

SCD-X501ES

SERVICE MANUAL

Ver. 1.1 2007.07

AEP Model
UK Model



Model Name Using Similar Mechanism	SCD-XA1200ES
CD Mechanism Type	CDM66E-DVBU50B
Base Unit Name	DVBU50B
Optical Traverse Unit 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	0.003 % 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	96 dB or more
Total harmonic distortion rate	0.0035 % or less
Wow and flutter	Value of measurable limit (±0.001 % W. PEAK) or less

Output connectors

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

* 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	13 W
Dimensions (w/h/d)	(Approx.) 280 × 111 × 267 mm incl. projecting parts
Mass	(Approx.) 3.9 kg

Supplied accessories

AC power cord (main lead) (1)	
Audio connecting cord	Red and White × 2 (2) Black × 1 (2)
Remote commander	RM-ASU002 (1)

Design and specifications are subject to change without notice.

SUPER AUDIO CD PLAYER

Notes on chip component replacement

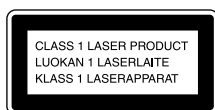
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

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.

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 marking is located on the rear exterior.

UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.

(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size)



LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40 °C higher than ordinary solder.
Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
Soldering irons using a temperature regulator should be set to about 350 °C.
Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
Unleaded solder is more viscous (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

TABLE OF CONTENTS

1. SERVICING NOTES	3
2. GENERAL	4
3. DISASSEMBLY	
3-1. Top Plate	6
3-2. Loading Panel Assy	6
3-3. Mechanism Deck (CDM66E-DVBU50B)	7
3-4. Front Panel Assy	7
3-5. Main Board	8
3-6. Base Unit (DVBU50B)	8
3-7. WALTZ-RF Board, Service Assy (DBU-3)	9
3-8. Loading Board	9
4. TEST MODE	10
5. ELECTRICAL ADJUSTMENTS	12
6. DIAGRAMS	
6-1. Block Diagram – Main Section –	14
6-2. Block Diagram – AMP Section –	15
6-3. Block Diagram – Display/Power Supply Section –	16
6-4. Printed Wiring Board – WALTZ-RF Board –	18
6-5. Schematic Diagram – WALTZ-RF Board –	19
6-6. Printed Wiring Board – Main Section (1/2) –	20
6-7. Printed Wiring Boards – Main Section (2/2) –	21
6-8. Schematic Diagram – Main Section (1/5) –	22
6-9. Schematic Diagram – Main Section (2/5) –	23
6-10. Schematic Diagram – Main Section (3/5) –	24
6-11. Schematic Diagram – Main Section (4/5) –	25
6-12. Schematic Diagram – Main Section (5/5) –	26
6-13. Printed Wiring Board – Display Board –	27
6-14. Schematic Diagram – Display Board –	28
6-15. Printed Wiring Boards – Power Supply Section –	29
6-16. Schematic Diagram – Power Supply Section –	30
7. EXPLODED VIEWS	
7-1. Main Section	42
7-2. Front Panel Section	43
7-3. Main Board Section	44
7-4. Chassis Section	45
7-5. Mechanism Deck Section (CDM66E-DVBU50B)	46
7-6. Optical Pick-up Section (DVBU50B)	47
8. ELECTRICAL PARTS LIST	48

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

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.

CLEANING OF OPTICAL PICK-UP LENS

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

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

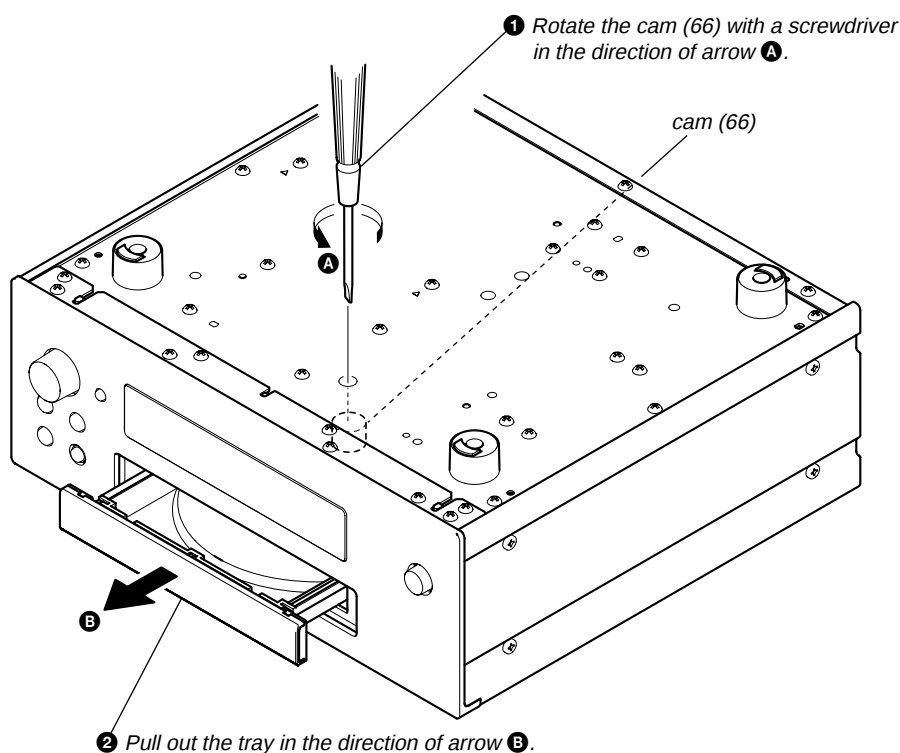
MODE SETTING FOR SHIPPING

Perform this setting when the EEPROM (IC702) on the MAIN board is replaced.

Procedure:

1. While pressing the **[MENU]** button and **[◀◀ AMS ▶▶]** jog press the **[POWER]** button to turn the power on and enter the test mode and display "DIAG MODE".
2. **[◀◀ AMS ▶▶]** jog is turned and "8D" is selected.
3. **[◀◀ AMS ▶▶]** jog is pressed and "INIT START" is displayed.
4. Then confirm "INITIAL OK" is displayed.
5. Press the **[POWER]** button to turn the power off.
6. Press the **[POWER]** button to turn the power on.
7. Press the **[MENU]** button.
8. **[◀◀ AMS ▶▶]** jog is turned and "M/2ch SEL" is selected.
9. **[◀◀ AMS ▶▶]** jog is pressed.
10. **[◀◀ AMS ▶▶]** jog is turned and "SEL - 2ch" is selected.
11. **[◀◀ AMS ▶▶]** jog is pressed.
12. Press the **[POWER]** button to turn the power off.

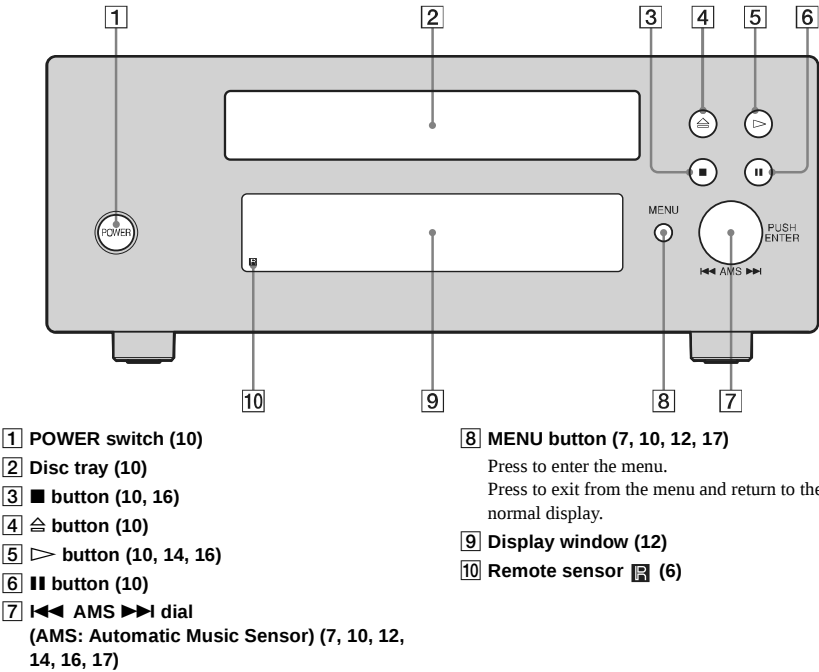
HOW TO OPEN THE TRAY WHEN POWER SWITCH TURNS OFF



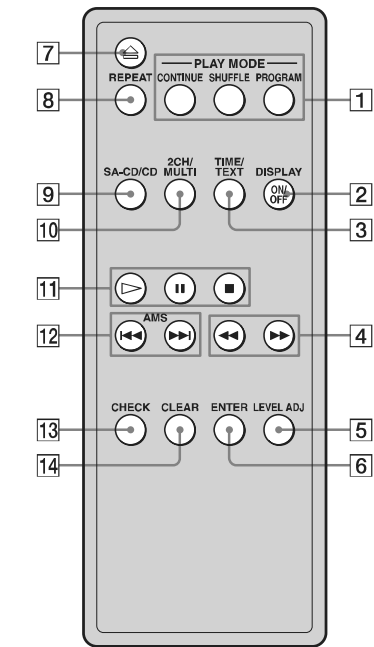
Index to Parts and Controls

Further details are provided on the pages indicated in parentheses.
Instructions in this manual describe the controls on the player. You can also use the controls on the remote if they have the same or similar names as those on the player.

Front Panel

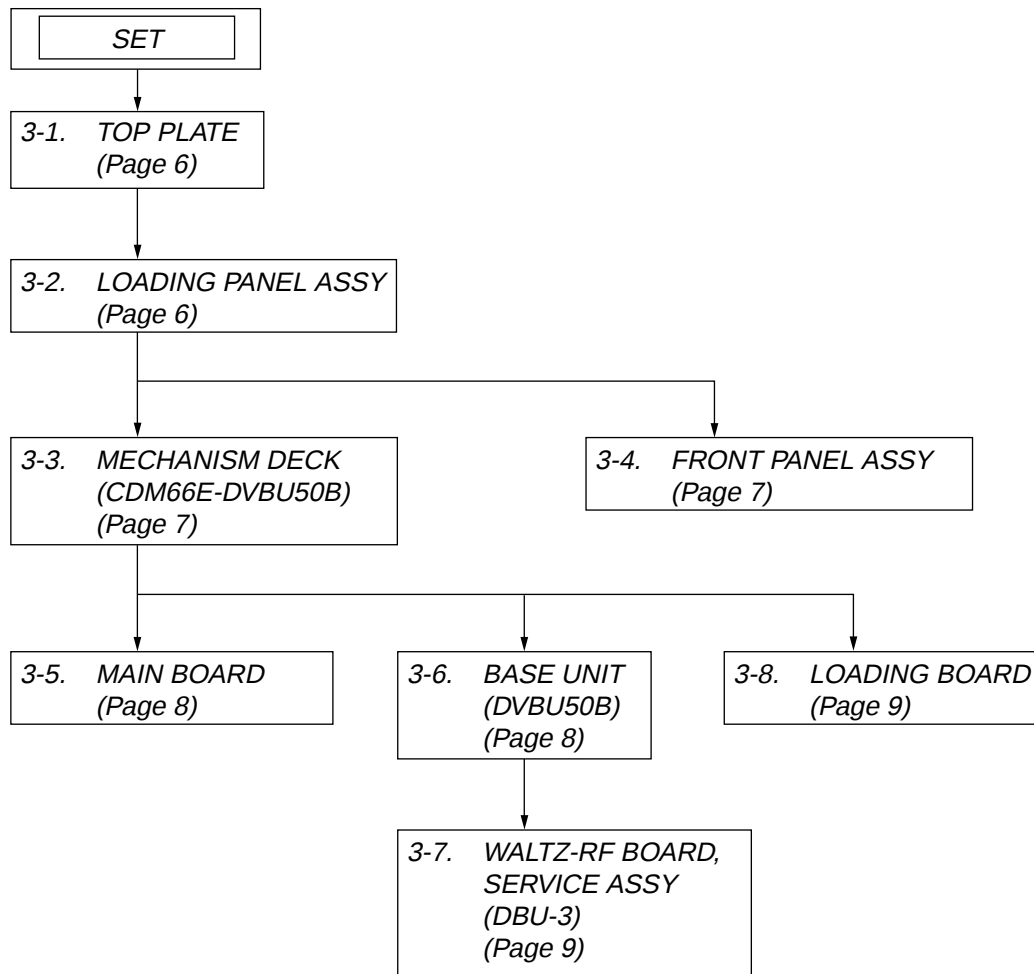


Remote



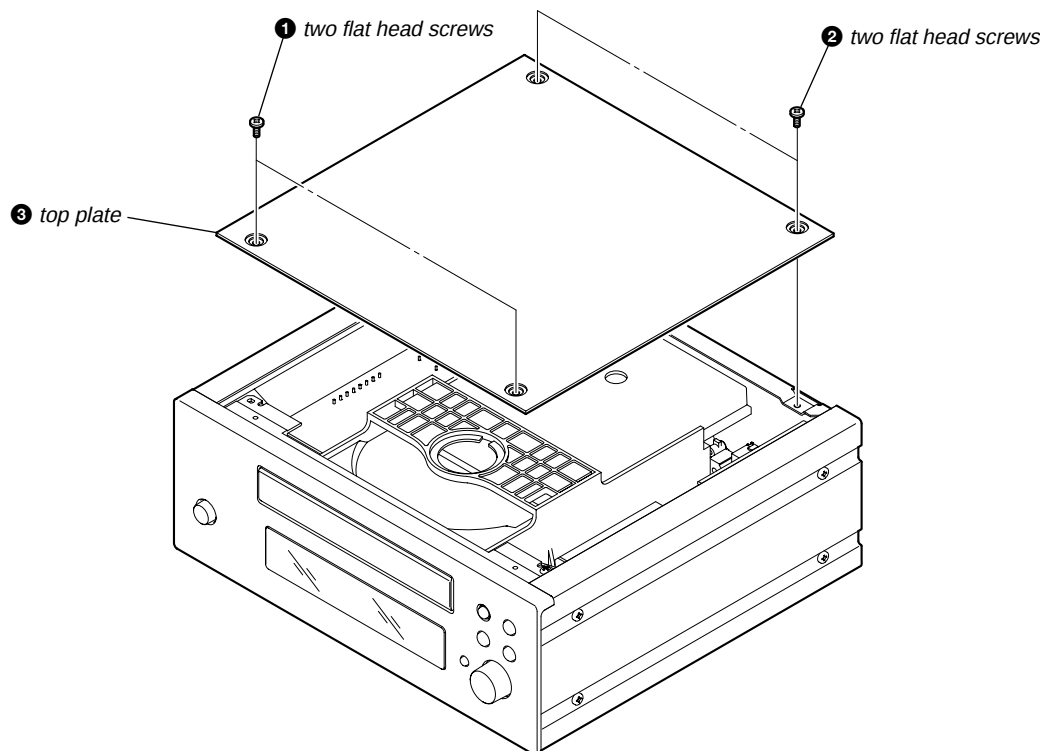
SECTION 3 DISASSEMBLY

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

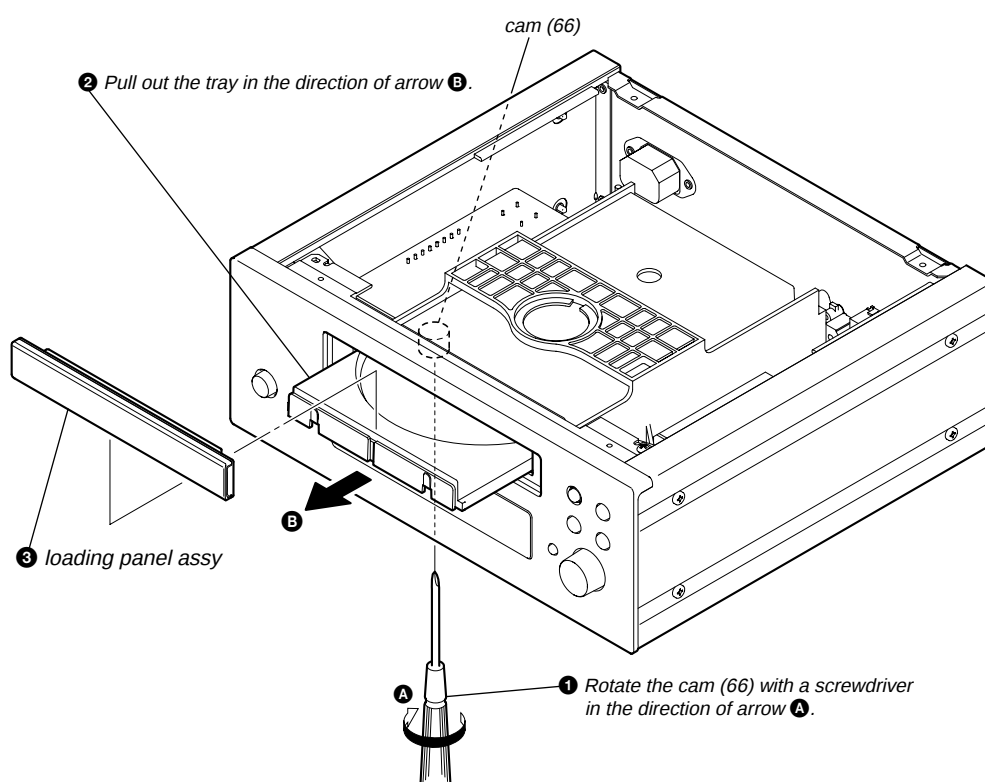


Note: Follow the disassembly procedure in the numerical order given.

