

ZS-2000

SERVICE MANUAL

US Model

Ver 1.0 2000.07



AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL

HARMONIC DISTORTION

With 4-ohm loads, both channels driven from 150 - 15,000 Hz; rated 6.5 W per channel - minimum RMS power, with no more than 10% total harmonic distortion in AC operation.

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 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 +0.5/-0.7 dB

Wow and flutter

Below measurable limit

Radio section

Frequency range

FM: 87.6 - 108 MHz

AM: 530 - 1,710 kHz

Antennas

FM: Telescopic antenna

AM: Loop antenna

CD Section	Model Name Using Similar Mechanism	ZS-D50
	CD Loading Mechanism Type	VLM-ZS2000
	CD Mechanism Type	CDM-2411AAA
	Optical Pick-up Name	DAX-01A2

SPECIFICATIONS

General

Speaker

Full range: 8 cm (3 1/4 in.) dia., 4 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

OPTICAL DIGITAL OUT (CD) (optical output connector)

Wavelength: 630 - 690 nm

Power requirements

For personal audio system:

120 V AC, 60 Hz

For remote control:

3 V DC, 2 size AA (R6) batteries

Power consumption

AC 30 W

Dimensions (incl. projecting parts)

approx. 470 × 206.5 × 145.5 mm (w/h/d)

(18 5/8 × 8 1/4 × 5 3/4 inches)

Mass

approx. 5 kg (11 lb.)

Supplied accessories

Remote control (RMT-C200A) (1)

AM loop antenna (1)

Speaker nets (2)

Design and specifications are subject to change without notice.

PERSONAL AUDIO SYSTEM

SONY®

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CAUTION

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

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.

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

NOTES ON LASER DIODE EMISSION CHECK

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

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.

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.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes).

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

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

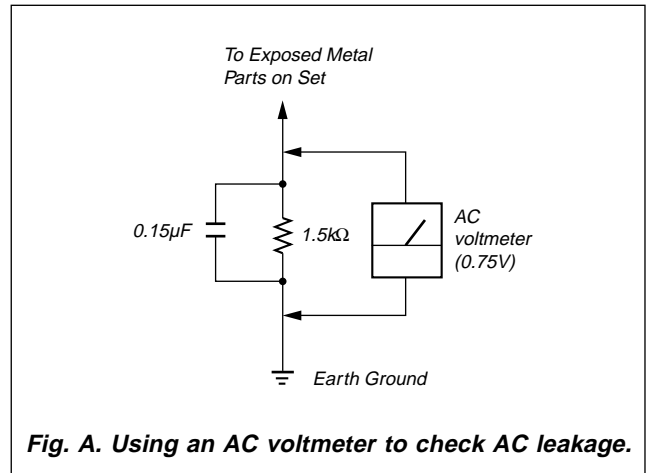


Fig. A. Using an AC voltmeter to check AC leakage.


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.

SECTION 1

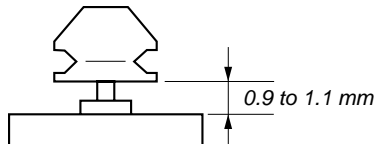
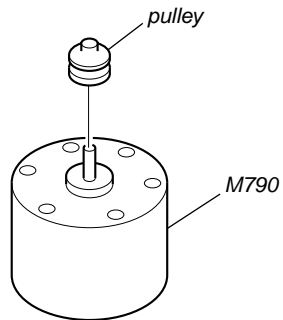
SERVICING NOTES

1-1. LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Close the lid for CD.
2. Press CD  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.

1-2. 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.



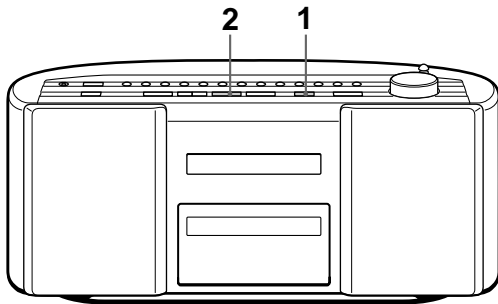
Install the pulley to the motor.

SECTION 2 GENERAL

This section is extracted from instruction manual.

Basic Operations

Playing a CD



Connect the AC power cord to the wall outlet (see page 26).

1 **CD OPEN/CLOSE** Press **▲ CD OPEN/CLOSE** (direct power-on) and place the CD on the CD tray until it clicks into place.

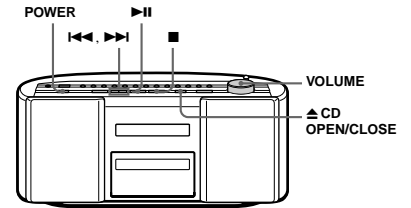
With the label side up

2 Press **▶▶** (▶ on the remote). The CD tray closes and the player plays all the tracks once.

Track number Playing time

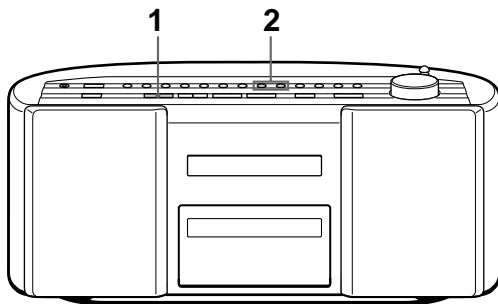
Tip
Next time you want to listen to a CD, just press **▶▶**. The player turns on automatically and starts playing the CD.

Use these buttons for additional operations



To	Do this
adjust the volume	Turn VOLUME toward + or - (press VOL +, - on the remote).
stop playback	Press ■ .
pause playback	Press ▶▶ () on the remote). Press again to resume play after pause.
go to the next track	Press ▶▶▶ .
go back to the previous track	Press ◀◀◀ .
remove the CD	Press ▲ CD OPEN/CLOSE .
turn on/off the player	Press POWER .

Listening to the radio



Connect the AC power cord to the wall outlet (see page 26).

1 **RADIO BAND • AUTO PRESET** Press **RADIO BAND • AUTO PRESET** until the band you want appears in the display (direct power-on).

Each time you press the button, the band changes as follows: "FM1" → "FM2" → "AM"

Display **FM1 87.6**

2 **TUNE - TIME SET +** Hold down **TUNE • TIME SET +** or - (**TUNE +** or - on the remote) until the frequency digits begin to change in the display.

The player automatically scans the radio frequencies and stops when it finds a clear station.

If you cannot tune in a station, press the button repeatedly to change the frequency step by step.

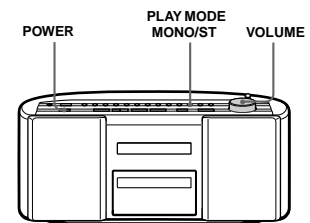
Display **FM1 89.2**

Indicates an FM stereo broadcast.

Tips

- The "FM1" and "FM2" bands have the same functions. You can store the stations you want separately in "FM1" and "FM2" (page 14).
- If the FM broadcast is noisy, press **PLAY MODE • MONO/ST** (MODE on the remote) until "Mono" appears in the display and the radio will play in monaural.
- Next time you want to listen to the radio, just press **RADIO BAND • AUTO PRESET**. The player turns on automatically and starts playing the previous station.

Use these buttons for additional operations



To	Do this
adjust the volume	Turn VOLUME toward + or - (press VOL +, - on the remote).
turn on/off the radio	Press POWER .

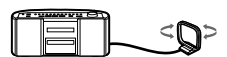
To improve broadcast reception FM:

Reorient the antenna for FM.



AM:

Keep the AM loop antenna as far as possible from the player and reorient it.

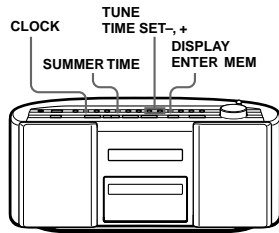


If the broadcast is still noisy, connect the external antenna (page 27).

The Timer

Setting the clock

“--:--” indication appears in the display until you set the clock.



Tip
The time display system of this player is the 12-hour system.

- 1 Press and hold **CLOCK** until the hour digits flash.



- 2 Set the time.

- 1 Press **TUNE • TIME SET +** or **-** to set the hour and press **DISPLAY • ENTER MEM**.



- 2 Press **TUNE • TIME SET +** or **-** to set the minutes.



- 3 Press **DISPLAY • ENTER MEM**.



The clock starts from 00 seconds.

To change the display to the daylight saving time (summer time) indication

Press and hold **SUMMER TIME** for 2 seconds.

“Summer On” appears in the display for a few seconds.

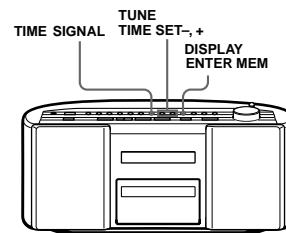
To cancel the summer time indication

Press and hold **SUMMER TIME** again.

“Summer Off” appears in the display for a few seconds.

Setting the time signal

When the power is off, you can hear the time signal on this player. You can select the sound for the time signal. Make sure you have set the clock (see page 18).



- 1 When the power is off, press **TIME SIGNAL** to display “TIME SIGNAL” indication.

Do the following operations by checking the display.



- 2 Press **TUNE • TIME SET +** or **-** until the sound you want appears in the display, and press **DISPLAY • ENTER MEM**.

Display	Intervals
Wall Clock	Sounds on the hour the number of times corresponding to the hour and again on the half hour once (Example: Three times at 3:00 p.m. and again at 3:30 p.m. once).
Harp	Sounds on the hour once
Music Box	Sounds on the hour once
Chime	Sounds on the hour once
Organ	Sounds on the hour once

- 3 Press **TUNE • TIME SET +** or **-** to set the volume you want, and press **DISPLAY • ENTER MEM**.

continued

Setting the time signal (continued)

- 4 Press **TUNE • TIME SET +** or **-** to select the time for the time signal function to work, and then press **DISPLAY • ENTER MEM**.

Display	Time signal sounds
Off	Not at all
Every Hour	All day
Auto	7:00 a.m. - 10:00 p.m.
Once a Day*	Once a day

* If you selected “Wall Clock” in step 2, you cannot select “Once a Day”

- 5 If you selected “Once a Day” in step 4, set the time for the time signal to sound. (If you selected other items in step 4, omit this step.)

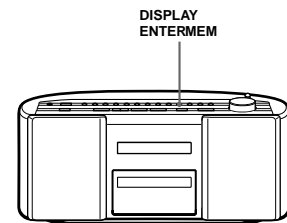
- 1 Press **TUNE • TIME SET +** or **-** to set the hour and press **DISPLAY • ENTER MEM**.
- 2 Press **TUNE • TIME SET +** or **-** to set the minutes and press **DISPLAY • ENTER MEM**.

To check the sound types (demonstration mode)

Press and hold **TIME SIGNAL** for about 2 seconds. You can hear the five types of sound once.

Saving power

Even when power is turned off, this player consumes about 5.6 W for time indication, timer operation, remote control reception. If you use the saving power function, you can reduce power consumption to less than 1 W.



When the power is off, press and hold **DISPLAY • ENTER MEM** for about 2 seconds.

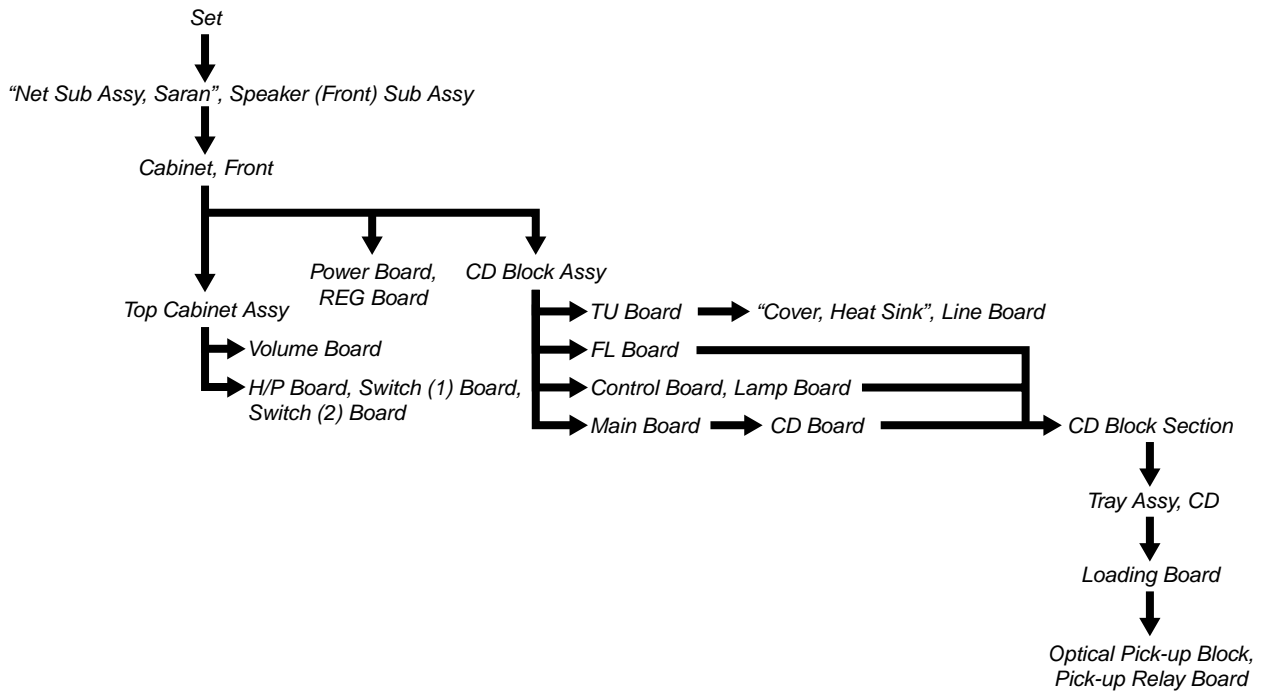
The player enters the lower power consumption standby mode.

To cancel the saving power

To make the time indication appear, press and hold **DISPLAY • ENTER MEM** for about 2 seconds when the power is off.

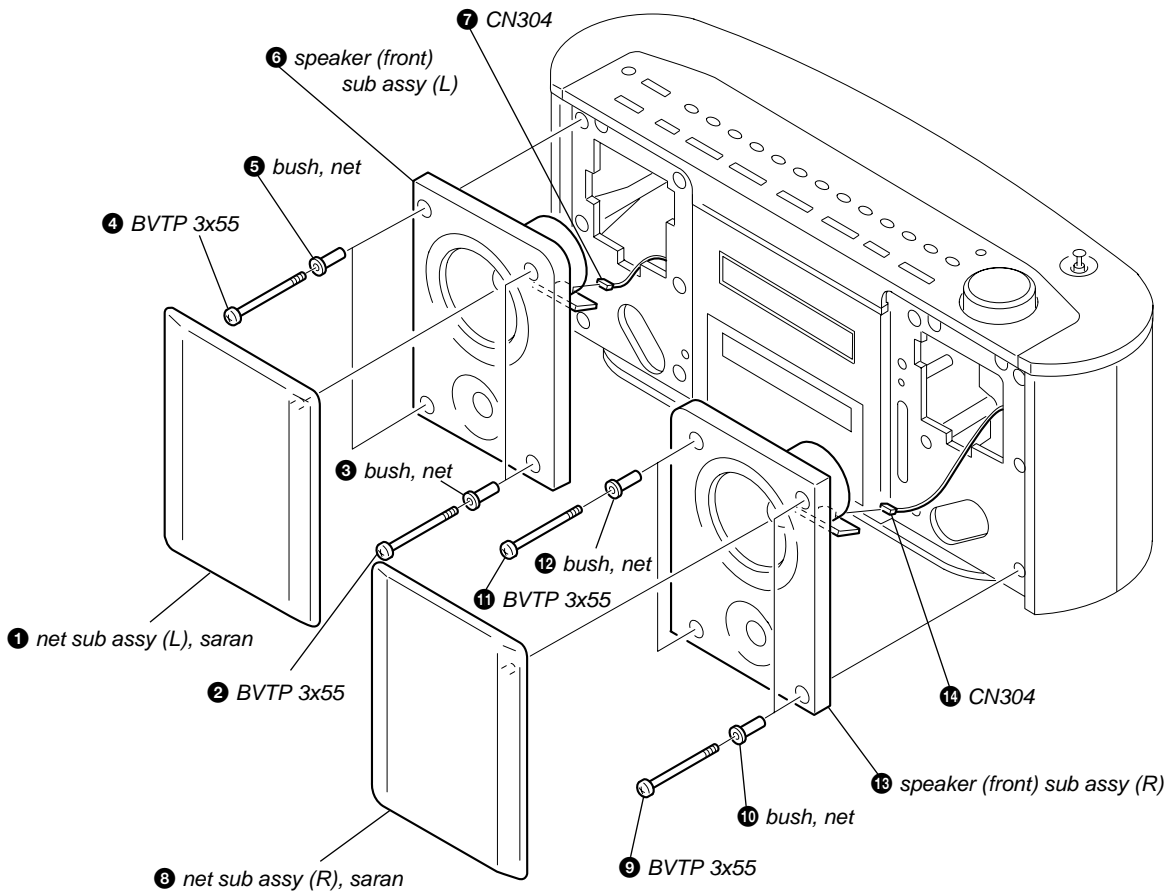
SECTION 3 DISASSEMBLY

Note : This set can be disassemble according to the following sequence.

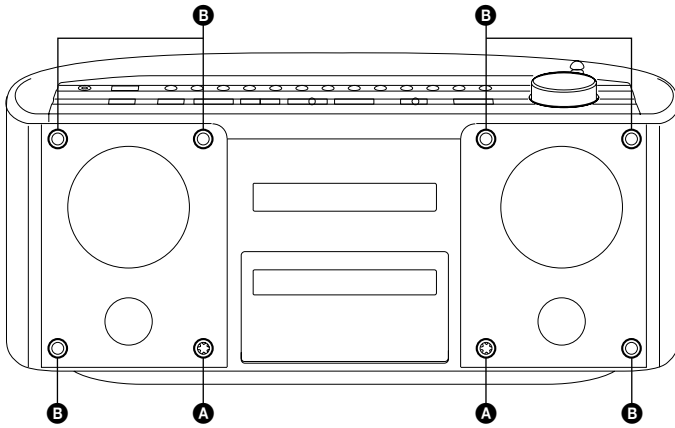


Note : Follow the disassembly procedure in the numerical order given.

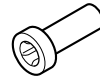
3-1. "NET SUB ASSY, SARAN", SPEAKER (FRONT) SUB ASSY



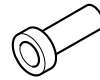
• Note for installation of the speaker (front) sub assy



There are two types of net "bush, net":
 Type A: 3-041-456-11 (with groove in the tube)

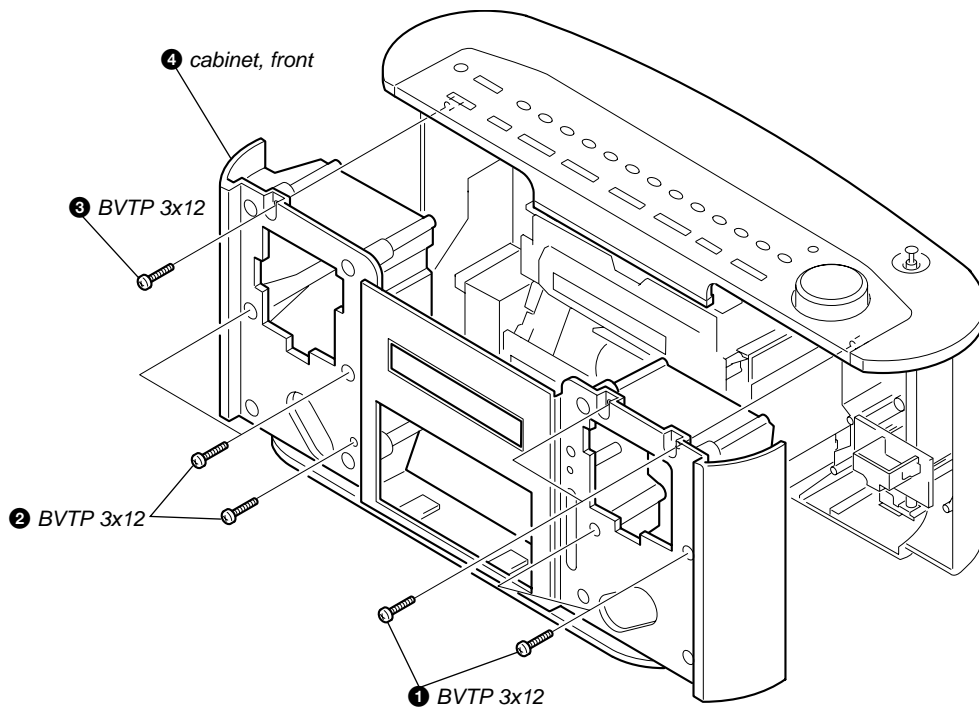


Type B: 3-041-456-01 (without groove in the tube)

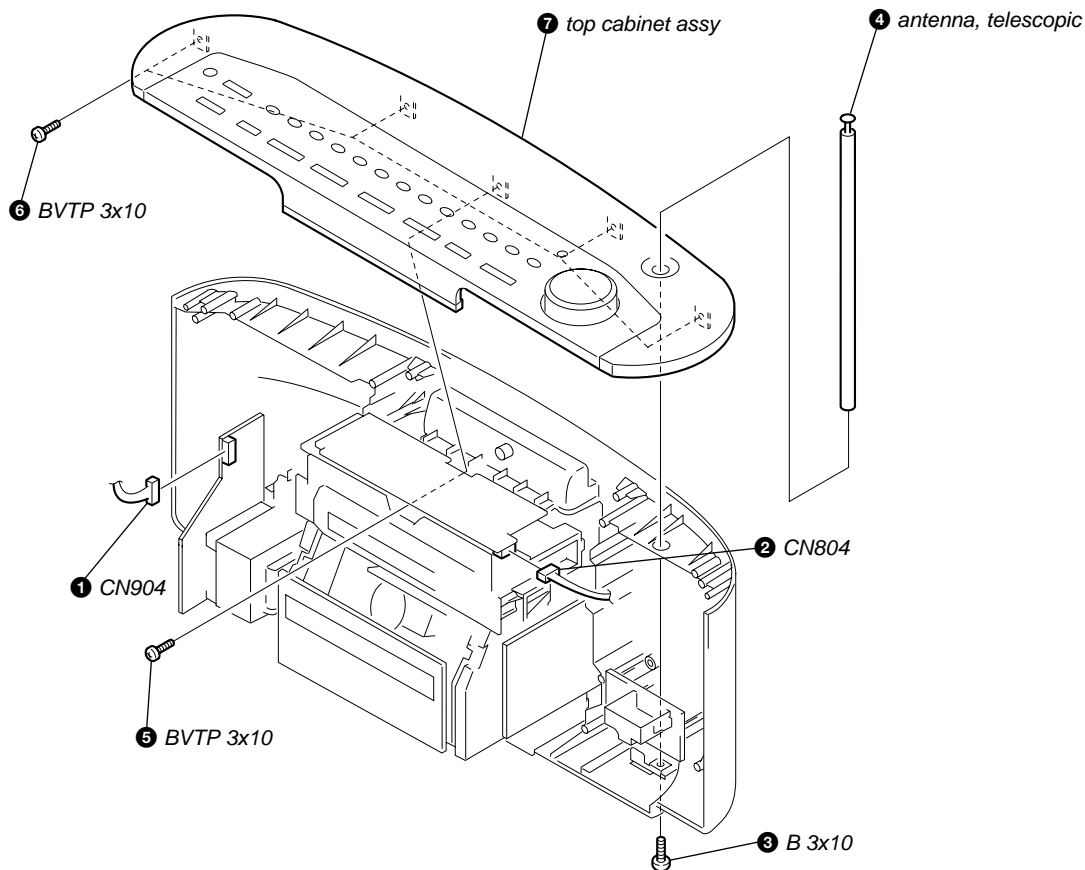


The type A of "bush, net" should be installed at place **A** in the left figure.
 The type B of "bush, net" should be installed at place **B**.

