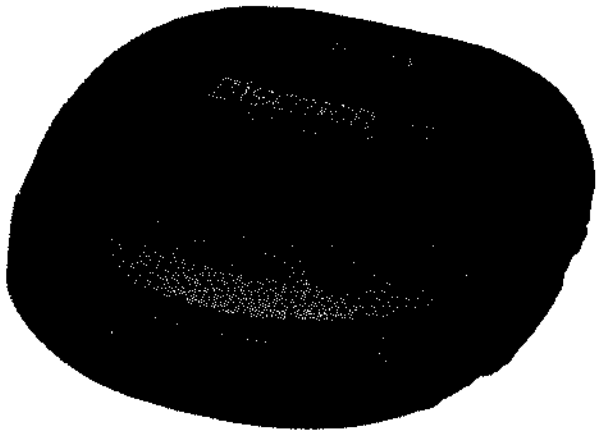
D-245

SERVICE MANUAL



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

Model Name Using Similar Mechanism	D-232/235
CD Mechanism Type	KSM-331CAN (S)
Optical Pick-up Name	KSS-331C

SPECIFICATIONS

System
Compact disc digital audio system
Laser diode properties
Material: GaAlAs
Wavelength: λ = 780 nm
Emission duration: Continuous
Laser output: Less than 44.6 μW (measured at 200 mm away from the objective lens surface)
Error correction
Sony Super Strategy Cross Interleave Reed Solomon Code
D-A conversion
1-bit quartz time-axis control
Frequency response
20 - 20,000 Hz ±½dB (measured by EIAJ CP-307)
Output (at 4.5 V input level)
Headphones (stereo minijack)
15 mW + 15 mW at 16 ohms
Line output (stereo minijack)
Output level 0.7 V rms at 50 kilohms
Recommended load impedance over 10 kilohms

General

Power requirements
- Rechargeable battery: 2.4 V DC
- Two LR6 (size AA) batteries: 3 V DC
- AC power adaptor (DC IN 4.5 V jack):

Where purchased	Operating voltage
European and Asian model	220V – 230V 50Hz
USA, Canadian, Central and South American model	120V 60Hz
Middle Eastren model	110V – 240V 50/60Hz
UK and Australian model	240V 50Hz
Model for other countries	100V – 240V 50/60Hz

- Sony CPM-300P mount plate and CPM-300PK mount arm for use on car battery: 4.5 V DC

Dimensions (w/h/d) (without projecting parts and controls)
Approx. 130 × 30.5 × 142 mm (5 ⅛ × 1 ¼ × 5 ⅝ in.)
Mass (without rechargeable battery)
Approx. 270 g (9.6 oz)
Operating temperature
5°C - 35°C (41°F - 95°F)

Supplied accessories

AC power adaptor (1)
Stereo headphones (1)
Connecting cord (Phono plug × 2 ↔ stereo miniplug)* (1)
Rechargeable battery BP-DM10** (1)
Carrying case*** (1)
*Not supplied with U.K. and European model, world model
**World model only
***U.K. and world model only

Design and specifications are subject to change without notice.

MICROFILM

COMPACT DISC COMPACT PLAYER

SONY®

TABLE OF CONTENTS

For the customers in the U.K.

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

For the customers in Australia

The supply cord of the AC power adaptor cannot be replaced; if the cord is damaged, the AC power adaptor should be discarded.

CAUTION

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

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement

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

SAFETY-RELATED COMPONENT WARNING!!

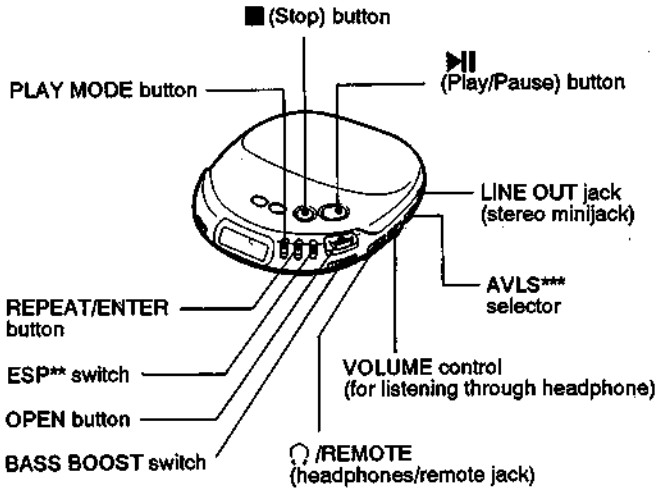
COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

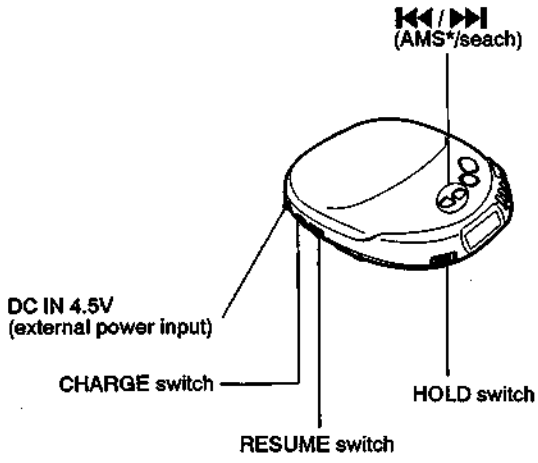
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1
GENERAL

Location and function of Controls





*AMS : Automatic Music Sensor
**ESP : Electrical shock protection
***AVLS : Automatic Volume Limiter System

SECTION 2
SERVICE NOTE

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

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Before Replacing the Optical Pick-Up Block

Please be sure to check thoroughly the parameters as par the "Optical Pick-Up Block Checking Procedures" (Part No.: 9-960-027-11) issued separately before replacing the optical pick-up block.
Note and specifications required to check are given below.

- FOK output: IC501 ⑫ pin
  When checking FOK, remove the lead wire to disc motor.
- S curve P-to-P value: 2.0 Vp-p IC501 ⑩ pin
  When checking S curve P-to-P value, remove the lead wire to disc motor.
- Adjusted part for focus gain adjustment: RV602
- RF signal P-to-P value: 0.8 – 1.2 Vp-p
- Traverse signal P-to-P value: 1.0 – 2.0 Vp-p
- The repairing grating holder is impossible.
- Adjusted part for tracking gain adjustment: RV601

Precautions for Checking Emission of Laser Diode

Laser light of the equipment is focused by the object lens in the optical pick-up so that the light focuses on the reflection surface of the disc. Therefore, be sure to keep your eyes more then 30 cm apart from the object lens when you check the emission of laser diode.

Laser Diode Checking Methods

During normal operation of the equipment, emission of the laser diode is prohibited unless the upper panel is closed while turning ON the S808 (push switch type).
The following two checking methods for the laser diode are operable.

- **Method-1 (In the service mode or normal operation): Emission of the laser diode is visually checked.**

1. Open the upper lid.
2. Push the S808 as shown in Fig. 1.
3. Check the object lens for confirming normal emission of the laser diode. If not emitting, there is a trouble in the automatic power control circuit or the optical pick-up.
   During normal operation, the laser diode is turned ON about 2.5 seconds for focus searching.

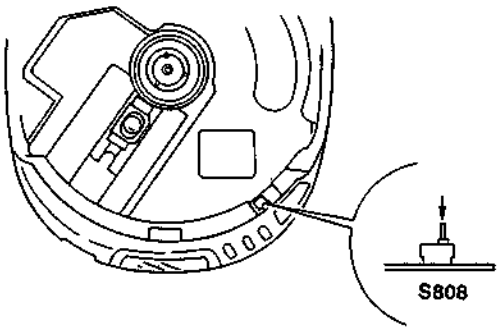
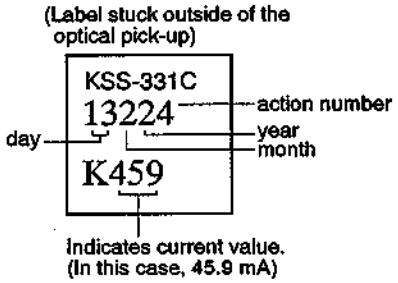


Fig. 1 Method to push the S808

- **Method-2 (In service mode or normal operation): Check the value of current flowing in the laser diode.**

1. Remove the upper panel.
2. Read the current printed on the label attached on the rear side of the optical pick-up.



3. Connect a VTVM as shown in Fig. 2.
4. Press the ▶II key.
5. Calculate current value by the reading of the VOM.
   Reading of the tester (V) ÷ 4.7 (Ω) = current value (A)
   (Example) Reading of the VOM of 0.216 V:
   0.216 V ÷ 4.7 Ω =0.0459 (A) = 45.9 mA
6. Check that the current value is within the following range.
   - Current value of the label: $^{+5}_{-11}$ mA (25 ℃)
     Variation by temperature: 0.4 mA/℃
     Current increases with temperature increased.
     Current decreases with temperature decreased.

   If the current is more than the range above, there is a trouble in the automatic power control circuit or the laser diode is in deterioration.
   If less than the range, a trouble exists in the automatic power control circuit or the optical pick-up.

