

SCD-XE597

SERVICE MANUAL

Ver. 1.3 2006.02

AEP Model
UK Model



Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM66D-DVBU50
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	100 dB or more
Total harmonic distortion rate	0.0035 % 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	96 dB or more
Total harmonic distortion rate	0.0039 % or less
Wow and flutter	Value of measurable limit (±0.001 % W. PEAK) or less

Output connector

	Jack type	Output level	Load impedance
ANALOG 5.1CH OUT	Phono jacks	2 Vrms (at 50 kilohms)	Over 10 kilohms
DIGITAL (CD) OUT	Square optical	–18 dBm	(Light emitting wave length: 660 nm)
OPTICAL*	output connector		

* 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	230 V AC, 50/60 Hz
Power consumption	15 W
Dimensions (w/h/d)	430 × 95 × 283 mm incl. projecting parts
Mass (approx.)	3.1 kg

Supplied accessories

Audio connecting cord	Red and White × 2 (1)
Remote commander	RM-SX800 (1)
Battery	R6 (size-AA) (2)

Design and specifications are subject to change without notice.

SUPER AUDIO CD PLAYER

SONY®

TABLE OF CONTENTS

1. SERVICING NOTES	3
2. GENERAL	4
3. DISASSEMBLY	
3-1. Disassembly Flow	6
3-2. Cover	6
3-3. MAIN Board	7
3-4. Loading Panel	7
3-5. Front Panel Section	8
3-6. KEY Board, DISPLAY Board	8
3-7. CD Mechanism Deck (CDM66D-DVBU50)	9
3-8. Base Unit (DVBU50)	9
3-9. RF Board, Pick-up Unit (DBU-3)	10
3-10. Belt (LD), LOADING Board, Motor (L) Assy	10
4. DIAGRAMS	
4-1. Block Diagram	12
4-2. Printed Wiring Board — RF Section —	13
4-3. Schematic Diagram — RF Section —	14
4-4. Printed Wiring Board — MAIN Section —	15
4-5. Schematic Diagram — MAIN Section (1/4) —	16
4-6. Schematic Diagram — MAIN Section (2/4) —	17
4-7. Schematic Diagram — MAIN Section (3/4) —	18
4-8. Schematic Diagram — MAIN Section (4/4) —	19
4-9. Printed Wiring Board — DISPLAY Section —	20
4-10. Schematic Diagram — DISPLAY Section —	21
5. TEST MODE	22
6. EXPLODED VIEWS	
6-1. Main Section	23
6-2. Front Panel Section	24
6-3. CD Mechanism Deck	25
6-4. Base Unit (DVBU50)	26
7. ELECTRICAL PARTS LIST	27

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.

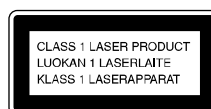
The flexible board is easily damaged and should be handled with care.

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.



This appliance is classified as a CLASS 1 LASER product. This label 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 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.

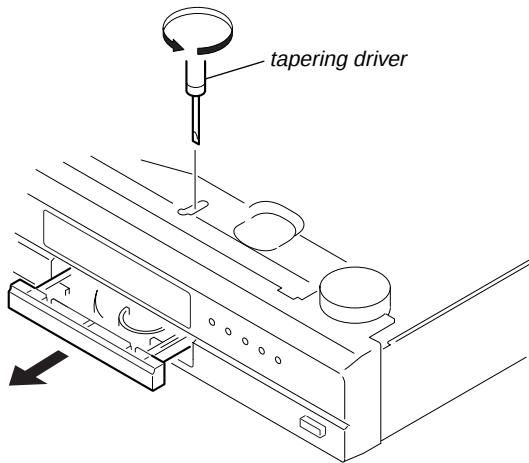
SAFETY-RELATED COMPONENT WARNING!!

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.

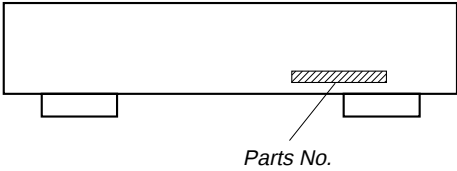
SECTION 1
SERVICING NOTES

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.

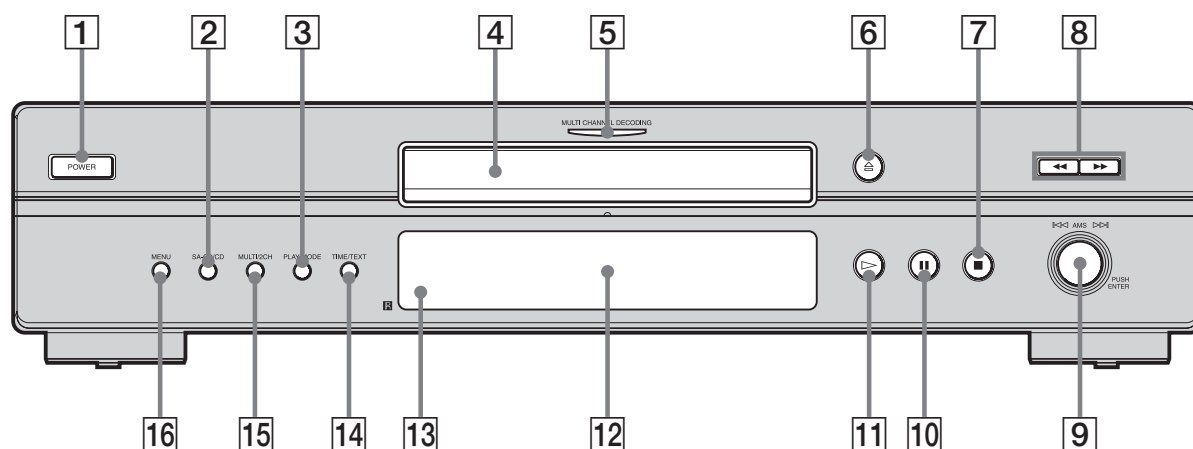


MODEL IDENTIFICATION
– Back Panel –



MODEL	Part No.
AEP Model	4-255-245-0□
UK Model	4-255-245-1□

Front Panel

**1 POWER switch (9)****2 SA-CD/CD button (5, 9)**

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.

3 PLAY MODE button (13, 14)

Press to select the play mode.

4 Disc tray (9)**5 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.

6 AMS button (9)**7 ■ button (9, 14)****8 ◀▶ buttons (12)****9 ◀◀ AMS ▶▶ dial**

(AMS: Automatic Music Sensor) (8, 9, 10, 12, 14, 15, 16, 18)

10 ■■ button (9)**11 ▷ button (9, 12, 13, 14)****12 Display window (10)****13 Remote sensor (6)****14 TIME/TEXT button (11)**

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.

15 MULTI/2CH button (5, 9)

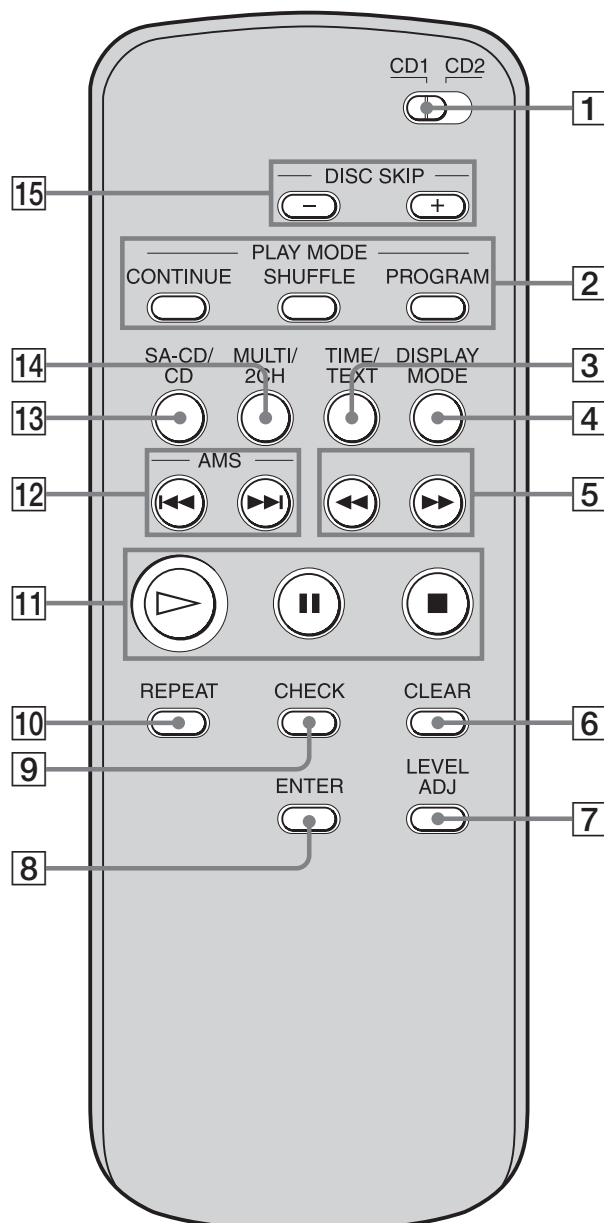
Press to select the playback area when a disc with the 2 channel area and the multi-channel area (page 5) is loaded.

16 MENU button (8, 9, 10, 12, 15, 16, 18)

Press to enter the menu.

Press to exit from the menu and return to the normal display.

Remote



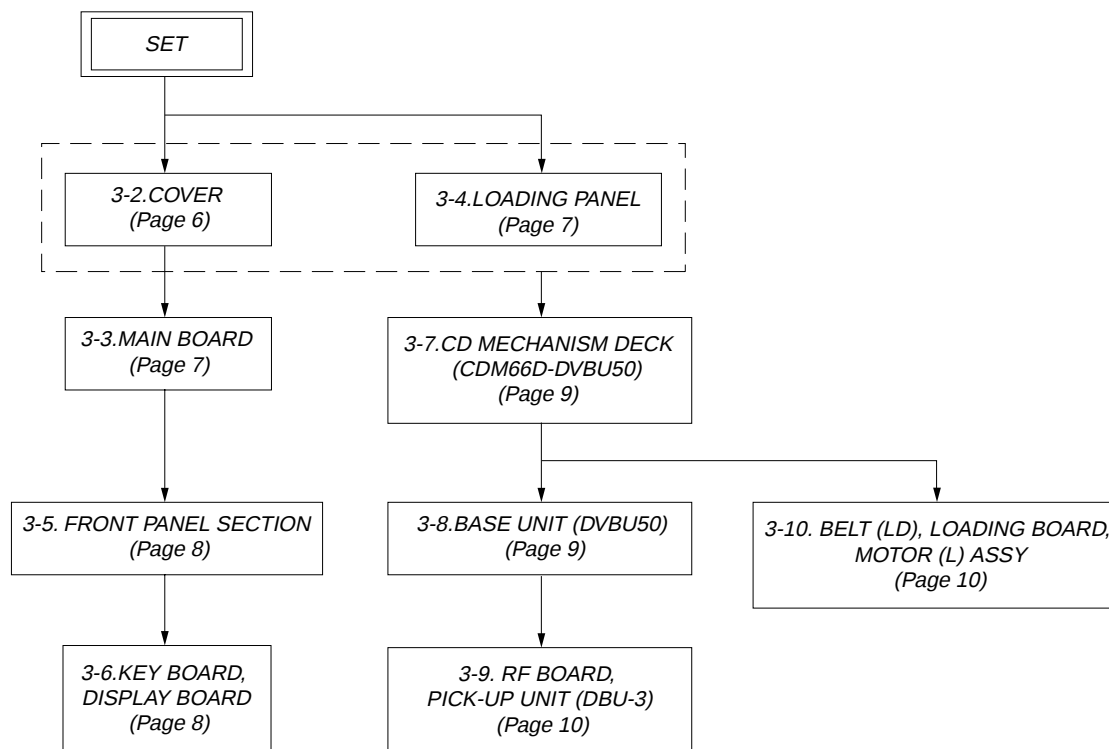
- 1 CD1/2 (command mode) switch (8)**
Select the command mode.
- 2 CONTINUE button (13, 14)**
Press to resume Continuous Play from Shuffle Play or Program Play.
SHUFFLE button (13)
PROGRAM button (14)
- 3 TIME/TEXT button (11)**
Each time you press the button, the playing time of the track, the remaining time of the disc, or TEXT information appears in the display.
- 4 DISPLAY MODE button (12)**
Press to turn the display information off or on.
- 5 ◀/▶ buttons (12)**
- 6 CLEAR button (14)**
Press to delete a programmed track number.
- 7 LEVEL ADJ button (17)**
Press to adjust the output level balance for the Multi-channel management function (page 15).
- 8 ENTER button (8, 9, 10, 12, 14, 15, 17, 18)**
- 9 CHECK button (14)**
Press to check the programmed order.
- 10 REPEAT button (13)**
- 11 ▷ button (9, 12, 13, 14)**
|| button (9)
■ button (9, 14)
- 12 AMS ◀/▶ buttons**
(AMS: Automatic Music Sensor) (8, 9, 10, 12, 14, 15, 17, 18)
- 13 SA-CD/CD button (5, 9)**
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.
- 14 MULTI/2CH button (5, 9)**
Press to select the playback area when a disc with the 2 channel area and the multi-channel area (page 5) is loaded.
- 15 DISC SKIP +/- buttons***
Press to select the disc.

*This button cannot be used in this player.

