

D-121

SERVICE MANUAL



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

Discman

CD Mechanism Name	KSM-331AAN (S)
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SPECIFICATIONS

System
Compact disc digital audio system

Laser diode properties
Material: GaAlAs
Wavelength: $\lambda = 780$ nm
Emission duration: Continuous
Laser output: Less than $44.6 \mu\text{W}$
(This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.)

Error correction
D-A conversion
1-bit quartz time-axis control

Frequency response
20 – 20,000 Hz ± 1 dB
(measured by EIAJ CP-307)

Output (at 4.5 V input level)
Line output (stereo minijack)
Output level 0.8 V rms at 50 kilohms
Load impedance over 10 kilohms
Headphones (stereo minijack)
20 mW + 20 mW at 16 Ω

General
Power requirements

Supplied:
• DC IN 4.5 V jack accepts the Sony AC power adaptor for use on:

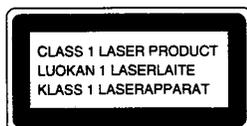
Where purchased	Operating voltage
AEP	220 – 230 V AC, 50 Hz
U.S.A., Canada, Central and South America	120 V AC, 60 Hz
E, Saudi Arabia, Hong Kong, Tourist	110 – 240 V AC, 50/60 Hz
United Kingdom, Australia	240 V AC, 50 Hz
Other countries	100 – 240 V AC, 50/60 Hz

Not supplied:
• DC IN 4.5 V accepts the Sony CPM-300P mount plate and CPM-300PK mount arm for use on car battery.
• DC 3 V two size AA (LR6) alkaline batteries
Approx. 132 x 30.2 x 155 mm (5 $\frac{1}{4}$ x 1 $\frac{3}{16}$ x 6 $\frac{1}{16}$ in.) (w/h/d) incl. projecting parts and controls
Approx. 340 g (12 oz.) incl. alkaline batteries
AC power adaptor (1)
Connecting cord (phono plug x 2 \leftrightarrow stereo miniplug) (1)
Stereo headphones (1)

Dimensions

Mass
Supplied accessories

Design and specifications subject to change without notice.



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



COMPACT DISC COMPACT PLAYER

SONY®

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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.

SECTION 1 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 break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic break-down 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.

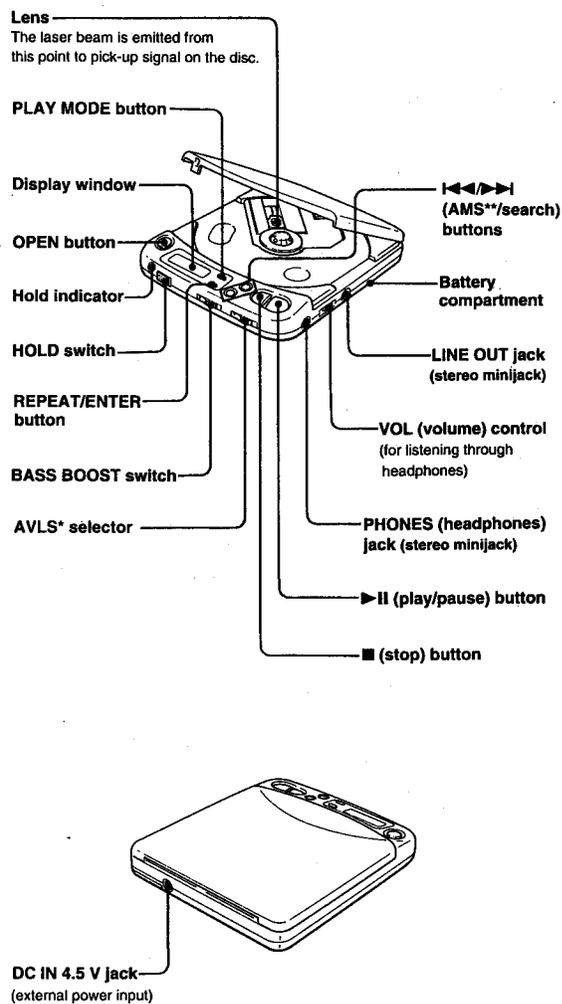
Before Replacing the Optical Pick-Up Block

Please be sure to check thoroughly the parameters as per 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 ⑦ pin
When checking FOK, remove the lead wire to disc motor .
- S curv P-to-P value : 2.5 Vp-p
When checking S curve P-to-P value, remove the lead wire to disc motor.
- Adjusted part for focus gain adjustment : RV502
- RF signal P-to-P value : 0.90 - 1.30 Vp-p
- Traverse signal P-to-P value : 2.5 Vp-p
- The repairing grating holder is impossible.
- Adjusted part for tracking gain adjustment : RV504

SECTION 2 GENERAL

Location and Function of Controls



* AVLS: Automatic Volume Limiter System
**AMS: Automatic Music Sensor

SECTION 3 SERVICE MODE

Precautions for Checking Emission of Laser Diode

Laser light of the equipment is focused by the object lens in the optical pickup so that the light focuses on the reflection surface of the disc. Therefore, be sure to keep your eyes more than 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 S802 (push switch type).

However, in the service mode, the laser diode always emits light regardless of the S802 turned ON or OFF.

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 panel.
2. Push the S802 as shown in Fig. 1.
(This is not needed in the service mode.)
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 pickup.
During normal operation, the laser diode is turned ON about 2.5 seconds for focus searching.

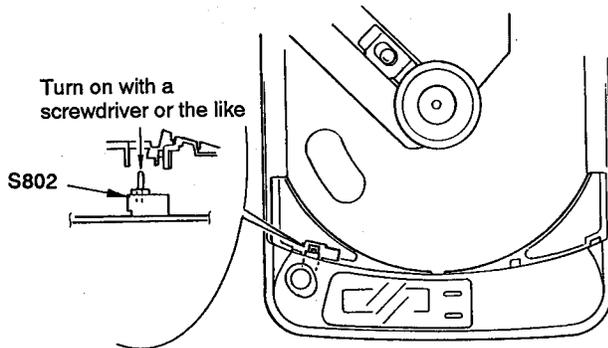
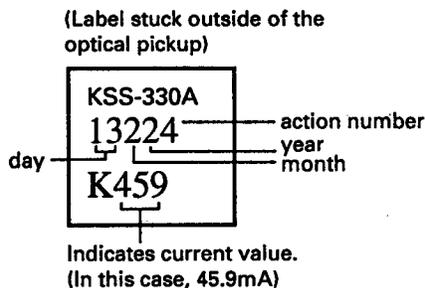


Fig. 1 Method to push the S802

- **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 pickup.



3. Connect a VTVM as shown in Fig. 2 (terminate it with R501, 10 Ω at both ends).
4. Press the \triangleright key.

5. Calculate current value by the reading of the VTVM.
Reading of the tester (V) + 10 = current value (A)
(Example) Reading of the VTVM of 0.46 V:
 $0.46 + 10 = 0.046$ (A) = 46 mA
6. Check that the current value is within the following range.
 - Current value of the label $^{+5}_{-11}$ mA (25 °C)
Variation by temperature: 0.4 mA/C
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 pickup.

— MAIN board — (side A)

