

# CDP-C235/C335

## SERVICE MANUAL

US Model  
Canadian Model  
AEP Model  
CDP-C235/335  
Australian Model  
CDP-C235  
UK Model  
E Model  
CDP-C335

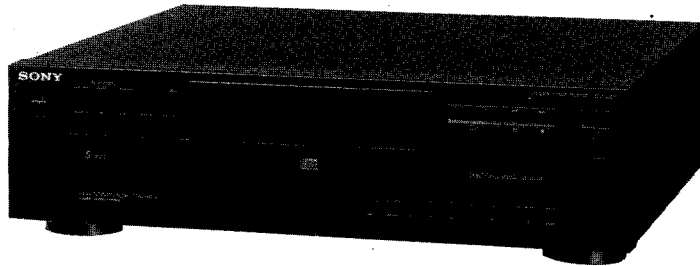


Photo : CDP-C235

Model Name Using Similar Mechanism	CDP-C225/C325
Optical Pick-up Block Type	BU-5BD13

### SPECIFICATIONS

#### Compact Disc Player

System	Compact disc digital audio system
Laser	Semiconductor laser
Wavelength	780-790 nm
Frequency response	2 Hz-20 kHz ( $\pm 0.5$ dB)
Signal to noise ratio	More than 102 dB
Dynamic range	More than 98 dB
Harmonic distortion	Less than 0.0045%
Channel separation	More than 100 dB

#### outputs

LINE OUT (phono jacks)	Output level 2 V (at 50 kilohms) Load impedance over 10 kilohms
PHONES (stereo phone jack)	Output level max. 10 mW Load impedance 32 ohms (CDP-C335 only)

#### General

Power requirements	Model for US and Canadian 120V AC, 60Hz Model for Australian and UK 240V AC, 50/60 Hz Model for E 11 O-I 20V, 220—240V AC, 50/60Hz
Power consumption	14w
Dimensions (w/h/d)	Approx. 430 x 125 x 385 mm (17 x 5 x 15 $\frac{1}{4}$ inches) (CDP-C335/C235) Including projecting parts and controls

#### Mass

Approx. 5.8 kg, net  
(12 lbs 6oz)  
(CDP-C335/C235)

#### Remote Commander

**RM-D335 (CDP-C335 only)**  
Remote control system Infrared control  
Power requirements 3 V DC with two size AA batteries  
(IEC designation R6)

#### Dimensions

45 x 185 x 20 mm (w/h/d)  
(1 13/16 x 7 3/8 x 13/16 inches)

#### Mass

100 g (3.5 oz) including batteries

#### Supplied accessories

Audio signal connecting cord  
(phono plug x 2 — phono plug x 2) (1)  
Remote commander (1) (CDP-C335 only)  
Sony SUM-3 (NS) batteries (2) (CDP-C335 only)  
AC plug adaptor (1) (CDP-C335 E model only)

Design and specifications are subject to change without notice.



COMPACT DISC PLAYER  
**SONY**®

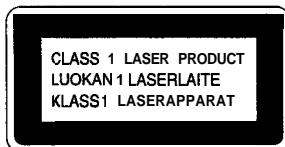
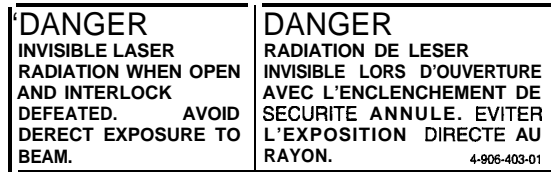
## For the Customers in Canada

**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

The following caution label is located inside of the unit.



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

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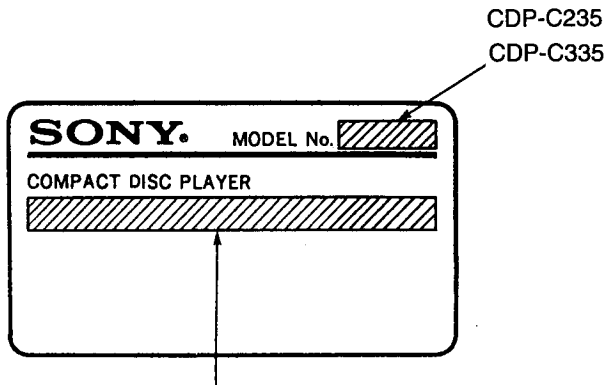
**SAFETY-RELATED COMPONENT WARNING!!**  
 COMPONENTS IDENTIFIED BY MARK OR DOTTED  
 LINE WITH MARK ON THE SCHEMATIC DIAGRAMS  
 AND IN THE PARTS LIST ARE CRITICAL TO SAFE  
 OPERATION. REPLACE THESE COMPONENTS WITH  
 SONY PARTS WHOSE PART NUMBERS APPEAR AS  
 SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUB-  
 LISHED 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 COM-  
 POSANTS QUE PAR DES PIÈCES SONY DONT LES  
 NUMÉROS SONT DONNÉS DANS CE MANUEL OU  
 DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

## SAFETY CHECK-OUT

### MODEL IDENTIFICATION

—Model Number Label—



US, Canadian model: AC: 120V 60Hz

UK, Australian model: AC: 240V-50/60Hz

AEP model: AC: 220-230V-50/60Hz

E model: AC: 110-120V, 220-240V-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.

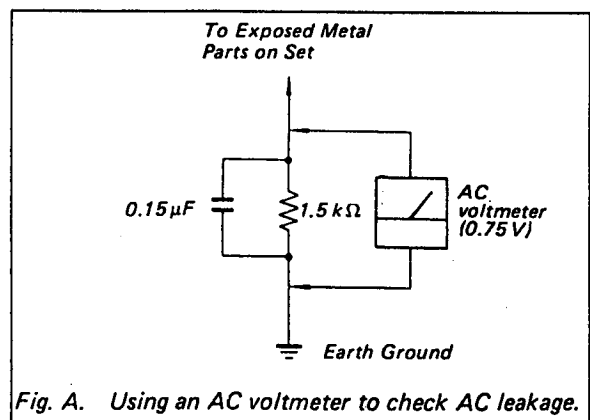
After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

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 microamperes). Leakage current can be measured by any one of three methods.

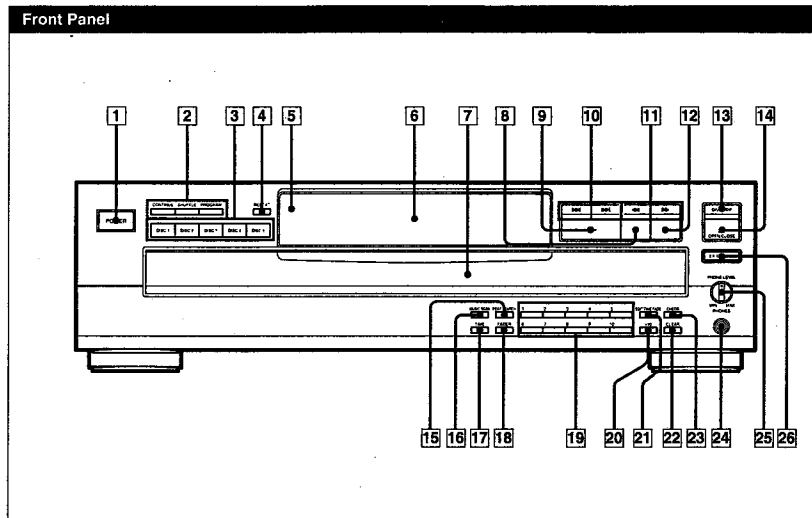
1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means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



# SECTION 1 GENERAL

This section is extracted from instruction manual.

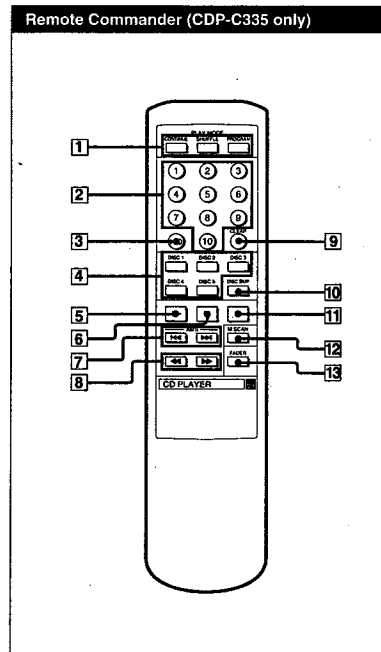
## Identifying the Parts



See the pages indicated in ( ) for details.

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>1 POWER switch (8)</li> <li>2 PLAY MODE buttons<br/>CONTINUE button (8)<br/>SHUFFLE button (13)<br/>PROGRAM button (14)</li> <li>3 DISC 1-5 buttons (8)</li> <li>4 REPEAT button (18)</li> <li>5 Remote sensor (4)</li> <li>6 Display window (8)</li> <li>7 Disc tray (8)</li> <li>8 (pause) button (8)</li> <li>9 (play) button (8)</li> <li>10 (AMS*) buttons (10)</li> <li>11 (manual search) buttons (10)</li> <li>12 (stop) button (8)</li> </ul> | <ul style="list-style-type: none"> <li>13 DISC SKIP button (8)</li> <li>14 OPEN/CLOSE button (8)</li> <li>15 PEAK SEARCH button (19)</li> <li>16 MUSIC SCAN (M. SCAN) button (17)</li> <li>17 TIME button (9)</li> <li>18 FADER button (12)</li> <li>19 Numeric buttons (10)</li> <li>20 &gt;10 (over 10) button (10)</li> <li>21 EDIT/TIME FADE button (20)</li> <li>22 CLEAR button (14)</li> <li>23 CHECK button (16)</li> <li>24 PHONES jack (CDP-C335 only) (9)</li> <li>25 PHONE LEVEL control (CDP-C335 only) (9)</li> <li>26 EX-CHANGE button (11)</li> </ul> |
|---|---|

\* AMS is the abbreviation for Automatic Music Sensor.

