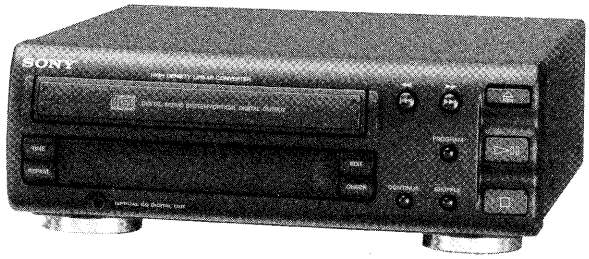
CDP-H7900

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model
Tourist Model



CDP-H7900 is the COMPACT DISC PLAYER section in MHC-7900/ P100X

Model Name Using Similer Mechanism	NEW
CD Mechanism Type	CDM14M-5BD10
Base Unit Type	BU-5BD10B
Optical Pick-up Type	KSS-240A

SPECIFICATIONS

System	Compact disc digital audio system
Laser	Semiconductor laser
Wavelength	780 – 790 nm
Frequence response	2 Hz – 20 kHz (±0.5 dB)
Signal-to-noise ratio	More than 115 dB
Dynamic range	More than 100 dB
Harmonic distortion	Less than 0.003%
Channel separation	More than 110 dB

Outputs
- LINE OUT (phono jacks):
  - Output level 2 V
  - (at 50 kilohms)
  - Load impedance over 10 kilohms
- DIGITAL OPTICAL OUT (Square optical connector jack, rear panel):
  - wave length 660 nm
  - output level –18 dBm
- OPTICAL CD DIGITAL OUT (Optical mini jack, front panel):
  - wave length 660 nm
  - output level –18 dBm

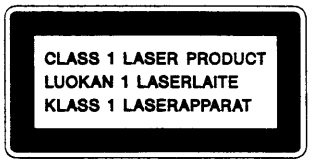
Dimensions
- Approx. 225 x 85 x 230 mm (w/h/d)
- (8 7/8 x 3 3/8 x 9 1/8 inches)

Mass Approx. 2.0 kg (4 lb 6 oz)

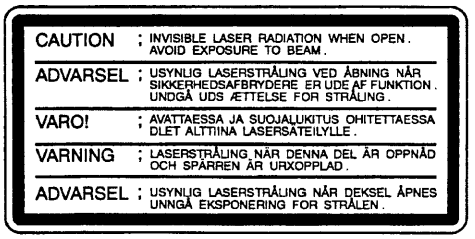
COMPACT DISC PLAYER

SONY®

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



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



This caution label is located inside the unit.

Notes on chip component replacement

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

TABLE OF CONTENTS

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.

SECTION 1
SERVICING NOTE

SAFETY CHECK-OUT

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

LEAKAGE

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

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

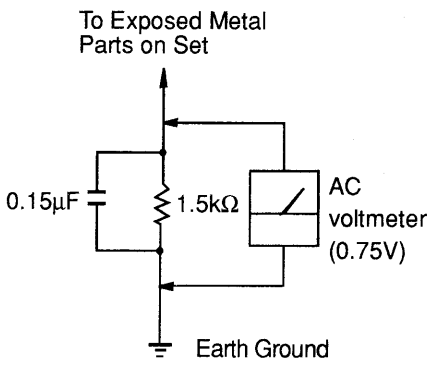


Fig. A. Using an AC voltmeter to check AC leakage.

Precautions for Handling the Optical Pick-up

The laser diode inside the optical pick-up is damaged easily by the potential differences resulting from the static electricity produced by our clothes and bodies.
Take careful anti-static electricity precautions when performing repairs. Follow the procedures in the manuals enclosed with the repair parts. Also handle the flexible boards carefully as they break easily.

Precautions for Checking Laser Diode Emission

In this unit, laser light is focused on the disc surface using the subjective lens in the optical pick-up. Therefore, when checking laser diode emissions, leave more than 30 cm or more between the lens and your eye.

Checking the Laser Diode and Focus Search Operations

Perform the "S curve check" in the CD Section and check that the S curve waveform is generated two times.

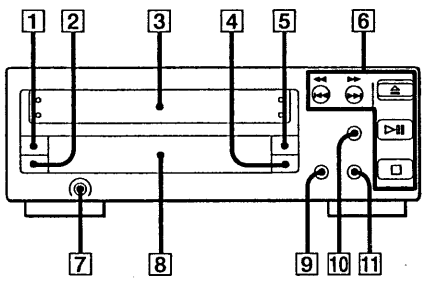
- **Power Supply Used In Servicing**
  This unit does not have its own power supply. As it works on the power supplied from the amplifier (TA-H7900E) used for this series, connect this amplifier when servicing the unit (conduction repair, etc.).
  Power can also be supplied by connecting the "CDP/TC" connector of the conduction tool (PFJ-1). The following three items are required for this connection.
  - J-2501-063-A
  - 1-696-741-11 CORD, (WITH CONNECTOR)
  - 1-751-541-11 CORD, (WITH CONNECTOR)

This section is extracted from instruction manual.

Index to Parts and Controls

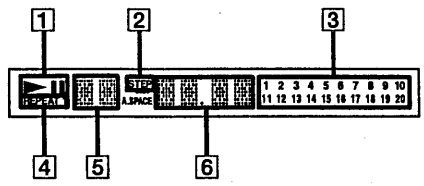
Refer to the pages indicated in parentheses for details on how to use the controls. Controls with an asterisk have indicators on themselves.

CD player



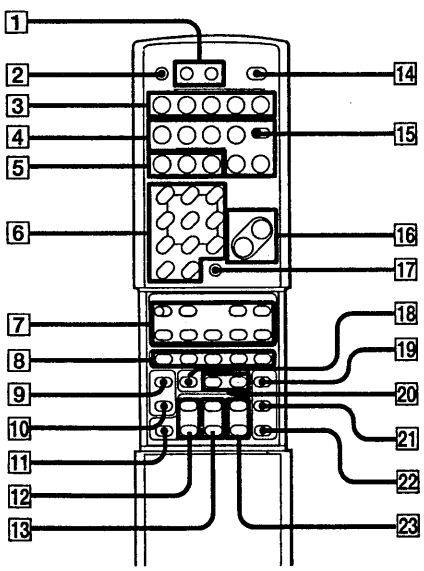
1 TIME button (8)
2 REPEAT button (9)
3 Disc tray (7)
4 CHECK button (15)
5 EDIT button (14, 15)
6 CD player operating buttons
⏮ ◀◀/▶▶ ⏭ (manual search/AMS) (7)
⏏ (open/close of the disc tray) (7, 13)
▷II (play/pause) (7, 14)
□ (stop) (7, 14)
7 OPTICAL CD DIGITAL OUT jack (27)
8 Display window (7)
9 CONTINUE button (8, 15)
10 PROGRAM button (8, 16)
11 SHUFFLE button (8)

CD player



1 Play and pause indicator (7)
2 STEP indication (8)
3 Music calendar (7, 14)
4 REPEAT/REPEAT 1 indication (9)
5 Track number indication (7)
6 Playing time indication (7, 14)