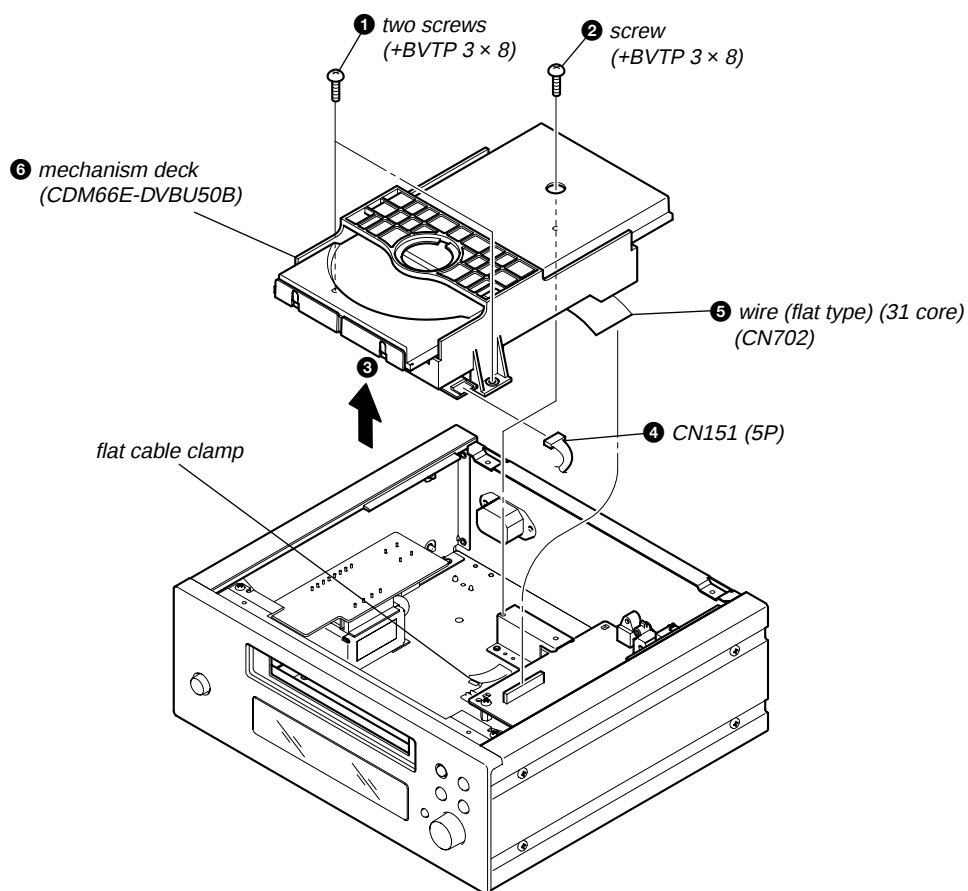
3-1. TOP PLATE



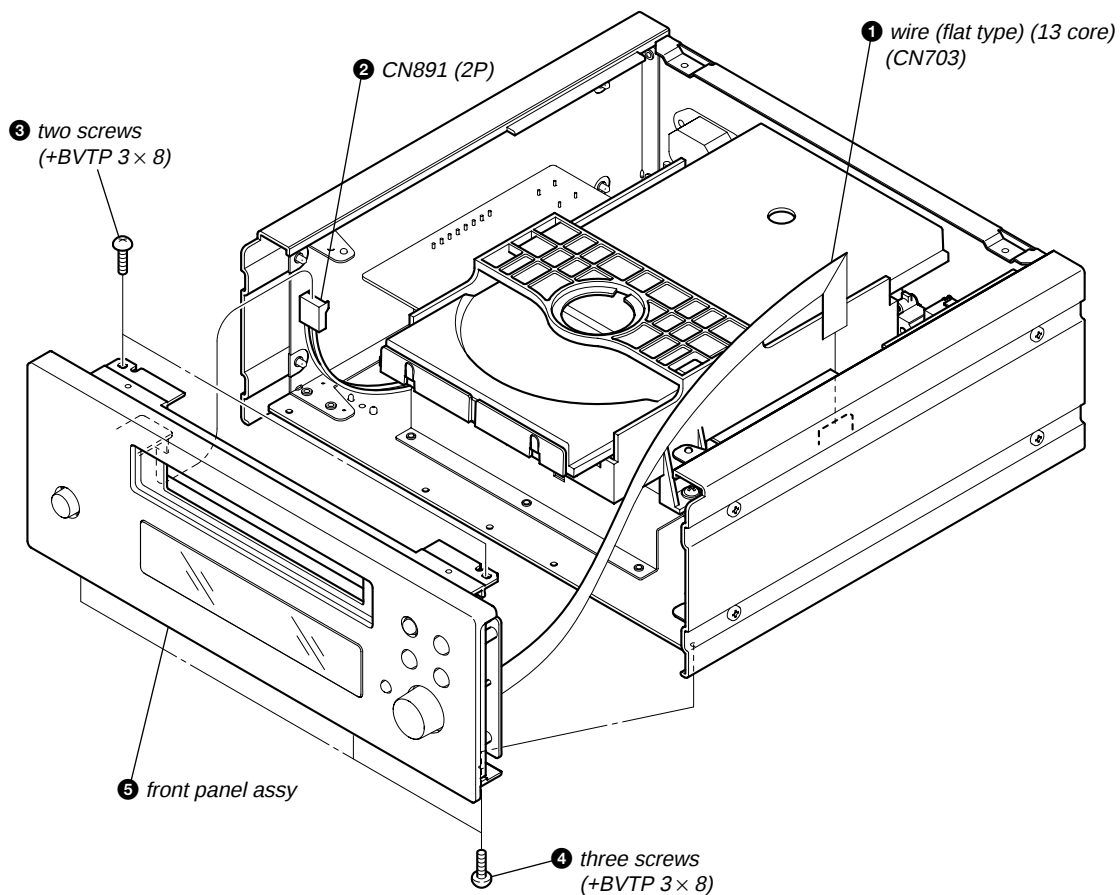
3-2. LOADING PANEL ASSY



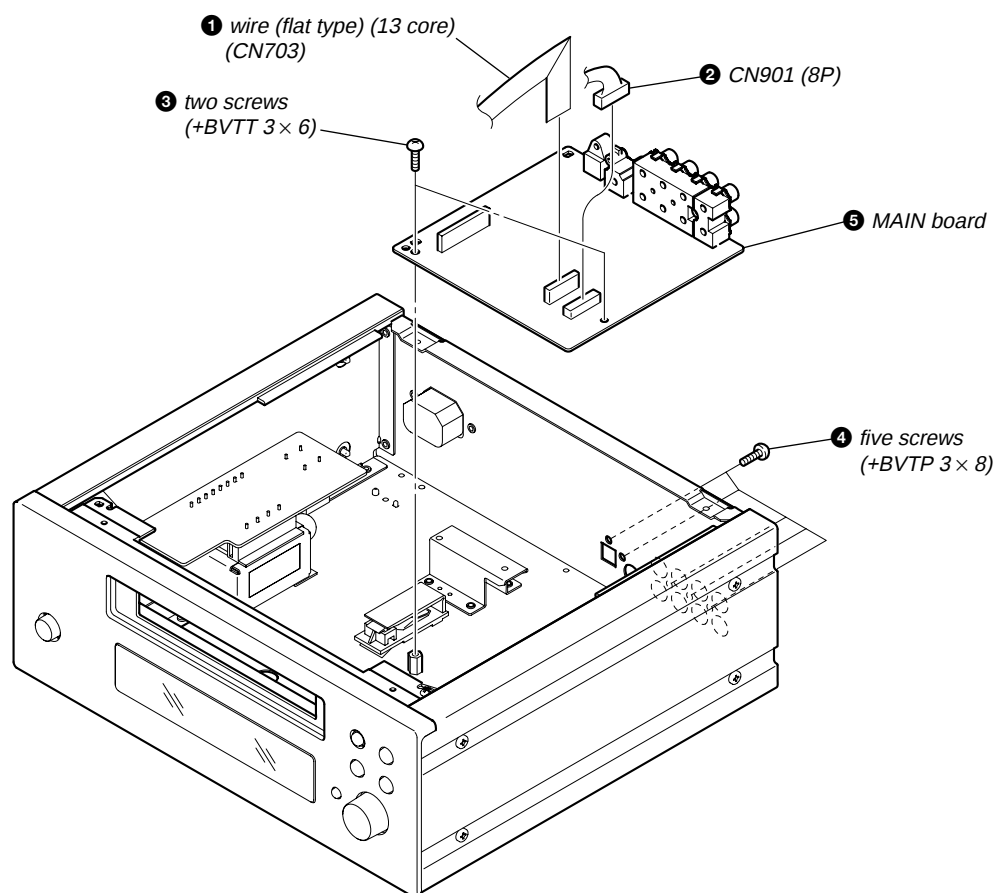
3-3. MECHANISM DECK (CDM66E-DVBU50B)



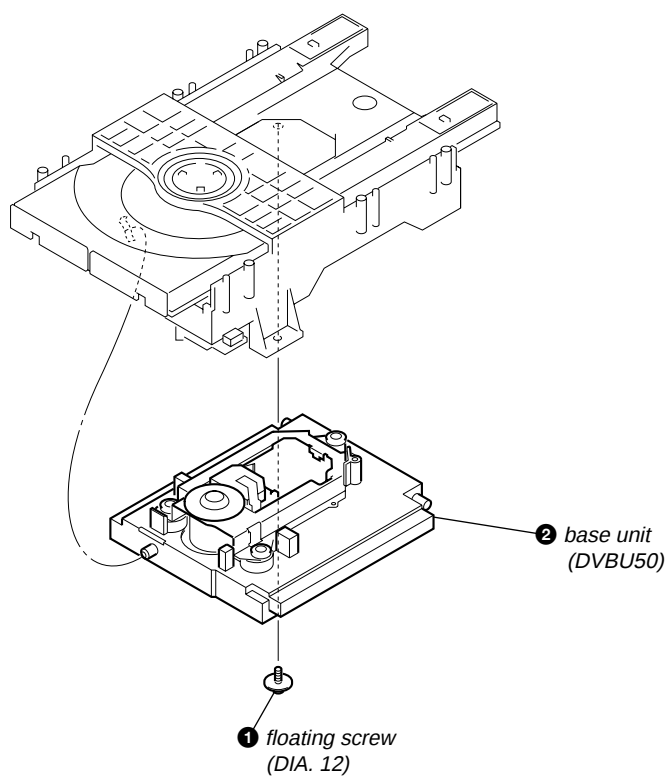
3-4. FRONT PANEL ASSY



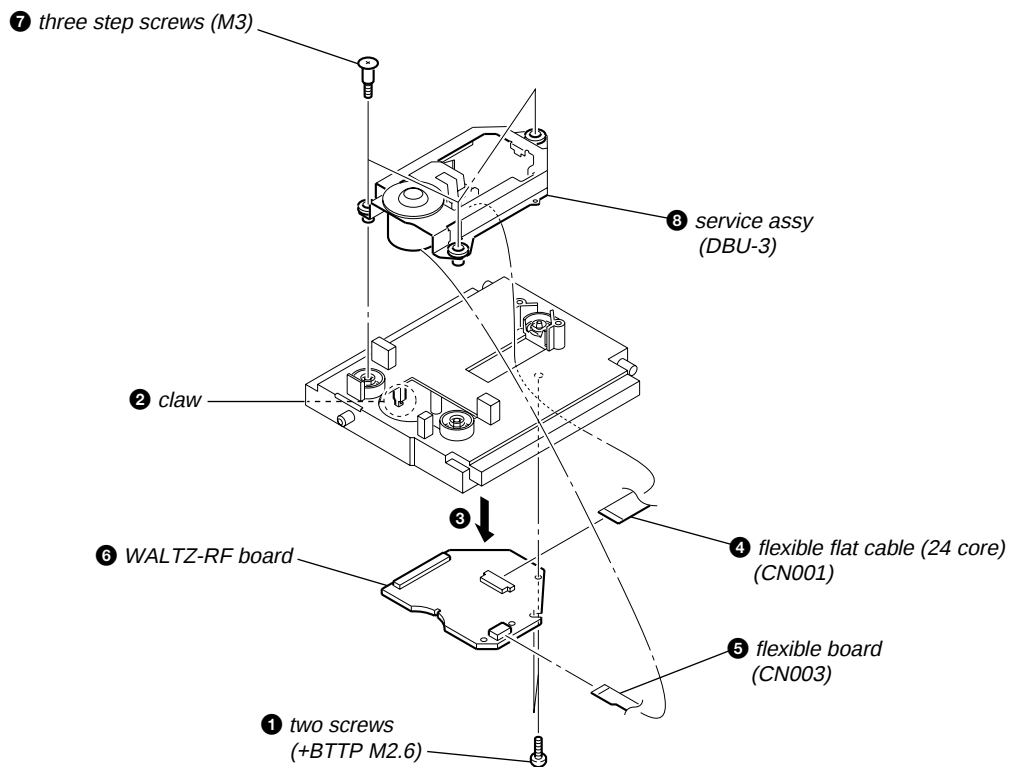
3-5. MAIN BOARD



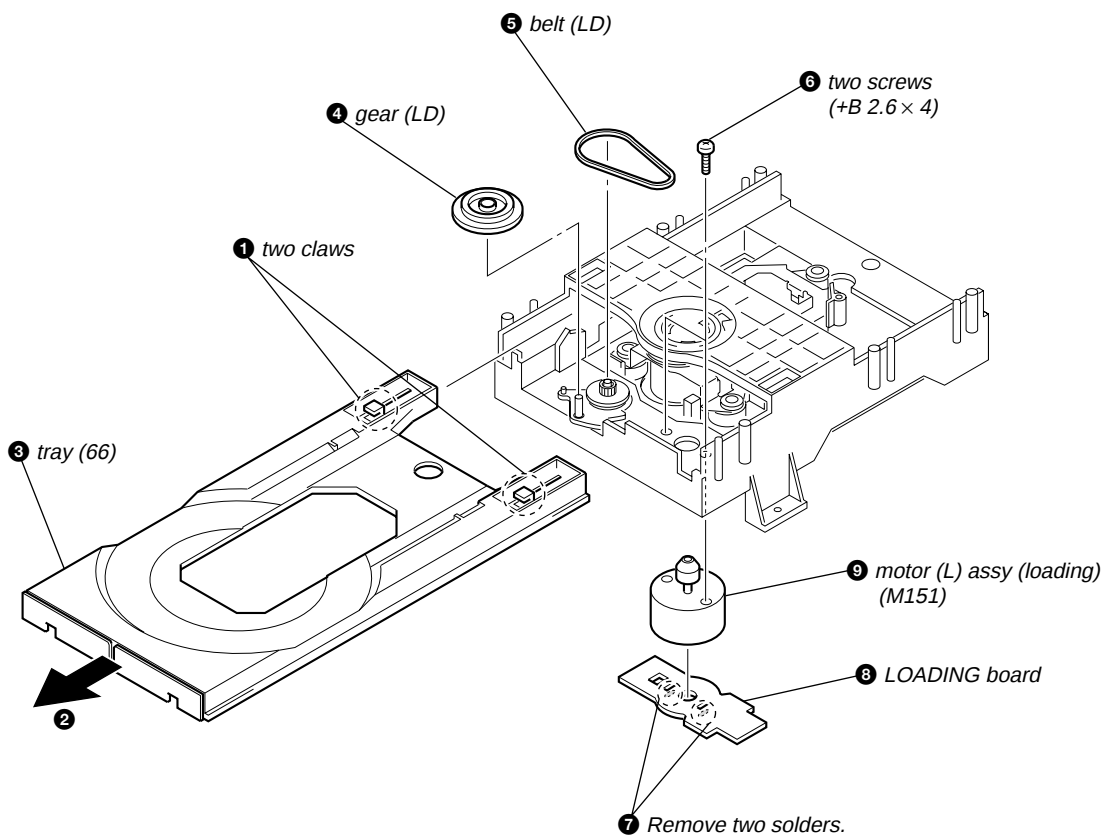
3-6. BASE UNIT (DVBU50B)



3-7. WALTZ-RF BOARD, SERVICE ASSY (DBU-3)



3-8. LOADING BOARD



SECTION 4 TEST MODE

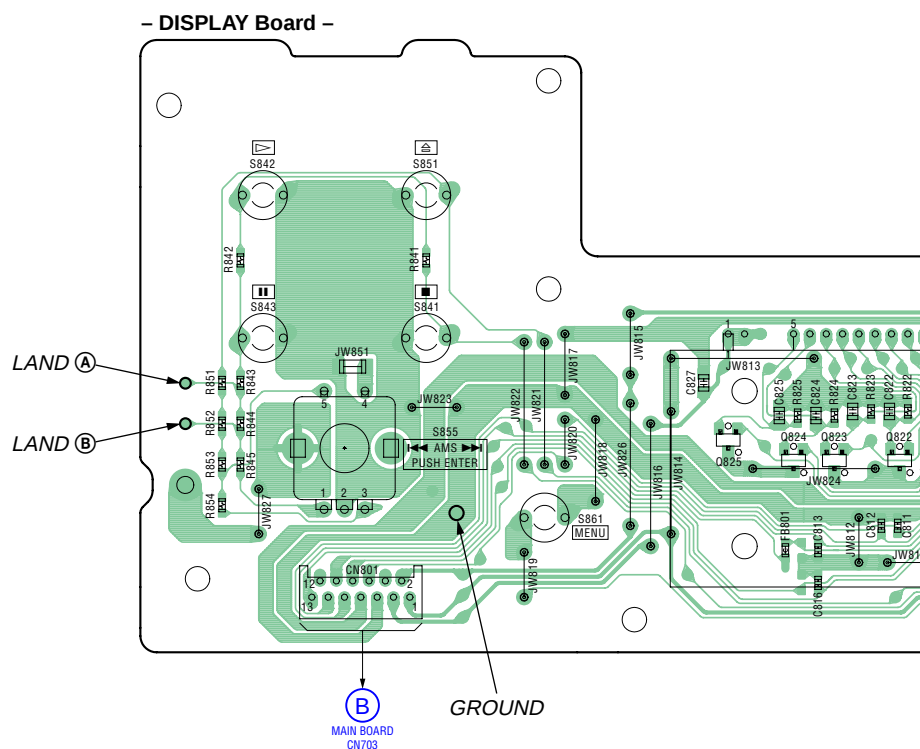
PANEL CHECK MODE

Procedure:

1. While shorting the land (A) of the figure below and ground, and pressing the [◀◀ AMS ▶▶] knob, press the [POWER] button to turn the power on.
2. When enter the panel check mode, fluorescent indicator tube and LEDs all light up for 5 seconds. Then, the pattern is each grid is displayed, and it is displayed at the end as "SIRCS CHECK".
3. Press the [▶] key of remote commander to enter the key check mode and display "KEY CHECK 12".^{(*)1}
4. Each button is pressed or each land of the figure below is shorted, the display number of "KEY CHECK" decreases.
5. All operations is performed, release the key check mode and enter the jog check mode, then display "JOG CHECK".
6. Turn the [◀◀ AMS ▶▶] knob clockwise.
7. Turn the [◀◀ AMS ▶▶] knob counterclockwise and jog check is OK and display "TEST-END".
8. Press the [POWER] button to turn the power off and release the panel check mode.

*1) If press the [■] key, it displays "KEY CHECK 19". However, this mode is for the model with changer. Therefore, it does not become OK unless 19 buttons are pressed. If entered to this mode by mistake, press the [POWER] button to turn the power off and repeat operation form step 1.

Land Location:



TEST MODE

1. Entering The Test Mode

While press the **[MENU]** button and **[◀◀ AMS ▶▶]** knob, 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 **[◀◀ AMS ▶▶]** knob to execute the selected command item.

3. Releasing The Test Mode

Press the **[POWER]** button to turn the power off.

4. 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 (*2)	ADJ FCSBIAS	Automatically adjust the focus bias
27 (*2)	FOCUS AGC	Automatically adjust the focus servo gain
31 (*2)	PI/FE OFFSET	Automatically adjust the offset signal of PI, PE and TE
45 (*2)	TRACKING AGC	Automatically adjust the focus servo gain
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	SETUP	initialize (for AEP model)
8F	SETUP	initialize (for except AEP model)
92	ERR CHECK	Error rate display (to stop, press the [■] button) for CD display “92 C1 C2 FF” 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 FF FF” (“xx” is measuring value of jitter)
B0 (*3)	FFFF	The electrical adjustment value clear
B1 (*3)	(Change value)	Writing of the electrical adjustment value
B2 (*3)	(Change value)	Confirm of the electrical adjustment value

*2) Not used in servicing

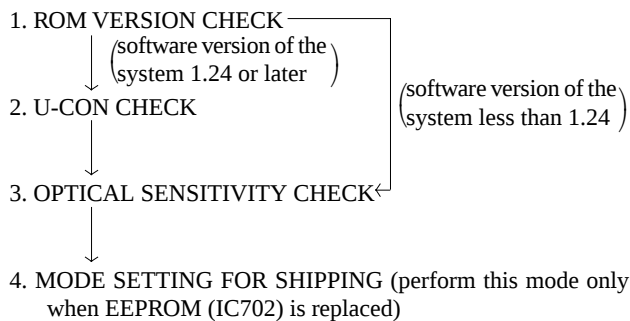
*3) Only software version of the system 1.24 or later

SECTION 5

ELECTRICAL ADJUSTMENTS

Adjust it as follows after the optical traverse unit (DBU-3), WALTZ-RF board, MAIN board, master controller (IC705), SA-CD/CD decoder (IC706) and EEPROM (IC702) are replaced.

Adjustments Flow



1. ROM VERSION CHECK

Software version of the system is confirmed.

Procedure:

- While pressing the **[MENU]** button and **[◀◀ AMS ▶▶]** jog press the **[POWER]** button to turn the power on and enter the test mode and display "DIAG MODE".
- [◀◀ AMS ▶▶]** jog is turned and "81" is selected.
- [◀◀ AMS ▶▶]** jog is pressed and software version of the system is displayed.
- "SYS VER *.**" is displayed.
- [◀◀ AMS ▶▶]** jog is turned and "82" is selected.
- [◀◀ AMS ▶▶]** jog is pressed and I/F version is displayed.
- "I/F VER *.**" is displayed.

2. U-CON CHECK (only software version of the system 1.24 or later)

When the software version of the system 1.24 or later, this checking must be performed before "3. OPTICAL SENSITIVITY CHECK" and "4. MODE SETTING FOR SHIPPING".

Procedure:

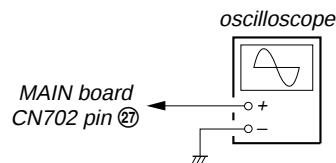
- While pressing the **[MENU]** button and **[◀◀ AMS ▶▶]** jog press the **[POWER]** button to turn the power on and enter the test mode and display "DIAG MODE".
- Insert the test disc (SATD-S5). (Part No. : J-2501-215-A)
- [◀◀ AMS ▶▶]** jog is turned and "B0" is selected.
- [◀◀ AMS ▶▶]** jog is pressed and confirm "FFFF" is displayed.
- [◀◀ AMS ▶▶]** jog is turned and "B1" is selected.
- [◀◀ AMS ▶▶]** jog is pressed and confirm "-9" is displayed. Then the value is changed and the value of four digits is displayed after "-0".
- [◀◀ AMS ▶▶]** jog is turned and "B2" is selected.
- [◀◀ AMS ▶▶]** jog is pressed and confirm the value of four digits is displayed. At this time, confirm the value displayed at the end is a specified value.

Specified Value: 08D0 to 04D0

- Eject the test disc and press the **[POWER]** button to turn the power off.

3. OPTICAL SENSITIVITY CHECK

Connection:



CHECK DISC LIST

Use the following hybrid disc on this check.

HLXA-509 (Part No. J-6090-090-A) or Super Audio CD HYBRID DISC (Market disc).

Procedure:

- Connect the oscilloscope to pin 27 of CN702 on the MAIN board.
- Insert the test disc HLXA-509 (Part No. J-6090-090-A) or Super Audio CD HYBRID DISC (Market disc).
- Confirm the waveform at that time because the disc is distinguished at chucking moment.
- Confirm Δt of the shape of waves is a specified value.

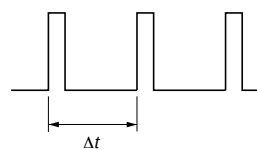
Specified Value: 7.5 ms to 9.7 ms

(software version of the system 1.24 or later)

6.9 ms to 9.7 ms

(software version of the system less than 1.24)

Waveform



- When step 4 is NG, R892 and R893 on the MAIN board are changed and the waveform is measured again.
In case of the specified value or more: Change R892 and R893 to 110 k Ω (part No. 1-218-896-11).
In case of the specified value or less: Change R892 and R893 to 130 k Ω (part No. 1-218-898-11).
- Eject the disc and press the **[POWER]** button to turn the power off.