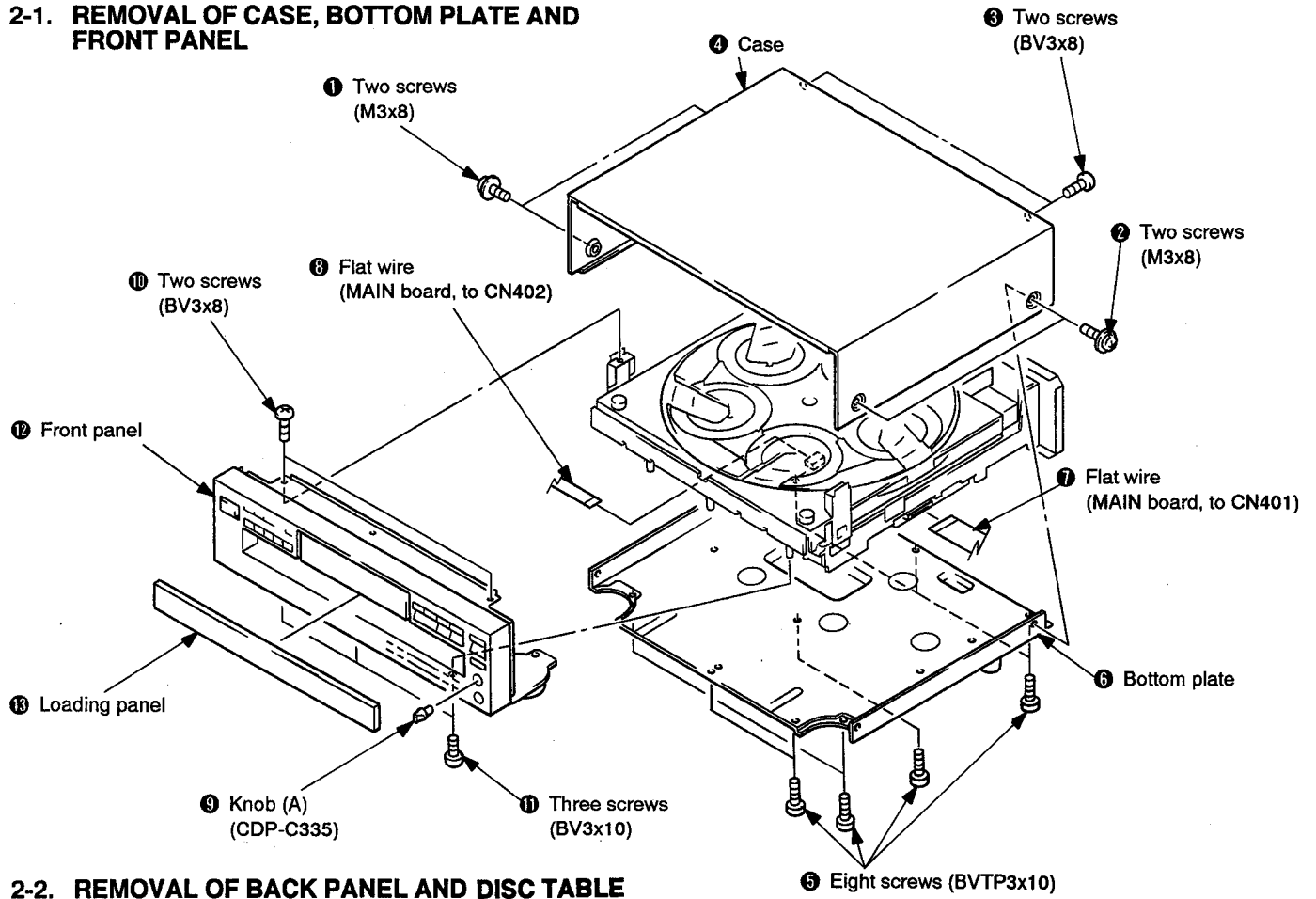


See the pages indicated in ( ) for details.

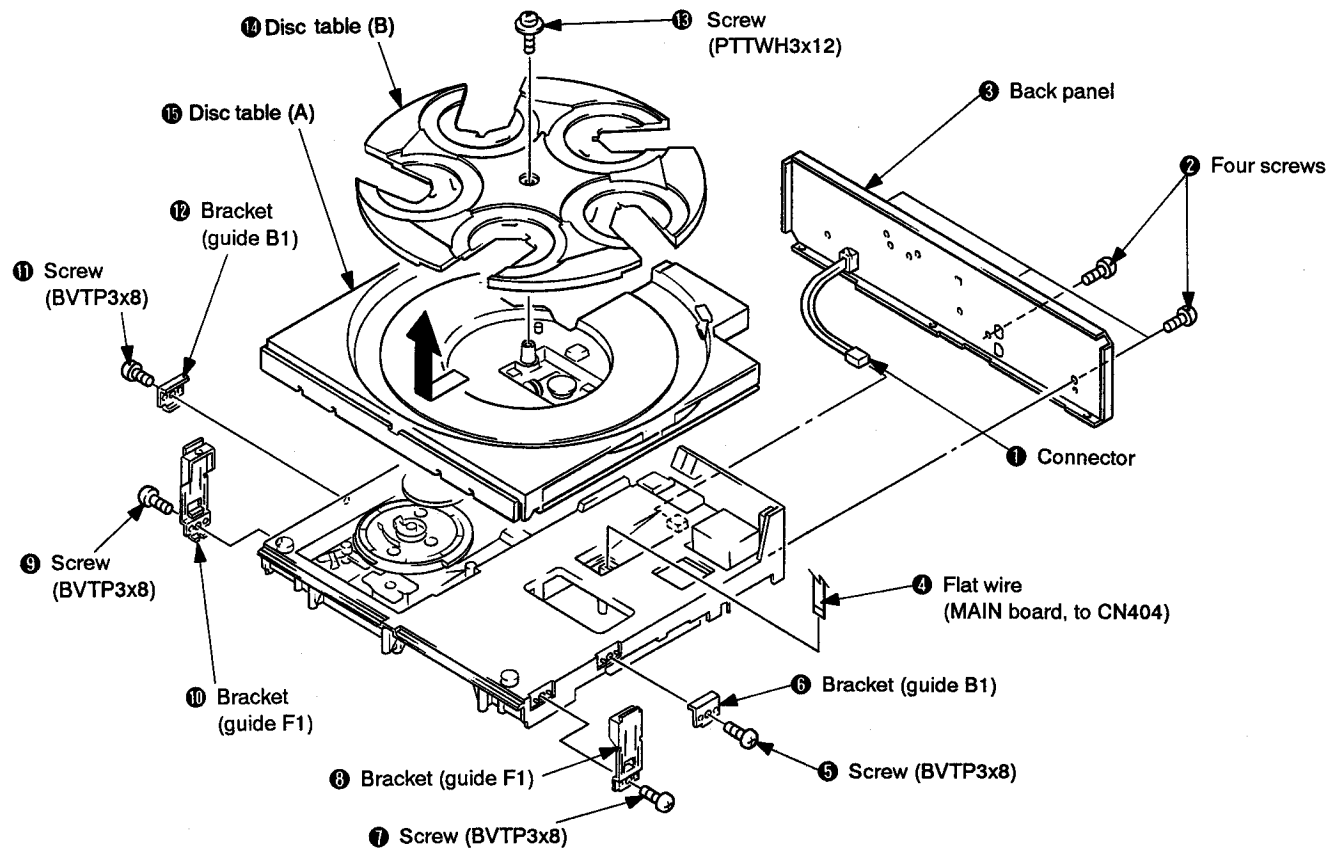
- 1 PLAY MODE buttons  
CONTINUE button (8)  
SHUFFLE button (13)  
PROGRAM button (14)
- 2 Numeric buttons (10)
- 3 >10 (over 10) button (10)
- 4 DISC 1-5 buttons (8)
- 5 (play) button (8)
- 6 (pause) button (8)
- 7 (AMS) buttons (10)
- 8 (manual search) buttons (10)
- 9 CLEAR button (14)
- 10 DISC SKIP button (8)
- 11 (stop) button (8)
- 12 MUSIC SCAN (M. SCAN) button (17)
- 13 FADER button (12)

