

CDP-C20/C26/C30

SERVICE MANUAL

US Model
CDP-C20/C26/C30

Canadian Model
CDP-C30

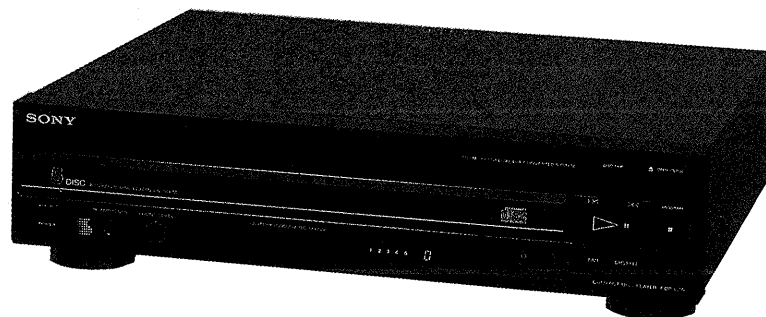


Photo : CDP-C30

SPECIFICATIONS

Compact disc player

System	Compact disc digital audio system
Laser	Semiconductor laser ($\lambda = 780 \text{ nm}$) Emission duration: continuous
Laser output	Max. $44.6 \mu\text{W}$ * * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.
Frequency response	2 Hz - 20 kHz (+1 dB, -2 dB)
Signal to noise ratio	More than 100 dB
Dynamic range	More than 88 dB
Harmonic distortion	Less than 0.05% (1 kHz)
Channel separation	More than 95 dB (1 kHz)
Wow and flutter	Below measurable limit
Outputs	LINE OUT (phono jacks) Output level 2 V (at 50 kilohms) Load impedance over 10 kilohms HEADPHONES (stereo phone jack) (CDP-C30, C20 only) Output level 0 - 2.4 mW (variable) (at 32 ohms)

General

Power requirements	120 V AC, 60 Hz
Power consumption	10 W
Dimensions	Approx. 430 × 110 × 400 mm (w/h/d) ($17 \times 4\frac{3}{8} \times 15\frac{3}{4}$ inches) not including projecting parts and controls
Weight	Approx. 5.8 kg (12 lbs 13 oz), net

Remote commander (supplied only for the CDP-C30, C26)



Remote control system	Infrared control
Power requirements	3 V DC with two size AA (R6) batteries
Dimensions	Approx. 43 × 20 × 175 mm (w/h/d) ($1\frac{11}{16} \times \frac{13}{16} \times 6\frac{15}{16}$ inches)
Weight	Approx. 110 g (4 oz) including batteries

Supplied accessories


Audio signal connecting cord	(phono plug × 2 ↔ phono plug × 2) (1)
CDP-C30, C26 only:	Sony SUM-3 (NS) batteries (2)

Design and specifications subject to change without notice.

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.

COMPACT DISC PLAYER

SONY®



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SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check 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)

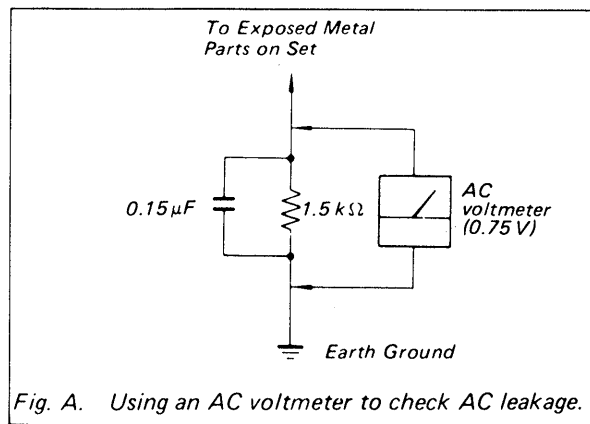


Fig. A. Using an AC voltmeter to check AC leakage.

SERVICING 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.

CAUTION

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

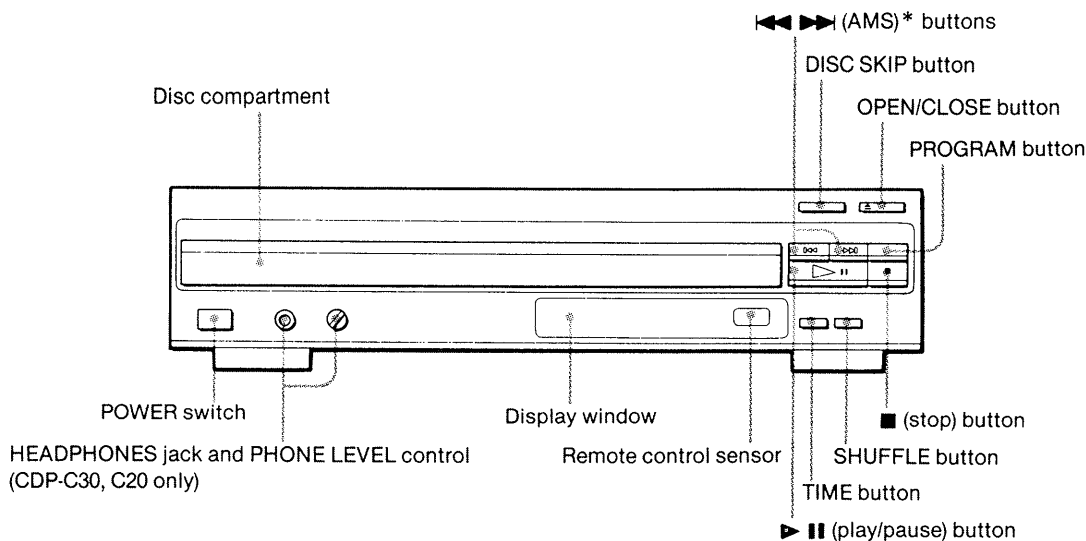
NOTES ON LASER DIODE EMISSION CHECK

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.

SECTION 1 GENERAL

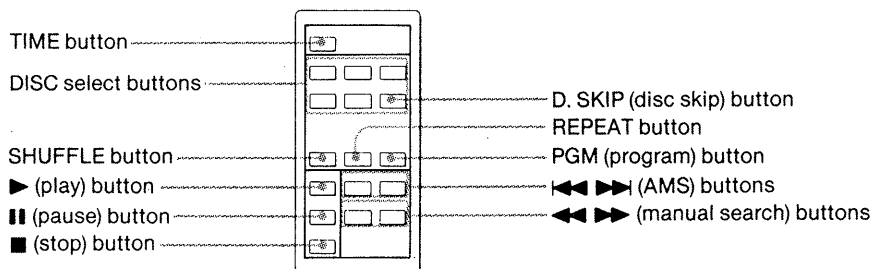
1-1. LOCATION AND FUNCTION OF CONTROLS

Front Panel



* AMS is the abbreviation of Automatic Music Sensor.

Remote Commander (CDP-C30, C-26 only)



Following functions are operated only by using the remote commander.

Direct disc selection

You can select a discs directly only by pressing a numeric button on the remote commander.

Manual search

You can locate a particular point in a selection by pressing the ◀▶ or ▶▶ button on the remote commander.

Repeat play

You can play your programmed selections or all the discs by pressing the REPEAT button on the remote commander.

	CDP-C30	CDP-C26	CDP-C20 using the remote commander supplied with the Sony stereo systems.
Direct disc selection	○	○	X
Manual search	○	○	X
Repeat play	○	○	○

○: possible X: not possible

Notes on the remote commander and remote control operation

- Keep the commander away from extremely hot or humid places.
- Avoid dropping any foreign objects into the commander casing, particularly when replacing the batteries.

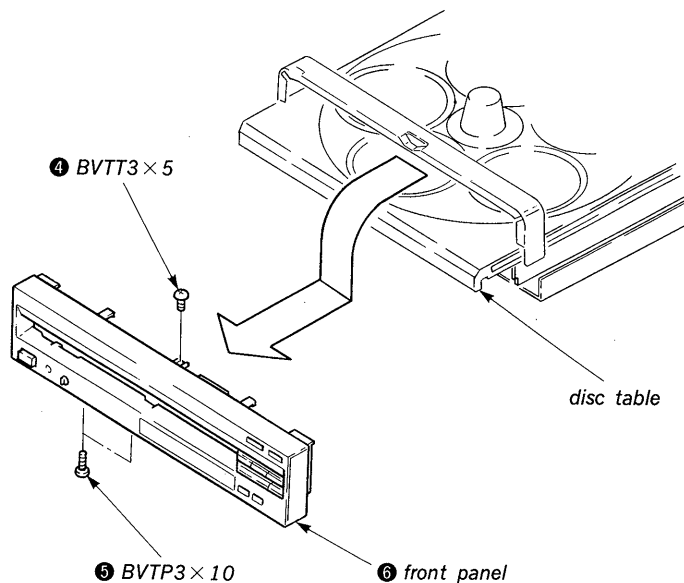
- To avoid a malfunction, do not simultaneously depress two or more buttons.
- Avoid exposure of the remote control sensor to direct sunlight or lighting apparatus. Such exposure can cause a malfunction.

SECTION 2 DISASSEMBLY

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

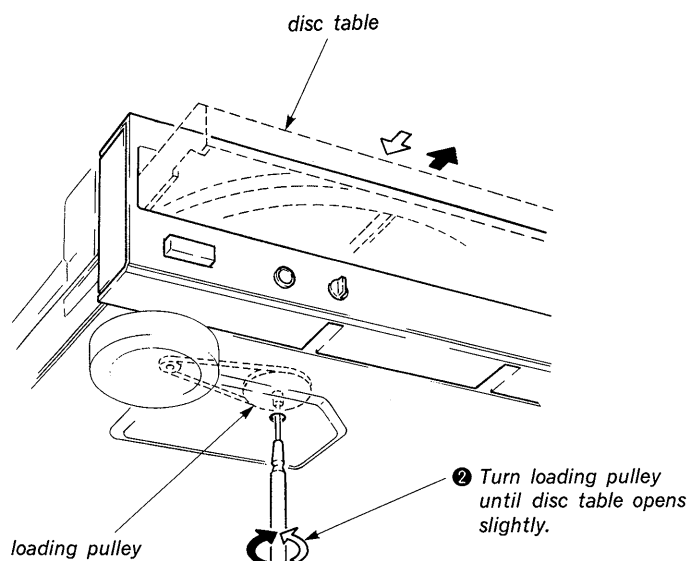
2-1. FRONT PANEL (A)

- ❶ Remove top cover.
- ❷ Press POWER switch to turn the power on.
- ❸ Press OPEN/CLOSE button to open disc table.



2-2. FRONT PANEL (B)

- ❶ Remove top cover.
- ❸ Perform steps A-4 to A-6.

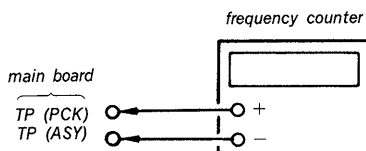


SECTION 3 ELECTRICAL ADJUSTMENTS

1. Perform adjustments in the order given.
2. Use YEDS-18 (Part No : 3-702-101-01) disc unless otherwise indicated.
3. Use the oscilloscope with more than 10 MΩ impedance.

