

# CDP-C69ES

## SERVICE MANUAL

US Model  
Canadian Model  
Australian Model



COMPACT  
disc  
DIGITAL AUDIO

Model Name Using Similar Mechanism	CDP-C525
Optical Pick-up Block Type	BU-5BD8B

### SPECIFICATIONS

System	Compact disc digital audio system Semiconductor laser ( $\lambda=780$ nm) Emission duration: continuous
Laser output	Max. $44.6 \mu\text{W}^*$ * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.
Frequency response	2 Hz – 20 kHz ( $\pm 0.3$ dB)
Signal to noise ratio	More than 115 dB
Dynamic range	More than 100 dB
Harmonic distortion	Less than 0.0025% (1 kHz)
Channel separation	More than 110 dB (1 kHz)
Wow and flutter	Below measurable limit

#### Outputs

LINE OUT (FIXED) (phono jacks)	Output level 2 V (at 50 kilohms, non DSP mode) Load impedance over 10 kilohms
LINE OUT (VARIABLE) (phono jacks)	Output level max. 2 V (at 50 kilohms, non DSP mode) Load impedance over 10 kilohms
DIGITAL OUT (OPTICAL) (optical output connector)	Wave length 660 nm Output level – 18 dBm
PHONES (stereo phone jack)	Output level max. 15 mW Load impedance 32 ohms

#### General

Power requirements	Model for USA and Canada 120 V AC, 60 Hz Model for Australia 240 V AC, 50/60 Hz
Power consumption	13 W
Dimensions	Approx. $430 \times 125 \times 385$ mm (w/h/d) ( $17 \times 5 \times 15\frac{1}{4}$ inches) not including projecting parts and controls
Weight	Approx. 7 kg (15 lbs 7 oz), net

#### Remote commander RM-D615

Remote control system	Infrared control
Power requirements	3 V DC with two batteries size AA (IEC esignation R6)

#### Supplied accessories

Connecting cord (1)  
(2 phono plugs  $\leftrightarrow$  2 phono plugs)  
Remote commander (1)  
Sony SUM-3(NS) batteries (2)  
Operating Manual (1)

— Continued on next page —

COMPACT DISC PLAYER  
**SONY**<sup>®</sup>

**Optional accessory**

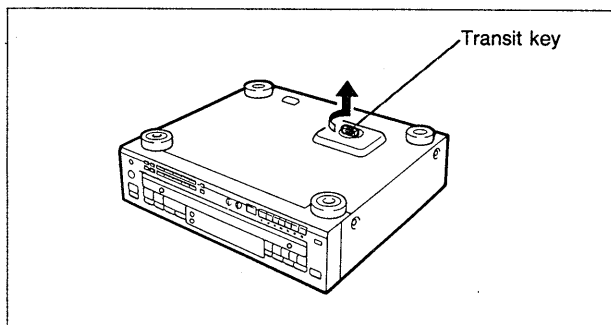
Audio Optical connecting cord POC-15

Design and specifications subject to change without notice.

**Note on the Transit Key**

The transit key on the bottom exterior of the unit protects the optical system against shock during transportation. Before operating the CD player, be sure to remove the key by following the instructions on the label, and store it in a safe place.

When transporting the unit, replace the key in its original hole and lock it in place.



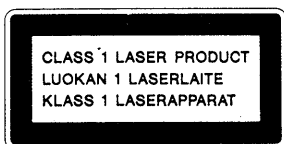
**For the customers in Canada**

**CAUTION:**

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

THIS APPARATUS COMPLIES WITH THE CLASS B LIMITS FOR RADIO NOISE EMISSIONS SET OUT IN RADIO INTERFERENCE REGULATIONS.

**For the customers in Australia**



This Compact Disc player is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT label is located on the rear exterior.

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**SAFETY-RELATED COMPONENT WARNING!!**

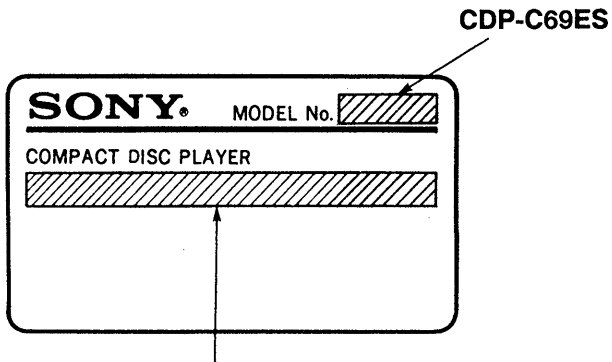
COMPONENTS IDENTIFIED BY MARK OR DOTTED LINE WITH MARK ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

**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

—Model Number Label—



US, Canadian model : AC : 120V 60Hz

Australian model : AC : 240V~50/60Hz

### 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 30cm away from the objective lens.

## 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 TEST

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)

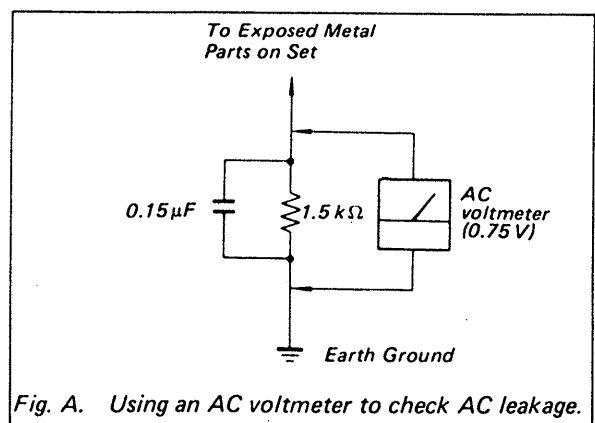


Fig. A. Using an AC voltmeter to check AC leakage.

## PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

### CAUTION

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

### 1. Laser Diode Properties

- Material: GaAlAs
- Wavelength: 780 nm
- Emission Duration: continuous
- Laser Output: max. 44.6  $\mu$ W\*

\* This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.

2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optical Pick-up Block (including APC board).

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## BESKYTTELSE AF ØJNE MOD LASERSTRÅLING UNDER SERVICE

I dette apparat anvendes laserlys. Derfor skal nedenstående instruktioner nøje følges under service.

Følg iverigt instruktionerne i servicemanualen.

### ADVARSEL!!

Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 25 cm fra den optiske pick-up.

### 1. Laser-dioe data

- Materiale: GaAlAs
- Bølgelængde: 780 nm
- Udstråling: Kontinuerlig
- Laseroutput: Max. 0,4 mW\*

\* Målt i 1,6 mm afstand fra overfladen af objektiv-linsen på den optiske pick-up enhed.

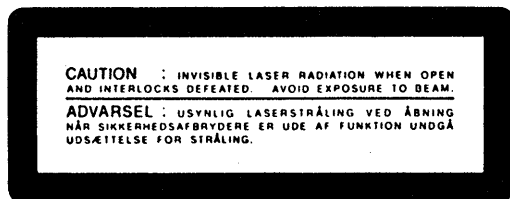
- Klassifikation: Klasse IIIb.

2. Adskil aldrig den optiske pick-up enhed under service, og juster ikke APC kredsløbet (Automatic Power Control). Hvis APC kredsløbet (incl. laser-dioden) bryder ned, skal hele den optiske pick-up enhed (incl. APC printkortet) udskiftes.

## LASER ADVARSEL MÆRKNING

Følgende mærkning findes indvendig i apparatet:

### 1. Advarsel Mærkning



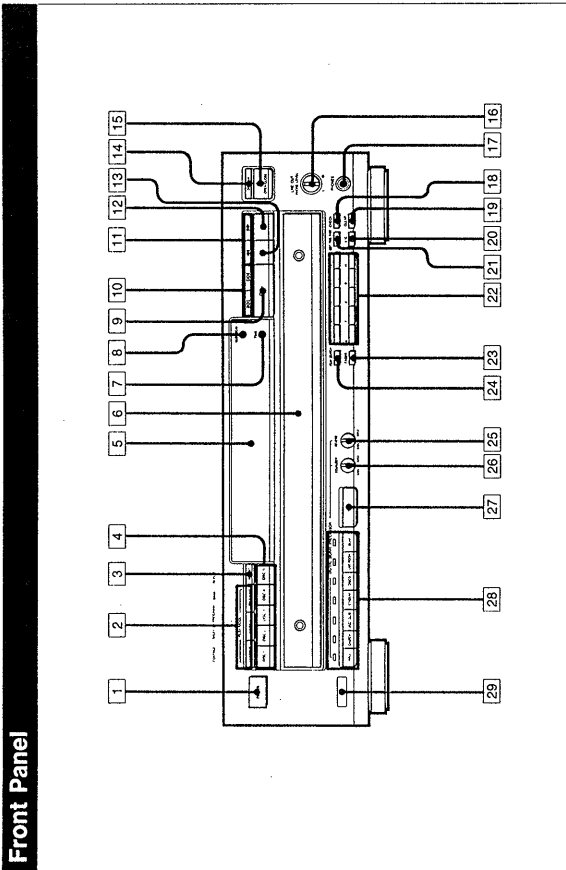

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**VAROITUS:** Laite sisältää, laserdiodin, joka lähettää (näkyvätöntä) silmille vaarallista lasersäteilyä.

1-1. LOCATION OF CONTROLS

SECTION 1  
GENERAL

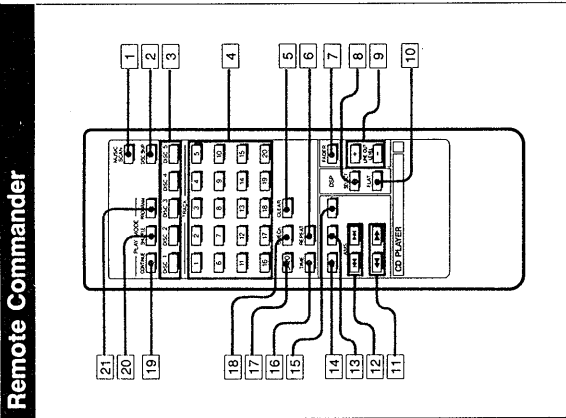
Front Panel



- 1 POWER switch
- 2 PLAY MODE buttons
- 3 CONTINUE button
- 4 SHUFFLE button
- 5 PROGRAM button
- 6 REPEAT button
- 7 DISC 1-5 buttons
- 8 Display window
- 9 Disc tray
- 10 TIME button
- 11 MUSIC SCAN button
- 12 DISC SKIP button
- 13 OPEN/CLOSE button
- 14 REPEAT button
- 15 CONTINUE button
- 16 SHUFFLE button
- 17 PROGRAM button
- 18 MUSIC SCAN button
- 19 DISC SKIP button
- 20 OPEN/CLOSE button
- 21 REPEAT button
- 22 CONTINUE button
- 23 SHUFFLE button
- 24 PROGRAM button
- 25 MUSIC SCAN button
- 26 DISC SKIP button
- 27 OPEN/CLOSE button
- 28 REPEAT button
- 29 CONTINUE button

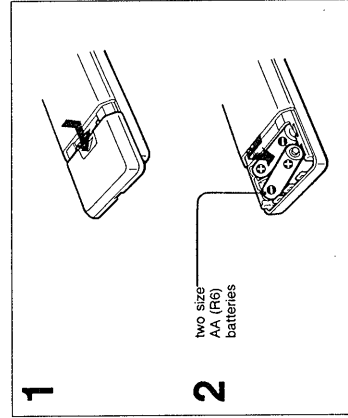
\* AMS is the abbreviation of Automatic Music Sensor.

