

CDP-C360Z/CE415

SERVICE MANUAL

US Model

CDP-C360Z/CE415

Canadian Model

CDP-CE415



Photo : CDP-CE415

Model Name Using Similar Mechanism	CDP-C160Z/C260Z/CE215/CE315
CD Mechanism Type	CDM27A2-5BD20
Base Unit Type	BU-5BD20
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 the 98 dB
Harmonic distortion	Less than 0.0045%

General

Power requirements 120V AC, 60 Hz

Power consumption	14W
Dimensions (approx.) (w/h/d)	430 $\times$ 120 $\times$ 385 mm (17 $\times$ 4 3/4 $\times$ 15 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)
Sony SUM-3 (NS) batteries (2)

Design and specifications are subject to change without notice.

Output

	Jack type	Maximum output level	Load impedance
LINE OUT	Phono jacks	2V (at 50 kilohms)	Over 10 kilohms

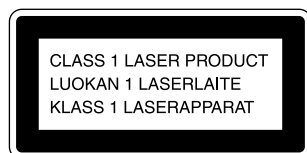
COMPACT DISC PLAYER

SONY®



The following caution label is located inside of the unit.

CAUTION	;	INVISIBLE LASER RADIATION, WHEN OPEN, AVOID EXPOSURE TO BEAM.
ADVARSEL	;	USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	;	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA DLET ALTIINNA LASERSÄTELYLLE.
VARNING	;	LASERSTRÅLING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URÖPPPLAD.
ADVARSEL	;	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN.



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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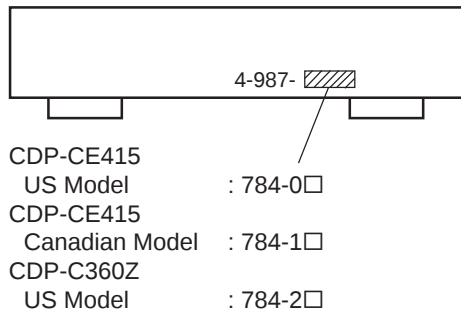
SAFETY-RELATED COMPONENT WARNING!!

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 —



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.

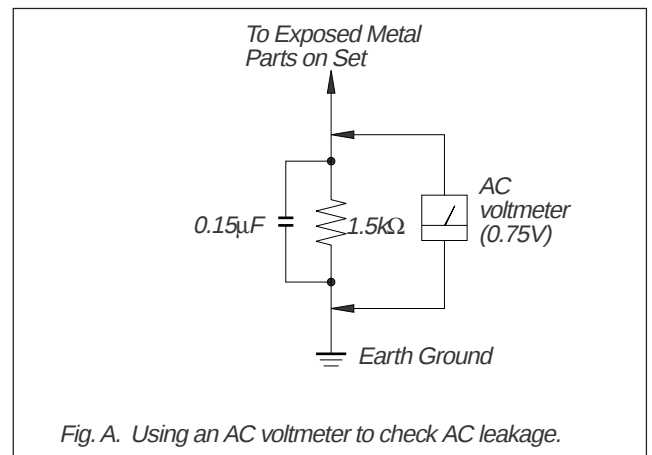
SAFETY CHECK-OUT (US model only)

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.

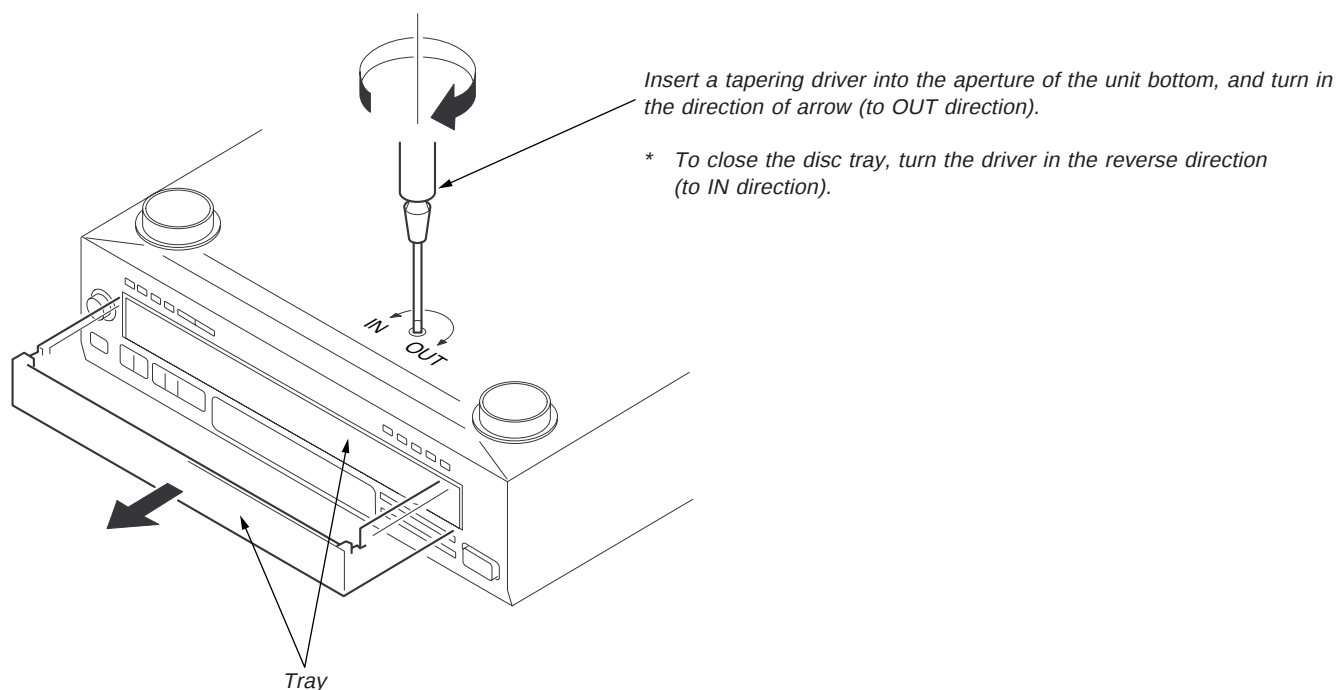
LEAKAGE

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.

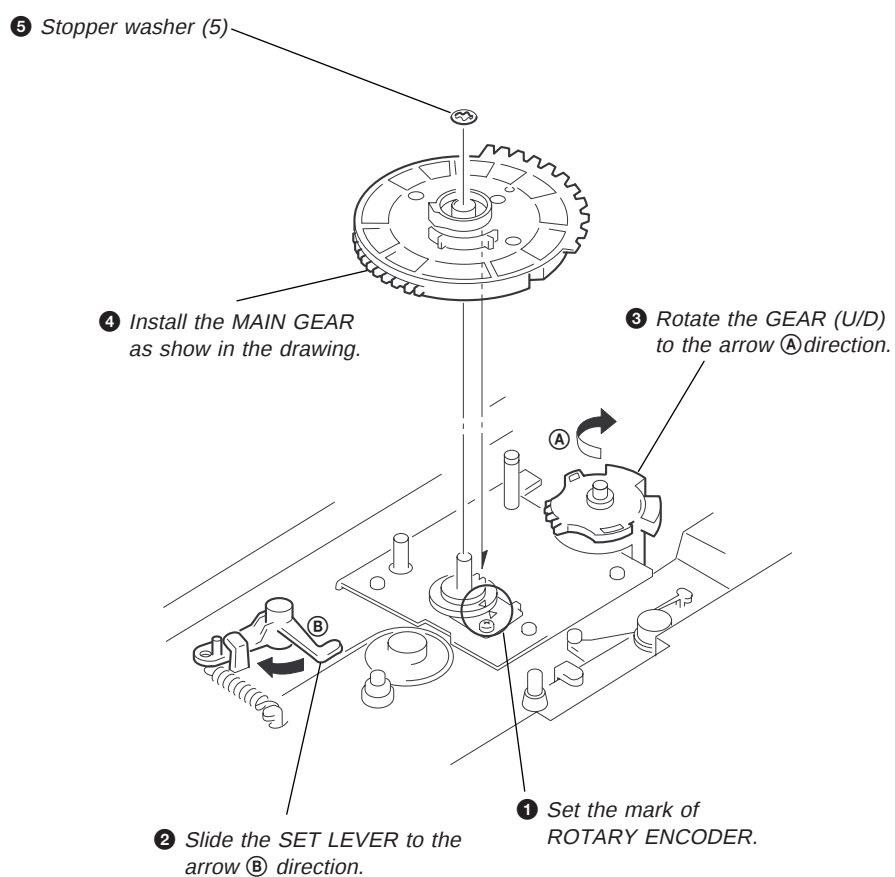
1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means 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)



HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF



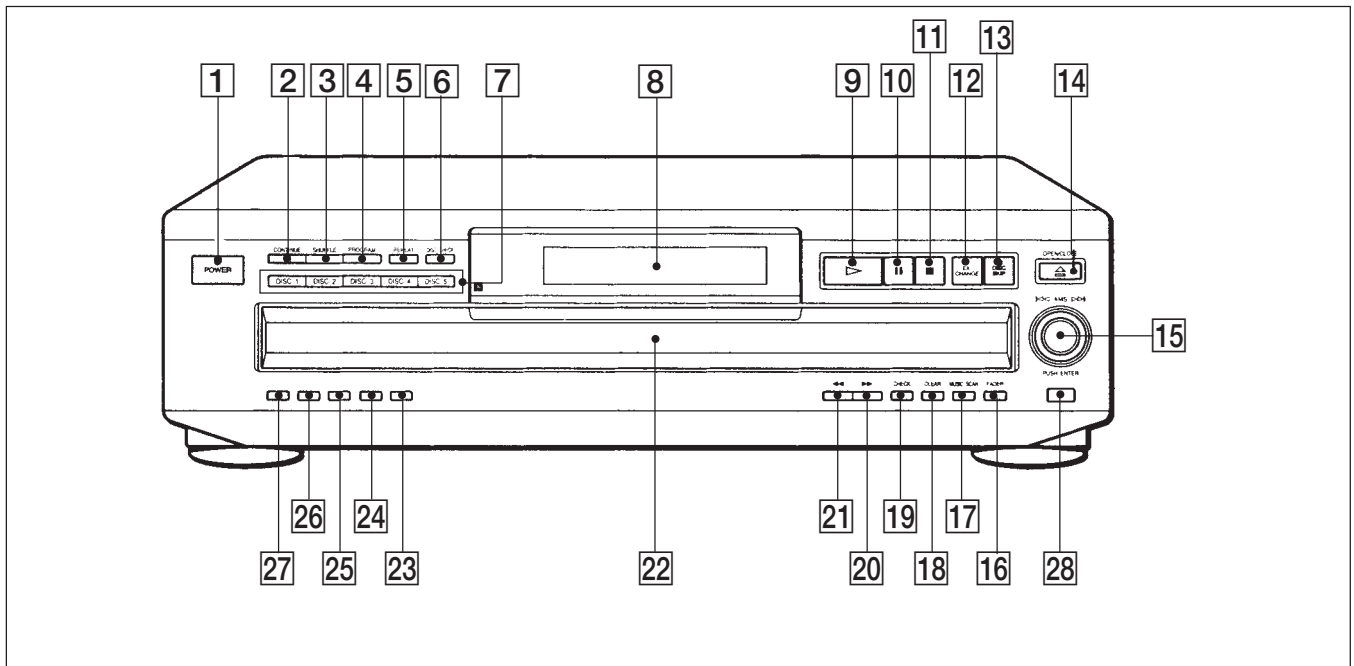
NOTE FOR MAIN GEAR INSTALLATION



SECTION 1 GENERAL

Identifying the Parts

Front Panel

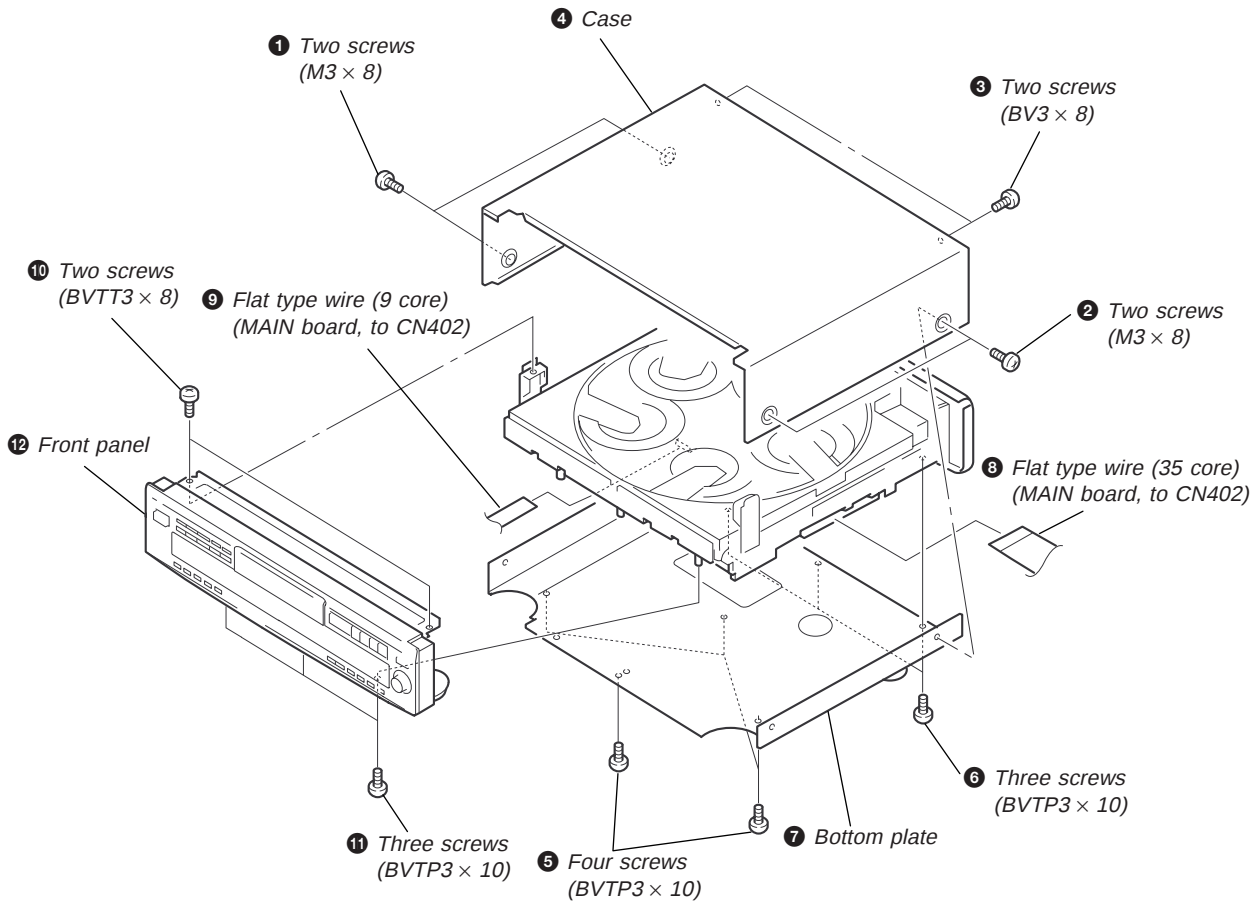


- | | |
|---|--|
| 1 POWER switch | 15 AMS knob |
| 2 CONTINUE button | 16 X-FADE button |
| 3 SHUFFLE button | 17 NO DELAY button |
| 4 PROGRAM button | 18 CLEAR button |
| 5 REPEAT button | 19 CHECK button |
| 6 DISC CHECK button: CE415 model
TIME button: C360Z model | 20 ►► (forward) button |
| 7 DISC 1-5 button | 21 ◀◀ (backward) button |
| 8 Display window | 22 Disc tray |
| 9 ► (play) button | 23 PEAK SEARCH button: CE415 model |
| 10 (pause) button | 24 EDIT/TIME FADE button: CE415 model |
| 11 ■ (stop) button | 25 TIME button: CE415 model |
| 12 EX-CHANGE button | 26 FADER button |
| 13 DISC SKIP button | 27 MUSIC SCAN button |
| 14 ▲ OPEN/CLOSE button | 28 MEGA CONTROL button |

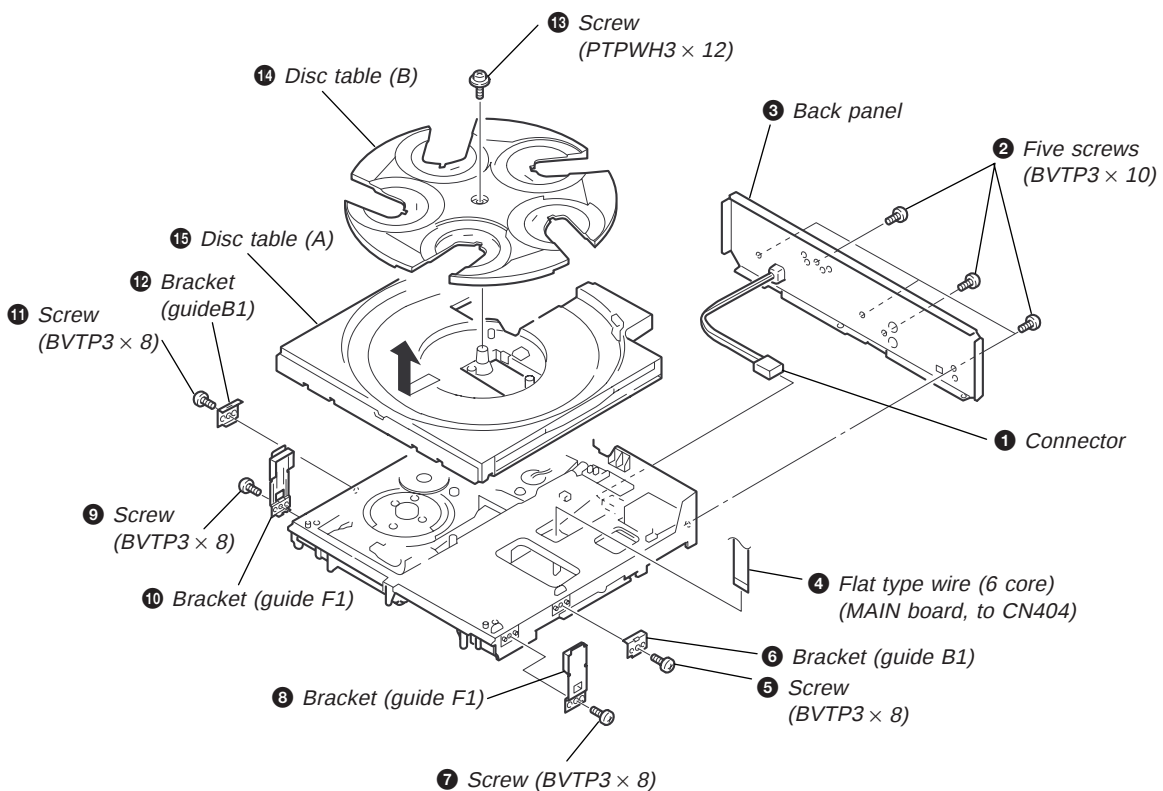
SECTION 2 DISASSEMBLY

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

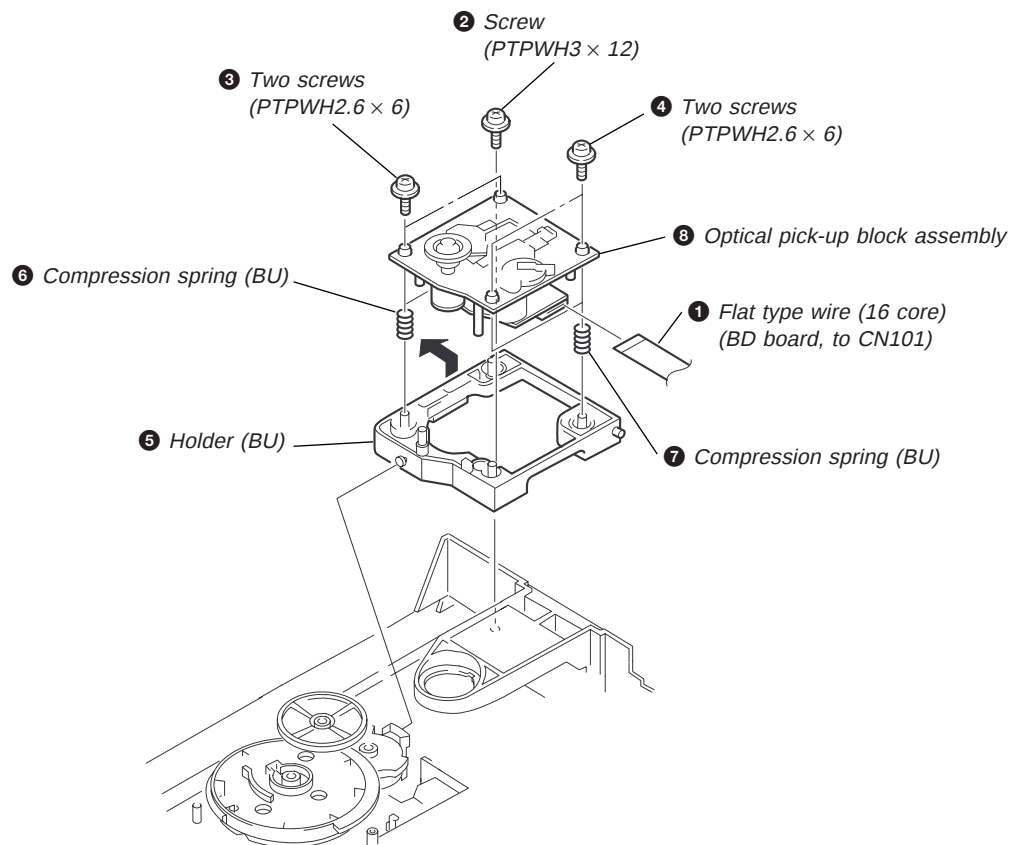
2-1. CASE, BOTTOM PLATE AND FRONT PANEL



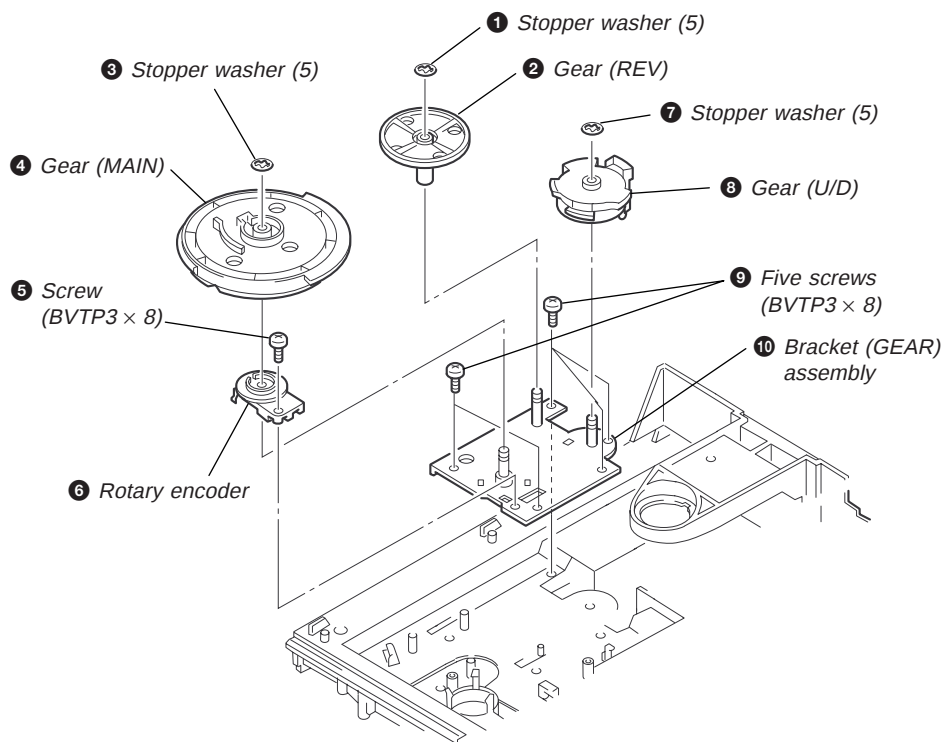
2-2. BACK PANEL AND DISC TABLE



2-3. OPTICAL PICK-UP BLOCK ASSEMBLY



2-4. BRACKET (GEAR) ASSEMBLY



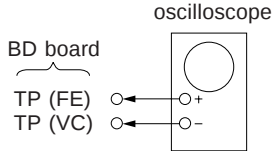
Note : As for the installation of the main gear, refer to “Note for MAIN GEAR installation” on page 4.

SECTION 3 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 10M Ω impedance.
4. Clean the object lens using an applicator with neutral detergent when the signal level is low than specified value with the following checks.

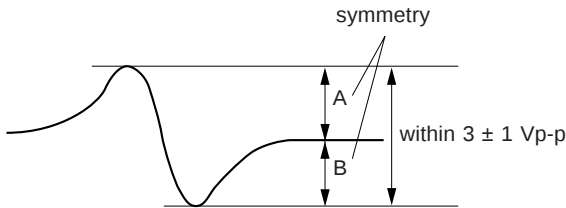
S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FE) on BD board.
2. Connect between test point TP (FEI) and TP (VC) by lead wire.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and turn Power switch on again and actuate the focus search. (Actuate the focus search when disc table is moving in and out.)
5. Check if the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3 ± 1 Vp-p.

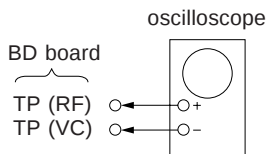
S-curve waveform



6. After check, remove the lead wire connected in step 2.

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



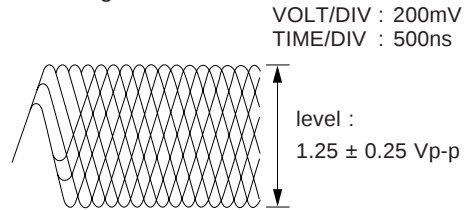
Procedure :

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

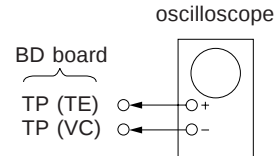
Note :

A clear RF signal waveform means that the shape “ $\diamond$ ” can be clearly distinguished at the center of the waveform.

RF signal waveform



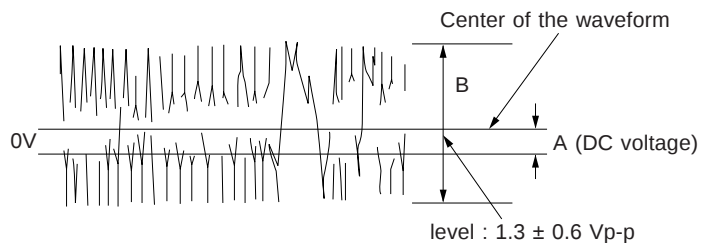
E-F Balance Check



Procedure :

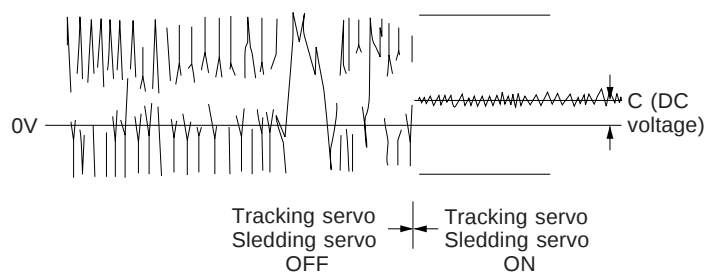
1. Connect test point TP1 (ADJ) to ground with a lead wire.
2. Connect oscilloscope to test point TP (TE) on BD board.
3. Turned Power switch on.
4. Put disc (YEDS-18) in to play the number five track.
5. Press the “3” button. (The tracking servo and the sledding servo are turned OFF.)
6. Check the level B of the oscilloscope's waveform and the A (DC voltage) of the center of the Traverse waveform. Confirm the following :
 $A/B \times 100 = \text{less than } \pm 22\%$

Traverse waveform



7. Press the “8” button. (The tracking servo and sledding servo are turned ON.) Confirm the C (DC voltage) is almost equal to the A (DC voltage) is step 6.