4. MODE SETTING FOR SHIPPING

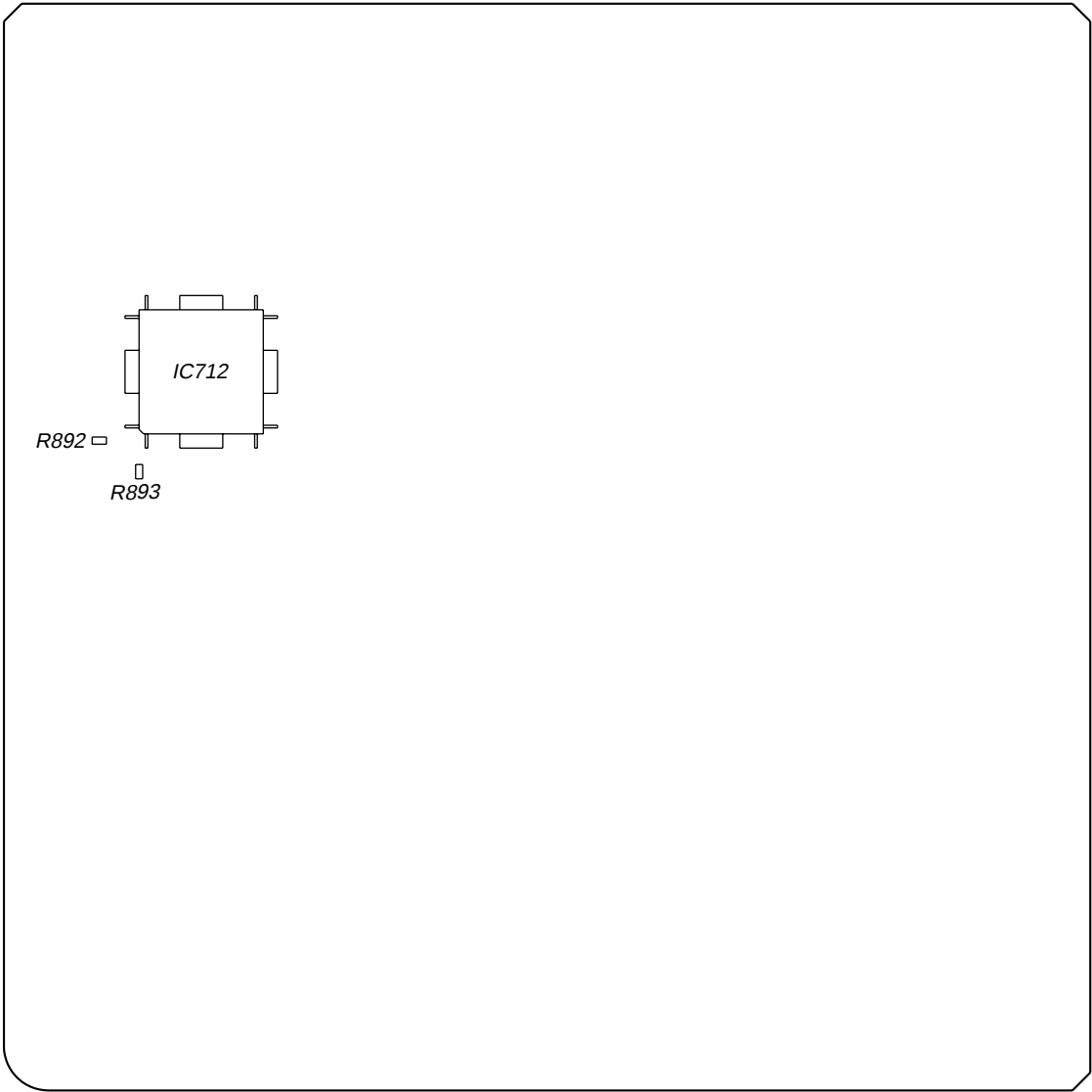
Perform this setting when the EEPROM (IC702) on the MAIN board is replaced.

Procedure:

- 1. While pressing the **MENU** button and **◀◀ AMS ▶▶** jog press the **POWER** button to turn the power on and enter the Test Mode and display “DIAG MODE”.
- 2. **◀◀ AMS ▶▶** jog is turned and “8D” is selected.
- 3. **◀◀ AMS ▶▶** jog is pressed and “INIT START” is displayed.
- 4. Then confrm “INITIAL OK” is displayed.
- 5. Press the **POWER** button to turn the power off.
- 6. Press the **POWER** button to turn the power on.
- 7. Press the **MENU** button.
- 8. **◀◀ AMS ▶▶** jog is turned and “M/2ch SEL” is selected.
- 9. **◀◀ AMS ▶▶** jog is pressed.
- 10. **◀◀ AMS ▶▶** jog is turned and “SEL – 2ch” is selected.
- 11. **◀◀ AMS ▶▶** jog is pressed.
- 12. Press the **POWER** button to turn the power off.

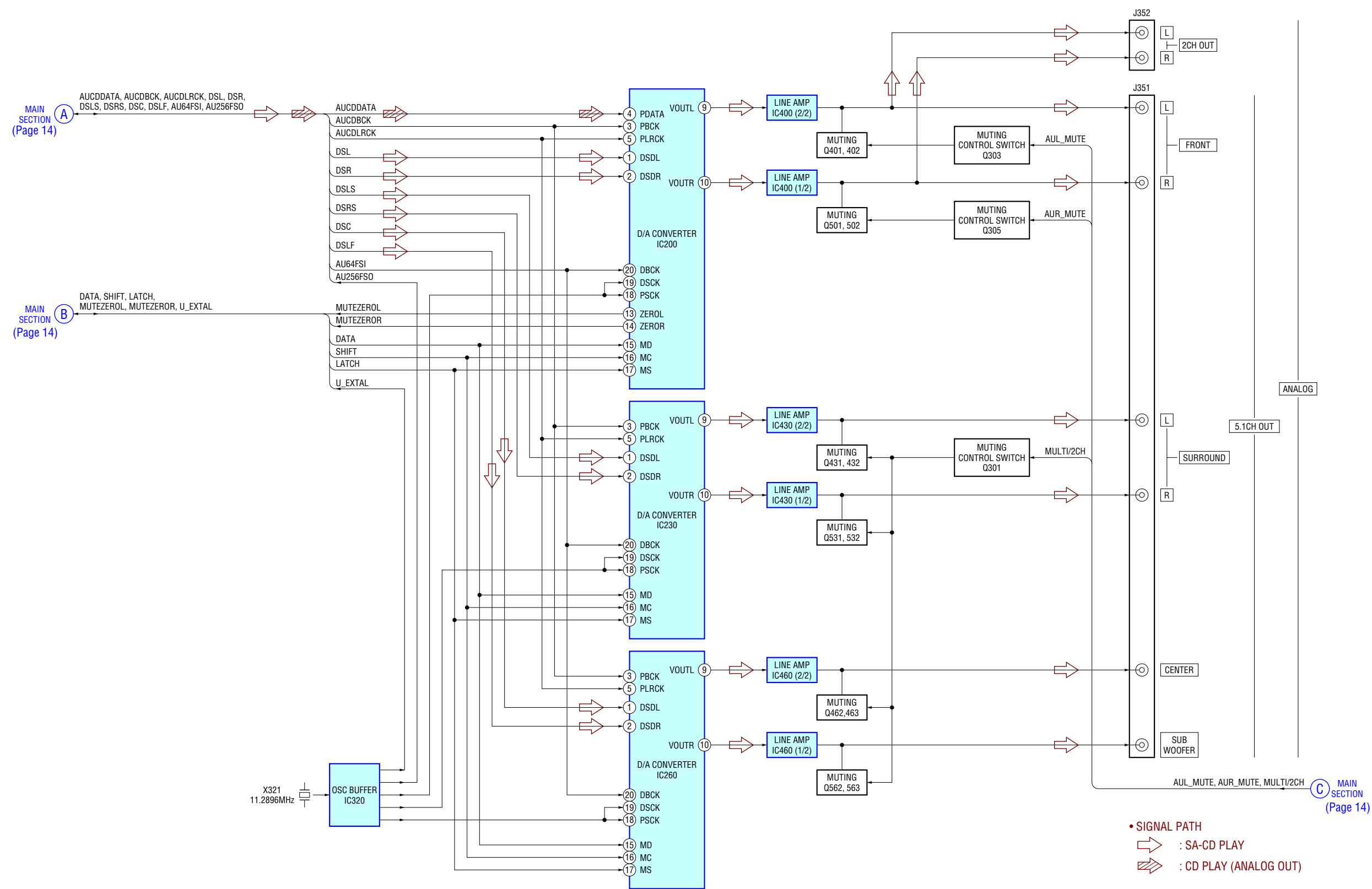
Part Location:

– MAIN Board (Side A) –

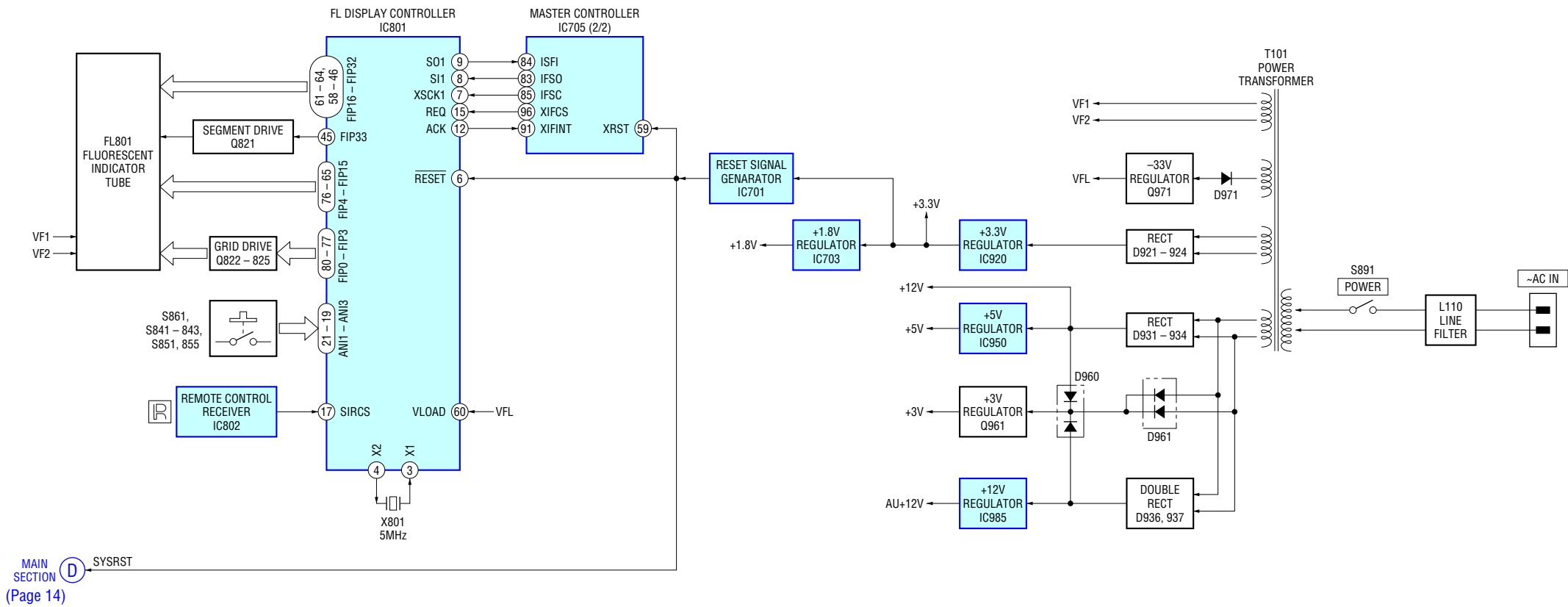


[illegible]

6-2. BLOCK DIAGRAM – AMP Section –



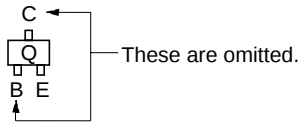
6-3. BLOCK DIAGRAM – DISPLAY/POWER SUPPLY Section –



• 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.
 - △ : internal component.
 - : Pattern from the side which enables seeing.
(The other layers' patterns are not indicated.)
- Caution:

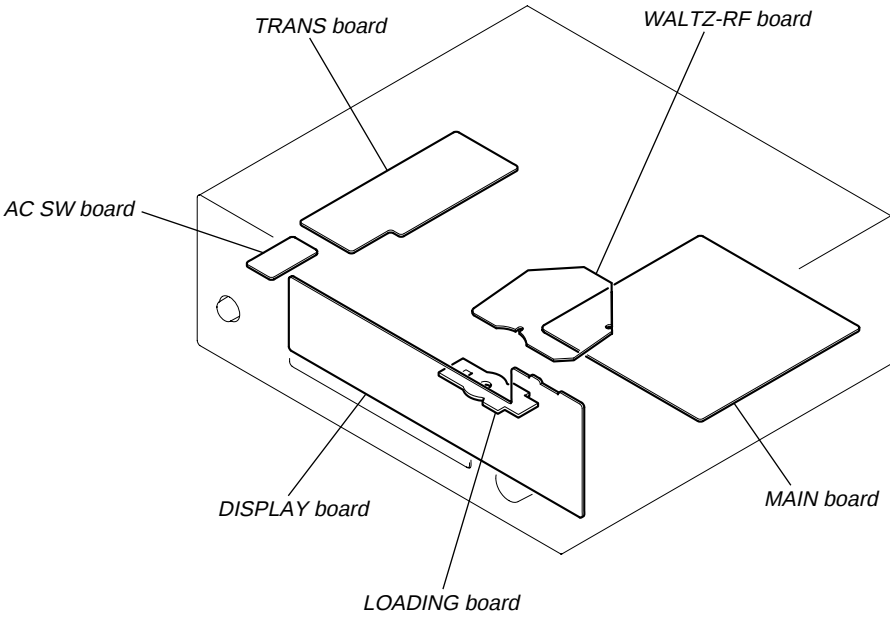
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.
- MAIN board is multi-layer printed board.
However, the patterns of intermediate layers have not been included in diagrams.
 - Indication of transistor



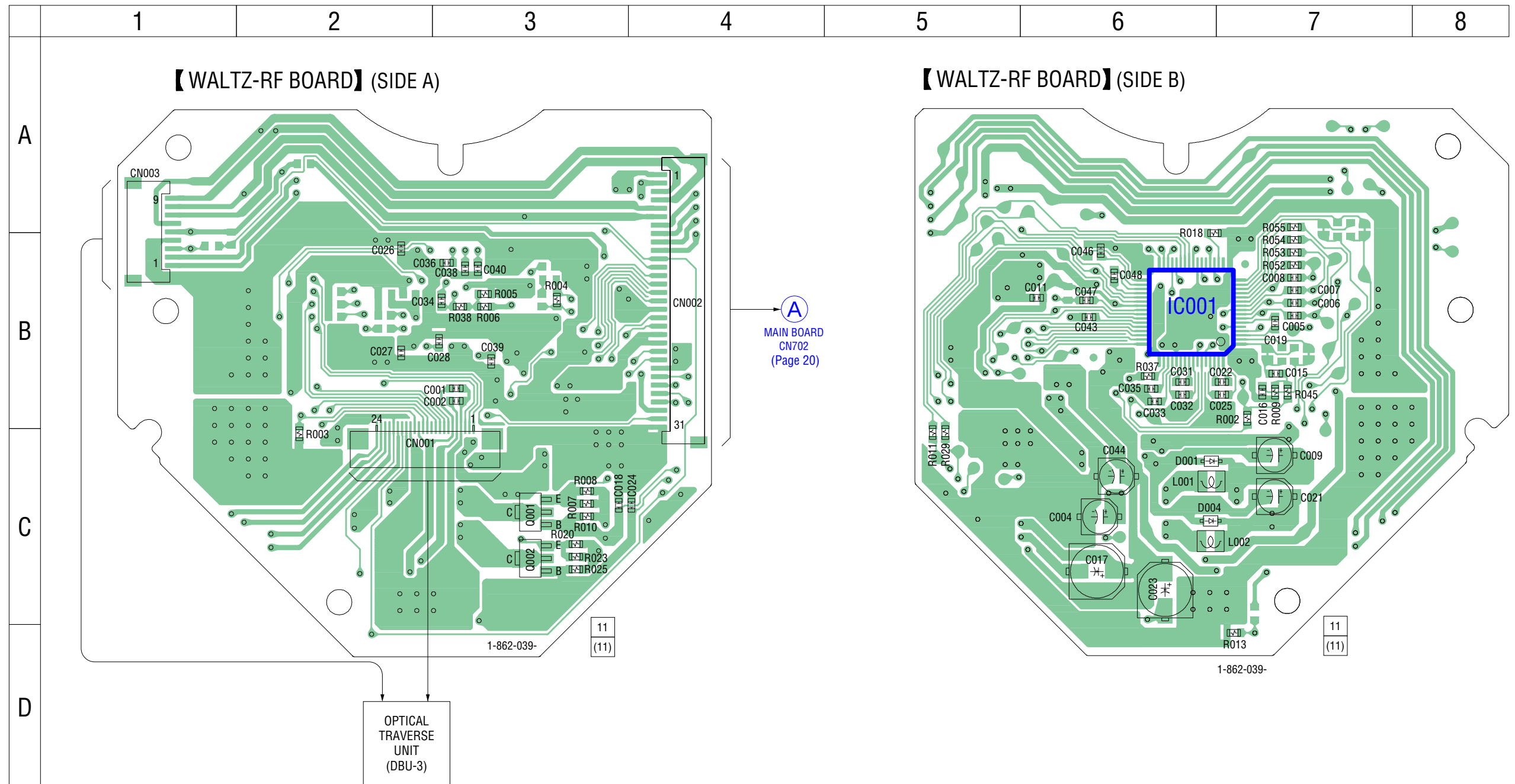
- Note on Schematic Diagram:**
- All capacitors are in μF unless otherwise noted. (p: pF) 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
 - △ : internal component.
 - : panel designation.
- 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 : SA-CD PLAY
() : CD PLAY
* : Impossible to measure
- 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.
⇒ : SA-CD PLAY
⇒ : CD PLAY (ANALOG OUT)
⇒ : CD PLAY (DIGITAL OUT)

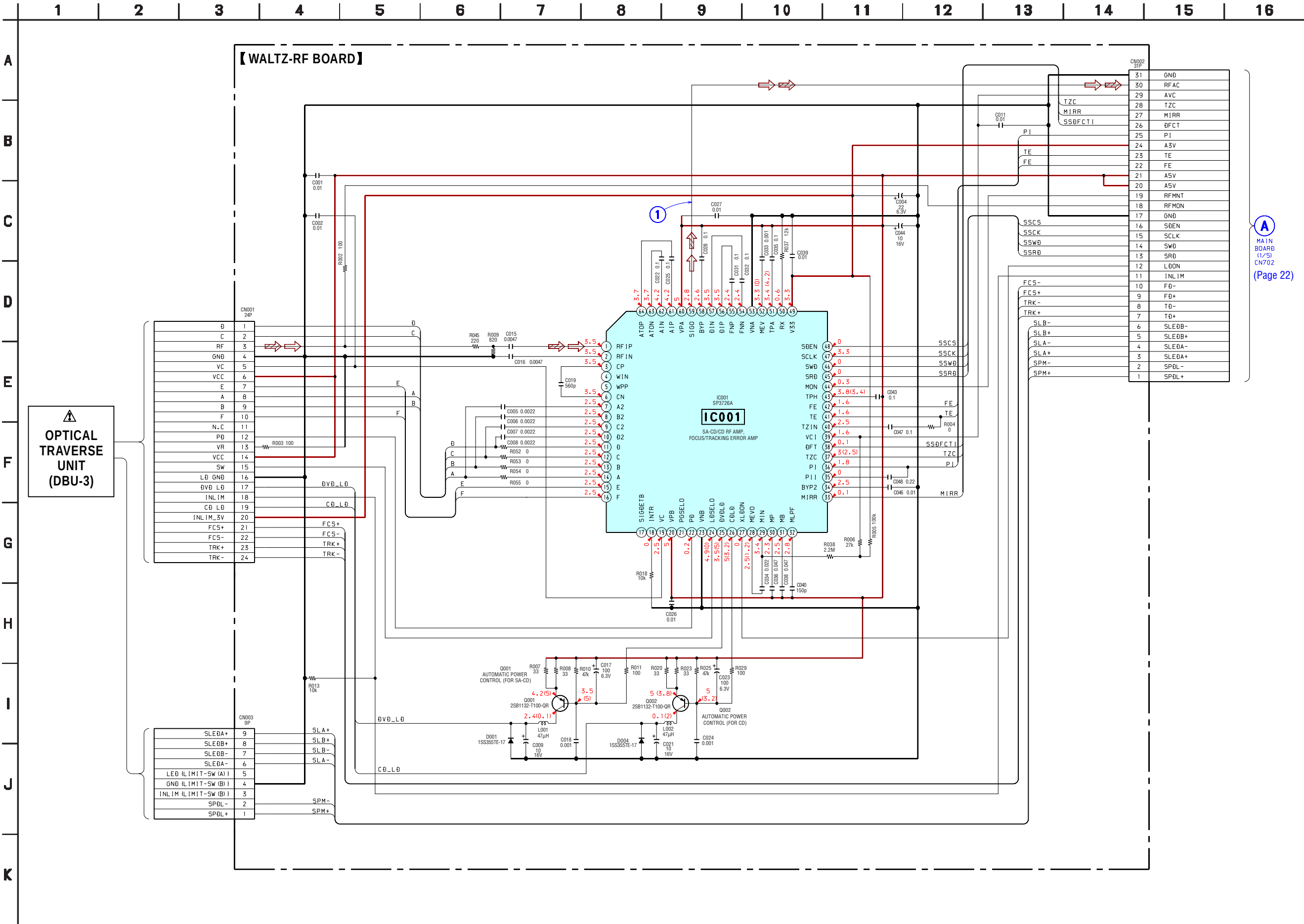
• Circuit Boards Location



6-4. PRINTED WIRING BOARD – WALTZ-RF Board – • See page 17 for Circuit Boards Location. : Uses unleaded solder.



6-5. SCHEMATIC DIAGRAM – WALTZ-RF Board – • See page 31 for Waveforms. • See page 33 for IC Pin Function Description.