– MAIN BOARD – (Conductor Side)

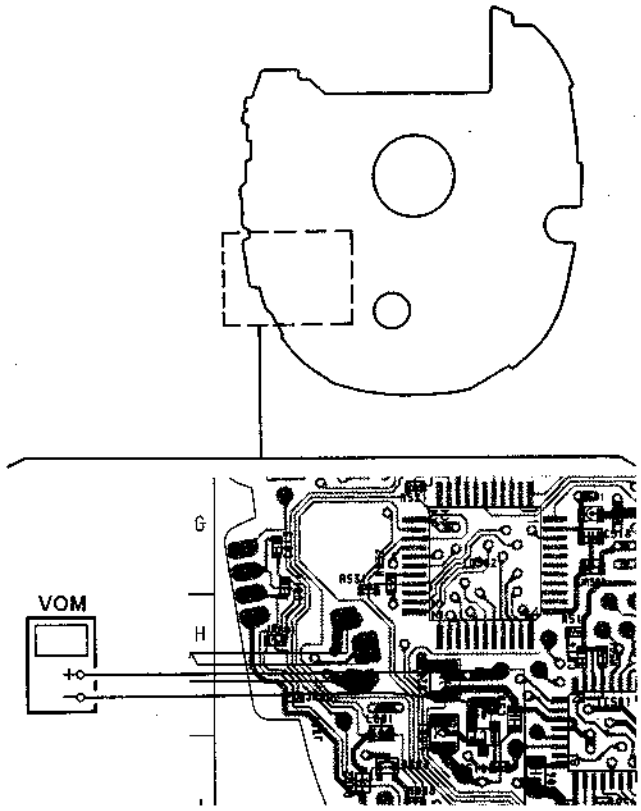
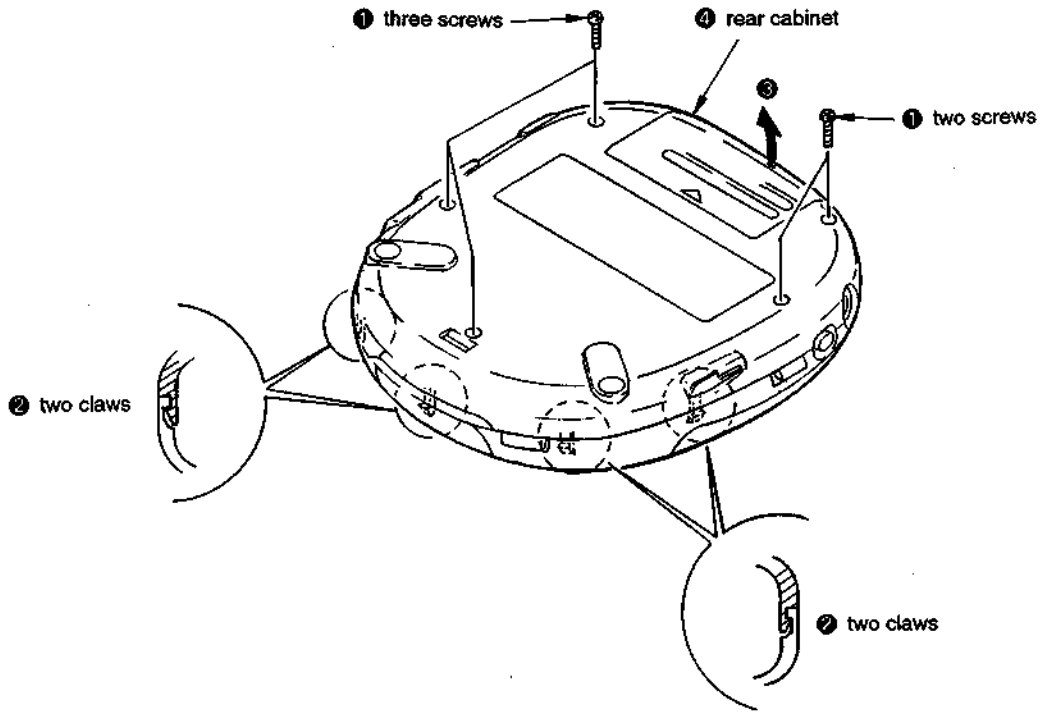


Fig. 2 VOM connecting location

SECTION 3
DISASSEMBLY

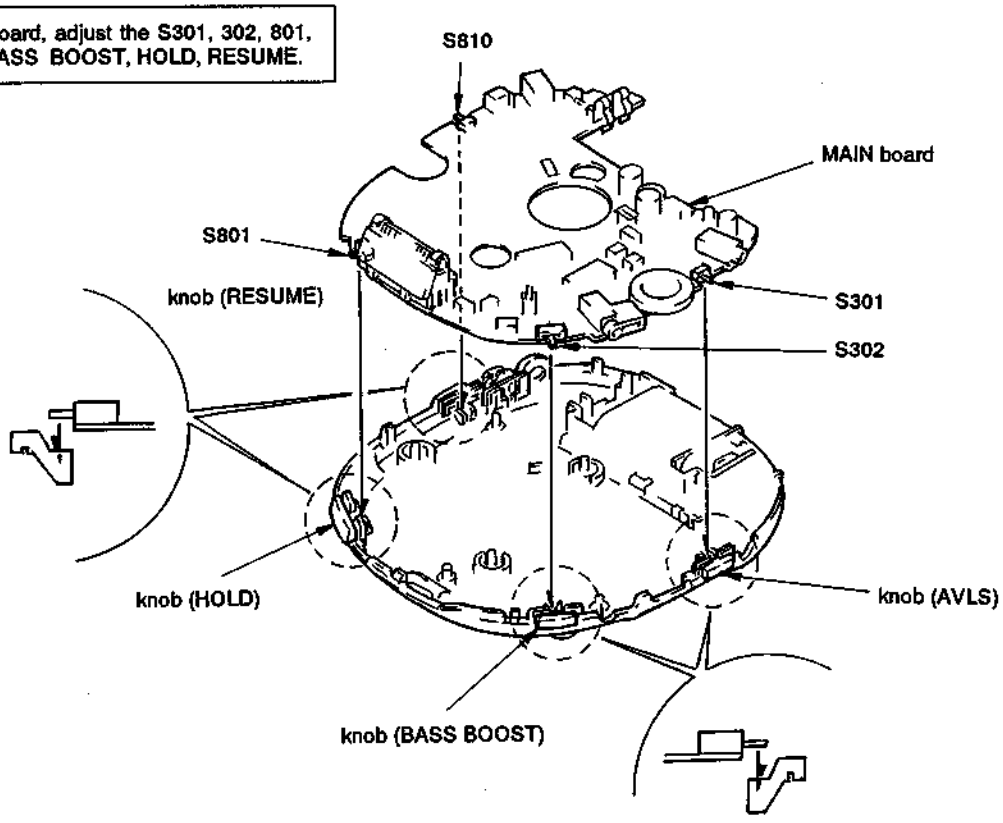
Note: Follow the disassembly procedure in the numerical order given.

REAR CABINET



INSTALLATION MAIN BOARD

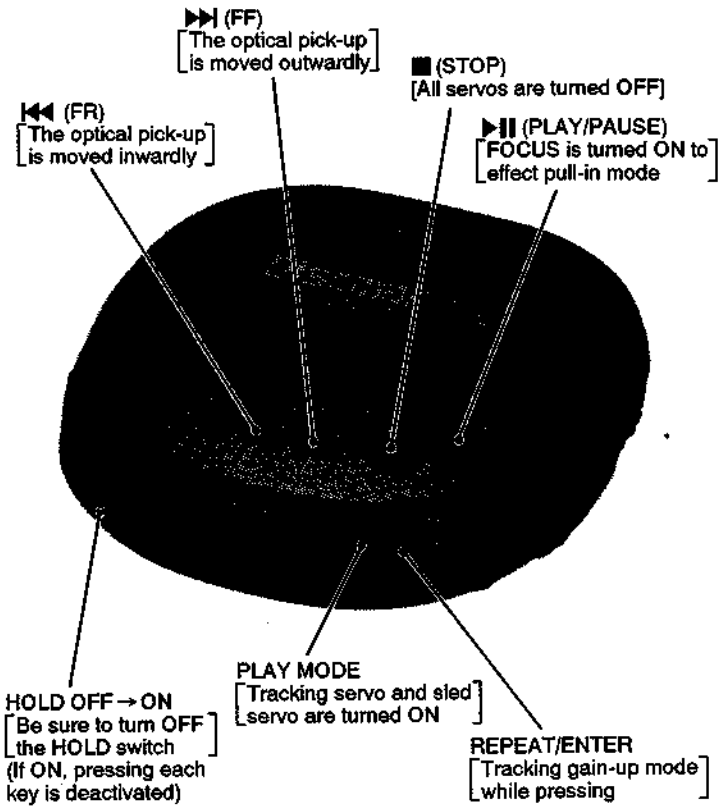
On installation MAIN board, adjust the S301, 302, 801, 810 and knob AVLS, BASS BOOST, HOLD, RESUME.



SECTION 4
SERVICE MODE

Service Mode (Service program)

The equipment is provided with a service program built in the microcomputer, like conventional models.
Service program operation methods are described in the following.



Descriptions in [ ] indicate major operations in the service mode. For more information, see Step 2.

Fig. 3 Layout of each key

• Step 1 (Service mode setting methods)

1. Turn OFF the HOLD switch with external power supply disconnected (power is not applied to the set).
2. Solder across the TEST terminals (pin ⑲ , IC801 (TEST) is grounded).
3. Connect an external power supply.

   Thus, the set is switched to the service mode.

• Step 2 (Operation in the service mode)

1. Once the service mode is effected, the LCD displays 5 indications each of which is repeatedly displayed.
   However, the following operations can be activated even if LCD indication is effected.
2. By pressing the ▶▶| or |◀◀ key, the optical pick-up is movable inwardly or outwardly. However, if this is activated, tracking servo and sled servo are turned OFF, so it can be turned ON by pressing the PLAY MODE key if required.
3. By pressing the REPEAT/ENTER key, the tracking gain-up mode becomes active.
4. By pressing the ▶|| key, focus is turned ON from focus searching while entering CLV-S (pull-in mode).
   Without disc, focus searching is repeated continuously.
5. By pressing the PLAY MODE key, tracking servo, sled servo and CLV-A (servo in PLAY) are turned ON.
6. When 4. and 5. are performed, playing begins. No muting is ON in the service mode.
7. By pressing the ■ key, all servos (focus, tracking and sled) are turned OFF. However, the disc motor revolves for a while by inertia.

• Step 3 (Resetting of service mode)

1. Be sure to disconnect the external power supply and remove the solder bridge at the TEST terminals connected before in setting.
2. The set thus becomes available for normal operation.