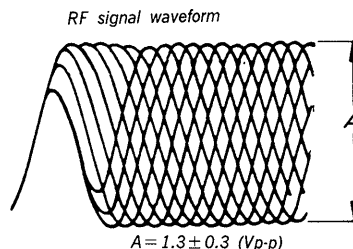
RF PLL Frequency Adjustment/Lock Frequency Check

Procedure :



1. Connect test point TP (ASY) to ground with lead wire.
2. Turn POWER switch on.
3. Connect the frequency counter to test point TP (PCK).
4. Adjust RV5 so that the reading on frequency counter is 4.3218MHz±30kHz.
..... (RF PLL frequency adjustment)
5. Remove lead wire connecting TP (ASY) to ground.
6. Put disc (YEDS-18) in and press ▷ PLAY button.
7. Confirm that the reading on frequency counter is 4.3218MHz.
..... (Lock frequency check)

1. Connect oscilloscope to test point TP (RF) and test point TP (RFG).
2. Turn POWER switch on.
3. Put disc (YEDS-18) in and press ▷ PLAY button.
4. Adjust RV2 for an optimum waveform eye pattern or so that the peak is maximum. Optimum eye pattern means that shape "◇" can be clearly distinguished at the center of the waveform.



REFERENCE

Focus/Tracking Gain Adjustments

A frequency response analyzer 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 problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow up (vertical and horizontal) relative to mechanical noise and shock when the 2-axis device operate.

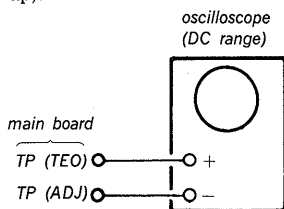
However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

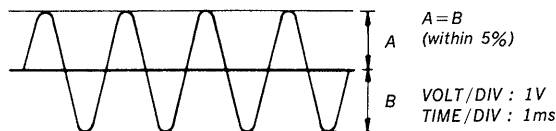
E-F Balance Adjustment

This adjustment should be made when replacing TOP (T-type Optical Pick-up).

Procedure :



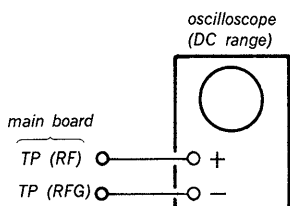
1. Connect test point TP (ADJ) and test point TP (TES) to ground with lead wire.
2. Connect oscilloscope to test point TP (TEO).
3. Turn POWER switch on.
4. Put disc (YEDS-18) in and press ▷ PLAY button.
5. Adjust RV1 so that the traverse waveform is symmetrical above and below.
6. After adjustment, remove the lead wire connected in step 5.



Focus Bias Adjustment

This adjustment should be made when replacing TOP (T-type Optical Pick-up).

Procedure :



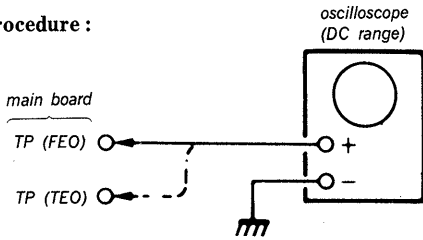
Symptoms	Gain	Focus	Tracking
• The time until music starts becomes longer for ■ STOP → ▷ PLAY or automatic selection. (◀◀, ▶▶ buttons pressed.) (Normally takes about 1 seconds.)		low	low or high
• Music does not start and disc continues to rotate for ■ STOP → ▷ PLAY or automatic selection. (◀◀, ▶▶ buttons pressed.)		—	low
• Disc table opens shortly after ■ STOP → ▷ PLAY.		low or high	—
• Sound is interrupted during PLAY or time counter display stops progressing.		—	low
• More noise during 2-axis device operation.		high	high

The following is a simple adjustment method.

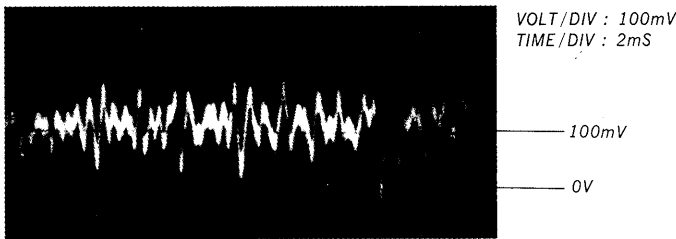
—Primary Adjustment—

Note : Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the position after the primary adjustment are only a little different, return the controls to the original position.

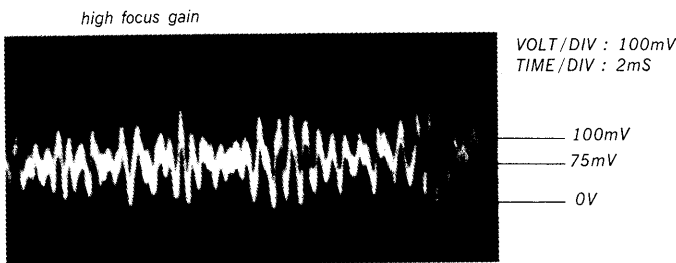
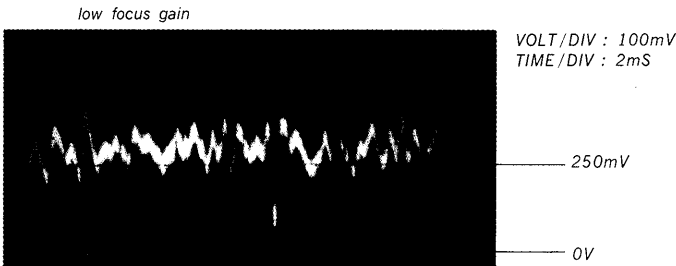
Procedure :



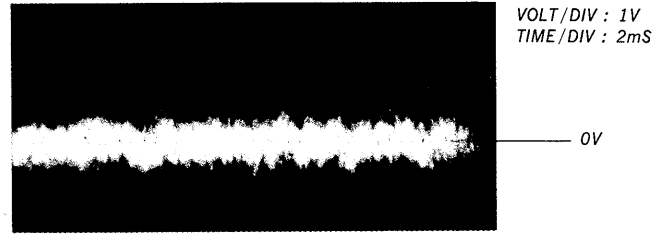
1. Keep the set horizontal.
(If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2-axis device.)
2. Insert disc (YEDS-18: Fifth Selection) and press ► PLAY button.
3. Connect oscilloscope to main amp board TP (FEO).
4. Adjust RV3 so that the waveform is as shown in the figure below. (focus gain adjustment)



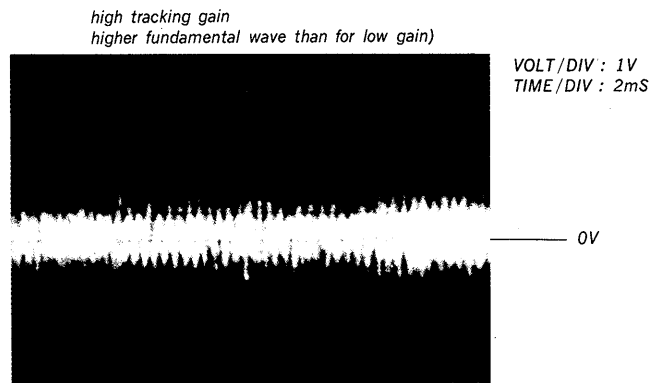
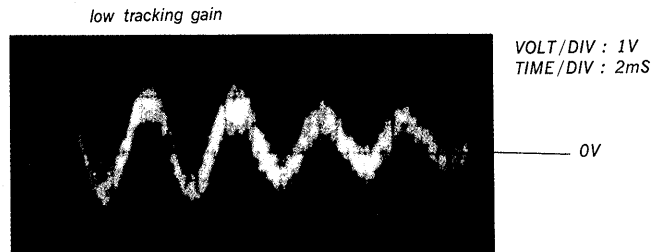
• Inccornt Examples (DC level changes more than on adjusted waveform)



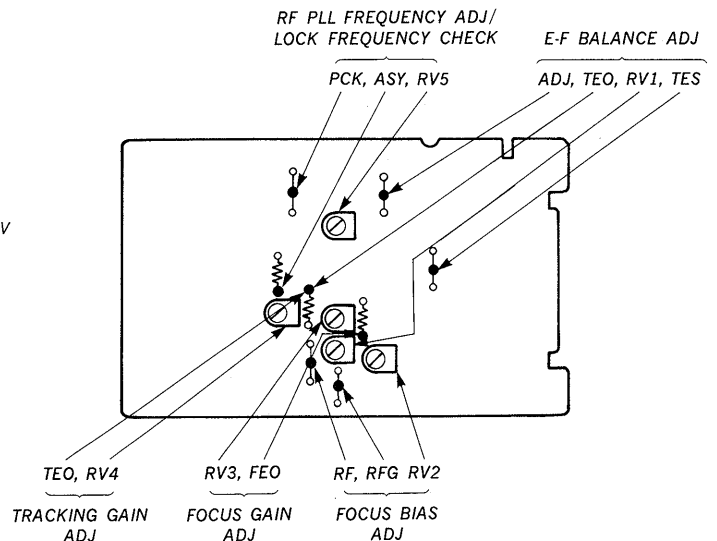
5. Connect oscilloscope to main board TP (TEO).
6. Adjust RV4 so that the waveform is as shown in the figure below. (tracking gain adjustment)



• Incorrect Examples (fundamental wave appears)