Remote Commander



- 1 MUSIC SCAN button
- 2 DISC SKIP button
- 3 DISC 1-5 buttons
- 4 CLEAR (program clear) button
- 5 REPEAT button
- 6 FADER button
- 7 DIGITAL SIGNAL PROCESSOR SELECT button
- 8 LINE OUT LEVEL buttons
- 9 DIGITAL SIGNAL PROCESSOR FLAT button
- 10 (manual search) buttons
- 11 (AMS) buttons
- 12 (pause) button
- 13 (play) button
- 14 (stop) button
- 15 TIME button
- 16 CHECK (program check) button
- 17 CONTINUE button
- 18 SHUFFLE button
- 19 PROGRAM button

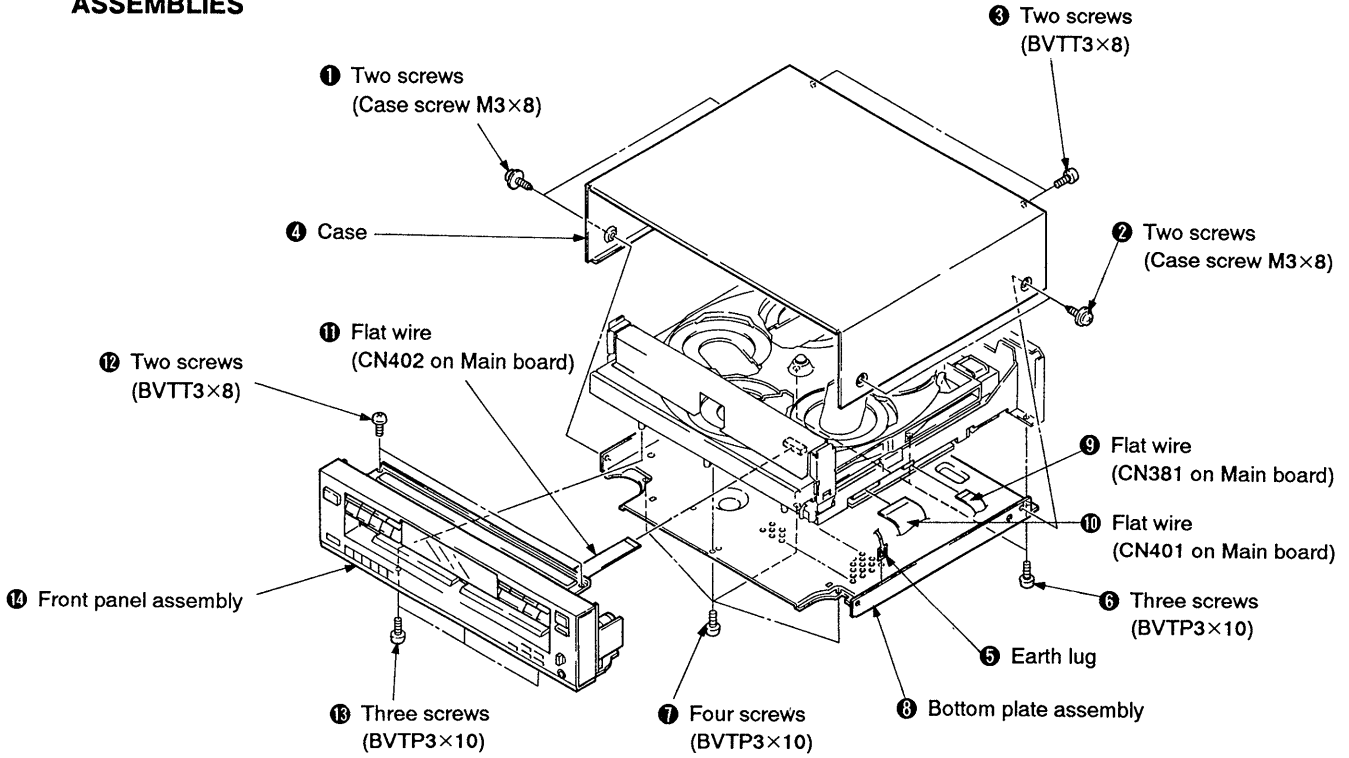
Installing Batteries in the Remote Commander



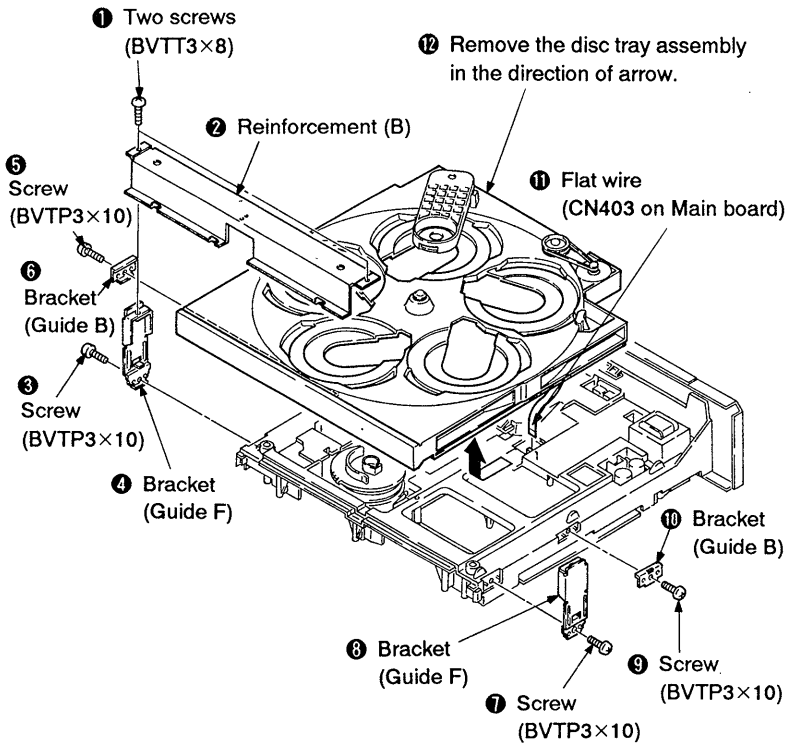
- On battery life**
- About half a year of normal operation can be expected when using the Sanyo SUM-3(NS) batteries.
  - When the batteries are run down, the remote commander will not operate the unit. In this case, replace both batteries with new ones.
- Notes on the remote commander and remote control operation**
- Keep the commander away from extremely hot or humid places.
  - Avoid dropping any foreign objects into the commander casing, particularly when replacing the batteries.
  - Avoid exposing the remote sensor to direct sunlight or lighting apparatus. Such exposure can cause a malfunction.
  - To avoid damage caused by battery leakage and corrosion, remove the batteries when the commander will not be used for a long time.

## SECTION 2 DISASSEMBLY

### 2-1. REMOVAL OF CASE AND FRONT PANEL ASSEMBLIES

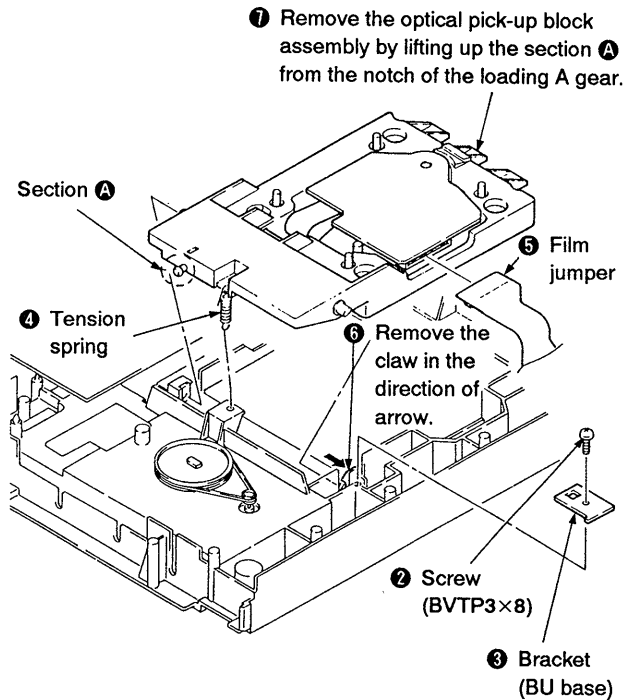


### 2-2. REMOVAL OF DISC TRAY ASSEMBLY



### 2-3. REMOVAL OF OPTICAL PICK-UP BLOCK ASSEMBLY

#### 1) Replace the set up side down.



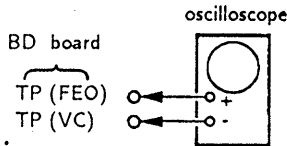
## SECTION 3

### ELECTRICAL BLOCK CHECKING

**Note :**

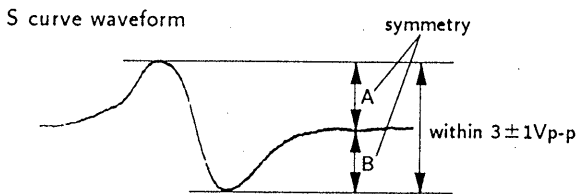
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than  $10M\Omega$  impedance.
4. Clean an object lens by an applicator with neutral detergent when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

**S Curve Check**



**Procedure :**

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus serch. (actuate the focus serch when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within  $3 \pm 1V_{p-p}$ .

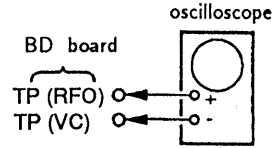


5. After check, remove the lead wire connected in step 2.

**Note :** • Try to mesure several times to make sure that 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**

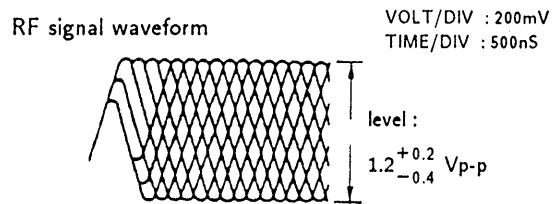


**Procedure :**

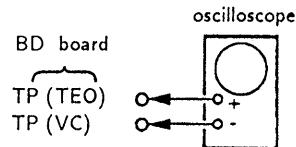
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

**Note :**

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

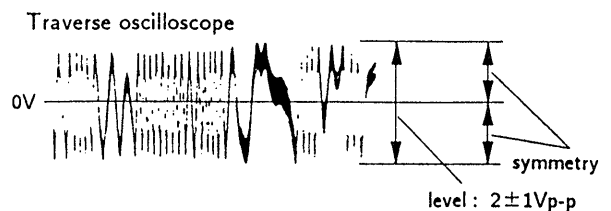


**E-F Balance Check**



**Procedure :**

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

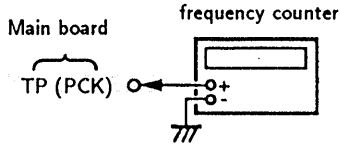


6. Remove the lead wire connected in step 1.

### RF PLL Free-run Frequency Check

**Procedure :**

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



2. Turn Power switch on.
3. Confirm that reading on frequency counter is
4. 3218MHz.

### Focus/Tracking Gain

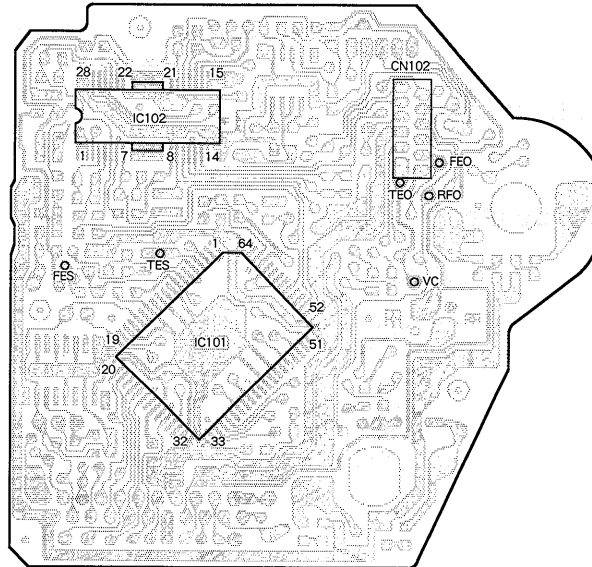
This gain has a margin, so even if it is slightly off. There is no problem.

Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position when you moved and do not know original position.

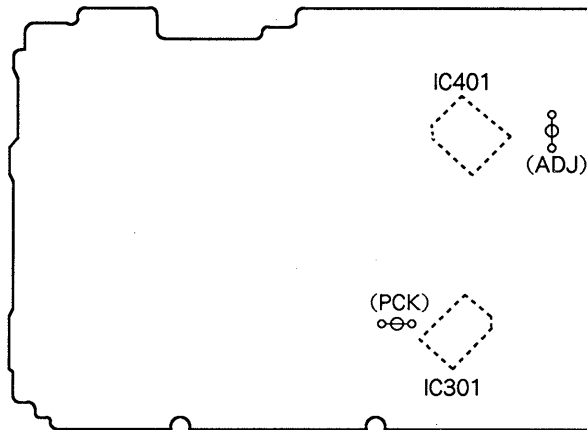
### Adjustment Locations : [BD board]

