

CDP-CX455

SERVICE MANUAL

Ver 1.0 2002.04

*US Model
Canadian Model
AEP Model
UK Model*



Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM62-K1BD46A
Base Unit Type	BU-K1BD46A
Optical Pick-up Type	KSM-213BFN

SPECIFICATIONS

Compact disc player

Laser	Semiconductor laser ($\lambda = 780 \text{ nm}$) Emission duration: continuous
Laser output	Max 44.6 μW * * This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up block with 7 mm aperture.
Frequency response	20 Hz to 20 kHz $\pm 0.5 \text{ dB}$
Signal-to-noise ratio	More than 108 dB
Dynamic range	More than 87 dB
Harmonic distortion	Less than 0.009%

Output

	Jack type	Maximum output level	Load impedance
LINE OUT	Phono jacks	2 V (at 50 kilohms)	Over 10 kilohms
DIGITAL OUT (OPTICAL)	Optical output connector	-18 dBm	Wave length: 660 nm

General

Power requirements

Where purchased Power requirements

US, Canada

120 V AC, 60 Hz

Europe

230 V AC, 50/60 Hz

Power consumption

16 W
1 W (at the Power Saving Mode)

Dimensions (approx.) (w/h/d)

430 × 189 × 537 mm
(17 × 7 1/2 × 21 1/4 in.) incl. projecting parts

Mass (approx.)

8.8 kg (19 lbs 7 oz.)

Supplied accessories

- Audio cord (1)
- Monaural (2P) mini-plug cord (1) (Connecting cord for CONTROL AIII) (supplied for Canadian models only)
- Remote commander (remote) (1)
- Size AA (LR6) batteries (2)

Design and specifications are subject to change without notice.

COMPACT DISC PLAYER

SONY®

9-873-947-01
2002D1600-1
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Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.



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



The following caution label is located inside of the unit.

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

Notes on chip component replacement

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

Flexible Circuit Board Repairing

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

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE \triangle SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer: Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

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

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

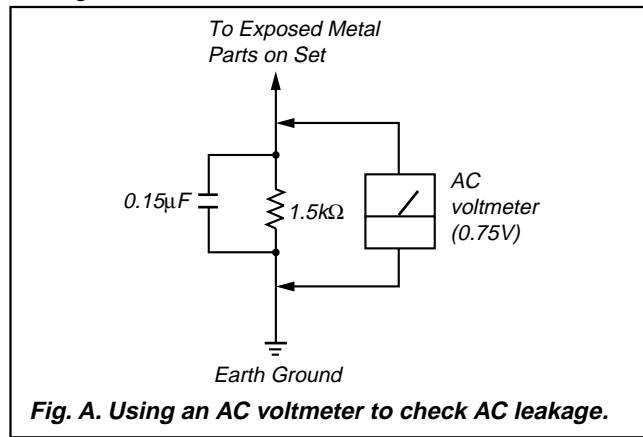


Fig. A. Using an AC voltmeter to check AC leakage.

MODEL IDENTIFICATION

— BACK PANEL —



PARTS No.	MODEL
4-238-082-0□	US
4-238-082-1□	CND
4-238-082-2□	AEP, UK

- Abbreviation
CND : Canadian model

SECTION 1 SERVICE NOTE

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

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.

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

NOTES ON LASER DIODE EMISSION CHECK

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

The emission check enables continuous checking of the S curve.

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.

CD-TEXT TEST DISC

This unit is able to display the TEXT data (character information) written in the CD on its fluorescent indicator tube. The CD-TEXT TEST DISC (TGCS-313:J-2501-126-A) is used for checking the display. To check, perform the following procedure.

Checking Method:

1. Turn ON the power, set the disc on the disc table with the side labeled as “test disc” as the right side, close the front cover, and chuck the disc.
2. The following will be displayed on the fluorescent indicator tube. (The display switches each time the **DISPLAY** button is pressed.)
Display : CD TEXT Test Disc (Album Title)
3. Press the **▶** button and play back the disc.
4. The following will be displayed on the fluorescent indicator tube. (If nothing is displayed, press the **DISPLAY** button.)
Display : 1kHz/0 dB/ L&R
5. Rotate **◀◀ AMS ▶▶** knob to switch the track. The text data of each track will be displayed.
For details of the displayed contents for each track, refer to “Table 1 : CD-TEXT TEST DISC Text Data Contents” and “Table 2 : CD-TEXT TEST DISC Recorded Contents and Display”.

Restrictions in CD-TEXT Display

In this unit, some special characters will not be displayed properly. These will be displayed as a space or a character resembling it. For details, refer to “Table 2 : CD-TEXT DISC Recorded Contents and Display”.

Table 1 : CD-TEXT TEST DISC Text Data Contents (TRACKS No. 1 to 41:Normal Characters)

TRACK No.	Displayed Contents	TRACK No.	Displayed Contents
1	1kHz/0dB/L&R	22	1kHz/-90dB/L&R
2	20Hz/0dB/L&R	23	Infinity Zero w/o emphasis//L&R
3	40Hz/0dB/L&R	24	Infinity Zero with emphasis//L&R
4	100Hz/0dB/L&R	25	400Hz+7kHz(4:1)/0dB/L&R
5	200Hz/0dB/L&R	26	400Hz+7kHz(4:1)/-10dB/L&R
6	500Hz/0dB/L&R	27	19kHz+20kHz(1:1)/0dB/L&R
7	1kHz/0dB/L&R	28	19kHz+20kHz(1:1)/-10dB/L&R
8	5kHz/0dB/L&R	29	100Hz/0dB/L*
9	7kHz/0dB/L&R	30	1kHz/0dB/L*
10	10kHz/0dB/L&R	31	10kHz/0dB/L*
11	16kHz/0dB/L&R	32	20kHz/0dB/L*
12	18kHz/0dB/L&R	33	100Hz/0dB/R*
13	20kHz/0dB/L&R	34	1kHz/0dB/R*
14	1kHz/0dB/L&R	35	10kHz/0dB/R*
15	1kHz/-1dB/L&R	36	20kHz/0dB/R*
16	1kHz/-3dB/L&R	37	100Hz Squire Wave//L&R
17	1kHz/-6dB/L&R	38	1kHz Squire Wave//L&R
18	1kHz/-10dB/L&R	39	1kHz w/emphasis/-0.37dB/L&R
19	1kHz/-20dB/L&R	40	5kHz w/emphasis/-4.53dB/L&R
20	1kHz/-60dB/L&R	41	16kHz w/emphasis/-9.04dB/L&R
21	1kHz/-80dB/L&R		

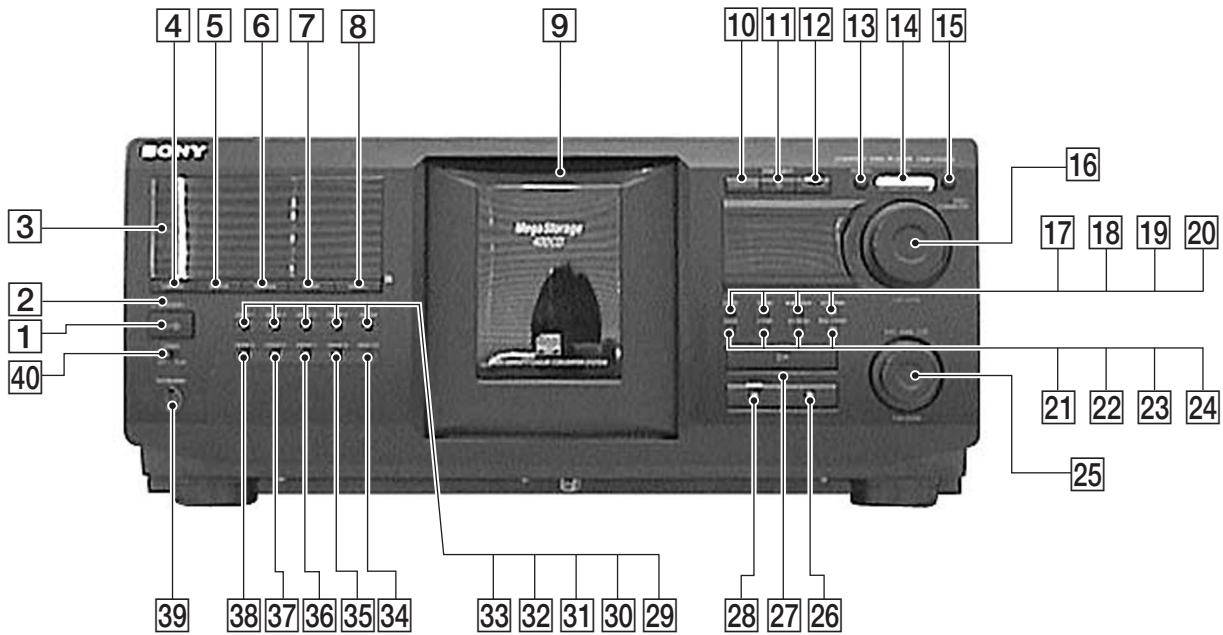
NOTE : The contents of Track No. 1 to 41 are the same as those of the current TEST DISC-their titles are displayed.

Table 2: CD-TEXT TEST DISC Recorded Contents and Display
(In this unit, some special characters cannot be displayed. This is no a fault.)

TRACK No.	Recorded contents	Display
42	! " # \$ % & ' (21h to 27h) 1kHz 0dB L&R	← All the same
43	() * + , - . / (28h to 2Fh)	← All the same
44	0 1 2 3 4 5 6 7 (30h to 37h)	← All the same
45	8 9 : ; < = > ? (38h to 3Fh)	← All the same
46	@ A B C D E F G (40h to 47h)	← All the same
47	H I J K L M N O (48h to 4Fh)	← All the same
48	P Q R S T U V W (50h to 57h)	← All the same
49	X Y Z [¥] ^ _ (58h to 5Fh)	X Y Z [\] ^ _ (58....
50	` a b c d e f g (60h to 67h)	← All the same
51	h i j k l m n o (68h to 6Fh)	← All the same
52	p q r s t u v w (70h to 77h)	← All the same
53	x y z { } ~ ■ (78h to 7Fh)	← All the same
54	■ i ç £ ¤ ¥ ¦ § (A0h to A7h) 8859-1	← All the same
55	♪ © ª « ¬ ® ¯ (A8h to AFh)	← All the same
56	• ± ² ³ ´ µ ¶ • (B0h to B7h)	← All the same
57	† † ° » ¼ ½ ¾ ¿ (B8h to BFh)	¼ ½ ¾ are displayed without “/”
58	À Á Â Ã Ä Å Æ Ç (C0h to C7h)	← All the same
59	È É Ê Ë Ì Í Î (C8h to CFh)	← All the same
60	Ð Ñ Ò Ó Ô Õ Ö × (D0h to D7h)	← All the same
61	Ø Ù Ú Û Ü Ý Þ ß (D8h to DFh)	← All the same
62	à á â ã ä å æ ç (E0h to E7h)	← All the same
63	è é ê ë ì í î (E8h to EFh)	← All the same
64	ÿ ñ ò ó ô õ ö ÷ (F0h to F7h)	← All the same
65	ø ù ú û ü ý þ ÿ (F8h to FFh)	← All the same
66	No.66	← All the same
67	No.67	← All the same
to	to	to
99	No.99	← All the same

SECTION 2
GENERAL

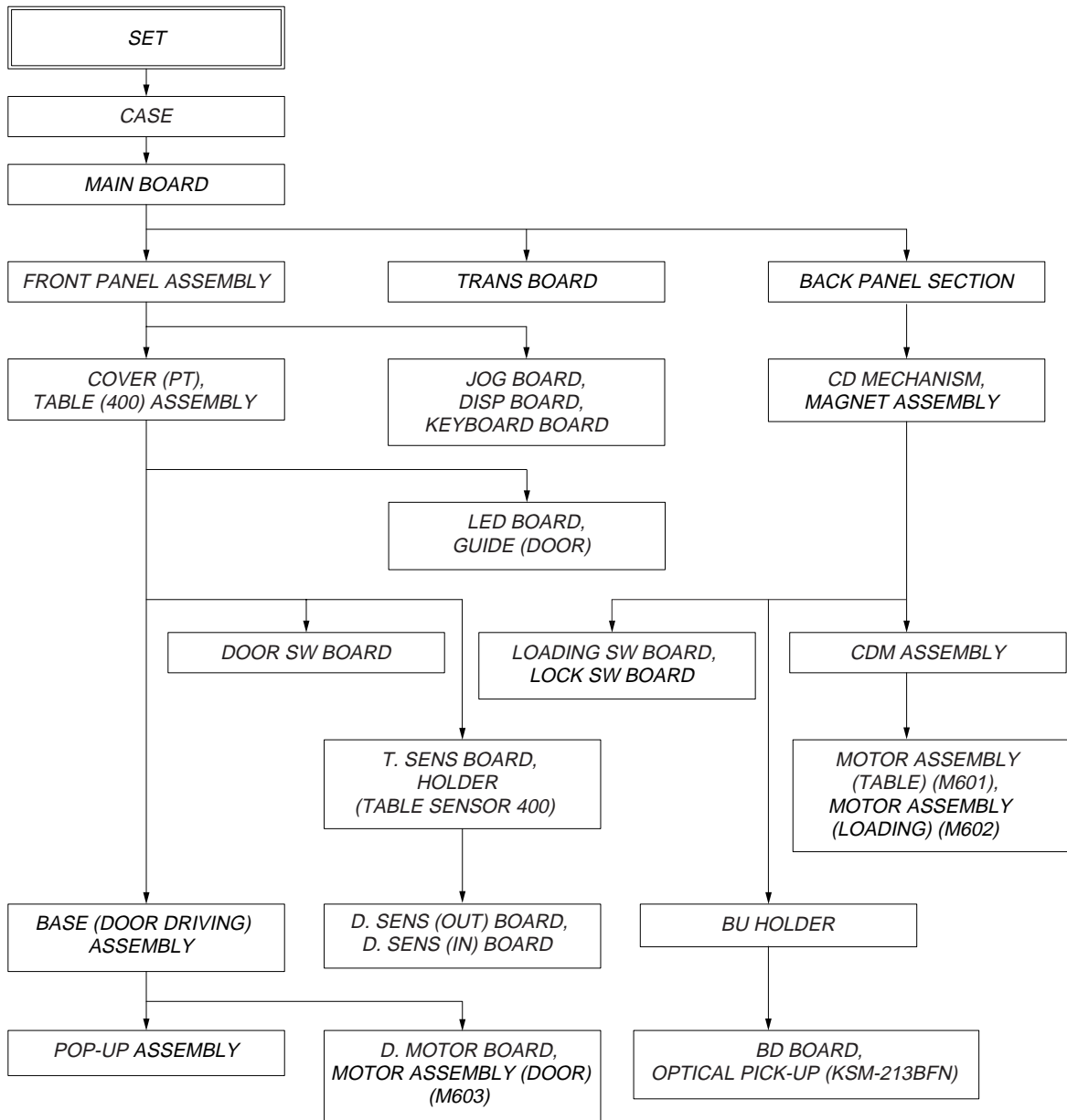
Front Panel



LOCATION OF PARTS AND CONTROLS

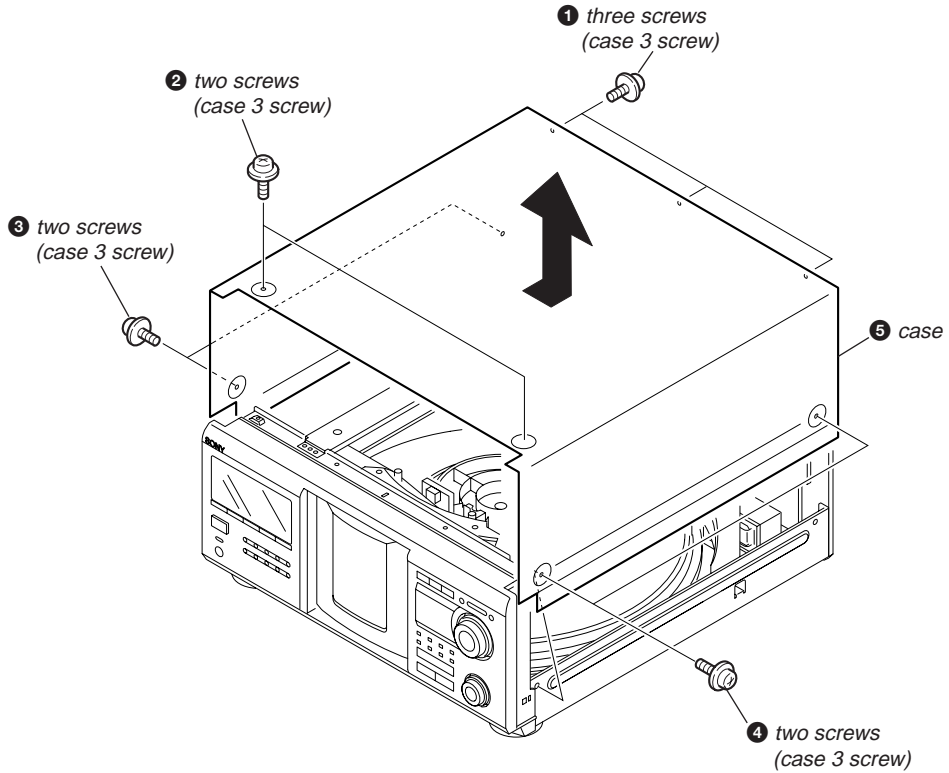
- | | |
|---|---|
| 1 I/⏻ (power) button | 21 FADER button |
| 2 STANDBY indicator | 22 X-FADE button |
| 3 Display window | 23 NO DELAY button |
| 4 CONTINUE button | 24 MEGA CONTROL button and indicator |
| 5 SHUFFLE button | 25 ⏮⏪ AMS ⏩⏭ /PUSH ENTER knob and button |
| 6 PROGRAM button | 26 ■ (stop) button |
| 7 REPEAT button | 27 ▷ (play) button and indicator |
| 8 DISPLAY button | 28 ⏸ (pause) button and indicator |
| 9 Front cover | 29 ARTIST MODE button and indicator |
| 10 OPEN/CLOSE button | 30 TOP ARTIST 4 button and indicator |
| 11 DISC EJECT button | 31 TOP ARTIST 3 button and indicator |
| 12 HISTORY button and indicator | 32 TOP ARTIST 2 button and indicator |
| 13 MENU/NO button | 33 TOP ARTIST 1 button and indicator |
| 14 +100 button | 34 TIME button |
| 15 YES button | 35 TOP ARTIST 8 button and indicator |
| 16 DISC/ALBUM/CHARACTER/PUSH ENTER knob and button | 36 TOP ARTIST 7 button and indicator |
| 17 CHECK button | 37 TOP ARTIST 6 button and indicator |
| 18 CLEAR button | 38 TOP ARTIST 5 button and indicator |
| 19 NAME SEARCH button | 39 KEYBOARD jack |
| 20 ALBUM SELECT button and indicator | 40 TIMER OFF/PLAY switch |

SECTION 3 DISASSEMBLY

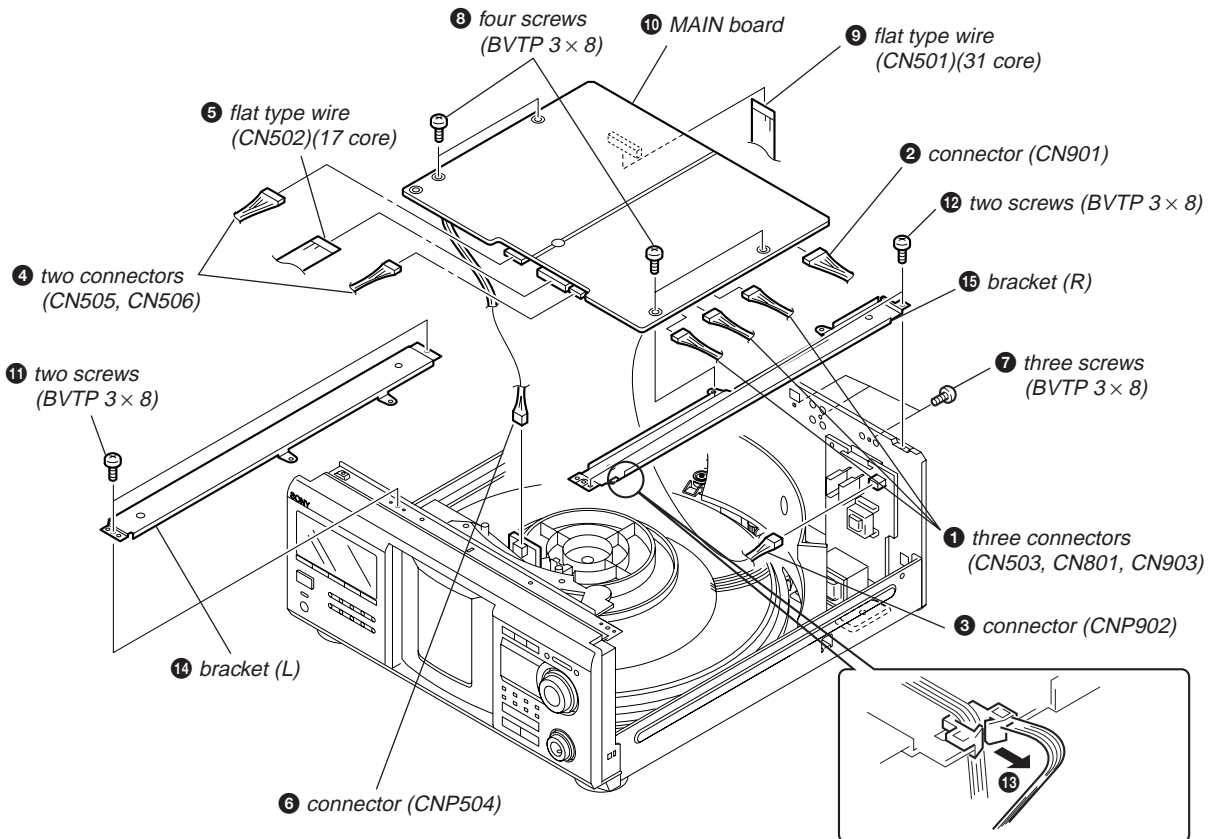


Note : Follow the disassembly procedure in the numerical order given.

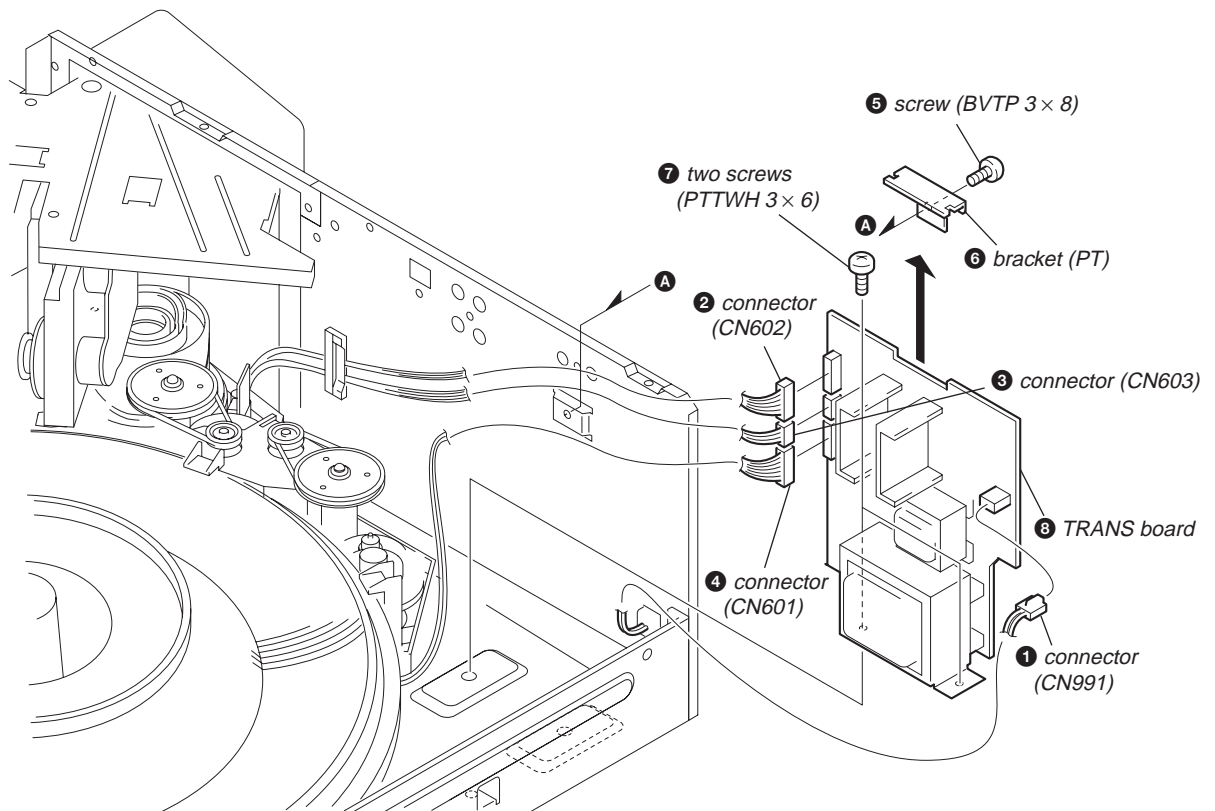
3-1. Case



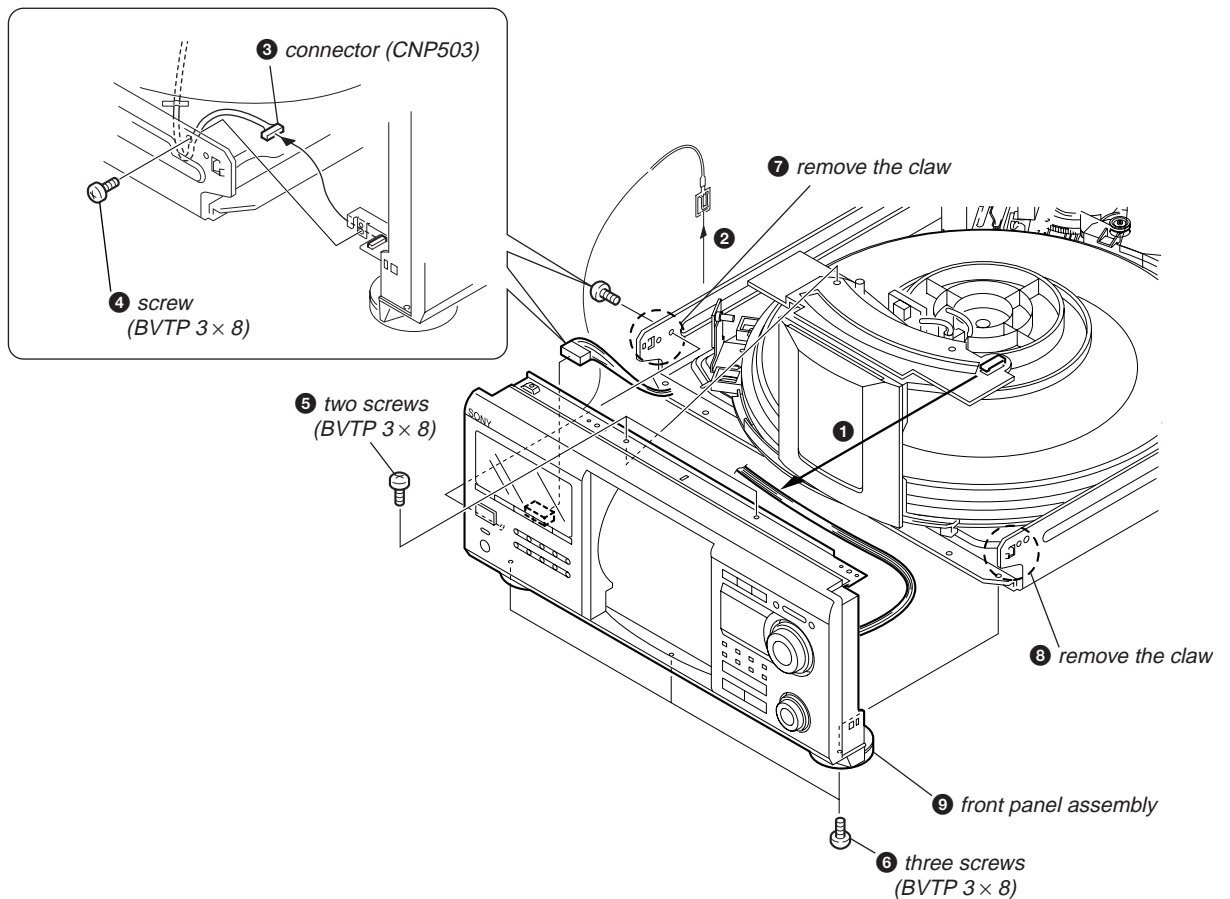
3-2. MAIN Board



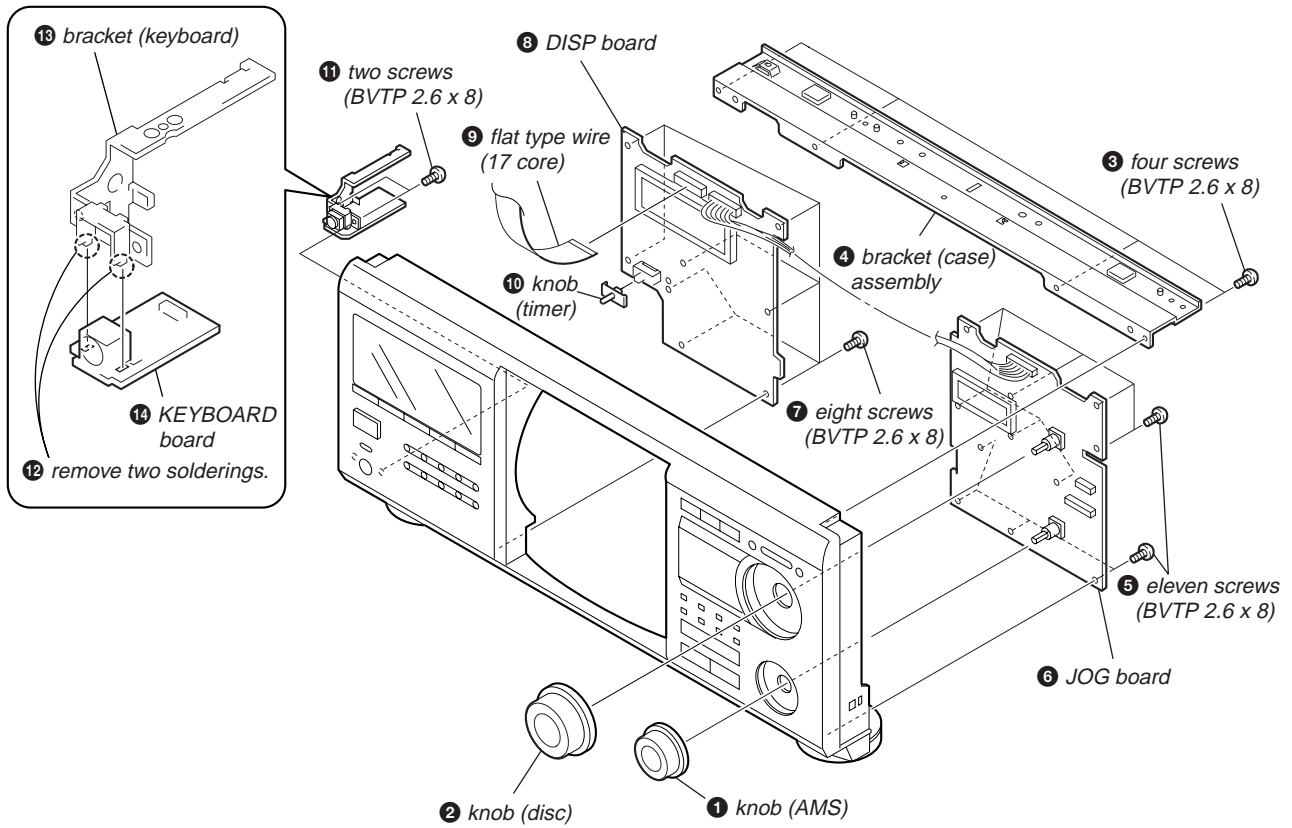
3-3. TRANS Board



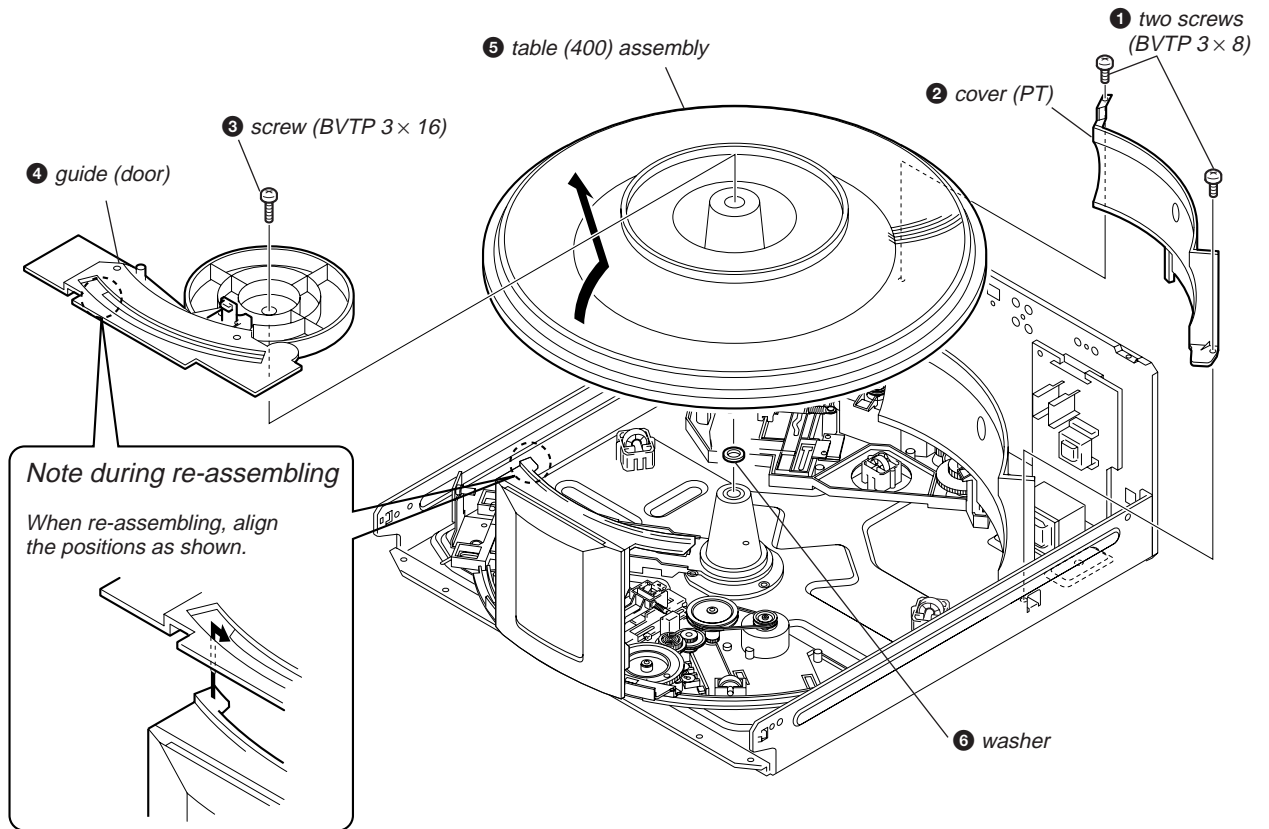
3-4. Front Panel Assembly



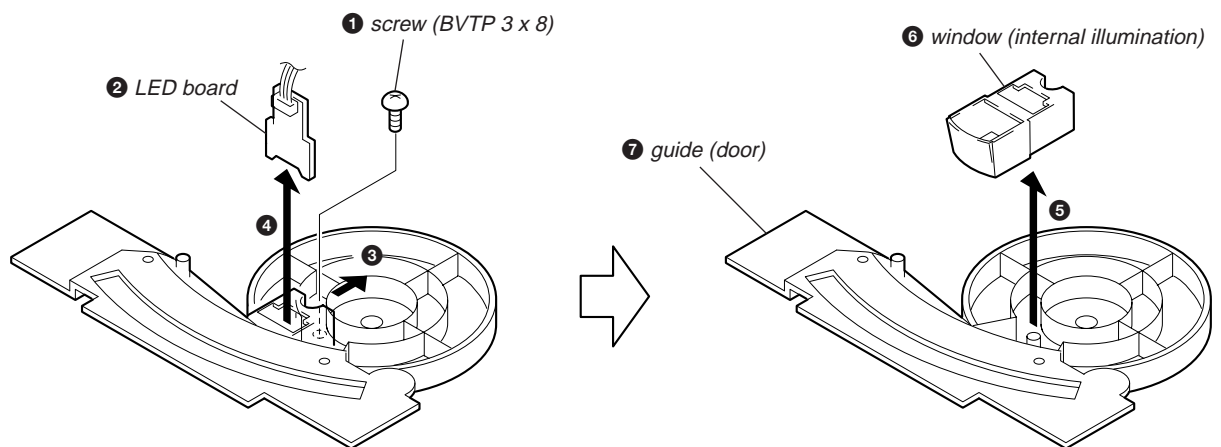
3-5. JOG Board, DISP Board, KEYBOARD Board