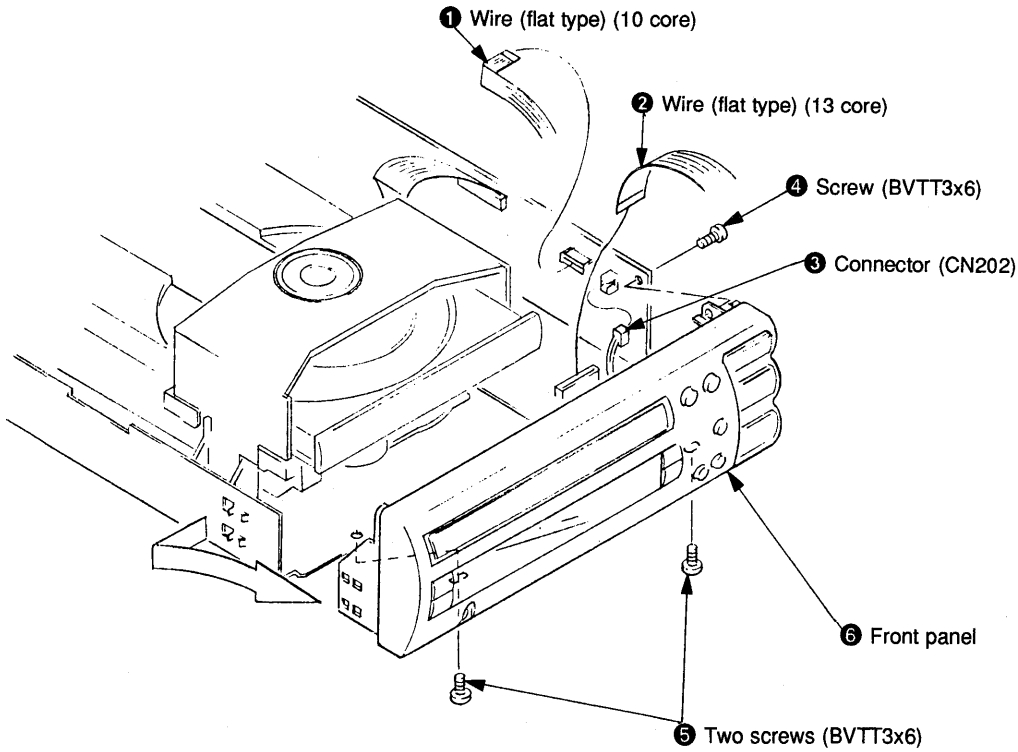
Remote commander



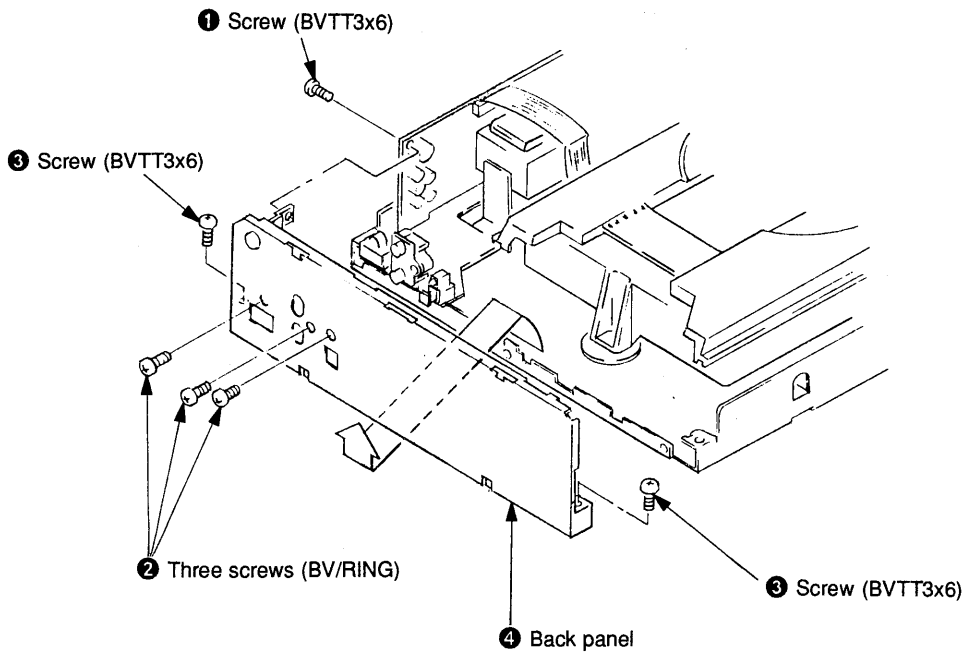
1 TAPE DECK A/B buttons (12)
2 SLEEP button (25)
3 CD/MD operating buttons (7, 16)
4 Cassette deck operating buttons (12)
5 Tuner operating buttons (11)
6 CD/Tuner/LPC numeric buttons (8, 11, 22)
7 VCR operating buttons (28)
8 TV operating buttons (28)
9 AUDIO FUNCTION button (28)
10 VIDEO FUNCTION button (28)
11 TEST TONE button (23)
12 REAR LEVEL +/– buttons (23)
13 CENTER LEVEL +/– buttons (23)
14 SYSTEM POWER switch (7)
15 CD/MD switch (7)
16 VOLUME +/– buttons (7)
17 LPC (Listening point control) button (22)
18 DIRECT button (18)
19 CHECK button (8)
20 MENU +/– button (18)
21 CLEAR button (8)
22 REPEAT button (9)
23 DELAY TIME +/– button (23)

SECTION 3
DISASSEMBLY

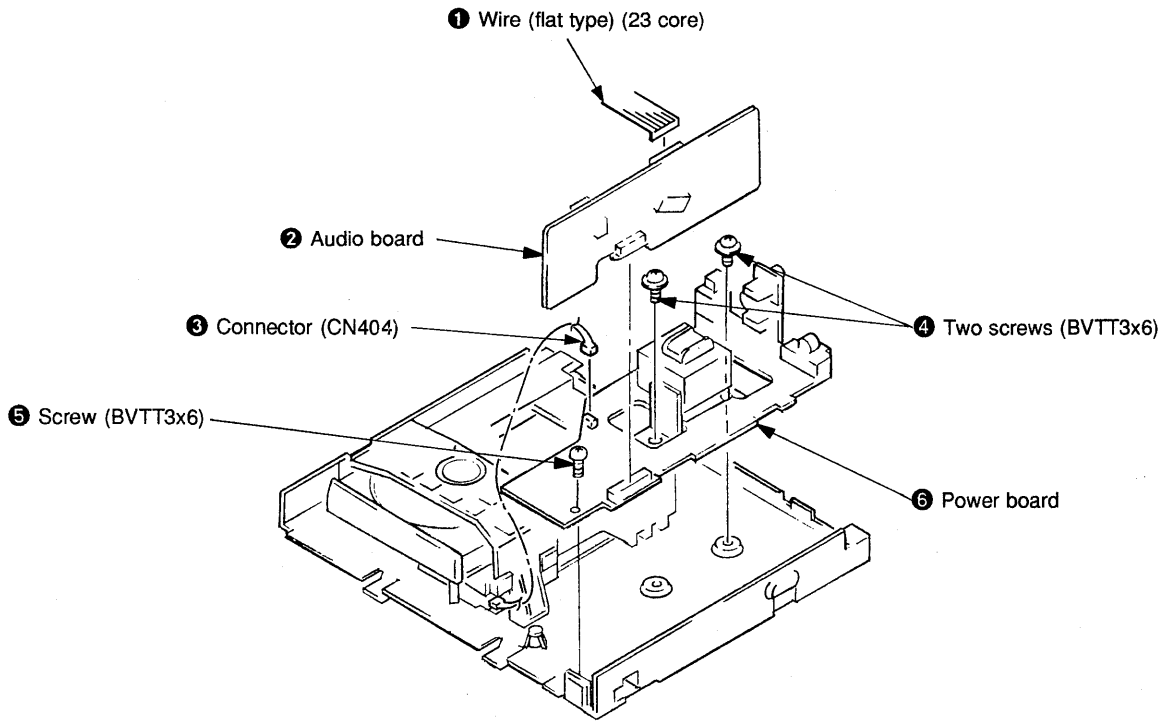
3-1. FRONT PANEL



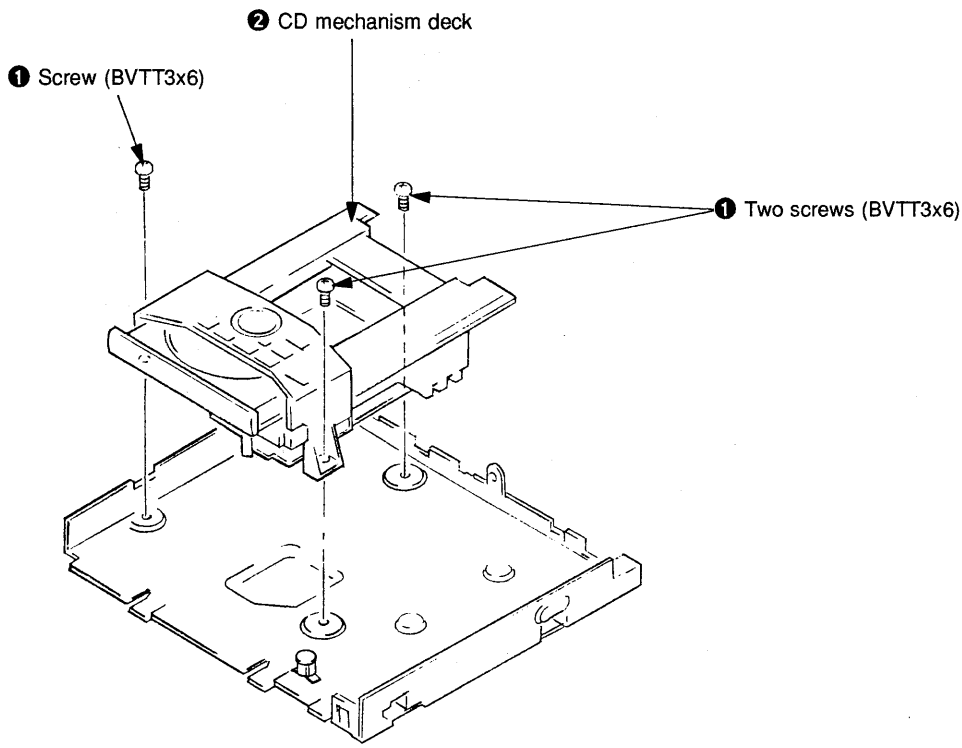
3-2. BACK PANEL



3-3. POWER BOARD



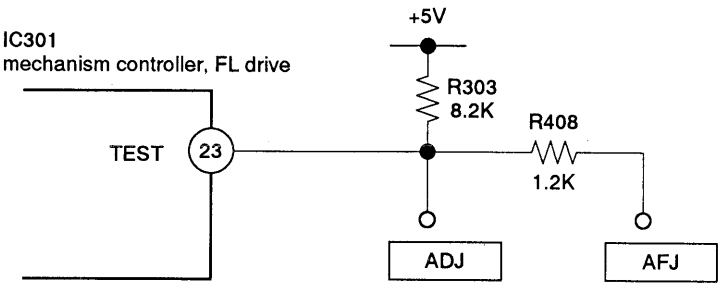
3-4. CD MECHANISM DECK



SECTION 4
TEST MODE

TEST MODE OF CXP82316-040Q MICROPROCESSOR FOR CDP-H7900 CD SECTION

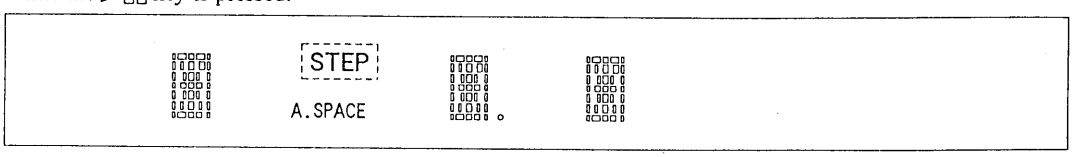
- **Test Pin Circuit**



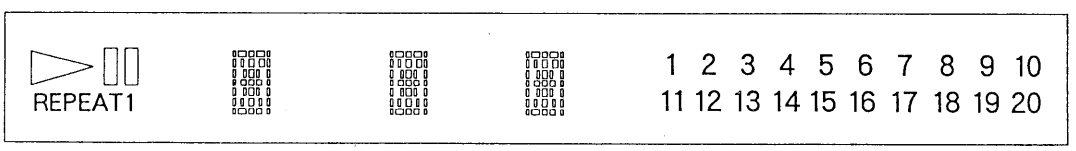
Connect the system cable from the power supply (Jig) or TA-H7900E.

- **Key and Display Test Mode**

1. Disconnect the system connector from the unit (CDP) and connect the TP of the power supply board (AFJ) to the GND.
2. Insert the system connector to the unit (CDP).
3. All FL displays will light up.
4. Check the digits using the ▷▯▯ key.
   While the ▷▯▯ key is pressed:

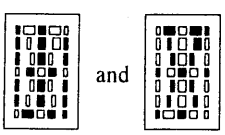


and



   The displays will be switched and shown for approximately 0.25 seconds each.

5. Check the segments using the □ key.
   While the □ key is pressed:



and will be switched and shown for approximately 0.25 seconds each at the minutes and seconds display.

6. Use the ▷ key of the remote commander to display RM50 (PLAY remote control code) and the □ key to display RM56 (STOP remote control code).
7. All FL displays will light up with the ⏏ key.
8. The test is satisfactory if 12 is displayed when any other key is pressed.