Traverse waveform



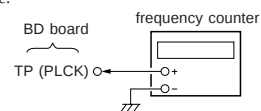
8. Disconnect the lead wire of test point TP1 (ADJ) connected in step 1.

SECTION 4 DIAGRAMS

RF PLL Free-run Frequency Check

Procedure :

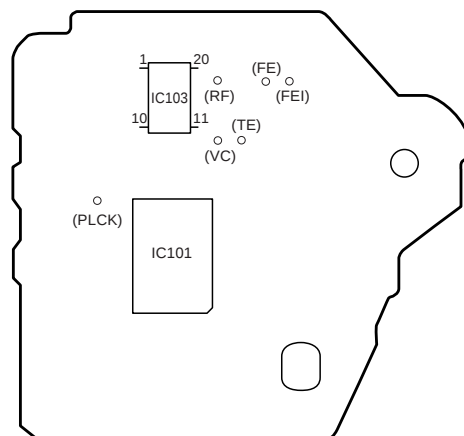
1. Connect frequency counter to test point TP (PLCK) with lead wire.



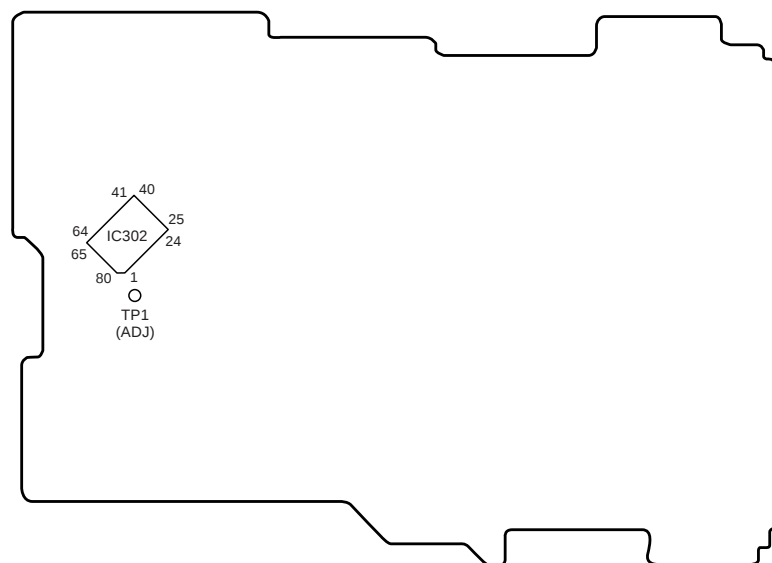
2. Turned Power switch on.
3. Put the disc (YEDS-18) in to play the number five track. Confirm that reading on frequency counter is 4.3218MHz.

Adjustment Location :

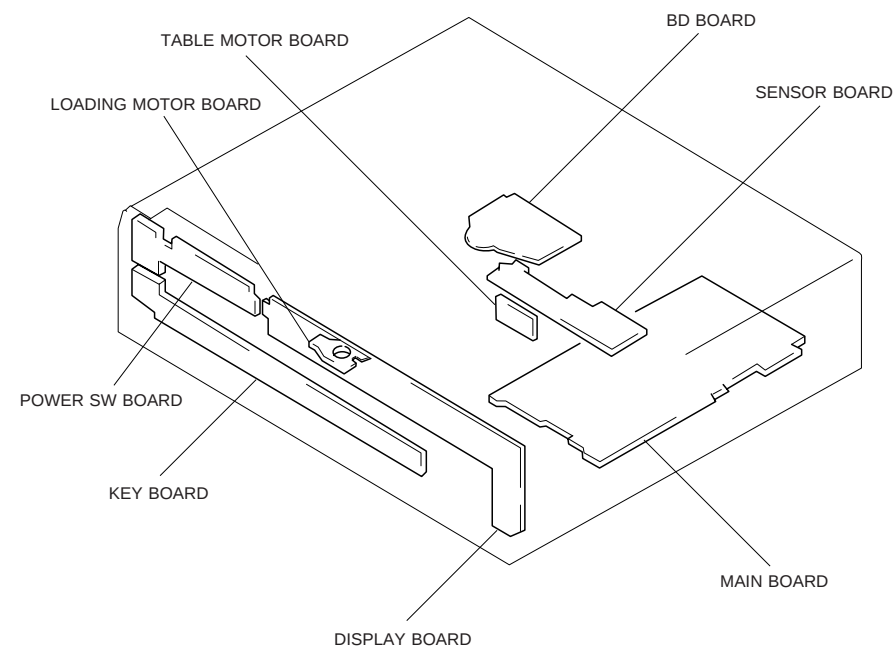
[BD BOARD] — Conductor Side —



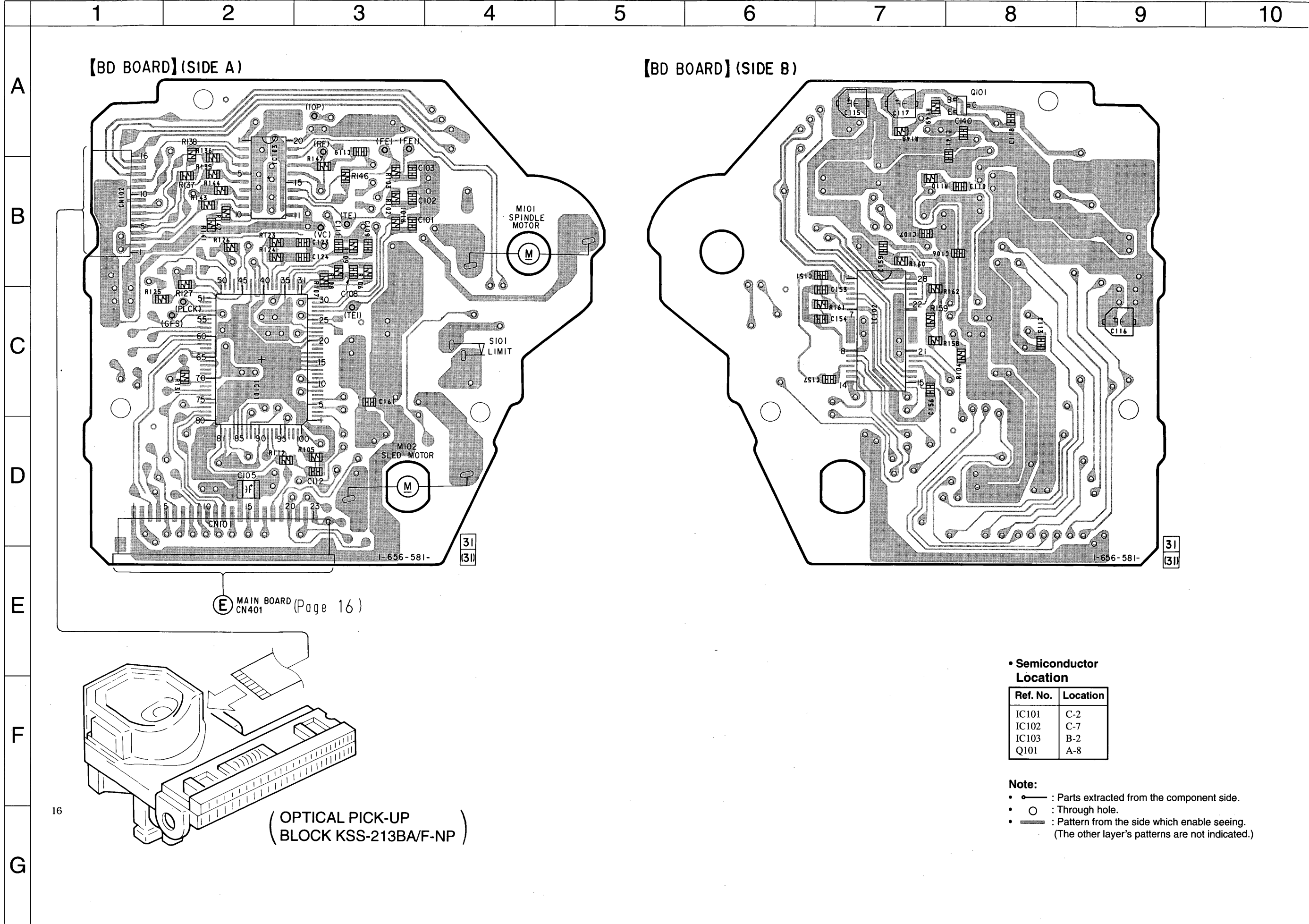
[MAIN BOARD] — Conductor Side —



4-1. CIRCUIT BOARDS LOCATION

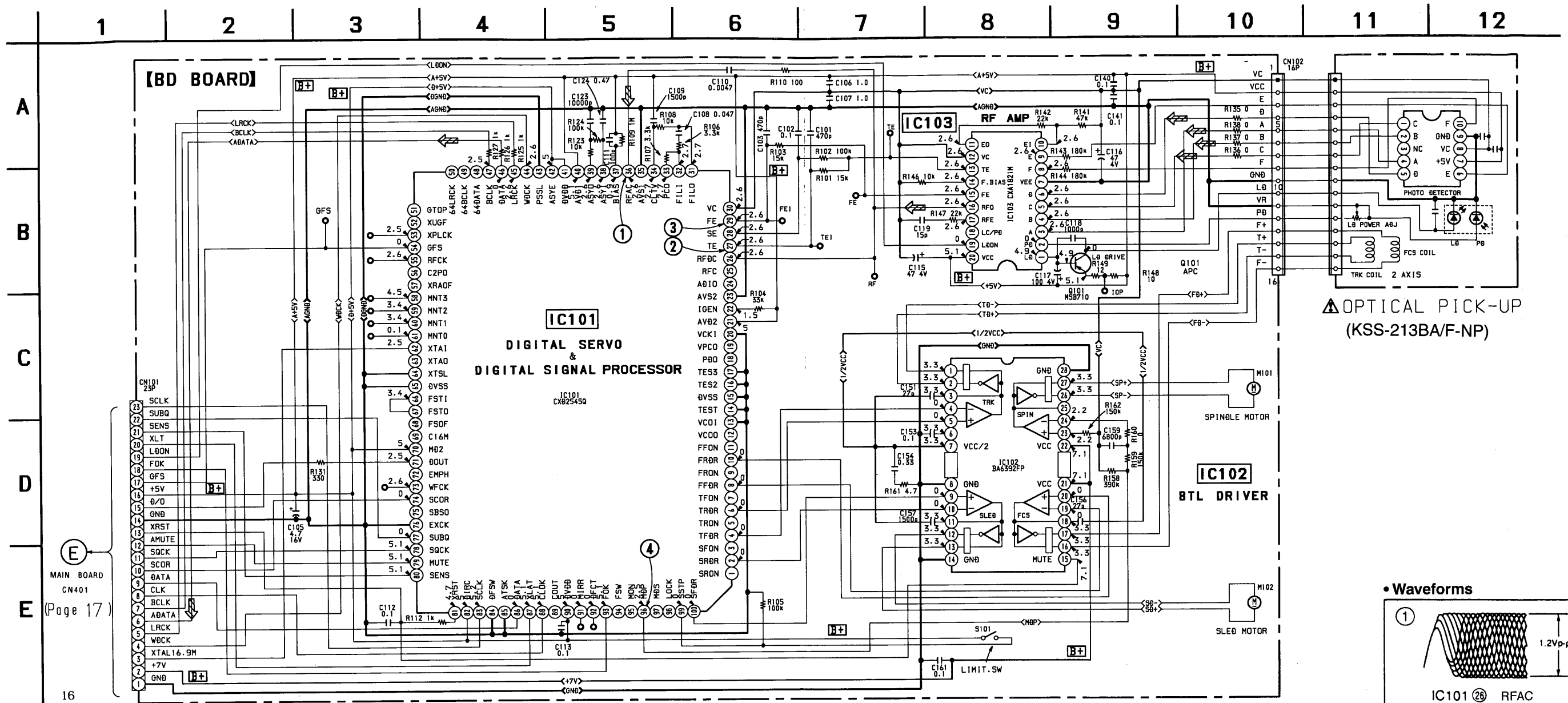


4-2. PRINTED WIRING BOARD – BD SECTION –
• See page 10 for Circuit Board Location.



4-3. SCHEMATIC DIAGRAM – BD SECTION –

- See page 23 for IC Block Diagrams.
- See page 25 for IC Pin Functions. (IC101)



Note:

- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- **[B+]**: B+ Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- No mark: STOP
- Voltages are taken with a VOM (Input impedance 10M 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.
- $\Rightarrow$: CD

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.

- See page 10 for Circuit Board Location.



