

CFD-60

SERVICE MANUAL

US Model
Canadian Model



SPECIFICATIONS

AUDIO POWER SPECIFICATIONS (US model)

Full-range speakers:
With 3.2-ohm loads, both channels driven from 150-15,000 Hz: rated 2.5 W per channel minimum RMS power, with no more than 10% total harmonic distortion in AC operation.

OTHER SPECIFICATIONS

CD player section

System Compact disc digital audio system
Laser diode properties Material: GaAlAs
Wavelength 780 nm
Emission duration: Continuous
Laser output: less than 44.6 μ 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 20—20,000 Hz \pm 3 dB
Wow and flutter Below measurable limit

Radio section

Frequency range FM: 87.6—108 MHz
AM: 530—1,710 kHz

Tape recorder section and general

Recording system 4-track 2-channel stereo
Frequency response 60—10,000 Hz
(with TYPE I (NORMAL) cassette)

Speaker Full-range speakers: 10 cm dia., cone type
Power output Full-range speakers: 2 W+2 W (at 3.2 ohms,
(Canadian model) 315 Hz, 10% harmonic distortion)

Model Name Using Similar Mechanism	CD Section	CFD-DW83
	Tape Section	NEW
Optical Device Name		KSM-210BAN
Tape Transport Mechanism Type		MF-60-64

Inputs Mixing microphone input jack (minijack)
Sensitivity 2.5 mV
For low impedance microphone

Outputs Headphones jack (stereo minijack)
For 16—68 ohms impedance headphones

Power requirements 120 V AC, 60 Hz
DC 9 V, 6 size D (R20) batteries

Power consumption AC 20 W

Battery life Batteries for radio cassette-corder (hours)

	Recording	Playback
Sony SUM-1 (NS)	approx. 11	approx. 8
Sony Alkaline AM1 (N)	approx. 17	approx. 12

Dimensions 593 x 175.5 x 197 mm (w/h/d)
(23 $\frac{3}{8}$ x 7 x 7 $\frac{7}{8}$ inches)
incl. projecting parts and controls

Weight Approx. 4.6 kg, incl. batteries
(Approx. 10 lb 2 oz)

Supplied accessories AC power cord (1)

Design and specifications subject to change without notice.

CD RADIO CASSETTE-CORDER

SONY®



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

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

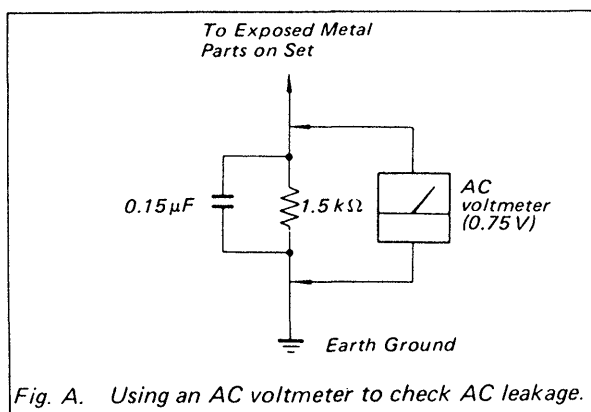


Fig. A. Using an AC voltmeter to check AC leakage.

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle 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 \triangle 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

SERVICING NOTES

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.

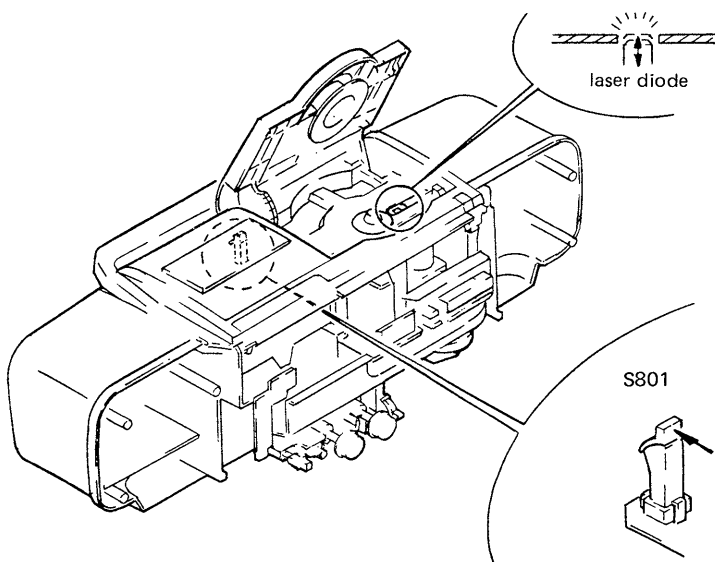
NOTES ON LASER DIODE EMISSION CHECK

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 more than 25 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Remove the front cabinet assembly. (See page 4.)
2. Turn POWER switch on with no disc inserted and make Function switch to CD position.
3. Open the lid for CD.
4. Turn on S801 as following figure.
5. Press ► key.
6. Confirm the laser diode emission while observing the objecting lens. When there is no emission, Auto Power Control circuit or Optical Pick-up is broken.

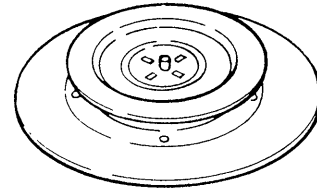
Objective lens moves up and down once for the focus search.



CHUCK PLATE JIG ON REPAIRING

On repairing CD section, playing a disc without the CD lid, use Chuck Plate Jig.

- Code number of Chuck Plate Jig: X-4918-255-1

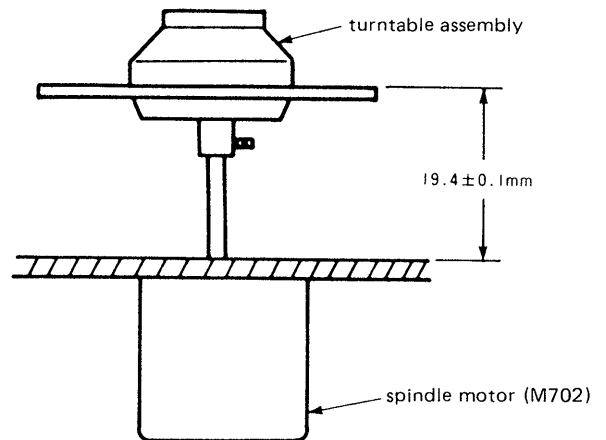


NOTE ON REPAIRING

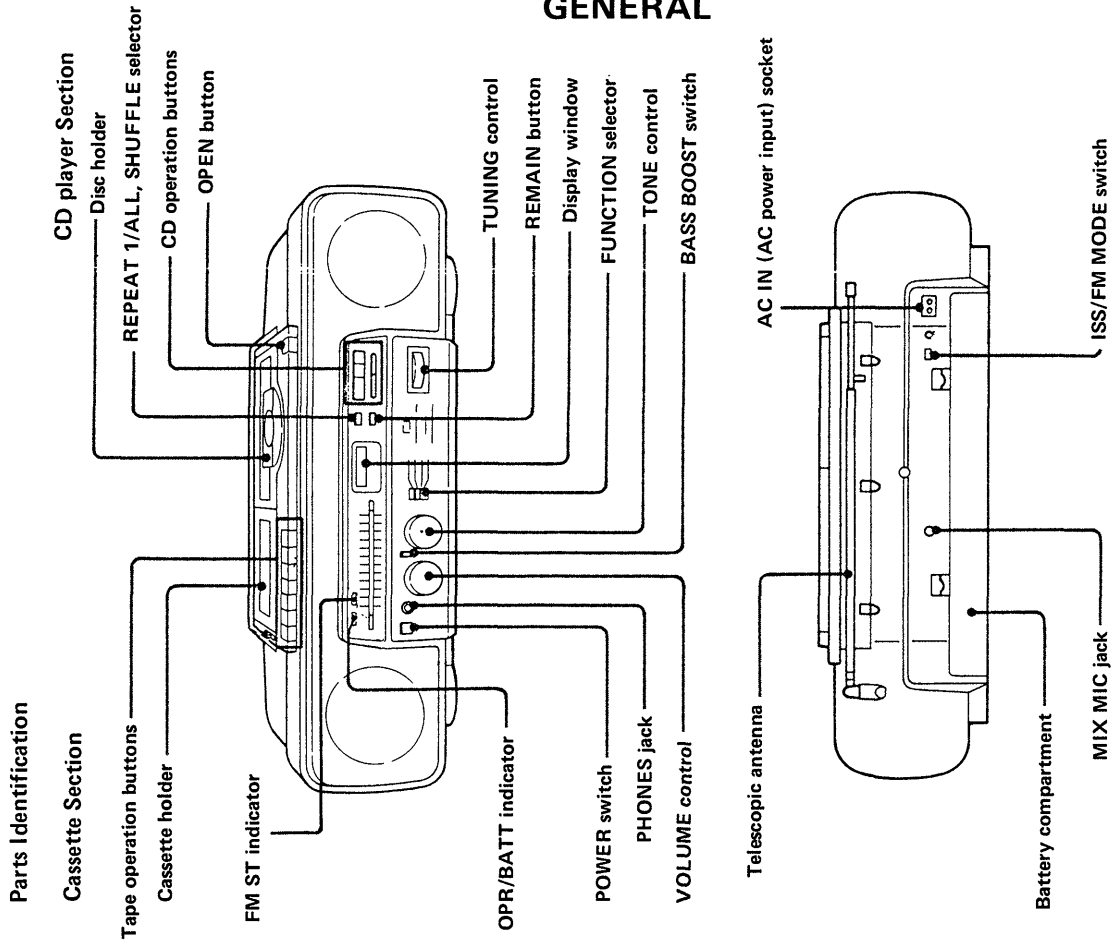
The spindle motor (M702) and the turntable assembly are individually supplied as repair parts.

When repairing M702, please order the turntable assembly together.

Dimension is as follows.

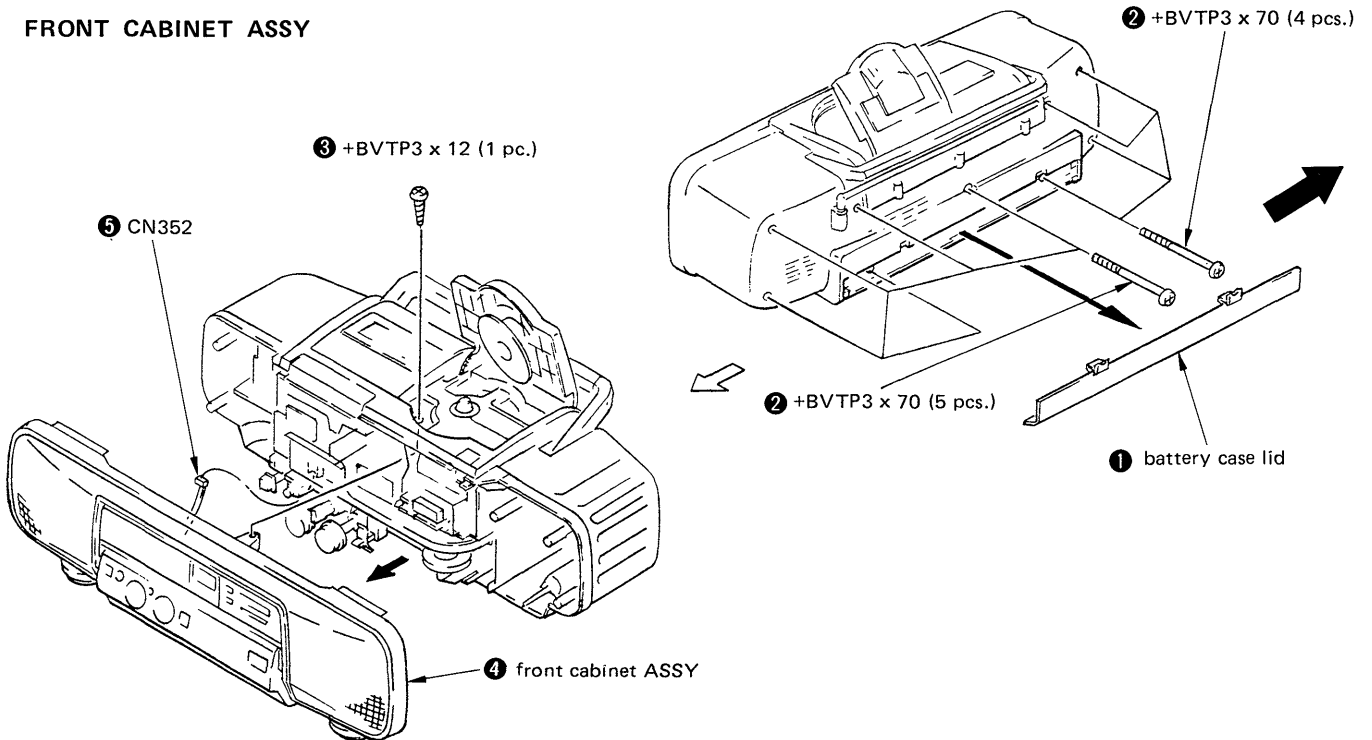


SECTION 2 GENERAL

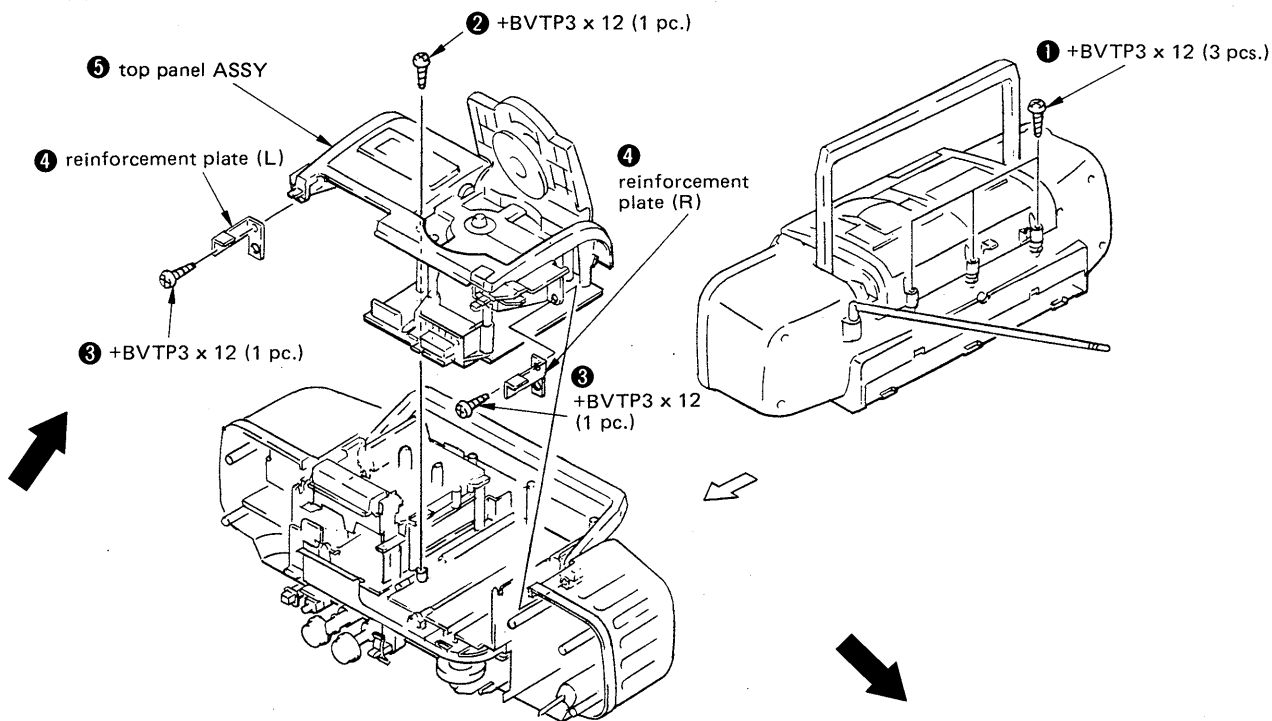


SECTION 3 DISASSEMBLY

FRONT CABINET ASSY

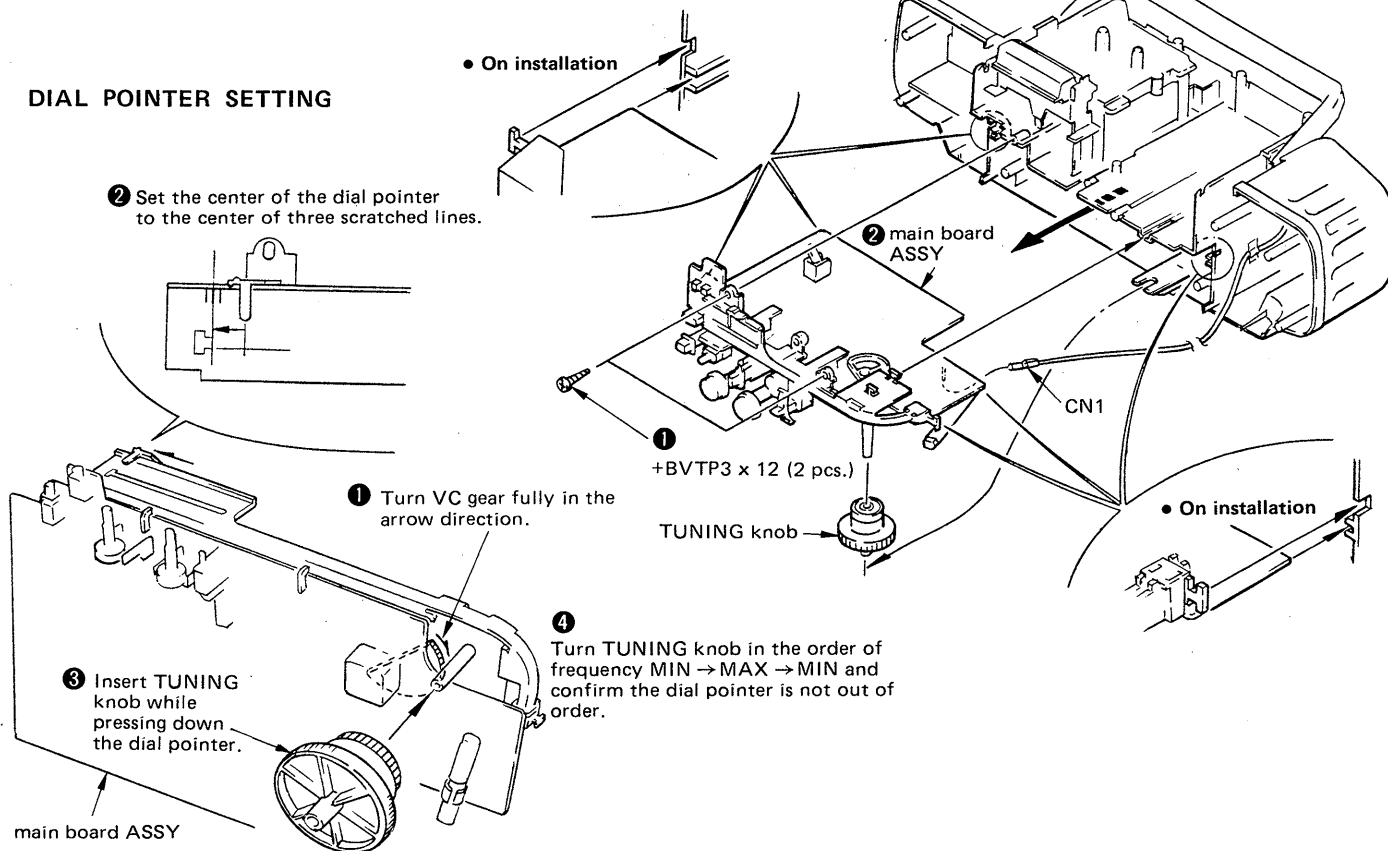


TOP PANEL ASSY



MAIN BOARD ASSY

DIAL POINTER SETTING



SECTION 4

MECHANICAL ADJUSTMENTS

TAPE RECORDER SECTION

PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:

record/playback head	pinch rollers
erase head	rubber belts
capstans	idlers
2. Demagnetize the record/playback/erase head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed in the order given in this service manual.

Torque Measurement		
Mode	Torque meter	Meter reading
FWD	CQ-102C	20 to 60 g·cm (0.28 to 0.83 oz·inch)
FWD back tension		2 to 6 g·cm (0.03 to 0.08 oz·inch)
FF	CQ-201B	more than 50 g·cm (more than 0.69 oz·inch)
REW	CQ-201B	more than 50 g·cm (more than 0.69 oz·inch)

Tape Tension		
Mode	Tension meter	Meter reading
FWD	CQ-403A	more than 70 g (more than 2.47 oz)

SECTION 5 ELECTRICAL ADJUSTMENTS

PRECAUTION

1. Adjustments should be performed in the order given.
Generally playback circuit adjustments should be completed before performing recording circuit adjustments.
2. Adjustments should be performed for both L ch and R-ch.
Switches and controls should be set as follows unless otherwise specified.

- Positions of switches and control knobs
 FUNCTION TAPE
 ISS/FM MODE 2/ST
 BASS BOOST OFF
 TONE mechanical center
 VOLUME minimum

- Standard recording position
Adjust the **VOLUME** knob so that the following regulated input/output signal levels are obtained.