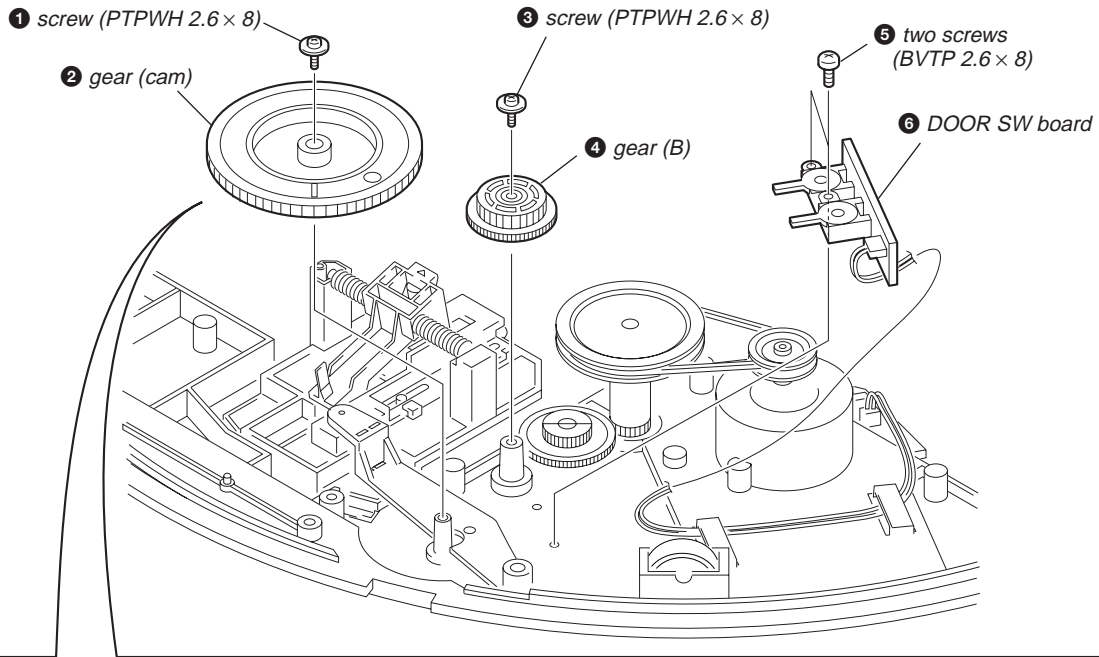
3-6. Cover (PT), Table (400) Assembly



3-7. LED Board, Guide (Door)

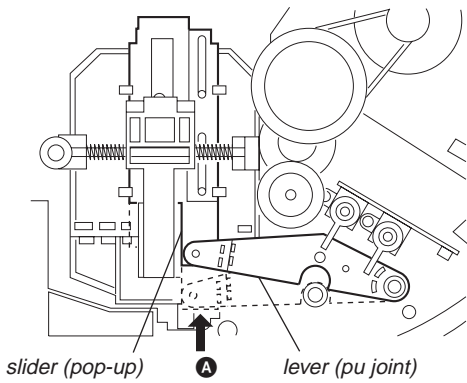


3-8. DOOR SW Board

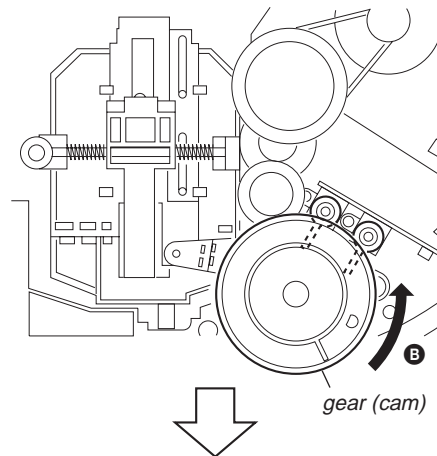


Precaution during the gear (cam) installation

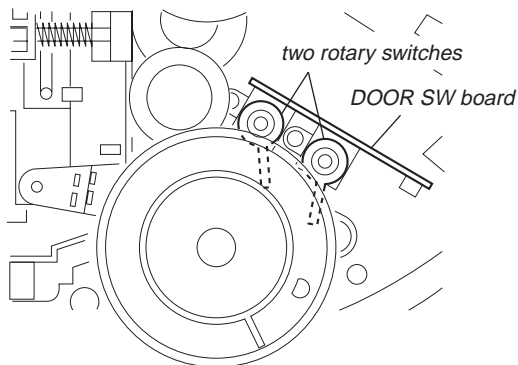
1 Move the slider (pop-up) and the lever (pu joint) fully in the direction of the arrow A.



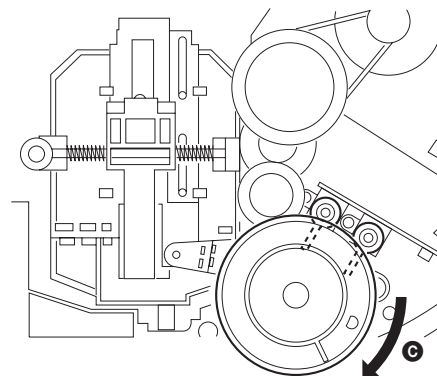
2 Install the gear (cam) in the direction shown in the illustration and rotate it fully in the direction of the arrow B.



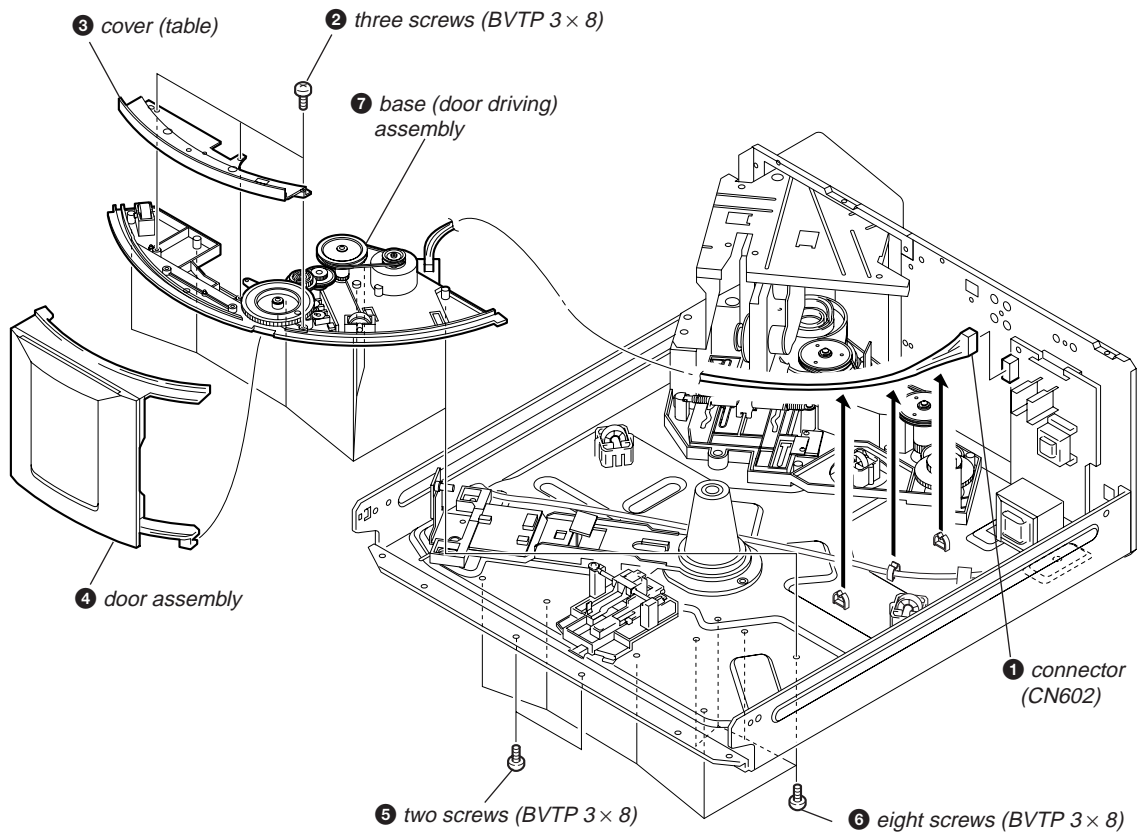
(The levers of the two rotary switches on the D. SW board are shown in the illustration below.)



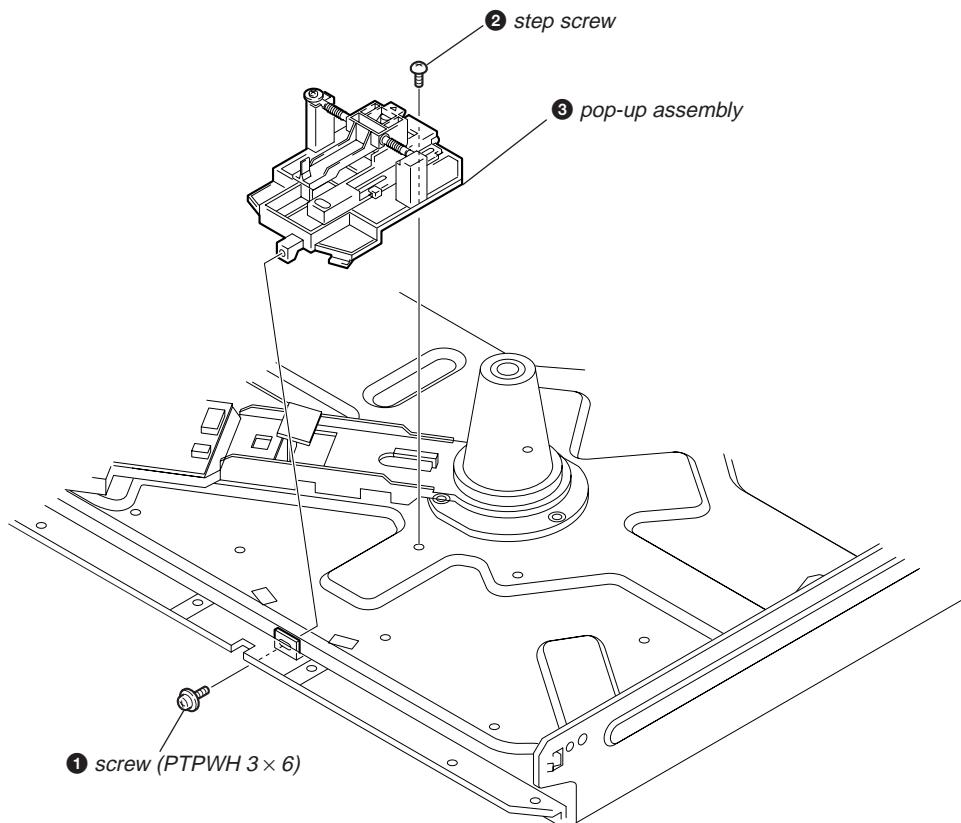
3 When the gear (cam) happens to go too deep, return it to the original position in the direction of the arrow C.



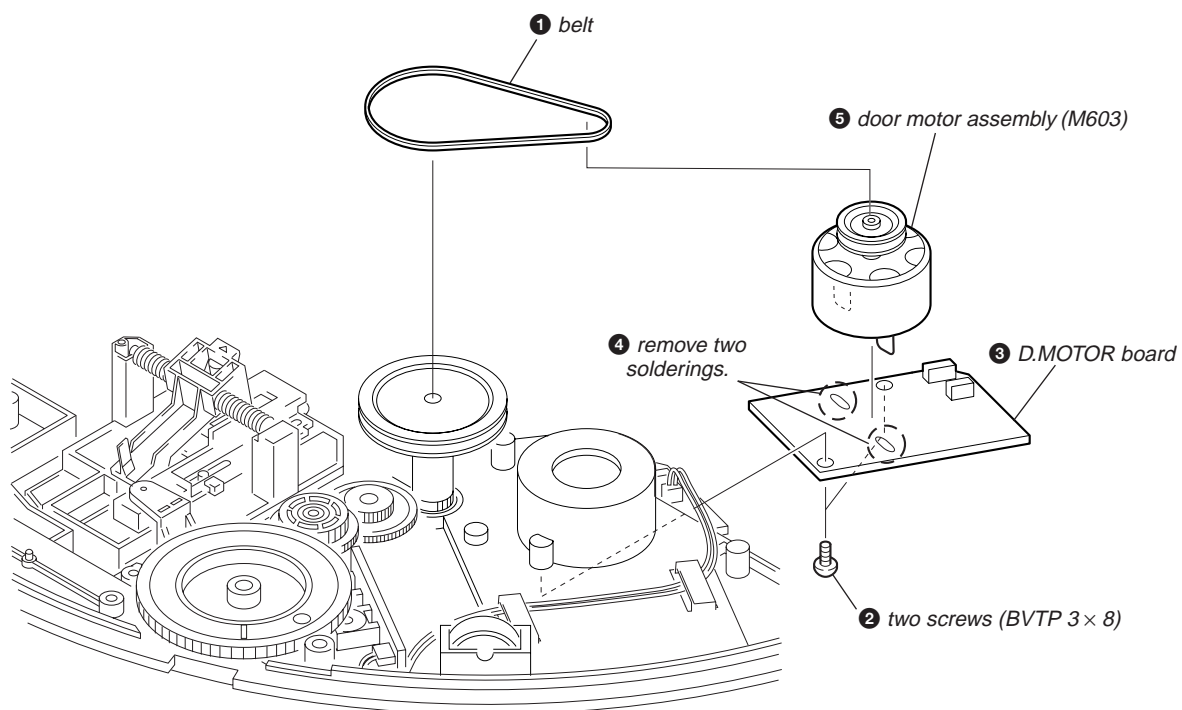
3-9. Base (Door Driving) Assembly



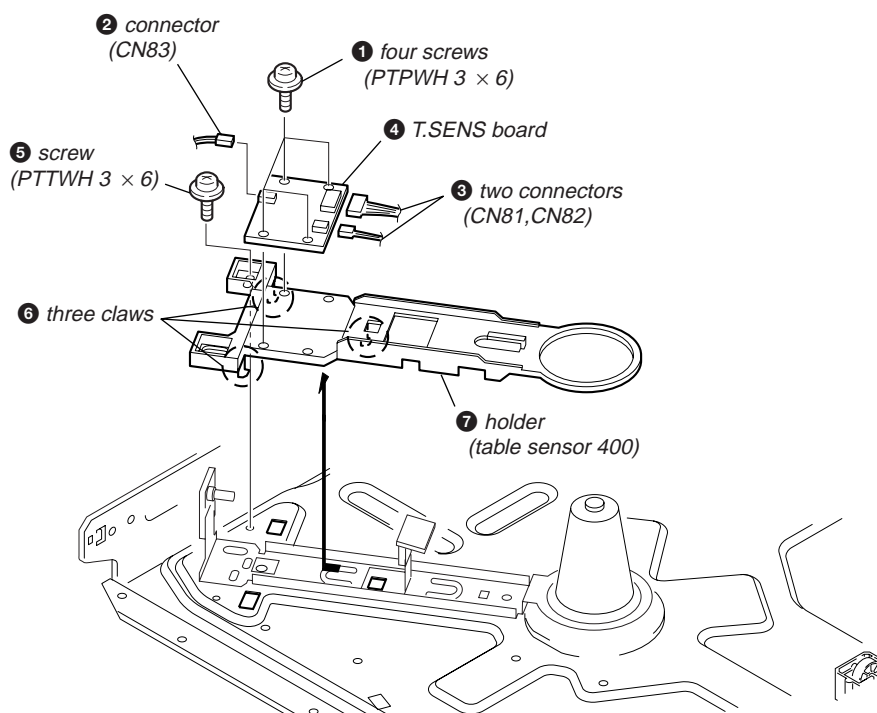
3-10. Pop-up Assembly



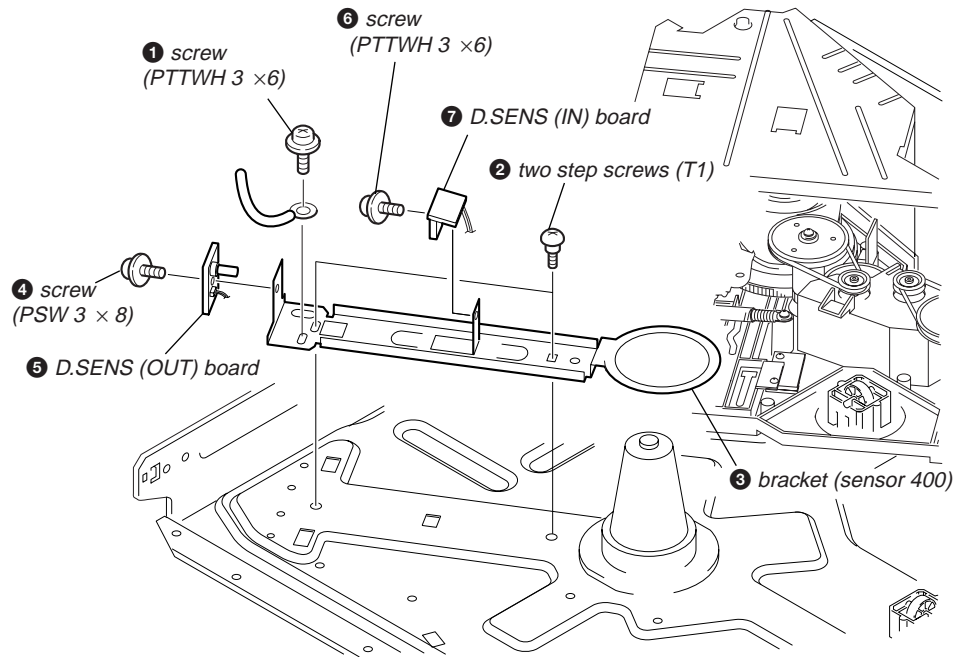
3-11. D.MOTOR Board, Motor Assembly (Door) (M603)



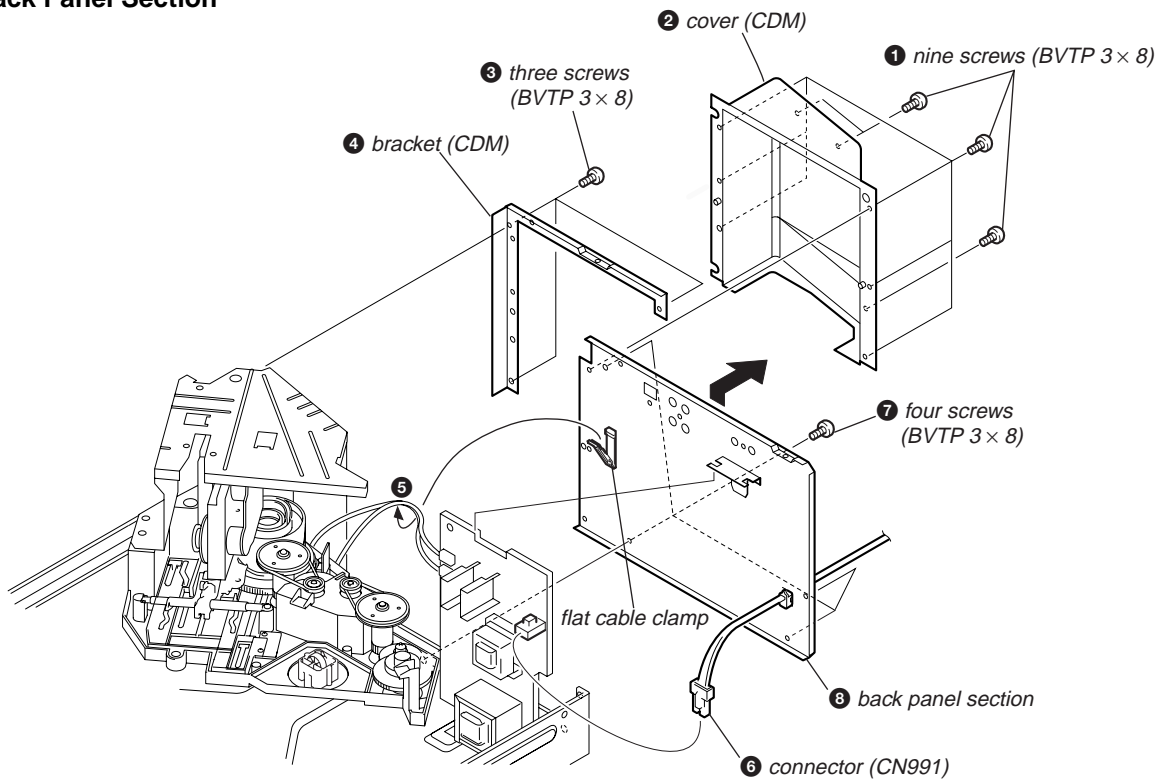
3-12. T.SENS Board, Holder (Table Sensor 400)



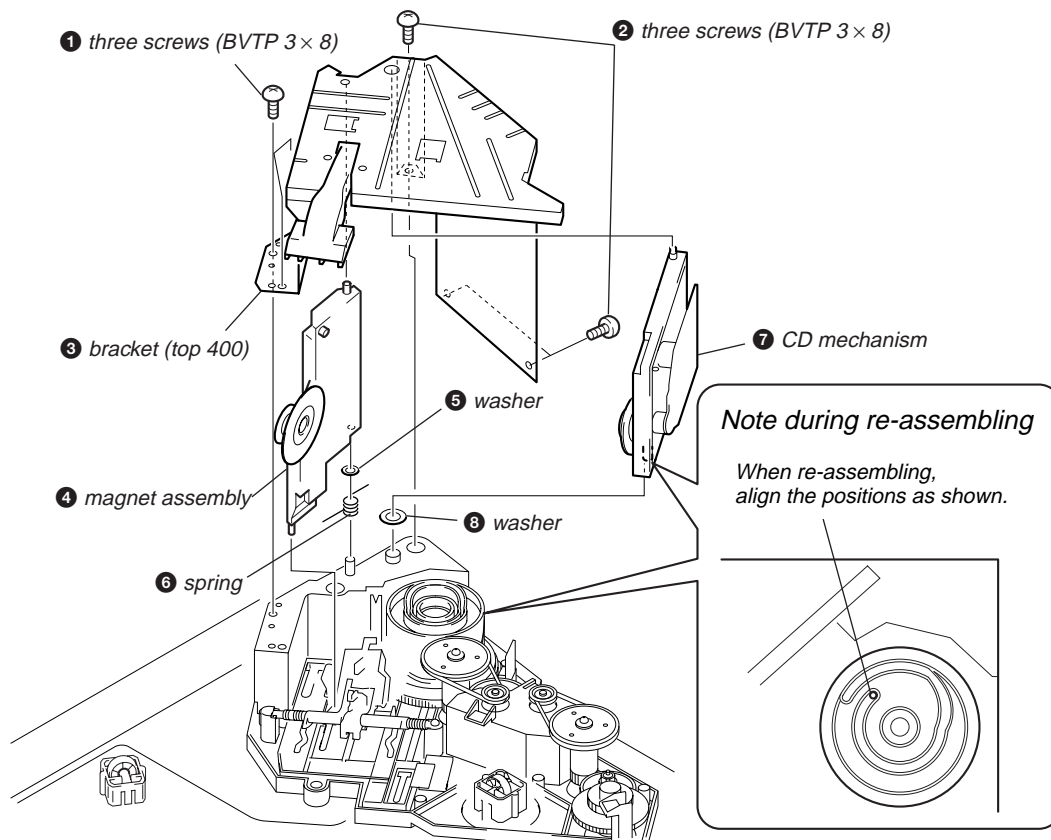
3-13. D.SENS (OUT) Board, D.SENS (IN) Board



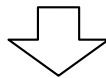
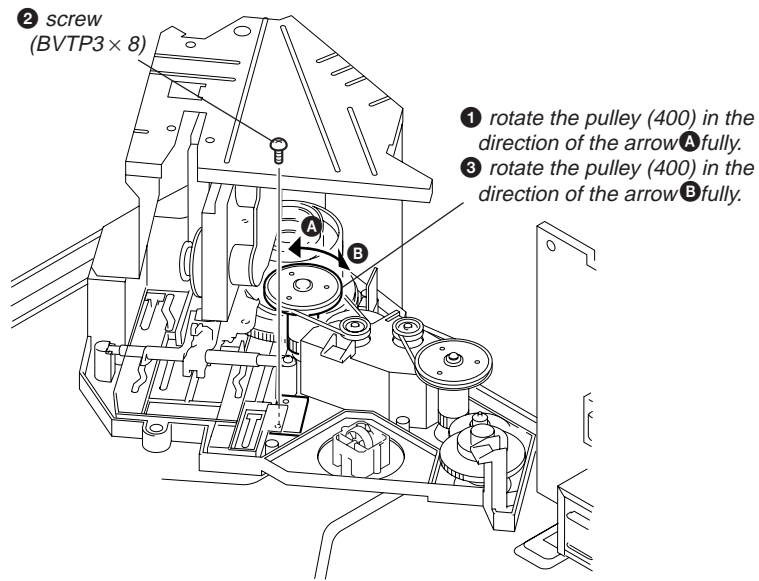
3-14. Back Panel Section



3-15. CD Mechanism, Magnet Assembly



3-16. LOADING SW Board, LOCK SW Board



Note during re-assembling

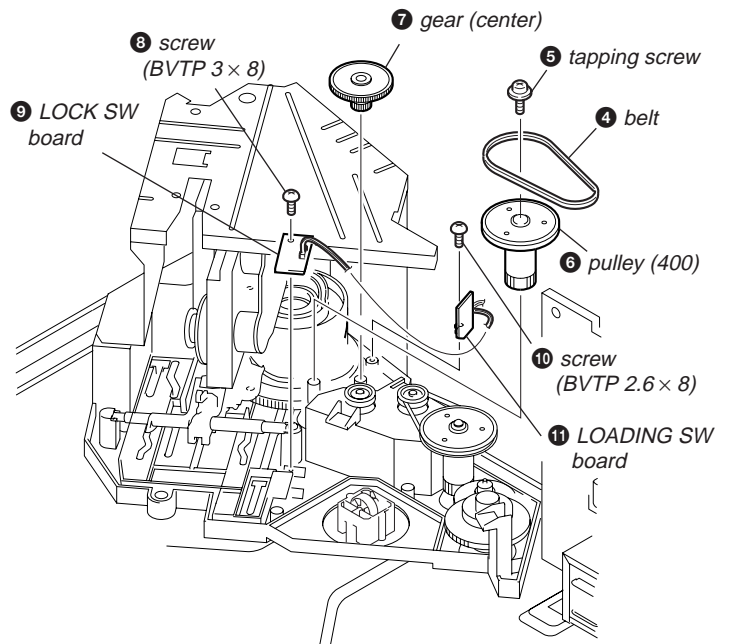
When re-assembling the LOADING SW board and LOCK SW boards, align the leads position as shown.