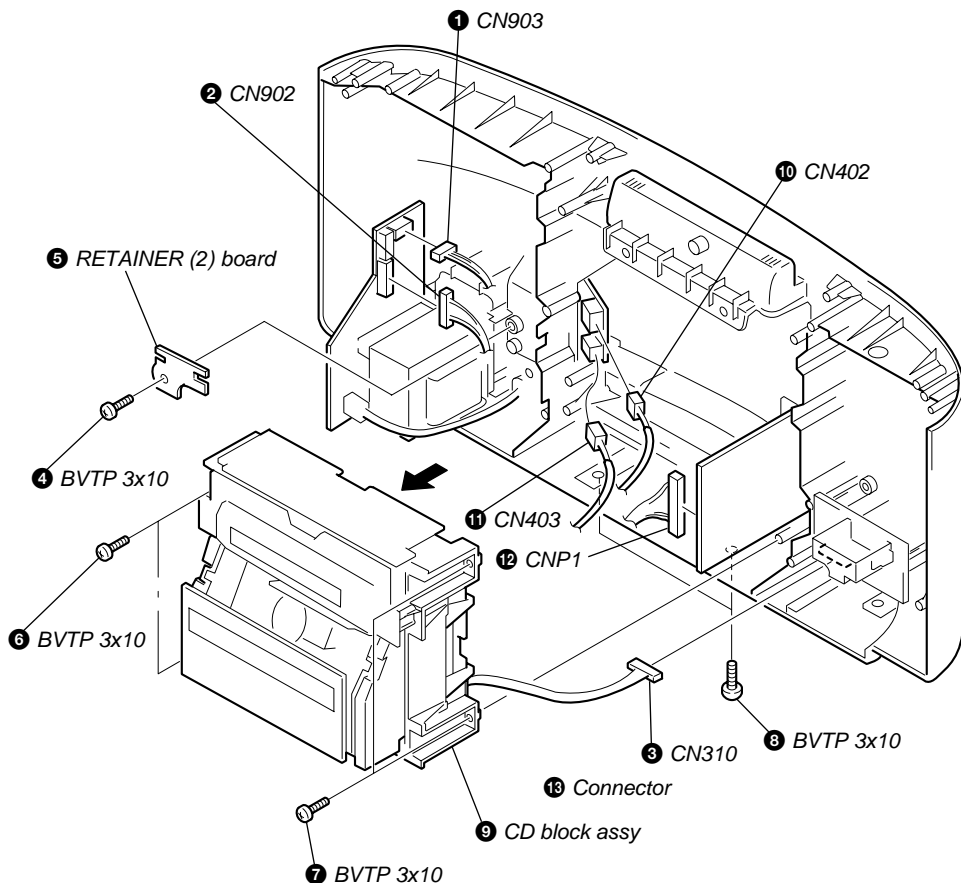
3-2. CABINET, FRONT



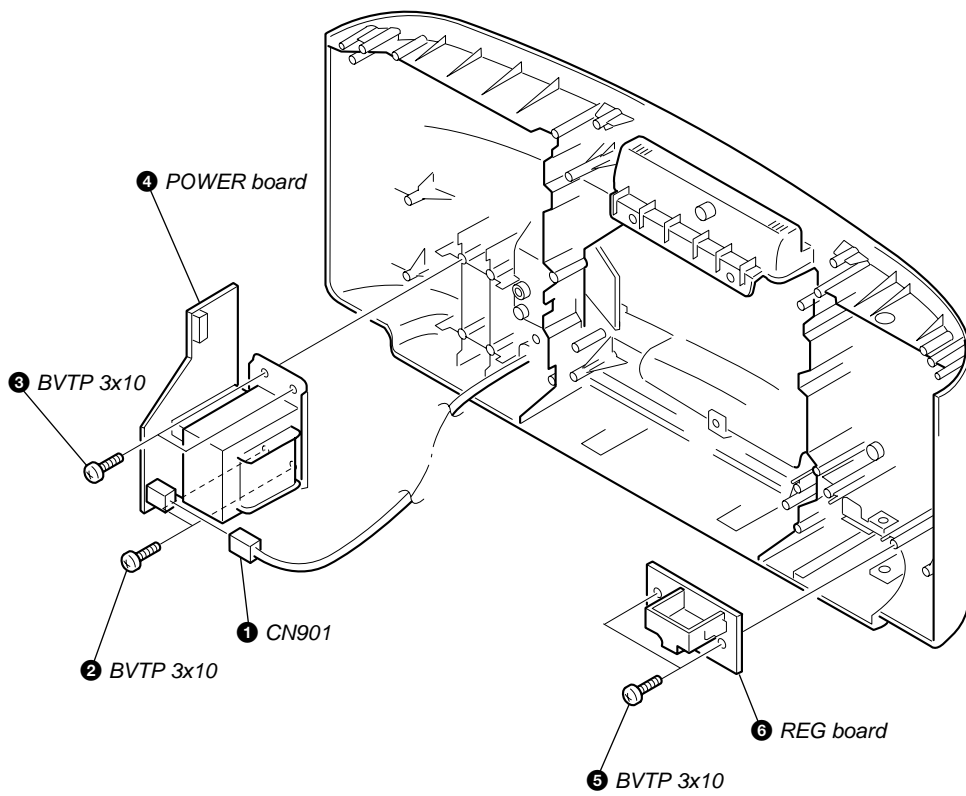
3-3. TOP CABINET ASSY



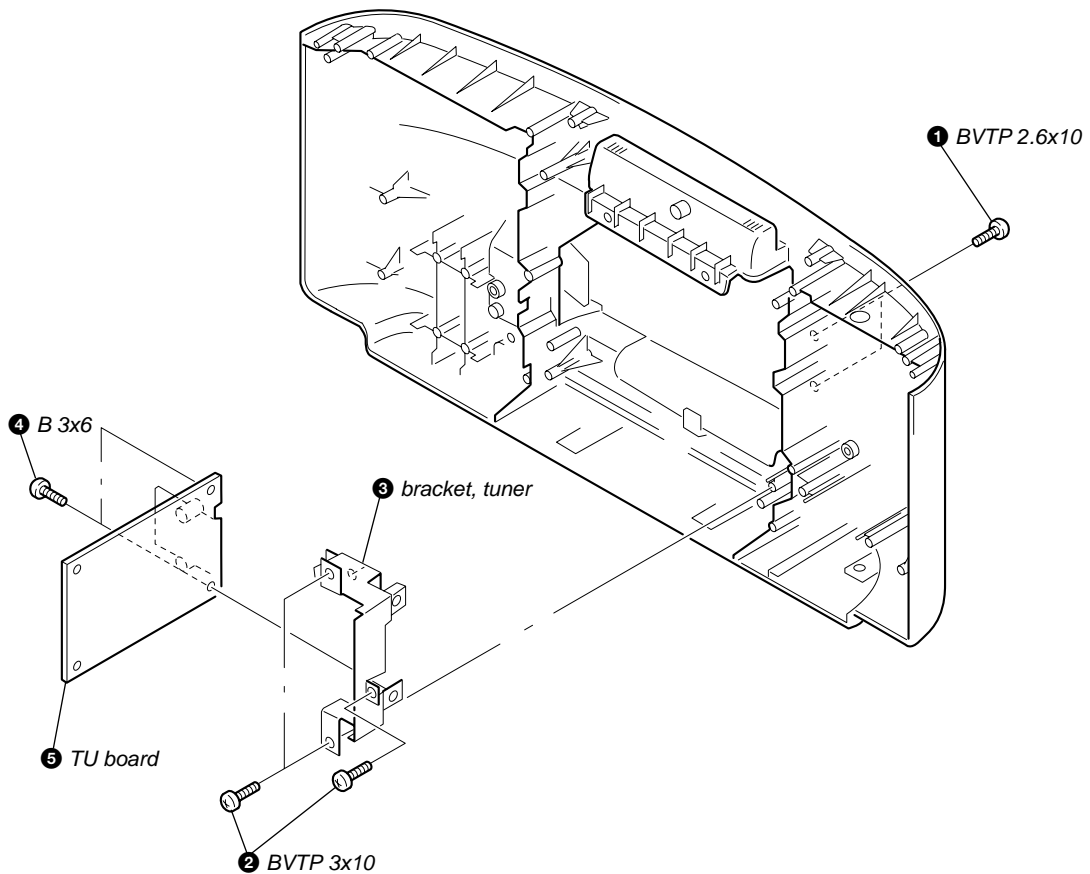
3-4. CD BLOCK ASSY



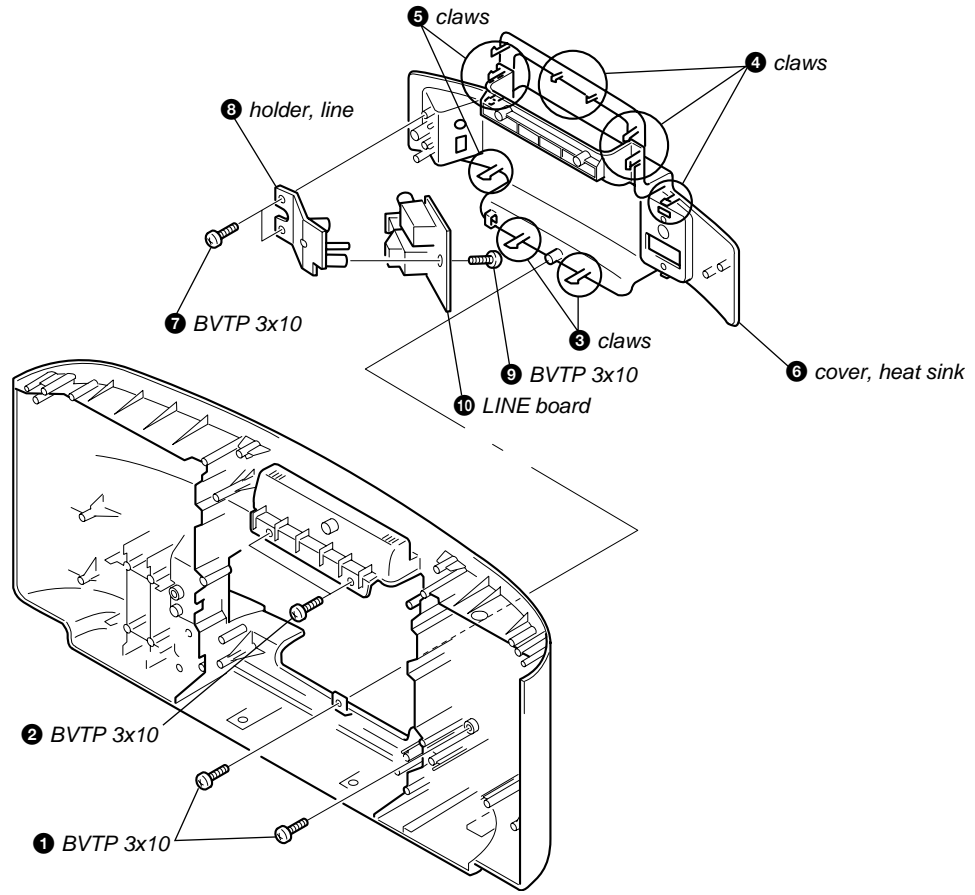
3-5. POWER BOARD, REG BOARD



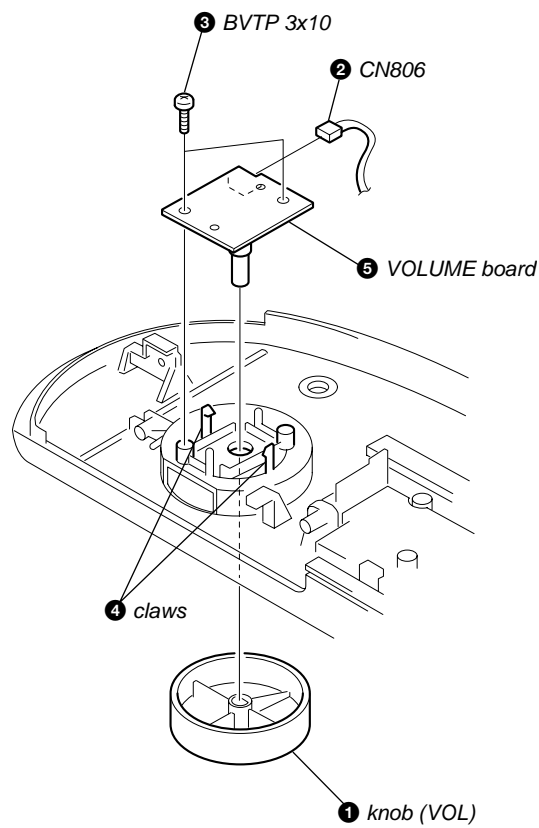
3-6. TU BOARD



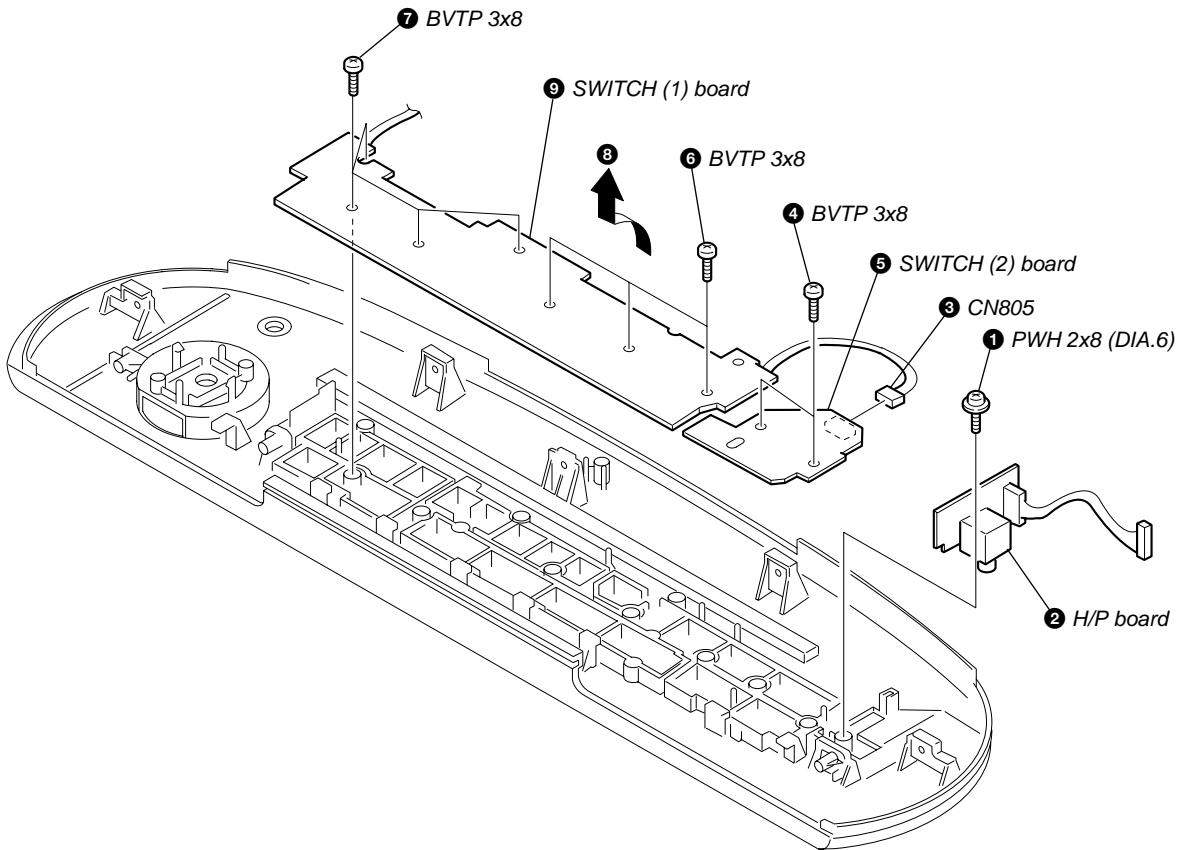
3-7. "COVER, HEAT SINK", LINE BOARD



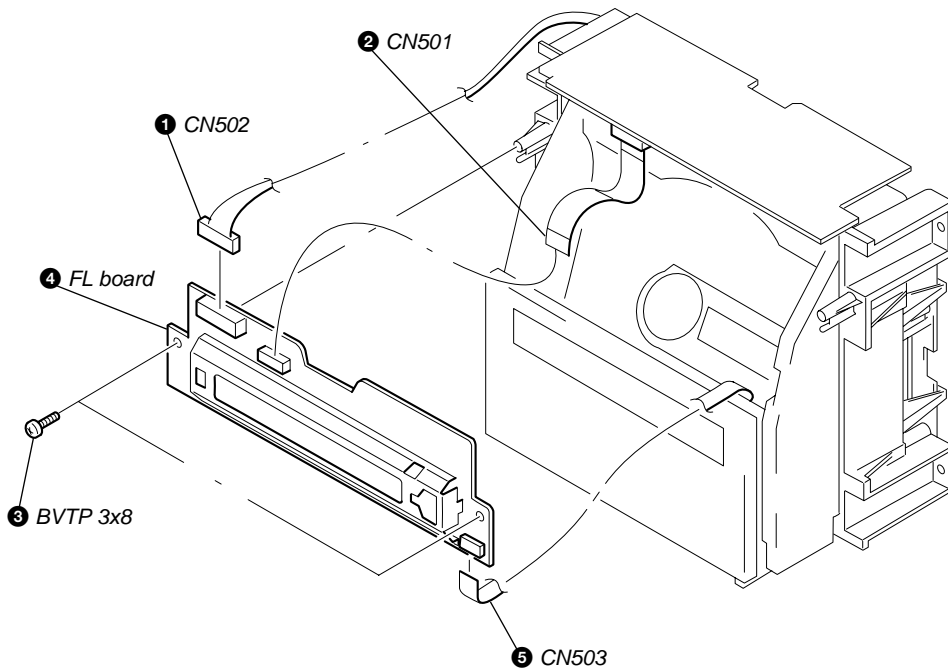
3-8. VOLUME BOARD



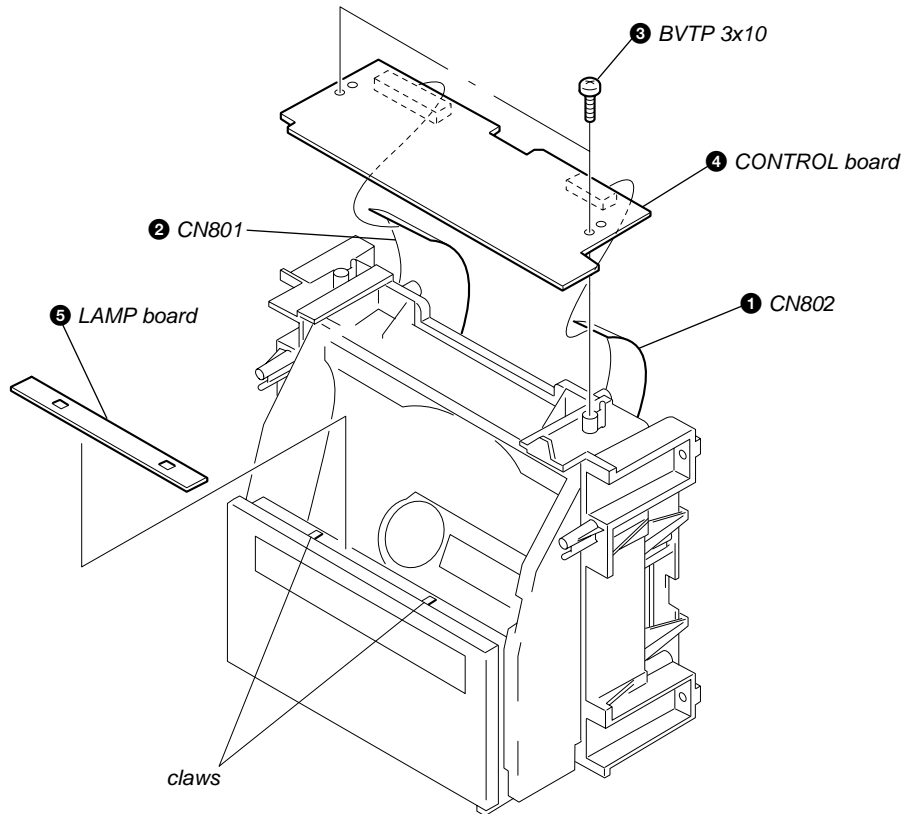
3-9. H/P BOARD, SWITCH (1) BOARD, SWITCH (2) BOARD



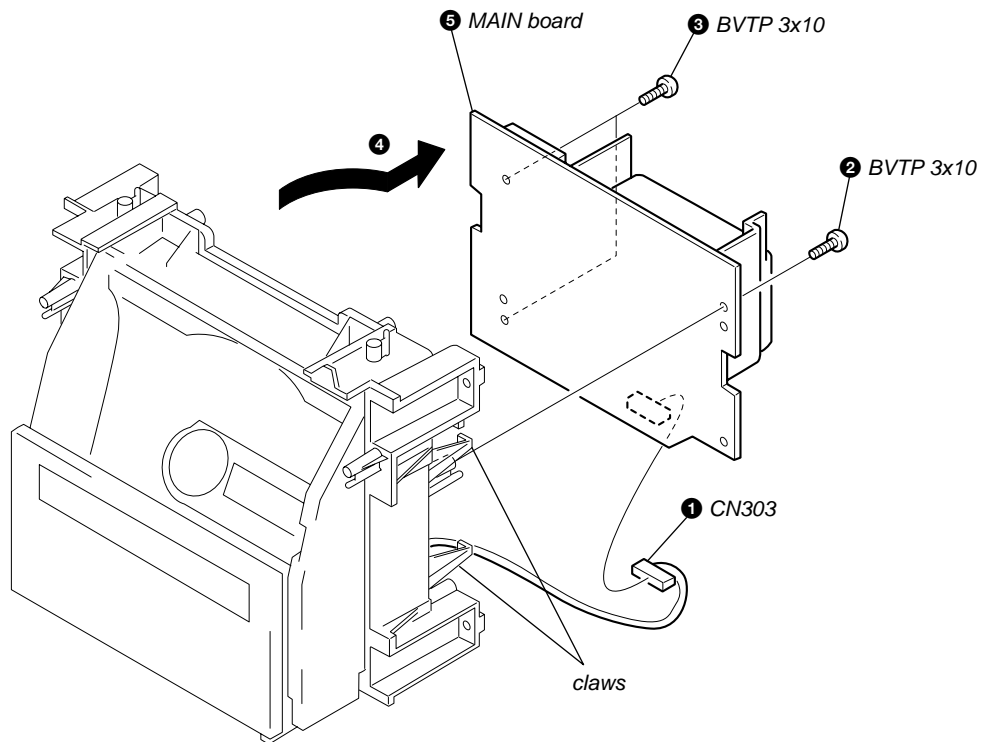
3-10. FL BOARD



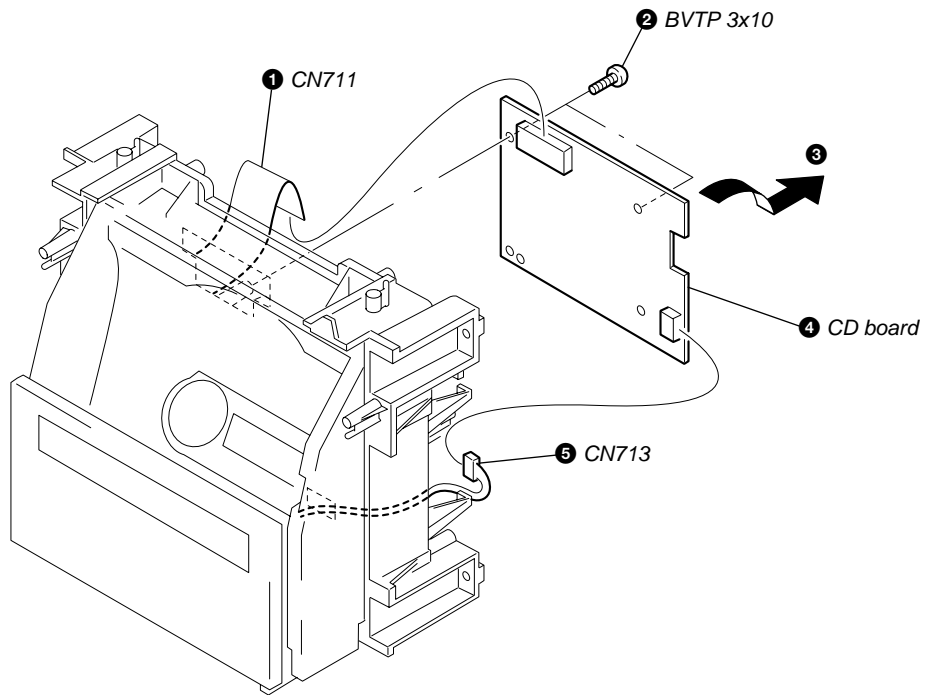
3-11. CONTROL BOARD, LAMP BOARD



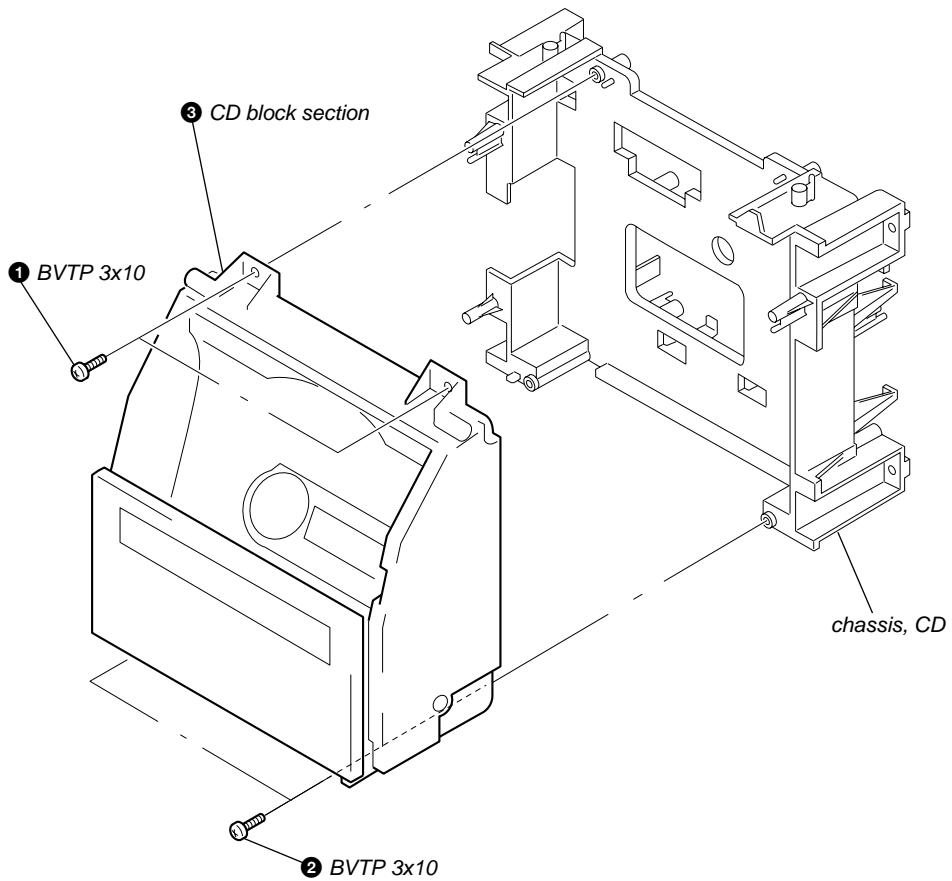
3-12. MAIN BOARD



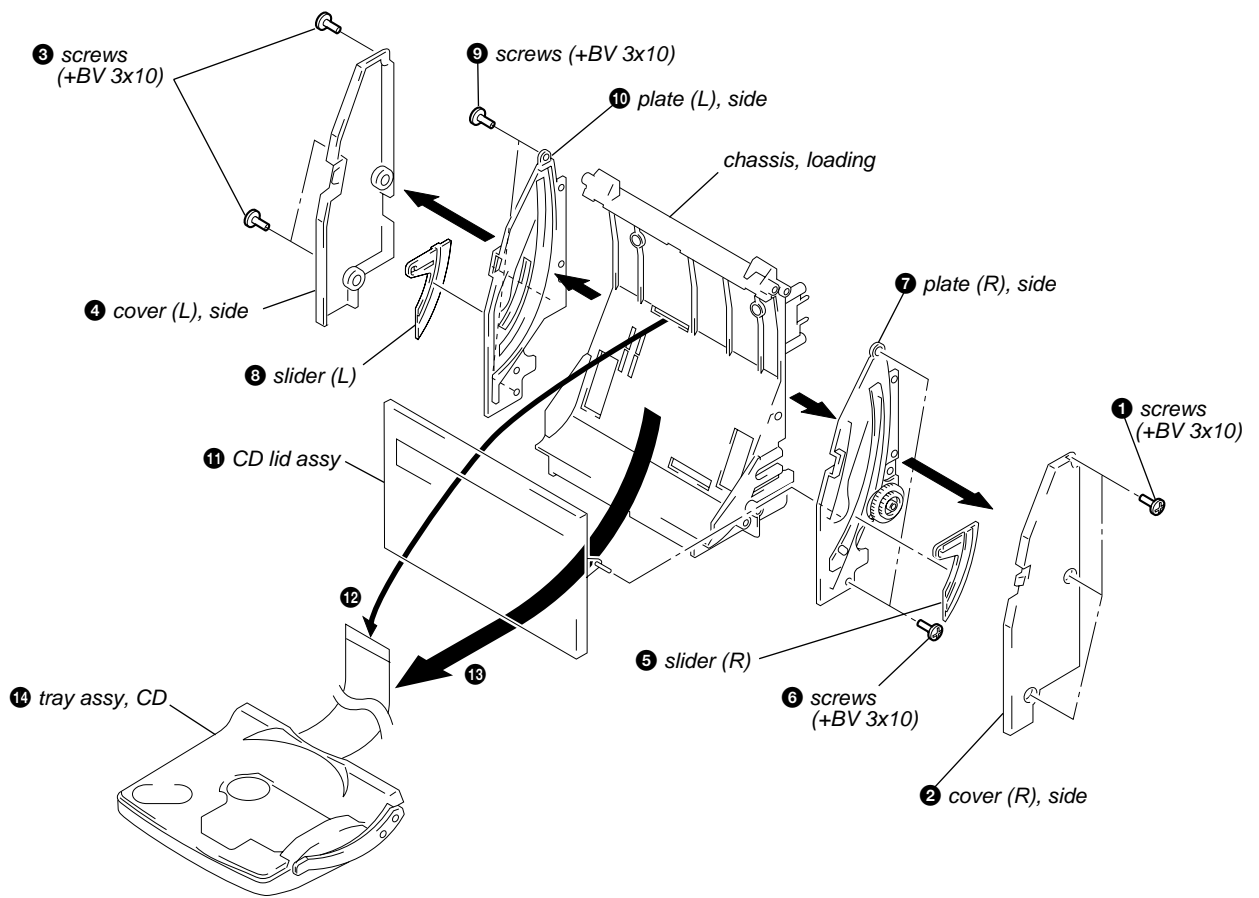
3-13. CD BOARD



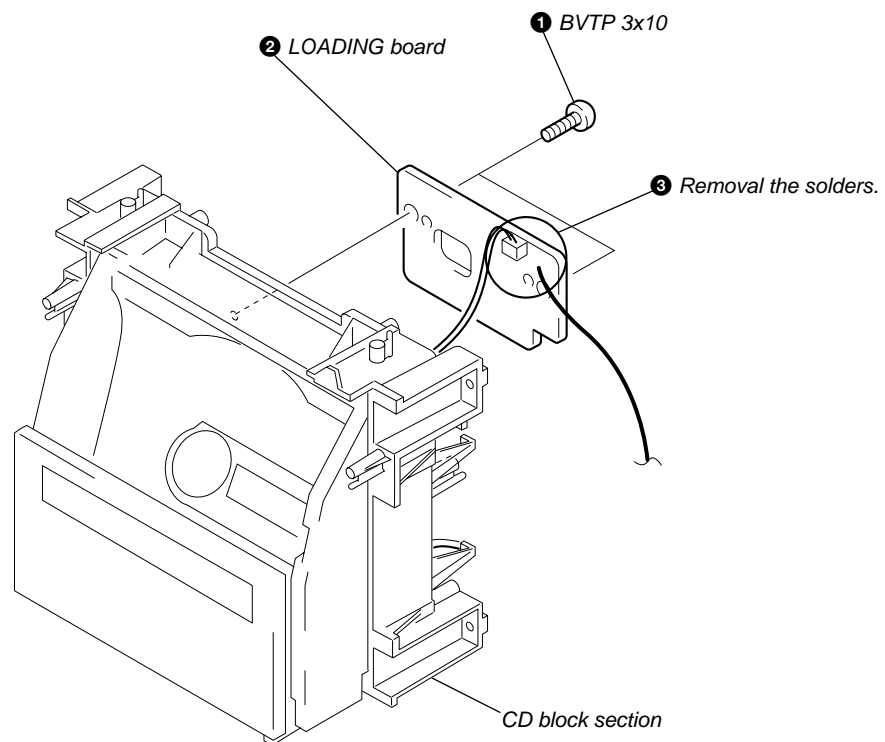
3-14. CD BLOCK SECTION



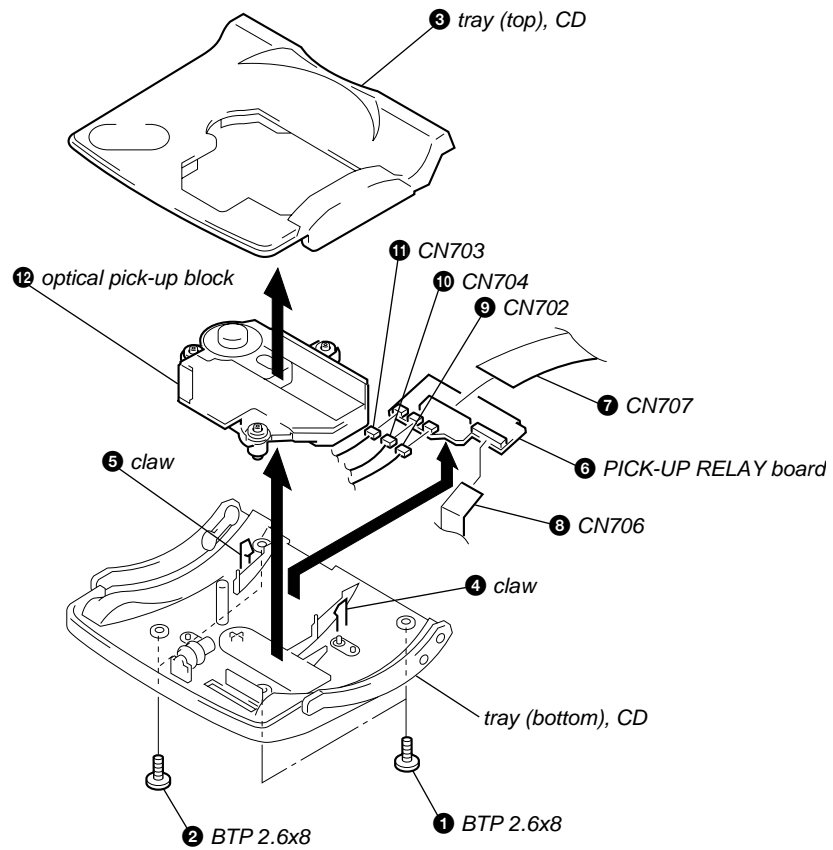
3-15. TRAY ASSY, CD



3-16. LOADING BOARD



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



SECTION 4 TEST MODE

4-1. GENERAL DESCRIPTION

This set has the TEST MODE that allows the CD unit to be operational checked.