— conductor side —



### [Main board]

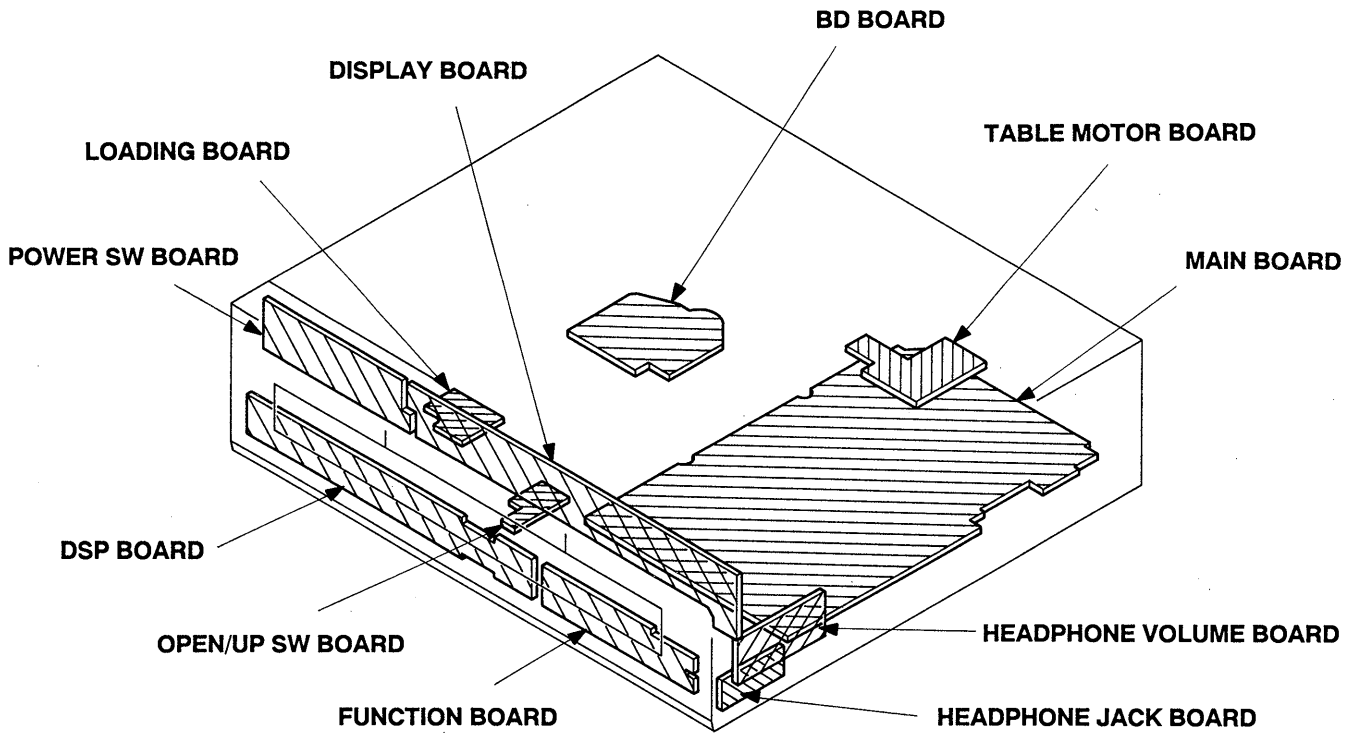
— component side —





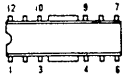
# SECTION 4 DIAGRAMS

## 4-1. CIRCUIT BOARDS LOCATION

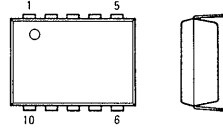


## 4-2. SEMICONDUCTOR LEAD LAYOUTS

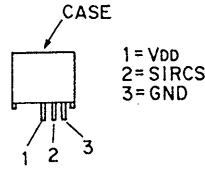
**CXA1291P**



**LA5601**



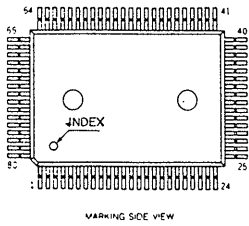
**SBX1610-59**



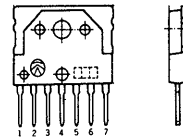
**RC78L12A-T1**



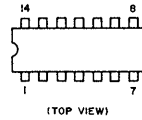
**CXD2500AQ**



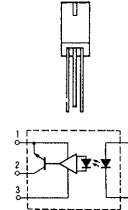
**LA5602**



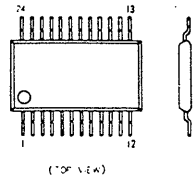
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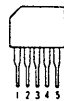
**GP-1A521**



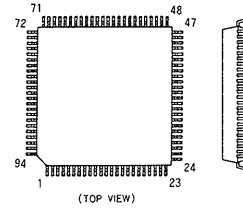
**CXD2560M**



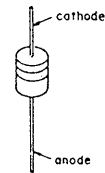
**M5293L**



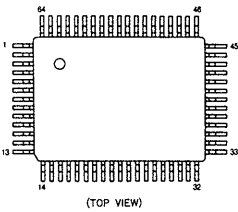
**μPD75237GJ-024-5BG**



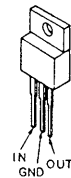
**11ES2  
RD8.2ES-B2**



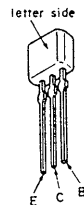
**CXD2562Q**



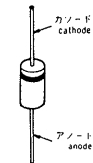
**M5F7807L**



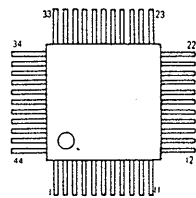
**2SA1175-HFE  
2SC3623-LK  
DTA124ES  
DTC144ES**



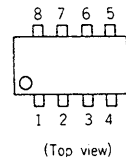
**1N4148M**



**CXD2701Q**



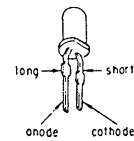
**MC33078  
RC4556D  
RC4558P  
TL082ACP**