– MAIN BOARD – (Component Side)

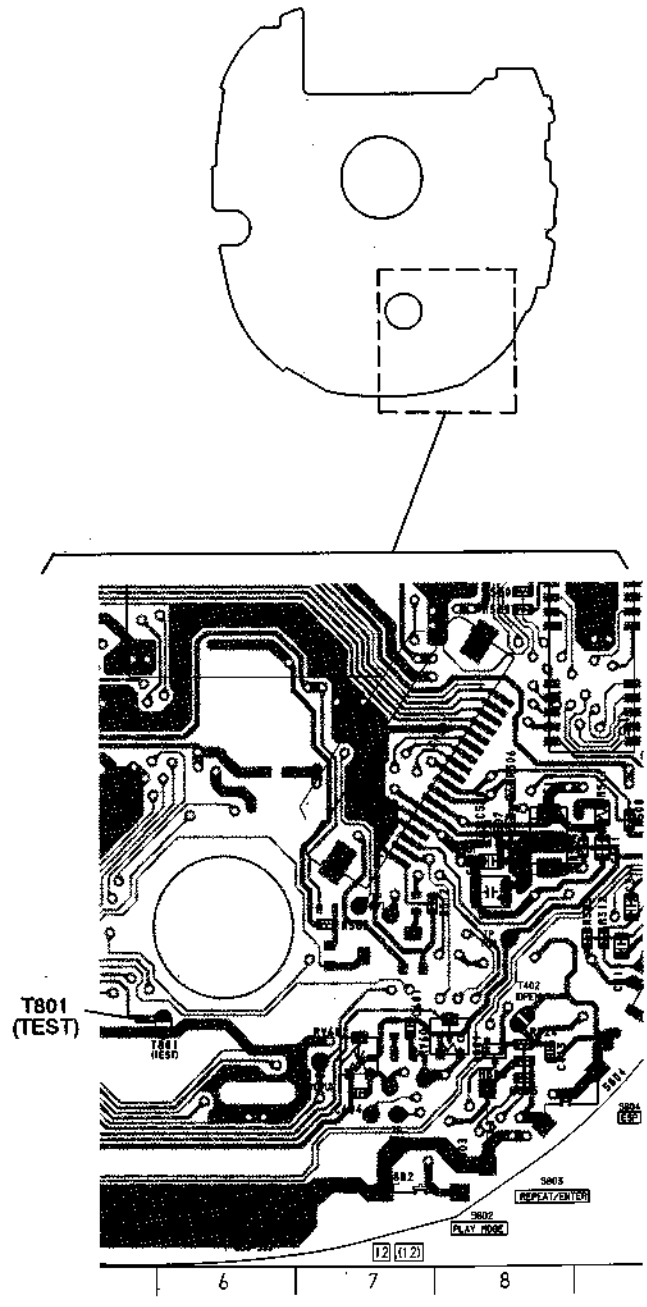


Fig. 4 Location of Test terminal

SECTION 5
ELECTRICAL ADJUSTMENTS

CD SECTION

Precautions for Adjustment

1. Before beginning adjustment, set the equipment to service mode.
   After the completion of adjustment, be sure to reset the service mode.
   For more information, see "Service Mode (service program)" on pages 5.
2. Perform adjustments in the order given.
3. Use YEDS-18 disc (Part No.: 3-702-101-01) unless otherwise indicated.
4. Power supply voltage requirement: DC4.5 V
   HOLD switch : OFF
   VOLUME switch : Minimum
   ESP switch : OFF
   BASS BOOST switch : NORM
   AVLS switch : OFF

Before Beginning Adjustment

Set the equipment to service mode (See page 6) and check the following. If there is an error, repair the equipment.

• Checking of the sled motor

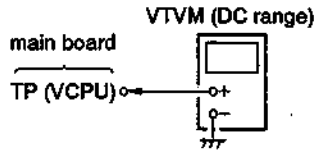
1. Open the upper panel.
2. Press the ▶▶| and |◀◀ keys and check that the optical pick-up can move smoothly without sluggishness or abnormal noise in innermost periphery → outermost periphery → innermost periphery.
   ▶▶| : The optical pick-up moves outwardly.
   |◀◀ : The optical pick-up moves inwardly.

• Checking of focus searching

1. Open the upper panel.
2. Press the ▶II key. (Focus searching operation is activated continuously.)
3. Check the object lens of the optical pick-up for smooth up/down motion without sluggishness or abnormal noise.
4. Press the ■ key.
   Check that focus searching operation is deactivated. If not, again press the ■ key slightly longer.

VDD Adjustment

Adjustment Procedure:



1. Set the equipment to service mode stop state. (See page 6.)
2. Connect the VTVM to TP (VCPU) of the main board.
3. Adjust RV401 on the main board so that the reading on VTVM goes 3.0 ± 0.05 V.
4. After the completion of adjustment, reset service mode. (See page 6.)

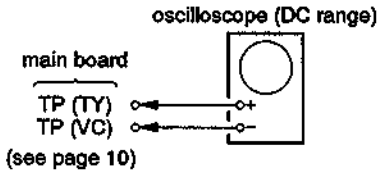
Adjustment Location: Main Board

Tracking Balance Adjustment

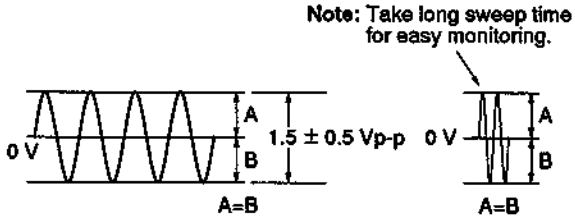
Condition:

• Hold the set in horizontal state.

Adjustment Procedure:



1. Connect the oscilloscope to TP (TY) of the main board.
2. Set the equipment to service mode stop state. (See page 6.)
3. Move the optical pick-up by pressing the ▶▶| and |◀◀ keys.
4. Put the disc (YEDS-18).
5. Press the ▶II key.
   [From focus searching, focus is turned ON while entering CLV drawing-in mode. Tracking and sled are turned OFF.]
6. Adjust RV501 so that the waveform on the oscilloscope becomes up/down symmetrical with an axis of 0 V.



7. Stop removing of the disc motor by pressing the ■ key.
8. After the completion of adjustment, reset service mode. (See page 6.)

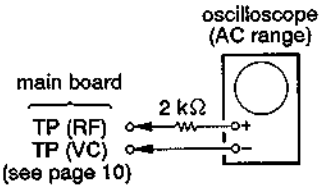
Adjustment Location: Main Board

Focus Bias Check

Condition:

- Hold the set in horizontal state.

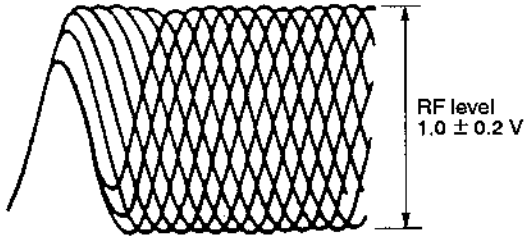
Adjustment Procedure:



1. Set the equipment to service mode stop state. (See page 6.)
2. Connect the oscilloscope to the test point TP (RF) of the main board.
3. Move the optical pick-up by pressing the ▶▶| and |◀◀ keys.
4. Put the disc (YEDS-18).
5. Put the ▶|| key.
   [From focus searching, focus is turned ON while entering CLV drawing-in mode. Tracking and sled are turned OFF.]
6. Press the PLAY MODE key. (Both tracking and sled are turned ON.)
7. Check the oscilloscope waveform is as shown below.
   A good eye pattern means that the diamond shape (◇) in the center of the waveform can be clearly distinguished.

RF SIGNAL REFERENCE WAVEFORM (EYE PATTERN)

VOLT DIV : 200 mV (With the 10:1 probe in use)
TIME DIV : 500 ns



To watch the eye pattern, set the oscilloscope to AC range and increase the vertical sensitivity of the oscilloscope for easy watching.

8. Stop revolving of the disc motor by pressing the ■ key.
9. After the completion of adjustment, reset service mode. (See page 6.)

Adjustment Location: Main Board

Focus/Tracking Gain Adjustment

A servo analayzer is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no probrem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow-up relative to mechanical noise and mechanical shock when the 2-axis device operates. However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is rased, the noise when 2-axis device operates increase.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.

This adjustment has to be performed upon replacing any of the following parts.

- Optical pick-up
- RV602 (Focus gain VR)
- RV601 (Tracking gain VR)

Normally, be sure not to move RV602 (focus gain VR) and RV601 (tracking gain VR).

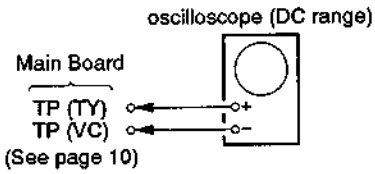
Adjustment method:

– Focus Gain Adjustment –

This adjustment is not performed.
If focus gain VR RV602 is turned, set to mechanical center.

– Tracking Gain Adjustment –

(perform at normal operation)



1. Place the optical pick-up level, horizontally. (If the optical pick-up is not level, the 2-axis device will be weighted and adjustment cannot be done.)
2. Connect the osilloscope to TP (TY) and TP (VC) on main board.
3. Set the disc (YEDS-18) and press the ▶ (▶▶|) key.
4. Turn RV601 slightly clockwise (tracking gain drops) and obtain a waveform with a fundamental wave (waveform has large waves) as in Figure 1.
5. Turn RV601 slowly counterclockwise (tracking gain rises) until the fundemental wave disappears (no large waves) as in Figure 2.
6. Set RV601 to the position about 30 ° counterclockwise form the position obtained in step 5. If RV601 contact point is more than 90 ° counterclockwise from mechanical center, tracking gain is too high. In this case, readjust from step 4.
7. Press ▶ (▶▶|) or |◀◀ key and observe the 100 track jump waveform. Check that no traverse waveform appears for both ▶ (▶▶|) or |◀◀ directions. (See Figures 3 and 4.) It is acceptable if the traverse waveform appears only now and then, but if it appears constantly, raise tracking gain slightly and check step 7 again.
8. Check that there is not abnormal amount of operation noise (white noise) from the 2-axis device. If there is, tracking gain is too high, readjust starting with step 4.