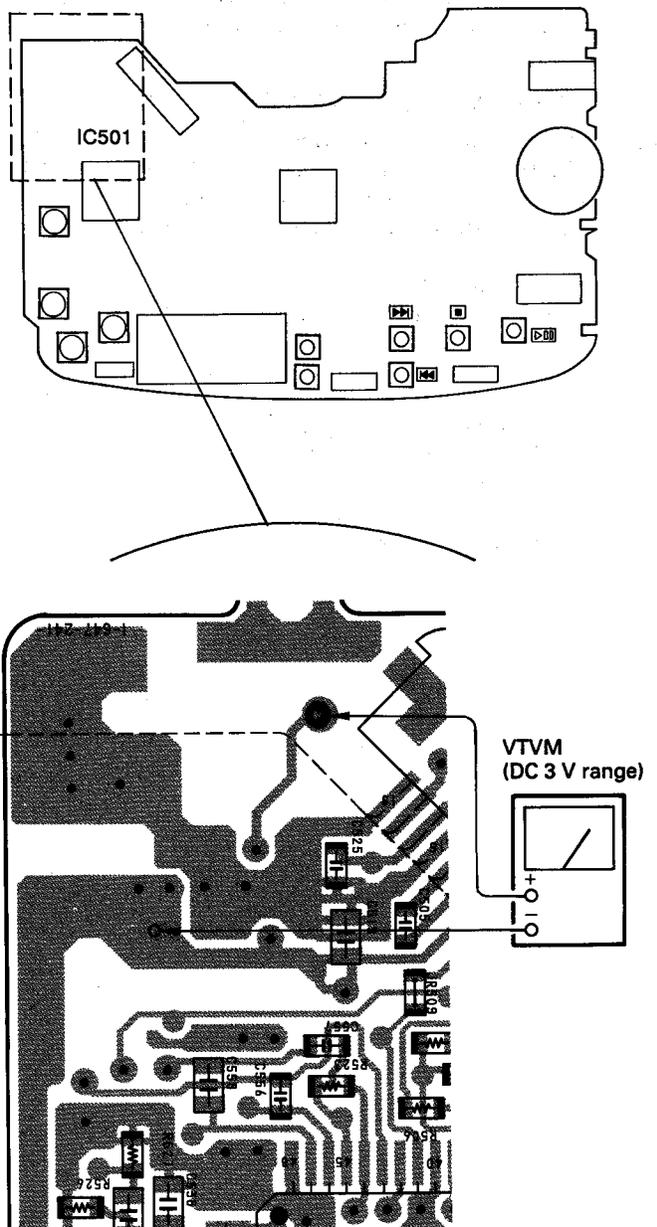
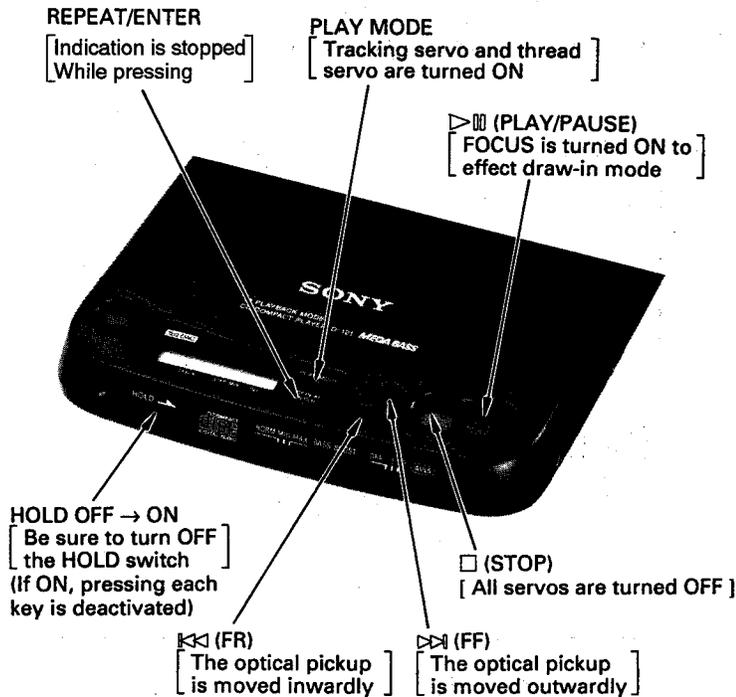


Fig. 2 VOM connecting location

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 the jumper wire across the TEST terminals (pin 64, IC801 (TEST) is grounded).
3. Keep the S802 in continuously pressed state. (Or, solder the jumper wire across the DOOR terminals.)

Thus, the set is switched to the service mode.

• Step 2 (Operation in the service mode)

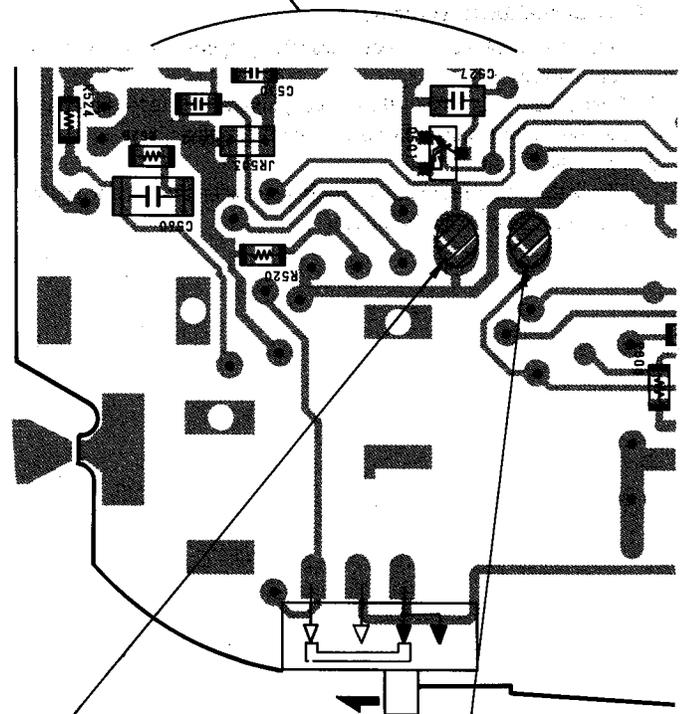
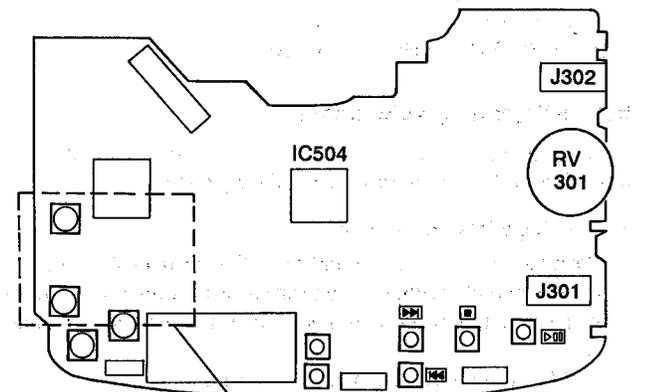
1. Once the service mode is effected, the LCD displays 5 indications each of which is repeatedly displayed. However, the following operations can be activated even if LCD indication is effected.
2. By pressing the >>> or <<< key, the optical pickup is movable inwardly or outwardly. However, if this is 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, all indications light up. With the key released, repeated indication is continued, so you can check each segment.
4. By pressing the >>>> key, focus is turned ON from focus searching while entering CLV-S (draw-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 thread) are turned OFF. However, the disc motor revolves for awhile by inertia.

• Step 3 (Resetting of service mode)

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

-MAIN board - (SIDE A)



DOOR terminal
with this terminal soldered for jumpering, the S802 is fixed in continuously pressed state, while activating to press each key.
[Be sure to remove the soldered jumper wire after the completion of service.]

TEST terminal
Location to be soldered for jumpering in the service mode
[Be sure to remove the soldered jumper wire after completion of checking and adjusting in the service mode.]

Fig. 4 Location of Test and Door terminal

SECTION 4 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
 AVLS switch : OFF
 BASS BOOST switch : NORM

Before Beginning Adjustment

Set the equipment to service mode (See Page 5) and check the following. If there is an error, repair the equipment.

• Checking of the sled motor

1. Press the $\triangleright\blacktriangleleft$ and $\blacktriangleleft\blacktriangleleft$ keys and check that the optical pickup can move smoothly without sluggishness or abnormal noise in innermost periphery \rightarrow outermost periphery \rightarrow innermost periphery.

$\triangleright\blacktriangleleft$: The optical pickup moves outwardly.

$\blacktriangleleft\blacktriangleleft$: The optical pickup moves inwardly.

• Checking of focus searching

1. Press the $\triangleright\blacksquare$ key. (Focus searching operation is activated continuously.)
2. Check the object lens of the optical pickup for smooth up/down motion without sluggishness or abnormal noise.
3. Press the \square key.
Check that focus searching operation is deactivated. If not, again press the \square key slightly longer.

