

# ZS-D50

## SERVICE MANUAL

Ver 1.1 2000.08

*AEP Model  
UK Model  
Tourist Model*



TAPE	Model Name Using Similar Mechanism	NEW
Section	Tape Transport Mechanism Type	MF-ZSD50
CD	Model Name Using Similar Mechanism	ZS-M7
	MD Mechanism Type	CDM-2411AAA
	Optical Pick-up Type	DAX-11A

### 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  $\mu$ 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 with 7 mm aperture.)

Spindle speed

200 r / min (rpm) to 500 r / min (rpm) (CLV)

Number of channels

2

Frequency response

20 - 20,000 Hz +1 / -1 dB

Wow and flutter

Below measurable limit

#### Radio section

Frequency range

FM	87.5 - 108 MHz
----	----------------

MW	531 - 1,602 kHz
----	-----------------

LW	153 - 279 kHz
----	---------------

IF FM : 10.7 MHz

MW / LW : 450 kHz

Aerials FM : Telescopic aerial

MW / LW : Built-in ferrite bar aerial

#### Cassette-corder Section

Recording System

4-track 2 channel stereo

Fast winding time

Approx. 130 s (sec.) with Sony cassette C-60

Frequency response

TYPE I (normal) : 50 - 15,000 Hz

#### General

Speaker

Full range : 8 cm (3  $\frac{1}{4}$  in.) dia., 3 ohms, cone type x 2

Input

LINE IN jack (stereo minijack)

Minimum input level 250 mV

Outputs

Headphones jack (stereo minijack)

For 16 - 68 ohms impedance headphones

LINE OUT jack (stereo minijack)

Rated output level 250 mV at load impedance 47 kilohms

OPTICAL DIGITAL OUT (CD) (optical output connector)

Wavelength : 630 - 690 nm

Maximum power outputs

4.5 W + 4.5 W

- Continued on page 2 -

## PERSONAL AUDIO SYSTEM



# SONY®

Power requirements  
 For personal audio system :  
 230V AC, 50 Hz  
 12 V DC, 8 R20 (size D) batteries

For memory back-up :  
 6 V DC, 4 R6 (size AA) batteries

For remote commander :  
 3 V DC, 2 R6 (size AA) batteries

Power consumption  
 AC 27 W

Battery life

For personal audio system

**FM recording**

Sony R20P : approx. 6 h

Sony alkaline LR20 : approx. 12 h

**Tape playback**

Sony R20P : approx. 3 h

Sony alkaline LR20 : approx. 6 h

**CD playback**

Sony R20P : approx. 1.5 h

Sony alkaline LR20 : approx. 3h

Dimensions (incl. projecting parts)  
 Approx. 435 x 223 x 160 mm (w / h / d)  
 (17 1/4 x 8 7/8 x 6 1/8 inches)

Mass (incl. batteries)  
 approx. 4.3 kg (9 lb. 7 oz)

Supplied accessories  
 AC power cord (1)  
 Remote commander (1)  
 Plug adaptor (1) (UK)

Design and specifications are subject to change without notice.

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## SECTION 1 SERVICE NOTE

### Flexible Circuit Board Repairing

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

### Notes on chip component replacement

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

### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  $\triangle$  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.

### 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

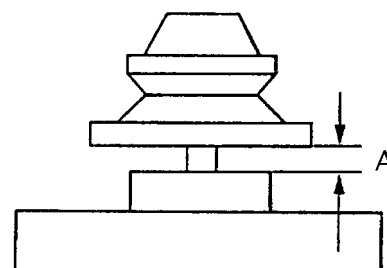
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe more than 30 cm away from the objective lens.

### LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Close the lid for CD.
2. Press CD  $\blacktriangleright$  button.
3. 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.

### CAUTION DURING WHEN MOUNTING THE PULLEY FOR THE LOADING MOTOR

Make the following adjustment when mounting the loading motor (part number : 1-698-999-11) and motor pulley (part number : 2-627-174-01) of the CD section.

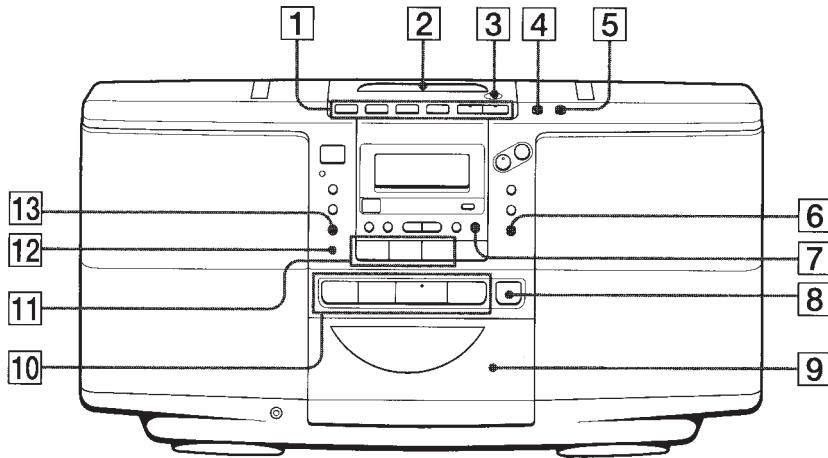


Specification :  $A = 0.9$  to  $1.1\text{mm}$

## SECTION 2 GENERAL

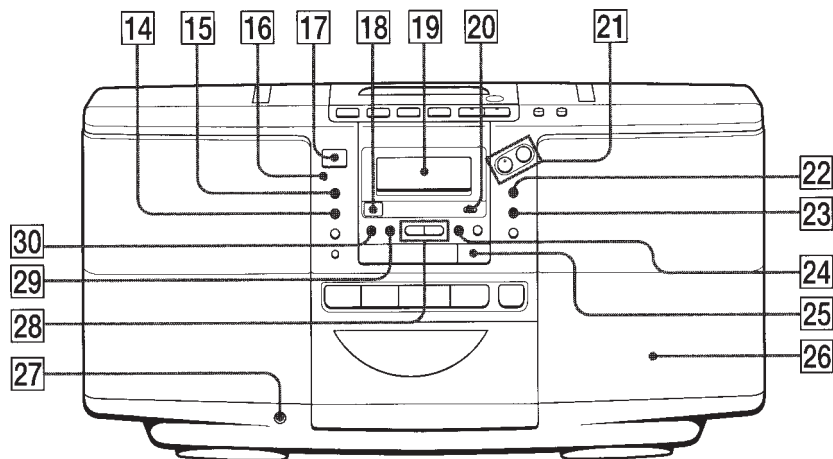
### LOCATION AND FUNCTION OF CONTROLS

#### FRONT PANEL : CD/RADIO/TAPE section



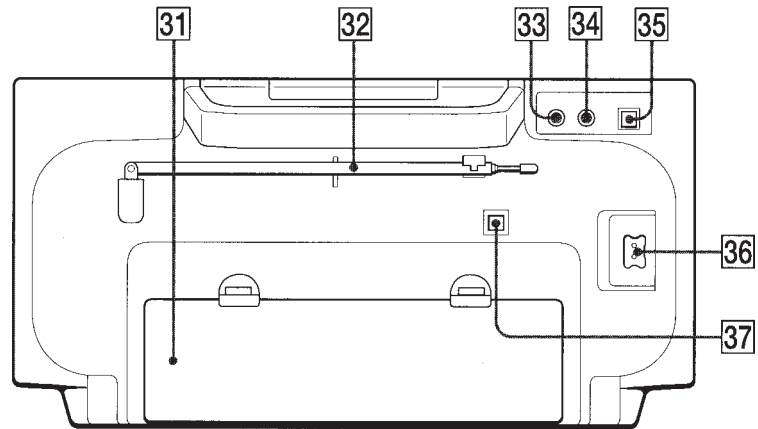
- |   |  |  |
|---|--|--|
| <p><b>1</b> Tape operation buttons<br/> <b>●/  </b> (REC/REC PAUSE)<br/> <b>◀◀, ▶▶</b> (FF/REW, AMS)<br/> <b>■</b> (STOP)<br/> <b>◀, ▶</b> (PLAY)</p> | <p><b>6</b> EDIT button<br/> <b>7</b> CANCEL button<br/> <b>8</b> ▲ CD OPEN/CLOSE button<br/> <b>9</b> CD tray<br/> <b>10</b> CD operation buttons<br/> <b>◀◀, ▶▶</b> (AMS/SEARCH)<br/> <b>▶  </b> (PLAY/PAUSE)<br/> <b>■</b> (STOP)</p> | <p><b>11</b> Radio operation buttons<br/>           RADIO BAND<br/>           PRESET +, -<br/> <b>12</b> AUTO PRESET button<br/> <b>13</b> MODE MONO/ST ISS button</p> |
| <p><b>2</b> Cassette lid<br/> <b>3</b> ▲ PUSH OPEN/CLOSE<br/> <b>4</b> DIR MODE button<br/> <b>5</b> COUNTER RESET button</p>                         |  |  |

#### FRONT PANEL: TIMER/COM section



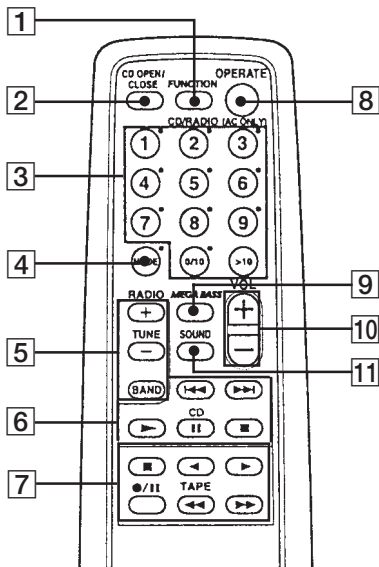
- |  |   |
|--|---|
| <p><b>14</b> STANDBY button<br/> <b>15</b> SLEEP button<br/> <b>16</b> OPR/BATT indicator<br/> <b>17</b> OPERATE button<br/> <b>18</b> Remote control receiver<br/> <b>19</b> Display window<br/> <b>20</b> DISPLAY button<br/> <b>21</b> VOL +, -<br/> <b>22</b> SOUND button</p> | <p><b>23</b> MEGA BASS button<br/> <b>24</b> ENTER/MEMORY CHECK button<br/> <b>25</b> MD(LINE) button<br/> <b>26</b> Speaker<br/> <b>27</b> ☎ (Headphones) jack (stereo mini jack)<br/> <b>28</b> TUNING TIME SET +, - button<br/> <b>29</b> TIMER button<br/> <b>30</b> CLOCK button</p> |
|--|---|

## REAR PANEL



- 31 Battery compartment
- 32 FM telescopic antenna
- 33 LINE IN jack
- 34 LINE OUT jack
- 35 OPTICAL DIGITAL OUT(CD) jack
- 36 AC IN ~ jack
- 37 OPTICAL DIGITAL OUT(CD) jack cover socket

## Remote commander

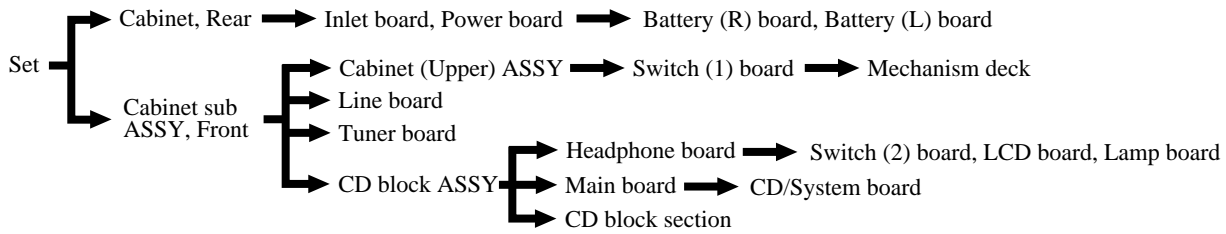


- 1 FUNCTION button  
Each time you pressed, the function changes in the order  
CD – Tape – Radio – Line – CD ...
- 2 ▲ CD OPEN/CLOSE button
- 3 Number buttons
- 4 MODE button
- 5 Radio operation buttons  
TUNE +, – button  
BAND
- 6 CD operation buttons  
◀◀, ▶▶ (AMS/SEARCH)  
▶ (PLAY)  
|| (PAUSE)  
■ (STOP)
- 7 Tape operation buttons  
■ (STOP)  
◀, ▶ (PLAY)  
●/|| (REC/REC PAUSE)  
◀◀, ▶▶ (FF/REW, AMS)
- 8 OPERATE button (AC only)  
Active only when you use the set with AC power source.
- 9 MEGA BASS button
- 10 VOL +, – button
- 11 SOUND button

## SECTION 3 DISASSEMBLY

●The equipment can be removed using the following procedure.

### < MAIN BLOCK SECTION >



### < MECHANISM DECK SECTION >

Mechanism deck → TC RF board, Head relay board, Belt (FR/BR), Motor (M691)

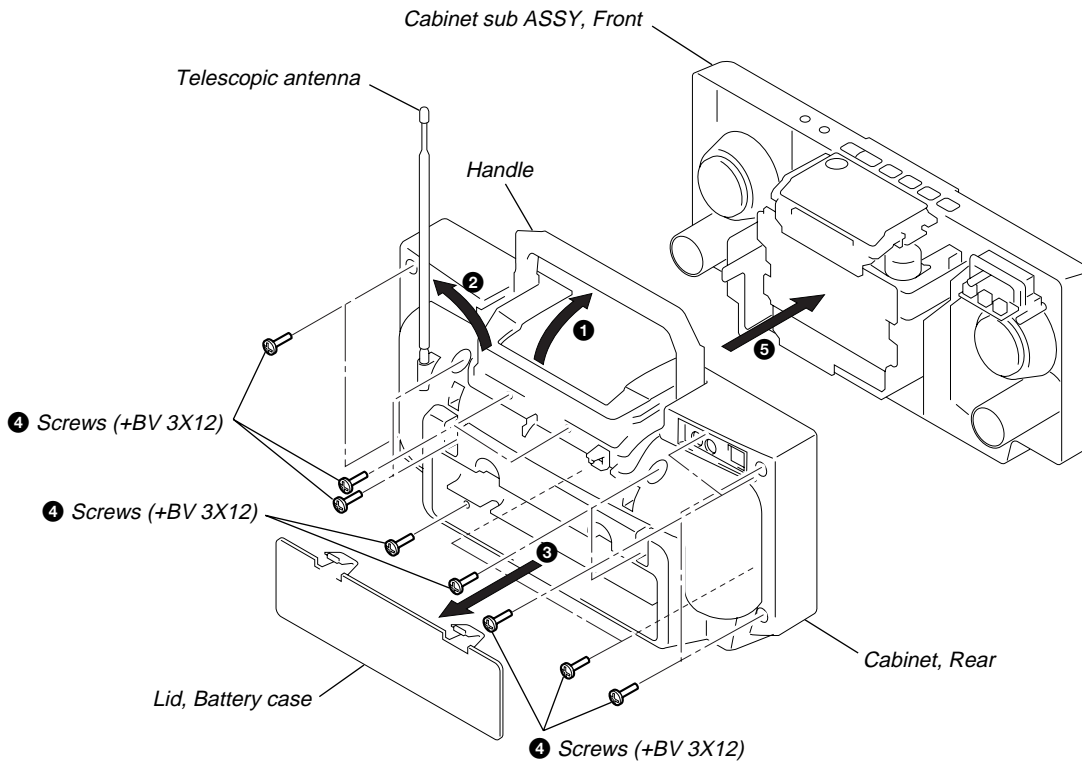
### < CD BLOCK SECTION >

CD block section → Tray ASSY, CD → Optical pick-up block, Pick-up relay board  
 → Loading board

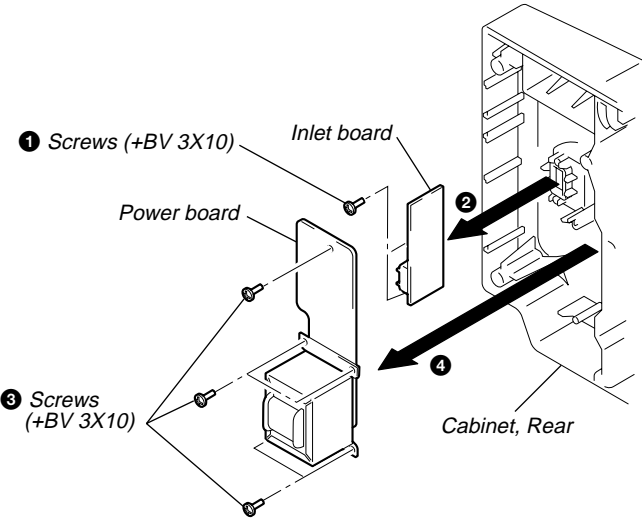
**Note** Follow the disassembly procedure in the numerical order given.

### <MAIN BLOCK SECTION>

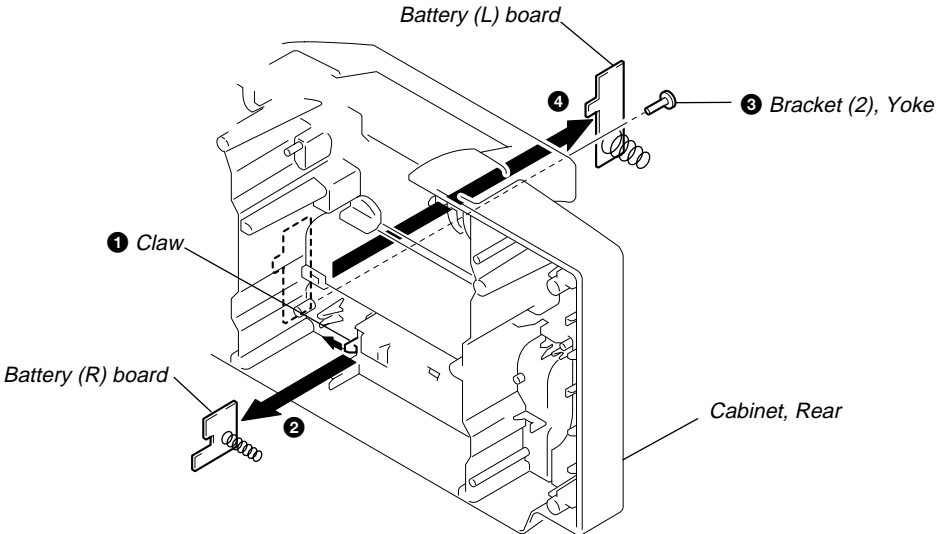
#### 3-1. "CABINET, REAR", "CABINET SUB ASSY, FRONT"



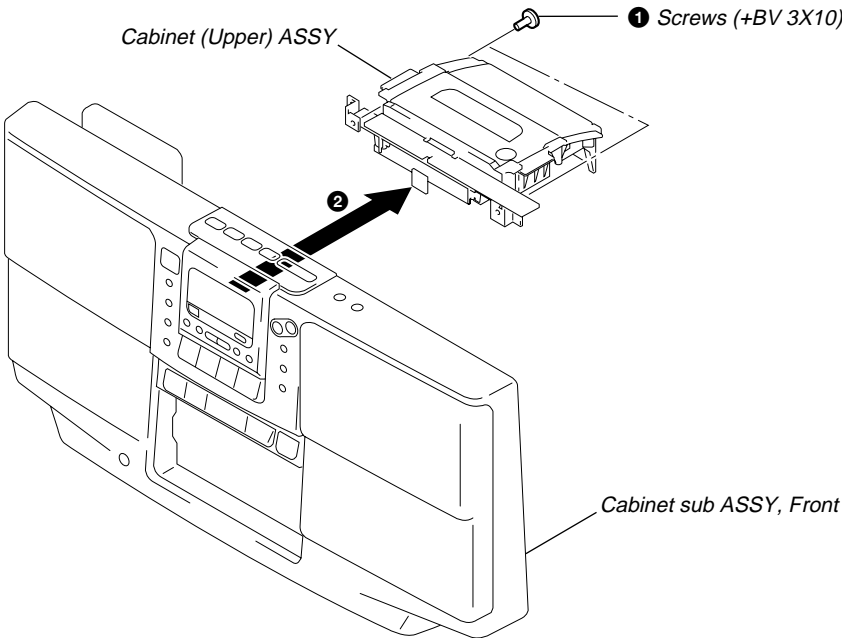
**3-2. INLET BOARD, POWER BOARD**



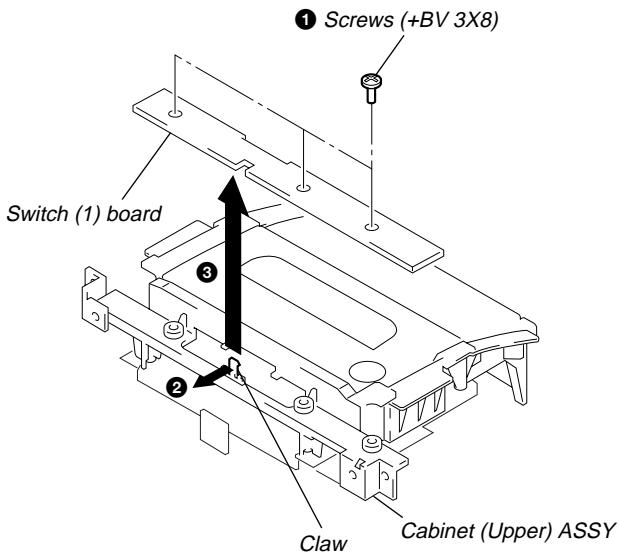
**3-3. BATTERY (R) BOARD, BATTERY (L) BOARD**



