-745-01	BELT (LOADING)		215	3-053-847-31	INSULATOR	
204	3-074-742-01	GEAR (SHAFT)		△ 216	A-1067-676-A	OPTICAL PICK-UP SERVICE ASSY(DBU-3)	
205	4-951-619-01	CUSHION (A)		217	A-4736-882-A	CHUCK ASSY	
206	3-074-735-01	GEAR (IDOLER)		218	1-824-106-51	CABLE, FLEXIBLE FLAT (0.5mmPITCH)	
207	1-829-172-11	WIRE (FLAT TYPE) (31 CORE)		219	X-4955-252-3	HOLDER (BU) ASSY	
208	3-074-741-01	GEAR (LOADING B)		220	A-4750-527-A	RF BOARD, COMPLETE	
209	3-074-738-01	GEAR (SWING)		#2	7-685-535-19	SCREW +BTP 2.6X10 TYPE2 N-S	
210	3-074-739-01	COLLAR (SWING)		#7	7-621-259-25	SCREW +P 2.6X4	
211	3-016-533-11	WASHER (FR), STOPPER		#8	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
212	3-074-740-01	GEAR (LOADING C)		M901	1-541-632-12	MOTOR, DC (SPINDLE)	
213	3-074-736-01	GEAR (CHUCK)		RE901	1-418-746-11	ENCODER, ROTARY	

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.

SECTION 7 ELECTRICAL PARTS LIST

DISPLAY

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- 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. .
- Abbreviation
CND : Canadian model

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.

- Accessories are given in the last of this parts list.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	A-4752-658-A	DISPLAY BOARD, COMPLETE *****				< FILTER >	
	4-949-935-41	CUSHION (FL)		FL801	1-518-992-11	INDICATOR TUBE, FLUORESCENT	
		< CAPACITOR >				< IC >	
C801	1-124-584-00	ELECT	100uF 20%	IC801	6-804-318-01	IC uPD780232GC-706-8BT-A	
C802	1-164-156-11	CERAMIC CHIP	0.1uF 25V	IC802	8-759-826-34	IC NJL74H400A (R)	
C803	1-164-156-11	CERAMIC CHIP	0.1uF 25V	IC803	6-700-587-01	IC TC7W53F (TE12R)	
C804	1-164-156-11	CERAMIC CHIP	0.1uF 25V			< TRANSISTOR >	
C805	1-164-156-11	CERAMIC CHIP	0.1uF 25V	Q821	8-729-027-43	TRANSISTOR DTC114EKA-T146	
C806	1-165-319-11	CERAMIC CHIP	0.1uF 50V	Q822	8-729-027-43	TRANSISTOR DTC114EKA-T146	
C811	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	Q823	8-729-027-43	TRANSISTOR DTC114EKA-T146	
C812	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	Q824	8-729-027-43	TRANSISTOR DTC114EKA-T146	
C813	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	Q825	8-729-027-43	TRANSISTOR DTC114EKA-T146	
C816	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	Q826	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16	
C817	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	Q865	8-729-402-42	TRANSISTOR UN5213-TX	
C818	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V			< RESISTOR >	
C819	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	R805	1-216-833-11	METAL CHIP 10K 5% 1/10W	
C820	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	R817	1-216-833-11	METAL CHIP 10K 5% 1/10W	
C821	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	R818	1-216-833-11	METAL CHIP 10K 5% 1/10W	
C822	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	R819	1-216-833-11	METAL CHIP 10K 5% 1/10W	
C823	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	R820	1-216-833-11	METAL CHIP 10K 5% 1/10W	
C824	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	R821	1-216-845-11	METAL CHIP 100K 5% 1/10W	
C825	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	R822	1-216-845-11	METAL CHIP 100K 5% 1/10W	
C827	1-165-319-11	CERAMIC CHIP	0.1uF 50V	R823	1-216-845-11	METAL CHIP 100K 5% 1/10W	
C829	1-165-319-11	CERAMIC CHIP	0.1uF 50V	R824	1-216-845-11	METAL CHIP 100K 5% 1/10W	
C831	1-124-589-11	ELECT	47uF 20% 6.3V	R825	1-216-845-11	METAL CHIP 100K 5% 1/10W	
C832	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	R826	1-216-833-11	METAL CHIP 10K 5% 1/10W	
C855	1-164-156-11	CERAMIC CHIP	0.1uF 25V	R831	1-216-805-11	METAL CHIP 47 5% 1/10W	
C865	1-127-715-91	CERAMIC CHIP	0.22uF 10% 16V	R841	1-216-821-11	METAL CHIP 1K 5% 1/10W	
C866	1-164-156-11	CERAMIC CHIP	0.1uF 25V	R842	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
C867	1-162-962-11	CERAMIC CHIP	470PF 10% 50V	R843	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
		< CONNECTOR >		R844	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
CN801	1-779-281-11	CONNECTOR, FFC (LIF (NON-ZIF)) 13P		R845	1-216-833-11	METAL CHIP 10K 5% 1/10W	
CN804	1-506-481-11	PIN, CONNECTOR 2P		R851	1-216-821-11	METAL CHIP 1K 5% 1/10W	
CN805	1-506-468-11	PIN, CONNECTOR 3P		R852	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
		< DIODE >		R853	1-216-825-11	METAL CHIP 2.2K 5% 1/10W	
D865	8-719-988-61	DIODE 1SS355TE-17		R854	1-216-829-11	METAL CHIP 4.7K 5% 1/10W	
		< FERRITE BEAD >		R856	1-216-833-11	METAL CHIP 10K 5% 1/10W	
FB801	1-414-595-11	INDUCTOR, FERRITE BEAD		R857	1-216-833-11	METAL CHIP 10K 5% 1/10W	
				R858	1-216-808-11	METAL CHIP 82 5% 1/10W	
				R865	1-216-809-11	METAL CHIP 100 5% 1/10W	