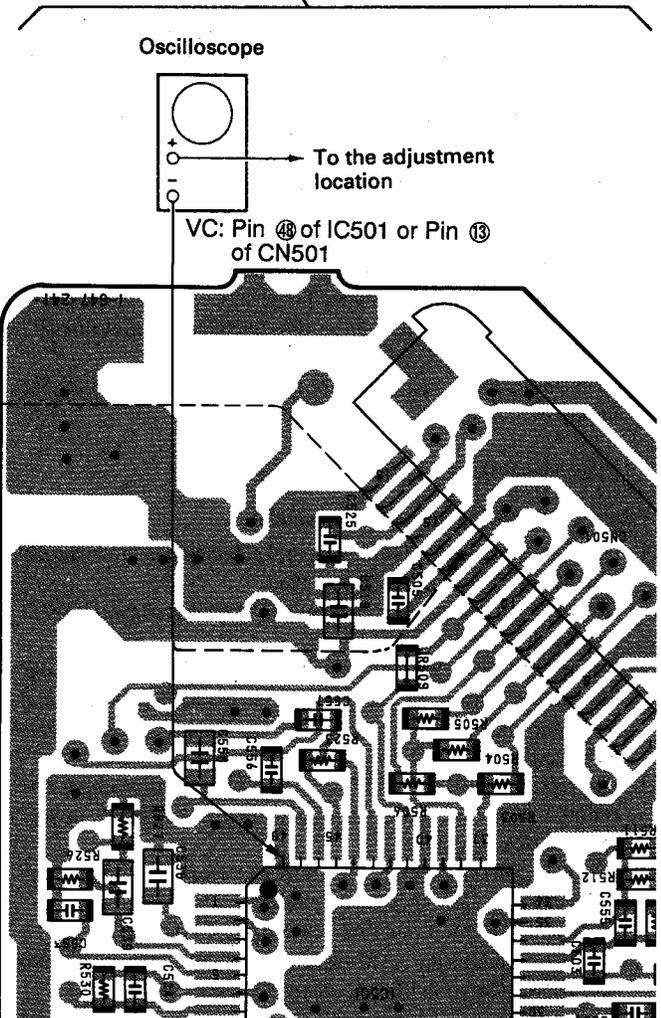
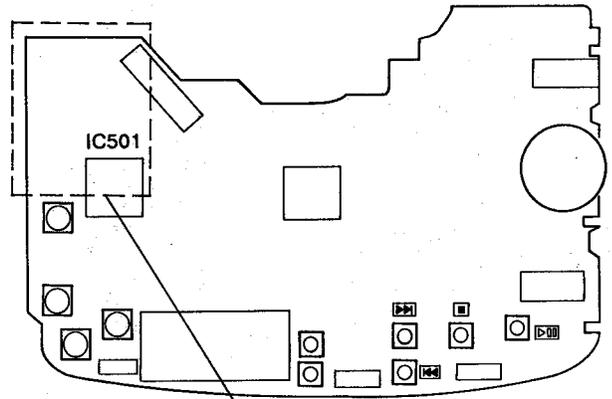
• VC (1/2Vcc) connection location

Focus bias adjustment

Tracking balance adjustment

For any of the adjustments above, connect the minus side of the oscilloscope at the point of the following view.

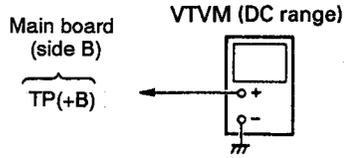
Connection Location: MAIN board (SIDE A)



+B Check

* Use a SUM-3 battery for +B Check

Checking Procedure :

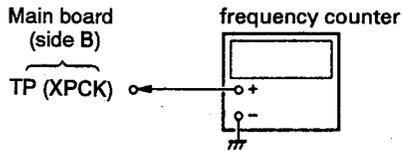


1. Connect the VTVM to (+B) of the main Board.
2. Check for 3.25 ± 0.1 V reading on the VTVM.

Connection and Adjustment Location: MAIN board
(side A, side B)
(See page 9)

PLL Free-run Frequency Check

Checking Procedure :



1. Connect the frequency counter to the test point TP (XPCK) of Pin ②, IC601 on the main board.
2. Set the equipment to service mode stop state (See page 5).
3. Confirm that the frequency counter indicates 4.321 ± 0.01 MHz.
4. After the completion of adjustment, reset the service mode.
(See page 5)

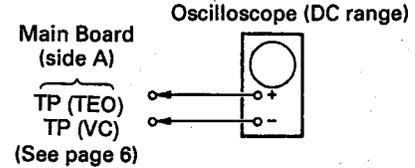
Connection and Checking Location: MAIN board (side B)
(See page 9)

Tracking Balance Adjustment

Condition:

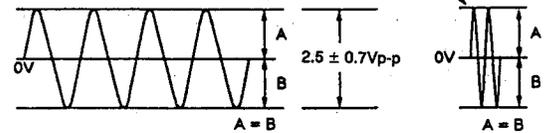
- Hold the set in horizontal state.

Adjustment Procedure:



1. Connect the oscilloscope to TP (TEO) of the main board.
2. Set the equipment to service mode stop state. (see page 5.)
3. Move the optical pickup by pressing the $\triangleright \triangleleft$ and $\triangleleft \triangleright$ keys.
4. Put the disc (YEDS-18).
5. Press the $\triangleright \square$ key.
[From focus searching, focus is turned ON while entering CLV drawing-in mode. Tracking and thread are turned OFF.
6. Adjust RV501 so that the waveform on the oscilloscope becomes up/down symmetrical with an axis of 0 V.

Note: Take long sweep time for easy monitoring.



7. Stop revolving of the disc motor by pressing the \square key.
8. After the completion of adjustment, reset service mode.
(see page 5.)

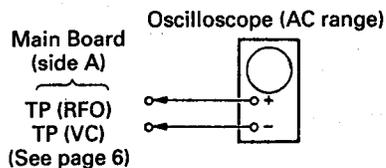
Connection and Adjustment Location: MAIN board (side A)
(See page 9)

Focus Bias Adjustment

Condition:

- Hold the set in horizontal state.

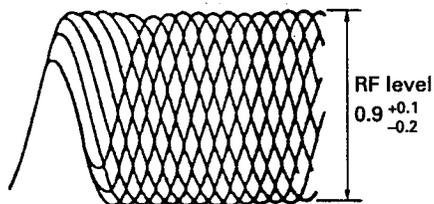
Adjustment Procedure:



1. Hold the set in service mode stop state. (see page 5)
2. Connect the oscilloscope to the test point TP (RFO) of the main board.
3. Move the optical pickup by pressing the $\triangleright\blacktriangleleft$ and $\blacktriangleleft\blacktriangleleft$ keys.
(To display the eye pattern more clearly, move the optical pickup to the music range of the disc.)
4. Put the disc (YEDS-18).
5. Press the $\triangleright\blacksquare$ key.
[From focus searching, focus is turned ON while entering CLV drawing-in mode. Tracking and thread are turned OFF.
6. Press the PLAY MODE key. (Both tracking and thread are turned ON.)
7. Adjust RV503 so that the eye pattern in the waveform of the oscilloscope is clearly displayed. "Clear display of the eye pattern" means that the \diamond shape can be clearly discriminated at the center of the waveform.

RF SIGNAL REFERENCE WAVEFORM (EYE PATTERN)

VOLT DIV : 20 mV (With the 10:1 probe in use)
TIME DIV : 500 ns



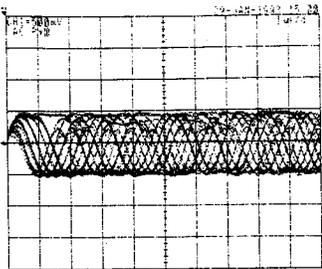
To watch the eye pattern, set the oscilloscope to AC range and increase the vertical sensitivity of the oscilloscope for easy watching.

8. Stop revolving of the disc motor by pressing the \square key.
9. After the completion of adjustment, reset service mode.
(see page 5.)