LOADING SW board

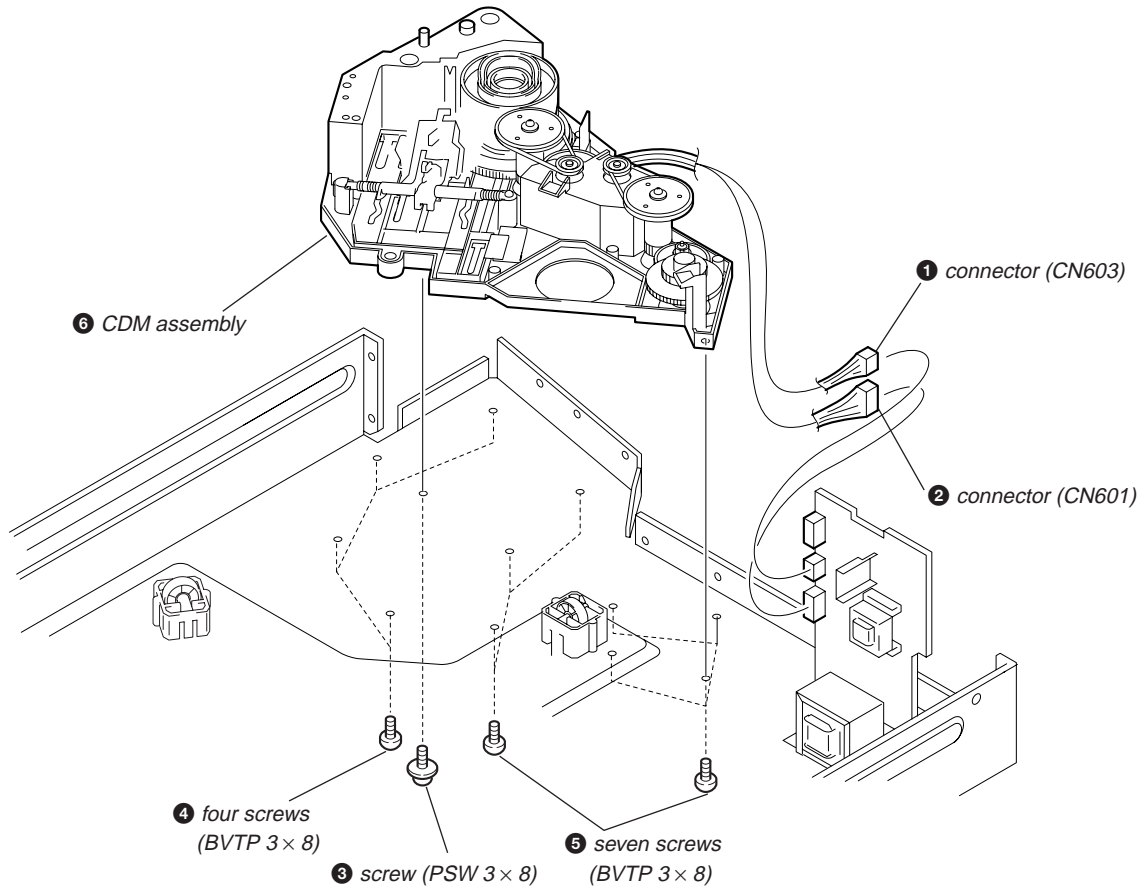
claws

Leads position

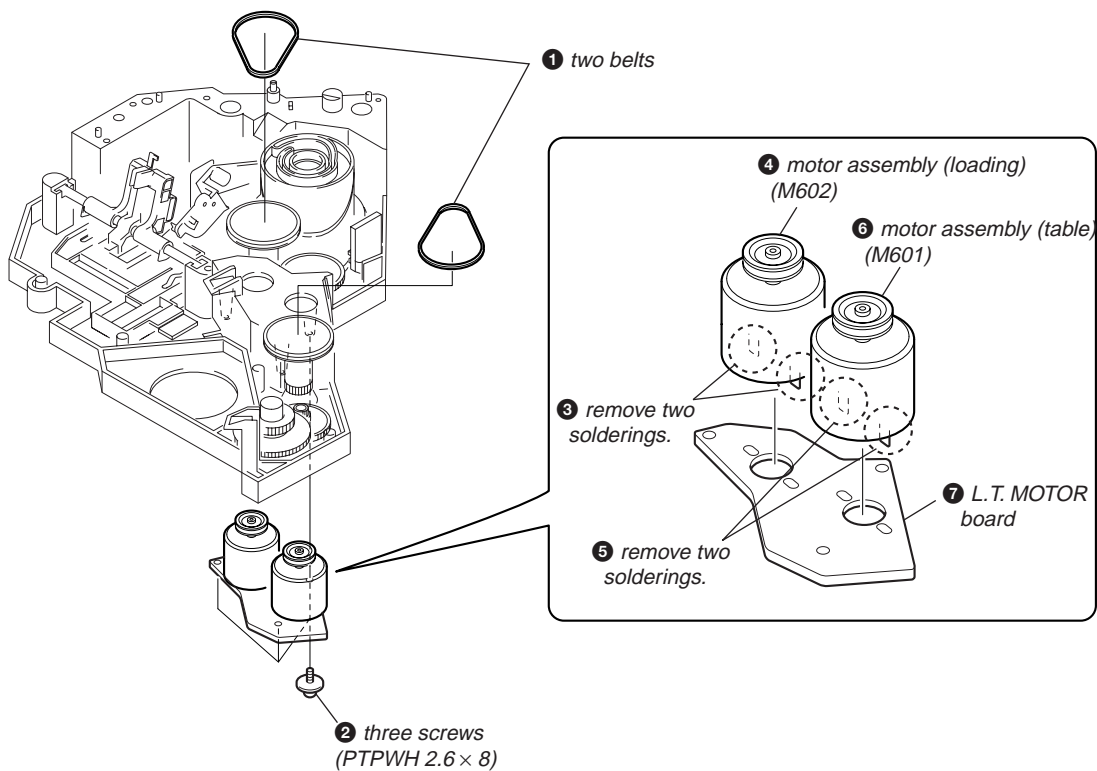
LOCK SW board



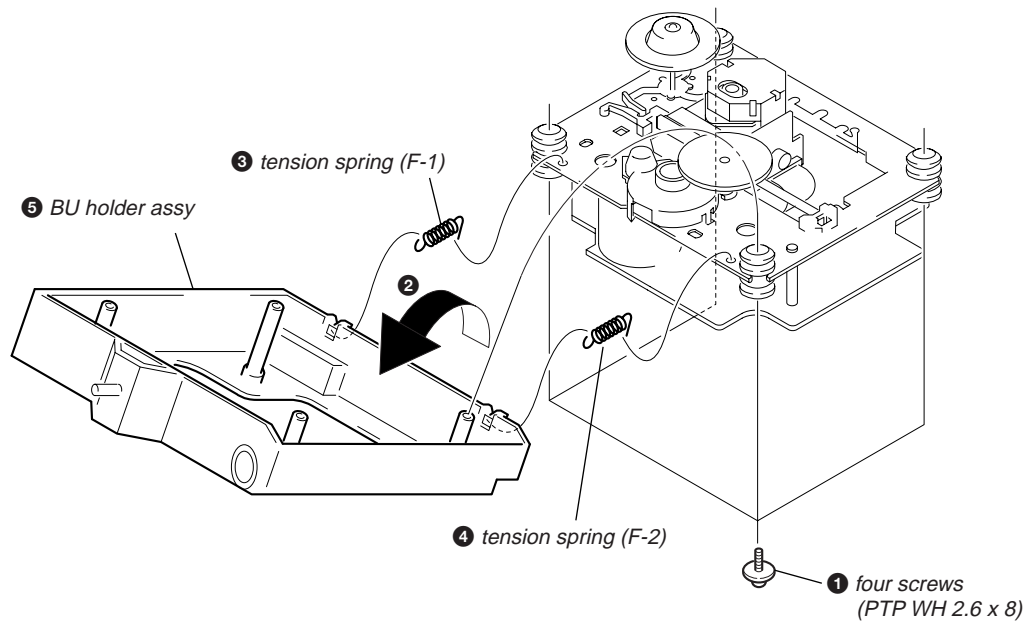
3-17. CDM Assembly



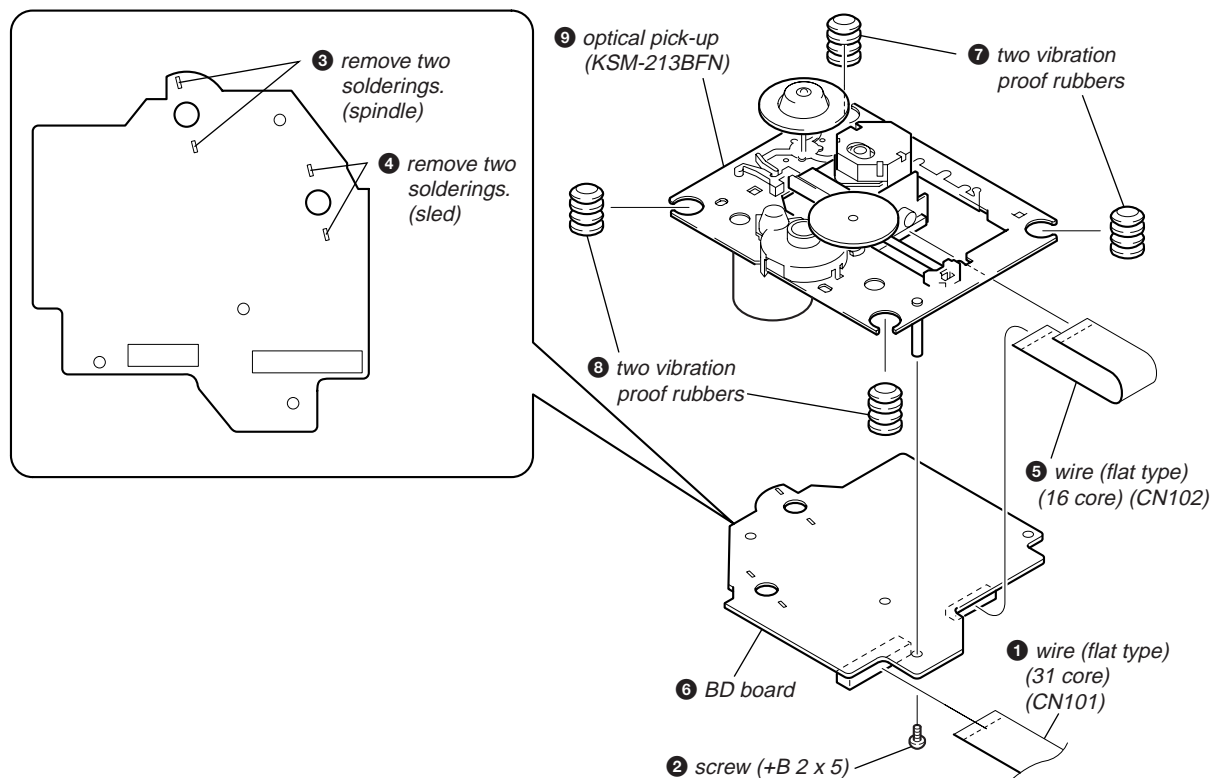
3-18. Motor Assembly (Table) (M601), Motor Assembly (Loading) (M602)



3-19. BU Holder



3-20. BD Board, Optical Pick-up (KSM-213BFN)



SECTION 4 TEST MODE

- This unit is provided with several test modes.
Details are shown in the following tables.

<Menu Method>

Turn on the power and press **TIME**, **MEGA CONTROL** and **I/⏻** buttons.
Rotate the **DISC/ALBUM/CHARACTER** dial to select any of the following modes.
Push the **DISC/ALBUM/CHARACTER** dial to enter the test mode.

Display	Contents
Version	Software version display
BU Test	BU test mode
CDM Test	CDM test mode
Aging Mode	Normal aging mode
Ship Mode	Default mode

To exit the mode, usually press the **I/⏻** button to enter the standby state.
(When selecting the Ship mode, the standby mode is automatically entered.)

<3 Buttons Method>

Mode name	Power supply state	Mode name	Power supply state
DOOR POP UP AGING MODE	ON	TOP ARTIST 3 + ▷ + +100	
ALL LIT MODE	ON	TOP ARTIST 4 + ▷ + +100	
MODEL NAME DISPLAY	ON	TOP ARTIST 6 + ▷ + +100	
SPRAY MODE	ON	TOP ARTIST 8 + ▷ + +100	
SHIPMENT MODE	ON	ARTIST MODE + ▷ + +100	Same as Ship Mode

To exit the mode, press the **I/⏻** button to enter the standby state.
(When selecting the Ship mode, the standby mode is automatically entered.)

SOFTWARE VERSION DISPLAY

- Software version can be displayed on the fluorescent indicator tube.

Procedure:

With the power ON, while pressing the [TIME] and [MEGA CONTROL] buttons, press the [I/O] button.

Rotate the [DISC/ALBUM/CHARACTER] dial, select “Version” and press the dial.

Software version is displayed on the fluorescent indicator tube.

To end this mode, press the [I/O] button.

BU TEST MODE

- This mode is used for electrical adjustments.
Refer to the section on Electrical Adjustment.

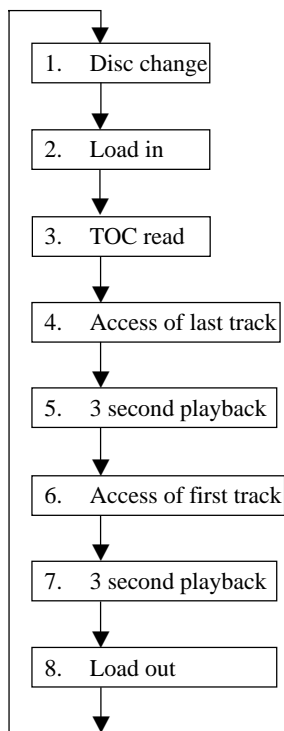
CDM TEST MODE

- This mode is used for mechanical adjustments and electrical adjustments.
Refer to the section on Mechanical adjustment and Electrical Adjustment.

AGING MODE

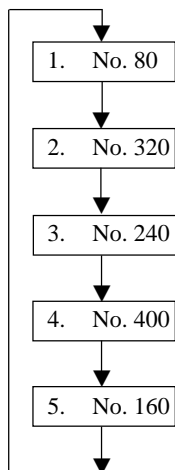
- Mode which repeatedly changes and plays back discs automatically in the unit.
- It will repeat aging as long as no errors occur.
- If an error occurs during aging, it will stop all servos, motors, etc. instantaneously, display the error number, and stop operations.
The function serves to maintain the state of the unit when errors occur.

Sequence of Aging Mode



Order of Disc Change

(1 cycle takes 3 minutes)



Special Aging Mode Functions

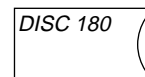
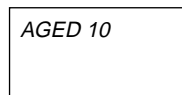
The aging mode is provided with the following convenient functions

1. Disc setting mode:
5 discs are set before setting the aging mode. This mode makes the setting of these discs more easy.
2. Aging disc count function:
Functions which displays the number of aging discs carried out on the Fluorescent indicator tube in numbers.

Aging Procedure

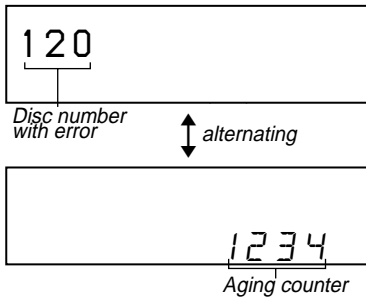
1. Turn on the power and press the [TIME], [MEGA CONTROL] and [I/O] buttons.
2. Rotate [DISC/ALBUM/CHARACTER] dial, select “Aging Mode” and press the dial to start the aging mode.
3. When the disc set mode is set, the [▶] and [■] LEDs blink.
4. Rotate the [DISC/ALBUM/CHARACTER] dial. The slits (No. 80, 160, 240, 320, 400) for setting the discs will come forward. Insert the discs into these slits. Do not set the discs in other slits.
5. Press the [▶] button.
6. The [▶] LED blinks, the aging mode is set, and aging is started.
7. The aging cycle lasts 3 minutes. If errors occur during aging, the error number will be displayed on the Fluorescent indicator tube. (Refer to the following table for the details of the errors.)
8. Aging will be repeated as long as no errors occur.
9. After disc load out, the number displayed on the Fluorescent indicator tube will increase.
10. To end aging, press the [I/O] button.
If an error occurs and the [I/O] button is useless, disconnect the power cord from the outlet.

Display in aging cycle



Error Display

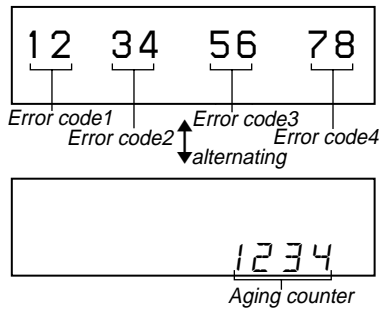
1. Disc sensor error



Error code

Code number	Contents
_____	No disc in the speified slit, or Disc in the other slits

2. Mechanism error



Error code 1

Code number	Contents
0X	With no problem
1X	With no problem
2X	Error during door initialization
3X	Error during loading initialization
4X	Error during door initialization
FX	With no problem

X : negligible number

Error code 2

Code number	Contents
1X	Error during loading in
2X	Error during loading out
3X	With no problem
4X	With no problem

X : negligible number

Error code 3

Code number	Contents
1X	Error during table operation
2X	With no problem

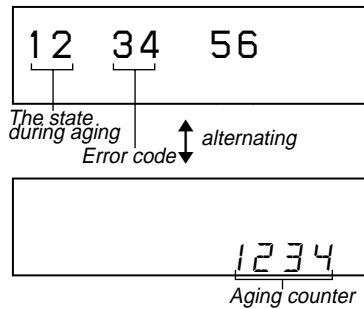
X : negligible number

Error code 4

Code number	Contents
0X	With no problem
1X	Error during table operation

X : negligible number

3. BD error



Code number	Contents
01	From chucking to TOC read
02	From chucking to TOC read
03	From TOC read to end of last track playback
04	From TOC read to end of last track playback
05	From end of last track playback to end of first track playback
06	From end of last track playback to end of first track playback

SHIPMENT MODE

- This mode is used for setting the unit to the shipment state. Do not execute it without a proper reason as it erases the memory of the title memo recorded by the customer.

Procedure1:

With the power ON, while pressing the **TIME** button and **MEGA CONTROL** button, press the **I/⏻** button.

Rotate the **DISC/ALBUM/CHARACTER** dial, select "Ship Mode" and press the dial. "-OFF-" is displayed and the standby mode is automatically entered.

Procedure2:

With the power ON, while pressing the **ARTIST MODE** button and **▷** button, press the **+100** button. "-OFF-" is displayed and the standby mode is automatically entered.

DOOR POP UP AGING MODE

- This mode is used for performing aging of the CD pop up part and door open/close. It is used for checking if operations are performed normally.

Procedure1:

1. With the power ON, while pressing the **TIME** button and **MEGA CONTROL** button, press the **I/⏻** button.
2. Rotate the **DISC/ALBUM/CHARACTER** dial, select "CDM Test" and press the dial.
3. Rotate the **DISC/ALBUM/CHARACTER** dial, select "DoorPopup Aging" and press the dial.
4. Aging starts, and door open/close and up/down operations of the pop up part are performed continuously.
5. To end this mode, press the **I/⏻** button.

Procedure2:

1. With the power ON, while pressing the **TOP ARTIST 3** button and **▷** button, press the **+100** button.
2. Aging starts, and door open/close and up/down operations of the pop up part are performed continuously.
3. To end the mode, press the **I/⏻** button.

ALL LIT MODE

- This mode is used for lighting the whole fluorescent indicator tubes and LEDs.

Procedure:

With the power ON, while pressing the **TOP ARTIST 4** and **▷** buttons, press the **+100** button.

Both the fluorescent indicator tubes and LEDs will light up completely.

To end this mode, press the **I/⏻** button.

MODEL NAME DISPLAY

- Model names can be displayed on the fluorescent indicator tube for checking the microprocessor model setting, etc.

Procedure:

With the power ON, while pressing the **TOP ARTIST 6** and **▷** buttons, press the **+100** button.

The model name is displayed on the fluorescent indicator tube.

To end this mode, press the **I/⏻** button.

SPRAY MODE

- This mode is used for the electrical adjustments. Refer to the section on Electrical Adjustment.

ADJ Mode


1. Turn ON the power of the unit, set disc to disc table, and perform chucking.
2. Disconnect the power supply plug from the outlet.
3. To set ADJ mode, connect the test point (ADJ) of the MAIN board to Ground, and connect the power supply plug to the outlet.

In this mode, table rotation and loading operations are not performed because it is taken that the disc has already been chucked.

Note: The same operations are also performed in the following when the test point (ADJ) is connected to Ground after turning on the power.

- Direct search (movement of sledding motor) is not performed during accessing
- Ignored even when GFS becomes L
- Ignored even when the Q data cannot be read
- Focus gain does not decrease

To end the ADJ mode


1. Press the  button and disconnect the plug.
2. Remove the wire between ADJ and GND.


Key and Display Check Mode


To set this mode, connect the test point (AFADJ) on the MAIN board to Ground, and connect the power supply plug to the outlet.


Note: When this mode is executed, all title memos recorded will be erased.





- When this button is pressed, “line # No. #” will be displayed. However, these will not be displayed for the following special buttons. However, these will not be displayed for the following special buttons.

 (stop) button: FL segment check
(Refer to FL Tube Check Patterns)

 (pause) button: FL grid check
(Refer to FL Tube Check Patterns)

The  LED also lights up simultaneously.

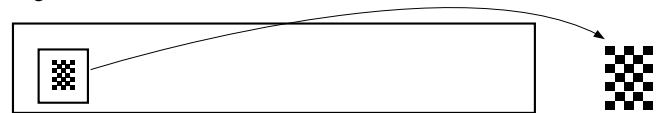
 (play) button: All FL segment and grid will light up.

The  LED also lights up simultaneously.
TIMER switch: When the switch position is , the  LED lights up. It goes OFF when set to .

Each time this button is pressed, the value of the “Got ## keys” increases. Buttons pressed once will not be counted when pressed again.

FL Tube Check Patterns

Segment check



Grid check



- When the jog dial and AMS is rotated to the right, the TOP ARTIST LEDs light up in the order of 1→2..8→ARTIST MODE→HISTORY ALBUM SELECT→MEGA CONTROL→1.
- When the jog dial and AMS is rotated to the left, the TOP ARTIST LEDs light up in the order of 8→7..1→MEGA CONTROL ALBUM SELECT→HISTORY→ARTIST MODE→8.

- Abbreviation
FL: Fluorescent Indicator Tube

To end the ADJ mode

1. Disconnect the plug.
2. Remove the wire between AFADJ and GND.

Adjustment Location: MAIN board (See page 28)

SECTION 5 ADJUSTMENTS

Mechanical Adjustments

Pop Up Mechanism Adjustment

1. Turn on the power and set the disc to number 24.
2. With the power ON, while pressing the **TIME** and **MEGA CONTROL** buttons, press the **[I/O]** button to enter the test mode.
3. Rotate the JOG dial and select "CDM Test". Press the JOG dial.
4. Rotate the JOG dial and select the mechanism adjustment mode. ("Mech Adjust" is displayed.) Press the JOG dial.
5. Keep pressing the **TOP ARTIST 1** button to operate the loading mechanism, and continue pressing until the disc table locks. (Fig. 1)
6. Keep pressing the **TOP ARTIST 2** button to raise the pop up part.
7. Loosen the adjusting screw, move the screwdriver left and right until the lever (POP UP) does not touch the slit wall, and secure the screw. (Fig. 2)

The following buttons have special functions in this mode.

TOP ARTIST 1	button: Loading mechanism IN operation
TOP ARTIST 5	button: Loading mechanism OUT operation
TOP ARTIST 2	button: Pop up part UP operation
TOP ARTIST 6	button: Pop up part DOWN operation

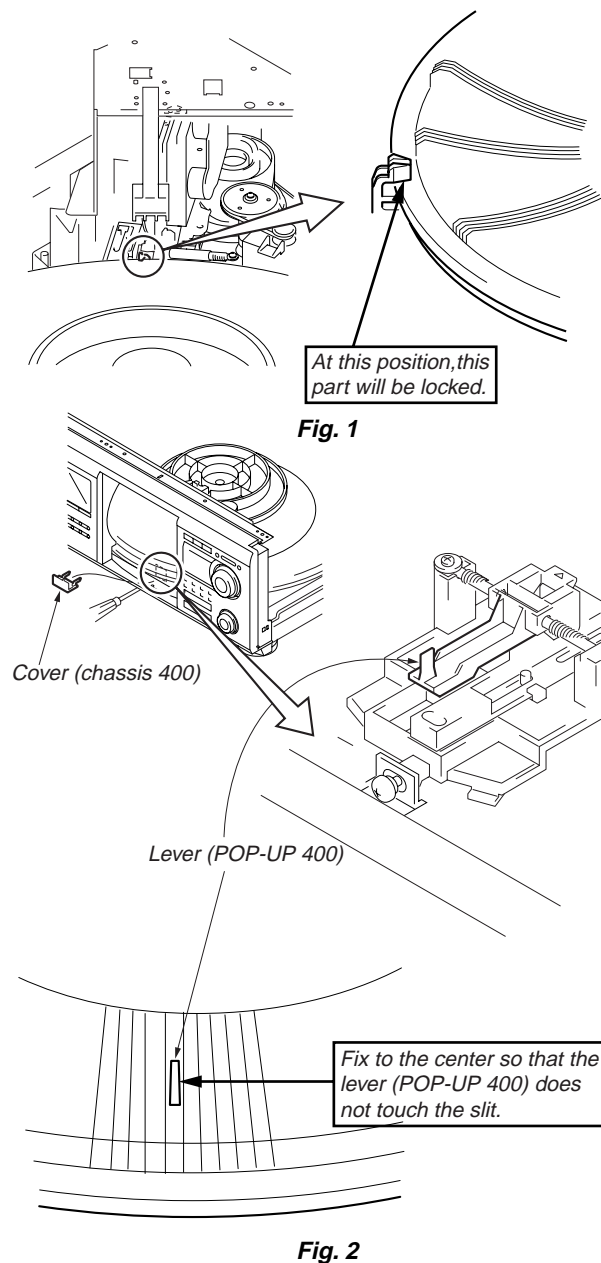


Fig. 2

Table Sensor Adjustment

1. Enter the CDM Test mode and select "Mech Adjust" with the JOG dial, and press the dial.
2. Press the **TOP ARTIST 1** button to operate the loading mechanism, and continue pressing until the disc table locks. (Fig. 3)
3. Loosen the fixing screw and move the holder so that both PLAY button LED (green) and the ALBUM SELECT button LED (green) light. If the holder is not in the correct position, the MEGA CONTROL button LED (orange) or the PAUSE button LED (orange) lights.
4. Moving the disc table right and left with a hand after the screw is fixed, the table will move by the play of a disc table. If the LEDs light up alternately, the adjustment will be performed correctly. (Fig. 4)

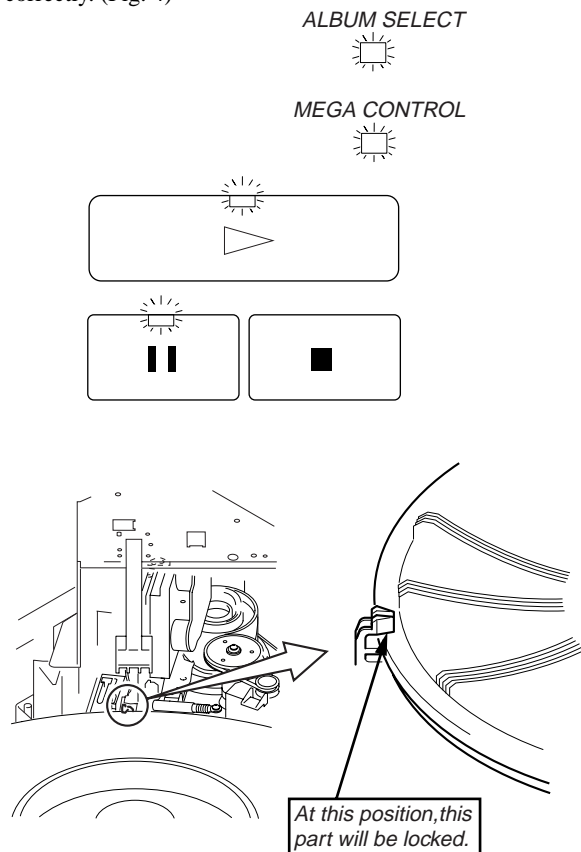


Fig. 3

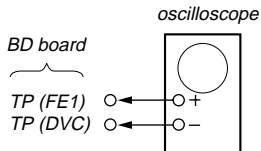
Fig. 4

Electrical Adjustment

Note:

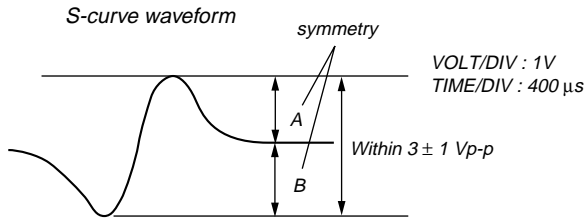
1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

S-Curve Check



Procedure :

1. Chuck the disc (YEDS-18) beforehand.
2. Connect oscilloscope to test point TP (FE1) on BD board.
3. With the power ON, while pressing the **TIME** and **MEGA CONTROL** buttons, press the **I/O** button. Rotate the **DISC/ALBUM/CHARACTER** dial, select “BU Test” and press the dial.
4. Rotate the **DISC/ALBUM/CHARACTER** dial, and select “bdt S CURVE”. Press the dial “LD AL” is displayed.
5. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3 ± 1 Vp-p.



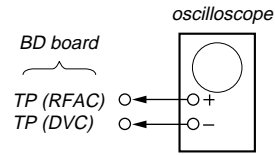
6. Pressing the **MENE/NO** button stops the output of the waveform (S CURVE). “bdt S CURVE” is displayed.
7. To end this mode, press the **I/O** button.

Note :

- Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as long as possible and light up the brightness to obtain best waveform.

Adjustment Location: BD board (See page 28)

RF Level Check

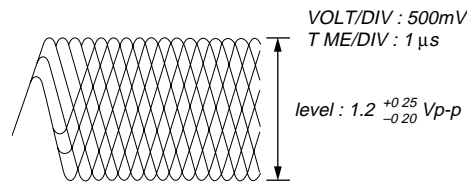


Procedure :

1. Connect oscilloscope to test point TP (RFAC) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in to play the number five track.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note: A clear RF signal waveform means that the shape “◇” can be clearly distinguished at the center of the waveform.

RF signal waveform

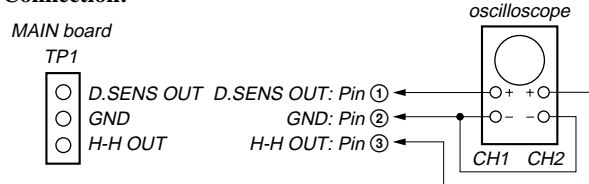


Adjustment Location: BD board (See page 28)

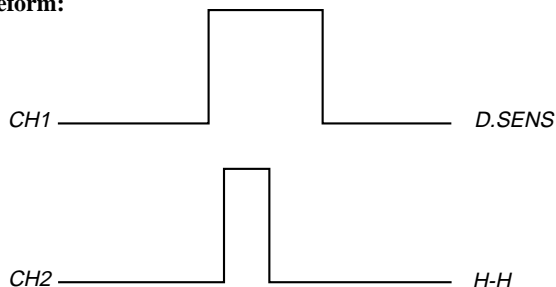
Disc Sensor Adjustment

Be sure to perform this adjustment after sensor adjustment in MECHANICAL ADJUSTMENT.

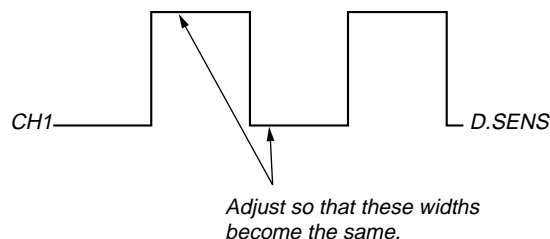
Connection:



Waveform:



- Rotate the **DISC/ALBUM/CHARACTER** knob in the counterclockwise direction and the disc table starts to rotate in the same direction. Check that the waveform at this time is the same as that in step 4. If larger by a considerable extent, rotate the **DISC/ALBUM/CHARACTER** knob in the clockwise direction and the disc table starts to rotate in the same direction. Repeat from step 4.
- Rotate RV501 of the MAIN board and adjust so that the H and L portions of the D.S waveform become the same.



- Connect the oscilloscope to Pins ①, ②, and ③ of TP1 of the MAIN board.
- Check that no discs are loaded in the unit.
- With the power ON, while pressing the **TIME** and **MEGA CONTROL** buttons, press the **I/⏻** button. Rotate the **DISC/ALBUM/CHARACTER** dial, select "CDM Test" and press the dial. Rotate the **DISC/ALBUM/CHARACTER** dial and select "TableRotation" and press the dial. The disc table starts to rotate in the clockwise direction.
- Loosen the fixing screw, move the mounting board (SENSOR), and secure the mounting board (SENSOR) at the point the H portion of the H-H waveform comes the center of the H portion of the D.SENS waveform.

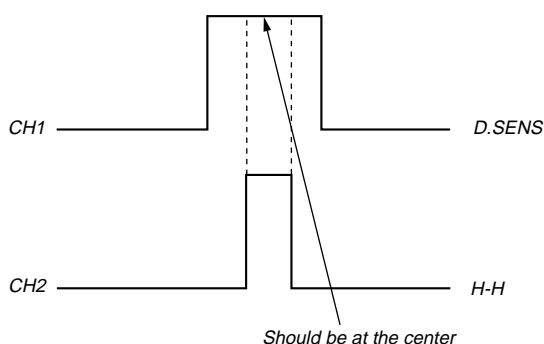
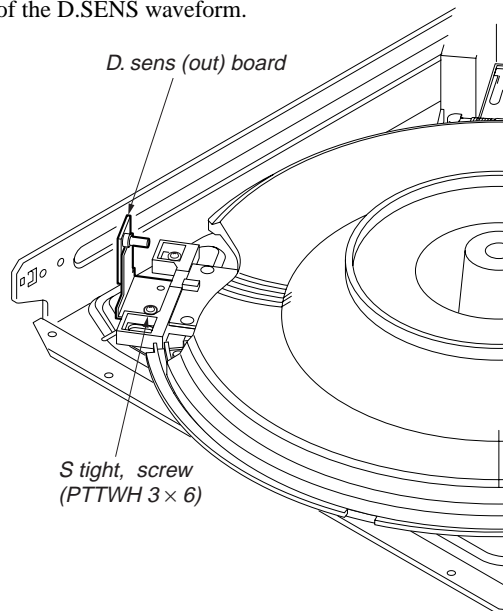
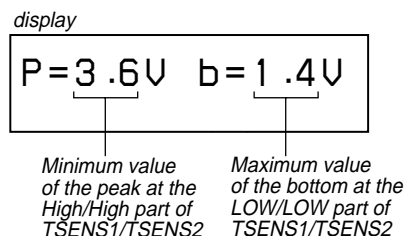
Adjustment Location: MAIN board (See page 28)

Spray Mode

- This mode is used for the measurement of the table sensor signal outputs characteristics.

Procedure :

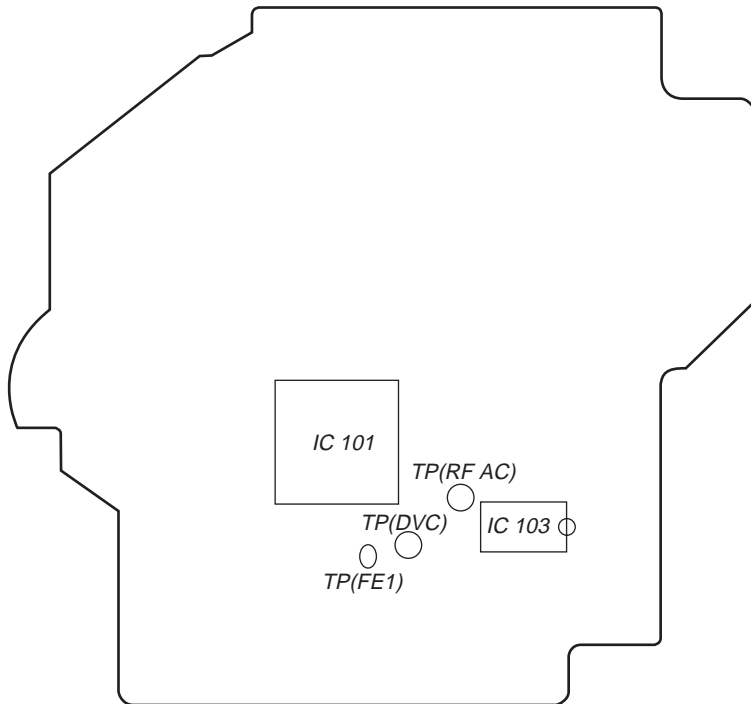
- Check that no discs are loaded in the unit. With the power ON, while pressing the **TOP ARTIAT 8** and **▷** buttons, press the **+100** button. "Spray Mode" is displayed.
- Press the **▷** button to start the measurement. "Now ...ing" is displayed during the measurement of one rotation.
- The result of the measurement is displayed as below.



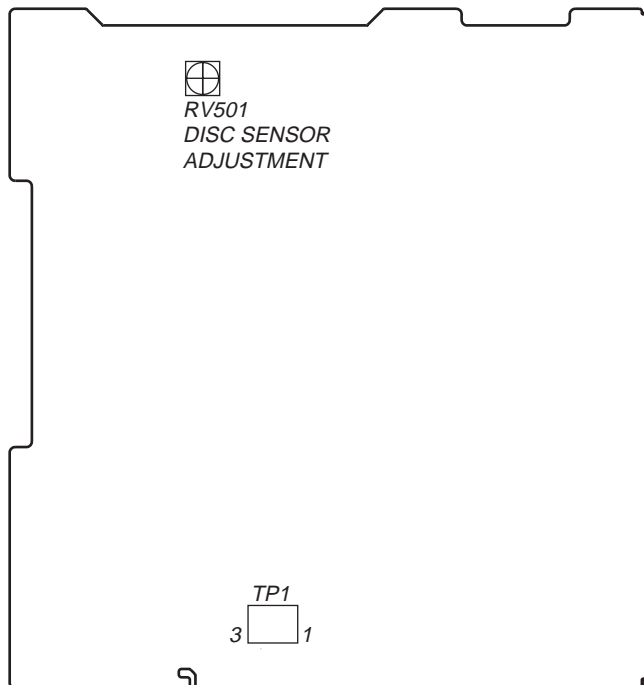
- To end this mode, press the **I/⏻** button.

CDP-CX455

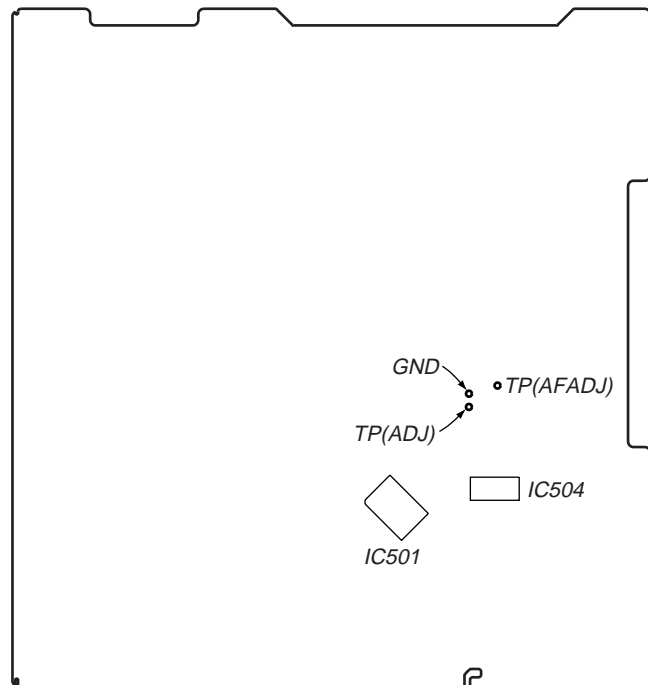
Adjustment Location :
[**BD BOARD**] – Conductor Side –



[**MAIN BOARD**] – Component Side –



– Conductor Side –



SECTION 6 DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

Note:

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

Note:

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

Note:

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

- — : B+ Line.
- - - - : B- Line.