## SECTION 2 DISASSEMBLY

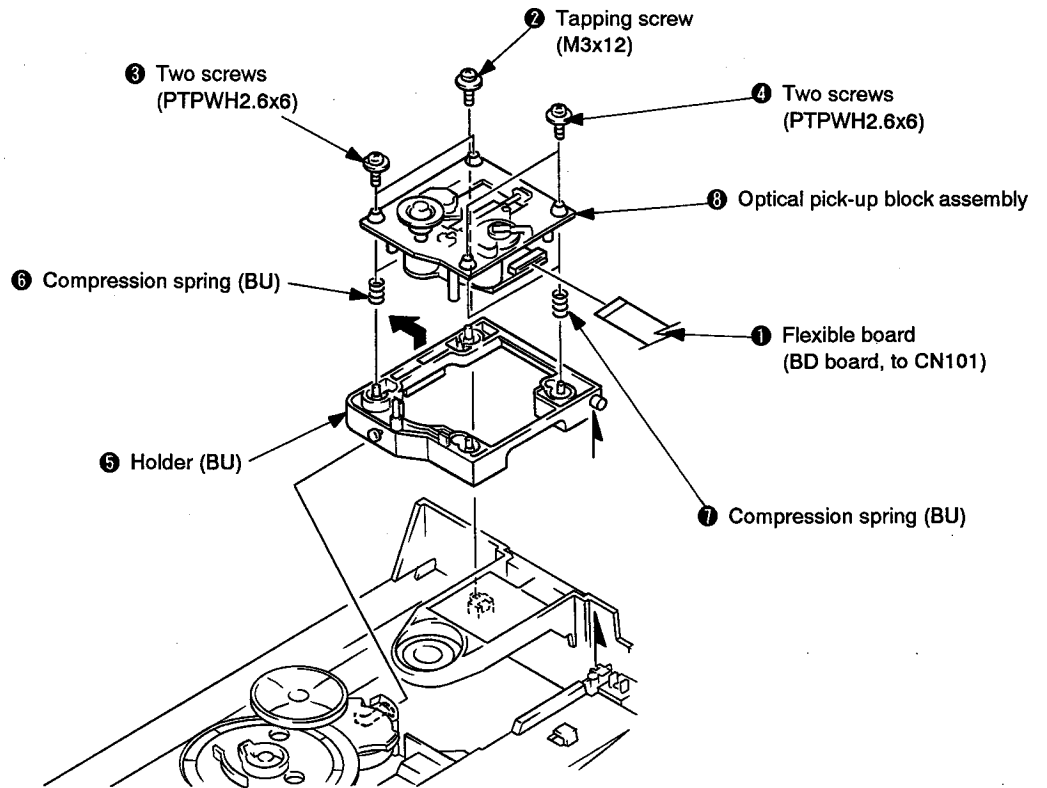
### 2-1. REMOVAL OF CASE, BOTTOM PLATE AND FRONT PANEL



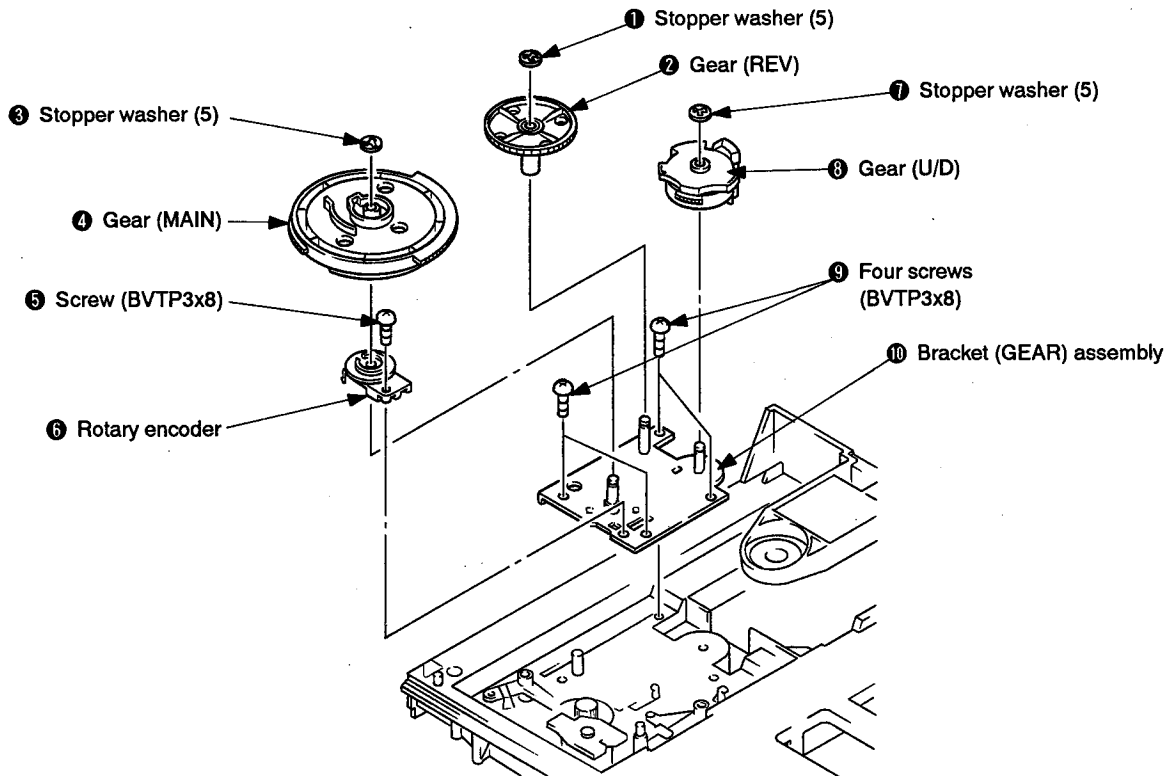
### 2-2. REMOVAL OF BACK PANEL AND DISC TABLE



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



### 2-4. REMOVAL OF BRACKET (GEAR) ASSEMBLY

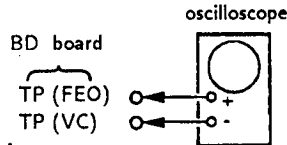


## SECTION 3 ELECTRICAL BLOCK CHECKING

### Note :

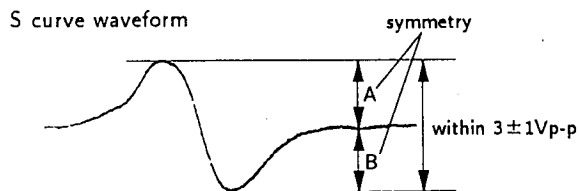
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than  $10M\Omega$  impedance.
4. Clean an object lens by an applicator with neutral detergent when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

### S Curve Check



#### Procedure :

1. Connect oscilloscope to test point TP (FE) on BD board.
2. Connect between test point TP (FE1) 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  $3 \pm 1V_{p-p}$ .

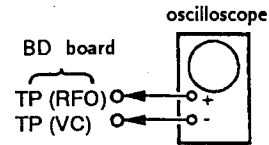


5. After check, remove the lead wire connected in step 2.

**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

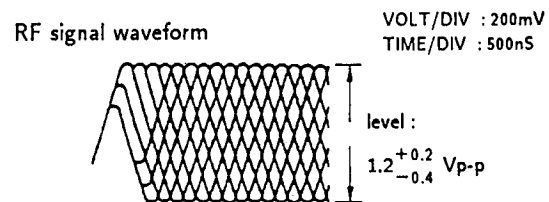


#### Procedure :

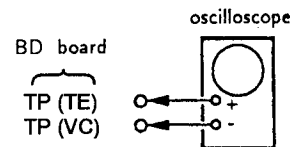
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

#### Note :

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

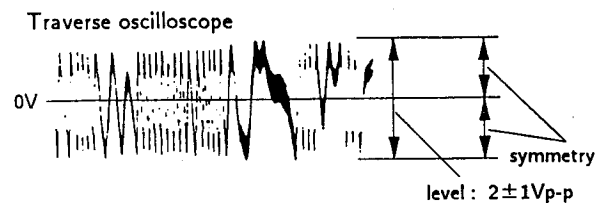


### E-F Balance Check



#### Procedure :

1. Connect test point TP (ADJ) to ground and TP (TE1) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TE) 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.

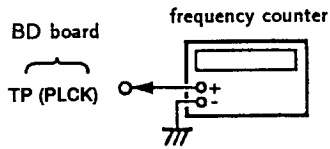


6. Remove the lead wire connected in step 1.

## RF PLL Free-run Frequency Check

### Procedure :

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



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

### Focus/Tracking Gain

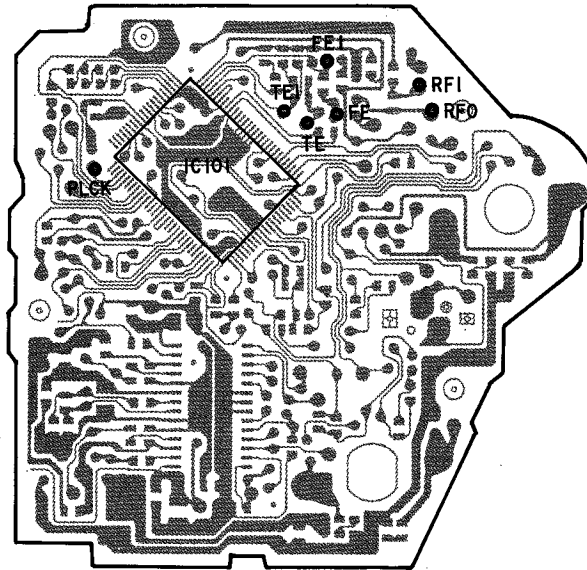
This gain has a margin, so even if it is slightly off. There is no problem.

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 —





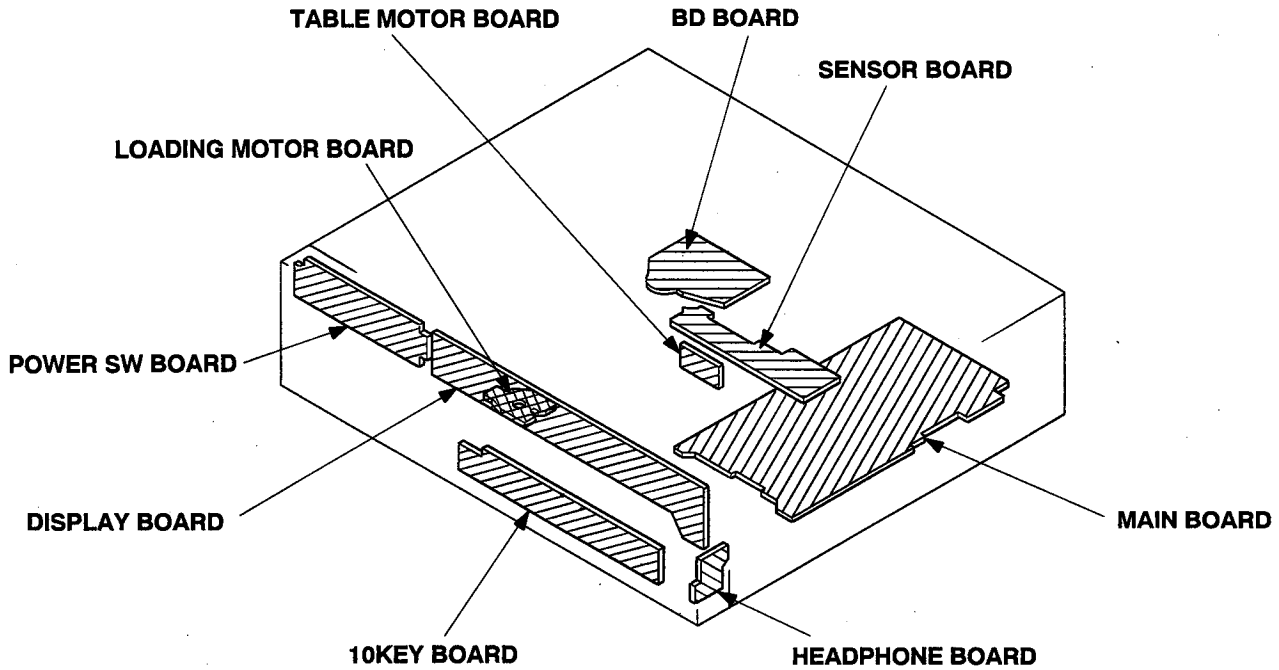
## SECTION 4 IC PIN FUNCTIONS

### CXP82316-020Q (IC401) PIN FUNCTIONS

PIN No.	PIN NAME	I/O	FUNCTION
1	AF ADJ	I	Test mode pin. Normally: "H"
2	RM IN	I	Remote control signal input pin.
3	ADJ	I	Test mode pin. Normally: "H"
4	A MUTE	O	Analog muting control signal output pin.
5	LDON	O	Optical pick-up laser diode control pin. ON: "H"
6	T.SENS	I	Slit sensor of disc table input pin.
7	PRGL	O	Latch signal output pin to digital filter IC.
8	CLK	O	Serial clock output pin.
9	XLT	O	Serial data latch signal output pin.
10	DATA	O	Serial data output pin.
11	SQCLK	O	Subcode Q data readout clock output pin.
12	SUBQ	I	Subcode Q data input pin.
13	SCLK	O	Internal register of SSP/DSP readout clock output pin.
14 to 16	ENC1 to ENC3	I	Loading encoder input pin.
17 to 20	–	–	Not used.
21	L.MODE	I	Loading mode setup pin.
22 to 27	KEY0 to KEY5	I	Key input pin. (A/D)
28	PICK	I	Optical pick-up setup pin. 0V: KSS-240A, 2.5V: KSS-390A, 5V: Automatic discrimination
29	D.MODE	I	Disc table feeling and stop precision fine adjustment pin.
30	XRST	I	Reset signal input pin.
31	X1	I	10MHz clock input pin.
32	X2	O	10MHz clock output pin.
33	GND	–	GND
34	LODOUT	O	Loading motor control pin.
35	LODIN	O	Loading motor control pin.
36	TBLL	O	Table motor control pin.
37	TBLR	O	Table motor control pin.
38 to 57	P1 to P20	O	FL segment output pin.
58 to 62		–	Not used.
63 to 70	G1 to G8	O	FL timing output pin.
71	–30V	–	–30V
72	+5V	–	+5V
73		–	+5V
74 to 77		–	Not used.
78	D.SENS	I	Disc sensor input pin. "L": disc present.
79	SENSE	I	SENSE signal input pin.
80	SCOR	I	Subcode Q data readout timing signal input pin.