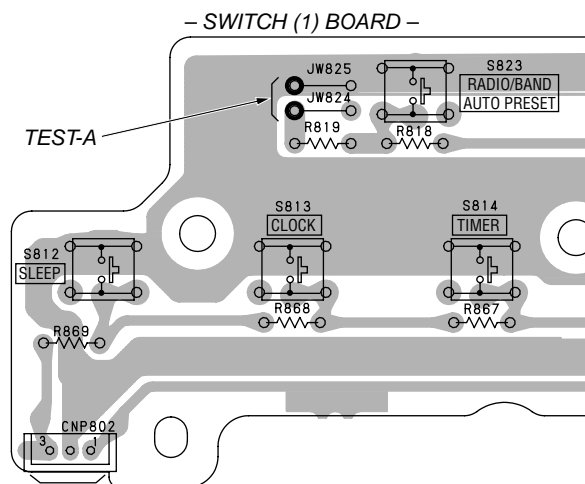
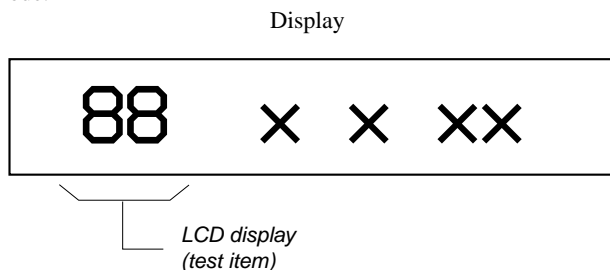
4-2. TEST MODE

4-2-1. Setting the test mode

- 1) Turn the power on.
- 2) Short the TEST-A land on the SWITCH(1) BOARD to open it (or short between JW824 and JW825 to open the circuit).

4-2-2. Releasing the test mode

After the test mode is complete, turn the power off to release the mode.



4-2-3. The contents of test mode

Mode name	Description	LCD display
STOP 1	The initial state and command are reset and the initial value is set. After resetting, Stop 2 is switched to.	88
STOP 2	Stopped state. FF/FR KEY is used to operate the SLED(PICK-UP). The automatic adjustment value is held.	88
FOCUS	FOCUS SERVO: ON. CLV-S TRACKING & SLED SERVO: OFF If FOCUS SERVO does not turn on, for example, without disc, FOCUS SEARCH is performed limitlessly. When FOCUS SERVO is turned on, LPC is turned on and 'PGM' is displayed.	v=
ALL SERVO	All SERVOS are turned on. When LPC is turned on, 'PGM' is displayed. After automatic adjustment, 'r=' is displayed. If the automatic adjustment value is manually changed, 'SHUF' is displayed.	r=
T.G UP	With SERVO OFF, TRACKING in the GAIN UP state. LPC is turned on.	r0
SLED FWD	With SERVO OFF, SLED (PICK-UP) is moved to the outer circumference.	u1
SLED REV	With SERVO OFF, SLED (PICK-UP) is moved to the inner circumference.	u2
FOCUS FWD	With FOCUS state, SLED(PICK-UP) is moved to the outer circumference.	v1
FOCUS REV	With FOCUS state, SLED (PICK-UP) is moved to the inner circumference.	v2
LPC OFF	When all SERVOS are on and LPC is off, 'PGM' is turned off. When LPC is on, 'PGM' is turned on.	-

4-2-4. MODE transition table

KEY operated Current TEST MODE			TUNE TIME SET -		TUNE TIME SET +	
			While held down	When released	While held down	When released
	STOP	PLAY/PAUSE				
STOP 1	STOP 1	FOCUS	SLED RWD	STOP 1	SLED FWD	STOP 1
STOP 2	STOP 1	FOCUS	SLED RWD	STOP 2	SLED FWD	STOP 2
FOCUS	STOP 2	ALL SERVO	FOCUS RWD	FOCUS	FOCUS FWD	FOCUS
ALL SERVO	STOP 2	LPC OFF	FOCUS RWD	FOCUS	FOCUS FWD	FOCUS
LPC OFF	STOP 2	T.G UP	FOCUS RWD	FOCUS	FOCUS FWD	FOCUS
TG UP	STOP 2	ALL SERVO	FOCUS RWD	FOCUS	FOCUS FWD	FOCUS

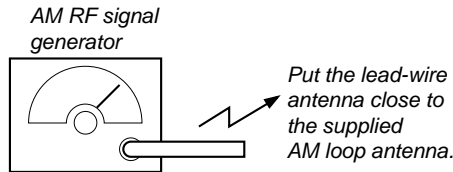
SECTION 5 ELECTRICAL ADJUSTMENTS

5-1. TUNER SECTION 0 dB = 1 μ V

• AM Section

Setting:

BAND button: AM

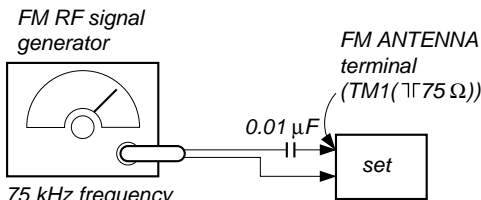


30% amplitude modulation by 400 Hz signal
output level : as low as possible

• FM Section

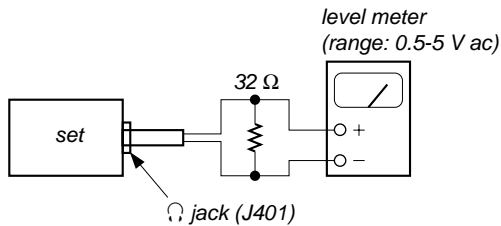
Setting:

BAND button: FM

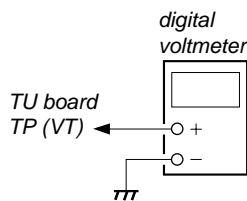


75 kHz frequency deviation by 1 kHz signal
output level : as low as possible

• Connecting Level Meter (FM and AM)



• Connecting Digital Voltmeter (FM and AM)



- NOTE :** 1) Repeat the procedures in each adjustment several times, and the tracking adjustments should be finally done by the trimmer capacitors.
2) Remove FM antenna in FM adjustment.

AM IF ADJUSTMENT		
Adjust for a maximum reading on level meter.		
T1		
450 kHz (Display: 1,000 kHz)		

AM FREQUENCY COVERAGE ADJUSTMENT		
Frequency Display	530 kHz	1,710 kHz
Reading on Digital voltmeter	0.9 ± 0.1 V	4.7 ± 0.5 V
Adjustment Part	T4	<confirmation>

AM TRACKING ADJUSTMENT	
Adjust for a maximum reading on level meter.	
T3	CT3
620 kHz	1,400 kHz

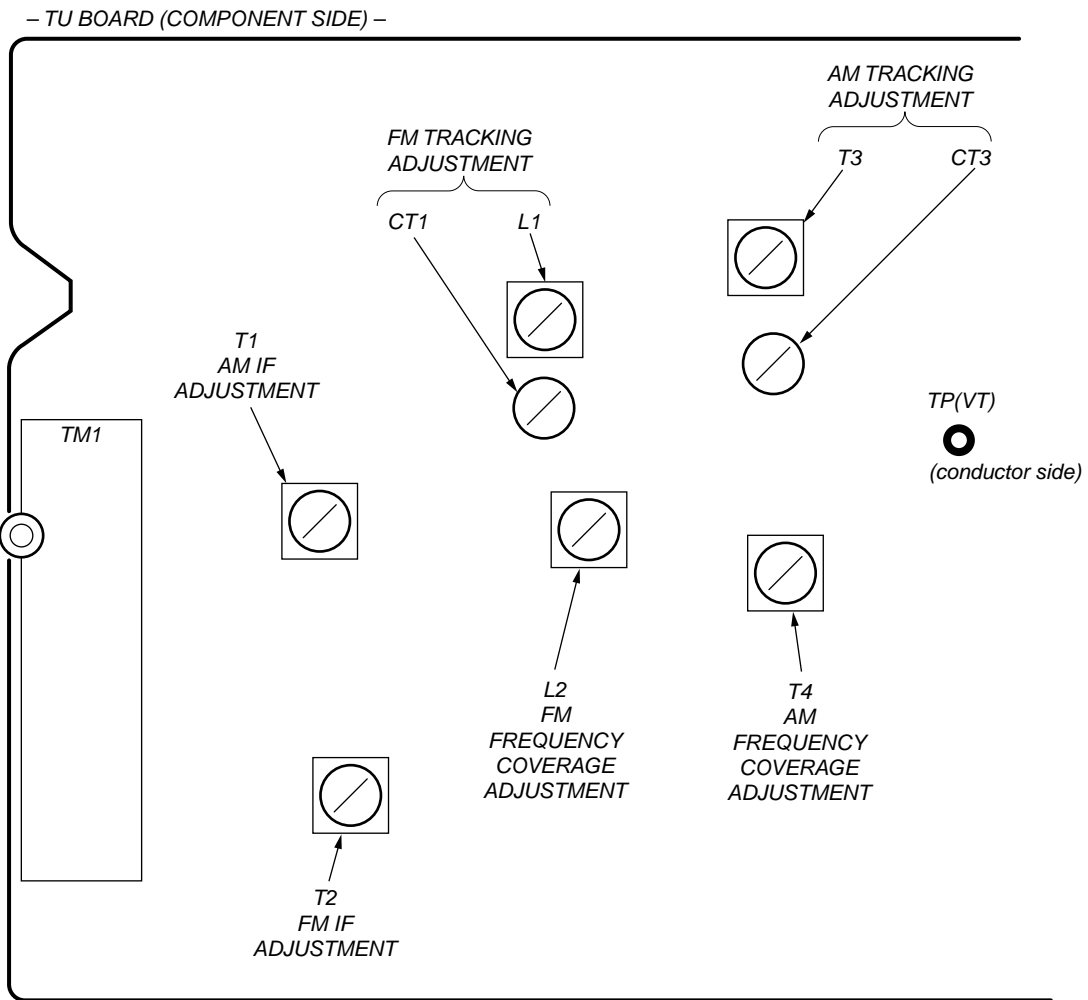
FM IF ADJUSTMENT		
Adjust for a maximum reading on level meter.		
T2		
10.7 MHz (Display: 98 MHz)		

FM FREQUENCY COVERAGE ADJUSTMENT		
Frequency Display	87.5 MHz	108 MHz
Reading on Digital voltmeter	1.5 ± 0.1 V	3.5 ± 0.4 V
Adjustment Part	L2	<confirmation>

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

Adjustment Location: TU board (See page 19.)

Adjustment Location:



5-2. CD SECTION

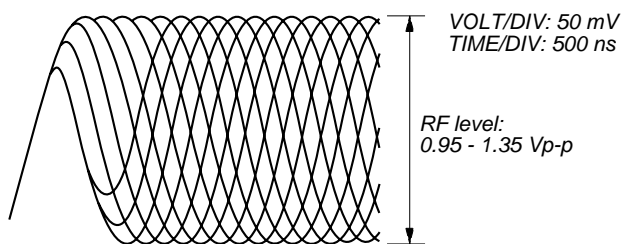
CD section adjustments are done automatically in this set.
In case of operation check, confirm that focus bias.

FOCUS BIAS CHECK

Procedure:

1. Connect the oscilloscope between IC701 pin ③ (or TP (RF)) and GND on CD board.
2. Insert the disc (YEDS-18). (Part No. : 3-702-101-01)
3. Press the CD button.
4. Confirm that the oscilloscope waveform is as shown in the figure below. (eye pattern)

A good eye pattern means that the diamond shape (◇) in the center of the waveform can be clearly distinguished.

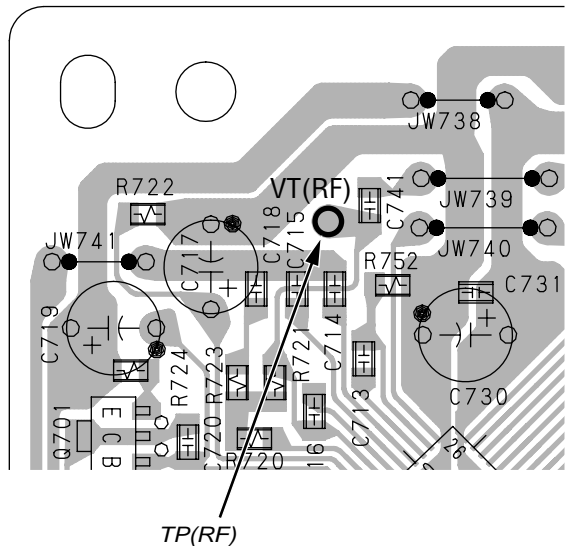


• RF signal reference waveform (eye pattern)

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

Test Point:

- CD board (conductor side) -



SECTION 6 DIAGRAMS

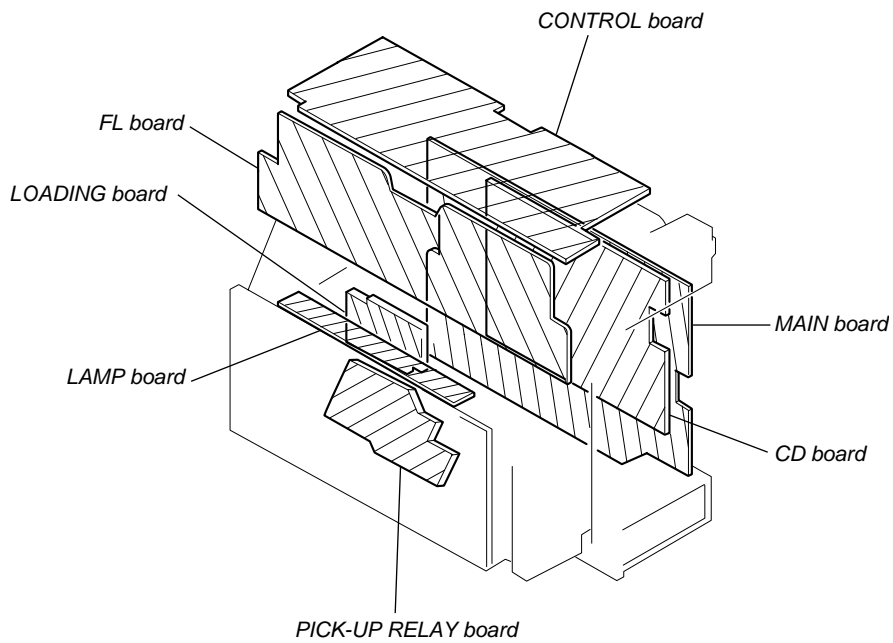
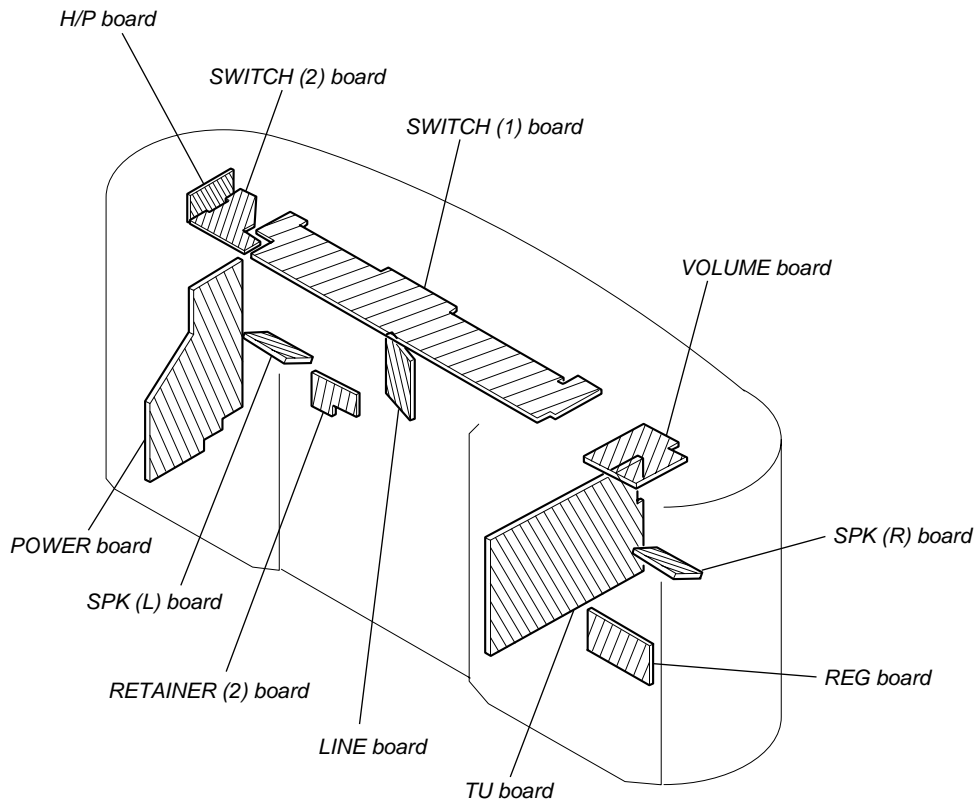
6-1. IC PIN DESCRIPTION

• IC801 CXP84332-229Q (SYSTEM CONTROL)

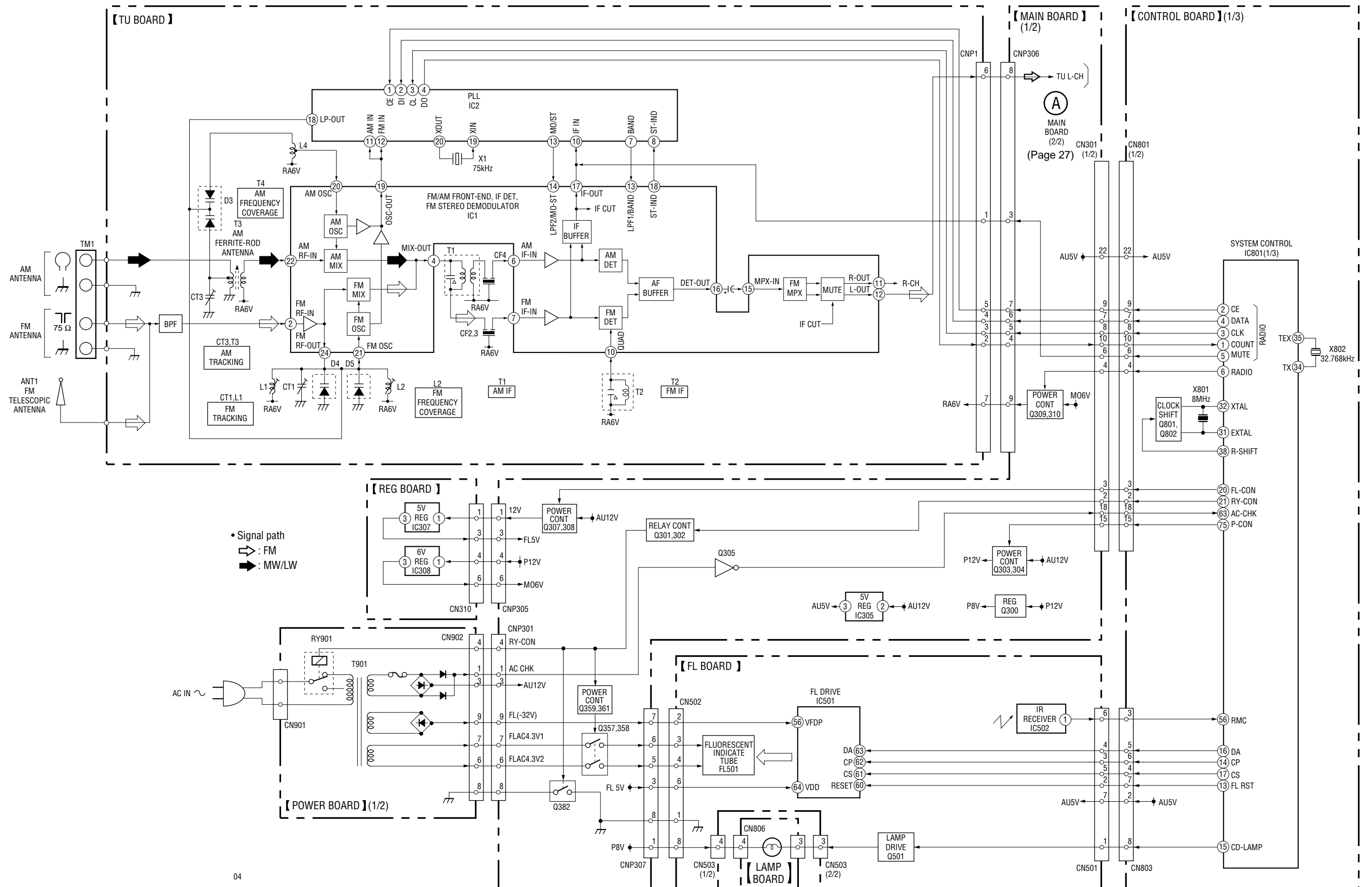
Pin No.	Pin Name	I/O	Pin Description
1	R-COUNT	I	PLL IC count data output
2	R-CE	O	PLL IC chip enable output.
3	R-CLK	O	PLL IC clock output.
4	R-DATA	O	PLL IC data output.
5	R-MUTE	O	Tuner mute signal output.
6	RADIO	O	Radio block power supply control signal output L : Radio on
7	M-NAR	I	Melody IC NAR signal input
8	M-RST	O	Melody IC reset signal output
9	M-ST	O	Melody IC strobe signal output
10	M-I0	O	Melody IC interface 0 data output
11	M-I1	O	Melody IC interface 1 data output
12	M-I2	O	Melody IC interface 2 data output
13	FL-RST	O	Reset signal output to the fluorescent indicator tube display drive IC (IC601)
14	CP	O	Clock pulse output to the fluorescent indicator tube display drive IC (IC601)
15	CD-LAMP	O	CD lamp (LAMP board) on/off signal output
16	DA	O	Serial data output to the fluorescent indicator tube display drive IC (IC601)
17	CS	O	Chip enable signal output to the fluorescent indicator tube display drive IC (IC601)
18,19	NC	—	Not used
20	FL-CON	O	FL 5V regulator control signal output
21	RY-CON	O	Relay (RY901 on POWER board) on/off control signal output
22 – 27	NC	—	Not used
28	JOG-A	I	Rotary encoder (RV801) input terminal (A/D input)
29	JOB-B	I	Rotary encoder (RV801) input terminal (A/D input)
30	RST	I	System reset signal input from the reset signal generator (IC403) “L”: reset
31	EXTAL	O	Main system clock output terminal (8 MHz)
32	XTAL	I	Main system clock input terminal (8 MHz)
33	VSS	—	Ground terminal
34	TX	I	Sub system clock input terminal (32.768 kHz)
35	TEX	O	Sub system clock output terminal (32.768 kHz)
36	AVSS	—	Ground terminal (for A/D converter)
37	AVREF	—	Reference voltage (+3.3V) input terminal (for A/D converter)
38	R-SHIFT	O	System clock shift output.
39	INIT	O	Destination check output
40	SIMUKE	I	Destination setting terminal
41 – 43	KEY1-KEY3	I	Key input terminal (A/D input)
44	C-MUTE	O	Muting on/off control signal output for the CD playback signal “L”: muting on
45	OP/CL	I	CD tray open/close detect input.
46	INPUT1	O	Loading motor control output.
47	INPUT2	O	Loading motor control output.
48	RDS-CLK	O	RDS serial data transfer clock signal input from the RDS decoder (Not used)
49	RDS-DATA	O	RDS serial data input from the RDS decoder (Not used)
50	RDS-QUAL	O	RDS QUAL input from the RDS decoder (Not used)
51	C-SQCK	O	Sub-code Q data reading clock signal output to the CD DSP IC (IC702)
52	C-SQSO	O	Sub-code Q data input from the CD DSP IC (IC702)
53	NC	—	Not used
54	SENSE2	I	Internal status (SENSE) input from the CD DSP IC (IC702)
55	SENSE1	I	Internal status (SENSE) input from the CD DSP IC (IC702)

Pin No.	Pin Name	I/O	Pin Description
56	RMC	I	SIRCS remote control signal input from the remote control receiver (IC602)
57	NC	—	Not used
58	C-DATA	O	Serial data output to the CD DSP IC (IC702)
59	C-XLAT	O	Serial data latch pulse signal output to the CD DSP IC (IC702)
60	C-XRST	O	Reset signal output to the CD RF AMP (IC701), CD DSP IC (IC702)
61	C-SCOR	I	Sub-code sync (S0+S1) detection signal input from the CD DSP IC (IC702)
62	C-CLK	O	Serial data transfer clock signal output to the CD DSP IC (IC702)
63	AC-CHK	I	AC power supply detection signal input “L”: AC in
64	ST-IND	I	PLL IC tuned indicator input
65	RDS-CON	O	RDS decoder IC control signal output (Not used)
66 – 70	NC	—	Not used
71	C/T-CON	O	Clock receiver decoder IC control signal output
72,73	VDD	—	Power supply terminal (+3.3V)
74	A-MUTE	O	Audio muting on/off control signal output “H”: muting on
75	P-CON	O	Power on/off control signal output “L”: standby mode, “H”: power on
76	VR-CLK	O	Volume clock output.
77	VR-DATA	O	Volume clock output.
78	C/T TCO	I	Clock receiver signal input
79	CD	O	Function output for CD.
80	AL-CON	O	Melody IC control signal output