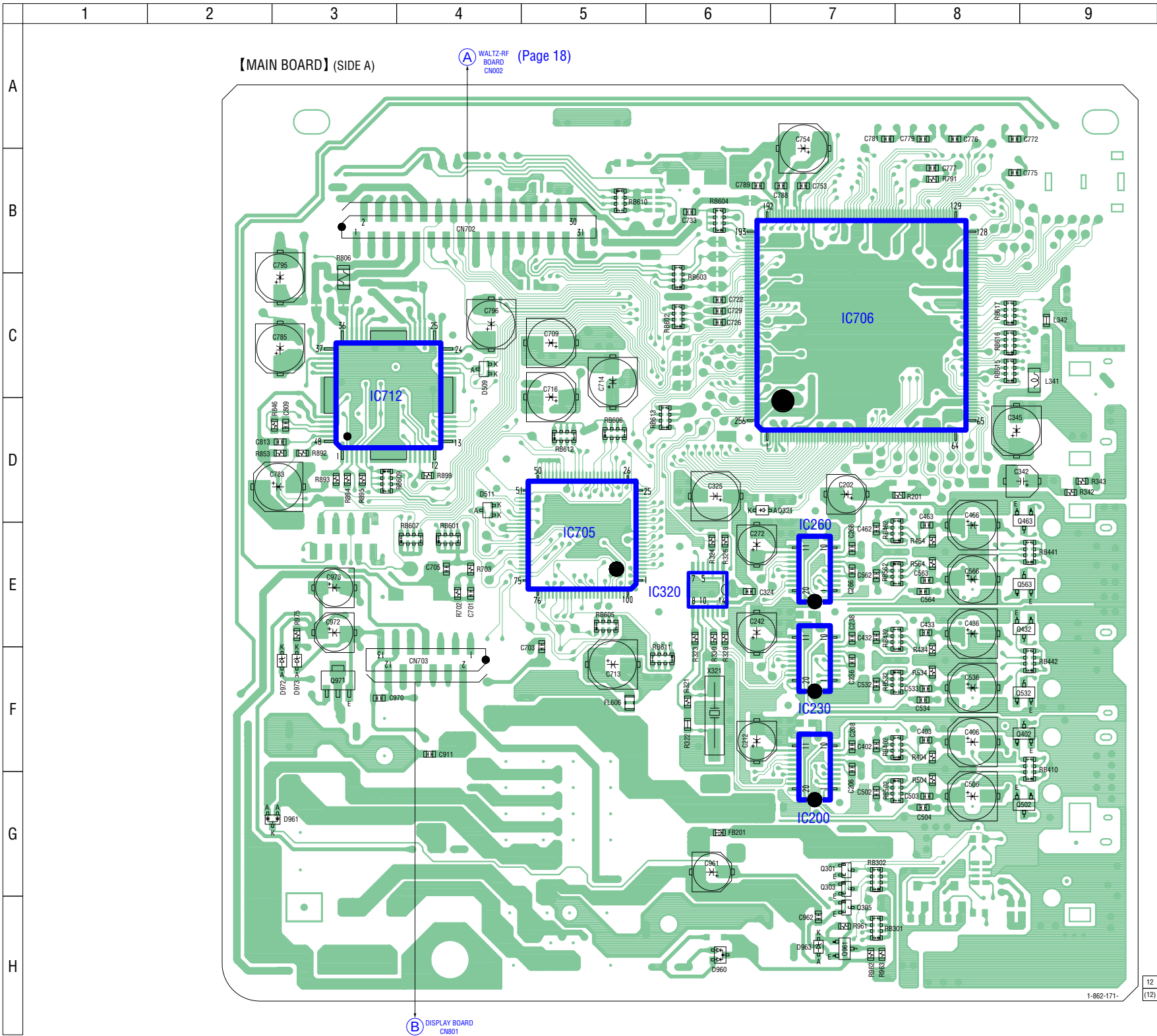


MAIN BOARD (1/5) CN702 (Page 22)

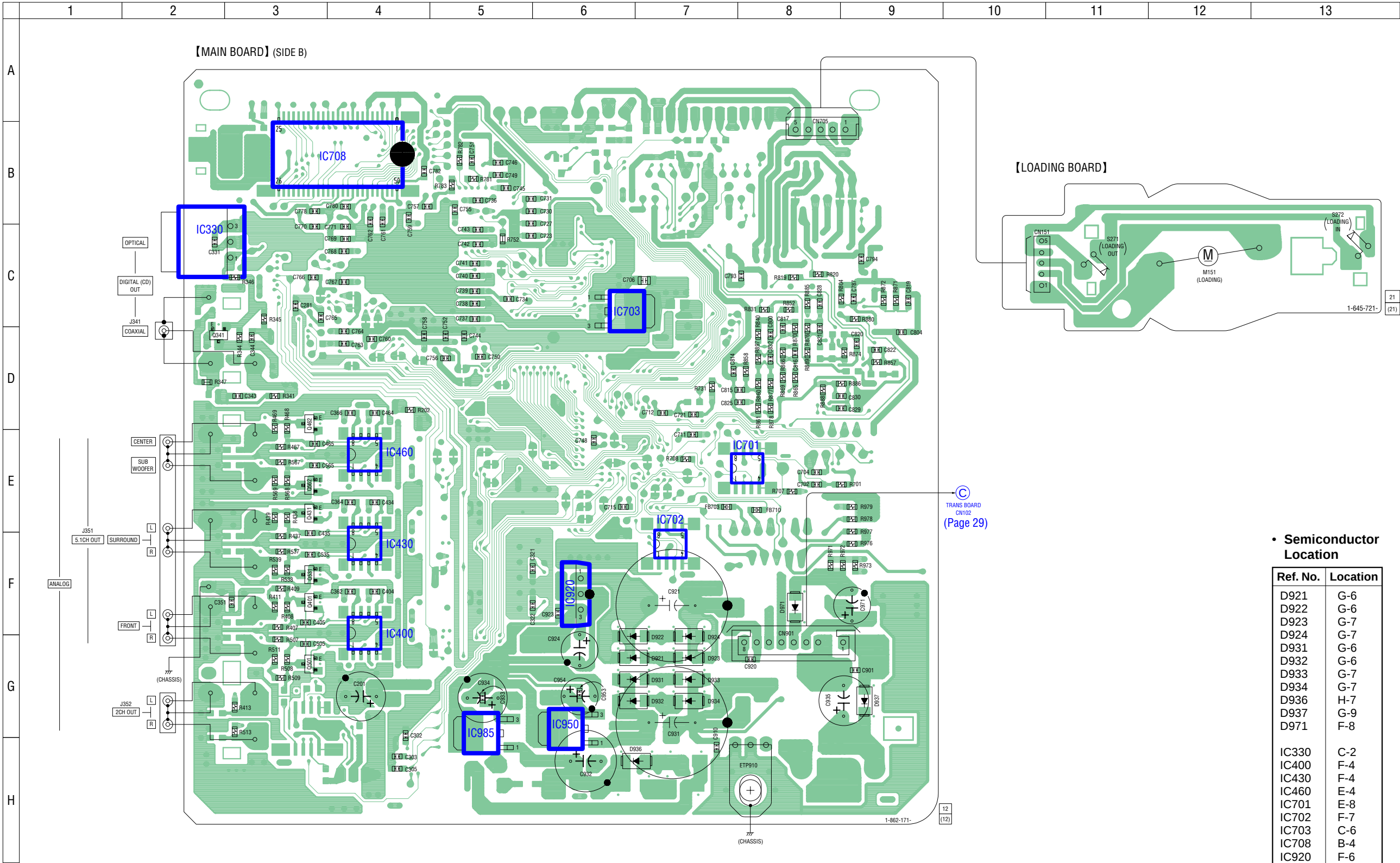
6-6. PRINTED WIRING BOARD – MAIN Section (1/2) – • See page 17 for Circuit Boards Location. : Uses unleaded solder.

• Semiconductor Location

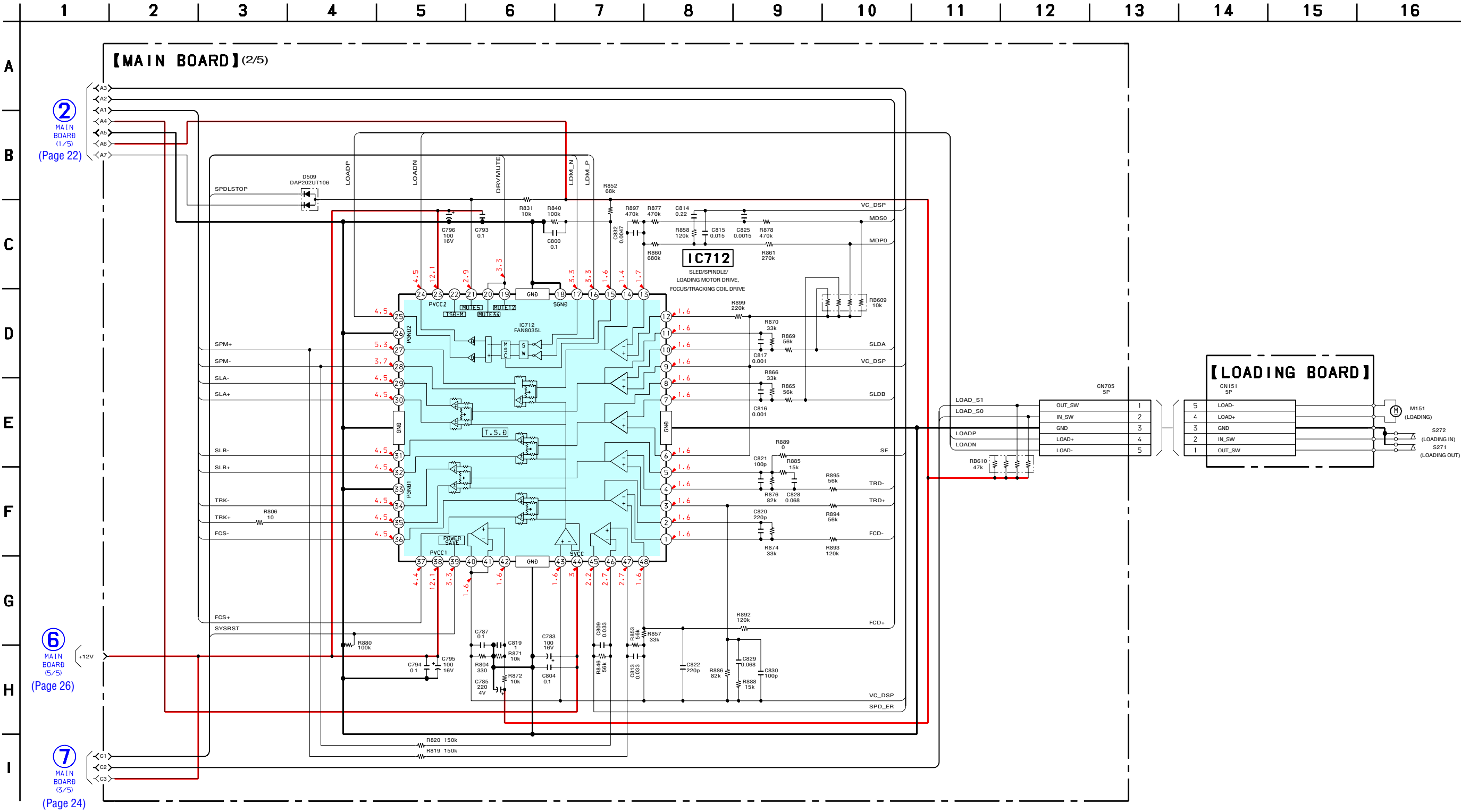
Ref. No.	Location
D321	D-6
D509	C-4
D511	D-4
D960	H-6
D961	G-3
D963	H-7
D972	F-3
D973	F-3
IC200	F-7
IC230	F-7
IC260	E-7
IC320	E-6
IC705	E-5
IC706	C-7
IC712	C-3
Q301	G-7
Q303	G-7
Q305	H-7
Q402	F-9
Q432	E-9
Q463	D-9
Q502	G-9
Q532	F-9
Q563	E-9
Q961	H-7
Q971	F-3



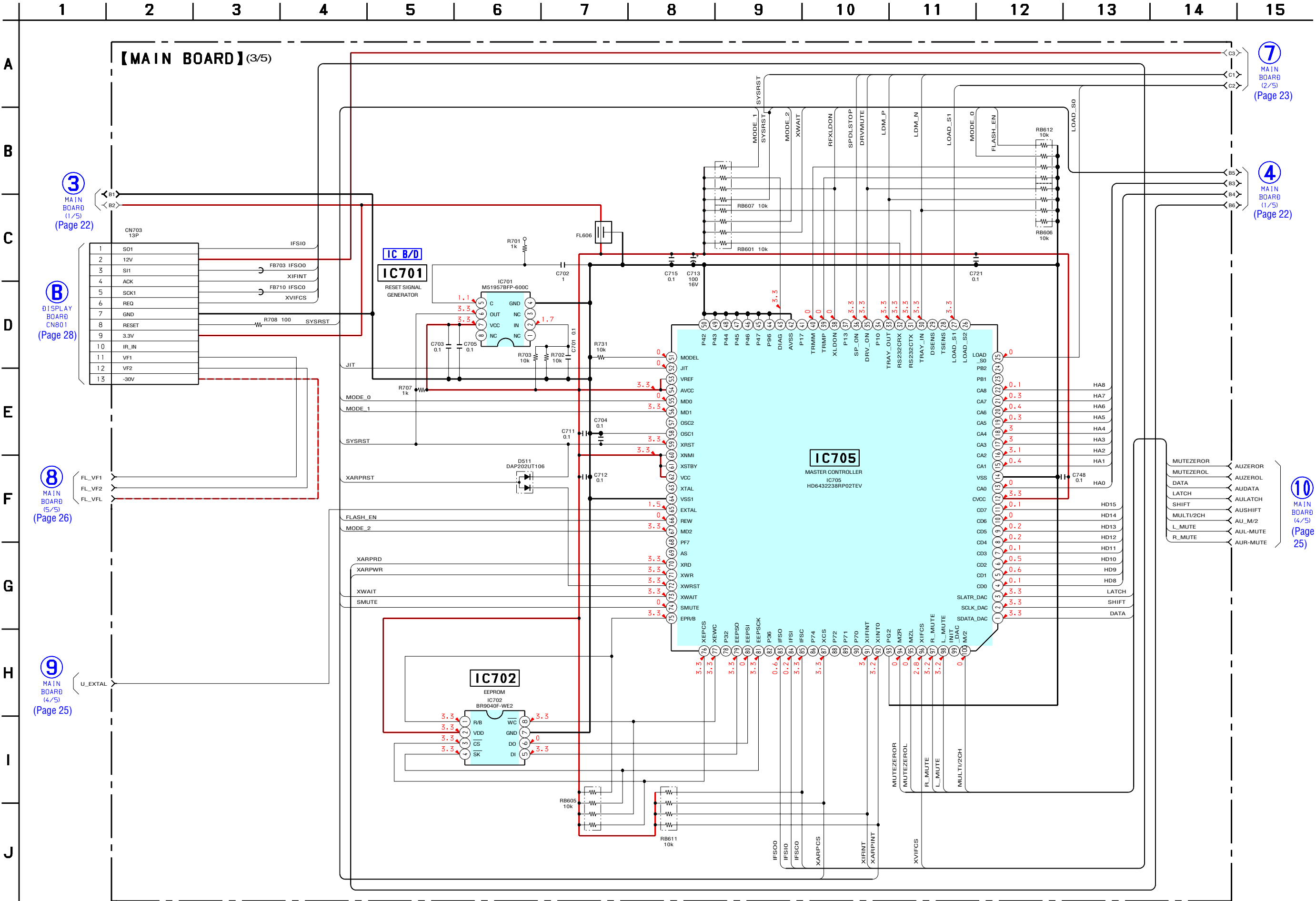
6-7. PRINTED WIRING BOARDS – MAIN Section (2/2) – • See page 17 for Circuit Boards Location. : Uses unleaded solder.