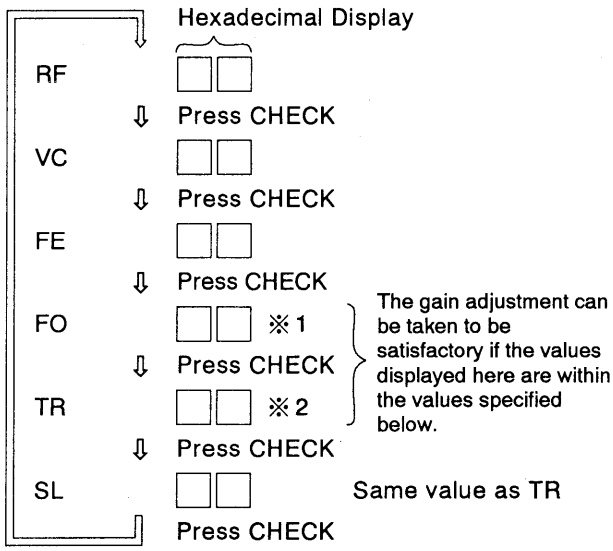
- **Forced Power ON Mode**

Mode for the unit to operate alone. It is operated by supplying AC20V to CN405 (primary side of the power transformer T401.

1. Turned OFF the AC20V power supply and connect the TP (ADJ) to the GND of the power supply board.
2. Turned ON the AC20V power supply. The power will turn on immediately.

- **Display Mode of Digital Servo State**

1. Before turning on the power supply, connect the TP (ADJ) to the GND, load the YEDS-18 test disk (3-702-101-01), and then turned on the power.
2. Each time the CHECK key is pressed, the data will be shown in hexadecimal digits in the order of RF offset, VC offset, FE offset, focus auto gain, tracking auto gain, and sled auto gain.



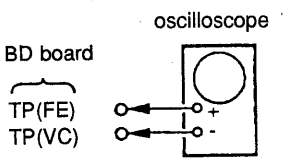
RF, VC, and FE display only the measurement results and cannot be used to determine if errors have occurred.

※1 FO: 46 to 24 (Hexadecimal digit)
※2 TR: 46 to 19 (Hexadecimal digit)

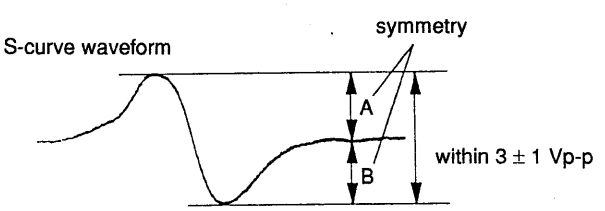
SECTION 5
ELECTRICAL BLOCK CHECKING

Note :
1. CD Block basically constructed 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 the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal lever is low than specified value with the following checks.

S Curve Check



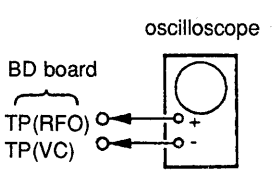
Procedure :
1. Connect oscilloscope to test point TP (FE) on BD board.
2. Connect between test point TP (FEI) and TP (VC) by lead wire.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and turned Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving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



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

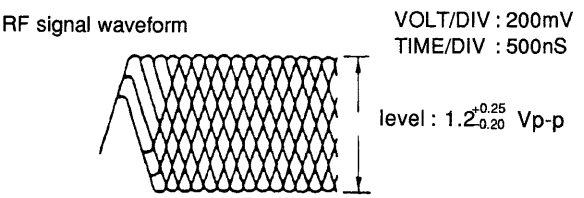
Note :
- Try to mesure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
- Take sweep time as loge as possible and light up the brightness to obtain best waveform.

RF Level Check

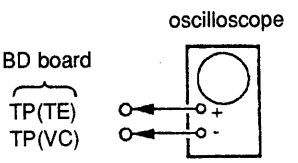


Procedure :
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

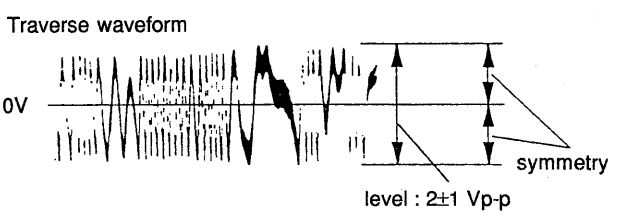
Note :
Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.



E-F Balance Check



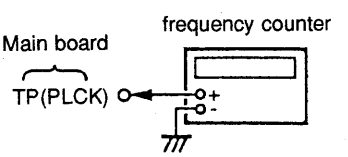
Procedure :
1. Connect test point TP (ADJ) to ground and TP(TEI) to TP (VC) with lead wire.
2. Connect oscilloscpe to test point TP (TE) on BD board.
3. Turned Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.



6. Remove the lead wire connected in step 1.

RF Free-run Frequency Check

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

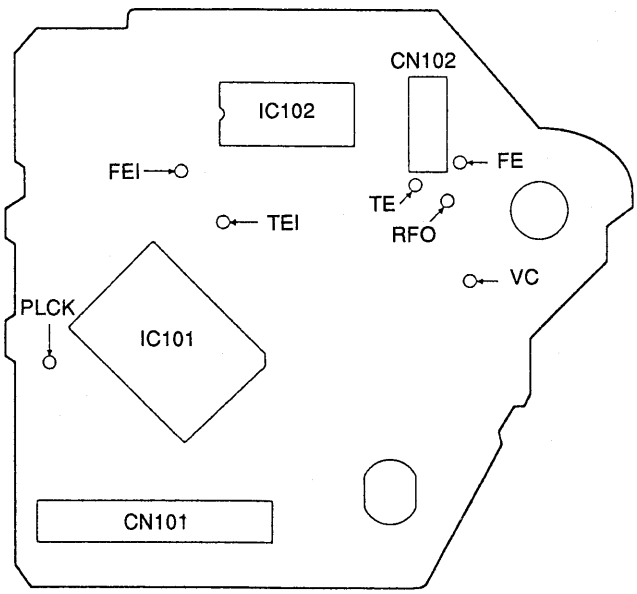


2. Turned Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

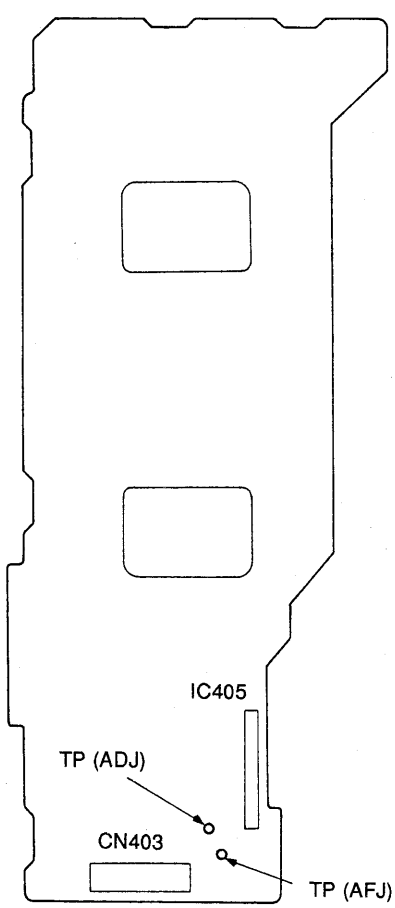
SECTION 6
DIAGRAMS

Adjustment Location :