6-2. CIRCUIT BOARDS LOCATION

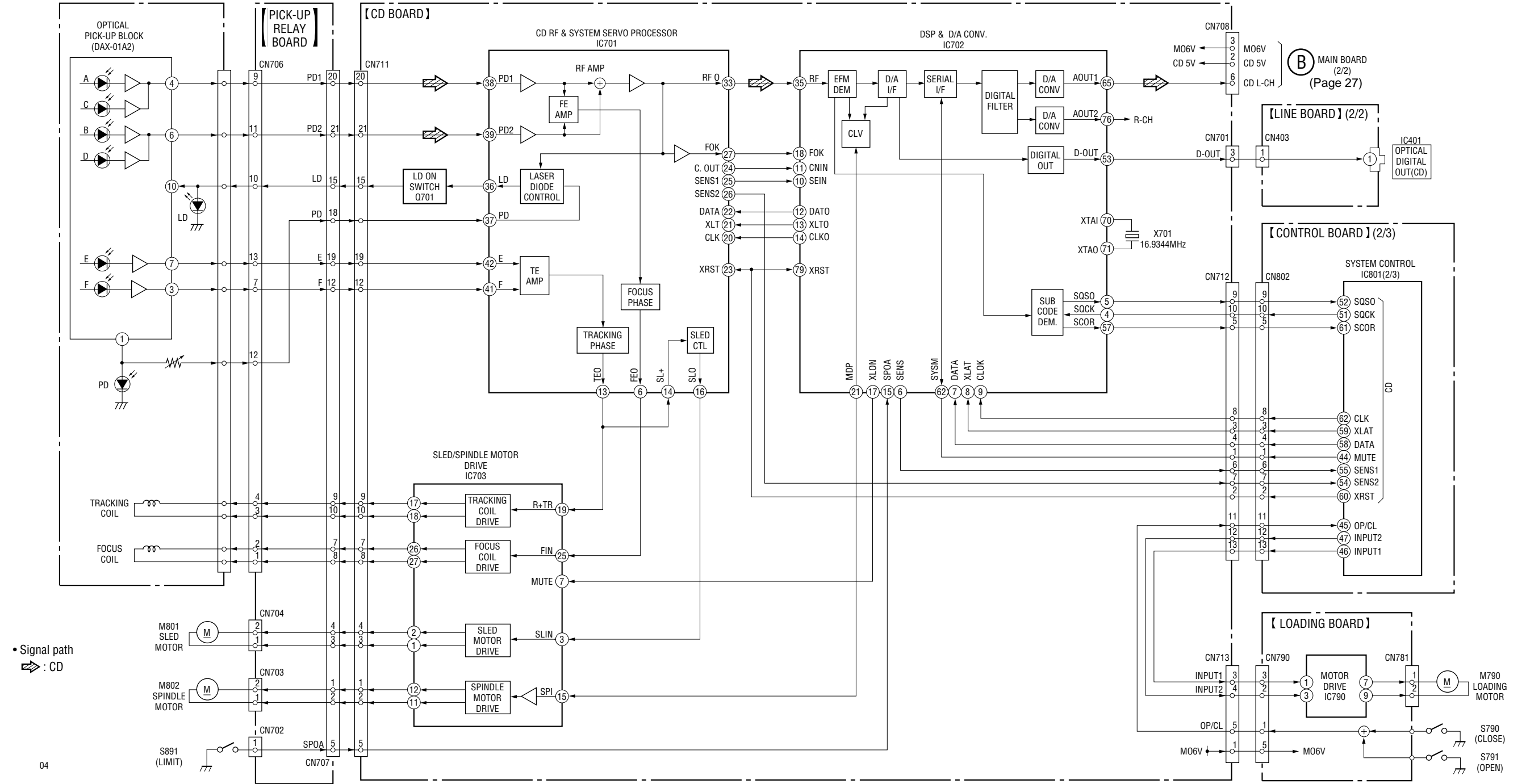


6-3. BLOCK DIAGRAM — TUNER SECTION —



04

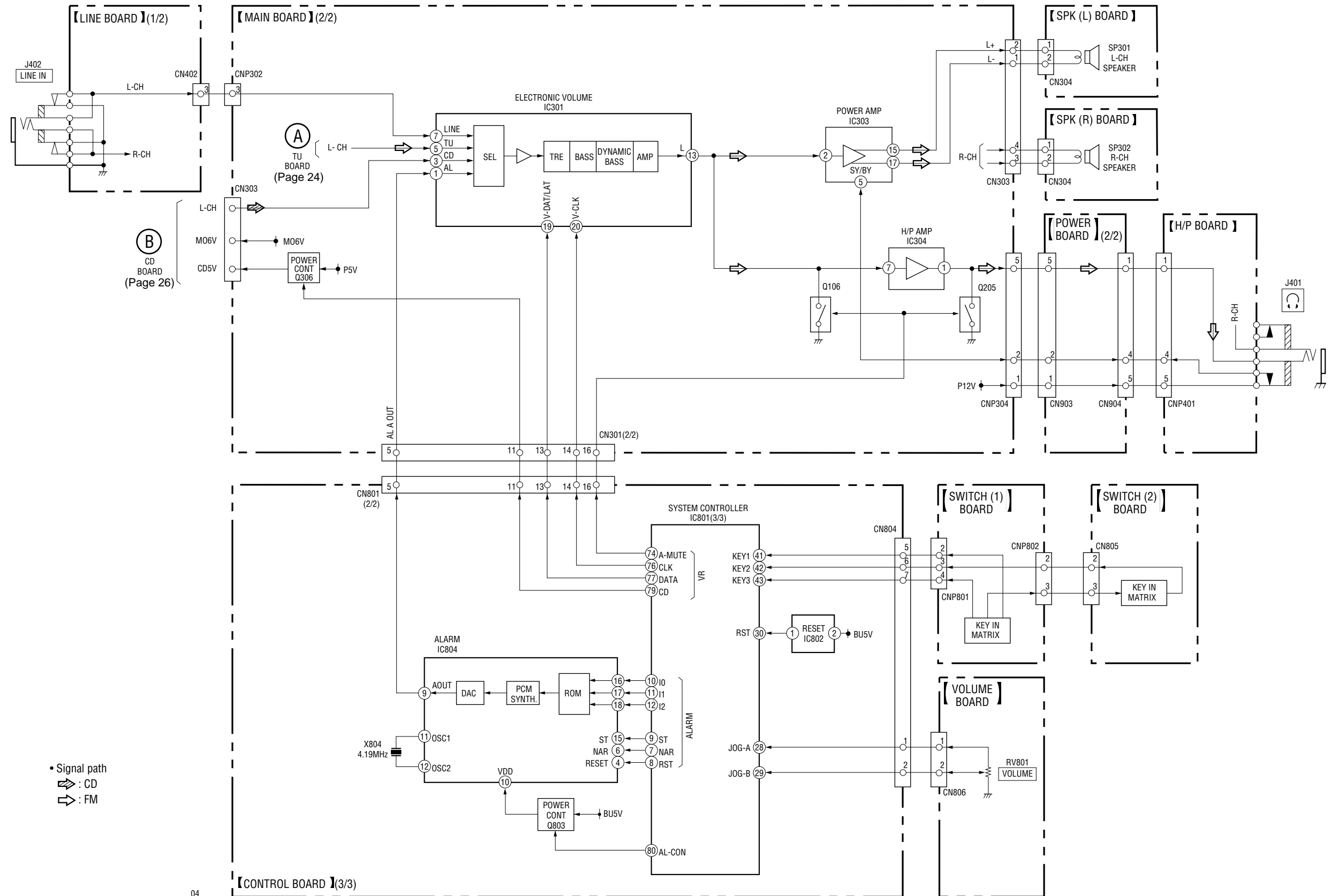
6-4. BLOCK DIAGRAM — CD SECTION —



• Signal path
⇒ : CD

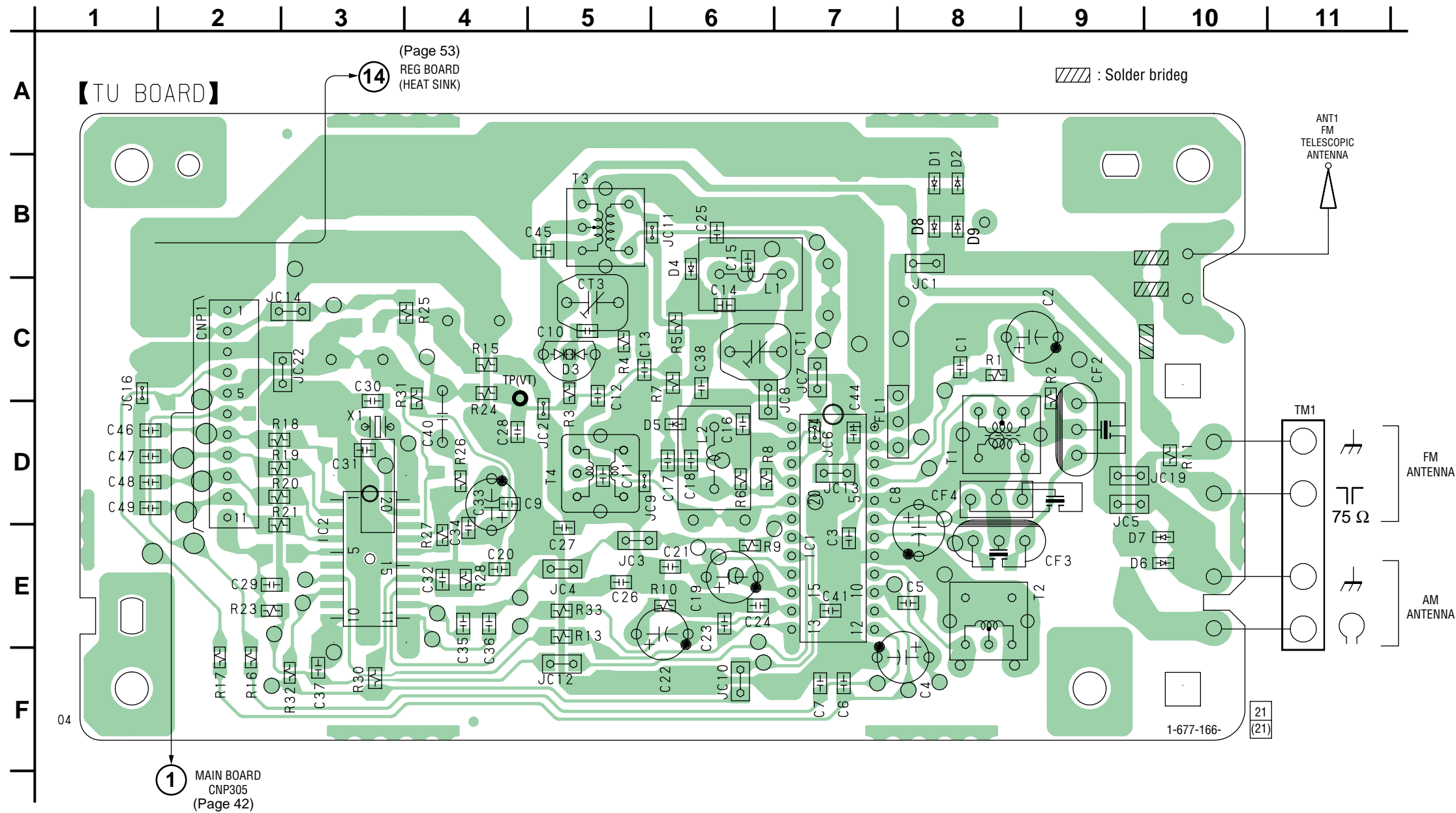
04

6-5. BLOCK DIAGRAM — AUDIO SECTION —



04

6-6. PRINTED WIRING BOARD — TUNER SECTION — • Refer to page 22 for Circuit Boards Location.



• Semiconductor Location

Ref. No.	Location
D1	B-8
D2	B-8
D3	C-5
D4	B-6
D5	D-6
D6	E-9
D7	E-9
D8	B-8
D9	B-8
IC1	E-7
IC2	D-3

Common Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF : μpF 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.
- Δ : internal component.
- \square : panel designation.

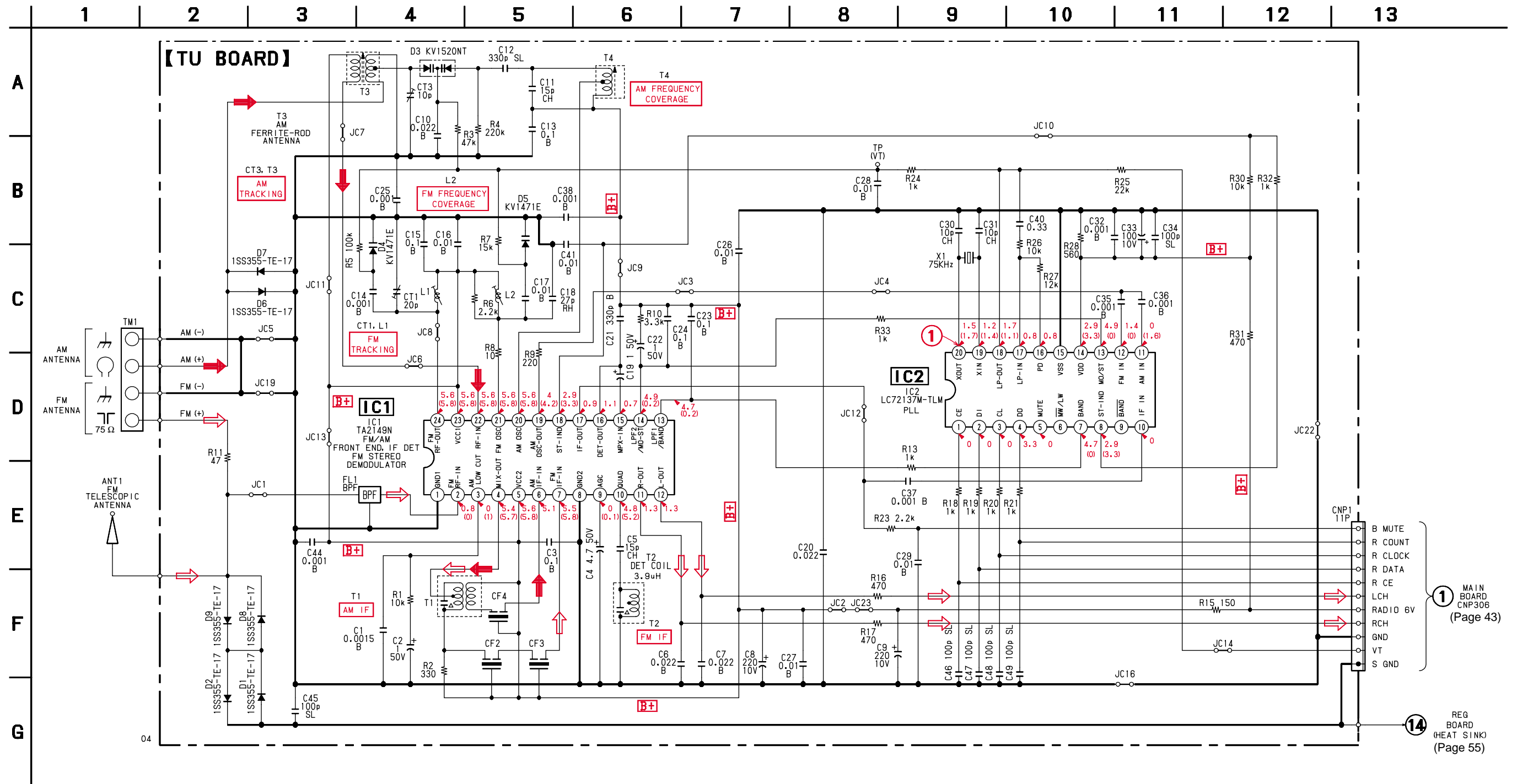
Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

- \square : B+ Line.
- \square : adjustment for repair.
- Voltages are taken with a VOM (Input impedance $10\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 - \rightarrow : FM
 - \rightarrow : AM
 - \rightarrow : CD

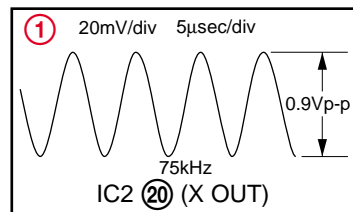
Common Note on Printed Wiring Boards:

- \circ : parts extracted from the component side.
- \circ : parts extracted from the conductor side.
- Δ : internal component.
- \square : Pattern from the side which enables seeing.

6-7. SCHEMATIC DIAGRAM — TUNER SECTION — • Refer to page 56 for IC Block Diagrams.
• Refer to page 29 for Note.



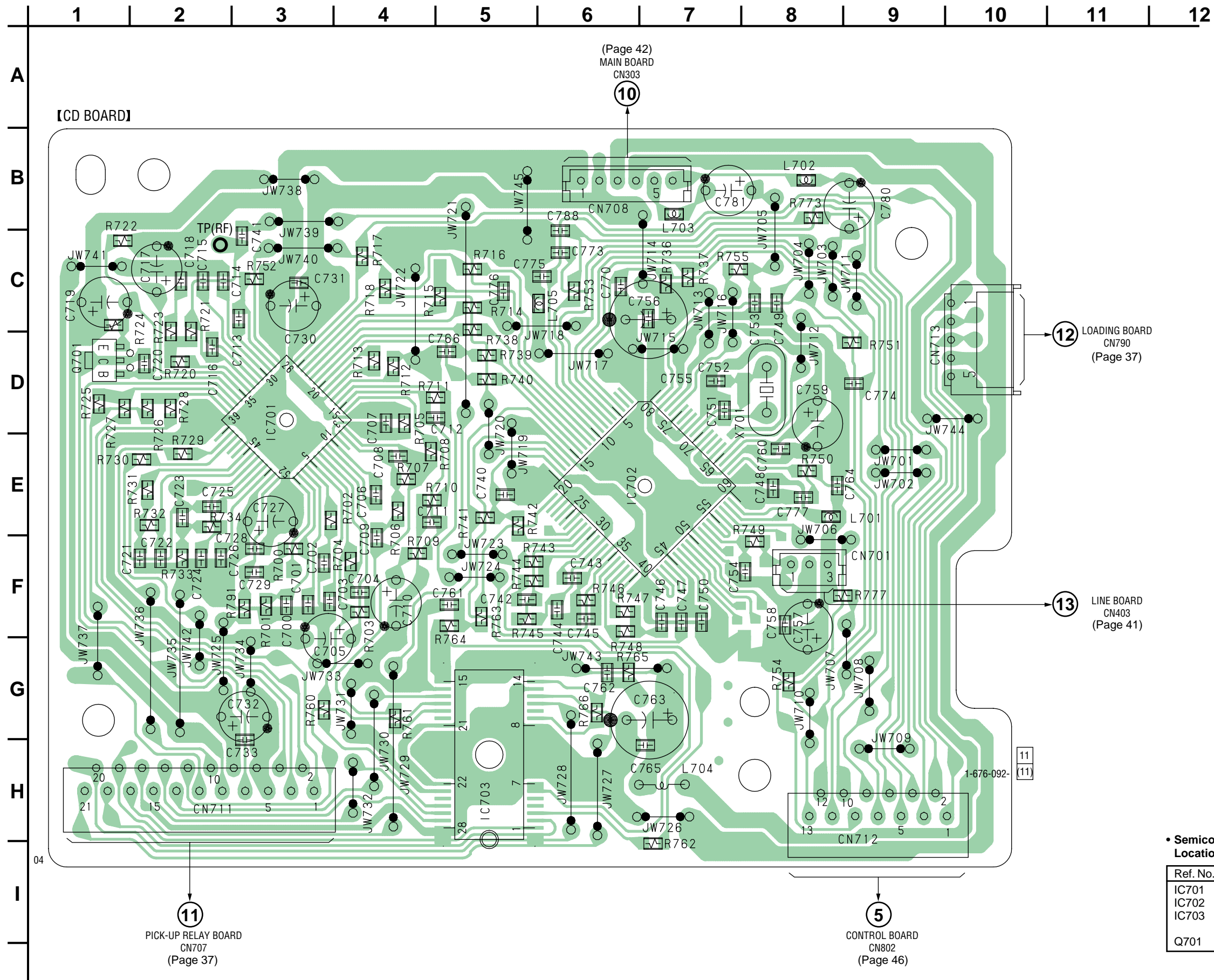
• Waveform



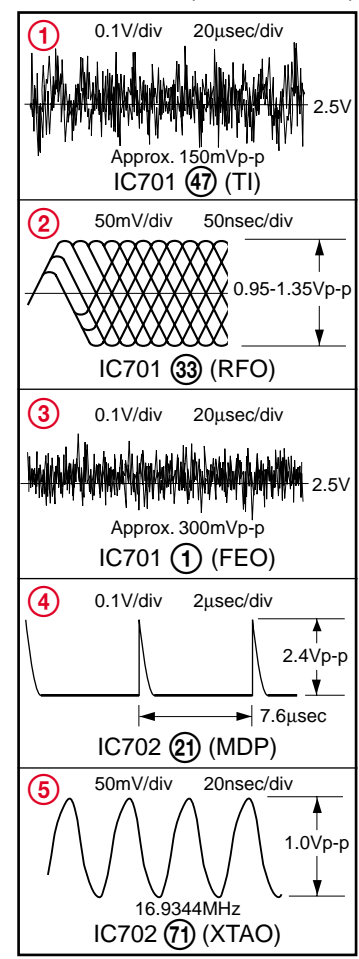
Note on Schematic Diagram:

- Voltage is dc with respect to ground under no-signal (detuned) condition.
- no mark : FM
- () : AM

6-8. PRINTED WIRING BOARD — CD SECTION — • Refer to page 22 for Circuit Boards Location.
 • Refer to page 29 for Note.



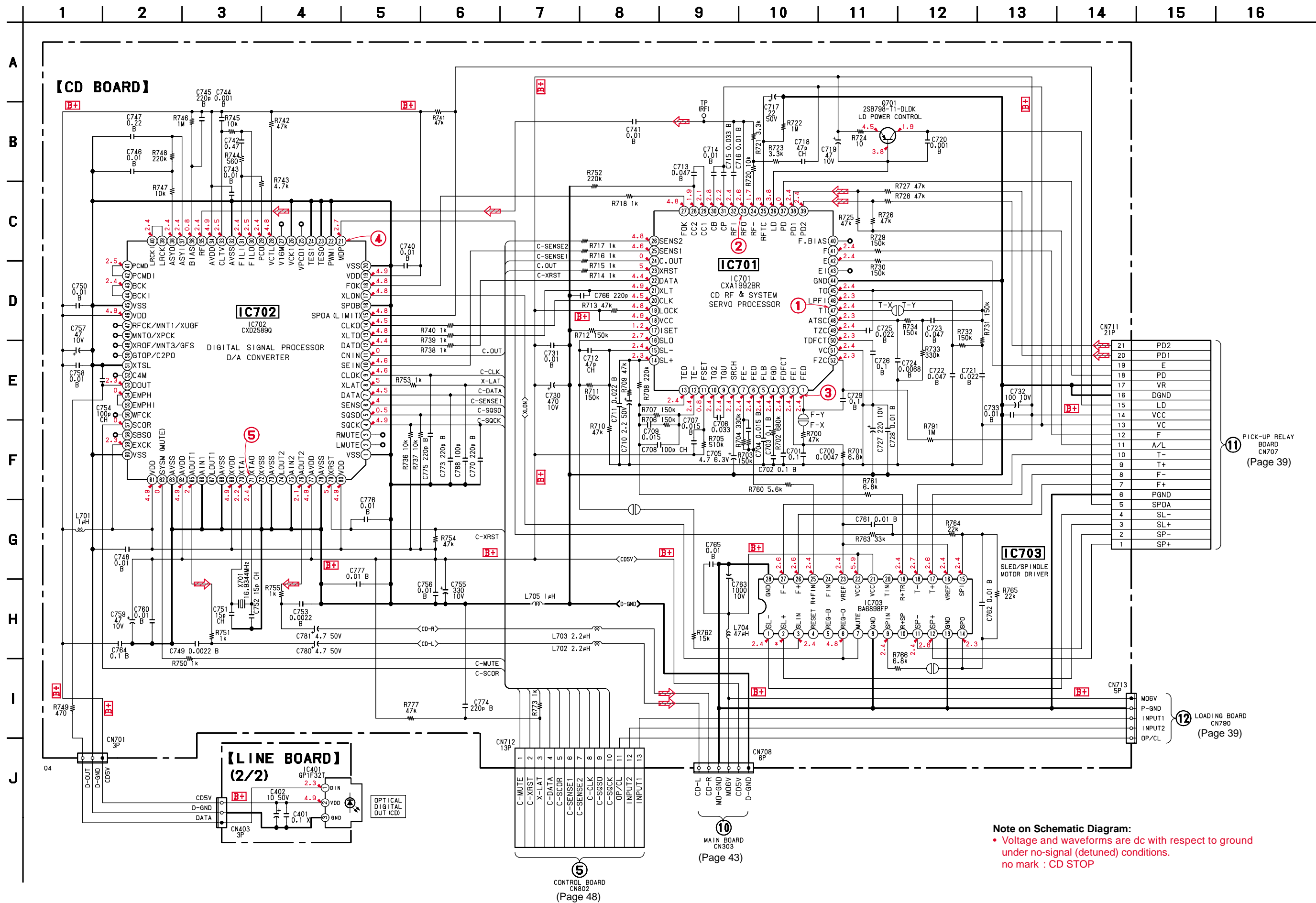
• Waveforms (MODE:PLAY)



• Semiconductor Location

Ref. No.	Location
IC701	D-3
IC702	E-6
IC703	H-5
Q701	D-1

6-9. SCHEMATIC DIAGRAMS — CD SECTION — • Refer to page 57 for IC Block Diagrams. • Refer to page 29 for Note.



Note on Schematic Diagram:

- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- no mark : CD STOP

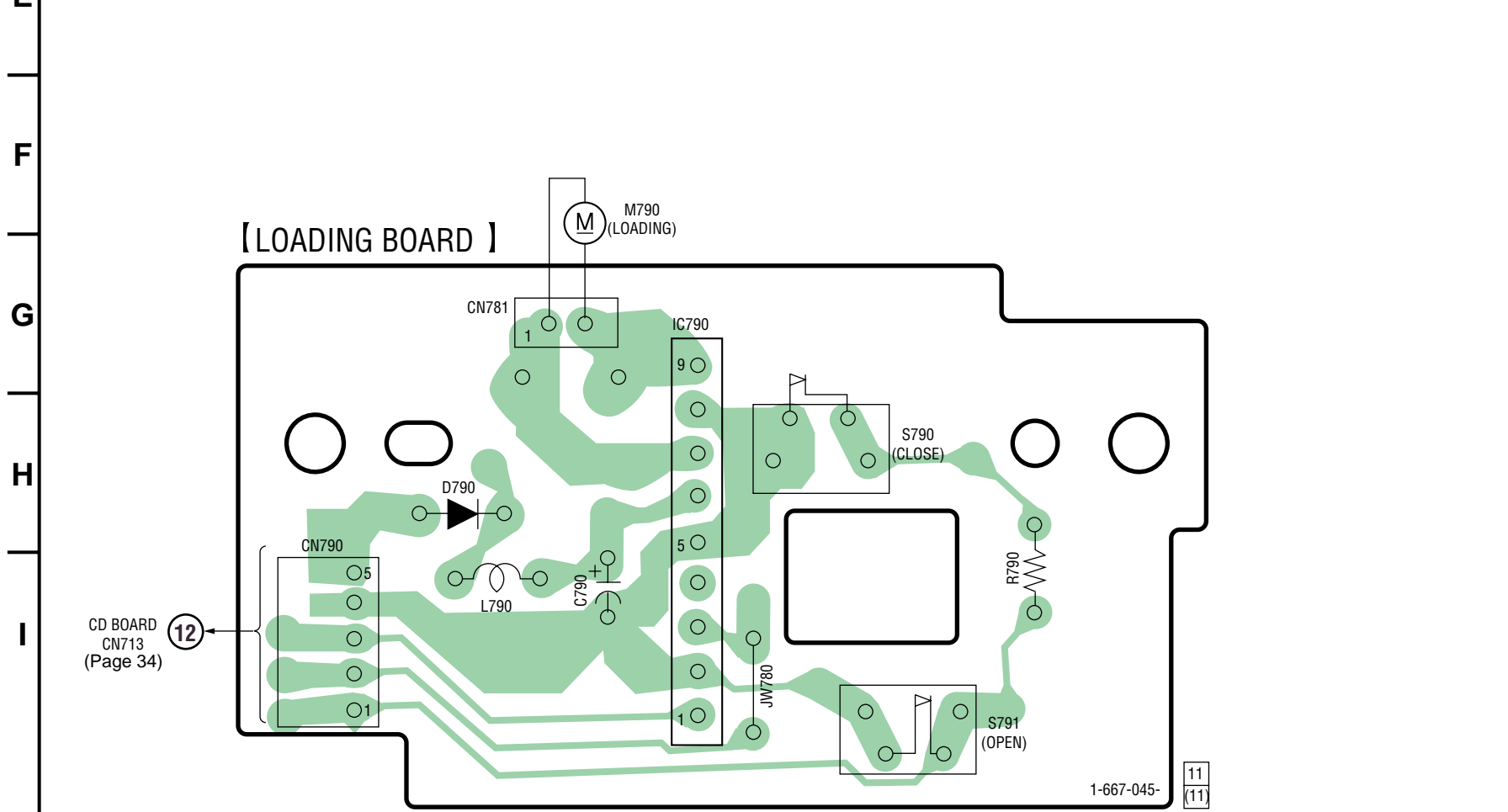
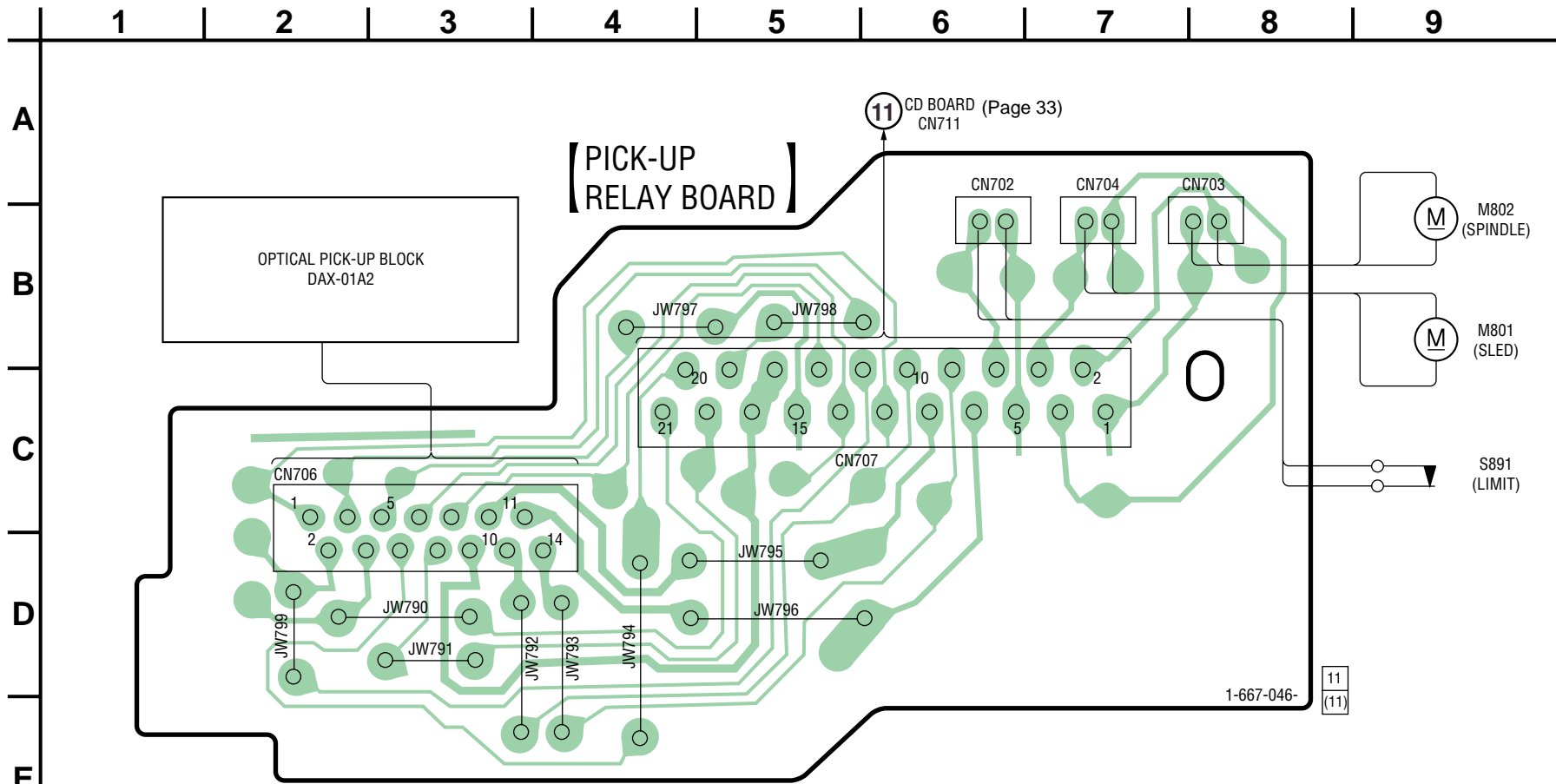
11 PICK-UP RELAY BOARD CN707 (Page 39)