- \square : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions. no mark : STOP
- 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 an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 - \Rightarrow : CD
 - \Rightarrow : digital out
- Abbreviation
CND: Canadian model

For printed wiring boards.

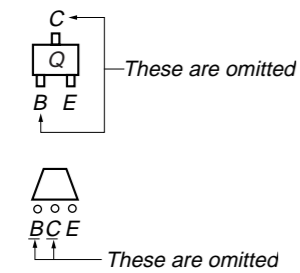
Note:

- \circ : parts extracted from the component side.
- \square : parts extracted from the conductor side.
- \circ : Through hole.
- ■ : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

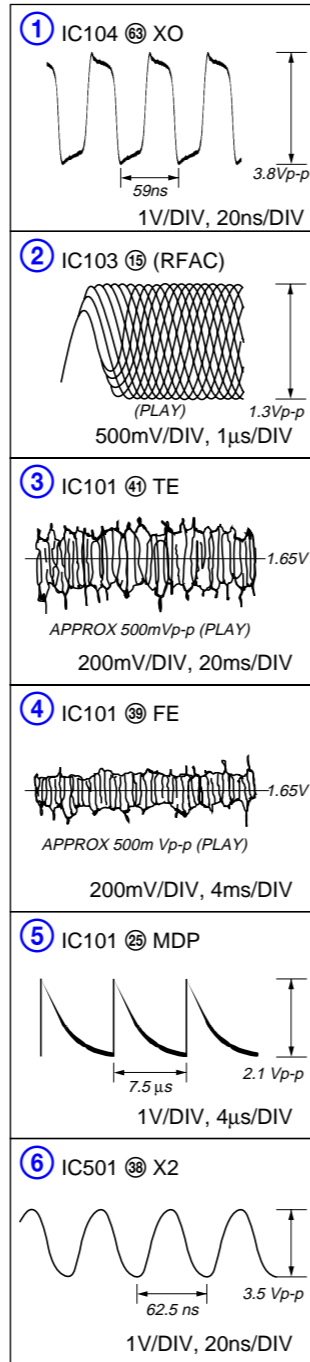
Caution:

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

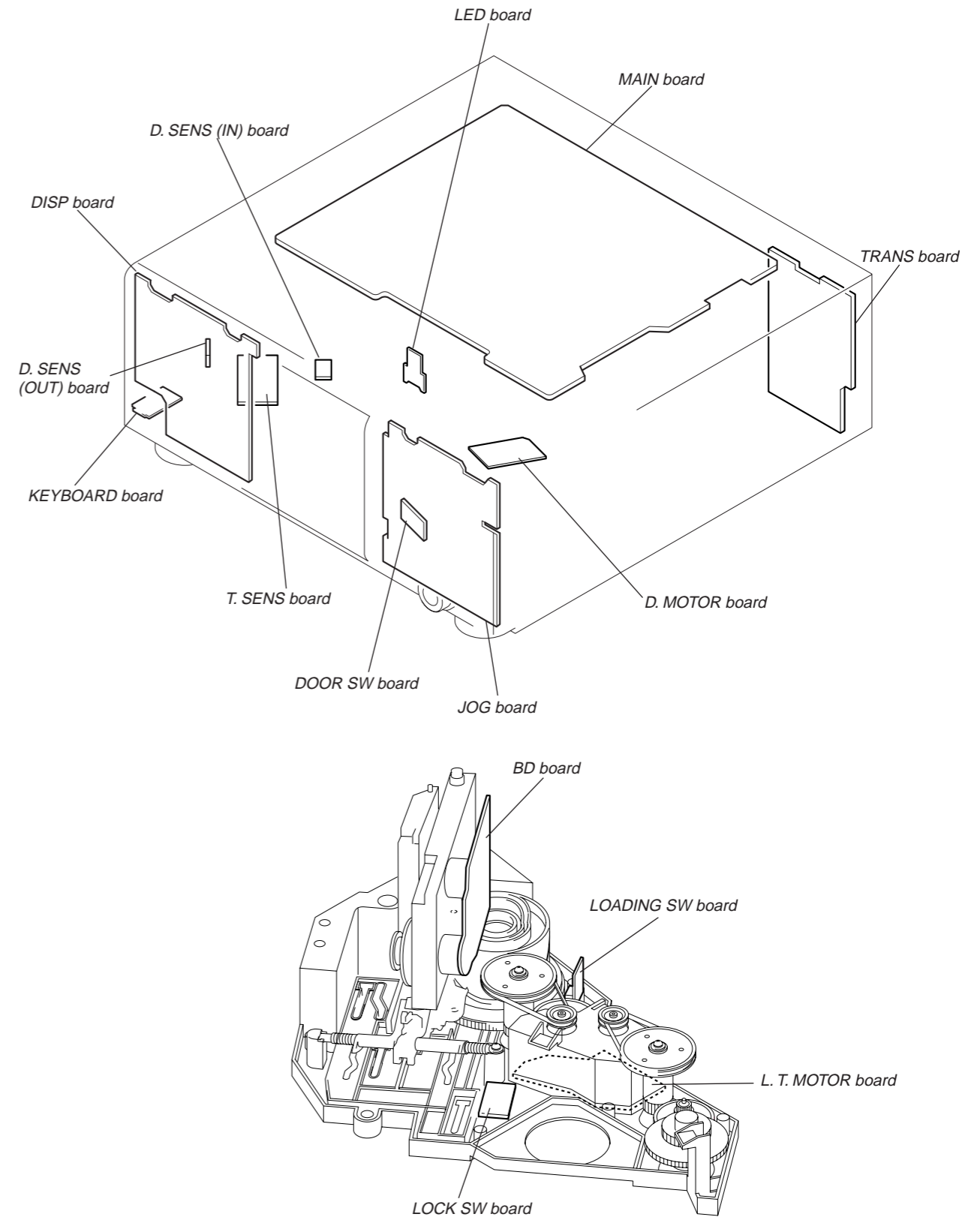
Indication of transistor



Waveforms

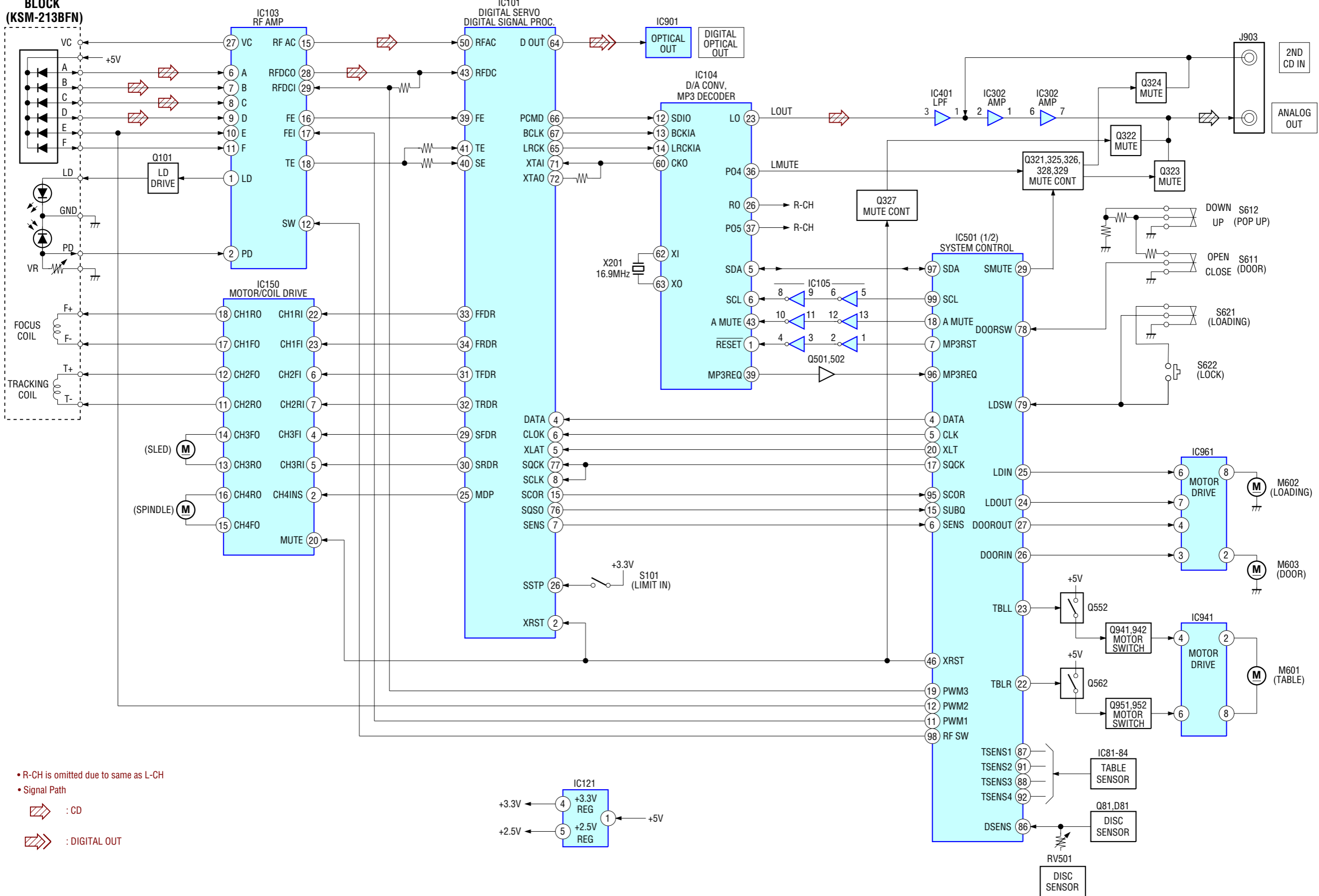


6-1. Circuit Boards Location



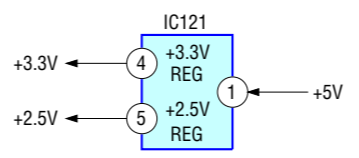
6-2. Block Diagrams
- BD Section -

OPTICAL PICK-UP BLOCK
(KSM-213BFN)

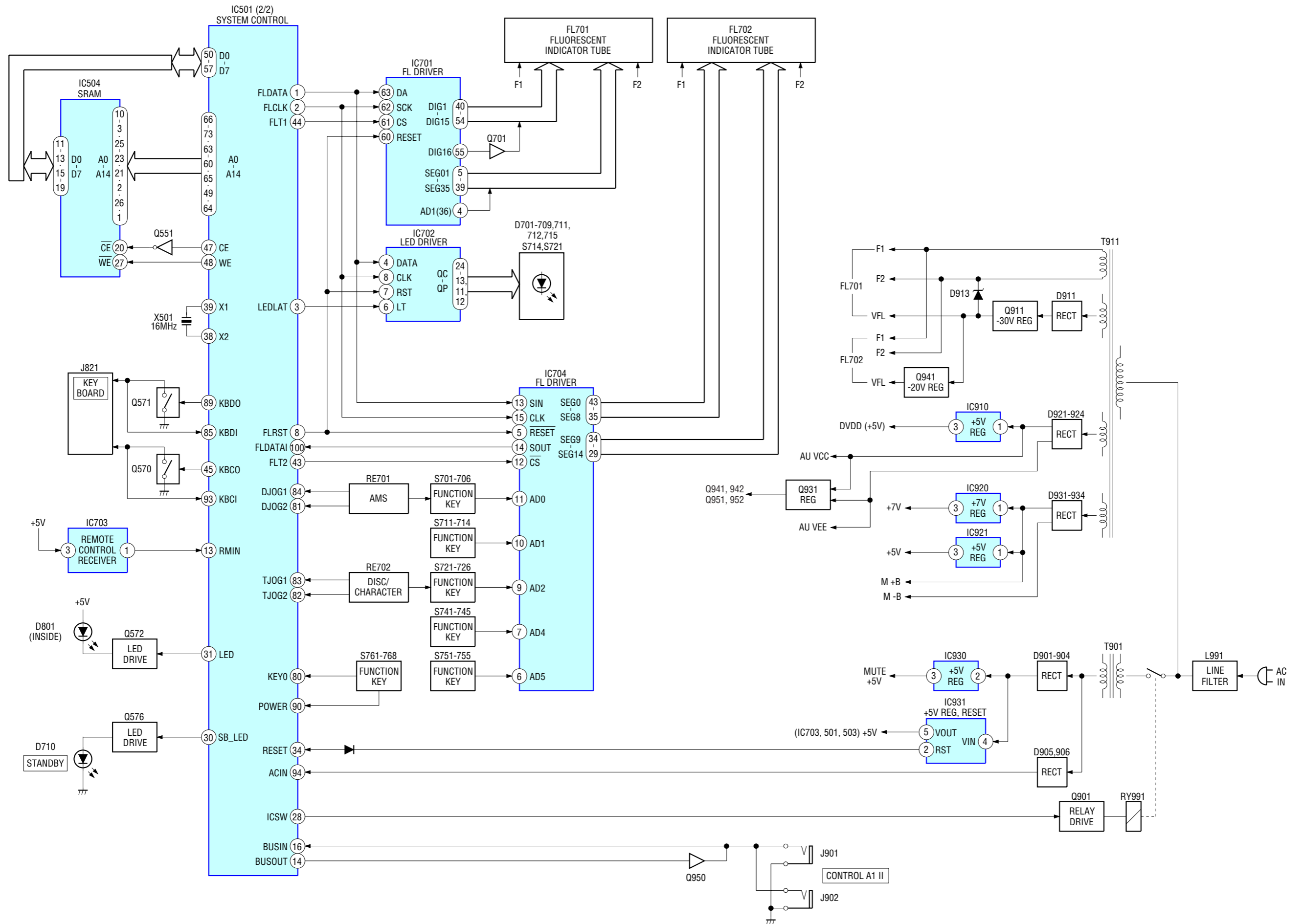


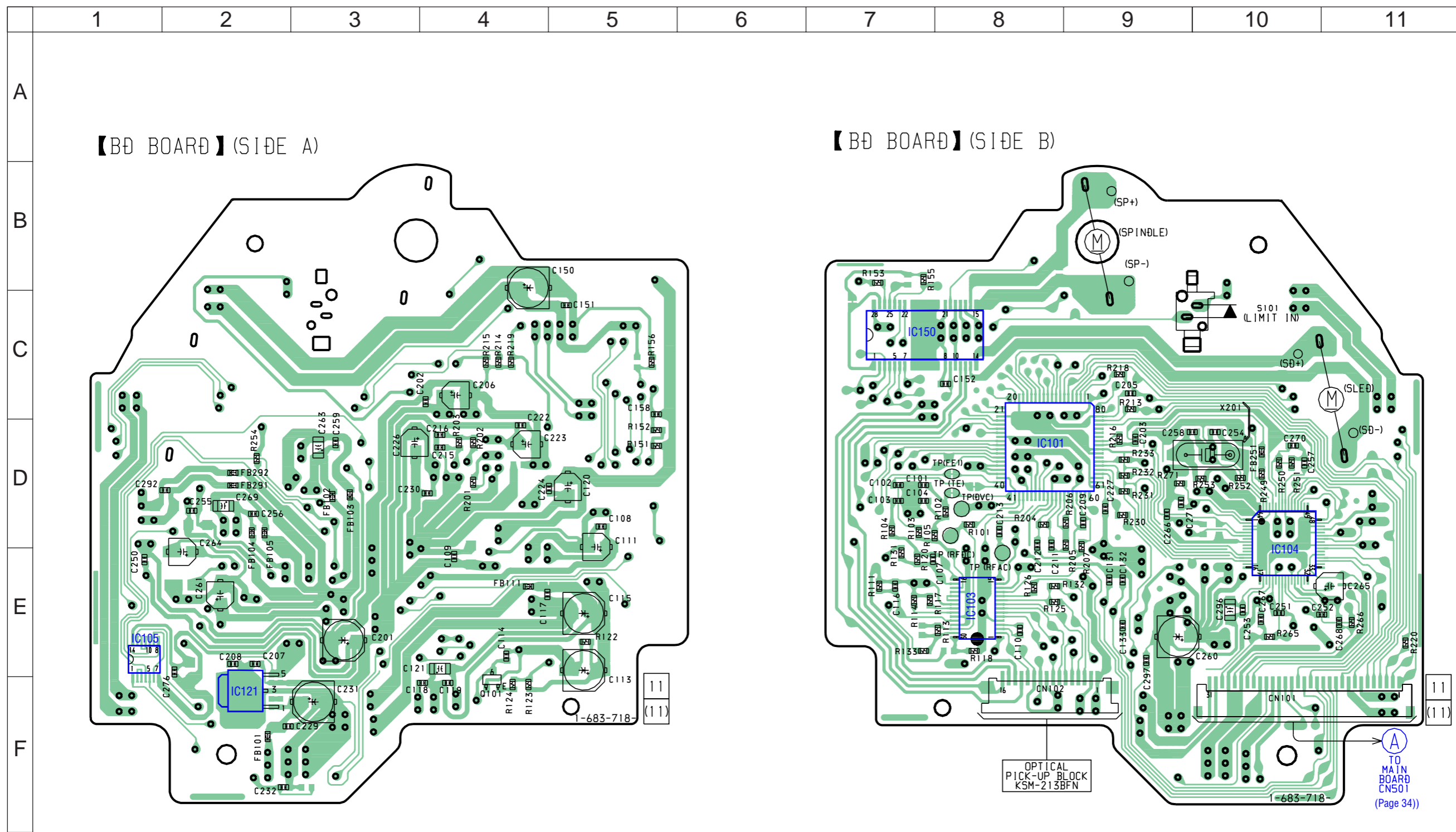
• R-CH is omitted due to same as L-CH
• Signal Path

⚡ : CD
⚡ : DIGITAL OUT



- Main Section -



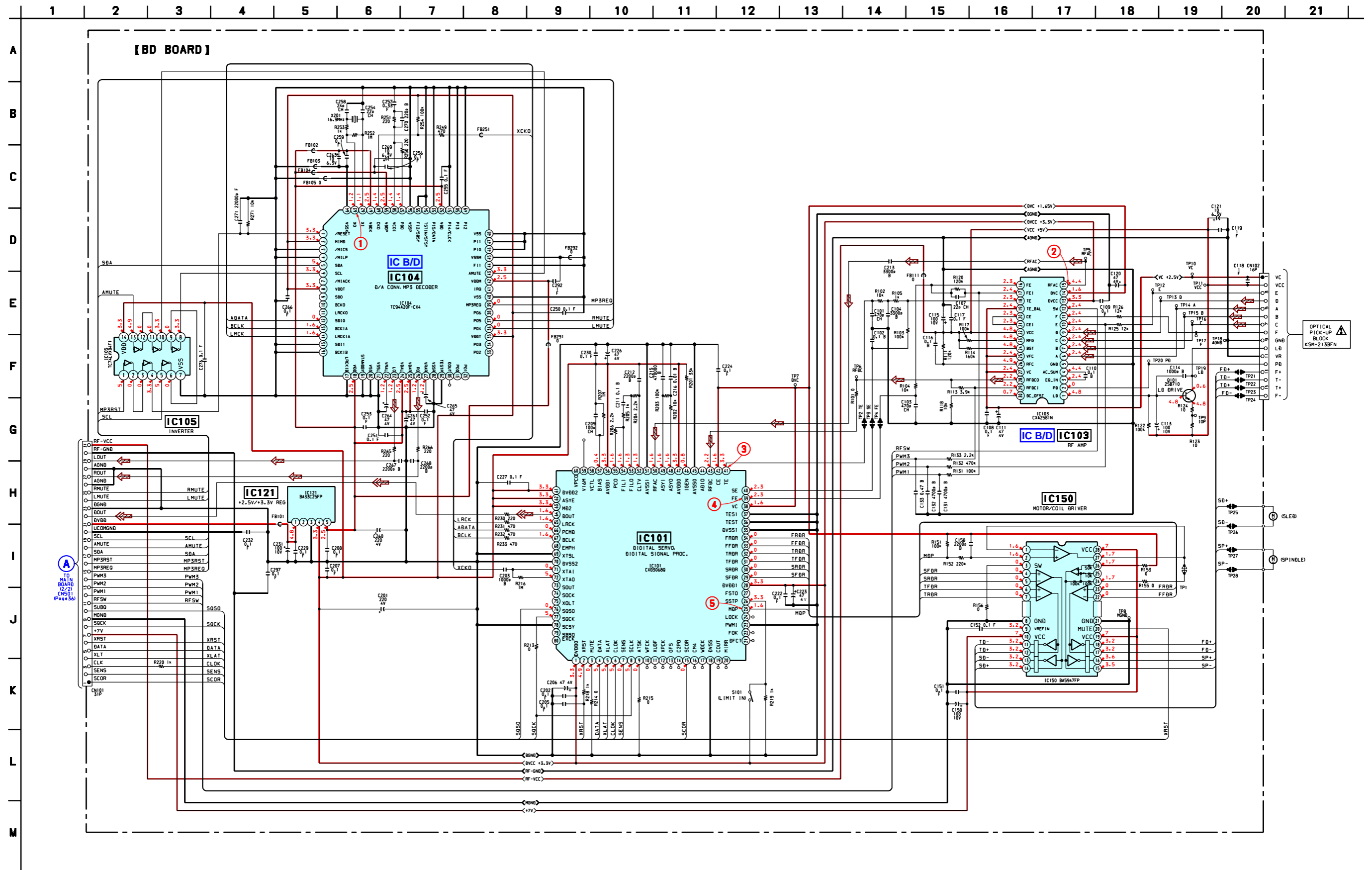


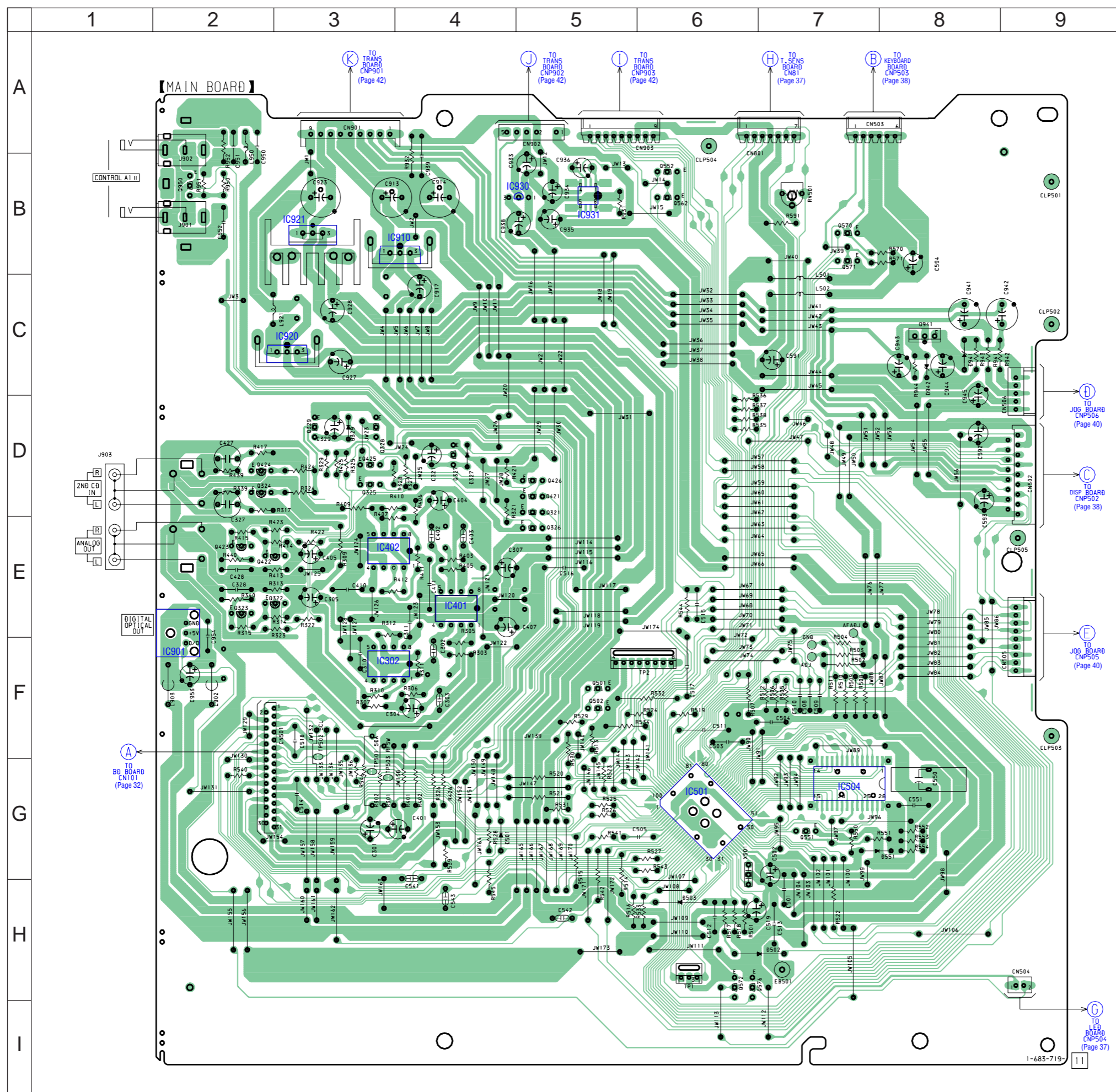
• Semiconductor Location

Ref. No.	Location
IC101	D-8
IC103	E-8
IC104	D-10
IC105	E-1
IC121	F-2
IC150	C-7
Q101	F-4

6-4. Schematic Diagram – BD Board –

- See page 29 for Waveforms.
- See page 44, 45 for IC Block Diagrams.
- See page 46 for IC Pin Function Description.

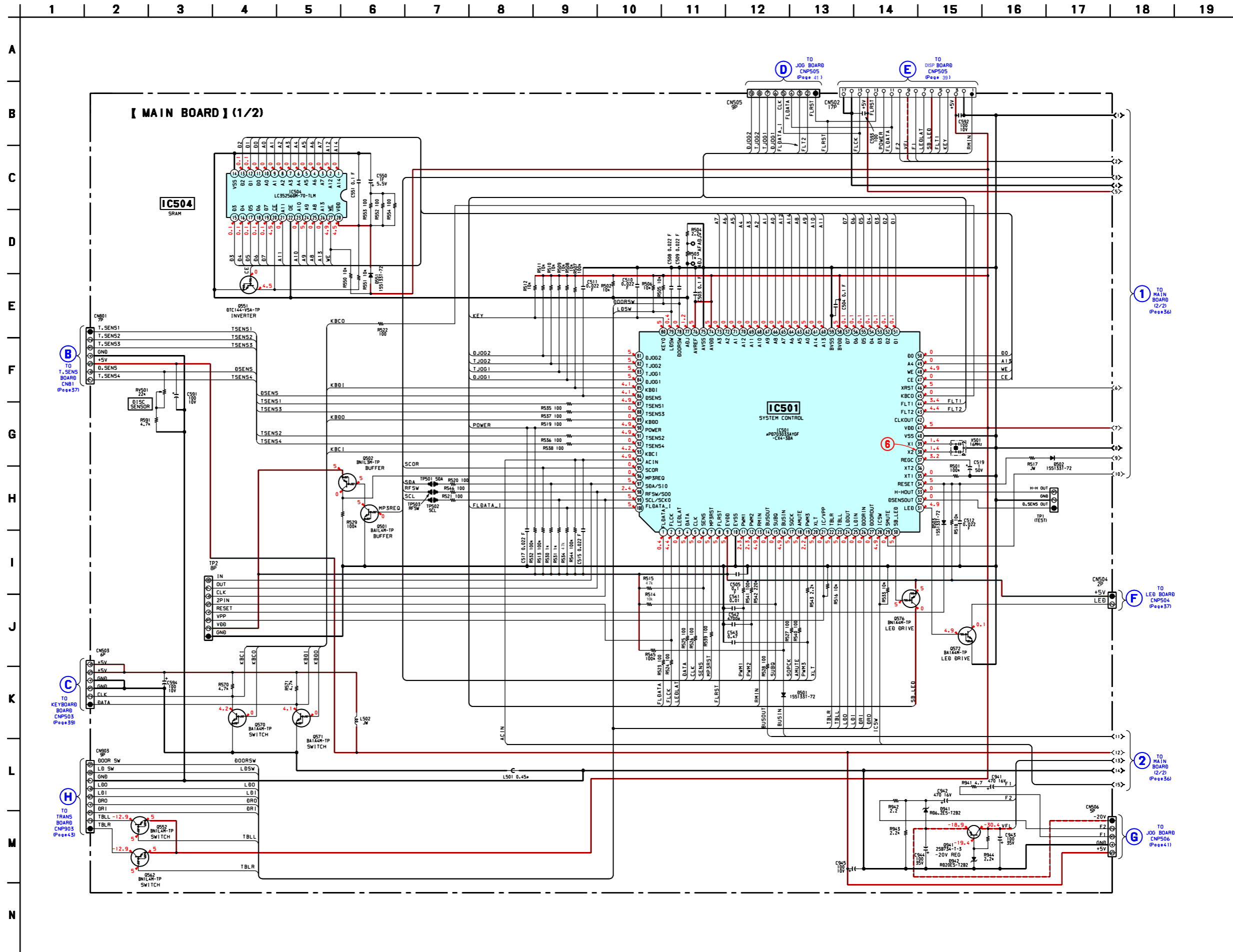


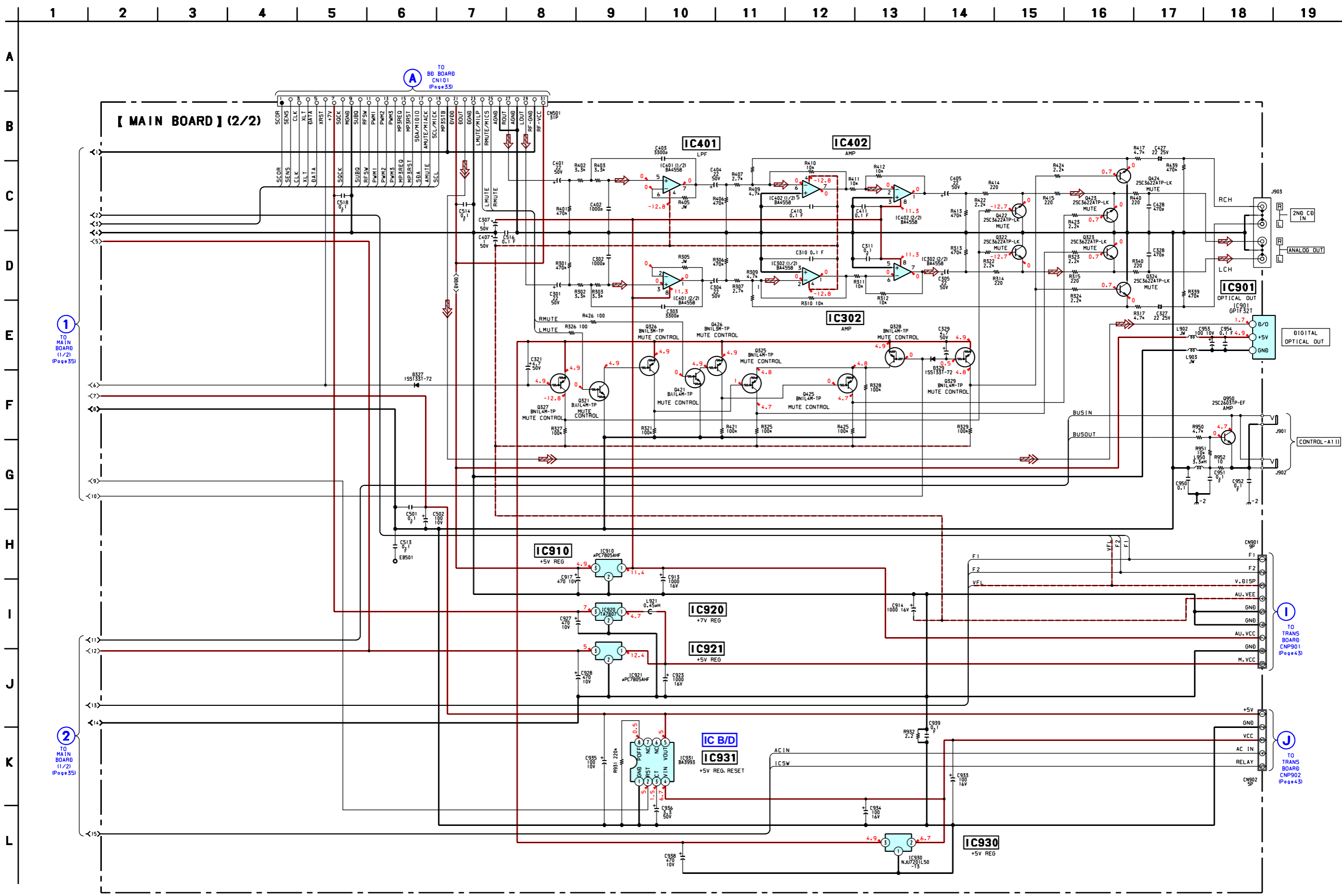


• Semiconductor Location

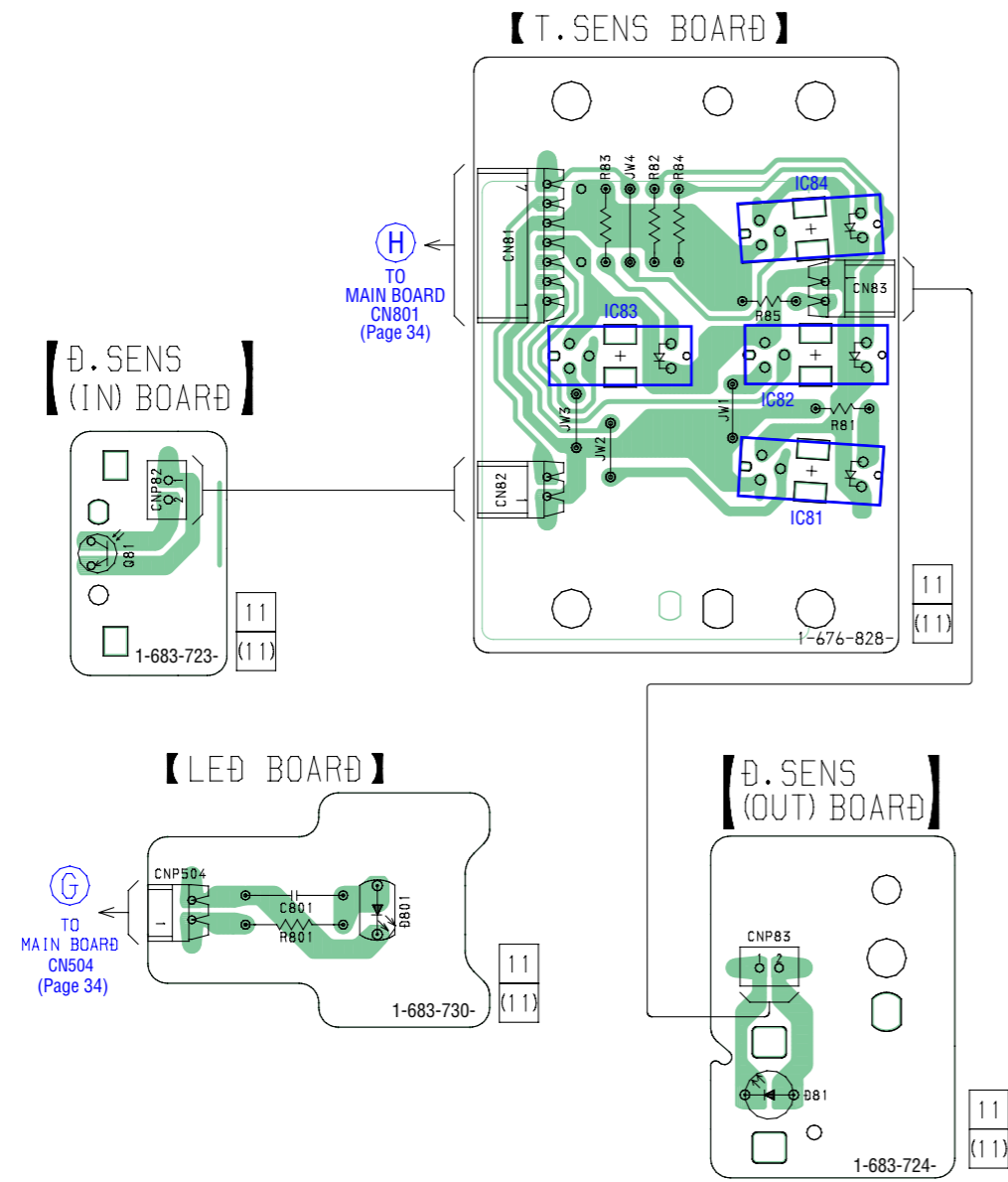
Ref. No.	Location
D327	D-4
D329	D-3
D501	G-4
D502	H-7
D503	H-6
D551	G-8
D941	C-8
D942	C-8
IC302	F-3
IC401	E-4
IC402	E-3
IC501	G-6
IC504	G-7
IC901	F-2
IC910	B-4
IC920	C-3
IC921	B-3
IC930	B-4
IC931	B-5
Q321	D-5
Q322	E-3
Q323	E-2
Q324	D-2
Q325	D-3
Q326	E-5
Q327	D-4
Q328	D-3
Q329	D-3
Q421	D-5
Q422	E-2
Q423	E-2
Q424	D-2
Q425	D-3
Q426	D-5
Q501	F-5
Q502	F-5
Q551	G-7
Q552	B-6
Q562	B-6
Q570	B-7
Q571	B-7
Q572	H-6
Q576	H-7
Q941	C-8
Q950	B-2

6-6. Schematic Diagram – MAIN Board (1/2) – • See page 29 for Waveforms. • See page 48 for IC Pin Function Description.