The waveforms are those measured with the oscilloscope set as shown below.

- VOLT/DIV: 50 mV
- TIME/DIV: 5 ms

- Waveform when tracking gain is lowered.
  Fundamental wave appears (large waves).

Fig. 1

- Waveform when fundamental wave disappears (no large waves).

Fig. 2

- Waveform with no traverse waveform during 100 track jump. (Brake application is smooth because of adjustment.)

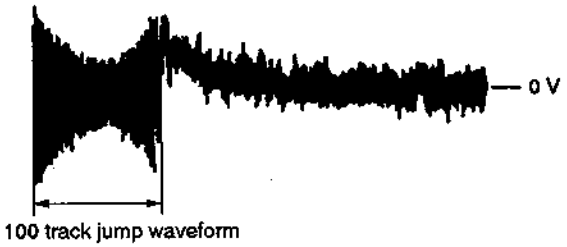


Fig. 3

- Waveform with traverse waveform during 100 track jump.
  (Brake application is poor because of adjustment.)

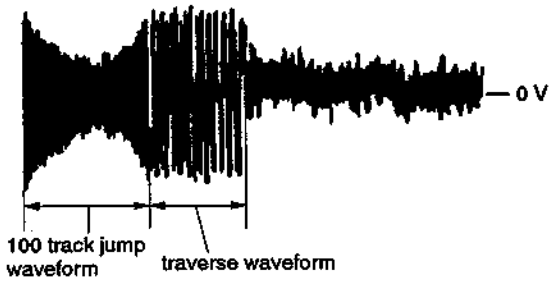
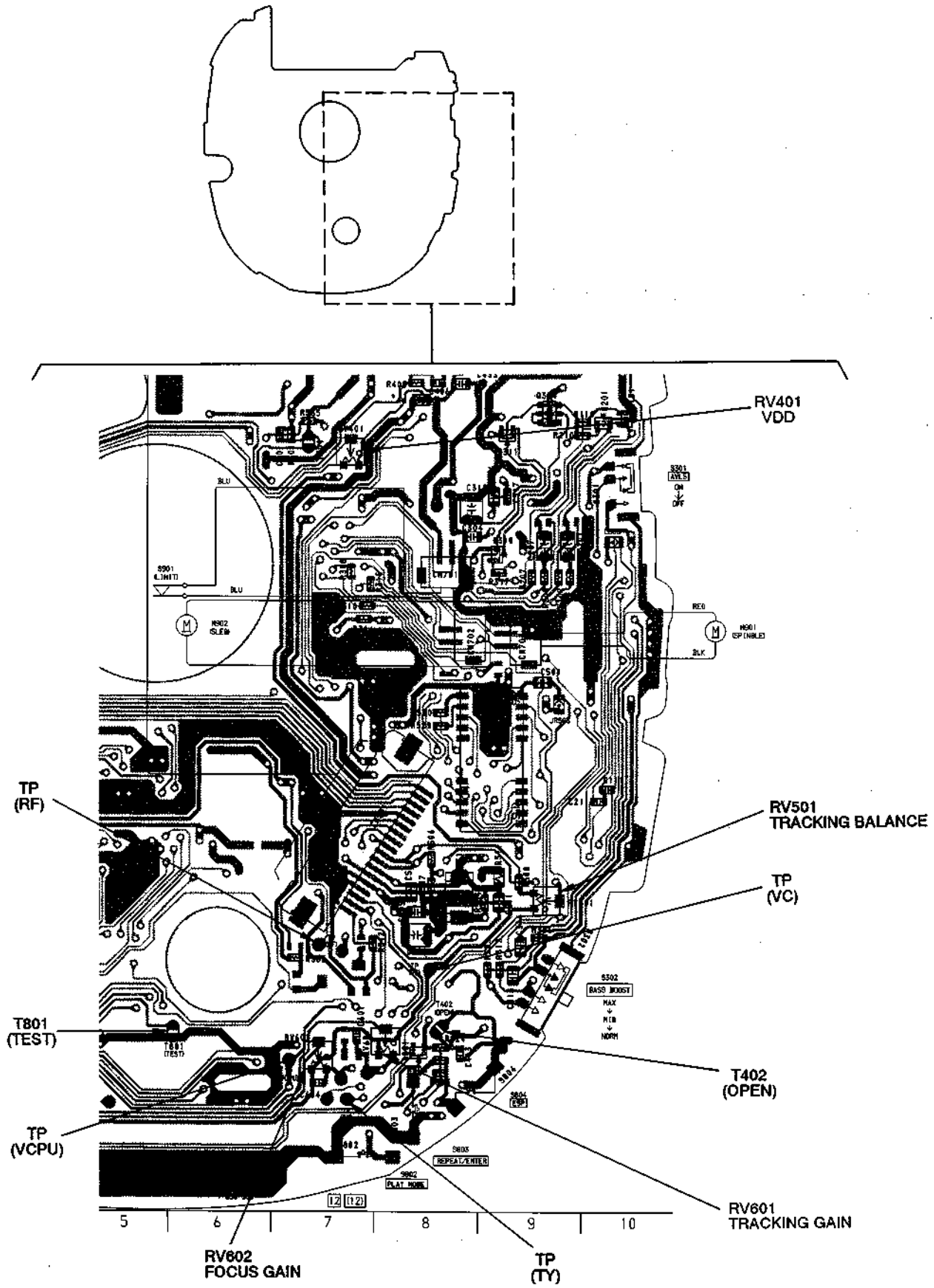


Fig. 4

Adjustment Parts Location:

-- **MAIN BOARD** – (Component Side)



SECTION 6
DIAGRAMS

6-1. IC PIN FUNCTION DESCRIPTION
MAIN BOARD IC801 CXP83412-017Q (SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Function
1	HICURR	I	Overcurrent detection terminal (short detection)
2	LOBAT	I	Lo-Battery Detection terminal. "L": Lo-Battery
3		—	Not used.
4	BEEP	O	Beep Sound Pulse output terminal.
5	MDSLT	I	Input terminal for MD setting (KSM-331CAN, AX-24). "H": KSM-331CAM, "L": AX-24
6	PCON	O	Power control output terminal. "L": Power ON, "H": Power OFF
7	SQCK	O	Clock output signal to enter SUB-Q signal from IC601 (BU9312AKS)
8	SUBQ	I	SUB-Q signal input terminal (from IC601 BU9312AKS)
9	CDATA	O	Serial Data output terminal
10	YMCLK	O	Clock signal output terminal to read serial data
11	ZSENCE	I	IC502 (SM5856AIF) internal status serial input terminal
12	YMDATA	O	Serial data output terminal.
13	BUSY	I	BUSY signal input terminal. "L": Track jumping, "H": Sarvo loop ON
14	FOK	I	FOK signal input terminal. "H": OK, "L": NG
15	XRCHG	I	Rechargeable battery detection terminal. "L": Rechargaeble battery present, "H": No rechargeable battery
16	XRST	I	Reset signal input terminal
17	XHOLD	I	Hold switch input terminal. "L": HOLD ON, "H": HOLD OFF
18	XRSM	I	RESUME switch input terminal. "L": RESUME ON, "H": RESUME OFF
19	XTEST	I	TEST mode at "L", when the system is reset.
20	XLIMIT	I	Input terminal of MD inside track sensor (S901). "L": Inside track
21	C2MNT	I	C2PO signal output monitor
22	ESP	I	ESP SWITCH (Q505, 506) control terminal. "L": ESP SWITCH OFF, "H": ESP SWITCH ON
23	BAT-MNT	I	Rechargeable battery/dry cell detection terminal
24	CHGON	I	Charging on input terminal
25	RMKEY	I	A/D input terminal for headphone remote control key
26	HKEY	I	A/D input terminal for main unit keys (REPEAT/ENTER, PLAYMODE, ESP, CHARGE)
27	JKEY	I	A/D input terminal for Switch unit
28	CHGMNT	I	A/D input terminal for charging voltage monitor
29	DCINMNT	I	A/D input terminal for DC IN voltage detection. Also used for DC IN detection.
30	RESET	I	System reset input terminal. System is reset at "L"
31	OSCI	I	X801 (4.19MHz) Clock oscillator input terminal.
32	OSCO	O	X801 (4.19MHz) Clock oscillator output terminal.
33	VSS	—	Ground terminal
34	VL	—	LCD bias resistor current control terminal. (Cut off at standby)
35	VLC3	—	LCD801 bias power supply terminal
36	VLC2	—	LCD801 bias power supply terminal
37	VLC1	—	LCD801 bias power supply terminal
38	COM0	O	LCD801 common signal output terminal
39	COM1	O	LCD801 common signal output terminal
40	COM2	O	LCD801 common signal output terminal

