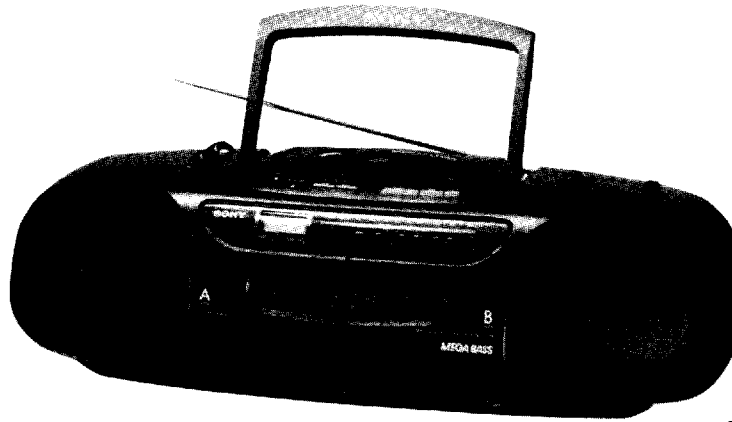


CFD-110L

SERVICE MANUAL

Ver 1.1 2002.05

*AEP Model
UK Model*



MEGA BASS

Model Name Using Similar Mechanism	CFD-10L
Optical Device Name	KSM-2101BAN
Tape Transport Mechanism Type	MF-W308-64

SPECIFICATIONS

CD player section

System	Compact disc digital audio system
Laser diode properties	Material: GaAlAs Wave length: 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.)
Spindle speed	200 r/min (rpm) to 500 r/min (rpm) (CLV)
Error correction	Sony Refined Super Strategy Cross Interleave Reed Solomon Code
Number of channels	2
Frequency response	20–20,000 Hz + 1/–2 dB
Wow and flutter	Below measurable limit

Radio section

Frequency range	FM: 65 – 108 MHz (East European Model) 87.6 – 107 MHz (Other Models) MW: 531–1602 kHz LW: 153–279 kHz SW: 5.95–18 MHz
IF	FM: 10.7 MHz SW/MW/LW: 455 kHz
Aerials	FM/SW: Telescopic aerial MW/LW: Built-in ferrite bar aerial

Cassette-corder section

Recording system	4-track 2-channel stereo
Frequency response	TYPE I (normal) cassette: 70–10,000 Hz

General

Speaker	Full range: 10 cm dia., 3.2 ohms cone type
Inputs	Mixing microphone input jack (minijack): Sensitivity 3 mV For low impedance microphone
Outputs	Headphones jack (stereo minijack): For 16–68 ohms impedance headphones
Maximum power output	2.3 W + 2.3 W
Power requirements	UK Model: 240 V AC, 50 Hz Other Models: 220 – 230 V AC, 50 Hz DC 9 V, 6 R20 (size D) batteries 17 W
Power consumption	For CD radio cassette-corder:
Battery life	

	FM recording	Tape playback	CD playback
Sony SUM-1 (NS)	approx. 15 h	approx. 6 h	approx. 3 h
Sony Alkaline AM1	approx. 24 h	approx. 15 h	approx. 8 h

Dimensions	Approx. 591 × 177 × 267 mm (w/h/d) incl. projecting parts
Mass	5 kg (incl. batteries)
Supplied accessories	Mains lead (1)

Design and specifications subject to change without notice.

9-959-090-12
2002E0500-1
© 2002.05

Sony Corporation
Personal Audio Company
Published by Sony Engineering Corporation

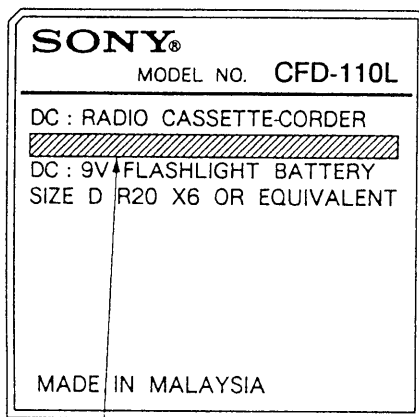
CD RADIO CASSETTE-CORDER
SONY®

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
	Specifications	1
1.	SERVICING NOTES	3
2.	GENERAL	4
3.	DISASSEMBLY	5
4.	MECHANICAL ADJUSTMENTS	7
5.	ELECTRICAL ADJUSTMENTS	
5-1.	Tape Recorder Section	7
5-2.	Tuner Section	8
5-3.	CD Section	10
6.	DIAGRAMS	
6-1.	Tuner Section Block Diagram	14
6-2.	MD/Main/Power Section Block Diagram	15
6-3.	CD Section Block Diagram	17
6-4.	Tuner Section Printed Wiring Boards and Schematic Diagram	19
6-5.	MD/Main/Power Section Printed Wiring Boards	22
6-6.	MD/Main/Power Section Schematic Diagram	25
6-7.	CD Section Schematic Diagram	31
6-8.	CD Section Printed Wiring Boards	35
7.	EXPLODED VIEWS	40
8.	ELECTRICAL PARTS LIST	46

MODEL IDENTIFICATION

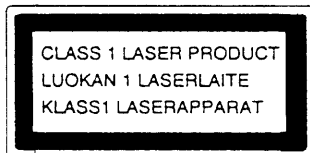
— SPECIFICATION LABEL —



UK model: 240 V AC, 50 Hz
OTHER models: 220 – 230 V AC, 50 Hz

Information

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.



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

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.

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.

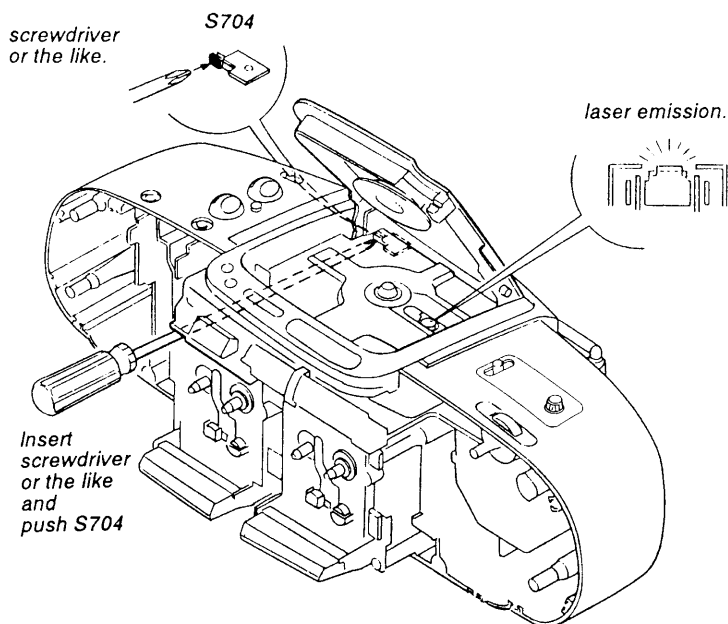
The flexible board is easily damaged and should be handled with care.

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. Make Function switch to CD position with no disc inserted.
2. Open the lid for CD.
3. Turn on S704 as following figure.
4. Press ► key.
5. 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.



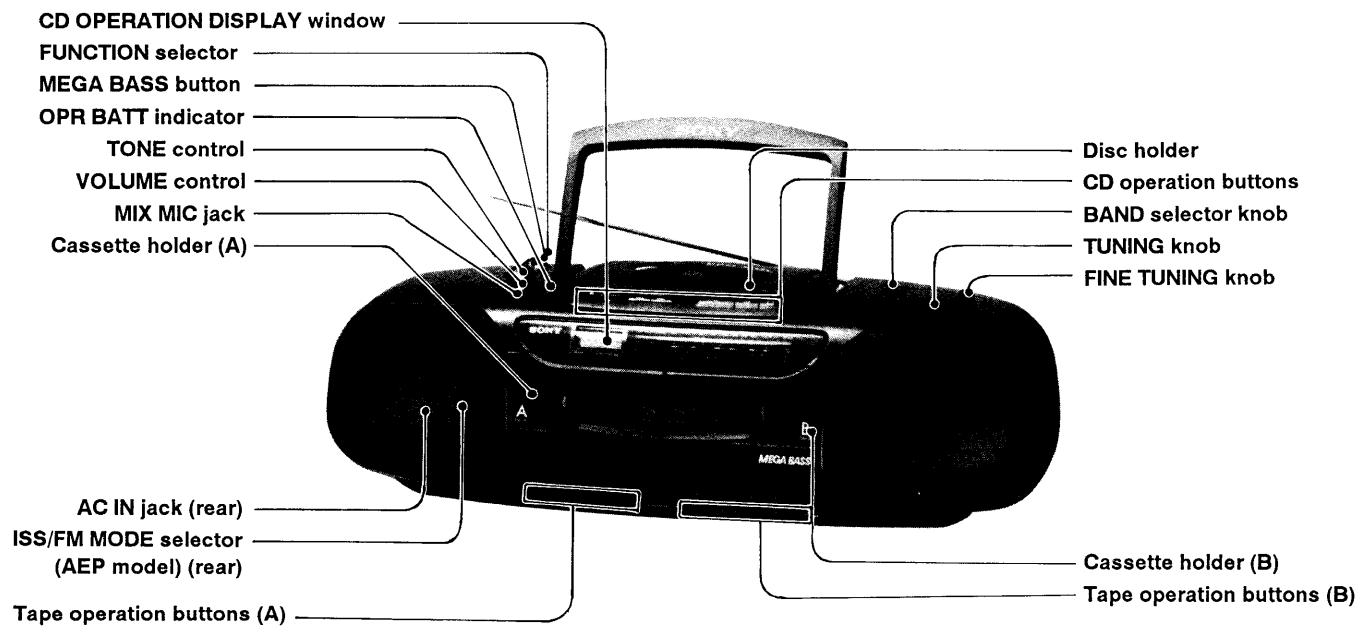
CHUCK PLATE JIG ON REPAIRING

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

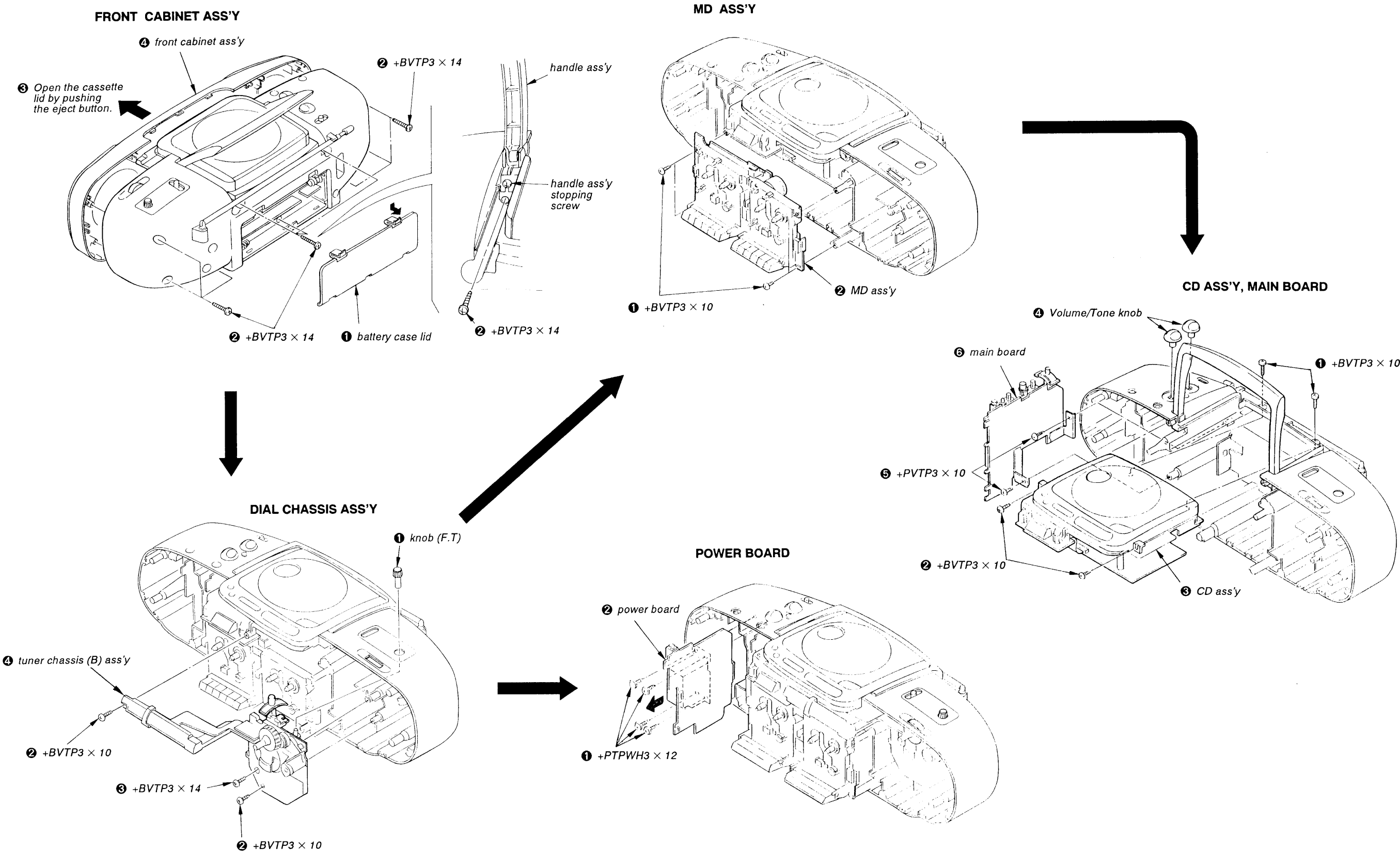
SECTION 2 GENERAL

• Parts Identification



SECTION 3
DISASSEMBLY

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



SECTION 4 MECHANICAL ADJUSTMENTS

PRECAUTION

- Clean the following parts with a denatured-alcohol-moistened swab:
 record/playback head pinch roller
 erase head rubber belts
 capstan idlers
- Demagnetize the record/playback head with a head demagnetizer. (Do not bring the head demagnetizer close to the erase head.)
- Do not use a magnetized screwdriver for the adjustments.
- After the adjustments, apply suitable locking compound to the parts adjusted.
- The adjustments should be performed with the rated power supply voltage unless otherwise noted.
- Power supply voltage: 9V dc.

Torque Measurement

Torque	Meter Reading	Torque Meter
Forward	22.5 – 55 g•cm (0.31 – 0.76 oz•inch)	CQ-102C
Fast Forward and Rewind	60 – 120 g•cm (0.83 – 1.67 oz•inch)	CQ-201B
Back Tension	2 – 5 g•cm (0.03 – 0.07 oz•inch)	CQ-102C

Tape Tension Measurement

Meter	Meter Reading
CQ-403A	more than 150 g (5.29 oz)

• Standard output level

Output Pin	PHONES
Signal source impedance	32 Ω
Output signal level	0.245 V (– 10 dB)

0 dB=0.775 V

5-1. TAPE RECORDER SECTION

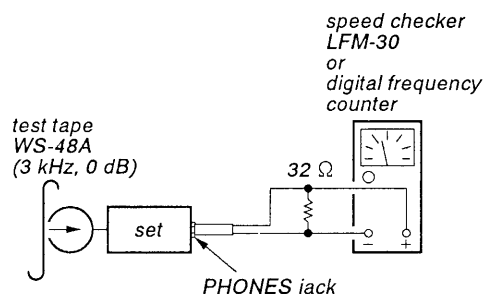
• Test Tape

Type	Signal	Used for
WS-48A	3 kHz, 0 dB	tape speed adjustment

Tape Speed Adjustment DECK A DECK B

Procedure:

Mode: playback



SECTION 5

ELECTRICAL ADJUSTMENTS

PRECAUTION

- Adjustments should be performed in the order given. Generally playback circuit adjustments should be completed before performing recording circuit adjustments.
- 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
 TONE maximum
 MEGA BASS off

• Standard recording position

Adjust the VOLUME knob so that the following regulated input/output signal levels are obtained.

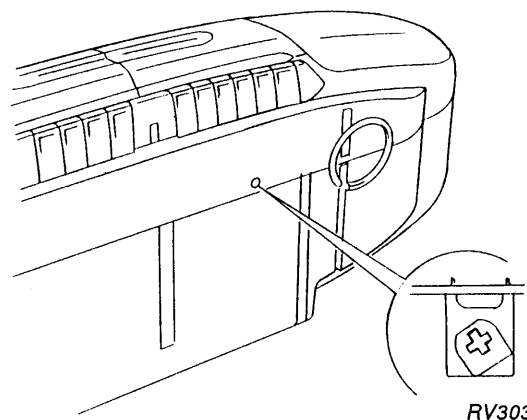
• Standard input level

Input Pin	MIX MIC
Signal source impedance	300 Ω
Input signal level	4.8 mV (– 48 dB)
Frequency	1 kHz

Speed	Adjustment point	Speed checker reading	Frequency counter
high	confirm	– 8.3 to – 1.7%	5,700 ± 200 Hz
normal	RV303	– 0.5 to 0.5%	3,000 ± 15 Hz

Frequency difference between the top and the end should be within 1.5% (45 Hz).

Adjustment Location: MD board

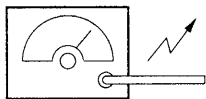


5-2. TUNER SECTION $0\text{dB} = 1\ \mu\text{V}$

[AM]

FUNCTION switch: RADIO
FINE TUNE control: Mechanical
BAND switch: MW, LW

AM RF SSG

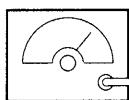


Put the lead-wire antenna close to the set.

30% amplitude modulation by 400 Hz signal
output level: as low as possible

BAND switch: SW

AM RF SSG



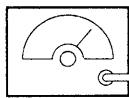
30% amplitude modulation by 400 Hz signal
output level: as low as possible

to ANT IN terminal.

[FM]

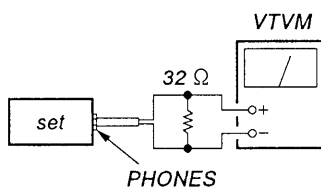
FUNCTION switch: RADIO
BAND switch: FM

FM RF SSG



22.5 kHz frequency deviation by 400 Hz signal.
output level: as low as possible

to ANT IN terminal



- 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.

T1	455 kHz
----	---------

LW FREQUENCY COVERAGE ADJUSTMENT

Adjust for a maximum reading on VTVM.

L4	145 kHz
CT8	300 kHz

LW TRACKING ADJUSTMENT

Adjust for a maximum reading on VTVM.

L10	160 kHz
CT7	260 kHz

MW FREQUENCY COVERAGE ADJUSTMENT

Adjust for a maximum reading on VTVM.

L8	515 kHz
CT4	1,680 kHz

MW TRACKING ADJUSTMENT

Adjust for a maximum reading on VTVM.

L3	600 kHz
CT3	1,400 kHz

SW FREQUENCY COVERAGE ADJUSTMENT

Adjust for a maximum reading on VTVM.

L6	5.8 MHz
CT6	18.4 MHz

SW TRACKING ADJUSTMENT

Adjust for a maximum reading on VTVM.

L5	5.8 MHz
CT5	18.4 MHz

FM FREQUENCY COVERAGE ADJUSTMENT

Adjust for a maximum reading on VTVM.

L2	64.0 MHz (East European Model) 87.35 MHz
CT2	109.5 MHz (East European Model) 107.8 MHz

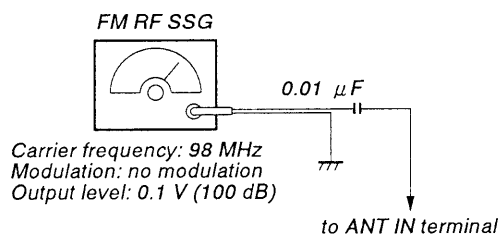
FM TRACKING ADJUSTMENT

Adjust for a maximum reading on VTVM.

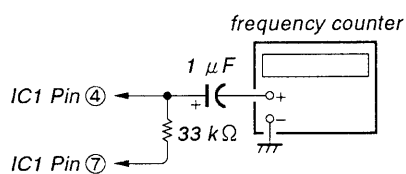
L1	64.0 MHz (East European Model) 87.35 MHz
CT1	109.5 MHz (East European Model) 107.8 MHz

FM VCO Adjustment

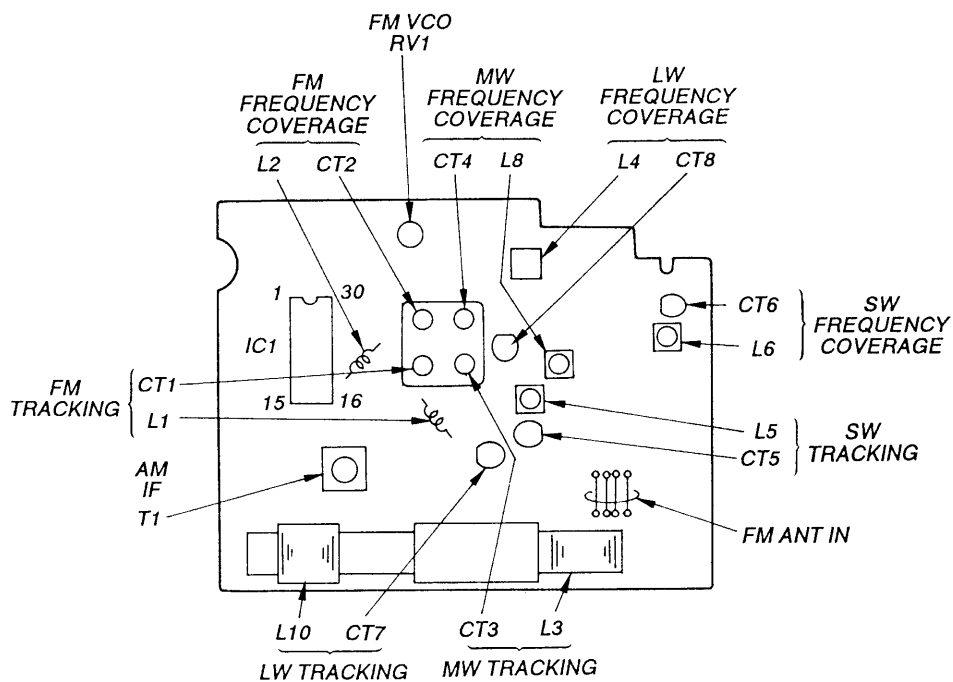
Procedure:



1. Connect frequency counter to the positions shown below.
2. Tune the set to 98 MHz.
3. Adjust RV1 for 76 kHz $\pm$ 500 Hz reading on the frequency counter.



● Adjusting Parts Location



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 **■** key for long.
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.
▶▶ : FOP moves to the outer circumference
◀◀ : FOP moves to the inner circumference
3. Press **■** key for long.
4. Confirm that FOP moving operations stops. If it does not, press **■** key again longer.