6-9. SCHEMATIC DIAGRAM – MAIN Section (2/5) –



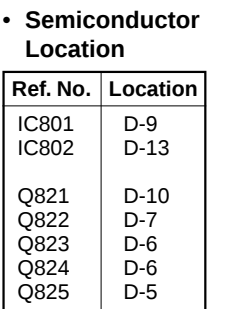
24 24



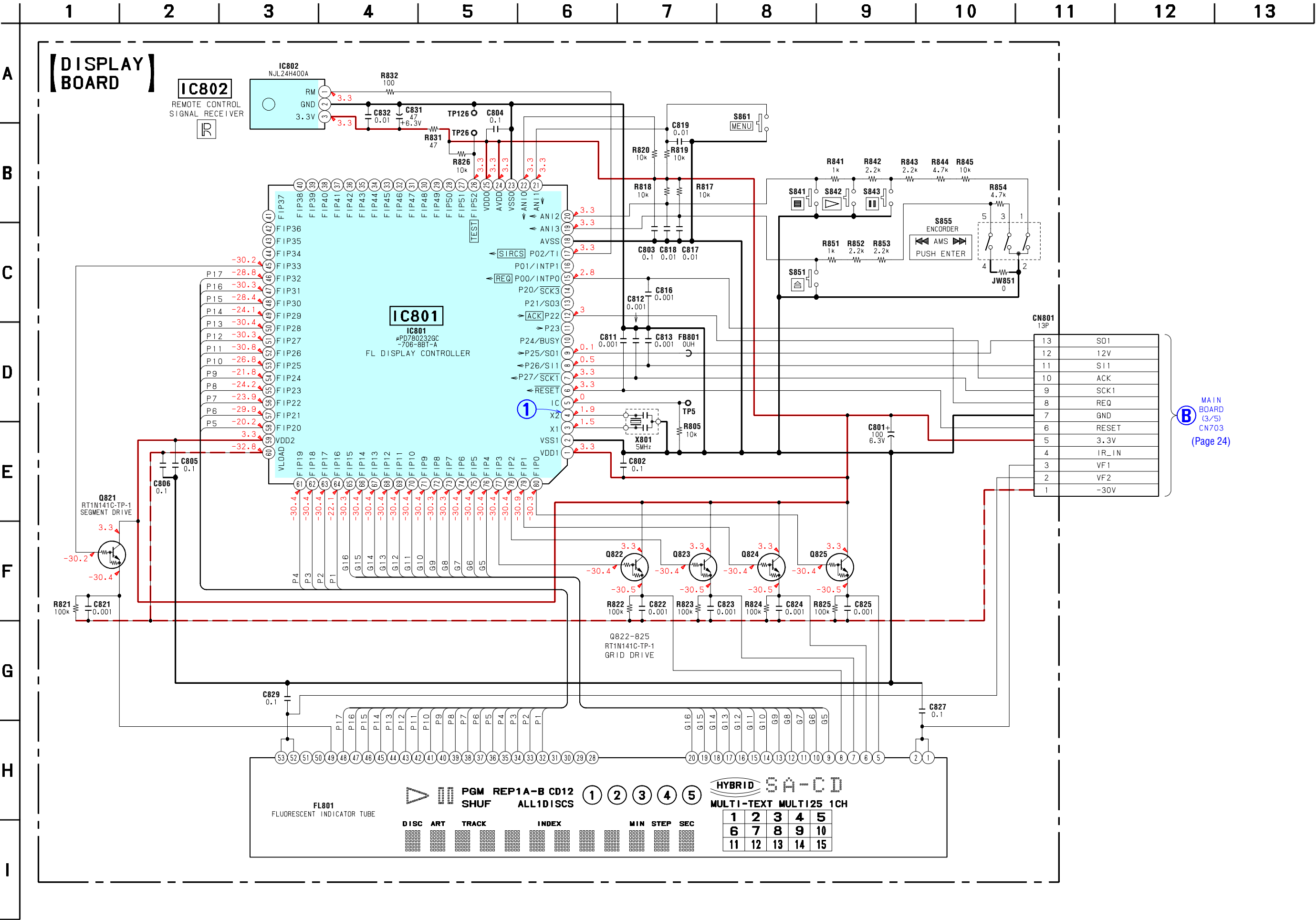
26 26



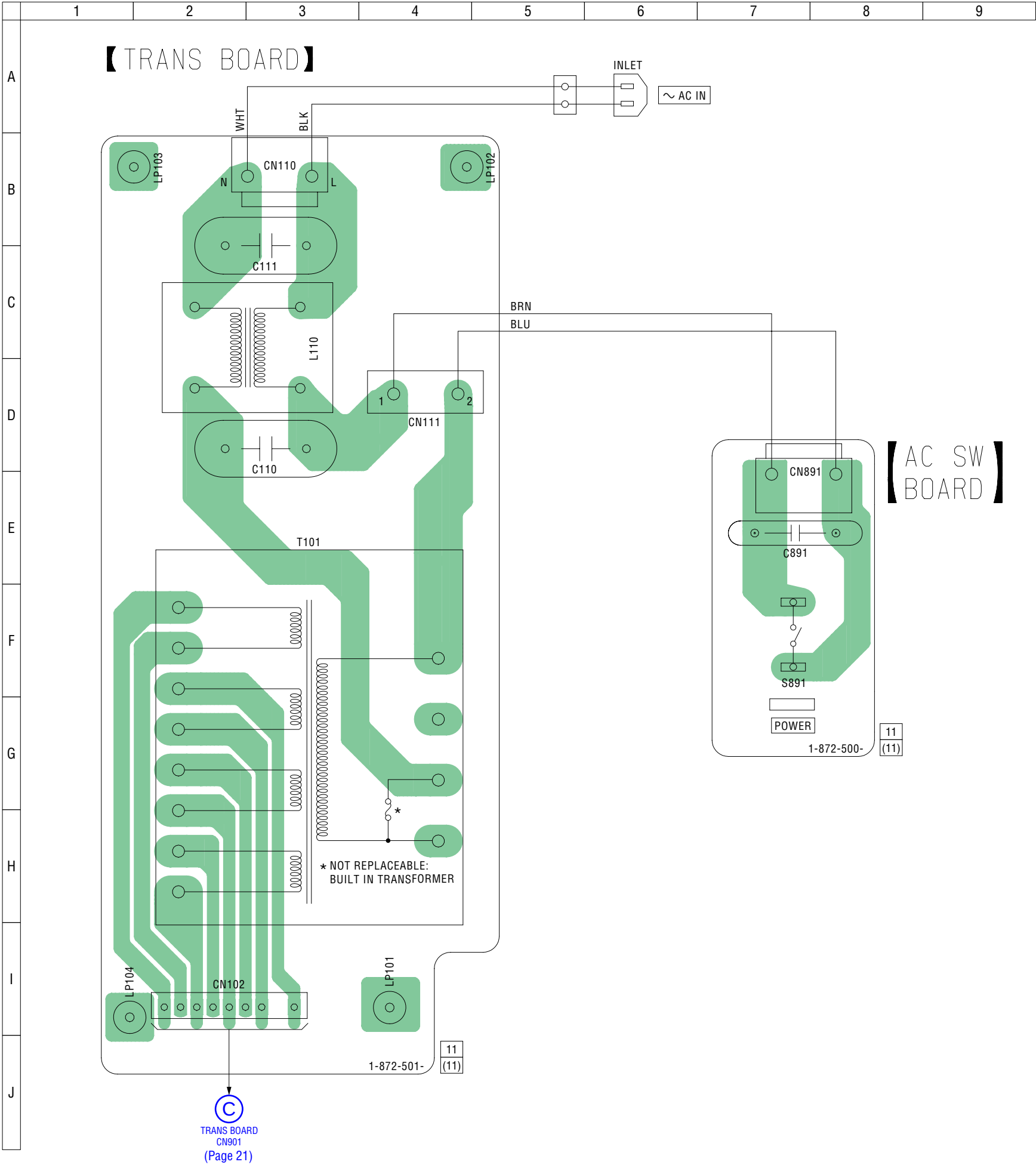
27 27



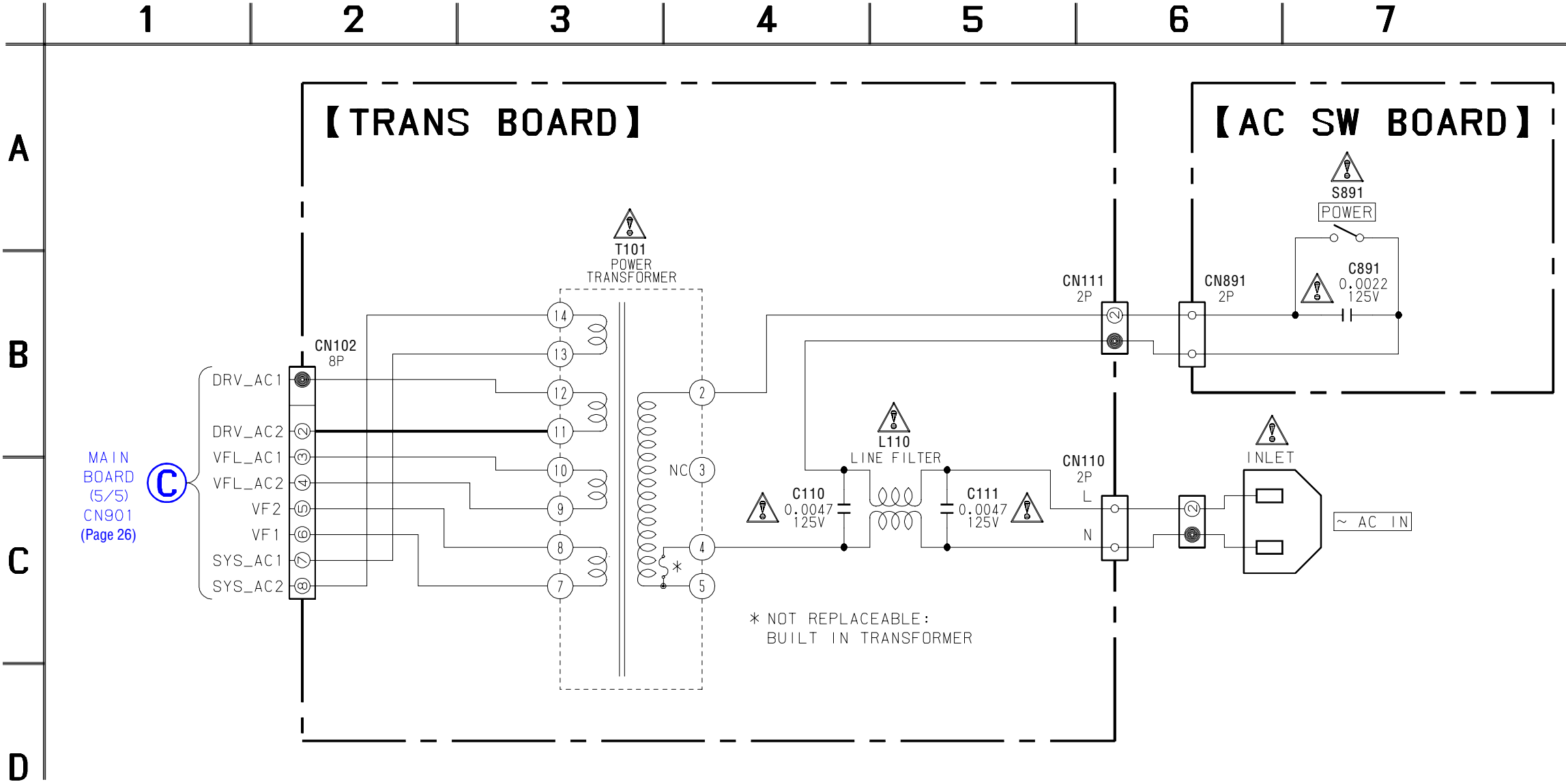
6-14. SCHEMATIC DIAGRAM – DISPLAY Board – • See page 31 for Waveforms. • See page 41 for IC Pin Function Description.



6-15. PRINTED WIRING BOARDS – POWER SUPPLY Section – • See page 17 for Circuit Boards Location. : Uses unleaded solder.

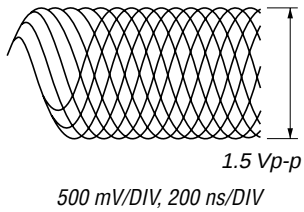
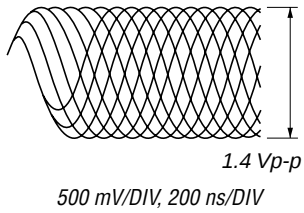


6-16. SCHEMATIC DIAGRAM – POWER SUPPLY Section –



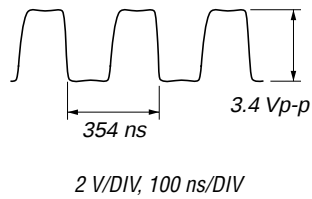
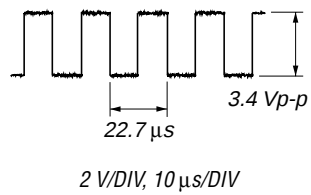
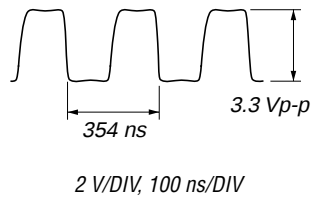
• Waveforms

– WALTZ-RF Board –

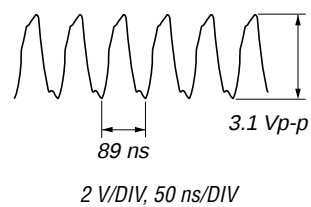
① IC001 ⑤⑨ (SIGO)
(CD play mode)① IC001 ⑤⑨ (SIGO)
(SA-CD play mode)

– MAIN Board –

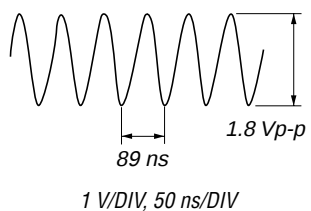
① IC706 ⑦⑧ (DSPHREFO)

② IC706 ⑨④ (CDLRCK)
(CD play mode)③ IC706 ⑨⑤ (CDBCK)
(CD play mode)

④ IC320 ②, ④, ⑥, ⑩, ⑫

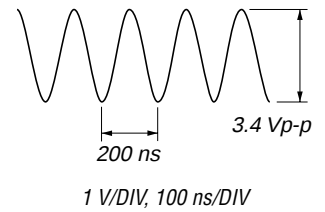


⑤ IC320 ⑨



– DISPLAY Board –

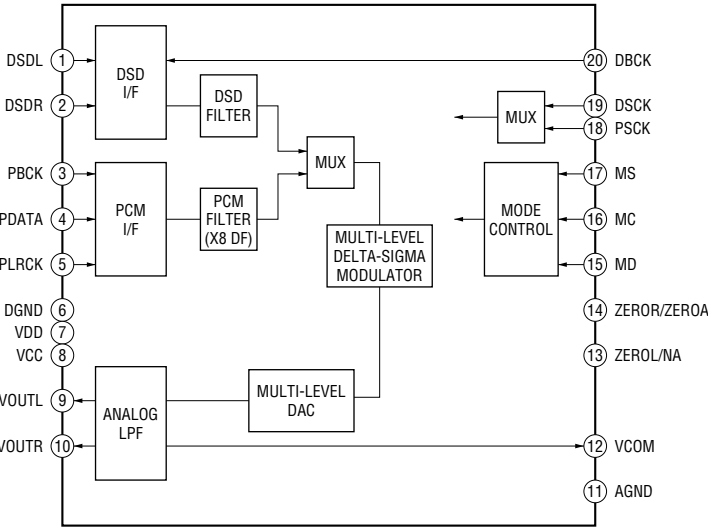
① IC801 ④ (X2)



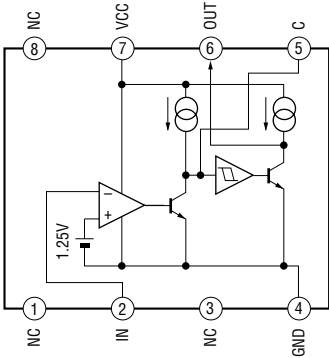
SCD-X501ES

• IC Block Diagrams
– MAIN Board –

IC200, 230, 260 DSD1751DBQR



IC701 M51957BFP-600C



• IC Pin Function Description

WALTZ-RF BOARD IC001 SP3726A (SA-CD/CD RF AMP, FOCUS/TRACKING ERROR AMP)

Pin No.	Pin Name	I/O	Description
1	RFIP	I	RF signal input from the optical traverse unit
2	RFIN	I	RF signal input from the optical traverse unit
3	CP	—	Tracking low-pass filter terminal
4	WIN	I	Wobble detection signal input terminal Not used (Open)
5	WPP	O	Wobble push-pull signal output terminal Not used (Open)
6	CN	—	Tracking low-pass filter terminal
7 to 10	A2 to D2	I	Photo detector interface input from the optical traverse unit (AC coupled input for the DPD and wobble)
11 to 14	D to A	I	Photo detector interface input from the optical traverse unit (main)
15, 16	E, F	I	Photo detector interface input from the optical traverse unit (sub)
17	SIGDETB	O	Signal detection signal output terminal Not used (Open)
18	INTR	I	Interruption control signal input terminal Not used
19	VC	O	Reference voltage (+2.5V) output to the optical traverse unit
20	VPB	—	Power supply (+5V) (for servo block)
21	PGSELO	O	PDIC gain selection signal output terminal Not used (Open)
22	PD	I	Automatic power control signal input from the optical traverse unit
23	VNB	—	Ground (for servo block)
24	LDSELO	O	Automatic power control laser diode selection signal output to the optical traverse unit
25	DVDLD	O	SA-CD automatic power control signal output terminal
26	CDLD	O	CD automatic power control signal output terminal
27	XLDON	I	Laser diode on/off control signal input from the master controller “L”: laser diode on
28	MEVO	O	Envelope signal output terminal for mirror
29	MIN	I	RF signal input terminal for mirror
30	MP	—	Mirror top hold terminal
31	MB	—	Mirror bottom hold terminal
32	MLPF	—	Mirror low-pass filter terminal
33	MIRR	O	Mirror signal output to the SA-CD/CD decoder
34	BYP2	—	Servo AGC gain control terminal
35	PII	I	Pull-in signal input terminal
36	PI	O	Pull-in signal output to the SA-CD/CD decoder
37	TZC	O	Tracking zero crossing signal output to the SA-CD/CD decoder
38	DFT	O	Defect signal output to the SA-CD/CD decoder
39	VCI	I	Middle point voltage input from the motor/coil driver
40	TZIN	I	Tracking zero crossing signal input terminal
41	TE	O	Tracking error signal output to the SA-CD/CD decoder
42	FE	O	Focusing error signal output to the SA-CD/CD decoder
43	TPH	—	Pull-in top hold terminal
44	MON	O	Monitor signal output to the SA-CD/CD decoder
45	SRD	O	Serial data output to the SA-CD/CD decoder
46	SWD	I	Serial data input from the SA-CD/CD decoder
47	SCLK	I	Serial data transfer clock signal input from the SA-CD/CD decoder
48	SDEN	I	Chip select signal input from the SA-CD/CD decoder
49	V33	—	Power supply (+3.3V) (for CMOS output buffers)
50	RX	I	Reference resistor input terminal
51	TPA	—	RF top hold terminal
52	MEV	—	RF bottom envelope terminal

Pin No.	Pin Name	I/O	Description
53	VNA	—	Ground (for RF block and serial port)
54, 55	FNN, FNP	O	Differential filter normal signal output terminal
56, 57	DIP, DIN	I	Analog signal input terminal for RF single buffer
58	BYP	—	RF AGC gain control terminal
59	SIGO	O	Single-ended RF signal output to the SA-CD/CD decoder
60	VPA	—	Power supply (+5V) (for RF block and serial port)
61, 62	AIP, AIN	I	AGC amplifier signal input terminal
63, 64	ATON, ATOP	O	Differential attenuator signal output terminal

MAIN BOARD IC705 HD6432238RP02TEV (MASTER CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	SDATA_DAC	O	Serial data output to the D/A converter
2	SCLK_DAC	O	Serial data transfer clock signal output to the D/A converter
3	SLATR_DAC	O	Serial data latch pulse signal output to the D/A converter
4 to 11	CD0 to CD7	I/O	Two-way data bus with the SA-CD/CD decoder
12	CVCC	—	Power supply (+3.3V)
13	CA0	O	Address signal output to the SA-CD/CD decoder
14	VSS0	—	Ground
15 to 22	CA1 to CA8	O	Address signal output to the SA-CD/CD decoder
23, 24	PB1, PB2	O	Not used (Open)
25	LOAD_S0	I	Loading in detection switch input terminal
26	LOAD_S2	I	Not used (Open)
27	LOAD_S1	I	Loading out detection switch input terminal
28	TSENS	I	Not used (Open)
29	DSENS	I	Not used (Open)
30	TRAY_IN	O	Loading motor drive signal (disc tray in direction) output terminal
31	RS232CTX	O	Transmit data output terminal Not used
32	RS232CRX	I	Receive data input terminal Not used
33	TRAY_OUT	O	Loading motor drive signal (disc tray out direction) output terminal
34	P10	O	Not used (Open)
35	DRV_ON	O	Stop signal output for the sled motor and focus/tracking coil
36	SP_ON	O	Stop signal output for the spindle motor
37	P13	O	Not used (Open)
38	XLDON	O	Laser diode on/off control signal output to the SA-CD/CD RF amplifier “L”: laser diode on
39, 40	TRMP, TRMM	O	Tray motor control signal output terminal Not used
41	P17	O	Not used (Open)
42	AVSS	—	Ground
43	DIAG	I	DIAG mode on/off control signal input terminal Not used
44	P96	I	Not used
45 to 50	P47 to P42	I	Not used
51	MODEL	I	Model setting terminal
52	JIT	I	Jitter value input from the SA-CD/CD decoder
53	VREF	I	Reference voltage input terminal
54	AVCC	—	Power supply (+3.3V)
55, 56	MD0, MD1	I	CPU operation mode setting terminal
57	OSC2	O	Sub system clock output terminal Not used (Open)
58	OSC1	I	Sub system clock input terminal Not used (Connected to Ground)
59	XRST	I	System reset signal input from the reset signal generator “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
60	XNMI	I	Non-maskable interrupt signal input terminal Not used
61	XSTBY	I	Standby on/off control signal input terminal Not used
62	VCC	—	Power supply (+3.3V)
63	XTAL	O	Main system clock output terminal Not used (Open)
64	VSS1	—	Ground
65	EXTAL	I	Main system clock input terminal (11.2896 MHz)
66	FWE	I	Write enable signal input terminal for flash memory Not used
67	MD2	I	CPU operation mode setting terminal

Pin No.	Pin Name	I/O	Description
68	PF7	O	Not used (Open)
69	AS	O	Not used (Open)
70	XRD	O	Read enable signal output to the SA-CD/CD decoder
71	XWR	O	Write enable signal output to the SA-CD/CD decoder
72	XWRST	O	Reset signal output to the SA-CD/CD decoder “L”: reset
73	XWAIT	I	Wait signal input from the SA-CD/CD decoder
74	SMUTE	O	Soft muting on/off control signal output to the SA-CD/CD decoder “H”: muting on
75	EPR/B	I	Read/busy signal input from the EEPROM
76	XEPCS	O	Chip select signal output to the EEPROM
77	XEWC	O	WC signal output to the EEPROM
78	P32	O	Not used (Open)
79	EEPSO	O	Serial data output to the EEPROM
80	EEPSI	I	Serial data input from the EEPROM
81	EEPCK	O	Serial data transfer clock signal output to the EEPROM
82	P36	O	Not used (Open)
83	IFSO	O	Serial data output to the display controller
84	IFSI	I	Serial data input from the display controller
85	IFSC	O	Serial data transfer clock signal output to the display controller
86	P74	O	Not used (Open)
87	XCS	O	Chip select signal output to the SA-CD/CD decoder
88 to 90	P72 to P70	I	Not used (Open)
91	XIFINT	I	Interrupt signal input from the display controller
92	XINT0	I	Interrupt signal input from the SA-CD/CD decoder
93	PG2	I	Not used (Connected to Ground)
94	MZR	I	Zero data (R-CH) flag detection signal input from the D/A converter
95	MZL	I	Zero data (L-CH) flag detection signal input from the D/A converter
96	XIFCS	O	Chip select signal output to the display controller
97	R_MUTE	O	Muting on/off control signal (for R-ch) output terminal “L”: muting on
98	L_MUTE	O	Muting on/off control signal (for L-ch) output terminal “L”: muting on
99	INIT_DAC	O	Not used (Open)
100	M/2	O	Multi/2ch selection signal output terminal “L”: 2ch “H”: multi

MAIN BOARD IC706 CXD2754Q (SA-CD/CD DECODER)

Pin No.	Pin Name	I/O	Description
1	CKVDD	—	Power supply (+1.8V) (for clock multiplier PLL)
2	CKVSS	—	Ground (for clock multiplier PLL)
3	MCKI	I	System clock (11.2896 MHz) signal input terminal
4, 5	CKSEL1, CKSEL0	I	System clock setting terminal Fixed at 11.2896 MHz in this set
6	VDIOCK	—	Power supply (+3.3V) (for clock I/O)
7	VSIOCK	—	Ground (for clock I/O)
8	EXCKO	O	External clock output terminal Not used (Open)
9	VDC0	—	Power supply (+1.8V) (for core)
10	VSC0	—	Ground (for core)
11 to 18	D0 to D7	I/O	Two-way data bus with the master controller
19	VDIO0	—	Power supply (+3.3V) (for I/O)
20	VSIO0	—	Ground (for I/O)
21 to 29	A0 to A8	I	Address signal input from the master controller
30	VDC1	—	Power supply (+1.8V) (for core)
31	VSC1	—	Ground (for core)
32	XINT	O	Interrupt signal output to the master controller
33	XCS	I	Chip select signal input from the master controller
34	XWAIT	O	Wait signal output to the master controller
35	XWR	I	Write enable signal input from the master controller
36	XRD	I	Read enable signal input from the master controller
37	XRST	I	System reset signal input from the reset signal generator and master controller “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
38	TRST	I	JTAG reset signal input from the reset signal generator and master controller “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
39	TCK	I	Clock signal input terminal (for JTAG) Not used
40	TDI	I	Test data input terminal (for JTAG) Not used (Open)
41	TDO	O	Test data output terminal (for JTAG) Not used (Open)
42	TMS	I	Mode selection signal input terminal (for JTAG) Not used (Open)
43	SCANEN	I	Test terminal Not used
44 to 47	TEST0 to TEST3	I	Test terminal Not used (Open)
48	VDC2	—	Power supply (+1.8V) (for core)
49	VSC2	—	Ground (for core)
50 to 57	MNT0 to MNT7	O	Monitor terminal Not used (Open)
58	EXMNT	O	Extra monitor terminal Not used (Open)
59	VDIO1	—	Power supply (+3.3V) (for I/O)
60	VSIO1	—	Ground (for I/O)
61	SMUTE	I	Soft muting on/off control signal input from the master controller “H”: muting on
62 to 69	SUPDT0 to SUPDT7	O	Not used (Open)
70	XSUPAK	O	Not used (Open)
71	FRAME	O	Not used (Open)
72	VDC3	—	Power supply (+1.8V) (for core)
73	VSC3	—	Ground (for core)
74	DSBCKAI	I	Bit clock signal input terminal (for DSD data output) Not used
75	DSBCKAO	O	Bit clock signal output terminal (for DSD data output) Not used (Open)
76	DSBCKASL	I	Bit clock signal input/output selection terminal (for DSD data output) “L”: input (slave), “H”: output (master) Fixed at “H” in this set