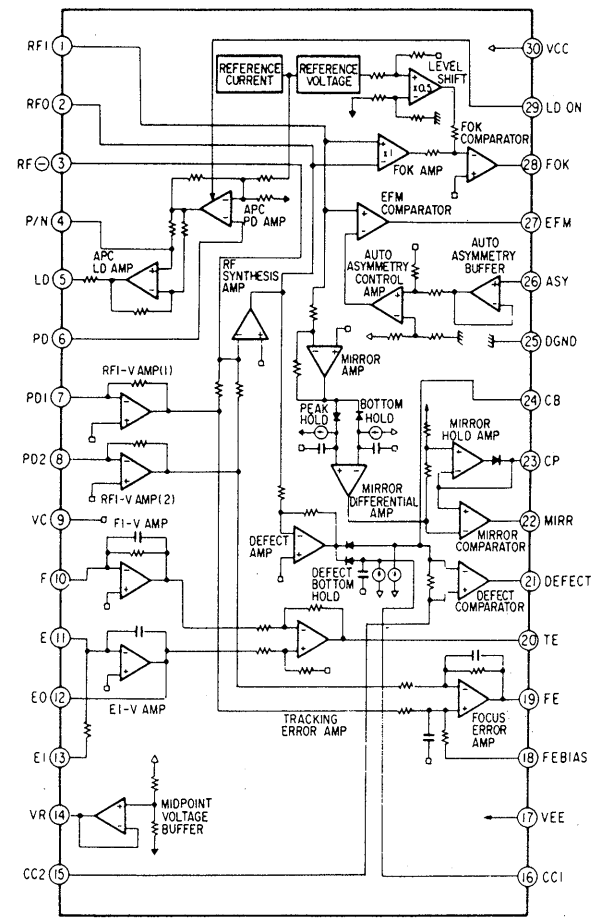
Adjustment Location : main board



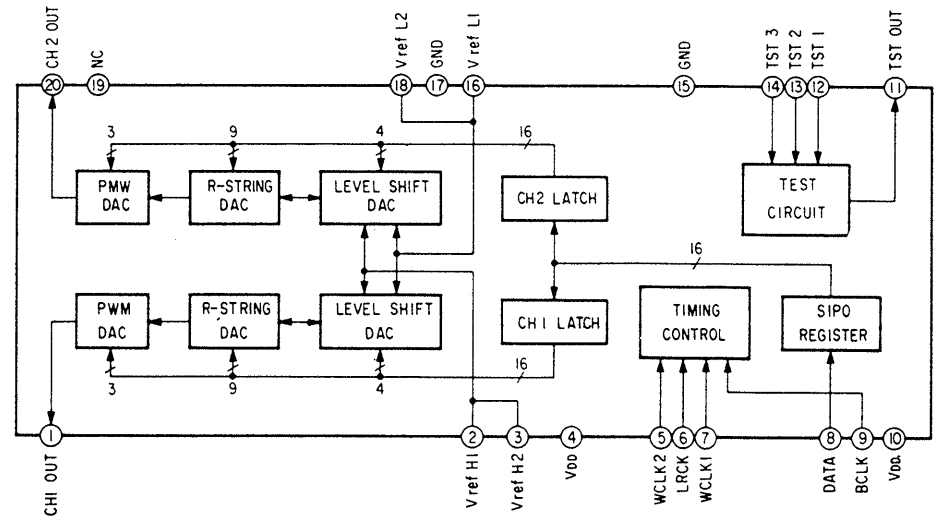
SECTION 4
DIAGRAMS

4-1. IC BLOCK DIAGRAMS

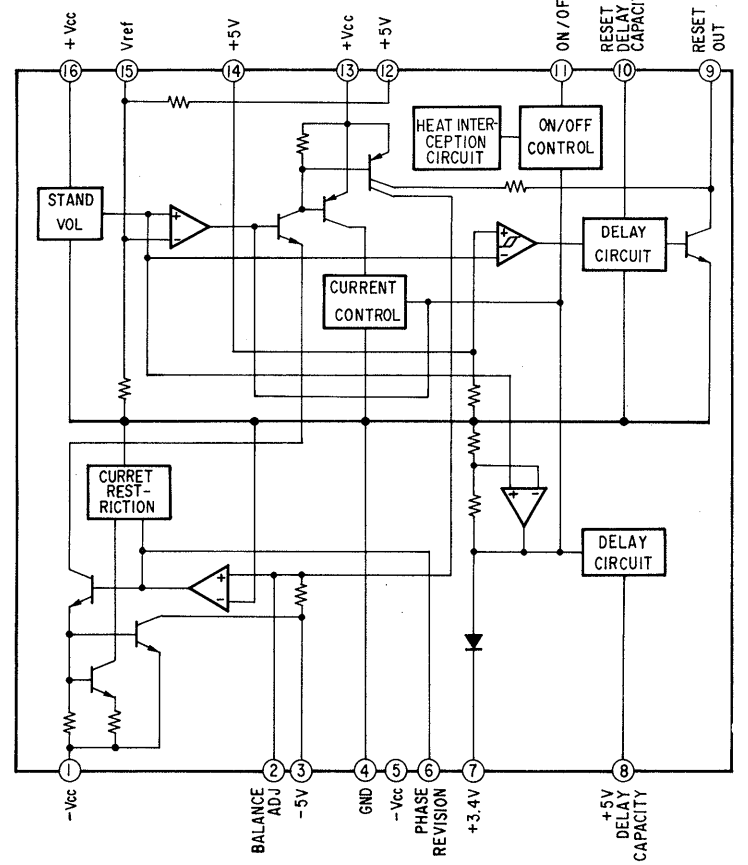
IC1 CXA1081S



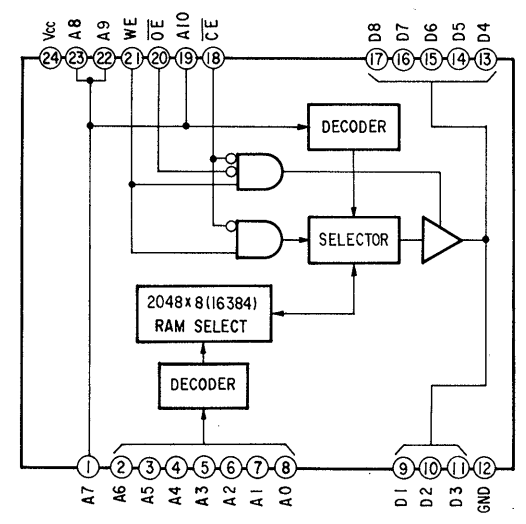
IC201 CXD1161P



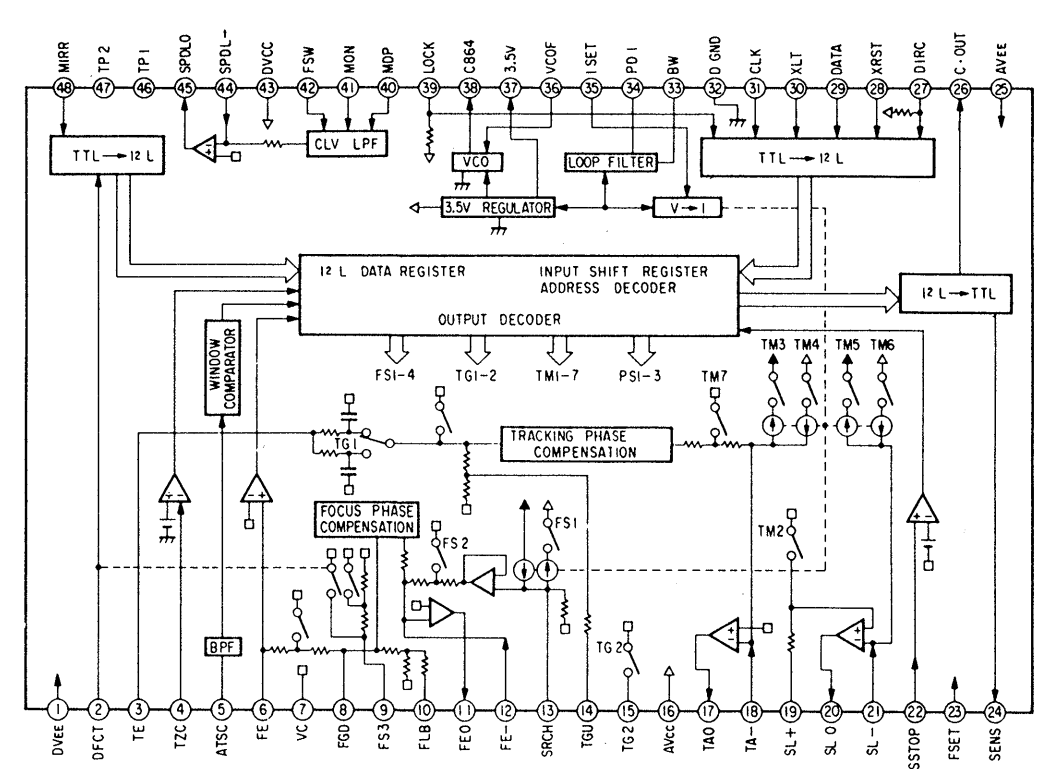
IC9 M5294P



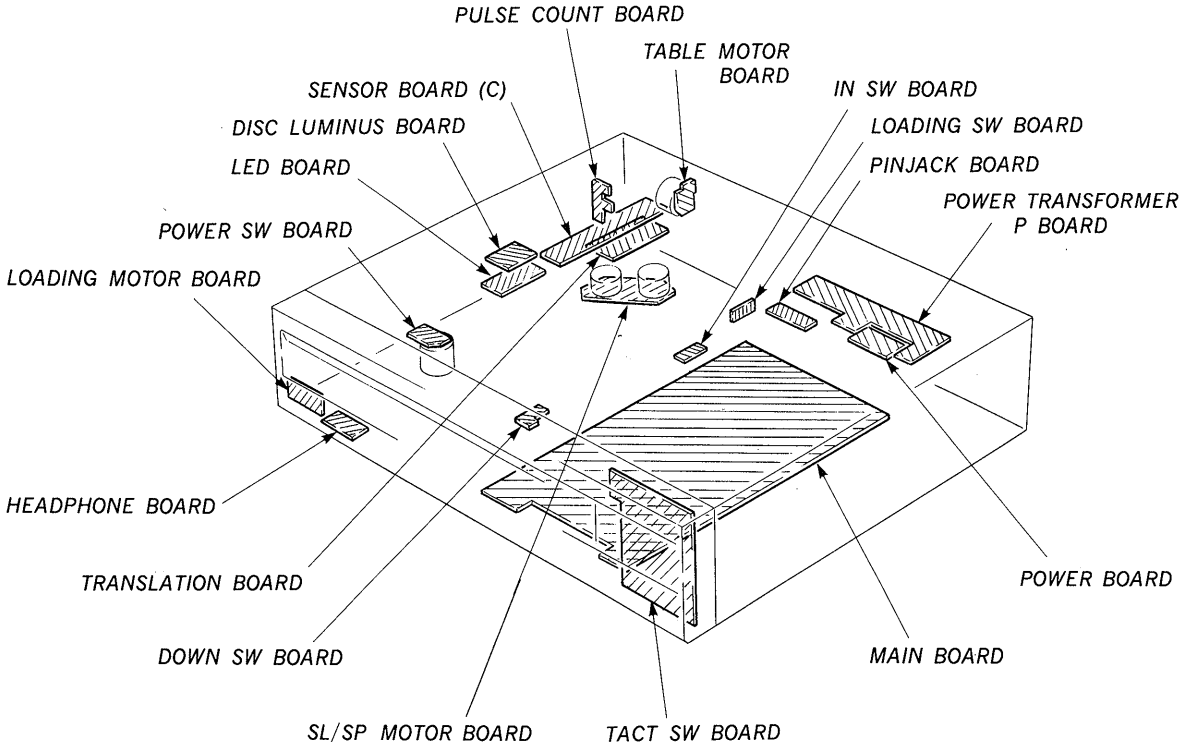
IC15 LC9600R-144



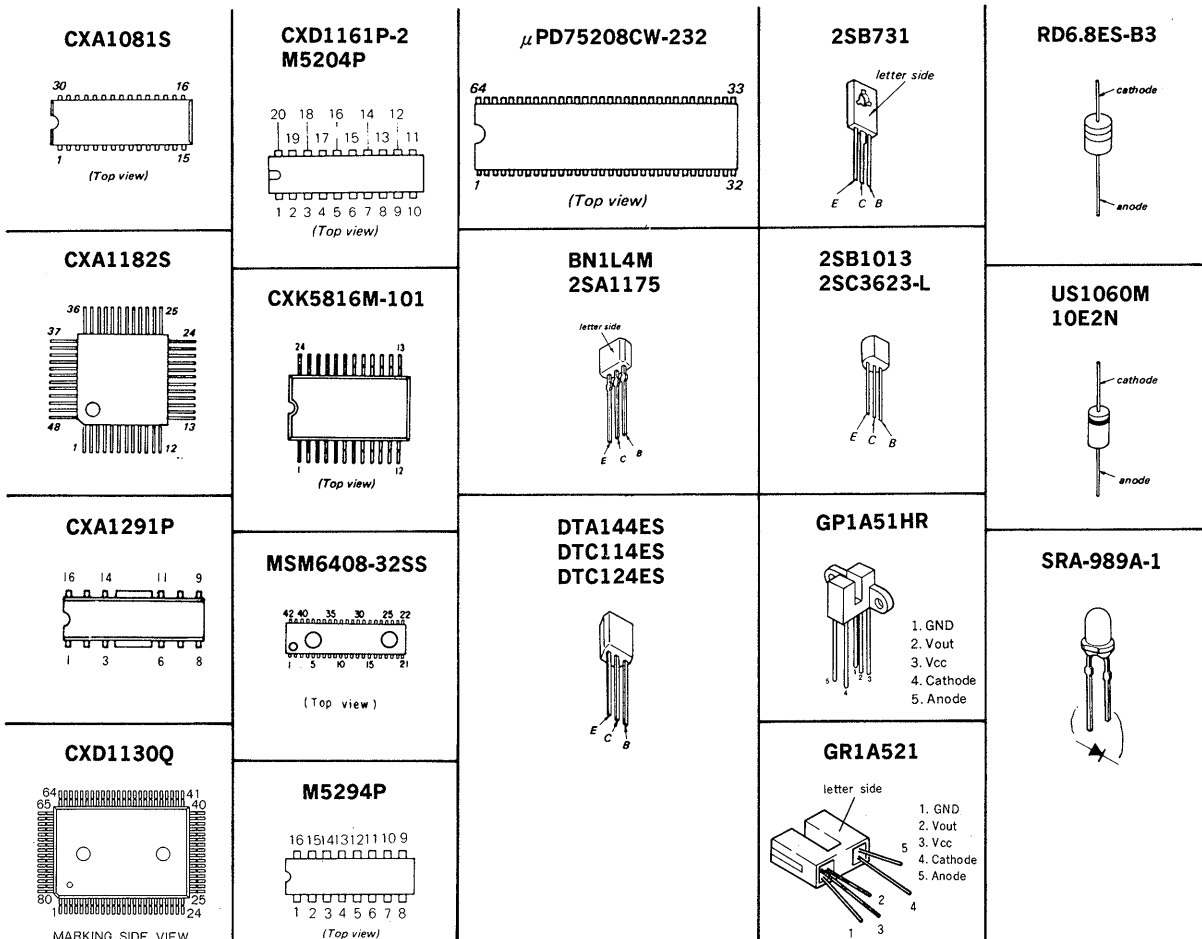
IC2 CXA1182S



4-2. CIRCUIT BOARDS LOCATION



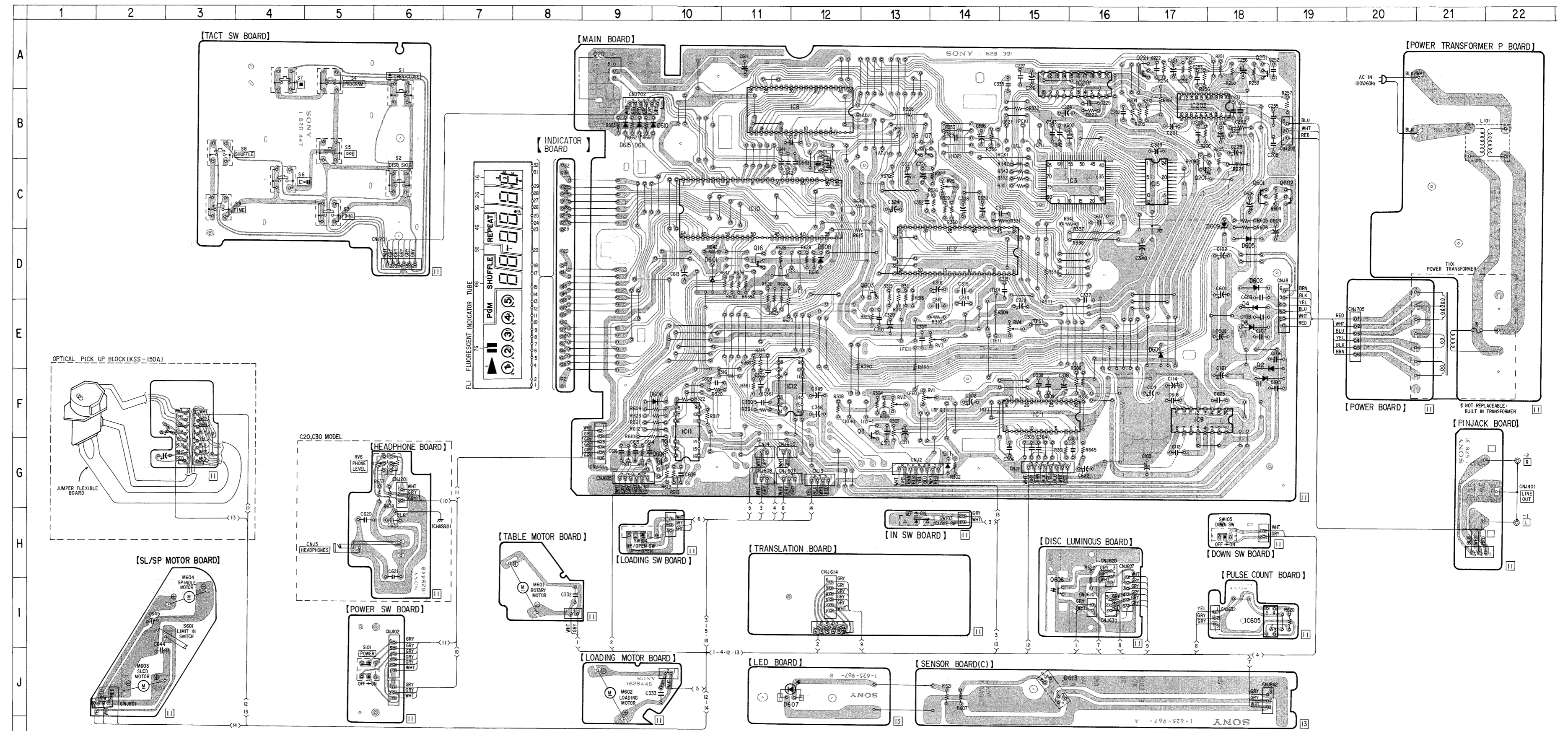
4-3. SEMICONDUCTOR LEAD LAYOUTS



4-4. PRINTED WIRING BOARDS • See page 9 for Circuit Boards Location and Semiconductor Lead Layouts.

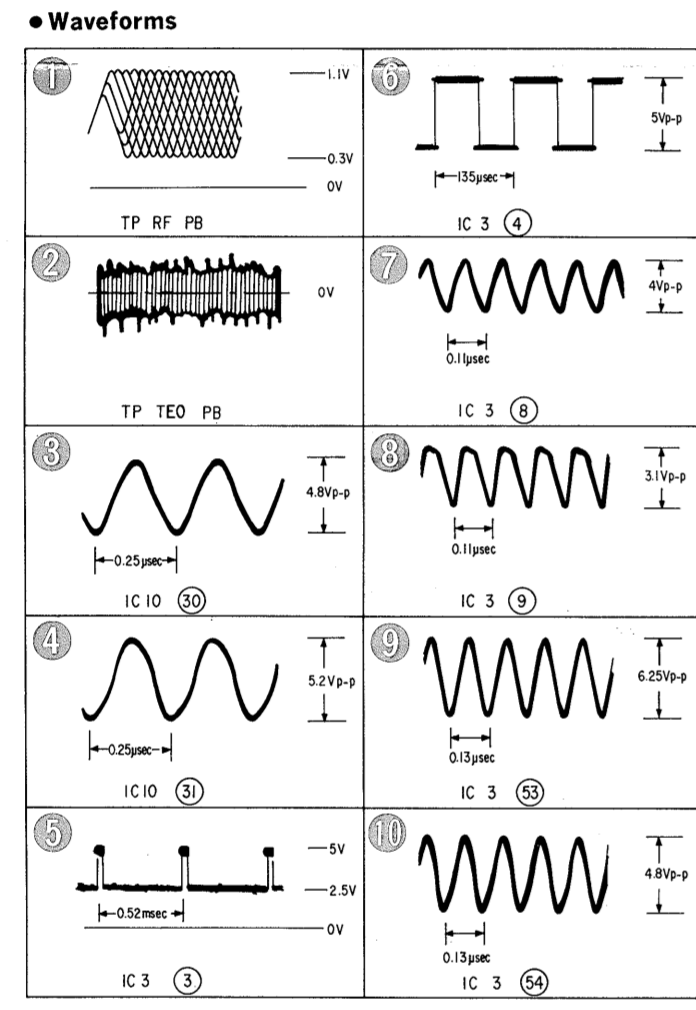