• Focus Search Check

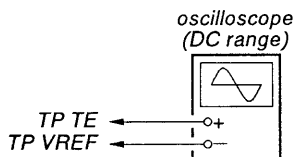
1. Press **■** key.
2. Press **▶** key. (Focus search operation is performed continuously.)
3. Look at the FOP objective lens and confirm that it moves up and down smoothly, with no catching or abnormal noises.
4. Press **■** key for long.
5. Confirm that focus search operation stops. If it does not,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

How to Put the Set into Service Mode

1. Short-circuit between TP TEST and ground on the CD main board.
2. Tune POWER on. (Set the FUNCTION switch to CD position.)
3. LCD801 indicator blinks the test mode pattern.

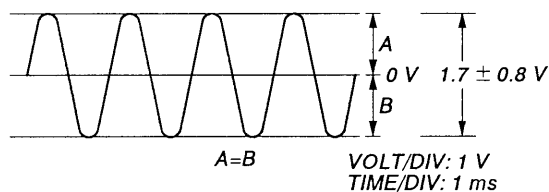
E-F Balance Adjustment

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



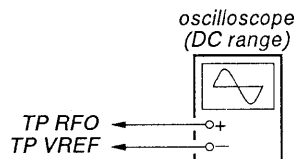
Adjustment Procedure:

1. Connect the oscilloscope between TP TE and TP VREF.
2. Put the set into service mode. (See page 10)
3. Press **▶▶** 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

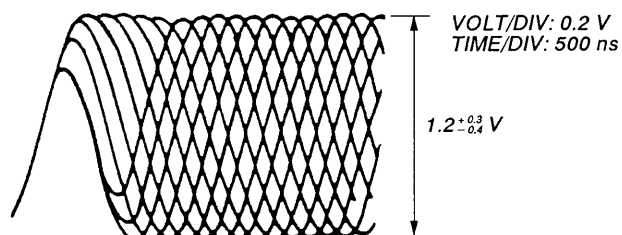
This adjustment is to be done when the optical block is replaced.



Adjustment Procedure:

1. Connect the oscilloscope between TP RFO and TP VREF.
2. Put the set into service mode. (See page 9)
3. Press **▶▶** 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. Press **||** key (Tracking and sledding go on).
6. 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 ($\diamond$) in the center of the waveform can be clearly distinguished.
7. Release service mode after adjustment is completed.

• RF signal reference waveform (eye pattern)



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

REFERENCE

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.

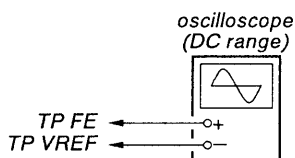
- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

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
• 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.

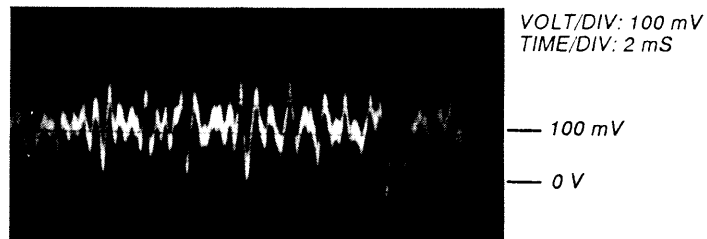
— Simple Adjustment —

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.



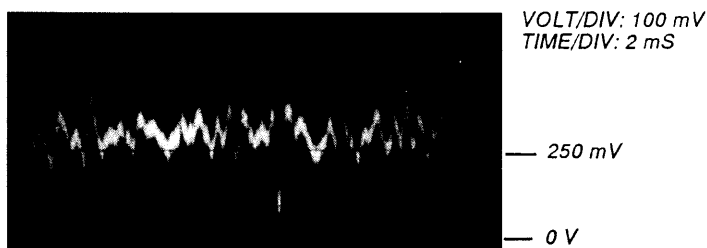
Procedure:

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. Put the set into service mode.
3. Insert disc (YEDS-18) and press ▶ PLAY button. (Focus on)
4. Press || key. (Tracking and sledding go on.)
5. Connect oscilloscope between TP FE and TP VREF.
6. Adjustment RV703 so that the waveform is as shown in the figure below. (focus gain adjustment)

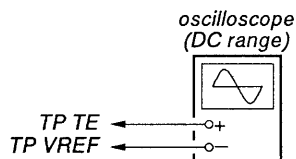
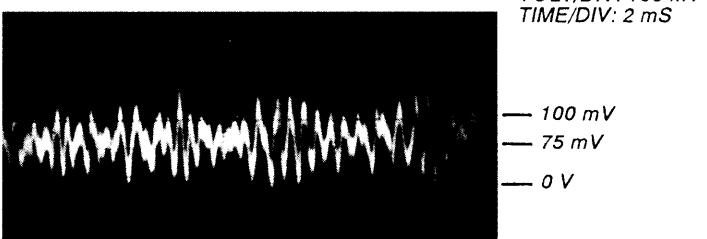


- Inccornt Examples (DC level changes more than on adjusted waveform)

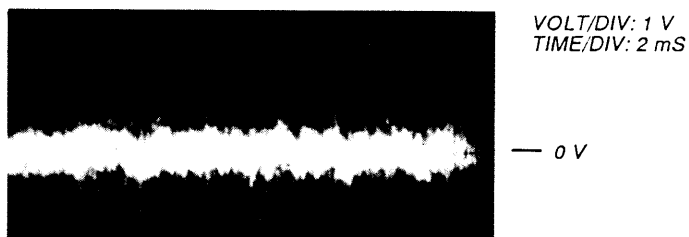
low focus gain



high focus gain

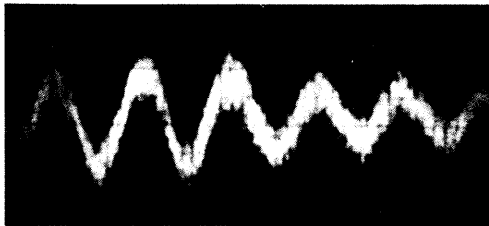


7. Connect the oscilloscope between TP TE and TP VREF.
8. Adjust RV704 so that the waveform is as shown in the figure below. (tracking gain adjustment)



- Incorrect Examples (fundamental wave appears)

low track gain



VOLT/DIV: 1 V
TIME/DIV: 2 mS

— 0 V

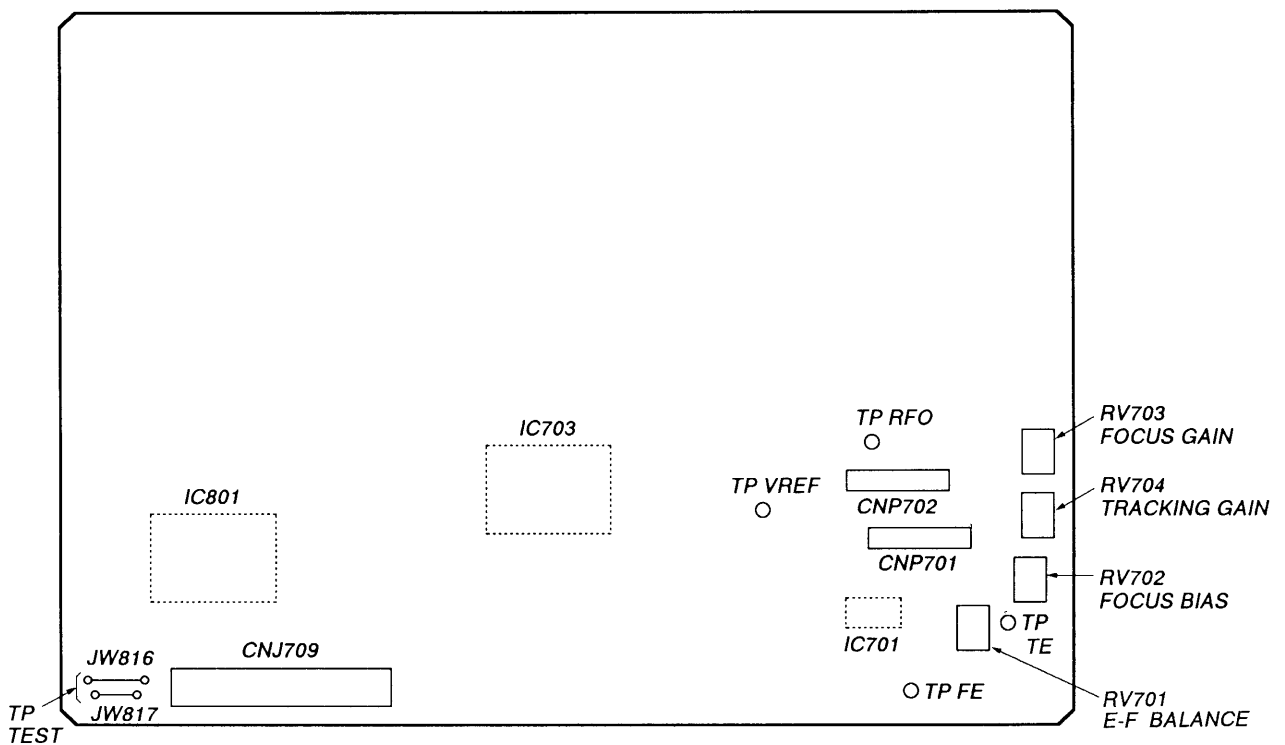
*high track gain
(higher fundamental wave than for low gain)*



VOLT/DIV: 1 V
TIME/DIV: 2 mS

— 0 V

Adjustment Location: CD main board (conductor side)



SECTION 6

DIAGRAMS

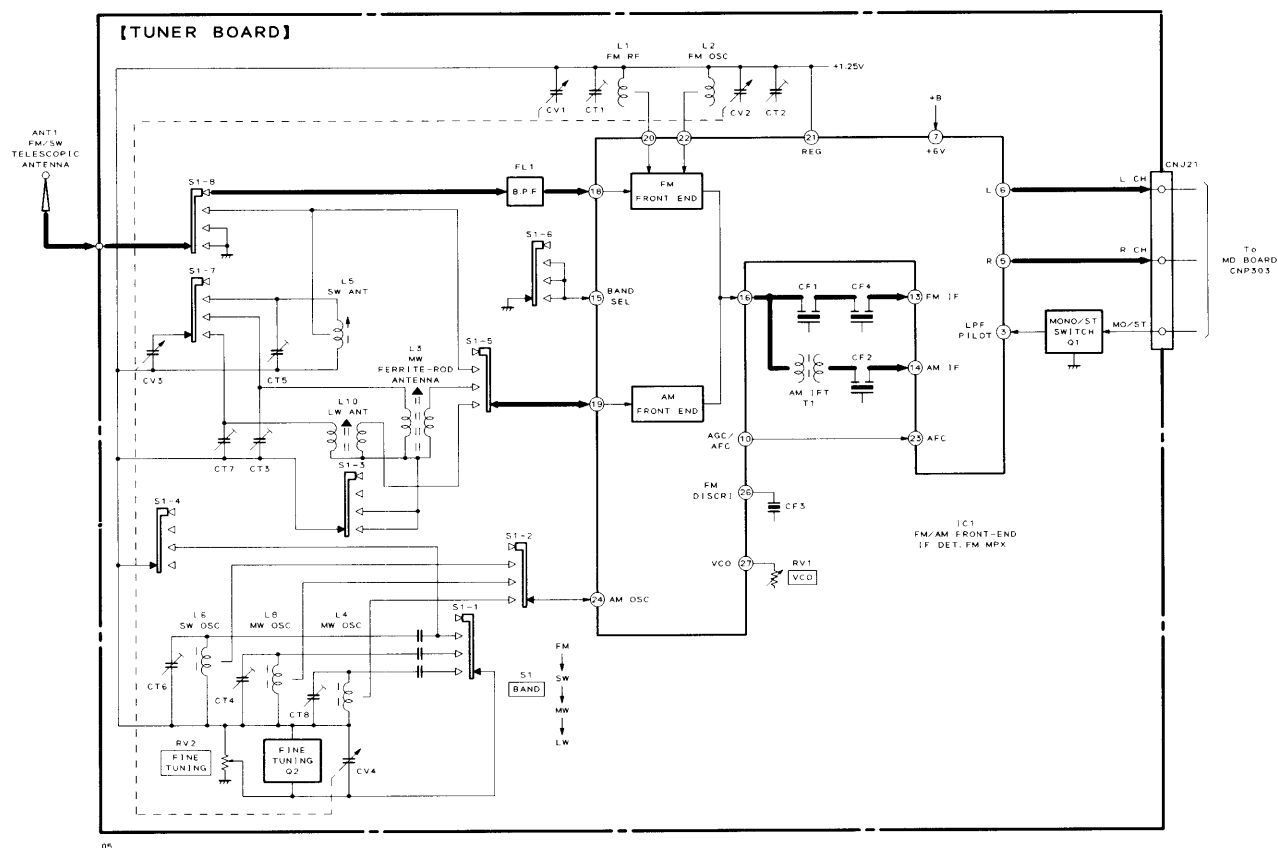
● Pin description

IC801 CXP5084H-636Q(MICRO COMPUTER)

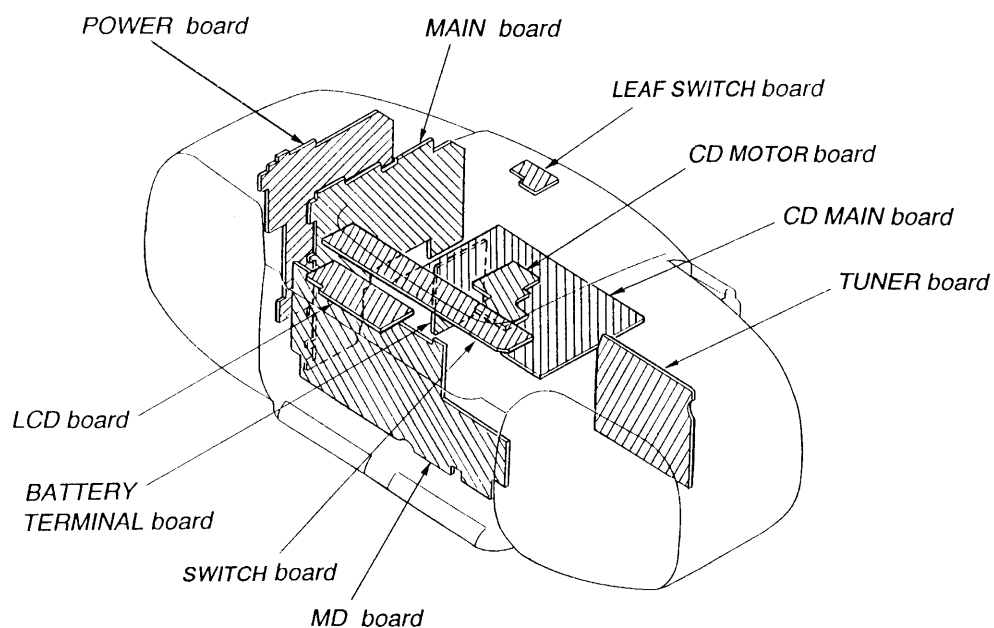
The CXP5084H-636Q function are described below.

Pin No.	Name	I/O	Description	Pin No.	Name	I/O	Description
1	—	—		55 ┆ 57	V _{LC1} ┆ V _{LC3}	O	LCD bias supply pin 1/3 Bias
2	XLT	O	System latch	58	V _{DD}	—	Data hold voltage 3.5~5.5V at STOP
3	GFS	I		59	V _L	O	Cut-off output
4	SCOR	I		60	OSC	—	Clock output
5	CLK	I/O	System clock	61	OSC	—	Clock input
6	DATA	I/O		62	RST	I/O	Reset pin
7	SENSE	I/O		63	WP	I	On at Wakeup "High"
8	SQSO	I	SUB Q	64	REMOTE	I	
9	K-PB	I/O	PLAY key input				
10	K-STOP	I/O	STOP key input				
11	K-FR	I/O	◀◀, ◀ key input				
12	K-FF	I/O	▶▶, ▶ key input				
13	PAUSE	I/O	⏸ key input				
14	P-MODE	I/O	PLAY MODE key input				
15	DISPLAY	I/O	Remain				
16	—	—					
17	DOOR	I/O	CD holder open/close detection				
18	CD	I/O	Low at Function CD				
19	REC	I/O	Low at Rec				
20	HISPEED	I/O	Low at High Speed Rec				
21	LD ON	I/O	Laser ON, BTL Mute				
22	FOK	I/O	Focus OK input 				
23	LATCH	I/O	DF latch output				
24	TEST	I/O					
25	GND	—					
26	NC	—					
27	—	—					
28	XRST	O	System reset				
29	MUTE	O	Mute at high,digital and analog mute				
30 ┆ 35	—	—					
36 ┆ 50	S14 ┆ S0	O	LCD segment pin (15 pcs)				
51 ┆ 54	COM3 ┆ COM0	O	LCD common pin 1/4 duty				