# SECTION 5 DIAGRAMS

## 5-1. CIRCUIT BOARDS LOCATION

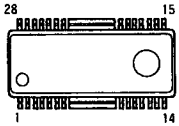


## 5-2. SEMICONDUCTOR LEAD LAYOUTS

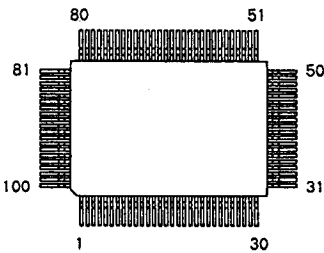
**BA6191**



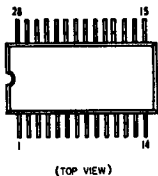
**BA6392FP-T1**



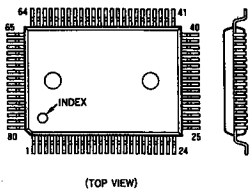
**CXD2515Q**  
**CXD2599Q**



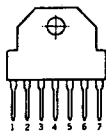
**CXD25605M-T6**



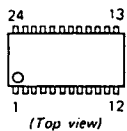
**CXP82316-020Q**



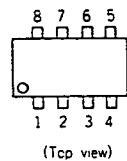
**LA5602**



**LA9215**



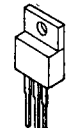
**M5218AP**



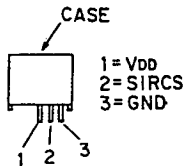
**M5293L**



**M5F78M07**



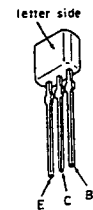
**SBX1610-59**



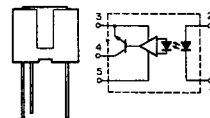
**2SC2603-EF**  
**DTA114ES**  
**DTC114ES**