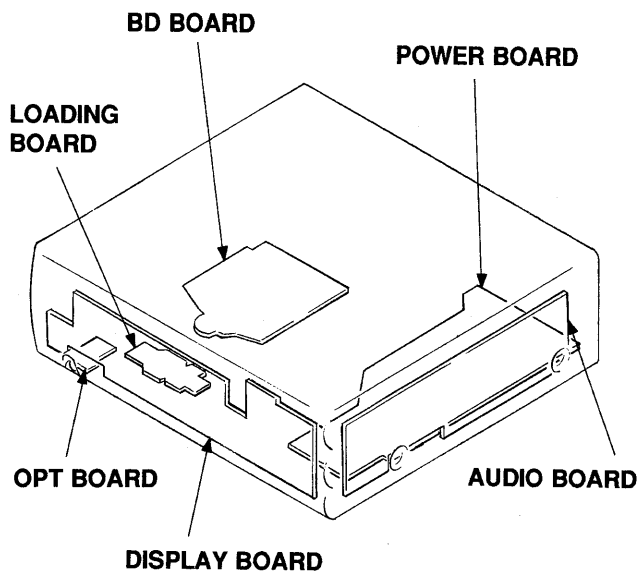
[BD BOARD] — Component Side —



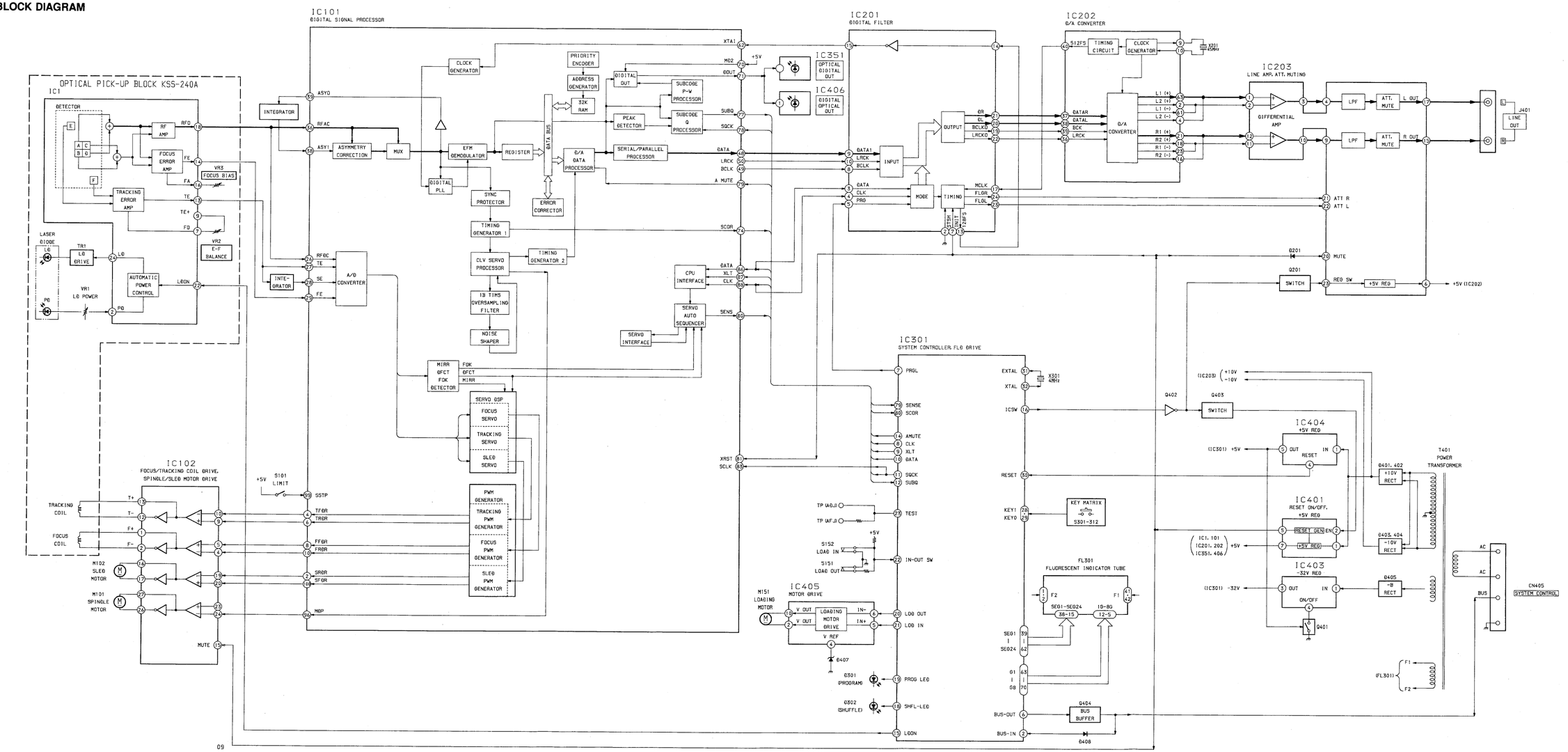
[POWER BOARD] — Component Side —



6-1. CIRCUIT BOARDS LOCATION



6-2. BLOCK DIAGRAM



6-3. PRINTED WIRING BOARDS

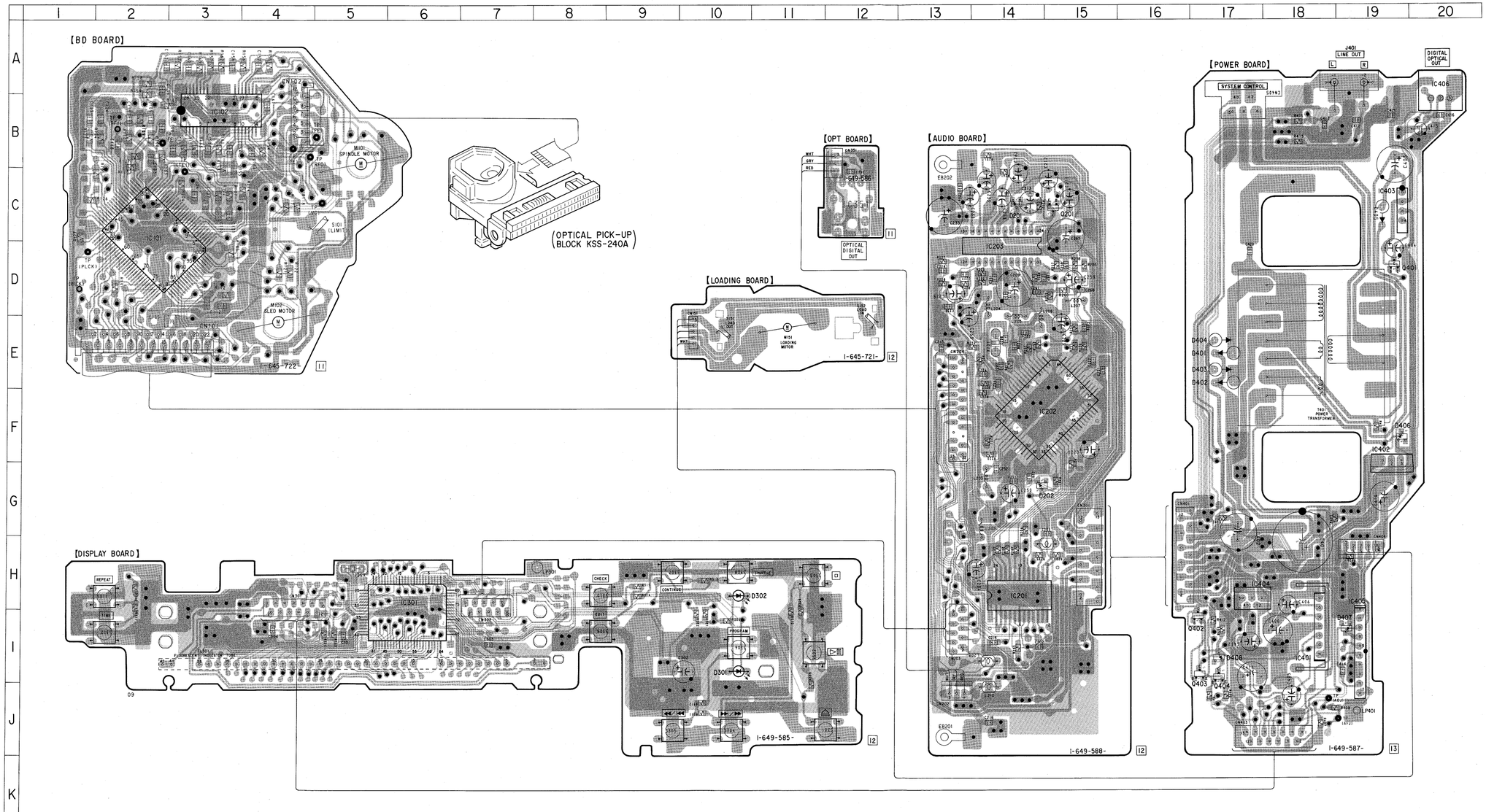
- See page 10 for Circuit Boards Location.
- See page 21 for Semiconductor Lead Layouts.

- Semiconductor Location

Ref. No.	Location
D201	C-14
D202	G-15
D301	I-10
D302	H-10
D401	E-17
D402	E-17
D403	E-17
D404	E-17
D405	C-19
D406	F-19
D407	I-19
D408	I-17
IC101	C-2
IC102	B-3
IC201	H-14
IC202	F-15
IC203	D-14
IC301	H-6
IC351	C-12
IC401	I-18
IC402	F-19
IC403	C-19
IC404	H-17
IC405	H-19
IC406	A-20
Q201	C-15
Q401	D-19
Q402	I-17
Q403	I-17
Q404	I-17

Note:

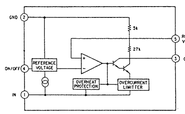
- o—— : parts extracted from the component side.
- ● : Through hole.
- ▒▒ : Pattern from the side which enable seeing.
- ▒▒ : Pattern of the rear side.



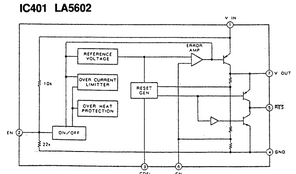
6-4. SCHEMATIC DIAGRAM

• See page 22 for IC Pin Functions.

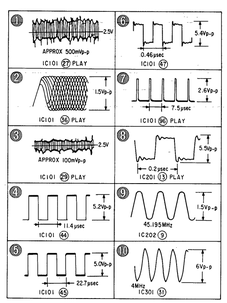
IC403 M5293L



IC401 LA5602



• **Waveforms.**

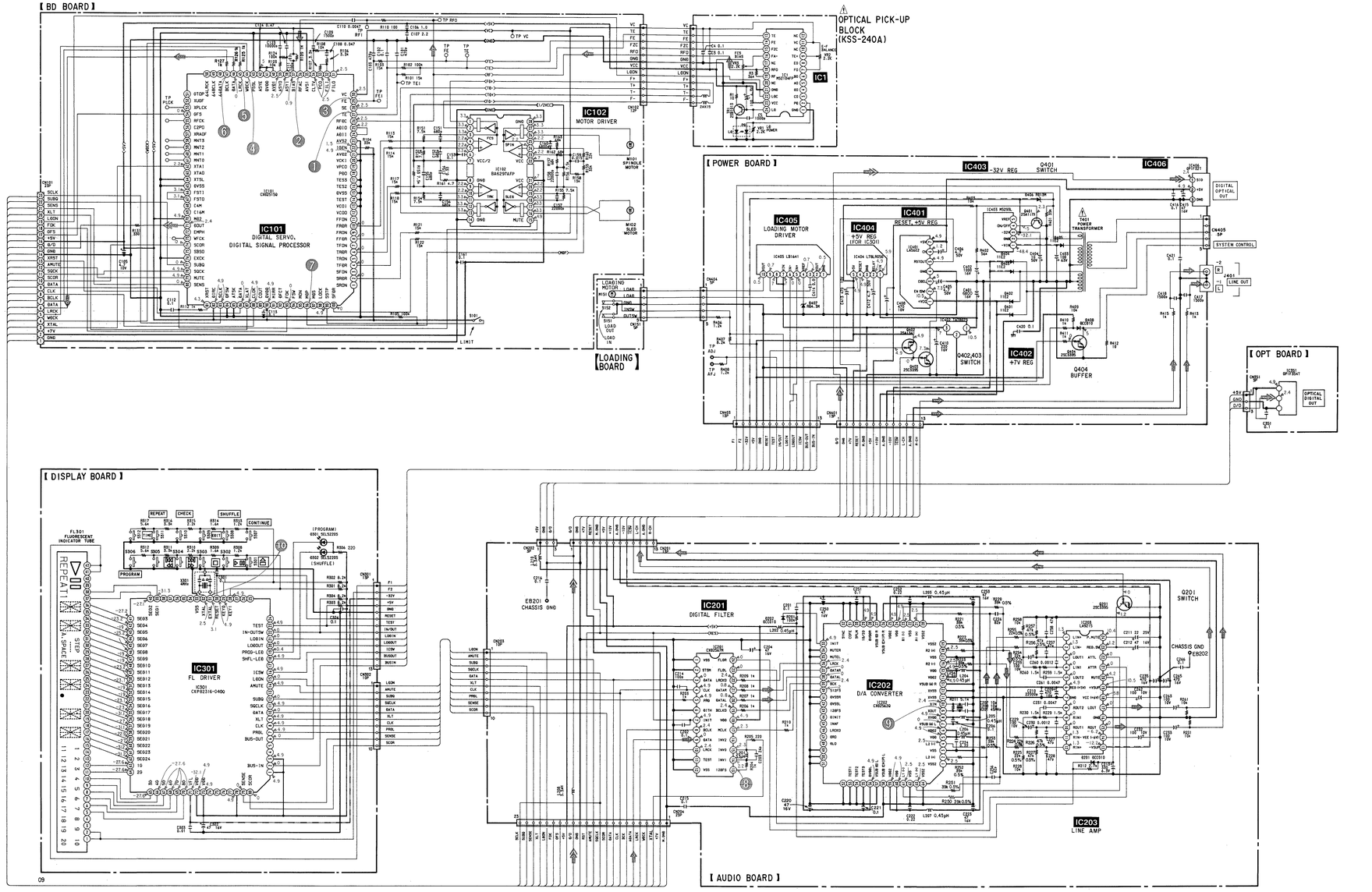


Note:

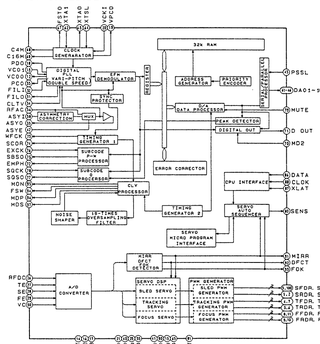
- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- % : indicates tolerance.
- △ : internal component.
- ▭ : panel designation.