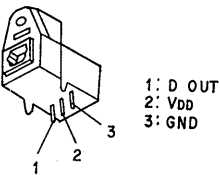
**2SC1815-Y  
DTA144ES**



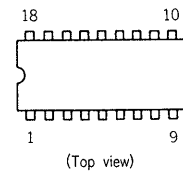
**SEL2810A-C**



**GP1F32T**



**MS51464-10NC**

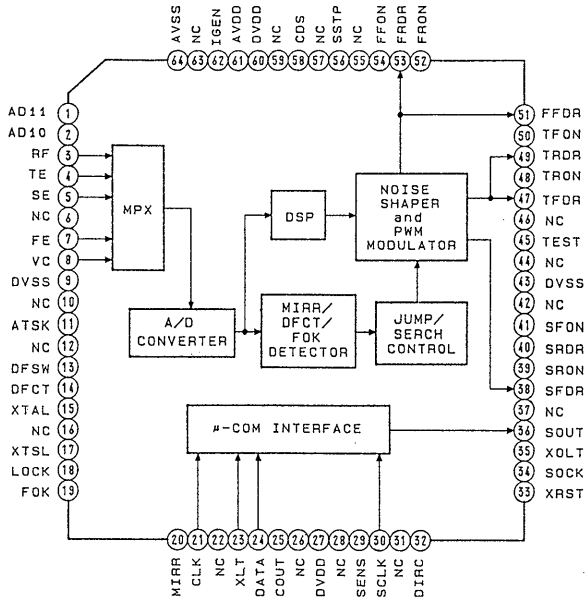


**2SC2878-AB**

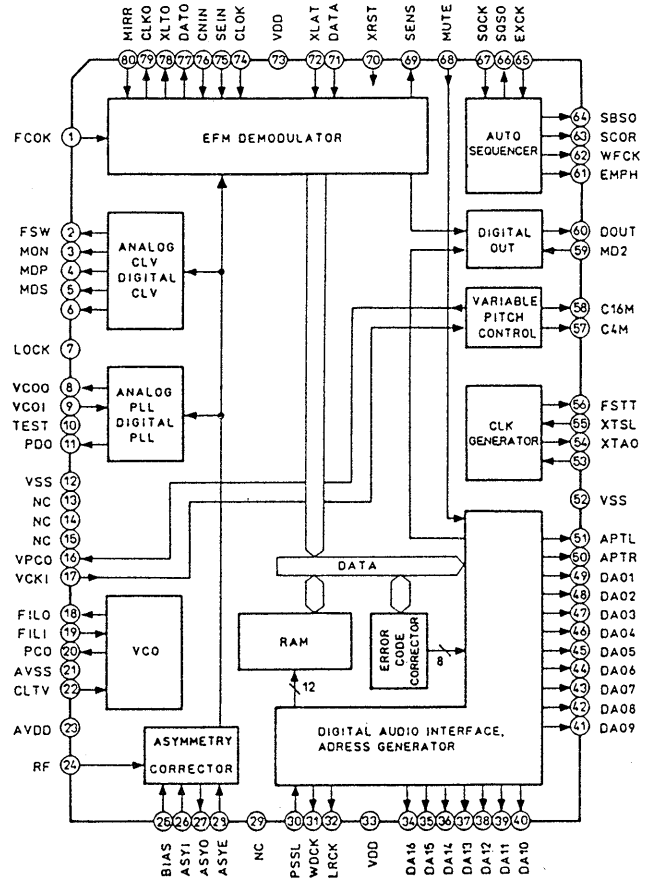


### 4-3. IC BLOCK DIAGRAMS

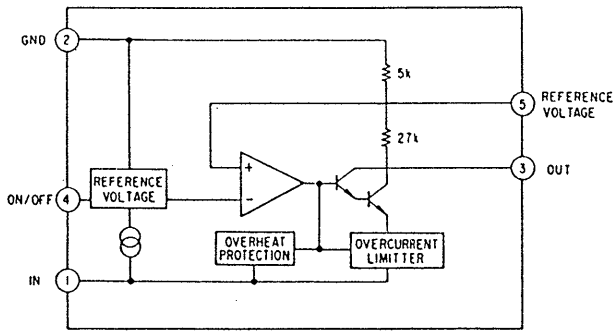
IC101 CXD2501Q



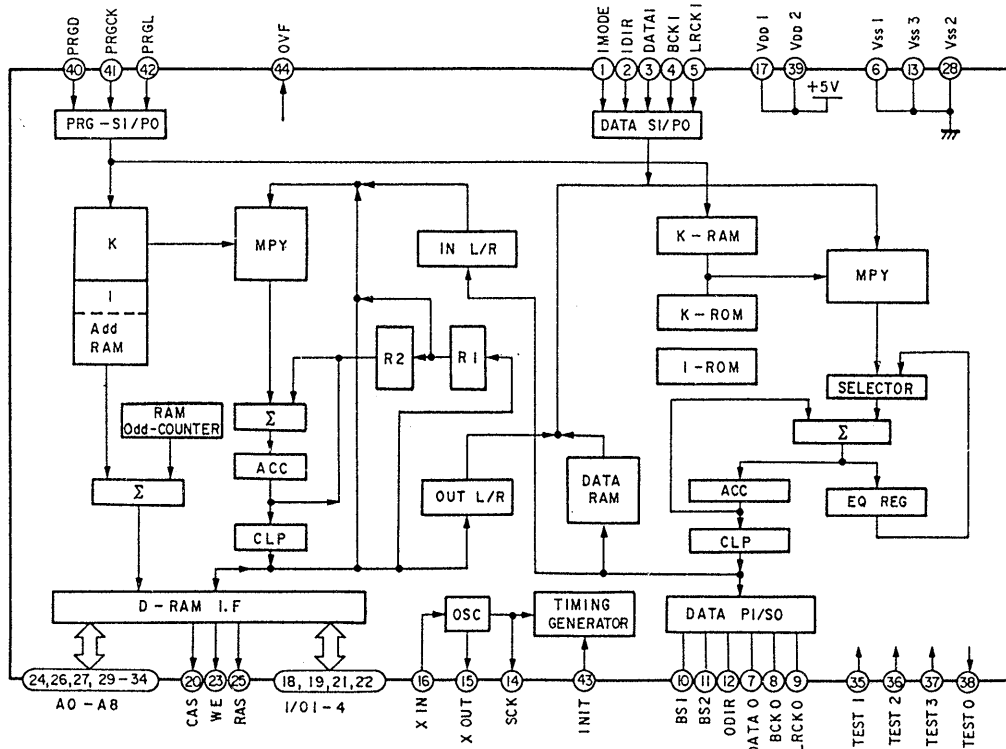
IC301 CXD2500Q



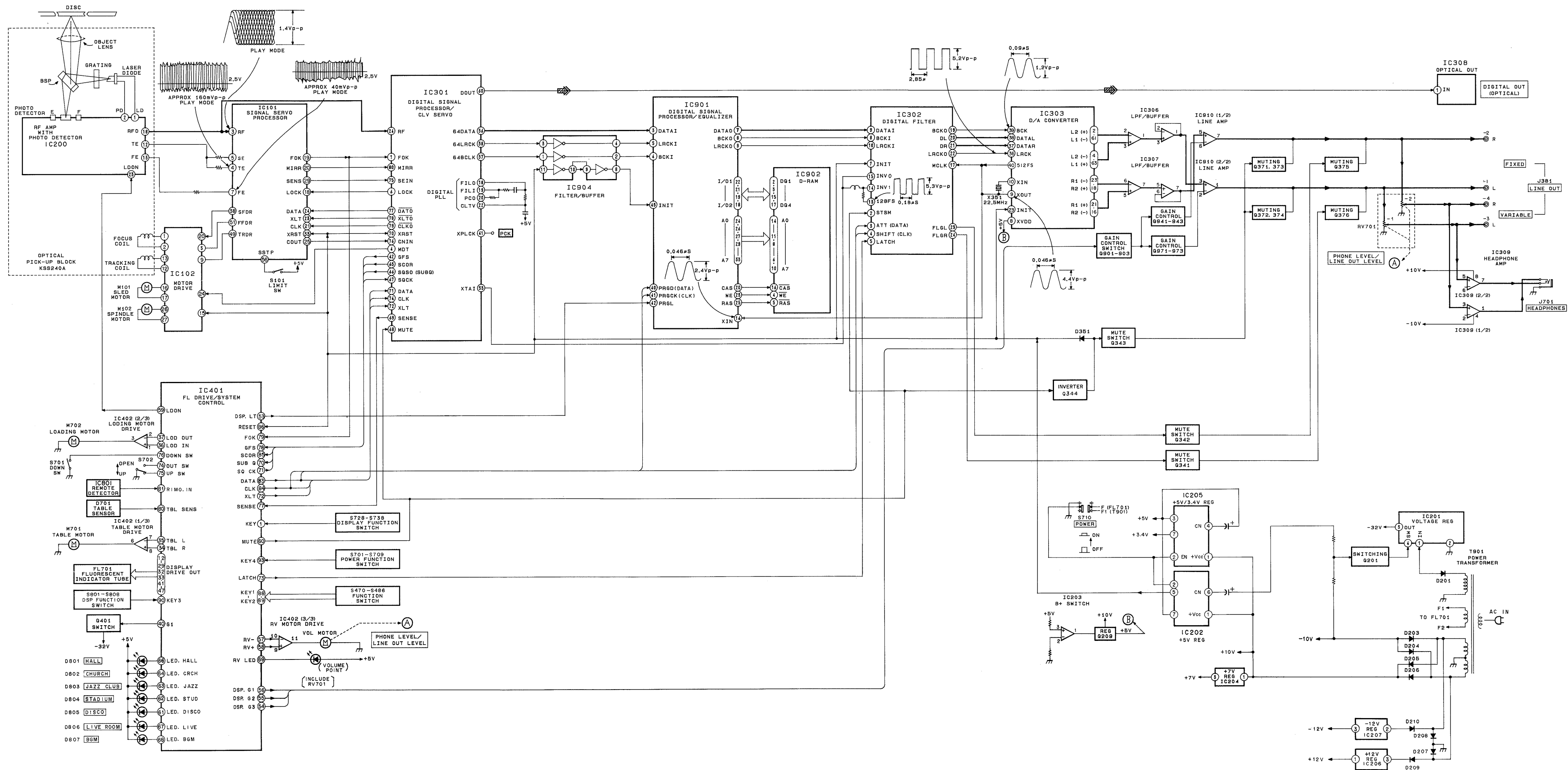
IC201 M5293L



IC901 CXD2701Q



4-4. BLOCK DIAGRAMS





4-5. PRINTED WIRING BOARDS

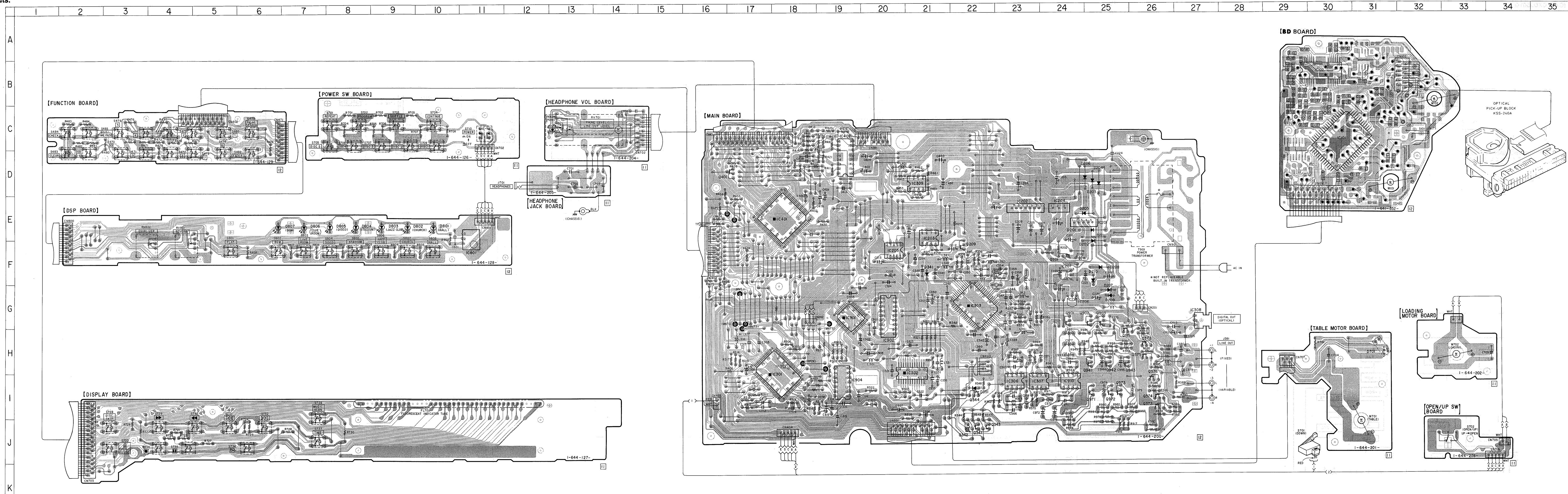
- Refer to page 10 for Semiconductor Lead Layouts.
- Refer to page 11 for IC BLOCK Diagrams.

• Semiconductor Location

Ref.No.	Location
D201	E-25
D202	E-25
D203	D-25
D204	D-25
D205	E-25
D206	D-25
D207	F-25
D208	F-25
D209	G-25
D210	F-25
D341	F-21
D351	I-22
D701	H-31
D801	E-10
E-9	E-9
D803	E-9
D804	E-8
D805	E-8
D806	E-7
D807	E-6
IC101	C-30
IC102	B-30
IC201	E-25
IC202	E-23
IC203	E-21
IC204	E-24
IC205	F-20
IC206	G-24
IC207	F-24
IC301	H-18
IC302	I-21
IC303	G-22
IC306	I-23
IC307	I-24
IC308	G-27
IC309	D-21
IC401	E-18
IC402	D-19
IC801	E-11
IC901	G-19
IC902	G-20
IC904	I-19
IC910	I-24
Q201	F-24
Q209	F-22
Q341	J-22
Q342	J-22
Q343	J-22
Q344	I-22
Q371	G-26
Q372	I-26
Q373	H-26
Q374	I-26
Q375	H-26
Q376	I-26
Q401	D-17
Q801	G-24
Q802	G-25
Q803	G-25
Q841	H-25
Q842	H-25
Q843	H-26
Q871	I-25
Q872	I-25
Q873	I-25

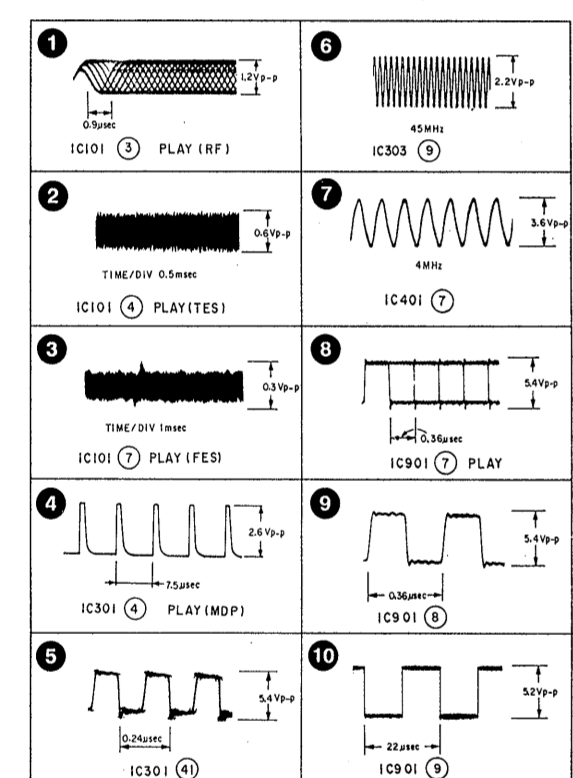
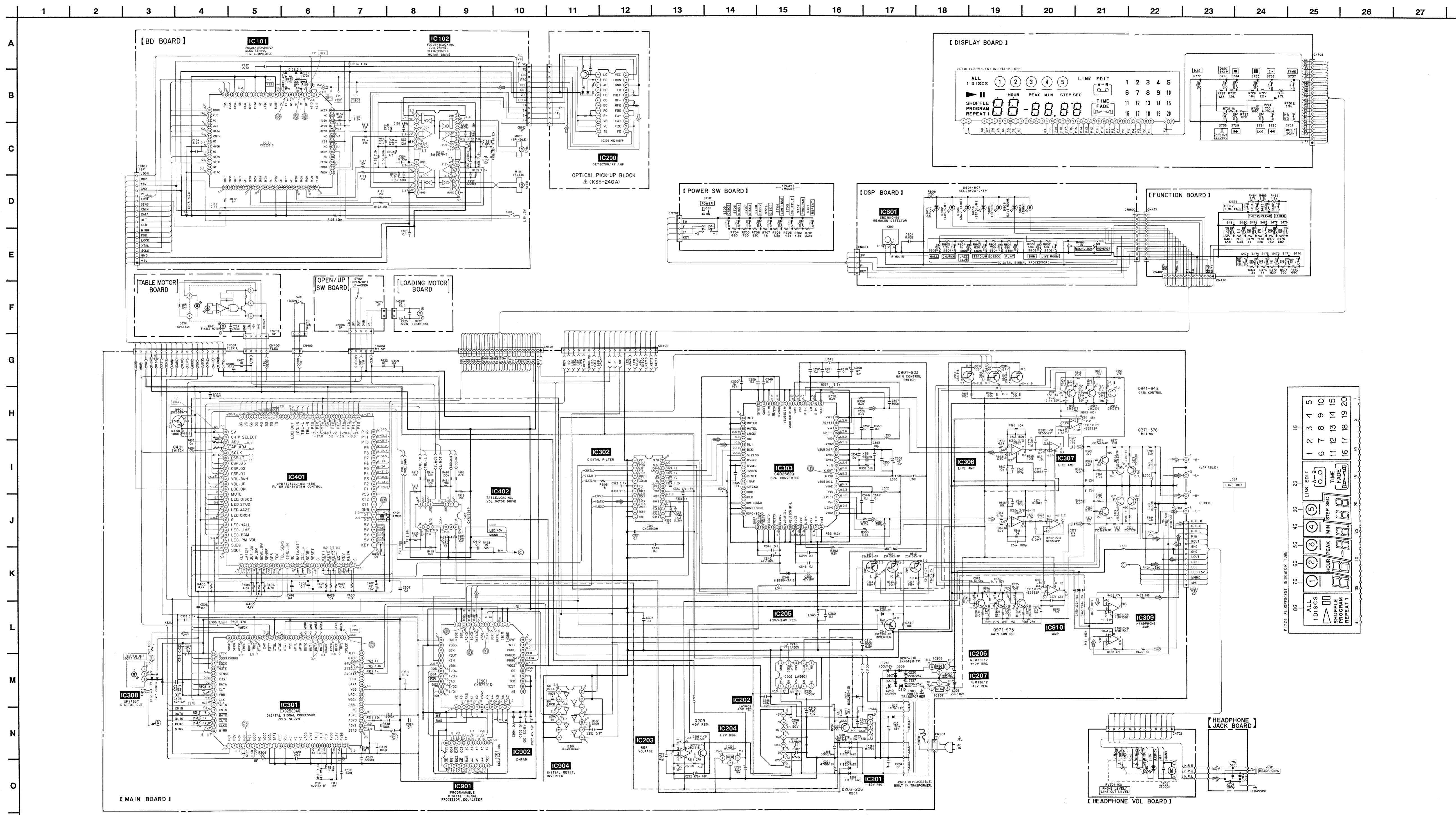
Note on Mounting Diagram:

- Note:**
- : parts extracted from the component side.
  - : Through hole.
  - ▨ : Pattern on the side which is seen.
  - ▩ : Pattern of the rear side.



4-6. SCHEMATIC DIAGRAM

- Refer to page 10 for Semiconductor Lead Layouts.
- Refer to page 11 for IC BLOCK Diagrams.



**Note on Schematic Diagram:**

**Note:**

- All capacitors are in  $\mu F$  unless otherwise noted. pF:  $\mu F$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and 1/4W or less unless otherwise specified.