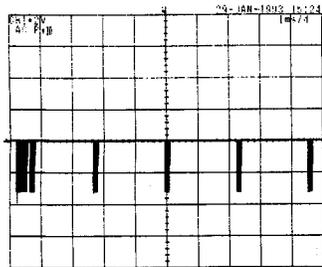
Connection and Adjustment Location: MAIN board (side A)
(See page 9)

• Waveforms

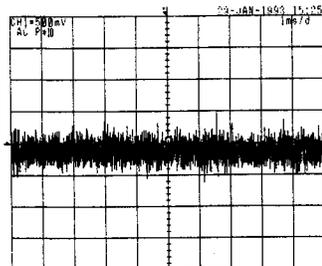
① RF 500mV/DIV 1 μ s/DIV



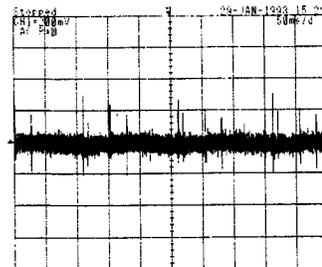
② IC501 ⑬, IC801 ⑭
2V/DIV 1ms/DIV



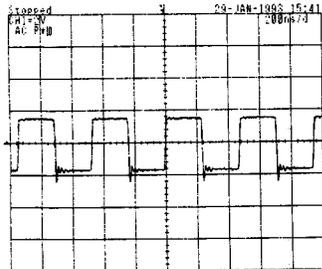
③ IC501 ⑬ 500mV/DIV
1ms/DIV



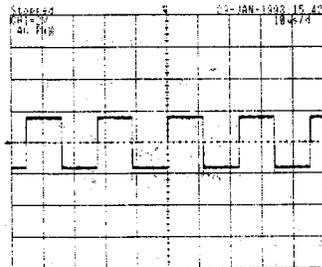
④ IC501 ① 200mV/DIV
50ms/DIV



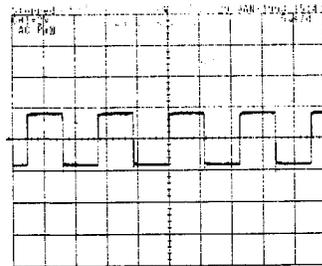
⑤ IC601 ⑳ 2V/DIV 200ns/DIV



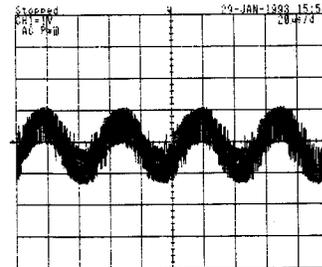
⑥ IC601 ㉑ 2V/DIV 10 μ s/DIV



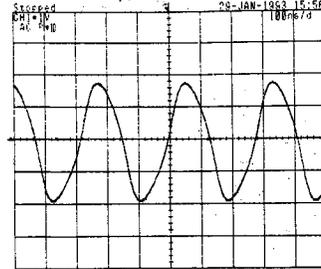
⑦ IC601 ⑲ 2V/DIV 5 μ s/DIV



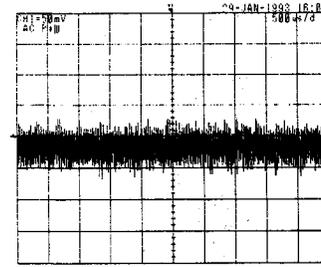
⑧ IC301 ⑫ 1V/DIV 20 μ s/DIV



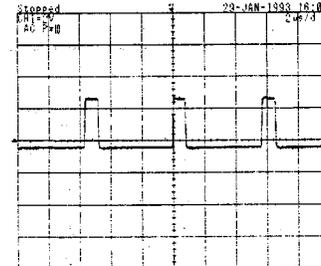
⑨ IC801 ⑮ 1V/DIV 100ns/DIV



⑩ IC504 ⑫ 50mV/DIV
500 μ s/DIV



⑪ IC504 ㉒ 2V/DIV 2 μ s/DIV



SECTION 6 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)

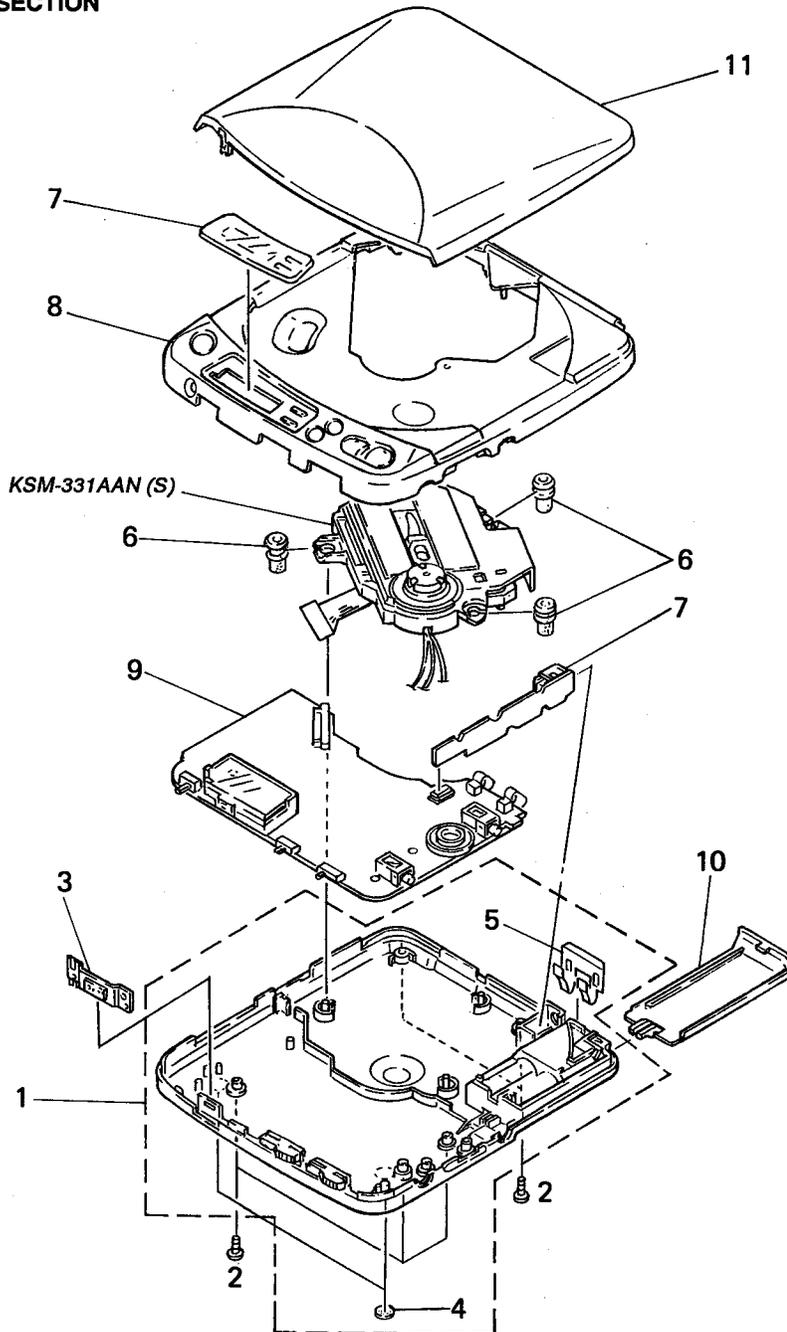
↑
↑
 Parts Color Cabinet's Color

- 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 is given in the last of this parts list.

