

CDP-C591/CE235/CE335

SERVICE MANUAL



Photo : CDP-CE235

US Model
CDP-C591/CE235/CE335
Canadian Model
AEP Model
UK Model
E Model
Australian Model
CDP-CE235/CE335

Model Name Using Similar Mechanism	NEW
CD Mechanism Type	CDM27-5BD32A
Base Unit Type	BU-5BD32A
Optical Pick-up Type	KSS-213BA/F-NP

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	2 Hz to 20 kHz $\pm 0.5 \text{ dB}$
Signal-to-noise ratio	More than 102 dB
Dynamic range	More than 98 dB
Harmonic distortion	Less than 0.0045%

Output

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

General

Where purchased	Power requirements
USA and Canada	120V AC, 60 Hz
Europe and some Asian countries	220V - 230V AC, 50/60 Hz
Other countries	110V - 120V AC or 220V - 240V AC, adjustable, 50/60 Hz

Power consumption	14 W
Dimensions (approx.) (w/h/d)	430 $\times$ 120 $\times$ 385 mm (17 $\times$ 4 $\frac{3}{4}$ $\times$ 15 $\frac{1}{4}$ in.) incl. projecting parts
Mass (approx.)	5.4 kg (11 lbs 15 oz)

Supplied accessories

Audio cord (2 phono plugs-2 phono plugs) (1)
Remote commander (remote) (1) (CDP-CE335 only)
R6 (size AA) batteries (2) (CDP-CE335 only)

Design and specifications are subject to change without notice.



COMPACT DISC PLAYER

SONY®



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

CAUTION

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

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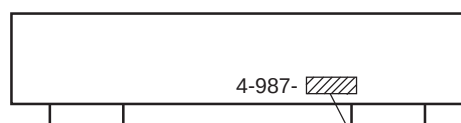
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  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  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.

MODEL IDENTIFICATION — BACK PANEL —



CDP-C591	
US MODEL	: 618-7□
CDP-CE235	
US MODEL	: 618-0□
Canadian MODEL	: 618-1□
AEP,North European MODEL	: 618-2□
UK MODEL	: 618-3□
Australian MODEL	: 618-4□
E,Saudi Arabia MODEL	: 618-5□
Singapore MODEL	: 618-6□
CDP-CE335	
US MODEL	: 619-0□
Canadian MODEL	: 619-1□
AEP,North European MODEL	: 619-2□
UK MODEL	: 619-3□
Australian MODEL	: 619-4□
E,Saudi Arabia MODEL	: 619-5□
Singapore MODEL	: 619-6□

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

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic breakdown 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.

SAFETY CHECK-OUT (US model only)

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

LEAKAGE

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

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

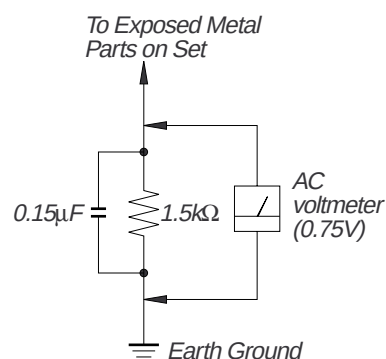
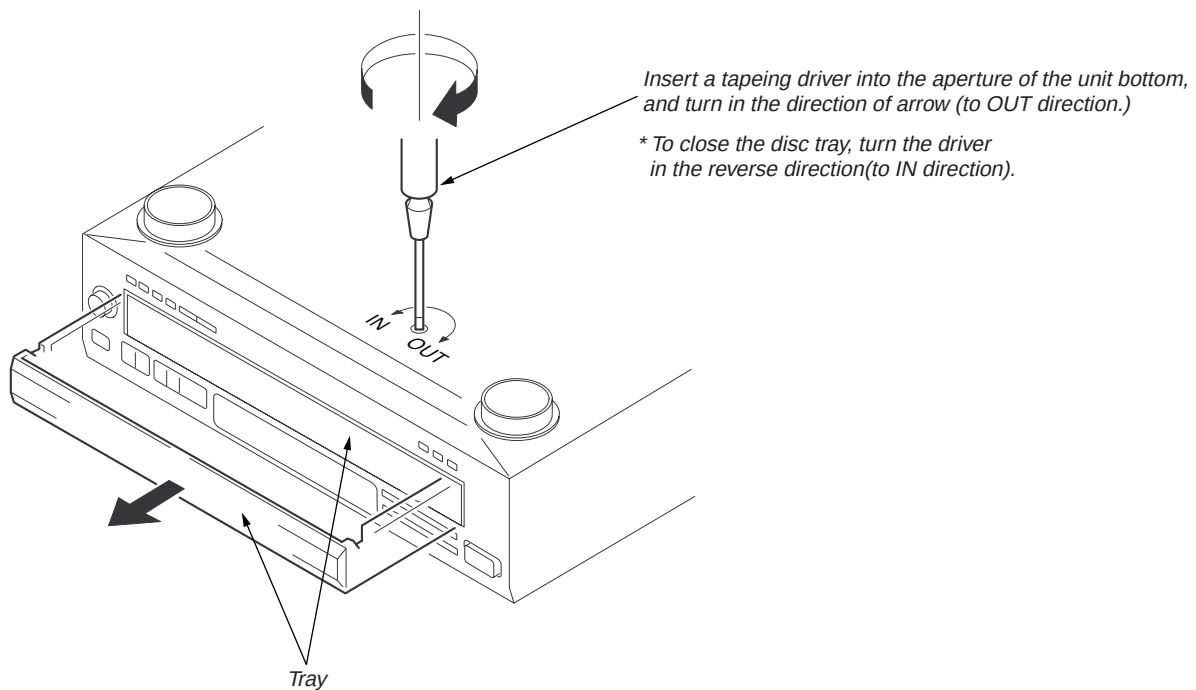
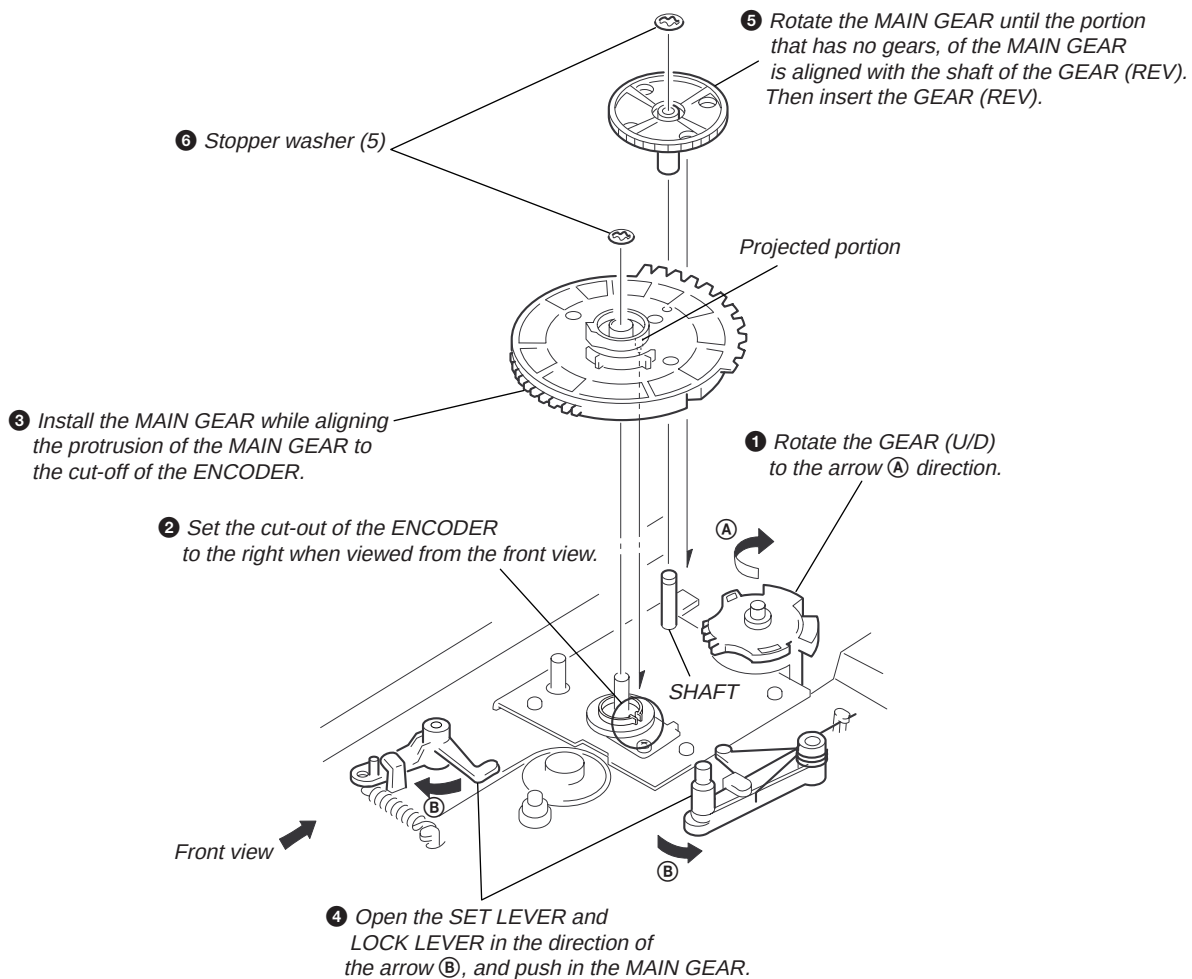


Fig. A. Using an AC voltmeter to check AC leakage.

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF



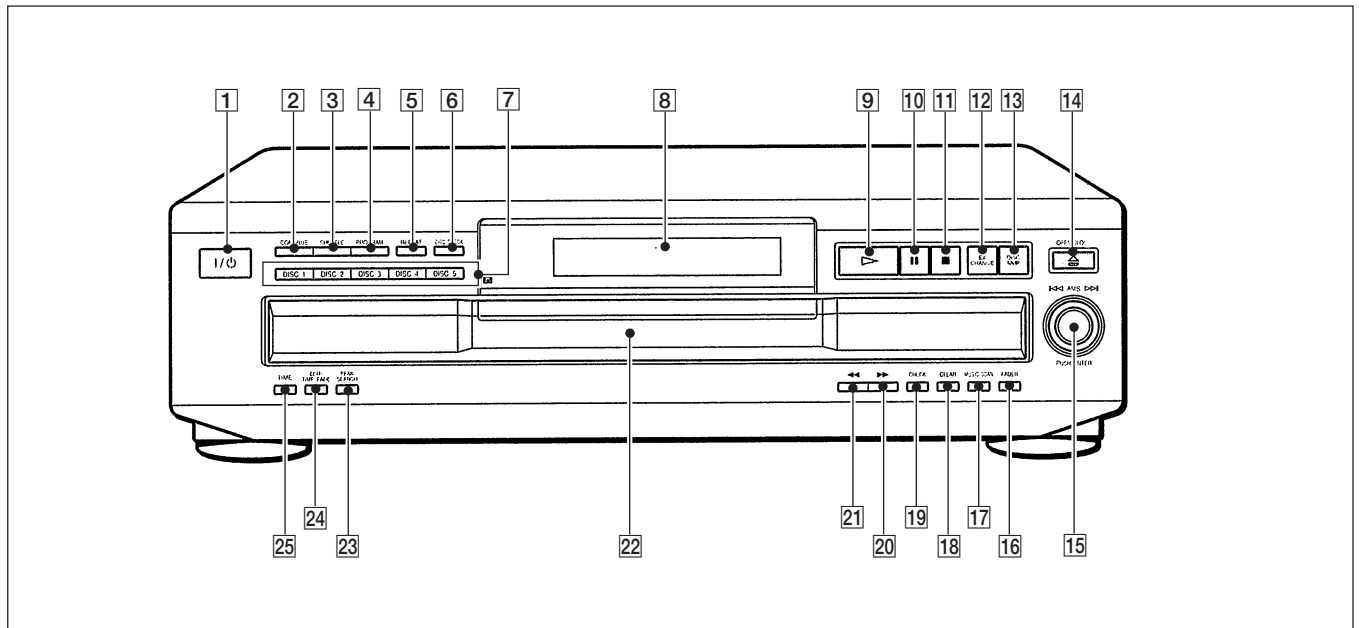
NOTE FOR MAIN GEAR INSTALLATION



SECTION 1 GENERAL

Identifying the Parts

Front Panel

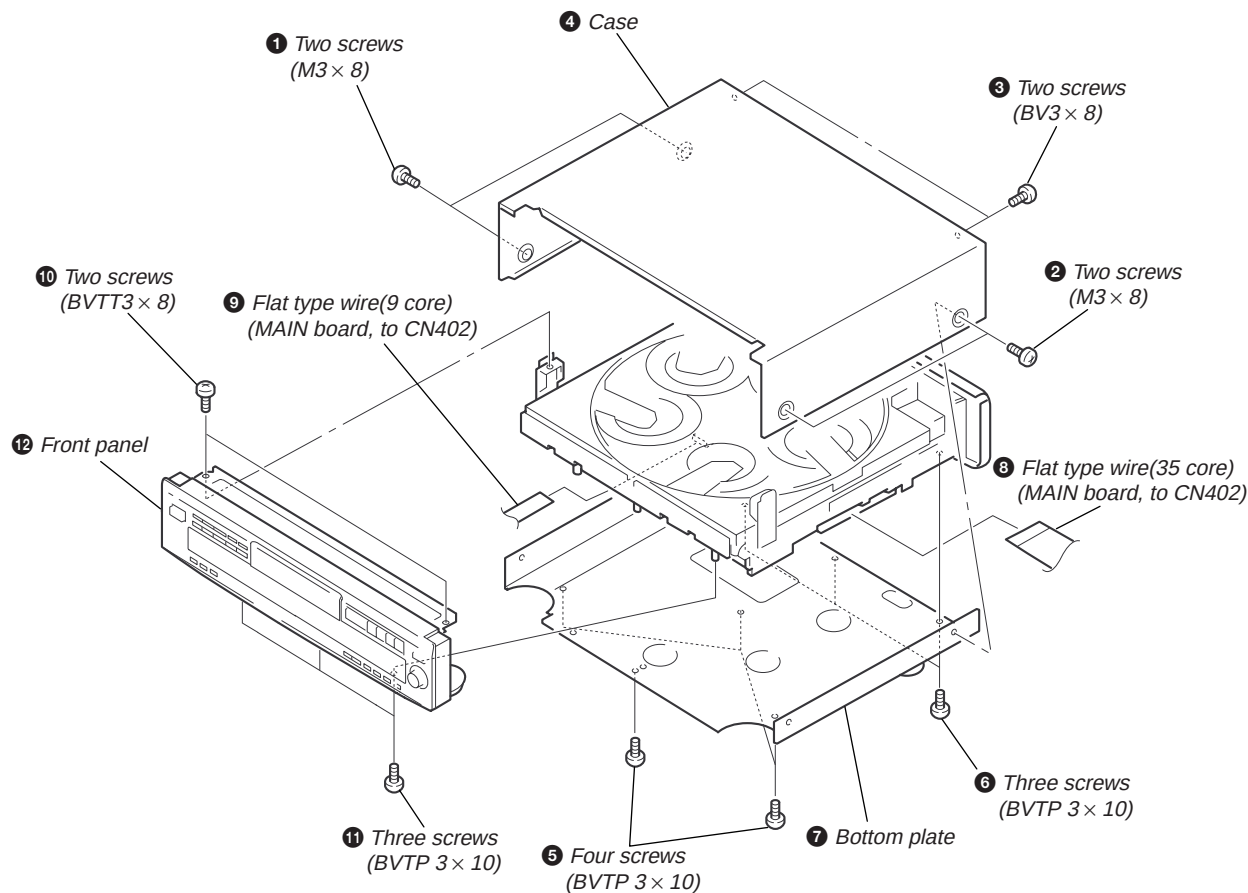


- | | |
|----------------------|--------------------------|
| 1 I/O POWER switch | 14 ▲ OPEN/CLOSE button |
| 2 CONTINUE button | 15 AMS knob |
| 3 SHUFFLE button | 16 FADER button |
| 4 PROGRAM button | 17 MUSIC SCAN button |
| 5 REPEAT button | 18 CLEAR button |
| 6 DISC CHECK button | 19 CHECK button |
| 7 DISC 1-5 button | 20 ►► (forward) button |
| 8 Display window | 21 ◀◀ (backward) button |
| 9 ► (play) button | 22 Disc tray |
| 10 (pause) button | 23 PEAK SEARCH button |
| 11 ■ (stop) button | 24 EDIT/TIME FADE button |
| 12 EX-CHANGE button | 25 TIME button |
| 13 DISC SKIP button | |