Ref. No.	Location	Ref. No.	Location
D302	F-5	IC402	F-8
D381	G-9	IC501	D-7
D601	B-7	IC502	E-8
D602	B-7	IC601	B-6
D603	A-7	IC602	C-6
D604	B-7	IC603	C-7
D605	B-7	Q201	E-4
D606	C-8	Q301	D-3
D608	C-6	Q381	F-9
D609	D-6	Q402	F-9
		Q404	C-2
IC301	F-5	Q502	F-9
IC302	D-2	Q503	F-8
IC304	C-4	Q601	B-7
IC401	E-7		

5
10MHz
5.2Vp-p
IC302 ⑪ EXTAL

6
5.5Vp-p
22.7μ sec
IC301 ⑫ LRCK

7
5Vp-p
470n sec
IC301 ⑩ BCK

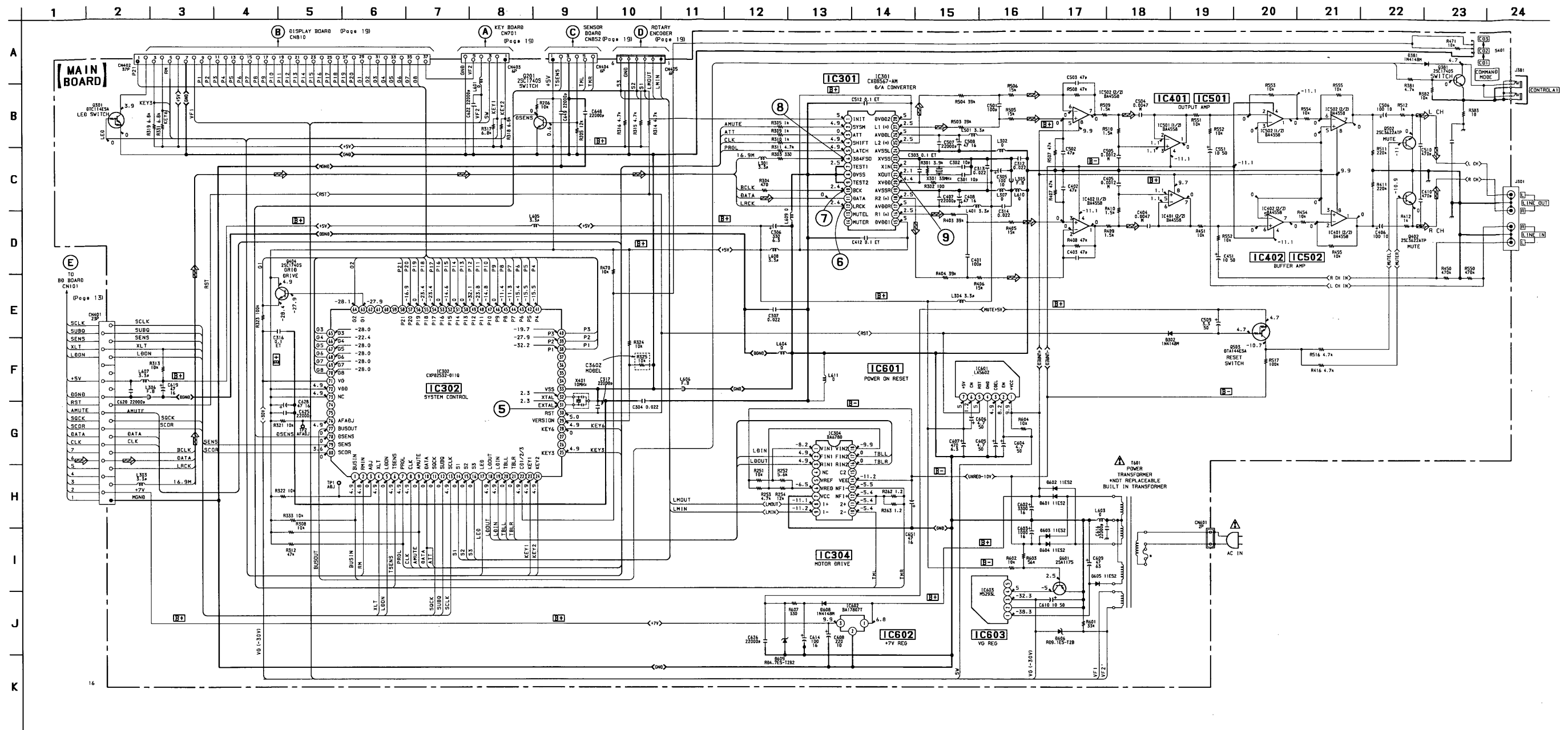
8
16.9MHz
4.7Vp-p
IC301 ⑧ 384 FSO

9
33.868MHz
2.3Vp-p
IC301 ⑫ X OUT

- : Parts extracted from the component side.
-  : Internal component.
-  : Pattern from the side which enable seeing.

4-5. SCHEMATIC DIAGRAM – MAIN SECTION –

- See page 23 for IC Block Diagrams.
- See page 28 for IC Pin Function. (IC302)



Note:

- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- $\triangle$: Internal component.
- $\square$: Panel designation.
- B+ : B+ Line.
- B- : B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.

No mark: STOP

- Voltages are taken with a VOM (Input impedance 10M 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.

⇒ : CD

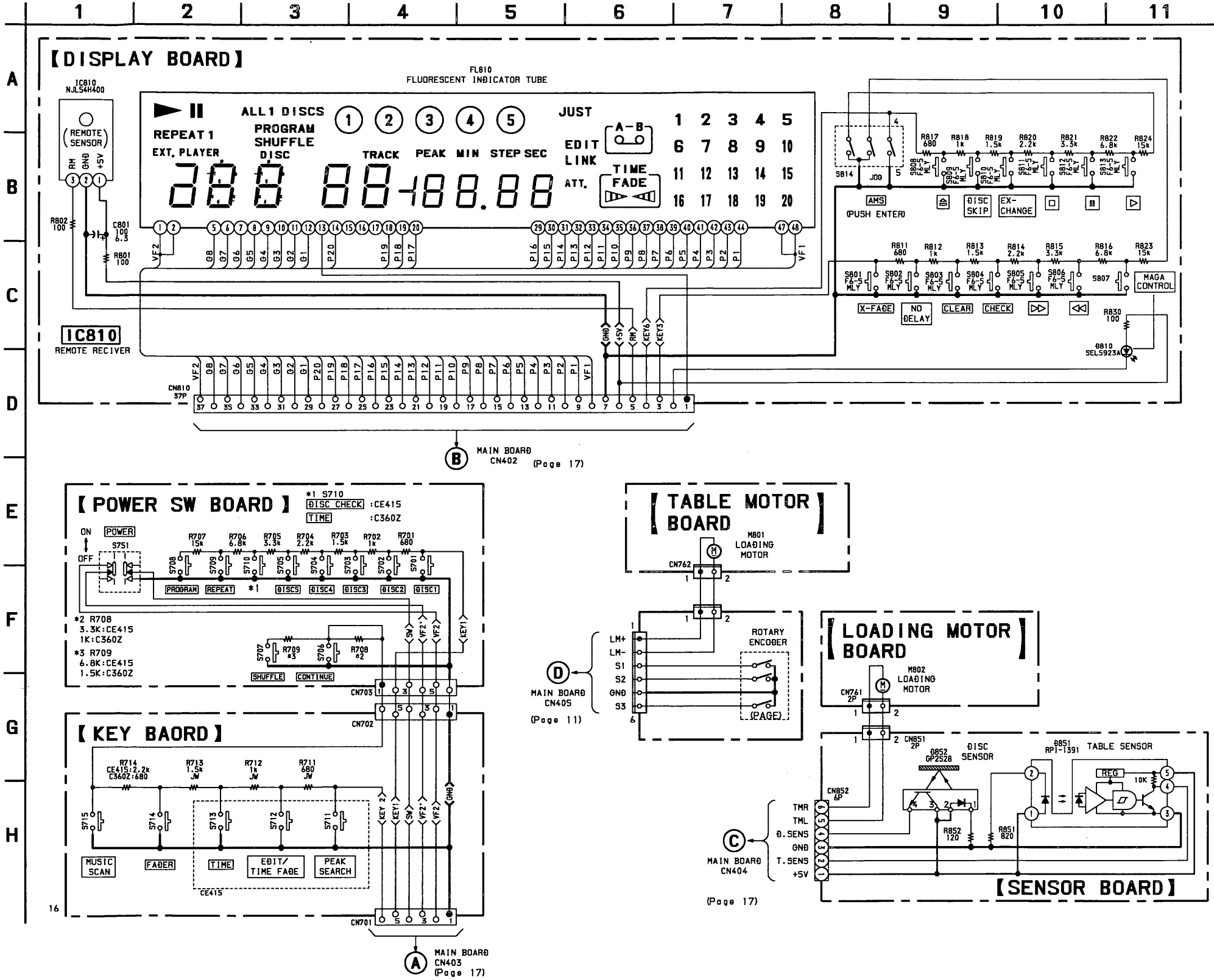
Note:

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

Note:

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

CDP-C360Z/CE415
4-6. SCHEMATIC DIAGRAM – DISPLAY SECTION –

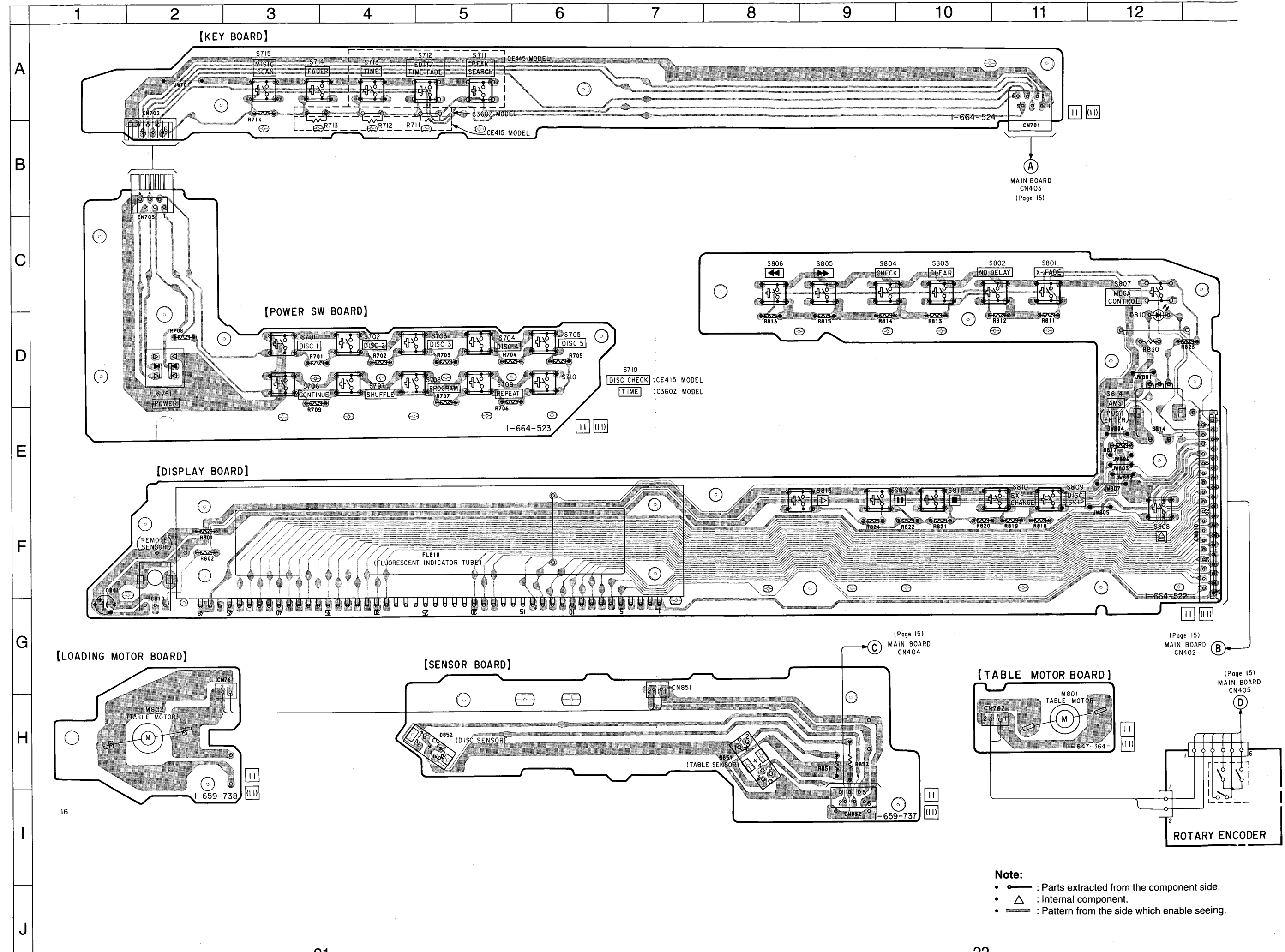


- Note:**
- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and 1/4W or less unless otherwise specified.
 - Δ : Internal component.
 - $\square$: Panel designation.
 - **B+** : B+ Line.
 - **B-** : B- Line.
 - Voltages and waveforms are dc with respect to ground under no-signal conditions.
No mark: STOP
 - Voltages are taken with a VOM (Input impedance 10M 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.

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.
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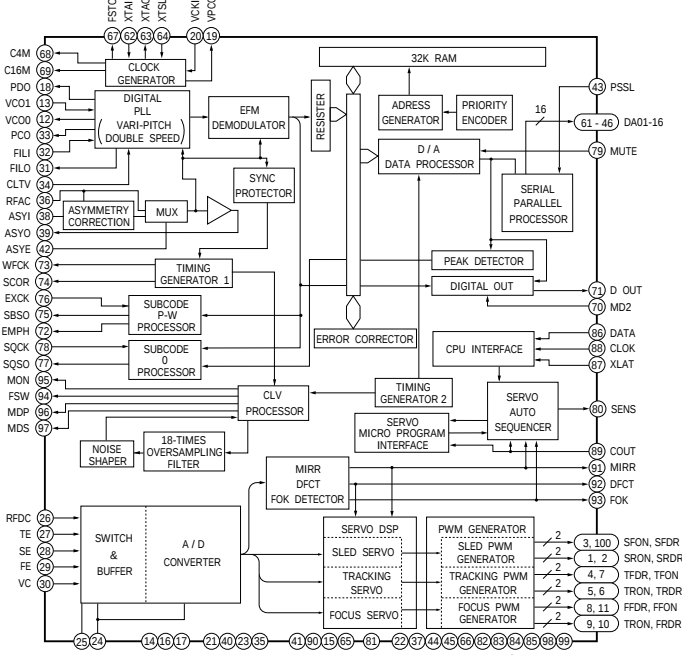
4-7. PRINTED WIRING BOARD - DISPLAY SECTION -

• See page 10 for Circuit Board Location.