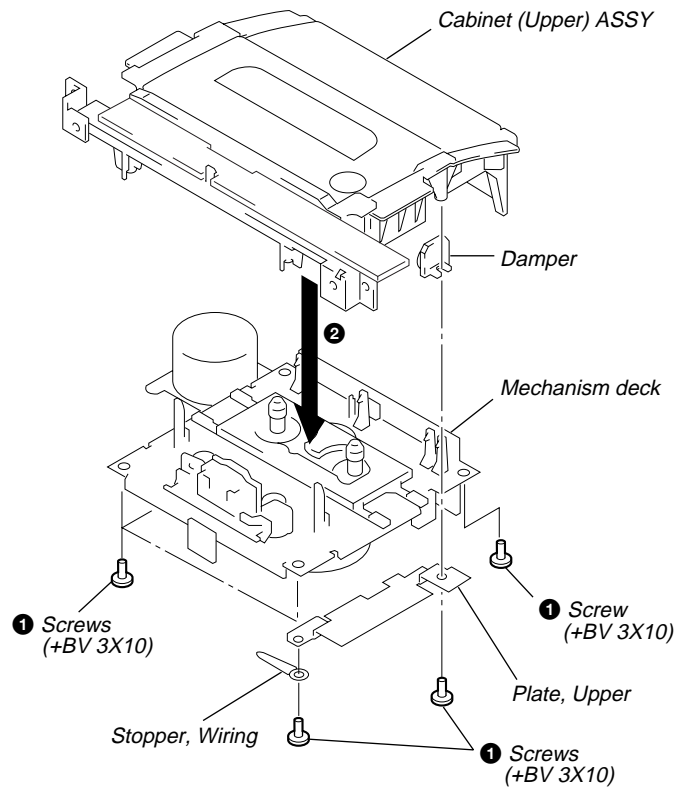
**3-4. CABINET (UPPER) ASSY**



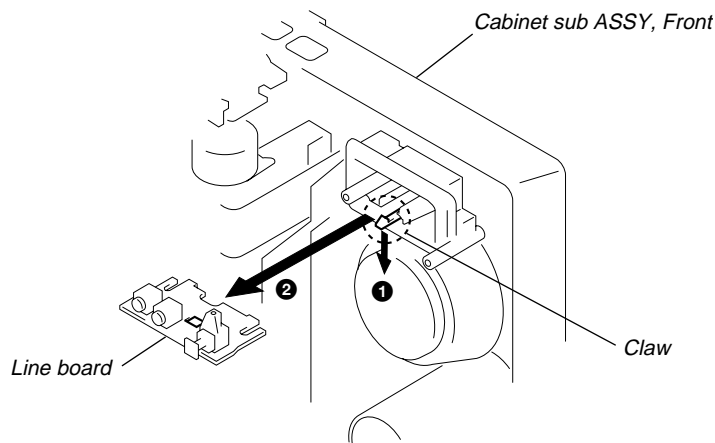
### 3-5. SWITCH (1) BOARD



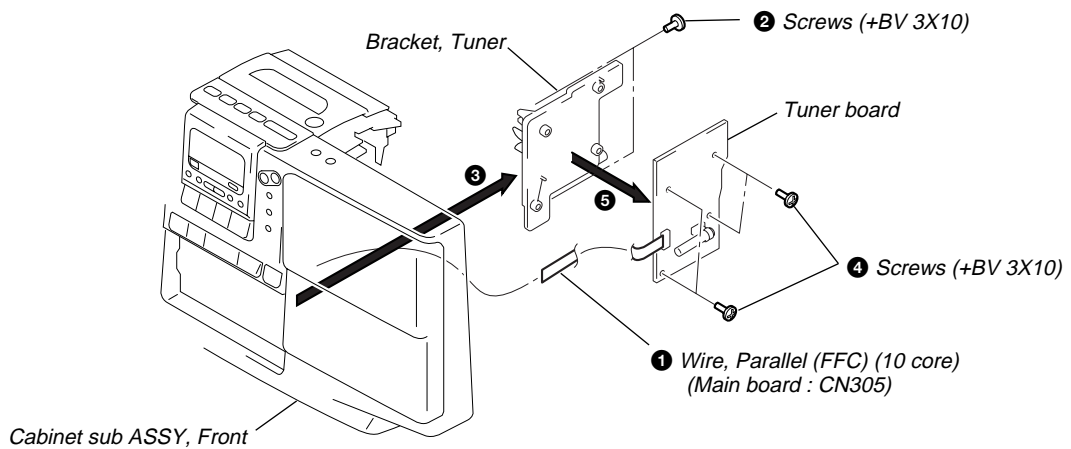
### 3-6. MECHANISM DECK



### 3-7. LINE BOARD

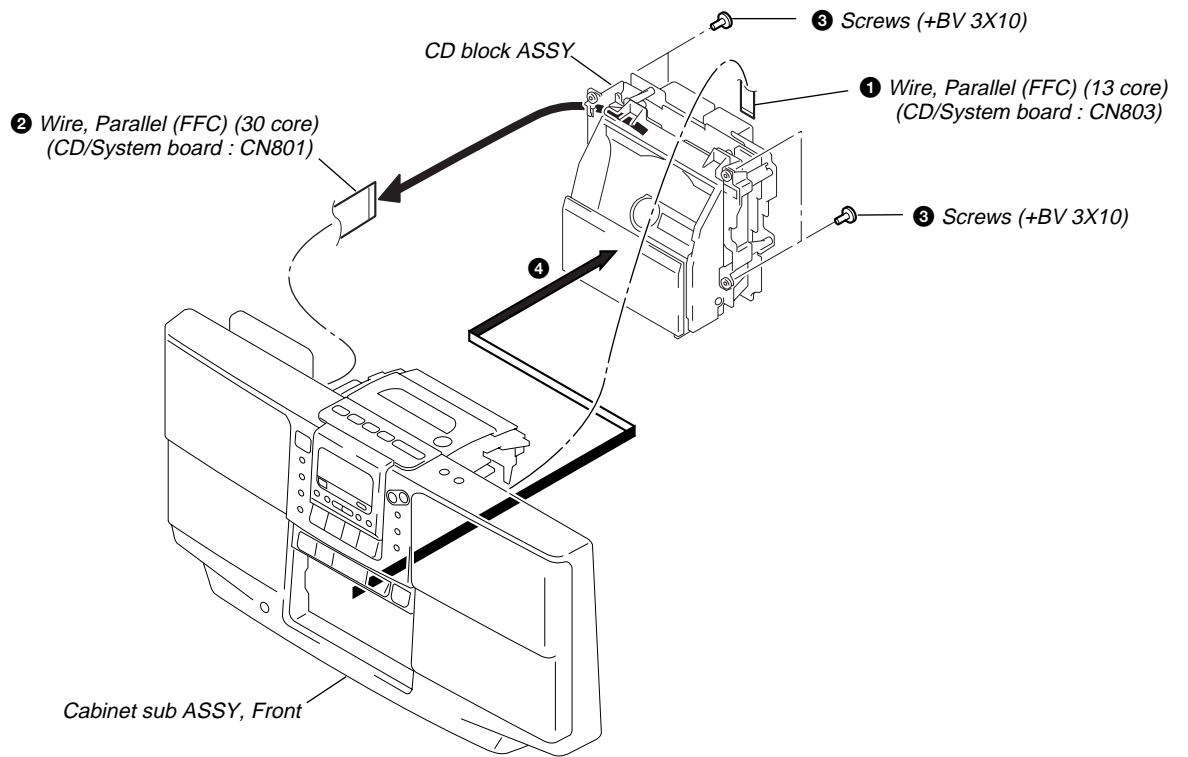


### 3-8. TUNER BOARD

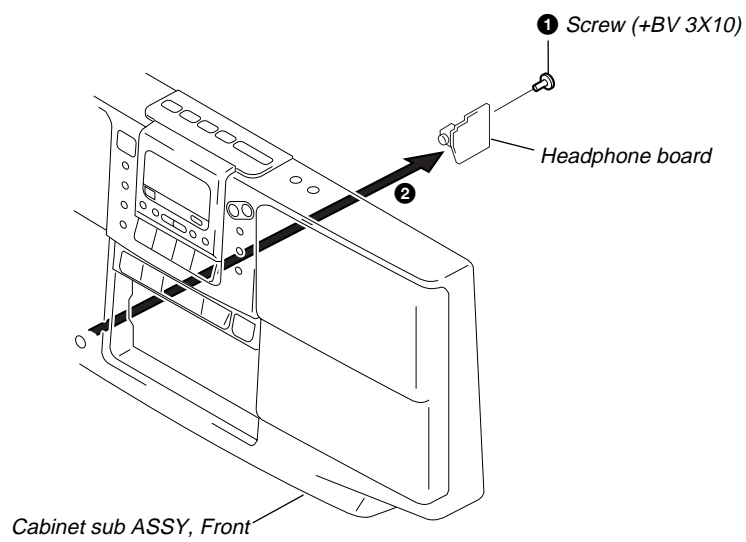




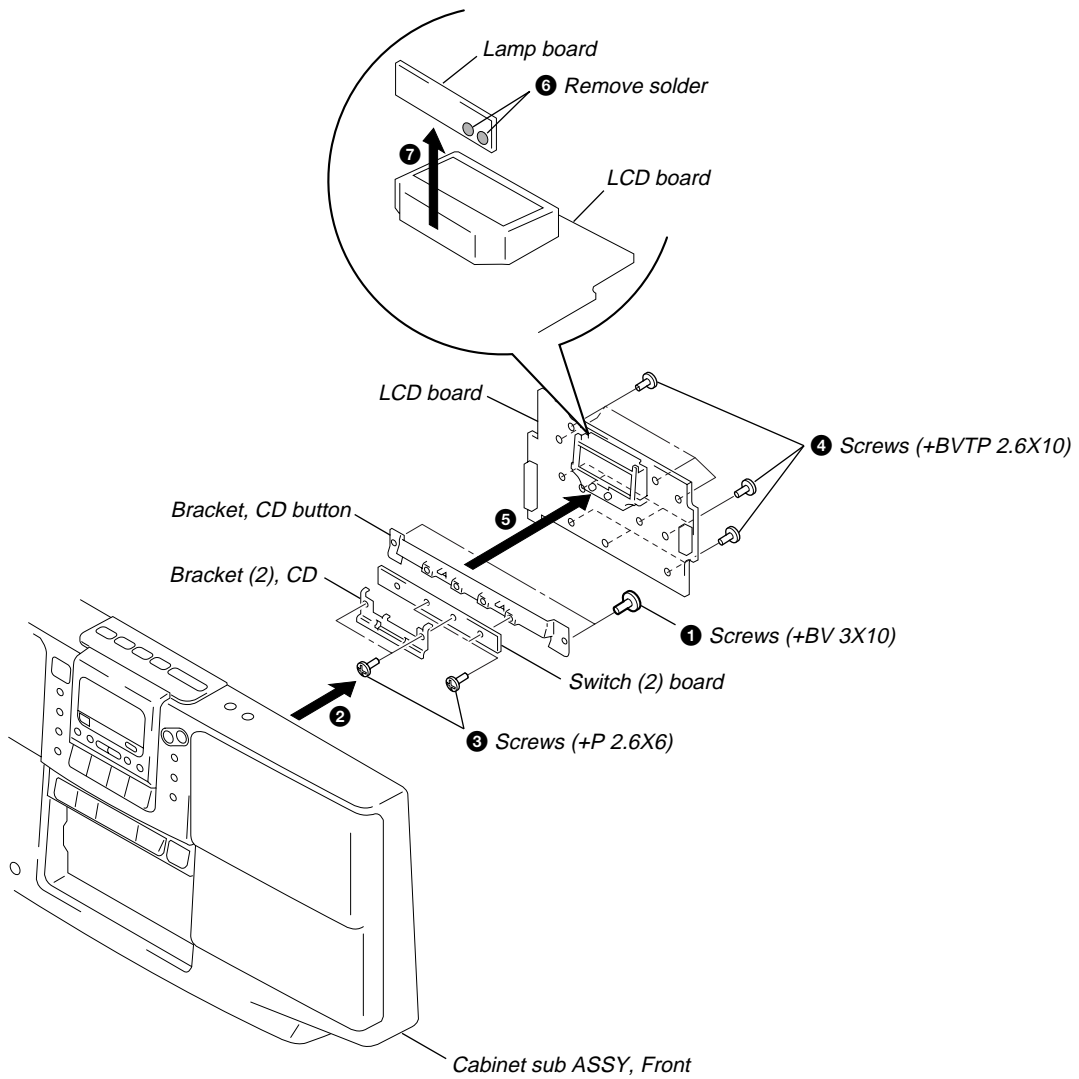
### 3-9. CD BLOCK ASSY



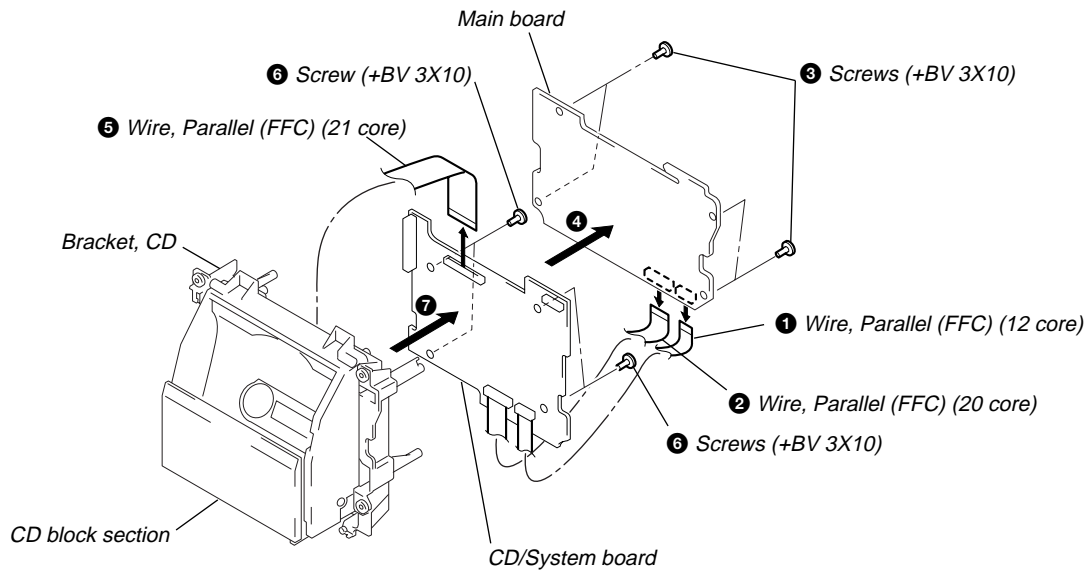
### 3-10. HEADPHONE BOARD



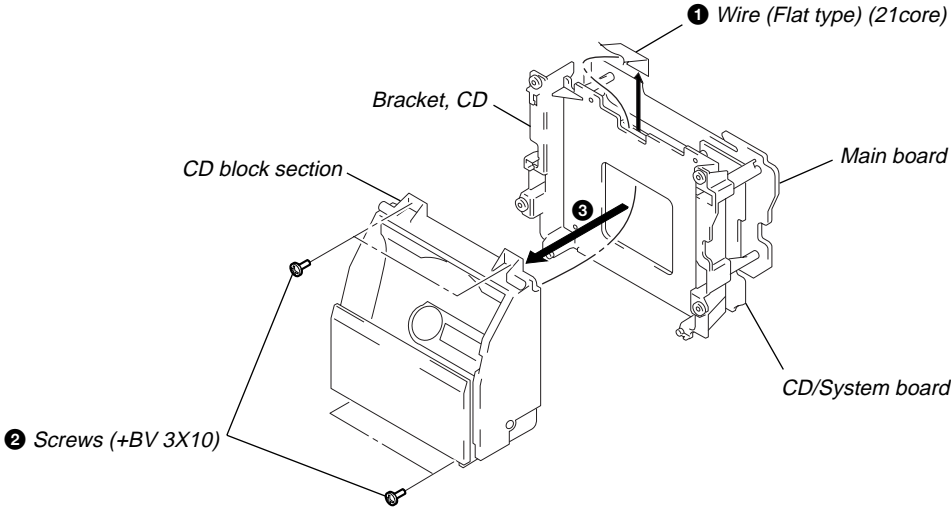
### 3-11. SWITCH (2) BOARD, LCD BOARD, LAMP BOARD



### 3-12. MAIN BOARD, CD/SYSTEM BOARD

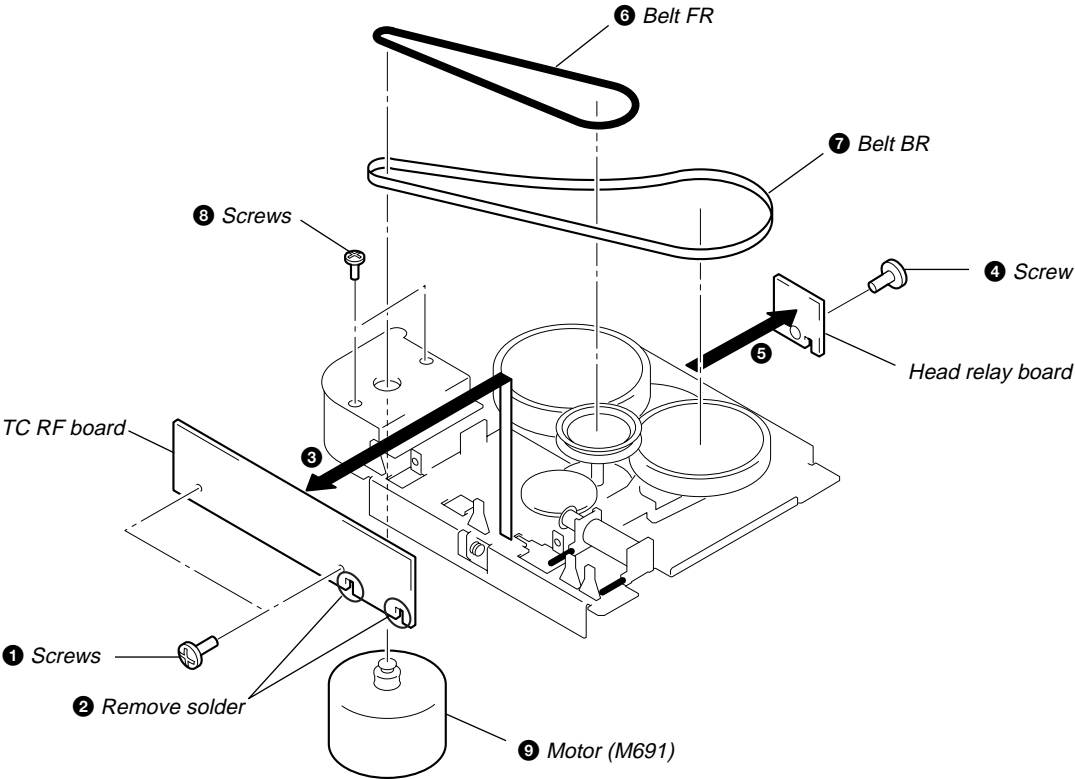


3-13. CD BLOCK SECTION



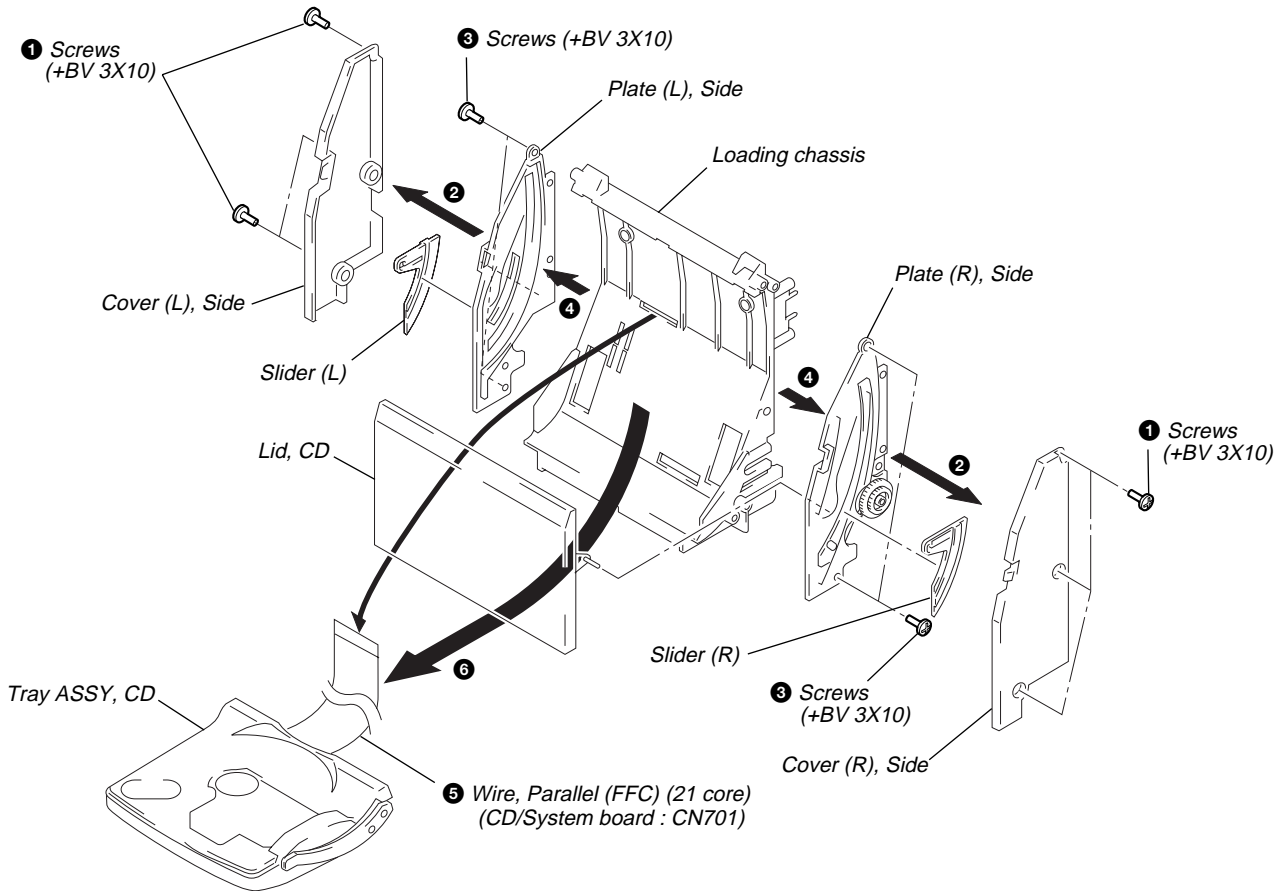
<MECHANISM DECK SECTION>

3-14. TC RF BOARD, HEAD RELAY BOARD, BELT (FR/BR), MOTOR (M691)

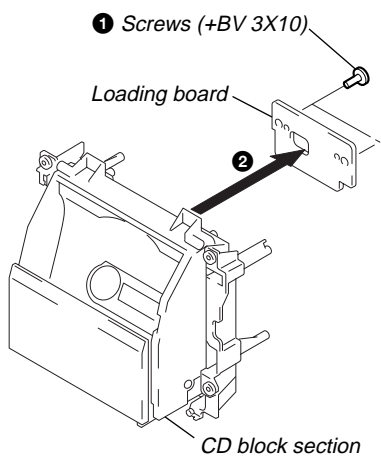


<CD BLOCK SECTION>

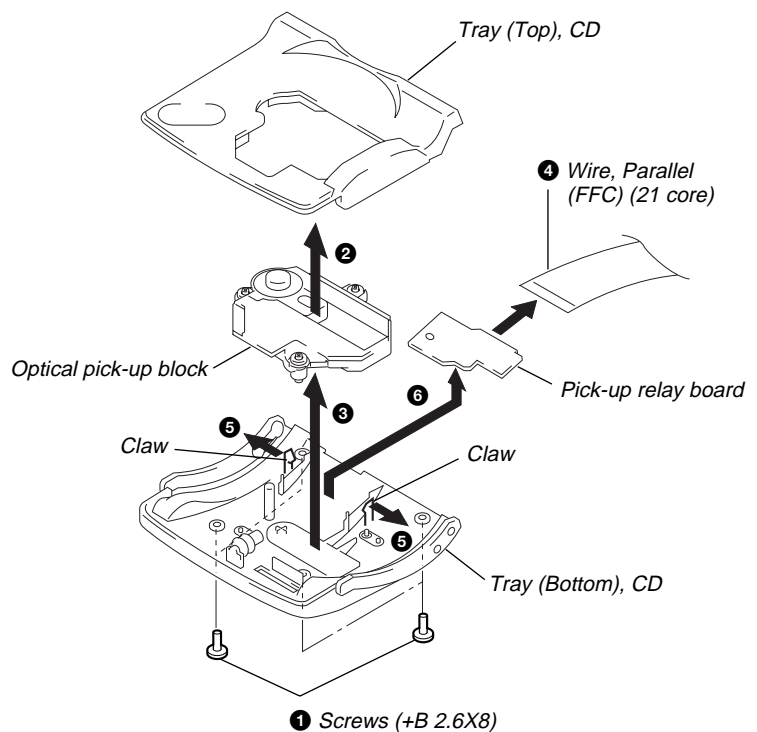
3-15. TRAY ASSY, CD



3-16. LOADING BOARD



3-17. OPTICAL PICK-UP BLOCK, PICK-UP RELAY BOARD



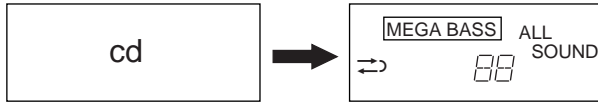
# SECTION 4 TEST MODE

## CD SECTION

### 1. Entering CD test mode

With the OPERATE button OFF, short JW801 and JW802 on the LCD board. (You need a moment for the short.)

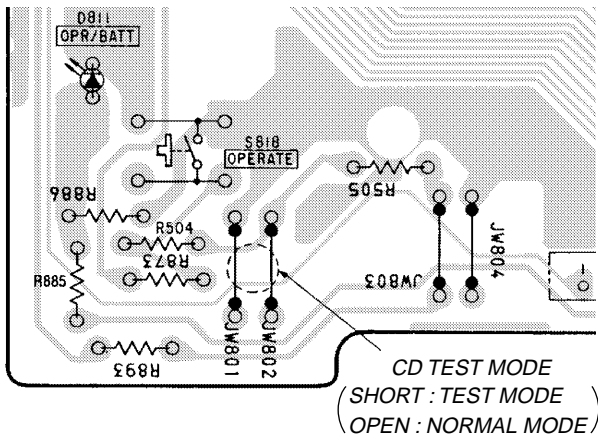
The LCD display changes as in the diagram and the unit goes into test mode.



When you press the **▶▶** key, the CD rotates and when you press the **▶▶** key again, the CD plays (the track servo comes on)(but no sound is issued).

Pressing the **▶▶** key starts automatic adjustment and the value changes, but this value is not a problem.

### [LCD BOARD] (Conductor side)



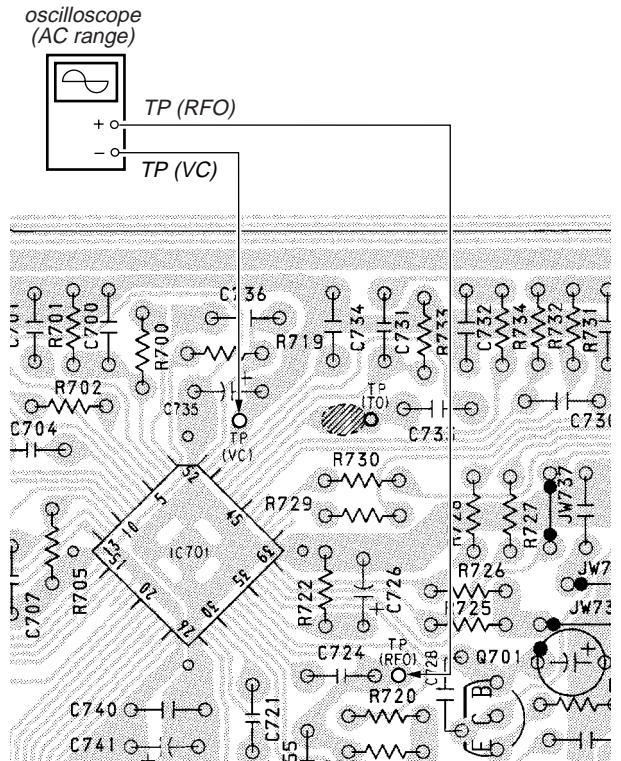
### 2. Exiting test mode

With the unit in test mode, when you press the OPERATE button to OFF, test mode ends.

### 3. RF LEVEL and jitter check

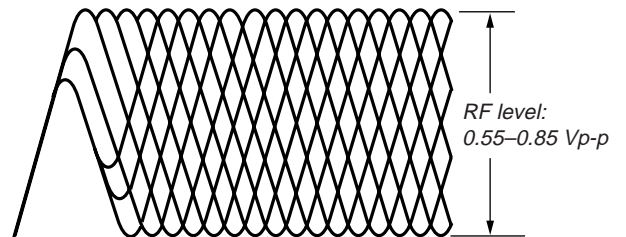
Test mode PLAY status

#### Connection Point : CD/System board (Conductor side)



Check to see that the jitter is less than 9.0 nsec. and RF level is between 0.55 – 0.85Vp-p.

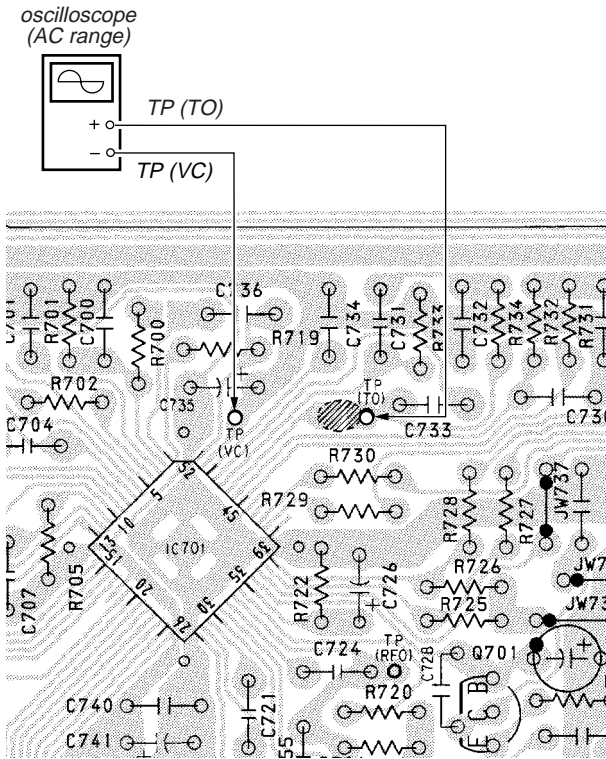
VOLT/DIV : 200mV (using 10:1 probe)  
TIME/DIV : 500ns



## SECTION 5 ADJUSTMENTS

### 4. TRAVERSE SIGNAL check

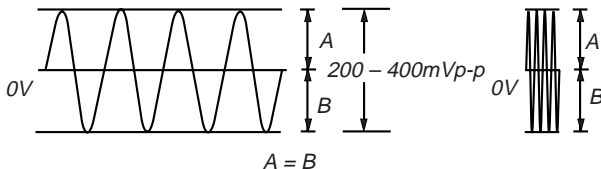
Connection Point : CD/System board (Conductor side)



Press the FF or FR from 3.

Check to see that the traverse signal level is between 200 to 400mVp-p.

**Note:**  
Extend the sweep time  
for easier view.



### 5. RELEASE THE TEST MODE

After completed with adjustment, press the OPERATE button to release the test mode.

### 5-1. MECHANICAL ADJUSTMENTS

#### TAPE RECORDER SECTION

##### PRECAUTION

- Clean the following parts with a denatured-alcohol-moistened swab :
  - record/playback/erase head    pinch roller
  - rubber belts                            capstan
- Demagnetize the record/playback head with a head demagnetizer.
- 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.

#### Torque Measurement

Torque	Torque Meter	Meter Reading
Forward	CQ-102C	36 to 61 g • cm (0.5 to 0.84 oz • inch)
Forward Back Tension	CQ-102C	2 to 6 g • cm (0.028 to 0.083 oz • inch)
Reverse	CQ-102RC	36 to 61 g • cm (0.5 to 0.84 oz • inch)
Reverse Back Tension	CQ-102RC	2 to 6 g • cm (0.028 to 0.083 oz • inch)
FF/REW	CQ-201B	61 to 143 g • cm (0.85 to 1.98 oz • inch)

#### Tape Tension Measurement

Mode	Tension Meter	Meter Reading
FWD	CQ-403A	more than 100g (more than 3.53 oz)
REV	CQ-403A	more than 100g (more than 3.53 oz)

### 5-2. ELECTRICAL ADJUSTMENTS

#### TAPE RECORDER SECTION

0dB = 0.775V

- The adjustments should be performed in the order in the service manual. (As a general rule playback circuit adjustment should be completed before recording circuit adjustment.)
- The adjustments should be performed for both the L-CH and R-CH unless otherwise indicated.

#### Standard Input Level

Input terminal	LINE IN
source impedance	10kΩ
input signal level	0.5V (-3.8dB)

#### Standard Output Level

Output terminal	LINE OUT
load impedance	47kΩ
output signal level	0.5V (-3.8dB)

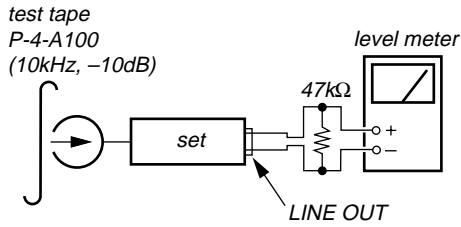
#### Test Tape

Type	Signal	Used for
P-4-A100	10kHz, -10dB	Azimuth Adjustment
WS-48B	3kHz, 0dB	Tape Speed Adjustment

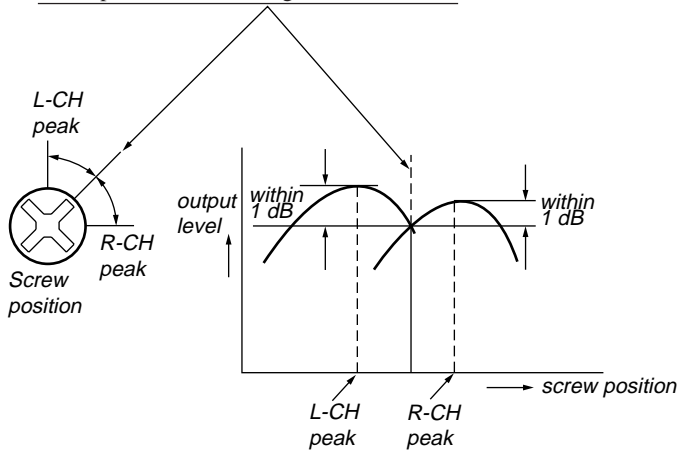
## Record/Playback/Erase Head Azimuth Adjustment

### Procedure:

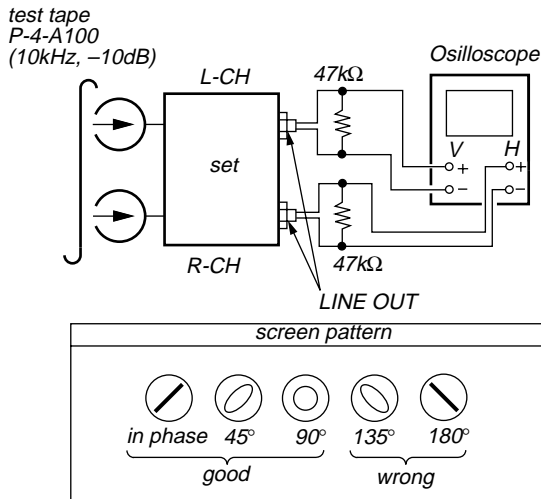
1. Mode : FWD playback



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 1dB.

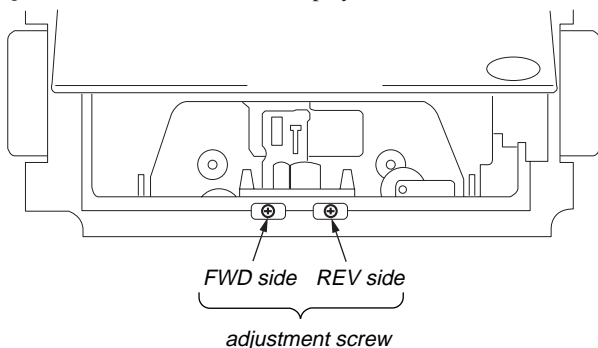


3. Phase Check  
Mode : FWD playback



4. Change the reverse playback mode and repeat the step 1 to 3.
5. After the adjustment, lock the adjustment screw with suitable locking compound.

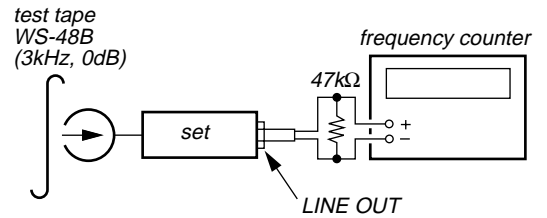
Adjustment Location : - record/playback head -



## Tape Speed Adjustment

### Procedure:

- FWD Playback Mode -

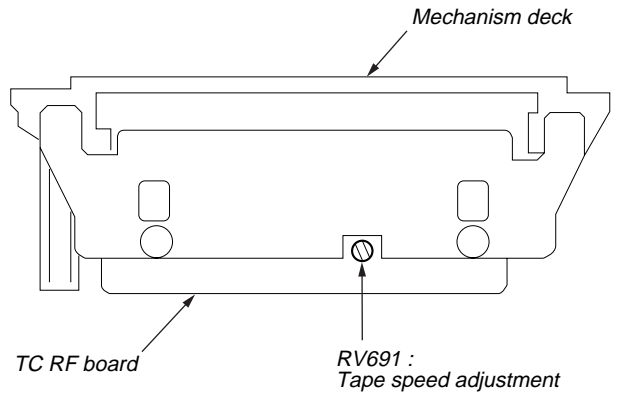


1. Set to FWD playback mode.
2. Adjust RV691 so that the frequency counter reading becomes 3,000Hz.

Standard value : 2,970 to 3,030Hz

3. Set to REV playback mode.  
Confirm the frequency should be within the standard value.
4. Confirm the frequency difference between beginning and the end of tape should be within 1.5% (45Hz).