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

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

- —: B+ line
- ---: B- line
- $\square$ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input Impedance 10 M $\Omega$ )
- Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope.
- Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- $\Rightarrow$ : CD

**SECTION 5  
EXPLODED VIEWS**

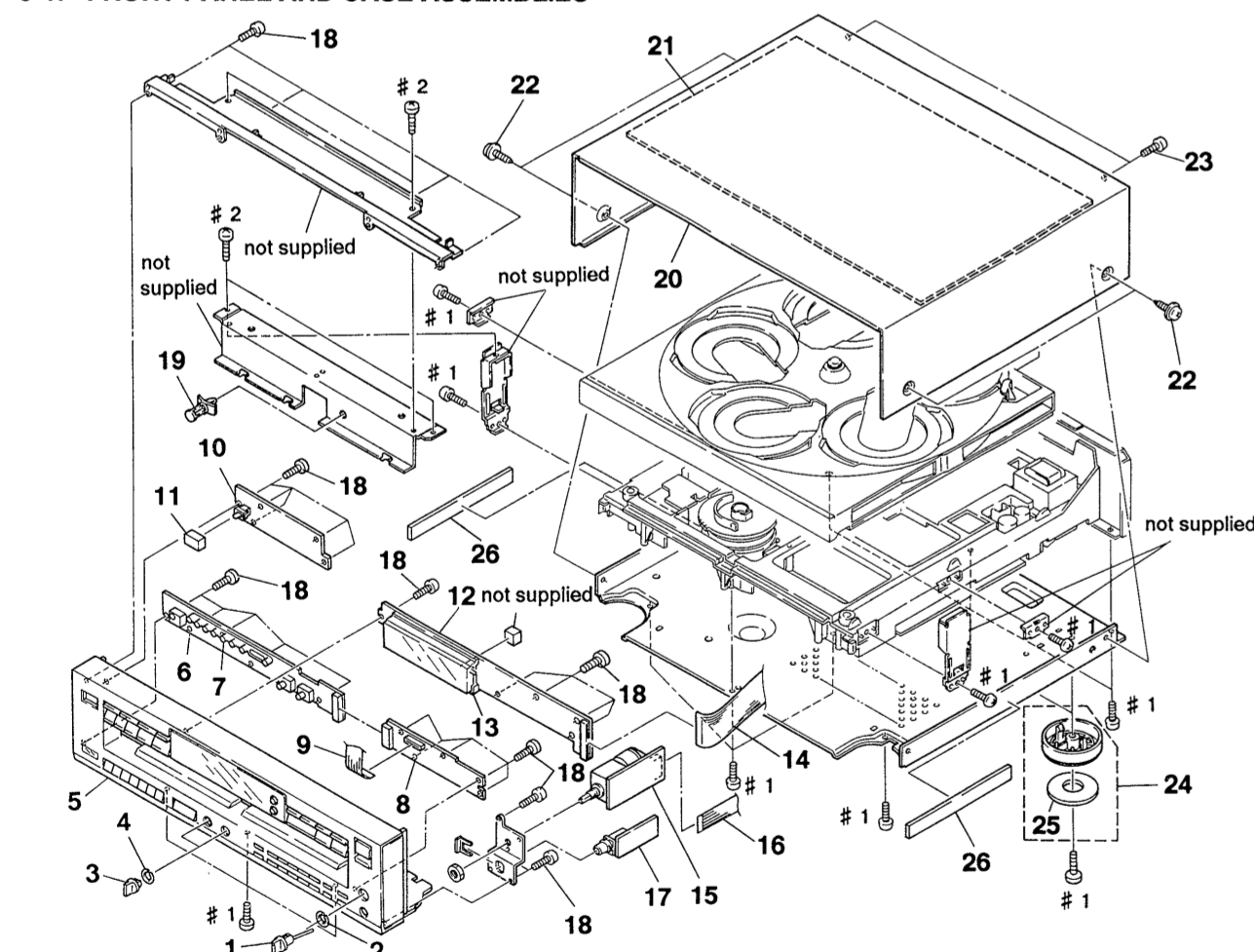
**NOTE:**

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts Example: KNOB, BALANCE (WHITE)... (RED)
- 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  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

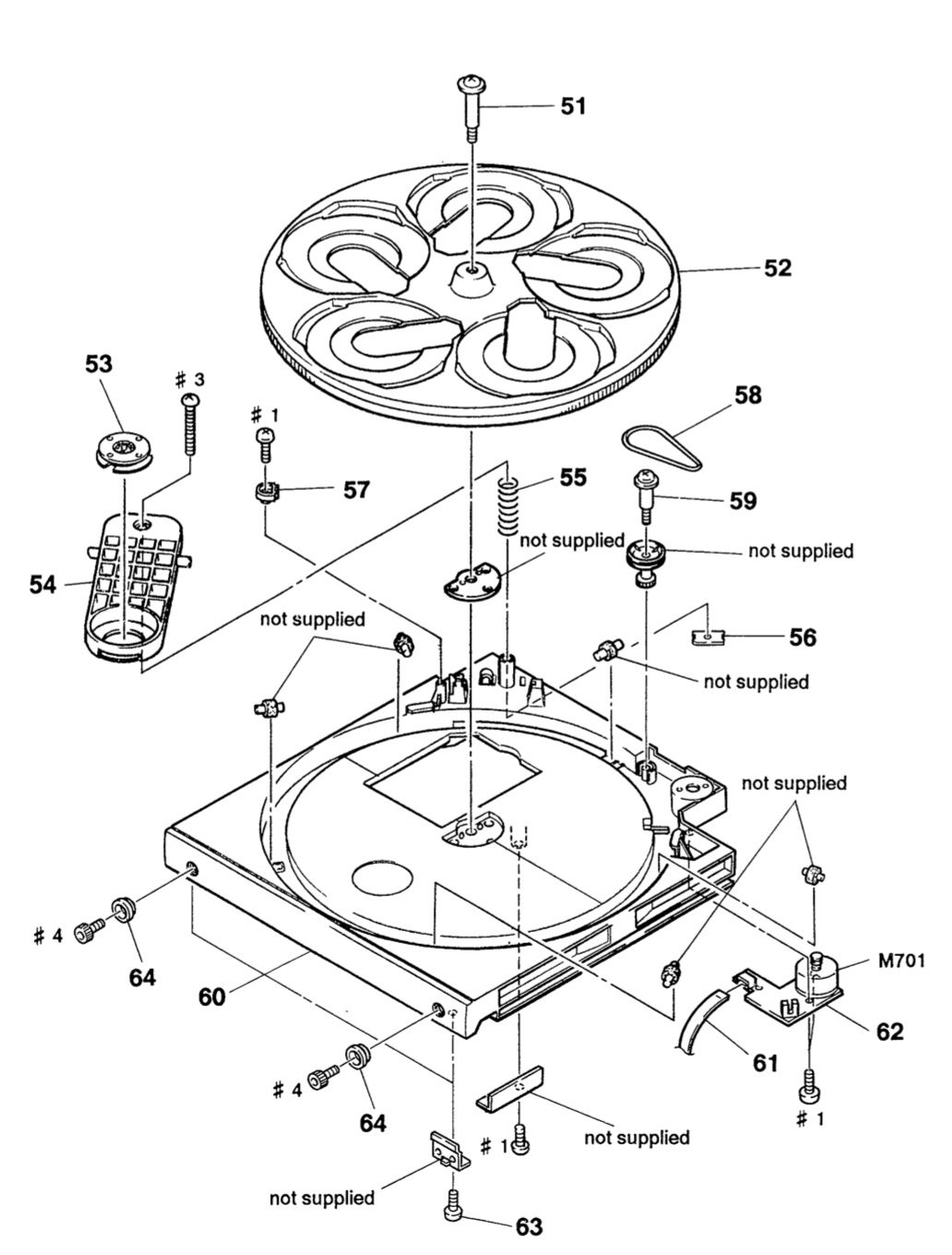
Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

**5-1. FRONT PANEL AND CASE ASSEMBLIES**



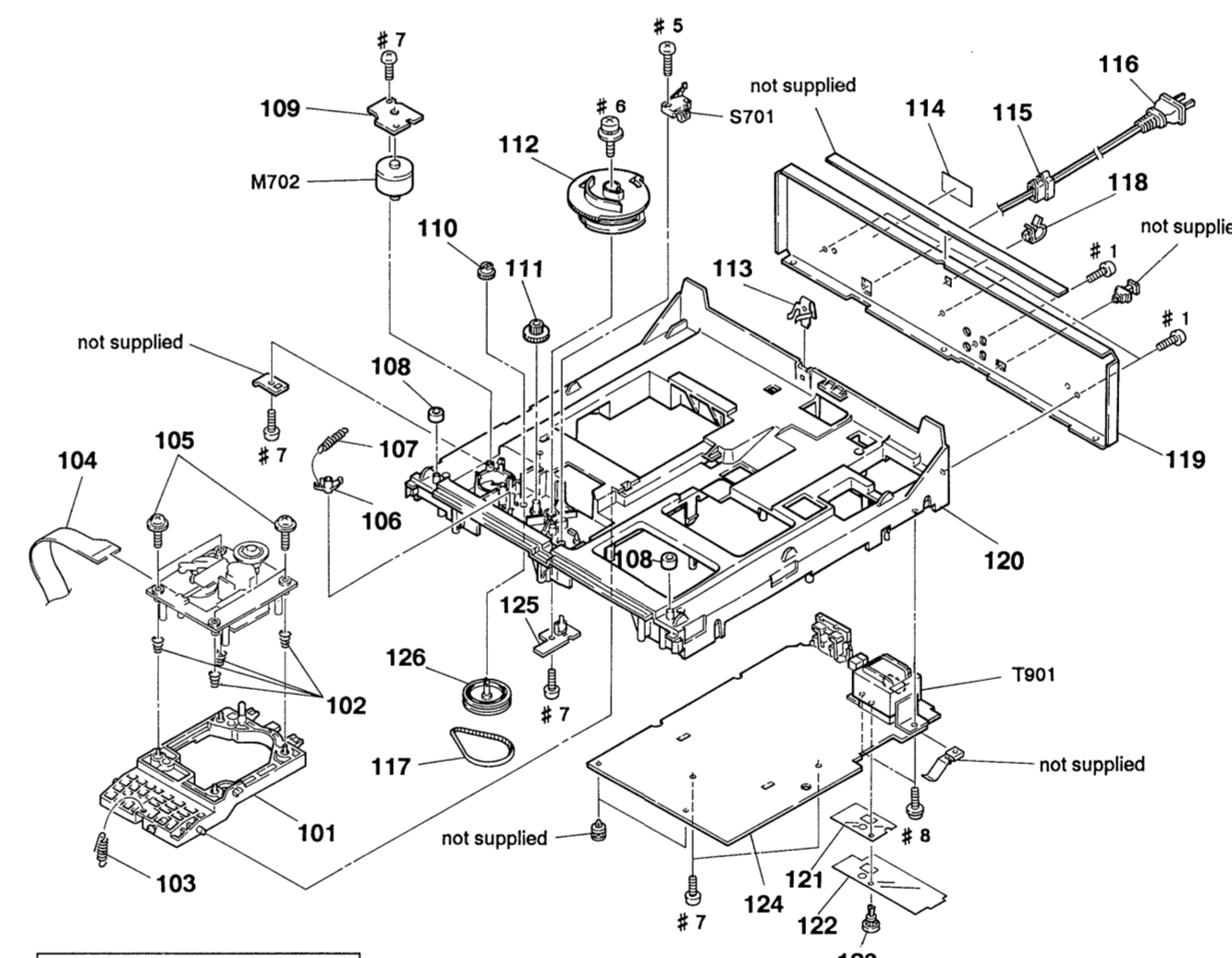
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	A-4680-105-A	KNOB (HP) ASSY		14	1-690-933-31	WIRE (FLAT TYPE) (32 CORE)	
2	4-949-469-01	SPRING, RING		15	1-644-204-11	HEADPHONE VOLUME BOARD	
3	4-944-154-01	KNOB (DSP)		16	1-690-934-11	WIRE (FLAT TYPE) (13 CORE)	
4	3-354-981-01	SPRING (SUS), RING		17	1-644-205-11	HEADPHONE JACK BOARD	
5	X-4942-670-1	PANEL ASSY, FRONT (US, Canadian)		18	4-951-620-01	SCREW (2.6X8), +BVTP	
6	X-4942-671-1	PANEL ASSY, FRONT (Australian)		19	3-350-847-31	HOLDER, PCB	
7	1-644-128-11	DSP BOARD		20	4-944-153-01	CASE	
8	4-952-230-01	HOLDER (LED)		21	A-4675-309-A	REINFORCEMENT (TOP PLATE) ASSY	
9	1-644-129-11	FUNCTION BOARD		22	3-704-366-01	SCREW (CASE) (M3X8)	
10	1-690-931-11	WIRE (FLAT TYPE) (19 CORE)		23	3-703-685-21	SCREW (1BV 3X8)	
11	1-644-126-11	POWER SW BOARD		24	X-4942-198-1	FOOT ASSY	
12	4-922-921-01	BUTTON (POWER)		25	4-923-836-11	CUSHION	
13	1-644-127-11	DISPLAY BOARD		26	4-929-561-01	CUSHION (CASE)	

**5-2. DISC TRAY ASSEMBLY**



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-926-384-01	SCREW, STEP		59	4-923-597-01	SCREW, STEP	
52	4-926-383-11	TABLE (B), DISK		60	4-944-161-12	TABLE (A), DISC	
53	1-452-538-11	MAGNET		61	1-590-849-11	WIRE, FLAT TYPE (5 CORE)	
54	4-930-506-02	BRACKET (PRESS PULLEY)		62	1-644-201-11	TABLE MOTOR BOARD	
55	4-926-395-01	SPRING, COMPRESSION		63	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
56	4-926-388-01	BRACKET (ADJUSTMENT)		64	4-934-307-01	ESCUTCHEON	
57	4-949-226-01	PLATE, LOCK		M701	A-4604-585-A	MOTOR ASSY, ROTARY (TABLE)	
58	4-926-399-01	BELT					