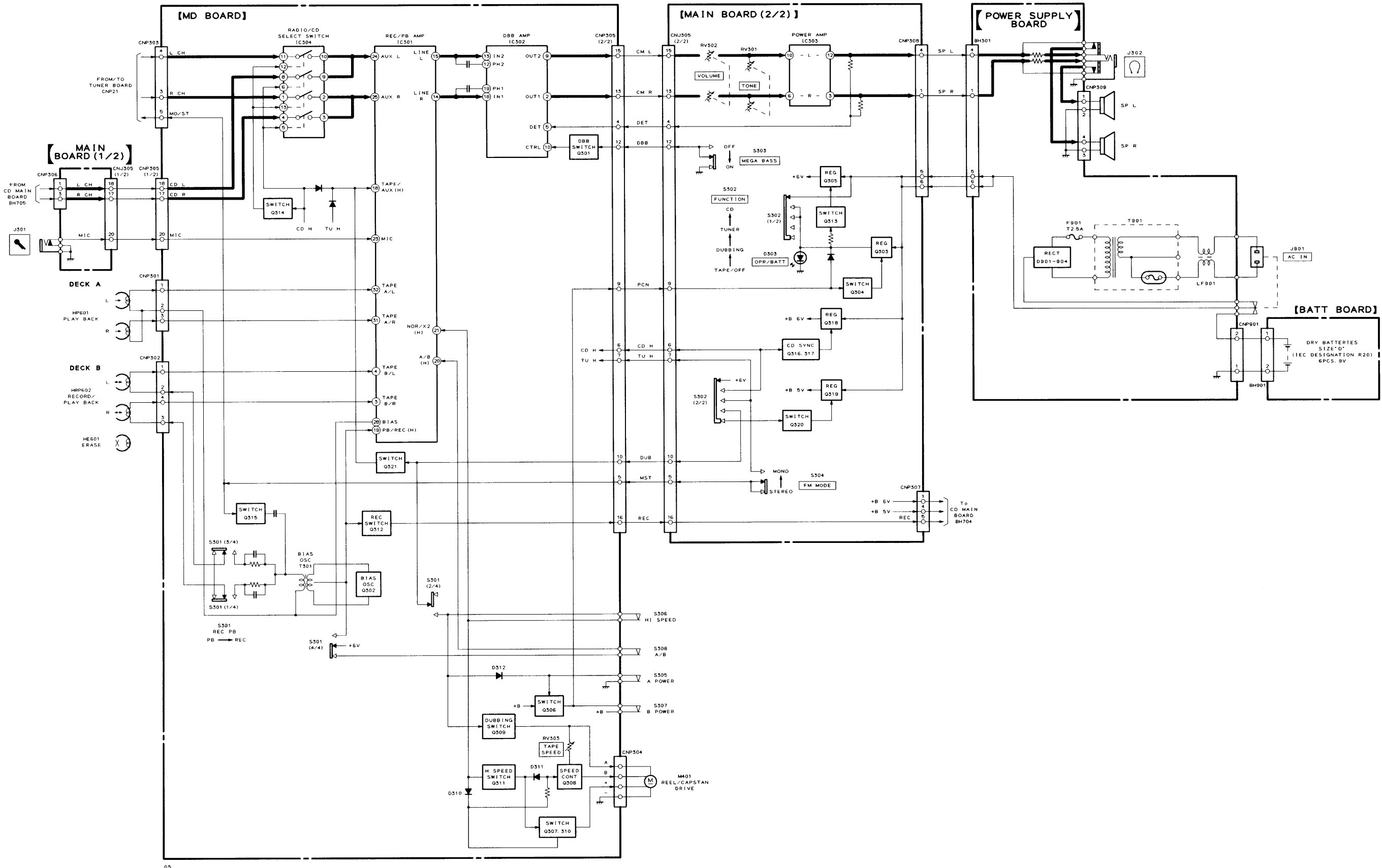
6-1. TUNER SECTION BLOCK DIAGRAM



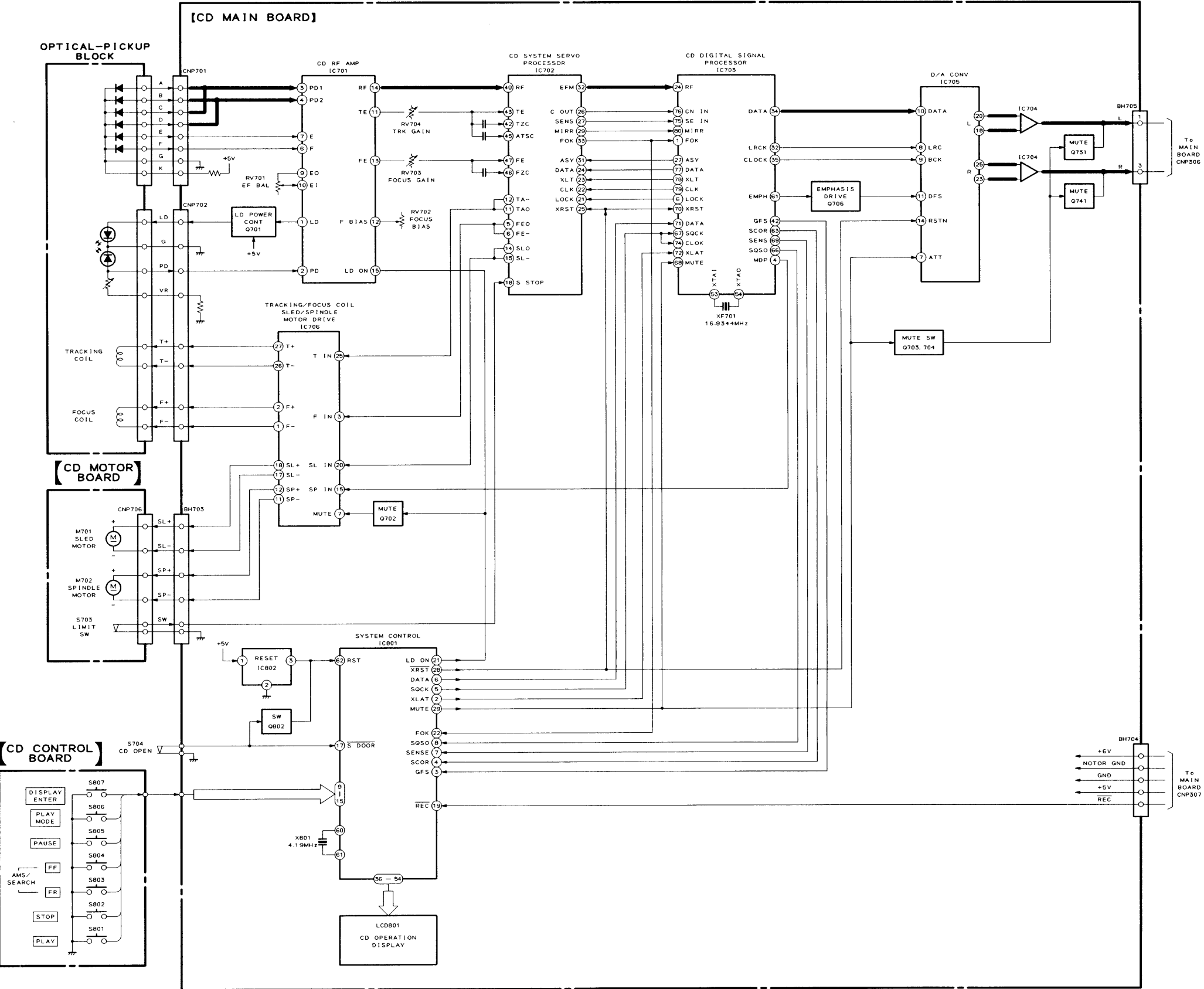
- **Circuit Boards Location**



6-2. MD/MAIN/POWER SECTION BLOCK DIAGRAM

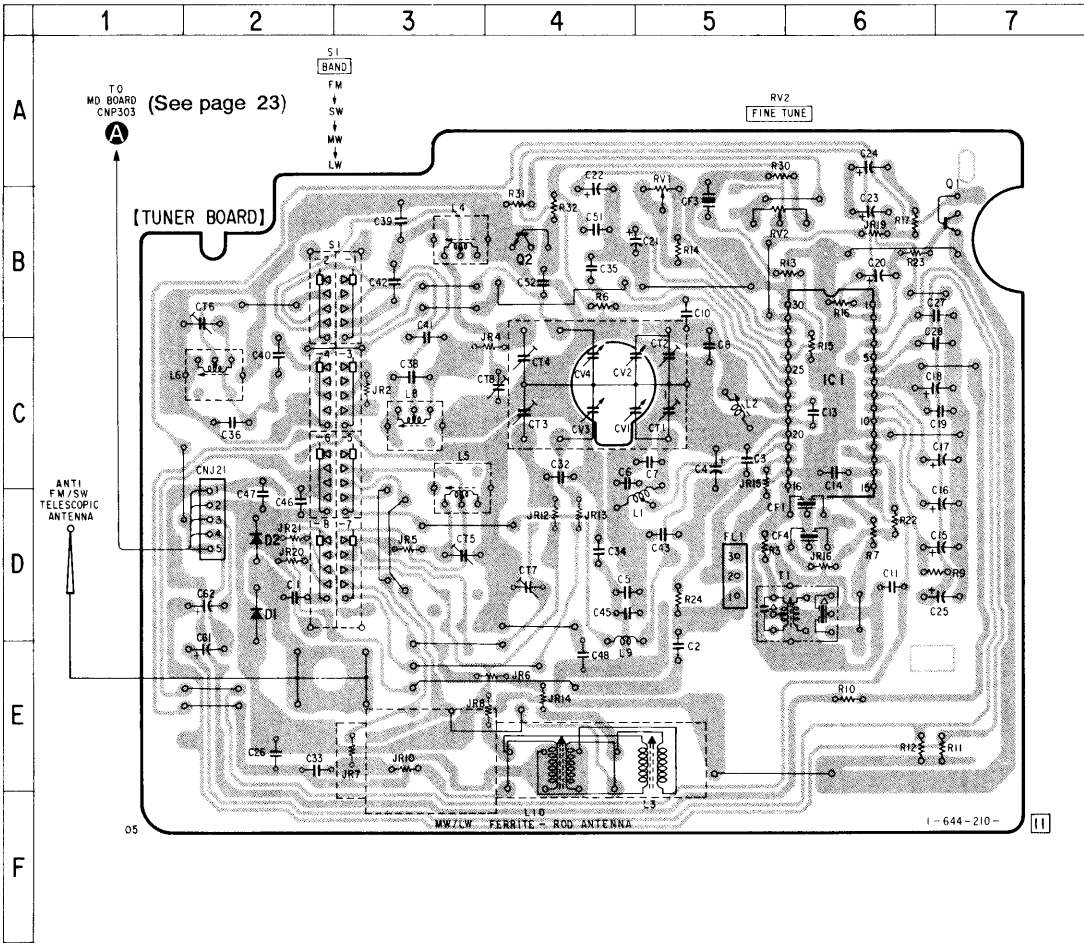


6-3. CD SECTION BLOCK DIAGRAM



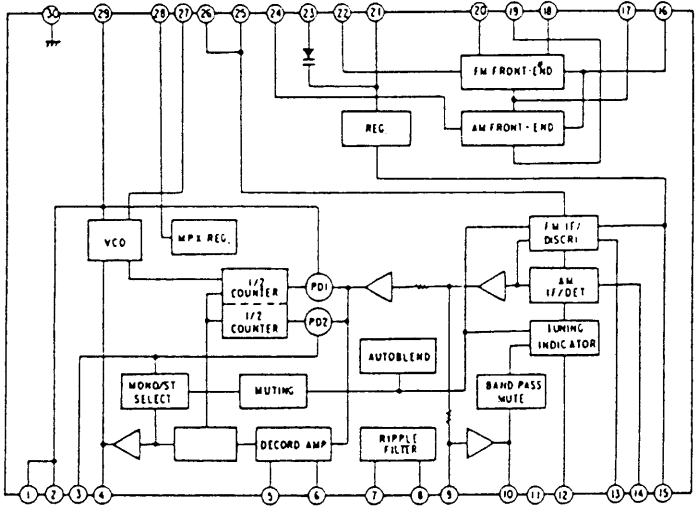
6-4. TUNER SECTION PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

• See page 39 for Semiconductor Lead Layouts.



• IC Block Diagram

IC1 CXA1238S

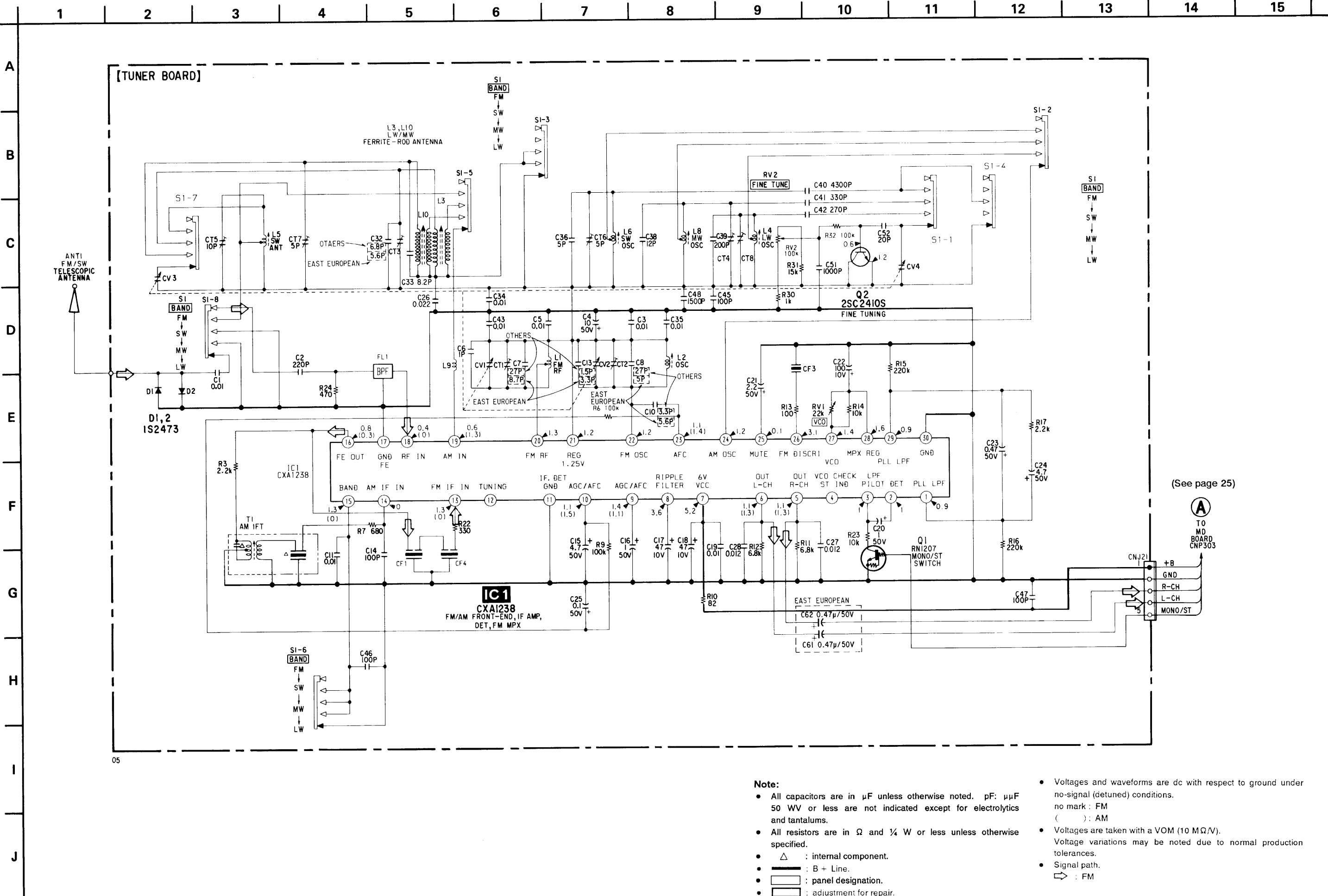


• Semiconductor Location

Ref. No.	Location
IC2	C-6
Q1	B-6
Q2	B-4

Note:

- : indicates side identified with part number.
- △ : internal component.



Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{ W}$ or less unless otherwise specified.
- △ : internal component.
- : B + Line.
- : panel designation.
- : adjustment for repair.

- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions. no mark : FM () : AM
- Voltages are taken with a VOM (10 M Ω /V). Voltage variations may be noted due to normal production tolerances.
- Signal path. $\Rightarrow$: FM

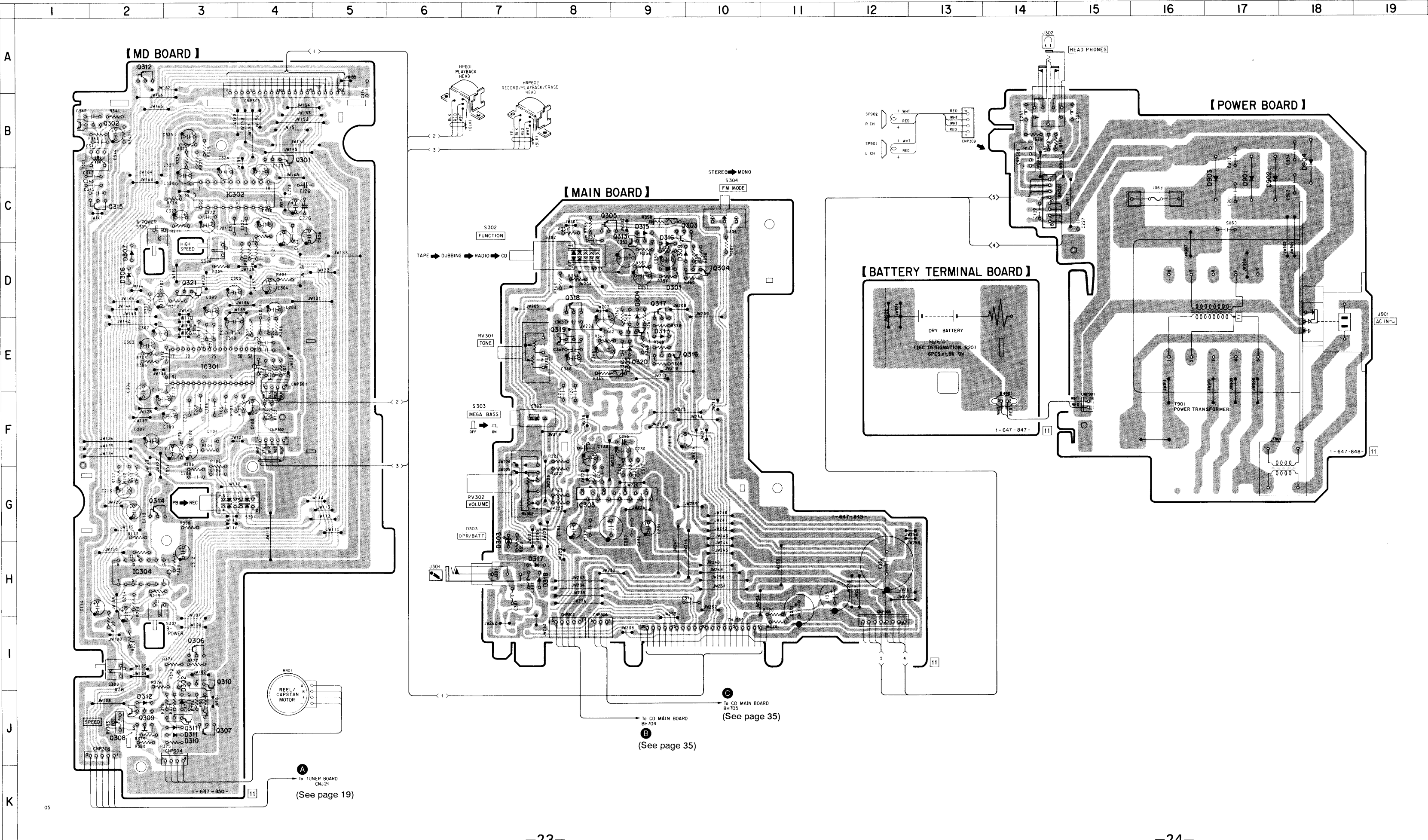
6-5. MD/MAIN/POWER SECTION PRINTED WIRING BOARDS

• See page 39 for Semiconductor Lead Layouts.

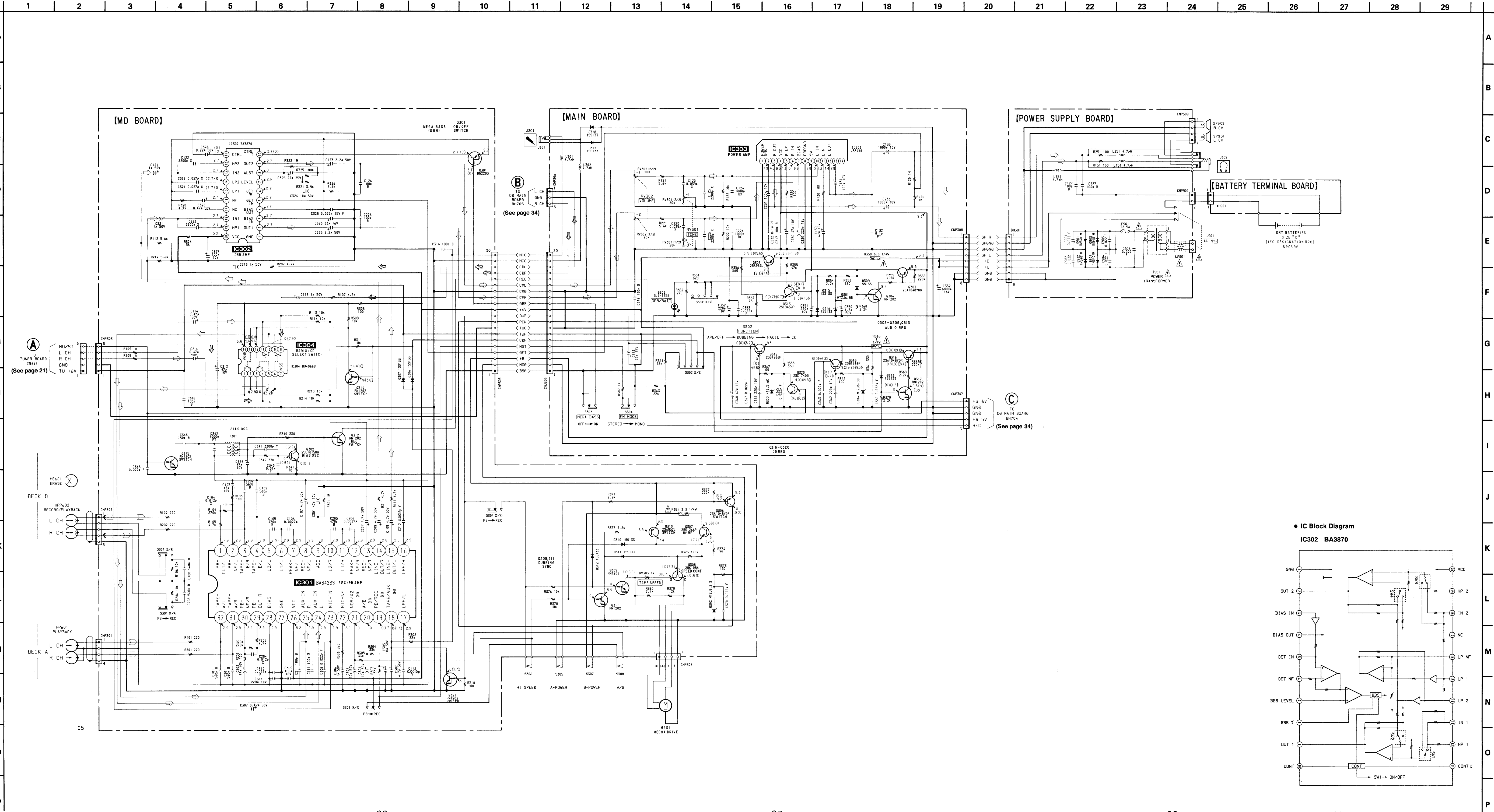
• Semiconductor Location

Ref. No.	Location
D301	D-9
D302	J-3
D303	G-7
D304	D-9
D305	E-9
D306	D-2
D307	D-2
D309	D-9
D310	J-3
D311	J-3
D312	J-2
D313	E-9
D315	C-9
D316	C-9
D317	H-7
D318	H-7
D901	C-17
D902	C-17
D903	C-16
D904	C-1
IC301	E-3
IC302	C-3
IC303	G-8
IC304	H-2
Q301	B-4
Q302	B-1
Q303	C-9
Q304	D-9
Q305	C-8
Q306	I-3
Q307	J-3
Q308	J-2
Q309	J-2
Q310	J-3
Q311	J-3
Q312	A-2
Q313	C-9
Q314	G-2
Q315	C-2
Q316	E-9
Q317	D-9
Q318	E-8
Q319	E-8
Q320	E-9
Q321	D-3

Note:
• — : parts extracted from the component side.



6-6. MD/MAIN/POWER SECTION SCHEMATIC DIAGRAM
• See page 37 to 38 for Waveforms.



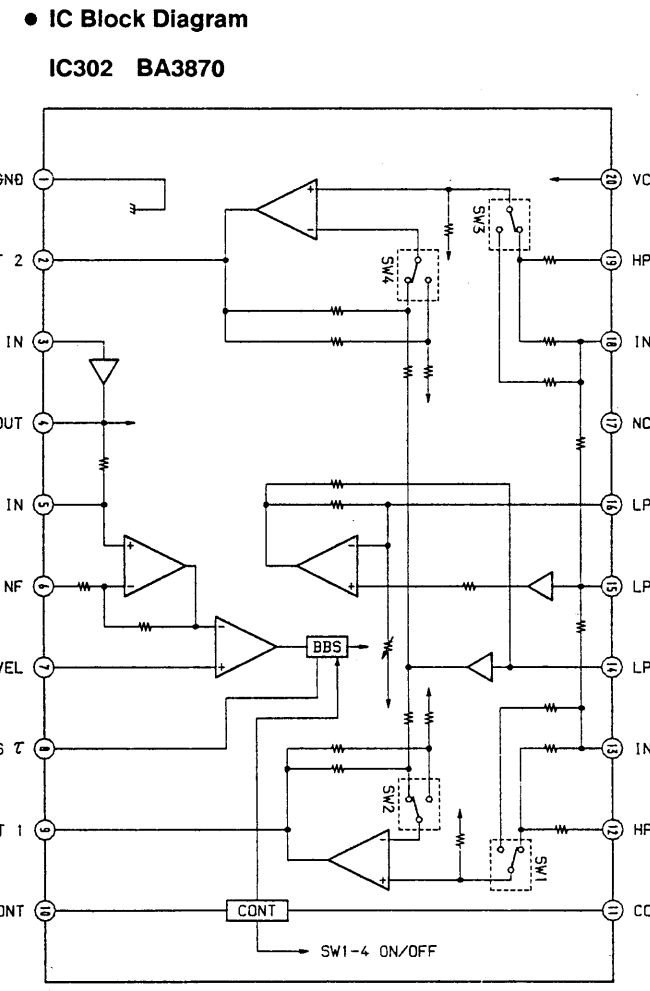
Note:

- All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{W}$ or less unless otherwise specified.
- : fusible resistor.

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

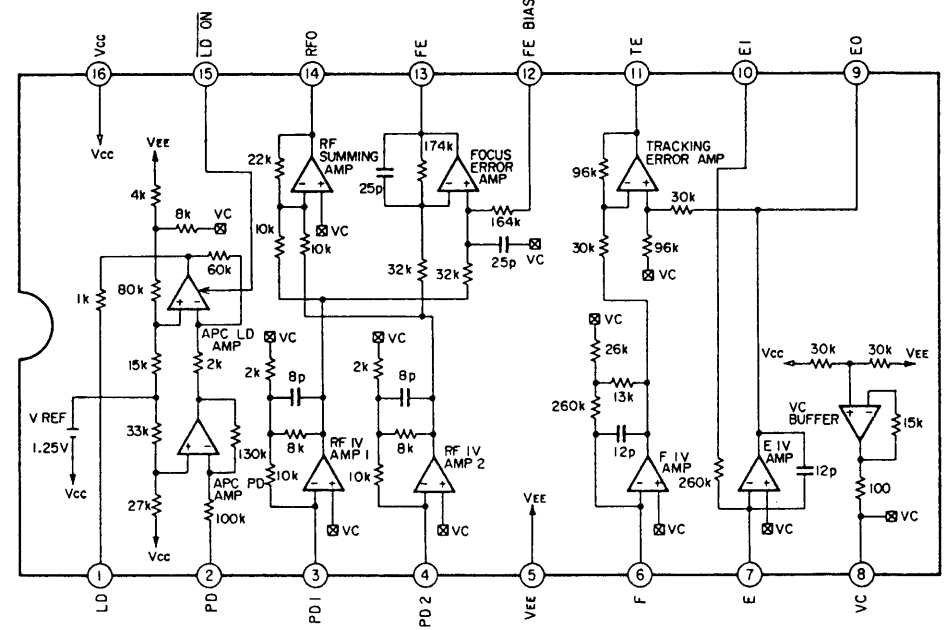
Note:

- : B+ Line.
- : panel designation.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark: STOP
- () : TAPE REC
- < > : MEGA BASS ON
- [] : RADIO
- () : CD PLAY
- Voltages are taken with a VOM (10 $\text{M}\Omega/\text{V}$). Voltage variations may be noted due to normal production tolerances.
- Signal path.
- : FM
- * : Impossible to measure the voltage at the marked points.