- Standard input level

Input Pin	MIX MIC
Signal source impedance	300 Ω
Input signal level	2.5 mV (-50 dB)
Frequency	1 kHz

- Standard output level

Output Pin	Speaker (L. R)	PHONES
Signal source impedance	3.2 Ω	32 Ω
Output signal level	0.775 V (0 dB)	0.245 V (-10 dB)

0 dB = 0.775 V

- Test Tape

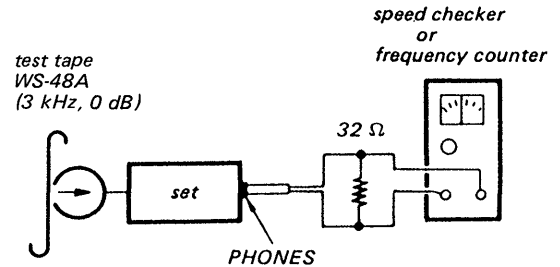
Type	Signal	Used for
WS-48A	3 kHz, 0 dB	Tape Speed Adjustment

5-1. TAPE RECORDER SECTION

Tape Speed Adjustment

Adjustment Procedure:

— Playback mode —



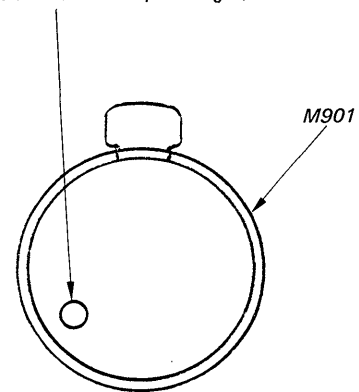
Adjustment Value:

Speed Checker	Frequency Counter
±2.5%	2,925 to 3,075 Hz

Frequency difference between the beginning and the end of the tape should be within 1% (30 Hz).

Adjustment Location:

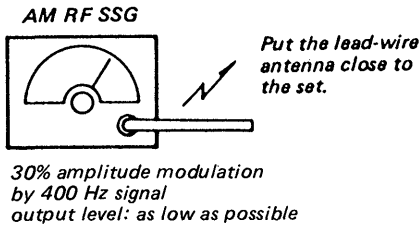
*Adjust the adjustment resistor built in the motor.
(Adjust with inserting the screwdriver. Turning clockwise makes the speed high.)*



5-2. RADIO SECTION

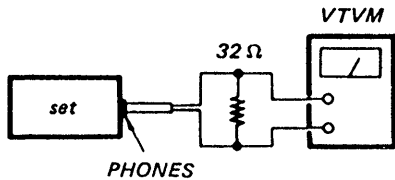
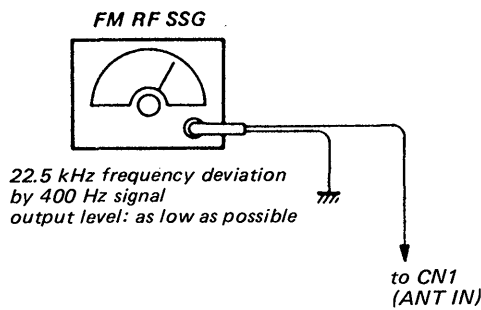
[AM]

FUNCTION switch: AM



[FM]

FUNCTION switch: FM



- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

AM IF ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
CP2	455 kHz

AM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
T1	516 kHz
CT1-4	1,750 kHz

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L3	620 kHz
CT1-3	1,400 kHz

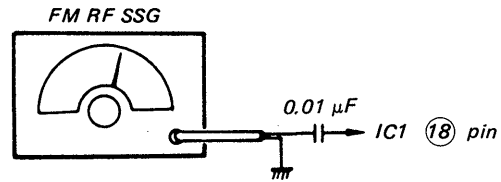
FM FREQUENCY COVERAGE ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L2	86.5 MHz
CT1-2	109.5 MHz

FM TRACKING ADJUSTMENT	
Adjust for a maximum reading on VTVM.	
L1	86.5 MHz
CT1-1	109.5 MHz

[FM VCO ADJUSTMENT]

Procedure:

- FUNCTION switch: FM



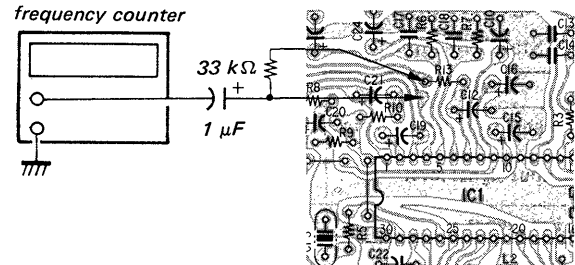
Carrier Frequency: According to the color of the mark on ceramic filter (CF2).

Mark	Carrier Frequency
red	10.7 MHz
blue	10.67 MHz
orange	10.73 MHz
black	10.64 MHz
white	10.76 MHz

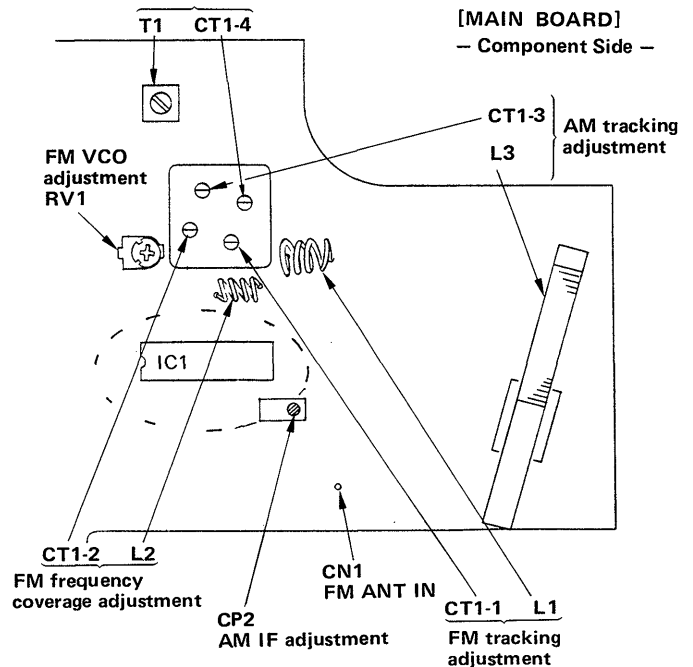
Output Level: 100 dB (0.1 V)

- 1) Adjust with RV1 so that the reading on the frequency counter becomes 76.0 ±0.3 kHz.

Adjustment Location: main board



AM frequency coverage adjustment



5-3. CD SECTION

Notes on Adjustment

1. Perform adjustment in service mode.
After adjustment, be sure to release service mode.
2. Perform adjustments in the order given.
3. Use the disc (YEDS-18, Part No. 3-702-101-01) only when so indicated.

Before Adjustment

Put the set into service mode and perform the following checks. Repair if there are any problems.

• Sled Motor Check

1. Press ►►, ◄◄ keys and confirm that the FOP moves smoothly from the innermost to outermost circumference and back smoothly and with no catching or abnormal noises.
 ►► : FOP moves to the outer circumference
 ◄◄ : FOP moves to the inner circumference

• Focus Search Check

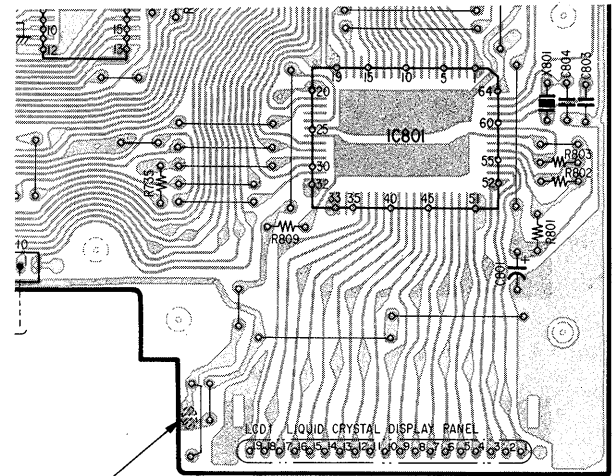
1. Press ► key. (Focus search operation is performed continuously.)
2. Look at the FOP objective lens and confirm that it moves up and down smoothly, with no catching or abnormal noises.
3. Press' ■ key.
Confirm that focus search operation stops. If it does not, press ■ key again longer.

How to Put the Set into Service Mode

1. Short-circuit following portions on the CD main board.

2. Turn the POWER on.

CD main board (conductor side)



short-circuit

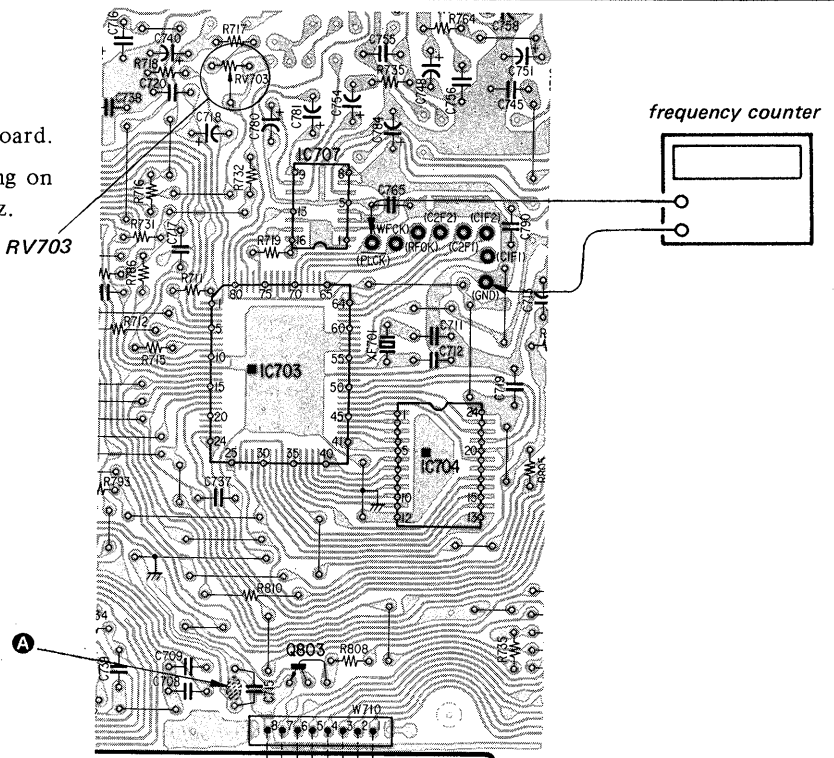
VCO Adjustment

Adjustment Procedure:

1. Short-circuit **A** portion on CD main board.
2. Adjust with RV703 so that the reading on frequency counter becomes 4.3218 MHz.
3. Release the short-circuit **A** portion.

Adjustment Location:

CD main board
(conductor side)

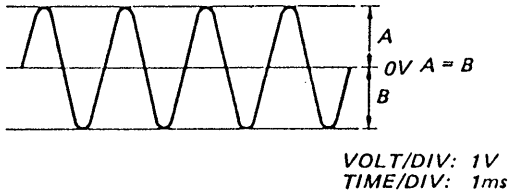


E-F Balance Adjustment

This adjustment is to be done when the optical block is replaced.

Adjustment Procedure:

1. Connect the oscilloscope between IC701 pins ① and ②⑥.
2. Put the set into service mode. (See page 9.)
3. Press the ►► and ◄◄ keys to move the FOP to the center.
4. Insert disc (YEDS-18) and press ► key.
5. Adjust RV701 so that the oscilloscope traverse waveform is symmetrical, as shown in the figure below.
6. Release service mode after adjustment is completed.

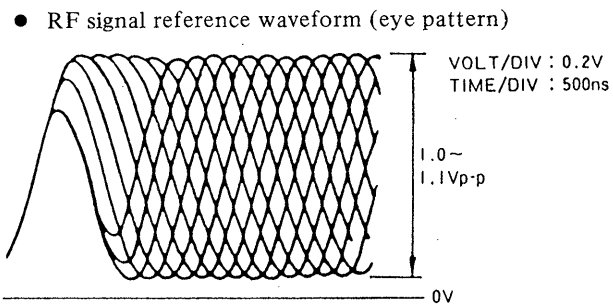


Focus Bias Adjustment

This adjustment is to be done when the optical block is replaced.

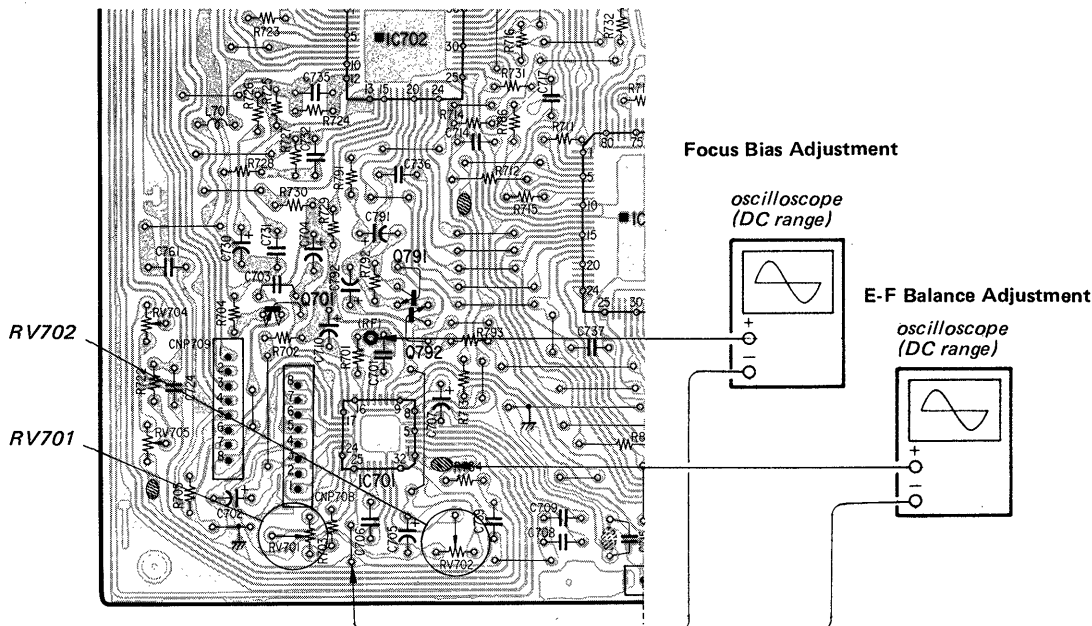
Adjustment Procedure:

1. Connect the oscilloscope between IC701 pins ①④ and ②⑥.
2. Put the set into service mode. (See page 9.)
3. Press the ►► and ◄◄ keys to move the FOP to the center. (Move the FOP to the music area on the disc to enable easy visibility of the eye pattern.)
4. Insert disc (YEDS-18) and press ► key.
5. Adjust RV702 so that the oscilloscope waveform is as shown in the figure below (eye pattern).
A good eye pattern means that the diamond shape (◊) in the center of the waveform can be clearly distinguished.
6. Release service mode after adjustment is completed.



When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

Adjustment Location: CD main board (conductor side)



Focus/Tracking Gain Adjustment

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 mechanical 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, it is more susceptible to mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

Symptoms \ Gain	Focus	Tracking
• The time until music starts becomes longer for STOP → PLAY or automatic selection (◀▶ buttons pressed). (Normally takes about 2 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 poise during 2-axis device operation.	high	high

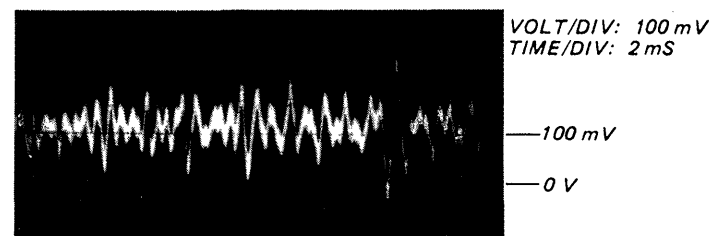
The following is a simple adjustment method.

- Simple Adjustment -

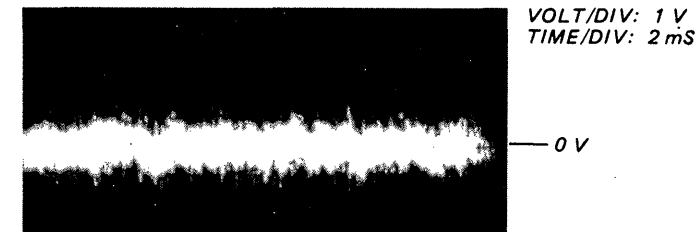
Note: Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the positions after the simple adjustment are only a little different, return the controls to the original position.

Procedure:

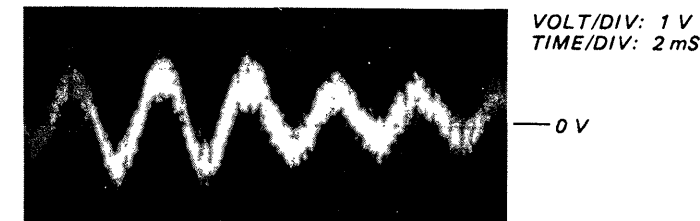
1. Keep the set horizontal.
(If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2 axis device.)
2. Insert disc (YEDS-18) and press ▶PLAY button.
3. Connect the oscilloscope between IC701 pins ① and ②⑥.
4. Adjustment RV705 so that the waveform is as shown in the figure below. (focus gain adjustment)



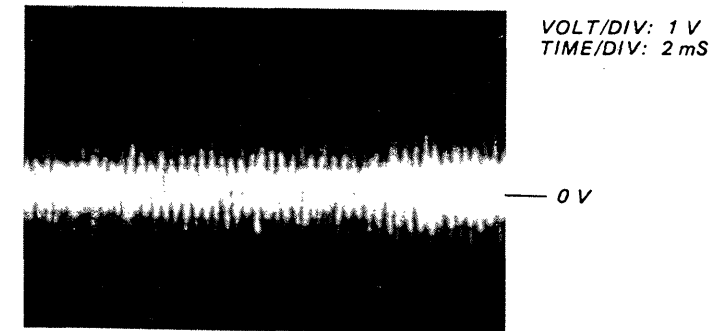
5. Connect the oscilloscope between IC701 pins ① and ②⑥.
6. Adjust RV704 so that the waveform is as shown in the figure below. (tracking gain adjustment)



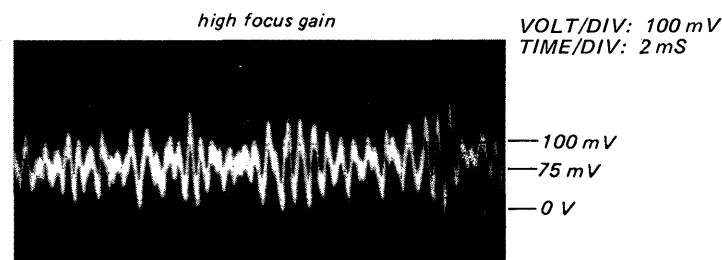
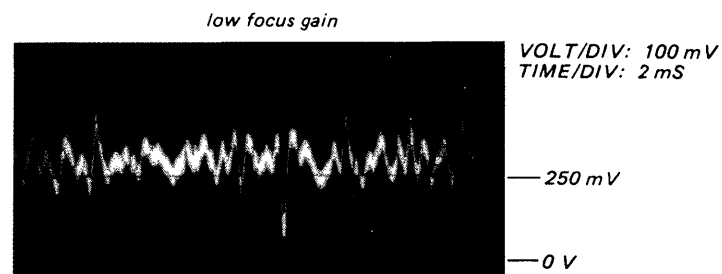
- Incorrect Examples (fundamental wave appears)
low tracking gain



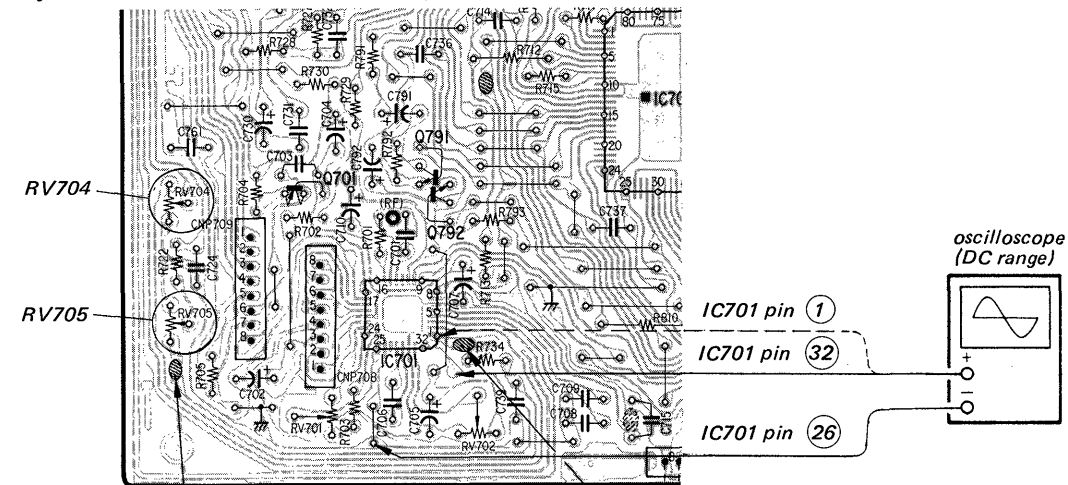
- Incorrect Examples (DC level changes more than on adjusted waveform)
low focus gain



- Incorrect Examples (DC level changes more than on adjusted waveform)



Adjustment Location: CD main board (conductor side)