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

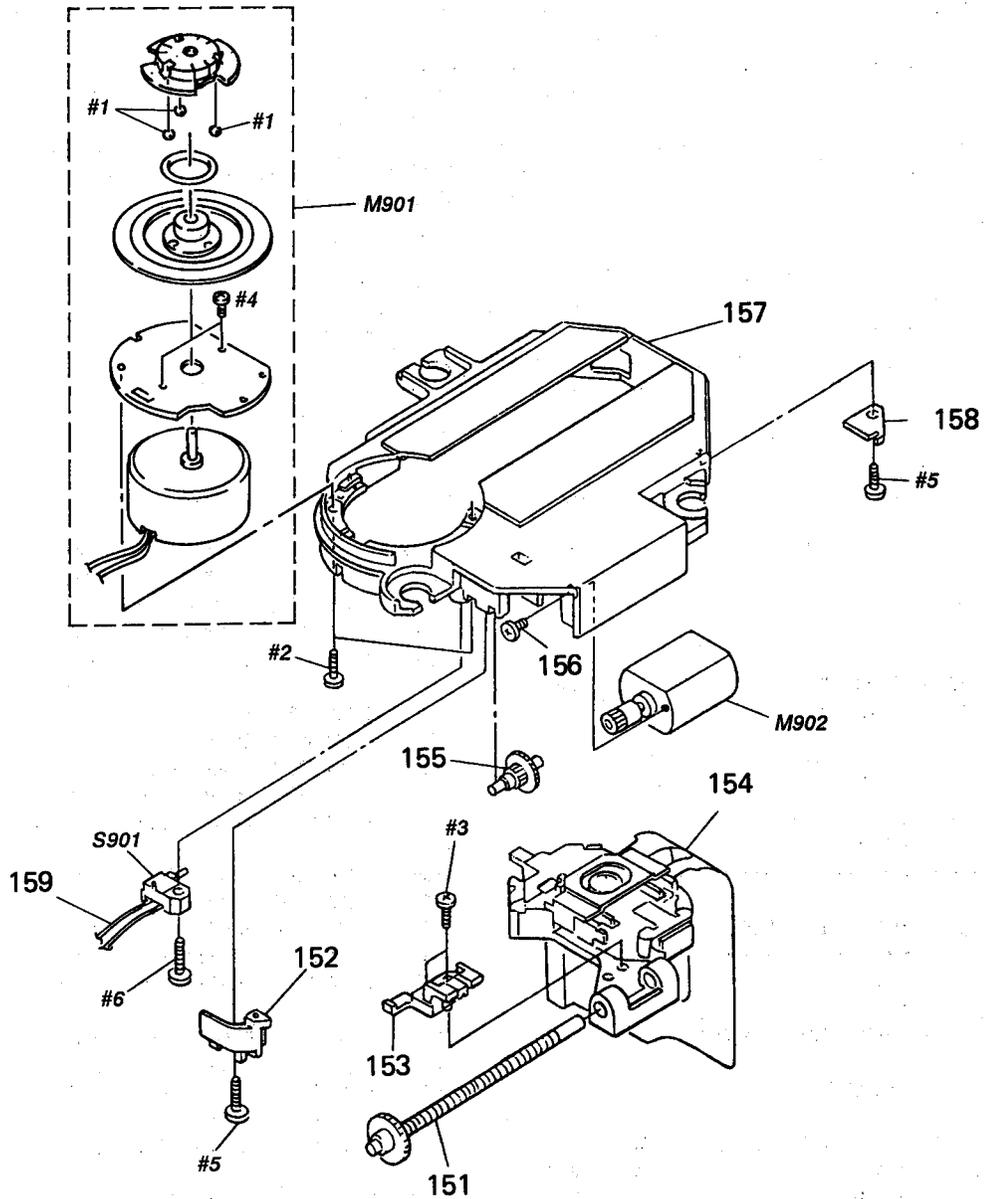
Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

(1) CABINET SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4943-594-1	CABINET (REAR) ASSY		6	4-947-759-01	INSULATOR (I)	
2	4-958-597-01	SCREW		7	4-958-019-01	WINDOW (LCD)	
3	4-958-025-01	KNOB (HOLD)		8	X-4943-760-1	CABINET (FRONT) ASSY	
4	4-912-641-01	FOOT, RUBBER		9	A-3264-214-A	MAIN BOARD, COMPLETE	
5	4-944-349-01	TERMINAL BOARD (RELAY), BATTERY		10	4-958-026-01	LID, BATTERY CASE	
				11	4-958-028-01	LID, UPPER	

(2) OPTICAL PICK-UP BLOCK SECTION
(KSM-331AAN (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	8-848-289-11	DEVICE, OPTICAL (KSS-331A)	
155	2-625-410-01	GEAR (B)	
156	3-732-988-01	SCREW (M2X2.5)	

Ref. No.	Part No.	Description	Remark
157	2-625-415-02	CHASSIS, MD	
158	2-625-411-01	RETAINER, SHAFT	
159	1-948-418-21	HARNES	
M901	X-2625-485-1	MOTOR ASSY, T. T. (SPINDLE)	
M902	X-2625-171-2	MOTOR ASSY, SLED	
S901	1-570-771-11	SWITCH (LIMIT)	

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

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

DC JACK

MAIN

SECTION 7
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

- 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

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

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

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

- DESTINATION
CND: Canadian G :Germany FR :French
EA :Saudi Arabia AEL:French, Austrian, Switzerland, JEB:Tourist
C & SA:Central & South America European AU :Australian
AEC:Netherlands, North European, Spanish, Belgium, Poland
HK :Hong Kong

Table with 4 columns: Ref. No., Part No., Description, Remark. Includes entries for DC JACK BOARD, CAPACITOR, CONNECTOR, and various CERAMIC CHIP and ELECT components.

Table with 4 columns: Ref. No., Part No., Description, Remark. Includes entries for CERAMIC CHIP and ELECT components.

Ref. No.	Part No.	Description	Remark
C348	1-126-602-11	ELECT CHIP	3. 3uF 20% 50V
C350	1-124-778-00	ELECT CHIP	22uF 20% 6. 3V
C361	1-126-603-11	ELECT CHIP	4. 7uF 20% 35V
C364	1-164-234-11	CERAMIC CHIP	1uF 10V
C365	1-164-336-11	CERAMIC CHIP	0. 33uF 25V
C366	1-135-149-21	TANTALUM CHIP	2. 2uF 20% 10V
C368	1-163-077-00	CERAMIC CHIP	0. 1uF 10% 25V
C370	1-163-077-00	CERAMIC CHIP	0. 1uF 10% 25V
C371	1-164-234-11	CERAMIC CHIP	1uF 10V
C372	1-164-222-11	CERAMIC CHIP	0. 22uF 25V
C373	1-162-953-11	CERAMIC CHIP	100PF 5% 50V
C374	1-162-953-11	CERAMIC CHIP	100PF 5% 50V
C375	1-162-964-11	CERAMIC CHIP	0. 001uF 10% 50V
C402	1-124-779-00	ELECT CHIP	10uF 20% 16V
C403	1-124-584-00	ELECT	100uF 20% 10V
C404	1-162-964-11	CERAMIC CHIP	0. 001uF 10% 50V
C405	1-162-949-11	CERAMIC CHIP	47PF 5% 50V
C406	1-164-234-11	CERAMIC CHIP	1uF 10V
C407	1-127-561-11	ELECT(SOLID)	33uF 20% 10V
C408	1-127-561-11	ELECT(SOLID)	33uF 20% 10V
C409	1-163-989-11	CERAMIC CHIP	0. 033uF 10% 25V
C412	1-162-964-11	CERAMIC CHIP	0. 001uF 10% 50V
C413	1-126-153-11	ELECT	22uF 20% 6. 3V
C414	1-164-004-11	CERAMIC CHIP	0. 1uF 10% 25V
C415	1-162-964-11	CERAMIC CHIP	0. 001uF 10% 50V
C416	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C418	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C501	1-124-229-00	ELECT	33uF 20% 10V
C502	1-162-942-11	CERAMIC CHIP	12PF 5% 50V
C503	1-162-970-11	CERAMIC CHIP	0. 01uF 10% 25V
C504	1-124-229-00	ELECT	33uF 20% 10V
C505	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C506	1-163-037-11	CERAMIC CHIP	0. 022uF 10% 25V
C507	1-162-970-11	CERAMIC CHIP	0. 01uF 10% 25V
C508	1-163-989-11	CERAMIC CHIP	0. 033uF 10% 25V
C512	1-162-962-11	CERAMIC CHIP	470PF 10% 50V
C519	1-164-234-11	CERAMIC CHIP	1uF 10V
C523	1-163-809-11	CERAMIC CHIP	0. 047uF 10% 25V
C524	1-162-953-11	CERAMIC CHIP	100PF 5% 50V
C525	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C526	1-135-151-21	TANTALUM CHIP	4. 7uF 20% 4V
C527	1-164-234-11	CERAMIC CHIP	1uF 10V
C528	1-162-949-11	CERAMIC CHIP	47PF 5% 50V
C529	1-126-153-11	ELECT	22uF 20% 6. 3V
C530	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C531	1-162-964-11	CERAMIC CHIP	0. 001uF 10% 50V
C532	1-163-809-11	CERAMIC CHIP	0. 047uF 10% 25V
C533	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C534	1-126-206-11	ELECT CHIP	100uF 20% 6. 3V