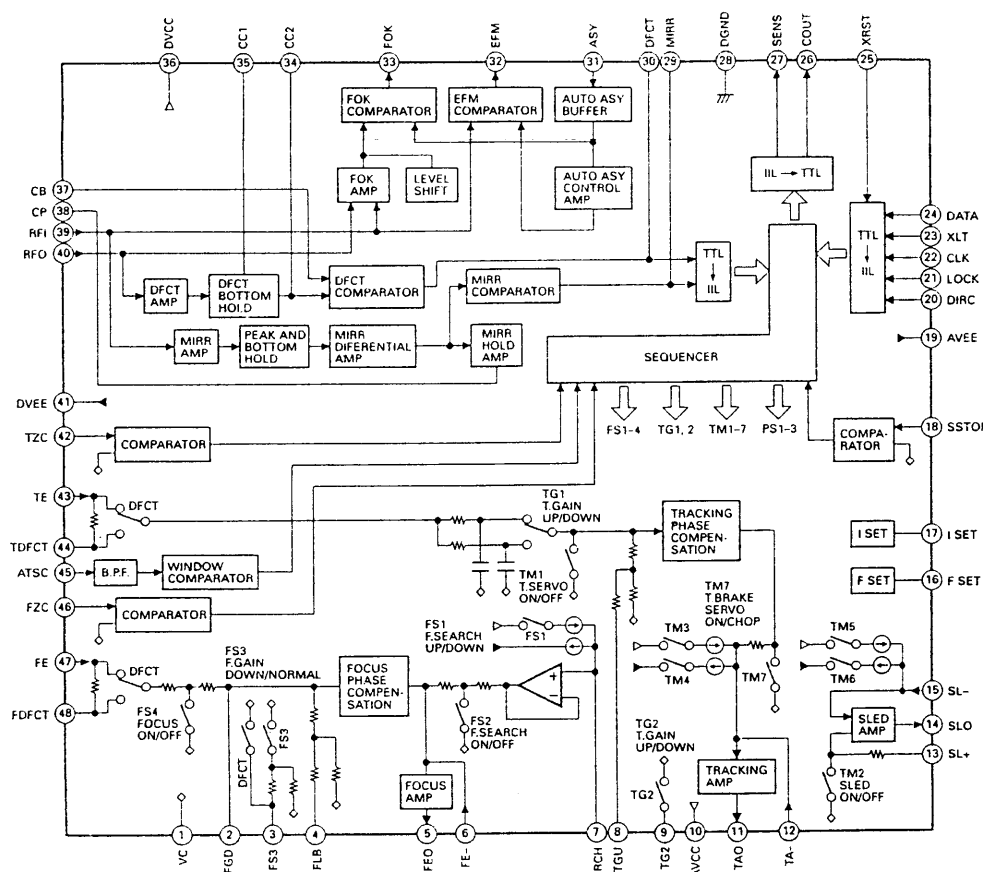


• IC Block Diagrams

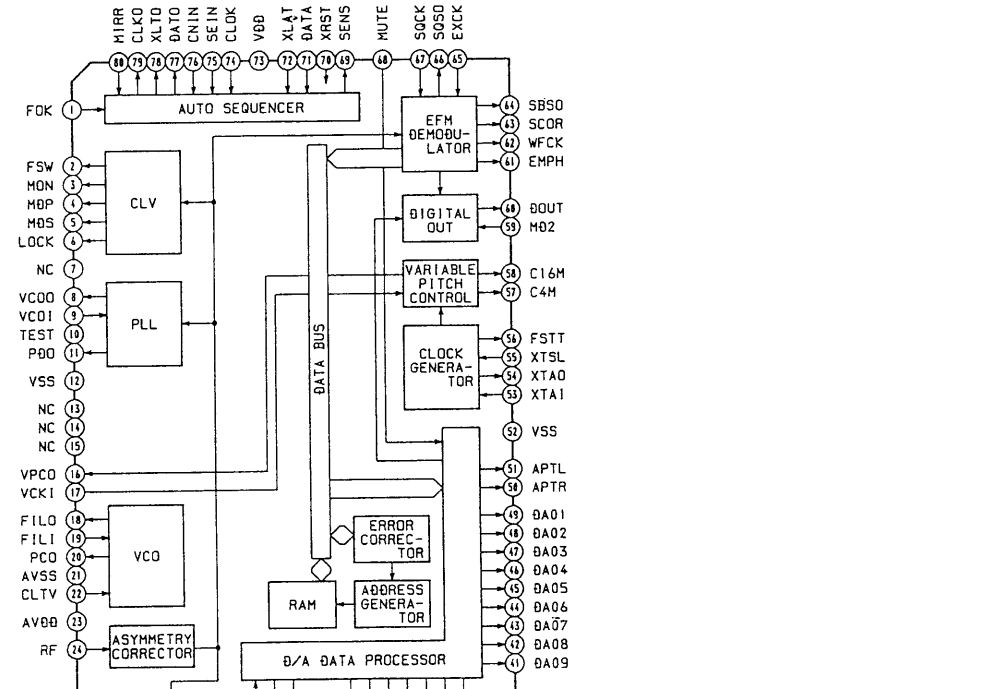
IC701 CXA1421M



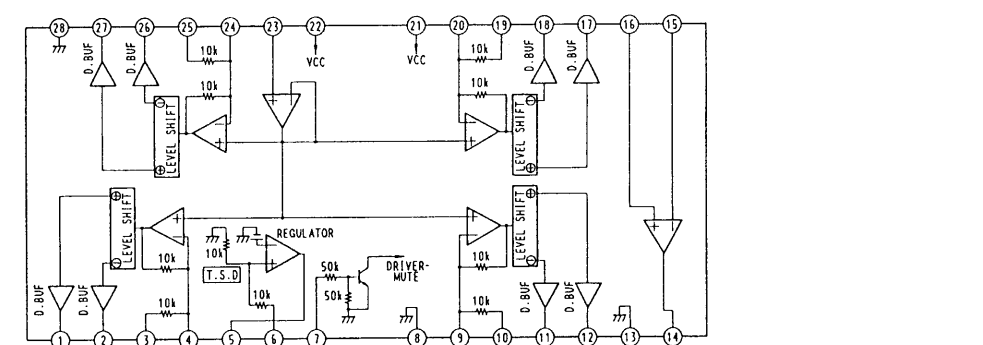
IC702 CXD1372AQ



IC703 CXD2500BQ

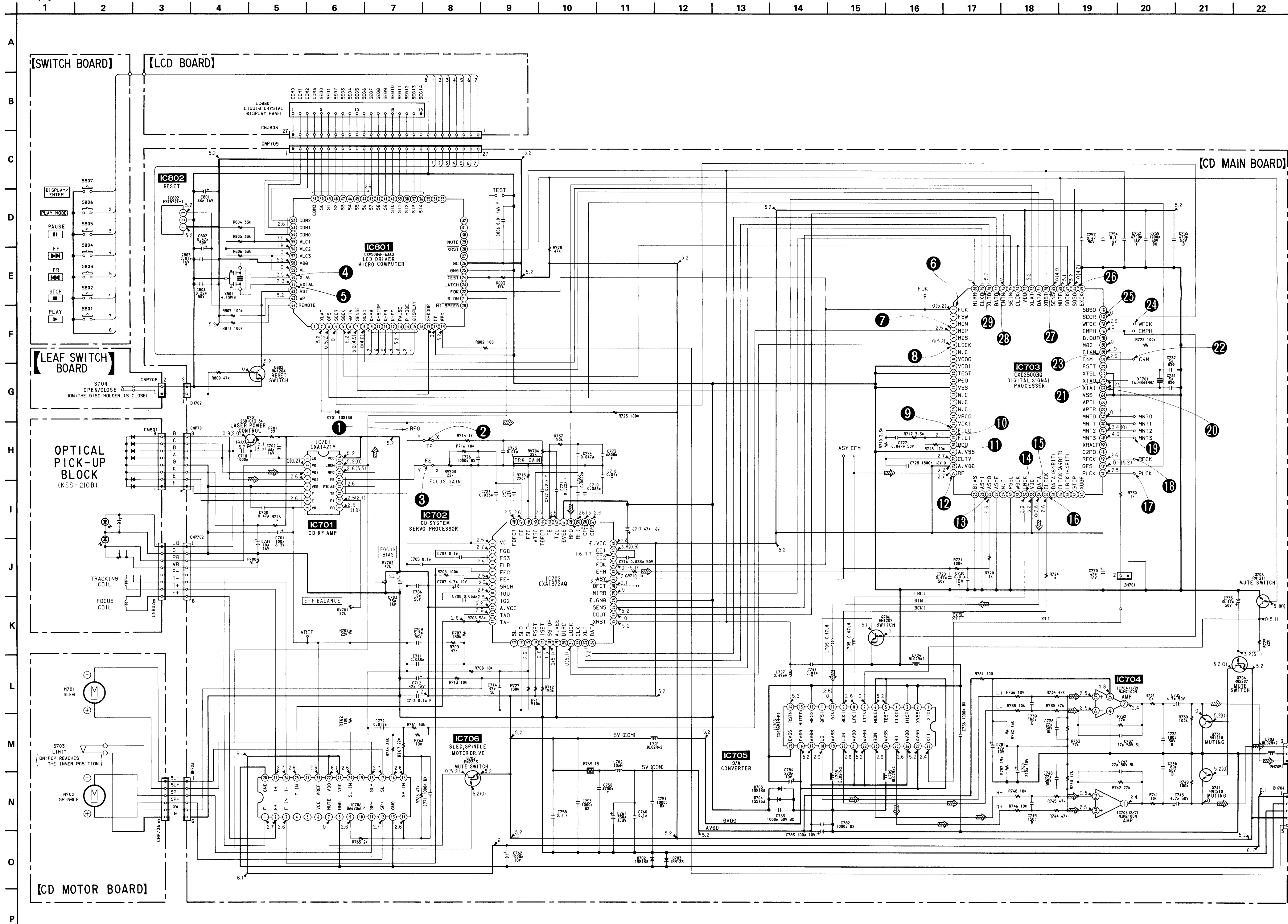


IC706 BA6296FP



6-7. CD SECTION SCHEMATIC DIAGRAM

• See page 37 to 38 for Waveforms.

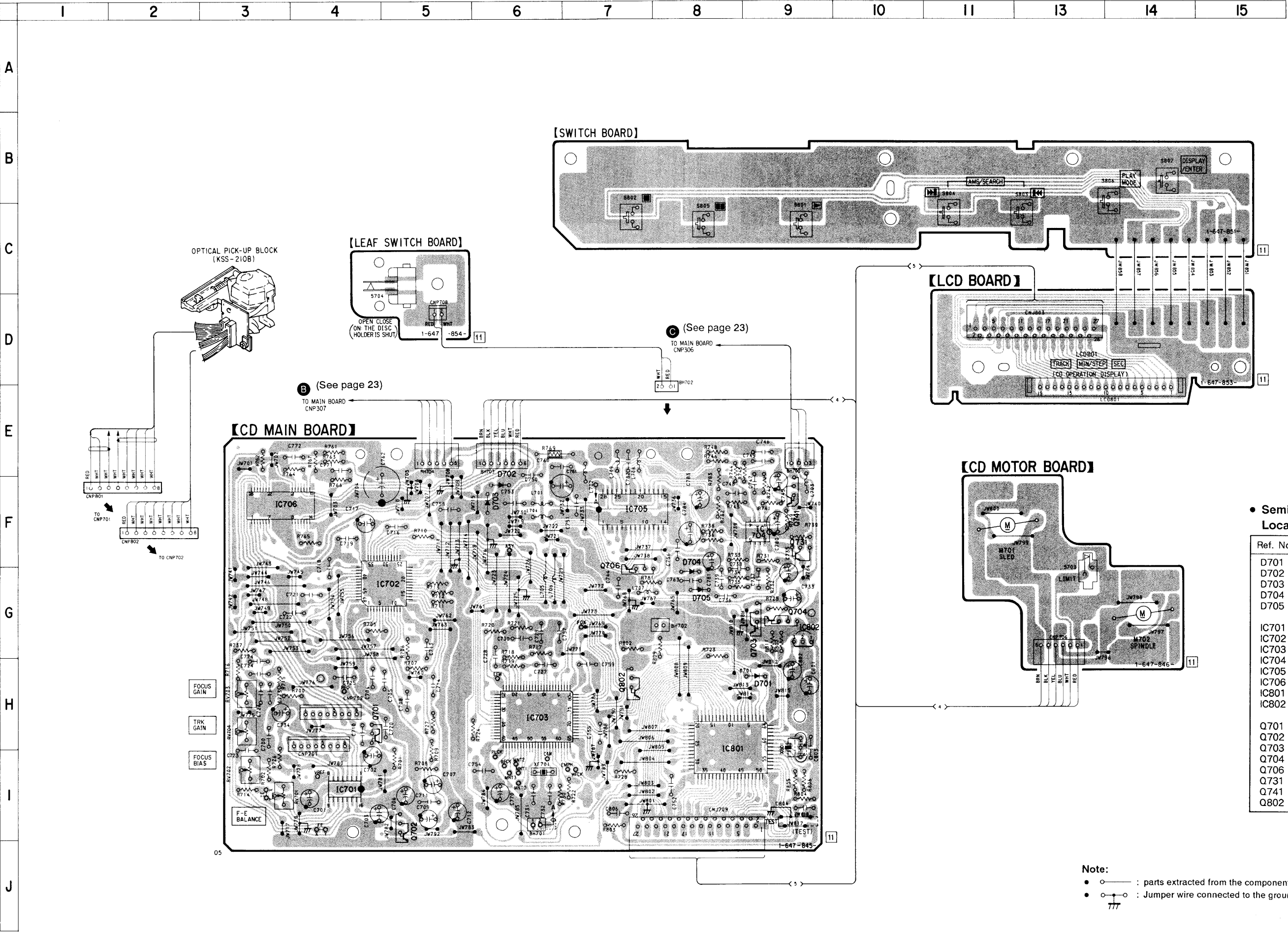


- Note:
- All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.
 - $\square$: nonflammable resistor.

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

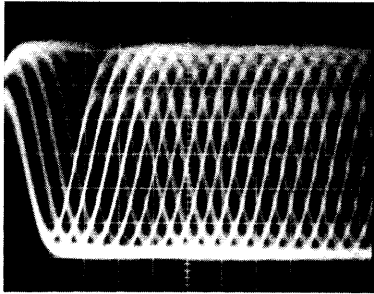
- $\square$: B + Line.
- $\square$: panel designation.
- $\square$: adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltage variations may be noted due to normal production tolerances.
- Signal path.
- $\star$: impossible to measure the voltage at the marked points.

6-8. CD SECTION PRINTED WIRING BOARDS
• See page 39 for Semiconductor Lead Layouts.