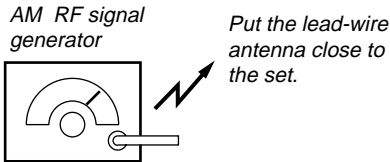
Adjustment Location : TC RF board



## TUNER SECTION

### AM Section

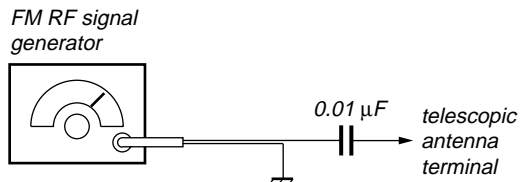
RADIO BAND button : MW or LW  
Volume : MIN



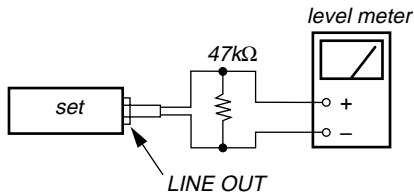
30% amplitude modulation by 400Hz signal.  
Output level : as low as possible

### FM Section

RADIO BAND button : FM  
Volume : MIN



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



**Adjustment Location :** Tuner board (See page 17)

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

MW/LW IF ADJUSTMENT		
Adjust for a maximum reading on level meter.		
CFT1		450kHz

MW FREQUENCY COVERAGE ADJUSTMENT		
Adjust part	Frequency display	reading on digital voltmeter.
L4	531kHz	0.65 – 1.05V
CT2	1,611kHz	5.1 – 6.1V

MW TRACKING ADJUSTMENT		
Adjust for a maximum reading on level meter.		
L3-1		621kHz
CT4		1,404kHz

LW FREQUENCY COVERAGE ADJUSTMENT		
Adjust part	Frequency display	reading on digital voltmeter
CT3	279kHz	5.1 – 5.5V
Confirmation	153kHz	0.6 – 0.8V

LW TRACKING ADJUSTMENT		
Adjust for a maximum reading on level meter.		
L3 – 2		162kHz
CT5		261kHz

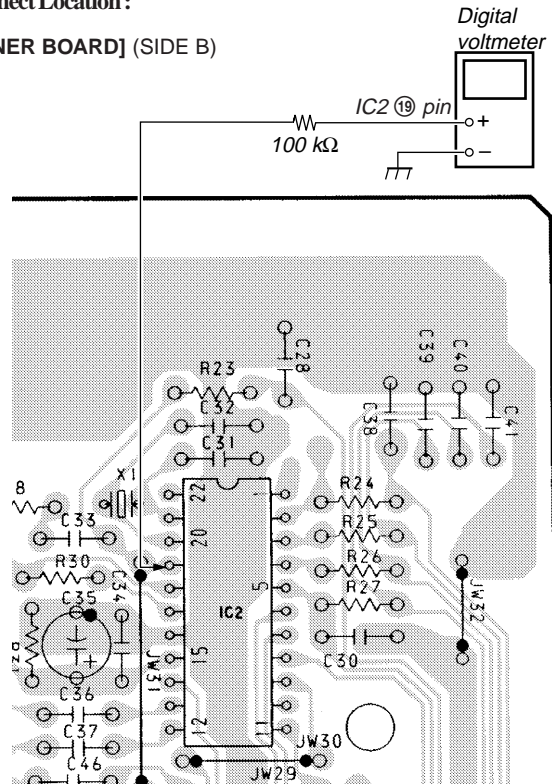
FM FREQUENCY COVERAGE ADJUSTMENT		
Adjust part	Frequency display	reading on digital voltmeter
Confirmation	87.5MHz	1.45 – 1.85V
L2	108MHz	3.6 – 4.6V

FM TRACKING ADJUSTMENT		
Adjust for a maximum reading on level meter.		
L1		87.5MHz
CT1		108MHz

## Frequency Coverage Adjustment

**Connect Location :**

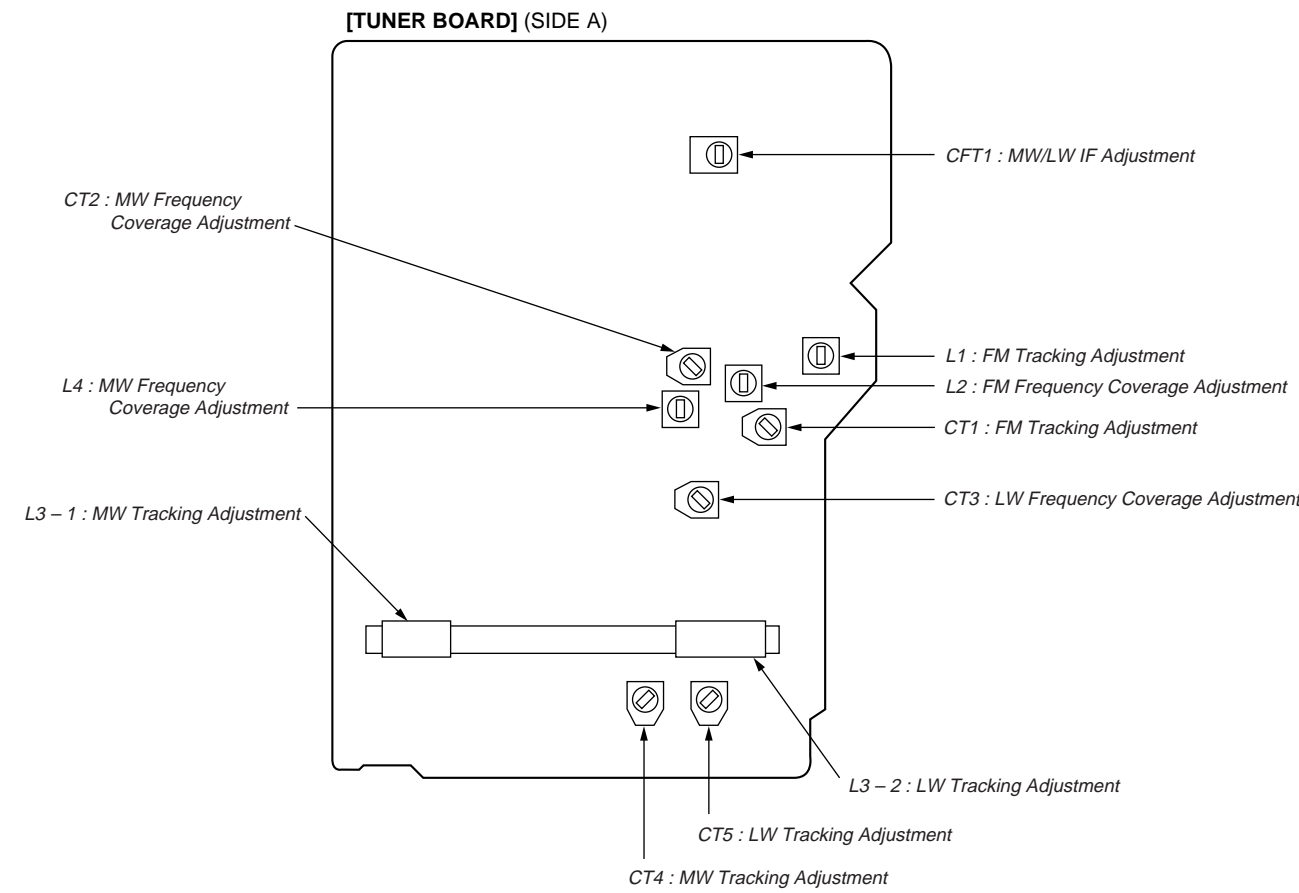
[TUNER BOARD] (SIDE B)





## SECTION 6 DIAGRAMS

Adjustment Location :



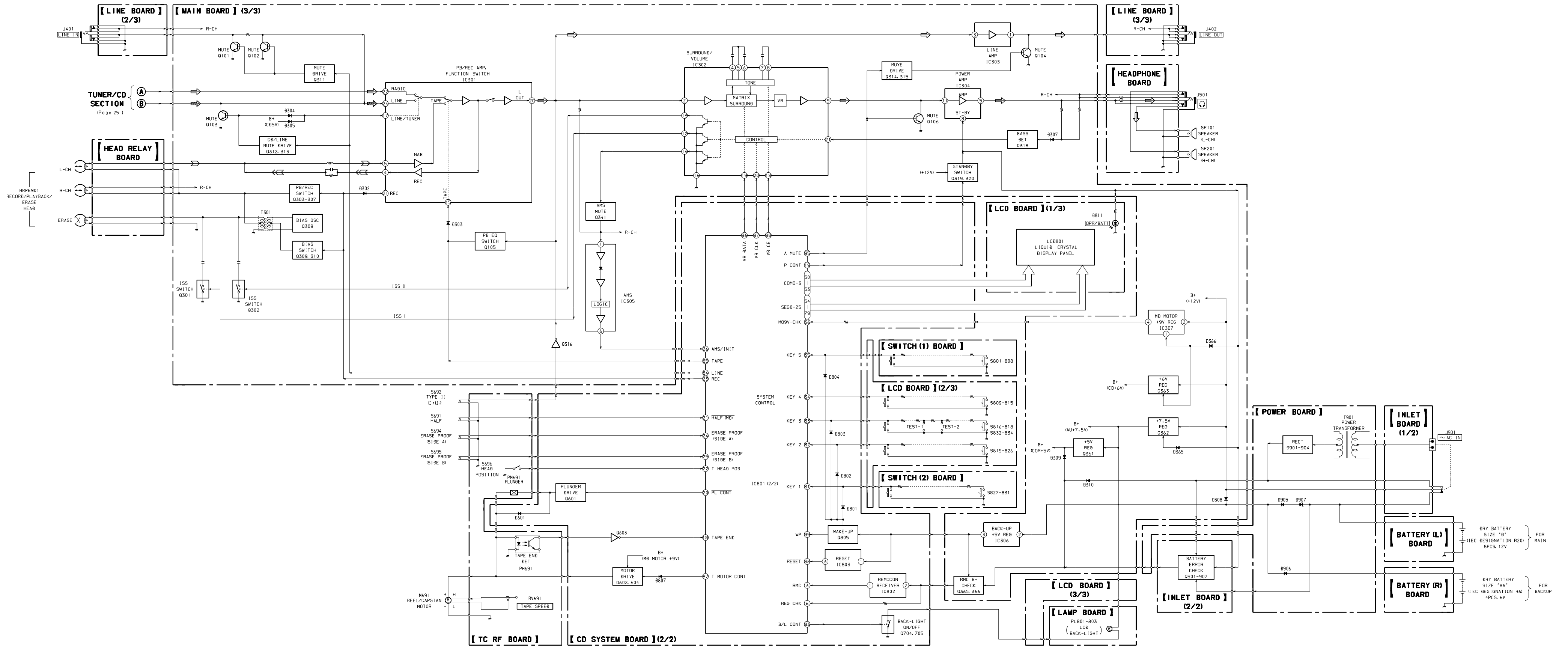
### 6-1. EXPLANATION OF IC TERMINALS

#### IC801 CXP83232A-010Q (SYSTEM CONTROL) CD/SYSTEM BOARD

Pin No.	Pin name	I/O	Description
1	C-SOR	I	CD DSP command data input.
2	NC	-	Not used ("L" level).
3	RMC	I	Remote control signal input.
4	R-MUTE	O	Tuner mute signal output.
5	C-XRST	O	CD system reset output.
6	REG-CHK	I	Regulator voltage check input.
7	C-SENSE 2	I	CD-SENSE input.
8	C-CLK	O	CD DSP command clock output.
9	C-DATA	O	CD DSP command data output.
10	C-SENSE 1	I	CD SENSE input.
11	C-SQCK	O	CD SUB-Q read out clock output.
12	C-SQSO	I	CD-SQSO data input.
13	C-MUTE	O	Mute signal output for DSP (IC702).
14	NC	-	Not used (OPEN).
15	R-DATA	O	PLL IC data output.
16	R-CLK	O	PLL IC clock output.
17	R-CE	O	PLL IC chip enable output.
18	R-COUNT	I	PLL IC data input.
19	P-CONT	O	POWER ON/OFF control output.
20	PL-CONT	O	Plunger ON/OFF control output.
21	HALF (M/D)	I	Cassette half detect input.
22	T-HEAD POS	I	Head position detect input.
23	REC	O	REC bias ON/OFF control output.
24	PROOF (A)	I	Half pawl input at A-side.
25	PROOF (B)	I	Half pawl input at B-side.
26	AMS/INIT	I	TC AMS signal input/Initial terminal.
27	R-SHIFT	O	System clock shift output.
28	INPUT 1	O	Loading motor control output.
29	INPUT 2	O	Loading motor control output.
30	CD-OP/CL	I	CD tray open/close detect input.
31	KEY 1	I	Key input terminal.
32	KEY 2	I	Key input terminal.
33	KEY 3	I	Key input terminal.
34	KEY 4	I	Key input terminal.
35	KEY 5	I	Key input terminal.
36	MO9V-CHK	I	Motor power supply voltage check.
37	MODEL ID	I	Model destination setting input.
38	RESET	I	System Reset terminal.
39	OSC-OUT	O	System clock oscillator output (4.21MHz).
40	OSC-IN	I	System clock oscillator input (4.21MHz).
41	GND	-	Ground terminal.
42	NC	-	Not used (OPEN).
43	NC	-	Not used (Ground).
44	V REF	I	Reference voltage input.
45	GND	-	Ground terminal.

Pin No.	Pin name	I/O	Description
46	VDDL	O	LCD drive bias control output.
47	VDD3	O	LCD drive bias power supply.
48	VDD2	O	LCD drive bias power supply.
49	VDD1	O	LCD drive bias power supply.
50	COM0	O	LCD common output.
51	COM1	O	LCD common output.
52	COM2	O	LCD common output.
53	COM3	O	LCD common output.
54 - 79	SEG0-SEG25	O	LCD segment output.
80	NC	-	Not used (OPEN).
81	NC	-	Not used (OPEN).
82	NC	-	Not used (OPEN).
83	B/L-CONT	O	Back-light ON/OFF control output.
84	LINE	O	Function output for LINE.
85	TAPE	O	Function output for TAPE
86	RADIO	O	Function output for RADIO
87	T-MOTOR-CONT	O	Motor control signal output.
88	X-LAT	O	CD DSP command latch output.
89	VDD	-	Power supply.
90	NC	-	Not used (connect to VDD).
91	GND	-	Ground.
92	CLK OUT	O	Sub system clock oscillator (32.768kHz).
93	CLK IN	I	Sub system clock oscillator (32.768kHz).
94	CD	O	Function output for CD.
95	A-MUTE	O	Audio mute signal output.
96	VR-DATA	O	Volume clock output.
97	VR-CLK	O	Volume clock output.
98	VR-CE	O	Volume enable output.
99	WP	I	Wake-up signal input.
100	TAPE END	I	Tape end detect input.

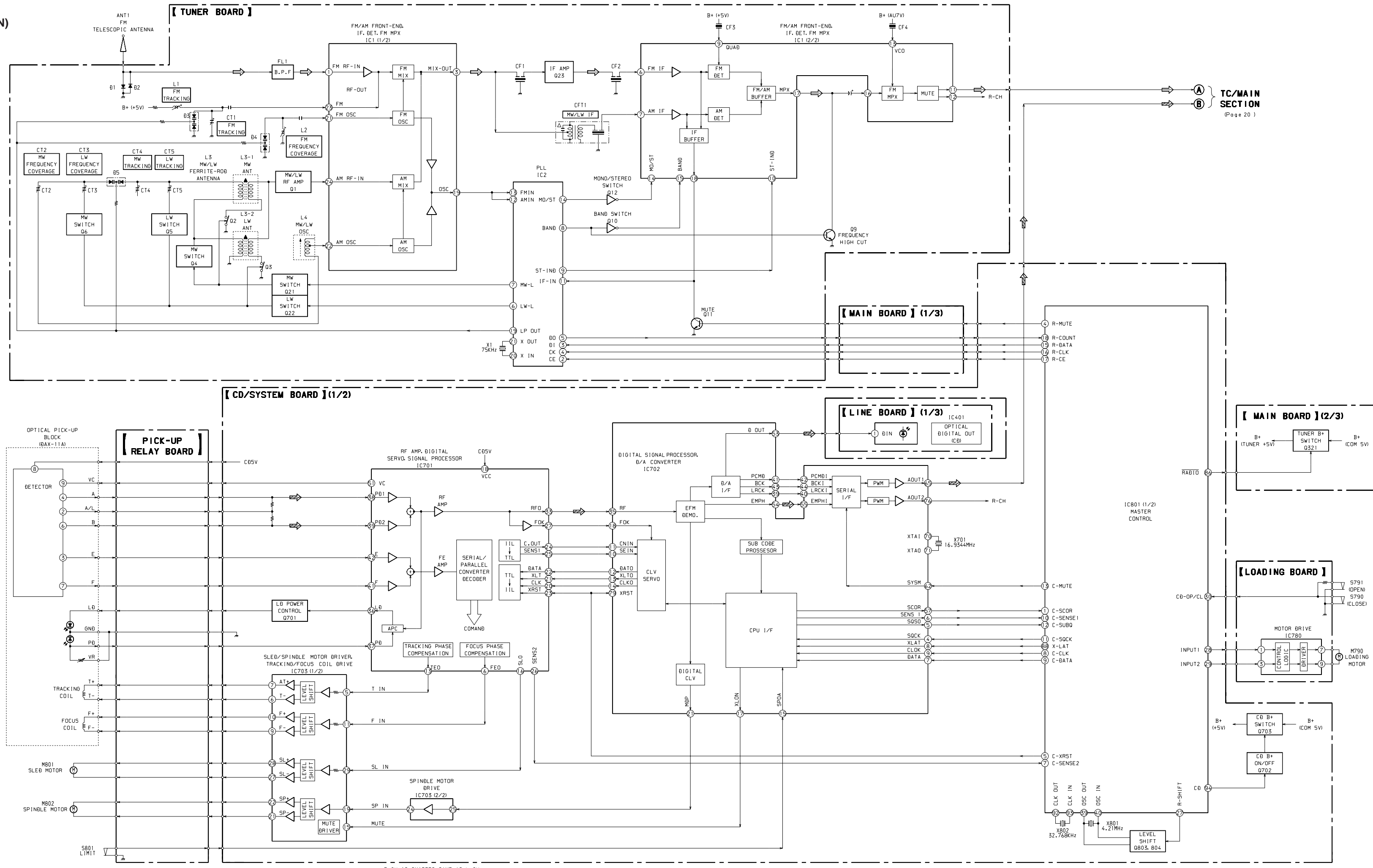
6-2. BLOCK DIAGRAMS (TAPE, MAIN SECTION)



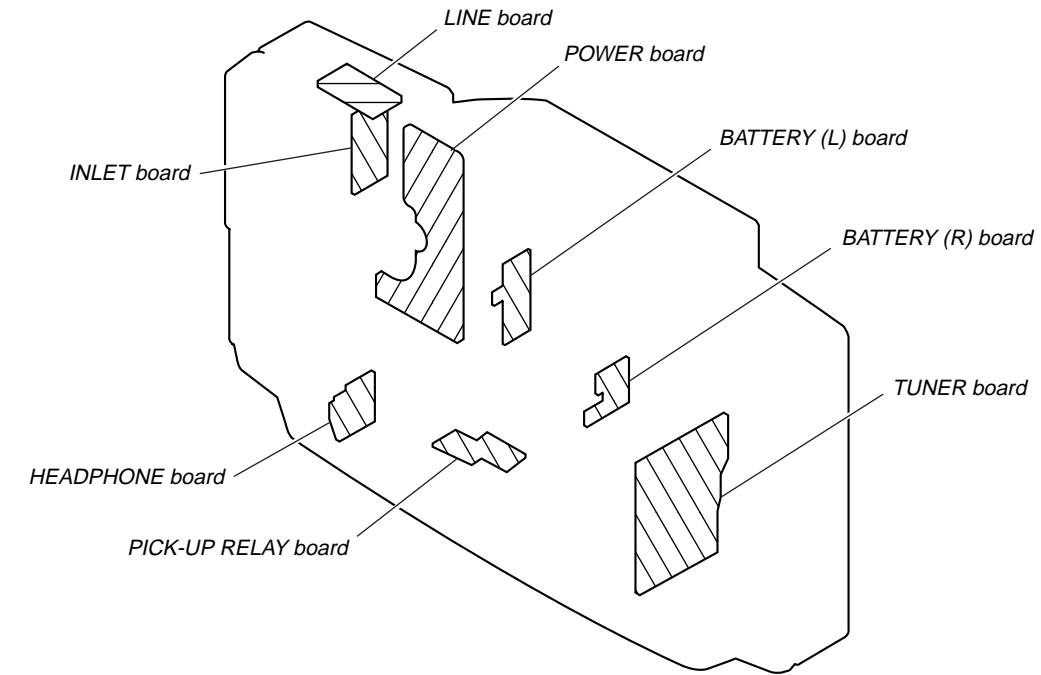
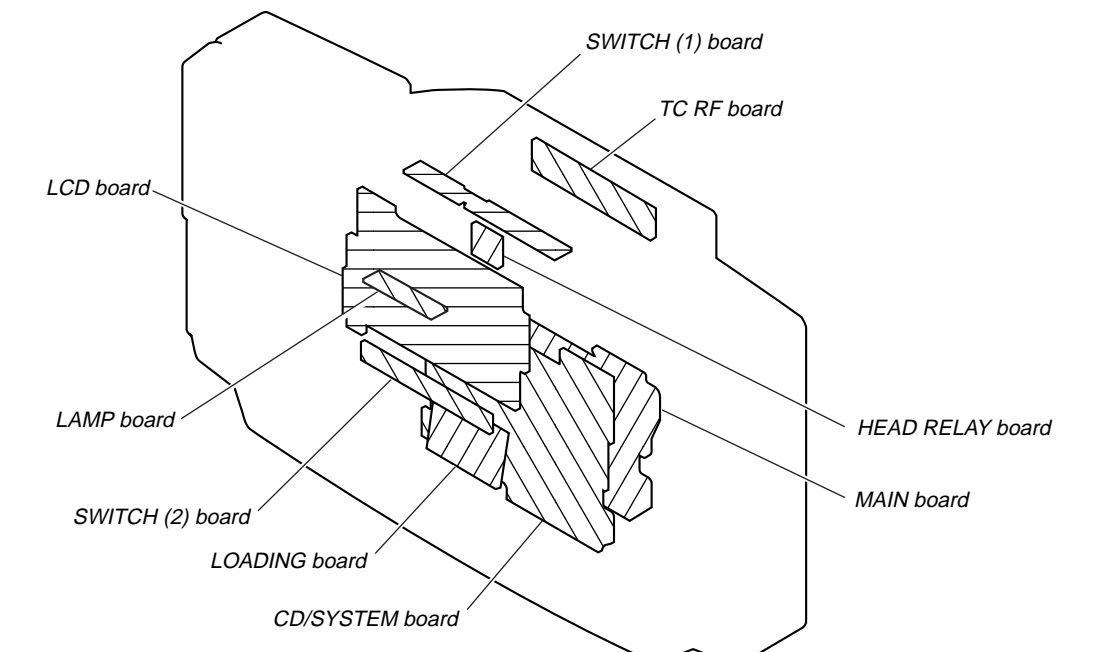
R-CH IS OMITTED-SAME AS L-CH

02

- Signal path.
- ◻ : FM
- ◻ : PB (L-CH)
- ◻ : REC (L-CH)
- ◻ : CD



• Circuit Boards Location

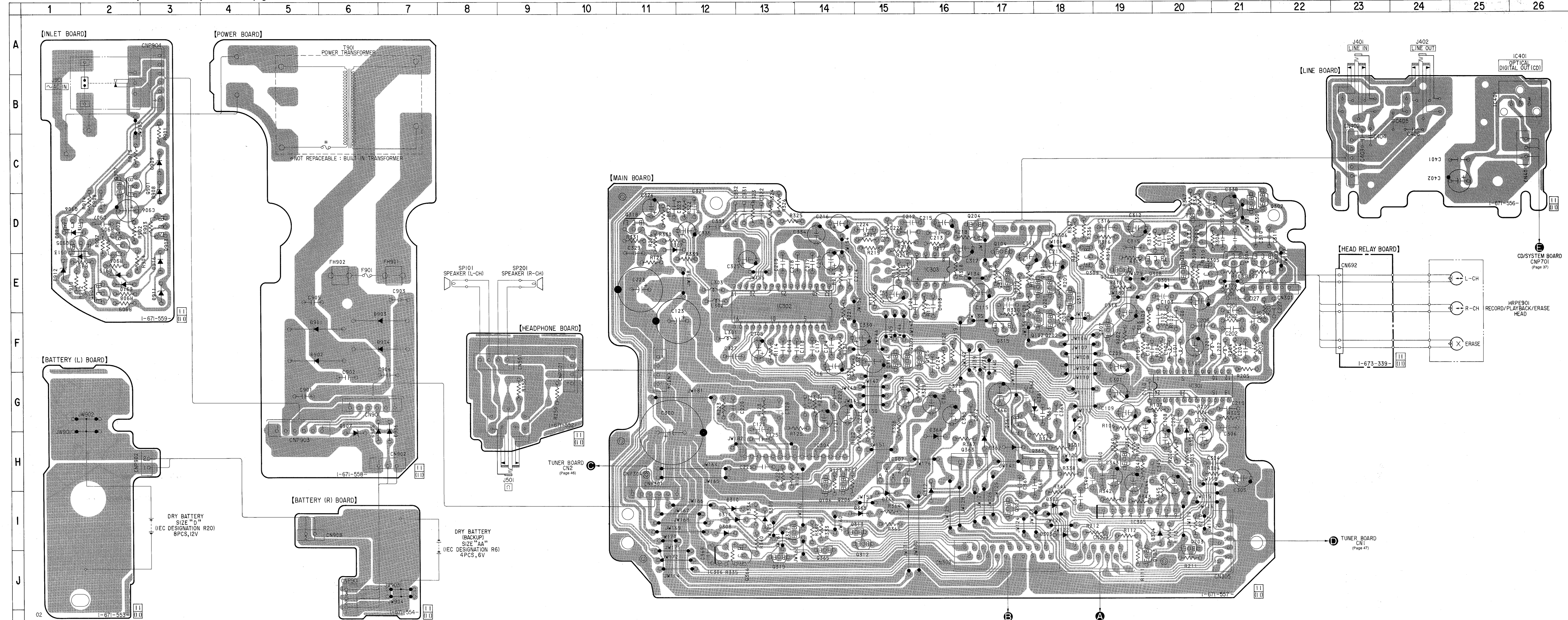


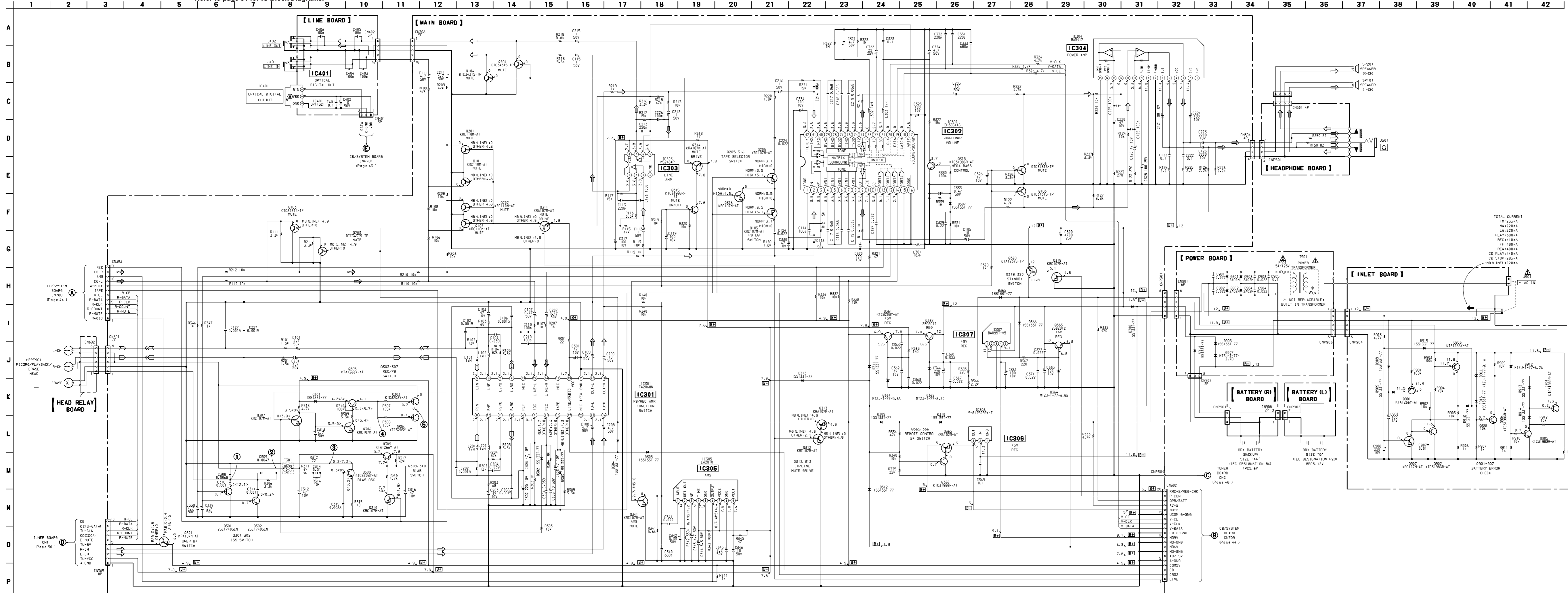
• Signal path.  
 — : FM  
 - - - : CD

• Semiconductor Location

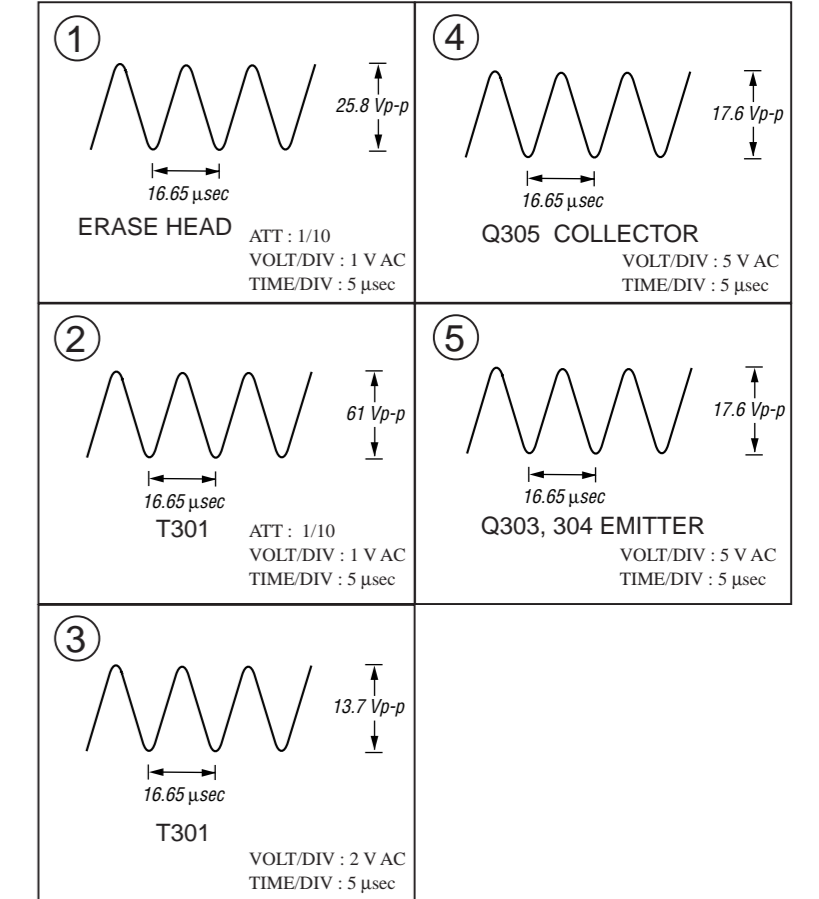
Ref. No.	Location	Ref. No.	Location
D301	E-20	Q106	H-14
D302	H-20	Q201	E-18
D303	I-18	Q202	F-18
D304	I-20	Q203	L-20
D305	I-18	Q204	D-16
D307	D-11	Q205	F-15
D308	I-12	Q206	H-14
D309	I-13	Q301	D-21
D310	I-12	Q302	D-21
D311	I-12	Q303	E-21
D312	H-16	Q304	E-21
D313	H-17	Q305	E-20
D361	G-17	Q306	E-20
D362	H-17	Q307	F-19
D364	H-16	Q308	E-20
D365	I-15	Q309	E-18
D366	I-15	Q310	E-19
D901	F-5	Q311	E-18
D902	F-5	Q312	I-15
D903	F-6	Q313	I-14
D904	F-6	Q314	E-17
D905	H-6	Q315	F-17
D906	H-7	Q316	F-15
D907	H-6	Q318	D-11
D908	C-3	Q319	J-13
D909	C-3	Q320	I-13
D910	E-2	Q321	I-17
D911	E-3	Q341	H-19
D912	E-1	Q361	G-17
D913	E-1	Q362	H-18
D914	D-1	Q363	H-16
D915	E-2	Q365	J-14
D916	E-3	Q366	J-13
IC301	G-20	Q901	C-2
IC302	E-13	Q902	D-2
IC303	E-16	Q903	D-3
IC304	H-14	Q904	E-2
IC305	I-19	Q905	D-1
IC306	J-12	Q906	D-1
IC307	H-15	Q907	C-2
IC401	B-26		
Q101	E-18		
Q102	F-18		
Q103	I-19		
Q104	D-17		
Q105	F-16		

Note:  
 • : parts extracted from the component side.  
 • : Pattern from the side which enables seeing.