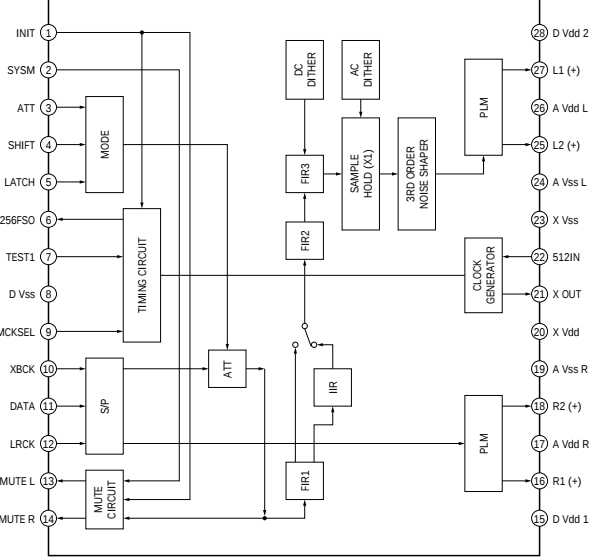


4-8. IC BLOCK DIAGRAMS

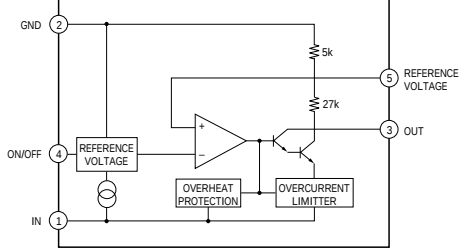
IC101 CXD2545Q



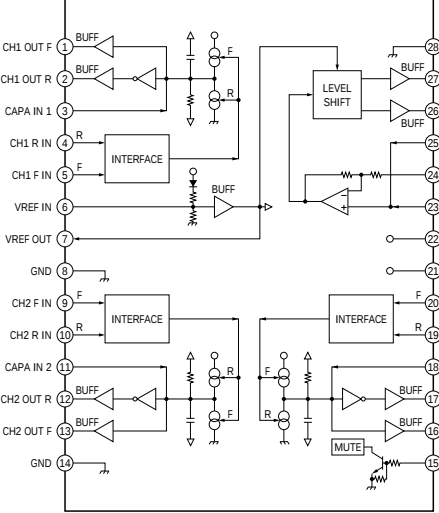
IC301 CXD8567AM



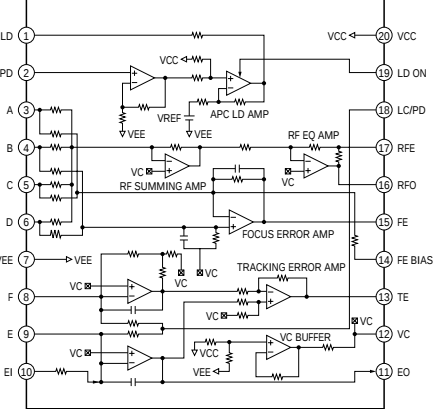
IC603 M5293L



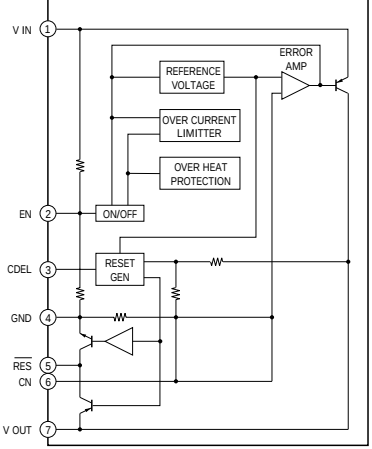
IC102 BA6392FP



IC103 CXA1821M



IC601 LA5602



4-9. IC PIN FUNCTIONS

• IC101 DIGITAL SIGNAL PROCESSOR (CXD2545Q)

Pin No.	Pin Name	I/O	Function
1	SRON	O	Sled drive output (Not used)
2	SRDR	O	Sled drive output
3	SFON	O	Sled drive output (Not used)
4	TFDR	O	Tracking drive output
5	TRON	O	Tracking drive output (Not used)
6	TRDR	O	Tracking drive output
7	TFON	O	Tracking drive output (Not used)
8	FFDR	O	Focus drive output
9	FRON	O	Focus drive output (Not used)
10	FRDR	O	Focus drive output
11	FFON	O	Focus drive output (Not used)
12	VCOO	O	VCO output for analog EFM PLL (Not used)
13	VCOI	I	VCO input for analog EFM PLL (Ground)
14	TEST	I	TEST pin connected normally to ground
15	DVss	—	Digital ground
16	TES2	I	TEST pin connected normally to ground
17	TES3	I	TEST pin connected normally to ground
18	PDO	O	Charge-pump output for analog EFM PLL (Not used)
19	VPCO	O	Charge-pump output for variable pitch PLL (Not used)
20	VCKI	I	Clock input from variable pitch external VCO (Ground)
21	AVD2	—	Analog power supply
22	IGEN	I	Power supply pin for operational amplifiers
23	AVS2	—	Analog ground
24	ADIO	I	(Not used)
25	RFC	O	(Not used)
26	RFDC	I	RF signal input
27	TE	I	Tracking error signal input
28	SE	I	Sled error signal input
29	FE	I	Focus error signal input
30	VC	I	Center voltage input pin
31	FILO	O	Filter output for master PLL
32	FILI	I	Filter input for master PLL
33	PCO	O	Charge-pump output for master PLL
34	CLTV	I	Control voltage input for master VCO
35	AVS1	—	Analog ground
36	RFAC	I	EFM signal input
37	BIAS	I	Asymmetry circuit constant current input
38	ASYI	I	Asymmetry compare voltage input
39	ASYO	O	EFM full swing output
40	AVD1	—	Analog power supply

Pin No.	Pin Name	I/O	Function
41	DVDD	—	Digital power supply
42	ASYE	I	Asymmetry circuit ON/OFF
43	PSSL	I	Audio data output mode selection input
44	WDCK	O	48-bit slot D/A interface. Word clock.
45	LRCK	O	48-bit slot D/A interface. LR clock.
46	DATA	O	DA 16 output when PSSL=1.48-bit slot serial data when PSSL=0
47	BCLK	O	DA 15 output when PSSL=1.48-bit slot data when PSSL=0
48	64DATA	O	DA 14 output when PSSL=1.64-bit slot data when PSSL=0 (Not used)
49	64BCLK	O	DA 13 output when PSSL=1.64-bit slot data when PSSL=0 (Not used)
50	64LRCK	O	DA 12 output when PSSL=1.64-bit slot data when PSSL=0 (Not used)
51	GTOP	O	DA 11 output when PSSL=1.GTOP output when PSSL=0 (Not used)
52	XUGF	O	DA 10 output when PSSL=1.XUGF output when PSSL=0 (Not used)
53	XPLCK	O	DA 09 output when PSSL=1.XPLCK output when PSSL=0
54	GFS	O	DA 08 output when PSSL=1.GFS output when PSSL=0
55	PFCK	O	DA 07 output when PSSL=1.RFCK output when PSSL=0
56	C2PO	O	DA 06 output when PSSL=1.C2PO output when PSSL=0 (Not used)
57	XRAOF	O	DA 05 output when PSSL=1.XRA0F output when PSSL=0
58	MNT3	O	DA 04 output when PSSL=1.MNT3 output when PSSL=0
59	MNT2	O	DA 03 output when PSSL=1.MNT2 output when PSSL=0
60	MNT1	O	DA 02 output when PSSL=1.MNT1 output when PSSL=0
61	MNT0	O	DA 01 output when PSSL=1.MNT0 output when PSSL=0
62	XTAI	I	X'tal oscillator circuit input
63	XTAO	O	X'tal oscillator circuit output (Not used)
64	XTSL	I	X'tal selection input pin (Ground)
65	DVss	—	Digital ground
66	FSTI	I	2/3 divider input of pins 62, 63
67	FSTO	O	2/3 divider output of pins 62, 63
68	FSOF	O	(Not used)
69	C16M	O	16.9344 MHz output (Not used)
70	MD2	I	Digital-out ON/OFF control pin (+5V)
71	DOUT	O	Digital-out output pin
72	EMPH	O	Playback disc output in emphasis mode (Not used)
73	WFCK	O	WFCK output
74	SCOR	O	Sub-code sync output
75	SBSO	O	Sub-P through Sub-W serial output (Not used)
76	EXCK	I	Clock input for SBS0 read-out (Ground)
77	SUBQ	O	Sub-Q 80-bit output
78	SQCK	O	Sub-code Q clock output
79	MUTE	I	Muting selection pin
80	SENS	O	SENS output

Pin No.	Pin Name	I/O	Function
81	XRST	I	System reset
82	DIRC	I	Used in 1-track jump mode (+5v)
83	SCLK	I	SENS serial data read-out clock
84	DFSW	I	DFCT selection pin (Ground)
85	ATSK	I	Input pin for anti-shock (Ground)
86	DATA	I	Serial data input, supplied from CPU
87	XLAT	I	Latch input, supplied from CPU
88	CLOCK	I	Serial data transfer clock input, supplied from CPU
89	COUT	O	Numbers of track counted signal output (Not used)
90	DVDD	—	Digital power supply
91	MIRR	O	Mirror signal output
92	DFCT	O	Defect signal output
93	FOK	O	Focus OK output
94	FSW	O	Output to select spindle motor output filter (Not used)
95	MON	O	Output to control ON/OFF of spindle motor (Not used)
96	NDP	O	Output to control spindle motor servo
97	MDS	O	Output to control spindle motor servo (Not used)
98	LOCK	O	GFS is sampled by 460 Hz. H when GFS is H (Not used)
99	SSTP	I	Input signal to detect disc inner most track
100	SFDR	O	Sled drive output

• IC302 SYSTEM CONTROL (CXP82532-011Q)

Pin No.	Pin Name	I/O	Function
1	BUS IN	I	Control A input
2	RM IN	I	Remote control signal input
3	ADJ	I	ADJ mode setting pin
4	XLT	O	CXD2545 latch output
5	LD ON	O	Laser diode ON output H : ON
6	TSENS	I	Table position sensor input
7	PRGL	O	CXD8567 latch output
8	CLK	O	CXD2545/CXD8567 serial clock output
9	AMUTE	O	Mute output pin H : ON
10	DATA	O	CXD2545/CXD8567 serial data output
11	SQCK	O	Subcode Q read clock
12	SUBQ	I	Subcode Q read data input
13	SCLK	O	CXD2545 data read serial clock output
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	MEGA CONTROL button LED output
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	CD1/2/3	I	Command mode switch input
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
30	XRST	I	Reset input L : Reset
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 segment output 1
39	P2	O	FL display tube segment output 2
40	P3	O	FL display tube segment output 3

Pin No.	Pin Name	I/O	Function
41	P4	O	FL display tube segment output 4
42	P5	O	FL display tube segment output 5
43	P6	O	FL display tube segment output 6
44	P7	O	FL display tube segment output 7
45	P8	O	FL display tube segment output 8
46	P9	O	FL display tube segment output 9
47	P10	O	FL display tube segment output 10
48	P11	O	FL display tube segment output 11
49	P12	O	FL display tube segment output 12
50	P13	O	FL display tube segment output 13
51	P14	O	FL display tube segment output 14
52	P15	O	FL display tube segment output 15
53	P16	O	FL display tube segment output 16
54	P17	O	FL display tube segment output 17
55	P18	O	FL display tube segment output 18
56	P19	O	FL display tube segment output 19
57	P20	O	FL display tube segment output 20
58	P21	O	FL display tube segment output 21
59 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	Control A output
78	DSSENS	I	Disc sensor input
79	SENS	I	CXD2545 internal state monitor input
80	SCOR	I	Subcode sync. input

SECTION 5 EXPLODED VIEWS

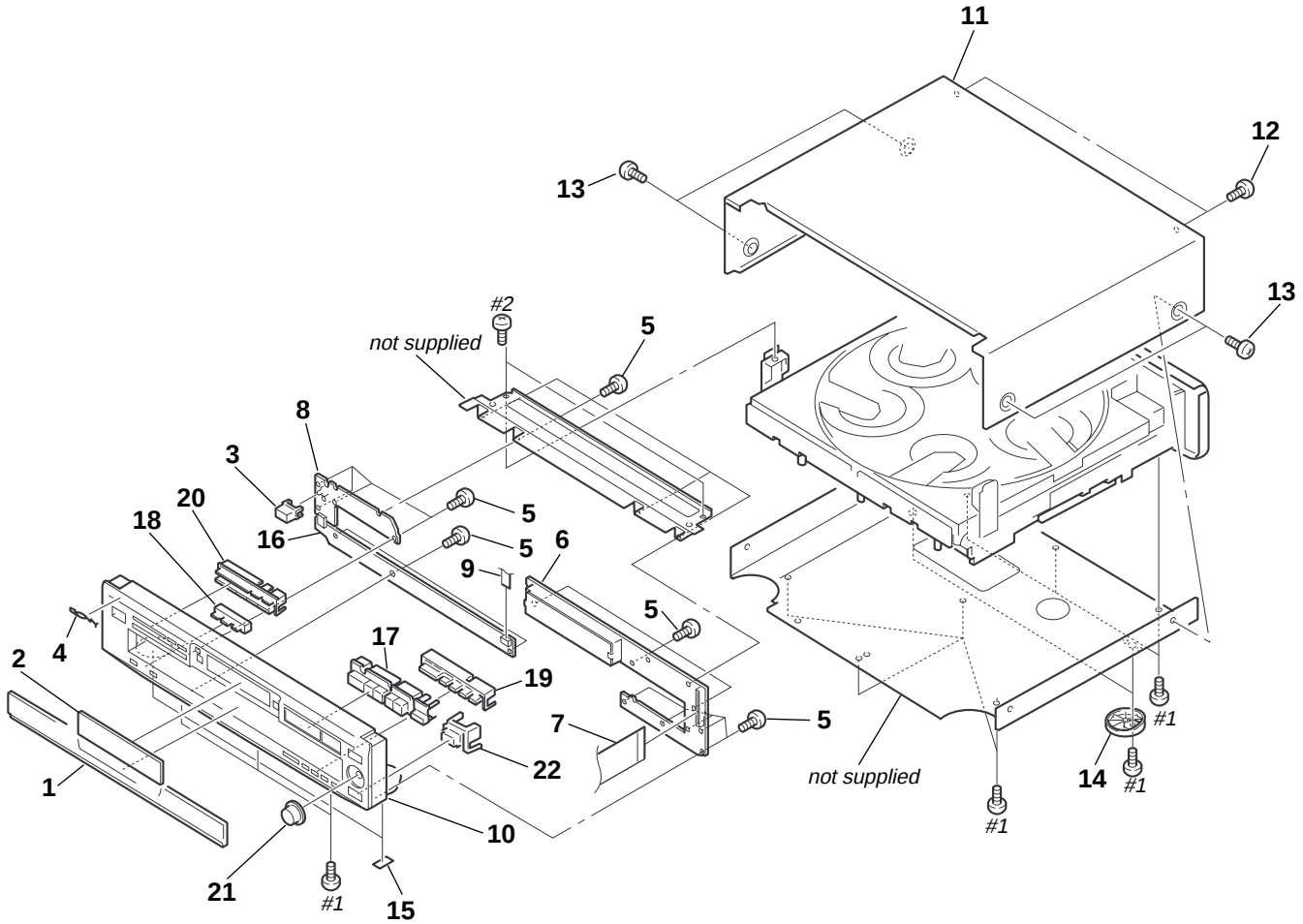
NOTE:

- -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 is given in the last of this parts list.