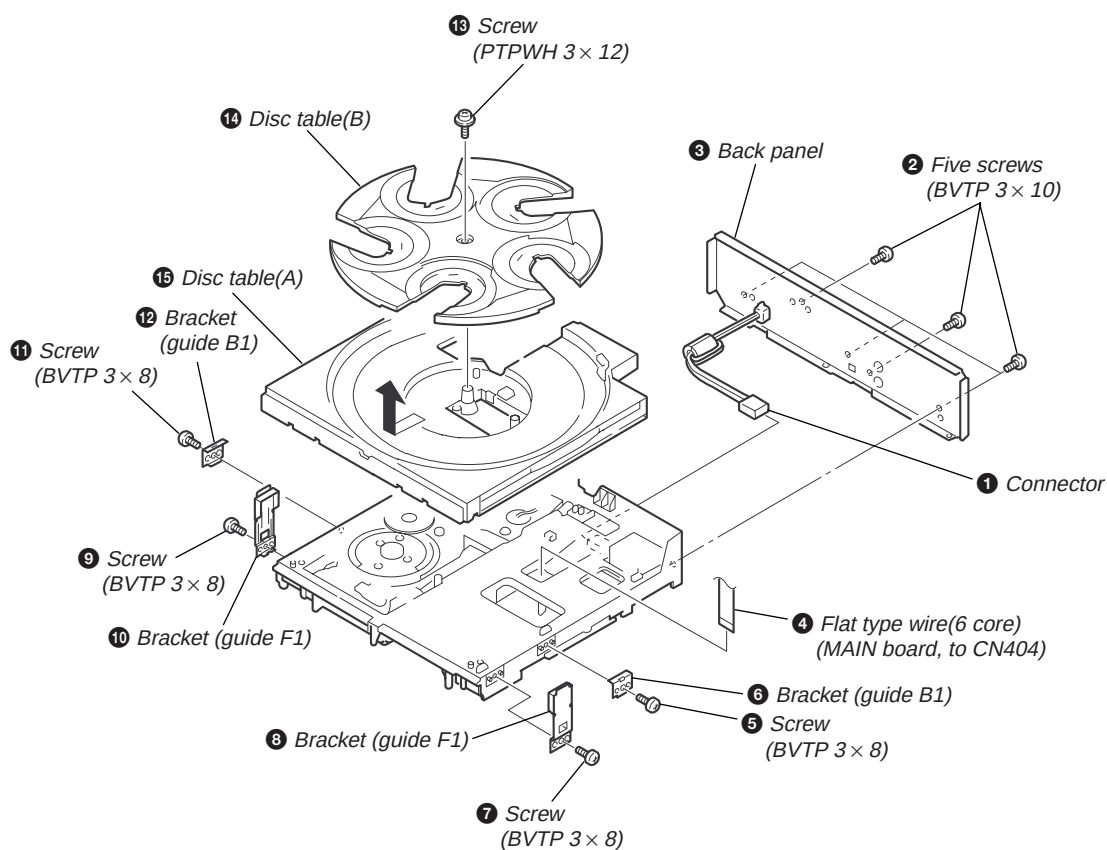
SECTION 2 DISASSEMBLY

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

2-1. CASE, BOTTOM PLATE AND FRONT PANEL

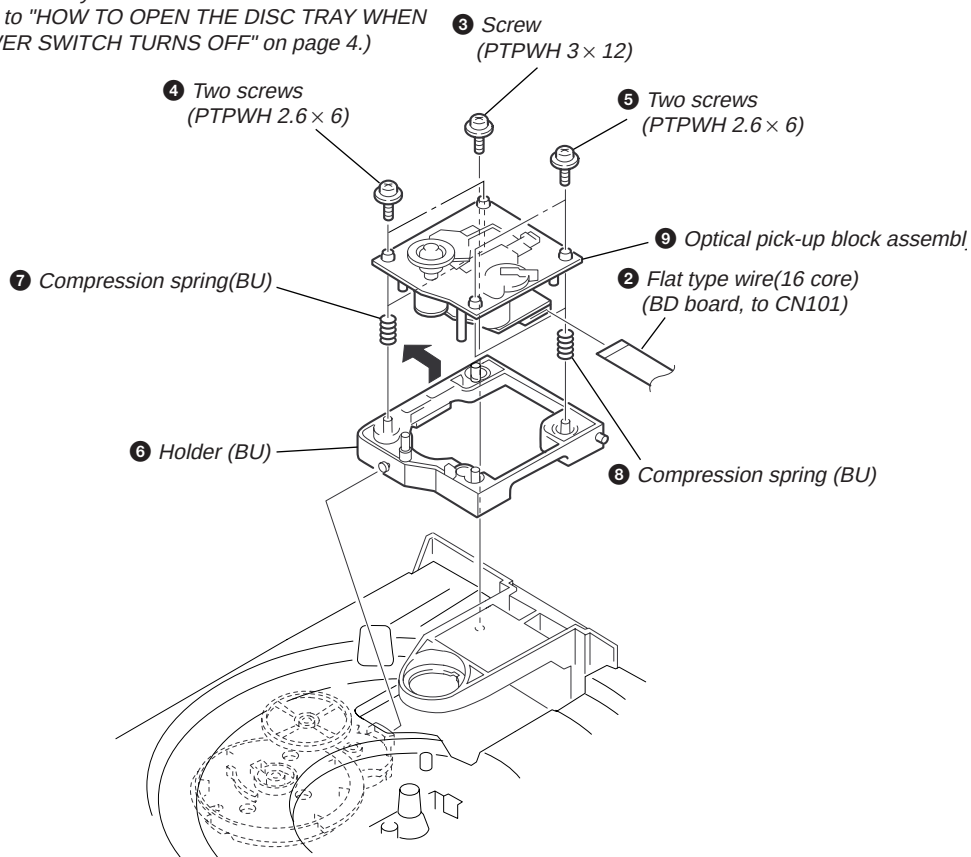


2-2. BACK PANEL AND DISC TABLE

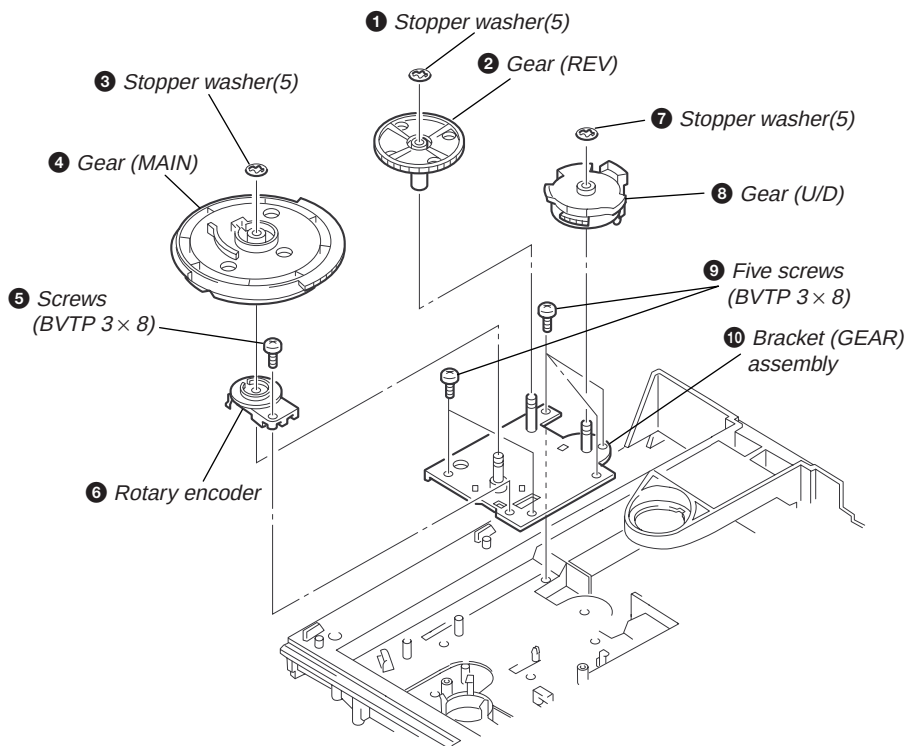


2-3. OPTICAL PICK-UP BLOCK ASSEMBLY

① Pull out the tray.
(Refer to "HOW TO OPEN THE DISC TRAY WHEN
POWER SWITCH TURNS OFF" on page 4.)



2-4. BRACKET (GEAR) ASSEMBLY



Note : As for the installation of the main gear, refer to "Note for MAIN
GEAR installation" on page 4.

SECTION 3 TEST MODE

① ADJ Mode

When the main power is turned on while the ADJ terminal is set to LOW, the CDP-C591/CE235/335 enters the ADJ mode that enables to implement the servo related checks.

The disk tray is not loaded or rotated.
The fifth program is automatically played back.

The following items are valid even when the main power is turned on first and the ADJ terminal is then set to LOW.

The high speed search cannot be performed.
The focus servo gain is not decreased.
CLV servo gain is not decreased.
GFS is ignored even if it is set to the LOW.
Q data is ignored even if it cannot be read.
Switching of the monitor terminal is possible.
Every pressing of the FADER key advances the MONITOR terminal in the following order.
RFCK→GFC→Error rate
When “3” of the remote controller is pressed, the tracking servo is turned off.
When “8” of the remote controller is pressed, the tracking servo is turned on.

* The servo related items cannot be checked in the CDP-C591/CE235/335.

② Key Check and Display Check Mode

When the main power is turned on while the AFADJ terminal is set to LOW, the CDP-C591/CE235/335 enters the key check and display check mode in which keys and displays can be checked.

First, all display tubes turn on.
When any key is pressed after display tubes are turned on, the number of the keys that have been pressed appear on the left and the key number appears on the right.
(Pushing the JOG key is counted as one of the keys.)
However, the following keys are treated as the special keys that show the different operations.
STOP : All display turn-on check
PLAY : Grid check
PAUSE : Segment check
JOG : Calendar check

When receiving a signal from remote controller, the display “[]- **” appears.
(Number of asterisks ** changes depending on the pressed key. For example, ** is 50 when the PLAY key is pressed.)

③ Default Shipment Mode

When the main power is turned on while pressing the DISCSKIP and the PROGRAM keys, the CDP-C591/CE235/335 enters the default shipment mode in which the default settings when shipped from the factory are set.

Move the DISC 1 to the front and stop the machine. When the message “NODISC” appears, it indicates that the mode has ended with success.

④ Aging Mode

When the OPEN key is pressed while the DISC1 and the CHECK keys are being pressed with the main power being turned ON, the CDP-C591/CE235/335 enters the aging mode in which aging is performed in the following sequence.

Reads TOC	A-1
Accesses the last program	A-2
Plays the last program for 3 seconds	PLAY display appears
EX-CHANGE	A-4
DISCSKIP	A-5
CLOSE	A-6
Accesses the first program	A-7
Playback the first program	PLAY display appears
OPEN	A-9
DISPSKIP	A-A
CLOSE	A-0

When an error occurs during aging, the message “Err-*” appears and the operation is stopped.
The system does not accept any key operations during aging.

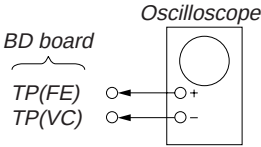
SECTION 4

ELECTRICAL BLOCK CHECKING

Note :

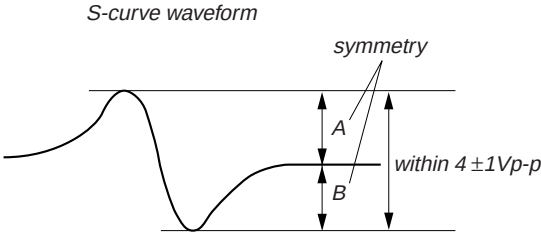
1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal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

S-Curve Check



Procedure :

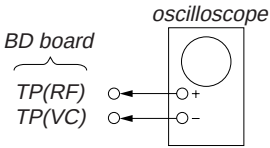
1. Connect oscilloscope to TP (FE).
2. Connect between TP (FE1) and TP (VC) by lead wire.
3. Connect between TP (AGCCON) and TP (GND) by lead wire.
4. Turn Power switch on.
5. Load a disc (YEDS-18) and actuate the focus search. (In consequence of open and close the disc tray, actuate the focus search)
6. Confirm that the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 4 ± 1 Vp-p.



7. After check, remove the lead wire connected in step 2 and 3.

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.

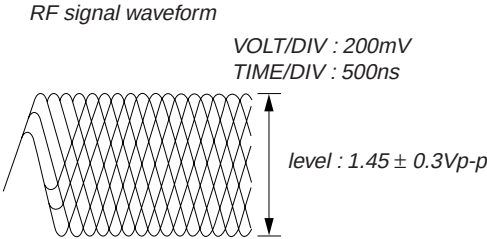
RF Level Check



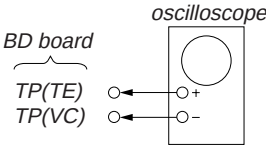
Procedure :

1. Connect oscilloscope to TP (RF).
2. Connect between TP (AGCCON) and TP (GND) by lead wire.
3. Turned Power switch on.
4. Load a disc (YEDS-18) and playback.
5. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.
6. After check, remove the lead wire connected in step 2.

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

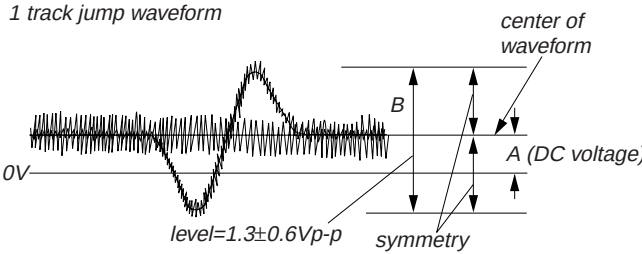


E-F Balance (1 Track jump) Check



Procedure :

1. Connect oscilloscope to TP (TE) and TP (VC).
2. Turned Power switch on.
3. Load a disc (YEDS-18) and playback the number five track.
4. Press the [▶] button. (Becomes the 1 track jump mode.)
5. Confirm that the level B and A (DC voltage) on the oscilloscope waveform.

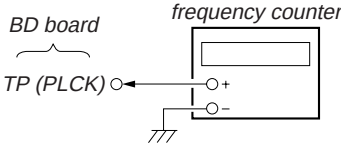


Specified level: $\frac{A}{B} \times 100 = \text{less than } \pm 22\%$

RF PLL Free-run Frequency Check

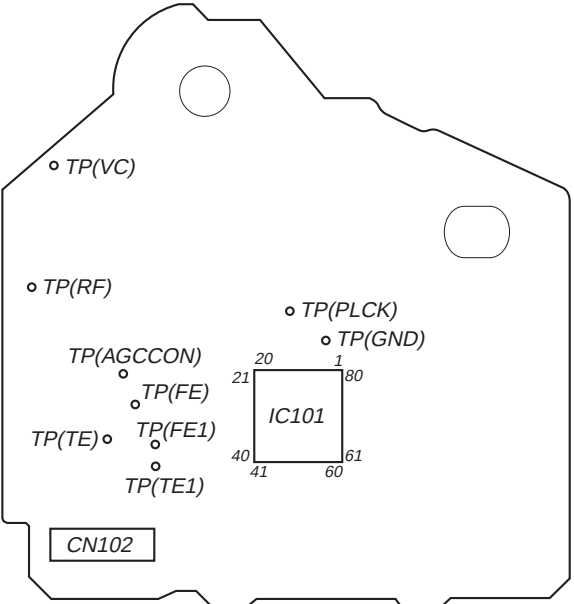
Procedure :

1. Connect frequency counter to TP (PLCK) with lead wire.
2. Turned Power switch on.
3. Put the disc (YEDS-18) in to play the number five track. Confirm that reading on frequency counter is 4.3218MHz.