Waveforms (Main Section)



**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ ;  $\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.

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

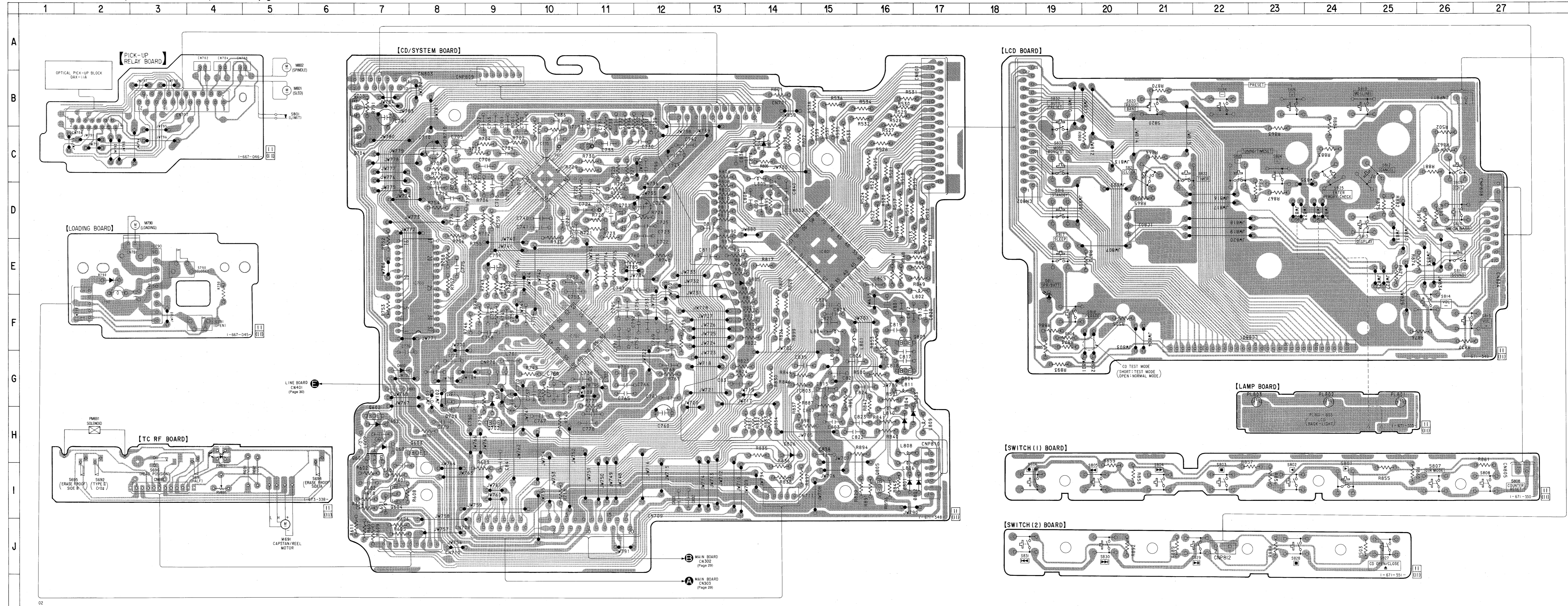
- $\text{B}+$  : B+ Line.
- Power voltage is dc 12V and fed with regulated dc power supply from external power voltage jack.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM
- < : REC
- Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- $\rightarrow$  : FM
- $\rightarrow$  : PB (L-CH)
- $\rightarrow$  : REC (L-CH)
- $\rightarrow$  : PB (R-CH)
- $\rightarrow$  : REC (R-CH)
- $\rightarrow$  : CD

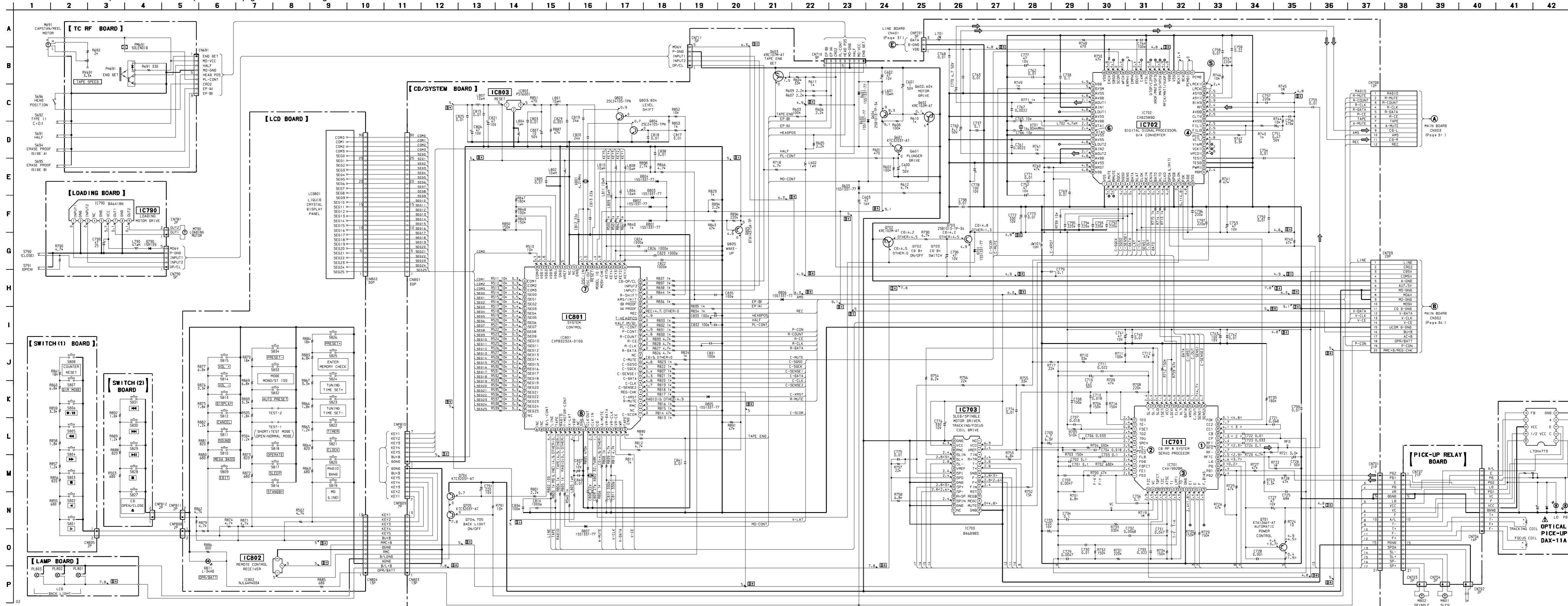
6-6. PRINTED WIRING BOARDS (CD/SYSTEM SECTION) • Refer to page 26 for Circuit Boards Location.

• Semiconductor Location

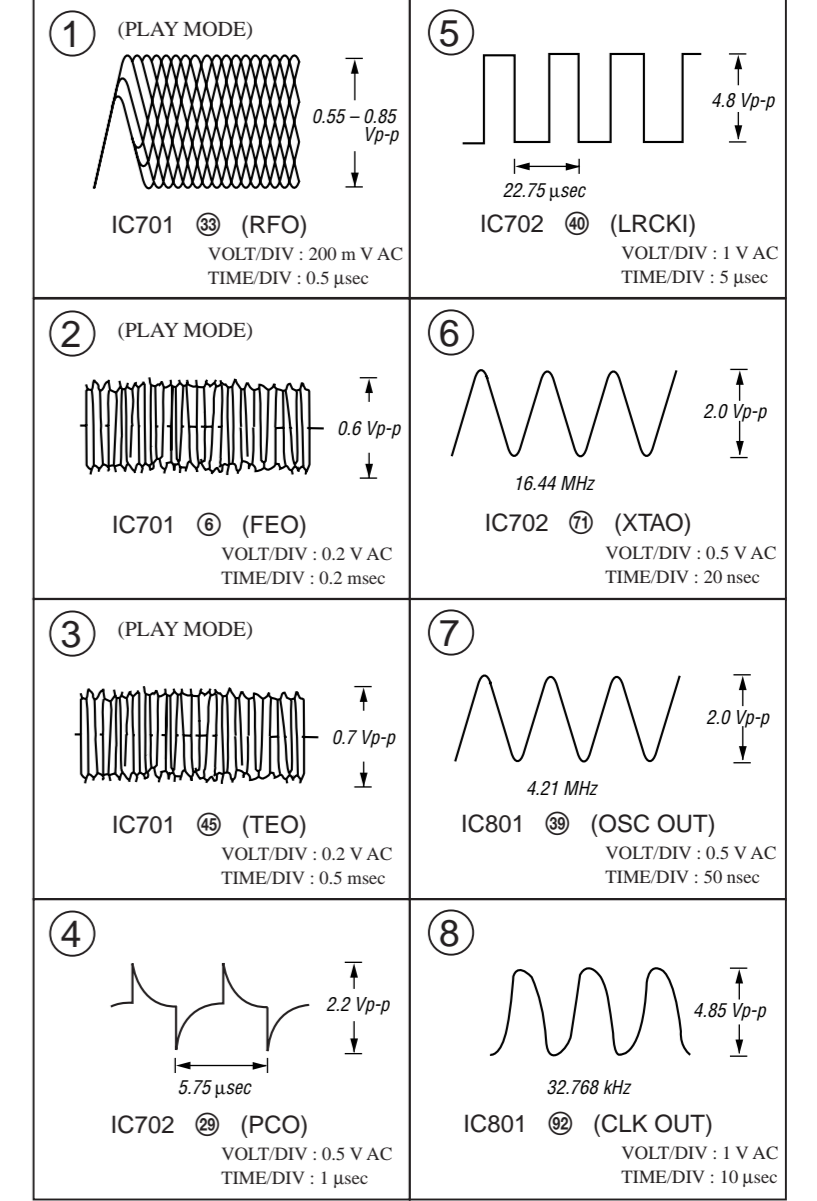
Ref. No.	Location
D601	H-7
D602	H-7
D603	G-7
D701	G-9
D790	E-2
D801	I-16
D802	I-17
D803	H-16
D804	H-16
D805	E-13
D806	H-14
D807	C-14
D811	F-19
IC701	C-10
IC702	F-10
IC703	E-8
IC790	E-3
IC801	E-15
IC802	D-20
IC803	G-15
Q601	H-7
Q602	H-7
Q603	H-8
Q604	I-7
Q701	D-11
Q702	H-9
Q703	G-8
Q704	C-7
Q705	B-7
Q803	F-16
Q804	G-16
Q805	I-16

Note:  
 • : parts extracted from the component side.  
 • : Pattern from the side which enables seeing.





• Waveforms (CD/System Section)



**Note:**

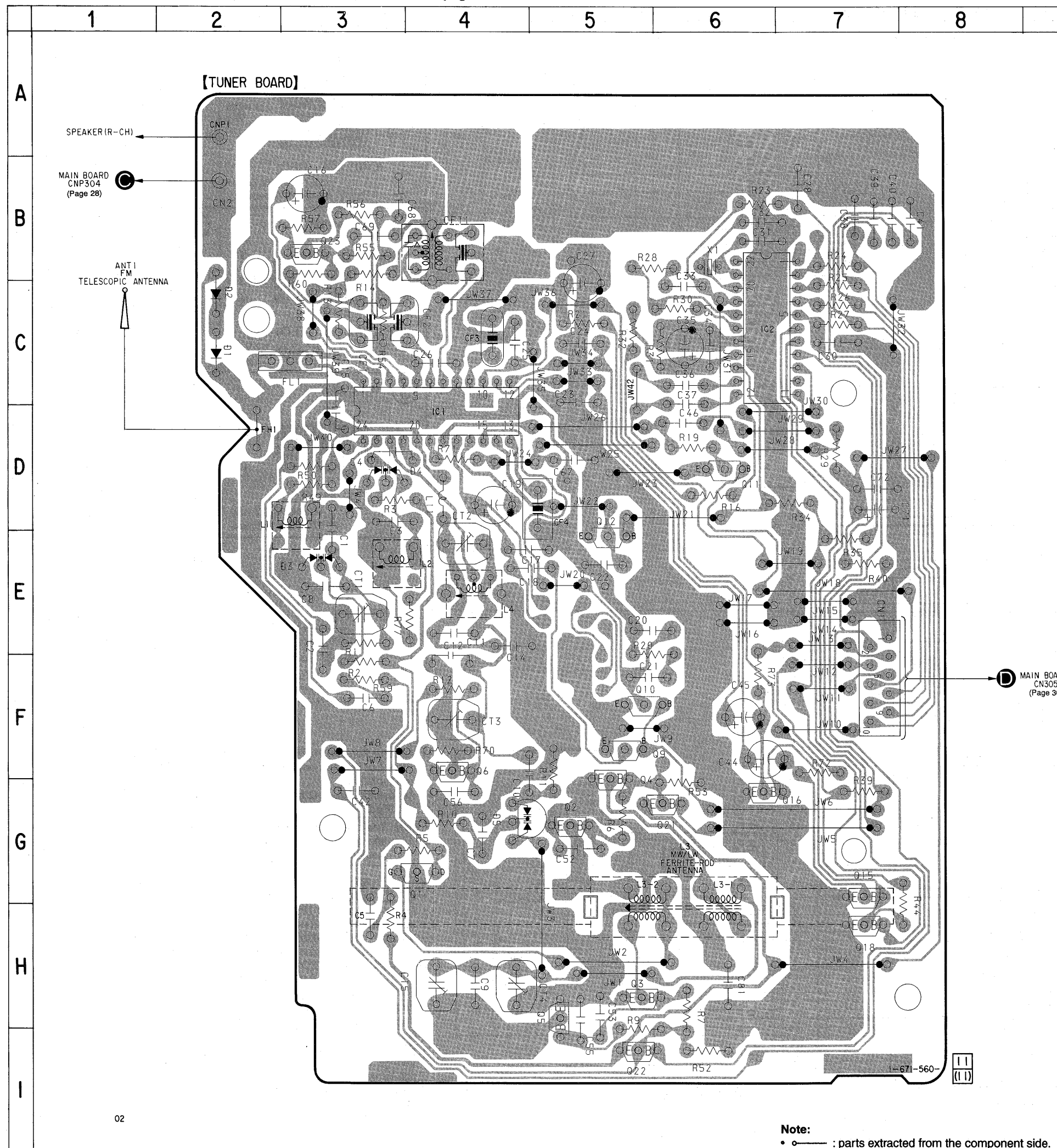
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$
- 50 W or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.

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

- $\square$  : B+ Line.
- $\square$  : adjustment for repair.
- Power voltage is dc 12V and fed with regulated dc power supply from external power voltage jack.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : FM (RADIO SECTION), CD STOP (CD SECTION)
- < : CD PLAY
- Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
- $\Rightarrow$  : CD

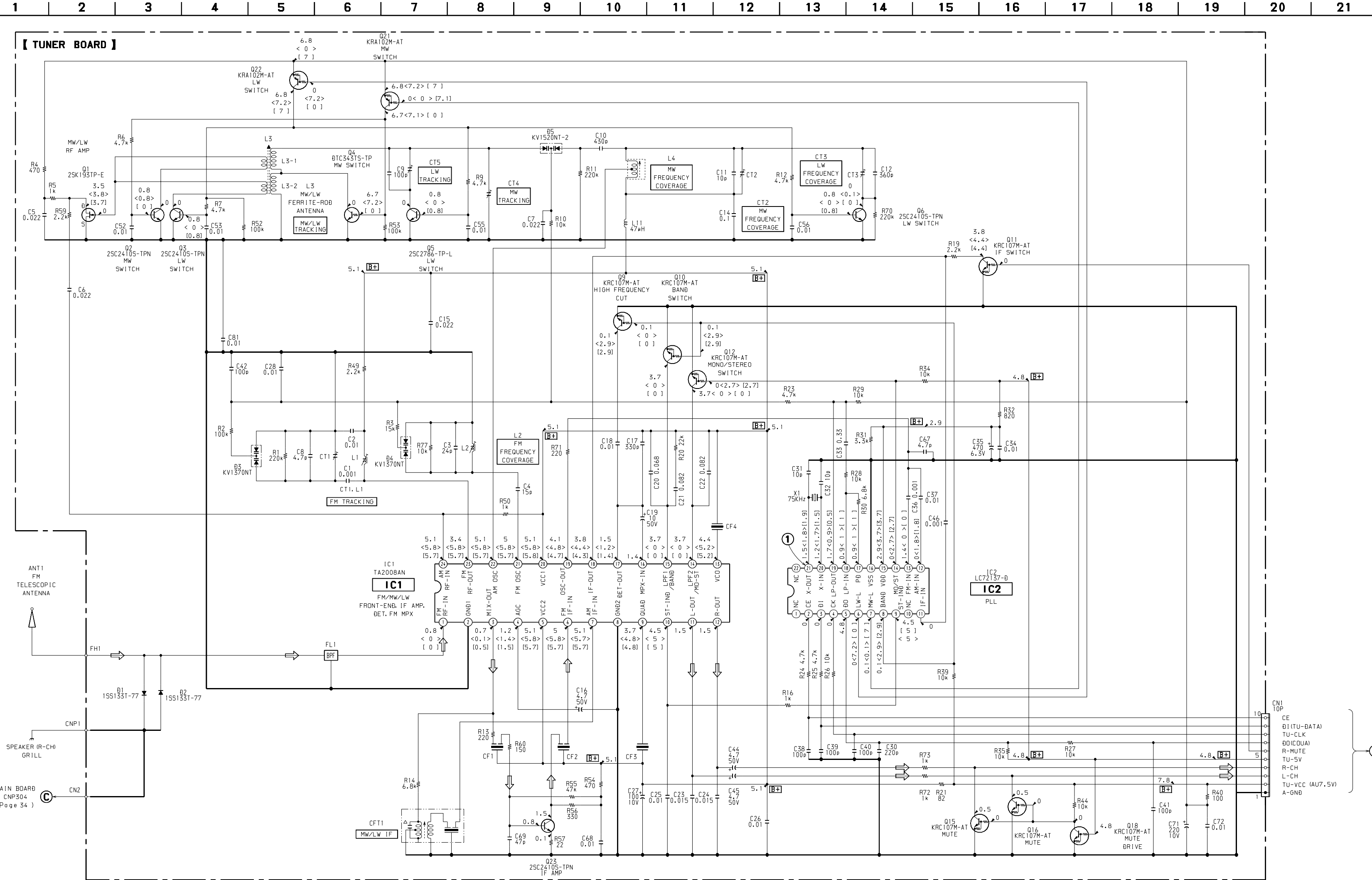
• Semiconductor Location

Ref. No.	Location
D1	C-2
D2	C-2
D3	E-3
D4	D-3
D5	G-4
IC1	D-4
IC2	C-6
Q1	G-4
Q2	G-5
Q3	H-5
Q4	F-5
Q5	H-5
Q6	F-4
Q9	F-5
Q10	F-5
Q11	D-6
Q12	E-5
Q15	G-7
Q16	G-6
Q18	H-7
Q21	G-6
Q22	I-5
Q23	B-3

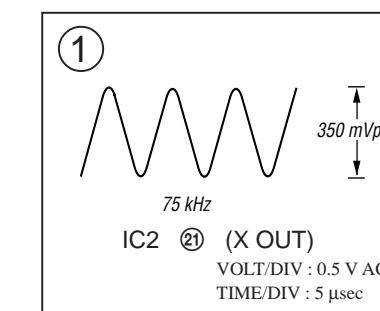


Note:  
 • — : parts extracted from the component side.  
 • : Pattern from the side which enables seeing.





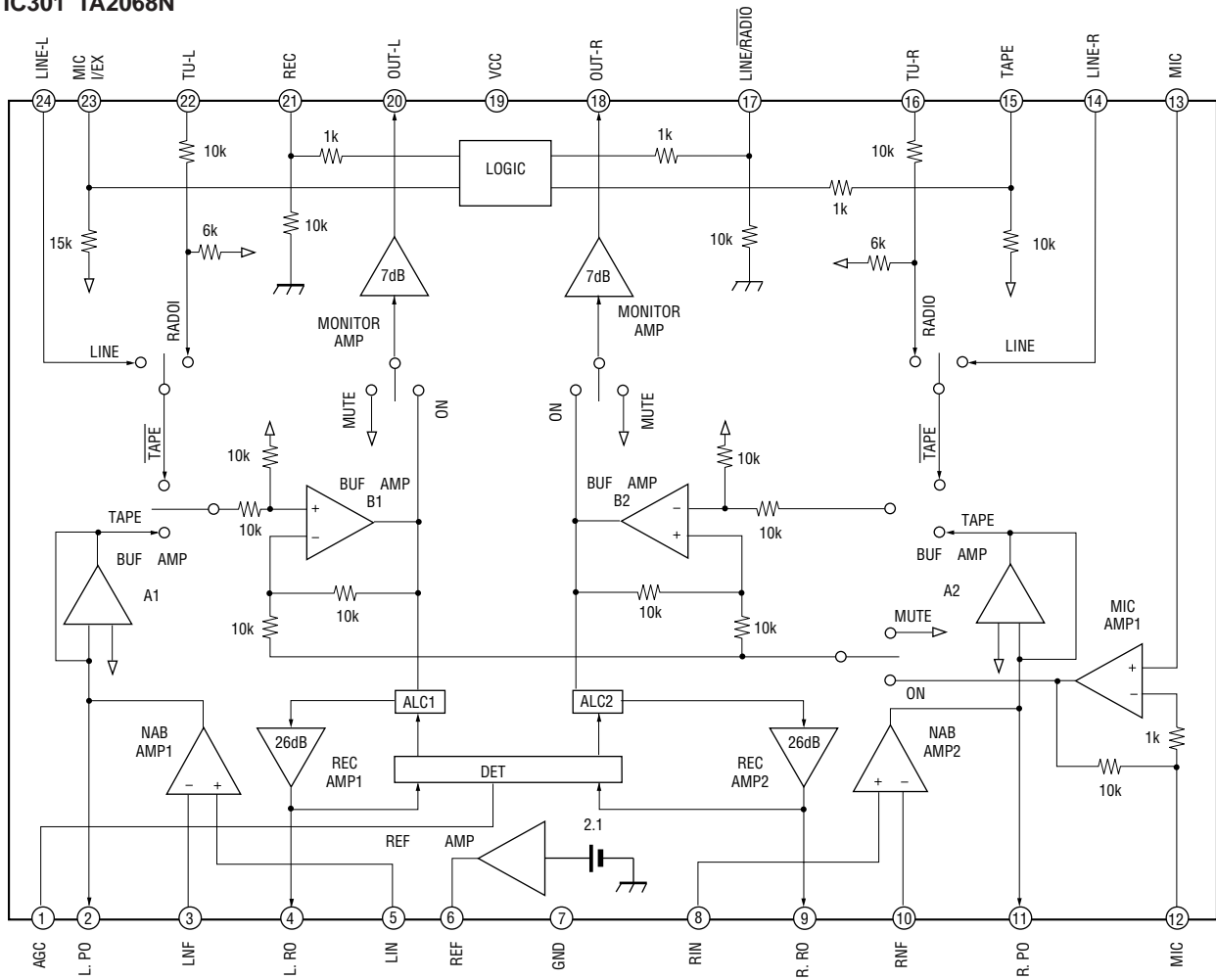
Waveforms (Tuner Section)



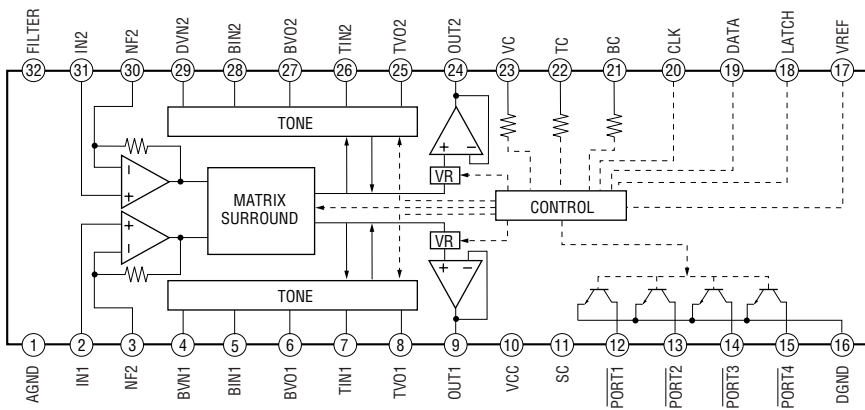
- Note:**
- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
  - All resistors are in  $\Omega$  and  $1/4\text{ W}$  or less unless otherwise specified.
  - $\Delta$  : internal component.
  - B+ : B+ Line.
  - [ ] : adjustment for repair.
  - Power voltage is dc 12V and fed with regulated dc power supply from external power voltage jack.
  - Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  - no mark : FM
  - < > : MW
  - [ ] : LW
  - Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
  - Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
  - Circled numbers refer to waveforms.
  - Signal path.
  - ↔ : FM

● IC Block Diagrams (Main Section)