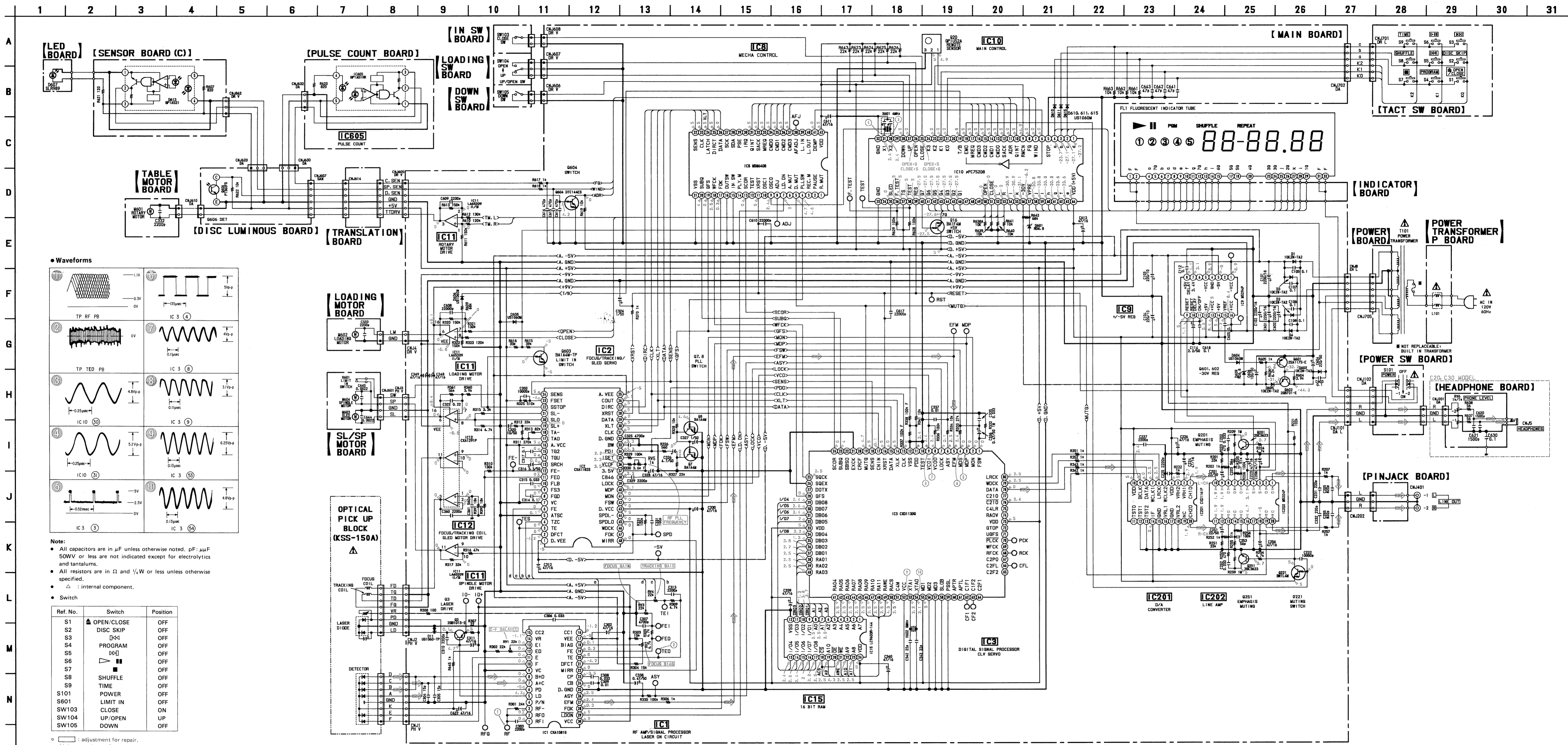
• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D1	F-18	Q3	F-13
D2	E-18	Q7	B-13
D3	E-18	Q8	B-13
D4	E-18	Q16	D-11
D11	G-14	Q20	A-9
D601	D-10	Q201	C-17
D602	D-18	Q221	A-17
D604	E-17	Q251	A-18
D605	D-18	Q601	C-18
D606	F-10	Q602	C-19
D607	J-11	Q603	D-13
D608	D-12	Q604	G-10
D609	C-18	Q606	I-15
D610	B-10		
D611	B-9		
D613	J-15		
D615	B-9		
IC1	F-15		
IC2	D-14		
IC3	C-16		
IC8	B-12		
IC9	F-17		
IC10	C-11		
IC11	F-10		
IC12	F-11		
IC15	C-17		
IC201	A-16		
IC202	B-17		
IC605	I-18		



Note:

- : parts extracted from the component side.
- : indicates side identified with part number.
- : Jumper wire connected to the ground pattern on the component side.