SECTION 3 DISASSEMBLY

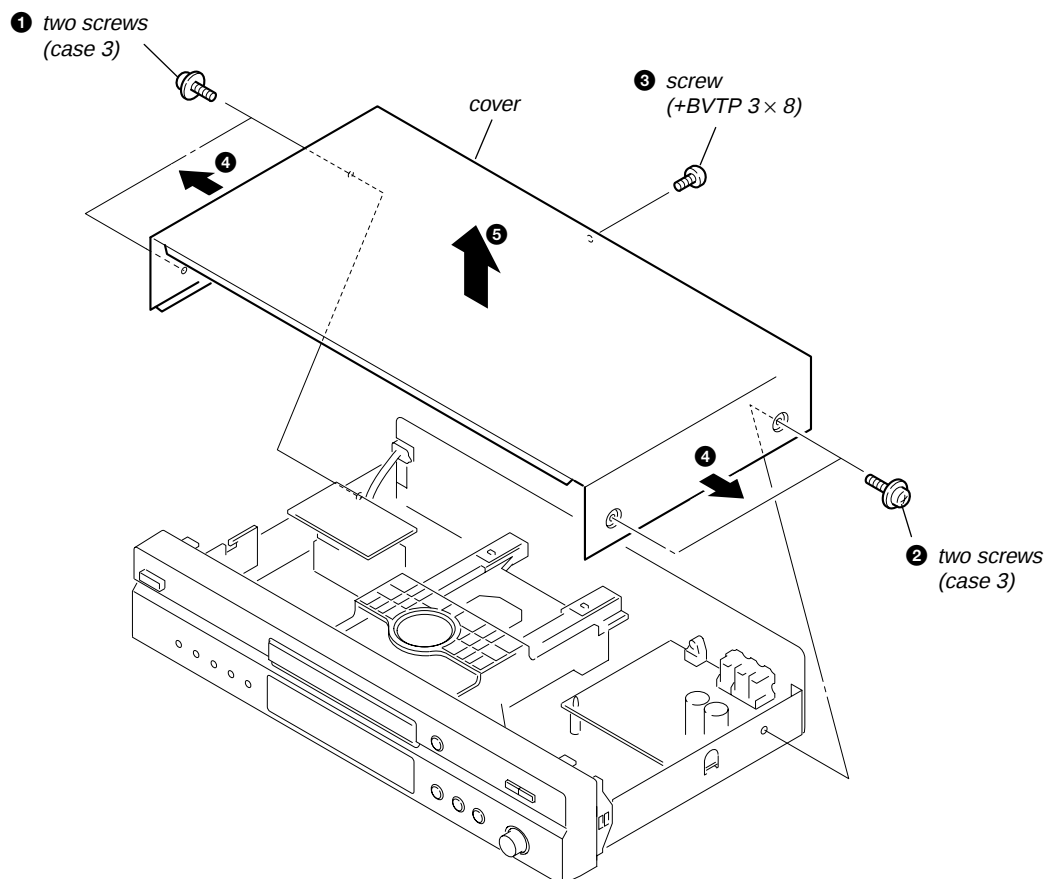
- This set can be disassembled in the order shown below.
- The dotted square with arrow (□→) prompts you to move to the next job when all of the works within the dotted square (□) are completed.

3-1. DISASSEMBLY FLOW

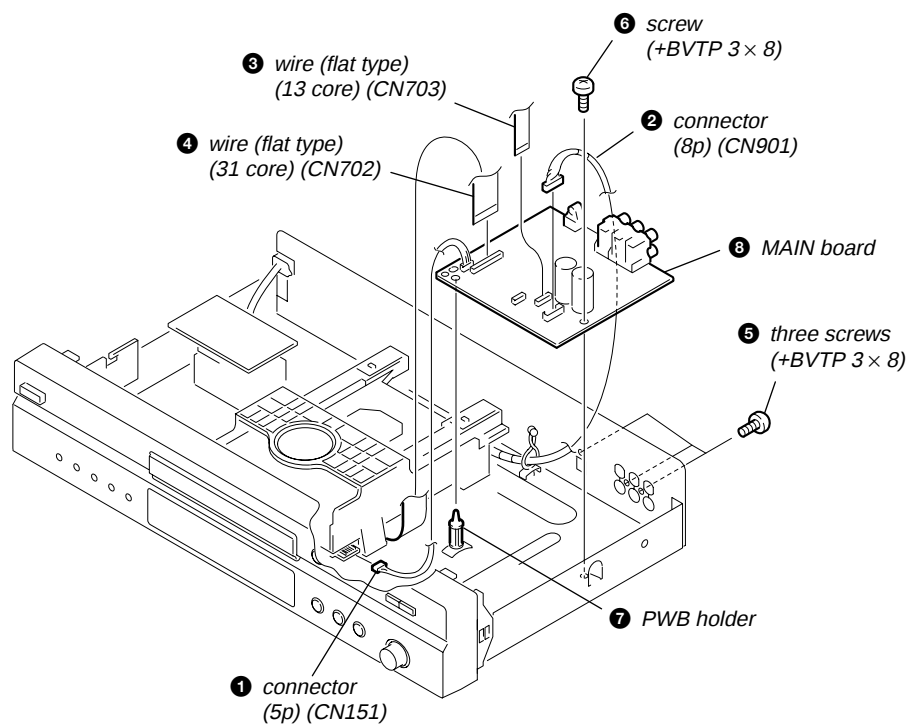


Note: Follow the disassembly procedure in the numerical order given.