Note:	**Note:**
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.

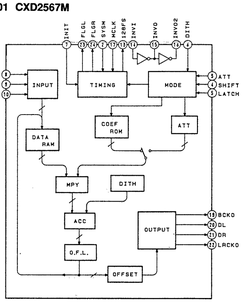
- ▬▬ : B+ Line
- ▬▬▬ : B− Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PLAY
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD
  ⇨ : digital out



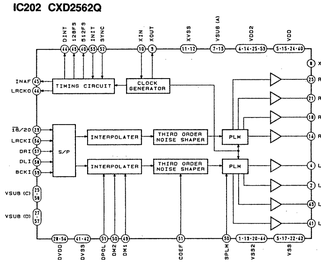
IC101 CXD2515Q



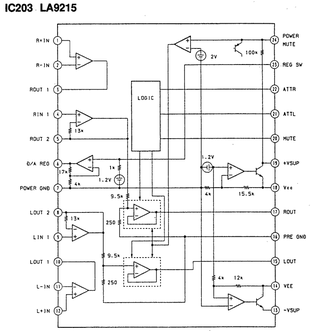
IC201 CXD2567M



IC202 CXD2562Q

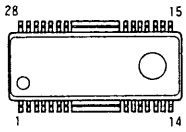


IC203 LA9215

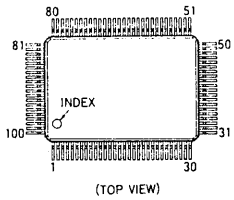


6-5. SEMICONDUCTOR LEAD LAYOUTS

BA6297AFP

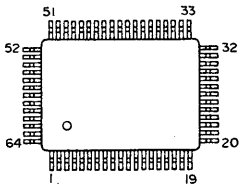


CXD2515Q



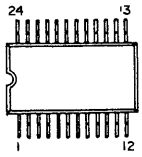
(TOP VIEW)

CXD2562Q



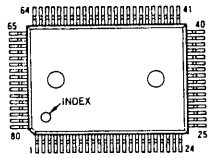
TOP VIEW

CXD2567M



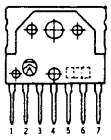
(TOP VIEW)

CXP82316-040Q

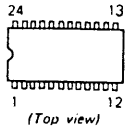


(TOP VIEW)

LA5602

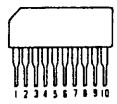


LA9215

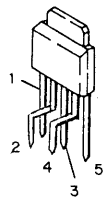


(Top view)

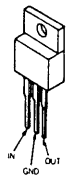
LB1641



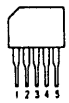
L78LR05D



M5F78M07L

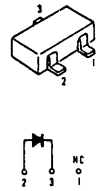


M5293L

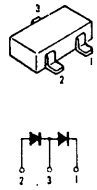


2SA1179-M5M6
2SC3395
DTA144EK

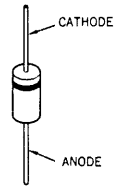
RD13M-B1
RD4.3M-B1



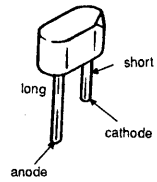
1SS226



10E2



SEL5220S



6-6. IC PIN FUNCTIONS

• **IC101 (CXD2515Q)**

No.	Pin Name	I/O	Description
1	SRON	O	Sled drive output
2	SRDR	O	Sled drive output
3	SFON	O	Sled drive output
4	TFDR	O	Tracking drive output
5	TRON	O	Tracking drive output
6	TRDR	O	Tracking drive output
7	TFON	O	Tracking drive output
8	FFDR	O	Focus drive output
9	FRON	O	Focus drive output
10	FRDR	O	Focus drive output
11	FFON	O	Focus drive output
12	VCOO	O	VCO output for analog EFM PLL
13	VCOI	I	VCO output for analog EFM PLL
14	TEST	I	TEST pin connected normally to GND
15	DVss	—	Digital GND
16	TES2	I	TEST pin connected normally to GND
17	TES3	I	TEST pin connected normally to GND
18	PDO	O	Charge-pump output for analog EFM PLL
19	VPCO	O	Charge-pump output for variable pitch PLL
20	VCKI	I	Clock input from variable pitch external VCO
21	AVD2	—	Analog power supply
22	IGEN	I	Power supply pin for operational amplifiers
23	AVS2	—	Analog GND
24	ADII	I	Input pin for A/D converter
25	ADIO	O	Operational amplifier output pin
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 GND
36	RFAC	I	EFM signal input
37	BIAS	I	Asymmetry circuit constant current input
38	ASYI	I	Asymmetry comparate voltage input
39	ASYO	O	EFM full swing output
40	AVD1	—	Analog power supply
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

No.	Pin Name	I/O	Description
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
49	64BCLK	O	DA 13 output when PSSL = 1. 64-bit slot data when PSSL = 0
50	64LRCK	O	DA 12 output when PSSL = 1. 64-bit slot data when PSSL = 0
51	GTOP	O	DA 11 output when PSSL = 1. GTOP output when PSSL = 0
52	XUGF	O	DA 10 output when PSSL = 1. XUGF output when PSSL = 0
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
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
64	XTSL	I	X'tal selection input pin
65	DVss	—	Digital GND
66	FSTI	I	2/3 divider output of pins 62,63
67	FSTO	O	2/3 divider output of pins 62,63
68	C4M	O	4.2336MHz output
69	C16M	O	16.9344MHz output
70	MD2	I	Digital-out ON/OFF control pin
71	DOUT	O	Digital-out output pin
72	EMPH	O	Playback disc output in emphasis mode
73	WFCK	O	WFCK output
74	SCOR	O	Sub-code sync output
75	SBSO	O	Sub-P through Sub-W serial output
76	EXCK	I	Clock input for SBS0 read-out
77	SUBQ	O	Sub-Q 80-bit output
78	SQCK	I	Clock input for SQS0 read-out
79	MUTE	I	Muting selection pin
80	SENS	O	SENS output
81	XRST	I	System reset
82	DIRC	I	Used in 1-track jump mode
83	SCLK	I	SENS serial data read-out clock
84	DFSW	I	DFCT selection pin
85	ATSK	I	Input pin for anti-shock
86	DATA	I	Serial data input, supplied from CPU
87	XLAT	I	Latch input, supplied from CPU
88	CLOK	I	Serial data transfer clock input, supplied from CPU

No.	Pin Name	I/O	Description
89	COUT	O	Numbers of track counted signal output
90	DV_{DD}	—	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
95	MON	O	Output to control ON/OFF of spindle motor
96	MDP	O	Output to control spindle motor servo
97	MDS	O	Output to control spindle motor servo
98	LOCK	O	GFS is sampled by 460Hz. H when GFS is H.
99	SSTP	I	Input signal to detect disc inner most track
100	SFDR	O	Sled drive output

- **IC301 CD MECHANISM CONTROLLER, FL DRIVER (CXP82316-040Q)**

Pin No.	Pin Name	I/O	Function
1	——	–	Connected to +5V.
2	BUS-IN	I	Audio bus input
3	——	–	Connected to +5V.
4	——	–	Not used. (Open)
5	——	–	
6	BUS-OUT	O	Audio bus output
7	PRGL	O	Latch signal output to the digital filter (IC201)
8	CLK	O	Serial clock output
9	XLT	O	Serial data latch signal output
10	DATA	O	Serial data output
11	SQCLK	O	Sub-code Q data read-out clock output
12	SUBQ	I	Sub code Q data input
13	——	–	Not used. (Open)
14	AMUTE	O	Analog muting control signal output
15	LDON	O	Optical pick-up laser diode control output
16	ICSW	O	+5V REG switch output signal to IC203 and IC401
17	——	–	Not used. (Open)
18	SHFL-LED	O	Drive output to the SHUFFLE LED (D302)
19	PROG-LED	O	Drive output to the PROGRAM LED (D301)
20	LODOUT	O	Loading motor control signal output
21	LODIN	O	
22	IN-OUTSW	I	Loading IN/OUT switch input
23	TEST	–	ADJ, AFJ test pin
24 to 27	——	–	Not used. (Open)
28	KEY1	I	Key input (S301 to S306)
29	KEY0	I	Key input (S307 to S312)
30	RESET	I	Reset signal input
31	EXTAL	I	Clock input (4 MHz)
32	XTAL	O	Clock output (4 MHz)
33	Vss	–	GND
34 to 38	——	–	Not used. (Open)
39 to 62	SEG1 to SEG24	O	FL segment output
63 to 70	1G~8G	O	FL grid output
71	V_{FL}	–	–32V pin for FL display
72	V_{DD}	–	+5V
73	V_{DD}	–	
74	——	–	Not used. (Open)
75	——	–	
76	——	–	
77	——	–	
78	——	–	Connected to +5V.
79	SENSE	I	SENSE signal input
80	SCOR	I	Sub code Q data read-out timing signal input