Pin No.	Pin Name	I/O	Function
41	COM3	O	LCD801 common signal output terminal
42	SEG0	O	LCD801 segment signal output terminal
43	SEG1	O	LCD801 segment signal output terminal
44	SEG2	O	LCD801 segment signal output terminal
45	SEG3	O	LCD801 segment signal output terminal
46	SEG4	O	LCD801 segment signal output terminal
47	SEG5	O	LCD801 segment signal output terminal
48	SEG6	O	LCD801 segment signal output terminal
49	SEG7	O	LCD801 segment signal output terminal
50	SEG8	O	LCD801 segment signal output terminal
51	—	—	Not used
52	SEG10	O	Not used
53	SEG11	O	Not used
54	SEG12	O	Not used
55	SEG13	O	Not used
56			Not used
57			Not used
58	DMUTE		Not used
59	DACLT	O	CPU Serial data input latch signal output. (For DAC only)
60	AMUTE	O	Analog mute control output terminal. "H": Mute
61	CLVMUTE	O	CLV Mute control output treminal. "H": Mute
62	RW	O	Read/Write switching signal output terminal. "L": Read, "H": Write
63	L1	O	Not uesd
64	L2	O	Not uesd
65	H1	O	Not uesd
66	H2	O	Not uesd
67	—	O	Not uesd
68	EMPH	—	Not uesd
69	SHCK	—	Not uesd
70	C2POEN	O	C2PO signal control output terminal. "L": Stop, "H": Searching
71	—	—	Not used
72	VDD	—	Power supply terminal
73	TX	I	Not used
74	TEX	O	Not used
75	NC	—	Not used
76	RMDAT	O	Serial data output terminal to LCD remote controller
77	YMLT	O	CPU serial data input latch signal output terminal. "L": Latch
78	WP	I	Input terminal to reset the system stop status. The stop status is reset with the falling edge of input signal.
79	OPEN	I	Door switch input terminal. The stop status is reset with the falling edge of input signal. "L": CLOSE, "H": OPEN
80	SCOR	I	Sub code sync SO+S1 input terminal

SECTION 7
EXPLODED VIEWS

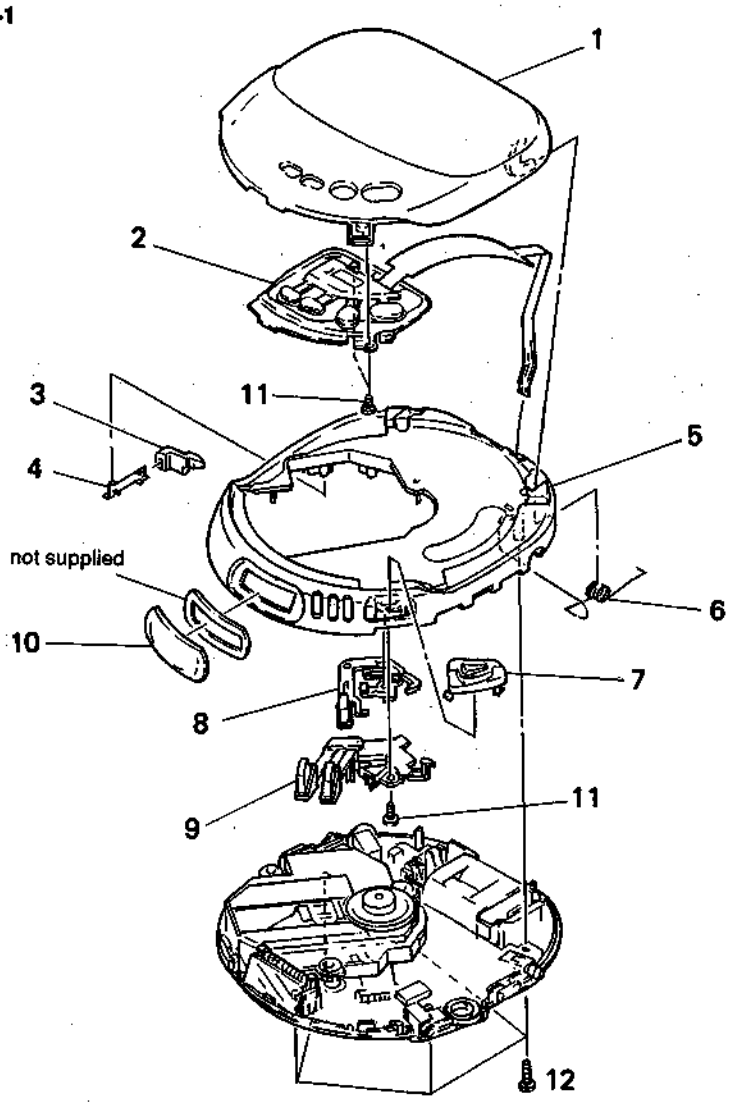
NOTE:

- -XX and -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 and accessories and packing materials are given in the last of the electrical parts list.
- Abbreviation
  JE: Tourist

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

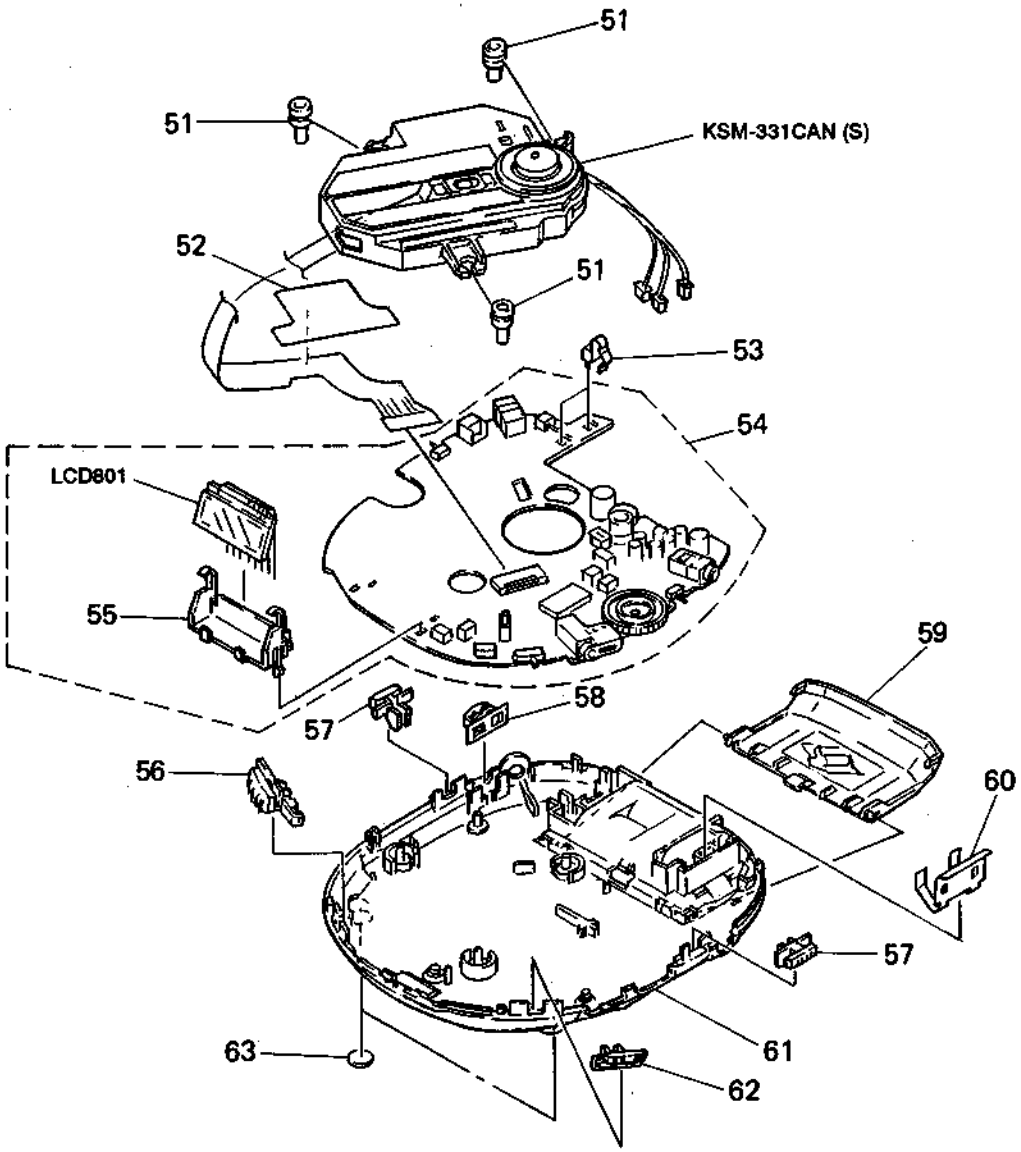
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le neméro spécifié.