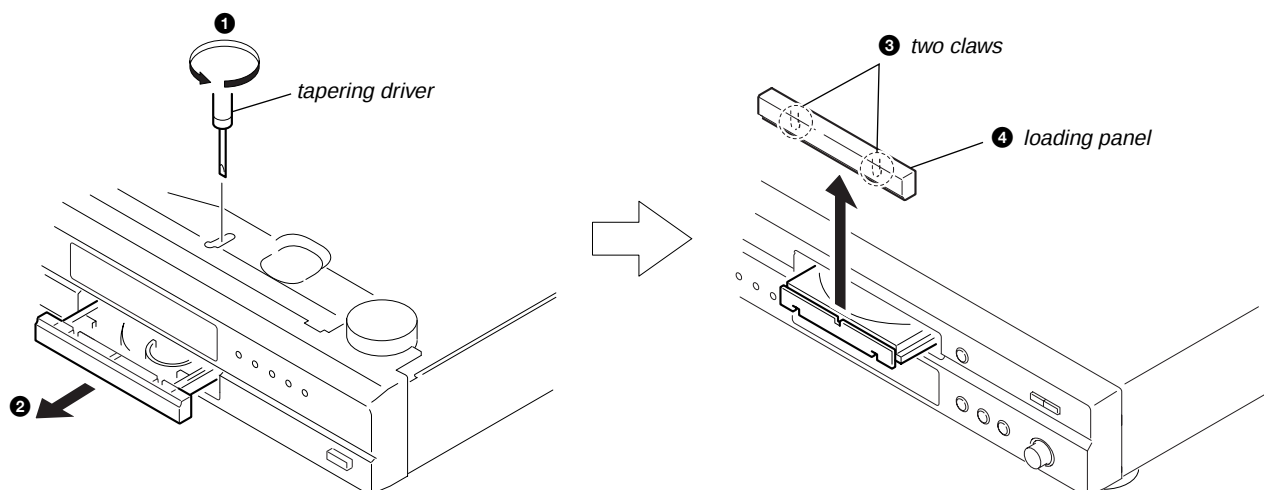
3-2. COVER



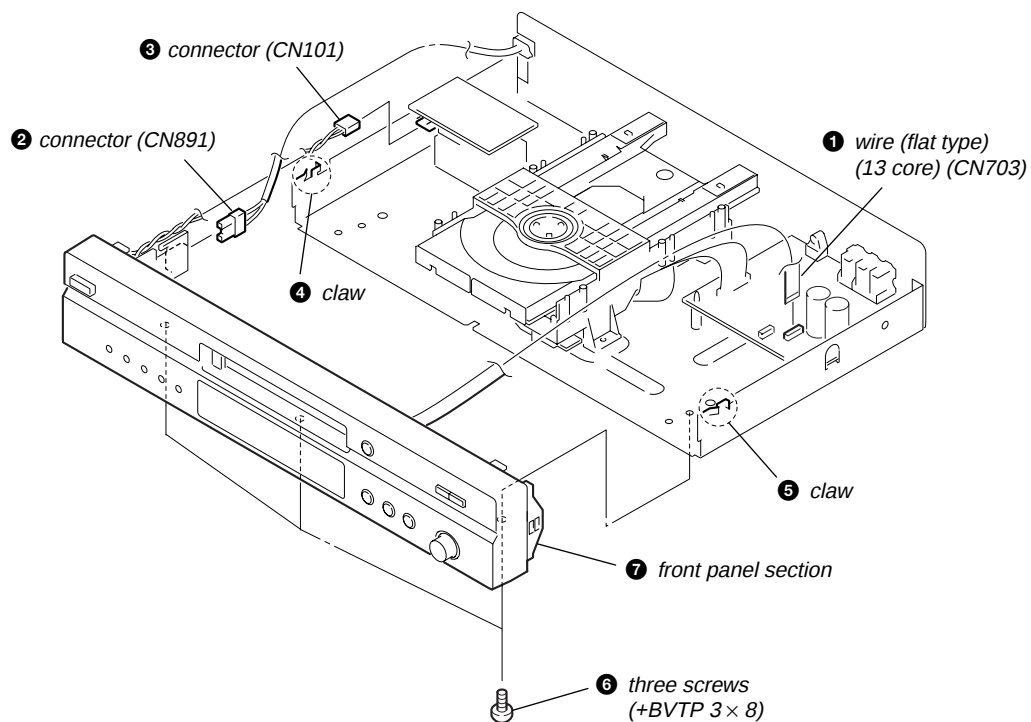
3-3. MAIN BOARD



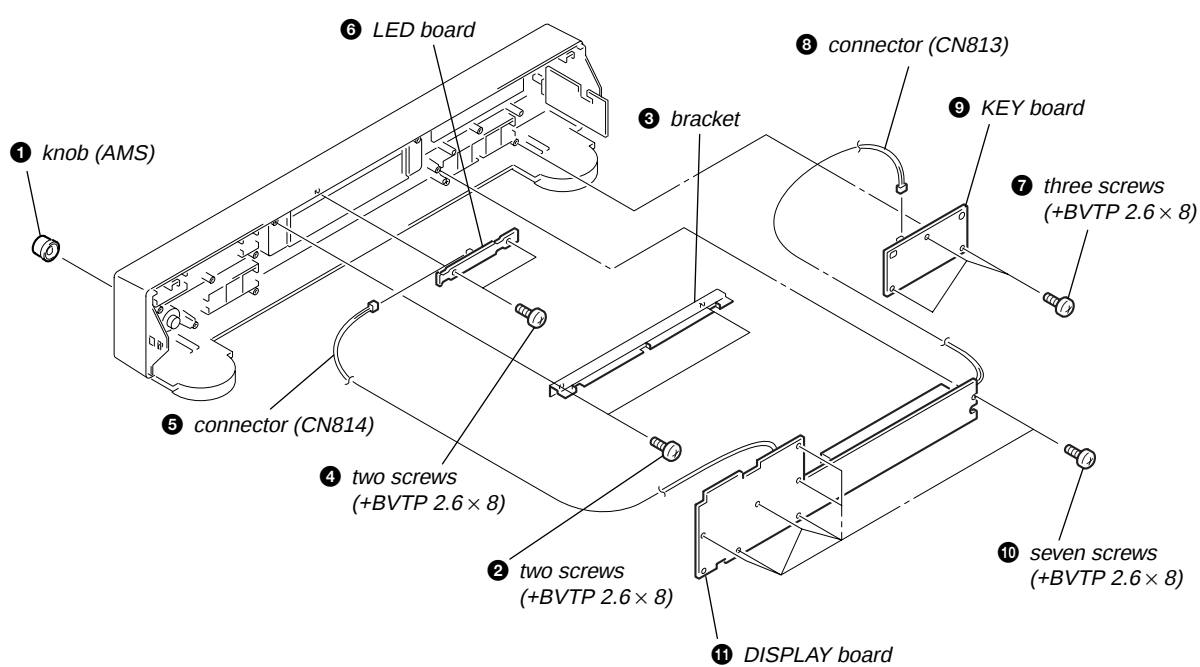
3-4. LOADING PANEL



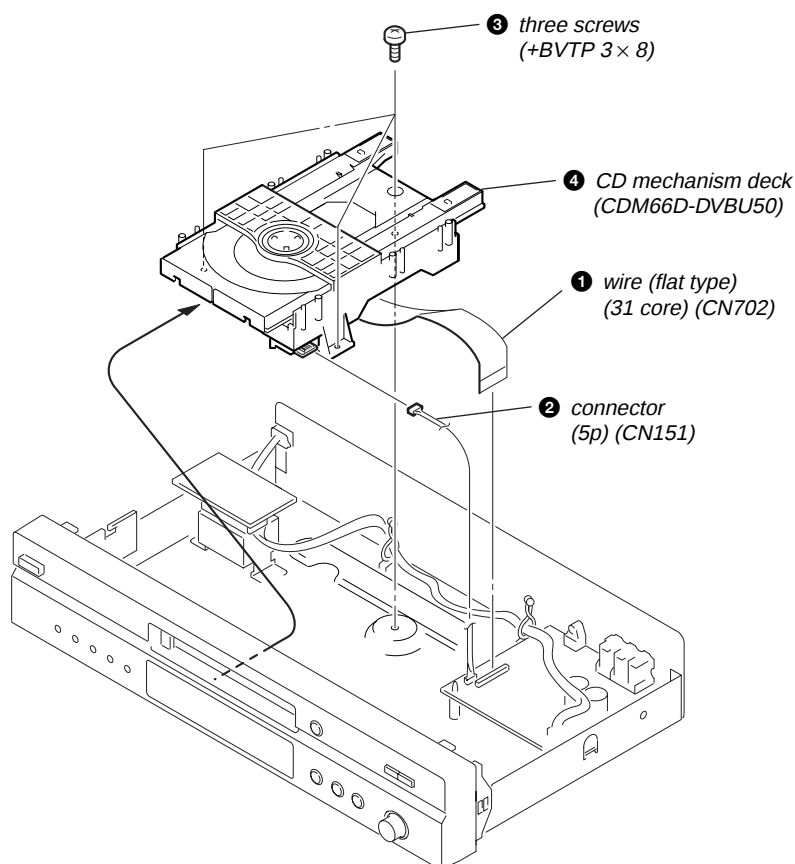
3-5. FRONT PANEL SECTION



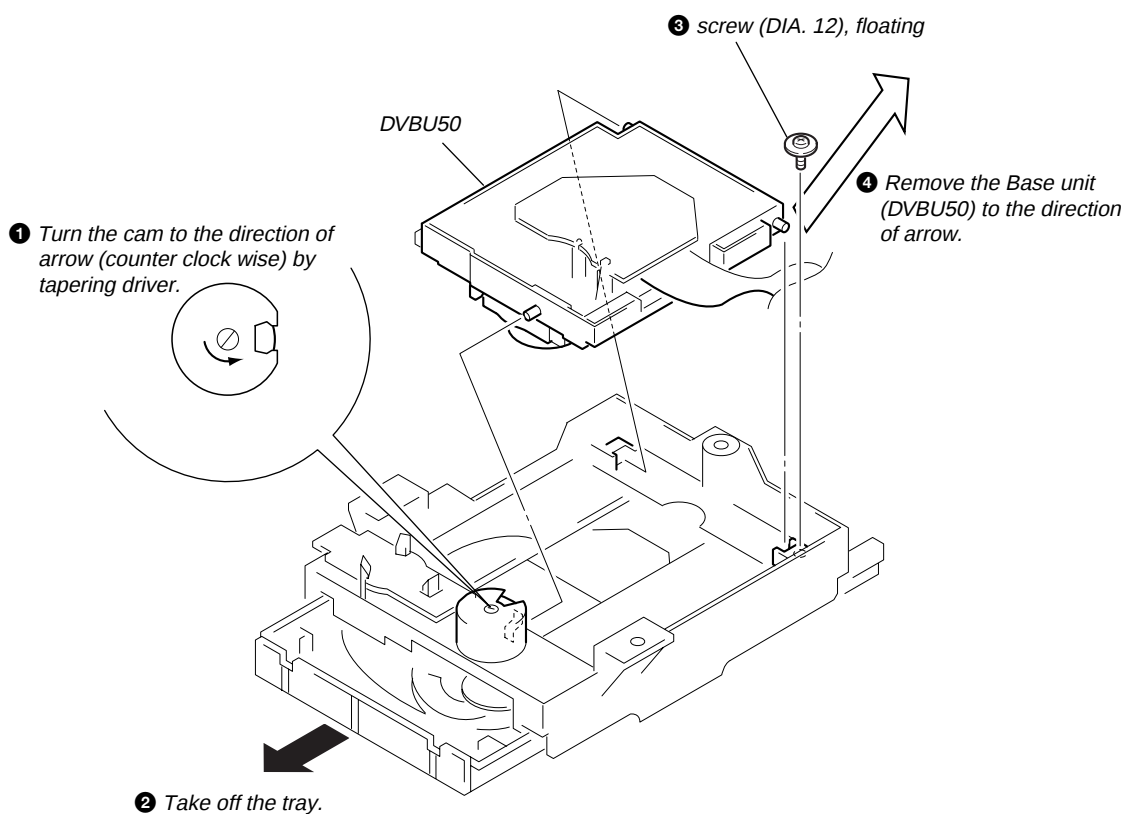
3-6. KEY BOARD, DISPLAY BOARD



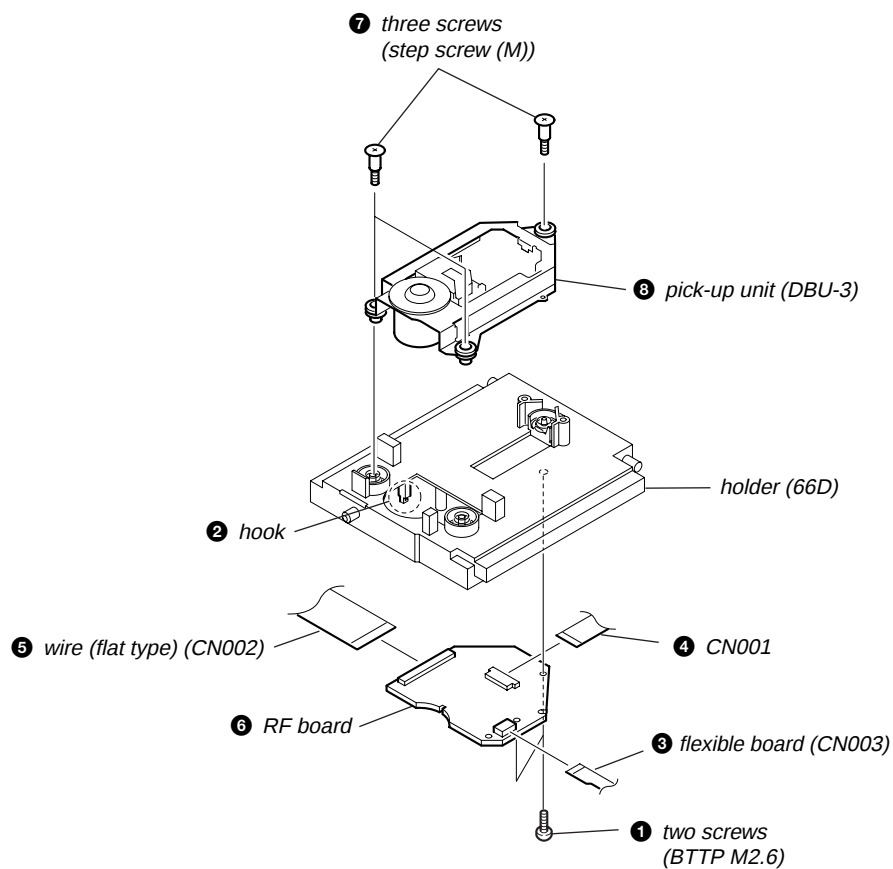
3-7. CD MECHANISM DECK (CDM66D-DVBU50)



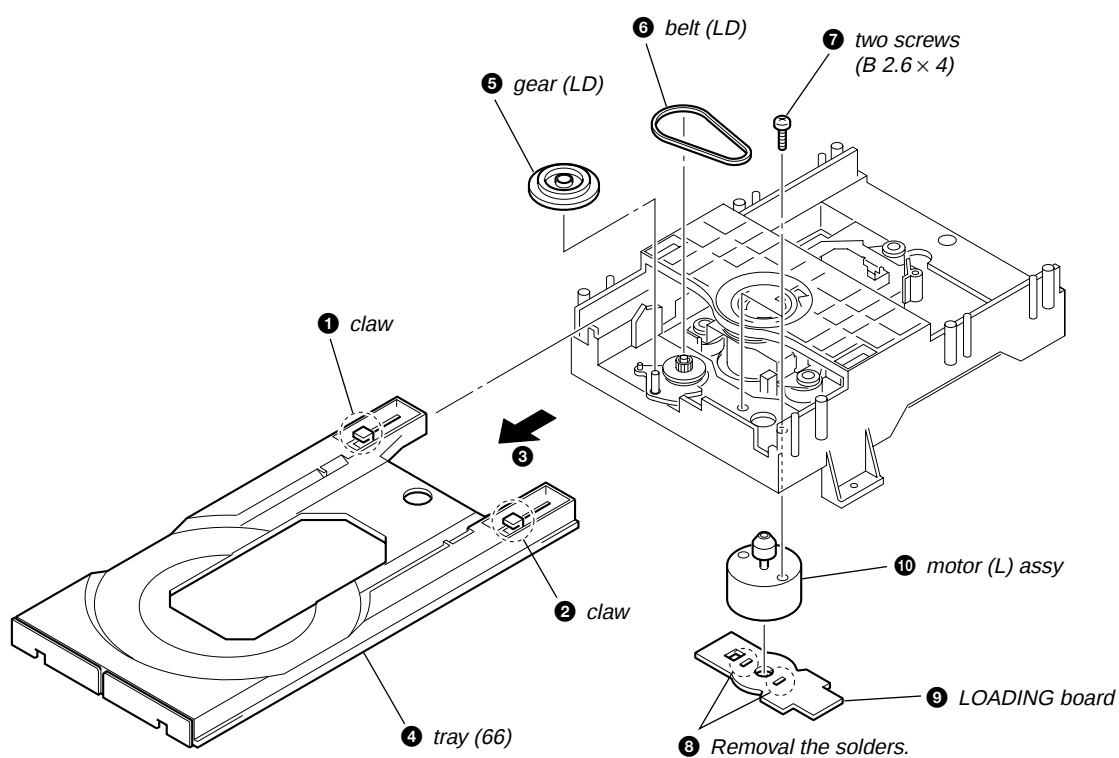
3-8. BASE UNIT (DVBU50)



3-9. RF BOARD, PICK-UP UNIT (DBU-3)



3-10. BELT (LD), LOADING BOARD, MOTOR (L) ASSY



SECTION 4
DIAGRAMS

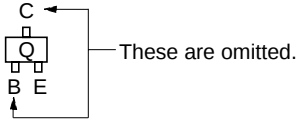
NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

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.



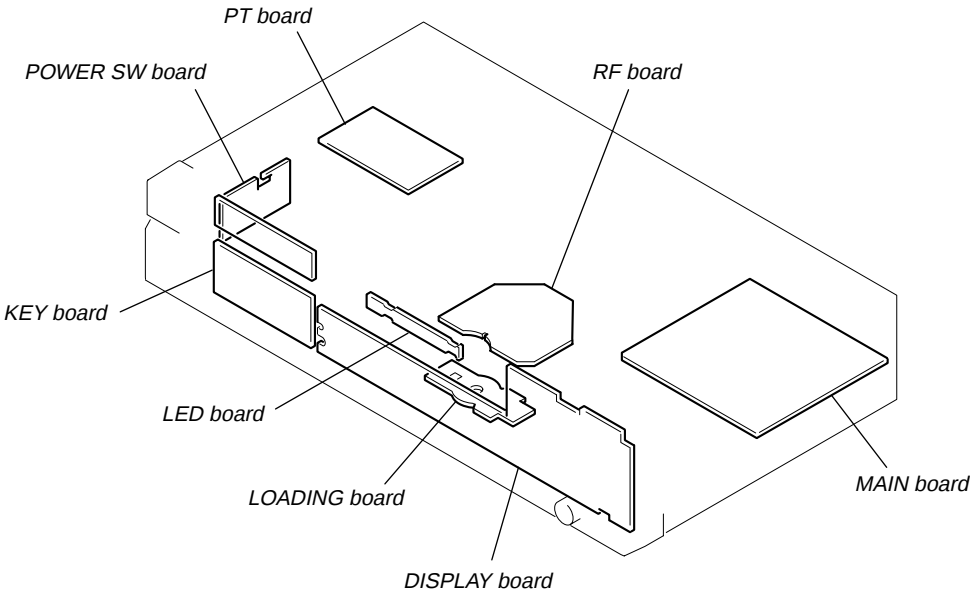
Note Schematic Diagrams.

- 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.

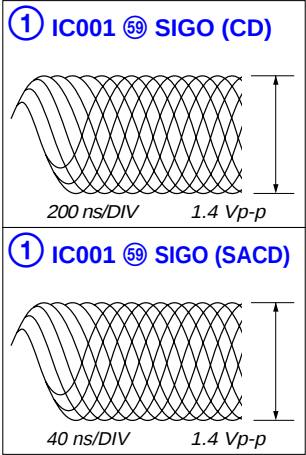
- : B+ Line.
- : B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- no mark: SACD PLAY () : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.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