12 LOADING BOARD CN790 (Page 39)

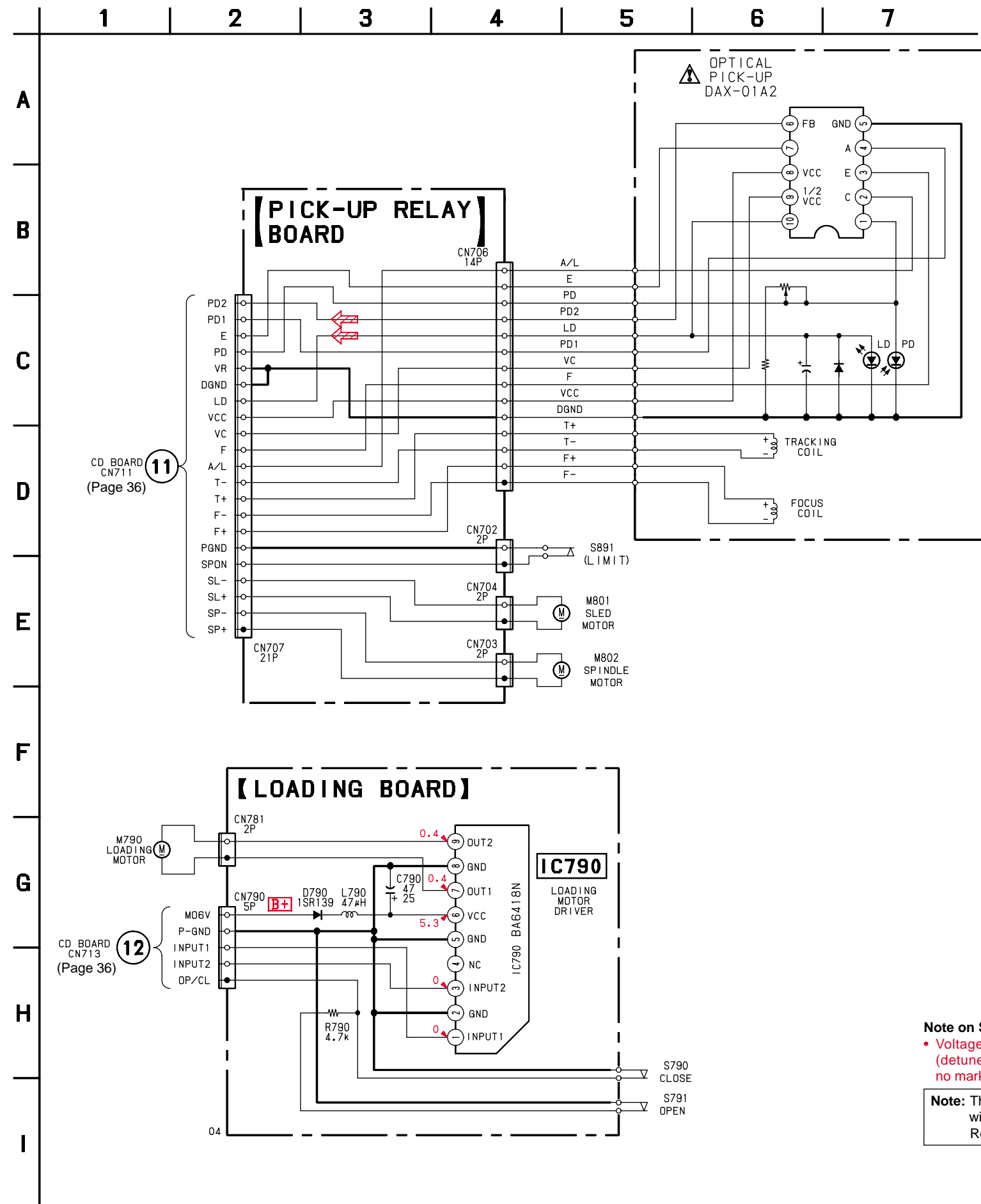
10 MAIN BOARD CN303 (Page 43)

5 CONTROL BOARD CN802 (Page 48)

6-10. PRINTED WIRING BOARDS — PICK-UP SECTION — • Refer to page 22 for Circuit Boards Location.
• Refer to page 29 for Note.



6-11. SCHEMATIC DIAGRAMS — PICK-UP SECTION — • Refer to page 56 for IC Block Diagrams.
 • Refer to page 29 for Note.



Note on Schematic Diagram:

- Voltage is dc with respect to ground under no-signal (detuned) condition. no mark : CD STOP

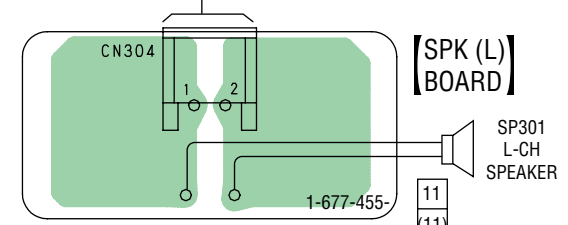
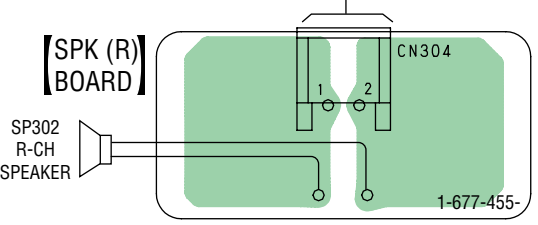
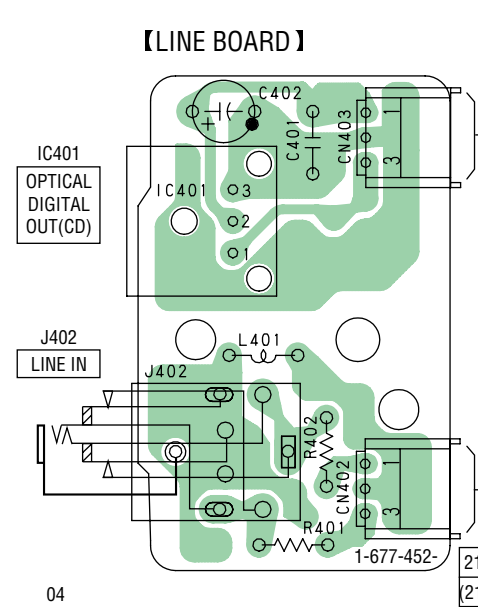
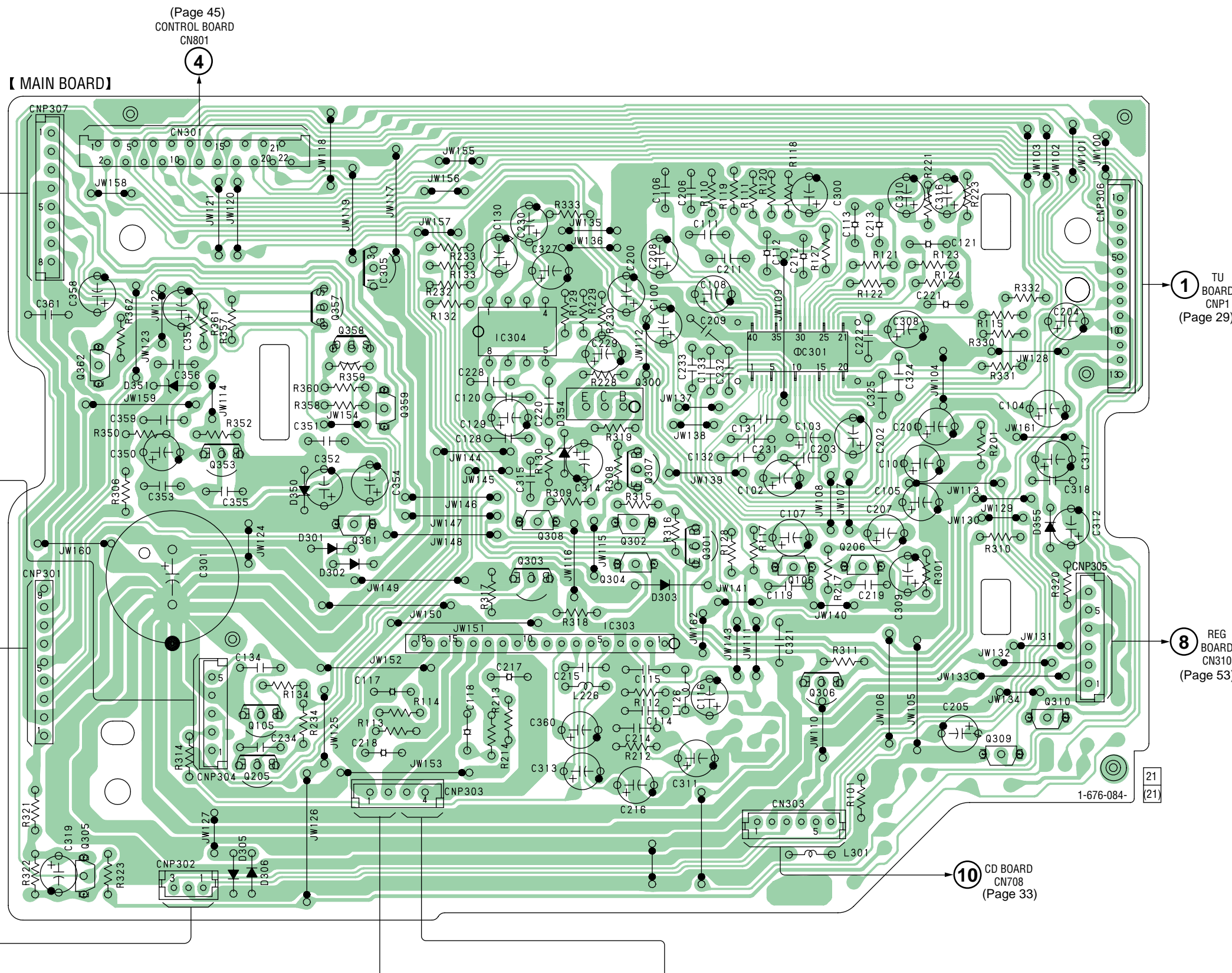
Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

6-12. PRINTED WIRING BOARDS — MAIN SECTION — • Refer to page 22 for Circuit Boards Location.
• Refer to page 29 for Note.

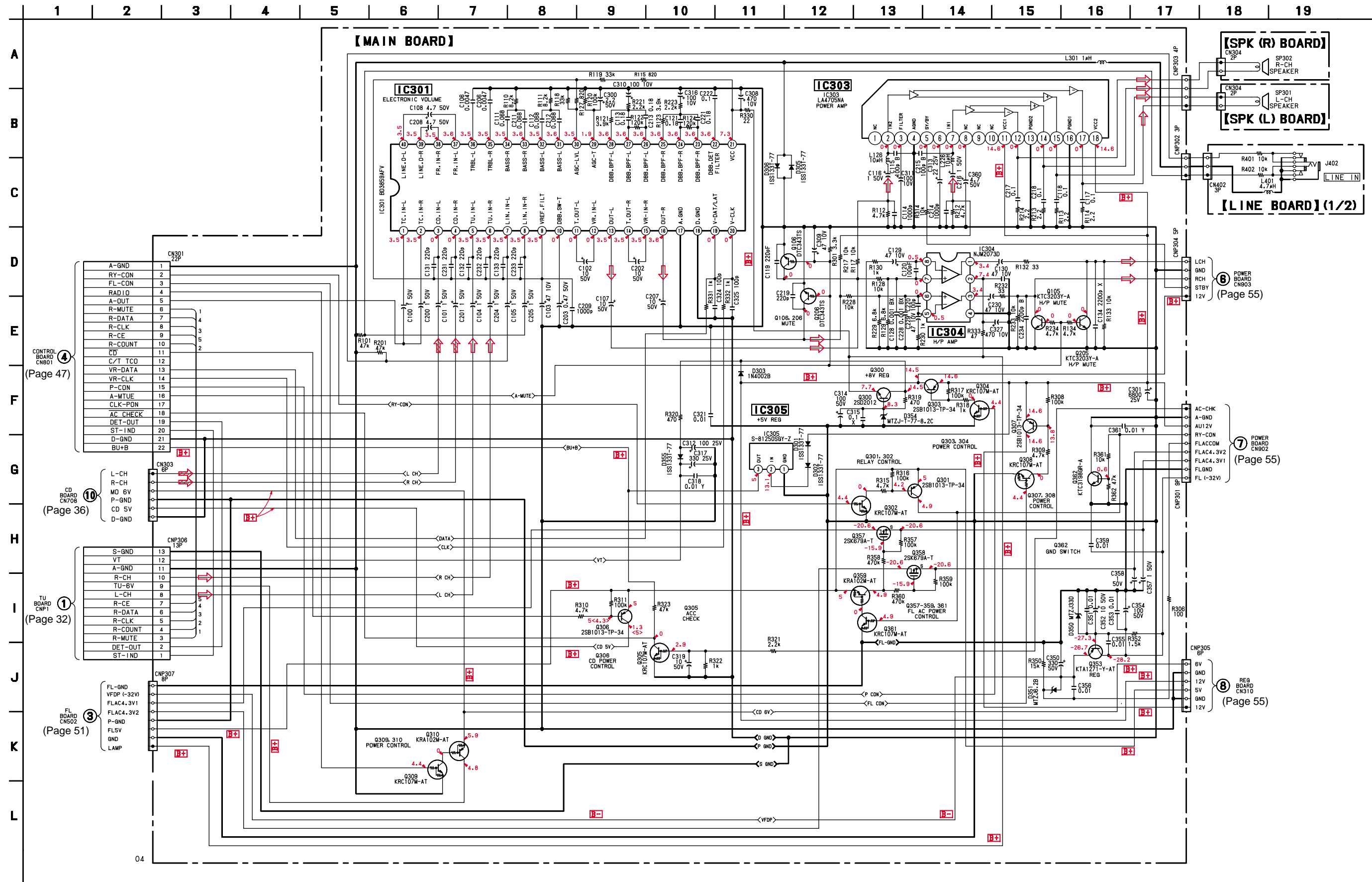
1 2 3 4 5 6 7 8 9 10 11 12 13 14

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D301	E-7	Q300	D-9
D302	E-7	Q301	F-10
D303	G-11	Q302	E-9
D304	G-11	Q303	F-8
D305	H-6	Q304	F-9
D306	H-6	Q305	H-5
D350	E-6	Q306	G-11
D351	D-6	Q307	E-9
D354	E-9	Q308	E-8
D355	E-13	Q309	G-13
		Q310	G-13
IC301	D-11	Q311	G-12
IC303	F-9	Q312	H-12
IC304	C-8	Q313	G-13
IC305	C-7	Q353	E-6
IC401	G-2	Q357	C-7
		Q358	D-7
Q105	G-6	Q359	D-7
Q106	E-11	Q361	E-7
Q205	G-6	Q362	D-5
Q206	E-12		

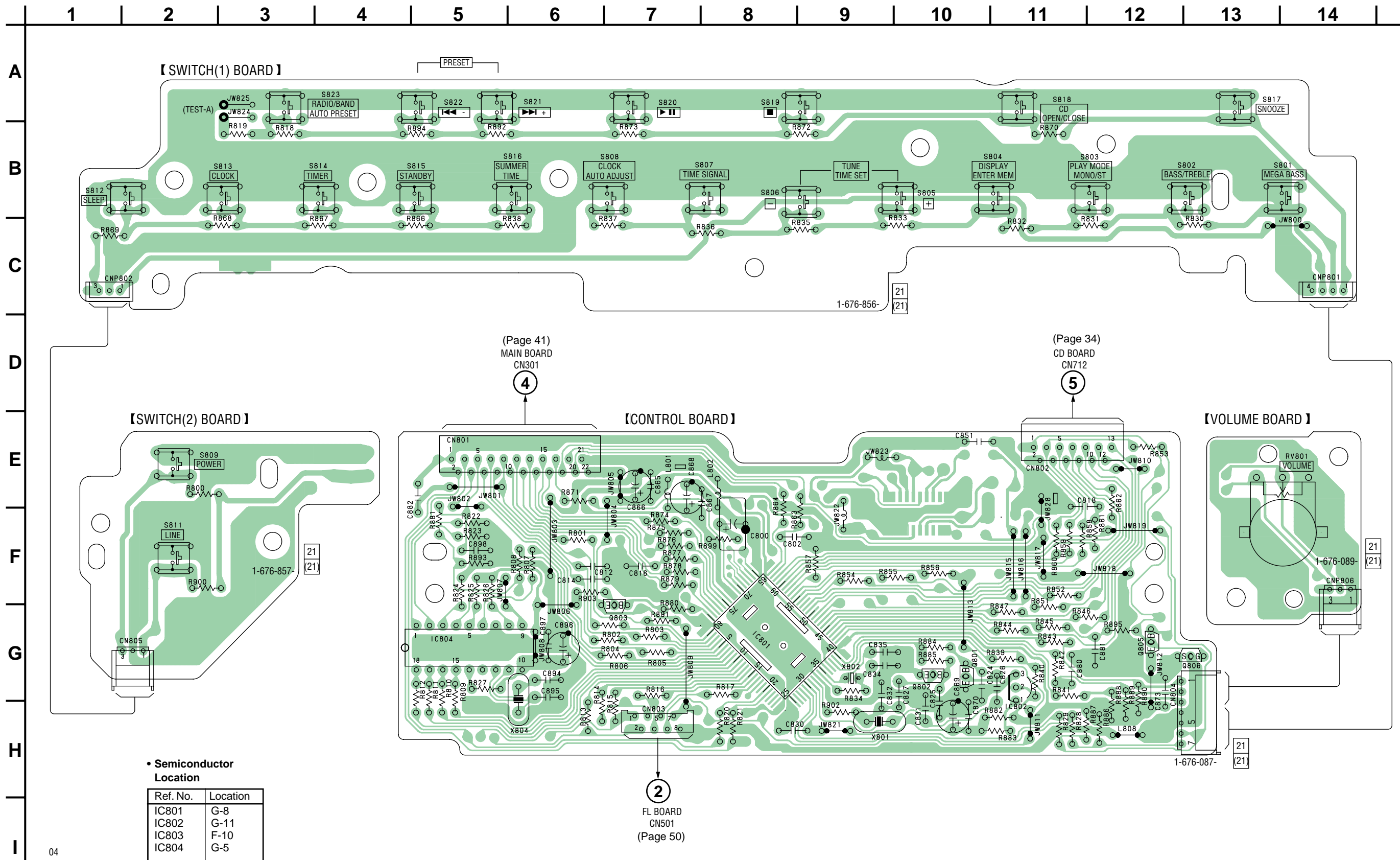


6-13. SCHEMATIC DIAGRAMS — MAIN SECTION — • Refer to page 59 for IC Block Diagrams. • Refer to page 29 for Note.



Note on Schematic Diagram:
 • Voltage is dc with respect to ground under no-signal (detuned) condition.
 no mark : FM

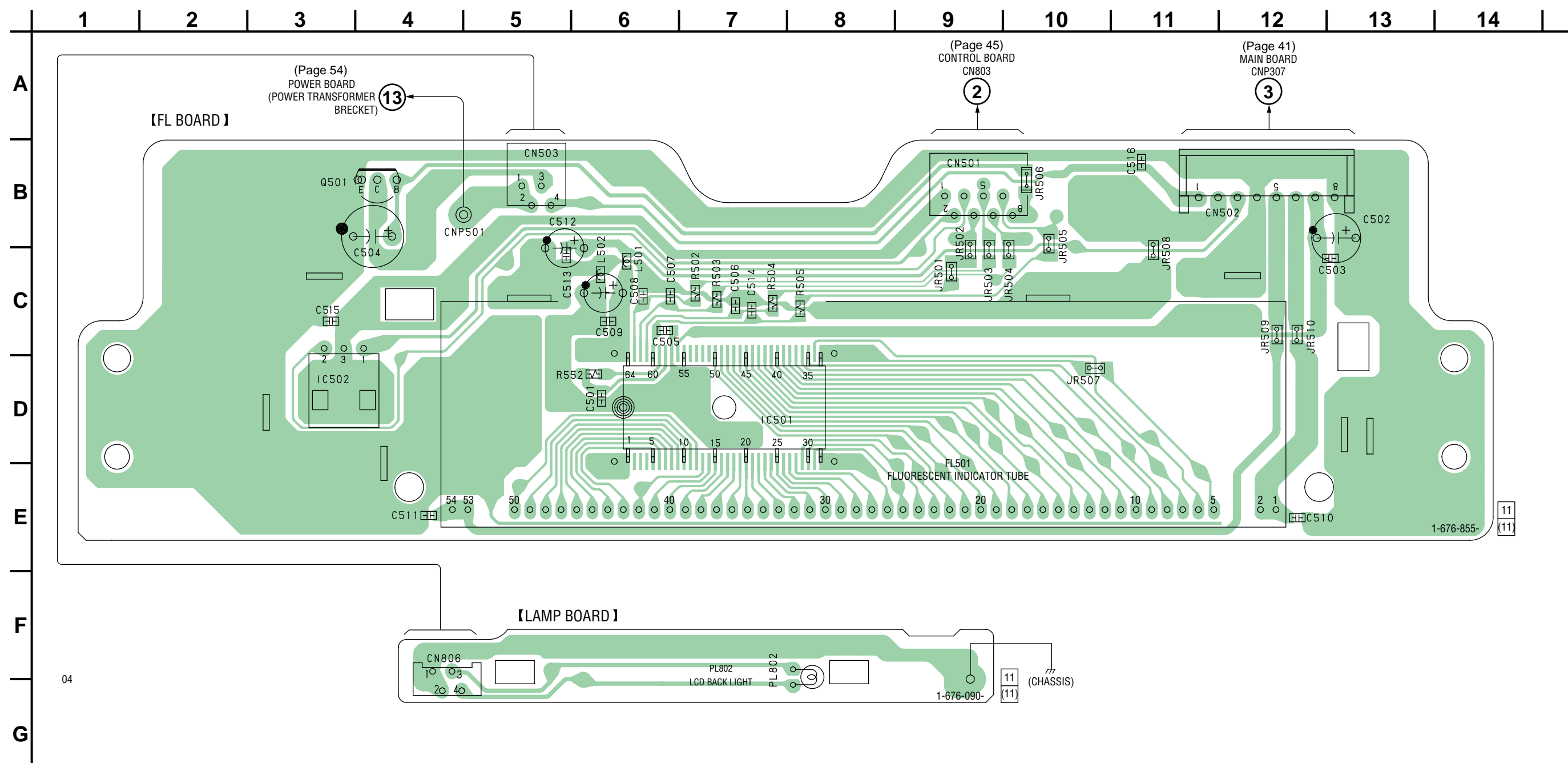
6-14. PRINTED WIRING BOARDS — CONTROL SECTION — • Refer to page 22 for Circuit Boards Location.
 • Refer to page 29 for Note.



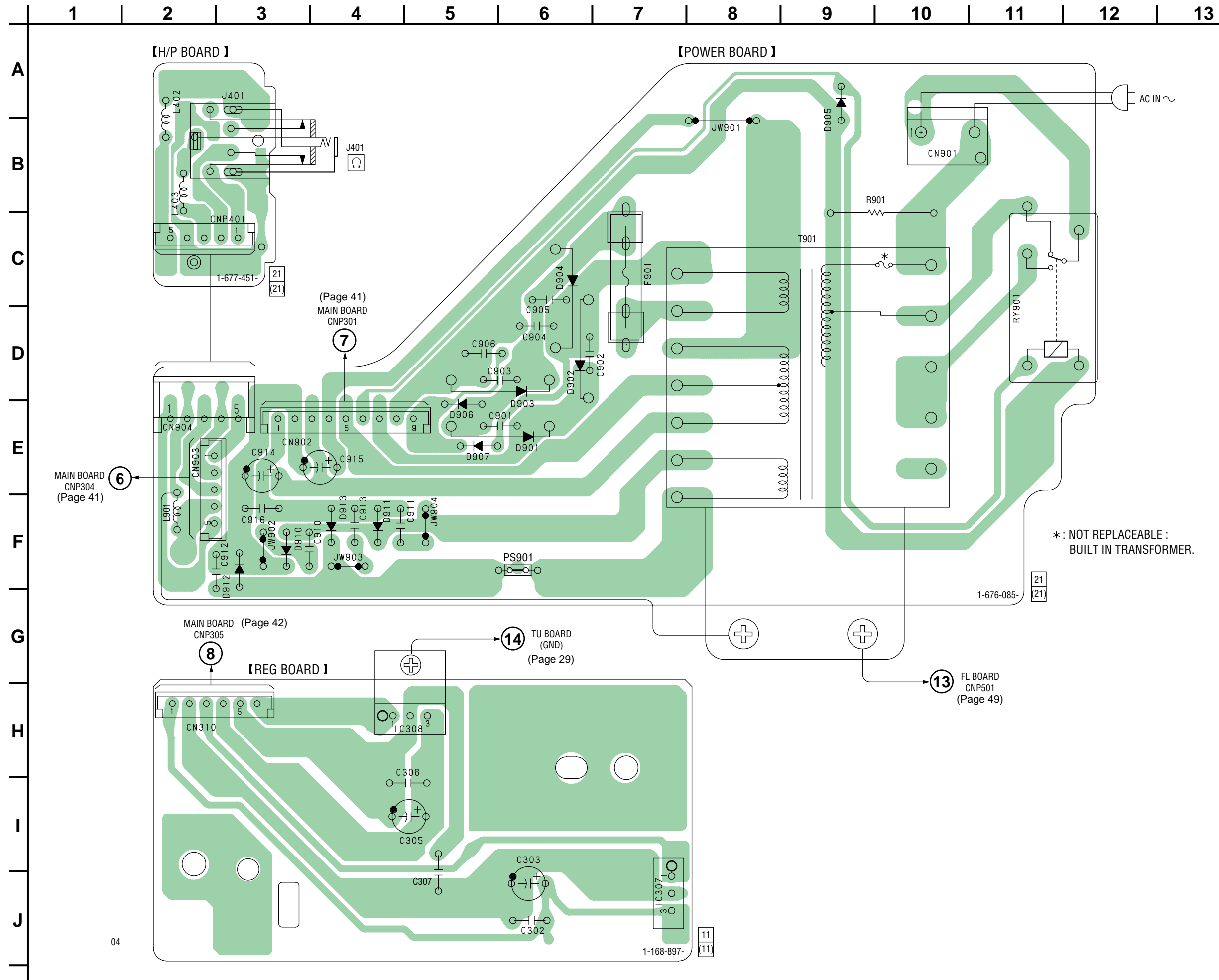
• Semiconductor Location

Ref. No.	Location
IC801	G-8
IC802	G-11
IC803	F-10
IC804	G-5
Q801	G-10
Q802	G-10
Q803	G-6
Q804	E-8
Q805	G-12
Q806	G-13

6-16. PRINTED WIRING BOARDS — DISPLAY SECTION — • Refer to page 22 for Circuit Boards Location.
• Refer to page 29 for Note.



6-18. PRINTED WIRING BOARDS — POWER SUPPLY SECTION — • Refer to page 22 for Circuit Boards Location.
 • Refer to page 29 for Note.