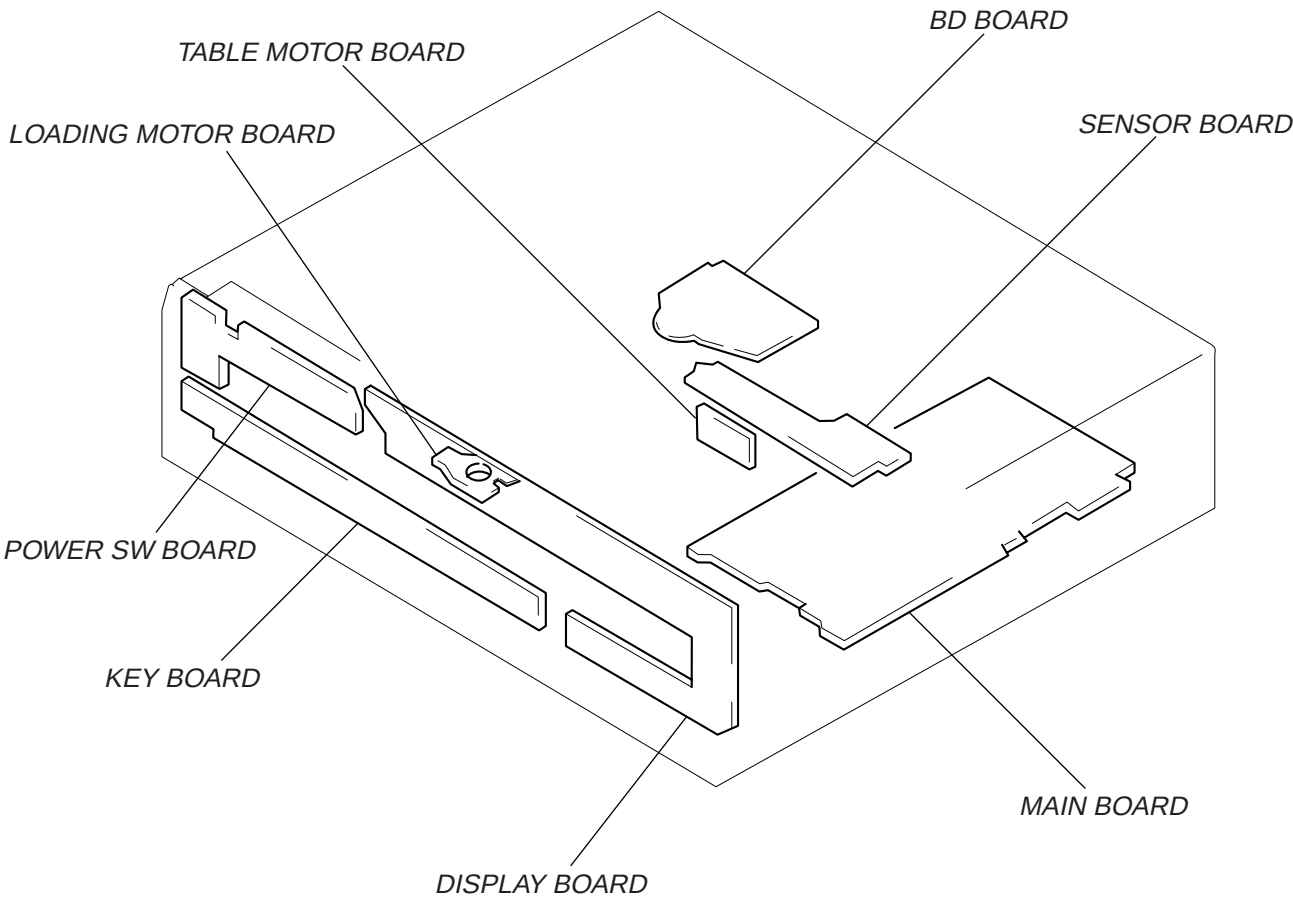
Adjustment Location :

[BD BOARD] — Conductor Side —



SECTION 5
DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION



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

- Note on Schematic Diagram:**
- All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$ 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
 - % : indicates tolerance.
 - Δ : internal component.
 - : panel designation.

Note: The components identi- fied by mark Δ or dotted line with mark Δ are criti- cal 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.
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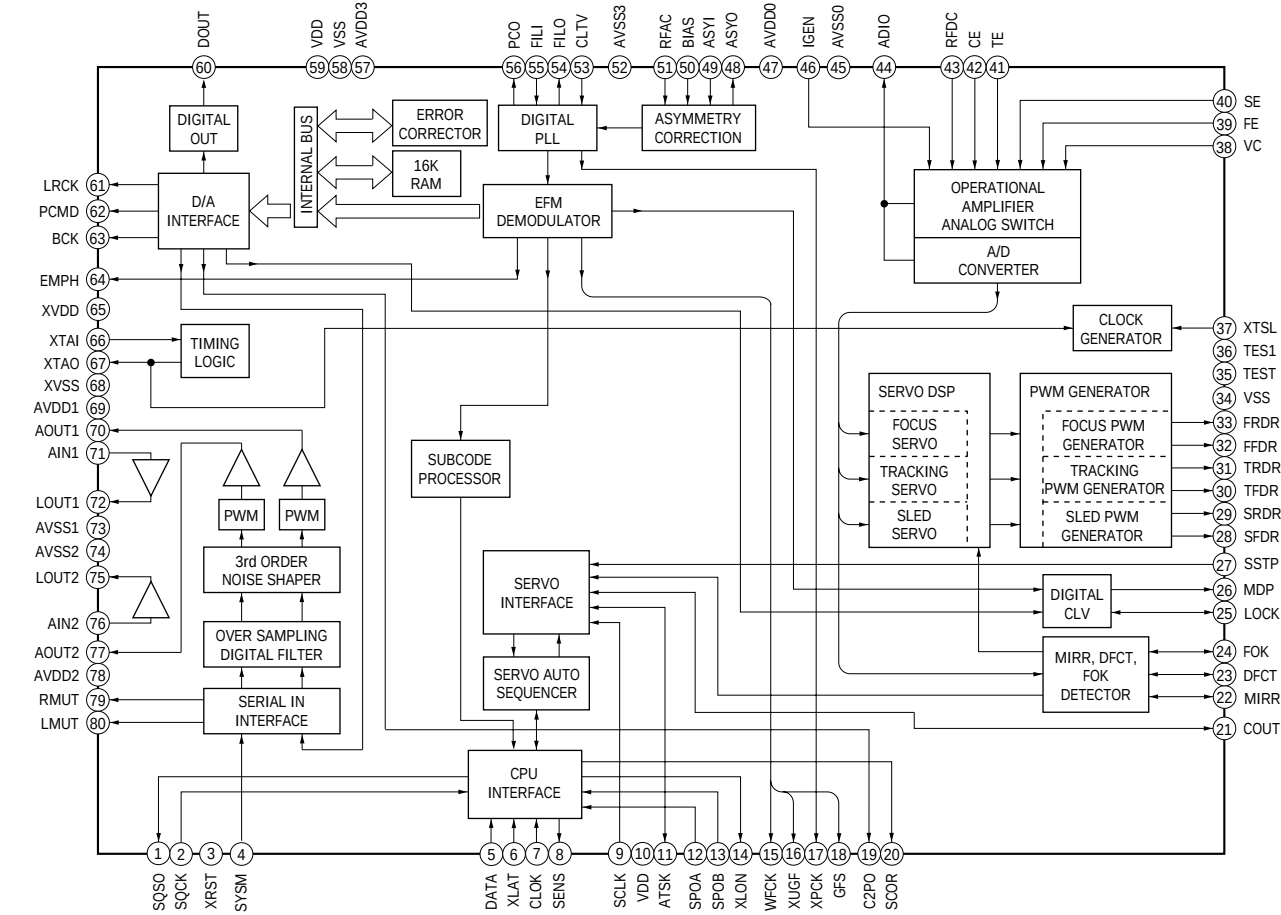
- Note on Printed Wiring Boards:**
- : parts extracted from the component side.
 - Δ : internal component.
 - : Pattern from the side which enables seeing.

- B+ : B+ Line.
- B- : B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 - : CD
 - : CD DIGITAL
- Abbreviation
 - CND : Canadian
 - AED : North European
 - AUS : Aurstrarian
 - EA : Saudi Arabia
 - SP : Singapore