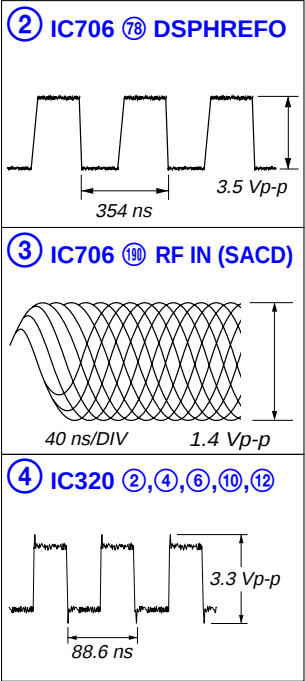


• Waveforms

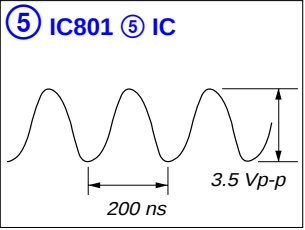
– RF Board –



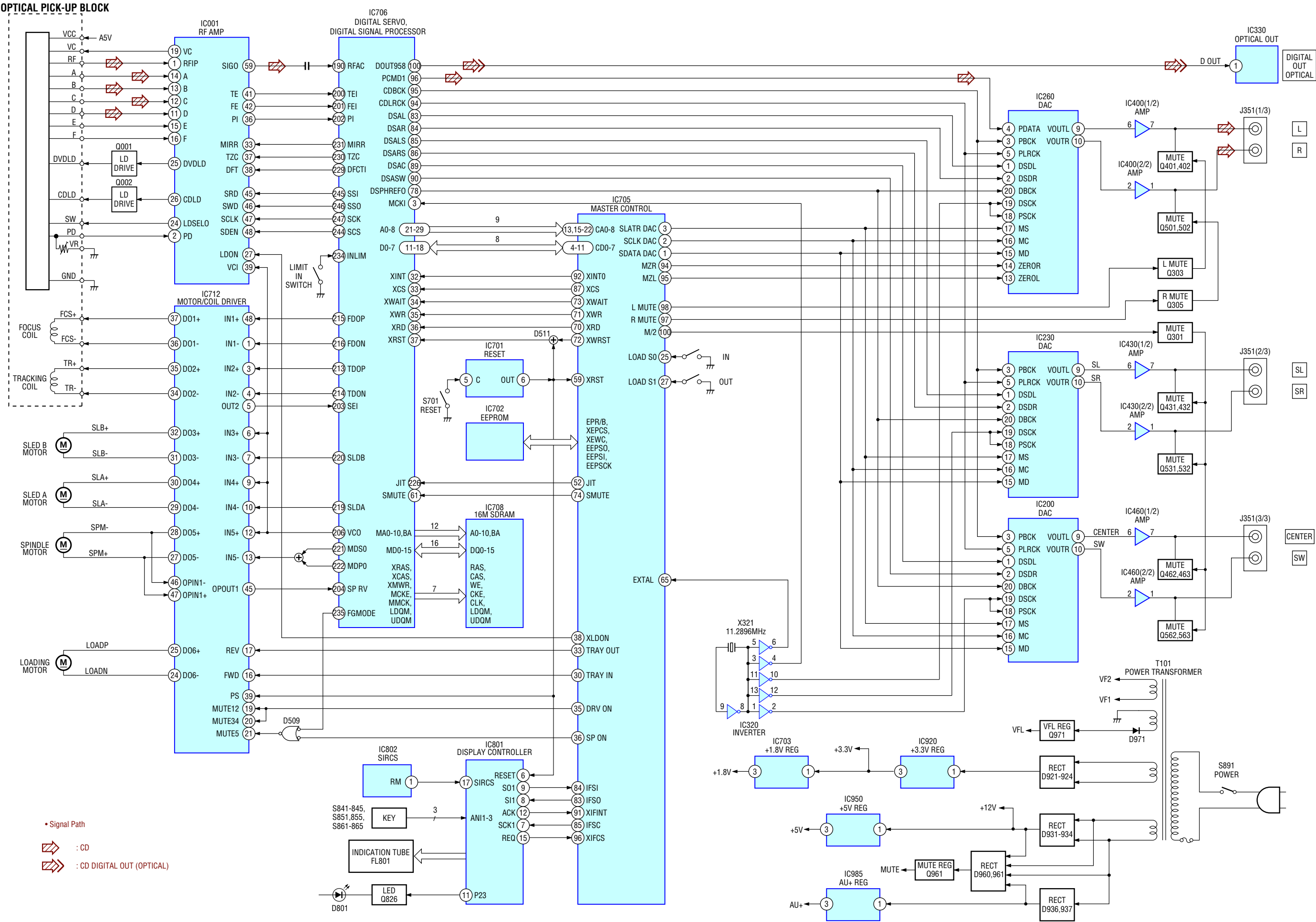
– MAIN Board –



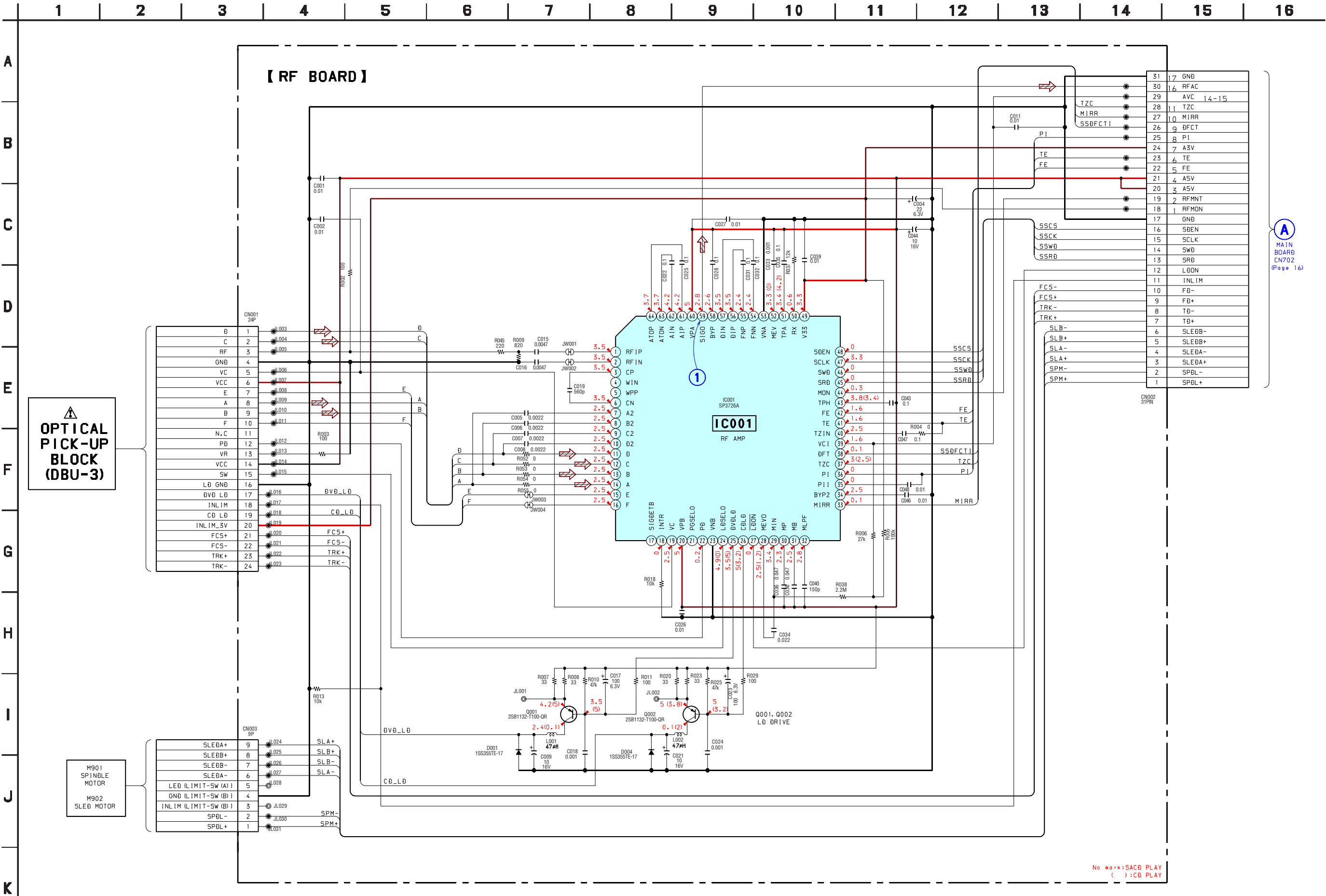
– DISPLAY Board –



4-1. BLOCK DIAGRAMS

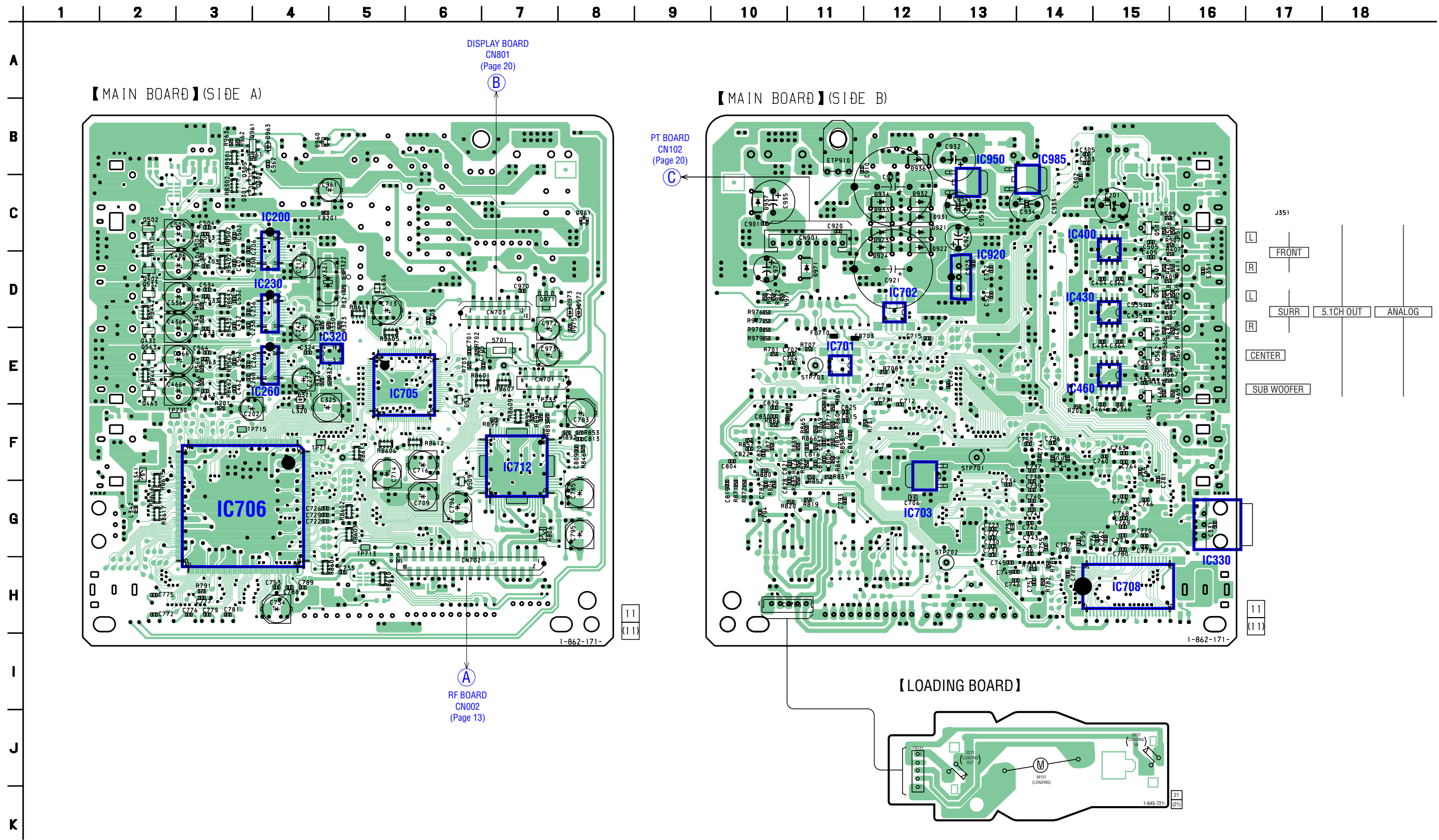


4-3. SCHEMATIC DIAGRAM — RF SECTION — • See page 11 for Waveforms.



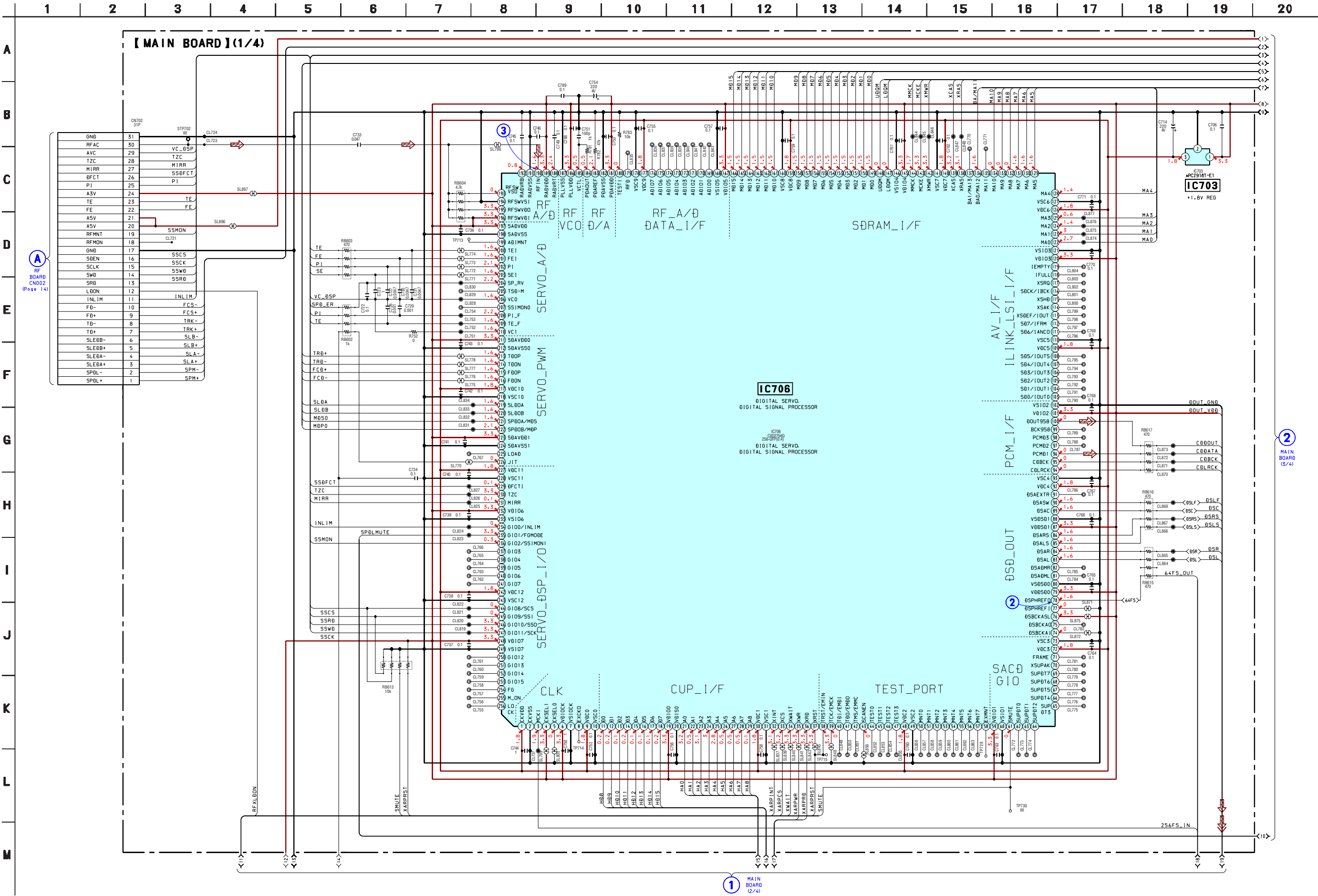
4-4. PRINTED WIRING BOARD — MAIN SECTION —

• See page 11 for Circuit Boards Location.  :Uses unleaded solder.