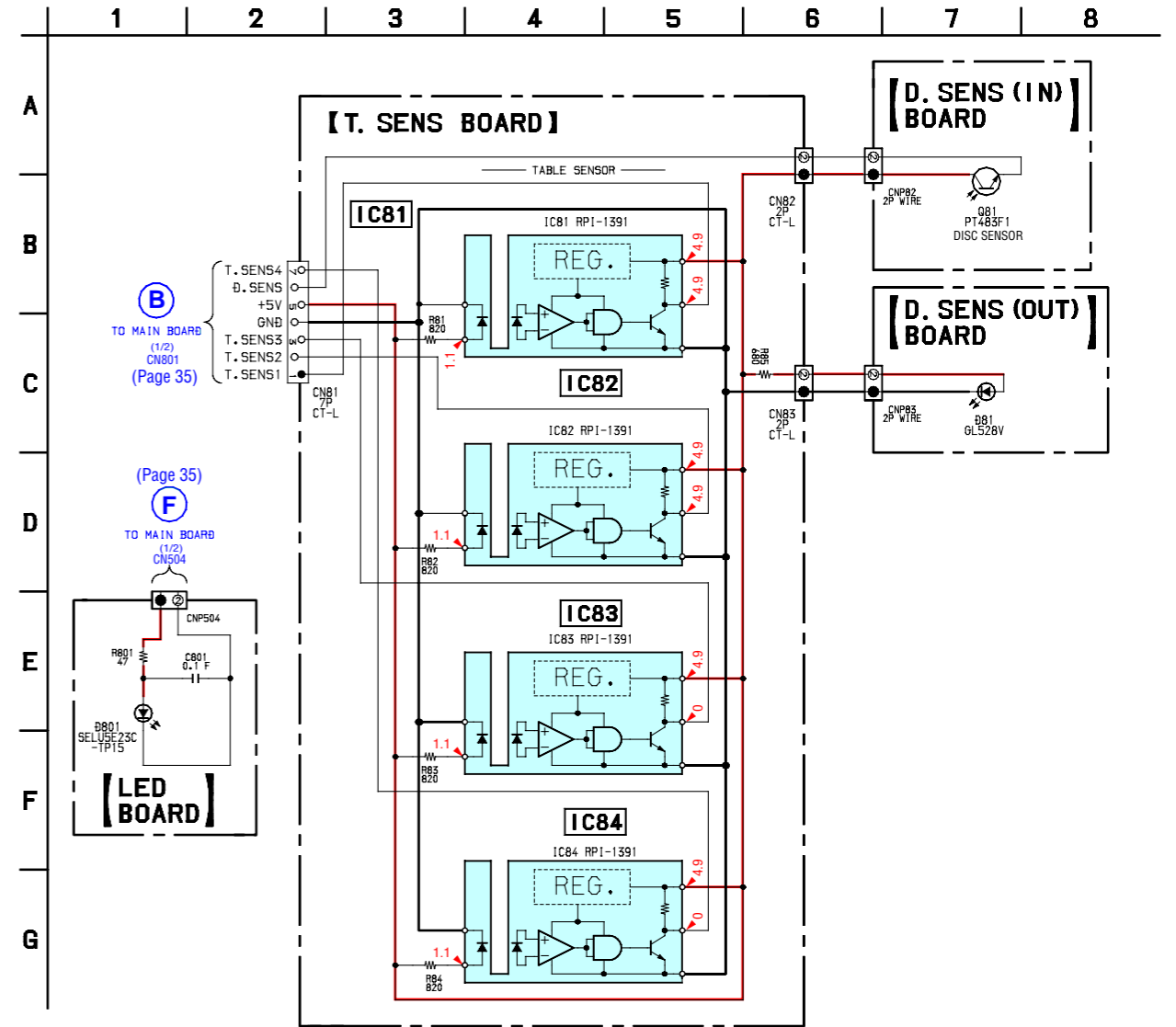


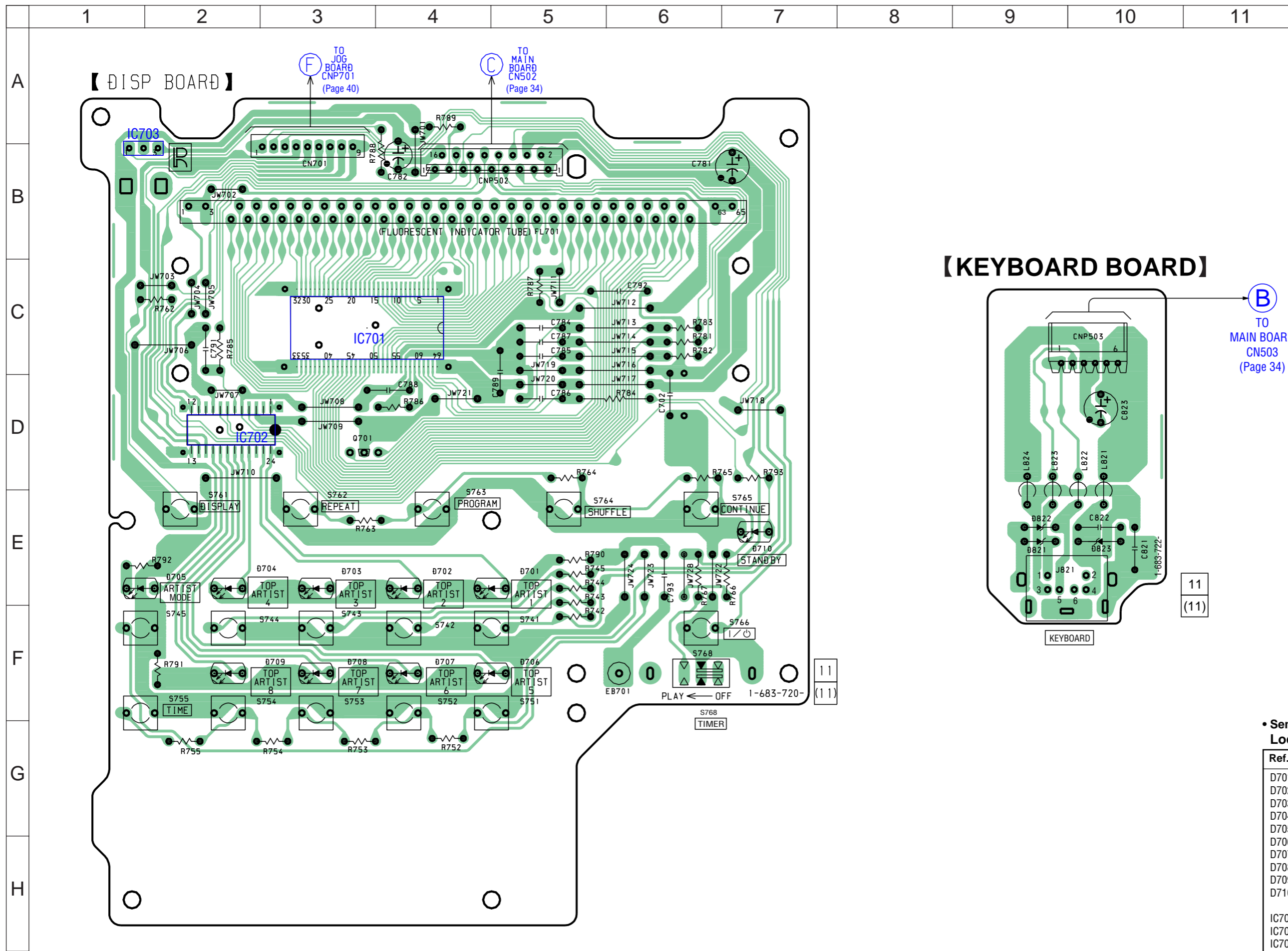


6-8. Printed Wiring Board – Sensor Section – • See page 29 for Circuit Boards Location.



6-9. Schematic Diagram – Sensor Section –

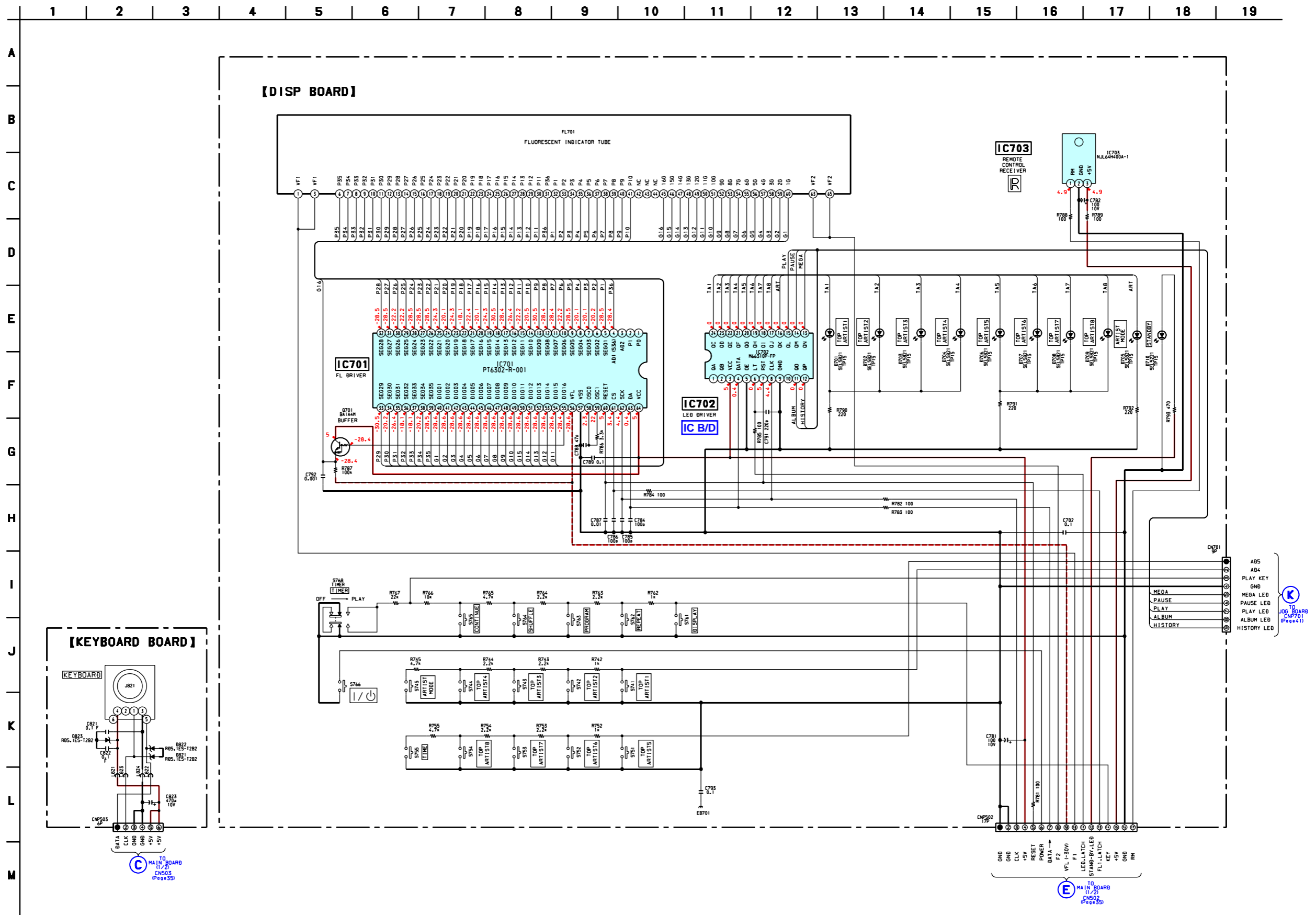


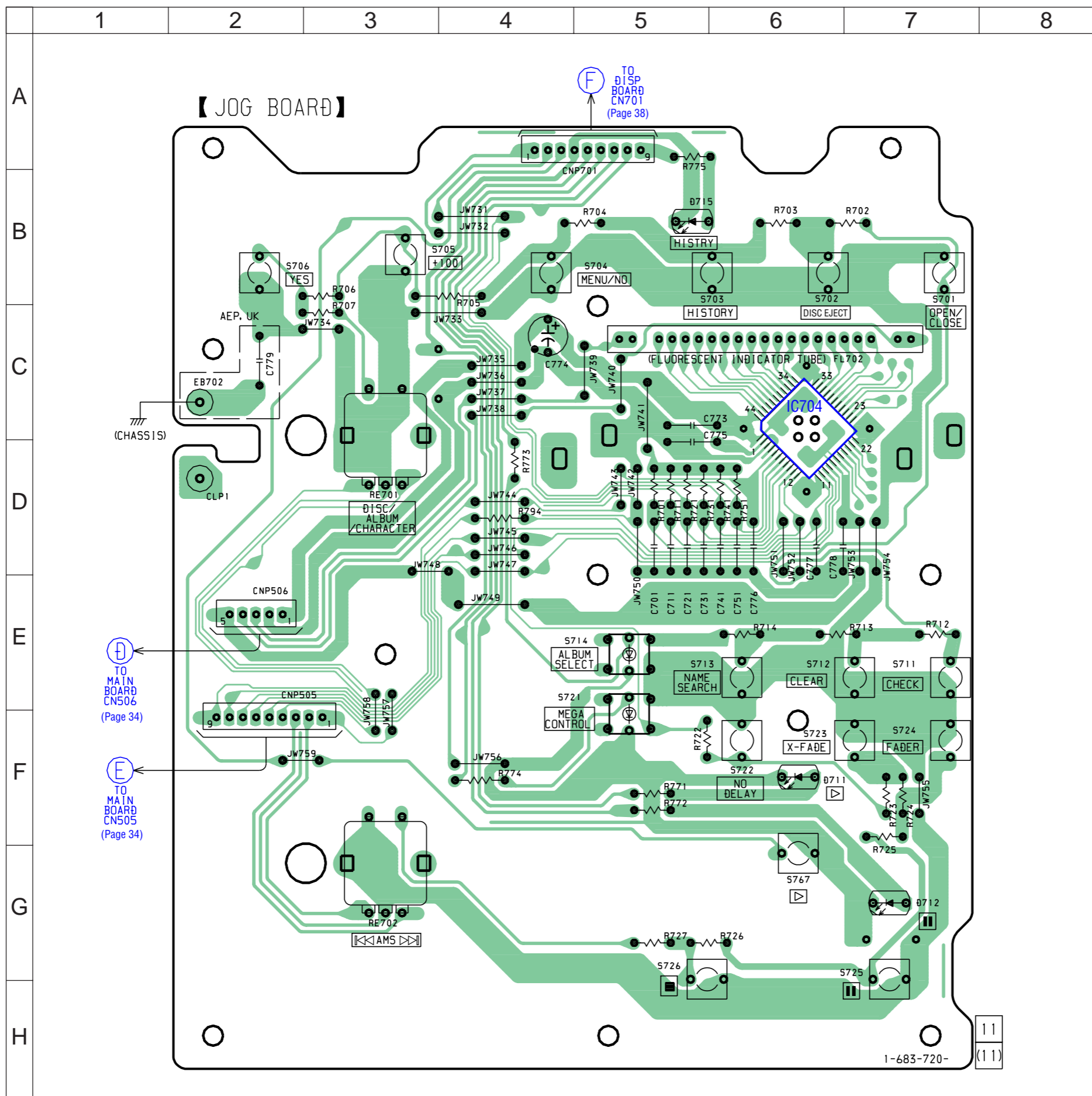


• Semiconductor Location

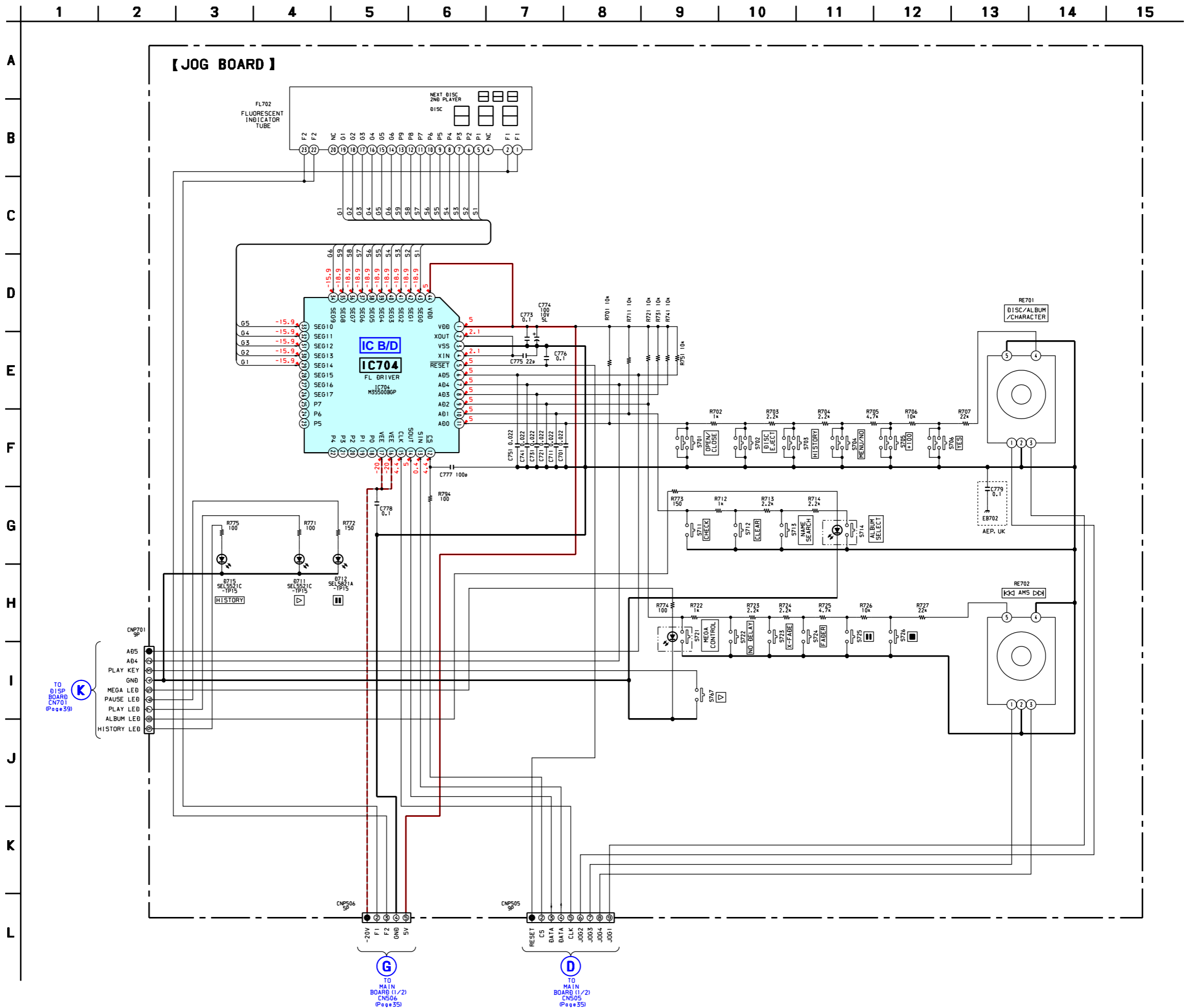
Ref. No.	Location
D701	E-5
D702	E-4
D703	E-3
D704	E-2
D705	E-2
D706	F-5
D707	F-4
D708	F-3
D709	F-2
D710	E-7
IC701	C-3
IC702	D-2
IC703	A-1
Q701	D-3

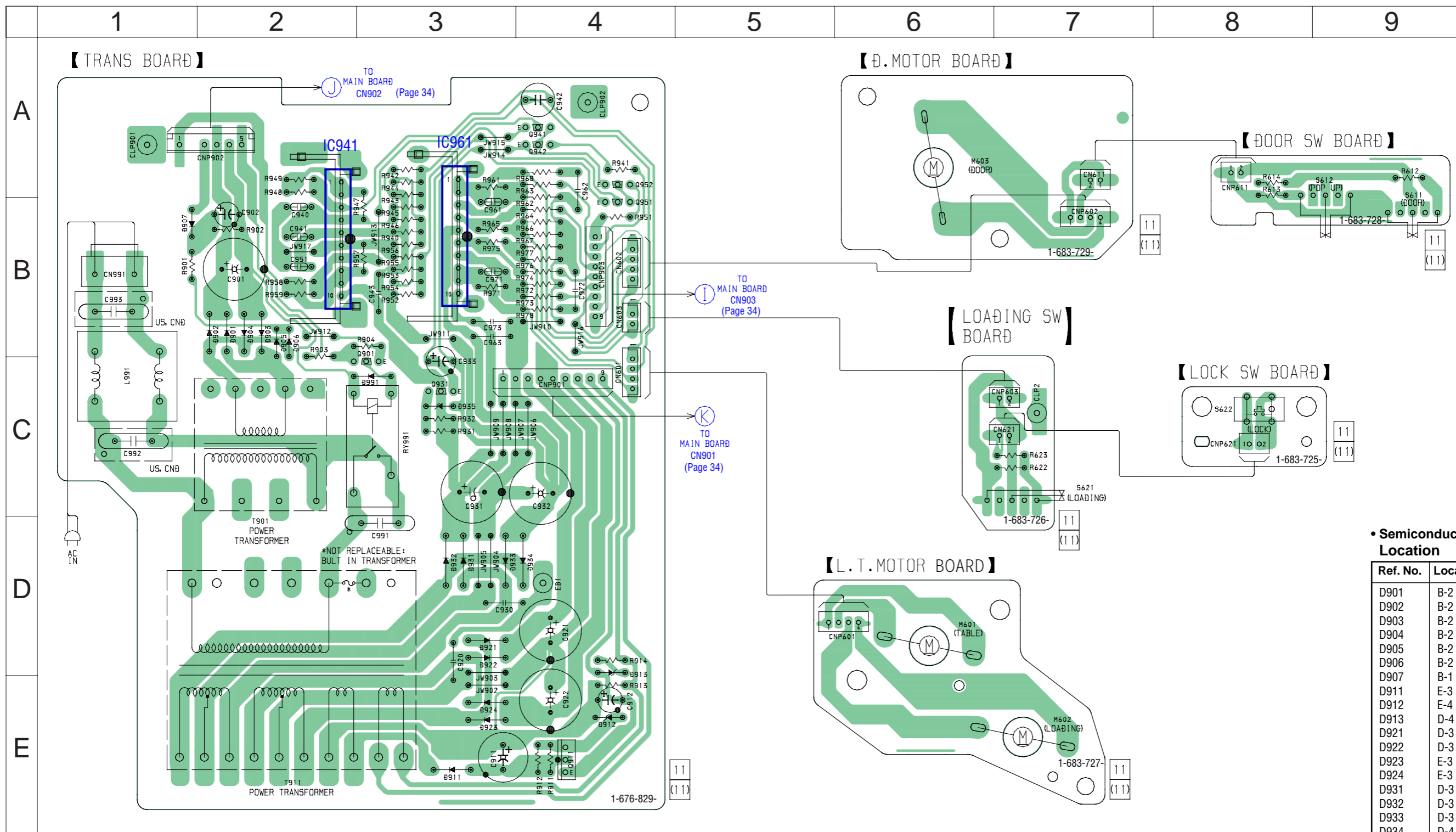
6-11. Schematic Diagram – Display Section – • See page 44 for IC Block Diagrams.





6-13. Schematic Diagram – JOG Board – • See page 44 for IC Block Diagrams.

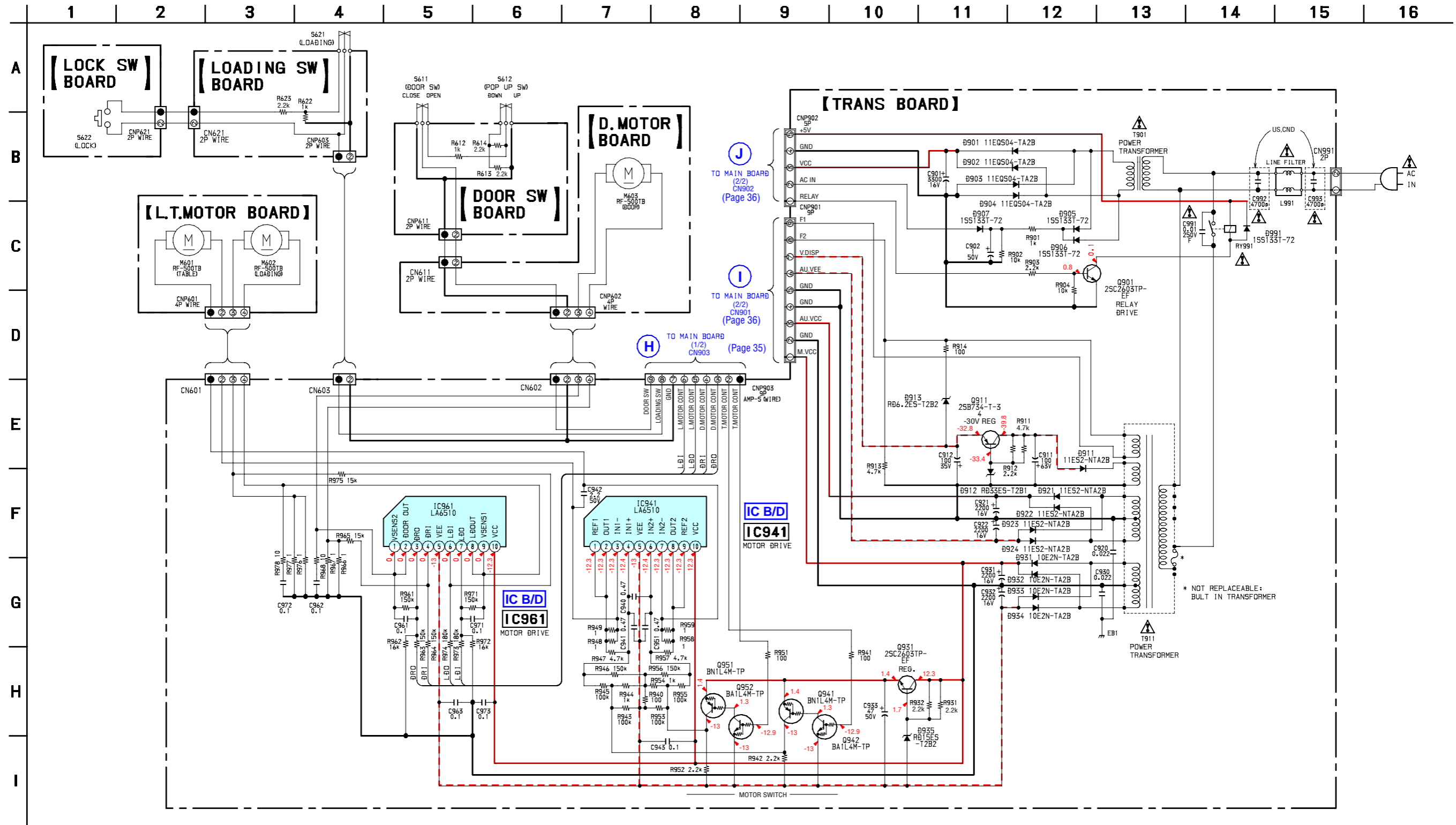




• Semiconductor Location

Ref. No.	Location
D901	B-2
D902	B-2
D903	B-2
D904	B-2
D905	B-2
D906	B-2
D907	B-1
D911	E-3
D912	E-4
D913	D-4
D921	D-3
D922	D-3
D923	E-3
D924	E-3
D931	D-3
D932	D-3
D933	D-3
D934	D-4
D935	C-3
D991	C-3
IC941	B-2
IC961	B-3
Q901	C-3
Q911	E-4
Q931	C-3
Q941	A-4
Q942	A-4
Q951	B-4
Q952	A-4

6-15. Schematic Diagram – Power Section – • See page 45 for IC Block Diagrams.