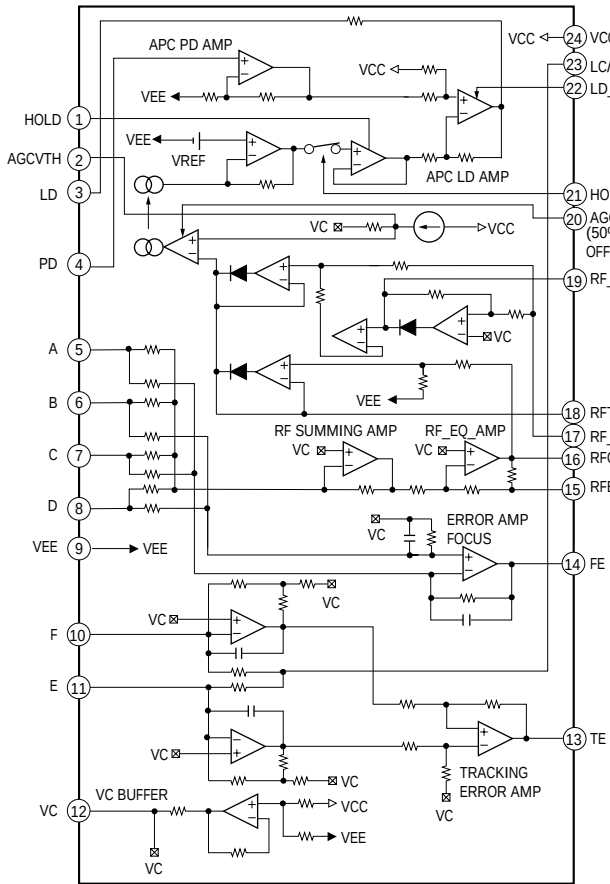
5-2. IC BLOCK DIAGRAMS

BD board

IC101 CXD2587Q

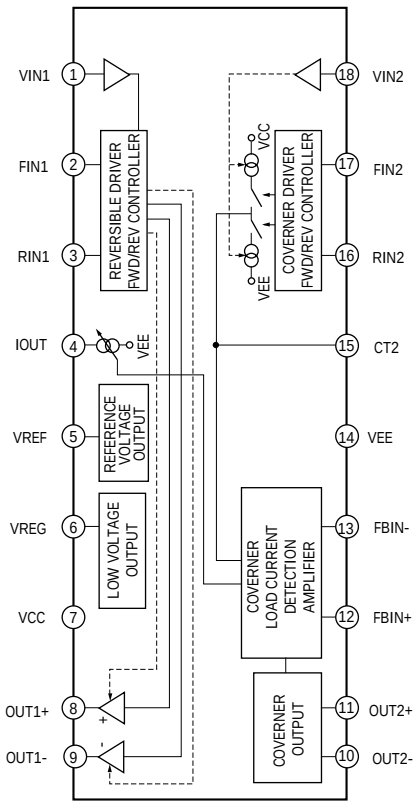


IC103 CXA2568M-T6

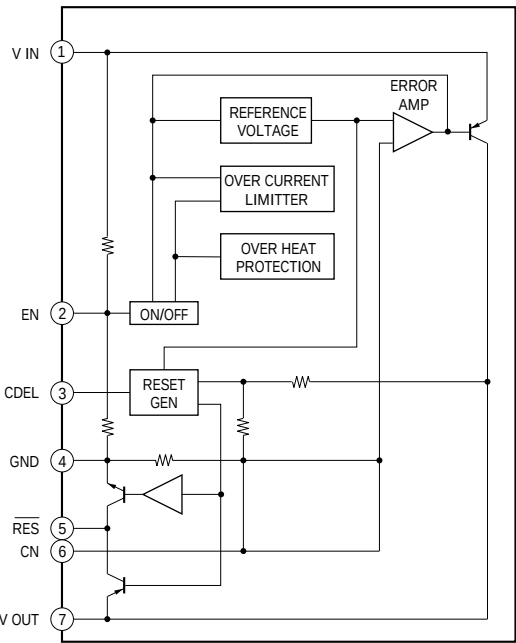


MAIN board

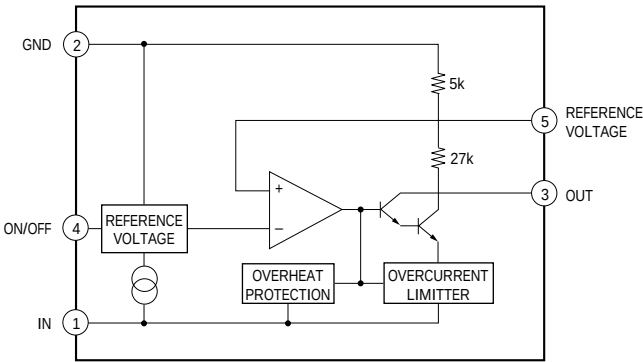
IC304 BA6780



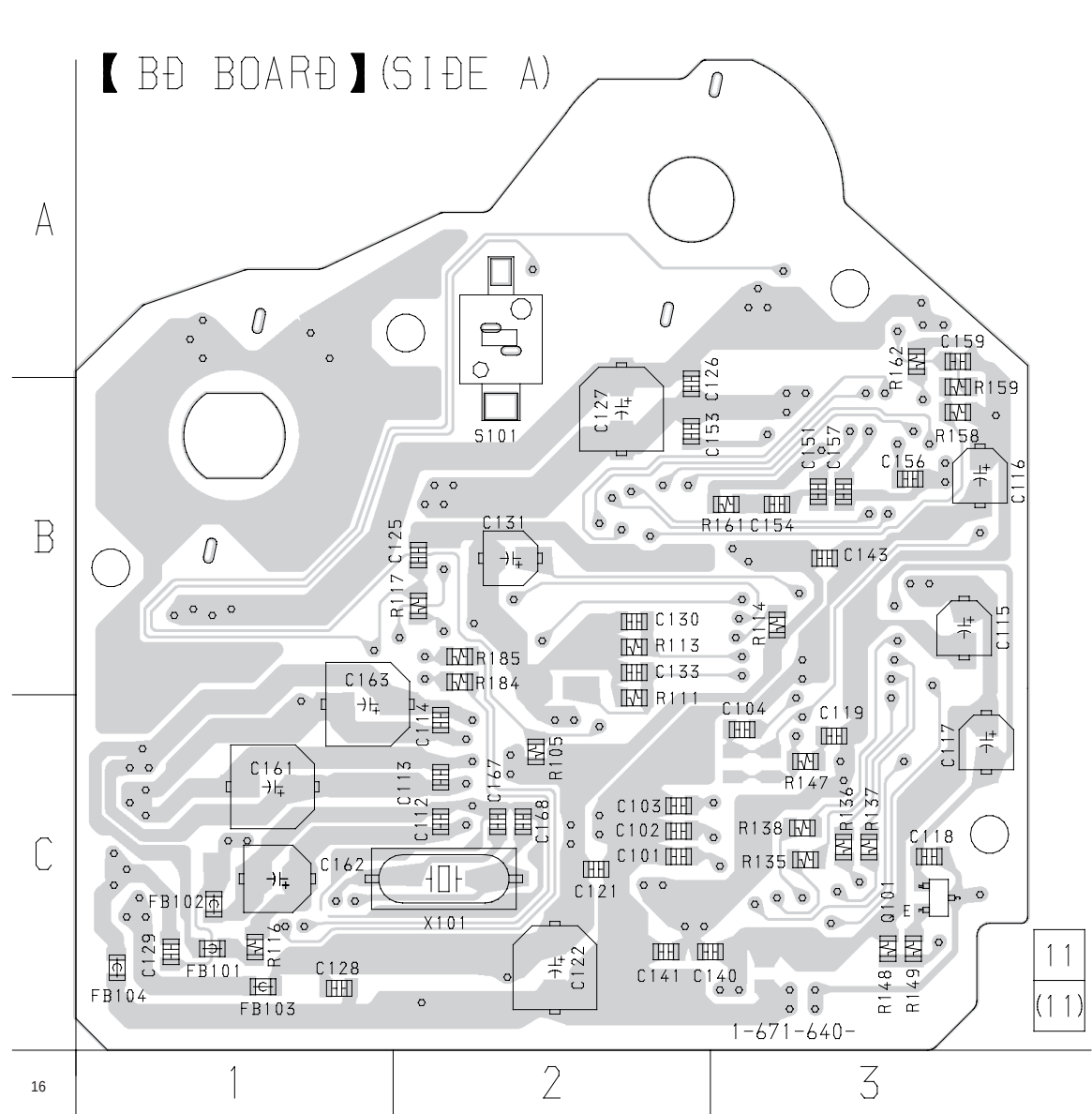
IC601 LA5602



IC603 M5293L

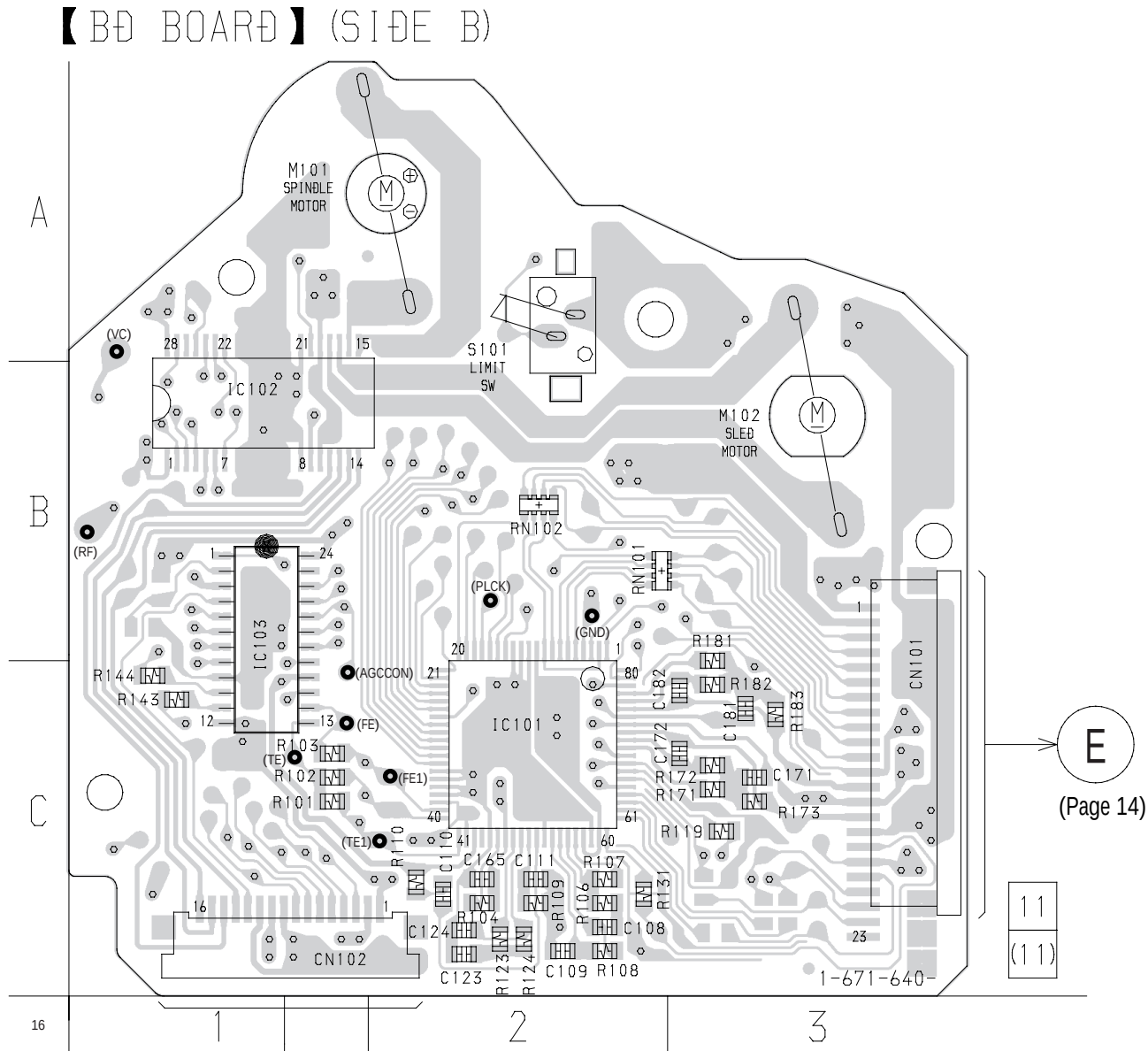


5-3. PRINTED WIRING BOARD – BD SECTION –
• See page 10 for Circuit Board Location.



• Semiconductor Location

Ref. No.	Location
Q101	C-3

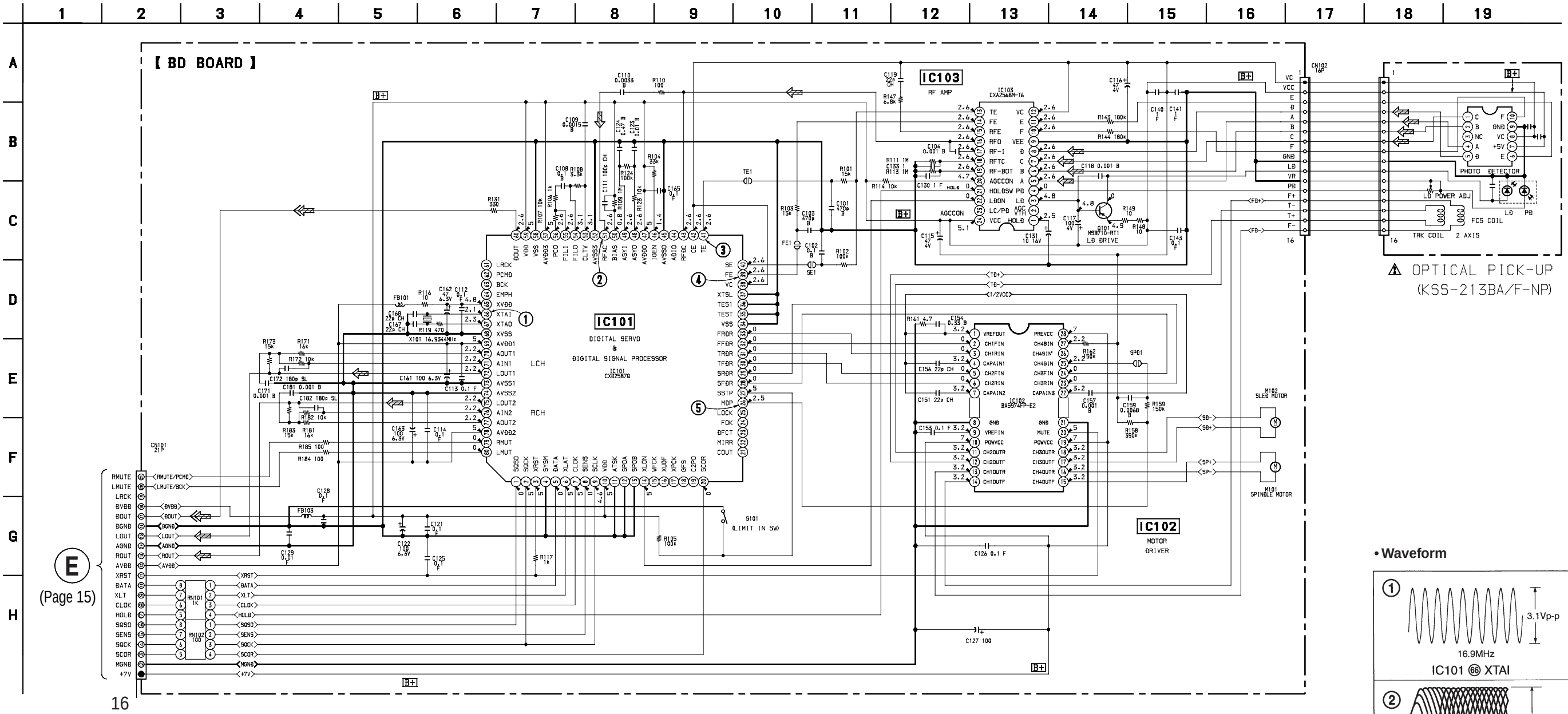


OPTICAL PICK-UP BLOCK
KSS-213BA/F-NP

• Semiconductor Location

Ref. No.	Location
IC101	C-2
IC102	B-1
IC103	B-1

5-4. SCHEMATIC DIAGRAM – BD SECTION –
• See page 11 for IC Block Diagrams.

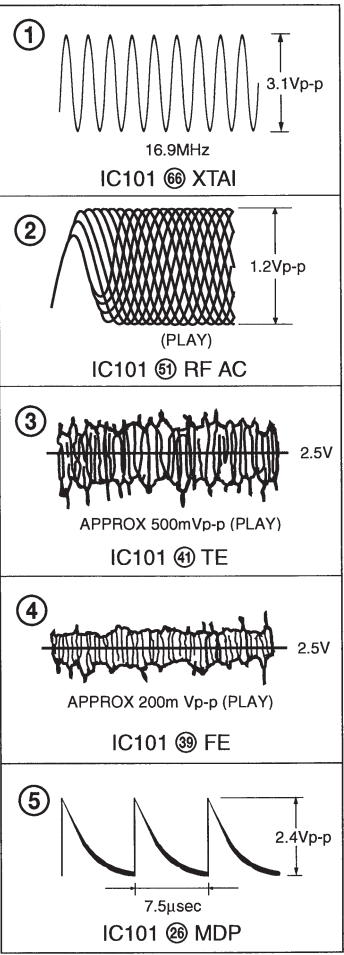


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(Page 15)

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

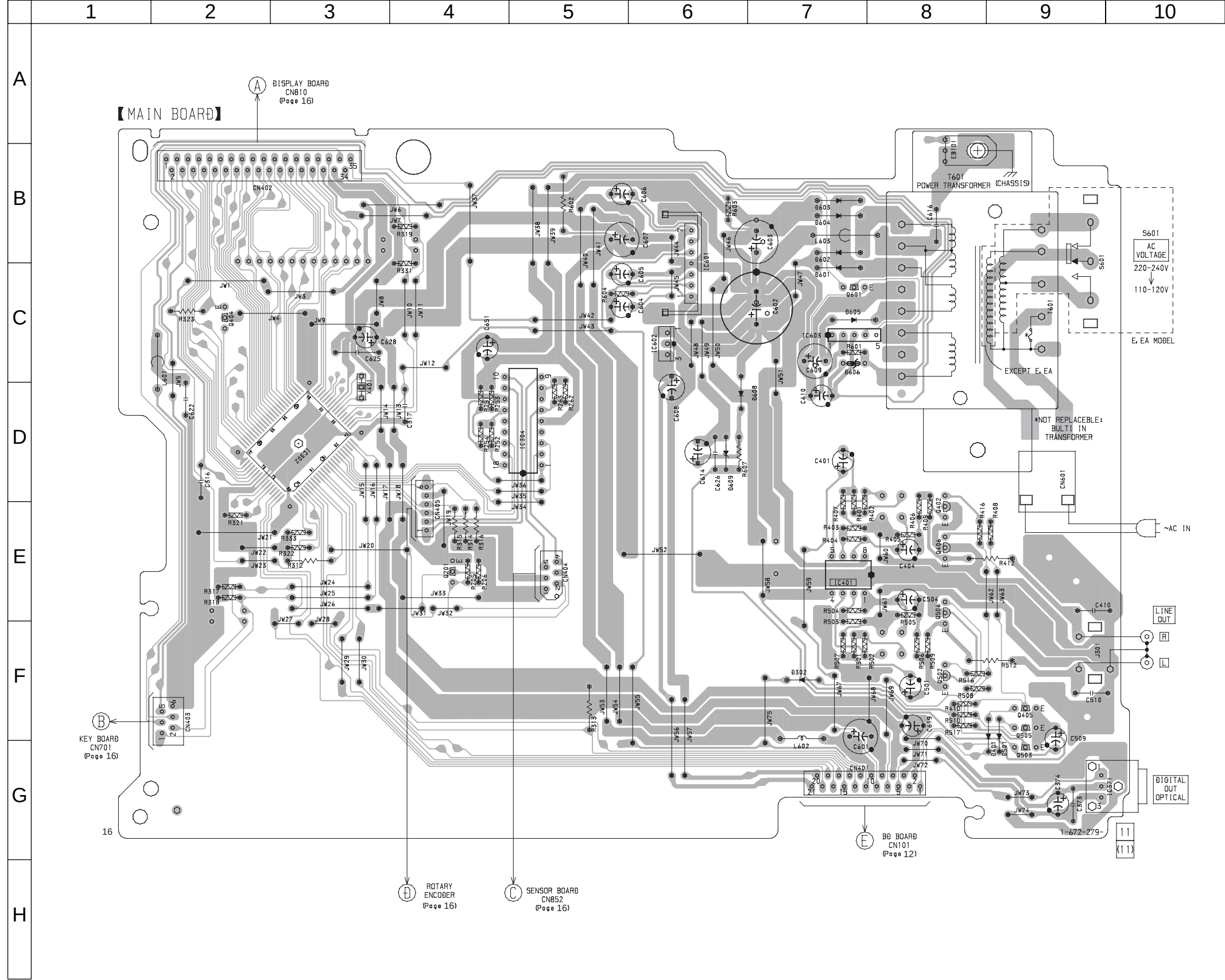
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

• Waveform



5-5. PRINTED WIRING BOARD – MAIN SECTION –

• See page 10 for Circuit Board Location.