• Semiconductor Location

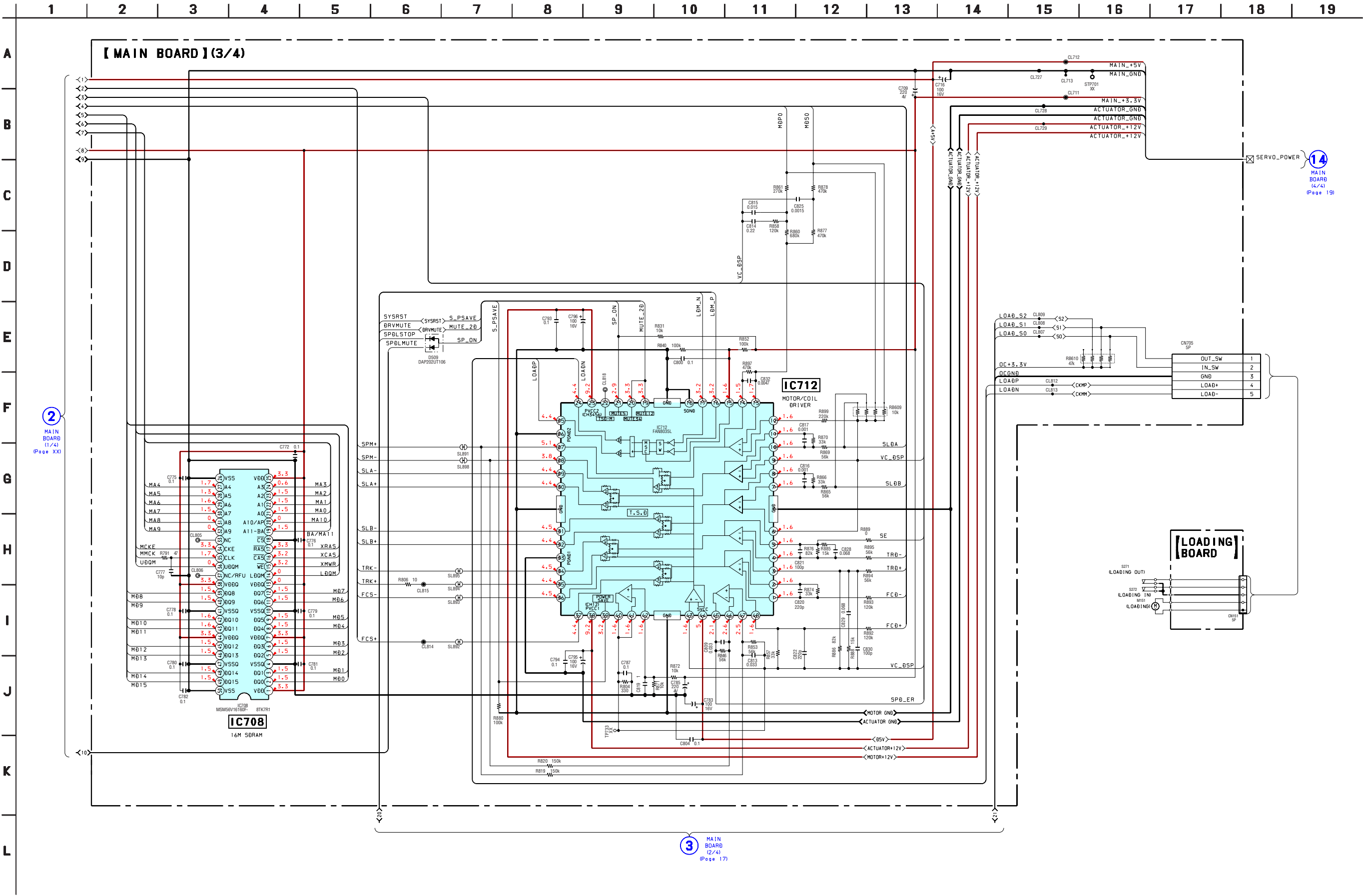
Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D321	E-4	D934	C-12	IC200	C-4	IC703	F-12	Q303	C-3	Q531	D-15
D509	G-6	D936	B-12	IC230	D-4	IC705	E-5	Q305	C-3	Q532	D-2
D511	E-6	D937	C-10	IC260	E-4	IC706	G-3	Q401	C-15	Q562	E-15
D921	C-12	D960	B-4	IC320	S-5	IC708	H-15	Q402	D-2	Q563	E-2
D922	C-12	D961	C-8	IC330	G-16	IC712	F-7	Q431	D-15	Q961	B-3
D923	C-12	D963	B-4	IC400	D-15	IC920	D-13	Q432	E-2	Q971	D-7
D924	C-12	D971	D-11	IC430	D-15	IC950	B-13	Q462	E-15		
D931	C-12	D972	D-8	IC460	E-15	IC985	B-14	Q463	E-2		
D932	C-12	D973	D-8	IC701	E-11			Q501	C-15		
D933	C-12			IC702	D-12	Q301	C-3	Q502	C-2		



- See page 22 for IC Block Diagrams.

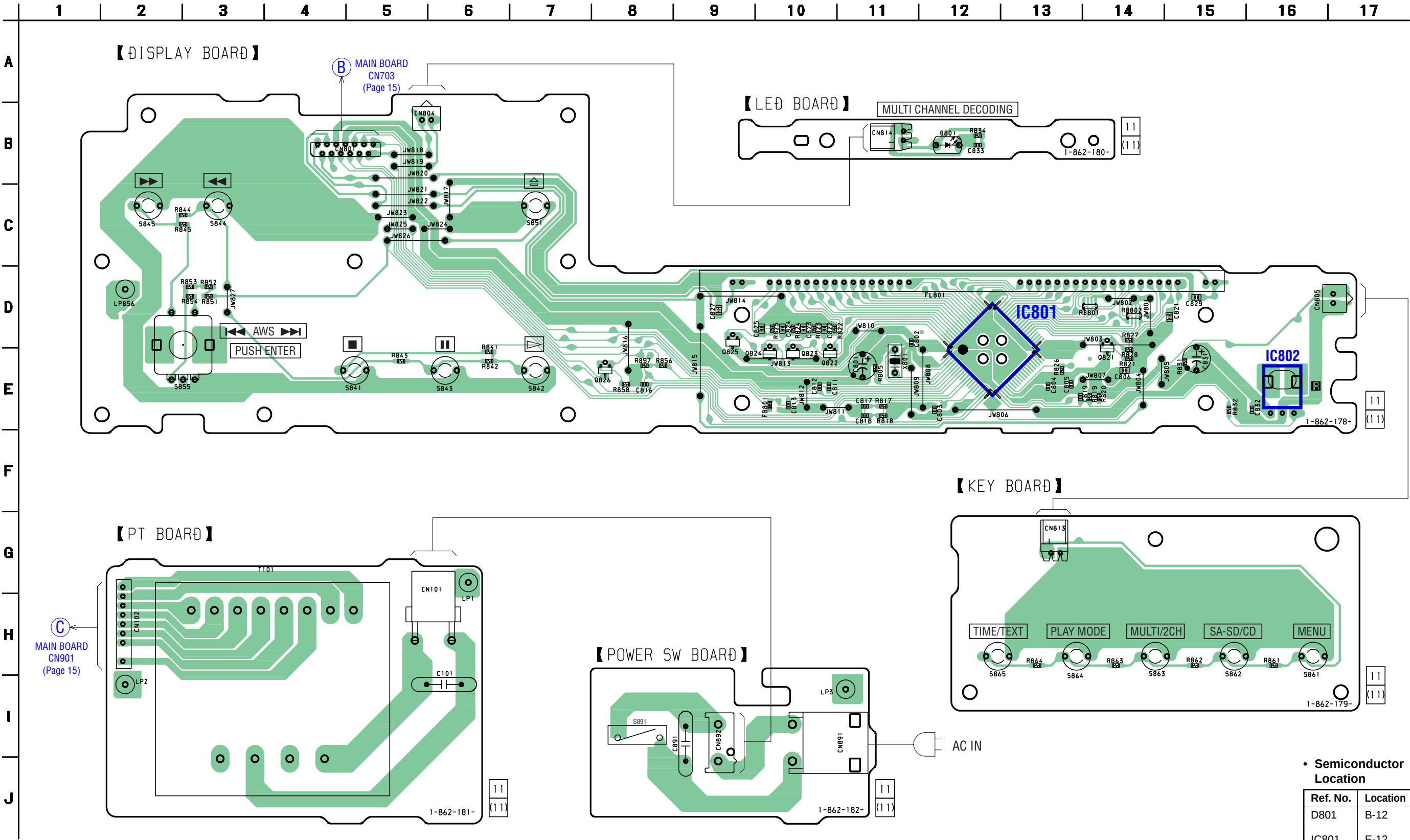


4-7. SCHEMATIC DIAGRAM — MAIN SECTION (3/4) —



19

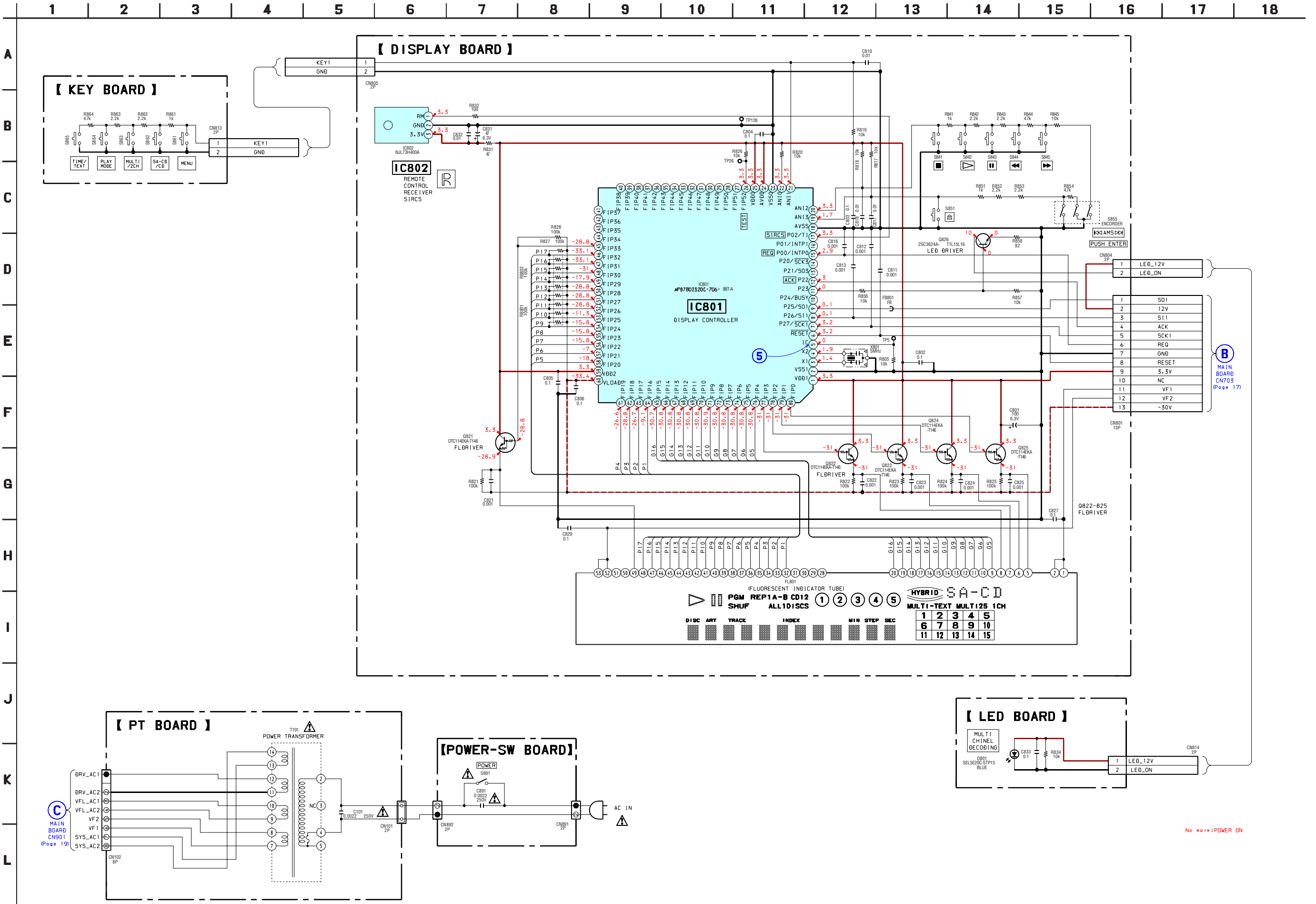
19



• Semiconductor Location

Ref. No.	Location
D801	B-12
IC801	E-12
IC802	E-16
Q821	E-14
Q822	E-10
Q823	E-10
Q824	E-10
Q825	D-9
Q826	E-8

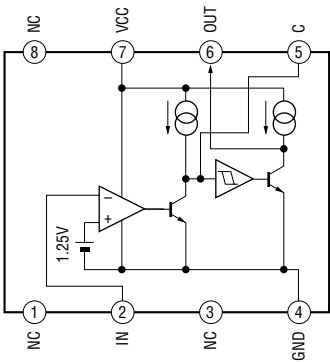
4-10. SCHEMATIC DIAGRAM — DISPLAY SECTION — • See page 11 for Waveforms.