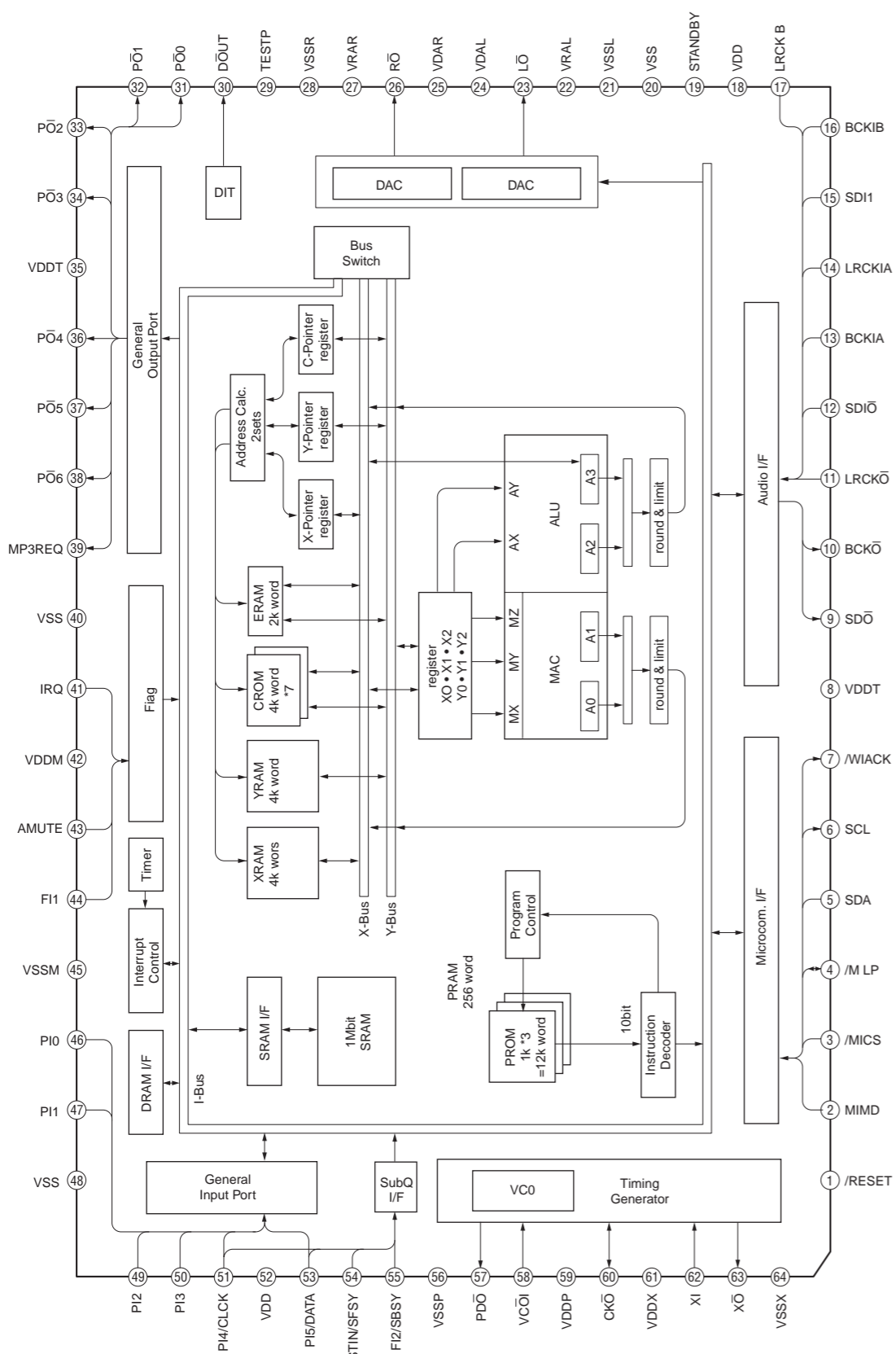


The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

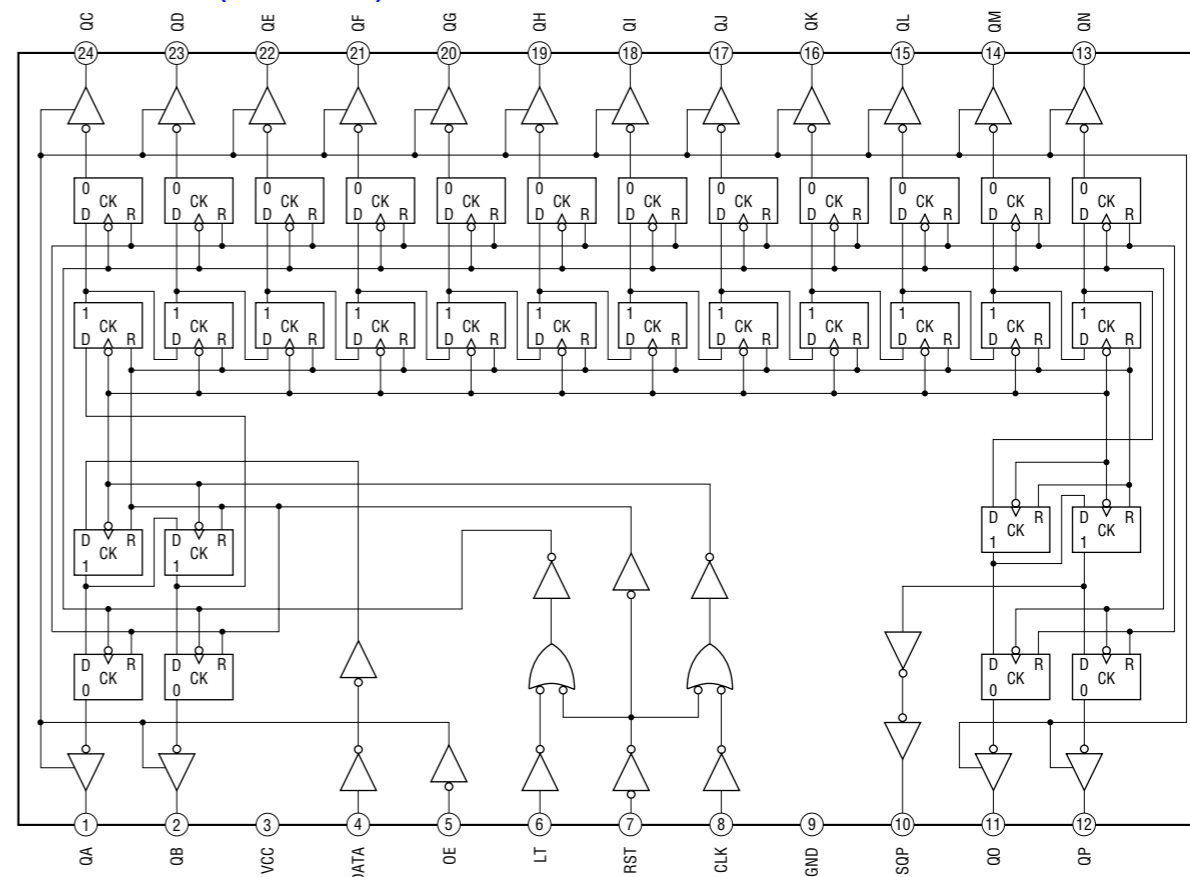
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-16. IC Block Diagrams

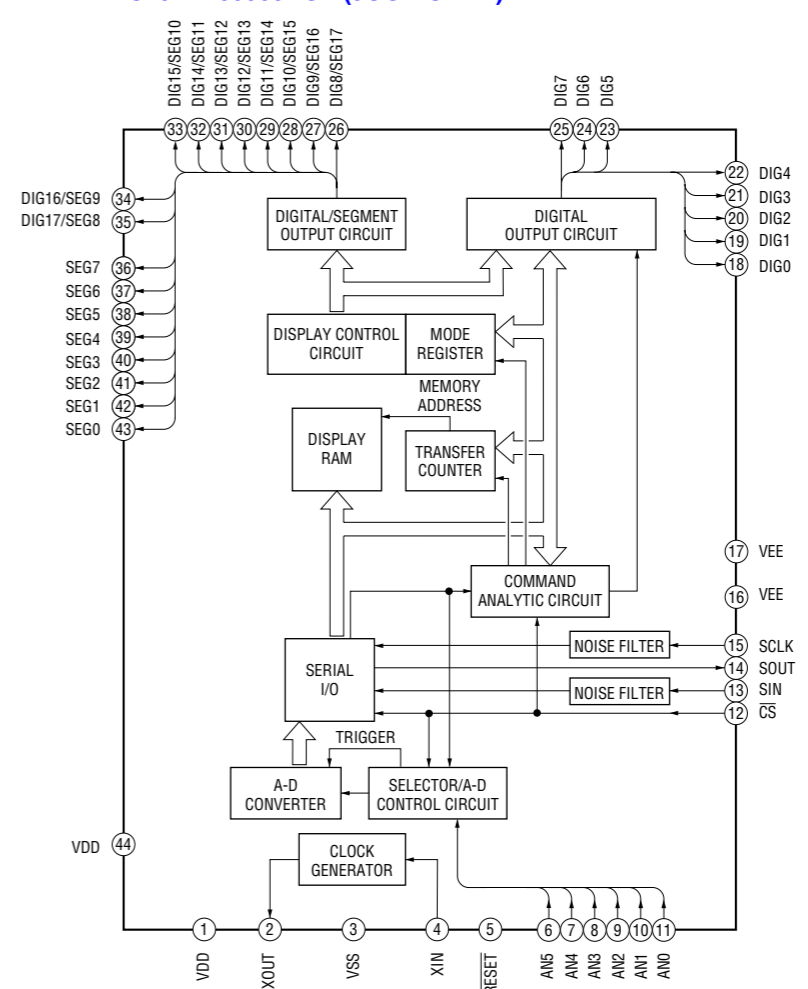
IC104 TC94A20F-CX4 (BD BOARD)



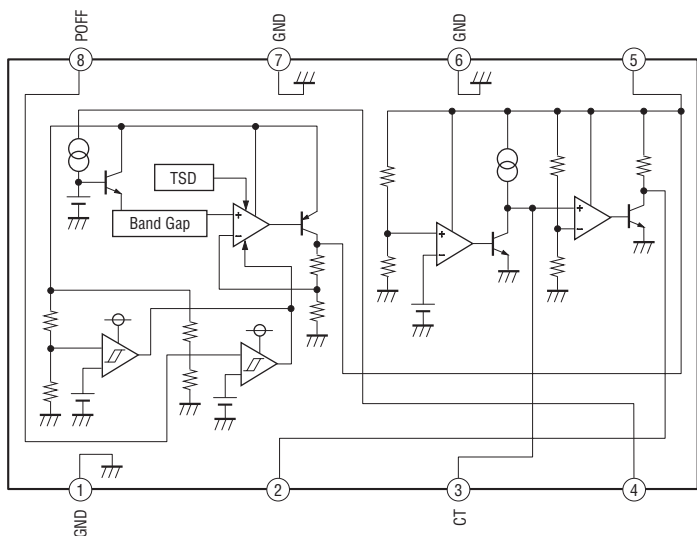
IC702 M66310FP (DISP BOARD)



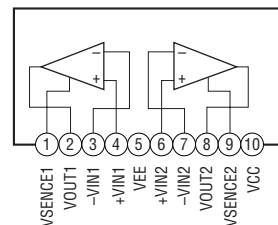
IC704 M35500BGP (JOG BOARD)



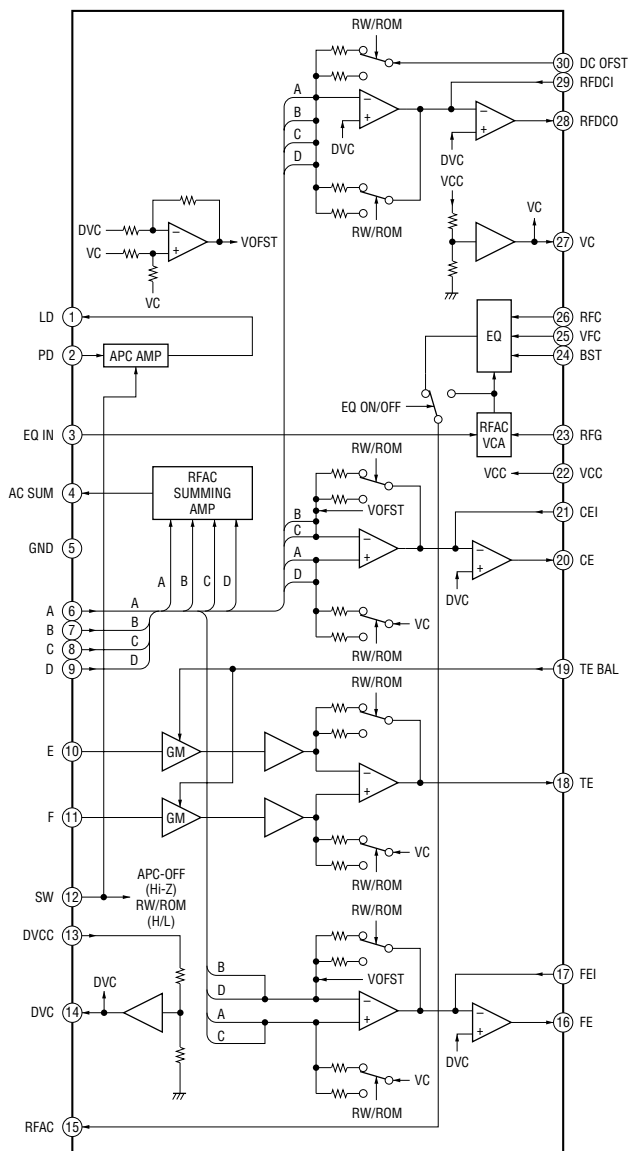
IC931 BA3993F (MAIN BOARD)



IC941, IC961 LA6510 (TRANS BOARD)



IC103 CXA2581N-T4 (BD BOARD)



6-17. IC Pin Function Descriptions

• IC104 TC94A20F-CX4 D/A Converter, MP3 Decoder (BD Board)

Pin No.	Pin Name	I/O	Description
1	/RESET	I	Reset input terminal "L": reset
2	MIMD	I	Microcomputer interface mode selection input "H": I2C, "L": TSB (fixed at "H")
3	/MICS	I	Microcomputer interface chip select signal input (fixed at "L")
4	/MILP	I	Microcomputer interface latch pulse input (fixed at "L")
5	SDA	I/O	Serial data input/output
6	SCL	I	Serial clock input
7	/MIACK	O	Microcomputer interface acknowledge signal output (open)
8	VDDT	–	Power supply (3.3V) for digital circuit
9	SDO	O	Data output (open)
10	BCKO	O	Bit output (open)
11	LRCKO	O	LR clock output (open)
12	SDI0	I	Data input 0
13	BCKIA	I	Bit clock input A
14	LRCKIA	I	LR clock input A
15	SDI1	I	Data input 1 (fixed at "L")
16	BCKIB	I	Bit clock input B (fixed at "L")
17	LRCKIB	I	LR clock input B (fixed at "L")
18	VDD	–	Power supply (2.5V) for digital circuit
19	STANDBY	I	Standby mode control signal input "H": STB, "L": normal (fixed at "L")
20	VSS	–	Ground for digital circuit
21	VSSL	–	Ground for DAC Lch
22	VRAL	–	Reference voltage terminal for DAC Lch
23	LO	O	DAC Lch signal output
24	VDAL	–	Power supply (2.5V) for DAC Lch
25	VDAR	–	Power supply (2.5V) for DAC Rch
26	RO	O	DAC Rch signal output
27	VRAR	–	Reference voltage terminal for DAC Rch
28	VSSR	–	Ground for DAC Rch
29	TESTP	I	Terminal for test "H": test mode, "L": normal (fixed at "L")
30	DOUT	O	SPDIF signal output (open)
31 to 34	PO0 to PO3	O	General purpose output (open)
35	VDDT	–	Power supply (3.3V) for digital circuit
36	PO4	O	General purpose output (LMUTE signal output)
37	PO5	O	General purpose output (RMUTE signal output)
38	PO6	O	General purpose output (open)
39	MP3REQ	O	Interrupt request signal output to the system control (IC501)
40	VSS	–	Ground for digital circuit
41	IRQ	I	External interrupt signal input (open)
42	VDDM	–	Power supply (2.5V) for the internal 1Mbit SRAM
43	AMUTE	I	Flag signal input 0 (AMUTE signal input)
44	FI1	I	Flag signal input 1 (fixed at "L")
45	VSSM	–	Ground for the internal 1Mbit SRAM
46, 47	PI0, PI1	I	General purpose input (fixed at "L")
48	VSS	–	Ground for digital circuit
49, 50	PI2, PI3	I	General purpose input (fixed at "L")
51	PI4/CLCK	I	General purpose input/SUBQ interface clock input or output (fixed at "L")
52	VDD	–	Power supply (2.5V) for digital circuit
53	PI5/DATA	I	General purpose input/SUBQ interface data input (fixed at "L")
54	TSTIN/SFSY	I	Terminal for test/SUBQ interface frame sync input (fixed at "L")
55	FI2/SBSY	I	Flag signal input 2/SUBQ interface block sync input (fixed at "L")

Pin No.	Pin Name	I/O	Description
56	VSSP	–	Ground for VCO circuit
57	PDO	O	PLL phase error detection signal output
58	VCOI	I	VCO control voltage input
59	VDDP	–	Power supply (2.5V) for VCO circuit
60	CKO	O	External clock output
61	VDDX	–	Power supply (2.5V) for oscillation circuit
62	XI	I	Resonator terminal (input)
63	XO	O	Resonator terminal (output)
64	VSSX	–	Ground for oscillation circuit

• IC501 μ PD703033AYGF-CX4-3BA System Control (MAIN Board)

Pin No.	Pin Name	I/O	Description
1	FLDATA	O	Data signal output to the fluorescent indicator drivers amd LED driver
2	FLCLK	O	Clock signal output to the fluorescent indicator drivers and LED driver
3	LEDLAT	O	Latch signal output to the LED driver
4	DATA	O	Data output to the DSP
5	CLK	O	Clock signal output to the DSP
6	SENS	I	SENS signal input from the DSP
7	MP3RST	O	Reset signal output to the IC104
8	FLRST	O	Reset signal output to the the fluorescent indicator driver amd LED driver
9	EVDD	-	Power supply (I/O port)
10	EVSS	-	Ground (I/O port)
11	PWM1	O	PWM1 signal output
12	PWM2	O	PWM2 signal output
13	RMIN	I	Data input from the remote control receiver
14	BUSOUT	O	CONTROL A1 signal output
15	SUBQ	I	CD SUBQ signal input from the DSP
16	BUSIN	I	CONTROL A1 signal input
17	SQCK	O	CD SUBQ clock signal output to the DSP
18	AMUTE	O	Muting signal output to the IC104
19	PWM3	O	PWM3 signal output
20	XLT	O	Latch signal output to the DSP
21	IC/VPP	-	Connected to ground
22	TBLR	O	Table motor control signal output (clockwise)
23	TBLL	O	Table motor control signal output (counterclockwise)
24	LDOUT	O	Loading motor control signal output (out)
25	LODIN	O	Loading motor control signal output (in)
26	DOORIN	O	Door motor control signal output (close)
27	DOOROUT	O	Door motor control signal output (open)
28	ICSW	O	Power supply to the peripheral ICs
29	SMUTE	O	2nd audio input muting signal output
30	SBLED	O	Sandby LED control signal output
31	LED	O	Inside illumination LED control signal output
32	DSENSOUT	O	Disc sensor readout result signal output
33	H-HOUT	O	Or signal of TSSENS1/TSSENS2 output
34	RESET	I	System reset input
35	XT1	I	Sub clock input
36	XT2	O	Sub clock output
37	REGC	-	Capacitor connection terminal for regulator output stabilizing
38	X2	O	Main system clock output
39	X1	I	Main system clock input
40	VSS	-	Ground
41	VDD	-	Power supply
42	CLKOUT	O	Clock output (open)
43	FLT2	O	Fluorescent indicator driver (IC704) latch signal output
44	FLT1	O	Fluorescent indicator driver (IC701) latch signal output
45	KBCO	O	Keyboard clock output
46	XRST	O	Peripheral ICs reset signal output
47	CE	O	SRAM chip enable signal output
48	WE	O	SRAM write enable signal output
49	A4	O	SRAM address signal output
50	D0	I/O	SRAM data bus

Pin No.	Pin Name	I/O	Description
51 to 57	D1 to D7	I/O	SRAM data bus
58	BVDD	–	Power supply (I/O port)
59	BVSS	–	Ground (I/O port)
60, 61	A13, A14	O	SRAM address signal output
62	A0	O	SRAM address signal output
63 to 70	A5 to A12	O	SRAM address signal output
71 to 73	A1 to A3	O	SRAM address signal output
74	AVDD	–	Power supply (A/D converter)
75	AVSS	–	Ground (A/D converter)
76	AVREF	–	Reference voltage for A/D converter
77	ADJ	I	selector (ADJ/AFADJ)
78	DOORSW	I	Door switch signal input (A/D)
79	LDSW	I	Loading switch signal input (A/D)
80	KEY0	I	Key data signal input (A/D)
81	DJOG2	I	Jog signal input
82	TJOG2	I	AMS jog signal input
83	TJOG1	I	AMS jog signal input
84	DJOG1	I	Jog signal input
85	KBDI	I	Keyboard data input
86	DSSENS	I	Disc sensor signal input
87	TSSENS1	I	Table sensor signal input
88	TSSENS3	I	Table sensor signal input
89	KBDO	O	Keyboard data output
90	POWER	I	POWER key signal input
91	TSSENS2	I	Table sensor signal input
92	TSSENS4	I	Table sensor signal input
93	KBCI	I	Keyboard clock input
94	ACIN	I	AC power detection signal input
95	SCOR	I	Sync signal input from the DSP
96	MP3REQ	I	MP3 request signal input from the IC104
97	SDA/SI0	I/O	MP3 IIC data input or output
98	RFSW/SO0	O	Mode selection signal output to the RF amplifier (IC103)
99	SCL/SCK0	O	MP3 clock output to the IC104
100	FLDATA_I	I	Data input from the fluorescent indicator driver

SECTION 7 EXPLODED VIEWS

NOTE:

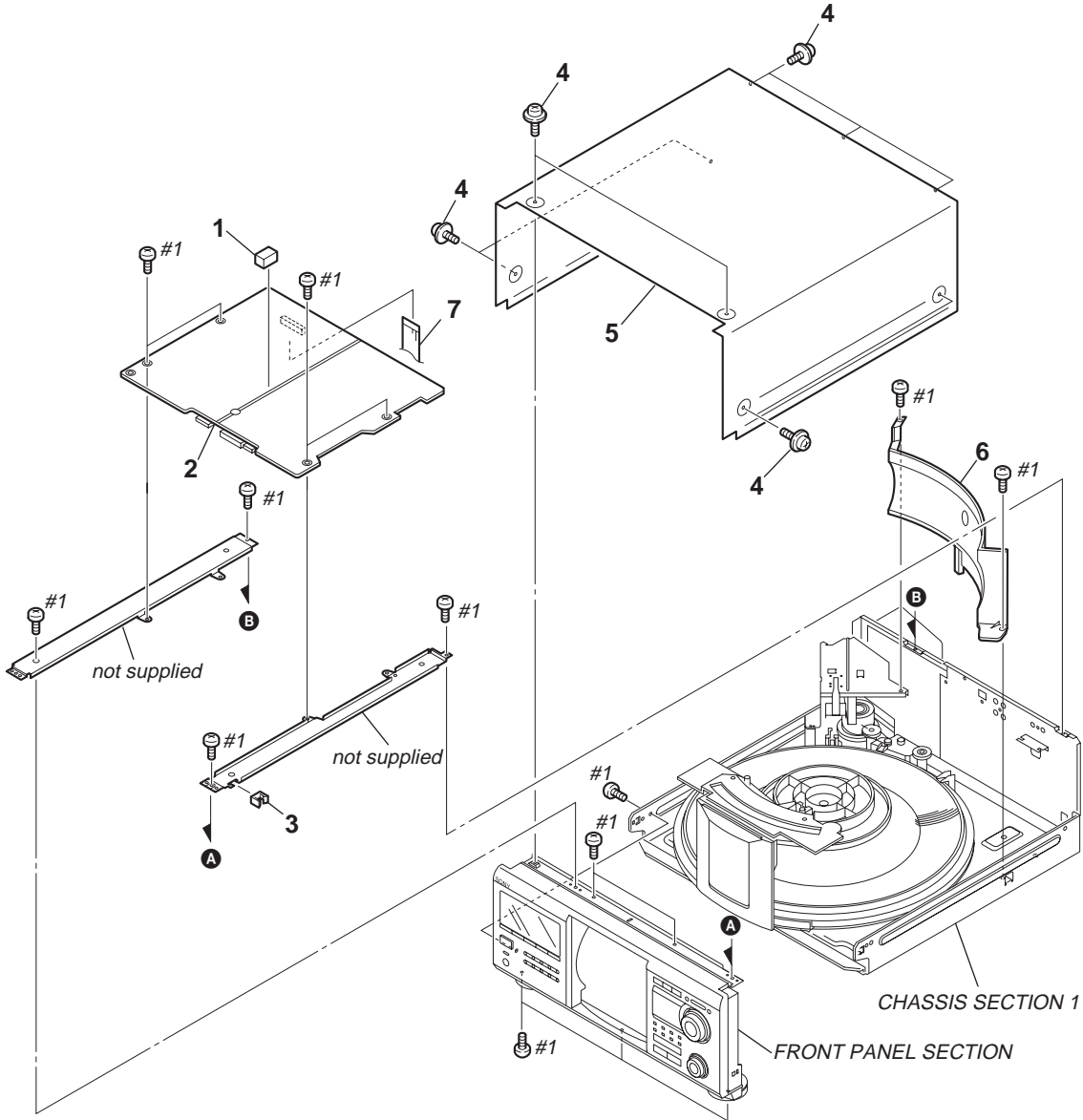
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

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

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

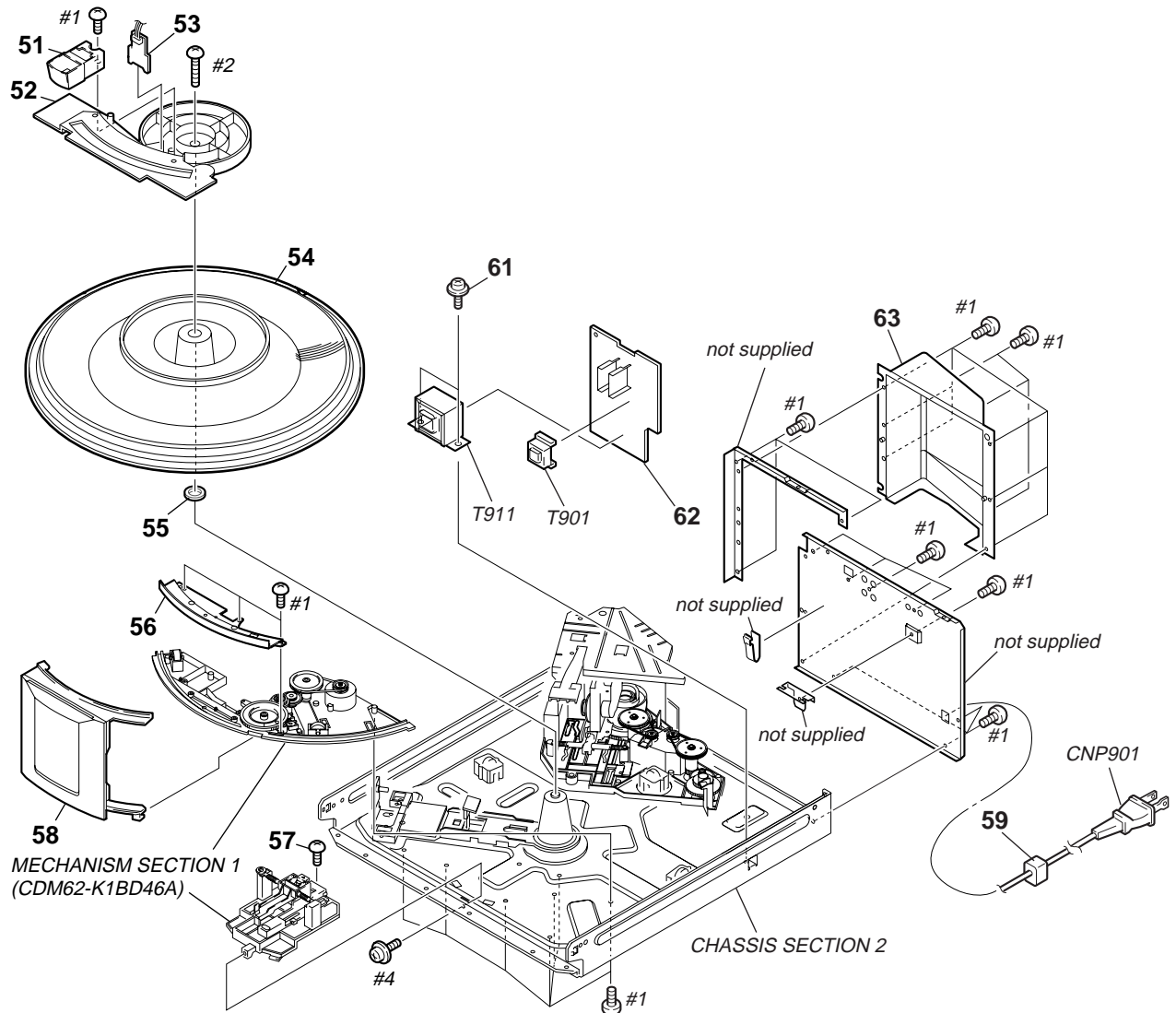
Les composants identifiés par une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

7-1. Case Section



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	4-985-553-11	CUSHION		5	4-226-855-11	CASE	
2	A-4727-715-A	MAIN BOARD, COMPLETE (AEP, UK)		6	4-226-841-01	COVER (PT)	
2	A-4727-805-A	MAIN BOARD, COMPLETE (US, CND)		7	1-824-181-11	WIRE (FLAT TYPE) (31 CORE)	
3	3-383-699-01	CLAMP (EDGE)		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
4	4-210-291-01	SCREW (CASE 3 TP2)					

7-2. Chassis Section 1

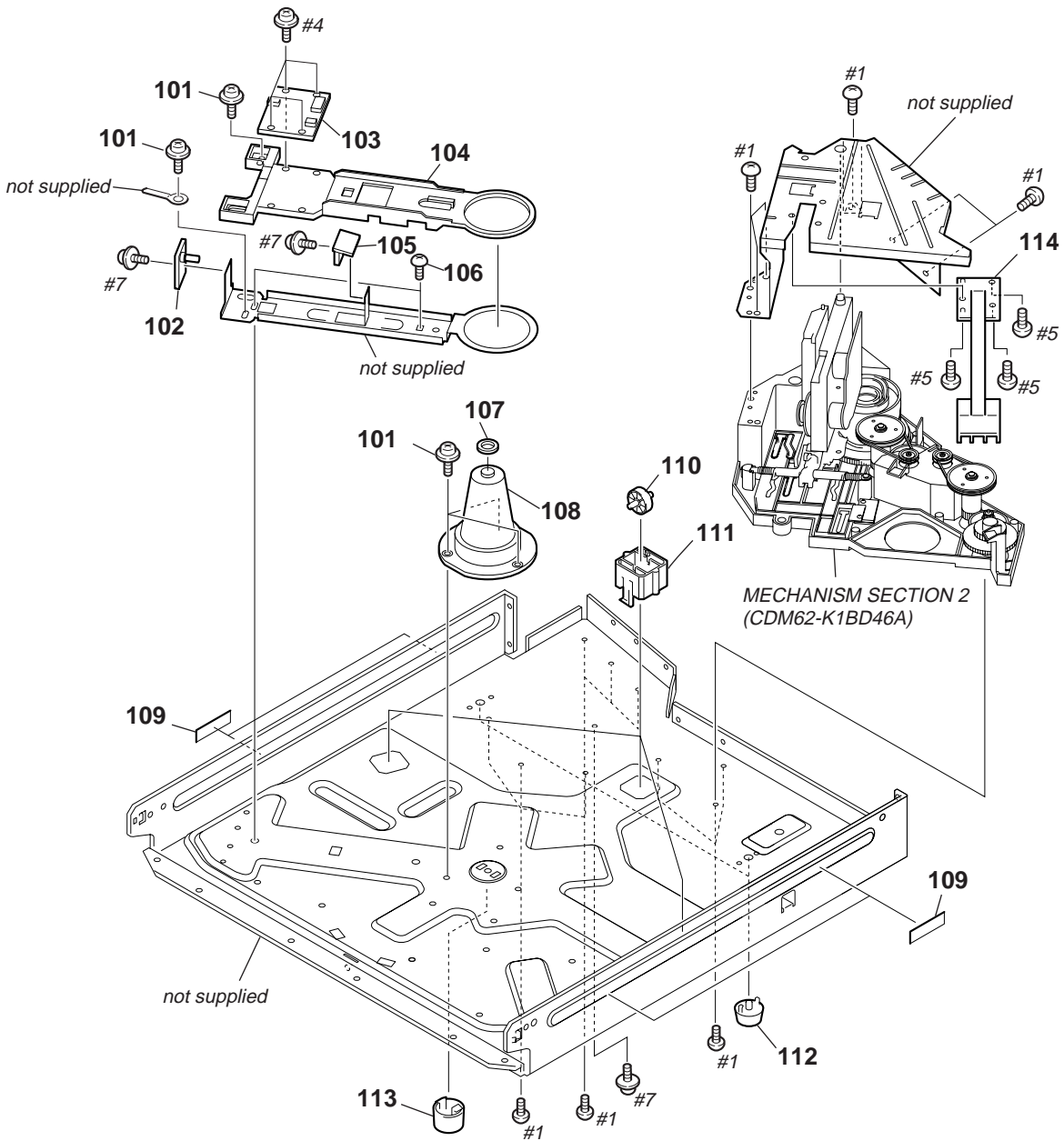


Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	4-215-968-01	WINDOW (INTERNAL ILLUMINATION)		63	4-226-876-01	COVER (CDM)	
52	4-226-833-01	GUIDE (DOOR)		△ CNP901	1-575-651-91	CORD, POWER (AEP, UK)	
53	1-683-730-11	LED BOARD		△ CNP901	1-783-531-41	CORD, POWER (US, CND)	
54	X-4952-500-1	TABLE (400) ASSY		△ T901	1-437-709-11	TRANSFORMER, POWER (US, CND)	
55	3-701-447-21	WASHER, 10		△ T901	1-437-718-11	TRANSFORMER, POWER (AEP, UK)	
56	4-226-834-01	COVER (TABLE)		△ T911	1-435-327-11	TRANSFORMER, POWER (US, CND)	
57	3-356-601-11	SCREW, STEP		△ T911	1-435-328-11	TRANSFORMER, POWER (AEP, UK)	
58	X-4952-641-1	DOOR ASSY		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
* 59	3-703-244-00	BUSHING (2104), CORD		#2	7-685-650-79	SCREW +BVTP 3X16 TYPE2 N-S	
61	3-703-249-01	SCREW, S TIGHT, +PTTWH 3X6		#4	7-685-903-11	SCREW +BVTP 3X6 (TYPE2)	

62 A-4727-718-A TRANS BOARD, COMPLETE (AEP, UK)
 62 A-4727-717-A TRANS BOARD, COMPLETE (US, CND)

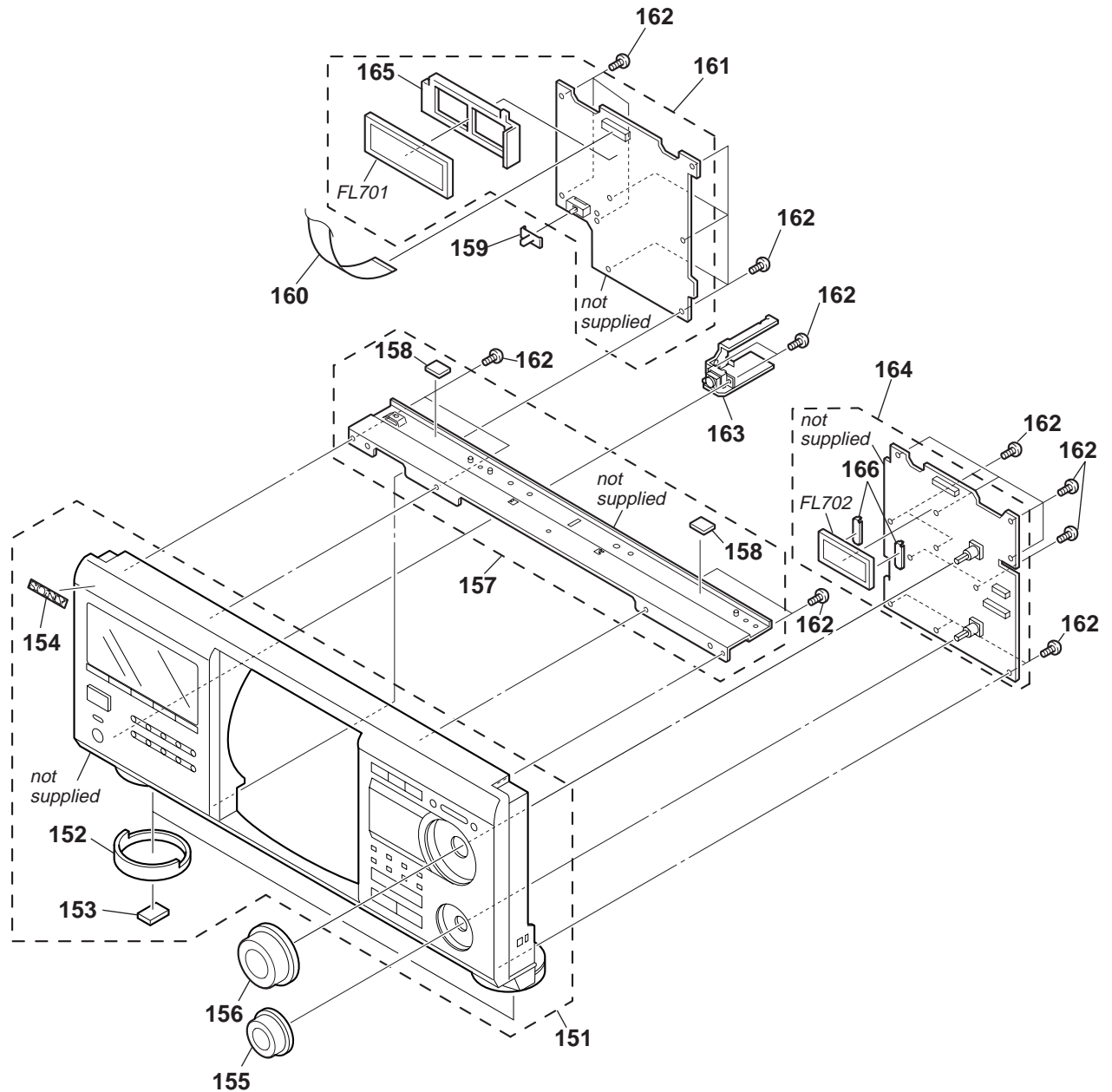
The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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7-3. Chassis Section 2