Ref. No.	Part No.	Description	Remark
C535	1-124-779-00	ELECT CHIP	10uF 20% 16V
C536	1-124-256-00	ELECT	1. 5uF 20% 50V
C537	1-164-234-11	CERAMIC CHIP	1uF 10V
C538	1-164-005-11	CERAMIC CHIP	0. 47uF 25V
C539	1-164-234-11	CERAMIC CHIP	1uF 10V
C540	1-162-638-11	CERAMIC CHIP	1uF 16V
C541	1-164-234-11	CERAMIC CHIP	1uF 10V
C542	1-164-004-11	CERAMIC CHIP	0. 1uF 10% 25V
C543	1-164-234-11	CERAMIC CHIP	1uF 10V
C544	1-163-139-00	CERAMIC CHIP	820PF 5% 50V
C545	1-162-970-11	CERAMIC CHIP	0. 01uF 10% 25V
C546	1-164-222-11	CERAMIC CHIP	0. 22uF 25V
C547	1-124-256-00	ELECT	1. 5uF 20% 50V
C548	1-124-779-00	ELECT CHIP	10uF 20% 16V
C549	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C550	1-164-005-11	CERAMIC CHIP	0. 47uF 25V
C551	1-164-234-11	CERAMIC CHIP	1uF 10V
C552	1-164-362-11	CERAMIC CHIP	470PF 5% 50V
C553	1-164-245-11	CERAMIC CHIP	0. 015uF 10% 25V
C555	1-162-932-11	CERAMIC CHIP	2PF 0. 25PF 50V
C556	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C557	1-162-970-11	CERAMIC CHIP	0. 01uF 10% 25V
C558	1-164-005-11	CERAMIC CHIP	0. 47uF 25V
C559	1-124-229-00	ELECT	33uF 20% 10V
C560	1-164-337-11	CERAMIC CHIP	2. 2uF 16V
C561	1-162-638-11	CERAMIC CHIP	1uF 16V
C562	1-162-968-11	CERAMIC CHIP	0. 0047uF 10% 50V
C563	1-164-360-11	CERAMIC CHIP	0. 1uF 16V
C564	1-163-077-00	CERAMIC CHIP	0. 1uF 10% 25V
C565	1-124-584-00	ELECT	100uF 20% 10V
C566	1-162-970-11	CERAMIC CHIP	0. 01uF 10% 25V
C601	1-135-145-11	TANTALUM CHIP	0. 47uF 10% 35V
C602	1-162-637-11	CERAMIC CHIP	0. 47uF 16V
C603	1-162-965-11	CERAMIC CHIP	0. 0015uF 10% 50V
C604	1-163-809-11	CERAMIC CHIP	0. 047uF 10% 25V
C606	1-162-953-11	CERAMIC CHIP	100PF 5% 50V
C607	1-163-037-11	CERAMIC CHIP	0. 022uF 10% 25V
C609	1-162-953-11	CERAMIC CHIP	100PF 5% 50V
C610	1-126-157-11	ELECT	10uF 20% 16V
C612	1-162-953-11	CERAMIC CHIP	100PF 5% 50V
C613	1-162-947-11	CERAMIC CHIP	33PF 5% 50V
C801	1-162-638-11	CERAMIC CHIP	1uF 16V
C804	1-126-601-11	ELECT CHIP	2. 2uF 20% 50V
C805	1-124-257-00	ELECT	2. 2uF 20% 50V
C806	1-162-638-11	CERAMIC CHIP	1uF 16V
< CONNECTOR >			
* CN401	1-580-712-21	CONNECTOR, BOARD TO BOARD 5P	
CN501	1-566-534-11	CONNECTOR, FPC (ZIF) 18P	

MAIN

Ref. No.	Part No.	Description	Remark
* CN502	1-695-320-31	PIN, CONNECTOR (1.5MM) (SMD) 2P	
* CN503	1-695-320-11	PIN, CONNECTOR (1.5MM) (SMD) 2P	
* CN504	1-695-320-51	PIN, CONNECTOR (1.5MM) (SMD) 2P	
< DIODE >			
D101	8-719-422-46	DIODE MA8056	
D201	8-719-422-46	DIODE MA8056	
D301	8-719-941-86	DIODE DAN202U	
D302	8-719-941-86	DIODE DAN202U	
D303	8-719-986-76	DIODE SB007W03C	
D304	8-719-421-27	DIODE MA728	
D305	8-719-941-86	DIODE DAN202U	
D306	8-719-422-46	DIODE MA8056	
D401	8-719-941-86	DIODE DAN202U	
D402	8-719-941-86	DIODE DAN202U	
D404	8-719-941-86	DIODE DAN202U	
D501	8-719-989-73	DIODE SB007T03C	
D502	8-719-986-76	DIODE SB007W03C	
D503	8-719-986-76	DIODE SB007W03C	
D801	8-719-941-86	DIODE DAN202U	
< FERRITE BEAD >			
FB101	1-414-135-11	INDUCTOR CHIP OUH	
FB201	1-414-135-11	INDUCTOR CHIP OUH	
FB301	1-414-135-11	INDUCTOR CHIP OUH	
FB302	1-414-135-11	INDUCTOR CHIP OUH	
< IC >			
IC301	8-759-164-14	IC TC9276F-EL	
IC302	8-759-710-55	IC NJM2100M	
IC303	8-759-166-95	IC LA4805V-TLM	
IC501	8-752-063-45	IC CXA1672Q	
IC502	8-759-710-55	IC NJM2100M	
IC504	8-759-164-13	IC SC111280FU	
IC505	8-759-031-84	IC SC7S04F	
IC601	8-752-357-68	IC CXD2517Q	
IC602	8-759-082-16	IC SC14S70FER	
IC801	8-752-842-16	IC CXP508L4-003Q	
IC802	8-759-998-92	IC LM393D	
< JACK >			
J301	1-565-287-11	JACK (PHONES)	
J302	1-565-287-61	JACK (LINE OUT)	
< JUMPER RESISTOR >			
JR302	1-216-296-00	METAL CHIP	0 5% 1/8W
JR303	1-216-864-11	METAL CHIP	0 5% 1/16W
JR304	1-216-296-00	METAL CHIP	0 5% 1/8W
JR401	1-216-864-11	METAL CHIP	0 5% 1/16W

Ref. No.	Part No.	Description	Remark
JR404	1-216-296-00	METAL CHIP	0 5% 1/8W
JR503	1-216-295-00	METAL CHIP	0 5% 1/10W
JR504	1-216-864-11	METAL CHIP	0 5% 1/16W
JR505	1-216-864-11	METAL CHIP	0 5% 1/16W
JR506	1-216-864-11	METAL CHIP	0 5% 1/16W
JR507	1-216-296-00	METAL CHIP	0 5% 1/8W
JR508	1-216-296-00	METAL CHIP	0 5% 1/8W
JR509	1-216-864-11	METAL CHIP	0 5% 1/16W
JR511	1-216-864-11	METAL CHIP	0 5% 1/16W
JR512	1-216-296-00	METAL CHIP	0 5% 1/8W
JR513	1-216-296-00	METAL CHIP	0 5% 1/8W
JR514	1-216-296-00	METAL CHIP	0 5% 1/8W
JR515	1-216-864-11	METAL CHIP	0 5% 1/16W
JR601	1-216-864-11	METAL CHIP	0 5% 1/16W
JR602	1-216-296-00	METAL CHIP	0 5% 1/8W
JR603	1-216-296-00	METAL CHIP	0 5% 1/8W
JR604	1-216-864-11	METAL CHIP	0 5% 1/16W
JR605	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	INDUCTOR CHIP 2.2uH	
L201	1-410-997-31	INDUCTOR CHIP 2.2uH	
L301	1-412-002-31	INDUCTOR CHIP 4.7uH	
L302	1-410-997-31	INDUCTOR CHIP 2.2uH	
L303	1-410-997-31	INDUCTOR CHIP 2.2uH	
L304	1-410-997-31	INDUCTOR CHIP 2.2uH	
L305	1-410-997-31	INDUCTOR CHIP 2.2uH	
L401	1-412-622-51	INDUCTOR 10uH	
L403	1-412-029-11	INDUCTOR CHIP 10uH	
L404	1-412-029-11	INDUCTOR CHIP 10uH	
L501	1-412-031-11	INDUCTOR CHIP 47uH	
L502	1-412-031-11	INDUCTOR CHIP 47uH	
L503	1-412-031-11	INDUCTOR CHIP 47uH	
L504	1-412-031-11	INDUCTOR CHIP 47uH	
L505	1-412-029-11	INDUCTOR CHIP 10uH	
L506	1-412-029-11	INDUCTOR CHIP 10uH	
< LIQUID CRYSTAL DISPLAY >			
LCD801	1-810-043-11	DISPLAY PANEL, LIQUID CRYSTAL	
< TRANSISTOR >			
Q103	8-729-400-56	TRANSISTOR 2SD1328-T	
Q203	8-729-400-56	TRANSISTOR 2SD1328-T	
Q301	8-729-402-45	TRANSISTOR UN5212	
Q302	8-729-422-28	TRANSISTOR 2SD601A-R	
Q303	8-729-402-55	TRANSISTOR 2SB1218A-R	