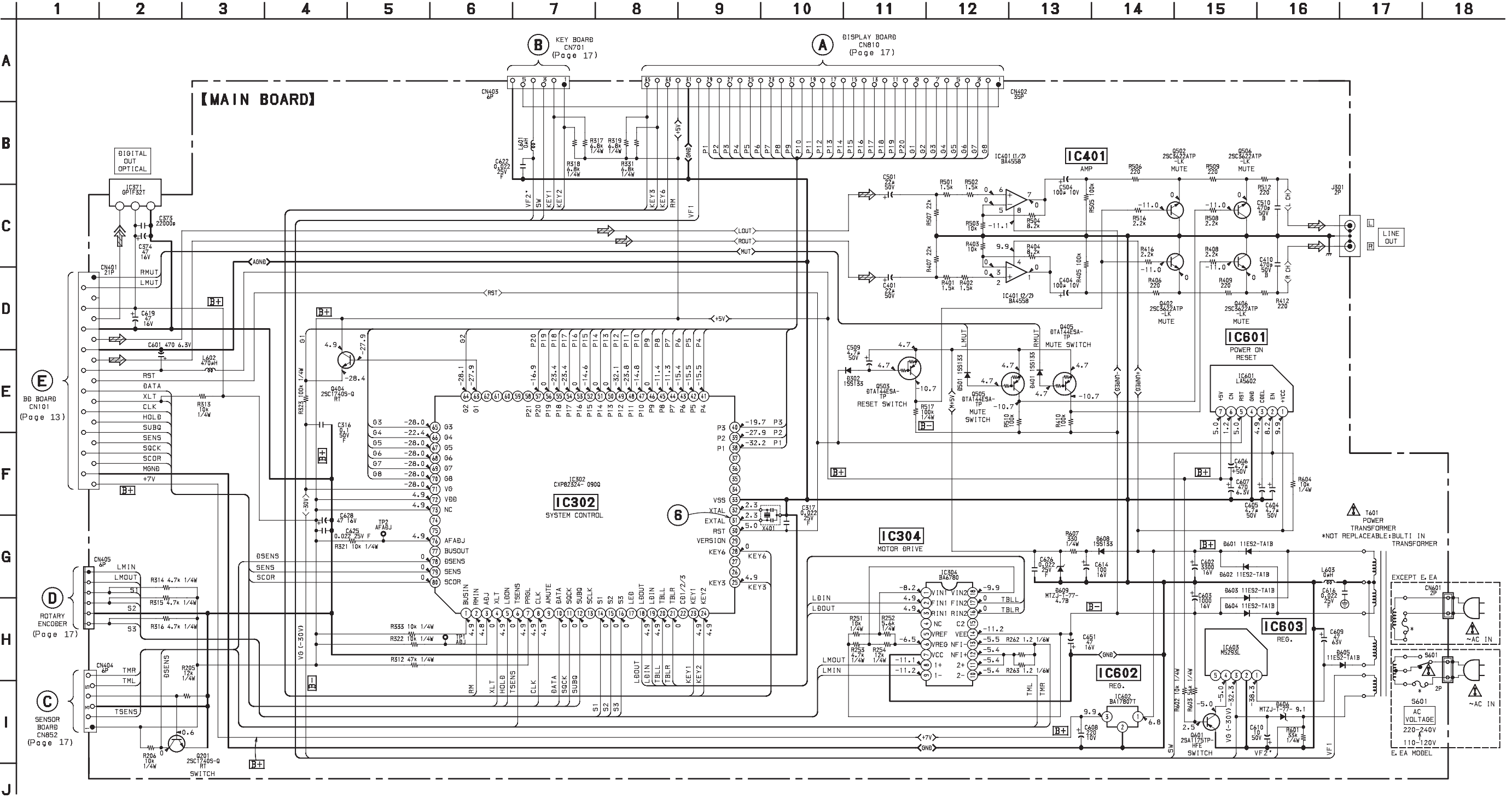


• Semiconductor Location

Ref. No.	Location
D302	F-7
D401	G-9
D501	G-9
D601	C-7
D602	B-7
D603	B-7
D604	B-7
D605	C-7
D606	C-7
D608	D-7
D609	D-6
IC302	D-2
IC304	D-5
IC371	G-10
IC401	E-7
IC601	C-6
IC602	C-6
IC603	C-7
Q201	E-4
Q402	E-8
Q404	C-2
Q405	F-9
Q406	E-8
Q502	F-8
Q503	G-9
Q505	F-9
Q506	E-8
Q601	C-7

5-6. SCHEMATIC DIAGRAM – MAIN SECTION –

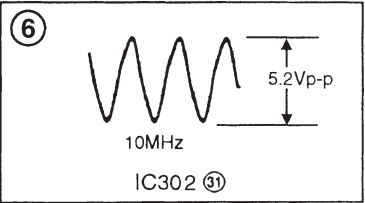
- See page 11 for IC Block Diagrams.
- See page 18 for IC Pin Function. (IC302)



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

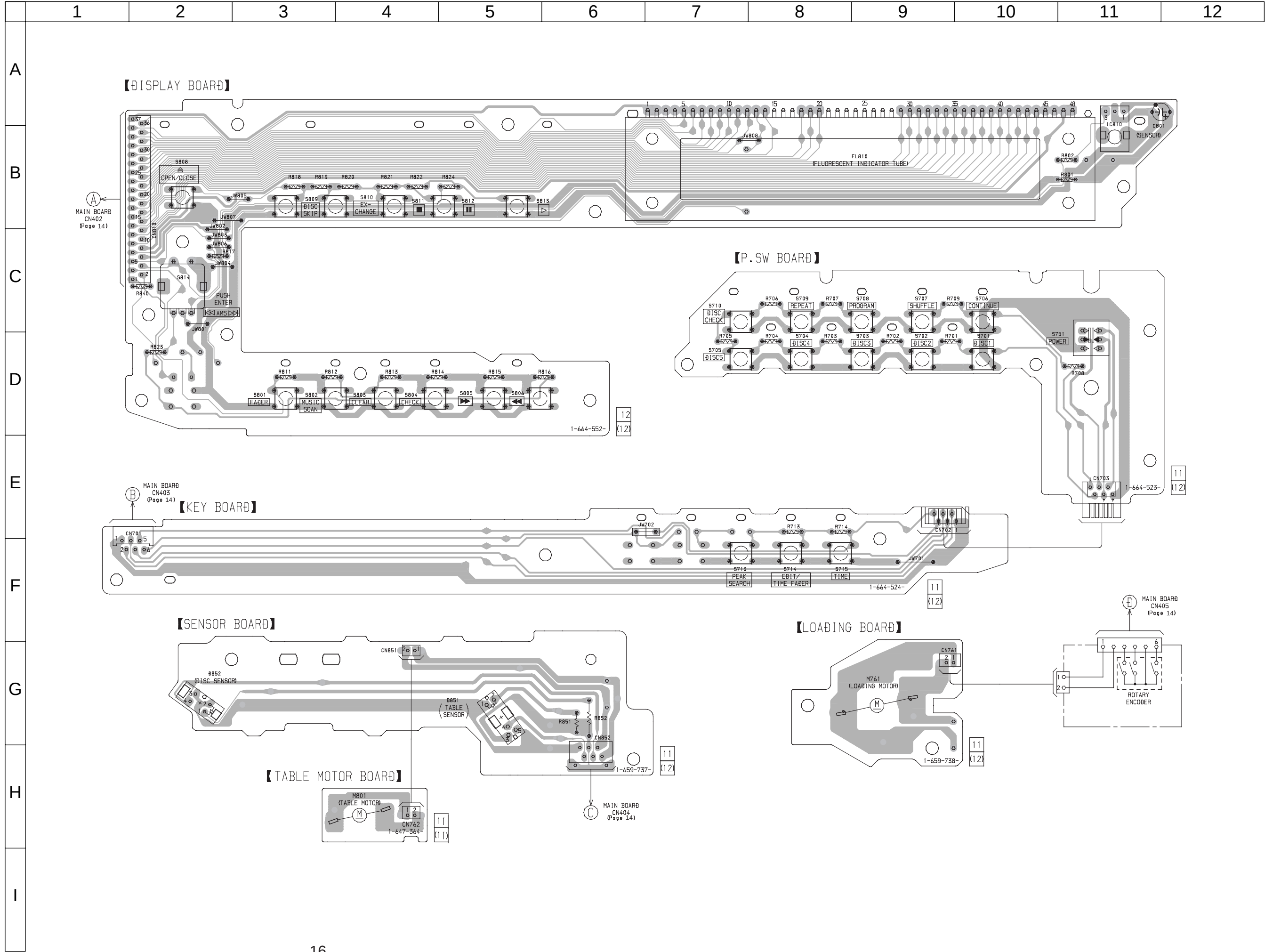
Les composants identifiés par une marque $\triangle$ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

• Waveform

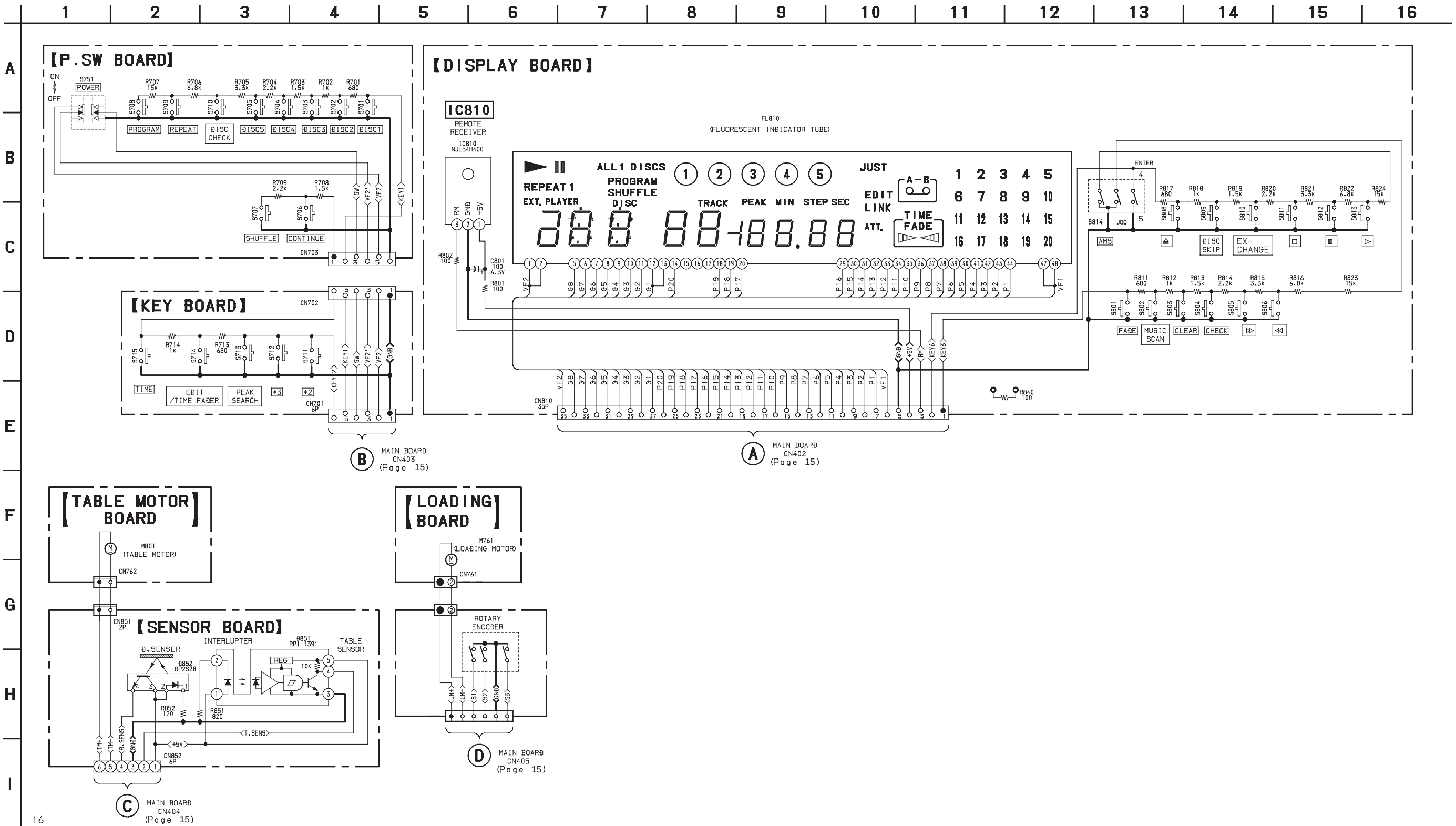


5-7. PRINTED WIRING BOARD – DISPLAY SECTION –

• See page 10 for Circuit Board Location.



5-8. SCHEMATIC DIAGRAM – DISPLAY SECTION –



5-9. IC PIN FUNCTION

• IC302 SYSTEM CONTROL (CXP82324-090Q)(MAIN board)

Pin No.	Pin Name	I/O	Function
1	BUS IN	I	Not used. (Pull up)
2	RM IN	I	Remote control signal input
3	ADJ	I	ADJ mode setting pin
4	XLT	O	CXD2587 latch output
5	LD ON	O	Laser diode ON output
6	TSENS	I	Table position sensor input
7	PRGL	O	Not used. (Pull up)
8	CLK	O	CXD2587 serial clock output
9	AMUTE	O	Mute output pin
10	DATA	O	CXD2587 serial data output
11	SQCK	O	Subcode Q read clock
12	SUBQ	I	Subcode Q read data input
13	SCLK	O	Not used. (Open)
14	S1	I	CDM27 table rotary encoder input 1
15	S2	I	CDM27 table rotary encoder input 2
16	S3	I	CDM27 table rotary encoder input 3
17	LED	O	Not used. (Open)
18	LDOUT	O	Loading-out output
19	LDIN	O	Loading-in output
20	TBLL	O	Rotary table rotation counter-clockwise rotation output
21	TBLR	O	Rotary table rotation clockwise rotation output
22	CD123	I	Not used. (Pull up)
23	KEY1	I	A/D input 1 for key input
24	KEY2	I	A/D input 2 for key input
25	KEY3	I	A/D input 3 for key input
26	KEY4	O	Not used. (Open)
27	KEY5	O	Not used. (Open)
28	KEY6	I	A/D input 6 for key input
29	VERSION	I	Version setting input pin (Open)
30	XRST	I	Reset input
31	EXTAL	—	Oscillator connection pin
32	XTAL	—	Oscillator connection pin
33	Vss	—	Ground
34 to 37	NC	O	Not used. (Open)
38	P1	O	FL display tube segmant output 1
39	P2	O	FL display tube segmant output 2
40	P3	O	FL display tube segmant output 3

Pin No.	Pin Name	I/O	Function
41	P4	O	FL display tube segmant output 4
42	P5	O	FL display tube segmant output 5
43	P6	O	FL display tube segmant output 6
44	P7	O	FL display tube segmant output 7
45	P8	O	FL display tube segmant output 8
46	P9	O	FL display tube segmant output 9
47	P10	O	FL display tube segmant output 10
48	P11	O	FL display tube segmant output 11
49	P12	O	FL display tube segmant output 12
50	P13	O	FL display tube segmant output 13
51	P14	O	FL display tube segmant output 14
52	P15	O	FL display tube segmant output 15
53	P16	O	FL display tube segmant output 16
54	P17	O	FL display tube segmant output 17
55	P18	O	FL display tube segmant output 18
56	P19	O	FL display tube segmant output 19
57	P20	O	FL display tube segmant output 20
58 to 62	NC	O	Not used. (Open)
63	G1	O	FL display tube grid output 1
64	G2	O	FL display tube grid output 2
65	G3	O	FL display tube grid output 3
66	G4	O	FL display tube grid output 4
67	G5	O	FL display tube grid output 5
68	G6	O	FL display tube grid output 6
69	G7	O	FL display tube grid output 7
70	G8	O	FL display tube grid output 8
71	VG	—	FL display tube filament voltage (−30 V)
72	VDD	—	+5V
73	NC	—	+5V
74	NC	O	Not used. (Open)
75	NC	O	Not used. (Open)
76	AFADJ	I	AFADJ mode setting pin
77	BUS OUT	O	Not used. (Open)
78	DSENS	I	Disc sensor input
79	SENS	I	CXD2587 internal state monitor input
80	SCOR	I	Subcode sync. input

SECTION 6 EXPLODED VIEWS

NOTE:

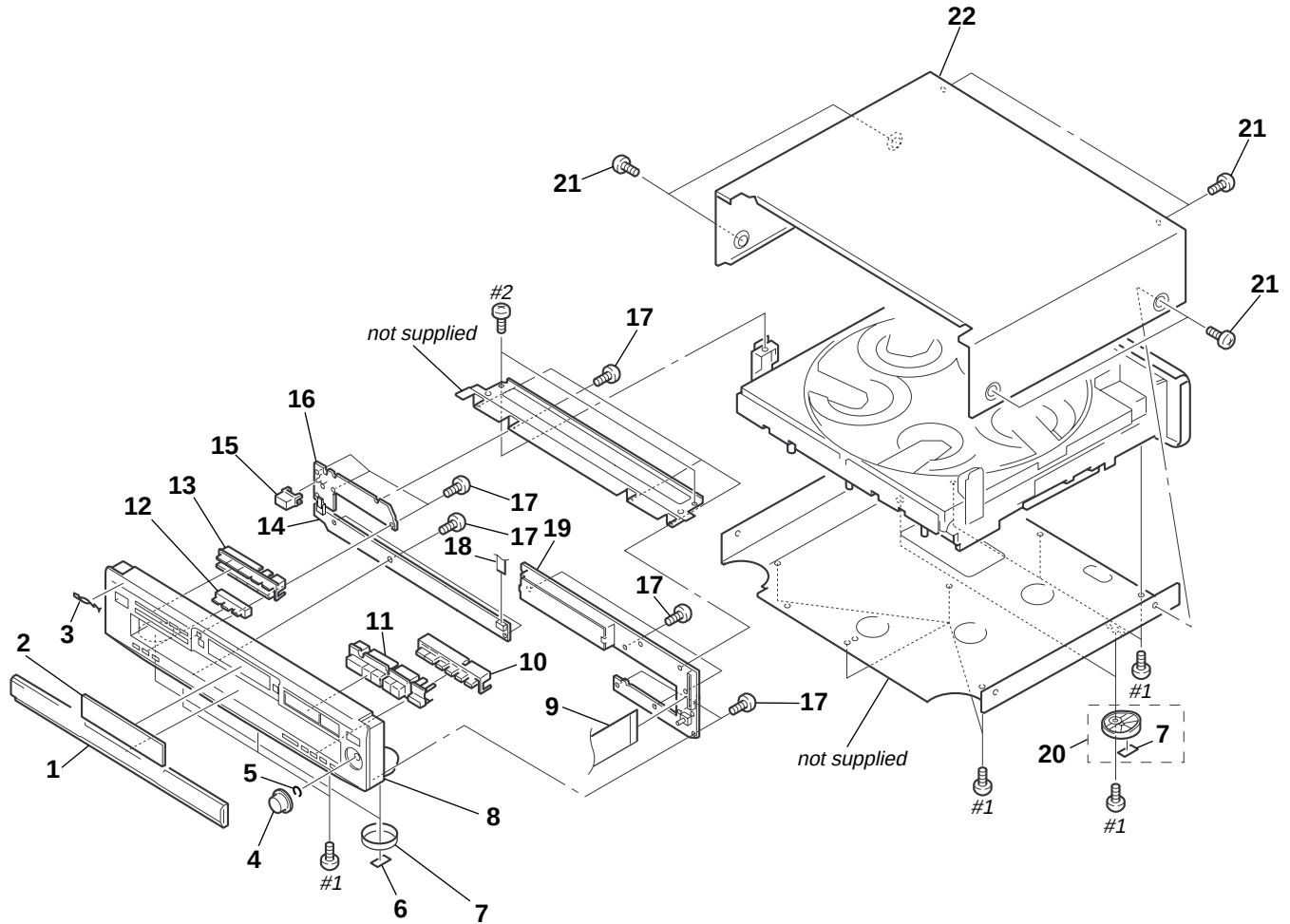
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
 CND : Canadian
 AED : North European
 AUS : Australian
 EA : Saudi Arabia
 SP : Singapore

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

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

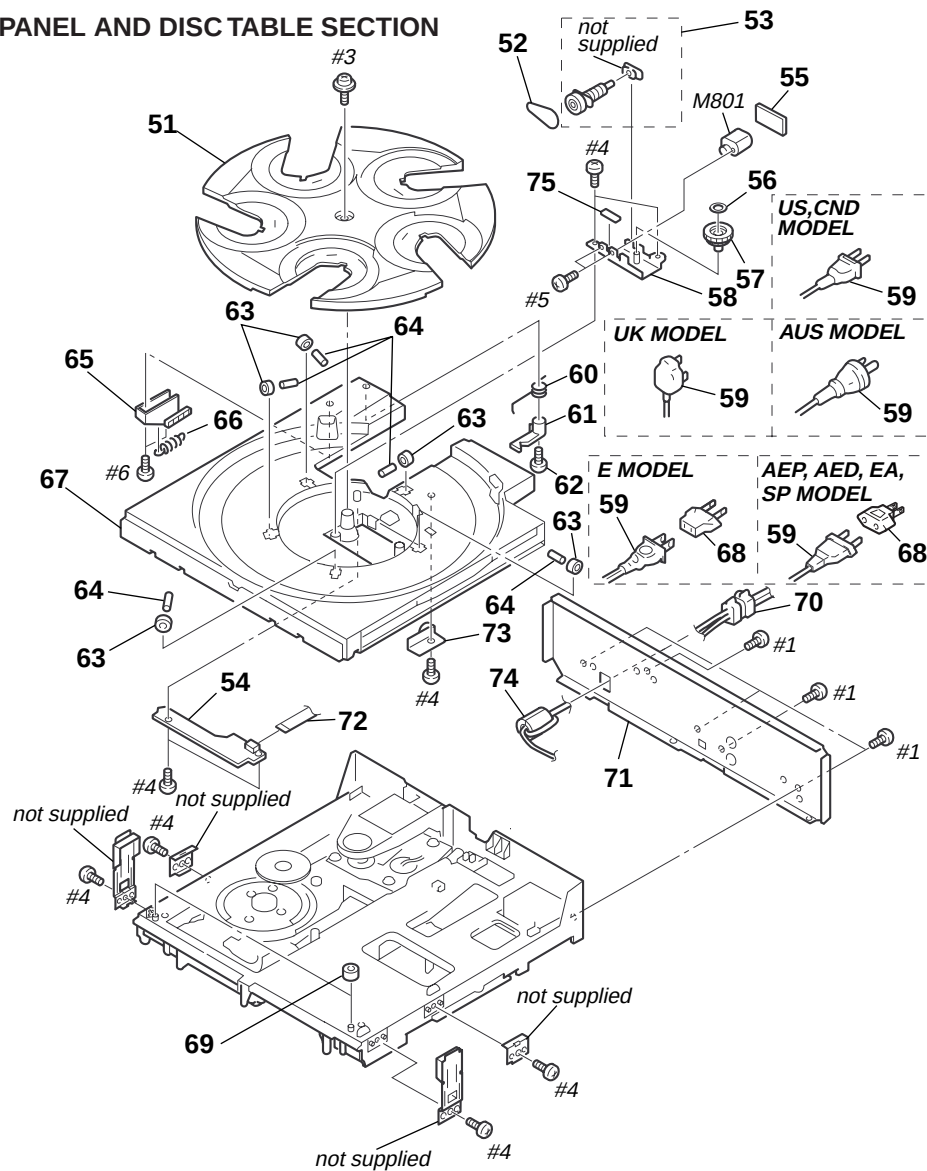
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-1. FRONT PANEL AND CASE SECTION



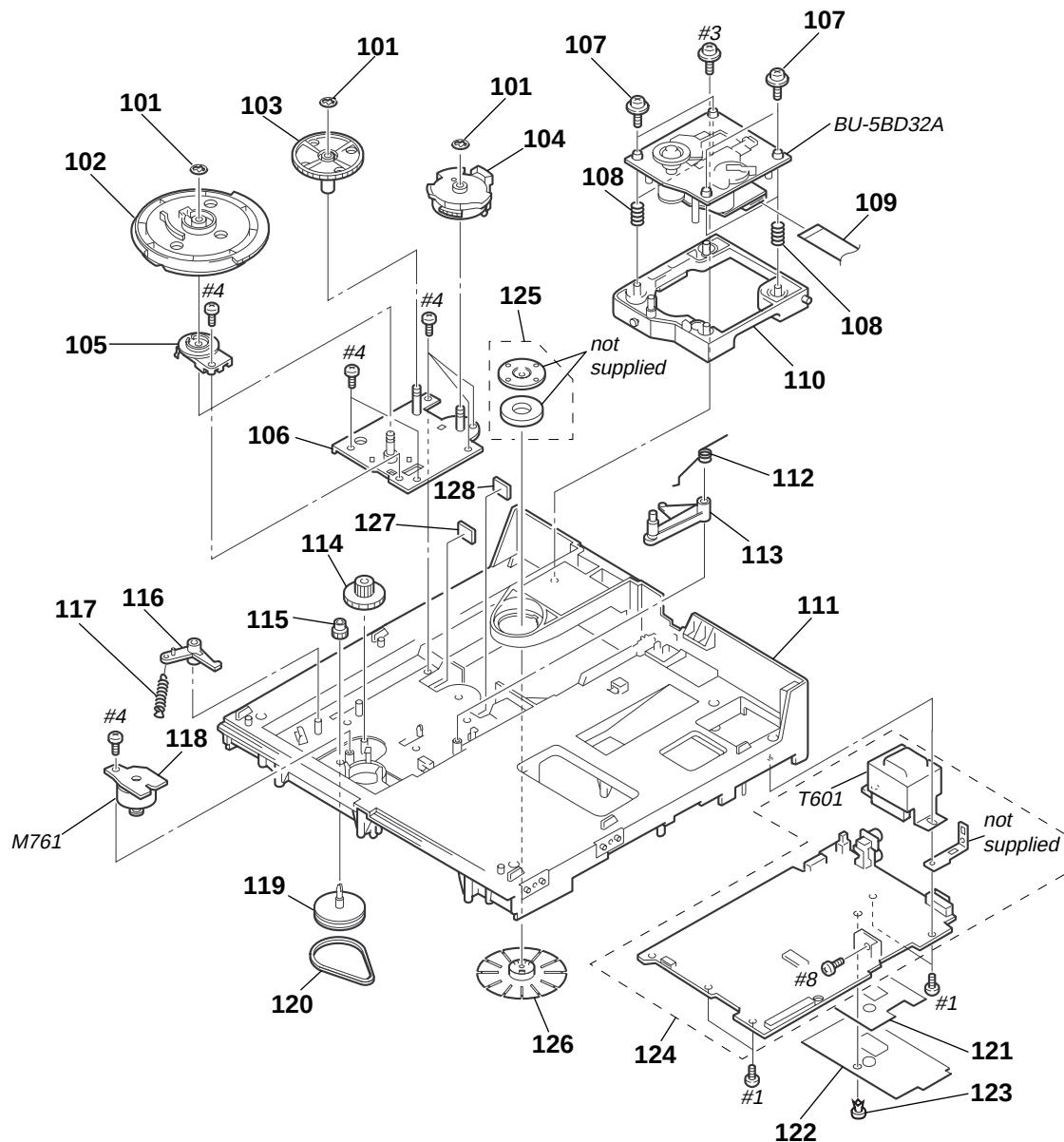
Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	4-997-437-11	PANEL, LOADING		11	4-987-775-01	BUTTON (PLAY)	
2	4-987-779-01	WINDOW (FL)(CE235,C591)		12	4-987-776-01	BUTTON (FUNC)	
2	4-987-779-11	WINDOW (FL)(CE335)		13	4-987-774-01	BUTTON (MODE)	
3	3-008-600-01	EMBLEM (5-AR), SONY		* 14	1-664-524-11	KEY BOARD	
4	4-987-994-01	KNOB(AMS)		15	4-999-354-01	BUTTON (POWER)	
5	3-354-981-01	SPRING (SUS), RING		* 16	1-664-523-11	P.S.W BOARD	
* 6	4-978-398-21	CUSHION		17	4-951-620-01	SCREW (2.6 × 8), +BVTP	
7	4-977-593-01	RING(DIA. 50), ORNAMENTAL	(EXCEPT US,CND)	18	1-777-838-11	WIRE(FLAT TYPE) (6 CORE)	
8	4-997-418-11	PANEL, FRONT(CE235)		* 19	A-4699-474-A	DISPLAY BOARD, COMPLETE	
8	4-997-418-21	PANEL, FRONT(CE335)		20	X-4946-618-1	FOOT ASSY(US,CND)	
8	4-997-418-41	PANEL, FRONT(C591)		20	X-4946-641-1	FOOT ASSY(EXCEPT US,CND)	
9	1-777-837-11	WIRE(FLAT TYPE) (35 CORE)		21	4-210-291-01	SCREW (CASE 3 TP2)	
10	4-987-777-01	BUTTON (FF)		* 22	4-978-492-11	CASE	

6-2. BACK PANEL AND DISC TABLE SECTION



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	4-957-299-11	TABLE (B), DISC		70	3-703-571-11	BUSHING (S) (FBS002), CORD(E)	
52	4-957-304-21	BELT(RM)		70	4-966-267-11	BUSHING (FBS001), CORD(EXCEPT E)	
53	X-4949-852-1	GEAR(ROTARY A) ASSY		* 71	4-214-618-01	PANEL, BACK(CE235:US)	
* 54	1-659-737-11	SENSOR BOARD		* 71	4-214-618-11	PANEL, BACK(CE235:CND)	
* 55	1-647-364-11	TABLE MOTOR BOARD		* 71	4-214-618-22	PANEL, BACK(CE235:AEP,AED)	
56	3-325-697-01	WASHER		* 71	4-214-618-32	PANEL, BACK(CE235:UK)	
57	4-957-284-01	GEAR(ROTARY B)		* 71	4-214-618-41	PANEL, BACK(CE235:AUS)	
58	X-4943-477-1	BRACKET (RM) ASSY		* 71	4-214-618-51	PANEL, BACK(CE235:E,EA)	
△ 59	1-558-943-41	CORD, POWER(E)		* 71	4-214-618-61	PANEL, BACK(CE235:SP)	
△ 59	1-575-651-21	CORD, POWER(AEP,AED,EA,SP)		* 71	4-214-618-71	PANEL, BACK(C591)	
△ 59	1-590-926-11	CORD, POWER(CND)	* 71	4-214-619-01	PANEL, BACK(CE335:US)		
△ 59	1-696-845-11	CORD, POWER(AUS)	* 71	4-214-619-11	PANEL, BACK(CE335:CND)		
△ 59	1-751-529-11	CORD, POWER(UK)	* 71	4-214-619-22	PANEL, BACK(CE335:AEP,AED)		
△ 59	1-783-531-41	CORD, POWER(US)	* 71	4-214-619-32	PANEL, BACK(CE335:UK)		
60	4-957-293-01	SPRING (RACK RELEASE)	* 71	4-214-619-41	PANEL, BACK(CE335:AUS)		
61	4-957-291-11	LEVER (RACK RELEASE)	* 71	4-214-619-51	PANEL, BACK(CE335:E,EA)		
62	4-957-868-01	SCREW (+PTPWH 2.6 × 20)	* 71	4-214-619-61	PANEL, BACK(CE335:SP)		
63	4-988-162-01	ROLLER	72	1-782-816-11	WIRE(FLAT TYPE) (6 CORE)		
64	4-934-376-01	SHAFT (ROLLER)	73	X-4943-480-1	BRACKET (ROLLER D) ASSY		
65	4-957-292-11	SLIDER (RACK)	74	1-500-386-11	FILTER, CLAMP (FERRITE CORE)		
66	4-957-294-01	SPRING (D.T), TENSION	75	4-957-295-11	CUSHION (RM)		
67	4-957-298-01	TABLE (A), DISC	M801	A-4660-525-A	MOTOR ASSY, ROTARY		
△ 68	1-569-007-11	ADAPTOR, CONVERSION 2P(E)	The components identified by mark △ or dotted line with mark △ are critical for safety. Les composants identifiés par une marque △ sont critiques pour la sécurité.				
△ 68	1-569-008-31	ADAPTOR, CONVERSION(EA)					
* 69	4-951-619-21	CUSHION (A)					