Pin No.	Pin Name	I/O	Description
77	DSPHREFI	I	Phase reference signal input terminal (for DSD output phase modulation) Not used
78	DSPHREFO	O	Phase reference signal output to the D/A converter (for DSD output phase modulation)
79	VDDSD0	—	Power supply (+3.3V) (for DSD data output)
80	VSDSD0	—	Ground (for DSD data output)
81	DSADML	O	DSD data output terminal (for down mix L-ch) Not used (Open)
82	DSADMR	O	DSD data output terminal (for down mix R-ch) Not used (Open)
83	DSAL	O	DSD data output to the D/A converter (for front L-ch)
84	DSAR	O	DSD data output to the D/A converter (for front R-ch)
85	DSALS	O	DSD data output to the D/A converter (for surround L-ch)
86	DSARS	O	DSD data output to the D/A converter (for surround R-ch)
87	VDDSD1	—	Power supply (+3.3V) (for DSD data output)
88	VSDSD1	—	Ground (for DSD data output)
89	DSAC	O	DSD data output to the D/A converter (for center)
90	DSASW	O	DSD data output to the D/A converter (for sub woofer)
91	DSAEXTR	O	DSD data output terminal (for extra channel) Not used (Open)
92	VDC4	—	Power supply (+1.8V) (for core)
93	VSC4	—	Ground (for core)
94	CDLRCK	O	L/R sampling clock signal output to the D/A converter (for CD data output)
95	CDBCK	O	Bit clock signal output to the D/A converter (for CD data output)
96	PCMD1	O	CD data output to the D/A converter
97, 98	PCMD2, PCMD3	O	Decimation data output terminal Not used (Open)
99	BCK958	O	Bit clock signal output terminal Not used (Open)
100	DOUT958	O	Digital out signal output terminal
101	VDIO2	—	Power supply (+3.3V) (for I/O)
102	VSIO2	—	Ground (for I/O)
103 to 108	IOUT0 to IOUT5	O	DSD data output terminal Not used (Open)
109	VDC5	—	Power supply (+1.8V) (for core)
110	VSC5	—	Ground (for core)
111	IANCO	O	Ancillary data output terminal Not used (Open)
112	IFRM	O	Frame signal output terminal Not used (Open)
113	IOUT	O	Enable signal output terminal Not used (Open)
114	XSAK	O	Effective flag output terminal Not used (Open)
115	XSHD	O	Header flag output terminal Not used (Open)
116	IBCK	O	Bit clock signal output terminal Not used (Open)
117	XSRQ	I	Request signal input terminal Not used (Open)
118	IFULL	I	Data transmission hold request signal output terminal Not used (Open)
119	IEMPTY	I	Hi-speed transmission request signal output terminal Not used (Open)
120	VDIO3	—	Power supply (+3.3V) (for I/O)
121	VSIO3	—	Ground (for I/O)
122 to 125	MA0 to MA3	O	Address signal output to the SD-RAM
126	VDC6	—	Power supply (+1.8V) (for core)
127	VSC6	—	Ground (for core)
128 to 134	MA4 to MA10	O	Address signal output to the SD-RAM
135	MA11	O	Address signal output terminal Not used (Open)
136	BA0	O	Bank address signal output to the SD-RAM
137	BA1	O	Bank address signal output terminal Not used (Open)
138	XRAS	O	Row address strobe signal output to the SD-RAM

Pin No.	Pin Name	I/O	Description
139	XCAS	O	Column address strobe signal output to the SD-RAM
140	VDC7	—	Power supply (+1.8V) (for core)
141	VSC7	—	Ground (for core)
142	XMWR	O	Write enable signal output to the SD-RAM
143	MCKE	O	Clock enable signal output to the SD-RAM
144	MMCK	O	Clock signal output to the SD-RAM
145	VDIO4	—	Power supply (+3.3V) (for I/O)
146	VSIO4	—	Ground (for I/O)
147	LDQM	O	Data mask (lower 8 bit) signal output to the SD-RAM
148	UDQM	O	Data mask (upper 8 bit) signal output to the SD-RAM
149 to 158	MD0 to MD9	I/O	Two-way data bus with the SD-RAM
159	VDC8	—	Power supply (+1.8V) (for core)
160	VSC8	—	Ground (for core)
161 to 166	MD10 to MD15	I/O	Two-way data bus with the SD-RAM
167	VDIO5	—	Power supply (+3.3V) (for I/O)
168	VSIO5	—	Ground (for I/O)
169 to 176	ADIO0 to ADIO7	I/O	A/D converter input/output terminal (for RF) No used (Open)
177	VDC9	—	Power supply (+1.8V) (for core)
178	VSC9	—	Ground (for core)
179	RFD	O	Binary RF signal output terminal No used (Open)
180	TESTI	I	Test terminal
181	PDAVDD	—	Power supply (+3.3V) (analog system for PLL-D/A)
182	PDAVSS	—	Ground (analog system for PLL-D/A)
183	PDAREF	O	Reference current output terminal (analog system for PLL-D/A)
184	PDAOUT	O	PLL-D/A output terminal
185	VCTL	I	VCO control voltage input terminal (for PLL)
186	PLLVD	—	Power supply (+3.3V) (analog system for PLL)
187	PLLVS	—	Ground (analog system for PLL)
188	RADVRT	I	Reference voltage (top side) input terminal (for RF A/D)
189	RADVDD	—	Power supply (+3.3V) (analog system for RF A/D)
190	RFIN	I	RF signal input from the SA-CD/CD RF amplifier
191	RADVSS	—	Ground (analog system for RF A/D)
192	RADVRB	I	Reference voltage (bottom side) input terminal (for RF A/D)
193	RFSWVSO	O	CD/DVD selection terminal (RFIN side)
194	RFSWVSI	I	CD/DVD selection terminal (ground side)
195	RFSWVDO	O	CD/DVD selection terminal (RFIN side)
196	RFSWVDI	I	CD/DVD selection terminal (power supply side)
197	SADVDD	—	Power supply (+3.3V) (analog system for servo A/D)
198	SADVSS	—	Ground (analog system for servo A/D)
199	ADIMNT	O	Not used (Open)
200	TEI	I	Tracking error signal input from the SA-CD/CD RF amplifier
201	FEI	I	Focus error signal input from the SA-CD/CD RF amplifier
202	PI	I	Pull-in signal input from the SA-CD/CD RF amplifier
203	SEI	I	Sled error signal input from the motor/coil driver
204	SP_RV	I	Spindle counter electromotive force input from the motor/coil driver
205	TSD-M	O	Thermal shut down signal output terminal Not used (Open)
206	VC0	I	Middle point voltage input from the motor/coil driver

Pin No.	Pin Name	I/O	Description
207	SSIMON0	I	Not used (Open)
208	PI_F	I	Pull-in signal input from the SA-CD/CD RF amplifier
209	TE_F	I	Tracking error signal input from the SA-CD/CD RF amplifier (for internal Tracking zero crossing signal generation)
210	VC1	I	Middle point voltage input from the motor/coil driver (for internal Tracking zero crossing signal generation)
211	SDAVDD0	—	Power supply (+3.3V) (analog system for servo PWM)
212	SDAVSS0	—	Ground (analog system for servo PWM)
213, 214	TDOP, TDON	O	Tracking coil drive signal output to the motor/coil driver
215, 216	FDOP, FDON	O	Focus coil drive signal output to the motor/coil driver
217	VDC10	—	Power supply (+1.8V) (for core)
218	VSC10	—	Ground (for core)
219, 220	SLDOA, SLDOB	O	Sled motor drive signal output to the motor/coil driver
221, 222	SPDOA, SPDOB	O	Spindle motor drive signal output to the motor/coil driver
223	SDAVDD1	—	Power supply (+3.3V) (analog system for servo PWM)
224	SDAVSS1	—	Ground (analog system for servo PWM)
225	LOAD	O	Not used (Open)
226	JIT	O	Jitter value output to the master controller
227	VDC11	—	Power supply (+1.8V) (for core)
228	VSC11	—	Ground (for core)
229	DFCTI	I	Defect signal input from the SA-CD/CD RF amplifier
230	TZC	I	Tracking zero crossing signal input from the SA-CD/CD RF amplifier
231	MIRR	I	Mirror signal input from the SA-CD/CD RF amplifier
232	VDIO6	—	Power supply (+3.3V) (for I/O)
233	VSIO6	—	Ground (for I/O)
234	INLIM	I	Limit in detection switch input terminal
235	FGMODE	O	Spindle motor break signal output to the motor/coil driver
236	SSIMON1	I	Monitor signal input from the SA-CD/CD RF amplifier
237 to 241	GIO3 to GIO7	I/O	No used (Open)
242	VDC12	—	Power supply (+1.8V) (for core)
243	VSC12	—	Ground (for core)
244	SCS	O	Chip select signal output to the SA-CD/CD RF amplifier
245	SSI	I	Serial data input from the SA-CD/CD RF amplifier
246	SSO	O	Serial data output to the SA-CD/CD RF amplifier
247	SCK	O	Serial data transfer clock signal output to the SA-CD/CD RF amplifier
248	VDIO7	—	Power supply (+3.3V) (for I/O)
249	VSIO7	—	Ground (for I/O)
250 to 253	GIO12 to GIO15	I/O	No used (Open)
254	FG	I	Motor rotation speed detection signal input terminal Not used (Open)
255	M_ON	O	Motor on monitor terminal (for spindle control) Not used (Open)
256	LOCK	O	Lock monitor terminal (for spindle control) Not used (Open)

DISPLAY BOARD IC801 uPD780232GC-706-8BT-A (DISPLAY CONTROLLER)

Pin No.	Pin Name	I/O	Description
1	VDD1	—	Power supply (+3.3V)
2	VSS1	—	Ground
3	X1	I	System clock input terminal (5 MHz)
4	X2	O	System clock output terminal (5 MHz)
5	IC	—	Not used (Pull down)
6	$\overline{\text{XRESET}}$	I	System reset signal input from the reset signal generator “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
7	P27/ $\overline{\text{SCK1}}$	I	Serial data transfer clock signal input from the master controller
8	P26/ $\overline{\text{SI1}}$	I	Serial data input from the master controller
9	P25/SO1	O	Serial data output to the master controller
10	P24/BUSY	O	Busy signal output terminal Not used (Open)
11	P23	O	Not used (Open)
12	$\overline{\text{ACK}}$ P22	O	Interrupt signal output to the master controller
13	P21/SO3	O	Serial data output terminal Not used (Open)
14	P20/ $\overline{\text{SCK3}}$	O	Serial data transfer clock signal terminal Not used (Open)
15	$\overline{\text{REQ}}$ P00/INTP0	I	Chip select signal input from the master controller
16	P01/INTP1	O	Interrupt signal output terminal Not used (Open)
17	$\overline{\text{SIRCS}}$ P02/TI	I	SIRCS signal input from the remote control receiver
18	AVSS	—	Ground
19 to 21	ANI3 to ANI1	I	Front panel keys input terminal (A/D input)
22	ANI0	I	Key input terminal (A/D input) Not used
23	VSS0	—	Ground
24	AVDD	—	Power supply (+3.3V)
25	VDD0	—	Power supply (+3.3V)
26	$\overline{\text{TEST}}$ FIP52	I	Test mode setting terminal “L”: test mode, normally fixed at “H”
27 to 44	FIP51 to FIP34	O	Not used (Open)
45 to 58	FIP33 to FIP20	O	Segment drive signal output to the fluorescent indicator tube
59	VDD2	—	Power supply (+3.3V)
60	VLOAD	—	Power supply (-33V)
61 to 64	FIP19 to FIP16	O	Segment drive signal output to the fluorescent indicator tube
65 to 80	FIP15 to FIP0	O	Grid drive signal output to the fluorescent indicator tube

SECTION 7
EXPLODED VIEWS

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

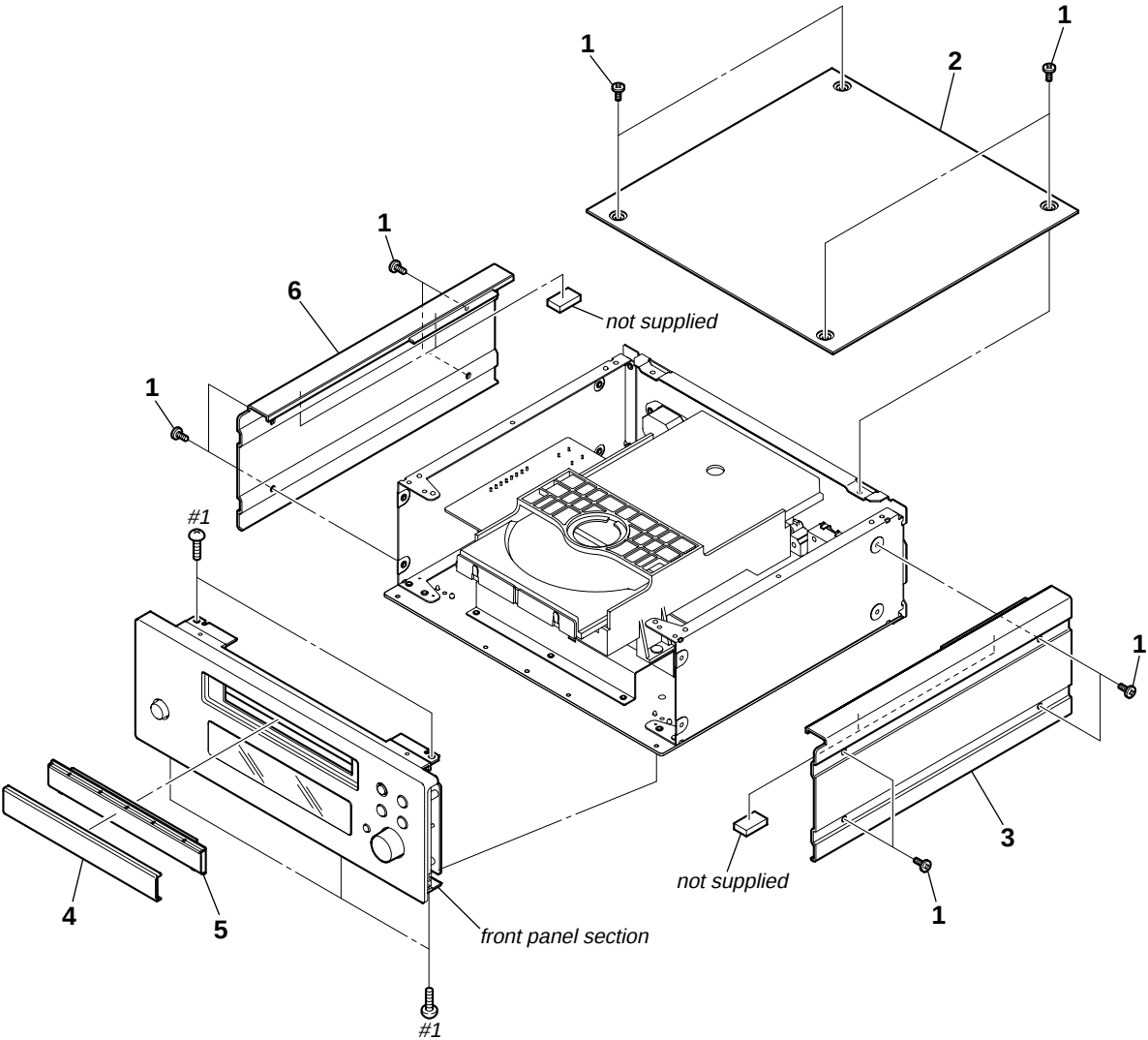
Parts Color
- ↑

Cabinet's Color

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories are given in the last of the electrical parts list.

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

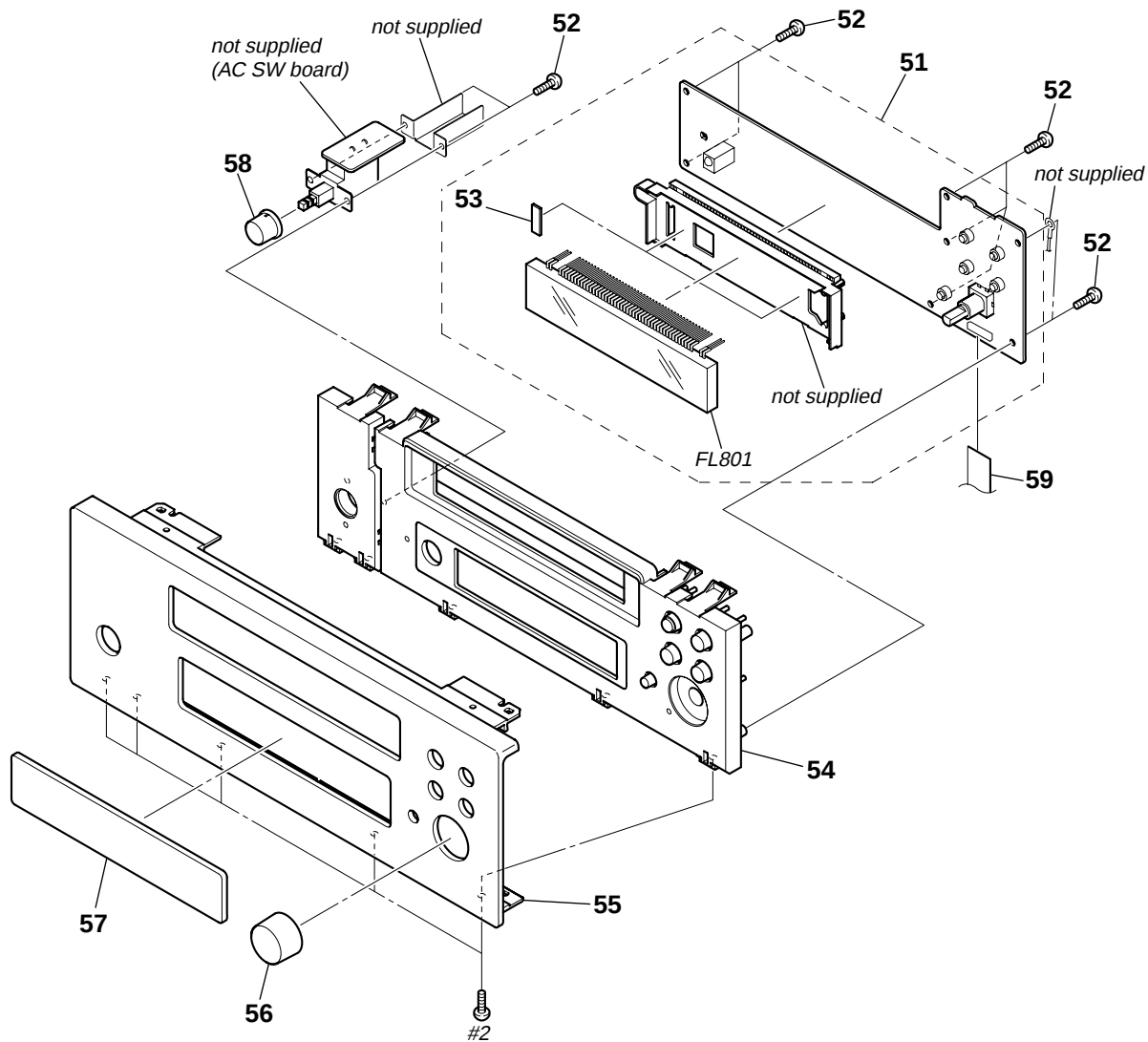
7-1. MAIN SECTION



Ref. No.	Part No.	Description	Remark
1	4-227-843-31	SCREW (TP), FLAT HEAD	
2	2-897-138-01	PLATE, TOP	
3	2-897-137-01	PLATE (R), SIDE	
4	2-897-153-01	PANEL, LOADING	

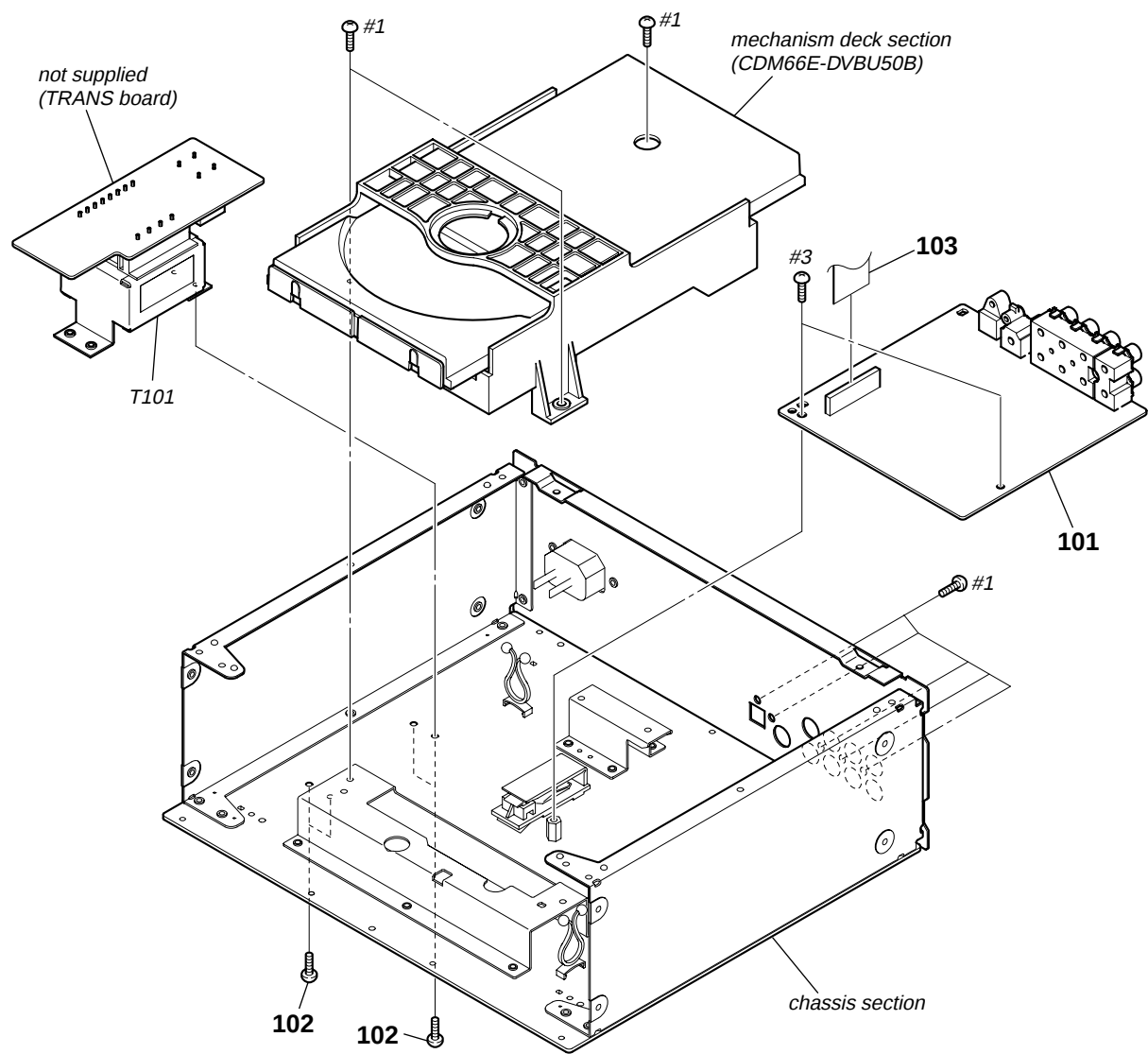
Ref. No.	Part No.	Description	Remark
5	2-897-154-01	BASE, LOADING PANEL	
6	2-897-136-01	PLATE (L), SIDE	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