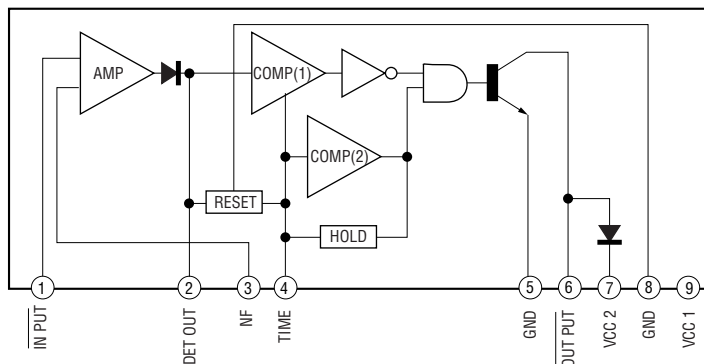
IC301 TA2068N



IC302 BH3854AS

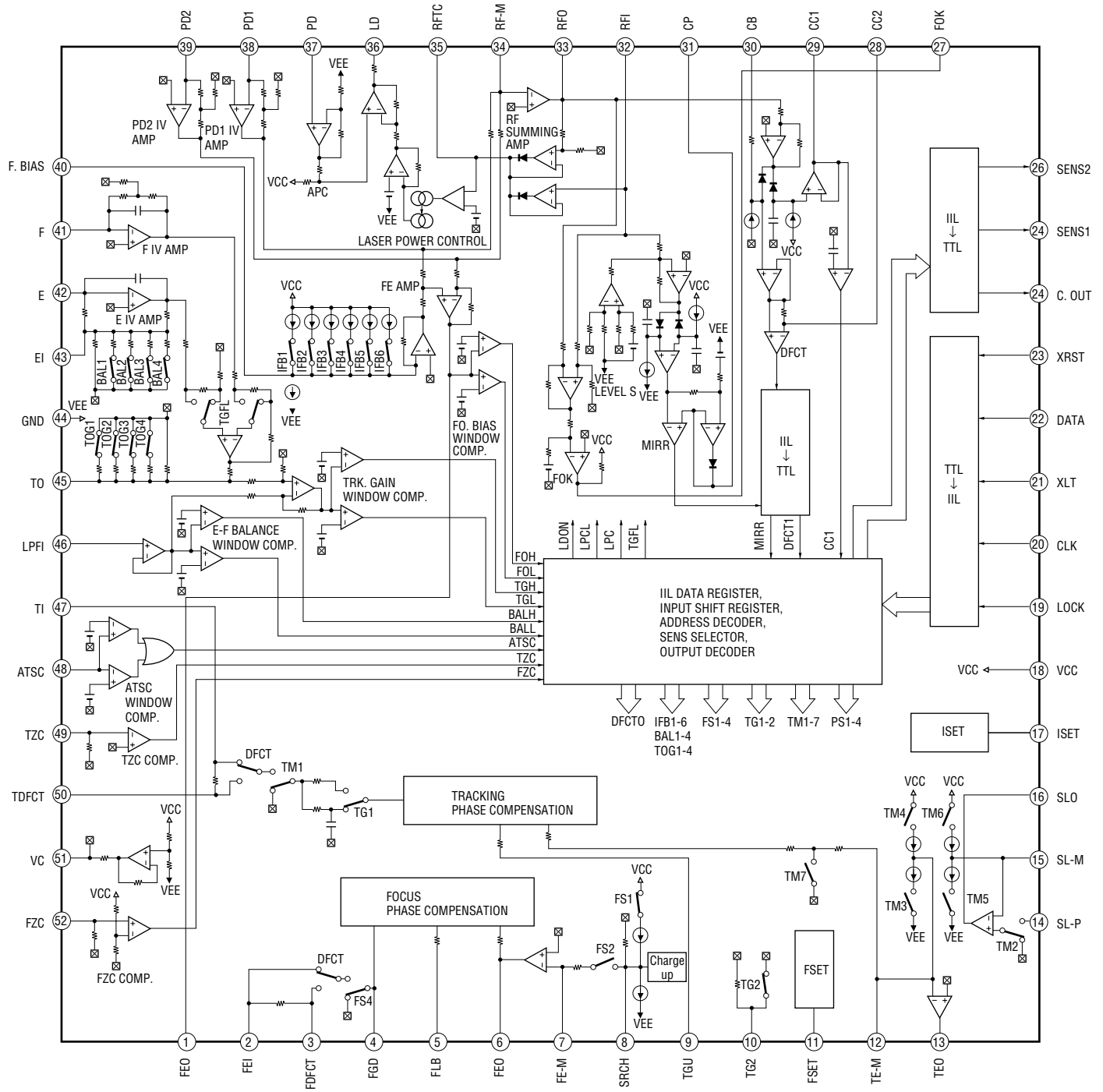


IC305 LA2010

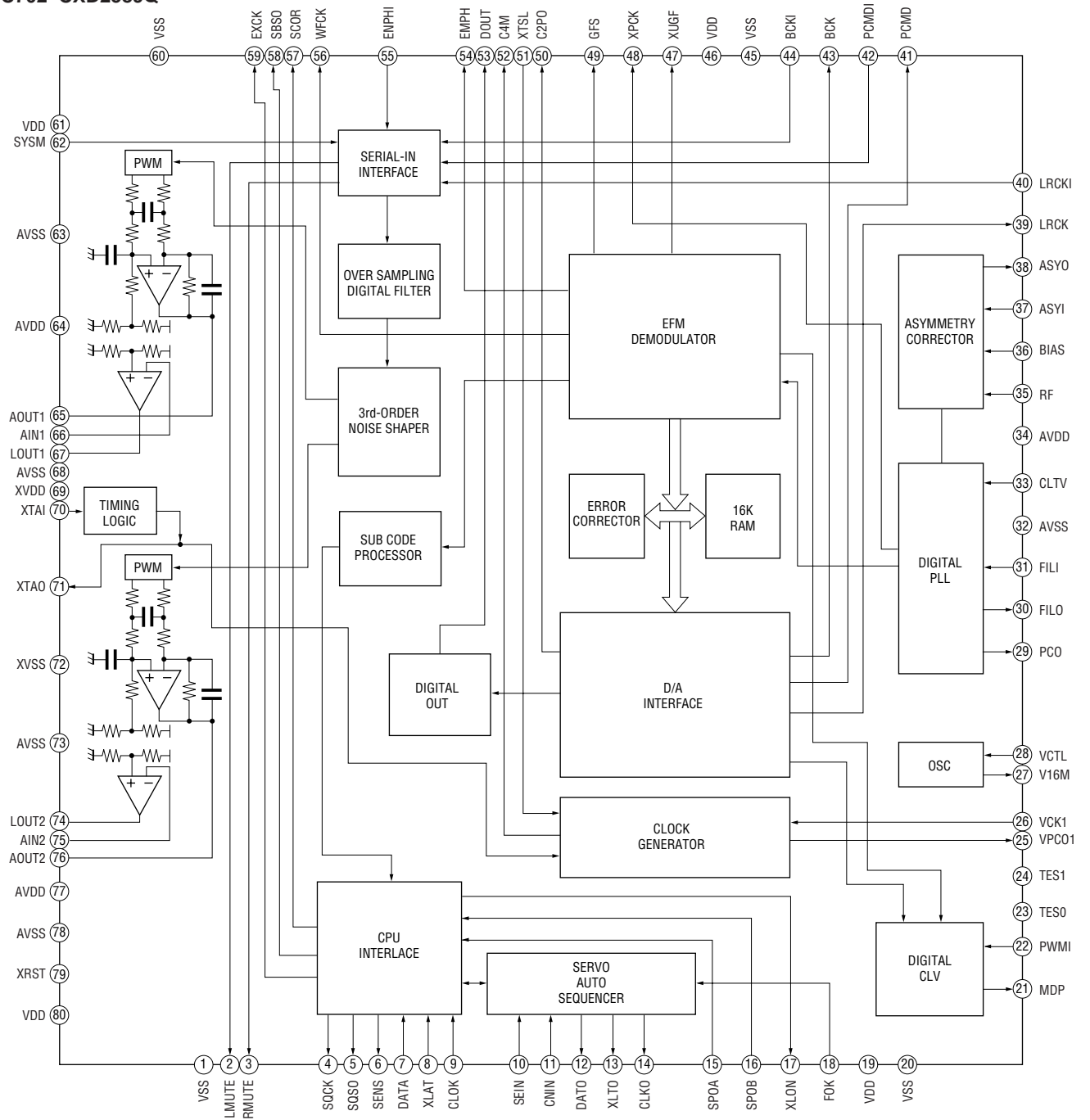


● IC Block Diagrams (CD/System Section)

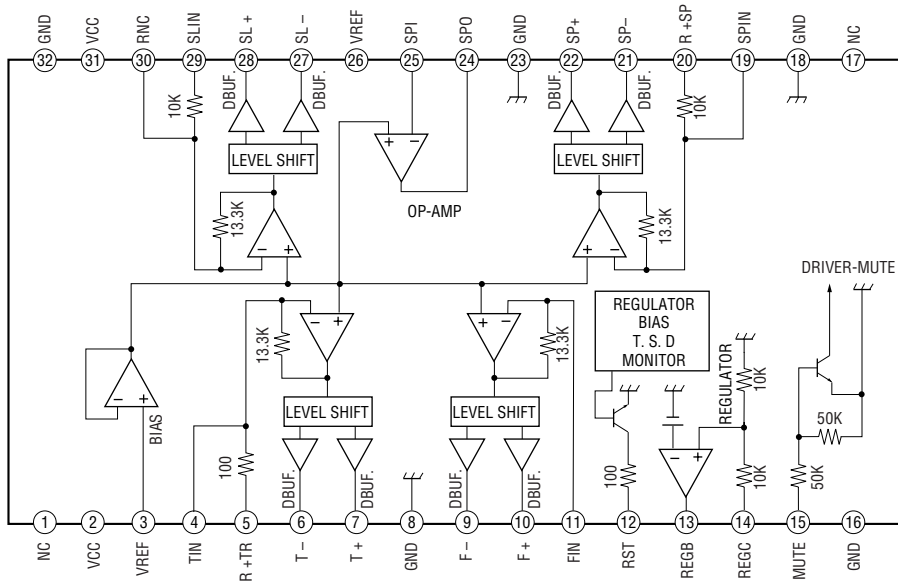
IC701 CXA1992BR



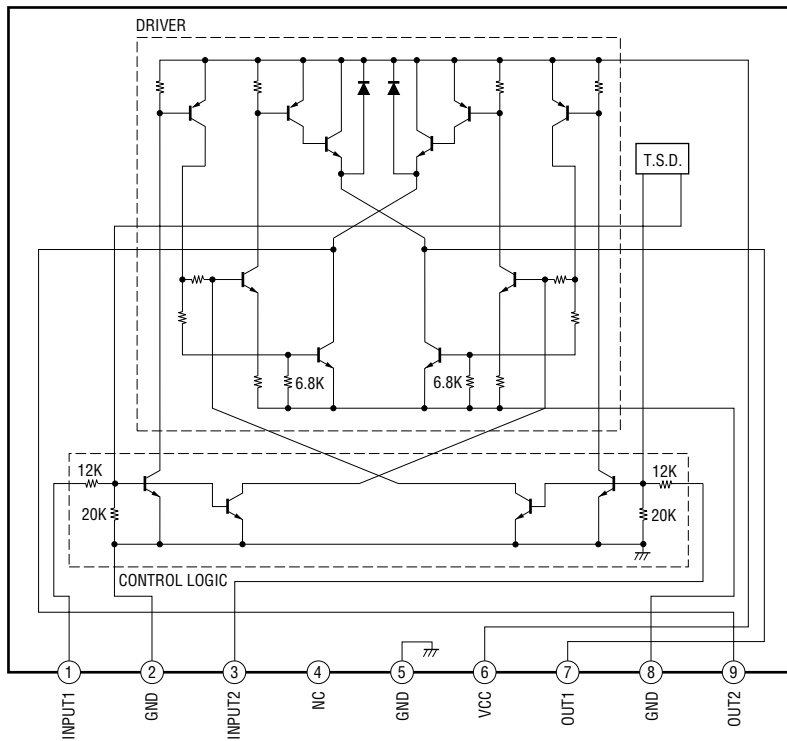
IC702 CXD2589Q



**IC703 BA6898S**

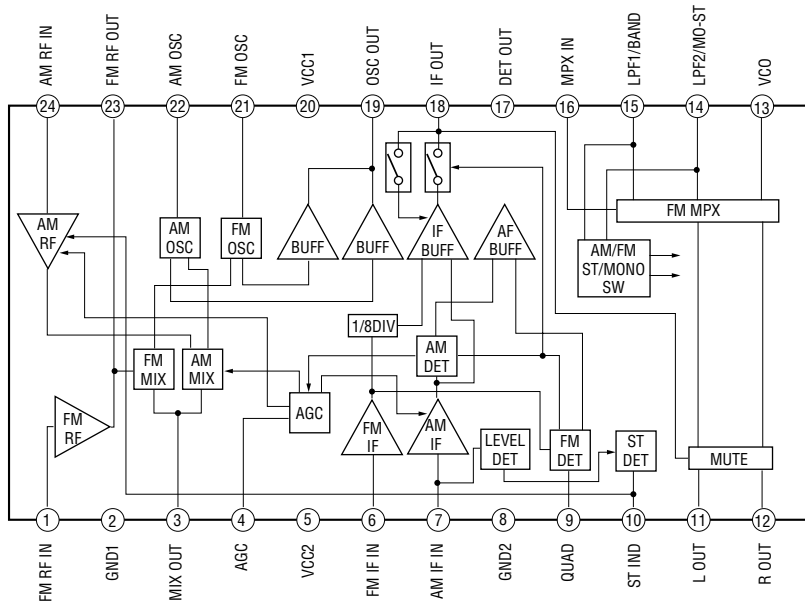


**IC790 BA6418N**

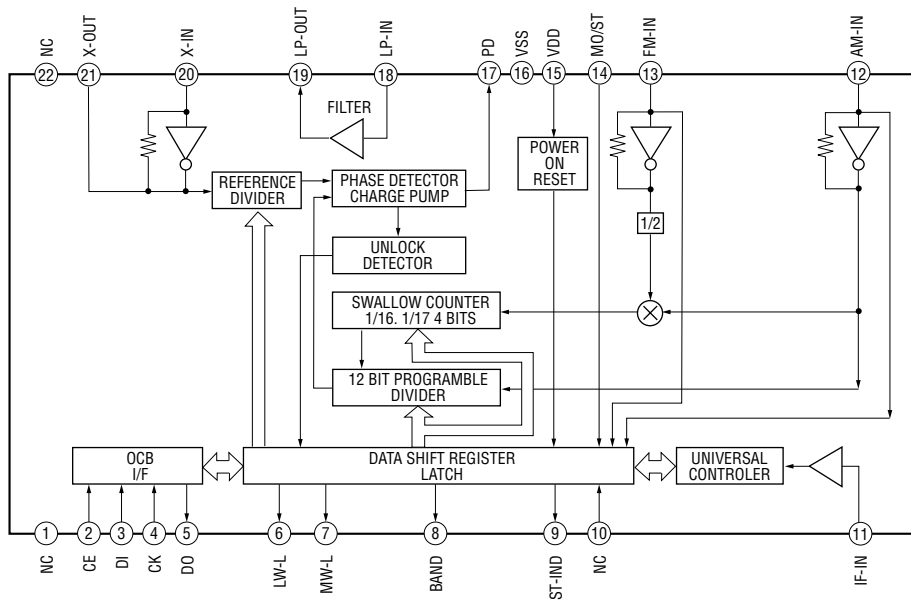


• IC Block Diagrams (Tuner Section)

IC1 TA2008AN



IC2 LC72137-D



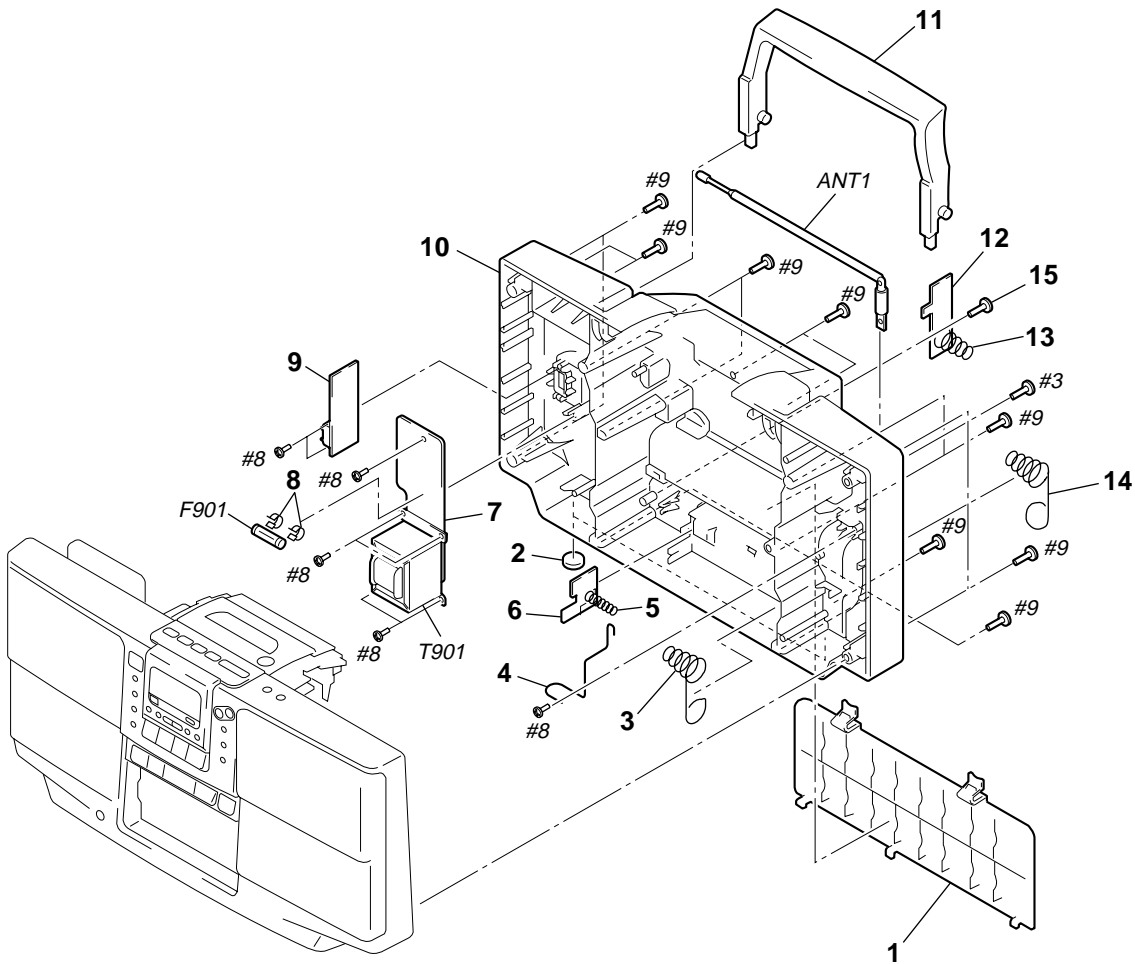
## SECTION 7 EXPLODED VIEWS

**NOTE :**

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked “ \* ” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

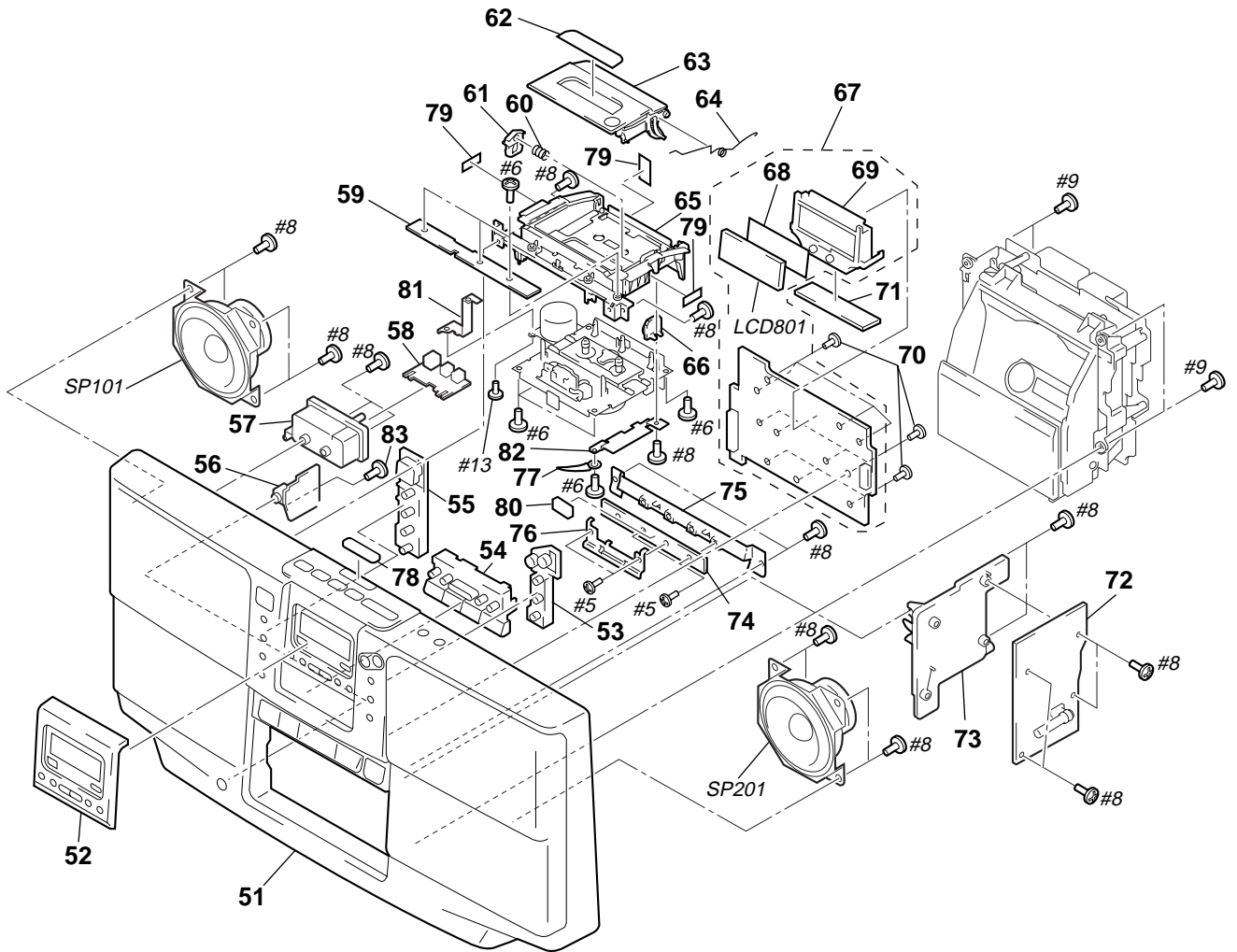
The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

### 7-1. REAR CABINET SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	3-389-436-32	LID, BATTERY CASE		11	3-028-600-01	HANDLE	
2	3-908-999-01	FOOT		* 12	1-671-553-11	BATTERY (L) BOARD	
3	3-028-598-01	SPRING (+-) (S), BATTERY		13	3-028-595-01	SPRING (-) (L), BATTERY	
4	3-028-599-01	TERMINAL, ANTENNA		14	3-028-597-01	SPRING (+-) (L), BATTERY	
5	3-028-596-01	SPRING (-) (S), BATTERY		15	4-981-789-01	BRACKET (2), YOKE	
* 6	1-671-554-11	BATTERY (R) BOARD		ANT1	1-754-055-11	ANTENNA, TELESCOPIC	
* 7	1-671-558-11	POWER BOARD		$\Delta$ F901	1-532-505-31	FUSE, TIME LAG (T5AL/250V)	
8	1-533-233-31	HOLDER, FUSE		$\Delta$ T901	1-433-456-11	TRANSFORMER, POWER	
* 9	1-671-559-11	INLET BOARD					
10	3-028-594-21	CABINET, REAR					

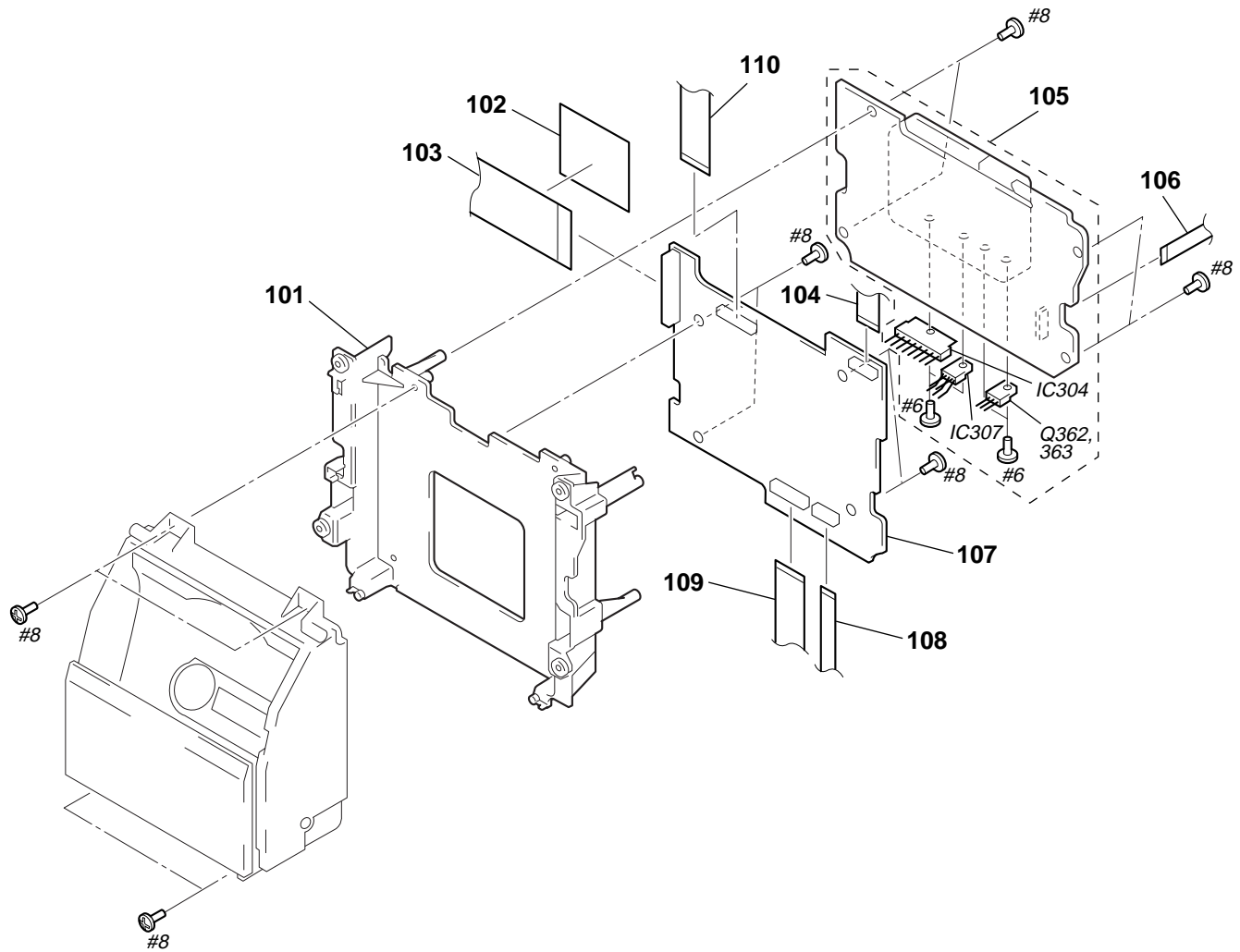
## 7-2. FRONT CABINET SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	X-3376-967-1	CABINET SUB ASSY, FRONT		70	4-951-620-11	SCREW (2.6X10), +BVTP	
52	3-028-604-11	WINDOW, LCD		* 71	1-671-555-11	LAMP BOARD	
53	3-028-611-01	BUTTON, VOLUME		* 72	A-3321-811-A	TUNER BOARD, COMPLETE	
54	3-028-613-11	BUTTON, FUNCTION		73	3-028-621-01	BRACKET, TUNER	
55	3-028-610-01	BUTTON, POWER		* 74	1-671-551-11	SWITCH (2) BOARD	
* 56	1-671-552-11	HEADPHONE BOARD		75	3-028-615-01	BRACKET, CD BUTTON	
57	3-028-622-02	BRACKET, LINE		76	3-031-094-02	BRACKET (2), CD	
* 58	1-671-556-11	LINE BOARD		77	3-703-397-01	STOPPER, WIRING	
* 59	1-671-550-11	SWITCH (1) BOARD		78	3-028-605-01	WINDOW, AZIMUTH	
60	3-029-159-01	SPRING, PUSH CATCHER RETURN		79	3-831-441-99	CUSHION (A)	
61	3-029-158-01	CATCHER, PUSH		80	3-831-441-11	CUSHION (B)	
62	3-028-602-01	WINDOW, CASSETTE		* 81	3-032-990-01	BRACKET, MD	
63	3-028-601-11	HOLDER, CASSETTE		82	3-031-956-01	PLATE, UPPER	
64	3-028-603-01	SPRING, CASSETTE OPEN		83	4-981-789-01	BRACKET (2), YOKE	
65	3-028-593-02	CABINET, UPPER		LCD801	1-803-232-11	DISPLAY PANEL, LIQUID CRYSTAL	
66	3-922-112-31	DAMPER		SP101	1-505-742-11	SPEAKER (8cm) (L-CH)	
* 67	A-3321-808-A	LCD BOARD, COMPLETE		SP201	1-505-742-11	SPEAKER (8cm) (R-CH)	
68	3-028-618-02	ILLUMINATOR					
69	3-028-617-01	HOLDER, LCD					