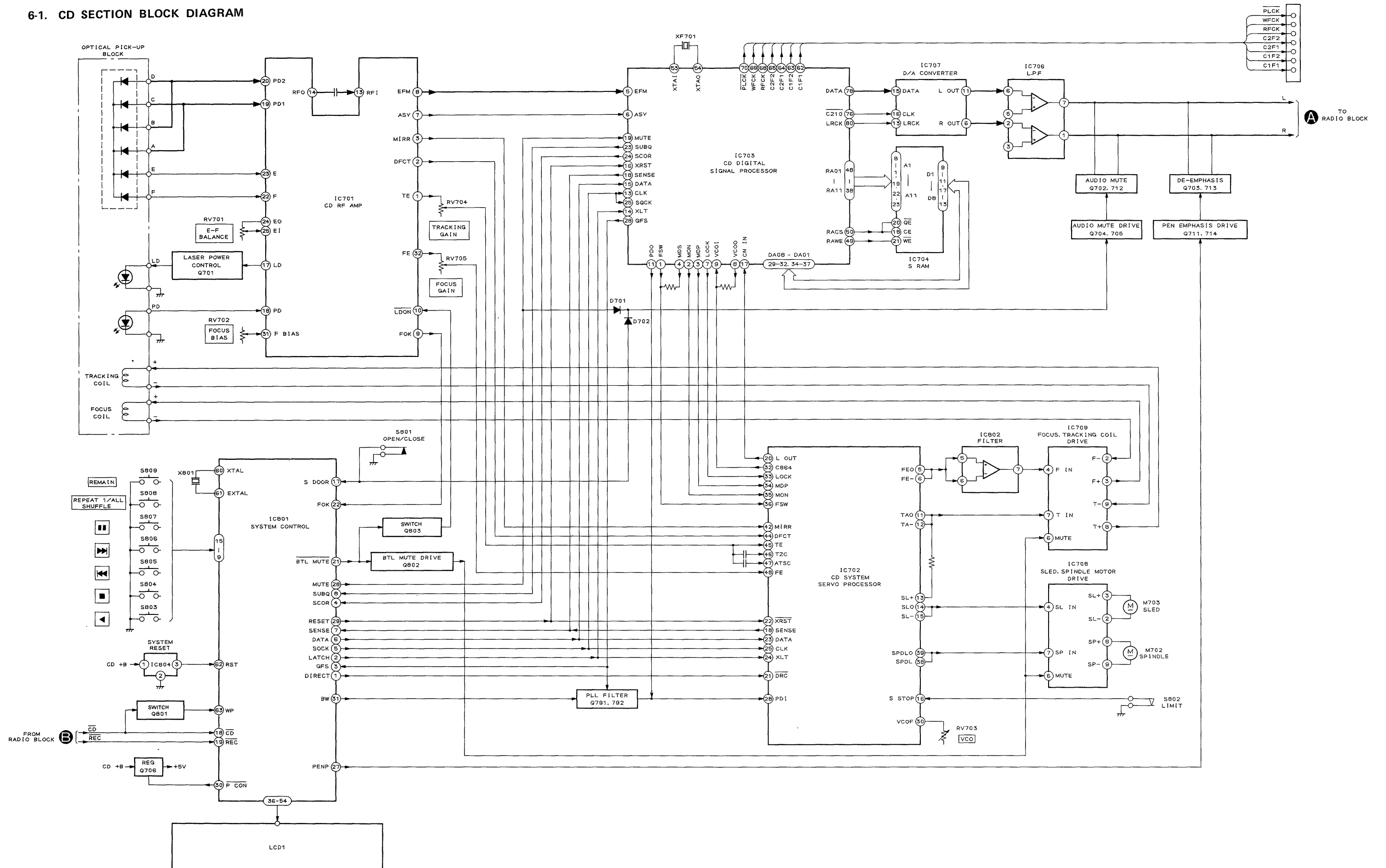


Remove the solder bridge while adjusting the focus gain. (After adjustment make the solder bridge.)

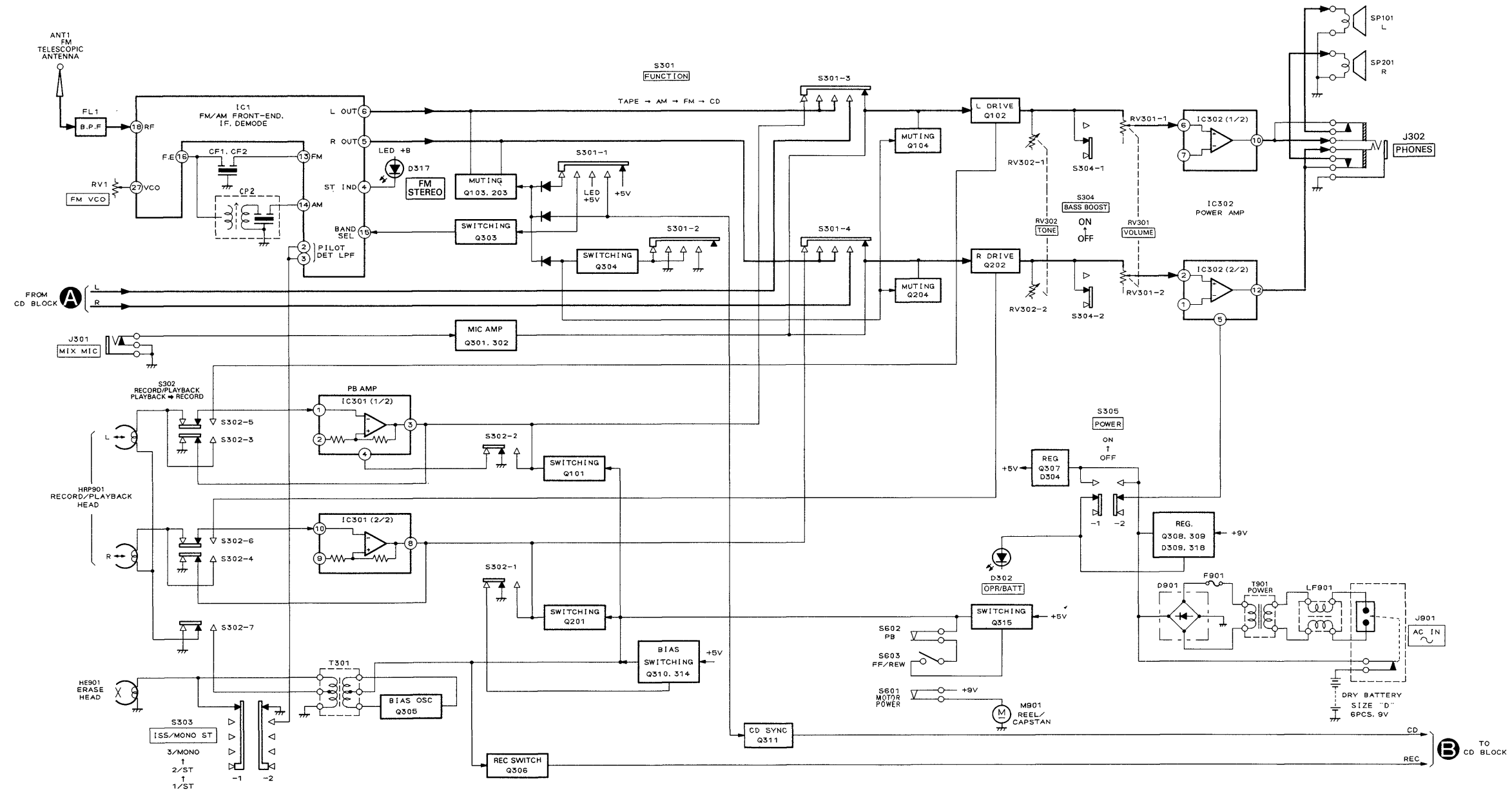
Remove the solder bridge while adjusting the tracking gain. (After adjustment make the solder bridge.)

SECTION 6 DIAGRAMS

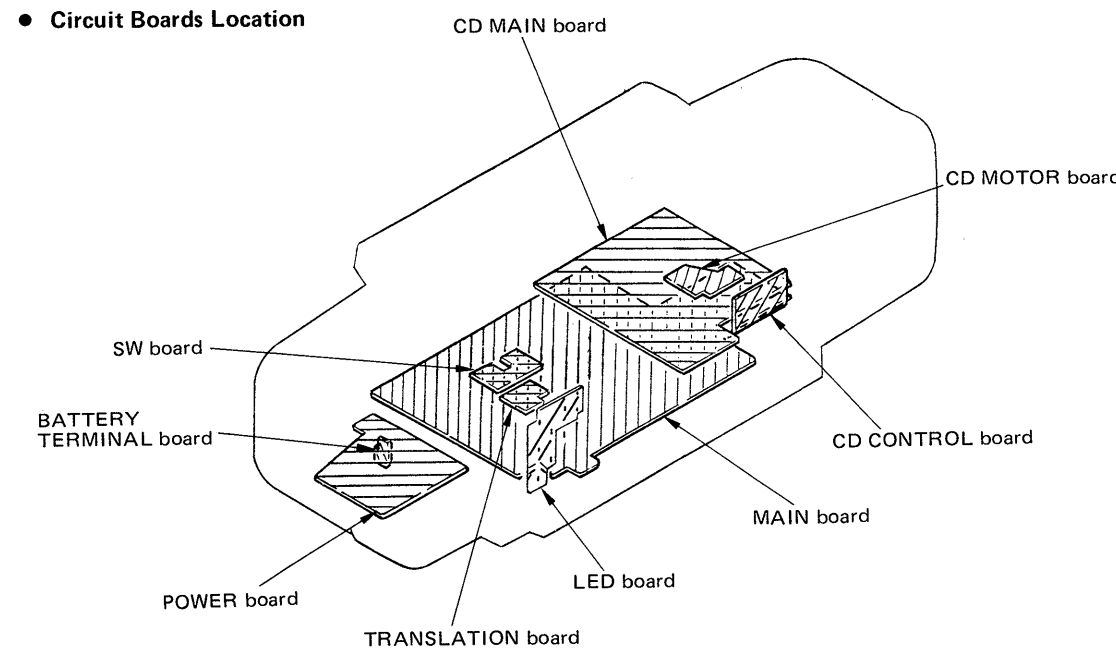
6-1. CD SECTION BLOCK DIAGRAM



6-2. RADIO, AUDIO SECTION BLOCK DIAGRAM



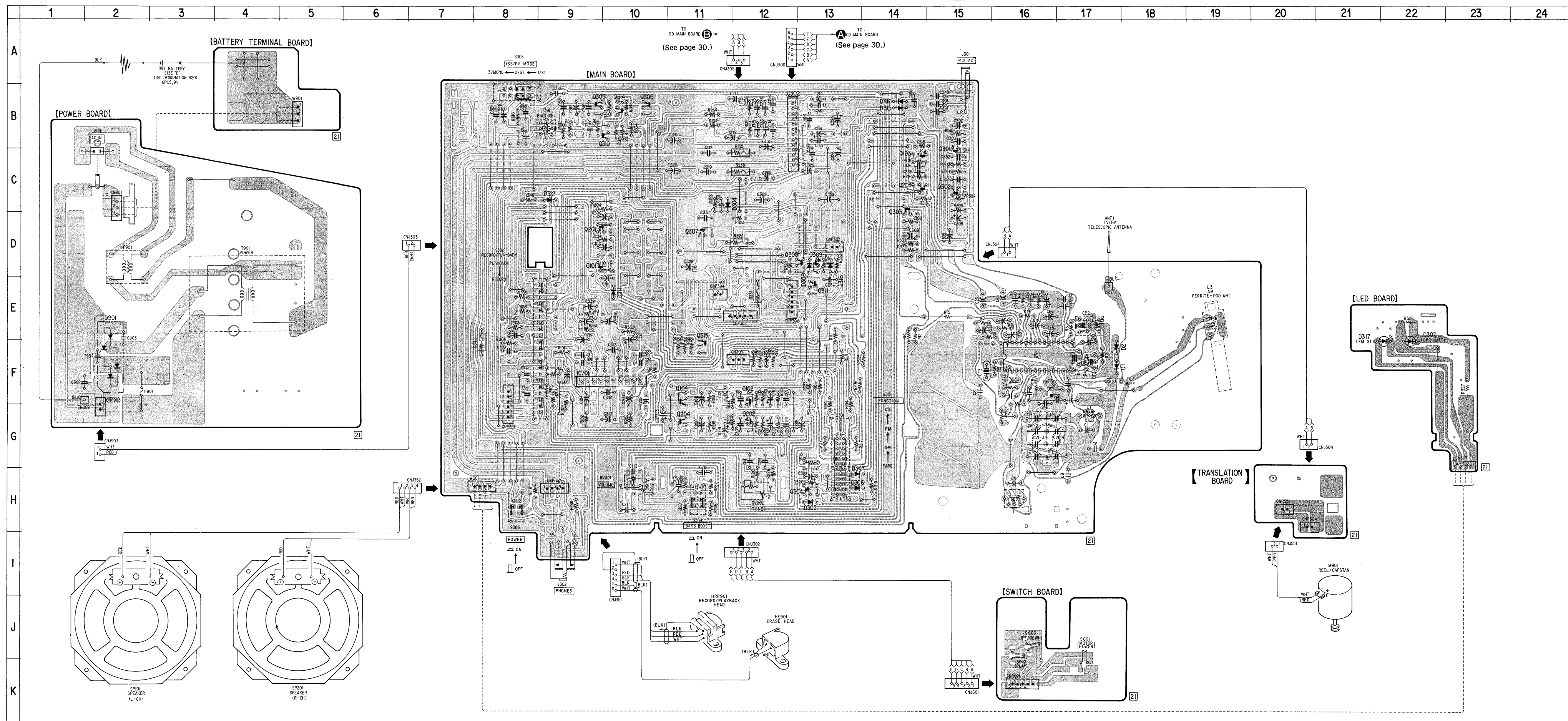
• Circuit Boards Location



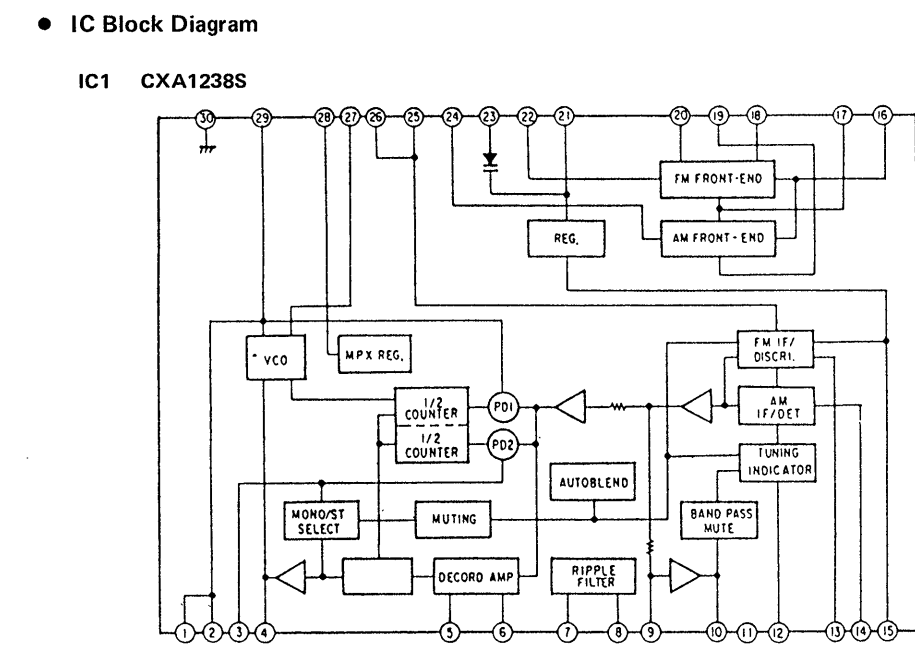
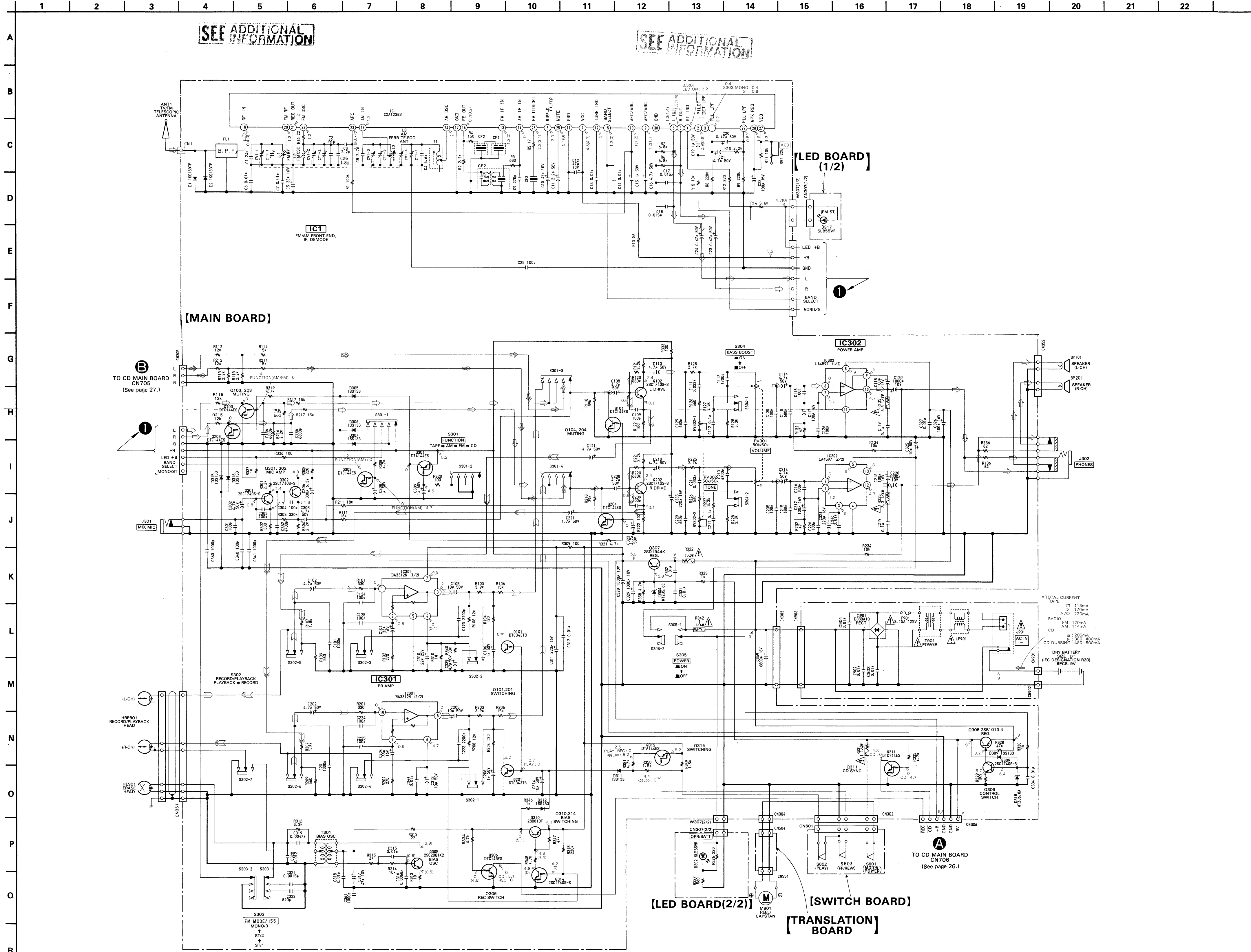
• Semiconductor Location

Ref. No.	Location
D1	F-17
D2	F-17
D302	E-22
D304	C-11
D305	H-13
D306	H-13
D307	H-13
D309	D-13
D311	E-10
D312	C-9
D315	B-14
D316	B-14
D317	F-22
D318	D-13
D901	F-2
IC1	F-16
IC301	F-10
IC302	B-12
Q101	D-10
Q102	F-12
Q103	C-14
Q104	F-11
Q201	D-10
Q202	G-12
Q203	C-14
Q204	G-11
Q301	C-15
Q302	C-15
Q303	C-14
Q304	H-13
Q305	B-9
Q306	B-10
Q307	D-11
Q308	D-13
Q309	D-13
Q310	B-10
Q311	E-13
Q314	B-10
Q315	F-11

SEE ADDITIONAL INFORMATION



SEE ADDITIONAL INFORMATION



Note on Printed Wiring Boards:

- : parts extracted from the component side.

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted, pF: pF and tantalum.
- All resistors are in Ω and $1/4 W$ or less unless otherwise specified.
- □ : fusible resistor.
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.

Radio section

- no mark: FM
- (): AM

Tape section

- no mark: PLAY
- (): REC

CD section

- no mark: STOP
- (): PLAY

● Voltages are taken with a VOM (10 M Ω/V). Voltage variations may be noted due to normal production tolerances.