- Notes:**
- All capacitors are in μF unless otherwise noted. pF: $\mu\text{F} \times 10^{-12}$. 50WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $\frac{1}{2}\text{W}$ or less unless otherwise specified.
 - Δ : internal component.
 - Switch

Ref. No.	Switch	Position
S1	▲ OPEN/CLOSE	OFF
S2	◀ DISC SKIP	OFF
S3	▶ PROGRAM	OFF
S4	▶▶	OFF
S5	▶▶▶	OFF
S6	▶▶▶▶	OFF
S7	▶▶▶▶▶	OFF
S8	■ SHUFFLE	OFF
S9	■ TIME	OFF
S101	■ POWER	OFF
S801	■ LIMIT IN	OFF
SW103	■ CLOSE	ON
SW104	■ UP/OPEN	ON
SW105	■ DOWN	OFF

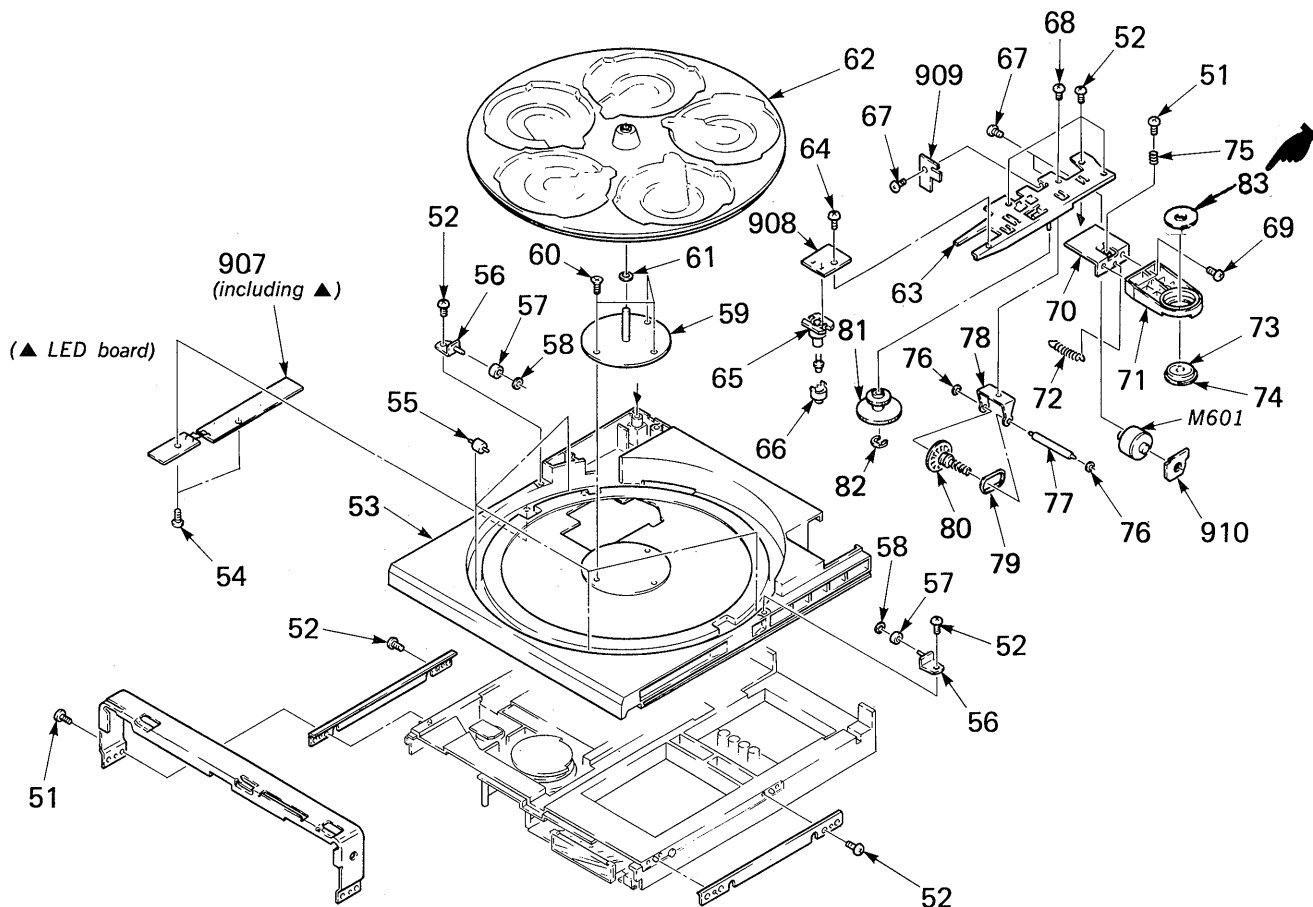
- : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions. no mark: PLAY
- Voltages are taken with a VOM (50 k Ω /V). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- : CD

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.

REVISED

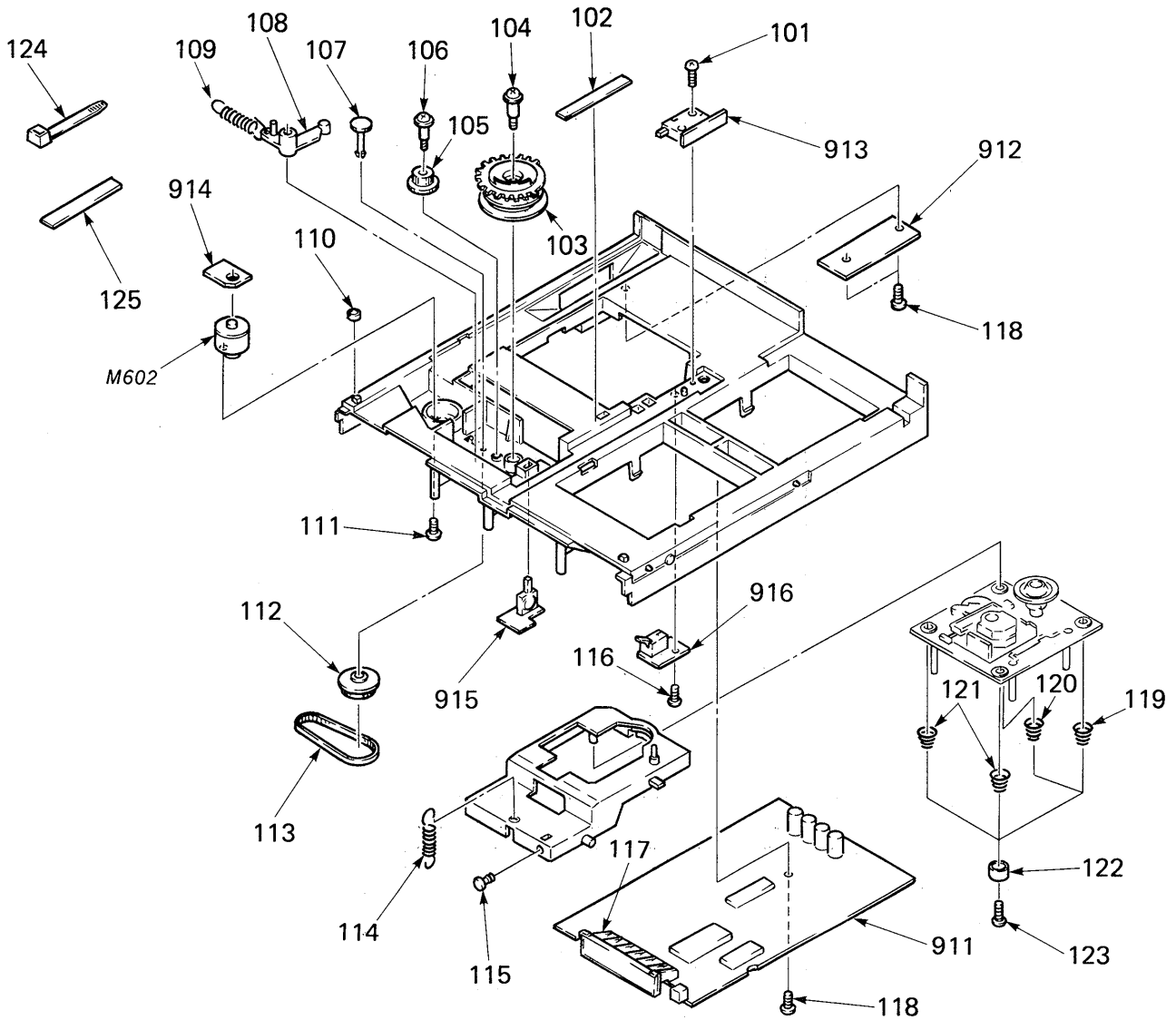
5-2. DISC TABLE SECTION



Ref.No	Part No.	Description	Remarks	Ref.No	Part No.	Description	Remarks
51	7-685-648-79	SCREW +BTP 3X12 TYPE2 N-S		70	*4-926-328-01	BRACKET (ADJUSTMENT A)	
52	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S		71	*4-926-326-01	BRACKET (PRESS PULLEY)	
53	4-924-406-01	TABLE (A), DISK		72	4-924-421-01	SPRING (C), TENSION	
54	7-685-534-14	SCREW +BTP 2.6X8		73	1-452-340-21	MAGNET	
55	*X-4924-409-1	SHAFT (ROLLER B) ASSY		74	*4-921-022-01	PULLEY, CHUCKING	
56	*X-4924-410-1	BRACKET (ROLLER) ASSY		75	4-924-477-01	SPRING, COMPRESSION	
57	*X-4924-408-3	COLLAR (ROLLER) ASSY		76	3-669-465-00	WASHER (1.5), STOPPER	
58	3-325-290-21	WASHER, STOPPER		77	4-924-420-01	SHAFT (W)	
59	*X-4924-402-1	BRACKET (A) ASSY		78	*4-924-424-01	BRACKET (WORM)	
60	7-685-134-19	SCREW, TOTSU BTP 2.6X8 TYPE2		79	4-917-548-02	BELT, DRIVING	
61	4-926-307-01	WASHER		80	4-924-419-01	PULLEY (WORM)	
62	*4-924-405-01	TABLE (B), DISK		81	4-924-414-01	GEAR (WH)	
63	*X-4924-423-1	BRACKET (R GEAR) ASSY		82	7-624-106-04	STOP RING 3.0, TYPE -E	
64	7-621-770-87	SCREW +BVTT 2.6X5 (S)		907	*1-625-967-11	PC BOARD, SENSOR (C)	
65	*4-924-409-01	HOLDER (A), LED		908	*1-628-439-11	PC BOARD, DISC LUMINUS	
66	*4-924-408-01	HOLDER (B), LED		909	*1-628-441-11	PC BOARD, PULSE COUNT	
67	7-621-775-08	SCREW +P 2.6X3		910	*1-628-440-11	PC BOARD, TABLE MOTOR	
68	7-682-548-09	SCREW +B 3X8		M601	A-4608-351-A	MOTOR ASSY, ROTARY	
69	7-682-147-01	SCREW +BVTT 3X6 (S)		83	4-921-029-01	YOKE, CHUCKING	