SECTION 7
EXPLODED VIEWS

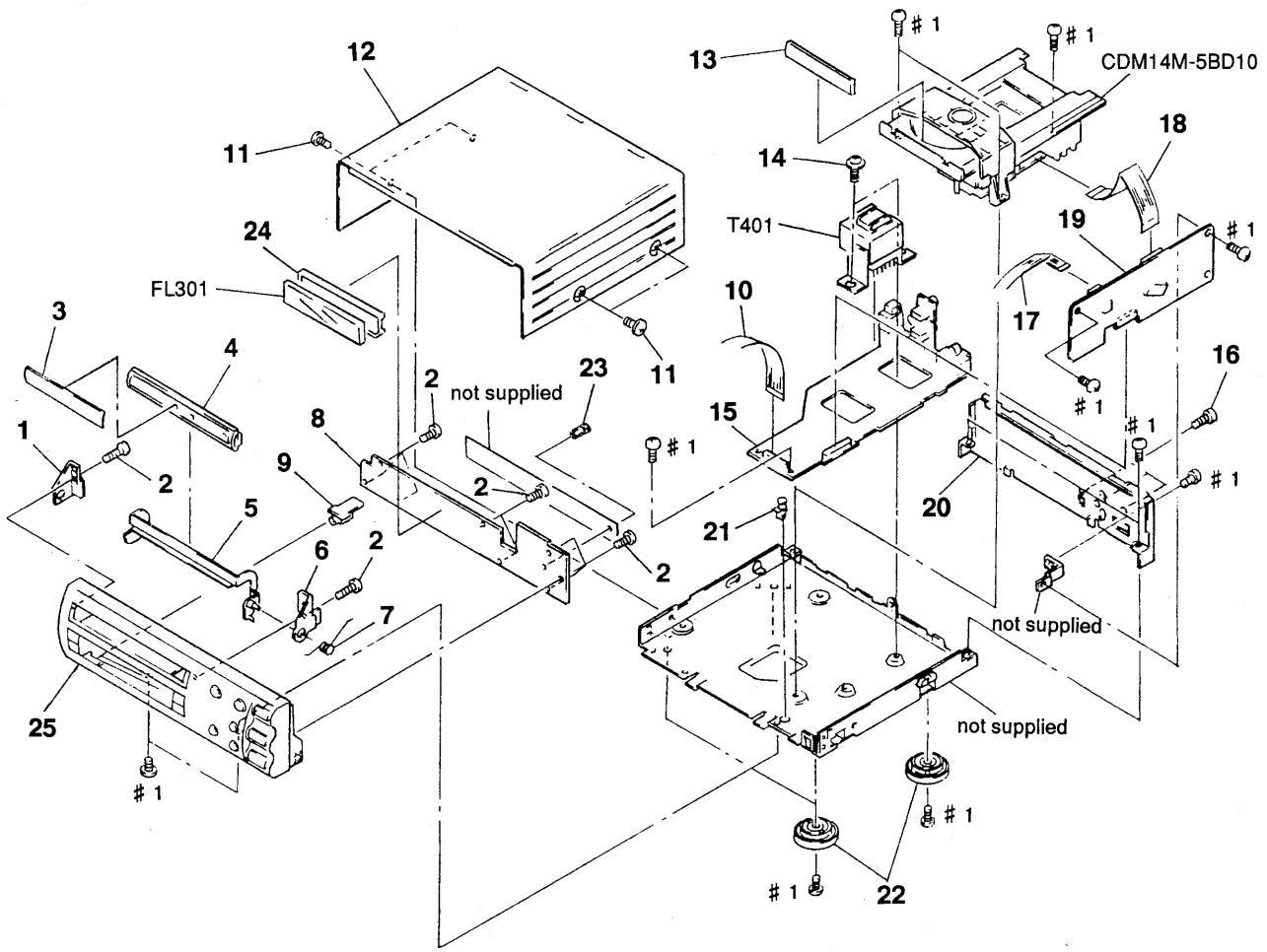
NOTE:
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

- CND : Canadian model
- G : German model
- IT : Italian model
- EA : Saudi Arabia model
- AUS : Australian model
- SP : Singapore model
- MY : Malaysia model
- JE : Tourist model

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

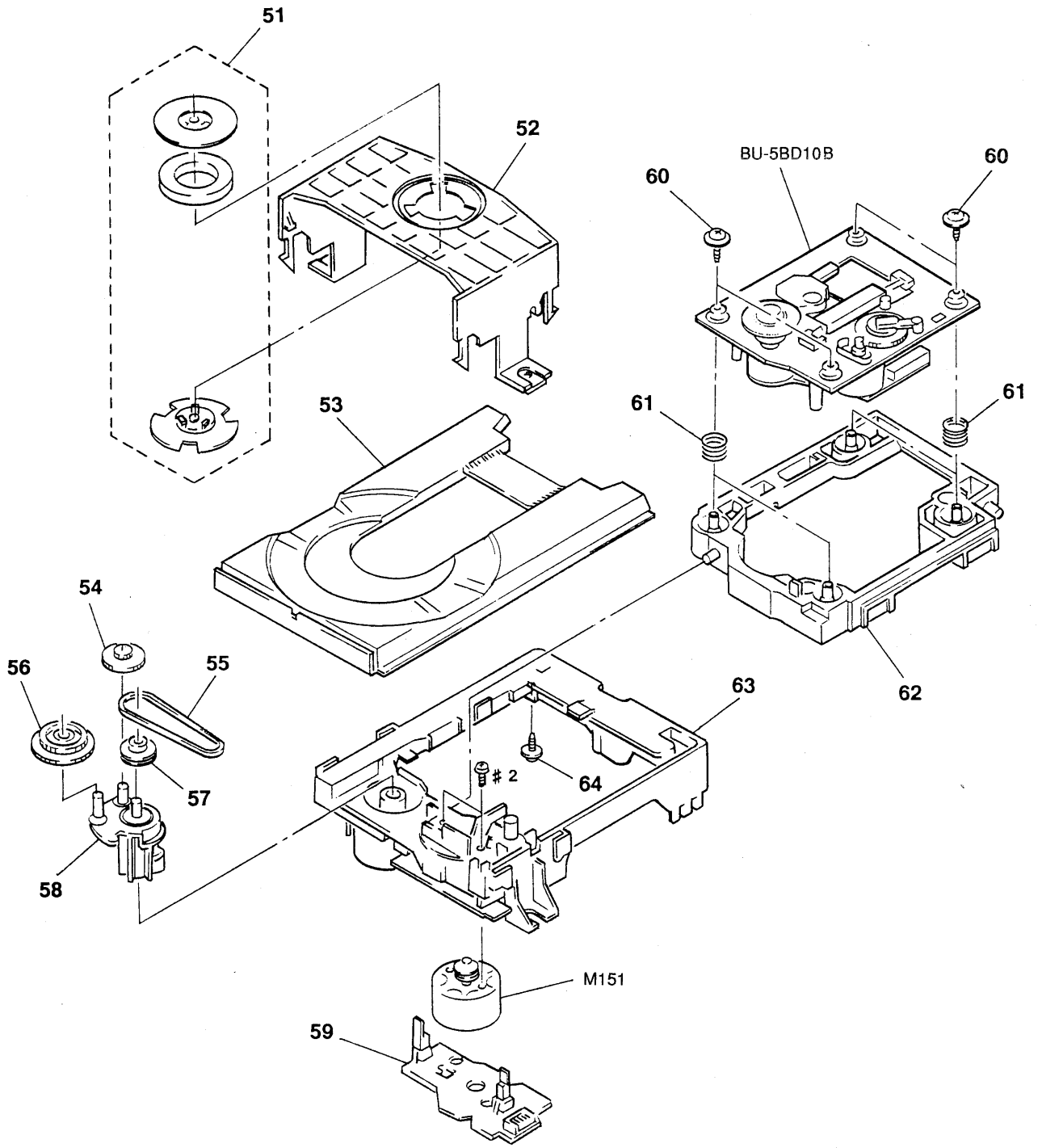
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

7-1. CASE AND CHASSIS BLOCK



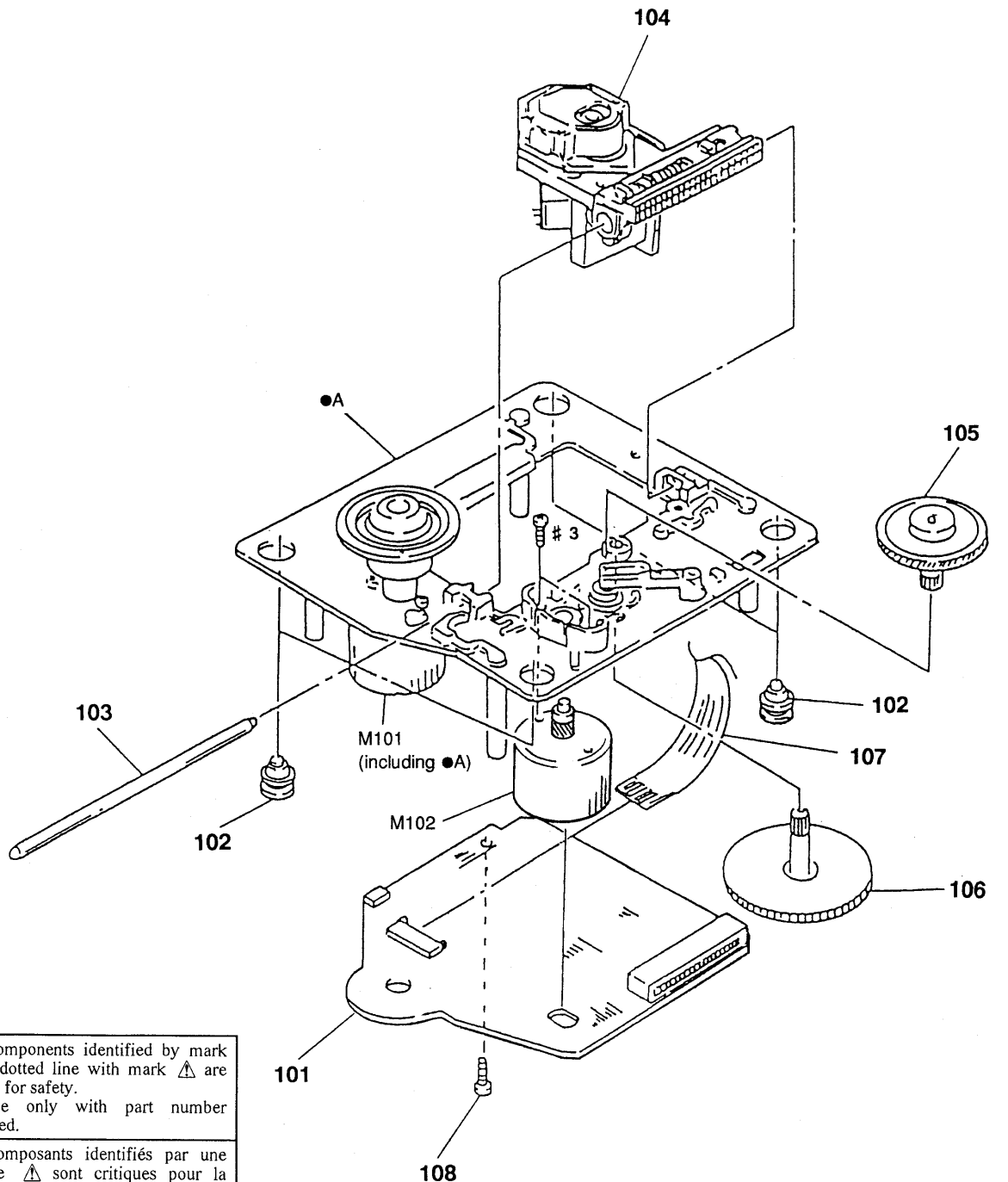
Ref. No.	Part No.	Description	Remark
1	4-961-479-01	GUIDE (DOOR L)	
2	4-951-620-01	SCREW (2.6X8), +BVTP	
3	4-961-470-01	DOOR (ORNAMENTAL PLATE)	
4	4-961-469-01	LID (BASE)	
5	X-4944-052-1	LID (BRACKET) ASSY	
6	4-961-472-01	GUIDE (DOOR R)	
7	4-961-476-01	SPRING (DOOR)	
* 8	A-4673-062-A	DISPLAY BOARD, COMPLETE	
* 9	1-649-586-11	OPT BOARD	
10	1-751-548-11	WIRE (FLAT TYPE) (13 CORE)	
11	3-363-099-21	SCREW (CASE 3 TP2)	
* 12	4-961-481-01	CASE	
13	4-961-486-01	PANEL, LOADING	
14	4-886-821-11	SCREW, S TIGHT, +PTTWH 3X6	
* 15	A-4673-060-A	POWER BOARD, COMPLETE	
16	3-704-515-21	SCREW (BV/RING)	
17	1-751-547-11	WIRE (FLAT TYPE) (10 CORE)	
18	1-751-549-11	WIRE (FLAT TYPE) (23 CORE)	
* 19	A-4673-061-A	AUDIO BOARD, COMPLETE	
* 20	4-961-483-11	PANEL, BACK (US, CND, AEP, IT, AUS, EA, E, JE, MY, SP, UK)	
* 20	4-961-483-21	PANEL, BACK (G)	
* 21	3-670-570-00	SPACER, SUPPORT	
22	X-4944-053-1	FOOT (DIA. 42) ASSY	
23	3-531-576-01	RIVET	
25	X-4944-371-1	PANEL ASSY, FRONT	
FL301	1-517-233-11	INDICATOR TUBE, FLUORESCENCE	
⚠T401	1-423-814-11	TRANSFORMER, POWER	