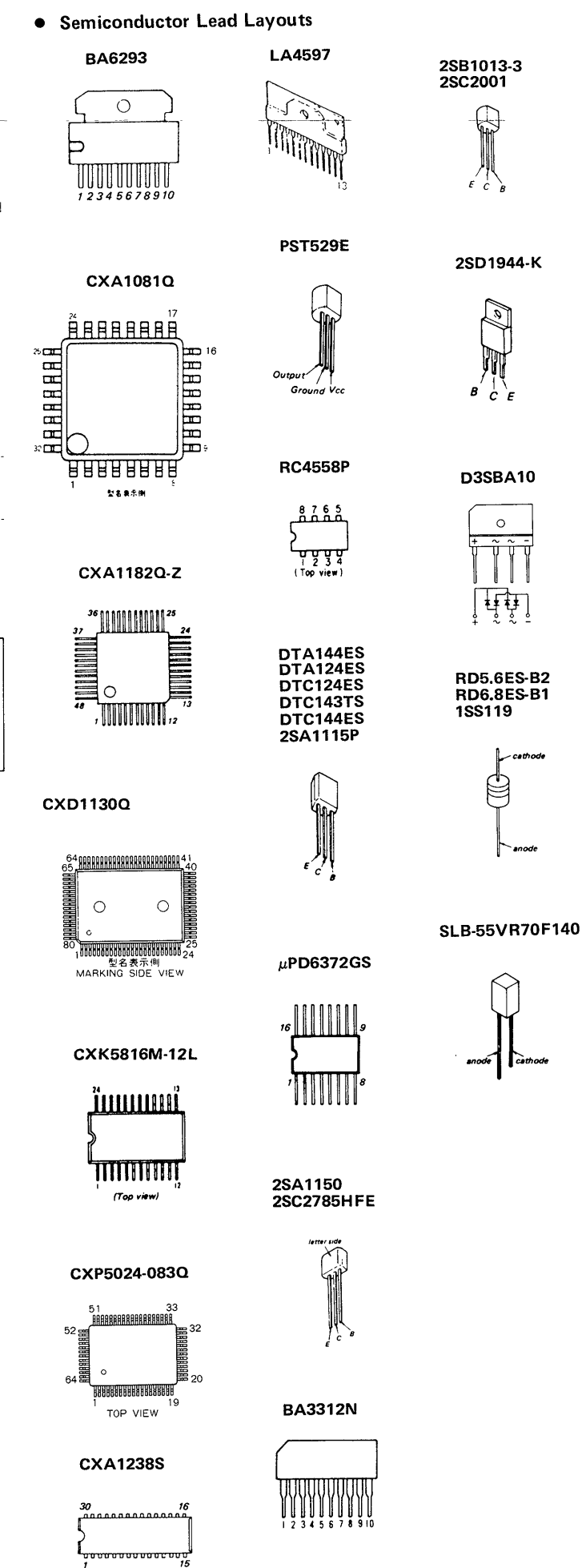
● Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.

● Signal path:

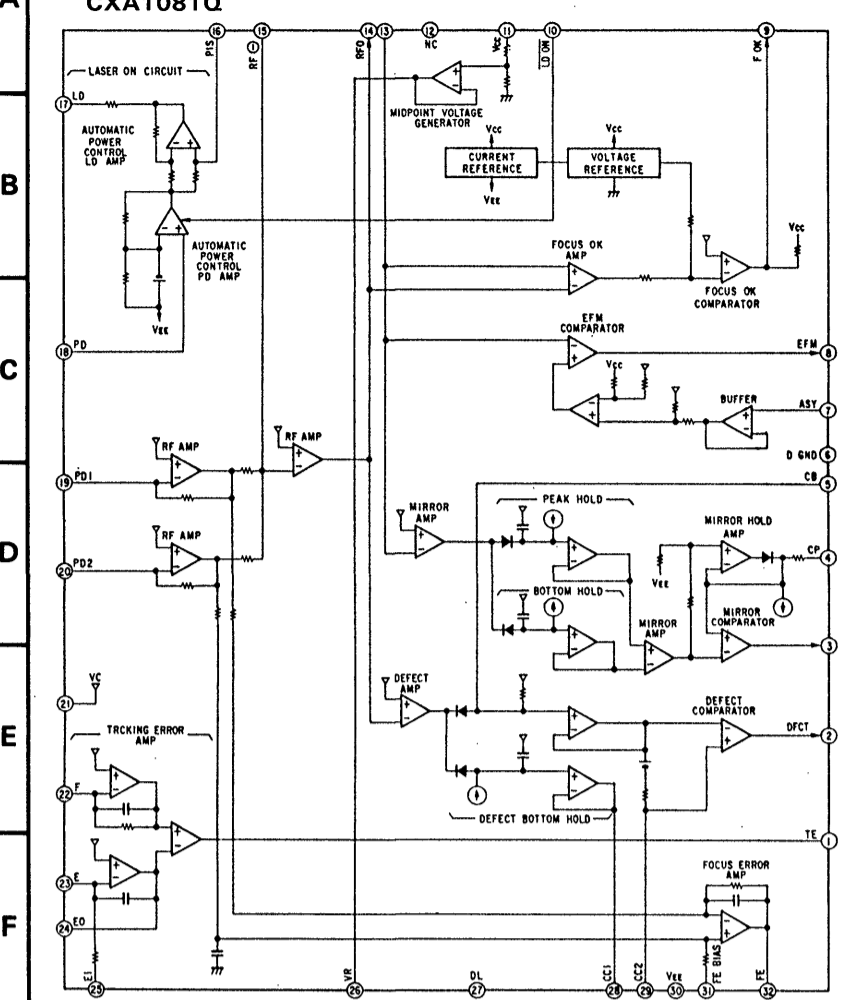
- : FM
- : PB
- : REC
- : CD

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

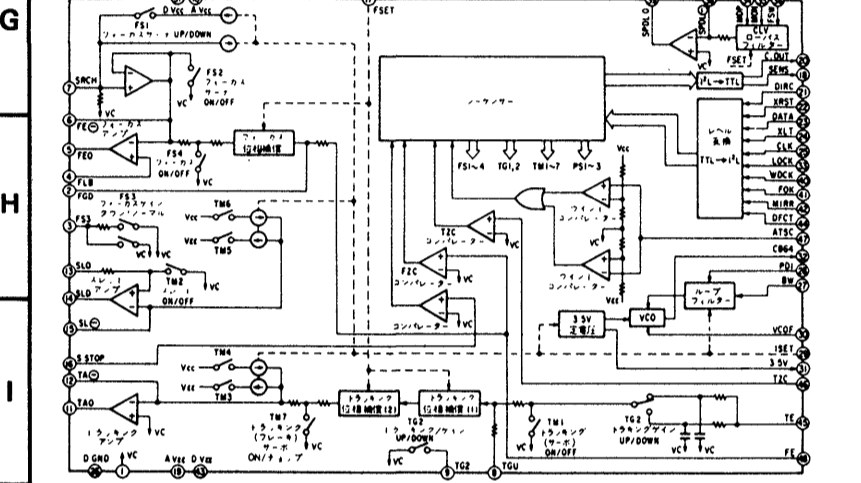
Note: Les composants identifiés par une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



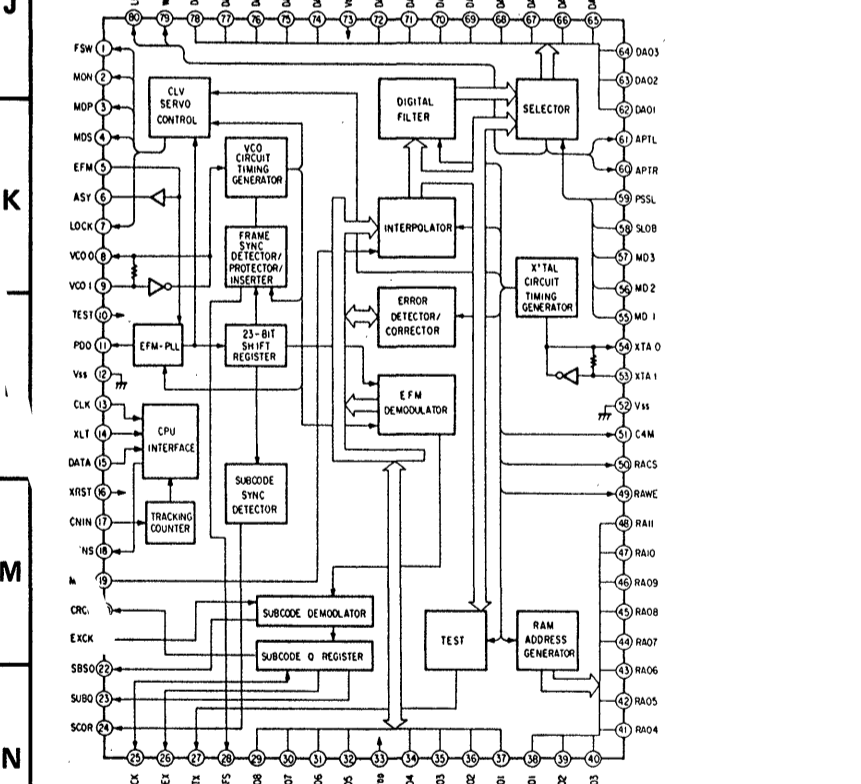
• IC Block Diagrams
IC701
CXA1081Q



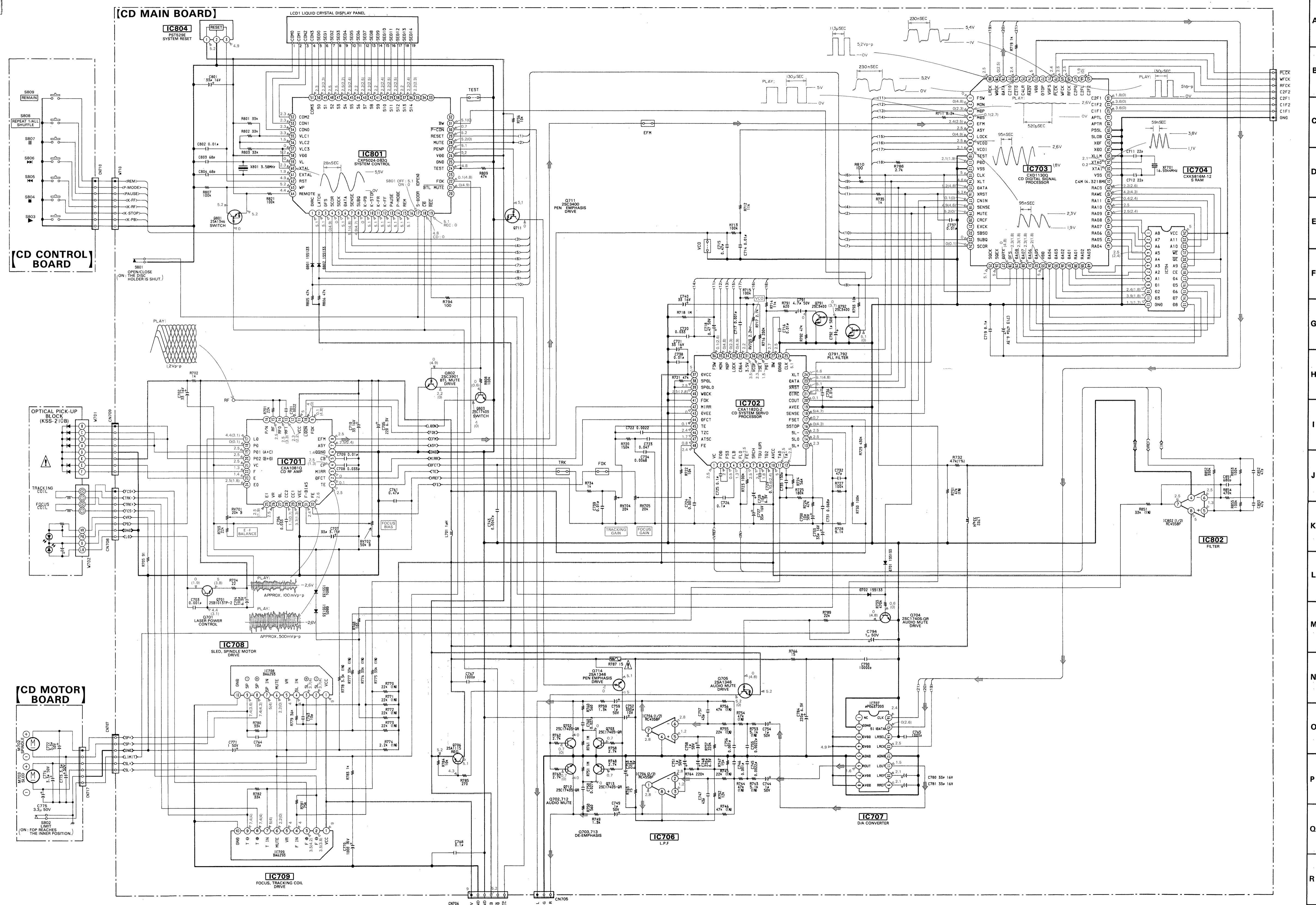
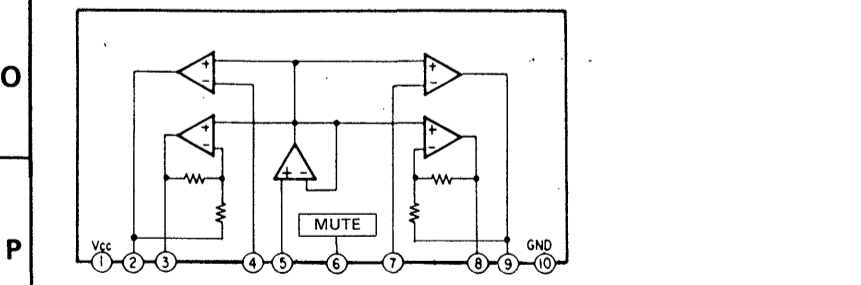
IC702
CXA1182Q-Z



IC703
CXD1130Q



IC708, 709
BA6293



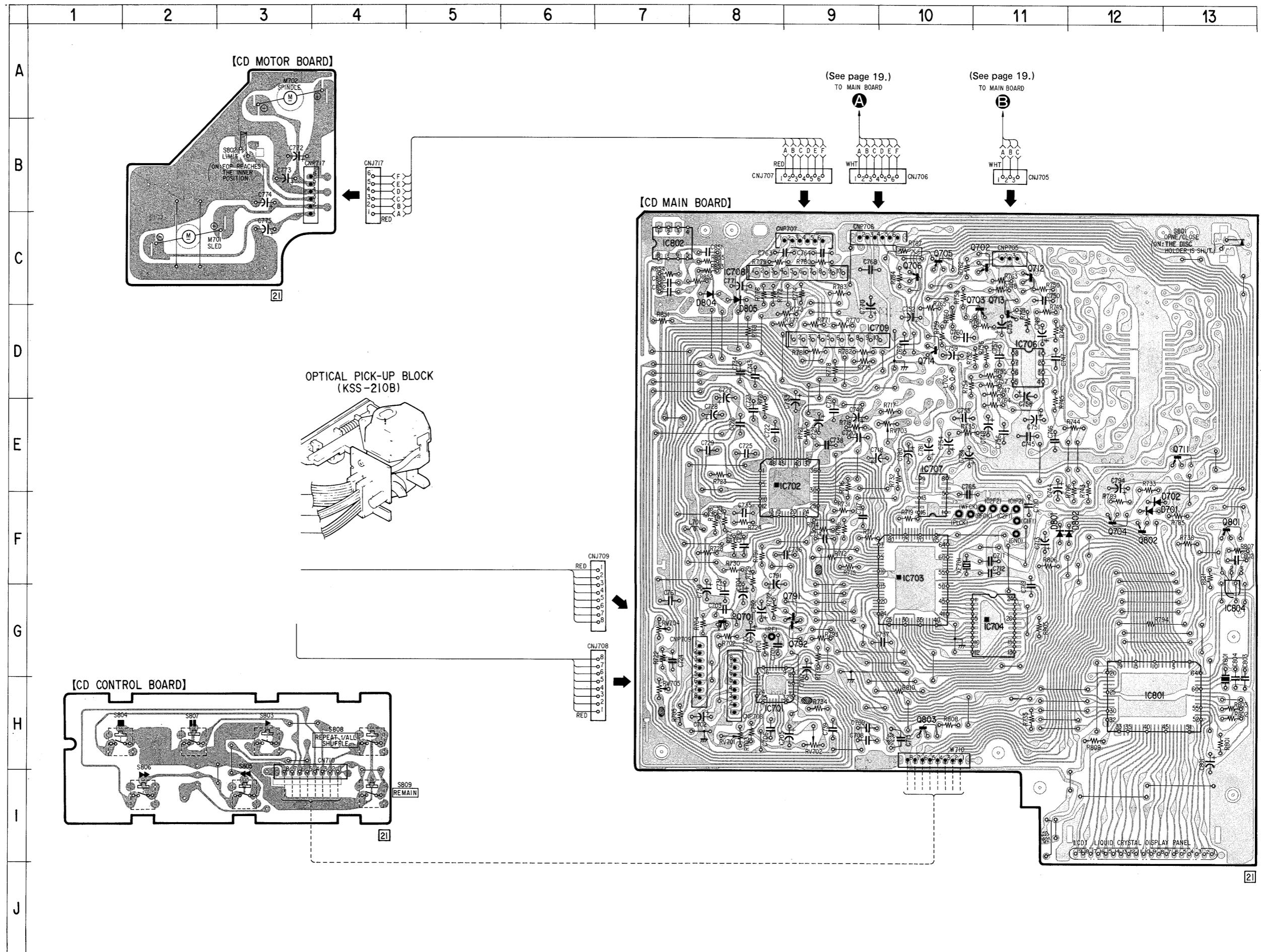
[CD CONTROL BOARD]

[CD MOTOR BOARD]

(ON: FOR REACHES THE INNER POSITION.)

• Semiconductor Location

Ref. No.	Location
D701	F-12
D702	F-12
D801	F-11
D802	F-12
D804	C-8
D805	C-8
IC701	H-8
IC702	E-9
IC703	F-10
IC704	G-11
IC706	D-11
IC707	E-10
IC708	C-8
IC709	D-9
IC801	H-12
IC802	C-7
IC804	F-13
Q701	G-8
Q702	C-11
Q703	D-11
Q704	F-12
Q705	C-10
Q706	C-10
Q711	E-13
Q712	C-11
Q713	D-11
Q714	D-10
Q791	G-9
Q792	G-9
Q801	F-13
Q802	F-12
Q803	H-10



SECTION 7

EXPLODED VIEWS

NOTE:

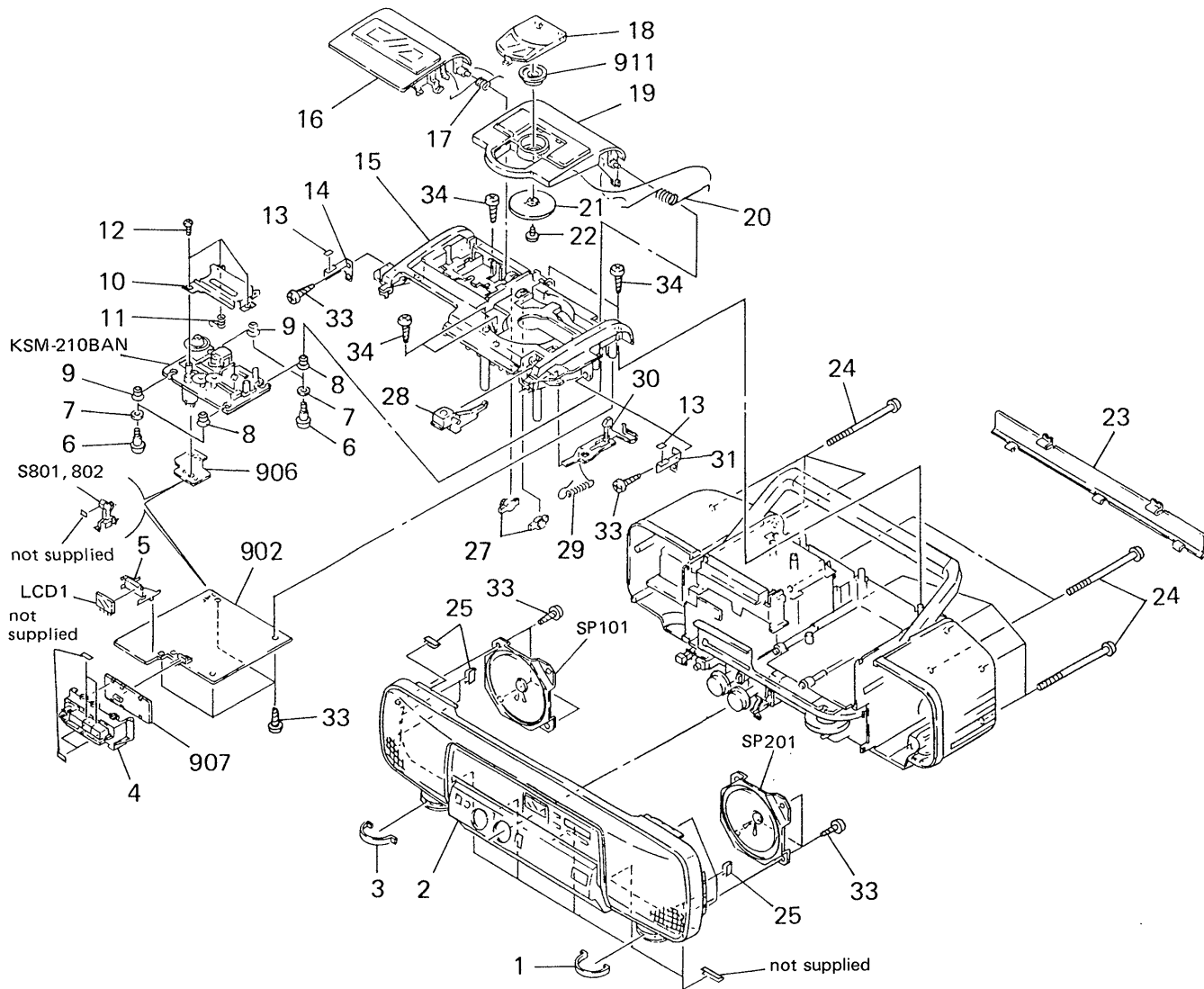
- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
Example:
(RED) ... KNOB, BALANCE (WHITE)
↑ Cabinet's Color ↑ Parts' Color