DISPLAY

HP

KEY

LED

MAIN

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
R866	1-216-857-11	METAL CHIP	1M	5%	1/10W	R874	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R868	1-216-857-11	METAL CHIP	1M	5%	1/10W			< SWITCH >			
R869	1-216-809-11	METAL CHIP	100	5%	1/10W						
R877	1-216-845-11	METAL CHIP	100K	5%	1/10W	S861	1-762-875-21	SWITCH, KEYBOARD (MENU)			
		< SWITCH >				S862	1-762-875-21	SWITCH, KEYBOARD (SA-CD/CD)			
S841	1-762-875-21	SWITCH, KEYBOARD (■)				S863	1-762-875-21	SWITCH, KEYBOARD (MULTI/2CH)			
S842	1-762-875-21	SWITCH, KEYBOARD (▷)				S864	1-762-875-21	SWITCH, KEYBOARD (PLAY MODE)			
S843	1-762-875-21	SWITCH, KEYBOARD (■)				S865	1-762-875-21	SWITCH, KEYBOARD (TIME/TEXT)			
S844	1-762-875-21	SWITCH, KEYBOARD (◀◀)									
S845	1-762-875-21	SWITCH, KEYBOARD (▶▶)				S871	1-762-875-21	SWITCH, KEYBOARD (DISC 1)			
S851	1-762-875-21	SWITCH, KEYBOARD (△)				S872	1-762-875-21	SWITCH, KEYBOARD (DISC 2)			
S852	1-762-875-21	SWITCH, KEYBOARD (EX-CHANGE)				S873	1-762-875-21	SWITCH, KEYBOARD (DISC 3)			
S853	1-762-875-21	SWITCH, KEYBOARD (DISC SKIP)				S874	1-762-875-21	SWITCH, KEYBOARD (DISC 4)			
S855	1-478-268-11	ENCODER, ROTARY (◀◀ AMS ▶▶)				S875	1-762-875-21	SWITCH, KEYBOARD (DISC 5)			
		(PUSH ENTER)						*****			
		< VIBRATOR >						LED BOARD			

X801	1-795-058-21	VIBRATOR, CERAMIC 5MHz						< CAPACITOR >			
		*****				C833	1-164-156-11	CERAMIC CHIP	0.1uF		25V
	1-862-177-11	HP BOARD						< CONNECTOR >			
		*****				CN814	1-506-481-11	PIN, CONNECTOR 2P			
		< CAPACITOR >						< DIODE >			
C881	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	D802	6-500-647-01	DIODE SEL5E20C-STP15			
C882	1-164-156-11	CERAMIC CHIP	0.1uF		25V			< RESISTOR >			
C883	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	R834	1-216-833-11	METAL CHIP	10K	5%	1/10W
		< CONNECTOR >						*****			
* CN881	1-568-941-11	PIN, CONNECTOR 3P						A-4752-592-A	MAIN BOARD, COMPLETE		
		< JACK >						*****			
J881	1-770-904-11	JACK (LARGE TYPE)						< CAPACITOR >			
		< COIL >				C201	1-126-916-11	ELECT	1000uF	20%	6.3V
L881	1-410-397-21	FERRITE	1.1uH			C202	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
L882	1-410-397-21	FERRITE	1.1uH			C206	1-115-156-11	CERAMIC CHIP	1uF		10V
L883	1-410-397-21	FERRITE	1.1uH			C208	1-115-156-11	CERAMIC CHIP	1uF		10V
		< VARIABLE RESISTOR >				C212	1-128-991-21	ELECT CHIP	10uF	20%	50V
RV881	1-241-031-11	RES, VAR, CARBON		1K/1K		C236	1-115-156-11	CERAMIC CHIP	1uF		10V
		*****				C238	1-115-156-11	CERAMIC CHIP	1uF		10V
	1-862-173-11	KEY BOARD				C242	1-128-991-21	ELECT CHIP	10uF	20%	50V
		*****				C266	1-115-156-11	CERAMIC CHIP	1uF		10V
		< CONNECTOR >				C268	1-115-156-11	CERAMIC CHIP	1uF		10V
CN813	1-506-468-11	PIN, CONNECTOR 3P				C272	1-128-991-21	ELECT CHIP	10uF	20%	50V
		< RESISTOR >				C281	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
R861	1-216-821-11	METAL CHIP	1K	5%	1/10W	C302	1-164-156-11	CERAMIC CHIP	0.1uF		25V
R862	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	C303	1-164-156-11	CERAMIC CHIP	0.1uF		25V
R863	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	C305	1-164-156-11	CERAMIC CHIP	0.1uF		25V
R864	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	C321	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
R871	1-216-821-11	METAL CHIP	1K	5%	1/10W	C322	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
R872	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	C324	1-115-156-11	CERAMIC CHIP	1uF		10V
R873	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	C325	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
						C331	1-164-156-11	CERAMIC CHIP	0.1uF		25V
						C342	1-126-193-11	ELECT CHIP	1uF	20%	50V
						C343	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
						C344	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V