Ref. No.	Part No.	Description	Remark
Q306	8-729-810-13	TRANSISTOR UN5112	
Q310	8-729-810-13	TRANSISTOR UN5112	
Q311	8-729-402-93	TRANSISTOR UN5214-TW	
Q401	8-729-924-39	TRANSISTOR DTC143XU	
Q402	8-729-402-45	TRANSISTOR UN5212	
Q403	8-729-422-37	TRANSISTOR 2SB709A-R	
Q404	8-729-924-62	TRANSISTOR DTC113ZU	
Q406	8-729-923-36	TRANSISTOR 2SD1963-Q.R	
Q407	8-729-400-56	TRANSISTOR 2SD1328-T	
Q408	8-729-921-84	TRANSISTOR 2SB1182F5-Q	
Q409	8-729-402-81	TRANSISTOR XN4501	
Q410	8-729-140-75	TRANSISTOR 2SD999-CLCK	
Q411	8-729-422-37	TRANSISTOR 2SB709A-R	
Q412	8-729-422-28	TRANSISTOR 2SD601A-R	
Q501	8-729-402-93	TRANSISTOR UN5214-TW	
Q502	8-729-422-37	TRANSISTOR 2SB709A-R	
Q503	8-729-400-56	TRANSISTOR 2SD1328-T	
Q504	8-729-810-13	TRANSISTOR UN5112	
Q505	8-729-402-93	TRANSISTOR UN5214-TW	
Q506	8-729-810-13	TRANSISTOR UN5112	
Q601	8-729-402-93	TRANSISTOR UN5214-TW	
Q801	8-729-810-13	TRANSISTOR UN5112	
Q802	8-729-402-93	TRANSISTOR UN5214-TW	
< RESISTOR >			
R101	1-216-834-11	METAL CHIP 12K 5%	1/16W
R102	1-216-834-11	METAL CHIP 12K 5%	1/16W
R103	1-216-837-11	METAL CHIP 22K 5%	1/16W
R104	1-216-837-11	METAL CHIP 22K 5%	1/16W
R105	1-216-839-11	METAL CHIP 33K 5%	1/16W
R106	1-216-839-11	METAL CHIP 33K 5%	1/16W
R107	1-216-843-11	METAL CHIP 68K 5%	1/16W
R108	1-216-843-11	METAL CHIP 68K 5%	1/16W
R110	1-216-843-11	METAL CHIP 68K 5%	1/16W
R111	1-216-813-11	METAL CHIP 220 5%	1/16W
R112	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R113	1-216-835-11	METAL CHIP 15K 5%	1/16W
R120	1-216-845-11	METAL CHIP 100K 5%	1/16W
R121	1-216-813-11	METAL CHIP 220 5%	1/16W
R127	1-216-789-11	METAL CHIP 2.2 5%	1/16W
R128	1-216-835-11	METAL CHIP 15K 5%	1/16W
R201	1-216-834-11	METAL CHIP 12K 5%	1/16W
R202	1-216-834-11	METAL CHIP 12K 5%	1/16W
R203	1-216-837-11	METAL CHIP 22K 5%	1/16W
R204	1-216-837-11	METAL CHIP 22K 5%	1/16W
R205	1-216-839-11	METAL CHIP 33K 5%	1/16W
R206	1-216-839-11	METAL CHIP 33K 5%	1/16W
R207	1-216-843-11	METAL CHIP 68K 5%	1/16W
R208	1-216-843-11	METAL CHIP 68K 5%	1/16W

Ref. No.	Part No.	Description	Remark
R210	1-216-843-11	METAL CHIP 68K 5%	1/16W
R211	1-216-813-11	METAL CHIP 220 5%	1/16W
R212	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R213	1-216-835-11	METAL CHIP 15K 5%	1/16W
R220	1-216-845-11	METAL CHIP 100K 5%	1/16W
R221	1-216-813-11	METAL CHIP 220 5%	1/16W
R227	1-216-789-11	METAL CHIP 2.2 5%	1/16W
R228	1-216-835-11	METAL CHIP 15K 5%	1/16W
R301	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R302	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R304	1-216-009-00	METAL CHIP 22 5%	1/10W
R307	1-216-833-11	METAL CHIP 10K 5%	1/16W
R314	1-216-845-11	METAL CHIP 100K 5%	1/16W
R325	1-216-809-11	METAL CHIP 100 5%	1/16W
R327	1-216-845-11	METAL CHIP 100K 5%	1/16W
R328	1-216-789-11	METAL CHIP 2.2 5%	1/16W
R329	1-218-292-11	METAL GLAZE 20K 5%	1/16W
R330	1-216-829-11	METAL CHIP 4.7K 5%	1/16W
R331	1-216-843-11	METAL CHIP 68K 5%	1/16W
R332	1-216-833-11	METAL CHIP 10K 5%	1/16W
R333	1-216-833-11	METAL CHIP 10K 5%	1/16W
R334	1-216-837-11	METAL CHIP 22K 5%	1/16W
R335	1-218-347-11	METAL GLAZE 91K 5%	1/16W
R336	1-216-797-11	METAL CHIP 10 5%	1/16W
R401	1-216-821-11	METAL CHIP 1K 5%	1/16W
R402	1-216-841-11	METAL CHIP 47K 5%	1/16W
R403	1-216-833-11	METAL CHIP 10K 5%	1/16W
R404	1-216-833-11	METAL CHIP 10K 5%	1/16W
R405	1-216-833-11	METAL CHIP 10K 5%	1/16W
R406	1-216-835-11	METAL CHIP 15K 5%	1/16W
R408	1-216-809-11	METAL CHIP 100 5%	1/16W
R409	1-216-797-11	METAL CHIP 10 5%	1/16W
R410	1-216-819-11	METAL CHIP 680 5%	1/16W
R412	1-216-804-11	METAL CHIP 39 5%	1/16W
R413	1-218-345-11	METAL CHIP 9.1K 0.50%	1/16W
R416	1-216-809-11	METAL CHIP 100 5%	1/16W
R417	1-216-825-11	METAL CHIP 2.2K 5%	1/16W
R418	1-216-814-11	METAL CHIP 270 5%	1/16W
R501	1-216-001-00	METAL CHIP 10 5%	1/10W
R502	1-216-833-11	METAL CHIP 10K 5%	1/16W
R503	1-218-720-11	METAL CHIP 15K 0.50%	1/16W
R504	1-218-720-11	METAL CHIP 15K 0.50%	1/16W
R505	1-218-720-11	METAL CHIP 15K 0.50%	1/16W
R506	1-218-720-11	METAL CHIP 15K 0.50%	1/16W
R510	1-216-833-11	METAL CHIP 10K 5%	1/16W
R511	1-218-296-11	METAL GLAZE 75K 5%	1/16W
R512	1-218-720-11	METAL CHIP 15K 0.50%	1/16W
R513	1-216-834-11	METAL CHIP 12K 5%	1/16W
R514	1-216-840-11	METAL CHIP 39K 5%	1/16W