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

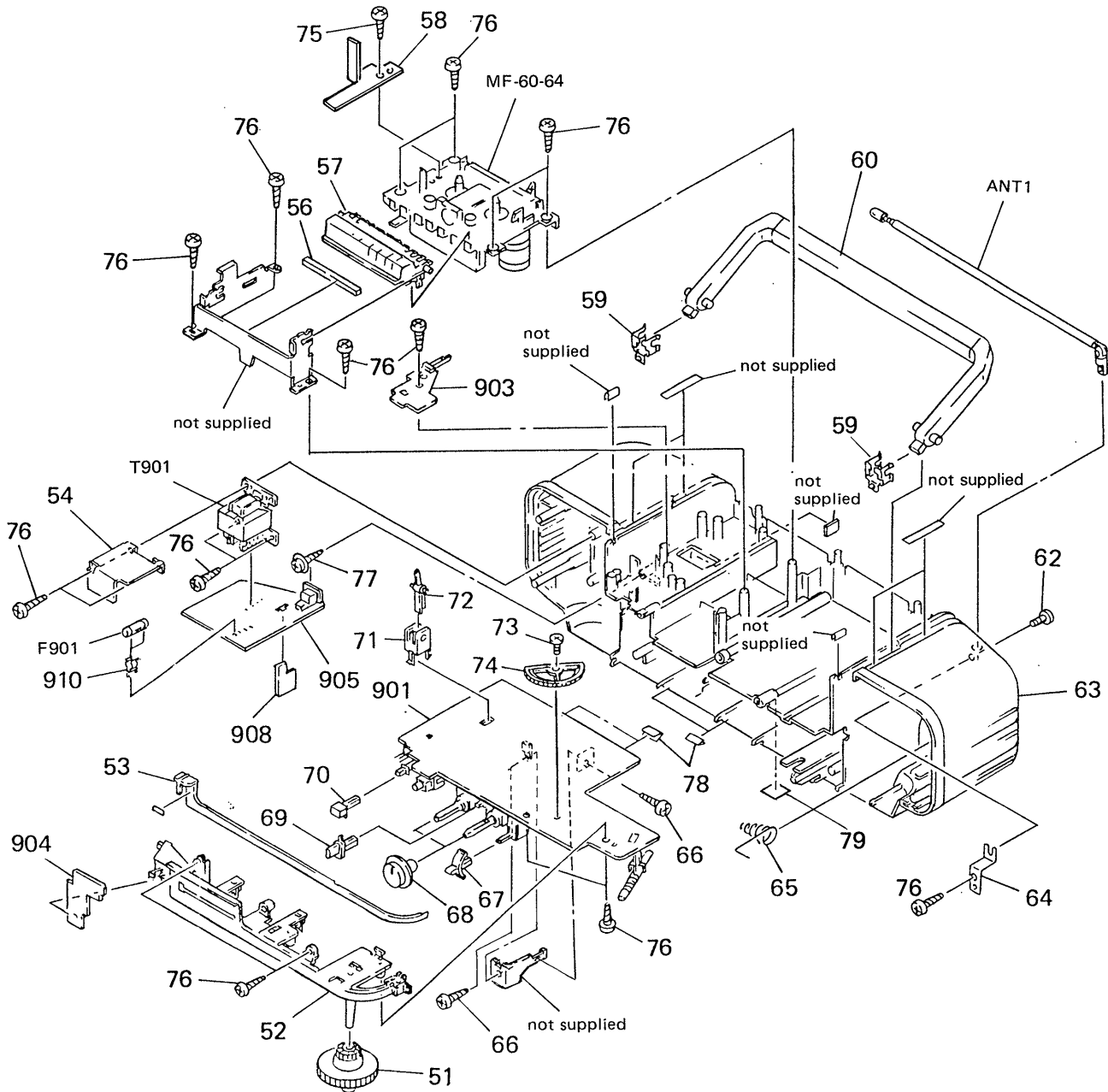
Les composants identifiés par une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

(1) FRONT CABINET AND TOP PANEL ASSEMBLIES



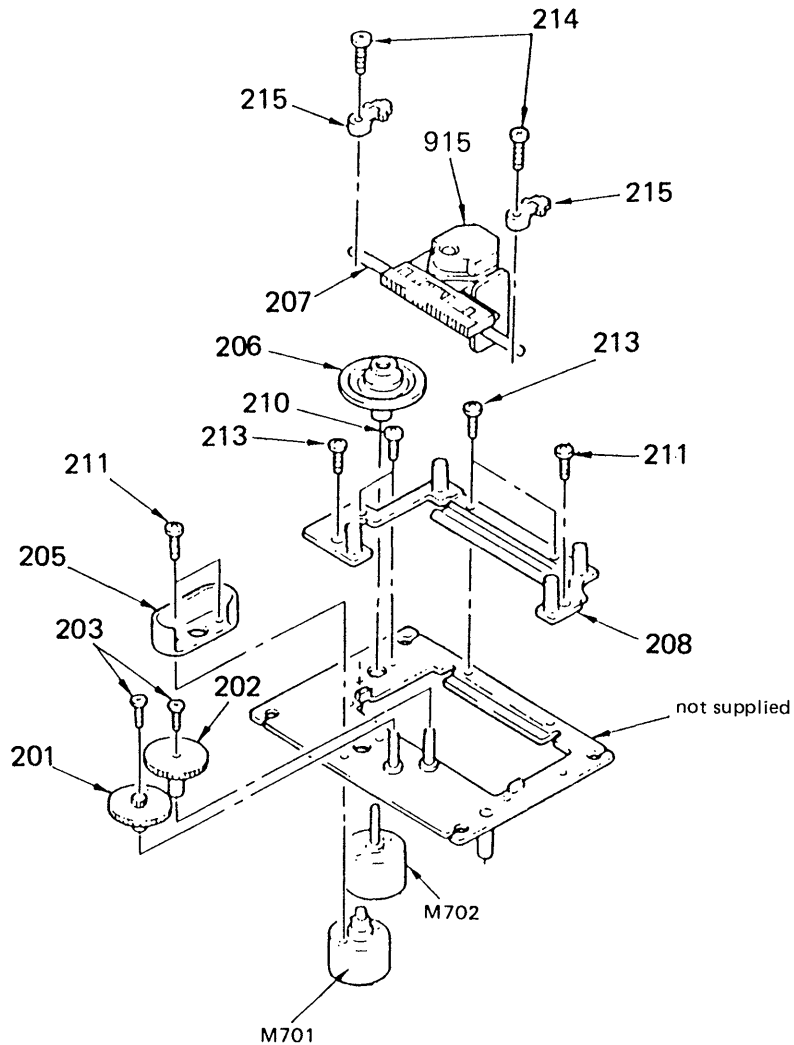
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	4-931-331-01	FOOT (RIGHT), ORNAMENTAL		21	3-704-435-01	PLATE (M), CHUCK	
2	X-4921-240-1	CABINET (FRONT) ASSY		22	7-621-772-00	SCREW +B 2X3	
3	4-931-330-01	FOOT (LEFT), ORNAMENTAL		23	4-931-307-01	LID, BATTERY CASE	
4	4-931-305-01	BUTTON, CD		24	4-918-246-01	SCREW (3X70), + BVTP	
5	*4-931-332-01	BRACKET, LCD		25	3-831-441-XX	SPACER (A)	
6	4-931-373-01	SCREW, CD FITTING		27	3-319-224-31	DAMPER, SMALL	
7	3-930-232-11	WASHER		28	4-931-311-01	BUTTON (CD), EJECT	
8	4-922-858-01	DAMPER		29	3-543-985-11	SPRING, TENSION	
9	4-922-858-11	DAMPER		30	4-931-312-01	LEVER (CD), EJECT	
10	*4-928-936-01	COVER, CD		31	*4-931-372-01	PLATE, REINFORLEMENT (R)	
11	*4-931-358-01	SPRING, GROUND		33	7-685-648-79	SCREW, TAPPING +BV 3X12	
12	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT		34	3-325-679-71	SCREW, TAPPING +BV 3X12	
13	3-647-028-01	CUSHION, RUBBER		902	*A-3260-940-A	MOUNTED PCB, MAIN, CD	
14	*4-931-371-01	PLATE, REINFORLEMENT (L)		906	*1-630-625-11	PC BOARD, CD MOTOR	
15	4-931-346-11	CABINET (UPPER)		907	*1-630-626-11	PC BOARD, CD CONTROL	
16	X-4921-241-1	LID ASSY, CASSETTE		908	*1-630-629-21	PC BOARD, BATTERY TERMINAL	
17	4-931-390-01	SPRING (45)		911	1-452-531-11	MAGNET	
18	4-931-313-01	WINDOW, CD		LCD1	1-808-726-11	DISPLAY PANEL, LIQUID CRYSTAL	
19	X-4919-960-1	LID ASSY, CD		SP101	1-544-148-11	SPEAKER	
20	4-931-335-01	SPRING (CD)		SP201	1-544-148-11	SPEAKER	

(2) REAR CABINET ASSEMBLY






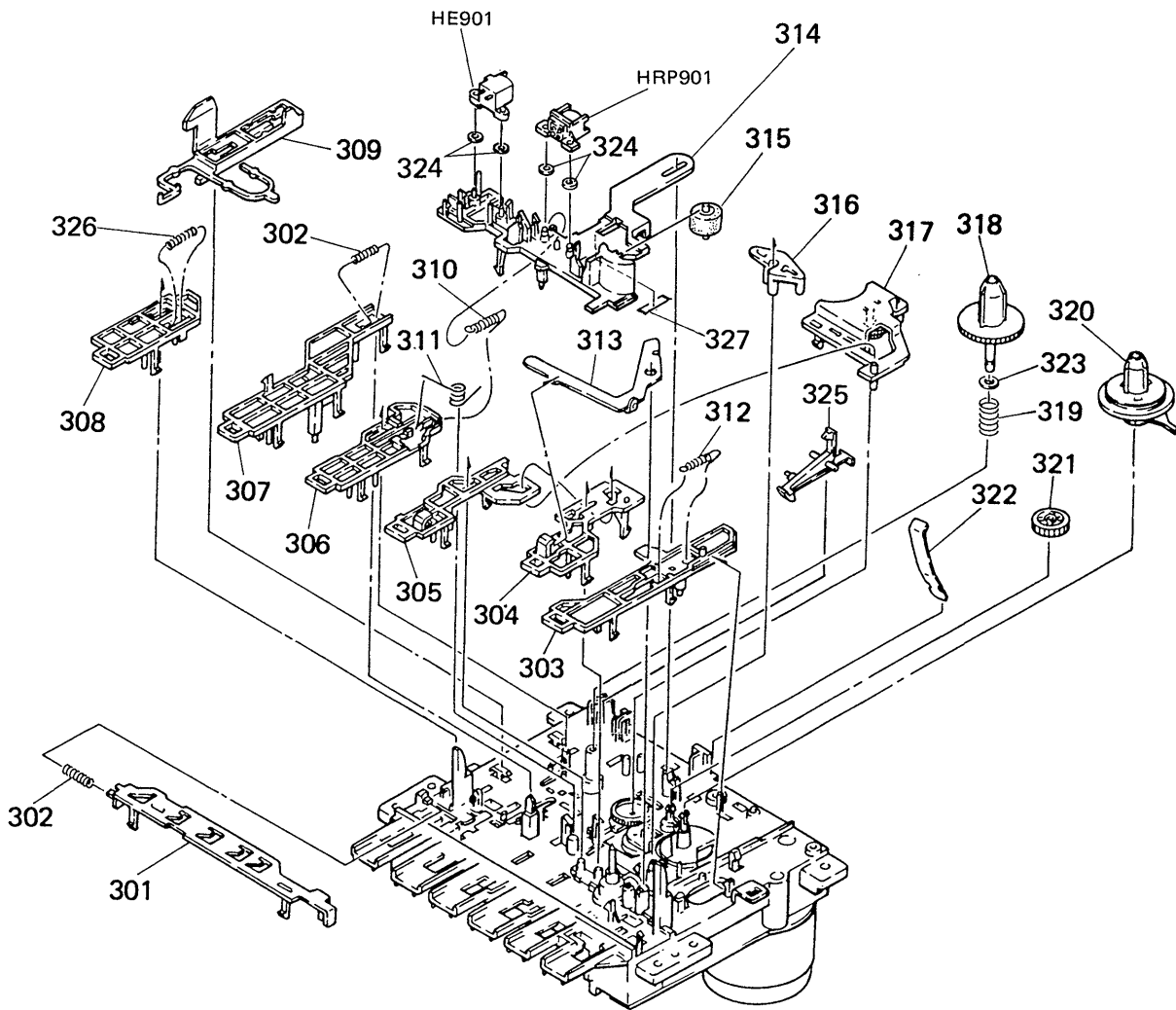
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	4-931-314-01	KNOB (TUNING)		69	4-931-310-01	KNOB (BASS BOOST)	
52	*4-931-347-01	CHASSIS (TU)		70	4-931-316-01	KNOB (POWER)	
53	4-931-318-01	RACK, POINTER		71	*4-931-320-01	BRACKET (REC)	
54	*4-931-384-01	PLATE, SHIELD, TRANSFORMER		72	4-931-319-01	LEVER (REC)	
56	4-930-370-11	CUSHION (P)		73	7-621-770-67	SCREW +B 2.6X6	
57	X-4921-239-1	TAPE BUTTON (M) ASSY		74	*4-931-322-01	GEAR, VC	
58	4-931-349-01	SPRING		75	7-685-134-19	SCREW +P 2.6X8 TYPE2 NON-SLIT	
59	*4-931-342-01	BRACKET, HANDLE		76	7-685-648-79	SCREW, TAPPING +BV 3X12	
60	4-931-306-01	HANDLE		77	7-685-647-79	SCREW (+ PTP DIA.12 WH 3)	
62	7-682-548-04	SCREW +B 3X8		78	3-831-441-XX	SPACER (A)	
63	4-931-344-11	(US).....CABINET (REAR)		79	*4-931-363-01	(Canadian)...LABEL, MODEL NUMBER	
	4-931-344-21	(Canadian)...CABINET (REAR)		ANT1	1-501-378-11	ANTENNA, TELESCOPIC	
64	*4-931-340-01	TERMINAL BOARD, ANTENNA		901	*A-3260-971-A	MOUNTED PCB, MAIN	
65	4-931-339-01	SPRING		903	*1-630-913-21	PC BOARD, TRANSLATION	
66	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3		904	*1-630-473-21	PC BOARD, LED	
67	3-323-803-11	KNOB (FUNCTION)		905	*1-630-475-21	PC BOARD, POWER	
68	4-931-315-01	KNOB (VOLUME, TONE)		910	1-533-217-31	HOLDER, FUSE	
				T901	Δ.1-449-676-11	TRANSFORMER, POWER	
				F901	Δ.1-532-745-11	FUSE, GLASS TUBE 3.15A/125V	

(3) OPTICAL PICK-UP BLOCK
(KSM-210BAN)



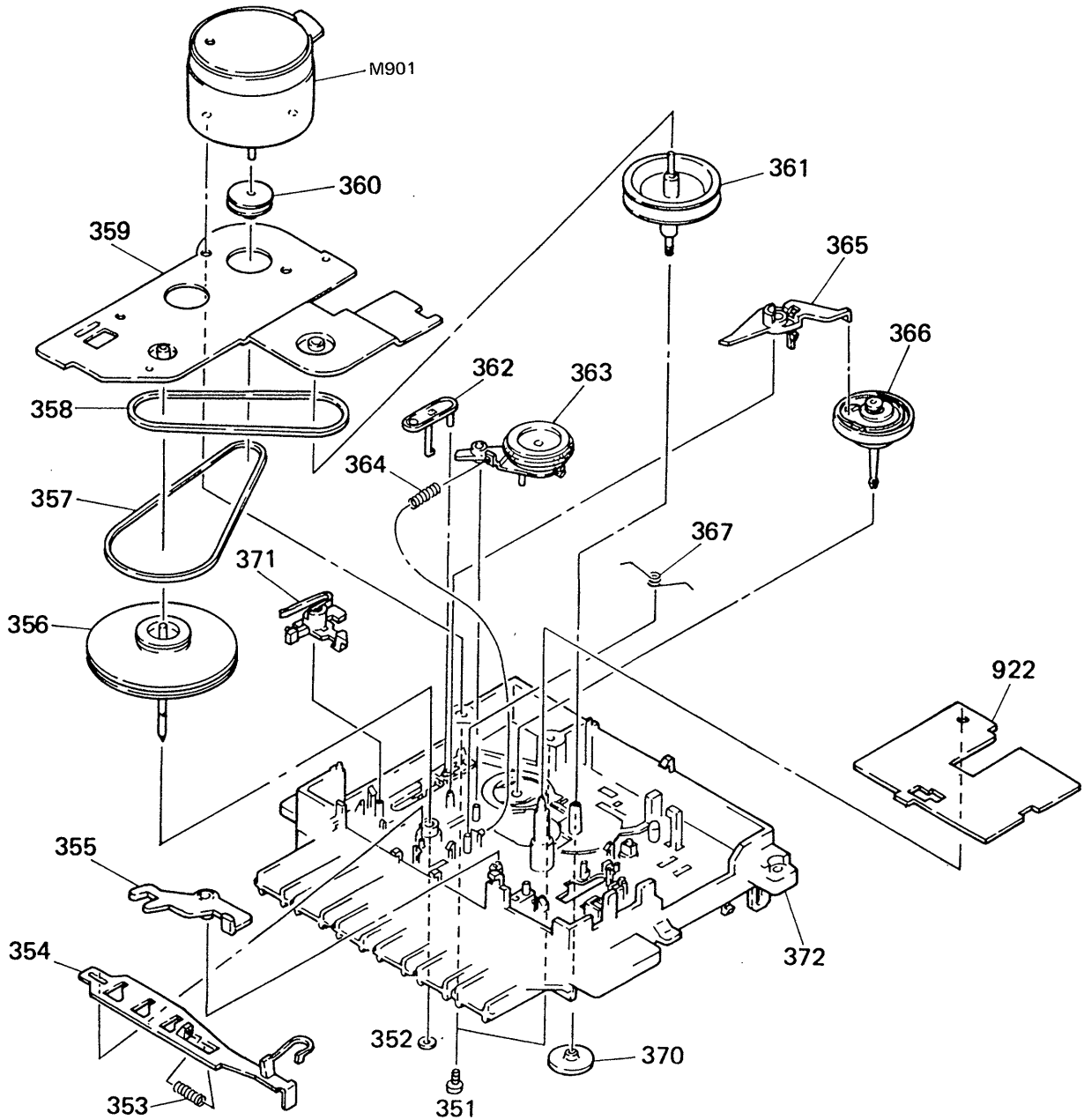
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
201	2-641-403-05	GEAR (B)		211	7-621-255-25	SCREW +P 2X4	
202	2-641-404-02	GEAR (A)		213	7-621-255-45	SCREW +PTT 2X6 (S)	
203	3-303-809-31	SCREW (M1.7X3.0), SPECIAL HEAD		214	2-641-447-01	SCREW (2.6X8), + STP	
205	*2-641-434-01	COVER, GEAR		215	2-641-448-02	CLAMP, SHAFT	
206	X-2640-771-1	TURNTABLE ASSY		915	△.8-848-137-11	DEVICE, OPTICAL KSS-210B	
207	*4-910-431-01	SHAFT, SLIDE		M701	X-2640-770-1	MOTOR ASSY, SLED (WITH GEAR)	
208	2-641-444-01	HOLDER (J), CHASSIS		M702	1-541-352-11	MOTOR (SPINDLE)	
210	7-621-255-15	SCREW +P 2X3					

<p>Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.</p>	<p>Note: Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.</p>
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SEE ADDITIONAL
INFORMATION(4) TAPE TRANSPORT MECHANISM-1
(MF-60-64)

No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
301	4-928-995-01	SLIDER, LOCK		316	4-928-982-01	LEVER (C)	
302	3-343-346-01	SPRING, COMPRESSION		317	X-4918-584-1	LEVER ASSY, FR	
303	4-928-994-01	LEVER, PAUSE		318	4-928-978-01	GEAR (C), SUPPLY REEL	
304	4-928-993-01	LEVER, FF		319	3-343-381-01	SPRING, COMPRESSION	
305	4-928-992-01	LEVER, REW		320	X-4918-585-1	GEAR (C) ASSY, TAKE-UP REEL	
306	4-928-991-01	LEVER, PLAY		321	3-343-285-01	GEAR, FF	
307	4-921-195-01	LEVER (AC), REC		322	4-928-957-01	RETAINER, CASSETTE	
308	4-928-985-01	LEVER, STOP		323	4-931-795-11	WASHER	
309	4-928-983-01	SLIDER, EJECT		324	3-701-438-01	WASHER	
310	4-928-972-01	SPRING, TENSION		325	4-928-960-01	CLAW, SAFETY	
311	4-928-973-01	SPRING		326	4-930-433-01	SPRING, COMPRESSION	
312	3-313-372-01	SPRING, TENSION		327	*4-932-612-01	SHEET, HD	
313	*4-928-984-01	LEVER (D)		HE901	1-543-535-11	HEAD, MAGNETIC (ERASE)	
314	4-921-196-01	DECK (AC), HEAD		HRP901	1-543-628-11	HEAD, MAGNETIC (REC/PB)	
315	4-928-962-01	PINCH ROLLER					