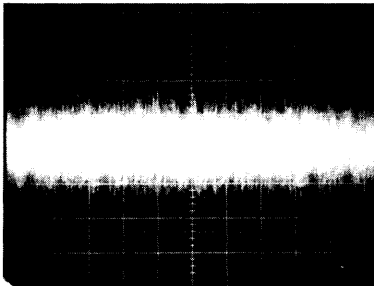


● Waveforms

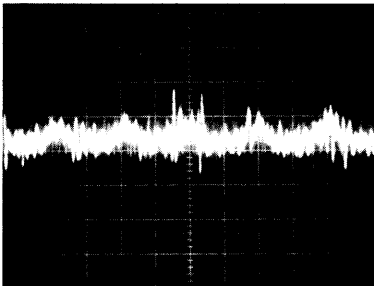
① TP RFO 1.2Vp-p 1 μ s/DIV



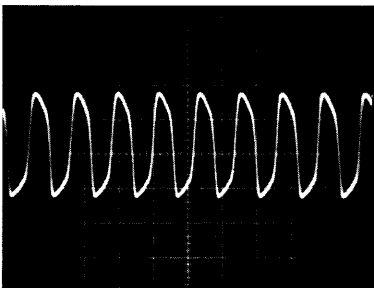
② TP TE 600mVp-p 2 μ s/DIV



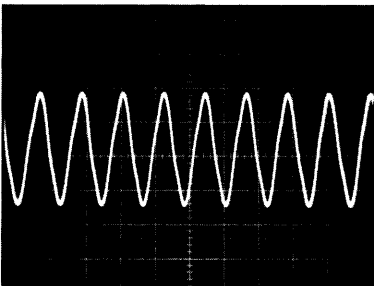
③ TP FE 10mV/DIV 5ms/DIV



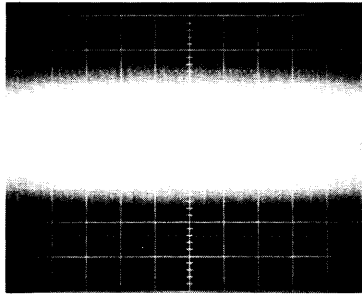
④ IC801 ⑥0 6Vp-p 0.2 μ s/DIV



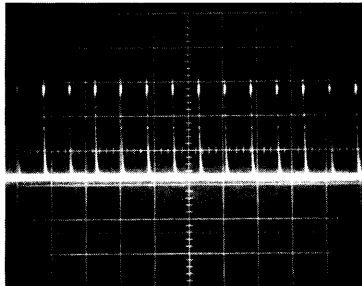
⑤ IC801 ⑥1 6.5Vp-p 0.2 μ s/DIV



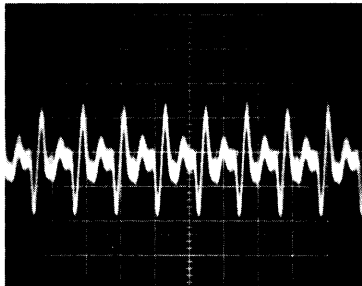
⑥ IC703 ① 200mVp-p 10 μ s/DIV



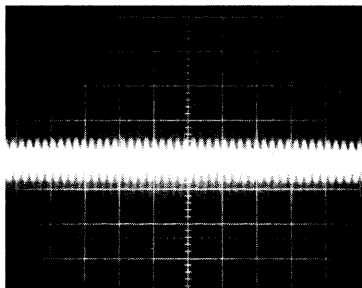
⑦ IC703 ④ 2.8Vp-p 10 μ s/DIV



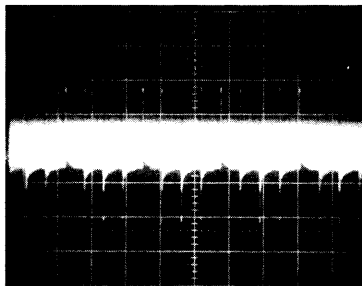
⑧ IC703 ⑥ 320mVp-p 0.1 μ s/DIV



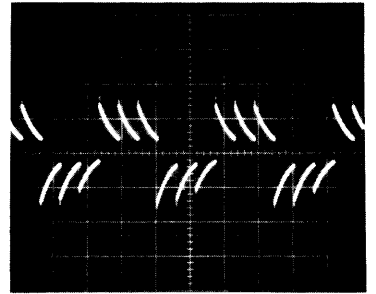
⑨ IC703 ⑮ 120mVp-p 50 μ s/DIV



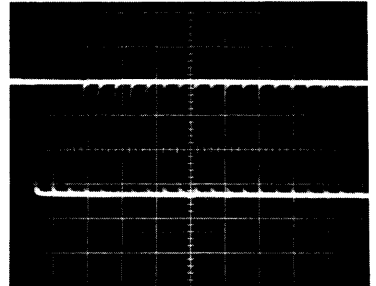
⑩ IC703 ⑲ 200mVp-p 5 μ s/DIV



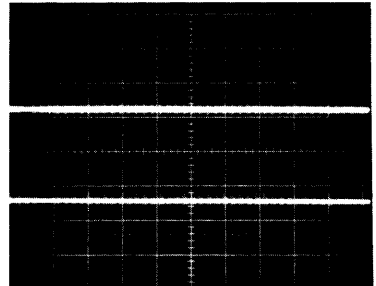
⑪ IC703 ⑳ 6Vp-p 5 μ s/DIV



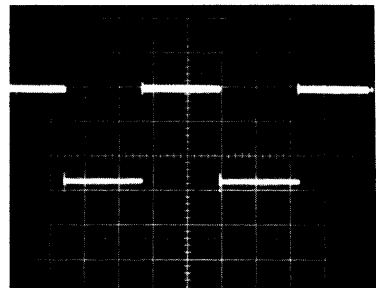
⑫ IC703 ㉔ 3.5Vp-p 1 μ s/DIV



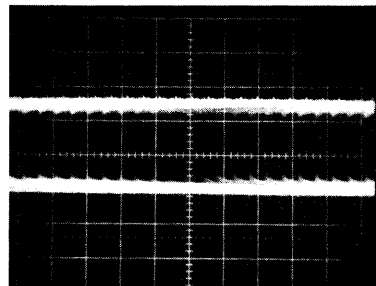
⑬ IC703 ㉗ 5.5Vp-p 1 μ s/DIV



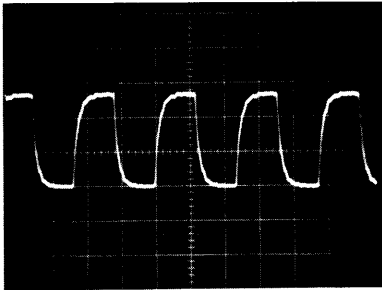
⑭ IC703 ㉚ 5.4Vp-p 5 μ s/DIV



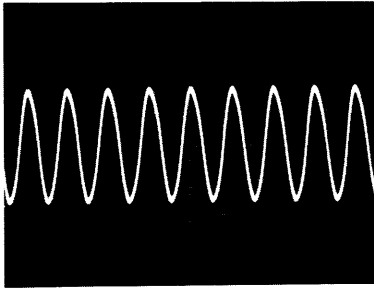
⑮ IC703 ㉜ 6Vp-p 1 μ s/DIV



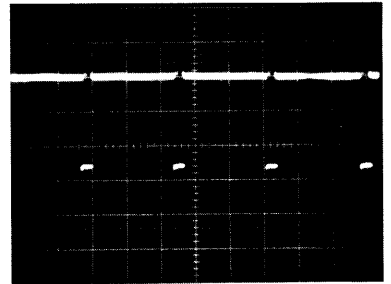
16 IC703 35 5.4Vp-p 0.2 μ s/DIV



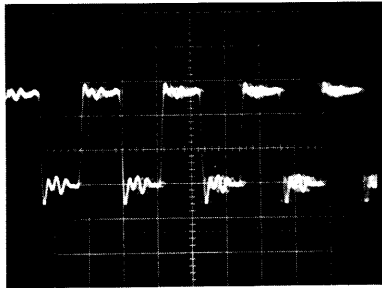
21 IC703 54 6.8Vp-p 0.05 μ s/DIV



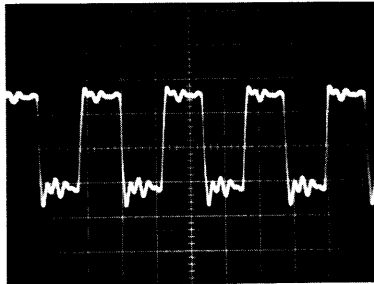
26 IC703 66 5.2Vp-p 5ms/DIV



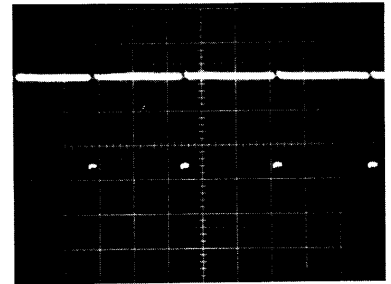
17 IC703 41 7Vp-p 0.1 μ s/DIV



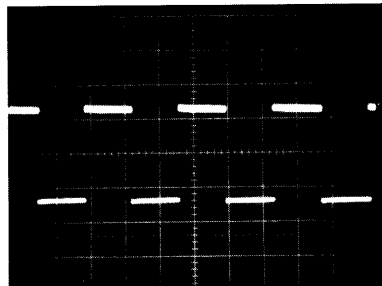
22 IC703 57 7Vp-p 0.1 μ s/DIV



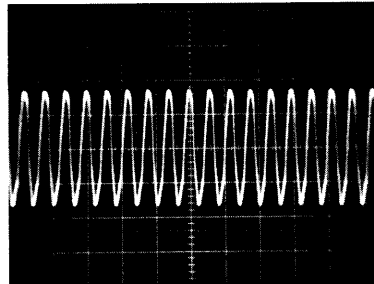
27 IC703 69 5.2Vp-p 5ms/DIV



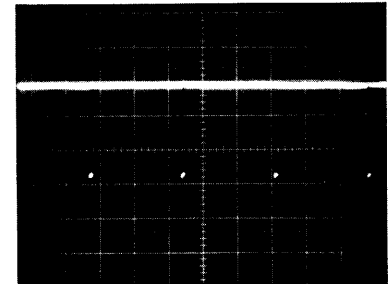
18 IC703 43 5.4Vp-p 50 μ s/DIV



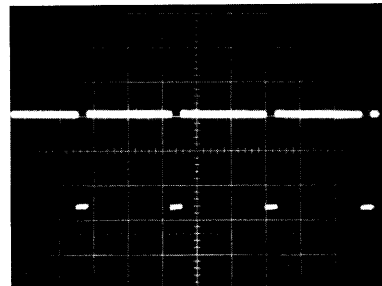
23 IC703 58 6.8Vp-p 0.1 μ s/DIV



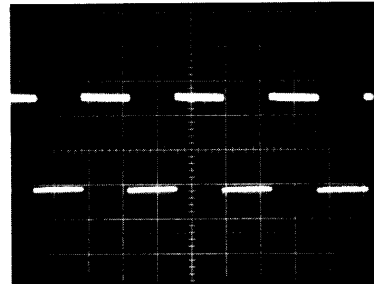
28 IC703 77 5Vp-p 5ms/DIV



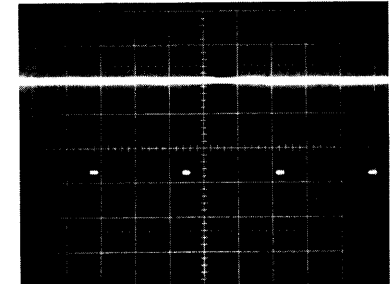
19 IC703 46 5.4Vp-p 50 μ s/DIV



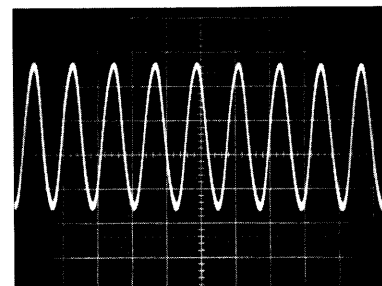
24 IC703 62 5.4Vp-p 50 μ s/DIV



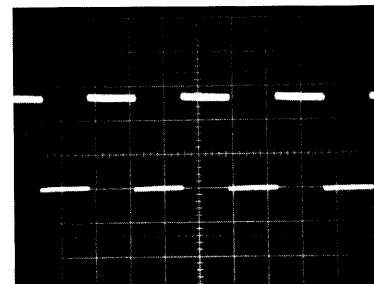
29 IC703 79 5.2Vp-p 5ms/DIV



20 IC703 53 2.3Vp-p 0.05 μ s/DIV

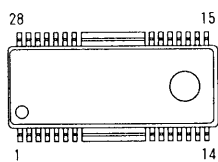


25 IC703 63 5.4Vp-p 50 μ s/DIV

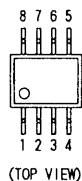


• Semiconductor Lead Layouts

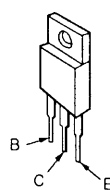
BA6296FP



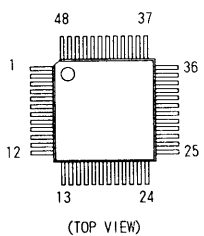
NJM2100M



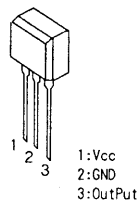
2SD1666K-RS



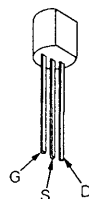
CXA1372AQ



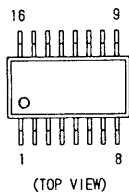
PST572E



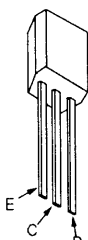
2SK105A-30



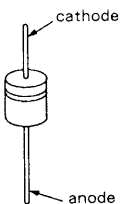
CXA1421M



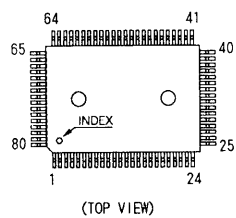
**DTC114ES
DTC124ES
RN1202
RN1207
RN1210
RN1211
RN2207TPE4**



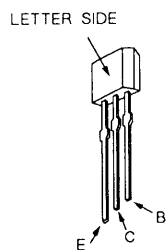
**RD5.6ES-B2
RD6.8ES-B2
RD8.2ES-B2
1SS119
1SS133T-77**



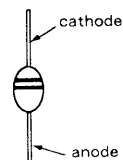
CXD2500BQ



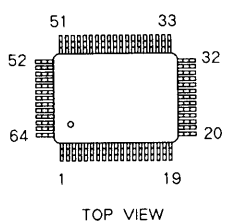
**DTC144ES
2SA1175-HFE
2SC2410SN
2SC2785-HFE**



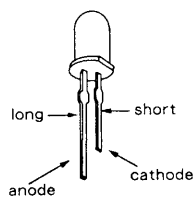
U05G



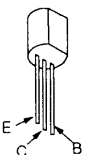
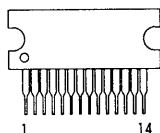
CXP5084H-636Q



SLZ-135B-01-T1



LA4598



**2SA952
2SB1013-4
2SC1815-GR
2SC945-P**

SECTION 7

EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) ... (RED)

↑
↑
 Parts Color Cabinet's Color

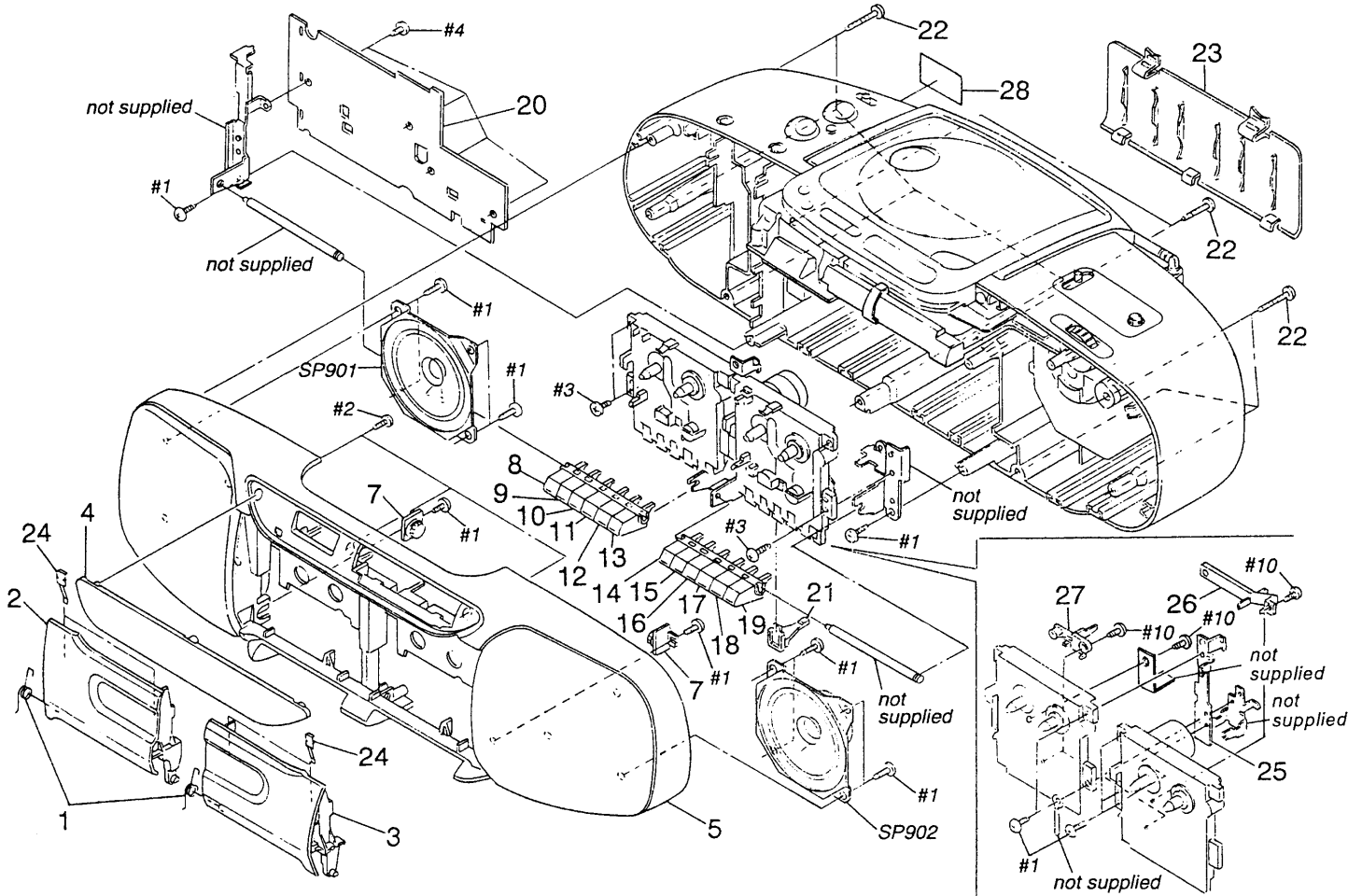
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.

- Hardware (# mark) list is given in the last of this parts list.

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

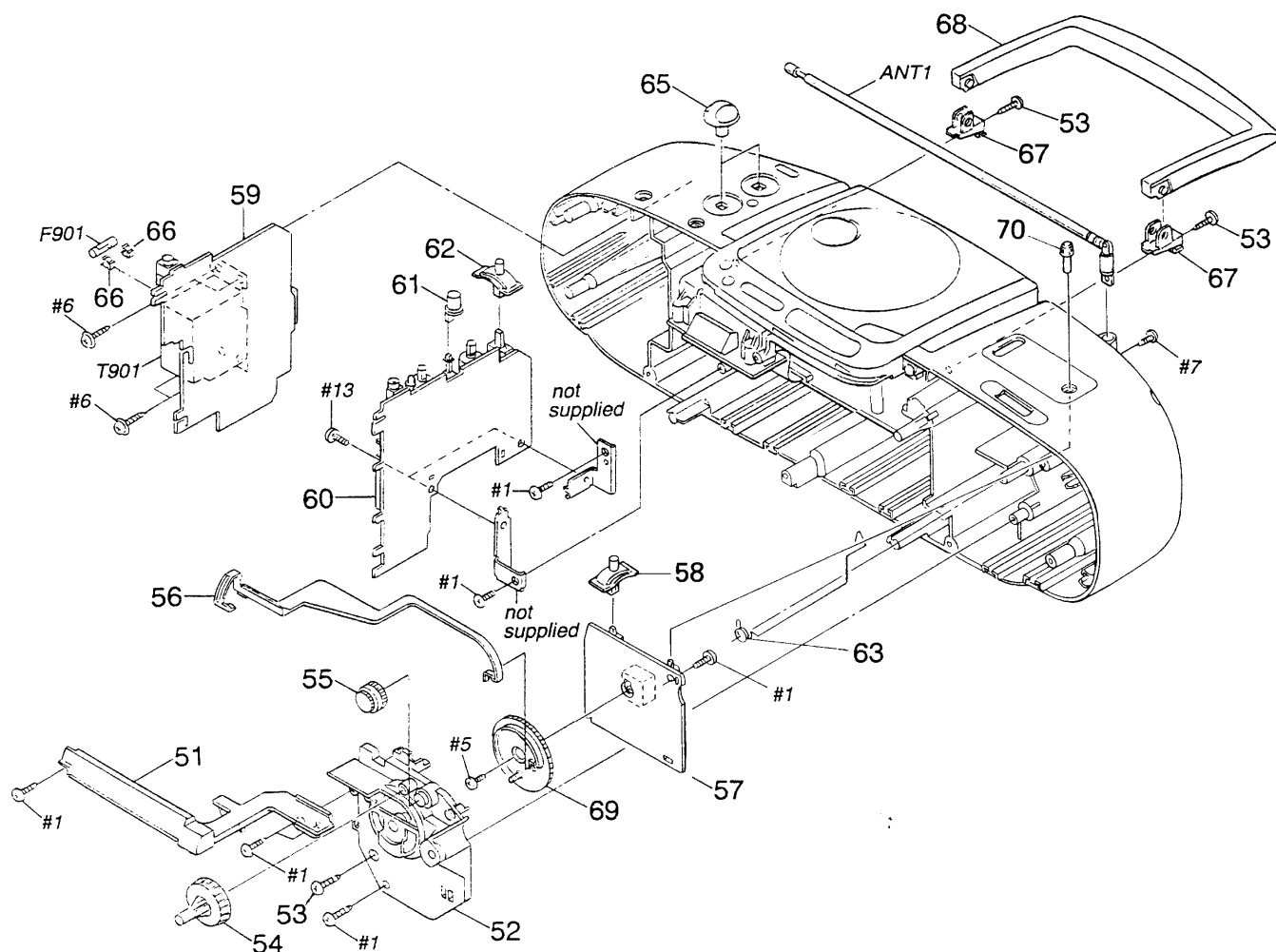
(1) FRONT CABINET ASSEMBLY SECTION



Ref. No.	Part No.	Description	Remark
1	3-388-196-01	SPRING, CASSETTE OPEN	
2	A-3263-586-A	HOLDER (L) ASSY, CASSETTE	
3	A-3263-587-A	HOLDER (R) ASSY, CASSETTE	
4	3-388-194-31	PANEL (AEP, GERMAN, UK)	
4	3-388-194-61	PANEL (EAST EUROPEAN)	
5	X-3366-599-1	CABINET (FRONT) SUB ASSY	
7	3-351-377-11	DAMPER	
8	3-388-177-01	BUTTON (S/E-A), MD	
9	3-388-182-01	BUTTON (HSD-A), MD	
10	3-388-180-01	BUTTON (PLAY-A), MD	
11	3-388-179-01	BUTTON (REW-A), MD	
12	3-388-178-01	BUTTON (FF-A), MD	
13	3-388-181-01	BUTTON (PAUSE-A), MD	
14	3-388-165-01	BUTTON (S/E-B), MD	
15	3-388-170-01	BUTTON (REC-B), MD	

Ref. No.	Part No.	Description	Remark
16	3-388-168-01	BUTTON (PLAY-B), MD	
17	3-388-167-01	BUTTON (REW-B), MD	
18	3-388-166-01	BUTTON (FF-B), MD	
19	3-388-169-01	BUTTON (PAUSE-B), MD	
* 20	A-3264-631-A	MD BOARD, COMPLETE	
* 21	3-389-274-01	LEVER, PLAY	
22	3-325-679-31	SCREW, TAPPING +BV 3X14	
23	3-368-522-01	LID, BATTERY CASE	
24	3-308-823-11	SPRING	
25	3-380-160-01	JOINT (MD)	
* 26	3-380-451-01	LEVER (REC)	
* 27	3-380-452-01	LEVER (MD-B)	
* 28	4-941-548-01	LABEL, CLASS (1)	
SP901	1-504-269-21	SPEAKER (10CM)	
SP902	1-504-269-21	SPEAKER (10CM)	

(2) REAR CABINET ASSEMBLY SECTION

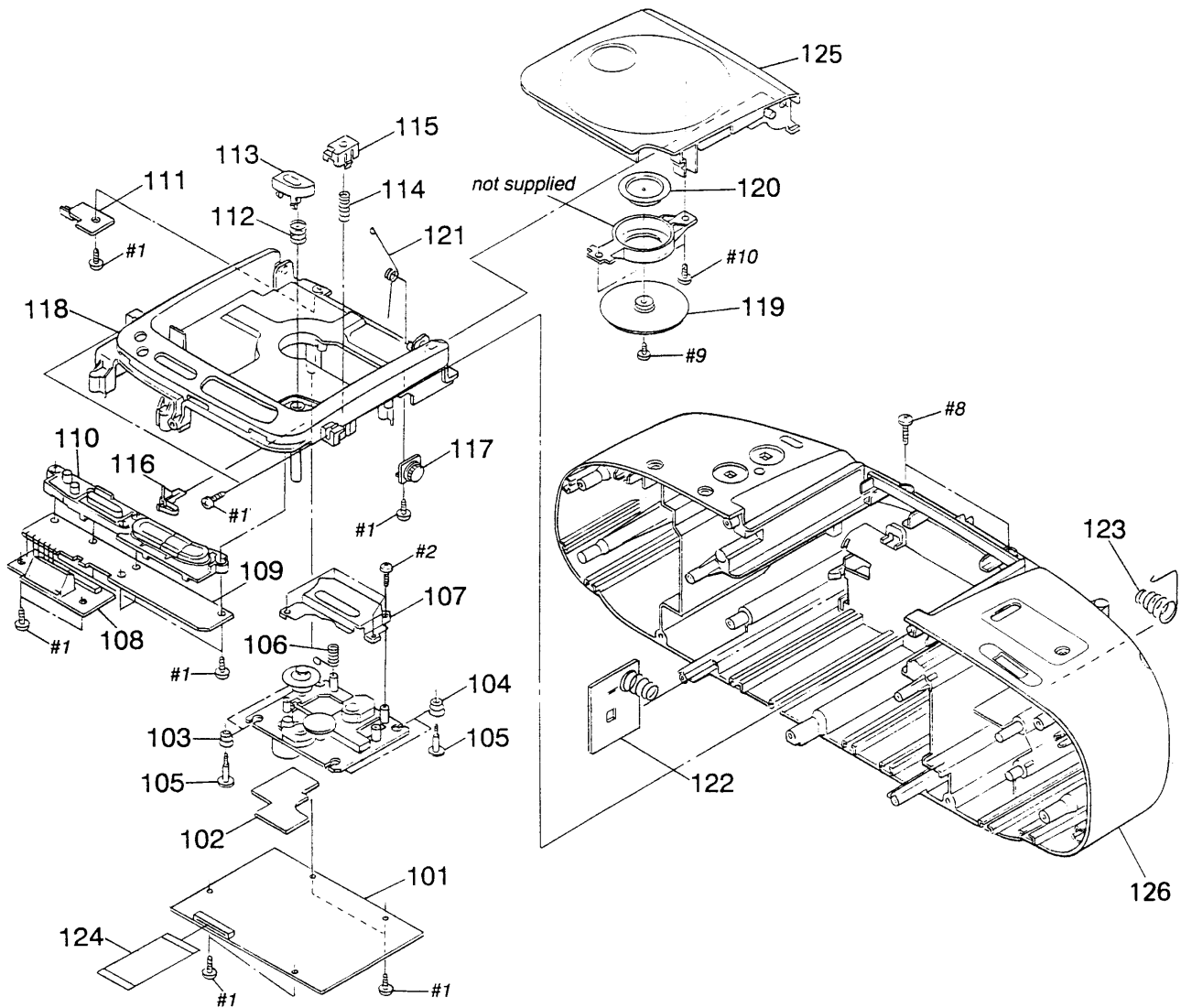


Ref. No.	Part No.	Description	Remark
* 51	3-388-184-01	CHASSIS (A), TUNER	
* 52	3-388-185-01	CHASSIS (B), TUNER	
53	3-325-679-31	SCREW, TAPPING +BV 3X14	
54	3-388-183-01	KNOB (TUNING)	
* 55	3-388-187-01	GEAR, MIDWAY	
56	3-388-186-01	POINTER	
* 57	A-3264-632-A	TUNER BOARD, COMPLETE (AEP, GERMAN, UK)	
* 57	A-3264-811-A	TUNER BOARD, COMPLETE (EAST EUROPEAN)	
58	3-904-033-01	KNOB (BAND)	
* 59	1-647-848-11	POWER BOARD	
* 60	A-3264-633-A	MAIN BOARD, COMPLETE	
61	3-386-946-01	BUTTON (DBB)	
62	3-388-164-01	KNOB (FUNCTION)	

Ref. No.	Part No.	Description	Remark
* 63	3-906-260-01	TERMINAL (4), ANTENNA	
65	3-386-950-01	KNOB (ROTARY)	
66	1-533-217-31	HOLDER, FUSE	
* 67	3-388-216-01	HOLDER, HANDLE	
68	X-3366-600-1	HANDLE ASSY	
69	3-388-189-01	GEAR, TUNING CAPACITOR	
70	3-904-032-01	KNOB (F. T)	
ANT1	1-501-378-11	ANTENNA, TELESCOPIC (FM/SW)	
ΔF901	1-532-286-00	FUSE (T2. 5A)	
ΔT901	1-450-517-11	TRANSFORMER, POWER (AEP, GERMAN, EAST EUROPEAN)	
ΔT901	1-450-516-11	TRANSFORMER, POWER (UK)	