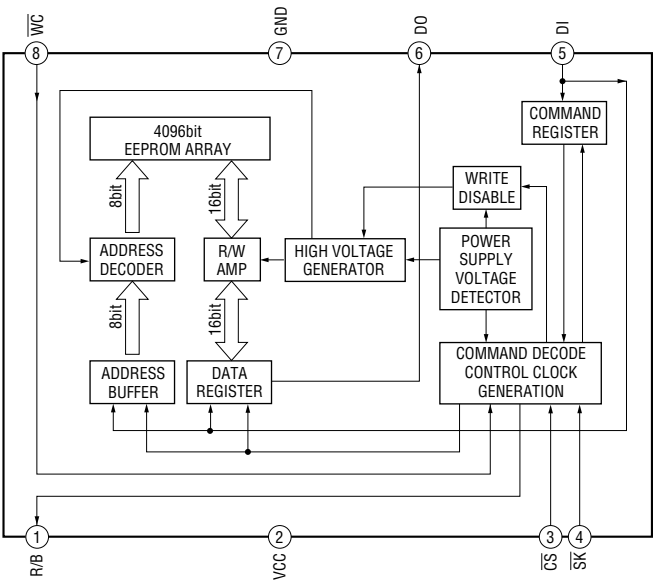
• IC Block Diagrams

– MAIN Board –

IC701 M51957BFP-600C



IC702 BR9040F-WF2



SECTION 5
TEST MODE

1. Setting Method of Test Mode

Press three buttons  ,  and  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  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 components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

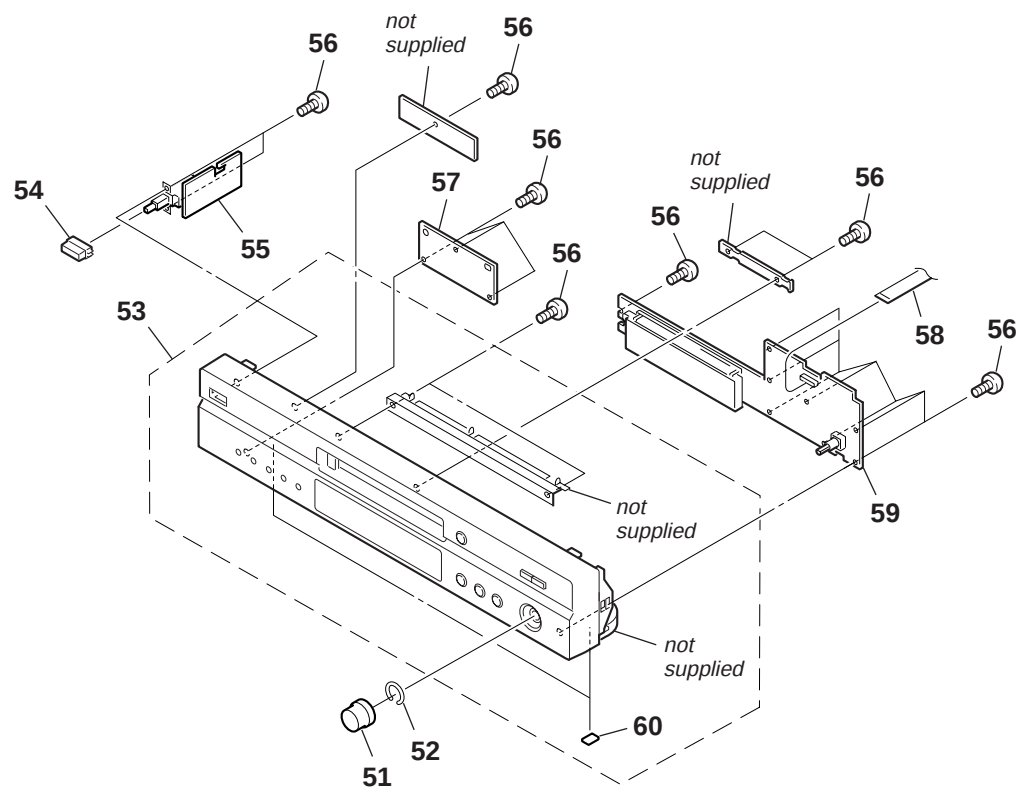
This exploded view diagram illustrates the assembly of the CDM66D-DVBU50 CD mechanism deck. The components are labeled as follows:

- 1**: A long, thin metal bracket or support rail.
- 2**: Screws used for mounting the top plate and securing the front panel section.
- 3**: The main top plate or cover of the unit.
- 4**: A small rectangular component, likely a sensor or switch, mounted on the top plate.
- 5**: A small electronic component, possibly a resistor or diode, mounted on the front panel section.
- 6**: A cable labeled "not supplied", likely for the CD mechanism deck.
- 7**: A small electronic component, possibly a resistor or diode, mounted on the front panel section.
- 8**: A printed circuit board (PCB) with various electronic components, labeled "not supplied".
- 9**: A circular component, possibly a lens or a filter, mounted on the front panel section.
- 10**: A small rectangular component, likely a sensor or switch, mounted on the front panel section.
- 11**: A screw used for mounting the CD mechanism deck.
- #1**: Screws used for mounting the front panel section and securing the top plate.

The diagram shows the front panel section (labeled "front panel section") being assembled onto the main unit. The CD mechanism deck (labeled "CD mechanism deck (CDM66D-DVBU50)") is shown being inserted into the front panel section. The front panel section is secured with screws (#1) and the top plate is secured with screws (2).

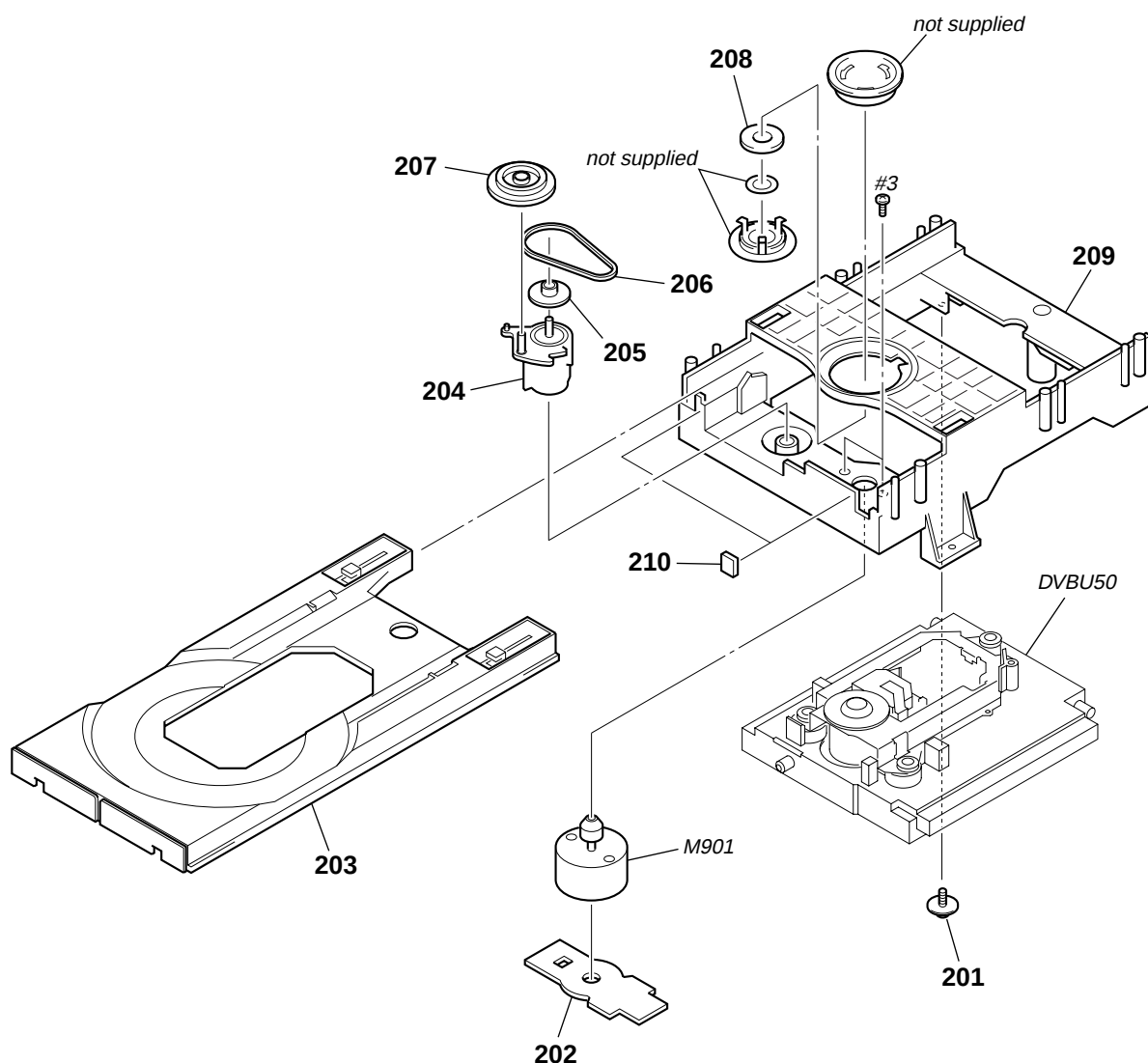
23

6-2. FRONT PANEL SECTION



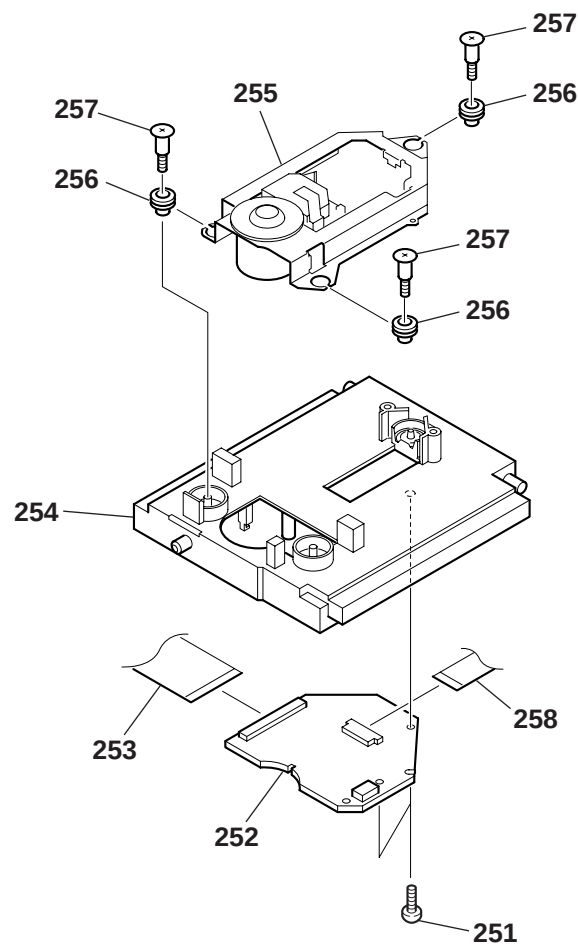
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-232-622-01	KNOB (AMS) (BLACK)		54	4-255-244-11	BUTTON, POWER (SILVER)	
51	4-232-622-31	KNOB (AMS) (SILVER)		54	4-255-244-31	BUTTON, POWER (SILVER: for Hair-line Finish)	
51	4-232-622-41	KNOB (AMS)		55	1-862-182-11	POWER SW BOARD	
		(SILVER: SILVER: for Hair-line Finish)		56	3-087-053-01	+BVTP2.6 (3CR)	
52	3-354-981-11	SPRING (SUS), RING		57	1-862-179-11	KEY BOARD	
53	X-2103-118-1	PANEL, FRONT ASSY (SILVER: Hair-line Finish)		58	1-828-333-11	WIRE (FLAT TYPE) (13 CORE)	
53	X-4956-440-1	PANEL, FRONT ASSY (BLACK)		59	A-4752-665-A	DISPLAY BOARD, COMPLETE	
53	X-4956-441-1	PANEL, FRONT ASSY (SILVER)		60	4-977-358-01	CUSHION	
54	4-255-244-01	BUTTON, POWER (BLACK)					

6-3. CD MECHANISM DECK



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	4-227-899-01	SCREW (DIA.12), FLOATING		207	4-232-711-01	GEAR (LD)	
202	1-645-721-11	LOADING BOARD		208	3-053-844-01	YOKE	
203	4-231-530-12	TRAY (66)		209	4-231-529-01	CHASSIS (66)	
204	4-232-712-05	CAM (66)		210	4-232-682-01	CUSHION (66)	
205	4-232-710-01	PULLEY (LD)		M901	A-4604-363-A	MOTOR (L) ASSY (LOADING)	
206	4-232-713-01	BELT (LD)		#3	7-621-775-10	SCREW +B 2.6X4	

6-4. BASE UNIT (DVBU50)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	4-218-253-52	SCREW (M2.6), +BTTP		△ 255	A-4713-410-A	PICK-UP UNIT (DBU-3)	
252	A-4750-527-A	RF BOARD, COMPLETE		256	3-053-847-31	INSULATOR	
253	1-829-172-11	WIRE (FLAT TYPE) (31 CORE)		257	4-981-923-01	SCREW (M), STEP	
254	4-240-953-05	HOLDER (66D)		258	1-824-106-12	CABLE, FLEXIBLE FLAT (24 CORE)	

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

DISPLAY

KEY

LED

LOADING

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
S851	1-771-349-21	SWITCH, KEYBOARD (㊦)		A-4752-595-A	MAIN BOARD, COMPLETE		
S855	1-478-268-11	ENCODER, ROTARY (◀▶ AMS ▶▶)	(PUSH ENTER)		*****		
		< VIBRATOR >			< CAPACITOR >		
X801	1-795-058-21	VIBRATOR, CERAMIC 5MHz		C201	1-126-916-11	ELECT 1000uF	20% 6.3V
*****				C202	1-126-205-11	ELECT CHIP 47uF	20% 6.3V
				C206	1-115-156-11	CERAMIC CHIP 1uF	10V
				C208	1-115-156-11	CERAMIC CHIP 1uF	10V
	1-862-179-11	KEY BOARD		C212	1-128-991-21	ELECT CHIP 10uF	20% 50V