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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C345	1-126-206-11	ELECT CHIP	100uF 20% 6.3V	C727	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V
C351	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C729	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V
C362	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C730	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V
C364	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C731	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V
C366	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C733	1-165-176-11	CERAMIC CHIP	0.047uF 10% 16V
C371	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C734	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C376	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C736	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C402	1-115-416-11	CERAMIC CHIP	0.001uF 5% 25V	C737	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C403	1-164-217-11	CERAMIC CHIP	150PF 5% 50V	C738	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C404	1-115-156-11	CERAMIC CHIP	1uF 10V	C739	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C405	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C740	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C406	1-128-992-21	ELECT CHIP	47uF 20% 25V	C741	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C412	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C742	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C432	1-115-416-11	CERAMIC CHIP	0.001uF 5% 25V	C743	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C433	1-164-217-11	CERAMIC CHIP	150PF 5% 50V	C744	1-115-156-11	CERAMIC CHIP	1uF 10V
C434	1-115-156-11	CERAMIC CHIP	1uF 10V	C745	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C435	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C746	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C436	1-128-992-21	ELECT CHIP	47uF 20% 25V	C748	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C462	1-115-416-11	CERAMIC CHIP	0.001uF 5% 25V	C749	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C463	1-164-217-11	CERAMIC CHIP	150PF 5% 50V	C750	1-115-156-11	CERAMIC CHIP	1uF 10V
C464	1-115-156-11	CERAMIC CHIP	1uF 10V	★ C751	1-162-927-11	CERAMIC CHIP	100PF 5% 50V
C465	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C752	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C466	1-128-992-21	ELECT CHIP	47uF 20% 25V	C753	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C502	1-115-416-11	CERAMIC CHIP	0.001uF 5% 25V	C754	1-126-246-11	ELECT CHIP	220uF 20% 4V
C503	1-164-217-11	CERAMIC CHIP	150PF 5% 50V	C755	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C504	1-115-156-11	CERAMIC CHIP	1uF 10V	C756	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C505	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C757	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C506	1-128-992-21	ELECT CHIP	47uF 20% 25V	C758	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C512	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C759	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C532	1-115-416-11	CERAMIC CHIP	0.001uF 5% 25V	C760	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C533	1-164-217-11	CERAMIC CHIP	150PF 5% 50V	C761	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C534	1-115-156-11	CERAMIC CHIP	1uF 10V	C762	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C535	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C763	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C536	1-128-992-21	ELECT CHIP	47uF 20% 25V	C764	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C562	1-115-416-11	CERAMIC CHIP	0.001uF 5% 25V	C765	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C563	1-164-217-11	CERAMIC CHIP	150PF 5% 50V	C766	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C564	1-115-156-11	CERAMIC CHIP	1uF 10V	C767	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C565	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C768	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C566	1-128-992-21	ELECT CHIP	47uF 20% 25V	C769	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C700	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	C770	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C701	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C771	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C702	1-125-837-91	CERAMIC CHIP	1uF 10% 6.3V	C772	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C703	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C775	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C704	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C776	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C705	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C777	1-162-915-11	CERAMIC CHIP	10PF 0.5PF 50V