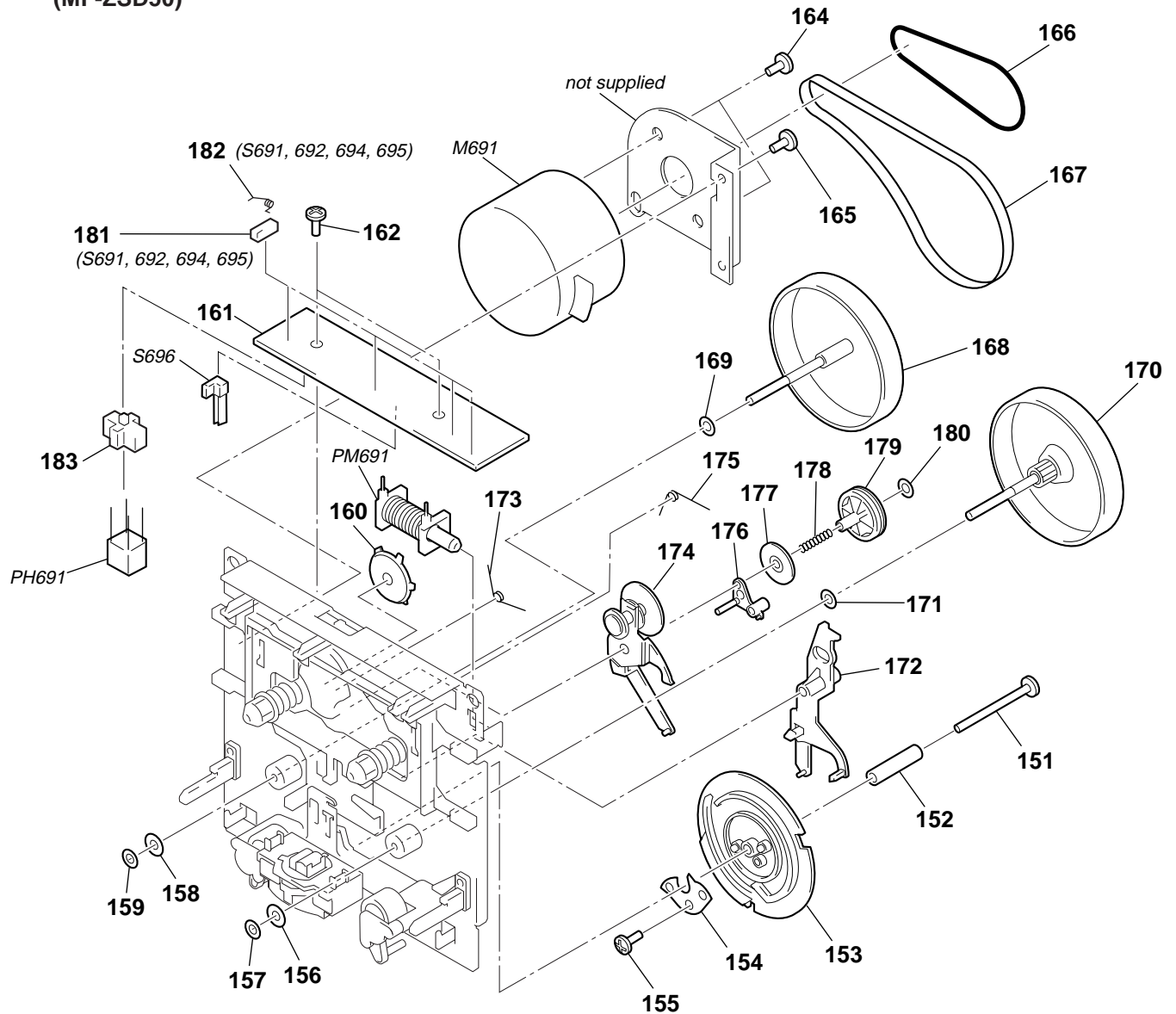


### 7-3. CD BLOCK SECTION



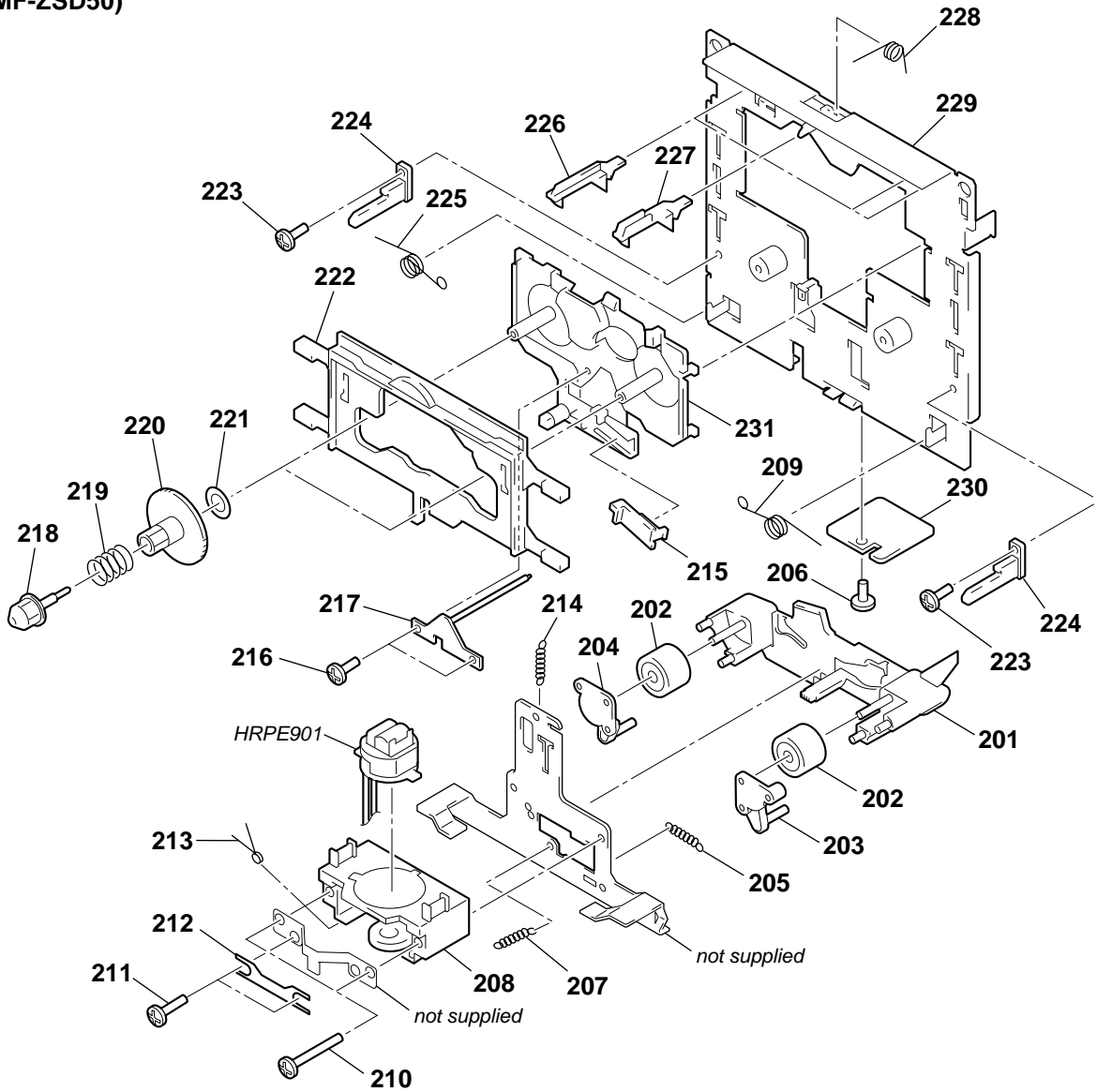
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	3-028-619-01	BRACKET, CD		108	1-783-991-11	WIRE, PARALLEL (FFC) (12 CORE)	
102	3-028-649-01	PAPER, SHIELD		109	1-783-992-11	WIRE, PARALLEL (FFC) (20 CORE)	
103	1-783-993-11	WIRE, PARALLEL (FFC) (30 CORE)		110	1-782-663-11	WIRE (FLAT TYPE) (21CORE)	
104	1-783-994-11	WIRE, PARALLEL (FFC) (13 CORE)		IC304	8-759-426-51	IC BA5417	
* 105	A-3321-813-A	MAIN BOARD, COMPLETE		IC307	8-759-564-82	IC BA09ST-V5	
106	1-783-990-11	WIRE, PARALLEL (FFC) (10 CORE)		Q362	8-729-209-15	TRANSISTOR 2SD2012	
* 107	A-3321-812-A	CD/SYSTEM BOARD, COMPLETE		Q363	8-729-209-15	TRANSISTOR 2SD2012	

**7-4. MECHANISM DECK SECTION-1  
(MF-ZSD50)**



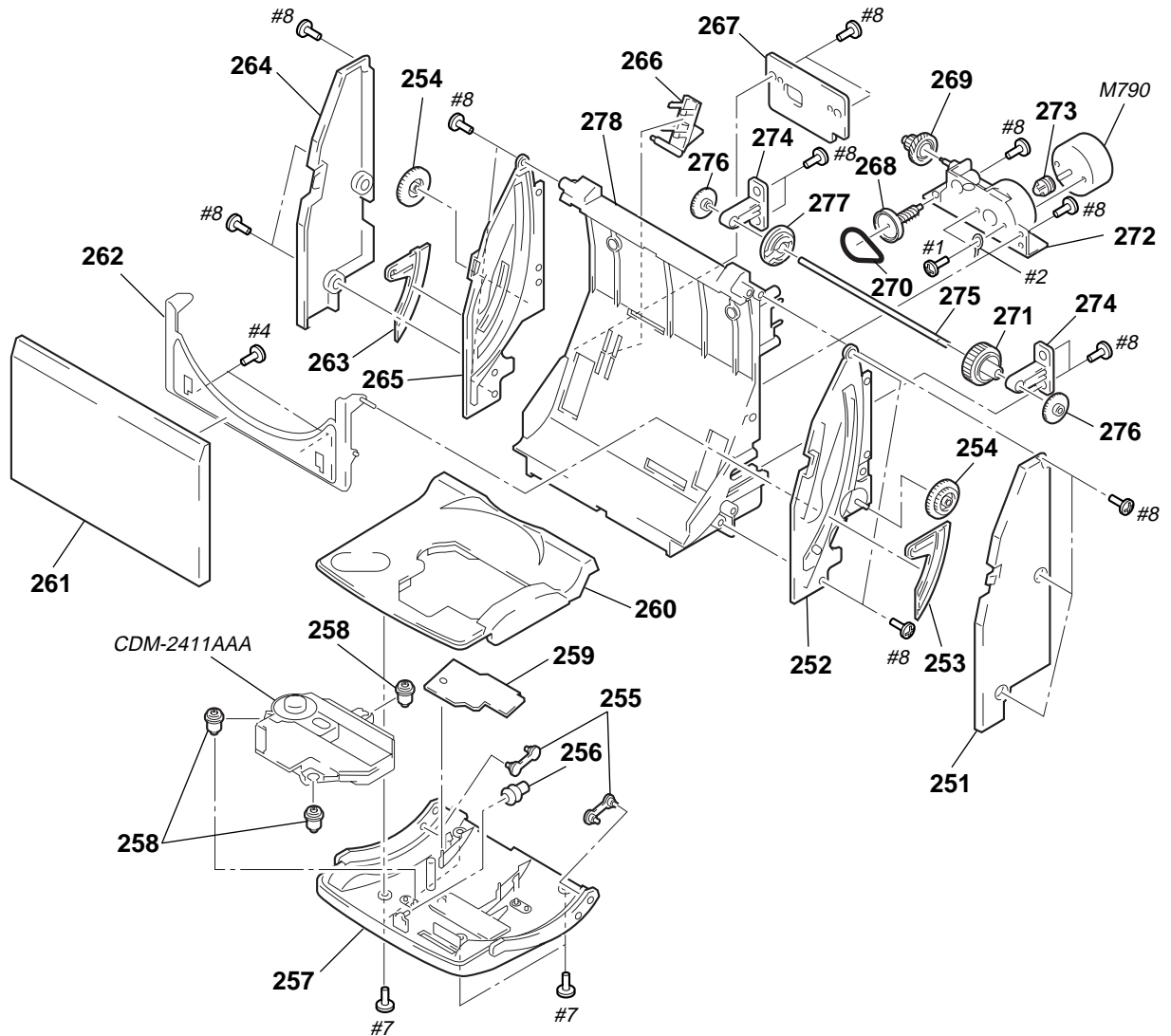
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	3-029-619-01	SCREW		171	3-029-626-01	WASHER	
152	3-029-591-01	COLLAR		172	3-029-589-01	TRIGGER, ARM	
153	3-029-590-01	CAM, GEAR		173	3-029-611-01	SPRING	
154	3-034-597-01	CAM, ARM		174	3-029-593-01	CLUTCH	
155	3-704-418-14	SCREW (M1.7X4), TAPPING		175	3-029-612-01	SPRING	
156	3-029-623-01	WASHER		176	3-029-594-01	ARM (UD B)	
157	3-029-622-01	WASHER		177	3-029-595-01	GEAR (UD)	
158	3-029-621-01	WASHER		178	3-029-613-01	SPRING	
159	3-029-620-01	WASHER		179	3-029-596-01	PULLEY (D)	
160	3-029-587-01	COVER		180	3-029-627-01	WASHER	
* 161	1-673-338-11	TC RF BOARD		181	3-034-694-01	BOX (SW) (S691, 692, 694, 695)	
162	3-938-944-01	SCREW (D)		182	3-034-693-01	SPRING (SW) (S691, 692, 694, 695)	
164	3-029-618-01	SCREW		183	3-029-600-01	SPACER	
165	3-029-614-01	SCREW		M691	3-034-599-01	MOTOR ASSY (CAPSTAN/REEL) (INCLUDING PULLEY)	
166	3-029-599-01	BELT (FR)		PH691	8-729-021-62	PHOTO INTERRUPTOR SG-211	
167	3-029-598-01	BELT (BR)		PM691	1-454-896-11	SOLENOID, PLUNGER	
168	3-029-588-01	FLYWHEEL (L)		S696	1-771-661-11	SWITCH, LEAF (HEAD POSITION)	
169	3-029-625-01	WASHER					
170	3-029-592-01	FLYWHEEL (R)					

7-5. MECHANISM DECK SECTION-2  
(MF-ZSD50)



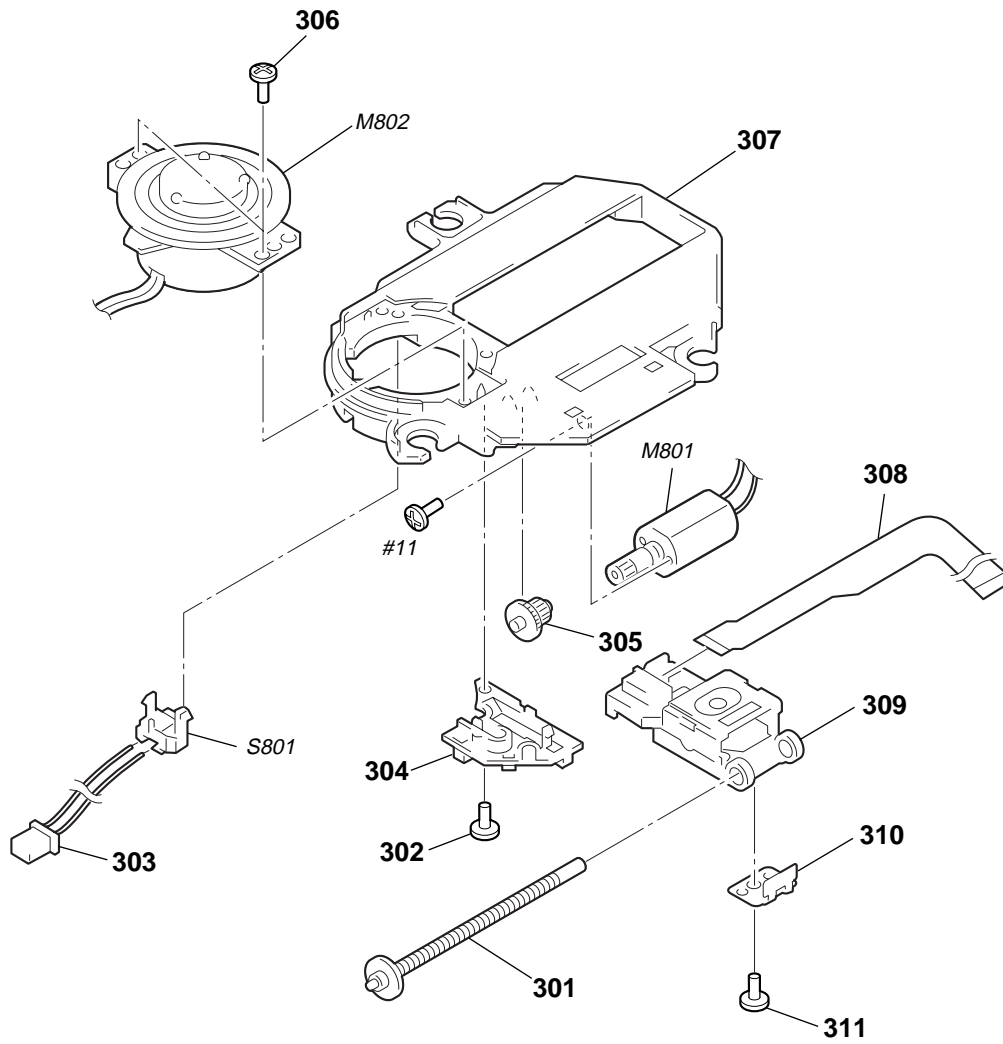
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	3-029-573-01	LEVER (HD)		217	3-029-577-01	PLATE (D)	
202	3-029-576-01	PINCH, ROLLER		218	3-029-578-01	REEL, CAP	
203	3-029-574-01	PINCH (R), CAP		219	3-029-602-01	SPRING	
204	3-029-575-01	PINCH (L), CAP		220	3-029-579-01	REEL, GEAR	
205	3-029-608-01	SPRING		221	3-029-624-01	WASHER	
206	3-029-617-01	SCREW		222	3-029-582-01	BRAKE, LEVER	
207	3-029-607-01	SPRING		223	3-029-615-01	SCREW	
208	3-029-570-01	FRAME (HD)		224	3-029-581-01	GUIDE (C)	
209	3-029-604-01	SPRING		225	3-029-603-01	SPRING	
210	3-029-616-01	SCREW		226	3-029-585-01	ARM (SW)	
211	3-938-941-01	SCREW (A)		227	3-029-584-01	ARM (CS)	
212	3-034-598-01	SPRING, AZIMUTH		228	3-029-610-01	SPRING	
213	3-029-606-01	SPRING		* 229	3-029-586-01	CHASSIS, MECHANISM	
214	3-029-609-01	SPRING		* 230	1-673-339-11	HEAD RELAY BOARD	
215	3-029-580-01	LEVER (ST)		231	3-029-583-01	FRAME (A)	
216	3-029-614-01	SCREW		HRPE9011-418-847-11	HEAD ASSY, HOLDER (RECORD/PLAYBACK/ERASE)		

7-6. CD SECTION  
(VLM-ZSD50-142)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
251	3-017-025-11	COVER (R), SIDE		266	3-017-017-11	LEVER, DETECTION	
252	3-017-012-11	PLATE (R), SIDE		* 267	1-667-045-11	LOADING BOARD	
253	3-017-014-11	SLIDER (R)		268	3-017-031-11	GEAR (A)	
254	3-017-027-11	GEAR (C)		269	3-017-032-11	GEAR (B)	
255	3-017-016-11	SHAFT, TRAY		270	3-017-030-01	BELT	
256	4-975-811-01	INSULATOR		271	3-017-008-11	GEAR (R), TIMING	
257	3-017-022-21	TRAY (BOTTOM), CD		272	3-017-036-11	CHASSIS, GEAR	
258	4-975-762-11	INSULATOR		273	2-627-174-01	PULLEY (MOTOR)	
* 259	1-667-046-11	PICK-UP RELAY BOARD		274	3-017-009-11	BEARING	
260	3-020-624-21	TRAY (TOP), CD		275	3-017-010-11	SHAFT	
261	3-028-620-01	LID, CD		276	3-017-028-11	GEAR (D)	
262	X-3374-204-1	WINDOW ASSY, CD		277	3-017-029-11	GEAR (L), TIMING	
263	3-017-013-11	SLIDER (L)		278	3-017-024-21	CHASSIS, LOADING	
264	3-017-035-11	COVER (L), SIDE		M790	1-698-999-11	MOTOR, DC (LOADING)	
265	3-017-011-11	PLATE (L), SIDE					

**7-7. OPTICAL PICK-UP SECTION  
(CDM-2411AAA)**



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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
301	A-3303-970-A	SCREW ASSY, FEED		308	1-660-965-11	SLIDE FLEXIBLE BOARD	
302	3-318-203-11	SCREW (B1.7X6), TAPPING		$\triangle$ 309	X-4950-060-1	OPTICAL PICK-UP (DAX01A2 RP)	
303	1-690-530-81	LEAD (WITH CONNECTOR)		310	4-972-165-01	RACK	
304	4-972-163-04	SPRING, SLED					
305	4-974-003-01	GEAR (B)		311	4-973-631-01	SCREW	
306	3-719-401-11	SCREW (B1.7), TAPPING		M801	A-3303-403-A	MOTOR ASSY (SLED) (INCLUDING GEAR)	
* 307	4-972-162-01	CHASSIS		M802	A-3303-971-A	MOTOR ASSY, TURNTABLE (SPINDLE)	
				S801	1-571-099-21	SWITCH (1 KEY) (LIMIT)	

# SECTION 8 ELECTRICAL PARTS LIST

BATTERY (L)

BATTERY (R)

CD/SYSTEM

**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, -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 :  $\mu$  , for example :  
uA..... :  $\mu$  A..... , uPA..... :  $\mu$  PA.....  
uPB..... :  $\mu$  PB..... , uPC..... :  $\mu$  PC.....  
uPD..... :  $\mu$  PD.....
- CAPACITORS  
uF :  $\mu$  F
- COILS  
uH :  $\mu$  H
- Abbreviation  
IT : Italian  
EE : East European

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  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
*	1-671-553-11	BATTERY (L) BOARD *****		C727	1-104-664-11	ELECT	47uF 20% 10V
	3-028-595-01	SPRING (-) (L), BATTERY *****		C728	1-162-294-31	CERAMIC	0.001uF 10% 50V
	1-671-554-11	BATTERY (R) BOARD *****		C729	1-162-600-11	CERAMIC	0.0047uF 30% 16V
	3-028-596-01	SPRING (-) (S), BATTERY  < CONNECTOR >		C730	1-162-306-11	CERAMIC	0.01uF 30% 16V
* CN908	1-564-505-11	PLUG, CONNECTOR 2P *****		C731	1-130-491-00	MYLAR	0.047uF 5% 50V
	A-3321-812-A	CD/SYSTEM BOARD, COMPLETE *****		C732	1-162-305-11	CERAMIC	0.0068uF 30% 16V
	1-783-991-11	WIRE, PARALLEL (FFC) (12 CORE)		C733	1-101-005-00	CERAMIC	22000PF 50V
	1-783-992-11	WIRE, PARALLEL (FFC) (20 CORE)  < CAPACITOR >		C734	1-162-851-11	CERAMIC	0.1uF 10% 16V
C600	1-124-903-11	ELECT	1uF 20% 50V	C735	1-104-666-11	ELECT	220uF 20% 10V
C601	1-124-903-11	ELECT	1uF 20% 50V	C736	1-162-851-11	CERAMIC	0.1uF 10% 16V
C602	1-104-664-11	ELECT	47uF 20% 10V	C737	1-162-851-11	CERAMIC	0.1uF 10% 16V
C603	1-104-664-11	ELECT	47uF 20% 16V	C738	1-162-851-11	CERAMIC	0.1uF 10% 16V
C700	1-162-600-11	CERAMIC	0.0047uF 30% 16V	C740	1-162-306-11	CERAMIC	0.01uF 30% 16V
C701	1-162-851-11	CERAMIC	0.1uF 10% 16V	C741	1-104-664-11	ELECT	47uF 20% 10V
C702	1-162-851-11	CERAMIC	0.1uF 10% 16V	C742	1-162-306-11	CERAMIC	0.01uF 30% 16V
C703	1-162-851-11	CERAMIC	0.1uF 10% 16V	C743	1-124-443-00	ELECT	100uF 20% 10V
C704	1-130-486-00	MYLAR	0.018uF 10% 50V	C750	1-162-306-11	CERAMIC	0.01uF 30% 16V
C705	1-131-375-00	TANTALUM	4.7uF 10% 10V	C751	1-124-902-00	ELECT	0.47uF 20% 50V
C706	1-130-489-00	MYLAR	0.033uF 5% 50V	C752	1-104-664-11	ELECT	47uF 20% 10V
C707	1-130-486-00	MYLAR	0.018uF 10% 50V	C753	1-104-664-11	ELECT	47uF 20% 10V
C708	1-162-282-31	CERAMIC	100PF 10% 50V	C754	1-162-306-11	CERAMIC	0.01uF 30% 16V
C710	1-126-961-11	ELECT	2.2uF 20% 50V	C755	1-130-483-00	MYLAR	0.01uF 5% 50V
C711	1-130-487-00	MYLAR	0.022uF 5% 50V	C756	1-162-290-31	CERAMIC	470PF 10% 50V
C712	1-162-215-31	CERAMIC	47PF 5% 50V	C757	1-162-286-21	CERAMIC	220PF 10% 50V
C713	1-130-486-00	MYLAR	0.018uF 10% 50V	C758	1-162-306-11	CERAMIC	0.01uF 30% 16V
C721	1-130-493-00	MYLAR	0.068uF 5% 50V	C759	1-130-499-00	MYLAR	0.22uF 5% 50V
C722	1-162-306-11	CERAMIC	0.01uF 30% 16V	C760	1-126-963-11	ELECT	4.7uF 20% 50V
C723	1-130-489-00	MYLAR	0.033uF 5% 50V	C761	1-162-302-11	CERAMIC	0.0022uF 30% 16V
C724	1-130-495-00	MYLAR	0.1uF 5% 50V	C762	1-162-306-11	CERAMIC	0.01uF 30% 16V
C725	1-162-219-31	CERAMIC	68PF 5% 50V	C763	1-162-306-11	CERAMIC	0.01uF 30% 16V
C726	1-124-903-11	ELECT	1uF 20% 50V	C764	1-162-282-31	CERAMIC	100PF 10% 50V
				C765	1-162-199-31	CERAMIC	10PF 5% 50V
				C766	1-162-199-31	CERAMIC	10PF 5% 50V
				C767	1-162-302-11	CERAMIC	0.0022uF 30% 16V
				C768	1-162-306-11	CERAMIC	0.01uF 30% 16V
				C769	1-162-306-11	CERAMIC	0.01uF 30% 16V
				C770	1-126-963-11	ELECT	4.7uF 20% 50V
				C771	1-162-306-11	CERAMIC	0.01uF 30% 16V
				C772	1-126-940-11	ELECT	330uF 20% 10V
				C773	1-162-306-11	CERAMIC	0.01uF 30% 16V
				C774	1-162-306-11	CERAMIC	0.01uF 30% 16V
				C775	1-162-306-11	CERAMIC	0.01uF 30% 16V

# CD/SYSTEM

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C776	1-126-940-11	ELECT	330uF 20% 10V			< DIODE >	
C777	1-104-664-11	ELECT	47uF 20% 10V	D601	8-719-991-33	DIODE 1SS133T-77	
C778	1-124-443-00	ELECT	100uF 20% 10V	D602	8-719-991-33	DIODE 1SS133T-77	
C779	1-162-851-11	CERAMIC	0.1uF 10% 16V	D603	8-719-991-33	DIODE 1SS133T-77	
C790	1-104-664-11	ELECT	47uF 20% 10V	D701	8-719-991-33	DIODE 1SS133T-77	
C791	1-104-666-11	ELECT	220uF 20% 10V	D801	8-719-991-33	DIODE 1SS133T-77	
C792	1-162-286-21	CERAMIC	220PF 10% 50V	D802	8-719-991-33	DIODE 1SS133T-77	
C793	1-162-286-21	CERAMIC	220PF 10% 50V	D803	8-719-991-33	DIODE 1SS133T-77	
C794	1-162-286-21	CERAMIC	220PF 10% 50V	D804	8-719-991-33	DIODE 1SS133T-77	
C795	1-162-286-21	CERAMIC	220PF 10% 50V	D805	8-719-991-33	DIODE 1SS133T-77	
C796	1-162-286-21	CERAMIC	220PF 10% 50V	D806	8-719-991-33	DIODE 1SS133T-77	
C797	1-162-286-21	CERAMIC	220PF 10% 50V	D807	8-719-991-33	DIODE 1SS133T-77	
C798	1-162-306-11	CERAMIC	0.01uF 30% 16V			< IC >	
C799	1-162-306-11	CERAMIC	0.01uF 30% 16V	IC701	8-752-082-14	IC CXA1992BR	
C803	1-162-306-11	CERAMIC	0.01uF 30% 16V	IC702	8-752-384-13	IC CXD2589Q	
C805	1-162-306-11	CERAMIC	0.01uF 30% 16V	IC703	8-759-478-60	IC BA6898S	
C806	1-104-664-11	ELECT	47uF 20% 10V	IC801	8-752-901-80	IC CXP83232A-010Q	
C807	1-124-907-11	ELECT	10uF 20% 50V	IC803	8-759-430-16	IC PST600I	
C808	1-102-514-11	CERAMIC	22PF 5% 50V			< COIL >	
C809	1-102-516-11	CERAMIC	27PF 5% 50V	JW101	1-414-142-11	INDUCTOR 1uH	
C810	1-162-288-31	CERAMIC	330PF 10% 50V	L601	1-408-117-00	INDUCTOR 10uH	
C811	1-162-288-31	CERAMIC	330PF 10% 50V	L602	1-414-142-11	INDUCTOR 1uH	
C812	1-102-514-11	CERAMIC	22PF 5% 50V	L702	1-410-324-11	INDUCTOR 4.7uH	
C813	1-102-514-11	CERAMIC	22PF 5% 50V	L801	1-410-509-11	INDUCTOR 10uH	
C814	1-162-294-31	CERAMIC	0.001uF 10% 50V	L802	1-410-509-11	INDUCTOR 10uH	
C815	1-162-306-11	CERAMIC	0.01uF 30% 16V	L804	1-414-142-11	INDUCTOR 1uH	
C817	1-162-306-11	CERAMIC	0.01uF 30% 16V	L805	1-414-142-11	INDUCTOR 1uH	
C818	1-162-306-11	CERAMIC	0.01uF 30% 16V	L806	1-410-509-11	INDUCTOR 10uH	
C819	1-102-960-00	CERAMIC	24PF 5% 50V	L807	1-410-509-11	INDUCTOR 10uH	
C820	1-102-960-00	CERAMIC	24PF 5% 50V	L808	1-410-509-11	INDUCTOR 10uH	
C821	1-104-664-11	ELECT	47uF 20% 10V	L809	1-410-509-11	INDUCTOR 10uH	
C822	1-162-294-31	CERAMIC	0.001uF 10% 50V	L810	1-410-509-11	INDUCTOR 10uH	
C823	1-162-294-31	CERAMIC	0.001uF 10% 50V	L811	1-410-509-11	INDUCTOR 10uH	
C824	1-162-294-31	CERAMIC	0.001uF 10% 50V			< TRANSISTOR >	
C825	1-162-306-11	CERAMIC	0.01uF 30% 16V	Q601	8-729-036-86	TRANSISTOR KTC3203Y-AT	
C826	1-162-294-31	CERAMIC	0.001uF 10% 50V	Q602	8-729-036-58	TRANSISTOR KRC102M-AT	
C829	1-162-294-31	CERAMIC	0.001uF 10% 50V	Q603	8-729-036-77	TRANSISTOR KRC107M	
C831	1-162-282-31	CERAMIC	100PF 10% 50V	Q604	8-729-801-84	TRANSISTOR 2SB1013-4	
C832	1-162-282-31	CERAMIC	100PF 10% 50V	Q701	8-729-037-02	TRANSISTOR KTA1266Y-AT	
C833	1-162-282-31	CERAMIC	100PF 10% 50V	Q702	8-729-036-58	TRANSISTOR KRC102M-AT	
C835	1-162-282-31	CERAMIC	100PF 10% 50V	Q703	8-729-801-84	TRANSISTOR 2SB1013-4	
C836	1-162-282-31	CERAMIC	100PF 10% 50V	Q704	8-729-036-86	TRANSISTOR KTC3203Y-AT	
C837	1-104-664-11	ELECT	47uF 20% 10V	Q705	8-729-036-86	TRANSISTOR KTC3203Y-AT	
C838	1-162-306-11	CERAMIC	0.01uF 30% 16V	Q803	8-729-922-66	TRANSISTOR 2SC2410SN	
C840	1-162-306-11	CERAMIC	0.01uF 30% 16V	Q804	8-729-922-66	TRANSISTOR 2SC2410SN	
C841	1-162-306-11	CERAMIC	0.01uF 30% 16V	Q805	8-729-029-49	TRANSISTOR DTA143TSA-TP	
		< CONNECTOR >				< RESISTOR >	
CN701	1-770-528-31	CONNECTOR, FFC/FPC 21P		R500	1-249-417-11	CARBON 1K 5% 1/4W	
CN708	1-691-071-31	HOUSING, CONNECTOR 12P		R501	1-249-417-11	CARBON 1K 5% 1/4W	
CN709	1-691-079-31	HOUSING, CONNECTOR 20P		R510	1-249-429-11	CARBON 10K 5% 1/4W	
* CN710	1-580-170-11	PIN, CONNECTOR (PC BOARD) 9P		R511	1-249-429-11	CARBON 10K 5% 1/4W	
* CN711	1-580-166-11	PIN, CONNECTOR (PC BOARD) 5P		R512	1-249-429-11	CARBON 10K 5% 1/4W	
CN801	1-770-537-31	CONNECTOR, FFC/FPC 30P					
CN803	1-695-374-31	CONNECTOR, FFC/FPC 13P					