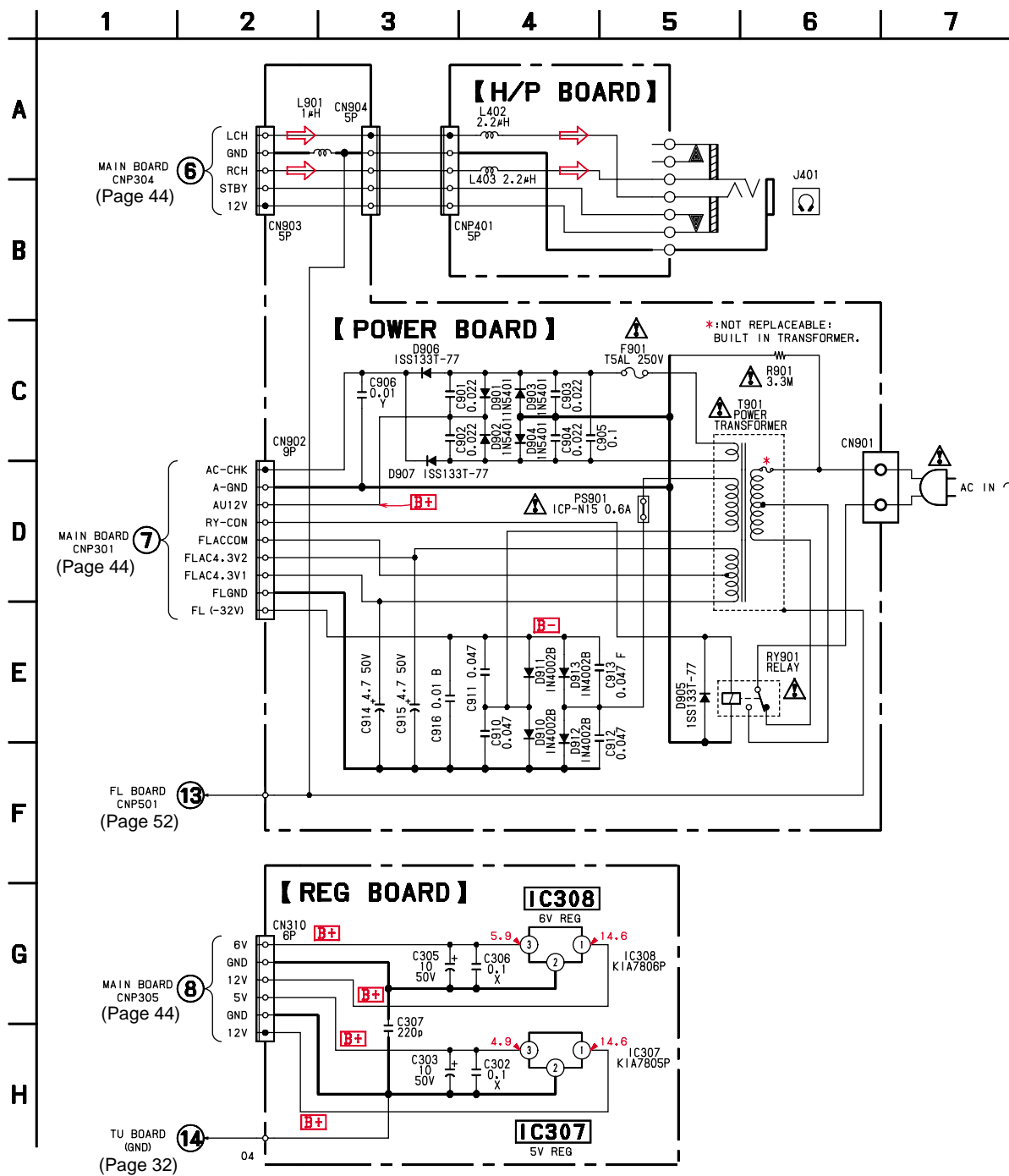


• Semiconductor Location

Ref. No.	Location
D901	E-6
D902	D-6
D903	D-6
D904	C-6
D905	A-9
D906	E-5
D907	E-6
D910	F-3
D911	F-4
D912	F-2
D913	F-4
IC307	H-5
IC308	J-7

*: NOT REPLACEABLE :
 BUILT IN TRANSFORMER.

6-19. SCHEMATIC DIAGRAMS — POWER SUPPLY SECTION — • Refer to page 29 for Note.



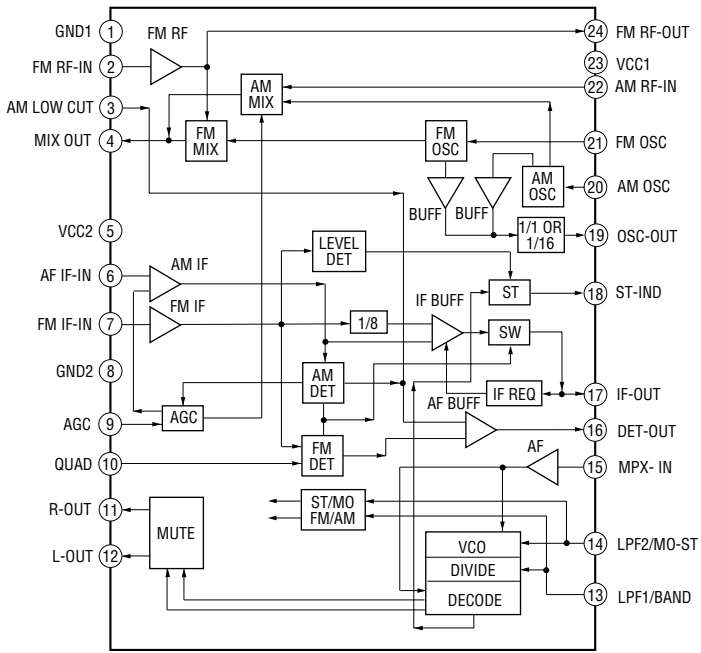
Note on Schematic Diagram:

- Voltage is dc with respect to ground under no-signal (detuned) condition.
no mark : FM

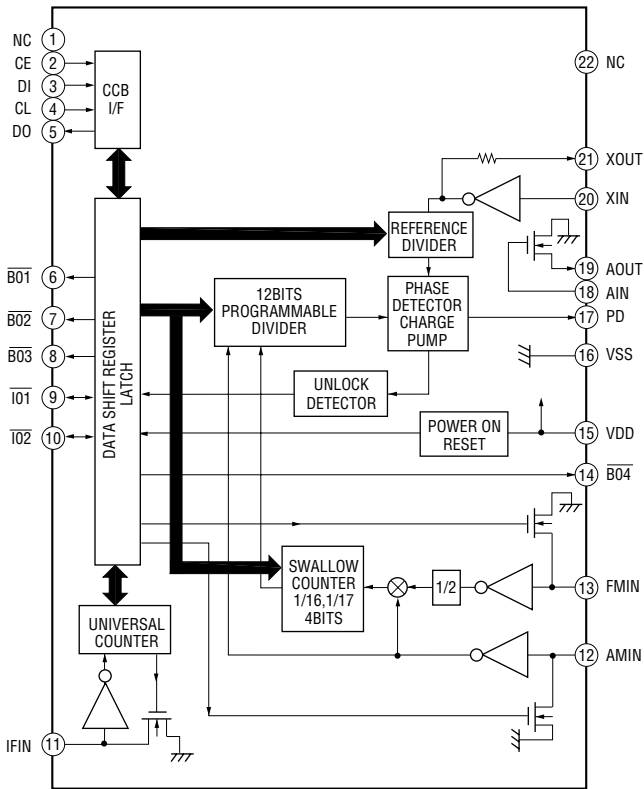
Note: The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

• IC BLOCK DIAGRAM

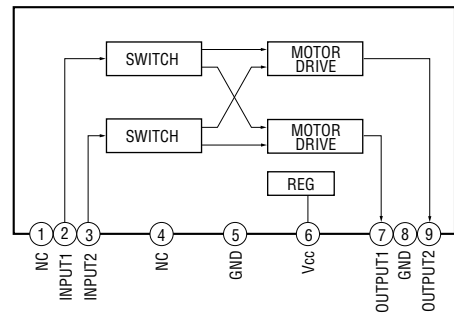
IC1 TA2149N



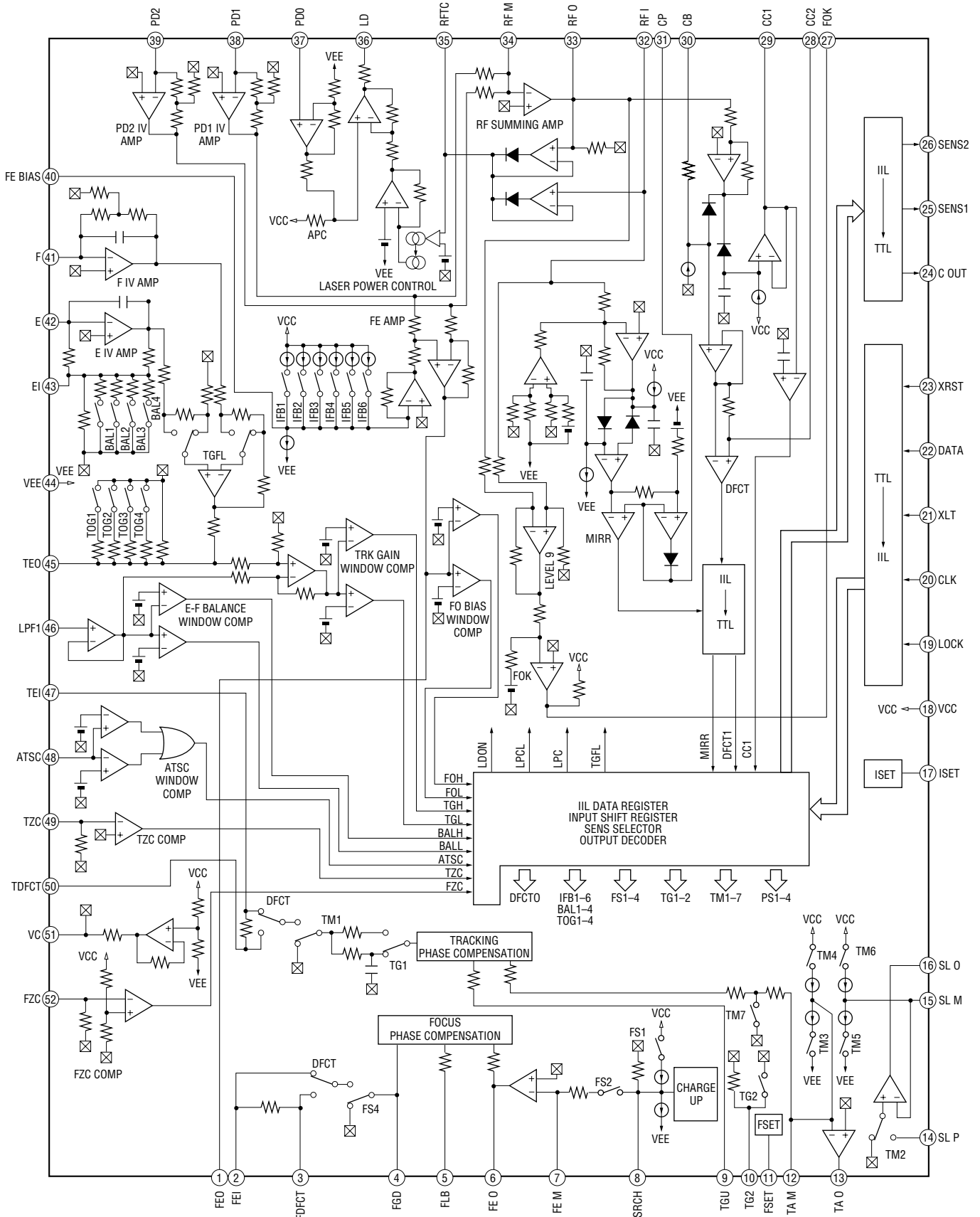
IC2 LC72137M-TLM



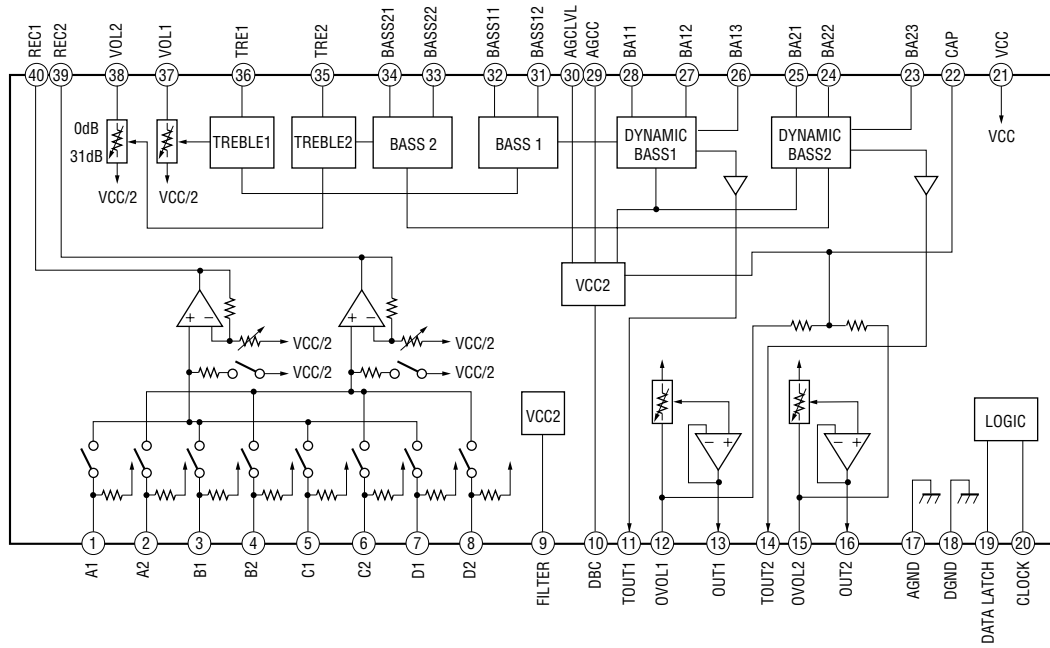
IC790 BA6418N



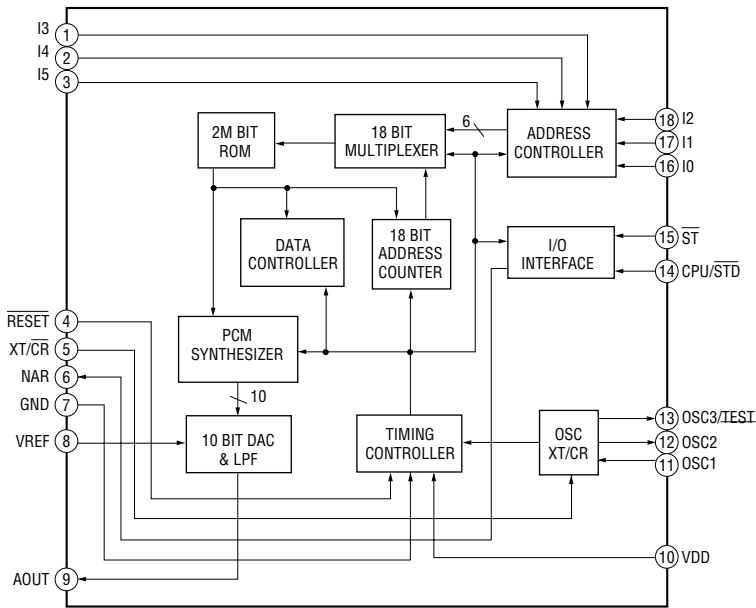
IC701 CXA1992BR



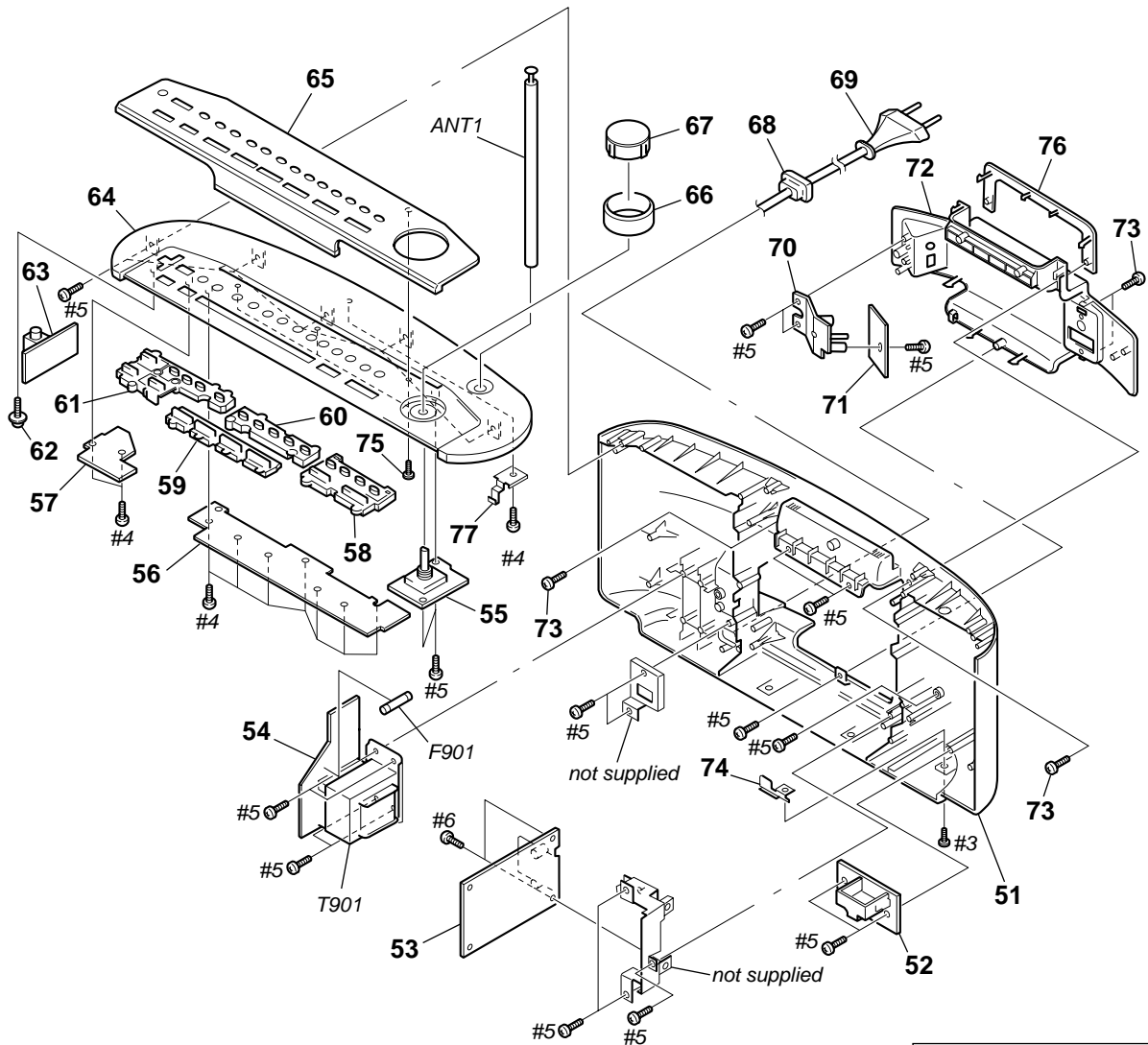
IC301 BD3859AFV



IC804 MSM9805-549RS



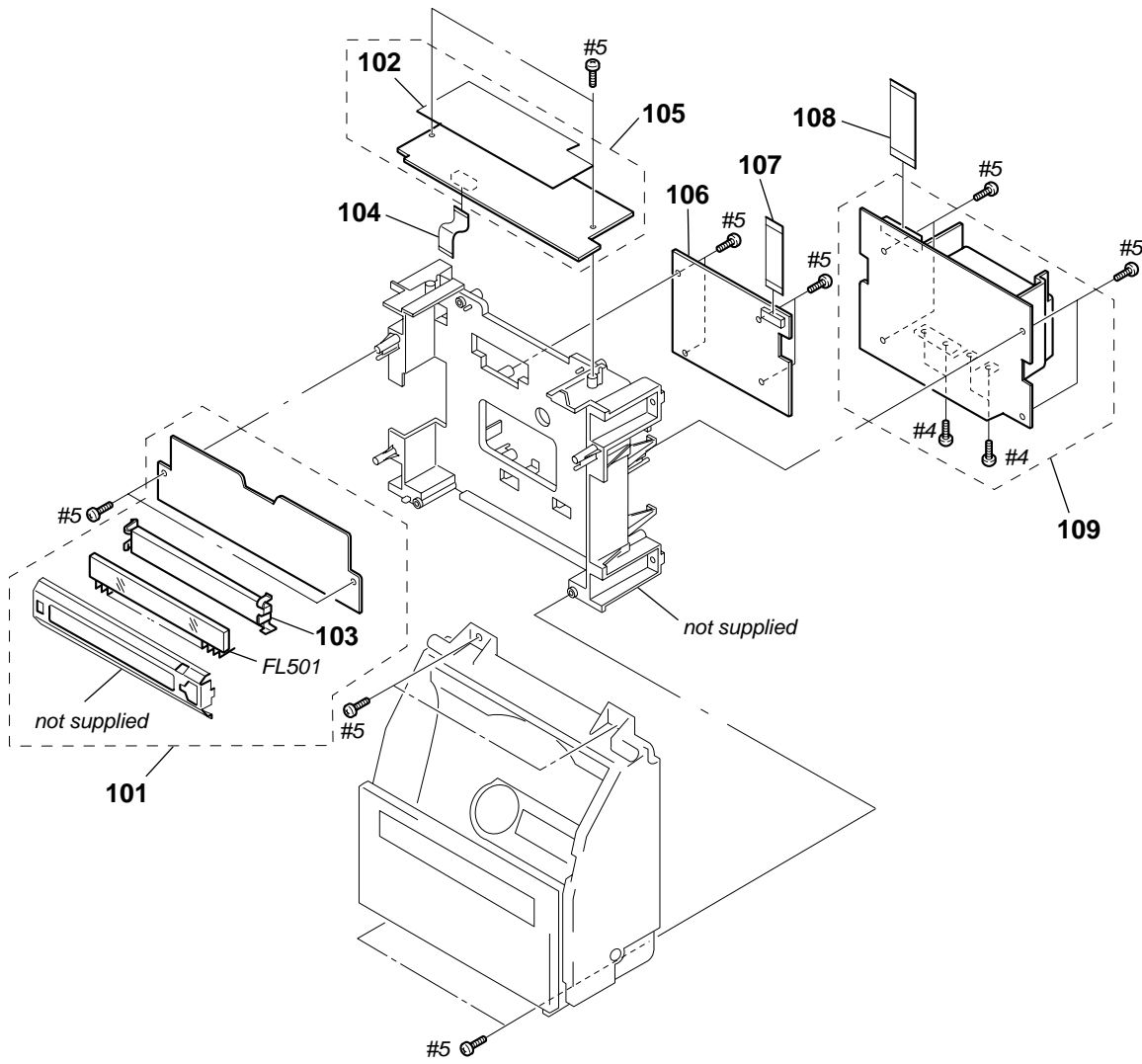
7-2. REAR CABINET SECTION



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

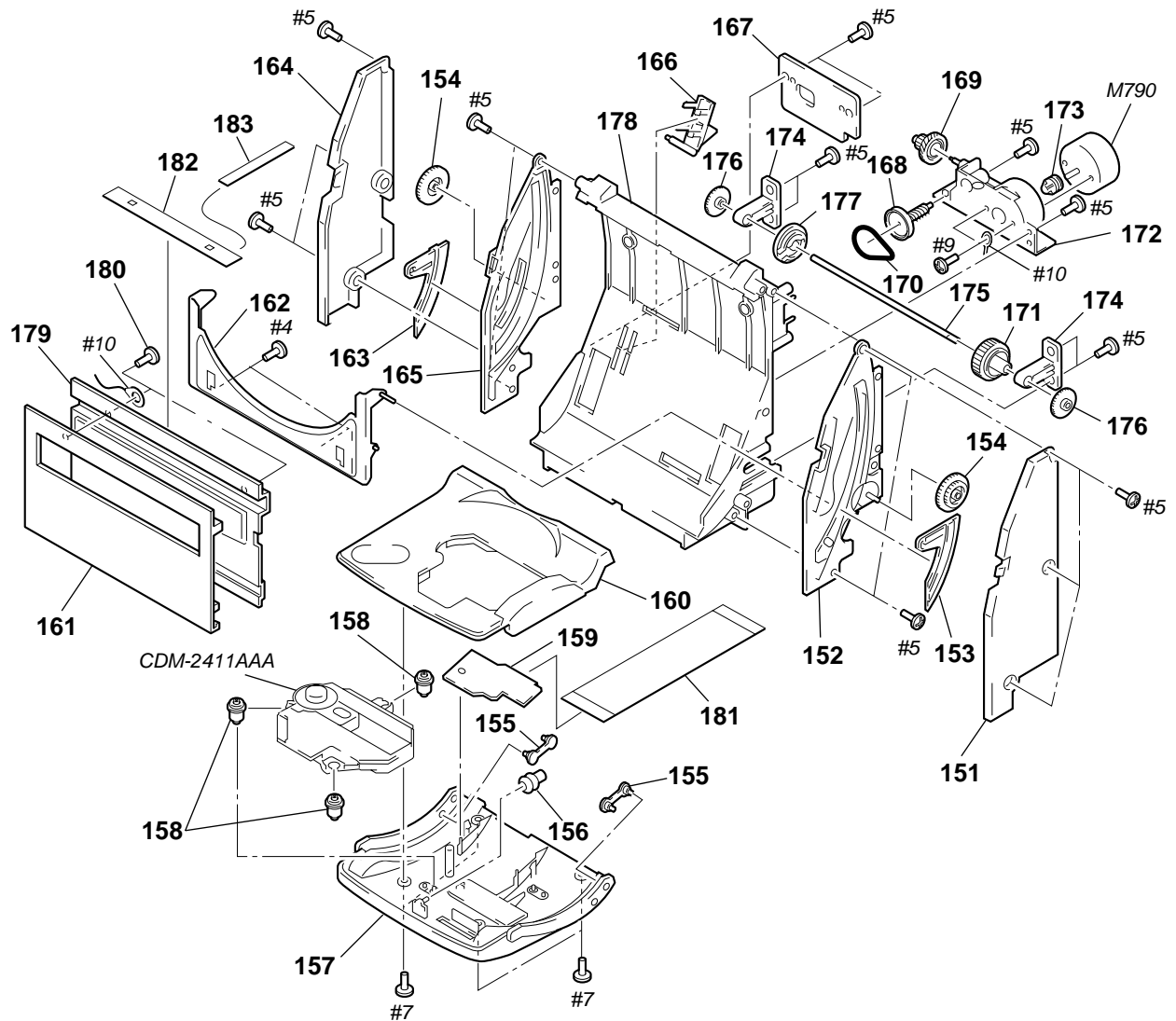
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	3-041-419-01	CABINET, REAR		66	3-041-432-01	COVER, KNOB	
52	A-3322-973-A	REG BOARD, COMPLETE		67	3-041-431-01	KNOB (VOL)	
* 53	A-3323-576-A	TU BOARD, COMPLETE		68	3-703-244-11	BUSHING (2104), CORD	
* 54	A-3323-577-A	POWER BOARD, COMPLETE		\triangle 69	1-783-531-61	CORD, POWER	
* 55	1-676-089-11	VOLUME BOARD		70	3-044-355-01	HOLDER, LINE	
* 56	A-3323-583-A	SWITCH (1) BOARD, COMPLETE		* 71	1-677-452-11	LINE BOARD	
* 57	1-676-857-11	SWITCH (2) BOARD		72	3-041-421-11	COVER, HEAT SINK	
58	3-041-429-01	BUTTON, SNOOZE		73	4-951-620-11	SCREW (2.6X10), +BVTP	
59	3-041-428-01	BUTTON, CD		74	3-041-423-01	TERMINAL, ANT	
60	3-041-427-01	BUTTON, TIME		75	3-048-309-01	SCREW (2X8) (DIA.6), +PWH TIGHT	
61	3-041-426-11	BUTTON, POWER		76	3-048-160-01	COVER, HANDLE	
62	4-960-167-01	SCREW (3X8) (DIA.10), +WH		77	3-048-308-01	BRACKET (TOP)	
* 63	1-677-451-11	H/P BOARD		ANT1	1-754-101-11	ANTENNA, TELESCOPIC	
64	3-041-425-01	CABINET, TOP		\triangle F901	1-576-109-11	FUSE (5A/125V)	
65	3-041-430-21	ALUMINUM, UPPER		\triangle T901	1-435-332-11	TRANSFORMER, POWER	