C706	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C778	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C709	1-126-246-11	ELECT CHIP	220uF 20% 4V	C779	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C711	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C780	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C712	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C781	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C713	1-117-681-11	ELECT CHIP	100uF 20% 16V	C782	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C714	1-126-246-11	ELECT CHIP	220uF 20% 4V	C783	1-117-681-11	ELECT CHIP	100uF 20% 16V
C715	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C785	1-126-246-11	ELECT CHIP	220uF 20% 4V
C716	1-117-681-11	ELECT CHIP	100uF 20% 16V	C787	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C721	1-164-156-11	CERAMIC CHIP	0.1uF 25V	C788	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C722	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C789	1-164-156-11	CERAMIC CHIP	0.1uF 25V
C723	1-125-837-91	CERAMIC CHIP	1uF 10% 6.3V	C791	1-128-992-21	ELECT CHIP	47uF 20% 25V
C726	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C793	1-164-156-11	CERAMIC CHIP	0.1uF 25V

★ It is necessary for checking that C751 is ceramic chip 100PF When IC705 (MASTER CONTROL) is exchanged.
Refer to Attention when IC705 (MASTER CONTROL) is exchanged (page 17).

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C794	1-164-156-11	CERAMIC CHIP	0.1uF	25V	D511	8-719-941-09	DIODE DAP202UT106
C795	1-117-681-11	ELECT CHIP	100uF	20%	D703	8-719-069-54	DIODE UDZSTE-175.1B
C796	1-117-681-11	ELECT CHIP	100uF	20%	D921	8-719-053-18	DIODE 1SR154-400TE-25
							16V
C799	1-164-156-11	CERAMIC CHIP	0.1uF	25V	D922	8-719-053-18	DIODE 1SR154-400TE-25
C800	1-164-156-11	CERAMIC CHIP	0.1uF	25V	D923	8-719-053-18	DIODE 1SR154-400TE-25
C804	1-164-156-11	CERAMIC CHIP	0.1uF	25V	D924	8-719-053-18	DIODE 1SR154-400TE-25
C806	1-107-826-11	CERAMIC CHIP	0.1uF	10%	D931	8-719-053-18	DIODE 1SR154-400TE-25
C808	1-107-726-91	CERAMIC CHIP	0.01uF	10%	D932	8-719-053-18	DIODE 1SR154-400TE-25
C809	1-164-677-11	CERAMIC CHIP	0.033uF	10%	D933	8-719-053-18	DIODE 1SR154-400TE-25
C813	1-164-677-11	CERAMIC CHIP	0.033uF	10%	D934	8-719-053-18	DIODE 1SR154-400TE-25
C814	1-115-467-11	CERAMIC CHIP	0.22uF	10%	D936	8-719-053-18	DIODE 1SR154-400TE-25
C815	1-164-245-11	CERAMIC CHIP	0.015uF	10%	D961	8-719-941-86	DIODE DAN202UT106
C816	1-162-964-11	CERAMIC CHIP	0.001uF	10%	★ D963	6-500-697-01	DIODE UDZSTE-173.3B
C817	1-162-964-11	CERAMIC CHIP	0.001uF	10%	D964	8-719-988-61	DIODE 1SS355TE-17
C819	1-115-156-11	CERAMIC CHIP	1uF	10V	D965	8-719-027-76	DIODE 1SS357-TPH3
C820	1-164-816-11	CERAMIC CHIP	220PF	2%	D971	8-719-053-18	DIODE 1SR154-400TE-25
C821	1-162-927-11	CERAMIC CHIP	100PF	5%	D972	8-719-083-87	DIODE UDZS-TE17-33B
C822	1-164-816-11	CERAMIC CHIP	220PF	2%	D973	8-719-069-60	DIODE UDZSTE-179.1B
C825	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	D981	8-719-053-18	DIODE 1SR154-400TE-25
C828	1-110-563-11	CERAMIC CHIP	0.068uF	10%	D983	8-719-053-18	DIODE 1SR154-400TE-25
C829	1-110-563-11	CERAMIC CHIP	0.068uF	10%	D984	8-719-053-18	DIODE 1SR154-400TE-25
C830	1-162-927-11	CERAMIC CHIP	100PF	5%			
C832	1-162-968-11	CERAMIC CHIP	0.0047uF	10%			< GROUND TERMINAL BOARD >
C901	1-162-970-11	CERAMIC CHIP	0.01uF	10%	ETP910	1-537-771-21	TERMINAL BOARD, GROUND
C910	1-164-156-11	CERAMIC CHIP	0.1uF	25V			< FERRITE BEAD >
C911	1-164-156-11	CERAMIC CHIP	0.1uF	25V			
C920	1-162-970-11	CERAMIC CHIP	0.01uF	10%			
C921	1-128-546-11	ELECT	10000uF	20%	FB201	1-500-283-11	INDUCTOR, FERRITE BEAD
					FB703	1-414-595-11	INDUCTOR, FERRITE BEAD
					FB710	1-414-595-11	INDUCTOR, FERRITE BEAD
							< FILTER >
C923	1-164-156-11	CERAMIC CHIP	0.1uF	25V			
C924	1-126-925-91	ELECT	470uF	20%	FL606	1-234-177-21	FILTER, CHIP EMI
C931	1-126-939-11	ELECT	10000uF	20%			< IC >
C932	1-126-942-91	ELECT	1000uF	20%			
C933	1-164-156-11	CERAMIC CHIP	0.1uF	25V	IC200	6-703-420-01	IC DSD1751DBQR
					IC230	6-703-420-01	IC DSD1751DBQR
					IC260	6-703-420-01	IC DSD1751DBQR
C934	1-126-935-11	ELECT	470uF	20%	IC309	8-759-256-42	IC NJM2043M-D
C953	1-164-156-11	CERAMIC CHIP	0.1uF	25V	IC320	8-759-549-25	IC SN74LVU04APWR
C954	1-126-925-91	ELECT	470uF	20%			
C961	1-128-991-21	ELECT CHIP	10uF	20%	IC330	6-600-012-01	IC TOTX141L
C962	1-164-156-11	CERAMIC CHIP	0.1uF	25V	IC400	8-759-710-97	IC NJM4565M (TE2)
					IC430	8-759-710-97	IC NJM4565M (TE2)
C970	1-162-970-11	CERAMIC CHIP	0.01uF	10%	IC460	8-759-710-97	IC NJM4565M (TE2)
C971	1-128-552-51	ELECT	47uF	20%	IC701	8-759-636-64	IC M51957BFP-600C
C972	1-128-991-21	ELECT CHIP	10uF	20%			
C973	1-126-395-11	ELECT CHIP	22uF	20%	IC702	6-706-632-01	IC BR9016AF-WE2
C981	1-162-970-11	CERAMIC CHIP	0.01uF	10%	IC703	6-700-398-01	IC uPC2918T-E1
					★ IC705	6-805-930-01	IC HD6432238RP02TEV
C995	1-104-666-11	ELECT	220uF	20%	IC706	8-752-420-59	IC CXD2754Q
					IC708	6-702-336-01	IC MSM56V16160F-8TK7R1
					IC710	8-759-598-69	IC BA6956AN
					IC712	6-702-157-01	IC FAN8035L
					IC920	6-705-463-01	IC BA33BC0T
					IC950	6-705-469-01	IC BA50BC0FP-E2
					IC985	8-759-460-81	IC BA12FP-E2
							< JACK >
D321	8-719-027-76	DIODE 1SS357-TPH3					
D509	8-719-941-09	DIODE DAP202UT106			J341	1-818-300-11	JACK, PIN 1P (COAXIAL)