(1) CABINET SECTION-1



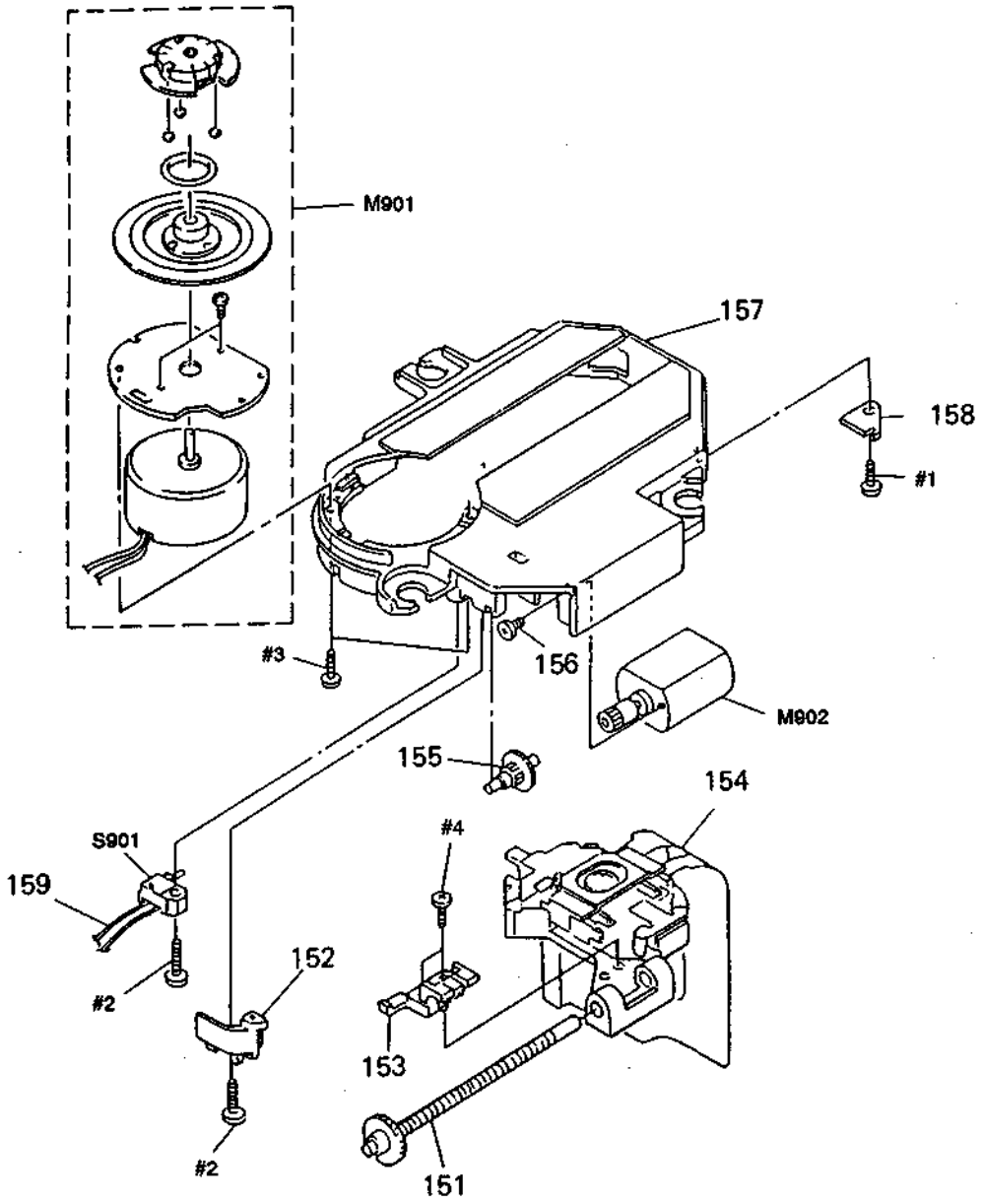
Ref. No.	Part No.	Description	Remark
1	4-972-733-01	LID, UPPER (GRAY) (EXCEPT JE)	
1	4-972-733-11	LID, UPPER (BLUE) (AEP, UK)	
1	4-972-733-21	LID, UPPER (METALLIC BLUE) (JE)	
1	4-972-733-31	LID, UPPER (METALLIC GRAY) (JE)	
2	1-473-074-11	SW UNIT	
3	4-972-780-01	DETECTOR	
4	4-972-866-01	SPRING (DETECTOR)	
5	4-972-731-01	CABINET (FRONT)	
6	4-972-741-01	SPRING, TORSION	
7	4-972-744-01	BUTTON (OPEN)	
8	4-972-745-01	BUTTON, LOCK CLAW	
9	4-972-742-01	BUTTON (MODE)	
10	4-972-735-01	WINDOW (LCD)	
11	4-945-318-01	SCREW	
12	4-958-597-11	SCREW	

(2) CABINET SECTION-2



Ref. No.	Part No.	Description	Remark
51	4-947-759-01	INSULATOR	
* 52	4-956-818-01	RETAINER, FLEXIBLE	
53	4-969-086-01	TERMINAL BOARD, BATTERY	
54	A-3276-763-A	MAIN BOARD, COMPLETE	
55	4-972-740-01	HOLDER (LCD)	
56	4-972-736-01	KNOB (HOLD)	
57	4-972-738-01	KNOB (A-R)	
58	4-972-739-01	BUTTON (CARGE)	
59	4-972-734-01	LID, BATTERY CASE	
60	4-965-555-01	TERMINAL BOARD (RELAY), BATTERY	
61	4-972-732-01	CABINET (REAR)	
62	4-972-737-01	KNOB (B.B)	
63	4-966-278-01	FOOT, RUBBER	
LCD801	1-810-875-11	DISPLAY PANEL, LIQUID CRYSTAL	

(3) OPTICAL PICK-UP BLOCK SECTION (KSM-331CAN (S))



Ref. No.	Part No.	Description	Remark
151	X-2625-483-1	SCREW ASSY, SLED	
152	2-625-412-02	SPRING, SLED	
153	2-625-414-02	RACK	
⚠154	8-848-295-51	OPTICAL PICK-UP (KSS-331C)	
155	2-625-410-01	GEAR (B)	
156	3-732-988-01	SCREW (M2X2.5)	
157	2-625-415-05	CHASSIS, MD	
158	2-625-411-01	RETAINER, SHAFT	
159	1-948-418-21	HARNESS	
M901	X-2625-485-1	MOTOR ASSY (MS), T.T. (SPENDLE)	
M902	X-2625-171-2	MOTOR ASSY, SLED	
S901	1-570-771-11	SWITCH(LIMIT)	

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

MAIN

SECTION 8
ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -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
- Abbreviation
  AUS:Australian E13:220-240V AC Area E33:100-240V AC Area E92:120V AC Area
  JE:Tourist
- 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:μ, for example:
  uA...: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

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

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

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

Ref. No.	Part No.	Description			Remark
	A-3276-763-A	MAIN BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C102	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C106	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C107	1-135-091-00	TANTAL. CHIP	1uF	20%	16V
C108	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C109	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C110	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C111	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C202	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C206	1-135-181-21	TANTALUM CHIP	4.7uF	20%	6.3V
C207	1-135-091-00	TANTAL. CHIP	1uF	20%	16V
C208	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C209	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C210	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C211	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C301	1-128-110-11	ELECT	470uF	20%	4V
C302	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C303	1-135-216-11	TANTALUM CHIP	10uF	20%	10V
C304	1-164-346-11	CERAMIC CHIP	1uF		16V
C305	1-126-096-11	ELECT	10uF	20%	35V
C306	1-164-346-11	CERAMIC CHIP	1uF		16V
C307	1-126-514-11	ELECT	22uF	20%	10V
C308	1-126-514-11	ELECT	22uF	20%	10V
C309	1-164-346-11	CERAMIC CHIP	1uF		16V
C310	1-126-162-11	ELECT	3.3uF	20%	50V
C311	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C312	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C313	1-164-346-11	CERAMIC CHIP	1uF		16V
C314	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C317	1-164-362-11	CERAMIC CHIP	470PF	10%	50V
C318	1-135-216-11	TANTALUM CHIP	10uF	20%	10V
C319	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C320	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C321	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C322	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C323	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C327	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C328	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C329	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C330	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C401	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C402	1-126-785-11	ELECT	47uF	20%	10V
C403	1-127-485-00	ELECT(SOLID)	33uF	20%	6.3V
C404	1-162-951-11	CERAMIC CHIP	68PF	5%	50V
C405	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C406	1-162-953-11	CERAMIC CHIP	100P	5%	50V
C407	1-164-360-11	CERAMIC CHIP	0.1uF		25V
C408	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C409	1-126-176-11	ELECT	220uF	20%	10V
C410	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C411	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C412	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C413	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C414	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C415	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C416	1-126-513-11	ELECT	47uF	20%	4V
C417	1-135-216-11	TANTALUM CHIP	10uF	20%	10V
C418	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C419	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C420	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C421	1-126-514-11	ELECT	22uF	20%	10V
C422	1-126-786-11	ELECT	47uF	20%	16V
C423	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C424	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C425	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C426	1-162-915-11	CERAMIC CHIP	10PF	0.50PF	50V
C427	1-104-851-11	TANTAL. CHIP	10uF	20%	10V
C428	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C429	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C430	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C431	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C432	1-164-346-11	CERAMIC CHIP	1uF		16V
C433	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C501	1-164-346-11	CERAMIC CHIP	1uF		16V
C502	1-162-912-11	CERAMIC CHIP	7PF	0.50PF	50V
C503	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description			Remark
C504	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C505	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C506	1-135-180-21	TANTALUM CHIP	3.3uF	20%	6.3V
C507	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C508	1-104-908-11	TANTAL. CHIP	47uF	20%	4V
C509	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C510	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C511	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C512	1-104-848-11	TANTAL. CHIP	100uF	20%	4V
C513	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C514	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C515	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C516	1-164-346-11	CERAMIC CHIP	1uF		16V
C519	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C520	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C521	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C523	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C524	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C526	1-104-908-11	TANTAL. CHIP	47uF	20%	4V
C527	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C528	1-164-360-11	CERAMIC CHIP	0.1UF	10%	16V
C562	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C563	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C565	1-124-584-00	ELECT	100uF	20%	10V
C601	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C602	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C603	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C604	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C605	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C606	1-164-505-11	TANTALUM CHIP	2.2uF		16V
C607	1-104-908-11	TANTAL. CHIP	47uF	20%	4V
C610	1-135-149-21	TANTAL. CHIP	2.2uF	10%	10V
C611	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C612	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C613	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C614	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C615	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C616	1-135-091-00	TANTAL. CHIP	1uF	20%	16V
C618	1-164-346-11	CERAMIC CHIP	1uF		16V
C619	1-164-489-11	TANTALUM CHIP	0.22uF	10%	16V
C620	1-162-913-11	CERAMIC CHIP	8PF	0.50PF	50V
C623	1-162-914-11	CERAMIC CHIP	9PF	0.50PF	50V
C624	1-162-915-11	CERAMIC CHIP	10PF	0.50PF	50V
C625	1-162-915-11	CERAMIC CHIP	10PF	0.50PF	50V
C627	1-104-847-11	TANTAL. CHIP	22uF	20%	4V
C628	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C701	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C702	1-164-362-11	CERAMIC CHIP	470PF	5%	50V
C703	1-164-362-11	CERAMIC CHIP	470PF	5%	50V

Ref. No.	Part No.	Description			Remark
C704	1-164-360-00	CERAMIC CHIP	0.1uF		16V
C716	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C717	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C719	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C721	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C722	1-104-852-11	TANTAL. CHIP	22uF	20%	10V
C801	1-126-161-11	ELECT	2.2uF	20%	35V
C802	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C803	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C805	1-164-346-11	CERAMIC CHIP	1uF		16V
C810	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C812	1-164-360-11	CERAMIC CHIP	0.1uF	10%	16V
C814	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C815	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V