7-3. CD BLOCK SECTION



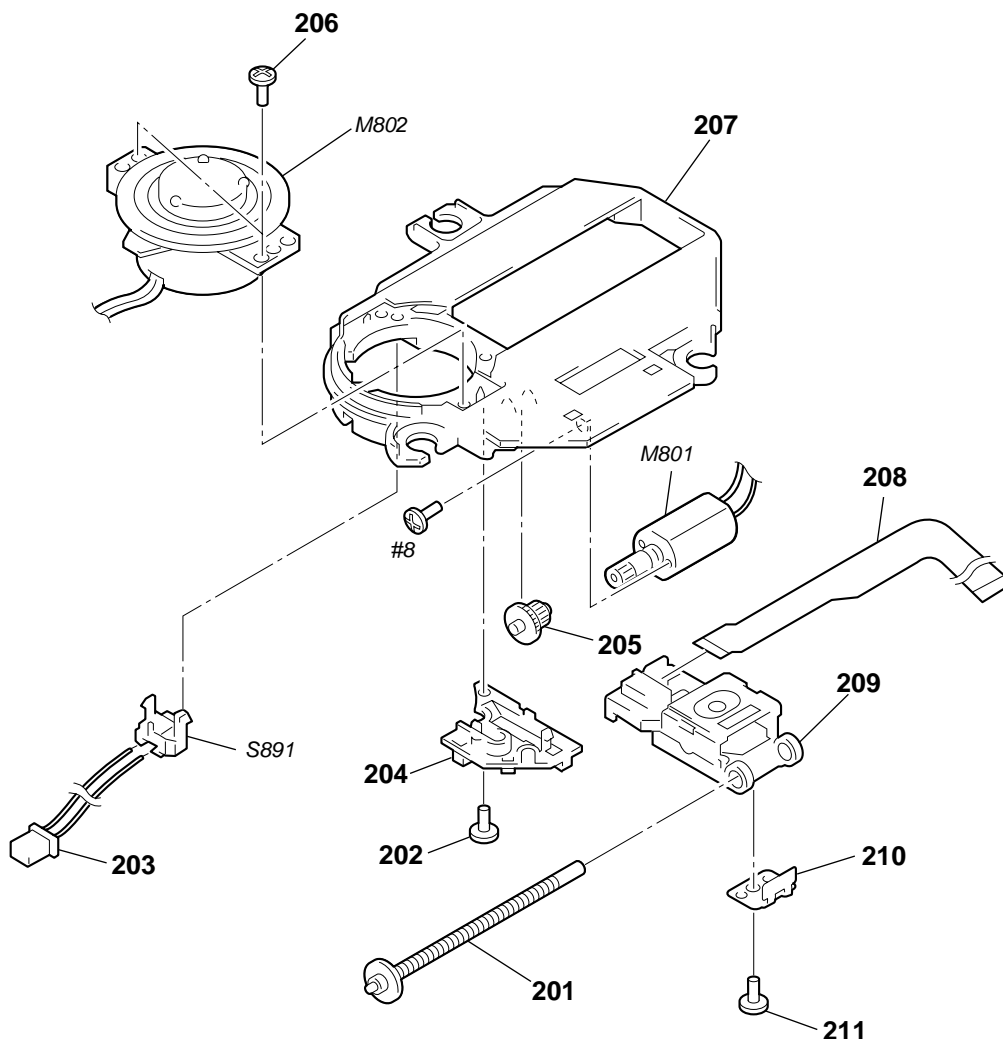
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	A-3323-581-A	FL BOARD, COMPLETE		* 106	A-3323-578-A	CD BOARD, COMPLETE	
102	3-220-079-01	PAPER, SHIELD		107	1-792-175-11	WIRE (FLAT TYPE) (13 CORE)	
103	3-041-440-01	HOLDER, FLT		108	1-792-513-11	WIRE (FLAT TYPE) (22 CORE)	
104	1-792-686-11	WIRE (FLAT TYPE) (8 CORE)		* 109	A-3322-837-A	MAIN BOARD, COMPLETE	
* 105	A-3322-838-A	CONTROL BOARD, COMPLETE		FL501	1-517-934-11	INDICATOR TUBE, FLUORESCENT	

**7-4. CD LOADING SECTION
(VLM-ZS2000)**



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	3-017-025-11	COVER (R), SIDE		168	3-017-031-11	GEAR (A)	
152	3-017-012-11	PLATE (R), SIDE		169	3-017-032-11	GEAR (B)	
153	3-017-014-11	SLIDER (R)		170	3-017-030-01	BELT	
154	3-017-027-11	GEAR (C)		171	3-017-008-11	GEAR (R), TIMING	
155	3-017-016-11	SHAFT, TRAY		172	3-017-036-11	CHASSIS, GEAR	
156	4-975-811-01	INSULATOR		173	2-627-174-01	PULLEY (M)	
157	3-017-022-21	TRAY (BOTTOM), CD		174	3-017-009-11	BEARING	
158	4-975-762-11	INSULATOR		175	3-017-010-11	SHAFT	
* 159	1-667-046-11	PICK-UP RELAY BOARD		176	3-017-028-11	GEAR (D)	
160	3-020-624-21	TRAY (TOP), CD		177	3-017-029-11	GEAR (L), TIMING	
161	3-041-437-01	LID (AL), CD		178	3-017-024-21	CHASSIS, LOADING	
162	X-3374-204-1	WINDOW ASSY, CD		179	3-041-434-01	LID (MO), CD	
163	3-017-013-11	SLIDER (L)		180	3-048-309-01	SCREW (2X8) (DIA.6), +PWH TIGHT	
164	3-017-035-11	COVER (L), SIDE		181	1-782-663-11	WIRE (FLAT TYPE)	
165	3-017-011-11	PLATE (L), SIDE		* 182	1-676-090-11	LAMP BOARD	
166	3-017-017-11	LEVER, DETECTION		183	1-792-936-11	WIRE (FLAT TYPE) (4 CORE)	
* 167	1-667-045-11	LOADING BOARD		M790	1-698-999-11	MOTOR, DC (LOADING)	

**7-5. OPTICAL PICK-UP SECTION
(CDM-2411AA)**



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

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
201	A-3303-970-A	SCREW ASSY, FEED		208	1-660-965-11	SLIDE FLEXIBLE BOARD	
202	3-318-203-01	SCREW (B1.7), TAPPING		Δ 209	X-4950-060-1	PICK-UP BLOCK, OPTICAL DAX-012A	
203	1-690-530-81	LEAD (WITH CONNECTOR)		210	4-972-165-01	RACK	
204	4-972-163-04	SPRING, SLED		211	4-973-631-01	SCREW	
205	4-974-003-01	GEAR (B)		M801	A-3303-403-A	MOTOR ASSY, SLED (SLED) (including GEAR)	
206	3-719-401-11	SCREW (B1.7), TAPPING		M802	A-3304-989-A	MOTOR ASSY, TURNTABLE (SPINDLE)	
207	4-972-162-01	CHASSIS		S891	1-571-099-21	SWITCH (1 KEY) (LIMIT)	

SECTION 8 ELECTRICAL PARTS LIST

CD

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
*	A-3323-578-A	CD BOARD, COMPLETE *****		C746	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
		< CAPACITOR >		C747	1-164-489-11	CERAMIC CHIP 0.22uF 10%	16V
C700	1-163-017-00	CERAMIC CHIP 0.0047uF 5%	50V	C748	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C701	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V	C749	1-164-161-11	CERAMIC CHIP 0.0022uF 10%	100V
C702	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V	C750	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C703	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V	C751	1-163-231-11	CERAMIC CHIP 15PF 5%	50V
C704	1-163-023-00	CERAMIC CHIP 0.015uF 5%	50V	C752	1-163-231-11	CERAMIC CHIP 15PF 5%	50V
C705	1-131-375-00	TANTALUM 4.7uF 10%	10V	C753	1-164-161-11	CERAMIC CHIP 0.0022uF 10%	100V
C706	1-115-185-11	CERAMIC CHIP 0.033uF 10%	50V	C754	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C707	1-163-023-00	CERAMIC CHIP 0.015uF 5%	50V	C755	1-126-924-11	ELECT 330uF 20%	10V
C708	1-163-251-11	CERAMIC CHIP 100PF 5%	50V	C756	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C709	1-163-023-00	CERAMIC CHIP 0.015uF 5%	50V	C757	1-104-664-11	ELECT 47uF 20%	10V
C710	1-126-961-11	ELECT 2.2uF 20%	50V	C758	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C711	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V	C759	1-104-664-11	ELECT 47uF 20%	10V
C712	1-163-243-11	CERAMIC CHIP 47PF 5%	50V	C760	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C713	1-104-760-11	CERAMIC CHIP 0.047uF 10%	50V	C761	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C714	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V	C762	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C715	1-115-185-11	CERAMIC CHIP 0.033uF 10%	50V	C763	1-126-926-11	ELECT 1000uF 20%	10V
C716	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V	C764	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V
C717	1-126-965-11	ELECT 22uF 20%	50V	C765	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C718	1-163-243-11	CERAMIC CHIP 47PF 5%	50V	C766	1-163-001-11	CERAMIC CHIP 220PF 10%	50V
C719	1-104-664-11	ELECT 47uF 20%	10V	C770	1-163-001-11	CERAMIC CHIP 220PF 10%	50V
C720	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V	C773	1-163-001-11	CERAMIC CHIP 220PF 10%	50V
C721	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V	C774	1-163-001-11	CERAMIC CHIP 220PF 10%	50V
C722	1-104-760-11	CERAMIC CHIP 0.047uF 10%	50V	C775	1-163-001-11	CERAMIC CHIP 220PF 10%	50V
C723	1-104-760-11	CERAMIC CHIP 0.047uF 10%	50V	C776	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C724	1-163-019-00	CERAMIC CHIP 0.0068uF 10%	50V	C777	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C725	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V	C780	1-126-963-11	ELECT 4.7uF 20%	50V
C726	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V	C781	1-126-963-11	ELECT 4.7uF 20%	50V
C727	1-126-934-11	ELECT 220uF 20%	10V	C788	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C728	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V	< CONNECTOR >			
C729	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V	* CN701	1-580-155-11	PIN, CONNECTOR (PC BOARD) 3P	
C730	1-126-925-11	ELECT 470uF 20%	10V	* CN708	1-580-158-11	PIN, CONNECTOR (PC BOARD) 6P	
C731	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V	CN711	1-770-528-31	CONNECTOR, FFC/FPC 21P	
C732	1-104-665-11	ELECT 100uF 20%	10V	CN712	1-695-374-31	CONNECTOR, FFC/FPC 13P	
C733	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V	* CN713	1-580-166-11	PIN, CONNECTOR (PC BOARD) 5P	
C734	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V	< IC >			
C741	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V	IC701	8-752-082-14	IC CXA1992BR	
C742	1-107-823-11	CERAMIC CHIP 0.47uF 10%	16V	IC702	8-752-384-13	IC CXD2589Q	
C743	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V	IC703	8-759-473-42	IC BA6898FP	
C744	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V	< COIL >			
C745	1-163-001-11	CERAMIC CHIP 220PF 10%	50V	L701	1-410-993-42	INDUCTOR CHIP 1uH	

CD	CONTROL
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
L702	1-410-997-42	INDUCTOR CHIP 2.2uH		R746	1-216-121-91	RES-CHIP 1M 5%	1/10W
L703	1-410-997-42	INDUCTOR CHIP 2.2uH		R747	1-216-073-00	METAL CHIP 10K 5%	1/10W
L704	1-412-852-11	INDUCTOR 47uH		R748	1-216-105-91	RES-CHIP 220K 5%	1/10W
L705	1-410-993-42	INDUCTOR CHIP 1uH		R749	1-216-041-00	METAL CHIP 470 5%	1/10W
		< TRANSISTOR >		R750	1-216-049-91	RES-CHIP 1K 5%	1/10W
Q701	8-729-101-07	TRANSISTOR 2SB798-DL		R751	1-216-049-91	RES-CHIP 1K 5%	1/10W
		< RESISTOR >		R752	1-216-105-91	RES-CHIP 220K 5%	1/10W
R700	1-216-089-91	RES-CHIP 47K 5%	1/10W	R753	1-216-049-91	RES-CHIP 1K 5%	1/10W
R701	1-216-069-00	METAL CHIP 6.8K 5%	1/10W	R754	1-216-089-91	RES-CHIP 47K 5%	1/10W
R702	1-216-117-00	METAL CHIP 680K 5%	1/10W	R755	1-216-049-91	RES-CHIP 1K 5%	1/10W
R703	1-216-101-00	METAL CHIP 150K 5%	1/10W	R760	1-216-067-00	METAL CHIP 5.6K 5%	1/10W
R704	1-216-109-00	METAL CHIP 330K 5%	1/10W	R761	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R705	1-216-114-00	RES-CHIP 510K 5%	1/10W	R762	1-216-077-91	RES-CHIP 15K 5%	1/10W
R706	1-216-101-00	METAL CHIP 150K 5%	1/10W	R763	1-216-085-00	METAL CHIP 33K 5%	1/10W
R707	1-216-101-00	METAL CHIP 150K 5%	1/10W	R764	1-216-081-00	METAL CHIP 22K 5%	1/10W
R708	1-216-105-91	RES-CHIP 220K 5%	1/10W	R765	1-216-081-00	METAL CHIP 22K 5%	1/10W
R709	1-216-089-91	RES-CHIP 47K 5%	1/10W	R766	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R710	1-216-089-91	RES-CHIP 47K 5%	1/10W	R773	1-216-049-91	RES-CHIP 1K 5%	1/10W
R711	1-216-101-00	METAL CHIP 150K 5%	1/10W	R777	1-216-089-91	RES-CHIP 47K 5%	1/10W
R712	1-216-101-00	METAL CHIP 150K 5%	1/10W	R791	1-216-121-91	RES-CHIP 1M 5%	1/10W
R713	1-216-089-91	RES-CHIP 47K 5%	1/10W			< VIBRATOR >	
R714	1-216-049-91	RES-CHIP 1K 5%	1/10W	X701	1-767-226-11	VIBRATOR, CRYSTAL (16.9344MHz)	

R715	1-216-049-91	RES-CHIP 1K 5%	1/10W	*	A-3322-838-A	CONTROL BOARD, COMPLETE	
R716	1-216-049-91	RES-CHIP 1K 5%	1/10W			*****	
R717	1-216-049-91	RES-CHIP 1K 5%	1/10W		3-220-079-01	PAPER, SHIELD	
R718	1-216-049-91	RES-CHIP 1K 5%	1/10W			< CAPACITOR >	
R720	1-216-073-00	METAL CHIP 10K 5%	1/10W	C800	1-125-507-11	DOUBLE LAYERS 0.22F 5.5V	
R721	1-216-061-00	METAL CHIP 3.3K 5%	1/10W	C802	1-162-306-11	CERAMIC 0.01uF 30% 16V	
R722	1-216-121-91	RES-CHIP 1M 5%	1/10W	C812	1-162-282-31	CERAMIC 100PF 10% 50V	
R723	1-216-061-00	METAL CHIP 3.3K 5%	1/10W	C814	1-162-282-31	CERAMIC 100PF 10% 50V	
R724	1-216-001-00	METAL CHIP 10 5%	1/10W	C816	1-162-282-31	CERAMIC 100PF 10% 50V	
R725	1-216-089-91	RES-CHIP 47K 5%	1/10W	C818	1-162-282-31	CERAMIC 100PF 10% 50V	
R726	1-216-089-91	RES-CHIP 47K 5%	1/10W	C824	1-162-306-11	CERAMIC 0.01uF 30% 16V	
R727	1-216-089-91	RES-CHIP 47K 5%	1/10W	C825	1-162-306-11	CERAMIC 0.01uF 30% 16V	
R728	1-216-089-91	RES-CHIP 47K 5%	1/10W	C826	1-102-962-00	CERAMIC 30PF 5% 50V	
R729	1-216-101-00	METAL CHIP 150K 5%	1/10W	C827	1-102-962-00	CERAMIC 30PF 5% 50V	
R730	1-216-101-00	METAL CHIP 150K 5%	1/10W	C830	1-162-306-11	CERAMIC 0.01uF 30% 16V	
R731	1-216-101-00	METAL CHIP 150K 5%	1/10W	C831	1-102-516-11	CERAMIC 27PF 5% 50V	
R732	1-216-101-00	METAL CHIP 150K 5%	1/10W	C832	1-102-516-11	CERAMIC 27PF 5% 50V	
R733	1-216-109-00	METAL CHIP 330K 5%	1/10W	C834	1-102-516-11	CERAMIC 27PF 5% 50V	
R734	1-216-101-00	METAL CHIP 150K 5%	1/10W	C835	1-102-514-11	CERAMIC 22PF 5% 50V	
R736	1-216-073-00	METAL CHIP 10K 5%	1/10W	C851	1-162-294-31	CERAMIC 0.001uF 10% 50V	
R737	1-216-073-00	METAL CHIP 10K 5%	1/10W	C865	1-162-306-11	CERAMIC 0.01uF 30% 16V	
R738	1-216-049-91	RES-CHIP 1K 5%	1/10W	C866	1-126-964-11	ELECT 10uF 20% 50V	
R739	1-216-049-91	RES-CHIP 1K 5%	1/10W	C867	1-162-306-11	CERAMIC 0.01uF 30% 16V	
R740	1-216-049-91	RES-CHIP 1K 5%	1/10W	C868	1-126-964-11	ELECT 10uF 20% 50V	
R741	1-216-089-91	RES-CHIP 47K 5%	1/10W	C869	1-126-963-11	ELECT 4.7uF 20% 50V	
R742	1-216-089-91	RES-CHIP 47K 5%	1/10W	C870	1-162-294-31	CERAMIC 0.001uF 10% 50V	
R743	1-216-065-91	RES-CHIP 4.7K 5%	1/10W	C873	1-162-306-11	CERAMIC 0.01uF 30% 16V	
R744	1-216-043-91	RES-CHIP 560 5%	1/10W				
R745	1-216-073-00	METAL CHIP 10K 5%	1/10W				

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C880	1-162-282-31	CERAMIC	100PF 10% 50V	R824	1-249-437-11	CARBON	47K 5% 1/4W
C881	1-162-282-31	CERAMIC	100PF 10% 50V	R825	1-249-437-11	CARBON	47K 5% 1/4W
C882	1-162-282-31	CERAMIC	100PF 10% 50V	R826	1-249-429-11	CARBON	10K 5% 1/4W
C894	1-102-518-11	CERAMIC	33PF 5% 50V	R827	1-249-437-11	CARBON	47K 5% 1/4W
C895	1-102-518-11	CERAMIC	33PF 5% 50V	R828	1-249-417-11	CARBON	1K 5% 1/4W
C896	1-126-924-11	ELECT	330uF 20% 10V	R829	1-249-417-11	CARBON	1K 5% 1/4W
C897	1-162-306-11	CERAMIC	0.01uF 30% 16V	R834	1-247-887-00	CARBON	220K 5% 1/4W
C898	1-162-306-11	CERAMIC	0.01uF 30% 16V	R839	1-249-425-11	CARBON	4.7K 5% 1/4W
< CONNECTOR >				R840	1-249-425-11	CARBON	4.7K 5% 1/4W
* CN801	1-770-529-31	CONNECTOR, FFC/FPC 22P		R841	1-249-417-11	CARBON	1K 5% 1/4W
CN802	1-695-374-31	CONNECTOR, FFC/FPC 13P		R842	1-249-417-11	CARBON	1K 5% 1/4W
* CN803	1-691-040-31	HOUSING, CONNECTOR 8P		R843	1-249-417-11	CARBON	1K 5% 1/4W
CN804	1-580-168-11	PIN, CONNECTOR (PC BOARD) 7P		R844	1-249-417-11	CARBON	1K 5% 1/4W
< IC >				R845	1-249-417-11	CARBON	1K 5% 1/4W
IC801	8-752-905-13	IC CXP84332-229Q		R846	1-249-417-11	CARBON	1K 5% 1/4W
IC802	8-759-645-87	IC PST9128-T		R847	1-249-417-11	CARBON	1K 5% 1/4W
IC804	8-759-677-21	IC MSM9805-549RS		R851	1-249-417-11	CARBON	1K 5% 1/4W
< COIL >				R852	1-249-417-11	CARBON	1K 5% 1/4W
L801	1-410-509-11	INDUCTOR	10uH	R853	1-249-437-11	CARBON	47K 5% 1/4W
L802	1-414-142-11	INDUCTOR	1uH	R854	1-249-417-11	CARBON	1K 5% 1/4W
< TRANSISTOR >				R855	1-249-417-11	CARBON	1K 5% 1/4W
Q801	8-729-922-66	TRANSISTOR	2SC2410SN	R856	1-249-417-11	CARBON	1K 5% 1/4W
Q802	8-729-922-66	TRANSISTOR	2SC2410SN	R857	1-249-417-11	CARBON	1K 5% 1/4W
Q803	8-729-037-34	TRANSISTOR	KRA107M	R858	1-249-417-11	CARBON	1K 5% 1/4W
Q805	8-729-037-34	TRANSISTOR	KRA107M	R859	1-249-417-11	CARBON	1K 5% 1/4W
Q806	8-729-012-83	FET	2SK679A	R860	1-249-417-11	CARBON	1K 5% 1/4W
< RESISTOR >				R861	1-249-417-11	CARBON	1K 5% 1/4W
R801	1-249-417-11	CARBON	1K 5% 1/4W	R862	1-249-417-11	CARBON	1K 5% 1/4W
R802	1-249-417-11	CARBON	1K 5% 1/4W	R863	1-249-417-11	CARBON	1K 5% 1/4W
R803	1-249-417-11	CARBON	1K 5% 1/4W	R864	1-249-417-11	CARBON	1K 5% 1/4W
R804	1-249-417-11	CARBON	1K 5% 1/4W	R871	1-249-429-11	CARBON	10K 5% 1/4W
R805	1-249-417-11	CARBON	1K 5% 1/4W	R874	1-249-417-11	CARBON	1K 5% 1/4W
R806	1-249-417-11	CARBON	1K 5% 1/4W	R875	1-249-417-11	CARBON	1K 5% 1/4W
R807	1-249-417-11	CARBON	1K 5% 1/4W	R876	1-249-417-11	CARBON	1K 5% 1/4W
R808	1-249-417-11	CARBON	1K 5% 1/4W	R877	1-249-417-11	CARBON	1K 5% 1/4W
R809	1-249-417-11	CARBON	1K 5% 1/4W	R878	1-249-417-11	CARBON	1K 5% 1/4W
R810	1-249-417-11	CARBON	1K 5% 1/4W	R879	1-249-417-11	CARBON	1K 5% 1/4W
R811	1-249-417-11	CARBON	1K 5% 1/4W	R880	1-249-417-11	CARBON	1K 5% 1/4W
R812	1-249-417-11	CARBON	1K 5% 1/4W	R881	1-249-429-11	CARBON	10K 5% 1/4W
R813	1-249-417-11	CARBON	1K 5% 1/4W	R882	1-249-429-11	CARBON	10K 5% 1/4W
R814	1-249-417-11	CARBON	1K 5% 1/4W	R883	1-249-413-11	CARBON	470 5% 1/4W
R815	1-249-417-11	CARBON	1K 5% 1/4W	R884	1-249-417-11	CARBON	1K 5% 1/4W
R816	1-249-417-11	CARBON	1K 5% 1/4W	R885	1-249-429-11	CARBON	10K 5% 1/4W
R817	1-249-417-11	CARBON	1K 5% 1/4W	R886	1-249-437-11	CARBON	47K 5% 1/4W
R820	1-249-417-11	CARBON	1K 5% 1/4W	R887	1-249-437-11	CARBON	47K 5% 1/4W
R821	1-249-417-11	CARBON	1K 5% 1/4W	R888	1-249-425-11	CARBON	4.7K 5% 1/4W
R822	1-249-437-11	CARBON	47K 5% 1/4W	R889	1-249-425-11	CARBON	4.7K 5% 1/4W
R823	1-249-437-11	CARBON	47K 5% 1/4W	R890	1-249-425-11	CARBON	4.7K 5% 1/4W
				R891	1-249-441-11	CARBON	100K 5% 1/4W
				R893	1-247-817-91	CARBON	270 5% 1/4W
				R895	1-249-425-11	CARBON	4.7K 5% 1/4W
				R899	1-247-807-31	CARBON	100 5% 1/4W
				R902	1-247-807-31	CARBON	100 5% 1/4W

CONTROL	FL	H/P	LAMP	LINE
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Ref. No.	Part No.	Description	Remark
R903	1-247-807-31	CARBON 100 5%	1/4W
		< VIBRATOR >	
X801	1-781-598-11	VIBRATOR, CERAMIC (8MHz)	
X802	1-767-697-11	VIBRATOR, CRYSTAL (32.768kHz)	
X804	1-781-775-21	VIBRATOR, CERAMIC (4.19MHz)	

*	A-3323-581-A	FL BOARD, COMPLETE	*****
	3-041-440-01	HOLDER, FLT	
		< CAPACITOR >	
C501	1-163-243-11	CERAMIC CHIP 47PF 5%	50V
C502	1-128-131-11	ELECT 22uF 20%	50V
C503	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C504	1-126-176-11	ELECT 220uF 20%	10V
C505	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C506	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C507	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C508	1-163-251-11	CERAMIC CHIP 100PF 5%	50V
C509	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C510	1-115-339-11	CERAMIC CHIP 0.1uF 10%	50V
C511	1-115-339-11	CERAMIC CHIP 0.1uF 10%	50V
C512	1-124-233-11	ELECT 10uF 20%	16V
C513	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C514	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
C515	1-163-009-11	CERAMIC CHIP 0.001uF 10%	50V
C516	1-163-021-91	CERAMIC CHIP 0.01uF 10%	50V
		< CONNECTOR >	
CN501	1-691-067-31	HOUSING, CONNECTOR 8P	
* CN502	1-564-523-11	PLUG, CONNECTOR 8P	
CN503	1-691-063-21	HOUSING, CONNECTOR 4P	
		< FLUORESCENT INDICATOR >	
FL501	1-517-934-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC501	8-759-663-70	IC ML9206-03MBZ060	
IC502	8-759-459-85	IC NJL63H400A	
		< JUMPER RESISTOR >	
JR501	1-216-295-91	SHORT 0	
JR502	1-216-295-91	SHORT 0	
JR503	1-216-295-91	SHORT 0	
JR504	1-216-295-91	SHORT 0	
JR505	1-216-295-91	SHORT 0	
JR506	1-216-295-91	SHORT 0	
JR507	1-216-295-91	SHORT 0	
JR508	1-216-295-91	SHORT 0	
JR509	1-216-295-91	SHORT 0	

Ref. No.	Part No.	Description	Remark
JR510	1-216-295-91	SHORT 0	
		< COIL >	
L501	1-410-993-42	INDUCTOR CHIP 1uH	
L502	1-410-993-42	INDUCTOR CHIP 1uH	
		< TRANSISTOR >	
Q501	8-729-036-86	TRANSISTOR KTC3203Y-AT	
		< RESISTOR >	
R502	1-216-065-91	RES-CHIP 4.7K 5%	1/10W
R503	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R504	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R505	1-216-073-00	METAL CHIP 10K 5%	1/10W
R552	1-216-061-00	METAL CHIP 3.3K 5%	1/10W

*	1-677-451-11	H/P BOARD	*****
		< JACK >	
J401	1-794-390-11	JACK (♁)	
		< COIL >	
L402	1-414-146-31	INDUCTOR 2.2uH	
L403	1-414-146-31	INDUCTOR 2.2uH	

*	1-676-090-11	LAMP BOARD	*****
	1-792-936-11	WIRE (FLAT TYPE) (4 CORE)	
		< CONNECTOR >	
CN806	1-691-036-21	HOUSING, CONNECTOR 4P	
		< PILOT LAMP >	
PL802	1-517-935-11	LAMP, PILOT	

*	1-677-452-11	LINE BOARD	*****
		< CAPACITOR >	
C401	1-162-851-11	CERAMIC 0.1uF 10%	16V
C402	1-126-964-11	ELECT 10uF 20%	50V
		< CONNECTOR >	
CN402	1-695-105-11	PIN, CONNECTOR (PC BOARD) 3P	
CN403	1-695-105-11	PIN, CONNECTOR (PC BOARD) 3P	
		< IC >	
IC401	8-749-921-12	IC GP1F32T (OPTICAL DIGITAL OUT (CD))	