**5-3. CHASSIS ASSEMBLY**

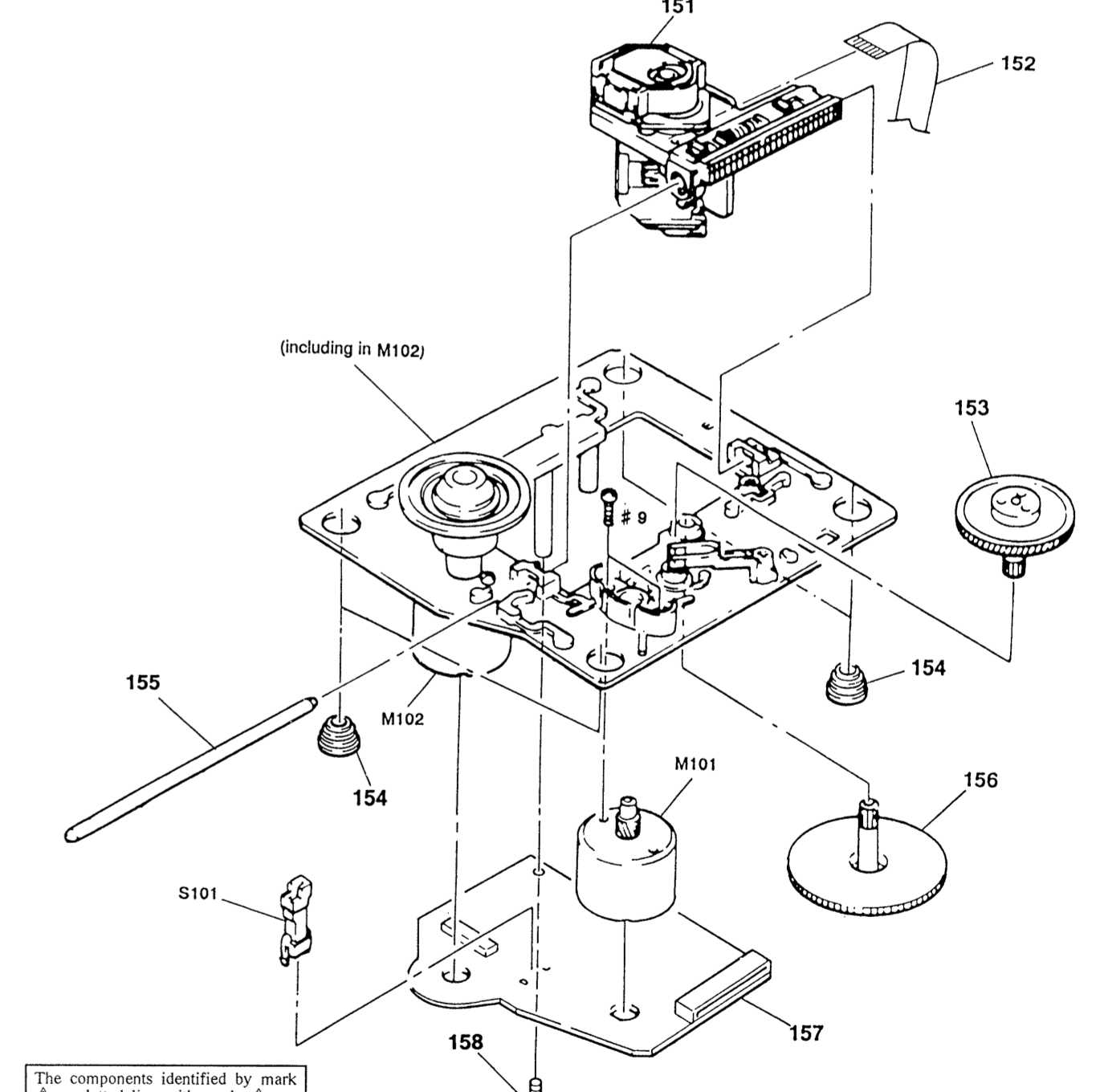


The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	4-934-373-01	BRACKET (BU)		117	4-944-490-01	BELT (TIMING)	
* 102	4-949-385-01	SPRING (D), COIL		* 118	4-949-235-01	HOOK	
103	4-937-911-01	SPRING, TENSION		* 119	4-951-174-11	PANEL, BACK (US, Canadian)	
104	1-694-003-11	JAMPER, FILM (WITH TARMINAL)		* 120	4-951-174-21	PANEL, BACK (Australian)	
105	4-933-134-01	SCREW (+PTPHW M2, 6X6)		* 121	4-951-933-02	SHEET, INSULATING (Australian)	
106	4-917-519-01	LEVER, SET		122	4-944-178-01	SHEET (INSULATING)	
107	4-924-412-01	SPRING (B), TENSION		123	3-531-576-11	RIVET	
* 108	4-951-619-01	CUSHION (A)		* 124	A-4649-301-A	MAIN BOARD, COMPLETE (Australian)	
* 109	1-844-202-11	LOADING MOTOR BOARD		* 124	A-4649-303-A	MAIN BOARD, COMPLETE (US, Canadian)	
110	4-934-375-01	GEAR (LOADING B)		125	1-644-203-11	OPEN/UP SW BOARD	
111	4-934-381-01	GEAR (LOADING C)		126	X-4941-529-1	PULLEY ASSY	
112	4-934-391-01	GEAR (LOADING A)		M702	A-4604-834-A	MOTOR ASSY, LOADING	
* 113	4-943-996-01	SPRING, LEAF		* 124	A-4649-301-A	MAIN BOARD, COMPLETE (Australian)	
* 114	4-941-548-01	LABEL, CLASS 1 (Australian)		* 124	A-4649-303-A	MAIN BOARD, COMPLETE (US, Canadian)	
* 115	3-703-244-00	BUSHING (2104), CORD		126	X-4941-529-1	PULLEY ASSY	
$\Delta$ 116	1-574-358-31	CORD, POWER (WITH CONNECTOR) (Australian)		S701	1-572-713-11	SWITCH, PUSH (WITH CONNECTOR) (DOWN)	
$\Delta$ 116	1-590-836-11	CORD, POWER (US, Canadian)		$\Delta$ T901	1-449-935-11	TRANSFORMER, POWER (Australian)	

**5-4. OPTICAL PICK-UP BLOCK ASSEMBLY(BU-5BD8B)**



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

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
$\Delta$ 151	8-848-144-11	DEVICE, OPTICAL KSS-240A		* 157	A-4649-199-A	BD BOARD, COMPLETE	
152	1-575-001-11	WIRE, FLAT TYPE (12 CORE)		158	4-951-620-01	SCREW (2.6X8), +BVTP	
153	4-917-567-01	GEAR (M)		M101	X-4917-504-1	MOTOR ASSY (SLED)	
154	4-951-940-01	INSULATOR (BU)		M102	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE)	
155	4-917-565-01	SHAFT, SLED		S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	
156	4-917-564-01	GEAR (P), FLATNESS					



## SECTION 6 ELECTRICAL PARTS LIST

**BD**

**DISPLAY**

**NOTE:**

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

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

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

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- **RESISTORS**  
All resistors are in ohms  
METAL: Metal-film resistor  
METAL OXIDE: Metal Oxide-film resistor  
F : nonflammable
- Color Indication of Appearance Parts Example:  
KNOB, BALANCE (WHITE) ... (RED)

↑                      ↑  
Parts color            Cabinet's color

- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- **SEMICONDUCTORS**  
In each case, u:  $\mu$ , for example:  
uA...:  $\mu$  A..., uPA...:  $\mu$  PA...,  
uPB...:  $\mu$  PB..., uPC...:  $\mu$  PC...,  
uPD...:  $\mu$  PD...
- **CAPACITORS**  
uF :  $\mu$  F
- **COILS**  
uH :  $\mu$  H
- Hardware (# mark) list is given in the last of this parts list.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-4649-199-A	BD BOARD, COMPLETE *****		R118	1-216-077-00	METAL CHIP      15K 5% 1/10W	
		< CAPACITOR >		R121	1-216-077-00	METAL CHIP      15K 5% 1/10W	
C101	1-163-005-11	CERAMIC CHIP 470PF      10% 50V		R122	1-216-077-00	METAL CHIP      15K 5% 1/10W	
C102	1-163-038-00	CERAMIC CHIP 0.1uF      25V		R151	1-216-070-00	METAL CHIP      7.5K 5% 1/10W	
C103	1-163-005-11	CERAMIC CHIP 470PF      10% 50V		R152	1-216-070-00	METAL CHIP      7.5K 5% 1/10W	
C104	1-164-505-11	CERAMIC CHIP 2.2uF      16V		R153	1-216-070-00	METAL CHIP      7.5K 5% 1/10W	
C105	1-135-155-21	TANTALUM CHIP 4.7uF      10% 16V		R154	1-216-070-00	METAL CHIP      7.5K 5% 1/10W	
C106	1-164-346-11	CERAMIC CHIP 1uF      16V		R155	1-216-070-00	METAL CHIP      7.5K 5% 1/10W	
C107	1-164-505-11	CERAMIC CHIP 2.2uF      16V		R156	1-216-070-00	METAL CHIP      7.5K 5% 1/10W	
C108	1-164-346-11	CERAMIC CHIP 1uF      16V		R157	1-216-085-00	METAL CHIP      33K 5% 1/10W	
C112	1-163-038-00	CERAMIC CHIP 0.1uF      25V		R158	1-216-076-00	METAL CHIP      13K 5% 1/10W	
C151	1-163-007-11	CERAMIC CHIP 680PF      10% 50V		R159	1-216-085-00	METAL CHIP      33K 5% 1/10W	
C152	1-163-007-11	CERAMIC CHIP 680PF      10% 50V		R160	1-216-081-00	METAL CHIP      22K 5% 1/10W	
C153	1-163-038-00	CERAMIC CHIP 0.1uF      25V		R161	1-216-093-00	METAL CHIP      68K 5% 1/10W	
C154	1-164-336-11	CERAMIC CHIP 0.33uF      25V		R162	1-216-085-00	METAL CHIP      33K 5% 1/10W	
C155	1-163-007-11	CERAMIC CHIP 680PF      10% 50V		R163	1-216-308-00	METAL CHIP      4.7 5% 1/10W	
C156	1-163-007-11	CERAMIC CHIP 680PF      10% 50V				< SWITCH >	
C157	1-163-037-11	CERAMIC CHIP 0.022uF      10% 25V		S101	1-572-085-11	SWITCH, LEAF (LIMIT) *****	
C158	1-163-037-11	CERAMIC CHIP 0.022uF      10% 25V				< CONNECTOR >	
C159	1-163-023-00	CERAMIC CHIP 0.015uF      5% 50V		*	1-644-127-11	DISPLAY BOARD *****	
C160	1-163-019-00	CERAMIC CHIP 0.0068uF      10% 50V				< CONNECTOR >	
C181	1-163-038-00	CERAMIC CHIP 0.1uF      25V		*	4-950-864-01	HOLDER (FL)  < CONNECTOR >	
		< CONNECTOR >				< FILTER >	
CN101	1-568-861-11	SOCKET, CONNECTOR 18P		CN705	1-691-899-21	CONNECTOR, FFC/FPC 32P	
CN102	1-568-795-11	SOCKET, CONNECTOR 12P				< RESISTOR >	
		< IC >		FL701	1-519-721-11	INDICATOR TUBE, FLUORESCENT	
IC101	8-752-344-48	IC CXD2501Q				< RESISTOR >	
IC102	8-759-071-79	IC BA6297AFP-T1		R721	1-249-417-11	CARBON      1K 5% 1/4W	
		< RESISTOR >		R722	1-249-419-11	CARBON      1.5K 5% 1/4W	
R101	1-216-077-00	METAL CHIP      15K 5% 1/10W		R723	1-249-416-11	CARBON      820 5% 1/4W	
R102	1-216-097-00	METAL CHIP      100K 5% 1/10W		R724	1-247-828-11	CARBON      750 5% 1/4W	
R103	1-216-077-00	METAL CHIP      15K 5% 1/10W		R725	1-249-415-11	CARBON      680 5% 1/4W	
R104	1-216-085-00	METAL CHIP      33K 5% 1/10W		R726	1-249-420-11	CARBON      1.8K 5% 1/4W	
R105	1-216-097-00	METAL CHIP      100K 5% 1/10W		R727	1-249-421-11	CARBON      2.2K 5% 1/4W	
R112	1-216-049-00	METAL CHIP      1K 5% 1/10W		R728	1-249-422-11	CARBON      2.7K 5% 1/4W	
R113	1-216-077-00	METAL CHIP      15K 5% 1/10W		R729	1-247-834-11	CARBON      1.3K 5% 1/4W	
R114	1-216-077-00	METAL CHIP      15K 5% 1/10W		R730	1-249-424-11	CARBON      3.9K 5% 1/4W	
R117	1-216-077-00	METAL CHIP      15K 5% 1/10W					