★ Refer to Attention at the time of IC705 (MASTER CONTROL) exchanged (page 17) when IC705(MASTER CONTROL) is exchanged.

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Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
J351	1-785-489-11	JACK, PIN 6P (5.1CH)				R434	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
J352	1-785-868-21	JACK, PIN 2P (2CH)				R437	1-216-845-11	METAL CHIP	100K	5%	1/10W
J701	1-764-188-21	JACK (SMALL TYPE)(DIA. 3.5)				R438	1-216-815-11	METAL CHIP	330	5%	1/10W
		< COIL >				R439	1-216-813-11	METAL CHIP	220	5%	1/10W
L341	1-412-056-11	INDUCTOR	4.7uH			R464	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
L342	1-216-864-11	SHORT CHIP	0			R467	1-216-845-11	METAL CHIP	100K	5%	1/10W
		< TRANSISTOR >				R468	1-216-815-11	METAL CHIP	330	5%	1/10W
Q301	8-729-924-04	TRANSISTOR	UN5116-TX			R469	1-216-813-11	METAL CHIP	220	5%	1/10W
Q303	8-729-924-04	TRANSISTOR	UN5116-TX			R504	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
Q305	8-729-924-04	TRANSISTOR	UN5116-TX			R506	1-216-821-11	METAL CHIP	1K	5%	1/10W
Q341	8-729-120-28	TRANSISTOR	2SC1623-T1-L5L6			R507	1-216-845-11	METAL CHIP	100K	5%	1/10W
Q401	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16			R508	1-216-815-11	METAL CHIP	330	5%	1/10W
Q402	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16			R509	1-216-813-11	METAL CHIP	220	5%	1/10W
Q403	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16			R511	1-216-809-11	METAL CHIP	100	5%	1/10W
Q431	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16			R513	1-216-809-11	METAL CHIP	100	5%	1/10W
Q432	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16			R519	1-216-809-11	METAL CHIP	100	5%	1/10W
Q462	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16			R520	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
Q463	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16			R534	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
Q501	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16			R537	1-216-845-11	METAL CHIP	100K	5%	1/10W
Q502	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16			R538	1-216-815-11	METAL CHIP	330	5%	1/10W
Q503	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16			R539	1-216-813-11	METAL CHIP	220	5%	1/10W
Q531	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16			R564	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
Q532	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16			R567	1-216-845-11	METAL CHIP	100K	5%	1/10W
Q562	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16			R568	1-216-815-11	METAL CHIP	330	5%	1/10W
Q563	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16			R569	1-216-813-11	METAL CHIP	220	5%	1/10W
Q701	8-729-027-56	TRANSISTOR	DTC143TKA-T146			R701	1-216-821-11	METAL CHIP	1K	5%	1/10W
Q961	8-729-027-56	TRANSISTOR	DTC143TKA-T146			R702	1-216-833-11	METAL CHIP	10K	5%	1/10W
Q971	8-729-019-72	TRANSISTOR	2SB1260T100			R703	1-216-833-11	METAL CHIP	10K	5%	1/10W
		< RESISTOR >				R704	1-216-821-11	METAL CHIP	1K	5%	1/10W
R201	1-216-833-11	METAL CHIP	10K	5%	1/10W	R707	1-216-821-11	METAL CHIP	1K	5%	1/10W
R202	1-216-839-11	METAL CHIP	33K	5%	1/10W	R708	1-216-809-11	METAL CHIP	100	5%	1/10W
R321	1-216-857-11	METAL CHIP	1M	5%	1/10W	R731	1-216-833-11	METAL CHIP	10K	5%	1/10W
R322	1-216-864-11	SHORT CHIP	0			R734	1-216-833-11	METAL CHIP	10K	5%	1/10W
R323	1-216-821-11	METAL CHIP	1K	5%	1/10W	R752	1-216-864-11	SHORT CHIP	0		
R324	1-216-809-11	METAL CHIP	100	5%	1/10W	R781	1-216-821-11	METAL CHIP	1K	5%	1/10W
R326	1-216-801-11	METAL CHIP	22	5%	1/10W	R782	1-216-841-11	METAL CHIP	47K	5%	1/10W
R328	1-216-801-11	METAL CHIP	22	5%	1/10W	R783	1-216-833-11	METAL CHIP	10K	5%	1/10W
R330	1-216-801-11	METAL CHIP	22	5%	1/10W	R791	1-216-805-11	METAL CHIP	47	5%	1/10W
R341	1-216-845-11	METAL CHIP	100K	5%	1/10W	R804	1-216-815-11	METAL CHIP	330	5%	1/10W
R342	1-216-805-11	METAL CHIP	47	5%	1/10W	R806	1-216-150-91	RES-CHIP	10	5%	1/8W
R343	1-216-815-11	METAL CHIP	330	5%	1/10W	R815	1-216-809-11	METAL CHIP	100	5%	1/10W
R344	1-216-824-11	METAL CHIP	1.8K	5%	1/10W	R818	1-216-809-11	METAL CHIP	100	5%	1/10W
R345	1-216-824-11	METAL CHIP	1.8K	5%	1/10W	R819	1-216-847-11	METAL CHIP	150K	5%	1/10W
R346	1-216-864-11	SHORT CHIP	0			R820	1-216-847-11	METAL CHIP	150K	5%	1/10W
R347	1-164-156-11	CERAMIC CHIP	0.1uF	10%	50V	R828	1-216-809-11	METAL CHIP	100	5%	1/10W
R404	1-216-827-11	METAL CHIP	3.3K	5%	1/10W	R831	1-216-833-11	METAL CHIP	10K	5%	1/10W
R406	1-216-821-11	METAL CHIP	1K	5%	1/10W	R840	1-216-845-11	METAL CHIP	100K	5%	1/10W
R407	1-216-845-11	METAL CHIP	100K	5%	1/10W	R846	1-216-842-11	METAL CHIP	56K	5%	1/10W
R408	1-216-815-11	METAL CHIP	330	5%	1/10W	R848	1-216-821-11	METAL CHIP	1K	5%	1/10W
R409	1-216-813-11	METAL CHIP	220	5%	1/10W	R851	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R411	1-216-809-11	METAL CHIP	100	5%	1/10W	R852	1-216-839-11	METAL CHIP	33K	5%	1/10W
R413	1-216-809-11	METAL CHIP	100	5%	1/10W	R853	1-216-842-11	METAL CHIP	56K	5%	1/10W
R419	1-216-809-11	METAL CHIP	100	5%	1/10W	R857	1-218-883-11	METAL CHIP	33K	0.5%	1/10W
R420	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	R858	1-216-846-11	METAL CHIP	120K	5%	1/10W
						R860	1-216-855-11	METAL CHIP	680K	5%	1/10W
						R861	1-216-850-11	METAL CHIP	270K	5%	1/10W
						R865	1-216-842-11	METAL CHIP	56K	5%	1/10W