7-2. MECHANISM DECK BLOCK



Ref. No.	Part No.	Description	Remark
* 51	1-452-538-11	MAGNET	
52	4-933-110-01	HOLDER (MG)	
53	4-961-487-01	TABLE, DISK	
54	4-927-628-01	GEAR (C)	
55	4-927-649-01	BELT	
56	4-933-107-01	GEAR (PL)	
57	4-927-651-01	PULLEY (S)	
58	4-933-109-01	CAM	
* 59	1-645-721-11	LOADING BOARD	
60	4-933-134-01	SCREW (+PTPWH M2.6X6)	
61	4-959-996-01	SPRING (932), COMPRESSION	
62	4-933-129-01	HOLDER (BU)	
63	4-933-111-01	CHASSIS (MD)	
* 64	4-917-583-21	BRACKET, YOKE	
M151	A-4604-363-A	MOTOR (L) ASSY (LOADING)	

7-3. OPTICAL PICK-UP BLOCK (BU-5BD10B)



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 piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
* 101	A-4649-432-A	BD BOARD, COMPLETE	
102	4-951-940-01	INSULATOR (BU)	
103	4-917-565-01	SHAFT, SLED	
⚠104	8-848-144-11	OPTICAL PICK-UP BLOCK (KSS-240A)	
105	4-917-567-01	GEAR (M)	
106	4-917-564-01	GEAR (P), FLATNESS	
107	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
108	4-951-620-01	SCREW (2.6X8), +BVTP	
M101	X-4917-523-3	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	

SECTION 8
ELECTRICAL PARTS LIST

AUDIO

NOTE:

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 piéce portant le numéro spécifié.

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

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

- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA..., uPB...: μPB..., uPC...: μPC..., uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH

Ref.No.	Part No.	Description			Remark
*	A-4673-061-A	AUDIO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C201	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C202	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C203	1-163-102-00	CERAMIC CHIP	24PF	5%	50V
C204	1-126-022-11	ELECT	47uF	20%	16V
C206	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C207	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C208	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C209	1-124-997-11	ELECT	470uF	20%	10V
C210	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C211	1-126-049-11	ELECT	22uF	20%	25V
C212	1-126-022-11	ELECT	47uF	20%	16V
C213	1-124-442-00	ELECT	330uF	20%	6.3V
C214	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C215	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C216	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C220	1-126-022-11	ELECT	47uF	20%	16V
C221	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C222	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C223	1-126-022-11	ELECT	47uF	20%	16V
C224	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C226	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C227	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C228	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C229	1-124-994-11	ELECT	100uF	20%	10V
C230	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V
C231	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C232	1-124-994-11	ELECT	100uF	20%	10V
C233	1-124-994-11	ELECT	100uF	20%	10V
C235	1-126-012-11	ELECT	470uF	20%	16V
C250	1-126-022-11	ELECT	47uF	20%	16V
C251	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C252	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C253	1-126-022-11	ELECT	47uF	20%	16V
C254	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C256	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C257	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C258	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C259	1-124-994-11	ELECT	100uF	20%	10V
C260	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V
C261	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C262	1-124-994-11	ELECT	100uF	20%	10V
C263	1-124-994-11	ELECT	100uF	20%	10V
C265	1-126-012-11	ELECT	470uF	20%	16V
C266	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN201	1-695-095-11	SOCKET, CONNECTOR 13P			
* CN202	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CN203	1-750-224-11	CONNECTOR, FFC/FPC 10P			
CN204	1-764-004-11	CONNECTOR, FFC/FPC 23P			
		< DIODE >			
D201	8-719-800-76	DIODE 1SS226			
D202	8-719-800-76	DIODE 1SS226			
		< GROUND PLATE >			
* EB201	4-870-539-00	PLATE, GROUND			
* EB202	4-870-539-00	PLATE, GROUND			
		< IC >			
IC201	8-752-356-03	IC CXD2567M			
IC202	8-759-044-10	IC CXD2562Q			
IC203	8-759-175-88	IC LA9215			
		< COIL >			
L201	1-410-464-11	INDUCTOR 3.3uH			
L202	1-410-396-41	FERRITE BEAD INDUCTOR			0.45uH
L203	1-410-396-41	FERRITE BEAD INDUCTOR			0.45uH
L204	1-410-396-41	FERRITE BEAD INDUCTOR			0.45uH
L205	1-410-396-41	FERRITE BEAD INDUCTOR			0.45uH
L206	1-410-396-41	FERRITE BEAD INDUCTOR			0.45uH
L207	1-410-396-41	FERRITE BEAD INDUCTOR			0.45uH
L208	1-410-464-11	INDUCTOR 3.3uH			
L210	1-410-464-11	INDUCTOR 3.3uH			

AUDIO BD

Ref.No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q201	8-729-805-45	TRANSISTOR 2SC3395			
		< RESISTOR >			
R201	1-216-097-00	METAL CHIP	100K	5% 1/10W	
R203	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R204	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R205	1-216-033-00	METAL CHIP	220	5% 1/10W	
R206	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R207	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R208	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R209	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R210	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R211	1-216-066-00	METAL CHIP	5.1K	5% 1/10W	
R212	1-216-059-00	METAL CHIP	2.7K	5% 1/10W	
R220	1-216-689-11	METAL CHIP	39K	0.5% 1/10W	
R221	1-216-689-11	METAL CHIP	39K	0.5% 1/10W	
R222	1-216-689-11	METAL CHIP	39K	0.5% 1/10W	
R223	1-216-689-11	METAL CHIP	39K	0.5% 1/10W	
R224	1-216-683-11	METAL CHIP	22K	0.5% 1/10W	
R225	1-216-683-11	METAL CHIP	22K	0.5% 1/10W	
R226	1-216-691-11	METAL CHIP	47K	0.5% 1/10W	
R227	1-216-691-11	METAL CHIP	47K	0.5% 1/10W	
R228	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R229	1-216-053-00	METAL CHIP	1.5K	5% 1/10W	
R230	1-216-053-00	METAL CHIP	1.5K	5% 1/10W	
R231	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R250	1-216-689-11	METAL CHIP	39K	0.5% 1/10W	
R251	1-216-689-11	METAL CHIP	39K	0.5% 1/10W	
R252	1-216-689-11	METAL CHIP	39K	0.5% 1/10W	
R253	1-216-689-11	METAL CHIP	39K	0.5% 1/10W	
R254	1-216-683-11	METAL CHIP	22K	0.5% 1/10W	
R255	1-216-683-11	METAL CHIP	22K	0.5% 1/10W	
R256	1-216-691-11	METAL CHIP	47K	0.5% 1/10W	
R257	1-216-691-11	METAL CHIP	47K	0.5% 1/10W	
R258	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R259	1-216-053-00	METAL CHIP	1.5K	5% 1/10W	
R260	1-216-053-00	METAL CHIP	1.5K	5% 1/10W	
R261	1-216-073-00	METAL CHIP	10K	5% 1/10W	
		< VIBRATOR >			
X201	1-579-161-11	VIBRATOR, CRYSTAL (45MHz)			
**********					
*	A-4649-432-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-005-11	CERAMIC CHIP	470PF	10% 50V	
C102	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C103	1-163-005-11	CERAMIC CHIP	470PF	10% 50V	
C105	1-135-155-21	TANTALUM CHIP	4.7uF	10% 16V	
C106	1-164-346-11	CERAMIC CHIP	1uF	16V	
C107	1-164-505-11	CERAMIC CHIP	2.2uF	16V	
C108	1-163-035-00	CERAMIC CHIP	0.047uF	50V	
C109	1-163-011-11	CERAMIC CHIP	0.0015uF	10% 50V	
C110	1-163-017-00	CERAMIC CHIP	0.0047uF	5% 50V	
C111	1-163-251-11	CERAMIC CHIP	100PF	5% 50V	
C112	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C113	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C123	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
C124	1-164-005-11	CERAMIC CHIP	0.47uF	25V	
C151	1-163-007-11	CERAMIC CHIP	680PF	10% 50V	
C152	1-163-007-11	CERAMIC CHIP	680PF	10% 50V	
C153	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C154	1-164-336-11	CERAMIC CHIP	0.33uF	25V	
C155	1-163-007-11	CERAMIC CHIP	680PF	10% 50V	
C156	1-163-007-11	CERAMIC CHIP	680PF	10% 50V	
C157	1-163-033-00	CERAMIC CHIP	0.022uF	50V	
C158	1-163-033-00	CERAMIC CHIP	0.022uF	50V	
C159	1-163-023-00	CERAMIC CHIP	0.015uF	5% 50V	
C160	1-163-019-00	CERAMIC CHIP	0.0068uF	10% 50V	
C161	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
		< CONNECTOR >			
* CN101	1-568-865-11	SOCKET, CONNECTOR 23P			
CN102	1-568-795-11	SOCKET, CONNECTOR 12P			
		< IC >			
IC101	8-752-361-90	IC CXD2515Q			
IC102	8-759-071-79	IC BA6297AFP			
		< MOTOR >			
M101	X-4917-523-3	MOTOR ASSY (SPINDLE)			
M102	X-4917-504-1	MOTOR ASSY (SLED)			
		< RESISTOR >			
R101	1-216-077-00	METAL CHIP	15K	5% 1/10W	
R102	1-216-097-00	METAL CHIP	100K	5% 1/10W	
R103	1-216-077-00	METAL CHIP	15K	5% 1/10W	
R104	1-216-085-00	METAL CHIP	33K	5% 1/10W	
R105	1-216-097-00	METAL CHIP	100K	5% 1/10W	
R106	1-216-061-00	METAL CHIP	3.3K	5% 1/10W	
R107	1-216-061-00	METAL CHIP	3.3K	5% 1/10W	
R108	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R109	1-216-121-00	METAL CHIP	1M	5% 1/10W	
R110	1-216-025-00	METAL CHIP	100	5% 1/10W	
R112	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R113	1-216-077-00	METAL CHIP	15K	5% 1/10W	