6-3. CHASSIS SECTION

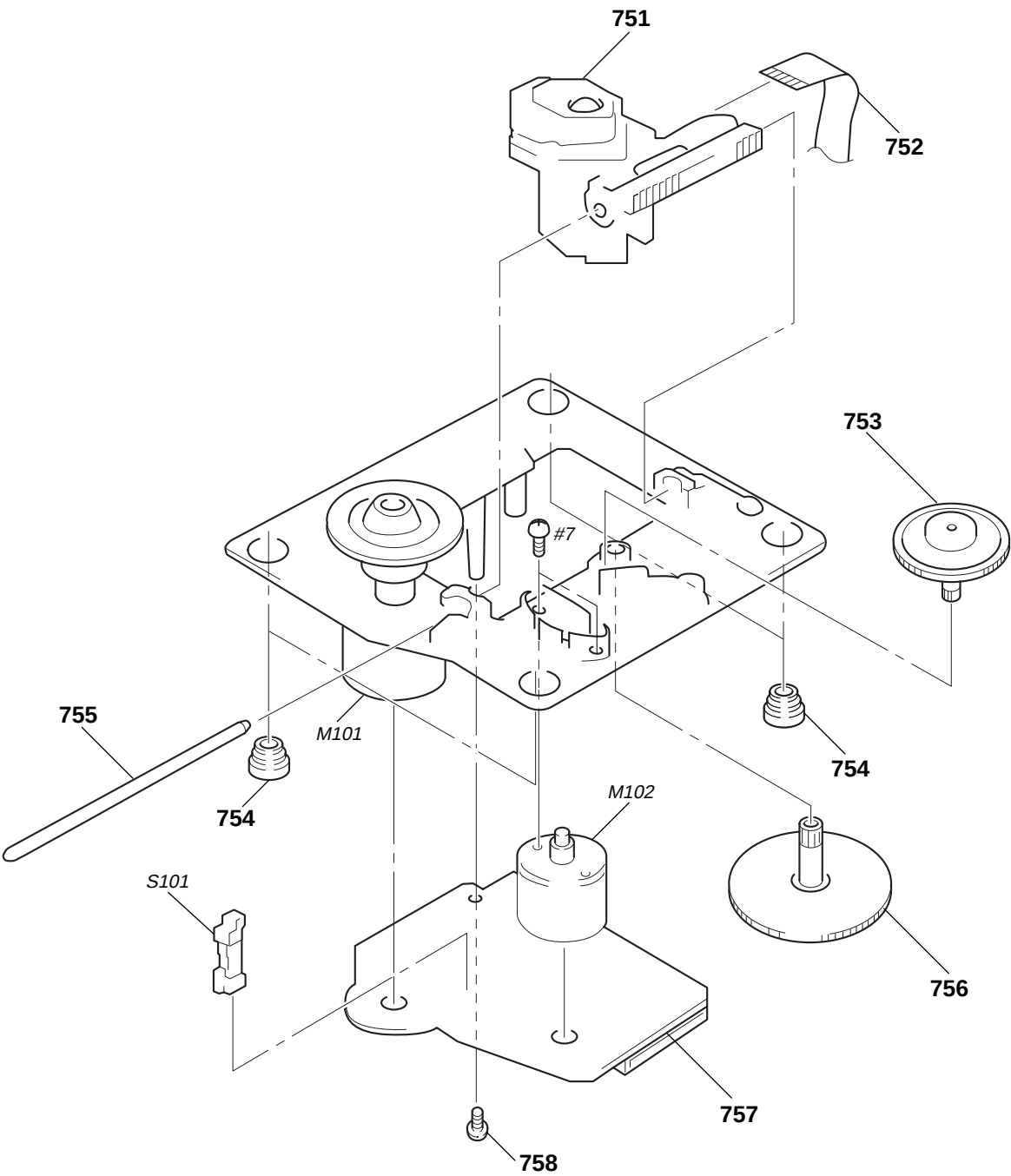


Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
101	4-957-283-01	WASHER (5), STOPPER		* 118	1-659-738-11	LOADING BOARD	
102	4-957-288-01	GEAR (MAIN)		119	X-4949-851-1	PULLEY ASSY	
103	4-957-287-21	GEAR (REV)		120	4-944-490-01	BELT (TIMING)	
104	4-957-286-11	GEAR (U/D)		* 121	4-957-555-01	SHEET, INSULATING(EXCEPT US,CND)	
105	1-466-996-11	ENCODER, ROTARY		* 122	4-957-556-01	SHEET, INSULATING(EXCEPT US,CND)	
106	X-4946-195-1	BRACKET (GEAR) ASSY		123	3-531-576-11	RIVET(EXCEPT US,CND)	
107	4-933-134-01	SCREW (+PTPWH M2.6 × 6)		* 124	A-4724-491-A	MAIN BOARD, COMPLETE(US,CND)	
108	4-948-503-01	SPRING (BU), COMPRESSION		* 124	A-4724-492-A	MAIN BOARD, COMPLETE(AEP,UK,AED,SP,AUS)	
109	1-790-490-11	WIRE, (FLAT TYPE) (21 CORE)		* 124	A-4724-493-A	MAIN BOARD, COMPLETE(E,EA)	
110	4-957-289-22	HOLDER (BU)		125	1-452-925-21	MAGNET ASSY	
111	4-957-300-03	CHASSIS		126	4-993-142-11	PULLEY (L), PRESS	
112	4-957-281-01	SPRING (LOCK LEVER)		127	4-981-731-21	CUSHION (U/D)	
113	4-957-279-11	LEVER, LOCK		128	4-981-731-11	CUSHION (U/D)	
114	4-957-303-01	GEAR (LOADING C)		M761	A-4604-834-A	MOTOR ASSY, LOADING	
115	4-934-375-21	GEAR (LOADING B)		△ T601	1-429-956-11	TRANSFORMER, POWER(US,CND)	
116	4-957-285-01	LEVER, SET		△ T601	1-431-076-11	TRANSFORMER, POWER(AEP,UK,AED,SP,AUS)	
117	4-962-087-01	SPRING (S), TENSION		△ T601	1-431-168-11	TRANSFORMER, POWER(E,EA)	

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.

6-4. BASE UNIT SECTION (BU-5BD32A)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
△ 751	8-848-379-31	OPTICAL PICK-UP KSS-213BA/F-NP		756	4-917-564-01	GEAR (P), FLATNESS	
752	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)		* 757	A-4724-494-A	BD BOARD, COMPLETE	
753	4-917-567-21	GEAR (M)		758	4-951-620-01	SCREW (2.6 × 8), +BVTP	
754	4-951-940-41	INSULATOR (BU)		M101	X-4917-523-3	MOTOR ASSY(SPINDLE)	
755	4-917-565-01	SHAFT, SLED		M102	X-4917-504-1	MOTOR ASSY(SLED)	
				S101	1-572-085-11	SWITCH, LEAF(LIMIT IN)	

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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SECTION 7 ELECTRICAL PARTS LIST

BD

NOTE:

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

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

- CAPACITORS:
uF: μ F
- RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- COILS
uH: μ H
- Abbreviation
CND : Canadian
AED : North European
AUS : Austrarian
EA : Saudi Arabia
SP : Singapore

- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA..., μ PA...,
uPB..., μ PB..., uPC..., μ PC...,
uPD..., μ PD...

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

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

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	A-4724-494-A	BD BOARD, COMPLETE *****		C181	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
				C182	1-163-123-00	CERAMIC CHIP 180PF 5%	50V
		< CAPACITOR >				< CONNECTOR >	
C101	1-163-005-11	CERAMIC CHIP 470PF 10%	50V	CN101	1-784-360-11	CONNECTOR,FFC(LIF(NON-ZIF))21P	
C102	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V	CN102	1-777-937-11	CONNECTOR, FFC/FPC 16P	
C103	1-163-005-11	CERAMIC CHIP 470PF 10%	50V			< FERRITE BEAD >	
C104	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V	FB101	1-500-445-21	FERRITE 0UH	
C108	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V	FB103	1-500-445-21	FERRITE 0UH	
C109	1-163-011-11	CERAMIC CHIP 0.0015uF 10%	50V			< IC >	
C110	1-164-182-11	CERAMIC CHIP 0.0033uF 10%	50V	IC101	8-752-386-85	IC CXD2587Q	
C111	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	IC102	8-759-549-28	IC BA5974FP-E2	
C112	1-163-038-91	CERAMIC CHIP 0.1uF 25V		IC103	8-752-085-51	IC CXA2568M-T6	
C113	1-163-038-91	CERAMIC CHIP 0.1uF 25V				< TRANSISTOR >	
C114	1-163-038-91	CERAMIC CHIP 0.1uF 25V		Q101	8-729-010-08	TRANSISTOR MSB710-R	
C115	1-126-607-11	ELECT CHIP 47uF 20%	4V			< RESISTOR >	
C116	1-126-607-11	ELECT CHIP 47uF 20%	4V	R101	1-216-077-00	METAL CHIP 15K 5%	1/10W
C117	1-126-209-11	ELECT CHIP 100uF 20%	4V	R102	1-216-097-91	RES,CHIP 100K 5%	1/10W
C118	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V	R103	1-216-077-00	METAL CHIP 15K 5%	1/10W
C119	1-163-235-11	CERAMIC CHIP 22PF 5%	50V	R104	1-216-085-00	METAL CHIP 33K 5%	1/10W
C121	1-163-038-91	CERAMIC CHIP 0.1uF 25V		R105	1-216-097-91	RES,CHIP 100K 5%	1/10W
C122	1-126-206-11	ELECT CHIP 100uF 20%	6.3V	R106	1-216-049-91	RES,CHIP 1K 5%	1/10W
C123	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V	R107	1-216-073-00	METAL CHIP 10K 5%	1/10W
C124	1-107-823-11	CERAMIC CHIP 0.47uF 10%	16V	R108	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
C125	1-163-038-91	CERAMIC CHIP 0.1uF 25V		R109	1-216-121-91	RES,CHIP 1M 5%	1/10W
C126	1-163-038-91	CERAMIC CHIP 0.1uF 25V		R110	1-216-025-91	RES,CHIP 100 5%	1/10W
C127	1-117-681-11	ELECT CHIP 100uF 20%	16V	R111	1-216-121-91	RES,CHIP 1M 5%	1/10W
C128	1-163-038-91	CERAMIC CHIP 0.1uF 25V		R113	1-216-121-91	RES,CHIP 1M 5%	1/10W
C129	1-163-031-11	CERAMIC CHIP 0.01uF 50V		R114	1-216-073-00	METAL CHIP 10K 5%	1/10W
C130	1-164-346-11	CERAMIC CHIP 1uF 16V		R116	1-216-001-00	METAL CHIP 10 5%	1/10W
C131	1-124-779-00	ELECT CHIP 10uF 20%	16V	R117	1-216-049-91	RES,CHIP 1K 5%	1/10W
C133	1-164-346-11	CERAMIC CHIP 1uF 16V		R119	1-216-041-00	METAL CHIP 470 5%	1/10W
C140	1-164-346-11	CERAMIC CHIP 1uF 16V		R123	1-216-073-00	METAL CHIP 10K 5%	1/10W
C141	1-164-346-11	CERAMIC CHIP 1uF 16V		R124	1-216-097-91	RES,CHIP 100K 5%	1/10W
C143	1-163-038-91	CERAMIC CHIP 0.1uF 25V		R131	1-216-037-00	METAL CHIP 330 5%	1/10W
C151	1-163-235-11	CERAMIC CHIP 22PF 5%	50V	R143	1-216-103-00	METAL CHIP 180K 5%	1/10W
C153	1-163-038-91	CERAMIC CHIP 0.1uF 25V		R144	1-216-103-00	METAL CHIP 180K 5%	1/10W
C154	1-110-501-11	CERAMIC CHIP 0.33uF 10%	16V	R147	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
C156	1-163-235-11	CERAMIC CHIP 22PF 5%	50V	R148	1-216-001-00	METAL CHIP 10 5%	1/10W
C157	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V	R149	1-216-001-00	METAL CHIP 10 5%	1/10W
C159	1-163-019-00	CERAMIC CHIP 0.0068uF 10%	50V	R158	1-216-111-00	METAL CHIP 390K 5%	1/10W
C161	1-126-206-11	ELECT CHIP 100uF 20%	6.3V				
C162	1-126-205-11	ELECT CHIP 47uF 20%	6.3V				
C163	1-126-206-11	ELECT CHIP 100uF 20%	6.3V				
C165	1-163-038-91	CERAMIC CHIP 0.1uF 25V					
C167	1-163-235-11	CERAMIC CHIP 22PF 5%	50V				
C168	1-163-235-11	CERAMIC CHIP 22PF 5%	50V				
C171	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V				
C172	1-163-123-00	CERAMIC CHIP 180PF 5%	50V				

Ref. No.	Part No.	Description				Remarks	Ref. No.	Part No.	Description				Remarks
R159	1-216-101-00	METAL CHIP	150K	5%	1/10W			< SWITCH >					
R161	1-216-308-00	METAL CHIP	4.7	5%	1/10W								
R162	1-216-101-00	METAL CHIP	150K	5%	1/10W		S801	1-554-303-21	SWITCH, TACTILE(FADER)				
R171	1-216-078-00	RES,CHIP	16K	5%	1/10W		S802	1-554-303-21	SWITCH, TACTILE(MUSIC SCAN)				
R172	1-216-073-00	METAL CHIP	10K	5%	1/10W		S803	1-554-303-21	SWITCH, TACTILE(CLEAR)				
							S804	1-554-303-21	SWITCH, TACTILE(CHECK)				
							S805	1-554-303-21	SWITCH, TACTILE(▶▶)				
R173	1-216-077-00	METAL CHIP	15K	5%	1/10W								
R181	1-216-078-00	RES,CHIP	16K	5%	1/10W		S806	1-554-303-21	SWITCH, TACTILE(◀◀)				
R182	1-216-073-00	METAL CHIP	10K	5%	1/10W		S808	1-554-303-21	SWITCH, TACTILE(△OPEN/CLOSE)				
R183	1-216-077-00	METAL CHIP	15K	5%	1/10W		S809	1-554-303-21	SWITCH, TACTILE(DISC SKIP)				
R184	1-216-025-91	RES,CHIP	100	5%	1/10W		S810	1-554-303-21	SWITCH, TACTILE(EX-CHANGE)				
R185	1-216-025-91	RES,CHIP	100	5%	1/10W		S811	1-554-303-21	SWITCH, TACTILE(■)				
		< RESISTOR ARRAY >					S812	1-554-303-21	SWITCH, TACTILE(▬▬)				
RN101	1-233-412-11	RES, CHIP NETWORK 1.0K (3216)					S813	1-554-303-21	SWITCH, TACTILE(▷)				
RN102	1-233-576-11	RES, CHIP NETWORK 100					S814	1-475-543-11	ENCODER, ROTARY(AMS)				
		< SWITCH >					*****						
S101	1-572-085-11	SWITCH, LEAF(LIMIT IN)					*	1-664-524-11	KEY BOARD				
		< VIBRATOR >							*****				
X101	1-767-408-21	VIBRATOR, CRYSTAL 16.9344MHz						< CONNECTOR >					
*****							CN701	1-770-540-31	SOCKET, CONNECTOR 6P				
							CN702	1-750-195-11	CONNECTOR, BOARD TO BOARD 6P				
		< RESISTOR >											
*	1-664-522-11	DISPLAY BOARD					R713	1-249-415-11	CARBON	680	5%	1/4W F	
		*****					R714	1-249-417-11	CARBON	1K	5%	1/4W F	
		< CAPACITOR >						< SWITCH >					
C801	1-126-968-11	ELECT	100uF	20%	6.3V		S713	1-554-303-21	SWITCH, TACTILE(PEAK SEARCH)				
		< CONNECTOR >					S714	1-554-303-21	SWITCH, TACTILE(EDIT/TIME FADE)				
* CN810	1-691-958-11	SOCKET, CONNECTOR 35P					S715	1-554-303-21	SWITCH, TACTILE(TIME)				
		< FLUORESCENT INDICATOR TUBE >					*****						
FL810	1-517-616-11	TUBE, FLUORESCENT INDICATOR					*	1-659-738-11	LOADING BOARD				
		< IC >							*****				
IC810	8-749-014-66	IC NJL56H400A					M761	A-4604-834-A	MOTOR ASSY, LOADING				
		< RESISTOR >					*****						
R801	1-247-807-31	CARBON	100	5%	1/4W		*	A-4724-492-A	MAIN BOARD, COMPLETE(AEP,UK,AED,SP,AUS)				
R802	1-247-807-31	CARBON	100	5%	1/4W				*****				
R811	1-249-415-11	CARBON	680	5%	1/4W F		*	A-4724-493-A	MAIN BOARD, COMPLETE(E,EA)				
R812	1-249-417-11	CARBON	1K	5%	1/4W F				*****				
R813	1-249-419-11	CARBON	1.5K	5%	1/4W F		*	A-4724-491-A	MAIN BOARD, COMPLETE(US,CND)				