**DISPLAY**   **DSP**   **FUNCTION**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< SWITCH >		RV802	1-241-514-11	RES, VAR, CARBON 10K (REVERB)	
S728	1-554-303-21	SWITCH, TACTILE (DISC SKIP)				< SWITCH >	
S729	1-554-303-21	SWITCH, TACTILE (▶▶)		S801	1-554-303-21	SWITCH, TACTILE (FLAT)	
S730	1-554-303-21	SWITCH, TACTILE (◀◀)		S802	1-554-303-21	SWITCH, TACTILE (BGM)	
S731	1-554-303-21	SWITCH, TACTILE (▶◀)		S803	1-554-303-21	SWITCH, TACTILE (LIVE ROOM)	
S732	1-554-303-21	SWITCH, TACTILE (◀▶)		S804	1-554-303-21	SWITCH, TACTILE (DISCO)	
S733	1-554-303-21	SWITCH, TACTILE (△ OPEN/CLOSE)		S805	1-554-303-21	SWITCH, TACTILE (STADIUM)	
S734	1-554-303-21	SWITCH, TACTILE (■)		S806	1-554-303-21	SWITCH, TACTILE (JAZZ CLUB)	
S735	1-554-303-21	SWITCH, TACTILE (▣)		S807	1-554-303-21	SWITCH, TACTILE (CHURCH)	
S736	1-554-303-21	SWITCH, TACTILE (▷)		S808	1-554-303-21	SWITCH, TACTILE (HALL)	
S737	1-554-303-21	SWITCH, TACTILE (TIME)		*****			
S738	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)		*	1-644-129-11	FUNCTION BOARD	
*****						*****	
*	1-644-128-11	DSP BOARD				< CONNECTOR >	
		*****		CN402	1-691-897-21	CONNECTOR, FFC/FPC 19P	
*	4-952-230-01	HOLDER (LED)		* CN471	1-691-187-11	CONNECTOR, BOARD TO BOARD 18P	
		< CAPACITOR >				< RESISTOR >	
C801	1-161-494-00	CERAMIC      0.022uF      25V		R470	1-249-415-11	CARBON      680   5%   1/4W	
		< CONNECTOR >		R471	1-247-828-11	CARBON      750   5%   1/4W	
* CN800	1-691-188-11	CONNECTOR, BOARD TO BOARD 18P		R472	1-249-416-11	CARBON      820   5%   1/4W	
		< DIODE >		R473	1-249-417-11	CARBON      1K    5%   1/4W	
D801	8-719-301-52	LED                      SEL2810A-C		R474	1-247-834-11	CARBON      1.3K 5%   1/4W	
D802	8-719-301-52	LED                      SEL2810A-C		R476	1-249-415-11	CARBON      680   5%   1/4W	
D803	8-719-301-52	LED                      SEL2810A-C		R477	1-247-828-11	CARBON      750   5%   1/4W	
D804	8-719-301-52	LED                      SEL2810A-C		R478	1-249-416-11	CARBON      820   5%   1/4W	
D805	8-719-301-52	LED                      SEL2810A-C		R479	1-249-417-11	CARBON      1K    5%   1/4W	
D806	8-719-301-52	LED                      SEL2810A-C		R480	1-247-834-11	CARBON      1.3K 5%   1/4W	
D807	8-719-301-52	LED                      SEL2810A-C		R481	1-249-419-11	CARBON      1.5K 5%   1/4W	
		< IC >		R482	1-249-420-11	CARBON      1.8K 5%   1/4W	
IC801	8-741-100-48	IC      SBX1610-59		R483	1-249-421-11	CARBON      2.2K 5%   1/4W	
		< RESISTOR >		R484	1-249-422-11	CARBON      2.7K 5%   1/4W	
R801	1-249-415-11	CARBON      680   5%   1/4W				< SWITCH >	
R802	1-247-828-11	CARBON      750   5%   1/4W		S470	1-554-303-21	SWITCH, TACTILE (10)	
R803	1-249-416-11	CARBON      820   5%   1/4W		S471	1-554-303-21	SWITCH, TACTILE (9)	
R804	1-249-417-11	CARBON      1K    5%   1/4W		S472	1-554-303-21	SWITCH, TACTILE (8)	
R805	1-247-834-11	CARBON      1.3K 5%   1/4W		S473	1-554-303-21	SWITCH, TACTILE (7)	
R806	1-249-419-11	CARBON      1.5K 5%   1/4W		S474	1-554-303-21	SWITCH, TACTILE (6)	
R807	1-249-420-11	CARBON      1.8K 5%   1/4W		S475	1-554-303-21	SWITCH, TACTILE (PEAK SERCH)	
R808	1-249-409-11	CARBON      220   5%   1/4W		S476	1-554-303-21	SWITCH, TACTILE (5)	
		< VARIABLE RESISTOR >		S477	1-554-303-21	SWITCH, TACTILE (4)	
RV801	1-241-514-11	RES, VAR, CARBON 10K (EQUALIZER)		S478	1-554-303-21	SWITCH, TACTILE (3)	
				S479	1-554-303-21	SWITCH, TACTILE (2)	
				S480	1-554-303-21	SWITCH, TACTILE (1)	
				S481	1-554-303-21	SWITCH, TACTILE (10)	
				S482	1-554-303-21	SWITCH, TACTILE (FADER)	
				S483	1-554-303-21	SWITCH, TACTILE (CLEAR)	

**FUNCTION**

**HEADPHONE JACK**

**HEADPHONE VOL**

**LOADING MOTOR**

**MAIN**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
S484	1-554-303-21	SWITCH, TACTILE (CHECK)		C206	1-126-163-11	ELECT 4. 7uF	20% 50V
S485	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)		C207	1-126-301-11	ELECT 1uF	20% 50V
*****				C209	1-124-997-11	ELECT 470uF	20% 10V
*	1-644-205-11	HEADPHONE JACK BOARD		C210	1-126-024-11	ELECT 220uF	20% 16V
		*****		C212	1-124-997-11	ELECT 470uF	20% 10V
		< CAPACITOR >		C213	1-126-301-11	ELECT 1uF	20% 50V
C701	1-162-291-31	CERAMIC 560PF	10% 50V	C214	1-136-157-00	FILM 0. 022uF	5% 50V
C702	1-162-291-31	CERAMIC 560PF	10% 50V	C215	1-124-997-11	ELECT 470uF	20% 10V
C703	1-164-159-11	CERAMIC 0. 1uF	50V	C216	1-126-301-11	ELECT 1uF	20% 50V
		< JACK >		C217	1-124-471-00	ELECT 1000uF	20% 6. 3V
J701	1-568-519-41	JACK, LARGE TYPE (HEADPHONES)		C218	1-126-023-11	ELECT 100uF	20% 16V
		< LEAD >		C219	1-126-023-11	ELECT 100uF	20% 16V
* LP701	1-690-880-31	LEAD (WITH CONNECTOR)		C220	1-124-120-11	ELECT 220uF	20% 25V
*****				C221	1-124-120-11	ELECT 220uF	20% 25V
*	1-644-204-11	HEADPHONE VOL BOARD		C222	1-126-024-11	ELECT 220uF	20% 16V
		*****		C223	1-126-024-11	ELECT 220uF	20% 16V
		< CAPACITOR >		C224	1-161-494-00	CERAMIC 0. 022uF	25V
C706	1-161-494-00	CERAMIC 0. 022uF	25V	C301	1-124-589-11	ELECT 47uF	20% 16V
		< CONNECTOR >		C303	1-164-159-11	CERAMIC 0. 1uF	50V
* CN702	1-691-892-11	CONNECTOR, FFC/FPC 13P		C305	1-126-022-11	ELECT 47uF	20% 16V
		< VARIABLE RESISTOR >		C306	1-164-159-11	CERAMIC 0. 1uF	50V
RV701	1-241-919-11	RES, VAR, CARBON 10K/10K		C307	1-164-159-11	CERAMIC 0. 1uF	50V
		(PHONE LEVEL/LINE OUT LEVEL)		C311	1-136-161-00	FILM 0. 047uF	5% 50V
*****				C312	1-161-374-11	CERAMIC 0. 0015uF	20% 50V
*	1-644-202-11	LOADING MOTOR BOARD		C313	1-161-494-00	CERAMIC 0. 022uF	25V
		*****		C314	1-162-306-11	CERAMIC 0. 01uF	20% 16V
		< CAPACITOR >		C315	1-124-465-00	ELECT 0. 47uF	20% 50V
C705	1-161-375-00	CERAMIC 0. 0022uF	20% 50V	C316	1-161-494-00	CERAMIC 0. 022uF	25V
*****				C317	1-161-494-00	CERAMIC 0. 022uF	25V
*	A-4649-301-A	MAIN BOARD, COMPLETE (Australian)		C318	1-164-159-11	CERAMIC 0. 1uF	50V
		*****		C319	1-162-282-31	CERAMIC 100PF	10% 50V
*	A-4649-303-A	MAIN BOARD, COMPLETE (US, Canadian)		C320	1-136-153-00	FILM 0. 01uF	5% 50V
		*****		C321	1-164-159-11	CERAMIC 0. 1uF	50V
		< CAPACITOR >		C322	1-164-159-11	CERAMIC 0. 1uF	50V
C201	1-124-572-11	ELECT 100uF	20% 63V	C323	1-164-159-11	CERAMIC 0. 1uF	50V
C202	1-126-059-11	ELECT 10uF	20% 50V	C324	1-164-159-11	CERAMIC 0. 1uF	50V
C203	1-124-887-00	ELECT 3300uF	20% 16V	C331	1-162-208-31	CERAMIC 24PF	5% 50V
C204	1-126-937-11	ELECT 4700uF	20% 16V	C332	1-136-170-00	FILM 0. 27uF	5% 50V
C205	1-126-163-11	ELECT 4. 7uF	20% 50V	C333	1-164-159-11	CERAMIC 0. 1uF	50V
				C336	1-126-022-11	ELECT 47uF	20% 16V
				C339	1-124-589-11	ELECT 47uF	20% 16V
				C340	1-126-022-11	ELECT 47uF	20% 16V
				C341	1-164-159-11	CERAMIC 0. 1uF	50V
				C342	1-124-589-11	ELECT 47uF	20% 16V
				C343	1-164-159-11	CERAMIC 0. 1uF	50V
				C344	1-164-159-11	CERAMIC 0. 1uF	50V
				C345	1-162-205-31	CERAMIC 18PF	5% 50V
				C346	1-164-159-11	CERAMIC 0. 1uF	50V
				C347	1-164-159-11	CERAMIC 0. 1uF	50V
				C348	1-164-159-11	CERAMIC 0. 1uF	50V

## MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C349	1-164-159-11	CERAMIC	0.1uF 50V	C971	1-162-219-31	CERAMIC 68PF 5% 50V	
C350	1-126-022-11	ELECT	47uF 20% 16V	C972	1-126-022-11	ELECT 47uF 20% 16V	
C351	1-164-159-11	CERAMIC	0.1uF 50V	C973	1-124-463-00	ELECT 0.1uF 20% 50V	
C352	1-164-159-11	CERAMIC	0.1uF 50V	C974	1-124-463-00	ELECT 0.1uF 20% 50V	
C353	1-162-199-31	CERAMIC	10PF 5% 50V	C975	1-124-463-00	ELECT 0.1uF 20% 50V	
C354	1-162-199-31	CERAMIC	10PF 5% 50V			( CONNECTOR )	
C355	1-164-159-11	CERAMIC	0.1uF 50V	* CN201	1-573-047-11	PIN, CONNECTOR (PC BOARD) 2P	
C356	1-126-022-11	ELECT	47uF 20% 16V	* CN202	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
C357	1-164-159-11	CERAMIC	0.1uF 50V	* CN301	1-691-895-21	CONNECTOR, FFC/FPC 18P	
C358	1-164-159-11	CERAMIC	0.1uF 50V	* CN381	1-691-892-11	CONNECTOR, FFC/FPC 13P	
C359	1-164-159-11	CERAMIC	0.1uF 50V	* CN401	1-691-900-12	CONNECTOR, FFC/FPC 32P	
C360	1-164-159-11	CERAMIC	0.1uF 50V	* CN402	1-691-898-12	CONNECTOR, FFC/FPC 19P	
C361	1-162-289-31	CERAMIC	390PF 10% 50V	* CN403	1-568-824-11	SOCKET, CONNECTOR 5P	
C363	1-162-285-31	CERAMIC	180PF 10% 50V	* CN404	1-568-943-11	PIN, CONNECTOR 5P	
C364	1-162-285-31	CERAMIC	180PF 10% 50V			( DIODE )	
C365	1-162-285-31	CERAMIC	180PF 10% 50V	D201	8-719-200-82	DIODE 11ES2	
C366	1-162-285-31	CERAMIC	180PF 10% 50V	D202	8-719-110-08	DIODE RD8. 2ES-B2	
C367	1-162-289-31	CERAMIC	390PF 10% 50V	D203	8-719-200-82	DIODE 11ES2	
C371	1-130-479-00	MYLAR	0.0047uF 5% 50V	D204	8-719-200-82	DIODE 11ES2	
C372	1-130-479-00	MYLAR	0.0047uF 5% 50V	D205	8-719-200-82	DIODE 11ES2	
C373	1-130-472-00	MYLAR	0.0012uF 5% 50V	D206	8-719-200-82	DIODE 11ES2	
C374	1-130-472-00	MYLAR	0.0012uF 5% 50V	D207	8-719-987-63	DIODE 1N4148M	
C377	1-126-022-11	ELECT	47uF 20% 16V	D208	8-719-987-63	DIODE 1N4148M	
C378	1-126-022-11	ELECT	47uF 20% 16V	D209	8-719-987-63	DIODE 1N4148M	
C379	1-130-473-00	MYLAR	0.0015uF 5% 50V	D210	8-719-987-63	DIODE 1N4148M	
C380	1-130-473-00	MYLAR	0.0015uF 5% 50V	D341	8-719-210-21	DIODE 11EQS04	
C401	1-126-022-11	ELECT	47uF 20% 16V	D351	8-719-987-63	DIODE 1N4148M	
C402	1-164-159-11	CERAMIC	0.1uF 50V			( IC )	
C403	1-126-023-11	ELECT	100uF 20% 16V	IC201	8-759-633-42	IC M5293L	
C404	1-126-023-11	ELECT	100uF 20% 16V	IC202	8-759-061-65	IC LA5602	
C408	1-164-159-11	CERAMIC	0.1uF 50V	IC203	8-759-945-58	IC RC4558P	
C409	1-164-159-11	CERAMIC	0.1uF 50V	IC204	8-759-604-86	IC M5F7807L	
C410	1-164-159-11	CERAMIC	0.1uF 50V	IC205	8-759-821-93	IC LA5601	
C412	1-126-022-11	ELECT	47uF 20% 16V	IC206	8-759-982-26	IC RC78L12A	
C413	1-161-494-00	CERAMIC	0.022uF 25V	IC207	8-759-982-48	IC RC79L12A	
C414	1-161-494-00	CERAMIC	0.022uF 25V	IC301	8-752-337-26	IC CXD2500AQ	
C415	1-164-159-11	CERAMIC	0.1uF 50V	IC302	8-752-342-65	IC CXD2560M	
C416	1-164-159-11	CERAMIC	0.1uF 50V	IC303	8-759-044-10	IC CXD2562Q	
C450	1-126-024-11	ELECT	220uF 20% 16V	IC306	8-759-503-91	IC TL082ACP	
C460	1-126-024-11	ELECT	220uF 20% 16V	IC307	8-759-073-60	IC MC3307BP	
C901	1-161-494-00	CERAMIC	0.022uF 25V	IC308	8-749-921-12	IC GP1F32T	
C902	1-126-022-11	ELECT	47uF 20% 16V	IC309	8-759-981-85	IC RC4556D	
C903	1-164-159-11	CERAMIC	0.1uF 50V	IC401	8-759-066-14	IC uPD75237GJ-024-5BG	
C904	1-164-159-11	CERAMIC	0.1uF 50V	IC402	8-759-821-32	IC CXA1291P	
C905	1-164-159-11	CERAMIC	0.1uF 50V	IC901	8-752-341-99	IC CXD2701Q	
C941	1-162-219-31	CERAMIC	68PF 5% 50V	IC902	8-759-508-41	IC MS51464-10NC	
C942	1-126-022-11	ELECT	47uF 20% 16V	IC904	8-759-917-18	IC SN74HCU04AN	
C943	1-124-463-00	ELECT	0.1uF 20% 50V	IC910	8-759-073-60	IC MC3307BP	
C944	1-124-463-00	ELECT	0.1uF 20% 50V				
C945	1-124-463-00	ELECT	0.1uF 20% 50V				