< CONNECTOR >

CN501	1-566-534-11	CONNECTOR, FPC (ZIF) 18P			
* CN701	1-695-320-51	PIN, CONNECTOR (1.5MM) (SMD)			2P
* CN702	1-695-320-31	PIN, CONNECTOR (1.5MM) (SMD)			2P
* CN703	1-695-320-21	PIN, CONNECTOR (1.5MM) (SMD)			2P
* CN801	1-770-849-11	HOUSING, CONNECTOR 3P			

< DIODE >

D310	8-719-988-78	DIODE	SB007W03Q
D311	8-719-988-78	DIODE	SB007W03Q
D401	8-719-048-98	DIODE	RB160L-40TE25
D402	8-719-048-98	DIODE	RB160L-40TE25
D403	8-719-938-72	DIODE	SB01-05CP
D404	8-719-938-72	DIODE	SB01-05CP
D405	8-719-938-72	DIODE	SB01-05CP
D407	8-719-049-09	DIODE	1SS367-T3SONY
D409	8-719-049-09	DIODE	1SS367-T3SONY
D501	8-719-024-81	DIODE	1SS300-TE85L
D502	8-719-049-09	DIODE	1SS367-T3SONY
D561	8-719-404-46	DIODE	MA110
D801	8-719-024-81	DIODE	1SS300-TE85L
D802	8-719-977-03	DIODE	DTZ5.6B
D803	8-719-941-86	DIODE	MDAN202U
D804	8-719-027-45	DIODE	MA740

< FERRITE BEAD >

FB301	1-414-235-11	INDUCTOR, FERRITE BEAD

< IC >

IC301	8-759-327-78	IC	TC9404FN-EL
IC302	8-759-285-22	IC	BA3574AFS
IC401	8-759-326-67	IC	MPC1825VMEL
IC402	8-759-711-38	IC	NJU7201U50
IC403	8-759-710-79	IC	NJM2107F

MAIN

Ref. No.	Part No.	Description				Remark
IC501	8-759-325-52	IC	BA6375K			
IC502	8-759-351-65	IC	SM5856A1F			
IC503	8-759-342-73	IC	LH64256BK-80			
IC561	8-759-293-74	IC	NJM2100E			
IC601	8-759-348-77	IC	BU9312AKS			
IC701	8-759-326-66	IC	MPC17A50VMEL			
IC801	8-752-867-84	IC	CXP83412-017Q			
		< JACK >				
J301	1-565-287-41	JACK (LINE OUT)				
J302	1-580-680-31	JACK (Ω/REMOTE)				
J401	1-691-099-51	JACK, DC (POLARITY UNIFIED TYPE) (DC IN 4.5V)				
		< RESISTOR >				
JR1	1-216-864-11	METAL CHIP	0	5%	1/16W	
JR2	1-216-864-11	METAL CHIP	0	5%	1/16W	
JR3	1-216-864-11	METAL CHIP	0	5%	1/16W	
JR4	1-216-864-11	METAL CHIP	0	5%	1/16W	
JR302	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR307	1-216-864-11	METAL CHIP	0	5%	1/16W	
JR309	1-216-864-11	METAL CHIP	0	5%	1/16W	
JR311	1-216-864-11	METAL CHIP	0	5%	1/16W	
JR316	1-216-864-11	METAL CHIP	0	5%	1/16W	
JR324	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR501	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR502	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR503	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR504	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR520	1-216-864-11	METAL CHIP	0	5%	1/16W	
JR601	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR602	1-216-864-11	METAL CHIP	0	5%	1/16W	
JR604	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR615	1-216-864-11	METAL CHIP	0	5%	1/16W	
JR618	1-216-864-11	METAL CHIP	0	5%	1/16W	
JR625	1-216-864-11	METAL CHIP	0	5%	1/16W	
JR626	1-216-864-11	METAL CHIP	0	5%	1/16W	
JR701	1-216-295-00	METAL CHIP	0	5%	1/10W	
JR801	1-216-864-11	METAL CHIP	0	5%	1/16W	
JR802	1-216-864-11	METAL CHIP	0	5%	1/16W	
		< COIL >				
L101	1-410-997-31	CHIP INDUCTOR	2.2uH			
L103	1-412-002-31	INDUCTOR CHIP	4.7uH			
L201	1-410-997-31	CHIP INDUCTOR	2.2uH			
L203	1-412-002-31	INDUCTOR CHIP	4.7uH			
L303	1-412-002-31	INDUCTOR CHIP	4.7uH			
L305	1-410-997-31	CHIP INDUCTOR	2.2uH			
L401	1-412-029-11	INDUCTOR CHIP	10uH			
L402	1-412-032-11	INDUCTOR CHIP	100uH			
L501	1-412-029-11	INDUCTOR CHIP	10uH			
L506	1-412-029-11	INDUCTOR CHIP	10uH			
L601	1-412-029-11	INDUCTOR CHIP	10uH			
L602	1-412-029-11	INDUCTOR CHIP	10uH			
L702	1-414-402-11	INDUCTOR (SMD)	47uF			
L801	1-412-002-31	INDUCTOR CHIP	4.7uH			
		< LIQUID CRYSTAL DISPLAY >				
LCD801	1-810-875-11	DISPLAY PANEL, LIQUID CRYSTAL				
		< TRANSISTOR >				
Q101	8-729-231-74	TRANSISTOR	2SC4116-GL			
Q201	8-729-231-74	TRANSISTOR	2SC4116-GL			
Q304	8-729-907-39	TRANSISTOR	IMD2			
Q310	8-729-320-66	TRANSISTOR	2SD1870			
Q401	8-729-320-66	TRANSISTOR	2SD1870			
Q402	8-729-923-36	TRANSISTOR	2SD1963-Q,R			
Q403	8-729-216-22	TRANSISTOR	2SA1162-G			
Q404	8-729-921-93	TRANSISTOR	2SB1182F5-QR			
Q405	8-729-922-34	TRANSISTOR	2SD1758F5-QR			
Q406	8-729-907-39	TRANSISTOR	IMD2			
Q501	8-729-216-22	TRANSISTOR	2SA1162-G			
Q502	8-729-905-61	TRANSISTOR	DTC124EU			
Q503	8-729-905-61	TRANSISTOR	DTC124EU			
Q505	8-729-905-57	TRANSISTOR	DTA124EU			
Q506	8-729-905-61	TRANSISTOR	DTC124EU			
Q561	8-729-014-34	TRANSISTOR	RN2311-TE85L			
Q601	8-729-907-39	TRANSISTOR	IMD2			
Q801	8-729-231-74	TRANSISTOR	2SC4116-GL			
		< RESISTOR >				
R107	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R108	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R109	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R110	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R111	1-216-789-11	METAL CHIP	2.2	5%	1/16W	
R207	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R208	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R209	1-216-835-11	METAL CHIP	15K	5%	1/16W	
R210	1-216-821-11	METAL CHIP	1K	5%	1/16W	
R211	1-216-789-11	METAL CHIP	2.2	5%	1/16W	
R301	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R302	1-216-833-11	METAL CHIP	10K	5%	1/16W	
R304	1-216-811-11	METAL CHIP	150	5%	1/16W	
R305	1-216-845-11	METAL CHIP	100K	5%	1/16W	
R306	1-216-857-11	METAL CHIP	1M	5%	1/16W	
R308	1-216-864-11	METAL CHIP	0	5%	1/16W	
R310	1-216-864-11	METAL CHIP	0	5%	1/16W	
R312	1-216-839-11	METAL CHIP	33K	5%	1/16W	