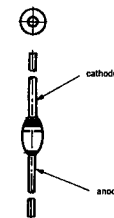
**2SA1175-HFE**  
**DTC144ES**



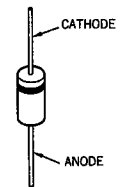
**RPI-1391**



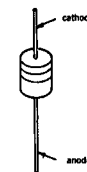
**MTZJ-T-72-6.2A**



**1N4148M**

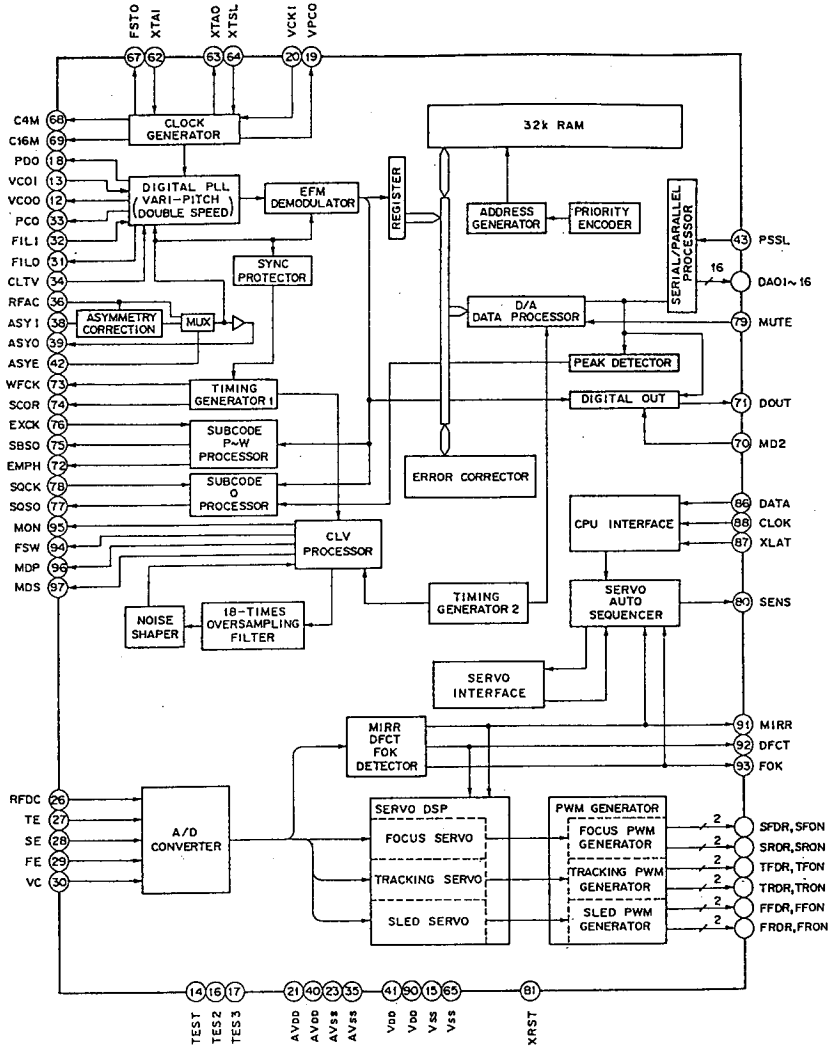


**11ES2**  
**RD6.2ES-B1**  
**RD9.1ES-B2**

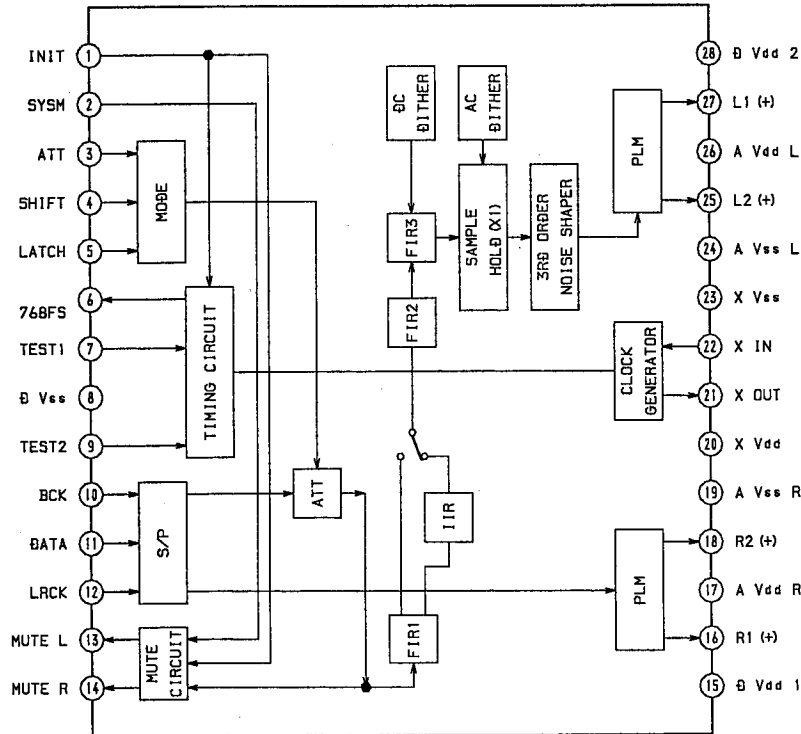


5-5. IC BLOCK DIAGRAM

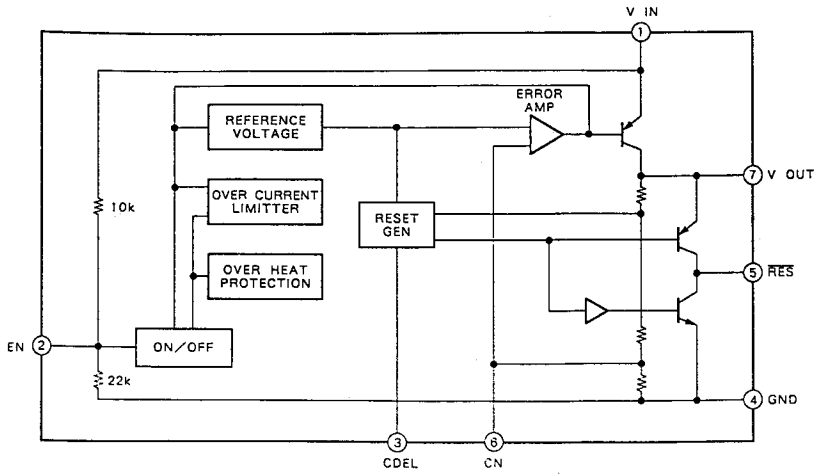
IC101 CXD2515Q/2599Q



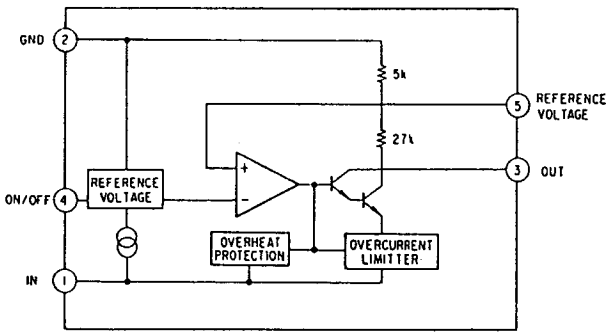
IC103 CXD2565M



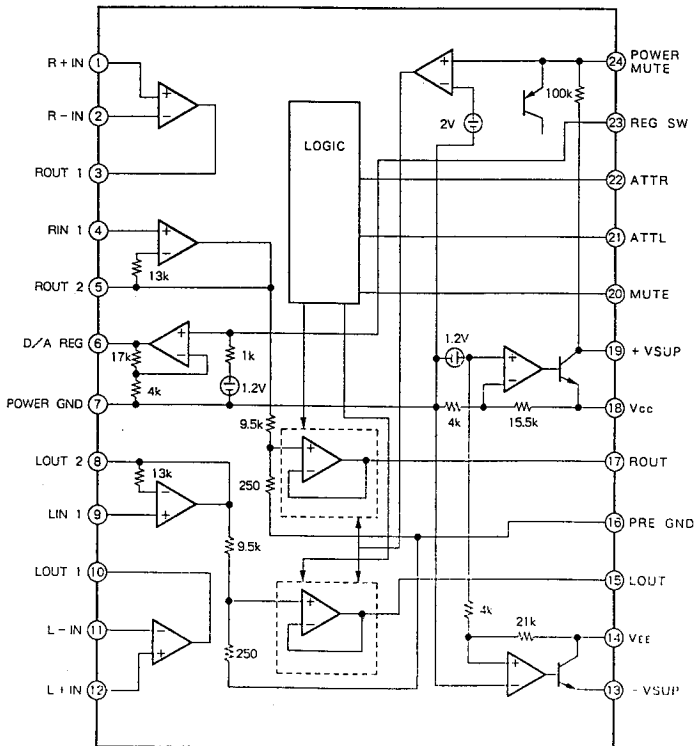
**IC201 LA5602**



**IC203 M5293L**



**IC501 LA9215**



# SECTION 6

## 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)  
                  ↑  ↑  
Parts color  Cabinet's color

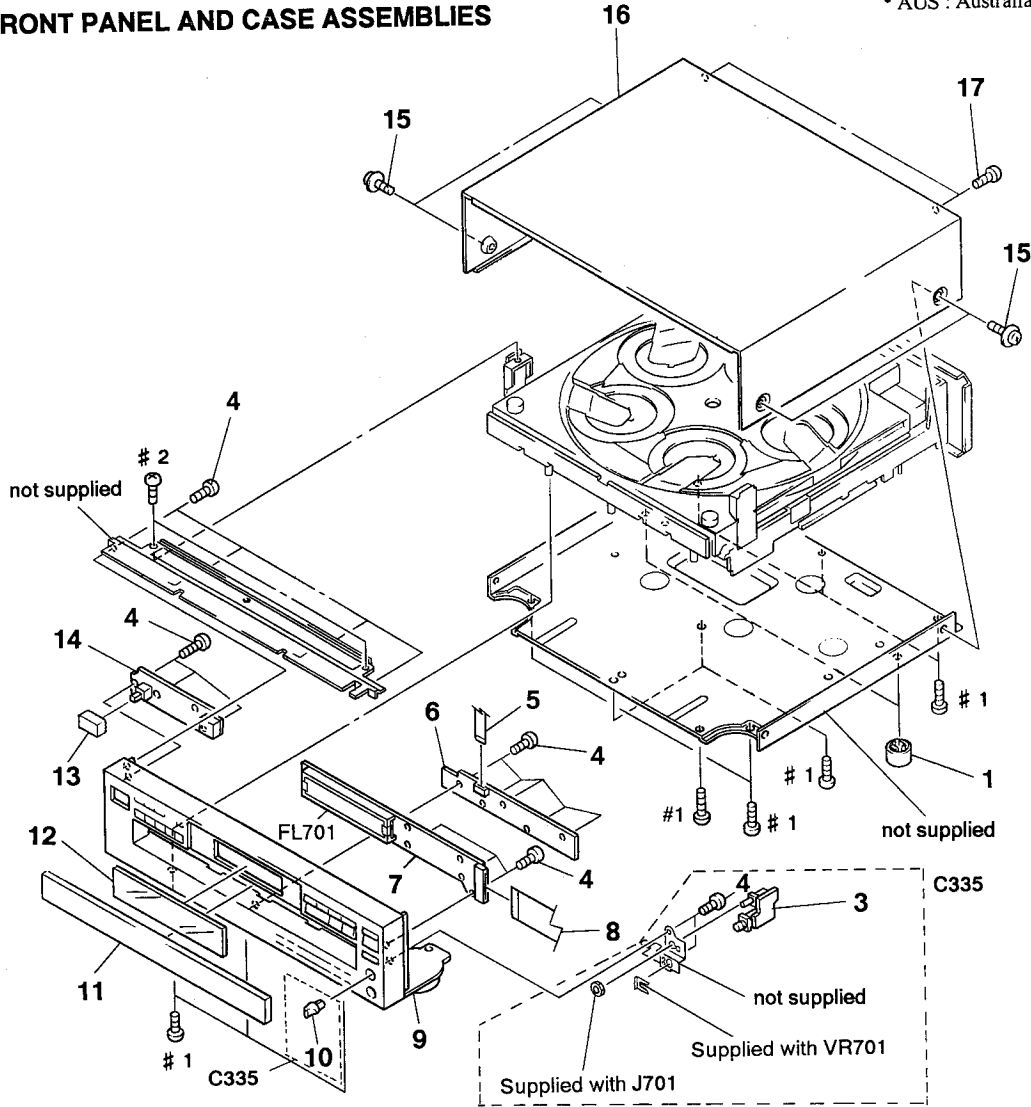
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

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

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

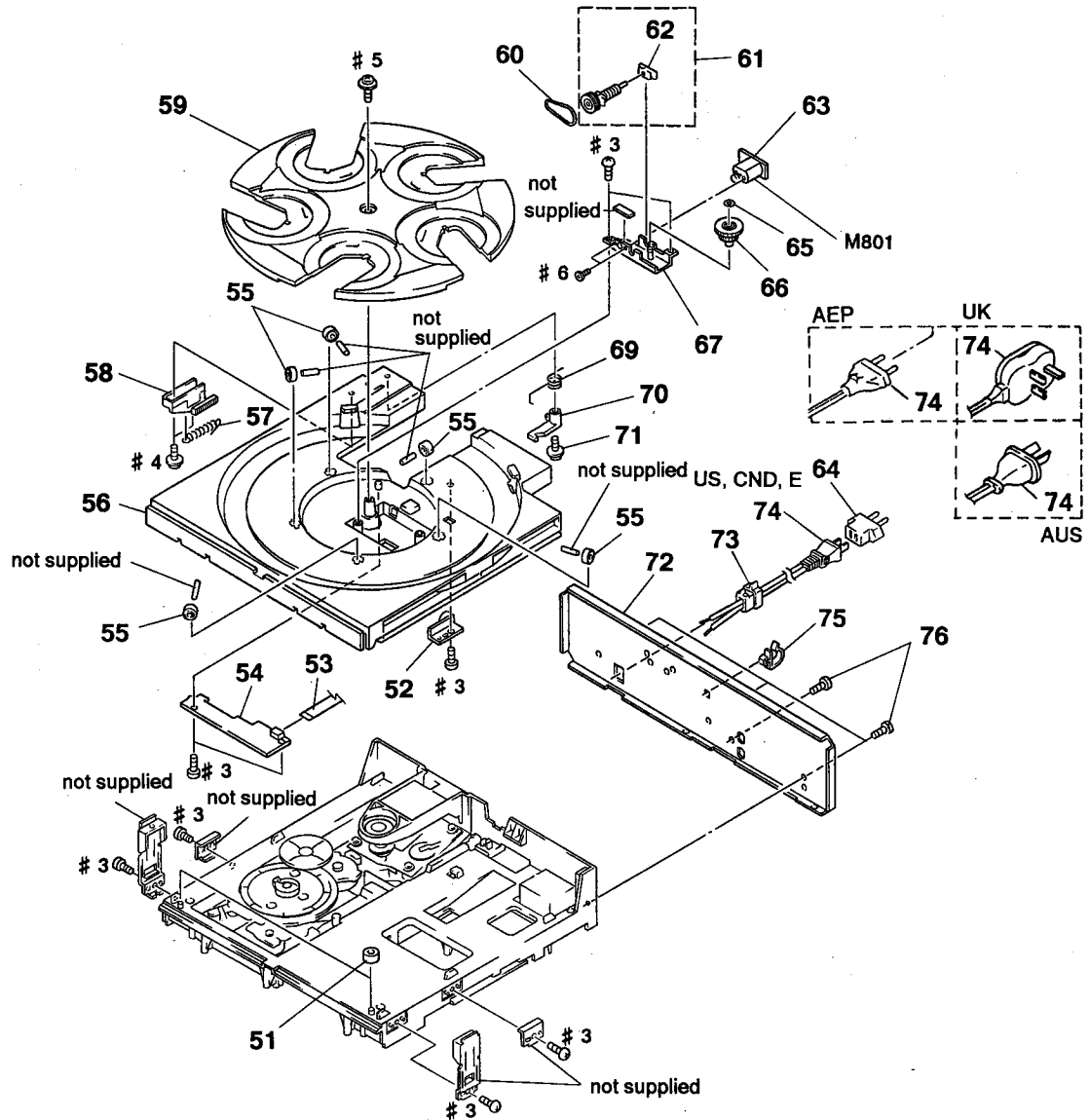
- CND : Canadian model
- AUS : Australian model

### 6-1. FRONT PANEL AND CASE ASSEMBLIES



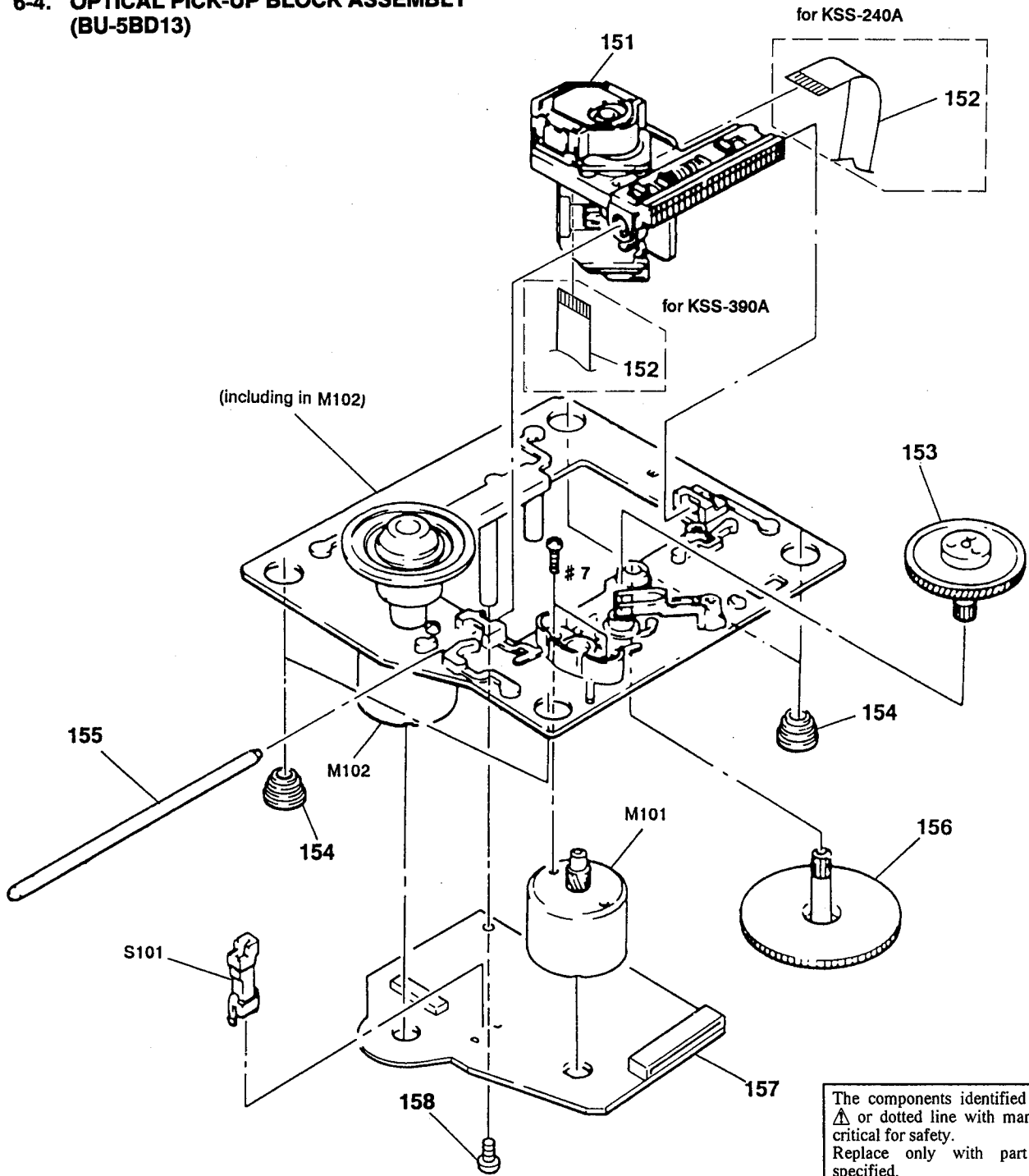
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-933-601-01	FOOT		10	4-950-189-01	KNOB (A) (VOL) (C335)	
* 3	1-647-544-11	HEADPHONE BOARD (C335)		11	4-957-557-01	PANEL, LOADING (C335)	
4	4-951-620-01	SCREW (2.6X8), +BVTP		11	4-957-557-11	PANEL, LOADING (C235)	
5	1-751-054-11	WIRE (FLAT TYPE) (10 CORE)		12	4-957-548-01	PLATE (FL), INDICATION (C335)	
* 6	1-647-543-11	10 KEY BOARD		12	4-957-548-11	PLATE (FL), INDICATION (C235)	
* 7	A-4649-651-A	DISPLAY BOARD, COMPLETE		13	4-922-921-01	BUTTON (POWER)	
8	1-751-053-11	WIRE (FLAT TYPE) (33 CORE)		* 14	1-647-542-11	POWER SW BOARD	
9	X-4943-506-1	PANEL ASSY, FRONT (C335:US, CND)		15	3-704-366-01	SCREW (CASE) (M3X8)	
9	X-4943-507-1	PANEL ASSY, FRONT (C335:AEP, UK, E)		* 16	4-944-153-01	CASE	
9	X-4943-510-1	PANEL ASSY, FRONT (C235:US, CND)		17	3-703-685-21	SCREW (+BV 3X8)	
9	X-4943-511-1	PANEL ASSY, FRONT (C235:AEP, AUS)		FL701	1-517-164-11	INDICATOR TUBE, FLUORESCENT	