MAIN

Ref. No.	Part No.	Description	Remark
R516	1-216-839-11	METAL CHIP	33K 5% 1/16W
R517	1-216-845-11	METAL CHIP	100K 5% 1/16W
R520	1-218-344-11	METAL GLAZE	7.5K 5% 1/16W
R521	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
R523	1-216-857-11	METAL CHIP	1M 5% 1/16W
R524	1-216-837-11	METAL CHIP	22K 5% 1/16W
R525	1-216-837-11	METAL CHIP	22K 5% 1/16W
R526	1-216-843-11	METAL CHIP	68K 5% 1/16W
R527	1-216-855-11	METAL CHIP	680K 5% 1/16W
R528	1-216-855-11	METAL CHIP	680K 5% 1/16W
R529	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R530	1-216-845-11	METAL CHIP	100K 5% 1/16W
R531	1-216-843-11	METAL CHIP	68K 5% 1/16W
R532	1-216-849-11	METAL CHIP	220K 5% 1/16W
R533	1-216-837-11	METAL CHIP	22K 5% 1/16W
R535	1-216-821-11	METAL CHIP	1K 5% 1/16W
R536	1-216-849-11	METAL CHIP	220K 5% 1/16W
R538	1-216-845-11	METAL CHIP	100K 5% 1/16W
R539	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R540	1-216-842-11	METAL CHIP	56K 5% 1/16W
R541	1-216-857-11	METAL CHIP	1M 5% 1/16W
R542	1-216-827-11	METAL CHIP	3.3K 5% 1/16W
R543	1-216-836-11	METAL CHIP	18K 5% 1/16W
R544	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
R545	1-216-827-11	METAL CHIP	3.3K 5% 1/16W
R546	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R547	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
R548	1-216-820-11	METAL CHIP	820 5% 1/16W
R549	1-216-823-11	METAL CHIP	1.5K 5% 1/16W
R550	1-216-821-11	METAL CHIP	1K 5% 1/16W
R551	1-216-832-11	METAL CHIP	8.2K 5% 1/16W
R601	1-216-833-11	METAL CHIP	10K 5% 1/16W
R603	1-216-827-11	METAL CHIP	3.3K 5% 1/16W
R604	1-216-827-11	METAL CHIP	3.3K 5% 1/16W
R605	1-216-833-11	METAL CHIP	10K 5% 1/16W
R607	1-216-841-11	METAL CHIP	47K 5% 1/16W
R609	1-216-833-11	METAL CHIP	10K 5% 1/16W
R610	1-216-857-11	METAL CHIP	1M 5% 1/16W
R611	1-216-857-11	METAL CHIP	1M 5% 1/16W
R801	1-216-841-11	METAL CHIP	47K 5% 1/16W
R802	1-216-833-11	METAL CHIP	10K 5% 1/16W
R803	1-216-837-11	METAL CHIP	22K 5% 1/16W
R804	1-216-833-11	METAL CHIP	10K 5% 1/16W
R805	1-218-344-11	METAL GLAZE	7.5K 5% 1/16W
R806	1-216-837-11	METAL CHIP	22K 5% 1/16W
R807	1-216-837-11	METAL CHIP	22K 5% 1/16W
R808	1-216-837-11	METAL CHIP	22K 5% 1/16W
R809	1-216-845-11	METAL CHIP	100K 5% 1/16W
R810	1-216-804-11	METAL CHIP	39 5% 1/16W

Ref. No.	Part No.	Description	Remark
R811	1-216-836-11	METAL CHIP	18K 5% 1/16W
R812	1-218-732-11	METAL CHIP	47K 0.50% 1/16W
R813	1-218-345-11	METAL CHIP	9.1K 0.50% 1/16W
R814	1-216-842-11	METAL CHIP	56K 5% 1/16W
R815	1-218-748-11	METAL CHIP	220K 0.50% 1/16W
R816	1-216-849-11	METAL CHIP	220K 5% 1/16W
R817	1-216-837-11	METAL CHIP	22K 5% 1/16W
R818	1-216-845-11	METAL CHIP	100K 5% 1/16W

< VARIABLE RESISTOR >

RV301	1-223-382-11	RES, VAR, CARBON 10K/10K (VOL)
RV501	1-238-602-11	RES, ADJ, CARBON 47K
RV502	1-238-601-11	RES, ADJ, CARBON 22K
RV503	1-238-602-11	RES, ADJ, CARBON 47K
RV504	1-238-601-11	RES, ADJ, CARBON 22K

< SWITCH >

S301	1-571-506-41	SWITCH, SLIDE (BASS BOOST)
S302	1-571-506-41	SWITCH, SLIDE (AVLS)
S801	1-570-397-11	SWITCH, SLIDE (HOLD)
S802	1-570-953-11	SWITCH, PUSH (1 KEY) (OPEN)
S803	1-572-198-11	SWITCH, KEYBOARD (▶)
S804	1-572-198-11	SWITCH, KEYBOARD (■)
S805	1-572-198-11	SWITCH, KEYBOARD (◀◀)
S806	1-572-198-11	SWITCH, KEYBOARD (▶▶)
S807	1-572-198-11	SWITCH, KEYBOARD (PLAY MODE)
S808	1-572-198-11	SWITCH, KEYBOARD (REPEAT/ENTER)

< TRANSFORMER >

T401	1-450-401-11	TRANSFORMER, CONVERTER DC-DC
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< VIBRATOR >

X301	1-579-345-11	VIBRATOR, CERAMIC (16.934MHz)
X801	1-579-956-11	VIBRATOR, CERAMIC (3.58MHz)

MISCELLANEOUS

△154	8-848-289-11	DEVICE, OPTICAL (KSS-331A)
159	1-948-418-21	HARNES
M901	X-2625-485-1	MOTOR ASSY, T. T. (SPINDLE)
M902	X-2625-171-2	MOTOR ASSY, SLED
S901	1-570-771-11	SWITCH (LIMIT)

ACCESSORIES & PACKING MATERIALS

△	1-467-007-21	ADAPTOR, AC (AC-E455) (AU)
△	1-467-007-21	ADAPTOR, AC (AC-E455) (AU)

<p>The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.</p>	<p>Les composants identifiés par une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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Ref. No.	Part No.	Description	Remark
△	1-467-008-11	ADAPTOR, AC (AC-E455) (AEC, AEL, HK, G, FR)	
△	1-467-008-11	ADAPTOR, AC (AC-E455) (AEL, HK, G, FR)	
△	1-467-009-11	ADAPTOR, AC (AC-E455) (US, CND, C & SA)	
△	1-467-009-11	ADAPTOR, AC (AC-E455) (US, CND, C & SA)	
△	1-467-011-11	ADAPTOR, AC (AC-E455) (E, JEB)	
△	1-467-012-11	ADAPTOR, AC (AC-E455) (EA)	
△	1-467-013-11	ADAPTOR, AC (AC-E455) (UK)	
	1-555-658-21	CORD, CONNECTION	
	1-569-007-11	ADAPTER, CONVERSION 2P (E, JEB)	
	1-569-008-11	ADAPTER, CONVERSION 2P (HK, EA)	
	1-575-195-11	CORD, CONNECTION	
*	3-703-034-01	LABEL, CAUTION (JEB)	
	3-752-086-01	INSTRUCTION	
	3-756-636-02	MANUAL, INSTRUCTION (JAPANESE) (JEB)	
	3-756-636-12	MANUAL, INSTRUCTION (SPANISH) (AEC, HK, E, C & SA, EA, JEB)	
	3-756-636-22	MANUAL, INSTRUCTION (ENGLISH) (US, CND, AEC, AEL, UK, HK, E, C & SA, EA, AU, JEB)	
	3-756-636-32	MANUAL, INSTRUCTION (FRENCH) (CND, AEC, AEL, HK, E, C & SA, FR, EA, JEB)	
	3-756-636-42	MANUAL, INSTRUCTION (DUTCH) (AEC)	
	3-756-636-52	MANUAL, INSTRUCTION (SWEDISH) (AEC)	
	3-756-636-62	MANUAL, INSTRUCTION (PORTUGUESE) (AEC)	
	3-756-636-72	MANUAL, INSTRUCTION (GERMAN) (AEL, G)	
	3-756-636-82	MANUAL, INSTRUCTION (ITALIAN) (AEL)	
	3-756-636-92	MANUAL, INSTRUCTION (CHINESE, KOREAN) (JEB)	
*	4-957-223-01	INDIVIDUAL CARTON (AEC, AEL, UK, E, HK, C & SA, G, FR, EA, AU, JEB)	
*	4-957-225-01	CUSHION (LOWER) (AEC, AEL, UK, C & SA, G, FR, AU, JEB)	
*	4-957-230-01	CUSHION (UPPER)	
*	4-957-231-01	CUSHION (LOWER) (US)	
*	4-957-232-01	INDIVIDUAL CARTON (US, CND)	
*	4-957-234-01	CUSHION (LOWER) (CND, HK, E, EA)	
	8-953-487-90	HEADPHONE MDR-14B SET (US)	
	8-953-538-91	HEADPHONE MDR-E741//K1 SET (CND, AEC, AEL, UK, HK, E, C & SA, G, FR, EA, AU, JEB)	

HARDWARE LIST

- #1 7-671-155-01 STEEL BALL 3.0
- #2 7-627-552-48 SCREW, PRECISION +P1. 7X4 TYPE 1
- #3 7-627-852-17 SCREW, PRECISION +P1. 7X4 TYPE 3
- #4 7-627-552-28 SCREW, PRECISION +P1. 7X2
- #5 7-685-104-19 SCREW (2X6), TAPPING (B)
- #6 7-685-105-19 SCREW (2X8), TAPPING (B)

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

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