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

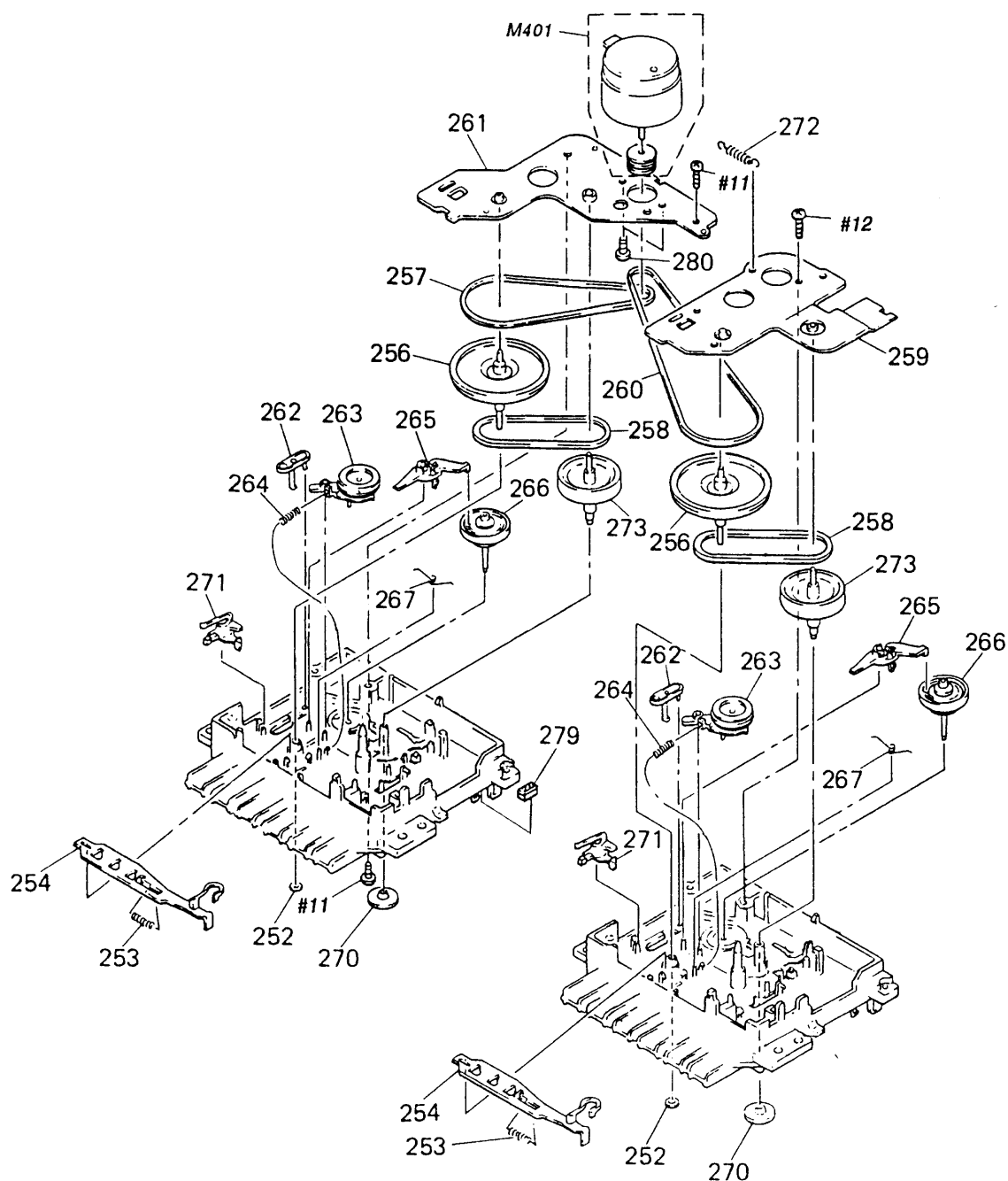
(3) CD ASSEMBLY SECTION



Ref. No.	Part No.	Description	Remark
* 101	A-3264-357-A	CD MAIN BOARD, COMPLETE	
* 102	1-647-846-11	CD MOTOR BOARD	
103	4-922-858-11	DAMPER (GREEN)	
104	4-922-858-01	DAMPER (PINK)	
105	4-931-373-01	SCREW, CD FITTING	
106	4-931-358-01	SPRING	
107	4-928-936-01	COVER, CD	
* 108	1-647-853-11	LCD BOARD	
* 109	1-647-851-11	SWITCH BOARD	
110	3-388-210-01	BUTTON (CD)	
* 111	1-647-854-11	LEAF SWITCH BOARD	
112	3-388-204-01	SPRING (CD OPEN BUTTON)	
113	3-388-205-01	BUTTON (CD OPEN)	
114	3-371-665-01	SPRING (CD LIFT)	

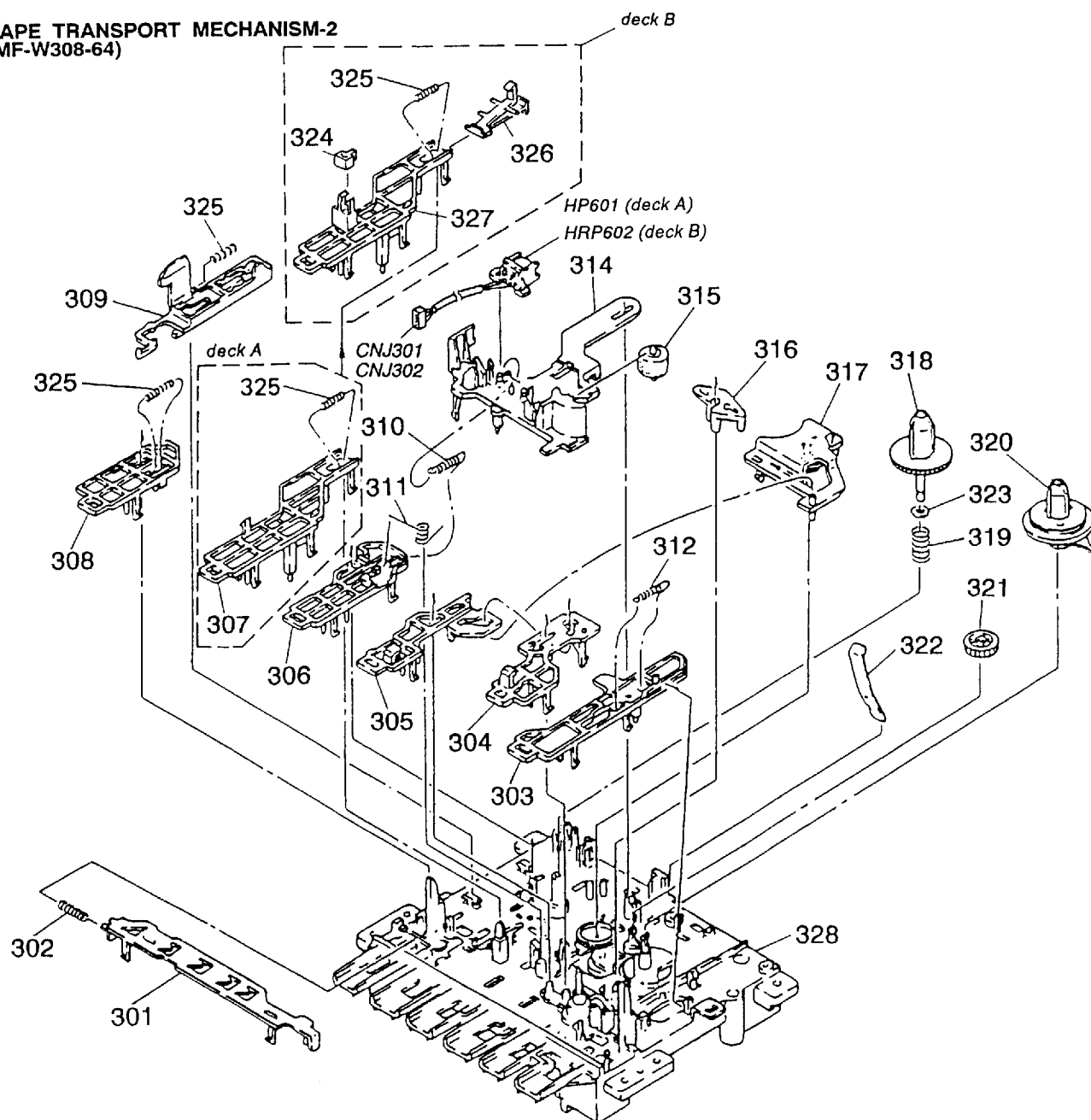
Ref. No.	Part No.	Description	Remark
* 115	3-388-202-01	LEVER, CD LIFT	
* 116	3-388-203-01	CLAW, LOCK	
117	3-351-377-11	DAMPER	
118	3-388-201-01	CABINET (UPPER)	
119	3-704-435-01	PLATE (M), CHUCK	
120	1-452-531-11	MAGNET	
121	3-388-211-01	SPRING (CD OPEN)	
* 122	1-647-847-11	BATTERY TERMINAL BOARD	
123	3-368-494-01	SPRING (+, -), BATTERY COIL	
124	1-751-445-11	WIRE, PARALLEL (FFC) (27 CORE)	
125	A-3300-133-A	HOLDER SUB ASSY (CD)	
126	3-388-215-31	CABINET (REAR)	

(4) TAPE TRANSPORT MECHANISM-1
(MF-W308-64)



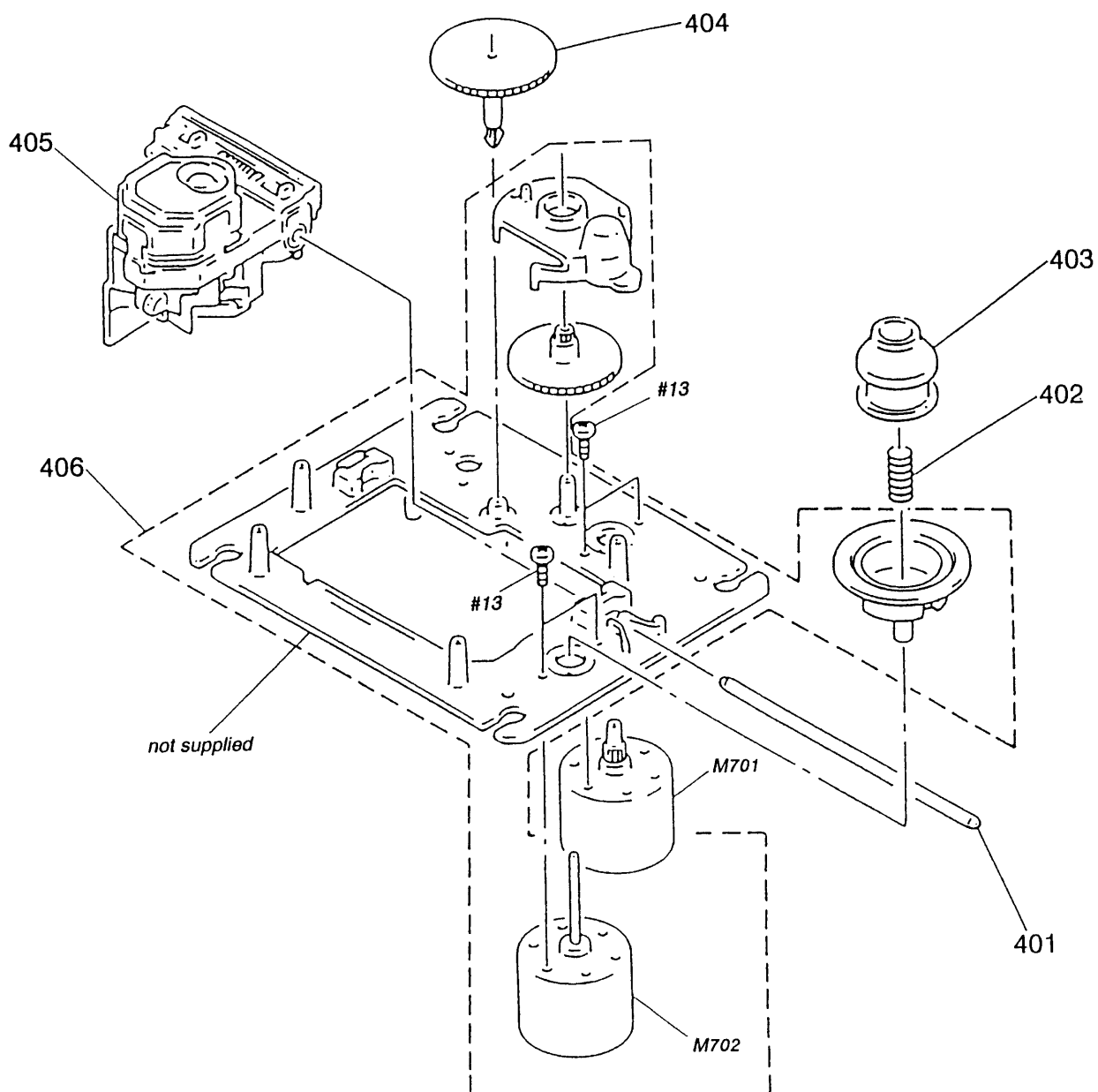
Ref.No.	Part No.	Description	Remarks	Ref.No.	Part No.	Description	Remarks
252	3-343-358-01	RING, RETAINING		264	3-905-168-01	SPRING, COMPRESSION	
253	4-932-656-01	SPRING, COMPRESSION		265	4-928-986-01	LEVER (S), SHUT-OFF	
254	4-928-996-11	LEVER, SW		266	X-4918-582-1	PLATE ASSY, TAKE-UP REEL	
256	X-4920-923-1	WHEEL (W) ASSY, CAPSTAN		267	4-928-958-01	SPRING, FR RETURN	
257	3-369-312-01	BELT (59X1)		270	4-928-967-01	GEAR (C), MIDWAY	
258	4-928-974-01	BELT (MIDWAY)		271	4-928-987-01	LEVER (T), SHUT-OFF	
* 259	X-4918-598-1	PLATE ASSY, GROUND		272	3-378-420-01	SPRING, TENSION	
260	3-378-419-01	BELT		273	X-4920-922-1	PULLEY (W) ASSY, FR	
261	X-4920-921-1	PLATE (W) ASSY, GROUND		279	4-934-522-01	CUSHION	
262	4-928-961-01	PLATE, PAUSE LOCK		280	3-343-251-01	SCREW (M2.6X2.5)	
263	X-4920-346-1	LEVER (S) ASSY, IDLER		M401	X-4920-924-1	MOTOR ASSY (REEL/CAPSTAN)	

(5) **TAPE TRANSPORT MECHANISM-2**
(MF-W308-64)



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remarks</u>
301	4-932-695-01	SLIDER (FR), LOCK		318	4-928-978-01	GEAR (C), SUPPLY REEL	
302	4-932-656-01	SPRING, COMPRESSION		319	3-343-381-01	SPRING, COMPRESSION	
303	4-928-994-01	LEVER, PAUSE		320	X-4920-350-1	GEAR (S) ASSY, T REEL	
304	4-928-993-01	LEVER, FF		321	3-343-285-01	GEAR, FF	
305	4-928-992-01	LEVER, REW		322	4-928-957-01	RETAINER, CASSETTE	
306	4-928-991-01	LEVER, PLAY		323	4-931-795-11	WASHER	
307	4-921-195-01	LEVER (AC), REC		324	1-543-876-13	HEAD (ERASE)	
308	4-928-985-11	LEVER, STOP		325	4-932-648-01	SPRING, COMPRESSION	
309	4-936-206-01	SLIDER (S), EJECT		326	4-928-960-02	CLAW, SAFETY	
310	4-928-972-01	SPRING, TENSION		327	4-934-511-01	LEVER (S), REC	
311	4-928-973-01	SPRING		328	X-4920-348-1	CHASSIS (S) ASSY, MECHANICAL	
312	3-313-372-01	SPRING, TENSION		* CNJ301	1-691-561-11	HOUSING, CONNECTOR 4P (DECK-A)	
314	4-932-693-03	DECK (S), HEAD		* CNJ302	1-691-562-11	HOUSING, CONNECTOR 5P (DECK-B)	
315	4-928-962-01	PINCH ROLLER		HP601	1-543-628-11	HEAD, MAGNETIC (PB) (DECK-A)	
316	4-928-982-01	LEVER (C)		HRP602	1-543-714-11	HEAD, MAGNETIC (REC/PB) (DECK-B)	
317	X-4920-347-1	LEVER (S) ASSY, FR					

(6) OPTICAL PICK-UP SECTION
(KSM-210BAN)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
401	4-917-565-01	SHAFT, SLED		△405	8-848-137-11	PICK-UP, OPTICAL KSS-210B	
402	2-625-191-01	SPRING, COMPRESSION		406	X-2625-133-2	CHASSIS ASSY, TT (WITH M702 SPINDLE) (SPINDLE)	
403	2-625-186-01	RING (C), CENTER					
404	2-625-188-02	GEAR (A)		M701	X-2625-132-1	GEAR ASSY, MOTOR (SLED)	

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

BATTERY TERMINAL

CD MAIN

SECTION 8

ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
In each case, u: μ , for example:
uA ..: μ A.. uPA..: μ PA..
uPB..: μ PB.. uPC..: μ PC.. uPD..: μ PD..
- CAPACITORS
uF: μ F
- COILS
uH: μ H

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

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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	1-647-847-11	BATTERY TERMINAL BOARD *****		C731	1-102-942-00	CERAMIC 5.0PF +-0.5PF	50V
				C732	1-102-942-00	CERAMIC 5.0PF +-0.5PF	50V
				C733	1-124-902-00	ELECT 0.47uF	20% 50V
				C734	1-126-157-11	ELECT 10uF	20% 16V
				C735	1-124-927-11	ELECT 4.7uF	20% 100V
	3-389-273-01	SPRING (-), BATTERY COIL *****		C736	1-162-285-31	CERAMIC 180PF	10% 50V
*	A-3264-357-A	CD MAIN BOARD, COMPLETE *****		C737	1-162-209-31	CERAMIC 27PF	5% 50V
		< CAPACITOR >		C738	1-162-209-31	CERAMIC 27PF	5% 50V
				C739	1-162-284-31	CERAMIC 150PF	10% 50V
				C744	1-162-306-11	CERAMIC 0.01uF	20% 16V
C700	1-136-173-00	FILM 0.47uF	5% 50V	C745	1-124-927-11	ELECT 4.7uF	20% 100V
C701	1-124-443-00	ELECT 100uF	20% 10V	C746	1-162-285-31	CERAMIC 180PF	10% 50V
C702	1-124-034-51	ELECT 33uF	20% 16V	C747	1-162-209-31	CERAMIC 27PF	5% 50V
C703	1-124-034-51	ELECT 33uF	20% 16V	C748	1-162-209-31	CERAMIC 27PF	5% 50V
C704	1-136-165-00	FILM 0.1uF	5% 50V	C749	1-162-284-31	CERAMIC 150PF	10% 50V
C705	1-136-165-00	FILM 0.1uF	5% 50V	C750	1-161-377-00	CERAMIC 0.0047uF	20% 16V
C706	1-124-907-11	ELECT 10uF	20% 50V	C751	1-162-294-31	CERAMIC 0.001uF	10% 50V
C707	1-131-375-00	TANTALUM 4.7uF	10% 10V	C752	1-161-377-00	CERAMIC 0.0047uF	20% 16V
C708	1-130-489-00	MYLAR 0.033uF	5% 50V	C753	1-162-294-31	CERAMIC 0.001uF	10% 50V
C709	1-123-382-00	ELECT 3.3uF	20% 100V	C754	1-162-851-11	CERAMIC 0.1uF	16V
C710	1-162-294-31	CERAMIC 0.001uF	10% 50V	C755	1-162-290-31	CERAMIC 470PF	10% 50V
C711	1-130-493-00	MYLAR 0.068uF	5% 50V	C756	1-162-294-31	CERAMIC 0.001uF	10% 50V
C712	1-124-477-11	ELECT 47uF	20% 25V	C757	1-136-173-00	FILM 0.47uF	5% 50V
C713	1-162-851-11	CERAMIC 0.1uF	16V	C758	1-162-851-11	CERAMIC 0.1uF	16V
C714	1-162-215-31	CERAMIC 47PF	5% 50V	C759	1-162-294-31	CERAMIC 0.001uF	10% 50V
C716	1-130-489-00	MYLAR 0.033uF	5% 50V	C760	1-162-851-11	CERAMIC 0.1uF	16V
C717	1-124-477-11	ELECT 47uF	20% 25V	C761	1-124-442-00	ELECT 330uF	20% 6.3V
C718	1-162-306-11	CERAMIC 0.01uF	20% 16V	C762	1-124-473-11	ELECT 1000uF	20% 10V
C719	1-130-489-00	MYLAR 0.033uF	5% 50V	C763	1-162-294-31	CERAMIC 0.001uF	10% 50V
C720	1-130-475-00	MYLAR 0.0022uF	5% 50V	C770	1-124-477-11	ELECT 47uF	20% 25V
C721	1-161-494-00	CERAMIC 0.022uF	25V	C771	1-162-294-31	CERAMIC 0.001uF	10% 50V
C722	1-162-306-11	CERAMIC 0.01uF	20% 16V	C772	1-130-484-00	MYLAR 0.012uF	5% 50V
C723	1-162-306-11	CERAMIC 0.01uF	20% 16V	C773	1-161-329-00	CERAMIC 0.0068uF	20% 16V
C724	1-130-489-00	MYLAR 0.033uF	5% 50V	C774	1-130-491-00	MYLAR 0.047uF	5% 50V
C725	1-136-165-00	FILM 0.1uF	5% 50V	C780	1-126-176-11	ELECT 220uF	20% 10V
C726	1-162-294-31	CERAMIC 0.001uF	10% 50V	C781	1-124-126-00	ELECT 47uF	20% 10V
C727	1-130-491-00	MYLAR 0.047uF	5% 50V	C782	1-162-294-31	CERAMIC 0.001uF	10% 50V
C728	1-161-374-11	CERAMIC 0.0015uF	20% 50V	C783	1-124-443-00	ELECT 100uF	20% 10V
C729	1-136-173-00	FILM 0.47uF	5% 50V	C784	1-126-176-11	ELECT 220uF	20% 10V
C730	1-162-306-11	CERAMIC 0.01uF	20% 16V	C801	1-124-034-51	ELECT 33uF	20% 16V

Ref. No.	Part No.	Description	Remark
C802	1-124-902-00	ELECT 0.47uF	20% 50V
C803	1-162-306-11	CERAMIC 0.01uF	20% 16V
C804	1-136-169-00	FILM 0.22uF	5% 50V
C806	1-162-306-11	CERAMIC 0.01uF	20% 16V

< CONNECTOR >

- * CNP701 1-564-710-11 PIN, CONNECTOR (SMALL TYPE) 8P
- * CNP702 1-564-710-11 PIN, CONNECTOR (SMALL TYPE) 8P
- * CNP709 1-569-919-11 SOCKET, CONNECTOR 27P