## 6-2. BACK PANEL AND DISC TABLE ASSEMBLIES



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-951-619-01	CUSHION (A)		71	4-957-868-01	SCREW (+PTPWH 2.6X20)	
52	X-4943-480-1	BRACKET (ROLLER D) ASSY		* 72	4-957-560-01	PANEL, BACK (C335:US, CND)	
53	1-751-052-11	WIRE (FLAT TYPE) (6 CORE)		* 72	4-957-560-11	PANEL, BACK (C335:AEP)	
* 54	1-647-362-11	SENSOR BOARD		* 72	4-957-560-21	PANEL, BACK (C335:E)	
55	X-4924-457-1	ROLLER ASSY		* 72	4-957-560-31	PANEL, BACK (C235:AUS)	
* 56	4-957-298-01	TABLE (A), DISC		* 72	4-957-560-41	PANEL, BACK (C335:UK)	
57	4-957-294-01	SPRING (D. T), TENSION		* 72	4-957-560-51	PANEL, BACK (C235:US, CND)	
58	4-957-292-01	SLIDER (RACK)		* 72	4-957-560-61	PANEL, BACK (C235:AEP)	
59	4-957-299-01	TABLE (B), DISC		* 73	3-703-244-00	BUSHING (2104), CORD (EXCEPT FOR E)	
60	4-957-304-01	BELT (RM)		* 73	3-703-571-11	BUSHING (S) (4516), CORD (E)	
61	X-4943-479-1	GEAR (ROTARY A) ASSY		74	1-575-651-21	CORD, POWER (AEP)	
62	4-957-278-01	BEARING (ROTARY A)		74	1-590-836-11	CORD, POWER (US, CND)	
63	1-647-364-11	TABLE MOTOR BOARD		74	1-696-027-11	CORD, POWER (E)	
64	1-569-007-11	ADAPTER, CONVERSION 2P (C335:E)		74	1-696-571-11	CORD, POWER (UK)	
65	3-325-697-01	WASHER		74	1-696-845-11	CORD, POWER (AUS)	
66	4-957-284-01	GEAR (LOTARY B)		* 75	4-949-235-01	HOOK	
67	X-4943-477-1	BRACKET (RM) ASSY		76	3-704-515-21	SCREW (BV/RING)	
69	4-957-293-01	SPRING (RACK RELEASE)		M801	A-4660-322-A	MOTOR ASSY, ROTARY (TABLE)	
70	4-957-291-01	LEVER (RACK RELEASE)					

**6-4. OPTICAL PICK-UP BLOCK ASSEMBLY  
(BU-5BD13)**



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

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
$\triangle$ 151	8-848-144-11	DEVICE, OPTICAL KSS-240A		156	4-917-564-01	GEAR (P), FLATNESS	
$\triangle$ 151	8-848-281-11	DEVICE, OPTICAL KSS-390A		* 157	A-4649-610-A	BD BOARD, COMPLETE	
152	1-575-001-11	WIRE, FLAT TYPE (12 CORE) (for KSS-240A)		158	4-951-620-01	SCREW (2.6X8), +BVTP	
152	1-647-341-11	PC BOARD, FLEXIBLE (for KSS-390A)		M101	X-4917-504-1	MOTOR ASSY (SLED)	
153	4-917-567-01	GEAR (M)		M102	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE MOTOR)	
154	4-951-940-01	INSULATOR (BU)		S101	1-572-085-11	SWITCH, LEAF	
155	4-917-565-01	SHAFT, SLED					

# SECTION 7 ELECTRICAL PARTS LIST

**NOTE:**

- |  |
|--|
| The components identified by mark $\Delta$ or dotted line with mark $\Delta$ are critical for safety.<br>Replace only with part number specified.    |
| Les composants identifiés par une marque $\Delta$ sont critiques pour la sécurité.<br>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
- CND : Canadian model
- AUS : Australian model

- 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
*	1-647-543-11	10 KEY BOARD *****	
		< CONNECTOR >	
CN751	1-750-228-11	CONNECTOR, FFC(LIGHT ANGLE)10P	
		< RESISTOR >	
R751	1-249-418-11	CARBON      1.2K 5%   1/4W F	
R752	1-247-836-11	CARBON      1.6K 5%   1/4W	
R753	1-249-421-11	CARBON      2.2K 5%   1/4W F	
R754	1-249-423-11	CARBON      3.3K 5%   1/4W F	
R755	1-249-426-11	CARBON      5.6K 5%   1/4W	
R756	1-247-856-00	CARBON      11K 5%   1/4W	
R757	1-249-435-11	CARBON      33K 5%   1/4W	
R758	1-249-418-11	CARBON      1.2K 5%   1/4W F	
R759	1-247-836-11	CARBON      1.6K 5%   1/4W	
R760	1-249-421-11	CARBON      2.2K 5%   1/4W F	
R761	1-249-423-11	CARBON      3.3K 5%   1/4W F	
R762	1-249-426-11	CARBON      5.6K 5%   1/4W	
R763	1-247-856-00	CARBON      11K 5%   1/4W	
R764	1-249-435-11	CARBON      33K 5%   1/4W	
R765	1-249-418-11	CARBON      1.2K 5%   1/4W F	
R766	1-247-836-11	CARBON      1.6K 5%   1/4W	
		< SWITCH >	
S751	1-554-303-21	SWITCH, TACTILE (PEAK SEARCH)	
S752	1-554-303-21	SWITCH, TACTILE (1)	
S753	1-554-303-21	SWITCH, TACTILE (2)	
S754	1-554-303-21	SWITCH, TACTILE (3)	
S755	1-554-303-21	SWITCH, TACTILE (4)	
S756	1-554-303-21	SWITCH, TACTILE (5)	
S757	1-554-303-21	SWITCH, TACTILE (EDIT)	
S758	1-554-303-21	SWITCH, TACTILE (CHECK)	
S759	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)	
S760	1-554-303-21	SWITCH, TACTILE (6)	
S761	1-554-303-21	SWITCH, TACTILE (7)	
S762	1-554-303-21	SWITCH, TACTILE (8)	
S763	1-554-303-21	SWITCH, TACTILE (9)	
S764	1-554-303-21	SWITCH, TACTILE (10)	
S765	1-554-303-21	SWITCH, TACTILE (>10)	
S766	1-554-303-21	SWITCH, TACTILE (CLEAR)	
S767	1-554-303-21	SWITCH, TACTILE (TIME)	
S768	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)	

Ref. No.	Part No.	Description	Remark
*****			
*	A-4649-651-A	DISPLAY BOARD, COMPLETE *****	
		< CONNECTOR >	
CN710	1-750-237-21	CONNECTOR, FFC(LIGHT ANGLE)33P	
		< INDICATOR TUBE >	
FL701	1-517-164-11	INDICATOR TUBE, FLUORESCENT	
		< RESISTOR >	
R711	1-249-418-11	CARBON      1.2K 5%   1/4W F	
R712	1-247-836-11	CARBON      1.6K 5%   1/4W	
R713	1-249-421-11	CARBON      2.2K 5%   1/4W F	
R714	1-249-423-11	CARBON      3.3K 5%   1/4W F	
R715	1-249-426-11	CARBON      5.6K 5%   1/4W	
R716	1-247-856-00	CARBON      11K 5%   1/4W	
R717	1-249-435-11	CARBON      33K 5%   1/4W	
R718	1-249-418-11	CARBON      1.2K 5%   1/4W F	
		< SWITCH >	
S711	1-554-303-21	SWITCH, TACTILE (EX-CHANGE)	
S712	1-554-303-21	SWITCH, TACTILE (■)	
S713	1-554-303-21	SWITCH, TACTILE (▨)	
S714	1-554-303-21	SWITCH, TACTILE (=)	
S715	1-554-303-21	SWITCH, TACTILE (◀)	
S716	1-554-303-21	SWITCH, TACTILE (▶)	
S717	1-554-303-21	SWITCH, TACTILE (DISC SKIP)	
S718	1-554-303-21	SWITCH, TACTILE (= OPEN/CLOSE)	
S719	1-554-303-21	SWITCH, TACTILE (=)	
S720	1-554-303-21	SWITCH, TACTILE (=)	
*****			
*	1-647-544-11	HEADPHONE BOARD (C335 only) *****	
		< CAPACITOR >	
C701	1-162-290-31	CERAMIC      470PF    10%   50V	
C702	1-162-290-31	CERAMIC      470PF    10%   50V	
C703	1-164-159-11	CERAMIC      0.1uF              50V	