		< CONNECTOR >		C236	1-115-156-11	CERAMIC CHIP 1uF	10V
				C238	1-115-156-11	CERAMIC CHIP 1uF	10V
CN813	1-506-481-11	PIN, CONNECTOR 2P		C242	1-128-991-21	ELECT CHIP 10uF	20% 50V
		< RESISTOR >		C266	1-115-156-11	CERAMIC CHIP 1uF	10V
				C268	1-115-156-11	CERAMIC CHIP 1uF	10V
R861	1-216-821-11	METAL CHIP 1K 5% 1/10W		C272	1-128-991-21	ELECT CHIP 10uF	20% 50V
R862	1-216-825-11	METAL CHIP 2.2K 5% 1/10W		C281	1-162-966-11	CERAMIC CHIP 0.0022uF	10% 50V
R863	1-216-825-11	METAL CHIP 2.2K 5% 1/10W		C302	1-164-156-11	CERAMIC CHIP 0.1uF	25V
R864	1-216-829-11	METAL CHIP 4.7K 5% 1/10W		C303	1-164-156-11	CERAMIC CHIP 0.1uF	25V
				C305	1-164-156-11	CERAMIC CHIP 0.1uF	25V
		< SWITCH >					
S861	1-771-349-21	SWITCH, KEYBOARD (MENU)		C321	1-162-917-11	CERAMIC CHIP 15PF	5% 50V
S862	1-771-349-21	SWITCH, KEYBOARD (SA-CD/CD)		C322	1-162-917-11	CERAMIC CHIP 15PF	5% 50V
S863	1-771-349-21	SWITCH, KEYBOARD (MULTI/2CH)		C324	1-115-156-11	CERAMIC CHIP 1uF	10V
S864	1-771-349-21	SWITCH, KEYBOARD (PLAY MODE)		C325	1-126-206-11	ELECT CHIP 100uF	20% 6.3V
S865	1-771-349-21	SWITCH, KEYBOARD (TIME/TEXT)		C331	1-164-156-11	CERAMIC CHIP 0.1uF	25V

		LED BOARD		C351	1-164-156-11	CERAMIC CHIP 0.1uF	25V
		*****		C362	1-164-156-11	CERAMIC CHIP 0.1uF	25V
		< CAPACITOR >		C364	1-164-156-11	CERAMIC CHIP 0.1uF	25V
				C366	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C833	1-164-156-11	CERAMIC CHIP 0.1uF 25V		G402	1-115-416-11	CERAMIC CHIP 0.001uF	5% 25V
		< CONNECTOR >					
				C403	1-164-217-11	CERAMIC CHIP 150PF	5% 50V
CN814	1-506-481-11	PIN, CONNECTOR 2P		C404	1-115-156-11	CERAMIC CHIP 1uF	10V
		< DIODE >		C405	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
				C406	1-128-992-21	ELECT CHIP 47uF	20% 25V
D801	6-500-647-01	DIODE SEL5E20C-STP15		C432	1-115-416-11	CERAMIC CHIP 0.001uF	5% 25V
		< RESISTOR >					
				C463	1-164-217-11	CERAMIC CHIP 150PF	5% 50V
R834	1-216-833-11	METAL CHIP 10K 5% 1/10W		C464	1-115-156-11	CERAMIC CHIP 1uF	10V
*****				C465	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
				C466	1-128-992-21	ELECT CHIP 47uF	20% 25V
	1-645-721-11	LOADING BOARD		C502	1-115-416-11	CERAMIC CHIP 0.001uF	5% 25V

		< CONNECTOR >		C503	1-164-217-11	CERAMIC CHIP 150PF	5% 50V
				C504	1-115-156-11	CERAMIC CHIP 1uF	10V
* CN151	1-568-943-11	PIN, CONNECTOR 5P		C505	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
		< SWITCH >		C506	1-128-992-21	ELECT CHIP 47uF	20% 25V
				C532	1-115-416-11	CERAMIC CHIP 0.001uF	5% 25V
S271	1-572-086-11	SWITCH, LEAF		C533	1-164-217-11	CERAMIC CHIP 150PF	5% 50V
S272	1-572-086-11	SWITCH, LEAF		C534	1-115-156-11	CERAMIC CHIP 1uF	10V
*****				C535	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V
				C536	1-128-992-21	ELECT CHIP 47uF	20% 25V
				C562	1-115-416-11	CERAMIC CHIP 0.001uF	5% 25V
				C563	1-164-217-11	CERAMIC CHIP 150PF	5% 50V
				C564	1-115-156-11	CERAMIC CHIP 1uF	10V
				C565	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V

MAIN

Ref. No.	Part No.	Description	Remark			Ref. No.	Part No.	Description	Remark		
C566	1-128-992-21	ELECT CHIP	47uF	20%	25V	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
						C772	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C702	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V	C775	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C703	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C776	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C704	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
						C779	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C709	1-126-246-11	ELECT CHIP	220uF	20%	4V	C780	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C711	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C781	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C712	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
						C785	1-126-246-11	ELECT CHIP	220uF	20%	4V
C715	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C787	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C716	1-117-681-11	ELECT CHIP	100uF	20%	16V	C788	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C721	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	C793	1-164-156-11	CERAMIC CHIP	0.1uF		25V
						C794	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C726	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	C795	1-117-681-11	ELECT CHIP	100uF	20%	16V
C727	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	C796	1-117-681-11	ELECT CHIP	100uF	20%	16V
C729	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V						
C730	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	C800	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C731	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V	C804	1-164-156-11	CERAMIC CHIP	0.1uF		25V
						C809	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C733	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V	C813	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C734	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C814	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C736	1-164-156-11	CERAMIC CHIP	0.1uF		25V						
C737	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C815	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C738	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C816	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
						C817	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C739	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C819	1-115-156-11	CERAMIC CHIP	1uF		10V
C740	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C820	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
C741	1-164-156-11	CERAMIC CHIP	0.1uF		25V						
C742	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C821	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C743	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C822	1-164-816-11	CERAMIC CHIP	220PF	2%	50V
						C825	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C744	1-115-156-11	CERAMIC CHIP	1uF		10V	C828	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C745	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C829	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C746	1-164-156-11	CERAMIC CHIP	0.1uF		25V						
C748	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C830	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C749	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C832	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
						C901	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C750	1-115-156-11	CERAMIC CHIP	1uF		10V	C910	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C751	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	C920	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C752	1-164-156-11	CERAMIC CHIP	0.1uF		25V						
C753	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C921	1-128-546-11	ELECT	10000uF	20%	10V
C754	1-126-246-11	ELECT CHIP	220uF	20%	4V	C923	1-164-156-11	CERAMIC CHIP	0.1uF		25V
						C924	1-126-925-91	ELECT	470uF	20%	10V
C755	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C931	1-126-939-11	ELECT	10000uF	20%	16V
C756	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C932	1-126-951-11	ELECT	470uF	20%	35V
C757	1-164-156-11	CERAMIC CHIP	0.1uF		25V						
C758	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C933	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C759	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C934	1-126-935-11	ELECT	470uF	20%	16V
						C935	1-126-767-11	ELECT	1000uF	20%	16V
C760	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C953	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C761	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C954	1-126-925-91	ELECT	470uF	20%	10V
C762	1-164-156-11	CERAMIC CHIP	0.1uF		25V						
C763	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C961	1-128-991-21	ELECT CHIP	10uF	20%	50V
C764	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C962	1-164-156-11	CERAMIC CHIP	0.1uF		25V
						C970	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C765	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C971	1-128-552-51	ELECT	47uF	20%	63V
C766	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C972	1-128-991-21	ELECT CHIP	10uF	20%	50V
C767	1-164-156-11	CERAMIC CHIP	0.1uF		25V						
C768	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C973	1-126-395-11	ELECT CHIP	22uF	20%	16V
C769	1-164-156-11	CERAMIC CHIP	0.1uF		25V						

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< CONNECTOR >				IC985	8-759-460-81	IC BA12FP-E2	
CN701	1-784-368-11	CONNECTOR, FFC/FPC 9P		< JACK >			
CN702	1-784-387-11	CONNECTOR, FFC/FPC 31P		J351	1-785-536-11	JACK, PIN 6P	
CN703	1-793-989-21	CONNECTOR, FFC/FPC 13P		< TRANSISTOR >			
* CN705	1-568-954-11	PIN, CONNECTOR 5P		Q301	8-729-924-04	TRANSISTOR	UN5116-TX
CN901	1-784-924-11	PIN, CONNECTOR 8P		Q303	8-729-924-04	TRANSISTOR	UN5116-TX
< DIODE >				Q305	8-729-924-04	TRANSISTOR	UN5116-TX
D321	8-719-027-76	DIODE 1SS357-TPH3		Q401	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16
D509	8-719-941-09	DIODE DAP202UT106		Q402	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16
D511	8-719-941-09	DIODE DAP202UT106		Q431	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16
D921	8-719-053-18	DIODE 1SR154-400TE-25		Q432	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16
D922	8-719-053-18	DIODE 1SR154-400TE-25		Q462	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16
D923	8-719-053-18	DIODE 1SR154-400TE-25		Q463	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16
D924	8-719-053-18	DIODE 1SR154-400TE-25		Q501	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16
D931	8-719-053-18	DIODE 1SR154-400TE-25		Q502	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16
D932	8-719-053-18	DIODE 1SR154-400TE-25		Q531	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16
D933	8-719-053-18	DIODE 1SR154-400TE-25		Q532	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16
D934	8-719-053-18	DIODE 1SR154-400TE-25		Q562	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16
D936	8-719-053-18	DIODE 1SR154-400TE-25		Q563	8-729-141-73	TRANSISTOR	2SC3624A-T1L15L16
D937	8-719-053-18	DIODE 1SR154-400TE-25		Q961	8-729-027-56	TRANSISTOR	DTC143TKA-T146
D960	8-719-941-86	DIODE DAN202UT106		Q971	8-729-019-72	TRANSISTOR	2SB1260T100
D961	8-719-941-86	DIODE DAN202UT106		< RESISTOR >			
D963	6-500-696-01	DIODE UDZSTE-173.0B		R201	1-216-833-11	METAL CHIP	10K 5% 1/10W
D971	8-719-053-18	DIODE 1SR154-400TE-25		R202	1-216-839-11	METAL CHIP	33K 5% 1/10W
D972	8-719-083-87	DIODE UDZS-TE17-33B		R321	1-216-857-11	METAL CHIP	1M 5% 1/10W
D973	8-719-069-60	DIODE UDZSTE-179.1B		R322	1-216-864-11	SHORT CHIP	0
< GROUND TERMINAL BOARD >				R323	1-216-821-11	METAL CHIP	1K 5% 1/10W
ETP910	1-537-771-21	TERMINAL BOARD, GROUND		R324	1-216-809-11	METAL CHIP	100 5% 1/10W
< FERRITE BEAD >				R326	1-216-801-11	METAL CHIP	22 5% 1/10W
FB201	1-500-283-11	INDUCTOR, FERRITE BEAD		R328	1-216-801-11	METAL CHIP	22 5% 1/10W
FB703	1-414-595-11	INDUCTOR, FERRITE BEAD		R330	1-216-801-11	METAL CHIP	22 5% 1/10W
FB710	1-414-595-11	INDUCTOR, FERRITE BEAD		R404	1-216-827-11	METAL CHIP	3.3K 5% 1/10W
< FILTER >				R407	1-216-845-11	METAL CHIP	100K 5% 1/10W
FL606	1-234-177-21	FILTER, CHIP EMI		R408	1-216-815-11	METAL CHIP	330 5% 1/10W
< IC >				R409	1-216-813-11	METAL CHIP	220 5% 1/10W
IC200	6-703-420-01	IC DSD1751DBQR		R411	1-216-809-11	METAL CHIP	100 5% 1/10W
IC230	6-703-420-01	IC DSD1751DBQR		R434	1-216-827-11	METAL CHIP	3.3K 5% 1/10W
IC260	6-703-420-01	IC DSD1751DBQR		R437	1-216-845-11	METAL CHIP	100K 5% 1/10W
IC320	8-759-549-25	IC SN74LVU04APWR		R438	1-216-815-11	METAL CHIP	330 5% 1/10W
IC330	6-600-012-01	IC TOTX141L		R439	1-216-813-11	METAL CHIP	220 5% 1/10W
IC400	8-759-710-97	IC NJM4565M (TE2)		R464	1-216-827-11	METAL CHIP	3.3K 5% 1/10W
IC430	8-759-710-97	IC NJM4565M (TE2)		R467	1-216-845-11	METAL CHIP	100K 5% 1/10W
IC460	8-759-710-97	IC NJM4565M (TE2)		R468	1-216-815-11	METAL CHIP	330 5% 1/10W
IC701	8-759-636-64	IC M51957BFP-600C		R469	1-216-813-11	METAL CHIP	220 5% 1/10W
* IC702	6-703-671-01	IC BR9040F-WE2		R504	1-216-827-11	METAL CHIP	3.3K 5% 1/10W
IC703	6-700-398-01	IC uPC2918T-E1		R507	1-216-845-11	METAL CHIP	100K 5% 1/10W
IC705	6-804-317-01	IC HD6432238RN51TEV		R508	1-216-815-11	METAL CHIP	330 5% 1/10W
IC706	8-752-420-59	IC CXD2754Q		R509	1-216-813-11	METAL CHIP	220 5% 1/10W
IC708	6-702-336-01	IC MSM56V16160F-8TK7R1		R511	1-216-809-11	METAL CHIP	100 5% 1/10W
IC712	6-702-157-01	IC FAN8035L		R534	1-216-827-11	METAL CHIP	3.3K 5% 1/10W
IC920	6-705-463-01	IC BA33BC0T		R537	1-216-845-11	METAL CHIP	100K 5% 1/10W
IC950	6-705-469-01	IC BA50BC0FP-E2		R538	1-216-815-11	METAL CHIP	330 5% 1/10W
				R539	1-216-813-11	METAL CHIP	220 5% 1/10W
				R564	1-216-827-11	METAL CHIP	3.3K 5% 1/10W