MAIN

MD-94

POWER SW

PT

RF

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R866	1-216-839-11	METAL CHIP	33K 5% 1/10W	RB615	1-233-577-11	RES, CHIP NETWORK	470 (3216)
R869	1-216-842-11	METAL CHIP	56K 5% 1/10W	RB616	1-233-577-11	RES, CHIP NETWORK	470 (3216)
R870	1-216-839-11	METAL CHIP	33K 5% 1/10W	RB617	1-233-577-11	RES, CHIP NETWORK	470 (3216)
R871	1-216-833-11	METAL CHIP	10K 5% 1/10W	< VIBRATOR >			
R872	1-216-833-11	METAL CHIP	10K 5% 1/10W	X321	1-795-535-21	VIBRATOR, CRYSTAL 11.2896MHz	
R874	1-218-883-11	METAL CHIP	33K 0.5% 1/10W	*****			
R876	1-216-844-11	METAL CHIP	82K 5% 1/10W	MD-94 BOARD			
R877	1-216-853-11	METAL CHIP	470K 5% 1/10W	*****			
R878	1-216-853-11	METAL CHIP	470K 5% 1/10W	< CONNECTOR >			
R880	1-216-845-11	METAL CHIP	100K 5% 1/10W	CN001	1-506-490-21	PIN, CONNECTOR 11P	
R885	1-216-835-11	METAL CHIP	15K 5% 1/10W	CN002	1-784-767-11	CONNECTOR, FFC 6P	
R886	1-216-844-11	METAL CHIP	82K 5% 1/10W	* CN003	1-564-013-11	PIN, CONNECTOR 3P	
R888	1-216-835-11	METAL CHIP	15K 5% 1/10W	CN004	1-506-481-11	PIN, CONNECTOR 2P	
R889	1-216-864-11	SHORT CHIP	0	< SWITCH >			
R892	1-218-897-11	METAL CHIP	120K 0.5% 1/10W	S001	1-786-514-21	SWITCH, LEVER (SLIDE)	
R893	1-218-897-11	METAL CHIP	120K 0.5% 1/10W	*****			
R894	1-216-842-11	METAL CHIP	56K 5% 1/10W	1-862-176-11 POWER SW BOARD			
R895	1-216-842-11	METAL CHIP	56K 5% 1/10W	*****			
R897	1-216-853-11	METAL CHIP	470K 5% 1/10W	< CAPACITOR >			
R899	1-216-849-11	METAL CHIP	220K 5% 1/10W	△C891	1-113-920-11	CERAMIC 0.0022uF 20% 250V	
★ R961	1-216-833-11	METAL CHIP	10K 5% 1/10W	< CONNECTOR >			
R962	1-216-821-11	METAL CHIP	1K 5% 1/10W	* CN891	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P	
R963	1-216-821-11	METAL CHIP	1K 5% 1/10W	< SWITCH >			
R971	1-216-833-11	METAL CHIP	10K 5% 1/10W	△S891	1-762-581-11	SWITCH, AC POWER PUSH (1 KEY) (POWER)	
R972	1-216-833-11	METAL CHIP	10K 5% 1/10W	*****			
R973	1-216-827-11	METAL CHIP	3.3K 5% 1/10W	1-862-175-11 PT BOARD			
R975	1-216-839-11	METAL CHIP	33K 5% 1/10W	*****			
R976	1-216-809-11	METAL CHIP	100 5% 1/10W	< CAPACITOR >			
R977	1-216-809-11	METAL CHIP	100 5% 1/10W	△C101	1-113-920-11	CERAMIC 0.0022uF 20% 250V	
R978	1-216-837-11	METAL CHIP	22K 5% 1/10W	< CONNECTOR >			
R979	1-216-833-11	METAL CHIP	10K 5% 1/10W	* CN101	1-568-226-11	PIN, CONNECTOR (3.96mm PITCH) 2P	
< COMPOSITION CIRCUIT BLOCK >				CN102	1-784-924-11	PIN, CONNECTOR 8P	
RB301	1-233-414-11	RES, CHIP NETWORK	4.7K (3216)	* CN103	1-568-226-11	PIN, CONNECTOR (3.96mm PITCH) 2P	
RB302	1-233-873-21	RES, CHIP NETWORK	220K (3216)	*****			
RB303	1-236-908-11	RES, CHIP NETWORK	10K (3216)	A-4750-527-A RF BOARD, COMPLETE			
RB402	1-233-419-21	RES, CHIP NETWORK	6.8K (3216)	*****			
RB410	1-233-413-11	RES, CHIP NETWORK	2.2K (3216)	< CAPACITOR >			
RB432	1-233-419-21	RES, CHIP NETWORK	6.8K (3216)	C001	1-107-726-91	CERAMIC CHIP 0.01uF 10% 16V	
RB441	1-233-413-11	RES, CHIP NETWORK	2.2K (3216)	C002	1-107-726-91	CERAMIC CHIP 0.01uF 10% 16V	
RB442	1-233-413-11	RES, CHIP NETWORK	2.2K (3216)	C004	1-124-778-00	ELECT CHIP 22uF 20% 6.3V	
RB462	1-233-419-21	RES, CHIP NETWORK	6.8K (3216)	C005	1-162-966-11	CERAMIC CHIP 0.0022uF 10% 50V	
RB502	1-233-419-21	RES, CHIP NETWORK	6.8K (3216)	C006	1-162-966-11	CERAMIC CHIP 0.0022uF 10% 50V	
RB532	1-233-419-21	RES, CHIP NETWORK	6.8K (3216)	< CAPACITOR >			
RB562	1-233-419-21	RES, CHIP NETWORK	6.8K (3216)	C007	1-162-966-11	CERAMIC CHIP 0.0022uF 10% 50V	
RB601	1-236-908-11	RES, CHIP NETWORK	10K (3216)	The components identified by			
RB602	1-233-412-11	RES, CHIP NETWORK	1.0K (3216)	mark △ or dotted line with mark			
RB603	1-233-577-11	RES, CHIP NETWORK	470 (3216)	△ are critical for safety.			
RB604	1-233-414-11	RES, CHIP NETWORK	4.7K (3216)	Replace only with part number			
RB605	1-236-908-11	RES, CHIP NETWORK	10K (3216)	specified.			
RB606	1-236-908-11	RES, CHIP NETWORK	10K (3216)	Les composants identifiés par			
RB607	1-236-908-11	RES, CHIP NETWORK	10K (3216)	une marque △ sont critiques			
RB608	1-233-578-11	RES, CHIP NETWORK	47K (3216)	pour la sécurité.			
RB609	1-236-908-11	RES, CHIP NETWORK	10K (3216)	Ne les remplacer que par une			
RB610	1-233-578-11	RES, CHIP NETWORK	47K (3216)	pièce portant le numéro spécifié.			
RB611	1-236-908-11	RES, CHIP NETWORK	10K (3216)				
RB612	1-236-908-11	RES, CHIP NETWORK	10K (3216)				
RB613	1-236-908-11	RES, CHIP NETWORK	10K (3216)				

★ Replacement of D693 and R961 may be required When IC705 (MASTER CONTROL) is exchanged. Refer to Attention when IC705 (MASTER CONTROL) is exchanged (page 17).

Ref. No.	Part No.	Description	Remark		
C008	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C009	1-124-779-00	ELECT CHIP	10uF	20%	16V
C011	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C015	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C016	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C017	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C018	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V
C019	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C021	1-124-779-00	ELECT CHIP	10uF	20%	16V
C022	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C023	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C024	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V
C025	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C026	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C027	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C028	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C031	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C032	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C033	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C034	1-164-227-11	CERAMIC CHIP	0.022uF	10%	16V
C035	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C036	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C038	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C039	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C040	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C043	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C044	1-124-779-00	ELECT CHIP	10uF	20%	16V
C046	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V
C047	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C048	1-127-715-91	CERAMIC CHIP	0.22uF	10%	16V
< CONNECTOR >					
CN001	1-815-031-61	CONNECTOR, FFC/FPC (ZIF) 24P			
CN002	1-784-879-21	CONNECTOR, FFC (LIF (NON-ZIF)) 31P			
CN003	1-784-861-21	CONNECTOR, FFC (LIF (NON-ZIF)) 9P			
< DIODE >					
D001	8-719-988-61	DIODE 1SS355TE-17			
D004	8-719-988-61	DIODE 1SS355TE-17			
< IC >					
IC001	6-703-445-01	IC SP3726A			
< COIL >					
L001	1-412-031-11	INDUCTOR 47uH			
L002	1-412-031-11	INDUCTOR 47uH			
< TRANSISTOR >					
Q001	8-729-903-46	TRANSISTOR 2SB1132-T100-QR			
Q002	8-729-903-46	TRANSISTOR 2SB1132-T100-QR			
< RESISTOR >					
R002	1-216-809-11	METAL CHIP 100 5% 1/10W			
R003	1-216-809-11	METAL CHIP 100 5% 1/10W			
R004	1-216-864-11	SHORT CHIP 0			
R005	1-216-845-11	METAL CHIP 100K 5% 1/10W			