(5) TAPE TRANSPORT MECHANISM-2
(MF-60-64)



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
351	7-621-775-20	SCREW +B 2.6X5		362	4-928-961-01	PLATE, PAUSE LOCK	
352	3-343-358-01	RING, RETAINING		363	X-4918-583-1	LEVER ASSY, IDLER	
353	4-931-746-01	SPRING, COMPRESSION		364	3-342-034-01	SPRING, TENSION	
354	4-928-996-01	LEVER, SW		365	4-928-986-01	LEVER (S), SHUT-OFF	
355	4-928-981-01	LEVER, FR SW		366	X-4918-582-1	PLATE ASSY, TAKE-UP REEL	
356	X-4918-576-1	WHEEL (C) ASSY, CAPSTAN		367	4-928-958-01	SPRING, FR RETURN	
357	4-928-951-01	BELT (CAPSTAN)		370	4-928-967-01	GEAR (C), MIDWAY	
358	4-928-974-01	BELT (MIDWAY)		371	4-928-987-01	LEVER (T), SHUT-OFF	
359	*X-4918-598-1	PLATE ASSY, GROUND		372	*X-4918-579-1	CHASSIS ASSY, MECHANICAL	
360	X-3313-308-1	PULLEY (P), MOTOR		922	*1-630-864-21	PC BOARD, SW	
361	X-4918-580-1	PULLEY ASSY, FR		M901	1-541-625-11	MOTOR, DC	

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.
- 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 F.**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	*A-3260-971-A	MOUNTED PCB, MAIN	C109	1-162-282-31	CERAMIC	100PF	10%	50V	
902	*A-3260-940-A	MOUNTED PCB, MAIN, CD	C110	1-124-927-11	ELECT	4.7MF	20%	50V	
903	*1-630-913-21	PC BOARD, TRANSLATION	C111	1-161-057-00	CERAMIC	0.033MF	10%	25V	
904	*1-630-473-21	PC BOARD, LED	C112	1-136-165-00	FILM	0.1MF	5%	50V	
905	*1-630-475-21	PC BOARD, POWER	C113	1-161-377-00	CERAMIC	0.0047MF	30%	16V	
906	*1-630-625-11	PC BOARD, CD MOTOR	C114	1-124-927-11	ELECT	4.7MF	20%	50V	
907	*1-630-626-11	PC BOARD, CD CONTROL	C115	1-162-292-31	CERAMIC	680PF	10%	50V	
908	*1-630-629-21	PC BOARD, BATTERY TERMINAL	C116	1-162-282-31	CERAMIC	100PF	10%	50V	
910	1-533-217-31	HOLDER, FUSE	C117	1-126-101-11	ELECT	100MF	20%	16V	
911	1-452-531-11	MAGNET	C118	1-126-101-11	ELECT	100MF	20%	16V	
915	Δ 8-848-137-11	DEVICE, OPTICAL KSS-210B	C119	1-136-165-00	FILM	0.1MF	5%	50V	
922	*1-630-864-21	PC BOARD, SW	C120	1-124-473-11	ELECT	1000MF	20%	10V	
ANT1	1-501-378-11	ANTENNA, TELESCOPIC	C121	1-124-927-11	ELECT	4.7MF	20%	50V	
C1	1-162-208-31	CERAMIC	24PF	5%	50V				
C2	1-102-960-00	CERAMIC	24PF	5%	50V				
C3	1-162-191-31	CERAMIC	2.2PF	10%	50V				
C4	1-162-196-31	CERAMIC	5.6PF	10%	50V				
C5	1-124-963-11	ELECT	33MF	20%	16V				
C6	1-161-379-00	CERAMIC	0.01MF	30%	16V				
C7	1-161-379-00	CERAMIC	0.01MF	30%	16V				
C8	1-162-192-31	CERAMIC	2.7PF	10%	50V				
C9	1-162-287-31	CERAMIC	270PF	10%	50V				
C10	1-124-446-11	ELECT	47MF	20%	10V				
C11	1-124-925-11	ELECT	2.2MF	20%	50V				
C12	1-124-446-11	ELECT	47MF	20%	10V				
C13	1-161-379-00	CERAMIC	0.01MF	30%	16V				
C14	1-161-379-00	CERAMIC	0.01MF	30%	16V				
C15	1-124-499-11	ELECT	1MF	20%	50V				
C16	1-124-927-11	ELECT	4.7MF	20%	50V				
C17	1-161-053-00	CERAMIC	0.015MF	10%	25V				
C18	1-161-053-00	CERAMIC	0.015MF	10%	25V				
C19	1-124-499-11	ELECT	1MF	20%	50V				
C20	1-124-902-00	ELECT	0.47MF	20%	50V				
C21	1-124-927-11	ELECT	4.7MF	20%	50V				
C22	1-126-101-11	ELECT	100MF	20%	16V				
C23	1-124-902-00	ELECT	0.47MF	20%	50V				
C24	1-124-902-00	ELECT	0.47MF	20%	50V				
C25	1-162-282-31	CERAMIC	100PF	10%	50V				
C101	1-162-294-31	CERAMIC	0.001MF	10%	50V				
C102	1-124-927-11	ELECT	4.7MF	20%	50V				
C104	1-124-963-11	ELECT	33MF	20%	16V				
C105	1-123-875-11	ELECT	10MF	20%	50V				
C106	1-124-499-11	ELECT	1MF	20%	50V				
C108	1-124-927-11	ELECT	4.7MF	20%	50V				
C123	1-161-043-00	CERAMIC	0.0022MF	10%	25V				
C124	1-162-282-31	CERAMIC	100PF	10%	50V				
C125	1-162-282-31	CERAMIC	100PF	10%	50V				
C126	1-162-282-31	CERAMIC	100PF	10%	50V				
C129	1-162-292-31	CERAMIC	680PF	10%	50V				
C135	1-162-282-31	CERAMIC	100PF	10%	50V				
C136	1-161-049-00	CERAMIC	0.0068MF	10%	25V				
C201	1-162-294-31	CERAMIC	0.001MF	10%	50V				
C202	1-124-927-11	ELECT	4.7MF	20%	50V				
C204	1-124-963-11	ELECT	33MF	20%	16V				
C205	1-123-875-11	ELECT	10MF	20%	50V				
C206	1-124-499-11	ELECT	1MF	20%	50V				
C208	1-124-927-11	ELECT	4.7MF	20%	50V				
C209	1-162-282-31	CERAMIC	100PF	10%	50V				
C210	1-124-927-11	ELECT	4.7MF	20%	50V				
C211	1-161-057-00	CERAMIC	0.033MF	10%	25V				
C212	1-136-165-00	FILM	0.1MF	5%	50V				
C213	1-161-377-00	CERAMIC	0.0047MF	30%	16V				
C214	1-124-927-11	ELECT	4.7MF	20%	50V				
C215	1-162-292-31	CERAMIC	680PF	10%	50V				
C216	1-162-282-31	CERAMIC	100PF	10%	50V				
C217	1-126-101-11	ELECT	100MF	20%	16V				
C218	1-126-101-11	ELECT	100MF	20%	16V				
C219	1-136-165-00	FILM	0.1MF	5%	50V				
C220	1-124-473-11	ELECT	1000MF	20%	10V				
C221	1-124-927-11	ELECT	4.7MF	20%	50V				
C223	1-161-043-00	CERAMIC	0.0022MF	10%	25V				
C224	1-162-282-31	CERAMIC	100PF	10%	50V				
C225	1-162-282-31	CERAMIC	100PF	10%	50V				
C226	1-162-282-31	CERAMIC	100PF	10%	50V				
C229	1-162-292-31	CERAMIC	680PF	10%	50V				
C235	1-162-282-31	CERAMIC	100PF	10%	50V				
C236	1-161-049-00	CERAMIC	0.0068MF	10%	25V				

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
C301	1-162-282-31	CERAMIC	100PF	10%	50V	C718	1-124-902-00	ELECT	0.47MF	20%	50V
C302	1-124-927-11	ELECT	4.7MF	20%	50V	C719	1-162-851-11	CERAMIC	0.1MF		16V
C303	1-162-282-31	CERAMIC	100PF	10%	50V	C720	1-130-489-00	MYLAR	0.033MF	5%	50V
C304	1-162-282-31	CERAMIC	100PF	10%	50V						
C305	1-124-927-11	ELECT	4.7MF	20%	50V	C721	1-124-963-11	ELECT	33MF	20%	16V
C306	1-124-442-00	ELECT	330MF	20%	6.3V	C722	1-130-475-00	MYLAR	0.0022MF	5%	50V
C308	1-124-499-11	ELECT	1MF	20%	50V	C723	1-161-021-11	CERAMIC	0.047MF	10%	25V
C309	1-124-499-11	ELECT	1MF	20%	50V	C724	1-162-294-31	CERAMIC	0.001MF	10%	50V
C310	1-126-233-11	ELECT	22MF	20%	25V	C725	1-136-165-00	FILM	0.1MF	5%	50V
C311	1-124-120-11	ELECT	220MF	20%	16V	C726	1-136-165-00	FILM	0.1MF	5%	50V
C312	1-161-379-00	CERAMIC	0.01MF	30%	16V	C727	1-124-963-11	ELECT	33MF	20%	16V
C313	1-123-875-11	ELECT	10MF	20%	50V	C728	1-131-377-00	TANTALUM	10MF	10%	6.3V
C314	1-123-875-11	ELECT	10MF	20%	50V	C729	1-136-165-00	FILM	0.1MF	5%	50V
C315	1-161-379-00	CERAMIC	0.01MF	30%	16V	C730	1-123-875-11	ELECT	10MF	20%	50V
C316	1-161-329-00	CERAMIC	0.0068MF	30%	16V	C731	1-161-061-11	CERAMIC	0.068MF	10%	25V
C317	1-124-446-11	ELECT	47MF	20%	10V	C732	1-162-215-31	CERAMIC	47PF	5%	50V
C318	1-161-379-00	CERAMIC	0.01MF	30%	16V	C733	1-124-963-11	ELECT	33MF	20%	16V
C319	1-130-479-00	MYLAR	0.0047MF	10%	50V	C734	1-130-481-00	MYLAR	0.0068MF	5%	50V
C320	1-136-154-00	MYLAR	0.012MF	10%	50V	C735	1-162-284-31	CERAMIC	150PF	10%	50V
C321	1-130-473-00	MYLAR	0.0015MF	10%	50V	C736	1-161-379-00	CERAMIC	0.01MF	30%	16V
C322	1-130-470-00	MYLAR	820PF	10%	50V	C737	1-161-379-00	CERAMIC	0.01MF	30%	16V
C323	1-124-927-11	ELECT	4.7MF	20%	50V	C738	1-161-379-00	CERAMIC	0.01MF	30%	16V
C324	1-124-120-11	ELECT	220MF	20%	16V	C739	1-161-379-00	CERAMIC	0.01MF	30%	16V
C325	1-123-875-11	ELECT	10MF	20%	50V	C740	1-124-963-11	ELECT	33MF	20%	16V
C326	1-126-101-11	ELECT	100MF	20%	16V	C743	1-130-479-00	MYLAR	0.0047MF	5%	50V
C327	1-161-379-00	CERAMIC	0.01MF	30%	16V	C744	1-124-499-11	ELECT	1MF	20%	50V
C328	1-124-473-11	ELECT	1000MF	20%	10V	C745	1-130-475-00	MYLAR	0.0022MF	5%	50V
C329	1-124-473-11	ELECT	1000MF	20%	10V	C746	1-130-471-00	MYLAR	0.001MF	5%	50V
C331	1-161-379-00	CERAMIC	0.01MF	30%	16V	C747	1-102-966-00	CERAMIC	43PF	5%	50V
C332	1-161-379-00	CERAMIC	0.01MF	30%	16V	C748	1-126-176-11	ELECT	220MF	20%	6.3V
C334	1-161-379-00	CERAMIC	0.01MF	30%	16V	C749	1-124-499-11	ELECT	1MF	20%	50V
C335	1-124-120-11	ELECT	220MF	20%	16V	C750	1-130-488-00	MYLAR	0.027MF	5%	50V
C339	1-124-927-11	ELECT	4.7MF	20%	50V	C751	1-124-499-11	ELECT	1MF	20%	50V
C340	1-162-282-31	CERAMIC	100PF	10%	50V	C752	1-124-604-00	ELECT	330MF	20%	10V
C341	1-162-294-31	CERAMIC	0.001MF	10%	50V	C753	1-126-176-11	ELECT	220MF	20%	6.3V
C344	1-161-379-00	CERAMIC	0.01MF	30%	16V	C754	1-124-438-00	ELECT	1MF	20%	50V
C346	1-161-379-00	CERAMIC	0.01MF	30%	16V	C755	1-130-475-00	MYLAR	0.0022MF	5%	50V
C352	1-161-377-00	CERAMIC	0.0047MF	30%	16V	C756	1-130-471-00	MYLAR	0.001MF	5%	50V
C359	1-126-017-11	ELECT	6800MF	20%	16V	C757	1-102-966-00	CERAMIC	43PF	5%	50V
C360	1-162-294-31	CERAMIC	0.001MF	10%	50V	C758	1-124-499-11	ELECT	1MF	20%	50V
C361	1-162-294-31	CERAMIC	0.001MF	10%	50V	C759	1-124-499-11	ELECT	1MF	20%	50V
C701	1-130-475-00	MYLAR	0.0022MF	5%	50V	C760	1-130-488-00	MYLAR	0.027MF	5%	50V
C702	1-124-963-11	ELECT	33MF	20%	16V	C761	1-136-173-00	FILM	0.47MF	5%	50V
C703	1-162-294-31	CERAMIC	0.001MF	10%	50V	C763	1-162-199-31	CERAMIC	10PF	5%	50V
C704	1-124-443-00	ELECT	100MF	20%	6.3V	C764	1-162-199-31	CERAMIC	10PF	5%	50V
C705	1-126-176-11	ELECT	220MF	20%	6.3V	C765	1-162-294-31	CERAMIC	0.001MF	10%	50V
C706	1-130-489-00	MYLAR	0.033MF	5%	50V	C767	1-162-294-31	CERAMIC	0.001MF	10%	50V
C707	1-131-386-00	TANTALUM	33MF	10%	3.15V	C768	1-162-851-11	CERAMIC	0.1MF		16V
C708	1-130-489-00	MYLAR	0.033MF	5%	50V	C770	1-124-360-00	ELECT	1000MF	20%	16V
C709	1-130-483-00	MYLAR	0.01MF	5%	50V	C771	1-124-499-11	ELECT	1MF	20%	50V
C710	1-124-963-11	ELECT	33MF	20%	16V	C772	1-123-382-00	ELECT	3.3MF	20%	50V
C711	1-162-207-31	CERAMIC	22PF	5%	50V	C773	1-123-382-00	ELECT	3.3MF	20%	50V
C712	1-162-207-31	CERAMIC	22PF	5%	50V	C774	1-123-382-00	ELECT	3.3MF	20%	50V
C713	1-124-472-11	ELECT	470MF	20%	6.3V	C775	1-123-382-00	ELECT	3.3MF	20%	50V
C714	1-161-379-00	CERAMIC	0.01MF	30%	16V	C780	1-124-963-11	ELECT	33MF	20%	16V
C715	1-136-173-00	FILM	0.47MF	5%	50V	C781	1-124-963-11	ELECT	33MF	20%	16V
C716	1-130-483-00	MYLAR	0.01MF	5%	50V	C784	1-126-176-11	ELECT	220MF	20%	6.3V
C717	1-162-294-31	CERAMIC	0.001MF	10%	50V	C790	1-161-379-00	CERAMIC	0.01MF	30%	16V


Ref.No.	Part No.	Description			
C791	1-124-927-11	ELECT	4.7MF	20%	50V
C792	1-124-499-11	ELECT	1MF	20%	50V
C794	1-124-499-11	ELECT	1MF	20%	50V
C801	1-124-963-11	ELECT	33MF	20%	16V
C802	1-161-379-00	CERAMIC	0.01MF	30%	16V
C803	1-162-219-31	CERAMIC	68PF	5%	50V
C804	1-162-219-31	CERAMIC	68PF	5%	50V
C851	1-162-292-31	CERAMIC	680PF	10%	50V
C852	1-162-215-31	CERAMIC	47PF	5%	50V
C853	1-162-215-31	CERAMIC	47PF	5%	50V
C902	1-161-379-00	CERAMIC	0.01MF	30%	16V
C903	1-161-379-00	CERAMIC	0.01MF	30%	16V
C904	1-161-379-00	CERAMIC	0.01MF	30%	16V
CF1	1-577-327-81	FILTER, CERAMIC			
CF2					
CF3					
CN1	*1-564-187-00	PIN, CONNECTOR			
CN302	*1-564-707-11	PIN, CONNECTOR (SMALL TYPE)	5P		
CN303	*1-564-704-11	PIN, CONNECTOR (SMALL TYPE)	2P		
CN304	*1-564-704-11	PIN, CONNECTOR (SMALL TYPE)	2P		
CN305	*1-564-705-11	PIN, CONNECTOR (SMALL TYPE)	3P		
CN306	*1-564-708-11	PIN, CONNECTOR (SMALL TYPE)	6P		
CN307	*1-568-450-11	HOUSING, CONNECTOR(PC BOARD)	4P		
CN351	*1-564-708-11	PIN, CONNECTOR (SMALL TYPE)	6P		
CN352	*1-564-706-11	PIN, CONNECTOR (SMALL TYPE)	4P		
CN504	*1-564-704-11	PIN, CONNECTOR (SMALL TYPE)	2P		
CN551	*1-564-704-11	PIN, CONNECTOR (SMALL TYPE)	2P		
CN601	*1-564-721-11	PIN, CONNECTOR (SMALL TYPE)	5P		
CN705	*1-564-719-11	PIN, CONNECTOR (SMALL TYPE)	3P		
CN706	*1-564-722-31	PIN, CONNECTOR (SMALL TYPE)	6P		
CN707	*1-564-708-11	PIN, CONNECTOR (SMALL TYPE)	6P		
CN708	*1-564-710-11	PIN, CONNECTOR (SMALL TYPE)	8P		
CN709	*1-564-710-11	PIN, CONNECTOR (SMALL TYPE)	8P		
CN710	*1-565-980-11	HOUSING, CONNECTOR(PC BOARD)	9P		
CN717	*1-564-722-11	PIN, CONNECTOR (SMALL TYPE)	6P		
CN901	*1-565-835-11	SOCKET, CONNECTOR	3P		
CN902	*1-564-187-00	PIN, CONNECTOR			
CN903	*1-564-718-11	PIN, CONNECTOR (SMALL TYPE)	2P		
CP2	1-236-079-11	ENCAPSULATED COMPONENT			
CT1	1-151-624-11	CAP, VARIABLE			
CV1					
D1	8-719-911-19	DIODE 1SS119			
D2	8-719-911-19	DIODE 1SS119			
D302	8-719-976-29	DIODE SLB-55VR70F140			
D304	8-719-109-89	DIODE RD5.6ES-B2			
D305	8-719-911-19	DIODE 1SS119			
D306	8-719-911-19	DIODE 1SS119			
D307	8-719-911-19	DIODE 1SS119			
D309	8-719-911-19	DIODE 1SS119			
D311	8-719-911-19	DIODE 1SS119			
D312	8-719-911-19	DIODE 1SS119			
D315	8-719-911-19	DIODE 1SS119			
D316	8-719-911-19	DIODE 1SS119			
D317	8-719-976-29	DIODE SLB-55VR70F140			
D318	8-719-109-96	DIODE RD6.8ES-B1			
D701	8-719-911-19	DIODE 1SS119			