Ref. No.	Part No.	Description			Remark	Ref. No.	Part No.	Description			Remark
R513	1-249-429-11	CARBON	10K	5%	1/4W	R719	1-247-903-00	CARBON	1M	5%	1/4W
R514	1-249-429-11	CARBON	10K	5%	1/4W	R720	1-249-425-11	CARBON	4.7K	5%	1/4W
R515	1-249-429-11	CARBON	10K	5%	1/4W						
R516	1-249-429-11	CARBON	10K	5%	1/4W	R721	1-247-843-11	CARBON	3.3K	5%	1/4W
R517	1-249-429-11	CARBON	10K	5%	1/4W	R722	1-247-903-00	CARBON	1M	5%	1/4W
						R723	1-247-843-11	CARBON	3.3K	5%	1/4W
R518	1-249-429-11	CARBON	10K	5%	1/4W	R724	1-249-393-11	CARBON	10	5%	1/4W
R519	1-249-429-11	CARBON	10K	5%	1/4W	R725	1-249-437-11	CARBON	47K	5%	1/4W
R520	1-249-429-11	CARBON	10K	5%	1/4W						
R521	1-249-429-11	CARBON	10K	5%	1/4W	R726	1-249-437-11	CARBON	47K	5%	1/4W
R522	1-249-429-11	CARBON	10K	5%	1/4W	R727	1-249-437-11	CARBON	47K	5%	1/4W
						R728	1-249-437-11	CARBON	47K	5%	1/4W
R523	1-249-429-11	CARBON	10K	5%	1/4W	R729	1-247-883-00	CARBON	150K	5%	1/4W
R524	1-249-429-11	CARBON	10K	5%	1/4W	R730	1-247-883-00	CARBON	150K	5%	1/4W
R525	1-249-429-11	CARBON	10K	5%	1/4W						
R526	1-249-429-11	CARBON	10K	5%	1/4W	R731	1-247-887-00	CARBON	220K	5%	1/4W
R527	1-249-429-11	CARBON	10K	5%	1/4W	R732	1-247-883-00	CARBON	150K	5%	1/4W
						R733	1-247-891-00	CARBON	330K	5%	1/4W
R528	1-249-429-11	CARBON	10K	5%	1/4W	R734	1-247-883-00	CARBON	150K	5%	1/4W
R529	1-249-429-11	CARBON	10K	5%	1/4W	R735	1-247-885-00	CARBON	180K	5%	1/4W
R530	1-249-429-11	CARBON	10K	5%	1/4W						
R531	1-249-429-11	CARBON	10K	5%	1/4W	R739	1-249-429-11	CARBON	10K	5%	1/4W
R532	1-249-429-11	CARBON	10K	5%	1/4W	R740	1-249-437-11	CARBON	47K	5%	1/4W
						R741	1-249-437-11	CARBON	47K	5%	1/4W
R533	1-249-429-11	CARBON	10K	5%	1/4W	R742	1-247-843-11	CARBON	3.3K	5%	1/4W
R534	1-249-429-11	CARBON	10K	5%	1/4W	R743	1-249-417-11	CARBON	1K	5%	1/4W
R535	1-249-429-11	CARBON	10K	5%	1/4W						
R536	1-249-429-11	CARBON	10K	5%	1/4W	R744	1-249-429-11	CARBON	10K	5%	1/4W
R537	1-249-429-11	CARBON	10K	5%	1/4W	R745	1-247-903-00	CARBON	1M	5%	1/4W
						R746	1-249-429-11	CARBON	10K	5%	1/4W
R538	1-249-429-11	CARBON	10K	5%	1/4W	R747	1-247-887-00	CARBON	220K	5%	1/4W
R539	1-249-429-11	CARBON	10K	5%	1/4W	R748	1-249-413-11	CARBON	470	5%	1/4W
R540	1-249-417-11	CARBON	1K	5%	1/4W						
R601	1-249-413-11	CARBON	470	5%	1/4W	R749	1-249-417-11	CARBON	1K	5%	1/4W
R602	1-249-441-11	CARBON	100K	5%	1/4W	R750	1-249-437-11	CARBON	47K	5%	1/4W
						R752	1-249-431-11	CARBON	15K	5%	1/4W
R603	1-249-441-11	CARBON	100K	5%	1/4W	R753	1-249-427-11	CARBON	6.8K	5%	1/4W
R604	1-249-435-11	CARBON	33K	5%	1/4W	R754	1-249-428-11	CARBON	8.2K	5%	1/4W
R605	1-249-421-11	CARBON	2.2K	5%	1/4W						
R606	1-249-421-11	CARBON	2.2K	5%	1/4W	R755	1-249-435-11	CARBON	33K	5%	1/4W
R607	1-249-421-11	CARBON	2.2K	5%	1/4W	R756	1-247-863-91	CARBON	22K	5%	1/4W
						R757	1-247-863-91	CARBON	22K	5%	1/4W
R608	1-249-441-11	CARBON	100K	5%	1/4W	R758	1-249-427-11	CARBON	6.8K	5%	1/4W
R609	1-249-421-11	CARBON	2.2K	5%	1/4W	R759	1-249-437-11	CARBON	47K	5%	1/4W
R610	1-249-417-11	CARBON	1K	5%	1/4W						
R611	1-249-417-11	CARBON	1K	5%	1/4W	R760	1-249-437-11	CARBON	47K	5%	1/4W
R612	1-249-425-11	CARBON	4.7K	5%	1/4W	R761	1-249-417-11	CARBON	1K	5%	1/4W
						R771	1-249-417-11	CARBON	1K	5%	1/4W
R700	1-249-437-11	CARBON	47K	5%	1/4W	R790	1-249-425-11	CARBON	4.7K	5%	1/4W
R701	1-249-427-11	CARBON	6.8K	5%	1/4W	R791	1-249-429-11	CARBON	10K	5%	1/4W
R702	1-247-899-11	CARBON	680K	5%	1/4W						
R703	1-247-883-00	CARBON	150K	5%	1/4W	R801	1-249-421-11	CARBON	2.2K	5%	1/4W
R704	1-247-891-00	CARBON	330K	5%	1/4W	R802	1-247-807-31	CARBON	100	5%	1/4W
						R803	1-249-417-11	CARBON	1K	5%	1/4W
R705	1-247-896-11	CARBON	510K	5%	1/4W	R804	1-249-417-11	CARBON	1K	5%	1/4W
R706	1-247-883-00	CARBON	150K	5%	1/4W	R805	1-249-417-11	CARBON	1K	5%	1/4W
R708	1-247-887-00	CARBON	220K	5%	1/4W						
R709	1-249-437-11	CARBON	47K	5%	1/4W	R806	1-249-417-11	CARBON	1K	5%	1/4W
R710	1-249-435-11	CARBON	33K	5%	1/4W	R807	1-249-417-11	CARBON	1K	5%	1/4W
						R808	1-249-417-11	CARBON	1K	5%	1/4W
R711	1-249-441-11	CARBON	100K	5%	1/4W	R809	1-249-425-11	CARBON	4.7K	5%	1/4W
R712	1-247-883-00	CARBON	150K	5%	1/4W	R810	1-249-425-11	CARBON	4.7K	5%	1/4W
R713	1-249-417-11	CARBON	1K	5%	1/4W						
R714	1-249-417-11	CARBON	1K	5%	1/4W	R811	1-249-417-11	CARBON	1K	5%	1/4W
R715	1-249-417-11	CARBON	1K	5%	1/4W	R812	1-249-425-11	CARBON	4.7K	5%	1/4W
						R813	1-249-417-11	CARBON	1K	5%	1/4W
R716	1-247-883-00	CARBON	150K	5%	1/4W	R814	1-249-437-11	CARBON	47K	5%	1/4W
R717	1-247-863-91	CARBON	22K	5%	1/4W	R815	1-249-417-11	CARBON	1K	5%	1/4W
R718	1-249-425-11	CARBON	4.7K	5%	1/4W						



**CD/SYSTEM**

**HEADPHONE**

**HEAD RELAY**

**INLET**

Ref. No.	Part No.	Description	Remark
R816	1-249-417-11	CARBON 1K 5%	1/4W
R817	1-249-417-11	CARBON 1K 5%	1/4W
R818	1-249-417-11	CARBON 1K 5%	1/4W
R819	1-249-417-11	CARBON 1K 5%	1/4W
R820	1-249-417-11	CARBON 1K 5%	1/4W
R821	1-249-417-11	CARBON 1K 5%	1/4W
R822	1-249-417-11	CARBON 1K 5%	1/4W
R823	1-249-417-11	CARBON 1K 5%	1/4W
R824	1-249-417-11	CARBON 1K 5%	1/4W
R826	1-249-425-11	CARBON 4.7K 5%	1/4W
R827	1-249-425-11	CARBON 4.7K 5%	1/4W
R828	1-249-425-11	CARBON 4.7K 5%	1/4W
R829	1-249-417-11	CARBON 1K 5%	1/4W
R830	1-249-417-11	CARBON 1K 5%	1/4W
R831	1-249-417-11	CARBON 1K 5%	1/4W
R832	1-249-417-11	CARBON 1K 5%	1/4W
R833	1-249-417-11	CARBON 1K 5%	1/4W
R834	1-249-417-11	CARBON 1K 5%	1/4W
R835	1-249-417-11	CARBON 1K 5%	1/4W
R836	1-249-417-11	CARBON 1K 5%	1/4W
R837	1-249-417-11	CARBON 1K 5%	1/4W
R838	1-249-417-11	CARBON 1K 5%	1/4W
R840	1-249-417-11	CARBON 1K 5%	1/4W
R841	1-249-417-11	CARBON 1K 5%	1/4W
R842	1-249-417-11	CARBON 1K 5%	1/4W
R843	1-249-437-11	CARBON 47K 5%	1/4W
R844	1-249-417-11	CARBON 1K 5%	1/4W
R846	1-249-425-11	CARBON 4.7K 5%	1/4W
R847	1-247-885-00	CARBON 180K 5%	1/4W
R848	1-249-441-11	CARBON 100K 5%	1/4W
R849	1-247-883-00	CARBON 150K 5%	1/4W
R850	1-247-883-00	CARBON 150K 5%	1/4W
R851	1-249-413-11	CARBON 470 5%	1/4W
R852	1-249-429-11	CARBON 10K 5%	1/4W
R853	1-249-417-11	CARBON 1K 5%	1/4W
R887	1-249-437-11	CARBON 47K 5%	1/4W
R890	1-249-417-11	CARBON 1K 5%	1/4W
R891	1-249-437-11	CARBON 47K 5%	1/4W
R894	1-249-421-11	CARBON 2.2K 5%	1/4W
R895	1-247-895-91	CARBON 470K 5%	1/4W
R896	1-247-887-00	CARBON 220K 5%	1/4W
R897	1-249-417-11	CARBON 1K 5%	1/4W
R898	1-249-422-11	CARBON 2.7K 5%	1/4W
R899	1-249-425-11	CARBON 4.7K 5%	1/4W

< VIBRATOR >

X701	1-767-226-11	VIBRATOR, CRYSTAL (16.9344MHz)
X801	1-767-184-11	VIBRATOR, CERAMIC (4.21MHz)
X802	1-767-697-11	VIBRATOR, CRYSTAL (32.768kHz)

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*	1-671-552-11	HEADPHONE BOARD *****
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< CONNECTOR >

* CN501	1-564-519-11	PLUG, CONNECTOR 4P
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Ref. No.	Part No.	Description	Remark
		< JACK >	
J501	1-566-891-11	JACK (♂)	
		< RESISTOR >	
R150	1-249-404-00	CARBON 82 5%	1/4W
R250	1-249-404-00	CARBON 82 5%	1/4W
*****			
	1-673-339-11	HEAD RELAY BOARD *****	
		< CONNECTOR >	
CN692	1-580-167-11	PIN, CONNECTOR (PC BOARD) 6P	
*****			
*	1-671-559-11	INLET BOARD *****	
		< CAPACITOR >	
C906	1-104-665-11	ELECT 100uF 20%	16V
C907	1-162-839-11	CERAMIC 0.01uF 10%	16V
C908	1-104-666-11	ELECT 220uF 20%	10V
		< DIODE >	
D908	8-719-991-33	DIODE 1SS133T-77	
D909	8-719-991-33	DIODE 1SS133T-77	
D910	8-719-991-33	DIODE 1SS133T-77	
D911	8-719-923-60	DIODE MTZJ-T-77-9.1A	
D912	8-719-109-92	DIODE RD6.2ES-B1	
D913	8-719-991-33	DIODE 1SS133T-77	
D914	8-719-991-33	DIODE 1SS133T-77	
D915	8-719-991-33	DIODE 1SS133T-77	
D916	8-719-991-33	DIODE 1SS133T-77	
		< JACK >	
△J901	1-526-838-11	INLET, AC 2P (～ AC IN)	
		< TRANSISTOR >	
Q901	8-729-037-02	TRANSISTOR KTA1266Y-AT	
Q902	8-729-036-89	TRANSISTOR KTC3198GR-AT	
Q903	8-729-037-02	TRANSISTOR KTA1266Y-AT	
Q904	8-729-036-89	TRANSISTOR KTC3198GR-AT	
Q905	8-729-036-89	TRANSISTOR KTC3198GR-AT	
Q906	8-729-036-89	TRANSISTOR KTC3198GR-AT	
Q907	8-729-036-77	TRANSISTOR KRC107M	
		< RESISTOR >	
R901	1-249-441-11	CARBON 100K 5%	1/4W
R902	1-249-429-11	CARBON 10K 5%	1/4W
R903	1-249-441-11	CARBON 100K 5%	1/4W
R904	1-249-429-11	CARBON 10K 5%	1/4W
R905	1-249-429-11	CARBON 10K 5%	1/4W
R906	1-249-417-11	CARBON 1K 5%	1/4W
R907	1-249-417-11	CARBON 1K 5%	1/4W
R908	1-249-429-11	CARBON 10K 5%	1/4W
R909	1-249-429-11	CARBON 10K 5%	1/4W
R910	1-249-429-11	CARBON 10K 5%	1/4W

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
R911	1-249-417-11	CARBON 1K 5%	1/4W
R912	1-249-429-11	CARBON 10K 5%	1/4W
R913	1-249-425-11	CARBON 4.7K 5%	1/4W
R914	1-249-417-11	CARBON 1K 5%	1/4W
*****			
*	1-671-555-11	LAMP BOARD *****	
PL801	1-517-487-41	LAMP, PILOT (LCD BACK-LIGHT)	
PL802	1-517-487-41	LAMP, PILOT (LCD BACK-LIGHT)	
PL803	1-517-487-41	LAMP, PILOT (LCD BACK-LIGHT)	
*****			
*	A-3321-808-A	LCD BOARD, COMPLETE *****	
	1-783-993-12	WIRE, PARALLEL (FFC) (30 CORE)	
	1-783-994-11	WIRE, PARALLEL (FFC) (13 CORE)	
	3-028-617-01	HOLDER, LCD	
	3-028-618-02	ILLUMINATOR	
	3-028-649-01	PAPER, SHIELD	
		< CONNECTOR >	
CN802	1-563-633-11	HOUSING, CONNECTOR 30P	
CN804	1-691-072-11	HOUSING, CONNECTOR 13P	
		< DIODE >	
D811	8-719-059-97	LED L-34HD (OPR/BATT)	
		< IC >	
IC802	8-749-014-66	IC NJL64H400A	
		< LIQUID CRYSTAL DISPLAY >	
LCD801	1-803-232-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< RESISTOR >	
R502	1-249-425-11	CARBON 4.7K 5%	1/4W
R504	1-249-418-11	CARBON 1.2K 5%	1/4W
R505	1-249-420-11	CARBON 1.8K 5%	1/4W
R862	1-249-425-11	CARBON 4.7K 5%	1/4W
R863	1-249-415-11	CARBON 680 5%	1/4W
R864	1-249-416-11	CARBON 820 5%	1/4W
R865	1-249-418-11	CARBON 1.2K 5%	1/4W
R866	1-249-420-11	CARBON 1.8K 5%	1/4W
R867	1-247-843-11	CARBON 3.3K 5%	1/4W
R869	1-249-427-11	CARBON 6.8K 5%	1/4W
R870	1-249-432-11	CARBON 18K 5%	1/4W
R871	1-249-425-11	CARBON 4.7K 5%	1/4W
R872	1-249-415-11	CARBON 680 5%	1/4W
R873	1-249-416-11	CARBON 820 5%	1/4W
R874	1-249-425-11	CARBON 4.7K 5%	1/4W
R875	1-249-420-11	CARBON 1.8K 5%	1/4W
R876	1-247-843-11	CARBON 3.3K 5%	1/4W
R877	1-249-427-11	CARBON 6.8K 5%	1/4W
R879	1-249-425-11	CARBON 4.7K 5%	1/4W
R880	1-249-415-11	CARBON 680 5%	1/4W
R881	1-249-416-11	CARBON 820 5%	1/4W
R882	1-249-418-11	CARBON 1.2K 5%	1/4W
R883	1-249-427-11	CARBON 6.8K 5%	1/4W

Ref. No.	Part No.	Description	Remark
R884	1-249-432-11	CARBON 18K 5%	1/4W
R885	1-249-415-11	CARBON 680 5%	1/4W
R886	1-247-818-91	CARBON 300 5%	1/4W
R893	1-247-843-11	CARBON 3.3K 5%	1/4W
		< SWITCH >	
S809	1-762-798-11	SWITCH, KEYBOARD (EDIT)	
S810	1-762-798-11	SWITCH, KEYBOARD (MEGA BASS)	
S811	1-762-798-11	SWITCH, KEYBOARD (SOUND)	
S812	1-762-798-11	SWITCH, KEYBOARD (CANCEL)	
S813	1-762-798-11	SWITCH, KEYBOARD (DISPLAY)	
S814	1-762-798-11	SWITCH, KEYBOARD (VOL -)	
S815	1-762-798-11	SWITCH, KEYBOARD (VOL +)	
S816	1-762-798-11	SWITCH, KEYBOARD (STANDBY)	
S817	1-762-798-11	SWITCH, KEYBOARD (SLEEP)	
S818	1-762-798-11	SWITCH, KEYBOARD (OPERATE)	
S819	1-762-798-11	SWITCH, KEYBOARD (MD (LINE))	
S820	1-762-798-11	SWITCH, KEYBOARD (RADIO BAND)	
S821	1-762-798-11	SWITCH, KEYBOARD (CLOCK)	
S822	1-762-798-11	SWITCH, KEYBOARD (TIMER)	
S823	1-762-798-11	SWITCH, KEYBOARD (TUNING/TIME SET -)	
S824	1-762-798-11	SWITCH, KEYBOARD (TUNING/TIME SET +)	
S825	1-762-798-11	SWITCH, KEYBOARD (ENTER/MEMORY CHECK)	
S826	1-762-798-11	SWITCH, KEYBOARD (PRESET +)	
S832	1-762-798-11	SWITCH, KEYBOARD (AUTO PRESET)	
S833	1-762-798-11	SWITCH, KEYBOARD (MODE MONO/ST ISS)	
S834	1-762-798-11	SWITCH, KEYBOARD (PRESET -)	
*****			
*	1-671-556-11	LINE BOARD *****	
		< CAPACITOR >	
C401	1-162-851-11	CERAMIC 0.1uF 10% 16V	
C402	1-124-907-11	ELECT 10uF 20% 50V	
C403	1-162-282-31	CERAMIC 100PF 10% 50V	
C404	1-162-282-31	CERAMIC 100PF 10% 50V	
C405	1-162-282-31	CERAMIC 100PF 10% 50V	
C406	1-162-282-31	CERAMIC 100PF 10% 50V	
		< CONNECTOR >	
* CN401	1-564-506-11	PLUG, CONNECTOR 3P	
* CN402	1-564-508-11	PLUG, CONNECTOR 5P	
		< IC >	
IC401	8-749-921-12	IC GP1F32T (OPTICAL DIGITAL OUT (CD))	
		< JACK >	
J401	1-566-891-21	JACK (LINE IN)	
J402	1-566-891-21	JACK (LINE OUT)	
*****			

**LOADING**

**MAIN**

Ref. No.	Part No.	Description	Remark		
*	1-667-045-11	LOADING BOARD *****			
		< CAPACITOR >			
C790	1-104-664-11	ELECT	47uF	20%	25V
		< CONNECTOR >			
* CN781	1-580-923-11	HOUSING, CONNECTOR 2P			
* CN790	1-580-926-11	HOUSING, CONNECTOR 5P			
		< DIODE >			
D790	8-719-970-02	DIODE 1SR139-400			
		< IC >			
IC790	8-759-501-73	IC BA6418N			
		< COIL >			
L790	1-412-852-11	INDUCTOR	47uH		
		< RESISTOR >			
R790	1-247-847-31	CARBON	4.7K	5%	1/4W
		< SWITCH >			
S790	1-762-951-11	SWITCH, PUSH (CLOSE)			
S791	1-762-951-11	SWITCH, PUSH (OPEN)			
*****					
*	A-3321-813-A	MAIN BOARD, COMPLETE *****			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR >			
C101	1-126-963-11	ELECT	4.7uF	20%	50V
C102	1-162-301-11	CERAMIC	0.0015uF	20%	16V
C103	1-104-664-11	ELECT	47uF	20%	10V
C104	1-161-020-11	CERAMIC	0.039uF	10%	16V
C105	1-124-907-11	ELECT	10uF	20%	50V
C106	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C107	1-124-902-00	ELECT	0.47uF	20%	50V
C108	1-126-963-11	ELECT	4.7uF	20%	50V
C109	1-124-907-11	ELECT	10uF	20%	50V
C110	1-162-282-31	CERAMIC	100PF	10%	50V
C111	1-126-963-11	ELECT	4.7uF	20%	50V
C112	1-124-903-11	ELECT	1uF	20%	50V
C113	1-162-286-21	CERAMIC	220PF	10%	50V
C114	1-162-282-31	CERAMIC	100PF	10%	50V
C115	1-124-903-11	ELECT	1uF	20%	50V
C116	1-124-903-11	ELECT	1uF	20%	50V
C117	1-162-849-11	CERAMIC	0.068uF	10%	16V
C118	1-162-849-11	CERAMIC	0.068uF	10%	16V
C119	1-162-837-11	CERAMIC	0.0068uF	10%	16V
C120	1-104-664-11	ELECT	47uF	20%	10V
C121	1-124-443-00	ELECT	100uF	20%	10V
C122	1-136-165-00	FILM	0.1uF	5%	50V
C123	1-126-927-11	ELECT	2200uF	20%	10V
C124	1-162-843-11	CERAMIC	0.022uF	10%	16V

Ref. No.	Part No.	Description	Remark		
C125	1-162-282-31	CERAMIC	100PF	10%	50V
C126	1-162-282-31	CERAMIC	100PF	10%	50V
C127	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C201	1-126-963-11	ELECT	4.7uF	20%	50V
C202	1-162-301-11	CERAMIC	0.0015uF	20%	16V
C203	1-104-664-11	ELECT	47uF	20%	10V
C204	1-161-020-11	CERAMIC	0.039uF	10%	16V
C205	1-124-907-11	ELECT	10uF	20%	50V
C206	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C207	1-124-902-00	ELECT	0.47uF	20%	50V
C208	1-126-963-11	ELECT	4.7uF	20%	50V
C209	1-124-907-11	ELECT	10uF	20%	50V
C210	1-162-282-31	CERAMIC	100PF	10%	50V
C211	1-126-963-11	ELECT	4.7uF	20%	50V
C212	1-124-903-11	ELECT	1uF	20%	50V
C213	1-162-286-21	CERAMIC	220PF	10%	50V
C214	1-162-282-31	CERAMIC	100PF	10%	50V
C215	1-124-903-11	ELECT	1uF	20%	50V
C216	1-124-903-11	ELECT	1uF	20%	50V
C217	1-162-849-11	CERAMIC	0.068uF	10%	16V
C218	1-162-849-11	CERAMIC	0.068uF	10%	16V
C219	1-162-837-11	CERAMIC	0.0068uF	10%	16V
C220	1-104-664-11	ELECT	47uF	20%	10V
C221	1-124-443-00	ELECT	100uF	20%	10V
C222	1-136-165-00	FILM	0.1uF	5%	50V
C223	1-126-927-11	ELECT	2200uF	20%	10V
C224	1-162-843-11	CERAMIC	0.022uF	10%	16V
C225	1-162-282-31	CERAMIC	100PF	10%	50V
C226	1-162-282-31	CERAMIC	100PF	10%	50V
C227	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C300	1-128-548-11	ELECT	4700uF	20%	25V
C301	1-104-664-11	ELECT	47uF	20%	10V
C302	1-104-666-11	ELECT	220uF	20%	10V
C303	1-104-664-11	ELECT	47uF	20%	10V
C304	1-161-020-11	CERAMIC	0.039uF	10%	16V
C305	1-124-907-11	ELECT	10uF	20%	50V
C306	1-104-664-11	ELECT	47uF	20%	10V
C308	1-130-481-00	MYLAR	0.0068uF	5%	50V
C309	1-130-479-00	MYLAR	0.0047uF	5%	50V
C310	1-130-471-00	MYLAR	0.001uF	5%	50V
C311	1-130-471-00	MYLAR	0.001uF	5%	50V
C312	1-104-664-11	ELECT	47uF	20%	10V
C313	1-126-963-11	ELECT	4.7uF	20%	50V
C314	1-162-306-11	CERAMIC	0.01uF	30%	16V
C315	1-130-481-00	MYLAR	0.0068uF	5%	50V
C316	1-104-664-11	ELECT	47uF	20%	10V
C317	1-124-443-00	ELECT	100uF	20%	10V
C319	1-124-443-00	ELECT	100uF	20%	10V
C320	1-104-666-11	ELECT	220uF	20%	10V
C321	1-126-963-11	ELECT	4.7uF	20%	50V
C322	1-126-233-11	ELECT	22uF	20%	50V
C323	1-162-851-11	CERAMIC	0.1uF	10%	16V
C324	1-126-963-11	ELECT	4.7uF	20%	50V
C325	1-124-443-00	ELECT	100uF	20%	10V
C326	1-104-664-11	ELECT	47uF	20%	10V
C327	1-162-843-11	CERAMIC	0.022uF	10%	16V
C328	1-124-478-11	ELECT	100uF	20%	25V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C329	1-130-499-00	MYLAR	0.22uF 5% 50V	IC302	8-759-432-41	IC BH3854AS	
C330	1-104-664-11	ELECT	47uF 20% 10V	IC303	8-759-634-51	IC M5218AP	
C331	1-162-286-21	CERAMIC	220PF 10% 50V	IC304	8-759-426-51	IC BA5417	
C332	1-162-286-21	CERAMIC	220PF 10% 50V	IC305	8-759-800-71	IC LA2010	
C333	1-162-292-31	CERAMIC	680PF 10% 50V				
C334	1-104-666-11	ELECT	220uF 20% 10V	IC306	8-759-479-70	IC S-81250SGY-B	
C335	1-124-902-00	ELECT	0.47uF 20% 50V	IC307	8-759-564-82	IC BA09ST-V5	
C338	1-126-963-11	ELECT	4.7uF 20% 50V			< COIL >	
C339	1-126-963-11	ELECT	4.7uF 20% 50V				
C340	1-162-292-31	CERAMIC	680PF 10% 50V	L101	1-414-142-11	INDUCTOR 1uH	
				L102	1-414-142-11	INDUCTOR 1uH	
C341	1-162-843-11	CERAMIC	0.022uF 10% 16V	L201	1-414-142-11	INDUCTOR 1uH	
C342	1-124-252-00	ELECT	0.33uF 20% 50V	L202	1-414-142-11	INDUCTOR 1uH	
C343	1-126-963-11	ELECT	4.7uF 20% 50V	L301	1-410-509-11	INDUCTOR 10uH	
C344	1-126-962-11	ELECT	3.3uF 20% 50V				
C345	1-126-961-11	ELECT	2.2uF 20% 50V	L302	1-414-142-11	INDUCTOR 1uH	
				L303	1-414-142-11	INDUCTOR 1uH	
C346	1-124-907-11	ELECT	10uF 20% 50V			< TRANSISTOR >	
C361	1-124-443-00	ELECT	100uF 20% 10V				
C362	1-104-664-11	ELECT	47uF 20% 10V	Q101	8-729-036-80	TRANSISTOR KRC110M	
C363	1-162-843-11	CERAMIC	0.022uF 10% 16V	Q102	8-729-036-80	TRANSISTOR KRC110M	
C364	1-162-843-11	CERAMIC	0.022uF 10% 16V	Q103	8-729-905-50	TRANSISTOR DTC343TS	
				Q104	8-729-905-50	TRANSISTOR DTC343TS	
C365	1-124-443-00	ELECT	100uF 20% 10V	Q105	8-729-036-77	TRANSISTOR KRC107M	
C366	1-104-666-11	ELECT	220uF 20% 10V				
C367	1-162-843-11	CERAMIC	0.022uF 10% 16V	Q106	8-729-905-50	TRANSISTOR DTC343TS	
C368	1-162-843-11	CERAMIC	0.022uF 10% 16V	Q201	8-729-036-80	TRANSISTOR KRC110M	
C369	1-162-851-11	CERAMIC	0.1uF 10% 16V	Q202	8-729-036-80	TRANSISTOR KRC110M	
				Q203	8-729-905-50	TRANSISTOR DTC343TS	
C371	1-162-843-11	CERAMIC	0.022uF 10% 16V	Q204	8-729-905-50	TRANSISTOR DTC343TS	
C372	1-162-843-11	CERAMIC	0.022uF 10% 16V				
		< CONNECTOR >		Q205	8-729-036-77	TRANSISTOR KRC107M	
* CN301	1-580-158-11	PIN, CONNECTOR (PC BOARD) 6P		Q206	8-729-905-50	TRANSISTOR DTC343TS	
CN302	1-691-079-31	HOUSING, CONNECTOR 20P		Q301	8-729-925-12	TRANSISTOR 2SC1740SLN	
CN303	1-691-071-31	HOUSING, CONNECTOR 12P		Q302	8-729-925-12	TRANSISTOR 2SC1740SLN	
* CN304	1-564-507-11	PLUG, CONNECTOR 4P		Q303	8-729-036-86	TRANSISTOR KTC3203Y-AT	
CN305	1-691-042-31	HOUSING, CONNECTOR 10P					
* CN306	1-564-508-11	PLUG, CONNECTOR 5P		Q304	8-729-036-86	TRANSISTOR KTC3203Y-AT	
		< DIODE >		Q305	8-729-037-02	TRANSISTOR KTA1266Y-AT	
D301	8-719-991-33	DIODE 1SS133T-77		Q306	8-729-036-77	TRANSISTOR KRC107M	
D302	8-719-991-33	DIODE 1SS133T-77		Q307	8-729-036-77	TRANSISTOR KRC107M	
D303	8-719-991-33	DIODE 1SS133T-77		Q308	8-729-036-86	TRANSISTOR KTC3203Y-AT	
D304	8-719-991-33	DIODE 1SS133T-77					
D305	8-719-991-33	DIODE 1SS133T-77		Q309	8-729-037-02	TRANSISTOR KTA1266Y-AT	
				Q310	8-729-036-77	TRANSISTOR KRC107M	
D307	8-719-991-33	DIODE 1SS133T-77		Q311	8-729-037-34	TRANSISTOR KRA107M	
D308	8-719-991-33	DIODE 1SS133T-77		Q312	8-729-036-77	TRANSISTOR KRC107M	
D309	8-719-991-33	DIODE 1SS133T-77		Q313	8-729-037-34	TRANSISTOR KRA107M	
D310	8-719-991-33	DIODE 1SS133T-77					
D311	8-719-991-33	DIODE 1SS133T-77		Q314	8-729-037-34	TRANSISTOR KRA107M	
				Q315	8-729-036-89	TRANSISTOR KTC3198GR-AT	
D312	8-719-991-33	DIODE 1SS133T-77		Q316	8-729-036-77	TRANSISTOR KRC107M	
D313	8-719-991-33	DIODE 1SS133T-77		Q318	8-729-036-89	TRANSISTOR KTC3198GR-AT	
D361	8-719-109-88	DIODE RD5.6ES-B1		Q319	8-729-036-77	TRANSISTOR KRC107M	
D362	8-719-110-09	DIODE RD8.2ES-B3					
D364	8-719-109-97	DIODE RD6.8ES-B2		Q320	8-729-920-94	TRANSISTOR DTA123YS	
				Q321	8-729-037-34	TRANSISTOR KRA107M	
D365	8-719-991-33	DIODE 1SS133T-77		Q341	8-729-036-77	TRANSISTOR KRC107M	
D366	8-719-991-33	DIODE 1SS133T-77		Q361	8-729-036-86	TRANSISTOR KTC3203Y-AT	
		< IC >		Q362	8-729-209-15	TRANSISTOR 2SD2012	
IC301	8-759-264-71	IC TA2068N					
				Q363	8-729-209-15	TRANSISTOR 2SD2012	
				Q365	8-729-037-29	TRANSISTOR KRA102M	
				Q366	8-729-036-89	TRANSISTOR KTC3198GR-AT	