MAIN

POWER SW

PT

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
R567	1-216-845-11	METAL CHIP	100K	5%	1/10W		R979	1-216-833-11	METAL CHIP	10K	5%	1/10W	
R568	1-216-815-11	METAL CHIP	330	5%	1/10W								
R569	1-216-813-11	METAL CHIP	220	5%	1/10W				< COMPOSITION CIRCUIT BLOCK >				
R701	1-216-821-11	METAL CHIP	1K	5%	1/10W		RB301	1-233-414-11	RES, CHIP NETWORK			4.7K (3216)	
R702	1-216-833-11	METAL CHIP	10K	5%	1/10W		RB302	1-233-873-21	RES, CHIP NETWORK			220K (3216)	
R703	1-216-833-11	METAL CHIP	10K	5%	1/10W		RB402	1-233-419-21	RES, CHIP NETWORK			6.8K (3216)	
R707	1-216-821-11	METAL CHIP	1K	5%	1/10W		RB410	1-233-413-11	RES, CHIP NETWORK			2.2K (3216)	
R708	1-216-809-11	METAL CHIP	100	5%	1/10W		RB432	1-233-419-21	RES, CHIP NETWORK			6.8K (3216)	
R731	1-216-833-11	METAL CHIP	10K	5%	1/10W		RB441	1-233-413-11	RES, CHIP NETWORK			2.2K (3216)	
R752	1-216-864-11	SHORT CHIP	0				RB442	1-233-413-11	RES, CHIP NETWORK			2.2K (3216)	
R781	1-216-821-11	METAL CHIP	1K	5%	1/10W		RB462	1-233-419-21	RES, CHIP NETWORK			6.8K (3216)	
R782	1-216-841-11	METAL CHIP	47K	5%	1/10W		RB502	1-233-419-21	RES, CHIP NETWORK			6.8K (3216)	
R783	1-216-833-11	METAL CHIP	10K	5%	1/10W		RB532	1-233-419-21	RES, CHIP NETWORK			6.8K (3216)	
R791	1-216-805-11	METAL CHIP	47	5%	1/10W		RB562	1-233-419-21	RES, CHIP NETWORK			6.8K (3216)	
R804	1-216-815-11	METAL CHIP	330	5%	1/10W		RB601	1-236-908-11	RES, CHIP NETWORK			10K (3216)	
R806	1-216-150-91	RES-CHIP	10	5%	1/8W		RB602	1-233-412-11	RES, CHIP NETWORK			1.0K (3216)	
R819	1-216-847-11	METAL CHIP	150K	5%	1/10W		RB603	1-233-577-11	RES, CHIP NETWORK			470 (3216)	
R820	1-216-847-11	METAL CHIP	150K	5%	1/10W		RB604	1-233-414-11	RES, CHIP NETWORK			4.7K (3216)	
R831	1-216-833-11	METAL CHIP	10K	5%	1/10W		RB605	1-236-908-11	RES, CHIP NETWORK			10K (3216)	
R840	1-216-845-11	METAL CHIP	100K	5%	1/10W		RB606	1-236-908-11	RES, CHIP NETWORK			10K (3216)	
R846	1-216-842-11	METAL CHIP	56K	5%	1/10W		RB607	1-236-908-11	RES, CHIP NETWORK			10K (3216)	
R852	1-216-845-11	METAL CHIP	100K	5%	1/10W		RB609	1-236-908-11	RES, CHIP NETWORK			10K (3216)	
R853	1-216-842-11	METAL CHIP	56K	5%	1/10W		RB610	1-233-578-11	RES, CHIP NETWORK			47K (3216)	
R857	1-216-839-11	METAL CHIP	33K	5%	1/10W		RB611	1-236-908-11	RES, CHIP NETWORK			10K (3216)	
R858	1-216-846-11	METAL CHIP	120K	5%	1/10W		RB612	1-236-908-11	RES, CHIP NETWORK			10K (3216)	
R860	1-216-855-11	METAL CHIP	680K	5%	1/10W		RB613	1-236-908-11	RES, CHIP NETWORK			10K (3216)	
R861	1-216-850-11	METAL CHIP	270K	5%	1/10W		RB615	1-233-577-11	RES, CHIP NETWORK			470 (3216)	
R865	1-216-842-11	METAL CHIP	56K	5%	1/10W		RB616	1-233-577-11	RES, CHIP NETWORK			470 (3216)	
R866	1-216-839-11	METAL CHIP	33K	5%	1/10W		RB617	1-233-577-11	RES, CHIP NETWORK			470 (3216)	
R869	1-216-842-11	METAL CHIP	56K	5%	1/10W								
R870	1-216-839-11	METAL CHIP	33K	5%	1/10W				< VIBRATOR >				
R871	1-216-833-11	METAL CHIP	10K	5%	1/10W		X321	1-795-535-21	VIBRATOR, CRYSTAL				
R872	1-216-833-11	METAL CHIP	10K	5%	1/10W				*****				
R874	1-216-839-11	METAL CHIP	33K	5%	1/10W								
R876	1-216-844-11	METAL CHIP	82K	5%	1/10W			1-862-182-11	POWER SW BOARD				
R877	1-216-853-11	METAL CHIP	470K	5%	1/10W				*****				
R878	1-216-853-11	METAL CHIP	470K	5%	1/10W								
R880	1-216-845-11	METAL CHIP	100K	5%	1/10W				< CAPACITOR >				
R885	1-216-835-11	METAL CHIP	15K	5%	1/10W		△C891	1-113-920-11	CERAMIC	0.0022uF	20%	250V	
R886	1-216-844-11	METAL CHIP	82K	5%	1/10W								
R888	1-216-835-11	METAL CHIP	15K	5%	1/10W				< CONNECTOR >				
R889	1-216-864-11	SHORT CHIP	0										
R892	1-216-846-11	METAL CHIP	120K	5%	1/10W		* CN891	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P				
R893	1-216-846-11	METAL CHIP	120K	5%	1/10W								
R894	1-216-842-11	METAL CHIP	56K	5%	1/10W				< SWITCH >				
R895	1-216-842-11	METAL CHIP	56K	5%	1/10W		△S891	1-762-581-11	SWITCH, AC POWER PUSH (1 KEY)				
R897	1-216-853-11	METAL CHIP	470K	5%	1/10W				*****				
R899	1-216-849-11	METAL CHIP	220K	5%	1/10W								
R961	1-216-821-11	METAL CHIP	1K	5%	1/10W								
R962	1-216-821-11	METAL CHIP	1K	5%	1/10W			1-862-181-11	PT BOARD				
R963	1-216-821-11	METAL CHIP	1K	5%	1/10W				*****				
R971	1-216-833-11	METAL CHIP	10K	5%	1/10W				< CAPACITOR >				
R972	1-216-833-11	METAL CHIP	10K	5%	1/10W		△C101	1-113-920-11	CERAMIC	0.0022uF	20%	250V	
R973	1-216-827-11	METAL CHIP	3.3K	5%	1/10W								
R975	1-216-839-11	METAL CHIP	33K	5%	1/10W				< CONNECTOR >				
R976	1-216-809-11	METAL CHIP	100	5%	1/10W								
R977	1-216-809-11	METAL CHIP	100	5%	1/10W		* CN101	1-568-226-11	PIN, CONNECTOR (3.96mm PITCH) 2P				
R978	1-216-837-11	METAL CHIP	22K	5%	1/10W				*****				

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

RF

Ref. No.	Part No.	Description	Remark			
	A-4750-527-A	RF BOARD, COMPLETE	*****			
		< CAPACITOR >				
C001	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V	
C002	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V	
C004	1-124-778-00	ELECT CHIP	22uF	20%	6.3V	
C005	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
C006	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
C007	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V	
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	1-107-726-91	CERAMIC CHIP	0.01uF	10%	16V	
		< CONNECTOR >				
CN001	1-815-031-11	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			

Ref. No.	Part No.	Description	Remark		
< 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
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		

MISCELLANEOUS					

△ 6	1-777-071-43	CORD, POWER			
△ 10	1-443-287-11	TRANSFORMER, POWER			
58	1-828-333-11	WIRE (FLAT TYPE) (13 CORE)			
253	1-829-172-11	WIRE (FLAT TYPE) (31 CORE)			
△ 255	A-4713-410-A	PICK-UP UNIT (DBU-3)			
258	1-824-106-12	CABLE, FLEXIBLE FLAT (24 CORE)			
M901	A-4604-363-A	MOTOR (L) ASSY (LOADING)			
ACCESSORIES					

1-478-636-11	COMMANDER, STANDARD (RM-SX800)				
1-790-735-12	CORD, CONNECTION				
2-021-059-11	MANUAL, INSTRUCTION				
	(ENGLISH, FRENCH, GERMAN, SPANISH)				
2-021-059-21	MANUAL, INSTRUCTION				
	(DUTCH, SWEDISH, ITALIAN, PORTUGUESE) (AEP)				

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

SCD-XE597

SONY®

AEP Model
UK Model

SERVICE MANUAL

Ver. 1.2 2005.05

SUPPLEMENT-1

Subject: TEST MODE and ELECTRICAL ADJUSTMENT

SECTION 1 TEST MODE

1. DIAG MODE of The Test Mode

While press **[MENU]** and **[PUSH ENTER]** buttons, 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 ▶▶]** knob to select the command number (hexadecimal number) (refer to the following table for command number).
2. Press the **[PUSH ENTER]** button 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	CEL	Initialization
8F	U&OTHERS	Initialization
92	ERR CHECK	Error rate display (to stop, press the x 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 x button) display: “9D xx 0xff 0xff” (“xx” is measuring value of jitter)

*1) Not used in servicing

4. The Commands in Automatic Electrical Adjustments

(Use the commands When The system version number is ver1.24 and higher)

Command No.	Item
B0	RAM clear
B1	Writing
B2	Check writing data

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.

1. ROM Version Check

Procedure:

1. While pressing **[PUSH ENTER]** button and **[MENU]** buttons, press the **[POWER]** button to turn the set on.
"DIAG MODE" is displayed on the screen.
2. Select "81 SYS-F VER" by tuning **[◀◀ AMS ▶▶]** knob.
3. Press **[PUSH ENTER]** button.
4. Check the version of ROM.
"SYS. VER X.XX" is displayed.
5. Select "82 I/F-F VER"
"I/F VER X.XX" is displayed.
Automatically return "81 SYS-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 **[PUSH ENTER]** button and **[MENU]** buttons, press the **[POWER]** button to turn the set on.
"DIAG MODE" is displayed on the screen.
2. Push the **[▲]** button to open the tray.
3. Load CD to tray.
4. Push the **[▲]** button to close the tray.
5. Turn "JOG DIAL" clockwise until "B0" and press the **[PUSH ENTER]** (Used time : 7 sec) "FFFF" is displayed.
6. Turn "JOG DIAL" clockwise until "B1" and press the **[PUSH ENTER]**.
Display shows "-9" and the numbering is counting down until "-0" lastly, "*****" (4 DIGITS VALUE) appears. (Used time : 33 sec)
7. Turn "JOG DIAL" clockwise until "B2" and press the **[PUSH ENTER]**.
Display shows the last number that appear at. STEP NO.7.
Confirm that the value is "08D0">THE VALUE>"04D0"
8. Push the **[▲]** button to open the tray.
9. Unload CD from tray.
10. Push the **[▲]** button to close the tray.
11. Press the **[POWER]** button to turn the set off. (Do not continue with another test mode without power off.)

3. Optical Sensitivity Check

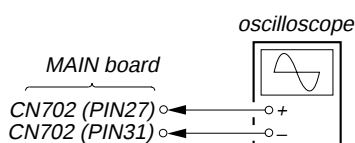
CHECK DISC LIST

Use the following hybrid disc on this check.

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

SACD HYBRID DISC (MARKET DISC)

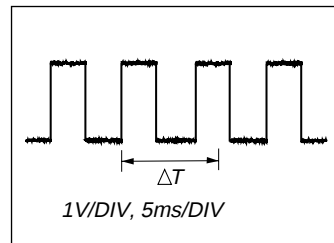
Connection:



Procedure:

1. Press the **[▲]** button.
2. Insert SACD hybrid disc (market disc).
3. Connect the oscilloscope to pin 27 and pin31 of CN702.
4. Observe the MIRR waveform immediately after the disc chucking is completed when disc identification is made.

MIRR signal waveform



5. Read the measurement of ΔT .
IF $7.5\text{ms} < \Delta T < 9.7\text{ms}$ OK
OTHERS>NG
6. When the system version number is before ver.1.24, and if the MIRR waveform is NG (No Good), change the values of R892 and R893, and then repeat step4 and after.
 $9.7\text{ms} < \Delta t$
R892/R893 120 k Ω $\rightarrow$ 110 k Ω (1-218-741-11)
 $\Delta t < 6.9\text{ms}$
R892/R893 120 k Ω $\rightarrow$ 130 k Ω (1-218-743-11)

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

Be sure to set the unit to the specified modes as stated in the steps below after sampling inspections by the QA dept.

Or before shipping.

Procedure:

1. While pressing **[PUSH ENTER]** and **[MENU]** buttons, press the **[POWER]** button to turn the set on.
"DIAG MODE" is displayed in the screen.
2. Turn jog until the specified mode (According to version) is displayed:
a) "8D SETUP" : CEL
b) "8F SETUP" : U & OTHERS
3. Press jog one single time.
"INIT START" is displayed and Mode setting for shipping starts.
4. Wait until "INITIAL OK" appears on the display.
5. 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.
Note : When EEPROM (IC702) is replaced, the initialization is necessary.

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]