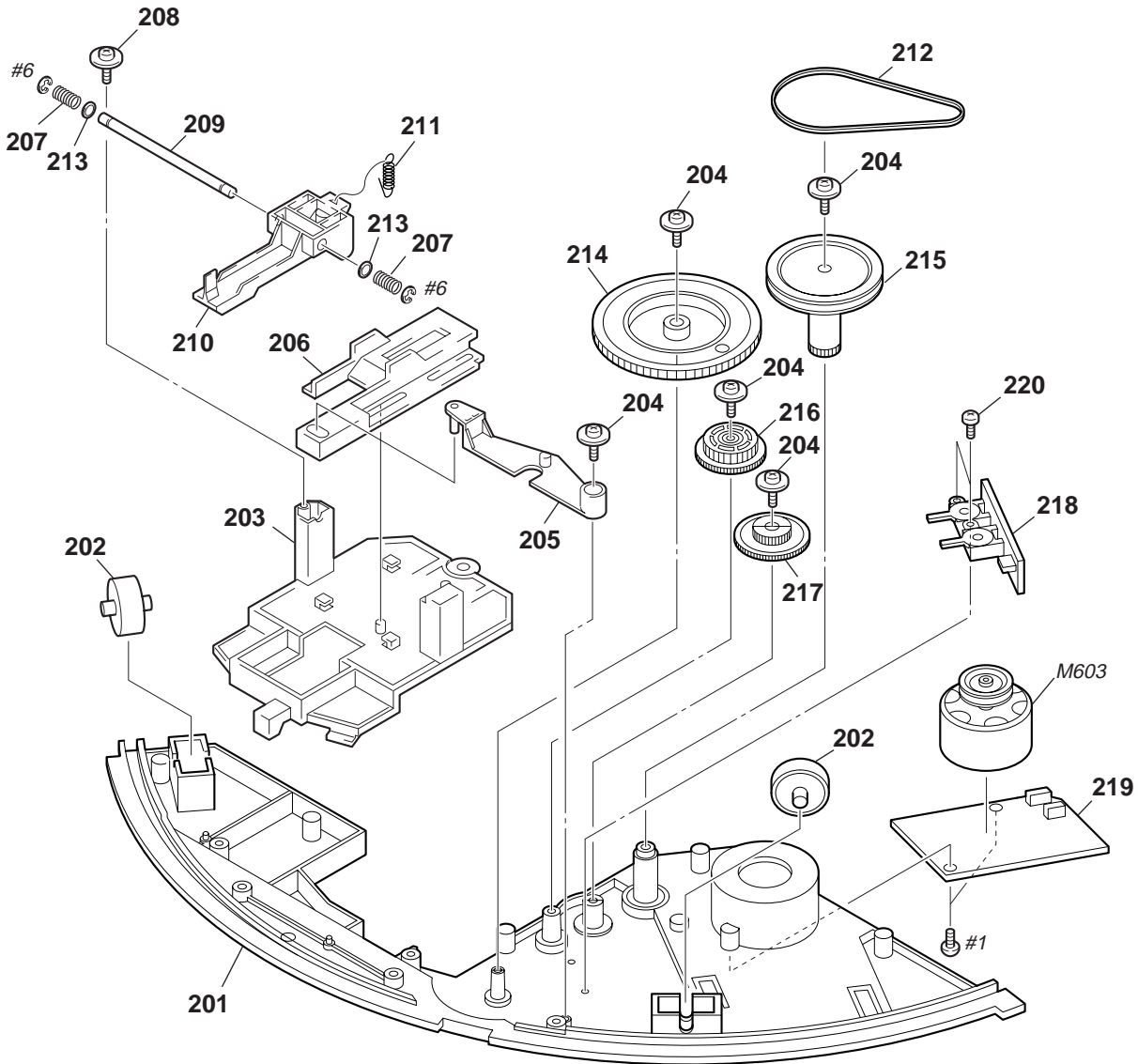
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	3-703-249-01	SCREW, S TIGHT, +PTTWH 3X6		110	4-216-093-01	ROLLER	
102	1-683-724-11	D.SENS(OUT) BOARD		111	4-216-092-02	HOLDER (ROLLER)	
103	1-676-828-11	T.SENS BOARD		112	4-965-822-01	FOOT	
104	4-225-873-01	HOLDER (TABLE SENSOR 400)		113	4-931-169-01	FOOT	
105	1-683-723-11	D.SENS(IN) BOARD		114	4-216-088-02	GUIDE (DISC)	
106	4-216-096-01	SCREW (T1), STEP		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
107	3-701-447-21	WASHER, 10		#4	7-685-903-11	SCREW +PTPWH 3X6 (TYPE2)	
108	4-216-089-01	SHAFT (CENTER)		#5	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S	
* 109	3-378-400-01	CUSHION, SARANET		#7	7-682-948-01	SCREW +PSW 3X8	

7-4. Front Panel Section



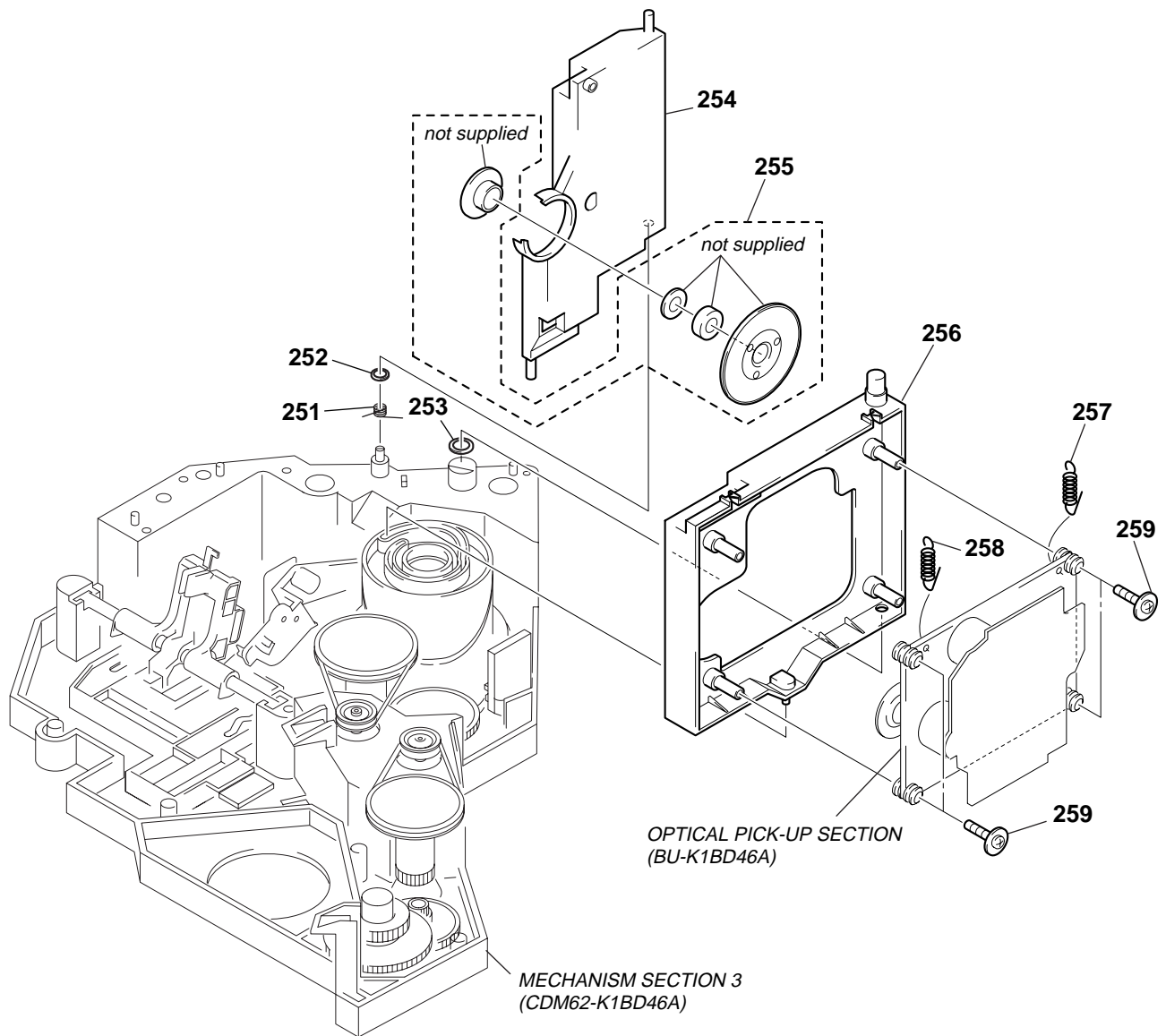
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	X-4954-416-2	PANEL ASSY, FRONT (US, CND)		161	A-4727-719-A	DISP BOARD, COMPLETE (US, CND)	
151	X-4954-471-3	PANEL ASSY, FRONT (AEP, UK)		161	A-4727-720-A	DISP BOARD, COMPLETE (AEP, UK)	
152	4-219-323-01	RING (DIA. 50-CX300)		162	4-951-620-01	SCREW (2.6X8), +BVTP	
153	4-977-358-01	CUSHION		163	1-683-722-11	KEYBOARD BOARD	
154	4-996-698-61	EMBLEM, SONY		164	A-4727-722-A	JOG BOARD, COMPLETE (AEP, UK)	
155	4-226-847-01	KNOB (AMS)		164	A-4727-721-A	JOG BOARD, COMPLETE (US, CND)	
156	4-226-846-01	KNOB (DISC)		165	4-982-811-21	HOLDER (FL)	
157	X-4952-642-2	BRACKET (CASE) ASSY		166	4-929-709-31	GUIDE (FL TUBE)	
158	4-985-553-21	CUSHION		FL701	1-518-802-11	INDICATOR TUBE, FLUORESCENT	
159	3-917-216-21	KNOB (TIMER)		FL702	1-518-803-11	INDICATOR TUBE, FLUORESCENT	
160	1-824-257-11	WIRE (FLAT TYPE) (17 CORE)					

7-5. Mechanism Section 1 (CDM62-K1BD46A)



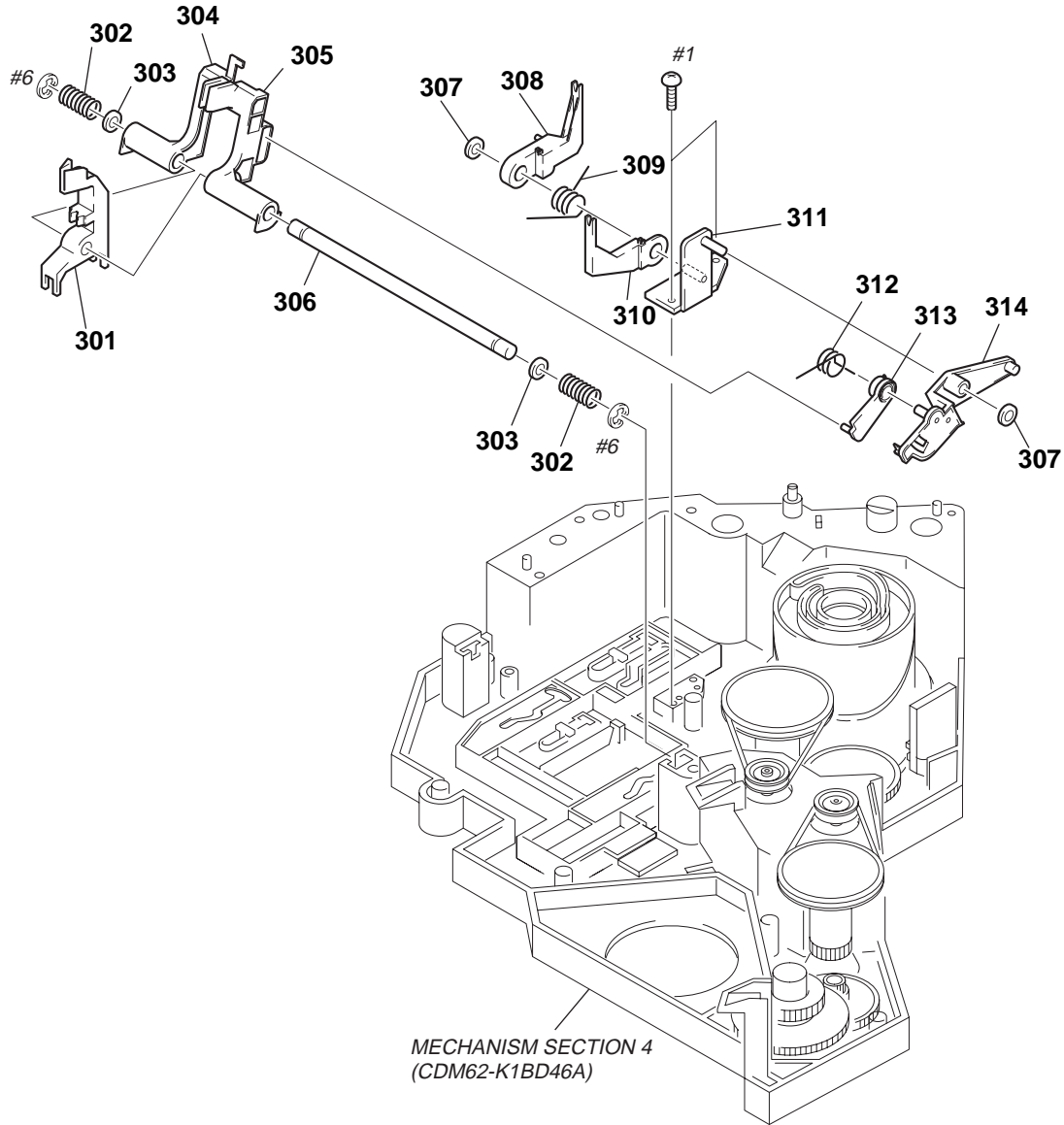
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	4-226-827-02	BASE (DOOR DRIVING)		213	3-701-441-21	WASHER	
202	4-216-093-01	ROLLER		214	4-226-828-02	GEAR (CAM)	
203	4-216-100-01	HOLDER (POP-UP)		215	4-226-829-01	GEAR (PULLEY)	
204	4-933-134-11	SCREW (+PTPWH M2.6X8)		216	4-226-831-01	GEAR (B)	
205	4-226-832-01	LEVER (PU JOINT)		217	4-226-830-01	GEAR (A)	
206	4-216-099-01	SLIDER (POP-UP)		218	1-683-728-11	DOOR SW BOARD	
207	4-216-103-01	SPRING (POP-UP), COMPRESSION		219	1-683-729-11	D.MOTOR BOARD	
208	4-998-716-01	SCREW, BU FITTING		220	4-951-620-01	SCREW (2.6X8), +BVTP	
209	4-216-102-01	SHAFT (POP-UP FULCRUM)		M603	1-763-790-11	MOTOR, DC (DOOR)	
210	4-228-352-01	LEVER (POP-UP 400)		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
211	4-216-104-01	SPRING (POP-UP), TENSION		#6	7-624-106-04	STOP RING 3.0, TYPE -E	
212	4-219-326-01	BELT (DIA. 42X1.2)					

7-6. Mechanism Section 2 (CDM62-K1BD46A)



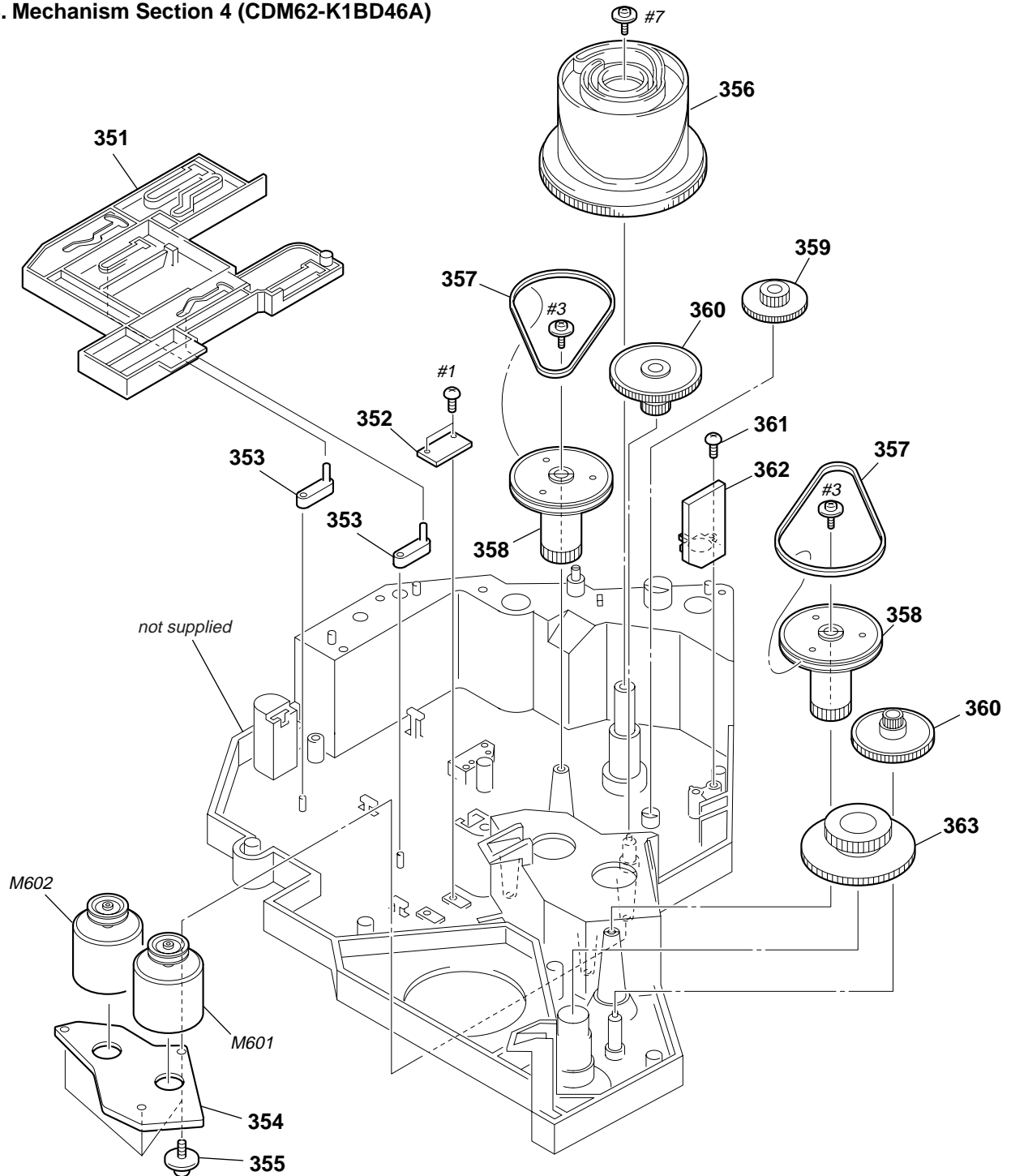
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	4-216-081-01	SPRING (MG), TORSION		256	X-4950-901-5	HOLDER ASSY, BU	
252	3-701-441-21	WASHER		257	4-216-086-01	SPRING (F-2), TENSION	
253	3-701-446-21	WASHER, 8		258	4-216-085-01	SPRING (F-1), TENSION	
254	4-216-082-01	HOLDER (MAGNET), TORSION		259	4-957-577-01	SCREW PTP WH (2.6X8) (DIA. 10)	
255	A-4672-768-A	MAGNET ASSY		260	4-992-054-01	RUBBER, VIBRATION PROOF	

7-7. Mechanism Section 3 (CDM62-K1BD46A)



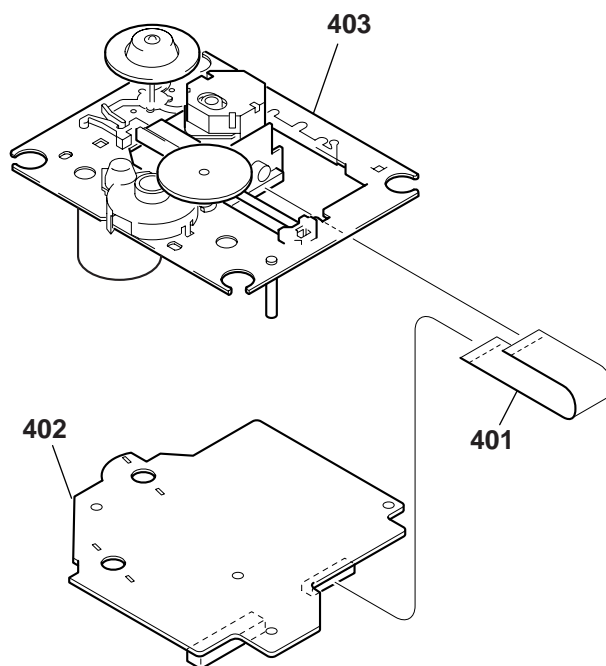
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	X-4952-499-1	LEVER (LOCK 400) ASSY		309	4-216-077-01	SPRING (HOLDER FR), TORSION	
302	4-216-067-01	SPRING (CLAMP), COMPRESSION		310	4-225-871-01	HOLDER (F400)	
303	3-701-441-21	WASHER		311	X-4950-900-1	BRACKET (LEVER) ASSY	
304	X-4952-501-1	HOLDER (DISC L400) ASSY		312	4-216-080-01	SPRING (LIMITTER), TORSION	
305	X-4952-502-1	HOLDER (DISC R400) ASSY		313	4-216-079-02	LIMITTER (LEVER)	
306	4-225-868-01	SHAFT (CLAMP 400)		314	4-216-078-01	LEVER (LOADING)	
307	3-325-697-21	WASHER		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
308	4-216-076-01	HOLDER (R)		#6	7-624-106-04	STOP RING 3.0, TYPE -E	

7-8. Mechanism Section 4 (CDM62-K1BD46A)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
351	4-225-865-01	SLIDER (400)		360	4-216-058-01	GEAR (CENTER)	
352	1-683-725-11	LOCK SW BOARD		361	4-951-620-01	SCREW (2.6X8), +BVTP	
353	X-4952-503-1	LEVER (FULCRUM 400) ASSY		362	1-683-726-11	LOADING SW BOARD	
354	1-683-727-11	L.T.MOTOR BOARD		363	4-225-869-01	GEAR (TABLE 400)	
355	4-933-134-11	SCREW (+PTPWH M2.6X8)		M601	A-4672-895-A	MOTOR (400) ASSY (TABLE)	
356	A-4672-676-B	CAM ASSY		M602	A-4672-895-A	MOTOR (400) ASSY (LOADING)	
357	4-225-876-01	BELT (400)		#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
358	4-225-870-01	PULLEY (400)		#3	7-685-648-79	SCREW, TAPPING	
359	4-216-057-01	GEAR (CENTER 2)		#7	7-682-948-01	SCREW +PSW 3X8	

7-9. Optical Pick-up Section (BU-K1BD46A)



Ref. No.	Part No.	Description	Remark
401	1-782-817-11	WIRE (FLAT TYPE) (16 CORE)	
402	A-4727-735-A	BD BOARD, COMPLETE	
△403	A-3328-818-A	OPTICAL PICK-UP KSM-213BFN/C2NP	

<p>The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.</p>	<p>Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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SECTION 8
ELECTRICAL PARTS LIST

BD

Note:

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

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

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

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "***" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F : nonflammable

- 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
- Abbreviation
CND : Canadian model

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	A-4727-735-A	BD BOARD, COMPLETE *****					
		< CAPACITOR >					
C101	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V	C224	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C102	1-107-826-11	CERAMIC CHIP	0.1uF 10.00% 16V	C226	1-126-607-11	ELECT CHIP	47uF 20% 4V
C103	1-164-315-11	CERAMIC CHIP	470PF 5.00% 50V	C227	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C104	1-162-967-11	CERAMIC CHIP	0.0033uF 10% 50V	C229	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C107	1-162-919-11	CERAMIC CHIP	22PF 5% 50V	C230	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C108	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C231	1-128-995-21	ELECT CHIP	100uF 20% 10V
C109	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C232	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C110	1-107-826-11	CERAMIC CHIP	0.1uF 10.00% 16V	C250	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C111	1-126-607-11	ELECT CHIP	47uF 20% 4V	C251	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C113	1-128-995-21	ELECT CHIP	100uF 20% 10V	C252	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C114	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C253	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C115	1-128-995-21	ELECT CHIP	100uF 20% 10V	C254	1-162-919-11	CERAMIC CHIP	22PF 5% 50V
C116	1-107-826-11	CERAMIC CHIP	0.1uF 10.00% 16V	C255	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C117	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C256	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C118	1-115-156-11	CERAMIC CHIP	1uF 10V	C257	1-165-112-11	CERAMIC CHIP	0.33uF 16V
C119	1-115-156-11	CERAMIC CHIP	1uF 10V	C258	1-162-975-11	CERAMIC CHIP	24PF 5.00% 50V
C120	1-126-607-11	ELECT CHIP	47uF 20% 4V	C259	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C121	1-117-920-11	TANTAL. CHIP	10uF 20.00% 6.3V	C260	1-126-246-11	ELECT CHIP	220uF 20% 4V
C131	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V	C261	1-126-607-11	ELECT CHIP	47uF 20% 4V
C132	1-162-968-11	CERAMIC CHIP	0.0047uF 10% 50V	C263	1-117-920-11	TANTAL. CHIP	10uF 20.00% 6.3V
C133	1-117-863-11	CERAMIC CHIP	0.47uF 10.00% 6.3V	C264	1-126-607-11	ELECT CHIP	47uF 20% 4V
C150	1-128-995-21	ELECT CHIP	100uF 20% 10V	C265	1-126-607-11	ELECT CHIP	47uF 20% 4V
C151	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C266	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C152	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C267	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V
C158	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V	C268	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V
C201	1-126-246-11	ELECT CHIP	220uF 20% 4V	C269	1-117-920-11	TANTAL. CHIP	10uF 20.00% 6.3V
C202	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C270	1-162-960-11	CERAMIC CHIP	220PF 10% 50V
C203	1-162-964-11	CERAMIC CHIP	0.001uF 10% 50V	C271	1-162-995-11	CERAMIC CHIP	0.022uF 50V
C205	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C276	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C206	1-126-607-11	ELECT CHIP	47uF 20% 4V	C292	1-115-156-11	CERAMIC CHIP	1uF 10V
C207	1-164-360-11	CERAMIC CHIP	0.1uF 16V	C297	1-164-360-11	CERAMIC CHIP	0.1uF 16V
C208	1-164-360-11	CERAMIC CHIP	0.1uF 16V			< CONNECTOR >	
C209	1-162-927-11	CERAMIC CHIP	100PF 5% 50V	CN101	1-784-879-21	CONNECTOR,FFC(LIF(NON-ZIF))31P	
C211	1-107-826-11	CERAMIC CHIP	0.1uF 10.00% 16V	CN102	1-777-937-11	CONNECTOR, FFC/FPC 16P	
C212	1-162-966-11	CERAMIC CHIP	0.0022uF 10% 50V			< FERRITE BEAD/CONDUCTOR >	
C213	1-162-967-11	CERAMIC CHIP	0.0033uF 10% 50V	FB101	1-500-283-11	FERRITE	0UH
C215	1-117-863-11	CERAMIC CHIP	0.47uF 10.00% 6.3V	FB102	1-500-283-11	FERRITE	0UH
C216	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V	FB103	1-500-283-11	FERRITE	0UH
C222	1-164-360-11	CERAMIC CHIP	0.1uF 16V	FB104	1-500-283-11	FERRITE	0UH
C223	1-126-607-11	ELECT CHIP	47uF 20% 4V	FB105	1-216-864-11	METAL CHIP	0 5% 1/16W

CDP-CX455

BD	D.MOTOR	D.SENS(IN)	D.SENS(OUT)	DISP
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Ref. No.	Part No.	Description	Remarks
FB111	1-216-864-11	METAL CHIP 0 5%	1/16W
FB251	1-414-594-11	FERRITE 0UH	
FB291	1-216-864-11	METAL CHIP 0 5%	1/16W
FB292	1-216-864-11	METAL CHIP 0 5%	1/16W
< IC >			
IC101	8-752-408-73	IC CXD3068Q	
IC103	8-752-089-74	IC CXA2581N-T4	
IC104	6-701-810-01	IC TC94A20F-CX4	
IC105	6-700-226-01	IC TC74LVX04FT(EL)	
IC121	6-701-808-01	IC BA33C25FP-E2	
IC150	8-759-677-90	IC BA5947FP-E2	
< TRANSISTOR >			
Q101	8-729-049-31	TRANSISTOR 2SB710A-RTX	
< RESISTOR >			
R101	1-216-864-11	METAL CHIP 0 5%	1/16W
R102	1-216-833-11	METAL CHIP 10K 5%	1/16W
R103	1-216-845-11	METAL CHIP 100K 5%	1/16W
R104	1-216-833-11	METAL CHIP 10K 5%	1/16W
R105	1-216-821-11	METAL CHIP 1K 5%	1/16W
R111	1-216-846-11	METAL CHIP 120K 5%	1/16W
R113	1-216-828-11	METAL CHIP 3.9K 5%	1/16W
R114	1-218-745-11	RES-CHIP 160K 5%	1/10W
R117	1-216-845-11	METAL CHIP 100K 5%	1/16W
R118	1-216-833-11	METAL CHIP 10K 5%	1/16W
R120	1-216-846-11	METAL CHIP 120K 5%	1/16W
R122	1-216-845-11	METAL CHIP 100K 5%	1/16W
R123	1-216-797-11	METAL CHIP 10 5%	1/16W
R124	1-216-797-11	METAL CHIP 10 5%	1/16W
R125	1-216-834-11	METAL CHIP 12K 5%	1/16W
R126	1-216-834-11	METAL CHIP 12K 5%	1/16W
R131	1-216-845-11	METAL CHIP 100K 5%	1/16W
R132	1-216-853-11	METAL CHIP 470K 5%	1/16W
R133	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R151	1-216-845-11	METAL CHIP 100K 5%	1/16W
R152	1-216-849-11	METAL CHIP 220K 5%	1/16W
R153	1-216-864-11	METAL CHIP 0 5%	1/16W
R155	1-216-864-11	METAL CHIP 0 5%	1/16W
R156	1-216-864-11	METAL CHIP 0 5%	1/16W
R201	1-216-839-11	METAL CHIP 33K 5%	1/16W
R202	1-216-833-11	METAL CHIP 10K 5%	1/16W
R203	1-216-845-11	METAL CHIP 100K 5%	1/16W
R204	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R205	1-216-821-11	METAL CHIP 1K 5%	1/16W
R206	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R207	1-216-857-11	METAL CHIP 1M 5%	1/16W
R213	1-216-864-11	METAL CHIP 0 5%	1/16W
R214	1-216-864-11	METAL CHIP 0 5%	1/16W
R215	1-216-864-11	METAL CHIP 0 5%	1/16W
R216	1-216-857-11	METAL CHIP 1M 5%	1/16W
R218	1-216-821-11	METAL CHIP 1K 5%	1/16W
R219	1-216-821-11	METAL CHIP 1K 5%	1/16W
R220	1-216-821-11	METAL CHIP 1K 5%	1/16W
R230	1-216-813-11	METAL CHIP 220 5%	1/16W
R231	1-216-817-11	METAL CHIP 470 5%	1/16W

Ref. No.	Part No.	Description	Remarks
R232	1-216-817-11	METAL CHIP 470 5%	1/16W
R233	1-216-817-11	METAL CHIP 470 5%	1/16W
R249	1-216-817-11	METAL CHIP 470 5%	1/16W
R250	1-216-813-11	METAL CHIP 220 5%	1/16W
R251	1-216-813-11	METAL CHIP 220 5%	1/16W
R252	1-216-857-11	METAL CHIP 1M 5%	1/16W
R253	1-216-821-11	METAL CHIP 1K 5%	1/16W
R254	1-216-845-11	METAL CHIP 100K 5%	1/16W
R265	1-216-813-11	METAL CHIP 220 5%	1/16W
R266	1-216-813-11	METAL CHIP 220 5%	1/16W
R271	1-216-833-11	METAL CHIP 10K 5%	1/16W
< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	
< VIBRATOR >			
X201	1-795-154-21	VIBRETOR, CRYSTAL (16.9MHz)	

	1-683-729-11	D.MOTOR BOARD	

< MOTOR >			
M603	1-763-790-11	MOTOR, DC (DOOR)	

	1-683-723-11	D.SENS(IN) BOARD	

*	4-985-300-01	HOLDER (P-T)	
< PHOTO TRANSISTOR >			
Q81	8-729-921-53	PHOTO TRANSISTOR PT483F1	

	1-683-724-11	D.SENS(OUT) BOARD	

< DIODE >			
D81	8-719-055-84	DIODE GL528VS1	

	A-4727-719-A	DISP BOARD, COMPLETE (US, CND)	
	A-4727-720-A	DISP BOARD, COMPLETE (AEP, UK)	

	4-982-811-21	HOLDER (FL)	
< CAPACITOR >			
C702	1-164-159-11	CERAMIC 0.1uF 20.00% 50V	
C703	1-164-159-11	CERAMIC 0.1uF 20.00% 50V	
C781	1-104-665-11	ELECT 100uF 20.00% 10V	
C782	1-104-665-11	ELECT 100uF 20.00% 10V	
C784	1-162-282-31	CERAMIC 100PF 10% 50V	
C785	1-162-282-31	CERAMIC 100PF 10% 50V	
C786	1-162-282-31	CERAMIC 100PF 10% 50V	
C787	1-162-306-11	CERAMIC 0.01uF 20.00% 16V	
C788	1-162-215-31	CERAMIC 47PF 5% 50V	
C789	1-164-159-11	CERAMIC 0.1uF 20.00% 50V	