**MAIN**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
< RESISTOR >							
R101	1-249-419-11	CARBON	1.5K 5% 1/4W	R301	1-247-791-91	CARBON	22 5% 1/4W
R102	1-249-430-11	CARBON	12K 5% 1/4W	R302	1-247-903-00	CARBON	1M 5% 1/4W
R103	1-249-403-11	CARBON	68 5% 1/4W	R303	1-249-429-11	CARBON	10K 5% 1/4W
R104	1-249-440-11	CARBON	82K 5% 1/4W	R304	1-249-429-11	CARBON	10K 5% 1/4W
R105	1-247-843-11	CARBON	3.3K 5% 1/4W	R305	1-247-843-11	CARBON	3.3K 5% 1/4W
R106	1-249-429-11	CARBON	10K 5% 1/4W	R306	1-247-843-11	CARBON	3.3K 5% 1/4W
R107	1-249-417-11	CARBON	1K 5% 1/4W	R307	1-249-419-11	CARBON	1.5K 5% 1/4W
R108	1-249-429-11	CARBON	10K 5% 1/4W	R308	1-249-419-11	CARBON	1.5K 5% 1/4W
R109	1-249-437-11	CARBON	47K 5% 1/4W	R309	1-247-843-11	CARBON	3.3K 5% 1/4W
R110	1-249-429-11	CARBON	10K 5% 1/4W	R310	1-249-441-11	CARBON	100K 5% 1/4W
R111	1-247-843-11	CARBON	3.3K 5% 1/4W	R311	1-249-401-11	CARBON	47 5% 1/4W
R112	1-249-429-11	CARBON	10K 5% 1/4W	R312	1-247-791-91	CARBON	22 5% 1/4W
R113	1-249-429-11	CARBON	10K 5% 1/4W	R313	1-249-425-11	CARBON	4.7K 5% 1/4W
R114	1-249-417-11	CARBON	1K 5% 1/4W	R314	1-249-429-11	CARBON	10K 5% 1/4W
R115	1-249-437-11	CARBON	47K 5% 1/4W	R315	1-249-393-11	CARBON	10 5% 1/4W
R116	1-247-843-11	CARBON	3.3K 5% 1/4W	R316	1-249-425-11	CARBON	4.7K 5% 1/4W
R117	1-249-431-11	CARBON	15K 5% 1/4W	R317	1-249-437-11	CARBON	47K 5% 1/4W
R118	1-249-426-11	CARBON	5.6K 5% 1/4W	R318	1-249-401-11	CARBON	47 5% 1/4W
R119	1-249-417-11	CARBON	1K 5% 1/4W	R319	1-249-429-11	CARBON	10K 5% 1/4W
R120	1-249-420-11	CARBON	1.8K 5% 1/4W	R320	1-249-429-11	CARBON	10K 5% 1/4W
R121	1-249-431-11	CARBON	15K 5% 1/4W	R321	1-249-401-11	CARBON	47 5% 1/4W
R122	1-249-425-11	CARBON	4.7K 5% 1/4W	R322	1-247-903-00	CARBON	1M 5% 1/4W
R123	1-249-410-11	CARBON	270 5% 1/4W	R323	1-247-903-00	CARBON	1M 5% 1/4W
R124	1-249-429-11	CARBON	10K 5% 1/4W	R324	1-249-425-11	CARBON	4.7K 5% 1/4W
R125	1-249-385-11	CARBON	2.2 5% 1/6W	R325	1-249-425-11	CARBON	4.7K 5% 1/4W
R126	1-249-421-11	CARBON	2.2K 5% 1/4W	R326	1-249-425-11	CARBON	4.7K 5% 1/4W
R127	1-247-843-11	CARBON	3.3K 5% 1/4W	R327	1-249-432-11	CARBON	18K 5% 1/4W
R140	1-249-429-11	CARBON	10K 5% 1/4W	R328	1-247-843-11	CARBON	3.3K 5% 1/4W
R201	1-249-419-11	CARBON	1.5K 5% 1/4W	R329	1-249-417-11	CARBON	1K 5% 1/4W
R202	1-249-430-11	CARBON	12K 5% 1/4W	R330	1-249-441-11	CARBON	100K 5% 1/4W
R203	1-249-403-11	CARBON	68 5% 1/4W	R331	1-249-429-11	CARBON	10K 5% 1/4W
R204	1-249-440-11	CARBON	82K 5% 1/4W	R332	1-249-413-11	CARBON	470 5% 1/4W
R205	1-247-843-11	CARBON	3.3K 5% 1/4W	R333	1-249-425-11	CARBON	4.7K 5% 1/4W
R206	1-249-429-11	CARBON	10K 5% 1/4W	R334	1-249-437-11	CARBON	47K 5% 1/4W
R207	1-249-417-11	CARBON	1K 5% 1/4W	R335	1-247-863-91	CARBON	22K 5% 1/4W
R208	1-249-429-11	CARBON	10K 5% 1/4W	R336	1-249-429-11	CARBON	10K 5% 1/4W
R209	1-249-437-11	CARBON	47K 5% 1/4W	R337	1-249-429-11	CARBON	10K 5% 1/4W
R210	1-249-429-11	CARBON	10K 5% 1/4W	R338	1-249-429-11	CARBON	10K 5% 1/4W
R211	1-247-843-11	CARBON	3.3K 5% 1/4W	R339	1-247-903-00	CARBON	1M 5% 1/4W
R212	1-249-429-11	CARBON	10K 5% 1/4W	R340	1-249-429-11	CARBON	10K 5% 1/4W
R213	1-249-429-11	CARBON	10K 5% 1/4W	R341	1-249-426-11	CARBON	5.6K 5% 1/4W
R214	1-249-417-11	CARBON	1K 5% 1/4W	R342	1-247-891-00	CARBON	330K 5% 1/4W
R215	1-249-437-11	CARBON	47K 5% 1/4W	R343	1-249-441-11	CARBON	100K 5% 1/4W
R216	1-247-843-11	CARBON	3.3K 5% 1/4W	R344	1-249-417-11	CARBON	1K 5% 1/4W
R217	1-249-431-11	CARBON	15K 5% 1/4W	R345	1-249-401-11	CARBON	47 5% 1/4W
R218	1-249-426-11	CARBON	5.6K 5% 1/4W	R346	1-249-417-11	CARBON	1K 5% 1/4W
R219	1-249-417-11	CARBON	1K 5% 1/4W	R347	1-249-417-11	CARBON	1K 5% 1/4W
R220	1-249-420-11	CARBON	1.8K 5% 1/4W	R363	1-249-407-11	CARBON	150 5% 1/4W
R221	1-249-431-11	CARBON	15K 5% 1/4W	R364	1-249-421-11	CARBON	2.2K 5% 1/4W
R222	1-249-425-11	CARBON	4.7K 5% 1/4W	R365	1-247-815-91	CARBON	220 5% 1/4W
R223	1-249-410-11	CARBON	270 5% 1/4W	R367	1-247-815-91	CARBON	220 5% 1/4W
R224	1-249-429-11	CARBON	10K 5% 1/4W	< TRANSFORMER >			
R225	1-249-385-11	CARBON	2.2 5% 1/6W	T301	1-433-372-11	TRANSFORMER, BIAS OSCILLATION	
R226	1-249-421-11	CARBON	2.2K 5% 1/4W	*****			
R227	1-247-843-11	CARBON	3.3K 5% 1/4W				
R240	1-249-429-11	CARBON	10K 5% 1/4W				

**PICK-UP RELAY**

**POWER**

**SWITCH (1)**

**SWITCH (2)**

**TC RF**

**TUNER**

Ref. No.	Part No.	Description	Remark
*	1-667-046-11	PICK-UP RELAY BOARD *****	
		< CONNECTOR >	
CN702	1-565-874-31	PIN, CONNECTOR (PC BOARD) 2P	
CN703	1-565-874-11	PIN, CONNECTOR (PC BOARD) 2P	
CN704	1-565-874-11	PIN, CONNECTOR (PC BOARD) 2P	
CN706	1-784-213-11	CONNECTOR, FFC/FPC 14P	
CN707	1-569-309-11	SOCKET, CONNECTOR (L TYRE) 21P	
*****			
*	1-671-558-11	POWER BOARD *****	
	1-533-233-31	HOLDER, FUSE  < CAPACITOR >	
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	1-136-165-00	FILM 0.1uF	5% 50V
		< CONNECTOR >	
* CN901	1-564-509-11	PLUG, CONNECTOR 6P	
* CN902	1-564-506-11	PLUG, CONNECTOR 3P  < DIODE >	
D901	8-719-046-07	DIODE 2A02M	
D902	8-719-046-07	DIODE 2A02M	
D903	8-719-046-07	DIODE 2A02M	
D904	8-719-046-07	DIODE 2A02M	
D905	8-719-991-33	DIODE 1SS133T-77	
D906	8-719-991-33	DIODE 1SS133T-77	
D907	8-719-981-95	DIODE MTZJ-2.7B  < FUSE >	
△ F901	1-532-505-31	FUSE, TIME LAG (T5AL/250V)  < TRANSFORMER >	
△ T901	1-433-456-11	TRANSFORMER, POWER *****	
*	1-671-550-11	SWITCH (1) BOARD *****	
* CN805	1-564-517-11	PLUG, CONNECTOR 2P  < RESISTOR >	
R855	1-249-415-11	CARBON 680	5% 1/4W
R856	1-249-416-11	CARBON 820	5% 1/4W
R857	1-249-418-11	CARBON 1.2K	5% 1/4W
R858	1-249-420-11	CARBON 1.8K	5% 1/4W
R859	1-247-843-11	CARBON 3.3K	5% 1/4W
R860	1-249-427-11	CARBON 6.8K	5% 1/4W
R861	1-249-432-11	CARBON 18K	5% 1/4W

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S801	1-762-798-11	SWITCH, KEYBOARD (▶)	
S802	1-762-798-11	SWITCH, KEYBOARD (◀)	
S803	1-762-798-11	SWITCH, KEYBOARD (■)	
S804	1-762-798-11	SWITCH, KEYBOARD (▶▶)	
S805	1-762-798-11	SWITCH, KEYBOARD (◀◀)	
S806	1-762-798-11	SWITCH, KEYBOARD (●/■)	
S807	1-762-798-11	SWITCH, KEYBOARD (DIR MODE)	
S808	1-762-798-11	SWITCH, KEYBOARD (COUNTER RESET)	
*****			
*	1-671-551-11	SWITCH (2) BOARD *****	
	3-028-615-01	BRACKET, CD BUTTON	
	3-031-094-03	BRACKET (2), CD	
	3-831-441-11	CUSHION (B) AEP	
	7-685-133-19	SCREW +P 2.6X6 TYPE2 NON-SLIT  < RESISTOR >	
R503	1-249-415-11	CARBON 680	5% 1/4W
R888	1-249-416-11	CARBON 820	5% 1/4W
R889	1-249-418-11	CARBON 1.2K	5% 1/4W
R892	1-249-420-11	CARBON 1.8K	5% 1/4W
		< SWITCH >	
S827	1-762-798-11	SWITCH, KEYBOARD (CD OPEN/CLOSE ▲)	
S828	1-762-798-11	SWITCH, KEYBOARD (■)	
S829	1-762-798-11	SWITCH, KEYBOARD (▶■)	
S830	1-762-798-11	SWITCH, KEYBOARD (▶▶■)	
S831	1-762-798-11	SWITCH, KEYBOARD (◀◀■)	
*****			
	1-673-338-11	TC RF BOARD *****	
		< CONNECTOR >	
CN691	1-580-170-11	PIN, CONNECTOR (PC BOARD) 9P  < PHOTO INTERRUPTER >	
PH691	8-729-021-62	PHOTO INTERRUPTER SG-211  < RESISTOR >	
R691	1-249-411-11	CARBON 330	5% 1/4W
R692	1-247-838-00	CARBON 2K	5% 1/4W
		< VARIABLE RESISTOR >	
RV691	1-228-992-11	VARIABLE RESISTOR (TAPE SPEED)  < SWITCH >	
S696	1-771-661-11	SWITCH, LEAF (HEAD POSITION) *****	
*	A-3321-811-A	TUNER BOARD, COMPLETE *****	
FH1	1-533-233-31	HOLDER, FUSE	

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

# TUNER

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	1-783-990-11	WIRE, PARALLEL (FFC) (10 CORE)				< FILTER >	
		< CAPACITOR >					
C1	1-162-294-31	CERAMIC	0.001uF 10% 50V	CF1	1-760-468-11	FILTER, CERAMIC	
C2	1-162-306-11	CERAMIC	0.01uF 30% 16V	CF2	1-760-468-11	FILTER, CERAMIC	
C3	1-102-960-00	CERAMIC	24PF 5% 50V	CF3	1-760-468-11	FILTER, CERAMIC	
C4	1-162-203-31	CERAMIC	15PF 5% 50V	CF4	1-579-762-11	VIBRATOR, CERAMIC	
C5	1-162-843-11	CERAMIC	0.022uF 10% 16V			< COMPOSITION CIRCUIT BLOCK >	
C6	1-162-843-11	CERAMIC	0.022uF 10% 16V	CFT1	1-239-173-11	ENCAPSULATED COMPONENT (MW/LW IF)	
C7	1-161-055-00	CERAMIC	0.022uF 10% 50V			< CONNECTOR >	
C8	1-162-195-31	CERAMIC	4.7PF 10% 50V	CN1	1-695-371-31	CONNECTOR, FFC/FPC 10P	
C9	1-102-973-00	CERAMIC	100PF 5% 50V	CN2	1-536-354-00	POST PIN	
C10	1-102-823-11	CERAMIC	430PF 5% 50V			< TRIMMER >	
C11	1-162-199-31	CERAMIC	10PF 5% 50V	CT1	1-141-411-11	CAP, ADJ 20PF (FM TRACKING)	
C12	1-136-013-11	FILM	360PF 5% 50V	CT2	1-141-411-11	CAP, ADJ 20PF (MW FREQUENCY COVERAGE)	
C14	1-162-851-11	CERAMIC	0.1uF 16V	CT3	1-141-459-11	CAP, TRIMMER (SEAL TYPE) 45PF (LW FREQUENCY COVERAGE)	
C15	1-161-494-00	CERAMIC	0.022uF 25V	CT4	1-141-486-11	CAP, ADJ 10PF (MW TRACKING)	
C16	1-126-963-11	ELECT	4.7uF 20% 50V	CT5	1-141-411-11	CAP, ADJ 20PF (LW TRACKING)	
C17	1-162-288-31	CERAMIC	330PF 10% 50V			< DIODE >	
C18	1-162-306-11	CERAMIC	0.01uF 30% 16V	D1	8-719-991-33	DIODE 1SS133T-77	
C19	1-124-907-11	ELECT	10uF 20% 50V	D2	8-719-991-33	DIODE 1SS133T-77	
C20	1-162-849-11	CERAMIC	0.068uF 10% 16V	D3	8-719-050-72	DIODE KV1370NT	
C21	1-162-850-11	CERAMIC	0.082uF 10% 16V	D4	8-719-050-72	DIODE KV1370NT	
C22	1-162-850-11	CERAMIC	0.082uF 10% 16V	D5	8-719-050-69	DIODE KV1520N	
C23	1-161-053-00	CERAMIC	0.015uF 10% 50V			< FILTER >	
C24	1-161-053-00	CERAMIC	0.015uF 10% 50V	FL1	1-236-711-21	FILTER, BAND PASS	
C25	1-162-306-11	CERAMIC	0.01uF 30% 16V			< IC >	
C26	1-162-306-11	CERAMIC	0.01uF 30% 16V	IC1	8-759-386-02	IC TA2008AN	
C27	1-124-443-00	ELECT	100uF 20% 10V	IC2	8-759-549-57	IC LC72137-D	
C28	1-162-306-11	CERAMIC	0.01uF 30% 16V			< COIL >	
C30	1-162-286-21	CERAMIC	220PF 10% 50V	L1	1-409-905-31	COIL, FM RF (FM TRACKING)	
C31	1-162-199-31	CERAMIC	10PF 5% 50V	L2	1-409-904-31	COIL, FM OSC (FM FREQUENCY COVERAGE)	
C32	1-162-199-31	CERAMIC	10PF 5% 50V	L3	1-501-752-11	ANTENNA, FERRITE-ROD (MW/LW) (MW/LW TRACKING)	
C33	1-136-171-00	FILM	0.33uF 5% 50V	L4	1-411-199-11	COIL, MW/LW OSC (MW FREQUENCY COVERAGE)	
C34	1-162-306-11	CERAMIC	0.01uF 30% 16V	L11	1-410-517-11	INDUCTOR 47uH	
C35	1-126-941-11	ELECT	470uF 20% 6.3V			< TRANSISTOR >	
C36	1-162-294-31	CERAMIC	0.001uF 10% 50V	Q1	8-729-119-32	TRANSISTOR 2SK193	
C37	1-162-306-11	CERAMIC	0.01uF 30% 16V	Q2	8-729-922-66	TRANSISTOR 2SC2410SN	
C38	1-162-282-31	CERAMIC	100PF 10% 50V	Q3	8-729-922-66	TRANSISTOR 2SC2410SN	
C39	1-162-282-31	CERAMIC	100PF 10% 50V	Q4	8-729-905-50	TRANSISTOR DTC343TS	
C40	1-162-282-31	CERAMIC	100PF 10% 50V	Q5	8-729-178-62	TRANSISTOR 2SC2786-L	
C41	1-162-282-31	CERAMIC	100PF 10% 50V	Q6	8-729-922-66	TRANSISTOR 2SC2410SN	
C42	1-130-483-00	MYLAR	0.01uF 5% 50V	Q9	8-729-036-77	TRANSISTOR KRC107M	
C44	1-126-963-11	ELECT	4.7uF 20% 50V	Q10	8-729-036-77	TRANSISTOR KRC107M	
C45	1-126-963-11	ELECT	4.7uF 20% 50V	Q11	8-729-036-77	TRANSISTOR KRC107M	
C46	1-162-294-31	CERAMIC	0.001uF 10% 50V	Q12	8-729-036-77	TRANSISTOR KRC107M	
C52	1-162-306-11	CERAMIC	0.01uF 30% 16V	Q15	8-729-036-77	TRANSISTOR KRC107M	
C53	1-162-306-11	CERAMIC	0.01uF 30% 16V	Q16	8-729-036-77	TRANSISTOR KRC107M	
C55	1-162-306-11	CERAMIC	0.01uF 30% 16V				
C56	1-162-306-11	CERAMIC	0.01uF 30% 16V				
C67	1-162-195-31	CERAMIC	4.7PF 10% 50V				
C68	1-162-306-11	CERAMIC	0.01uF 30% 16V				
C69	1-162-215-31	CERAMIC	47PF 5% 50V				
C71	1-104-666-11	ELECT	220uF 20% 10V				
C72	1-162-306-11	CERAMIC	0.01uF 30% 16V				
C81	1-162-306-11	CERAMIC	0.01uF 30% 16V				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
Q18	8-729-036-77	TRANSISTOR	KRC107M			< VIBRATOR >	
Q21	8-729-037-29	TRANSISTOR	KRA102M				
Q22	8-729-037-29	TRANSISTOR	KRA102M				
Q23	8-729-922-66	TRANSISTOR	2SC2410SN				
		< RESISTOR >				MISCELLANEOUS	
						*****	
R1	1-247-887-00	CARBON	220K	5%	1/4W	8	1-533-233-31 HOLDER, FUSE
R2	1-249-441-11	CARBON	100K	5%	1/4W	103	1-783-993-11 WIRE, PARALLEL (FFC) (30 CORE)
R3	1-249-431-11	CARBON	15K	5%	1/4W	104	1-783-994-11 WIRE, PARALLEL (FFC) (13 CORE)
R4	1-249-413-11	CARBON	470	5%	1/4W	106	1-783-990-11 WIRE, PARALLEL (FFC) (10 CORE)
R5	1-249-417-11	CARBON	1K	5%	1/4W	108	1-783-991-11 WIRE, PARALLEL (FFC) (12 CORE)
R6	1-249-425-11	CARBON	4.7K	5%	1/4W	109	1-783-992-11 WIRE, PARALLEL (FFC) (20 CORE)
R7	1-249-425-11	CARBON	4.7K	5%	1/4W	110	1-782-663-11 WIRE (FLAT TYPE) (21CORE)
R9	1-249-425-11	CARBON	4.7K	5%	1/4W	303	1-690-530-81 LEAD (WITH CONNECTOR)
R10	1-249-429-11	CARBON	10K	5%	1/4W	308	1-660-965-11 SLIDE FLEXIBLE BOARD
R11	1-247-887-00	CARBON	220K	5%	1/4W	△309	X-4950-060-1 OPTICAL PICK-UP (DAX01A2 RP)
R12	1-249-425-11	CARBON	4.7K	5%	1/4W	ANT1	1-754-055-11 ANTENNA, TELESCOPIC
R13	1-247-815-91	CARBON	220	5%	1/4W	△F901	1-532-505-31 FUSE, TIME LAG (T5AL/250V)
R14	1-249-427-11	CARBON	6.8K	5%	1/4W	HRPE901	1-418-847-11 HEAD ASSY, HOLDER (RECORD/PLAYBACK/ERASE)
R16	1-249-417-11	CARBON	1K	5%	1/4W	LCD801	1-803-232-11 DISPLAY PANEL, LIQUID CRYSTAL
R19	1-249-421-11	CARBON	2.2K	5%	1/4W	M691	3-034-599-01 MOTOR ASSY (CAPSTAN/REEL) (INCLUDING PULLEY)
R20	1-247-863-91	CARBON	22K	5%	1/4W	M790	1-698-999-11 MOTOR, DC (LOADING)
R21	1-249-404-00	CARBON	82	5%	1/4W	M801	A-3303-403-A MOTOR ASSY (SLED) (INCLUDING GEAR)
R23	1-249-425-11	CARBON	4.7K	5%	1/4W	M802	A-3303-971-A MOTOR ASSY, TURNTABLE (SPINDLE)
R24	1-249-425-11	CARBON	4.7K	5%	1/4W	PH691	8-729-021-62 PHOTO INTERRUPTOR SG-211
R25	1-249-425-11	CARBON	4.7K	5%	1/4W	PM691	1-454-896-11 SOLENOID, PLUNGER
R26	1-249-429-11	CARBON	10K	5%	1/4W	S696	1-771-661-11 SWITCH, LEAF (HEAD POSITION)
R27	1-249-429-11	CARBON	10K	5%	1/4W	S801	1-571-099-21 SWITCH (1 KEY) (LIMIT)
R28	1-249-429-11	CARBON	10K	5%	1/4W	SP101	1-505-742-11 SPEAKER (8cm) (L-CH)
R29	1-249-429-11	CARBON	10K	5%	1/4W	SP201	1-505-742-11 SPEAKER (8cm) (R-CH)
R30	1-249-427-11	CARBON	6.8K	5%	1/4W	△T901	1-433-456-11 TRANSFORMER, POWER
R31	1-247-843-11	CARBON	3.3K	5%	1/4W		*****
R32	1-249-416-11	CARBON	820	5%	1/4W		ACCESSORIES & PACKING MATERIALS
R34	1-249-429-11	CARBON	10K	5%	1/4W		*****
R35	1-249-429-11	CARBON	10K	5%	1/4W		
R39	1-249-429-11	CARBON	10K	5%	1/4W		
R40	1-247-807-31	CARBON	100	5%	1/4W	△	1-769-412-13 CORD, POWER
R44	1-249-429-11	CARBON	10K	5%	1/4W	△	1-770-019-11 ADAPTOR, CONVERSION PLUG 3P (UK)
R49	1-249-421-11	CARBON	2.2K	5%	1/4W		3-027-153-01 LID, BATTERY CASE (FOR RMT-CD50AD)
R50	1-249-417-11	CARBON	1K	5%	1/4W		3-864-496-11 MANUAL, INSTRUCTION (ENGLISH, SPANISH) (AEP,Tourist,UK)
R52	1-249-441-11	CARBON	100K	5%	1/4W		3-864-496-21 MANUAL, INSTRUCTION (FRENCH, GERMAN) (AEP,Tourist)
R53	1-249-441-11	CARBON	100K	5%	1/4W		3-864-496-31 MANUAL, INSTRUCTION (DUTCH, PORTUGUESE) (AEP)
R54	1-249-413-11	CARBON	470	5%	1/4W		3-864-496-41 MANUAL, INSTRUCTION (ITALIAN) (IT)
R55	1-249-437-11	CARBON	47K	5%	1/4W		3-864-496-51 MANUAL, INSTRUCTION (SWEDISH, FINNISH) (EE, Russia)
R56	1-249-411-11	CARBON	330	5%	1/4W		3-864-496-61 MANUAL, INSTRUCTION (POLISH, CZECH, HUNGARIAN) (EE,Russia)
R57	1-247-791-91	CARBON	22	5%	1/4W		A-3250-874-A REMOTE COMMANDER (RMT-CD50AD)
R59	1-249-421-11	CARBON	2.2K	5%	1/4W		*****
R60	1-249-407-11	CARBON	150	5%	1/4W		
R70	1-247-887-00	CARBON	220K	5%	1/4W		
R71	1-247-815-91	CARBON	220	5%	1/4W		
R72	1-249-417-11	CARBON	1K	5%	1/4W		
R73	1-249-417-11	CARBON	1K	5%	1/4W		
R77	1-249-429-11	CARBON	10K	5%	1/4W		

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



# ZS-D50

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
		***** HARDWARE LIST *****	
#1	7-621-773-86	SCREW +B 2.6X4	
#2	7-623-510-01	LUG, 4	
#3	7-682-549-04	SCREW +B 3X10	
#4	7-685-103-19	SCREW +P 2X5 TYPE2 NON-SLIT	
#5	7-685-133-19	SCREW +P 2.6X6 TYPE2 NON-SLIT	
#6	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#7	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#8	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#9	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S	
#11	7-627-850-17	SCREW +P 1.4X2.5 TYPE3	
#13	7-682-546-09	SCREW +B 3X5	