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

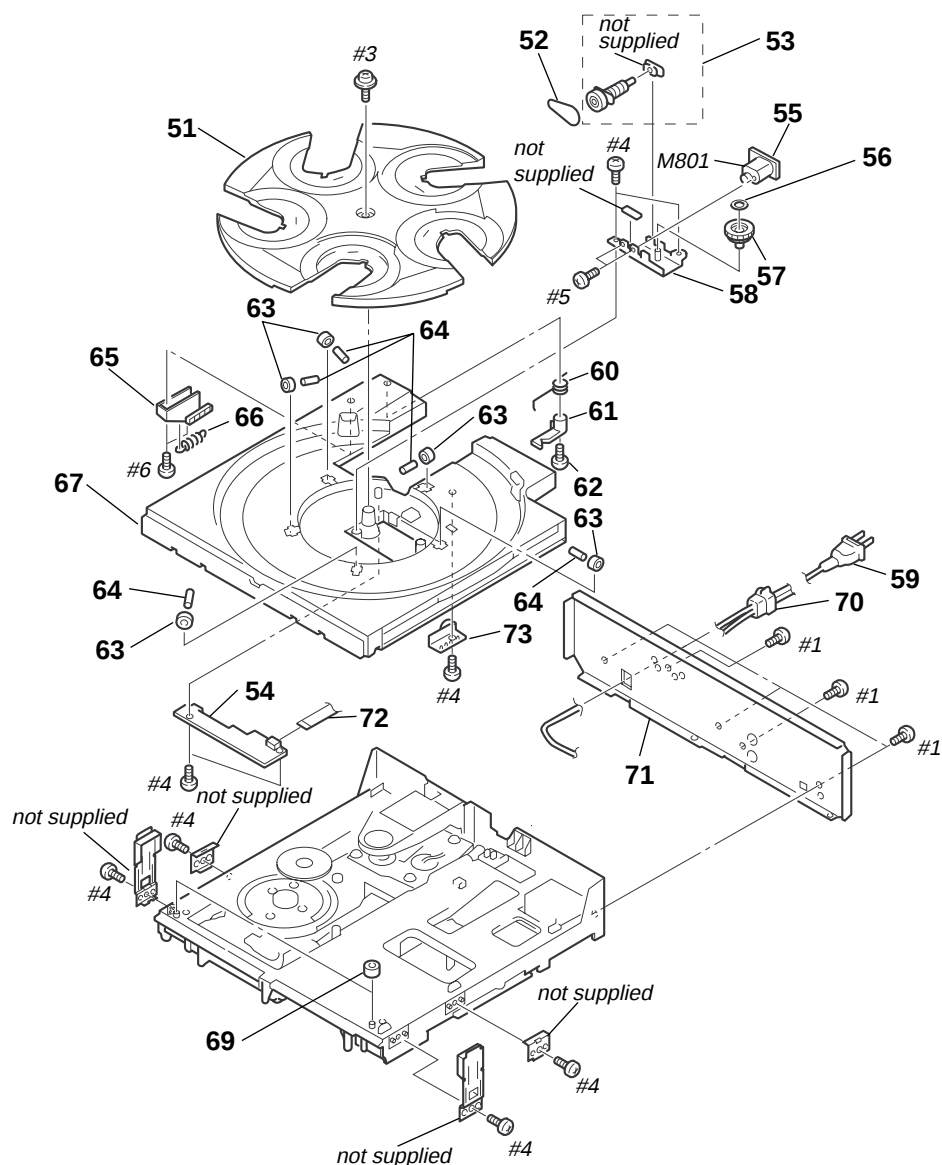
Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

5-1. FRONT PANEL AND CASE SECTION



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	4-987-780-11	PANEL, LOADING		12	3-703-685-21	SCREW (+BV 3X8)	
2	4-987-779-11	WINDOW (FL)		13	3-704-366-01	SCREW (CASE) (M3X8)	
3	4-977-589-01	BUTTON (POWER)		14	X-4946-618-1	FOOT ASSY	
4	3-008-600-01	EMBLEM (5-AR), SONY		* 15	4-978-398-21	CUSHION	
5	4-951-620-01	SCREW (2.6X8), +BVTP		* 16	1-664-524-11	KEY BOARD	
* 6	1-664-522-11	DISPLAY BOARD		17	4-987-775-01	BUTTON (PLAY)	
7	1-777-839-11	WIRE (FLAT TYPE) (37 CORE)		18	4-987-776-01	BUTTON (FUNC)	
* 8	1-664-523-11	POWER SW BOARD		19	4-987-777-01	BUTTON (FF)	
9	1-777-838-11	WIRE (FLAT TYPE) (6 CORE)		20	4-987-774-01	BUTTON (MODE)	
10	4-987-773-31	PANEL, FRONT (CE415)		21	4-987-994-01	KNOB (AMS)	
10	4-987-773-41	PANEL, FRONT (C360Z)		22	4-987-778-01	BUTTON (MEGA-CONTROL)	
* 11	4-978-492-11	CASE					

5-2. BACK PANEL AND DISC TABLE SECTION

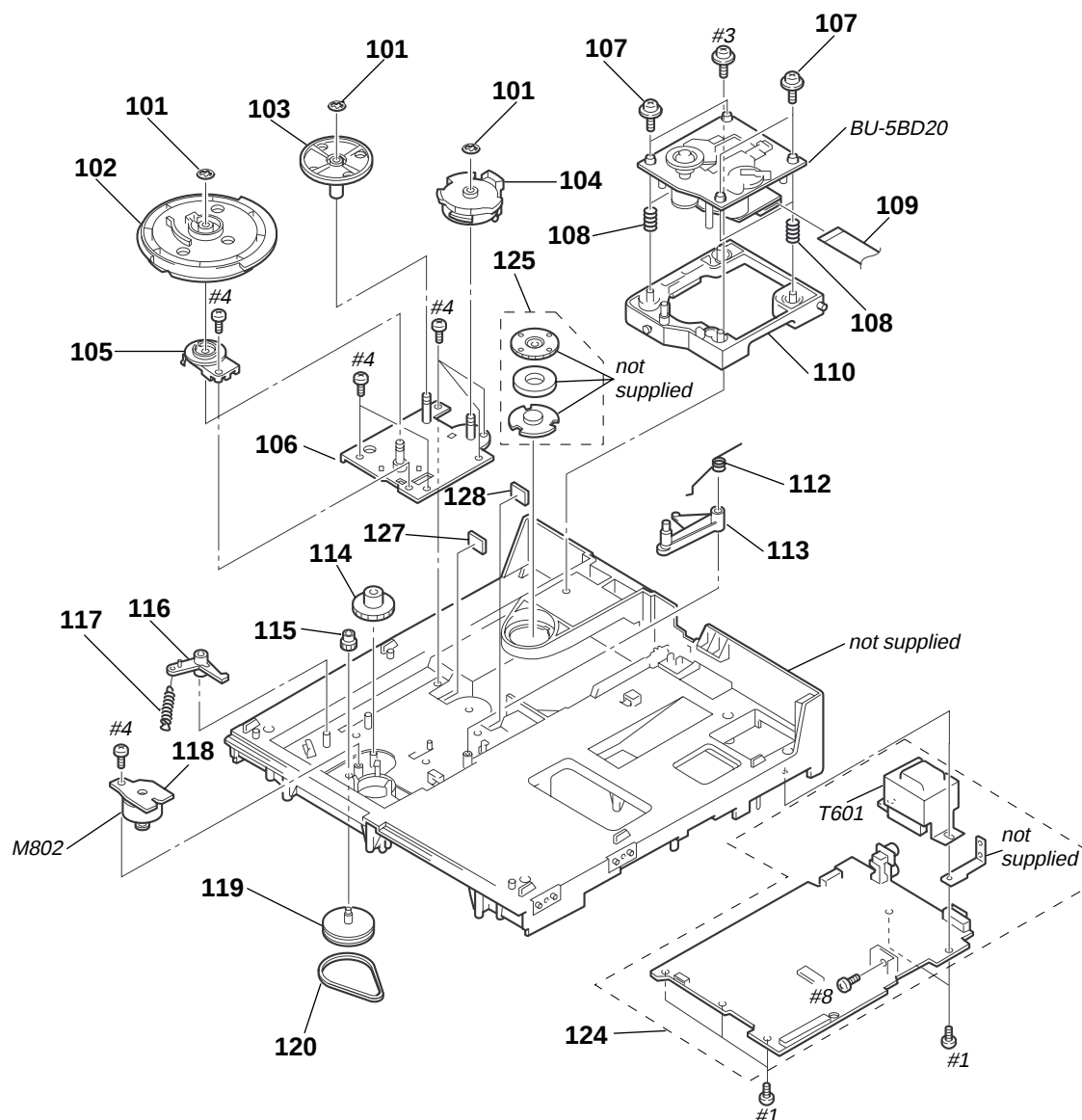


Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	4-957-299-11	TABLE (B), DISC		64	4-934-376-01	SHAFT (ROLLER)	
52	4-957-304-01	BELT (RM)		65	4-957-292-11	SLIDER (RACK)	
53	X-4943-479-1	GEAR (ROTARY A) ASSY		66	4-957-294-01	SPRING (D.T), TENSION	
* 54	1-659-737-11	SENSOR BOARD		67	4-957-298-01	TABLE (A), DISC	
* 55	1-647-364-11	TABLE MOTOR BOARD		* 69	4-951-619-01	CUSHION (A)	
56	3-325-697-01	WASHER		* 70	3-703-244-00	BUSHING (2104), CORD	
57	4-957-284-01	GEAR (ROTARY B)		* 71	4-987-784-01	PANEL, BACK (CE415:US)	
58	X-4943-477-1	BRACKET (RM) ASSY		* 71	4-987-784-11	PANEL, BACK (CE415:Canadian)	
△ 59	1-590-926-11	CORD, POWER		* 71	4-987-784-21	PANEL, BACK (C360Z)	
60	4-957-293-01	SPRING (RACK RELEASE)		72	1-751-052-11	WIRE (FLAT TYPE) (6 CORE)	
61	4-957-291-11	LEVER (RACK RELEASE)		73	X-4943-480-1	BRACKET (ROLLER D) ASSY	
62	4-957-868-01	SCREW (+PTPWH 2.6X20)		M801	A-4660-525-A	MOTOR ASSY, ROTARY(TABLE)	
63	X-4924-457-1	ROLLER ASSY					

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.