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< JACK >					
J381	1-569-443-21	JACK, PIN 4P (LINE OUT)		R215	1-249-417-11	CARBON	1K 5% 1/4W
		< COIL >		R302	1-249-417-11	CARBON	1K 5% 1/4W
L301	1-412-473-21	INDUCTOR 0uH		R303	1-249-417-11	CARBON	1K 5% 1/4W
L306	1-408-403-00	INDUCTOR 3. 3uH		R305	1-249-405-11	CARBON	100 5% 1/4W
L331	1-408-403-00	INDUCTOR 3. 3uH		R306	1-249-413-11	CARBON	470 5% 1/4W
L341	1-412-473-21	INDUCTOR 0uH		R309	1-249-405-11	CARBON	100 5% 1/4W
L342	1-412-473-21	INDUCTOR 0uH		R311	1-249-423-11	CARBON	3. 3K 5% 1/4W
L343	1-412-473-21	INDUCTOR 0uH		R312	1-249-429-11	CARBON	10K 5% 1/4W
L350	1-412-473-21	INDUCTOR 0uH		R313	1-249-423-11	CARBON	3. 3K 5% 1/4W
L351	1-412-473-21	INDUCTOR 0uH		R314	1-249-429-11	CARBON	10K 5% 1/4W
L353	1-412-473-21	INDUCTOR 0uH		R315	1-249-417-11	CARBON	1K 5% 1/4W
L361	1-412-473-21	INDUCTOR 0uH		R316	1-249-417-11	CARBON	1K 5% 1/4W
L362	1-412-473-21	INDUCTOR 0uH		R317	1-249-417-11	CARBON	1K 5% 1/4W
L363	1-412-473-21	INDUCTOR 0uH		R318	1-249-441-11	CARBON	100K 5% 1/4W
L401	1-412-473-21	INDUCTOR 0uH		R319	1-247-903-00	CARBON	1M 5% 1/4W
		< TRANSISTOR >		R321	1-249-417-11	CARBON	1K 5% 1/4W
Q201	8-729-119-76	TRANSISTOR 2SA1175-HFE		R322	1-249-417-11	CARBON	1K 5% 1/4W
Q209	8-729-281-52	TRANSISTOR 2SC1815-Y		R323	1-249-417-11	CARBON	1K 5% 1/4W
Q341	8-729-900-65	TRANSISTOR DTA144ES		R324	1-249-418-11	CARBON	1. 2K 5% 1/4W
Q342	8-729-900-65	TRANSISTOR DTA144ES		R330	1-249-417-11	CARBON	1K 5% 1/4W
Q343	8-729-900-65	TRANSISTOR DTA144ES		R331	1-249-417-11	CARBON	1K 5% 1/4W
Q344	8-729-900-89	TRANSISTOR DTC144ES		R332	1-247-893-11	CARBON	390K 5% 1/4W
Q371	8-729-141-30	TRANSISTOR 2SC3623A-LK		R342	1-249-417-11	CARBON	1K 5% 1/4W
Q372	8-729-141-30	TRANSISTOR 2SC3623A-LK		R343	1-249-441-11	CARBON	100K 5% 1/4W
Q373	8-729-141-30	TRANSISTOR 2SC3623A-LK		R344	1-249-441-11	CARBON	100K 5% 1/4W
Q374	8-729-141-30	TRANSISTOR 2SC3623A-LK		R345	1-249-425-11	CARBON	4. 7K 5% 1/4W
Q375	8-729-231-55	TRANSISTOR 2SC2878-AB		R346	1-249-425-11	CARBON	4. 7K 5% 1/4W
Q376	8-729-231-55	TRANSISTOR 2SC2878-AB		R347	1-249-441-11	CARBON	100K 5% 1/4W
Q401	8-729-900-89	TRANSISTOR DTC144ES		R348	1-249-429-11	CARBON	10K 5% 1/4W
Q901	8-729-900-63	TRANSISTOR DTA124ES		R351	1-249-428-11	CARBON	8. 2K 5% 1/4W
Q902	8-729-900-63	TRANSISTOR DTA124ES		R352	1-249-428-11	CARBON	8. 2K 5% 1/4W
Q903	8-729-900-63	TRANSISTOR DTA124ES		R353	1-249-428-11	CARBON	8. 2K 5% 1/4W
Q941	8-729-231-55	TRANSISTOR 2SC2878-AB		R354	1-249-428-11	CARBON	8. 2K 5% 1/4W
Q942	8-729-231-55	TRANSISTOR 2SC2878-AB		R355	1-249-428-11	CARBON	8. 2K 5% 1/4W
Q943	8-729-231-55	TRANSISTOR 2SC2878-AB		R356	1-249-428-11	CARBON	8. 2K 5% 1/4W
Q971	8-729-231-55	TRANSISTOR 2SC2878-AB		R357	1-249-428-11	CARBON	8. 2K 5% 1/4W
Q972	8-729-231-55	TRANSISTOR 2SC2878-AB		R358	1-249-428-11	CARBON	8. 2K 5% 1/4W
Q973	8-729-231-55	TRANSISTOR 2SC2878-AB		R359	1-247-848-11	CARBON	5. 1K 5% 1/4W
		< RESISTOR >		R361	1-249-425-11	CARBON	4. 7K 5% 1/4W
R001	1-249-417-11	CARBON	1K 5% 1/4W	R362	1-249-425-11	CARBON	4. 7K 5% 1/4W
R201	1-249-435-11	CARBON	33K 5% 1/4W	R363	1-249-425-11	CARBON	4. 7K 5% 1/4W
R202	1-249-438-11	CARBON	56K 5% 1/4W	R364	1-249-425-11	CARBON	4. 7K 5% 1/4W
R203	1-249-429-11	CARBON	10K 5% 1/4W	R365	1-249-429-11	CARBON	10K 5% 1/4W
R210	1-249-429-11	CARBON	10K 5% 1/4W	R366	1-249-429-11	CARBON	10K 5% 1/4W
R211	1-249-410-11	CARBON	270 5% 1/4W	R367	1-249-429-11	CARBON	10K 5% 1/4W
				R368	1-249-429-11	CARBON	10K 5% 1/4W
				R369	1-249-419-11	CARBON	1. 5K 5% 1/4W
				R370	1-249-419-11	CARBON	1. 5K 5% 1/4W
				R371	1-249-419-11	CARBON	1. 5K 5% 1/4W
				R372	1-249-419-11	CARBON	1. 5K 5% 1/4W



**POWER SW**

**TABLE MOTOR**

Ref. No.	Part No.	Description	Remark
*	1-644-126-11	POWER SW BOARD ***** < CONNECTOR >	
* CN702	1-568-943-11	PIN, CONNECTOR 5P < RESISTOR >	
R701	1-249-421-11	CARBON 2.2K 5% 1/4W	
R702	1-249-420-11	CARBON 1.8K 5% 1/4W	
R703	1-249-419-11	CARBON 1.5K 5% 1/4W	
R704	1-249-415-11	CARBON 680 5% 1/4W	
R705	1-247-828-11	CARBON 750 5% 1/4W	
R706	1-249-416-11	CARBON 820 5% 1/4W	
R707	1-249-417-11	CARBON 1K 5% 1/4W	
R708	1-247-834-11	CARBON 1.3K 5% 1/4W	
		< SWITCH >	
S701	1-554-303-21	SWITCH, TACTILE (REPEAT)	
S702	1-554-303-21	SWITCH, TACTILE (PROGRAM)	
S703	1-554-303-21	SWITCH, TACTILE (SHUFFLE)	
S704	1-554-303-21	SWITCH, TACTILE (CONTINUE)	
S705	1-554-303-21	SWITCH, TACTILE (DISC 5)	
S706	1-554-303-21	SWITCH, TACTILE (DISC 4)	
S707	1-554-303-21	SWITCH, TACTILE (DISC 3)	
S708	1-554-303-21	SWITCH, TACTILE (DISC 2)	
S709	1-554-303-21	SWITCH, TACTILE (DISC 1)	
S710	1-572-714-11	SWITCH, PUSH (POWER)	
*****			
*	1-644-201-11	TABLE MOTOR BOARD ***** < CAPACITOR >	
C704	1-161-375-00	CERAMIC 0.0022uF 20% 50V < CONNECTOR >	
* CN707	1-573-044-11	SOCKET, CONNECTOR 5P < DIODE >	
D701	8-719-970-19	DIODE GP-1A521 < RESISTOR >	
R701	1-249-416-11	CARBON 820 5% 1/4W	
*****			
		MISCELLANEOUS *****	
9	1-690-931-31	WIRE (FLAT TYPE) (19 CORE)	

Ref. No.	Part No.	Description	Remark
14	1-690-933-31	WIRE (FLAT TYPE) (32 CORE)	
16	1-690-934-11	WIRE (FLAT TYPE) (13 CORE)	
* 53	1-452-538-11	MAGNET	
61	1-590-849-11	WIRE, FLAT TYPE (5 CORE)	
104	1-694-003-11	JAMPER, FILM (WITH TARMINAL)	
△116	1-574-358-31	CORD, POWER (WITH CONNECTOR) (Australian)	
△116	1-590-836-11	CORD, POWER (US, Canadian)	
△151	8-848-144-11	DEVICE, OPTICAL KSS-240A	
152	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
S701	1-572-713-11	SWITCH, PUSH (WITH CONNECTOR) (DOWN)	
△T901	1-449-955-11	TRANSFORMER, POWER (Australian)	
△T901	1-450-876-11	TRANSFORMER, POWER (US, Canadian)	
M701	A-4604-585-A	MOTOR ASSY, ROTARY (TABLE)	
M702	A-4604-834-A	MOTOR ASSY, LOADING	
M101	X-4917-504-1	MOTOR ASSY (SLED)	
M102	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE)	
*****			
		ACCESSORIES & PACKING MATERIALS *****	
		1-465-729-11 REMOTE COMMANDER	
		1-558-271-11 CORD, CONNECTION	
		3-707-584-01 COVER, BATTERY	
		3-755-137-21 MANUAL, INSTRUCTION (ENGLISH)	
		3-755-137-31 MANUAL, INSTRUCTION (FRENCH) (Canadian)	
		4-937-945-01 PLATE (TRANSPORT), LOCK	
*	4-941-548-01	LABEL, CLASS 1 (Australian)	
*	4-944-110-01	CUSHION (FRONT)	
*	4-944-111-01	CUSHION (REAR)	
*	4-949-235-01	HOOK	
*	4-951-752-41	INDIVIDUAL CARTON	
*****			
		***** HARDWARE LIST *****	
#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#2	7-682-548-04	SCREW +BVTT 3X8 (S)	
#3	7-682-554-04	SCREW +B 3X25	
#4	7-683-401-04	BOLT, HEXAGON SOCKET 3X4	
#5	7-685-136-19	SCREW +P 2.6X12 TYPE2 NON-SLIT	
#6	7-682-661-09	SCREW +PSW 4X8	
#7	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#8	7-685-647-79	SCREW, TAPPING	
#9	7-621-255-15	SCREW +P 2X3	

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