Ref. No.	Part No.	Description			Remark
R313	1-216-803-11	METAL CHIP	33	5%	1/16W
R314	1-216-797-11	METAL CHIP	10	5%	1/16W
R315	1-216-817-11	METAL CHIP	470	5%	1/16W
R317	1-216-821-11	METAL CHIP	1K	5%	1/16W
R318	1-216-821-11	METAL CHIP	1K	5%	1/16W
R401	1-218-833-11	METAL CHIP	33K	0.50%	1/16W
R402	1-218-714-11	METAL CHIP	8.2K	0.50%	1/16W
R403	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R404	1-216-797-11	METAL CHIP	10	5%	1/16W
R405	1-216-809-11	METAL CHIP	100	5%	1/16W
R406	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R407	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R408	1-216-813-11	METAL CHIP	220	5%	1/16W
R409	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R410	1-216-857-11	METAL CHIP	1M	5%	1/16W
R412	1-216-843-11	METAL CHIP	68K	5%	1/16W
R413	1-218-749-11	METAL CHIP	240K	0.50%	1/16W
R414	1-218-748-11	METAL CHIP	220K	0.50%	1/16W
R415	1-216-815-11	METAL CHIP	330	5%	1/16W
R416	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R417	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R418	1-216-833-11	METAL CHIP	10K	5%	1/16W
R420	1-216-861-11	METAL CHIP	2.2M	5%	1/16W
R421	1-218-716-11	METAL CHIP	10K	0.50%	1/16W
R422	1-216-854-11	METAL CHIP	560K	5%	1/16W
R423	1-216-854-11	METAL CHIP	560K	5%	1/16W
R424	1-216-857-11	METAL CHIP	1M	5%	1/16W
R425	1-216-857-11	METAL CHIP	1M	5%	1/16W
R426	1-202-931-11	METAL GLAZE	910K	5%	1/16W
R427	1-202-931-11	METAL GLAZE	910K	5%	1/16W
R502	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R503	1-218-345-11	METAL CHIP	9.1K	5%	1/16W
R504	1-218-347-11	METAL GLAZE	91K	5%	1/16W
R505	1-216-837-11	METAL CHIP	22K	5%	1/16W
R506	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R507	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R508	1-216-864-11	METAL CHIP	0	5%	1/16W
R509	1-216-837-11	METAL CHIP	22K	5%	1/16W
R510	1-216-821-11	METAL CHIP	1K	5%	1/16W
R511	1-216-308-00	METAL CHIP	4.7	5%	1/10W
R512	1-216-809-11	METAL CHIP	100	5%	1/16W
R513	1-216-833-11	METAL CHIP	10K	5%	1/16W
R515	1-216-846-11	METAL CHIP	120K	5%	1/16W
R516	1-216-846-11	METAL CHIP	120K	5%	1/16W
R517	1-216-833-11	METAL CHIP	10K	5%	1/16W
R518	1-216-833-11	METAL CHIP	10K	5%	1/16W
R519	1-216-833-11	METAL CHIP	10K	5%	1/16W
R521	1-216-827-11	METAL CHIP	3.3K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R522	1-216-845-11	METAL CHIP	100K	5%	1/16W
R523	1-216-833-11	METAL CHIP	10K	5%	1/16W
R527	1-216-833-11	METAL CHIP	10K	5%	1/16W
R528	1-216-833-11	METAL CHIP	10K	5%	1/16W
R529	1-216-821-11	METAL CHIP	1K	5%	1/16W
R530	1-216-821-11	METAL CHIP	1K	5%	1/16W
R531	1-216-821-11	METAL CHIP	1K	5%	1/16W
R532	1-216-821-11	METAL CHIP	1K	5%	1/16W
R533	1-216-841-11	METAL CHIP	47K	5%	1/16W
R534	1-216-845-11	METAL CHIP	100K	5%	1/16W
R535	1-216-817-11	METAL CHIP	470	5%	1/16W
R536	1-216-833-11	METAL CHIP	10K	5%	1/16W
R561	1-216-851-11	METAL CHIP	330K	5%	1/16W
R562	1-216-846-11	METAL CHIP	120K	5%	1/16W
R563	1-216-857-11	METAL CHIP	1M	5%	1/16W
R564	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R565	1-216-843-11	METAL CHIP	68K	5%	1/16W
R567	1-218-716-11	METAL CHIP	10K	0.5%	1/16W
R568	1-218-725-11	METAL CHIP	24K	0.50%	1/16W
R569	1-216-847-11	METAL CHIP	150K	5%	1/16W
R602	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R603	1-218-867-11	METAL CHIP	6.8K	0.5%	1/16W
R605	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R606	1-216-857-11	METAL CHIP	1M	5%	1/16W
R607	1-216-835-11	METAL CHIP	15K	5%	1/16W
R608	1-218-724-11	METAL CHIP	22K	0.50%	1/16W
R609	1-216-811-11	METAL CHIP	150	5%	1/16W
R610	1-218-708-11	METAL FILM	4.7K	0.50%	1/16W
R612	1-216-848-11	METAL CHIP	180K	5%	1/16W
R613	1-216-837-11	METAL CHIP	22K	5%	1/16W
R614	1-216-837-11	METAL CHIP	22K	5%	1/16W
R619	1-216-845-11	METAL CHIP	100K	5%	1/16W
R621	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R622	1-218-720-11	METAL CHIP	15K	0.50%	1/16W
R623	1-218-735-11	METAL FILM	62K	0.50%	1/16W
R624	1-218-734-11	METAL FILM	22K	0.50%	1/16W
R627	1-216-833-11	METAL CHIP	10K	5%	1/16W
R629	1-216-848-11	METAL CHIP	180K	5%	1/16W
R711	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R801	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R802	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R803	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R804	1-216-821-11	METAL CHIP	1K	5%	1/16W
R805	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R806	1-216-833-11	METAL CHIP	10K	5%	1/16W
R807	1-218-873-11	METAL CHIP	12K	0.50%	1/16W
R808	1-216-857-11	METAL CHIP	1M	5%	1/16W

MAIN

Ref. No.	Part No.	Description			Remark
R809	1-216-854-11	METAL CHIP	560K	5%	1/16W
R810	1-216-861-11	METAL CHIP	2.2M	5%	1/16W
R811	1-218-345-11	METAL GLAZE	9.1K	5%	1/16W
R812	1-216-821-11	METAL CHIP	1K	5%	1/16W
R813	1-216-857-11	METAL CHIP	1M	5%	1/16W
R814	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R815	1-216-837-11	METAL CHIP	22K	5%	1/16W
R816	1-216-837-11	METAL CHIP	22K	5%	1/16W
R817	1-216-837-11	METAL CHIP	22K	5%	1/16W
R818	1-216-841-11	METAL CHIP	47K	5%	1/16W
R819	1-216-821-11	METAL CHIP	1K	5%	1/16W
R820	1-216-821-11	METAL CHIP	1K	5%	1/16W
R821	1-216-821-11	METAL CHIP	1K	5%	1/16W
R823	1-216-853-11	METAL CHIP	470K	5%	1/16W
R824	1-216-858-11	METAL CHIP	1.2M	5%	1/16W
R825	1-216-858-11	METAL CHIP	1.2M	5%	1/16W
		< VARIABLE RESISTOR >			
RV301	1-223-382-11	RES, VAR, CARBON 10K/10K (VOLUME)			
RV401	1-241-397-11	RES, ADJ, METAL GLAZE 47K			
RV501	1-241-395-11	RES, ADJ, METAL GLAZE 10K			
RV601	1-241-396-11	RES, ADJ, METAL GLAZE 22K			
RV602	1-241-396-11	RES, ADJ, METAL GLAZE 22K			
		< SWITCH >			
S301	1-572-922-11	SWITCH, SLIDE (AVLS)			
S302	1-692-605-11	SWITCH, SLIDE (BASS BOOST)			
S801	1-572-922-11	SWITCH, SLIDE (HOLD)			
S802	1-762-400-11	SWITCH (PLAY MODE)			
S803	1-762-400-11	SWITCH (REPEAT/ENTER)			
S804	1-762-400-11	SWITCH (ESP)			
S805	1-554-088-00	SWITCH, KEY BOARD (CHARGE)			
S808	1-570-953-11	SWITCH, PUSH (1 KEY) (OPEN)			
S809	1-571-754-31	SWITCH, PUSH (1 KEY) (BATT)			
S810	1-572-922-11	SWITCH, SLIDE (RESUME)			
		< TRANSFORMER >			
T401	1-427-958-11	TRANSFORMER, DC-DC CONVERTER			
		< VIBRATOR >			
X301	1-760-307-11	VIBRATOR, CERAMIC (16.93MHz)			
X801	1-760-641-21	VIBRATOR, CERAMIC (4.19MHz)			

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Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
2	1-473-074-11	SW UNIT	
△154	8-848-295-51	OPTICAL PICK-UP(KSS-331C)	
159	1-948-418-21	HARNESS	
M901	X-2625-485-1	MOTOR ASSY (MS), T.T. (SPENDLE)	
M902	X-2625-171-2	MOTOR ASSY, SLED	
S901	1-570-771-11	SWITCH (LIMIT)	

****

ACCESSORIES & PACKING MATERIALS

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△	1-467-007-21	ADAPTOR, AC (AC-E455) (AUS)	
△	1-467-008-11	ADAPTOR, AC (AC-E455D) (AEP, E13)	
△	1-467-009-11	ADAPTOR, AC (AC-E455) (US, Canadian, E92)	
△	1-467-013-11	ADAPTOR, AC (AC-E455) (UK)	
△	1-467-550-11	ADAPTOR, AC (AC-E455A) (E33, JE)	
	1-528-541-31	BATTERY PACK (BP-DM10) (JE)	
	1-558-145-32	CORD, CONNECTION (US, Canadian, E, AUS)	
△	1-569-007-11	ADAPTER, CONVERSION 2P (E33, JE)	
△	1-569-008-11	ADAPTER, CONVERSION 2P (E13)	
	3-798-801-01	MANUAL, INSTRUCTION (JAPANESE, ENGLISH)	(JE)
	3-798-801-11	MANUAL, INSTRUCTION (SPANISH)	(AEP, E33, E92, JE)
	3-798-801-21	MANUAL, INSTRUCTION (ENGLISH)	(EXCEPT E13)
	3-798-801-31	MANUAL, INSTRUCTION (FRENCH)	(Canadian, AEP, JE)
	3-798-801-41	MANUAL, INSTRUCTION (DATCH) (AEP)	
	3-798-801-51	MANUAL, INSTRUCTION (SWEDISH) (AEP)	
	3-798-801-61	MANUAL, INSTRUCTION (PORTUGUEST) (AEP)	
	3-798-801-71	MANUAL, INSTRUCTION (GERMAN) (AEP)	
	3-798-801-81	MANUAL, INSTRUCTION (ITALIAN) (AEP)	
	3-798-801-91	MANUAL, INSTRUCTION (CHINESE, KOREAN) (JE)	
	3-800-155-11	MANUAL, INSTRUCTION (CHINESE, KOREAN)	(E13)
	3-800-155-21	MANUAL, INSTRUCTION (ENGLISH) (E13)	
*	4-974-074-01	INDIVIDUAL CARTON (JE)	
*	4-974-075-01	INDIVIDUAL CARTON (US, Canadian)	
*	4-974-076-01	INDIVIDUAL CARTON (AEP, UK)	
*	4-974-077-01	INDIVIDUAL CARTON (E)	
*	4-974-078-01	INDIVIDUAL CARTON (AUS)	
*	4-974-086-01	CUSHION (US, Canadian)	
*	4-974-087-01	CUSHION (E)	
*	4-974-088-01	SPACER (UK)	
	4-974-219-01	CASE, CARRYING (UK, JE)	
	8-953-342-91	HEADPHONE MDR-24//K SET (US)	

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

Ref. No.	Part No.	Description	Remark
	8-953-538-91	HEADPHONE MDR-E741//K1 SET (EXCEPT US)	
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-104-19	SCREW (2X6), TAPPING (B)	
#2	7-685-105-19	SCREW (2X8), TAPPING (B)	
#3	7-627-852-17	+P 1.7X4	
#4	7-627-852-18	SCREW, PRECISION +P 1.7X4 TYPE3	

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