5-3. CHASSIS SECTION

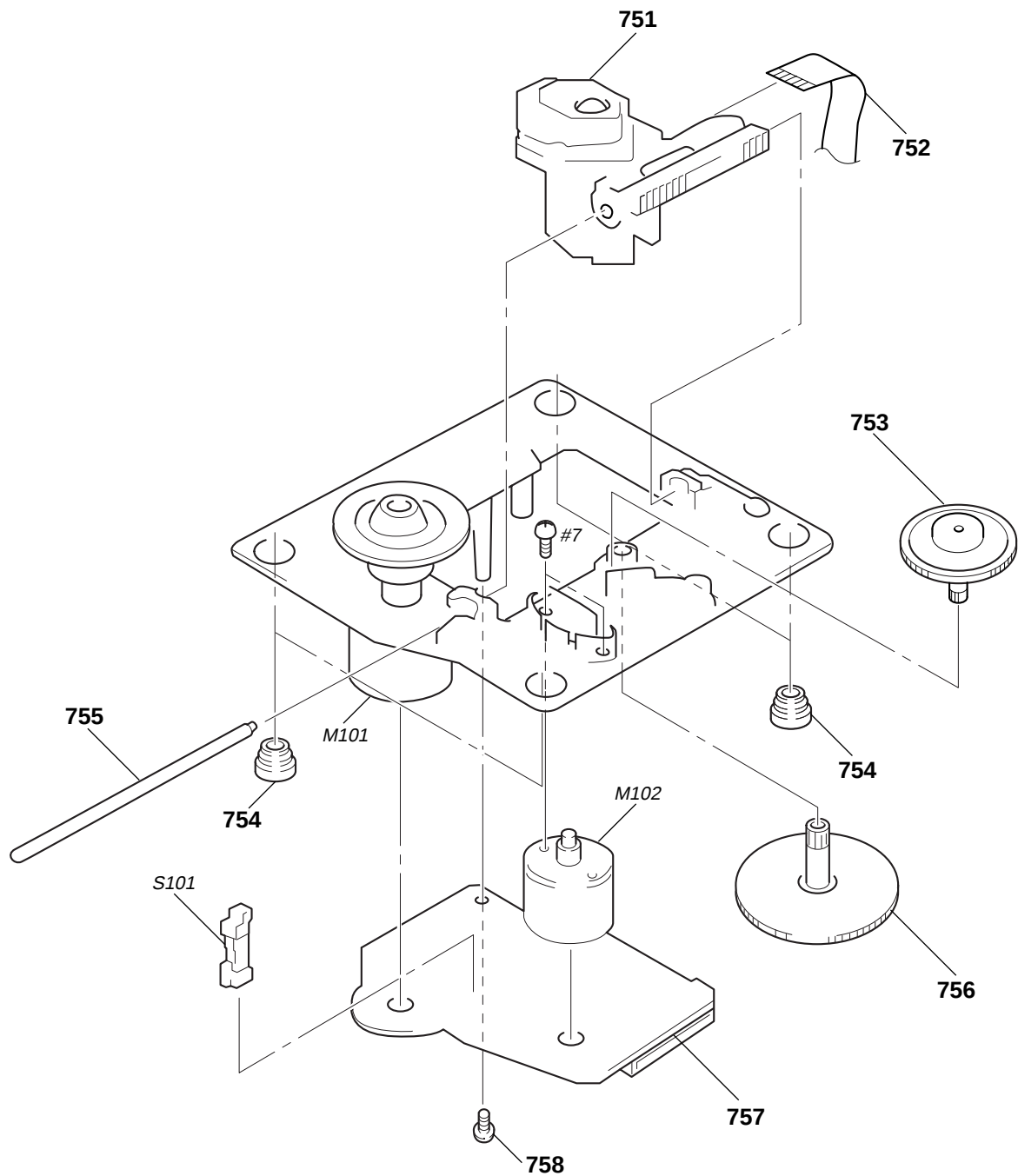


Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
101	4-957-283-01	WASHER (5), STOPPER		115	4-934-375-01	GEAR (LOADING B)	
102	4-957-288-01	GEAR (MAIN)		116	4-957-285-01	LEVER, SET	
103	4-957-287-01	GEAR (REV)		117	4-962-087-01	SPRING (S), TENSION	
104	4-957-286-01	GEAR (U/D)		* 118	1-659-738-11	LOADING MOTOR BOARD	
105	1-466-996-11	ENCODER, ROTARY		119	X-4941-529-1	PULLEY ASSY	
106	X-4946-195-1	BRACKET (GEAR) ASSY		120	4-944-490-01	BELT (TIMING)	
107	4-933-134-01	SCREW (+PTPWH M2.6X6)		* 124	A-4699-512-A	MAIN BOARD, COMPLETE (CE415)	
108	4-948-503-01	SPRING (BU), COMPRESSION		* 124	A-4699-572-A	MAIN BOARD, COMPLETE (C360Z)	
109	1-765-443-11	WIRE (FLAT TYPE) (23 CORE)		* 125	1-452-879-31	MAGNET	
110	4-957-289-12	HOLDER (BU)		* 127	4-981-731-01	CUSHION (U/D)	
112	4-957-281-01	SPRING (LOCK LEVER)		* 128	4-981-731-11	CUSHION (U/D)	
113	4-957-279-11	LEVER, LOCK		M802	A-4660-914-A	MOTOR ASSY, LOADING	
114	4-957-303-01	GEAR (LOADING C)		▲ T601	1-429-956-11	TRANSFORMER, POWER	

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 spécifique.

5-4. BASE UNIT SECTION (BU-5BD20)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
△ 751	8-848-379-31	OPTICAL PICK-UP KSS-213B/S-N		* 757	A-4673-509-A	BD BOARD, COMPLETE	
752	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)		758	4-951-620-01	SCREW (2.6X8), +BVTP	
753	4-917-567-21	GEAR (M)		M101	X-4917-523-3	MOTOR ASSY (SPINDLE)	
754	4-951-940-01	INSULATOR (BU)		M102	X-4917-504-1	MOTOR ASSY (SLED)	
755	4-917-565-01	SHAFT, SLED		S101	1-572-085-11	SWITCH, LEAF (LIMIT)	
756	4-917-564-01	GEAR (P), FLATNESS					

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

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

SECTION 6

ELECTRICAL PARTS LIST

BD

DISPLAY

NOTE:

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.

- 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.
- CAPACITORS:
uF: μ F
- RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- COILS
uH: μ H
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA..., μ PA...,
uPB..., μ PB..., uPC..., μ PC...,
uPD..., μ PD...

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	A-4673-509-A	BD BOARD, COMPLETE *****				< RESISTOR >	
		< CAPACITOR >		R101	1-216-077-00	METAL CHIP 15K 5%	1/10W
C101	1-163-005-11	CERAMIC CHIP 470PF 10%	50V	R102	1-216-097-00	METAL GLAZE 100K 5%	1/10W
C102	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R103	1-216-077-00	METAL CHIP 15K 5%	1/10W
C103	1-163-005-11	CERAMIC CHIP 470PF 10%	50V	R104	1-216-085-00	METAL CHIP 33K 5%	1/10W
C105	1-135-155-21	TANTALUM CHIP 4.7uF 10%	16V	R105	1-216-097-00	METAL GLAZE 100K 5%	1/10W
C106	1-164-346-11	CERAMIC CHIP 1uF	16V	R106	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
C107	1-164-346-11	CERAMIC CHIP 1uF	16V	R107	1-216-061-00	METAL CHIP 3.3K 5%	1/10W
C108	1-163-035-00	CERAMIC CHIP 0.047uF	50V	R108	1-216-073-00	METAL CHIP 10K 5%	1/10W
C109	1-163-145-00	CERAMIC CHIP 0.0015uF 5%	50V	R109	1-216-121-00	METAL GLAZE 1M 5%	1/10W
C110	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V	R110	1-216-025-00	METAL GLAZE 100 5%	1/10W
C111	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	R112	1-216-049-00	METAL GLAZE 1K 5%	1/10W
C112	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R123	1-216-073-00	METAL CHIP 10K 5%	1/10W
C113	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R124	1-216-097-00	METAL GLAZE 100K 5%	1/10W
C115	1-126-607-11	ELECT CHIP 47uF 20%	4V	R125	1-216-049-00	METAL GLAZE 1K 5%	1/10W
C116	1-126-607-11	ELECT CHIP 47uF 20%	4V	R126	1-216-049-00	METAL GLAZE 1K 5%	1/10W
C117	1-126-209-11	ELECT 100uF 20%	4V	R127	1-216-049-00	METAL GLAZE 1K 5%	1/10W
C118	1-163-275-11	CERAMIC CHIP 0.001uF 5%	50V	R131	1-216-037-00	METAL CHIP 330 5%	1/10W
C119	1-163-231-11	CERAMIC CHIP 15PF 5%	50V	R135	1-216-295-00	CONDUCTOR, CHIP (2012)	
C123	1-164-232-11	CERAMIC CHIP 0.01uF	50V	R136	1-216-295-00	CONDUCTOR, CHIP (2012)	
C124	1-164-005-11	CERAMIC CHIP 0.47uF	25V	R137	1-216-295-00	CONDUCTOR, CHIP (2012)	
C140	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R138	1-216-295-00	CONDUCTOR, CHIP (2012)	
C141	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R141	1-216-089-00	METAL GLAZE 47K 5%	1/10W
C151	1-163-237-11	CERAMIC CHIP 27PF 5%	50V	R142	1-216-081-00	METAL CHIP 22K 5%	1/10W
C153	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R143	1-216-103-00	METAL CHIP 180K 5%	1/10W
C154	1-164-336-11	CERAMIC CHIP 0.33uF	25V	R144	1-216-103-00	METAL CHIP 180K 5%	1/10W
C156	1-163-237-11	CERAMIC CHIP 27PF 5%	50V	R146	1-216-073-00	METAL CHIP 10K 5%	1/10W
C157	1-163-145-00	CERAMIC CHIP 0.0015uF 5%	50V	R147	1-216-081-00	METAL CHIP 22K 5%	1/10W
C159	1-163-019-00	CERAMIC CHIP 0.0068uF 10%	50V	R148	1-216-001-00	METAL CHIP 10 5%	1/10W
C161	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R149	1-216-003-11	METAL GLAZE 12 5%	1/10W
		< CONNECTOR >		R158	1-216-111-00	METAL GLAZE 390K 5%	1/10W
CN101	1-770-072-11	CONNECTOR,(LIF(NON-ZIF))FFC23P		R159	1-216-101-00	METAL CHIP 150K 5%	1/10W
CN102	1-770-014-11	CONNECTOR, FFC/FPC 16P		R160	1-216-295-00	CONDUCTOR, CHIP (2012)	
		< IC >		R161	1-216-308-00	METAL CHIP 4.7 5%	1/10W
IC101	8-752-369-78	IC CXD2545Q		R162	1-216-101-00	METAL CHIP 150K 5%	1/10W
IC102	8-759-176-09	IC BA6392FP				< SWITCH >	
IC103	8-752-072-45	IC CXA1821M		S101	1-572-085-11	SWITCH, LEAF(LIMIT)	
		< TRANSISTOR >				*****	
Q101	8-729-010-08	TRANSISTOR MSB710-R		*	1-664-522-12	DISPLAY BOARD	

						< CAPACITOR >	
				C801	1-126-933-11	ELECT 100uF 20%	10V

DISPLAY

KEY

LOADING MOTOR

MAIN

Ref. No.	Part No.	Description				Remarks	Ref. No.	Part No.	Description				Remarks
< CONNECTOR >							< RESISTOR >						
* CN810	1-764-700-11	SOCKET, CONNECTOR 37P					R711	1-249-415-11	CARBON	680	5%	1/4W	F
< DIODE >							R712	1-249-417-11	CARBON	1K	5%	1/4W	F
							R713	1-249-419-11	CARBON	1.5K	5%	1/4W	F
D810	8-719-057-97	DIODE SEL5923A-TP15					R711	1-249-415-11	CARBON	680	5%	1/4W	F
< FLUORESCENT DISPLAY >							R712	1-249-417-11	CARBON	1K	5%	1/4W	F
							R713	1-249-419-11	CARBON	1.5K	5%	1/4W	F
FL810	1-517-616-11	TUBE, FLUORESCENT INDICATOR					R714	1-249-415-11	CARBON	680	5%	1/4W	F
< IC >							R714	1-249-421-11	CARBON	2.2K	5%	1/4W	F
IC810	8-759-459-84	IC NJL56H400					< SWITCH >						
< RESISTOR >							S711	1-554-303-21	SWITCH, TACTILE(PEAK SEARCH) (CE415)				
R801	1-247-807-31	CARBON	100	5%	1/4W		S712	1-554-303-21	SWITCH, TACTILE(EDIT/TIME FADE)(CE415)				
R802	1-247-807-31	CARBON	100	5%	1/4W		S713	1-554-303-21	SWITCH, TACTILE(TIME) (CE415)				
R811	1-249-415-11	CARBON	680	5%	1/4W	F	S714	1-554-303-21	SWITCH, TACTILE(FADER)				
R812	1-249-417-11	CARBON	1K	5%	1/4W	F	S715	1-554-303-21	SWITCH, TACTILE(MUSIC SCAN)				
R813	1-249-419-11	CARBON	1.5K	5%	1/4W	F	*****						
							* 1-659-738-11	LOADING MOTOR BOARD					
R814	1-249-421-11	CARBON	2.2K	5%	1/4W	F	*****						
R815	1-247-843-11	CARBON	3.3K	5%	1/4W		< MOTOR >						
R816	1-249-427-11	CARBON	6.8K	5%	1/4W	F	M802	A-4660-914-A	MOTOR ASSY (LOADING)				
R817	1-249-415-11	CARBON	680	5%	1/4W	F	*****						
R818	1-249-417-11	CARBON	1K	5%	1/4W	F	* A-4699-512-A	MAIN BOARD, COMPLETE(CE415)					

R819	1-249-419-11	CARBON	1.5K	5%	1/4W	F	* A-4699-572-A	MAIN BOARD, COMPLETE(C360Z)					
R820	1-249-421-11	CARBON	2.2K	5%	1/4W	F	*****						
R821	1-247-843-11	CARBON	3.3K	5%	1/4W								
R822	1-249-427-11	CARBON	6.8K	5%	1/4W	F	7-685-871-01	SCREW +BVTT 3X6 (S)					
R823	1-249-431-11	CARBON	15K	5%	1/4W		< CAPACITOR >						
< SWITCH >							C301	1-162-199-31	CERAMIC	10PF	5%	50V	
S801	1-554-303-21	SWITCH, TACTILE(X-FADE)					C302	1-162-199-31	CERAMIC	10PF	5%	50V	
S802	1-554-303-21	SWITCH, TACTILE(NO DELAY)					C303	1-164-159-11	CERAMIC	0.1uF		50V	
S803	1-554-303-21	SWITCH, TACTILE(CLEAR)					C304	1-161-494-00	CERAMIC	0.022uF		25V	
S804	1-554-303-21	SWITCH, TACTILE(CHECK)					C305	1-126-933-11	ELECT	100uF	20%	10V	
S805	1-554-303-21	SWITCH, TACTILE(▶▶)					C306	1-124-442-00	ELECT	330uF	20%	6.3V	
S806	1-554-303-21	SWITCH, TACTILE(◀◀)					C307	1-161-494-00	CERAMIC	0.022uF		25V	
S807	1-554-303-21	SWITCH, TACTILE(MEGA CONTROL)					C311	1-161-494-00	CERAMIC	0.022uF		25V	
S808	1-554-303-21	SWITCH, TACTILE(OPEN/CLOSE)					C312	1-161-494-00	CERAMIC	0.022uF		25V	
S809	1-554-303-21	SWITCH, TACTILE(DISC SKIP)					C313	1-161-494-00	CERAMIC	0.022uF		25V	
S810	1-554-303-21	SWITCH, TACTILE(EXCHANGE)					C316	1-164-159-11	CERAMIC	0.1uF		50V	
S811	1-554-303-21	SWITCH, TACTILE(■)					C317	1-161-494-00	CERAMIC	0.022uF		25V	
S812	1-554-303-21	SWITCH, TACTILE(■)					C401	1-162-282-31	CERAMIC	100PF	10%	50V	
S813	1-554-303-21	SWITCH, TACTILE(▮▮)					C402	1-162-215-31	CERAMIC	47PF	5%	50V	
S814	1-473-957-11	ENCODER, ROTARY(AMS)					C403	1-162-215-31	CERAMIC	47PF	5%	50V	
*****							C404	1-130-479-00	MYLAR	0.0047uF	5%	50V	
* 1-664-524-11	KEY BOARD						C405	1-130-472-00	MYLAR	0.0012uF	5%	50V	
*****							C406	1-126-933-11	ELECT	100uF	20%	10V	
< CONNECTOR >							C407	1-161-494-00	CERAMIC	0.022uF		25V	
CN701	1-568-849-11	SOCKET, CONNECTOR 6P					C408	1-126-967-11	ELECT	47uF	20%	16V	
CN702	1-750-195-11	CONNECTOR, BOARD TO BOARD 6P					C410	1-162-290-31	CERAMIC	470PF	10%	50V	
							C412	1-164-159-11	CERAMIC	0.1uF		50V	
							C451	1-126-059-11	ELECT	10uF	20%	50V	
							C501	1-162-282-31	CERAMIC	100PF	10%	50V	
							C502	1-162-215-31	CERAMIC	47PF	5%	50V	