Ref.No.	Part No.	Description			
D702	8-719-911-19	DIODE 1SS119			
D801	8-719-911-19	DIODE 1SS119			
D802	8-719-911-19	DIODE 1SS119			
D804	8-719-911-19	DIODE 1SS119			
D805	8-719-911-19	DIODE 1SS119			
D901	8-719-500-55	DIODE D3SBA10			
F901	△.1-532-745-11	FUSE, GLASS TUBE 3.15A/125V			
FL1	1-236-022-11	FILTER, BAND PASS			
HE901	1-543-535-11	HEAD, MAGNETIC (ERASE)			
HRP901	1-543-628-11	HEAD, MAGNETIC (REC/PB)			
IC1	8-752-035-68	IC CXA1238S			
IC301	8-759-942-24	IC BA3312N			
IC302	8-759-820-22	IC LA4597			
IC701	8-752-033-14	IC CXA1081Q			
IC702	8-752-032-32	IC CXA1182Q-Z			
IC703	8-752-329-15	IC CXD1130Q			
IC704	8-752-323-64	IC CXK5816M-12L			
IC706	8-759-945-58	IC RC4558P			
IC707	8-759-145-25	IC UPD6372GS			
IC708	8-759-984-37	IC BA6293			
IC709	8-759-984-37	IC BA6293			
IC801	8-752-811-21	IC CXP5024-083Q			
IC802	8-759-945-58	IC RC4558P			
IC804	8-759-971-12	IC PST529E			
J301	1-563-330-11	JACK (MIX MIC)			
J302	1-566-891-11	JACK (PHONES)			
J901	△.1-526-818-11	INLET, AC (AC IN)			
L1	*1-428-029-11	COIL, AIR-CORE			
L2	*1-422-354-11	COIL, AIR-CORE			
L3	1-402-435-11	ANTENNA, FERRITE-ROD (MW)			
L701	1-410-316-11	INDUCTOR	1UH		
L702	1-410-974-11	INDUCTOR	33UH		
LCD1	1-808-726-11	DISPLAY PANEL, LIQUID CRYSTAL			
LF901	△.1-424-265-11	TRANSFORMER, LINE FILTER			
M701	X-2640-770-1	MOTOR ASSY, SLED (WITH GEAR)			
M702	1-541-352-11	MOTOR (SPINDLE)			
M901	1-541-625-11	MOTOR, DC			
Q101	8-729-119-78	TRANSISTOR 2SC2785HFE			
Q102	8-729-119-78	TRANSISTOR 2SC2785HFE			
Q103	8-729-900-89	TRANSISTOR DTC144ES			
Q104	8-729-900-89	TRANSISTOR DTC144ES			
Q201	8-729-119-78	TRANSISTOR 2SC2785HFE			
Q202	8-729-119-78	TRANSISTOR 2SC2785HFE			
Q203	8-729-900-89	TRANSISTOR DTC144ES			
Q204	8-729-900-89	TRANSISTOR DTC144ES			
Q301	8-729-119-78	TRANSISTOR 2SC2785HFE			
Q302	8-729-119-78	TRANSISTOR 2SC2785HFE			
Q303	8-729-900-89	TRANSISTOR DTC144ES			
Q304	8-729-900-65	TRANSISTOR DTA144ES			
Q305	8-729-100-13	TRANSISTOR 2SC2001			
Q306	8-729-900-89	TRANSISTOR DTC144ES			
Q307	8-729-905-67	TRANSISTOR 2SD1944-K			

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	Ref.No.	Part No.	Description				
Q308	8-729-116-57	TRANSISTOR 2SB1013-3	R132	1-249-401-11	CARBON	47	5%	1/4W	
Q309	8-729-119-78	TRANSISTOR 2SC2785HFE	R134	1-249-429-11	CARBON	10K	5%	1/4W	
Q310	8-729-205-02	TRANSISTOR 2SA1150	R135	Δ 1-217-640-11	FUSIBLE	3.3	5%	1/4W	F
Q311	8-729-900-89	TRANSISTOR DTC144ES	R136	1-249-404-00	CARBON	82	5%	1/4W	
Q314	8-729-119-78	TRANSISTOR 2SC2785HFE	R201	1-249-411-11	CARBON	330	5%	1/4W	
Q315	8-729-900-65	TRANSISTOR DTA144ES	R202	1-249-410-11	CARBON	270	5%	1/4W	
Q701	8-729-116-57	TRANSISTOR 2SB1013-3	R203	1-249-424-11	CARBON	3.9K	5%	1/4W	
Q702	8-729-119-78	TRANSISTOR 2SC2785HFE	R204	1-249-406-11	CARBON	120	5%	1/4W	
Q703	8-729-119-78	TRANSISTOR 2SC2785HFE	R206	1-249-431-11	CARBON	15K	5%	1/4W	
Q704	8-729-119-78	TRANSISTOR 2SC2785HFE	R207	1-249-420-11	CARBON	1.8K	5%	1/4W	
Q705	8-729-900-63	TRANSISTOR DTA124ES	R208	1-249-430-11	CARBON	12K	5%	1/4W	
Q706	8-729-119-76	TRANSISTOR 2SA1115P	R209	1-249-414-11	CARBON	560	5%	1/4W	
Q711	8-729-900-36	TRANSISTOR DTC124ES	R211	1-249-432-11	CARBON	18K	5%	1/4W	
Q712	8-729-119-78	TRANSISTOR 2SC2785HFE	R212	1-249-430-11	CARBON	12K	5%	1/4W	
Q713	8-729-119-78	TRANSISTOR 2SC2785HFE	R213	1-249-421-11	CARBON	2.2K	5%	1/4W	
Q714	8-729-900-63	TRANSISTOR DTA124ES	R214	1-249-431-11	CARBON	15K	5%	1/4W	
Q791	8-729-900-36	TRANSISTOR DTC124ES	R215	1-249-430-11	CARBON	12K	5%	1/4W	
Q792	8-729-900-36	TRANSISTOR DTC124ES	R216	1-249-421-11	CARBON	2.2K	5%	1/4W	
Q801	8-729-900-63	TRANSISTOR DTA124ES	R217	1-249-431-11	CARBON	15K	5%	1/4W	
Q802	8-729-900-74	TRANSISTOR DTC143TS	R218	1-249-436-11	CARBON	39K	5%	1/4W	
Q803	8-729-119-78	TRANSISTOR 2SC2785HFE	R220	1-247-899-11	CARBON	680K	5%	1/4W	
R1	1-249-441-11	CARBON	100K	5%	1/4W				
R2	1-249-421-11	CARBON	2.2K	5%	1/4W				
R3	1-249-415-11	CARBON	680	5%	1/4W				
R4	1-249-407-11	CARBON	150	5%	1/4W				
R5	1-249-401-11	CARBON	47	5%	1/4W				
R6	1-249-427-11	CARBON	6.8K	5%	1/4W				
R7	1-249-427-11	CARBON	6.8K	5%	1/4W				
R8	1-247-887-00	CARBON	220K	5%	1/4W				
R9	1-247-887-00	CARBON	220K	5%	1/4W				
R10	1-249-421-11	CARBON	2.2K	5%	1/4W				
R11	1-249-429-11	CARBON	10K	5%	1/4W				
R12	1-249-409-11	CARBON	220	5%	1/4W				
R13	1-249-402-11	CARBON	56	5%	1/4W				
R14	1-249-426-11	CARBON	5.6K	5%	1/4W				
R15	1-249-429-11	CARBON	10K	5%	1/4W				
R16	1-249-397-11	CARBON	22	5%	1/4W				
R101	1-249-411-11	CARBON	330	5%	1/4W				
R102	1-249-410-11	CARBON	270	5%	1/4W				
R103	1-249-424-11	CARBON	3.9K	5%	1/4W				
R104	1-249-406-11	CARBON	120	5%	1/4W				
R106	1-249-431-11	CARBON	15K	5%	1/4W				
R107	1-249-420-11	CARBON	1.8K	5%	1/4W				
R108	1-249-430-11	CARBON	12K	5%	1/4W				
R109	1-249-414-11	CARBON	560	5%	1/4W				
R111	1-249-432-11	CARBON	18K	5%	1/4W				
R112	1-249-430-11	CARBON	12K	5%	1/4W				
R113	1-249-421-11	CARBON	2.2K	5%	1/4W				
R114	1-249-431-11	CARBON	15K	5%	1/4W				
R115	1-249-430-11	CARBON	12K	5%	1/4W				
R116	1-249-421-11	CARBON	2.2K	5%	1/4W				
R117	1-249-431-11	CARBON	15K	5%	1/4W				
R118	1-249-436-11	CARBON	39K	5%	1/4W				
R120	1-247-899-11	CARBON	680K	5%	1/4W				
R121	1-249-421-11	CARBON	2.2K	5%	1/4W				
R122	1-249-405-11	CARBON	100	5%	1/4W				
R125	1-249-422-11	CARBON	2.7K	5%	1/4W				
R126	1-249-414-11	CARBON	560	5%	1/4W				
R127	1-249-423-11	CARBON	3.3K	5%	1/4W				
R128	1-249-423-11	CARBON	3.3K	5%	1/4W				
R221	1-249-421-11	CARBON	2.2K	5%	1/4W				
R222	1-249-405-11	CARBON	100	5%	1/4W				
R225	1-249-422-11	CARBON	2.7K	5%	1/4W				
R226	1-249-414-11	CARBON	560	5%	1/4W				
R227	1-249-423-11	CARBON	3.3K	5%	1/4W				
R228	1-249-423-11	CARBON	3.3K	5%	1/4W				
R232	1-249-401-11	CARBON	47	5%	1/4W				
R234	1-249-429-11	CARBON	10K	5%	1/4W				
R235	Δ 1-217-640-11	FUSIBLE	3.3	5%	1/4W				F
R236	1-249-404-00	CARBON	82	5%	1/4W				
R301	1-249-421-11	CARBON	2.2K	5%	1/4W				
R302	1-249-411-11	CARBON	330	5%	1/4W				
R303	1-247-891-00	CARBON	330K	5%	1/4W				
R304	1-249-421-11	CARBON	2.2K	5%	1/4W				
R305	1-249-409-11	CARBON	220	5%	1/4W				
R308	1-249-425-11	CARBON	4.7K	5%	1/4W				
R309	1-249-405-11	CARBON	100	5%	1/4W				
R310	1-247-903-00	CARBON	1M	5%	1/4W				
R312	1-249-397-11	CARBON	22	5%	1/4W				
R313	1-249-393-11	CARBON	10	5%	1/4W				
R314	1-249-429-11	CARBON	10K	5%	1/4W				
R315	1-249-401-11	CARBON	47	5%	1/4W				
R316	1-249-423-11	CARBON	3.3K	5%	1/4W				
R318	1-247-887-00	CARBON	220K	5%	1/4W				
R319	1-249-425-11	CARBON	4.7K	5%	1/4W				
R320	1-249-405-11	CARBON	100	5%	1/4W				
R321	1-249-425-11	CARBON	4.7K	5%	1/4W				
R322	Δ 1-217-637-00	FUSIBLE	1	5%	1/4W				F
R323	1-249-417-11	CARBON	1K	5%	1/4W				
R326	1-249-409-11	CARBON	220	5%	1/4W				
R327	1-249-414-11	CARBON	560	5%	1/4W				
R328	1-249-437-11	CARBON	47K	5%	1/4W				
R329	1-249-407-11	CARBON	150	5%	1/4W				
R330	1-249-417-11	CARBON	1K	5%	1/4W				
R331	Δ 1-217-637-00	FUSIBLE	1	5%	1/4W				F
R333	1-249-405-11	CARBON	100	5%	1/4W				

Note:
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Note:
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Ref.No.	Part No.	Description				
R334	1-249-425-11	CARBON	4.7K	5%	1/4W	
R335	1-249-425-11	CARBON	4.7K	5%	1/4W	
R336	1-249-405-11	CARBON	100	5%	1/4W	
R337	1-249-417-11	CARBON	1K	5%	1/4W	
R340	1-249-435-11	CARBON	33K	5%	1/4W	
R342	△ 1-217-637-00	FUSIBLE	1	5%	1/4W	F
R346	1-249-417-11	CARBON	1K	5%	1/4W	
R347	1-249-437-11	CARBON	47K	5%	1/4W	
R348	1-249-425-11	CARBON	4.7K	5%	1/4W	
R349	1-249-419-11	CARBON	1.5K	5%	1/4W	
R350	1-249-419-11	CARBON	1.5K	5%	1/4W	
R351	1-249-425-11	CARBON	4.7K	5%	1/4W	
R358	1-249-425-11	CARBON	4.7K	5%	1/4W	
R701	1-249-433-11	CARBON	22K	5%	1/4W	
R702	1-249-417-11	CARBON	1K	5%	1/4W	
R703	1-249-433-11	CARBON	22K	5%	1/4W	
R704	1-249-397-11	CARBON	22	5%	1/4W	
R705	1-247-806-11	CARBON	91	5%	1/4W	
R711	1-249-428-11	CARBON	8.2K	5%	1/4W	
R712	1-247-856-00	CARBON	11K	5%	1/4W	
R713	1-249-441-11	CARBON	100K	5%	1/4W	
R714	1-249-425-00	CARBON	4.7K	5%	1/4W	
R715	1-249-441-11	CARBON	100K	5%	1/4W	
R716	1-247-886-11	CARBON	200K	5%	1/4W	
R717	1-249-422-11	CARBON	2.7K	5%	1/4W	
R718	1-247-903-00	CARBON	1M	5%	1/4W	
R719	1-249-417-11	CARBON	1K	5%	1/4W	
R720	1-247-883-00	CARBON	150K	5%	1/4W	
R721	1-249-437-11	CARBON	47K	5%	1/4W	
R722	1-249-429-11	CARBON	10K	5%	1/4W	
R723	1-249-441-11	CARBON	100K	5%	1/4W	
R724	1-249-438-11	CARBON	56K	5%	1/4W	
R725	1-247-885-00	CARBON	180K	5%	1/4W	
R726	1-249-437-11	CARBON	47K	5%	1/4W	
R727	1-249-441-11	CARBON	100K	5%	1/4W	
R728	1-247-854-11	CARBON	9.1K	5%	1/4W	
R729	1-247-894-11	CARBON	430K	5%	1/4W	
R730	1-249-441-11	CARBON	100K	5%	1/4W	
R731	1-215-457-00	METAL	33K	1%	1/6W	
R732	1-215-457-00	METAL	33K	1%	1/6W	
R733	1-247-895-00	CARBON	470K	5%	1/4W	
R734	1-249-417-11	CARBON	1K	5%	1/4W	
R735	1-249-417-11	CARBON	1K	5%	1/4W	
R736	1-249-429-11	CARBON	10K	5%	1/4W	
R743	1-215-438-00	METAL	5.1K	1%	1/6W	
R744	1-215-461-00	METAL	47K	1%	1/6W	
R745	1-215-453-00	METAL	22K	1%	1/6W	
R746	1-215-461-00	METAL	47K	1%	1/6W	
R747	1-249-431-11	CARBON	15K	5%	1/4W	
R748	1-249-422-11	CARBON	2.7K	5%	1/4W	
R749	1-247-834-11	CARBON	1.3K	5%	1/4W	
R750	1-249-414-11	CARBON	560	5%	1/4W	
R751	1-247-903-00	CARBON	1M	5%	1/4W	
R752	1-249-430-11	CARBON	12K	5%	1/4W	
R753	1-215-438-00	METAL	5.1K	1%	1/6W	
R754	1-215-461-00	METAL	47K	1%	1/6W	
R755	1-215-453-00	METAL	22K	1%	1/6W	

Note:

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Ref.No.	Part No.	Description				
R756	1-215-461-00	METAL	47K	1%	1/6W	
R757	1-247-887-00	CARBON	220K	5%	1/4W	
R758	1-249-422-11	CARBON	2.7K	5%	1/4W	
R759	1-247-834-11	CARBON	1.3K	5%	1/4W	
R760	1-249-414-11	CARBON	560	5%	1/4W	
R761	1-247-903-00	CARBON	1M	5%	1/4W	
R762	1-249-422-11	CARBON	2.7K	5%	1/4W	
R763	1-249-422-11	CARBON	2.7K	5%	1/4W	
R764	1-247-887-00	CARBON	220K	5%	1/4W	
R765	1-249-395-11	CARBON	15	5%	1/4W	
R766	1-249-395-11	CARBON	15	5%	1/4W	
R768	1-249-405-11	CARBON	100	5%	1/4W	
R770	1-215-453-00	METAL	22K	1%	1/6W	
R771	1-215-453-00	METAL	22K	1%	1/6W	
R772	1-215-453-00	METAL	22K	1%	1/6W	
R773	1-215-453-00	METAL	22K	1%	1/6W	
R774	1-215-429-00	METAL	2.2K	1%	1/6W	
R775	1-215-457-00	METAL	33K	1%	1/6W	
R776	1-215-457-00	METAL	33K	1%	1/6W	
R777	1-215-457-00	METAL	33K	1%	1/6W	
R778	1-215-433-00	METAL	3.3K	1%	1/6W	
R779	1-247-868-11	CARBON	36K	5%	1/4W	
R780	1-249-435-11	CARBON	33K	5%	1/4W	
R781	1-247-876-11	CARBON	75K	5%	1/4W	
R782	1-249-435-11	CARBON	33K	5%	1/4W	
R783	1-249-417-11	CARBON	1K	5%	1/4W	
R784	1-249-429-11	CARBON	10K	5%	1/4W	
R785	1-249-410-11	CARBON	270	5%	1/4W	
R786	1-249-425-11	CARBON	4.7K	5%	1/4W	
R787	△ 1-212-861-11	FUSIBLE	15	5%	1/4W	F
R789	1-249-433-11	CARBON	22K	5%	1/4W	
R791	1-247-838-00	CARBON	2K	5%	1/4W	
R792	1-249-437-11	CARBON	47K	5%	1/4W	
R793	1-249-429-11	CARBON	10K	5%	1/4W	
R794	1-249-405-11	CARBON	100	5%	1/4W	
R801	1-249-435-11	CARBON	33K	5%	1/4W	
R802	1-249-435-11	CARBON	33K	5%	1/4W	
R803	1-249-435-11	CARBON	33K	5%	1/4W	
R805	1-249-437-11	CARBON	47K	5%	1/4W	
R806	1-249-437-11	CARBON	47K	5%	1/4W	
R807	1-249-441-11	CARBON	100K	5%	1/4W	
R808	1-249-441-11	CARBON	100K	5%	1/4W	
R809	1-249-437-11	CARBON	47K	5%	1/4W	
R810	1-249-405-11	CARBON	100	5%	1/4W	
R821	1-249-441-11	CARBON	100K	5%	1/4W	
R851	1-215-457-00	METAL	33K	1%	1/6W	
R852	1-247-893-11	CARBON	390K	5%	1/4W	
R853	1-249-441-11	CARBON	100K	5%	1/4W	
R854	1-247-895-00	CARBON	470K	5%	1/4W	
R855	1-249-441-11	CARBON	100K	5%	1/4W	
RV1	1-238-017-11	RES, ADJ, CARBON	22K			
RV301	1-238-606-11	RES, VAR, CARBON	50K/50K	(VOLUME)		
RV302	1-238-607-11	RES, VAR, CARBON	50K/50K	(TONE)		
RV701	1-228-995-00	RES, ADJ, CARBON	20K			
RV702	1-228-996-00	RES, ADJ, CARBON	50K			
RV703	1-228-991-00	RES, ADJ, METAL GLAZE	2.2K			

Ref.No.	Part No.	Description
RV704	1-230-497-11	RES, ADJ, CARBON 20K
RV705	1-230-497-11	RES, ADJ, CARBON 20K
S301	1-571-949-11	SWITCH, LEVER SLIDE (FUNCTION)
S302	1-571-948-11	SWITCH, SLIDE (REC/PB)
S303	1-571-307-11	SWITCH, SLIDE (ISS/FM MODE)
S304	1-571-042-11	SWITCH, PUSH (1 KEY)(BASS BOOST)
S305	1-570-913-11	SWITCH, PUSH (POWER)
S601	1-571-330-21	SWITCH, LEAF (MOTOR POWER)
S602	1-571-890-11	SWITCH, LEAF (PB)
S603	1-571-890-11	SWITCH, LEAF (FF/REW)
S801	1-571-936-11	SWITCH, LEAF (OPEN/CLOSE)
S802	1-571-936-11	SWITCH, LEAF (LIMIT)
S803	1-571-760-11	SWITCH, KEY BOARD (▶)
S804	1-571-760-11	SWITCH, KEY BOARD (■)
S805	1-571-760-11	SWITCH, KEY BOARD (◀◀)
S806	1-571-760-11	SWITCH, KEY BOARD (▶▶)
S807	1-571-760-11	SWITCH, KEY BOARD ()
S808	1-571-760-11	SWITCH, KEY BOARD (REPEAT 1/ALL,SHUFFLE)
S809	1-571-760-11	SWITCH, KEY BOARD (REMAIN)
SP101	1-544-148-11	SPEAKER
SP201	1-544-148-11	SPEAKER
T1	1-406-040-00	COIL (OSC)
T301	1-433-321-11	TRANSFORMER, BIAS OSCILLATION
T901	▲.1-449-676-11	TRANSFORMER, POWER
W307	*1-568-453-11	PIN, CONNECTOR (PC BOARD) 4P
W710	*1-568-454-11	PIN, CONNECTOR (PC BOARD) 9P
W901	1-506-569-11	PIN, CONNECTOR 3P
X801	1-567-094-00	VIBRATOR, CERAMIC 3.58MHz
XF701	1-567-926-11	VIBRATOR, CRYSTAL 16.9344MHz

ACCESSORY & PACKING MATERIAL

▲.1-556-281-21	CORD, POWER
3-750-235-21	MANUAL, INSTRUCTION
3-750-235-31	(Canadian)...MANUAL, INSTRUCTION
*4-921-197-01	CUSHION (LEFT) (RIGHT)
*4-931-359-01	INDIVIDUAL CARTON

Note:

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Note:

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SONY SERVICE MANUAL


US Model
Canadian Model

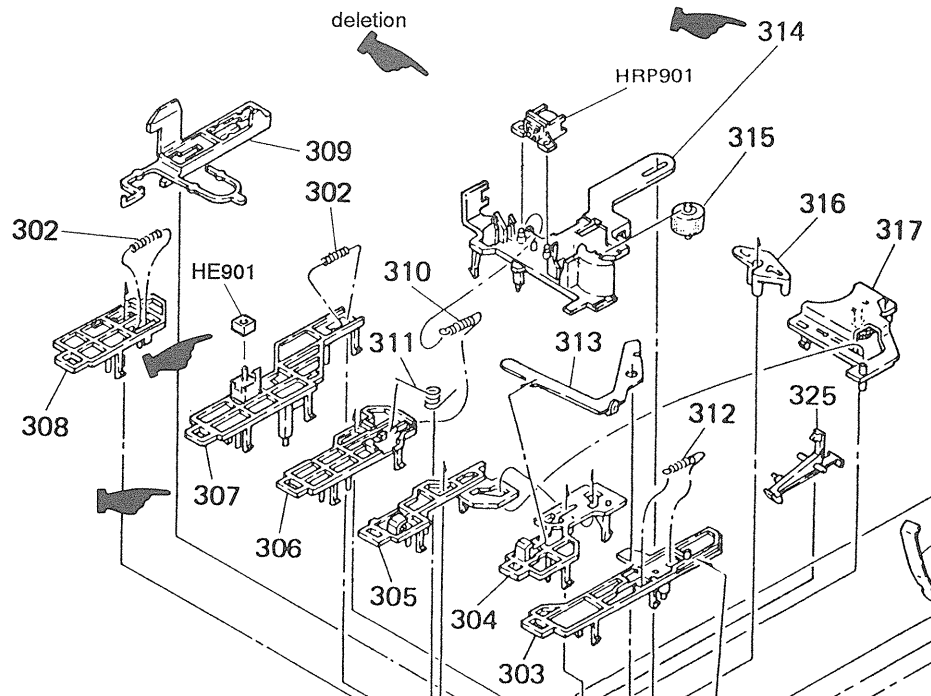
SUPPLEMENT-1




File this supplement with the service manual.