R814	1-249-421-11	CARBON	2.2K	5%	1/4W F			7-685-871-01	SCREW +BVTT 3 × 6 (S)				
R815	1-247-843-11	CARBON	3.3K	5%	1/4W								
R816	1-249-427-11	CARBON	6.8K	5%	1/4W F			< CAPACITOR >					
R817	1-249-415-11	CARBON	680	5%	1/4W F		C316	1-164-159-11	CERAMIC	0.1uF	50V		
R818	1-249-417-11	CARBON	1K	5%	1/4W F		C317	1-161-494-00	CERAMIC	0.022uF	25V		
R819	1-249-419-11	CARBON	1.5K	5%	1/4W F		C373	1-161-494-00	CERAMIC	0.022uF	25V		
R820	1-249-421-11	CARBON	2.2K	5%	1/4W F		C374	1-104-664-11	ELECT	47uF	20%	16V	
R821	1-247-843-11	CARBON	3.3K	5%	1/4W		C401	1-126-965-11	ELECT	22uF	20%	50V	
R822	1-249-427-11	CARBON	6.8K	5%	1/4W F								
R823	1-249-431-11	CARBON	15K	5%	1/4W		C404	1-104-665-11	ELECT	100uF	20%	10V	
R824	1-249-431-11	CARBON	15K	5%	1/4W		C410	1-162-290-31	CERAMIC	470PF	10%	50V	
R840	1-247-807-31	CARBON	100	5%	1/4W		C501	1-126-965-11	ELECT	22uF	20%	50V	
							C504	1-124-443-00	ELECT	100uF	20%	10V	
							C509	1-126-963-11	ELECT	4.7uF	20%	50V	

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
C509	1-126-163-11	ELECT	4.7uF 20% 50V	< COIL >			
C509	1-126-963-11	ELECT	4.7uF 20% 50V	L601	1-412-473-21	INDUCTOR	0uH
C510	1-162-290-31	CERAMIC	470PF 10% 50V	L602	1-414-151-21	INDUCTOR	470uH
C601	1-119-941-91	ELECT	470uF 20% 6.3V	L603	1-412-473-21	INDUCTOR	0uH
C602	1-126-944-11	ELECT	3300uF 20% 16V	< TRANSISTOR >			
C603	1-126-942-61	ELECT	1000uF 20% 16V	Q201	8-729-119-78	TRANSISTOR	2SC403SP-51
C604	1-126-963-11	ELECT	4.7uF 20% 50V	Q402	8-729-141-26	TRANSISTOR	2SC3622A-LK
C605	1-126-963-11	ELECT	4.7uF 20% 50V	Q404	8-729-119-78	TRANSISTOR	2SC403SP-51
C606	1-126-963-11	ELECT	4.7uF 20% 50V	Q405	8-729-029-56	TRANSISTOR	DTA144ESA
C607	1-126-941-11	ELECT	470uF 20% 6.3V	Q406	8-729-141-26	TRANSISTOR	2SC3622A-LK
C608	1-104-666-11	ELECT	220uF 20% 10V	Q502	8-729-141-26	TRANSISTOR	2SC3622A-LK
C609	1-128-552-11	ELECT	47uF 20% 63V	Q503	8-729-029-56	TRANSISTOR	DTA144ESA
C610	1-124-907-11	ELECT	10uF 20% 50V	Q505	8-729-029-56	TRANSISTOR	DTA144ESA
C614	1-104-665-11	ELECT	100uF 20% 16V	Q506	8-729-141-26	TRANSISTOR	2SC3622A-LK
C616	1-161-494-00	CERAMIC	0.022uF 25V	Q601	8-729-119-76	TRANSISTOR	2SA1175-HFE
C619	1-104-664-11	ELECT	47uF 20% 16V	< RESISTOR >			
C622	1-161-494-00	CERAMIC	0.022uF 25V	R205	1-249-430-11	CARBON	12K 5% 1/4W
C625	1-161-494-00	CERAMIC	0.022uF 25V	R206	1-249-429-11	CARBON	10K 5% 1/4W
C626	1-161-494-00	CERAMIC	0.022uF 25V	R251	1-249-429-11	CARBON	10K 5% 1/4W
C628	1-104-664-11	ELECT	47uF 20% 16V	R252	1-249-426-11	CARBON	5.6K 5% 1/4W
C651	1-104-664-11	ELECT	47uF 20% 16V	R253	1-249-425-11	CARBON	4.7K 5% 1/4W F
< CONNECTOR >				R254	1-249-430-11	CARBON	12K 5% 1/4W
CN401	1-785-841-11	CONNECTOR, FFC/FPC 21P		R262	1-249-382-11	CARBON	1.2 5% 1/6W F
CN402	1-764-411-11	PIN, CONNECTOR (PC BOARD) 35P		R263	1-249-382-11	CARBON	1.2 5% 1/6W F
CN403	1-770-540-31	SOCKET, CONNECTOR 6P		R312	1-249-437-11	CARBON	47K 5% 1/4W
* CN404	1-568-825-11	SOCKET, CONNECTOR 6P		R313	1-249-429-11	CARBON	10K 5% 1/4W
* CN601	1-573-047-11	PIN, CONNECTOR (PC BOARD) 2P		R314	1-249-425-11	CARBON	4.7K 5% 1/4W F
< DIODE >				R315	1-249-425-11	CARBON	4.7K 5% 1/4W F
D302	8-719-991-33	DIODE 1SS133T-77		R316	1-249-425-11	CARBON	4.7K 5% 1/4W F
D401	8-719-991-33	DIODE 1SS133T-77		R317	1-249-427-11	CARBON	6.8K 5% 1/4W F
D501	8-719-991-33	DIODE 1SS133T-77		R318	1-249-427-11	CARBON	6.8K 5% 1/4W F
D601	8-719-200-82	DIODE 11ES2		R319	1-249-427-11	CARBON	6.8K 5% 1/4W F
D602	8-719-200-82	DIODE 11ES2		R321	1-249-429-11	CARBON	10K 5% 1/4W
D603	8-719-200-82	DIODE 11ES2		R322	1-249-429-11	CARBON	10K 5% 1/4W
D604	8-719-200-82	DIODE 11ES2		R323	1-249-441-11	CARBON	100K 5% 1/4W
D605	8-719-200-82	DIODE 11ES2		R331	1-249-427-11	CARBON	6.8K 5% 1/4W F
D606	8-719-923-60	DIODE MTZJ-T-77-9.1A		R333	1-249-429-11	CARBON	10K 5% 1/4W
D608	8-719-991-33	DIODE 1SS133T-77		R401	1-215-425-00	METAL	1.5K 1% 1/4W
D609	8-719-921-40	DIODE MTZJ-4.7C		R402	1-215-425-00	METAL	1.5K 1% 1/4W
< TERMINAL >				R403	1-215-445-00	METAL	10K 1% 1/4W
EB101	1-537-770-21	TERMINAL BOARD, GROUND		R404	1-215-443-00	METAL	8.2K 1% 1/4W
< IC >				R405	1-215-469-00	METAL	100K 1% 1/4W
IC302	8-752-902-15	IC CXP82324-090Q		R406	1-215-405-00	METAL	220 1% 1/4W
IC304	8-759-356-03	IC BA6780		R407	1-215-453-00	METAL	22K 1% 1/4W
IC371	8-749-921-12	IC GP1F32T(DIGITAL OUT)		R408	1-249-421-11	CARBON	2.2K 5% 1/4W F
IC401	8-759-145-58	IC UPC4558C		R409	1-215-405-00	METAL	220 1% 1/4W
IC601	8-759-061-65	IC LA5602		R410	1-249-441-11	CARBON	100K 5% 1/4W
IC602	8-749-011-78	IC BA17807T		R412	1-215-405-00	METAL	220 1% 1/4W
IC603	8-759-633-42	IC M5293L		R416	1-249-421-11	CARBON	2.2K 5% 1/4W F
< JACK >				R501	1-215-425-00	METAL	1.5K 1% 1/4W
J301	1-785-868-11	JACK, PIN 2P(LINE OUT)		R502	1-215-425-00	METAL	1.5K 1% 1/4W
				R503	1-215-445-00	METAL	10K 1% 1/4W
				R504	1-215-443-00	METAL	8.2K 1% 1/4W
				R505	1-215-469-00	METAL	100K 1% 1/4W
				R506	1-215-405-00	METAL	220 1% 1/4W
				R507	1-215-453-00	METAL	22K 1% 1/4W

MAIN	P.SW	SENSOR	TABLE MOTOR
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Ref. No.	Part No.	Description	Remarks
R508	1-249-421-11	CARBON 2.2K 5%	1/4W F
R509	1-215-405-00	METAL 220 1%	1/4W
R510	1-249-441-11	CARBON 100K 5%	1/4W
R512	1-215-405-00	METAL 220 1%	1/4W
R516	1-249-421-11	CARBON 2.2K 5%	1/4W F
R517	1-249-441-11	CARBON 100K 5%	1/4W
R601	1-249-435-11	CARBON 33K 5%	1/4W
R602	1-249-429-11	CARBON 10K 5%	1/4W
R603	1-249-438-11	CARBON 56K 5%	1/4W
R604	1-249-429-11	CARBON 10K 5%	1/4W
R607	1-249-411-11	CARBON 330 5%	1/4W
< SWITCH >			
△ S601	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (AC VOLTAGE)(E,EA)	
< TRANSFORMER >			
△ T601	1-429-956-11	TRANSFORMER, POWER(US,CND)	
△ T601	1-431-076-11	TRANSFORMER, POWER(AEP,UK,AED,SP,AUS)	
△ T601	1-431-168-11	TRANSFORMER, POWER(E,EA)	
< VIBRATOR >			
X401	1-579-175-11	VIBRATOR, CERAMIC 10.0MHZ	

*	1-664-523-11	P.SW BOARD	*****
< CONNECTOR >			
CN703	1-750-186-11	CONNECTOR, BOARD TO BOARD 6P	
< RESISTOR >			
R701	1-249-415-11	CARBON 680 5%	1/4W F
R702	1-249-417-11	CARBON 1K 5%	1/4W F
R703	1-249-419-11	CARBON 1.5K 5%	1/4W F
R704	1-249-421-11	CARBON 2.2K 5%	1/4W F
R705	1-247-843-11	CARBON 3.3K 5%	1/4W
R706	1-249-427-11	CARBON 6.8K 5%	1/4W F
R707	1-249-431-11	CARBON 15K 5%	1/4W
R708	1-249-419-11	CARBON 1.5K 5%	1/4W F
R709	1-249-421-11	CARBON 2.2K 5%	1/4W F
< SWITCH >			
S701	1-554-303-21	SWITCH, TACTILE(DISC 1)	
S702	1-554-303-21	SWITCH, TACTILE(DISC 2)	
S703	1-554-303-21	SWITCH, TACTILE(DISC 3)	
S704	1-554-303-21	SWITCH, TACTILE(DISC 4)	
S705	1-554-303-21	SWITCH, TACTILE(DISC 5)	
S706	1-554-303-21	SWITCH, TACTILE(CONTINUE)	
S707	1-554-303-21	SWITCH, TACTILE(SHUFFLE)	
S708	1-554-303-21	SWITCH, TACTILE(PROGRAM)	
S709	1-554-303-21	SWITCH, TACTILE(REPEAT)	
S710	1-554-303-21	SWITCH, TACTILE(DISC CHECK)	
S751	1-554-118-00	SWITCH, PUSH (1 KEY)(POWER)	

Ref. No.	Part No.	Description	Remarks
*	1-659-737-11	SENSOR BOARD	*****
< CONNECTOR >			
CN851	1-573-383-11	PIN, CONNECTOR (PC BOARD) 2P	
CN852	1-750-243-11	SOCKET, CONNECTOR 6P	
< DIODE >			
D851	8-749-924-18	DIODE PHOTO INTERRUPTER RPI-1391	
D852	8-749-924-30	DIODE PHOTO REFLECTOR GP2S28	
< RESISTOR >			
R851	1-249-416-11	CARBON 820 5%	1/4W F
R852	1-249-406-11	CARBON 120 5%	1/4W F

*	1-647-364-11	TABLE MOTOR BOARD	*****
M801	A-4660-525-A	MOTOR ASSY, ROTARY	

MISCELLANEOUS			

9	1-777-837-11	WIRE(FLAT TYPE) (35 CORE)	
18	1-777-838-11	WIRE(FLAT TYPE) (6 CORE)	
△ 59	1-558-943-41	CORD, POWER(E)	
△ 59	1-575-651-21	CORD, POWER(AEP,AED,EA,SP)	
△ 59	1-590-926-11	CORD, POWER(CND)	
△ 59	1-696-845-11	CORD, POWER(AUS)	
△ 59	1-751-529-11	CORD, POWER(UK)	
△ 59	1-783-531-41	CORD, POWER(US)	
△ 68	1-569-007-11	ADAPTOR, CONVERSION 2P(E)	
△ 68	1-569-008-31	ADAPTOR, CONVERSION(EA)	
72	1-782-816-11	WIRE(FLAT TYPE) (6 CORE)	
74	1-500-386-11	FILTER, CLAMP (FERRITE CORE)	
105	1-466-996-11	ENCODER, ROTARY	
109	1-790-490-11	WIRE, (FLAT TYPE) (21 CORE)	
125	1-452-925-21	MAGNET ASSY	
△ 751	8-848-379-31	OPTICAL PICK-UP KSS-213BA/F-NP	
752	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
M101	X-4917-523-3	MOTOR ASSY(SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY(SLED)	
M761	A-4604-834-A	MOTOR ASSY, LOADING	
M801	A-4660-525-A	MOTOR ASSY, ROTARY	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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Ref. No.	Part No.	Description	Remarks
		ACCESSORIES & PACKING MATERIALS	

	1-418-204-11	REMOTE COMMANDER(RM-DC335)(CE335)	
	1-558-271-11	CORD,CONNECTION(AUDIO)	
	3-865-901-11	MANUAL, INSTRUCTION(ENGLISH)(US/AUS)	
	3-865-901-21	MANUAL, INSTRUCTION (ENGLISH/FRENCH/SPANISH)(CND/AEP/E/EA/SP/UK)	
	3-865-901-31	MANUAL, INSTRUCTION (GERMAN/DUTCH/ITALIAN/PORTUGUESE)(AEP)	
	3-865-901-41	MANUAL, INSTRUCTION(CHINESE)(E/SP)	
	3-865-901-51	MANUAL, INSTRUCTION(ARABIC)(EA)	
	3-865-901-61	MANUAL, INSTRUCTION (SWEDISH/DANISH/FINNISH)(AED)	
	4-981-643-01	COVER BATTERY (For RM-DC335)(CE335)	

HARDWARE LIST

#1	7-685-647-79	SCREW +BVTP	3 × 10 TYPE2 N-S
#2	7-685-872-09	SCREW +BVTT	3 × 8 (S)
#3	7-685-648-79	SCREW (M3 × 12), TAPPING	
#4	7-685-646-79	SCREW +BVTP	3 × 8 TYPE2 N-S
#5	7-621-772-00	SCREW +B	2 × 3
#6	7-685-134-19	SCREW (+ PTPWH) (2.6 × 8)	
#7	3-713-786-51	SCREW +P	2 × 3
#8	7-685-871-01	SCREW +BVTT	3 × 6 (S)