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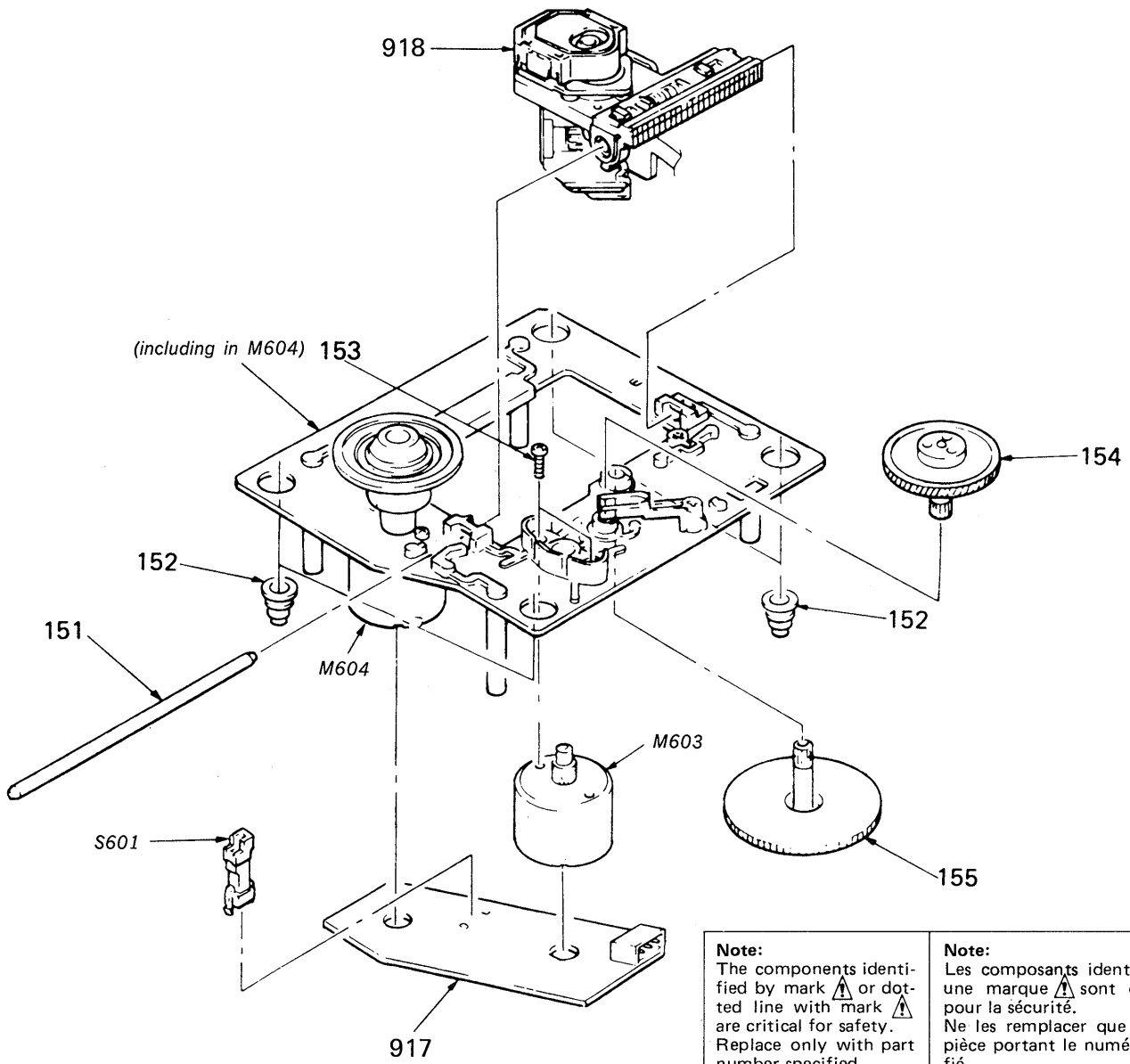
5-3. FRAME SECTION



Ref.No	Part No.	Description	Remarks
101	7-685-137-19	SCREW +P 2.6X14 TYPE2 NON-SLIT	
102	*4-926-316-01	SHEET	
103	4-924-431-01	GEAR (LOADING A)	
104	4-926-317-01	SCREW, STEP	
105	4-924-426-01	GEAR (LOADING C)	
106	4-926-320-01	SCREW (B), STEP	
107	4-924-425-01	GEAR (LOADING B)	
108	4-917-519-01	LEVER, SET	
109	4-924-412-01	SPRING (B), TENSION	
110	*3-576-990-01	CUSHION	
111	7-628-254-00	+PSW, 2.6X5	
112	4-924-474-01	PULLEY (LOADING)	
113	4-924-478-01	BELT (TIMING)	
114	4-924-411-01	SPRING (A), TENSION	
115	4-917-515-01	ROLLER	
116	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT	

Ref.No	Part No.	Description	Remarks
117	*4-926-324-01	BRACKET (FL)	
118	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
119	4-917-541-01	SPRING (B)	
120	4-918-669-01	SPRING (W)	
121	4-917-507-01	SPRING (H)	
122	4-917-508-01	HOLDER, SP	
123	7-685-135-19	SCREW +P 2.6X10 TYPE2 NON-SLIT	
124	3-701-748-00	CLAMP	
125	3-831-441-XX	CUSHION (B), CABINET	
911	*A-4651-220-A	MOUNTED PCB, MAIN	
912	*1-628-446-11	PC BOARD, TRANSLATION	
913	*1-628-444-11	PC BOARD, LOADING SW	
914	*1-628-445-11	PC BOARD, LOADING MOTOR	
915	*1-628-442-11	PC BOARD, DOWN SW	
916	*1-628-443-12	PC BOARD, IN SW	
M602	A-4608-350-A	MOTOR ASSY, LOADING	

5-4. OPTICAL PICK-UP BLOCK (BU-5C)



<p>Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.</p>	<p>Note: 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	Remarks	Ref.No	Part No.	Description	Remarks
151	4-917-565-01	SHAFT, SLED		917	*1-626-304-11	PC BOARD, SL/SP MOTOR	
152	4-917-562-01	INSULATOR		918	Δ 8-848-062-01	DEVICE, OPTICAL	
153	7-621-255-15	SCREW +P 2X3		M603	X-4917-504-1	ASSY, MOTER (SLED)	
154	4-917-567-01	GEAR (M)		M604	X-4917-523-1	ASSY, MOTER (SPINDLE)	
155	4-917-564-01	GEAR (P), FLATNESS		S601	1-571-274-11	SWITCH, LEAF (LIMIT IN)	

SECTION 6 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.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:MF: μ F, PF: μ MF.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORSIn each case, U: μ , for example:UA...: μ A..., UPA...: μ PA...,
UPC...: μ PC, UPD...: μ PD...

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.

Ref.No	Part No.	Description	Ref.No	Part No.	Description			
901	*1-628-449-11	PC BOARD, POWER SW	C306	1-136-159-00	FILM	0.033MF	5%	50V
902	*1-628-448-11	PC BOARD, HEADPHONE	C307	1-161-377-00	CERAMIC	0.0047MF	30%	16V
903	*1-628-447-11	PC BOARD, TACT SW	C308	1-136-159-00	FILM	0.033MF	5%	50V
904	*1-628-393-11	PC BOARD, PINJACK	C309	1-136-153-00	FILM	0.01MF	5%	50V
905	*1-628-392-11	PC BOARD, POWER TRANSFORMER P	C310	1-161-375-00	CERAMIC	0.0022MF	30%	16V
906	Δ 1-559-582-11	CORD, POWER	C311	1-124-477-11	ELECT	47MF	20%	16V
907	*1-625-967-11	PC BOARD, SENSOR (C)	C312	1-124-477-11	ELECT	47MF	20%	16V
908	*1-628-439-11	PC BOARD, DISC LUMINUS	C313	1-161-375-00	CERAMIC	0.0022MF	30%	16V
909	*1-628-441-11	PC BOARD, PULSE COUNT	C314	1-136-165-00	FILM	0.1MF	5%	50V
910	*1-628-440-11	PC BOARD, TABLE MOTOR	C315	1-136-159-00	FILM	0.033MF	5%	50V
911	*A-4651-220-A	MOUNTED PCB, MAIN	C316	1-123-382-00	ELECT	3.3MF	20%	50V
912	*1-628-446-11	PC BOARD, TRANSLATION	C317	1-136-165-00	FILM	0.1MF	5%	50V
913	*1-628-444-11	PC BOARD, LOADING SW	C320	1-123-875-11	ELECT	10MF	20%	50V
914	*1-628-445-11	PC BOARD, LOADING MOTOR	C322	1-136-169-00	FILM	0.22MF	5%	50V
915	*1-628-442-11	PC BOARD, DOWN SW	C324	1-124-499-11	ELECT	1MF	20%	50V
916	*1-628-443-12	PC BOARD, IN SW	C325	1-161-377-00	CERAMIC	0.0047MF	30%	16V
917	*1-626-304-11	PC BOARD, SL/SP MOTOR	C326	1-124-927-11	ELECT	4.7MF	20%	50V
918	Δ 8-848-062-01	DEVICE, OPTICAL	C327	1-124-499-11	ELECT	1MF	20%	50V
			C328	1-124-477-11	ELECT	47MF	20%	16V
			C329	1-161-375-00	CERAMIC	0.0022MF	30%	16V
			C330	1-124-477-11	ELECT	47MF	20%	16V
			C331	1-162-282-31	CERAMIC	100PF	10%	50V
			C332	1-161-494-00	CERAMIC	0.022MF		25V
			C333	1-161-494-00	CERAMIC	0.022MF		25V
			C335	1-136-159-00	FILM	0.033MF	5%	50V
			C336	1-124-902-00	ELECT	0.47MF	20%	50V
			C337	1-161-379-00	CERAMIC	0.01MF	30%	16V
			C338	1-124-902-00	ELECT	0.47MF	20%	50V
			C339	1-124-477-11	ELECT	47MF	20%	16V
			C340	1-124-477-11	ELECT	47MF	20%	16V
			C342	1-162-207-31	CERAMIC	22PF	5%	50V
			C343	1-162-207-31	CERAMIC	22PF	5%	50V
			C348	1-124-477-11	ELECT	47MF	20%	16V
			C349	1-124-477-11	ELECT	47MF	20%	16V
			C350	1-161-379-00	CERAMIC	0.01MF	30%	16V
			C360	1-161-375-00	CERAMIC	0.0022MF	30%	16V
			C361	1-162-291-31	CERAMIC	560PF	10%	50V
			C601	1-124-556-11	ELECT	2200MF	20%	16V
			C602	1-124-556-11	ELECT	2200MF	20%	16V
			C603	1-136-165-00	FILM	0.1MF	5%	50V
			C604	1-124-911-11	ELECT	220MF	20%	50V
			C605	1-136-165-00	FILM	0.1MF	5%	50V
			C606	1-124-122-11	ELECT	100MF	20%	50V
			C608	1-161-494-00	CERAMIC	0.022MF		25V
			C609	1-161-494-00	CERAMIC	0.022MF		25V
			C610	1-161-494-00	CERAMIC	0.022MF		25V
			C611	1-124-477-11	ELECT	47MF	20%	16V
			C613	1-124-477-11	ELECT	47MF	20%	16V
			C614	1-162-290-31	CERAMIC	470PF	10%	50V
			C615	1-162-290-31	CERAMIC	470PF	10%	50V
			C616	1-162-290-31	CERAMIC	470PF	10%	50V
			C617	1-161-494-00	CERAMIC	0.022MF		25V
C101	1-124-556-11	ELECT	2200MF	20%	16V			
C102	1-124-556-11	ELECT	2200MF	20%	16V			
C103	1-126-176-11	ELECT	220MF	20%	10V			
C104	1-126-176-11	ELECT	220MF	20%	10V			
C105	1-136-165-00	FILM	0.1MF	5%	50V			
C106	1-136-165-00	FILM	0.1MF	5%	50V			
C107	1-136-165-00	FILM	0.1MF	5%	50V			
C108	1-136-165-00	FILM	0.1MF	5%	50V			
C112	1-136-165-00	FILM	0.1MF	5%	50V			
C114	1-124-925-11	ELECT	2.2MF	20%	50V			
C201	1-126-233-11	ELECT	22MF	20%	50V			
C202	1-136-159-00	FILM	0.033MF	5%	50V			
C203	1-162-217-31	CERAMIC	56PF	5%	50V			
C205	1-162-293-31	CERAMIC	820PF	10%	50V			
C206	1-124-477-11	ELECT	47MF	20%	16V			
C222	1-161-379-00	CERAMIC	0.01MF	30%	16V			
C223	1-124-477-11	ELECT	47MF	20%	16V			
C224	1-124-477-11	ELECT	47MF	20%	16V			
C225	1-161-494-00	CERAMIC	0.022MF		25V			
C226	1-124-477-11	ELECT	47MF	20%	16V			
C227	1-161-494-00	CERAMIC	0.022MF		25V			
C231	1-162-286-31	CERAMIC	220PF	10%	50V			
C232	1-162-286-31	CERAMIC	220PF	10%	50V			
C251	1-126-233-11	ELECT	22MF	20%	50V			
C252	1-136-159-00	FILM	0.033MF	5%	50V			
C253	1-162-217-31	CERAMIC	56PF	5%	50V			
C255	1-162-293-31	CERAMIC	820PF	10%	50V			
C256	1-124-477-11	ELECT	47MF	20%	16V			
C302	1-124-477-11	ELECT	47MF	20%	16V			
C303	1-161-375-00	CERAMIC	0.0022MF	30%	16V			
C304	1-162-203-31	CERAMIC	15PF	5%	50V			
C305	1-162-203-31	CERAMIC	15PF	5%	50V			