LINE	LOADING	MAIN
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Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< JACK >		C105	1-126-960-11	ELECT	1uF 20% 50V
J402	1-566-891-21	JACK (LINE IN)		C106	1-130-479-00	MYLAR	0.0047uF 5% 50V
		< COIL >		C107	1-126-964-11	ELECT	10uF 20% 50V
L401	1-410-324-11	INDUCTOR 4.7uH		C108	1-126-963-11	ELECT	4.7uF 20% 50V
		< RESISTOR >		C111	1-136-163-00	MYLAR	0.068uF 5% 50V
R401	1-249-429-11	CARBON 10K 5% 1/4W		C112	1-136-163-00	MYLAR	0.068uF 5% 50V
R402	1-249-429-11	CARBON 10K 5% 1/4W		C113	1-136-168-00	MYLAR	0.18uF 5% 50V
*****				C114	1-162-294-31	CERAMIC	0.001uF 10% 50V
*	1-667-045-11	LOADING BOARD		C115	1-162-282-31	CERAMIC	100PF 10% 50V
		*****		C116	1-126-960-11	ELECT	1uF 20% 50V
*	1-580-937-11	TERMINAL, SOLDERLESS		C117	1-136-165-00	MYLAR	0.1uF 5% 50V
	7-623-510-01	LUG, 4		C118	1-136-165-00	MYLAR	0.1uF 5% 50V
		< CAPACITOR >		C119	1-162-286-21	CERAMIC	220PF 10% 50V
C790	1-104-664-11	ELECT 47uF 20% 25V		C120	1-162-282-31	CERAMIC	100PF 10% 50V
		< CONNECTOR >		C121	1-136-168-00	MYLAR	0.18uF 5% 50V
* CN781	1-580-923-11	HOUSING, CONNECTOR 2P		C128	1-162-294-31	CERAMIC	0.001uF 10% 50V
* CN790	1-580-926-11	HOUSING, CONNECTOR 5P		C129	1-104-664-11	ELECT	47uF 20% 10V
		< DIODE >		C130	1-104-664-11	ELECT	47uF 20% 10V
D790	8-719-970-02	DIODE 1SR139-400		C131	1-162-286-21	CERAMIC	220PF 10% 50V
		< IC >		C132	1-162-286-21	CERAMIC	220PF 10% 50V
IC790	8-759-501-73	IC BA6418N		C133	1-162-286-21	CERAMIC	220PF 10% 50V
		< COIL >		C134	1-162-302-11	CERAMIC	0.0022uF 30% 16V
L790	1-412-852-11	INDUCTOR 47uH		C200	1-126-960-11	ELECT	1uF 20% 50V
		< RESISTOR >		C201	1-126-960-11	ELECT	1uF 20% 50V
R790	1-249-425-11	CARBON 4.7K 5% 1/4W		C202	1-126-964-11	ELECT	10uF 20% 50V
		< SWITCH >		C203	1-126-959-21	ELECT	0.47uF 20% 50V
S790	1-762-951-11	SWITCH, PUSH (CLOSE)		C204	1-126-960-11	ELECT	1uF 20% 50V
S791	1-762-951-11	SWITCH, PUSH (OPEN)		C205	1-126-960-11	ELECT	1uF 20% 50V
*****				C206	1-130-479-00	MYLAR	0.0047uF 5% 50V
*	A-3322-837-A	MAIN BOARD, COMPLETE		C207	1-126-964-11	ELECT	10uF 20% 50V
		*****		C208	1-126-963-11	ELECT	4.7uF 20% 50V
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S		C209	1-162-294-31	CERAMIC	0.001uF 10% 50V
		< CAPACITOR >		C211	1-136-163-00	MYLAR	0.068uF 5% 50V
C100	1-126-960-11	ELECT 1uF 20% 50V		C212	1-136-163-00	MYLAR	0.068uF 5% 50V
C101	1-126-960-11	ELECT 1uF 20% 50V		C213	1-136-168-00	MYLAR	0.18uF 5% 50V
C102	1-126-964-11	ELECT 10uF 20% 50V		C214	1-162-294-31	CERAMIC	0.001uF 10% 50V
C103	1-104-664-11	ELECT 47uF 20% 10V		C215	1-162-282-31	CERAMIC	100PF 10% 50V
C104	1-126-960-11	ELECT 1uF 20% 50V		C216	1-126-960-11	ELECT	1uF 20% 50V
				C217	1-136-165-00	MYLAR	0.1uF 5% 50V
				C218	1-136-165-00	MYLAR	0.1uF 5% 50V
				C219	1-162-286-21	CERAMIC	220PF 10% 50V
				C220	1-162-282-31	CERAMIC	100PF 10% 50V
				C221	1-136-168-00	MYLAR	0.18uF 5% 50V
				C222	1-164-159-21	CERAMIC	0.1uF 5% 50V
				C228	1-162-294-31	CERAMIC	0.001uF 10% 50V
				C229	1-104-664-11	ELECT	47uF 20% 10V
				C230	1-104-664-11	ELECT	47uF 20% 10V
				C231	1-162-286-21	CERAMIC	220PF 10% 50V
				C232	1-162-286-21	CERAMIC	220PF 10% 50V
				C233	1-162-286-21	CERAMIC	220PF 10% 50V
				C234	1-162-302-11	CERAMIC	0.0022uF 30% 16V
				C300	1-126-961-11	ELECT	2.2uF 20% 50V
				C301	1-126-946-11	ELECT	6800uF 20% 25V

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C308	1-126-925-11	ELECT	470uF 20% 10V	L301	1-414-142-11	INDUCTOR 1uH	
C309	1-104-664-11	ELECT	47uF 20% 10V			< TRANSISTOR >	
C310	1-104-665-11	ELECT	100uF 20% 10V				
C311	1-104-665-11	ELECT	100uF 20% 10V	Q105	8-729-011-92	TRANSISTOR 2SC2001TP-K1K2	
C312	1-104-665-11	ELECT	100uF 20% 25V	Q105	8-729-036-86	TRANSISTOR KTC3203Y-AT	
C313	1-128-551-11	ELECT	22uF 20% 25V	Q106	8-729-905-50	TRANSISTOR DTC343TS	
C314	1-126-968-11	ELECT	100uF 20% 50V	Q205	8-729-011-92	TRANSISTOR 2SC2001TP-K1K2	
C315	1-162-851-11	CERAMIC	0.1uF 10% 16V	Q205	8-729-036-86	TRANSISTOR KTC3203Y-AT	
C316	1-104-665-11	ELECT	100uF 20% 10V				
C317	1-126-940-11	ELECT	330uF 20% 25V	Q206	8-729-905-50	TRANSISTOR DTC343TS	
C318	1-162-306-11	CERAMIC	0.01uF 30% 16V	Q300	8-729-209-15	TRANSISTOR 2SD2012	
C319	1-126-964-11	ELECT	10uF 20% 50V	Q301	8-729-801-84	TRANSISTOR 2SB1013-4	
C321	1-162-306-11	CERAMIC	0.01uF 30% 16V	Q302	8-729-036-77	TRANSISTOR KRC107M	
C324	1-162-282-31	CERAMIC	100PF 10% 50V	Q303	8-729-801-84	TRANSISTOR 2SB1013-4	
C325	1-162-282-31	CERAMIC	100PF 10% 50V	Q304	8-729-036-77	TRANSISTOR KRC107M	
C327	1-126-925-11	ELECT	470uF 20% 10V	Q305	8-729-036-77	TRANSISTOR KRC107M	
C350	1-126-970-11	ELECT	330uF 20% 50V	Q306	8-729-801-84	TRANSISTOR 2SB1013-4	
C351	1-130-483-00	MYLAR	0.01uF 5% 50V	Q307	8-729-801-84	TRANSISTOR 2SB1013-4	
C352	1-126-964-11	ELECT	10uF 20% 50V	Q308	8-729-036-77	TRANSISTOR KRC107M	
C353	1-130-483-00	MYLAR	0.01uF 5% 50V	Q309	8-729-036-77	TRANSISTOR KRC107M	
C354	1-126-968-11	ELECT	100uF 20% 50V	Q310	8-729-037-29	TRANSISTOR KRA102M	
C355	1-130-483-00	MYLAR	0.01uF 5% 50V	Q353	8-729-037-13	TRANSISTOR KTA1271Y	
C356	1-130-483-00	MYLAR	0.01uF 5% 50V	Q357	8-729-012-83	FET 2SK679A	
C357	1-126-960-11	ELECT	1uF 20% 50V	Q358	8-729-012-83	FET 2SK679A	
C358	1-126-960-11	ELECT	1uF 20% 50V	Q359	8-729-037-29	TRANSISTOR KRA102M	
C359	1-130-483-00	MYLAR	0.01uF 5% 50V	Q361	8-729-036-77	TRANSISTOR KRC107M	
C360	1-126-963-11	ELECT	4.7uF 20% 50V	Q362	8-729-036-89	TRANSISTOR KTC3198GR-AT	
C361	1-162-306-11	CERAMIC	0.01uF 30% 16V			< RESISTOR >	
		< CONNECTOR >		R101	1-249-437-11	CARBON 47K 5% 1/4W	
* CN301	1-691-054-31	HOUSING, CONNECTOR 22P		R110	1-247-853-11	CARBON 8.2K 5% 1/4W	
* CN303	1-580-158-11	PIN, CONNECTOR (PC BOARD) 6P		R111	1-247-853-11	CARBON 8.2K 5% 1/4W	
		< DIODE >		R112	1-249-425-11	CARBON 4.7K 5% 1/4W	
D301	8-719-991-33	DIODE 1SS133T-77		R113	1-249-385-11	CARBON 2.2 5% 1/6W	
D302	8-719-991-33	DIODE 1SS133T-77		R114	1-249-385-11	CARBON 2.2 5% 1/6W	
D303	8-719-063-79	DIODE 1N4002B		R115	1-249-416-11	CARBON 820 5% 1/4W	
D305	8-719-991-33	DIODE 1SS133T-77		R117	1-249-429-11	CARBON 10K 5% 1/4W	
D306	8-719-991-33	DIODE 1SS133T-77		R118	1-249-435-11	CARBON 33K 5% 1/4W	
D350	8-719-983-35	DIODE MTZJ-T-77-33D		R119	1-249-435-11	CARBON 33K 5% 1/4W	
D351	8-719-109-93	DIODE RD6.2ESB2		R120	1-249-441-11	CARBON 100K 5% 1/4W	
D354	8-719-110-09	DIODE RD8.2ES-B3		R121	1-249-424-11	CARBON 3.9K 5% 1/4W	
D355	8-719-991-33	DIODE 1SS133T-77		R122	1-247-881-00	CARBON 120K 5% 1/4W	
		< IC >		R123	1-249-424-11	CARBON 3.9K 5% 1/4W	
IC301	8-759-674-39	IC BD3859AFV		R124	1-247-881-00	CARBON 120K 5% 1/4W	
IC303	8-759-333-16	IC LA4705NA		R127	1-249-416-11	CARBON 820 5% 1/4W	
IC304	8-759-701-54	IC NJM2073D		R128	1-249-429-11	CARBON 10K 5% 1/4W	
IC305	8-759-479-70	IC S-81250SGY-B		R129	1-249-427-11	CARBON 6.8K 5% 1/4W	
		< COIL >		R130	1-249-417-11	CARBON 1K 5% 1/4W	
L126	1-410-509-11	INDUCTOR 10uH		R132	1-249-399-11	CARBON 33 5% 1/4W	
L226	1-410-509-11	INDUCTOR 10uH		R133	1-249-429-11	CARBON 10K 5% 1/4W	
				R134	1-249-425-11	CARBON 4.7K 5% 1/4W	
				R201	1-249-437-11	CARBON 47K 5% 1/4W	
				R212	1-249-425-11	CARBON 4.7K 5% 1/4W	
				R213	1-249-385-11	CARBON 2.2 5% 1/6W	

MAIN

PICK-UP RELAY

POWER

Ref. No.	Part No.	Description	Remark
R214	1-249-385-11	CARBON 2.2 5%	1/6W
R217	1-249-429-11	CARBON 10K 5%	1/4W
R221	1-249-421-11	CARBON 2.2K 5%	1/4W
R223	1-249-421-11	CARBON 2.2K 5%	1/4W
R228	1-249-429-11	CARBON 10K 5%	1/4W
R229	1-249-427-11	CARBON 6.8K 5%	1/4W
R230	1-249-417-11	CARBON 1K 5%	1/4W
R232	1-249-399-11	CARBON 33 5%	1/4W
R233	1-249-429-11	CARBON 10K 5%	1/4W
R234	1-249-425-11	CARBON 4.7K 5%	1/4W
R301	1-247-843-11	CARBON 3.3K 5%	1/4W
R306	1-247-807-31	CARBON 100 5%	1/4W
R308	1-249-441-11	CARBON 100K 5%	1/4W
R309	1-249-425-11	CARBON 4.7K 5%	1/4W
R310	1-249-425-11	CARBON 4.7K 5%	1/4W
R311	1-249-441-11	CARBON 100K 5%	1/4W
R314	1-249-429-11	CARBON 10K 5%	1/4W
R315	1-249-425-11	CARBON 4.7K 5%	1/4W
R316	1-249-441-11	CARBON 100K 5%	1/4W
R317	1-249-441-11	CARBON 100K 5%	1/4W
R318	1-249-417-11	CARBON 1K 5%	1/4W
R319	1-249-413-11	CARBON 470 5%	1/4W
R320	1-249-413-11	CARBON 470 5%	1/4W
R321	1-249-421-11	CARBON 2.2K 5%	1/4W
R322	1-249-417-11	CARBON 1K 5%	1/4W
R323	1-249-437-11	CARBON 47K 5%	1/4W
R330	1-247-791-91	CARBON 22 5%	1/4W
R331	1-249-417-11	CARBON 1K 5%	1/4W
R332	1-249-417-11	CARBON 1K 5%	1/4W
R333	1-249-401-11	CARBON 47 5%	1/4W
R350	1-249-431-11	CARBON 15K 5%	1/4W
R352	1-249-419-11	CARBON 1.5K 5%	1/4W
R357	1-249-441-11	CARBON 100K 5%	1/4W
R358	1-247-895-91	CARBON 470K 5%	1/4W
R359	1-249-441-11	CARBON 100K 5%	1/4W
R360	1-247-895-91	CARBON 470K 5%	1/4W
R361	1-249-429-11	CARBON 10K 5%	1/4W
R362	1-249-437-11	CARBON 47K 5%	1/4W

*	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 TYPE) 21P	

Ref. No.	Part No.	Description	Remark
*	A-3323-577-A	POWER BOARD, COMPLETE *****	
	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	MYLAR 0.1uF	5% 50V
C906	1-162-306-11	CERAMIC 0.01uF	30% 16V
C910	1-136-161-00	MYLAR 0.047uF	5% 50V
C911	1-136-161-00	MYLAR 0.047uF	5% 50V
C912	1-136-161-00	MYLAR 0.047uF	5% 50V
C913	1-136-161-00	MYLAR 0.047uF	5% 50V
C914	1-126-963-11	ELECT 4.7uF	20% 50V
C915	1-126-963-11	ELECT 4.7uF	20% 50V
C916	1-136-153-00	FILM 0.01uF	5% 50V
		< CONNECTOR >	
* CN901	1-793-660-11	PIN, CONNECTOR (PC BOARD) 3P	
* CN902	1-564-512-11	PLUG, CONNECTOR 9P	
* CN903	1-564-508-11	PLUG, CONNECTOR 5P	
* CN904	1-564-520-11	PLUG, CONNECTOR 5P	
		< DIODE >	
D901	8-719-902-17	DIODE U15G	
D902	8-719-902-17	DIODE U15G	
D903	8-719-902-17	DIODE U15G	
D904	8-719-902-17	DIODE U15G	
D905	8-719-991-33	DIODE 1SS133T-77	
D906	8-719-991-33	DIODE 1SS133T-77	
D907	8-719-991-33	DIODE 1SS133T-77	
D910	8-719-063-79	DIODE 1N4002B	
D911	8-719-063-79	DIODE 1N4002B	
D912	8-719-063-79	DIODE 1N4002B	
D913	8-719-063-79	DIODE 1N4002B	
		< COIL >	
L901	1-414-142-11	INDUCTOR 1uH	
		< IC LINK >	
△ PS901	1-532-679-00	LINK, IC (ICP-N15) 0.6A	
		< RESISTOR >	
△ R901	1-202-725-11	SOLID 3.3M	10% 1/2W
		< RELAY >	
△ RY901	1-755-386-11	RELAY	

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

REG	SPK (L)	SPK (R)	SWITCH (1)	SWITCH (2)	TU
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Ref. No.	Part No.	Description	Remark
	A-3322-973-A	REG BOARD, COMPLETE *****	
		< CAPACITOR >	
C302	1-162-851-11	CERAMIC 0.1uF	10% 16V
C303	1-126-964-11	ELECT 10uF	20% 50V
C305	1-126-964-11	ELECT 10uF	20% 50V
C306	1-162-851-11	CERAMIC 0.1uF	10% 16V
C307	1-102-110-00	CERAMIC 220PF	10% 50V
		< CONNECTOR >	
* CN310	1-564-509-11	PLUG, CONNECTOR 6P	
		< IC >	
IC307	8-759-646-52	IC KIA7805API	
IC308	8-759-663-22	IC KIA7806AP	

*	1-677-455-11	SPK (L) BOARD *****	
		< CONNECTOR >	
* CN304	1-564-517-11	PLUG, CONNECTOR 2P	

*	1-677-455-11	SPK (R) BOARD *****	
		< CONNECTOR >	
* CN304	1-564-517-11	PLUG, CONNECTOR 2P	

*	A-3323-583-A	SWITCH (1) BOARD, COMPLETE *****	
		< RESISTOR >	
R818	1-249-427-11	CARBON 6.8K	5% 1/4W
R819	1-249-432-11	CARBON 18K	5% 1/4W
R830	1-249-415-11	CARBON 680	5% 1/4W
R831	1-249-416-11	CARBON 820	5% 1/4W
R832	1-249-418-11	CARBON 1.2K	5% 1/4W
R833	1-249-420-11	CARBON 1.8K	5% 1/4W
R835	1-247-843-11	CARBON 3.3K	5% 1/4W
R836	1-249-427-11	CARBON 6.8K	5% 1/4W
R837	1-249-432-11	CARBON 18K	5% 1/4W
R838	1-249-432-11	CARBON 18K	5% 1/4W
R866	1-249-427-11	CARBON 6.8K	5% 1/4W
R867	1-247-843-11	CARBON 3.3K	5% 1/4W
R868	1-249-420-11	CARBON 1.8K	5% 1/4W
R869	1-249-418-11	CARBON 1.2K	5% 1/4W
R870	1-249-415-11	CARBON 680	5% 1/4W
R872	1-249-416-11	CARBON 820	5% 1/4W
R873	1-249-418-11	CARBON 1.2K	5% 1/4W
R892	1-249-420-11	CARBON 1.8K	5% 1/4W
R894	1-247-843-11	CARBON 3.3K	5% 1/4W

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S801	1-762-798-11	SWITCH, KEY BOARD (MEGA BASS)	
S802	1-762-798-11	SWITCH, KEY BOARD (BASS/TREBLE)	
S803	1-762-798-11	SWITCH, KEY BOARD (PLAY MODE•MONO/ST)	
S804	1-762-798-11	SWITCH, KEY BOARD (DISPLAY•ENTER MEM)	
S805	1-762-798-11	SWITCH, KEY BOARD (TUNE•TIME SET +)	
S806	1-762-798-11	SWITCH, KEY BOARD (TUNE•TIME SET -)	
S807	1-762-798-11	SWITCH, KEY BOARD (TIME SIGNAL)	
S808	1-762-798-11	SWITCH, KEY BOARD (CLOCK AUTO ADJUST)	
S812	1-762-798-11	SWITCH, KEY BOARD (SLEEP)	
S813	1-762-798-11	SWITCH, KEY BOARD (CLOCK)	
S814	1-762-798-11	SWITCH, KEY BOARD (TIMER)	
S815	1-762-798-11	SWITCH, KEY BOARD (STANDBY)	
S816	1-762-798-11	SWITCH, KEY BOARD (SUMMER TIME)	
S817	1-762-798-11	SWITCH, KEY BOARD (SNOOZE)	
S818	1-762-798-11	SWITCH, KEY BOARD (▲ CD OPEN/CLOSE)	
S819	1-762-798-11	SWITCH, KEY BOARD (■)	
S820	1-762-798-11	SWITCH, KEY BOARD (▶)	
S821	1-762-798-11	SWITCH, KEY BOARD (PRESET ▶▶ +)	
S822	1-762-798-11	SWITCH, KEY BOARD (PRESET ◀◀ -)	
S823	1-762-798-11	SWITCH, KEY BOARD (RADIO BAND•AUTO PRESET)	

*	1-676-857-11	SWITCH (2) BOARD *****	
		< CONNECTOR >	
CN805	1-695-105-11	PIN, CONNECTOR (PC BOARD) 3P	
		< RESISTOR >	
R800	1-249-415-11	CARBON 680	5% 1/4W
R900	1-249-416-11	CARBON 820	5% 1/4W
		< SWITCH >	
S809	1-762-798-11	SWITCH, KEY BOARD (POWER)	
S811	1-762-798-11	SWITCH, KEY BOARD (LINE)	

*	A-3323-576-A	TU BOARD, COMPLETE *****	
		< CAPACITOR >	
C1	1-163-011-11	CERAMIC CHIP 0.0015uF	10% 50V
C2	1-126-960-11	ELECT 1uF	20% 50V
C3	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C4	1-126-963-11	ELECT 4.7uF	20% 50V
C5	1-163-231-11	CERAMIC CHIP 15PF	5% 50V
C6	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C7	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C8	1-126-934-11	ELECT 220uF	20% 10V
C9	1-126-934-11	ELECT 220uF	20% 10V
C10	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C11	1-163-231-11	CERAMIC CHIP 15PF	5% 50V

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C12	1-163-130-00	CERAMIC CHIP	360PF 5% 50V	D6	8-719-988-61	DIODE 1SS355TE-17	
C13	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V	D7	8-719-988-61	DIODE 1SS355TE-17	
C14	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	D8	8-719-988-61	DIODE 1SS355TE-17	
C15	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V	D9	8-719-988-61	DIODE 1SS355TE-17	
C16	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V			< BPF >	
C17	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V				
C18	1-163-237-11	CERAMIC CHIP	27PF 5% 50V	FL1	1-236-711-31	FILTER, BAND PASS	
C19	1-126-960-11	ELECT	1uF 20% 50V			< IC >	
C20	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V				
C21	1-163-003-11	CERAMIC CHIP	330PF 10% 50V	IC1	8-759-662-67	IC TA2149N	
C22	1-126-960-11	ELECT	1uF 20% 50V	IC2	8-759-483-40	IC LC72137M-TLM	
C23	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V			< JUMPER RESISTOR >	
C24	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V	JC1	1-216-295-91	SHORT	0
C25	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	JC2	1-216-295-91	SHORT	0
C26	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	JC3	1-216-295-91	SHORT	0
C27	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	JC4	1-216-295-91	SHORT	0
C28	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	JC5	1-216-295-91	SHORT	0
C29	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	JC6	1-216-295-91	SHORT	0
C30	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V	JC7	1-216-295-91	SHORT	0
C31	1-163-227-11	CERAMIC CHIP	10PF 0.5PF 50V	JC8	1-216-295-91	SHORT	0
C32	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	JC9	1-216-295-91	SHORT	0
C33	1-104-665-11	ELECT	100uF 20% 10V	JC10	1-216-295-91	SHORT	0
C34	1-163-117-00	CERAMIC CHIP	100PF 5% 50V	JC11	1-216-295-91	SHORT	0
C35	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	JC12	1-216-295-91	SHORT	0
C36	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	JC13	1-216-295-91	SHORT	0
C37	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	JC14	1-216-295-91	SHORT	0
C38	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	JC16	1-216-295-91	SHORT	0
C40	1-136-171-00	FILM	0.33uF 5% 50V	JC19	1-216-295-91	SHORT	0
C41	1-163-021-91	CERAMIC CHIP	0.01uF 10% 50V	JC22	1-216-295-91	SHORT	0
C44	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V	JC23	1-216-295-91	SHORT	0
C45	1-163-117-00	CERAMIC CHIP	100PF 5% 50V			< COIL >	
C46	1-163-117-00	CERAMIC CHIP	100PF 5% 50V	L1	1-419-679-11	COIL, AM OSC	
C47	1-163-117-00	CERAMIC CHIP	100PF 5% 50V	L2	1-419-680-11	COIL, AIR-CORE	
C48	1-163-117-00	CERAMIC CHIP	100PF 5% 50V			< RESISTOR >	
C49	1-163-117-00	CERAMIC CHIP	100PF 5% 50V	R1	1-216-073-00	METAL CHIP	10K 5% 1/10W
		< FILTER >		R2	1-216-037-00	METAL CHIP	330 5% 1/10W
CF2	1-760-738-61	FILTER, CERAMIC		R3	1-216-089-91	RES-CHIP	47K 5% 1/10W
CF3	1-760-738-61	FILTER, CERAMIC		R4	1-216-105-91	RES-CHIP	220K 5% 1/10W
CF4	1-781-344-12	FILTER, AM CERAMIC		R5	1-216-097-91	RES-CHIP	100K 5% 1/10W
		< CONNECTOR >		R6	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
* CNP1	1-766-594-11	PIN, CONNECTOR (PC BOARD) 11P		R7	1-216-077-91	RES-CHIP	15K 5% 1/10W
		< TRIMMER >		R8	1-216-001-00	METAL CHIP	10 5% 1/10W
CT1	1-141-227-00	CAP, TRIMMER	20PF	R9	1-216-033-00	METAL CHIP	220 5% 1/10W
CT3	1-141-304-21	CAP, TRIMMER	10PF	R10	1-216-061-00	METAL CHIP	3.3K 5% 1/10W
		< DIODE >		R11	1-216-017-11	RES-CHIP	47 5% 1/10W
D1	8-719-988-61	DIODE 1SS355TE-17		R13	1-216-049-91	RES-CHIP	1K 5% 1/10W
D2	8-719-988-61	DIODE 1SS355TE-17		R15	1-216-029-00	METAL CHIP	150 5% 1/10W
D3	8-719-050-69	DIODE KV1520N		R16	1-216-041-00	METAL CHIP	470 5% 1/10W
D4	8-719-076-71	DIODE KV1471ETR		R17	1-216-041-00	METAL CHIP	470 5% 1/10W
D5	8-719-076-71	DIODE KV1471ETR		R18	1-216-049-91	RES-CHIP	1K 5% 1/10W

TU **VOLUME**

Ref. No.	Part No.	Description	Remark
R19	1-216-049-91	RES-CHIP 1K 5%	1/10W
R20	1-216-049-91	RES-CHIP 1K 5%	1/10W
R21	1-216-049-91	RES-CHIP 1K 5%	1/10W
R23	1-216-057-00	METAL CHIP 2.2K 5%	1/10W
R24	1-216-049-91	RES-CHIP 1K 5%	1/10W
R25	1-216-081-00	METAL CHIP 22K 5%	1/10W
R26	1-216-073-00	METAL CHIP 10K 5%	1/10W
R27	1-216-075-00	METAL CHIP 12K 5%	1/10W
R28	1-216-043-91	RES-CHIP 560 5%	1/10W
R30	1-216-073-00	METAL CHIP 10K 5%	1/10W
R31	1-216-041-00	METAL CHIP 470 5%	1/10W
R32	1-216-049-91	RES-CHIP 1K 5%	1/10W
R33	1-216-049-91	RES-CHIP 1K 5%	1/10W
< TRANSFORMER >			
T1	1-433-741-11	TRANSFORMER, IF	
T2	1-408-598-31	COIL (DET) 3.9uH	
T3	1-416-251-11	COIL, AM ANT	
T4	1-411-234-21	COIL, AM OSC	
< TERMINAL >			
TM1	1-694-668-11	TERMINAL BOARD (AM ANTENNA, FM ANTENNA)	
< VIBRATOR >			
X1	1-781-592-11	VIBRATOR, CRYSTAL (75kHz)	

*	1-676-089-11	VOLUME BOARD *****	
< ROTARY ENCODER >			
RV801	1-473-392-11	ENCODER, ROTARY (VOLUME)	

MISCELLANEOUS *****			
△69	1-783-531-61	CORD, POWER	
104	1-792-686-11	WIRE (FLAT TYPE) (8 CORE)	
107	1-792-175-11	WIRE (FLAT TYPE) (13 CORE)	
108	1-792-513-11	WIRE (FLAT TYPE) (22 CORE)	
181	1-782-663-11	WIRE (FLAT TYPE)	
183	1-792-936-11	WIRE (FLAT TYPE) (4 CORE)	
203	1-690-530-81	LEAD (WITH CONNECTOR)	
208	1-660-965-11	SLIDE FLEXIBLE BOARD	
△209	X-4950-060-1	PICK-UP BLOCK, OPTICAL DAX-012A	
ANT1	1-754-101-11	ANTENNA, TELESCOPIC	
△F901	1-576-109-11	FUSE (5A/125V)	
M790	1-698-999-11	MOTOR, DC (LOADING)	
M801	A-3303-403-A	MOTOR ASSY, SLED (SLED) (including GEAR)	
M802	A-3304-989-A	MOTOR ASSY, TURNTABLE (SPINDLE)	
S891	1-571-099-21	SWITCH (1 KEY) (LIMIT)	
SP301	1-529-753-11	SPEAKER (8cm) (L-CH)	
SP302	1-529-753-11	SPEAKER (8cm) (R-CH)	
△T901	1-435-332-11	TRANSFORMER, POWER	

Ref. No.	Part No.	Description	Remark
ACCESSORIES & PACKING MATERIALS *****			
	1-754-102-21	ANTENNA, LOOP (AM)	
	3-027-153-11	LID, BATTERY CASE (for RMT-C200A)	
	3-046-451-41	MANUAL, INSTRUCTION (ENGLISH)	
	A-3258-033-A	REMOTE COMMANDER RMT-C200A	

***** HARDWARE LIST *****			
#1	7-685-648-79	SCREW +BVTP 3X12 TYPE2 N-S	
#2	7-685-782-01	SCREW +PTT 2X5 (S)	
#3	7-682-549-04	SCREW +B 3X10	
#4	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#5	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
#6	7-682-547-09	SCREW +B 3X6	
#7	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#8	7-627-850-17	SCREW, PRECISION +P 1.4X2.5	
#9	7-621-773-86	SCREW +B 2.6X4	
#10	7-623-510-01	LUG, 4	

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