# HEADPHONE

# LOADING MOTOR

# MAIN

Ref. No.	Part No.	Description	Remark
		< JACK >	
J701	1-750-162-41	JACK (LARGE TYPE) (PHONES)	
		< RESISTOR >	
R701	1-249-402-11	CARBON 56 5% 1/4W F	
R702	1-249-402-11	CARBON 56 5% 1/4W F	
		< VARIABLE RESISTOR >	
RV701	1-223-359-11	RES, VAR, CARBON 1K/1K (PHONE LEVEL)	
*****			
*	1-647-363-11	LOADING MOTOR BOARD *****	
*****			
*	A-4649-656-A	MAIN BOARD, COMPLETE (C235:US, CND) *****	
*	A-4649-657-A	MAIN BOARD, COMPLETE (C235:AEP, AUS) *****	
*	A-4649-649-A	MAIN BOARD, COMPLETE (C335:US, CND) *****	
*	A-4649-654-A	MAIN BOARD, COMPLETE (C335:AEP, UK) *****	
*	A-4649-655-A	MAIN BOARD, COMPLETE (C335:E) *****	
	7-685-871-01	SCREW +BVT 3X6 (S)	
		< CAPACITOR >	
C201	1-124-887-00	ELECT 3300uF 20% 16V	
C202	1-124-360-00	ELECT 1000uF 20% 16V	
C203	1-124-910-11	ELECT 47uF 20% 50V	
C204	1-126-163-11	ELECT 4.7uF 20% 50V	
C205	1-126-163-11	ELECT 4.7uF 20% 50V	
C206	1-124-997-11	ELECT 470uF 20% 10V	
C207	1-126-024-11	ELECT 220uF 20% 16V	
C208	1-126-059-11	ELECT 10uF 20% 50V	
C209	1-124-572-11	ELECT 100uF 20% 63V	
C210	1-161-494-00	CERAMIC 0.022uF 25V	
C401	1-126-022-11	ELECT 47uF 20% 16V	
C402	1-161-494-00	CERAMIC 0.022uF 25V	
C403	1-161-494-00	CERAMIC 0.022uF 25V	
C404	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C405	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C451	1-126-012-11	ELECT 470uF 20% 16V	
C501	1-126-012-11	ELECT 470uF 20% 16V	
C502	1-126-012-11	ELECT 470uF 20% 16V	

Ref. No.	Part No.	Description	Remark
C503	1-124-994-11	ELECT 100uF 20% 10V	
C504	1-124-994-11	ELECT 100uF 20% 10V	
C505	1-124-997-11	ELECT 470uF 20% 10V	
C506	1-161-494-00	CERAMIC 0.022uF 25V	
C507	1-126-022-11	ELECT 47uF 20% 16V	
C508	1-126-788-91	ELECT 22uF 20% 25V	
C509	1-126-786-11	ELECT 47uF 20% 16V	
C521	1-162-282-31	CERAMIC 100PF 10% 50V	
C522	1-162-282-31	CERAMIC 100PF 10% 50V	
C523	1-130-472-00	MYLAR 0.0012uF 5% 50V	
C524	1-124-994-11	ELECT 100uF 20% 10V	
C525	1-106-359-00	MYLAR 4700PF 5% 200V	
C531	1-124-994-11	ELECT 100uF 20% 10V	
C532	1-130-467-00	MYLAR 470PF 5% 50V	
C551	1-126-024-11	ELECT 220uF 20% 16V (C335)	
C552	1-126-024-11	ELECT 220uF 20% 16V (C335)	
C571	1-162-282-31	CERAMIC 100PF 10% 50V	
C572	1-162-282-31	CERAMIC 100PF 10% 50V	
C573	1-130-472-00	MYLAR 0.0012uF 5% 50V	
C574	1-124-994-11	ELECT 100uF 20% 10V	
C575	1-106-359-00	MYLAR 4700PF 5% 200V	
C581	1-124-994-11	ELECT 100uF 20% 10V	
C582	1-130-467-00	MYLAR 470PF 5% 50V	
		< CONNECTOR >	
* CN201	1-573-047-11	PIN, CONNECTOR (PC BOARD) 2P	
CN301	1-750-236-11	CONNECTOR, FFC(LIGHT ANGLE)24P	
CN401	1-750-237-11	CONNECTOR, FFC(LIGHT ANGLE)33P	
CN402	1-750-228-11	CONNECTOR, FFC(LIGHT ANGLE)10P	
* CN403	1-695-006-11	PIN, CONNECTOR (PC BOARD) 6P	
CN404	1-750-223-11	CONNECTOR, FFC(STRAIGHT TYPE)6P	
* CN551	1-568-941-11	PIN, CONNECTOR 3P (C335)	
		< DIODE >	
D201	8-719-200-82	DIODE 11ES2	
D202	8-719-200-82	DIODE 11ES2	
D203	8-719-200-82	DIODE 11ES2	
D204	8-719-200-82	DIODE 11ES2	
D205	8-719-200-82	DIODE 11ES2	
D206	8-719-110-13	DIODE RD9. 1ES-B2	
D207	8-719-200-82	DIODE 11ES2 (C235:AEP, AUS/C335:AEP, UK)	
D208	8-719-200-82	DIODE 11ES2 (C235:AEP, AUS/C335:AEP, UK)	
D451	8-719-012-99	DIODE UZ-6. 2BSA-TP	
D451	8-719-109-92	DIODE RD6. 2ES-B1	
D451	8-719-947-24	DIODE MTZJ-T-72-6. 2A	
D501	8-719-987-63	DIODE 1N4148M	
		< IC >	
IC201	8-759-061-65	IC LA5602	

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
IC202	8-759-605-00	IC M5F78M07		R453	1-247-876-11	CARBON 75K 5% 1/4W	
IC203	8-759-633-42	IC M5293L		R454	1-247-876-11	CARBON 75K 5% 1/4W	
IC401	8-752-843-25	IC CXP82316-020Q		R456	1-249-425-11	CARBON 4.7K 5% 1/4W F	
IC451	8-759-172-31	IC BA6191		R457	1-247-840-00	CARBON 2.4K 5% 1/4W F	
IC501	8-759-061-66	IC LA9215		R458	1-247-828-11	CARBON 750 5% 1/4W F	
IC551	8-759-634-51	IC M5218AP (C335)		R459	1-249-418-11	CARBON 1.2K 5% 1/4W F	
< JACK >				R501	1-249-422-11	CARBON 2.7K 5% 1/4W F	
J501	1-750-679-11	JACK, PIN 2P (LINE OUT)		R521	1-247-852-11	CARBON 7.5K 5% 1/4W	
< COIL >				R522	1-247-864-11	CARBON 24K 5% 1/4W	
L501	1-412-473-21	INDUCTOR 0uH		R523	1-247-852-11	CARBON 7.5K 5% 1/4W	
L551	1-412-473-21	INDUCTOR 0uH (C335)		R524	1-247-864-11	CARBON 24K 5% 1/4W	
L552	1-412-473-21	INDUCTOR 0uH (C335)		R525	1-249-419-11	CARBON 1.5K 5% 1/4W F	
L553	1-412-473-21	INDUCTOR 0uH (C335)		R526	1-249-419-11	CARBON 1.5K 5% 1/4W F	
< TRANSISTOR >				R527	1-249-429-11	CARBON 10K 5% 1/4W	
Q201	8-729-119-76	TRANSISTOR 2SA1175-HFE		R531	1-249-429-11	CARBON 10K 5% 1/4W	
Q401	8-729-900-89	TRANSISTOR DTC144ES		R532	1-249-417-11	CARBON 1K 5% 1/4W F	
Q402	8-729-620-05	TRANSISTOR 2SC2603-EF		R551	1-249-405-11	CARBON 100 5% 1/4W F	(C335)
Q501	8-729-900-89	TRANSISTOR DTC144ES		R552	1-249-405-11	CARBON 100 5% 1/4W F	(C335)
Q502	8-729-900-61	TRANSISTOR DTA114ES		R571	1-247-852-11	CARBON 7.5K 5% 1/4W	
Q503	8-729-900-61	TRANSISTOR DTA114ES		R572	1-247-864-11	CARBON 24K 5% 1/4W	
Q504	8-729-900-80	TRANSISTOR DTC114ES		R573	1-247-852-11	CARBON 7.5K 5% 1/4W	
< RESISTOR >				R574	1-247-864-11	CARBON 24K 5% 1/4W	
R201	1-249-429-11	CARBON 10K 5% 1/4W		R575	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R202	1-249-438-11	CARBON 56K 5% 1/4W		R576	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R203	1-249-435-11	CARBON 33K 5% 1/4W		R577	1-249-429-11	CARBON 10K 5% 1/4W	
R401	1-249-428-11	CARBON 8.2K 5% 1/4W F		R581	1-249-429-11	CARBON 10K 5% 1/4W	
R402	1-249-428-11	CARBON 8.2K 5% 1/4W F		R582	1-249-417-11	CARBON 1K 5% 1/4W F	
R403	1-249-428-11	CARBON 8.2K 5% 1/4W F		< SWITCH >			
R404	1-249-428-11	CARBON 8.2K 5% 1/4W F		△S201	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (C335:E)	
R405	1-249-428-11	CARBON 8.2K 5% 1/4W F		< VIBRATOR >			
R406	1-249-428-11	CARBON 8.2K 5% 1/4W F		X401	1-579-175-11	VIBRATOR, CERAMIC (10MHz)	
R407	1-249-425-11	CARBON 4.7K 5% 1/4W F		*****			
R408	1-249-425-11	CARBON 4.7K 5% 1/4W F		*	A-4649-610-A	BD BOARD, COMPLETE	
R409	1-249-425-11	CARBON 4.7K 5% 1/4W F		*****			
R410	1-249-429-11	CARBON 10K 5% 1/4W		< CAPACITOR >			
R411	1-249-429-11	CARBON 10K 5% 1/4W		C101	1-163-005-11	CERAMIC CHIP 470PF 10% 50V	
R412	1-249-441-11	CARBON 100K 5% 1/4W		C102	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
R413	1-249-429-11	CARBON 10K 5% 1/4W		C103	1-163-005-11	CERAMIC CHIP 470PF 10% 50V	
R414	1-249-430-11	CARBON 12K 5% 1/4W		C105	1-135-155-21	TANTALUM CHIP 4.7uF 10% 16V	
R415	1-249-417-11	CARBON 1K 5% 1/4W F		C106	1-164-346-11	CERAMIC CHIP 1uF 16V	
R421	1-249-428-11	CARBON 8.2K 5% 1/4W F		C107	1-164-505-11	CERAMIC CHIP 2.2uF 16V	
R422	1-249-428-11	CARBON 8.2K 5% 1/4W F		C108	1-163-035-00	CERAMIC CHIP 0.047uF 50V	
R424	1-249-430-11	CARBON 12K 5% 1/4W		C109	1-163-011-11	CERAMIC CHIP 0.0015uF 10% 50V	
R426	1-249-428-11	CARBON 8.2K 5% 1/4W F		C110	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V	
R451	1-247-876-11	CARBON 75K 5% 1/4W					
R452	1-247-876-11	CARBON 75K 5% 1/4W					