Ref. No.	Part No.	Description	Remark		
R006	1-216-838-11	METAL CHIP 27K	5%	1/10W	
R007	1-216-803-11	METAL CHIP 33	5%	1/10W	
R008	1-216-803-11	METAL CHIP 33	5%	1/10W	
R009	1-216-820-11	METAL CHIP 820	5%	1/10W	
R010	1-216-841-11	METAL CHIP 47K	5%	1/10W	
R011	1-216-809-11	METAL CHIP 100	5%	1/10W	
R013	1-216-833-11	METAL CHIP 10K	5%	1/10W	
R018	1-216-833-11	METAL CHIP 10K	5%	1/10W	
R020	1-216-803-11	METAL CHIP 33	5%	1/10W	
R023	1-216-803-11	METAL CHIP 33	5%	1/10W	
R025	1-216-841-11	METAL CHIP 47K	5%	1/10W	
R029	1-216-809-11	METAL CHIP 100	5%	1/10W	
R037	1-216-834-11	METAL CHIP 12K	5%	1/10W	
R038	1-216-861-11	METAL CHIP 2.2M	5%	1/10W	
R045	1-216-813-11	METAL CHIP 220	5%	1/10W	
R052	1-216-864-11	SHORT CHIP 0			
R053	1-216-864-11	SHORT CHIP 0			
R054	1-216-864-11	SHORT CHIP 0			
R055	1-216-864-11	SHORT CHIP 0			

A-6060-642-A		SE-130 BOARD, COMPLETE			

< CONNECTOR >					
CN101	1-750-243-11	SOCKET, CONNECTOR 6P			
CN102	1-573-383-11	PIN, CONNECTOR (PC BOARD) 2P			
< PHONT SENSOR >					
PH101	8-749-017-45	SENSOR, PHONT RPR-220C1N			
PH102	6-600-072-01	IC RPI-392			

		MISCELLANEOUS			

63	1-828-334-11	WIRE (FLAT TYPE) (13 CORE)			
△ 103	1-783-532-32	CORD, POWER			
158	1-823-921-11	FMS-18			
207	1-829-172-11	WIRE (FLAT TYPE) (31 CORE)			
△ 216	A-1067-676-A	OPTICAL PICK-UP SERVICE ASSY(DBU-3)			
218	1-824-106-51	CABLE, FLEXIBLE FLAT (24 CORE)(0.5mmPITCH)			
M901	1-541-632-12	MOTOR, DC (SPINDLE)			
RE901	1-418-746-11	ENCODER, ROTARY			
△ T101	1-431-174-22	TRANSFORMER, POWER			
△ T102	1-443-286-11	TRANSFORMER, POWER			
		ACCESSORIES			

1-478-635-11		COMMANDER, STANDARD (RM-SC505)			
1-757-960-22		CORD, CONNECTION (BLACK, 1m) (For CENTER or SUB WOOFER SPEAKER)			
1-791-732-12		CORD, CONNECTION (RED and WHITE, 1m) (For FRONT or SURROUND SPEAKER)			
2-103-394-13		MANUAL, INSTRUCTION (ENGLISH, FRENCH)			
4-228-696-01		COVER, BATTERY (FOR RM-SC505)			

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.
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SCD-C2000ES

SONY®

*US Model
Canadian Model*

SERVICE MANUAL

Ver. 1.1 2005.05

SUPPLEMENT-1

Subject: TEST MODE and ELECTRICAL ADJUSTMENT

SECTION 1 TEST MODE

1. Setting Method of The Test Mode

While press **MENU** and **◀◀ AMS ▶▶** dial, press the **POWER** button to turn the power on and enter the Test Mode and display “DIAG MODE”.

2. Operating The Test Mode

Procedure:

1. Turn the **◀◀ AMS ▶▶** dial to select the command number (hexadecimal number) (refer to the following table for command number).
2. Press the **◀◀ AMS ▶▶** dial to execute the selected command item.

3. The Commands in Test Mode

Command No.	Command name	Item
12	LD ON/OFF	Turn on/off the laser diode
13	SPIN ON/OFF	Turn on/off the spindle motor
14	FSRV ON/OFF	Turn on/off the focus servo
15	TSRV ON/OFF	Turn on/off the tracking servo
16	CLV ON/OFF	Turn on/off the spindle CLV servo, when both focus servo and tracking servo are on
17	SSRV ON/OFF	Turn on/off the spindle CLV servo, when all servo of focus servo, tracking servo and spindle servo are on
18	ALL SRV ON	Turn on all servo
19	ALL SRV OFF	Turn off all servo
1A	DISC STOP	Stop the disc rotation (useful as overdrived)
24	ADJ FCSBIAS	Automatically adjust the focus bias (*1)
27	FOCUS AGC	Automatically adjust the focus servo gain (*1)
31	PI/FE OFFSET	Automatically adjust the offset signal of PI, PE and TE (*1)
45	TRACKING AGC	Automatically adjust the focus servo gain (*1)
61	DISC DETECT	Judge the disc type (when SA-CD, SL or DL is displayed)
7C	FJUMP TEST	Focus jump test mode
81	SYSTEM VERSION	Display the version of system microcomputer for 2 seconds
82	I/F VERSION	Display the version of IF microcomputer for 2 seconds
8D	SET UP	Initialization (factory set up) (AEP model) (*2)
8F	SET UP	Initialization (factory set up) (EXCEPT AEP model) (*2)
92	ERR CHECK	Error rate display (to stop, press the ■ button) for CD display 92 C1 C2 0xff for SA-CD display 92 PI1 PO PI2
93	WATER MARK	WaterMark display display 93 xxxx“(xxxx”is value of pspamp)
9D	PLAY&RFD ON	Measuring the jitter (to stop, press the ■ button) display: 9D xx 0xff 0xff“(xx”is measuring value of jitter)
B0	RAM clear	Electric adjustment value is clear (*3)
B1	Writing	Electric adjustment value is writing (*3)
B2	Check writing data	Electric adjustment value is checking (*3)

*1) Not used in servicing

*2) After the all work end, set up for factory default.

*3) The Commands in Automatic Electrical Adjustments
(Use the commands When The system version number is ver1.24 and higher)

SECTION 2

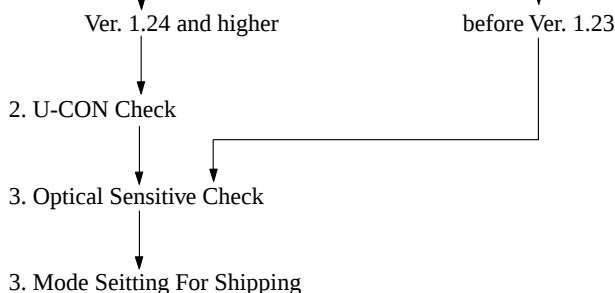
ELECTRICAL ADJUSTMENTS

GENERAL DESCRIPTION

After parts to the circuit (OPTICAL PICK-UP (DBU-3), RF BOARD, MAIN BOARD, EEPROM (IC702), MASTERCOM (IC705), DSP (IC706), so on) are replaced, readjusting is necessary. Check the system software version at first, since the adjustment procedure is different by the system software version.