7-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	A-1254-368-A	DISPLAY BOARD, COMPLETE		57	2-897-145-01	WINDOW (SCD)	
52	3-087-053-01	+BVTP2.6 (3CR)		58	X-2176-429-1	BUTTON (POWER) ASSY	
53	4-949-935-41	CUSHION (FL)		59	1-965-430-11	HARNESS (FLAT WIRE CABLE) 13P	
54	X-2176-428-1	PANEL (SCD) ASSY, BASE		FL801	1-519-943-11	INDICATOR TUBE, FLUORESCENT	
55	2-897-143-11	PANEL (SCD), FRONT		#2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
56	X-2176-430-1	KNOB (AMS) ASSY					

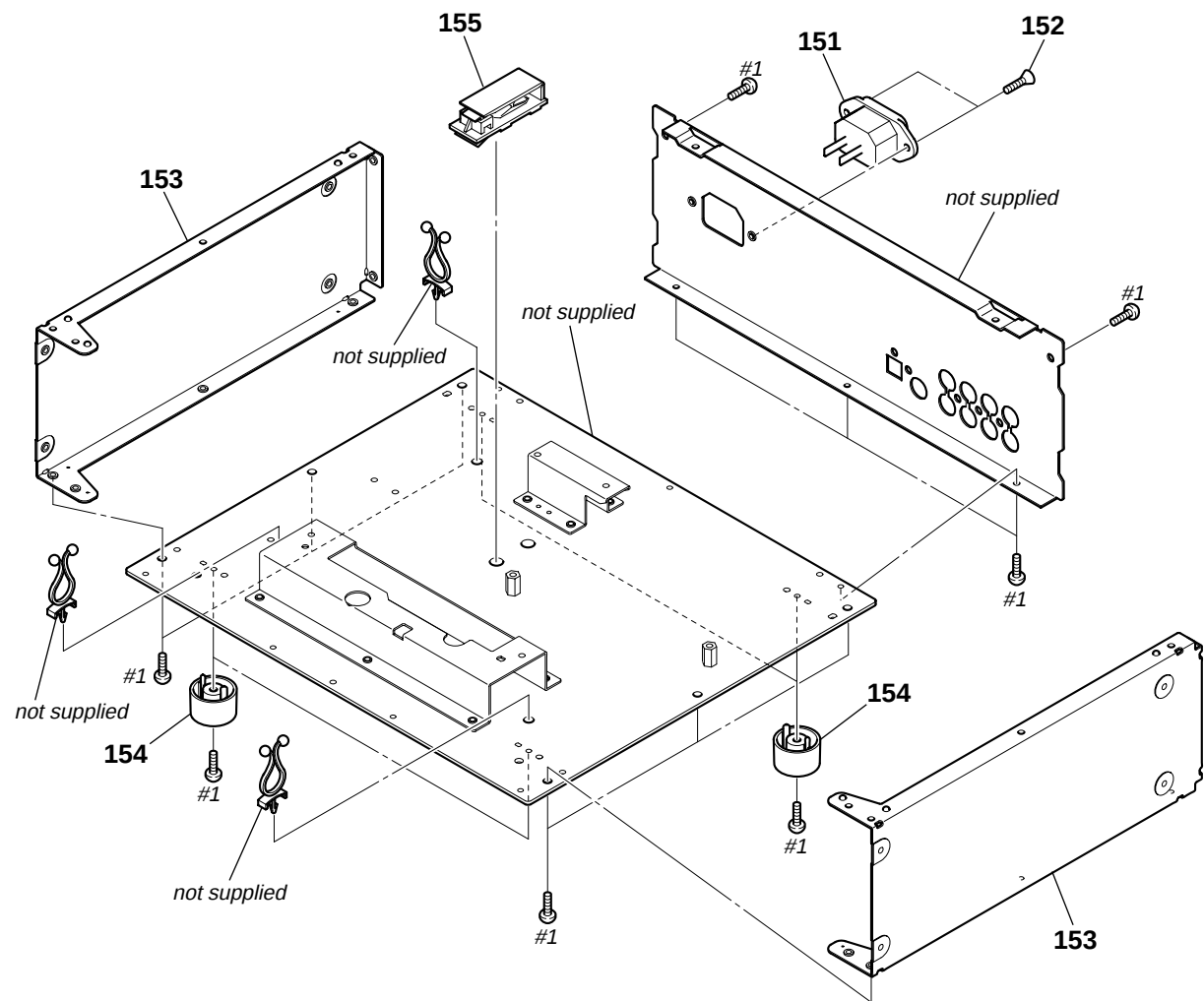
7-3. MAIN BOARD SECTION



Note: If Ref. No. 103 is replaced, install it after bending it in the same form as that before replacement.

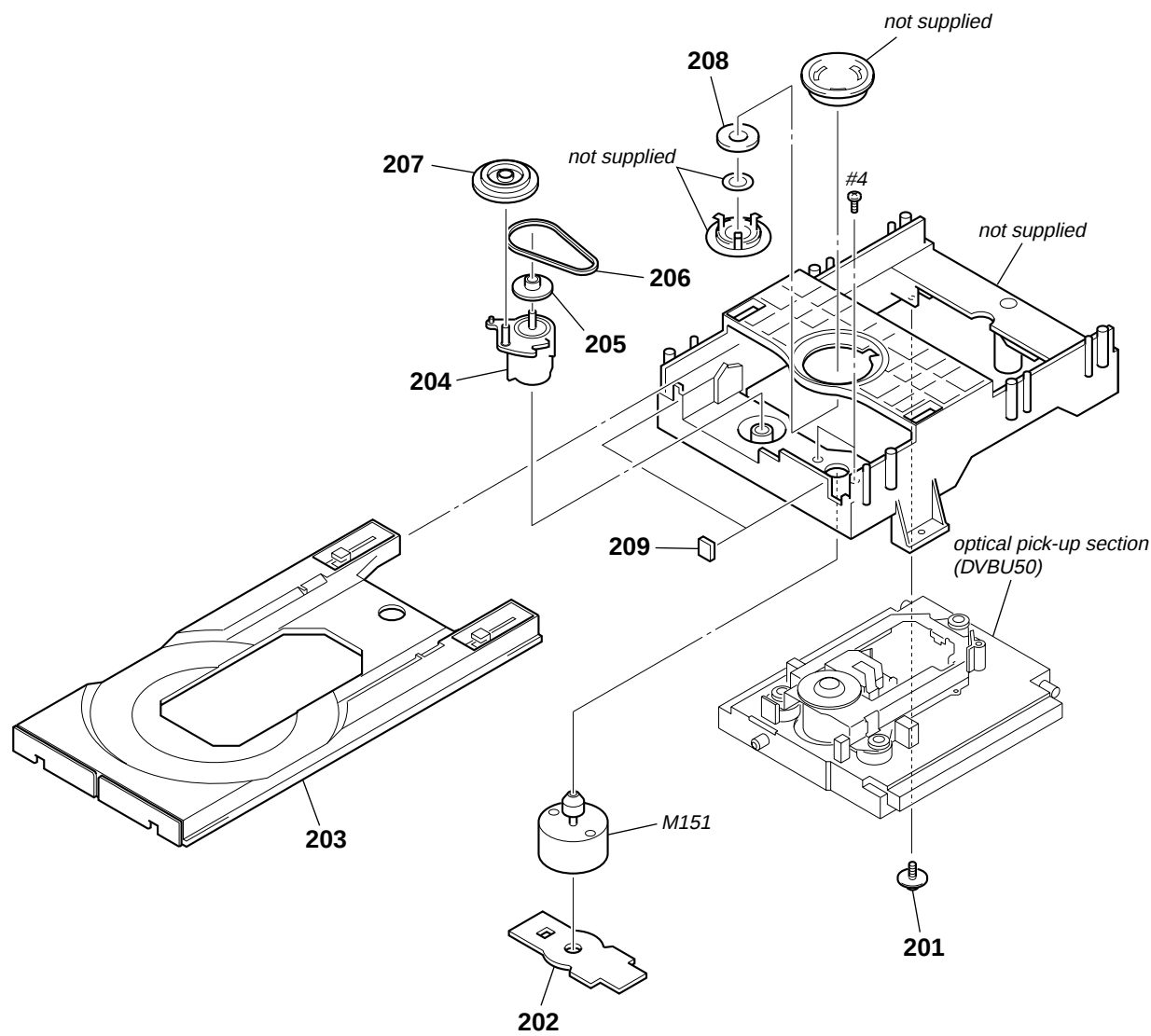
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	A-1254-372-A	MAIN BOARD, COMPLETE		△ T101	1-443-287-11	TRANSFORMER, POWER	
102	4-974-510-11	SCREW (+BV 3X8 CU)		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
103	1-965-534-11	HARNESS (FLAT WIRE CABLE) 31P		#3	7-685-871-01	SCREW +BVTT 3X6 (S)	

7-4. CHASSIS SECTION



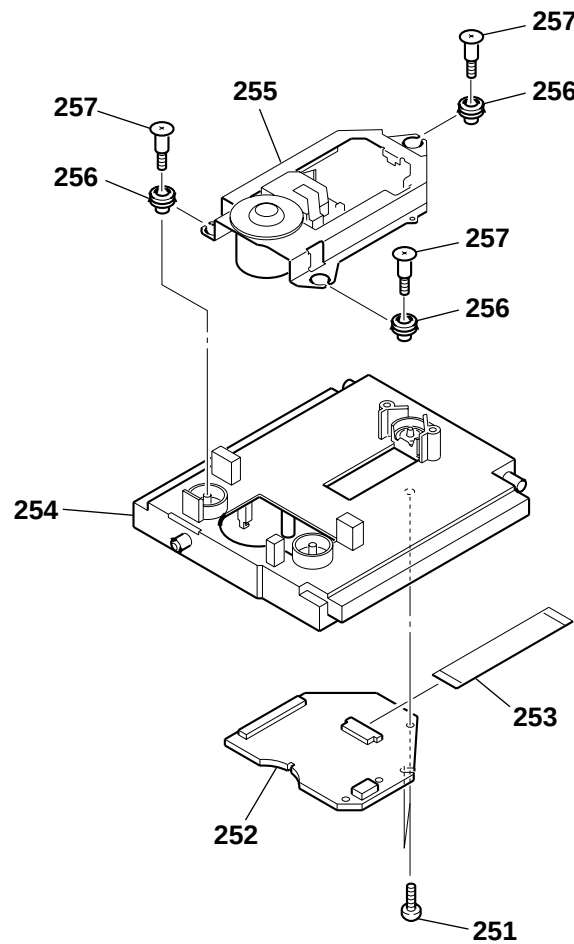
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
△ 151	1-819-867-11	INLET, AC 2P (~ AC IN)		154	X-2022-049-1	FOOT ASSY	
152	2-580-644-01	SCREW, +KTP2 3X8		* 155	3-184-898-01	CLAMP, FLAT CABLE	
153	2-897-133-01	FRAME, SIDE		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

7-5. MECHANISM DECK SECTION
(CDM66E-DVBU50B)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	4-227-899-31	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	4-231-530-05	TRAY (66)		209	4-232-682-01	CUSHION (66)	
204	4-232-712-01	CAM (66)		M151	A-4604-363-A	MOTOR (L) ASSY (LOADING)	
205	4-232-710-01	PULLEY (LD)		#4	7-621-775-10	SCREW +B 2.6X4	
206	4-232-713-01	BELT (LD)					

7-6. OPTICAL PICK-UP SECTION (DVBU50B)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	4-218-253-52	SCREW (M2.6), +BTTP		△ 255	A-1109-164-A	SERVICE ASSY, DBU-3	
252	A-4750-527-A	WALTZ-RF BOARD, COMPLETE		256	3-053-847-31	INSULATOR	
253	1-824-106-51	CABLE, FLEXIBLE FLAT (0.5mm PITCH) 24P		257	4-981-923-01	SCREW (M), STEP	
254	4-240-953-11	HOLDER (66D)					

SECTION 8

ELECTRICAL PARTS LIST

AC SW

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.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA... : μ A... uPA... : μ PA...
uPB... : μ PB... uPC... : μ PC...
uPD... : μ PD...
- CAPACITORS
uF: μ F
- COILS
uH: μ H

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

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

Ref. No.	Part No.	Description	Remark				Ref. No.	Part No.	Description	Remark			
		AC SW BOARD *****							< FERRITE BEAD >				
		< CAPACITOR >					FB801	1-414-595-11	INDUCTOR, FERRITE BEAD				
		< FLUORESCENT INDICATOR TUBE >							< FLUORESCENT INDICATOR TUBE >				
△ C891	1-112-871-51	CERAMIC	0.0022uF	20%	125V		FL801	1-519-943-11	INDICATOR TUBE, FLUORESCENT				
		< CONNECTOR >							< IC >				
CN891	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH) 2P					IC801	6-804-318-01	IC uPD780232GC-706-8BT-A				
		< SWITCH >					IC802	6-600-349-31	IC NJL24H400A (IR)				
△ S891	1-572-267-51	SWITCH, PUSH (AC POWER) (1 KEY) (POWER)							< JUMPER RESISTOR >				

	A-1254-368-A	DISPLAY BOARD, COMPLETE *****					JW851	1-216-296-11	SHORT CHIP	0			
		< TRANSISTOR >							< TRANSISTOR >				
	4-949-935-41	CUSHION (FL)					Q821	8-729-027-43	TRANSISTOR	DTC114EKA-T146			
		< CAPACITOR >					Q822	8-729-027-43	TRANSISTOR	DTC114EKA-T146			
C801	1-124-584-00	ELECT	100uF	20%	6.3V	Q823	8-729-027-43	TRANSISTOR	DTC114EKA-T146				
C802	1-164-156-11	CERAMIC CHIP	0.1uF		25V	Q824	8-729-027-43	TRANSISTOR	DTC114EKA-T146				
C803	1-164-156-11	CERAMIC CHIP	0.1uF		25V	Q825	8-729-027-43	TRANSISTOR	DTC114EKA-T146				
C804	1-164-156-11	CERAMIC CHIP	0.1uF		25V			< RESISTOR >					
C805	1-164-156-11	CERAMIC CHIP	0.1uF		25V	R805	1-216-833-11	METAL CHIP	10K	5%	1/10W		
							R817	1-216-833-11	METAL CHIP	10K	5%	1/10W	
C806	1-165-319-11	CERAMIC CHIP	0.1uF		50V	R818	1-216-833-11	METAL CHIP	10K	5%	1/10W		
C811	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	R819	1-216-833-11	METAL CHIP	10K	5%	1/10W		
C812	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	R820	1-216-833-11	METAL CHIP	10K	5%	1/10W		
C813	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V								
C816	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	R821	1-216-845-11	METAL CHIP	100K	5%	1/10W		
							R822	1-216-845-11	METAL CHIP	100K	5%	1/10W	
C817	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	R823	1-216-845-11	METAL CHIP	100K	5%	1/10W		
C818	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	R824	1-216-845-11	METAL CHIP	100K	5%	1/10W		
C819	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	R825	1-216-845-11	METAL CHIP	100K	5%	1/10W		
C821	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V								
C822	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	R826	1-216-833-11	METAL CHIP	10K	5%	1/10W		
							R831	1-216-805-11	METAL CHIP	47	5%	1/10W	
C823	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	R832	1-216-809-11	METAL CHIP	100	5%	1/10W		
C824	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	R841	1-216-821-11	METAL CHIP	1K	5%	1/10W		
C825	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	R842	1-216-825-11	METAL CHIP	2.2K	5%	1/10W		
C827	1-165-319-11	CERAMIC CHIP	0.1uF		50V								
C829	1-165-319-11	CERAMIC CHIP	0.1uF		50V	R843	1-216-825-11	METAL CHIP	2.2K	5%	1/10W		
							R844	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	
C831	1-124-589-11	ELECT	47uF	20%	16V	R845	1-216-833-11	METAL CHIP	10K	5%	1/10W		
C832	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V	R851	1-216-821-11	METAL CHIP	1K	5%	1/10W		
		< CONNECTOR >					R852	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	
CN801	1-779-550-21	CONNECTOR, FFC (LIF(NON-ZIF)) 13P					R853	1-216-825-11	METAL CHIP	2.2K	5%	1/10W	
							R854	1-216-829-11	METAL CHIP	4.7K	5%	1/10W	

DISPLAY

LOADING

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< SWITCH >					
S841	1-762-875-21	SWITCH, KEYBOARD (■)		C404	1-115-156-11	CERAMIC CHIP 1uF	10V
S842	1-762-875-21	SWITCH, KEYBOARD (▷)		C405	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
S843	1-762-875-21	SWITCH, KEYBOARD (■)		C406	1-112-075-11	ELECT CHIP 47uF 20%	16V
S851	1-762-875-21	SWITCH, KEYBOARD (≡)		C432	1-115-416-11	CERAMIC CHIP 0.001uF 5%	25V
S855	1-475-543-11	ENCODER, ROTARY (◀▶ AMS ▶▶/PUSH ENTER)		C433	1-164-217-11	CERAMIC CHIP 150PF 5%	50V
S861	1-762-875-21	SWITCH, KEYBOARD (MENU)		C434	1-115-156-11	CERAMIC CHIP 1uF	10V
		< VIBRATOR >		C435	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
X801	1-795-058-21	VIBRATOR, CERAMIC (5MHz)		C436	1-128-992-21	ELECT CHIP 47uF 20%	25V
		*****		C462	1-115-416-11	CERAMIC CHIP 0.001uF 5%	25V
	1-645-721-11	LOADING BOARD		C463	1-164-217-11	CERAMIC CHIP 150PF 5%	50V
		*****		C464	1-115-156-11	CERAMIC CHIP 1uF	10V
		< CONNECTOR >		C465	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
* CN151	1-568-943-11	PIN, CONNECTOR 5P		C466	1-128-992-21	ELECT CHIP 47uF 20%	25V
		< SWITCH >		C502	1-115-416-11	CERAMIC CHIP 0.001uF 5%	25V
S271	1-572-086-11	SWITCH, LEAF (LOADING OUT)		C503	1-164-217-11	CERAMIC CHIP 150PF 5%	50V
S272	1-572-086-11	SWITCH, LEAF (LOADING IN)		C504	1-115-156-11	CERAMIC CHIP 1uF	10V
		*****		C505	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
A-1254-372-A		MAIN BOARD, COMPLETE		C506	1-112-075-11	ELECT CHIP 47uF 20%	16V
		*****		C532	1-115-416-11	CERAMIC CHIP 0.001uF 5%	25V
		< CAPACITOR >		C533	1-164-217-11	CERAMIC CHIP 150PF 5%	50V
C201	1-112-115-11	ELECT 1000uF 20%	6.3V	C534	1-115-156-11	CERAMIC CHIP 1uF	10V
C202	1-126-205-11	ELECT CHIP 47uF 20%	6.3V	C535	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C206	1-115-156-11	CERAMIC CHIP 1uF	10V	C536	1-128-992-21	ELECT CHIP 47uF 20%	25V
C208	1-115-156-11	CERAMIC CHIP 1uF	10V	C562	1-115-416-11	CERAMIC CHIP 0.001uF 5%	25V
C212	1-128-991-21	ELECT CHIP 10uF 20%	50V	C563	1-164-217-11	CERAMIC CHIP 150PF 5%	50V
C236	1-115-156-11	CERAMIC CHIP 1uF	10V	C564	1-115-156-11	CERAMIC CHIP 1uF	10V
C238	1-115-156-11	CERAMIC CHIP 1uF	10V	C565	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C242	1-128-991-21	ELECT CHIP 10uF 20%	50V	C566	1-128-992-21	ELECT CHIP 47uF 20%	25V
C266	1-115-156-11	CERAMIC CHIP 1uF	10V	C701	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C268	1-115-156-11	CERAMIC CHIP 1uF	10V	C702	1-125-837-11	CERAMIC CHIP 1uF 10%	6.3V
C272	1-128-991-21	ELECT CHIP 10uF 20%	50V	C703	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C281	1-162-966-11	CERAMIC CHIP 0.0022uF 10%	50V	C704	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C302	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C705	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C303	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C706	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C305	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C709	1-126-210-21	ELECT CHIP 220uF 20%	4V
C321	1-162-917-11	CERAMIC CHIP 15PF 5%	50V	C711	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C322	1-162-917-11	CERAMIC CHIP 15PF 5%	50V	C712	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C324	1-115-156-11	CERAMIC CHIP 1uF	10V	C713	1-117-681-11	ELECT CHIP 100uF 20%	16V
C325	1-126-206-11	ELECT CHIP 100uF 20%	6.3V	C714	1-126-210-21	ELECT CHIP 220uF 20%	4V
C331	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C715	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C342	1-126-193-11	ELECT CHIP 1uF 20%	50V	C716	1-117-681-11	ELECT CHIP 100uF 20%	16V
C343	1-162-927-11	CERAMIC CHIP 100PF 5%	50V	C721	1-164-156-11	CERAMIC CHIP 0.1uF	25V
C344	1-164-227-11	CERAMIC CHIP 0.022uF 10%	25V	C722	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C345	1-126-206-11	ELECT CHIP 100uF 20%	6.3V	C723	1-125-837-11	CERAMIC CHIP 1uF 10%	6.3V
C351	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C726	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C362	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C727	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
C364	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C729	1-162-964-11	CERAMIC CHIP 0.001uF 10%	50V
C366	1-164-156-11	CERAMIC CHIP 0.1uF	25V	C730	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
C402	1-115-416-11	CERAMIC CHIP 0.001uF 5%	25V	C731	1-162-968-11	CERAMIC CHIP 0.0047uF 10%	50V
C403	1-164-217-11	CERAMIC CHIP 150PF 5%	50V	C733	1-165-176-11	CERAMIC CHIP 0.047uF 10%	16V
				C734	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
				C736	1-164-156-11	CERAMIC CHIP 0.1uF	25V
				C737	1-164-156-11	CERAMIC CHIP 0.1uF	25V
				C738	1-164-156-11	CERAMIC CHIP 0.1uF	25V
				C739	1-164-156-11	CERAMIC CHIP 0.1uF	25V
				C740	1-164-156-11	CERAMIC CHIP 0.1uF	25V
				C741	1-164-156-11	CERAMIC CHIP 0.1uF	25V
				C742	1-164-156-11	CERAMIC CHIP 0.1uF	25V