CDP-CX455

JOG KEYBOARD L.T.MOTOR LED LOCK SW

Ref. No.	Part No.	Description	Remarks
		< FLUORESCENT INDICATOR TUBE >	
FL702	1-518-803-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC704	8-759-547-59	IC M35500BGP	
		< RESISTOR >	
R701	1-249-429-11	CARBON 10K 5% 1/4W	
R702	1-249-417-11	CARBON 1K 5% 1/4W	F
R703	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R704	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R705	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R706	1-249-429-11	CARBON 10K 5% 1/4W	
R707	1-249-433-11	CARBON 22K 5% 1/4W	
R711	1-249-429-11	CARBON 10K 5% 1/4W	
R712	1-249-417-11	CARBON 1K 5% 1/4W	F
R713	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R714	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R721	1-249-429-11	CARBON 10K 5% 1/4W	
R722	1-249-417-11	CARBON 1K 5% 1/4W	F
R723	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R724	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R725	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R726	1-249-429-11	CARBON 10K 5% 1/4W	
R727	1-249-433-11	CARBON 22K 5% 1/4W	
R731	1-249-429-11	CARBON 10K 5% 1/4W	
R741	1-249-429-11	CARBON 10K 5% 1/4W	
R751	1-249-429-11	CARBON 10K 5% 1/4W	
R771	1-247-807-31	CARBON 100 5% 1/4W	
R772	1-249-407-11	CARBON 150 5% 1/4W	F
R773	1-249-407-11	CARBON 150 5% 1/4W	F
R774	1-247-807-31	CARBON 100 5% 1/4W	
R775	1-247-807-31	CARBON 100 5% 1/4W	
R794	1-247-807-31	CARBON 100 5% 1/4W	
		< ROTARY ENCODER >	
RE701	1-475-543-11	ENCODER, ROTARY (DISC/ALBUM/CHARACTER)	
RE702	1-475-543-11	ENCODER, ROTARY (AMS)	
		< SWITCH >	
S701	1-771-349-21	SWITCH, KEYBOARD (OPEN/CLOSE)	
S702	1-771-349-21	SWITCH, KEYBOARD (DISC EJECT)	
S703	1-771-349-21	SWITCH, KEYBOARD (HISTORY)	
S704	1-771-349-21	SWITCH, KEYBOARD (MENU/NO)	
S705	1-771-349-21	SWITCH, KEYBOARD (+100)	
S706	1-771-349-21	SWITCH, KEYBOARD (YES)	
S711	1-771-349-21	SWITCH, KEYBOARD (CHECK)	
S712	1-771-349-21	SWITCH, KEYBOARD (CLEAR)	
S713	1-771-349-21	SWITCH, KEYBOARD (NAME SEARCH)	
S714	1-692-537-21	SWITCH, TACTILE (WITH LIGHT) (ALBUM SELECT)	
S721	1-692-537-11	SWITCH, TACTILE (WITH LIGHT) (MEGA CONTROL)	
S722	1-771-349-21	SWITCH, KEYBOARD (NO DELAY)	
S723	1-771-349-21	SWITCH, KEYBOARD (X-FADE)	
S724	1-771-349-21	SWITCH, KEYBOARD (FADER)	
S725	1-771-349-21	SWITCH, KEYBOARD (■)	

Ref. No.	Part No.	Description	Remarks
S726	1-771-349-21	SWITCH, KEYBOARD (■)	
S767	1-771-349-21	SWITCH, KEYBOARD (▷)	

	1-683-722-11	KEYBOARD BOARD *****	
		< CAPACITOR >	
C821	1-164-159-11	CERAMIC 0.1uF 20.00% 50V	
C822	1-164-159-11	CERAMIC 0.1uF 20.00% 50V	
C823	1-126-935-11	ELECT 470uF 20.00% 10V	
		< CONNECTOR >	
CNP503	1-785-332-11	PIN, CONNECTOR (LIGHT ANGLE)6P	
CNP504	1-785-328-11	PIN, CONNECTOR (LIGHT ANGRE)2P	
		< DIODE >	
D821	8-719-109-85	DIODE RD5.1ES-T2B2	
D822	8-719-109-85	DIODE RD5.1ES-T2B2	
D823	8-719-109-85	DIODE RD5.1ES-T2B2	
		< JACK >	
J821	1-785-945-11	CONNECTOR, DIN (KEYBOARD)	
		< COIL >	
L821	1-424-122-11	FILTER, NOISE	
L822	1-424-122-11	FILTER, NOISE	
L823	1-424-122-11	FILTER, NOISE	
L824	1-424-122-11	FILTER, NOISE	

	1-683-727-11	L.T.MOTOR BOARD *****	
		< MOTOR >	
M601	A-4672-895-A	MOTOR (400) ASSY (TABLE)	
M602	A-4672-895-A	MOTOR (400) ASSY (LOADING)	

	1-683-730-11	LED BOARD *****	
*	4-976-473-01	HOLDER (LED-S)	
		< CAPACITOR >	
C801	1-164-159-11	CERAMIC 0.1uF 20.00% 50V	
		< DIODE >	
D801	8-719-069-45	DIODE SELU5E23C-TP15	
		< RESISTOR >	
R801	1-249-401-11	CARBON 47 5% 1/4W F	

	1-683-725-11	LOCK SW BOARD *****	
		< SWITCH >	
S622	1-771-604-11	SWITCH, DETECTION (LOCK)	

LOADING SW

MAIN

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
	1-683-726-11	LOADING SW BOARD *****		C542	1-136-287-11	MYLAR	0.0047uF 5.00% 50V
		< RESISTOR >		C543	1-131-700-31	FILM	0.47uF 5% 50V
R622	1-249-417-11	CARBON	1K 5% 1/4W F	C550	1-110-489-11	CAPACITOR	1F 5.5V
R623	1-249-421-11	CARBON	2.2K 5% 1/4W F	C551	1-164-159-11	CERAMIC	0.1uF 20.00% 50V
		< SWITCH >		C591	1-104-665-11	ELECT	100uF 20.00% 10V
S621	1-786-154-11	SWITCH, ROTARY (LOADING)		C592	1-104-665-11	ELECT	100uF 20.00% 10V
*****				C593	1-104-665-11	ELECT	100uF 20.00% 10V
	A-4727-715-A	MAIN BOARD, COMPLETE (AEP, UK)		C594	1-104-665-11	ELECT	100uF 20.00% 10V
	A-4727-805-A	MAIN BOARD, COMPLETE (US, CND)		C779	1-164-159-11	CERAMIC	0.1uF 20.00% 50V (AEP, UK)
*****				C913	1-126-767-11	ELECT	1000uF 20.00% 16V
	3-309-144-21	HEAT SINK		C914	1-126-767-11	ELECT	1000uF 20.00% 16V
*	4-363-146-21	HEAT SINK, V.OUT		C917	1-126-935-11	ELECT	470uF 20.00% 10V
*	7-685-871-01	SCREW +BVTT 3X6 (S)		C923	1-126-767-11	ELECT	1000uF 20.00% 16V
		< CAPACITOR >		C927	1-126-935-11	ELECT	470uF 20.00% 10V
C301	1-126-965-91	ELECT	22uF 20.00% 50V	C928	1-126-935-11	ELECT	470uF 20.00% 10V
C302	1-130-471-00	MYLAR	0.001uF 5% 50V	C933	1-126-933-11	ELECT	100uF 20.00% 16V
C303	1-137-367-11	MYLAR	0.0033uF 5.00% 50V	C934	1-126-933-11	ELECT	100uF 20.00% 16V
C304	1-126-965-91	ELECT	22uF 20.00% 50V	C935	1-104-665-11	ELECT	100uF 20.00% 10V
C305	1-126-965-91	ELECT	22uF 20.00% 50V	C936	1-126-962-11	ELECT	3.3uF 20.00% 50V
C307	1-126-960-11	ELECT	1uF 20.00% 50V	C938	1-126-935-11	ELECT	470uF 20.00% 10V
C310	1-164-159-11	CERAMIC	0.1uF 20.00% 50V	C939	1-164-159-11	CERAMIC	0.1uF 20.00% 50V
C311	1-164-159-11	CERAMIC	0.1uF 20.00% 50V	C941	1-126-935-11	ELECT	470uF 20.00% 16V
C321	1-126-963-11	ELECT	4.7uF 20.00% 50V	C942	1-126-935-11	ELECT	470uF 20.00% 16V
C327	1-124-282-00	ELECT	22uF 20.00% 25V	C943	1-126-948-11	ELECT	100uF 20.00% 35V
C328	1-162-290-31	CERAMIC	470PF 10% 50V	C944	1-126-948-11	ELECT	100uF 20.00% 35V
C329	1-126-963-11	ELECT	4.7uF 20.00% 50V	C945	1-104-665-11	ELECT	100uF 20.00% 10V
C401	1-126-965-91	ELECT	22uF 20.00% 50V	C950	1-164-159-11	CERAMIC	0.1uF 20.00% 50V
C402	1-130-471-00	MYLAR	0.001uF 5% 50V	C951	1-164-159-11	CERAMIC	0.1uF 20.00% 50V
C403	1-137-367-11	MYLAR	0.0033uF 5.00% 50V	C952	1-164-159-11	CERAMIC	0.1uF 20.00% 50V
C404	1-126-965-91	ELECT	22uF 20.00% 50V	C953	1-104-665-11	ELECT	100uF 20.00% 10V
C405	1-126-965-91	ELECT	22uF 20.00% 50V	C954	1-164-159-11	CERAMIC	0.1uF 20.00% 50V
C407	1-126-960-11	ELECT	1uF 20.00% 50V	< CONNECTOR >			
C410	1-164-159-11	CERAMIC	0.1uF 20.00% 50V	CN501	1-779-299-11	CONNECTOR,FFC(LIF(NON-ZIF))31P	
C411	1-164-159-11	CERAMIC	0.1uF 20.00% 50V	CN502	1-784-739-11	CONNECTOR, FFC 17P	
C427	1-124-282-00	ELECT	22uF 20.00% 25V	CN503	1-785-332-11	PIN, CONNECTOR (LIGHT ANGLE)6P	
C428	1-162-290-31	CERAMIC	470PF 10% 50V	CN505	1-785-335-11	PIN, CONNECTOR (LIGHT ANGLE)9P	
C501	1-164-159-11	CERAMIC	0.1uF 20.00% 50V	CN506	1-785-331-11	PIN, CONNECTOR (LIGHT ANGLE)5P	
C502	1-104-665-11	ELECT	100uF 20.00% 10V	CN801	1-785-333-11	PIN, CONNECTOR (LIGHT ANGLE)7P	
C503	1-164-159-11	CERAMIC	0.1uF 20.00% 50V	* CN901	1-564-524-11	PLUG, CONNECTOR 9P	
C504	1-164-159-11	CERAMIC	0.1uF 20.00% 50V	CN903	1-785-335-11	PIN, CONNECTOR (LIGHT ANGLE)9P	
C505	1-164-159-11	CERAMIC	0.1uF 20.00% 50V	< DIODE >			
C508	1-161-494-00	CERAMIC	0.022uF 25V	D327	8-719-911-19	DIODE 1SS133T-72	
C509	1-161-494-00	CERAMIC	0.022uF 25V	D329	8-719-911-19	DIODE 1SS133T-72	
C510	1-161-494-00	CERAMIC	0.022uF 25V	D501	8-719-911-19	DIODE 1SS133T-72	
C511	1-161-494-00	CERAMIC	0.022uF 25V	D502	8-719-911-19	DIODE 1SS133T-72	
C512	1-161-494-00	CERAMIC	0.022uF 25V	D503	8-719-911-19	DIODE 1SS133T-72	
C513	1-164-159-11	CERAMIC	0.1uF 20.00% 50V	D551	8-719-911-19	DIODE 1SS133T-72	
C514	1-164-159-11	CERAMIC	0.1uF 20.00% 50V	D941	8-719-109-93	DIODE RD6.2ES-T2B2	
C515	1-161-494-00	CERAMIC	0.022uF 25V	D942	8-719-110-53	DIODE RD20ES-T2B2	
C516	1-164-159-11	CERAMIC	0.1uF 20.00% 50V	< IC >			
C517	1-161-494-00	CERAMIC	0.022uF 25V	IC302	8-749-015-59	IC BA4558-HT	
C518	1-164-159-11	CERAMIC	0.1uF 20.00% 50V	IC401	8-749-015-59	IC BA4558-HT	
C519	1-126-960-11	ELECT	1uF 20.00% 50V	IC402	8-749-015-59	IC BA4558-HT	
C541	1-131-679-31	FILM	0.01uF 5% 50V	IC501	6-801-221-01	IC uPD703033AYGF-CX4-3BA	
				IC504	8-759-825-10	IC LC35256DM-70-TLM	

MAIN

Ref. No.	Part No.	Description	Remarks
IC901	8-749-017-31	IC GP1FA550TZ (DIGITAL OPTICAL IN)	
IC910	8-759-039-69	IC uPC7805AHF	
IC920	8-759-071-48	IC TA7807S	
IC921	8-759-039-69	IC uPC7805AHF	
IC930	8-759-173-39	IC NJU7201L50-T3	
IC931	8-759-658-02	IC BA3993F	
< JACK >			
* J901	1-764-188-11	JACK (SMALL TYPE) (DIA. 3.5) (CONTROL A1 II)	
* J902	1-764-188-11	JACK (SMALL TYPE) (DIA. 3.5) (CONTROL A1 II)	
J903	1-794-012-11	JACK, PIN 4P (2ND CD IN, ANLOG OUT)	
< COIL >			
L501	1-410-396-41	FERRITE 0.45uH	
L921	1-410-396-41	FERRITE 0.45uH	
L950	1-410-503-11	INDUCTOR 3.3uH	
< TRANSISTOR >			
Q321	8-729-900-89	TRANSISTOR DTC144ES	
Q322	8-729-141-26	TRANSISTOR 2SC3622ATP-LK	
Q323	8-729-141-26	TRANSISTOR 2SC3622ATP-LK	
Q324	8-729-141-26	TRANSISTOR 2SC3622ATP-LK	
Q325	8-729-900-65	TRANSISTOR DTA144ES	
Q326	8-729-115-52	TRANSISTOR BN1L3M-TP	
Q327	8-729-029-56	TRANSISTOR DTA144ES	
Q328	8-729-029-56	TRANSISTOR DTA144ES	
Q329	8-729-029-56	TRANSISTOR DTA144ES	
Q421	8-729-900-89	TRANSISTOR DTC144ES	
Q422	8-729-141-26	TRANSISTOR 2SC3622ATP-LK	
Q423	8-729-141-26	TRANSISTOR 2SC3622ATP-LK	
Q424	8-729-141-26	TRANSISTOR 2SC3622ATP-LK	
Q425	8-729-900-65	TRANSISTOR DTA144ES	
Q426	8-729-115-52	TRANSISTOR BN1L3M-TP	
Q501	8-729-900-89	TRANSISTOR DTC144ES	
Q502	8-729-115-52	TRANSISTOR BN1L3M-TP	
Q551	8-729-030-09	TRANSISTOR DTC144VSA-TP	
Q552	8-729-900-65	TRANSISTOR DTA144ES	
Q562	8-729-900-65	TRANSISTOR DTA144ES	
Q570	8-729-116-02	TRANSISTOR BA1A4M-TP	
Q571	8-729-116-02	TRANSISTOR BA1A4M-TP	
Q572	8-729-116-02	TRANSISTOR BA1A4M-TP	
Q576	8-729-422-57	TRANSISTOR UN4111	
Q941	8-729-140-97	TRANSISTOR 2SB734-T-34	
Q950	8-729-620-05	TRANSISTOR 2SC2603TP-EF	
< RESISTOR >			
R301	1-247-895-00	CARBON 470K 5%	1/4W
R302	1-247-843-11	CARBON 3.3K 5%	1/4W
R303	1-247-843-11	CARBON 3.3K 5%	1/4W
R306	1-247-895-00	CARBON 470K 5%	1/4W
R307	1-249-422-11	CARBON 2.7K 5%	1/4W F
R309	1-249-425-11	CARBON 4.7K 5%	1/4W F
R310	1-249-429-11	CARBON 10K 5%	1/4W
R311	1-249-429-11	CARBON 10K 5%	1/4W
R312	1-249-429-11	CARBON 10K 5%	1/4W
R313	1-247-895-00	CARBON 470K 5%	1/4W
R314	1-249-409-11	CARBON 220 5%	1/4W F

Ref. No.	Part No.	Description	Remarks
R315	1-249-409-11	CARBON 220 5%	1/4W F
R317	1-249-425-11	CARBON 4.7K 5%	1/4W F
R321	1-249-441-11	CARBON 100K 5%	1/4W
R322	1-249-421-11	CARBON 2.2K 5%	1/4W F
R323	1-249-421-11	CARBON 2.2K 5%	1/4W F
R324	1-249-421-11	CARBON 2.2K 5%	1/4W F
R325	1-249-441-11	CARBON 100K 5%	1/4W
R326	1-247-807-31	CARBON 100 5%	1/4W
R327	1-249-441-11	CARBON 100K 5%	1/4W
R328	1-249-441-11	CARBON 100K 5%	1/4W
R329	1-249-441-11	CARBON 100K 5%	1/4W
R339	1-247-895-00	CARBON 470K 5%	1/4W
R340	1-249-409-11	CARBON 220 5%	1/4W F
R401	1-247-895-00	CARBON 470K 5%	1/4W
R402	1-247-843-11	CARBON 3.3K 5%	1/4W
R403	1-247-843-11	CARBON 3.3K 5%	1/4W
R406	1-247-895-00	CARBON 470K 5%	1/4W
R407	1-249-422-11	CARBON 2.7K 5%	1/4W F
R409	1-249-425-11	CARBON 4.7K 5%	1/4W F
R410	1-249-429-11	CARBON 10K 5%	1/4W
R411	1-249-429-11	CARBON 10K 5%	1/4W
R412	1-249-429-11	CARBON 10K 5%	1/4W
R413	1-247-895-00	CARBON 470K 5%	1/4W
R414	1-249-409-11	CARBON 220 5%	1/4W F
R415	1-249-409-11	CARBON 220 5%	1/4W F
R417	1-249-425-11	CARBON 4.7K 5%	1/4W F
R421	1-249-441-11	CARBON 100K 5%	1/4W
R422	1-249-421-11	CARBON 2.2K 5%	1/4W F
R423	1-249-421-11	CARBON 2.2K 5%	1/4W F
R424	1-249-421-11	CARBON 2.2K 5%	1/4W F
R425	1-249-441-11	CARBON 100K 5%	1/4W
R426	1-247-807-31	CARBON 100 5%	1/4W
R439	1-247-895-00	CARBON 470K 5%	1/4W
R440	1-249-409-11	CARBON 220 5%	1/4W F
R501	1-249-441-11	CARBON 100K 5%	1/4W
R502	1-249-429-11	CARBON 10K 5%	1/4W
R503	1-249-417-11	CARBON 1K 5%	1/4W F
R504	1-249-421-11	CARBON 2.2K 5%	1/4W F
R505	1-249-429-11	CARBON 10K 5%	1/4W
R506	1-249-429-11	CARBON 10K 5%	1/4W
R507	1-249-441-11	CARBON 100K 5%	1/4W
R508	1-249-429-11	CARBON 10K 5%	1/4W
R509	1-249-429-11	CARBON 10K 5%	1/4W
R510	1-249-429-11	CARBON 10K 5%	1/4W
R511	1-249-429-11	CARBON 10K 5%	1/4W
R512	1-249-429-11	CARBON 10K 5%	1/4W
R513	1-249-441-11	CARBON 100K 5%	1/4W
R514	1-249-429-11	CARBON 10K 5%	1/4W
R515	1-249-425-11	CARBON 4.7K 5%	1/4W F
R516	1-249-429-11	CARBON 10K 5%	1/4W
R518	1-249-429-11	CARBON 10K 5%	1/4W
R519	1-247-807-31	CARBON 100 5%	1/4W
R520	1-247-807-31	CARBON 100 5%	1/4W
R521	1-247-807-31	CARBON 100 5%	1/4W
R522	1-247-807-31	CARBON 100 5%	1/4W
R523	1-247-807-31	CARBON 100 5%	1/4W
R524	1-247-807-31	CARBON 100 5%	1/4W
R525	1-247-807-31	CARBON 100 5%	1/4W

MAIN

T.SENS

TRANS

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks		
R526	1-247-807-31	CARBON	100 5% 1/4W			< PHOTO INTERRUPTER >			
R527	1-247-807-31	CARBON	100 5% 1/4W	IC81	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
R528	1-247-807-31	CARBON	100 5% 1/4W	IC82	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
R529	1-249-441-11	CARBON	100K 5% 1/4W	IC83	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
R530	1-249-417-11	CARBON	1K 5% 1/4W F	IC84	8-749-924-18	PHOTO INTERRUPTER RPI-1391			
R531	1-249-417-11	CARBON	1K 5% 1/4W F			< RESISTOR >			
R532	1-249-441-11	CARBON	100K 5% 1/4W	R81	1-249-416-11	CARBON 820 5% 1/4W F			
R533	1-249-429-11	CARBON	10K 5% 1/4W	R82	1-249-416-11	CARBON 820 5% 1/4W F			
R534	1-249-425-11	CARBON	4.7K 5% 1/4W F	R83	1-249-416-11	CARBON 820 5% 1/4W F			
R535	1-247-807-31	CARBON	100 5% 1/4W	R84	1-249-416-11	CARBON 820 5% 1/4W F			
R536	1-247-807-31	CARBON	100 5% 1/4W	R85	1-249-415-11	CARBON 680 5% 1/4W F			
R537	1-247-807-31	CARBON	100 5% 1/4W	*****					
R538	1-247-807-31	CARBON	100 5% 1/4W	A-4727-718-A	TRANS BOARD, COMPLETE (AEP, UK)				
R539	1-247-807-31	CARBON	100 5% 1/4W	A-4727-717-A	TRANS BOARD, COMPLETE (US, CND)				
R540	1-247-807-31	CARBON	100 5% 1/4W	*****					
R541	1-249-441-11	CARBON	100K 5% 1/4W	7-685-871-01	SCREW +BVTT 3X6 (S)				
R542	1-247-887-00	CARBON	220K 5% 1/4W			< CAPACITOR >			
R543	1-249-421-11	CARBON	2.2K 5% 1/4W F	C901	1-126-936-11	ELECT 3300uF 20.00% 16V			
R544	1-249-441-11	CARBON	100K 5% 1/4W	C902	1-126-960-11	ELECT 1uF 20.00% 50V			
R545	1-249-441-11	CARBON	100K 5% 1/4W	C911	1-128-576-11	ELECT 100uF 20.00% 63V			
R546	1-247-807-31	CARBON	100 5% 1/4W	C912	1-126-948-11	ELECT 100uF 20.00% 35V			
R550	1-249-429-11	CARBON	10K 5% 1/4W	C920	1-161-494-00	CERAMIC 0.022uF 25V			
R551	1-249-429-11	CARBON	10K 5% 1/4W	C921	1-126-768-11	ELECT 2200uF 20.00% 16V			
R552	1-247-807-31	CARBON	100 5% 1/4W	C922	1-126-768-11	ELECT 2200uF 20.00% 16V			
R553	1-247-807-31	CARBON	100 5% 1/4W	C930	1-161-494-00	CERAMIC 0.022uF 25V			
R554	1-247-807-31	CARBON	100 5% 1/4W	C931	1-126-768-11	ELECT 2200uF 20.00% 16V			
R570	1-249-425-11	CARBON	4.7K 5% 1/4W F	C932	1-126-768-11	ELECT 2200uF 20.00% 16V			
R571	1-249-425-11	CARBON	4.7K 5% 1/4W F	C933	1-126-967-11	ELECT 47uF 20.00% 50V			
R591	1-249-425-11	CARBON	4.7K 5% 1/4W F	C940	1-136-173-00	MYLAR 0.47uF 5.00% 50V			
R931	1-247-887-00	CARBON	220K 5% 1/4W	C941	1-136-173-00	MYLAR 0.47uF 5.00% 50V			
R932	1-249-385-11	CARBON	2.2 5% 1/6W F	C942	1-109-953-11	ELECT 2.2uF 20.00% 50V			
R941	1-249-389-11	CARBON	4.7 5% 1/4W F	C943	1-164-159-11	CERAMIC 0.1uF 20.00% 50V			
R942	1-249-385-11	CARBON	2.2 5% 1/6W F	C951	1-136-173-00	MYLAR 0.47uF 5.00% 50V			
R943	1-249-421-11	CARBON	2.2K 5% 1/4W F	C961	1-136-165-00	MYLAR 0.1uF 5.00% 50V			
R944	1-249-421-11	CARBON	2.2K 5% 1/4W F	C962	1-164-159-11	CERAMIC 0.1uF 20.00% 50V			
R950	1-249-425-11	CARBON	4.7K 5% 1/4W F	C963	1-164-159-11	CERAMIC 0.1uF 20.00% 50V			
R951	1-249-429-11	CARBON	10K 5% 1/4W	C971	1-136-165-00	MYLAR 0.1uF 5.00% 50V			
R952	1-249-393-11	CARBON	10 5% 1/4W F	C972	1-164-159-11	CERAMIC 0.1uF 20.00% 50V			
		< VARIABLE RESISTOR >		C973	1-164-159-11	CERAMIC 0.1uF 20.00% 50V			
RV501	1-241-765-11	RES, ADJ, CARBON 22K		△ C991	1-113-925-11	CERAMIC 0.01uF 20.00% 250V			
		< TEST PIN >		△ C992	1-113-924-11	CERAMIC 0.0047uF 20.00% 250V	(US, CND)		
* TP1	1-568-449-11	HOUSING, CONNECTOR(PC BOARD)3P		△ C993	1-113-924-11	CERAMIC 0.0047uF 20.00% 250V	(US, CND)		
* TP2	1-566-970-11	HOUSING, CONNECTOR(PC BOARD)8P				< CONNECTOR >			
		< VIBRATOR >		CN601	1-506-469-11	PIN, CONNECTOR 4P			
X501	1-781-107-21	VIBRATOR, CERAMIC (16MHZ)		* CN602	1-506-469-11	PIN, CONNECTOR 4P			
*****				CN603	1-568-951-11	PIN, CONNECTOR 2P			
	1-676-828-11	T.SENS BOARD		* CN991	1-580-230-11	PIN, CONNECTOR (PC BOARD) 2P			
		*****		CNP902	1-691-767-11	PLUG (MICRO CONNECTOR) 5P			
		< CONNECTOR >		<table border="1"> <tr> <td>The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.</td> <td>Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</td> </tr> </table>				The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.								
* CN81	1-506-486-11	PIN, CONNECTOR 7P							
CN82	1-506-481-11	PIN, CONNECTOR 2P							
CN83	1-506-481-11	PIN, CONNECTOR 2P							

TRANS

Ref. No.	Part No.	Description	Remarks
< DIODE >			
D901	8-719-210-21	DIODE 11EQS04-TA2B	
D902	8-719-210-21	DIODE 11EQS04-TA2B	
D903	8-719-210-21	DIODE 11EQS04-TA2B	
D904	8-719-210-21	DIODE 11EQS04-TA2B	
D905	8-719-911-19	DIODE 1SS133T-72	
D906	8-719-911-19	DIODE 1SS133T-72	
D907	8-719-911-19	DIODE 1SS133T-72	
D911	8-719-024-99	DIODE 11ES2-NTA2B	
D912	8-719-150-92	DIODE RD33ES-T2B1	
D913	8-719-109-93	DIODE MTZJ-T-72-6.2B	
D921	8-719-024-99	DIODE 11ES2-NTA2B	
D922	8-719-024-99	DIODE 11ES2-NTA2B	
D923	8-719-024-99	DIODE 11ES2-NTA2B	
D924	8-719-024-99	DIODE 11ES2-NTA2B	
D931	8-719-200-77	DIODE 10E2N-TA2B	
D932	8-719-200-77	DIODE 10E2N-TA2B	
D933	8-719-200-77	DIODE 10E2N-TA2B	
D934	8-719-200-77	DIODE 10E2N-TA2B	
D935	8-719-110-41	DIODE RD15ES-T2B2	
D991	8-719-911-19	DIODE 1SS133T-72	
< IC >			
IC941	8-759-822-38	IC LA6510	
IC961	8-759-822-38	IC LA6510	
< COIL >			
△L991	1-424-485-11	FILTER, LINE	
< TRANSISTOR >			
Q901	8-729-620-05	TRANSISTOR 2SC2603TP-EF	
Q911	8-729-140-97	TRANSISTOR 2SB734-T-34	
Q931	8-729-620-05	TRANSISTOR 2SC2603TP-EF	
Q941	8-729-029-56	TRANSISTOR DTA144ESA-TP	
Q942	8-729-030-02	TRANSISTOR UN4213-TA	
Q951	8-729-029-56	TRANSISTOR DTA144ESA-TP	
Q952	8-729-030-02	TRANSISTOR UN4213-TA	
< RESISTOR >			
R901	1-249-417-11	CARBON 1K 5%	1/4W F
R902	1-249-429-11	CARBON 10K 5%	1/4W
R903	1-249-421-11	CARBON 2.2K 5%	1/4W F
R904	1-249-429-11	CARBON 10K 5%	1/4W
R911	1-249-425-11	CARBON 4.7K 5%	1/4W F
R912	1-249-421-11	CARBON 2.2K 5%	1/4W F
R913	1-249-425-11	CARBON 4.7K 5%	1/4W F
R914	1-247-807-31	CARBON 100 5%	1/4W
R931	1-249-421-11	CARBON 2.2K 5%	1/4W F
R932	1-249-421-11	CARBON 2.2K 5%	1/4W F
R940	1-247-807-31	CARBON 100 5%	1/4W
R941	1-247-807-31	CARBON 100 5%	1/4W
R942	1-249-421-11	CARBON 2.2K 5%	1/4W F
R943	1-249-441-11	CARBON 100K 5%	1/4W
R944	1-249-417-11	CARBON 1K 5%	1/4W F
R945	1-249-441-11	CARBON 100K 5%	1/4W
R946	1-247-883-00	CARBON 150K 5%	1/4W
R947	1-249-425-11	CARBON 4.7K 5%	1/4W F

Ref. No.	Part No.	Description	Remarks
R948	1-249-381-11	CARBON 1 5%	1/4W F
R949	1-249-381-11	CARBON 1 5%	1/4W F
R951	1-247-807-31	CARBON 100 5%	1/4W
R952	1-249-421-11	CARBON 2.2K 5%	1/4W F
R953	1-249-441-11	CARBON 100K 5%	1/4W
R954	1-249-417-11	CARBON 1K 5%	1/4W F
R955	1-249-441-11	CARBON 100K 5%	1/4W
R956	1-247-883-00	CARBON 150K 5%	1/4W
R957	1-249-425-11	CARBON 4.7K 5%	1/4W F
R958	1-249-381-11	CARBON 1 5%	1/4W F
R959	1-249-381-11	CARBON 1 5%	1/4W F
R961	1-247-883-00	CARBON 150K 5%	1/4W
R962	1-247-860-11	CARBON 16K 5%	1/4W
R963	1-247-883-00	CARBON 150K 5%	1/4W
R964	1-247-883-00	CARBON 150K 5%	1/4W
R965	1-249-431-11	CARBON 15K 5%	1/4W
R966	1-249-381-11	CARBON 1 5%	1/4W F
R967	1-249-381-11	CARBON 1 5%	1/4W F
R968	1-249-393-11	CARBON 10 5%	1/4W F
R971	1-247-883-00	CARBON 150K 5%	1/4W
R972	1-247-860-11	CARBON 16K 5%	1/4W
R973	1-247-885-00	CARBON 180K 5%	1/4W
R974	1-247-885-00	CARBON 180K 5%	1/4W
R975	1-249-431-11	CARBON 15K 5%	1/4W
R976	1-249-381-11	CARBON 1 5%	1/4W F
R977	1-249-381-11	CARBON 1 5%	1/4W F
R978	1-249-393-11	CARBON 10 5%	1/4W F
< RELAY >			
△RY991	1-755-299-11	RELAY	
< TRANSFORMER >			
△T901	1-437-709-11	TRANSFORMER, POWER (US, CND)	
△T901	1-437-718-11	TRANSFORMER, POWER (AEP, UK)	
△T911	1-435-327-11	TRANSFORMER, POWER (US, CND)	
△T911	1-435-328-11	TRANSFORMER, POWER (AEP, UK)	

MISCELLANEOUS			

7	1-824-181-11	WIRE (FLAT TYPE) (31 CORE)	
160	1-824-257-11	WIRE (FLAT TYPE) (17 CORE)	
401	1-782-817-11	WIRE (FLAT TYPE) (16 CORE)	
△404	A-332-881-8A	OPTICAL PICK-UP KSM-213BFN/C2NP	
△CNP901	1-575-651-91	CORD, POWER (AEP, UK)	
△CNP901	1-783-531-41	CORD, POWER (US, CND)	
M601	A-4672-895-A	MOTOR (400) ASSY (TABLE)	
M602	A-4672-895-A	MOTOR (400) ASSY (LOADING)	
M603	1-763-790-11	MOTOR, DC (DOOR)	
△T901	1-437-709-11	TRANSFORMER, POWER (US, CND)	
△T901	1-437-718-11	TRANSFORMER, POWER (AEP, UK)	
△T911	1-435-327-11	TRANSFORMER, POWER (US, CND)	
△T911	1-435-328-11	TRANSFORMER, POWER (AEP, UK)	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>
		ACCESSORIES *****	
	1-477-214-11	REMOTE COMMANDER (RM-DX455)	
	1-558-626-11	CORD, CONNECTION (AUDIO)	
△	1-770-019-51	ADAPTOR, CONVERSION PLUG (UK)	
	1-777-172-11	CORD, CONNECTION (CONTROL A1 II) (CND)	
	4-228-696-01	COVER, BATTERY (FOR RM-DX455)	
	4-238-112-11	MANUAL, INSTRUCTION (ENGLISH) (US)	
	4-238-112-21	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (CND, AEP, UK)	
	4-238-112-31	MANUAL, INSTRUCTION (GERMAN, SPANISH, DUTCH) (AEP)	
	4-238-112-41	MANUAL, INSTRUCTION (SWEDISH, ITALIAN, POLISH) (AEP)	
	4-238-112-51	MANUAL, INSTRUCTION (DANISH, FINNISH) (AEP)	
	4-238-112-61	MANUAL, INSTRUCTION (PORTUGUESE) (AEP)	
	4-239-579-11	MANUAL, INSTRUCTION (ENGLISH) (US)	
	4-239-579-21	MANUAL, INSTRUCTION (HUNGARIAN, CZECH) (CND, AEP, UK)	
	4-239-579-31	MANUAL, INSTRUCTION (TURKISH) (AEP)	
	4-239-579-41	MANUAL, INSTRUCTION (SLOVAK) (AEP)	

<p>The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.</p>	<p>Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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