Ref.No.	Part No.	Description				Remark
R114	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R117	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R118	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R121	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R122	1-216-077-00	METAL CHIP	15K	5%	1/10W	
R123	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R124	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R125	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R126	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R127	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R131	1-216-037-00	METAL CHIP	330	5%	1/10W	
R151	1-216-070-00	METAL CHIP	7.5K	5%	1/10W	
R152	1-216-070-00	METAL CHIP	7.5K	5%	1/10W	
R153	1-216-070-00	METAL CHIP	7.5K	5%	1/10W	
R154	1-216-070-00	METAL CHIP	7.5K	5%	1/10W	
R155	1-216-070-00	METAL CHIP	7.5K	5%	1/10W	
R156	1-216-070-00	METAL CHIP	7.5K	5%	1/10W	
R157	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R158	1-216-076-00	METAL CHIP	13K	5%	1/10W	
R159	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R160	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R161	1-216-308-00	METAL CHIP	4.7	5%	1/10W	
R162	1-216-093-00	METAL CHIP	68K	5%	1/10W	
R163	1-216-093-00	METAL CHIP	68K	5%	1/10W	
		< SWITCH >				
S101	1-572-085-11	SWITCH, LEAF (LIMIT)				

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*	A-4673-062-A	DISPLAY BOARD, COMPLETE				
		**********				
*	4-961-485-01	HOLDER (FL)				
		< CAPACITOR >				
C301	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C302	1-124-589-11	ELECT	47uF	20%	16V	
C303	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C304	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
		< CONNECTOR >				
CN301	1-750-230-11	CONNECTOR, FFC/FPC 13P				
CN302	1-750-228-11	CONNECTOR, FFC/FPC 10P				
		< DIODE >				
D301	8-719-032-83	LED SEL5220S (PROGRAM)				
D302	8-719-032-83	LED SEL5220S (SHUFFLE)				

Ref.No.	Part No.	Description				Remark
		< FLUORESCENT INDICATOR >				
FL301	1-517-233-11	INDICATOR TUBE, FLUORESCENT				
		< IC >				
IC301	8-752-854-97	IC CXP82316-040Q				
		< RESISTOR >				
R301	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R302	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R303	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R304	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R306	1-216-033-00	METAL CHIP	220	5%	1/10W	
R308	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R309	1-216-054-00	METAL GLAZE	1.6K	5%	1/10W	
R310	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R311	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R312	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
R313	1-216-051-00	METAL CHIP	1.2K	5%	1/10W	
R314	1-216-054-00	METAL GLAZE	1.6K	5%	1/10W	
R315	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R316	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R317	1-216-067-00	METAL CHIP	5.6K	5%	1/10W	
		< SWITCH >				
S301	1-554-303-21	SWITCH, TACTILE (△)				
S302	1-554-303-21	SWITCH, TACTILE (▷▯▯)				
S303	1-554-303-21	SWITCH, TACTILE (□)				
S304	1-554-303-21	SWITCH, TACTILE (▷▷▯/▷▷)				
S305	1-554-303-21	SWITCH, TACTILE (▯◁◁/◁◁▯)				
S306	1-554-303-21	SWITCH, TACTILE (PROGRAM)				
S307	1-554-303-21	SWITCH, TACTILE (CONTINUE)				
S308	1-554-303-21	SWITCH, TACTILE (SHUFFLE)				
S309	1-554-303-21	SWITCH, TACTILE (EDIT)				
S310	1-554-303-21	SWITCH, TACTILE (CHECK)				
S311	1-554-303-21	SWITCH, TACTILE (REPEAT)				
S312	1-554-303-21	SWITCH, TACTILE (TIME)				
		< VIBRATOR >				
X301	1-577-358-21	VIBRATOR, CERAMIC (4MHz)				

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*	1-645-721-11	LOADING BOARD	
		**********	
		< CONNECTOR >	
* CN151	1-568-943-11	PIN, CONNECTOR 5P	

LOADING | OPT | POWER

Ref.No.	Part No.	Description			Remark
		< MOTOR >			
M151	A-4604-363-A	MOTOR (L) ASSY (LOADING)			
		< SWITCH >			
S151	1-572-086-11	SWITCH, LEAF (LOAD OUT)			
S152	1-572-086-11	SWITCH, LEAF (LOAD IN)			
**********					
*	1-649-586-11	OPT BOARD			
		*********			
		< CAPACITOR >			
C351	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
* CN351	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
		< IC >			
IC351	8-759-199-42	IC GP1F354T (OPTICAL DIGITAL OUT)			
**********					
*	A-4673-060-A	POWER BOARD, COMPLETE			
		**********			
	7-682-547-09	SCREW +BVTT 3X6 (S)			
		< CAPACITOR >			
C401	1-124-894-11	ELECT	6800uF	20%	16V
C402	1-124-360-00	ELECT	1000uF	20%	16V
C403	1-124-572-11	ELECT	100uF	20%	63V
C404	1-126-059-11	ELECT	10uF	20%	50V
C405	1-126-163-11	ELECT	4.7uF	20%	50V
C406	1-126-163-11	ELECT	4.7uF	20%	50V
C408	1-124-997-11	ELECT	470uF	20%	10V
C410	1-126-024-11	ELECT	220uF	20%	16V
C412	1-126-163-11	ELECT	4.7uF	20%	50V
C413	1-124-997-11	ELECT	470uF	20%	10V
C414	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C415	1-126-022-11	ELECT	47uF	20%	16V
C416	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C417	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C418	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C420	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C421	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN401	1-695-090-11	PIN, CONNECTOR (PC BOARD) 13P			
CN403	1-764-166-11	CONNECTOR, FFC/FPC 13P			
CN404	1-568-954-11	PIN, CONNECTOR (STRAIGHT) 5P			
CN405	1-764-016-11	HOUSING, CONNECTOR(PC BOARD) 5P (SYSTEM CONTROL)			
		< DIODE >			
D401	8-719-200-02	DIODE 10E2			
D402	8-719-200-02	DIODE 10E2			
D403	8-719-200-02	DIODE 10E2			
D404	8-719-200-02	DIODE 10E2			
D405	8-719-200-02	DIODE 10E2			
D406	8-719-106-79	DIODE RD13M-B1			
D407	8-719-105-63	DIODE RD4.3M-B1			
D408	8-719-800-76	DIODE 1SS226			
		< IC >			
IC401	8-759-061-65	IC LA5602			
IC402	8-759-605-00	IC M5F78M07L			
IC403	8-759-633-42	IC M5293L			
IC404	8-759-805-37	IC L78LR05D			
IC405	8-759-822-09	IC LB1641			
IC406	8-749-921-12	IC GP1F32T (DIGITAL OPTICAL OUT)			
		< JACK >			
J401	1-750-679-11	JACK, PIN 2P (LINE OUT)			
		< TRANSISTOR >			
Q401	8-729-820-76	TRANSISTOR 2SA1179-M5M6			
Q402	8-729-901-06	TRANSISTOR DTA144EK			
Q403	8-729-805-45	TRANSISTOR 2SC3395			
Q404	8-729-805-45	TRANSISTOR 2SC3395			
		< RESISTOR >			
R401	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R402	1-216-091-00	METAL CHIP	56K	5%	1/10W
R403	1-216-073-00	METAL CHIP	10K	5%	1/10W
R406	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R407	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R408	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R409	1-216-073-00	METAL CHIP	10K	5%	1/10W
R410	1-216-049-00	METAL CHIP	1K	5%	1/10W
R411	1-216-049-00	METAL CHIP	1K	5%	1/10W
R412	1-216-001-00	METAL CHIP	10	5%	1/10W
R413	1-216-049-00	METAL CHIP	1K	5%	1/10W
R415	1-216-049-00	METAL CHIP	1K	5%	1/10W
		< TRANSFORMER >			
⚠T401	1-423-814-11	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 piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		************	
10	1-751-548-11	WIRE (FLAT TYPE) (13 CORE)	
17	1-751-547-11	WIRE (FLAT TYPE) (10 CORE)	
18	1-751-549-11	WIRE (FLAT TYPE) (23 CORE)	
* 51	1-452-538-11	MAGNET	
⚠104	8-848-144-11	OPTICAL PICK-UP BLOCK (KSS-240A)	
107	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
FL301	1-517-233-11	INDICATOR TUBE, FLUORESCENCE	
M101	X-4917-523-3	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M151	A-4604-363-A	MOTOR (L) ASSY (LOADING)	
⚠T401	1-423-814-11	TRANSFORMER, POWER	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-682-547-09	SCREW +BV 3X6, S TIGHT	
#2	7-621-775-10	SCREW +B 2.6X4	
#3	7-621-255-15	SCREW +P 2X3	

Ref. No.	Part No.	Description	Remark

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 piéce portant le numéro spécifié.

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