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

Ref. No.	Part No.	Description	Remark
R732	1-247-836-11	CARBON	1.6K 5% 1/4W
R733	1-249-421-11	CARBON	2.2K 5% 1/4W F
R734	1-249-423-11	CARBON	3.3K 5% 1/4W F
R735	1-249-426-11	CARBON	5.6K 5% 1/4W
R736	1-247-856-00	CARBON	11K 5% 1/4W
R737	1-249-421-11	CARBON	2.2K 5% 1/4W F
< SWITCH >			
S730	1-572-714-11	SWITCH, PUSH (POWER)	
S731	1-554-303-21	SWITCH, TACTILE (DISC 1)	
S732	1-554-303-21	SWITCH, TACTILE (DISC 2)	
S733	1-554-303-21	SWITCH, TACTILE (DISC 3)	
S734	1-554-303-21	SWITCH, TACTILE (DISC 4)	
S735	1-554-303-21	SWITCH, TACTILE (DISC 5)	
S736	1-554-303-21	SWITCH, TACTILE (REPEAT)	
S737	1-554-303-21	SWITCH, TACTILE (PROGRAM)	
S738	1-554-303-21	SWITCH, TACTILE (SHUFFLE)	
S739	1-554-303-21	SWITCH, TACTILE (CONTINUE)	
*****			
*	1-647-362-11	SENSOR BOARD	*****
< CONNECTOR >			
CN801	1-573-383-11	PIN, CONNECTOR (PC BOARD) 2P	
CN802	1-750-243-11	SOCKET, CONNECTOR 6P	
< DIODE >			
D801	8-749-924-18	DIODE IC RPI-1391	
D802	8-749-924-30	DIODE PHOTO SENSOR GP2S28	
< RESISTOR >			
R801	1-249-416-11	CARBON	820 5% 1/4W F
R802	1-249-406-11	CARBON	120 5% 1/4W F
*****			
MISCELLANEOUS			
*****			
5	1-751-054-11	WIRE (FLAT TYPE) (10 CORE)	
8	1-751-053-11	WIRE (FLAT TYPE) (33 CORE)	
53	1-751-052-11	WIRE (FLAT TYPE) (6 CORE)	
64	1-569-007-11	ADAPTER, CONVERSION 2P (C335:E)	
△74	1-575-651-21	CORD, POWER (AEP)	
△74	1-590-836-11	CORD, POWER (US, CND)	
△74	1-696-027-11	CORD, POWER (E)	
△74	1-696-571-11	CORD, POWER (UK)	
△74	1-696-845-11	CORD, POWER (AUS)	
115	1-466-996-11	ENCODER, ROTARY	
* 122	1-648-409-11	PC BOARD, FLEXIBLE	
* 124	1-452-538-11	MAGNET	

Ref. No.	Part No.	Description	Remark
△151	8-848-144-11	DEVICE, OPTICAL KSS-240A	
△151	8-848-281-11	DEVICE, OPTICAL KSS-390A	
152	1-575-001-11	WIRE, FLAT TYPE (12 CORE) (for KSS-240A)	
152	1-647-341-11	PC BOARD, FLEXIBLE (for KSS-390A)	
M101	X-4917-504-1	MOTOR ASSY (SLED)	
M102	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE MOTOR)	
M801	A-4660-322-A	MOTOR ASSY, ROTARY (TABLE)	
M802	A-4604-834-A	MOTOR ASSY, LOADING	
△T901	1-423-553-11	TRANSFORMER, POWER (US, CND)	
△T901	1-423-554-11	TRANSFORMER, POWER (AEP, AUS, UK)	
△T901	1-423-555-11	TRANSFORMER, POWER (E)	
*****			
ACCESSORIES & PACKING MATERIALS			
*****			
	1-467-123-11	REMOTE COMMANDER (RM-D335) (C335)	
	1-558-271-11	CORD, CONNECTION	
	3-756-520-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (AEP, UK, E)	
	3-756-520-21	MANUAL, INSTRUCTION (ENGLISH) (US, CND, AUS)	
	3-756-520-31	MANUAL, INSTRUCTION (FRENCH) (CND)	
	3-756-520-41	MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN) (AEP)	
	3-756-520-61	MANUAL, INSTRUCTION (DANISH, FINNISH, SWEDISH, ENGLISH) (AEP)	
*	4-944-110-01	CUSHION (FRONT)	
*	4-944-111-01	CUSHION (REAR)	
*	4-958-473-01	INDIVIDUAL CARTON (C235)	
*	4-958-474-01	INDIVIDUAL CARTON (C335)	
	4-959-044-01	COVER, BATTERY (for RM-D335) (C335)	
*****			
*****			
HARDWARE LIST			
*****			
#1	7-685-647-79	SCREW, TAPPING	
#2	7-682-548-04	SCREW +BVTT 3X8 (S)	
#3	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#4	7-685-134-19	SCREW +PTPW 2.6X8 (TYPE2)	
#5	7-685-648-79	SCREW (M3X12), TAPPING	
#6	7-621-772-00	SCREW +B 2X3	
#7	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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# CDP-C235/C335

## SONY SERVICE MANUAL

### SUPPLEMENT-2

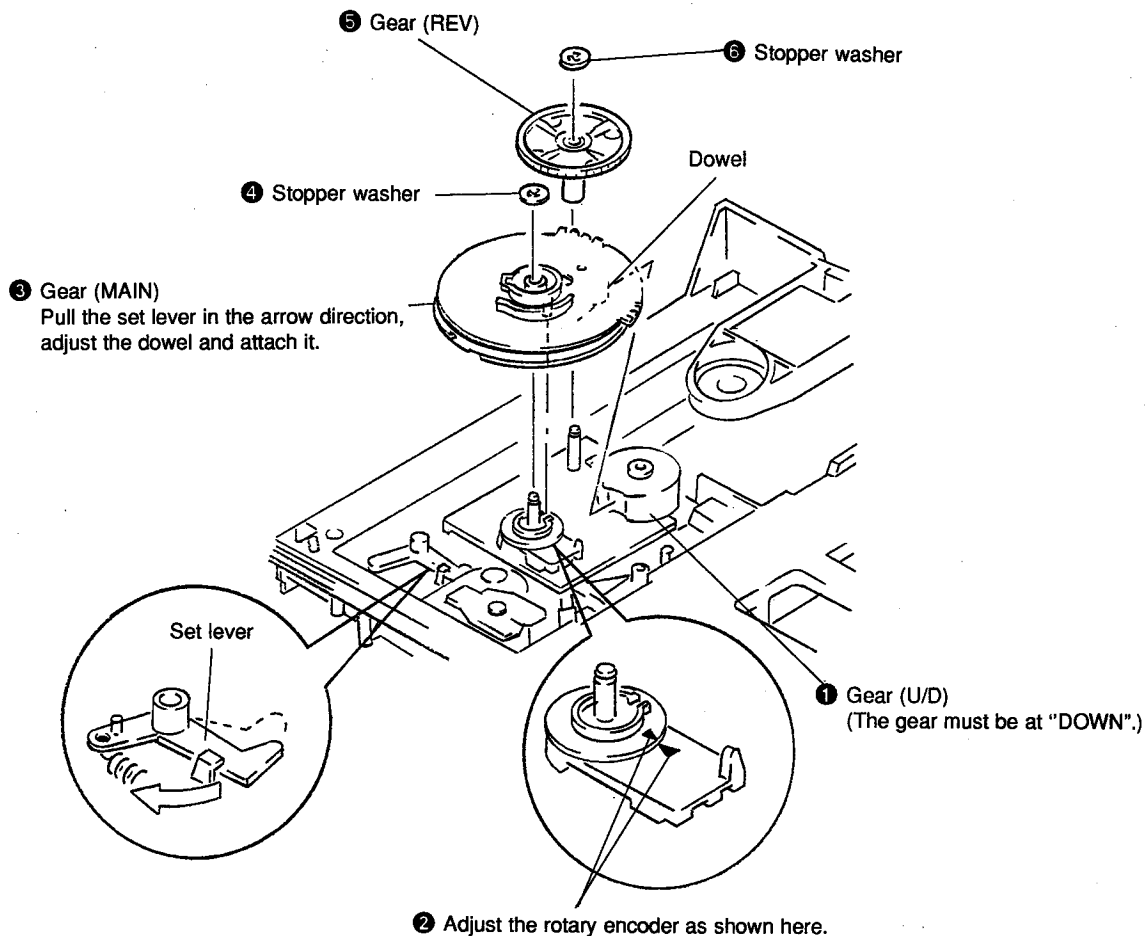
File this Supplement with the Service Manual.

US Model  
Canadian Model  
AEP Model  
CDP-C235/C335  
Australian Model  
CDP-C235  
UK Model  
E Model  
CDP-C335

**Subject : Positioning the Encoder When Attaching the Gear (MAIN)**

The position of the rotary encoder must be adjusted when attaching the gear (MAIN). If its position is not adjusted properly, problem may occur afterwards during operation.

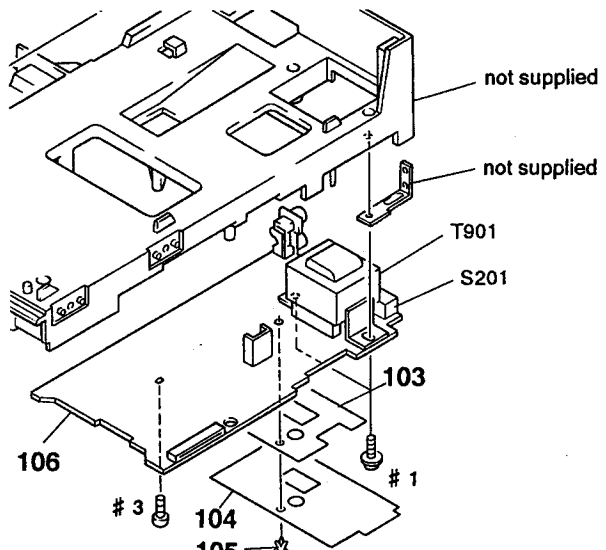
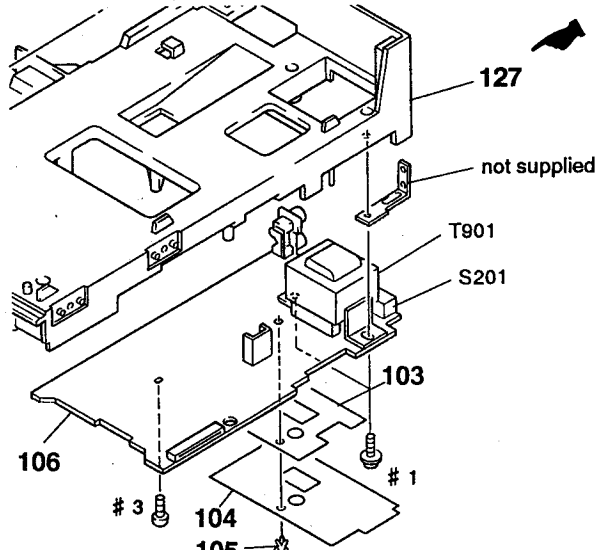
**: Correction**



**CORRECTION**

Please correct your Service Manual.  
**6-3. CHASSIS ASSEMBLY (Page 23)**

 : Corrected portion

Incorrect				Correct			
							
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
				* 127	4-957-300-03	CHASSIS 