< DIODE >

D701	8-719-901-33	DIODE 1SS133T-77
D702	8-719-901-33	DIODE 1SS133T-77
D703	8-719-901-33	DIODE 1SS133T-77
D704	8-719-901-33	DIODE 1SS133T-77
D705	8-719-901-33	DIODE 1SS133T-77

< IC >

IC701	8-752-039-03	IC CXA1421M
IC702	8-752-058-77	IC CXA1372AQ
IC703	8-752-352-93	IC CXD2500BQ
IC704	8-759-710-55	IC NJM2100M
IC705	8-759-093-98	IC CXD8451M

IC706	8-759-518-59	IC BA6296FP
IC801	8-752-830-87	IC CXP5084H-636Q
IC802	8-759-520-90	IC PST572E

< COIL >

L701	1-410-397-21	FERRITE BEAD INDUCTOR
L702	1-410-509-11	INDUCTOR 10uH
L703	1-410-397-21	FERRITE BEAD INDUCTOR
L704	1-410-397-21	FERRITE BEAD INDUCTOR
L705	1-410-314-11	INDUCTOR 0.47uH

L706	1-410-314-11	INDUCTOR 0.47uH
L707	1-410-314-11	INDUCTOR 0.47uH
L708	1-410-397-21	FERRITE BEAD INDUCTOR
L709	1-410-397-21	FERRITE BEAD INDUCTOR

< TRANSISTOR >

Q701	8-729-801-84	TRANSISTOR 2SB1013-4
Q702	8-729-900-36	TRANSISTOR DTC124ES
Q703	8-729-206-29	TRANSISTOR RN1211
Q704	8-729-206-36	TRANSISTOR RN2207TPE4
Q706	8-729-206-25	TRANSISTOR RN1207

Q731	8-729-206-28	TRANSISTOR RN1210
Q741	8-729-206-28	TRANSISTOR RN1210
Q802	8-729-900-89	TRANSISTOR DTC144ES

Ref. No.	Part No.	Description	Remark
< RESISTOR >			
R700	1-247-806-11	CARBON 91 5%	1/4W
R701	1-249-397-11	CARBON 22 5%	1/4W F
R702	1-249-433-11	CARBON 22K 5%	1/4W
R705	1-249-441-11	CARBON 100K 5%	1/4W
R706	1-249-438-11	CARBON 56K 5%	1/4W
R707	1-247-885-00	CARBON 180K 5%	1/4W
R708	1-249-432-11	CARBON 18K 5%	1/4W
R709	1-249-437-11	CARBON 47K 5%	1/4W
R710	1-249-417-11	CARBON 1K 5%	1/4W F
R711	1-247-896-11	CARBON 510K 5%	1/4W
R712	1-247-883-00	CARBON 150K 5%	1/4W
R713	1-249-429-11	CARBON 10K 5%	1/4W
R714	1-249-417-11	CARBON 1K 5%	1/4W F
R715	1-247-887-00	CARBON 220K 5%	1/4W
R716	1-249-429-11	CARBON 10K 5%	1/4W
R717	1-249-423-11	CARBON 3.3K 5%	1/4W F
R718	1-247-881-00	CARBON 120K 5%	1/4W
R719	1-249-423-11	CARBON 3.3K 5%	1/4W F
R720	1-247-856-00	CARBON 11K 5%	1/4W
R721	1-249-441-11	CARBON 100K 5%	1/4W
R722	1-249-441-11	CARBON 100K 5%	1/4W
R723	1-249-441-11	CARBON 100K 5%	1/4W
R724	1-249-417-11	CARBON 1K 5%	1/4W F
R725	1-249-433-11	CARBON 22K 5%	1/4W
R726	1-249-417-11	CARBON 1K 5%	1/4W F
R727	1-249-441-11	CARBON 100K 5%	1/4W
R728	1-249-437-11	CARBON 47K 5%	1/4W
R730	1-249-417-11	CARBON 1K 5%	1/4W F
R731	1-249-429-11	CARBON 10K 5%	1/4W
R732	1-249-434-11	CARBON 27K 5%	1/4W
R733	1-249-434-11	CARBON 27K 5%	1/4W
R734	1-249-437-11	CARBON 47K 5%	1/4W
R735	1-249-437-11	CARBON 47K 5%	1/4W
R736	1-249-429-11	CARBON 10K 5%	1/4W
R737	1-247-883-00	CARBON 150K 5%	1/4W
R738	1-249-429-11	CARBON 10K 5%	1/4W
R739	1-249-441-11	CARBON 100K 5%	1/4W
R741	1-249-429-11	CARBON 10K 5%	1/4W
R742	1-249-434-11	CARBON 27K 5%	1/4W
R743	1-249-434-11	CARBON 27K 5%	1/4W
R744	1-249-437-11	CARBON 47K 5%	1/4W
R745	1-249-437-11	CARBON 47K 5%	1/4W
R746	1-249-429-11	CARBON 10K 5%	1/4W
R748	1-249-429-11	CARBON 10K 5%	1/4W
R749	1-249-441-11	CARBON 100K 5%	1/4W
R761	1-249-435-11	CARBON 33K 5%	1/4W
R762	1-249-429-11	CARBON 10K 5%	1/4W

CD MAIN

CD MOTOR

LCD

LEAF SWITCH

MAIN

Ref. No.	Part No.	Description	Remark
R763	1-249-429-11	CARBON 10K 5% 1/4W	
R764	1-249-435-11	CARBON 33K 5% 1/4W	
R765	1-247-838-00	CARBON 2K 5% 1/4W	
R766	1-249-437-11	CARBON 47K 5% 1/4W	
R767	1-249-433-11	CARBON 22K 5% 1/4W	
R769	1-247-690-11	CARBON 15 5% 1/4W	
R781	1-249-405-11	CARBON 100 5% 1/4W F	
R782	1-249-431-11	CARBON 15K 5% 1/4W	
R783	1-249-431-11	CARBON 15K 5% 1/4W	
R802	1-249-405-11	CARBON 100 5% 1/4W F	
R803	1-249-437-11	CARBON 47K 5% 1/4W	
R804	1-249-435-11	CARBON 33K 5% 1/4W	
R805	1-249-435-11	CARBON 33K 5% 1/4W	
R806	1-249-435-11	CARBON 33K 5% 1/4W	
R807	1-249-441-11	CARBON 100K 5% 1/4W	
R809	1-249-437-11	CARBON 47K 5% 1/4W	
R811	1-249-441-11	CARBON 100K 5% 1/4W	

< VARIABLE RESISTOR >

RV701	1-230-497-11	RES, ADJ, CARBON 22K
RV702	1-237-288-11	RES, ADJ, CARBON 47K
RV703	1-230-497-11	RES, ADJ, CARBON 22K
RV704	1-230-497-11	RES, ADJ, CARBON 22K

< VIBRATOR >

X801	1-567-775-11	VIBRATOR, CERAMIC (4.19MHz)
XF701	1-579-345-11	VIBRATOR, CERAMIC (16.9344MHz)

* 1-647-846-11 CD MOTOR BOARD

< SWITCH >

S703 1-571-936-11 SWITCH, LEAF (LIMIT)

* 1-647-853-11 LCD BOARD

* 3-389-271-01 BRACKET, LCD

< JACK >

* CNJ803 1-569-919-11 SOCKET, CONNECTOR 27P

< LIQUID CRYSTAL DISPLAY >

LCD801 1-810-089-11 LCD

Ref. No.	Part No.	Description	Remark
*	1-647-854-11	LEAF SWITCH BOARD *****	
		< CONNECTOR >	
*	CNP708 1-691-573-11	PIN, CONNECTOR (PC BOARD) 2P	
		< SWITCH >	
	S704 1-570-013-11	SWITCH, LEAF (OPEN/CLOSE)	

*	A-3264-633-A	MAIN BOARD, COMPLETE *****	
	3-386-946-01	BUTTON (DBB)	
	3-388-164-01	KNOB (FUNCTION)	
	7-685-870-01	SCREW +BVTT 3X5 (S)	
		< CAPACITOR >	
C120	1-161-020-11	CERAMIC 0.039uF 10% 16V	
C124	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C125	1-161-043-11	CERAMIC 0.0022uF 10% 50V	
C130	1-124-126-00	ELECT 47uF 20% 10V	
C131	1-124-443-00	ELECT 100uF 20% 10V	
C132	1-130-495-00	MYLAR 0.1uF 5% 50V	
C133	1-124-473-11	ELECT 1000uF 20% 10V	
C220	1-161-020-11	CERAMIC 0.039uF 10% 16V	
C224	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C225	1-161-043-11	CERAMIC 0.0022uF 10% 50V	
C230	1-124-126-00	ELECT 47uF 20% 10V	
C231	1-124-443-00	ELECT 100uF 20% 10V	
C232	1-130-495-00	MYLAR 0.1uF 5% 50V	
C233	1-124-473-11	ELECT 1000uF 20% 10V	
C313	1-124-916-11	ELECT 22uF 20% 63V	
C316	1-162-282-31	CERAMIC 100PF 10% 50V	
C317	1-162-282-31	CERAMIC 100PF 10% 50V	
C330	1-124-120-11	ELECT 220uF 20% 25V	
C332	1-126-017-11	ELECT 6800uF 20% 16V	
C350	1-124-927-11	ELECT 4.7uF 20% 100V	
C351	1-126-176-11	ELECT 220uF 20% 10V	
C352	1-126-176-11	ELECT 220uF 20% 10V	
C353	1-161-494-00	CERAMIC 0.022uF 25V	
C360	1-161-494-00	CERAMIC 0.022uF 25V	
C362	1-126-176-11	ELECT 220uF 20% 10V	
C363	1-161-494-00	CERAMIC 0.022uF 25V	
C365	1-161-494-00	CERAMIC 0.022uF 25V	
C366	1-126-176-11	ELECT 220uF 20% 10V	
C367	1-161-494-00	CERAMIC 0.022uF 25V	
C368	1-124-126-00	ELECT 47uF 20% 10V	

Ref. No.	Part No.	Description	Remark
< CONNECTOR >			
	CNJ305	1-580-848-11 SOCKET, CONNECTOR(PC BOARD) 20P	
*	CNP306	1-695-105-11 PIN, CONNECTOR (PC BOARD) 3P	
*	CNP307	1-695-107-11 PIN, CONNECTOR (PC BOARD) 5P	
*	CNP308	1-691-579-11 PIN, CONNECTOR (PC BOARD) 8P	
< DIODE >			
D301	8-719-109-97	DIODE RD6.8ES-B2	
D303	8-719-903-39	DIODE SLZ-135B-01-T1 (OPR/BATT)	
D304	8-719-109-97	DIODE RD6.8ES-B2	
D305	8-719-109-89	DIODE RD5.6ES-B2	
D309	8-719-901-33	DIODE 1SS133T-77	
D313	8-719-901-33	DIODE 1SS133T-77	
D315	8-719-901-33	DIODE 1SS133T-77	
D316	8-719-901-33	DIODE 1SS133T-77	
D317	8-719-901-33	DIODE 1SS133T-77	
D318	8-719-901-33	DIODE 1SS133T-77	
< IC >			
IC303	8-759-060-21	IC LA4598	
< JACK >			
J301	1-563-330-11	JACK (MIX MIC)	
< COIL >			
L301	1-410-324-11	INDUCTOR 4.7uH	
L302	1-410-324-11	INDUCTOR 4.7uH	
< TRANSISTOR >			
Q303	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q304	8-729-206-20	TRANSISTOR RN1202	
Q305	8-729-195-23	TRANSISTOR 2SA952	
Q313	8-729-194-57	TRANSISTOR 2SC945-P	
Q316	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q317	8-729-206-20	TRANSISTOR RN1202	
Q318	8-729-819-68	TRANSISTOR 2SD1666K-RS	
Q319	8-729-819-68	TRANSISTOR 2SD1666K-RS	
Q320	8-729-119-78	TRANSISTOR 2SC2785-HFE	
< RESISTOR >			
R120	1-247-903-00	CARBON 1M 5% 1/4W	
R121	1-249-426-11	CARBON 5.6K 5% 1/4W	
R122	1-249-429-11	CARBON 10K 5% 1/4W	
R130	1-249-405-11	CARBON 100 5% 1/4W F	
R220	1-247-903-00	CARBON 1M 5% 1/4W	
R221	1-249-426-11	CARBON 5.6K 5% 1/4W	
R222	1-249-429-11	CARBON 10K 5% 1/4W	
R230	1-249-405-11	CARBON 100 5% 1/4W F	

Ref. No.	Part No.	Description	Remark
R307	1-249-417-11	CARBON 1K 5% 1/4W F	
△R350	1-219-113-11	FUSIBLE 6.8 5% 1/4W F	
R351	1-249-416-11	CARBON 820 5% 1/4W F	
R352	1-249-410-11	CARBON 270 5% 1/4W F	
R353	1-249-408-11	CARBON 180 5% 1/4W F	
R354	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R355	1-249-437-11	CARBON 47K 5% 1/4W	
R356	1-249-414-11	CARBON 560 5% 1/4W F	
R357	1-247-804-11	CARBON 75 5% 1/4W	
R358	1-247-887-00	CARBON 220K 5% 1/4W	
R359	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R360	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R361	1-249-411-11	CARBON 330 5% 1/4W	
R362	1-249-405-11	CARBON 100 5% 1/4W F	
R363	1-249-433-11	CARBON 22K 5% 1/4W	
R364	1-249-433-11	CARBON 22K 5% 1/4W	
△R365	1-219-149-11	FUSIBLE 1 5% 1/4W F	
R366	1-249-411-11	CARBON 330 5% 1/4W	
R367	1-249-405-11	CARBON 100 5% 1/4W F	
R368	1-247-887-00	CARBON 220K 5% 1/4W	
R369	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R370	1-249-421-11	CARBON 2.2K 5% 1/4W F	
< VARIABLE RESISTOR >			
RV301	1-241-745-11	RES, VAR, CARBON 20K/20K (TONE)	
RV302	1-223-403-11	RES, VAR, CARBON (VOLUME)	
< SWITCH >			
S302	1-571-345-11	SWITCH, LEVER SLIDE (FUNCTION)	
S303	1-572-006-11	SWITCH, PUSH (1 KEY) (FM MODE)	
S304	1-692-117-11	SWITCH, SLIDE (MEGA BASS)	

*	A-3264-631-A	MD BOARD, COMPLETE	

< CAPACITOR >			
C101	1-162-291-31	CERAMIC 560PF 10% 50V	
C102	1-162-291-31	CERAMIC 560PF 10% 50V	
C103	1-124-126-00	ELECT 47uF 20% 10V	
C104	1-162-840-11	CERAMIC 0.012uF 10% 16V	
C105	1-162-290-31	CERAMIC 470PF 10% 50V	
C106	1-162-832-11	CERAMIC 0.0027uF 10% 16V	
C107	1-124-927-11	ELECT 4.7uF 20% 100V	
C108	1-162-291-31	CERAMIC 560PF 10% 50V	
C109	1-124-927-11	ELECT 4.7uF 20% 100V	
C111	1-162-282-31	CERAMIC 100PF 10% 50V	
C112	1-161-374-11	CERAMIC 0.0015uF 20% 50V	
C113	1-124-903-11	ELECT 1uF 20% 50V	

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

Ref. No.	Part No.	Description	Remark		
C114	1-124-902-00	ELECT	0.47uF	20%	50V
C121	1-124-903-11	ELECT	1uF	20%	50V
C122	1-161-375-00	CERAMIC	0.0022uF	20%	50V
C123	1-124-925-11	ELECT	2.2uF	20%	100V
C126	1-162-282-31	CERAMIC	100PF	10%	50V
C201	1-162-291-31	CERAMIC	560PF	10%	50V
C202	1-162-291-31	CERAMIC	560PF	10%	50V
C203	1-124-126-00	ELECT	47uF	20%	10V
C204	1-162-840-11	CERAMIC	0.012uF	10%	16V
C205	1-162-290-31	CERAMIC	470PF	10%	50V
C206	1-162-832-11	CERAMIC	0.0027uF	10%	16V
C207	1-124-927-11	ELECT	4.7uF	20%	100V
C208	1-162-291-31	CERAMIC	560PF	10%	50V
C209	1-124-927-11	ELECT	4.7uF	20%	100V
C211	1-162-282-31	CERAMIC	100PF	10%	50V
C212	1-161-374-11	CERAMIC	0.0015uF	20%	50V
C213	1-124-903-11	ELECT	1uF	20%	50V
C214	1-124-902-00	ELECT	0.47uF	20%	50V
C221	1-124-903-11	ELECT	1uF	20%	50V
C222	1-161-375-00	CERAMIC	0.0022uF	20%	50V
C223	1-124-925-11	ELECT	2.2uF	20%	100V
C226	1-162-282-31	CERAMIC	100PF	10%	50V
C301	1-124-126-00	ELECT	47uF	20%	10V
C302	1-124-927-11	ELECT	4.7uF	20%	100V
C303	1-124-907-11	ELECT	10uF	20%	50V
C304	1-124-907-11	ELECT	10uF	20%	50V
C305	1-124-907-11	ELECT	10uF	20%	50V
C306	1-124-903-11	ELECT	1uF	20%	50V
C307	1-124-902-00	ELECT	0.47uF	20%	50V
C308	1-161-494-00	CERAMIC	0.022uF		25V
C309	1-124-443-00	ELECT	100uF	20%	10V
C310	1-161-494-00	CERAMIC	0.022uF		25V
C311	1-126-176-11	ELECT	220uF	20%	10V
C312	1-124-126-00	ELECT	47uF	20%	10V
C314	1-162-282-31	CERAMIC	100PF	10%	50V
C318	1-162-282-31	CERAMIC	100PF	10%	50V
C320	1-124-902-00	ELECT	0.47uF	20%	50V
C321	1-162-844-11	CERAMIC	0.027uF	10%	16V
C322	1-162-844-11	CERAMIC	0.027uF	10%	16V
C323	1-124-034-51	ELECT	33uF	20%	16V
C324	1-124-907-11	ELECT	10uF	20%	50V
C325	1-124-916-11	ELECT	22uF	20%	63V
C326	1-124-464-11	ELECT	0.22uF	20%	50V
C327	1-124-443-00	ELECT	100uF	20%	10V
C328	1-161-494-00	CERAMIC	0.022uF		25V
C340	1-161-379-00	CERAMIC	0.01uF	20%	25V
C341	1-161-327-00	CERAMIC	0.0033uF	30%	16V
C342	1-130-471-00	MYLAR	0.001uF	5%	50V

Ref. No.	Part No.	Description	Remark		
C343	1-162-284-31	CERAMIC	150PF	10%	50V
C344	1-124-126-00	ELECT	47uF	20%	10V
C345	1-161-494-00	CERAMIC	0.022uF		25V
C370	1-161-494-00	CERAMIC	0.022uF		25V
< CONNECTOR >					
CNP301	1-506-986-11	PIN, CONNECTOR (PC BOARD)	4P		
CNP302	1-506-987-11	PIN, CONNECTOR (PC BOARD)	5P		
* CNP303	1-695-107-11	PIN, CONNECTOR (PC BOARD)	5P		
CNP304	1-506-986-11	PIN, CONNECTOR (PC BOARD)	4P		
CNP305	1-580-849-11	PIN, CONNECTOR (PC BOARD)	20P		
< DIODE >					
D302	8-719-110-08	DIODE	RD8.2ES-B2		
D306	8-719-901-33	DIODE	1SS133T-77		
D307	8-719-901-33	DIODE	1SS133T-77		
D310	8-719-901-33	DIODE	1SS133T-77		
D311	8-719-901-33	DIODE	1SS133T-77		
D312	8-719-901-33	DIODE	1SS133T-77		
< IC >					
IC301	8-759-048-59	IC	BA3423S		
IC302	8-759-048-60	IC	BA3870		
IC304	8-759-932-33	IC	BU4066B		
< TRANSISTOR >					
Q301	8-729-900-36	TRANSISTOR	DTC124ES		
Q302	8-729-281-53	TRANSISTOR	2SC1815-GR		
Q306	8-729-119-76	TRANSISTOR	2SA1175-HFE		
Q307	8-729-819-68	TRANSISTOR	2SD1666K-RS		
Q308	8-729-115-30	TRANSISTOR	2SK105A-30		
Q309	8-729-206-20	TRANSISTOR	RN1202		
Q310	8-729-195-23	TRANSISTOR	2SA952		
Q311	8-729-206-20	TRANSISTOR	RN1202		
Q312	8-729-206-20	TRANSISTOR	RN1202		
Q314	8-729-206-20	TRANSISTOR	RN1202		
Q315	8-729-206-20	TRANSISTOR	RN1202		
Q321	8-729-206-20	TRANSISTOR	RN1202		
< RESISTOR >					
R101	1-249-409-11	CARBON	220 5%	1/4W	F
R102	1-249-409-11	CARBON	220 5%	1/4W	F
R103	1-249-405-11	CARBON	100 5%	1/4W	F
R104	1-247-889-00	CARBON	270K 5%	1/4W	
R105	1-249-425-11	CARBON	4.7K 5%	1/4W	F
R106	1-249-429-11	CARBON	10K 5%	1/4W	
R107	1-249-425-11	CARBON	4.7K 5%	1/4W	F
R109	1-249-417-11	CARBON	1K 5%	1/4W	F
R111	1-249-425-11	CARBON	4.7K 5%	1/4W	F