Procedure:

1. ROM Version Check



1. ROM Version Check

Procedure:

1. While pressing **◀◀ AMS ▶▶** dial and **MENU** buttons, press the **POWER** button to turn the set on, so “DIAG MODE” is displayed on the screen and the test mode active.
2. Select “ 81 ” by tuning **◀◀ AMS ▶▶** dial.
3. Press **◀◀ AMS ▶▶** dial, so the message is displayed the system software version as following.

" SYS VER *.* "

4. Select “ 82 ” by tuning **◀◀ AMS ▶▶** dial.
5. Press **◀◀ AMS ▶▶** dial, so the message is displayed the I/F version as following.

" I/F VER *.* "

2. U-CON Check (The system version number is Ver 1.24 and higher)

This checking must be performed before any other checking.

CHECK DISC LIST

Use the following disc on this check.

SATD-S4: PART No. J-2501-184-A

SATD-S5: PART No. J-2501-215-A

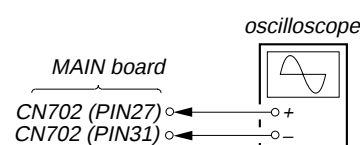
Procedure:

1. While pressing **◀◀ AMS ▶▶** dial and **MENU** buttons, press the **POWER** button to turn the set on. “DIAG MODE” is displayed on the screen, so enter the test mode.
2. Push the **▲** button to open the tray.
3. Load Test Disc to tray.
4. Select “ B0 ” by tuning **◀◀ AMS ▶▶** dial.
5. Push the **◀◀ AMS ▶▶** dial and check the “FFFF” displayed.
6. Select “ B1 ” by tuning **◀◀ AMS ▶▶** dial.
7. Push the **◀◀ AMS ▶▶** dial and check the “-9” displayed. After that the value has changed until the display shows “-0” and lastly “*****” (4 DIGITS VALUE) appears.
8. Select “ B2 ” by tuning **◀◀ AMS ▶▶** dial.

9. Push the **◀◀ AMS ▶▶** dial and check the “ ***** ” (4 DIGITS VALUE) displayed.
Check the last value in the standard.
the standard value : 08D0 to 04D0
10. Push the **▲** button to open the tray.
11. Unload CD from tray.
12. Push the **▲** button to close the tray.
13. Press the **POWER** button to turn the set off. (Do not continue with another test mode without power off.)

3. Optical Sensitivity Check

Setting:



CHECK DISC LIST

Use the following hybrid disc on this check.

HLXA-509 : PART No. J-6090-090-A

SACD HYBRID DISC (MARKET DISC)

Procedure:

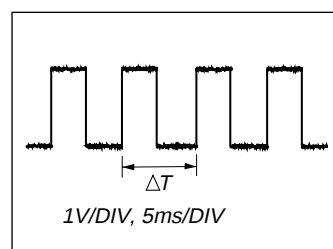
1. Connect the oscilloscope to pin 27 and pin31 of CN702 (Main board).
2. Insert SACD hybrid disc (market disc).
3. Observe the MIRR waveform immediately after the disc chucking is completed when disc identification is made. At that time check that the measurement of ΔT on the waveform is standard.

The standard value :

7.5ms ~ 9.7ms (specification for the system version number is Ver1.24 and higher)

6.9ms ~ 9.7ms (specification for the system version number is Ver1.23 and before)

MIRR signal waveform



4. When the measurement of ΔT is out of the standard value, change the parts of R892 and R893 as follows and then repeat step3 and after.
9.7 ms < Δt
R892/R893 120 k Ω → 110 k Ω (1-218-741-11)
 Δt < 6.9 ms
R892/R893 120 k Ω → 130 k Ω (1-218-743-11)
5. Put out the test disc from tray, then press the **POWER** button to turn the set off.

4. Mode Setting For Shipping (EEPROM (IC702) on MAIN board is replaced.)

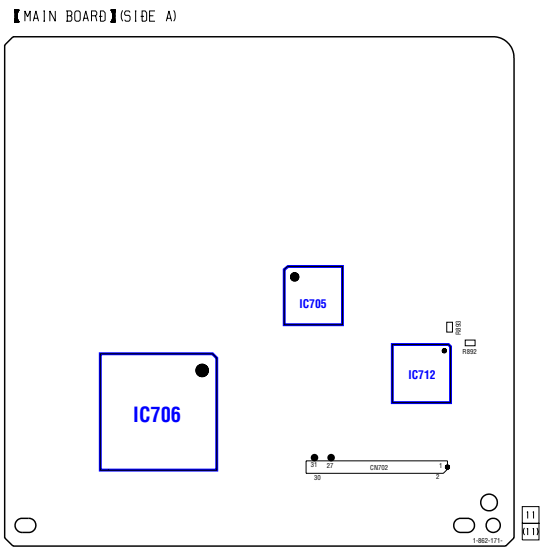
Caution : Be sure to set the unit to the specified modes as stated in the steps when the EEPROM (IC702) on main board is replaced. Set the mode for shipping after ending the all works.

Procedure:

- 1. While pressing **◀◀ AMS ▶▶** dial and **MENU** buttons, press the **POWER** button to turn the set on.
“DIAG MODE” is displayed in the screen and set the test mode.
- 2. Turn **◀◀ AMS ▶▶** dial, then select "8D" or "8F".
“8D” : AEP model
“8F” : EXCEPT AEP model
- 3. Press **◀◀ AMS ▶▶** dial, so “INIT START” is displayed and Mode setting for shipping starts.
- 4. “INITIAL OK” appears on the display and setting end.
By this operation, the unit is initialized as follows:

PLAY MODE	ALL DISCS
COMMAND MODE	CD 1
REPEAT	OFF
SACD/CD	SACD
M/2ch	MULTI

- 6. After 2 to 3 sec., Press the **POWER** button to turn the set off.



MEMO

REVISION HISTORY

Clicking the version allows you to jump to the revised page.

Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

[illegible]