Ref.No	Part No.	Description			
C618	1-136-165-00	FILM	0.1MF	5%	50V
C620	1-161-374-11	(EXCEPT FOR C26) CERAMIC	0.0015MF	20%	16V
C621	1-161-374-11	(EXCEPT FOR C26) CERAMIC	0.0015MF	20%	16V
C622	1-124-477-11	ELECT	47MF	20%	16V
C630	1-136-165-00	(EXCEPT FOR C26) FILM	0.1MF	5%	50V
C641	1-162-215-31	CERAMIC	47PF	5%	50V
C642	1-162-215-31	CERAMIC	47PF	5%	50V
C643	1-162-215-31	CERAMIC	47PF	5%	50V
C644	1-108-796-11	MYLAR	0.0022MF	5%	50V
C645	1-108-796-11	MYLAR	0.0022MF	5%	50V
CN601	*1-564-720-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CNJ1	*1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P			
CNJ2	*1-564-710-11	PIN, CONNECTOR (SMALL TYPE) 8P			
CNJ3	*1-564-706-11	PIN, CONNECTOR (SMALL TYPE) 4P			
CNJ4	*1-564-336-00	PIN, CONNECTOR 2P			
CNJ5	1-507-796-71	(EXCEPT FOR C26)....JACK, LARGE TYPE (HEADPHONES)			
CNJ8	*1-564-509-11	PLUG, CONNECTOR 6P			
CNJ101	*1-564-499-11	PIN, CONNECTOR 6P			
CNJ202	*1-564-506-11	PLUG, CONNECTOR 3P			
CNJ401	1-566-921-11	JACK, PIN 2P (LINE OUT)			
CNJ605	*1-564-340-61	PIN, CONNECTOR 6P			
CNJ606	*1-564-336-61	PIN, CONNECTOR 2P			
CNJ607	*1-564-337-71	PIN, CONNECTOR 3P			
CNJ608	*1-564-336-81	PIN, CONNECTOR 2P			
CNJ614	*1-564-708-11	PIN, CONNECTOR (SMALL TYPE) 6P			
CNJ701	*1-564-499-11	PIN, CONNECTOR 6P			
CNJ862	*1-564-337-00	PIN, CONNECTOR 3P			
D1	8-719-200-77	DIODE 10E2N			
D2	8-719-200-77	DIODE 10E2N			
D3	8-719-200-77	DIODE 10E2N			
D4	8-719-200-77	DIODE 10E2N			
D11	8-719-000-26	DIODE US1060M			
D601	8-719-109-98	DIODE RD6.8ES-B3			
D602	8-719-200-77	DIODE 10E2N			
D604	8-719-000-26	DIODE US1060M			
D605	8-719-200-77	DIODE 10E2N			
D606	8-719-000-26	DIODE US1060M			
D607	8-719-950-62	DIODE SRA-989A-1			
D608	8-719-000-26	DIODE US1060M			
D609	8-719-109-98	DIODE RD6.8ES-B3			
D610	8-719-000-26	DIODE US1060M			
D611	8-719-000-26	DIODE US1060M			
D613	8-719-970-19	DIODE GP-1A521			
D615	8-719-000-26	DIODE US1060M			
FL1	1-519-477-11	INDICATOR TUBE, FLUORESCENT			
IC1	8-752-031-80	IC CXA1081S			
IC2	8-752-032-33	IC CXA1182S			
IC3	8-759-947-03	IC CXD1130Q			
IC8	8-759-972-49	IC MSM6408-32SS			
IC9	8-759-631-40	IC M5294P			
IC10	8-759-142-66	IC UPD75208 CW-232			
IC11	8-752-035-28	IC CXA1291P			
IC12	8-752-035-28	IC CXA1291P			
IC15	8-752-320-44	IC CXK5816M-10L			
IC201	8-759-805-35	IC CXD1161P-2			
IC202	8-759-631-39	IC M5204P			
IC605	8-719-945-83	PHOTO INTERRUPTER GP-1A51HR			
L101	▲1-421-915-11	COIL, LINE FILTER			

Ref.No	Part No.	Description			
M601	A-4608-351-A	MOTOR ASSY, ROTARY			
M602	A-4608-350-A	MOTOR ASSY, LOADING			
M603	X-4917-504-1	ASSY, MOTOR (SLED)			
M604	X-4917-523-1	ASSY, MOTOR (SPINDLE)			
Q3	8-729-801-83	TRANSISTOR 2SB1013			
Q7	8-729-900-80	TRANSISTOR DTC114ES			
Q8	8-729-900-65	TRANSISTOR DTA144ES			
Q16	8-729-900-36	TRANSISTOR DTC124ES			
Q20	8-749-920-53	IC GPIU52A			
Q201	8-729-107-77	TRANSISTOR 2SC3623-L			
Q221	8-729-115-12	TRANSISTOR BN1L4M			
Q251	8-729-107-77	TRANSISTOR 2SC3623-L			
Q601	8-729-117-54	TRANSISTOR 2SA1175			
Q602	8-729-173-13	TRANSISTOR 2SB731			
Q603	8-729-900-80	TRANSISTOR DTC114ES			
Q604	8-729-900-65	TRANSISTOR DTA144ES			
Q606	8-729-904-10	(PHOTO) TRANSISTOR PT360FS			
RESISTOR					
R201	1-249-435-11	CARBON	33K	5%	1/4W
R202	1-249-417-11	CARBON	1K	5%	1/4W
R203	1-249-413-11	CARBON	470	5%	1/4W
R204	1-249-425-11	CARBON	4.7K	5%	1/4W
R205	1-247-872-11	CARBON	51K	5%	1/4W
R206	1-249-441-11	CARBON	100K	5%	1/4W
R207	1-249-417-11	CARBON	1K	5%	1/4W
R209	1-247-903-00	CARBON	1M	5%	1/4W
R221	1-249-441-11	CARBON	100K	5%	1/4W
R222	1-249-417-11	CARBON	1K	5%	1/4W
R251	1-249-435-11	CARBON	33K	5%	1/4W
R252	1-249-417-11	CARBON	1K	5%	1/4W
R253	1-249-413-11	CARBON	470	5%	1/4W
R254	1-249-425-11	CARBON	4.7K	5%	1/4W
R255	1-247-872-11	CARBON	51K	5%	1/4W
R256	1-249-441-11	CARBON	100K	5%	1/4W
R257	1-249-417-11	CARBON	1K	5%	1/4W
R259	1-247-903-00	CARBON	1M	5%	1/4W
R301	1-247-864-11	CARBON	24K	5%	1/4W
R302	1-249-433-11	CARBON	22K	5%	1/4W
R303	1-249-431-11	CARBON	15K	5%	1/4W
R304	1-249-431-11	CARBON	15K	5%	1/4W
R305	1-249-425-11	CARBON	4.7K	5%	1/4W
R306	1-249-417-11	CARBON	1K	5%	1/4W
R307	1-249-397-11	CARBON	22	5%	1/4W
R308	1-249-405-11	CARBON	100	5%	1/4W
R309	1-249-425-11	CARBON	4.7K	5%	1/4W
R310	1-247-882-11	CARBON	130K	5%	1/4W
R311	1-247-889-00	CARBON	270K	5%	1/4W
R312	1-249-435-11	CARBON	33K	5%	1/4W
R313	1-249-440-11	CARBON	82K	5%	1/4W
R314	1-249-425-11	CARBON	4.7K	5%	1/4W
R315	1-249-423-11	CARBON	3.3K	5%	1/4W
R316	1-249-437-11	CARBON	47K	5%	1/4W
R317	1-249-435-11	CARBON	33K	5%	1/4W
R320	1-247-883-00	CARBON	150K	5%	1/4W
R321	1-247-882-11	CARBON	130K	5%	1/4W
R322	1-247-883-00	CARBON	150K	5%	1/4W
R323	1-247-881-00	CARBON	120K	5%	1/4W
R325	1-247-896-11	CARBON	510K	5%	1/4W
R326	1-249-414-11	CARBON	560	5%	1/4W
R327	1-249-433-11	CARBON	22K	5%	1/4W
R328	1-249-429-11	CARBON	10K	5%	1/4W
R329	1-249-441-11	CARBON	100K	5%	1/4W
R330	1-215-434-00	METAL	3.6K	1%	1/6W
R331	1-249-441-11	CARBON	100K	5%	1/4W

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.