Ref. No.	Part No.	Description	Remark
R112	1-249-426-11	CARBON	5.6K 5% 1/4W
R113	1-249-429-11	CARBON	10K 5% 1/4W
R114	1-249-429-11	CARBON	10K 5% 1/4W
R201	1-249-409-11	CARBON	220 5% 1/4W F
R202	1-249-409-11	CARBON	220 5% 1/4W F
R203	1-249-405-11	CARBON	100 5% 1/4W F
R204	1-247-889-00	CARBON	270K 5% 1/4W
R205	1-249-425-11	CARBON	4.7K 5% 1/4W F
R206	1-249-429-11	CARBON	10K 5% 1/4W
R207	1-249-425-11	CARBON	4.7K 5% 1/4W F
R209	1-249-417-11	CARBON	1K 5% 1/4W F
R211	1-249-425-11	CARBON	4.7K 5% 1/4W F
R212	1-249-426-11	CARBON	5.6K 5% 1/4W
R213	1-249-429-11	CARBON	10K 5% 1/4W
R214	1-249-429-11	CARBON	10K 5% 1/4W
R301	1-247-903-00	CARBON	1M 5% 1/4W
R302	1-249-435-11	CARBON	33K 5% 1/4W
R303	1-249-435-11	CARBON	33K 5% 1/4W
R304	1-249-435-11	CARBON	33K 5% 1/4W
R305	1-249-435-11	CARBON	33K 5% 1/4W
R306	1-249-416-11	CARBON	820 5% 1/4W F
R308	1-249-405-11	CARBON	100 5% 1/4W F
R309	1-249-429-11	CARBON	10K 5% 1/4W
R310	1-249-429-11	CARBON	10K 5% 1/4W
R311	1-249-429-11	CARBON	10K 5% 1/4W
R320	1-249-425-11	CARBON	4.7K 5% 1/4W F
R321	1-249-424-11	CARBON	3.9K 5% 1/4W F
R322	1-247-903-00	CARBON	1M 5% 1/4W
R324	1-249-402-11	CARBON	56 5% 1/4W F
R325	1-249-441-11	CARBON	100K 5% 1/4W
R326	1-249-418-11	CARBON	1.2K 5% 1/4W F
R340	1-249-411-11	CARBON	330 5% 1/4W
R341	1-249-393-11	CARBON	10 5% 1/4W F
R342	1-249-435-11	CARBON	33K 5% 1/4W
R371	1-249-421-11	CARBON	2.2K 5% 1/4W F
R372	1-247-887-00	CARBON	220K 5% 1/4W
R373	1-249-407-11	CARBON	150 5% 1/4W F
R374	1-247-804-11	CARBON	75 5% 1/4W
R375	1-249-441-11	CARBON	100K 5% 1/4W
R376	1-249-429-11	CARBON	10K 5% 1/4W
R377	1-249-421-11	CARBON	2.2K 5% 1/4W F
R378	1-249-429-11	CARBON	10K 5% 1/4W
R379	1-249-418-11	CARBON	1.2K 5% 1/4W F
R380	1-249-422-11	CARBON	2.7K 5% 1/4W F
△R381	1-219-162-11	FUSIBLE	3.3 5% 1/4W F
< VARIABLE RESISTOR >			
RV303	1-230-494-11	RES, ADJ, CARBON 1K	

Ref. No.	Part No.	Description	Remark
< SWITCH >			
S301	1-572-325-11	SWITCH, SLIDE (REC/PB)	
S305	1-692-080-11	SWITCH, PUSH (1 KEY) (A-POWER)	
S306	1-692-080-11	SWITCH, PUSH (1 KEY) (HI SPEED)	
S307	1-692-080-11	SWITCH, PUSH (1 KEY) (B-POWER)	
S308	1-692-080-11	SWITCH, PUSH (1 KEY) (A/B)	
< TRANSFORMER >			
T301	1-433-346-11	TRANSFORMER, BIAS OSCILLATOR	

*	1-647-848-11	POWER BOARD	

	1-533-217-31	HOLDER, FUSE	
< CAPACITOR >			
C127	1-162-282-31	CERAMIC	100PF 10% 50V
C227	1-162-282-31	CERAMIC	100PF 10% 50V
C901	1-101-005-00	CERAMIC	22000PF 50V
C902	1-101-005-00	CERAMIC	22000PF 50V
C903	1-101-005-00	CERAMIC	22000PF 50V
C904	1-101-005-00	CERAMIC	22000PF 50V
C905	1-101-005-00	CERAMIC	22000PF 50V
< CONNECTOR >			
* CNP309	1-695-106-11	PIN, CONNECTOR (PC BOARD) 4P	
* CNP901	1-691-573-11	PIN, CONNECTOR (PC BOARD) 2P	
< DIODE >			
D901	8-719-911-55	DIODE U05G	
D902	8-719-911-55	DIODE U05G	
D903	8-719-911-55	DIODE U05G	
D904	8-719-911-55	DIODE U05G	
< FUSE >			
△F901	1-532-286-00	FUSE (T2.5A)	
< JACK >			
J302	1-566-891-11	JACK (PHONES)	
△J901	1-526-838-11	INLET, AC 2P (AC IN)	
< COIL >			
L151	1-410-324-11	INDUCTOR	4.7uH
L251	1-410-324-11	INDUCTOR	4.7uH
L351	1-410-324-11	INDUCTOR	4.7uH

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

POWER

SWITCH

TUNER

Ref. No.	Part No.	Description	Remark			
< LINE FILTER >						
△LF901	1-424-150-21	TRANSFORMER, LINE FILTER				
< RESISTOR >						
R151	1-249-405-11	CARBON	100	5%	1/4W	F
R251	1-249-405-11	CARBON	100	5%	1/4W	F
< TRANSFORMER >						
△T901	1-450-516-11	TRANSFORMER, POWER (UK)				
△T901	1-450-517-11	TRANSFORMER, POWER (AEP, GERMAN, EAST EUROPEAN)				

*	1-647-851-11	SWITCH BOARD				

< SWITCH >						
S801	1-572-198-11	SWITCH, KEY BOARD (▶)				
S802	1-572-198-11	SWITCH, KEY BOARD (■)				
S803	1-572-198-11	SWITCH, KEY BOARD (◀◀)				
S804	1-572-198-11	SWITCH, KEY BOARD (▶▶)				
S805	1-572-198-11	SWITCH, KEY BOARD ()				
S806	1-572-198-11	SWITCH, KEY BOARD (PLAY MODE)				
S807	1-572-198-11	SWITCH, KEY BOARD (DISPLAY/ENTER)				

*	A-3264-632-A	TUNER BOARD, COMPLETE (AEP, GERMAN, UK)				

*	A-3276-115-A	TUNER BOARD, COMPLETE (EAST EUROPEAN)				

	3-388-189-01	GEAR, TUNING CAPACITOR				
	7-621-770-87	SCREW +P 2.6X5				
< CAPACITOR >						
C1	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V	
C2	1-163-189-00	CERAMIC MELF	220PF	10%	50V	
C3	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V	
C4	1-124-907-11	ELECT	10uF	20%	50V	
C5	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V	
C6	1-163-147-00	CERAMIC MELF	1PF	20%	50V	
C7	1-163-155-00	CERAMIC MELF (EAST EUROPEAN)	8.2PF	10%	50V	
C7	1-163-167-00	CERAMIC MELF (AEP, GERMAN, UK)	27PF	5%	50V	
C8	1-102-942-00	CERAMIC (EAST EUROPEAN)	5.0PF	+0.5PF	50V	
C8	1-102-961-00	CERAMIC (AEP, GERMAN, UK)	27PF	5%	50V	

Ref. No.	Part No.	Description	Remark			
C10	1-162-353-11	CERAMIC MELF (EAST EUROPEAN)	5.6PF	10%	50V	
C10	1-163-150-00	CERAMIC MELF (AEP, GERMAN, UK)	3.3PF	10%	50V	
C11	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V	
C13	1-163-148-00	CERAMIC MELF (AEP, GERMAN, UK)	1.5PF	20%	50V	
C13	1-163-150-00	CERAMIC MELF (EAST EUROPEAN)	3.3PF	10%	50V	
C14	1-163-181-00	CERAMIC MELF	100PF	10%	50V	
C15	1-124-927-11	ELECT	4.7uF	20%	100V	
C16	1-124-903-11	ELECT	1uF	20%	50V	
C17	1-124-126-00	ELECT	47uF	20%	10V	
C18	1-124-126-00	ELECT	47uF	20%	10V	
C19	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V	
C20	1-124-903-11	ELECT	1uF	20%	50V	
C21	1-124-925-11	ELECT	2.2uF	20%	100V	
C22	1-124-443-00	ELECT	100uF	20%	10V	
C23	1-124-902-00	ELECT	0.47uF	20%	50V	
C24	1-124-927-11	ELECT	4.7uF	20%	100V	
C25	1-124-463-00	ELECT	0.1uF	20%	50V	
C26	1-163-063-00	CERAMIC MELF	0.022uF		25V	
C27	1-162-840-11	CERAMIC	0.012uF	10%	16V	
C28	1-162-840-11	CERAMIC	0.012uF	10%	16V	
C32	1-163-153-00	CERAMIC MELF (EAST EUROPEAN)	5.6PF	10%	50V	
C32	1-163-154-00	CERAMIC MELF (AEP, GERMAN, UK)	6.8PF	10%	50V	
C33	1-163-155-00	CERAMIC MELF	8.2PF	10%	50V	
C34	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V	
C35	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V	
C36	1-102-942-00	CERAMIC	5.0PF	+0.5PF	50V	
C38	1-102-949-00	CERAMIC	12PF	5%	50V	
C39	1-130-918-00	FILM	200PF	5%	63V	
C40	1-136-232-11	FILM	0.0043uF	5%	63V	
C41	1-136-355-11	FILM	330PF	5%	63V	
C42	1-130-011-00	FILM	270PF	5%	63V	
C43	1-163-059-00	CERAMIC CHIP	0.01uF	10%	50V	
C45	1-163-181-00	CERAMIC MELF	100PF	10%	50V	
C46	1-163-181-00	CERAMIC MELF	100PF	10%	50V	
C47	1-163-181-00	CERAMIC MELF	100PF	10%	50V	
C48	1-163-209-00	CERAMIC MELF	0.0015uF	20%	16V	
C51	1-162-397-11	CERAMIC MELF	0.001uF	10%	50V	
C52	1-163-164-00	CERAMIC MELF	20PF	5%	50V	
C61	1-124-902-00	ELECT (EAST EUROPEAN)	0.47uF	20%	50V	
C62	1-124-902-00	ELECT (EAST EUROPEAN)	0.47uF	20%	50V	

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

Ref. No.	Part No.	Description	Remark
< FILTER >			
CF1	1-577-327-81	FILTER, CERAMIC	
CF3	1-577-327-81	FILTER, CERAMIC	
CF4	1-577-327-81	FILTER, CERAMIC	
< JACK >			
CNJ21	1-568-280-11	SOCKET, CONNECTOR 5P (EAST EUROPEAN)	
< TRIMMER >			
CT1-4 CV1-4	1-151-693-11	CAP, VAR (AEP, GERMAN, UK)	
CT1-4 CV1-4			
CT5	1-141-290-41	CAP, VAR FILM TRIMMER	
CT6	1-141-290-41	CAP, VAR FILM TRIMMER	
CT7	1-141-439-11	CAP, ADJ	
CT8	1-141-416-11	CAP, ADJ	
< DIODE >			
D1	8-719-911-19	DIODE 1SS119	
D2	8-719-911-19	DIODE 1SS119	
< FILTER >			
FL1	1-236-470-11	FILTER, BAND PASS (EAST EUROPEAN)	
< IC >			
IC1	8-752-050-20	IC CXA1238S	
< JUMPER RESISTOR >			
JR2	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR4	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR5	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR6	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR7	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR8	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR10	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR12	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR13	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR14	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR15	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR16	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR19	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR20	1-216-296-00	METAL CHIP 0 5% 1/8W	
JR21	1-216-296-00	METAL CHIP 0 5% 1/8W	

Ref. No.	Part No.	Description	Remark
< COIL >			
L1	1-428-776-11	COIL, AIR-CORE (AEP, GERMAN, UK)	
L1	1-428-858-11	COIL, AIR-CORE (EAST EUROPEAN)	
L2	1-460-206-11	COIL (WITH CORE) (AEP, GERMAN, UK)	
L2	1-460-350-11	COIL (WITH CORE) (EAST EUROPEAN)	
L3	1-402-590-11	ANTENNA, FERRITE-ROD (LW/MW)	
L4	1-406-472-11	COIL (OSC)	
L5	1-402-596-11	COIL (ANT)	
L6	1-406-471-11	COIL (OSC)	
L8	1-406-473-11	COIL (OSC)	
L9	1-414-174-31	INDUCTOR 0.33uH	
L10	1-402-590-11	ANTENNA, FERRITE-ROD (LW/MW)	
< TRANSISTOR >			
Q1	8-729-900-80	TRANSISTOR DTC114ES	
Q2	8-729-922-66	TRANSISTOR 2SC2410SN	
< RESISTOR >			
R3	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R6	1-249-441-11	CARBON 100K 5% 1/4W	
R7	1-249-415-11	CARBON 680 5% 1/4W F	
R9	1-249-441-11	CARBON 100K 5% 1/4W	
R10	1-249-404-00	CARBON 82 5% 1/4W	
R11	1-249-427-11	CARBON 6.8K 5% 1/4W F	
R12	1-249-427-11	CARBON 6.8K 5% 1/4W F	
R13	1-249-405-11	CARBON 100 5% 1/4W F	
R14	1-249-429-11	CARBON 10K 5% 1/4W	
R15	1-215-477-00	METAL 220K 1% 1/6W	
R16	1-215-477-00	METAL 220K 1% 1/6W	
R17	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R22	1-249-411-11	CARBON 330 5% 1/4W	
R23	1-249-429-11	CARBON 10K 5% 1/4W	
R24	1-249-413-11	CARBON 470 5% 1/4W F	
R30	1-249-417-11	CARBON 1K 5% 1/4W F	
R31	1-249-431-11	CARBON 15K 5% 1/4W	
R32	1-249-441-11	CARBON 100K 5% 1/4W	
< VARIABLE RESISTOR >			
RV1	1-238-601-11	RES, ADJ, CARBON 22K	
RV2	1-230-534-11	RES, VAR, CARBON 100K (FINE TUNE)	
< SWITCH >			
S1	1-571-147-11	SWITCH, LEVER SLIDE (BAND)	
< TRANSFORMER >			
T1	1-239-246-11	ENCAPSULATED COMPONENT	

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS *****	
120	1-452-531-11	MAGNET	
124	1-751-445-11	WIRE, PARALLEL (FFC) (27 CORE)	
324	1-543-876-13	HEAD, ERASE	
△405	8-848-137-11	PICK-UP, OPTICAL KSS-210B	
ANT1	1-501-378-11	ANTENNA, TELESCOPIC (FM/SW)	
* CNJ301	1-691-561-11	HOUSING, CONNECTOR 4P (DECK-A)	
* CNJ302	1-691-562-11	HOUSING, CONNECTOR 5P (DECK-B)	
HP601	1-543-628-11	HEAD, MAGNETIC (PB) (DECK-A)	
HRP602	1-543-714-11	HEAD, MAGNETIC (REC/PB) (DECK-B)	
M401	X-4920-924-1	MOTOR ASSY (REEL/CAPSTAN)	
M701	X-2625-132-1	GEAR ASSY, MOTOR (SLED)	
SP901	1-504-269-21	SPEAKER (10CM)	
SP902	1-504-269-21	SPEAKER (10CM)	

ACCESSORIES & PACKING MATERIALS

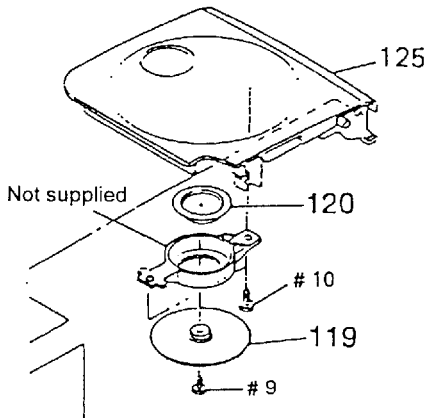
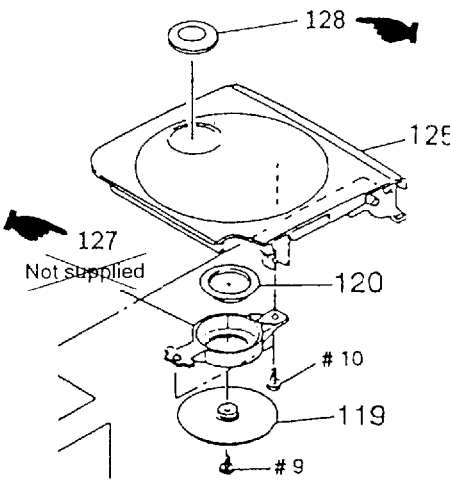
△	1-575-131-11	CORD, POWER SUPPLY (AEP, GERMAN, EAST EUROPEAN)	
△	1-751-214-11	CORD, POWER (UK)	
	3-756-864-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, GERMAN, SPANISH) (AEP, GERMAN, UK)	
	3-756-864-41	MANUAL, INSTRUCTION (SWEDISH, PORTUGUESE) (AEP)	
	3-756-864-61	MANUAL, INSTRUCTION (POLISH, ENGLISH, GERMAN, RUSSIAN) (EAST EUROPEAN)	
*	3-906-187-01	CUSHION (L)	
*	3-906-188-01	CUSHION (R)	

HARDWARE LIST

#1	7-685-647-79	SCREW, TAPPING +BV 3X10	
#2	7-685-104-19	SCREW +P 2X6 TYPE2 NON-SLIT	
#3	7-682-548-04	SCREW +BVTT 3X8 (S)	
#4	7-685-870-01	SCREW +BVTT 3X5 (S)	
#5	7-621-770-87	SCREW +P 2.6X5	
#6	7-685-648-79	SCREW, TAPPING +BV 3X12	
#7	7-682-148-15	SCREW +P 3X8	
#8	7-685-547-19	SCREW +BTP 3X10 TYPE2 N-S	
#9	7-621-772-00	SCREW +B 2X3	
#10	7-685-133-19	SCREW +P 2.6X6 TYPE2	

Ref. No.	Part No.	Description	Remark
#11	7-685-132-19	SCREW +P 2.6X5 TYPE2 NON-SLIT	
#12	7-685-144-11	SCREW +P 3X5 TYPE2 NON-SLIT	
#13	7-621-255-15	SCREW +P 2X3	
#14	7-682-547-04	SCREW +P 3X6	

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

Page	Ref. No.	CURRENT	REVISED																
42		<table><thead><tr><th>Part No.</th><th>Description</th></tr></thead><tbody><tr><td>125</td><td>A-3300-133-A HOLDER SUB ASSY (CD)</td></tr><tr><td>127</td><td>Not supplied</td></tr><tr><td>128</td><td>_____</td></tr></tbody></table>	Part No.	Description	125	A-3300-133-A HOLDER SUB ASSY (CD)	127	Not supplied	128	_____	<table><thead><tr><th>Part No.</th><th>Description</th></tr></thead><tbody><tr><td>3-388-212-11</td><td>LID, CD </td></tr><tr><td>3-388-214-01</td><td>HOLDER, CHUCKING </td></tr><tr><td>3-386-985-01</td><td>PLATE (CD), TRANSPARENT </td></tr></tbody></table>	Part No.	Description	3-388-212-11	LID, CD 	3-388-214-01	HOLDER, CHUCKING 	3-386-985-01	PLATE (CD), TRANSPARENT 
	Part No.	Description																	
125	A-3300-133-A HOLDER SUB ASSY (CD)																		
127	Not supplied																		
128	_____																		
Part No.	Description																		
3-388-212-11	LID, CD 																		
3-388-214-01	HOLDER, CHUCKING 																		
3-386-985-01	PLATE (CD), TRANSPARENT 																		
	(3) CD ASSEMBLY SECTION 	(3) CD ASSEMBLY SECTION 																	
54		_____ _____	3-756-864-81 MANUAL, INSTRUCTION (CZECH, HUNGARIAN) (East European)  3-756-864-91 MANUAL, INSTRUCTION (DANISH, FINNISH) (AEP) 																

MEMO

Printing Method for Large Sized Documents Such As Circuit Diagrams

Printing the page that exceeds A4-size two pages (or letter size) is possible by specifying the print range. (Acrobat Reader Version 4.0 or later)

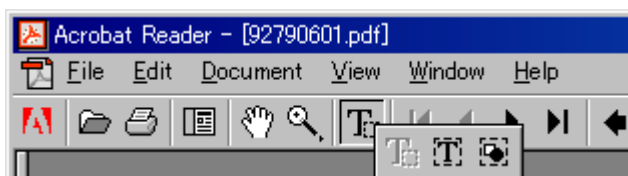
1. The enlarged print is made, if a smaller range than A4 size is specified and the A4 size is selected as a print paper.
2. Almost real sized print is made, if the range is specified, meeting the print paper size.
3. The reduced print is made, if a larger range than the print paper size is specified.

Printing by Specifying a Range

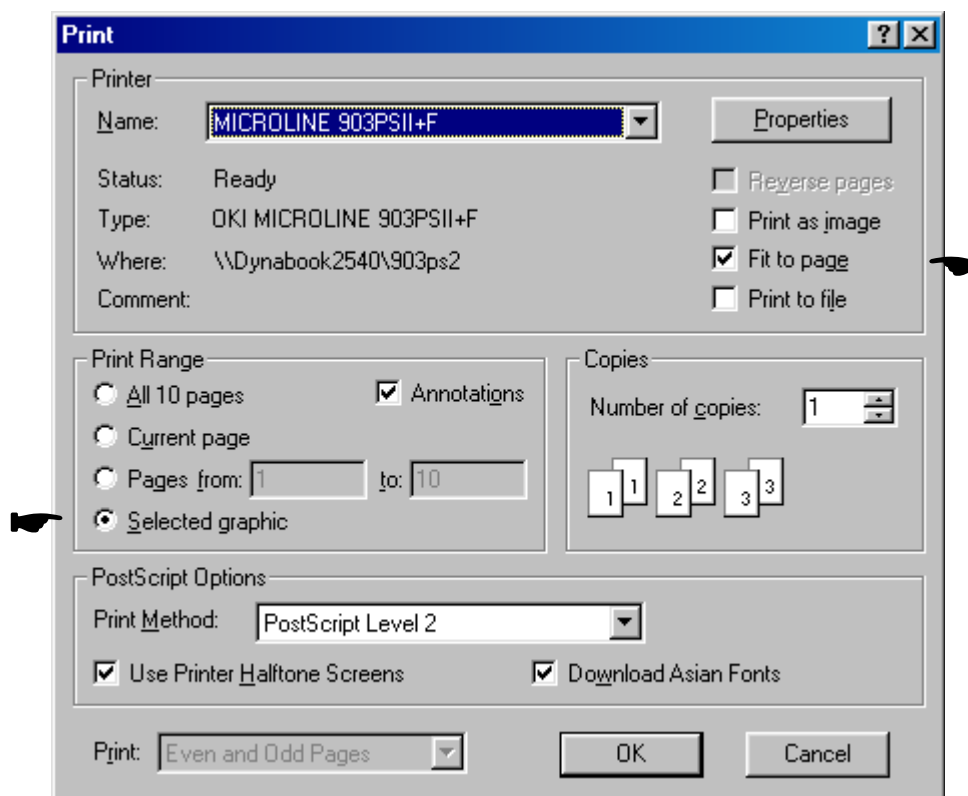
In printing out the drawings such as a schematic diagram and a printed wiring board larger than the printed paper size, they can be printed by specifying the range. (Acrobat Reader Version 4.0 or later)

1. Display the page to be printed.
2. From the File menu, select [Page Setup] and set the paper size.
3. From the Command bar, select [Graphic Select Tool].

(Keep pressing  , select )



4. Dragging the cursor, enclose the range on the page to be printed.
5. From the File menu, select [Print] and make sure that the [Selected Graphic] is already checked. Also, if [Fit to page] is checked, the selected range is enlarged or reduced (and rotated as necessary) meeting the paper size.



6. To cancel the printed range, click an arbitrary position on the screen.

REVISION HISTORY

Clicking the version allows you to jump to the revised page.

Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

[illegible]