SCD-X501ES

MAIN

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
C743	1-164-156-11	CERAMIC CHIP	0.1uF		25V	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	C830	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C748	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C832	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C749	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	C901	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C750	1-115-156-11	CERAMIC CHIP	1uF		10V	C910	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C751	1-162-927-11	CERAMIC CHIP	100PF	5%	50V	C911	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C752	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C920	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C753	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C921	1-128-546-11	ELECT	0.01F	20%	10V
C754	1-126-210-21	ELECT CHIP	220uF	20%	4V	C923	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C755	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C924	1-126-925-11	ELECT	470uF	20%	10V
C756	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C931	1-126-939-11	ELECT	0.01F	20%	16V
C757	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C932	1-126-942-61	ELECT	1000uF	20%	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	1-112-123-11	ELECT	470uF	20%	16V
C760	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C935	1-126-767-11	ELECT	1000uF	20%	16V
C761	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C953	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C762	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C954	1-126-925-11	ELECT	470uF	20%	10V
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
C765	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C970	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C766	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C971	1-128-552-51	ELECT	47uF	20%	63V
C767	1-164-156-11	CERAMIC CHIP	0.1uF		25V	C972	1-128-991-21	ELECT CHIP	10uF	20%	50V
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	< CONNECTOR >					
C770	1-164-156-11	CERAMIC CHIP	0.1uF		25V	CN702	1-784-387-51	CONNECTOR, FFC/FPC 31P			
C771	1-164-156-11	CERAMIC CHIP	0.1uF		25V	CN703	1-784-372-51	CONNECTOR, FFC/FPC 13P			
C772	1-164-156-11	CERAMIC CHIP	0.1uF		25V	CN901	1-784-924-11	PIN, CONNECTOR 8P			
C775	1-164-156-11	CERAMIC CHIP	0.1uF		25V	< DIODE >					
C776	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D321	8-719-027-76	DIODE 1SS357-TPH3			
C777	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V	D509	8-719-941-09	DIODE DAP202U			
C778	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D511	8-719-941-09	DIODE DAP202U			
C779	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D921	8-719-053-18	DIODE 1SR154-400TE-25			
C780	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D922	8-719-053-18	DIODE 1SR154-400TE-25			
C781	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D923	8-719-053-18	DIODE 1SR154-400TE-25			
C782	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D924	8-719-053-18	DIODE 1SR154-400TE-25			
C783	1-117-681-11	ELECT CHIP	100uF	20%	16V	D931	8-719-053-18	DIODE 1SR154-400TE-25			
C785	1-126-210-21	ELECT CHIP	220uF	20%	4V	D932	8-719-053-18	DIODE 1SR154-400TE-25			
C787	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D933	8-719-053-18	DIODE 1SR154-400TE-25			
C788	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D934	8-719-053-18	DIODE 1SR154-400TE-25			
C789	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D936	8-719-053-18	DIODE 1SR154-400TE-25			
C793	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D937	8-719-053-18	DIODE 1SR154-400TE-25			
C794	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D960	8-719-941-86	DIODE DAN202U			
C795	1-117-681-11	ELECT CHIP	100uF	20%	16V	D961	8-719-941-86	DIODE DAN202U			
C796	1-117-681-11	ELECT CHIP	100uF	20%	16V	D963	8-719-017-79	DIODE MA8033			
C800	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D971	8-719-053-18	DIODE 1SR154-400TE-25			
C804	1-164-156-11	CERAMIC CHIP	0.1uF		25V	D972	8-719-977-81	DIODE DTZ33B			
C809	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V	D973	8-719-420-14	DIODE MA8082-M			
C813	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V	< GROUND TERMINAL >					
C814	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V	ETP910	1-537-771-21	TERMINAL BOARD, GROUND			
C815	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V	< FERRITE BEAD >					
C816	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	FB201	1-500-283-11	INDUCTOR, FERRITE BEAD			
C817	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V	FB703	1-414-595-11	INDUCTOR, FERRITE BEAD			
C819	1-115-156-11	CERAMIC CHIP	1uF		10V						
C820	1-164-816-11	CERAMIC CHIP	220PF	2%	50V						
C821	1-162-927-11	CERAMIC CHIP	100PF	5%	50V						
C822	1-164-816-11	CERAMIC CHIP	220PF	2%	50V						

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
FB710	1-414-595-11	INDUCTOR, FERRITE BEAD		R202	1-216-839-11	METAL CHIP 33K 5%	1/10W
		< FILTER >		R321	1-216-857-11	METAL CHIP 1M 5%	1/10W
FL606	1-234-177-21	FILTER, CHIP EMI		R322	1-216-864-11	SHORT CHIP 0	
		< IC >		R323	1-216-821-11	METAL CHIP 1K 5%	1/10W
IC200	6-703-420-01	IC DSD1751DBQR		R324	1-216-809-11	METAL CHIP 100 5%	1/10W
IC230	6-703-420-01	IC DSD1751DBQR		R326	1-216-801-11	METAL CHIP 22 5%	1/10W
IC260	6-703-420-01	IC DSD1751DBQR		R328	1-216-801-11	METAL CHIP 22 5%	1/10W
IC320	8-759-549-25	IC SN74LVU04APWR		R330	1-216-801-11	METAL CHIP 22 5%	1/10W
IC330	6-600-012-01	IC TOTX141L (DIGITAL(CD) OUT OPTICAL)		R341	1-216-845-11	METAL CHIP 100K 5%	1/10W
IC400	8-759-710-97	IC NJM4565M-D		R342	1-216-805-11	METAL CHIP 47 5%	1/10W
IC430	8-759-710-97	IC NJM4565M-D		R343	1-216-815-11	METAL CHIP 330 5%	1/10W
IC460	8-759-710-97	IC NJM4565M-D		R344	1-216-824-11	METAL CHIP 1.8K 5%	1/10W
IC701	8-759-636-64	IC M51957BFP-600C		R345	1-216-824-11	METAL CHIP 1.8K 5%	1/10W
* IC702	6-703-671-01	IC BR9040F-WE2		R346	1-216-864-11	SHORT CHIP 0	
IC703	6-700-398-01	IC uPC2918T-E1		R347	1-164-156-11	CERAMIC CHIP 0.1uF	25V
IC705	6-805-930-01	IC HD6432238RP02TEV		R404	1-216-827-11	METAL CHIP 3.3K 5%	1/10W
IC706	8-752-420-59	IC CXD2754Q		R407	1-216-845-11	METAL CHIP 100K 5%	1/10W
IC708	6-703-791-01	IC MSM56V16160F-8T3FM1		R408	1-216-815-11	METAL CHIP 330 5%	1/10W
IC712	6-702-157-01	IC FAN8035L		R409	1-216-813-11	METAL CHIP 220 5%	1/10W
IC920	6-705-463-01	IC BA33BC0T		R411	1-216-809-11	METAL CHIP 100 5%	1/10W
IC950	6-705-469-01	IC BA50BC0FP-E2		R413	1-216-809-11	METAL CHIP 100 5%	1/10W
IC985	8-759-460-81	IC BA12FP-E2		R434	1-216-827-11	METAL CHIP 3.3K 5%	1/10W
		< JACK >		R437	1-216-845-11	METAL CHIP 100K 5%	1/10W
J341	1-818-300-11	JACK, PIN 1P (DIGITAL(CD) OUT COAXIAL)		R438	1-216-815-11	METAL CHIP 330 5%	1/10W
J351	1-785-489-11	JACK, PIN 6P (ANALOG 5.1CH OUT FRONT,SURROUND,CENTER,SUB WOOFER)		R439	1-216-813-11	METAL CHIP 220 5%	1/10W
J352	1-785-868-21	JACK, PIN 2P (ANALOG 2CH OUT)		R464	1-216-827-11	METAL CHIP 3.3K 5%	1/10W
		< COIL >		R467	1-216-845-11	METAL CHIP 100K 5%	1/10W
L341	1-412-056-11	INDUCTOR 4.7uH		R468	1-216-815-11	METAL CHIP 330 5%	1/10W
L342	1-216-864-11	SHORT CHIP 0		R469	1-216-813-11	METAL CHIP 220 5%	1/10W
		< TRANSISTOR >		R504	1-216-827-11	METAL CHIP 3.3K 5%	1/10W
Q301	8-729-028-87	TRANSISTOR DTA143TUA-T106		R507	1-216-845-11	METAL CHIP 100K 5%	1/10W
Q303	8-729-028-87	TRANSISTOR DTA143TUA-T106		R508	1-216-815-11	METAL CHIP 330 5%	1/10W
Q305	8-729-028-87	TRANSISTOR DTA143TUA-T106		R509	1-216-813-11	METAL CHIP 220 5%	1/10W
Q341	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R511	1-216-809-11	METAL CHIP 100 5%	1/10W
Q401	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16		R513	1-216-809-11	METAL CHIP 100 5%	1/10W
Q402	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16		R534	1-216-827-11	METAL CHIP 3.3K 5%	1/10W
Q431	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16		R537	1-216-845-11	METAL CHIP 100K 5%	1/10W
Q432	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16		R538	1-216-815-11	METAL CHIP 330 5%	1/10W
Q462	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16		R539	1-216-813-11	METAL CHIP 220 5%	1/10W
Q463	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16		R564	1-216-827-11	METAL CHIP 3.3K 5%	1/10W
Q501	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16		R567	1-216-845-11	METAL CHIP 100K 5%	1/10W
Q502	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16		R568	1-216-815-11	METAL CHIP 330 5%	1/10W
Q531	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16		R569	1-216-813-11	METAL CHIP 220 5%	1/10W
Q532	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16		R701	1-216-821-11	METAL CHIP 1K 5%	1/10W
Q562	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16		R702	1-216-833-11	METAL CHIP 10K 5%	1/10W
Q563	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16		R703	1-216-833-11	METAL CHIP 10K 5%	1/10W
Q961	8-729-027-56	TRANSISTOR DTC143TKA-T146		R707	1-216-821-11	METAL CHIP 1K 5%	1/10W
Q971	8-729-019-72	TRANSISTOR 2SB1260		R708	1-216-809-11	METAL CHIP 100 5%	1/10W
		< RESISTOR >		R731	1-216-833-11	METAL CHIP 10K 5%	1/10W
R201	1-216-833-11	METAL CHIP 10K 5%	1/10W	R752	1-216-864-11	SHORT CHIP 0	
				R781	1-216-821-11	METAL CHIP 1K 5%	1/10W
				R782	1-216-841-11	METAL CHIP 47K 5%	1/10W
				R783	1-216-833-11	METAL CHIP 10K 5%	1/10W
				R791	1-216-805-11	METAL CHIP 47 5%	1/10W
				R804	1-216-815-11	METAL CHIP 330 5%	1/10W
				R806	1-216-150-11	RES-CHIP 10 5%	1/8W
				R819	1-216-847-11	METAL CHIP 150K 5%	1/10W
				R820	1-216-847-11	METAL CHIP 150K 5%	1/10W

SCD-X501ES

MAIN

TRANS

WALTZ-RF

Ref. No.	Part No.	Description	Remark		
R831	1-216-833-11	METAL CHIP	10K	5%	1/10W
R840	1-216-845-11	METAL CHIP	100K	5%	1/10W
R846	1-216-842-11	METAL CHIP	56K	5%	1/10W
R852	1-216-845-11	METAL CHIP	100K	5%	1/10W
R853	1-216-842-11	METAL CHIP	56K	5%	1/10W
R857	1-218-883-11	METAL CHIP	33K	0.5%	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
R866	1-216-839-11	METAL CHIP	33K	5%	1/10W
R869	1-216-842-11	METAL CHIP	56K	5%	1/10W
R870	1-216-839-11	METAL CHIP	33K	5%	1/10W
R871	1-216-833-11	METAL CHIP	10K	5%	1/10W
R872	1-216-833-11	METAL CHIP	10K	5%	1/10W
R874	1-218-883-11	METAL CHIP	33K	0.5%	1/10W
R876	1-216-844-11	METAL CHIP	82K	5%	1/10W
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
R885	1-216-835-11	METAL CHIP	15K	5%	1/10W
R886	1-216-844-11	METAL CHIP	82K	5%	1/10W
R888	1-216-835-11	METAL CHIP	15K	5%	1/10W
R889	1-216-864-11	SHORT CHIP	0		
R892	1-218-897-11	METAL CHIP	120K	0.5%	1/10W
R893	1-218-897-11	METAL CHIP	120K	0.5%	1/10W
R894	1-216-842-11	METAL CHIP	56K	5%	1/10W
R895	1-216-842-11	METAL CHIP	56K	5%	1/10W
R897	1-216-853-11	METAL CHIP	470K	5%	1/10W
R899	1-216-849-11	METAL CHIP	220K	5%	1/10W
R961	1-216-833-11	METAL CHIP	10K	5%	1/10W
R962	1-216-821-11	METAL CHIP	1K	5%	1/10W
R963	1-216-821-11	METAL CHIP	1K	5%	1/10W
R971	1-216-833-11	METAL CHIP	10K	5%	1/10W
R972	1-216-833-11	METAL CHIP	10K	5%	1/10W
R973	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R975	1-216-839-11	METAL CHIP	33K	5%	1/10W
R976	1-216-809-11	METAL CHIP	100	5%	1/10W
R977	1-216-809-11	METAL CHIP	100	5%	1/10W
R978	1-216-837-11	METAL CHIP	22K	5%	1/10W
R979	1-216-833-11	METAL CHIP	10K	5%	1/10W
< NETWORK RESISTOR >					
RB301	1-233-414-11	RES, CHIP NETWORK 4.7KX4 (3216)			
RB302	1-233-873-21	RES, CHIP NETWORK 220KX4 (3216)			
RB402	1-233-419-21	RES, CHIP NETWORK 6.8KX4 (3216)			
RB410	1-233-413-11	RES, CHIP NETWORK 2.2KX4 (3216)			
RB432	1-233-419-21	RES, CHIP NETWORK 6.8KX4 (3216)			
RB441	1-233-413-11	RES, CHIP NETWORK 2.2KX4 (3216)			
RB442	1-233-413-11	RES, CHIP NETWORK 2.2KX4 (3216)			
RB462	1-233-419-21	RES, CHIP NETWORK 6.8KX4 (3216)			
RB502	1-233-419-21	RES, CHIP NETWORK 6.8KX4 (3216)			
RB532	1-233-419-21	RES, CHIP NETWORK 6.8KX4 (3216)			
RB562	1-233-419-21	RES, CHIP NETWORK 6.8KX4 (3216)			
RB601	1-236-908-11	RES, CHIP NETWORK 10KX4 (3216)			
RB602	1-233-412-11	RES, CHIP NETWORK 1KX4 (3216)			
RB603	1-233-577-11	RES, CHIP NETWORK 470X4 (3216)			
RB604	1-233-414-11	RES, CHIP NETWORK 4.7KX4 (3216)			

Ref. No.	Part No.	Description	Remark		
RB605	1-236-908-11	RES, CHIP NETWORK 10KX4 (3216)			
RB606	1-236-908-11	RES, CHIP NETWORK 10KX4 (3216)			
RB607	1-236-908-11	RES, CHIP NETWORK 10KX4 (3216)			
RB609	1-236-908-11	RES, CHIP NETWORK 10KX4 (3216)			
RB610	1-233-578-11	RES, CHIP NETWORK 47KX4 (3216)			
RB611	1-236-908-11	RES, CHIP NETWORK 10KX4 (3216)			
RB612	1-236-908-11	RES, CHIP NETWORK 10KX4 (3216)			
RB613	1-236-908-11	RES, CHIP NETWORK 10KX4 (3216)			
RB615	1-233-577-11	RES, CHIP NETWORK 470X4 (3216)			
RB616	1-233-577-11	RES, CHIP NETWORK 470X4 (3216)			
RB617	1-233-577-11	RES, CHIP NETWORK 470X4 (3216)			
< VIBRATOR >					
X321	1-795-535-21	VIBRATOR, CRYSTAL (11.2896MHz)			

TRANS BOARD					

< CAPACITOR >					
△ C110	1-112-872-51	CERAMIC	0.0047uF	20%	125V
△ C111	1-112-872-51	CERAMIC	0.0047uF	20%	125V
< CONNECTOR >					
CN110	1-564-321-00	PIN, CONNECTOR (3.96mm PITCH) 2P			
* CN111	1-568-226-11	PIN, CONNECTOR (3.96mm PITCH) 2P			
< COIL >					
△ L110	1-421-915-11	COIL, LINE FILTER			

A-4750-527-A	WALTZ-RF BOARD, COMPLETE				

< CAPACITOR >					
C001	1-107-726-11	CERAMIC CHIP	0.01uF	10%	16V
C002	1-107-726-11	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	1-107-726-11	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	1-107-726-11	CERAMIC CHIP	0.01uF	10%	16V
C027	1-107-726-11	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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C032	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	R055	1-216-864-11	SHORT CHIP 0	
C033	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	*****			
C034	1-164-227-11	CERAMIC CHIP	0.022uF 10% 25V			MISCELLANEOUS	
C035	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V			*****	
C036	1-165-176-11	CERAMIC CHIP	0.047uF 10% 16V	59	1-965-430-11	HARNESS (FLAT WIRE CABLE) 13P	
C038	1-165-176-11	CERAMIC CHIP	0.047uF 10% 16V	103	1-965-534-11	HARNESS (FLAT WIRE CABLE) 31P	
C039	1-107-726-11	CERAMIC CHIP	0.01uF 10% 16V	△151	1-819-867-11	INLET, AC 2P (～ AC IN)	
C040	1-164-217-11	CERAMIC CHIP	150PF 5% 50V	253	1-824-106-51	CABLE, FLEXIBLE FLAT (0.5mm PITCH) 24P	
C043	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	△255	A-1109-164-A	SERVICE ASSY, DBU-3	
C044	1-124-779-00	ELECT CHIP	10uF 20% 16V				
C046	1-107-726-11	CERAMIC CHIP	0.01uF 10% 16V	M151	A-4604-363-A	MOTOR (L) ASSY (LOADING)	
C047	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	△T101	1-443-287-11	TRANSFORMER, POWER	
C048	1-127-715-11	CERAMIC CHIP	0.22uF 10% 16V	*****			
< CONNECTOR >				ACCESSORIES			
CN001	1-815-031-61	CONNECTOR, FFC/FPC (ZIF) 24P		*****			
CN002	1-784-879-21	CONNECTOR, FFC (LIF(NON-ZIF)) 31P		1-480-075-11	COMMANDER, STANDARD (RM-ASU002)		
CN003	1-784-861-21	CONNECTOR, FFC (LIF(NON-ZIF)) 9P			(including BATTERY CASE)		
< DIODE >				1-757-960-22	CORD, CONNECTION (1P-1P) (BLACK) (AUDIO)		
D001	8-719-988-61	DIODE 1SS355TE-17		1-791-732-12	CORD, CONNECTION (2P-2P) (WHITE/RED)		
D004	8-719-988-61	DIODE 1SS355TE-17			(AUDIO)		
< IC >				△	1-820-797-11	ADAPTOR, CONVERSION (EURO ECU 6) (UK)	
IC001	6-703-445-01	IC SP3726A		△	1-831-474-11	CORD, POWER	
< COIL >				2-319-527-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH, SPANISH,GERMAN)		
L001	1-412-031-11	INDUCTOR 47uH		2-319-527-21	MANUAL, INSTRUCTION (ITALIAN,DUTCH, POLISH,SWEDISH) (AEP)		
L002	1-412-031-11	INDUCTOR 47uH					
< TRANSISTOR >							
Q001	8-729-920-79	TRANSISTOR 2SB1132-T100-QR					
Q002	8-729-920-79	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					

Note: If Ref. No. 103 is replaced, install it after bending it in the same form as that before replacement.

REVISION HISTORY

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

Also, clicking the version at the top of the revised page allows you to jump to the next revised page.

[illegible]