MAIN

Ref. No.	Part No.	Description	Remarks			
C503	1-162-215-31	CERAMIC	47PF	5%	50V	
C504	1-130-479-00	MYLAR	0.0047uF	5%	50V	
C505	1-130-472-00	MYLAR	0.0012uF	5%	50V	
C506	1-126-933-11	ELECT	100uF	20%	10V	
C507	1-161-494-00	CERAMIC	0.022uF		25V	
C508	1-126-967-11	ELECT	47uF	20%	16V	
C509	1-126-962-11	ELECT	3.3uF	20%	50V	
C510	1-162-290-31	CERAMIC	470PF	10%	50V	
C512	1-164-159-11	CERAMIC	0.1uF		50V	
C551	1-126-059-11	ELECT	10uF	20%	50V	
C602	1-126-944-11	ELECT	3300uF	20%	16V	
C603	1-126-942-61	ELECT	1000uF	20%	16V	
C604	1-126-963-11	ELECT	4.7uF	20%	50V	
C605	1-126-963-11	ELECT	4.7uF	20%	50V	
C606	1-126-963-11	ELECT	4.7uF	20%	50V	
C607	1-126-935-11	ELECT	470uF	20%	6.3V	
C608	1-104-101-11	ELECT	220uF	20%	10V	
C609	1-124-918-11	ELECT	47uF	20%	63V	
C610	1-126-059-11	ELECT	10uF	20%	50V	
C614	1-126-052-11	ELECT	100uF	20%	16V	
C616	1-161-494-00	CERAMIC	0.022uF		25V	
C619	1-126-967-11	ELECT	47uF	20%	16V	
C622	1-161-494-00	CERAMIC	0.022uF		25V	
C624	1-161-494-00	CERAMIC	0.022uF		25V	
C625	1-161-494-00	CERAMIC	0.022uF		25V	
C626	1-161-494-00	CERAMIC	0.022uF		25V	
C628	1-126-967-11	ELECT	47uF	20%	16V	
C648	1-161-494-00	CERAMIC	0.022uF		25V	
C649	1-161-494-00	CERAMIC	0.022uF		25V	
C651	1-126-967-11	ELECT	47uF	20%	16V	
< CONNECTOR >						
CN401	1-750-640-11	CONNECTOR, FFC/FPC 23P				
* CN402	1-764-701-11	SOCKET, CONNECTOR 37P				
CN403	1-568-849-11	SOCKET, CONNECTOR 6P				
* CN404	1-568-825-11	SOCKET, CONNECTOR 6P				
* CN601	1-573-047-11	PIN, CONNECTOR (PC BOARD) 2P				
< DIODE >						
D302	8-719-987-63	DIODE 1N4148M				
D381	8-719-987-63	DIODE 1N4148M				
D601	8-719-200-82	DIODE 11ES2				
D602	8-719-200-82	DIODE 11ES2				
D603	8-719-200-82	DIODE 11ES2				
D604	8-719-200-82	DIODE 11ES2				
D605	8-719-200-82	DIODE 11ES2				
D606	8-719-929-15	DIODE HZS9.1NB2				
D608	8-719-987-63	DIODE 1N4148M				
D609	8-719-010-34	DIODE UZ-4.7BSC				
< IC >						
IC301	8-759-362-47	IC CXD8567AM				
IC302	8-752-881-74	IC CXP82532-011Q				
IC304	8-759-356-03	IC BA6780				
IC401	8-759-145-58	IC uPC4558C				
IC402	8-759-145-58	IC uPC4558C				
IC501	8-759-145-58	IC uPC4558C				
IC502	8-759-145-58	IC uPC4558C				
IC601	8-759-061-65	IC LA5602				
IC602	8-749-011-78	IC BA17807T				
IC603	8-759-633-42	IC M5293L				

Ref. No.	Part No.	Description	Remarks			
< JACK >						
J301	1-770-720-11	JACK, PIN 4P (LINE IN/OUT)				
J381	1-774-726-11	JACK (S-LINK(CONTROL A1))				
< COIL >						
L301	1-410-503-11	INDUCTOR	3.3uH			
L303	1-410-503-11	INDUCTOR	3.3uH			
L304	1-410-503-11	INDUCTOR	3.3uH			
L305	1-410-397-21	FERRITE BEAD INDUCTOR				
L306	1-410-397-21	FERRITE BEAD INDUCTOR				
L401	1-410-503-11	INDUCTOR	3.3uH			
L501	1-410-503-11	INDUCTOR	3.3uH			
L601	1-412-473-21	INDUCTOR	0uH			
L603	1-412-473-21	INDUCTOR	0uH			
L604	1-412-473-21	INDUCTOR	0uH			
L605	1-410-503-11	INDUCTOR	3.3uH			
L606	1-410-397-21	FERRITE BEAD INDUCTOR				
L607	1-410-503-11	INDUCTOR	3.3uH			
L608	1-410-507-11	INDUCTOR	6.8uH			
L609	1-412-473-21	INDUCTOR	0uH			
L610	1-412-473-21	INDUCTOR	0uH			
L611	1-412-473-21	INDUCTOR	0uH			
< TRANSISTOR >						
Q201	8-729-230-45	TRANSISTOR	2SC2785-HFE			
Q301	8-729-029-67	TRANSISTOR	DTC114ESA-TP			
Q381	8-729-230-45	TRANSISTOR	2SC2785-HFE			
Q402	8-729-141-26	TRANSISTOR	2SC3622A-LK			
Q404	8-729-230-45	TRANSISTOR	2SC2785-HFE			
Q502	8-729-141-26	TRANSISTOR	2SC3622A-LK			
Q503	8-729-029-56	TRANSISTOR	DTA144ESA			
Q601	8-729-119-76	TRANSISTOR	2SA1175-HFE			
< RESISTOR >						
R205	1-249-430-11	CARBON	12K	5%	1/4W	
R206	1-249-429-11	CARBON	10K	5%	1/4W	
R251	1-249-429-11	CARBON	10K	5%	1/4W	
R252	1-249-426-11	CARBON	5.6K	5%	1/4W	
R253	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R254	1-249-430-11	CARBON	12K	5%	1/4W	
R262	1-249-382-11	CARBON	1.2	5%	1/6W	F
R263	1-249-382-11	CARBON	1.2	5%	1/6W	F
R301	1-249-424-11	CARBON	3.9K	5%	1/4W	F
R302	1-247-807-31	CARBON	100	5%	1/4W	
R303	1-249-411-11	CARBON	330	5%	1/4W	
R304	1-249-413-11	CARBON	470	5%	1/4W	F
R308	1-249-429-11	CARBON	10K	5%	1/4W	
R309	1-249-417-11	CARBON	1K	5%	1/4W	F
R310	1-249-417-11	CARBON	1K	5%	1/4W	F
R311	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R312	1-249-437-11	CARBON	47K	5%	1/4W	
R313	1-249-429-11	CARBON	10K	5%	1/4W	
R314	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R315	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R316	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R317	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R318	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R319	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R321	1-249-429-11	CARBON	10K	5%	1/4W	

MAIN

POWER SWITCH

SENSOR

Ref. No.	Part No.	Description			Remarks
R322	1-249-429-11	CARBON	10K	5%	1/4W
R323	1-249-441-11	CARBON	100K	5%	1/4W
R324	1-249-429-11	CARBON	10K	5%	1/4W
R325	1-249-429-11	CARBON	10K	5%	1/4W
					(C360Z)
R331	1-249-427-11	CARBON	6.8K	5%	1/4W F
R333	1-249-429-11	CARBON	10K	5%	1/4W
R381	1-249-425-11	CARBON	4.7K	5%	1/4W F
R382	1-249-429-11	CARBON	10K	5%	1/4W
R383	1-249-393-11	CARBON	10	5%	1/4W F
R403	1-249-436-11	CARBON	39K	5%	1/4W
R404	1-249-436-11	CARBON	39K	5%	1/4W
R405	1-249-431-11	CARBON	15K	5%	1/4W
R406	1-249-431-11	CARBON	15K	5%	1/4W
R407	1-215-461-00	METAL	47K	1%	1/4W
R408	1-215-461-00	METAL	47K	1%	1/4W
R409	1-249-419-11	CARBON	1.5K	5%	1/4W F
R410	1-249-419-11	CARBON	1.5K	5%	1/4W F
R411	1-247-887-00	CARBON	220K	5%	1/4W
R412	1-249-417-11	CARBON	1K	5%	1/4W F
R416	1-249-425-11	CARBON	4.7K	5%	1/4W F
R450	1-247-895-00	CARBON	470K	5%	1/4W
R451	1-249-429-11	CARBON	10K	5%	1/4W
R452	1-249-429-11	CARBON	10K	5%	1/4W
R453	1-249-429-11	CARBON	10K	5%	1/4W
R454	1-249-429-11	CARBON	10K	5%	1/4W
R455	1-249-429-11	CARBON	10K	5%	1/4W
R470	1-249-429-11	CARBON	10K	5%	1/4W
R471	1-249-429-11	CARBON	10K	5%	1/4W
R503	1-249-436-11	CARBON	39K	5%	1/4W
R504	1-249-436-11	CARBON	39K	5%	1/4W
R505	1-249-431-11	CARBON	15K	5%	1/4W
R506	1-249-431-11	CARBON	15K	5%	1/4W
R507	1-215-461-00	METAL	47K	1%	1/4W
R508	1-215-461-00	METAL	47K	1%	1/4W
R509	1-249-419-11	CARBON	1.5K	5%	1/4W F
R510	1-249-419-11	CARBON	1.5K	5%	1/4W F
R511	1-247-887-00	CARBON	220K	5%	1/4W
R512	1-249-417-11	CARBON	1K	5%	1/4W F
R516	1-249-425-11	CARBON	4.7K	5%	1/4W F
R517	1-249-441-11	CARBON	100K	5%	1/4W
R550	1-247-895-00	CARBON	470K	5%	1/4W
R551	1-249-429-11	CARBON	10K	5%	1/4W
R552	1-249-429-11	CARBON	10K	5%	1/4W
R553	1-249-429-11	CARBON	10K	5%	1/4W
R554	1-249-429-11	CARBON	10K	5%	1/4W
R555	1-249-429-11	CARBON	10K	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 >			
S401	1-571-308-11	SWITCH, SLIDE(COMMAND MODE)			
		< VIBRATOR >			
X301	1-579-833-21	VIBRATOR, CRYSTAL 33MHz			
X401	1-579-175-11	VIBRATOR, CERAMIC 10MHz			

Ref. No.	Part No.	Description				Remarks
*	1-664-523-11	POWER SWITCH 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	1-247-843-11	CARBON	3.3K	5%	1/4W	(CE415)
R708	1-249-417-11	CARBON	1K	5%	1/4W	F (C360Z)
R709	1-249-419-11	CARBON	1.5K	5%	1/4W	F (C360Z)
R709	1-249-427-11	CARBON	6.8K	5%	1/4W	F (CE415)
< 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 (C360Z:TIME, CE415:DISC CHECK)				
S751	1-554-118-00	SWITCH, PUSH (1 KEY)(POWER)				

*	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

TABLE MOTOR

Ref. No.	Part No.	Description	Remarks
*	1-647-364-11	TABLE MOTOR BOARD *****	
		< MOTOR >	
M801	A-4660-525-A	MOTOR ASSY, ROTARY (TABLE) *****	
		MISCELLANEOUS *****	
7	1-777-839-11	WIRE (FLAT TYPE) (37 CORE)	
9	1-777-838-11	WIRE (FLAT TYPE) (6 CORE)	
△ 59	1-590-926-11	CORD, POWER	
72	1-751-052-11	WIRE (FLAT TYPE) (6 CORE)	
105	1-466-996-11	ENCODER, ROTARY	
109	1-765-443-11	WIRE (FLAT TYPE) (23 CORE)	
* 125	1-452-879-31	MAGNET	
△ 751	8-848-379-31	OPTICAL PICK-UP KSS-213B/S-N	
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)	
M801	A-4660-525-A	MOTOR ASSY, ROTARY (TABLE)	
M802	A-4660-914-A	MOTOR ASSY, LOADING	
△ T601	1-429-956-11	TRANSFORMER, POWER	

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.

Ref. No.	Part No.	Description	Remarks
		ACCESSORIES & PACKING MATERIALS *****	
	1-475-087-11	REMOTE COMMANDER (RM-DC43)	
	1-558-271-11	CORD, CONNECTION (AUDIO)	
	1-777-241-11	CORD, CONNECTION (CONTROL A1) (CE415:Canadian)	
	3-859-178-11	MANUAL, INSTRUCTION (ENGLISH)	
	3-859-178-21	MANUAL, INSTRUCTION (FRENCH) (CE415:Canadin)	
	4-983-956-01	COVER, BATTERY (FOR RM-DC43)	

		HARDWARE LIST *****	
#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#2	7-685-872-09	SCREW +BVTT 3X8 (S)	
#3	7-685-648-79	SCREW (M3X12), TAPPING	
#4	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#5	7-621-772-00	SCREW +B 2X3	
#6	7-685-134-19	SCREW (+ PTPWH) (2.6X8)	
#7	7-621-255-15	SCREW +P 2X3	
#8	7-685-871-01	SCREW +BVTT 3X6 (S)	