Ref.No	Part No.	Description			
R332	1-247-903-00	CARBON	1M	5%	1/4W
R333	1-249-434-11	CARBON	27K	5%	1/4W
R334	1-249-429-11	CARBON	10K	5%	1/4W
R335	1-249-441-11	CARBON	100K	5%	1/4W
R336	1-249-441-11	CARBON	100K	5%	1/4W
R337	1-215-469-00	METAL	100K	1%	1/6W
R338	1-215-469-00	METAL	100K	1%	1/6W
R341	1-249-429-11	CARBON	10K	5%	1/4W
R342	1-249-417-11	CARBON	1K	5%	1/4W
R343	1-249-417-11	CARBON	1K	5%	1/4W
R351	1-249-417-11	CARBON	1K	5%	1/4W
R352	1-249-417-11	CARBON	1K	5%	1/4W
R360	1-249-424-11	CARBON	3.9K	5%	1/4W
R361	1-249-438-11	CARBON	56K	5%	1/4W
R370	1-249-417-11	CARBON	1K	5%	1/4W
R390	1-249-432-11	CARBON	18K	5%	1/4W
R391	1-249-432-11	CARBON	18K	5%	1/4W
R604	1-249-424-11	CARBON	3.9K	5%	1/4W
R605	1-249-417-11	CARBON	1K	5%	1/4W
R606	1-247-850-11	CARBON	6.2K	5%	1/4W
R607	1-249-416-11	CARBON	820	5%	1/4W
R609	1-249-439-11	CARBON	68K	5%	1/4W
R610	1-247-881-00	CARBON	120K	5%	1/4W
R611	1-247-883-00	CARBON	150K	5%	1/4W
R612	1-247-882-11	CARBON	130K	5%	1/4W
R613	1-247-883-00	CARBON	150K	5%	1/4W
R615	1-249-436-11	CARBON	39K	5%	1/4W
R616	1-249-435-11	CARBON	33K	5%	1/4W
R617	1-249-417-11	CARBON	1K	5%	1/4W
R618	1-249-417-11	CARBON	1K	5%	1/4W
R619	1-249-429-11	CARBON	10K	5%	1/4W
R620	1-249-416-11	CARBON	820	5%	1/4W
R621	1-249-406-11	CARBON	120	5%	1/4W
R622	1-249-429-11	CARBON	10K	5%	1/4W
R623	1-249-433-11	CARBON	22K	5%	1/4W
R624	1-249-433-11	CARBON	22K	5%	1/4W
R625	1-249-433-11	CARBON	22K	5%	1/4W
R626	1-249-433-11	CARBON	22K	5%	1/4W
R628	1-249-441-11	CARBON	100K	5%	1/4W
R629	1-249-441-11	CARBON	100K	5%	1/4W
R637	1-249-402-11	(EXCEPT FOR C26)....CARBON	56	5%	1/4W
R638	1-249-402-11	(EXCEPT FOR C26)....CARBON	56	5%	1/4W
R638A	1-249-429-11	CARBON	10K	5%	1/4W
R639	1-249-429-11	CARBON	10K	5%	1/4W
R640	1-249-429-11	CARBON	10K	5%	1/4W
R641	1-249-429-11	CARBON	10K	5%	1/4W
R642	1-249-439-11	CARBON	68K	5%	1/4W
R643	1-249-433-11	CARBON	22K	5%	1/4W
R645	1-249-417-11	CARBON	1K	5%	1/4W
R661	1-249-429-11	CARBON	10K	5%	1/4W
R662	1-249-429-11	CARBON	10K	5%	1/4W
R663	1-249-429-11	CARBON	10K	5%	1/4W
RV1	1-228-995-00	RES, ADJ, CARBON	22K		
RV2	1-228-993-00	RES, ADJ, CARBON	4.7K		
RV3	1-228-995-00	RES, ADJ, CARBON	22K		
RV4	1-228-995-00	RES, ADJ, CARBON	22K		
RV5	1-228-990-00	RES, ADJ, METAL GLAZE	1K		
RV6	1-238-302-11	(EXCEPT FOR C26)....RES, VAR, CARBON	1K/1K		(PHONE LEVEL)
S1	1-554-596-21	SWITCH, KEY BOARD (▲ OPEN/CLOSE)			
S2	1-554-596-21	SWITCH, KEY BOARD (DISC SKIP)			
S3	1-554-596-21	SWITCH, KEY BOARD (▶▶)			
S4	1-554-596-21	SWITCH, KEY BOARD (PROGRAM)			

Ref.No	Part No.	Description
S5	1-554-596-21	SWITCH, KEY BOARD (▶▶)
S6	1-554-596-21	SWITCH, KEY BOARD (▶▶)
S7	1-554-596-21	SWITCH, KEY BOARD (■)
S8	1-554-596-21	SWITCH, KEY BOARD (SHUFFLE)
S9	1-554-596-21	SWITCH, KEY BOARD (TIME)
S101	▲1-571-305-11	SWITCH, PUSH (1 KEY) (POWER)
S601	1-571-274-11	SWITCH, LEAF (LIMIT IN)
SW103	1-571-677-11	SWITCH, PUSH (1 KEY) (CLOSE SW)
SW104	1-571-300-11	SWITCH, ROTARY (UP/OPEN SW)
SW105	1-571-453-11	SWITCH, LEVER SLIDE (DOWN SW)
T101	▲1-449-024-11	TRANSFORMER, POWER
X601	1-567-686-11	OSCILLATOR, CERAMIC (4MHZ)
X602	1-567-768-21	VIBRATOR, CRYSTAL (8MHZ)

ACCESSORY & PACKING MATERIAL

1-559-533-11	CORD, CONNECTION
1-465-078-11	(EXCEPT FOR C20)... REMOTE COMMANDER (RM-D35)
3-703-710-41	STICKER, SONY SYMBOL (12)
*3-704-217-01	LABEL
*3-704-346-01	SHEET (STANDARD), PROTECTION
3-786-537-21	MANUAL, INSTRUCTION
3-786-537-31	(canadian)... MANUAL, INSTRUCTION
*4-924-418-01	PLATE (TRANSPORT), LOCK
*4-926-344-01	CUSHION (LEFT)
*4-926-345-01	CUSHION (RIGHT)
*4-926-346-01	INDIVIDUAL CARTON

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.

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REVISED

SUPPLEMENT-1

File this supplement with the service manual.

**Subject: Alteration for pattern of MAIN board
and added for WIND SENSOR board**

1. AS TO CHANGED PARTS

Added parts

• WIND SENSOR BOARD

	*1-629-107-11	PC BOARD, WIND SENSOR				
C1001	1-136-165-00	FILM	0.1MF	5%	50V	
C1002	1-123-875-11	ELECT	10MF	20%	50V	
CNJ1001	*1-564-508-11	PLUG, CONNECTOR 5P				
D1001	8-719-000-26	DIODE US1060M				
D1002	8-719-000-26	DIODE US1060M				
IC1001	8-759-202-24	IC TC74HC86P				
R1001	1-247-895-00	CARBON	470K	5%	1/4W	

• MAIN BOARD

Q701	8-729-115-27	TRANSISTOR BN1L3Z
Q702	8-729-115-77	TRANSISTOR BA1L4M

Deleted parts

MAIN BOARD

C105	FILM	0.1MF	5%	50V
C106	FILM	0.1MF	5%	50V
C107	FILM	0.1MF	5%	50V
C108	FILM	0.1MF	5%	50V
C603	FILM	0.1MF	5%	50V

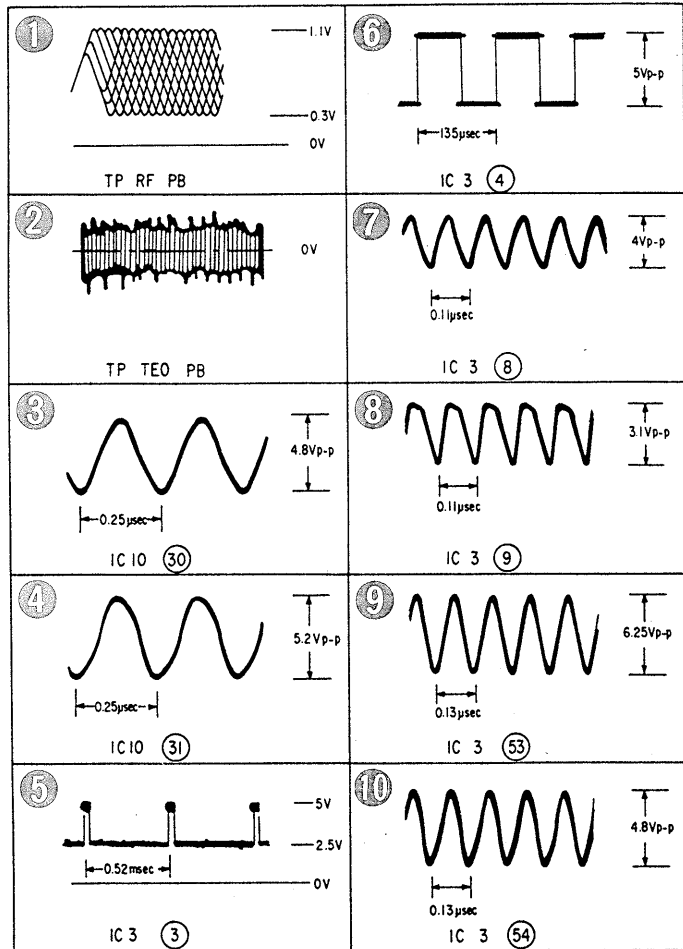
2. AS TO ALTERATION OF IC10

Alteration for repair part of IC10.

	Former type	New type
IC10 (Part No.)	μ PD75208-CW-232 (8-759-142-66)	μ PD75208-CW-257 (8-759-144-54)

Occur to exchange at new type for former type IC10,
certainly remove the connector CNJ1001 of WIND SENSOR board.

● Waveforms



Note:

- All capacitors are in μF unless otherwise noted. pF : $\mu\mu\text{F}$
50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- Δ : internal component.
- \square : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
no mark : PLAY
- Voltages are taken with a VOM (50 $\text{k}\Omega/\text{V}$).
Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope.
Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 \Rightarrow : CD

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SUPPLEMENT -2

File this supplement with the service manual.

1. MAIN board modification. (See page 2.)

CDP-C20 (US model): Serial No. 851929 and later.

CDP-C30 (US model): Serial No. 849101 and later.

2. WIND SENSOR board modification. (See page 3.)

CDP-C30 (US model): Serial No. 855101 to 859100.

CDP-C30 (Canadian model): Serial No. 700001 to 701000.

3. TABLE board is added. (See page 4.)

CDP-C20 (US model): Serial No. 860001 and later.

CDP-C30 (US model): Serial No. 859101 and later.

ADDED PARTS

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>
	*1-630-550-11	PC BOARD, TABLE
	*1-629-107-11	PC BOARD, WIND SENSOR
C1101	1-124-907-11	ELECT 10MF 20% 50V
D1101	8-719-000-26	DIODE US1060M
Q1101	8-729-115-77	TRANSISTOR BA1L4M
Q1102	8-729-900-65	TRANSISTOR DTA144ES
Q1103	8-729-900-65	TRANSISTOR DTA144ES
R1101	1-247-874-11	CARBON 62K 5% 1/4W

2. WIND SENSOR board modification.

👉 : added portion.