Subject: Erase head has been changed from AC bias system to DC bias system.

PAGE:34

 : Changed portion

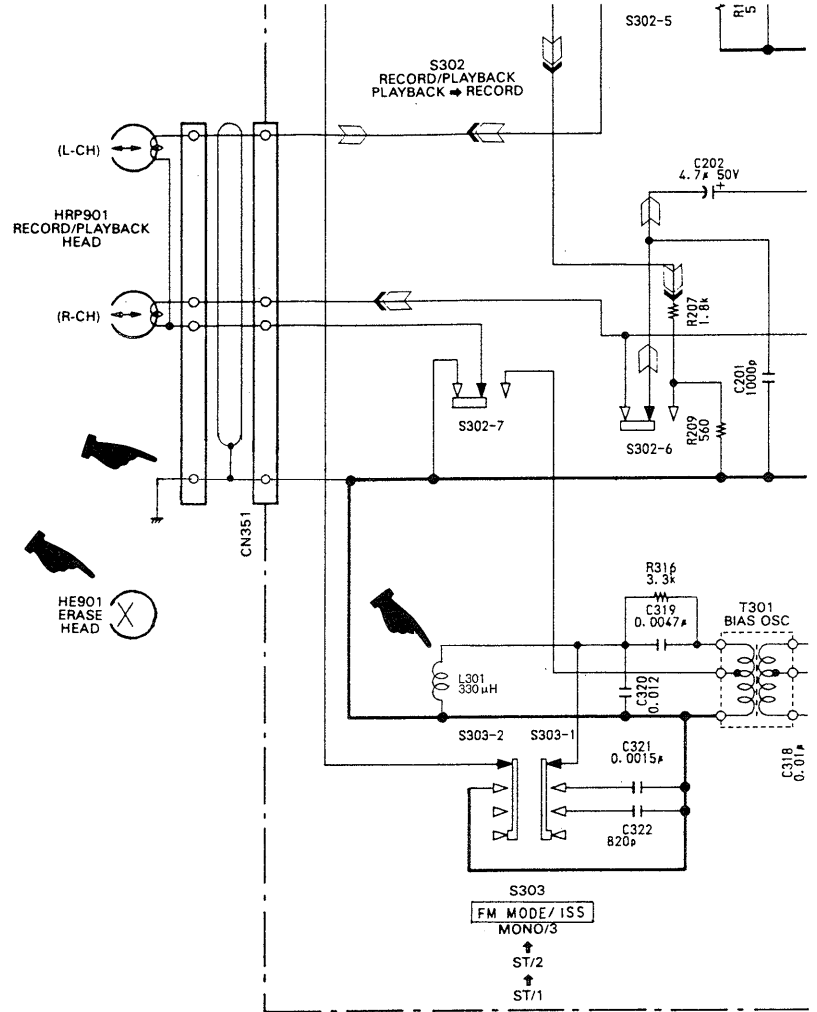
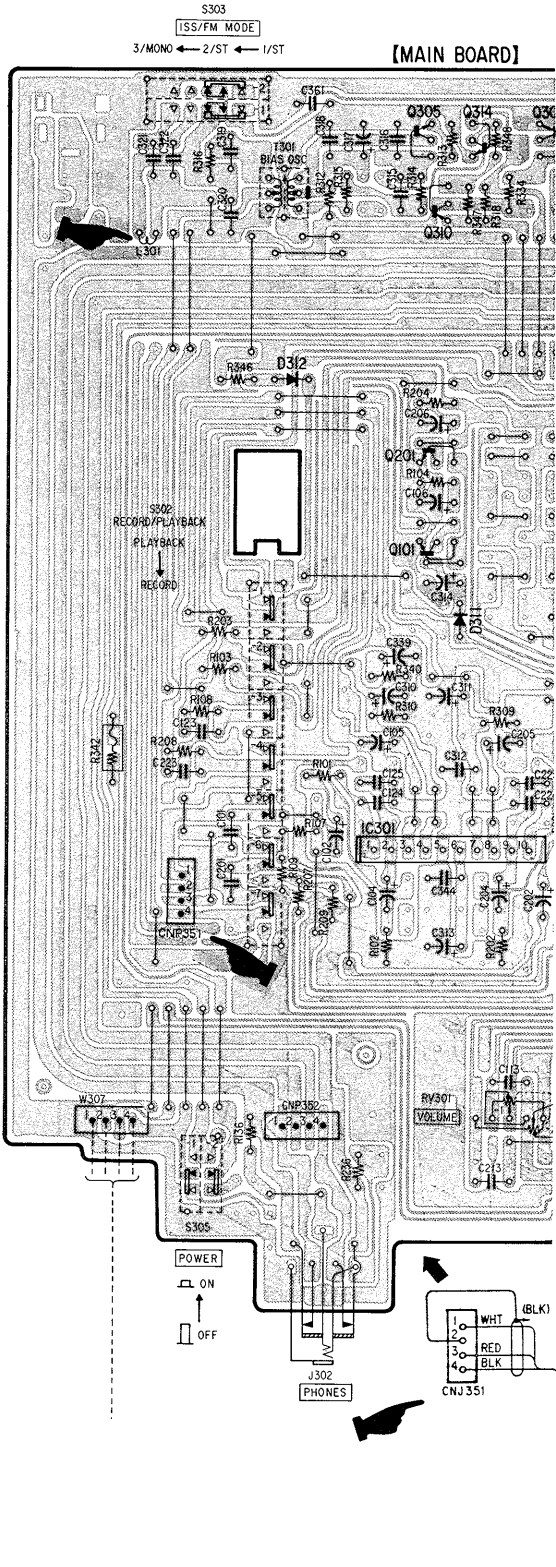


No.	Part No.	Description
 307	4-928-990-01	LEVER, REC
 314	4-928-998-01	DECK, HEAD
 HE901	1-543-474-11	HEAD, MAGNETIC (ERASE)

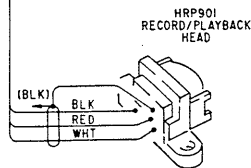
: Changed portion

PAGE 18, 19

PAGE 21




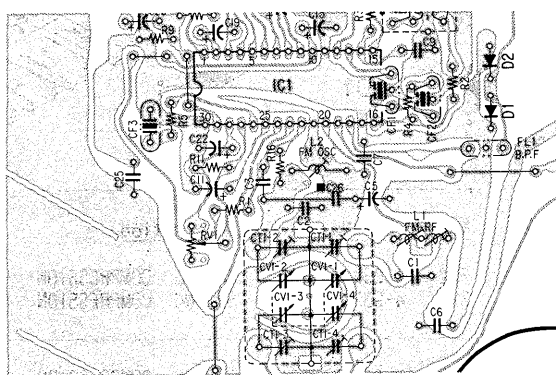
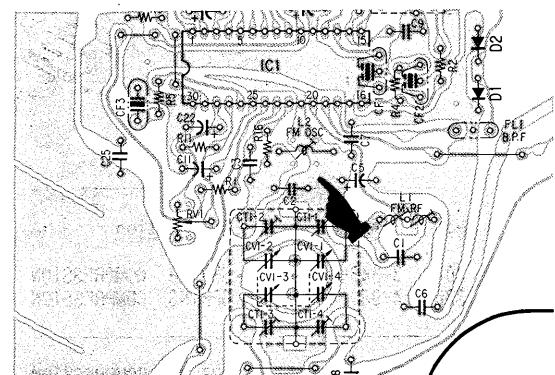
Ref. No.	Part No.	Description
	CN351	*1-564-706-11 PIN, CONNECTOR (SMALL TYPE) 4P
	HE901	1-543-474-11 HEAD, MAGNETIC (ERASE)
	L301	1-410-680-31 MICRO INDUCTOR, 330 μ H



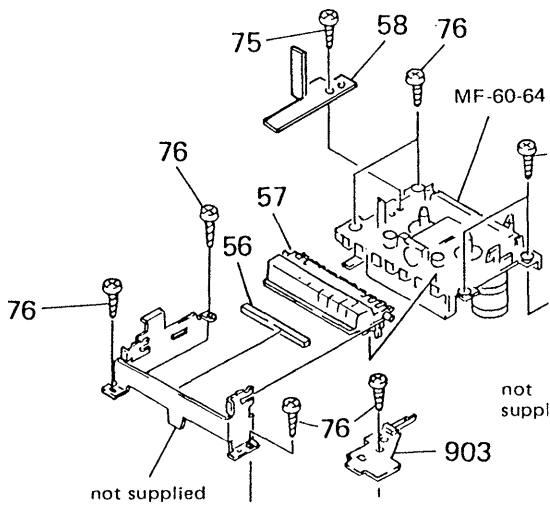

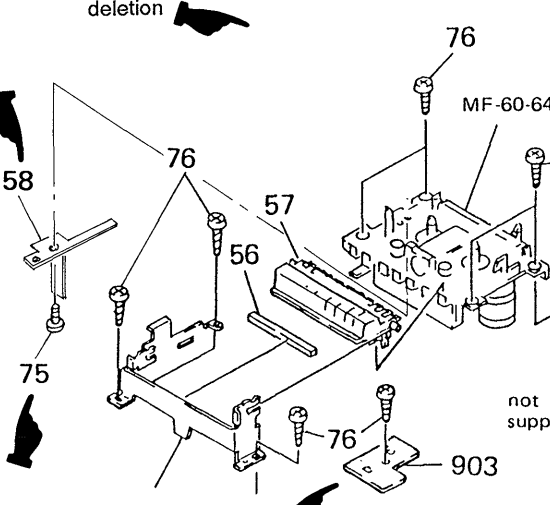
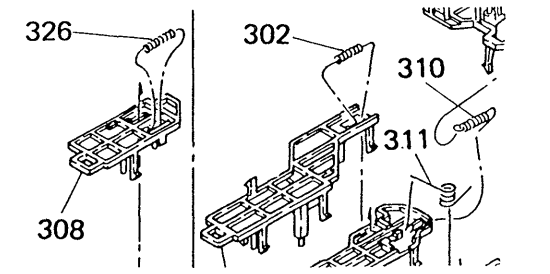
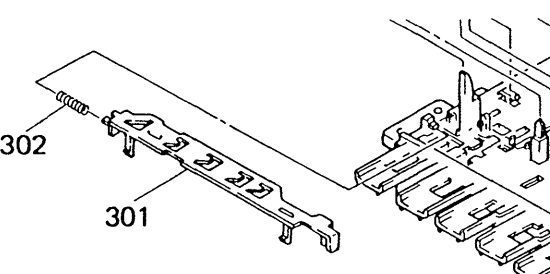
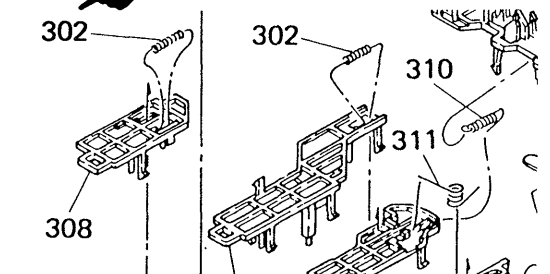
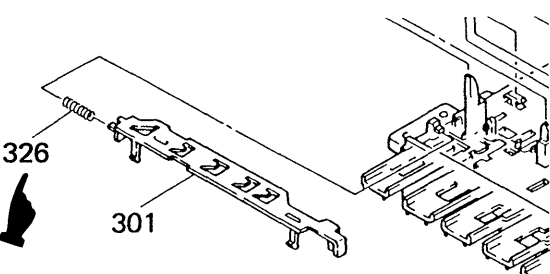
deletion

CORRECTION

 : Corrected portion

PAGE	INCORRECT	CORRECT																																												
9	<ul style="list-style-type: none"> Sled Motor Check 1. Press ►►, ◄◄ keys and confirm that the FOP moves smoothly from the innermost to outermost circumference and back smoothly and with no catching or abnormal noises. <ul style="list-style-type: none"> ►► : FOP moves to the outer circumference ◄◄ : FOP moves to the inner circumference 	<ul style="list-style-type: none"> Sled Motor Check 1. Press ► key, then press ■ key.  2. Press ►►, ◄◄ keys and confirm that the FOP moves smoothly from the innermost to outermost circumference and back smoothly and with no catching or abnormal noises. <ul style="list-style-type: none"> ►► : FOP moves to the outer circumference ◄◄ : FOP moves to the inner circumference 																																												
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 : Corrected portion

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CFD-60

SONY SERVICE MANUAL

US Model
Canadian Model

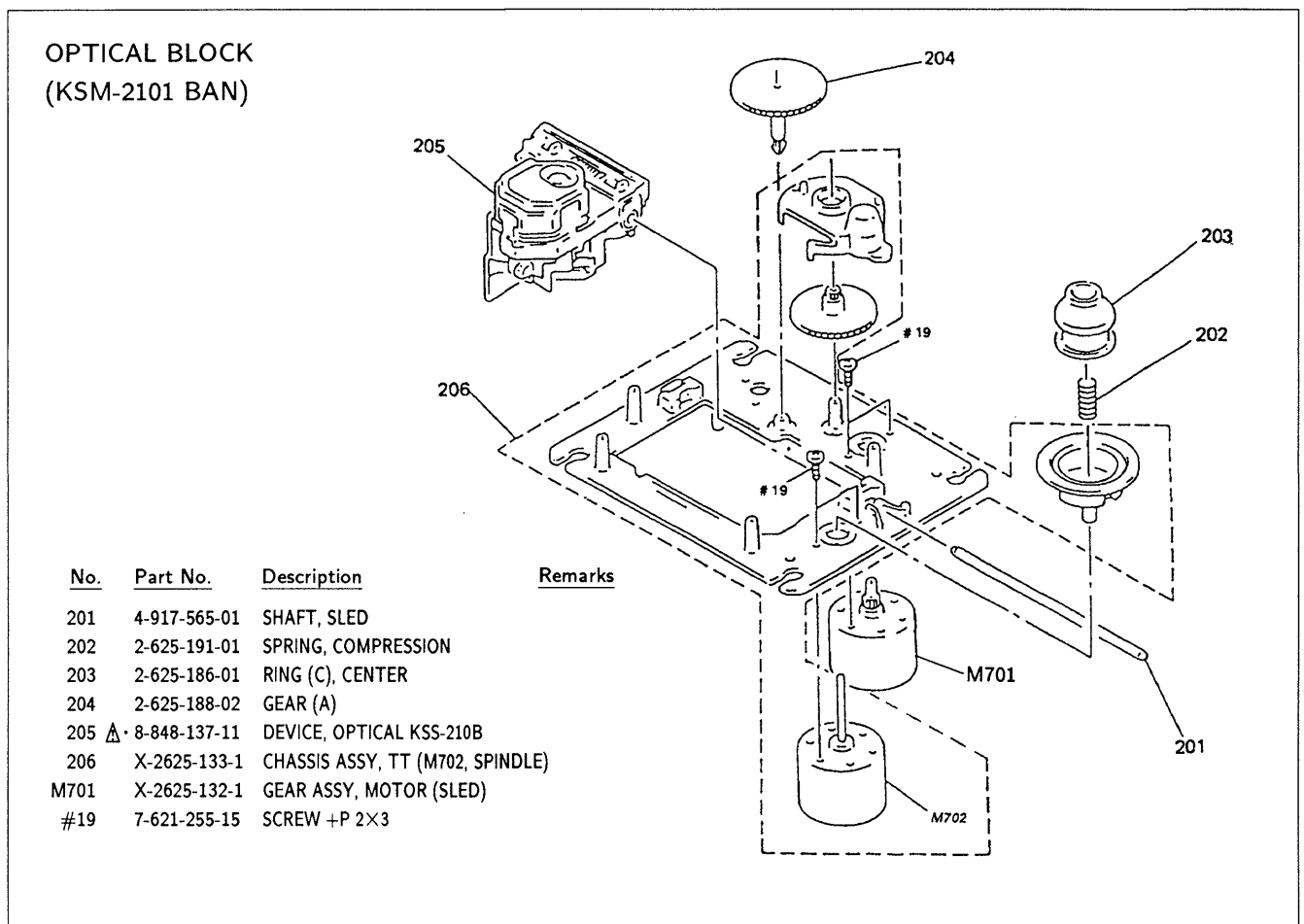
SUPPLEMENT-2

File this supplement with the service manual.

Subject : KSM-2101 BAN Optical Block Parts

The KSM-210 BAN and KSM-2101 BAN optical blocks were used in the CFD-60, but the Service Manual only shows the parts for KSM-210 BAN optical block. The type of optical block used in this model is marked on the optical block's chassis.

Refer to the following diagram for KSM-2101 BAN optical block parts :



SUPPLEMENT-3

File this supplement with the service manual and supplement-1.

CHANGE OF RECORD/PLAYBACK HEAD

The record/playback head has two types : fixed type and adjustment type. When servicing and/or inspecting, check the type of the record/playback head and prepare the appropriate part.

• How to discriminate between these types

Fixed type : The tape guide of the head is provided at both sides.

Adjustment type : The tape guide of the head is provided at one side.

Adjustment Type : MECHANICAL ADJUSTMENT

Tape Path Adjustment

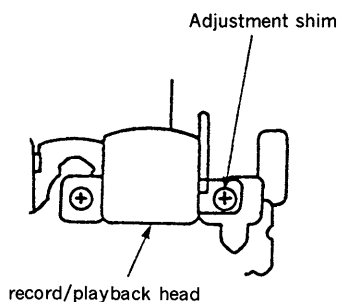
When the mode is playback, run a mirror cassette, then turn adjustment screw to eliminate tape curl and tape twist at tape guide on erase head and record/playback head.

Adjust the height by using head shim if needed.

Standard : $t=0.1$

Part No.	t
3-336-274-01	0.1
3-336-274-11	0.2

Adjustment Location :

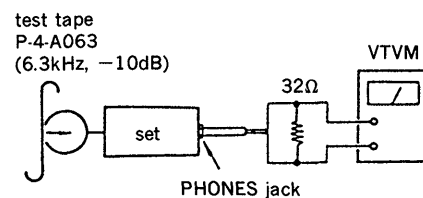


ELECTRICAL ADJUSTMENT

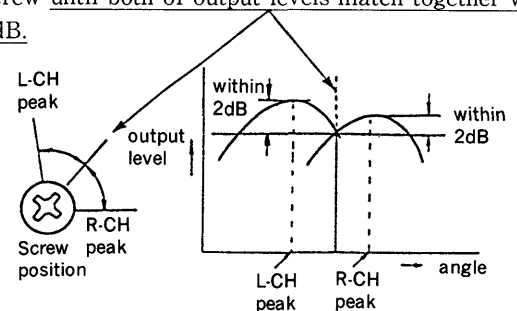
Record/Playback Head Azimuth Adjustment

Procedure : Adjust both FWD and REV.

1. Mode : playback



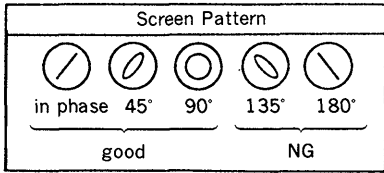
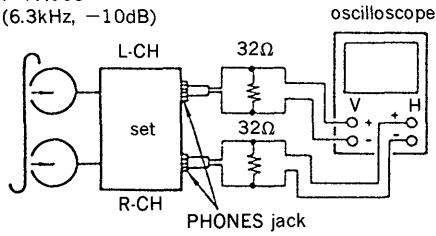
2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 2dB.



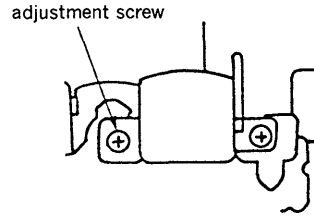
3. Phase Check

Mode : playback

test tape
P-4-A063
(6.3kHz, -10dB)



Adjustment Location :



DIFFERENCE OF PARTS LIST

() : Page of SUPPLEMENT-1

Page	Ref No.	Fixed Type	Adjustment Type																																																						
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